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10 Design Theses

When Dieter Rams entered our lives 16 years ago as a participant in FSB's Design Workshop, he taught us his 10 design theses, which are now part and parcel of any good designer's thinking:

1) Good design needs to be innovative. It must not reiterate existing product forms.

2) Good design needs to make a product usable; that's what products are bought for, after all, to be used.

3) Good design needs to have an aesthetic dimension, since the fascination this engenders is an integral constituent of a product's usability.

4) Good design needs to enhance a product's ability to explain itself. It has to render the product compellingly eloquent.

5) Good design is unobtrusive. However, in this, it differs from decorative works of art.

6) Good design has got to be honest. It does not attempt to make the product appear to be something it is not.

7) Good design needs to be enduring, since fashion is fickle and encourages a throw-away approach.

8) Good design extends to every last detail. Anything else would be disrespectful towards the consumer, the product and its function.

9) Good design has to be environmentally benign and must not be a visual pollutant either.

10) The tenth, last and most central tenet of our great mentor, to conclude, states that good design is a minimum of design. Getting back to what is pure and straightforward.

Under the slogan "Multiplicity not Simplicity", we are once again attempting to meet Dieter Rams' exacting demands in the 02103 edition of our Manual, issued in the 121st year of our company's history, and prove that good design does not need to be boring and monotonous. As ever, it will be the market that determines how compelling our proof is.

For more on the genesis of design theses:

- general summary in 'Door Handles, Workshop in Brakel', Cologne 1987, ISBN 3-88375-072-7, pp. 55-57
- discussion of fundamentals in 'Vom Mythos des Funktionalismus' ('On the myth of functionalism'), Cologne 1997, ISBN 3-88375-270-3
- a proposition by Dieter Rams in 'Less but better' Hamburg 1995, ISBN 3-9803485-1-2

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Aluminium
Stainless steel

Lever handles

1

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Overview

 	 	 	 	 	 	 
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Aluminium
 Stainless steel



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Pages 86 and 278



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Pages 87 and 250



Pages 88 and 251



Pages 89 and 252



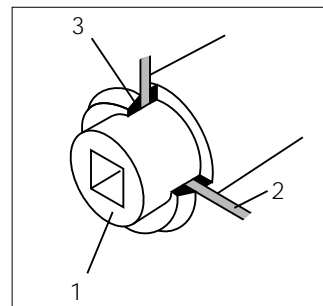
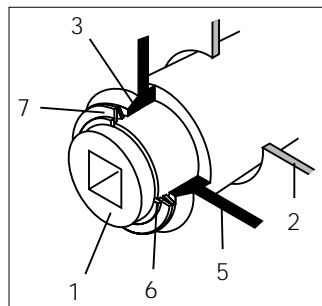
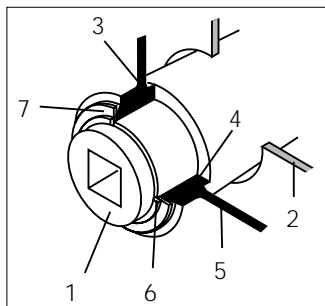
Page 90



Bearings

1

a



Key

1. Neck of handle
2. Rose or backplate cover
3. Sliding bearing
4. Compensating bearing
5. Backplate or rose baseplate
6. Retaining ring
7. Washer

Project fittings

Lever sets on heavily-used doors are subject to greater stress than their domestic counterparts. Designers in the builders hardware industry have for this reason long been working on how best to contain the forces exerted when doors are opened and closed. FSB opted for a technique tried and tested in automobile construction and mechanical engineering. Here, stress and thrust are absorbed using combinations of rubber and metal as opposed to all-metal bearings.

This proven construction method has enabled FSB to come up with project fittings, in which a 7 mm self-lubricating bearing is flexibly attached to a backplate screwed to the door. We have been successfully marketing this system for a decade now.

Fire safety furniture

The specifications for fire, smoke and panic doors are set forth in the following DIN (German Standards) provisions:

- DIN 4 102, Pts 5 + 18
- DIN 18 082, Pt 1
- DIN 18 095, Pts 1 + 2
- DIN 18 273

Standards for fire-safety furniture address design-engineering as well as function and stress-rating criteria. FSB supplies almost all heavy-duty furniture in a fire-safety variant. These fittings are certified and quality-controlled in line with Construction Rulebook (Bauregelliste) A (6.17). A general Construction Supervision Certificate (P) and Certificate of Conformity (ÜZ) have been awarded by Dortmund Material Testing Laboratory. The safety-engineering contract bears the registration number 12 9902-Do 20.3.

Standard fittings

FSB standard furniture rests snugly in a 7 mm bearing made of black glass-fibre reinforced plastics contained within a rose or backplate. In addition to the 7 mm glass-fibre reinforced bearing, FSB roses and back-plates feature lugs that, if properly fitted, ensure all tensile, compressive, and torsional forces arising in normal use are comprehensively contained and absorbed. These design features have been proving their worth for decades.



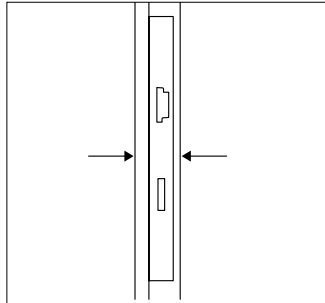
	Project fittings	Fire door fittings* 	Standard fittings
Uses	<p>The FSB project fittings with compensating bearing deal very ably with the considerable axial and vertical forces that arise given doors that are in virtually constant use. This is ideal for use in:</p> <ul style="list-style-type: none"> - Schools - Nursery schools - Hospitals - Nursing homes - Office buildings - Banks 	<p>All fire-safety fittings shown in this Manual are to the German standard DIN 18 273. They are quality-controlled in compliance with the directives of Construction Rulebook (Bauregelliste) A (6.17) and covered by a Certificate of Conformity (ÜZ) and the general construction Supervision Certificate (P) of the Dortmund Material Testing Laboratory, safety-engineering contract No. 12 9902-Do 20.3.</p>	<p>Standard fittings are designed for normal use and are generally installed in the home. The lever section fits into a rugged injection-moulded black plastic bearing. Correctly fitted, these handles will provide decades of service.</p>
Specification details	<p>Project fittings with FSB compensating bearing</p> <p>FSB lever handle furniture No.</p> <p>FSB dead knob/lever furniture No.</p> <p>FSB bathroom furniture No.</p> <p>Levers operating in conjunction with the FSB compensating bearing and the FSB Stabil-spindle, inseparable from their backplate or rose but nevertheless rotate freely, concealed fixing on both sides.</p> <p>Backplates with lugs 10 mm dia.,</p> <p>roses with lugs 8.5 mm dia.,</p> <p>prepared for door thickness mm,</p> <p>manufactured in Aluminium/Stainless steel</p>	<p>FSB fire door fittings</p> <p>FSB fire door lever handle furniture No.</p> <p>FSB fire door dead knob/lever furniture No.</p> <p>turnably fixed in 7 mm bearing, non loosening in conjunction with 9 mm FSB Stabil-spindle,</p> <p>prepared for door thickness mm,</p> <p>manufactured in Aluminium/Stainless steel</p>	<p>FSB standard door furniture</p> <p>FSB-lever handle furniture Nr.</p> <p>FSB-dead knob/lever furniture Nr.</p> <p>FSB-bathroom furniture Nr.</p> <p>features 7 mm bearing glass-fibre reinforced bearing to ensure snug lever fit.</p> <p>Roses and short backplates with lugs to counteract the tensile, compressive, and torsional forces arising in normal use,</p> <p>incorporating FSB Stabil-spindle,</p> <p>prepared for door thickness mm,</p> <p>manufactured in Aluminium/Stainless steel</p>

* acc. to German DIN 18 273

Lever handles

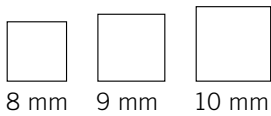
Selection guidelines

When selecting and ordering door furniture, there are a number of guidelines to follow:



Door thickness

Standard doors almost invariably feature standardised door thicknesses: internal doors 38–42 mm, entrance doors 66–70 mm. This is the standard FSB spindles are designed to. The thickness of older doors should be checked and any discrepancy pointed out when ordering.

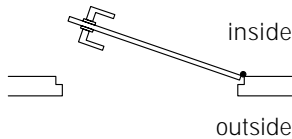


Lock follower

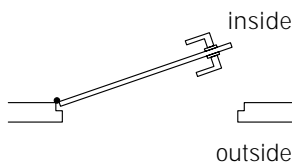
According to DIN lever handles employ different locking mechanisms depending on their application. FSB supplies:

- for internal door locks lever handles with 8 mm square spindle
- for entrance door locks lever handles with 10 mm square spindle
- for locks in fire safety, smoke and panic doors lever handles with 9 mm spindle

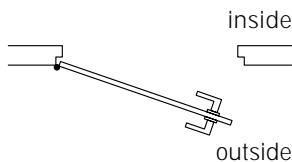
1. DIN l.h., inward opening



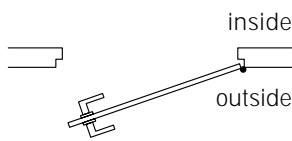
2. DIN r.h., inward opening



3. DIN l.h., outward opening

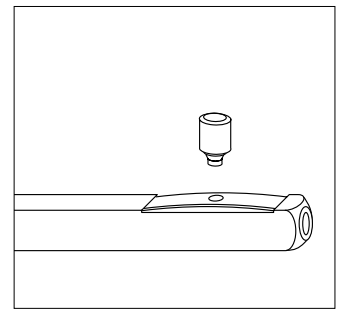


4. DIN r.h., outward opening



Handing

Doors are either right or left hand, relative to which way they open. When ordering lever furniture with dead knob or spindle element located on the outside, you should specify left or right. Indication with use of diagram nos. 1, 2, 3 or 4 would suffice. Further details p. 508.



FSB Stabil-spindle

All FSB lever handles are to be fitted with the FSB Stabil-spindle. The spindle is solid and meets all the specification set out in DIN 18 255 if correctly mounted.

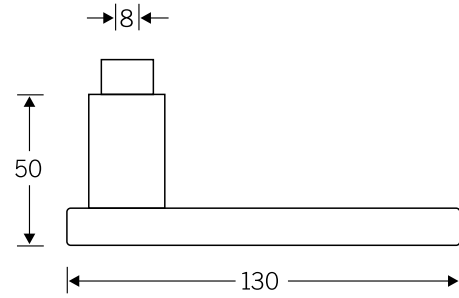
For detailed information on every aspect of our spindle technology, please consult pages 479 - 498.

Lever handle



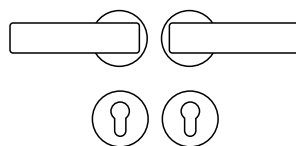
1003

Aluminium
Stainless steel

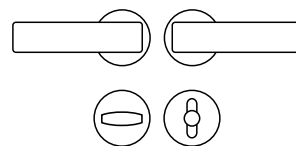


The FSB 1003 lever handle, styled like a miniature door on its side, is a bit of a collector's item. Its designer is unknown. Johannes Potente discovered this design and redesigned it in aluminium and stainless steel.

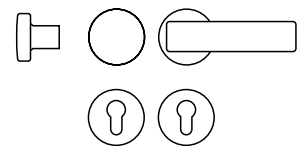
Order proposal:



Internal door furniture
Lever handle 1003
Rose 1731
Escutcheon 1735



Bathroom furniture
Lever handle 1003
Rose 1731
Roses WC 1735 0054



Entrance door furniture
Lever-female part 1003
Rose 1731
Escutcheon 1735
Door knob 2329 06

Lever handle

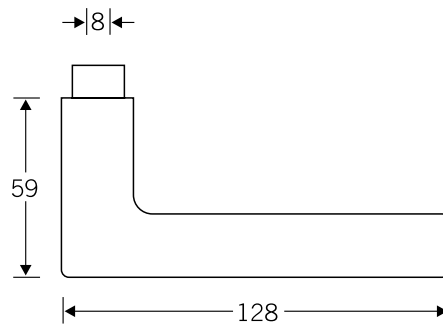
1

a



1005

Aluminium
Stainless steel



There's no shortage of wedge-shaped lever handles around. Virtually every maker features a variation on this theme in their repertoire. This design may originally have been Professor Burchartz's. The version by Johannes Potente is very slender.



Window handle 3425 p. 139
Pull handles p. 315ff.
Door stops p. 177ff.

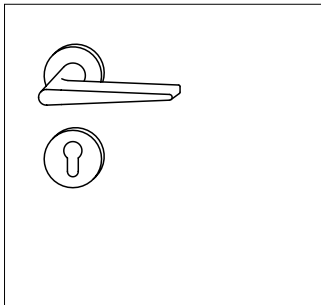
Specification details p. 9

Project fittings

Fire door fittings*



Standard fittings



Internal door furniture
7205 13

Entrance door furniture
7205 14

Bathroom furniture
7205 15

Internal door furniture
7605 13

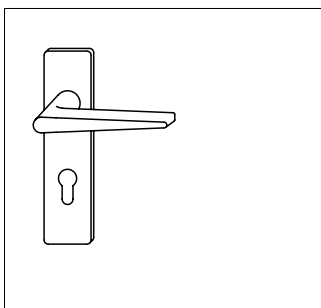
Entrance door furniture
7605 14

Inactive leaf furniture
7605 73
without escutcheon

Internal door furniture
1005 | 1731 | 1735

Entrance door furniture
1005 | 1731 | 1735 | 2329 06

Bathroom furniture
1005 | 1731 | 1735 0054



Internal door furniture
7205 01

Entrance door furniture
7205 02

Bathroom furniture
7205 03

Internal door furniture
7605 01

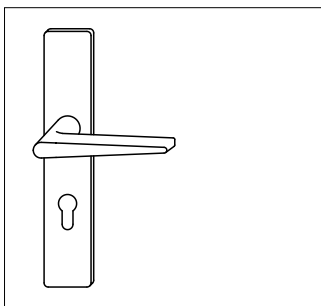
Entrance door furniture
7605 02

Inactive leaf furniture
7605 71
without keyhole

Internal door furniture
1005 | 1402

Entrance door furniture
1005 | 1402 | 1966

Bathroom furniture
1005 | 1402 0054



Internal door furniture
7205 09

Entrance door furniture
7205 10

Bathroom furniture
7205 11

Internal door furniture
7605 09

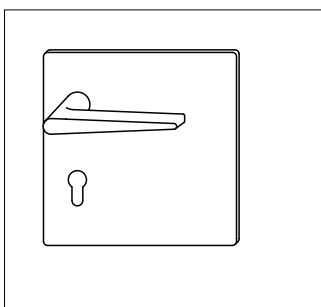
Entrance door furniture
7605 10

Inactive leaf furniture
7605 79
without keyhole

Internal door furniture
1005 | 1410

Entrance door furniture
1005 | 1410 | 1970

Bathroom furniture
1005 | 1410 0054



Internal door furniture
7205 16 r.h. | 7205 19 l.h.

Entrance door furniture
7205 17 r.h. | 7205 20 l.h.

Bathroom furniture
7205 18 r.h. | 7205 21 l.h.

Internal door furniture
7605 16 r.h. | 7605 19 l.h.

Entrance door furniture
7605 17 r.h. | 7605 20 l.h.

*acc. to German DIN 18 273

Entrance door furniture
with fixed knob:



Project and fire door fittings
feature roses or backplates
with concealed fixing. Item
numbers and dimensions of
roses and plates can be
ascertained using the table
on page 91.

Standard fittings feature con-
cealed fixing on roses and
visible fixing on plates.
Alternatives on pages 93-.

Lever handle

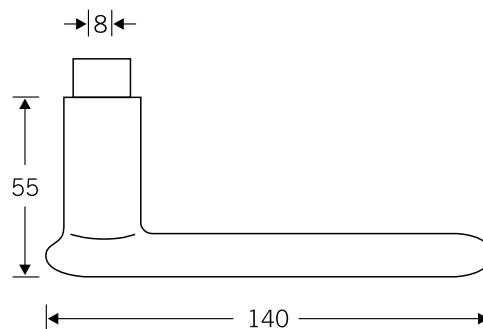
1

a



1010

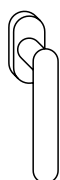
Aluminium
Stainless steel



During a visit in 1996 to the Charité hospital in East Berlin, FSB staff came across a lever handle design they had never seen before - an upright oval grip yoked to a cylindrical shank.

It pleased us no end, so we thought it might find favour elsewhere too. And so it came to pass that we marketed our felicitous little find from Berlin.

Always on the look-out for uncluttered designs, the visiting group duly reported back to base on returning to the Weserberg hills. FSB in-house designer Hartmut Weise listened attentively and then set about constructing a model incorporating what he had heard.



Window handle 3484 p. 149
Pull handles p. 315ff.
Door stops p. 177ff.

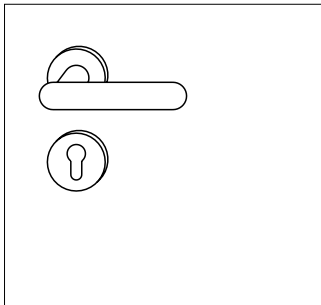
Specification details p. 9

Project fittings

Fire door fittings*



Standard fittings



Internal door furniture
7230 13

Entrance door furniture
7230 12

Bathroom furniture
7230 15

Internal door furniture
7630 13

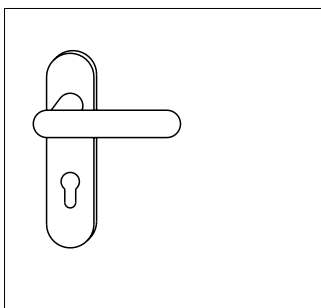
Entrance door furniture
7630 12

Inactive leaf furniture
7630 73
without escutcheon

Internal door furniture
1010 | 1731 | 1735

Entrance door furniture
1010 | 1731 | 1735 | 2302 06

Bathroom furniture
1010 | 1731 | 1735 0054



Internal door furniture
7230 04

Entrance door furniture
7230 05

Bathroom furniture
7230 06

Internal door furniture
7630 04

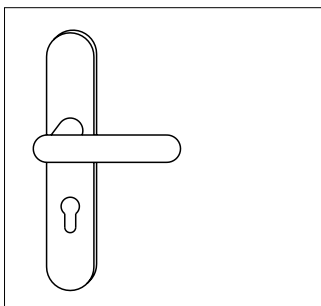
Entrance door furniture
7630 05

Inactive leaf furniture
7630 74
without keyhole

Internal door furniture
1010 | 1415

Entrance door furniture
1010 | 1415 | 1923

Bathroom furniture
1010 | 1415 0054



Internal door furniture
7230 39

Entrance door furniture
7230 40

Bathroom furniture
7230 41

Internal door furniture
7630 39

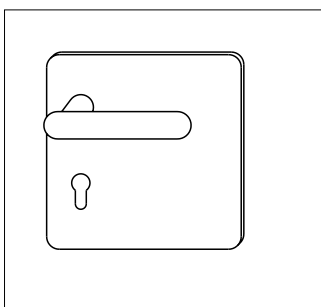
Entrance door furniture
7630 40

Inactive leaf furniture
7630 78
without keyhole

Internal door furniture
1010 | 1418

Entrance door furniture
1010 | 1418 | 1927

Bathroom furniture
1010 | 1418 0054



Internal door furniture
7230 16 r.h. | 7230 19 l.h.

Entrance door furniture
7230 27 r.h. | 7230 28 l.h.

Bathroom furniture
7230 18 r.h. | 7230 21 l.h.

Internal door furniture
7630 16 r.h. | 7630 19 l.h.

Entrance door furniture
7630 27 r.h. | 7630 28 l.h.

Those fire door fittings are
only available in stainless
steel.

*acc. to German DIN 18 273

Entrance door furniture
with fixed knob:



Project and fire door fittings
feature roses or backplates
with concealed fixing. Item
numbers and dimensions of
roses and plates can be
ascertained using the table
on page 91.

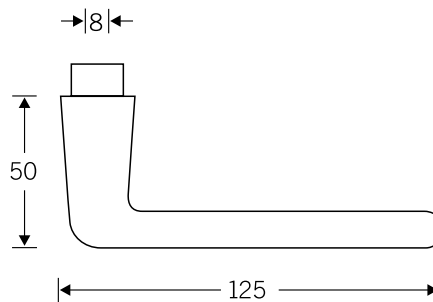
Standard fittings feature con-
cealed fixing on roses and
visible fixing on plates.
Alternatives on pages 93-.

Lever handle

1
a



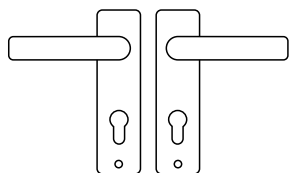
1012
Aluminium



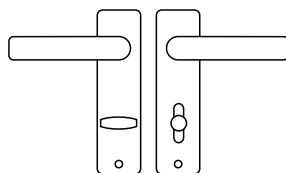
Some lever handle types defy explanation as to either their origins or their market durability. This is especially true of FSB 1012. It used to be known colloquially as a 'Reich-shape' but is now described as an 'upright oval'. It is said to have been first used in 1926 in IG Farben's admin block in Frankfurt.

It was inspired by the architect Hans Poelzig. The version shown here was adapted by Peter Assenmacher in 1988.

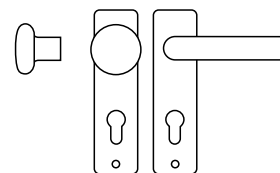
Order proposal:



Internal door furniture
Lever handle 1012
Backplate 1402



Bathroom furniture
Lever handle 1012
Backplates WC 1402 0054

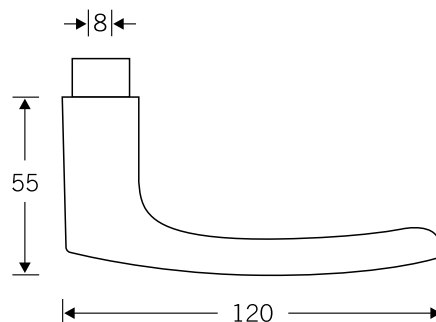


Entrance door furniture
Lever-female part 1012
Backplate 1402
Knob backplate 1904

Lever handle



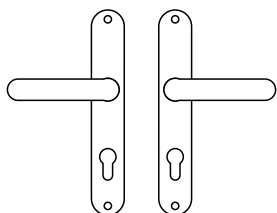
1014
Aluminium



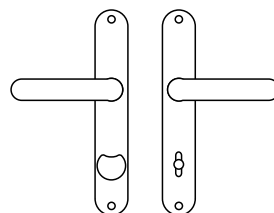
For some time now a design philosophy dubbed the 'new restraint' has been doing the rounds. The names most frequently cited in architectural hardware circles in this connection are Hartmut Weise (FSB 1025) and Jasper Morrison (FSB 1144).

We would now like to make a further contribution to the new spirit of restraint with lever handle design FSB 1014 and the new FSB 1417 narrow backplate. Handle and plate enter into such a slender unfussy union that imagining anything more restrained would be a bit difficult. Designed by Hartmut Weise.

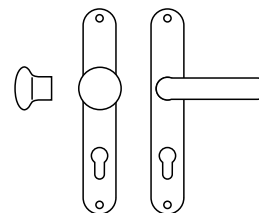
Order proposal:



Internal door furniture
Lever handle 1014
Backplate 1417



Bathroom furniture
Lever handle 1014
Backplates WC 1417 7554



Entrance door furniture
Lever-female part 1014
Backplate 1417
Knob backplate 1912

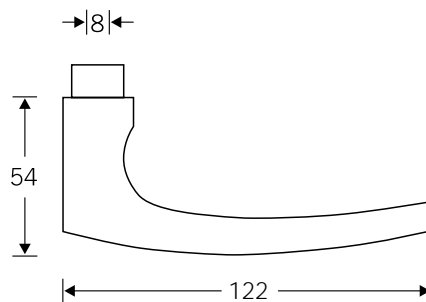
Lever handle

1
a



1015

Aluminium
Stainless steel



It is not known who designed the original of FSB 1015. We suspect it was hatched by the Wehag company. Like most FSB lever handles, 1015 was conceived by Johannes Potente. The clarity of the design struck a particular chord in the Netherlands - more than 40 years ago.



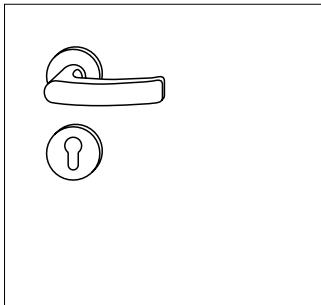
Window handle 3424	p. 139
Pull handles	p. 315ff.
Door stops	p. 177ff.
Specification details	p. 9

Project fittings

Fire door fittings*



Standard fittings



Internal door furniture
7215 13

Entrance door furniture
7215 14

Bathroom furniture
7215 15

Internal door furniture
7615 13

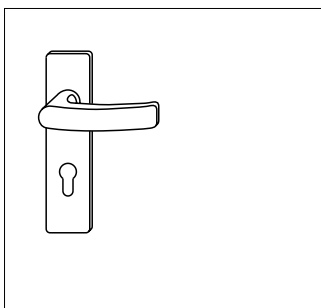
Entrance door furniture
7615 14

Inactive leaf furniture
7615 73
without escutcheon

Internal door furniture
1015 | 1731 | 1735

Entrance door furniture
1015 | 1731 | 1735 | 2329 06

Bathroom furniture
1015 | 1731 | 1735 0054



Internal door furniture
7215 01

Entrance door furniture
7215 02

Bathroom furniture
7215 03

Internal door furniture
7615 01

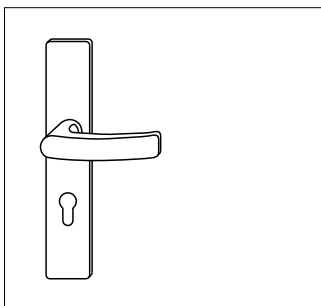
Entrance door furniture
7615 02

Inactive leaf furniture
7615 71
without keyhole

Internal door furniture
1015 | 1402

Entrance door furniture
1015 | 1402 | 1966

Bathroom furniture
1015 | 1402 0054



Internal door furniture
7215 09

Entrance door furniture
7215 10

Bathroom furniture
7215 11

Internal door furniture
7615 09

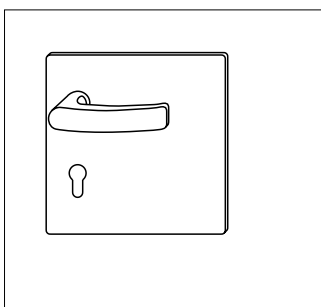
Entrance door furniture
7615 10

Inactive leaf furniture
7615 79
without keyhole

Internal door furniture
1015 | 1410

Entrance door furniture
1015 | 1410 | 1970

Bathroom furniture
1015 | 1410 0054



Internal door furniture
7215 16 r.h. | 7215 19 l.h.

Entrance door furniture
7215 17 r.h. | 7215 20 l.h.

Bathroom furniture
7215 18 r.h. | 7215 21 l.h.

Internal door furniture
7615 16 r.h. | 7615 19 l.h.

Entrance door furniture
7615 17 r.h. | 7615 20 l.h.

*acc. to German DIN 18 273

Entrance door furniture
with fixed knob:



Project and fire door fittings
feature roses or backplates
with concealed fixing. Item
numbers and dimensions of
roses and plates can be
ascertained using the table
on page 91.

Standard fittings feature con-
cealed fixing on roses and
visible fixing on plates.
Alternatives on pages 93-.

Lever handle

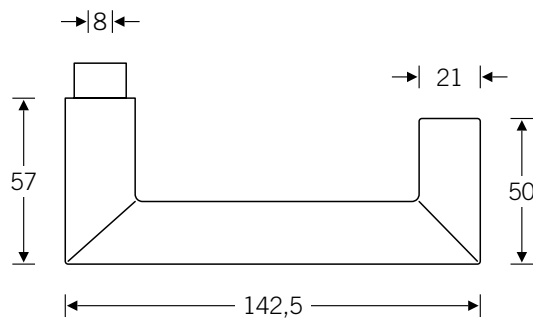
1

a

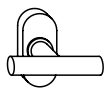


1016

Aluminium
Stainless steel



FSB's first Grey Manual published in 1990 introduced to the market a lever handle based on a design from the 1920s. FSB 1076 subsequently became the most copied handle of the 20th century. FSB 1016, the model pictured here, is a closed variant that meets the specifications for emergency exits set forth under DIN 18 273 5.9.



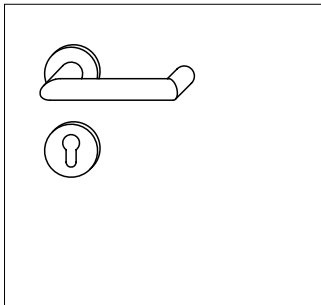
- Window handle 3403 p. 160
- Window handle 3476 p. 149
- Pull handles p. 315ff.
- Door stops p. 177ff.
- Lever handle for framed doors p. 428ff.
- Specification details p. 9

Project fittings

Fire door fittings*



Standard fittings



Internal door furniture
7216 13

Entrance door furniture
7216 14

Bathroom furniture
7216 15

Internal door furniture
7616 13

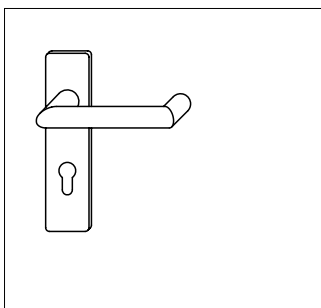
Entrance door furniture
7616 14

Inactive leaf furniture
7616 73
without escutcheon

Internal door furniture
1016 | 1731 | 1735

Entrance door furniture
1016 | 1731 | 1735 | 2329 06

Bathroom furniture
1016 | 1731 | 1735 0054



Internal door furniture
7216 01

Entrance door furniture
7216 02

Bathroom furniture
7216 03

Internal door furniture
7616 01

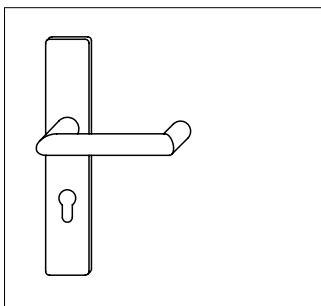
Entrance door furniture
7616 02

Inactive leaf furniture
7616 71
without keyhole

Internal door furniture
1016 | 1402

Entrance door furniture
1016 | 1402 | 1966

Bathroom furniture
1016 | 1402 0054



Internal door furniture
7216 09

Entrance door furniture
7216 10

Bathroom furniture
7216 11

Internal door furniture
7616 09

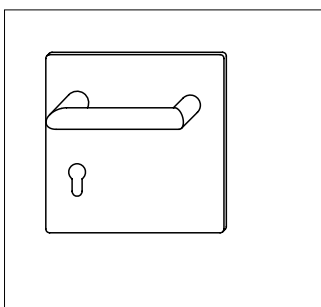
Entrance door furniture
7616 10

Inactive leaf furniture
7616 79
without keyhole

Internal door furniture
1016 | 1410

Entrance door furniture
1016 | 1410 | 1970

Bathroom furniture
1016 | 1410 0054



Internal door furniture
7216 16 r.h. | 7216 19 l.h.

Entrance door furniture
7216 17 r.h. | 7216 20 l.h.

Bathroom furniture
7216 18 r.h. | 7216 21 l.h.

Internal door furniture
7616 16 r.h. | 7616 19 l.h.

Entrance door furniture
7616 17 r.h. | 7616 20 l.h.

*acc. to German DIN 18 273

Entrance door furniture
with fixed knob:



Project and fire door fittings
feature roses or backplates
with concealed fixing. Item
numbers and dimensions of
roses and plates can be
ascertained using the table
on page 91.

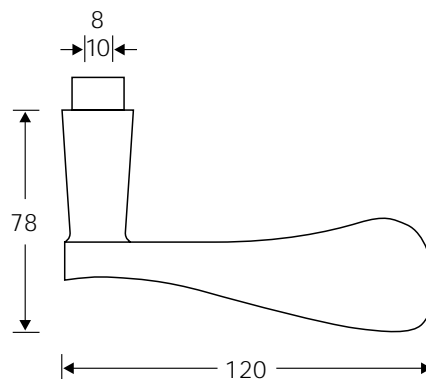
Standard fittings feature con-
cealed fixing on roses and
visible fixing on plates.
Alternatives on pages 93-.

Lever handle

1
a



1020
Aluminium

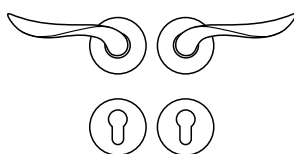


The 'functional style' of the 50s found its clearest expression in the model FSB 1020. Johannes Potente designed this model in 1953. His design's strong points are its physical dynamism, its simple hand shape and an asymmetry that gives the illusion of symmetry.

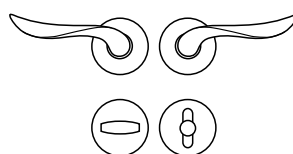
When Johannes Potente designed his 1020 model, it was his intention to provide visual relief from the strict lines of the door, 'inviting' the observer to take hold of the handle.

FSB 1020 is one of four models designed by Designer Johannes Potente which became part of the permanent collection of the MoMA in New York.

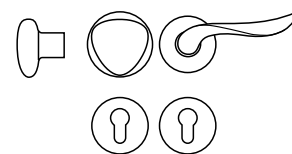
Order proposal:



Internal door furniture
Lever handle 1020
Rose 1731
Escutcheon 1735



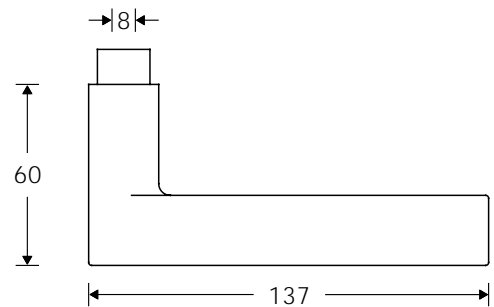
Bathroom furniture
Lever handle 1020
Rose 1731
Roses WC 1735 0054



Entrance door furniture
Lever-female part 1020
Rose 1731
Escutcheon 1735
Door knob 2327 06

Lever handle

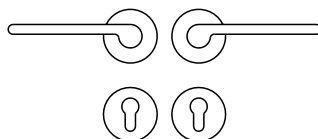
1021
Aluminium
Stainless steel



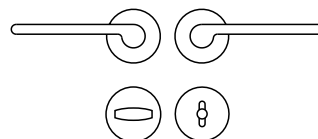
Illustrated on pages 4 and 5 of a 30s' catalogue by the bronze-ware company S. A. Loevy are half a dozen door fittings by Rachlis, Grenander, Behrens, Wagenfeld and Paul in which a round shank is combined with a flat grip section. In the 90s, the Spanish designer Miguel Milá bent things round a bit to produce the FSB 1126 model.

This time, though, we are adhering more to the original 30s' designs. The third modernist age embraces the spirit of the Bauhaus.

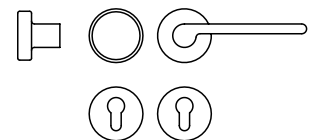
Order proposal:



Internal door furniture
Lever handle 1021
Rose 1731
Escutcheon 1735



Bathroom furniture
Lever handle 1021
Rose 1731
Roses WC 1735 0054



Entrance door furniture
Lever-female part 1021
Rose 1731
Escutcheon 1735
Door knob 2329 06

Lever handle

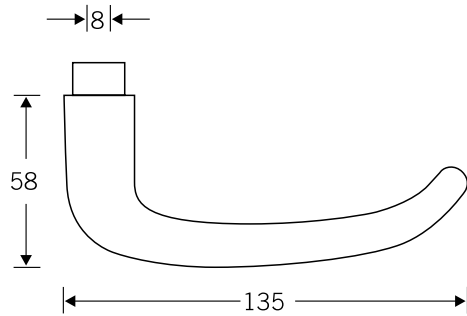
1

a



1023

Aluminium
Stainless steel



When the Ulm Design College was being built in the Fifties, the Swiss architect, sculptor and designer Max Bill with Ernst Moeckel designed a lever handle based on the railway carriage handle common in Switzerland. It entered design history as the 'Ulm handle'.

Johannes Potente took this as the starting point for the 1023 model, still a compelling alternative to anonymous tubular designs.



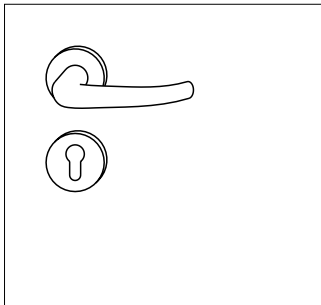
Window handle 3423	p. 138
Pull handles	p. 315ff.
Door stops	p. 177ff.
Lever handle for framed doors	p. 426ff.
Specification details	p. 9

Project fittings

Fire door fittings*



Standard fittings



Internal door furniture
7223 13

Entrance door furniture
7223 12

Bathroom furniture
7223 15

Internal door furniture
7623 13

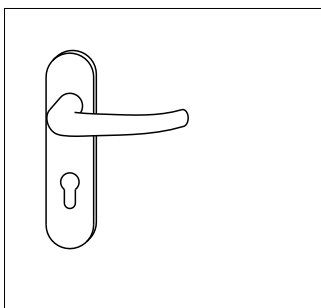
Entrance door furniture
7623 12

Inactive leaf furniture
7623 73
without escutcheon

Internal door furniture
1023 | 1731 | 1735

Entrance door furniture
1023 | 1731 | 1735 | 2302 06

Bathroom furniture
1023 | 1731 | 1735 0054



Internal door furniture
7223 04

Entrance door furniture
7223 05

Bathroom furniture
7223 06

Internal door furniture
7623 04

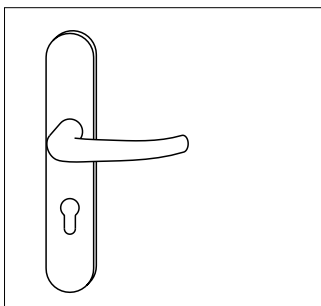
Entrance door furniture
7623 05

Inactive leaf furniture
7623 74
without keyhole

Internal door furniture
1023 | 1415

Entrance door furniture
1023 | 1415 | 1923

Bathroom furniture
1023 | 1415 0054



Internal door furniture
7223 39

Entrance door furniture
7223 40

Bathroom furniture
7223 41

Internal door furniture
7623 39

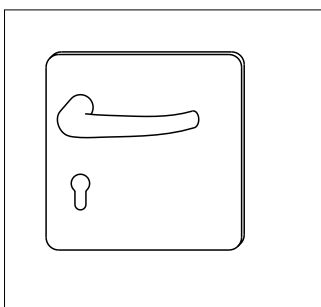
Entrance door furniture
7623 40

Inactive leaf furniture
7623 78
without keyhole

Internal door furniture
1023 | 1418

Entrance door furniture
1023 | 1418 | 1927

Bathroom furniture
1023 | 1418 0054



Internal door furniture
7223 16 r.h. | 7223 19 l.h.

Entrance door furniture
7223 27 r.h. | 7223 28 l.h.

Bathroom furniture
7223 18 r.h. | 7223 21 l.h.

Internal door furniture
7623 16 r.h. | 7623 19 l.h.

Entrance door furniture
7623 27 r.h. | 7623 28 l.h.

*acc. to German DIN 18 273

Entrance door furniture
with fixed knob:



Project and fire door fittings feature roses or backplates with concealed fixing. Item numbers and dimensions of roses and plates can be ascertained using the table on page 91.

Standard fittings feature concealed fixing on roses and visible fixing on plates. Alternatives on pages 93-.

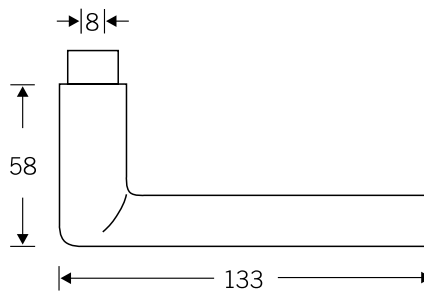
Lever handle

1
a



1025

Aluminium natural colour
anodised
Stainless steel



FSB 1025 is the nucleus of the 'FSB Light' range of handles.

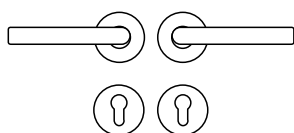
Its stylistic identity is clearly discernible. A straight handle grip, fashioned in cross section like the outline of a teardrop, slants away from the axis of the lever shank to which it is connected.

FSB 1025 possesses an elegant modesty that will please all those keen on no-frills efficiency. With the gripping surface tilted at 45 degrees, the hand slips on easily; the handle's globular section makes for comfortable and secure gripping, allowing the door to be opened or closed with little effort.

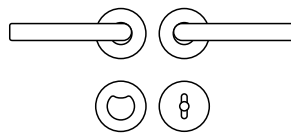
A central element in the design of FSB 1025 is its vividly condensed ridge of luminosity.

The effect of slenderness in this unfussy door handle model is heightened by the way light and shade are manipulated.

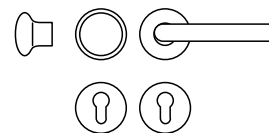
Order proposal:



Internal door furniture	
Lever handle	1025
Rose	1707
Escutcheon	1708



Bathroom furniture	
Lever handle	1025
Rose	1707
Roses WC	1708 7554

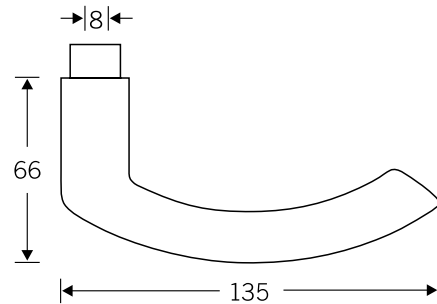


Entrance door furniture	
Lever-female part	1025
Rose	1707
Escutcheon	1708
Door knob	2380 06

Lever handle



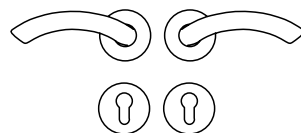
1026
Aluminium natural colour
anodised



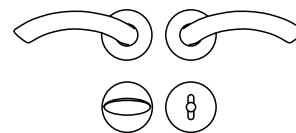
Lever handle model FSB 1026 adds a rising quarter circle to the core features of the 'FSB Light' range, thus pointedly making its mark. The sectionally globular grip arcs up in a quarter circle as though reaching out to be held. This is a door handle that can be grasped with equal ease left- or right-handedly. There's good support for elbows and forearms.

The curvature creates the impression of increased gripping substance, although here, too, material input was kept to a minimum.

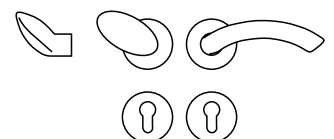
Order proposal:



Internal door furniture
Lever handle 1026
Rose 1707
Escutcheon 1708



Bathroom furniture
Lever handle 1026
Rose 1707
Roses WC 1708 0054



Entrance door furniture
Lever-female part 1026
Rose 1707
Escutcheon 1708
Door knob, r.h. 2326 0406
l.h. 2326 0506

Lever handle

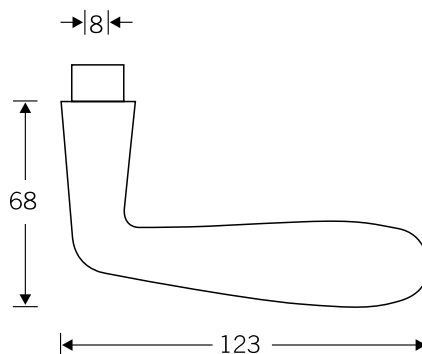
1

a



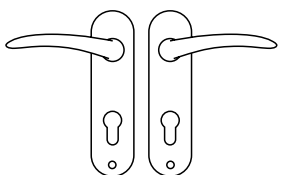
1027

Aluminium
Stainless steel

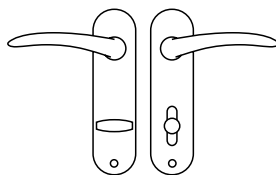


FSB 1027 is regarded as a stock item in the industry. It is also disparagingly known as the 'shoe horn' model. The basic design was first marketed by wehag, designed by Professor Max Burchartz. It sits extremely snugly in the hand and is notably unobtrusive. FSB's 'shoe horn'-version was designed by Johannes Potente.

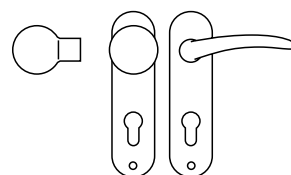
Order proposal:



Internal door furniture
Lever handle 1027
Backplate 1415



Bathroom furniture
Lever handle 1027
Backplates WC 1415 0054



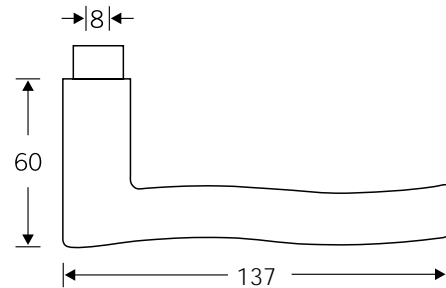
Entrance door furniture
Lever-female part 1027
Backplate 1415
Knob backplate 1923

Lever handle



1028

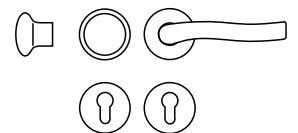
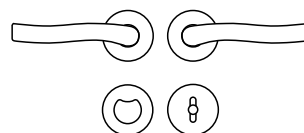
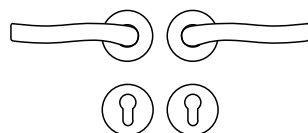
Aluminium natural colour
anodised
Stainless steel



FSB 1028 is the most ornate of the handles in the 'FSB Light' range. It's a bold variation on the FSB 1025 theme that nonetheless retains the vital ergonomic features.

This is a design that catches the eye and is just as good to hold. The undular styling of the actual handle is both visually striking and a stimulating experience for the hand. It's as elegant a silver embellishment as you could wish to see on any door, and it also does the job of opening and closing the door pretty well.

Order proposal:



Internal door furniture
Lever handle 1028
Rose 1707
Escutcheon 1708

Bathroom furniture
Lever handle 1028
Rose 1707
Roses WC 1708 7554

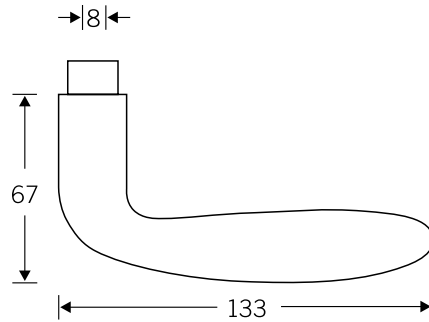
Entrance door furniture
Lever-female part 1028
Rose 1707
Escutcheon 1708
Door knob 2380 06

Lever handle



1029

Aluminium natural colour
anodised



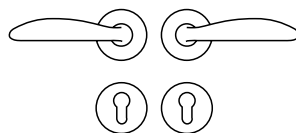
FSB 1029 is a special moulded-to-the-hand design that augments the other three handles in the 'FSB Light' range.

We only use the phrase 'moulded-to-the-hand' for models that meet our four Good Grip criteria to the letter.

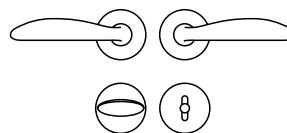
Hartmut Weise managed to modify the teardrop motif in such a way that the thumb and the forefinger have somewhere to go and the palm of the hand has ample bulk to grip on.

This model incorporates a few more grammes of aluminium than the other three lighter designs in the 'FSB Light' series. But that could not be avoided, given what the model has to offer. And at the end of the day aluminium is fully recyclable.

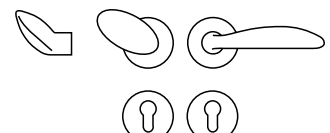
Order proposal:



Internal door furniture
Lever handle 1029
Rose 1707
Escutcheon 1708



Bathroom furniture
Lever handle 1029
Rose 1707
Roses WC 1708 0054

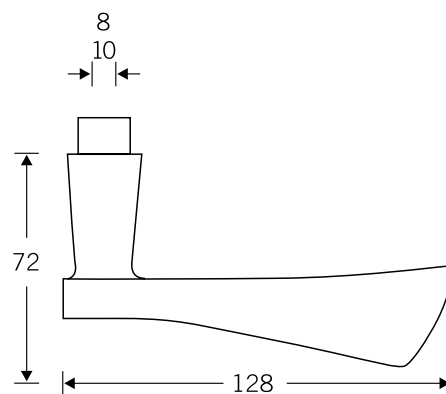


Entrance door furniture
Lever-female part 1029
Rose 1707
Escutcheon 1708
Door knob, r.h. 2326 0406
l.h. 2326 0506

Lever handle

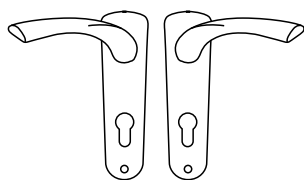


1034
Aluminium

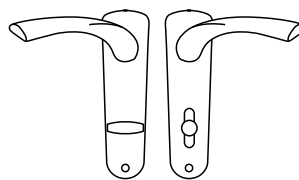


The FSB 1034 lever handle was Johannes Potente's first major hit. It dates from 1952. Once the copyright lapsed, it was imitated by the million throughout the world. It even had to suffer being remodelled in grey plastic – back in the days before plastic went technicolor. The Four Rules of the Grip viz. thumb guide, forefinger furrow, ball-of-thumb support and gripping substance are ideally catered for.

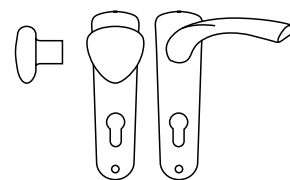
Order proposal:



Internal door furniture
Lever handle 1034
Backplate 1431



Bathroom furniture
Lever handle 1034
Backplates WC 1431 0054



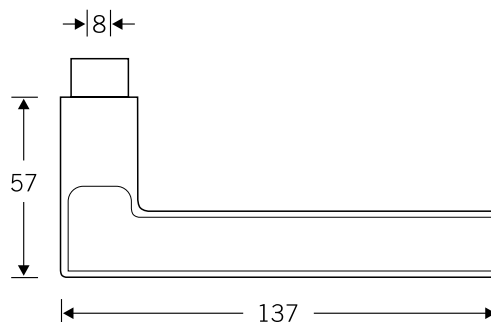
Entrance door furniture
Lever-female part 1034
Backplate 1431
Knob backplate 1936

Lever handle



1035

Aluminium
Stainless steel



In the autumn of 1996, the Düsseldorf-based interior designer Heike Falkenberg invited us to recreate a handle design from the past as part of a renovation project. On the strength of sketches submitted, the FSB development department did some milling work on FSB 1076 to arrive at a first approximation. We were so enamoured of the prototype that we decided on the spot to present our hefty new idea to the market.



Window handle 3459 p. 146
Pull handles p. 315ff.
Door stops p. 177ff.

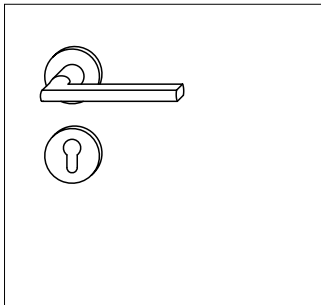
Specification details p. 9

Project fittings

Fire door fittings*



Standard fittings



Internal door furniture
7235 13

Entrance door furniture
7235 14

Bathroom furniture
7235 15

Internal door furniture
7635 13

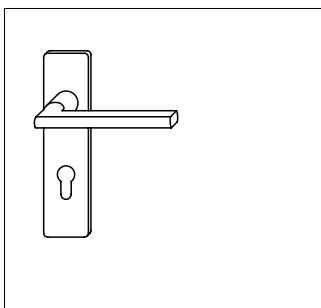
Entrance door furniture
7635 14

Inactive leaf furniture
7635 73
without escutcheon

Internal door furniture
1035 | 1731 | 1735

Entrance door furniture
1035 | 1731 | 1735 | 2329 06

Bathroom furniture
1035 | 1731 | 1735 0054



Internal door furniture
7235 01

Entrance door furniture
7235 02

Bathroom furniture
7235 03

Internal door furniture
7635 01

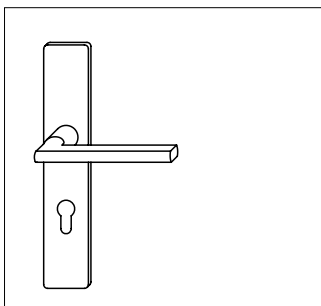
Entrance door furniture
7635 02

Inactive leaf furniture
7635 71
without keyhole

Internal door furniture
1035 | 1402

Entrance door furniture
1035 | 1402 | 1966

Bathroom furniture
1035 | 1402 0054



Internal door furniture
7235 09

Entrance door furniture
7235 10

Bathroom furniture
7235 11

Internal door furniture
7635 09

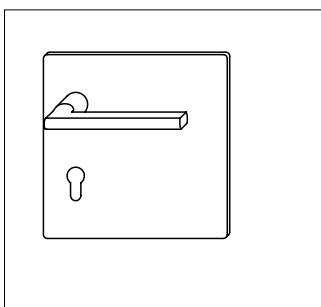
Entrance door furniture
7635 10

Inactive leaf furniture
7635 79
without keyhole

Internal door furniture
1035 | 1410

Entrance door furniture
1035 | 1410 | 1970

Bathroom furniture
1035 | 1410 0054



Internal door furniture
7235 16 r.h. | 7235 19 l.h.

Entrance door furniture
7235 17 r.h. | 7235 20 l.h.

Bathroom furniture
7235 18 r.h. | 7235 21 l.h.

Internal door furniture
7635 16 r.h. | 7635 19 l.h.

Entrance door furniture
7635 17 r.h. | 7635 20 l.h.

Those fire door fittings are
only available in stainless
steel.

*acc. to German DIN 18 273

Entrance door furniture
with fixed knob:



Project and fire door fittings
feature roses or backplates
with concealed fixing. Item
numbers and dimensions of
roses and plates can be
ascertained using the table
on page 91.

Standard fittings feature con-
cealed fixing on roses and
visible fixing on plates.
Alternatives on pages 93-.

Lever handle

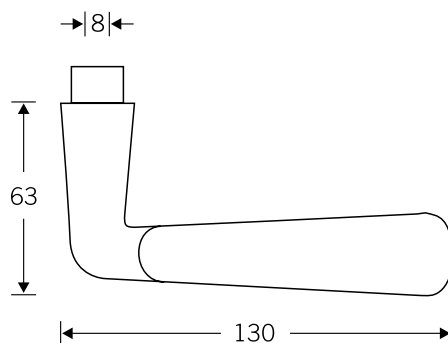
1

a



1046

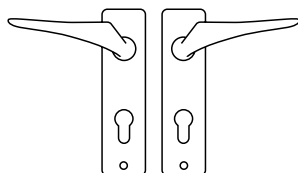
Aluminium



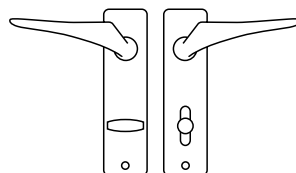
FSB 1046 sports a striking design. A straight gripping area is met by two distinct lines towards the pivot point. The resultant elongated acute-angled triangle resembles a 'beak', which is the nickname this product of the Johannes Potente design workshop acquired. The 'beak' from Brakel has become in the past decades a special collector's item.

FSB 1046 is one of four models designed by Designer Johannes Potente which became part of the permanent collection of the MoMA in New York.

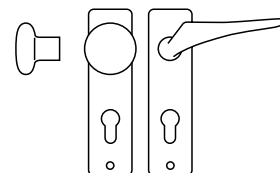
Order proposal:



Internal door furniture
Lever handle 1046
Backplate 1402



Bathroom furniture
Lever handle 1046
Backplates WC 1402 0054

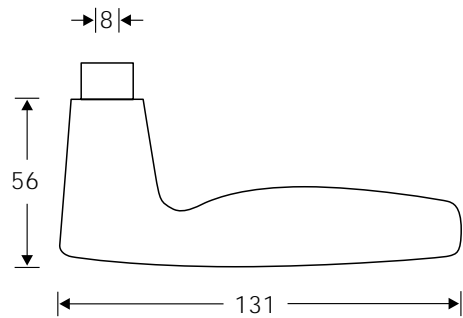


Entrance door furniture
Lever-female part 1046
Backplate 1402
Knob backplate 1904

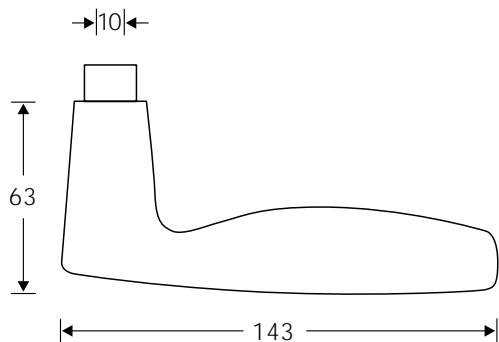
Lever handle



1051
Aluminium



1050
Aluminium

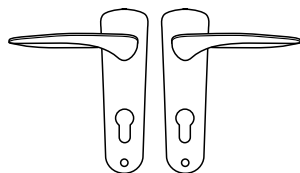


The FSB 1051 lever handle has come to epitomize FSB. It was known as the 'Schneider-handle' virtually from its conception in the mid Fifties. We can only surmise as to why this model was such a success for Johannes Potente in the Fifties (as it still is). Maybe it's because of the smooth design,

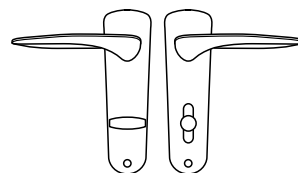
the harmonious interplay between an unerring rectilinearity and the calculated triangular design motif towards the neck.

FSB 1051 is one of four models designed by Designer Johannes Potente which became part of the permanent collection of the MoMA in New York.

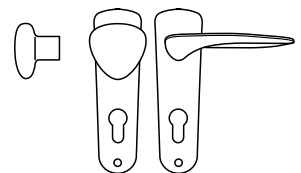
Order proposal:



Internal door furniture
Lever handle 1051
Backplate 1431



Bathroom furniture
Lever handle 1051
Backplate 1431 0054



Entrance door furniture
Lever-female part 1051
Backplate 1431
Knob backplate 1936

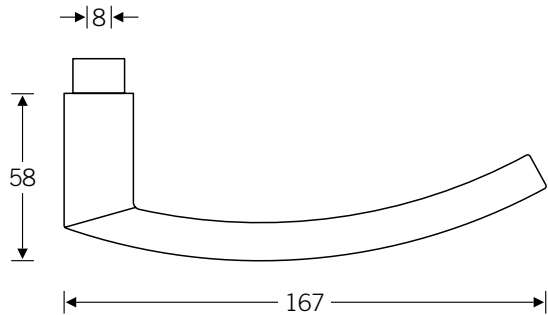
Lever handle

1
a

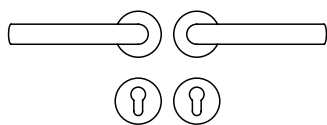


1052
Stainless steel

The styling of lever handle FSB 1052 echoes the 'Brakel lightweight' with its dynamic sense of motion (the 1107 model). Several architects and planners urged us to harness this handle shape for heavy-duty applications (e.g. in hospitals). The extended slight curvature towards the door is conducive to elbow operation should this prove necessary. This lever handle set is ideal for heavy-duty and fire-door applications. In view of the larger handle projection, FSB recommends the use of locks with a 9 mm follower and a corresponding lever handle spindle.



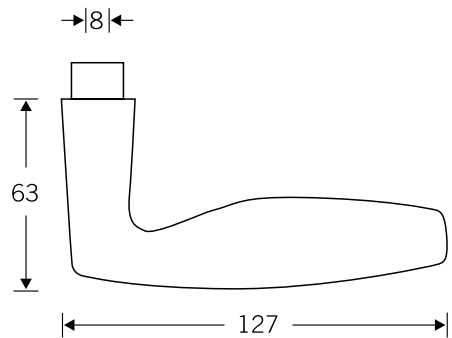
Order proposal:



Standard fittings	Internal door furniture
Project fittings	1052 1707 1708
Fire door fittings*	7252 63
	7652 63
* acc. to German DIN Standard	

Lever handle

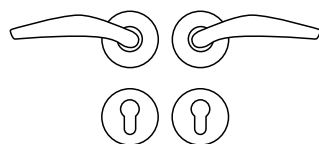
1057
Aluminium
Stainless steel



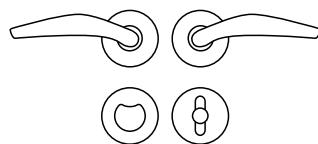
The FSB 1057 lever handle is the work of Munich designer Jan Roth. Unimpressed by the models then on sale, he decided to design handles of his own. After the first casting, he took the polished unfinished parts home and duly fitted them to his doors (which is where they still are). Will Jan Roth like our new version in stainless steel too?

The Jan Roth-designed FSB 1057 model nestles snugly in the hand, and women, especially, often fall for it on the spot.

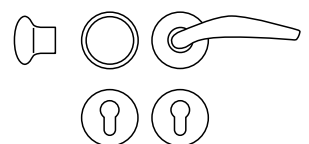
Order proposal:



Internal door furniture
Lever handle 1057
Rose 1707
Escutcheon 1708



Bathroom furniture
Lever handle 1057
Rose 1707
Roses WC 1708 7554



Entrance door furniture
Lever-female part 1057
Rose 1707
Escutcheon 1708
Door knob 2380 06

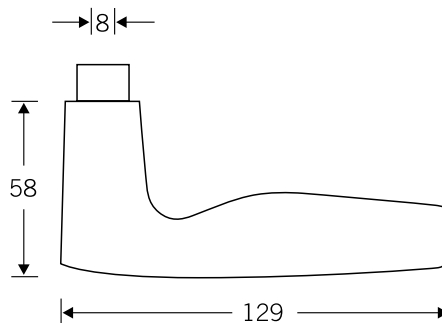
Lever handle

1
a



1058

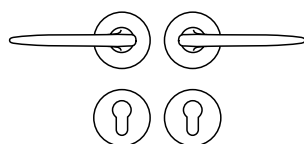
Aluminium
Stainless steel



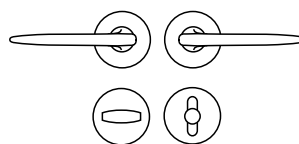
FSB 1058 was Johannes Potente's favourite. It is not known why he followed up his accomplished FSB 1051 model with a re-design two years later. The FSB 1058 re-design does away with the triangular motif near the pivotal axis. The result is a slender, elegant model that is strikingly attractive.

FSB 1058 is one of four models designed by Designer Johannes Potente which became part of the permanent collection of the MoMA in New York.

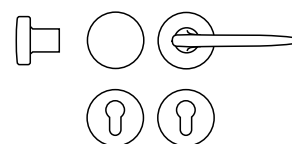
Order proposal:



Internal door furniture	
Lever handle	1058
Rose	1731
Escutcheon	1735



Bathroom furniture	
Lever handle	1058
Rose	1731
Roses WC	1735 0054



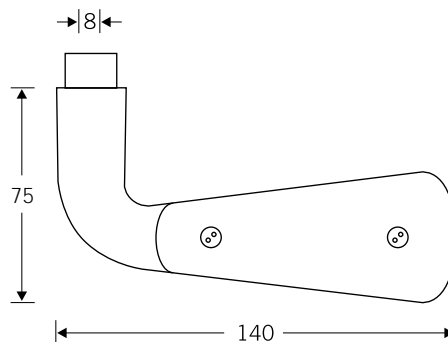
Entrance door furniture	
Lever-female part	1058
Rose	1731
Escutcheon	1735
Door knob	2329 06

Lever handle



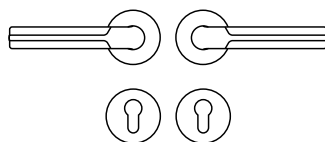
1069

Aluminium natural colour
anodised | black plastics

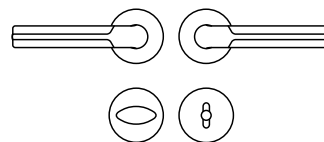


Nicholas Grimshaw's door handle design is notable for its easy readability. The grip appears to be saying 'to open please press'. The flattened bulk is clearly inviting the hand to envelop and operate it. The grip is as slender from the front as it is broad across the top. The silver aluminium layer that separates the top of the grip from the bottom lends the design a sense of great lightness.

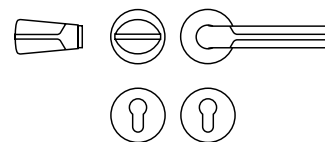
Order proposal:



Internal door furniture	
Lever handle	1069
Rose	1731
Escutcheon	1735



Bathroom furniture	
Lever handle	1069
Rose	1731
Roses WC	1735 6754



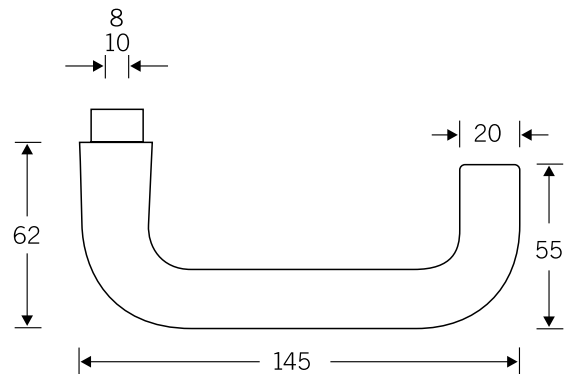
Entrance door furniture	
Lever-female part	1069
Rose	1731
Escutcheon	1735
Door knob	2369 06

Lever handle



1070

Aluminium
Stainless steel



What is there left to say about this particular design? Art historians report that it was a blacksmith of yore who fashioned the first tubular handle. In more recent times - in the 1920s - it was most likely the Wehag company that introduced the circular cross-section to architectural hardware. At about the same time the neighbouring Woelm company was launching an identical design it dubbed the 'stable door handle'.

FSB didn't leap onto the circular bandwagon until the 1970s, when the market was very well disposed to such moves. Lever handle model FSB 1070 has admittedly since found a powerful rival at home. We acquired the redesign habit from our friend Alessandro Mendini. With this approach, FSB 1070 has been redefined as the FSB 1146 model.

Order proposal:



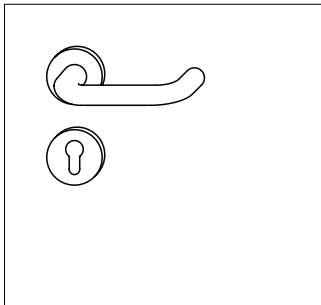
- Window handle 3421 p. 137
- Pull handles p. 315ff.
- Door stops p. 177ff.
- Lever handle for framed doors p. 428ff.
- Specification details p. 9

Project fittings

Fire door fittings*



Standard fittings



Internal door furniture
7270 13

Entrance door furniture
7270 12

Bathroom furniture
7270 15

Internal door furniture
7670 13

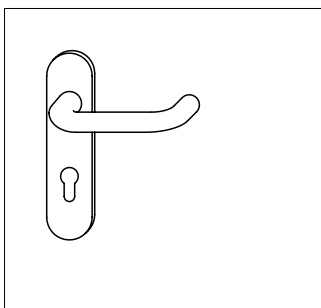
Entrance door furniture
7670 12

Inactive leaf furniture
7670 73
without escutcheon

Internal door furniture
1070 | 1731 | 1735

Entrance door furniture
1070 | 1731 | 1735 | 2302 06

Bathroom furniture
1070 | 1731 | 1735 0054



Internal door furniture
7270 04

Entrance door furniture
7270 05

Bathroom furniture
7270 06

Internal door furniture
7670 04

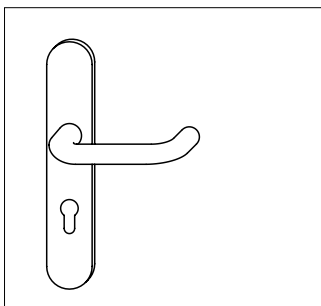
Entrance door furniture
7670 05

Inactive leaf furniture
7670 74
without keyhole

Internal door furniture
1070 | 1415

Entrance door furniture
1070 | 1415 | 1923

Bathroom furniture
1070 | 1415 0054



Internal door furniture
7270 39

Entrance door furniture
7270 40

Bathroom furniture
7270 41

Internal door furniture
7670 39

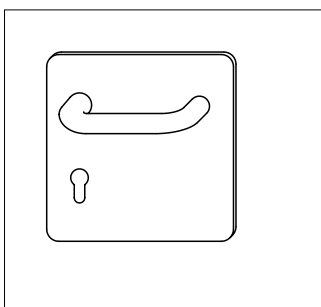
Entrance door furniture
7670 40

Inactive leaf furniture
7670 78
without keyhole

Internal door furniture
1070 | 1418

Entrance door furniture
1070 | 1418 | 1927

Bathroom furniture
1070 | 1418 0054



Internal door furniture
7270 16 r.h. | 7270 19 l.h.

Entrance door furniture
7270 27 r.h. | 7270 28 l.h.

Bathroom furniture
7270 18 r.h. | 7270 21 l.h.

Internal door furniture
7670 16 r.h. | 7670 19 l.h.

Entrance door furniture
7670 27 r.h. | 7670 28 l.h.

*acc. to German DIN 18 273

Entrance door furniture
with fixed knob:



Project and fire door fittings
feature roses or backplates
with concealed fixing. Item
numbers and dimensions of
roses and plates can be
ascertained using the table
on page 91.

Standard fittings feature con-
cealed fixing on roses and
visible fixing on plates.
Alternatives on pages 93-.

Lever handle

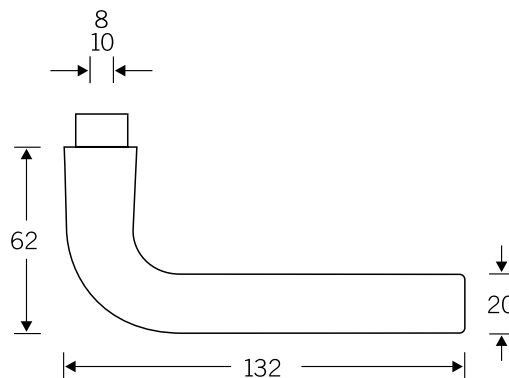
1

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1075

Aluminium
Stainless steel



The 1920s gave us three truly enduring door handle designs. In Paris, the architect Mallet-Stevens cut a tube in half and mitred it back together again (FSB 1076). The open end was rounded. In Vienna, meanwhile, the philosopher Ludwig Wittgenstein was busy bending a brass tube through 90 degrees (FSB 1147). He, too, rounded off the end. Messrs Gropius and Meyer, finally, yoked a square section shank to a circular grip (FSB 1102).

All three designs are still with us today. In fact, two and three times over as far as FSB is concerned, viz. the Frankfurt Model, Wittgenstein's handle and the Gropius/Meyer redesign by Alessandro Mendini. There's even a variation on the theme: Model FSB 1075. Someone had the bright idea of slicing off the round tip. That was the simple way FSB 1075 turned out.



Window handle 3422 p. 138
Pull handles p. 315ff.
Door stops p. 177ff.

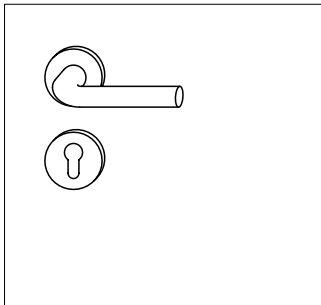
Specification details p. 9

Project fittings

Fire door fittings*



Standard fittings



Internal door furniture
7275 13

Entrance door furniture
7275 12

Bathroom furniture
7275 15

Internal door furniture
7675 13

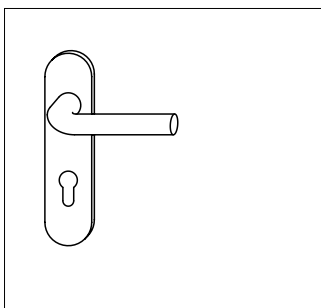
Entrance door furniture
7675 12

Inactive leaf furniture
7675 73
without escutcheon

Internal door furniture
1075 | 1731 | 1735

Entrance door furniture
1075 | 1731 | 1735 | 2302 06

Bathroom furniture
1075 | 1731 | 1735 0054



Internal door furniture
7275 04

Entrance door furniture
7275 05

Bathroom furniture
7275 06

Internal door furniture
7675 04

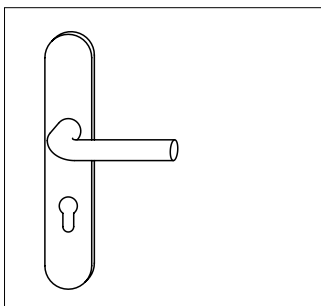
Entrance door furniture
7675 05

Inactive leaf furniture
7675 74
without keyhole

Internal door furniture
1075 | 1415

Entrance door furniture
1075 | 1415 | 1923

Bathroom furniture
1075 | 1415 0054



Internal door furniture
7275 39

Entrance door furniture
7275 40

Bathroom furniture
7275 41

Internal door furniture
7675 39

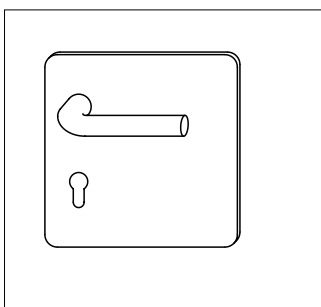
Entrance door furniture
7675 40

Inactive leaf furniture
7675 78
without keyhole

Internal door furniture
1075 | 1418

Entrance door furniture
1075 | 1418 | 1927

Bathroom furniture
1075 | 1418 0054



Internal door furniture
7275 16 r.h. | 7275 19 l.h.

Entrance door furniture
7275 27 r.h. | 7275 28 l.h.

Bathroom furniture
7275 18 r.h. | 7275 21 l.h.

Internal door furniture
7675 16 r.h. | 7675 19 l.h.

Entrance door furniture
7675 27 r.h. | 7675 28 l.h.

*acc. to German DIN 18 273

Entrance door furniture
with fixed knob:



Project and fire door fittings feature roses or backplates with concealed fixing. Item numbers and dimensions of roses and plates can be ascertained using the table on page 91.

Standard fittings feature concealed fixing on roses and visible fixing on plates. Alternatives on pages 93-.

Lever handle

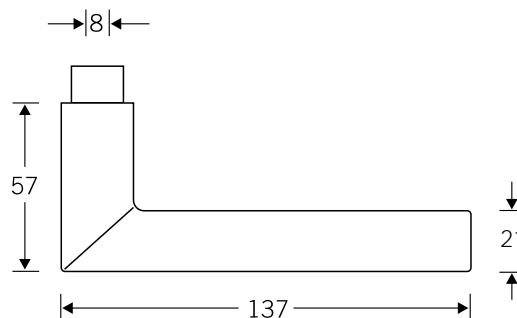
1

a



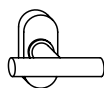
1076

Aluminium
Stainless steel



The architect Robert-Mallet Stevens (1886–1945) designed several blocks of flats in the Paris of the 1920s. He was probably the first designer to hit upon the idea of taking the tubular handle devised by the Viennese philosopher Ludwig Wittgenstein in the same decade, splitting it where it bends, and mitring it back together again at right angles.

They are now known as the 'FRANKFURT model', and there's a simple reason for this. They were rediscovered for the new Architecture Museum building in Frankfurt and soon took the market by storm.



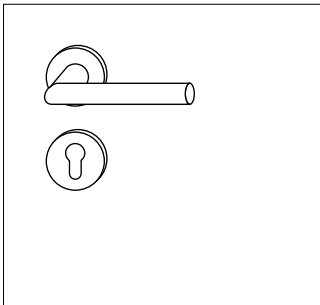
- Window handle 3403 p. 160
- Window handle 3476 p. 149
- Pull handles p. 315ff.
- Door stops p. 177ff.
- Lever handle for framed doors p. 428ff.
- Specification details p. 9

Project fittings

Fire door fittings*



Standard fittings



Internal door furniture
7276 13

Entrance door furniture
7276 14

Bathroom furniture
7276 15

Internal door furniture
7676 13

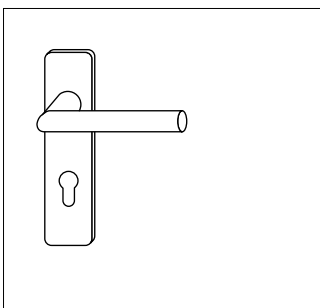
Entrance door furniture
7676 14

Inactive leaf furniture
7676 73
without escutcheon

Internal door furniture
1076 | 1731 | 1735

Entrance door furniture
1076 | 1731 | 1735 | 2329 06

Bathroom furniture
1076 | 1731 | 1735 0054



Internal door furniture
7276 01

Entrance door furniture
7276 02

Bathroom furniture
7276 03

Internal door furniture
7676 01

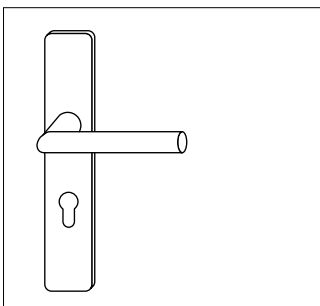
Entrance door furniture
7676 02

Inactive leaf furniture
7676 71
without keyhole

Internal door furniture
1076 | 1402

Entrance door furniture
1076 | 1402 | 1966

Bathroom furniture
1076 | 1402 0054



Internal door furniture
7276 09

Entrance door furniture
7276 10

Bathroom furniture
7276 11

Internal door furniture
7676 09

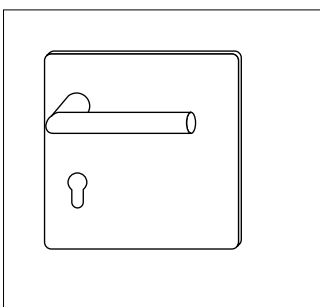
Entrance door furniture
7676 10

Inactive leaf furniture
7676 79
without keyhole

Internal door furniture
1076 | 1410

Entrance door furniture
1076 | 1410 | 1970

Bathroom furniture
1076 | 1410 0054



Internal door furniture
7276 16 r.h. | 7276 19 l.h.

Entrance door furniture
7276 17 r.h. | 7276 20 l.h.

Bathroom furniture
7276 18 r.h. | 7276 21 l.h.

Internal door furniture
7676 16 r.h. | 7676 19 l.h.

Entrance door furniture
7676 17 r.h. | 7676 20 l.h.

*acc. to German DIN 18 273

Entrance door furniture
with fixed knob:



Project and fire door fittings
feature roses or backplates
with concealed fixing. Item
numbers and dimensions of
roses and plates can be
ascertained using the table
on page 91.

Standard fittings feature con-
cealed fixing on roses and
visible fixing on plates.
Alternatives on pages 93-.

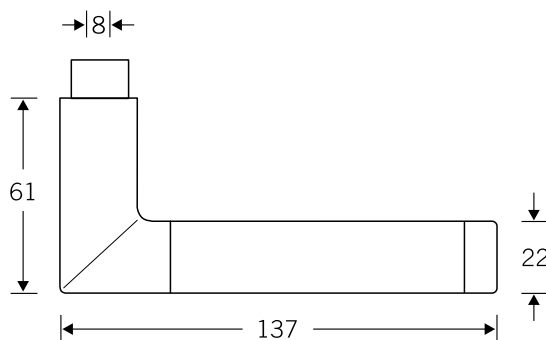
Lever handle

1
a



1077

Aluminium natural colour
anodised



The idea behind the FSB 1077 lever handle series was to give architects and end-users the opportunity to have a say in the choice of grip.

Illustrated here are the choices available. Cognoscenti will have spotted that the jazzy colours of yesteryear have made way for more subtle satin shades.

The following proven combinations await your order in FSB's stock range:

Aluminium natural colour
anodised
Grip stainless steel

Aluminium natural colour
anodised
Grip black



Window handle 3477 p. 150
Pull handles p. 315ff.
Door stops p. 177ff.

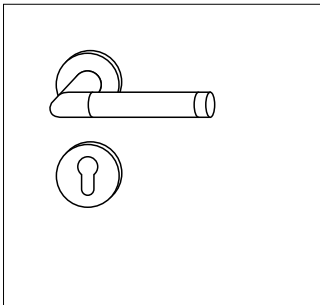
Specification details p. 9

Project fittings

Fire door fittings*



Standard fittings



Internal door furniture
7277 13

Entrance door furniture
7277 14

Bathroom furniture
7277 15

Internal door furniture
7677 13

Entrance door furniture
7677 14

Inactive leaf furniture
7677 73
without escutcheon

Internal door furniture
1077 | 1731 | 1735

Entrance door furniture
1077 | 1731 | 1735 | 2329 06

Bathroom furniture
1077 | 1731 | 1735 54

Grips for individuality



1300
white



8114
grey



1302
black



7582
brown



7584
anthracite



7585
green



7201
Terrazzo
black/grey



7202
Terrazzo
black/white



7215
Terrazzo
blue/beige

*acc. to German DIN 18 273

Entrance door furniture
with fixed knob:



A certain number of the handle grips illustrated here are held in stock, with continuous adjustments being made to reflect customer demand. Stocks can become depleted following a large order, and restocking can take up to twelve weeks. It is therefore advisable to plan orders well ahead of schedule.

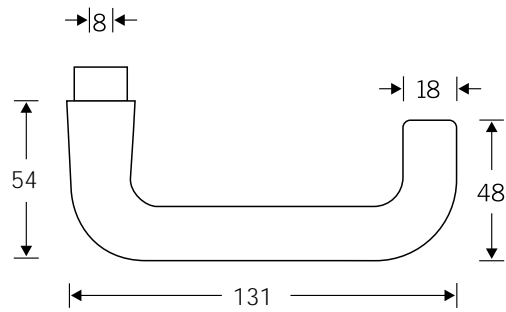
All handle grips illustrated are manufactured in DUROHORN®. The pigments used are non-fade. As with all plastics, rough contact with harder materials or sharp edges can lead to denting. This in no way impairs the operation or looks of the furniture.

Lever handle



1080

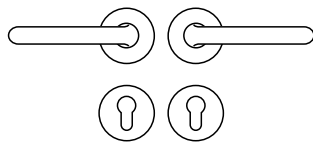
Aluminium
Stainless steel



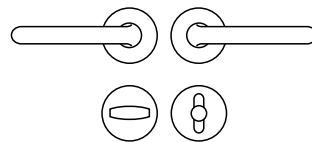
Much has been written about who invented the tubular design. Most probably it was some master craftsman way back when hammering steel tubing into a handle format on the anvil. The phrase 'horse stable handle' has long been common parlance - the end bent towards the door was presumably designed to prevent the bridle from snagging. Having served the animal world, it experienced a worldwide comeback in manifold materials and countless jazzed-up plastic colours a century later. That's the general background to this classical design.

There's no doubt who designed FSB 1080, though - none other than our during life anonymous designer Johannes Potente. His idea was to produce a shorter version suitable for domestic use. He was successful.

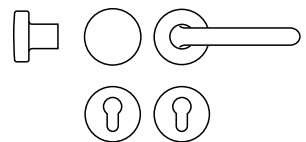
Order proposal:



Internal door furniture	
Lever handle	1080
Rose	1731
Escutcheon	1735



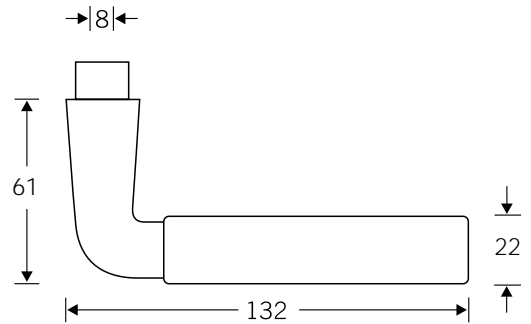
Bathroom furniture	
Lever handle	1080
Rose	1731
Roses WC	1735 0054



Entrance door furniture	
Lever-female part	1080
Rose	1731
Escutcheon	1735
Door knob	2329 06

Lever handle

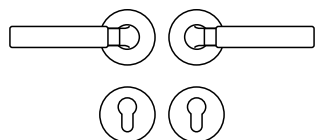
1082
Aluminium



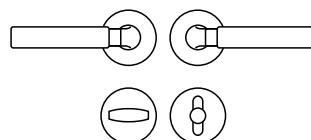
The notion of combining metal and wood in a lever handle took to the streets, as it were, in the early Eighties. For FSB, Johannes Potente conceived a solid metal shaft with a highly tactile tubular beech grip in light and dark versions. This unorthodox series was a great Fair success and has remained a consistent seller. The FSB programme would be inconceivable without it.

- Available in:
- Aluminium natural colour anodised
 - Dark wood handle
 - Aluminium dark bronze colour anodised
 - Light wood handle

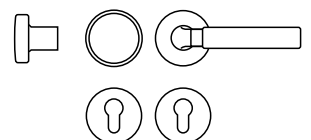
Order proposal:



Internal door furniture
Lever handle 1082
Rose 1731
Escutcheon 1735



Bathroom furniture
Lever handle 1082
Rose 1731
Roses WC 1735 0054



Entrance door furniture
Lever-female part 1082
Rose 1731
Escutcheon 1735
Door knob 2329 06

Lever handle

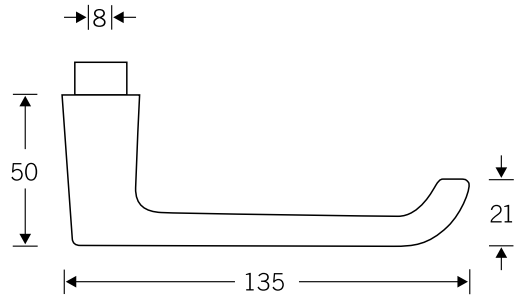
1

a



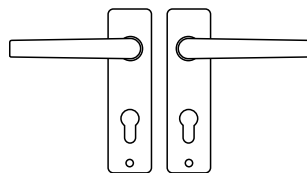
1086

Aluminium

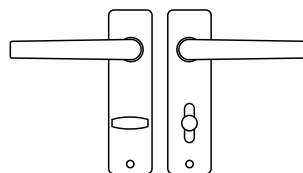


FSB 1086 has a typical 'practical shape'. These functional models are ideal where a lesser projection is required on the handle to accommodate shutters, blinds, etc. Of course it can be used as a regular pair of lever handles, too.

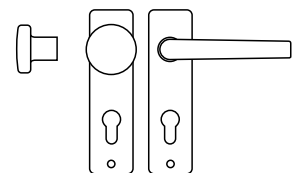
Order proposal:



Internal door furniture
Lever handle 1086
Backplate 1402



Bathroom furniture
Lever handle 1086
Backplates WC 1402 0054

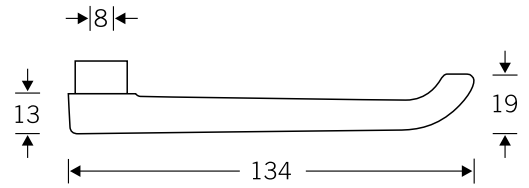


Entrance door furniture
Lever-female part 1086
Backplate 1402
Knob backplate 1966

Lever handle

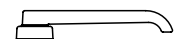
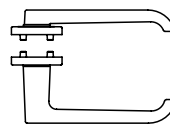


1087
Aluminium

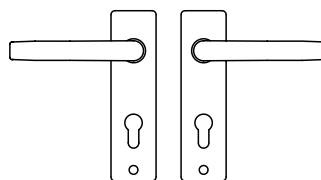


Variations of combination illustrated in the order proposal.

Order proposal:



1087
1086



Balcony lever set
Lever-female part 1086
Lever-male part 1087
Backplate 1402

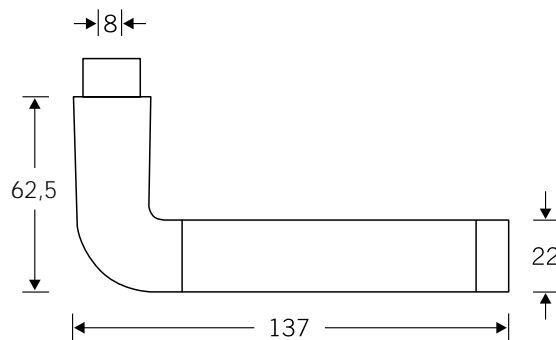
Lever handle for framed doors
0634 page 419

Lever handle



1089

Aluminium natural colour
anodised



The idea behind the FSB 1089 lever handle series was to give architects and end-users the opportunity to have a say in the choice of grip.

Illustrated here are the choices available. Cognoscenti will have spotted that the jazzy colours of yesteryear have made way for more subtle satin shades.

The following proven combinations await your order in FSB's stock range:

Aluminium natural colour
anodised
Grip stainless steel

Aluminium natural colour
anodised
Grip black



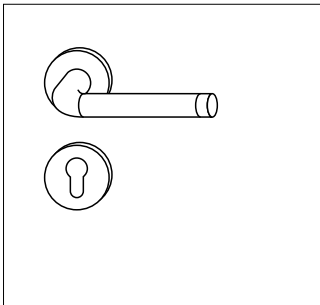
Window handle 3489	p. 150
Pull handles	p. 315ff.
Door stops	p. 177ff.
Lever handle for framed doors	p. 432ff.
Specification details	p. 9

Project fittings

Fire door fittings*



Standard fittings



Internal door furniture
7289 13

Entrance door furniture
7289 14

Bathroom furniture
7289 15

Internal door furniture
7689 13

Entrance door furniture
7689 14

Inactive leaf furniture
7689 73
without escutcheon

Internal door furniture
1089 | 1731 | 1735

Entrance door furniture
1089 | 1731 | 1735 | 2329 06

Bathroom furniture
1089 | 1731 | 1735 0054

Grips for individuality



1300
white



8114
grey



1302
black



7582
brown



7584
anthracite



7585
green



7201
Terrazzo
black/grey



7202
Terrazzo
black/white



7215
Terrazzo
blue/beige

*acc. to German DIN 18 273

Entrance door furniture
with fixed knob:



A certain number of the handle grips illustrated here are held in stock, with continuous adjustments being made to reflect customer demand. Stocks can become depleted following a large order, and re-stocking can take up to twelve weeks. It is therefore advisable to plan orders well ahead of schedule.

All handle grips illustrated are manufactured in DUROHORN®. The pigments used are non-fade. As with all plastics, rough contact with harder materials or sharp edges can lead to denting. This in no way impairs the operation or looks of the furniture.

Lever handle

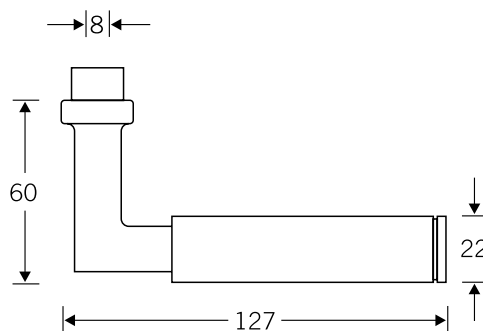
1

a



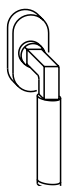
1102

Stainless steel



Model 1102 was produced by the Italian designer Alessandro Mendini, who contributed to the FSB Design Workshop by refashioning a familiar Gropius handle using new materials. So popular has Alessandro Mendini's 're-design' proved that there have been many requests for a stainless steel version. We're only too pleased to comply.

Shown on this page is the rugged version in stainless steel for heavily-used doors. The other variants are covered on the next page but one.



Window handle 3432 p. 141
 Pull handles p. 315ff.
 Door stops p. 177ff.

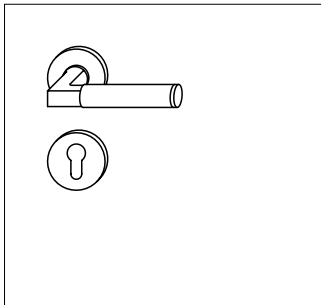
Specification details p. 9

Project fittings

Fire door fittings*



Standard fittings



Internal door furniture
7202 13

Entrance door furniture
7202 14

Bathroom furniture
7202 15

Internal door furniture
7602 13

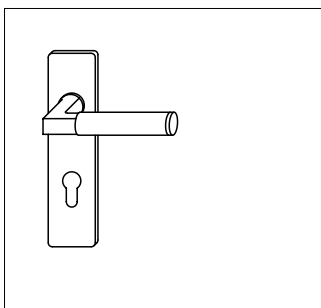
Entrance door furniture
7602 14

Inactive leaf furniture
7602 73
without escutcheon

Internal door furniture
1102 | 1731 | 1735

Entrance door furniture
1102 | 1731 | 1735 | 2329 06

Bathroom furniture
1102 | 1731 | 1735 0054



Internal door furniture
7202 01

Entrance door furniture
7202 02

Bathroom furniture
7202 03

Internal door furniture
7602 01

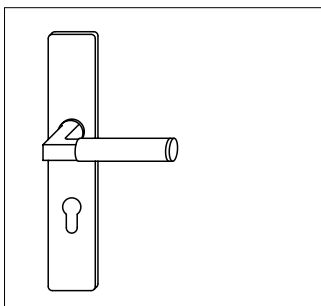
Entrance door furniture
7602 02

Inactive leaf furniture
7602 71
without keyhole

Internal door furniture
1102 | 1402

Entrance door furniture
1102 | 1402 | 1966

Bathroom furniture
1102 | 1402 0054



Internal door furniture
7202 09

Entrance door furniture
7202 10

Bathroom furniture
7202 11

Internal door furniture
7602 09

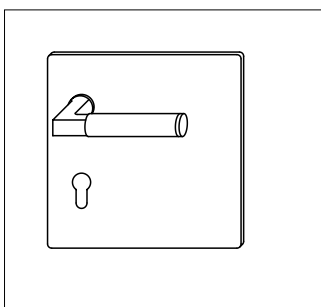
Entrance door furniture
7602 10

Inactive leaf furniture
7602 79
without keyhole

Internal door furniture
1102 | 1410

Entrance door furniture
1102 | 1410 | 1970

Bathroom furniture
1102 | 1410 0054



Internal door furniture
7202 16 r.h. | 7202 19 l.h.

Entrance door furniture
7202 17 r.h. | 7202 20 l.h.

Bathroom furniture
7202 18 r.h. | 7202 21 l.h.

Internal door furniture
7602 16 r.h. | 7602 19 l.h.

Entrance door furniture
7602 17 r.h. | 7602 20 l.h.

*acc. to German DIN 18 273

Entrance door furniture
with fixed knob:



Project and fire door fittings
feature roses or backplates
with concealed fixing. Item
numbers and dimensions of
roses and plates can be
ascertained using the table
on page 91.

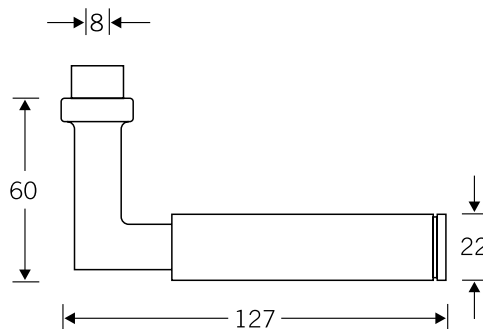
Standard fittings feature con-
cealed fixing on roses and
visible fixing on plates.
Alternatives on pages 93-.

Lever handle



1102

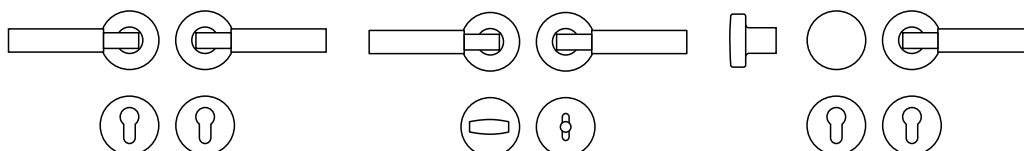
Aluminium natural colour
anodised



The redesign of the Gropius handle by the Italian design philosopher Alessandro Mendini is available from FSB in natural anodised aluminium or with black grip sections. No other grips are authorised by Alessandro Mendini.

Available in:
Aluminium natural colour anodised
Aluminium natural colour anodised black DUROHORN® handle

Order proposal:



Internal door furniture
Lever handle 1102
Rose 1731
Escutcheon 1735

Bathroom furniture
Lever handle 1102
Rose 1731
Roses WC 1735 0054

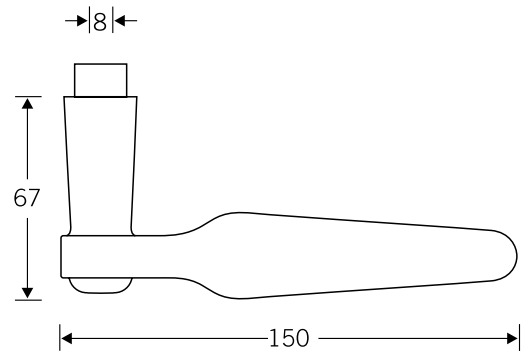
Entrance door furniture
Lever-female part 1102
Rose 1731
Escutcheon 1735
Door knob 2329 06

Lever handle



1103

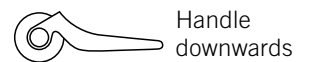
Aluminium natural colour
anodised



The FSB 1103 lever handle by Hans Hollein is shaped to the hand in classical FSB fashion. Hans Hollein incorporated two specific principles into this model: Firstly, he wanted to keep the user's hand well clear of the edge of the door. Hence the stagger between the point of pivot and the grip. Secondly, he wanted to offer a choice of either upward or downward lever position, thus lending the door a flexible identity.

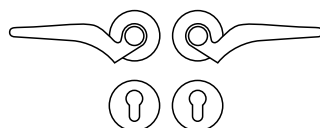


Handle upwards

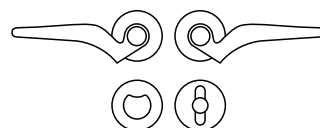


Handle downwards

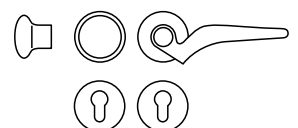
Order proposal:



Internal door furniture
Lever handle 1103
Rose 1707
Escutcheon 1708

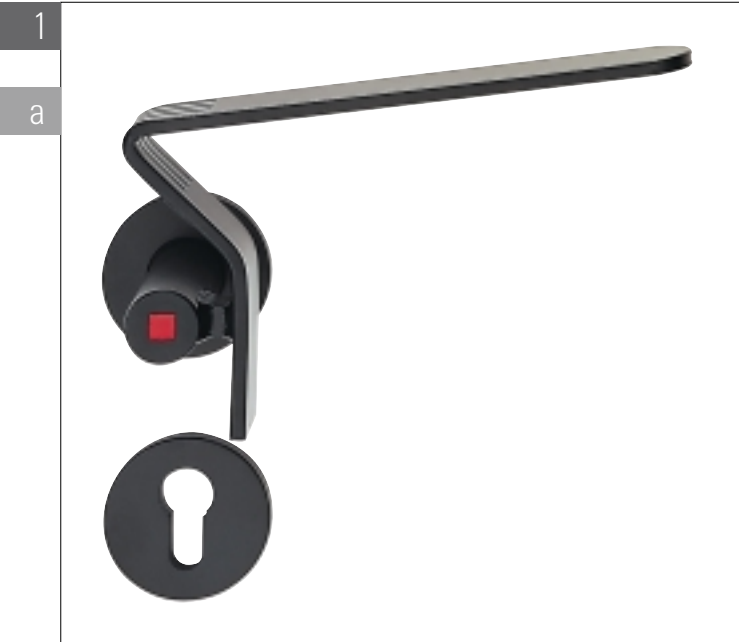


Bathroom furniture
Lever handle 1103
Rose 1707
Roses WC 1708 7554

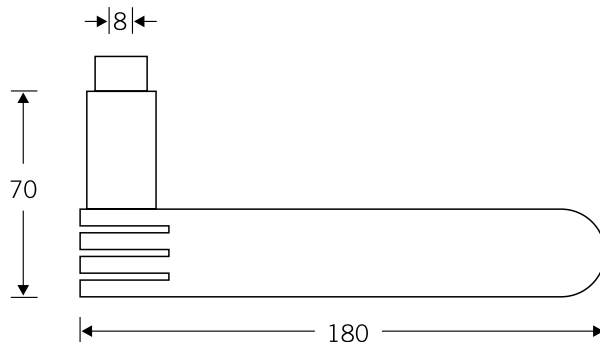


Entrance door furniture
Lever-female part 1103
Rose 1707
Escutcheon 1708
Door knob 2380 06

Lever handle

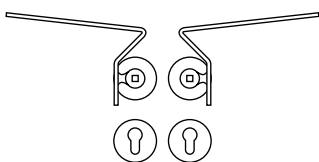


1104
Steel black coated



With FSB 1104, Mario Botta sought to highlight the fact that, to open a door, the human hand requires an implement. The planning of this model was guided by the realisation that opening a door brings together an organic component, viz. the human hand, and a mechanical component, viz. the door furniture. Mario Botta marked the heart of his 'Calvinist' offering with a small square. The material used is black-coated steel.

Order proposal:

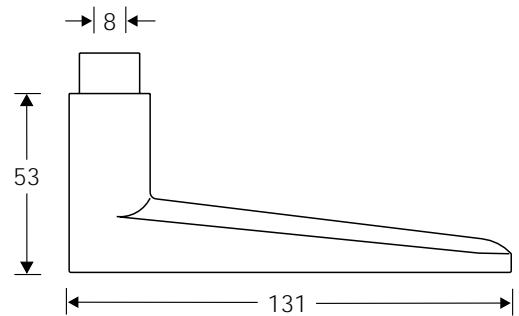


Internal door furniture	
Lever handle	1104
Rose	1731
Escutcheon	1735

Lever handle

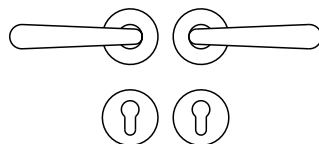


1105
Aluminium

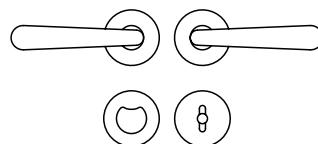


Once again, Hartmut Weise proves with the design of FSB 1105 that less is often more. His FSB featherweight lever handle series has been augmented by a further unfussy model for doors and windows. Its symmetrical form simply calls out to be gripped. These easy-to-grasp manual and visual qualities are echoed in a sensitively fashioned window fastener.

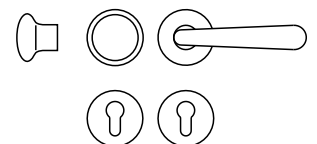
Order proposal:



Internal door furniture
Lever handle 1105
Rose 1707
Escutcheon 1708



Bathroom furniture
Lever handle 1105
Rose 1707
Roses WC 1708 7554



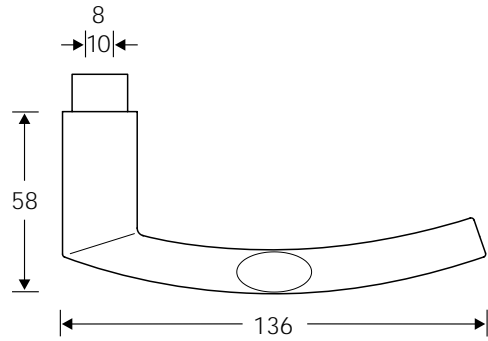
Entrance door furniture
Lever-female part 1105
Rose 1707
Escutcheon 1708
Door knob 2380 06

Lever handle



1107

Aluminium
Stainless steel



FSB 1107 has close affinities with FSB 1108. Hartmut Weise has imbued his 'Brakel light-weight' model with the verve of a door in motion.



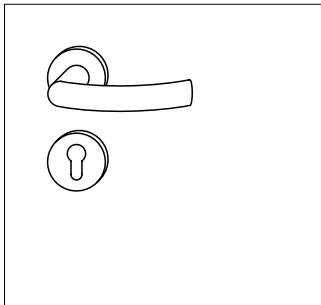
Window handle 3440	p. 135
Pull handles	p. 315ff.
Door stops	p. 177ff.
Lever handle for framed doors	p. 426ff.
Specification details	p. 9

Project fittings

Fire door fittings*



Standard fittings



Internal door furniture
7240 63

Entrance door furniture
7240 62

Bathroom furniture
7240 65

Internal door furniture
7640 63

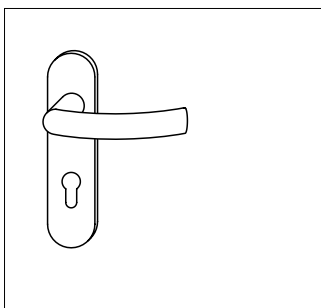
Entrance door furniture
7640 62

Inactive leaf furniture
7640 72
without escutcheon

Internal door furniture
1107 | 1707 | 1708

Entrance door furniture
1107 | 1707 | 1708 | 2380 06

Bathroom furniture
1107 | 1707 | 1708 7554



Internal door furniture
7240 04

Entrance door furniture
7240 05

Bathroom furniture
7240 06

Internal door furniture
7640 04

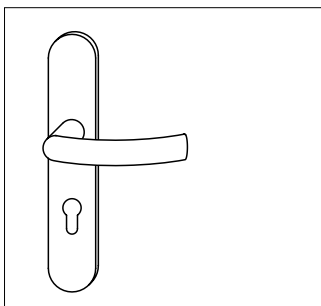
Entrance door furniture
7640 05

Inactive leaf furniture
7640 74
without keyhole

Internal door furniture
1107 | 1415

Entrance door furniture
1107 | 1415 | 1923

Bathroom furniture
1107 | 1415 0054



Internal door furniture
7240 39

Entrance door furniture
7240 40

Bathroom furniture
7240 41

Internal door furniture
7640 39

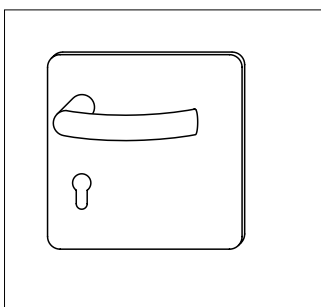
Entrance door furniture
7640 40

Inactive leaf furniture
7640 78
without keyhole

Internal door furniture
1107 | 1418

Entrance door furniture
1107 | 1418 | 1927

Bathroom furniture
1107 | 1418 0054



Internal door furniture
7240 16 r.h. | 7240 19 l.h.

Entrance door furniture
7240 27 r.h. | 7240 28 l.h.

Bathroom furniture
7240 18 r.h. | 7240 21 l.h.

Internal door furniture
7640 16 r.h. | 7640 19 l.h.

Entrance door furniture
7640 27 r.h. | 7640 28 l.h.

*acc. to German DIN 18 273

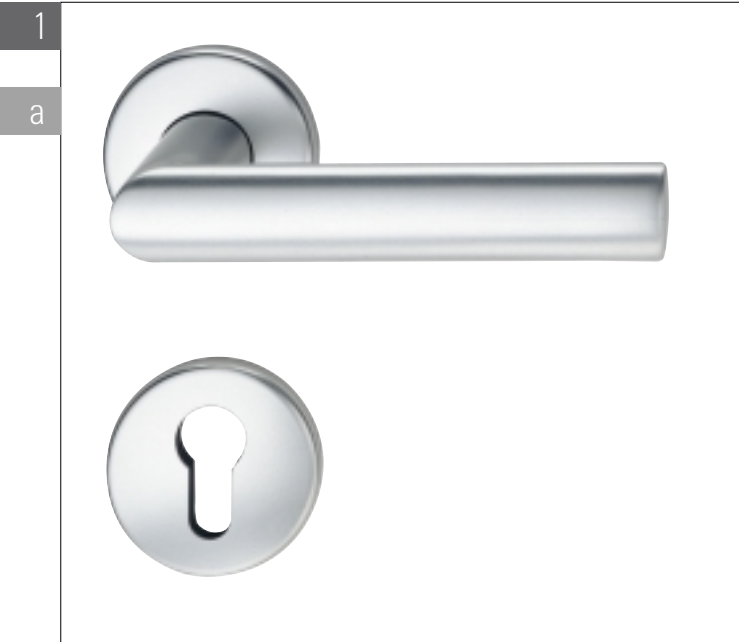
Entrance door furniture
with fixed knob:



Project and fire door fittings
feature roses or backplates
with concealed fixing. Item
numbers and dimensions of
roses and plates can be
ascertained using the table
on page 91.

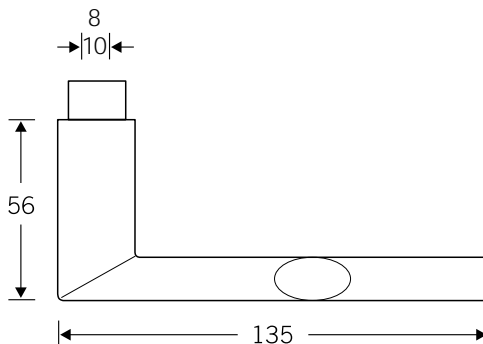
Standard fittings feature con-
cealed fixing on roses and
visible fixing on plates.
Alternatives on pages 93-.

Lever handle



1108

Aluminium
Stainless steel



FSB designer Hartmut Weise has long been wondering where the secret of the two popular door handles 'Wittgenstein's Handle' and 'Frankfurt Model' can lie. Then one day he hit upon the term 'unpretentious presence' to sum up the outcome of his deliberations.

Spurred on by this analysis, Hartmut Weise resolved to place an even more chaste variant on the decision-making table:

Round tubing is mitred to an oval grip at right angles. The 'Frankfurt heavyweight' is instantly transformed into an elegant 'Brakel featherweight' without in any way having sacrificed the unpretentious presence of the former.



Window handle 3409 p. 135
Pull handles p. 315ff.
Door stops p. 177ff.

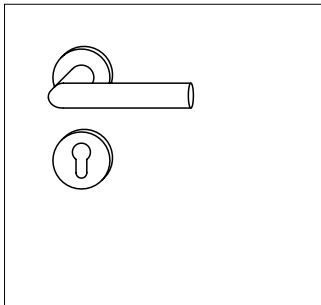
Specification details p. 9

Project fittings

Fire door fittings*



Standard fittings



Internal door furniture
7242 63

Entrance door furniture
7242 62

Bathroom furniture
7242 65

Internal door furniture
7642 63

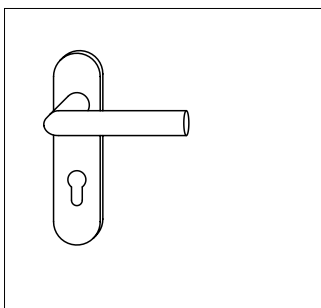
Entrance door furniture
7642 62

Inactive leaf furniture
7642 72
without escutcheon

Internal door furniture
1108 | 1707 | 1708

Entrance door furniture
1108 | 1707 | 1708 | 2380 06

Bathroom furniture
1108 | 1707 | 1708 7554



Internal door furniture
7242 04

Entrance door furniture
7242 05

Bathroom furniture
7242 06

Internal door furniture
7642 04

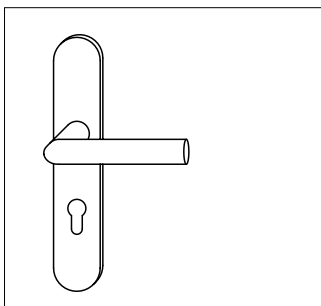
Entrance door furniture
7642 05

Inactive leaf furniture
7642 74
without keyhole

Internal door furniture
1108 | 1415

Entrance door furniture
1108 | 1415 | 1923

Bathroom furniture
1108 | 1415 0054



Internal door furniture
7242 39

Entrance door furniture
7242 40

Bathroom furniture
7242 41

Internal door furniture
7642 39

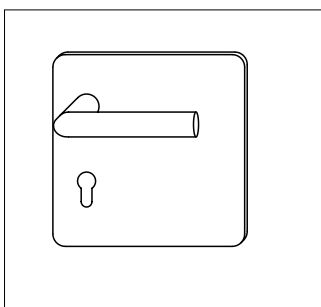
Entrance door furniture
7642 40

Inactive leaf furniture
7642 78
without keyhole

Internal door furniture
1108 | 1418

Entrance door furniture
1108 | 1418 | 1927

Bathroom furniture
1108 | 1418 0054



Internal door furniture
7242 16 r.h. | 7242 19 l.h.

Entrance door furniture
7242 27 r.h. | 7242 28 l.h.

Bathroom furniture
7242 18 r.h. | 7242 21 l.h.

Internal door furniture
7642 16 r.h. | 7642 19 l.h.

Entrance door furniture
7642 27 r.h. | 7642 28 l.h.

*acc. to German DIN 18 273

Entrance door furniture
with fixed knob:



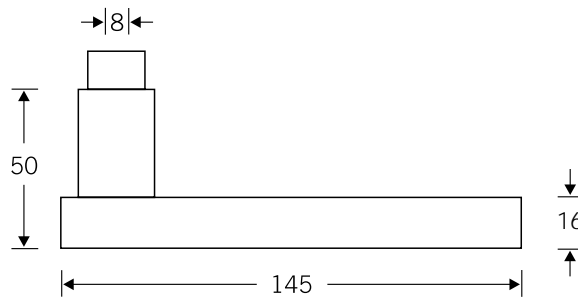
Project and fire door fittings
feature roses or backplates
with concealed fixing. Item
numbers and dimensions of
roses and plates can be
ascertained using the table
on page 91.

Standard fittings feature con-
cealed fixing on roses and
visible fixing on plates.
Alternatives on pages 93-.

Lever handle



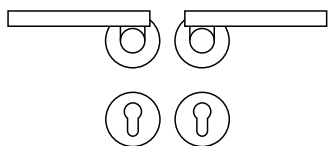
1114
Stainless steel



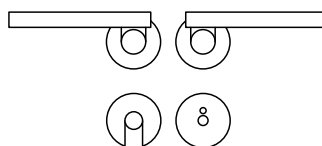
Richard Rogers commissioned his colleague Laurence Abbott and a team headed by Florian Fischötter to come up with a lever handle design with a difference. The brief foresaw an elegant stainless steel hardware collection whose individual constituents would be immediately discernible to the human eye. This far from easy task was achieved with aplomb with door handle model FSB 1114.

A stainless steel bar 16 mm in diameter floats airily above a pivot to which it is connected by means of a heavy-duty shackle. Sporting the looks of a mechanical lever, this is a no-nonsense tool for opening closed doors.

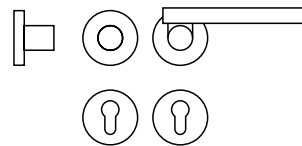
Order proposal:



Internal door furniture
Lever handle 1114
Rose 1731
Escutcheon 1735

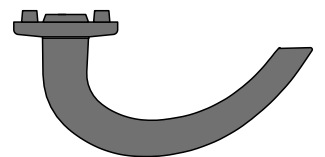
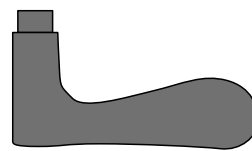
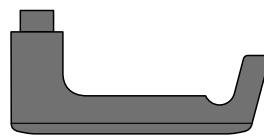
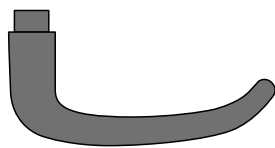
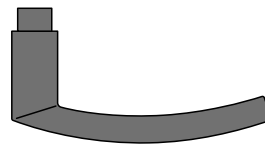
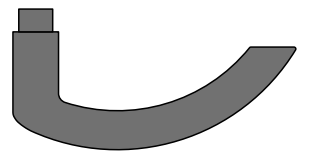


Bathroom furniture
Lever handle 1114
Rose 1731
Roses WC 1735 6854



Entrance door furniture
Lever-female part 1114
Rose 1731
Escutcheon 1735
Door knob 2314 06

Selection of closed shapes



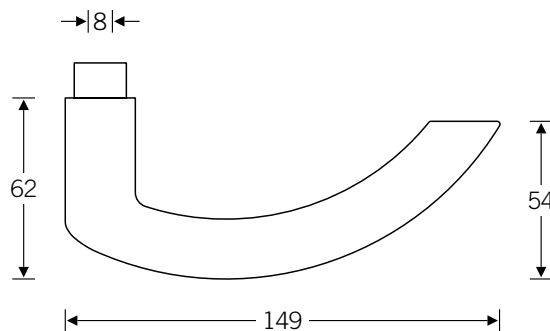
Lever handle

1
a



1119

Aluminium
Stainless steel



FSB 1119 is the heavy-duty member of the light series. It augments the design's graceful lightness with the ruggedness required for doors in constant use. Hands and elbows are dependably guided into the operating position. Its end curves gently back towards the leaf of the door. This handle was designed by Hartmut Weise.

Lever handle for framed doors p. 425ff.

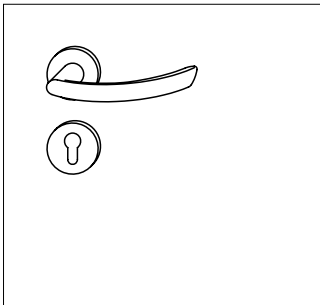
Specification details p. 9

Project fittings

Fire door fittings*



Standard fittings



Internal door furniture
7219 13

Entrance door furniture
7219 12

Bathroom furniture
7219 15

Internal door furniture
7619 13

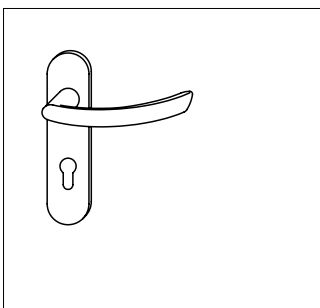
Entrance door furniture
7619 12

Inactive leaf furniture
7619 73
without escutcheon

Internal door furniture
1119 | 1731 | 1735

Entrance door furniture
1119 | 1731 | 1735 | 2302 06

Bathroom furniture
1119 | 1731 | 1735 54



Internal door furniture
7219 04

Entrance door furniture
7219 05

Bathroom furniture
7219 06

Internal door furniture
7619 04

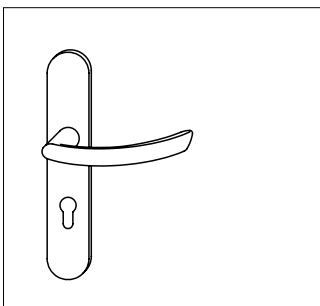
Entrance door furniture
7619 05

Inactive leaf furniture
7619 74
without keyhole

Internal door furniture
1119 | 1415

Entrance door furniture
1119 | 1415 | 1923

Bathroom furniture
1119 | 1415 0054



Internal door furniture
7219 39

Entrance door furniture
7219 40

Bathroom furniture
7219 41

Internal door furniture
7619 39

Entrance door furniture
7619 40

Inactive leaf furniture
7619 78
without keyhole

Internal door furniture
1119 | 1418

Entrance door furniture
1119 | 1418 | 1927

Bathroom furniture
1119 | 1418 0054

*acc. to German DIN 18 273

Entrance door furniture
with fixed knob:



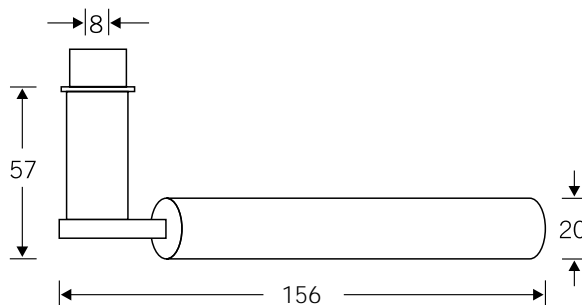
Project and fire door fittings feature roses or backplates with concealed fixing. Item numbers and dimensions of roses and plates can be ascertained using the table on page 91.

Standard fittings feature concealed fixing on roses and visible fixing on plates. Alternatives on pages 93-.

Lever handle

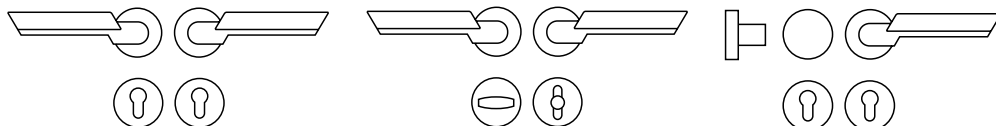


1125
Stainless steel



FSB 1125 is one of three models top Austrian architect Hans Hollein brought along to our Design Workshop in 1986. All three were included in the book 'Door Handles: Workshop in Brakel'. Since that publication, we have often been asked by readers why we only adopted Hollein's handle FSB 1103 and not his equally attractive stainless steel handle. We had made good that omission.

Order proposal:



Internal door furniture
Lever handle 1125
Rose 1731
Escutcheon 1735

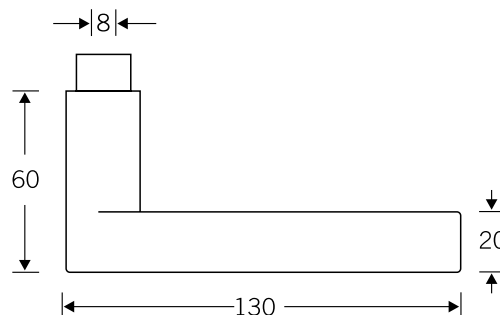
Bathroom furniture
Lever handle 1125
Rose 1731
Roses WC 1735 0054

Entrance door furniture
Lever-female part 1125
Rose 1731
Escutcheon 1735
Door knob 2329 06

Lever handle



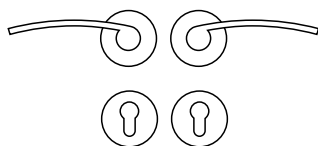
1126
Stainless steel



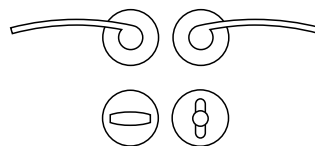
When the Spanish designer Miguel Milá suggested that we make a gently arching lever handle from a flat steel hoop, we first thought Milá was resurrecting a form familiar from the work of Wilhelm Wagenfeld and his followers.

But we were to discover that, by grace of its organic curvature, Miguel Milá's steel handle boasted hitherto unknown formal properties. His design is an inventive re-interpretation of an old motif, the fusing of a round shank and a flat steel band into a single entity.

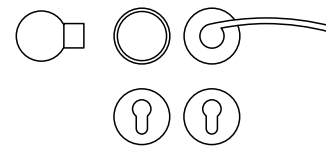
Order proposal:



Internal door furniture
Lever handle 1126
Rose 1731
Escutcheon 1735



Bathroom furniture
Lever handle 1126
Rose 1731
Roses WC 1735 0054

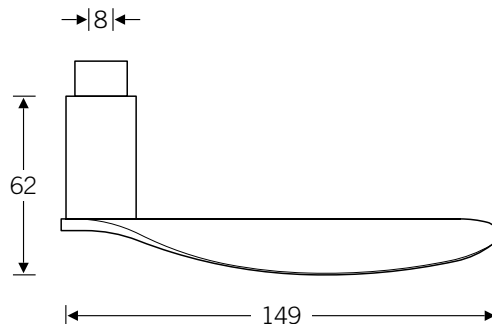


Entrance door furniture
Lever-female part 1126
Rose 1731
Escutcheon 1735
Door knob 2302 06

Lever handle



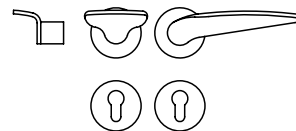
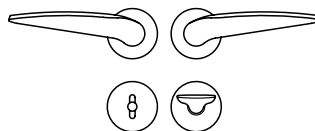
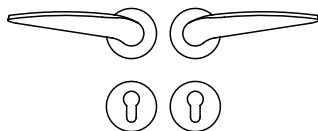
1127
Stainless steel



The shape of door handle model FSB 1127 evokes the wing-beat of a gull. The slender contours of the folded stainless steel sheeting give the hand plenty to grip on, and quite as if by chance the thumb also slips nicely into place. This is an unpretentious design offering its services as a hand tool for the opening and closing of doors. That's design Erik Magnussen all over.

Lever handle design FSB 1127, shown here with round roses, can also be combined with the long narrow backplate FSB 1432.

Order proposal:



Internal door furniture	
Lever handle	1127
Rose	1707
Escutcheon	1708

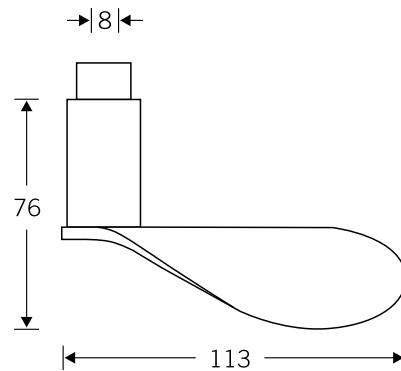
Bathroom furniture	
Lever handle	1127
Rose	1707
Roses WC	1708 7054

Entrance door furniture	
Lever-female part	1127
Rose	1707
Escutcheon	1708
Door knob	2357 06

Lever handle

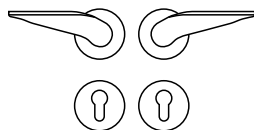


1128
Stainless steel

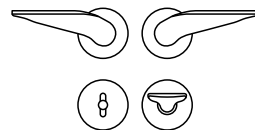


To the 'large wing-beat' of his first door handle Mr. Magnussen has added a smaller version, FSB 1128. His wife Jonna, when asked what she thought of the original design, argued that a more petite model was also needed. The grip is shorter and fuller, though the term 'grip' scarcely does it justice; this is truly a tactile delight the hand will not want to let go.

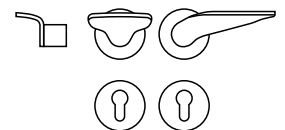
Order proposal:



Internal door furniture
Lever handle 1128
Rose 1707
Escutcheon 1708



Bathroom furniture
Lever handle 1128
Rose 1707
Roses WC 1708 7054



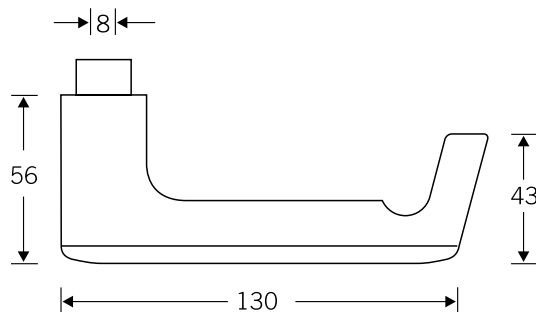
Entrance door furniture
Lever-female part 1128
Rose 1707
Escutcheon 1708
Door knob 2357 06

Lever handle



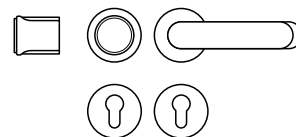
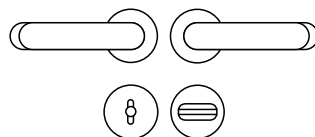
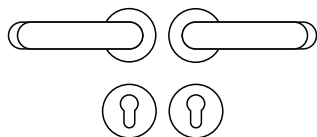
1137

Aluminium grey
Thermoplastics black



In FSB 1137, the working parts and the front section are in grey aluminium whereas the grip is in black thermoplastics. What really sets this unpretentious safety handle apart (a handle that won't slip up your sleeve!) is its 'little finger recess', which provides the hand with sufficient purchase despite extreme economies of space. Less tends to be more as designer Dieter Rams sees it.

Order proposal:



Standard fittings
Fire door fittings*

* acc. to German DIN Standard

Internal door furniture
1137 | 1740 | 1741
7637 13

Bathroom furniture
1137 | 1740 | 1741 0054

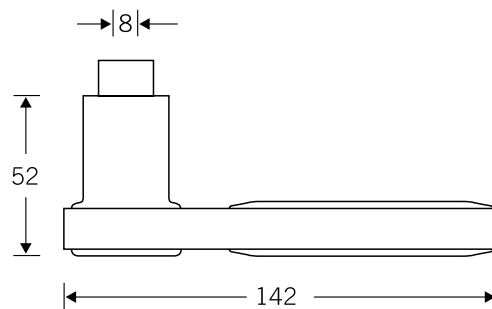
Entrance door furniture
1137 | 1740 | 1741 | 2376 06
7637 14

Lever handle



1138

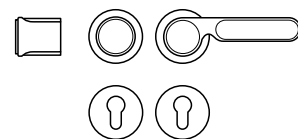
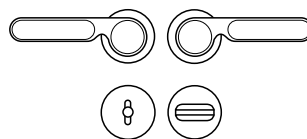
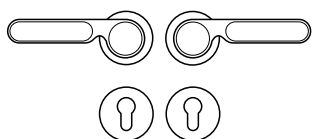
Aluminium grey
Thermoplastics black



The qualities Dieter Rams demands of design are simplicity, lightness, and the incorporation of what readily springs to mind. His own work faithfully puts these demands to effect, as is graphically demonstrated by FSB 1138.

FSB 1138 is endowed with a sturdy round aluminium neck that is effectively the lynchpin of the piece. The black grip section in thermoplastics features a clearly discernible index finger recess.

Order proposal:



Standard fittings
Fire door fittings*
* acc. to German DIN Standard

Internal door furniture
1138 | 1740 | 1741
7638 13

Bathroom furniture
1138 | 1740 | 1741 0054

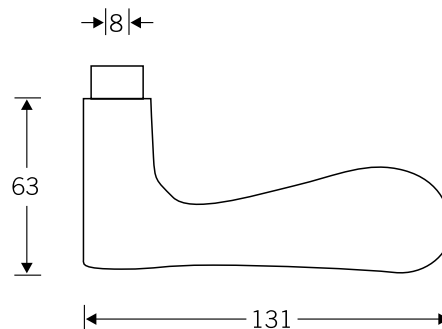
Entrance door furniture
1138 | 1740 | 1741 | 2376 06
7638 44 r.h.
7638 54 l.h.

Lever handle



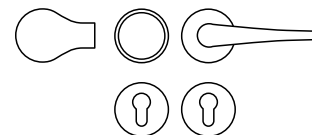
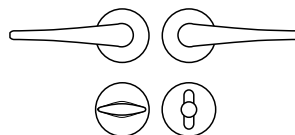
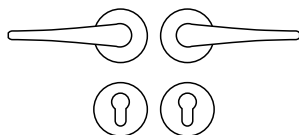
1144

Aluminium natural colour
anodised



FSB 1144 is a lever handle styled to appeal to eye and hand in equal measure. The message the eye receives from Jasper Morrison's design is that this handle is a hand-operated device for opening doors. Reassured, the hand reaches out. The thumb comes to rest; the index settles in its recess; the hand clenches to give a firm grip. All the good-grip criteria identified by Otl Aicher and ourselves have been met.

Order proposal:



Standard fittings
Fire door fittings*

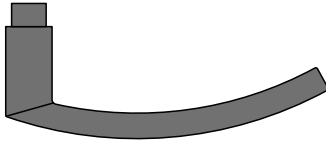
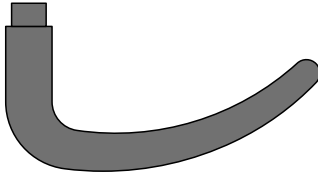
* acc. to German DIN Standard

Internal door furniture
1144 | 1731 | 1735
7644 13

Bathroom furniture
1144 | 1731 | 1735 6054

Entrance door furniture
1144 | 1731 | 1735 | 2374 06
7644 14

Selection XXL >150 mm

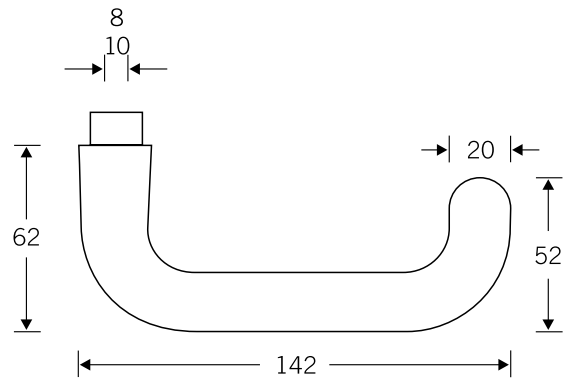


Lever handle



1146

Aluminium
Stainless steel



Much has been written about who actually invented the tubular design. Most probably it was some master craftsman in the mists of time hammering steel tubing into a rudimentary handle on his anvil. He had very likely been commissioned to produce a handle that would prevent animals' harnesses snagging on doors. The disparaging phrase 'stable door handle' has long been common parlance. Having served the animal world well, the handle came back in an array of material and colours a century later to adorn doors for human use the world over.

That's the general background to this classic design. But FSB felt the time had come to take tubular design a stage further. The shank was made to taper, the arching free end given a spherical tip. Only two very simple features have lent the FSB 1146 model greater individuality with this reworking. Isn't it strange? FSB 1146 gets copied more and more.



Window handle 3446 p. 137
Pull handles p. 315ff.
Door stops p. 177ff.

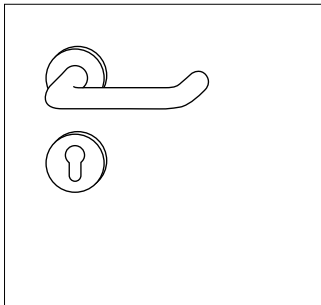
Specification details p. 9

Project fittings

Fire door fittings*



Standard fittings



Internal door furniture
7246 13

Entrance door furniture
7246 12

Bathroom furniture
7246 15

Internal door furniture
7646 13

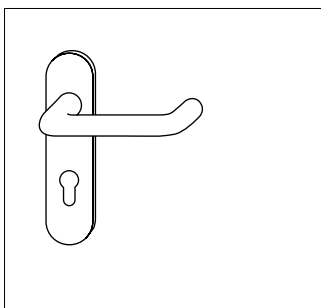
Entrance door furniture
7646 12

Inactive leaf furniture
7646 73
without escutcheon

Internal door furniture
1146 | 1731 | 1735

Entrance door furniture
1146 | 1731 | 1735 | 2302 06

Bathroom furniture
1146 | 1731 | 1735 0054



Internal door furniture
7246 04

Entrance door furniture
7246 05

Bathroom furniture
7246 06

Internal door furniture
7646 04

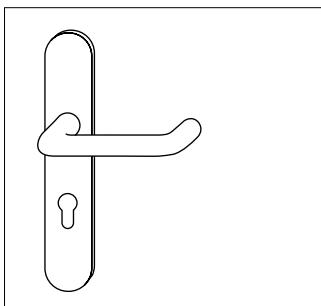
Entrance door furniture
7646 05

Inactive leaf furniture
7646 74
without keyhole

Internal door furniture
1146 | 1415

Entrance door furniture
1146 | 1415 | 1923

Bathroom furniture
1146 | 1415 0054



Internal door furniture
7246 39

Entrance door furniture
7246 40

Bathroom furniture
7246 41

Internal door furniture
7646 39

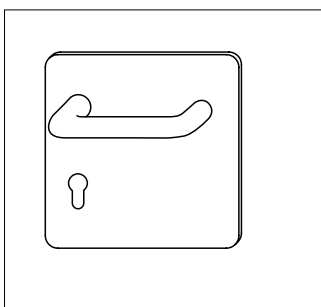
Entrance door furniture
7646 40

Inactive leaf furniture
7646 78
without keyhole

Internal door furniture
1146 | 1418

Entrance door furniture
1146 | 1418 | 1927

Bathroom furniture
1146 | 1418 0054



Internal door furniture
7246 16 r.h. | 7246 19 l.h.

Entrance door furniture
7246 27 r.h. | 7246 28 l.h.

Bathroom furniture
7246 18 r.h. | 7246 21 l.h.

Internal door furniture
7646 16 r.h. | 7646 19 l.h.

Entrance door furniture
7646 27 r.h. | 7646 28 l.h.

*acc. to German DIN 18 273

Entrance door furniture
with fixed knob:



Project and fire door fittings feature roses or backplates with concealed fixing. Item numbers and dimensions of roses and plates can be ascertained using the table on page 91.

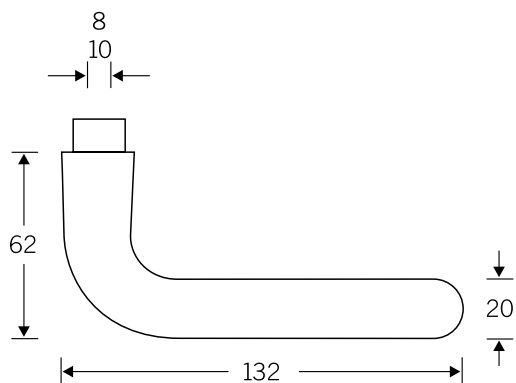
Standard fittings feature concealed fixing on roses and visible fixing on plates. Alternatives on pages 93-.

Lever handle



1147

Aluminium
Stainless steel



The company motif draws on a door handle designed in mid-Twenties' Vienna by the Austrian philosopher Ludwig Wittgenstein that has served as a model for several designs since, including the reworked FSB 1147 handle in this catalogue. It should replace the standard 1075 model.

Its tapered neck and rounded end set it apart from both our own company motif and the many other variants of this handle on the market.



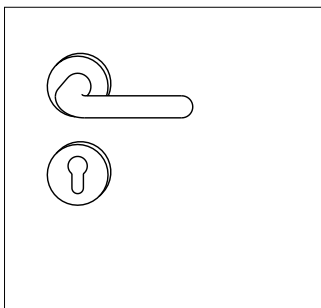
Window handle 3447	p. 138
Pull handles	p. 315ff.
Door stops	p. 177ff.
Lever handle for framed doors	p. 428ff.
Specification details	p. 9

Project fittings

Fire door fittings*



Standard fittings



Internal door furniture
7247 13

Entrance door furniture
7247 12

Bathroom furniture
7247 15

Internal door furniture
7647 13

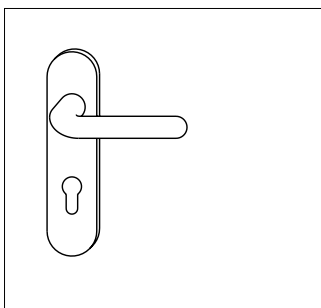
Entrance door furniture
7647 12

Inactive leaf furniture
7647 73
without escutcheon

Internal door furniture
1147 | 1731 | 1735

Entrance door furniture
1147 | 1731 | 1735 | 2302 06

Bathroom furniture
1147 | 1731 | 1735 0054



Internal door furniture
7247 04

Entrance door furniture
7247 05

Bathroom furniture
7247 06

Internal door furniture
7647 04

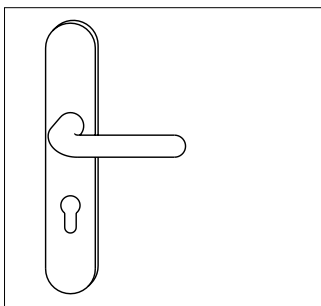
Entrance door furniture
7647 05

Inactive leaf furniture
7647 74
without keyhole

Internal door furniture
1147 | 1415

Entrance door furniture
1147 | 1415 | 1923

Bathroom furniture
1147 | 1415 0054



Internal door furniture
7247 39

Entrance door furniture
7247 40

Bathroom furniture
7247 41

Internal door furniture
7647 39

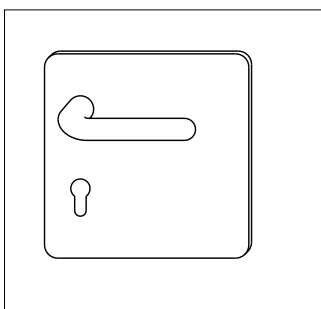
Entrance door furniture
7647 40

Inactive leaf furniture
7647 78
without keyhole

Internal door furniture
1147 | 1418

Entrance door furniture
1147 | 1418 | 1927

Bathroom furniture
1147 | 1418 0054



Internal door furniture
7247 16 r.h. | 7247 19 l.h.

Entrance door furniture
7247 27 r.h. | 7247 28 l.h.

Bathroom furniture
7247 18 r.h. | 7247 21 l.h.

Internal door furniture
7647 16 r.h. | 7647 19 l.h.

Entrance door furniture
7647 27 r.h. | 7647 28 l.h.

*acc. to German DIN 18 273

Entrance door furniture
with fixed knob:



Project and fire door fittings feature roses or backplates with concealed fixing. Item numbers and dimensions of roses and plates can be ascertained using the table on page 91.

Standard fittings feature concealed fixing on roses and visible fixing on plates. Alternatives on pages 93-.

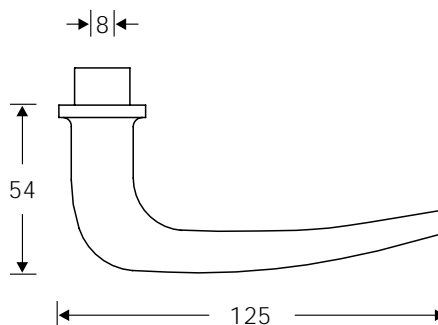
Lever handle

1
a



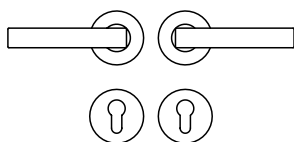
1163

Aluminium natural colour
anodised
Stainless steel

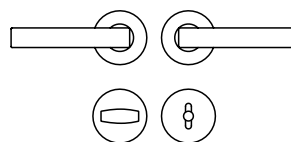


The Berlin-based architect Hans Kollhoff devised a handle design for his building projects that consciously incorporates elements of 30s' styles. His chaste door handles and window handles and fasteners have been accepted by the market as authentic interpretations.

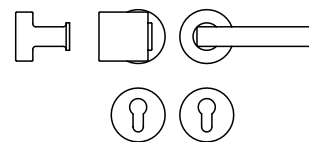
Order proposal:



Internal door furniture
1163 | 1731 | 1735
7663 13



Bathroom furniture
1163 | 1731 | 1735 0054



Entrance door furniture
1163 | 1731 | 1735 | 2333 06
7663 14

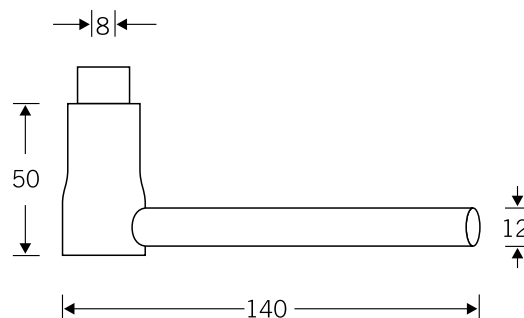
Standard fittings
Fire door fittings*

* acc. to German DIN Standard

Lever handle



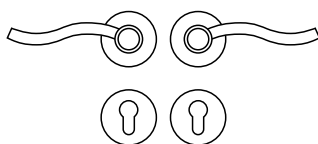
1166
Stainless steel



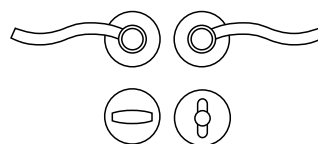
In 1988 we got to know the young English designer Jasper Morrison, explained the Four Rules of the grip to him and invited him to turn this formula into a lightweight stainless steel handle. He accepted the challenge and turned up a few months later with the FSB 1166 model. We were impressed.

Handles with thin grips had been produced before but had tended to be geometrically prosaic.

Order proposal:



Internal door furniture
Lever handle 1166
Rose 1731
Escutcheon 1735



Bathroom furniture
Lever handle 1166
Rose 1731
Escutcheon 1735 0054



Window handle 3466
p. 146

Lever handle

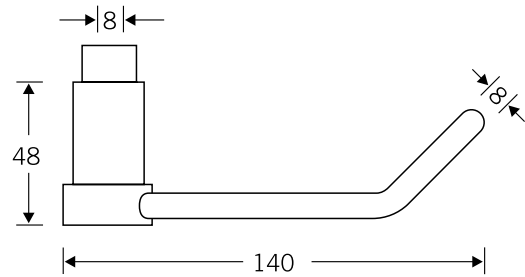
1

a



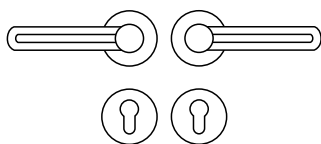
1167

Stainless steel

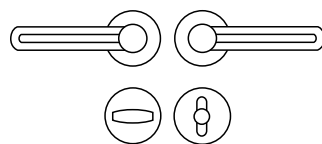


FSB featured a window handle in its 1986 catalogue that was nicknamed the 'string model' because its handle consisted of a double length of fine steel wire. Before very long, we were being asked whether we couldn't produce a lever handle in the same style. We could.

Order proposal:



Internal door furniture
 Lever handle 1167
 Rose 1731
 Escutcheon 1735



Bathroom furniture
 Lever handle 1167
 Rose 1731
 Roses WC 1735 0054

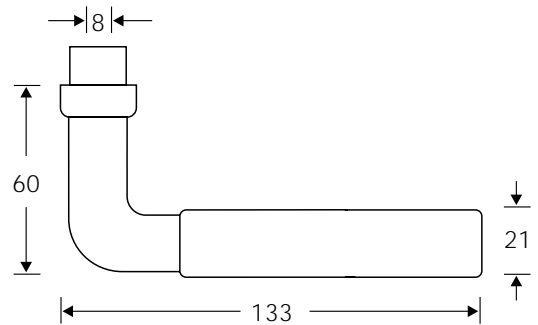


Window handle 3467
 p. 147

Lever handle



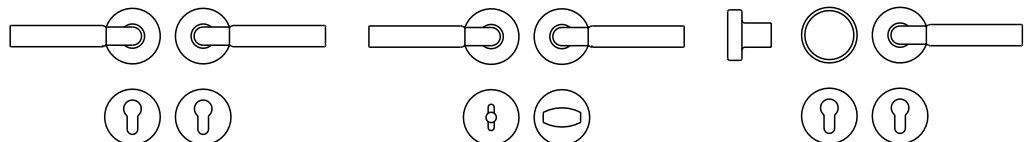
1171
Aluminium
Stainless steel



FSB's lever handle model 1171 owes its existence to a 'crazy notion' hatched in FSB's tool-making shop. It's a notion with a history. In the inter-war and post-war periods FSB produced a lever handle that entered design history as the nickel horn handle. It combined a bent silver-plated shank with a black plastic grip.

It was in 1992 that FSB's tool-makers set about recreating this design classic in tubular stainless steel using modern expansion technology. Law and behold - it worked.

Order proposal:



Standard fittings
Project fittings
Fire door fittings*

* acc. to German DIN Standard

Internal door furniture
1171 | 1731 | 1735
7271 13
7671 13

Bathroom furniture
1171 | 1731 | 1735 0054
7271 15

Entrance door furniture
1171 | 1731 | 1735 2329 06
7271 14
7671 14

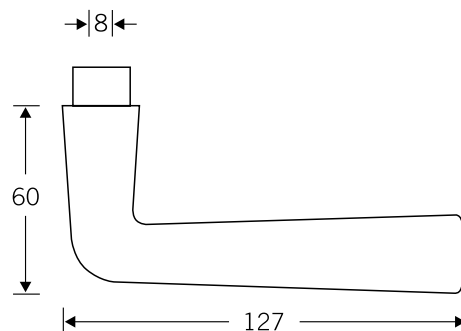
Lever handle

1
a



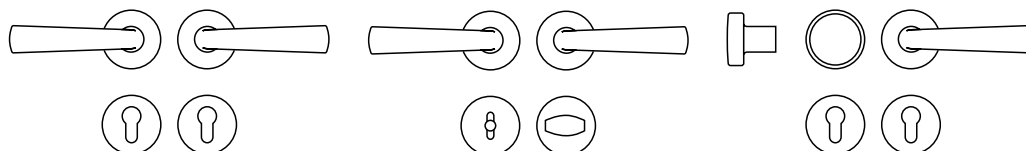
1173

Aluminium
Stainless steel



FSB 1173 model sports a trumpet-shaped design very much reminiscent of a model that emerged in the late Twenties in the Frankfurt area and has also long been part of the FSB repertoire. In earlier catalogues it was listed as FSB 7411. The chaste styling of this redesign in aluminium and stainless steel represents a compelling alternative to the famous door handle model FSB 1147, based on a design by the philosopher Ludwig Wittgenstein.

Order proposal:



	Internal door furniture
Standard fittings	1173 1731 1735
Project fittings	7273 13
Fire door fittings*	7673 13

Bathroom furniture
1173 1731 1735 0054
7273 15

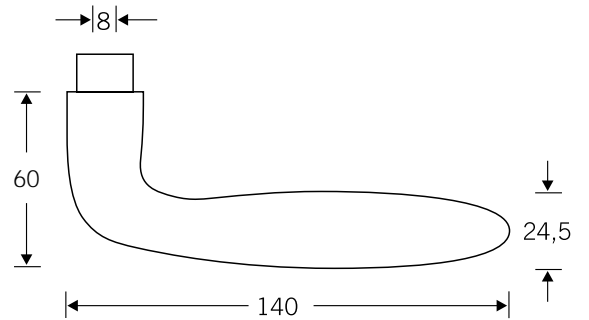
Entrance door furniture
1173 1731 1735 2329 06
7273 14
7673 14

* acc. to German DIN Standard

Lever handle



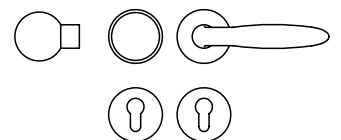
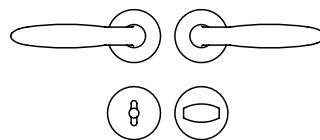
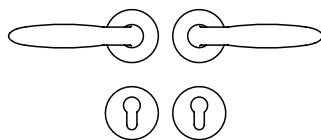
1176
Aluminium
Stainless steel



The design of FSB 1176 is likewise based on an older FSB model. The shank and tip of the handle were originally made of rolled steel, this later giving way to cast aluminum, whilst the grip itself was finished in chunky black plastic.

The tool makers and R & D people at FSB joined forces to fashion this familiar form out of steel tubing, which then simply had to be rolled to a point at one end. To produce the moulds for the aluminium version was much easier.

Order proposal:



Standard fittings
Project fittings
Fire door fittings*

* acc. to German DIN Standard

Internal door furniture
1176 | 1731 | 1735
7286 13
7686 13

Bathroom furniture
1176 | 1731 | 1735 0054
7286 15

Entrance door furniture
1176 | 1731 | 1735 | 2302 06
7286 12
7686 12

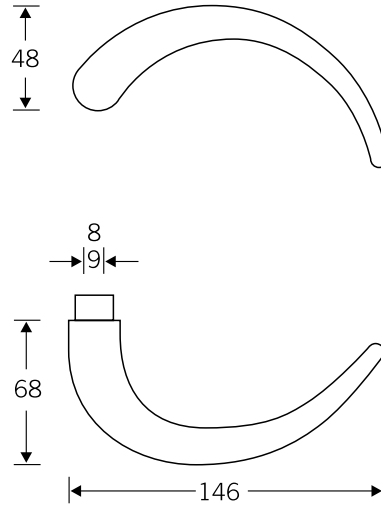
Lever handle

1
a



1191

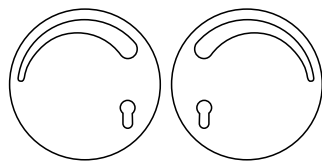
Aluminium natural colour
anodised



Looking at this lever design divorced from its backplate, it might be suggested that Philippe Starck was out to endow us with horns. Strangely enough, though, when these horns are fastened to the backplate they turn into door handles as functional as any you could wish for:
The lever can be grasped at varying heights. Thumb, forefinger and palm nestle securely. The handle fills the hand when gripped; there is sufficient volume available.

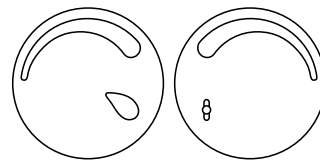
With this door furniture, FSB offers an alternative to the symmetrical design philosophy based on circles, triangles and rectangles. And the set as a whole provides a visual contrast to the rectangular door without seeking to rise above its station. Matt silver backplate, polished lever. Both in high-quality aluminium.

Order proposal:

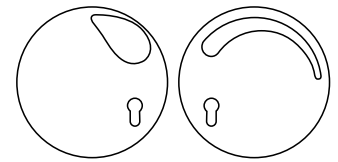


Internal door furniture
1191 | 1491

Standard fittings



Bathroom furniture
1191 | 1491 4354 r.h.
1191 | 1491 5354 l.h.



Entrance door furniture
1191 | 1491 | 1991 43 r.h.
1191 | 1491 | 1991 53 l.h.
7691 17 r.h.
7691 20 l.h.

Fire door fittings*

* acc. to German DIN Standard

7691 16 r.h.
19 l.h.

Lever handle

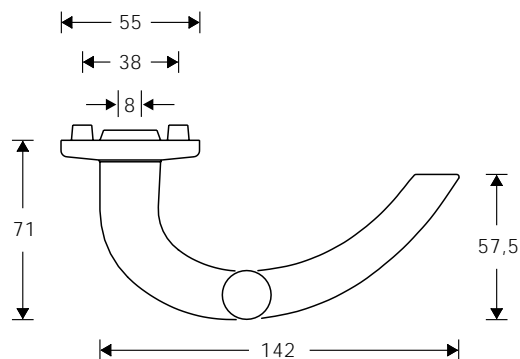


7010

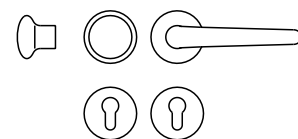
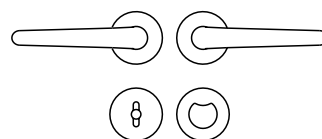
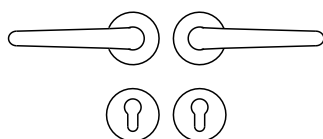
Aluminium natural colour
anodised
Stainless steel

1
a

In works design FSB 7010, the 'dynamic golden growth spiral' was recreated with a round cross-section, the lever tapering progressively towards the tip. This effect enhances the momentum of the natural curvature. With its restrained looks and direction-of-motion styling, FSB 7010 is a joy to hold and use.



Order proposal:



Standard fittings
Project fittings
Fire door fittings*

* acc. to German DIN Standard

Internal door furniture
7010 63
7210 63
7610 63

Bathroom furniture
7010 65
7210 65

Entrance door furniture
7010 66
7210 66
7610 66

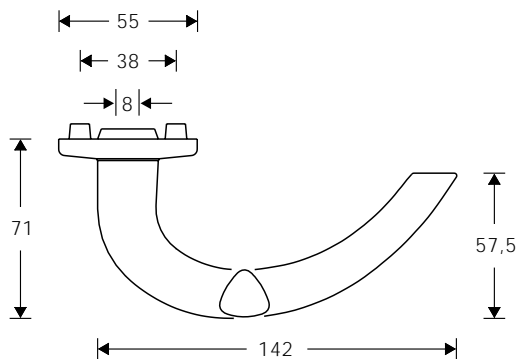
Lever handle

1
a

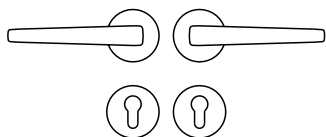


7011
Aluminium natural colour
anodised
Stainless steel

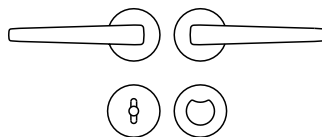
In the case of works design FSB 7011, the round cross-section of the FSB 7010 model makes way for an ergonomic triangular form. Very striking here is the organic ease with which the shank of the handle initiates the 'dynamic golden growth spiral' and oversees a tapering of the grip's cross-section from 24 mm to 18 mm at the tip. This is an unobtrusive, non-slip design that reflects the direction of motion.



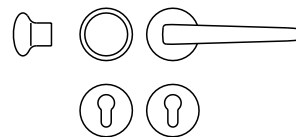
Order proposal:



Internal door furniture
7011 63
7211 63
7611 63 only Stainless steel



Bathroom furniture
7011 65
7211 65



Entrance door furniture
7011 66 r.h. | 7011 76 l.h.
7211 66 r.h. | 7211 76 l.h.
7611 66 r.h. only Stainless steel
7611 76 l.h. only Stainless steel

Standard fittings
Project fittings
Fire door fittings*

* acc. to German DIN Standard

Lever handle

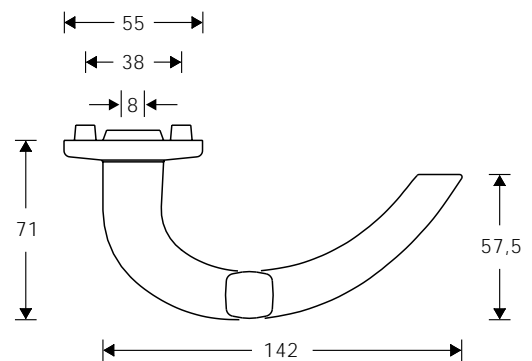


7012

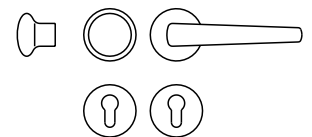
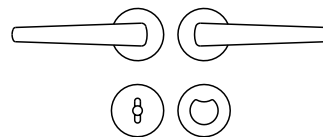
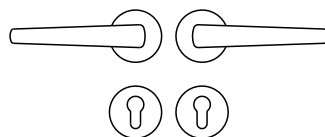
Aluminium natural colour
anodised
Stainless steel

1
a

Works design FSB 7012 yokes the 'dynamic golden growth spiral' to an elegant square cross-section. In this series, we quite deliberately adopted three classical Euclidean forms - circle, triangle and square. We wanted to demonstrate that the 'dynamic golden growth spiral' applies for all forms. In this model, too, the grip tapers as the spiral expands. This tough handle is conducive to gripping and features direction-of-motion styling.



Order proposal:



Standard fittings
Project fittings
Fire door fittings*

* acc. to German DIN Standard

Internal door furniture
7012 63
7212 63
7612 63 only Stainless steel

Bathroom furniture
7012 65
7212 65

Entrance door furniture
7012 66
7212 66
7612 66 only Stainless steel

Lever handleset Ergo

1
a



7655
Aluminium
Stainless steel

This design is the splendid result of a time taking research and solves virtually every ergonomic problem associated with heavily-used doors. Why we've called it the 'Ergo handle' is thus plain to see.

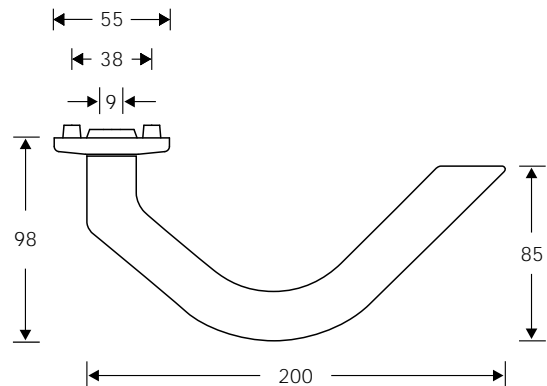
The main benefits of the Ergo handle FSB 7655 are:

- The triangular styling corresponds to the direction of motion of the user.
- This angular shape absorbs the effort of operating the door.

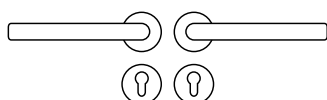
-The fullness and triangular cross-section of the design complement the shape of the hand as it closes to grip.

Where an elbow is applied, the left-right offers ample support.

The FSB Ergo lever furniture set 7655 is turnably fixed backplate and is suitable for fire doors (acc. to German DIN 18 273). Because of the width of FSB 7655 we recommend to use locks with follower 9 mm only. That's why the spindle is only available in 9 mm.



Order proposal:



7655 13

Project fittings

Fire door fittings*



Standard fittings

Clarification

To simplify specification and ordering procedures, heavy-duty and fire-door furniture has been accorded a six-figure code number covering both lever handles and accessories. And there are other potential accessory options.

In case this might sound confusing, here's an explanation of the final two digits with the diagrams of the item being concerned.

.... 12 to 15
Roses

.... 01 to 03
Backplate 1450 03

.... 09 to 11
Backplate 1410 03

.... 04 to 06
Backplate 1451 03

.... 39 to 41
Backplate 1418 03

.... 16 to 28
Square Backplate

.... 12 to 14
Roses

.... 01 to 02
Backplate 1450 03

.... 09 to 10
Backplate 1410 03

.... 04 to 05
Backplate 1451 03

.... 39 to 40
Backplate 1418 03

.... 16 to 28
Square Backplate

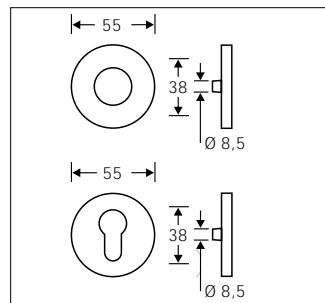
Our standard lever handles are designed for use either with roses for concealed fixing or backplates for visible fixing.

But standard furniture can just as conceivably feature roses for visible fixing or backplates for concealed fixing.

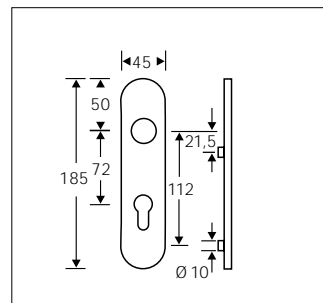
You can also choose between square or round-edged backplates.

All the various plate and rose styles available are illustrated on page 93-.

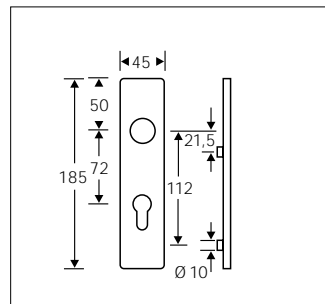
*acc. to German DIN 18 273



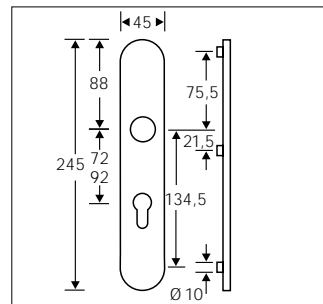
1731 | 1735 1707 | 1708



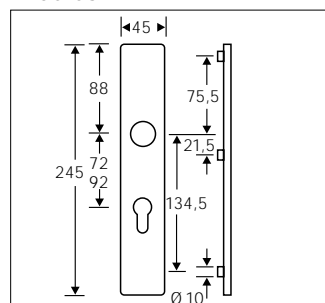
1451 03



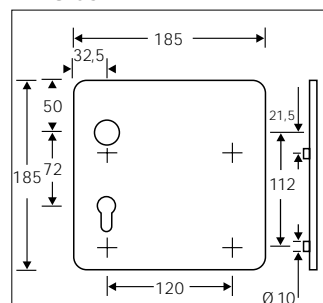
1450 03



1418 03



1410 03



1483 03

1488 03

Aluminium
Stainless steel

Roses
Backplates

1

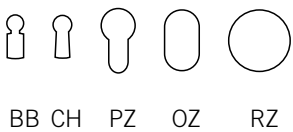
Technical information	94
Overview	95
Roses	96
WC furniture	98
Backplates	99
Square backplates	106
Finger plates	108

Roses Backplates

Opening a door involves two key forces, pushing and then pulling. Both forces have a cumulative effect and need to be carefully counteracted if a door handle set is to remain in good working order over the years. Backplates and roses fulfil this function, which is why it is so important that they are properly fitted.

All plates and roses supplied by FSB feature a 7 mm plain bearing made of indestructible black GFR plastics. Backplates and roses are additionally fitted with rugged support lugs in the same material.

Lever handle sets and their accessories need to match the appropriate locks. Thus it is therefore important to heed the specifications listed below when ordering. It goes without saying that we are acquainted with the common international variations in spacings, key patterns and lock break-throughs. We nevertheless advise you to quote the lock type in use if in any doubt.

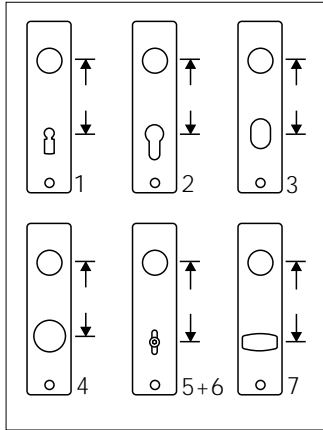


Keyholes

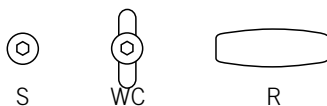
In the absence of special instructions, we supply plates and roses with lever lock keyholes, i.e. BB

Keyhole spacing

The standard keyhole spacing for internal backplates is 72 mm, for bathroom backplates 78 mm and for final exit backplates 92 mm. The spacings are measured as follows:

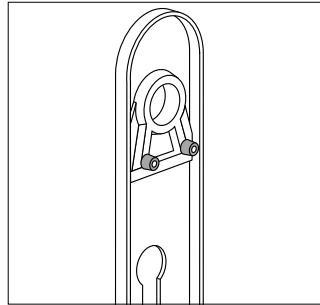


1. BB and Chubb: centre of follower to centre of key pin.
2. Profile cylinder: centre of follower to centre of profile cylinder core.
3. Oval cylinder: centre of follower to centre of oval cylinder.
4. Round cylinder: centre of follower to centre of round cylinder.
5. Emergency release: centre of follower to centre of spindle.
6. WC: centre of follower to centre of spindle.
7. Thumbturn: centre of follower to centre of spindle.



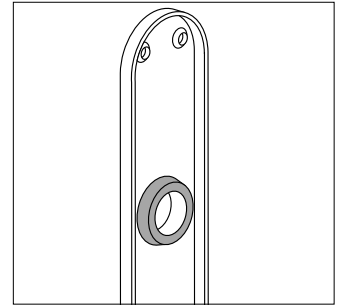
Bathroom/WC version

FSB bathroom furniture features a thumbturn (R) on the inside and an emergency release with indicator (WC) on the outside. The door can be unlocked from the outside using an Allen key or coin. The red/white indicator can be dispensed with if so desired (S). A special-purpose emergency furniture is available for old people's homes and nursery schools, shown on page 98.



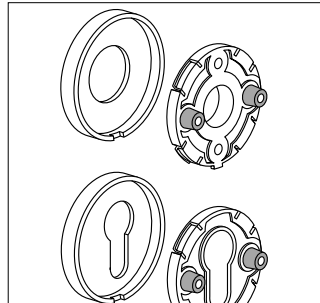
Standard short backplates with visible screws

Standard short backplates with visible screws feature two support lugs in the area beneath the handle bearing. Screw holes are designed for 3.5 mm countersunk screws.



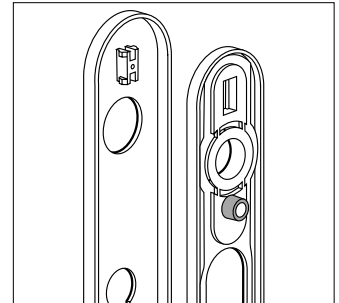
Standard backplates with visible screws

Standard backplates with visible screws incorporate a GFR plastics bearing. Screw holes are designed for 3.5 mm countersunk screws.



Roses with concealed fixing

The metal covering plates rest on a GFR-plastics backplate fitted with 2 support lugs in the fixing area. Fixing centres 38 mm.



Backplates and squareplates with concealed fixing

Backplates and squareplates with concealed fixing have a support plate similar to that for roses.

Fixing Aids

In the Fixing Aids section '13' of this Catalogue we have set out all the steps needed to ensure roses and plates are correctly fitted.

To ensure FSB door furniture is only supplemented by the appropriate FSB accessories, we manufacture all plastics components in the same black GFR plastics. The colour scheme is sustained in the black grub screw featured in FSB handle sets. This uniformity of colour means you can check the correctness of pieces before fitting the handle.

Overview

Aluminium
 Stainless steel



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Page 97

Page 98



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Page 100

Page 101

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Page 103

Pages 105 and 234

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Page 107

Page 107



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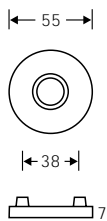
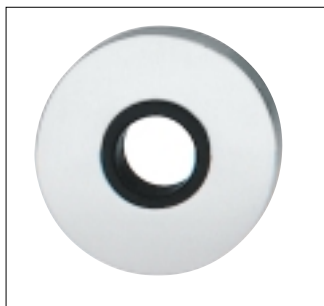
Page 440



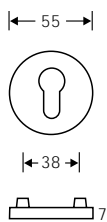
Roses

1

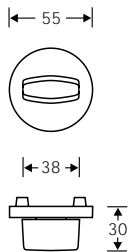
b



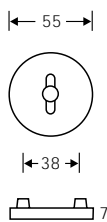
1731
without lugs 1743
Aluminium
Stainless steel



1735
without lugs 1744
Aluminium
Stainless steel

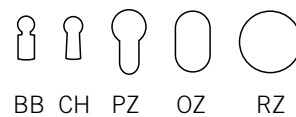


1735 0054
without lugs 1744 0054
Aluminium
Stainless steel

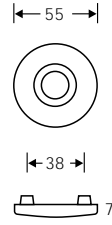


Roses with square edges

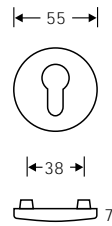
Keyholes



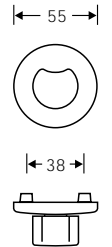
Roses



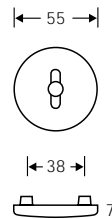
1707
without lugs 1705
Aluminium
Stainless steel



1708
without lugs 1709
Aluminium
Stainless steel

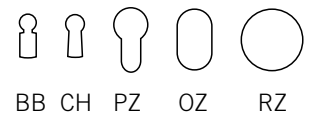


1708 7554
without lugs 1709 7554
Aluminium
Stainless steel



FSB offers the market a selection of soft-edged roses by Hartmut Weise (FSB 1707/1708) that augment and offset the proven square-edged standard designs FSB 1731/1735/1743/1744 .

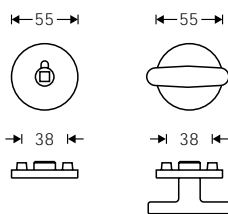
Keyholes



WC furniture for special requirements

1

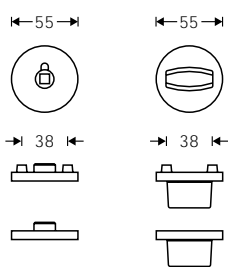
b



1732 0054

Aluminium
Stainless steel

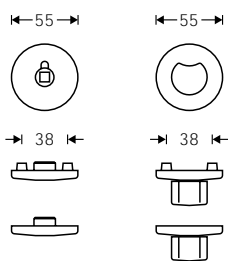
through fixing



1735 7654

without lugs 1744 7654

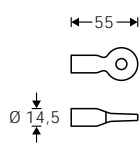
Aluminium
Stainless steel



1708 7654

without lugs 1709 7654

Aluminium
Stainless steel



3464

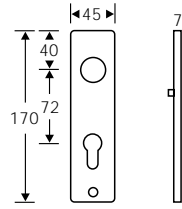
Aluminium

Enquiries are often received from old people's homes, nursing wards, and indeed child-care centres and schools concerning heavy-duty bathroom furniture with an emergency release on the outside. An FSB set devised for such special circumstances features a chunky, extra-large thumb-turn on the inside that can be safely operated by all hands

small, tremulous, or frail. This fitting is connected to a rugged emergency release on the outside that can be opened, by authorised persons only, even if resistance is put up on the inside.

WC furniture can also be combined with backplates. Please send your requests.

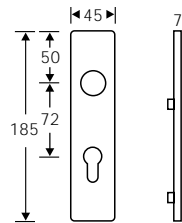
Backplates



1402 72 mm

Aluminium
Stainless steel

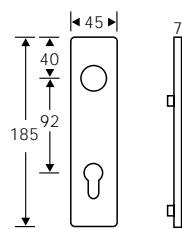
visible fixing



1450 03 72 mm

Aluminium
Stainless steel

concealed fixing

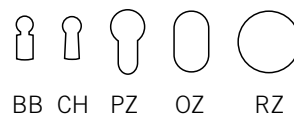


1452 03 92 mm

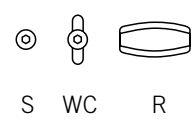
Aluminium
Stainless steel

concealed fixing

Keyholes



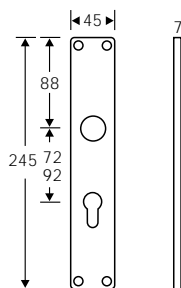
Bathroom/WC version



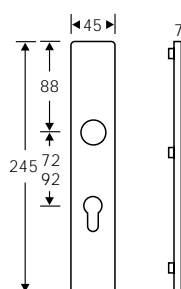
1

b

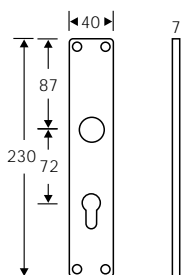
Backplates



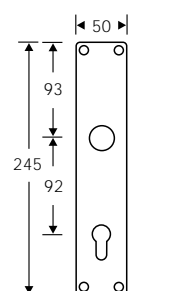
1410 72 + 92 mm
Aluminium
Stainless steel
visible fixing



1410 03 72 + 92 mm
Aluminium
Stainless steel
concealed fixing

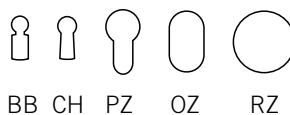


1407 72 mm
Aluminium
visible fixing

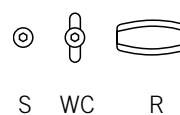


1445 92 mm
Aluminium
visible fixing

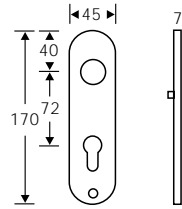
Keyholes



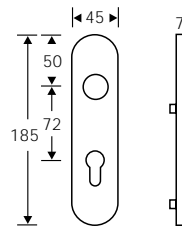
Bathroom/WC version



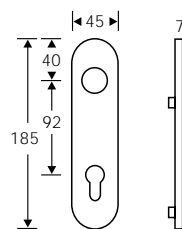
Backplates



1415 72 mm
 Aluminium
 Stainless steel
 visible fixing

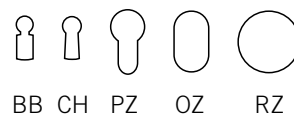


1451 03 72 mm
 Aluminium
 Stainless steel
 concealed fixing

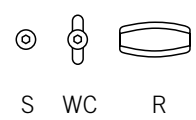


1453 03 92 mm
 Aluminium
 Stainless steel
 concealed fixing

Keyholes



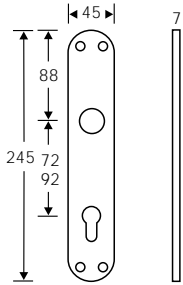
Bathroom/WC version



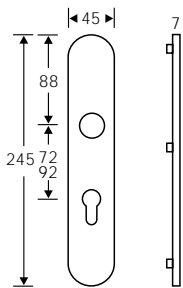
Backplates

1

b

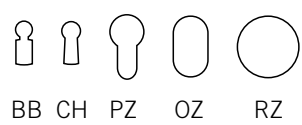


1418 72 + 92 mm
 Aluminium
 Stainless steel
 visible fixing

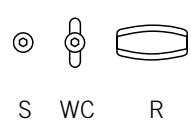


1418 03 72 + 92 mm
 Aluminium
 Stainless steel
 concealed fixing

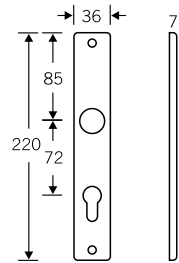
Keyholes



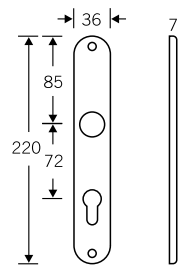
Bathroom/WC version



Backplates



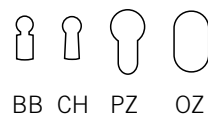
1416 72 mm
Aluminium
Stainless steel



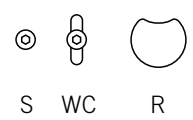
1417 72 mm
Aluminium
Stainless steel

With backplates series 1416 and 1417 FSB wants to suggest, whether lever handles shouldn't be sometimes combined with narrow backplates. Less, often is more.

Keyholes



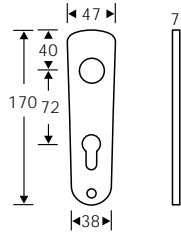
Bathroom/WC version



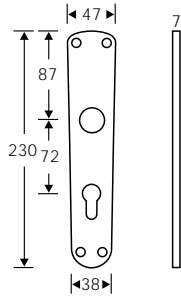
Backplates

1

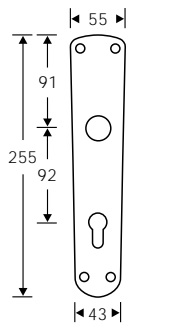
b



1431 72 mm
Aluminium

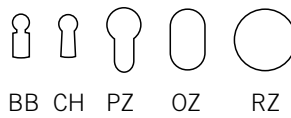


1436 72 mm
Aluminium

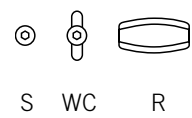


1439 92 mm
Aluminium

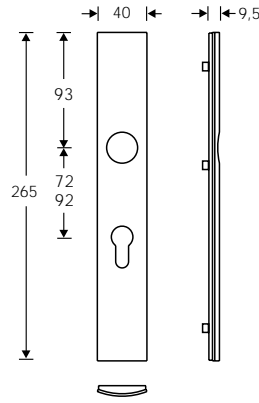
Keyholes



Bathroom/WC version



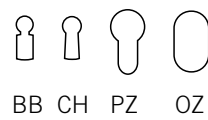
Backplate



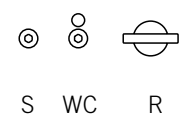
1432 72 + 92 mm
Stainless steel

It is now several years since Hartmut Weise came up with curved roses that found great favour in the marketplace. Now, he has added a curved backplate in stainless steel that appears to hover on its plastic base.

Keyholes



Bathroom/WC version

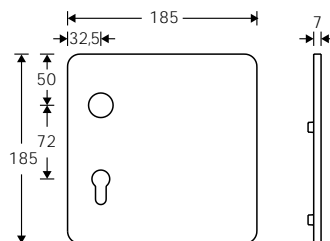


Square backplates
Radius corners 12 mm

1



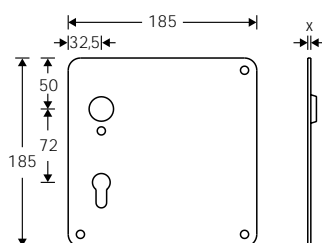
b



1483 03

Aluminium
Stainless steel

Radius corners 12 mm



1485 01

Aluminium (x = 3 mm)
Stainless steel (x = 2 mm)

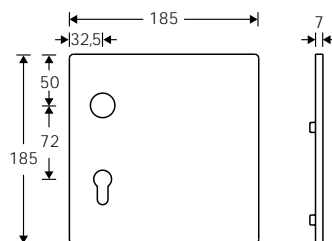
Radius corners 12 mm

Square backplates

The FSB backplate programme embraces items for both concealed and visible fixing, radiused corners or square corners. In the lever handle section of this Manual these backplates have been allotted to specific lever handle designs.

In addition FSB offers 'nibbled' or laser cut customized backplates for visible fixing. Please send dimensioned drawings. We will submit our own drawings and a quote by return.

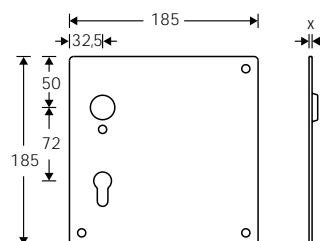
Square backplates
Radius corners 4 mm



1488 03

Aluminium
Stainless steel

Radius corners 4 mm



1486 01

Aluminium (x = 3 mm)
Stainless steel (x = 2 mm)

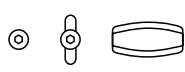
Radius corners 4 mm

Keyholes

Bathroom/WC version

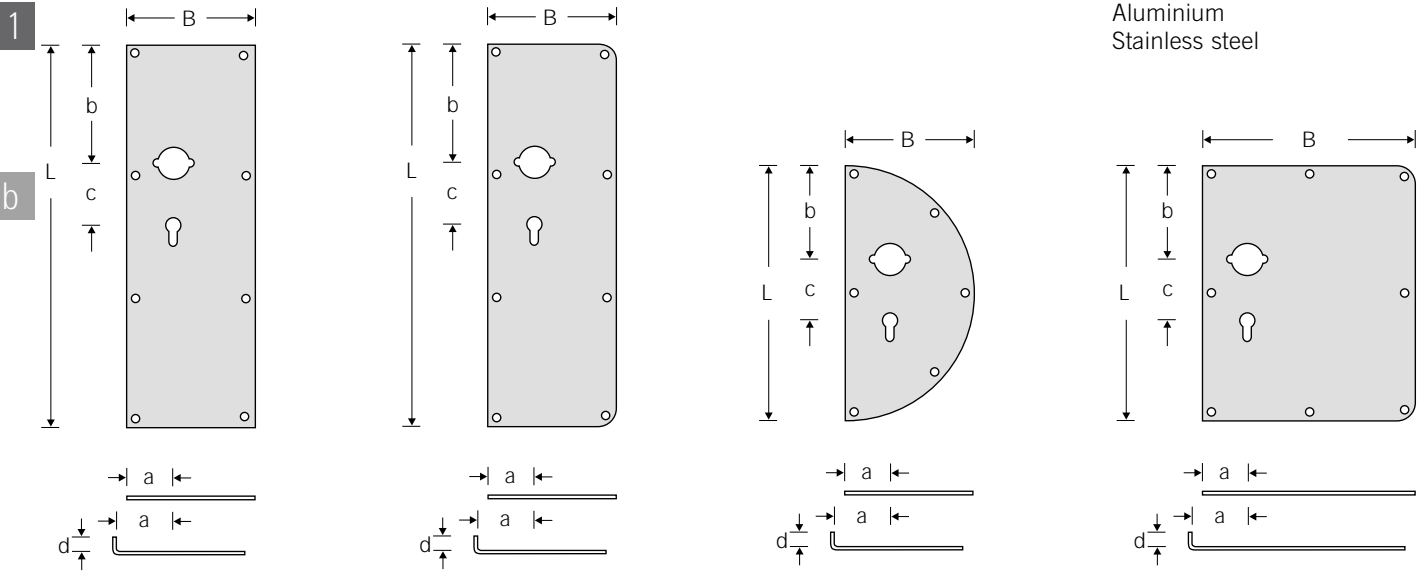


BB CH PZ OZ RZ



S WC R

Finger plates



Aluminium
Stainless steel

illustrated r.h.

5300 without return
5310 with return

5320 without return
5330 with return

5340 without return
5350 with return

5360 without return
5370 with return

Perforations

Finger plates can be pierced to accommodate roses or backplates. The simplest way of providing accurate specifications here is to cite the roses or backplates used together with their product codes. The following options are possible:

Option 1

Lever handle rose above (e. g. 1731), keyhole perforation below (e. g. europrofile cylinder).

Option 2

Lever handle rose above, escutcheon below (e. g. 1731, 1735).

Option 3

Backplate with visible fixing (e. g. model 1402).

Option 4

Backplate for concealed fixing (e. g. 1450).

Further options

FSB can also produce other forms of finger plates to customer specifications through 'CNC' or laser procedures. Please send dimensioned drawings. We will submit our own drawings and a quote by return.

pce	no	r.h. l.h.	L length mm	B width mm	a backset mm	b spacing mm	c keyhole spacing mm	d return mm	perforations with product codes for roses or backplates used				keyholes e. g.		
									1	2	3	4	BB	PZ	

Aluminium
Stainless steel

Door knobs
Knob backplates

1

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Technical information	112
Knob handles	113
Door knobs	118
Knob backplates	125
Pull handles on backplates	129
Pull handles	130

Overview



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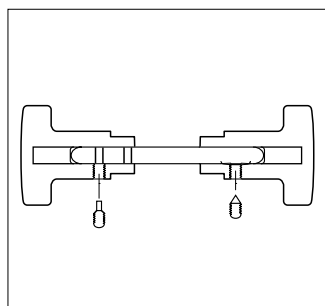
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Door knobs



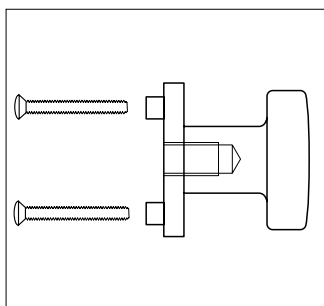
Knob handles

We supply knob handle sets as female pairs complete with a separate special-purpose FSB Stabil-spindle.

To assemble, first construct a male handle from the spindle and one of the female parts, carefully inserting the grub screw supplied through the appropriate borehole. The grub screw passes through the neck of the knob and locates into the spindle. For the male knob to be correctly assembled it is generally necessary for the head of the grub screw to lie flush with the outer surface of the neck of the knob.

Thereafter, fixing is as for the FSB Stabil-spindle.

Female knob handles can of course be fitted to rotate in a plate or rose on one side only using the customised FSB half-spindle. For more detailed information on fixing, please consult the technical section of this Manual on pages 489-.



Fixed knobs on roses

Door knobs can be riveted to roses to form dead knobs and can be fixed in one of two ways:

Concealed through fixing and concealed face fixing

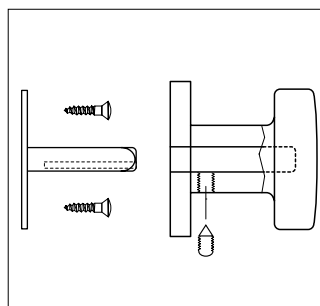
Concealed through fixing

Where concealed through fixing is required, we supply door knobs prepared for 5 mm bolts and reinforced with two lugs with standard 38 mm centres.

On the reverse, a lever handle rose of comparable technical design is used (FSB 1731 50).

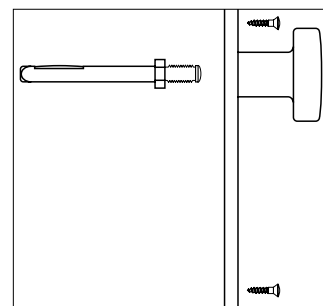
The length of the 5 mm bolts is set at door thickness plus 7 mm.

In this configuration, the door knob can be fastened to an FSB lever handle on the reverse by means of an FSB half-spindle screwed into the 12 mm threaded neck of the knob.



Concealed face fixing

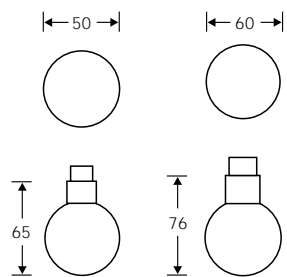
Concealed face fixing first involves screwing a steel base rose to the door. The dead knob is then positioned so as to precisely cover this and is secured with a grub screw.



Backplate with dead knob

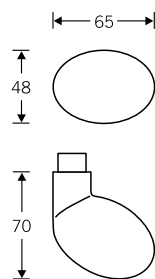
FSB also supplies door knobs rigidly mounted on backplates. These feature a 12 mm internal thread to accommodate the FSB Stabil-half-spindle provided. Before fitting the plate, the spindle is firmly screwed into the shank of the knob. Backplate and spindle are then fitted to the door and the procedure is repeated on the reverse.

Knob handles

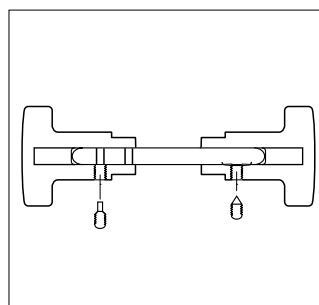


0802 8 mm □
Aluminium
Stainless steel

0803 8 mm □
Stainless steel



0804 8 mm □
Aluminium
Stainless steel



Turnable knob handles are made and supplied by FSB as female sections. Knobsets are created by joining two female parts together using the FSB Stabil spindle 0102.

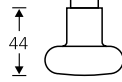
Knob handles

1



C

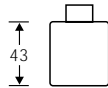
← 53 →



0806 8 + 10 mm □
Aluminium



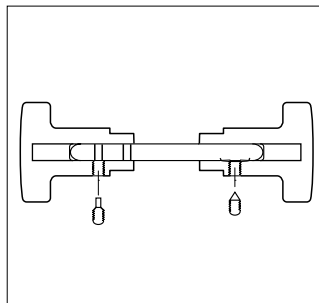
← 40 →



0808 8 mm □
Stainless steel

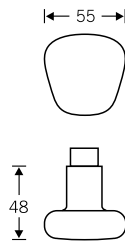
0044 r.h.
0045 l.h.

Design: Franco Clivio

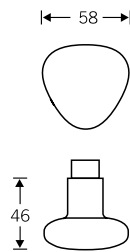


Turnable knob handles are made and supplied by FSB as female sections. Knobsets are created by joining two female parts together using the FSB Stabil spindle 0102.

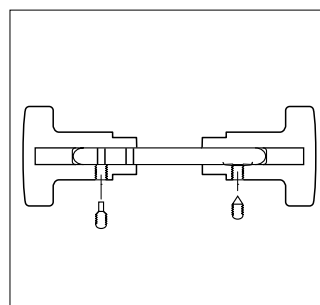
Knob handles



0810 8 + 10 mm □
Aluminium



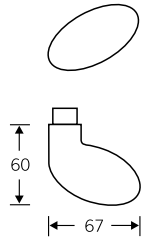
0817 8 + 10 mm □
Aluminium



Turnable knob handles are made and supplied by FSB as female sections. Knobsets are created by joining two female parts together using the FSB Stabil spindle 0102.

Knob handles

1
C

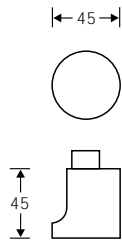


0826 8 mm □
Aluminium natural colour

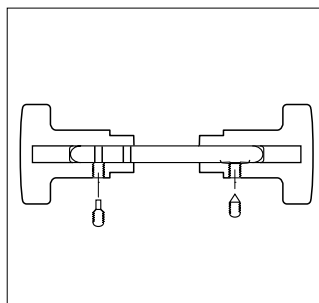
0044 r.h.
0045 l.h.

Illustration r.h.

Design: Hartmut Weise

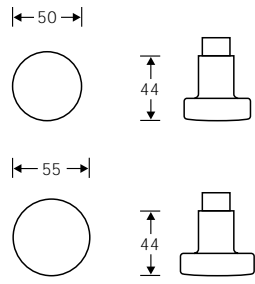


0828 8 mm □
Aluminium
Stainless steel

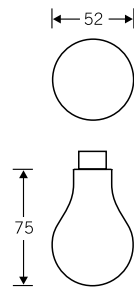


Turnable knob handles are made and supplied by FSB as female sections. Knobsets are created by joining two female parts together using the FSB Stabil spindle 0102.

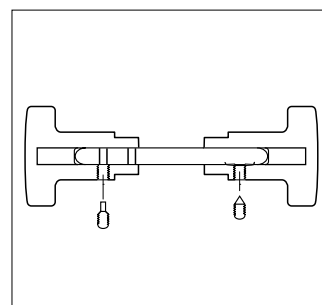
Knob handles



0829 8 mm □
 Aluminium Ø 50 mm
 Stainless steel Ø 55 mm



0844 8 mm □
 Aluminium natural colour
 Design: Jasper Morrison



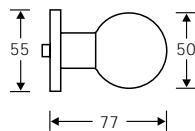
Turnable knob handles are made and supplied by FSB as female sections. Knobsets are created by joining two female parts together using the FSB Stabil spindle 0102.

Door knobs

1



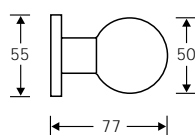
C



2302 06

Aluminium
Stainless steel

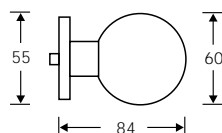
concealed through fixing
c:c screw holes 38 mm



2302 05

Aluminium
Stainless steel

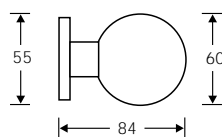
concealed face fixing



2303 06

Stainless steel

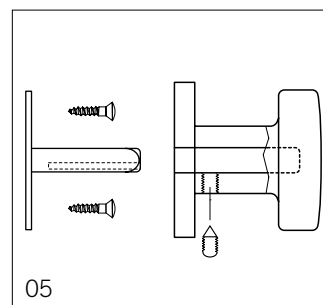
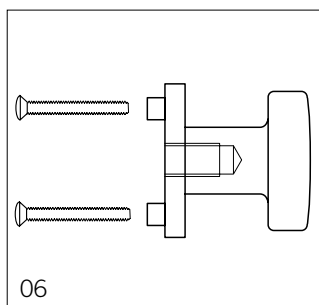
concealed through fixing
c:c screw holes 38 mm



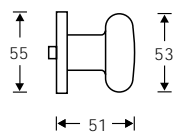
2303 05

Stainless steel

concealed face fixing



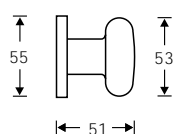
Door knobs



2306 06

Aluminium

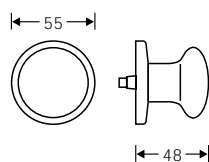
concealed face fixing
c:c screw holes 38 mm



2306 05

Aluminium

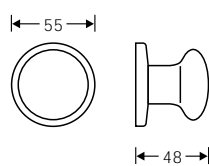
concealed face fixing



2380 06

Aluminium
Stainless steel

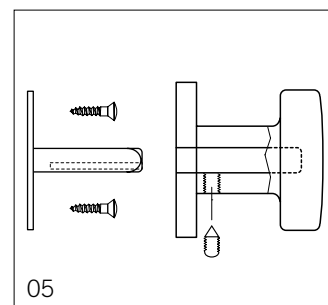
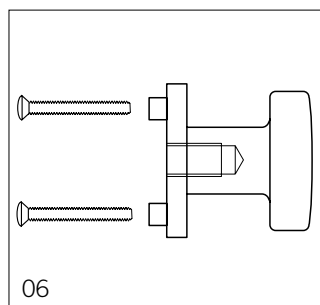
concealed through fixing
c:c screw holes 38 mm



2380 05

Aluminium
Stainless steel

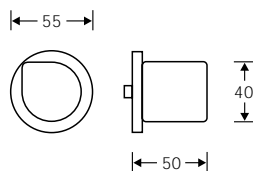
concealed face fixing



Door knobs

1

C

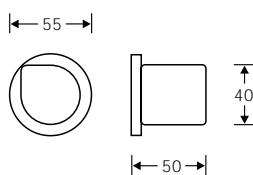


2308 06

Aluminium
Stainless steel

concealed through fixing
c:c screw holes 38 mm

2308 0406 r.h.
2308 0506 l.h.

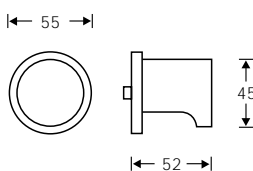


2308 05

Aluminium
Stainless steel

concealed face fixing

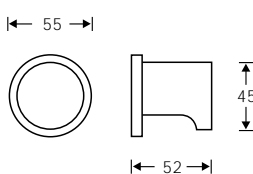
2308 0405 r.h.
2308 0505 l.h.



2322 06

Aluminium
Stainless steel

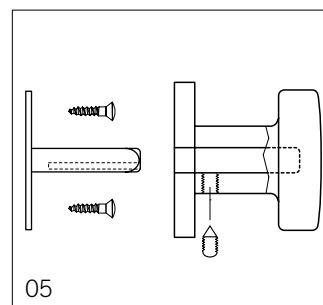
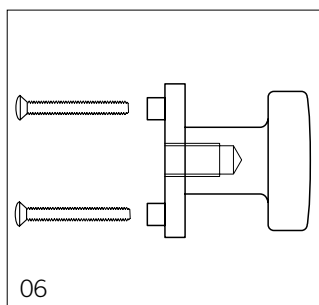
concealed through fixing
c:c screw holes 38 mm



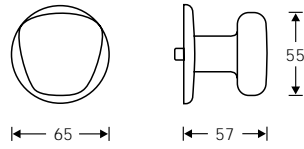
2322 05

Aluminium
Stainless steel

concealed face fixing



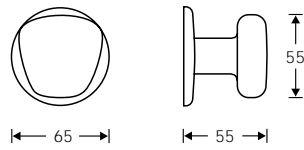
Door knobs



2320 06

Aluminium

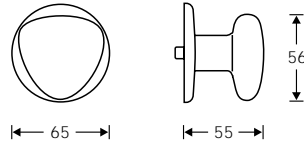
concealed through fixing
c:c screw holes 38 mm



2320 05

Aluminium

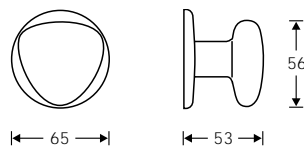
concealed face fixing



2327 06

Aluminium

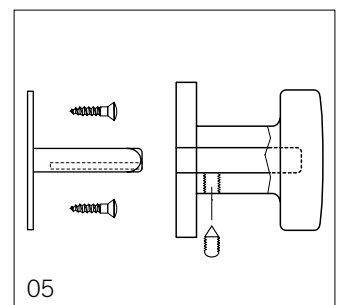
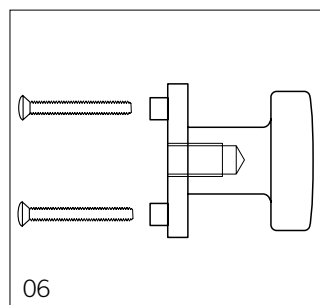
concealed through fixing
c:c screw holes 38 mm



2327 05

Aluminium

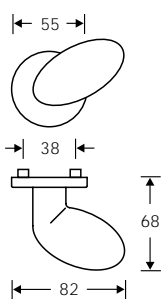
concealed face fixing



Door knobs

1

C

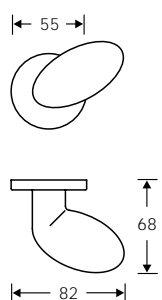


2326

Aluminium natural colour

0406 r.h.
0506 l.h.

concealed through fixing
c:c screw holes 38 mm

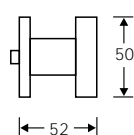


2326

Aluminium natural colour
Stainless steel

0405 r.h.
0505 l.h.

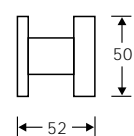
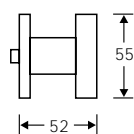
concealed face fixing



2329 06

Aluminium Ø 50 mm
Stainless steel Ø 55 mm

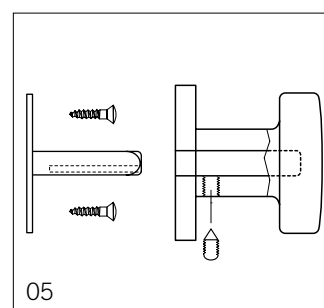
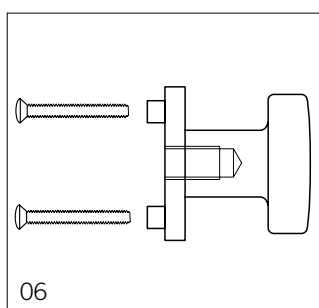
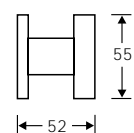
concealed through fixing
c:c screw holes 38 mm



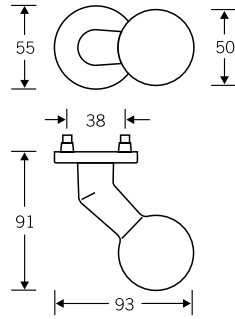
2329 05

Aluminium Ø 50 mm
Stainless steel Ø 55 mm

concealed face fixing



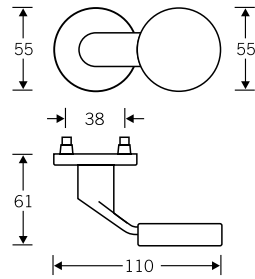
Door knobs



2346 06

Aluminium
Stainless steel

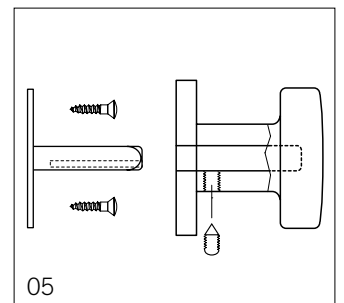
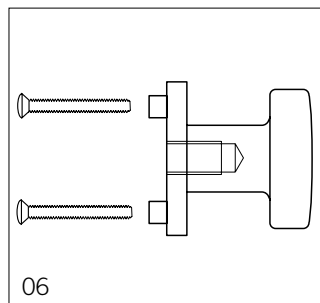
concealed through fixing
c:c screw holes 38 mm



2354 06

Stainless steel

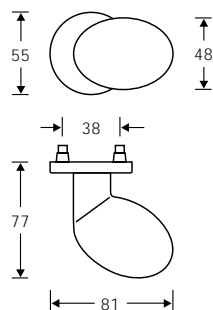
concealed through fixing
c:c screw holes 38 mm



Door knobs

1

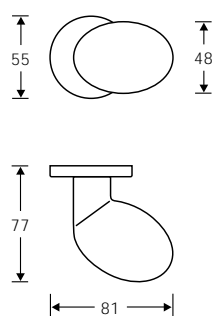
C



2304 06

Aluminium
Stainless steel

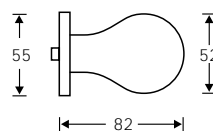
concealed through fixing
c:c screw holes 38 mm



2304 05

Aluminium
Stainless steel

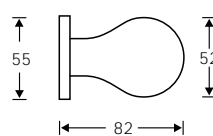
concealed face fixing



2374 06

Aluminium

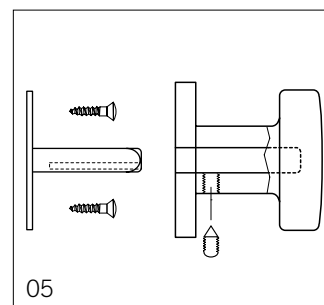
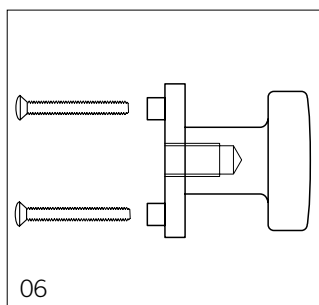
concealed through fixing
c:c screw holes 38 mm



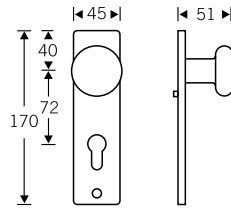
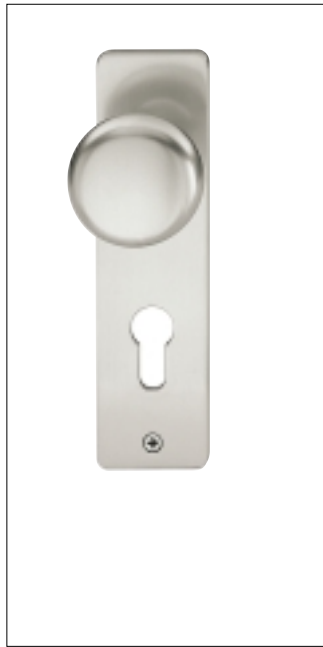
2374 05

Aluminium

concealed face fixing

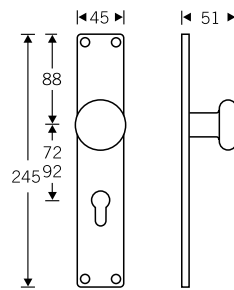


Knob backplates

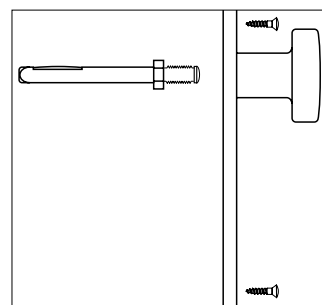


1904 72 mm
Aluminium






1
C



1920 72 + 92 mm
Aluminium

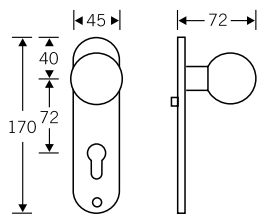


Keyholes

-  BB
-  CH
-  PZ
-  OZ
-  RZ

Knob backplates

1

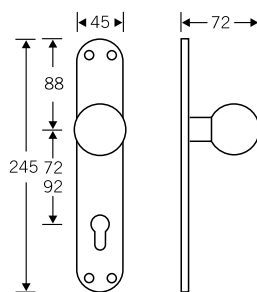


1923 72 mm

Aluminium
Stainless steel

visible fixing

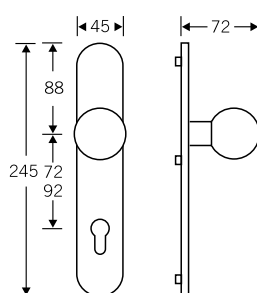
C



1927 72 + 92 mm

Aluminium
Stainless steel

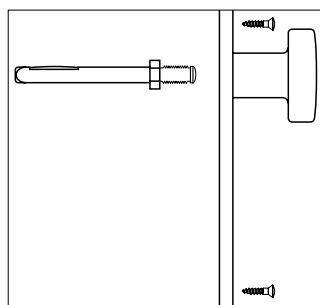
visible fixing



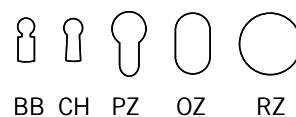
1927 03 72 + 92 mm

Aluminium
Stainless steel

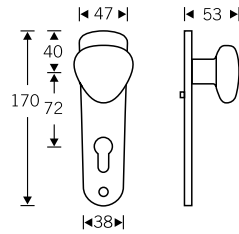
concealed fixing



Keyholes



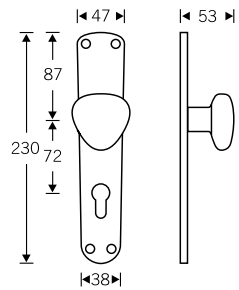
Knob backplates



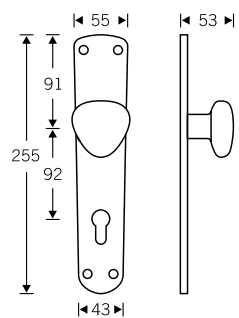
1936 72 mm
Aluminium

1

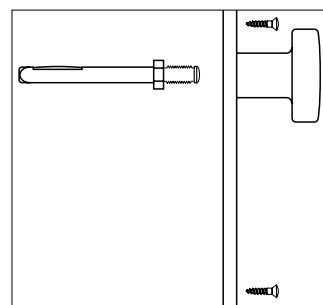
C



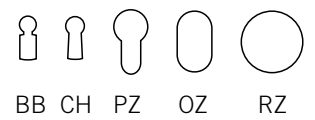
1942 72 mm
Aluminium



1945 92 mm
Aluminium

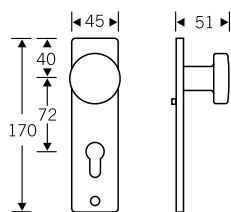


Keyholes



Knob backplates

1

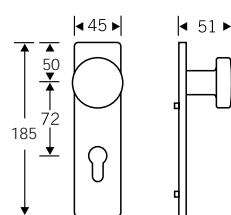


1966 72 mm

Aluminium
Stainless steel

visible fixing

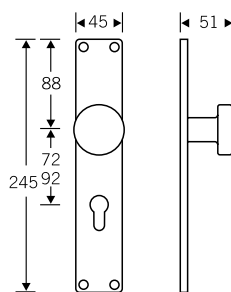
C



1966 03 72 mm

Aluminium
Stainless steel

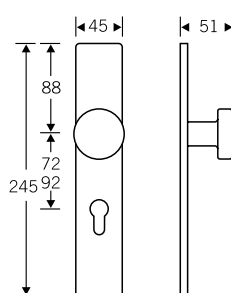
concealed fixing



1970 72 + 92 mm

Aluminium
Stainless steel

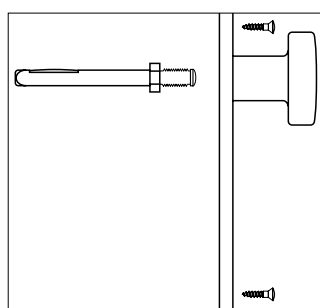
visible fixing



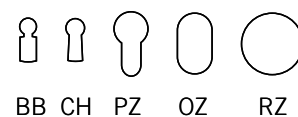
1970 03 72 + 92 mm

Aluminium
Stainless steel

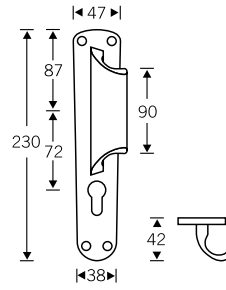
concealed fixing



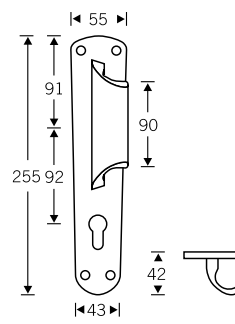
Keyholes



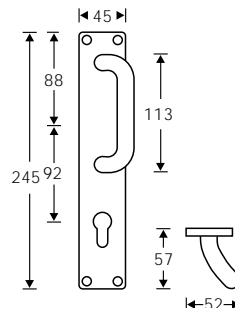
Pull handles
on backplates



2121 72 mm
Aluminium

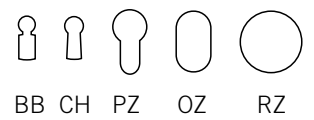


2123 92 mm
Aluminium



2144 92 mm
Aluminium

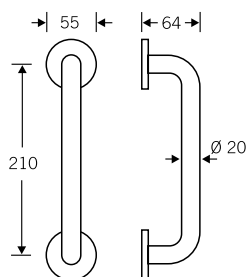
Keyholes



BB CH PZ OZ RZ

Pull handles

1

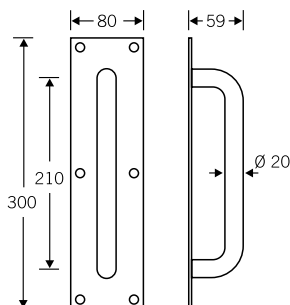


6628

Aluminium
Stainless steel

Fittings feature two fixing points concealed by a clip-on cover.

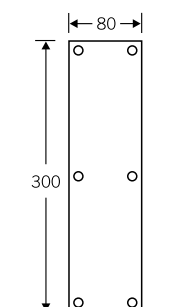
C



6629

Aluminium
Stainless steel

Boreholes for 3.0 mm counter-sunk screws



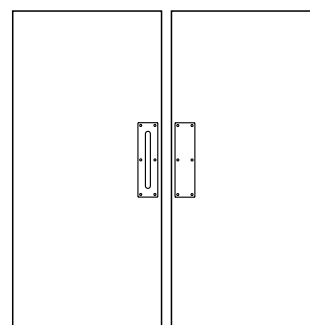
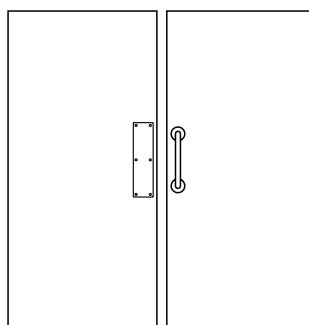
5325

Aluminium
Stainless steel

counterplate to 6629

Boreholes for 3.0 mm counter-sunk screws

Double-action swing doors in restaurants, canteens, hospitals and the like are generally fitted with finger plates and kicking plates for added protection. There are further conceivable forms of the finger plates, however. By coupling models as shown, the desired direction of swing can be determined



Overview	132
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Window lock, acc. DIN V ENV 1627	152
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Window lock	154
Combination lock	155
Window handles with cylinder locks	156
Tee handles	159
Sliding patio door levers	163

Even humdrum items such as window handles are subject to the laws of commodity aesthetics, i.e. they need to be selected to match the lever handles in use.

Overview



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Page 149 Page 150 Page 150 Page 151 Page 238 Page 243 Page 248

-  Aluminium
-  Stainless steel
-  Plastics, white
-  Plastics, grey
-  Plastics, black



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Page 157



Page 152



Page 152



Page 158



Page 159



Page 159



Page 161



Page 160



Page 160



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Page 162



Page 161



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Page 153



Page 154



Page 155



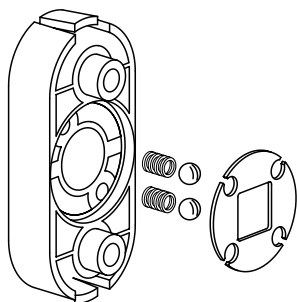
Page 163



Page 163



Window handles



The FSB click-stop mechanism

All FSB window handles with click-stop mechanisms comply with the RAL quality standard. The RAL quality board has drawn up specifications for window handles that are designed to ensure lasting quality and performance.

The FSB click-stop device enables windows to be efficiently closed, tilted, or opened. This device is made up of steel ball bearings in a rugged GFR plastics housing. Whenever the window is operated, the handle clicks audibly into place. Handles can be supplied with a 45-degree 'night-tilt' setting on request.



FSB supplies window handles with or without a click-stop mechanism.

For models with click-stop mechanisms the following applies:

FSB supplies these handles as standard with a rose thickness of 14 mm, lugs of 10 mm dia., and a 7 mm spindle with a 30 mm projection, the distance between fixing centres being 43 mm. The same handles can also be supplied with 12 mm Ø lugs or without lugs.

In the case of models without click-stop mechanism, the rose thickness is just 7 mm. The distance between fixing centres remains 43 mm. Models are available without a click-stop mechanism under the following product codes: 3401, 3402, 3404, 3430, 3441.

FSB window handles are supplied without screws. Fixing is by means of 5 mm oval head screws.

Window handles with security characteristics

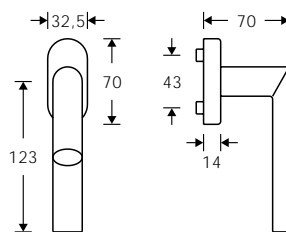
Criminal statistics show that windows have virtually overtaken doors as the favourite point of entry. It is thus advisable to make sure windows are secure.

The hardware industry has developed a host of security features for windows which may not be able to prevent a burglary but can significantly delay the process. FSB's wide-ranging programme includes the following safety devices:

- window handles with cylinder locks
- handle adaptors with cylinder locks
- combination lock
- concealed anti-leverage devices

The efficacy of the security items listed depends to an extent on how well they are fastened and to what.

Window handles

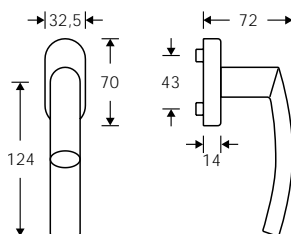


3409
Aluminium
Stainless steel

Window handle with click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm

1

d



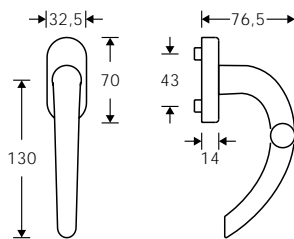
3440
Aluminium
Stainless steel

Window handle with click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm



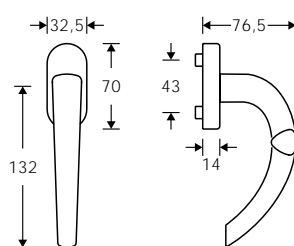
Window handles

1

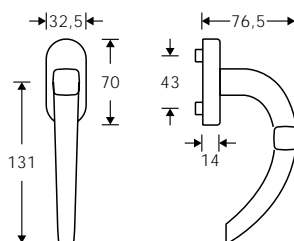


3410

d



3411



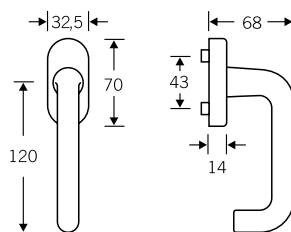
3412

Aluminium
Stainless steel

Window handles with
click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm



Window handles

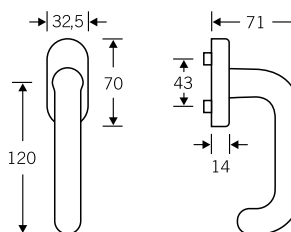


3421
Aluminium

Window handle with click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm

1

d



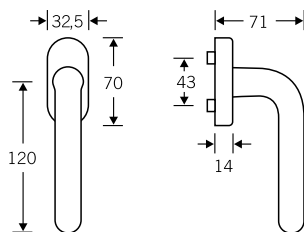
3446
Aluminium
Stainless steel

Window handle with click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm



Window handles

1

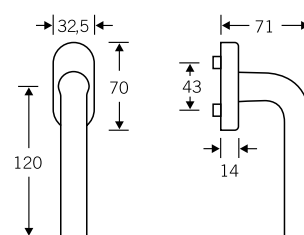


3447

Aluminium
Stainless steel

Window handle with click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm

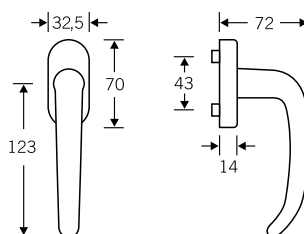
d



3422

Aluminium
Stainless steel

Window handles with click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm



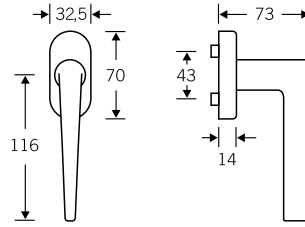
3423

Aluminium
Stainless steel

Window handle with click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm



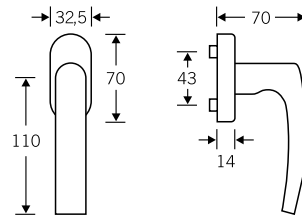
Window handles



3425

Aluminium
Stainless steel

Window handle with click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm



3424

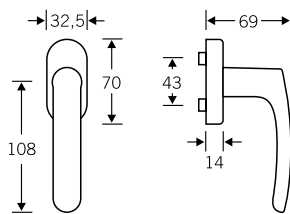
Aluminium
Stainless steel

Window handle with click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm



Window handles

1

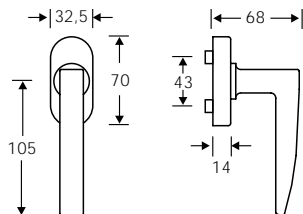


3431

Aluminium

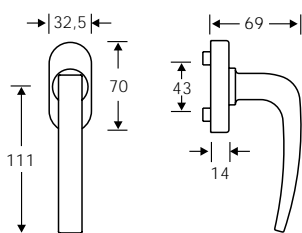
Window handle with click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm

d



3433

Aluminium natural colour



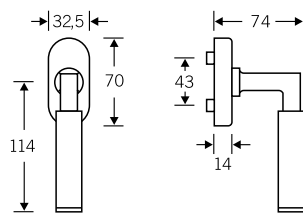
Stainless steel

Window handle with click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm

Design: Hans Kollhoff



Window handle



3432

Aluminium natural colour

Window handle with click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm



Stainless steel

Window handle with click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm

Design: Alessandro Mendini

Available in:

Aluminium natural colour

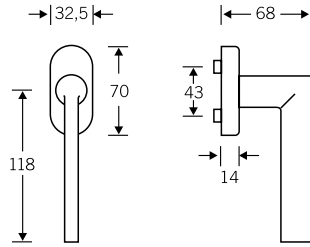
Aluminium natural colour
black DUROHORN® handle

Stainless steel



Window handles

1



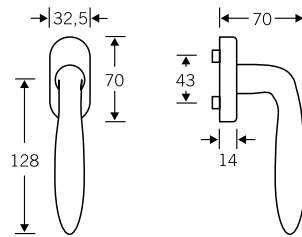
3435

Aluminium natural colour
Stainless steel

Window handle with
click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm

Design: Hartmut Weise

d



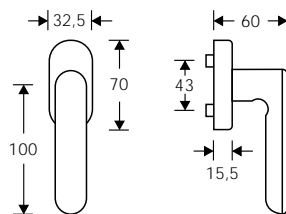
3437

Aluminium
Stainless steel

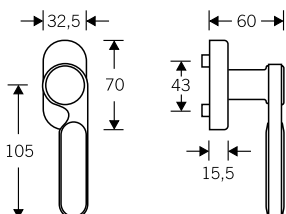
Window handle with
click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm



Window handles



3436



3438

3438 48 r.h.
3438 58 l.h.

Illustration r.h.

Aluminium grey
Thermoplastics black

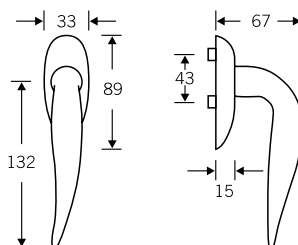
Window handles with click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm

Design: Dieter Rams



Window handles

1



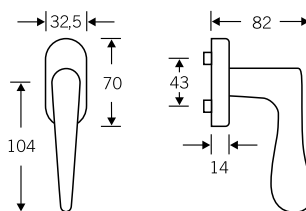
3439

Aluminium natural colour

Window handle with click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm

Design: Philippe Starck

d



3444

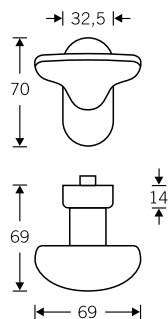
Aluminium natural colour

Window handle with click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm

Design: Jasper Morrison



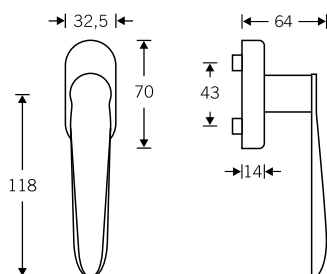
Window handles



3406

1

d



3458

Stainless steel

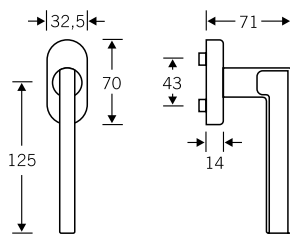
Window handles with click-stop mechanism
 lugs with 10 mm Ø
 c:c mounting holes 43 mm
 7 mm □
 spindle projecting 30 mm

Design: Erik Magnussen



Window handles

1



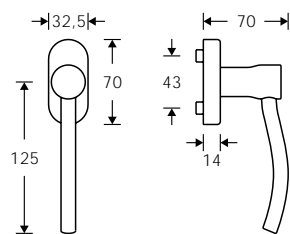
3459

Aluminium
Stainless steel

Window handle with click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm

Design: Heike Falkenberg

d



3466

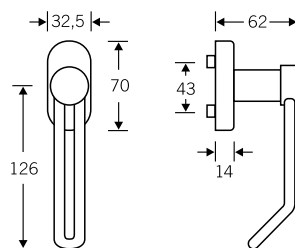
Stainless steel

Window handle with click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm

Design: Jasper Morrison



Window handles



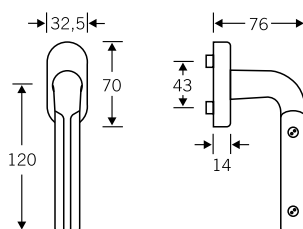
3467

Stainless steel

Window handle with click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm

1

d



3469

Aluminium
natural colour | black plastics

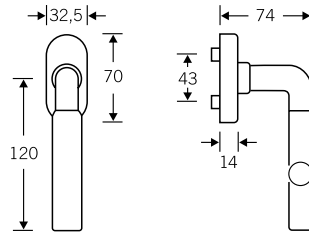
Window handle with click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm

Design: Nicholas Grimshaw



Window handles

1

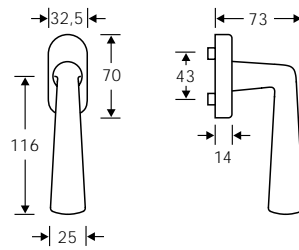


3471

Aluminium
Stainless steel

Window handle with click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm

d



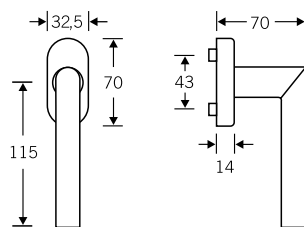
3473

Aluminium
Stainless steel

Window handle with click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm



Window handles



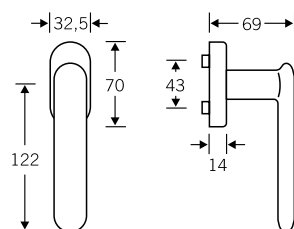
3476

Aluminium
Stainless steel

Window handle with click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm

1

d



3484

Aluminium
Stainless steel

Window handle with click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm

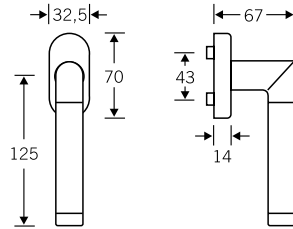


Window handles

1



d



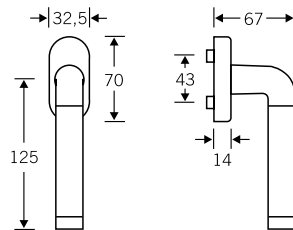
3477

Window handle with click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm

Available in:

Aluminium natural colour
handle stainless steel

Aluminium natural colour
handle black



3489

Window handle with click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm

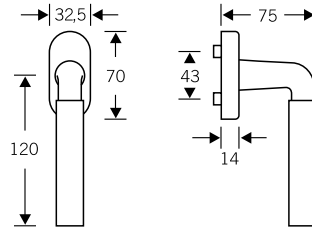
Available in:

Aluminium natural colour
handle stainless steel

Aluminium natural colour
handle black



Window handle



3482

Aluminium

Window handle with click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm

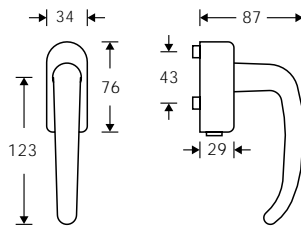
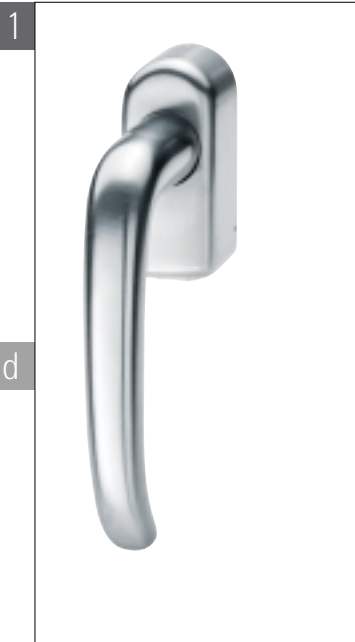
Available in:

Aluminium natural colour
dark wood grip

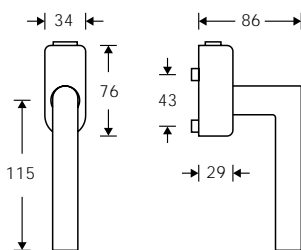
Aluminium dark bronze colour
light wood grip



Window lock acc.
DIN V ENV 1627



3423 80



3476 80

Aluminium
Stainless steel

Window lock matching FSB-
window handles on security
windows acc. DIN V ENV 1627

Click-stop + protection



Accessories:
2 screws M5 x 35 mm
2 adapter rings 10 to 12
Disassembly pin for cylinder

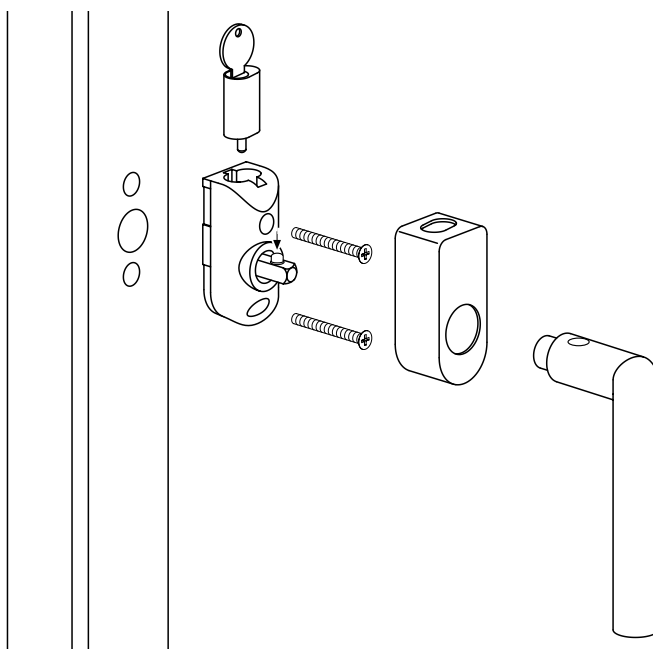
For many years FSB has supplied RAL-approved lockable handles for security windows, amongst them FSB 3481 and FSB 3488.

In addition and as an alternative to these standard items, the market has shown an interest in a RAL-approved lockable adaptor on which FSB name window handles can be fitted if required.

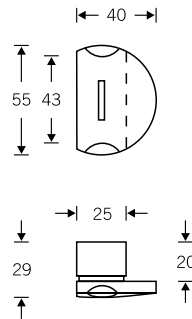
Together with a rival, FSB launched an approved adaptor for security windows which can be fitted to the window in one of two positions depending on the window's design.

The new FSB window handle lock is equipped with the FSB 1023 and FSB 1076 models as standard. Other handle designs can be prepared for fabrication on request.

In such cases, please allow a little more time for delivery.



Protection from leverage



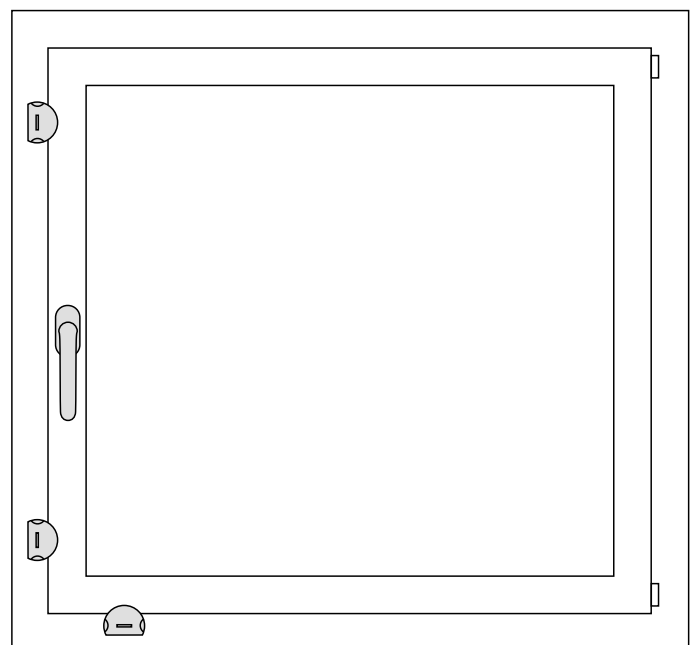
3416
Aluminium

1

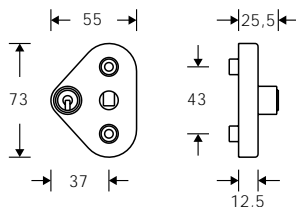
d

Protection from leverage has a demoralising effect. Even assuming a hole is cut through the window pane and the handle inside has not been locked, the hidden anti-leverage devices will prevent the window from opening. Thus, the would be intruder is either forced to smash the whole pane or with brute force remove the frame. At the very least, protection from leverage hinders and deters would be burglars. Their effect is to an extent psychological. How physically effective they are greatly depends on how solidly they have been fixed and to what (timber, plastic, or metal frame).

We emphasize that, whilst protection from leverage devices make break-ins more difficult and time-consuming, they cannot provide complete protection.



Window handle lock adaptor



3407

Aluminium
 Stainless steel
 Plastics black
 similar to RAL 9004
 Plastics white
 similar to RAL 9010

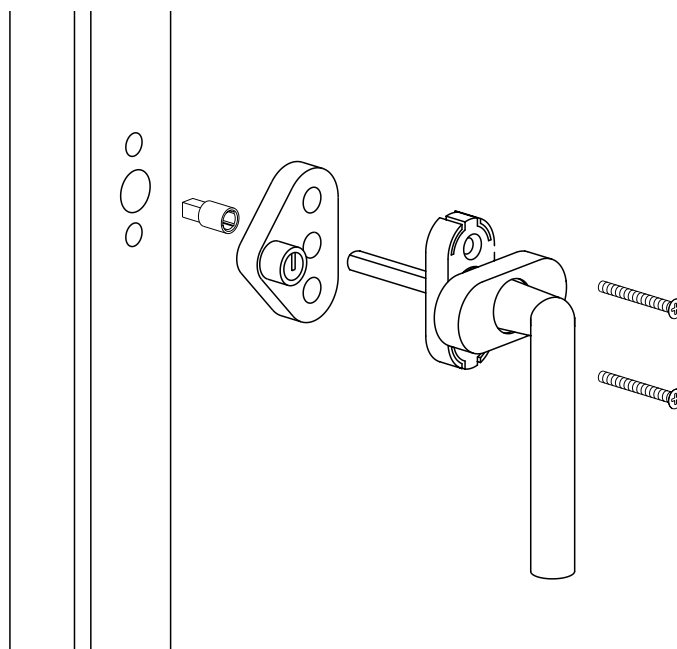
Keys to differ
 keys to pass

Lugs with 10 mm Ø
 matching FSB-window handles
 with lugs 10 mm Ø only

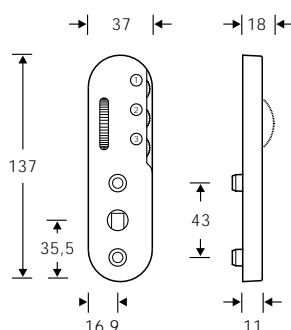
FSB 3407 matches all FSB window handles with click-stop mechanism. To compensate for the insert length of the spindle due to the additional depth of the lock adapter, the standard spindle projection of 30 mm will be extended to 42 mm. This is accomplished with the use of a spindle extension part

which is delivered together with the window lock. Installed as illustrated on this page. We emphasize that, whilst protection from leverage devices make break-ins more difficult and time-consuming, they cannot provide complete protection.

Accessories:
 2 screws M5 x 50 mm
 1 spindle extension part



Combination lock for Window handles



3490

Plastics white
similar to RAL 9010
Plastics grey
similar to RAL 7004
Plastics black
similar to RAL 9004

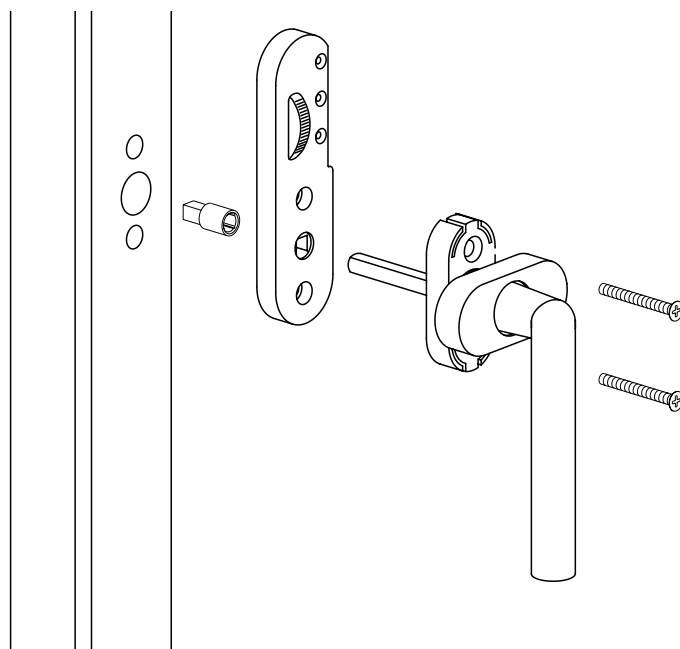
Lugs with 10 mm Ø
matching FSB-window handles
with lugs 10 mm Ø only

As an alternative to window handle locks with cylinders and keys, FSB also supplies a combination lock in which the key, which could get mislaid, is replaced by an individually selectable code.

In the unlocked position, the handle can be operated without hindrance. The bolt can be shot in any position of the window (closed, open or tilt). The numeric code is randomly selectable and can be obscured at any window position for the user's safety. As soon as the code is obscured, the bolt is locked.

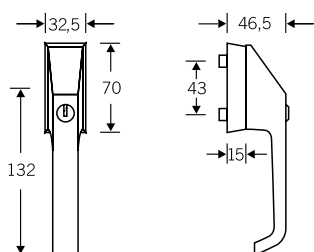
Fabrication is as for the window lock with cylinder and key: once the existing FSB window handle has been unscrewed, the spindle is lengthened using the spindle extension part supplied. The handle is then fitted onto the combination lock and screwed onto the window using the extra-long screws likewise supplied.

Accessories:
2 screws M5 x 50 mm
1 spindle extension part



Window handles

1



3488

Aluminium
Alu + colour

Window handle with click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm

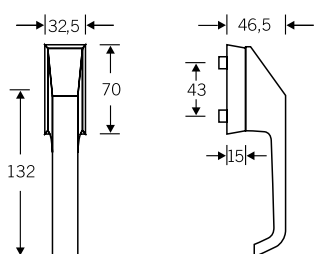
Keys to differ | keys to pass

for security windows
acc. DIN V ENV 1627

Click-stop + protection



d



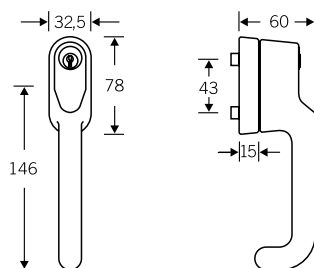
3488 00

Aluminium
Alu + colour

Window handle with click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm



Window handles



3481

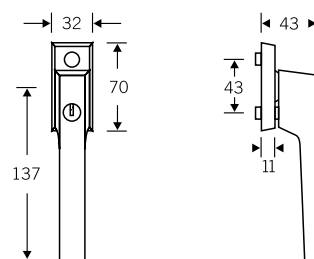
Aluminium

Window handle with click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm

Keys to differ | keys to pass

for security windows
acc. DIN V ENV 1627

Click-stop + protection



3492

Aluminium

Window handle with click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm

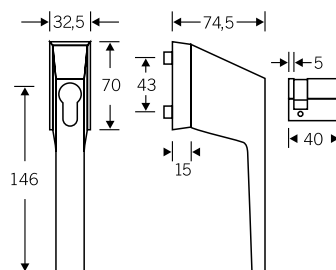
Keys to differ
keys to pass

Window handle

1



d



3495

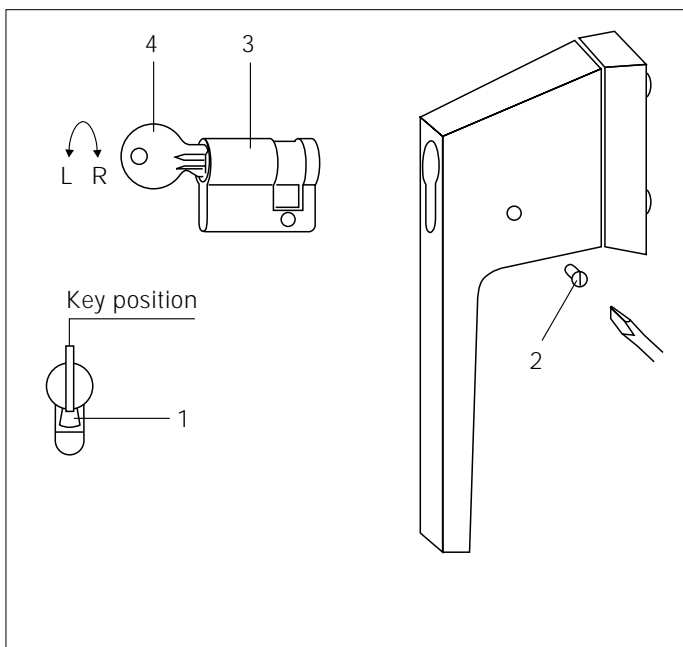
Aluminium

Window handle with click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm

prepared for single profile cylinder

for security windows
acc. DIN V ENV 1627

Click-stop + protection

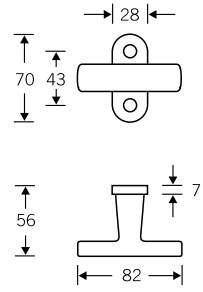


Inserting the cylinder

Loosen grub screw ②, set the cylinder thrower to the vertical position before assembly ①, insert the cylinder ③ and press in until there is an audible click. Tighten grub screw ②. Further pressure on the cylinder ③ causes the handle to become locked. To unlock, turn the key ④ clockwise.

Removing the cylinder:
Set the cylinder ③ in the un-locked position. Loosen grub screw ②. The cylinder ③ can now be removed by turning the key ④ anticlockwise.

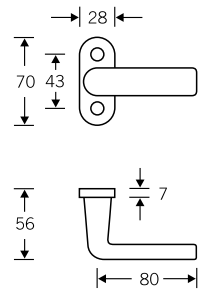
Window handles



3401

Aluminium

c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm



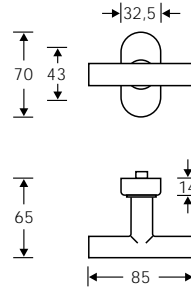
3402

Aluminium

c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm

Window handles

1



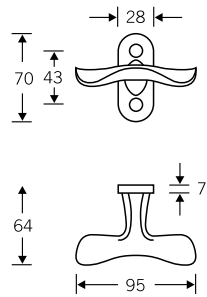
3403

Aluminium
Stainless steel

Window handle with click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm



d

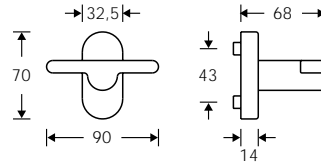


3404

Aluminium

c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm

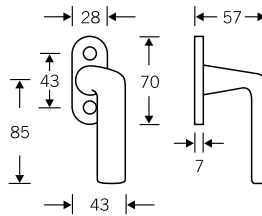
Window handles



3420

Aluminium
Stainless steel

Window handle with click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm



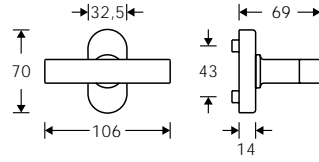
3430

Aluminium

c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm

Window handles

1



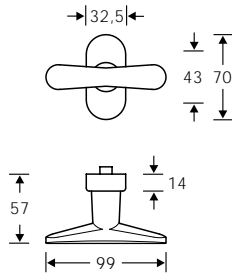
3453

Aluminium natural colour

Window handle with click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm

Design: Hans Kollhoff

d



3455

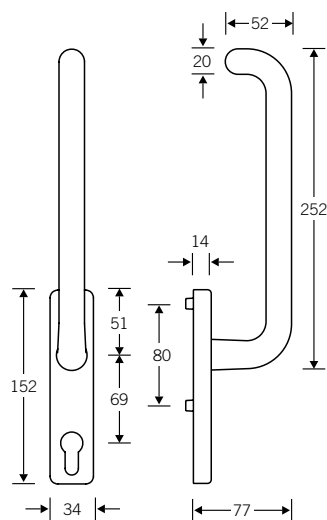
Aluminium natural colour

Window handle with click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm

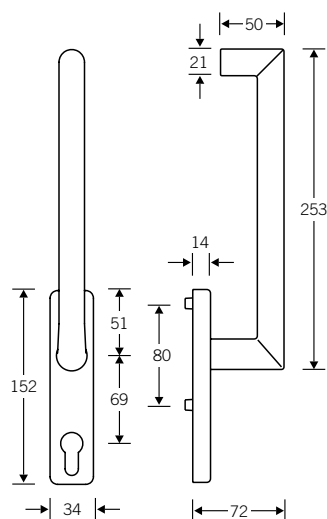
Design: Hartmut Weise



Sliding patio door levers



3750 01



3750 02

Stainless steel

Sliding patio door levers
incl. mechanism
turnably fixed
concealed fixing
10 mm □-spindle
Fixing M6

Sliding patio door levers are available

without keyhole
with PZ keyhole

Aluminium
Stainless steel

Letter plates

1

Technical information	166
Overview	167
Letter plates	168
Intercom and bell-push plates	174
Accessories	176

Letter plates

Letter plates

Letter plates and matching accessories are available for any number of applications and with a great variety of outer and aperture dimensions:

Letter plates with and without spacer.

Letter plates with spring mechanism – they can also be fitted vertically.

Letter plates with nameplates.

DIN 32 617

The Federal German Post Office has, in consultation with letter-plate manufacturers and consumer organisations, drawn up 'industrial guidelines for domestic letter boxes (specifications, testing and installation)'. These guidelines recommend that:

The aperture should be wide enough to allow a C4 letter (229 x 324 mm) to pass through lengthwise.

FSB letter-plate models 3829 and 3801 meet this criteria.

Bell pushes and lighting bases

Bell pushes and lighting bases may only be connected to a low voltage circuit, (max. 24 V/40 mA when connected to 8 V).

Overview

Aluminium
 Stainless steel



Pages 168 and 169



Page 170



Page 171



Page 172



Page 173



Page 176



Page 176



Page 174



Page 174



Page 174



Page 176



Page 175



Page 175



Page 175



Page 176



Letter plates

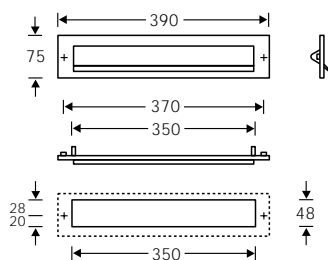
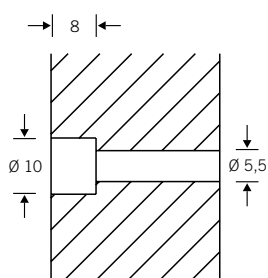
1



e

Fixing holes :
10 mm Ø, 8 mm deep
5,5 mm Ø through

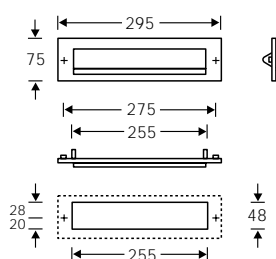
Installation with delivered
screws M5.



3801
Aluminium

2001 without nameplate
2002 with nameplate

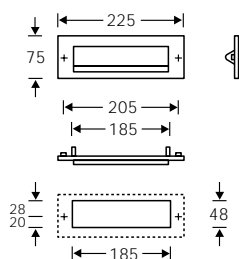
Opening size 325 x 32 mm
Cutout size in the door
350 x 48 mm



3804
Aluminium

2001 without nameplate
2002 with nameplate

Opening size 230 x 32 mm
Cutout size in the door
255 x 48 mm



3805
Aluminium

2001 without nameplate
2002 with nameplate

Opening size 160 x 32 mm
Cutout size in the door
185 x 48 mm

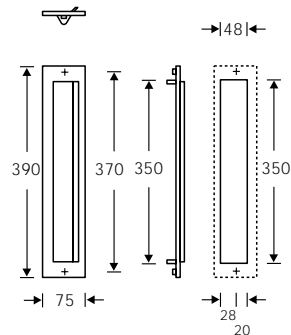
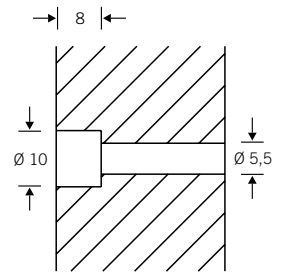
Letter plates



Letter plates 3801, 3804 and 3805 are fitted with springs and can hence be installed vertically.

Fixing holes :
10 mm Ø, 8 mm deep
5,5 mm Ø through

Installation with delivered screws M5.

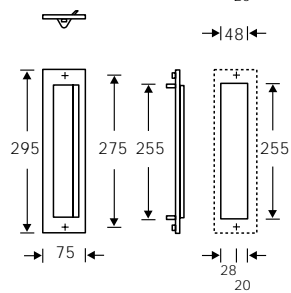


3801

Aluminium

2001 without nameplate
2002 with nameplate

Opening size 325 x 32 mm
Cutout size in the door
350 x 48 mm

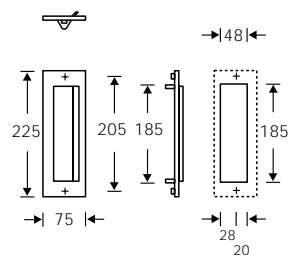


3804

Aluminium

2001 without nameplate
2002 with nameplate

Opening size 230 x 32 mm
Cutout size in the door
255 x 48 mm



3805

Aluminium

2001 without nameplate
2002 with nameplate

Opening size 160 x 32 mm
Cutout size in the door
185 x 48 mm

Letter plate

1



e

3808

Stainless steel

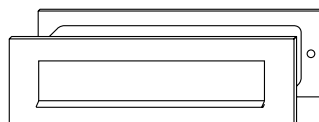
Opening size 230 x 35 mm
Cutout size in the door
246 x 60 mm

Concealed fixing from the inside or through the inner flap.

Letter plate system 3808 is available as:

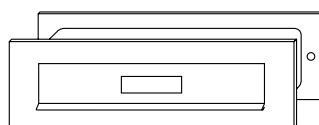
- Letter plate set with black spacer and inner flap for door thickness 40 -70mm or door thickness 71-100mm

- Single as letter plate or for wallmounting. Information on fixing page 174.



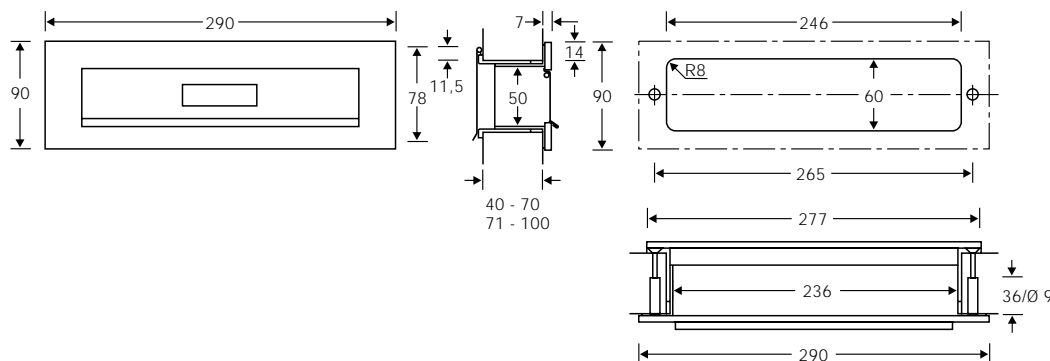
3808 0061 (40 - 70 mm)
3808 0071 (71 - 100 mm)
Letter plate set without nameplate, with spacer and inner flap

3808 0001
3808 0101, wallmounting
Letter plate without nameplate, without spacer or inner flap



3808 0062 (40 - 70 mm)
3808 0072 (71 - 100 mm)
Letter plate set with nameplate, spacer and inner flap

3808 0002
3808 0102, wallmounting
Letter plate with nameplate, without spacer or inner flap



Fixing holes:
9 mm Ø, 36 mm deep
4,5 mm Ø through

Installation with delivered screws M4.

Letter plate



3835 00

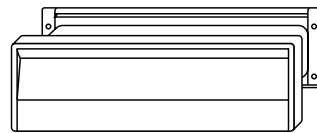
Aluminium

Opening size 230 x 40 mm
Cutout in the door
240 x 50 mm

Fixing of letter plate and inner plate must be made separately.

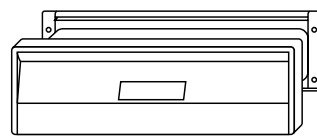
Letter plate system 3835 00 is available as:

- Letter plate set with black spacer and inner flap for door thickness 40 -70mm or door thickness 71-100mm
- Single as letter plate.



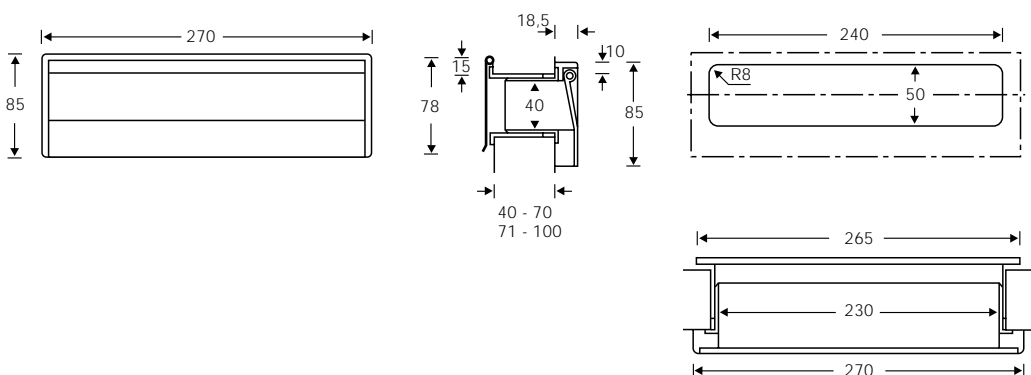
3835 0061 (40 - 70 mm)
3835 0071 (71 - 100 mm)
Letter plate set without nameplate, with spacer and inner flap

3835 0001
Letter plate without nameplate, without spacer or inner flap



3835 0062 (40 - 70 mm)
3835 0072 (71 - 100 mm)
Letter plate set with nameplate, spacer and inner flap

3835 0002
Letter plate with nameplate, without spacer and inner flap

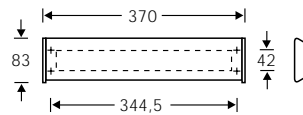


Letter plates

1



e

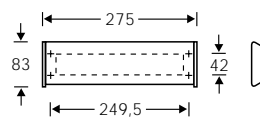


3829

Aluminium

0001 without nameplate
0002 with nameplate

Opening size/cutout size in the door 325 x 40 mm

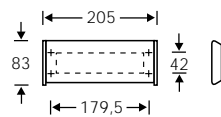


3826

Aluminium

2001 without nameplate
2002 with nameplate

Opening size/cutout size in the door 230 x 40 mm



3827

Aluminium

2001 without nameplate
2002 with nameplate

Opening size/cutout size in the door 160 x 40 mm

Letter plate

3826 20

Aluminium
Stainless steel

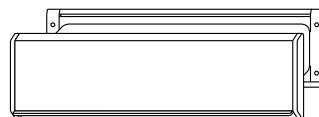
Opening size 230 x 40 mm
Cutout size in the door
240 x 50 mm

Fixing of letter plate and inner flap must be made separately.



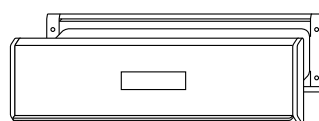
Letter plate system 3826 20 is available as:

- Letter plate set with black spacer and inner flap for door thickness 40 – 70mm or door thickness 71 – 100mm
- Single as letter plate.



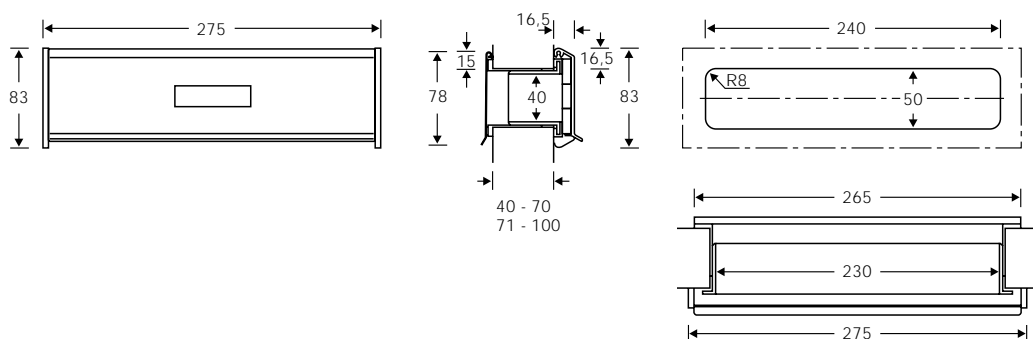
3826 2061 (40 - 70 mm)
3826 2071 (71 - 100 mm)
Letter plate set without nameplate, with spacer and inner flap

3826 2001
Letter plate without nameplate, without spacer or inner flap



3826 2062 (40 - 70 mm)
3826 2072 (71 - 100 mm)
Letter plate set with nameplate, spacer and inner flap

3826 2002
Letter plate with nameplate, without spacer or inner flap



Intercom and bell-push plates

1

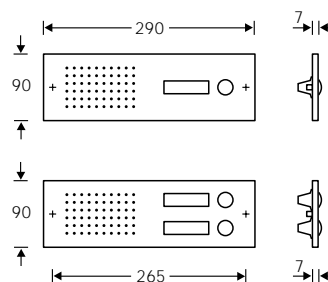


3812

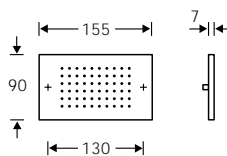
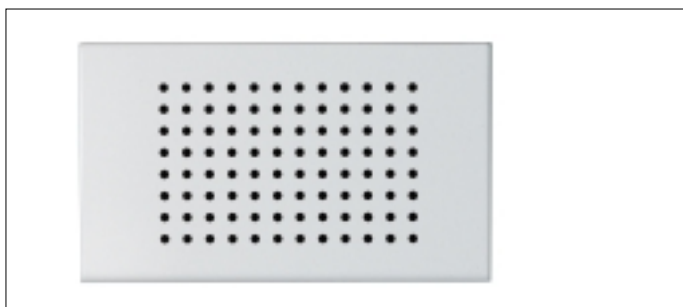
Stainless steel

- 0011 single
- 0012 double
- 0111 single, wallmounting
- 0112 double, wallmounting

Mill out size
W 245 x H 70 x D 30 mm



e

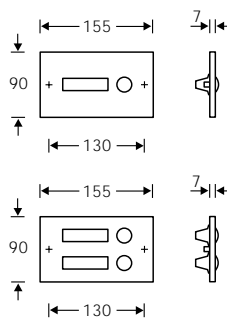


3811

Stainless steel

- 0010 single
- 0110 single, wallmounting

Mill out size
W 110 x H 70 x D 30 mm



3810

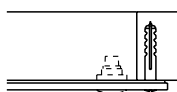
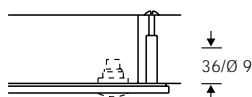
Stainless steel

- 0011 single
- 0012 double
- 0111 single, wallmounting
- 0112 double, wallmounting

Mill out size
W 110 x H 70 x D 30 mm

Instruction:

Bell pushes and lighting bases may only be connected to a low voltage circuit, (max. 24 V/40 mA when connected to 8 V).



Fixing holes:
9 mm Ø , 36 mm deep
4,5 mm Ø through
Installation with delivered screws M4.

Intercom and bell-push plates and letter plate 3808 are available on request with visible fixing for 5 mm Ø countersunk head screws.

Intercom and bell-push plates

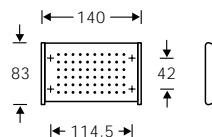
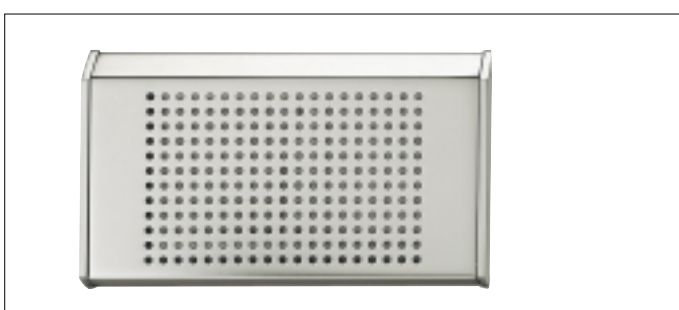
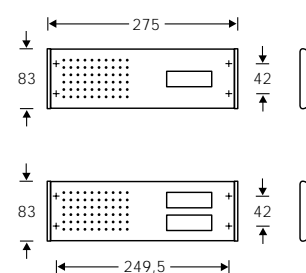


3866

Aluminium
Stainless steel

0011 single
0012 double

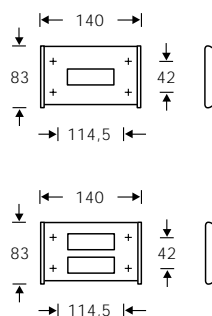
Mill out size
W 235 x H 60 x D 30 mm



3865

Aluminium
Stainless steel

Mill out size
W 100 x H 60 x D 30 mm



3864

Aluminium
Stainless steel

0011 single
0012 double

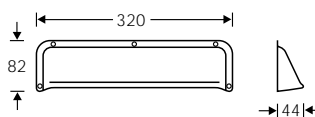
Mill out size
W 100 x H 60 x D 30 mm

Instruction:

Bell pushes and lighting bases may only be connected to a low voltage circuit, (max. 24 V/40 mA when connected to 8 V).

Letter hood
Flap
Bell pushes

1

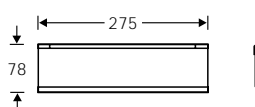


5812

Aluminium

for aperture size
280 x 65 mm

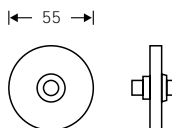
e



3845

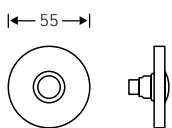
Aluminium

for aperture size
255 x 40 mm



3863

Aluminium



3863

Stainless steel

Instruction:

Bell pushes and lighting bases may only be connected to a low voltage circuit, (max. 24 V/40 mA when connected to 8 V).

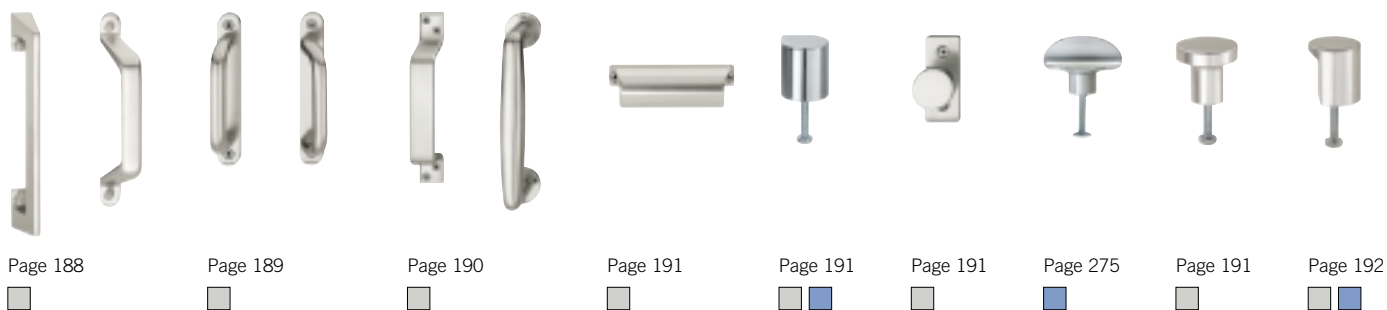
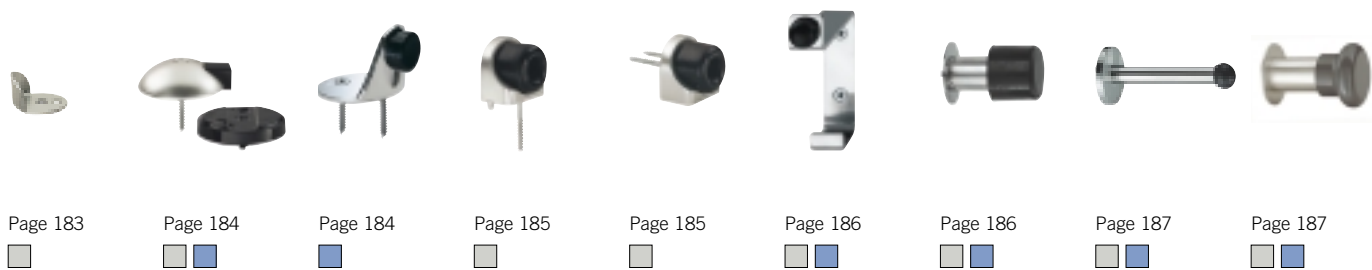
Aluminium Stainless steel Accessories

1

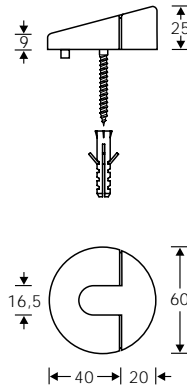
Overview	178
Door stops	179
Pull handles	188
Cabinet knobs	191
Card frames	194
Cable box	195
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Key tag	201
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Overview

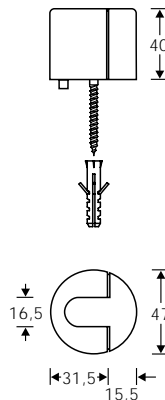
Aluminium
 Stainless steel



Door stops



3816
Aluminium
Stainless steel



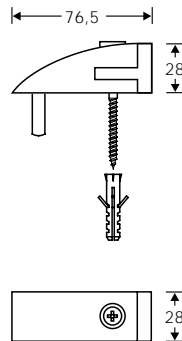
3817
Aluminium

As with all architectural hardware, door stops will only give satisfaction if correctly fitted and properly used. Before ordering or fabricating, it is necessary to check the weight of the door leaf, the angle of contact, the height of the bottom of the door from the floor and the quality of the flooring itself. Depending on requirements, it

is then possible to choose between simple stops, stops with anti-skew capability, stops with baseplates, directional and non-directional stops and, finally, stops fitted straight into the floor or those where rawplugs are used. If in any doubt, please consult us citing the conditions in question.

Door stops

1

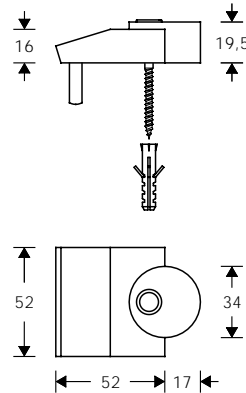


3819

Aluminium natural colour
anodised

Design: Josef Paul Kleihues

f



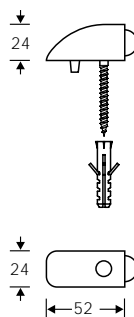
3820

Aluminium natural colour
anodised

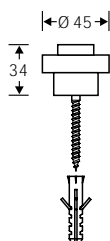
Design: Hans Kollhoff

As with all architectural hardware, door stops will only give satisfaction if correctly fitted and properly used. Before ordering or fabricating, it is necessary to check the weight of the door leaf, the angle of contact, the height of the bottom of the door from the floor and the quality of the flooring itself. Depending on requirements, it

Door stops



3879
Aluminium

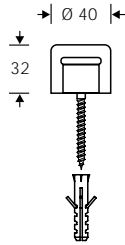


3881
Aluminium
Stainless steel

is then possible to choose between simple stops, stops with anti-skew capability, stops with baseplates, directional and non-directional stops and, finally, stops fitted straight into the floor or those where rawlplugs are used. If in any doubt, please consult us citing the conditions in question.

Door stops

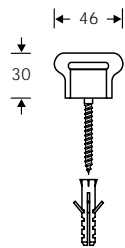
1



3880 00

Aluminium

f



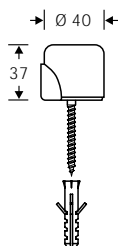
3896 00

Aluminium

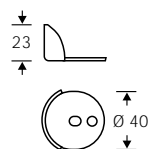
Design: Jasper Morrison

As with all architectural hardware, door stops will only give satisfaction if correctly fitted and properly used. Before ordering or fabricating, it is necessary to check the weight of the door leaf, the angle of contact, the height of the bottom of the door from the floor and the quality of the flooring itself. Depending on requirements, it

Door stops



3882
Aluminium

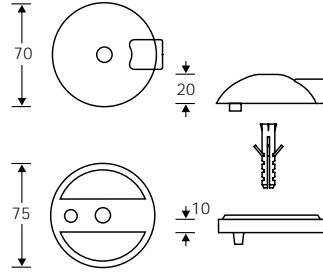


3883
Aluminium
Shoe without door stop

is then possible to choose between simple stops, stops with anti-skew capability, stops with baseplates, directional and non-directional stops and, finally, stops fitted straight into the floor or those where rawlplugs are used. If in any doubt, please consult us citing the conditions in question.

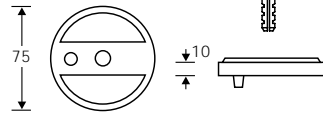
Door stops

1



3884 00

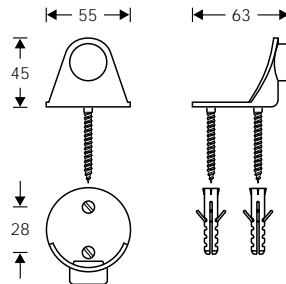
Aluminium
Stainless steel



3884 10

Black baseplate

f



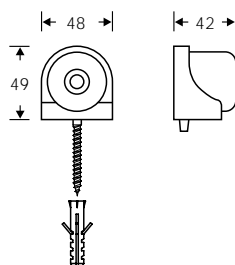
3887

Stainless steel

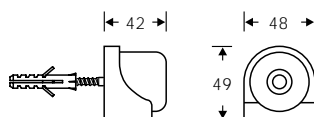
Design: Erik Magnussen

As with all architectural hardware, door stops will only give satisfaction if correctly fitted and properly used. Before ordering or fabricating, it is necessary to check the weight of the door leaf, the angle of contact, the height of the bottom of the door from the floor and the quality of the flooring itself. Depending on requirements, it

Door stops



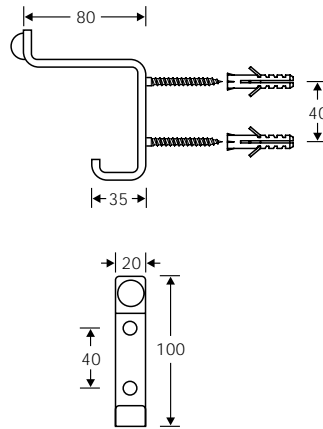
3888
Aluminium



3889
Aluminium

is then possible to choose between simple stops, stops with anti-skew capability, stops with baseplates, directional and non-directional stops and, finally, stops fitted straight into the floor or those where rawlplugs are used. If in any doubt, please consult us citing the conditions in question.

Door stops for wall mounting

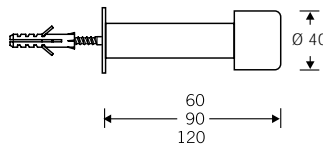
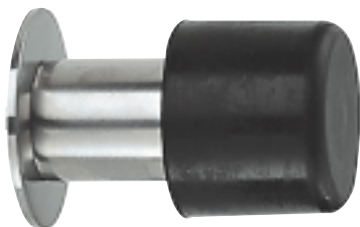


3646 ..

Aluminium
Stainless steel

Door stop combined with
hat & coat hook

00 without door stop
01 with door stop



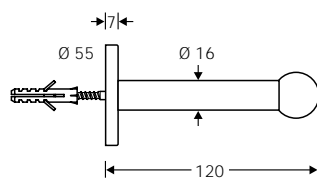
3880

Aluminium
Stainless steel

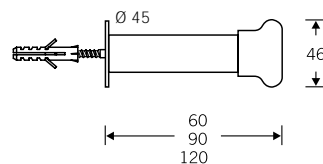
02 length 120 mm
03 length 90 mm
04 length 60 mm

Door stops mounted to the wall need to be fitted in such a way that the door leaf strikes them as head-on as possible. Any undue lateral force is likely to cause the stop to be worked loose.

Door stops for wall mounting



3895
Aluminium
Stainless steel



3896
Aluminium natural colour
anodised

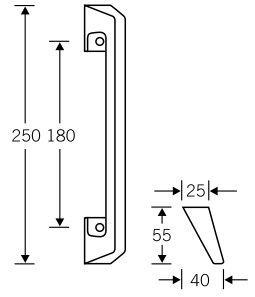
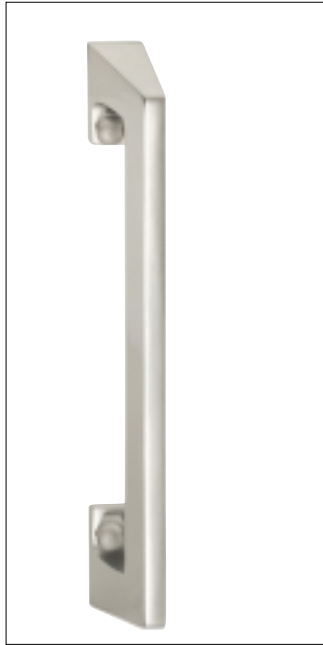
- 02 length 120 mm
- 03 length 90 mm
- 04 length 60 mm

Design: Jasper Morrison

FSB advises against fitting stops at door-handle height. The resultant shock waves are transmitted via the lock follower to the lock mechanism, eventually causing it to suffer damage.

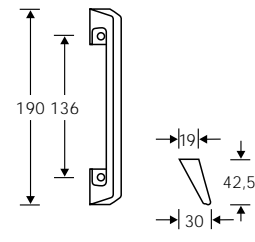
Pull handles

1

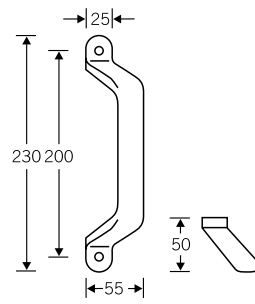


3606
Aluminium

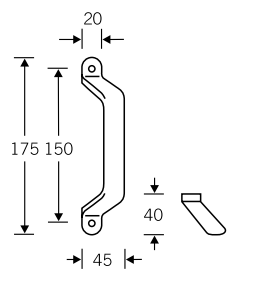
f



3607
Aluminium



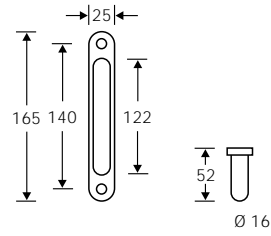
3603
Aluminium



3604
Aluminium

Fixing is by means of 6 mm threaded bolts and dome nuts.

Pull handles



2160

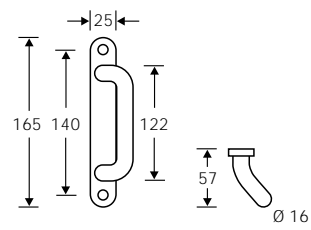
Aluminium

00 visible fixing

01 concealed bolt through fixing

1

f



2161

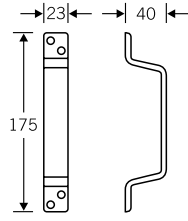
Aluminium

00 visible fixing

01 concealed bolt through fixing

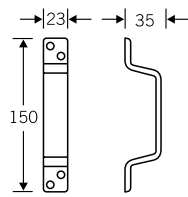
Pull handles

1

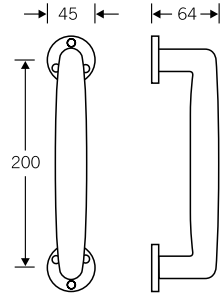


3617
Aluminium

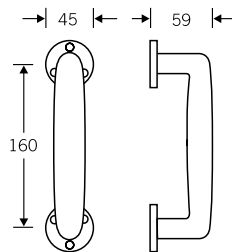
f



3618
Aluminium

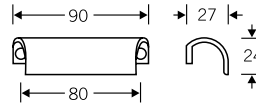


3601
Aluminium

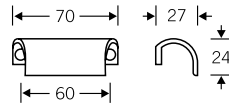


3602
Aluminium

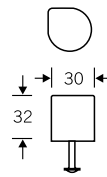
Drawer pull
Cabinet knobs



3657
Aluminium



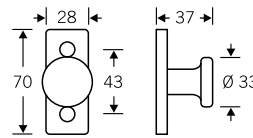
3656
Aluminium



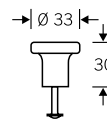
3614
Aluminium
Stainless steel

Screw M4 x 30 mm

Design: Franco Clivio



2328
Aluminium

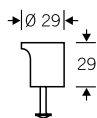


3689
Aluminium

Screw M4 x 30 mm

Cabinet knobs

1

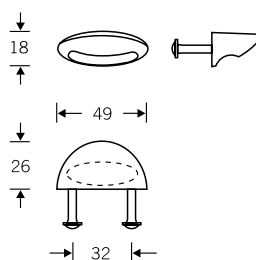


3691

Aluminium
Stainless steel

Screw M4 x 30 mm

f

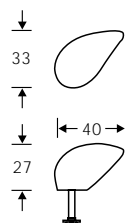


3629

Aluminium natural colour
anodised

Screw M4 x 30 mm

Design: Hartmut Weise



3632

Aluminium natural colour
anodised
Stainless steel

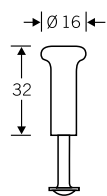
3632 04 r.h.
3632 05 l.h.
Screw M4 x 30 mm

Design: Philippe Starck

Quiz question: how can you tell whether cabinet knob design FSB 3632 is the FSB Philippe Starck original or a cheap copy?

Answer: by its design and cost. Philippe Starck fashioned an elaborate right- and lefthand version. The plagiarisers reduced the effect to cheap symmetry. FSB continues to supply solely original designs.

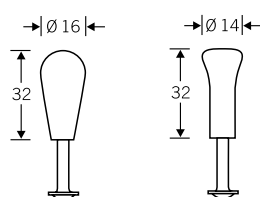
Cabinet knobs



3641

Aluminium natural colour
anodised
Stainless steel

1



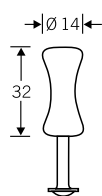
3642

Aluminium natural colour
anodised
Stainless steel

3643

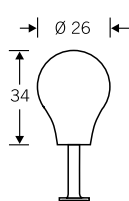
Aluminium natural colour
anodised
Stainless steel

f



3644

Aluminium natural colour
anodised
Stainless steel



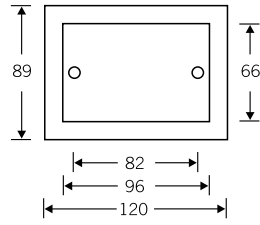
3654

Aluminium natural colour
anodised
Stainless steel

Jasper Morrison has designed a whole handful of unfussy cabinet knobs for FSB.

All cabinet knobs are supplied with screw M4 x 30 mm.

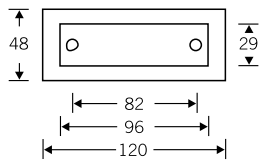
Card frames



4001

Aluminium

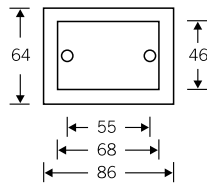
suitable for paper dimension
74 x 105 mm



4002

Aluminium

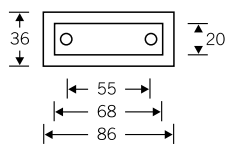
suitable for paper dimension
37 x 105 mm



4003

Aluminium

suitable for paper dimension
52 x 74 mm



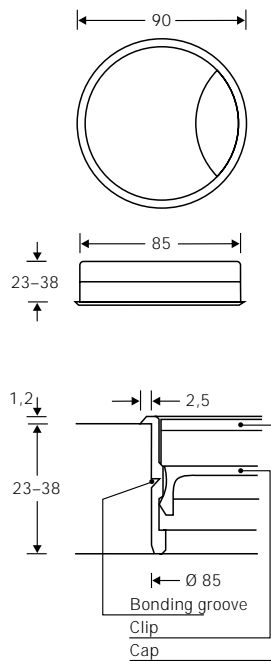
4004

Aluminium

suitable for paper dimension
26 x 74 mm

The card frames are also available with metal plates with or without engraving.

Cable box



9865

Aluminium
Stainless steel

External diameter	90,0 mm
Internal diameter	80,0 mm
Inlet diameter	85,0 mm
Height less rim	
9865 0000	38,0 mm
9865 0002	33,0 mm
9865 0004	29,0 mm
9865 0006	23,0 mm
Rim thickness	1,2 mm
Rim projection	2,5 mm
Slit length	58,0 mm

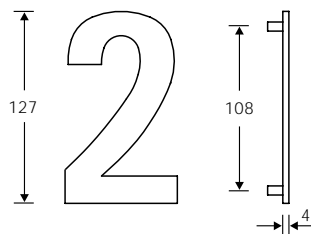
The FSB cable box ensures tidy cable management at work desks. Connections for telephones and fax machines, task lights, desktop computers and all that goes with them are ideally accommodated in this elegant cable box. Its heavy-duty design is such that the cap remains resolutely clipped in place no matter how obdurate the cabling beneath.

The slit is sealed by a brush gasket that adapts itself to the cables inserted.

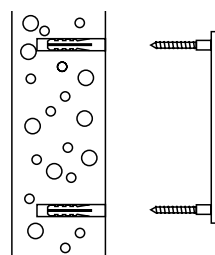
The FSB cable box is available in

- Alu 01 natural colour anodised
- Alu 03 brass-colour anodised
- Alu + colour black
- Alu + colour white
- Alu + colour grey
- Satin stainless steel

Numerals



4005
Stainless steel



FSB's programme of numerals and letters draws on a design that Otl Aicher recommended to our company as a headline typeface. For Otl Aicher, good legibility from a distance was all important.

Our numerals and letters are made of 4 mm-thick stainless steel, material code 1.4301.

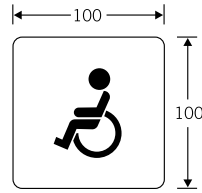
All characters feature two standardised fixing points comprising 4 mm threaded sockets. These are fitted with bolts which in turn are secured in 8 mm rawlplugs.

Each character is supplied with a fixing template that also determines the distance between characters. Custom spacing can be achieved by reducing the width of templates.

Item-nos.:
4005 ..

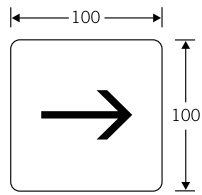
1	2	3	4	5	6	7	8	9	0
01	02	03	04	05	06	07	08	09	00
a	b	c	d	e	/				
11	12	13	14	16	15				

Indicators



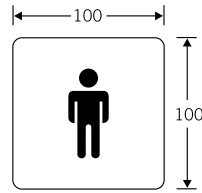
4058 30

Aluminium
Stainless steel



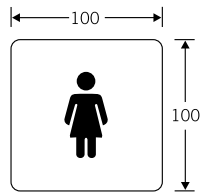
4058 33

Aluminium
Stainless steel



4058 36

Aluminium
Stainless steel



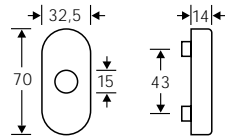
4058 37

Aluminium
Stainless steel

With adhesive film on reverse

Budget lock roses

1

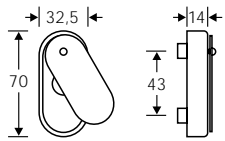


1759 25

Aluminium
Stainless steel

Lugs with 10 mm Ø

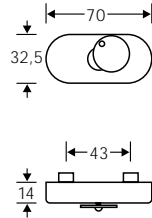
f



1759 26

Aluminium
Stainless steel

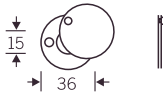
Lugs with 10 mm Ø



1759 27

Aluminium
Stainless steel

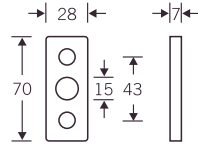
Lugs with 10 mm Ø



1793

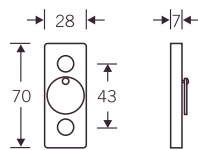
Aluminium

Budget lock roses



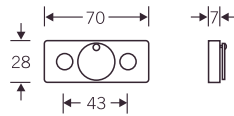
1783
Aluminium

1



1784
Aluminium

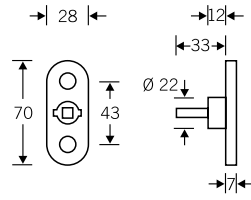
f



1785
Aluminium

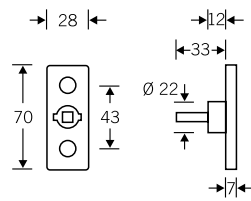
Window locks
Door viewer

1

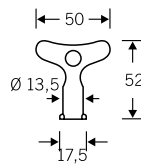


3461
Aluminium

f

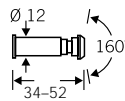


3462
Aluminium



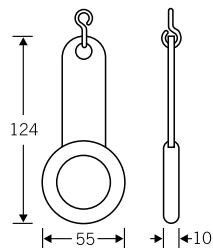
3463
Galvanised iron

The key fits article no. FSB 3461 and 3462, but not bathroom furniture.



3875
Chrome plated

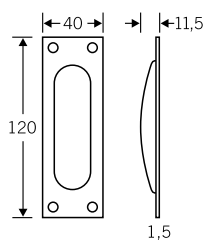
Key tag
Flush pulls



4047

Aluminium 01
Aluminium 07
Stainless steel

Engraving on request.
Tag ring black

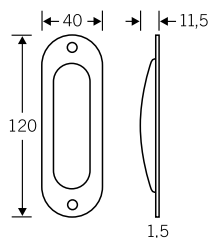


4211

Aluminium
Stainless steel

Mill out size in the door
87 x 28 x 10 mm

Boreholes for 3.0 mm
countersunk screws

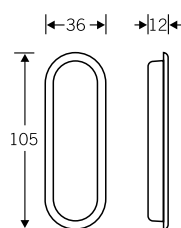


4212

Aluminium
Stainless steel

Mill out size in the door
87 x 28 x 10 mm

Boreholes for 3.0 mm
countersunk screws



4213

Aluminium
Stainless steel

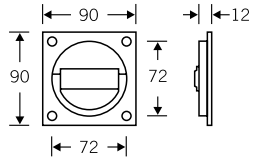
Mill out size in the door
97 x 28 x 10 mm

Flush pulls FSB 4211, 4212
and 4213 are available:

without keyhole,
with lever lock/BB keyhole,
with profile cylinder/PZ keyhole.

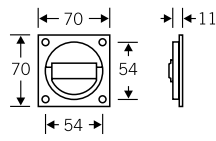
Flush ring handles

1

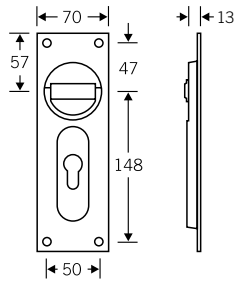


4203
Aluminium

f



4204
Aluminium



4205
Aluminium

Available with:

- 8 mm □-hole
- Solid spindle 8 mm □
- FSB Stabil-spindle 8 mm □

Lever lock/BB keyhole
Profile cylinder/PZ keyhole
(4205)

Boreholes for 3.0 mm counter-sunk screws

Engraving

FSB can engrave lettering and numerals on information signs, key tags, pad handles and any other flat plates made of aluminium, brass, bronze or stainless steel.

Before we can quote, we require the following information:

Metal required for plate

Size of plate, max. 500 x 1.200 mm

Typeface desired (see selection in righthand column)

Height of lettering (3 - 100 mm)

Engraving natural or inlaid. For the latter, the colour required; we supply black as standard

For logos and other pictorial material, drawings or sketches with details of dimensions.

Helvetica bold

Aluminium
Stainless steel
Brass

Helvetica light

ROMAN trilinear

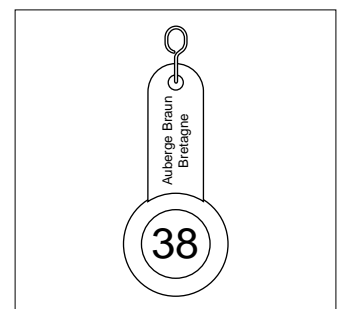
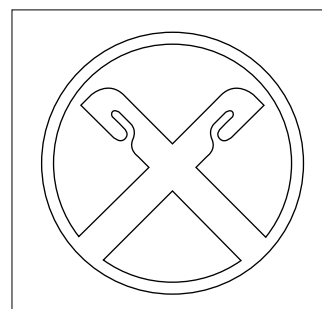
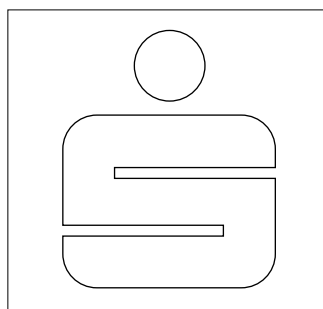
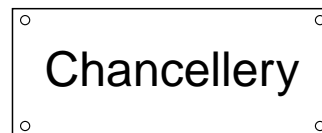
Century

EnScript

Old English trilinear

Gothic

DIN 1451



Brass

Brass - the material	206
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Backplates	219
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Brass



FSB 4205
Brass polished lacquered

FSB 4305
Brass polished waxed

FSB and brass

FSB has been supplying select door and window furniture in brass, together with accessories, for forty years. From the very beginning we strove for originality, spurning hackneyed forms such as post horns or duck bills.

DIN 17660

Brass furniture is available in a wide range of alloys and at widely differing prices. But not all that glitters is pure brass. It is in our case though. We make exclusive use of the CuZn37 copper-zinc alloy specified under DIN 17660 as material no. 2.0321 and 2.0335.

Corrosion protection

Brass is prone to corrosion in everyday use - a fact that is sometimes glossed over.

Polishing is the only way round this. Anyone acquainted with more northerly countries will have observed the weekly buffing given to brass furniture on front doors there.

This chore becomes redundant if the surface is either lacquered or waxed.

Waxed brass components are self-polishing through use. Areas that are not handled will rapidly develop a brown or grey-green patina. Many buyers deem this surface discolouration positively alluring. Lacquered brass furniture loses its gloss once the lacquer is damaged. Intercrystalline corrosion then quickly sets in. Corroded handles can be re-conditioned, however - for a charge covering costs.

Recommendation

For anyone interested in a lasting golden 'sheen', FSB recommends zirkon-coated stainless steel fittings in a golden brass finish. The hardness of the base material ensures that the brass stained zircon coating will withstand the ravages of the environment in normal use.

For those who prefer to stick with brass despite what we have said on the previous page, FSB has the following recommendations to make:

Only use waxed brass finishes. Waxed brass polished finish can be looked after using proprietary cleansers.

Do not use lacquered brass finishes in outdoor applications where the sun and the environment will hasten the onset of corrosion.

Brass furniture should not be considered for heavy duty applications in public buildings, since there is too much cleaning involved.

Surface hygiene

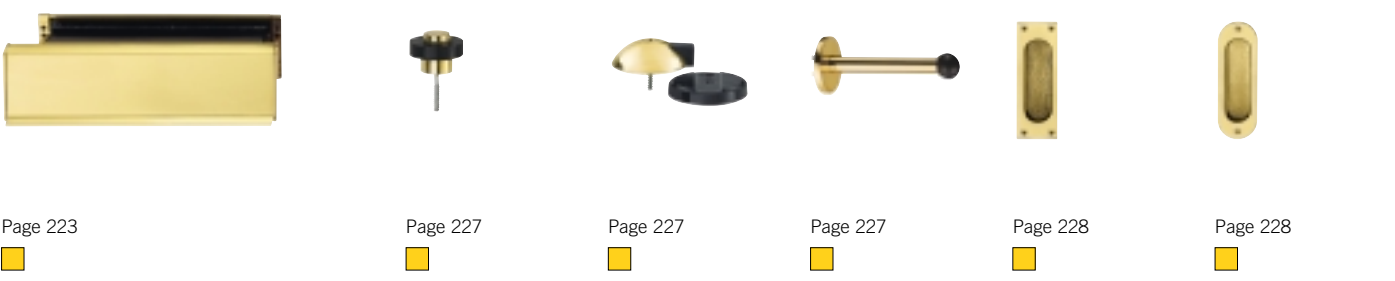
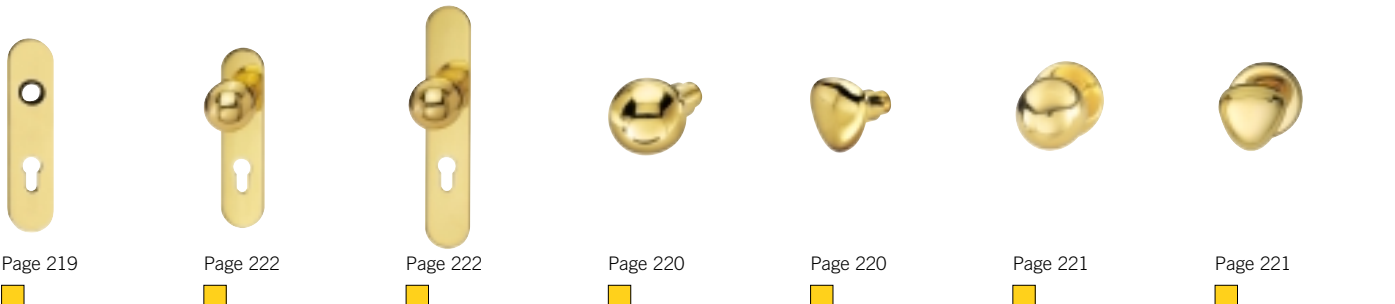
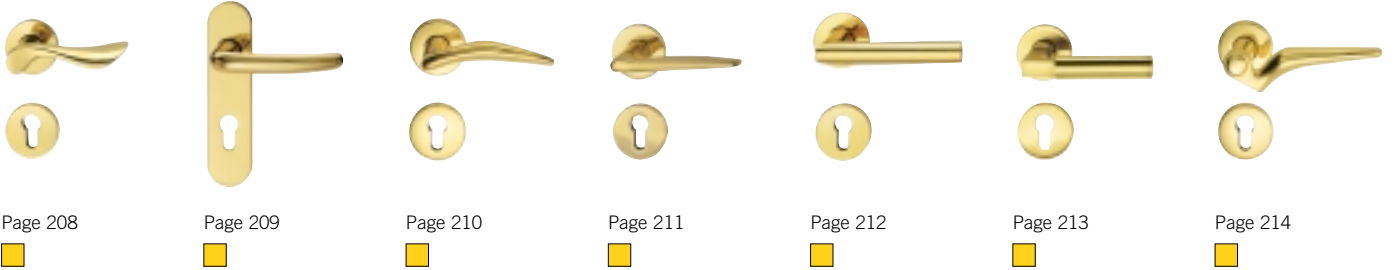
A brief word of clarification concerning the hygienic properties of door handles:

There are those amongst our competitors who, citing the findings of research institutes, make much in their brochures of the enhanced sterilizing properties of certain finishes. FSB likewise has access to reports proving that, for instance, cupriferous metals kill germs more effectively than, in particular, synthetic materials.

But FSB sets no great store by such findings. Whether a given finish destroys bacteria in 24 hours or in 72 is academic really, since in practice, doors tend to be in fairly regular use anyway. You'd have to take remedial action every time a door was opened or closed if you wished to eliminate germs altogether.

Overview

■ Brass

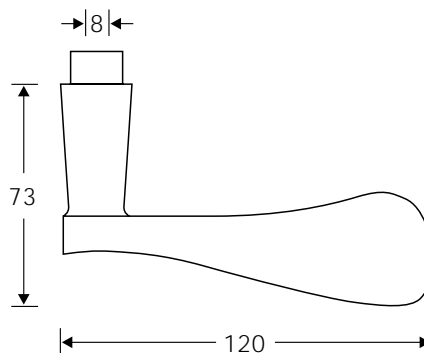


Lever handle



1020

Brass



2

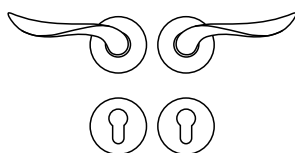
The 'functional style' of the 50s found its clearest expression in the model FSB 1020. Johannes Potente designed this model in 1953. His design's strong points are its physical dynamism, its simple hand shape and an assymetry that gives the illusion of symmetry.

When Johannes Potente designed his 1020 model, it was his intention to provide visual relief from the strict lines of the door, 'inviting' the observer to take hold of the handle.

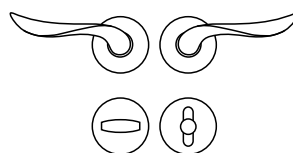
Johannes Potente always intended that this model should be produced in aluminium and brass.

FSB 1020 is one of four models designed by Designer Johannes Potente which became part of the permanent collection of the MoMA in New York.

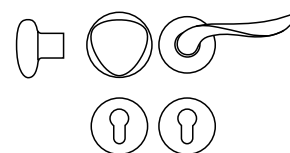
Order proposal:



Internal door furniture	
Lever handle	1020
Rose	1731
Escutcheon	1735



Bathroom furniture	
Lever handle	1020
Rose	1731
Roses WC	1735 0054



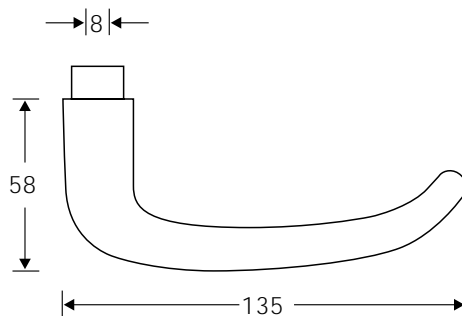
Entrance door furniture	
Lever-female part	1020
Rose	1731
Escutcheon	1735
Door knob	2327 06

Lever handle



1023

Brass

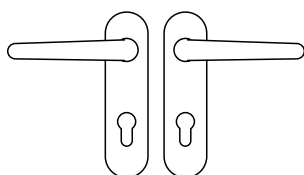


When the Ulm Design College was being built in the Fifties, the Swiss architect, sculptor and designer Max Bill with Ernst Moeckel designed a lever handle based on the railway carriage handle common in Switzerland. It entered design history as the 'Ulm handle'.

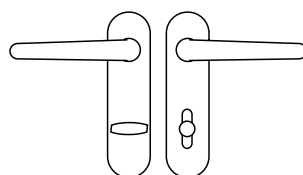
Johannes Potente took this as the starting point for the FSB 1023 model, still a compelling alternative to anonymous tubular designs.

2

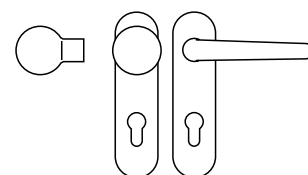
Order proposal:



Internal door furniture
Lever handle 1023
Backplate 1451 03



Bathroom furniture
Lever handle 1023
WC Set 1451 0354



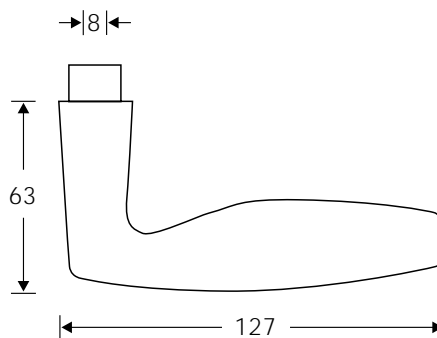
Entrance door furniture
Lever-female part 1023
Backplates 1451 03
Knob backplate 1964 03

Lever handle



1057

Brass

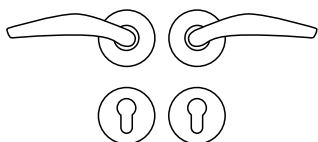


2

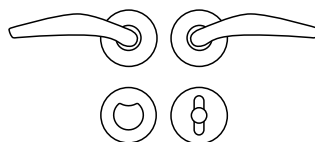
The FSB 1057 lever handle is the work of Munich designer Jan Roth. Unimpressed by the models then on sale, he decided to design handles of his own. After the first casting, he took the polished unfinished parts home and duly fitted them to his doors (which is where they still are). Will Jan Roth like our version in brass too?

The Jan Roth-designed FSB 1057 model nestles snugly in the hand, and women, especially, often fall for it on the spot.

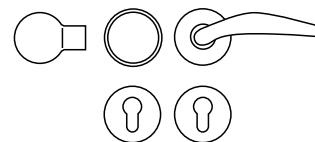
Order proposal:



Internal door furniture
 Lever handle 1057
 Rose 1707
 Escutcheon 1708



Bathroom furniture
 Lever handle 1057
 Rose 1707
 Roses WC 1708 7554



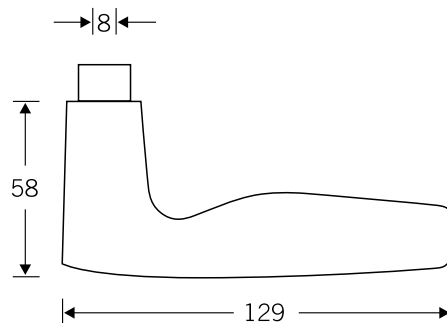
Entrance door furniture
 Lever-female part 1057
 Rose 1707
 Escutcheon 1708
 Door knob 2302 06

Lever handle



1058

Brass

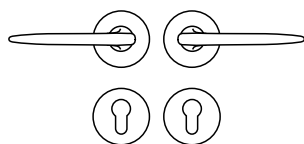


2

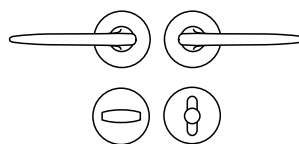
FSB 1058 was Johannes Potente's favourite. It is not known why he followed up his accomplished FSB 1051 model with a re-design two years later. The FSB 1058 re-design does away with the triangular motif near the pivotal axis. The result is a slender, elegant model that is strikingly attractive.

FSB 1058 is one of four models designed by Designer Johannes Potente which became part of the permanent collection of the MoMA in New York.

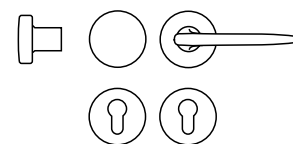
Order proposal:



Internal door furniture	
Lever handle	1058
Rose	1731
Escutcheon	1735



Bathroom furniture	
Lever handle	1058
Rose	1731
Roses WC	1735 0054



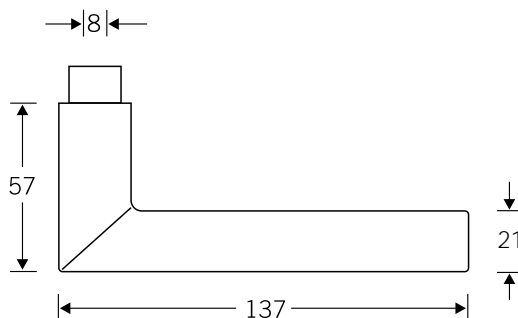
Entrance door furniture	
Lever-female part	1058
Rose	1731
Escutcheon	1735
Door knob	2329 06

Lever handle



1076

Brass

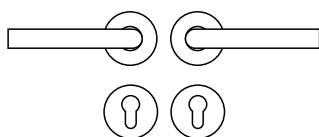


2

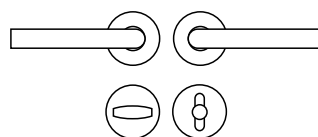
The architect Robert-Mallet Stevens (1886–1945) designed several blocks of flats in Paris during the 1920s. He was probably the first designer to hit upon the idea of taking the tubular handle devised by the Viennese philosopher Ludwig Wittgenstein in the same decade, splitting it where it bends, and mitring it back together again at right angles.

They are now known as the 'FRANKFURT model', and there's a simple reason for this. They were rediscovered for the new Architecture Museum building in Frankfurt and soon took the market by storm.

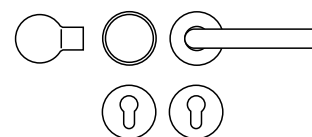
Order proposal:



Internal door furniture
 Lever handle 1076
 Rose 1731
 Escutcheon 1735



Bathroom furniture
 Lever handle 1076
 Rose 1731
 Roses WC 1735 0054



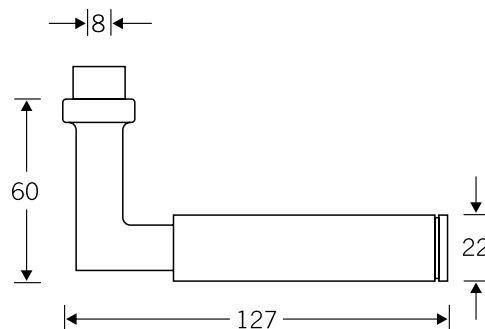
Entrance door furniture
 Lever-female part 1076
 Rose 1731
 Escutcheon 1735
 Door knob 2302 06

Lever handle



1102

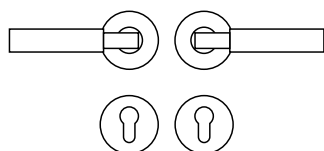
Brass



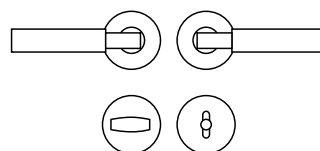
Model FSB 1102 was produced by the Italian designer Alessandro Mendini, who contributed to the FSB Design Workshop by refashioning a familiar Gropius handle using new materials. So popular has Alessandro Mendini's 're-design' proved that there have been many requests for a brass version. We're only too pleased to comply.

2

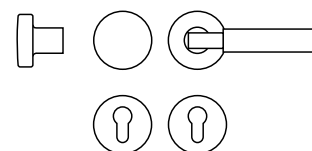
Order proposal:



Internal door furniture
 Lever handle 1102
 Rose 1731
 Escutcheon 1735



Bathroom furniture
 Lever handle 1102
 Rose 1731
 Roses WC 1735 0054



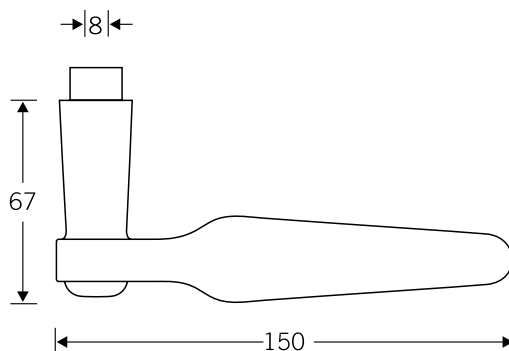
Entrance door furniture
 Lever-female part 1102
 Rose 1731
 Escutcheon 1735
 Door knob 2329 06

Lever handle



1103

Brass



2

The FSB 1103 lever handle by Hans Hollein is shaped to the hand in classical FSB fashion. Hans Hollein incorporated two specific principles into this model: Firstly, he wanted to keep the user's hand well clear of the edge of the door. Hence the offset between the point of pivot and the grip. Secondly, he wanted to offer a choice of either upward or downward lever position, thus lending the door a flexible identity.

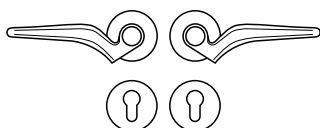


Handle upwards

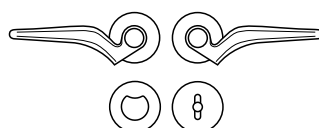


Handle downwards

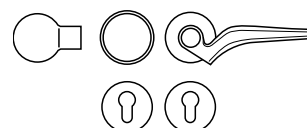
Order proposal:



Internal door furniture
 Lever handle 1103
 Rose 1707
 Escutcheon 1708



Bathroom furniture
 Lever handle 1103
 Rose 1707
 Roses WC 1708 7554



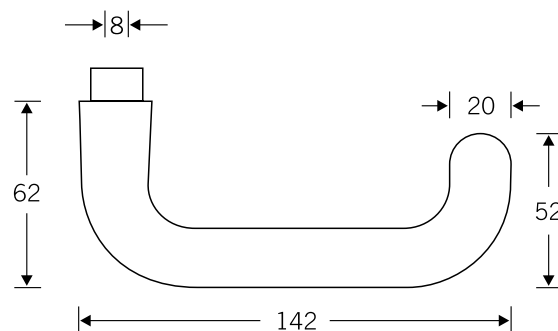
Entrance door furniture
 Lever-female part 1103
 Rose 1707
 Escutcheon 1708
 Door knob 2302 06

Lever handle



1146

Brass

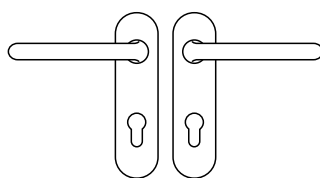


2

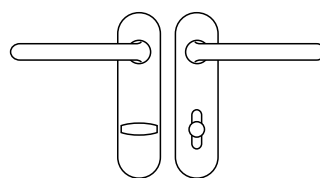
Much has been written about who actually invented the tubular design. Most probably it was some master craftsman in the mists of time hammering steel tubing into a rudimentary handle on his anvil. He had very likely been commissioned to produce a handle that would prevent animals' harnesses snagging on doors. This disparaging phrase 'stable door handle' has long been common parlance. Having served the animal world well, the handle came back in an array of material and colours a century later to adorn doors for human use the world over. That's the general background to this classic design.

But FSB felt the time had come to take tubular design a stage further. The shank was made to taper, the arching free end given a spherical tip. Only two very simple features have lent the FSB 1146 model greater individuality with this reworking. Isn't it strange? FSB 1146 gets copied more and more.

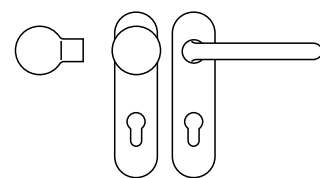
Order proposal:



Internal door furniture
Lever handle 1146
Backplates 1451 03



Bathroom furniture
Lever handle 1146
WC Set 1451 0354



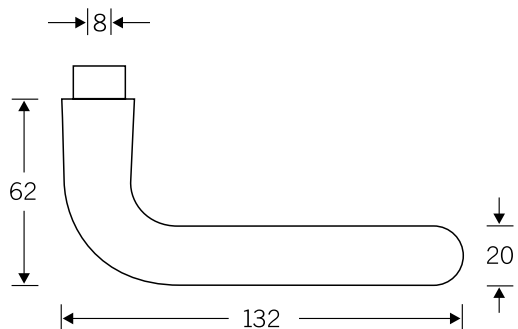
Entrance door furniture
Lever-female part 1146
Backplates 1451 03
Knob backplate 1964 03

Lever handle



1147

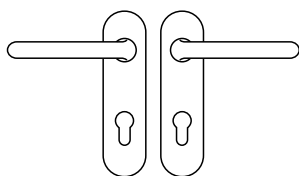
Brass



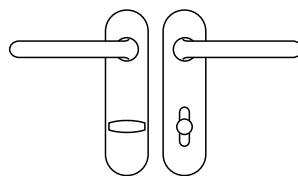
The company motif draws on a door handle designed in mid-Twenties' Vienna by the Austrian philosopher Ludwig Wittgenstein that has served as a model for several designs since, including the reworked FSB 1147 handle in this catalogue. It should replace the standard 1075 model.

Its tapered neck and rounded end set it apart from both our own company motif and the many other variants of this handle on the market.

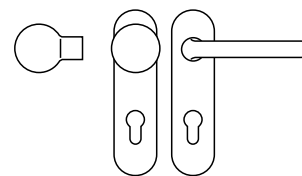
Order proposal:



Internal door furniture
Lever handle 1147
Backplates 1451 03

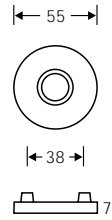
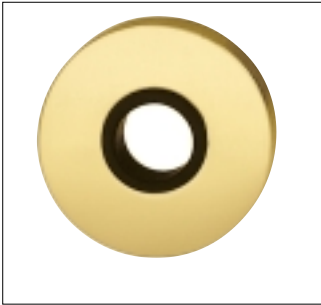


Bathroom furniture
Lever handle 1147
WC Set 1451 0354

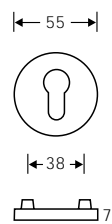


Entrance door furniture
Lever-female part 1147
Backplates 1451 03
Knob backplate 1964 03

Roses



1731
without lugs 1743
Brass

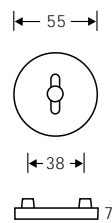


1735
without lugs 1744
Brass

2

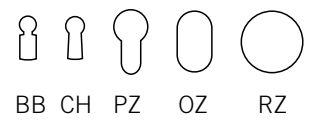


1735 0054
without lugs 1744 0054
Brass

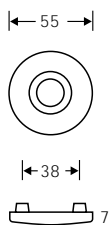
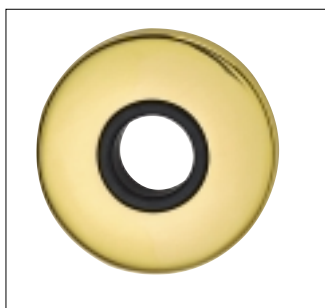


Roses with square edges

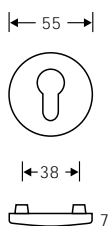
Keyholes



Roses

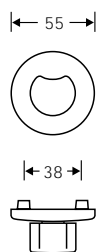


1707
without lugs 1705
Brass

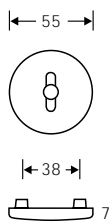
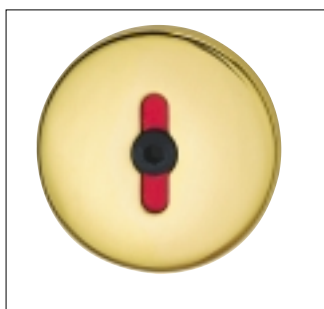


1708
without lugs 1709
Brass

2

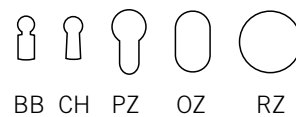


1708 7554
without lugs 1709 7554
Brass

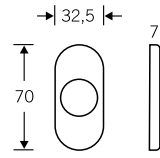
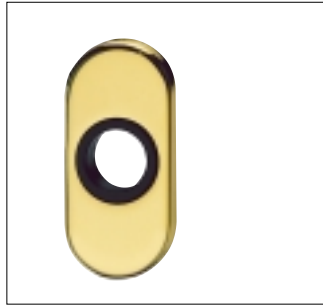


FSB offers the market a selection of convex roses by Hartmut Weise (FSB 1707/ 1708) that augment the proven hard-edged standard designs FSB 1731/1735/ 1743/1744.

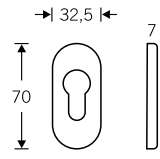
Keyholes



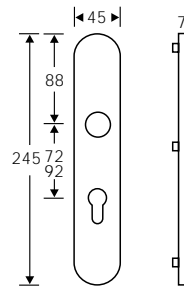
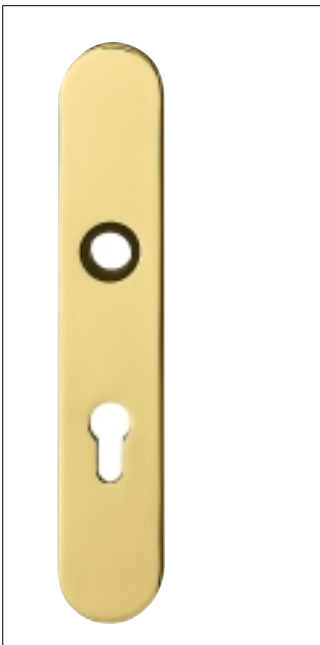
Roses
Backplates



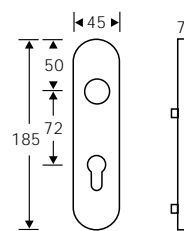
1758
Brass



1757
Brass



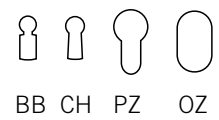
1418 03 72 + 92 mm
Brass



1451 03 72 mm
Brass

2

Keyholes

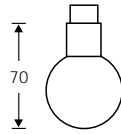


BB CH PZ OZ

Knob handles

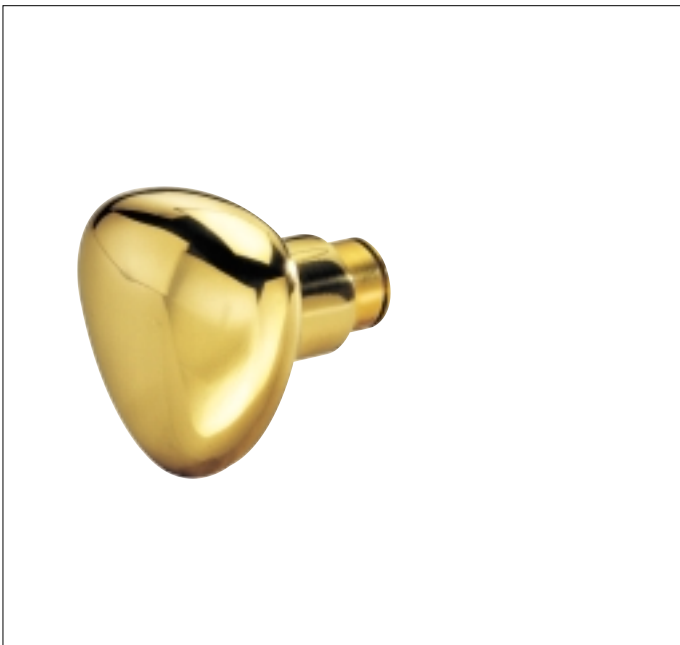


← 50 →

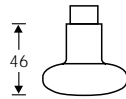


0802 8 mm □
Brass

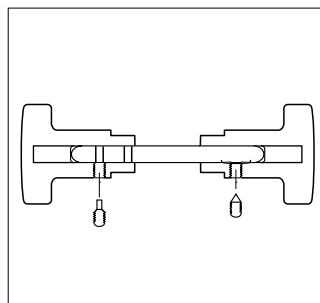
2



← 58 →

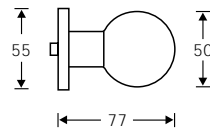


0817 8 mm □
Brass



Turnable knob handles are made and supplied by FSB as female sections. Knobsets are created by joining two female parts together using the FSB Stabil-spindle 0102.

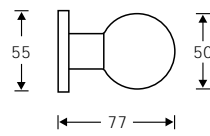
Door knobs



2302 06

Brass

concealed through fixing
c:c screw holes 38 mm

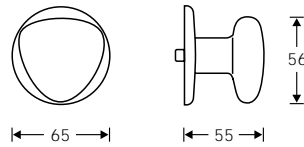
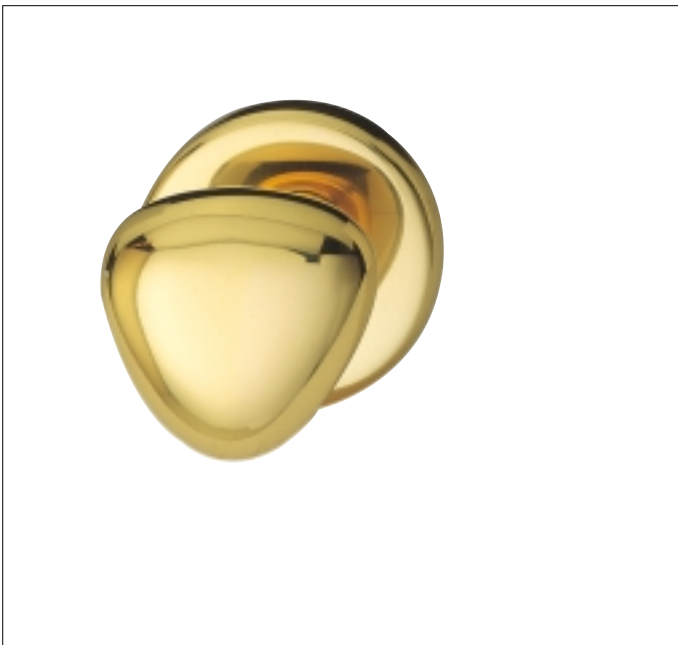


2302 05

Brass

concealed face fixing

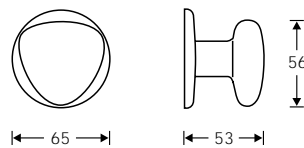
2



2327 06

Brass

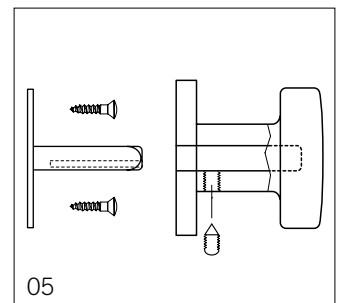
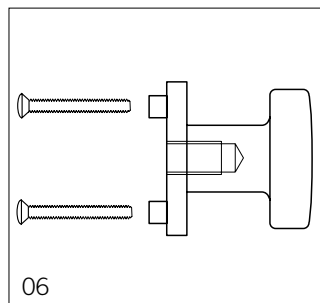
concealed through fixing
c:c screw holes 38 mm



2327 05

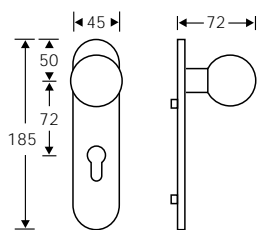
Brass

concealed face fixing

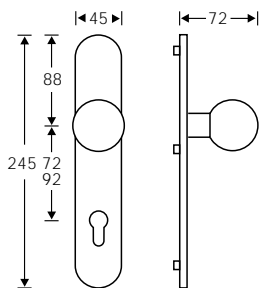


Knob backplates

2

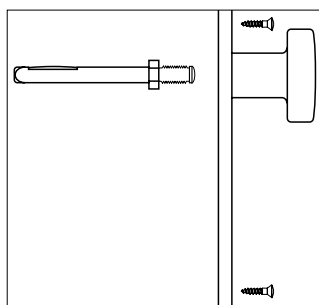


1964 03 72 mm
Brass

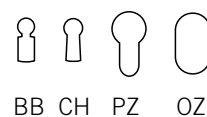


1927 03 72 + 92 mm
Brass

Matching backplates reverse side shown on page 219.



Keyholes



Letter plates with spacer



3826 20

Inside:
Brass polished lacquered
Outside:
Brass polished waxed

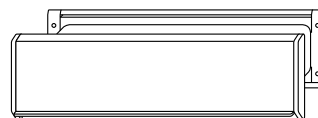
Opening size 230 x 40 mm
Cutout size in the door
240 x 50 mm

Fixing of letter plate and inner
flap must be made separately.

2

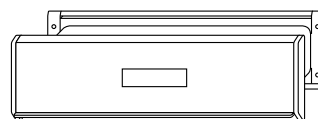
Letter plate system 3826 20 is
available as:

- Letter plate set with black
spacer and inner flap for
door thickness 40 – 70 mm
or door thickness
71 – 100 mm
- Single as letter plate.



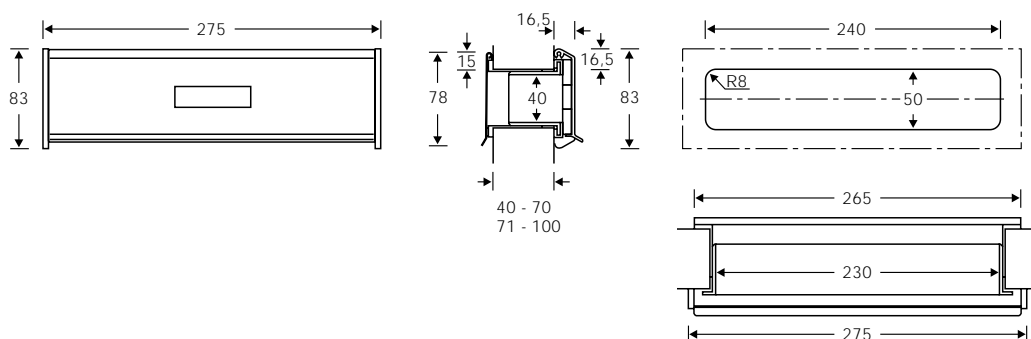
3826 2061 (40 - 70 mm)
3826 2071 (71 - 100 mm)
Letter plate set
without nameplate,
with spacer and inner flap

3826 2001
Letter plate set
without nameplate,
without spacer or inner flap

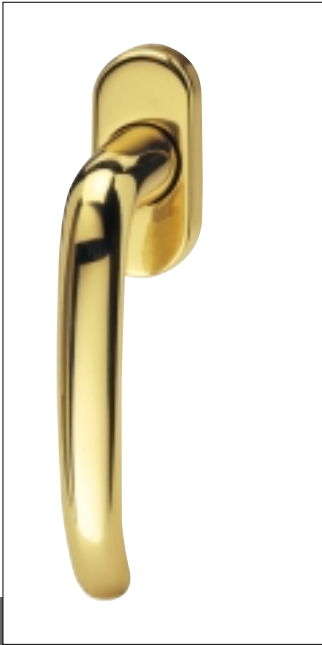


3826 2062 (40 - 70 mm)
3826 2072 (71 - 100 mm)
Letter plate set
with nameplate, spacer and
inner flap

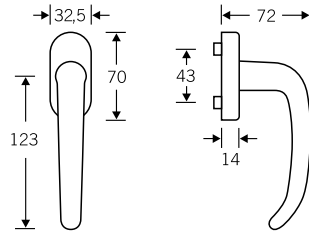
3826 2002
Letter plate set
with nameplate,
without spacer or inner flap



Window handles



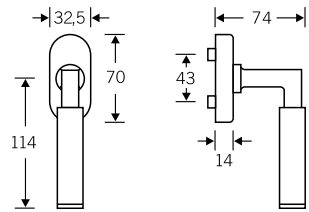
2



3423

Brass

Window handle with click-stop mechanism
 lugs with 10 mm Ø
 c:c mounting holes 43 mm
 7 mm □
 spindle projecting 30 mm



3432

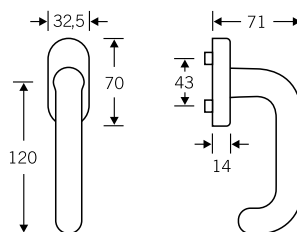
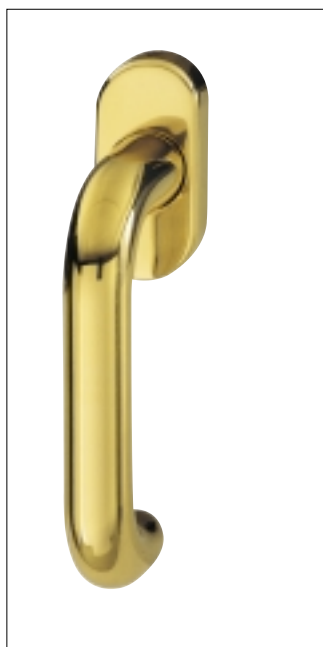
Brass

Window handle with click-stop mechanism
 lugs with 10 mm Ø
 c:c mounting holes 43 mm
 7 mm □
 spindle projecting 30 mm

Design: Alessandro Mendini



Window handles

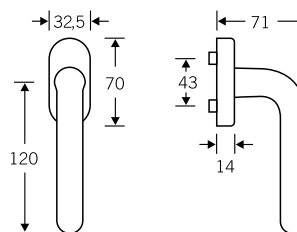
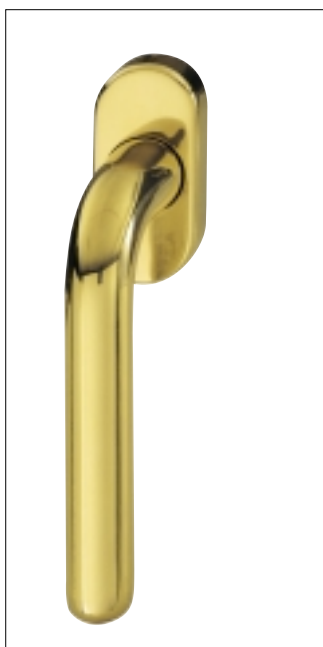


3446

Brass

Window handle with click-stop mechanism
 lugs with 10 mm Ø
 c:c mounting holes 43 mm
 7 mm □
 spindle projecting 30 mm

2



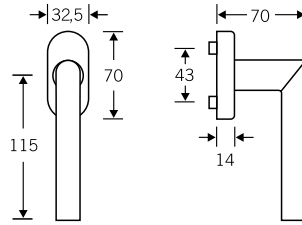
3447

Brass

Window handle with click-stop mechanism
 lugs with 10 mm Ø
 c:c mounting holes 43 mm
 7 mm □
 spindle projecting 30 mm



Window handles



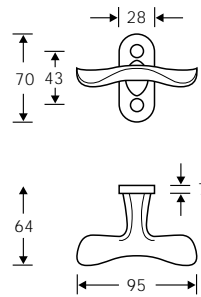
3476

Brass

Window handle with click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm



2

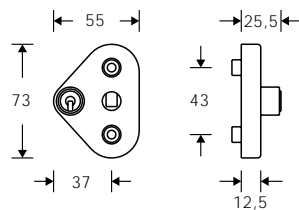
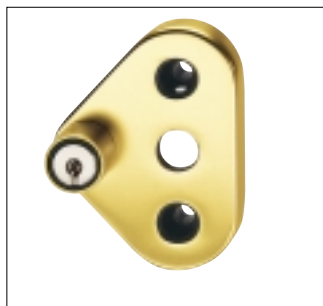


3404

Brass

c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm

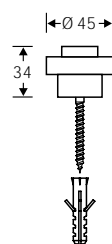
Window lock
Door stops



3407

Brass

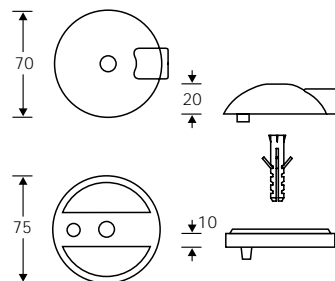
Technical information page 154



3881

Brass

2

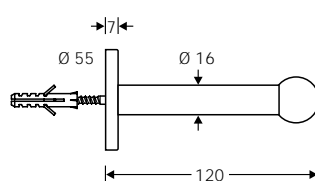


3884 00

Brass

3884 10

Black baseplate



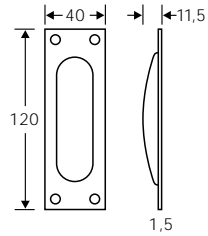
3895

Brass

Door stops mounted to the wall need to be fitted in such a way that the door leaf strikes them as head-on as possible. Any undue lateral force is likely to cause the stop to work loose.

FSB also urgently advises against fitting stops at door-handle height. The resultant shock waves are transmitted via the lock follower to the lock mechanism, eventually causing damage.

Flush pulls



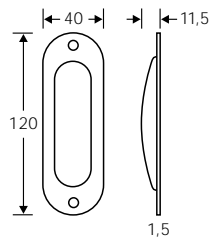
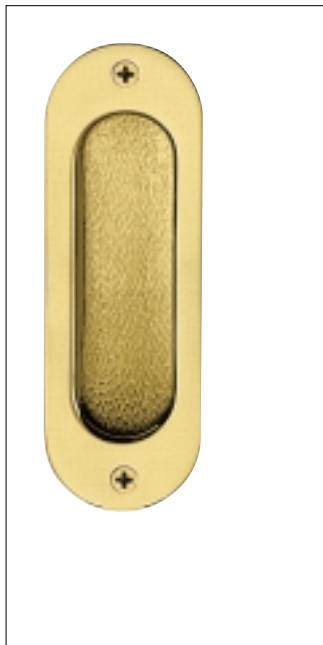
4211

Brass

Mill out size 87 x 28 x 10 mm

Boreholes for 3,0 mm
countersunk screws

2



4212

Brass

Mill out size 87 x 28 x 10 mm

Boreholes for 3,0 mm
countersunk screws

Flush pulls FSB 4211 and
4212 are available:

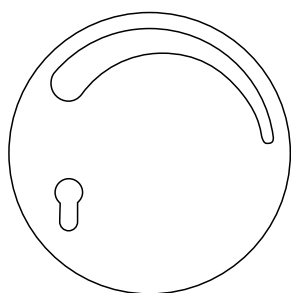
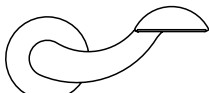
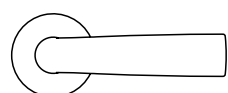
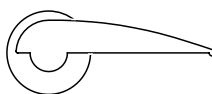
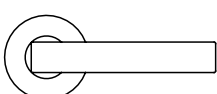
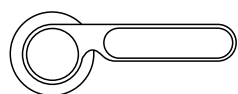
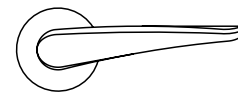
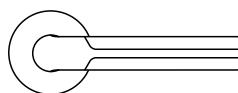
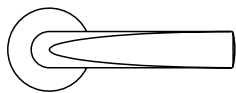
- without keyhole,
- with lever lock/BB keyhole,
- with profile cylinder/PZ keyhole.

Designer programme

3

Hartmut Weise	231
Ton Haas	239
rahe + rahe	245
Works Design	249
Hans Kollhoff	257
Josef Paul Kleihues	261
Nicholas Grimshaw	265
Erik Magnussen	271
Philippe Starck	277
Jasper Morrison	281
Dieter Rams	287

Designer programme



Under the heading 'Designer programme', we have bracketed product ranges bearing the hallmark of a given designer. A product range generally consists of one or two lever handles, the attendant window handle plus doorknobs and door stops. Our European 'names' include:

the German Dieter Rams, whose striking handles so fully bear out his dictum that 'less is more';

the Englishman Jasper Morrison with his predilection for the unassuming, tangible and hefty;

the Frenchman Philippe Starck, who proves that, even when designing the most commonplace of products, it is possible to infuse a strong personal touch without sacrificing functionality;

the Dutchman Ton Haas, who feels that, above all, a Dutch handle needs to have bulk;

the German husband-and-wife designer duo rahe + rahe, who wished to gift the Bauhaus town of Dessau a handle of their own;

our colleague Hartmut Weise with his light and breezy stainless steel collection;

the English architect Nicholas Grimshaw, who imparts styling common in the cutlery industry to his door handles;

the Dane Erik Magnussen, who created a handle collection out of folded stainless steel strip that has the lightness of a Scandinavian gull's wing-beat;

the German architect Hans Kollhoff with his clean-lined handles that exude the spirit of the legendary 1930s.

And our designers' hall of fame does not overlook the doyen of unsung industrial design, our very own Johannes Potente, either. You will find his classics both here in this work aid and in the permanent collection at the MoMA in New York.

On the subject of 'unsung in-house designs', the most recent major creation of this sort by FSB was the product not of one but of 650 authors. Together, we have developed a range of fittings over the past few years that accords with the rules of the Golden Section.

Handle Programme Hartmut Weise



In the spring of 2000, we gave our in-house designer Hartmut Weise a clear brief: 'Please design us some treats for Hand and Eye or else tools for the Hand and treats for the Eye. Both in stainless steel.'

Hartmut Weise promptly set about punching, stamping, lasing, cutting and jointing. Very much in the spirit of the 'new flatness', he fashioned a series of designs with one thing in common - the inherent formal momentum of parts punched out of flat metal and then jointed together.

The lever handles were soon joined by designs for door knobs plus handles and fasteners for windows. A novel backplate was also conceived. All items were supplied in a satin finish as standard, and optionally in a mirror polish variant.

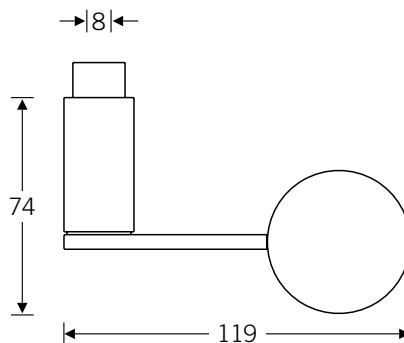
Following his globally successful debut with the ecologically focused 'FSB light' handle series in aluminium, Hartmut Weise has thus again made his mark in the design world. Incidentally, the initial 'FSB light' series has been so successful that we have propelled it from the Name Design section to the main body of the Manual, where attention is directed less towards the name of the author than towards the degree of long-term market take-up.

Eye + Hand
Lever handle



1192

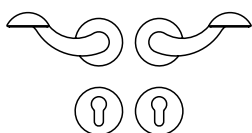
Satin stainless steel
Mirror polished stainless steel



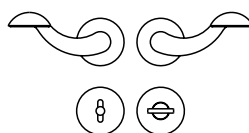
3

With his first two design efforts in stainless steel, Hartmut Weise adopts and adapts a formal vocabulary for the things we use day in, day out, that has been passed down by several generations. Despite the flatness of the material used, bulkiness and gripping volume are provided for the Hand, whilst curvaceous lightness flatters the Eye – something particularly dear to the designer's heart. We dubbed this the 'Eye + Hand' series as a result.

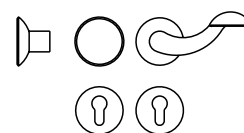
Order proposal:



Internal door set
Lever handle 1192
Rose 1707
Escutcheon 1708



Bathroom furniture
Lever handle 1192
Rose 1707
WC set 1708 7754

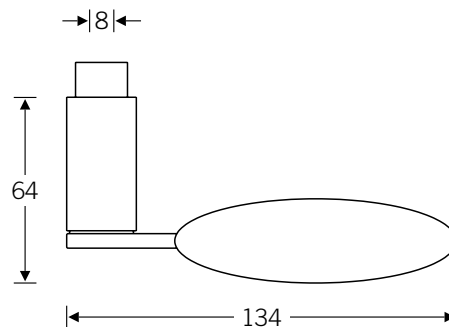


Entrance door set
Lever-female part 1192
Rose 1707
Escutcheon 1708
Door knob 2392 06

Eye + Hand
Lever handle

1194

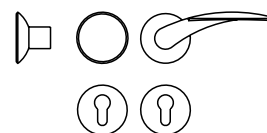
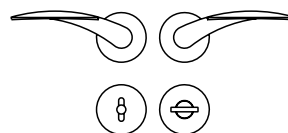
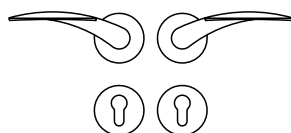
Satin stainless steel
Mirror polished stainless steel



Whereas FSB 1192 constitutes a modern re-design of the famous post-horn lever handle, FSB 1194 takes up the equally famous duck's bill motif in a new guise. Together with Mario Botta, Hartmut Weise is of the view that every generation should be allowed to re-interpret tradition with its own vocabulary and materials. Only in this way can there be progress.

3

Order proposal:

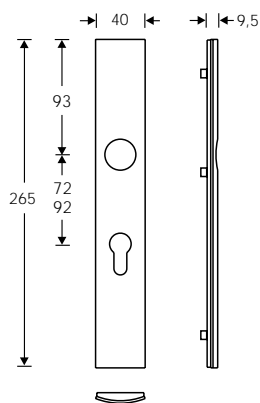


Internal door set
Lever handle 1194
Rose 1707
Escutcheon 1708

Bathroom furniture
Lever handle 1194
Rose 1707
WC set 1708 7754

Entrance door set
Lever-female part 1194
Rose 1707
Escutcheon 1708
Door knob 2392 06

Eye + Hand Backplate



1432 72 + 92 mm

Satin stainless steel
Mirror polished stainless steel

All design efforts at FSB are rooted in the Renaissance concept of 'disegno'. It follows, therefore, that every FSB product is called upon to mirror the company's 120-year-old design tradition. Hartmut Weise is likewise bound by this duty, which as well as covering principal products also extends to accessories. It is now several years since he came up with curved roses that found great favour in the marketplace as an alternative to the angular styling of the flat roses. Now, he has added a curved backplate in stainless steel that appears to hover on its plastic base. This innovative design departure again embodies the 'new flatness'. Airy visuals virtually cancel out the materiality of the stainless steel.

3

Keyholes



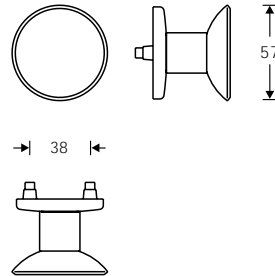
BB CH PZ OZ

Bathroom/WC version



S WC R

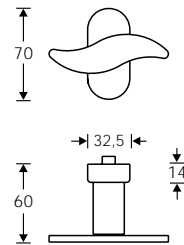
Eye + Hand
 Door knob
 Window handle



2392 06

Satin stainless steel
 Mirror polished stainless steel

concealed through fixing
 c:c screw holes 38 mm



3793

Satin stainless steel
 Mirror polished stainless steel

Window handle with
 click-stop mechanism
 lugs with 10 mm Ø
 c:c mounting holes 43 mm
 7 mm □
 spindle projecting 30 mm



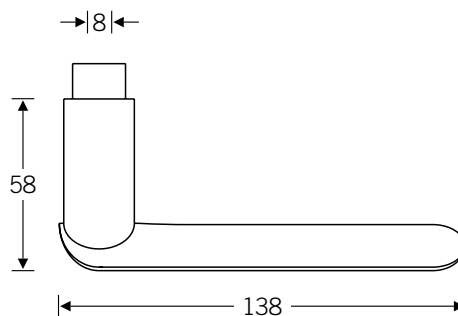
3

Hand + Eye Lever handle



1196

Satin stainless steel
Mirror polished stainless steel

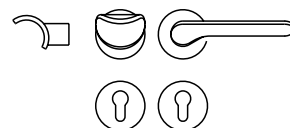
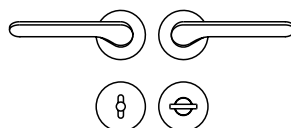
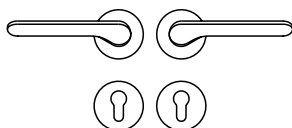


3

Departing from punching, stamping and jointing, Hartmut Weise resorted, in design tests for a second range of hardware, to the latest options afforded by laser technology. As his starting point he selected proprietary tube rounds in stainless steel. Using the laser, he cut sections out of these rounds to produce hollow shapes that are a treat to Hand and Eye alike. Since the emphasis is on the Hand in this range, we are calling it 'Hand + Eye'.

FSB 1196 tidily lets the laser beam run either inline or along precisely defined curves in compliance with the rules of classical modernism, with the result that the hefty tubular section nestles snugly in the hand and even suggests a certain symmetry to the eye.

Order proposal:



Internal door set
Lever handle 1196
Rose 1707
Escutcheon 1708

Bathroom furniture
Lever handle 1196
Rose 1707
WC set 1708 7754

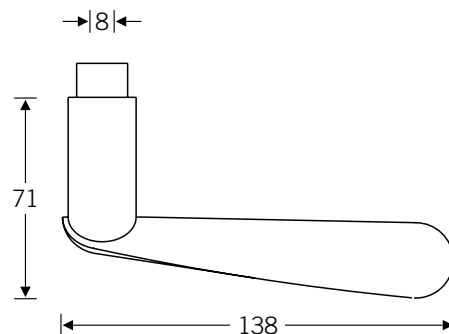
Entrance door set
Lever-female part 1196
Rose 1707
Escutcheon 1708
Door knob 2396 06

Hand + Eye
Lever handle



1197

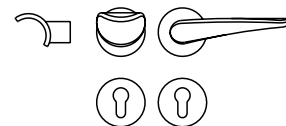
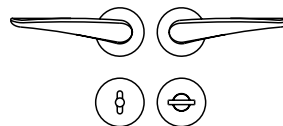
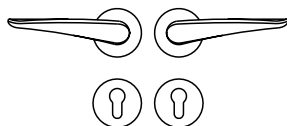
Satin stainless steel
Mirror polished stainless steel



FSB 1197 makes quite different demands of the laser beam. The profile is cut out of the tube in a dynamic turning motion. The styling points the way. This handle does not in the first instance seek to be ogled but rather to be operated by the hand.

3

Order proposal:

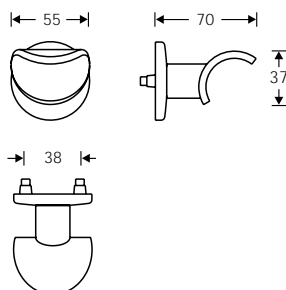


Internal door set
Lever handle 1197
Rose 1707
Escutcheon 1708

Bathroom furniture
Lever handle 1197
Rose 1707
WC set 1708 7754

Entrance door set
Lever-female part 1197
Rose 1707
Escutcheon 1708
Door knob 2396 06

Hand + Eye
Door knob
Window handle

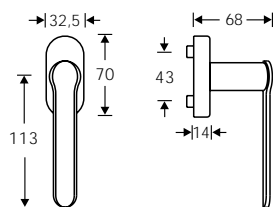


2396 06

Satin stainless steel
Mirror polished stainless steel

concealed through fixing
c:c screw holes 38 mm

3



3796

Satin stainless steel
Mirror polished stainless steel

Window handle with
click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm



Technical information page 134

Hartmut Weise was likewise intent on adding a distinctive touch to accessories for the 'Hand + Eye' range. His door knob and window handle represent the world of hardware in a youthfully effervescent manner.

Handle Programme Ton Haas



For over a decade now, FSB has been looking into a succession of European neighbours' visions of the definitive door handle. At the beginning of the new millennium we knocked at Holland's door.

Ton Haas, an experienced and committed industrial designer, heeded our pleas and plunged head-first into the adventure that is the door handle. He describes his attempts to close in on the subject better than any outside party could:

'Some things look more straightforward than they actually are, a fact that led me to underestimate the door handle. What, for God's sake, is a Dutch door handle after all? We live here in a multicultural society. Wherever we look, we see water. We can build dikes and are experienced traders. Being Calvinists, we have a clear will and we proceed self-confidently. But door handles? I think a Dutch door handle ought to be substantial and to give the hand something to get hold of. Clear ideas need strong handles.'

Having put in some hard work, Ton Haas presented us with half a dozen door-handle designs. We jointly opted for one of them, around which he modelled an entire family of Dutch fittings. The watchword now is:

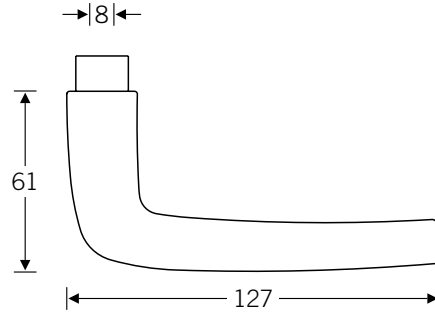
'Oranje Boven'.

Lever handle



1179

Aluminium natural colour
anodised



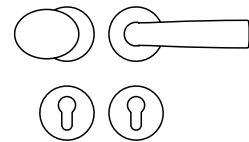
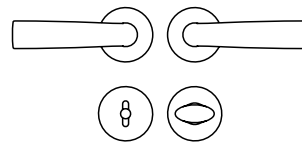
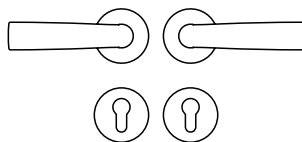
3

No matter how much we enjoy setting lever handles to words, some designs present us with well-nigh insurmountable obstacles. Had Ton Haas taken a standard tubular handle and simply flattened it into an upright oval shape on his anvil? Or had he got two geometric shapes to merge seamlessly together?

The simplicity of the various means used to lend new form to a tool for operating doors never ceases to amaze. FSB 1179 enters the world of hardware as inconspicuously as if it were an old hand.

Thank you, Ton Haas.

Order proposal:



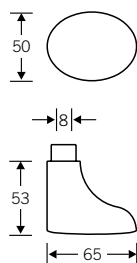
Standard fittings
Project fittings
Fire door fittings
acc. to German DIN standard

1179 | 1707 | 1708
7279 63
7679 63

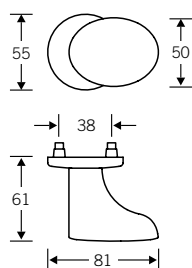
1179 | 1707 | 1708 7854
7279 65

1179 | 1707 | 1708 | 2379 06
7279 62
7679 62

Knob handle
Door knob

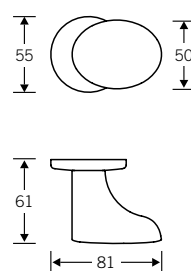


0879 8 mm □
Aluminium natural colour
anodised



2379 06
Aluminium natural colour
anodised

concealed through fixing
c:c screw holes 38 mm



2379 05
Aluminium natural colour
anodised

concealed face fixing

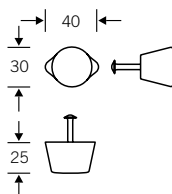
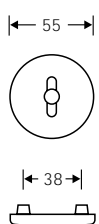
Ton Haas really hit the mark with his doorknob design. He expertly varies the transition from circular styling to oval gripping area. The substantial knob can be deployed either as a dead knob or, with spindle attachment, instead of a lever handle.

WC set
Cabinet knobs



1708 7854

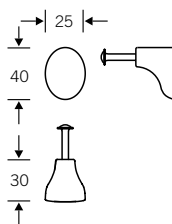
Aluminium natural colour
anodised



3681

Aluminium natural colour
anodised

Screws M4 x 30 mm



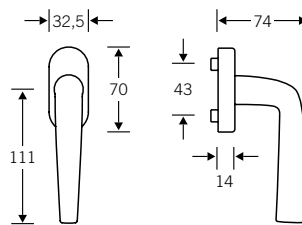
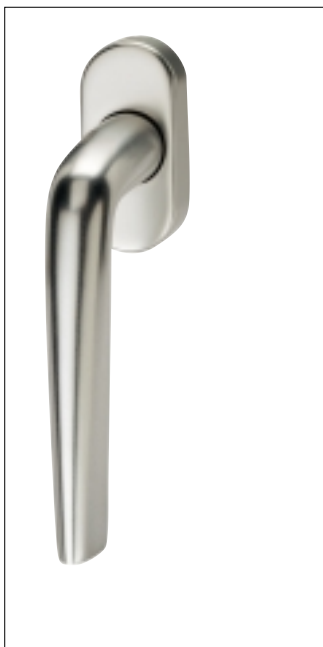
3682

Aluminium natural colour
anodised

Screws M4 x 30 mm

Ton Haas rounded off our new Dutch handle collection with cabinet knobs and thumbturns.

Window handle
Lever handles for framed doors



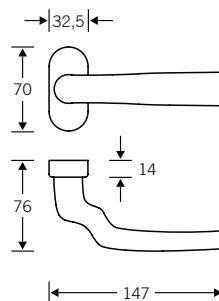
3779

Aluminium natural colour
anodised

Window handle with
click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm



Technical information page 134

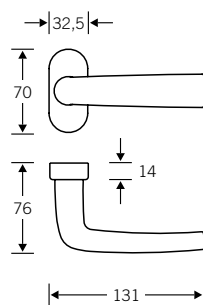


0679 21

Aluminium natural colour
anodised

0679 22 **F**

Aluminium natural colour
anodised



7279 25

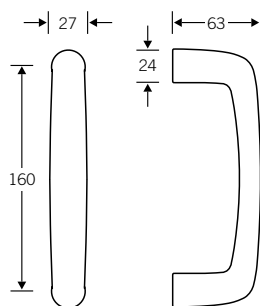
Aluminium natural colour
anodised

7679 25 **F**

Aluminium natural colour
anodised

The window and narrow-frame door handles echo the styling of the lever handle, with circular giving way to oval.

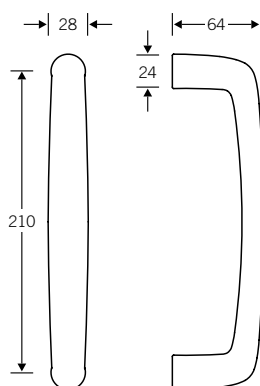
Pulls



3683

Aluminium natural colour
anodised

3



3684

Aluminium natural colour
anodised

Special circumstances gave rise to two pull handles with different 'A' dimensions. On a tour of Rotterdam with Ton Haas, we discovered that large numbers of Dutch doors are fitted with pulls instead of dead knobs. Ton Haas was immediately tempted to submit a proposal of his own to his compatriots. We subsequently

patronised a recently re-opened concert hall at the same location and noticed that here, too, a not insignificant number of obsolescent pulls from the 1950s had been installed. Since Ton Haas is personally acquainted with the building's designer, this was a fitting opportunity for him to demonstrate to this friend too that, in the

new millennium, one ought to have the courage to embrace new forms. We were glad to put Ton Haas's design stimuli to effect, indeed they can be found both in the Designer programme and in the main body of the Manual.

Handle Programme rahe + rahe



When the young architect Walter Gropius was given the opportunity in the convulsive 1920s to build a shoe-last factory at Aalfeld, he commissioned Loevy of Berlin to produce the door handles. This angular machine handle with round grip (FSB 1102) came, along with Wittgenstein's handle (FSB 1147) and the model by the Frenchman Mallet-Stevens (FSB 1076), to epitomise early modernism. The Gropius handle followed in the traces of its creator. It was fitted at the Bauhaus premises at Weimar and later at Dessau. It has wrongly been referred to since as the Bauhaus handle or the handle from Dessau.

A genuine door handle for and from Dessau was produced in the design workshop of the Rahe husband-and-wife business. rahe + rahe designed a handle collection for the new Dessau college campus sited right next to the Bauhaus building and containing seminar rooms, student ateliers, professors' and staff offices, lecture halls, an admin wing, dining hall and cafe, and chose FSB to be their development associates.

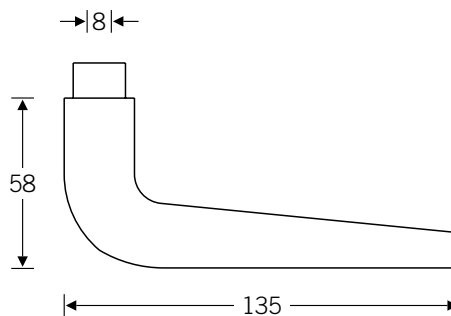
Their design follows seamlessly on from the great masterpieces of modernism. A circular handle element that gently arcs back towards the door has had its front surface flattened off in such a way that, front on, the door and handle run parallel, though the back of the handle does retreat a little from the leaf of the door. This elemental, innovative design feature defines the entire collection, an unobtrusive, functional range of handles that offer themselves up for use by the hand.

Lever handle



1149

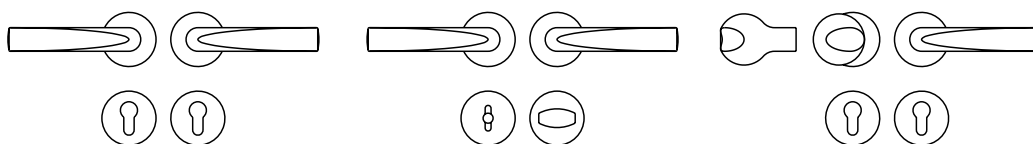
Aluminium natural colour
anodised



3

Three design constituents go to make up the grace of the rahe+rahe door handle. First, there is the conical, flat styling visible front-on that emerges from the tubular material. This bisects the end face, giving rise there to a striking semi-circle as the second constituent. The third constituent is heftiness deriving from the slight angle of extension of the back of the door handle. It is the harmonious interplay of these three constituents that gives the rounded tube its striking and innovative identity.

Order proposal:



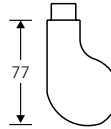
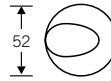
Standard fittings
Project fittings
Fire door fittings
acc. to German DIN standard

1149 | 1731 | 1735
7249 13
7649 13

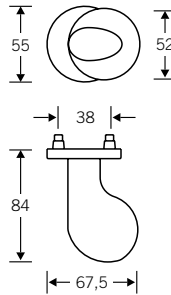
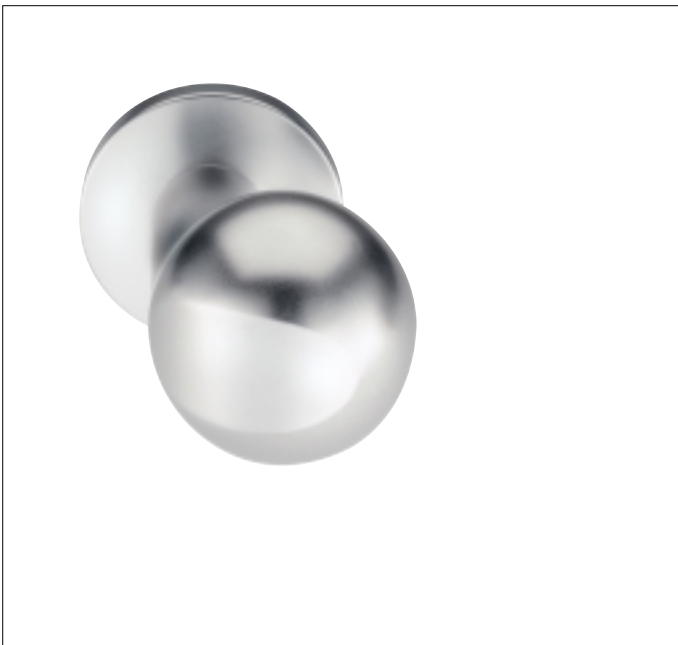
1149 | 1731 | 1735 0054
7249 15

1149 | 1731 | 1735 | 2318 06
7249 12
7649 12

Knob handle
Door knob

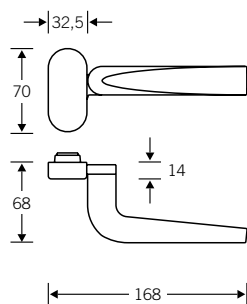


0818 8 mm □
Aluminium natural colour
anodised



2318 06
Aluminium natural colour
anodised
concealed through fixing
c:c screw holes 38 mm

Lever handles
for framed doors
Window handle

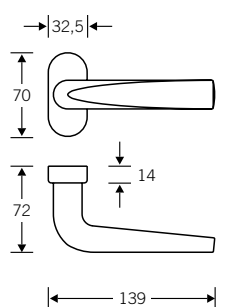


0649 17..

44 r.h. | 45 l.h.
Aluminium natural colour
anodised

0649 18.. **F**

44 r.h. | 45 l.h.
Aluminium natural colour
anodised

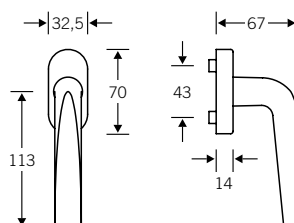


7249 25

Aluminium natural colour
anodised

7649 25 **F**

Aluminium natural colour
anodised



3448

Aluminium natural colour
anodised

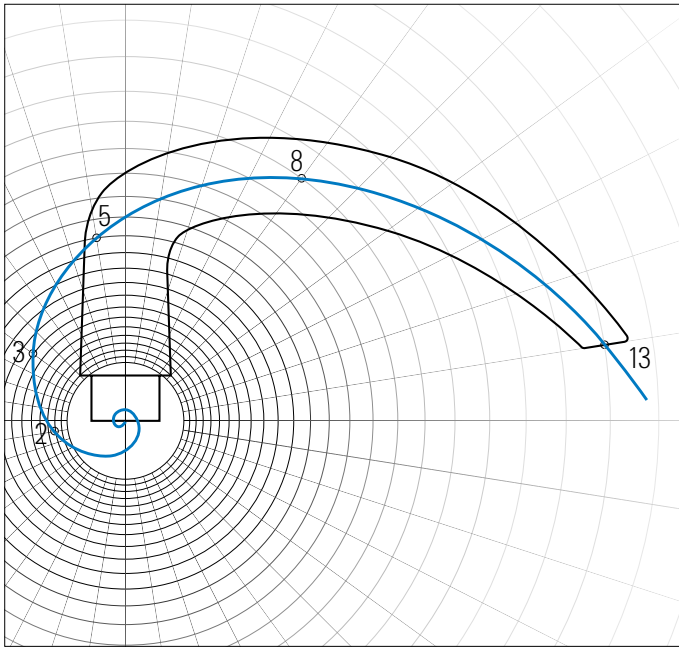
Window handle with
click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm



Technical information page 134

Although the styling for door and window handle is essentially the same, the window model makes a completely different visual impact. Its flattened front surface clearly mirrors the glass plane of the window.

Works Design



Three door handles in search of the irrational measure of beauty or the golden spiral as the soul of handle culture:

Having read a book on the 'Nature of Beauty' by Friedrich Cramer and Wolfgang Kämpfer, we at FSB hit upon the idea of fathoming the mystery of beauty in the world of door handles with the aid of the Golden Section.

The mystery of beauty, we had read, is closely bound up with the history of an irrational number whose mysterious power man had been attempting to interpret since Vitruvius (first century B.C.). We learnt about multifarious endeavours by leading minds to visualise this mystery-enshrouded number, we read about proportioned sketches by Leonardo da Vinci and the series of numbers discovered by Leonardo

of Pisa (1170 to 1220), read about flying squares and less flightworthy rectangles. We discovered that this 'ineffable number' (Johannes Kepler, 1571 to 1630) is a symbol for the dynamics of the life process that is generally regarded as being beautiful if it adheres to the principle of self-similitude. One merely needs to observe the natural growth spiral of a sea-shell, a daisy or a sunflower's infructescence.

Fascinated by these mathematical interpretations of beauty in nature, we immediately harnessed the dynamics of the Golden Section for our own purposes and came up with a pleasing door-handle style.

In our Design Engineering dept. we generated a radial grid system in our CAD system, entered the technical specifications for a door handle and, with the aid of right angles and Fibonacci's numbers (0, 1, 1, 2, 3, 5, 8, 13, ...), constructed a line through swirling rectangles.

Before our eyes, the aesthetic soul of a handle form gently reclining towards the door materialised – an irrational measure so compelling we were a little dumbfounded.

The rest was plain sailing. Drawing on our ergonomic know-how, we arrived at three handle cross-sections, one traditionally circular, one ergonomically triangular, and one elegantly square.

We, the 650-strong FSB workforce, are proud of our new co-operatively produced

lever-handle collection. The market had been getting on at us for years to provide an alternative to the classic lever-handle style rooted in the Pythagorean laws and incapable of more than 'harmonia et symmetria'. It was not until we shot a glance at Nature and familiarised ourselves with the laws of the Golden Section and the mystery of the irrational proportional number that we hit upon the innovative alternative the market was anticipating by way of the dynamic golden growth curve.



Design
Center
Stuttgart

Ausgezeichnet!

FSB 7010, 7011, 7012

1999



Industrie
Forum
Design
Hannover

**Product Design Award
+
Ecology Design Award**

FSB 7010, 7011, 7012

2000

Lever handle

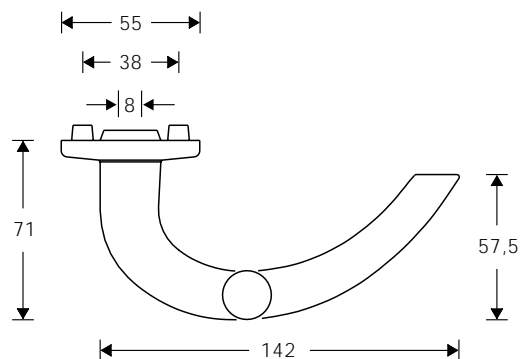


7010

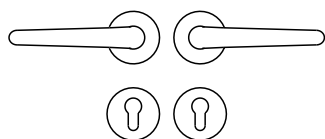
Aluminium natural colour
anodised
Stainless steel

3

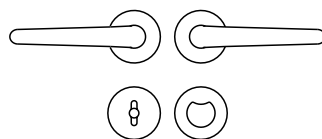
In works design FSB 7010, the 'dynamic golden growth spiral' was recreated with a round cross-section, the lever tapering progressively towards the tip. This effect enhances the momentum of the natural curvature. With its restrained looks and direction-of-motion styling, FSB 7010 is a joy to hold and use.



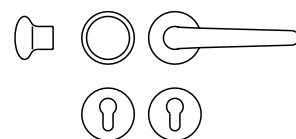
Order proposal:



Internal door set
7010 63
7210 63
7610 63



Bathroom furniture
7010 65
7210 65



Entrance door set
7010 66
7210 66
7610 66

Standard fittings
Project fittings
Fire door fittings
acc. to German DIN standard

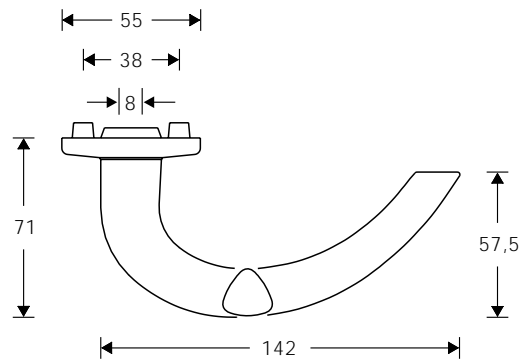
Lever handle



7011

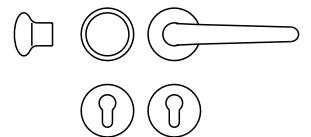
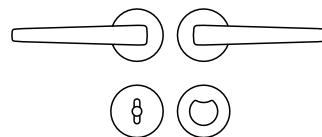
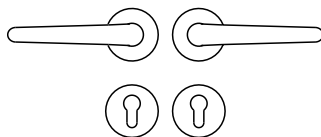
Aluminium natural colour
anodised
Stainless steel

In the case of works design FSB 7011, the round cross-section of the FSB 7010 model makes way for an ergonomic triangular form. Very striking here is the organic ease with which the shank of the handle initiates the 'dynamic golden growth spiral' and oversees a tapering of the grip's cross-section from 24 mm to 18 mm at the tip. This is an unobtrusive, non-slip design that reflects the direction of motion.



3

Order proposal:



Standard fittings
Project fittings
Fire door fittings
acc. to German DIN standard

Internal door set
7011 63
7211 63
7611 63 only Stainless steel

Bathroom furniture
7011 65
7211 65

Entrance door set
7011 66 r.h. | 7011 76 l.h.
7211 66 r.h. | 7211 76 l.h.
7611 66 r.h. only Stainless steel
7611 76 l.h. only Stainless steel

Lever handle

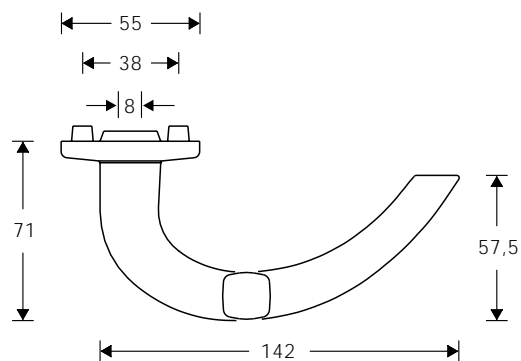


7012

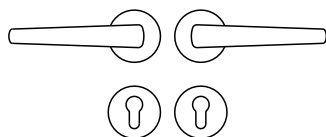
Aluminium natural colour
anodised
Stainless steel

3

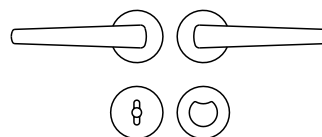
Works design FSB 7012 yokes the 'dynamic golden growth spiral' to an elegant square cross-section. In this series, we quite deliberately adopted three classical Euclidean forms – circle, triangle and square. We wanted to demonstrate that the 'dynamic golden growth spiral' applies for all forms. In this model, too, the grip tapers as the spiral expands. This tough handle is conducive to gripping and features direction-of-motion styling.



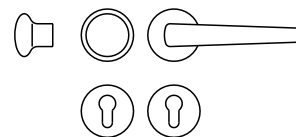
Order proposal:



Internal door set
7012 63
7212 63
7612 63 only Stainless steel



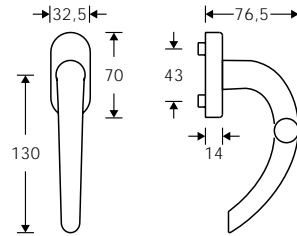
Bathroom furniture
7012 65
7212 65



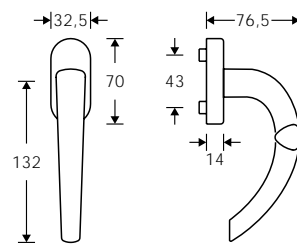
Entrance door set
7012 66
7212 66
7612 66 only Stainless steel

Standard fittings
Project fittings
Fire door fittings
acc. to German DIN standard

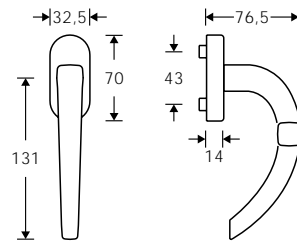
Window handles



3410



3411



3412

Aluminium natural colour
anodised
Stainless steel

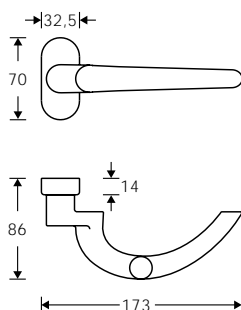
Window handles with
click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm



Cranked lever handles for framed doors on oval rose with concealed fixing and support mechanism

8 mm □-hole

9 mm □-hole for fire- and smoke stop doors* **(F)**

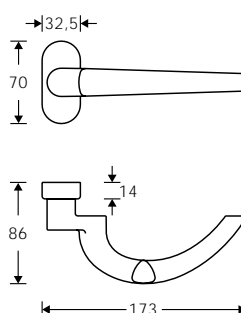


0680 21

Aluminium natural colour
anodised
Stainless steel

0680 22 (F)

Stainless steel



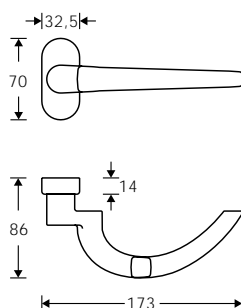
0681 21

Aluminium natural colour
anodised
Stainless steel

0681 22 (F)

Stainless steel

3

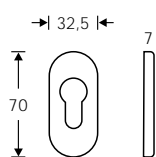
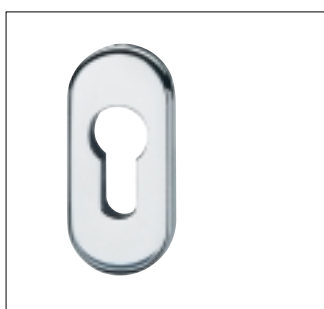


0682 21

Aluminium natural colour
anodised
Stainless steel

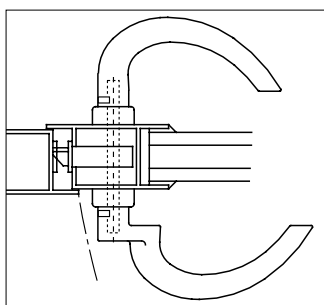
0682 22 (F)

Stainless steel



1757

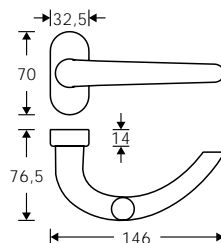
Aluminium natural colour
anodised
Stainless steel



The cranked lever handles shown on these pages are the proven precursors of the system set out on page 423. They are explained in detail on pages 422 and 423.

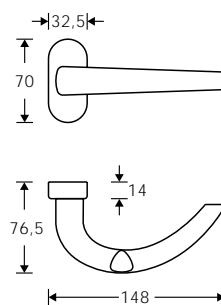
c:c screw holes 50 mm, for countersunk screws M5
Fixing accessories cf. page 486.

Cranked lever handles for framed doors on oval rose with concealed fixing and support mechanism
 8 mm □-hole
 9 mm □-hole for fire- and smoke stop doors* **F**



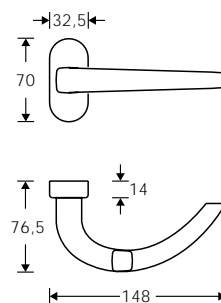
7210 25
 Aluminium natural colour
 anodised
 Stainless steel

7610 25 **F**
 Stainless steel



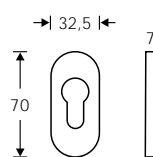
7211 25
 Aluminium natural colour
 anodised
 Stainless steel

7611 25 **F**
 Stainless steel



7212 25
 Aluminium natural colour
 anodised
 Stainless steel

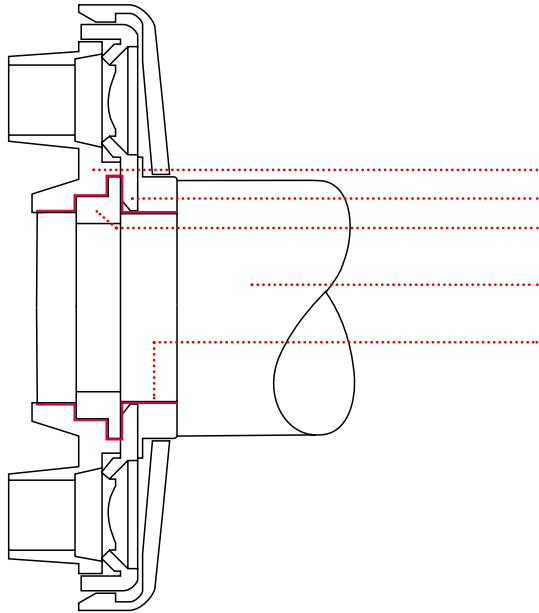
7612 25 **F**
 Stainless steel



1757
 Aluminium natural colour
 anodised
 Stainless steel

* acc. to German DIN standard

Bearing Specifications



Rose baseplate
 Lever bearing
 Retaining ring
 Neck of lever
 Length of bearing in mm: 12 + 2

For the bearing in its new lever handle series incorporating the principles of the 'dynamic golden growth spiral', FSB makes use of a copyrighted system that encloses the shank in a broad-wall bushing for its entire length, preventing it from slipping and delivering two-way support at the sides. Lever handles are supplied turnably fixed in a rose.

3

FSB lever handle set designed to the rules of the 'dynamic golden growth spiral'

- circular cross-section FSB 7010 and FSB 7210,
- triangular cross-section FSB 7011 and FSB 7211,
- square cross-section FSB 7012 and FSB 7212,

each tapering from 24 to 18 mm,

with 8mm FSB Stabil-spindles for door thickness . . . mm, with all-over FSB broad-wall bushing, with non-slip rose fixing, roses with 8.5 mm lugs,

Aluminium natural colour anodised

Stainless steel, with a satin nap or mirror polish

As fire door furniture (F) FSB 7610, (FSB 7611, FSB 7612), in Stainless steel, prepared for fire doors and smoke-stop doors acc. DIN 18 273, supplied with 9 mm FSB Stabil-spindle for door thickness . . . mm.

Paper template for FSB-roses
 Item no. 8429 0096

Paper template for roses WC
 Item no. 8429 0104

Handle Programme Hans Kollhoff



The architect Hans Kollhoff has added contributions to our company's 'Design for Berlin' project. In the process, he has joined Josef Paul Kleihues, Richard Rogers and Nicholas Grimshaw with some panache.

Born at Lobenstein in 1946, Hans Kollhoff studied architecture in Karlsruhe and New York. Having learnt the ropes with Oswald Matthias Unger, he set up his own architect's business in Berlin in 1978. The architectural scene in what was then West Berlin soon pricked up its ears. The housing he built on Luisenplatz received international acclaim. And the way Hans Kollhoff took off in the 'new' Berlin could have come as a surprise to no one:

Malchower Weg estate, Potsdamer Platz, government buildings, Alexanderplatz project etc.

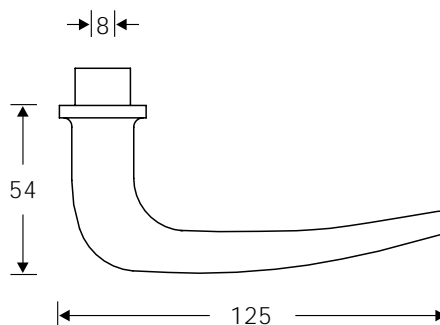
Hans Kollhoff advocates building that is thought through: re-addressing the essence of architecture, putting ideas found to effect in urban spaces, execution to the highest of standards – these are what inform his thoughts and deeds.

Lever handle



1163

Aluminium natural colour
anodised
Stainless steel

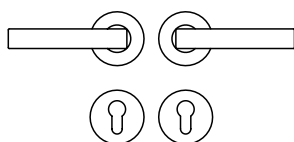


3

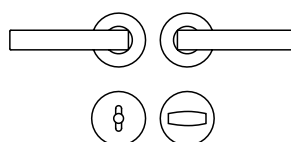
Hans Kollhoff's lever handle echoes the design vocabulary from the 30s of the last century, when Mies van der Rohe produced handle 3690 for Loevy. A circular shank mutates into a square-section lever.

Hans Kollhoff re-interprets both elements with reference to the laws of the obvious and the unassuming. The emphasis is no longer on 'Softline' but on 'New Edge', or unfussy gripability. You can see and feel what you're taking hold of.

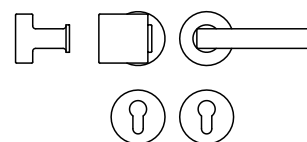
Order proposal:



Internal door set
Lever handle 1163
Rose 1731
Escutcheon 1735

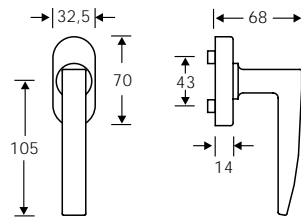


Bathroom furniture
Lever handle 1163
Rose 1731
WC set 1735 0054



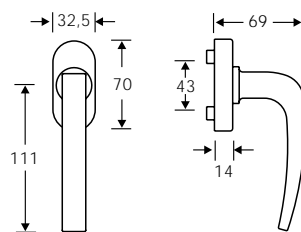
Entrance door set
Lever-female part 1163
Rose 1731
Escutcheon 1735
Door knob 2333 06

Window handles

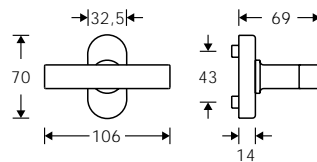


3433

Aluminium natural colour
anodised



Stainless steel



3453

Aluminium natural colour
anodised

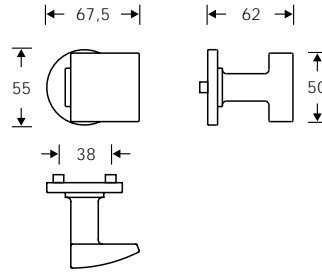
Window handles with
click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm

Together, the two window handles by Hans Kollhoff just about sum up what 'functional realism' is all about. The L-shaped model mimics the angular styling of the window and hence clearly sets itself apart from the lever handle, their underlying affinities notwithstanding.

The alternative twist handle features a rounded front to soften the hardness of the T design.



Door knob
Door stop

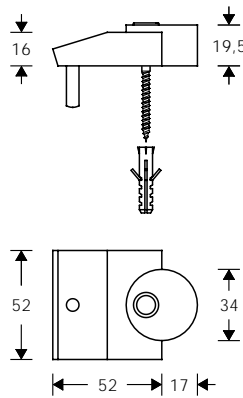


2333 06

Aluminium natural colour
anodised
Stainless steel

concealed through fixing
c:c screw holes 38 mm

3



3820

Aluminium natural colour
anodised
black plastics

The door knob and door stop
adapt the lever handle styling
to their own functional require-
ments.

Handle Programme Josef Paul Kleihues



There are three things linking the architect Josef Paul Kleihues and FSB: firstly, he was born in Rheine (in 1933) and is thus a Westphalian compatriot; secondly, he urged us to follow in the footsteps of the legendary Loevy company in our 'Design for Berlin' project; and thirdly, he ensured in exemplary manner that our design can even be 'grasped' by the banks of Lake Michigan.

Josef Paul Kleihues studied architecture in Berlin, Stuttgart and Paris. At the age of 32, he started up his own architect's firm in Berlin. He soon established his architectural credentials in a building (main cleaning service depot in Berlin), planning (IBA) and lecturing (Dortmund, Düsseldorf) capacity. Critics interpret his distinctive architectural language as a mixture of functional rationalism and borrowings from the history of Prussian classicism. Josef Paul Kleihues prefers the term 'poetic rationalism'.

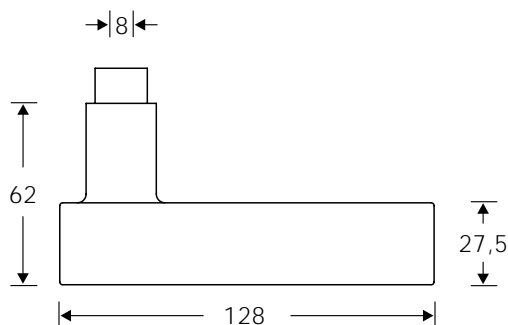
Projects completed while we were working with Josef Paul Kleihues include the Kant Triangle in Berlin, the Museum of Contemporary Art in Chicago and Hamburger Bahnhof railway station in Berlin.

Lever handle



1048

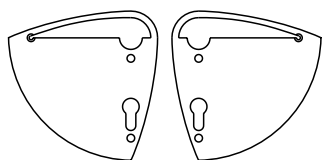
Aluminium natural colour
anodised



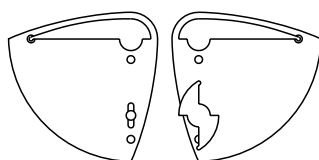
3

The door handle by Josef Paul Kleihues is the epitome of 'poetic rationalism'. Rational design engineering, poetic form. And that's equally true of the backplate. The handle's lyrical lines soften the consciously practical nature of the piece.

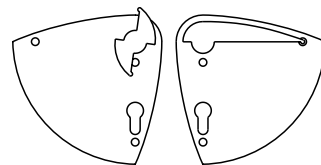
Order proposal:



Internal door set
Lever handle 1048
Backplate 1448



Bathroom furniture
Lever handle 1048
WC set, r.h. 1448 4254
l.h. 1448 5254



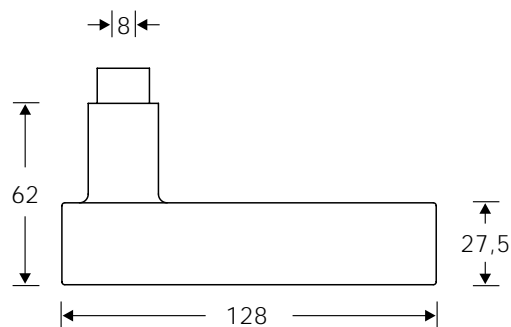
Entrance door set
Lever-female part 1048
Backplate 1448
Fixed knob r.h. 1948 4210
backplate l.h. 1948 5210

Lever handle



1048

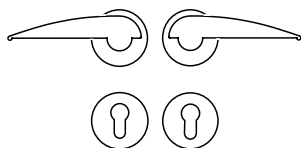
Aluminium natural colour
anodised



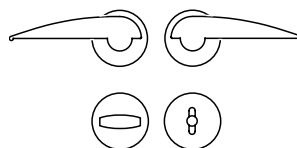
The door handle by Josef Paul Kleihues can also be fitted with roses. The unity of handle and backplate sought by the architect is admittedly lost, but the handle makes a more forceful impact as a result.

3

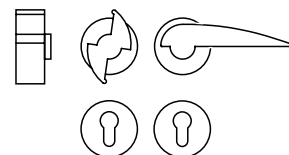
Order proposal:



Internal door set
Lever handle 1048
Rose 1731
Escutcheon 1735

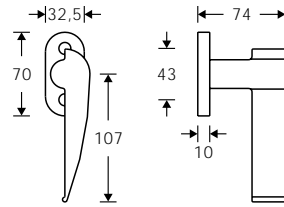


Bathroom furniture
Lever handle 1048
Rose 1731
WC set 1735 0054



Entrance door set
Lever-female part 1048
Rose 1731
Escutcheon 1735
Door knob, r.h. 2373 0406
l.h. 2373 0506

Window handle
Door stop



3434

Aluminium natural colour
anodised

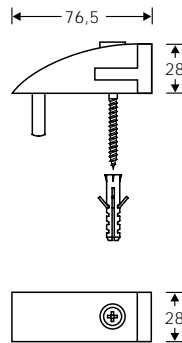
3434 6400 r.h.
3434 6500 l.h.

Window handle with
click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm



Technical information page 134

3



3819

Aluminium natural colour
anodised

Handle Programme Nicholas Grimshaw



As had already been the case towards the end of the 19th century, Berlin is now once again one of the most engaging sites for new architecture anywhere in the world. The elite of the architectural and design scene are breaking new moulds here – and that goes for door handle design too – and we are proud to be in on the process. Take, for example, the handle by the famous British architect Nicholas Grimshaw, which he designed for his Berlin Chamber of Trade and Commerce project in 1996.

Grimshaw's handle range has been well-received by the market. Its design constituents are readily recognised and appreciated. Some (generally Europeans) instantly recall Scandinavian cutlery design, others (predominantly North Americans) are more readily reminded of the butt of a Colt. Which only goes to show that

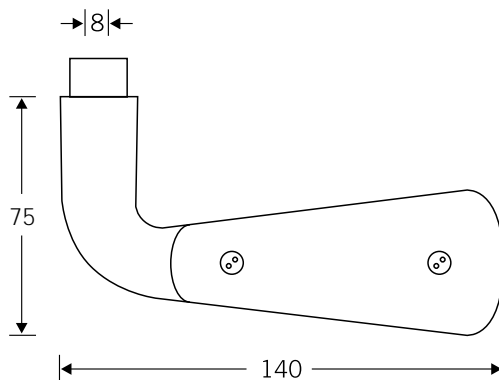
Nicholas Grimshaw and his team headed by Matt Keeler have managed to highlight the heftiness of the design. The designers made great demands of the FSB workforce's craft expertise. The production process calls for the coupling of very differing materials. Aluminium mouldings and composite injection mouldings are held together by stainless steel bolts.

Lever handle



1069

Aluminium natural colour
anodised
black plastics

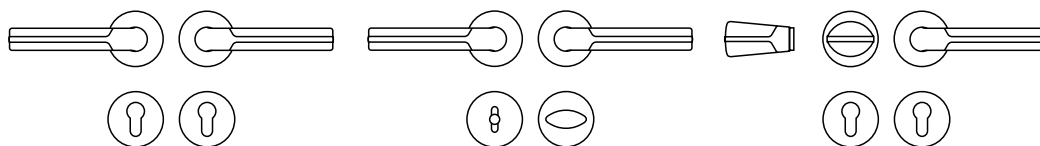


3

Nicholas Grimshaw's door handle design is notable for its easy readability. The grip appears to be saying 'to open please press'. The flattened bulk is clearly inviting the hand to envelop and operate it. The grip is as slender from the front as it is broad across the top.

The silver aluminium layer that separates the top of the grip from the bottom lends the design a sense of great lightness.

Order proposal:



Internal door set
Lever handle 1069
Rose 1731
Escutcheon 1735

Bathroom furniture
Lever handle 1069
Rose 1731
WC set 1735 6754

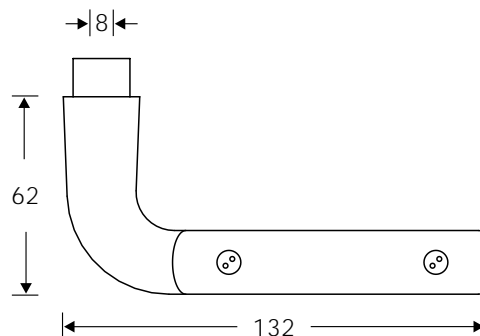
Entrance door set
Lever-female part 1069
Rose 1731
Escutcheon 1735
Door knob 2369 06

Lever handle



1064

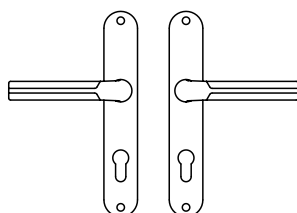
Aluminium natural colour
anodised
black plastics



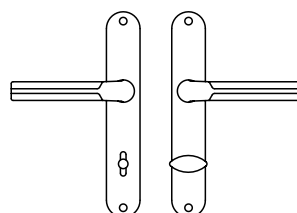
The design behind FSB 1064 is very much market-driven. An admirer of Nicholas Grimshaw's handle collection tentatively enquired whether his window handle design coupled with a narrow backplate could be re-interpreted as door furniture. It transpired that this was indeed possible without too much bother. Nicholas Grimshaw had no option but to go along with what was being done to his design work.

3

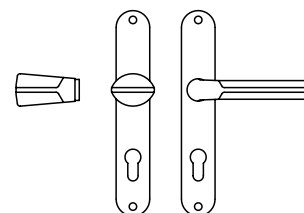
Order proposal:



Internal door set
Lever handle 1064
Backplate 1417

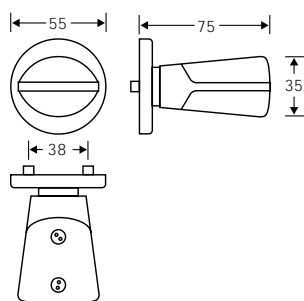


Bathroom furniture
Lever handle 1064
WC Set 1417 6754



Entrance door set
Lever handle 1064
Backplate 1417
Knob backplate 1929

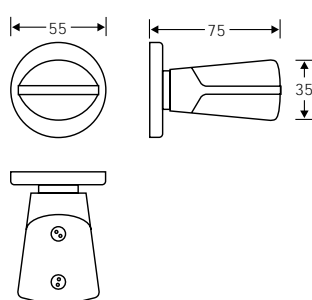
Door knob
Cabinet knob



2369 06

Aluminium natural colour
anodised
black plastics

concealed through fixing
c:c screw holes 38 mm

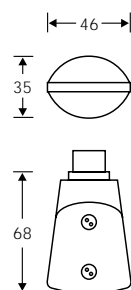


2369 05

Aluminium natural colour
anodised
black plastics

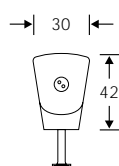
concealed face fixing

3



0869 8 mm □

Knob handle
Aluminium natural colour
anodised
black plastics



3669

Aluminium natural colour
anodised
black plastics

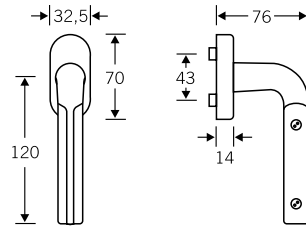
Screws M4 x 30 mm

A third design element was incorporated into the doorknob and cabinet knob, one rooted firmly in function. With the emphasis in such hardware very much on the act of pulling, it is crucial that the hand be discouraged from simply slipping off. Nicholas Grimshaw and colleagues achieved this by having the knob emphatically taper in from the end.

Window handle
Coat hook
Roses WC



Where leverage was the keynote in the case of the door handle, the window handle has been designed very much with turning and pulling in mind. Round tubing has been bent and cut away in such a fashion that the silvery central strip and the gripping cheeks to either side immediately indicate to the eye whether the window is closed, open, or tilted.



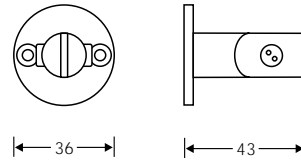
3469

Aluminium natural colour
anodised
black plastics

Window handle with
click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm



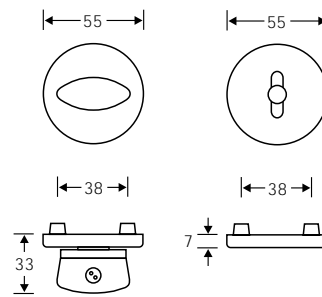
Technical information page 134



3668 01

Aluminium natural colour
anodised
black plastics

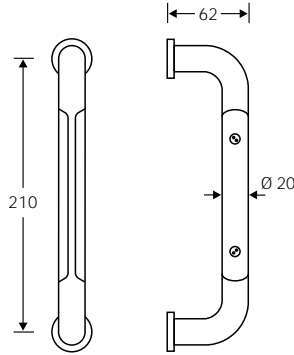
3



1735 6754

Aluminium natural colour
anodised
black plastics

Door pull



6619 21

Aluminium natural colour
anodised
black plastics

In the Anglo-Saxon hardware market, short pulls with an A dimension of 210 mm figure in every collection. Nicholas Grimshaw was of the opinion that we shouldn't confine this item to the British market.

Handle Programme Erik Magnussen



In early 1994, the Name Design series went Scandinavian and Erik Magnussen entered the Brakel scene. Born in Copenhagen in 1940, the Dane achieved fame when he followed in the footsteps of Arne Jacobsen at Stelton. Magnussen's jugs, butter dishes, side-forks, lanterns and cutlery ranges in stainless steel became a Danish trademark, his crisp formal vocabulary the symbol of what is often referred to as frosty Nordic design. His policy is to work on designs until their functioning can be taken as read.

Our collaboration with Erik Magnussen began late in the summer of 1994 when Erik and his four-legged friend Kaktus stopped over at Brakel for the first time. Kaktus, a splendid wiry-haired terrier, was part of the design team from the start. Erik inspected our production, discussed the concept of the product family with us, and promised to mull over our scheme in sunny France and to turn up again at some point once the long Danish winter was over. We got together half a dozen times, either at ours or in greater Copenhagen, over the next twelve months.

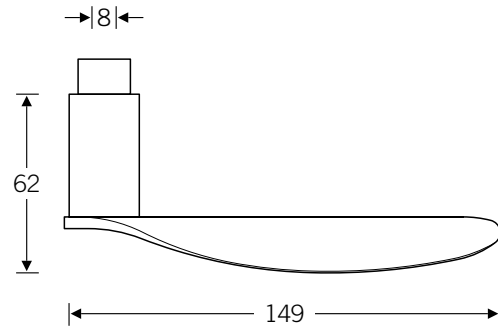
Naturally enough, our remit was largely about taking Kaktus for long walks through the Weser valley woodlands and around the Royal Hunting Lodge, though we did also touch on the subject of design. After such a long and intensive period of incubation, it is hardly surprising that Erik Magnussen won the hearts of Brakel's door handle makers with his very first sketches. He set his initial ideas to paper with broad pencil strokes. We thought we could discern the wing-beat of Scandinavian gulls in these first drafts. Which is how the entire product family acquired its semiotic identity. The materials we were required to use by Erik Magnussen were stainless steel and black plastic, his favourites. He also had clear ideas concerning the production process. We were not to engage in any bending, welding or widening, we were simply to fold. Once again, we were being led into virgin engineering territory by a designer.

Lever handle



1127

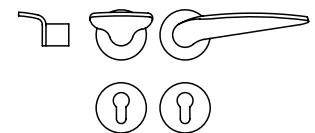
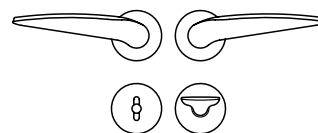
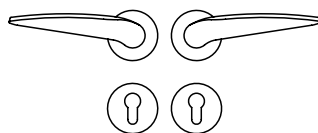
Stainless steel



3

The styling of FSB 1127 from the design workshop of the Dane Erik Magnussen evokes the wingbeat of a gull. The slender contours of the folded stainless steel sheeting give the hand plenty to grip on, and quite as if by chance the thumb also slips nicely into place. This is an unassuming design offering its services as a hand tool for the opening and closing of doors.

Order proposal:



Internal door set
 Lever handle 1127
 Rose 1707
 Escutcheon 1708

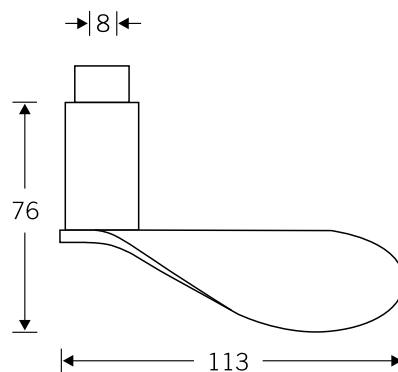
Bathroom furniture
 Lever handle 1127
 Rose 1707
 WC set 1708 7054

Entrance door set
 Lever-female part 1127
 Rose 1707
 Escutcheon 1708
 Door knob 2357 06

Lever handle



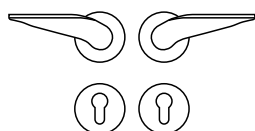
1128
Stainless steel



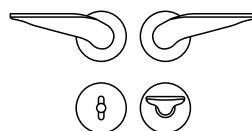
The 'large wing-beat' design of the first door handle was joined by a smaller version, FSB 1128, after Erik Magnussen's wife Jonna had argued that a more petite model would also be in order. The grip is shorter and fuller, though the term 'grip' scarcely does it justice; this is a tactile delight which will have hands caressing it longingly.

3

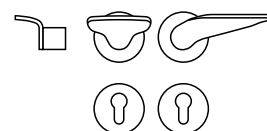
Order proposal:



Internal door set	
Lever handle	1128
Rose	1707
Escutcheon	1708



Bathroom furniture	
Lever handle	1128
Rose	1707
WC set	1708 7054



Entrance door set	
Lever-female part	1128
Rose	1707
Escutcheon	1708
Door knob	2357 06

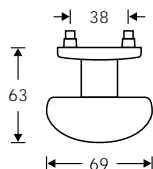
Door knob
WC Roses



2357 06

Stainless steel

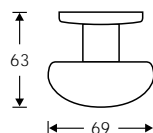
concealed through fixing
c:c screw holes 38 mm



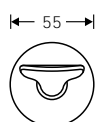
2357 05

Stainless steel

concealed face fixing

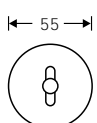
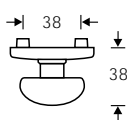


3



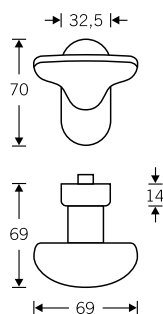
1708 7054

Stainless steel

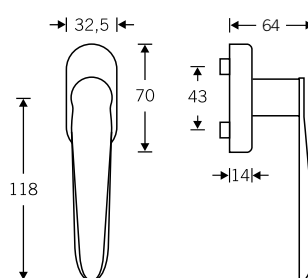


Erik Magnussen shows with this design that a knob need be neither round, cylindrical, square nor triangular. Instead, he again makes do with folded stainless steel strip. The WC thumbturn is a miniaturised version of the knob.

Window handles
Cabinet knob



3406



3458

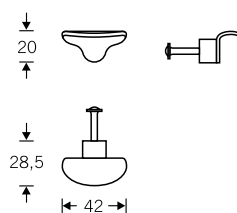
Stainless steel

Window handles with click-stop mechanism lugs with 10 mm Ø c:c mounting holes 43 mm 7 mm □ spindle projecting 30 mm



3

Technical information page 134



3627

Stainless steel

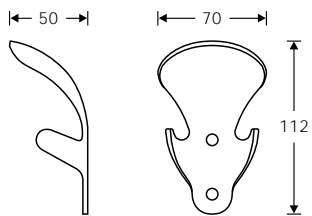
The cabinet knob is a smaller version of the doorknob design.

Screws M4 x 30 mm

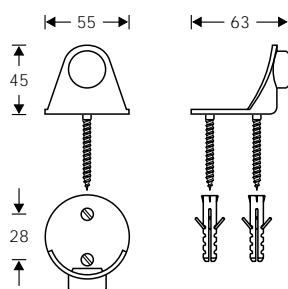
Coat hook
Door stop
Door pull



Erik Magnussen has taken the exterior styling of an eggshell and reproduced it in cutaway form as a coat hook. This marvellously uncluttered design is just crying out to have your hat, coat, jacket and scarf slung over it.

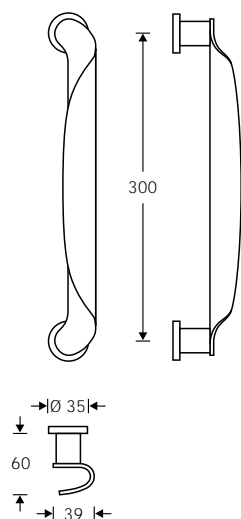


3647
Stainless steel



3887
Stainless steel

3



6647 37
Stainless steel

Handle Programme Philippe Starck



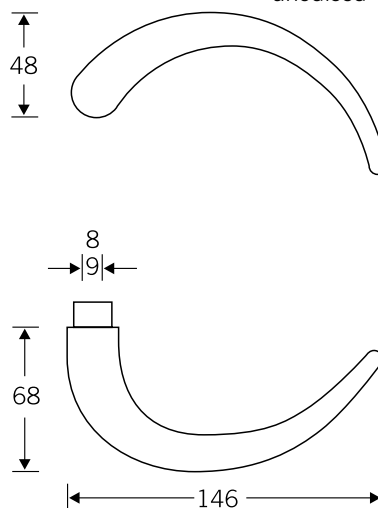
Philippe Starck, the mega-star of the 1990s, has never contented himself with simply submitting plans for interior designs. From the outset he has also created furniture for them. A typical example is the famous chair for Café Costes, which has since outlived the site of its deployment. Fascinating industrial products followed: office articles, bottles, cutlery, luggage, knives, household gadgets, vases, carpets, toothbrushes. FSB was very keen indeed on asking this uncommonly productive and also extraordinarily multifaceted designer to try his hand at something as commonplace as a door handle. Philippe Starck did just that and gifted us some of his gritty French charm.

Lever handle



1191

Aluminium natural colour anodised

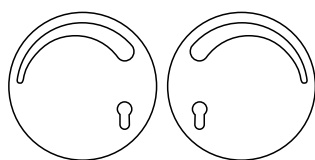


3

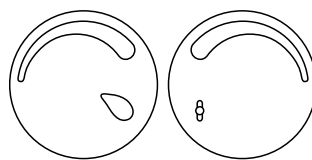
Contemplating this lever design divorced from its backplate, one might be forgiven for thinking Monsieur Starck had gone raving mad. In their assembled state, though, these horn-shaped devices are as practical as anything one could wish for. The lever can be grasped at various points; thumb, fore-finger, and palm nestle securely; the hand is given the necessary purchase.

This furniture represents an alternative to symmetrical designs incorporating circles, triangles, and rectangles. The set as a whole provides a visual contrast to the leaf of the door without seeking to rise above its station. Backplate satin silver, lever mirror-polish. Both in prime aluminium.

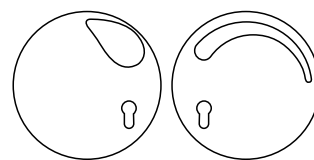
Order proposal:



Internal door furniture
1191 | 1491



Bathroom furniture
1191 | 1491 4354 r.h.
1191 | 1491 5354 l.h.

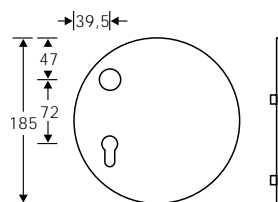


Entrance door furniture
1191 | 1491 | 1991 43 r.h.
1191 | 1491 | 1991 53 l.h.
7691 17 r.h.
7691 20 l.h.

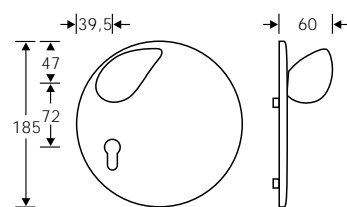
Standard fittings

Fire door fittings
acc. to German DIN standard

Backplate
Knob backplate



1491 72 mm
Aluminium natural colour
anodised



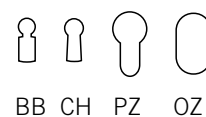
1991 72 mm
Aluminium natural colour
anodised

3

In the case of the door knob, Philippe Starck reverted to the drop motif, a design concept of which he has made frequent and varied use. But his drop-shaped door knob does not descend earthwards but instead, in line with its function, gently curves upwards

in unison with the backplate. It rests snugly in the hand and matches the handle design.

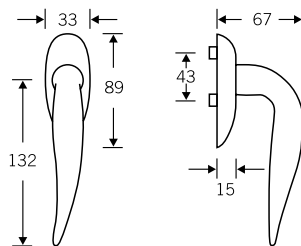
Keyholes



Window handle Cabinet knob



Philippe Starck was taken aback at first when we pointed out to him during our working discussions that individual doors are almost invariably accompanied by a plethora of windows and that, hence, designing a window handle to match that on the door was imperative if only to avoid clashes of style. He applied himself to this as to any other task. With rapid, masterful strokes, he drafted a window handle and, while he was at it, a matching rose on a sweeping Gothic S-shape.



3439

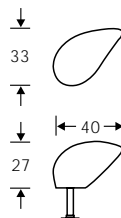
Aluminium natural colour anodised

Window handle with click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm



Technical information page 134

3



3632

04 r.h. | 05 l.h.
Aluminium natural colour anodised
Stainless steel

Illustration r.h.

Screws M4 x 30 mm

The cabinet knob draws on the design of the doorknob. It could well become a 'cult object', being the smallest Philippe Starck ever. The marketplace is now veritably awash with plagiarised versions. Don't be taken in!

Handle Programme Jasper Morrison



In May 1988, the Italian design journal "domus" published an article on the young English designer Jasper Morrison. A dozen of his works from 1985-88 were presented including a door handle. A rhetorical question posed in the piece was whether the creativity of this London-based designer would survive long enough for his designs to be mass-produced. The "domus" question has now been answered: Morrison's door handle design FSB 1166 was presented to the market in 1990 in stainless steel. A little later, we asked Jasper Morrison to design a second door handle for FSB. The issue of materials was soon resolved, since Jasper loves aluminium. He likes it most of all in its natural silvery-coloured form. Jasper Morrison emphasizes the aura of the utensil in his work, opting for chaste looks. No wonder, then, that he furnished us with a very unassuming product range.

Should you find yourself exclaiming 'I've seen that before' when you view products by Jasper Morrison, you will have grasped the English designer's philosophy. Morrison's wish is that anyone looking at or using his products should feel at once that the object is trustworthy. That, after all, is what design is about: fashioning usable objects.



Industrie
Forum
Design
Hannover

**Auszeichnung für
excellente Designlösungen**

Die 10 Besten des Jahres

1990



Design Zentrum Essen

**Designpreis des Landes
Nordrhein-Westfalen**

Hohe Designqualität

1991



Rat für Formgebung
Frankfurt

bundespreis
produkt-design

bundespreis produkt-design

für hervorragende Produkt-
gestaltung

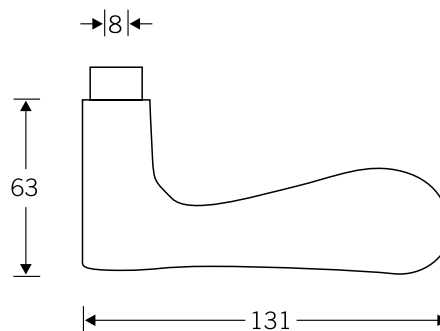
1992

Lever handle



1144

Aluminium natural colour
anodised

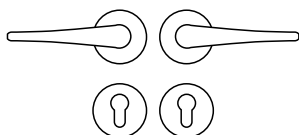


3

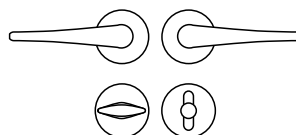
FSB 1144 is a lever handle styled to appeal to eye and hand in equal measure. The message the eye receives from Jasper Morrison's design is that this handle is a hand-operated device for opening doors.

Reassured, the hand reaches out. The thumb comes to rest; the index settles in its recess; the hand clenches to give a firm grip. All the good-grip criteria identified by Otl Aicher and ourselves have been met.

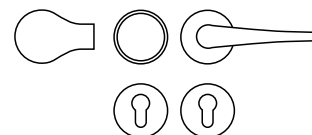
Order proposal:



Internal door furniture
1144 | 1731 | 1735
7644 13



Bathroom furniture
1144 | 1731 | 1735 6054



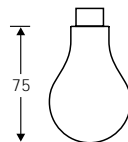
Entrance door furniture
1144 | 1731 | 1735 | 2374 06
7644 14

Standard fittings
Fire door fittings
acc. to German DIN standard

Knob handle
Door knob



← 52 →



0844 8 mm □
Aluminium natural colour
anodised



← 55 →



← 38 →



82

← 55 →



← 55 →



82

2374 06
Aluminium natural colour
anodised

concealed through fixing
c:c screw holes 38 mm

2374 05
Aluminium natural colour
anodised

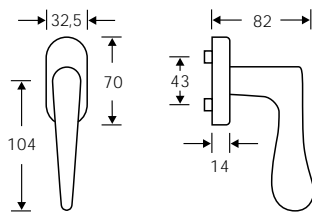
concealed face fixing

3

The FSB 0844 and FSB 2374 door knobs add a fresh dimension to design in this field. As Jasper Morrison was hatching them, he must have looked up at the ceiling in his design studio. Hanging there was a conventional light bulb. Jasper took this form so familiar to us all and transferred it to the door knob. The outcome is a

worthy alternative to the more usual round or flattened disc styles. The fixed version gives the hand plenty of scope to grip and pull, while the rotating knob can be turned the requisite amount without unduly extending the hand. Their style, moreover, harmonises well with the FSB 1144 handle design.

Window handle
Lever handle
for framed doors



3444

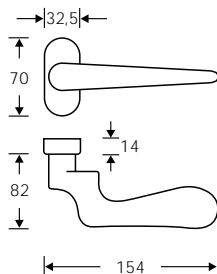
Aluminium natural colour
anodised

Window handle with
click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm



Technical information page 134

3



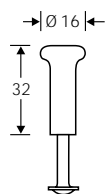
0642 21

0642 22 **F**

Aluminium natural colour
anodised

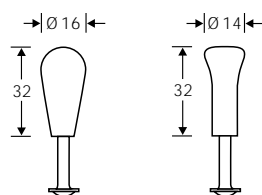
c:c screw holes 50 mm,
for countersunk screws M5

Cabinet Knobs



3641

Aluminium natural colour
anodised
Stainless steel

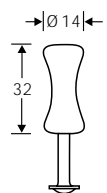


3642

Aluminium natural colour
anodised
Stainless steel

3643

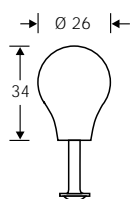
Aluminium natural colour
anodised
Stainless steel



3644

Aluminium natural colour
anodised
Stainless steel

3

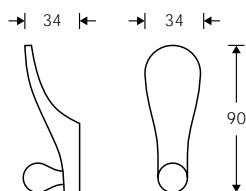


3654

Aluminium natural colour
anodised
Stainless steel

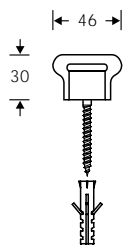
Jasper Morrison has designed a handful of unfussy cabinet knobs for FSB.
All cabinet knobs are supplied with M4 x 30 mm screws.

Coat hook
Door stop

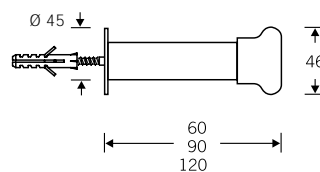


3650
Aluminium natural colour
anodised

3



3896 00

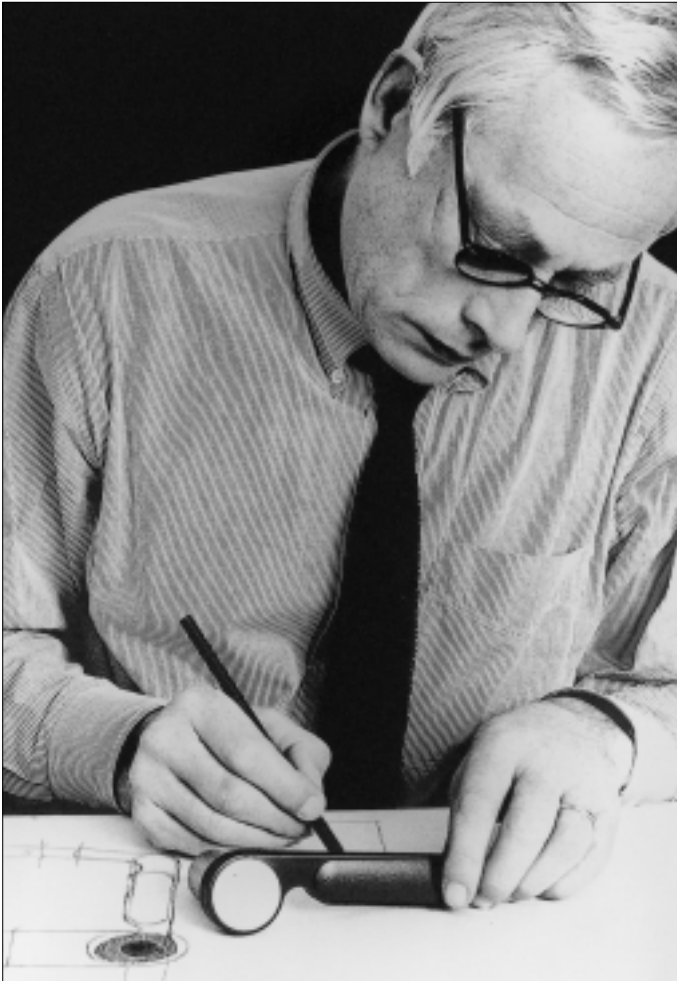


3896
Aluminium natural colour
anodised

02 length 120 mm
03 length 90 mm
04 length 60 mm

Handle Programme

Dieter Rams



The FSB product range comprised 70 different designs. Not to mention all the other market offerings. Wasn't that enough? Hadn't the scope for novelty been exhausted? We wanted to know and asked Dieter Rams, probably the most noted German designer, to contemplate a new design for door handles. Rams accepted the challenge – and won.

The hardware series by Dieter Rams is formally engaging, technically innovative, suits doors and windows in all styles and finishes, and sports a simplicity that is surprisingly new, yet somehow familiar. It consciously bucks the trend evident in so much else on the market.



Design Zentrum Essen

**Staatspreis des Landes
Nordrhein-Westfalen**

Design Innovationen

1989



Industrie
Forum
Design
Hannover

**Auszeichnung für
excellente Designlösungen**

Die 10 Besten des Jahres

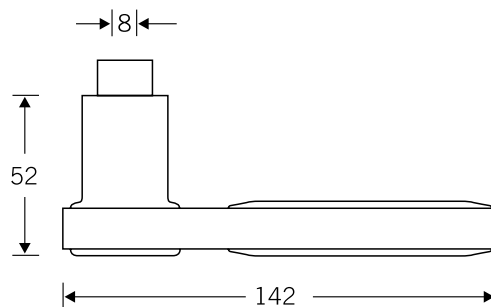
1990

Lever handle



1138

Aluminium grey
Thermoplastics black

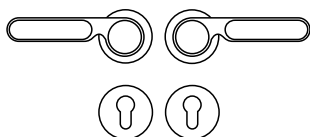


3

In his design work, Dieter Rams tends to prioritise simplicity, lightness, and the close-at-hand. FSB 1138 is a classic embodiment of his belief that form follows function.

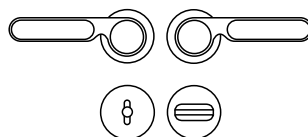
FSB 1138 is endowed with a sturdy round aluminium neck that is effectively the lynchpin of the piece. The black grip section in thermoplastics features a clearly discernible index finger recess. The lateral heftiness of the grip components provides plenty to grasp hold of. All in all, this design meets the Good Grip criteria in exemplary fashion.

Order proposal:

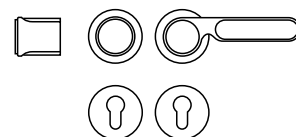


Internal door furniture
1138 | 1740 | 1741
7638 13

Standard fittings
Fire door fittings
acc. to German DIN standard



Bathroom furniture
1138 | 1740 | 1741 0054



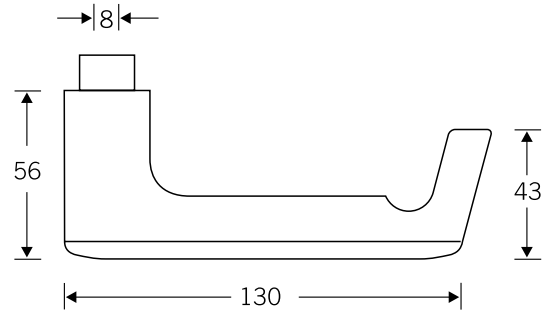
Entrance door furniture
1138 | 1740 | 1741 | 2376 06
7638 44 r.h.
7638 54 l.h.

Lever handle



1137

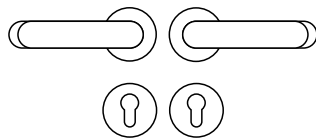
Aluminium grey
Thermoplastics black



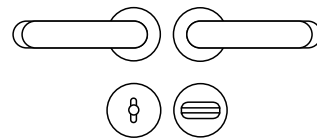
In FSB 1137, the working parts and the front section are in grey aluminium whereas the grip is in black thermoplastics. What really sets this unpretentious safety handle apart (a handle that won't slip up your sleeve!) is its 'little finger recess', which provides the hand with sufficient purchase despite extreme economies of space. Less tends to be more as designer Dieter Rams sees it.

3

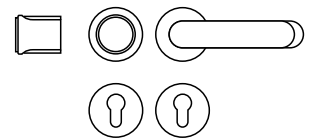
Order proposal:



Internal door furniture
1137 | 1740 | 1741
7637 13



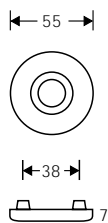
Bathroom furniture
1137 | 1740 | 1741 0054



Entrance door furniture
1137 | 1740 | 1741 | 2376 06
7637 14

Standard fittings
Fire door fittings
acc. to German DIN standard

Roses

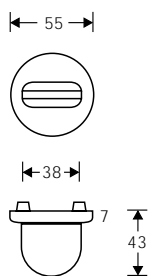


1740
Aluminium grey

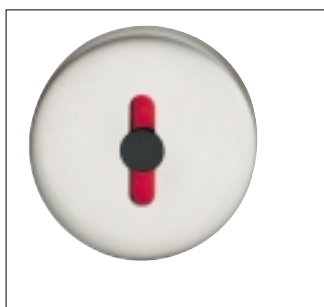


1741
Aluminium grey

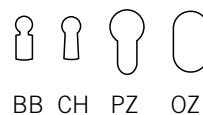
3



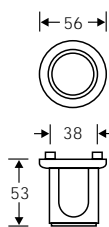
1741 0054
Aluminium grey
Thermoplastics black



Keyholes



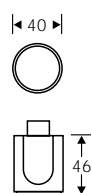
Door knob
 Door stop
 Cabinet knob



2376 06

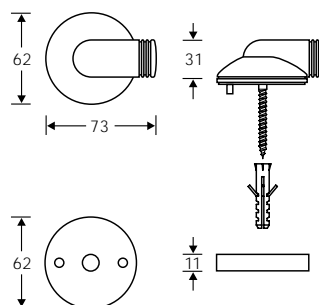
Aluminium grey
 Thermoplastics black

concealed through fixing
 c:c screw holes 38 mm



0838 8 mm □

Knob handle
 Aluminium grey
 Thermoplastics black

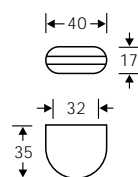


3891 00

Aluminium grey
 Thermoplastics black

3891 10

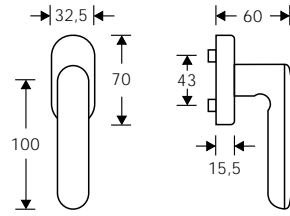
Baseplate black



3631

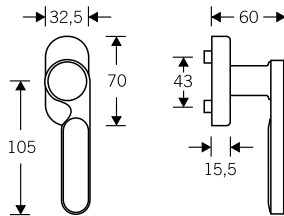
Aluminium grey
 Thermoplastics black

Window handles



3436

3



3438

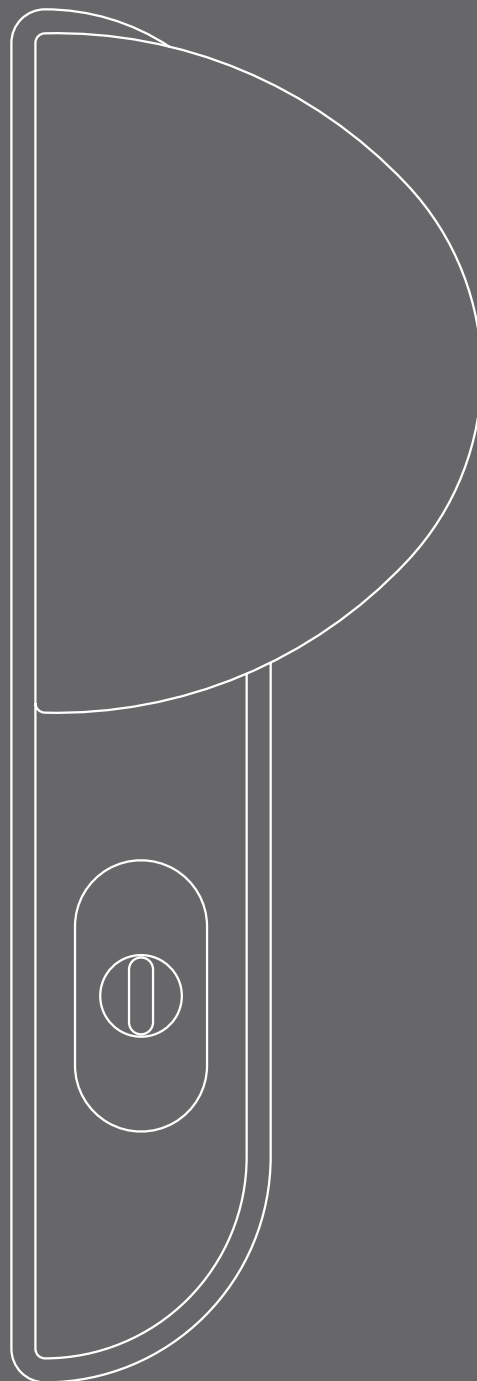
48 r.h. | 58 l.h.

Illustration r.h.

Aluminium grey
Thermoplastics black

Window handles with
click-stop mechanism
lugs with 10 mm Ø
c:c mounting holes 43 mm
7 mm □
spindle projecting 30 mm





... one of 9 design alternatives

Design + Security



Criminal statistics show that doors and windows are the most popular points of entry for intruders. Police and insurance sources therefore advise paying special attention to ensuring doors and windows are secure.

The industry has taken appropriate measures in this respect. German industrial standards drawn up to aid orientation include 'Burglar-resistant windows, doors and additional barriers' (DIN 18 103) and 'Builders hardware and security furniture (concepts and definitions, dimensions, requirements, testing and labelling)' (DIN 18 257).

Alongside this, the newest standards pr. EN 1906 and DIN V ENV 1627 - 1630 have been developed.

With the publication of Manual 2000, FSB posed the rhetorical question as to whether this purely technical approach is the only way to proceed and promptly answers it with its 'Design + Security' deal.

On the pages that follow, FSB sets forth no fewer than nine different hardware design options for main and internal entrance doors that vary in terms of their backplate, knobs or lever handle designs. The nine designs are available in either stainless steel or aluminium, moreover.

With this design-driven deal, FSB takes the worry out of security for architects, interior designers, joiners and end-users. In the first instance they buy what appeals to them; only then do they specify the level of protection they want. We've dubbed it 'Design + Security'. Having opted for a particular design, all you have to do is tick Security Class box 1, 2, 3 or 4. FSB will then slot the security technology selected into the design package chosen.

Gone are the days when you had to make do with the cheapest design if you wanted the lowest security rating and the best designs were only to be had for the top rating. FSB is turning the tables. Only once a given design has been chosen the purchaser's must decide the appropriate security rating to be chosen.

The FSB design range is spaciouly and clearly set out on pp. 296-. Browse through at your leisure until you're sure which one pleases you most. Next to the design selection you will find a technical question sheet on which you are asked to tick the technical specifications you desire. Simple as that.

For the technically curious, we explain the essence of the four security ratings alongside. At European level, the German three-rating industrial norms currently in force are to be revised in such a way that, under EN 1906, there will in future be four security ratings. We have matched these with the current DIN classifications:

Security class 1 (EN 1906)
open version (ES 0)

Strength of backplates 7 kN
Maximum flexion ≤ 5 mm
Tensile force of fastening 10 kN
Maximum deformation ≤ 5 mm

Security class 2 (EN 1906)
open version

(ES-1 K Reg.-No. 4X078)
(ES-1 L Reg.-No. 4X076)

Strength of backplates 10 kN
Maximum flexion ≤ 5 mm
Tensile force of fastening 15 kN
Maximum deformation ≤ 5 mm
Drill resistance 30 s
Chisel test resistance 3 blows

Security class 2 (EN1906)
with anti-tamper device (ZA)
(ES-1 K-ZA Reg.-No. 4X077)
(ES-1 L-ZA Reg.-No. 4X079)

Strength 10 kN
Maximum flexion ≤ 5 mm
Tensile force of fastening 15 kN
Maximum deformation ≤ 5 mm
Drill resistance 30 s
Chisel test resistance 3 blows
Strength of ZA 10 kN

Security class 3 (EN 1906)
with anti-tamper device (ZA)
(ES-2 L-ZA Reg.-No. 4X080)

Strength 15 kN
Maximum flexion ≤ 5 mm
Tensile force of fastening 20 kN
Maximum deformation ≤ 5 mm
Drill resistance 3 min
Chisel test resistance 6 blows
Strength of ZA 15 kN

Security class 4 (EN 1906)
with anti-tamper device (ZA)
(ES-3 L-ZA Reg.-No. 4X081)

Strength 20 kN
Maximum flexion ≤ 5 mm
Tensile force of fastening 30 kN
Maximum deformation ≤ 5 mm
Drill resistance 5 min
Chisel test resistance 12 blows
Strength of ZA 20 kN

Design + Security

In Security Class 1, open version (fig. 2), FSB supplies all eight design options with long backplates that accommodate cylinder projections of approx. 11 mm in the cylinder area (fig. 1)

In Security Class 2, open and anti-tamper versions (fig. 3), there is a choice between long and short backplate variants for all eight design options. In Security class 2 FSB supplies a counter-rose version (see page 305) in addition to the counter-backplate variante. The same dimensional stipulations as set out for Security Class 1 apply for the open version. In the anti-tamper version (ZA), cylinder projections of 8 - 16 mm are catered for.

The design stipulations as set out for Security Class 2, anti-tamper version (ZA), also apply for Security Classes 3 and 4.

To aid comprehension of the engineering involved, the relevant designs are shown alongside.



fig. 1



fig. 2



fig. 3

FSB's 'Design + Security' hardware package draws on a proven laminar construction technique developed within the company that is now a benchmark for the industry. The security specified in standards is enhanced from rating to rating by exchanging and adding materials. Technical refinement of the new security concept was achieved with the able help of the Engineering chair at Paderborn, where the Finite Element Method (FEM) was utilised.

FSB security hardware is supplied as standard for the following door thicknesses:

Internal doors	40 - 42 mm
Main entrance doors	67 - 69 mm
Fire doors	53 - 57 mm

Besides standard-compliant security fittings, FSB also supplies other items of architectural hardware with preventive capabilities. These include:

- circular armoured roses, open version, 10 and 14 mm thick
- circular armoured roses with anti-tamper devices (ZA), 15 mm thick
- rectangular and oval armoured roses with anti-tamper devices, 16 mm thick
- rectangular and oval slide-on roses 6, 9 and 14 mm thick

These anti-bandit features are designed to frighten off would-be burglars or at the very least to make breaking in an extremely arduous undertaking.

The industry has likewise addressed itself to window security. A wealth of security fittings for windows have been developed that comply with the German industrial norm already referred to - 'Burglar-resistant windows, doors and additional barriers' (DIN 18 103). Included in the FSB range of security hardware for windows (cf. pp 154-160) are:

- lockable window handles
- lockable adaptors to accommodate window handles
- adaptors with combination locks to accommodate window handles
- frame locks

The FSB range of security features for windows may not be able to rule burglaries out but will certainly serve to delay them. The degree of physical resistance afforded by security features of this sort can generally only be overcome by making a lot of noise, and this will tend to deter most people from trying to enter in the first place. Assuming the right window design and security accessories have been selected, would-be burglars will be forced to turn their attention to the glass itself. If they want to get at the handle on the inside, their only option is to smash, cut a whole in or remove the pane. The presence of lockable window handles and concealed frame locks will contrive to make their task even more difficult.

Security fitting Design 7381



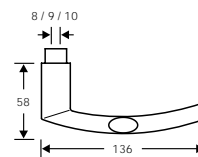
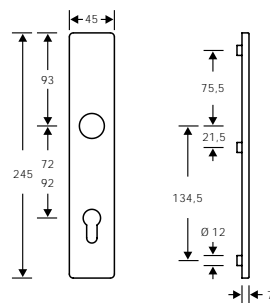
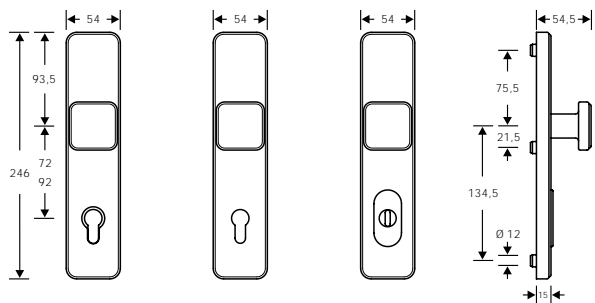
- Order details standard Design 7381
Fire and smoke-stop door* (F) **Design 7581 (only Stainless steel)**
- Knob furniture
 Lever handle furniture
- Security class S1 11 mm
 S1 15 mm
 S2 11 mm
 S2 15 mm
 S2 - ZA 8 - 16 mm
 S3 - ZA 8 - 16 mm
 S4 - ZA 8 - 16 mm
- Handing of door DIN r.h., inward opening
 DIN l.h., inward opening
- to suit door thickness _____ mm
- Spacing 72 mm 92 mm
 72 mm
- Spindle 8 mm 10 mm
 9 mm
- Material/colour Aluminium 01 _____
 Alu + colour white _____
 Stainless steel 6204 _____

4



Order quantity _____ sets

* acc. to German DIN standard



Security fitting Design 7382



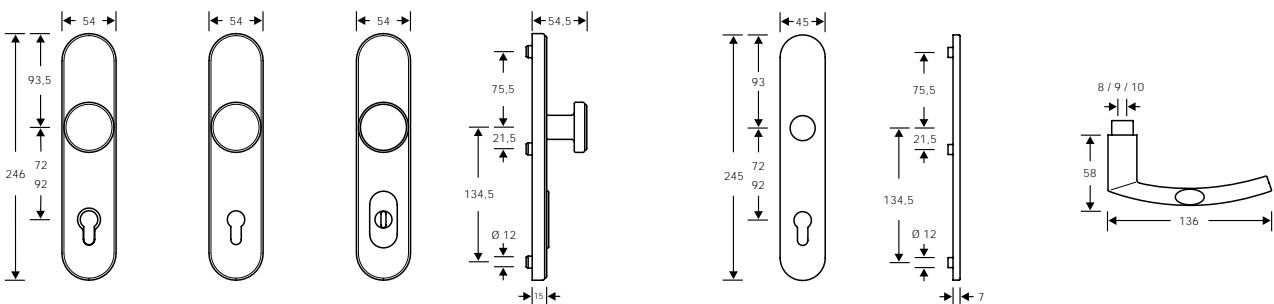
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|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|-----------------------------|--------------------------------|--------------|--------------------------------|--------------------------------|-----------------|-------------------------------|--------------------------------|
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| Fire and smoke-stop door* (E) | <input type="checkbox"/> Design 7582 (only Stainless steel) | | | | | | | | | |
| Knob furniture | <input type="checkbox"/> | | | | | | | | | |
| Lever handle furniture | <input type="checkbox"/> | | | | | | | | | |
| Security class | <input type="checkbox"/> S1 11 mm
<input type="checkbox"/> S1 15 mm
<input type="checkbox"/> S2 11 mm
<input type="checkbox"/> S2 15 mm
<input type="checkbox"/> S2 - ZA 8 - 16 mm
<input type="checkbox"/> S3 - ZA 8 - 16 mm
<input type="checkbox"/> S4 - ZA 8 - 16 mm | | | | | | | | | |
| Handing of door | <input type="checkbox"/> DIN r.h., inward opening
<input type="checkbox"/> DIN l.h., inward opening | | | | | | | | | |
| to suit door thickness | _____ mm | | | | | | | | | |
| Spacing | <input type="checkbox"/> 72 mm <input type="checkbox"/> 92 mm
<input checked="" type="checkbox"/> 72 mm | | | | | | | | | |
| Spindle | <input type="checkbox"/> 8 mm <input type="checkbox"/> 10 mm
<input checked="" type="checkbox"/> 9 mm | | | | | | | | | |
| Material/colour | <table border="0"> <tr> <td>Aluminium</td> <td><input type="checkbox"/> 01</td> <td><input type="checkbox"/> _____</td> </tr> <tr> <td>Alu + colour</td> <td><input type="checkbox"/> white</td> <td><input type="checkbox"/> _____</td> </tr> <tr> <td>Stainless steel</td> <td><input type="checkbox"/> 6204</td> <td><input type="checkbox"/> _____</td> </tr> </table> | Aluminium | <input type="checkbox"/> 01 | <input type="checkbox"/> _____ | Alu + colour | <input type="checkbox"/> white | <input type="checkbox"/> _____ | Stainless steel | <input type="checkbox"/> 6204 | <input type="checkbox"/> _____ |
| Aluminium | <input type="checkbox"/> 01 | <input type="checkbox"/> _____ | | | | | | | | |
| Alu + colour | <input type="checkbox"/> white | <input type="checkbox"/> _____ | | | | | | | | |
| Stainless steel | <input type="checkbox"/> 6204 | <input type="checkbox"/> _____ | | | | | | | | |

4



Order quantity _____ sets

* acc. to German DIN standard



Security fitting Design 7383

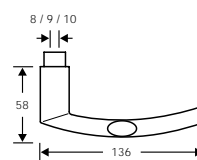
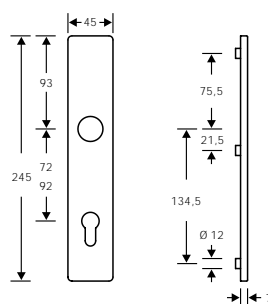
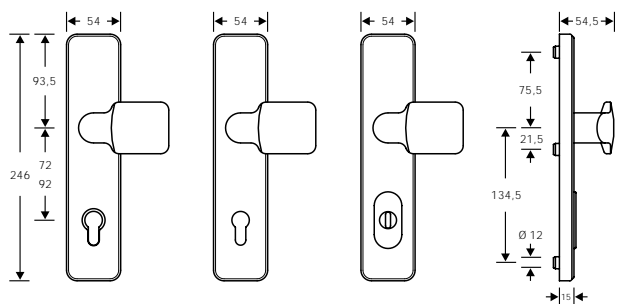


- Order details standard Design 7383
Fire and smoke-stop door* (F) **Design 7583 (only Stainless steel)**
- Knob furniture
 Lever handle furniture
- Security class S1 11 mm
 S1 15 mm
 S2 11 mm
 S2 15 mm
 S2 - ZA 8 - 16 mm
 S3 - ZA 8 - 16 mm
 S4 - ZA 8 - 16 mm
- Handing of door DIN r.h., inward opening
 DIN l.h., inward opening
- to suit door thickness _____ mm
- Spacing 72 mm 92 mm
 72 mm
- Spindle 8 mm 10 mm
 9 mm
- Material/colour Aluminium 01 _____
 Alu + colour white _____
 Stainless steel 6204 _____



Order quantity _____ sets

* acc. to German DIN standard



Security fitting Design 7384



- Order details standard Design 7384
Fire and smoke-stop door* (E) Design 7584
- Knob furniture
- Lever handle furniture
- Security class
 - S1 11 mm
 - S1 15 mm
 - S2 11 mm
 - S2 15 mm
 - S2 - ZA 8 - 16 mm
 - S3 - ZA 8 - 16 mm
 - S4 - ZA 8 - 16 mm
- Handing of door
 - DIN r.h., inward opening
 - DIN l.h., inward opening
- to suit door thickness _____ mm
- Spacing
 - 72 mm 92 mm
 - 72 mm
- Spindle
 - 8 mm 10 mm
 - 9 mm
- Material/colour

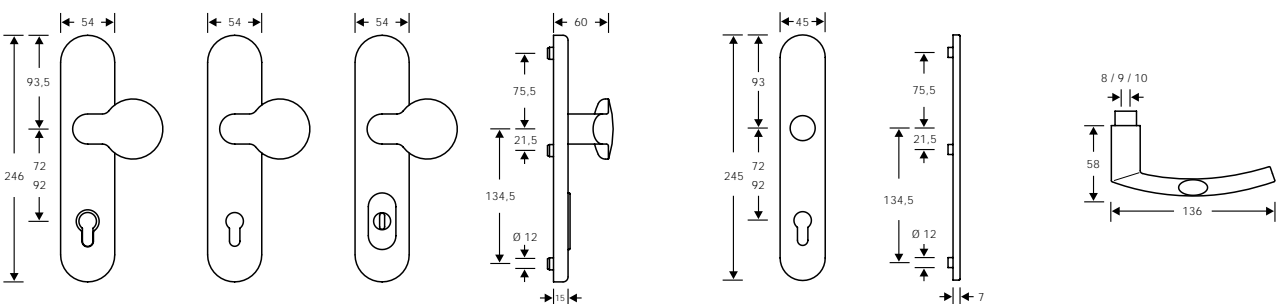
Aluminium	<input type="checkbox"/> 01	<input type="checkbox"/> _____
Alu + colour	<input type="checkbox"/> white	<input type="checkbox"/> _____
Stainless steel	<input type="checkbox"/> 6204	<input type="checkbox"/> _____

4



Order quantity _____ sets

* acc. to German DIN standard



Security fitting Design 7385



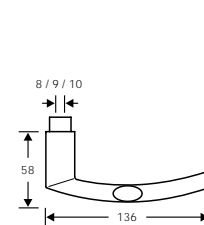
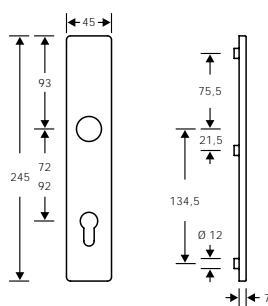
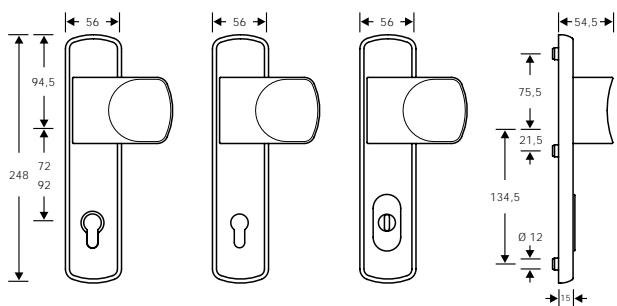
- Order details standard Design 7385
Fire and smoke-stop door* (F) **Design 7585 (only Stainless steel)**
- Knob furniture
 Lever handle furniture
- Security class S1 11 mm
 S1 15 mm
 S2 11 mm
 S2 15 mm
 S2 - ZA 8 - 16 mm
 S3 - ZA 8 - 16 mm
 S4 - ZA 8 - 16 mm
- Handing of door DIN r.h., inward opening
 DIN l.h., inward opening
- to suit door thickness _____ mm
- Spacing 72 mm 92 mm
 72 mm
- Spindle 8 mm 10 mm
 9 mm
- Material/colour Aluminium 01 _____
 Alu + colour white _____
 Stainless steel 6204 _____

4



Order quantity _____ sets

* acc. to German DIN standard



Security fitting Design 7386



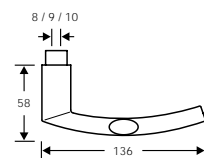
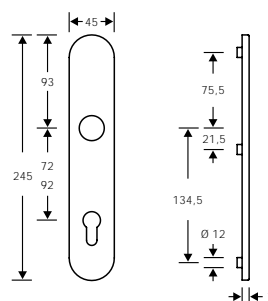
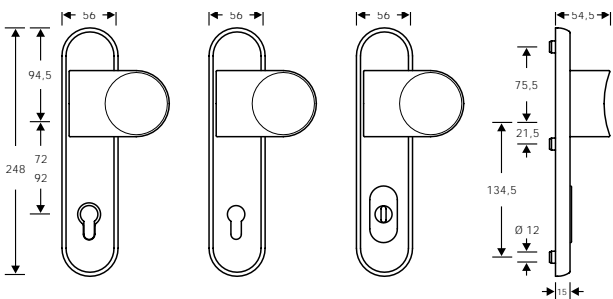
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|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|-----------------------------|--------------------------------|--------------|--------------------------------|--------------------------------|-----------------|-------------------------------|--------------------------------|
| Order details standard | <input type="checkbox"/> Design 7386 | | | | | | | | | |
| Fire and smoke-stop door* (E) | <input type="checkbox"/> Design 7586 (only Stainless steel) | | | | | | | | | |
| Knob furniture | <input type="checkbox"/> | | | | | | | | | |
| Lever handle furniture | <input type="checkbox"/> | | | | | | | | | |
| Security class | <input type="checkbox"/> S1 11 mm
<input type="checkbox"/> S1 15 mm
<input type="checkbox"/> S2 11 mm
<input type="checkbox"/> S2 15 mm
<input type="checkbox"/> S2 - ZA 8 - 16 mm
<input type="checkbox"/> S3 - ZA 8 - 16 mm
<input type="checkbox"/> S4 - ZA 8 - 16 mm | | | | | | | | | |
| Handing of door | <input type="checkbox"/> DIN r.h., inward opening
<input type="checkbox"/> DIN l.h., inward opening | | | | | | | | | |
| to suit door thickness | _____ mm | | | | | | | | | |
| Spacing | <input type="checkbox"/> 72 mm <input type="checkbox"/> 92 mm
<input checked="" type="checkbox"/> 72 mm | | | | | | | | | |
| Spindle | <input type="checkbox"/> 8 mm <input type="checkbox"/> 10 mm
<input checked="" type="checkbox"/> 9 mm | | | | | | | | | |
| Material/colour | <table border="0"> <tr> <td>Aluminium</td> <td><input type="checkbox"/> 01</td> <td><input type="checkbox"/> _____</td> </tr> <tr> <td>Alu + colour</td> <td><input type="checkbox"/> white</td> <td><input type="checkbox"/> _____</td> </tr> <tr> <td>Stainless steel</td> <td><input type="checkbox"/> 6204</td> <td><input type="checkbox"/> _____</td> </tr> </table> | Aluminium | <input type="checkbox"/> 01 | <input type="checkbox"/> _____ | Alu + colour | <input type="checkbox"/> white | <input type="checkbox"/> _____ | Stainless steel | <input type="checkbox"/> 6204 | <input type="checkbox"/> _____ |
| Aluminium | <input type="checkbox"/> 01 | <input type="checkbox"/> _____ | | | | | | | | |
| Alu + colour | <input type="checkbox"/> white | <input type="checkbox"/> _____ | | | | | | | | |
| Stainless steel | <input type="checkbox"/> 6204 | <input type="checkbox"/> _____ | | | | | | | | |

4



Order quantity _____ sets

* acc. to German DIN standard



Security fitting Design 7387

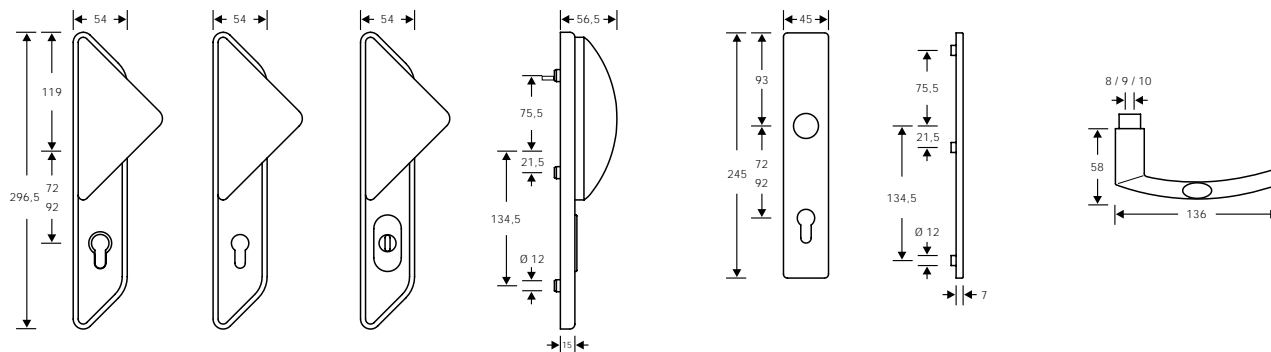


- Order details standard Design 7387
Fire and smoke-stop door* (F) Design 7587 (only Stainless steel)
- Knob furniture
 Lever handle furniture
- Security class S1 11 mm
 S1 15 mm
 S2 11 mm
 S2 15 mm
 S2 - ZA 8 - 16 mm
 S3 - ZA 8 - 16 mm
 S4 - ZA 8 - 16 mm
- Handing of door DIN r.h., inward opening
 DIN l.h. inward opening
- to suit door thickness _____ mm
- Spacing 72 mm 92 mm
 72 mm
- Spindle 8 mm 10 mm
 9 mm
- Material/colour Aluminium 01 _____
 Alu + colour white _____
 Stainless steel 6204 _____



Order quantity _____ sets

* acc. to German DIN standard



Security fitting Design 7388



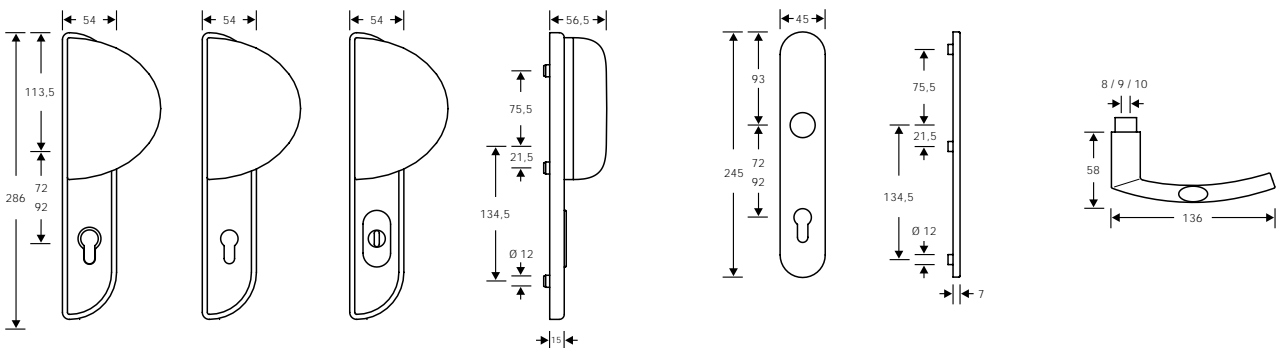
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|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|-----------------------------|--------------------------------|--------------|--------------------------------|--------------------------------|-----------------|-------------------------------|--------------------------------|
| Order details standard | <input type="checkbox"/> Design 7388 | | | | | | | | | |
| Fire and smoke-stop door* (E) | <input type="checkbox"/> Design 7588 (only Stainless steel) | | | | | | | | | |
| Knob furniture | <input type="checkbox"/> | | | | | | | | | |
| Lever handle furniture | <input type="checkbox"/> | | | | | | | | | |
| Security class | <input type="checkbox"/> S1 11 mm
<input type="checkbox"/> S1 15 mm
<input type="checkbox"/> S2 11 mm
<input type="checkbox"/> S2 15 mm
<input type="checkbox"/> S2 - ZA 8 - 16 mm
<input type="checkbox"/> S3 - ZA 8 - 16 mm
<input type="checkbox"/> S4 - ZA 8 - 16 mm | | | | | | | | | |
| Handing of door | <input type="checkbox"/> DIN r.h., inward opening
<input type="checkbox"/> DIN l.h., inward opening | | | | | | | | | |
| to suit door thickness | _____ mm | | | | | | | | | |
| Spacing | <input type="checkbox"/> 72 mm <input type="checkbox"/> 92 mm
<input checked="" type="checkbox"/> 72 mm | | | | | | | | | |
| Spindle | <input type="checkbox"/> 8 mm <input type="checkbox"/> 10 mm
<input checked="" type="checkbox"/> 9 mm | | | | | | | | | |
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| Aluminium | <input type="checkbox"/> 01 | <input type="checkbox"/> _____ | | | | | | | | |
| Alu + colour | <input type="checkbox"/> white | <input type="checkbox"/> _____ | | | | | | | | |
| Stainless steel | <input type="checkbox"/> 6204 | <input type="checkbox"/> _____ | | | | | | | | |

4



Order quantity _____ sets

* acc. to German DIN standard

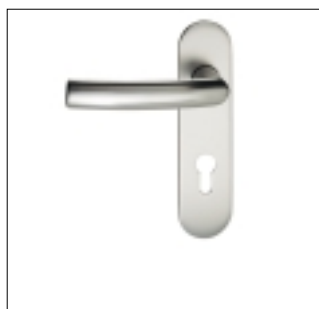


Security fitting Design 7374



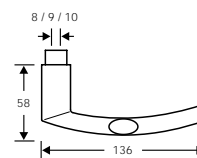
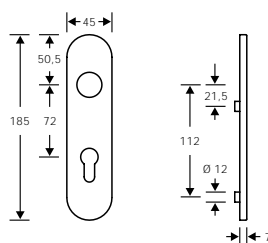
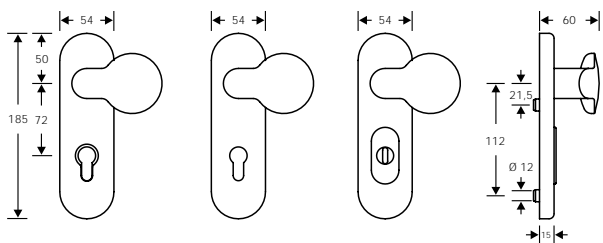
- Order details standard Design 7374
Fire and smoke-stop door* (F) Design 7574
- Knob furniture
- Lever handle furniture
- Security class S2 11 mm
 S2 15 mm
 S2 - ZA 8 - 16 mm
- Handing of door DIN r.h., inward opening
 DIN l.h., inward opening
- to suit door thickness _____ mm
- Spacing 72 mm
- Spindle 8 mm 9 mm
- Material/colour Aluminium 01 _____
 Alu + colour white _____
 Stainless steel 6204 _____

4

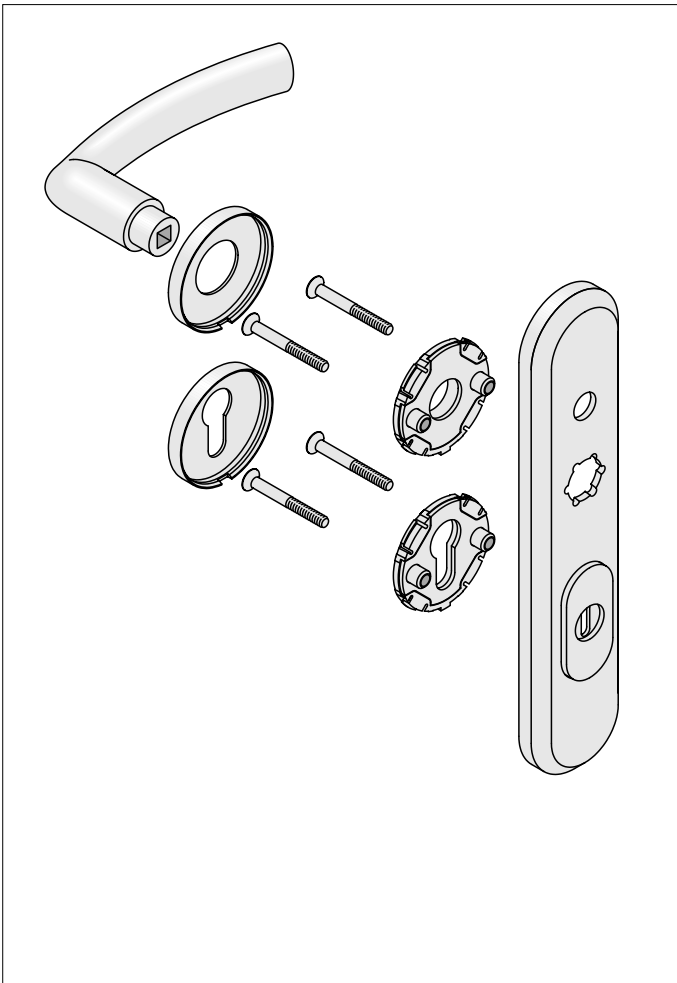


Order quantity _____ sets

* acc. to German DIN standard



Security fitting + Internal roses



Order details standard

- Design 7381
- Design 7382
- Design 7383
- Design 7384
- Design 7385
- Design 7386
- Design 7387
- Design 7388
- Design 7374

Order details Fire and smoke-stop door* (F)

- Design 7581 (only Stainless steel)
- Design 7582 (only Stainless steel)
- Design 7583 (only Stainless steel)
- Design 7584
- Design 7585 (only Stainless steel)
- Design 7586 (only Stainless steel)
- Design 7587 (only Stainless steel)
- Design 7588 (only Stainless steel)
- Design 7574

Knob furniture
Lever handle furniture

Security class S2 11 mm
 S2 15 mm
 S2 - ZA 8 - 16 mm

Handing of door DIN r.h., inward opening
 DIN l.h., inward opening

to suit door thickness _____ mm

Spacing 72 mm 92 mm
(except 7374/7574)
 72 mm

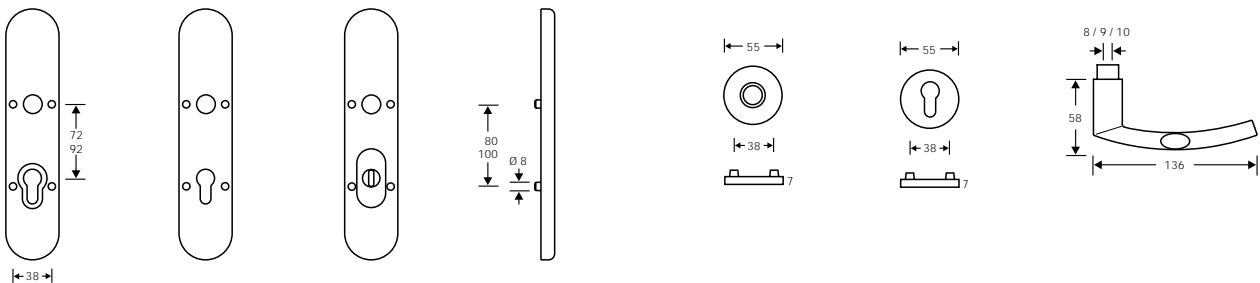
Spindle 8 mm 10 mm
(except 7374)
 9 mm

Material/colour Aluminium 01 _____
Alu + colour white _____
Stainless steel 6204 _____

Order quantity _____ sets

* acc. to German DIN standard

4



Security fitting

to suit locks for framed doors
centres 92 mm



Lever handle furniture
for framed doors

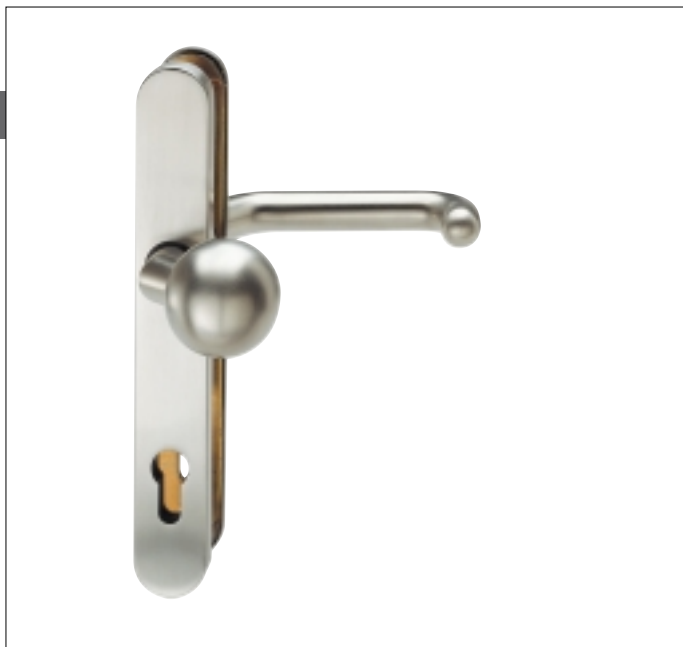
7330 30 Outer backplate
14 mm
PZ 92
8 mm □-spindle

Aluminium
Stainless steel
Alu + colour

Lever handle furniture
for framed fire doors*



7530 30 Outer backplate
14 mm
PZ 92
9 mm □-spindle



Knob furniture
for framed doors

7330 31 Knob backplate
14 mm
PZ 92
8 mm □-spindle

Aluminium
Stainless steel
Alu + colour

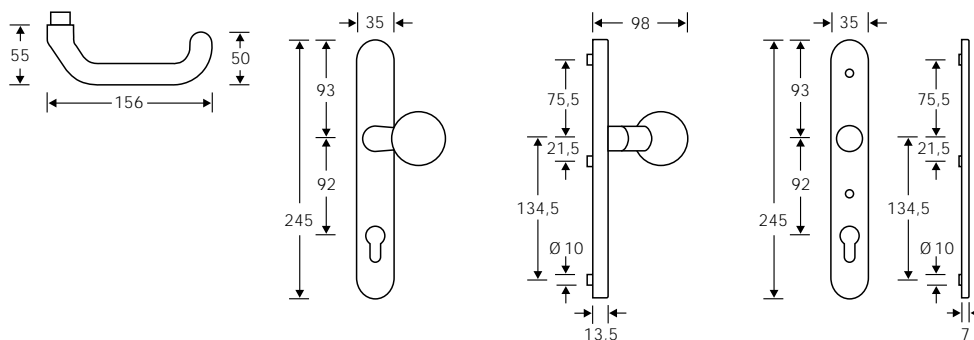
Knob furniture
for framed fire doors*



7530 31 Knob backplate
14 mm
PZ 92
9 mm □-spindle

4

* acc. to German DIN standard



Security fitting

to suit locks for framed doors
centres 92 mm



Lever handle furniture
for framed doors
suitable for cylinder projec-
tions from 8 to 13 mm

Aluminium
Stainless steel
Alu + colour

7331 30 Outer backplate
14 mm
PZ 92
8 mm □-spindle

Lever handle furniture
for framed fire doors*
suitable for cylinder projec-
tions from 8 to 13 mm



7531 30 Outer backplate
14 mm
PZ 92
9 mm □-spindle



Knob furniture
for framed doors
suitable for cylinder projec-
tions from 8 to 13 mm

Aluminium
Stainless steel
Alu + colour

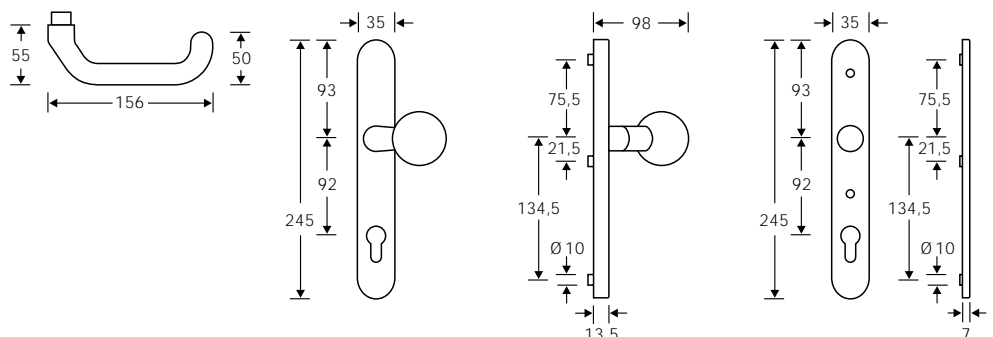
7331 31 Knob backplate
14 mm
PZ 92
8 mm □-spindle

Knob furniture
for framed fire doors*
suitable for cylinder projec-
tions from 8 to 13 mm

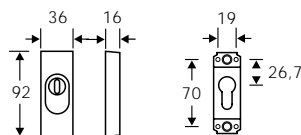


7531 31 Knob backplate
14 mm
PZ 92
9 mm □-spindle

* acc. to German DIN standard



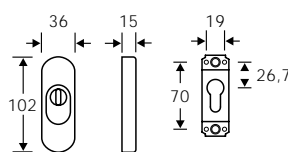
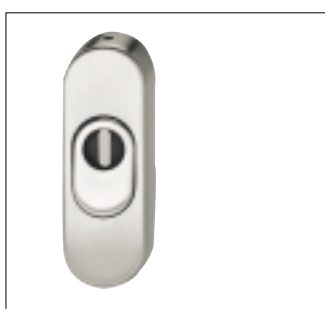
Protection roses



3244

Aluminium
Alu + colour

Screw hole - Ø 3.2 mm

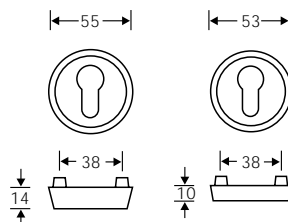
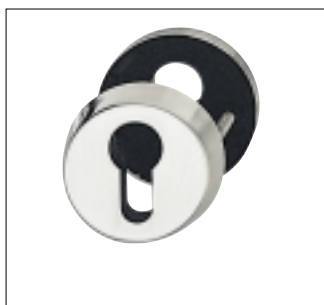


3246

Aluminium
Stainless steel
Brass
Alu + colour

Screw hole - Ø 3.2 mm

4



7391

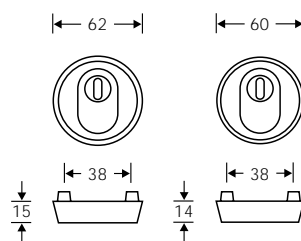
7392

7391

7392

Aluminium
Stainless steel
Brass
Alu + colour

Counter rose 1735 50



Stainless steel
Brass

Aluminium
Alu + colour

7393

Aluminium
Stainless steel
Brass
Alu + colour

Suitable for cylinder projections from 8 to 15 mm.

Counter rose 1735 50

Integrated safety engineering demands that the external dimensions of an armoured rose be 11 or 16 mm greater than its fixing centres. In particular, this needs to be borne in mind when ordering a mix of hardware.

Protection roses FSB 3244 and 3246 suit cylinder projections from 8 to 15 mm.

Technical information page 295

Stainless steel with a polished brass finish for entrance and internal doors

5

Brass is an alloy formed by mixing copper and zinc that has served as 'poor man's gold' since time immemorial. Ornaments, weapons, household goods of all types and hence also fittings are all frequently made with this alloy. But as the saying goes, all that glitters is not gold. This is particularly true of hybrid metals such as brass. A natural tension exists between the various constituents and this expresses itself in the form of surface corrosion. Tackling such intercrystalline corrosion makes for a lot of cleaning - the alternative being to simply let nature take her course. One way forward is often claimed to be a good lacquer. That only holds true for as long as the coating remains intact, however. Experience regrettably shows that the surface is usually impaired fairly quickly.

The brass dilemma has never ceased to haunt us, but now FSB has come up with an answer: Stainless Steel with a Brassy Sheen. The host material in this ideal solution for entrance and internal doors is a corrosion-resistant high-grade steel, a material that has been proving its worth in construction under the most exacting of conditions for decades. An additional solid layer of metal with a polished brass finish is applied to this base using a PVD (physical vapour deposition) technique. This dyed zirconium nitride (ZrN) coating delivers excellent resistance to abrasion and corrosion. Intercrystalline corrosion is now ruled out. Accordingly, FSB guarantees long enjoyment of its polished brass finish, always assuming correct fixing and proper use.

Lever handles
Knobs and roses



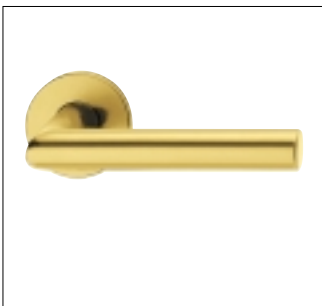
1023 7000 0004
Stainless steel pvd
10 mm □-hole
Female part turnably fixed

see page 24



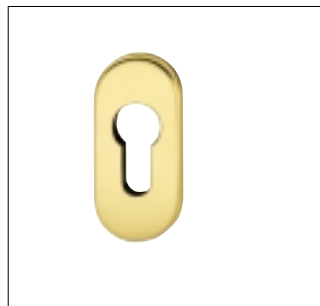
2303 05
2303 06
Stainless steel pvd

see page 118



1076 7000 0003
Stainless steel pvd
10 mm □-hole
Female part turnably fixed

see page 44



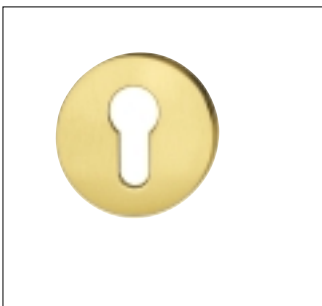
1757 0010
Stainless steel pvd

see page 425



1146 7000 0002
Stainless steel pvd
10 mm □-hole
Female part turnably fixed

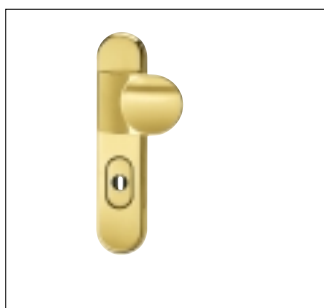
see page 76



1735 0010
Stainless steel pvd

see page 96

Design +
Security



7386 5712

Stainless steel pvd

S4 – ZA
PZ 92 mm
10 mm □-spindle

see page 301

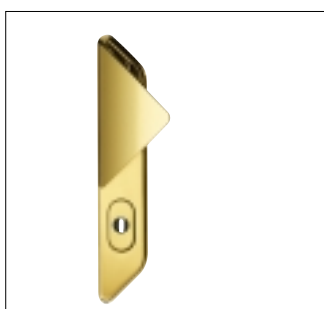


7331 3012

Stainless steel pvd

PZ 92 mm
8 mm □-spindle

see page 307



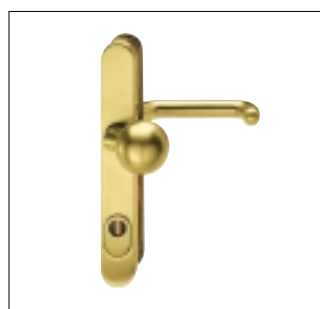
7387 6712 r.h.

7387 7712 l.h.

Stainless steel pvd

S4 – ZA
PZ 92 mm
10 mm □-spindle

see page 302



7331 3112

Stainless steel pvd

PZ 92 mm
8 mm □-spindle

see page 307



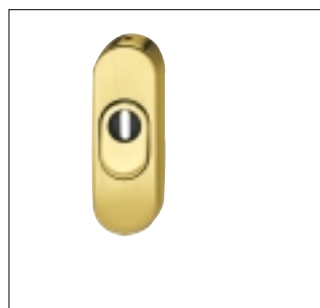
7388 6712 r.h.

7388 7712 l.h.

Stainless steel pvd

S4 – ZA
PZ 92 mm
10 mm □-spindle

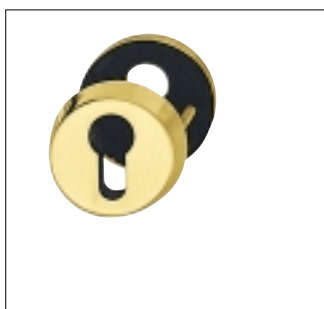
see page 303



3246

Stainless steel pvd

see page 308



7392

Stainless steel pvd

see page 308



7393

Stainless steel pvd

see page 308

Letter plates with spacer
Intercom and bell-push plates
Numerals



3826 2061

Stainless steel pvd

see page 173



3863

Stainless steel pvd

see page 176

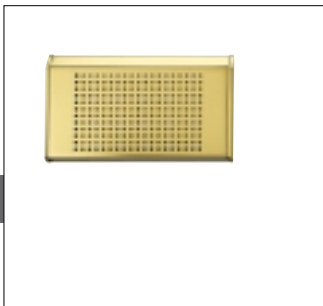


3864

Stainless steel pvd

0011 single
0012 double

see page 175



3865

Stainless steel pvd

see page 175



4005 . .

Stainless steel pvd

see page 196

Pull handles and fittings
for entrance and internal doors



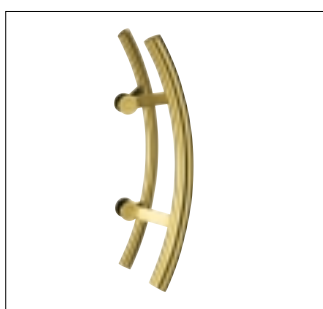
6616 35
Stainless steel pvd
Ø 40 x 28 mm
A 350 mm
L 550 mm

see page 320



6623 38
Stainless steel pvd
Ø 30 mm
A 350 mm
B 152 mm

see page 349



6675 21
Stainless steel pvd
Ø 40 x 28 mm
A 210 mm
L 504 mm

see page 321



7872 24 r.h.
7872 25 l.h.
Stainless steel pvd

see page 407



6621 45
Stainless steel pvd
Ø 25 mm
A 450 mm
L 600 mm

see page 339



7873 24 r.h.
7873 25 l.h.
Stainless steel pvd

see page 408



6683 38
Stainless steel pvd
Ø 30 mm
A 350 mm
B 235 mm

see page 350



7874 24 r.h.
7874 25 l.h.
Stainless steel pvd

see page 409

Lever handles for framed doors
Sliding escutcheons



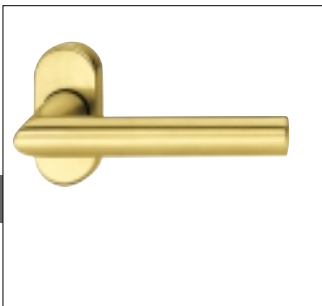
7223 25
Stainless steel pvd
8 mm □-hole

see page 427



7246 25
Stainless steel pvd
8 mm □-hole

see page 433



7276 25
Stainless steel pvd
8 mm □-hole

see page 429



1727
Stainless steel pvd
9 mm

see page 441
















































































Pull Handles

6

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Pull handles Round series	335
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Other pull systems	373
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Push and pull pad handles, Sections and support brackets, Horizontal bar handles, Accessories	389

Overview

								
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- Aluminium
- Stainless steel
- Brass
- Aluminium + colour
- Platics, black



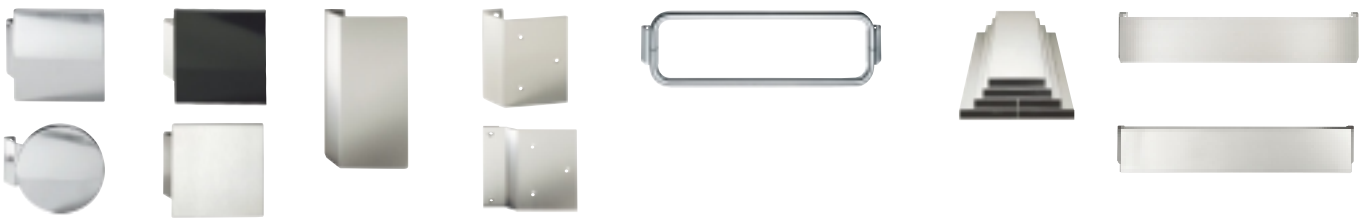
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Page 400 Page 400 Page 400 Page 400 Page 401 Page 401
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Materials, Fixing Options, Safety Clearance

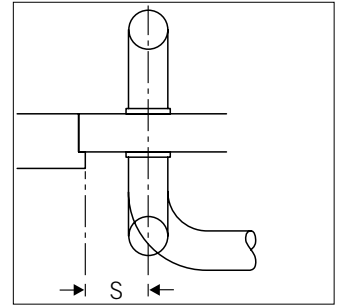
Fixing Scenarios

Over the past decade, FSB has added a fully-fledged alternative to its traditional tubular pull-handle range with a comprehensive collection of oval designs. Both sets of designs can be fixed in a wide variety of ways. The traditional range of push/pull pad handles and profiles with brackets has also been further developed.

Materials

In principle, FSB supplies its entire pull-handle range in either aluminium, stainless steel or brass, with stainless steel being particularly recommended for heavy-duty applications. Aluminium surfaces can easily get blemished in such circumstances, though this 'ageing process' in no way impairs the functioning of the handle. Owing to their tendency to corrode, brass pulls are only offered with a waxed finish. It takes several years before a natural brown protective patina forms on brass handles.

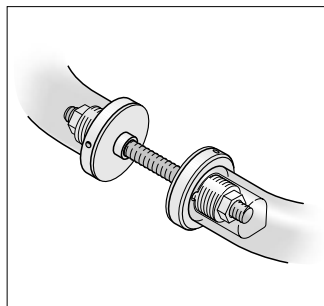
Pulls can be either face or through fixed to doors made of the most diverse of materials. In the case of through-fixing, either a pair of pulls or a single handle can be fitted. FSB has accorded these three fixing options - both-sides through fixing, one-side through fixing - clear identifying symbols that can be found on all relevant product pages. (Examples show fixing for tubular pulls).



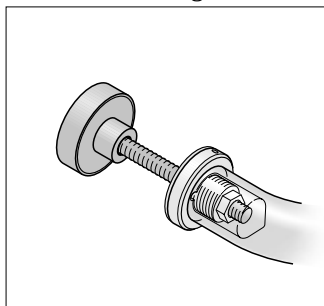
Safety Clearance (S)

When fitting a handle to the closing face of a door, a safety clearance needs to be allowed for between the handle and the edge of the door and the jamb. The assembly scenario is made more readily comprehensible by the following sketch. Ideally, safety clearances as recommended by FSB should be adhered to. Nevertheless, conditions at the point of assembly are crucial. It is particularly advisable to make use of the shackle-type bracket purpose-designed by FSB for especially narrow stiles, which sets the handle sufficiently far away from the edge.

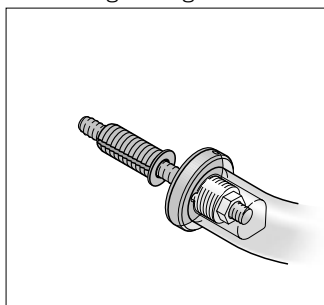
As regards the issue of face fixing versus one-side through-fixing, FSB wishes to point out that, on account of the dowel-fastening technique deployed by FSB, face fixing is both aesthetically pleasing and sufficiently durable as a rule. This needs to be qualified, however, in the case of heavy-duty applications, (i.e. in schools, office blocks and other public institutions): here, we emphatically recommend one-side through-fixing, which ensures that the furniture remains fit for use even after years of heavy treatment, since the forces involved are absorbed on both sides of the door.



back to back fixing



bolt through fixing



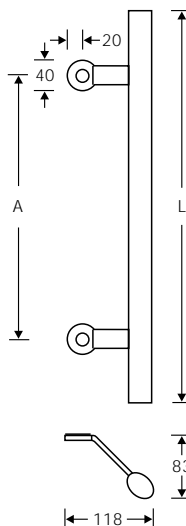
secret single side fixing with expansion plug

Pull handles Oval series



Kicking off the FSB door-pull programme are the oval pulls developed by FSB over the past decade as an alternative to its traditional tubular handles. The oval styling has given the market a new visual and ergonomic handle quality, one which to the fullest possible extent has been design-protected. The experience FSB has garnered in the past now allows it to supply safe-to-grip oval equivalents of virtually all the traditional round pull designs. For quick jobs, the proven HT kit system has been extended to the oval tube. With this hardware kit system (brackets and tubes) solutions up to 1,500 mm in length can be fabricated on site that look good and are technically flawless. Where lengths in excess of 1,500 mm are concerned, FSB recommends using factory-welded structures for reasons of stability.

Pull handles
Oval series

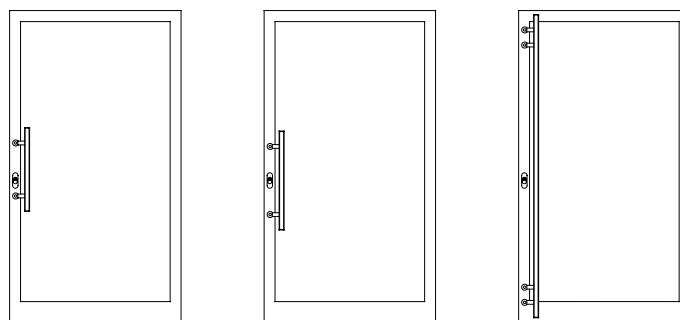


6616

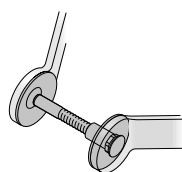
Stainless steel

In door pull series FSB 6616 (Ø 40 x 28 mm), fixing is by means of laterally offset strap-type brackets. The fastening and gripping sides are separated from one another and hence protect hands. The innovative combination of fixing strap and pull lends the design an airy, vivacious appearance.

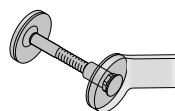
Item nos.	Ø	A	L
6616 35	40 x 28	350	550
6616 45	40 x 28	450	650
6616 99	40 x 28	451-2100	



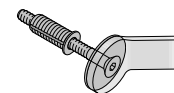
For detailed information on fixing, please turn to page 380.



back to back fixing

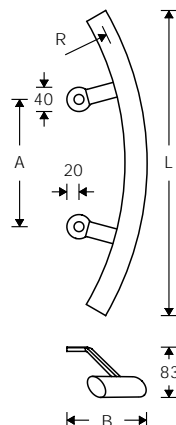


bolt through-fixing



secret single side fixing with expansion plug

Pull handles
Oval series

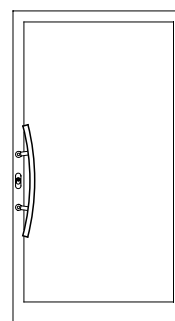
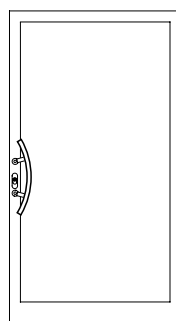


6675

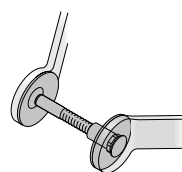
Stainless steel

Door pull FSB 6675 takes the offset strap-type brackets from the FSB 6616 series and fuses these with the sweep of the crescent-shaped oval pull (Ø 40 x 28 mm). This pull series is only supplied with A Dimensions of 210 mm and 350 mm.

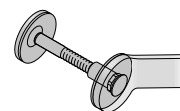
Item nos.	Ø	R	A	B	L
6675 21	40 x 28	485	210	130	504
6675 35	40 x 28	1420	350	130	745



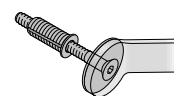
For detailed information on fixing, please turn to page 380.



back to back fixing

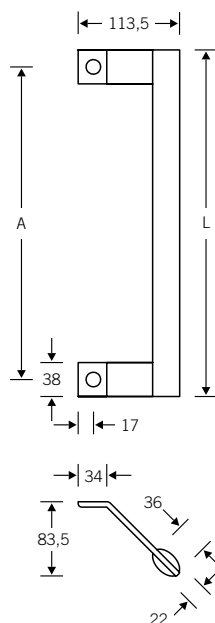


bolt through-fixing



secret single side fixing with expansion plug

Pull handles
Oval series



6525

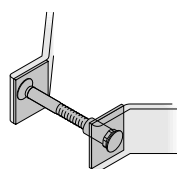
Aluminium

Oval pulls with safe-to-grip strap-type brackets have only hitherto been available in stainless steel. This gap in the range is being closed with publication of the 02103 Manual by means of a design-conscious model in which aluminium oval pulls with A Dimensions of 350 and 450 mm are joined to their fixing straps to great visual effect.

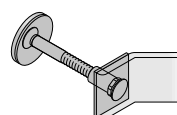
Item nos.	Ø	A	L
6525 35	36 x 22	350	388
6525 45	36 x 22	450	488

6

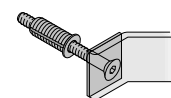
For detailed information on fixing, please turn to page 380.



back to back fixing

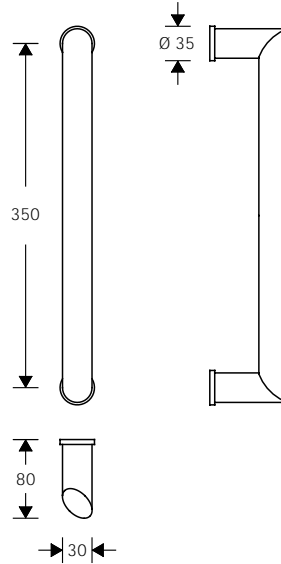


bolt through-fixing



secret single side fixing with expansion plug

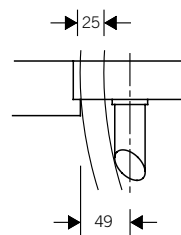
Pull handles
Oval series



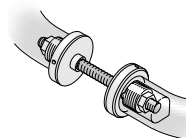
6650
Stainless steel
Fixing M8

FSB could not resist squeezing all the experience gained in fashioning the 40 x 28 mm oval tube into a smaller diameter. And thus it was that the standard in-line pull FSB 6650 came into being. It features a skewed oval grip 36.5 by 22 mm in diameter affixed to circular brackets. If so desired, FSB 6650 can also be supplied in other lengths.

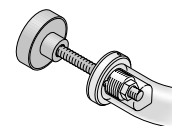
Item nos.	Ø	A	S
6650 38	36 x 22	350	49
6650 99	36 x 22	351-2100	49



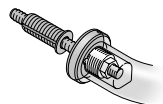
For detailed information on fixing, please turn to page 383.



back to back fixing

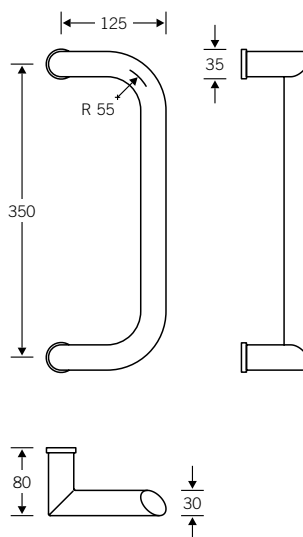


bolt through-fixing



secret single side fixing with expansion plug

Pull handles
Oval series



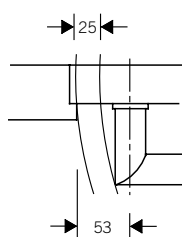
6682

Stainless steel

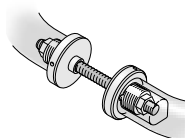
M8 fixing

For the 02103 edition of its Manual, FSB has extended its FSB 6650 series introduced two years ago to embrace U-shaped, circular and triangular variants. In all four cases, the easy-grip oval tube with a diameter of 36 x 22 mm is supported on round fixing brackets.

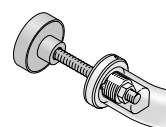
Item nos.	Ø	A	S
6682 38	36 x 22	350	53



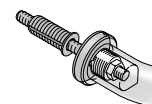
For detailed information on fixing, please turn to page 383.



back to back fixing

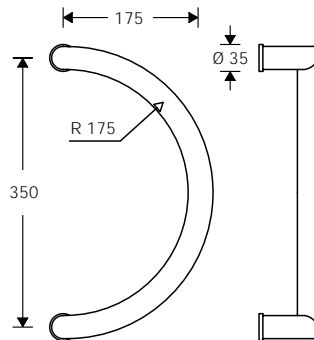


bolt through-fixing



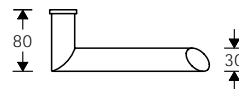
secret single side fixing with expansion plug

Pull handles
Oval series

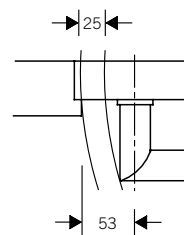


6652
Stainless steel
M8 fixing

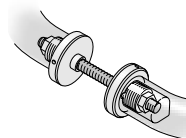
Handle models FSB 6650 (in-line), FSB 6682 (U-shape), FSB 6652 (semicircular) and FSB 6685 (triangular) are living proof that tested designs featuring new oval cross-sections have the edge over their round counterparts both optically and in terms of gripping ergonomics. The hand glides effortlessly around them.



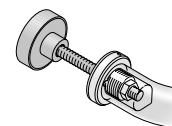
Item nos.	Ø	A	S
6652 38	36 x 22	350	53



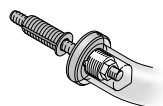
For detailed information on fixing, please turn to page 383.



back to back fixing

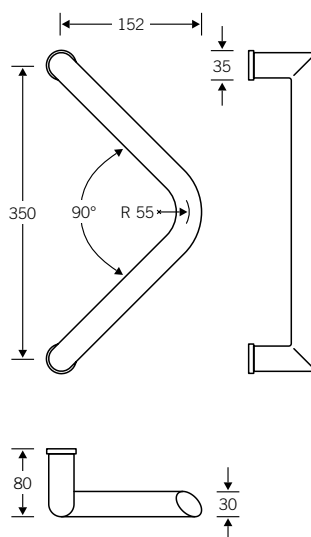


bolt through-fixing



secret single side fixing with expansion plug

Pull handles
Oval series



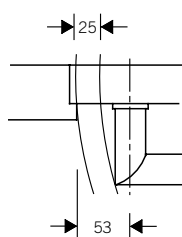
6685

Stainless steel

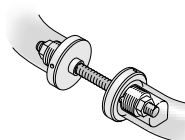
M8 fixing

The triangular tubular pull launched by FSB 15 years ago became a top-seller, echoing as it does the diagonal trussing so commonly to be found on front doors. The new oval-section pull handle 6685 adds ergonomically enhanced gripping qualities to what are already very fine visuals.

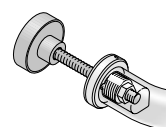
Item nos.	Ø	A	S
6685 38	36 x 22	350	53



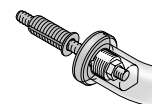
For detailed information on fixing, please turn to page 383.



back to back fixing

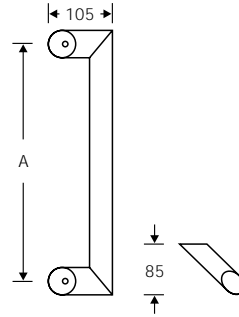


bolt through-fixing



secret single side fixing with expansion plug

Pull handles
Oval series

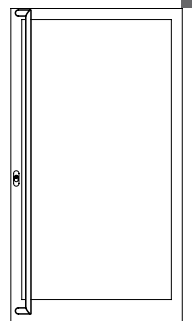
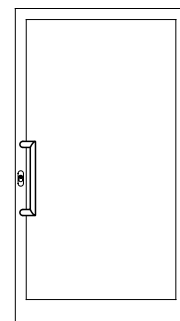
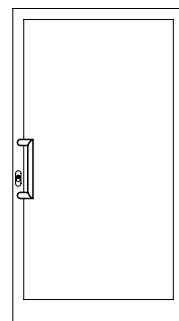
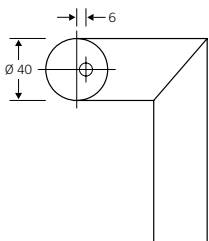


6635

Stainless steel

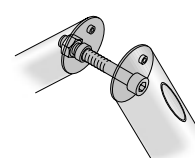
Door pull design FSB 6635 was the first member of the oval family. A hefty oval tube ($\varnothing 40 \times 28$ mm) was required to be ergonomically designed to ensure hands could grip safely and purposefully. This objective was achieved by welding handle and brackets together in a mitre-joint. The upshot was a design in stark contrast to the gentle curves of its tubular counterparts. The market was immediately receptive.

Item nos.	\varnothing	A
6635 38	40 x 28	350
6635 45	40 x 28	450
6635 99	40 x 28	451-2100

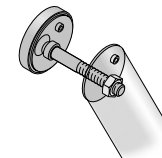


When locating the fixing points, especially on narrow stiles of frame doors, please regard the off-centre location of the threaded holes from the centre of the contact plane of the handle. The measurement's difference is in case of FSB 6635 exactly 6mm.

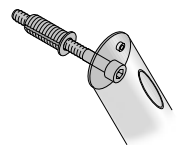
For detailed information on fixing, please turn to page 381.



back to back fixing

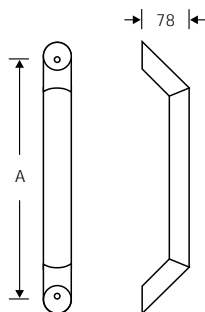


bolt through-fixing



secret single side fixing with expansion plug

Pull handles
Oval series



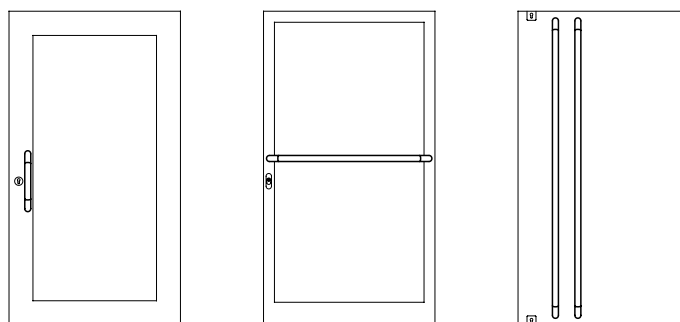
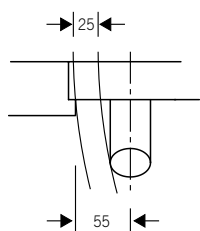
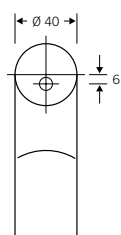
6637

Stainless steel

Door pull series FSB 6637 dispenses with the raking of the oval tube ($\varnothing 40 \times 28$ mm). The pull is aligned with the door front-on whatever its A dimension. Being an in-line pull, attention must always be paid to ensuring sufficient safety clearance from the edge. Extended over the entire door, these pulls add structure to the door panel whilst also protecting it.

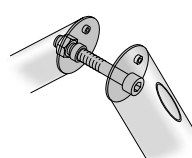
Item nos.	\varnothing	A	S
6637 38	40 x 28	350	55
6637 45	40 x 28	450	55
6637 99	40 x 28	451-2100	55

6

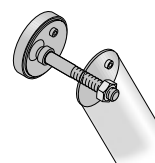


When locating the fixing points, especially on narrow stiles of frame doors, please regard the off-centre location of the threaded holes from the centre of the contact plane of the handle. The measurement's difference is in case of FSB 6637 exactly 6mm.

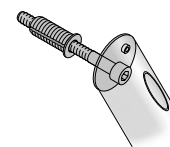
For detailed information on fixing, please turn to page 381.



back to back fixing

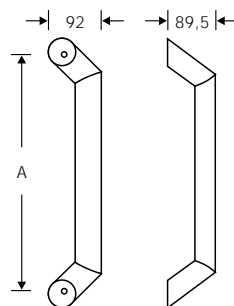


bolt through-fixing



secret single side fixing with expansion plug

Pull handles
Oval series

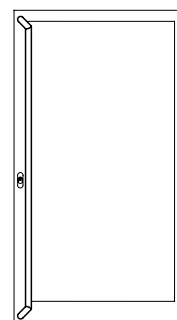
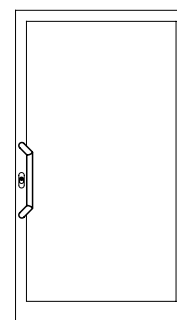
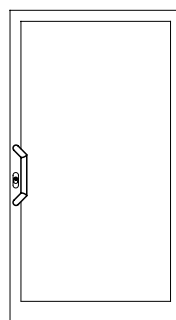
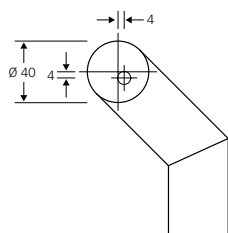


6636

Stainless steel

Door pull design FSB 6636 is a variation on the now classic first design FSB 6635. The visual severity of the first model is softened by having the brackets slope towards the grip. The angle between the two is 135°. The new design qualities really come into their own given smaller A dimensions.

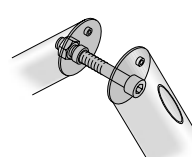
Item nos.	Ø	A
6636 38	40 x 28	350
6636 45	40 x 28	450
6636 99	40 x 28	451-2100



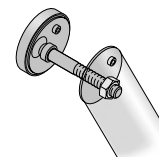
6

When locating the fixing points, especially on narrow stiles of frame doors, please regard the off-centre location of the threaded holes from the centre of the contact plane of the handle. The measurement's difference is in case of FSB 6636 exactly 6mm.

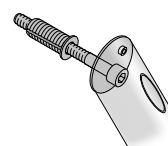
For detailed information on fixing, please turn to page 381.



back to back fixing

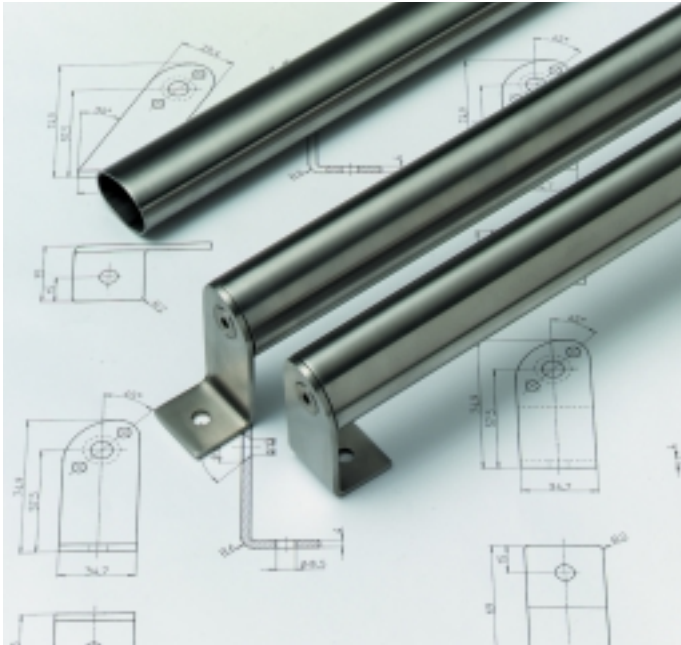


bolt through-fixing



secret single side fixing with expansion plug

ht oval modular systems up to 1,500 mm



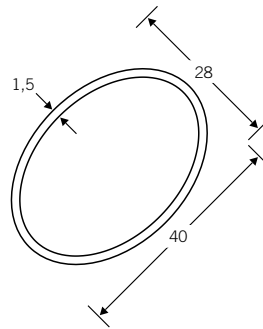
6802

Stainless steel

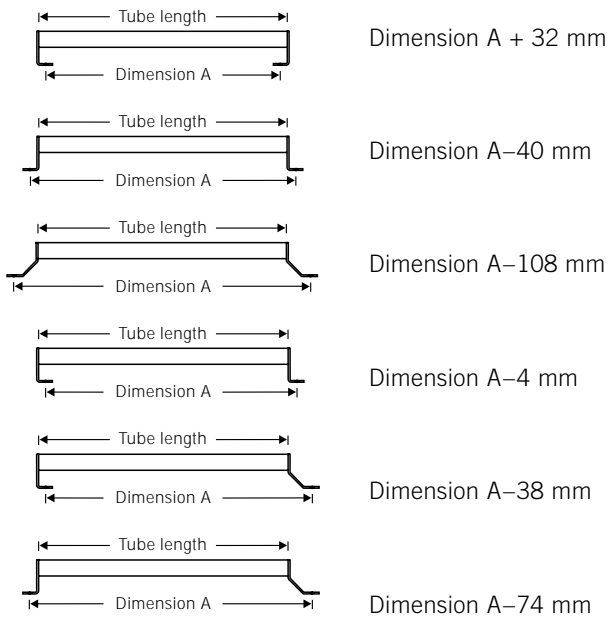
Tube 28 x 40 x 1.5 mm
Stock length 3,000 mm

The ht oval kit enables safety rails, handle systems, hand-rails etc. up to 1,500 mm in length to be cut to size, fabricated and fitted on site with the aid of the appropriate tools.

Where lengths in excess of 1,500 mm are concerned, we would recommend factory welded hardware.



Dimensions:



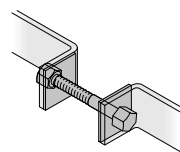
Tube length and A dimension are important for fabrication, fitting and ordering purposes. The A dimension defines the fixing distance from the centre of the borehole for one bracket to the centre of the borehole for the other. Tube length is arrived at by adding or subtracting the differential dimensions given alongside from the A dimension.

FSB recommends reinforcing door pulls from the HT Oval kit that are to be fitted to heavily used doors by means of the accessories available.

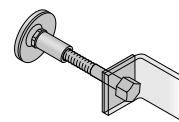
Reference:

When using elements of the HT Oval kit - whether for self-fabrication or as factory-welded parts - attention needs to be paid to structural specifications and conditions locally. This hefty product series is not a substitute for gym bars, neither should it be used as a safety

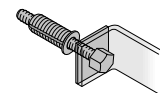
rail at particularly hazardous openings in buildings. If in any doubt, please contact the architect or engineer in charge. For detailed information on fixing, please turn to page 384.



back to back fixing

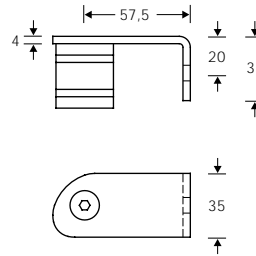


bolt through-fixing



secret single side fixing with expansion plug

Brackets **ht oval**
modular systems

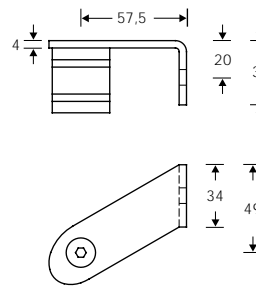


6735

Stainless steel

6735 04 r.h.
6735 05 l.h.

Straight bracket,
angled 90° inwards,
to match oval tube
40 x 28 x 1.5 mm Ø

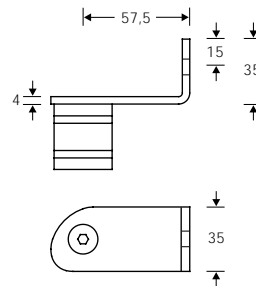


6736

Stainless steel

6736 04 r.h.
6736 05 l.h.

Bracket with 30° cranking,
angled 90° inwards,
to match oval tube
40 x 28 x 1.5 mm Ø

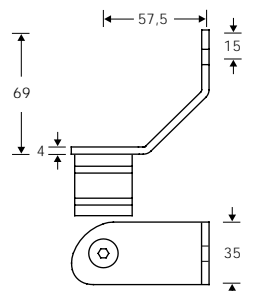


6737

Stainless steel

6737 04 r.h.
6737 05 l.h.

Straight bracket,
angled 90° outwards,
to match oval tube
40 x 28 x 1.5 mm Ø



6738

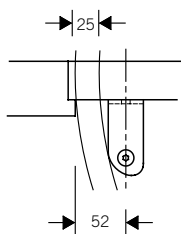
Stainless steel

6738 04 r.h.
6738 05 l.h.

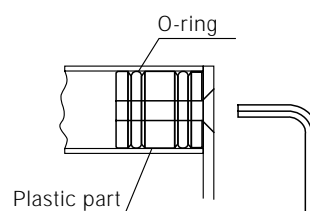
Bracket for swing doors,
to match oval tube
40 x 28 x 1.5 mm Ø

All illustrations r.h.

Screw hole Ø 8,5 mm



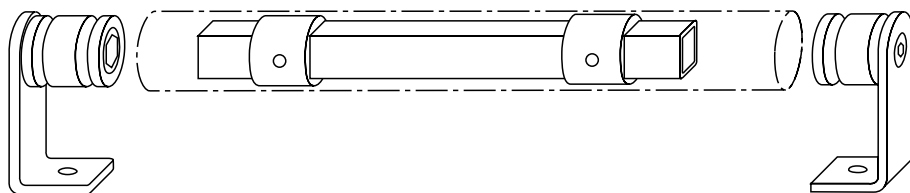
Safety clearance 52 mm



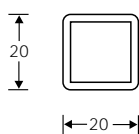
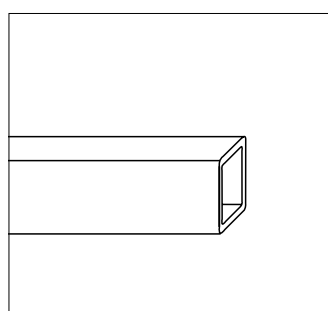
Once the tube has been cut to size (dimensions A + differential measurement), matching brackets are slotted into the tube ends and fastened with screws from the top.

Accessories

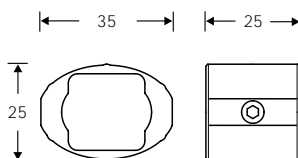
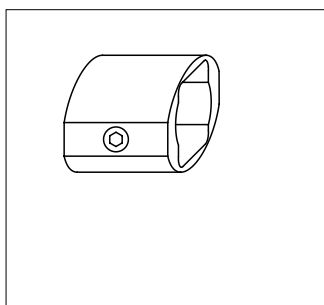
ht oval modular systems



For pull handles from the modular systems ht oval where robust handling is to be assumed, we would recommend reinforcing them with the accessories as shown on this page.

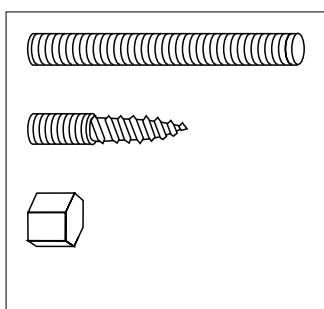


6801 20
Steel tube hot galvanised
20 x 20 x 2 mm
Stock length 3,000 mm



6739
Synth. mat.
Spacing sleeve with fixing screw

6



0313 0880 M8 x 80 mm
Steel stud

0316 0840 M8
Steel stud - for timber fixing

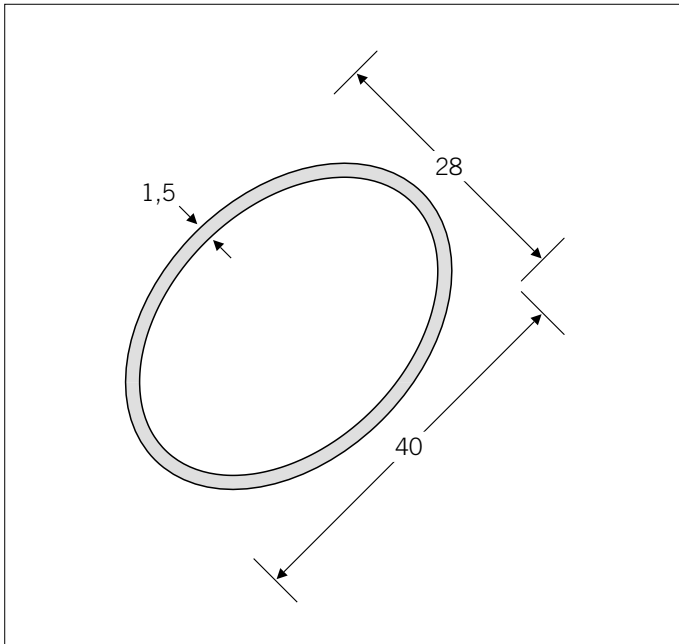
0320 0800 M8
Dome nut of stainless steel

For detailed information on fixing, please turn to page 384.

Fixing reference:

Sizing square-section tube: outside length of oval tube minus 100 mm. Then fixing of spacing sleeves with distance 350 mm, afterwards assembling.

ht oval welded
from 1500 to 2100 mm



6524

Stainless steel

Rohr 28 x 40 x 1,5 mm

For reasons of structural strength, we recommend ordering a factory-welded version drawing on the elements of the ht oval kit in cases where the A dimension lies between 1.500 mm and a maximum of 2.100 mm.

45 r.h.	55 l.h.	46 r.h.	56 l.h.	47 r.h.	57 l.h.	48 r.h.	58 l.h.
. 45 r.h. 55 l.h. 46 r.h. 56 l.h. 47 r.h. 57 l.h. 48 r.h. 58 l.h.

The pulls in the welded series FSB 6524 are produced to order. This involves selecting the combination of brackets desired from the illustration alongside and citing the appropriate code numbers. It is also necessary to state the A dimensions, which defines the fixing distance from the centre of the borehole for one bracket to the centre of the borehole for the other. By adding or subtracting the differential dimensions given on page 330, we calculate the length of the pull at the works prior to welding.

Reference:

When using elements of the HT Oval kit - whether for self-fabrication or as factory-welded parts - attention needs to be paid to structural specifications and conditions locally. This hefty product series is not a substitute for gym bars, neither should it be used as a safety rail at particularly hazardous

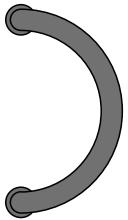
openings in buildings. If in any doubt, please contact the architect or engineer in charge.

For detailed information on fixing, please turn to page 384.

Pull handles Ellipse series



Reference is made at this juncture to a very pleasant-to-hold pull-handle series with elliptical grips. This 'smaller edition' of the oval pull series sports an A Dimension of 210 mm and comes in aluminium and stainless steel. Cf. Page 356 of the Manual.



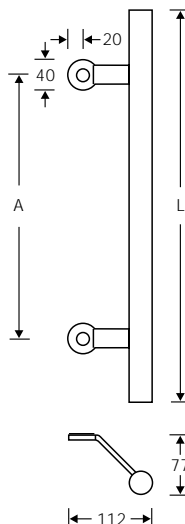
Pull handles Round series



The proven FSB range of tubular pulls has profited from the burst of innovation in the sphere of oval designs. New shapes and brackets have been added.

This is particularly true of the lightweight pull series in 20 mm tubular material, for which a new design-conscious bracket fixture has been developed that FSB has likewise had utility and design patented. Hence, this lightweight pull-handle series in its familiar 'straight, rectangular, triangular and crescent' styles can continue its victorious campaign against the traditional 'heavyweights'.

Pull handles
Round series

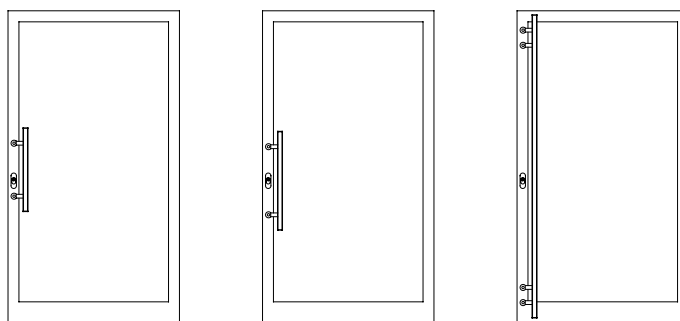


6615

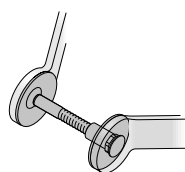
Stainless steel

In door pull series FSB 6615 (Ø 30 mm), fixing is by means of laterally offset strap-type brackets. The fastening and gripping sides are separated from one another and hence protect hands. The innovative combination of fixing strap and pull lends the design an airy, vivacious appearance.

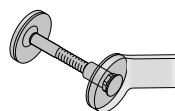
Item nos.	Ø	A	L
6615 35	30	350	550
6615 45	30	450	650
6615 99	30	451-2100	



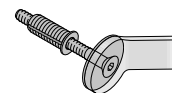
For detailed information on fixing, please turn to page 380.



back to back fixing

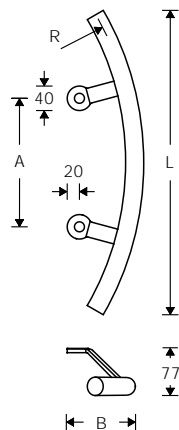


bolt through-fixing



secret single side fixing with expansion plug

Pull handles
Round series

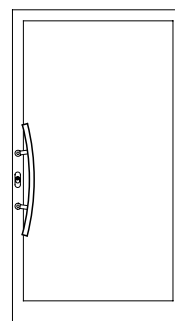
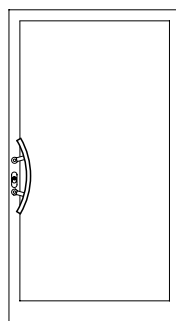


6674

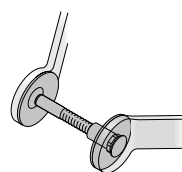
Stainless steel

Door pull FSB 6674 takes the offset strap-type brackets from the FSB 6615 series and fuses these with the sweep of the crescent-shaped round pull (Ø 30 mm). This pull series is only supplied with A dimensions of 210 mm and 350 mm.

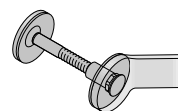
Item nos.	Ø	R	A	B	L
6674 21	30	485	210	126	497
6674 35	30	1420	350	123	742



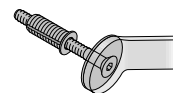
For detailed information on fixing, please turn to page 380.



back to back fixing

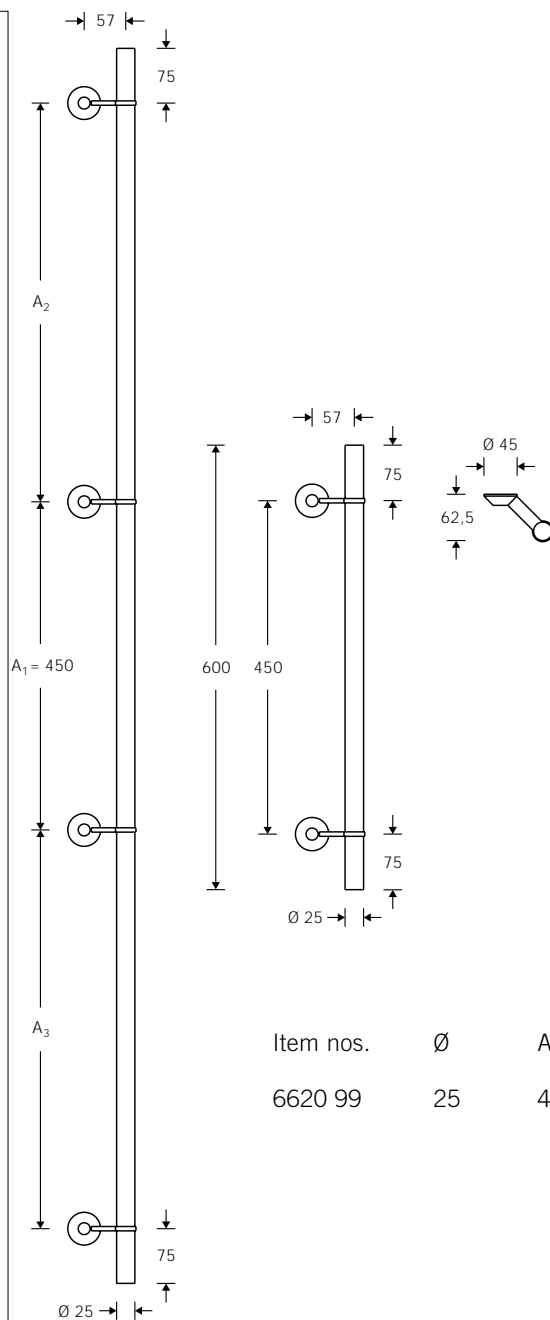


bolt through-fixing



secret single side fixing with expansion plug

Pull handles
Round series



6620 45

Ø 25 mm

Stainless steel

A₁ = 450 mm

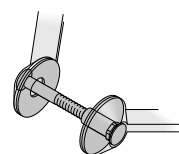
Overall length 600 mm

6

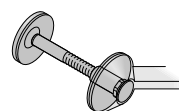
Item nos.	Ø	A1	A2	A3	Ending
6620 99	25	450	X	X	75 mm

The stiles on frame doors have become narrower in recent years. FSB has responded by producing a filigree handle series in stainless steel (Ø 25 mm). The straight bar handle features a clearance between the fixing centre and the centre of the bar of no less than 57 mm. With the curved version, the clearance is a mighty 130 mm. Both are

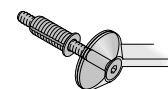
supplied as standard with an A dimension of 450 mm and an overall length of 600 mm. Optionally, they can both extend over the entire door. The standard measurement for the end sections is 75 mm. FSB recommends a distance between brackets of at most 1,200 mm.



back to back fixing



bolt through-fixing



secret single side fixing with expansion plug

Pull handles
Round series



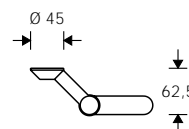
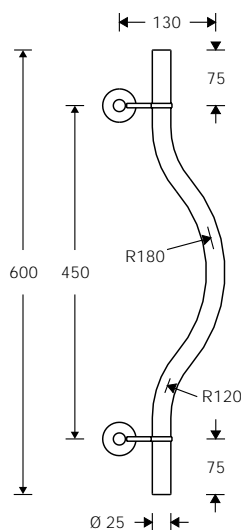
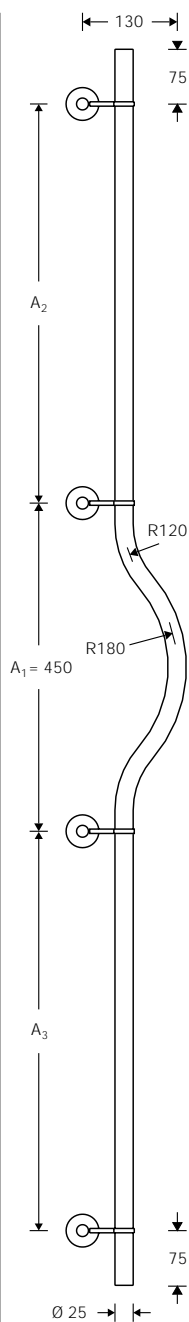
6621 45

Ø 25 mm

Stainless steel

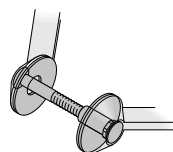
A₁ = 450 mm

Overall length 600 mm

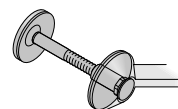


Item nos.	Ø	A1	A2	A3	Ending
6621 99	25	450	X	X	75 mm

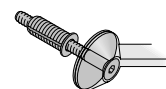
For detailed information on fixing, please turn to page 385.



back to back fixing

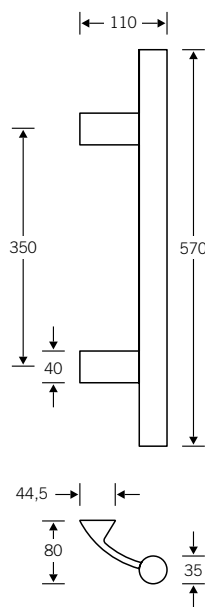


bolt through-fixing



secret single side fixing with expansion plug

Pull handles
Round series



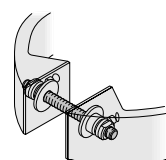
6526

Aluminium
Stainless steel (brackets natural coloured aluminium)

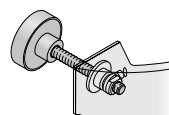
With the publication of its 02/03 Manual, FSB is supplementing its proven and long-successful in-line pull series in aluminium and stainless steel with a particularly safe-to-grip design featuring heavily cranked fixing points on which the ends of brackets are incorporated into the pull section. The in-line pull sections are supplied with a diameter of 35 mm in either aluminium or stainless steel. The brackets are made of aluminium and are anodised in the metal's natural colour. The standard version has an A dimension of 350 mm and a length of 570 mm. Other A dimensions and lengths are possible.

6

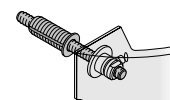
For detailed information on fixing, please turn to page 386.



back to back fixing



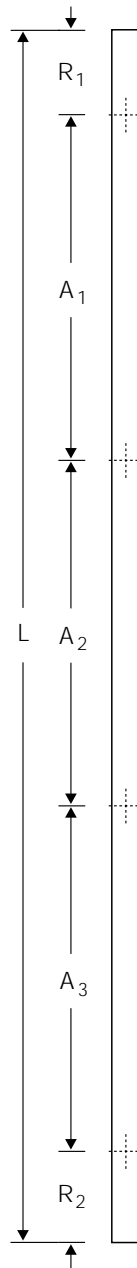
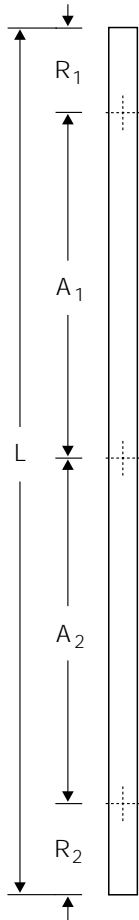
bolt through-fixing



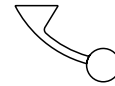
secret single side fixing with expansion plug



Fax copy



6526 Ø 35 mm



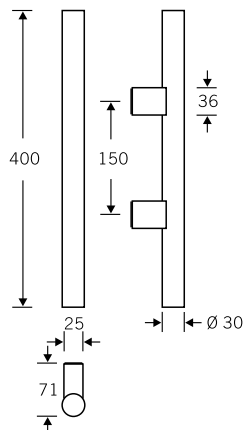
To order custom designs in the pull handle series 6526, please use a copy of this page: First specify the model desired citing the applicable order code above. Then enter the quantity required and overall length in the table below. Then enter details of the distances between brackets and, where applicable, their distance from the end of the handle in mm. To ensure stability, the distance between brackets should not exceed 1,200 mm.

6

Quantity	Overall length L	Distance between brackets			Edge spacing*	
		A ₁	A ₂	A ₃	R ₁	R ₂

* least 30 mm

Pull handles
Round series

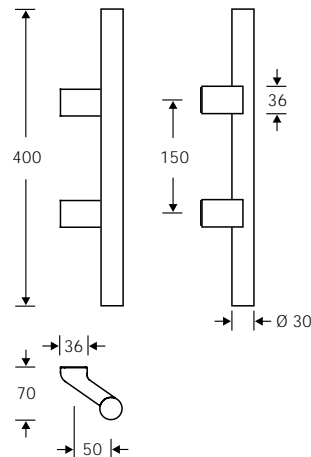


6642

Ø 30 mm

Brackets
Aluminium natural colour anod.
Grip
Aluminium natural colour anod.

Standard length 400 mm
Safety clearance 38 mm
Fixing M6



6643

Ø 30 mm

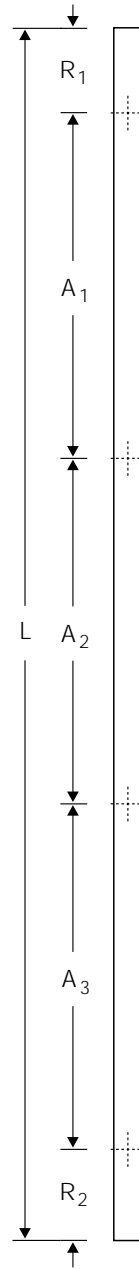
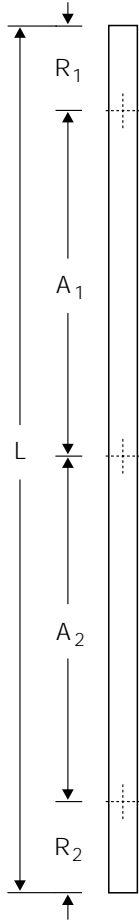
Brackets
Aluminium natural colour anod.
Grip
Aluminium natural colour anod.

Standard length 400 mm
Fixing M6

6

For detailed information on fixing of the pull handles 6642 and 6643, please turn to page 382.

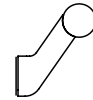
Fax copy



6642 Ø 30 mm



6643 Ø 30 mm



To order custom designs in the pull handle series 6642 or 6643, please use a copy of this page:

First specify the model desired citing the applicable order code above.

Then enter the quantity required and overall length in the table below.

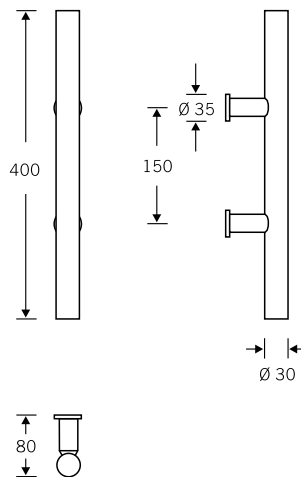
Then enter details of the distances between brackets and, where applicable, their distance from the end of the handle in mm. To ensure stability, the distance between brackets should not exceed 1,200 mm.

6

Quantity	Overall length L	Distance between brackets			Edge spacing*	
		A ₁	A ₂	A ₃	R ₁	R ₂

* least 30 mm

Pull handles
Round series

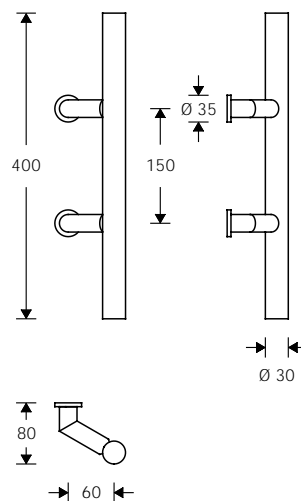


6681

Ø 30 mm

Brackets Stainless steel
Grip Stainless steel

Standard length 400 mm
Safety clearance 38 mm
Fixing M8



6630

30 mm Ø

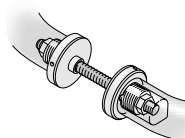
Brackets Stainless steel
Grip Stainless steel

Standard length 400 mm
Fixing M8

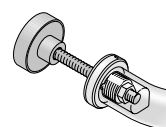
6

For all tubular pulls in stainless steel FSB can supply two customised variants with non-standard ends, one a shallow curvature (10), the other a stepped flat cap (20).

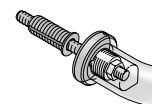
For detailed information on fixing, please turn to page 383.



back to back fixing

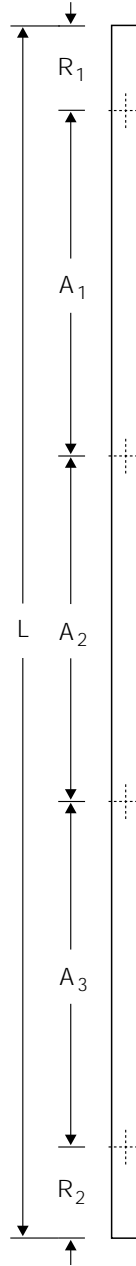
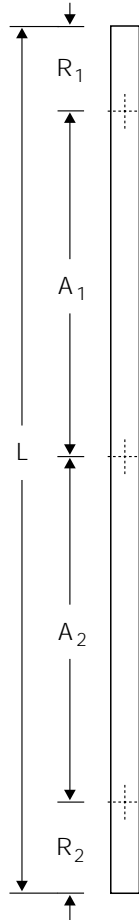
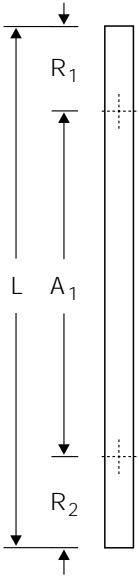


bolt through-fixing

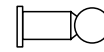


secret single side fixing with expansion plug

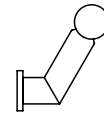
Fax copy



- 6580 Ø 25 mm
- 6681 Ø 30 mm
- 6582 Ø 35 mm
- 6583 Ø 40 mm



- 6529 Ø 25 mm
- 6630 Ø 30 mm
- 6531 Ø 35 mm
- 6532 Ø 40 mm



To order custom designs in the pull handle series 6681 or 6630, please use a copy of this page:

First specify the model desired citing the applicable order code above.

Then enter the quantity required and overall length in the table below.

Then enter details of the distances between brackets and, where applicable, their distance from the end of the handle in mm.

To ensure stability, the distance between brackets should not exceed 1,200 mm.

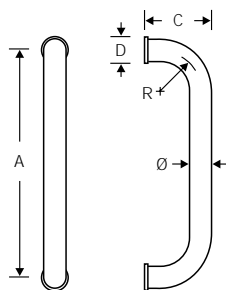
Finally, please tick the cap required for standard versions with a diameter of 30 Ø.

6

Quantity	Overall length L	Caps for 6681 and 6630			Distance between brackets			Edge spacing*	
		..00	..10	..20	A ₁	A ₂	A ₃	R ₁	R ₂

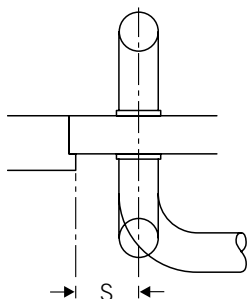
* least 30 mm

Pull handles
Round series



Aluminium
Stainless steel
Brass
Aluminium + colour

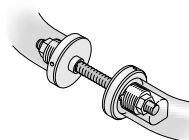
Fixing $\varnothing = 20$ mm M6
 $\varnothing \geq 25$ mm M8



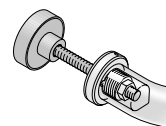
Item nos.	\varnothing	R	A	C	D	S
6627 34	20	25	200	75	30	45
6670 34	25	40	200	80	35	48
6670 37	25	40	300	80	35	48
6670 38	25	40	350	80	35	48
6602 38	30	55	350	90	35	51
6603 38	35	60	350	95	45	56
6604 38	40	60	350	105	45	65
6670 99	25	40	200-1200	80	35	48
6602 99	30	55	300-1200	90	35	51
6603 99	35	60	300-1200	95	45	56
6604 99	40	60	350-1200	105	45	65

S Safety clearance

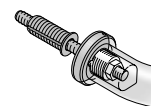
For detailed information on fixing, please turn to pages 382 and 383.



back to back fixing

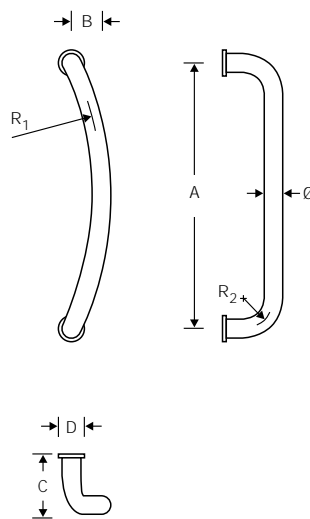


bolt through-fixing

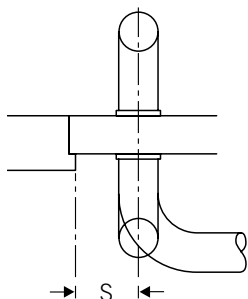


secret single side fixing with expansion plug

Pull handles
Round series



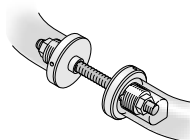
Aluminium
Stainless steel
Brass
Aluminium + colour
Fixing M8



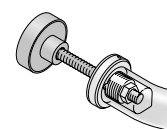
Item nos.	Ø	R1	R2	A	B	C	S
6605 25	25	260	40	250	32	80	45
6605 38	25	260	40	350	68	80	45
6605 50	25	400	40	500	88	80	45

S Safety clearance

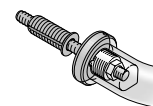
For detailed information on fixing, please turn to page 383.



back to back fixing

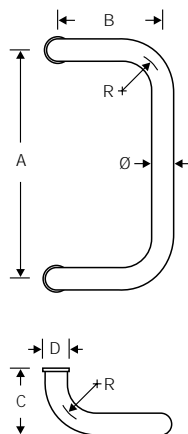


bolt through-fixing



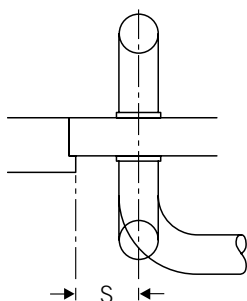
secret single side fixing with expansion plug

Pull handles
Round series



Aluminium
Stainless steel
Brass
Aluminium + colour

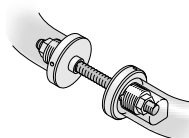
Fixing Ø = 20 mm M6
Ø ≥ 25 mm M8



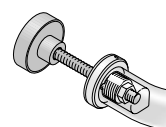
Item nos.	Ø	R	A	B	C	D	S
6660 34	20	25	200	100	75	30	41
6661 34	25	40	200	100	80	35	42
6661 37	25	40	300	100	80	35	42
6661 38	25	40	350	100	80	35	42
6662 38	30	55	350	140	90	35	43
6663 38	35	60	350	140	95	45	45
6664 38	40	60	350	150	120	45	52
6661 99	25	40	200–1200	100	80	35	42
6662 99	30	55	300–1200	140	90	35	43
6663 99	35	60	300–1200	140	95	45	45
6664 99	40	60	350–1200	150	120	45	52

S Safety clearance

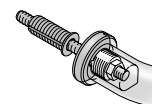
For detailed information on fixing, please turn to pages 382 and 383.



back to back fixing

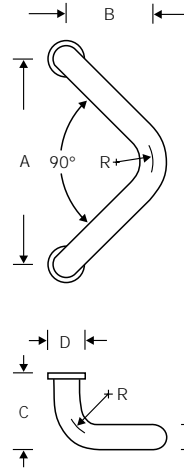
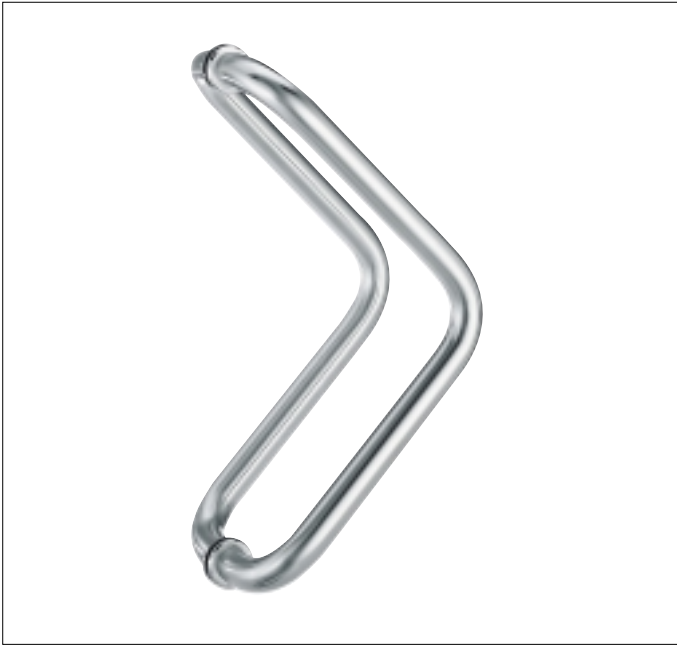


bolt through-fixing



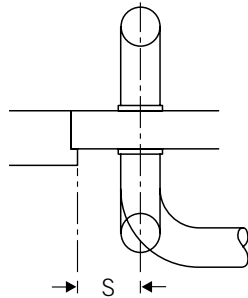
secret single side fixing with expansion plug

Pull handles
Round series



Aluminium
Stainless steel
Brass
Aluminium + colour

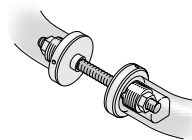
Fixing Ø = 20 mm M6
Ø ≥ 25 mm M8



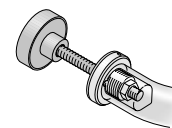
Item nos.	Ø	R	A	B	C	D	S
6649 34	20	25	200	90	75	30	41
6679 34	25	40	200	83	80	35	42
6679 37	25	40	300	133	80	35	42
6679 38	25	40	350	158	80	35	42
6623 38	30	55	350	152	90	35	43
6624 38	35	60	350	150	95	45	45
6625 38	40	60	350	150	105	45	49

S Safety clearance

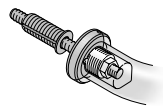
For detailed information on fixing, please turn to pages 382 and 383.



back to back fixing

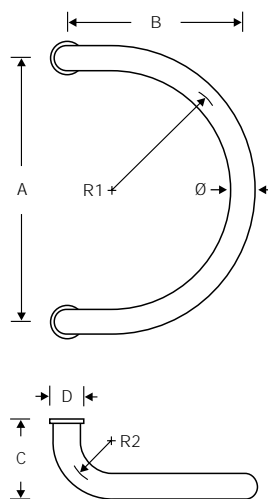


bolt through-fixing



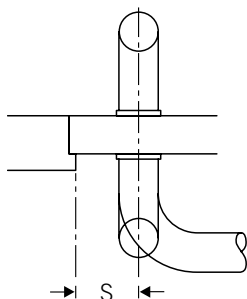
secret single side fixing with expansion plug

Pull handles
Round series



Aluminium
Stainless steel
Brass
Aluminium + colour

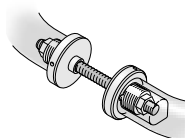
Fixing $\varnothing = 20$ mm M6
 $\varnothing \geq 25$ mm M8



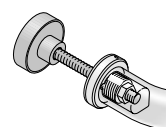
Item nos.	\varnothing	R1	R2	A	B	C	D	S
6626 34	20	100	25	200	130	75	30	41
6673 34	25	100	40	200	140	80	35	42
6673 37	25	150	40	300	195	80	35	42
6673 38	25	175	40	350	220	80	35	42
6683 38	30	175	55	350	235	90	35	43
6659 38	35	175	60	350	235	95	45	45
6678 38	40	175	60	350	235	120	45	52

S Safety clearance

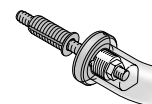
For detailed information on fixing, please turn to pages 382 and 383.



back to back fixing

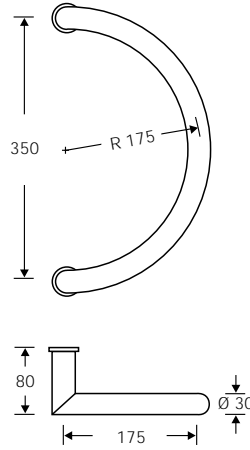


bolt through-fixing



secret single side fixing with expansion plug

Pull handles
Round series



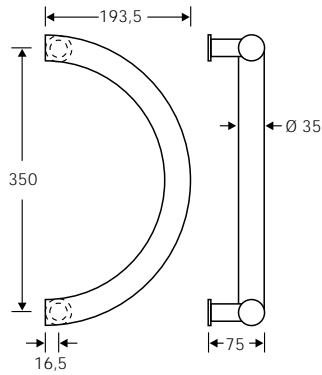
6653 38

Ø 30 mm

Stainless steel

Safety clearance 55 mm

Fixing M8



6655 38

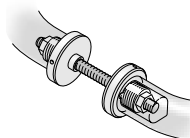
Ø 35 mm

Aluminium
Stainless steel

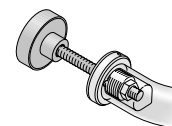
Safety clearance 55 mm

Fixing M8

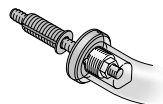
For detailed information on fixing, please turn to page 383.



back to back fixing

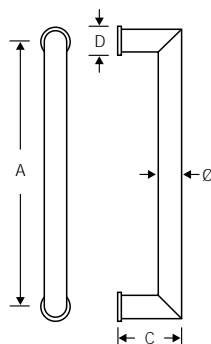


bolt through-fixing



secret single side fixing with expansion plug

Pull handles
Round series

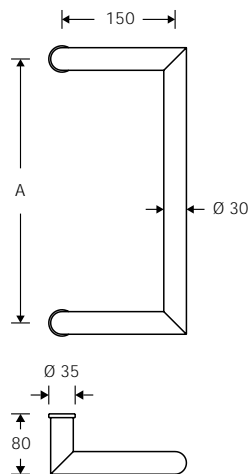


Stainless steel

Fixing M8

Item nos.	Ø	A	C	D	S
6606 38	25	350	75	35	50
6669 38	30	350	80	35	55
6607 38	35	350	85	45	57
6609 38	40	350	90	45	60

S Safety clearance



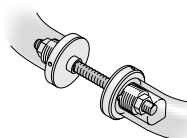
6514

Stainless steel

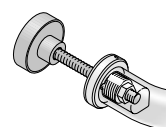
Fixing M8

Item nos.	Ø	A	S
6514 38	30	350	55
6514 45	30	450	55

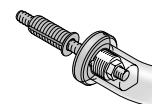
For detailed information on fixing, please turn to page 383.



back to back fixing

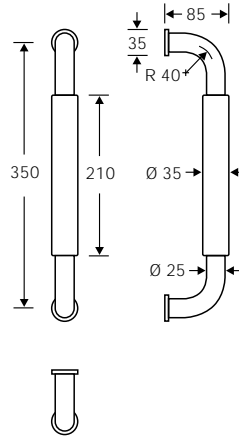


bolt through-fixing



secret single side fixing with expansion plug

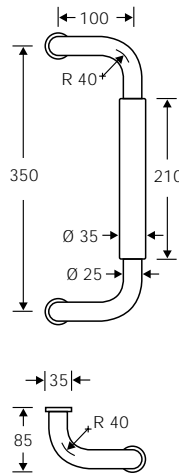
Pull handles
Round series



6608 38

Stainless steel 35/25 mm

Safety clearance 50 mm
Fixing M8

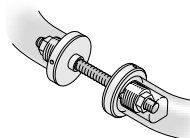


6658 38

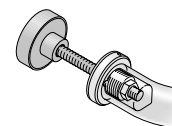
Stainless steel 35/25 mm

Safety clearance 42 mm
Fixing M8

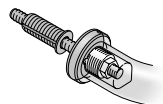
For detailed information on fixing, please turn to page 383.



back to back fixing

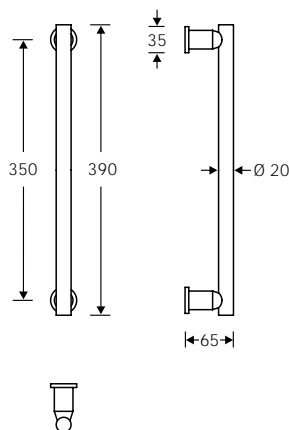


bolt through-fixing



secret single side fixing with expansion plug

Pull handles
Round series

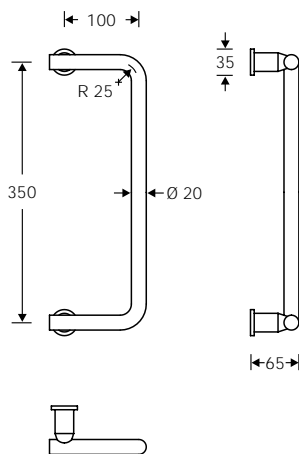


6501 38

Ø 20 mm

Aluminium
Stainless steel
Brass

Safety clearance 49 mm
Fixing M8



6502 38

Ø 20 mm

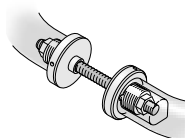
Aluminium
Stainless steel
Brass

Safety clearance 59 mm
Fixing M8

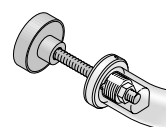
6

The 'heavyweights' of the long-running standard programme are juxtaposed with a 'lighter than air' series of pull handles (20 mm) in several shapes on plain brackets (25 mm).

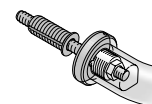
For detailed information on fixing, please turn to page 383.



back to back fixing

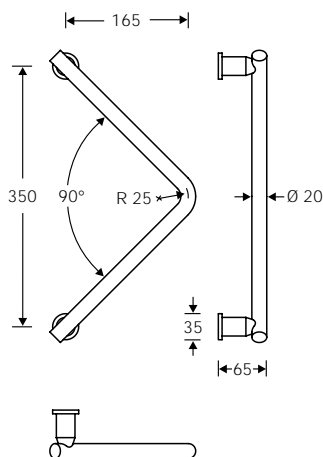


bolt through-fixing



secret single side fixing with expansion plug

Pull handles
Round series

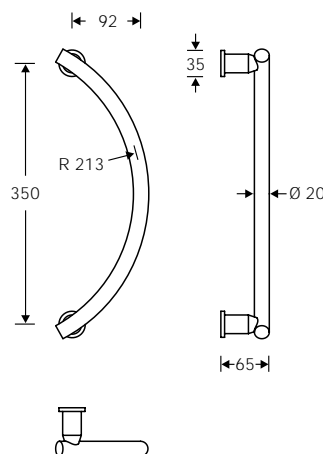


6503 38

Ø 20 mm

Aluminium
Stainless steel
Brass

Safety clearance 59 mm
Fixing M8



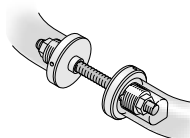
6504 38

Ø 20 mm

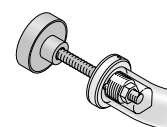
Aluminium
Stainless steel
Brass

Safety clearance 59 mm
Fixing M8

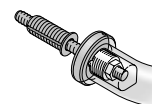
For detailed information on fixing, please turn to page 383.



back to back fixing

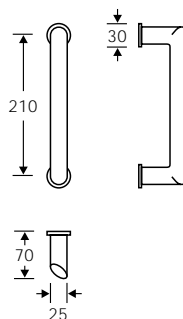


bolt through-fixing



secret single side fixing with expansion plug

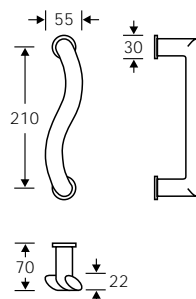
Pull handles
Ellipse series



6610

Aluminium natural color
anodised
Stainless steel
Aluminium + colour

Safety clearance 45 mm
Fixing M6



6611

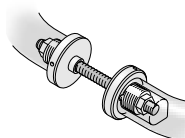
Aluminium natural color
anodised
Stainless steel
Aluminium + colour

Safety clearance 60 mm
Fixing M6

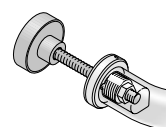
Illustration r.h., outside view,
handing details cf. page 508ff

6

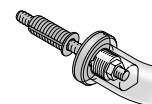
For detailed information on
fixing, please turn to page 382.



back to back
fixing

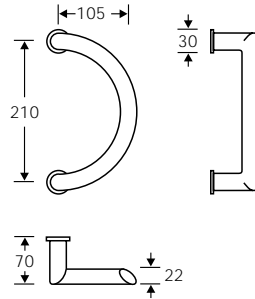


bolt through-fixing



secret single side
fixing with
expansion plug

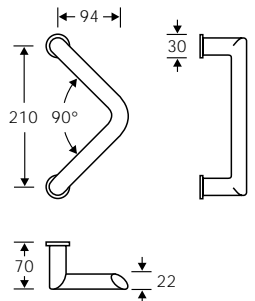
Pull handles
Ellipse series



6612

Aluminium natural color
anodised
Stainless steel
Aluminium + colour

Safety clearance 48 mm
Fixing M6

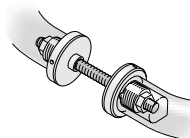


6613

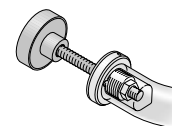
Aluminium natural color
anodised
Stainless steel
Aluminium + colour

Safety clearance 48 mm
Fixing M6

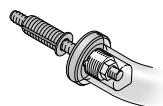
For detailed information on
fixing, please turn to page 382.



back to back
fixing

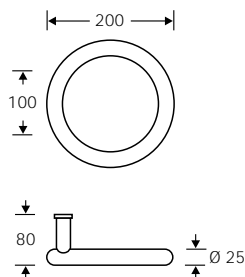


bolt through-fixing



secret single side
fixing with
expansion plug

Pull handles
Round series

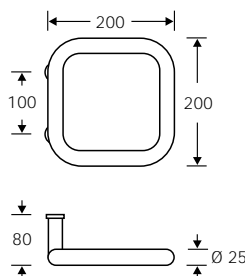


6677 00

Ø 25 mm

Stainless steel

Safety clearance 65 mm
Fixing M8



6688 00

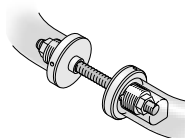
Ø 25 mm

Stainless steel

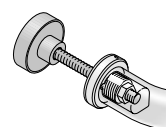
Safety clearance 48 mm
Fixing M8

6

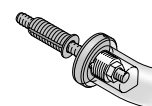
For detailed information on fixing, please turn to page 383.



back to back
fixing

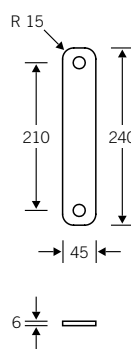
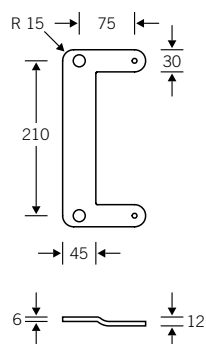


bolt through-fixing



secret single side
fixing with
expansion plug

Handle adaptor for special applications



6114

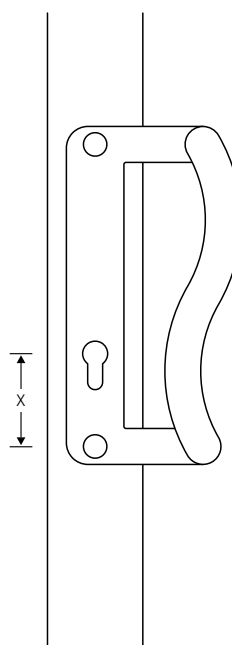
Stainless steel

6114 14 r.h.
6114 15 l.h.

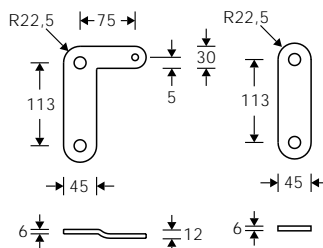
Illustration r.h.

Fixing holes pull handle
6,5 mm Ø
Fixing element reverse
side 6114 20

Where special handle designs are to be fitted to extremely narrow stiles, conjuring up the prospect of injuries to hands, one way out is to attach the handle on the slamming face to a stainless steel adaptor. FSB 6114 is a handle adaptor developed for pull handle designs FSB 6610 and 6611.



Handle adaptor for special applications



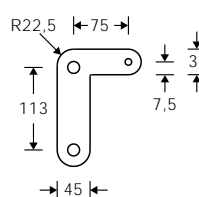
6115

6115 20

6115 Grip Ø 25 mm
Stainless steel

6115 14 r.h.
6115 15 l.h.

Fixing holes pull handle
8.5 mm Ø
Fixing element reverse side
6115 20



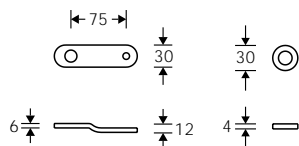
6116

Illustration r.h.

6116 Grip Ø 30 mm
Stainless steel

6116 14 r.h.
6116 15 l.h.

Fixing holes pull handle
Ø 8.5 mm
Fixing element reverse side
6115 20

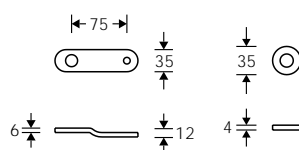


6115 30

6115 40

6115 30 Grip Ø 25 mm
Stainless steel

Fixing holes pull handle
Ø 8.5 mm
Fixing element reverse side
6115 40

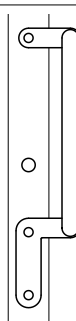


6116 30

6116 40

6116 30 Grip Ø 30 mm
Stainless steel

Fixing holes pull handle
Ø 8.5 mm
Fixing element reverse side
6116 40



Handle adaptors FSB 6115/6116 and 6115 30/6116 30 extend the range of troubleshooting options available for miscellaneous fixing scenarios and specifically for handles from the broad FSB programme with a diameter of 25 mm or 30 mm.

ht round modular systems up to 1,500 mm



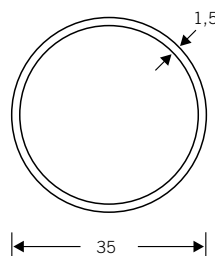
6801

Stainless steel

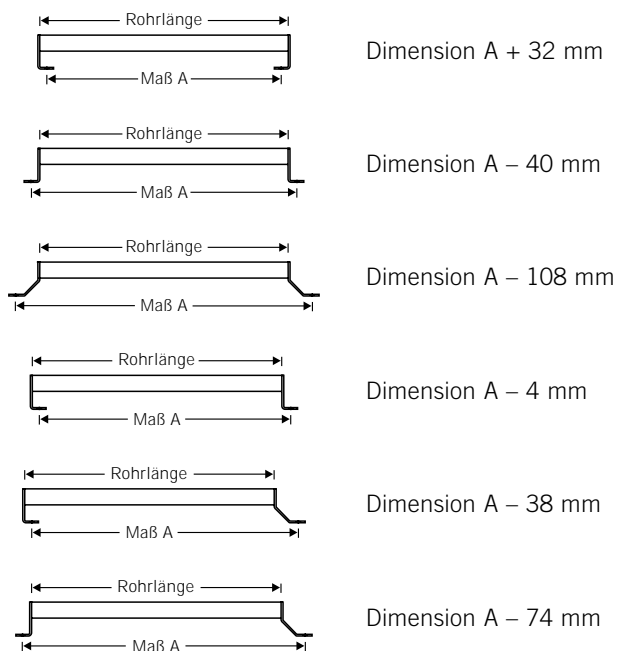
Tube Ø 35 x 1.5 mm
Stock length 3,000 mm

The ht round kit enables safety rails, handle systems, handrails etc. up to 1,500 mm in length to be cut to size, fabricated and fitted on site with the aid of the appropriate tools.

Where lengths in excess of 1,500 mm are concerned, we would recommend factory welded hardware.



Dimensions:



Tube length and A size are important for fabrication, fitting and ordering purposes. The A size defines the fixing distance from the centre of the borehole for one bracket to the centre of the borehole for the other. Tube length is arrived at by adding or subtracting the differential sizes given alongside from the A size.

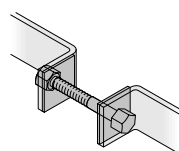
FSB recommends reinforcing door pulls from the ht round kit that are to be fitted to heavily used doors by means of the accessories available.

6

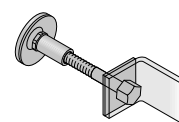
Reference:

When using elements of the ht round kit - whether for self-fabrication or as factory-welded parts - attention needs to be paid to structural specifications and conditions locally. This hefty product series is not a substitute for gym bars, neither should it be used as a

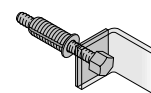
safety rail at particularly hazardous openings in buildings. If in any doubt, please contact the architect or engineer in charge. For detailed information on fixing, please turn to page 384.



back to back fixing

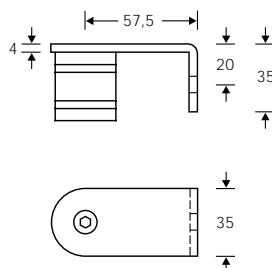


bolt through-fixing



secret single side fixing with expansion plug

ht round modular systems
up to 1,500 mm



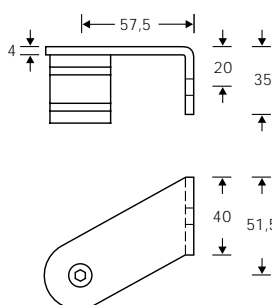
6715

Stainless steel

Straight bracket,
angled 90° inwards,
to match tube 35 x 1.5 mm Ø



Illustration r.h.

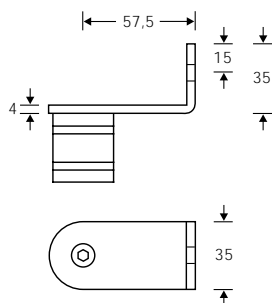


6716

Stainless steel

6716 04 r.h.
6716 05 l.h.

Bracket with 30° cranking,
angled 90° inwards,
to match tube 35 x 1.5 mm Ø

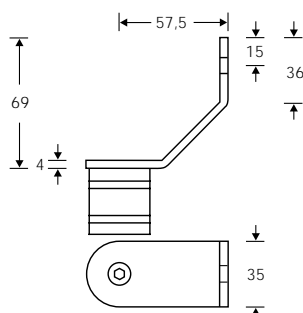


6717

Stainless steel

Straight bracket,
angled 90° inwards,
to match tube 35 x 1.5 mm Ø

6

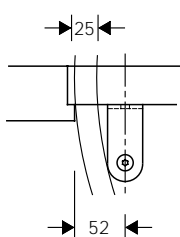


6718

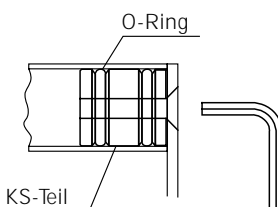
Stainless steel

Bracket for swing doors,
to match tube 35 x 1.5 mm Ø

Screw hole Ø 8,5 mm

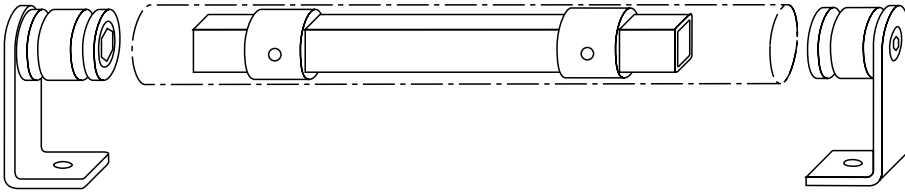


Safety clearance 52 mm

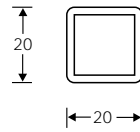
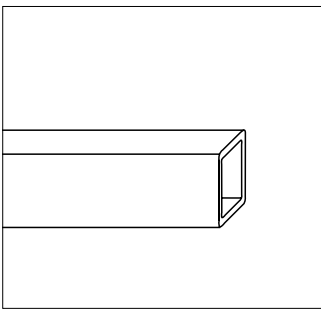


Once the tube has been cut to size (dimensions A + differential measurement), matching brackets are slotted into the tube ends and fastened with screws from the top.

Accessoires
ht round modular systems



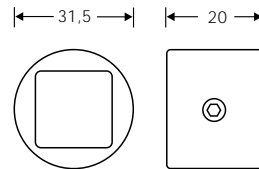
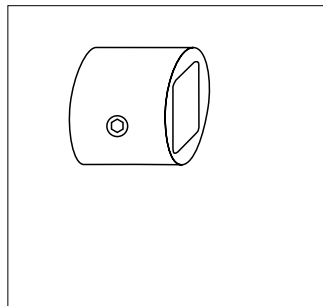
For pull handles from the modular systems HT Round over 1.5 metres long or where robust handling is to be assumed, we would recommend reinforcing the tube with square-section tubing as shown on this page.



6801 20

Steel tube hot galvanised

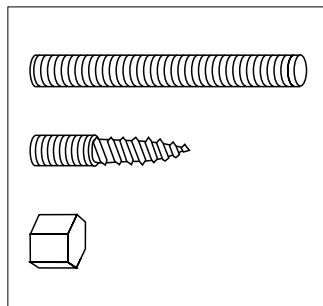
20 x 20 x 2 mm
Stock length 3,000 mm



6719

Synth. mat.

Spacing sleeve with fixing screw



0313 0880 M8 x 80 mm
Steel stud

0316 0840 M8
Steel stud - for timber fixing

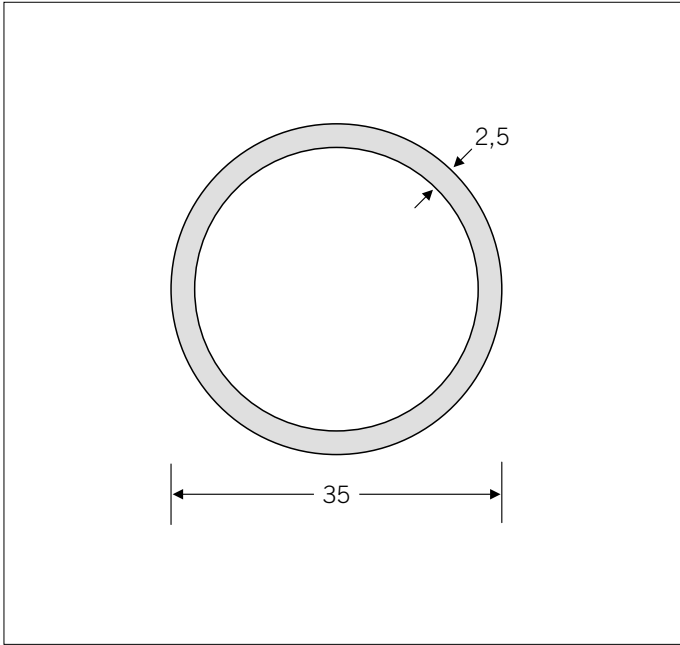
0320 0800 M8
Dome nut of stainless steel

For detailed information on fixing, please turn to page 384.

Fixing reference:

Sizing square-section tube: outside length of oval tube minus 100 mm. Then fixing of spacing sleeves with distance 350 mm.

ht round welded
from 1,500 mm up to 2,100 mm



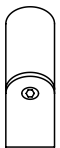
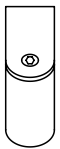
6522

Stainless steel

Tube Ø 35 x 1.5 mm

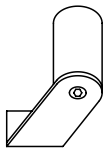
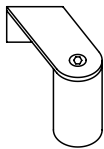
For reasons of structural strength, we recommend ordering a factory-welded version drawing on the elements of the HT Round kit in cases where the A dimension lies between 1,500 mm and a maximum of 2,100 mm.

45



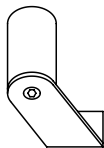
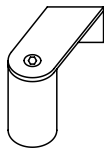
. . . . 45

46
r.h.



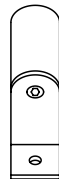
. . . . 46
r.h.

56
l.h.



. . . . 56
l.h.

47



. . . . 47

48



. . . . 48

The pulls in the welded series FSB 6522 are produced to order. This involves selecting the combination of brackets desired from the illustration alongside and citing the appropriate code numbers.

It is also necessary to state the A dimension, which defines the fixing distance from the centre of the borehole for one bracket to the centre of the borehole for the other. By adding or subtracting the differential dimensions given on page 362, we calculate the length of the pull at the works prior to welding.

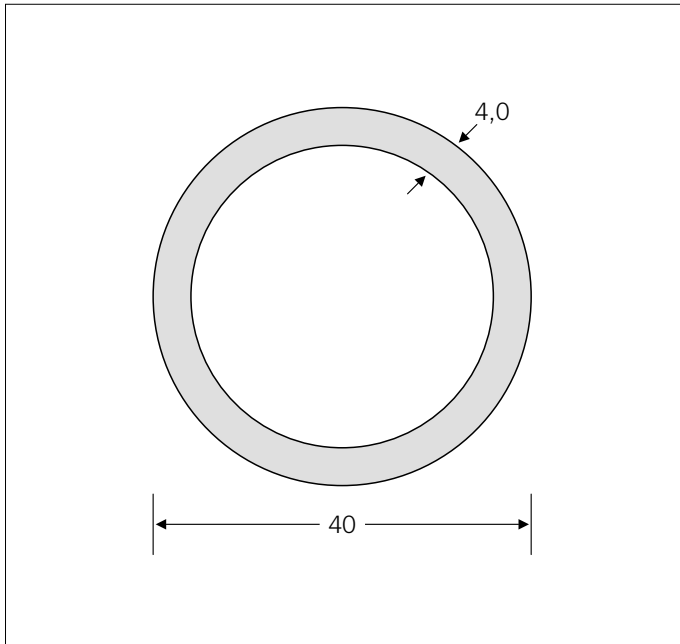
Reference:

When using elements of the HT Round kit - whether for self-fabrication or as factory-welded parts - attention needs to be paid to structural specifications and conditions locally. This hefty product series is not a substitute for gym bars, neither should it be used as a safety rail at particularly hazardous openings in buildings.

If in any doubt, please contact the architect or engineer in charge.

For detailed information on fixing, please turn to page 384.

ht round welded
for lengths more than 2,100 mm



6523

Stainless steel

Tube Ø 40 x 4 mm

For requirements where dimension A exceeds 2,100 mm, we can supply a factory-welded version incorporating a sturdy tube cross-section of 40 x 4 mm and in all other respects the design features of the HT Round series.

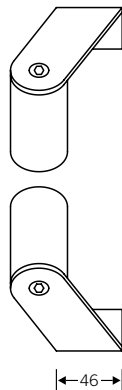
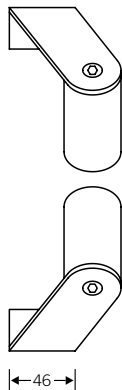
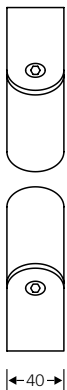
45

46 rechts

56 links

47

48



The pulls in the welded larger length series FSB 6522 are produced to order. This involves selecting the combination of brackets desired from the illustration alongside and citing the appropriate code numbers. It is also necessary to state the A dimension, which defines the fixing distance from the centre of the borehole for one bracket to the centre of the borehole for the other. By adding or subtracting the differential dimensions given on page 332, we calculate the length of the pull at the works prior to welding.

6

. . . . 45

. . . . 46 rechts

. . . . 56 links

. . . . 47

. . . . 48

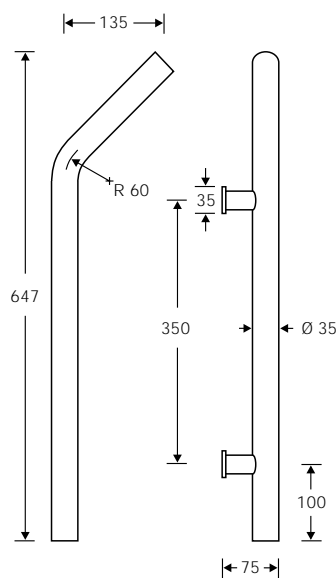
Reference:

When using elements of the HT Round kit - whether for self-fabrication or as factory-welded parts - attention needs to be paid to structural specifications and conditions locally. This hefty product series is not a substitute for gym bars, neither should it be used as a safety rail at particularly hazardous openings in buildings.

If in any doubt, please contact the architect or engineer in charge.

For detailed information on fixing, please turn to page 384.

Pull handles
Round series



6505 38

Ø 35 mm

Stainless steel

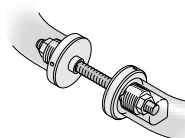
Safety clearance 56 mm
Fixing M8

Illustration r.h., outside view,
handing details cf. page 508ff

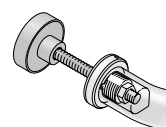
6

The graphic qualities of the Y handle are best brought out by fitting it in pairs to double doors.

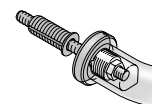
For detailed information on fixing, please turn to page 383.



back to back fixing

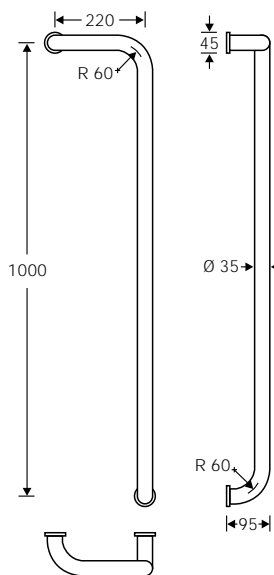


bolt through-fixing



secret single side fixing with expansion plug

Pull handles
Round series



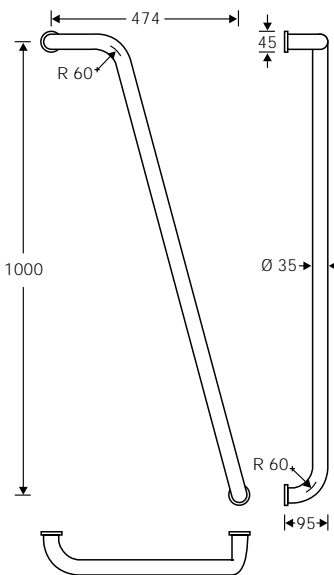
6506 55

Ø 35 mm

Aluminium
Stainless steel

Illustration r.h., outside view,
handing details cf. page 508ff

Safety clearance 47 mm
Fixing M8



6507 55

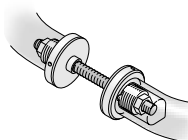
Ø 35 mm

Aluminium
Stainless steel

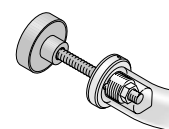
Illustration r.h., outside view,
handing details cf. page 508ff

Safety clearance 47 mm
Fixing M8

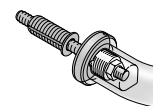
For detailed information on fixing, please turn to page 383.



back to back
fixing

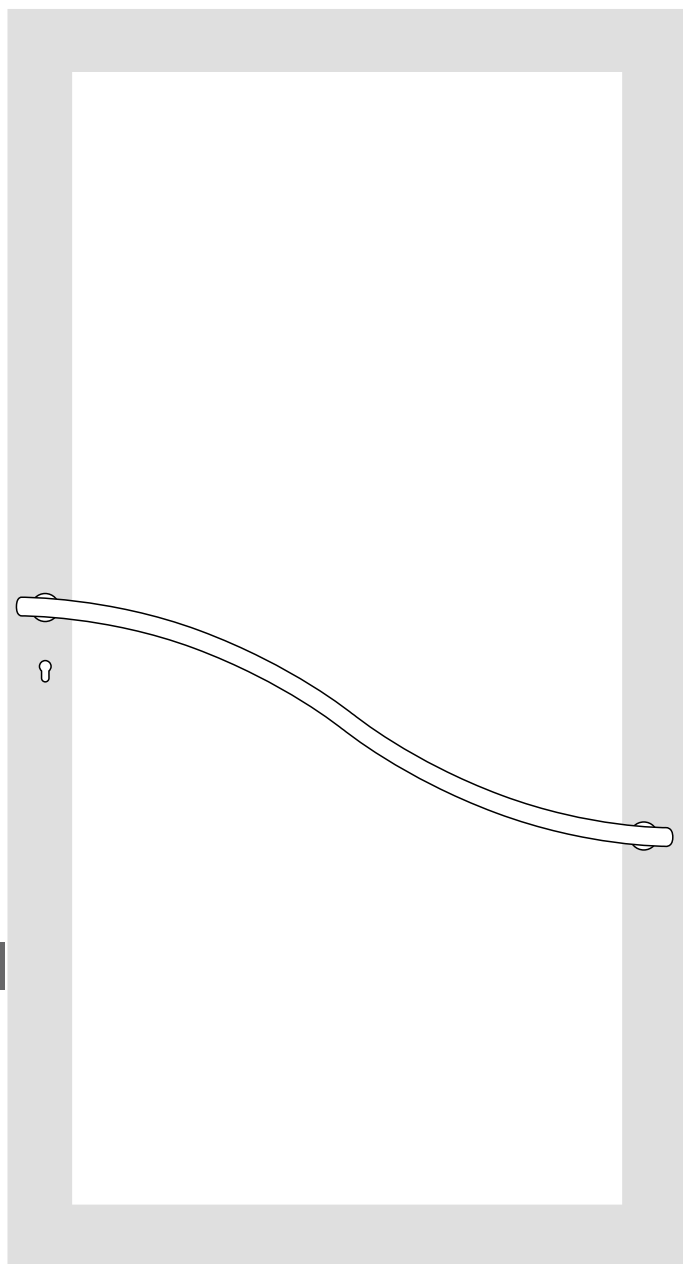


bolt through-fixing



secret single side
fixing with
expansion plug

Pull handle
Wave



6510

30 mm Ø

Aluminium
Stainless steel
Brass

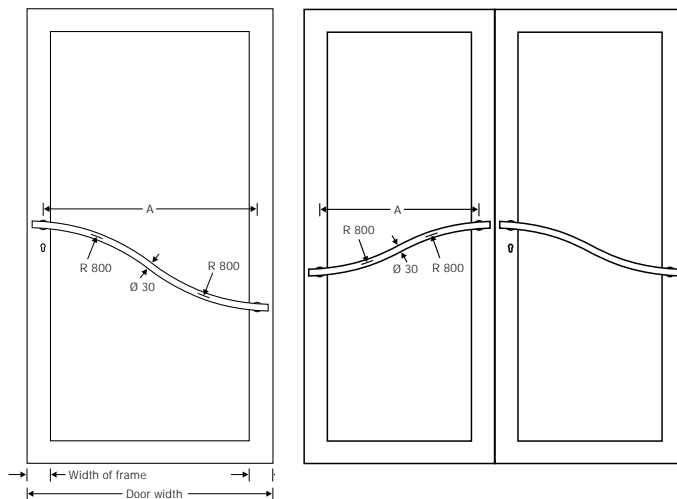
Safety clearance 65 mm for
30 mm handle projection,
fixing M8.

The wave handle is offered in
aluminium, stainless steel and
brass with the following speci-
fications:

Torsion radius: 800 mm
Handle diameter: 30 mm
Bracket diameter: 35 mm

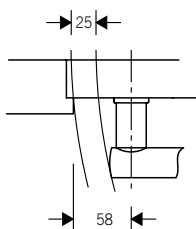
For quoting purposes, we requi-
re the following details together
with a dimensioned sketch:

1. Width of door
2. Size A required
3. Frame widths
4. Profile section
5. In case of glass doors:
distance of fixing holes from
edge

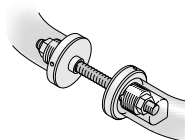


Handing details cf. page 508ff

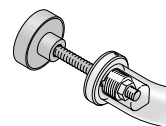
6



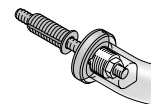
For detailed information on fix-
ing, please turn to page 383.



back to back
fixing

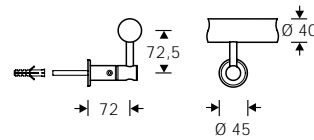
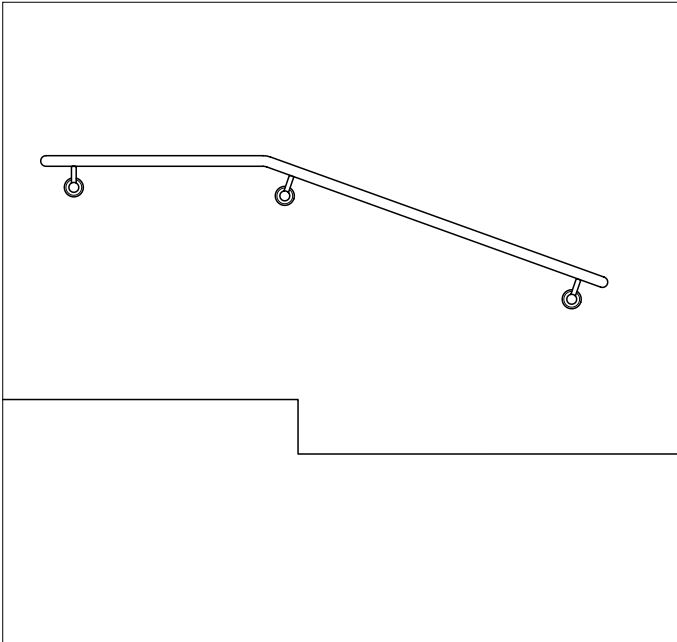


bolt through-fixing

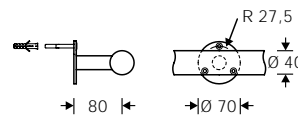


secret single side
fixing with
expansion plug

Hand rail systems



Fixing method 1
6599 9991



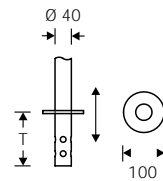
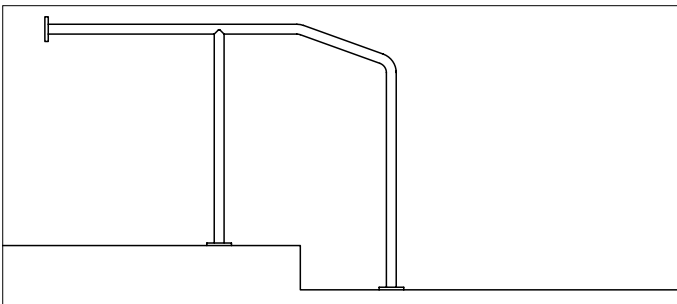
Fixing method 2
6599 9994

Typ A Stainless steel

Fixing method 1:
Hole for countersunk screw M8

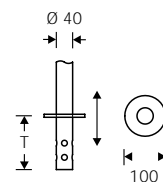
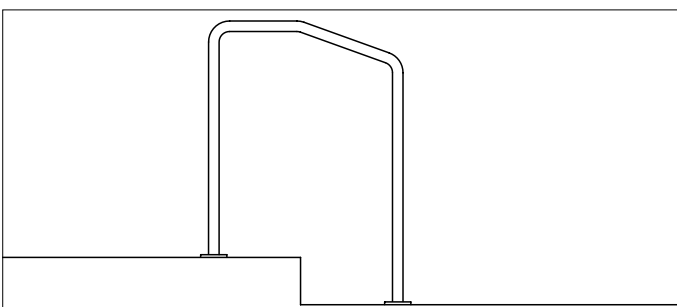
Fixing method 2:
Hole for countersunk screw M6

Screws and dowels are delivered for number of fixing points.



6599 9993

Typ B₁ Stainless steel



6599 9992

Typ B₂ Stainless steel

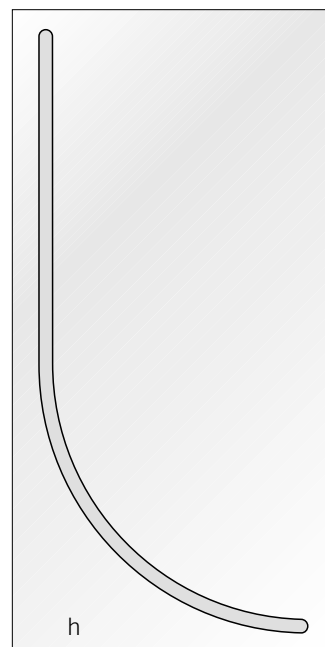
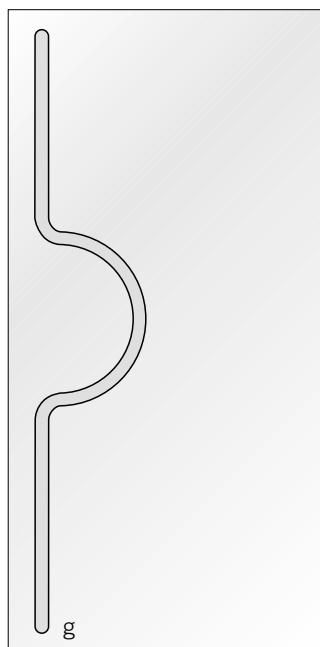
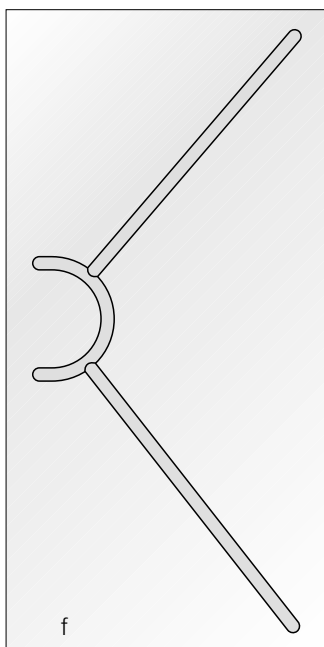
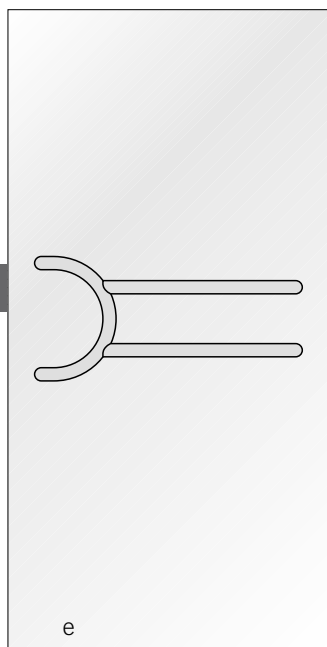
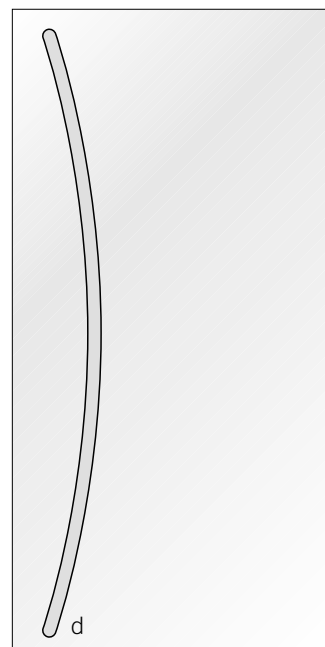
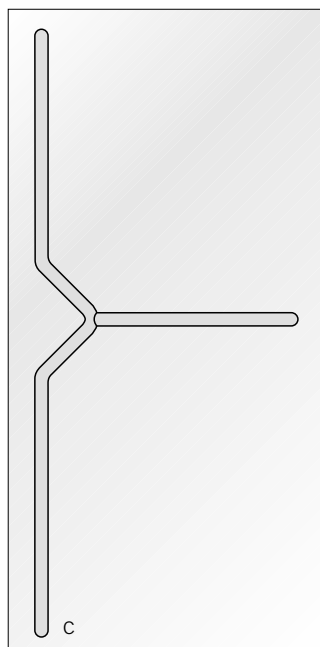
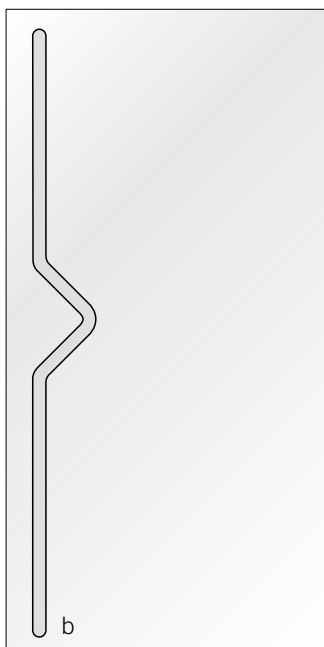
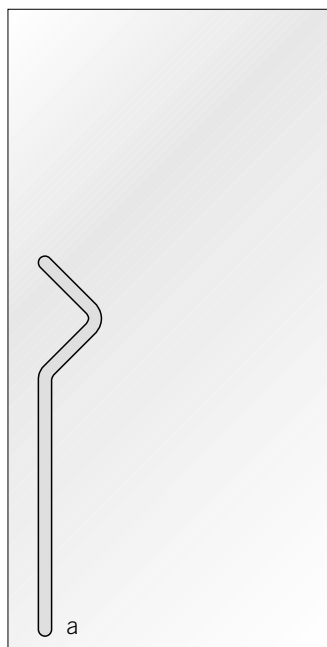
Fixing reference: First of all the supplied rose has to be shoved on the tubes of the handrail system. Fill up then boreholes in basis with usual constructional resins. Before hardening set up the handrail system. The rose will then be glued to the basis.

Handrail systems

In recent years FSB has occasionally made handrail systems to measures for installation near main-entrance doors. Three typical examples are shown on this page. Unlike serially produced hardware, these custom products are made to order. Responsibility for deployment and fabrication lies with the

ordering party. The variants shown here are merely meant to provide a general impression, which is why no dimensions have been given. Why not send us your specifications - plus dimensions - by fax? We will then scrutinise the details, produce drawings of our own, and submit a quote.

Design proposals
Pull handles Round series

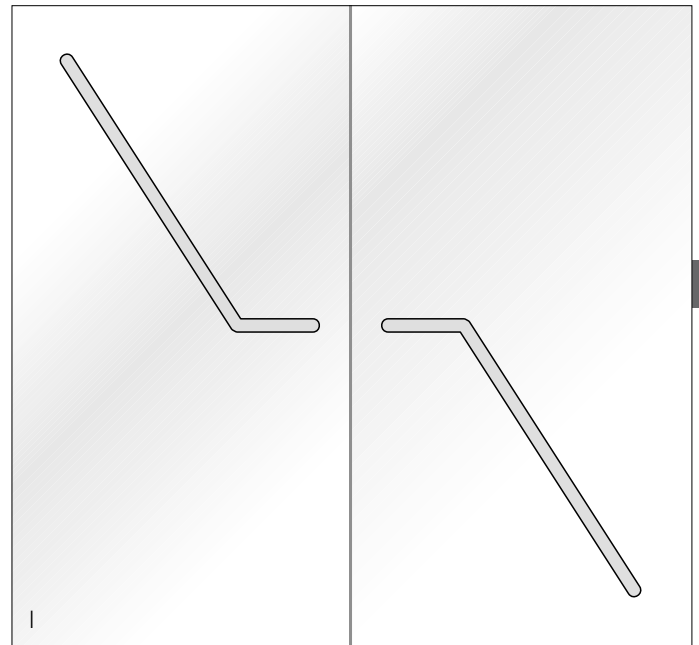
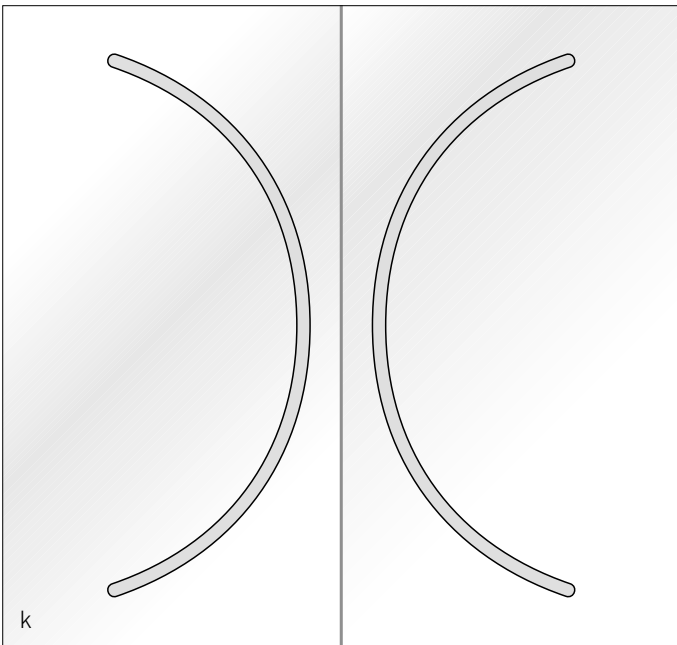
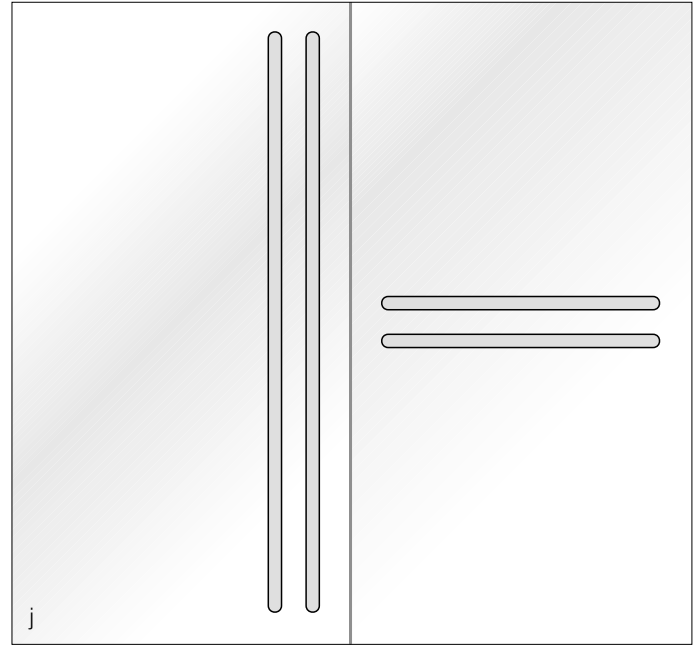
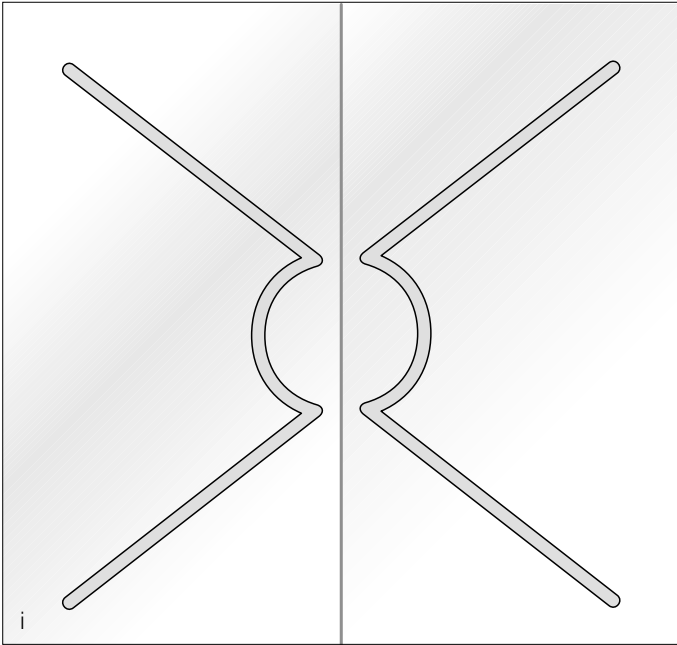


6

The stainless steel pull handle designs shown here are intended as creative aids for architects, planners, designers, retailers and builder clients alike. Please always give details of the door's type, material and weight. We must have accurate drawings before we can supply quotes or implement orders.

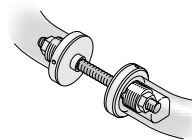
Handing details cf. page 508ff

Design proposals
Pull handles Round series

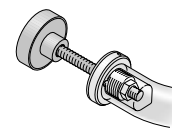


6

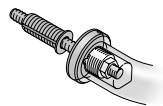
For detailed information on fixing, please turn to page 383.



back to back fixing



bolt through-fixing



secret single side fixing with expansion plug

Other handle systems



The HT Round and HT Oval kits launched by FSB and enthusiastically received by the market have precursors that are still going strong:

R+S

Back when the first grey Manual was published in the early 90s, we introduced a system of tubes and brackets for speedy erection on building sites that was well taken up and has thus been retained:

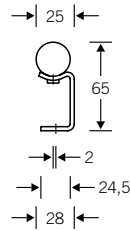
- aluminium brackets
- tubes in either aluminium or stainless steel

TGS

Towards the end of the 90s, the 4th edition of our grey Manual featured a rapid-assembly range in stainless steel that was likewise well received:

- either circular with a 25mm diameter or of 25mm square cross-section
- accessory brackets for visible fixing
- offer of dispatch within 24 hours of order. We've always been up to the challenge so far.

Pull handles
TGS round series

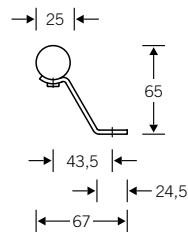
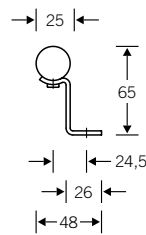


6508

Ø 25 mm

Stainless steel

Breadth of brackets 40 mm
Screw hole - Ø 8.5 mm



6

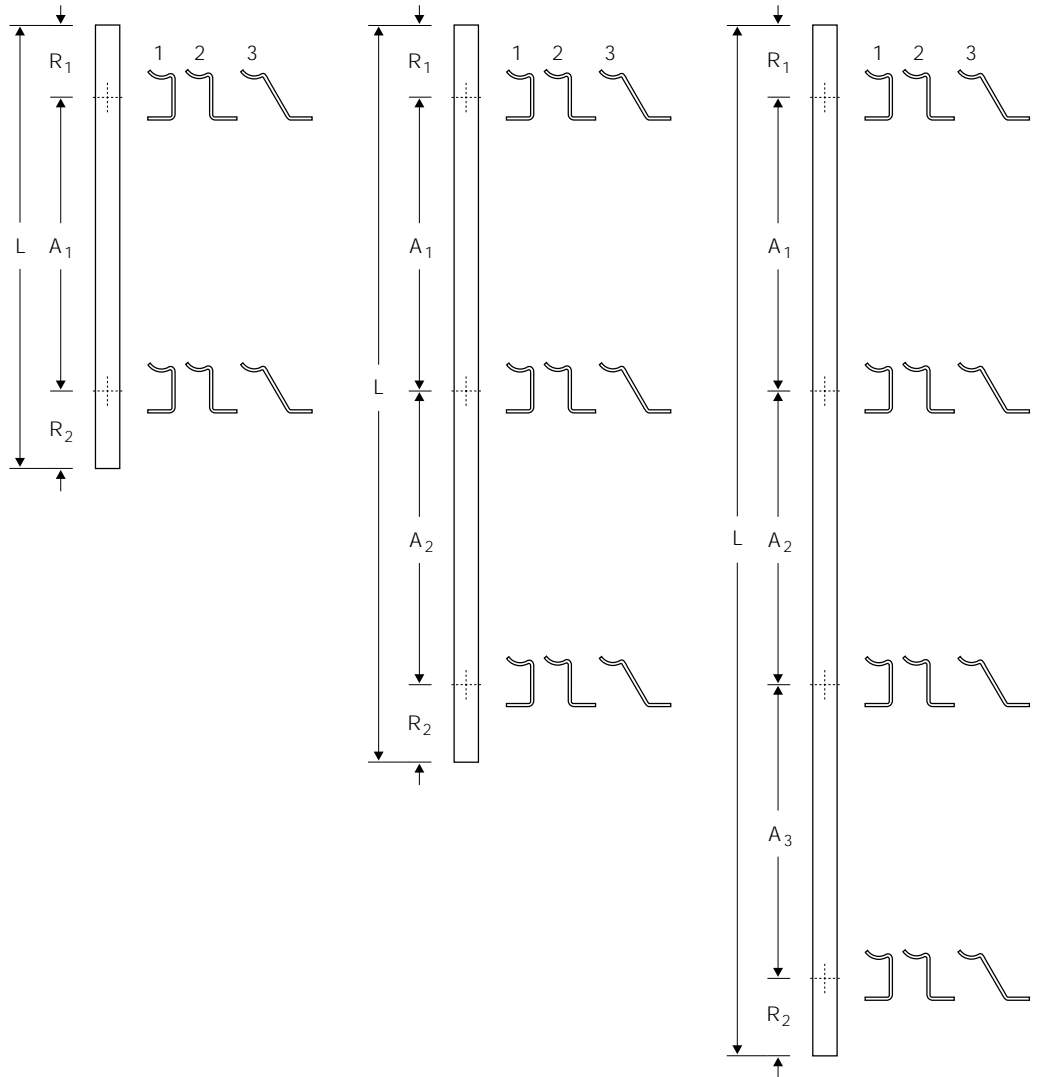
For detailed information on fixing, please turn to page 384, fixing accessories cf. page 401.

Speed and ease of installation were the design brief for the Immediate programme by FSB: The TGS series comprises stainless steel tubes with a diameter of 25 mm and three choices of brackets. We recommend allowing one bracket for each 600 mm of handle.

Please feel free to make enquiries and put FSB's new TGS series to the test. It can be called up any time and is ready and waiting to be assembled in a jiffy.



Fax copy TGS



Where express delivery is required, the TGS series can be precision assembled at the works and prepared for dispatch within 24 hours. Please submit exact measurements, ideally on a copy of the order chart shown here:

First enter number of handles required and overall length.

Then ring the brackets intended for your fixing points (in-line, offset, or diagonally offset) as well as ticking the numbered box.

Finally, specify distances between brackets and edge spacing. For reasons of stability, the distance between brackets should not exceed 600 mm.

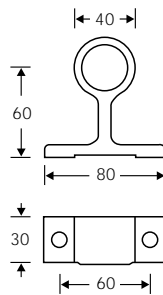
Quantity	Overall length L	Type of bracket						Distance between brackets			Edge spacing*	
		1 li	re	2 li	re	3 li	re	A ₁	A ₂	A ₃	R ₁	R ₂

* least 30 mm

Pull handles Modular systems R+S



The 'tube and support bracket' package is a kit system that allows the buyer effortlessly to make to measure, put together and fit in place pull handles, hand and towel rails of all types.



6800 04

Stainless steel 30 mm Ø
Side 1.5 mm
Stock length 3,000 mm

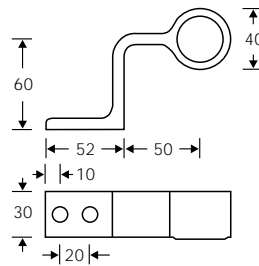
6800 09

Aluminium Ø 30 mm
Side 2.0 mm
Stock length 3,000 mm

6707

Aluminium natural colour anodised
Aluminium dark bronze colour anodised

6707 06 End support
6707 05 Intermediate support



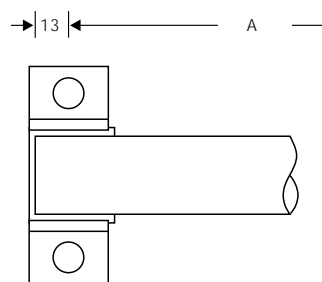
6708

Aluminium natural colour anodised
Aluminium dark bronze colour anodised

6708 06 End support
6708 05 Intermediate support

6

The length is established by measuring between bore holes and adding 26 mm (2 x 13 mm). The tube will now fit snugly into its end brackets. Any end play there is can easily be remedied by wedging, recentring, bonding etc., as applicable.



When using elements of the tubes and brackets kit attention needs to be paid to structural specifications and conditions locally. This hefty product series is not a substitute for gym bars, neither should it be used as a safety rail at particularly hazardous openings in buildings.

If in any doubt, please contact the architect or engineer in charge.

Fixing methods brackets:

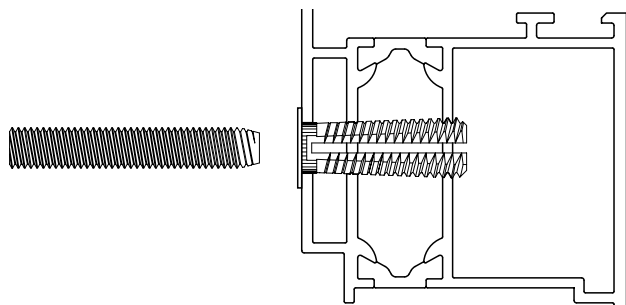
Screw holes - Ø 5.3 mm for countersunk screws

FSB Expansion Plug



FSB's straddling dowel system facilitates practical solutions for single-side concealed fixing of door pulls to timber, aluminium and composite doors whereby it is merely necessary to select the length of dowel to suit a given door thickness or stile design. Plug 20, 34 and 46mm long are available.

What makes FSB's technique so novel is the way it combines an external thread, conical styling and lateral slots to ensure that, once it has been driven in, it straddles to secure the set screw, as the latter is turned, whatever the material or type of stile. Skewing of the plug is prevented by knurling at the top of its shank.



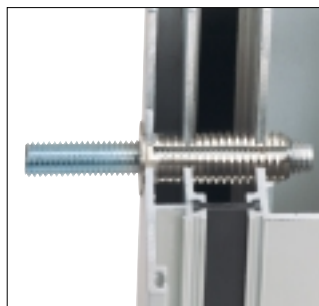
6

Step 1

Drill holes 10.5 mm in diameter to accommodate the FSB plug (if using a manual drill select a 10mm bit).

Step 2

Once the plug has been driven into the borehole, tighten the set screw, thus causing the dowel's conical surfaces to spread and produce the fixing point for the handle in the stile.



Step 3

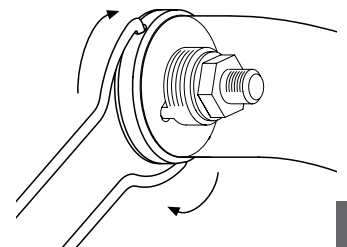
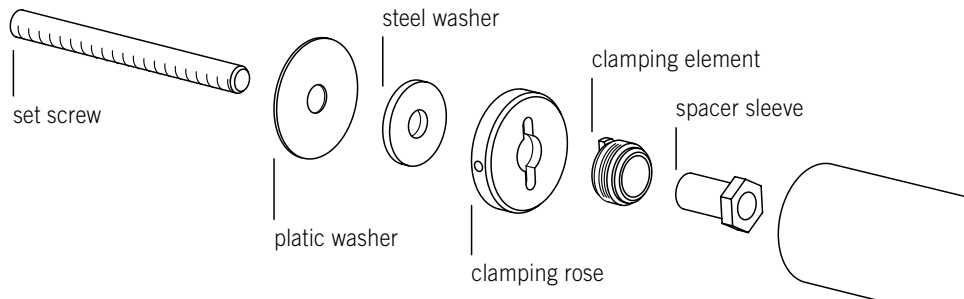
The handle is then fastened to these fixing points.

FSB Clamping Rose Fastening



The FSB clamping rose fastening is a new method of assembling door-pulls whereby the pull is tightened fast against the surface of the door. Visible fixing screws are done away with.

All door pulls with round necks are supplied as female parts with an internal left-handed thread 18 by 1.5 mm (M8 fixing) or 14 by 1.5 mm (M6 fixing). A clamping rose fastening comprises a plastic washer, a steel washer, a clamping element, a rotating rose and a spacer sleeve that are securely held in place by a plastic clip and pre-attached to the end of the handle.



FSB Clamping Rose Fastening

The new FSB clamping rose fastening allows all FSB door pulls with round necks to be screwed tight against the surface of the door by means of an easy-to-operate clamping rose. Radial play allowed for by FSB ensures the necessary tolerances during fitting. Assembly is as follows:

Step 1

First fit into the door the set screw over which the clamping elements are to pass. How this is done depends on whether back to back fixing, bolt through-fixing or secret single side fixing with expansion plug.

Step 2

Then detach the clamping elements from the handle ends by turning them anticlockwise. Remove the plastic clip and slip the plastic washer, the steel washer, the clamping rose and the clamping element over the set screw in that order. Using the spacer sleeve, screw the elements together, ensuring that the clamping rose and clamping element remain free to rotate.

Step 3

Place the handle on the fixing points and tighten against the door by alternately turning the clamping roses in a clockwise direction.

A turning device for the FSB clamping rose is supplied with the product.

Fixing methods

Pull handles

Pull handles series

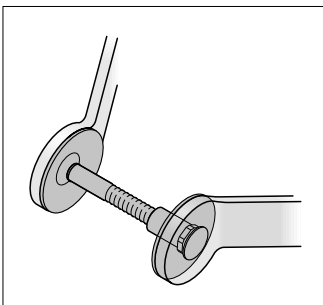
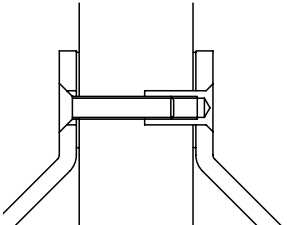
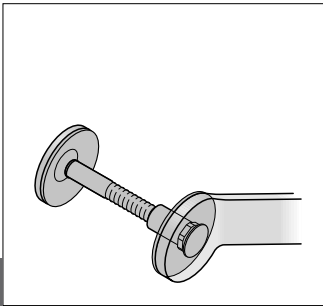
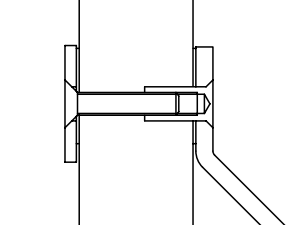
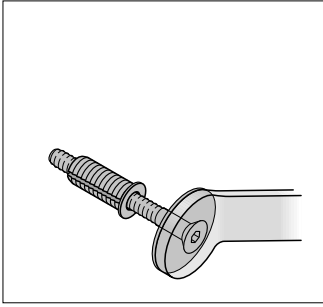
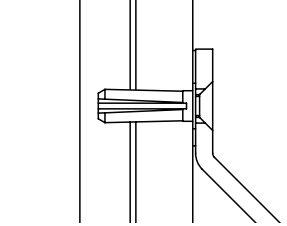
6525

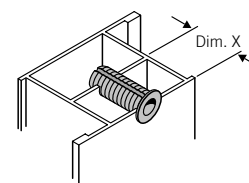
6615

6616

6674

6675

	Fixing method	Fixing accessories	Item nos.
		2 each countersunk screws M8 with sleeve nuts M8 stainless steel	0583 1008 glass door 8 – 10 mm
		4 each plastic washers	0583 3034 34 – 43 mm 0583 3044 44 – 53 mm 0583 3054 54 – 63 mm 0583 3064 64 – 73 mm 0583 3074 74 – 83 mm
		2 each countersunk screws M8 with sleeve nuts M8 stainless steel	0583 2008 glass door 8 – 10 mm
		2 each washers stainless steel	0583 4036 36 – 45 mm 0583 4046 46 – 55 mm 0583 4056 56 – 65 mm 0583 4066 66 – 75 mm
		2 each countersunk screws M8 Stainless steel	0583 0010 Dim. X 10 – 16 mm length of dowel 20 mm
		2 each expansion plugs brass dull nickel finish	0583 0016 Dim. X 16 – 30 mm length of dowel 34 mm
		2 each plastic washers	0583 0024 Dim. X 24 – 44 mm length of dowel 48 mm



Dim X = Dim. of chamber

For timber doors the possible maximum length of dowel is to be chosen.

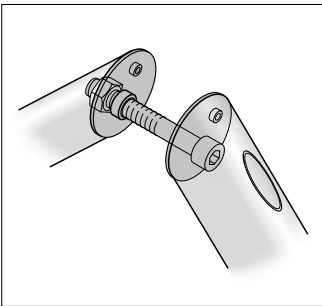
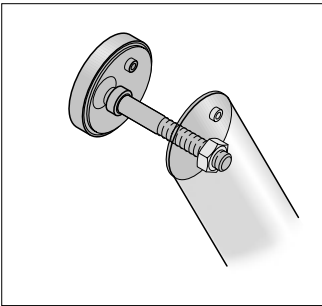
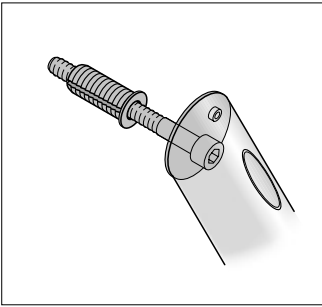
Fixing methods

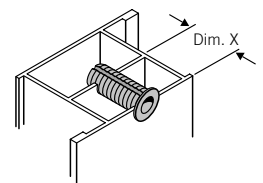
Pull handles

Pull handle series

6635
6636
6637

When selecting and ordering pull handles, please note that the pulls in this series are produced as threaded-part and through-fixing sections.

	Fixing method	Fixing accessories	Item nos.
	back to back fixing	2 each socket head cup screws M8 4 each plastic washers 2 each lids Stainless steel	0582 1008 glass door 8 – 10 mm 0582 3038 38 – 44 mm 0582 3045 45 – 49 mm 0582 3050 50 – 54 mm 0582 3055 55 – 59 mm 0582 3060 60 – 64 mm 0582 3065 65 – 69 mm 0582 3070 70 – 74 mm 0582 3075 75 – 79 mm 0582 3080 80 – 84 mm
	bolt through-fixing	2 each countersunk screw M8 4 each plastic washers 2 each fixing washers with caps Stainless steel	0582 2008 glass door 8 – 10mm 0582 4038 38 – 44 mm 0582 4045 45 – 49 mm 0582 4050 50 – 54 mm 0582 4055 55 – 59 mm 0582 4060 60 – 64 mm 0582 4065 65 – 69 mm 0582 4070 70 – 74 mm 0582 4075 75 – 79 mm 0582 4080 80 – 84 mm
	secret single side fixing with expansion plug	2 each socket head cup screws M8 2 each plastic washers 2 each expansion plugs brass dull nickel finish 2 each lids Stainless steel	0582 0010 Dim. X 10 – 16 mm length of dowel 20 mm 0582 0016 Dim. X 16 – 30 mm length of dowel 34 mm 0582 0024 Dim. X 24 – 44 mm length of dowel 48 mm



Dim. X = Dim. of chamber

For timber doors the possible max. length of dowel is to be chosen.

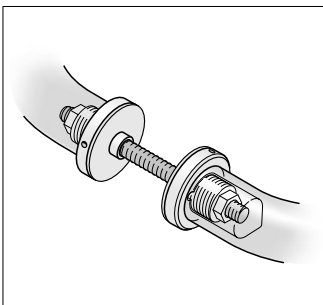
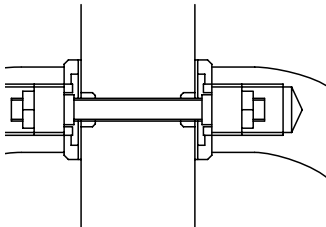
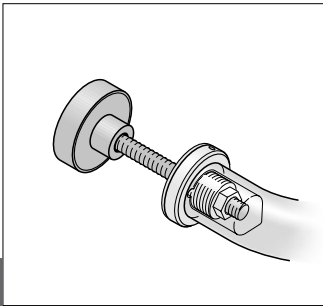
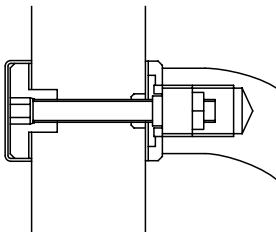
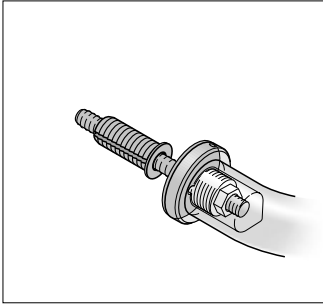
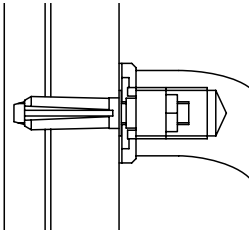
Fixing methods Pull handles

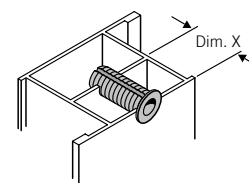
Pull handle series

round M6

6642

6643

	Fixing method	Fixing accessories	Item nos.
	back to back fixing	2 each set screws M6	0580 1208 glass door 8 – 10 mm 0580 3235 35 – 54 mm 0580 3255 55 – 74 mm 0580 3275 75 – 94 mm
			
	bolt through-fixing	2 each set screws M6 2 each fixing nuts with caps	Grip diameter 20/25 mm 0580 2208 glass door 8 – 10 mm 0580 4235 35 – 44 mm 0580 4245 45 – 54 mm 0580 4255 55 – 64 mm 0580 4265 65 – 74 mm 0580 4275 75 – 84 mm
			
	secret single side fixing with expansion plug	2 each set screws M6 2 each expansion plugs brass dull nickel finish	0580 0210 Dim. X 10 – 16 mm length of dowel 20 mm 0580 0216 Dim. X 16 – 30 mm length of dowel 34 mm 0580 0224 Dim. X 24 – 44 mm length of dowel 48 mm
			



Dim. X = Dim. of chamber

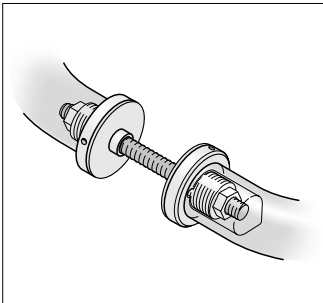
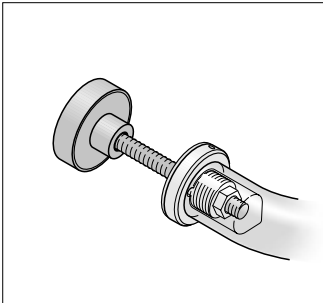
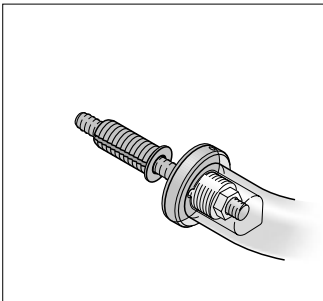
For timber doors the possible max. length of dowel is to be chosen.

Fixing methods

Pull handles

Pull handle series

round M8

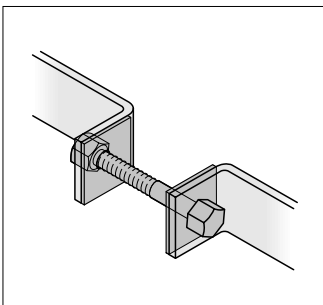
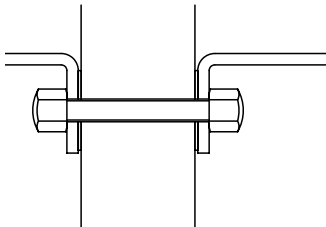
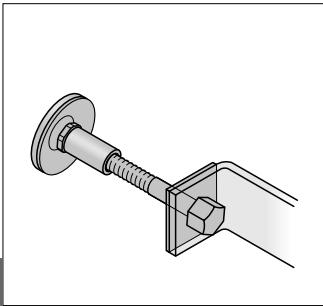
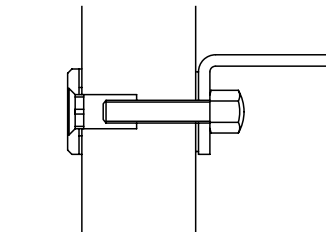
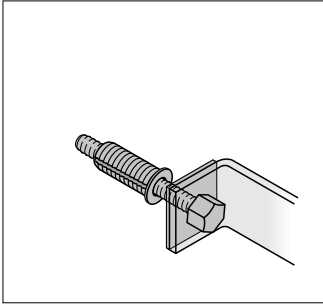
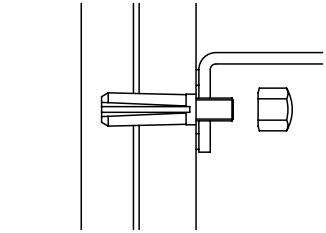
	Fixing method	Fixing accessories	Item nos.
	back to back fixing	2 each set screws M8	0580 1008 glass door 8 – 10 mm 0580 3035 35 – 54 mm 0580 3055 55 – 74 mm 0580 3075 75 – 94 mm
	bolt through-fixing	2 each set screws M8 2 each fixing nuts with caps	Grip diameter 25/30 mm 0580 2308 glass door 8 – 10 mm 0580 4335 35 – 44 mm 0580 4345 45 – 54 mm 0580 4355 55 – 64 mm 0580 4365 65 – 74 mm 0580 4375 75 – 84 mm Grip diameter 35/40 mm 0580 2408 glass door 8 – 10 mm 0580 4435 35 – 44 mm 0580 4445 45 – 54 mm 0580 4455 55 – 64 mm 0580 4465 65 – 74 mm 0580 4475 75 – 84 mm
	secret single side fixing with expansion plug	2 each set screws M8 2 each expansion plugs brass dull nickel finish	0580 0010 Dim. X 10 – 16 mm length of dowel 20 mm 0580 0016 Dim. X 16 – 30 mm length of dowel 34 mm 0580 0024 Dim. X 24 – 44 mm length of dowel 48 mm

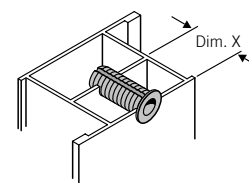
Fixing methods

Pull handles

Pull handle series

ht oval modular systems
 ht round modular systems
 6524
 6522
 6523
 6508

	Fixing method	Fixing accessories	Item nos.
	back to back fixing	2 each set screws M8 4 each sleeve nuts M8 Stainless steel 4 each plastic washers	0585 3035 35 – 39 mm 0585 3040 40 – 44 mm 0585 3045 45 – 49 mm 0585 3050 50 – 54 mm 0585 3055 55 – 59 mm 0585 3060 60 – 64 mm 0585 3065 65 – 69 mm 0585 3070 70 – 74 mm 0585 3075 75 – 79 mm 0585 3080 80 – 84 mm
			
	bolt through-fixing	2 each set screws M8 2 each sleeve nuts M8 Stainless steel 2 each sleeve nuts M8 with washers Stainless steel 4 each plastic washers	0585 2035 35 – 44 mm 0585 2045 45 – 54 mm 0585 2055 55 – 64 mm 0585 2065 65 – 74 mm 0585 2075 75 – 84 mm
			
	secret single side fixing with expansion plug	2 each set screws M8 2 each sleeve nuts M8 Stainless steel 2 each expansion plugs brass dull nickel finish 2 each plastic washers	0585 0010 Dim. X 10 – 16 mm length of dowel 20 mm 0585 0016 Dim. X 16 – 30 mm length of dowel 34 mm 0585 0024 Dim. X 24 – 44 mm length of dowel 48 mm
			



Dim. X = Dim. of chamber

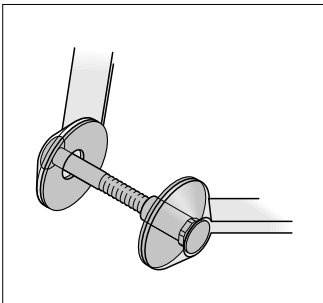
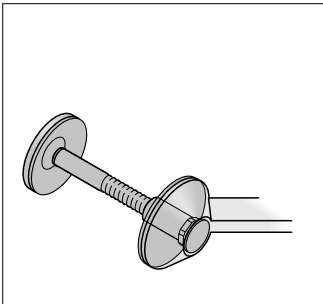
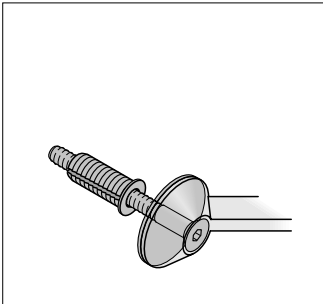
For timber doors the possible max. length of dowel is to be chosen.

Fixing methods

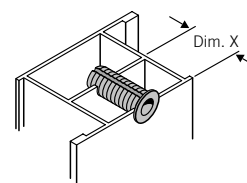
Pull handles

Pull handle series

6620
6621

	Fixing method	Fixing accessories	Item nos.
	back to back fixing	2 each countersunk screw M 8 with sleeve nuts M8 Stainless steel	0584 1008 glass door 8 – 10 mm 0584 3035 35 – 44 mm 0584 3045 45 – 54 mm 0584 3055 55 – 64 mm 0584 3065 65 – 74 mm 0584 3075 75 – 84 mm
	bolt through-fixing	2 each countersunk screw M8 with sleeve nuts M8 Stainless steel	0584 2008 glass door 8 – 10 mm 0584 4035 35 – 44 mm 0584 4045 45 – 55 mm 0584 4055 55 – 65 mm 0584 4065 65 – 75 mm 0584 4075 75 – 85 mm
	secret single side fixing with expansion plug	2 each countersunk screw M8 Stainless steel 2 each expansion plugs brass dull nickel finish 2 each plastic washers	0584 0010 Dim. X 10 – 16 mm length of dowel 20 mm 0584 0016 Dim. X 16 – 30 mm length of dowel 34 mm 0584 0024 Dim. X 24 – 44 mm length of dowel 48 mm

6



Dim. X = Dim. of chamber

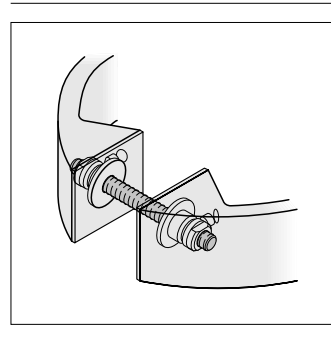
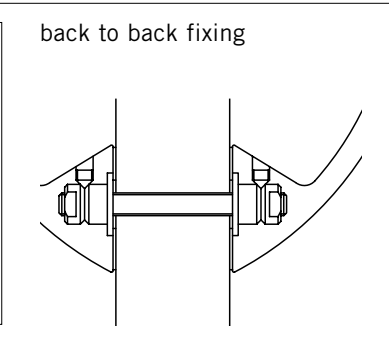
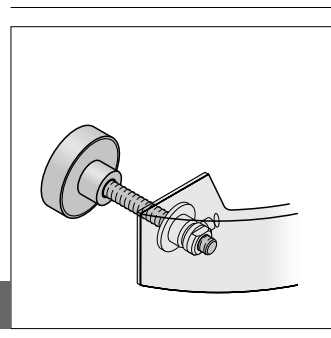
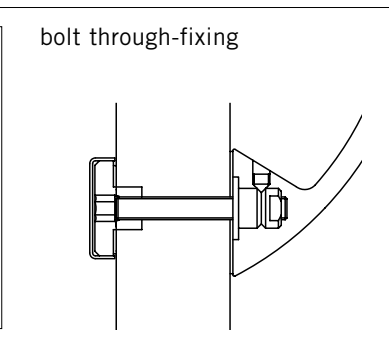
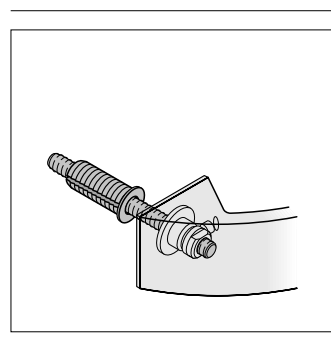
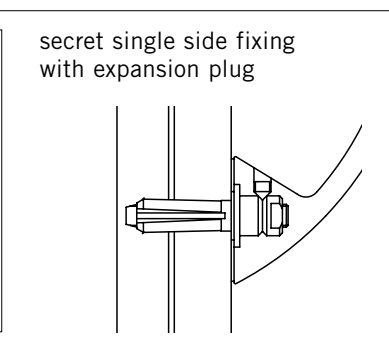
For timber doors the possible max. length of dowel is to be chosen.

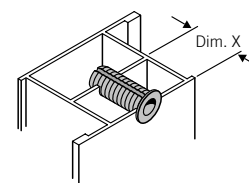
Fixing methods

Pull handles

Pull handle series

6526

	Fixing method	Fixing accessories	Item nos.
	 <p>back to back fixing</p>	<p>2 each set screws M8</p>	<p>0587 1008 glass door 8 – 10 mm</p> <p>0587 3035 35 – 54 mm 0587 3055 55 – 74 mm 0587 3075 75 – 94 mm</p>
	 <p>bolt through-fixing</p>	<p>2 each set screws M8</p> <p>2 each fixing nuts with caps</p>	<p>0587 2308 glass door 8 – 10 mm</p> <p>0587 4335 35 – 44 mm 0587 4345 45 – 54 mm 0587 4355 55 – 64 mm 0587 4365 65 – 74 mm 0587 4375 75 – 84 mm</p>
	 <p>secret single side fixing with expansion plug</p>	<p>2 each set screws M8</p> <p>2 each expansion plugs brass dull nickel finish</p>	<p>0587 0010 Dim. X 10 – 16 mm length of dowel 20 mm</p> <p>0587 0016 Dim. X 16 – 30 mm length of dowel 34 mm</p> <p>0587 0024 Dim. X 24 – 44 mm length of dowel 48 mm</p>



Dim. X = Dim. of chamber

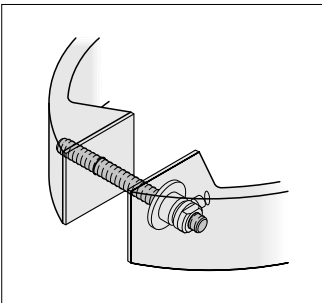
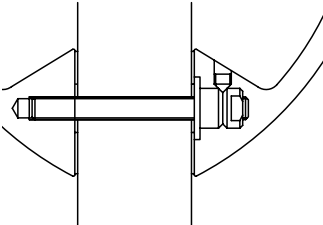
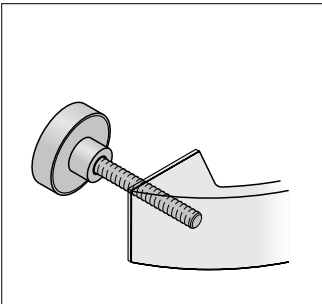
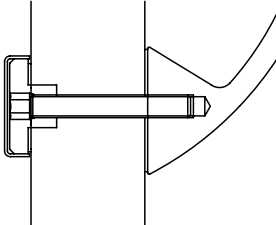
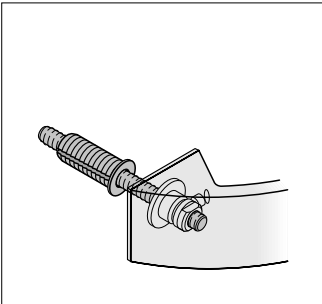
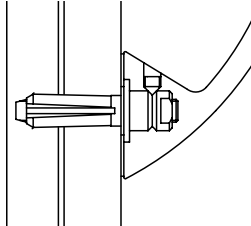
For timber doors the possible max. length of dowel is to be chosen.

Fixing methods

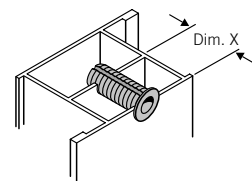
Pull handles

Pull handle series

6110
6111
6112
6113

	Fixing method	Fixing accessories	Item nos.
		2 each set screws M6	0580 1208 glass door 8 – 10 mm
			0580 3235 35 – 54 mm 0580 3255 55 – 74 mm 0580 3275 75 – 94 mm
		2 each set screws M6	0580 2208 glass door 8 – 10 mm
		2 each fixing nuts with caps	0580 4235 35 – 44 mm 0580 4245 45 – 54 mm 0580 4255 55 – 64 mm 0580 4265 65 – 74 mm 0580 4275 75 – 84 mm
		2 each set screws M6	0580 0210 Dim. X 10 – 16 mm length of dowel 20 mm
		2 each expansion plugs brass dull nickel finish	0580 0216 Dim. X 16 – 30 mm length of dowel 34 mm 0580 0224 Dim. X 24 – 44 mm length of dowel 48 mm

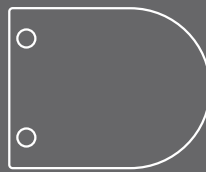
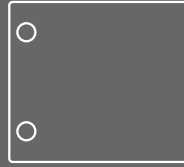
6



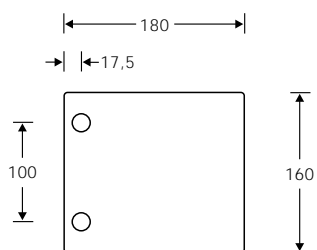
Dim. X = Dim. of chamber

For timber doors the possible max. length of dowel is to be chosen.

Push and pull pad handles
Sections and support brackets
Horizontal bar handles
Accessories

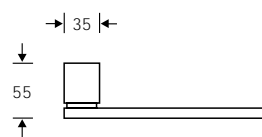


Push and pull pad handles



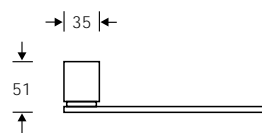
6108

Fixing M8

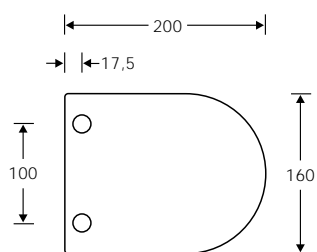


Available in:

Bracket Aluminium 01,
Pad Aluminium 01

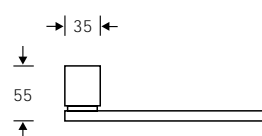


Bracket Aluminium 01,
Pad Stainless steel 62



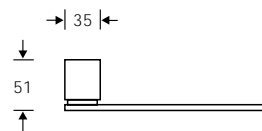
6109

Fixing M8



Available in:

Bracket Aluminium 01,
Pad Aluminium 01

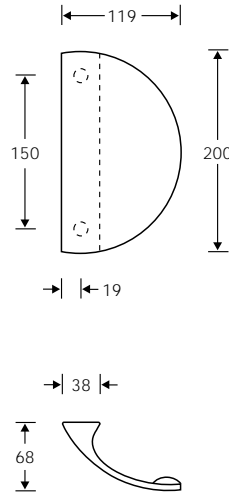


Bracket Aluminium 01,
Pad Stainless steel 62

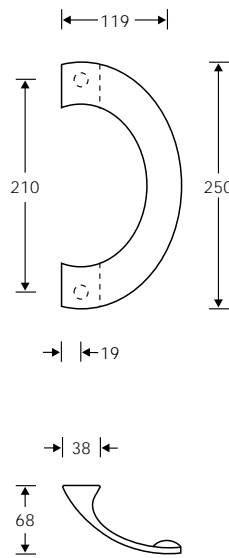
6

For detailed information on fixing, please turn to page 383, fixing accessories cf. page 401.

Push and pull pad handles

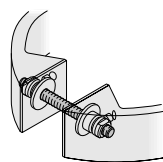


6110
Aluminium
Fixing M6

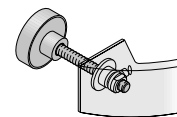


6111
Aluminium
Fixing M6

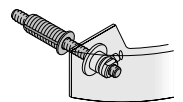
For detailed information on fixing, please turn to page 387, fixing accessories cf. page 401.



back to back fixing

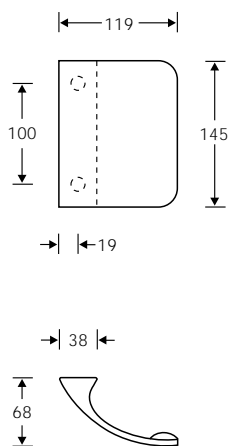


bolt through-fixing

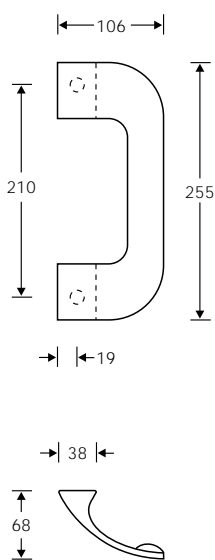


secret single side fixing with expansion plug

Push and pull pad handles

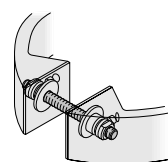


6112
Aluminium
Fixing M6

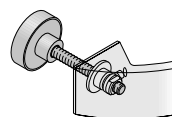


6113
Aluminium
Fixing M6

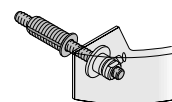
For detailed information on fixing, please turn to page 387, fixing accessories cf. page 401.



back to back fixing

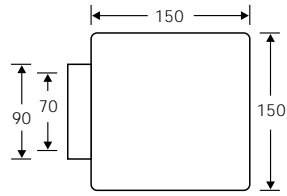


bolt through-fixing



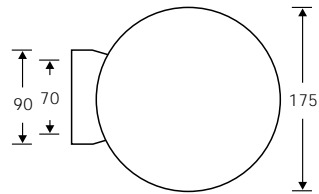
secret single side fixing with expansion plug

Push and pull pad handles



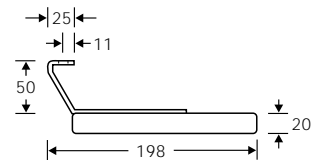
6254 62

Stainless steel



6268

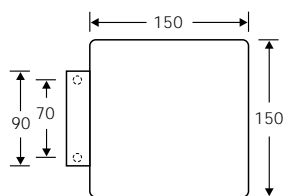
Stainless steel



For detailed information on fixing, please turn to page 384, fixing accessories cf. page 401.

Screw hole - Ø 8.5 mm

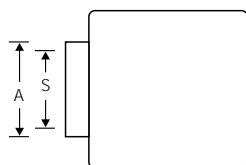
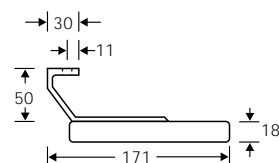
Push and pull pad handles



6184 62

Aluminium

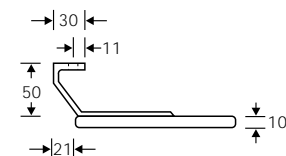
Black plastic pad



6181 62

Aluminium

Pad 150 x 150 mm
Dimension A 90 mm
c:c screw holes 70 mm



6181 70

Aluminium

Pad 180 x 180 mm
Dimension A 120 mm
c:c screw holes 100 mm

6181 74

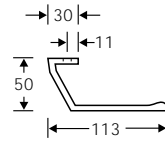
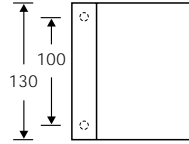
Aluminium

Pad 200 x 200 mm
Dimension A 120 mm
c:c screw holes 100 mm

For detailed information on fixing, please turn to page 384, fixing details cf. page 401.

Screw hole - Ø 8.5 mm
Engravings cf. page 203

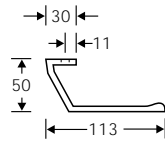
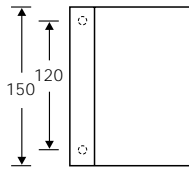
Push and pull
pad handles



6137 31

Aluminium

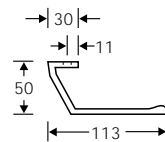
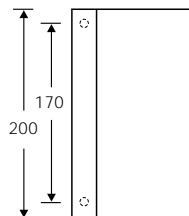
c:c screw holes 100 mm



6137 32

Aluminium

c:c screw holes 120 mm



6137 34

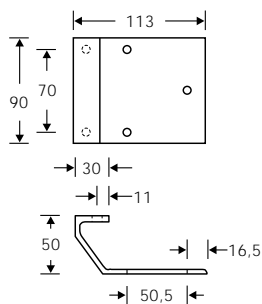
Aluminium

c:c screw holes 170 mm

Screw hole - Ø 8.5 mm
Engravings cf. page 203

For detailed information on fixing, please turn to page 384, fixing accessories cf. page 401.

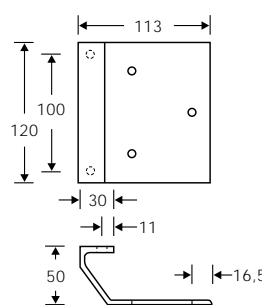
Brackets for
pad handles and
horizontal bar handles



6755 27

Aluminium

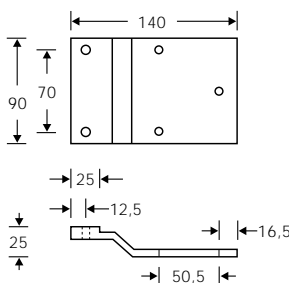
Screw hole - Ø 8.5 mm
Screw hole Ø 5.3 mm (pad)



6755 29

Aluminium

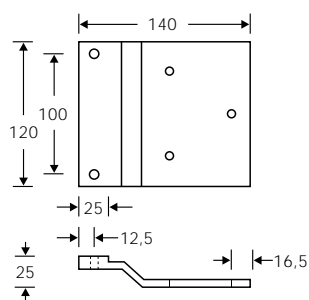
Screw hole - Ø 8.5 mm
Screw hole Ø 5.3 mm (pad)



6756 27

Aluminium

Screw hole Ø 6.5 mm
Screw hole Ø 5.3 mm (pad)



6756 29

Aluminium

Screw hole Ø 6.5 mm
Screw hole Ø 5.3 mm (pad)

Bracket models FSB 6755 and 6756 are the support modules for custom-design pad and horizontal bar handles. Handle designs in timber, plastic and metal can be securely fastened to these support brackets by means of three bolts fitted from the back.

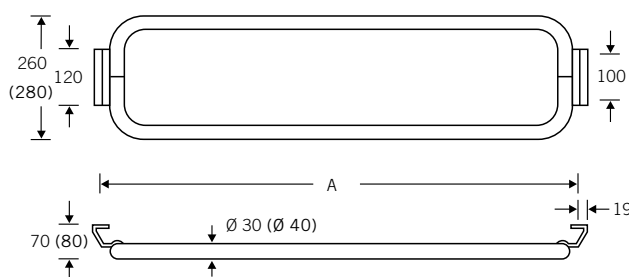
For detailed information on fixing, please turn to page 384, fixing accessories cf. page 401.

Pull handles with cranked brackets

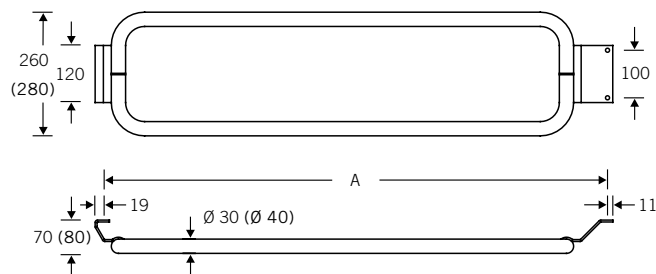


Aluminium
Stainless steel

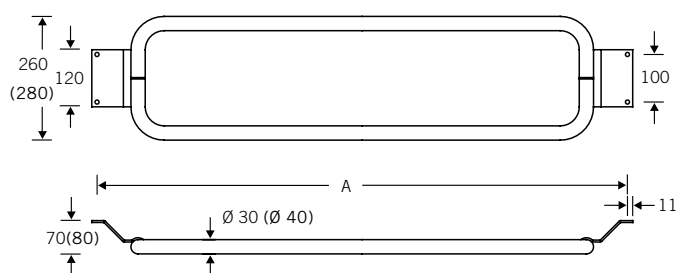
Screw hole - Ø 8.5 mm



6676 02 Ø 30 mm
6686 02 Ø 40 mm



6676 03 Ø 30 mm
6686 03 Ø 40 mm



6676 04 Ø 30 mm
6686 04 Ø 40 mm

For detailed information on fixing, please turn to page 384, fixing accessories cf. page 401.

Sections and support brackets for horizontal bar handles

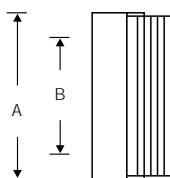
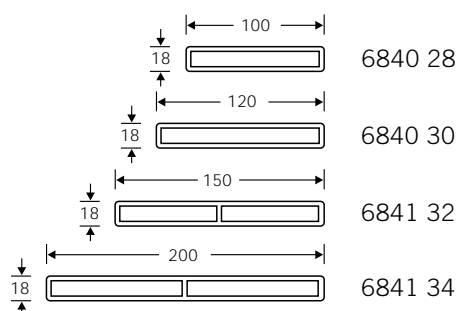


6840

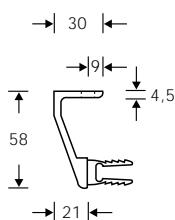
6841

Aluminium

The illustrated sections are available in stock lengths of 4,000 mm.



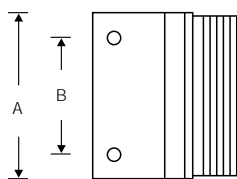
Screw hole \varnothing 6,5 mm



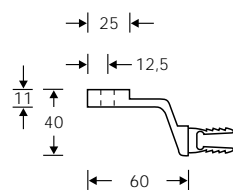
6763

Aluminium

Sizes in mm	A	B
28	100	70
30	120	100
32	150	120
34	200	170



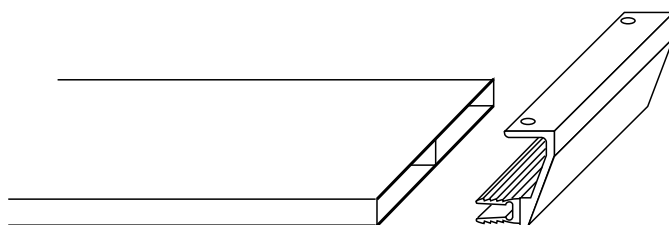
Screw hole \varnothing 6,5 mm



6769

Aluminium

Sizes in mm	A	B
28	100	70
30	120	100
32	150	120
34	200	170



Horizontal bar handles

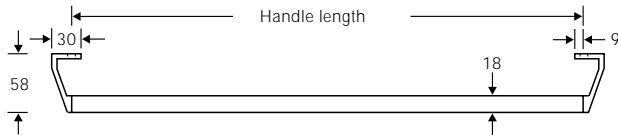
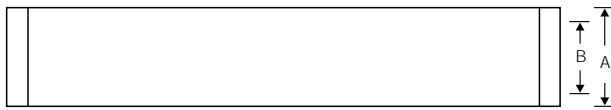


6460

Aluminium

Screw hole \varnothing 6,5 mm (base)

Sizes in mm	A	B
0028	100	70
0030	120	100
0032	150	120
0034	200	170



Cranked bracket for swing doors

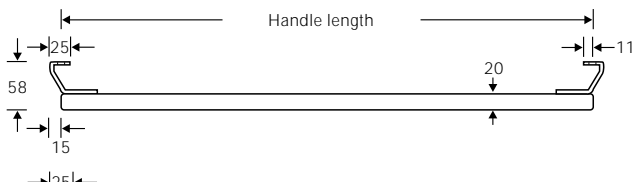
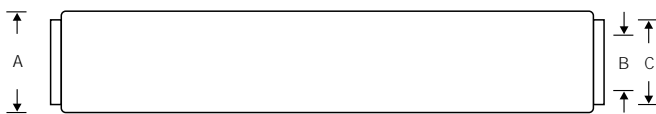


6475

Stainless steel

Screw hole - \varnothing 8.5 mm (base)

Sizes in mm	A	B	C
0030	120	70	100
0032	150	100	120

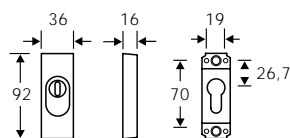


Cranked bracket for swing doors

Sizes in mm	A	B	C
0130	120	70	100
0132	150	100	120

For detailed information on fixing, please turn to page 384, fixing accessories cf. page 401.

Accessories

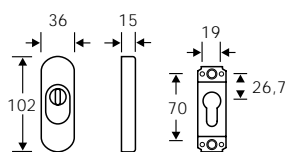


3244

Aluminium
Aluminium + colour

Suitable for cylinder projections from 8 – 15 mm

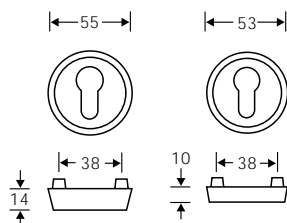
Screw hole Ø 3,2 mm



3246

Aluminium
Stainless steel
Brass
Aluminium + colour

Screw hole Ø 3,2 mm



7391

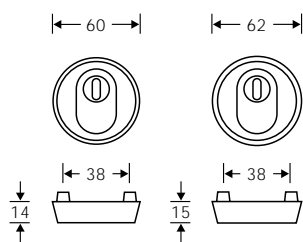
7392

7391

7392

Aluminium
Stainless steel
Brass
Aluminium + colour

Counter rose 1735 50



Aluminium
Alu. + colour

Stainless steel
Brass

7393

Aluminium
Stainless steel
Brass
Aluminium + colour

Suitable for cylinder projections from 8 – 15 mm

Counter rose 1735 50

Integrated security engineering demands that the external dimensions of an armoured rose be 11 or 16 mm greater than its fixing centres. In particular, this needs to be borne in mind when ordering a mix of hardware.

Technical information page 295

Fixing accessories



0313

Steel studs

0313 0670 M6 x 70 mm
0313 0680 M6 x 80 mm

0313 0880 M8 x 80 mm



0316

Steel studs - for timber fixing

0316 0640 M6

0316 0840 M8



0319

Aluminium dome nuts

0319 0600 M6
0319 0800 M8

Stainless steel dome nuts

0319 0800 M8



0320

Aluminium and Stainless steel dome nuts

0320 0800 M8



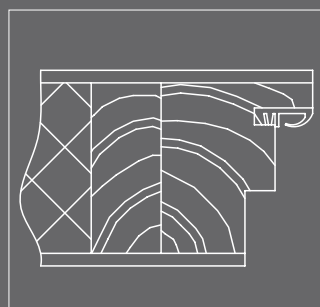
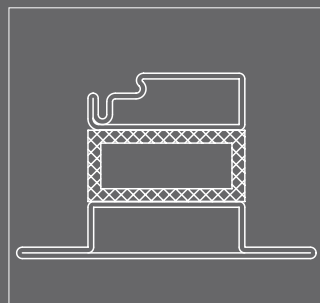
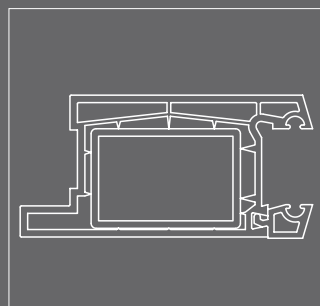
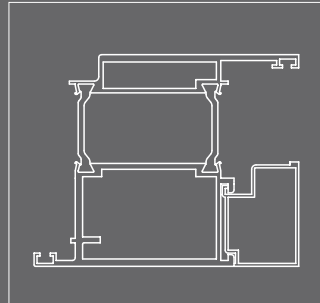
0325

Aluminium

Blind nuts with 12 mm neck

0325 0600 M6

0325 0800 M8



Furniture for main entrance doors

The architectural hardware sector - including FSB - has for decades been marketing a veritable plethora of custom fittings for main entrance doors, to wit door knobs, door pulls, armoured roses and security furniture in all materials and all manner of designs. You'd think the market had been sated.

Not a bit of it though. An article in the supplement to the weekly newspaper DIE ZEIT of 31 March 1995 observes: 'Same doors, handles, conservatories, carports everywhere. Be it in Munich or Münster, Darmstadt or Stuttgart, owner-occupiers are a force for uniformity in their unitary housing.'

But help is at hand for our beleaguered author. FSB commissioned its in-house designer Hartmut Weise to come up with some new ideas for main entrance doors. Hartmut Weise already presented four design conceptions for the penultimate Manual. Two more followed for the last Manual.

The first four handles for main entrance doors by Hartmut Weise retain the distinctive axially slanted grip from his 1995 pull-handle collection, but forego the droplet-shaped cross section in favour of an elliptical form.

Mr. Weise was intent on ensuring that the hand would be able to exert the necessary force despite the vertical styling.

These handles are available in silver anodised or colour-coated aluminium and in stainless steel. They are through-fixed by means of 6 mm bolts that fasten onto a rugged backplate on the inside.

The internal backplate also acts as a bearing for the lever handle. The fancy coverplate on the inside can be supplied in either aluminium, colour-coated aluminium, stainless steel or brass.

Two further main-door pull handles by Hartmut Weise incorporate a design idea from the 50's. At that time, any number of doors were adorned with sinuous extruded handles. Refining this seasoned style gave rise to an integrated pull handle/backplate design.

In this case, too, handles are through fixed using 6mm bolts that engage in a heavy-duty backplate on the inside. The latter additionally supports the lever handle and its bushing.

These two designs are exclusively available in aluminium. A matching aluminium lever handle and coverplate have been selected for the inside. If so desired, however, the internal furniture may be made of stainless steel, brass or colour-coated aluminium.

This comprehensive new package is augmented by pull, knob and lever handle furniture on oval and angular narrow-frame backplates, pull-handle furniture with a selection of fittings, and push/pull handles with armoured cylinders. Before ordering please always check that the situation allows for sufficient mortise depth as well as the necessary backset.

This proven standard range modestly takes second place in the Manual 02103, whence it can watch the interaction between innovation and tradition.

When fitting the new pulls for main entrance and entrance doors, FSB recommends reinforcing the cylinder by means of round, oval or angular armoured roses.

Lever handles

turnably fixed



1023 7000 0004

Aluminium
Stainless steel

10 mm □-hole

see page 24



1070 7000 0001

Aluminium
Stainless steel

10 mm □-hole

see page 40



1076 7000 0003

Aluminium
Stainless steel

10 mm □-hole

see page 44

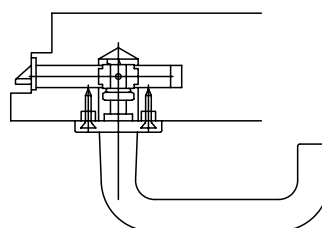


1146 7000 0002

Aluminium
Stainless steel

10 mm □-hole

see page 76



Single fixed lever handles for entrance doors incl. solid sub-roses.

Fixings with metal screws acc. to DIN 7982 (4.8 x 25 mm), FSB spindle 0104 necessary, see page 482.

Furniture for
main entrance doors



7871

Aluminium natural colour
anodised
Stainless steel

The order code covers external pull, screws and internal back-plate plus lever handle FSB 1025. You will additionally need to order an FSB Stabil-half-spindle for doors drilled from one side only (p. 482) and an FSB armoured rose (p. 400).

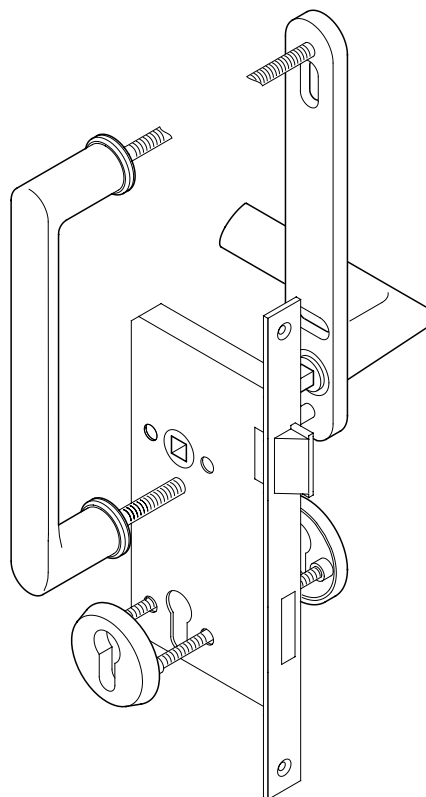
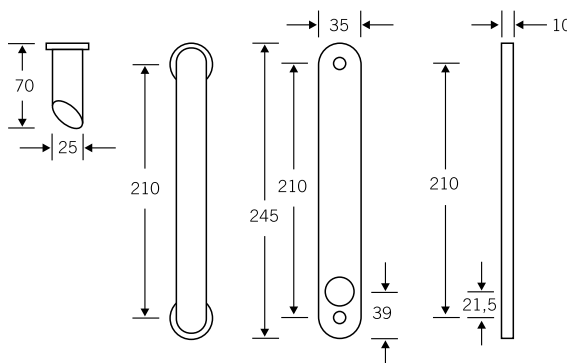


Illustration r.h.,
handing details cf. page 508ff.
Safety clearance 45 mm



Order details:

spindle thickness: 8 or 10 mm
door thickness . . . mm

7871 24 r.h.
7871 25 l.h.

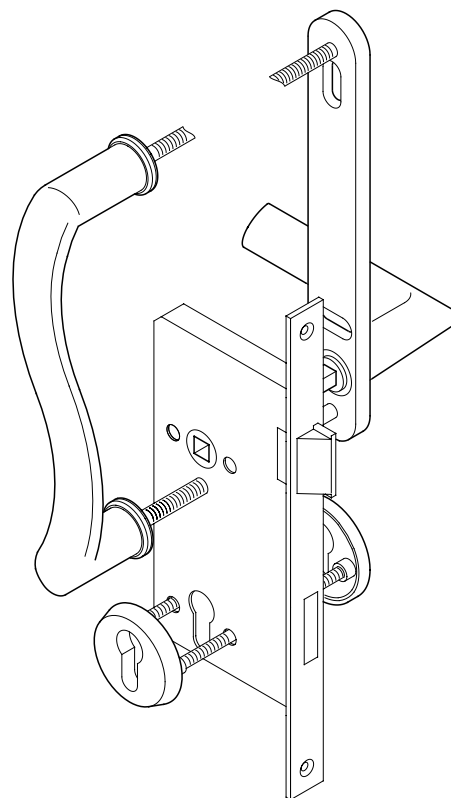
Furniture for
main entrance doors



7872

Aluminium natural colour
anodised
Stainless steel

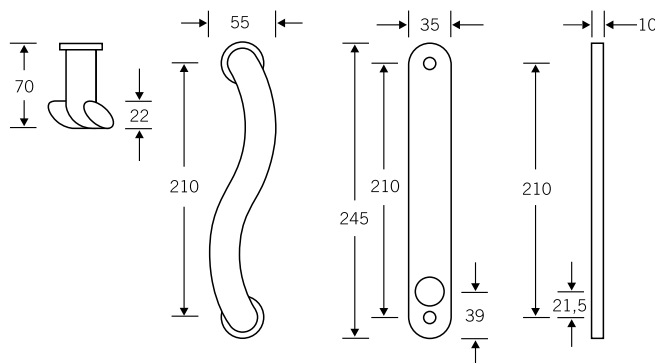
The order code covers external pull, screws and internal back-plate plus lever handle FSB 1028. You will additionally need to order an FSB Stabil-half-spindle for doors drilled from one side only (p. 482) and an FSB armoured rose (p. 400).



Design
Award
Winner
1999

Illustration r.h.,
handing details cf. page 508ff.
Safety clearance 60 mm

7



Order details:

spindle thickness: 8 or 10 mm
door thickness . . . mm

7872 24 r.h.
7872 25 l.h.

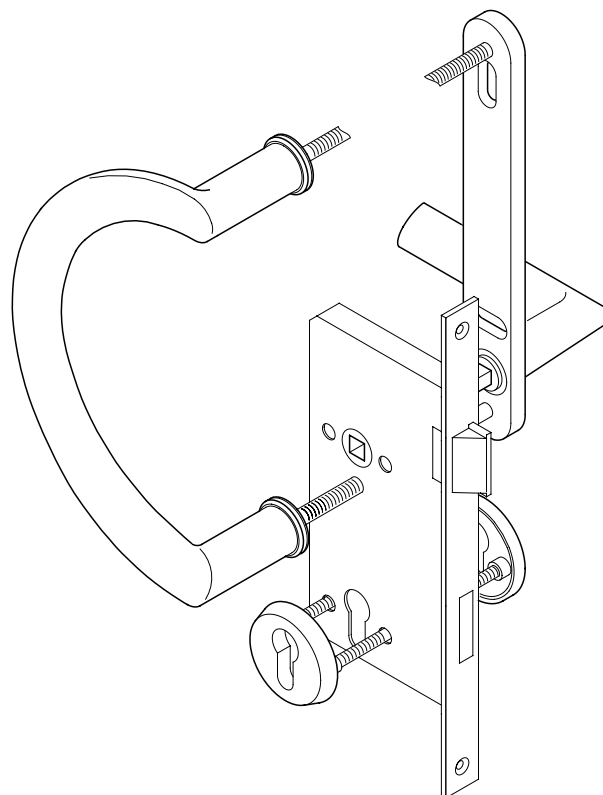
Furniture for
main entrance doors



7873

Aluminium natural colour
anodised
Stainless steel

The order code covers external pull, screws and internal back-plate plus lever handle FSB 1025. You will additionally need to order an FSB Stabil-half-spindle for doors drilled from one side only (p 482) and an FSB armoured rose (p. 400).

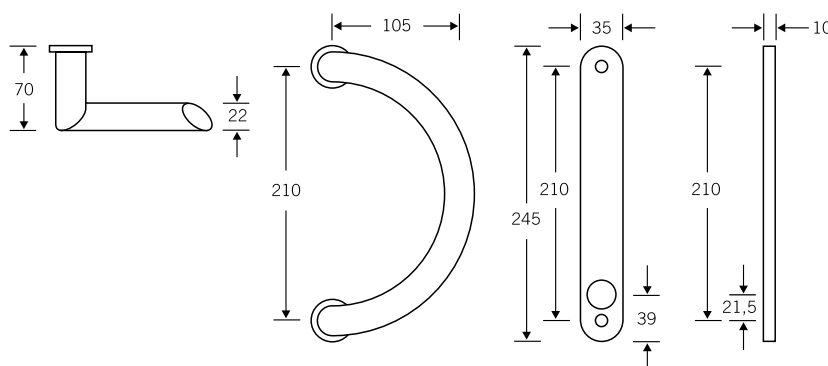


7



Design
Award
Winner
1999

Illustration r.h.,
handing details cf. page 508ff.
Safety clearance 48 mm



Order details:

spindle thickness: 8 or 10 mm
door thickness . . . mm

7873 24 r.h.
7873 25 l.h.

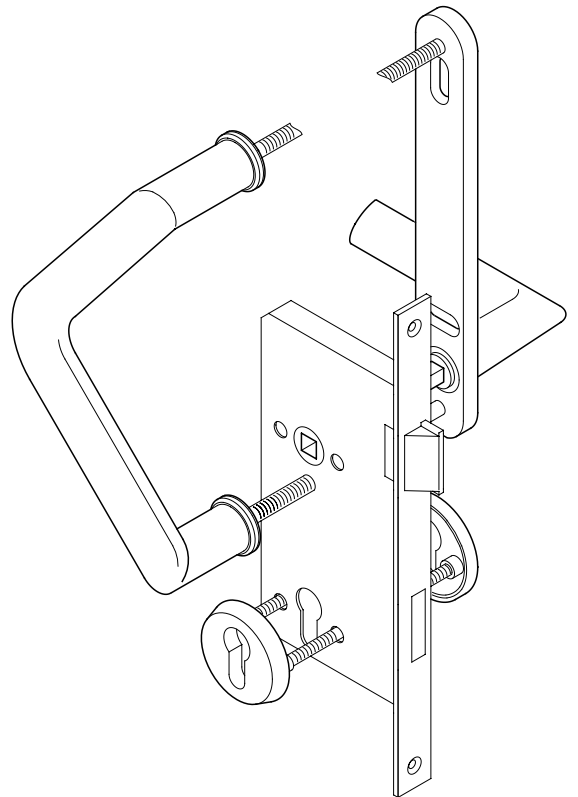
Furniture for
main entrance doors



7874

Aluminium natural colour
anodised
Stainless steel

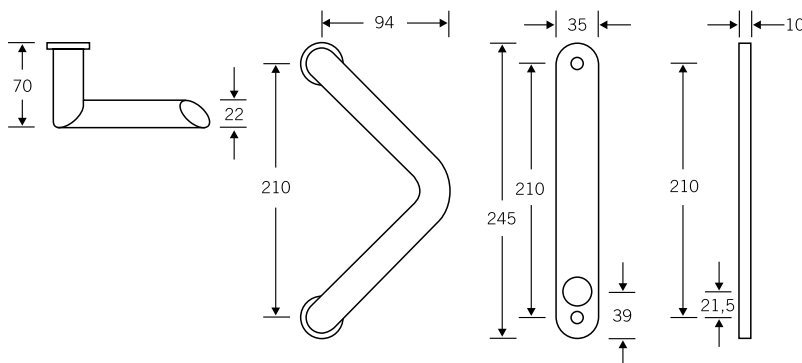
The order code covers external pull, screws and internal back-plate plus lever handle FSB 1025. You will additionally need to order an FSB Stabil-half-spindle for doors drilled from one side only (p. 482) and an FSB armoured rose (p. 400).



Design
Award
Winner
1999

Illustration r.h.,
handing details cf. page 508ff.
Safety clearance 48 mm

7



Order details:

spindle thickness: 8 or 10 mm
door thickness . . . mm

7874 24 r.h.
7874 25 l.h.

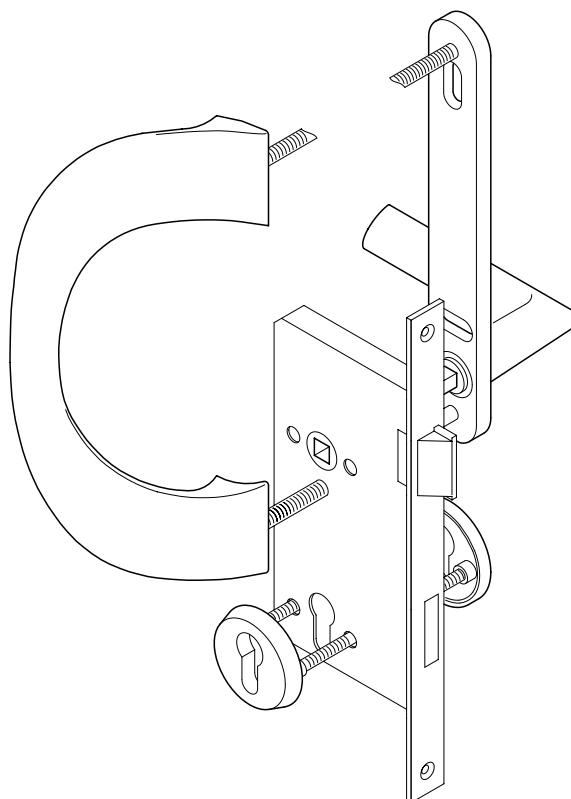
Furniture for
main entrance doors



7802

Aluminium natural colour
anodised

The order code covers external
pull, screws and internal back-
plate plus lever handle FSB
1010. You will additionally
need to order an FSB Stabil-
half-spindle for doors drilled
from one side only (p. 482)
and an FSB armoured rose
(p. 400).

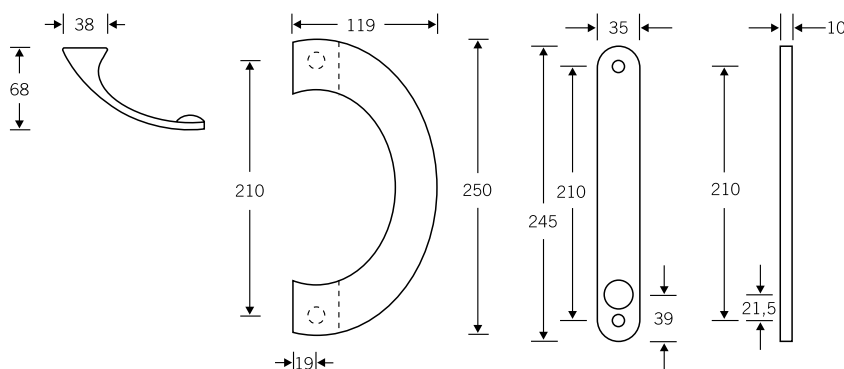


7



Design
Award
Winner
1999

Illustration r.h.,
handing details cf. page 508ff.
Safety clearance 48 mm



Order details:

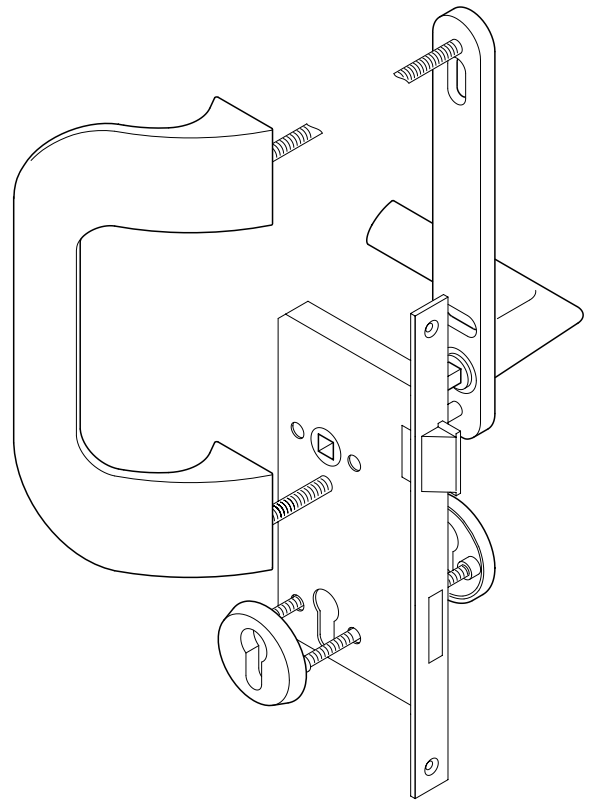
spindle thickness: 8 or 10 mm
door thickness mm

Furniture for
main entrance doors

7803

Aluminium natural colour
anodised

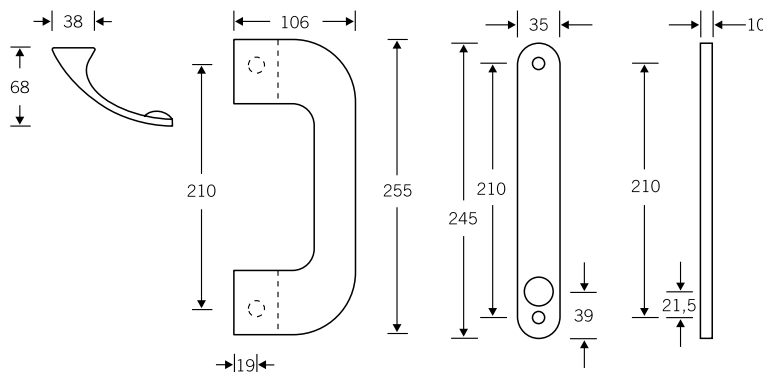
The order code covers external
pull, screws and internal back-
plate plus lever handle FSB
1108. You will additionally
need to order an FSB Stabil-
half-spindle for doors drilled
from one side only (p. 482)
and an FSB armoured rose
(p. 400).



Design
Award
Winner
1999

Illustration r.h.,
handing details cf. page 508ff.
Safety clearance 48 mm

7



Order details:

spindle thickness: 8 or 10 mm
door thickness mm

Grip handle furniture for framed doors
with concealed fixing



7816

Aluminium natural colour
anodised

7816 07 r.h.
7816 08 l.h.

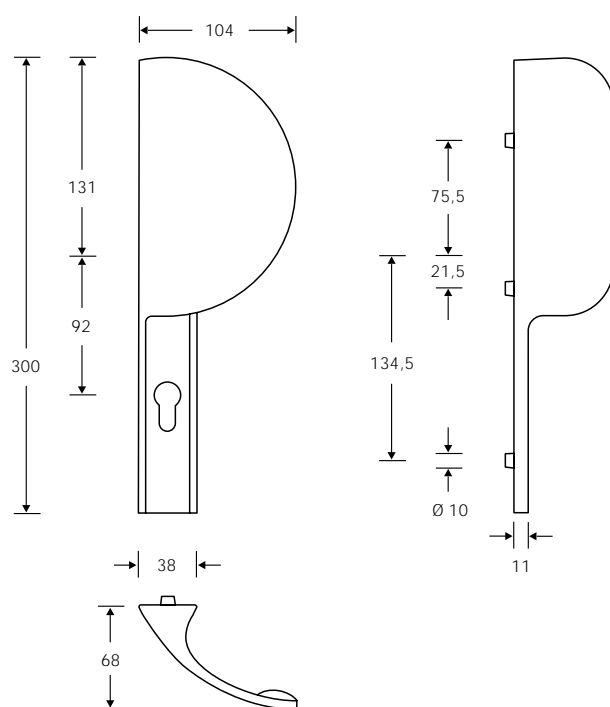
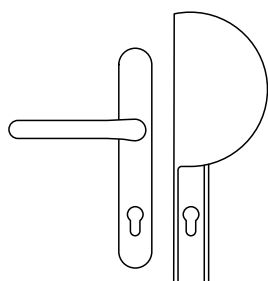


Illustration l.h., handing details
cf. page 508ff.

7

Item nos.:



7816 07 r.h.
7816 08 l.h.

Order details:

spindle thickness: 8 or 10 mm
door thickness mm

Grip handle furniture for framed doors
with concealed fixing

7816

Aluminium natural colour
anodised

7816 11 r.h.
7816 12 l.h.

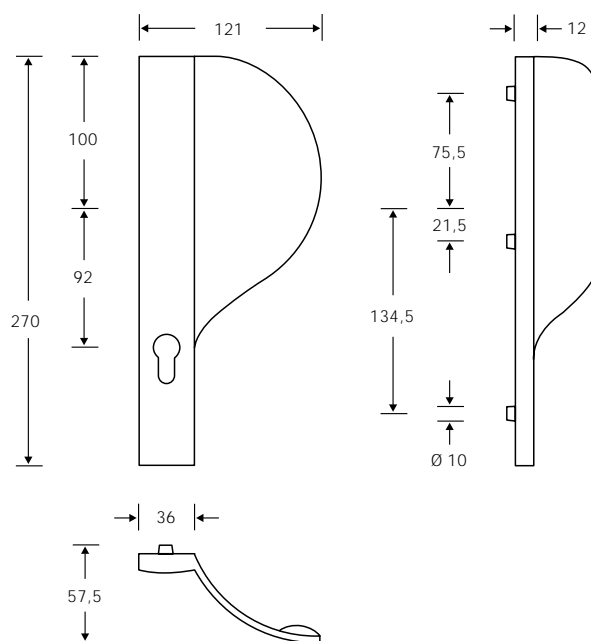
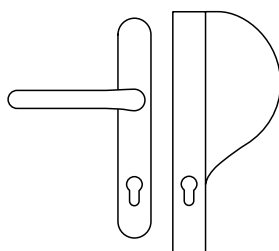


Illustration l.h., handing details
cf. page 508ff.

7

Item nos.:



7816 11 r.h.
7816 12 l.h.

Order details:

spindle thickness: 8 or 10 mm
door thickness mm

Lever handle for framed doors fixed on an oval backplate,
with concealed fixing
8 mm □-hole und support mechanism
9 mm □-hole for fire and smoke stop doors **F**

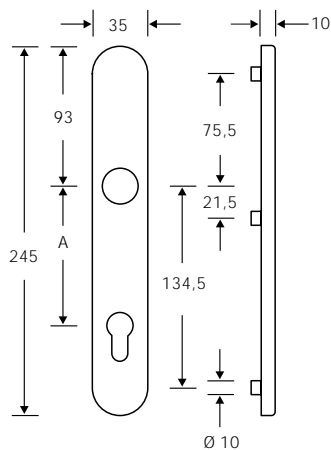
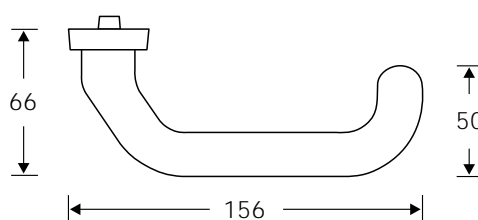


7816

Aluminium
Stainless steel
Alu + colour

7816 18 **F**

Aluminium
Stainless steel
Alu + colour

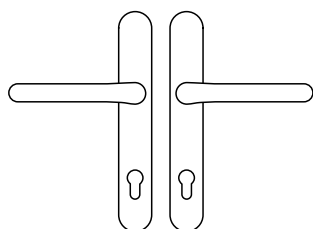


Order details:

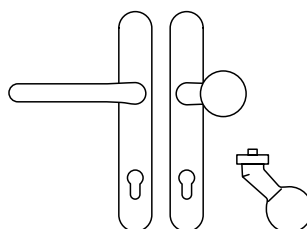
spindle thickness: 8 or 10 mm
9 mm **F** Standard
door thickness mm

Size A spacing 72 mm PZ
Size A spacing 92 mm PZ

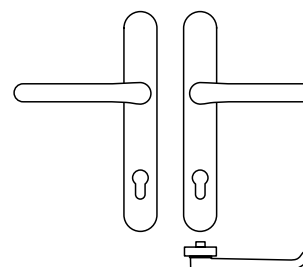
Item nos.:



Standard fittings
Fire door fittings



Entrance door furniture
7816 13

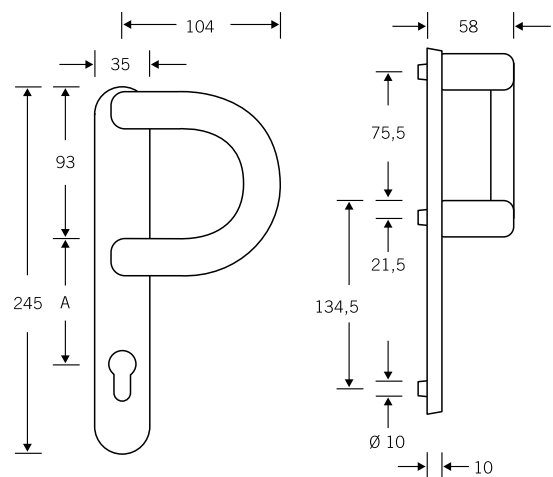


Balcony door furniture
7816 02

Grip handle furniture for framed doors
on an oval backplate, with concealed fixing
and support mechanism

7816 09

Aluminium natural colour
anodised
Alu + colour



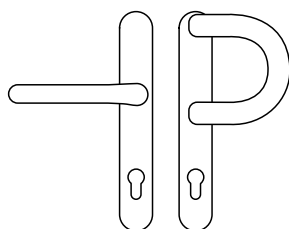
Order details:

spindle thickness: 8 or 10 mm
door thickness mm

Size A spacing 72 mm PZ
Size A spacing 92 mm PZ

7

Item no.:



Grip handle furniture
7816 09

Lever handle for framed doors fixed on an angular backplate, concealed fixing on one side



7820

Aluminium
Alu + colour

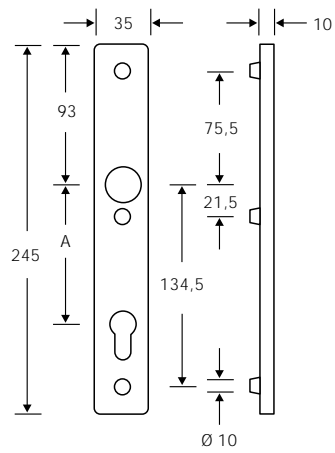
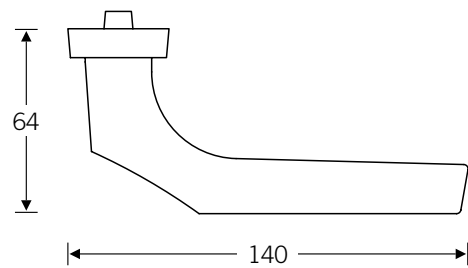


Illustration inner backplate

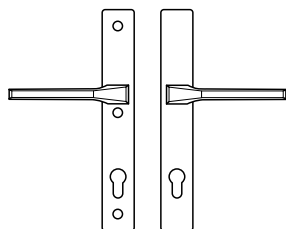
Order details:

spindle thickness: 8 or 10 mm
door thickness mm

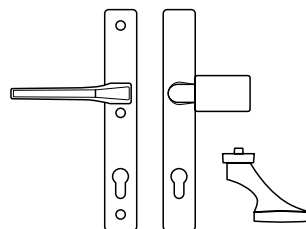
Size A spacing 72 mm PZ
Size A spacing 92 mm PZ

7

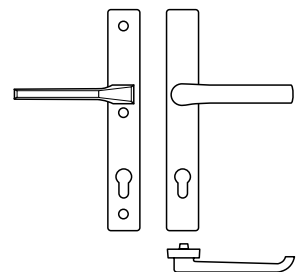
Item nos.:



Lever handle furniture
7820 01



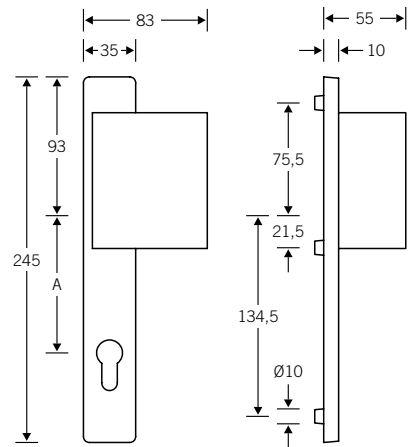
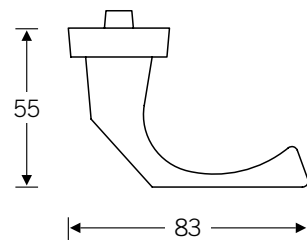
Entrance door furniture
7820 13



Balcony door furniture
7820 02

Lever handle furniture for framed doors
 fixed on an angular backplate
 concealed fixing on one side

7820 03
 Aluminium



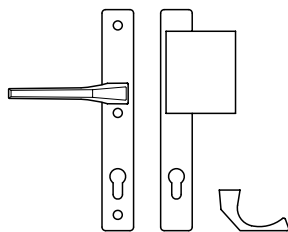
Order details:

spindle thickness: 8 or 10 mm
 door thickness mm

Size A spacing 72 mm PZ
 Size A spacing 92 mm PZ

7

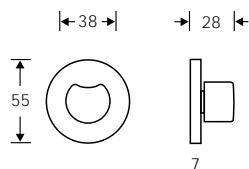
Item no.:



7820 03

Turnable knobs

for multi-point locks

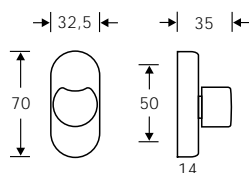


0418 02

Aluminium
Stainless steel

8 mm

Spindle projecting
standard 40 mm



0418 03

Aluminium
Stainless steel

8 mm

Spindle projecting
standard 40 mm

7

For deployment on multi-point locks, FSB supplies an easy-action turnable knob on a circular or oval rose for concealed face fixing.

Lever handles and door knobs for framed doors

8

As an alternative to the cranked lever handles for narrow-frame doors FSB has always supplied, we are using the 02103 edition of our Manual to switch the focus to cranked lever handles fitted away from the centre of pivot, thus keeping the hand well away from the edge of the door, out of harm's way.

With this approach, the desired lever handle design is fitted on a pivoting arm to the side of the rose. The centre of pivot in the rose is doubly supported between a base-plate and a housing.

This rugged double bearing for the pivoting arm reduces tolerances. The entire works is concealed behind a cap made of the same material as the lever handle, cf. pp. 424 and 425.

Set out in the following section is the complete FSB range of cranked lever handles for narrow-frame doors for both standard and fire-safety applications.

The range is rounded off by a series of standard lever handles on oval roses. These handles can be used as standard female handles on the opposite side of the door as in the 'Wittgenstein' scheme described overleaf.

Overview



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Page 432



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Page 431 and 255







Page 433



Page 433



-  Aluminium
-  Stainless steel
-  Aluminium + colour
-  Black plastics



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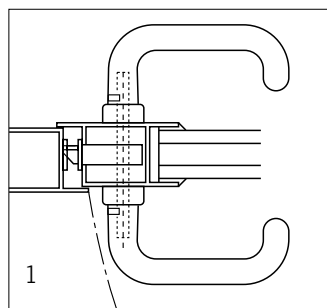


Page 444



Furniture for framed doors

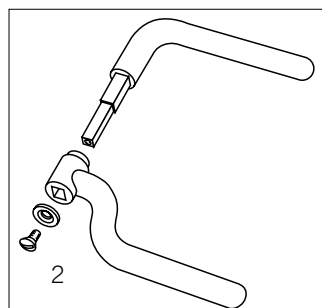
FSB supplies a complete range of different types of handle (levers, knobs and pulls) for narrow-frame doors in metal, plastic or wood.



Hand injury hazard

The dimensional limits of narrow-frame doors can lead to fingers getting caught when the door is operated. This is particularly true of the closing face (Fig. 1).

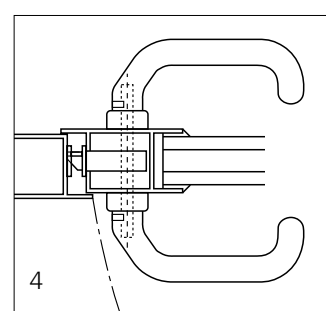
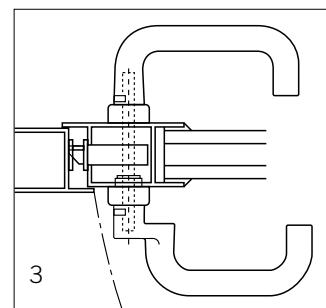
A further consequence of the spatial constraints referred to is a certain difficulty in fixing the furniture. The locks used feature a very short backset (25, 30, or 35 mm) and do not allow through fixing as an option. Thus lever handles, knobs, and pulls must generally be face fixed onto the stile.



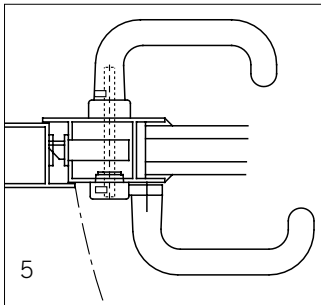
An inspired idea by the philosopher Ludwig Wittgenstein

The Austrian philosopher and qualified engineer Ludwig Wittgenstein took time off from philosophising in the 1920s to design the interior of his sister's house, Palais Wittgenstein, in Vienna. In the process he had to come to grips with very narrow steel door stiles. To enable furniture to be firmly fixed onto the stiles yet prevent hands getting caught between the closing face and the door jamb, Ludwig Wittgenstein had a cranked handle made for the closing face to his own drawings, and to this he connected a normal male lever handle on the opening face. By combining a cranked female handle with a standard male lever handle in this inspired fashion, a man who otherwise applied himself to the imponderables of language produced a very clear-cut answer to the problems of injuries to the hand and firmness of fixing (Fig. 2).

FSB recommends giving the Wittgensteinian solution a new lease of life by pairing cranked and uncranked lever handles, the cranked handle being used as the male section and its uncranked counterpart providing a rugged connection (Figs. 3 and 5).



Anyone studying the remedy advocated for such problems in the past will be shaking their heads in disbelief given these insights. Two cranked female handle sections, rigidly mounted but freely rotating, were screwed onto the stile and joined together by means of a floating spindle (Fig. 4).

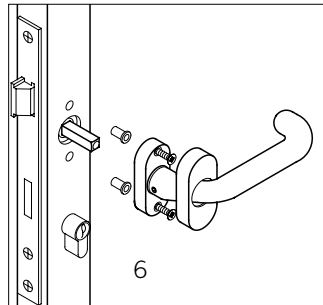


The alternative

As an alternative to the cranked lever handles supplied hitherto, FSB is introducing a new type of hardware in which the lever handle is located away from the point of pivot.

The pivot shaft in the rose is doubly supported between the baseplate and the housing. This rugged double bearing improves tolerances. The desired lever handle design is positioned on a swivel lever to the side of the rose (Fig. 5).

This adaptive alternative enables FSB to offer a solution for the wishes of architects to equip their building projects with the same design of lever handle in all its technical diversities.



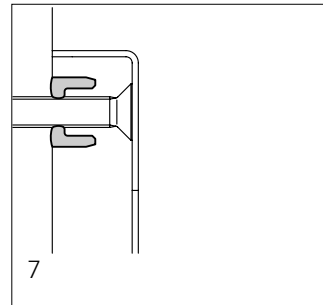
Rivet nuts

To ensure hardware for narrow-frame doors is securely affixed, FSB recommends the use of rivet nuts in which fittings are subsequently anchored by means of non-loosening screws.

The heads of these rivet nuts (Ø 11 mm) fit snugly into the underside of FSB fittings for narrow-frame doors. The combination of rivet nuts, baseplate and non-loosening screws enables fittings to be very securely fastened. (Fig. 6)

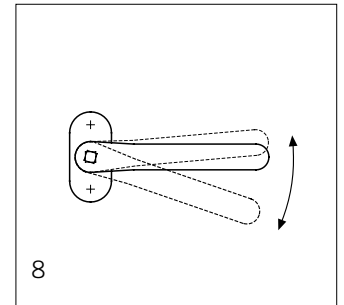
Front-end borehole

To further reduce any remaining play between spindle, follower and other parts, FSB recommends firmly tightening fittings for narrow-frame doors against the spindle via the grub screw in the front-end borehole.



Antislip and screw-retention device

Notwithstanding the use of rivet nuts and non-loosening screws, at their fixing centres all FSB roses forming part of hardware for narrow-frame doors feature retarder plugs made of a rubbery plastic. These retarder plugs project slightly beyond the reverse of the rose and are compressed when the screws are tightened. Hence, they act as an antislip device against their host surface whilst also providing the necessary axial and radial tension to keep the screws in a vice-like grip (Fig. 7).



Spring loading

Virtually the entire FSB range for narrow-frame doors is fitted with a positive mechanism to support the lock springs. This restricts the angle of operation to 45°. If required (i.e. for inactive doors), the positive mechanism can be straightforwardly removed from the base-rose. (Fig. 8)

Lever handle on oval rose

Uncranked FSB lever handles are supplied for invisible fixing to narrow-frame doors on oval roses. They are fitted with positive mechanisms (maximum angle of operation 45°) and optionally front-end boreholes.

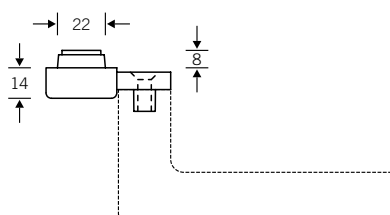
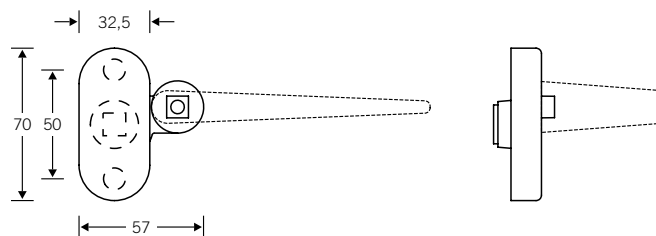
Supplied as standard with 8 mm square hole. Lever handle variants for fire and smoke stop doors with 9 mm square hole.

FSB Adaptor-solution

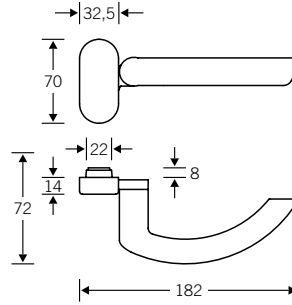


Many architects and planners set store by matching lever handle designs for internal and narrow-frame doors. On the pages that follow, FSB offers a wide range of solutions for some of its typical lever handle types.

Since it is not possible to design separate narrow-frame handles to go with all our internal-door models, however, FSB recommends using its patented and design-protected adaptor combination. The Picture opposite visualises a few of the possible options. Whilst variants in stainless steel are generally suitable for use on smoke and fire control doors, there are restrictions in this respect as regards aluminium.

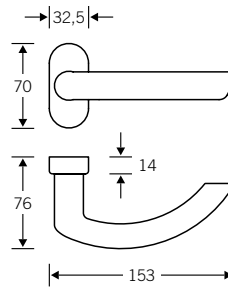


Lever handles for framed doors fixed on oval rose,
with concealed fixing and support mechanism
8 mm □-hole
9 mm □-hole for fire and smoke stop doors* **F**



0619 17..
1744 r.h. | 1745 l.h.
Aluminium
Stainless steel

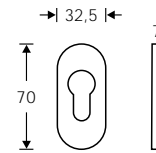
0619 18.. **F**
1864 r.h. | 1865 l.h.
Aluminium
Stainless steel



7219 25
Aluminium
Stainless steel

7619 25 **F**
Aluminium
Stainless steel

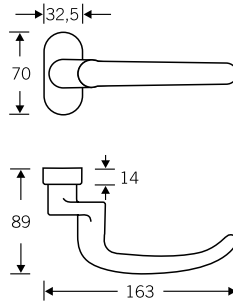
Handing required



1757
Aluminium
Stainless steel

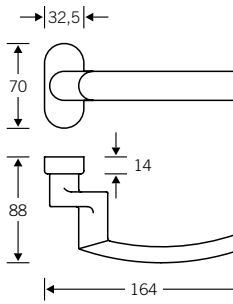
* acc. to German DIN standard

Lever handles for framed doors fixed on oval rose, with concealed fixing and support mechanism
 8 mm □-hole
 9 mm □-hole for fire and smoke stop doors* **F**



0653 21

Aluminium
 Stainless steel

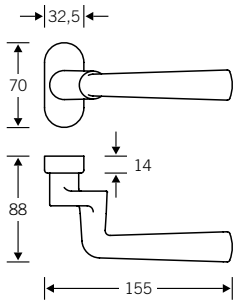
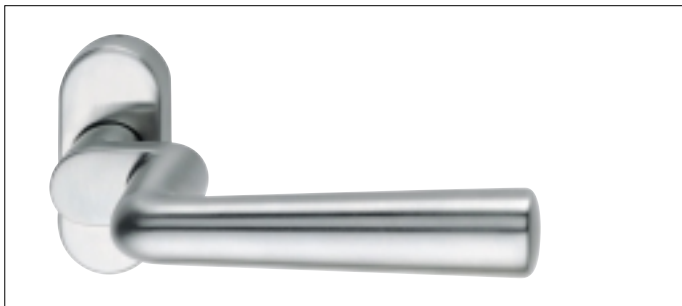


0607 21

Aluminium
 Stainless steel

0607 22 **F**

Aluminium
 Stainless steel

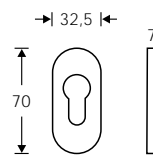


0673 21

Aluminium
 Stainless steel

0673 22 **F**

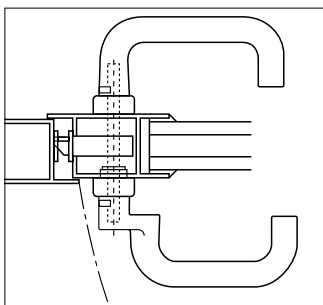
Aluminium
 Stainless steel



1757

Aluminium
 Stainless steel

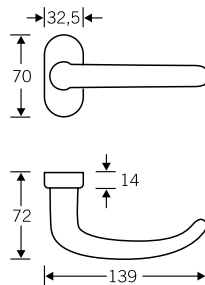
8



The cranked lever handles, illustrated on these pages, are the well-tried forerunners of the solution illustrated on page 424. Their operating principles are set out on pages 422 and 423.

c:c screwholes 50 mm, for countersunk screws M5
 Fixing accessories cf. page 486.

Lever handles for framed doors fixed on oval rose,
with concealed fixing and support mechanism
8 mm □-hole
9 mm □-hole for fire and smoke stop doors* **F**

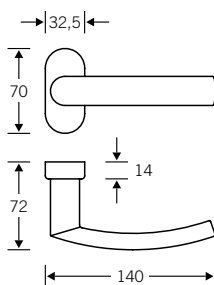


7223 25

Aluminium
Stainless steel

7623 25 **F**

Aluminium
Stainless steel

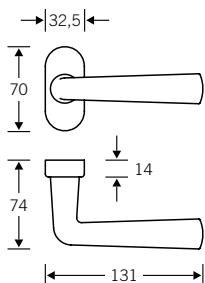


7240 25

Aluminium
Stainless steel

7640 25 **F**

Aluminium
Stainless steel

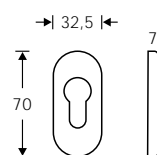
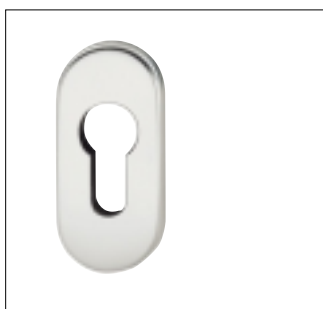


7273 25

Aluminium
Stainless steel

7673 25 **F**

Aluminium
Stainless steel



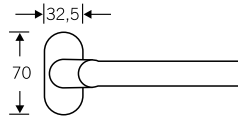
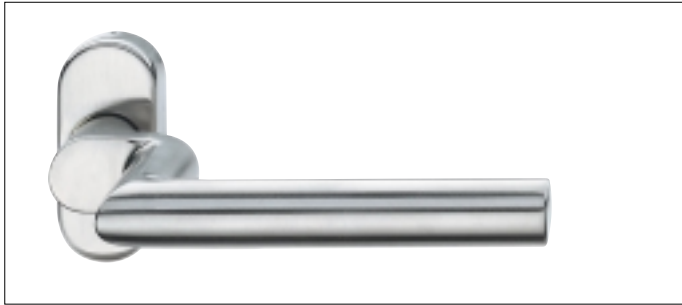
1757

Aluminium
Stainless steel

* acc. to German DIN standard

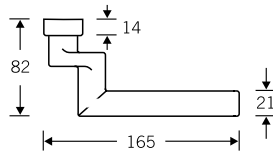
c:c screwholes 50 mm,
for countersunk screws M5
Fixing accessories cf. page 486.

Lever handles for framed doors fixed on oval rose, with concealed fixing and support mechanism
 8 mm □-hole
 9 mm □-hole for fire and smoke stop doors* **F**



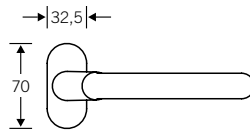
0656 21

Aluminium
 Stainless steel



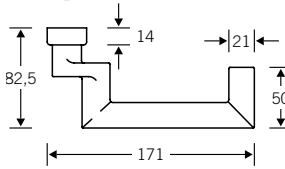
0656 22 **F**

Aluminium
 Stainless steel



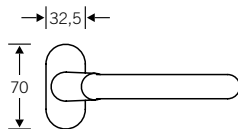
0616 21

Aluminium
 Stainless steel



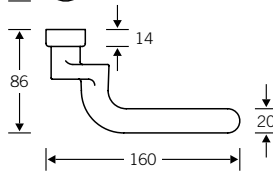
0616 22 **F**

Aluminium
 Stainless steel



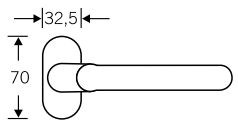
0647 21

Aluminium
 Stainless steel



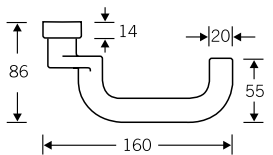
0647 22 **F**

Aluminium
 Stainless steel



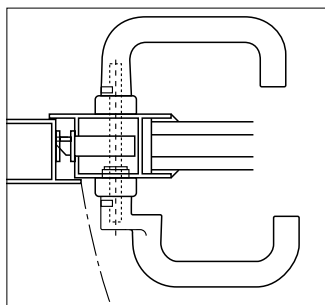
0665 21

Aluminium
 Stainless steel



0665 22 **F**

Aluminium
 Stainless steel



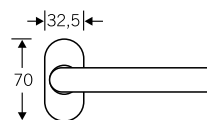
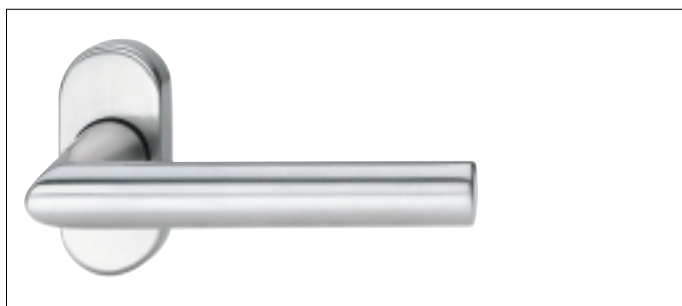
The cranked lever handles, illustrated on these pages, are the well-tried forerunners of the solution illustrated on page 424. Their operating principles are set out on page 422 and 423.

c:c screwholes 50 mm, for countersunk screws M5
 Fixing accessories cf. page 486.

Lever handles for framed doors fixed on oval rose,
with concealed fixing and support mechanism

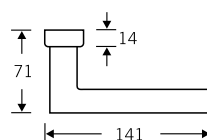
8 mm □-hole

9 mm □-hole for fire and smoke stop doors* **F**



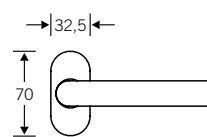
7276 25

Aluminium
Stainless steel



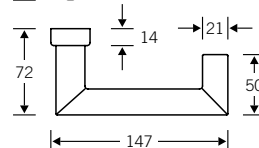
7676 25 **F**

Aluminium
Stainless steel



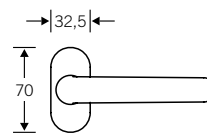
7216 25

Aluminium
Stainless steel



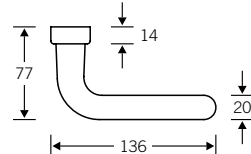
7616 25 **F**

Aluminium
Stainless steel



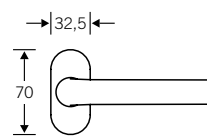
7247 25

Aluminium
Stainless steel



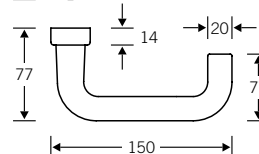
7647 25 **F**

Aluminium
Stainless steel



7270 25

Aluminium
Stainless steel



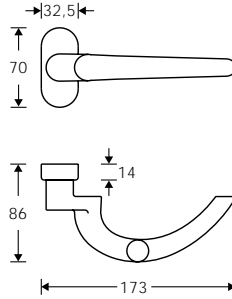
7670 25 **F**

Aluminium
Stainless steel

* acc. to German DIN standard

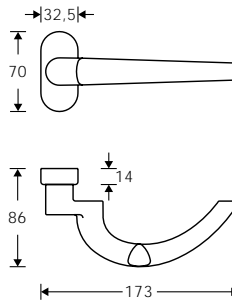
c:c screwholes 50 mm,
for countersunk screws M5
Fixing accessories cf. page 486.

Lever handles for framed doors fixed on oval rose, with concealed fixing and support mechanism
 8 mm □-hole
 9 mm □-hole for fire and smoke stop doors* **F**



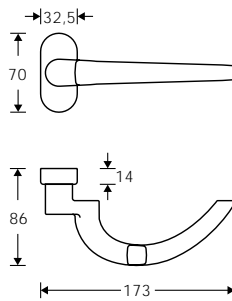
0680 21
 Aluminium natural colour
 anodised
 Stainless steel

0680 22 **F**
 Stainless steel



0681 21
 Aluminium natural colour
 anodised
 Stainless steel

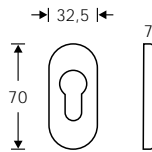
0681 22 **F**
 Stainless steel



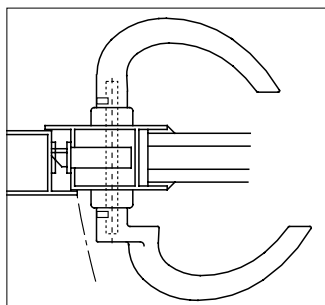
0682 21
 Aluminium natural colour
 anodised
 Stainless steel

0682 22 **F**
 Stainless steel

8



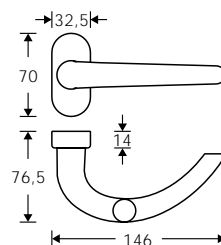
1757
 Aluminium
 Stainless steel



The cranked lever handles, illustrated on these pages, are the well-tried forerunners of the solution illustrated on page 424. Their operating principles are set out on page 422 and 423.

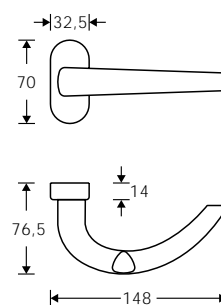
c:c screwholes 50 mm,
 for countersunk screws M5
 Fixing accessories cf. page 486.

Lever handles for framed doors fixed on oval rose,
with concealed fixing and support mechanism
8 mm □-hole
9 mm □-hole for fire and smoke stop doors* **F**



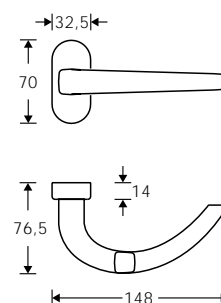
7210 25
Aluminium natural colour
anodised
Stainless steel

7610 25 **F**
Stainless steel



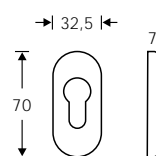
7211 25
Aluminium natural colour
anodised
Stainless steel

7611 25 **F**
Stainless steel



7212 25
Aluminium natural colour
anodised
Stainless steel

7612 25 **F**
Stainless steel

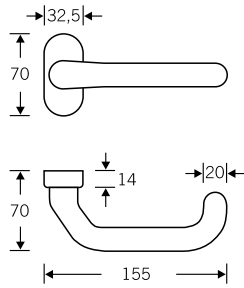


1757
Aluminium
Stainless steel

* acc. to German DIN standard

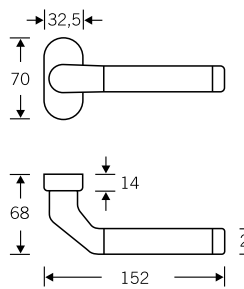
c:c screwholes 50 mm,
for countersunk screws M5
Fixing accessories cf. page 486.

Lever handles for framed doors fixed on oval rose, with concealed fixing and support mechanism
 8 mm □-hole
 9 mm □-hole for fire and smoke stop doors* **F**



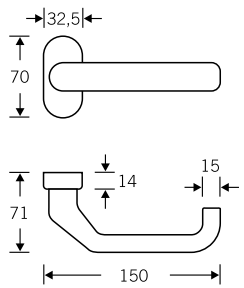
0646 21
 Aluminium
 Stainless steel
 Aluminium + colour

0646 22 **F**
 Aluminium
 Stainless steel
 Aluminium + colour



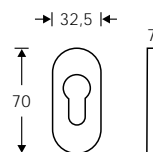
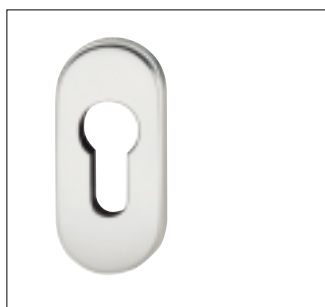
0664 21
 Aluminium
 black handle

0664 22 **F**
 Aluminium
 black handle

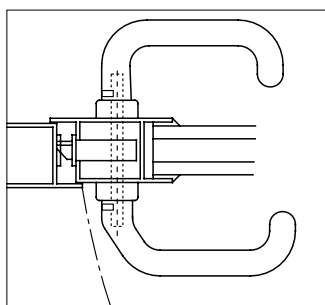


0662 21
 Aluminium
 Stainless steel
 Aluminium + colour

0662 22 **F**
 Aluminium
 Stainless steel
 Aluminium + colour



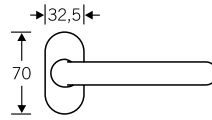
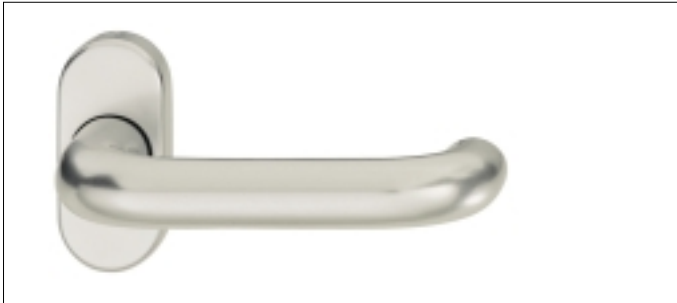
1757
 Aluminium
 Stainless steel



The cranked lever handles, illustrated on these pages, are the well-tried forerunners of the solution illustrated on page 424. Their operating principles are set out on page 422 and 423.

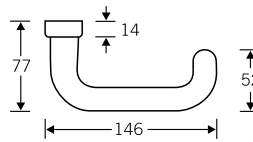
c:c screwholes 50 mm, for countersunk screws M5
 Fixing accessories cf. page 486.

Lever handles for framed doors fixed on oval rose,
with concealed fixing and support mechanism
8 mm □-hole
9 mm □-hole for fire and smoke stop doors* **F**



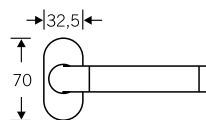
7246 25

Aluminium
Stainless steel



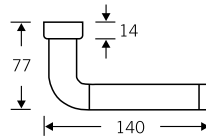
7646 25 **F**

Aluminium
Stainless steel



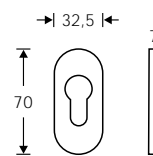
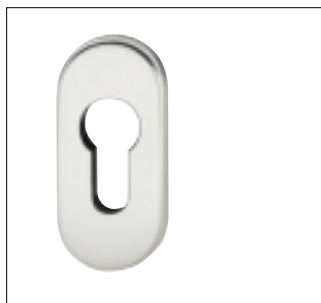
7289 25

Aluminium
black handle



7689 25 **F**

Aluminium
black handle



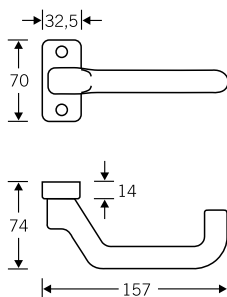
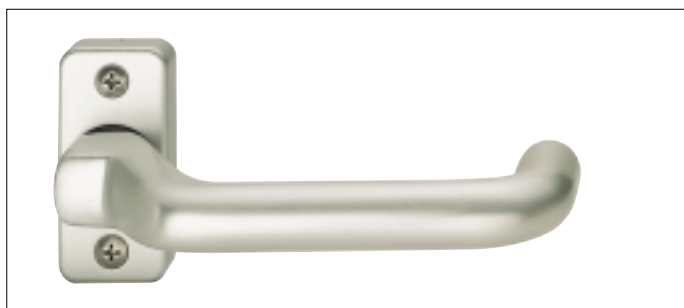
1757

Aluminium
Stainless steel

* acc. to German DIN standard

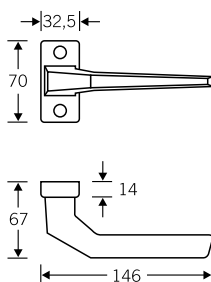
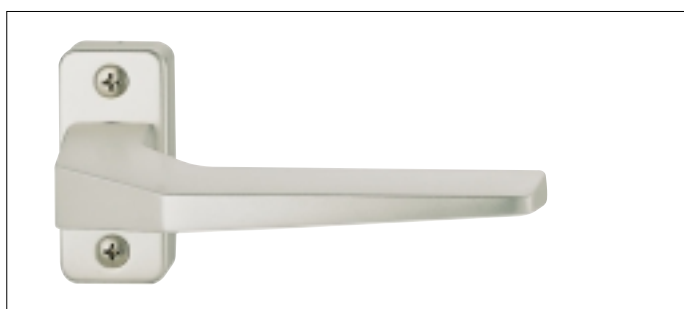
c:c screwholes 50 mm,
for countersunk screws M5
Fixing accessories cf. page 486.

Lever handles for framed doors fixed on angular rose,
with visible fixing and support mechanism
8 mm □-hole



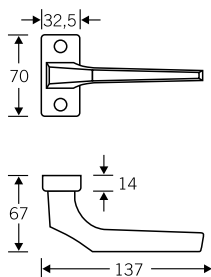
0663 16

Aluminium
Aluminium + colour



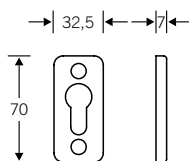
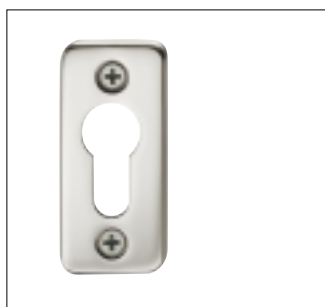
0668 16

Aluminium
Aluminium + colour



0620 16

Aluminium
Aluminium + colour

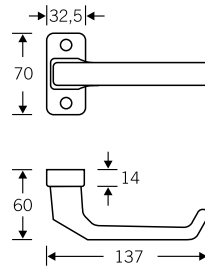


1717

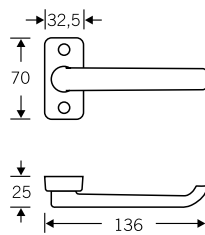
Aluminium
Aluminium + colour

c:c screwholes 50 mm,
for countersunk screws M5
Fixing accessories cf. page 486.

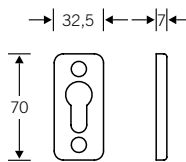
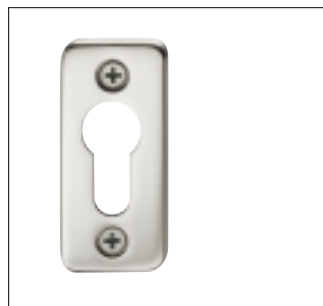
Lever handles for framed doors fixed on angular rose,
with visible fixing
8 mm □-hole



0605 13
Aluminium
Aluminium + colour



0634 02
Aluminium
Aluminium + colour

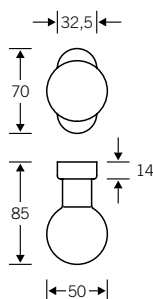


1717
Aluminium
Aluminium + colour

c:c screwholes 50 mm,
for countersunk screws M5
Fixing accessories cf. page 486.

Door knobs for framed doors

with concealed fixing



0602

Aluminium
Stainless steel

turnable


8 mm □-hole
0602 2853

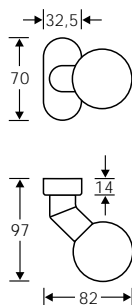
9 mm □-hole
0602 3863 Aluminium 
0602 2863 Stainless steel 

2302

fixed

2302 2801

2302 1801 Aluminium 
2302 2801 Stainless steel 



0638

Aluminium
Stainless steel

turnable


8 mm □-hole
0638 2853

9 mm □-hole
0638 2863 Stainless steel 

2346

fixed

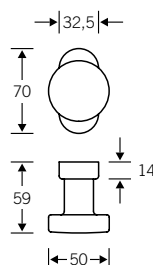
2346 2801

2346 1801 Aluminium 
2346 2801 Stainless steel 

c:c screwholes 50 mm,
for countersunk screws M5
Fixing accessories cf. page 486.

Door knobs for framed doors

with concealed fixing



0629

Aluminium Ø 50 mm
Stainless steel Ø 55 mm

turnable

8 mm □-hole
0629 2853

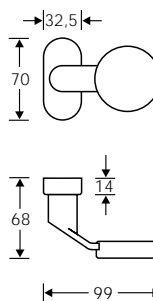
9 mm □-hole
0629 3863 Aluminium 
0629 2863 Stainless steel 

2329

fixed

2329 2801

2329 1801 Aluminium 
2329 2801 Stainless steel 



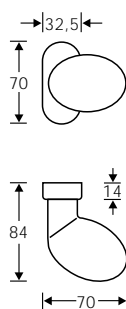
0654 28

Stainless steel

turnable 8 mm □-hole

2354 28

fixed



0604 28

Aluminium natural colour
anodised
Stainless steel

turnable 8 mm □-hole

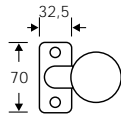
2304 28

fixed

c:c screwholes 50 mm,
for countersunk screws M5
Fixing accessories cf. page 486.

Door knobs for framed doors

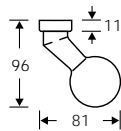
with visible fixing



0638 02

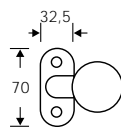
Aluminium

turnable with 8 mm □-hole



2346 02

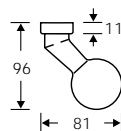
fixed



0638 08

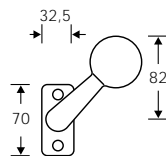
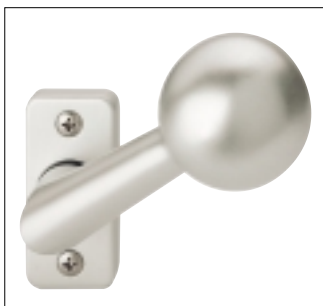
Aluminium

turnable with 8 mm □-hole



2346 08

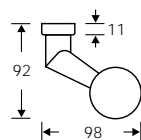
fixed



0637 02

Aluminium

turnable with 8 mm □-hole

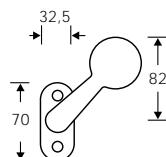


2348

fixed

2348 4201 r.h.

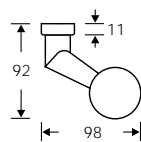
2348 5201 l.h.



0637 08

Aluminium

turnable with 8 mm □-hole



2348

fixed

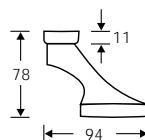
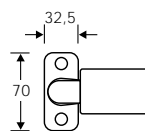
2348 4801 r.h.

2348 5801 l.h.

c:c screwholes 50 mm,
for countersunk screws M5
Fixing accessories cf. page 486.

Door knobs for framed doors

with visible fixing



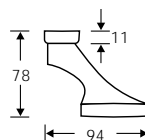
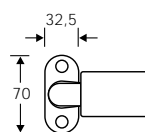
0636 02

Aluminium

turnable with 8 mm □-hole

2336 02

fixed



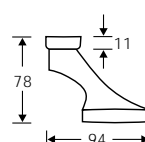
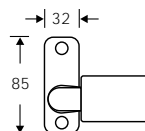
0636 08

Aluminium

turnable with 8 mm □-hole

2336 08

fixed



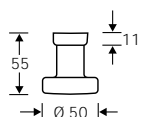
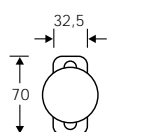
0686 06

Aluminium

turnable with 8 mm □-hole

2386 06

fixed



0643 02

Aluminium

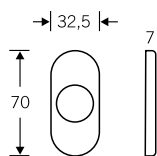
turnable with 8 mm □-hole

2343 02

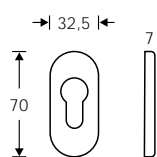
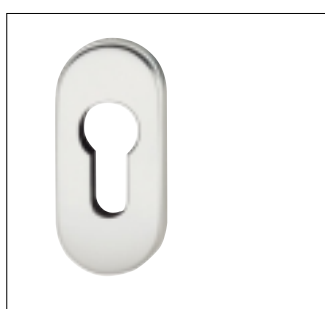
fixed

c:c screwholes 50 mm, for countersunk screws M5.
 Door knobs 0686 06 and 2386 06 c:c screwholes 67,5 mm for countersunk screws M5.

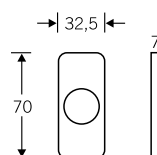
Roses for
framed doors



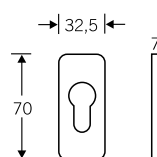
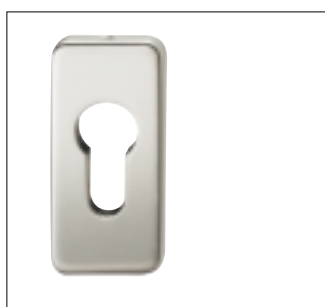
1758
Aluminium
Stainless steel



1757
Aluminium
Stainless steel



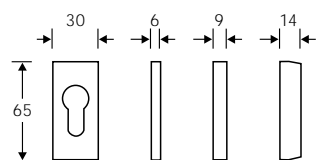
1718
Aluminium



1719
Aluminium

c:c screwholes 50 mm,
for countersunk screws M5

Roses for framed doors



c:c screwholes 50 mm,
for countersunk screws M5

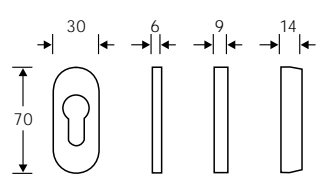
Sliding escutcheons

1776 6 mm

1777 9 mm

1779 14 mm

Aluminium
Stainless steel
Aluminium + colour



c:c screwholes 50 mm,
for countersunk screws M5

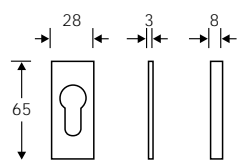
Sliding escutcheons

1726 6 mm

1727 9 mm

1728 14 mm

Aluminium
Stainless steel
Aluminium + colour

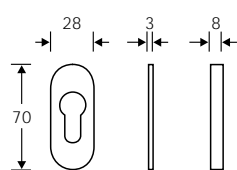


Self adhesive escutcheons

1768 3 mm

1769 8 mm

Aluminium
Stainless steel
Aluminium + colour



Self adhesive escutcheons

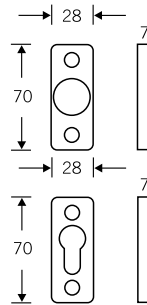
1729 3 mm

1730 8 mm

Aluminium
Stainless steel
Aluminium + colour

Roses Backplate

for framed doors

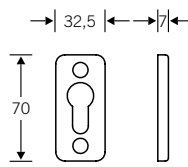
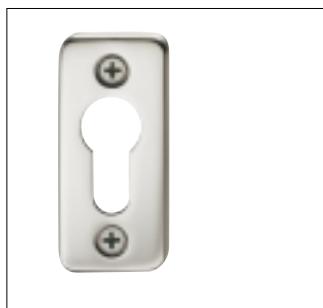


1752

1755

Aluminium
Aluminium + colour

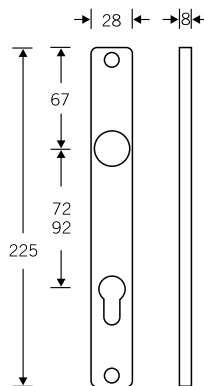
c:c screwholes 50 mm,
for countersunk screws M5



1717

Aluminium
Aluminium + colour

c:c screwholes 50 mm,
for countersunk screws M5

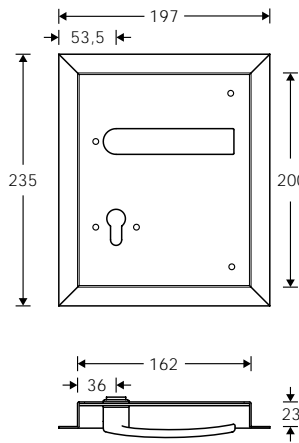


1550

Aluminium

c:c screwholes 210 mm,
for countersunk screws M4

Gymnasium fittings



7949

Stainless steel

Applications exist in which it is not permissible for the handle to protrude above the surface of the door, in the case of sliding-door designs, for instance, or gymnasium doors.

FSB has devised two models of gymnasium fittings for such applications. The FSB 7949 model is angular with mitred corners. FSB 7950, by contrast, features rounded edges.

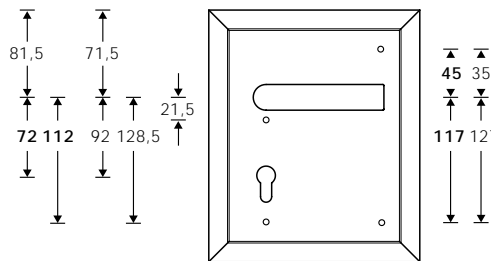
Flush handles FSB 7949 and 7950 are combined on the reverse side with hardware from the FSB heavy-duty programme, with the option of either a backplate or rose. Cf. page 91ff.

Doors to which flush handles are to be fitted must be at least 55 mm thick. To rule out any chance of injury, it should be ensured when fitting the handle that there is sufficient backset and the rim rests fully flush against the door.

Backplate version to suit PZ 72 and 92 mm

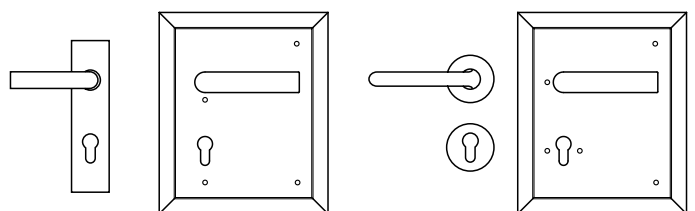
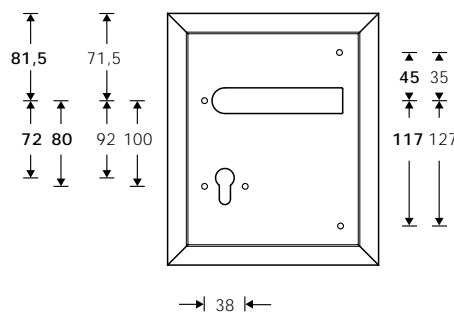
Inner backplate PZ 72 mm: 1450 03 / 1451 03

Inner backplate PZ 92 mm: 1452 03 / 1453 03



Roses version to suit PZ 72 and 92 mm

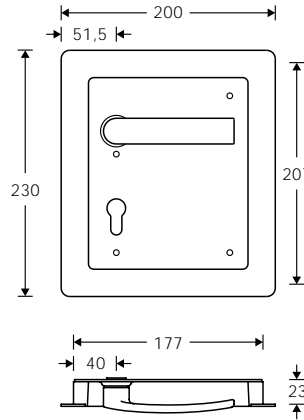
Roses: 1731 / 1735 resp. 1707 / 1708



Backplate version

Roses version

Gymnasium fittings



7950 Backplate version

7952 Roses version

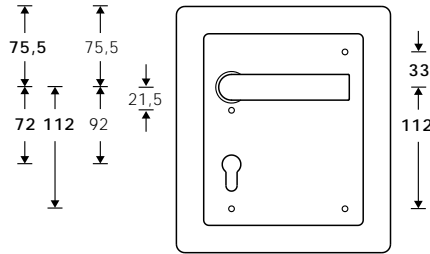
Aluminium
Stainless steel

Edges: radius 8 mm

Backplate version to suit
PZ 72 and 92 mm

Inner backplate PZ 72 mm:
1450 03 / 1451 03

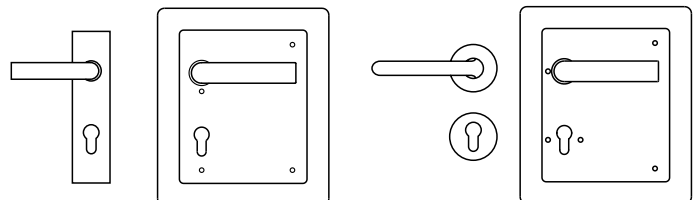
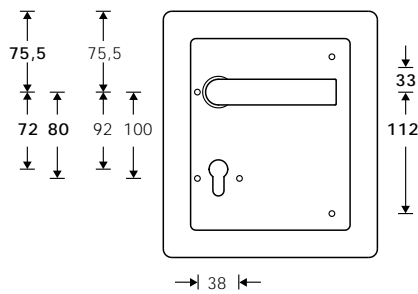
Inner backplate PZ 92 mm:
1452 03 / 1453 03 resp.
1410 03 / 1418 03



With the PZ 92 backplate,
through fixing is only possible
below the lever bearing.

Roses version to suit
PZ 72 and 92 mm

Roses:
1731 / 1735 resp.
1707 / 1708



Backplate version

Roses version

Fittings for glass doors

9

Lever handle furniture for glass doors	447
Entrance door furniture for glass doors	448
Door knobs for glass doors	449 and 450

Fittings for glass doors

Over the past decade, glass doors have become an important design feature in both domestic and public-block construction. The builders hardware industry has adjusted to the task of designing the fittings to mount, operate, and lock such doors so they do not lessen the transparency of the glass. To an extent, the notion has been fostered that glass doors will only take special-purpose furniture. This is a little misleading. FSB, for instance, has found it possible to design nearly all its levers and knobs in such a way that they can be modified for use on glass doors.

Glass doors can be fitted with pull handles (cf. page 315ff.), lever handles for customised glass door locks or fixed door knobs.

Public buildings generally feature glass doors with tubular pull handles for added safety.

Instead of these large tubular handles, non-rotating door knobs can be deployed. 'Less is more', so they say, and dead knobs certainly look less conspicuous than their larger tubular counterparts. They suggest themselves as a design feature notably in the domestic sphere.

Lever handle furniture for glass doors

When deploying lever handle or entrance door furniture, there are two basic options to be considered:

Lever handles and door knobs without roses can be fitted straight onto the lock case.

Lever handles and door knobs with roses can be fitted onto glass door locks if these are suitably adapted.

In both cases, FSB can supply modified versions of all FSB models.

Both assembly options are illustrated on the pages that follow. FSB has diagrams and locks for all the leading makes of glass doors. The assembly procedure has in each case been gauged to match.

Fixed door knobs for glass doors

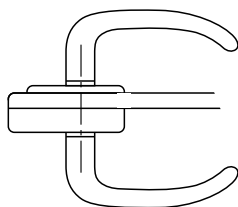
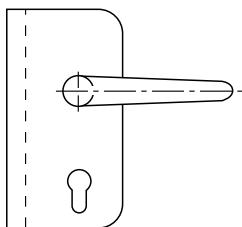
Fixed door knobs are usually fastened directly to the glass door. There is no lock in use. The knobs are coupled on site using a 12 mm threaded spindle and secured with a grub screw.

Orders

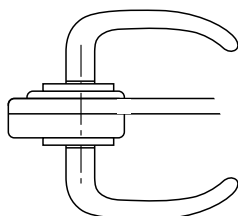
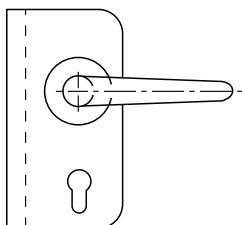
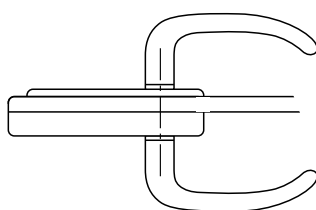
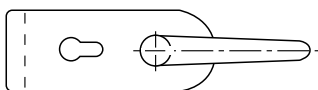
When ordering lever handles and door knobs for glass doors, it is necessary to state the make, exact type, and order number of the lock to avoid any disappointment.

Sufficient time should be allowed for any modifications that may be required. Deliveries from stock are not possible.

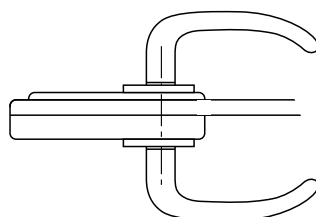
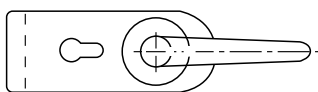
Lever handle furniture to suit glass door locks



FSB lever handle sets for use on glass doors feature modified bearings and spindle lengths (door thickness).



FSB lever handle furniture with roses can only be fitted to glass-door-locks that have been specially adapted.

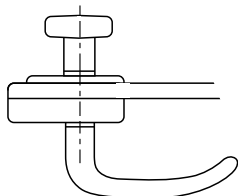
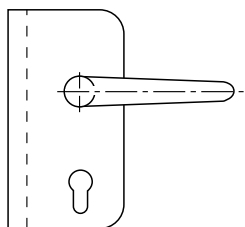


When ordering, please state lock type. We have detailed technical diagrams of the following lock types:

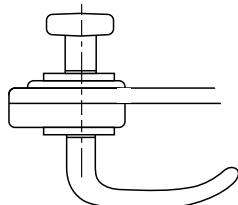
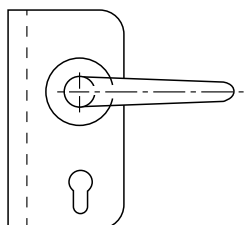
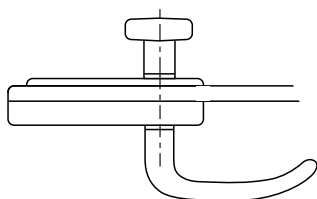
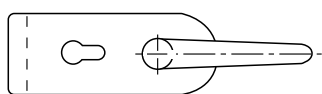
- DORMA Junior
- DORMA Junior-Office
- DORMA Studio-Rondo
- DORMA Studio-Gala
- KLARIT-Atelier-FR
- WSS-Objekta
- WSS-Studio 85
- WSS-Agency lock

Technical information page 446

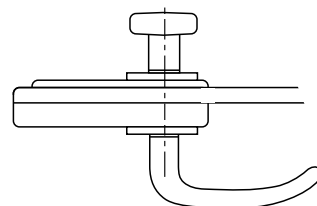
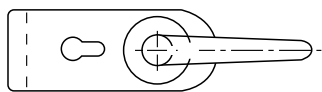
Front door furniture to suit glass door locks



FSB front door furniture with dead knob for use on glass doors feature modified bearings and spindle lengths (door thickness). Door knob is turnable.



FSB front door furniture with roses and dead knob can only be fitted to glass-door-locks that have been specially adapted.

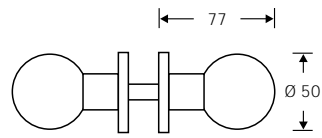
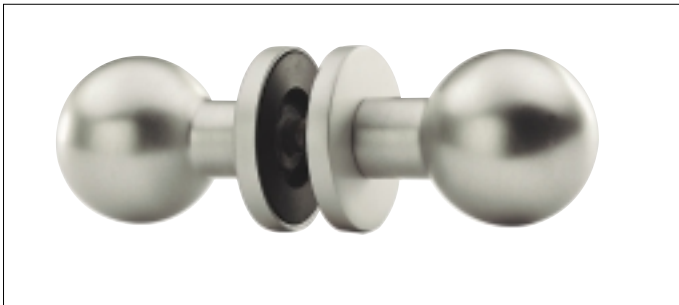


When ordering, please state lock type. We have detailed technical diagrams of the following lock types:

DORMA Junior
DORMA Junior-Office
DORMA Studio-Rondo
DORMA Studio-Gala
KLARIT-Atelier-FR
WSS-Objekta
WSS-Studio 85
WSS-Agency lock

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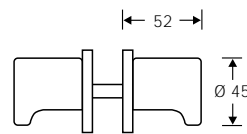
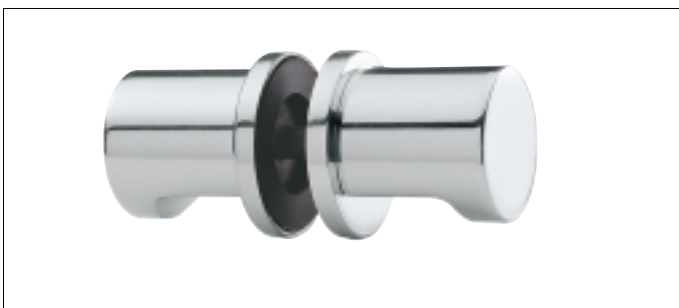
Dead knobs
for glass doors



2302 07

Aluminium
Brass
Stainless steel

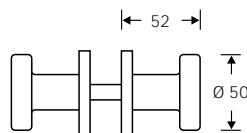
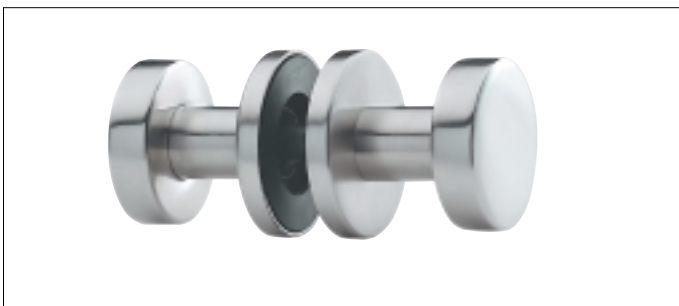
Bore hole \varnothing 13 mm



2322 07

Aluminium
Stainless steel

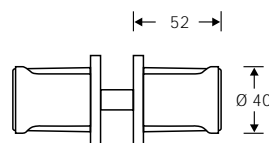
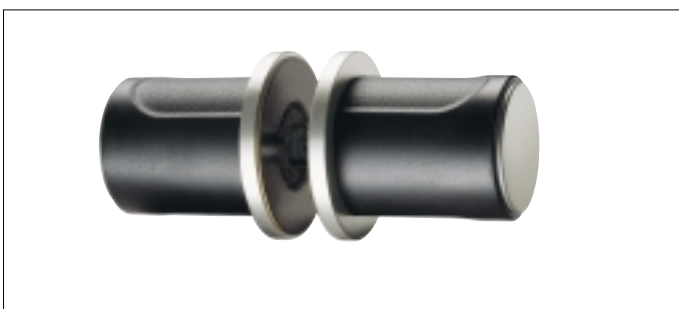
Bore hole \varnothing 13 mm



2329 07

Aluminium
Stainless steel (\varnothing 55 mm)

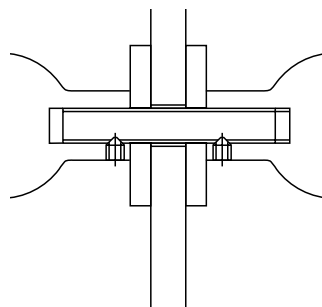
Bore hole \varnothing 13 mm



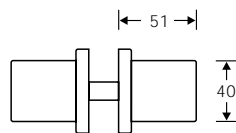
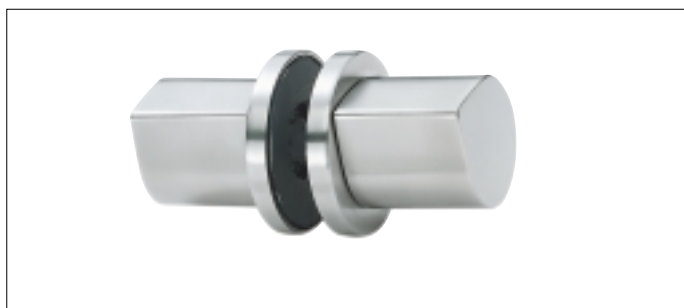
2376 07

Aluminium grey
Thermoplastics black

Bore hole 13 mm \varnothing



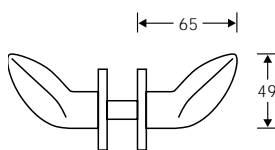
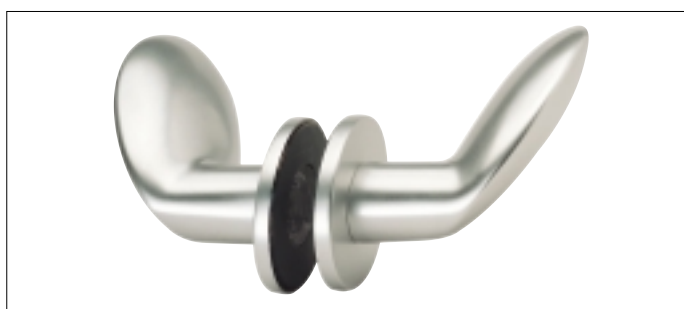
Dead knobs
for glass doors



2308 07

Stainless steel

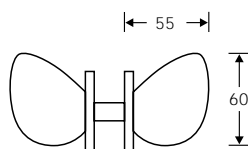
Bore hole Ø 13 mm



2326 07

Aluminium natural colour
anodised

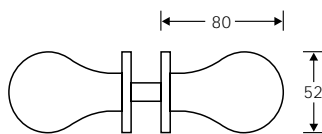
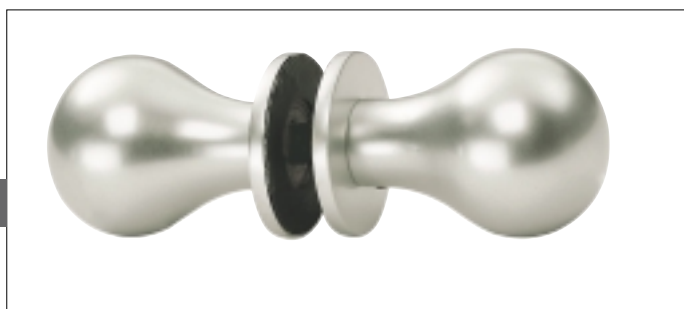
Bore hole Ø 13 mm



2339 07

Aluminium natural colour
anodised

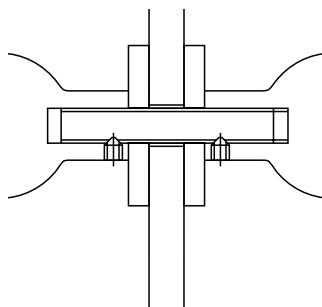
Bore hole Ø 13 mm



2374 07

Aluminium natural colour
anodised

Bore hole Ø 13 mm



Panic fittings

A panic fitting is actually a set comprising a lock, a cylinder, and a handle that allows locked doors on escape routes to be opened by simply operating a lever handle or crossbar device.

FSB feels compelled by events to emphasise here that standard panic furniture in Germany cannot be compared with the easy-action panic lock configurations used abroad. German panic hardware is designed to conform to the stringent fire-safety and emergency-exit provisions stipulated under German law and has the task of ensuring locked doors can be opened in an emergency. Accordingly, hardware of this type is not appropriate for doors in constant use. Attention is invariably drawn to these points in German lock-makers' catalogues. German hardware manufacturers cannot accept liability for wobbly fittings, broken spindles, sagging handles or doors that won't close, if their advice is disregarded. In recent years, many clients wishing to locate large heavyweight panic doors in general transit areas have resorted to fitting bar handles alongside the panic furniture for push and pull operations. In such cases, the panic hardware exclusively serves to operate the lock mechanism, whilst the sturdy bar handle is used for pulling or pushing the door (cf. page 461). FSB can provide suitable design proposals for concrete requirements.

There follows a synopsis of the main specifications relating to fire barriers, escape routes, and emergency exit hardware:

DIN 18 082, Part 1

Fire barriers
Steel doors T 30-1
Construction type A
Section 5.4.5

DIN 18 082, Part 3

Fire barriers
Steel doors T 30-1
Construction type B
Section 5.3.5

DIN 18 095, Part 1

Smoke stop doors
Definitions and requirements

DIN 18 095, Part 2

Smoke stop doors
Type testing for operational
endurance and tightness

DIN 18 250

Mortise locks for fire barriers
Section 6.9

DIN 18 273

Architectural hardware, lever
handle units for fire doors and
smoke stop doors, concepts
and definitions, dimensions,
requirements and testings.

DIN 4102 Part 18

Fire characteristics of building
materials and construction
parts Section 4.1.2 (Architectural
hardware)

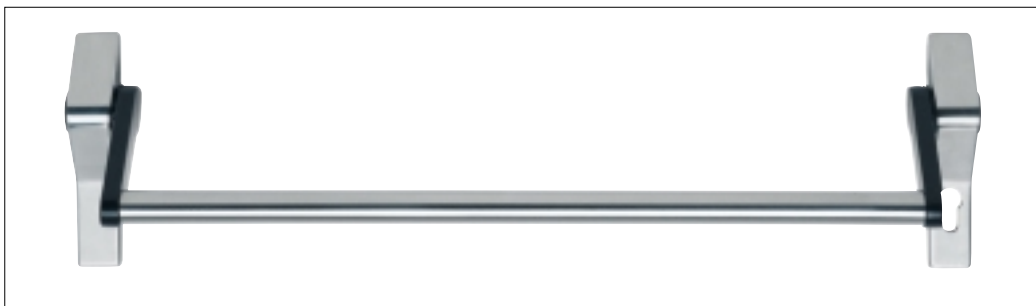
Directives for the approval of fire barriers issued by the Institut für Bautechnik, Berlin, in February 1983

Section 4 of this Directive defines a single-leaf door (4.1), double doors (4.2), construction types of fire barriers and their specific requirements. Section 4.1.2 – Furniture and Hinges – sets forth the requirements for lever handles and accessories. With regard to the panic crossbar fitting, it states: 'Instead of lever handles, what are known as crossbar handles can be fitted to the push side of emergency exit doors. They must extend over at least three-quarters of the width of the leaf.' The structural requirements for lever handles (e.g. steel core) are also applicable to crossbar handles.

There are additional regulations for the German federal state of North-Rhine Westphalia. Please contact us for further details in such cases.

Unless expressly stated otherwise in this work, FSB emergency exit hardware in stainless steel and aluminium meets all the requirements for fire barriers. The relevant endorsements and test results are available on request.

Panic fittings



7970

Aluminium
Stainless steel

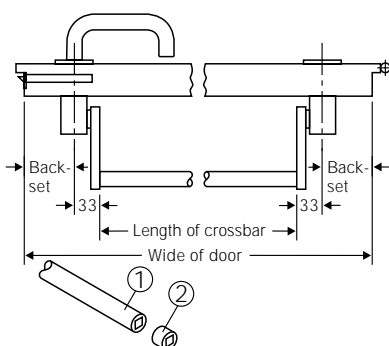
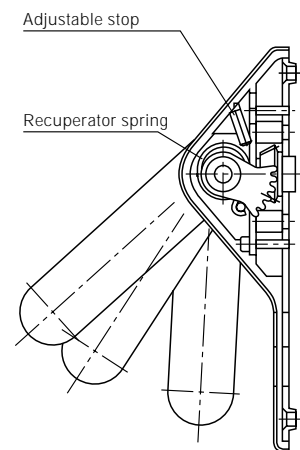
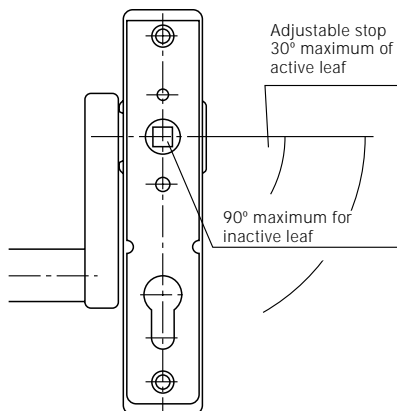
Description of function:

Bevel gearing and spindle combine to convert pressure on the cross bar into rotary motion acting on the lock follower. An adjustable stop protects the lock follower and is set at the fixing stage to suit the operating arc.



Dimensions:

Mounting boxes
185 x 36 mm,
all counter backplates
185 x 45 mm



Determining length crossbar:

Width of door
minus (2 x backset)
minus 67 mm
= Crossbar length

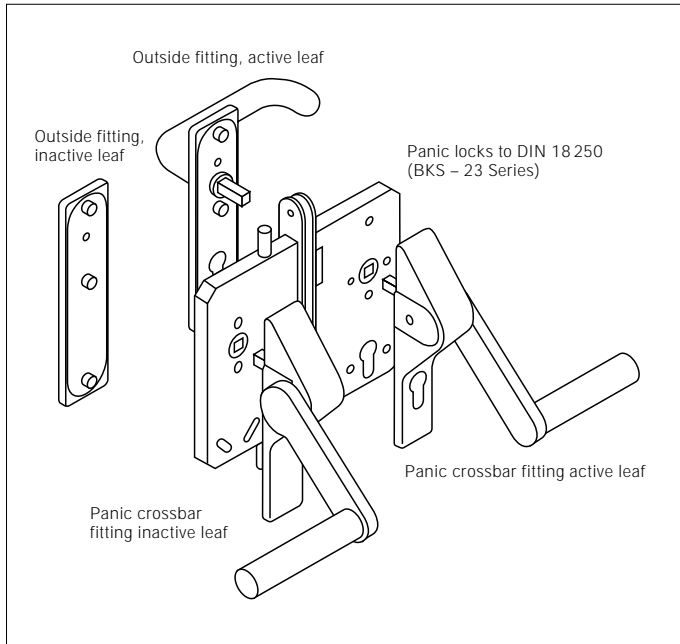
Note on fitting:

Cut crossbar (1) to size.

In the case of panic crossbars in stainless steel, insert plastic end piece (2).



Panic fittings



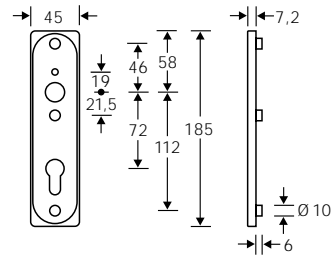
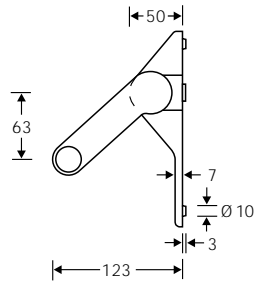
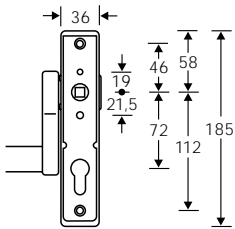
7970

Aluminium
Stainless steel

Crossbar furniture for
flush panic doors

The FSB 7970 panic crossbar fitting was developed for use on flush doors featuring BKS 23 series locks. All fixing dimensions correspond to the lock preparations in this BKS lock series.

The hardware package (FSB/BKS) was coordinated so that the FSB panic crossbar fitting on the active leaf and on the inactive leaf can be assembled with non-loosening screws through the preparations in the lock case from the inside or outside door face.



To ensure flawless fitting and operation, please advise lock type and its planned closing function with every enquiry or order.



Panic fittings



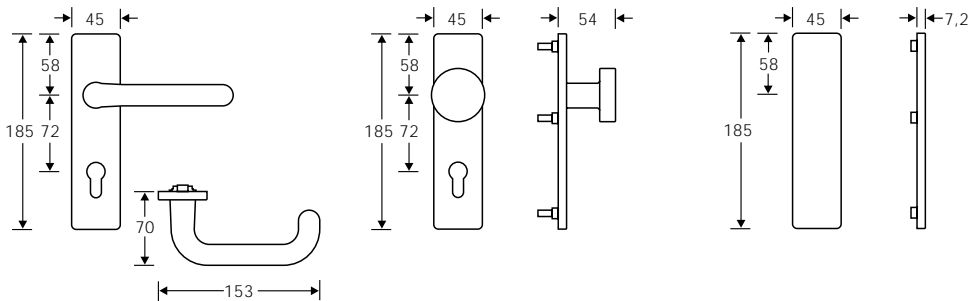
7970 0110

Aluminium
Stainless steel



7970 0200

Aluminium
Stainless steel



Outside furniture options

7971 0010

FSB lever handle turnably fixed on backplate concealed fixing for fire doors to German DIN standard, PZ 72 mm.

7972 0110

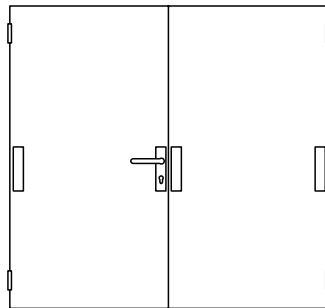
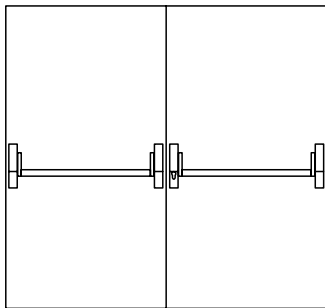
FSB backplate with dead knob concealed fixing for fire doors to German DIN standard PZ 72 mm.

7973 0000

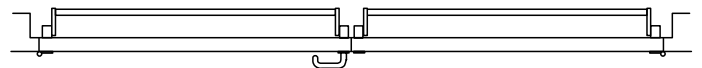
FSB blind backplate concealed fixing for fire doors to German DIN standard.



Panic fittings



Examples of use



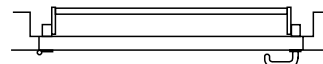
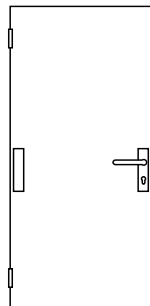
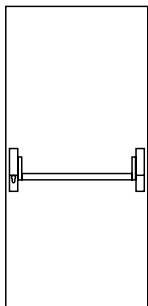
Active leaf

Inside: crossbar fitting 7970 0110
PZ 72 mm

Outside: lever handle with 7971 0010
counterbackplate PZ 72 mm
blind backplate 7973 0000

Inactive leaf

Inside: crossbar fitting 7970 0200
Outside: blind backplates 7973 0000

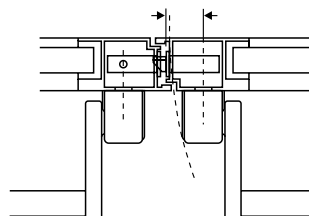
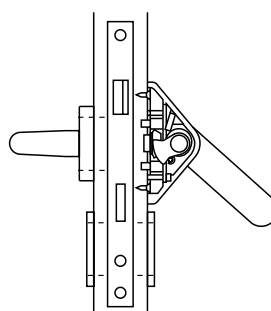
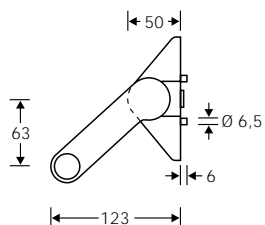
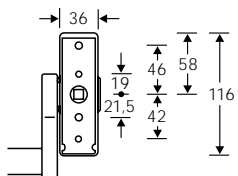
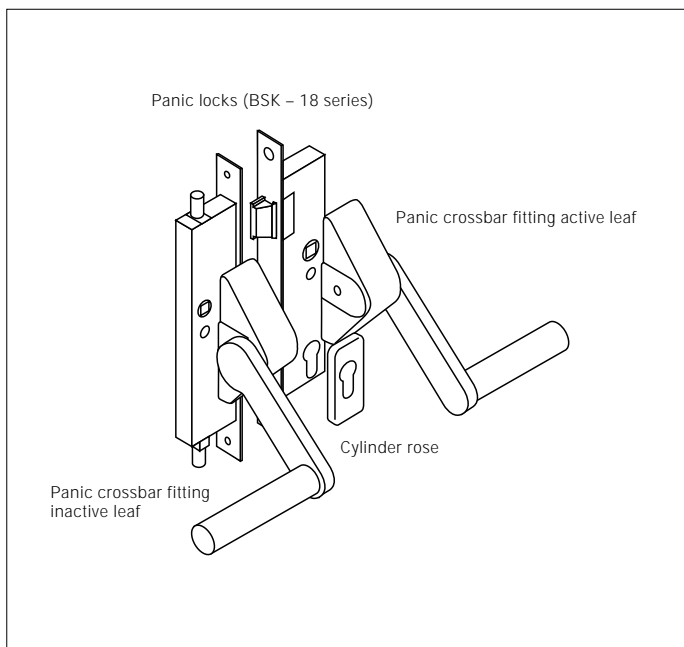


Inside: crossbar fitting 7970 0110
PZ 72 mm

Outside: lever handle with 7971 0010
counterbackplate PZ 72 mm

blind backplate 7973 0000

Panic fittings



7970

Aluminium
Stainless steel

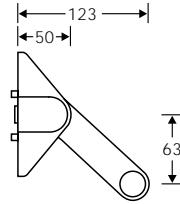
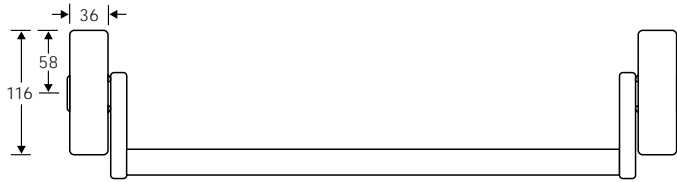
Crossbar fittings with slim mounting boxes for narrow frame panic doors

The FSB crossbar furniture FSB 7970 featuring slim mounting boxes was developed for narrow frame panic doors equipped with BKS lock series 18. The slim FSB panic mounting boxes can be combined with FSB cylinder roses for centres exceeding 92 mm.

When installing panic crossbar fittings with slim mounting boxes to panic doors, the geometry of the door and the backset of the lock determine the opening angle. These calculations should be carefully considered to avoid the possibility of jamming.

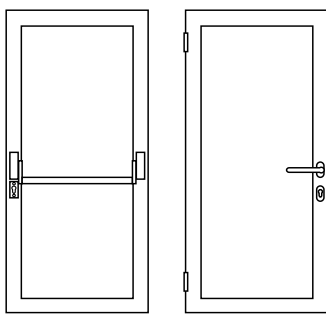
To ensure flawless fitting and operation, please advise lock type and its planned closing function with every enquiry or order.

Panic fittings

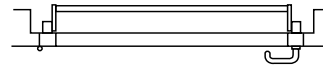


7970 0300

Aluminium
Stainless steel



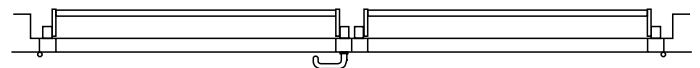
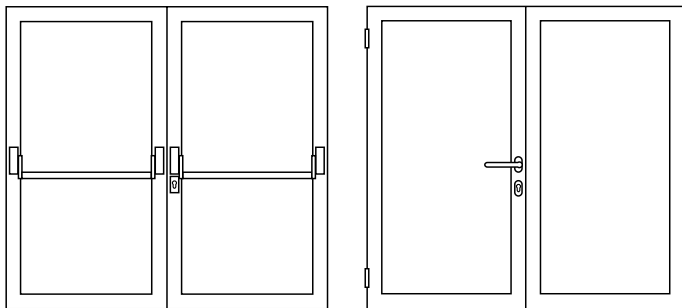
Examples of use



Inside: crossbar fitting

7970 0300

Outside:
lever handle with cylinder rose
from the FSB programme



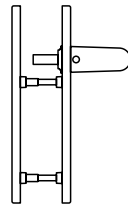
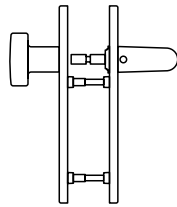
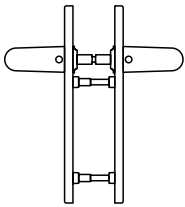
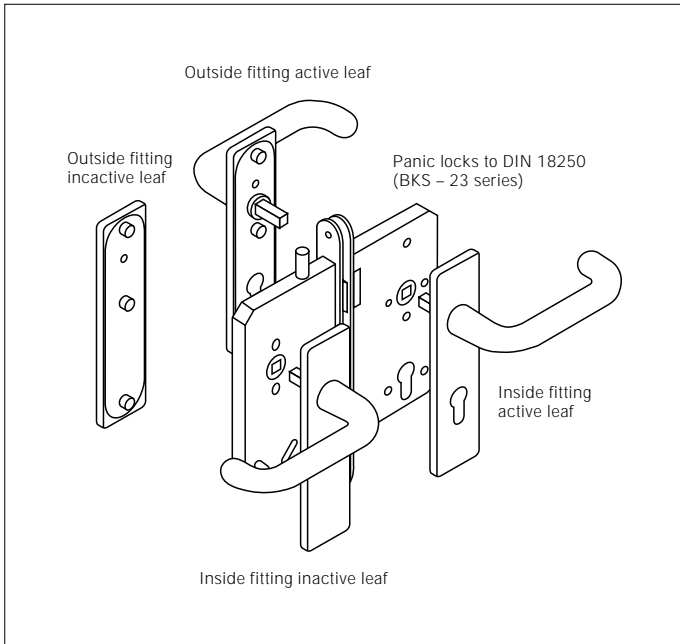
Active leaf 7970 0300
 Inside: crossbar fitting
 Cylinder rose
 Outside: lever handle with rose
 cylinder rose

Inactive leaf
 Inside: crossbar fitting 7970 0300



Panic fittings

Backplate version



Door furniture
lever handle on both sides

Entrance door furniture
Inside: lever handle
Outside: backplate with
dead knob

Inactive leaf furniture
Inside: lever handle
Outside: blind backplate

e. g.
1 set 7646 0410
1 each 0125

e. g.
1 set 7646 0510
1 each 0125

e. g.
1 set 7646 7400

Lever handle furniture for flush panic doors

Flush panic doors equipped with BKS 23 series locks can usually be fitted with any of FSB's fire door sets.

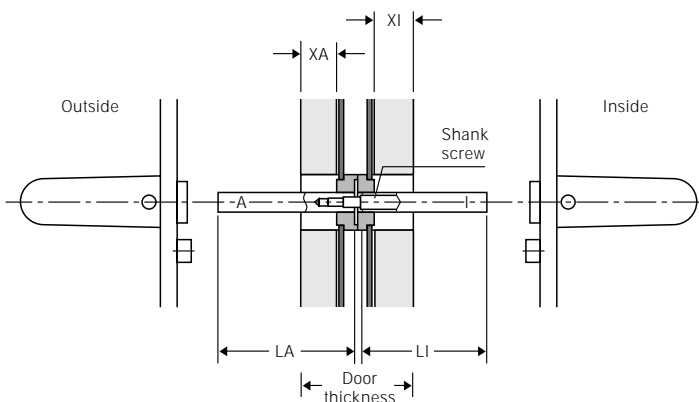
The FSB special spindle no. 0125 for door thicknesses from 34 mm to 101 mm, is ideal for use with locks incorporating a split follower.

Building Regulations should be borne in mind when ordering and we also require the following details:

- Door thickness
- Measurements XA and XI
- Product code for the FSB fire door furniture required

For FSB fire door fittings please also refer to catalogue sections a and c.

The FSB special spindle for locks with split follower is outlined in detail on page 485.

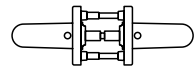
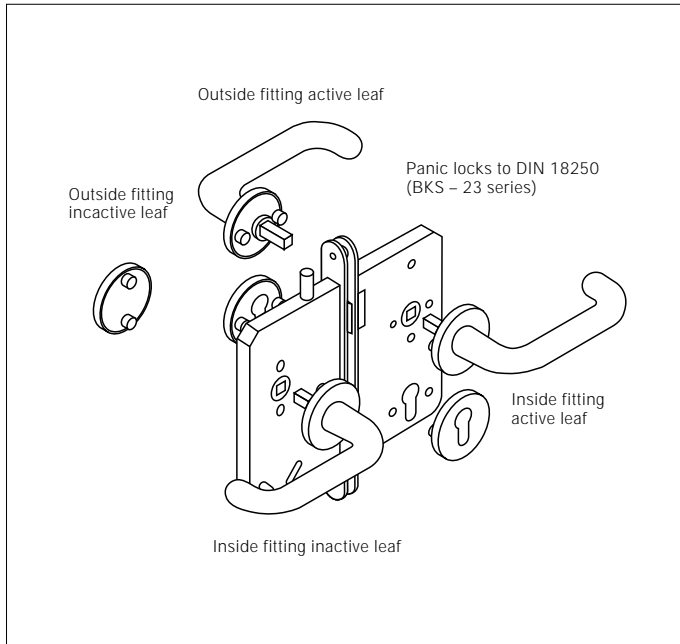


To ensure flawless fitting and operation, please advise lock type and its planned closing function with every enquiry or order.



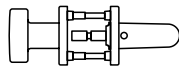
Panic fittings

Round rose version



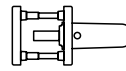
Door furniture
lever handle on both sides

e. g.
1 set 7646 1310
1 each 0125



Entrance door furniture
Inside: lever handle
Outside: dead knob

e. g.
1 set 7646 1210
1 each 0125



Inactive leaf furniture
Inside: lever handle
Outside: blind rose

e. g.
1 each 7646 7300

Lever handle furniture for flush panic doors

Flush panic doors equipped with BKS 23 series locks can usually be fitted with any of FSB's fire door sets.

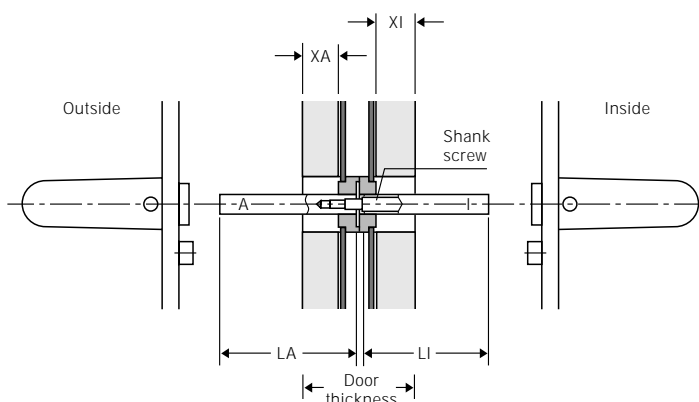
The FSB special spindle no. 0125 for door thicknesses from 34 mm to 101 mm, is ideal for use with locks incorporating a split follower.

Building Regulations should be borne in mind when ordering and we also require the following details:

Door thickness
Measurements XA and XI
Product code for the FSB fire door furniture required

For FSB fire door fittings please also refer to catalogue sections a and c.

The FSB special spindle for locks with split follower is outlined in detail on page 485.

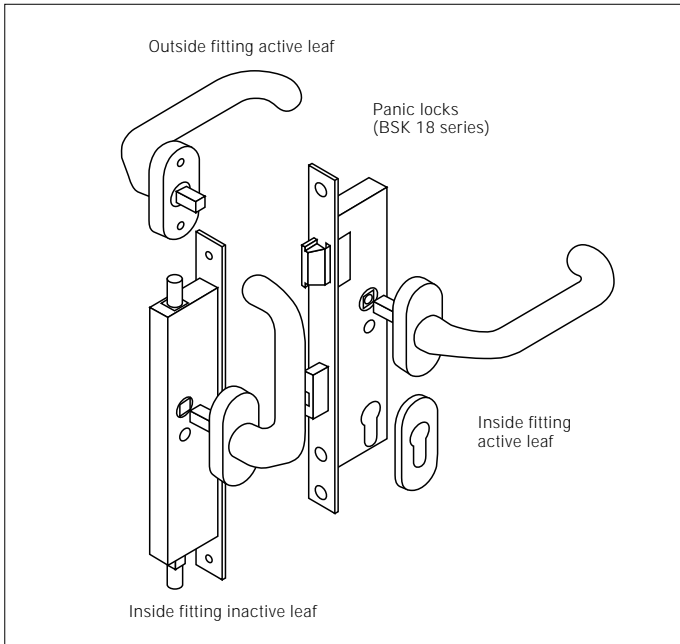


To ensure flawless fitting and operation, please advise lock type and its planned closing function with every enquiry or order.



Panic fittings

Oval rose version



FSB lever furniture for framed panic doors

FSB lever handles on oval rose for fire and smoke stop doors (in-line and cranked) can be used with matching accessories on all framed panic doors featuring BKS 18 series locks.

The FSB special spindle no. 0125 for door thicknesses from 34 mm to 101 mm, is ideal for use with locks incorporating a split follower.

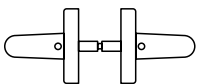
Building Regulations should be borne in mind when ordering and we also require the following details:

Door thickness
Measurements XA and XI
Product code for the FSB fire door furniture required

For FSB fire door fittings please also refer to catalogue sections a and c.

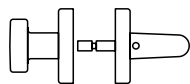
The FSB special spindle for locks with split follower is outlined in detail on page 485.

The relevant cranked-design lever handle sets are shown on pages 419ff.



Door furniture
lever handle on both sides

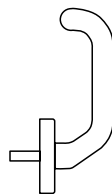
e. g.
2 each 0646 22
1 each 0125



Entrance door furniture

Inside: lever handle
Outside: dead knob

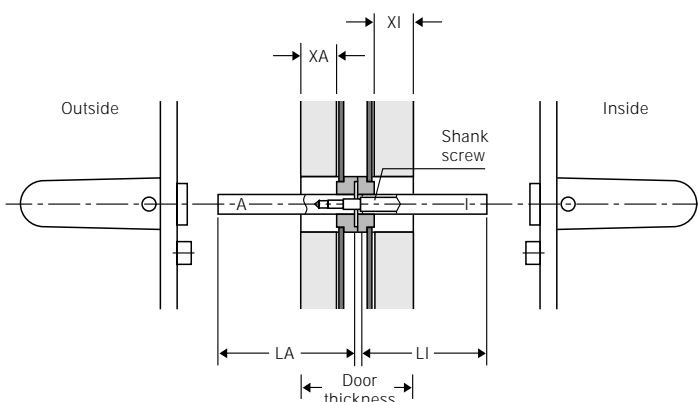
e. g.
1 each 0646 22
1 each 2329 28
1 each 0125



Inactive leaf furniture
Inside: lever handle

e. g.
1 each 0646 22
1 each 0173

10



To ensure flawless fitting and operation, please advise lock type and its planned closing function with every enquiry or order.

When fitting the lever handles, the roses must be secured against slippage by means of the lugs provided whilst the handles are rigidly tightened against the 9 mm spindle using a cup point stud bolt through the lever neck.

Unlatching and pulling or pushing



Lever handle for unlatching handle for pulling and pushing

We know from sorry experience that architects, interior designers and clients often disregard the recommendations of the hardware industry in respect of panic doors, allowing them to be used for general public transit. Such furniture is only intended for emergency application, however and subjecting it to regular heavy use can cause spindles to break, backplates and roses to work loose and locks to suffer damage. The following procedure has proved effective in such scenarios:

The panic door lever handle furniture is fitted together with a pull. In this disparate match, the lever handle has the task of releasing the panic lock, whilst the robust pull suggests itself as a means of pulling or pushing the door. It has been our observation that people very soon grasp how difficult it is to move a heavy panic door, with door-closer attached using a lightweight lever handle. It is only a matter of time, therefore, before attention switches to the sturdier fixed pull handle.

Where there is a likelihood – against the advice of the industry – of panic doors being used as standard transit points, FSB recommends fitting a lever/pull combination from the outset, instead of waiting until damage has occurred.

Kicking plates
Ventilation plates
Ventilation grills
Perforated plates

Technical Information	464
Kicking plates	465
Finger plates	466
Measurement details of perforation	467
Perforated Plates	468
Ventilation plates	471
Ventilation covers	472
Ventilation plates with fixing webs	473
Air inlet and outlet grills	474
Weatherseals	477

Technical Information

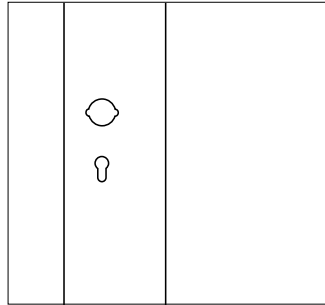
Kicking plates and finger plates

Doors are not always opened gently or with clean fingers. To prevent doors being soiled or mutilated, FSB supplies finger plates for the area adjacent to the lever handle and kicking plates for where feet tend to make contact.

Kicking and finger plates are available in a wide variety of materials (aluminium, stainless steel, brass) and thicknesses.

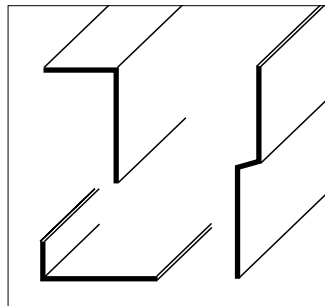
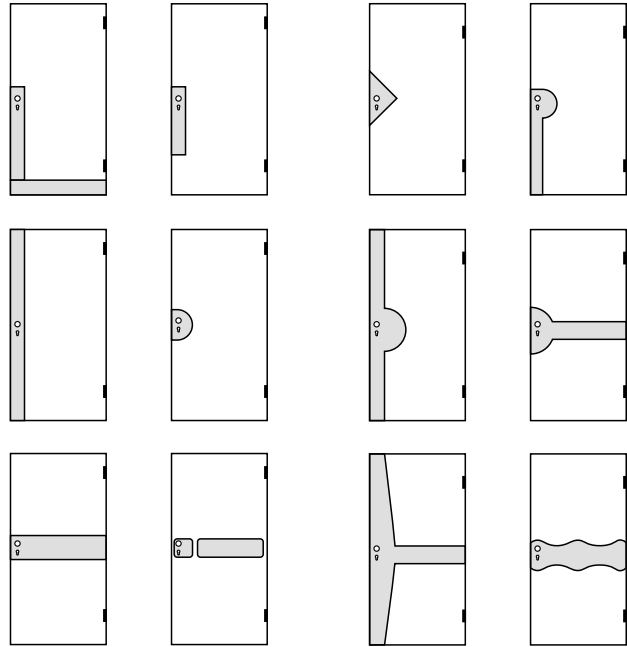
With or without screwholes

For assembly purposes, FSB kicking and finger plates are supplied as standard with holes for 3 mm countersunk screws. On express request, they may be supplied without screwholes, however. Plates 1 mm thick (FSB 5222 for example) can be made and delivered with self-adhesive foil instead of screwholes. Fitting such items requires experience and care on the part of the user. Most importantly, the surface of the door needs to be absolutely even and clean.



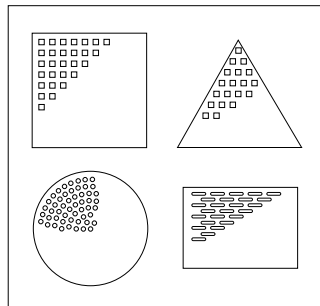
Perforations

Finger plates are generally machined to accept roses and backplates. FSB supplies finger plates as standard with piercings for the lever handle rose and for a standard euro-profile cylinder.



Return edges

Kicking plates and finger plates can feature a return edge. To ensure a good fit, detailed drawings need to be enclosed with orders that take account of all the structural tolerances involved. Should no such drawings or models be forthcoming, FSB will always treat dimensions cited for straightforward return edges as internal dimensions, notably in the case of rebated doors.



Shapes

Finger plates and kicking plates can come in many conceivable shapes, a few examples are shown here.

Basically, it's a question of availing oneself of the classic forms, i.e. square, circle, rectangle and triangle. To this extent FSB appeals to the imagination of designers and will gladly provide quotes on receipt of dimensioned drawings.

Data transferred in .dxf- or .dwg format can directly be processed by FSB.

Risk of injury

Items such as kicking plates, ventilation plates, ventilation covers and perforated plates are made of thin, sharp-edged material. When fitting them, it is important to make sure they lie flush against the surface to which they are to be attached. Such items should be handled with extreme care when being unpacked, fitted, checked for positioning and, indeed, throughout their service life. Carelessness in this respect can easily lead to fingers getting injured, especially in the course of cleaning routines.

Stock merchandise

FSB can effect immediate delivery of kicking plates in standard sizes from stock. Dimensions and materials are cited in the applicable price list.

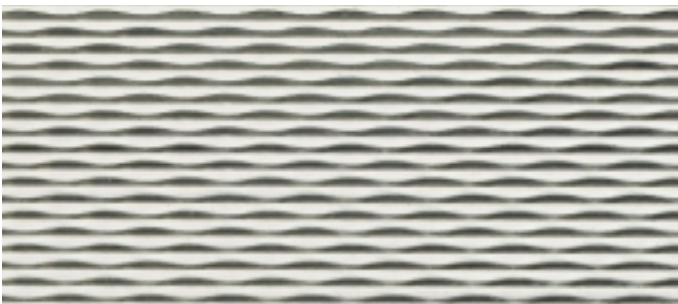
Kicking plates



5222 1 mm
Aluminium
Stainless steel

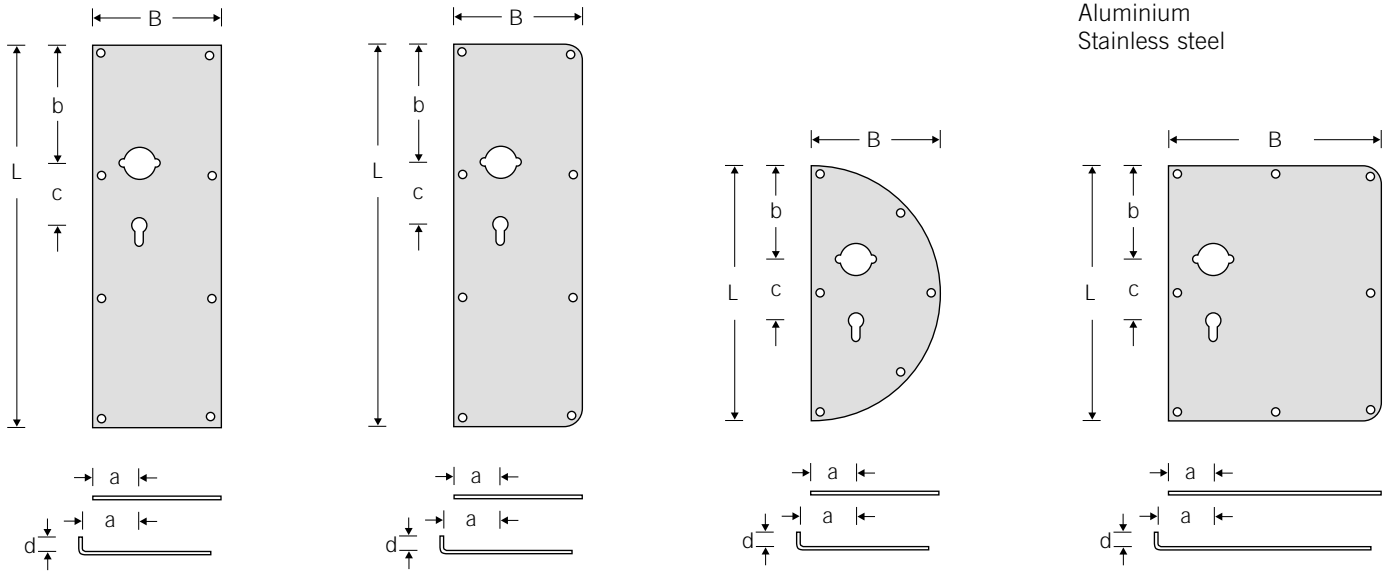
5223 1.5 mm
Aluminium
Stainless steel

5224 2 mm
Aluminium
Stainless steel



5215 1 mm
Aluminium

Finger plates



illustrated r.h.

5300 without return
5310 with return

5320 without return
5330 with return

5340 without return
5350 with return

5360 without return
5370 with return

Perforations

Finger plates can be pierced to accommodate roses or backplates. The simplest way of providing accurate specifications here is to cite the roses or backplates used together with their product codes. The following options are possible:

Option 1

Lever handle rose above (e. g. 1731), keyhole perforation below (e. g. europrofile cylinder).

Option 2

Lever handle rose above, escutcheon below (e. g. 1731, 1735).

Option 3

Door plate with visible fixing (e. g. model 1402).

Option 4

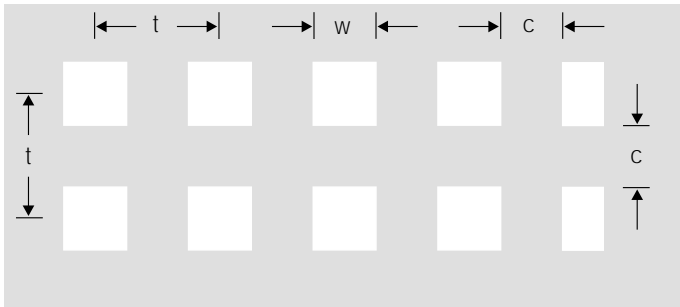
Backplate for invisible fixing (e. g. 1450).

Further options

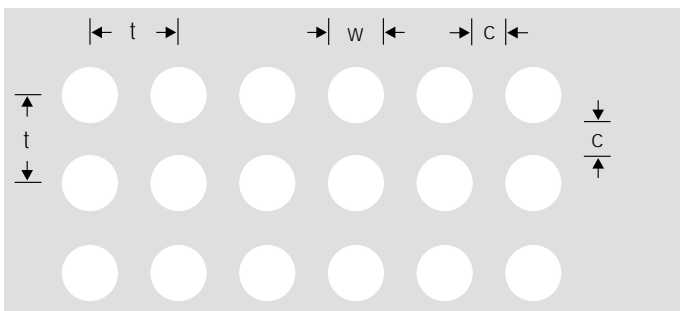
FSB can also produce other forms of finger plates to customer specifications through CNC or laser procedures. Please send dimensioned drawings. We will submit our own drawings and a quote by return.

pce	no	r.h. l.h.	L length mm	B width mm	a backset mm	b spacing mm	c keyhole spacing mm	d return mm	perforations with product codes for roses or backplates used				keyholes e. g.		
									1	2	3	4	BB	PZ	

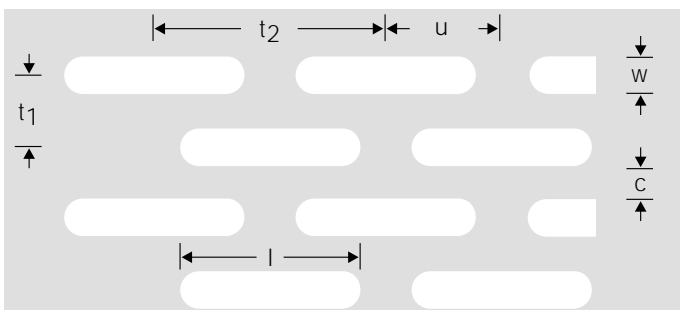
Measurement details of perforation



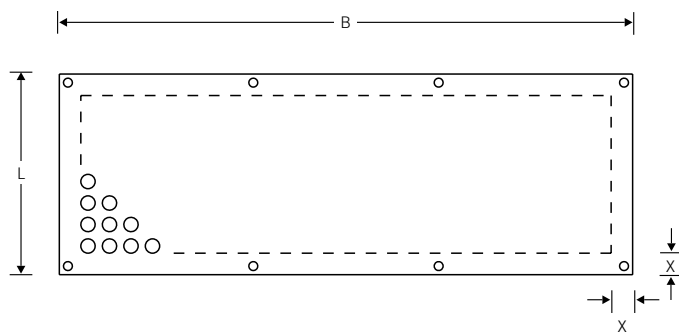
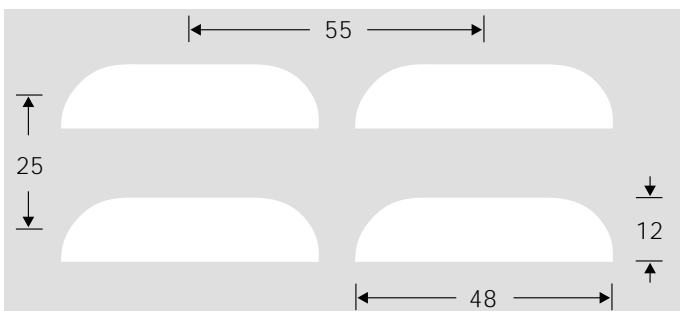
Perforation	w	t	c
	7	14	7
	10	20	10



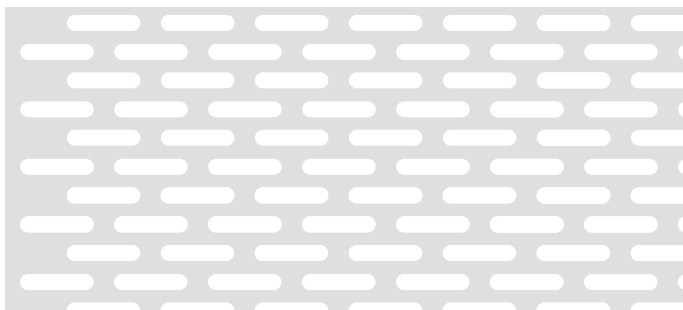
Perforation	w	t	c
∅	6	10	4
∅	10	15	5



Perforation	w	l	t ₁	t ₂	u	c
20 x 4	4	20	8	26	13.0	4
30 x 5	5	30	10	37	18.5	5
40 x 7	7	40	13	48	24.0	6



Perforated plates



20 x 4 mm slotted perforation

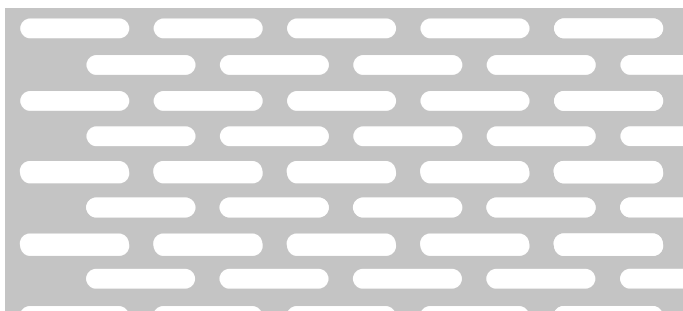
Relative free airflow area
34.2 %

5551 1 mm

Aluminium
Stainless steel

5552 1.5 mm

Aluminium
Stainless steel



30 x 5 mm slotted perforation

Relative free airflow area
36.4 %

5554 1 mm

Aluminium

5555 1.5 mm

Aluminium



40 x 7 mm slotted perforation

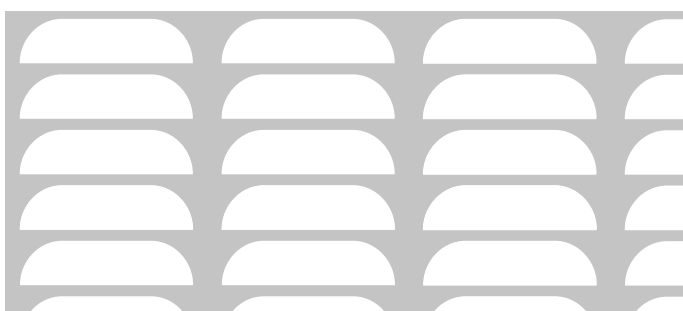
Relative free airflow area
40.4 %

5558 1 mm

Aluminium

5559 1.5 mm

Aluminium



48 mm muschelförmig
herausgeprägte Luftschlitze

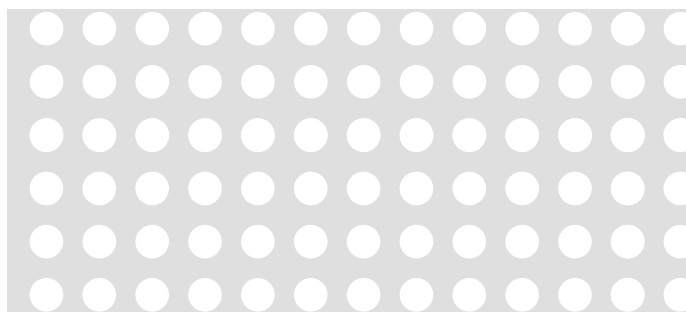
Ventilation section
1.2 cm²/slot

5581 1.5 mm

Aluminium

Further measurement details
see page 467

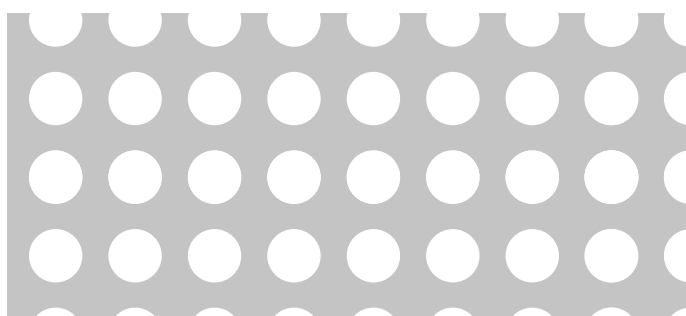
Perforated plates



6 mm round perforation
Relative free airflow area
26.6 %

5501 1 mm
Aluminium
Stainless steel

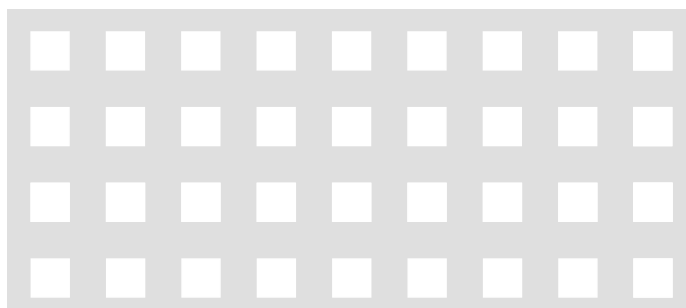
5502 1.5 mm
Aluminium
Stainless steel



10 mm round perforation
Relative free airflow area
33.2 %

5505 1 mm
Aluminium
Stainless steel

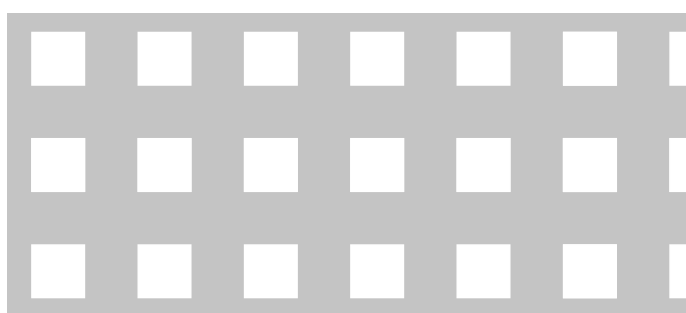
5506 1.5 mm
Aluminium
Stainless steel



7 mm square perforation
Relative free airflow area
23.3 %

5524 1 mm
Aluminium
Stainless steel

5525 1.5 mm
Aluminium
Stainless steel



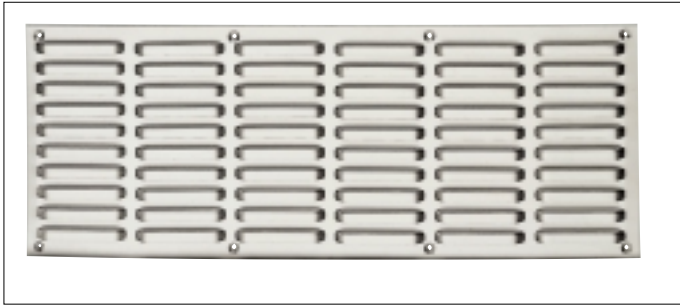
10 mm square perforation
Relative free airflow area
24 %

5528 1 mm
Aluminium
Stainless steel

5529 1.5 mm
Aluminium
Stainless steel

Further measurement details
see page 467

Perforated plates



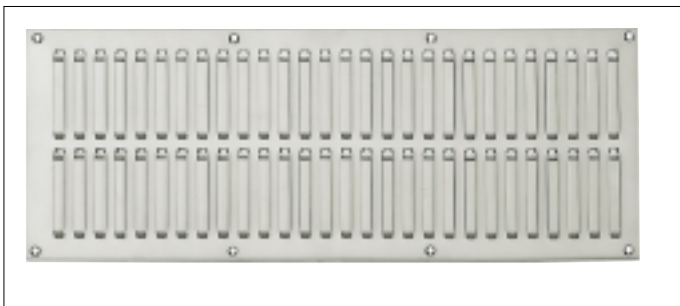
Size 360 x 135 mm
Slot length 50 mm

Ventilation area 144 cm²

Cutout size in the door
330 x 115 mm

5801

Aluminium 1.5 mm
Stainless steel 1 mm



Size 360 x 135 mm
Slot length 50 mm

Ventilation area 134.4 cm²

Cutout size in the door
330 x 115 mm

5802

Aluminium 1.5 mm
Stainless steel 1 mm



Size 55 mm Ø

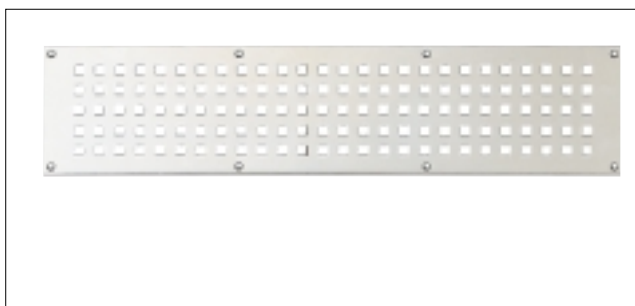
Ventilation area
2.88 cm²

Cutout size in the door
Ø 37 mm

5853

Aluminium
Stainless steel

Ventilation slide



Ventilation plates
with 7 mm □-Perforation

5833 1 mm

Aluminium
Stainless steel

No.	Size	Ventilation area	Cutout size in the door
5833 24	200 x 60 mm	17.64 cm ²	165 x 35 mm
5833 31	250 x 75 mm	31.30 cm ²	225 x 50 mm
5833 37	250 x 80 mm	31.30 cm ²	225 x 55 mm
5833 38	300 x 80 mm	39.20 cm ²	280 x 55 mm
5833 39	400 x 80 mm	52.90 cm ²	375 x 55 mm
5833 40	500 x 80 mm	66.90 cm ²	475 x 55 mm
5833 41	400 x 90 mm	63.70 cm ²	375 x 65 mm
5833 46	300 x 100 mm	55.86 cm ²	275 x 80 mm
5833 47	400 x 100 mm	79.38 cm ²	375 x 80 mm
5833 48	500 x 100 mm	94.08 cm ²	475 x 80 mm
5833 51	500 x 90 mm	83.30 cm ²	475 x 65 mm
5833 61	600 x 90 mm	100.45 cm ²	575 x 65 mm

Suitable as counterplates to 5821



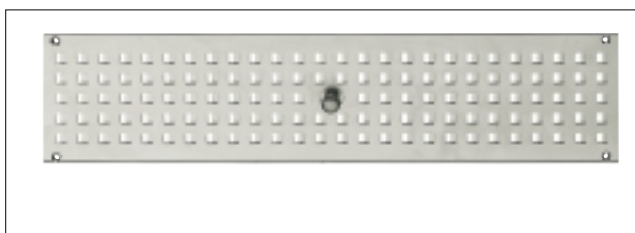
Ventilation plates with concha-
tely louvred ventilation slots
Slot length 48 mm

5835 1 mm

Aluminium
Stainless steel

No.	Size	Ventilation area	Cutout size in the door
5835 24	200 x 60 mm	10.80 cm ²	175 x 45 mm
5835 31	250 x 75 mm	14.40 cm ²	230 x 60 mm
5835 41	400 x 90 mm	28.80 cm ²	385 x 65 mm

Suitable as counterplates to 5821



Ventilation plates
with 7 mm □-Perforation
Available length up to 600 mm

5821 4 mm

Aluminiumprofile

No.	Size	Ventilation area	Cutout size in the door
5821 24	200 x 60 mm	16.60 cm ²	175 x 41 mm
5821 31	250 x 75 mm	29.40 cm ²	235 x 56 mm
5821 41	400 x 90 mm	62.70 cm ²	385 x 71 mm
5821 51	500 x 90 mm	77.42 cm ²	480 x 71 mm
5821 61	600 x 90 mm	89.67 cm ²	570 x 71 mm

Ventilation covers



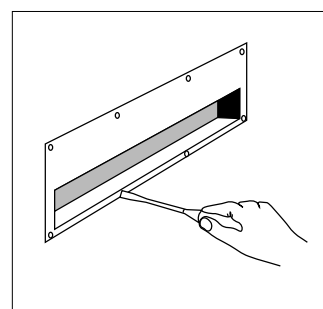
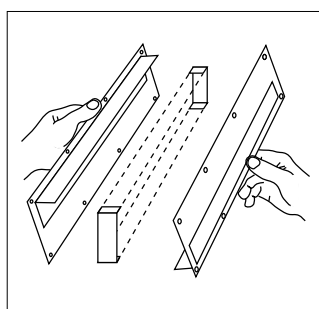
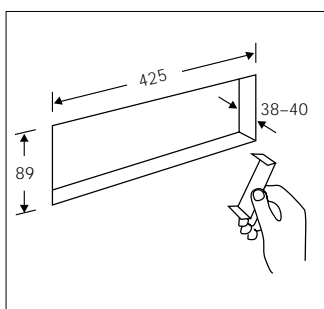
5807

Aluminium 1.5 mm
Stainless steel 1.0 mm

HORA-ventilation cover for bathroom with gas heating

Ventilation section 150 cm², corresponding to the German building regulations.

Size 450 x 115 mm
Door cutout 425 x 89 mm



5812

Aluminium

Ventilation hood

Size 320 x 80 mm
Door cutout 280 x 65 mm

Ventilation section 46.55 cm²

5833 0038

Aluminium

Ventilation grid

Size 300 x 80 mm
Door cutout 280 x 55 mm

Ventilation section 39.2 cm²

Items such as kicking plates, ventilation plates, ventilation grills, ventilation covers and perforated plates are made of thin, sharp-edged material. When fitting them, it is important to make sure they lie flush against the surface to which they are to be attached. Such items should be handled with

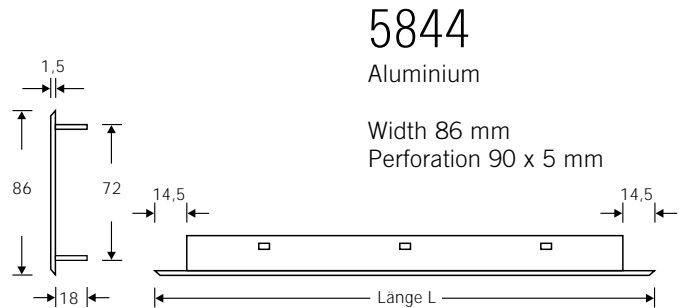
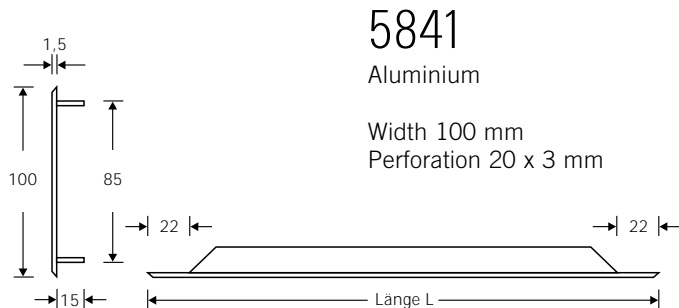
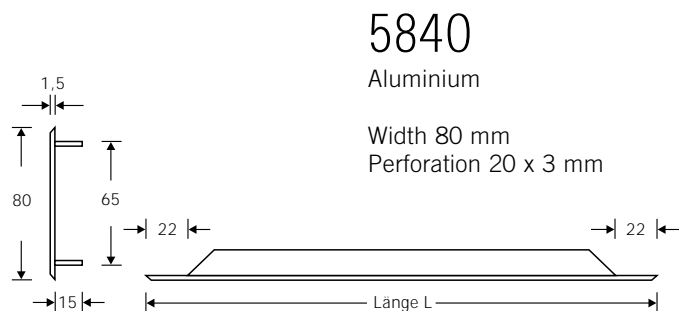
extreme care when being unpacked, fitted, checked for positioning and, indeed, throughout their service life. Carelessness in this respect can easily lead to fingers getting injured, especially in the course of cleaning routines.

Ventilation covers

The ventilation web plates 5840 and 5841 are available in stock lengths 200, 300, 400, 480, 500, 600, 800, 1,000 and 2,500 mm.

A tailor-made construction according to your requirements is possible. Special construction and special finish on request.

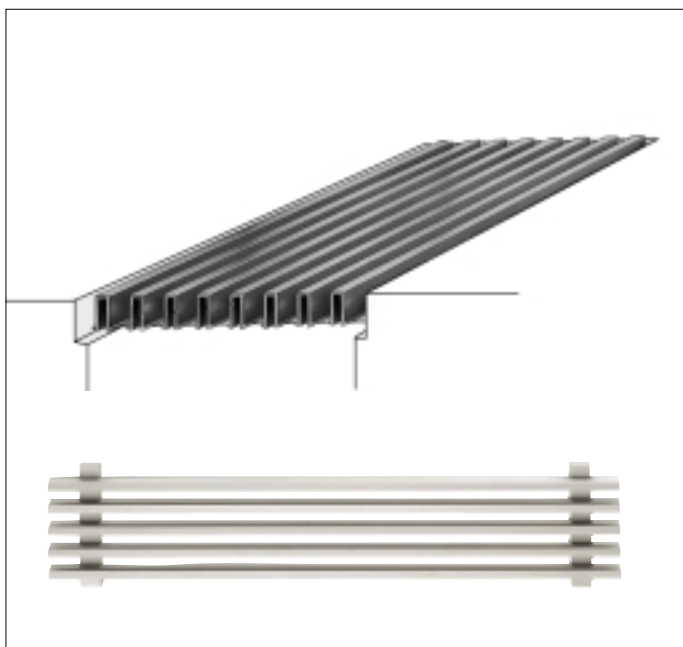
The ventilation web plates FSB 5844 are available in standard lengths of 400 and 500 mm.



Ventilation areas:

- 5840 208.8 cm²/lfd m.
- 5841 278.4 cm²/lfd m.
- 5844 400.0 cm²/lfd m.

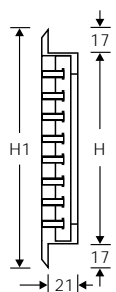
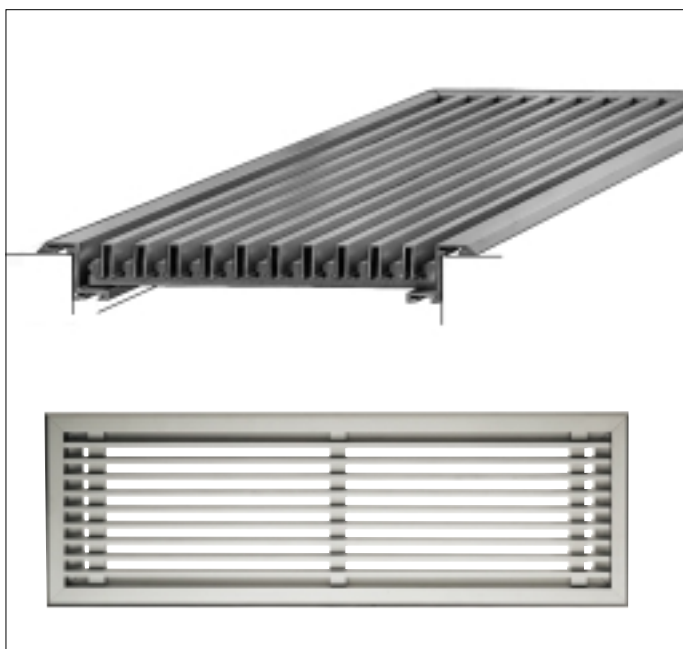
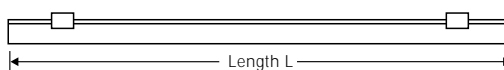
Air inlet and outlet grills



5588

Aluminium

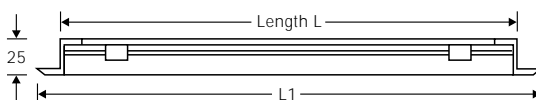
Fixing procedure A I + A II



5589

Aluminium

Fixing procedure A III + A VI



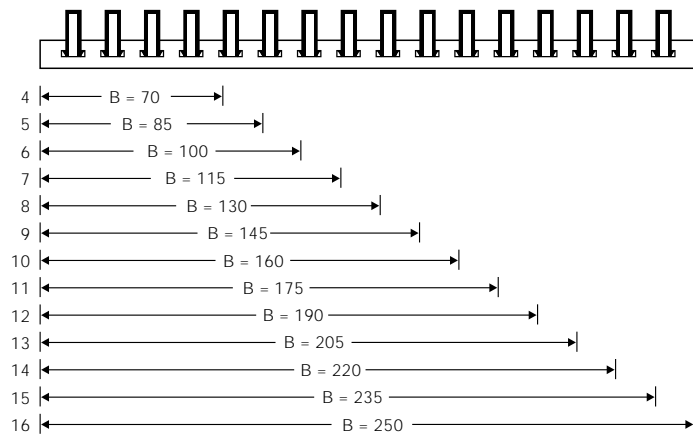
H clear installation height
H₁ total length

L clear installation height
L₁ total length

FSB air inlet and outlet grills in aluminium are deployed as decorative fittings in ceilings, walls, heating covers, furniture and so on. They cannot be walked or driven on.

Ordering procedure as well as sizes and models described on the following pages.

Air inlet and outlet grills



FSB can produce any dimensions within the range 4,000 x 250 mm. To avoid any unnecessary delay, please submit exact measurements, ideally on a copy of the order chart shown here. The number of lattice bars and support webs required can be roughly assessed using the appropriate tables.

In exceptional circumstances where the max. width of 250 mm needs to be exceeded, please supply us with an out-line of the situation stating all dimensions. One solution is to combine several lattice bars with one support web. FSB will willingly offer a quote for such work.

Number of holding webs:

300 - 400 mm	2 pieces
500 - 800 mm	3 pieces
900 - 1200 mm	4 pieces
1300 - 1600 mm	5 pieces
1700 - 2000 mm	6 pieces
2100 - 2500 mm	7 pieces

5888

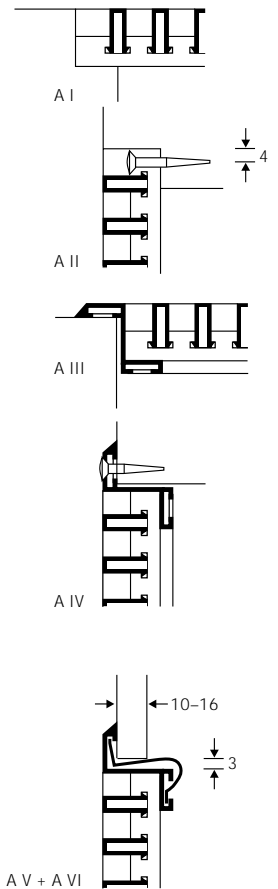
5889

Aluminium

For intermediate sizes or larger widths than 250 mm, please ask us.

Fixing modes:

- A I
without fixing holes to be placed into the groove
- A II
support webs provided with countersunk screw holes 4,25 mm Ø
- A III
Z-frame without fixing holes (grill is placed without being fixed)
- A IV
Z-frame with countersunk screw holes 4.25 mm Ø, grill is fixed in the Z-frame
- A V
Z-frame with spring elements, grill is placed without being fixed (for horizontal installation)
- A VI
Z-frame with spring elements, grill is fixed in the Z-frame.



Necessary order details:

Quantity	Item no.	Colour	Dim. L	Dim. H	Dim. L1	Dim. H1	A I	A II	A III	A IV	A V	A VI

Air inlet and outlet grills

Stock sizes:

The FSB-aluminium air inlet and outlet grills are constructed in a way that all parts can be kept in stock by retailers or fabricators and put together as required with a minimum of fuss.

Aluminium profile for lattice bars:
 Stock length: 4,000 mm
 Item no.: 5888 50
 Packing unit 29 pieces



5888

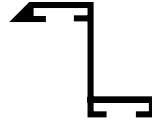
5889

Aluminium

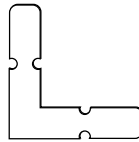
Aluminium support web
 15 x 250 mm
 Item no.: 5888 60



Aluminium profile for Z-frame
 Stock length: 4000 mm
 Item no.: 5889 60
 Packing unit 25 pieces



Corner connection for Z-frames
 Item no.: 5889 65
 Packing unit 250 pieces



Clamp element, spring steel
 Item no.: 5889 66
 Packing unit 250 pieces



11

Order quantity per packing unit:

Number of inlets FSB 5888 50	Number of aluminium support webs	Number of Z-Frames	Number of corner connections	Number of spring elements

Weatherseals

8580
Aluminium

Available sizes
for horizontal installation:

lengths up to max. 4000 mm
height up to max. 600 mm

for vertical installation:

lengths up to max. 1000 mm
height up to max. 1500 mm

Other dimensions on request.

The weatherseals can be installed flush. The overlap is 12 mm and is provided with countersunk screw holes.

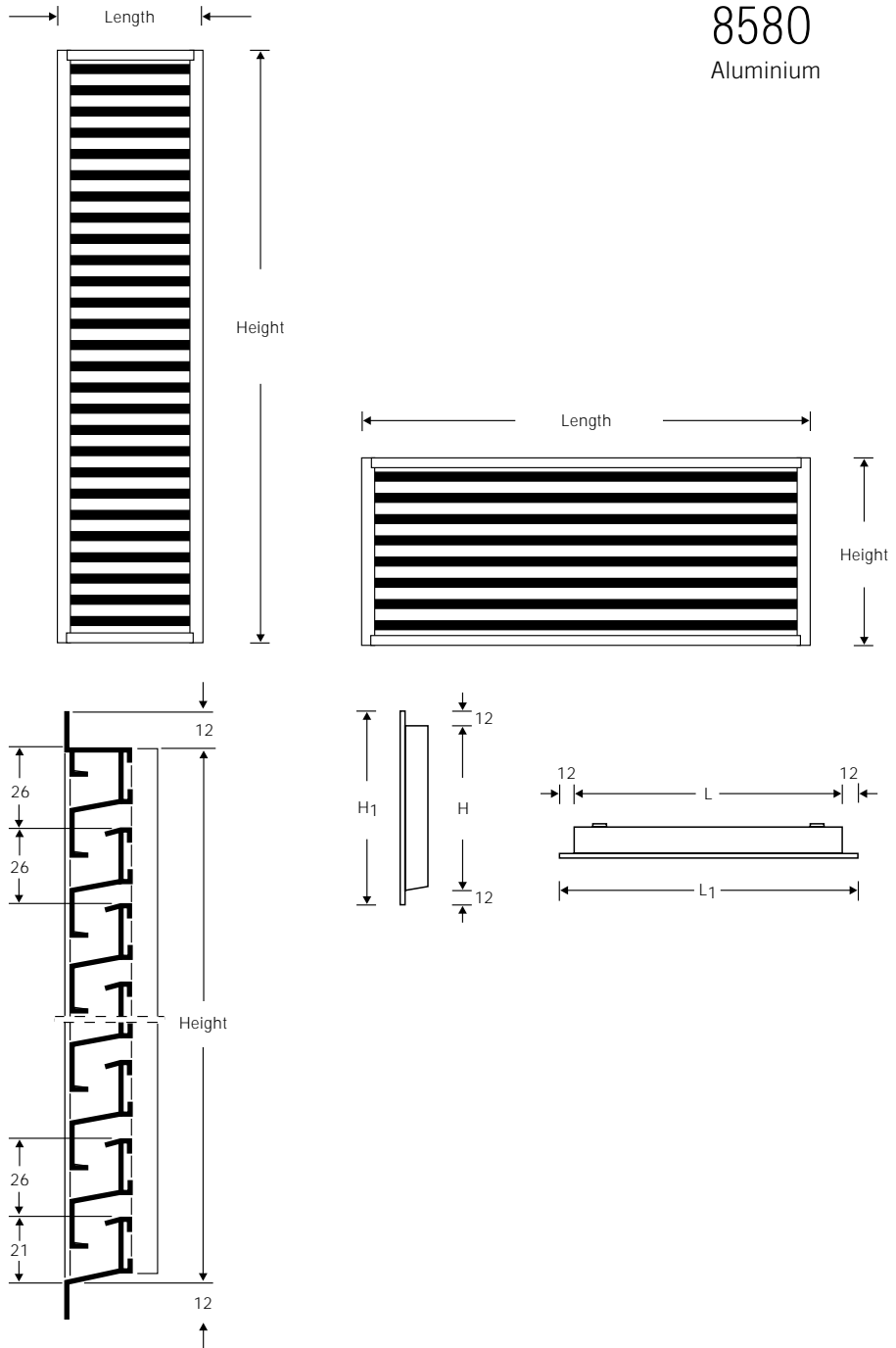
For the installation height a modular dimension of 26 mm; + 21 mm for bottom section.

Height =
no. of blades x 26 + 21
(e. g. 5 x 26 + 21 = 151 mm).

Length can be produced to size up to max. 4000 mm.

Installation depth for vertical installation without holding webs 21 mm, for horizontal installation with holding webs 28 mm.

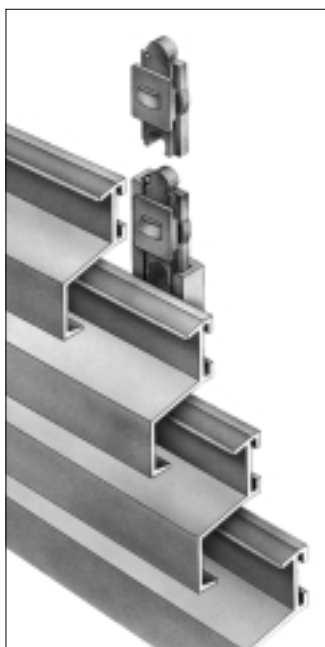
Ordering sizes:
H clear installation height
H₁ total height
L clear installation length
L₁ total length



Necessary order details:

Quantity	Item no.	Colour	Dim. L	Dim. H	Dim. L ₁	Dim. H ₁

Weatherseals



Stock version:

8581

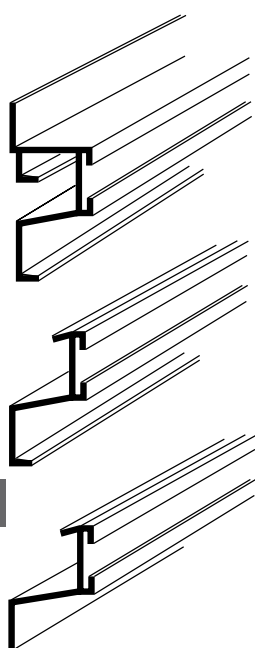
The FSB-weatherseals are also available in single components for self-assembly and installation.

Working instructions:

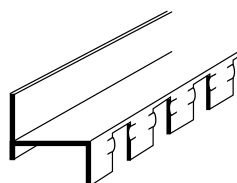
By simply cutting the sections to size and joining them up with holders, webs and cheeks, weatherseals of any dimensions can be produced.

1. Saw top, middle and bottom weatherseal blades to desired length (opening size -5 mm).
2. Saw lateral end sections to desired lengths notching them for the top and bottom sections.
3. Push weatherseal sections on lateral end sections. Use auxiliary web sections with plastic holder for lengths and widths over 400 mm.
4. The weatherseal can be secured on the top and bottom, in the area of the lateral end sections and web sections, using pop-rivets.

Single sections:

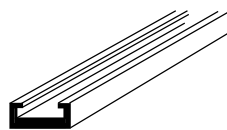


Top section
Length: 4,000 mm
Item no.: 8581 01



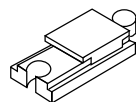
Lateral section with punches
Length: 4,000 mm
Item no.: 8581 04

Blade section
Length: 4,000 mm
Item no.: 8581 02



Web section
Length: 4,000 mm
Item no.: 8581 05

Bottom section
Length: 4,000 mm
Item no.: 8581 03



Plastic holder
Item no.: 8581 06

Accessories

Overview	480
FSB Stabil-spindle	481
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Accessories	486
Screws	488

Overview



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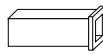
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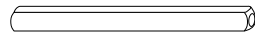
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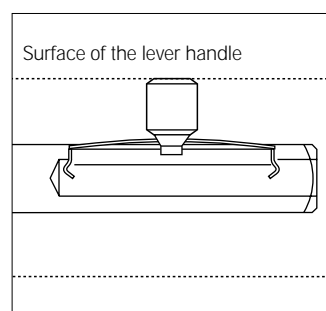
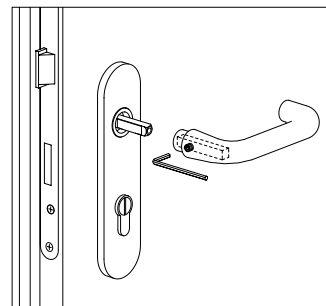


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FSB Stabil-spindle

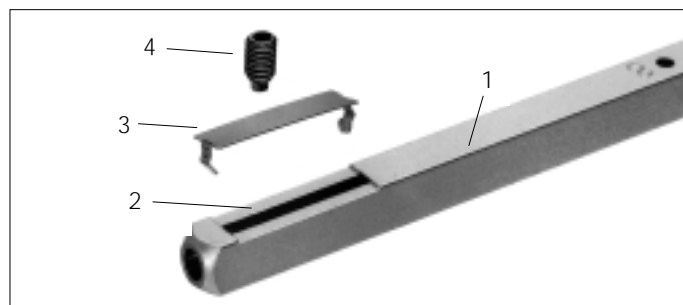


The FSB Stabil-spindle carries on from where its predecessors - the FSB Screw- and the FSB Anker-spindle - left off. New is a spring loaded tolerance compensator pierced by the grub screw when fastened.



Features

1. Solid square-section construction
2. Fastening for anchor clamp
3. Anchor clamp with pre-stress springing
4. Grub screw with piercing punch



The FSB stock range serves the following door thicknesses:

- 36 to 45 mm with the 8 mm FSB Stabil-spindle
- 66 to 75 mm with the 10 mm FSB Stabil-spindle

To this stock range all lengths of accessory parts are adapted. Hardware can be precision customised for other door or spindle thicknesses, with accessories to match.

Assembly instructions:

Pass the spindle with the male lever or male knob handle through the lock follower. The female lever or female knob handle is fitted to the spindle and the two parts pushed together securely.

The grub screw in the neck of the female lever or female knob handle is tightened and the handles are checked several times to ensure perfect operation. The grub screw should now be further firmly tightened until it pierces the spindle clamping clip. Visible sign for correctly mounted furniture: The head of the screw is flush with the handle's neck.

Check the fit by turning, pushing and pulling the handle a number of times.

FSB Stabil-half-spindle

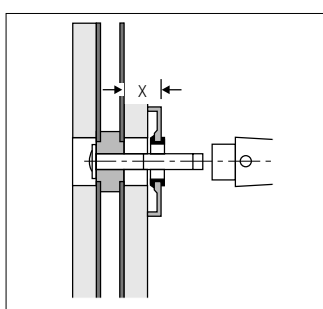


FSB Stabil-half-spindle
for through fixing

Dimension X

0103 0808 8 x 55 mm, 15 to 24 mm
0103 0812 8 x 65 mm, 25 to 34 mm
0103 0816 8 x 75 mm, 35 to 44 mm

0103 0908 9 x 55 mm, 15 to 24 mm
0103 0912 9 x 65 mm, 25 to 34 mm
0103 0916 9 x 75 mm, 35 to 44 mm



0103 1008 10 x 55 mm, 15 to 24 mm
0103 1012 10 x 65 mm, 25 to 34 mm
0103 1016 10 x 75 mm, 35 to 44 mm

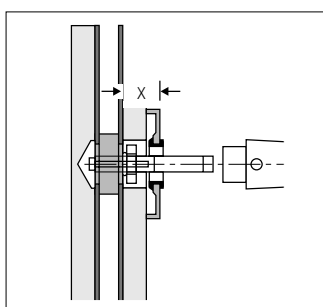


FSB Stabil-half-spindle
for doors drilled on one side

Dimension X

0104 0810 8 x 60 mm, 22,5 to 31,5 mm
0104 0814 8 x 70 mm, 32,5 to 41,5 mm
0104 0818 8 x 80 mm, 42,5 to 51,5 mm

0104 0910 9 x 60 mm, 22,5 to 31,5 mm
0104 0914 9 x 70 mm, 32,5 to 41,5 mm
0104 0918 9 x 80 mm, 42,5 to 51,5 mm



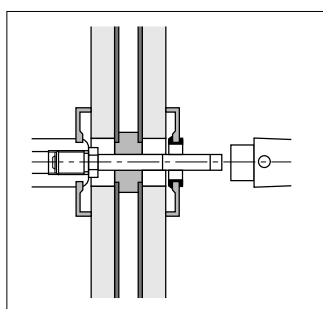
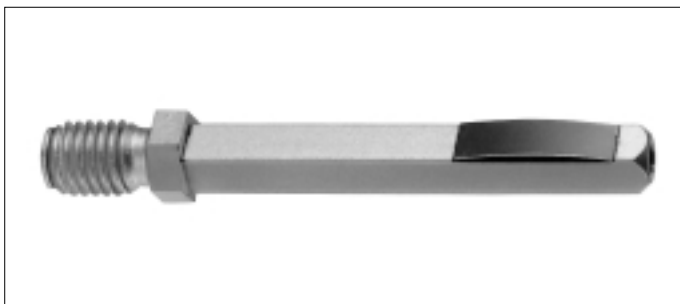
0104 1010 10 x 60 mm, 22,5 to 31,5 mm
0104 1014 10 x 70 mm, 32,5 to 41,5 mm
0104 1018 10 x 80 mm, 42,5 to 51,5 mm

0106 1012 8/10 x 65 mm, 27,0 to 36,0 mm*
0106 1014 8/10 x 70 mm, 32,5 to 41,5 mm*
0106 1018 8/10 x 80 mm, 42,5 to 51,5 mm*

*stepped, 8 mm lever handle hole / 10 mm follower

In choosing the correct FSB Stabil-half-spindle, one can use the measurement of X as an aid. The measurement of X is the distance between the outer rim of the bushing of the backplates or roses and the lock follower.

FSB Stabil-half-spindle



FSB Stabil-half-spindle
with plug for screw mounting in knob neck, lever operable

for door thickness

0177 0820	8 x 85 mm, 36 to 45 mm
0177 0824	8 x 95 mm, 46 to 55 mm
0177 0828	8 x 105 mm, 56 to 65 mm
0177 0832	8 x 115 mm, 66 to 75 mm
0177 0836	8 x 125 mm, 76 to 85 mm
0177 0840	8 x 135 mm, 86 to 95 mm
0177 0844	8 x 145 mm, 96 to 105 mm

0177 0920	9 x 85 mm, 36 to 45 mm
0177 0924	9 x 95 mm, 46 to 55 mm
0177 0928	9 x 105 mm, 56 to 65 mm
0177 0932	9 x 115 mm, 66 to 75 mm
0177 0936	9 x 125 mm, 76 to 85 mm
0177 0940	9 x 135 mm, 86 to 95 mm
0177 0944	9 x 145 mm, 96 to 105 mm

0177 1020	10 x 85 mm, 36 to 45 mm
0177 1024	10 x 95 mm, 46 to 55 mm
0177 1028	10 x 105 mm, 56 to 65 mm
0177 1032	10 x 115 mm, 66 to 75 mm
0177 1036	10 x 125 mm, 76 to 85 mm
0177 1040	10 x 135 mm, 86 to 95 mm
0177 1044	10 x 145 mm, 96 to 105 mm

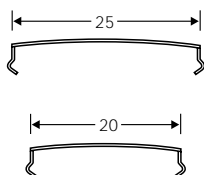
0107 1020	8/10 x 85 mm, 36 to 45 mm*
0107 1024	8/10 x 95 mm, 46 to 55 mm*
0107 1028	8/10 x 105 mm, 56 to 65 mm*
0107 1032	8/10 x 115 mm, 66 to 75 mm*
0107 1036	8/10 x 125 mm, 76 to 85 mm*
0107 1040	8/10 x 135 mm, 86 to 95 mm*
0107 1044	8/10 x 145 mm, 96 to 105 mm*

*stepped, 8 mm lever handle hole / 10 mm follower

The door thickness given for the FSB Stabil-half-spindle with plug assumes a backplate or rose thickness of 7 mm.

FSB supplies its office, fire-check and security furniture with FSB Stabil-half-spindle included, spindle and screw length being adjusted to the thickness of a given door.

Accessories Stabil-spindle

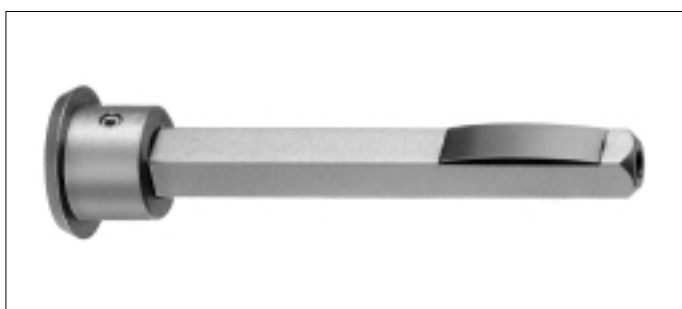


Anchor clamp spring

0406 2508 25 mm
0406 2008 20 mm

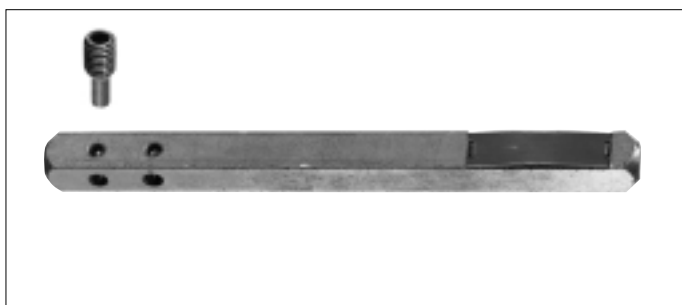
Grub screw with piercing punch

0402 0601 M6 x 8 mm
0402 0602 M6 x 9 mm
0402 0603 M6 x 10.5 mm
0402 0604 M6 x 11.5 mm



FSB Stabil-blind-spindle

0442 50 8 x 80 mm, suitable for door thickness 36 to 45 mm



FSB Special-stabil-spindle as a provisional device for lever handle sets comprising two female handles

0102 0826 8 x 100 mm, suitable f. door thickness 36 to 55 mm
0102 0834 8 x 120 mm, suitable f. door thickness 56 to 75 mm
0102 0842 8 x 140 mm, suitable f. door thickness 76 to 95 mm

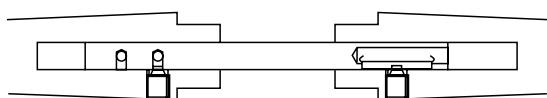
0102 0926 9 x 100 mm, suitable f. door thickness 36 to 55 mm
0102 0934 9 x 120 mm, suitable f. door thickness 56 to 75 mm
0102 0942 9 x 140 mm, suitable f. door thickness 76 to 95 mm

0102 1026 10 x 100 mm, suitable f. door thickness 36 to 55 mm
0102 1034 10 x 120 mm, suitable f. door thickness 56 to 75 mm
0102 1042 10 x 140 mm, suitable f. door thickness 76 to 95 mm

0404 threaded bolt M6 x 12 mm with pin

Female part of lever with threaded bolt 404

Female part of lever with grub screw 0402



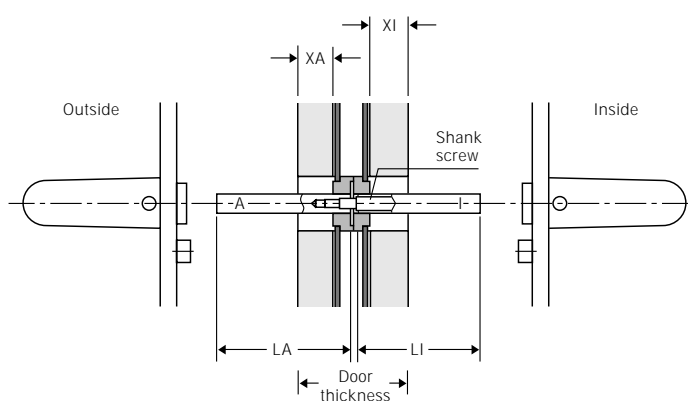
Where it is intended to form a set out of two female handle parts, the first step involves constructing a male handle using the FSB Stabil-spindle and the special threaded bolt with pin that goes with it. To produce this spindle-and-handle unit,

the grub screw must engage fully in the spindle-boreholes leaving the screw head flush with the surface of the handle. Thereafter assembly is as for the FSB Stabil-spindle in standard use.

The door thickness given for the FSB special Stabil-spindle assumes a backplate or rose thickness of 7 mm.

FSB Special spindle

0125



FSB lever handle spindle
for split follower,
item no. 0125

An equally proven FSB special spindle of 9 mm square section, item no. 0125, is available for locks with split follower. It suits door thicknesses from 34 mm to 101 mm.

When ordering, please specify:
Door thickness
Dimensions XA and XI
Item no. of FSB furniture

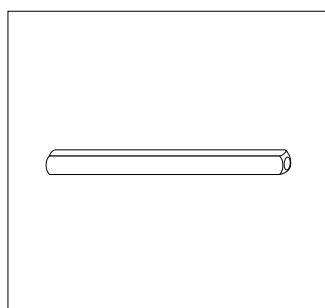
When deploying the FSB spindle for locks with a split follower, it is important not only to heed building regulations but also to bear in mind that panic fittings (lock, cylinder, spindle, handles etc.) are intended solely for use in an emergency and should never be fitted to doors in constant operation. FSB would draw your attention to the recommendations and observations of the lock industry in this respect.

Fixing instructions

1. From the outside insert spindle section A into the lock follower.
2. From the inside insert spindle section I into the lock follower and screw the two spindle sections together by means of the shank screw on the coupling washer.
3. Place the turnably fixed lever handles together with the backplates or roses on the spindles.
4. It should be ensured that there is no play between the plates or roses and the doors. The slightest slackness can lead to the connection in the lock follower being ruptured due to the forces exerted in operating the door.
5. Finally, firmly tighten the cup points on the two lever handles against the spindle. Heads of screws must be flush with the surface of the handle.

Accessories

Stabil-spindle



Solid □-spindles 8 mm

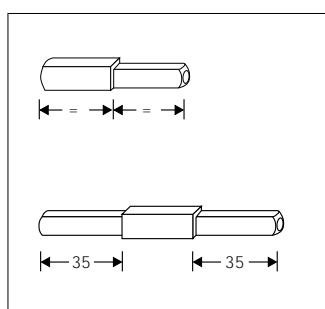
0172 0810 8 x 60 mm
 0172 0814 8 x 70 mm
 0172 0818 8 x 80 mm
 0172 0822 8 x 90 mm

Solid □-spindles 8 mm

0172 0826 8 x 100 mm
 0172 0830 8 x 110 mm
 0172 0834 8 x 120 mm
 0172 0838 8 x 130 mm
 0172 0842 8 x 140 mm
 0172 0846 8 x 150 mm
 0172 0850 8 x 160 mm

Solid □-spindles 9 mm

0173 0910 9 x 60 mm
 0173 0918 9 x 80 mm
 0173 0926 9 x 100 mm
 0173 0934 9 x 120 mm
 0173 0938 9 x 130 mm
 0173 0942 9 x 140 mm
 0173 0946 9 x 150 mm
 0173 0950 9 x 160 mm



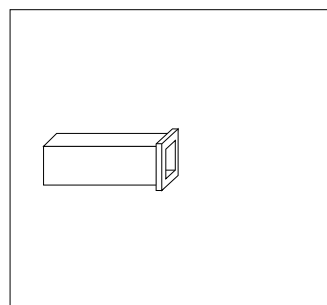
Stepped spindles one side

0188 0910 9/8 x 60 mm
 0188 0916 9/8 x 75 mm
 0188 0934 9/8 x 120 mm

0189 1010 10/8 x 60 mm
 0189 1016 10/8 x 75 mm
 0189 1018 10/8 x 80 mm
 0189 1026 10/8 x 100 mm
 0189 1030 10/8 x 110 mm

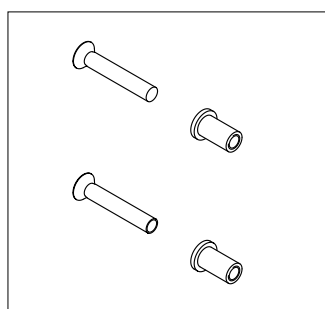
Stepped spindles both sides

0183 0926 8/9/8 x 100 mm
 0183 0934 8/9/8 x 120 mm
 0184 1026 8/10/8 x 100 mm
 0184 1030 8/10/8 x 110 mm
 0184 1034 8/10/8 x 120 mm
 0184 1038 8/10/8 x 130 mm
 0184 1042 8/10/8 x 140 mm



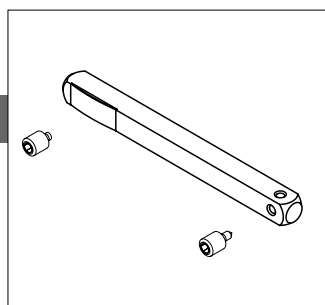
Adaptor sleeve
 for lever handles/spindles/
 lock follower

0425 0809 8 on 9 mm
 0425 0810 8 on 10 mm
 0425 0910 9 on 10 mm
 0425 0885 8 on 8,5 mm



Fixing accessories for
 frame door furniture

Screws M5 x 25 mm and
 rivet nuts
 Item no. 0526



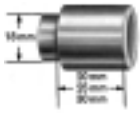
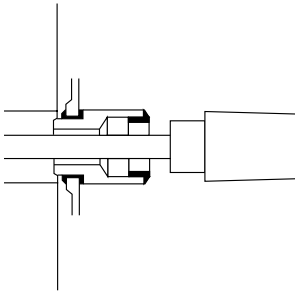

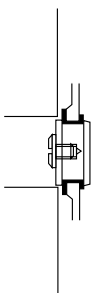


8(9) mm spindles
 (suitable to FSB adaptor-solution)

Door thickness	Spindle-length	Accessorie-bag
38 - 47 mm	88 mm	0525 08(9)03
48 - 57 mm	98 mm	0525 08(9)04
58 - 67 mm	108 mm	0525 08(9)05
68 - 77 mm	118 mm	0525 08(9)06
78 - 87 mm	128 mm	0525 08(9)07
88 - 97 mm	138 mm	0525 08(9)08
98 - 107 mm	148 mm	0525 08(9)09

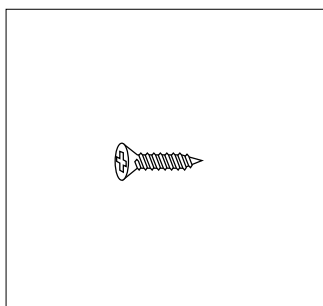
8(9) mm spindles (suitable to all other lever handles for framed doors)

Door thickness	Spindle-length	Accessorie-bag
35 - 44 mm	98 mm	0525 18(9)04
45 - 54 mm	108 mm	0525 18(9)05
55 - 64 mm	118 mm	0525 18(9)06
65 - 74 mm	128 mm	0525 18(9)07
75 - 84 mm	138 mm	0525 18(9)08
85 - 94 mm	148 mm	0525 18(9)09
95 - 104 mm	158 mm	0525 18(9)10

Accessories

		<p>Lever handle distance rose to increase the distance between door and lever handle</p>						
		<p>Aluminium</p> <table border="0"> <tr> <td>0440 20</td> <td>20 mm</td> </tr> <tr> <td>0440 25</td> <td>25 mm</td> </tr> <tr> <td>0440 30</td> <td>30 mm</td> </tr> </table>	0440 20	20 mm	0440 25	25 mm	0440 30	30 mm
0440 20	20 mm							
0440 25	25 mm							
0440 30	30 mm							
		<p>Blind rose to blank out the lever handle hole on backplates</p>						
		<p>Aluminium</p> <p>0441</p>						
								
		<p>FSB socket spanner for half spindles for doors drilled from one side</p> <p>0410 00</p>						
	<p>Hexagonal key with handle item no. 0415</p> <p>Width over flats 3.0 for FSB lever and pull handles</p>	<p>Hexagonal key without handle item no. 0416</p> <p>Width over flats 2.5 for FSB 3244 and 4346</p> <p>Width over flats 3.0 for FSB lever handles and pull handles</p> <p>Width over flats 4.0 suitable to FSB security furniture:</p> <ul style="list-style-type: none"> - Version with long backplate: intermediate fixing point - Version with short backplate: all fixing points <p>and also the FSB emergency release on bathroom furniture</p> <p>Width over flats 5.0 for the top and base fixing point of FSB security furnitures with long backplate</p>						

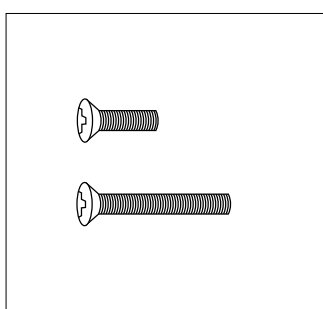
Screws



Cross recessed tapping screw with countersunk head

0315

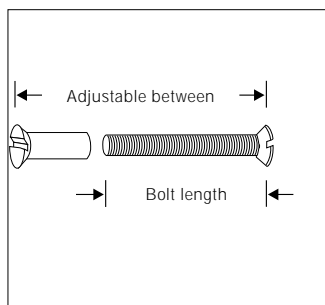
2,9 x 16 mm
3,9 x 16 mm
4,2 x 19 mm



Cross recessed raised countersunk oval head bolt

0303 0515
M5 x 15 mm

0303 0535
M5 x 35 mm



Bolts with 4 mm threaded sleeve nut 0309

Size	Bolt length	Adjustable between	for door thickness
M4 x 35	35 mm	37 - 45 mm	25 - 33 mm
M4 x 40	40 mm	42 - 50 mm	30 - 38 mm
M4 x 45	45 mm	47 - 55 mm	35 - 43 mm
M4 x 50	50 mm	52 - 60 mm	40 - 48 mm
M4 x 55	55 mm	57 - 65 mm	45 - 53 mm
M4 x 60	60 mm	62 - 70 mm	50 - 58 mm

Finishes of products

Aluminium 01, 02
Aluminium 03, 04, 07
Stainless steel
Brass
Aluminium + colour

Finishes of screws

N.P. on brass
Brass, lacquered to match
Satin stainless steel
Brass, coloured to match
Brass, lacquered to match

Fixing aids

Correct fixing is essential if FSB lever handle furniture is to function flawlessly.

It is FSB policy to enclose paper positioning templates with all orders. Should these have been omitted, we would ask you to inform us immediately and we will rectify the matter. Product codes are given in the footers of the pages that follow.

FSB supplies trade installers with metal templates, the product codes for which are quoted towards the top of the right-hand column in the pages that follow.

A fair amount of force is involved in the operation of lever handle furniture. This holds particularly true for fittings on heavily used doors. Long-term trouble-free use can only be guaranteed if sufficient care is taken when marking out and boring holes and fixing the furniture.

FSB has looked very carefully into the complaints received over recent years. In the process, it has discovered that the source of the problem is very frequently faulty fixing. Here are a few typical examples:

- Lugs on backplates and roses simply pinched off. Non-slip attachment impossible as a result.
- Fittings ordered for wrong door thickness. Connecting spindle was either too long - lever handle began to move - or too short - spindle mounted too close to its end, leading to breakage.
- The grub screw punch was not tightened with sufficient care and hence the clamping plate was not pierced. The lever handle was slack on its spindle, which meant it could be wrenched loose if tugged with any force.
- Holes bored without using template. Centres marked out in haphazard manner, producing oversize holes and hence poorly anchored backplates and roses moved on the door.
- FSB furniture has been combined with spindles, screws, backplates and roses of competitors.

FSB is at pains to stress that it can only accept liability for its products - just as all competitors - if they have been correctly fixed.

We would additionally wish to draw attention to growing public sensitivity regarding the issue of liability. Improperly fitted door and window furniture can have dire consequences in this respect. FSB puts its faith in the practical experience and skill of its own clientele and of their customers. Our mutual end customers have a right to expect properly fitted hardware that works.

Fixing aids

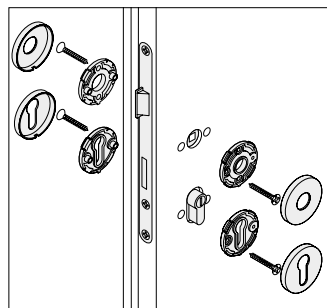
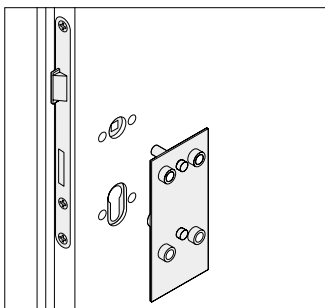
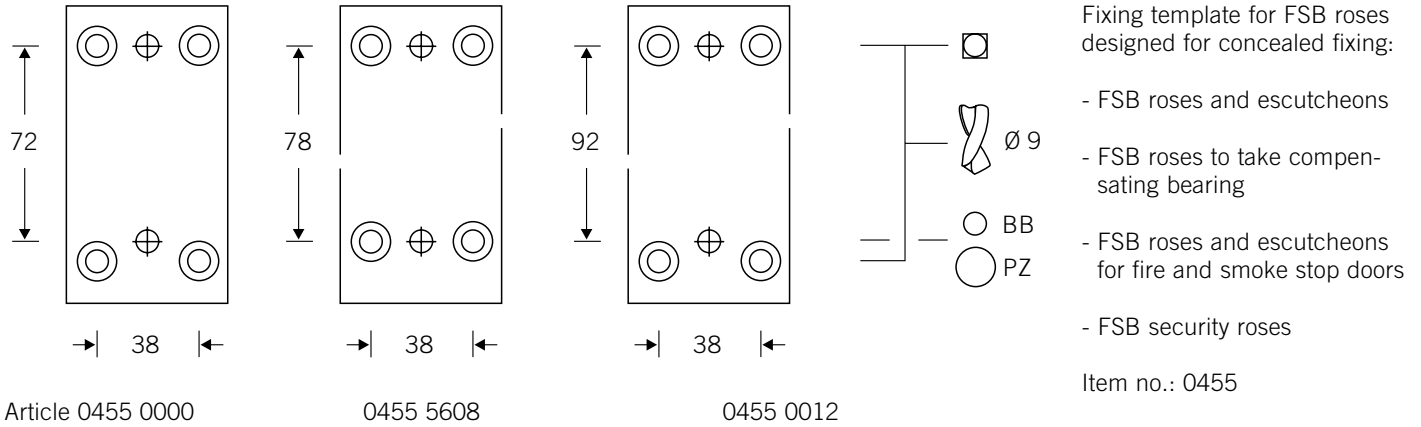
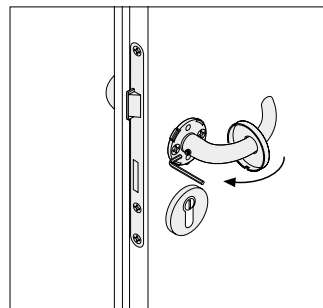
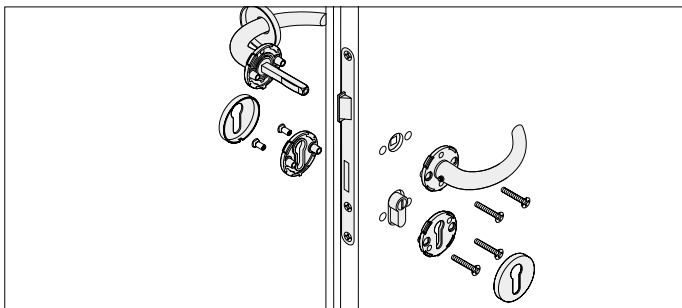


Illustration left:
Fixing roses

Illustration middle:
Fixing fire door furniture resp.
furniture with compensating
bearing

Pass template guide pins through follower and keyhole. Drill four recesses of 9 mm Ø through template bushings. Firmly press lugs of base roses into drilled recesses ensuring small rectangular plastic lip faces downwards. Then screw base roses together.

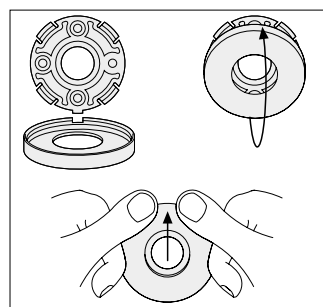
Cover roses are attached to their bases by applying a combination of downward and forward pressure whilst ensuring their rectangular notch slots over the plastic lip on the base. Should the furniture need to be removed, a screwdriver can be used to gently lever lip and notch apart.



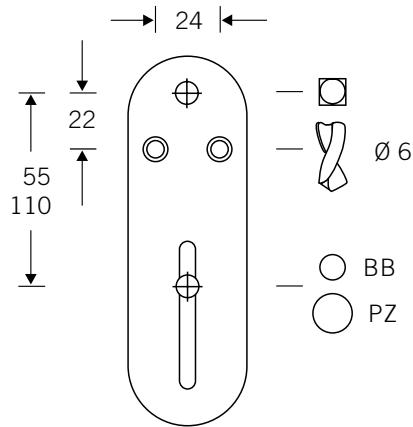
Paper template for FSB roses standard:
Item no.: 8429 0201

Paper template for FSB fire door furniture resp. with compensating bearing
Item no.: 8429 0204

Paper template for FSB roses WC standard:
Item no.: 8429 0205

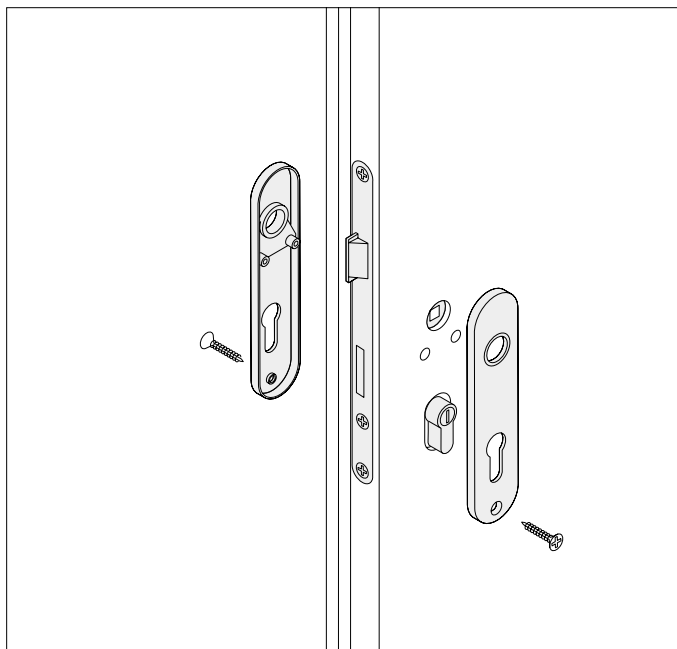
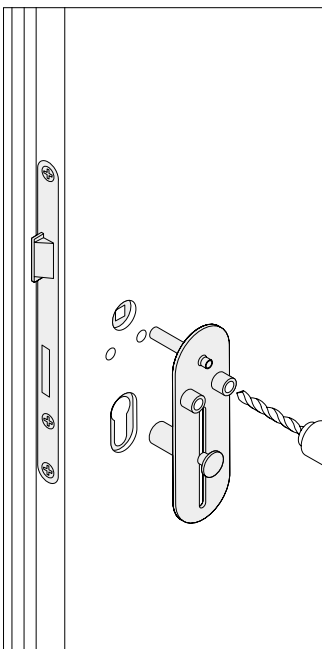


Fixing aids



Fixing template for FSB standard short backplate, locating lugs and visible fixing

Item no.: 0453



The two guide pins of the fixing template are pressed into the follower hole and the keyhole:

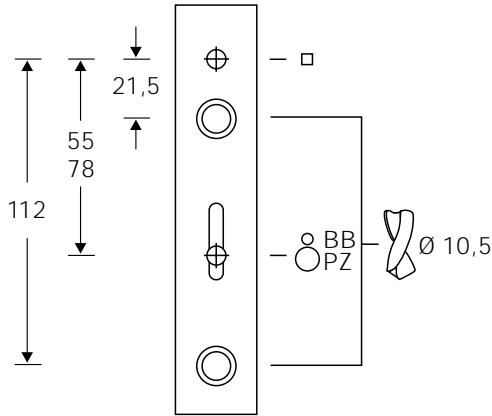
With FSB standard short backplates with two lugs, 6 mm Ø holes are bored through the two drilling bushes.

Firmly press the short backplate into position with lugs in drilled holes and secure with the screw.

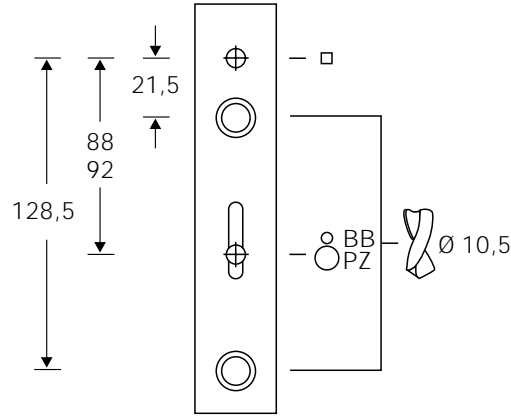
Paper template for FSB standard short backplate
Item no.: 8429 0203

Paper template for FSB standard short WC backplate
Item no.: 8429 0206

Fixing aids



Item no.: 0477



Item no.: 0469

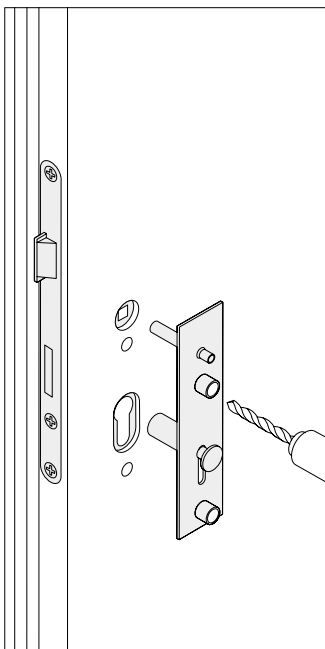
Fixing template for:

- FSB backplates 1450 03 and 1451 03
- with concealed fixing
- FSB sets for fire doors
- FSB sets with compensating bearing.

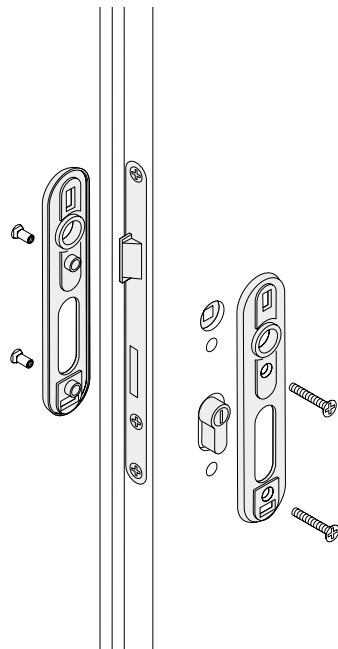
Item no.: 0477

- FSB backplates 1452 03 and 1453 03
- with concealed fixing
- FSB sets for fire doors
- FSB sets with compensating bearing.

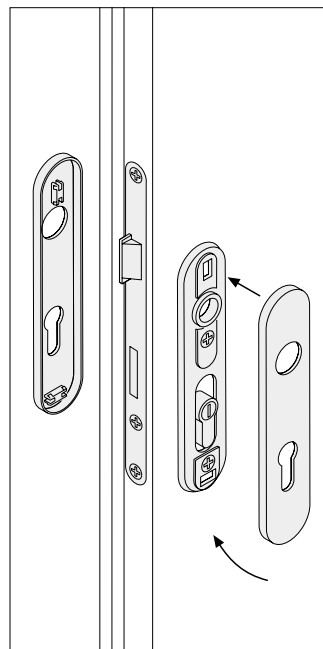
Item no.: 0469



Paper template for FSB short backplate with base
Item no.: 8429 0202



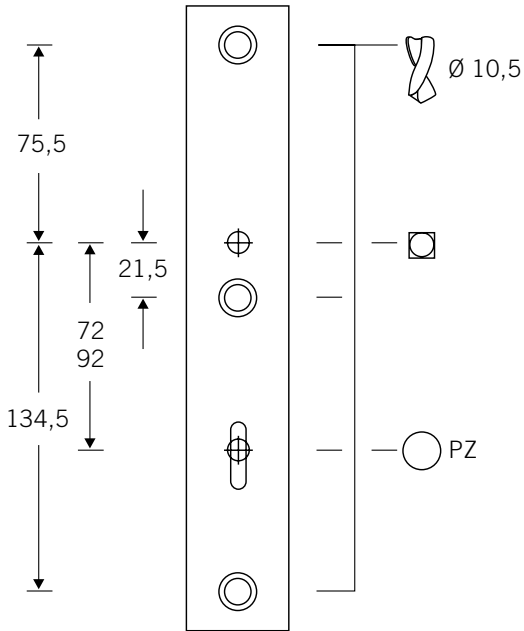
Paper template for FSB 1452 03 and 1453 03
Item no.: 8429 0185



Paper template for FSB short WC backplate with base
Item no.: 8429 0196

The two template guide pins are pressed into the follower hole and the keyhole. 10,5 mm Ø holes are bored through the two drilling bushes. Firmly press the baseplates into position with lugs in drilled holes. Secure the baseplates to each other with the screws. Then clip on the baseplate covers in the pressure direction 'diagonally forward'.

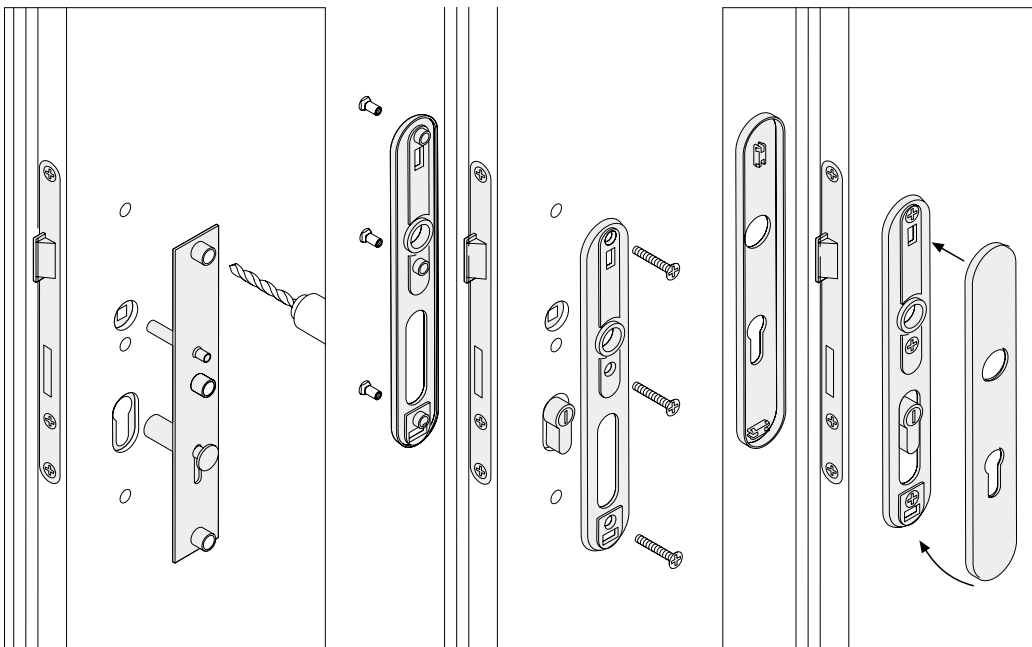
Fixing aids



Fixing template for:

- FSB long backplates with concealed fixing
- FSB long backplate sets for fire doors
- FSB long backplate sets with compensating bearing
- FSB long backplate sets for framed doors FSB 7816 and 7820

Item no.: 0476

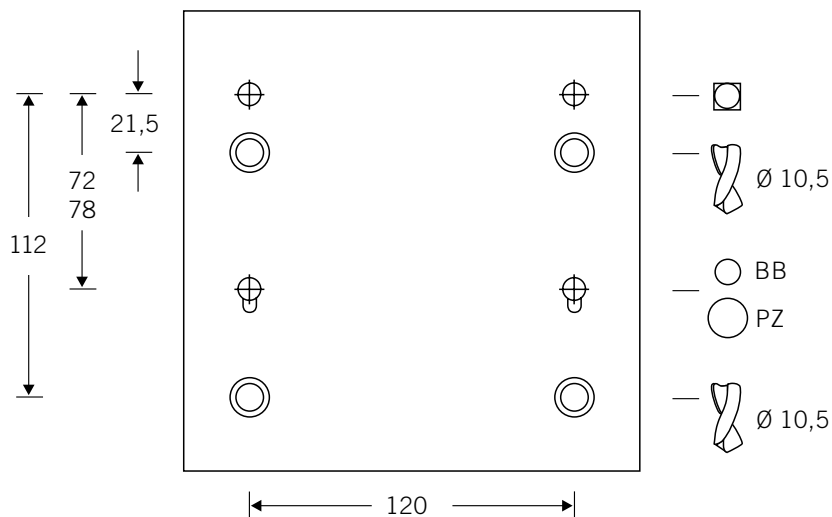


The two template guide pins are pressed into the follower hole and the keyhole. 10,5 mm \varnothing holes are bored through the three drilling bushes. Firmly press the baseplates into position with lugs in drilled holes. Secure the baseplates to each other with the screws. Then clip on the baseplate covers in the pressure direction 'diagonally forward'.

Paper template for FSB long backplates with base
Item no.: 8429 0149

Paper template for FSB long WC backplates with base
Item no.: 8429 0195

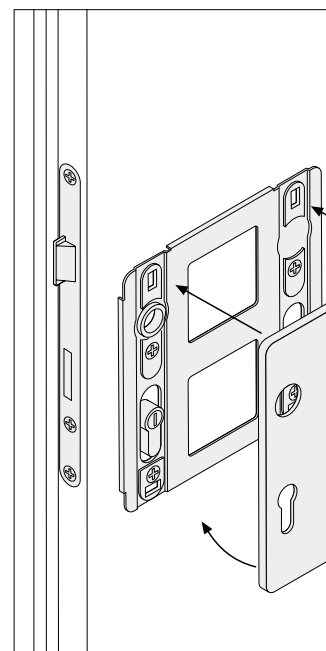
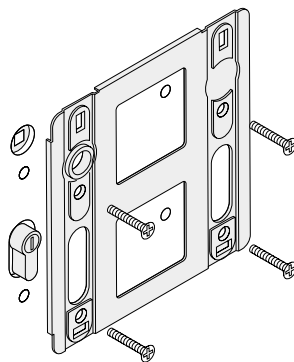
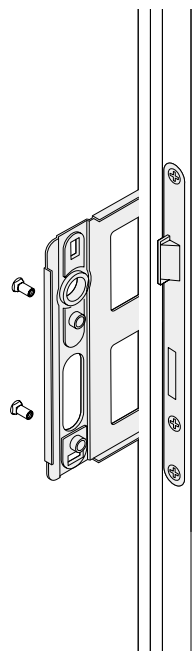
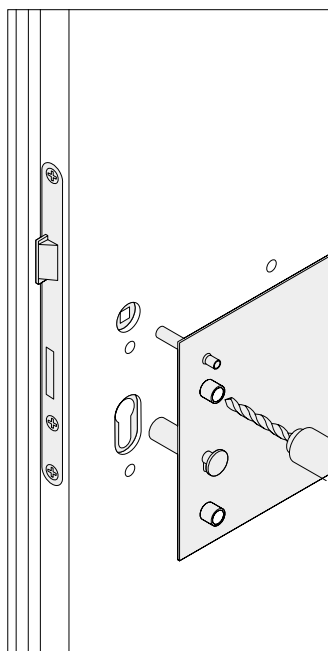
Fixing aids



Fixing template for:

- FSB square backplates with concealed fixing
- FSB square backplate sets for fire doors
- FSB square backplate sets with compensating bearing

Item no.: 0478



Paper template for FSB broad backplate with base

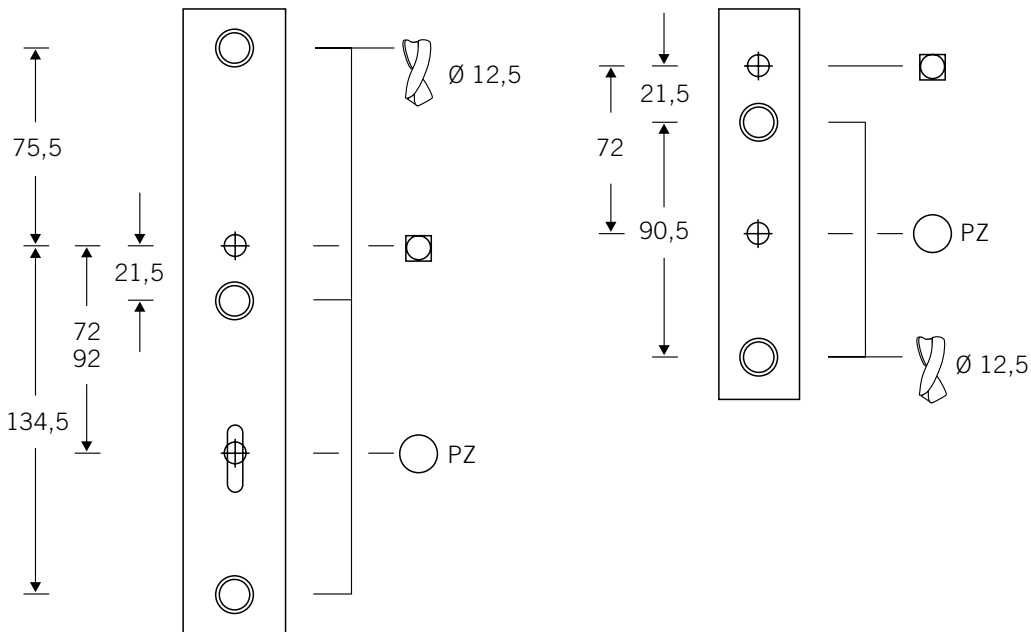
Item no.: 8429 0209

The two template guide pins are pressed into the follower hole and the keyhole. 10,5 mm Ø holes are bored through the four drilling bushes. By reversing the pins, the template can be used for both left and right hands.

Firmly press the baseplates into position with lugs in drilled holes. Secure the baseplates to each other with the screws.

Then clip on the baseplate covers in the pressure direction 'diagonally forward'.

Fixing aids Design + security



Fixing template for:

- FSB security furniture long backplate version

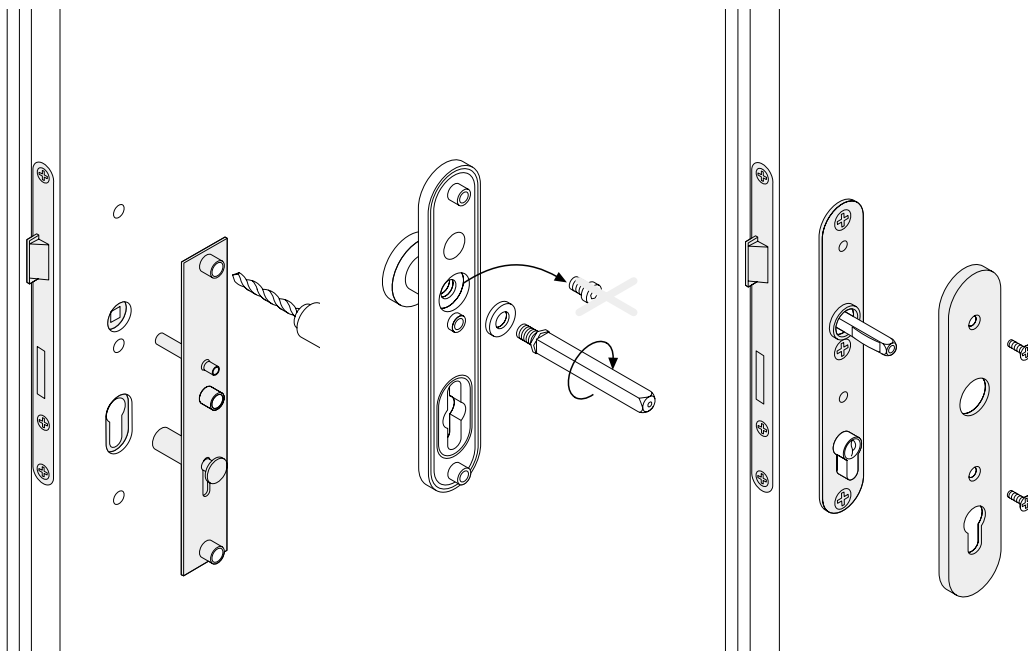
Item no. 0487

- FSB security furniture short backplate version

Item no. 0488

- FSB security furniture for framed-door-locks 'Securitas' FSB 7330 and 7531 FSB 7530 and 7531

Item no. 0476



Pass template guide pins through lock follower and key-hole, then bore holes for lugs through the drill bushings. In the case of FSB security furniture with a short backplate or with a long backplate 12,5 mm Ø holes, in case of FSB furniture for framed doors 10,5 mm Ø holes are drilled. Then firmly press outside backplates and lugs on inside into boreholes and fasten with screws from the inside.

Clip on inside cover plate and screw tight. Insert the female lever handle section and work in the punching screw until its head is flush with the surface of the handle.

Paper template for FSB security furniture long backplate version

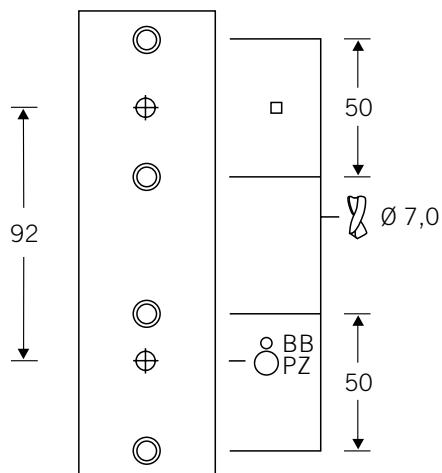
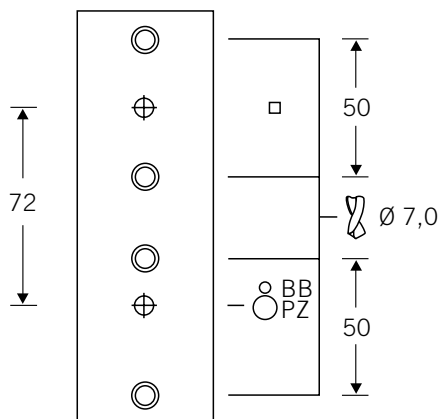
PZ 72 mm
Item no.: 8429 0211

PZ 92 mm
Item no.: 8429 0212

Paper template for FSB security furniture short backplate version

Item no.: 8429 0210

Fixing aids

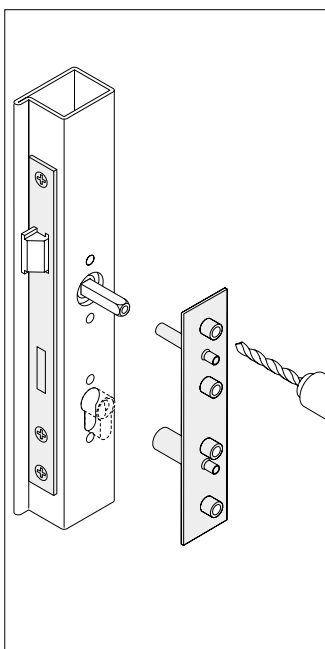


Fixing template for:

- FSB oval roses with rivet nuts for using FSB fixing accessories 0526

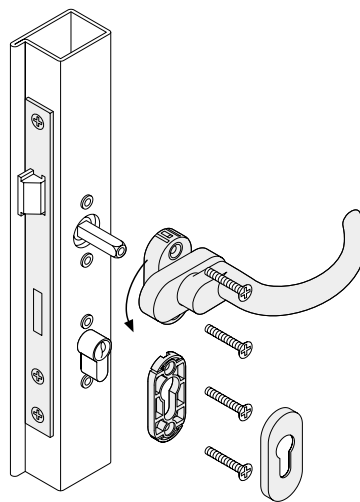
PZ 72 mm
Item no.: 0481

PZ 92 mm
Item no.: 0482



Paper template for oval roses with rivet nuts

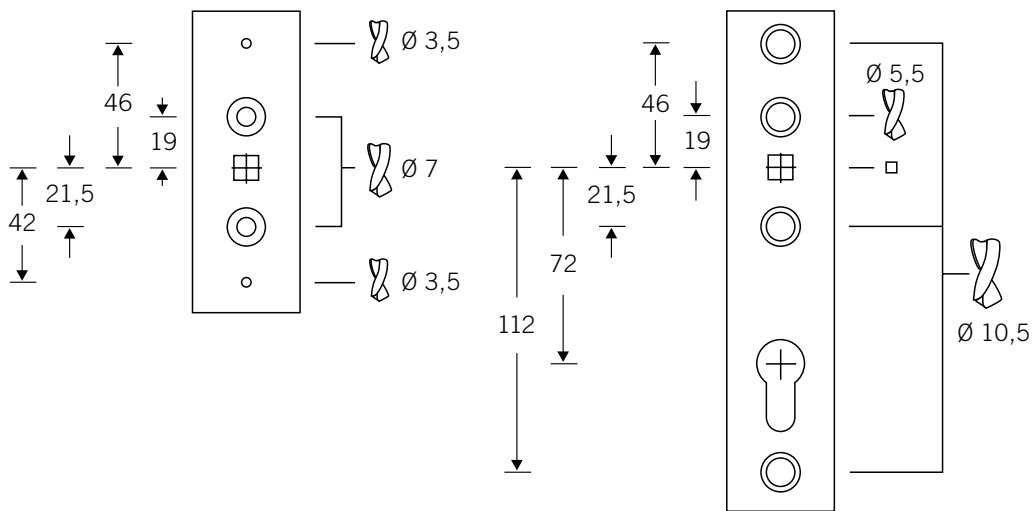
PZ 72 and 92 mm
Item no.: 8429 0208



Pass template guide pins through lock follower and key-hole, then bore 7mm Ø holes for rivet nuts through the drill bushings. Repeat process on other side if necessary. Screw rivet nuts onto the threaded mandrel of riveting tool and fix the rivet nuts whilst working it.

Then fit the framed door furniture whilst fastening it with screws. Clip on the cover rose and fix the square spindle by tightening the punching screw in the neck of the handle.

Fixing aids



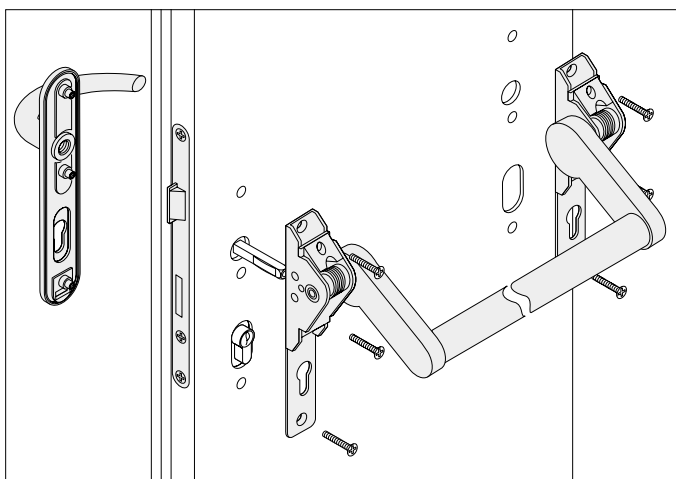
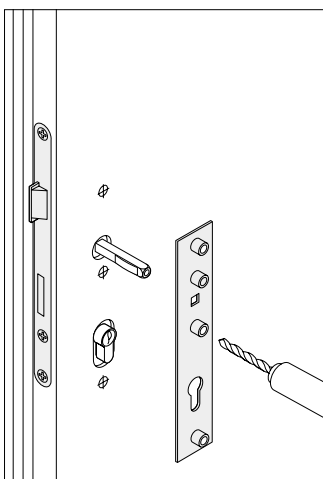
Fixing template for:

- FSB panic furniture
7970 0110
7970 0200

Item no.: 0457 6409

- FSB panic furniture
7970 0300

Item no.: 0457 6609



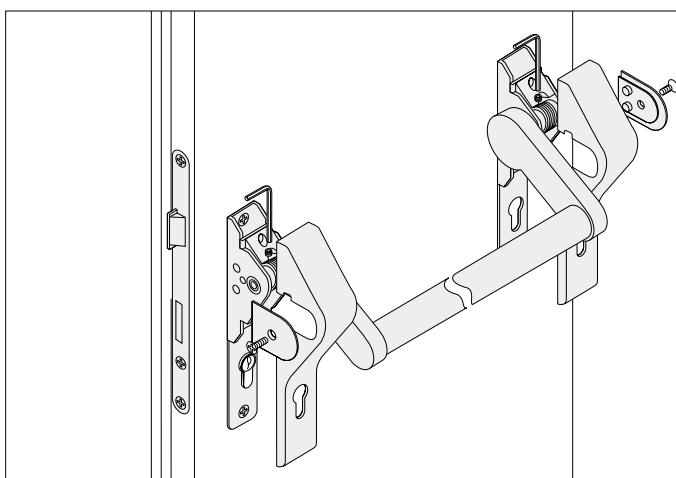
Insert FSB special-purpose spindle $\varnothing 125$ into lock and fit cylinder. Position borehole template over spindle and cylinder and drill through guiding bushings.

The crossbar length is arrived at by taking the width of the door and deducting the back-set twice and a further 67mm. Once bars have been cut to size, fit plastic end pieces for the stainless steel version.

Assembling panic furniture and integrating it with fittings on the other side is very straightforward. Full instructions are enclosed with each set.

Check the action of the furniture once the stop setting has been determined and covers have been fitted.

Paper template for
FSB panic furniture
Item no.: 8430 0085

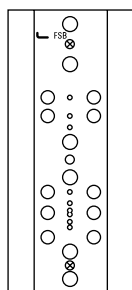


Universal Template

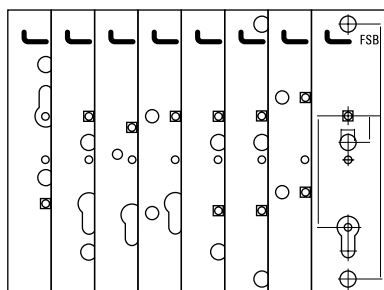


0460

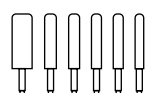
All FSB fittings have their own fixing templates for use as needed, but FSB has additionally developed a universal template that encompasses virtually every borehole configuration available. This all-purpose kit is a must for all professional fabricators.



1



2



3



4



5

Constituent parts:

- 1 Metal template
- 2 Borehole layout sheets
- 3 Pilot pins
- 4 Knurled screw
- 5 Drill bits

Instructions for use:

1. Select borehole layout required using paper sheets provided.
2. Push borehole layout sheet from above into the guide of metal template.
3. Firmly secure layout sheet with knurled screw.
4. Select pilot pins to suit lock-follower (7 mm, 8 mm, 9 mm, 10 mm) and keyway type (lever lock, PZ, dead-bolt follower) and screw them into the metal template from the back until they become visible in the borehole layout.
5. Attach the prepared universal template to each side of the door in turn and drill through the available layout holes.
6. Remove template and fit FSB furniture as shown in fixing instructions.

Explanations

Materials	500
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Product liability	510
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Aluminium

Aluminium is the most common metal in the Earth's crust (8 %). It occurs widely in feldspar, mica, and clay materials and is mainly extracted from bauxite.

Aluminium is a light metal (relative density 2.699 g/cu.m) with a melting point of 660 degrees Celsius. Its natural colour is silvery white. It can be cast or rolled into virtually any shape, including foil.

Aluminium is extracted from bauxite in two separate stages. Pure aluminium oxide (alumina) is generated, and this is then broken down into aluminium and oxygen by a process of electrolysis in fused cryolite solution.

Despite the high energy cost of the initial extraction process, aluminium is environmentally sound. Being a lightweight amongst metals, it saves energy when used. It can also be fully recycled at a fraction of the cost involved in its manufacture.

FSB processes only pure smelting alloys, as follows:

- AlMg3:
Mat.-No. 3.3541.02
DIN 1725
- AlMg1:
Mat.-No. 3.3315
DIN 1725
- AlMgSi0,5:
Mat.-No. 3.3206
DIN 1725

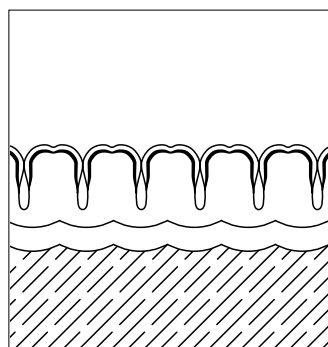
After machining, the surface is anodised. This is an electrochemical process which transforms the surface of the metal into a given thickness of aluminium oxide.

FSB uses the standard GS process to form its anodised coatings. GS are the German initials for direct-current sulphuric acid electrolysis, which produces an oxidised layer approx. 10 µm thick. Coating hardness is between 250 and 350 kp/sq.mm (Vickers), equivalent to 2,500 - 3,500 N/sq.mm.

The silvery oxidised layer can be stained to extend the range of possible finishes. FSB makes use of two methods:

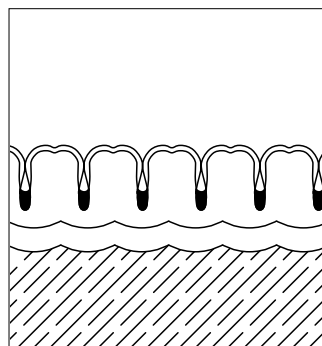
1. Surface and penetrating staining by immersion and absorption

The silvery white anodised aluminium is chemically stained in organic and inorganic dye solutions. The non-fade factor is between 6 and 7.



2. Deep staining of the oxidised coating

Metals and metal compounds are electrolytically implanted into the silvery oxidised layer using an alternating current. This is also known as the two-step method. Non-fade factors range between 7 and 8.



Once colouration is complete, the surface is sealed. This ensures abrasion strength as well as colour and weather fastness.

Aluminium essentially needs no looking after. The surface is protected by natural or artificial anodisation. Marks can be removed with water and a soft cloth.

Harder materials can gouge or abrade an aluminium surface. The scratches left by rings are a typical example. Though such blemishes may be a visual nuisance, they in no way impair the functional properties of the product. There are many users who view the impact of time on the objects of everyday use as an ennobling process.

We would also like to say a clear word on the subject of surface hygiene as it affects levers, handles and knobs.

FSB is not in the game of playing one material off against another. Whether a given surface destroys bacteria in 24 hours or 72 is a bit academic really, since people are using doors all the time in practice. You'd have to get out a disinfectant every time a handle were touched if you wished to eliminate germs altogether.

The finishes



The natural colour of aluminium is natural silver. This is the obvious choice for anyone seeking an authentic metal finish.

FSB aluminium products are colour classified as follows:

FSB 01
Aluminium natural colour anodised



FSB 02
Aluminium German silver-colour anodised

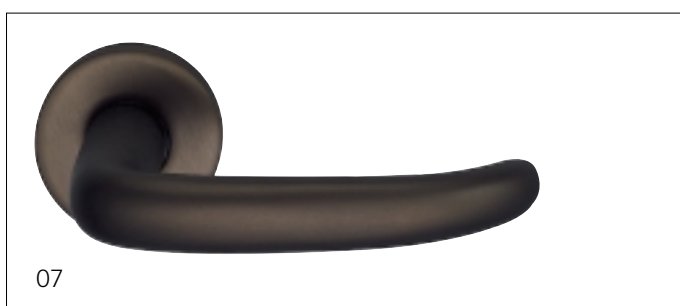
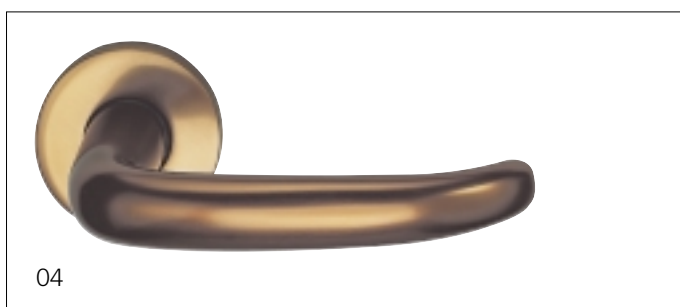
FSB 03
Aluminium brass-coloured anodised

FSB 04
Aluminium bronze-coloured anodised



FSB 07
Aluminium dark bronze colour anodised

The listed standard colours are reproduced opposite as accurately as printing technology will allow, as featured on the FSB 1023 lever handle. To ensure accurate matching, you are advised to request a sample product. Slight colour deviations arising from the manufacturing process are inevitable.



Stainless steel

Stainless steel

In 1912, the Krupp company in Essen patented a new material that was known in the inter-war period as 'Nirosta' or 'V2a steel'. It was soon adopted for applications ranging from the construction of containers for the chemical industry and components for motorcar and aviation design to building materials and domestic appliances.

Chromium-nickel steel, material No. 1.4301 under DIN 17440

The generic term stainless steel embraces over 100 separate rust and acidresistant steels. We manufacture our builders hardware utilizing a chromium-nickel steel classified as material 1.4301 under DIN 17440. It contains approx. 18 % chromium and 8 % nickel. This alloy has proved particularly successful in the building industry.

Properties of stainless steel

Stainless steel is an excellent material for door and window furniture, since its surface is extremely resistant to corrosion, knocks, scratches and abrasion and, owing to the chromium and nickel additives, needs little looking after. An invisible passive layer forms on the surface that is even said to kill bacteria.

Applications

We recommend stainless steel for all door and window furniture subject to heavy use, viz. in public buildings, office blocks, hospitals, motorway service areas, and public parks, at sporting venues, or on ships - wherever large numbers of people regularly congregate and reliable, low-maintenance fittings are a must.

Care

Stainless steel furniture basically requires no looking after. Smudges can be removed with a damp cloth. Outdoor fittings and those at chlorinated pools can develop what is known as 'flash rust' after a while. This is not generated from within the metal itself and can be removed by vigorous rubbing.

Notes on selection

When selecting and ordering door and window furniture, please read carefully the general material and technical data in this Catalogue. This avoids misunderstandings, queries, and delays.

A comprehensive 24 page guide containing information on Stainless steel and it's main-tenance is available from the Stainless steel information centre:

Informationsstelle
Edelstahl Rostfrei
P. O. Box 10 22 05
40013 Düsseldorf
Germany

The finishes



6204

FSB supplies stainless steel door and window furniture as standard in the following finishes:

FSB 6204
Satin Stainless steel
(stock version)

FSB 6205
Mirror polished Stainless steel

FSB 6206
Matt Stainless steel

FSB 6210
Stainless steel in brass finish

The stock satin finish is exceedingly hard-wearing. The optional mirror polished model is an ecologically sound alternative to chrome plating. The matt model has a very granular looking grip, though it has to be said that constant use gradually buffs the matt surface up. The mirror polished, the matt and the brass/gold hue variants are made to order. Production time, processing, and outlay are dependent on your overall order.

Surface Hygiene

There are those amongst our competitors who, citing the findings of research institutes, make much in their brochures of the enhanced sterilizing properties of certain finishes. FSB likewise has access to reports proving that, for instance, cupriferous metals kill germs more effectively than, in particular, synthetic materials. But FSB sets no great store by such findings. Whether a given finish destroys bacteria in 24 hours or in 72 is academic really, since in practice, doors tend to be in fairly regular use anyway. You'd have to take remedial action every time a door was opened or closed if you wished to eliminate germs altogether.



6205



6206



6210

Brass

The finishes



FSB 4205
Brass polished lacquered

FSB 4305
Brass polished waxed

FSB and brass

FSB has been supplying select door and window furniture in brass, together with accessories, for forty years. From the very beginning we strove for originality, spurning hackneyed forms such as post horns or duck bills.

DIN 17 660

Brass furniture is available in a wide range of alloys and at widely differing prices. But not all that glitters is pure brass. It is in our case though. We make exclusive use of the CuZn37 copper-zinc alloy specified under DIN 17 660 as material no. 2.0321 and 2.0335.

Corrosion protection

Brass is prone to corrosion in everyday use - a fact that is sometimes glossed over.

Polishing is the only way round this. Anyone acquainted with more northerly countries will have observed the weekly buffing given to brass furniture on front doors there.

This chore becomes redundant if the surface is either lacquered or waxed.

Waxed brass components are self-polishing through use. Areas that are not handled will rapidly develop a brown or grey-green patina. Many buyers deem this surface discolouration positively alluring. Lacquered brass furniture loses its gloss once the lacquer is damaged. Intercrystalline corrosion then quickly sets in. Corroded handles can be reconditioned, however - for a charge covering costs.

Recommendation

For anyone interested in a lasting golden 'sheen', FSB recommends titanium-coated stainless steel fittings in a golden brass finish. The hardness of the base material ensures that the brass stained titanium coating will withstand the ravages of the environment in normal use (shown on page 503).

For those who prefer to stick with brass despite what we have said on the previous page, FSB has the following recommendations to make:

Only use waxed brass finishes. Waxed brass polished finish can be looked after using proprietary cleansers.

Do not use lacquered brass finishes in outdoor applications where the sun and the environment will hasten the onset of corrosion.

Brass furniture should not be considered for heavy duty applications in public buildings, since there is too much cleaning involved.

Surface Hygiene

A brief word of clarification concerning the hygienic properties of door handles:

There are those amongst our competitors who, citing the findings of research institutes, make much in their brochures of the enhanced sterilizing properties of certain finishes. FSB likewise has access to reports proving that, for instance, cupriferous metals kill germs more effectively than, in particular, synthetic materials.

But FSB sets no great store by such findings. Whether a given finish destroys bacteria in 24 hours or in 72 is academic really, since in practice, doors tend to be in fairly regular use anyway. You'd have to take remedial action every time a door was opened or closed if you wished to eliminate germs altogether.

Aluminium + colour The finish



Aluminium + colour

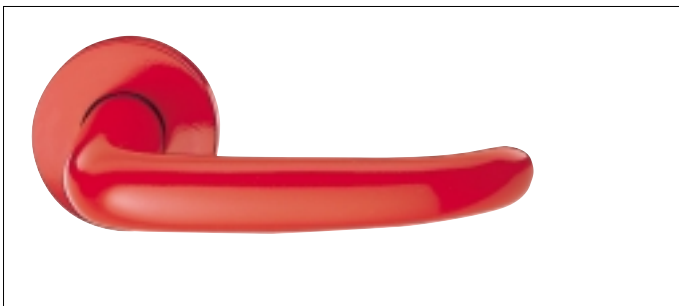
Coloured door and window furniture has been making waves for twenty years now. Against a background of featureless concrete, it has often provided the sole relief. The builders hardware industry is no longer conceivable without it.

Coating processes

Forming the basis of FSB's coated hardware are cast and polished aluminium models from the standard range. The surface is electrolytically oxidised and subsequently electro-statically powder coated. FSB uses a solvent-free lacquering process to produce a colour coating some 80 µm thick. Non-fade factor, surface hardness, and resistance to abrasion are roughly as for anodised aluminium coatings.

FSB is occasionally asked to supply colour coated versions of tubular handles in various types of steel. The danger here, especially with ordinary steel, is that, once the coating has been breached, the metal inside will corrode. FSB specifically draws your attention to this and is compelled to reject all claims to liability from the outset.

Assuming FSB colour coated handles are correctly fixed and properly treated, they will withstand day-to-day use. Surfaces can be damaged if knocked by hard angular items such as rings, keys, or boxes. Such scratch marks do not impair the handle's functioning, however.



Standard range

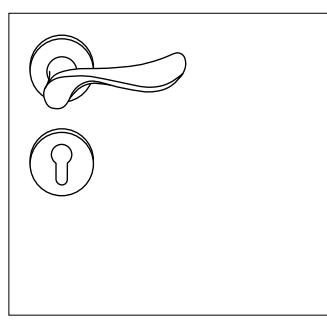
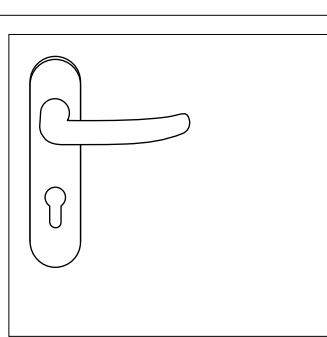
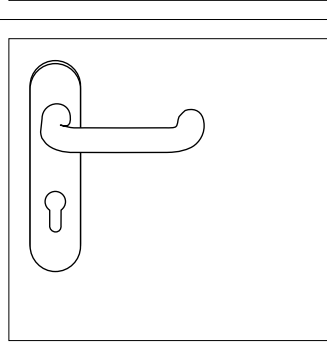
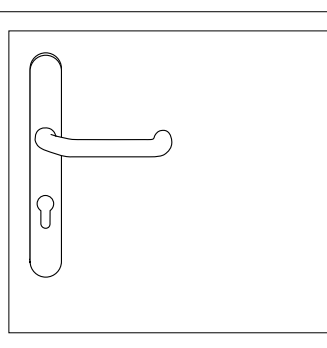
FSB regards itself primarily as a producer of door and window furniture in metal. Colour-coated fittings constitute but a very small proportion of our business. Nevertheless given a sufficiently sizeable order, we will be pleased to extend our range to individual requirements.



Colours

White	approx. RAL 9016
Crimson	approx. RAL 3002
Black	approx. RAL 9005

Examples of German specifications

<p>Standard-Türdrückergarnitur</p>		<p>FSB-Türdrückergarnitur Aluminium eloxiert mit 8 mm FSB-Stabilstift für Türdicke 40 mm</p> <p>gelagert in Türdrückerrosetten mit Stütznocken und Gleitlager aus glasfaserverstärktem schwarzem Kunststoff</p>	<p>Schlüsselrosetten gelocht</p> <p>FSB-Handformdesign 1020 Design Johannes Potente Türdrückerrosette FSB 1731 Schlüsselrosette FSB 1735</p>
<p>Securitas -AGL- Behördengarnitur</p>		<p>FSB-Türdrückergarnitur Securitas AGL Edelstahl mit 8 mm FSB-Stabilstift für Türdicke 40 mm</p> <p>festdrehbar passgenau gelagert in wartungsfreiem FSB-Ausgleichslager auf FSB-Schildern 185 x 45 mm</p>	<p>mit stabilisierenden Stütznocken, Befestigung beidseitig unsichtbar Entfernung 72 mm</p> <p>FSB-Design 7223 04 Grundentwurf Max Bill überarbeitet von Johannes Potente</p>
<p>FS-Türdrückergarnitur</p>		<p>FSB-Türdrückergarnitur für Rauch- und Feuerschutz-türen nach DIN 18 273</p> <p>Aluminium eloxiert mit 9 mm FSB-Stabilstift für Türdicke 40 mm</p> <p>festdrehbar gelagert auf FSB-Schildern 185 x 45 mm</p>	<p>versehen mit stabilisierenden Stütznocken, Befestigung beidseitig unsichtbar Entfernung 72 mm</p> <p>FSB-Design 7646 04 authentischer FSB-Werksentwurf</p>
<p>Türdrückergarnitur für Rahmentüren</p>		<p>FSB-Türdrückergarnitur für Rahmentüren aus Aluminium eloxiert mit 8 mm Vollstift für Türdicke 40 mm</p> <p>festdrehbar gelagert auf ovalen Langschildern 245 x 35 mm</p>	<p>mit stabilisierenden Stütznocken, Gleitlager aus schwarzem Kunststoff beidseitig unsichtbare Befestigung Entfernung 72 mm</p> <p>FSB-Design 7816 authentischer FSB-Werksentwurf</p>

Recommendation

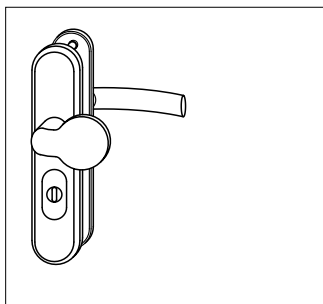
In describing our products at such length, we have sought to stress their distinctive 'personalities', i.e. the factors that set them apart from their market rivals.

Whether you are a briefing architect, a consultant joiner, a builders hardware wholesaler or an 'enlightened' end-

user, to ensure an FSB product is absolutely right for a given door or window you should heed all the specific 'traits' accorded that product. Indicated on these two pages are examples of how to ensure that the FSB products chosen are the most suitable for German customers.

Examples of German specifications

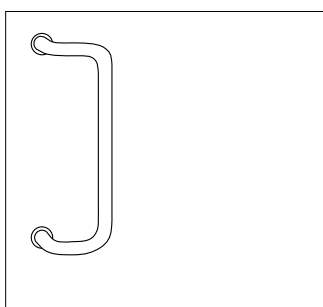
Schutzbeschlag



FSB-Schutzbeschlag
Schutzklasse 2-ZA
Aluminium . . . eloxiert
in FSB-Schichtbauweise
mit Zylinderabdeckung für
Überstände von 8 - 16 mm
mit drehbar am Kopfhals
verankertem 8 mm FSB-
Stabilstift
Entfernung 72 mm PZ

FSB-Design 7384 5510
Knopf und Türdrücker
Design Hartmut Weise

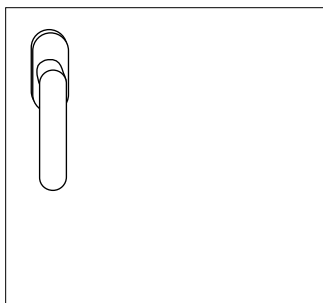
Türgriff



FSB-Türgriff aus Rundmaterial
z. B. Messing poliert gewachst
Grifflänge 350 mm
Griffdurchmesser 30 mm
mit Stützrosetten zur Stabilisie-
rung auf der Türoberfläche
Befestigung paarweise 1

FSB-Design 6662 38

Fenstergriff

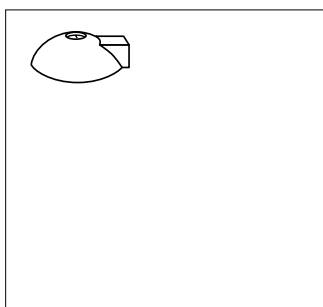


FSB-Fenstergriff
Aluguss und Thermoplast
grau-schwarz
RAL-geprüfte Kugelrastung
dauerhafter Gleichlauf
spürbare Positionierung
ganzflächig abdeckende
Korbbogenrosette

Befestigung unsichtbar mit
stabilisierenden Stütznocken,
Durchmesser 10 mm

FSB-Design 3436
Entwurf Dieter Rams

Türstopper



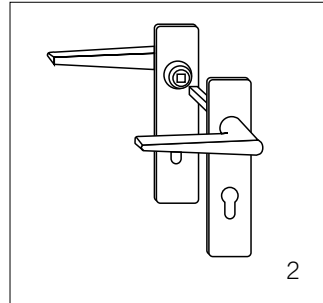
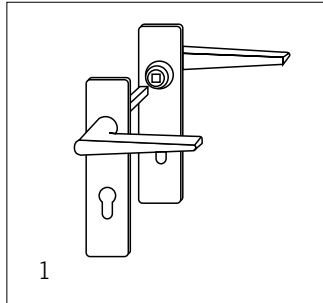
FSB-Bodentürstopper
Edelstahl
Durchmesser 70 mm
komplett mit Befestigungs-
material

FSB-Design 3884 00
authentischer
FSB-Werksentwurf

Handing details

Lever handle furniture for doors DIN l.h., inward opening

male handle points right, female handle points left.

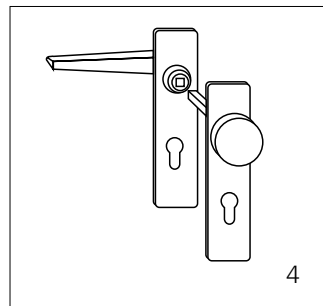
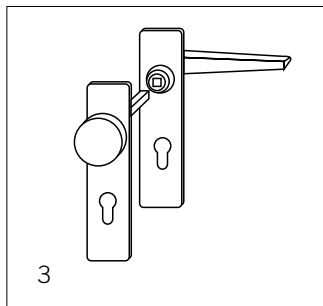


Lever handle furniture for doors DIN r.h., inward opening

male handle points left, female handle points right.

Lever furniture with dead knob for doors DIN l.h., inward opening

female handle points left.

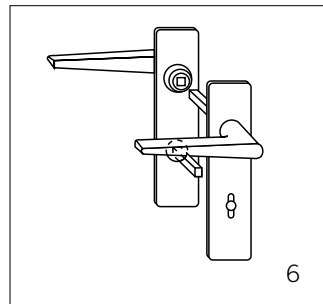
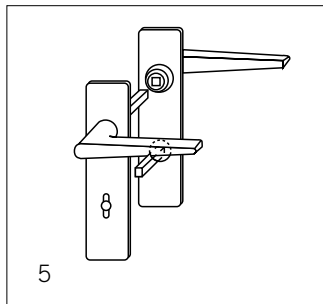


Lever furniture with dead knob for doors DIN r.h., inward opening

female handle points right.

Bathroom/WC furniture for doors DIN l.h., inward opening

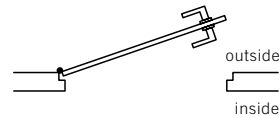
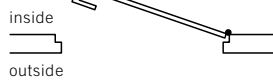
male handle points right, with WC perforation; female handle points left, with thumbturn.



Bathroom/WC furniture for doors DIN r.h., inward opening

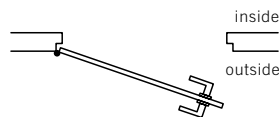
male handle points left, with WC perforation; female handle points right, with thumbturn.

DIN left hand inward opening



DIN right hand outward opening

DIN right hand inward opening



DIN left hand outward opening

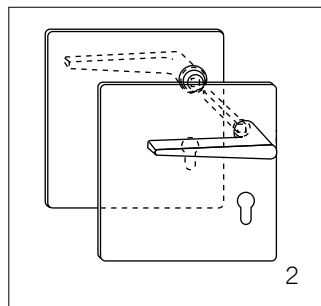
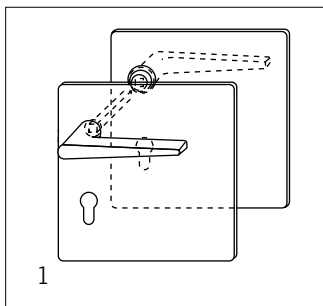
Explanation:

The German specifications DIN right hand respective DIN left hand refer to the positioning of the things on the opening face of the door.

Doors are either right or left hand, relative to which way they open. When ordering lever furniture with dead knob or if you require the spindle element to be located on the outside, you should specify left or right hand. Indication with use of diagram nos. would suffice.

Lever handle furniture for doors DIN l.h., inward opening

male handle points right, female handle points left.

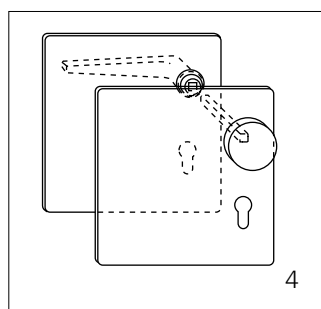
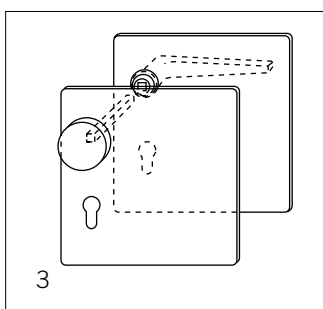


Lever handle furniture for doors DIN r.h., inward opening

male handle points left, female handle points right.

Lever furniture with dead knob for doors DIN l.h., inward opening

female handle points left.

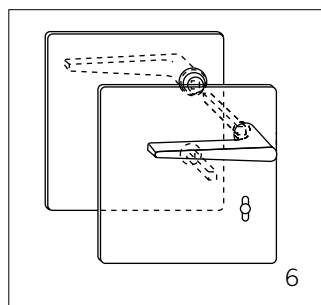
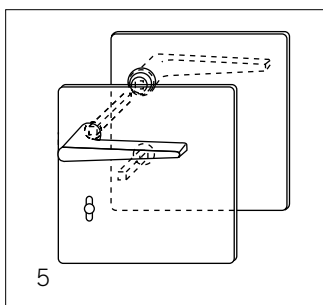


Lever furniture with dead knob for doors DIN r.h., inward opening

female handle points right.

Bathroom/WC furniture for doors DIN l.h., inward opening

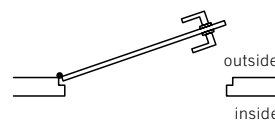
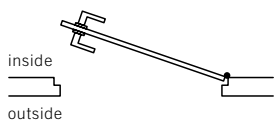
male handle points right, with WC perforation; female handle points left, with thumbturn.



Bathroom/WC furniture for doors DIN r.h., inward opening

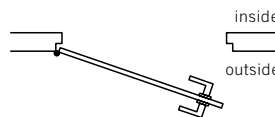
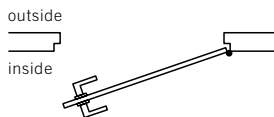
male handle points left, with WC perforation; female handle points right, with thumbturn.

DIN left hand inward opening



DIN right hand outward opening

DIN right hand inward opening



DIN left hand outward opening

About product liability

Under the Product Liability Act, FSB is liable for damage caused by faulty products, the precondition being that, in the selection, installation and use of the goods, all the applicable regulations set down in the FSB manual shall have been complied with.

We would additionally like to point out that what the law defines as product liability and what the end user actually expects of a product can be two radically different things. Door and window handles, after all, are in the first instance 'tools' for opening and closing doors and windows. However beautiful they might be, such tools still remain subject to the laws of wear and tear. Though prime materials are used, production is organised to ISO 9001, and the company has successfully undergone an EU 'eco-audit' (1996) and been certificated to ISO 14001 (1997), the laws of physics will inevitably manifest themselves to the end user in the form of wear and tear.

The main definitions and regulations are recapitulated in the following.

1.0 Product definitions

1.1 Lever handles and accessories

Lever handles and their accessories are implements with which to open and close doors. They do this in concert with the door frame, the door's hinges, the door leaf, the lock, and the cylinder, and all these components need to be properly synchronized. It's no use trying to use a lever handle to open a door if the door is locked, for instance, the only exception to this being the special mechanisms featured on panic doors.

1.2 Tubular handles

The same applies to tubular handles. The door frame, door hinges, door leaf and other closing devices such as door closers need to be compatible with one another.

1.3 Window handles and accessories

Again, window handles are but one element of the window. The method of closure will generally determine which type of handle is appropriate.

2.0 Improper use

Lever handles, pull handles and window handles and sliding ventilators are subject comparatively frequently to improper use, and this can lead sooner or later to damage for which the manufacturer can no longer be held responsible. Typical examples:

- Lever handles are used as supports, especially when on doors at the base of steep stairs.
- Doors are used as a sort of roundabout by children, the handles serving as the main source of support.
- In the absence of door stops, lever handles and pull handles bang against the wall.
- Lever handles and pull handles are used to hang heavy objects on.

3.0 Product Performance

Notions of product performance are only codified in norms to a very limited degree. For the most part, they are the up-shot of many years of experience and are by now common property in the builders hardware trade. FSB keeps faith with these general informal standards. The norms listed below apply for special performance requirements.

- **DIN 18 255**
This norm sets general standards for door furniture and accessories.
- **DIN 18 273**
This norm sets out limits specifically for firecheck and smoke stop doors.
- **DIN 18 257**
This norm lays down minimum requirements for security furniture.

FSB products are constantly evolving, and production is subject to continuous quality control. We reserve the right to make technical modifications.

4.0 Product maintenance

Most FSB products are 'implementations' for the opening and closing of doors and windows. Sooner or later, depending on what they are made of and where they are fitted, they will inevitably begin to show signs of wear. The properties of the various materials can be summarized as follows:

4.1 Aluminium

Aluminium has performed admirably in everyday use for many decades. The metal is protected by a tough anodised coating. Surface scratch marks in no way impair the operating efficiency of the furniture but simply denote the passing of time.

4.2 Stainless steel

Stainless steel is commonly regarded as being indestructible. In fact, even stainless steel can develop scratches and traces of rust. This latter is the phenomenon known as 'flash rust', which can be removed with the aid of standard cleansing agents.

4.3 Brass

Much has already been said in the FSB manual regarding the properties of brass. Whereas aluminium is more or less a pure metal, brass is an alloy with tendencies towards corrosion. We would therefore like to emphasize once again here that only regularly cleaned brass components without lacquer retain their initial allure. Once the coating of the lacquered version has been breached, unsightly corrosion sets in, and this can only be reversed in our factory after a laborious stripping operation.

4.4 Aluminium + colour

Coloured FSB lever handles are generally given a flexible colour membrane approx. 250 microns thick that is long-lived given correct use. Contact with sharp objects may lead to some denting.

5.0 Requisite information and instructions

Relevant information and instructions can be gleaned from the following material:

For stockists, architects and consultants: catalogues with all the necessary detailed descriptions.

For installers: besides catalogues - fitting instructions and templates and, where necessary, technical drawings.

For end users: fitting instructions, templates, and instructions for use and - in specific instances - care, all included with products.

To ensure the correct functioning of door and window furniture,

architects and designers are urged to bear in mind where and under what conditions the furniture is going to be in use and to select accordingly. Any queries should be addressed to the trade wholesalers, the FSB External Service, or FSB itself.

the sales trade is urged to rigorously double check the specifications provided by architects, designers and clients so as to ensure the compatibility of these specifications with those of the furniture selected.

installers are urged to make sure they receive from the sales trade all the products information and fitting and maintenance instructions needed for them to be able to fit the furniture correctly and pass on any relevant information to the customer.

Sales aids

You're wondering perhaps why we've spent so much time discussing something as secondary as sales aids. The point is, we don't see them as being secondary.

Builders hardware isn't changed every day like dirty clothes. Opting for the wrong product - wrong in terms of design, quality, or even the profit margin - can cause lasting damage, so there has to be forward planning. Practical sales aids - promotion, presentation and a strong case - can draw the customer's attention to the right product at the critical moment.

Once, all was well with the world and the term 'sales aids' meant little. Business ran its preordained course. Merchandise didn't hang around long on its way to the distribution networks and on to the joiners yards and building sites. It was the seller who set the agenda, while the buyer was happy simply to get the goods.

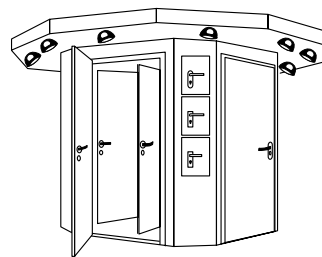
Things are pretty different now, though. What was formerly a seller's is now decidedly a buyer's market. The enlightened consumer responds to advertising, a well-conceived layout, accessible catalogue material, and down-to-earth advice. It's a trend we've all taken cognizance of in recent years, but still there's quite a bit to be done.

We at FSB do not consider it appropriate, for instance, to simulate a supermarket in an exhibition setting. Our trade should realize that simply bombarding the customer with builders hardware is counter-productive. Sliding partitions and revolving display add leanness to the sales argument.

You should also consider for a moment whether it is acceptable to present our furniture 'abstractly', i.e. without a concrete context. We know from the fashion world that anyone wishing to sell a shirt or a dress also has to display accessories such as a tie or a blouse. We're asking too much of our customers if we expect them to simply imagine the rest of the door when they're buying door furniture. Together with allied companies, FSB has several times in recent years shown at fairs how builders hardware can be introduced to the consumer in a 'concrete' fashion, i.e. with referential touch on sales arguments. We've all frequently been asked, 'What do you recommend, then?' Out comes some garbled reply to the effect that beauty is in the eye of the beholder but that such-and-such a model is going rather well at present. But have we ever seriously attempted to come up with genuine arguments?

We at FSB have been doing our homework on this one over the past few years. We published a booklet on the relationship between handles and the human hand entitled 'Greifen und Griffe'. We organized a work-shop around the issue of design and the commonplace, and acknowledged our own part in the history of design with a biography of Johannes Potente. We would be pleased if our fellow companies were to acquaint themselves with these publications and pass on the ideas contained within them.

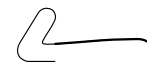
In answer to the often posed question as to what constitutes the handle of handles, for instance, we would invite the questioner to, literally, try his hand and apply the 'four rules of the grip'. It is this sort of approach that strikes a chord with the enlightened customer.



Thumb guide



Forefinger
farrow



Ball of the
thumb support



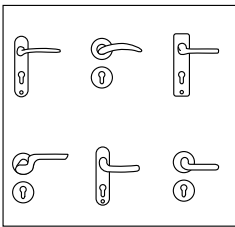
Gripping
substance

There are of course more pro-saic sales aids, which we will now briefly run through.

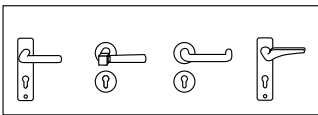
Take sample boards for a start. We supply them in four standard sizes. Up to six items can be displayed on each of these boards, which we have given a grey coating to reflect our corporate identity. Metallic tones show up well against a grey background. Items are fitted on special lock mechanism.



210 x 300 mm

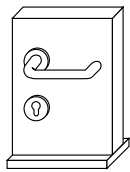


650 x 610 mm



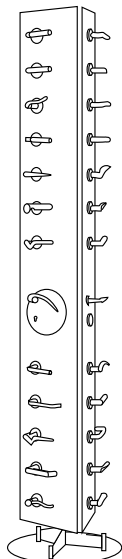
870 x 300 mm

Architects often look for something a bit more ambitious than a sample board. They like to see the furniture in conjunction with a lock and cylinder on a working door element. We produce sample blocks for this purpose.

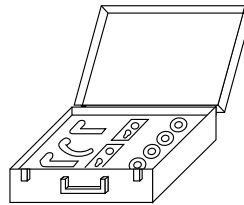
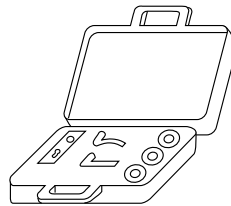


210 x 300 mm

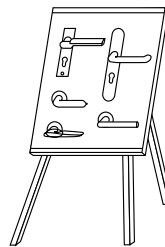
FSB's triangular display stand allows the company to exhibit its entire range in the most confined of areas and yet remain sharply demarcated from other exhibitors. The FSB stand requires 0.5 square metre of floor space at the outside and generates ideal display space for over 35 of our company products.



Triangular stands don't travel awfully well, though, which is why we devised our special sample cases to accommodate the entire FSB range. They can be bought and, in individual instances, hired. The FSB External Service has the details.



Exhibitions often call for display systems that are convenient to handle, and FSB's answer has similarities with a painter's easel. FSB standard boards (1,000 x 600 mm) are supported by a lightweight black steel frame which can be erected and dismantled in next to no time. The subject matter on display can be tailored to fit customer requirements.



ments.

Catalogues and prospectuses are also an important sales aid. To quote the familiar line from Goethe: 'If it's not down in black and white . . .'

We have put a great deal of effort into our new catalogues and prospectuses, with the primary objective of being of tangible assistance to the sales sector. Please place your orders with FSB's External Service.

German Standards (DIN)

Please find hereafter some German Standards (DIN) for doors and windows:

DIN 107

Bezeichnung mit links oder rechts im Bauwesen

DIN 4102, Beiblatt 1

Brandverhalten von Baustoffen und Bauteilen; Inhaltsverzeichnisse

DIN 4102, Teil 5

Brandverhalten von Baustoffen und Bauteilen; Feuerschutzabschlüsse, Abschlüsse in Fahr-schachtwänden und gegen feuerwiderstandsfähige Verglasungen, Begriffe, Anforderungen und Prüfungen

DIN 4102, Teil 13

Brandverhalten von Baustoffen und Bauteilen; Brandschutzverglasungen, Begriffe, Anforderungen und Prüfungen

DIN 4102, Teil 18

Brandverhalten von Baustoffen und Bauteilen; Feuerschutzabschlüsse, Nachweis der Eigenschaft 'selbstschließend' (Dauerfunktionsprüfung)

DIN 1080, Teil 1

Begriffe, Formelzeichen und Einheiten im Bauingenieurwesen, Grundlagen

DIN 18 054

Fenster; Einbruchhemmende Fenster – Begriffe, Anforderungen, Prüfungen und Kennzeichnung

DIN 18 055

Fenster; Fugendurchlässigkeit, Schlagregendichtheit und mechanische Beanspruchung; Anforderungen und Prüfungen

DIN 18 082, Teil 1

Feuerschutzabschlüsse
Stahltüren T 30-1, Bauart

DIN 18 095, Teil 1

Türen; Rauchschutztüren; Begriffe und Anforderungen

DIN 18 095, Teil 2

Türen; Rauchschutztüren Bauartprüfung der Dauerfunktions-tüchtigkeit und Dichtheit

DIN 18 100

Türen; Wandöffnungen für Türen; Maße entsprechend DIN 4172

DIN 18 101

Türen; Türen für den Wohn-bau; Türblattgrößen, Bandsitz und Schlosssitz; gegenseitige Abhängigkeit der Maße

DIN 18 103

Türen; Einbruchhemmende Türen, Begriffe, Anforderungen, Prüfungen und Kennzeichnungen

DIN 18 111, Teil 1

Türzargen; Stahlzargen, Standardzargen für gefälzte Türen

DIN 18 250

Einsteckschlösser für Feuer-schutzabschlüsse

DIN 18 251

Schlösser; Einsteckschlösser für Türen

DIN 18 252

Schließzylinder für Türschlös-ser; Begriffe, Benennungen

DIN 18 254

Schließzylinder für Türschlös-ser; Maße, Anforderungen, Prüfungen für Profilzylinder mit einreihigen Stiftzuhaltungen

DIN 18 255

Baubeschläge; Türdrücker, Türschilder und Türrosetten – Begriffe, Maße, Anforderungen

DIN 18 257

Baubeschläge; Schutzbe-schläge – Begriffe, Maße, An-forderungen, Prüfungen und Kennzeichnungen

DIN 18 268

Baubeschläge; Türbänder; Bandbezugslinie

DIN 18 273

Baubeschläge; Türdrückergar-nituren für Feuerschutztüren und Rauchschutztüren – Be-griffe, Maße, Anforderungen und Prüfungen

DIN 18 357

VOB Verdingungsordnung für Bauleistungen Teil C: Allge-meine Technische Vertragsbedingungen für Bauleistungen (ATV) Beschlagarbeiten

DIN 18 361

VOB Verdingungsordnung für Bauleistungen; Teil C – Allge-meine Technische Vorschriften für Bauleistungen, Verglasungsarbeiten

DIN 32 617

Hausbriefkästen; Anforderun-gen, Prüfung und Aufstellung

DIN 58 125

Schulbau, Bautechnische An-forderungen zur Verhütung von Unfällen

DIN 68 706, Teil 1

Innentüren aus Holz und Holz-werkstoffen; Sperrtürlätter, Begriffe, Vorzugsmaße, Kon-struktionsmerkmale

DIN V ENV 1627

Fenster, Türen, Abschlüsse – Einbruchhemmung – Anfor-derungen und Klassifizierung

DIN V ENV 1628

Fenster, Türen, Abschlüsse – Einbruchhemmung – Prüf-verfahren für die Ermittlung der Widerstandsfähigkeit unter statischer Belastung

DIN V ENV 1629

Fenster, Türen, Abschlüsse – Einbruchhemmung – Prüf-verfahren für die Ermittlung der Widerstandsfähigkeit unter dynamischer Belastung

DIN V ENV 1630

Fenster, Türen, Abschlüsse – Einbruchhemmung – Prüf-verfahren für die Ermittlung der Widerstandsfähigkeit gegen manuelle Einbruchversuche

prEN 1906

Baubeschläge, Türdrücker, und Türkäufe – Anforderungen und Prüfverfahren

General terms of sale

1. General

The following Terms of Sales represent the exclusive basis for all quotations and contracts; any deviating terms of the Customer, unless expressly acknowledged in writing, have no binding force.

2. Quotations

All quotations remain subject to confirmation unless expressly stipulated as binding or fixed. A contract of sale comes into being only with our written confirmation of order.

3. Delivery and passing of the risk

Shipment is made at the risk and expense of the Customer. The risk passes to the Customer when goods are delivered to the shipping or forwarding agent.

4. Delivery dates

The delivery dates indicated represent the foreseeable delivery dates with which we shall endeavour to comply.

5. Prices

Unless other agreements as to price are made, the price in application on the date of delivery is the price agreed. Prices are ex works Brakel excluding packaging. Packing is charged at cost. Tools for which prorata payments have been received remain our property.

6. Payment, setoff and withholding and return shipment

Our invoices are payable within 14 days after date of invoice less 2 % discount or within 30 days after date of invoice net. Sums below offer EUR 50.00 are payable net immediately. If the Customer is in default of payment, he must pay default interest at a rate of 3 % above the relevant basic rate of the ECB. If we become aware of circumstances, after an order has been placed, which give us good cause to doubt the credit worthiness of the Customer, we are entitled to deliver this order subject to cash in advance only and to make the delivery of other orders subject to their prior payment. The Customer may only set off claims which are not disputed and may exercise a right of withholding only in respect of such claims as are based on the same contract. The Customer is only entitled to return goods provided that an express prior agreement has been made to this effect. Such return shipments are subject to a deduction from goods value of at least 30 % to compensate for expenses.

7. Reservation of title

The products delivered (reserved title goods) remain our property until payment in full of the selling price and all existing and future claims arising from the business relations with the Customer. This is also valid in case that individual claims or all of them have been consolidated into one single invoice, the balance being stroked and recognised. The Customer has the right to sell the reserved title goods in the due course of business provided that he meets his contractual obligations. Otherwise we have the right to require the surrender of the reserved title goods; in this case, the Customer has no right of possession. We are then entitled, without prejudice to the payment obligation of the Customer, to sell the repossessed goods and to credit the Customer with any surplus. Already at the time of purchasing the reserved-title goods, the Customer assigns to us all claims arising from the

resale which accrue to him against his customers. Subject to revocation, he is authorised to collect the assigned claims, however, upon our demand, he shall notify us without delay and in full of the amount of these claims and the names of his customers. In case of a delivery by the manufacturer is regulated by a draft, the reservation of title will only expire after the draft being re-deemed. Whenever the value of existing securities is surpassing the liabilities to be guaranteed by more than 20 % the customer is entitled to force the manufacturer delivering orders.

8. Details

Unless expressly described as binding, all details and illustrations contained in our brochures and catalogues are merely approximate values usual in the trade. The duty is on the Customer to perform his own examination as to whether the goods are suitable for the intended purpose.

9. Warranty

Complaints regarding recognisable defects, wrong deliveries or substantial differences in quantity must be notified to us without delay in writing at the latest within ten days of delivery of the goods. If the Customer does not notify any defects within this period, the goods are deemed to have been approved free of defects. Concealed defects must be notified in writing without delay upon their discovery, however, at the latest within six months of delivery. We give a warranty for a freedom from defects conforming for a period of two years from the date of delivery. Complaints must be notified to us without delay in writing. Excluded from warranty are damages resulting from wear and tear and improper handling or repair. In the event of a justified and timely complaint, we shall, at our discretion, either undertake improvement or replacement delivery of the goods; all further claims, in particular, claims for consequential damage, are excluded. In the event that such improvement or replacement fails, the Customer retains

the right to require a reduction in the purchase price or rescission of the contract.

10. Place of performance and court of jurisdiction

Place of performance, place of payment and court of jurisdiction, also for actions based on bills of exchange or cheques is, as far as admissible, Brakel. This contract is governed exclusively by German law. The application of the United Nations Convention of 11.04.1980 on Contracts for the International Sale of Goods (CISG - 'Vienna Sales Convention') is excluded.

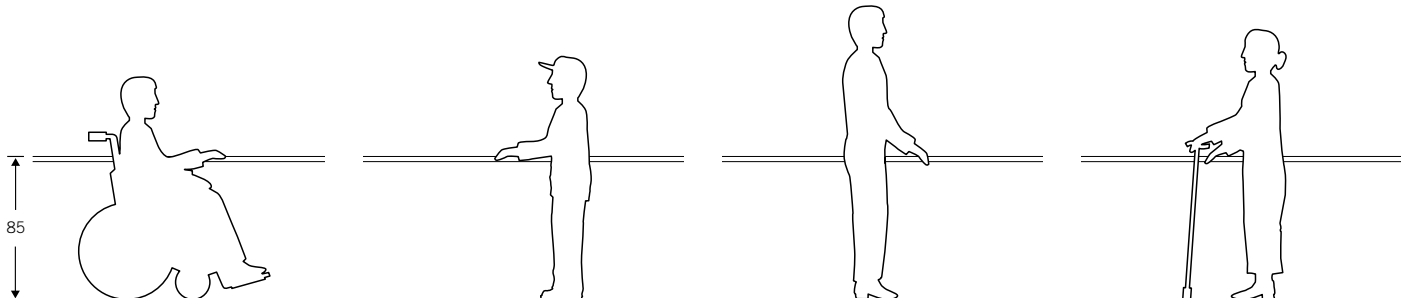
11. Data protection

The business data of the Customer shall be processed in accordance with the provisions of the Federal Data Protection Act (Bundesdatenschutzgesetz).

12. Concluding provision

The legal invalidity of individual provisions shall not affect the binding force otherwise of these terms of sale.

Building without barriers



FSB possesses copies of the German standards DIN 18 024 (Non-barrier access points in public buildings, spaces and workplaces) and DIN 18 025 (Non-barrier residential units) as well as guidelines and observations on this subject issued by the Bavarian Chamber of Architects. There follow extracts from these:

Operating devices on single-action hinged doors

Empirical studies have shown that, when adults - be they little or large - stand with arms dangling, their finger tips are at a height of roughly 73 - 75 cm. In the case of hinged doors in residential buildings, there must be clearance of at least 50 cm from the side wall or any furniture, measured from the centre-line of the door, to enable wheelchairs to be manoeuvred up to the handle from the side. The reveal in the wall, moreover, should be no wider than 20 cm.

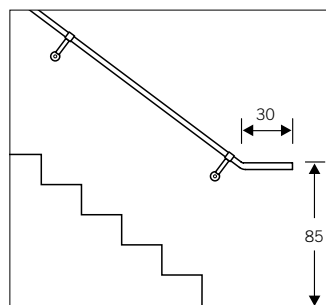
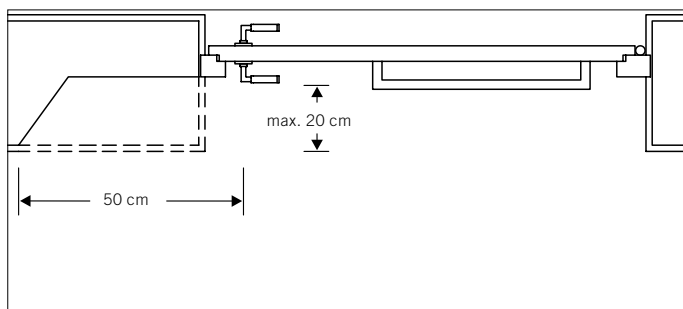
Movement areas near hand-operated doors

Wheelchair users have very limited scope for movement. The movement area on the slamming side of a hinged door is calculated as being 1.50 m x 1.50 m. Once someone in a wheelchair has passed through the doorway, the easiest way for them to close the single-action door is if a bar is mounted across the inside of the door at a height of approx. 85 cm. Thus adults will always be able to reach operating devices fitted at a height of 85 cm. Those of impaired mobility do not need to raise their walking aids at this height. Wheelchair users are able to tackle a gripping height of 85 cm with their arms on their rests. Hence, operating devices (e.g. lever handle crossbars for closing hinged doors, French window openers, operating units for automatic doors) should always be fitted at a height of 85 cm in nonbarrier spaces. Operating devices need to be designed to take account of those with impairments of manual functions, e.g. by cranking lever handles at their ends to prevent hands slipping off too easily.

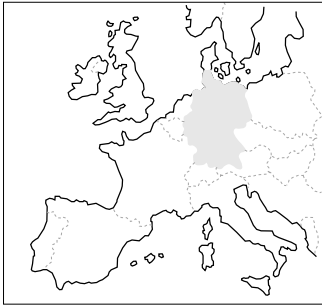
Railings

Stairs must be appointed in such a manner that safe use is assured. For a person to raise or support themselves, they need to be able to enclose the handrail with their hands. Handrail diameters of 30 - 45 mm are recommended. Stairs should be fitted with handrails on both sides. At the tops and bottoms of stairs, handrails should run horizontally for 30 cm. These areas should also be marked by means of tactile features.

FSB recommends careful study of the relevant regulations and will be willing to act as a development partner if required.



How to reach FSB



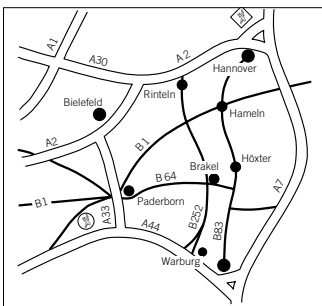
Brakel is situated in the south-easternmost corner of the German federal state of North-Rhine Westphalia. Geographically speaking, it is where the Egge mountains merge with the Weserberg hills.



Paderborn is connected with Berlin, London, Munich, Paris and Stuttgart, etc. The distance of the ICE-railway station Kassel-Wilhelmshöhe is about 55 minutes by car to Brakel.

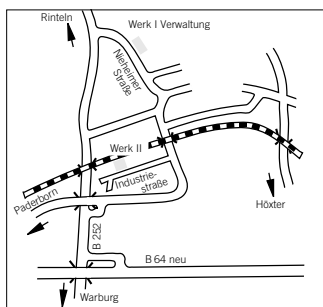
The distances to the most important German airports in km are:

Düsseldorf	about 200 km,
Frankfurt	about 220 km,
Hannover	about 120 km.



When going by car from the north, you'll come to Brakel via motorway, Hannover-Dortmund, exit point Rinteln, picking up then the route from Rinteln-Bartrup-Blomberg to Brakel. The distance from Rinteln to Brakel is about 90 km.

When coming from the south, leave the motorway Kassel-Dortmund at the exit point Warburg/Brakel driving then from Warburg over Peckelsheim, Siddessen and Rheder about 35 km to Brakel.



FSB has two production sites in Brakel.

Central administration is located together with the aluminium foundry and development units at Nieheimer Strasse 38.

Facilities II and III are housed along with the logistics centre at Industriestrasse 12 on the Brakel industrial estate.

Domestic Agencies



Domestic Agencies

- | | | | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>1
Klaus-Dieter Heib
Sandberg 131a
25524 Itzehoe
Telefon (0 48 21) 9 37 95
9 42 39
Telefax (0 48 21) 9 42 48
www.kd-heib.de
kd.heib@fsb.de</p> | <p>Wolfgang Doetkotte
Eisenbahnweg 27 a
48599 Gronau
Telefon (0 25 62) 81 77 77
Telefax (0 25 62) 81 77 78
fj.hund.doetkotte@fsb.de</p> | <p>8
Comos GmbH
Mönninghofer Weg 34
58285 Gevelsberg
Telefon (0 23 32) 1 21 96
Telefax (0 23 32) 1 44 33
j.comos@fsb.de</p> | <p>12
Heinz W. Perplies
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90585 Veitsbronn
Telefon (09 11) 9 75 45-0
Telefax (09 11) 9 75 45-11
www.perplies.de
hw.perplies-nordbayern@fsb.de</p> |
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Telefon (04 41) 9 36 11-0
Telefax (04 41) 9 36 11-11
www.feldtange.de
hg.feldtange@fsb.de</p> | <p>5
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Arnold Reinstädler
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66787 Wadgassen-Differten
Telefon (0 68 34) 96 01-0
Telefax (0 68 34) 96 01-18
www.reinstaedtler.de
a.reinstaedtler@fsb.de</p> |
| <p>3
Klaus-Dieter Heib
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Telefon (0 39 71) 21 06 36
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kd.heib.maibohm@fsb.de</p> | <p>Rolf Fischgrabe
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Karl-Heinz Beyl GmbH
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51107 Köln
Postfach 95 02 29 · 51087 Köln
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Telefax (02 21) 86 45 50
www.beyl.net
kh.beyl@fsb.de</p> | <p>14
Heinz W. Perplies
Moritzburger Weg 67
01109 Dresden
Telefon (03 51) 8 85 91-0
Telefax (03 51) 8 85 91-11
www.perplies-sachsen.de
hw.perplies-sachsen@fsb.de</p> |
| <p>4
Franz-Josef Hund
Rudolf-Harbig-Straße 7
48301 Nottuln
Telefon (0 25 02) 64 22
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www.fjhund.de
fj.hund@fsb.de</p> | <p>Walter Heilmann
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30173 Hannover
Telefon (05 11) 88 51 70
Telefax (05 11) 88 90 84
Mobil (01 71) 4 10 83 73
kh.moeller.heilmann@fsb.de</p> | <p>10 + 11
Karlheinz Peters GmbH
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63533 Mainhausen
Telefon (0 61 82) 9 37 50
Telefax (0 61 82) 2 85 84
Mobil (01 71) 8 24 91 87
www.kh-peters.de
kh.peters@fsb.de</p> | <p>15
Link Objektberatung
Böblinger Straße 29
71229 Leonberg
Telefon (0 71 52) 9 79 66-0
Telefax (0 71 52) 9 79 66-50
www.objektberatung.de
j.link@fsb.de</p> |
| <p>Gerd Leßmann
Unterdorfstraße 22 f
58239 Schwerte
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Telefax (0 23 04) 7 02 44
fj.hund.lessmann@fsb.de</p> | <p>6
Möller & Sohn GmbH
Jens Hostmann
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39124 Magdeburg
Telefon (03 91) 2 51 52 16
Telefax (03 91) 2 51 52 17
Mobil (01 71) 7 77 22 80
www.moellerundsohn.de
kh.moeller.hostmann@fsb.de</p> | <p>Adalbert Eulenstein
Gräfenthaler Straße 4
07330 Probstzella
Telefon (03 67 35) 7 07 90
Telefax (03 67 35) 7 07 90
Mobil (01 70) 8 31 73 68
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Wolfgang Fuchs
Helmut Immler
Wallbergstraße 3
82024 Taufkirchen
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Telefax (0 89) 61 45 61 70
www.immler-fuchs.de
w.fuchs@fsb.de</p> |
| <p>Ludger Hammelbeck
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59556 Lippstadt
Telefon (0 29 41) 8 14 11
Telefax (0 29 41) 8 14 46
fj.hund.hammelbeck@fsb.de</p> | <p>7
Hendrik Orsinger
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Telefon (03 32 03) 5 98-0
Telefax (03 32 03) 5 98-17
www.orsinger.de
h.orsinger@fsb.de</p> | | |

FSB-Edition

The following titles have so far been issued in the FSB-Edition:

Greifen und Griffe
Otl Aicher, Robert Kuhn
Köln: Verlag der Buchhandlung
Walther König, 1987
ISBN 3-88375-061-1

Türklinken, Workshop in Brakel
Texte: Otl Aicher, Jürgen W.
Braun, Siegfried Gronert
Fotos: Timm Rautert
Köln: Verlag der Buchhandlung
Walther König, 1987
ISBN 3-88375-072-7

Johannes Potente, Brakel
Design der 50er Jahre
Texte: Otl Aicher, Jürgen W.
Braun, Siegfried Gronert,
Robert Kuhn, Dieter Rams,
Rudolf Schönwandt
Köln: Verlag der Buchhandlung
Walther König, 1989
ISBN 3-88375-090-5

Zugänge – Ausgänge
Gedichte von Peter Maiwald
sowie Textbeiträge von
Jürgen W. Braun und
Marcel Reich-Ranicki
Köln: Verlag der Buchhandlung
Walther König, 1989
ISBN 3-88375-107-3

Zugänge – Ausgänge
Fotos von Timm Rautert sowie
Textbeiträge von Otl Aicher,
Jürgen Becker, Wolfgang
Pehnt
Köln: Verlag der Buchhandlung
Walther König, 1990
ISBN 3-88375-127-1

Türdrücker der Moderne,
Eine Designgeschichte von
Siegfried Gronert
Köln: Verlag der Buchhandlung
Walther König, 1991
ISBN 3-88375-136-7

Annentag in Brakel
Ein deutsches Volksfest
Fotos: Rudi Meisel,
Timm Rautert, Michael Wolf
Reportage: Bernd Müllender
Weitere Beiträge: Eugen
Drewermann, Herbert
Engemann, Peter Maiwald
Köln: Verlag der Buchhandlung
Walther König, 1992
ISBN 3-88375-157-X

Übergriff
Auftragstellung:
Jürgen W. Braun
Realisation:
Studenten der HfG Karlsruhe
unter Leitung von
Gunter Rambow
Texte: Peter Sloterdijk, Heinrich
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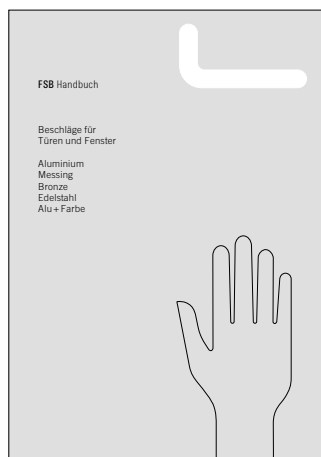
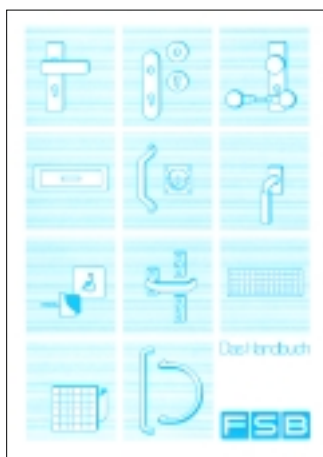
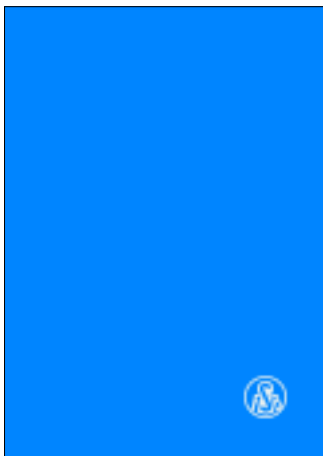
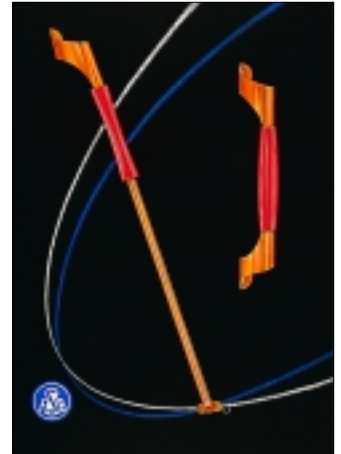
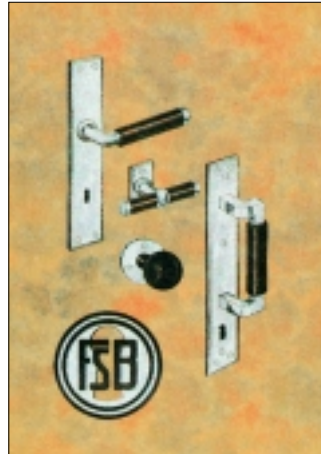
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Proud tradition

This Manual is part of a proud tradition stretching back to 1881. Since then, FSB has been presenting itself to the market in new guises every 15 years or so. This approach has kept us fresh and has clearly also helped keep us going.

We hope you will make use of this new aid at every opportunity. Should you encounter difficulties in your day-to-day dealings, please do not hesitate to communicate them to us. Only thus can we continue to match market requirements.



Many diligent helping hands have taken part of this Manual. One co-operation is specially to be emphasized. For the last time Herr Reinhard Hellmiß had taken pictures for us. For more than 30 years he had been the companion on our way. Thank you.

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