
















































































## Pull Handles

6

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# Overview

								
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- Aluminium
- Stainless steel
- Brass
- Aluminium + colour
- Plastics, black



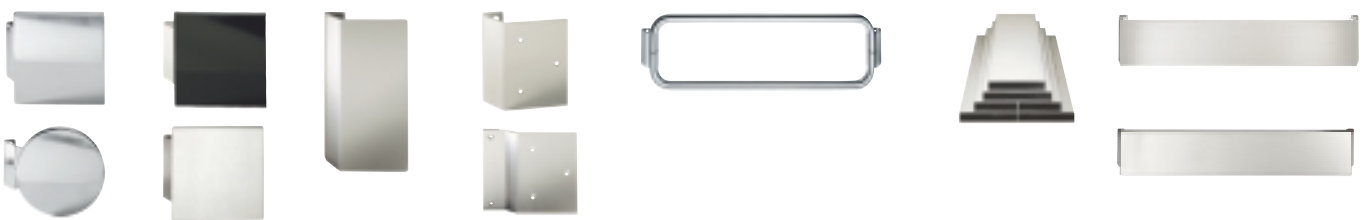
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# Materials, Fixing Options, Safety Clearance

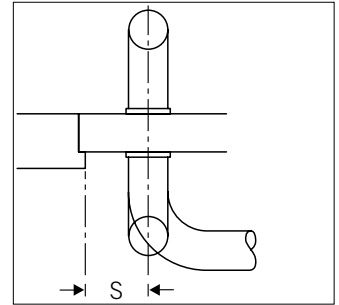
## Fixing Scenarios

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.

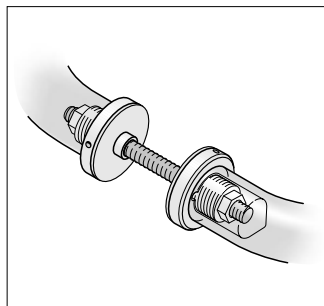
Pulls can be either face or through fixed to doors made of the most diverse of materials. In the case of through-fixing, either a pair of pulls or a single handle can be fitted. FSB has accorded these three fixing options - both-sides through fixing, one-side through fixing - clear identifying symbols that can be found on all relevant product pages. (Examples show fixing for tubular pulls).



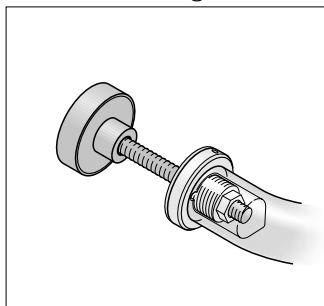
Safety Clearance (S)

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.

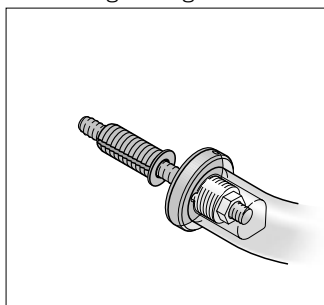
As regards the issue of face fixing versus one-side through-fixing, FSB wishes to point out that, on account of the dowel-fastening technique deployed by FSB, face fixing is both aesthetically pleasing and sufficiently durable as a rule. This needs to be qualified, however, in the case of heavy-duty 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



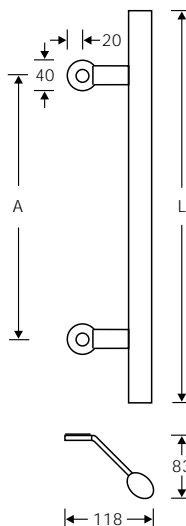
secret single side fixing with expansion plug

## 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

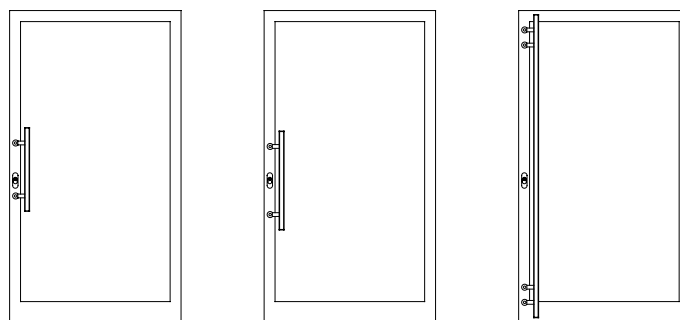


6616

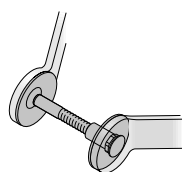
Stainless steel

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.

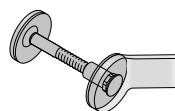
Item nos.	Ø	A	L
6616 35	40 x 28	350	550
6616 45	40 x 28	450	650
6616 99	40 x 28	451-2100	



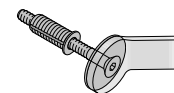
For detailed information on fixing, please turn to page 380.



back to back fixing

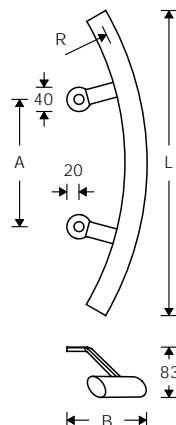


bolt through-fixing



secret single side fixing with expansion plug

Pull handles  
Oval series

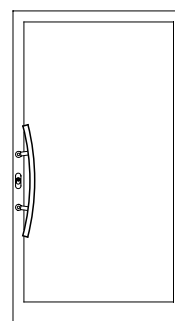
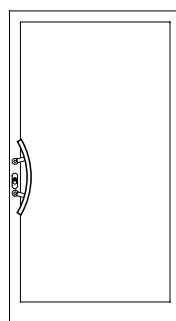


6675

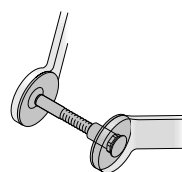
Stainless steel

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.

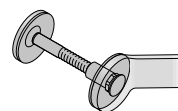
Item nos.	Ø	R	A	B	L
6675 21	40 x 28	485	210	130	504
6675 35	40 x 28	1420	350	130	745



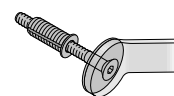
For detailed information on fixing, please turn to page 380.



back to back fixing

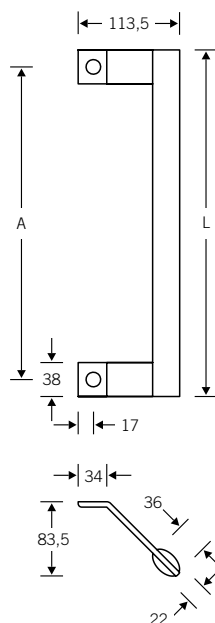


bolt through-fixing



secret single side fixing with expansion plug

Pull handles  
Oval series



6525

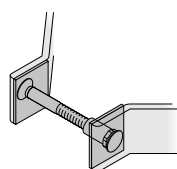
Aluminium

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.

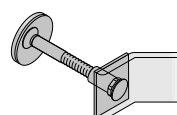
Item nos.	Ø	A	L
6525 35	36 x 22	350	388
6525 45	36 x 22	450	488

6

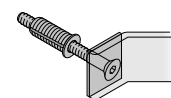
For detailed information on fixing, please turn to page 380.



back to back fixing



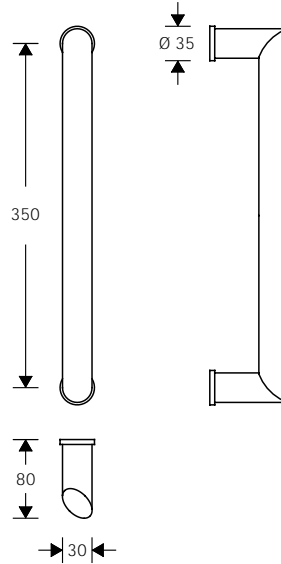
bolt through-fixing



secret single side fixing with expansion plug



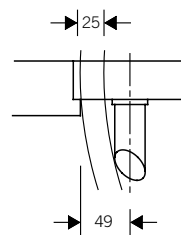
Pull handles  
Oval series



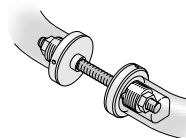
**6650**  
Stainless steel  
Fixing M8

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.

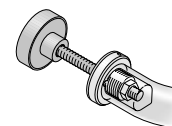
Item nos.	Ø	A	S
6650 38	36 x 22	350	49
6650 99	36 x 22	351-2100	49



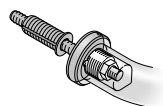
For detailed information on fixing, please turn to page 383.



back to back fixing

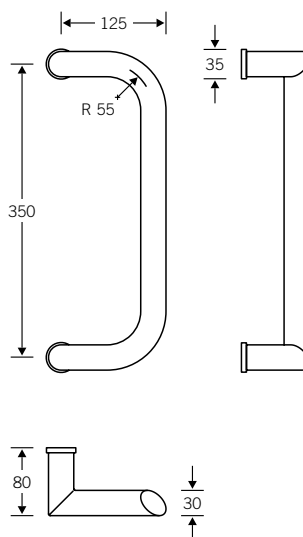


bolt through-fixing



secret single side fixing with expansion plug

Pull handles  
Oval series



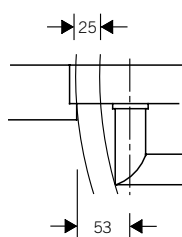
6682

Stainless steel

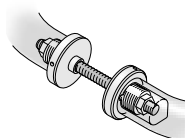
M8 fixing

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.

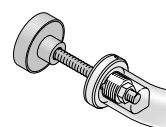
Item nos.	Ø	A	S
6682 38	36 x 22	350	53



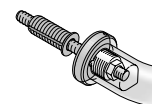
For detailed information on fixing, please turn to page 383.



back to back fixing

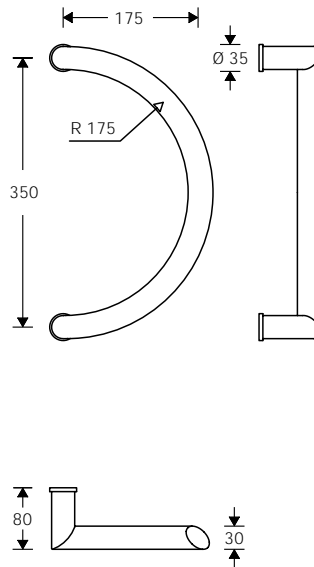


bolt through-fixing



secret single side fixing with expansion plug

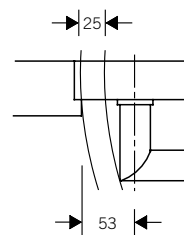
Pull handles  
Oval series



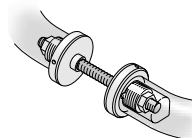
**6652**  
Stainless steel  
M8 fixing

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.

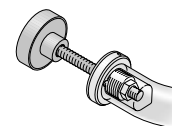
Item nos.	Ø	A	S
6652 38	36 x 22	350	53



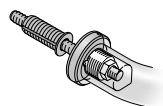
For detailed information on fixing, please turn to page 383.



back to back fixing

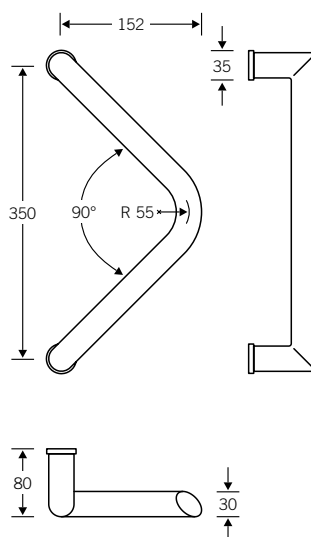


bolt through-fixing



secret single side fixing with expansion plug

Pull handles  
Oval series



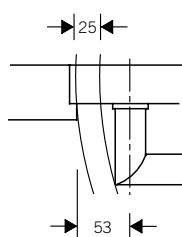
6685

Stainless steel

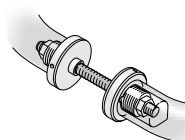
M8 fixing

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.

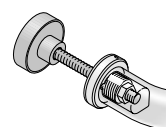
Item nos.	Ø	A	S
6685 38	36 x 22	350	53



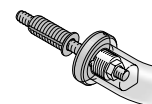
For detailed information on fixing, please turn to page 383.



back to back fixing

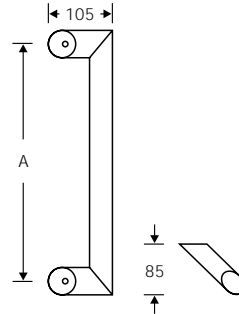


bolt through-fixing



secret single side fixing with expansion plug

Pull handles  
Oval series

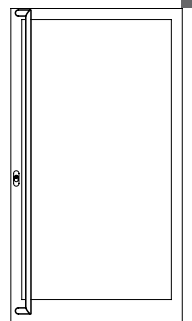
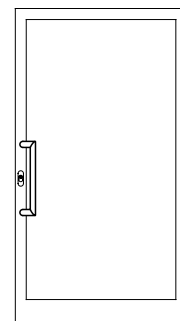
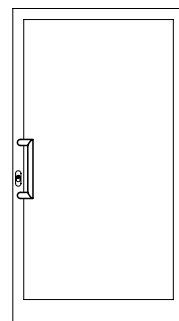
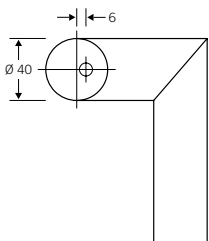


6635

Stainless steel

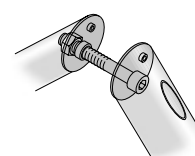
Door pull design FSB 6635 was the first member of the oval family. A hefty oval tube ( $\varnothing 40 \times 28$  mm) was required to be ergonomically designed to ensure hands could grip safely and purposefully. This objective was achieved by welding handle and brackets together in a mitre-joint. The 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

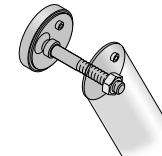


When locating the fixing points, especially on narrow stiles of frame doors, please regard the off-centre location of the threaded holes from the centre of the contact plane of the handle. The measurement's difference is in case of FSB 6635 exactly 6mm.

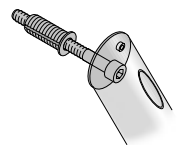
For detailed information on fixing, please turn to page 381.



back to back fixing

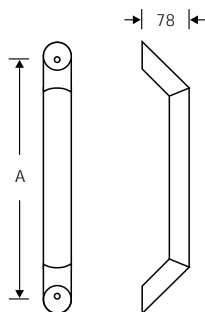


bolt through-fixing



secret single side fixing with expansion plug

Pull handles  
Oval series



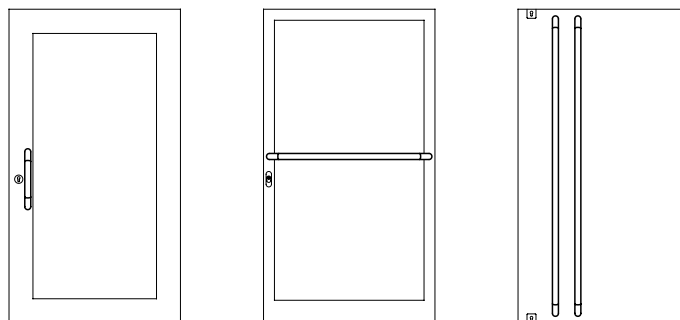
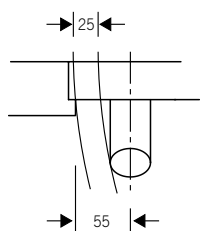
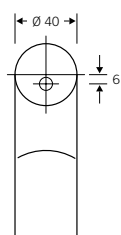
6637

Stainless steel

Door pull series FSB 6637 dispenses with the raking of the oval tube (Ø 40 x 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.

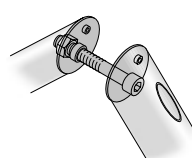
Item nos.	Ø	A	S
6637 38	40 x 28	350	55
6637 45	40 x 28	450	55
6637 99	40 x 28	451-2100	55

6

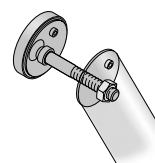


When locating the fixing points, especially on narrow stiles of frame doors, please regard the off-centre location of the threaded holes from the centre of the contact plane of the handle. The measurement's difference is in case of FSB 6637 exactly 6mm.

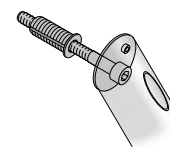
For detailed information on fixing, please turn to page 381.



back to back fixing

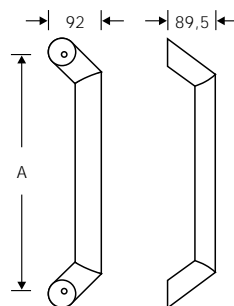


bolt through-fixing



secret single side fixing with expansion plug

Pull handles  
Oval series

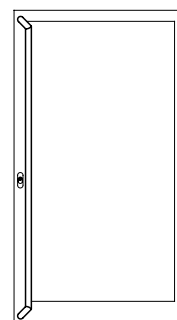
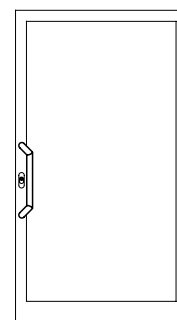
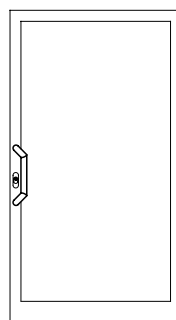
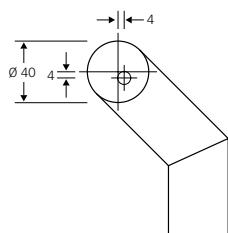


6636

Stainless steel

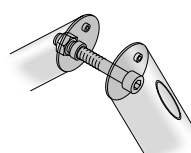
Door pull design FSB 6636 is a variation on the now classic first design FSB 6635. The visual severity of the first model is softened by having the brackets slope towards the grip. The angle between the two is 135°. The new design qualities really come into their own given smaller A dimensions.

Item nos.	Ø	A
6636 38	40 x 28	350
6636 45	40 x 28	450
6636 99	40 x 28	451-2100

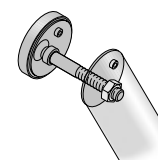


When locating the fixing points, especially on narrow stiles of frame doors, please regard the off-centre location of the threaded holes from the centre of the contact plane of the handle. The measurement's difference is in case of FSB 6636 exactly 6mm.

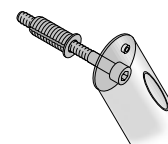
For detailed information on fixing, please turn to page 381.



back to back fixing

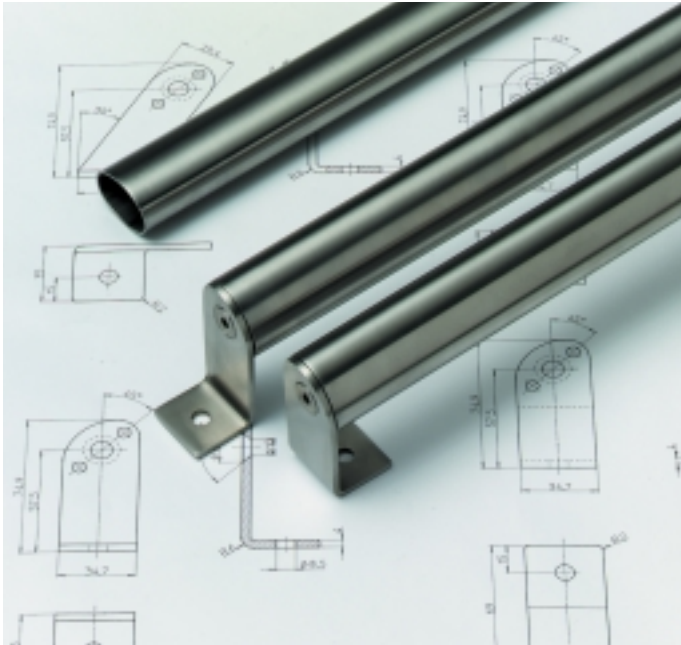


bolt through-fixing



secret single side fixing with expansion plug

# ht oval modular systems up to 1,500 mm



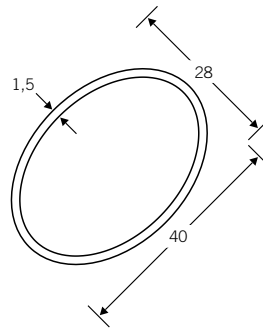
## 6802

Stainless steel

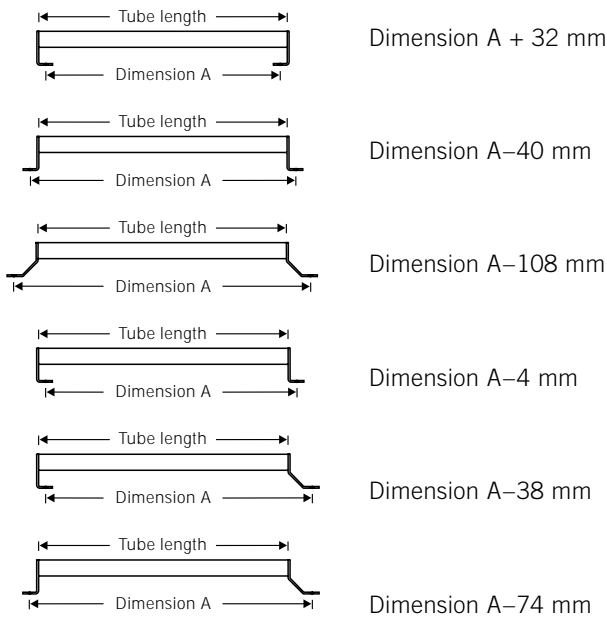
Tube 28 x 40 x 1.5 mm  
Stock length 3,000 mm

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:



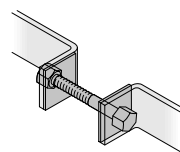
Tube length and A dimension are important for fabrication, fitting and ordering purposes. The A dimension defines the fixing distance from the centre of the borehole for one bracket to the centre of the borehole for the other. Tube length is arrived at by adding or subtracting the differential dimensions 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.

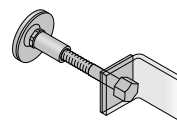
Reference:

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

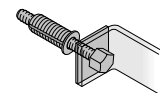
rail at particularly hazardous openings in buildings. If in any doubt, please contact the architect or engineer in charge. For detailed information on fixing, please turn to page 384.



back to back fixing



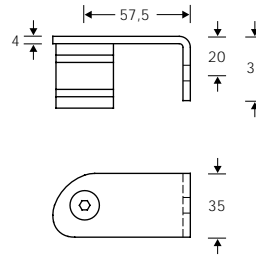
bolt through-fixing



secret single side fixing with expansion plug



Brackets **ht oval**  
modular systems

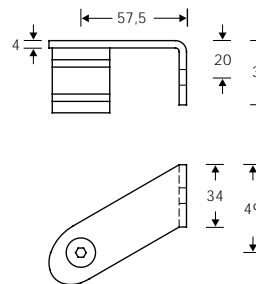


**6735**

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

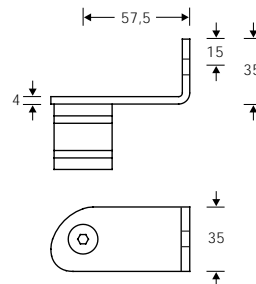


**6736**

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

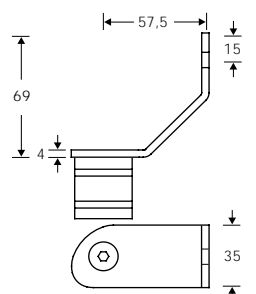


**6737**

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**

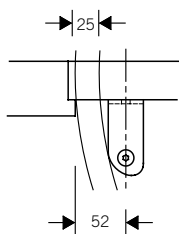
Stainless steel

6738 04 r.h.  
6738 05 l.h.

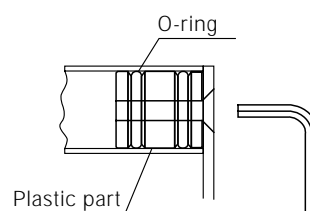
Bracket for swing doors,  
to match oval tube  
40 x 28 x 1.5 mm Ø

All illustrations r.h.

Screw hole Ø 8,5 mm



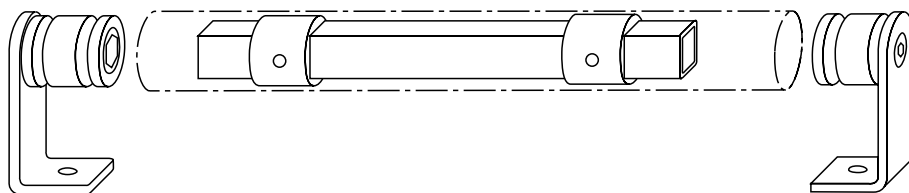
Safety clearance 52 mm



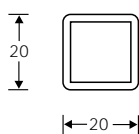
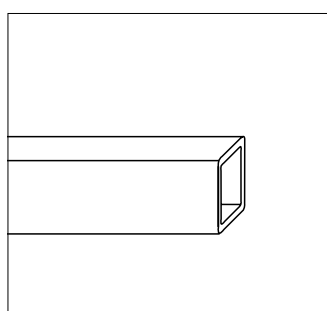
Once the tube has been cut to size (dimensions A + differential measurement), matching brackets are slotted into the tube ends and fastened with screws from the top.

# Accessories

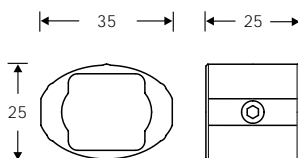
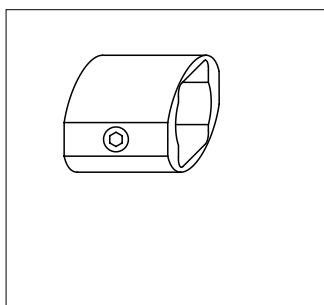
## ht oval modular systems



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.

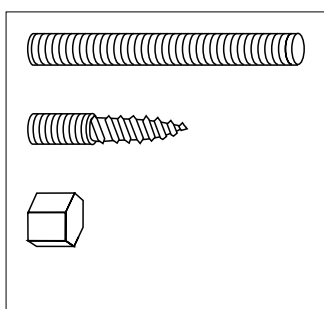


**6801 20**  
Steel tube hot galvanised  
20 x 20 x 2 mm  
Stock length 3,000 mm



**6739**  
Synth. mat.  
Spacing sleeve with fixing screw

6



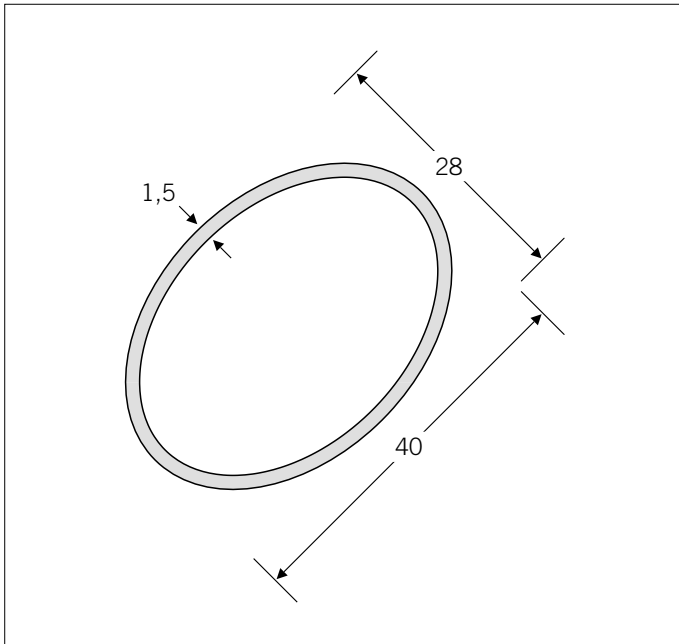
0313 0880 M8 x 80 mm  
Steel stud  
  
0316 0840 M8  
Steel stud - for timber fixing  
  
0320 0800 M8  
Dome nut of stainless steel

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

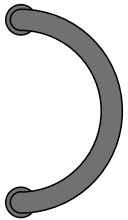
openings in buildings. If in any doubt, please contact the architect or engineer in charge.

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

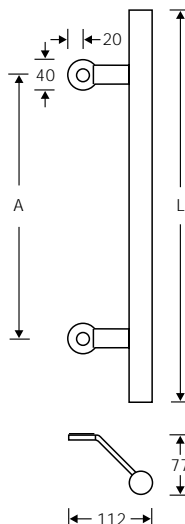
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The proven FSB range of tubular pulls has profited from the burst of innovation in the sphere of oval designs. New shapes and brackets have been added.

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

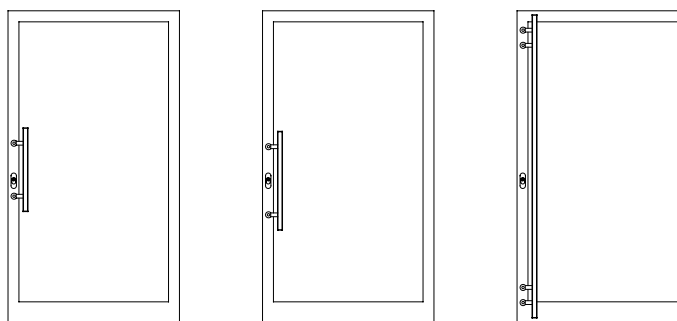


6615

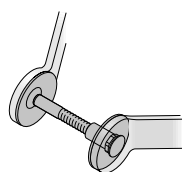
Stainless steel

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.

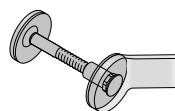
Item nos.	Ø	A	L
6615 35	30	350	550
6615 45	30	450	650
6615 99	30	451-2100	



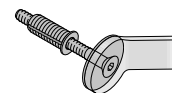
For detailed information on fixing, please turn to page 380.



back to back fixing

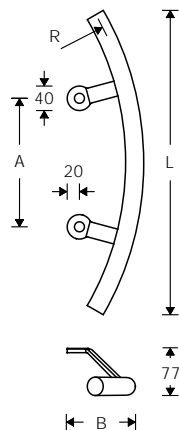


bolt through-fixing



secret single side fixing with expansion plug

Pull handles  
Round series

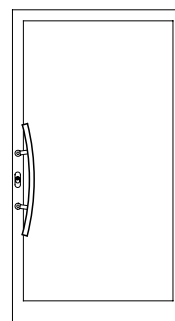
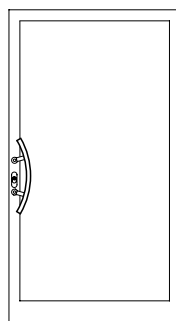


6674

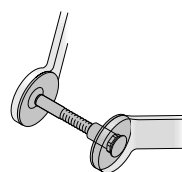
Stainless steel

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.

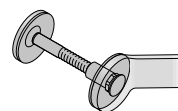
Item nos.	Ø	R	A	B	L
6674 21	30	485	210	126	497
6674 35	30	1420	350	123	742



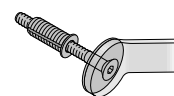
For detailed information on fixing, please turn to page 380.



back to back fixing

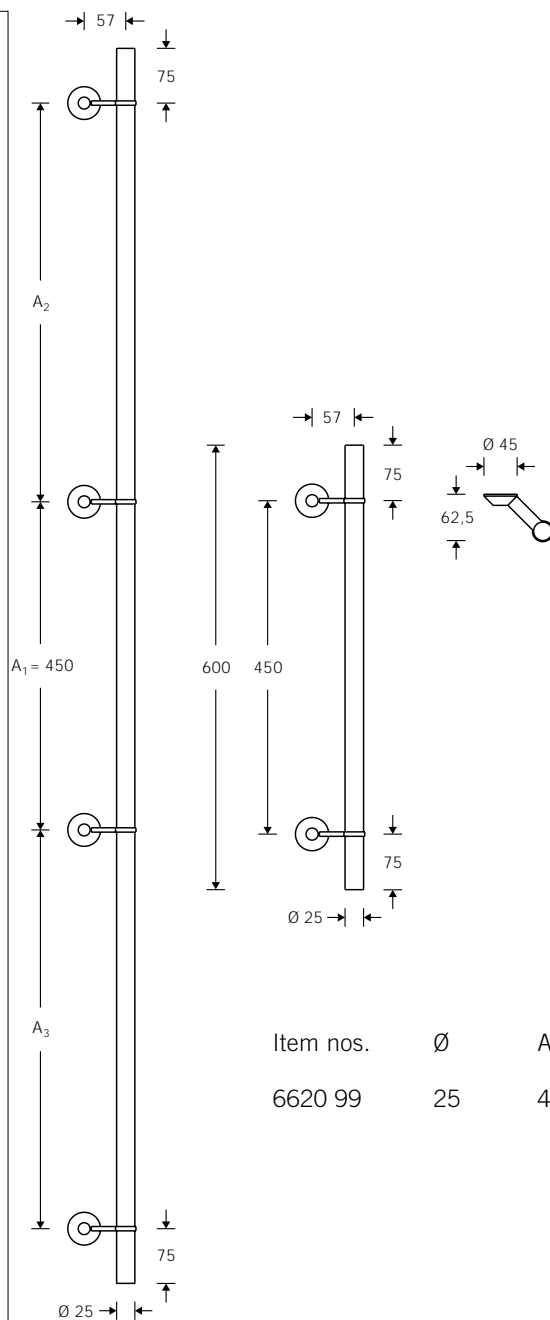


bolt through-fixing



secret single side fixing with expansion plug

Pull handles  
Round series



6620 45

Ø 25 mm

Stainless steel

A<sub>1</sub> = 450 mm

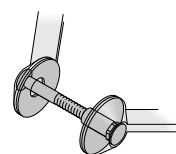
Overall length 600 mm

6

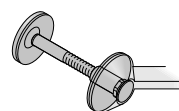
Item nos.	Ø	A1	A2	A3	Ending
6620 99	25	450	X	X	75 mm

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

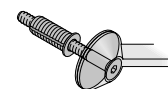
supplied as standard with an A dimension of 450 mm and an overall length of 600 mm. Optionally, they can both extend over the entire door. The standard measurement for the end sections is 75 mm. FSB recommends a distance between brackets of at most 1,200 mm.



back to back fixing



bolt through-fixing



secret single side fixing with expansion plug



Pull handles  
Round series



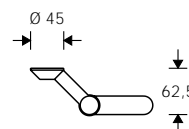
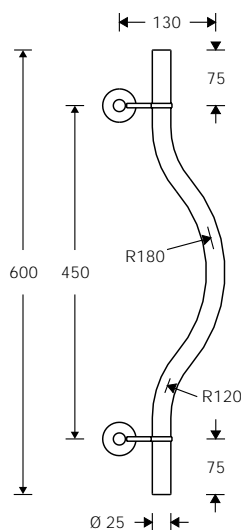
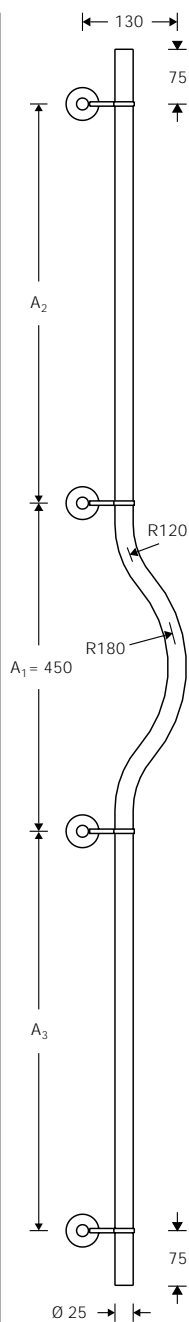
6621 45

Ø 25 mm

Stainless steel

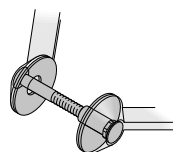
A<sub>1</sub> = 450 mm

Overall length 600 mm

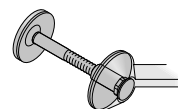


Item nos.	Ø	A1	A2	A3	Ending
6621 99	25	450	X	X	75 mm

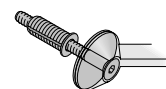
For detailed information on fixing, please turn to page 385.



back to back fixing

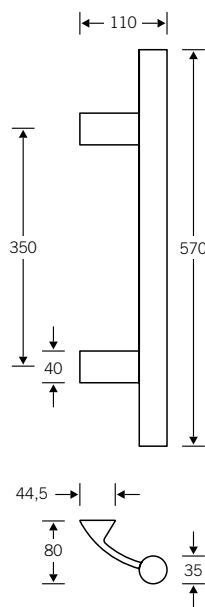


bolt through-fixing



secret single side fixing with expansion plug

Pull handles  
Round series



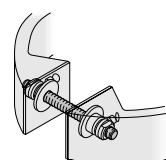
6526

Aluminium  
Stainless steel (brackets natural coloured aluminium)

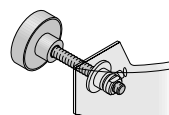
With the publication of its 02/03 Manual, FSB is supplementing its proven and long-successful in-line pull series in aluminium and stainless steel with a particularly safe-to-grip design featuring heavily cranked fixing points on which the ends of brackets are incorporated into the pull section. The 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

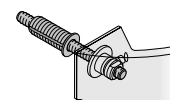
For detailed information on fixing, please turn to page 386.



back to back fixing

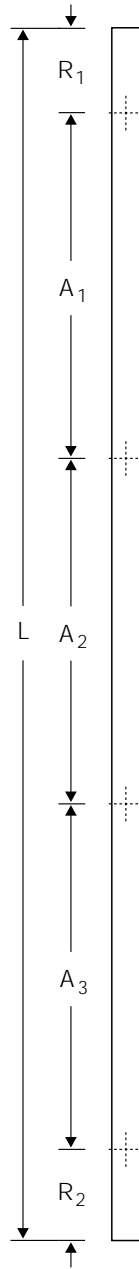
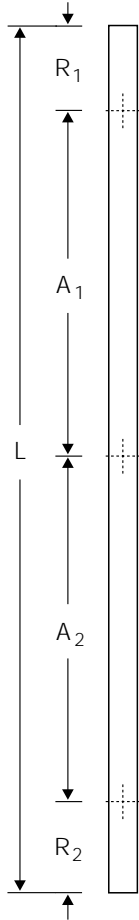


bolt through-fixing

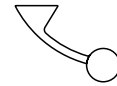


secret single side fixing with expansion plug

Fax copy



**6526** Ø 35 mm



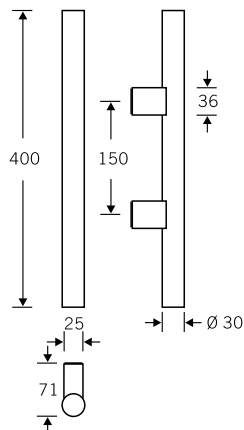
To order custom designs in the pull handle series 6526, please use a copy of this page: First specify the model desired citing the applicable order code above. Then enter the quantity required and overall length in the table below. Then enter details of the distances between brackets and, where applicable, 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 <sub>1</sub>	A <sub>2</sub>	A <sub>3</sub>	R <sub>1</sub>	R <sub>2</sub>

\* least 30 mm

Pull handles  
Round series

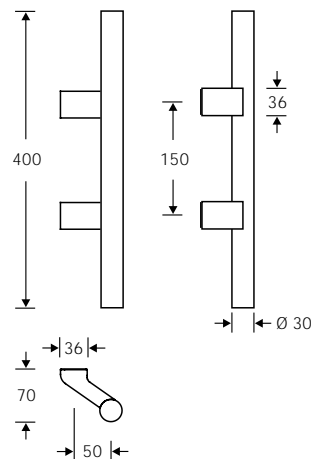


**6642**

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

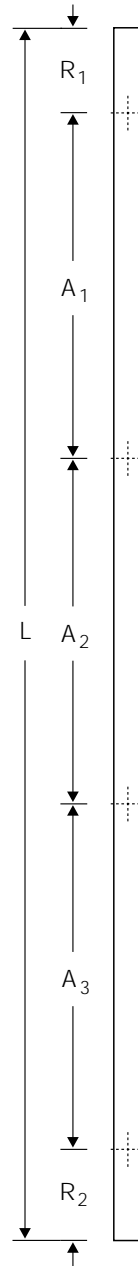
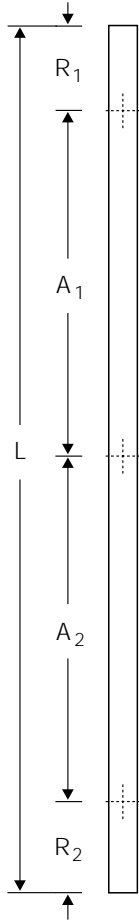
Brackets  
Aluminium natural colour anod.  
Grip  
Aluminium natural colour anod.

Standard length 400 mm  
Fixing M6

6

For detailed information on fixing of the pull handles 6642 and 6643, please turn to page 382.

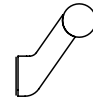
Fax copy



**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.

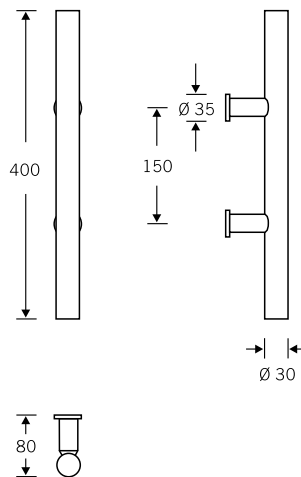
Then enter details of the distances between brackets and, where applicable, their distance from the end of the handle in mm. To ensure stability, the distance between brackets should not exceed 1,200 mm.

6

Quantity	Overall length L	Distance between brackets			Edge spacing*	
		A <sub>1</sub>	A <sub>2</sub>	A <sub>3</sub>	R <sub>1</sub>	R <sub>2</sub>

\* least 30 mm

Pull handles  
Round series

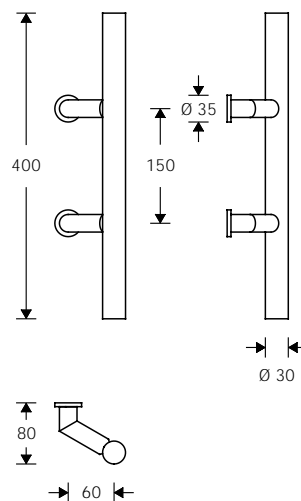


6681

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).

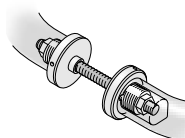
For detailed information on fixing, please turn to page 383.



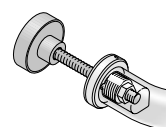
..00

..10

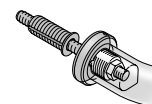
..20



back to back fixing

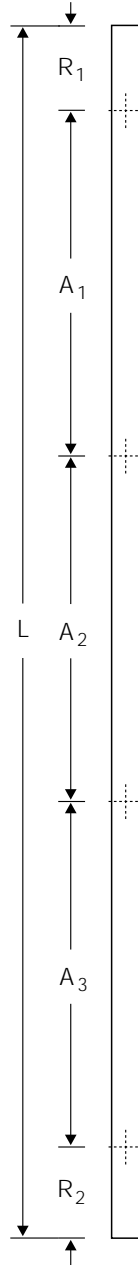
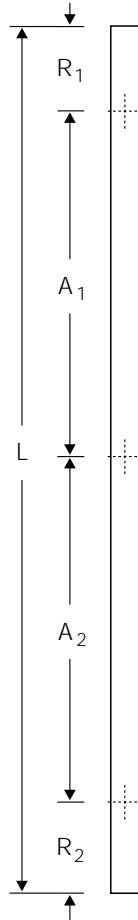


bolt through-fixing

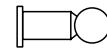


secret single side fixing with expansion plug

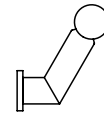
Fax copy



- 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.

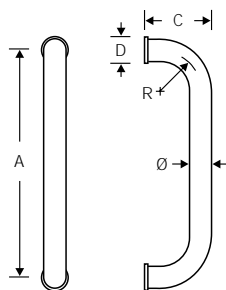
Finally, please tick the cap required for standard versions with a diameter of 30 Ø.

6

Quantity	Overall length L	Caps for 6681 and 6630			Distance between brackets			Edge spacing*	
		..00	..10	..20	A <sub>1</sub>	A <sub>2</sub>	A <sub>3</sub>	R <sub>1</sub>	R <sub>2</sub>

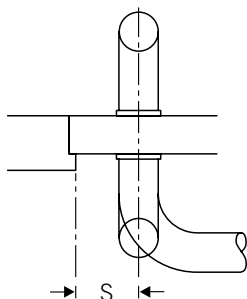
\* least 30 mm

Pull handles  
Round series



Aluminium  
Stainless steel  
Brass  
Aluminium + colour

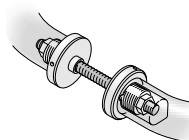
Fixing  $\varnothing = 20$  mm M6  
 $\varnothing \geq 25$  mm M8



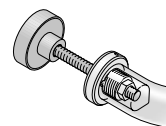
Item nos.	$\varnothing$	R	A	C	D	S
6627 34	20	25	200	75	30	45
6670 34	25	40	200	80	35	48
6670 37	25	40	300	80	35	48
6670 38	25	40	350	80	35	48
6602 38	30	55	350	90	35	51
6603 38	35	60	350	95	45	56
6604 38	40	60	350	105	45	65
6670 99	25	40	200-1200	80	35	48
6602 99	30	55	300-1200	90	35	51
6603 99	35	60	300-1200	95	45	56
6604 99	40	60	350-1200	105	45	65

S Safety clearance

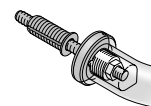
For detailed information on fixing, please turn to pages 382 and 383.



back to back fixing



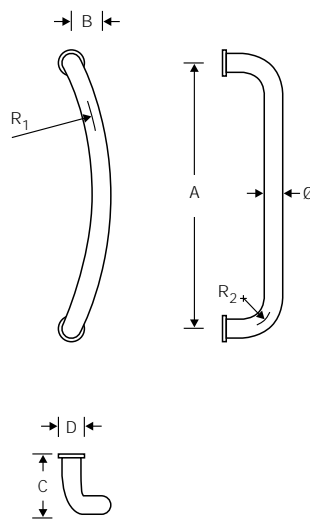
bolt through-fixing



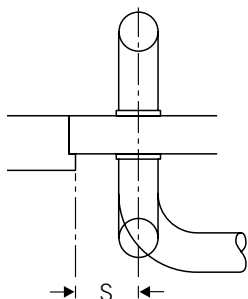
secret single side fixing with expansion plug



Pull handles  
Round series



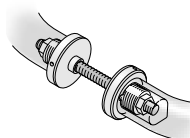
Aluminium  
Stainless steel  
Brass  
Aluminium + colour  
Fixing M8



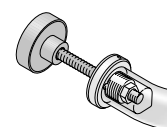
Item nos.	Ø	R1	R2	A	B	C	S
6605 25	25	260	40	250	32	80	45
6605 38	25	260	40	350	68	80	45
6605 50	25	400	40	500	88	80	45

S Safety clearance

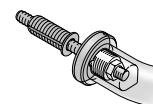
For detailed information on fixing, please turn to page 383.



back to back fixing

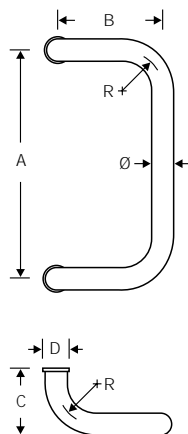


bolt through-fixing



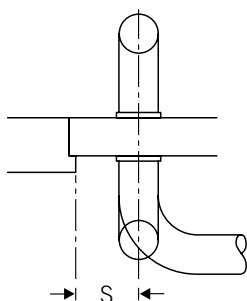
secret single side fixing with expansion plug

Pull handles  
Round series



Aluminium  
Stainless steel  
Brass  
Aluminium + colour

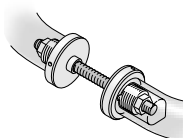
Fixing Ø = 20 mm M6  
Ø ≥ 25 mm M8



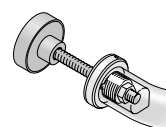
Item nos.	Ø	R	A	B	C	D	S
6660 34	20	25	200	100	75	30	41
6661 34	25	40	200	100	80	35	42
6661 37	25	40	300	100	80	35	42
6661 38	25	40	350	100	80	35	42
6662 38	30	55	350	140	90	35	43
6663 38	35	60	350	140	95	45	45
6664 38	40	60	350	150	120	45	52
6661 99	25	40	200–1200	100	80	35	42
6662 99	30	55	300–1200	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

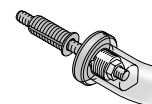
For detailed information on fixing, please turn to pages 382 and 383.



back to back fixing

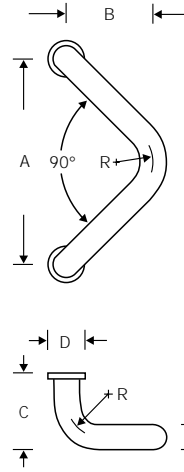


bolt through-fixing



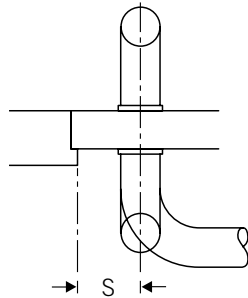
secret single side fixing with expansion plug

Pull handles  
Round series



Aluminium  
Stainless steel  
Brass  
Aluminium + colour

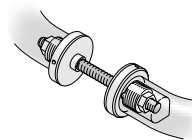
Fixing Ø = 20 mm M6  
Ø ≥ 25 mm M8



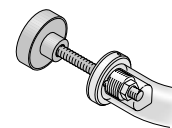
Item nos.	Ø	R	A	B	C	D	S
6649 34	20	25	200	90	75	30	41
6679 34	25	40	200	83	80	35	42
6679 37	25	40	300	133	80	35	42
6679 38	25	40	350	158	80	35	42
6623 38	30	55	350	152	90	35	43
6624 38	35	60	350	150	95	45	45
6625 38	40	60	350	150	105	45	49

S Safety clearance

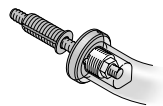
For detailed information on fixing, please turn to pages 382 and 383.



back to back fixing

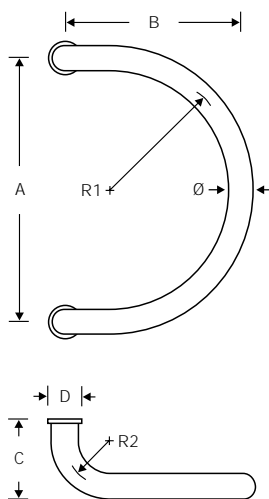


bolt through-fixing



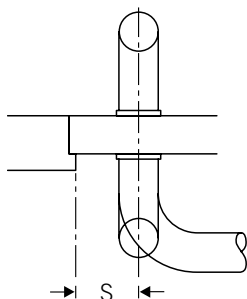
secret single side fixing with expansion plug

Pull handles  
Round series



Aluminium  
Stainless steel  
Brass  
Aluminium + colour

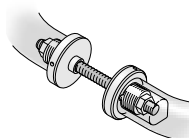
Fixing Ø = 20 mm M6  
Ø ≥ 25 mm M8



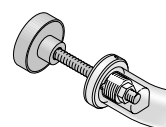
Item nos.	Ø	R1	R2	A	B	C	D	S
6626 34	20	100	25	200	130	75	30	41
6673 34	25	100	40	200	140	80	35	42
6673 37	25	150	40	300	195	80	35	42
6673 38	25	175	40	350	220	80	35	42
6683 38	30	175	55	350	235	90	35	43
6659 38	35	175	60	350	235	95	45	45
6678 38	40	175	60	350	235	120	45	52

S Safety clearance

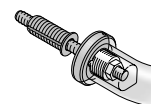
For detailed information on fixing, please turn to pages 382 and 383.



back to back fixing

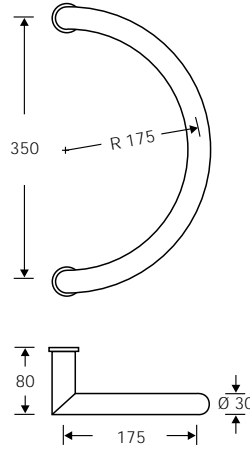


bolt through-fixing



secret single side fixing with expansion plug

Pull handles  
Round series



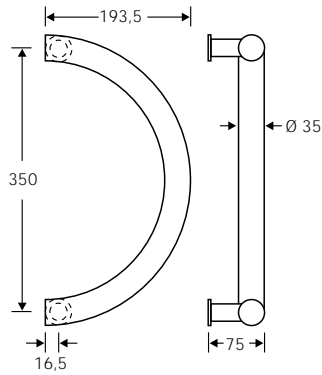
**6653 38**

Ø 30 mm

Stainless steel

Safety clearance 55 mm

Fixing M8



**6655 38**

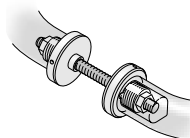
Ø 35 mm

Aluminium  
Stainless steel

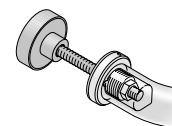
Safety clearance 55 mm

Fixing M8

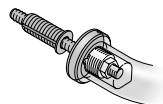
For detailed information on fixing, please turn to page 383.



back to back fixing

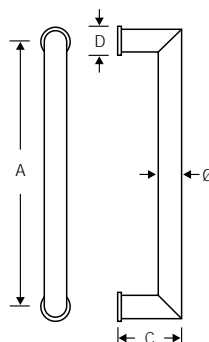


bolt through-fixing



secret single side fixing with expansion plug

Pull handles  
Round series

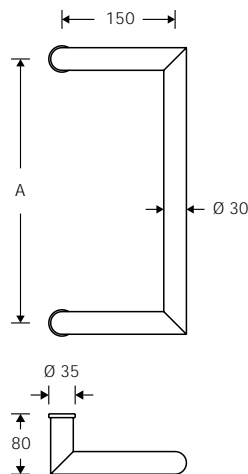


Stainless steel

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



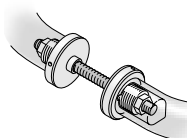
6514

Stainless steel

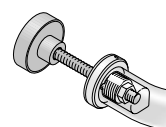
Fixing M8

Item nos.	Ø	A	S
6514 38	30	350	55
6514 45	30	450	55

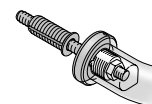
For detailed information on fixing, please turn to page 383.



back to back fixing

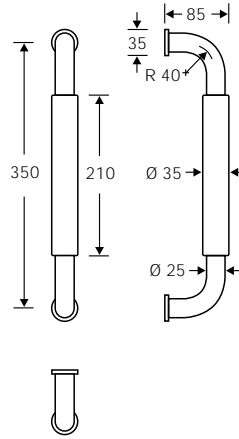


bolt through-fixing



secret single side fixing with expansion plug

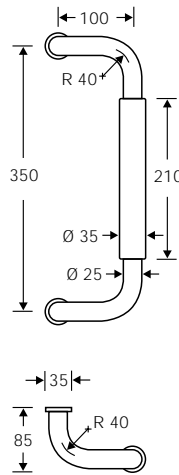
Pull handles  
Round series



**6608 38**

Stainless steel 35/25 mm

Safety clearance 50 mm  
Fixing M8

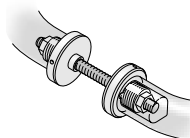


**6658 38**

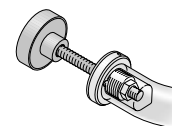
Stainless steel 35/25 mm

Safety clearance 42 mm  
Fixing M8

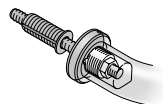
For detailed information on fixing, please turn to page 383.



back to back fixing

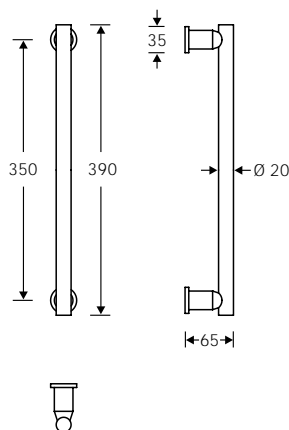


bolt through-fixing



secret single side fixing with expansion plug

Pull handles  
Round series

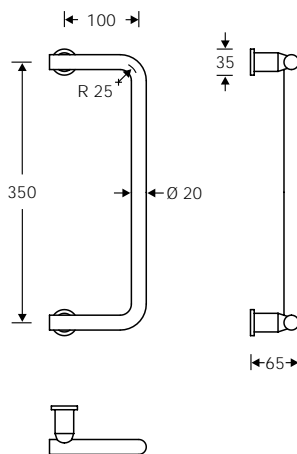


6501 38

Ø 20 mm

Aluminium  
Stainless steel  
Brass

Safety clearance 49 mm  
Fixing M8



6502 38

Ø 20 mm

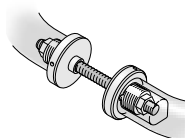
Aluminium  
Stainless steel  
Brass

Safety clearance 59 mm  
Fixing M8

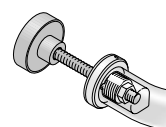
6

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).

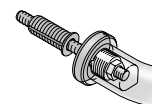
For detailed information on fixing, please turn to page 383.



back to back fixing



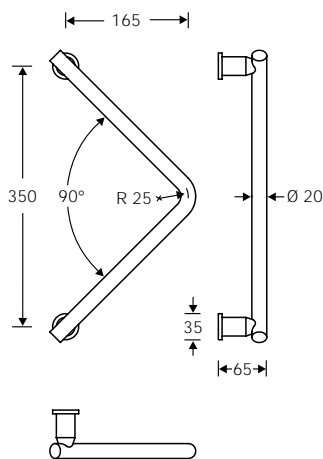
bolt through-fixing



secret single side fixing with expansion plug



Pull handles  
Round series

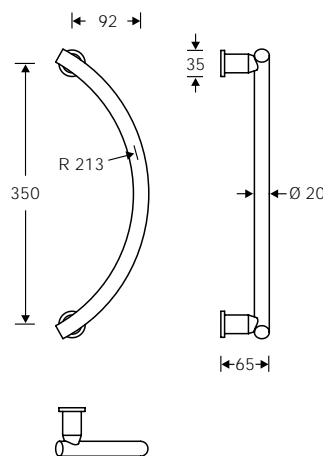


**6503 38**

Ø 20 mm

Aluminium  
Stainless steel  
Brass

Safety clearance 59 mm  
Fixing M8



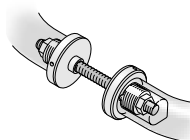
**6504 38**

Ø 20 mm

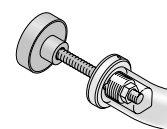
Aluminium  
Stainless steel  
Brass

Safety clearance 59 mm  
Fixing M8

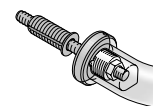
For detailed information on fixing, please turn to page 383.



back to back fixing

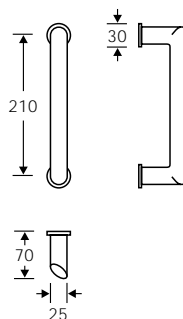


bolt through-fixing



secret single side fixing with expansion plug

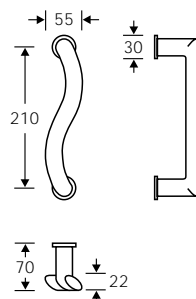
Pull handles  
Ellipse series



6610

Aluminium natural color  
anodised  
Stainless steel  
Aluminium + colour

Safety clearance 45 mm  
Fixing M6



6611

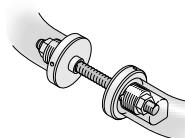
Aluminium natural color  
anodised  
Stainless steel  
Aluminium + colour

Safety clearance 60 mm  
Fixing M6

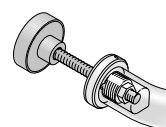
Illustration r.h., outside view,  
handing details cf. page 508ff

6

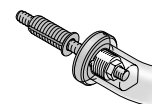
For detailed information on  
fixing, please turn to page 382.



back to back  
fixing

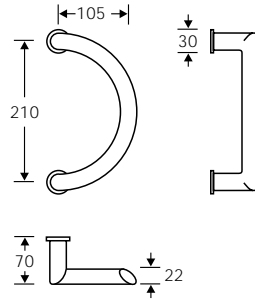


bolt through-fixing



secret single side  
fixing with  
expansion plug

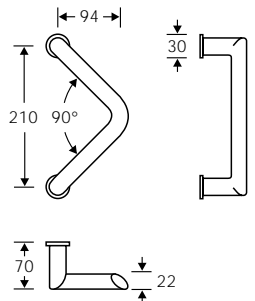
Pull handles  
Ellipse series



6612

Aluminium natural color  
anodised  
Stainless steel  
Aluminium + colour

Safety clearance 48 mm  
Fixing M6

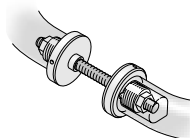


6613

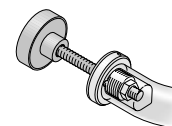
Aluminium natural color  
anodised  
Stainless steel  
Aluminium + colour

Safety clearance 48 mm  
Fixing M6

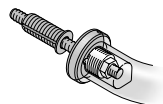
For detailed information on  
fixing, please turn to page 382.



back to back  
fixing

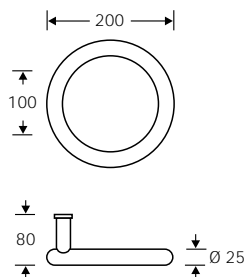


bolt through-fixing



secret single side  
fixing with  
expansion plug

Pull handles  
Round series

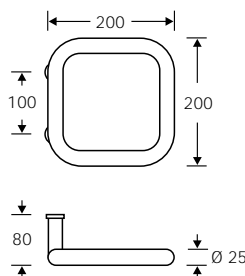


**6677 00**

Ø 25 mm

Stainless steel

Safety clearance 65 mm  
Fixing M8



**6688 00**

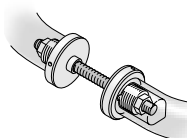
Ø 25 mm

Stainless steel

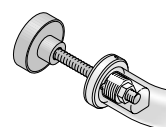
Safety clearance 48 mm  
Fixing M8

6

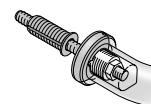
For detailed information on fixing, please turn to page 383.



back to back fixing

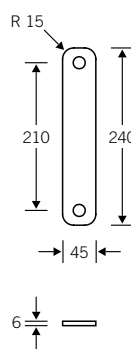
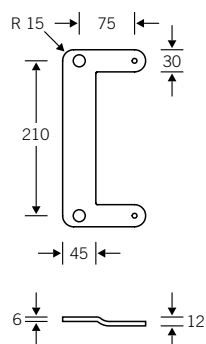


bolt through-fixing



secret single side fixing with expansion plug

# Handle adaptor for special applications



## 6114

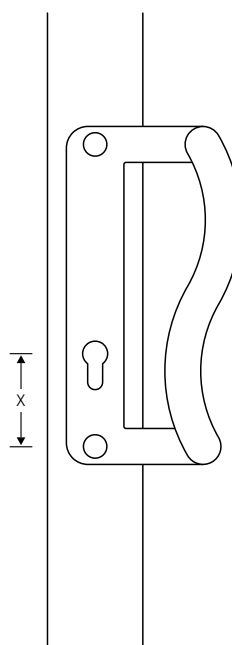
Stainless steel

6114 14 r.h.  
6114 15 l.h.

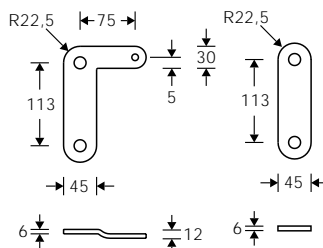
Illustration r.h.

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

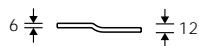
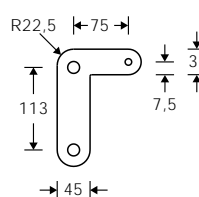
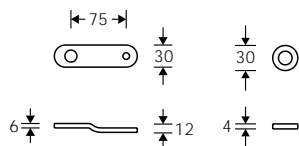


Illustration r.h.

**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

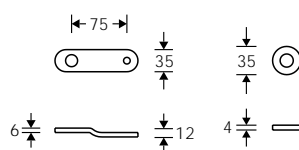


6115 30

6115 40

**6115 30** Grip Ø 25 mm  
Stainless steel

Fixing holes pull handle  
Ø 8.5 mm  
Fixing element reverse side  
6115 40

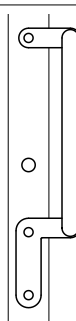


6116 30

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



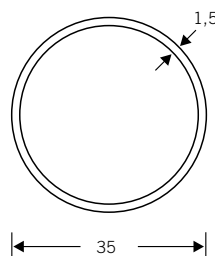
## 6801

Stainless steel

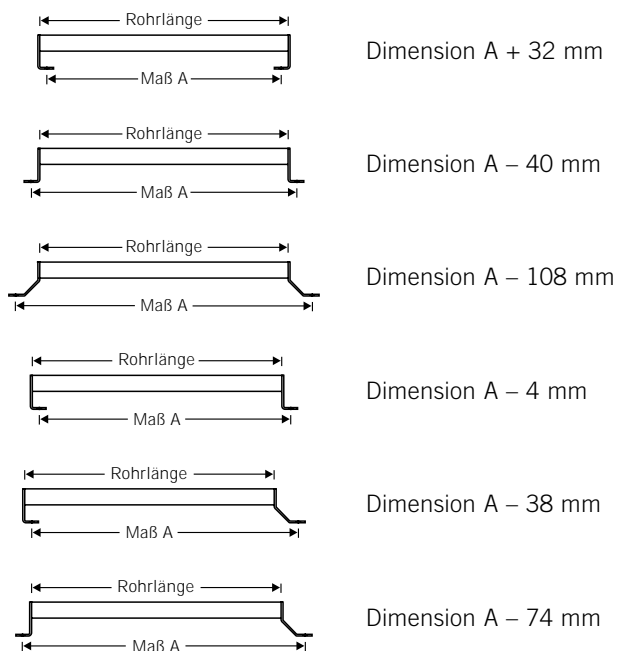
Tube Ø 35 x 1.5 mm  
Stock length 3,000 mm

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.

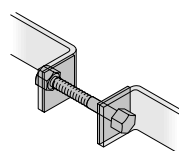
FSB recommends reinforcing door pulls from the ht round kit that are to be fitted to heavily used doors by means of the accessories available.

6

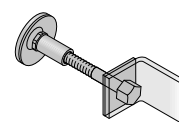
Reference:

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

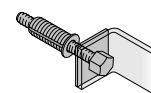
safety rail at particularly hazardous openings in buildings. If in any doubt, please contact the architect or engineer in charge. For detailed information on fixing, please turn to page 384.



back to back fixing

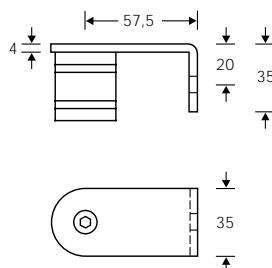


bolt through-fixing



secret single side fixing with expansion plug

ht round modular systems  
up to 1,500 mm



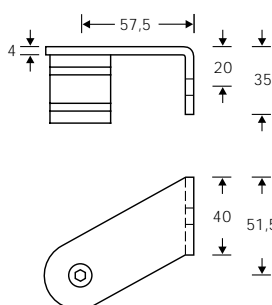
6715

Stainless steel

Straight bracket,  
angled 90° inwards,  
to match tube 35 x 1.5 mm Ø



Illustration r.h.

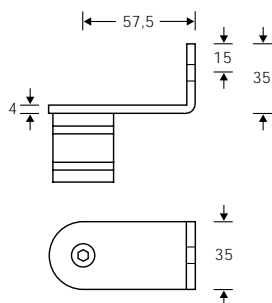


6716

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

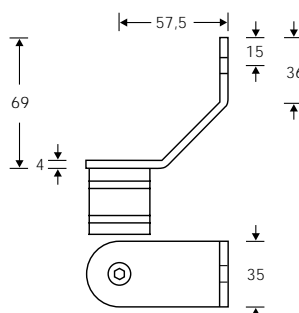


6717

Stainless steel

Straight bracket,  
angled 90° inwards,  
to match tube 35 x 1.5 mm Ø

6

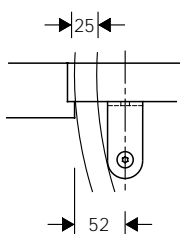


6718

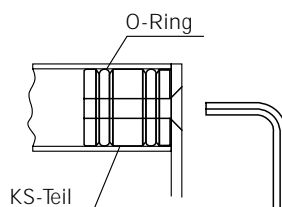
Stainless steel

Bracket for swing doors,  
to match tube 35 x 1.5 mm Ø

Screw hole Ø 8,5 mm



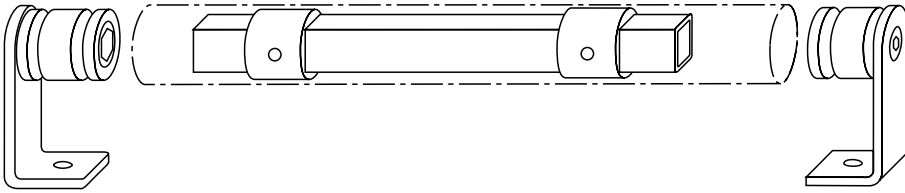
Safety clearance 52 mm



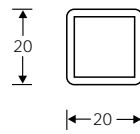
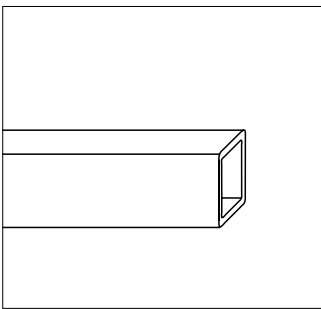
Once the tube has been cut to size (dimensions A + differential measurement), matching brackets are slotted into the tube ends and fastened with screws from the top.



Accessoires  
ht round modular systems



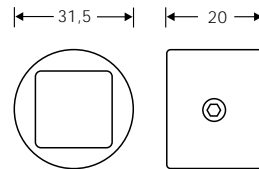
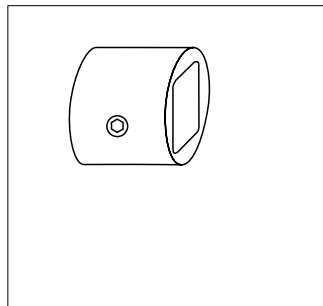
For pull handles from the modular systems HT Round over 1.5 metres long or where robust handling is to be assumed, we would recommend reinforcing the tube with square-section tubing as shown on this page.



**6801 20**

Steel tube hot galvanised

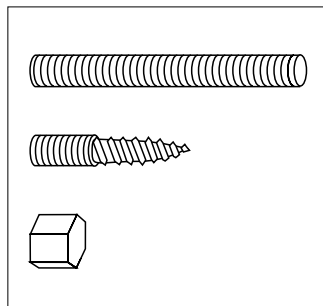
20 x 20 x 2 mm  
Stock length 3,000 mm



**6719**

Synth. mat.

Spacing sleeve with fixing screw



0313 0880 M8 x 80 mm  
Steel stud

0316 0840 M8  
Steel stud - for timber fixing

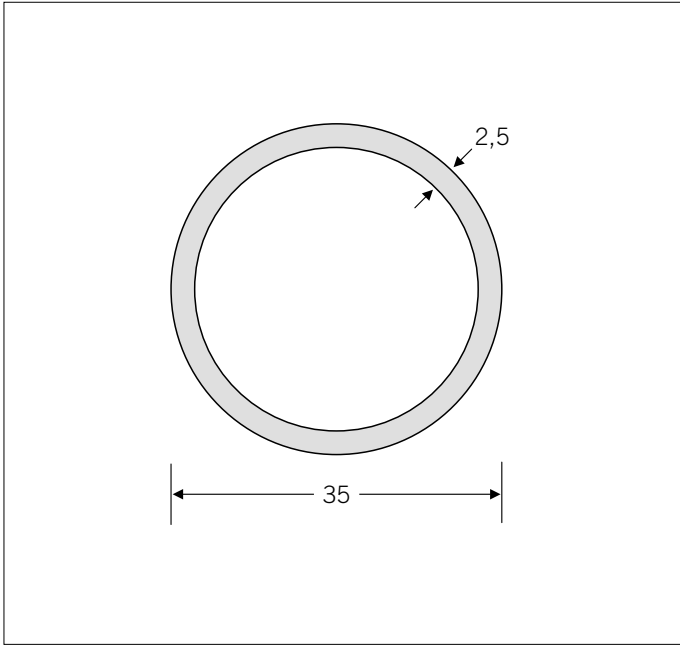
0320 0800 M8  
Dome nut of stainless steel

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



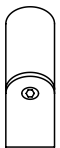
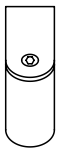
**6522**

Stainless steel

Tube Ø 35 x 1.5 mm

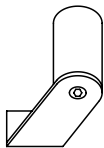
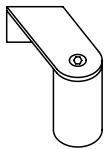
For reasons of structural-strength, we recommend ordering a factory-welded version drawing on the elements of the HT Round kit in cases where the A dimension lies between 1,500 mm and a maximum of 2,100 mm.

45 . . . .



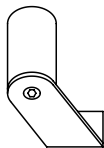
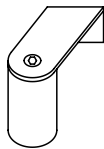
. . . . 45

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.

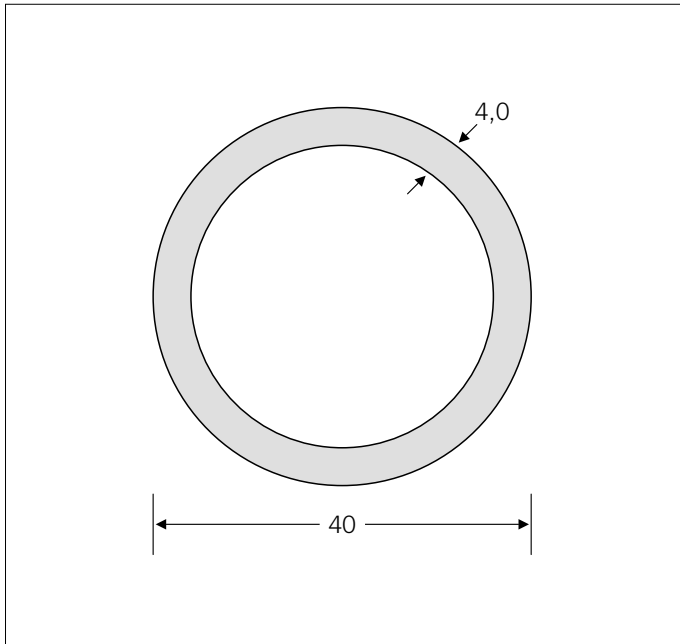
Reference:

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.

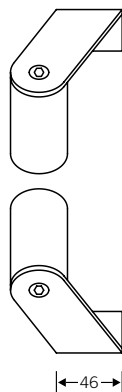
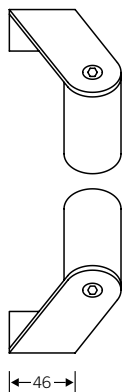
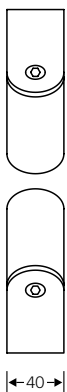
45 . . . .

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

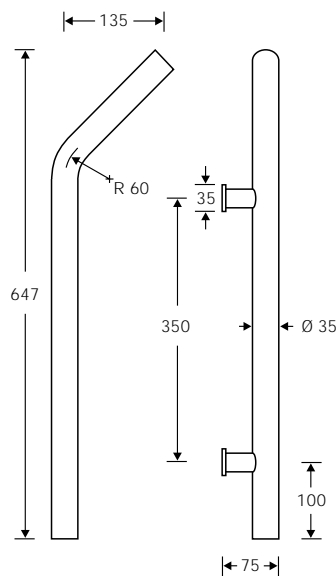
Reference:

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

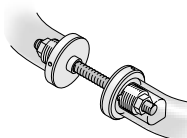
Safety clearance 56 mm  
Fixing M8

Illustration r.h., outside view,  
handing details cf. page 508ff

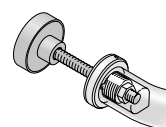
6

The graphic qualities of the Y handle are best brought out by fitting it in pairs to double doors.

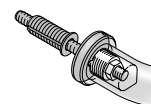
For detailed information on fixing, please turn to page 383.



back to back fixing

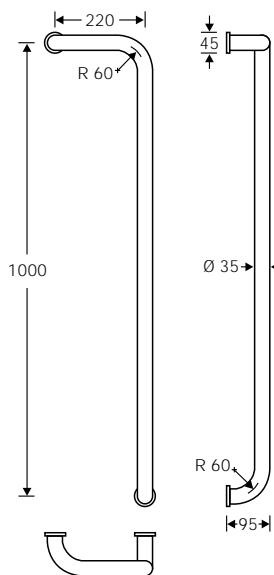


bolt through-fixing



secret single side fixing with expansion plug

Pull handles  
Round series



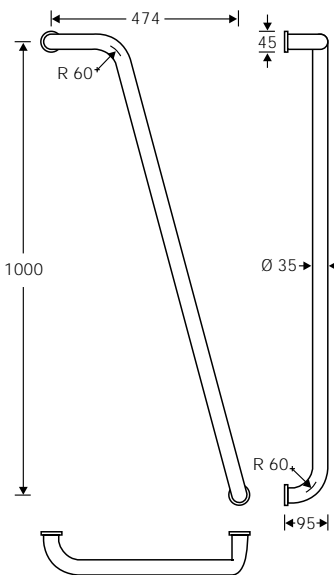
6506 55

Ø 35 mm

Aluminium  
Stainless steel

Illustration r.h., outside view,  
handing details cf. page 508ff

Safety clearance 47 mm  
Fixing M8



6507 55

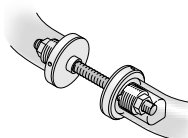
Ø 35 mm

Aluminium  
Stainless steel

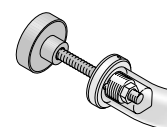
Illustration r.h., outside view,  
handing details cf. page 508ff

Safety clearance 47 mm  
Fixing M8

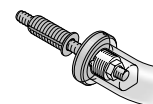
For detailed information on fixing, please turn to page 383.



back to back  
fixing

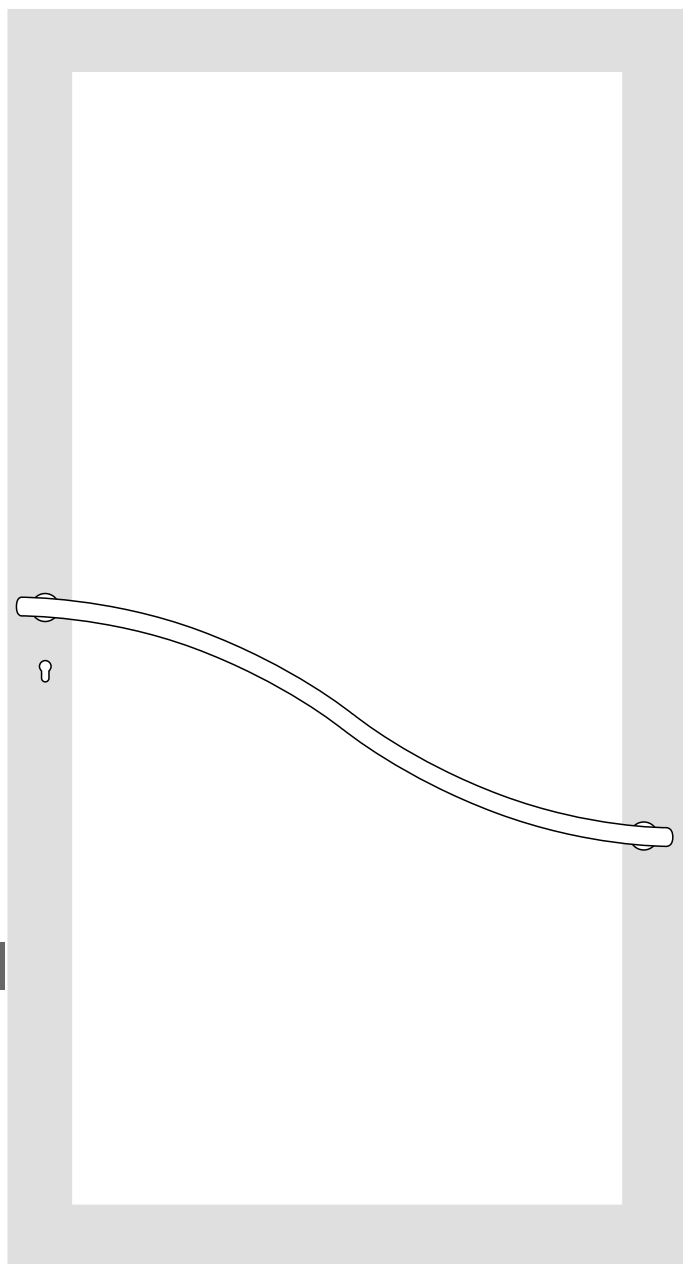


bolt through-fixing



secret single side  
fixing with  
expansion plug

# Pull handle Wave



6510

30 mm Ø

Aluminium  
Stainless steel  
Brass

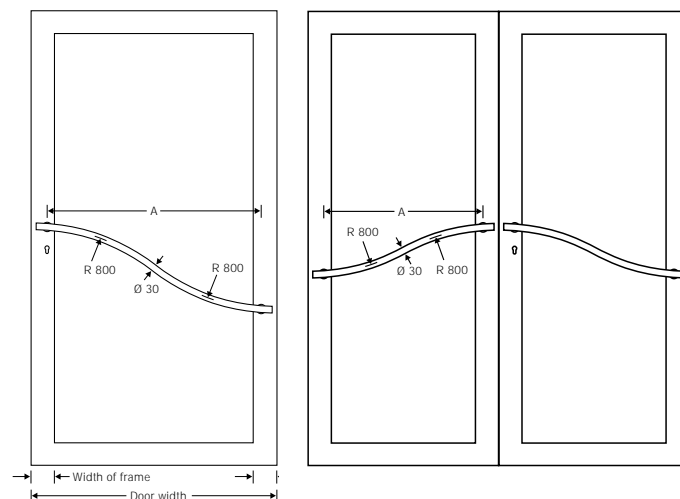
Safety clearance 65 mm for  
30 mm handle projection,  
fixing M8.

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

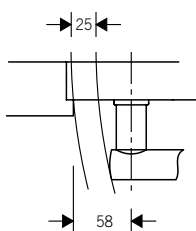
For quoting purposes, we requi-  
re the following details together  
with a dimensioned sketch:

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

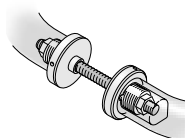


Handing details cf. page 508ff

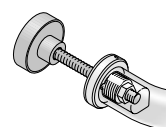
6



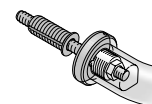
For detailed information on fix-  
ing, please turn to page 383.



back to back  
fixing

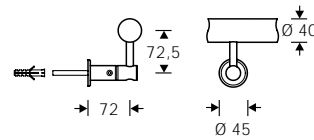
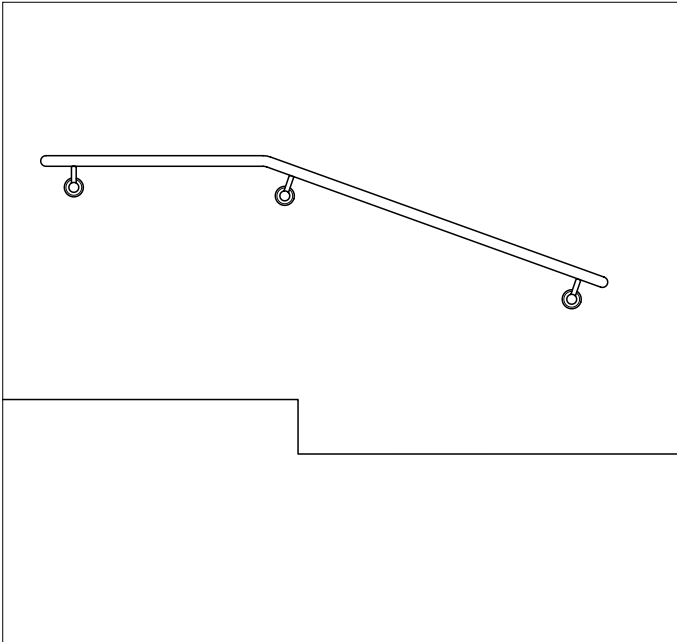


bolt through-fixing



secret single side  
fixing with  
expansion plug

# Hand rail systems



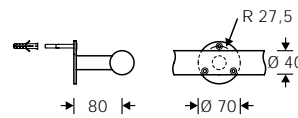
Fixing method 1  
6599 9991

## Typ A Stainless steel

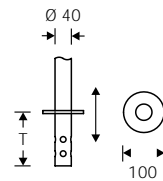
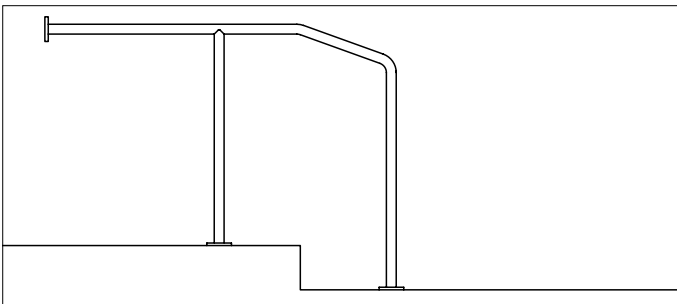
Fixing method 1:  
Hole for countersunk screw M8

Fixing method 2:  
Hole for countersunk screw M6

Screws and dowels are delivered for number of fixing points.

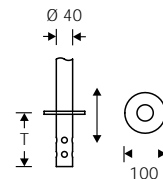
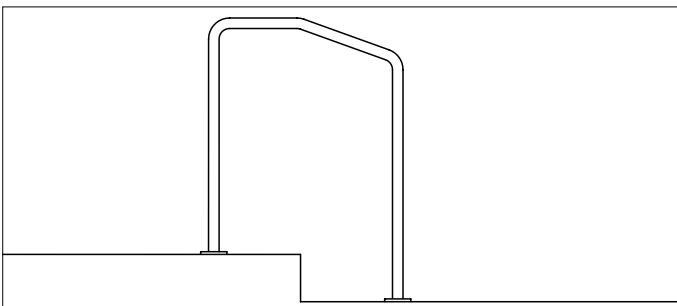


Fixing method 2  
6599 9994



6599 9993

## Typ B<sub>1</sub> Stainless steel



6599 9992

## Typ B<sub>2</sub> Stainless steel

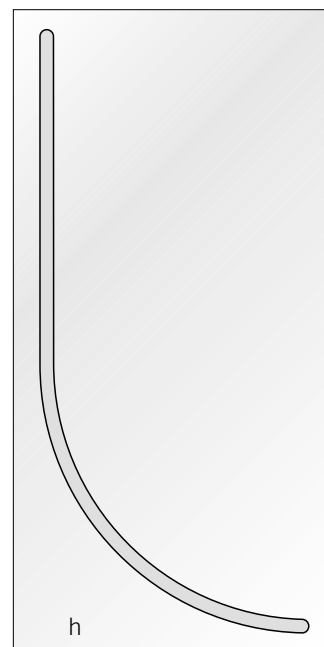
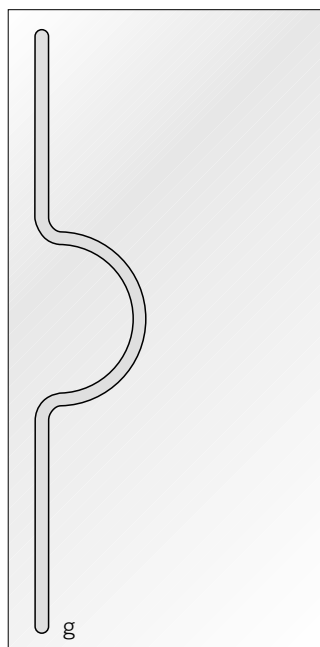
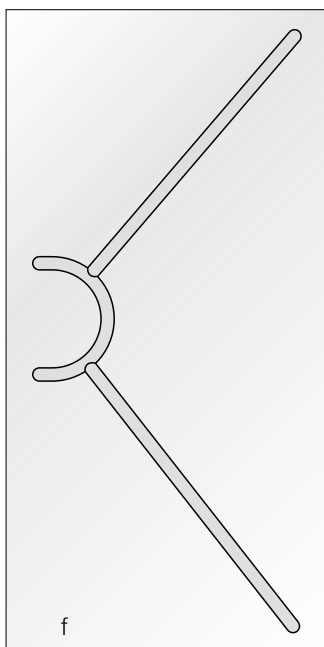
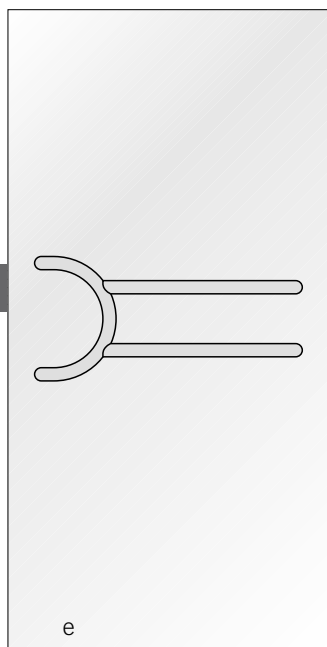
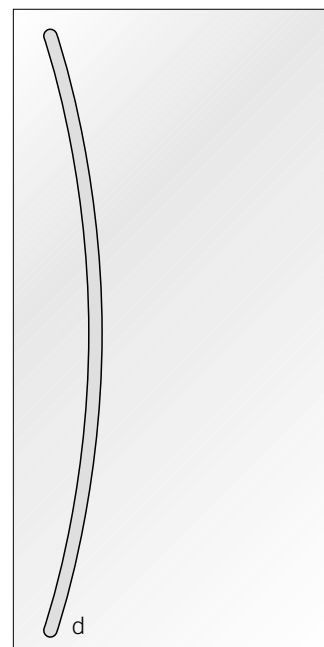
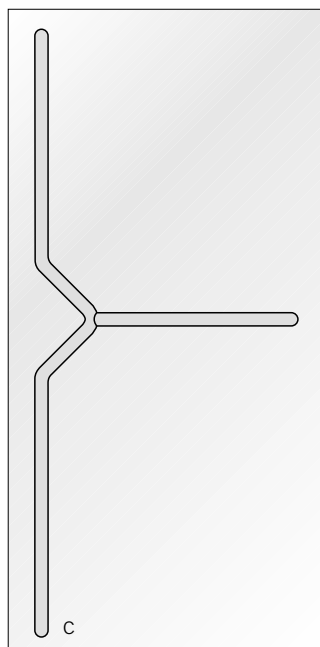
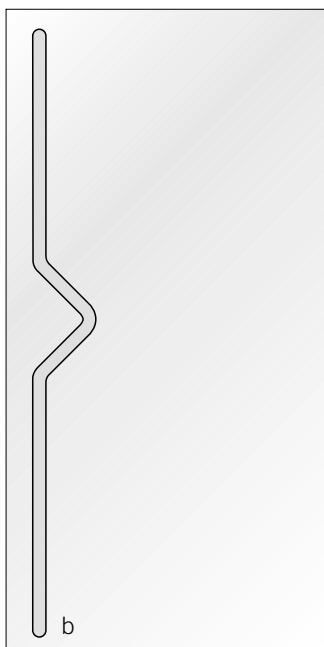
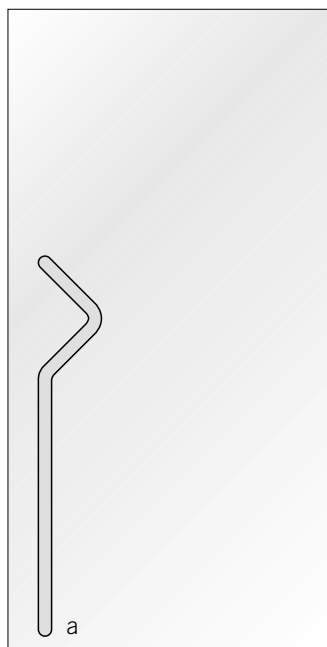
Fixing reference: First of all the supplied rose has to be shoved on the tubes of the handrail system. Fill up then boreholes in basis with usual constructional resins. Before hardening set up the handrail system. The rose will then be glued to the basis.

### 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



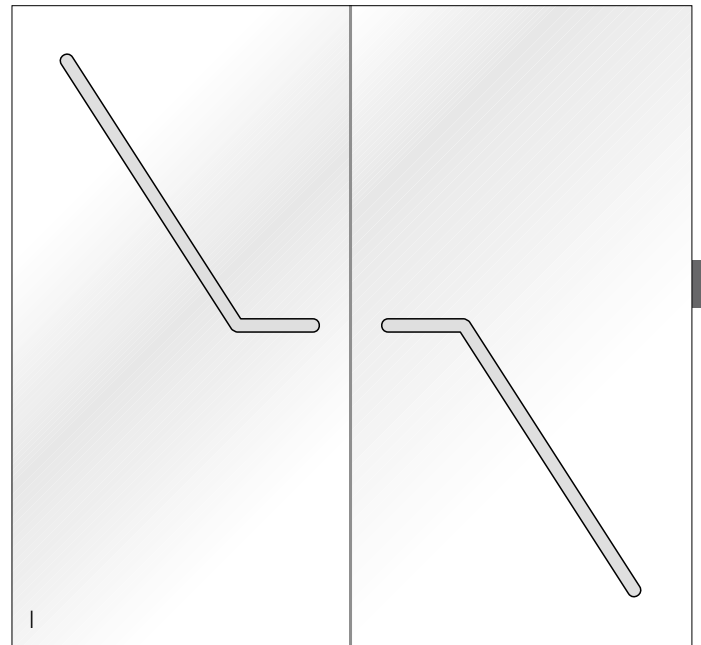
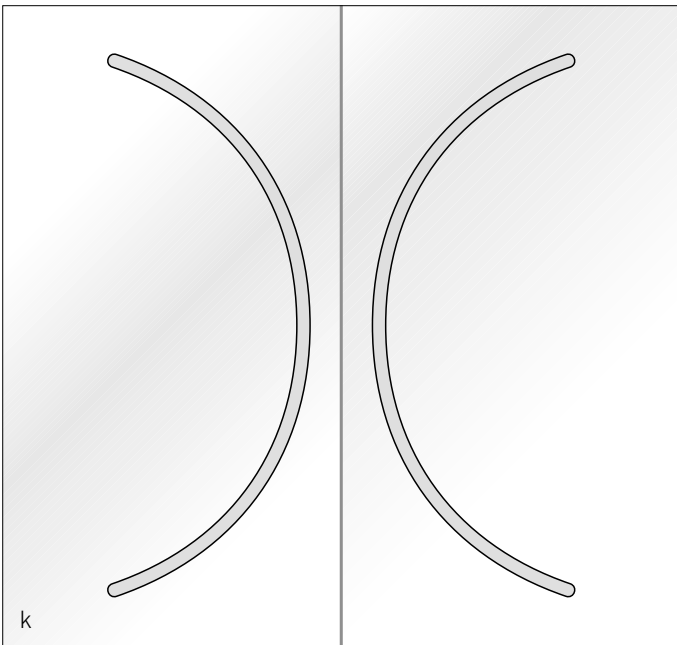
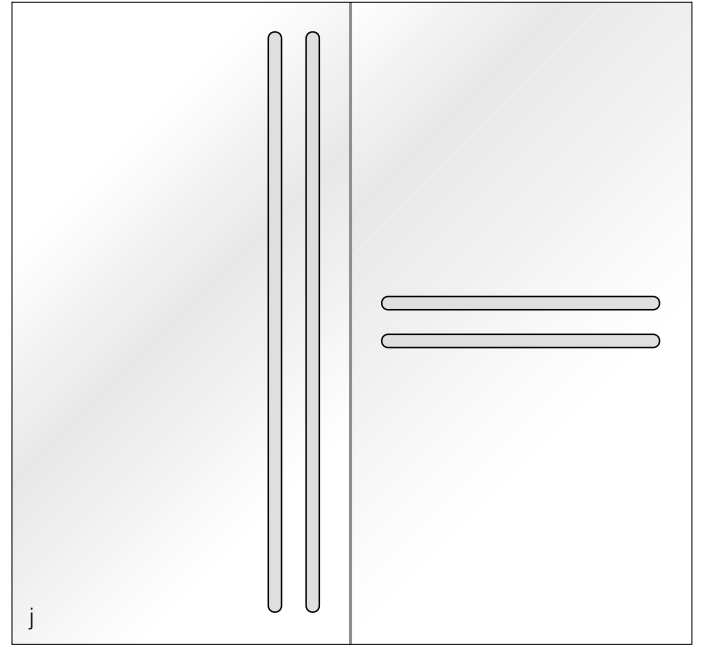
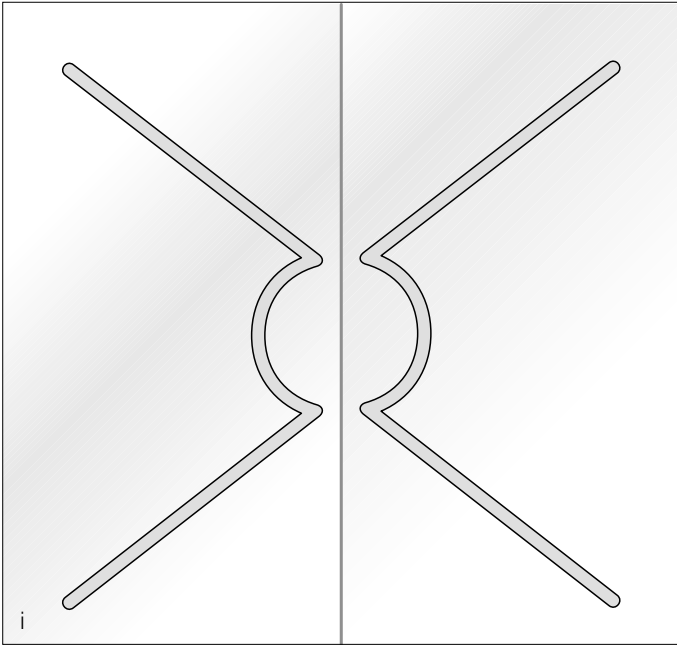
6

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

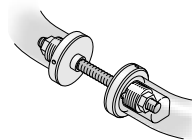


Design proposals  
Pull handles Round series

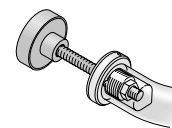


6

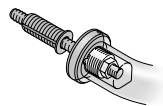
For detailed information on fixing, please turn to page 383.



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:

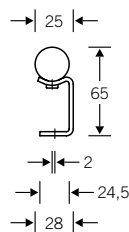
- aluminium brackets
- tubes in either aluminium or stainless steel

### 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

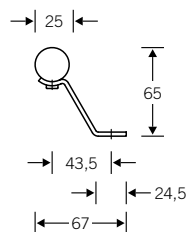
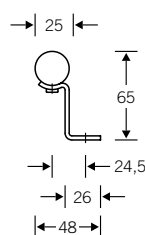


6508

Ø 25 mm

Stainless steel

Breadth of brackets 40 mm  
Screw hole - Ø 8.5 mm



6

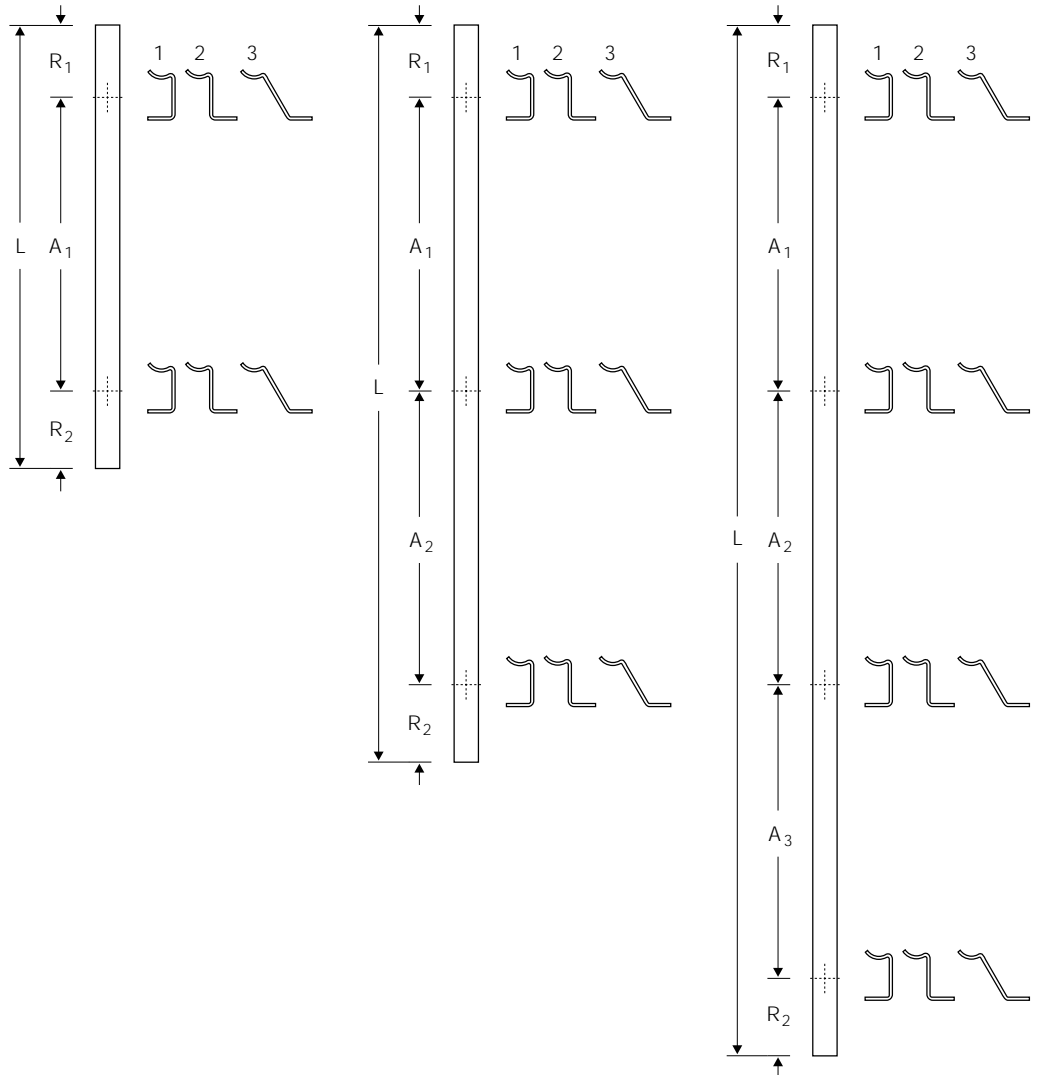
For detailed information on fixing, please turn to page 384, fixing accessories cf. page 401.

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.

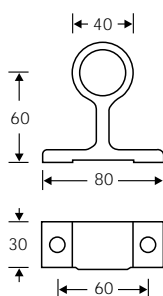
Quantity	Overall length L	Type of bracket						Distance between brackets			Edge spacing*	
		1 li	re	2 li	re	3 li	re	A <sub>1</sub>	A <sub>2</sub>	A <sub>3</sub>	R <sub>1</sub>	R <sub>2</sub>

\* 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

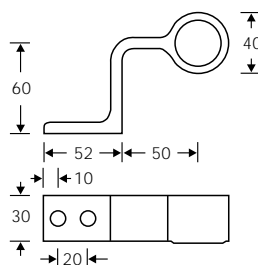
## 6800 09

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



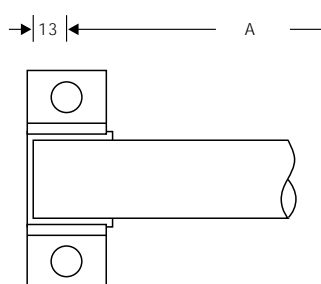
## 6708

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

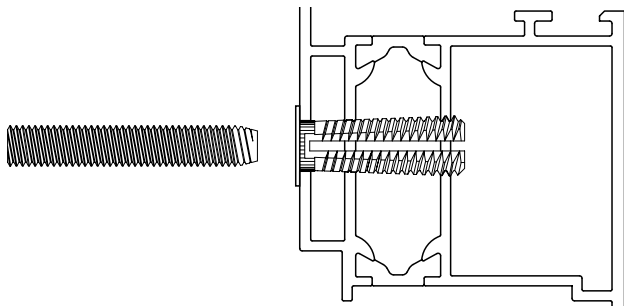


## FSB Expansion Plug



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.



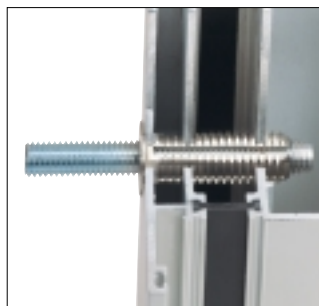
6

### 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

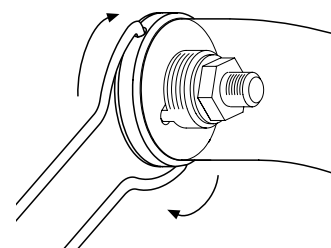
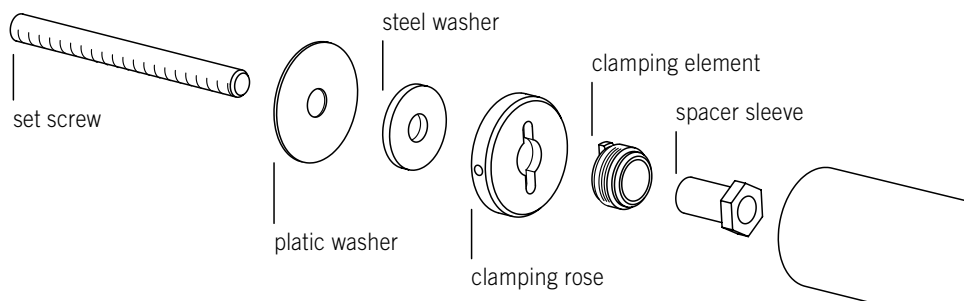
The handle is then fastened to these fixing points.

## 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.



6

### 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

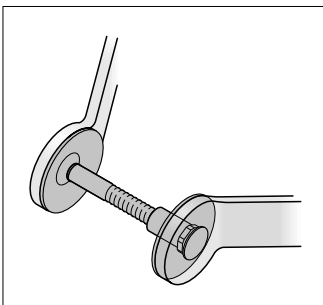
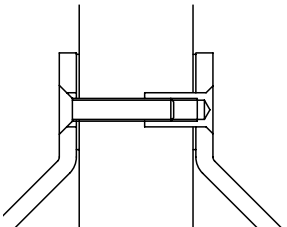
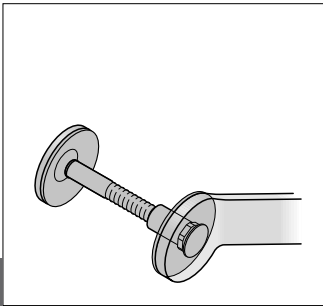
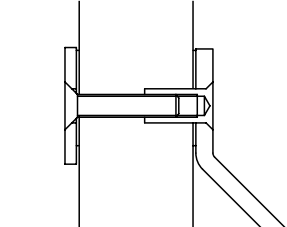
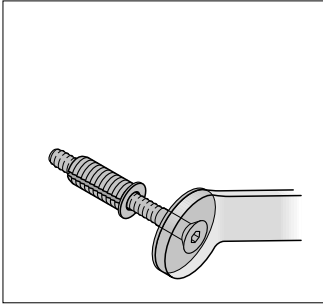
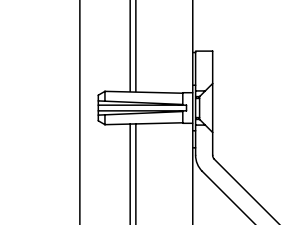
6525

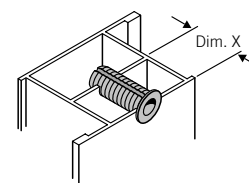
6615

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.

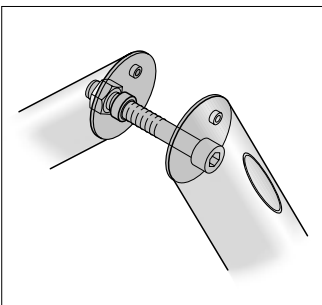
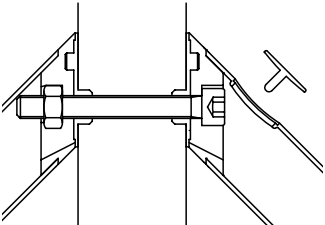
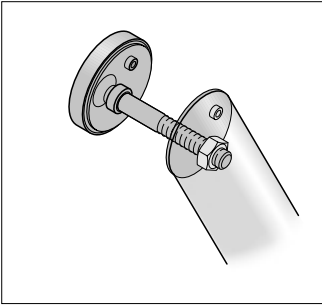
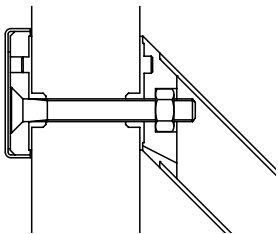
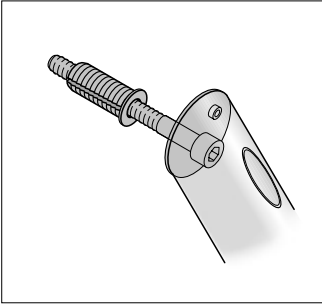
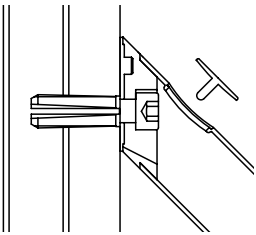
# Fixing methods

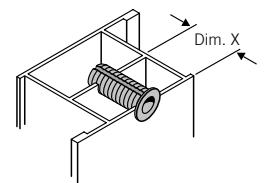
## Pull handles

### 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.

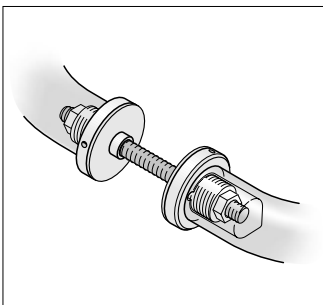
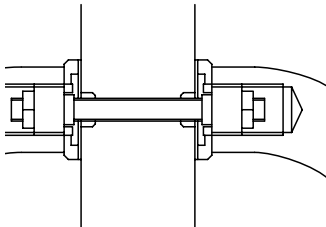
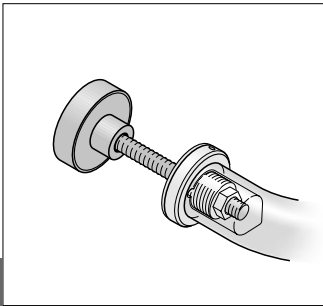
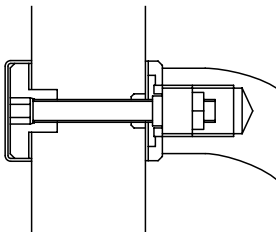
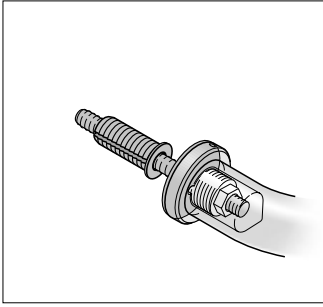
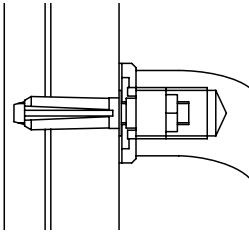
# Fixing methods Pull handles

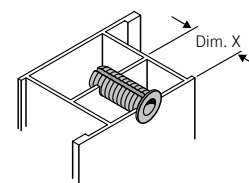
**Pull handle series**

round M6

6642

6643

	<b>Fixing method</b>	<b>Fixing accessories</b>	<b>Item nos.</b>
	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

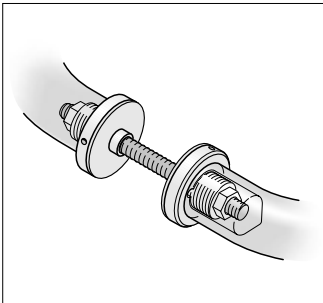
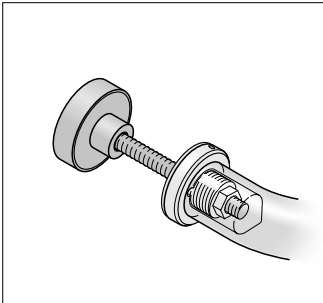
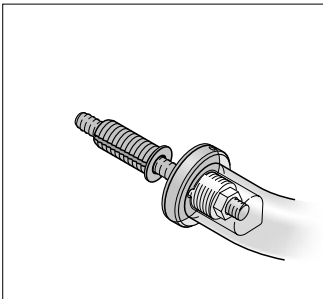
For timber doors the possible max. length of dowel is to be chosen.

# Fixing methods

## Pull handles

### Pull handle series

round M8

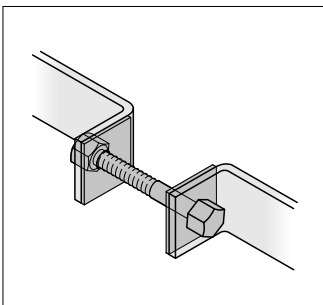
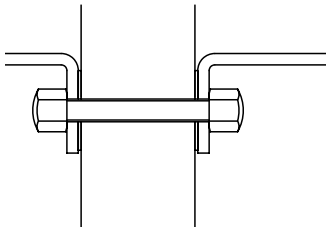
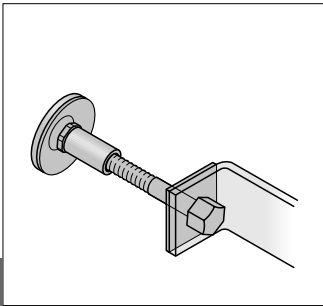
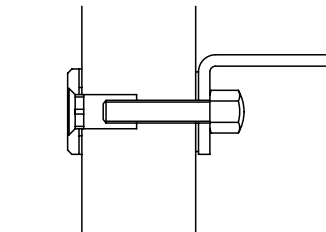
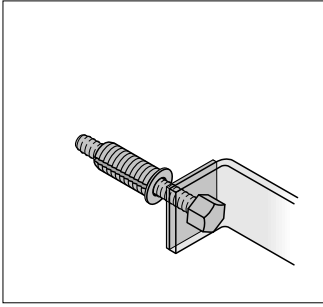
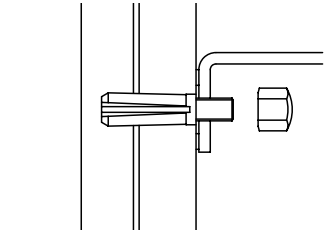
	Fixing method	Fixing accessories	Item nos.
	back to back fixing	2 each set screws M8	0580 1008 glass door 8 – 10 mm  0580 3035 35 – 54 mm 0580 3055 55 – 74 mm 0580 3075 75 – 94 mm
	bolt through-fixing	2 each set screws M8  2 each fixing nuts with caps	Grip diameter 25/30 mm  0580 2308 glass door 8 – 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

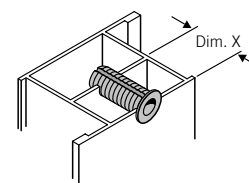
# Fixing methods

## 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

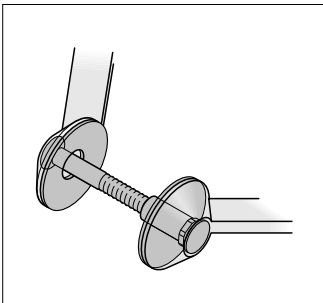
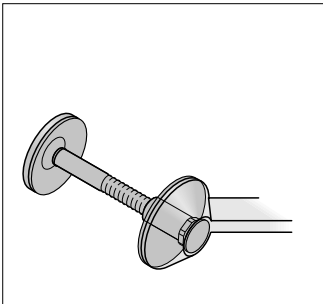
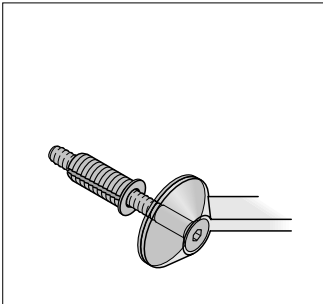
For timber doors the possible max. length of dowel is to be chosen.

# Fixing methods

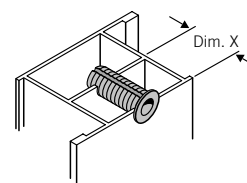
## Pull handles

### 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

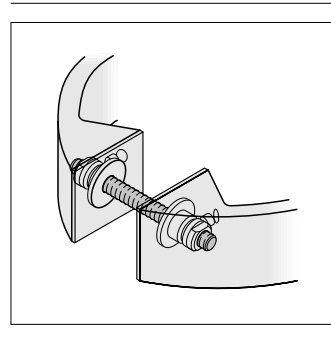
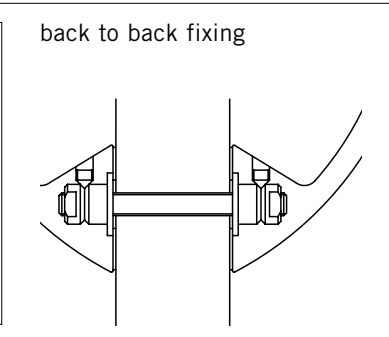
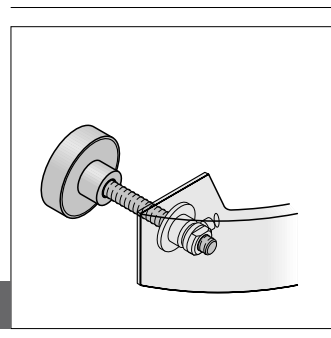
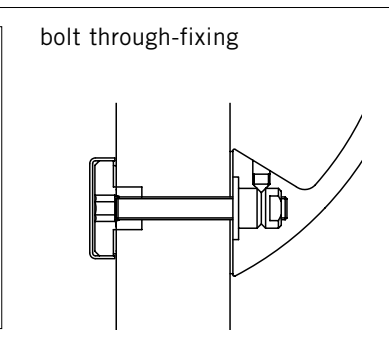
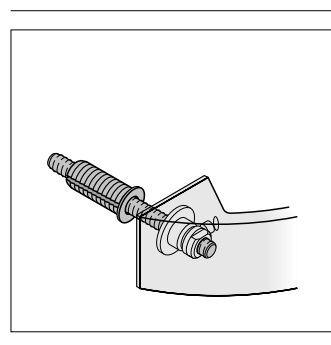
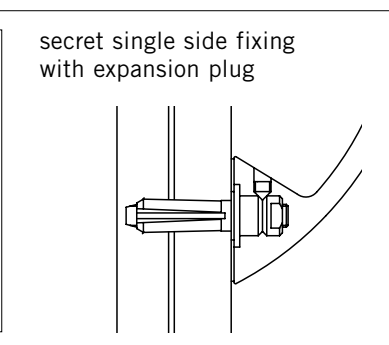
For timber doors the possible max. length of dowel is to be chosen.

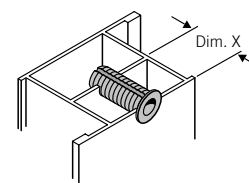
# Fixing methods

## 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

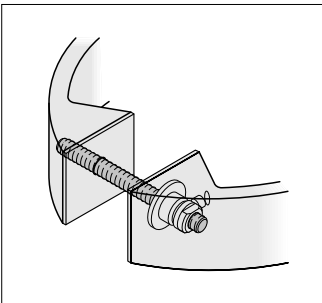
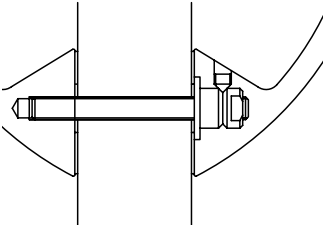
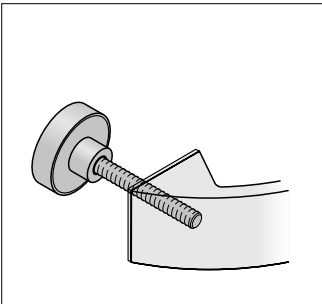
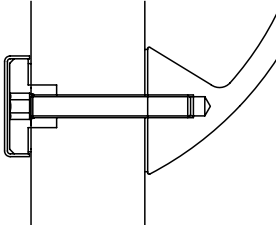
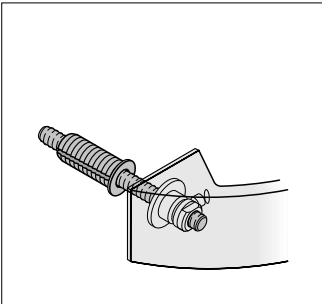
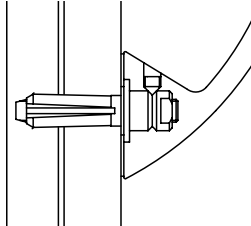
For timber doors the possible max. length of dowel is to be chosen.

# Fixing methods

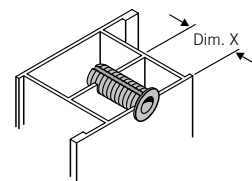
## Pull handles

### 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



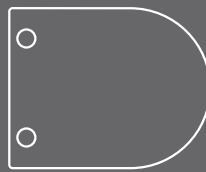
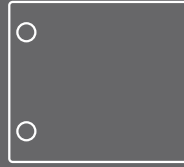
Dim. X = Dim. of chamber

For timber doors the possible max. length of dowel is to be chosen.

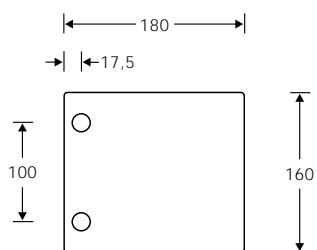


Push and pull pad handles  
Sections and support brackets  
Horizontal bar handles  
Accessories

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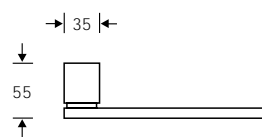


# Push and pull pad handles



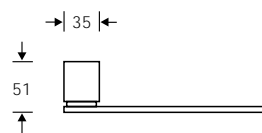
**6108**

Fixing M8

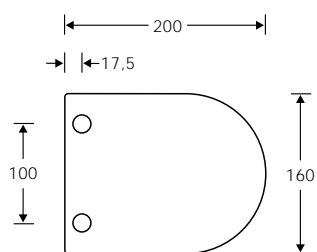


Available in:

Bracket Aluminium 01,  
Pad Aluminium 01

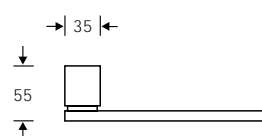


Bracket Aluminium 01,  
Pad Stainless steel 62



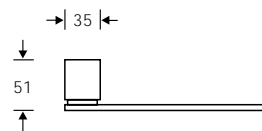
**6109**

Fixing M8



Available in:

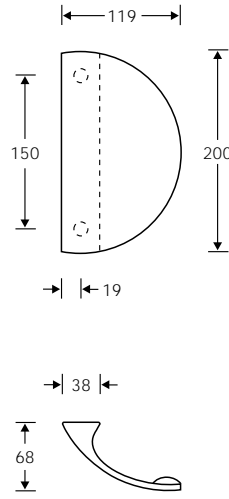
Bracket Aluminium 01,  
Pad Aluminium 01



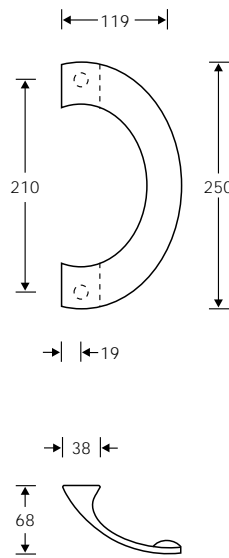
Bracket Aluminium 01,  
Pad Stainless steel 62

For detailed information on fixing, please turn to page 383, fixing accessories cf. page 401.

# Push and pull pad handles

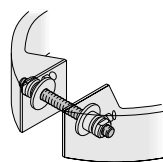


**6110**  
Aluminium  
Fixing M6

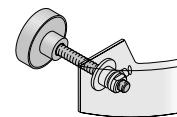


**6111**  
Aluminium  
Fixing M6

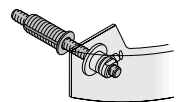
For detailed information on fixing, please turn to page 387, fixing accessories cf. page 401.



back to back fixing

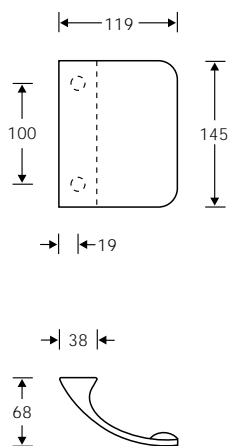


bolt through-fixing

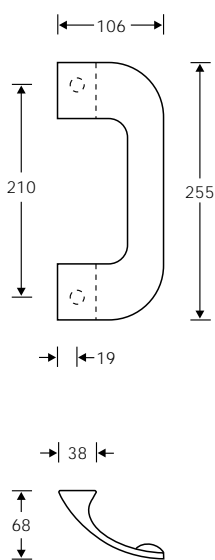


secret single side fixing with expansion plug

# Push and pull pad handles



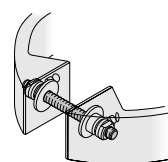
**6112**  
Aluminium  
Fixing M6



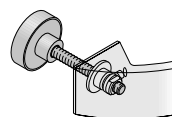
**6113**  
Aluminium  
Fixing M6

6

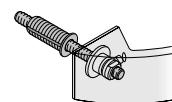
For detailed information on fixing, please turn to page 387, fixing accessories cf. page 401.



back to back fixing

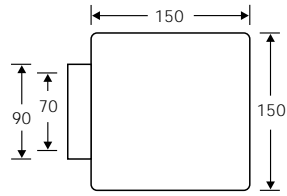


bolt through-fixing



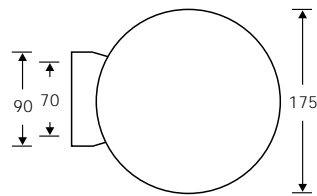
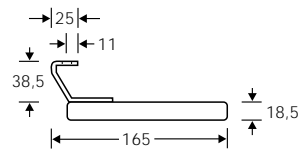
secret single side fixing with expansion plug

# Push and pull pad handles



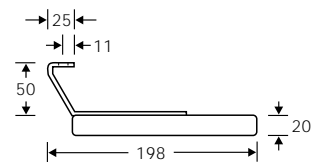
**6254 62**

Stainless steel



**6268**

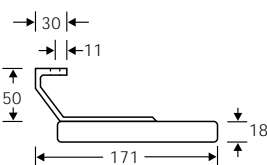
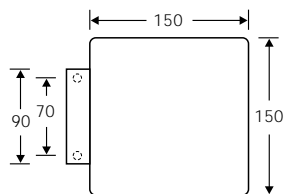
Stainless steel



For detailed information on fixing, please turn to page 384, fixing accessories cf. page 401.

Screw hole - Ø 8.5 mm

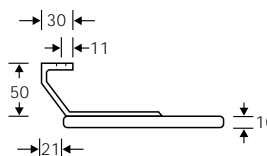
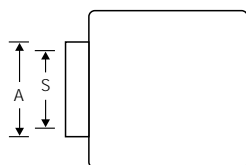
# Push and pull pad handles



**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**

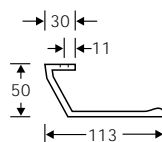
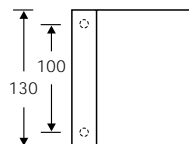
Aluminium

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

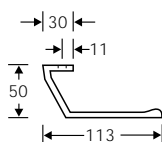
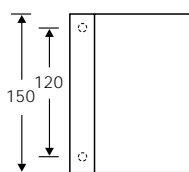
Push and pull  
pad handles



**6137 31**

Aluminium

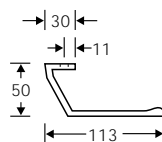
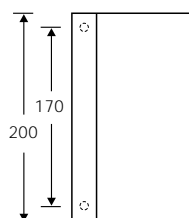
c:c screw holes 100 mm



**6137 32**

Aluminium

c:c screw holes 120 mm



**6137 34**

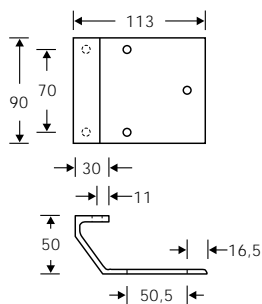
Aluminium

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.

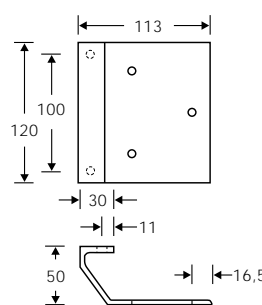
Brackets for  
pad handles and  
horizontal bar handles



6755 27

Aluminium

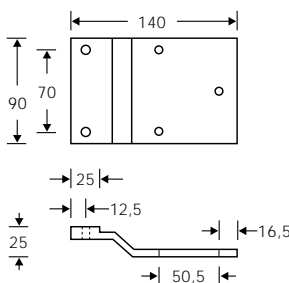
Screw hole - Ø 8.5 mm  
Screw hole Ø 5.3 mm (pad)



6755 29

Aluminium

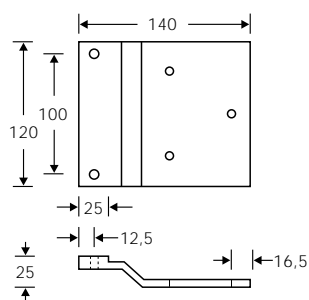
Screw hole - Ø 8.5 mm  
Screw hole Ø 5.3 mm (pad)



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.

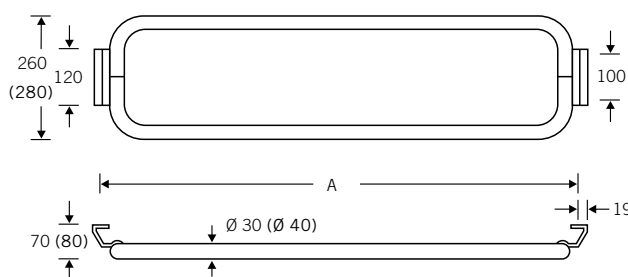


# Pull handles with cranked brackets

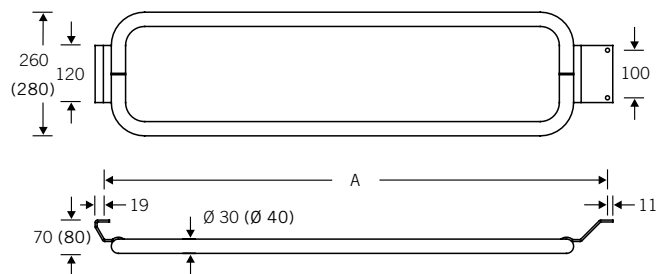


Aluminium  
Stainless steel

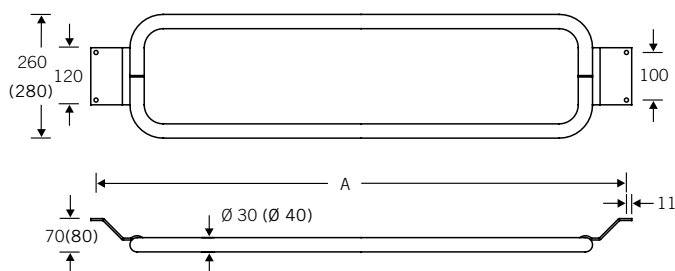
Screw hole - Ø 8.5 mm



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

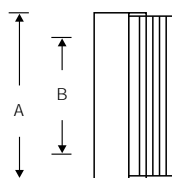
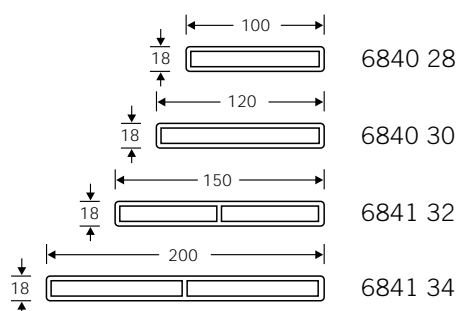


**6840**

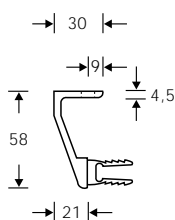
**6841**

Aluminium

The illustrated sections are available in stock lengths of 4,000 mm.



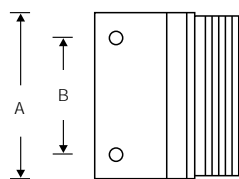
Screw hole  $\varnothing$  6,5 mm



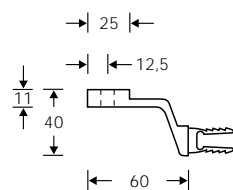
**6763**

Aluminium

Sizes in mm	A	B
28	100	70
30	120	100
32	150	120
34	200	170



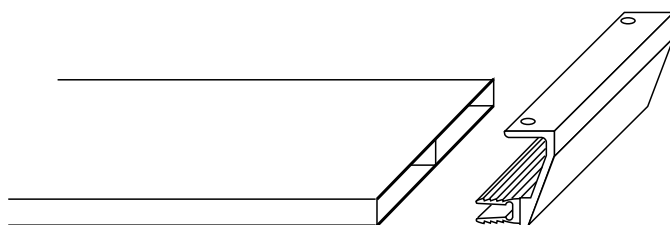
Screw hole  $\varnothing$  6,5 mm



**6769**

Aluminium

Sizes in mm	A	B
28	100	70
30	120	100
32	150	120
34	200	170



# Horizontal bar handles

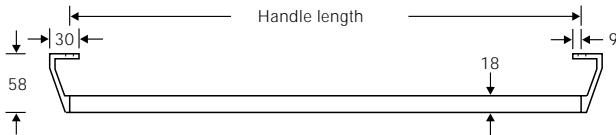


## 6460

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

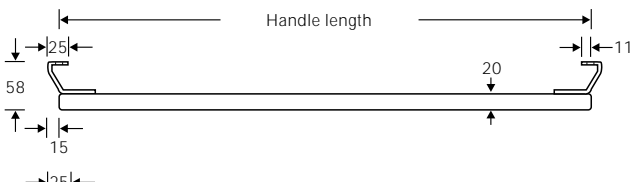
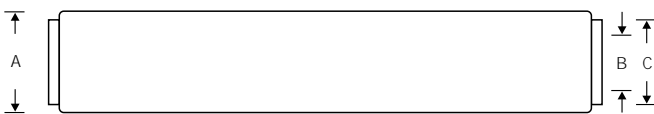


## 6475

Stainless steel

Screw hole -  $\varnothing$  8.5 mm (base)

Sizes in mm	A	B	C
0030	120	70	100
0032	150	100	120

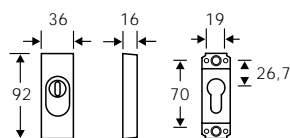


Cranked bracket for swing doors

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

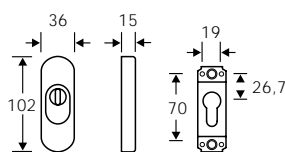


**3244**

Aluminium  
Aluminium + colour

Suitable for cylinder projections from 8 – 15 mm

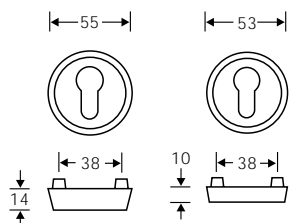
Screw hole Ø 3,2 mm



**3246**

Aluminium  
Stainless steel  
Brass  
Aluminium + colour

Screw hole Ø 3,2 mm



7391

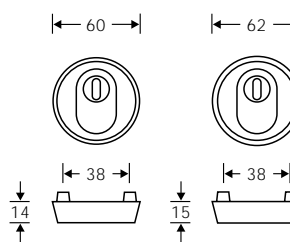
7392

**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.

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# 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