

Lever handles and door knobs for framed doors

8

As an alternative to the cranked lever handles for narrow-frame doors FSB has always supplied, we are using the 02103 edition of our Manual to switch the focus to cranked lever handles fitted away from the centre of pivot, thus keeping the hand well away from the edge of the door, out of harm's way.

With this approach, the desired lever handle design is fitted on a pivoting arm to the side of the rose. The centre of pivot in the rose is doubly supported between a base-plate and a housing.

This rugged double bearing for the pivoting arm reduces tolerances. The entire works is concealed behind a cap made of the same material as the lever handle, cf. pp. 424 and 425.

Set out in the following section is the complete FSB range of cranked lever handles for narrow-frame doors for both standard and fire-safety applications.

The range is rounded off by a series of standard lever handles on oval roses. These handles can be used as standard female handles on the opposite side of the door as in the 'Wittgenstein' scheme described overleaf.

Overview



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-  Aluminium
-  Stainless steel
-  Aluminium + colour
-  Black plastics



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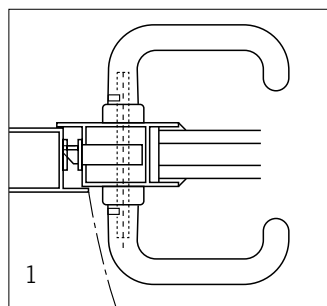


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Furniture for framed doors

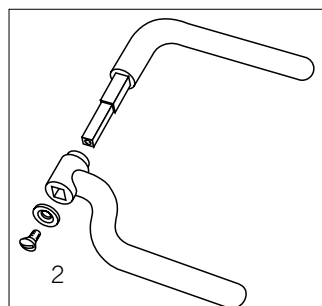
FSB supplies a complete range of different types of handle (levers, knobs and pulls) for narrow-frame doors in metal, plastic or wood.



Hand injury hazard

The dimensional limits of narrow-frame doors can lead to fingers getting caught when the door is operated. This is particularly true of the closing face (Fig. 1).

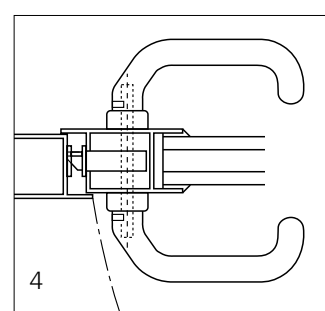
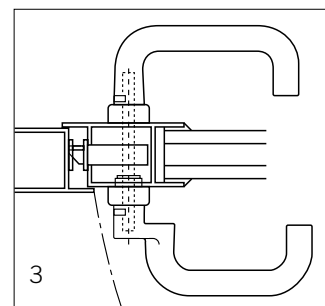
A further consequence of the spatial constraints referred to is a certain difficulty in fixing the furniture. The locks used feature a very short backset (25, 30, or 35 mm) and do not allow through fixing as an option. Thus lever handles, knobs, and pulls must generally be face fixed onto the stile.



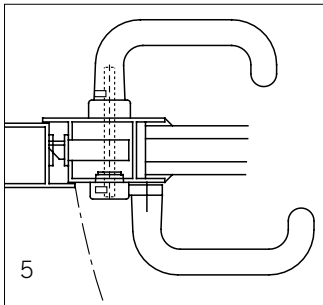
An inspired idea by the philosopher Ludwig Wittgenstein

The Austrian philosopher and qualified engineer Ludwig Wittgenstein took time off from philosophising in the 1920s to design the interior of his sister's house, Palais Wittgenstein, in Vienna. In the process he had to come to grips with very narrow steel door stiles. To enable furniture to be firmly fixed onto the stiles yet prevent hands getting caught between the closing face and the door jamb, Ludwig Wittgenstein had a cranked handle made for the closing face to his own drawings, and to this he connected a normal male lever handle on the opening face. By combining a cranked female handle with a standard male lever handle in this inspired fashion, a man who otherwise applied himself to the imponderables of language produced a very clear-cut answer to the problems of injuries to the hand and firmness of fixing (Fig. 2).

FSB recommends giving the Wittgensteinian solution a new lease of life by pairing cranked and uncranked lever handles, the cranked handle being used as the male section and its uncranked counterpart providing a rugged connection (Figs. 3 and 5).



Anyone studying the remedy advocated for such problems in the past will be shaking their heads in disbelief given these insights. Two cranked female handle sections, rigidly mounted but freely rotating, were screwed onto the stile and joined together by means of a floating spindle (Fig. 4).

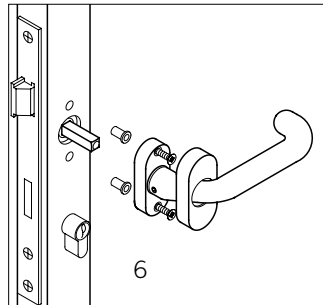


The alternative

As an alternative to the cranked lever handles supplied hitherto, FSB is introducing a new type of hardware in which the lever handle is located away from the point of pivot.

The pivot shaft in the rose is doubly supported between the baseplate and the housing. This rugged double bearing improves tolerances. The desired lever handle design is positioned on a swivel lever to the side of the rose (Fig. 5).

This adaptive alternative enables FSB to offer a solution for the wishes of architects to equip their building projects with the same design of lever handle in all its technical diversities.



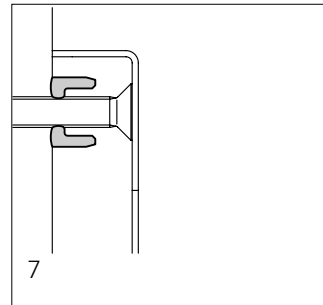
Rivet nuts

To ensure hardware for narrow-frame doors is securely affixed, FSB recommends the use of rivet nuts in which fittings are subsequently anchored by means of non-loosening screws.

The heads of these rivet nuts (Ø 11 mm) fit snugly into the underside of FSB fittings for narrow-frame doors. The combination of rivet nuts, baseplate and non-loosening screws enables fittings to be very securely fastened. (Fig. 6)

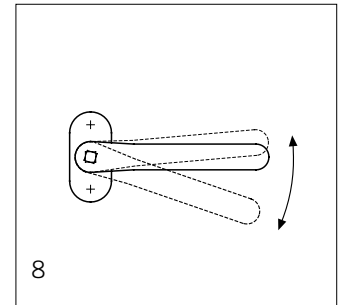
Front-end borehole

To further reduce any remaining play between spindle, follower and other parts, FSB recommends firmly tightening fittings for narrow-frame doors against the spindle via the grub screw in the front-end borehole.



Antislip and screw-retention device

Notwithstanding the use of rivet nuts and non-loosening screws, at their fixing centres all FSB roses forming part of hardware for narrow-frame doors feature retarder plugs made of a rubbery plastic. These retarder plugs project slightly beyond the reverse of the rose and are compressed when the screws are tightened. Hence, they act as an antislip device against their host surface whilst also providing the necessary axial and radial tension to keep the screws in a vice-like grip (Fig. 7).



Spring loading

Virtually the entire FSB range for narrow-frame doors is fitted with a positive mechanism to support the lock springs. This restricts the angle of operation to 45°. If required (i.e. for inactive doors), the positive mechanism can be straightforwardly removed from the base-rose. (Fig. 8)

Lever handle on oval rose

Uncranked FSB lever handles are supplied for invisible fixing to narrow-frame doors on oval roses. They are fitted with positive mechanisms (maximum angle of operation 45°) and optionally front-end boreholes.

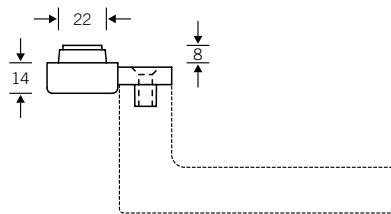
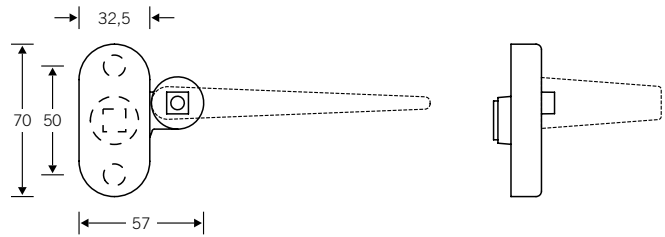
Supplied as standard with 8 mm square hole. Lever handle variants for fire and smoke stop doors with 9 mm square hole.

FSB Adaptor-solution



Many architects and planners set store by matching lever handle designs for internal and narrow-frame doors. On the pages that follow, FSB offers a wide range of solutions for some of its typical lever handle types.

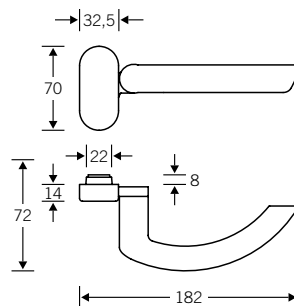
Since it is not possible to design separate narrow-frame handles to go with all our internal-door models, however, FSB recommends using its patented and design-protected adaptor combination. The Picture opposite visualises a few of the possible options. Whilst variants in stainless steel are generally suitable for use on smoke and fire control doors, there are restrictions in this respect as regards aluminium.



Lever handles for framed doors fixed on oval rose,
with concealed fixing and support mechanism

8 mm □-hole

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



0619 17..

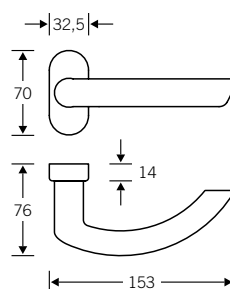
1744 r.h. | 1745 l.h.

Aluminium
Stainless steel

0619 18.. **F**

1864 r.h. | 1865 l.h.

Aluminium
Stainless steel



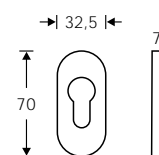
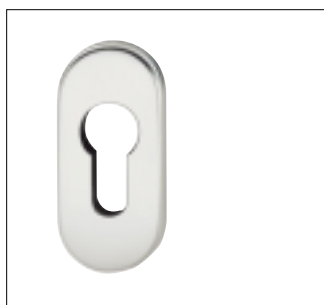
7219 25

Aluminium
Stainless steel

7619 25 **F**

Aluminium
Stainless steel

Handing required

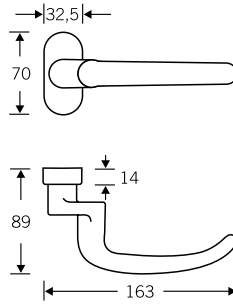


1757

Aluminium
Stainless steel

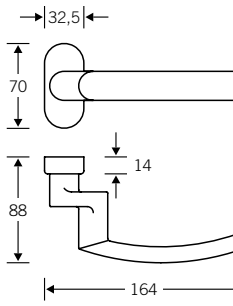
* acc. to German DIN standard

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



0653 21

Aluminium
 Stainless steel

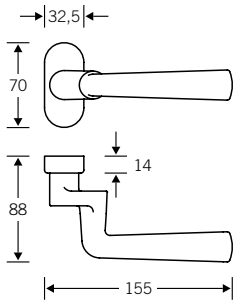
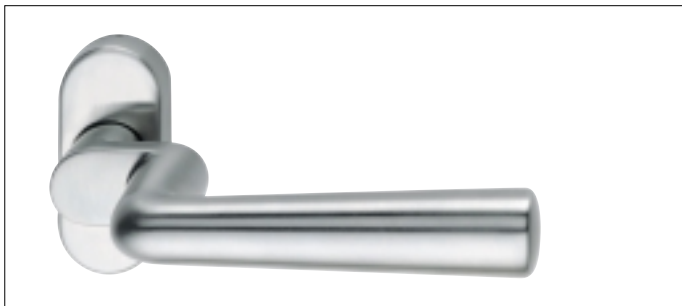


0607 21

Aluminium
 Stainless steel

0607 22 **F**

Aluminium
 Stainless steel

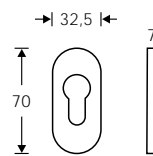


0673 21

Aluminium
 Stainless steel

0673 22 **F**

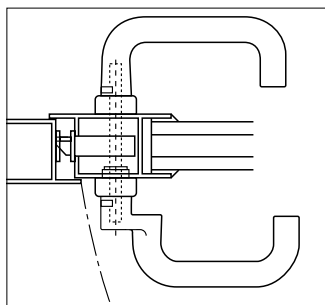
Aluminium
 Stainless steel



1757

Aluminium
 Stainless steel

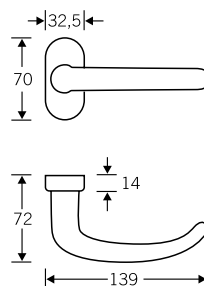
8



The cranked lever handles, illustrated on these pages, are the well-tried forerunners of the solution illustrated on page 424. Their operating principles are set out on pages 422 and 423.

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

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

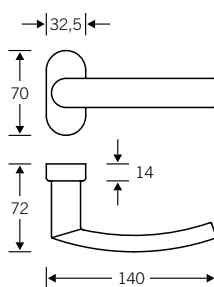


7223 25

Aluminium
Stainless steel

7623 25 **F**

Aluminium
Stainless steel

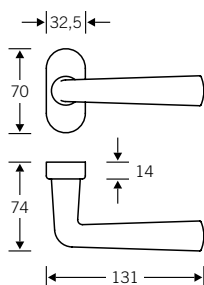


7240 25

Aluminium
Stainless steel

7640 25 **F**

Aluminium
Stainless steel

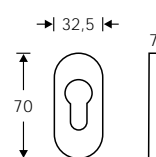
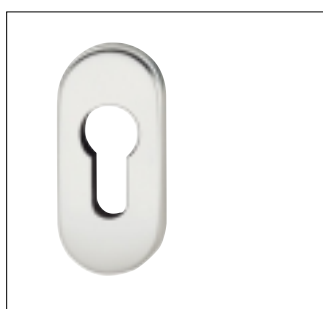


7273 25

Aluminium
Stainless steel

7673 25 **F**

Aluminium
Stainless steel



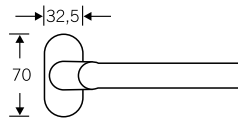
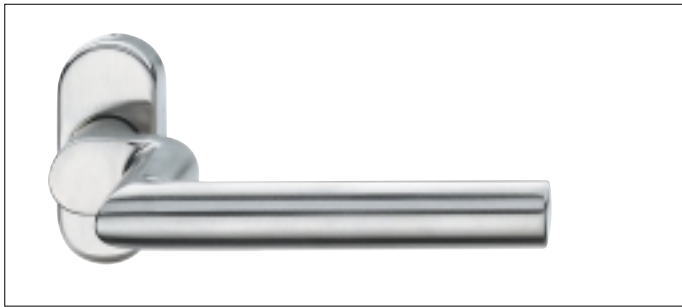
1757

Aluminium
Stainless steel

* acc. to German DIN standard

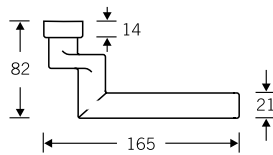
c:c screwholes 50 mm,
for countersunk screws M5
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Lever handles for framed doors fixed on oval rose, with concealed fixing and support mechanism
 8 mm □-hole
 9 mm □-hole for fire and smoke stop doors* **F**



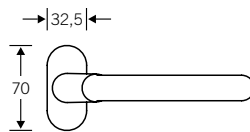
0656 21

Aluminium
 Stainless steel



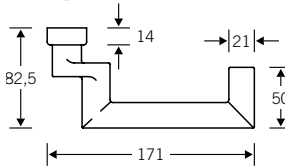
0656 22 **F**

Aluminium
 Stainless steel



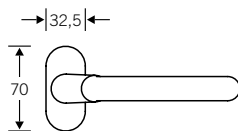
0616 21

Aluminium
 Stainless steel



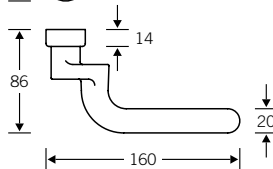
0616 22 **F**

Aluminium
 Stainless steel



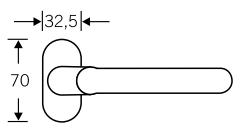
0647 21

Aluminium
 Stainless steel



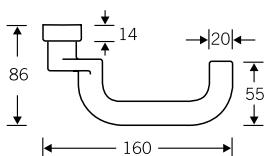
0647 22 **F**

Aluminium
 Stainless steel



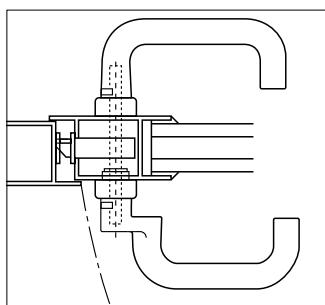
0665 21

Aluminium
 Stainless steel



0665 22 **F**

Aluminium
 Stainless steel



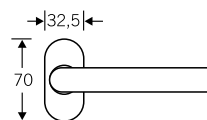
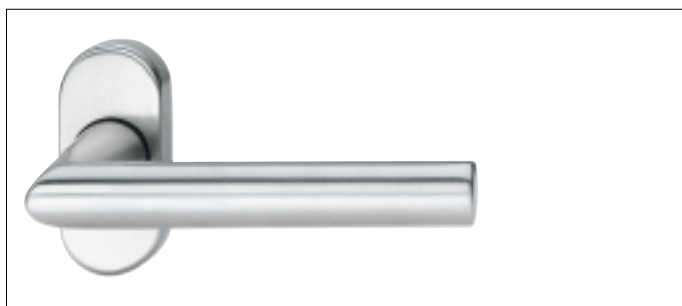
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 Fixing accessories cf. page 486.

Lever handles for framed doors fixed on oval rose,
with concealed fixing and support mechanism

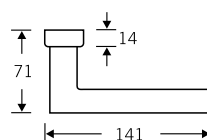
8 mm □-hole

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



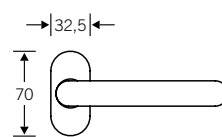
7276 25

Aluminium
Stainless steel



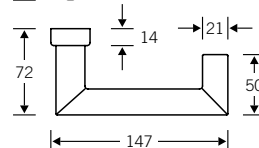
7676 25 **F**

Aluminium
Stainless steel



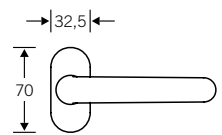
7216 25

Aluminium
Stainless steel



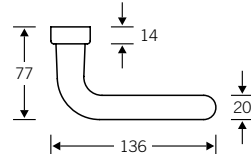
7616 25 **F**

Aluminium
Stainless steel



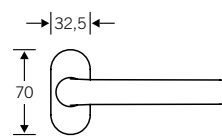
7247 25

Aluminium
Stainless steel



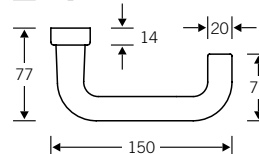
7647 25 **F**

Aluminium
Stainless steel



7270 25

Aluminium
Stainless steel



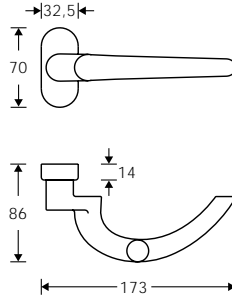
7670 25 **F**

Aluminium
Stainless steel

* acc. to German DIN standard

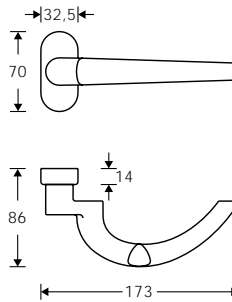
c:c screwholes 50 mm,
for countersunk screws M5
Fixing accessories cf. page 486.

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



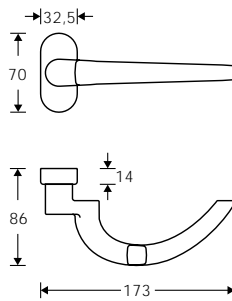
0680 21
 Aluminium natural colour
 anodised
 Stainless steel

0680 22 **F**
 Stainless steel



0681 21
 Aluminium natural colour
 anodised
 Stainless steel

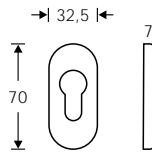
0681 22 **F**
 Stainless steel



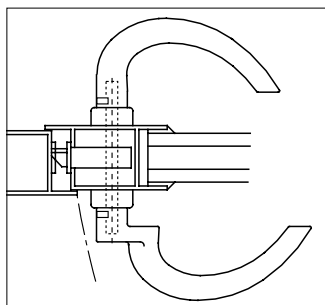
0682 21
 Aluminium natural colour
 anodised
 Stainless steel

0682 22 **F**
 Stainless steel

8



1757
 Aluminium
 Stainless steel



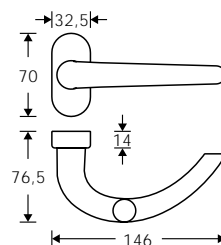
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 for countersunk screws M5
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Lever handles for framed doors fixed on oval rose,
with concealed fixing and support mechanism

8 mm □-hole

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

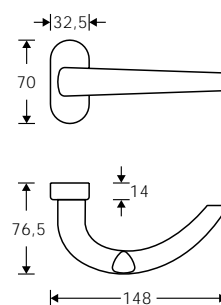


7210 25

Aluminium natural colour
anodised
Stainless steel

7610 25 **F**

Stainless steel

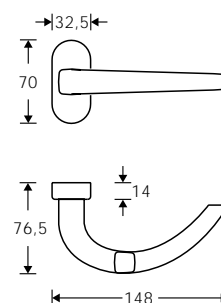


7211 25

Aluminium natural colour
anodised
Stainless steel

7611 25 **F**

Stainless steel

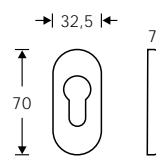


7212 25

Aluminium natural colour
anodised
Stainless steel

7612 25 **F**

Stainless steel



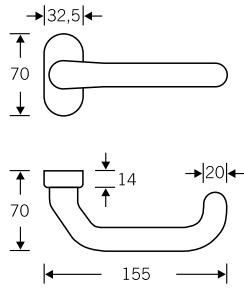
1757

Aluminium
Stainless steel

* acc. to German DIN standard

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

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

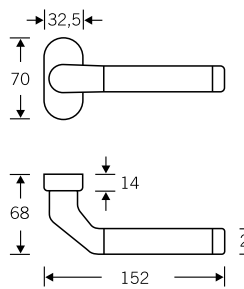


0646 21

Aluminium
Stainless steel
Aluminium + colour

0646 22 **F**

Aluminium
Stainless steel
Aluminium + colour

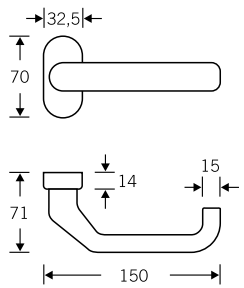


0664 21

Aluminium
black handle

0664 22 **F**

Aluminium
black handle



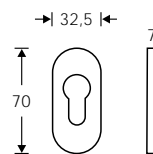
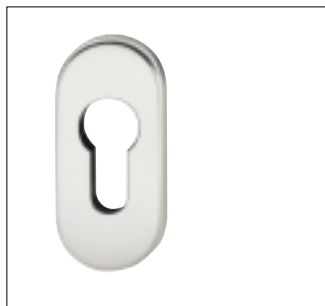
0662 21

Aluminium
Stainless steel
Aluminium + colour

0662 22 **F**

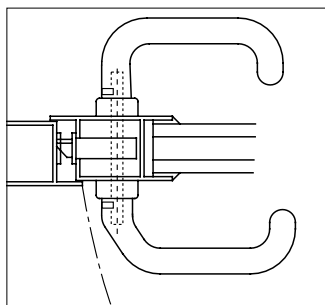
Aluminium
Stainless steel
Aluminium + colour

8



1757

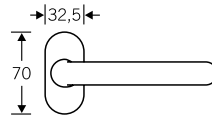
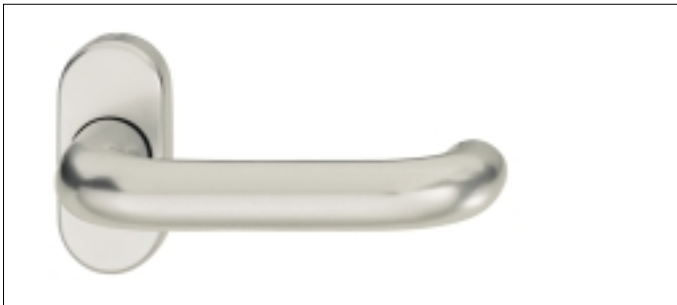
Aluminium
Stainless steel



The cranked lever handles, illustrated on these pages, are the well-tried forerunners of the solution illustrated on page 424. Their operating principles are set out on page 422 and 423.

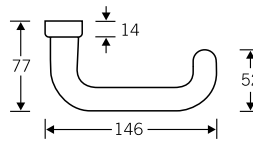
c:c screwholes 50 mm,
for countersunk screws M5
Fixing accessories cf. page 486.

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



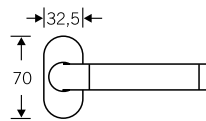
7246 25

Aluminium
Stainless steel



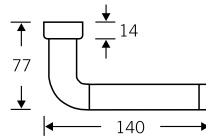
7646 25 **F**

Aluminium
Stainless steel



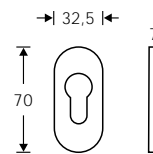
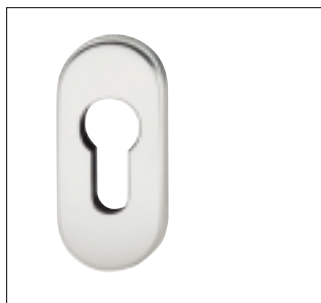
7289 25

Aluminium
black handle



7689 25 **F**

Aluminium
black handle



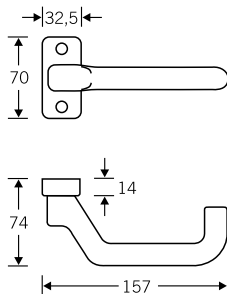
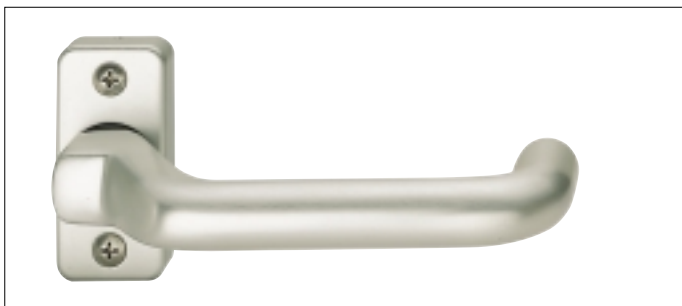
1757

Aluminium
Stainless steel

* acc. to German DIN standard

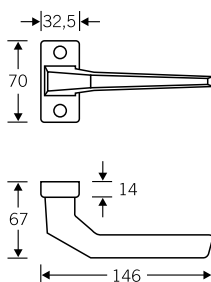
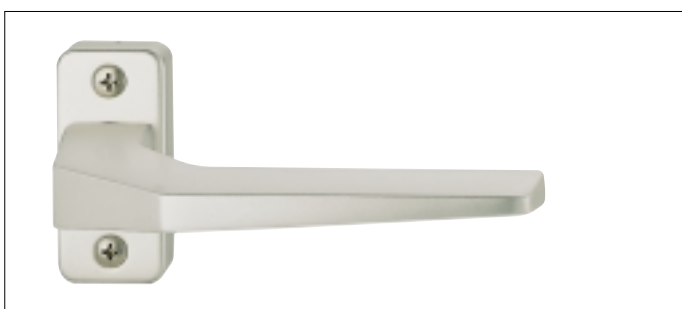
c:c screwholes 50 mm,
for countersunk screws M5
Fixing accessories cf. page 486.

Lever handles for framed doors fixed on angular rose,
with visible fixing and support mechanism
8 mm □-hole



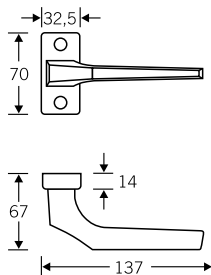
0663 16

Aluminium
Aluminium + colour



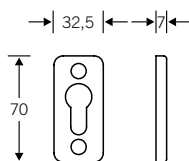
0668 16

Aluminium
Aluminium + colour



0620 16

Aluminium
Aluminium + colour

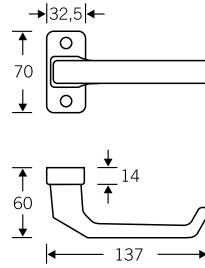


1717

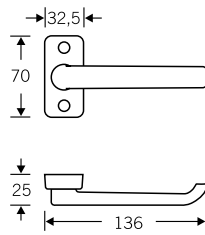
Aluminium
Aluminium + colour

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

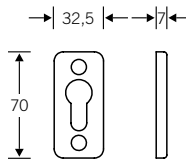
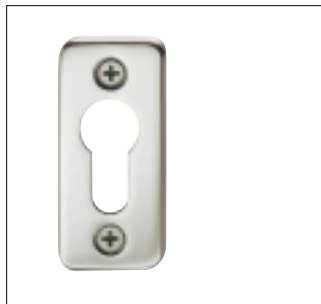
Lever handles for framed doors fixed on angular rose,
with visible fixing
8 mm □-hole



0605 13
Aluminium
Aluminium + colour



0634 02
Aluminium
Aluminium + colour

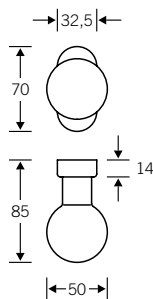


1717
Aluminium
Aluminium + colour

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

Door knobs for framed doors

with concealed fixing



0602

Aluminium
Stainless steel

turnable



8 mm □-hole
0602 2853

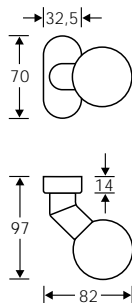
9 mm □-hole
0602 3863 Aluminium 
0602 2863 Stainless steel 

2302

fixed

2302 2801

2302 1801 Aluminium 
2302 2801 Stainless steel 



0638

Aluminium
Stainless steel

turnable



8 mm □-hole
0638 2853

9 mm □-hole
0638 2863 Stainless steel 

2346

fixed

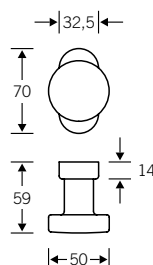
2346 2801

2346 1801 Aluminium 
2346 2801 Stainless steel 

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

Door knobs for framed doors

with concealed fixing



0629

Aluminium Ø 50 mm
Stainless steel Ø 55 mm

turnable

8 mm □-hole
0629 2853

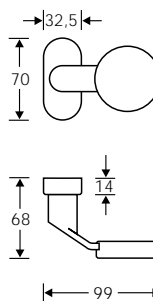
9 mm □-hole
0629 3863 Aluminium 
0629 2863 Stainless steel 

2329

fixed

2329 2801

2329 1801 Aluminium 
2329 2801 Stainless steel 



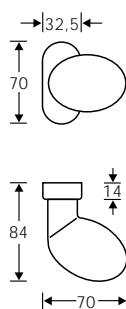
0654 28

Stainless steel

turnable 8 mm □-hole

2354 28

fixed



0604 28

Aluminium natural colour
anodised
Stainless steel

turnable 8 mm □-hole

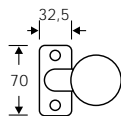
2304 28

fixed

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

Door knobs for framed doors

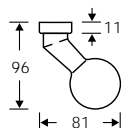
with visible fixing



0638 02

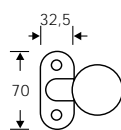
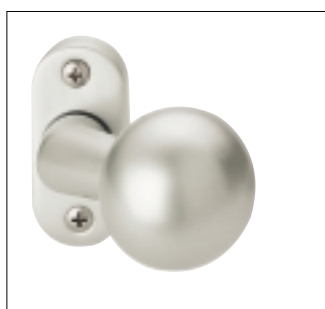
Aluminium

turnable with 8 mm □-hole



2346 02

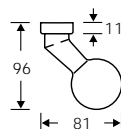
fixed



0638 08

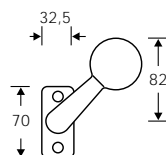
Aluminium

turnable with 8 mm □-hole



2346 08

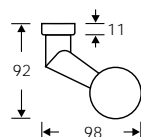
fixed



0637 02

Aluminium

turnable with 8 mm □-hole

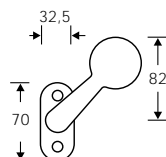


2348

fixed

2348 4201 r.h.

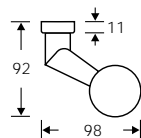
2348 5201 l.h.



0637 08

Aluminium

turnable with 8 mm □-hole



2348

fixed

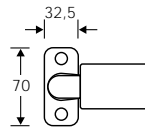
2348 4801 r.h.

2348 5801 l.h.

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

Door knobs for framed doors

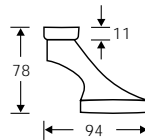
with visible fixing



0636 02

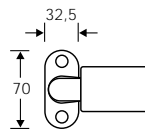
Aluminium

turnable with 8 mm □-hole



2336 02

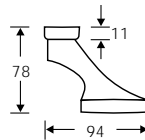
fixed



0636 08

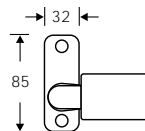
Aluminium

turnable with 8 mm □-hole



2336 08

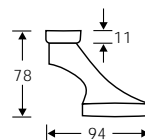
fixed



0686 06

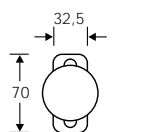
Aluminium

turnable with 8 mm □-hole



2386 06

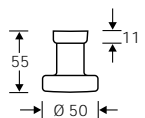
fixed



0643 02

Aluminium

turnable with 8 mm □-hole

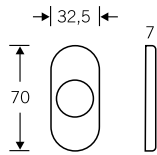


2343 02

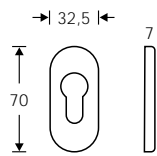
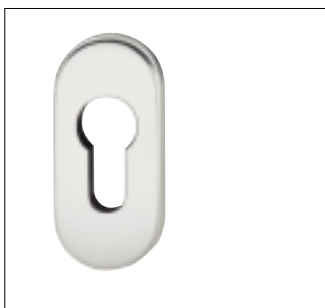
fixed

c:c screwholes 50 mm, for countersunk screws M5.
 Door knobs 0686 06 and 2386 06 c:c screwholes 67,5 mm for countersunk screws M5.

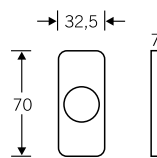
Roses for framed doors



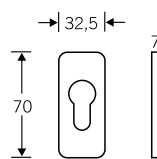
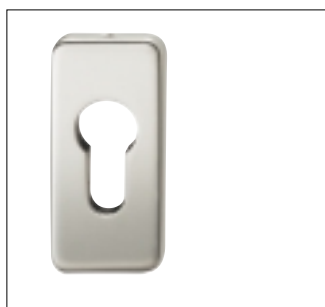
1758
Aluminium
Stainless steel



1757
Aluminium
Stainless steel



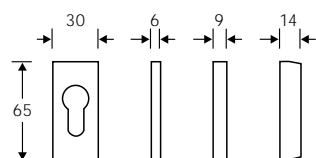
1718
Aluminium



1719
Aluminium

c:c screwholes 50 mm,
for countersunk screws M5

Roses for framed doors



c:c screwholes 50 mm,
for countersunk screws M5

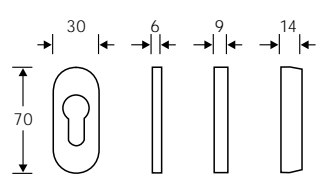
Sliding escutcheons

1776 6 mm

1777 9 mm

1779 14 mm

Aluminium
Stainless steel
Aluminium + colour



c:c screwholes 50 mm,
for countersunk screws M5

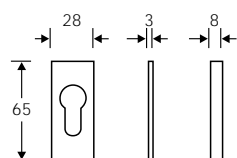
Sliding escutcheons

1726 6 mm

1727 9 mm

1728 14 mm

Aluminium
Stainless steel
Aluminium + colour

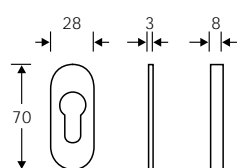
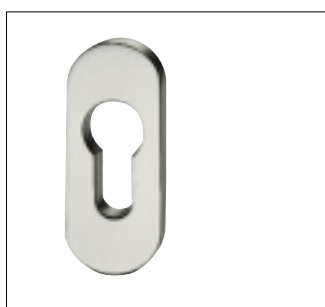


Self adhesive escutcheons

1768 3 mm

1769 8 mm

Aluminium
Stainless steel
Aluminium + colour



Self adhesive escutcheons

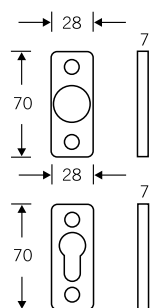
1729 3 mm

1730 8 mm

Aluminium
Stainless steel
Aluminium + colour

Roses Backplate

for framed doors

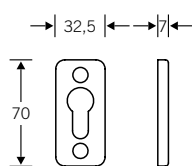
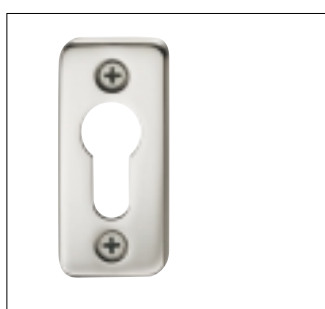


1752

1755

Aluminium
Aluminium + colour

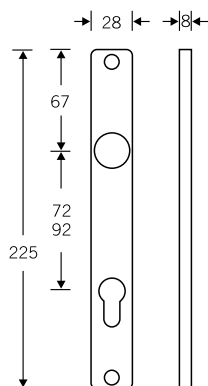
c:c screwholes 50 mm,
for countersunk screws M5



1717

Aluminium
Aluminium + colour

c:c screwholes 50 mm,
for countersunk screws M5

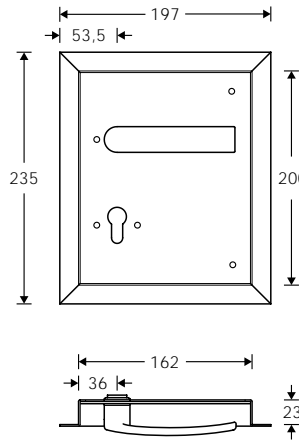


1550

Aluminium

c:c screwholes 210 mm,
for countersunk screws M4

Gymnasium fittings



7949

Stainless steel

Applications exist in which it is not permissible for the handle to protrude above the surface of the door, in the case of sliding-door designs, for instance, or gymnasium doors.

FSB has devised two models of gymnasium fittings for such applications. The FSB 7949 model is angular with mitred corners. FSB 7950, by contrast, features rounded edges.

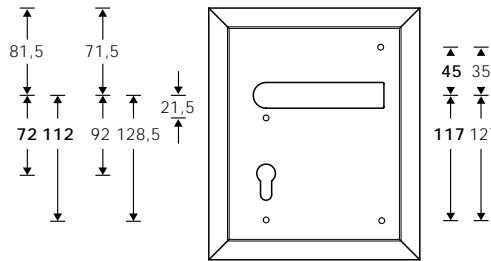
Flush handles FSB 7949 and 7950 are combined on the reverse side with hardware from the FSB heavy-duty programme, with the option of either a backplate or rose. Cf. page 91ff.

Doors to which flush handles are to be fitted must be at least 55 mm thick. To rule out any chance of injury, it should be ensured when fitting the handle that there is sufficient backset and the rim rests fully flush against the door.

Backplate version to suit
PZ 72 and 92 mm

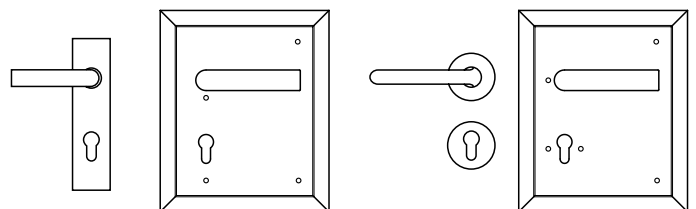
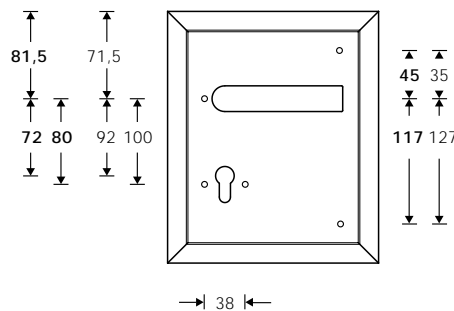
Inner backplate PZ 72 mm:
1450 03 / 1451 03

Inner backplate PZ 92 mm:
1452 03 / 1453 03



Roses version to suit
PZ 72 and 92 mm

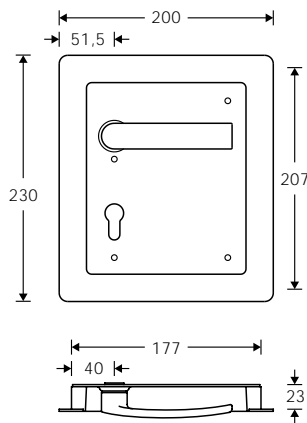
Roses:
1731 / 1735 resp.
1707 / 1708



Backplate version

Roses version

Gymnasium fittings



7950 Backplate version

7952 Roses version

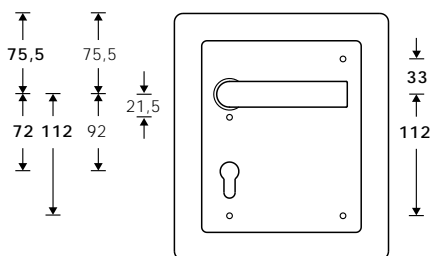
Aluminium
Stainless steel

Edges: radius 8 mm

Backplate version to suit
PZ 72 and 92 mm

Inner backplate PZ 72 mm:
1450 03 / 1451 03

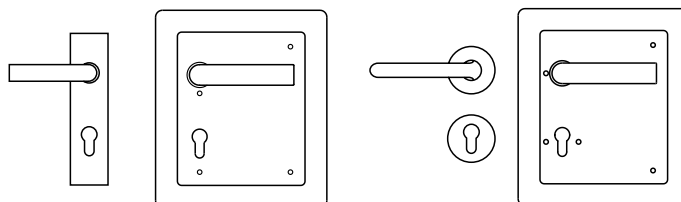
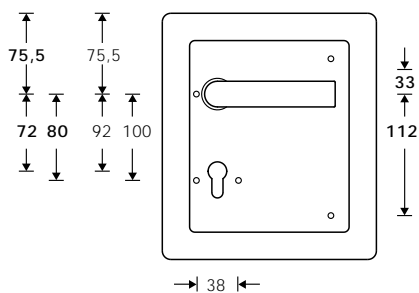
Inner backplate PZ 92 mm:
1452 03 / 1453 03 resp.
1410 03 / 1418 03



With the PZ 92 backplate,
through fixing is only possible
below the lever bearing.

Roses version to suit
PZ 72 and 92 mm

Roses:
1731 / 1735 resp.
1707 / 1708



Backplate version

Roses version