

Furniture for glass door

6e

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Glass door furniture

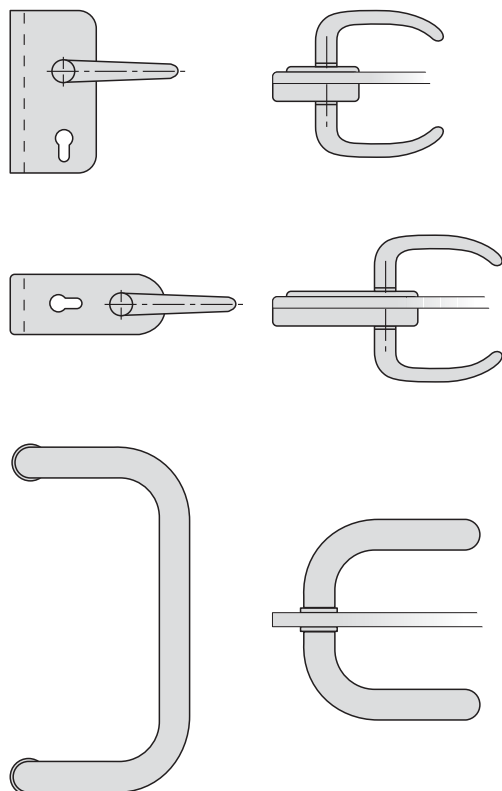
Coordinating hardware designs for doors, glass doors and windows strikes FSB as being logical, such consistency being an indispensable form of overall architectural expression in modern buildings. Glass doors in particular have an important part to play here. They create more light, link up spaces and are conducive to a great sense of roominess. The innate transparency of glass doors means that great care needs to be taken when designing hardware for them, however. It is the lock, handles and hinges, after all, that lend a glass door its visual identity. One of the compelling innovations presented in this Manual is a new compact glass door lock concept developed in cooperation with Ingenhoven Architects that, as well as being

extremely compactly dimensioned and operating without handle roses even in the heavy-duty variant, can be fitted flush with the door frame (assuming the latter is to the DIN standard). Our glass door furniture is ideally complemented by components produced by system partners Gira (ITS 30 installation system for partition systems), Mabeg (Comform wayfinding system) and Inotec (ITS 30 escape route lighting system) that are suitably proportioned and go well with FSB's AluGrau® colour shade. Please request exhaustive product information from the respective makers. All the hardware variants covered in this section can be combined with virtually all lever handle models in the FSB range.



ished in a RAL colour. Series 4220 and 4223 hardware can be fitted either with or without rose/lever handle furniture, thus offering scope for deploying lever handle sets with AGL® heavy-duty bearings for heavy or large-format glass doors.

Mention should also however be made of the visually very alluring 4224 Series of fittings for glass doors: A notch between shank and grip on lever handles FSB 1063, 1078 and 1088 is aligned with the edge of the lockset plate. Colour can also feature if so desired: Lock and hardware can be powder-coated in any colour from the RAL chart to match stiles fin-



Matching hinges complete FSB's collection of glass door fittings

Lever handle furniture to match glass door locks As well as supplying its own glass door fittings, FSB can also – with few exceptions – adapt its entire range of lever handles/ doorknobs to glass door fittings commonly marketed by its competitors. This entails minor technical modifications regarding the handle connection and fixing procedure. To rule out any misunderstandings, detailed information concerning the lock (e.g. maker's name and product code) is required when ordering lever handles and door-knobs for glass door locks. Please order well in advance to allow for the requisite modifications. We cannot supply these items from stock.

Door pulls for glass doors

Door pulls of round or oval cross-section can be used in a great variety of ways either as a means of operating glass doors or as a design feature with protective properties and have fastenings specifically intended for back-to-back or face fixing respectively. FSB can either make use of existing custom solutions for glass doors or develop bespoke fixing solutions and handle designs. The standard fixing solutions for glass doors and the pull handle models variously available are shown on pages 414ff.

● New products 09110

- Aluminium ■ Bronze
- AluGrey ■ Brass
- Stainless steel

Overview



4220 41/51 □ □ □ ■
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4223 45/55 □ □ □ ■
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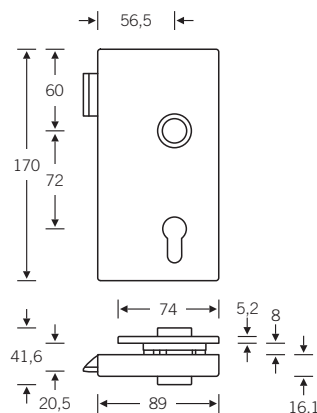
4230 □ □ □ ■
Page 337

Glass door furniture Compact



Illustration l.h.
Drawing r.h.

The FSB 4224 lockset plate for glass doors terminates flush with any DIN frame, thus visually unifying frame and hardware. Door frames that are not to the DIN specification can, of course, also be used – though the flush-frame effect cannot then be guaranteed. The furniture can also be used in conjunction with partition systems. The glass door's transparency is underscored by the tight dimensions of the lock cover, which is some 10 % smaller than in standard glass door furniture. This paring-down was achieved by developing a special-purpose lock that is every bit as rugged and functional as larger models as well as being suitable for all sizes



4224 42 r.h.

4224 52 l.h.

- Aluminium
- AluGrey
- Stainless steel

Heavy-duty bearings compact rectangular lockset plate for glass doors with cover plates with heavy-duty glass door lock (DIN 18251, Class 4) designed for use with cylinder and featuring a lifter assembly EPC 72 mm
8 mm split follower
cast-steel latch bolt head in bright nickel-plated zinc heavy-duty
Teflon-coated handle bearing in Aluminium/Stainless steel to suit FSB lever handles

of glass door. We have developed a special heavy-duty bearing for heavily frequented doors involving an expansion sleeve in Teflon-coated stainless steel that encompasses the door handle over its entire bushing area whilst also dependably withstanding the mechanical forces exerted on large-format glass doors.

Technical notes:

Dimensions given assume glass 8 mm thick. Lockset plates for glass doors are prepared at the works for glass 8 mm and 10 mm thick. Hardware for glass 12 mm thick is available to order. For further technical notes, refer to page 371. The strike box shown does not form part of the goods supplied.

The handles shown are merely illustrative. Virtually any FSB handle can be used. For technical details please refer to page 342.

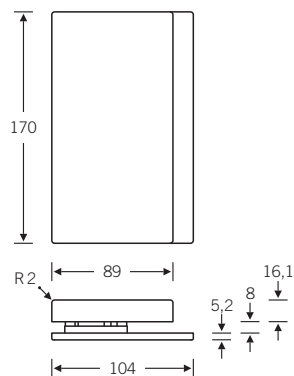
Options:

- warded lock (BB)
- no keyway
- indicating/bathroom furniture: Please specify when ordering, as furniture is fitted with indicating furniture 1735 0054 as standard at the works. Indicating furniture is not fitted on site.

Strike box for double-leaf glass doors



Illustration l.h.



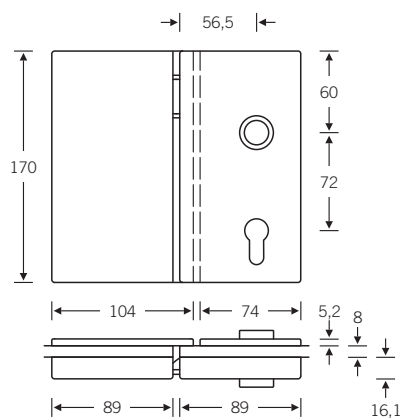
4224 45 r.h.

4224 55 l.h.

- Aluminium
- AluGrey
- Stainless steel

Compact rectangular strike box

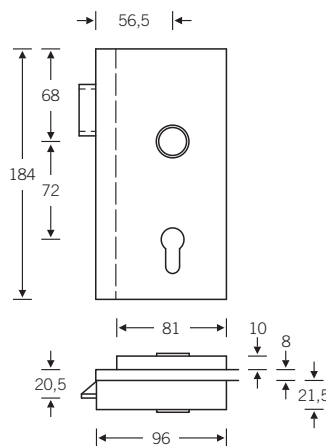
to match lockset plate 4224



Technical notes:

Dimensions given assume glass 8 mm thick. Strike box plates for glass doors are prepared at the works for glass 8 mm and 10 mm thick. Hardware for glass 12 mm thick is available to order.

Glass door furniture Rectangular



4220 41 r.h.

4220 51 l.h.

- Aluminium
- AluGrey
- Stainless steel

Rectangular lockset plate with heavy-duty lock for glass doors (DIN 18251, Class 4) designed for use with Euro-profile cylinder centres 72 mm
8 mm steel-bushed split follower latch
cast steel
bolt head bright nickel-plated zinc
die casting handle bushing
glass-fibre reinforced polyamide to suit all FSB lever handles



4220 42 r.h.

4220 52 l.h.

- Aluminium
- AluGrey
- Stainless steel

Rectangular lockset plate with heavy-duty lock for glass doors (DIN 18251, Class 4) designed for use with Euro-profile cylinder and lifter assembly centres 72 mm
8 mm steel-bushed split follower latch
cast steel
bolt head bright nickel-plated zinc
die casting handle bushing
glass-fibre reinforced polyamide to suit FSB commercial hardware with roses

Illustration DIN r.h.

Technical notes:

Dimensions given assume glass 8 mm thick. Lockset plates for glass doors are prepared at the works for glass 8 mm and 10 mm thick. Hardware for glass 12 mm thick is available to order. For further technical notes, refer to page 371. The strike box shown does not form part of the goods supplied.

The handles shown are merely illustrative. Virtually any FSB handle can be used. For technical details please refer to page 342.

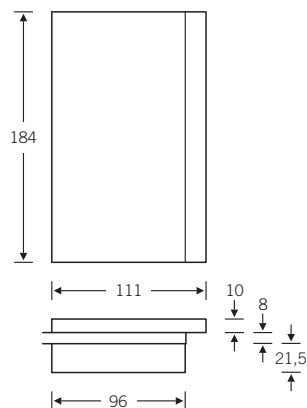
Options:

- warded lock (BB)
- no keyway
- indicating/bathroom furniture: Please specify when ordering according to FSB indicating bathroom furniture shown on page 150. Indicating/bathroom furniture will be fitted on site.

Strike box for double-leaf glass doors



Illustration l.h.

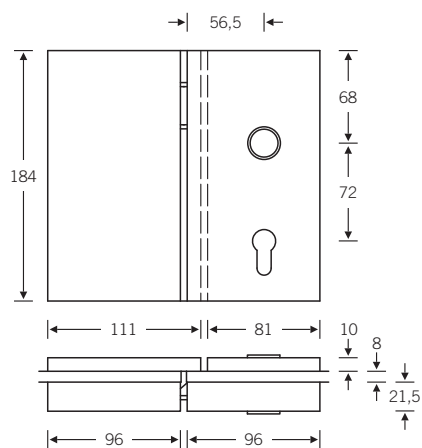


4220 45 r.h.
4220 55 l.h.

- Aluminium
- AluGrey
- Stainless steel

Rectangular strike box

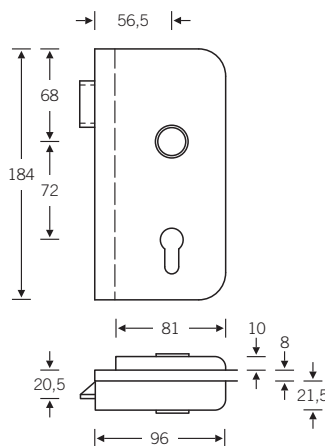
To match lockset plate
4220 41/51 and 4220 42/52



Technical notes:

Dimensions given assume glass 8 mm thick. Strike box plates for glass doors are prepared at the works for glass 8 mm and 10 mm thick. Hardware for glass 12 mm thick is available to order.

Glass door furniture
Softly rectangular



4223 41 r.h.

4223 51 l.h.

- Aluminium
- AluGrey
- Stainless steel

Softly rectangular lockset plate with heavy-duty lock for glass doors (DIN 18251, Class 4) designed for use with Euro-profile cylinder centres 72 mm
8 mm steel-bushed split follower latch
cast steel
bolt head bright nickel-plated zinc
die casting handle bushing
glass-fibre reinforced polyamide to suit all FSB lever handles



4223 42 r.h.

4223 52 l.h.

- Aluminium
- AluGrey
- Stainless steel

Softly rectangular lockset plate with heavy-duty lock for glass doors (DIN 18251, Class 4) designed for use with Euro-profile cylinder and lifter assembly centres 72 mm
8 mm steel-bushed split follower latch
cast steel
bolt head bright nickel-plated zinc
die casting handle bushing
glass-fibre reinforced polyamide to suit FSB commercial hardware with roses

Illustration DIN r.h.

Technical notes:

Dimensions given assume glass 8 mm thick. Lockset plates for glass doors are prepared at the works for glass 8 mm and 10 mm thick. Hardware for glass 12 mm thick is available to order. For further technical notes, refer to page 371. The strike box shown does not form part of the goods supplied.

The handles shown are merely illustrative. Virtually any FSB handle can be used. For technical details please refer to page 342.

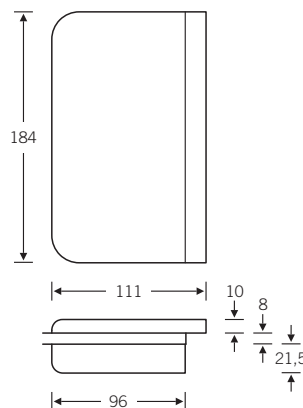
Options:

- warded lock (BB)
- no keyway
- indicating/bathroom furniture: Please specify when ordering according to FSB indicating bathroom furniture shown on page 150. Indicating/bathroom furniture will be fitted on site.

Strike box for double-leaf glass doors



Illustration l.h.



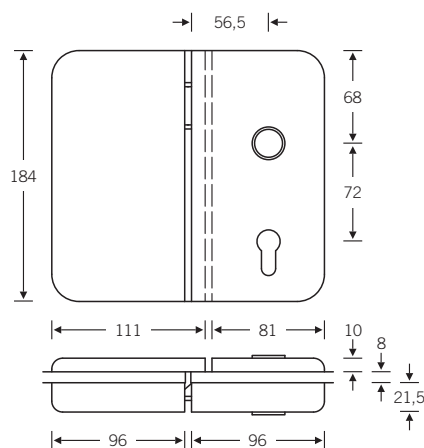
4223 45 r.h.

4223 55 l.h.

- Aluminium
- AluGrey
- Stainless steel

Softly rectangular strike box

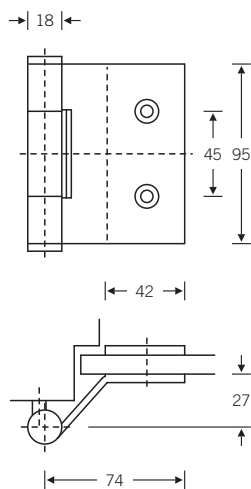
To match lockset plate
4223 41/51 and 4223 42/52



Technical notes:

Dimensions given assume glass 8 mm thick. Strike box plates for glass doors are prepared at the works for glass 8 mm and 10 mm thick. Hardware for glass 12 mm thick is available to order.

Hinges for glass doors

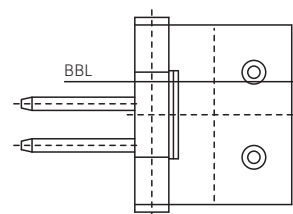
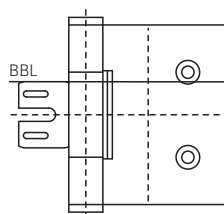
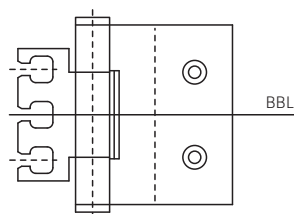
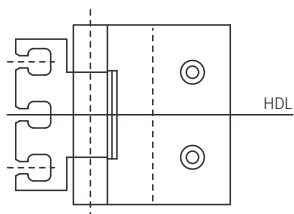


4228

- Satin chromium-plated steel
- Stainless steel

VARIANT glass door hinge in satin chromium-plated steel to suit Aluminium and AluGrey finishes or in stainless steel with hinge connector

To match lockset plate 4220 41/51 and 4220 42/52



4228 0101

VARIANT VXG 7990/100K commercial hinge for glass doors on rebated timber, steel or aluminium frames with three-dimensionally adjustable mating elements

4228 0102

VARIANT VNG 7990/100K commercial hinge for glass doors on rebated steel frames with three-dimensionally adjustable mating elements

4228 0103

VARIANT VG 8790K commercial hinge for glass doors on rebated steel frames

4228 ..04

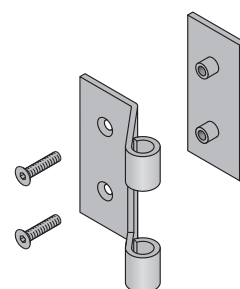
41 r.h. | 51 l.h.
VARIANT VG 3990K commercial hinge for glass doors on rebated wooden soffit and blockwork frames

Technical notes:

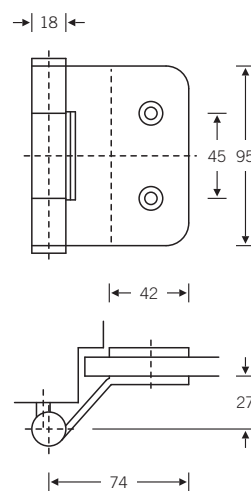
Loading capacity 60 kg
(two hinges)

Loading capacity 90 kg
(three hinges)

Hinges for glass doors are prepared at the works for glass 8 mm and 10 mm thick. For further technical notes please refer to page 344 and 345.



Hinges for glass doors

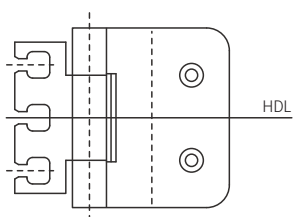


4227

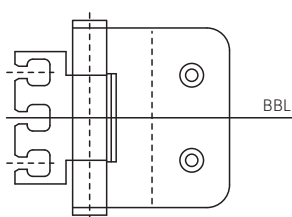
- Satin chromium-plated steel
- Stainless steel

VARIANT glass door hinge in satin chromium-plated steel to suit Aluminium and AluGrey finishes or in stainless steel with hinge connector

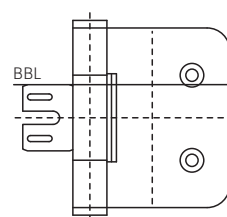
To match lockset plate 4223 41/51 and 4223 42/52



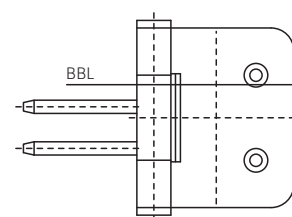
HDL



BBL



BBL



BBL

6e

4227 0101

VARIANT VXG 7990/100 commercial hinge for glass doors on rebated timber, steel or aluminium frames with three-dimensionally adjustable mating elements

4227 0102

VARIANT VNG 7990/100 commercial hinge for glass doors on rebated steel frames with three-dimensionally adjustable mating elements

4227 0103

VARIANT VG 8790 commercial hinge for glass doors on rebated steel frames

4227 ..04

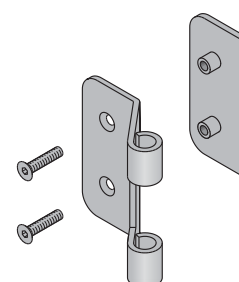
41 r.h. | 51 l.h.
VARIANT VG 3990 commercial hinge for glass doors on rebated wooden soffit and blockwork frames

Technical notes:

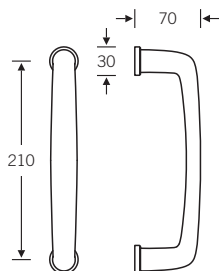
Loading capacity 60 kg
(two hinges)

Loading capacity 90 kg
(three hinges)

Hinges for glass doors are prepared at the works for glass 8 mm and 10 mm thick. For further technical notes please refer to page 344 and 345



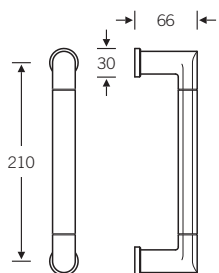
Pull handles for glass doors



3684 2114

- Aluminium
- AluGrey

Design: Ton Haas

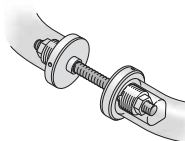


3688 2114

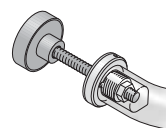
- AluGrey
- Stainless steel

Design: Christoph Ingenhoven

For detailed information on fixing, please turn to page 414ff.

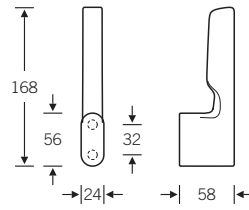


Back to back fixing



bolt-through fixing

Sliding door handle
Door holder

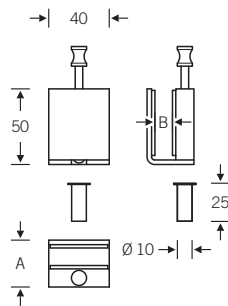


3686

- Aluminium
- AluGrey
- Stainless steel

Sliding door handle for fixing in pairs

Design: Jahn/Lykouria



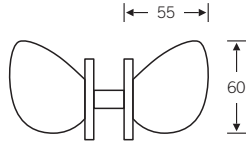
4230

- Stainless steel

thickness of glass (B)	width overall (A)	order code.
8 mm	27 mm	4230 0000
10 mm	29 mm	4230 1000
12 mm	31 mm	4230 1200

6e

Doorknob
for glass doors



2339 07

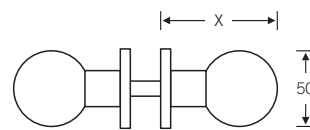
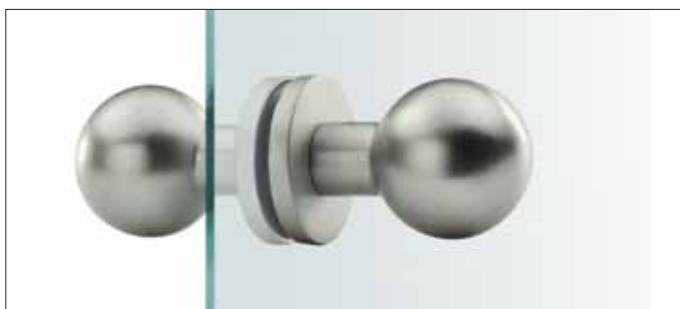
■ Aluminium

Bore hole Ø 13 mm

Design: Philippe Starck

Deadknob

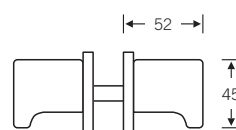
Doorknobs for glass doors



2302 07

- Aluminium (X = 77 mm)
- AluGrey (X = 77 mm)
- Stainless steel (X = 73 mm)
- Bronze (X = 72 mm)
- Brass (X = 72 mm)

Bore hole Ø 13 mm



2322 07

- Aluminium
- Stainless steel

Bore hole Ø 13 mm

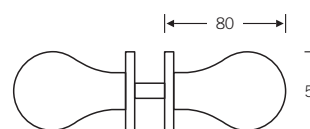
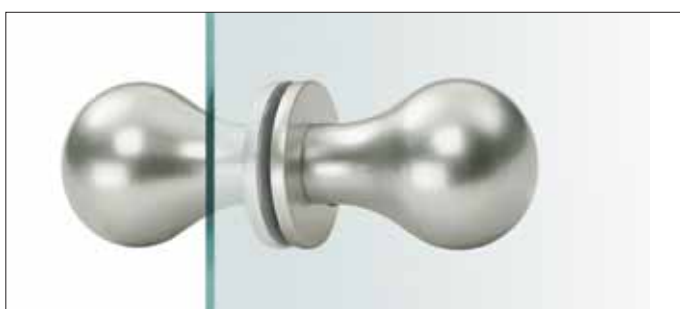


2329 07

- Aluminium (Ø = 50 mm)
- AluGrey (Ø = 50 mm)
- Stainless steel (Ø = 55 mm)
- Bronze (Ø = 50 mm)

Bore hole Ø 13 mm

6e



2374 07

- Aluminium
- AluGrey
- Stainless steel

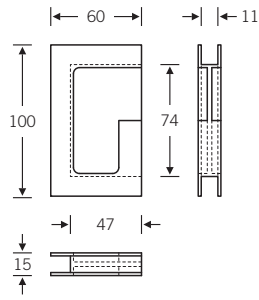
Bore hole Ø 13 mm

Design: Jasper Morrison

Deadknobs

Deadknobs are generally fitted directly to glass doors. There are no locks involved. The knobs are joined together at the assembly stage by means of an 8 mm square spindle (for two female parts).

Flush pull for glass doors



4299

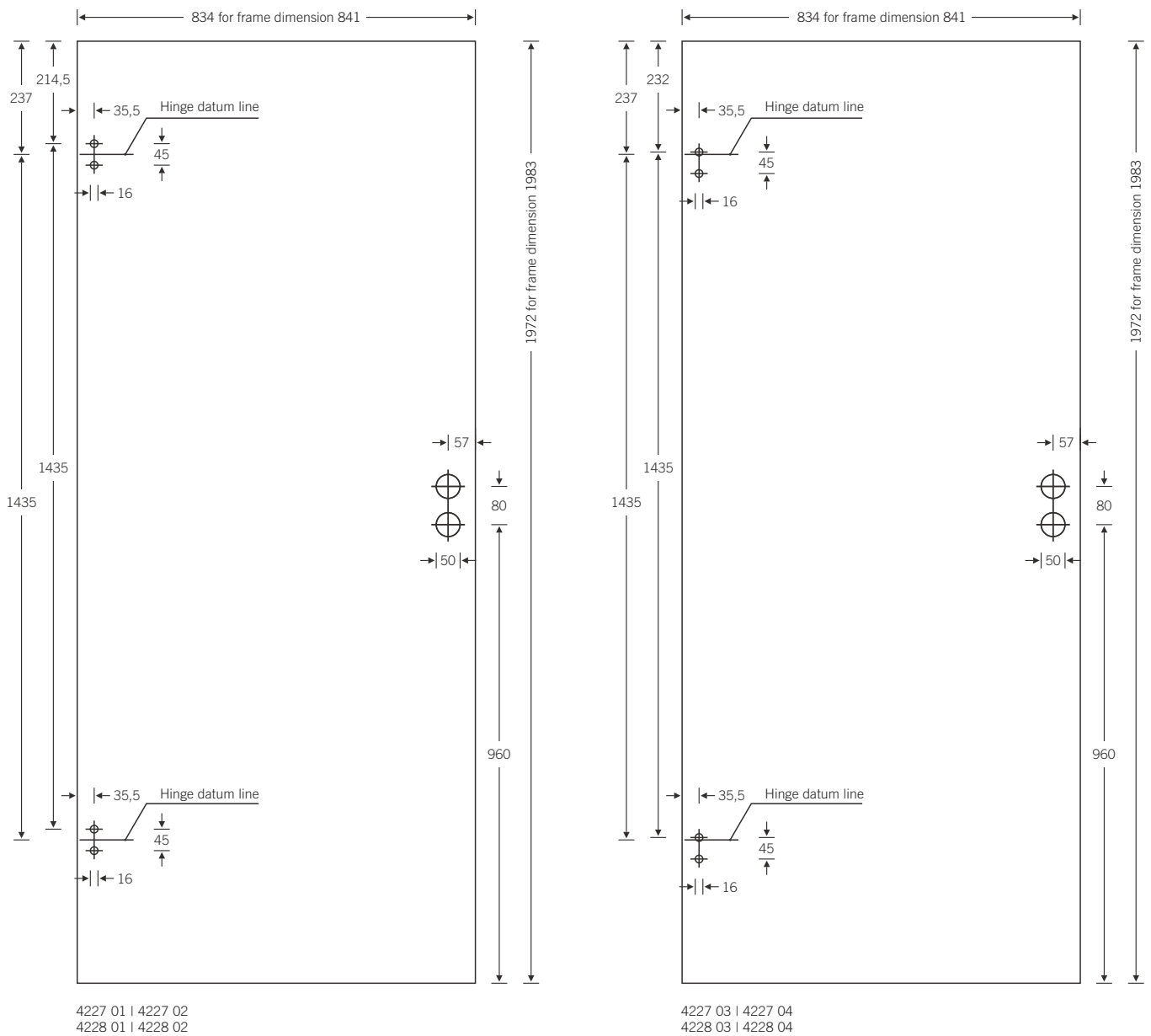
■ Stainless steel

.... 0012 for glass doors
10 mm thick

.... 0019 for glass doors
8 mm thick

Adhesive not included in
the goods supplied.

Door dimensions acc. DIN 18101



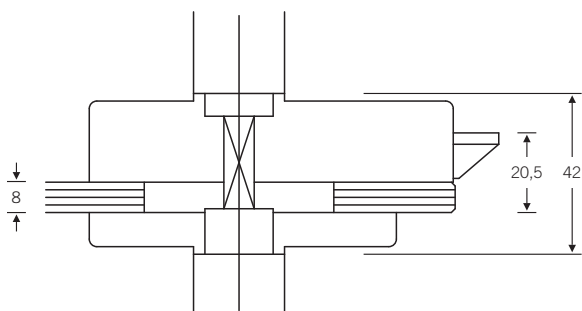
6e

T.D.I.U.S.*	750 × 2000	875 × 2000	1000 × 2000
Frame rebate dimensions	716 × 1983	841 × 1983	966 × 1983
Standard glass dimensions	709 × 1972	834 × 1972	959 × 1972
T.D.I.U.S.*	750 × 2125	875 × 2125	1000 × 2125
Frame rebate dimensions	716 × 2108	841 × 2108	966 × 2108
Standard glass dimensions	709 × 2097	834 × 2097	959 × 2097

* = theoretical dimensions in unfinished state

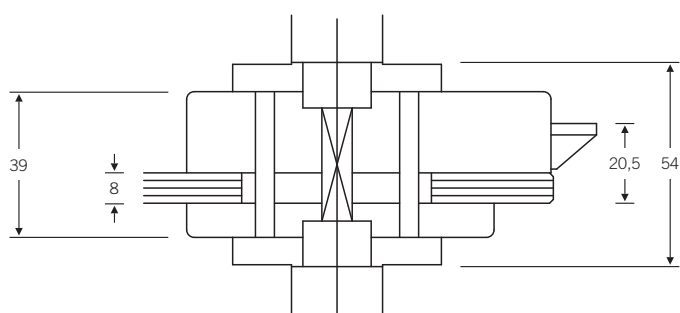
Technical notes

Series 4220 and 4223



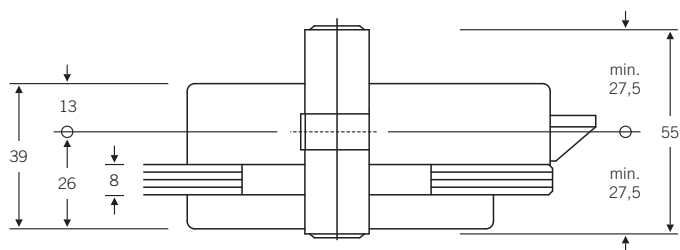
Lever handle specification

A modified lever handle set is required for glass door lockset plates 4220 41/51 and 4223 41/51. Lever handle sets will be shortened one-side at the works to make sure lever handle connecting is adjusted on lock dimensions inside.



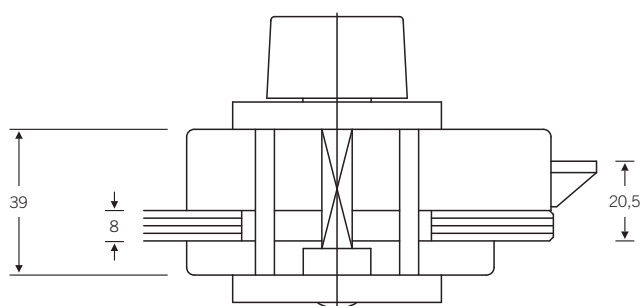
Bearings

Lockset plates 4220 42/52 and 4223 42/52 can be fitted with either standard roses and lever handle sets or commercial fittings with compensating bearing for heavy or big-sized glass doors.



Lock cylinders

For aesthetic and functional reasons FSB recommends lock cylinders with minimum 55 mm (27,5 mm on both sides).



Indicating/bathroom furniture

Lockset plates for glass doors 4220/4223 series are also available in a bathroom version. They can be fitted with FSB standard indicating furniture shown on page 150 and are suitable for doors opening both inwards and outwards.

Technical notes:

Dimensions given assume glass 8 mm thick. Lockset plates for glass doors are prepared at the works for glass 8 mm, 10 mm and 12 mm thick.

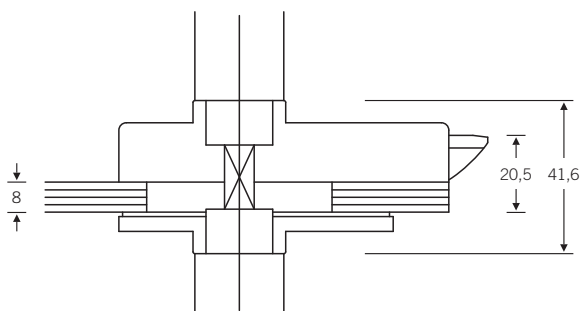
Order details:

Lever handles are not supplied as part of these hardware sets. Please order the desired model separately, indicating that it is used on glass door furniture 4220/4223 series.

Please specify also lockset plate type regarding with or without roses and type of bearing and DIN handing.

Technical notes

Series 4224

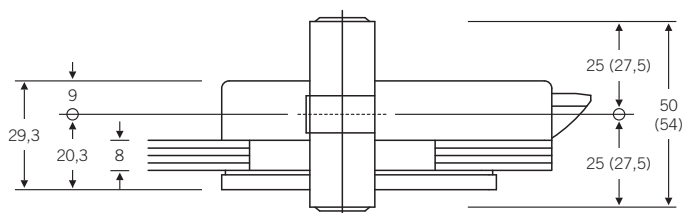


Lever handle specification

A modified lever handle set is required for glass door lockset plates 4224. Male lever handle will be adapted to a special spindle projection (differing from FSB standard) at the works to make sure lever handle connecting is adjusted on lock dimensions inside.

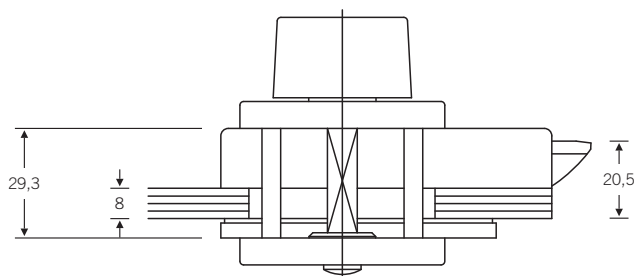
Bearing

Lockset plates 4224 will be supplied without roses for aesthetic reasons. A heavy-duty bearing is included as standard and fits functionality with heavy and big-sized glass doors.



Lock cylinders

For aesthetic reasons FSB recommends lock cylinders with minimum length 50 mm (25 mm on both sides) or 55 mm (27,5 mm on both sides). For lock cylinders with length 50 mm its necessary to make sure its ability within key systems.



Indicating/bathroom furniture

Lockset plates for glass doors 4224 series are also available in a bathroom version. They will be fitted with FSB indicating furniture 1735 0054 (cf. page 150) at the works by request. Indicating furniture is suitable for doors opening both inwards and outwards.

Technical notes:

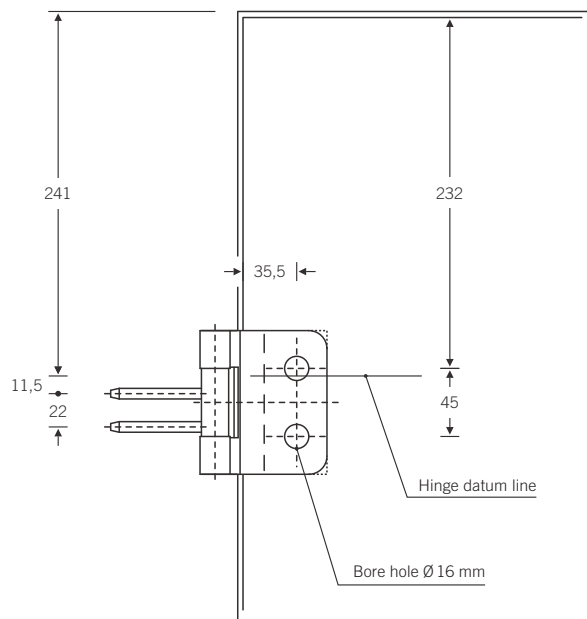
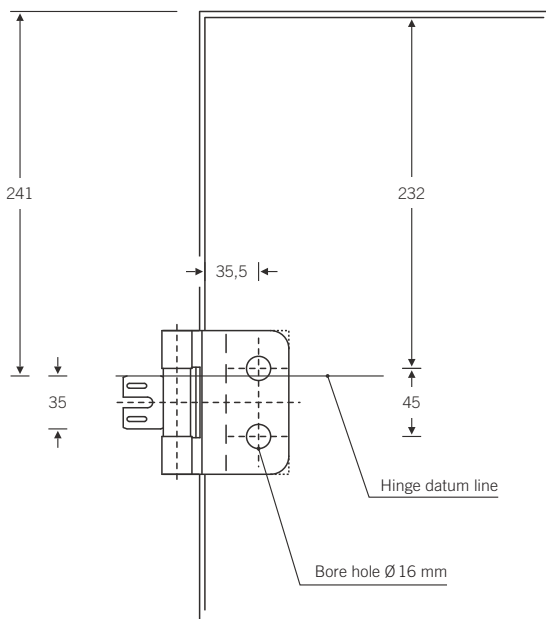
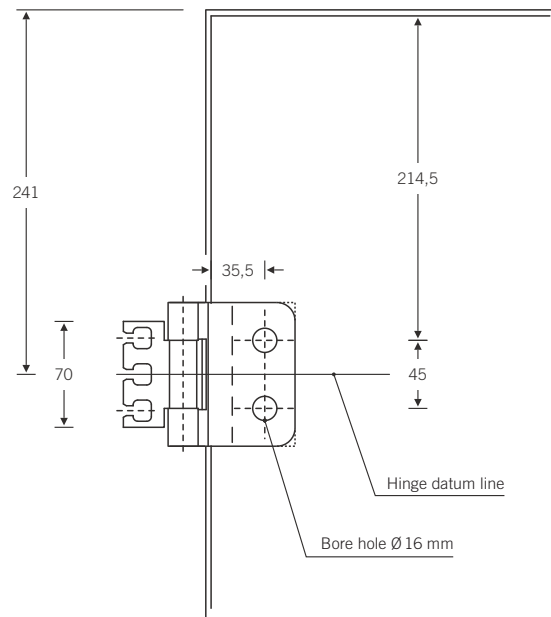
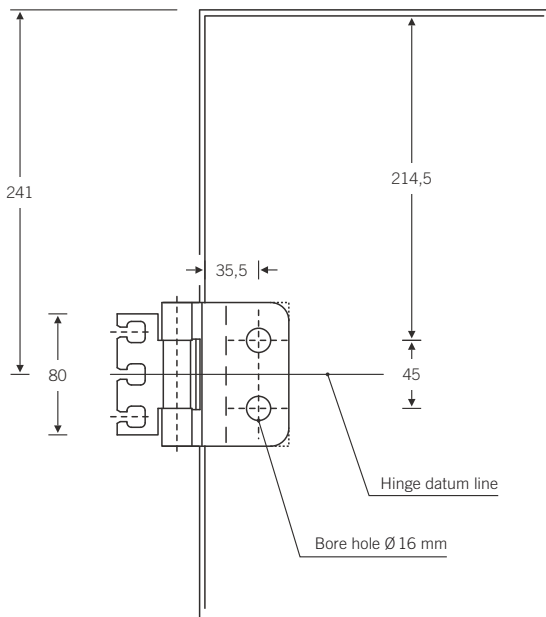
Dimensions given assume glass 8 mm thick. Lockset plates for glass doors are prepared at the works for glass 8 mm, 10 mm and 12 mm thick.

Order details:

Lever handles are not supplied as part of these hardware sets. Please order the desired model separately, indicating that it is used on glass door furniture 4224 series. Please specify also DIN handing.

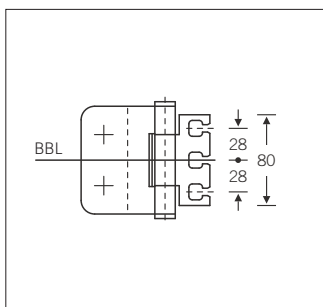
Technical notes

4227 and 4228



The positioning of hinge connectors relative to the hinge datum line also necessitates adapting bore holes in the glass door. This should be borne in mind most notably in the cases of VX and VN commercial hinges.

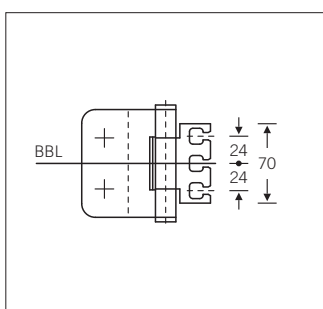
Frame connection dimensions



VARIANT commercial hinge for glass doors on rebated timber, steel or aluminium frames with three-dimensionally adjustable mating elements VX

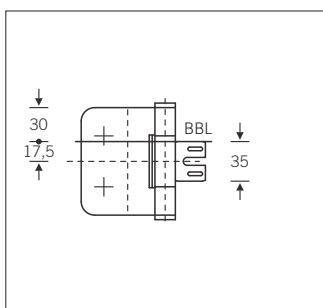
- suitable for wholly glazed doors with standard vertical borehole layout
- for glass 8 and 10 mm thick
- twistproof threaded stud
- concealed, no-maintenance axial-radial sliding bearings
- combinable with mating element: for blockwork frames VX 7601 3D

for soffit frames VX 7602 3D
for blockwork frames VX 7605 3D
for steel frames VX 7611 3D
VX 7612 3D
for aluminium frames VX 7621 3D
· non-handed



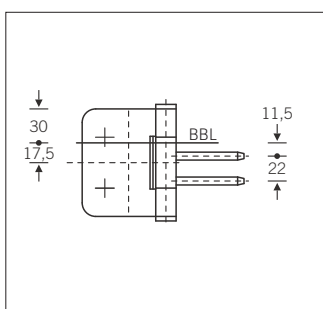
VARIANT commercial hinge for glass doors on rebated steel frames with three-dimensionally adjustable mating elements

- suitable for wholly glazed doors with standard vertical borehole layout
- for glass 8 and 10 mm thick
- twistproof threaded stud
- concealed, no-maintenance axial-radial sliding bearings
- combinable with mating element VN 7608/120 3D
- non-handed



VARIANT commercial hinge for glass doors on rebated steel frames

- suitable for wholly glazed doors with standard vertical borehole layout
- for glass 8 and 10 mm thick
- for mating elements V 8600 or V 8610
- non-handed



VARIANT commercial hinge for glass doors on rebated wooden soffit and blockwork frames

- suitable for wholly glazed doors with standard vertical borehole layout
- for glass 8 and 10 mm thick
- for mating elements of the V 3600, V 3610, V 3630, V 3650 series and clamping block V 3604 or V 3607
- necessary to indicate DIN handing

SIMONSWERK engineering and quality are a byword for safety and stability to the highest professional standards. For further information on hinges, hinge connectors, frame fastening elements etc., please consult the latest SIMONSWERK manual.

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Functional and associative aspects.

The formal implications of using colour are manifold. Colour makes houses larger or smaller, makes them stand out against or blend in with Nature. Besides its spatial (physiological) effect, colour also has the psychological effect of triggering associations. A darker shade of light blue applied to the outside of buildings can, for instance, have nautical connotations and, applied to the interior, intuitively make reference to the function of having a bath. Whilst social concerns were in no way a decisional driving force for Le Corbusier, colour was nevertheless expected to be of service to humanity in architecture. He saw his investigations as aiming to provide

people's individual tendencies and inner needs with tools conducive to "self-revelation". His deliberations are also to be seen as a reaction against the sometimes oppressive external impact of large edifices. Colour was a multilayered means of visual expression for Le Corbusier: an element engendering identity and meaning that completes architecture without alienating it.