

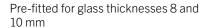
496	Fittings for glass doors
504	Glass-door boxes
513	Glass-door hinges
516	Doorknobs
520	Sliding door handles
523	Door holder
525	Technical information

## Added value at a glance

Glass has always been a versatile architectural material, and glass doors carry this role into the sphere of interior design. Sliding glass doors also make efficient use of space and open up smaller rooms. FSB offers a range of glass door fittings that are compelling both in their contributions to design and to function



Fittings with consistent design for glass doors in combination with doorknobs, sliding door handles and hinges





Can be combined with over 50 different door handle models



Variants for emergency exit devices conforming to EN 179 available with APD or APE panic function

Fire safety variants conforming to DIN 18273 available for tempered safety glass (10 and 24 mm)

Variants with or without round/square handle rose; alternatively also with CH-RC round cylinder keyway

#### Product variants

#### Product features of glass door fittings

Our glass-door boxes can be combined with almost any FSB door handle model and are available with or without profile cylinder (PC) keyway. Please specify when ordering:

- Door handle model
- DIN door handing

In addition to glass-door boxes, the following pages also present matching strike boxes, door hinges and a door holder.

#### Standard variant Glass door fitting 13 4231



Illustrative example featuring door handle 1244

13 4231 can be combined with:

Door handles without handle roses

Cannot be combined with models 1163, 1241, 1242, 1251 and 1254

#### Standard variant Glass door fitting 13 4224



Illustrative example featuring door handle 1244

13 4224 can be combined with:

Door handles without handle roses

Teflon-coated bushing with handle guide, which can withstand the mechanical forces exerted on large-format glass doors even though the glass door fitting is smaller and more discreet than models 13 4220 and 13 4223

## Heavy-duty variant Glass door fitting 13 4223



Illustrative example featuring door handle 1244 and handle roses

13 4223 can be combined with:

Door handles without handle roses

© Door handles with handle roses and FSB ASL® bearing (see page 56 f.) for light to medium heavy-duty doors

Door handles with handle roses and FSB AGL® heavy-duty bearing (see page 58 f.) for heavy-duty and hightraffic doors

## Heavy-duty variant Glass door fitting 13 4220

# Glass door fitting 13 4220 090

Fire safety and EN 179 variant

#### Other fittings for glass doors



Illustrative example featuring door handle 1244 and handle roses



Illustrative example featuring door handle 1244 and handle roses

The range would not be complete without doorknobs and flush pulls for glass doors. Furthermore, all door pulls (except push/pull pad handles) and individually configurable pull handle systems can also be installed on glass doors with the right fixing set (see page 630 ff.).

If desired, glass door fittings from series 13 4220 04.../05..., 13 4223 and 13 4224 and their companion door handles can be powder-coated in any colour from the RAL colour chart to match the interior design concept.

#### 13 4220 can be combined with:

Door handles without handle roses
Door handles with handle roses and
FSB ASL® bearing (see page 56 f.) for
light to medium heavy-duty doors

Door handles with handle roses and FSB AGL® heavy-duty bearing (see page 58 f.) for heavy-duty and high-traffic doors

#### 13 4220 090 can be combined with:

Door handles with handle roses and FSB AGL® FS heavy-duty bearing (see page 58 f.) for heavy-duty and high-traffic doors in fire safety variant

Door handles with handle roses and FSB AGL® FS heavy-duty bearing (see page 58 f.) for heavy-duty and high-traffic doors for emergency exit devices in fire safety variant conforming to EN 179

## Overview

#### Glass-door boxes

13 4224 Page 504 f.





13 4220

Page 506 f.







13 4223

Page 509 f.







13 4231

Page 511 f.





#### Glass-door hinges







#### Doorknobs









23 0844

#### Sliding door handles





13 4256



#### Door holders



13 4230

## Compact glass-door box





13 4224

(E) 13 4224 042 (R) | 13 4224 052 (L)

Compact rectangular glass door fitting with heavy-duty glass door lock (DIN 18251-1, grade 4)

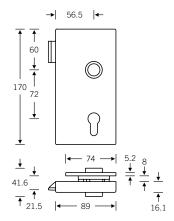
Profile cylinder (PC) 72 mm, 8 mm self-tightening follower in steel with polyamide retaining ring

Latch bolt in a combination of plastic/ pressure die casting, acoustically attenuated

Bolt head as bright nickel-plated casting; bearing with Teflon-coated bushing that wholly envelops the handle neck; can be combined with female handles

Pictured: DIN RH, opening inwards

The glass door fitting, developed in collaboration with Ingenhoven Architects, stands out for its pared-down design without handle roses, its extremely compact dimensions and the fact that it can be flush-fitted with the door frame (when using DIN frames). The fitting closes flush with DIN frame so that the door frame and fitting join together as one visual unit. Particularly delightful when combined with door handle 1078: the dividing line on the grip section aligns perfectly with the edge of the glass door fitting.



Please note that the profile cylinder always protrudes from the glass-door box and does not end flush with the surface of the fitting.

Please specify DIN door handing when ordering

Female handles

FSB ASL®

FSB AGL®

FS heavy-duty fitting
FN 179 heavy-duty fitting

Aluminium

# Fittings for glass doors

## Compact strike box

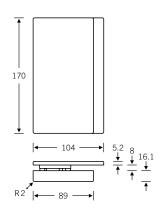


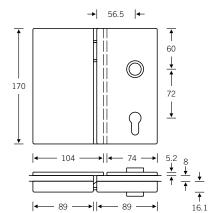
13 4224

13 4224 045 (R) | 13 4224 055 (L)

Compact rectangular strike box for double-leaf glass doors matching glass door fitting 13 4224 042 (R) | 13 4224 052 (L)

Pictured: DIN LH, opening inwards





Please specify DIN door handing when ordering

Female handles

► FSB ASL®

FSB AGL®

FS heavy-duty fitting
FN 179 heavy-duty fitting

#### Glass-door boxes





Model 13 4220 041



Model 13 4220 042

13 4220



⇒ 13 4220 041 (R) | 13 4220 051 (L)

€ 13 4220 042 (R) | 13 4220 052 (L)\*

€ 13 4220 042 (R) | 13 4220 052 (L)\*

Rectangular glass door fitting with heavy-duty glass door lock (DIN 18251-1, based on grade 4)

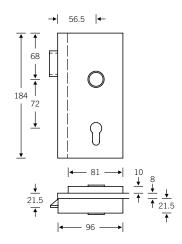
Profile cylinder (PC) 72 mm, 8 mm self-tightening follower in steel with polyamide retaining ring

Latch bolt in a combination of plastic/ pressure die casting, acoustically attenuated

13 4220 041 (R) | 13 4220 051 (L) Fitted for profile cylinder (PC); bolt head as bright nickel-plated casting; handle bushing in GFR polyamide; can be combined with female handles

13 4220 042 (R) | 13 4220 052 (L) Fitted for profile cylinder (PC) with lifter assembly; bolt head as bright nickel-plated casting; pre-fitted for installation of door handles with handle roses and FSB ASL® bearing or FSB heavy-duty fitting with FSB AGL® bearing (also available in these two variants with square handle roses)

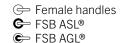
Pictured: DIN RH, opening inwards



Please note that the profile cylinder always protrudes from the glass-door box and does not end flush with the surface of the fitting.

Please specify DIN door handing when ordering

\* Not in bronze



FS heavy-duty fitting EN 179 heavy-duty fitting For bearings, see page 52 ff.

Aluminium

## Fittings for glass doors

## Strike box

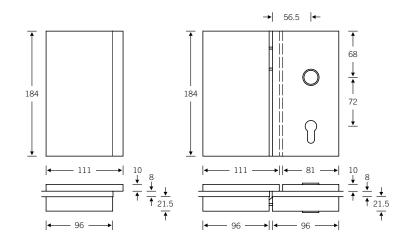


13 4220

13 4220 045 (R) | 13 4220 055 (L)

Rectangular strike box for double-leaf glass doors matching glass door fittings 13 4220 041 (R) | 13 4220 051 (L) 13 4220 042 (R) | 13 4220 052 (L)

Pictured: DIN LH, opening inwards



Please specify DIN door handing when ordering

## Glass-door boxes for fire and panic doors





13 4220

Door thickness 24 mm

- → 13 4220 09001 (R) | 13 4220 09002 (L) Fire safety variant
- 9 13 4220 09003 (R) | 13 4220 09004 (L) with APE panic function (lever/knob set)
- 9 13 4220 09005 (R) | 13 4220 09006 (L) with APD panic function (lever/lever set)

Door thickness 10 mm

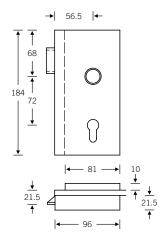
- ⊕ 13 4220 09015 (R) | 13 4220 09016 (L) Fire safety variant
- → 13 4220 09007 (R) | 13 4220 09008 (L) with APD panic function (lever/lever set)
- 13 4220 09009 (R) | 13 4220 09010 (L) with APE panic function (lever/knob set)

Rectangular glass door fitting with heavy-duty glass door lock (DIN 18250, based on grade 4)

Fitted for profile cylinder (PC) with lifter assembly; bolt head as bright nickel-plated casting; fitted for installation of door handles with handle roses and FSB heavy-duty fittings with FSB AGL® bearing

Variant with square handle roses also available

Pictured: DIN RH, opening inwards



Please note that the profile cylinder always protrudes from the glass-door box and does not end flush with the surface of the fitting.

Please specify DIN door handing when ordering

Female handles

← FSB ASL®

FSB AGL®

FS heavy-duty fitting

EN 179 heavy-duty fitting For bearings, see page 52 ff.

Aluminium

Stainless steel

#### Glass-door boxes



Model 13 4223 041



Model 13 4223 042

surface of the fitting.

13 4223



⇒ 13 4223 041 (R) | 13 4223 051 (L)

**←** 13 4223 042 (R) | 13 4223 052 (L)

€ 13 4223 042 (R) | 13 4223 052 (L)

Rectangular glass door fitting, roundcornered

with heavy-duty glass door lock (DIN 18251-1, based on grade 4)

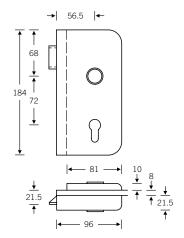
Profile cylinder (PC) 72 mm, 8 mm self-tightening follower in steel with polyamide retaining ring

Latch bolt in a combination of plastic/ pressure die casting, acoustically attenuated

13 4223 041 (R) | 13 4223 051 (L) Fitted for profile cylinder (PC); bolt head as bright nickel-plated casting; handle bushing in GFR polyamide; can be combined with female handles

13 4223 042 (R) | 13 4223 052 (L) Fitted for profile cylinder (PC) with lifter assembly; bolt head as bright nickel-plated casting; pre-fitted for installation of door handles with handle roses and FSB ASL® bearing or FSB heavy-duty fitting with FSB AGL® bearing (also available in these two variants with square handle roses)

Pictured: DIN RH, opening inwards



Please note that the profile cylinder always protrudes from the glass-door box and does not end flush with the

Please specify DIN door handing when ordering

Female handles

FSB ASL®

FSB AGL®

FS heavy-duty fitting EN 179 heavy-duty fitting

Strike box



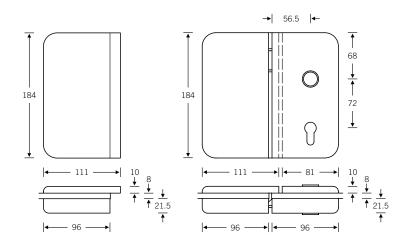


13 4223

13 4223 045 (R) | 13 4223 055 (L)

Rectangular strike box, round-cornered for double-leaf glass doors matching glass door fittings 13 4223 041 (R) | 13 4223 051 (L) 13 4223 042 (R) | 13 4223 052 (L)

Pictured: DIN LH, opening inwards



Please specify DIN door handing when ordering

## Glass-door box



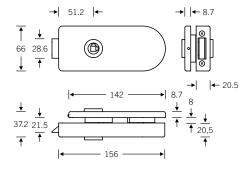
13 4231

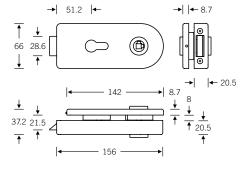
⇒ 13 4231 00001 (without PC keyway)
 ⇒ 13 4231 00010 (with PC keyway)

Latch bolt can be modified from right to left; cannot be combined with door handle models 1163, 1241, 1242, 1251 and 1254

Only available in Aluminium, Natural Colour, Anodised (FSB 0105) and Stainless Steel, Brushed Satin Matt (FSB 6204)

Pictured: DIN RH, opening inwards





Please note that the profile cylinder always protrudes from the glass-door box and does not end flush with the surface of the fitting.

Please specify DIN door handing when ordering

Female handles

← FSB ASL®

FSB AGL®

FS heavy-duty fitting
FN 179 heavy-duty fitting

## Strike box





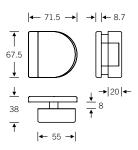
13 4231

13 4231 01001

Semi-circle strike box matching glass door fitting 13 4231

Only available in Aluminium, Natural Colour, Anodised (FSB 0105) and Stainless Steel, Brushed Satin Matt (FSB 6204)

Pictured: DIN LH, opening inwards



Please specify DIN door handing when ordering

Female handles

FSB ASL®

FSB AGL®

FS heavy-duty fitting EN 179 heavy-duty fitting

Aluminium

## Fittings for glass doors Glass-door hinge



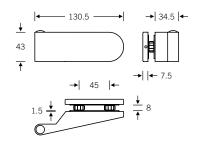
13 4232

13 4232 00001

Glass-door hinge in matt chrome-plated steel

Only available in Aluminium, Natural Colour, Anodised (FSB 0105). Finish FSB 3427 (Aluminium, Anodised, in stainless steel look) is available for matching to stainless steel fittings.

Load capacity: 60 kg, 2 hinges 90 kg, 3 hinges



Please specify DIN door handing when ordering

Female handles

► FSB ASL®

FSB AGL®

FS heavy-duty fitting EN 179 heavy-duty fitting

## Angular glass-door hinge





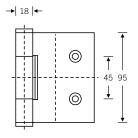
13 4228

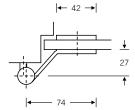
VARIANT glass-door hinge in matt chrome-plated steel and stainless steel, with receiver

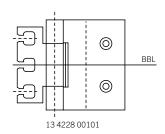
Matching glass door fittings from series 13 4220 and 13 4224

#### Finishes:

- material matt chrome-plated steel only available in Aluminium, Natural Colour, Anodised
- material stainless steel only available in **Brushed Satin Matt**

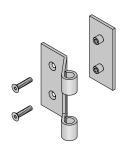


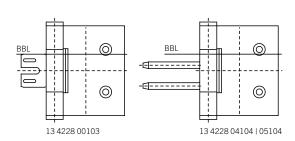




VARIANT heavy-duty hinges

13 4228 00101 for glass doors in rebated timber, steel or aluminium frames





13 4228 00103 for glass doors in rebated steel frames

13 4228 04104 (R) | 13 4228 05104 (L) for glass doors in rebated timber-casing and block frames

Load capacity:

60 kg, 2 hinges 90 kg, 3 hinges Glass-door hinges pre-fitted for glass thicknesses 8 and 10 mm

## Round glass-door hinge





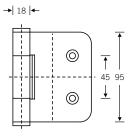
13 4227

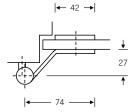
VARIANT glass-door hinge in matt chrome-plated steel and stainless steel, with receiver

Matching glass door fittings from series 13 4223

#### Finishes:

- material matt chrome-plated steel only available in Aluminium, Natural Colour, Anodised
- material stainless steel only available in Brushed Satin Matt

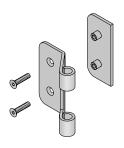


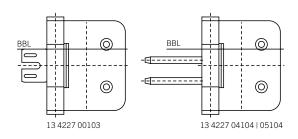


# BBL 0 13 4227 00101

#### VARIANT heavy-duty hinges

13 4227 00101 for glass doors in rebated timber, steel or aluminium frames





13 4227 00103 for glass doors in rebated steel frames

13 4227 04104 (R) | 13 4227 05104 (L) for glass doors in rebated timber-casing and block frames

Load capacity:

60 kg, 2 hinges 90 kg, 3 hinges Glass-door hinges pre-fitted for glass thicknesses 8 and 10 mm

## Doorknob



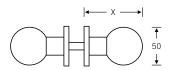


23 0802

23 0802 00007

Aluminium X = 77 mmStainless steel X = 73 mmBronze X = 72 mm

Drill hole Ø 13 mm



Fixed knobs

Doorknob

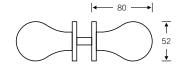




23 0844

Design: Jasper Morrison

Drill hole Ø 13 mm



Fixed knobs

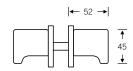
## Doorknob





23 0828

Drill hole Ø 13 mm



Fixed knobs

# Stainless steelBronze

Aluminium

## Fittings for glass doors

## Doorknob

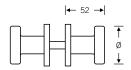


23 0829

23 0829 00007

Aluminium  $\emptyset = 50 \text{ mm}$ Stainless steel  $\emptyset = 55 \text{ mm}$ Bronze  $\emptyset = 50 \text{ mm}$ 

Drill hole Ø 13 mm



Fixed knobs

## Sliding door handle





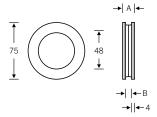
13 4256		
Product code	В	А
13 4256 00100 13 4256 00200 13 4256 00300	8 mm 10 mm 12 mm	16 mm 18 mm 20 mm

Glass thickness = B; total thickness = A

Open variant

Pair for either side of the door Glass cut-out  $\emptyset$  70 mm

No adhesives required; back-to-back fixing with countersunk screws  $\emptyset$  3.9 mm, included in scope of delivery



## Sliding door handle





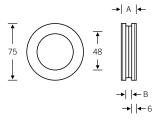
13 4256		
Product code	В	А
13 4256 00101 13 4256 00201 13 4256 00301	8 mm 10 mm 12 mm	20 mm 22 mm 24 mm

Glass thickness = B; total thickness = A

**Enclosed variant** 

Pair for either side of the door Glass cut-out Ø 70 mm

No adhesives required; back-to-back fixing with countersunk screws  $\emptyset$  3.9 mm, included in scope of delivery



## Sliding door handle



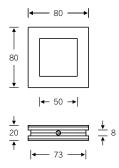


13 4257



Pair for either side of the door Glass cut-out 75 mm × 75 mm

No adhesives required; back-to-back fixing with countersunk screws  $\emptyset$  3.9 mm, included in scope of delivery



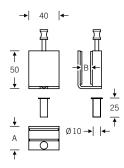
## Door holder





13 4230		
Productcode	В	Α
13 4230 000 13 4230 010 13 4230 012	8 mm 10 mm 12 mm	27 mm 29 mm 31 mm

Glass thickness = B; total thickness = A



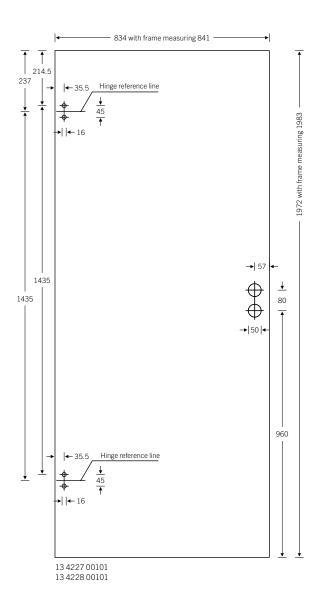
**Technical information** Fittings for glass doors

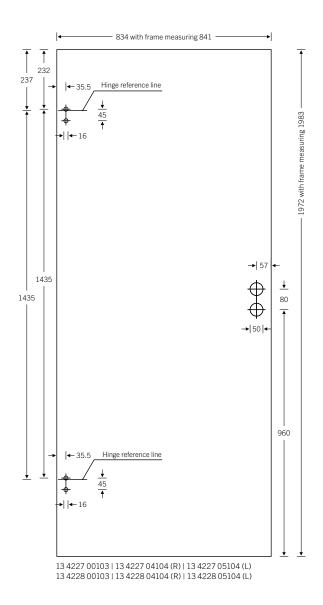
## Glass door measurements pursuant to DIN 18101

#### Glass cut-outs for series 13 4220 - 13 4224 Profile cylinder

The glass door fittings and strike boxes are pre-fitted: series 13 4220 and 13 4223 for glass door thicknesses 8 and 10 mm, and series 13 4224 for 8 mm.

Profile cylinders with lengths of 25/25 mm or 27.5/27.5 mm are recommended owing to the small projection achieved. Profile cylinders 25/25 mm must be checked on a case-bycase basis to ensure they are compatible with the locking system.





875 × 2000 mm 1000 × 2000 mm Approximate carcass dimensions 750 × 2000 mm Frame rebate dimensions 716 × 1983 mm 841 × 1983 mm 966 × 1983 mm 709 × 1972 mm 834 × 1972 mm 959 × 1972 mm Standard glass dimensions Approximate carcass dimensions 750 × 2125 mm 875 × 2125 mm 1000 × 2125 mm Frame rebate dimensions 716 × 2108 mm  $841 \times 2108 \, \text{mm}$ 966 × 2108 mm 834 × 2097 mm 959 × 2097 mm Standard glass dimensions 709 × 2097 mm

## Glass door measurements pursuant to DIN 18101

#### Glass cut-outs for series 13 4231

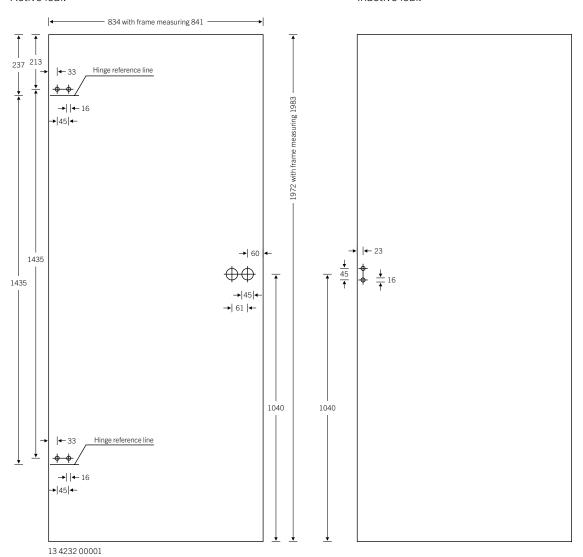
#### Profile cylinder

The glass door fittings and strike boxes are pre-fitted for glass thickness 8 mm.

Profile cylinders with lengths of 25/25 mm or 27.5/27.5 mm are recommended owing to the small projection achieved. Profile cylinders 25/25 mm must be checked on a case-bycase basis to ensure they are compatible with the locking system.

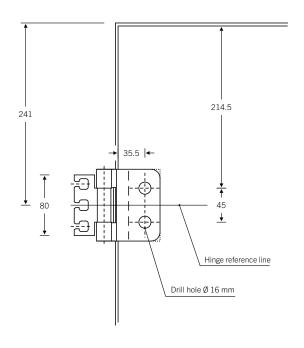
#### Active leaf:

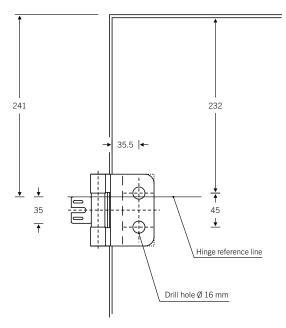
Inactive leaf:

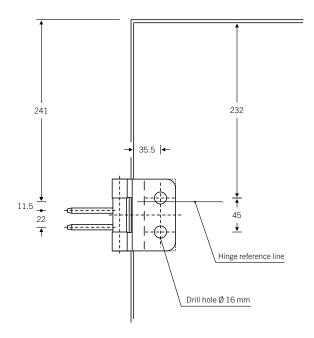


Approximate carcass dimensions	750 × 2000 mm	875 × 2000 mm	1000 × 2000 mm
Frame rebate dimensions	716 × 1983 mm	841 × 1983 mm	966 × 1983 mm
Standard glass dimensions	709 × 1972 mm	834 × 1972 mm	959 × 1972 mm
Approximate carcass dimensions	750 × 2125 mm	875 × 2125 mm	1000 × 2125 mm
Frame rebate dimensions	716 × 2108 mm	841 × 2108 mm	966 × 2108 mm
Standard glass dimensions	709 × 2097 mm	834 × 2097 mm	959 × 2097 mm

## Receivers for 13 4227 and 13 4228

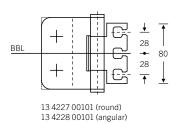






Receivers and their position relative to the hinge reference line also determine the positioning of drill holes in the glass door. This should be taken into consideration especially in the case of FSB heavy-duty hinges 13 4227 00101 and 13 4228 00101.

### Frame connection dimensions for 13 4227 and 13 4228

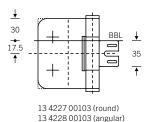


# VARIANT heavy-duty hinge for glass doors in rebated timber, steel or aluminium frames

- Designed for wholly glazed doors with standard vertical drill hole layout
- For glass thicknesses 8 and 10 mm
- Non-twist threaded pin
- Concealed, maintenance-free axial/radial sliding bearing
- Can be combined with receiver:
  for block frames
  for casing frames
  for block frames
  for steel frames
  VX 7505 3D
  VX 7611 3D
  VX 7612 3D

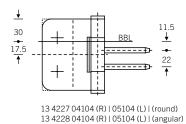
for aluminium frames VX 7521 3D

Non-handed



## VARIANT heavy-duty hinge for glass doors in rebated steel frames

- Designed for wholly glazed doors with standard vertical drill hole layout
- For glass thicknesses 8 and 10 mm
- For receiverV 8600 or V 8610
- Non-handed



# VARIANT heavy-duty hinge for glass doors in rebated timber-casing and block frames

- Designed for wholly glazed doors with standard vertical drill hole layout
- For glass thicknesses 8 and 10 mm
- For receivers from series V 3600, V 3610,
   V 3630, V 3650, V 3690 and clamping
   block V 3604 or V 3607
- DIN door handing must be specified

Further information about hinges, receivers, frame fixing elements, etc. can be found in the latest SIMONSWERK manual.