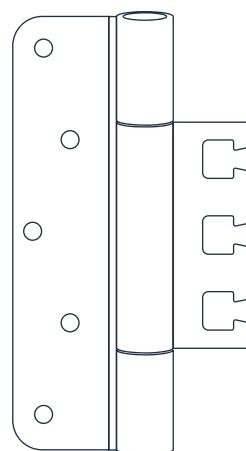


Hinge technology

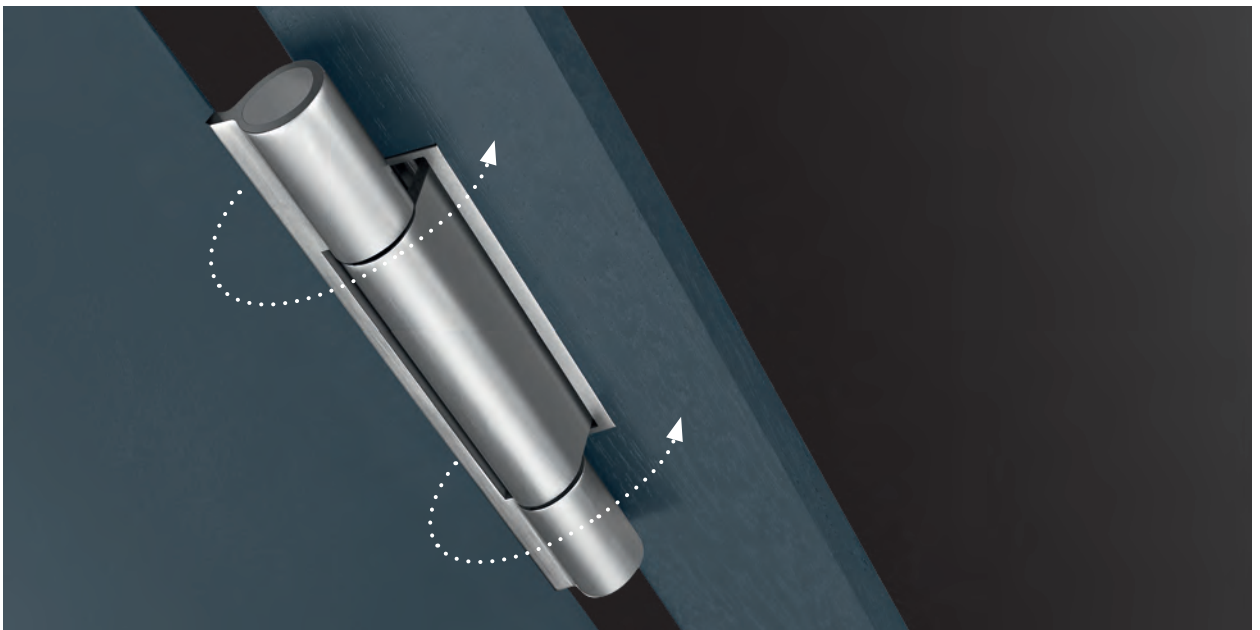
Supporting rollers



Defying the laws of leverage

The hinges connect the door leaf to the frame and enable its opening and closing. The German term Band originates from the time when doors had iron bands fitted to them, the ends of which were bent to form an eye. This eye was then hung onto a tang protruding from the door frame, thus giving rise to the English word hinge.

Many aphorisms have been dedicated to doors. One of the most powerful comes from a quote by Archimedes: "Give me a firm location outside our earth, and I will lift the world off its hinges". This adage is always used when something fundamental is changed, when a philosophy alters or a paradigm is to be reappraised. Archimedes was referring to the laws of leverage.

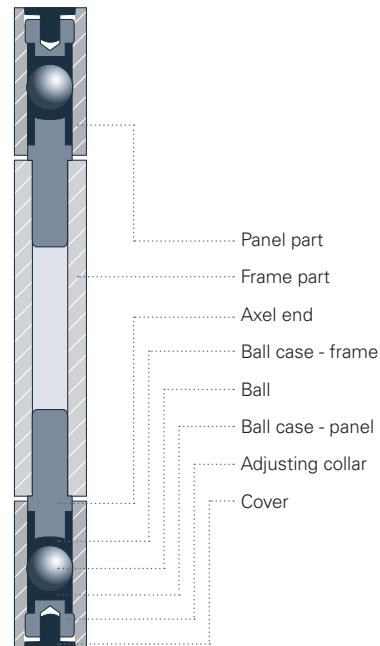


This remains true to this day: good hinges ensure that doors open the way we expect them to. They define the fulcrum - and thereby the mobility of the door - and give the door leaf a solid support.

Door hinges must be precisely coordinated to the dimensions of a door - to its measurements, weight, type of mounting and location. They are not just hard-wearing components of a door. ECO Schulte can look back on decades of experience in the manufacture of hinges. ECO hinges are premium products that comply with the standard **EN 1935**. They bear the CE mark and are tested in the highest standard class (14).

Premium ball-bearings

The quality of a hinge is determined to a great extent by the quality of the bearing. That is why ECO Schulte developed its own bearings technology especially for its hinge plates (Patent: DE 103 61 548.2). The bearing is characteristic: the roller is guided top and bottom on a steel ball, each mounted in two high-strength plastic trays. This specific bearing is wear, maintenance and play-free and guarantees the light and smooth running of the door. The double bearing controls axial and radial forces effectively and permanently. In a series of practical tests, this bearings technology was successfully tested by an independent institute for more than one million closing actions. That more than guarantees lifelong, secure functioning.



Hinge plates - Versions

The high-quality hinge plates from ECO Schulte are available for all standard door types. Individual solutions to match each door are also available, depending on requirements.

OBX hinge plates - Perfectly adjustable

Because hinge plates of this type are three dimensionally adjustable within the element that holds them when the door is mounted, installation is made considerably easier. The number behind the OBX mark indicates the diameter of the roller used. Hinge plate OBX 20 is cast in stainless steel for the highest possible surface quality and fitting precision of the roller and eye.



OBN hinge plates - Firmly bolted for fixed doors

Hinge plates of this type are installed by the door manufacturer or processor and cannot be adjusted. The number behind the OBN mark indicates the diameter of the roller used. Hinge plate OBN 20 is cast in stainless steel for the highest possible surface quality and fitting precision of the roller and eye.



The highlights of the system

The quality of a hinge can be seen from the details. ECO is the specialist for hinges and can score points here - not only through the fact that ECO hinges can be used DIN-left / DIN-right without conversion.

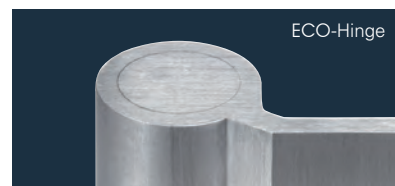
Premium ball-bearings

With its patented ball-bearing technology, ECO Schulte has a unique selling point in the market and sets a new standard in the premium segment. The right product for those who place the highest demands on a door hinge. ECO Schulte OBX and OBN hinges are absolutely maintenance-free and work without any lubrication. Unsightly deposits of grease and oil on the visible parts of the hinge are a thing of the past. The absolutely play-free door bearings guarantee optimum load transfer via both hinges.



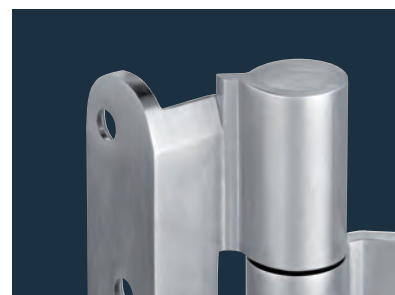
Cast roller holders

The processing of stainless steel is a demanding affair, as can be seen from the example of the hinge roller: ECO investment casting technology produces a perfect, closed roller holder. Thanks to the homogeneity of the material all the way through to the hinge flaps, the load transfer of our hinges is guaranteed to a well above average extent. That precision and quality of this kind are not a matter of course can be seen from the rival product depicted here. The holder of this roller has some play and can be levered up - a mortgage on the service life of the product and an invitation to burglars.



Defined edges

ECO Schulte hinge plates are in a class of their own where aesthetics and precision are concerned. The defined edge of the holder surface ensures the best possible fitting precision and force distribution. It also proves that the system constructors from the Westphalian town of Menden are masters where the handling of materials and hinges is concerned.



System-identical finish pattern

ECO Schulte perceives the door as a system consisting of all of the functional elements that make a door open and close. Where the hinge plates are concerned, ECO demonstrates a love of detail by polishing the stainless steel surface of the hinges in the longitudinal direction so that the fine finish pattern thus produced is exactly the same as the one on the handle fittings from the same company.



Weights and loads

Door hinges are high load-bearing construction elements. They not only have to carry the weight of the door itself, they are subjected to much higher loads, depending on where they are used. Frequent opening, slamming and exceptional handling of doors, as occurs in barracks and schools, can take conventional hinges to their limits if they are only designed to carry the weight of the door.

ECO Schulte hinges have a closed hinge roller which is manufactured using elaborate cold forging technology which prevents the roller from bending up. There are no compromises with the material thickness of the hinges either: ECO Schulte hinge flaps can carry loads of up to 300 kg each.

Maximum door weight of hinge plates

Notch	max. door load: 300 kg	max. door load: 200 kg	max. door load: 160 kg	max. door load: 120 kg
Rebated notch	OBX-20-1531/160	OBX-20-1531/120	OBX-20-1951/120	
	OBX-20-1532/160	OBX-20-1532/120	OBX-18-1532/160	
		OBX-20-1951/160		OBX-18-1531/120
			OBX-18-1531/160	
Unrebated notch	OBX-20-2541/160	OBX-20-2541/120		OBX-18-2541/120
	OBX-20-2542/160	OBX-20-2542/120	OBX-18-2541/160	
	OBN-20-4141/160			OBN-18-4141/120
			OBN-18-4141/160	

The listed values were measured under 100% test lab conditions. Please observe them when selecting hinge plates.

Assuming the proper mounting of the door, the material stability of the construction element to which they are to be attached and an effective bonding with the masonry, ECO Schulte hinges should be selected and utilized in accordance with the above table with sufficient load and safety reserves, particularly where special locations are concerned. The use of a third hinge with the ECO Schulte system is only necessary under particularly difficult conditions. A third hinge attached in the upper third of the door frame can increase the load-bearing capacity of the hinges by around one third.

The following data relates to a door leaf size of 2x1 m, the application of two hinges and a professional installation. The EN 1935 is the basis of the development of our object hinges. The norm requirements regarding the use of hinges are in accordance with the guidelines required in Europe. ECO hinges are way beyond these requirements. ECO hinges therefore fulfill the highest demand for which the object industry is known. The multitude of the individual criteria of choice, for example installation site, use of the doors and so on, cannot be considered for the determination of the values. Therefore we recommend to take reserves into account for the protection of the individual's safety. The correct choice of the hinges should be made accordingly.

For any further information / questions please feel free to contact us.

For all notches

Technical, construction and aesthetic requirements determine the form of the edge of the door leaf - and consequently the required hinge. Typical edge types are blunt notch and rebated doors - and variations thereof. ECO Schulte has hinges in its range for the following door notch versions:

Rebated door versions:

1a. Rebated door

The rebated door leaf has a single groove on the lateral and upper edge. The closed door locks into the frame so that no gap is visible.

1b. Rebated door with leaf seal

This rebated door has an additional seal in the locking groove.

Variations of the flush door:

2a. Flush door

The door leaf of a flush door is flush with the frame when closed. A circumferential gap (joint clearance) remains visible from the abutment side.

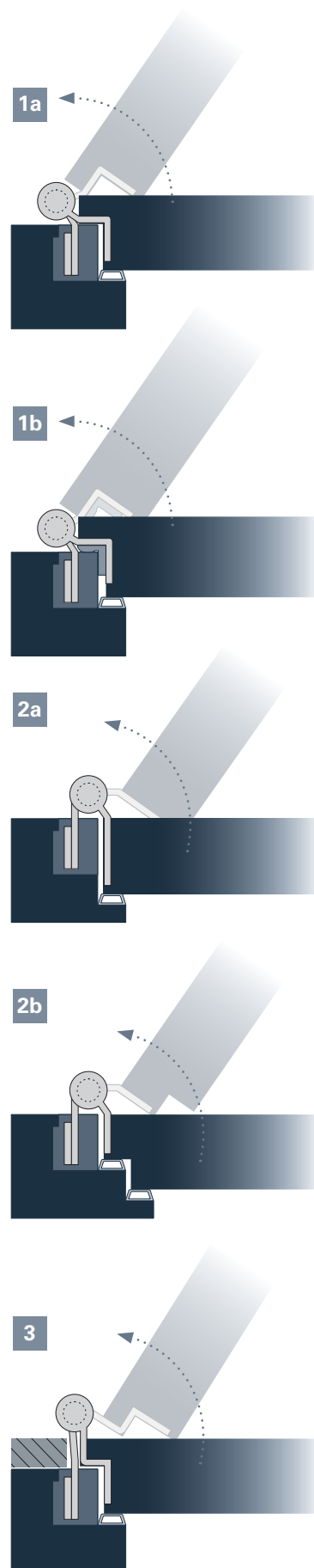
2b. Flush door with double groove

This door combines the optical effect of the flush door (frame and door leaf flush) with the improved sealing properties of the grooved door. A double rubber seal in the door frame ensures outstanding sound and heat insulation. This makes the double groove door a typical front door in many homes.

Variants of the grooved, flush-surface door:

3. Diminishing door

A special door design with which continuous wall panelling extends over the door leaf. The door leaf is grooved but closes flush with the panelling. A circumferential gap (joint clearance) remains visible from the abutment side.



Steel doors: OEM hinges made to measure

ECO Schulte offers processors and door manufacturers a wide range of individually developed hinges for sheet steel doors (German Patent 102008049740.1, European Patent 09008617.4). These hinges are constructed and manufactured for series production in accordance with customers' requirements. The most innovative OEM solution from ECO Schulte is called the ECO GENIUS LHA and is a laser-welded industrial hinge.

LHA stands for "laser hinge adjustable" and it is not only laser-welded but also height adjustable. "

Laser welding technology produces minimum contact, precise and highly stable welding seams. The technology combines top manufacturing precision with a high load-carrying capacity. The height adjustment of the hinge during assembly is very simple and is carried out using a standard commercial Allen key.



The new manufacturing concept satisfies the needs of the door industry in a flexible manner:

- Frame and leaf parts are available separately
- A set consists of a spring hinge that support the closing force and a standard hinge (KO hinge)
- Various materials available (galvanized or stainless steel)
- Various material thicknesses (3, 4 or 5 mm)
- Flexible tools for a flexible manufacturing concept

Project hinges OBX 20 mm for mortise rebated door 3D hinge



OBX-20-1531/160
for mortise rebated door
3D hinge
Page 572



OBX-20-1531/120
for mortise rebated door
3D hinge
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OBX-20-1532/160 FD
for mortise rebated door
3D hinge
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OBX-20-1532/120 FD
for mortise rebated door
3D hinge
Page 578



OBX-20-1951/160
for mortise rebated door
3D hinge
Page 580



OBX-20-1951/120
for mortise rebated door
3D hinge
Page 582

Project hinges OBX 20 mm for mortise flush door 3d hinge



OBX-20-2541/160
for mortise flush door
3D hinge
Page 584



OBX-20-2541/120
for mortise flush door
3D hinge
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OBX-20-2542/160
for mortise flush door
3D hinge
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OBX-20-2542/120
for mortise flush door
3D hinge
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Project hinges OBX 18 mm rebated / mortise flush door 3D hinge



OBX-18-1531/160
for mortise rebated
door 3D hinge
Page 594



OBX-18-1531/120
for mortise rebated
door 3D hinge
Page 596



OBX-18-1532/160 FD
for mortise rebated
door 3D hinge
Page 598



OBX-18-2541/160
for mortise flush
door 3D hinge
Page 600



OBX-18-2541/120
for mortise flush
door 3D hinge
Page 602

Project hinges OBN 20 und 18 mm for mortise flush door hinge



OBN-20-4141/160
for mortise flush door
hinge
Page 606



OBN-18-4141/160
for mortise flush door
hinge
Page 608



OBN-18-4141/120 round
for mortise flush door
hinge
Page 610



OBN-18-4141/120 square
for mortise flush door
hinge
Page 612

Adjustable frame boxes ■ Cover plates ■ Lifting lug



OBX adjustable frame
boxes for OBX-hinges
Page 616

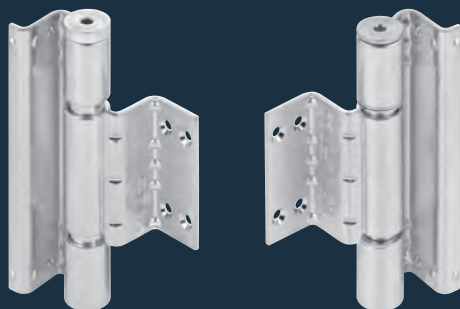


OBX-Cover plates
for adjustable frame boxes
Page 620



OBX-Lifting lug
for OBX-hinges
Page 622

Laser-welded steel hinges ■ GENIUS LHA

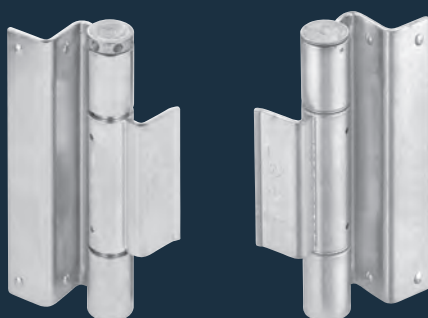


GENIUS LHA

Hinge with spring / KO hinge set

Page 624

Laser-welded steel hinges ■ Standard 3 mm



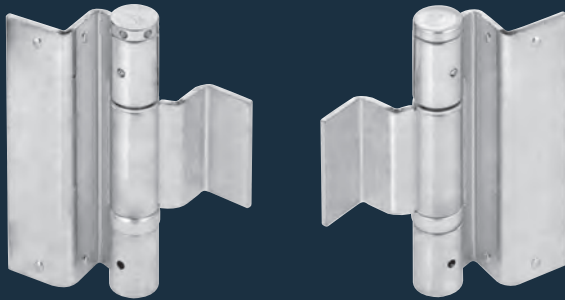
Standard 3 mm

Hinge with spring / KO hinge set

Page 626

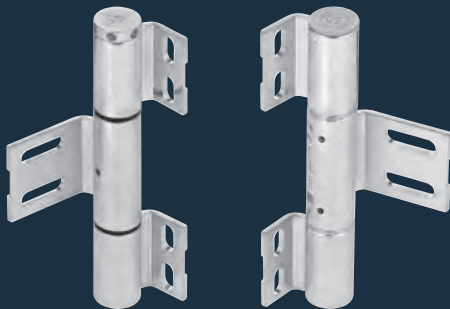
TABLE OF CONTENTS

Laser-welded steel hinges ■ Standard 4 mm



Standard 4 mm
Hinge with spring / KO hinge set
Page 628

Laser-welded steel hinges ■ 3 mm adjustable in height and side



Adjustment in height 3 mm
Hinge with spring / KO hinge set
Page 630

Laser-welded steel hinges ■ Accessories



Locking pin 3 mm / 4 mm
Page 632



Spring pin 3 mm / 4 mm
Page 632

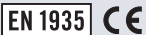
Project hinges OBX-20



OBX-20-1531/160

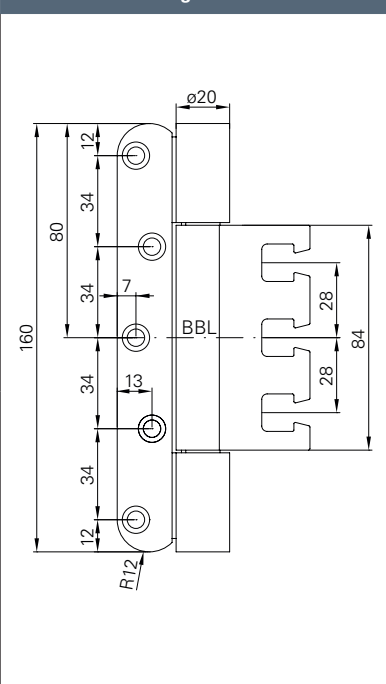


Product characteristics

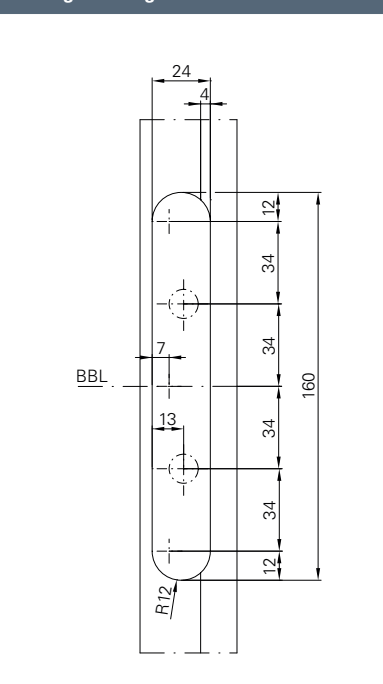
Size		160 mm
Ø Barrel diameter		20 mm
Material thickness		3,5 mm
Screws		5 x 50 mm
DIN left / DIN right		■
Milling diameter		24 mm
Milling length		160 mm
Milling depth		3,5 mm
Door types	Rebated	■
	Flush with the adjacent areas	-
Frame types	Wood	■
	Steel	■
	Aluminium	■
Suitable for fire doors		■
Loading capacity Class 14 (maximum door load)		■
	Norm	160 kg
	ECO loading capacity	300 kg
Finishes	Stainless steel (ER)	■
	ER polished	□
	PVD coating (brass)	□
	PVD coating in RAL colours	□
Reception elements page 616	For upright standing pillars	OBX-3001-3D
	For timber frames	OBX-3002-3D
	For steel frames	OBX-3011-3D
		OBX-3012-3D
	For aluminium frames	OBX-3021-3D

■ Yes - No □ On request

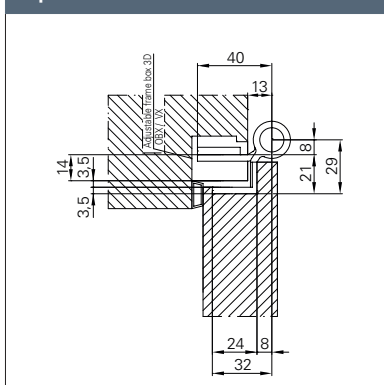
Dimension drawing



Milling drawing



Top view



PRODUCT FAMILY ■ MORTISE REBATED DOOR 3D HINGE



OBX-20-1531/120.ER



OBX-20-1532/160.ER
OBX-20-1532/120.ER



OBX-20-1951/160.ER
OBX-20-1951/120.ER



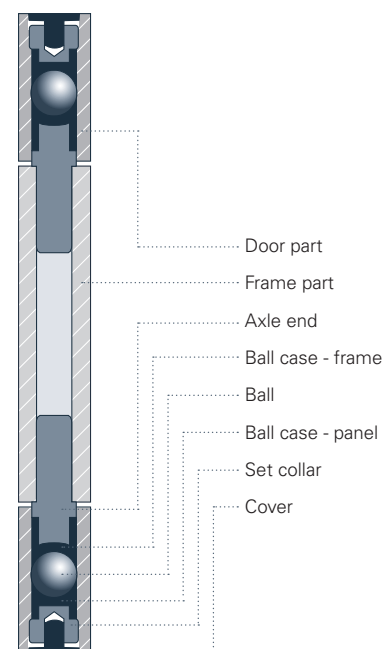
Description

ECO project hinge OBX-20-1531/160

- For rebated doors on wooden, steel or aluminium frames
- With OBX adjustable frame box adjustable in three dimensions
- Inner, firmly rotating axis
- Wear and maintenance-free ball bearing technology
- Suitable for fire doors
- Can be used DIN left and DIN right without modification

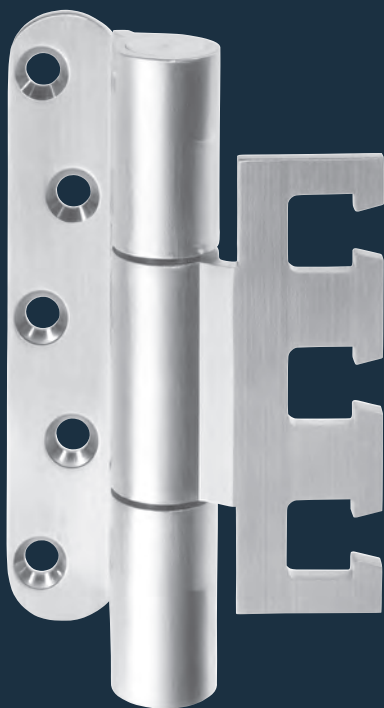
F **EN 1935** **CE** **ER**  Wooden door

OBX-20-1531 Mortise rebated door 3D hinge	Dimensions	Article number
OBX-20-1531/160.ER	Ø 20 x 160 mm	459231.46




ECO Schulte is using a patented bearing technology for the production of OBX and OBN hinges. This technology guarantees a lifelong function.

OBX-20-1531/120

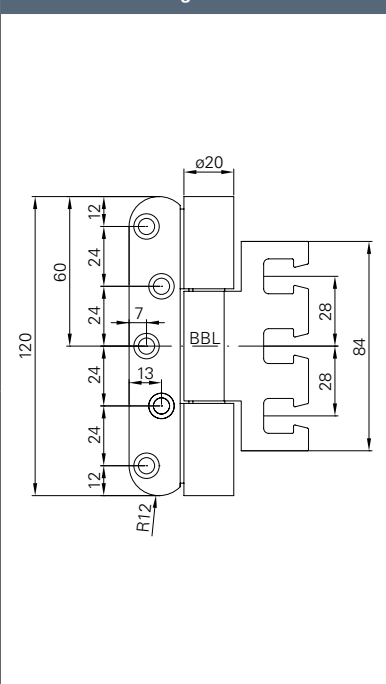


Product characteristics

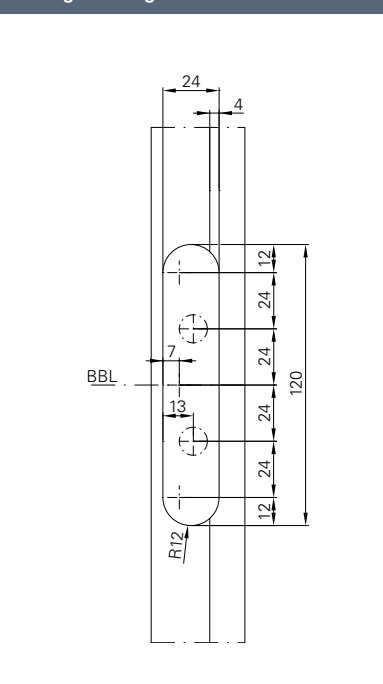
Size		120 mm
Ø Barrel diameter		20 mm
Material thickness		3,5 mm
Screws		5 x 50 mm
DIN left / DIN right		■
Milling diameter		24 mm
Milling length		120 mm
Milling depth		3,5 mm
Door types	Rebated	■
	Flush with the adjacent areas	-
Frame types	Wood	■
	Steel	■
	Aluminium	■
Suitable for fire doors		■
Loading capacity Class 14 (maximum door load)		■
	Norm	160 kg
	ECO loading capacity	200 kg
Finishes	Stainless steel (ER)	■
	ER polished	▣
	PVD coating (brass)	▣
	PVD coating in RAL colours	▣
Reception elements page 616	For upright standing pillars	OBX-3001-3D
	For timber frames	OBX-3002-3D
	For steel frames	OBX-3011-3D
		OBX-3012-3D
	For aluminium frames	OBX-3021-3D

■ Yes - No □ On request

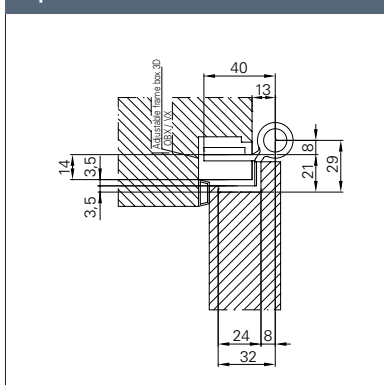
Dimension drawing



Milling drawing



Top view



PRODUCT FAMILY ■ MORTISE REBATED DOOR 3D HINGE



OBX-20-1531/160.ER



OBX-20-1532/160.ER
OBX-20-1532/120.ER



OBX-20-1951/160.ER
OBX-20-1951/120.ER



Description

ECO project hinge OBX-20-1531/120

- For rebated doors on wooden, steel or aluminium frames
- With OBX adjustable frame box adjustable in three dimensions
- Inner, firmly rotating axis
- Wear and maintenance-free ball bearing technology
- Suitable for fire doors
- Can be used DIN left and DIN right without modification


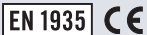
F **EN 1935** **CE** **ER**  Wooden door

OBX-20-1531 Mortise rebated door 3D hinge	Dimensions	Article number
OBX-20-1531/120.ER	Ø 20 x 120 mm	459131.46

OBX-20-1532/160 FD

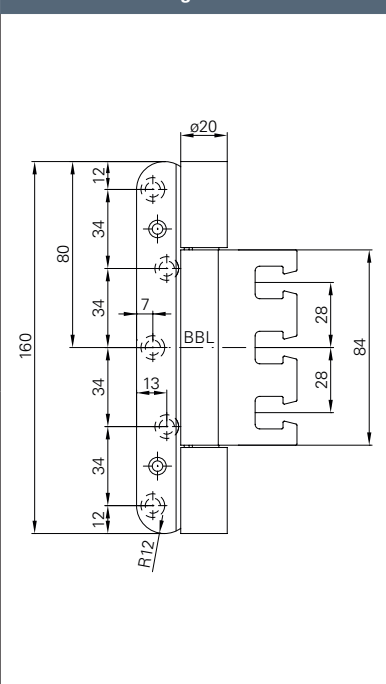


Product characteristics

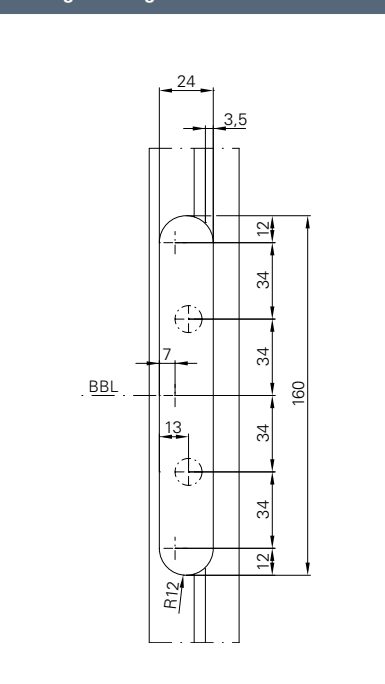
Size		160 mm
Ø Barrel diameter		20 mm
Material thickness		3,5 mm
Screws		5 x 50 mm
DIN left / DIN right		■
Milling diameter		24 mm
Milling length		160 mm
Milling depth		11 mm
Door types	Rebated	■
	Flush with the adjacent areas	-
Frame types	Wood	■
	Steel	■
	Aluminium	■
Suitable for fire doors		■
Loading capacity Class 14 (maximum door load)		■
	Norm	160 kg
	ECO loading capacity	300 kg
Finishes	Stainless steel (ER)	■
	ER polished	□
	PVD coating (brass)	□
	PVD coating in RAL colours	□
Reception elements page 616	For upright standing pillars	OBX-3001-3D
	For timber frames	OBX-3002-3D
	For steel frames	OBX-3011-3D
		OBX-3012-3D
	For aluminium frames	OBX-3021-3D

■ Yes - No □ On request

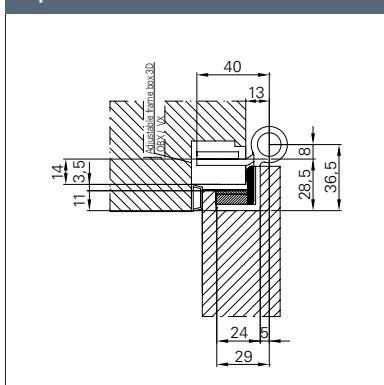
Dimension drawing



Milling drawing



Top view



PRODUCT FAMILY ■ MORTISE REBATED DOOR 3D HINGE



OBX-20-1531/160.ER
OBX-20-1531/120.ER



OBX-20-1532/120.ER



OBX-20-1951/160.ER
OBX-20-1951/120.ER



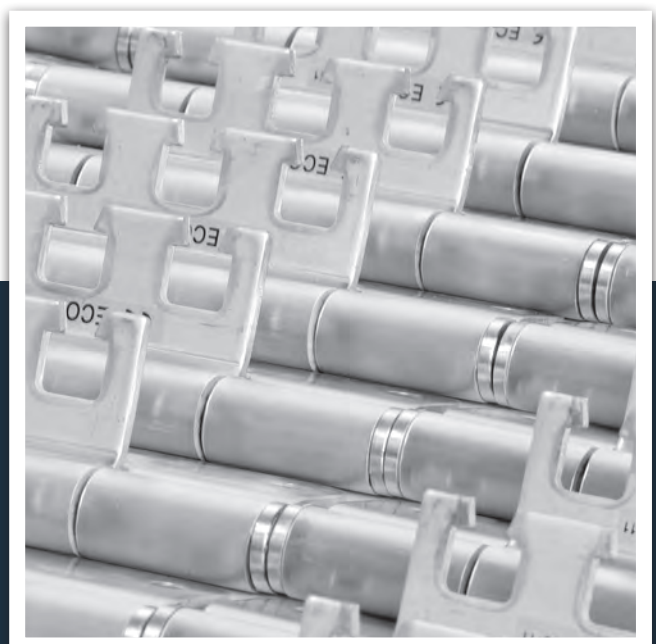
Description

ECO project hinge OBX-20-1532/160 leaf gasket (FD)

- For rebated doors on wooden, steel or aluminium frames
- With OBX adjustable frame box adjustable in three dimensions
- Inner, firmly rotating axis
- Wear and maintenance-free ball bearing technology
- Suitable for fire doors
- Can be used DIN left and DIN right without modification

F **EN 1935** **CE** **ER**  Wooden door


OBX-20-1532 Mortise rebated door 3D hinge leaf gasket	Dimensions	Article number
OBX-20-1532.FD/160.ER	Ø 20 x 160 mm	459232.46



OBX-20-1532/120 FD

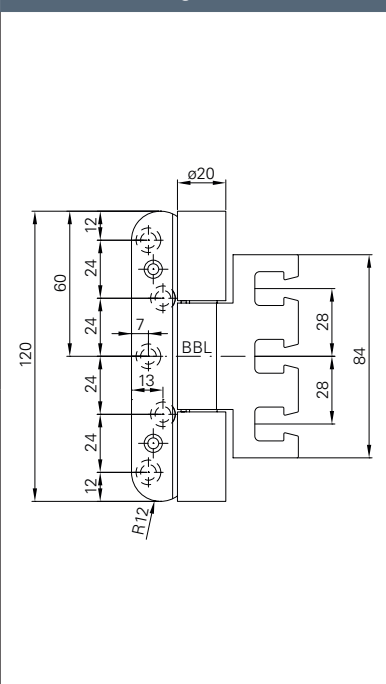


Product characteristics

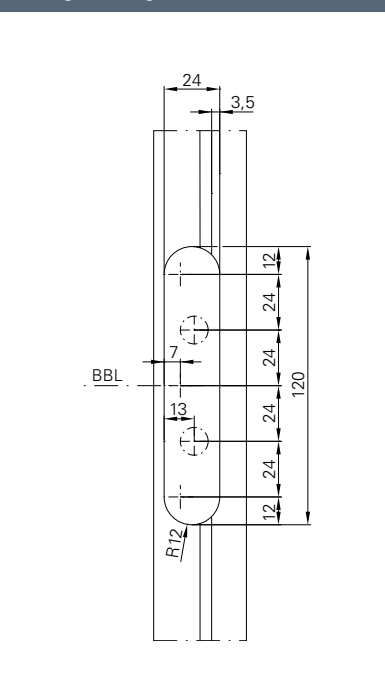
Size		120 mm
Ø Barrel diameter		20 mm
Material thickness		3,5 mm
Screws		5 x 50 mm
DIN left / DIN right		■
Milling diameter		24 mm
Milling length		120 mm
Milling depth		11 mm
Door types	Rebated	■
	Flush with the adjacent areas	-
Frame types	Wood	■
	Steel	■
	Aluminium	■
Suitable for fire doors		■
Loading capacity Class 14 (maximum door load)		■
	Norm	160 kg
	ECO loading capacity	200 kg
Finishes	Stainless steel (ER)	■
	ER polished	▣
	PVD coating (brass)	▣
	PVD coating in RAL colours	▣
Reception elements page 616	For upright standing pillars	OBX-3001-3D
	For timber frames	OBX-3002-3D
	For steel frames	OBX-3011-3D
		OBX-3012-3D
	For aluminium frames	OBX-3021-3D

■ Yes - No □ On request

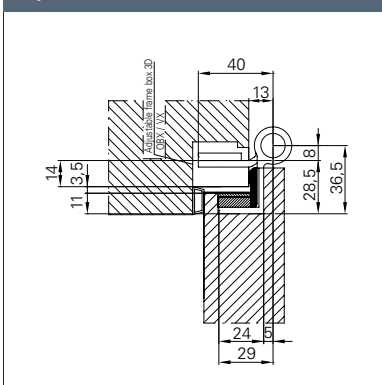
Dimension drawing



Milling drawing



Top view



PRODUCT FAMILY ■ MORTISE REBATED DOOR 3D HINGE



OBX-20-1531/160.ER
OBX-20-1531/120.ER



OBX-20-1532/160.ER



OBX-20-1951/160.ER
OBX-20-1951/120.ER



Description

ECO project hinge OBX-20-1532/120 leaf gasket (FD)

- For rebated doors on wooden, steel or aluminium frames
- With OBX adjustable frame box adjustable in three dimensions
- Inner, firmly rotating axis
- Wear and maintenance-free ball bearing technology
- Suitable for fire doors
- Can be used DIN left and DIN right without modification



F **EN 1935** **CE** **ER**  Wooden door

OBX-20-1532 Mortise rebated door 3D hinge leaf gasket	Dimensions	Article number
OBX-20-1532.FD/120.ER	Ø 20 x 120 mm	459132.46

OBX-20-1951/160

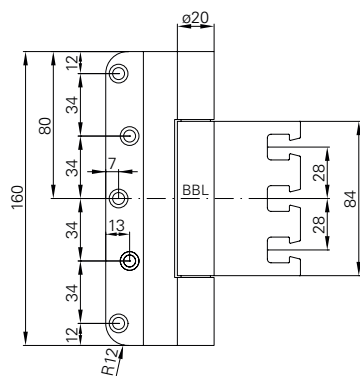


Product characteristics

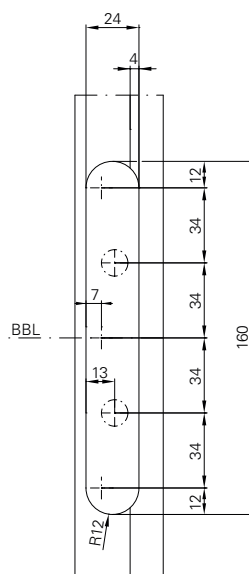
Size		160 mm
Ø Barrel diameter		20 mm
Material thickness		3,5 mm
Screws		5 x 50 mm
DIN left / DIN right		■
Milling diameter		24 mm
Milling length		160 mm
Milling depth		3,5 mm
Door types	Rebated	■
	Flush with the adjacent areas	■
Frame types	Wood	■
	Steel	■
	Aluminium	■
Suitable for fire doors		■
Loading capacity Class 14 (maximum door load)		■
	Norm	160 kg
	ECO loading capacity	200 kg
Finishes	Stainless steel (ER)	■
	ER polished	□
	PVD coating (brass)	□
	PVD coating in RAL colours	□
Reception elements page 616	For upright standing pillars	OBX-3001-3D
	For timber frames	OBX-3002-3D
	For steel frames	OBX-3011-3D
		OBX-3012-3D
	For aluminium frames	OBX-3021-3D

■ Yes - No □ On request

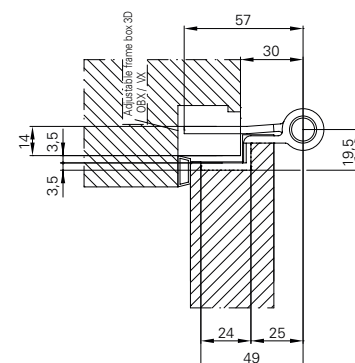
Dimension drawing



Milling drawing



Top view



PRODUCT FAMILY ■ MORTISE REBATED DOOR 3D HINGE



OBX-20-1531/160.ER
OBX-20-1531/120.ER



OBX-20-1532/160.ER
OBX-20-1532/120.ER



OBX-20-1951/120.ER



Description

ECO project hinge OBX-20-1951/160

- For rebated doors, flush with the adjacent areas, on wooden, steel or aluminium frames
- With OBX adjustable frame box adjustable in three dimensions
- Inner, firmly rotating axis
- Wear and maintenance-free ball bearing technology
- Suitable for fire doors
- Can be used DIN left and DIN right without modification

F **EN 1935** **CE** **ER**  Wooden door

OBX-20-1532 Mortise rebated door 3D hinge flush with the adjacent areas	Dimensions	Article number
OBX-20-1951/160.ER	Ø 20 x 160 mm	459251.46

The perfect casting technology
of ECO provides a perfect,
closed reception of the
roll - and a best possible
and free-of-play force distribution.



OBX-20-1951/120

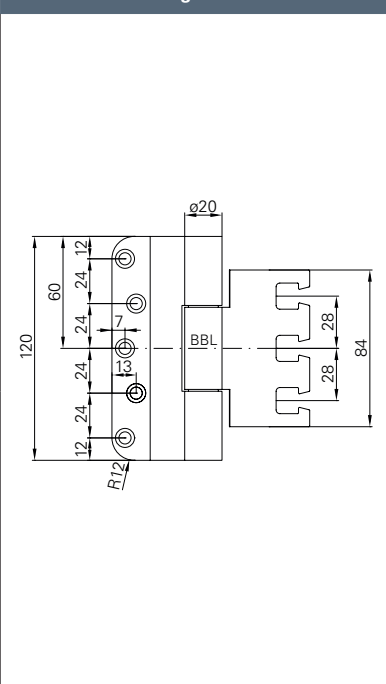


Product characteristics

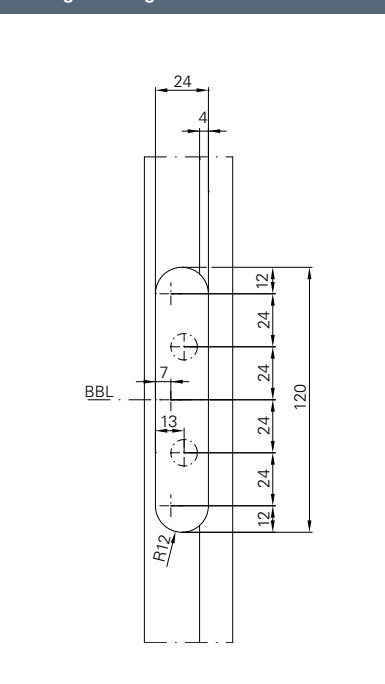
Size		120 mm
Ø Barrel diameter		20 mm
Material thickness		3,5 mm
Screws		5 x 50 mm
DIN left / DIN right		■
Milling diameter		24 mm
Milling length		120 mm
Milling depth		3,5 mm
Door types	Rebated	■
	Flush with the adjacent areas	■
Frame types	Wood	■
	Steel	■
	Aluminium	■
Suitable for fire doors		■
Loading capacity Class 14 (maximum door load)		■
	Norm	160 kg
	ECO loading capacity	160 kg
Finishes	Stainless steel (ER)	■
	ER polished	▣
	PVD coating (brass)	▣
	PVD coating in RAL colours	▣
Reception elements page 616	For upright standing pillars	OBX-3001-3D
	For timber frames	OBX-3002-3D
	For steel frames	OBX-3011-3D
		OBX-3012-3D
	For aluminium frames	OBX-3021-3D

■ Yes - No □ On request

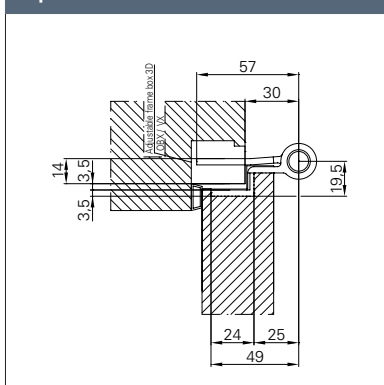
Dimension drawing



Milling drawing



Top view



PRODUCT FAMILY ■ MORTISE REBATED DOOR 3D HINGE



OBX-20-1531/160.ER
OBX-20-1531/120.ER



OBX-20-1532/160.ER
OBX-20-1532/120.ER



OBX-20-1951/160.ER



Description

ECO project hinge OBX-20-1951/120

- For rebated doors, flush with the adjacent areas, on wooden, steel or aluminium frames
- With OBX adjustable frame box adjustable in three dimensions
- Inner, firmly rotating axis
- Wear and maintenance-free ball bearing technology
- Suitable for fire doors
- Can be used DIN left and DIN right without modification



F **EN 1935** **CE** **ER**  Wooden door

OBX-20-1951 Mortise rebated door 3D hinge flush with the adjacent areas	Dimensions	Article number
OBX-20-1951/120.ER	Ø 20 x 120 mm	459151.46

OBX-20-2541/160

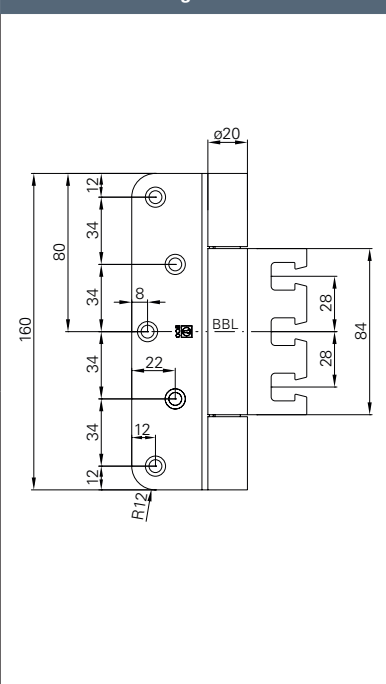


Product characteristics

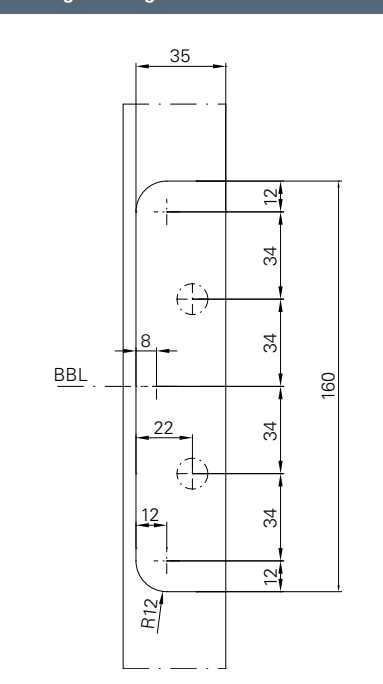
Size		160 mm
Ø Barrel diameter		20 mm
Material thickness		3,5 mm
Screws		5 x 50 mm
DIN left / DIN right		■
Milling diameter		24 mm
Milling length		160 mm
Milling depth		3,5 mm
Door types	Unrebated	■
	Double rebated	-
Frame types	Wood	■
	Steel	■
	Aluminium	■
Suitable for fire doors		■
Loading capacity Class 14 (maximum door load)		■
	Norm	160 kg
	ECO loading capacity	300 kg
Finishes	Stainless steel (ER)	■
	ER polished	▣
	PVD coating (brass)	▣
	PVD coating in RAL colours	▣
Reception elements page 616	For upright standing pillars	OBX-3001-3D
	For timber frames	OBX-3002-3D
	For steel frames	OBX-3011-3D
		OBX-3012-3D
	For aluminium frames	OBX-3021-3D

■ Yes - No □ On request

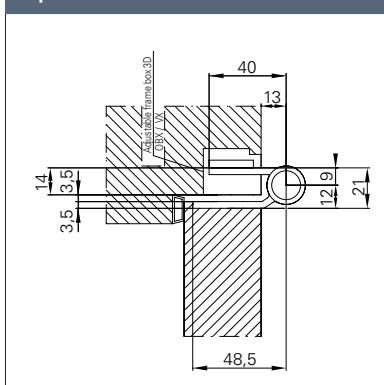
Dimension drawing



Milling drawing



Top view



PRODUCT FAMILY ■ MORTISE FLUSH DOOR 3D HINGE



OBX-20-2541/120.ER



OBX-20-2542/160.ER
OBX-20-2542/120.ER



Description

ECO **project hinge OBX-20-2541/160**

- For unrebuted doors on wooden, steel or aluminium frames
- With OBX adjustable frame box adjustable in three dimensions
- Inner, firmly rotating axis
- Wear and maintenance-free ball bearing technology
- Suitable for fire doors
- Can be used DIN left and DIN right without modification

F **EN 1935** **CE** **ER**  Wooden door

OBX-20-2541 mortise flush door 3D hinge	Dimensions	Article number
OBX-20-2541/160.ER	Ø 20 x 160 mm	459241.46



OBX-20-2541/120

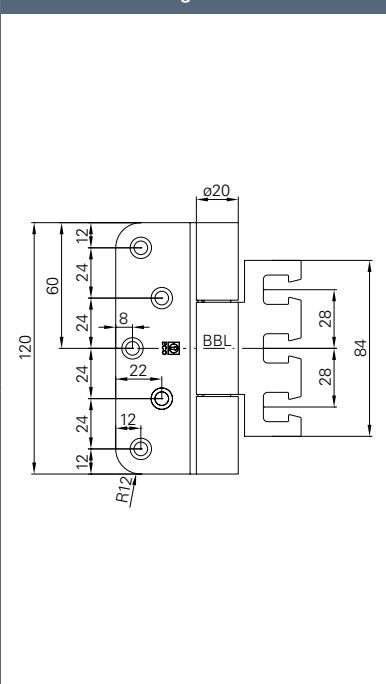


Product characteristics

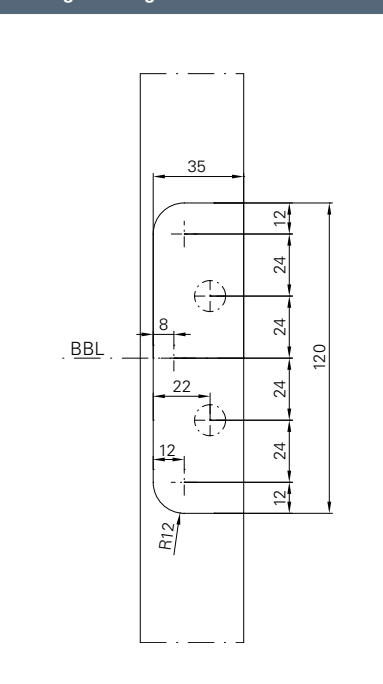
Size		120 mm
Ø Barrel diameter		20 mm
Material thickness		3,5 mm
Screws		5 x 50 mm
DIN left / DIN right		■
Milling diameter		24 mm
Milling length		120 mm
Milling depth		3,5 mm
Door types	Unrebrated	■
	Double rebated	-
Frame types	Wood	■
	Steel	■
	Aluminium	■
Suitable for fire doors	F	■
Loading capacity Class 14 (maximum door load)	EN 1935 CE	■
	Norm	160 kg
	ECO loading capacity	200 kg
Finishes	Stainless steel (ER)	■
	ER polished	▣
	PVD coating (brass)	▣
	PVD coating in RAL colours	▣
Reception elements page 616	For upright standing pillars	OBX-3001-3D
	For timber frames	OBX-3002-3D
	For steel frames	OBX-3011-3D
		OBX-3012-3D
	For aluminium frames	OBX-3021-3D

■ Yes - No □ On request

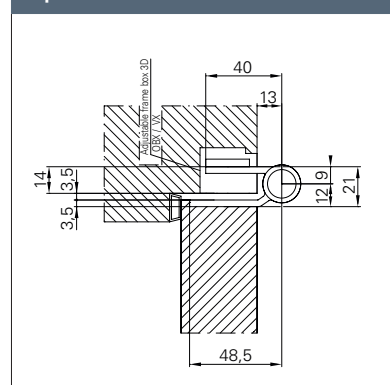
Dimension drawing



Milling drawing



Top view





ECO

Project hinges ■ OBX-20 ■ Mortise flush door 3D hinge

PRODUCT FAMILY ■ MORTISE FLUSH DOOR 3D HINGE



OBX-20-2541/160.ER



OBX-20-2542/160.ER
OBX-20-2542/120.ER



Description

ECO project hinge OBX-20-2541/120

- For unrebuted doors on wooden, steel or aluminium frames
- With OBX adjustable frame box adjustable in three dimensions
- Inner, firmly rotating axis
- Wear and maintenance-free ball bearing technology
- Suitable for fire doors
- Can be used DIN left and DIN right without modification



EN 1935



Wooden door

OBX-20-2541 mortise flush door 3D hinge	Dimensions	Article number
OBX-20-2541/120.ER	Ø 20 x 120 mm	459141.46

OBX-20-2542/160

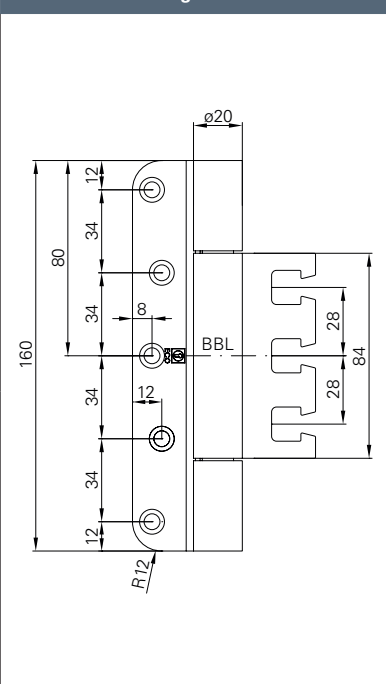


Product characteristics

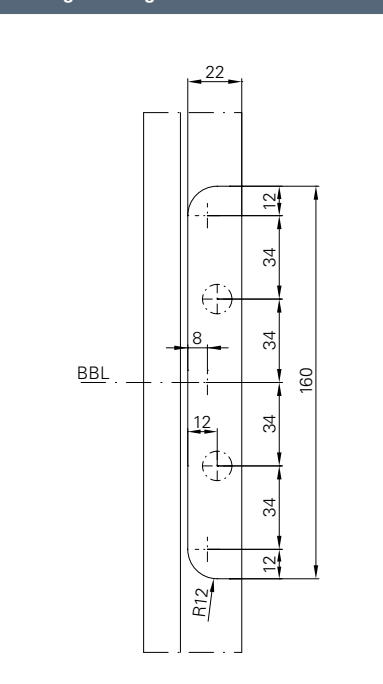
Size		160 mm
Ø Barrel diameter		20 mm
Material thickness		3,5 mm
Screws		5 x 50 mm
DIN left / DIN right		■
Milling diameter		24 mm
Milling length		160 mm
Milling depth		3,5 mm
Door types	Unrebated	■
	Double rebated	■
Frame types	Wood	■
	Steel	■
	Aluminium	■
Suitable for fire doors	F	■
Loading capacity Class 14 (maximum door load)	EN 1935 CE	■
	Norm	160 kg
	ECO loading capacity	300 kg
Finishes	Stainless steel (ER)	■
	ER polished	□
	PVD coating (brass)	□
	PVD coating in RAL colours	□
Reception elements page 616	For upright standing pillars	OBX-3001-3D
	For timber frames	OBX-3002-3D
	For steel frames	OBX-3011-3D
		OBX-3012-3D
	For aluminium frames	OBX-3021-3D

■ Yes - No □ On request

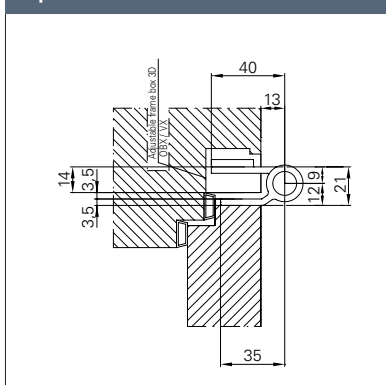
Dimension drawing



Milling drawing



Top view



PRODUCT FAMILY ■ MORTISE FLUSH DOOR 3D HINGE



OBX-20-2541/160.ER
OBX-20-2541/120.ER



OBX-20-2542/120.ER



Description

ECO project hinge OBX-20-2542/160

- For mortise flush door 3D hinge, double rebated, on wooden, steel or aluminium frames
- With OBX adjustable frame box adjustable in three dimensions
- Inner, firmly rotating axis
- Wear and maintenance-free ball bearing technology
- Suitable for fire doors
- Can be used DIN left and DIN right without modification

F **EN 1935** **CE** **ER**  Wooden door

OBX-20-2542 mortise flush door 3D hinge double rebated	Dimensions	Article number
OBX-20-2542/160.ER	Ø 20 x 160 mm	459242.46



ECO Schulte shows attention to detail by brushing the surface of the stainless steel hinges lengthwise. Thus, the brushing pattern perfectly matches the handle sets delivered by ECO.



OBX-20-2542/120

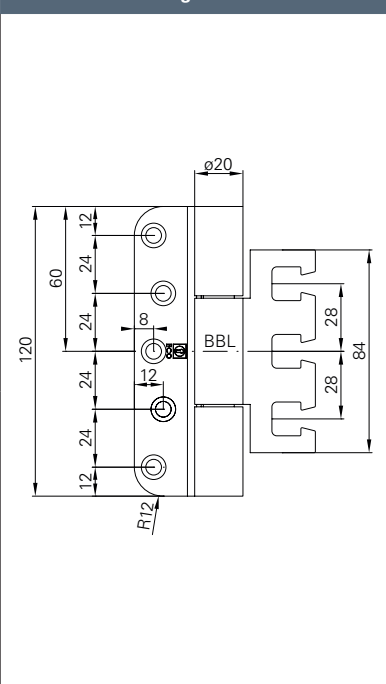


Product characteristics

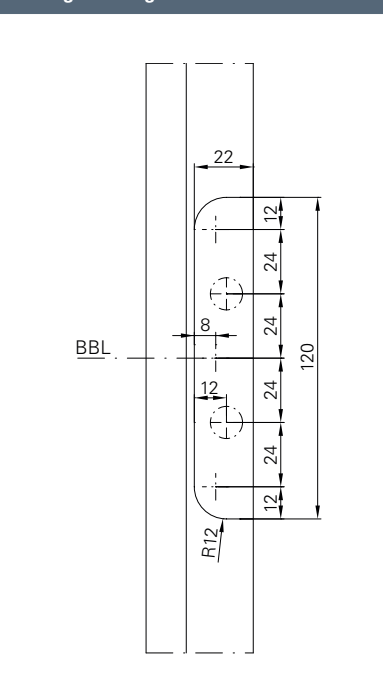
Size		120 mm
Ø Barrel diameter		20 mm
Material thickness		3,5 mm
Screws		5 x 50 mm
DIN left / DIN right		■
Milling diameter		24 mm
Milling length		120 mm
Milling depth		3,5 mm
Door types	Unrebated	■
	Double rebated	■
Frame types	Wood	■
	Steel	■
	Aluminium	■
Suitable for fire doors		■
Loading capacity Class 14 (maximum door load)		■
	Norm	160 kg
	ECO loading capacity	200 kg
Finishes	Stainless steel (ER)	■
	ER polished	▣
	PVD coating (brass)	▣
	PVD coating in RAL colours	▣
Reception elements page 616	For upright standing pillars	OBX-3001-3D
	For timber frames	OBX-3002-3D
	For steel frames	OBX-3011-3D
		OBX-3012-3D
	For aluminium frames	OBX-3021-3D

■ Yes - No □ On request

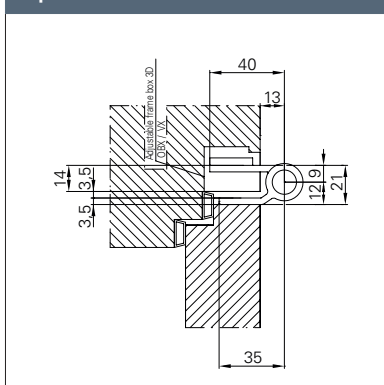
Dimension drawing



Milling drawing



Top view



PRODUCT FAMILY ■ MORTISE FLUSH DOOR 3D HINGE



OBX-20-2541/160.ER



OBX-20-2542/160.ER
OBX-20-2542/120.ER



Description

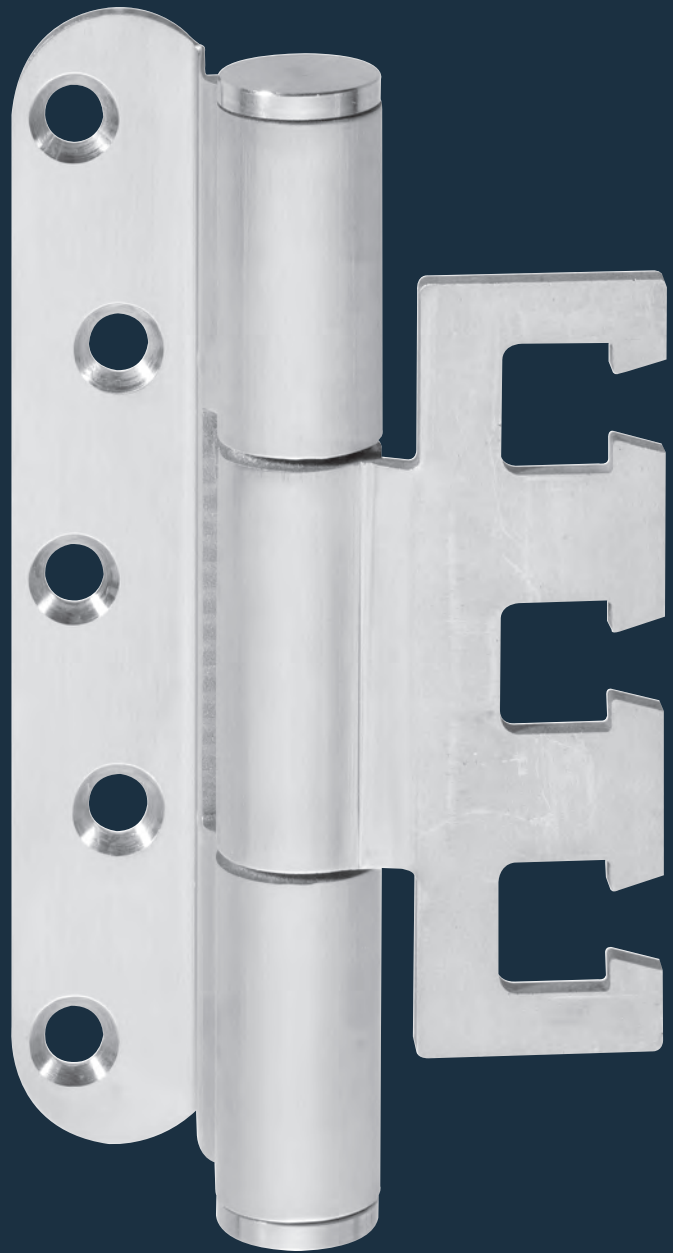
ECO project hinge OBX-20-2542/120

- For mortise flush door 3D hinge, double rebated, on wooden, steel or aluminium frames
- With OBX adjustable frame box adjustable in three dimensions
- Inner, firmly rotating axis
- Wear and maintenance-free ball bearing technology
- Suitable for fire doors
- Can be used DIN left and DIN right without modification

F **EN 1935** **CE** **ER**  Wooden door

OBX-20-2542 mortise flush door 3D hinge double rebated	Dimensions	Article number
OBX-20-2542/120.ER	Ø 18 x 120 mm	459142.46



Project hinges OBX-18



OBX-18-1531/160

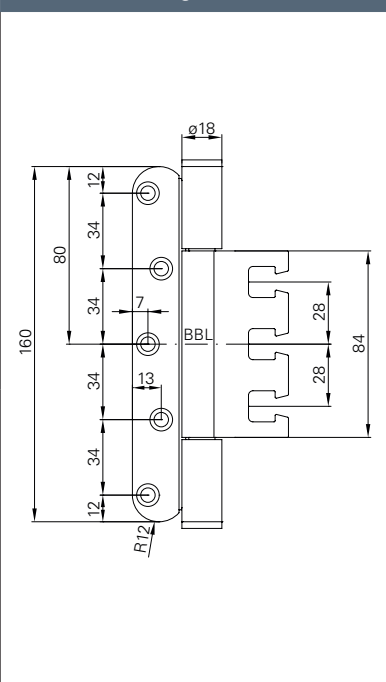


Product characteristics

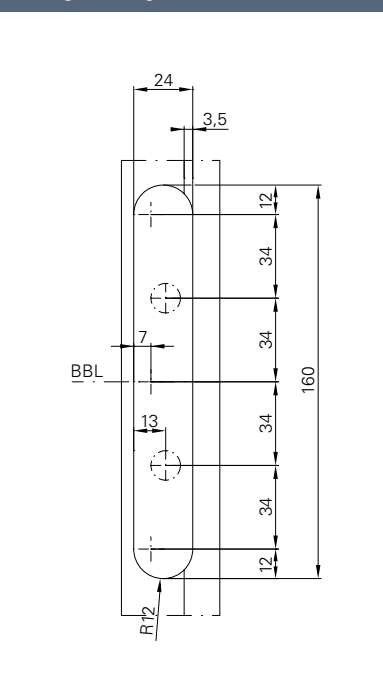
Size		160 mm
Ø Barrel diameter		18 mm
Material thickness		3 mm / 3,5 mm
Screws		5 x 50 mm
DIN left / DIN right		■
Milling diameter		24 mm
Milling length		160 mm
Milling depth		3 mm
Door types	Rebated	■
	Unrebated	-
Frame types	Wood	■
	Steel	■
	Aluminium	■
Suitable for fire doors		■
Loading capacity Class 11 (maximum door load)		■
	Norm	80 kg
	ECO loading capacity	160 kg
Finishes	Stainless steel (ER)	■
	Steel satin nickel plated	▣
	Steel zinc plated	▣
Reception elements page 616	For upright standing pillars	OBX-3001-3D
	For timber frames	OBX-3002-3D
	For steel frames	OBX-3011-3D
		OBX-3012-3D
	For aluminium frames	OBX-3021-3D

■ Yes - No □ On request

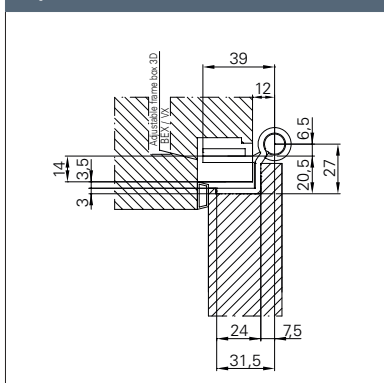
Dimension drawing



Milling drawing



Top view



PRODUCT FAMILY ■ MORTISE REBATED DOOR 3D HINGE



OBX-18-1531/120.ER



OBX-18-1532/160.ER



Description

ECO project hinge OBX-18-1531/160

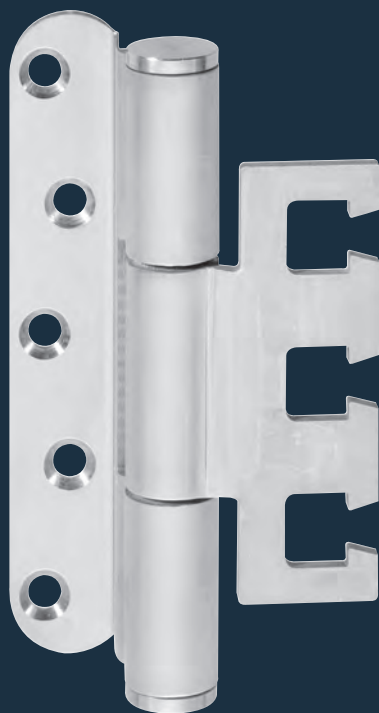
- For rebated doors on wooden, steel or aluminium frames
- With OBX adjustable frame box adjustable in three dimensions
- Inner, firmly rotating axis
- Wear and maintenance-free ball bearing technology
- Suitable for fire doors
- Can be used DIN left and DIN right without modification

F **EN 1935** **CE** **ER**  Wooden door

OBX-18-1531 Mortise rebated door 3D hinge	Dimensions	Article number
OBX-18-1531/160.ER	Ø 18 x 160 mm	460431.46
OBX-18-1531/160.St.Ni	Ø 18 x 160 mm	On request
OBX-18-1531/160.St.Zc	Ø 18 x 160 mm	460431.43



OBX-18-1531/120

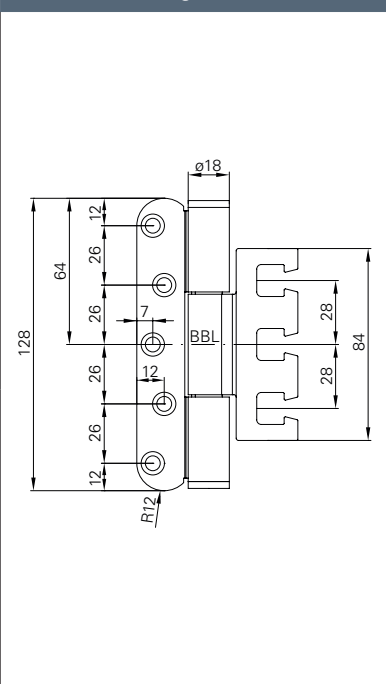


Product characteristics

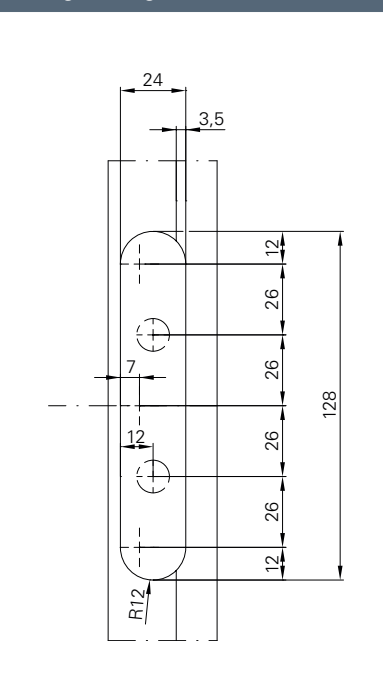
Size		120 mm
Ø Barrel diameter		18 mm
Material thickness		3 mm / 3,5 mm
Screws		5 x 50 mm
DIN left / DIN right		■
Milling diameter		24 mm
Milling length		128 mm
Milling depth		3 mm
Door types	Rebated	■
	Unrebated	-
Frame types	Wood	■
	Steel	■
	Aluminium	■
Suitable for fire doors	F	■
Loading capacity Class 11 (maximum door load)	EN 1935 CE	■
	Norm	80 kg
	ECO loading capacity	120 kg
Finishes	Stainless steel (ER)	■
	Steel satin nickel plated	▣
	Steel zinc plated	▣
Reception elements page 616	For upright standing pillars	OBX-3001-3D
	For timber frames	OBX-3002-3D
	For steel frames	OBX-3011-3D
		OBX-3012-3D
	For aluminium frames	OBX-3021-3D

■ Yes - No □ On request

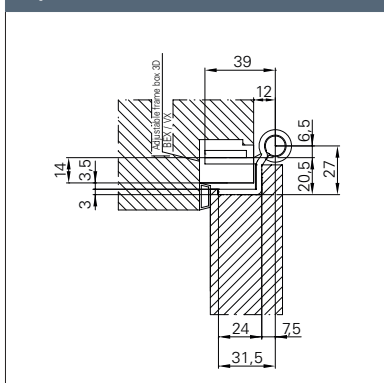
Dimension drawing



Milling drawing



Top view



PRODUCT FAMILY ■ MORTISE REBATED DOOR 3D HINGE



OBX-18-1531/160.ER



OBX-18-1532/160.ER



Description

ECO project hinge OBX-18-1531/120

- For rebated doors on wooden, steel or aluminium frames
- With OBX adjustable frame box adjustable in three dimensions
- Inner, firmly rotating axis
- Wear and maintenance-free ball bearing technology
- Suitable for fire doors
- Can be used DIN left and DIN right without modification



EN 1935



Wooden door

OBX-18-1531 Mortise rebated door 3D hinge	Dimensions	Article number
OBX-18-1531/120.ER	Ø 18 x 120 mm	460331.46
OBX-18-1531/120.St.Ni	Ø 18 x 120 mm	On request
OBX-18-1531/120.St.Zc	Ø 18 x 120 mm	460331.43

OBX-18-1532/160 FD

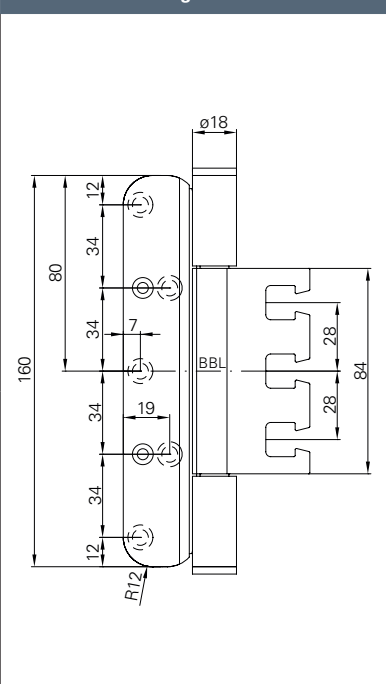


Product characteristics

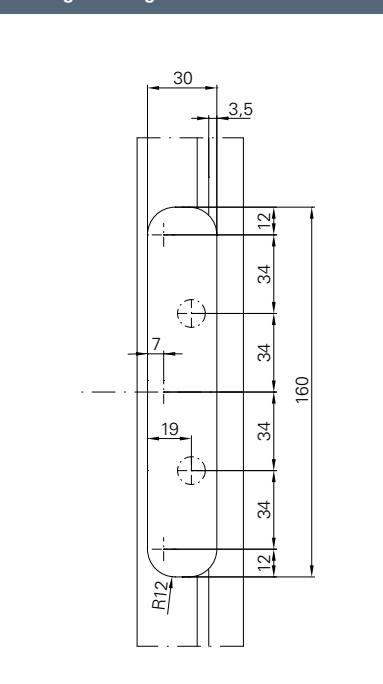
Size		160 mm
Ø Barrel diameter		18 mm
Material thickness		3 mm / 3,5 mm
Screws		5 x 50 mm
DIN left / DIN right		■
Milling diameter		24 mm
Milling length		160 mm
Milling depth		3 mm
Door types	Rebated	■
	Unrebated	-
Frame types	Wood	■
	Steel	■
	Aluminium	■
Suitable for fire doors	F	■
Loading capacity Class 11 (maximum door load)	EN 1935 CE	■
	Norm	80 kg
	ECO loading capacity	160 kg
Finishes	Stainless steel (ER)	■
	Steel satin nickel plated	▣
	Steel zinc plated	▣
Reception elements page 616	For upright standing pillars	OBX-3001-3D
	For timber frames	OBX-3002-3D
	For steel frames	OBX-3011-3D
		OBX-3012-3D
	For aluminium frames	OBX-3021-3D

■ Yes - No □ On request

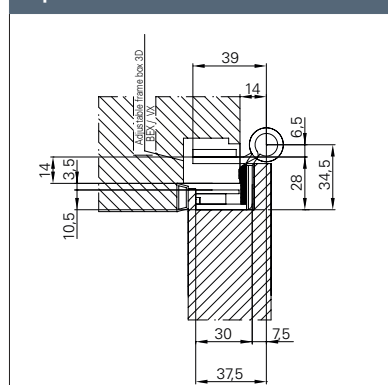
Dimension drawing



Milling drawing



Top view



PRODUCT FAMILY ■ MORTISE REBATED DOOR 3D HINGE



OBX-18-1531/160.ER
OBX-18-1531/120.ER



Description

ECO project hinge OBX-18-1532/160 FD

- For rebated doors on wooden, steel or aluminium frames
- With OBX adjustable frame box adjustable in three dimensions
- Inner, firmly rotating axis
- Wear and maintenance-free ball bearing technology
- Suitable for fire doors
- Can be used DIN left and DIN right without modification

F **EN 1935** **CE** **ER**  Wooden door

OBX-18-1532 Mortise rebated door 3D hinge leaf gasket	Dimensions	Article number
OBX-18-1532/160.ER	Ø 18 x 160 mm	460432.46

ECO Schulte project hinges are playing in their own league in regards to precision and aesthetics. The defined edge of the reception area provides best-possible force distribution and fitting accuracy.



OBX-18-2541/160

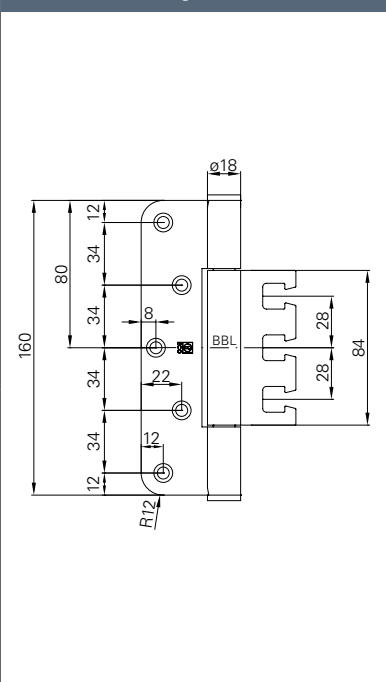


Product characteristics

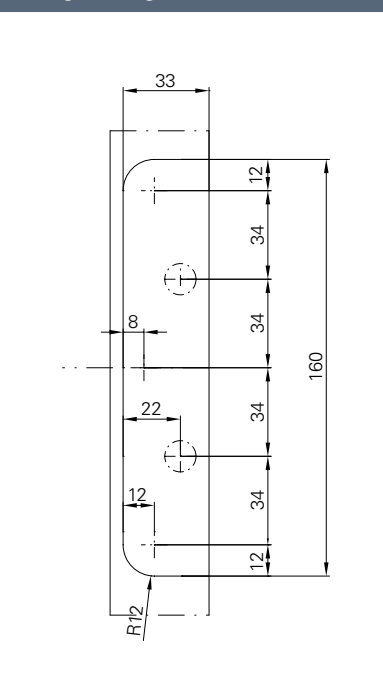
Size		160 mm
Ø Barrel diameter		18 mm
Material thickness		3 mm / 3,5 mm
Screws		5 x 50 mm
DIN left / DIN right		■
Milling diameter		24 mm
Milling length		160 mm
Milling depth		3 mm
Door types	Rebated	-
	Unrebated	■
Frame types	Wood	■
	Steel	■
	Aluminium	■
Suitable for fire doors	F	■
Loading capacity Class 11 (maximum door load)	EN 1935 CE	■
	Norm	80 kg
	ECO loading capacity	160 kg
Finishes	Stainless steel (ER)	■
	Steel satin nickel plated	▣
	Steel zinc plated	▣
Reception elements page 616	For upright standing pillars	OBX-3001-3D
	For timber frames	OBX-3002-3D
	For steel frames	OBX-3011-3D
		OBX-3012-3D
	For aluminium frames	OBX-3021-3D

■ Yes - No □ On request

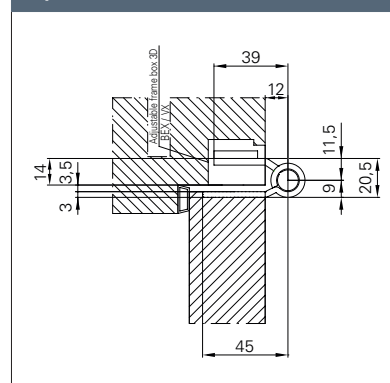
Dimension drawing



Milling drawing



Top view



PRODUCT FAMILY ■ MORTISE FLUSH DOOR 3D HINGE



OBX-18-2541/120.ER



Description

ECO project hinge OBX-18-2541/160

- For unrehabbed doors on wooden, steel or aluminium frames
- With OBX adjustable frame box adjustable in three dimensions
- Inner, firmly rotating axis
- Wear and maintenance-free ball bearing technology
- Suitable for fire doors
- Can be used DIN left and DIN right without modification


F **EN 1935** **CE** **ER**  Wooden door

OBX-18-2541 mortise flush door 3D hinge	Dimensions	Article number
OBX-18-2541/160.ER	Ø 18 x 160 mm	460441.46
OBX-18-2541/160.St.Ni	Ø 18 x 160 mm	On request
OBX-18-2541/160.St.Zc	Ø 18 x 160 mm	460441.43

OBX-18-2541/120

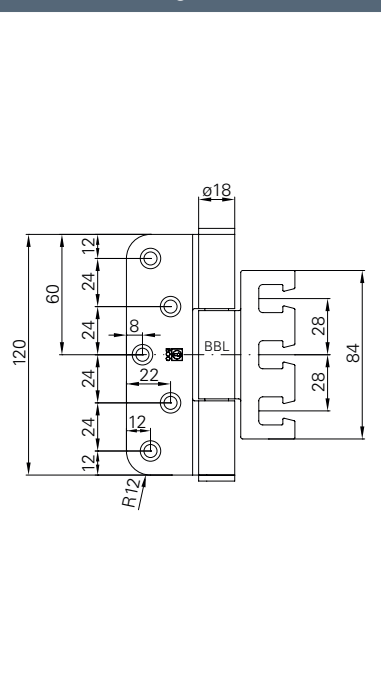


Product characteristics

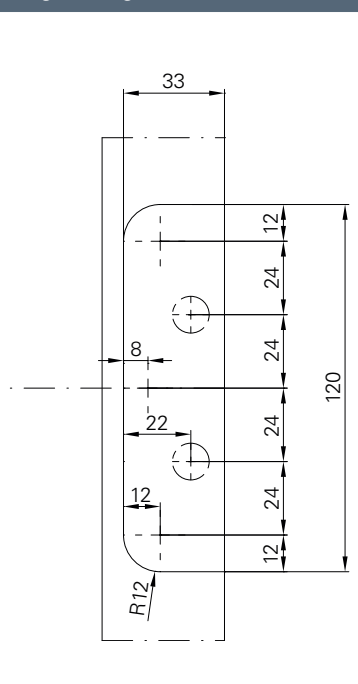
Size	120 mm	
Ø Barrel diameter	18 mm	
Material thickness	3 mm / 3,5 mm	
Screws	5 x 50 mm	
DIN left / DIN right	■	
Milling diameter	24 mm	
Milling length	120 mm	
Milling depth	3 mm	
Door types	Rebated	-
	Unrebated	■
Frame types	Wood	■
	Steel	■
	Aluminium	■
Suitable for fire doors		■
Loading capacity Class 11 (maximum door load)		■
	Norm	80 kg
	ECO loading capacity	120 kg
Finishes	Stainless steel (ER)	■
	Steel satin nickel plated	▣
	Steel zinc plated	▣
Reception elements page 616	For upright standing pillars	OBX-3001-3D
	For timber frames	OBX-3002-3D
	For steel frames	OBX-3011-3D
		OBX-3012-3D
	For aluminium frames	OBX-3021-3D

☐ Yes - No ☒ On request

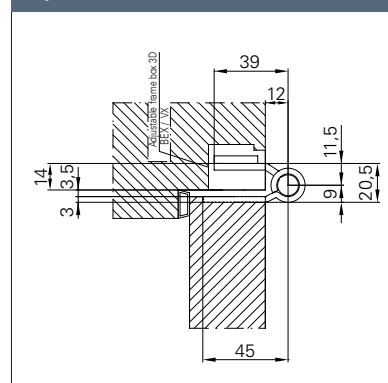
Dimension drawing



Milling drawing



Top view



PRODUCT FAMILY ■ MORTISE FLUSH DOOR 3D HINGE



OBX-18-2541/160.ER



Description

ECO project hinge OBX-18-2541/120

- For unrehabbed doors on wooden, steel or aluminium frames
- With OBX adjustable frame box adjustable in three dimensions
- Inner, firmly rotating axis
- Wear and maintenance-free ball bearing technology
- Suitable for fire doors
- Can be used DIN left and DIN right without modification

F **EN 1935** **CE** **ER**  Wooden door

OBX-18-2541 mortise flush door 3D hinge	Dimensions	Article number
OBX-18-2541/120.ER	Ø 18 x 120 mm	460341.46
OBX-18-2541/120.St.Ni	Ø 18 x 120 mm	On request
OBX-18-2541/120.St.Zc	Ø 18 x 120 mm	460341.43






Project hinges OBN



OBN-20-4141/160

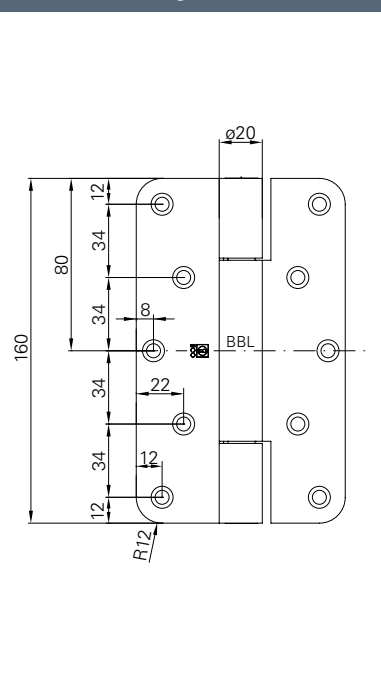


Product characteristics

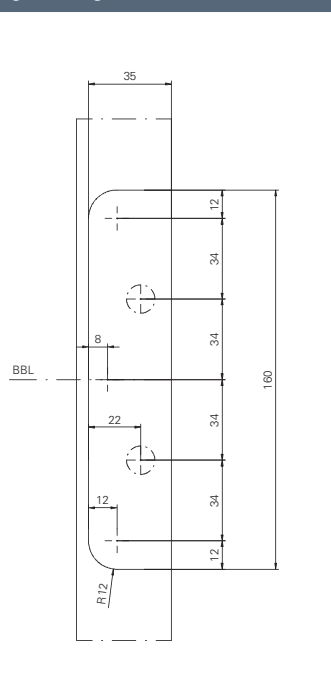
Size		120 mm
Ø Barrel diameter		20 mm
Material thickness		3,5 mm
Screws		5 x 50 mm
DIN left / DIN right		■
Milling diameter		24 mm
Milling length		160 mm
Milling depth		3,5 mm
Door types	Rebated	-
	Unrebated	■
Frame types	Wood	■
Suitable for fire doors		■
Loading capacity	 	■
Class 14 (maximum door load)	Norm	160 kg
	ECO loading capacity	300 kg
Finishes	Stainless steel (ER)	■
	ER polished	□
	PVD coating (brass)	□
	PVD coating in RAL colours	□

☒ Yes - No ☐ On request

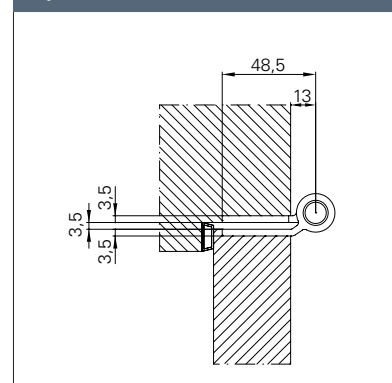
Dimension drawing



Milling drawing



Top view





Description

ECO project hinge OBN-20-4141/160

- For unrebated doors on upright standing pillars
- Inner, firmly rotating axis
- Wear and maintenance-free ball bearing technology
- Suitable for fire doors
- Can be used DIN left and DIN right without modification

F **EN 1935** **CE** **ER**  Wooden door

OBN-20-4141 mortise flush door 3D hinge for upright standing pillars	Dimensions	Article number
OBN-20-4141/160.ER	Ø 20 x 160 mm	460641.46



OBN-18-4141/160

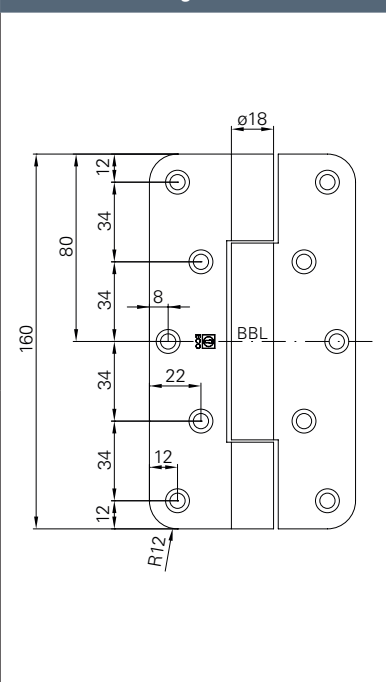


Product characteristics

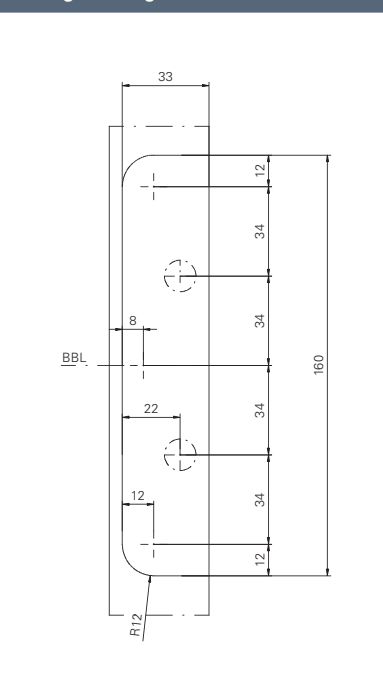
Size	160 mm	
Ø Barrel diameter	18 mm	
Material thickness	3 mm / 3,5 mm	
Screws	5 x 50 mm	
DIN left / DIN right	■	
Milling diameter	24 mm	
Milling length	160 mm	
Milling depth	3 mm / 3,5 mm	
Door types	Rebated	-
	Unrebated	■
Frame types	Wood	■
Suitable for fire doors	F	■
Loading capacity Class 11 (maximum door load)	EN 1935 CE	■
	Norm	80 kg
	ECO loading capacity	160 kg
Finishes	Stainless steel (ER)	■
	ER polished	□
	PVD coating (brass)	□
	PVD coating in RAL colours	□

■ Yes - No □ On request

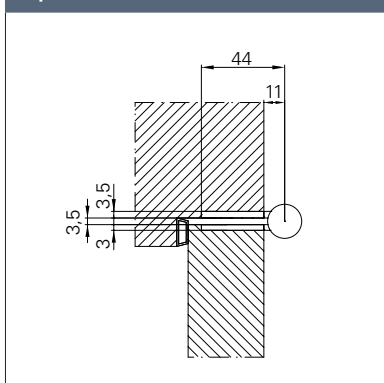
Dimension drawing



Milling drawing



Top view



PRODUCT FAMILY ■ MORTISE FLUSH DOOR 3D HINGE



OBN-18-4141/120.ER round



OBN-18-4141/120.ER square



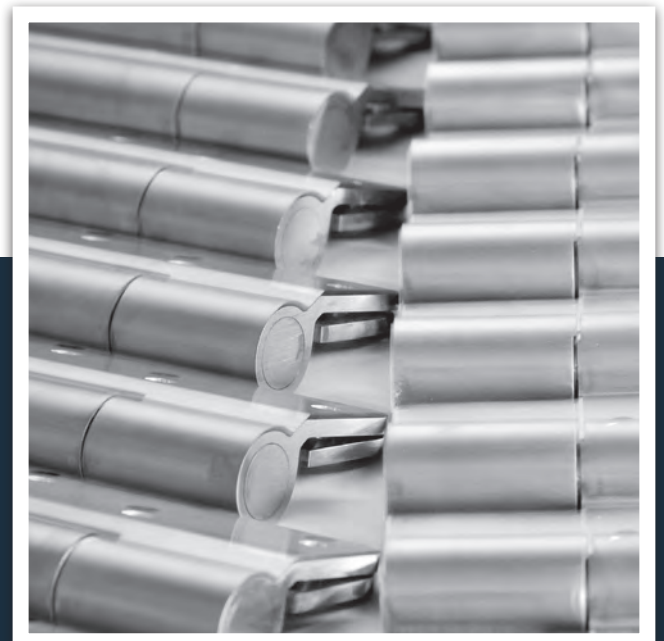
Description

ECO project hinge OBN-18-4141/160

- For unrebated doors on upright standing pillars
- Inner, firmly rotating axis
- Wear and maintenance-free ball bearing technology
- Suitable for fire doors
- Can be used DIN left and DIN right without modification

F **EN 1935** **CE** **ER**  Wooden door

OBN-18-4141 mortise flush door 3D hinge	Dimensions	Article number
OBN-18-4141/160.ER	Ø 18 x 160 mm	460741.46
OBN-18-4141/160.St.Ni	Ø 18 x 160 mm	460741.42
OBN-18-4141/160.St.Zc	Ø 18 x 160 mm	460741.43



OBN-18-4141/120 round

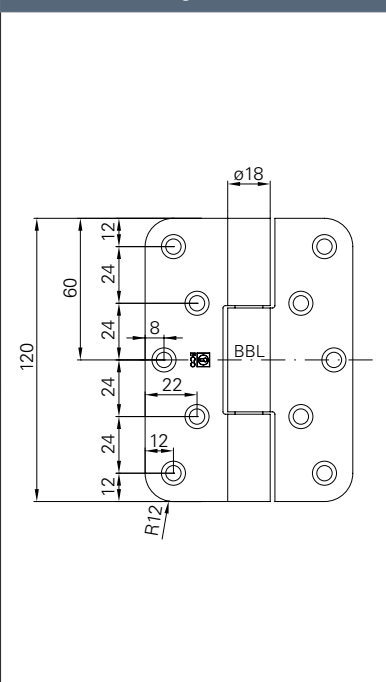


Product characteristics

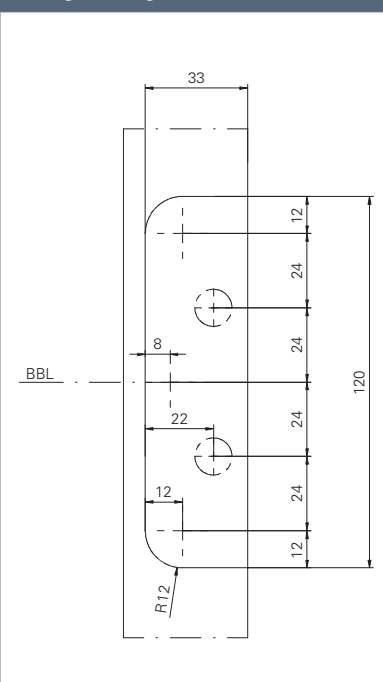
Size		120 mm
Ø Barrel diameter		18 mm
Material thickness		3 mm / 3,5 mm
Screws		5 x 50 mm
DIN left / DIN right		■
Milling diameter		24 mm
Milling length		120 mm
Milling depth		3 mm / 3,5 mm
Door types	Rebated	-
	Unrebated	■
Frame types	Wood	■
Suitable for fire doors	F	■
Loading capacity Class 11 (maximum door load)	EN 1935 CE	■
	Norm	80 kg
	ECO loading capacity	120 kg
Finishes	Stainless steel (ER)	■
	ER polished	□
	PVD coating (brass)	□
	PVD coating in RAL colours	□

■ Yes - No □ On request

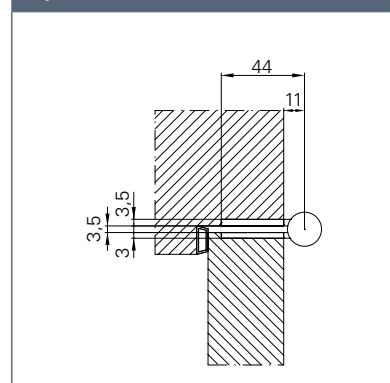
Dimension drawing



Milling drawing



Top view



PRODUCT FAMILY ■ MORTISE FLUSH DOOR 3D HINGE



OBN-18-4141/160.ER



OBN-18-4141/120.ER square



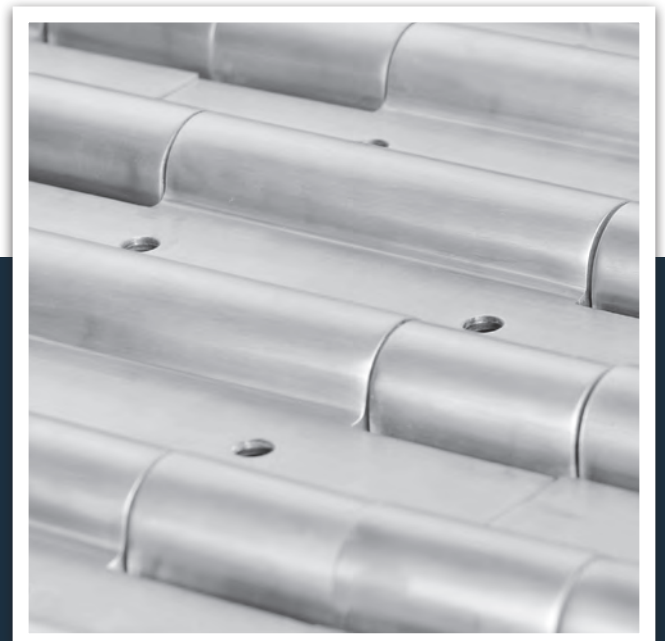
Description

ECO project hinge OBN-18-4141/120 round

- For unrebated doors on upright standing pillars
- Inner, firmly rotating axis
- Wear and maintenance-free ball bearing technology
- Suitable for fire doors
- Can be used DIN left and DIN right without modification

F **EN 1935** **CE** **ER**  Wooden door



OBN-18-4141 mortise flush door 3D hinge round	Dimensions	Article number
OBN-18-4141/120.ER	Ø 18 x 120 mm	460841.46
OBN-18-4141/120.St.Ni	Ø 18 x 120 mm	460841.42
OBN-18-4141/120.St.Zk	Ø 18 x 120 mm	460841.43



OBN-18-4141/120 square

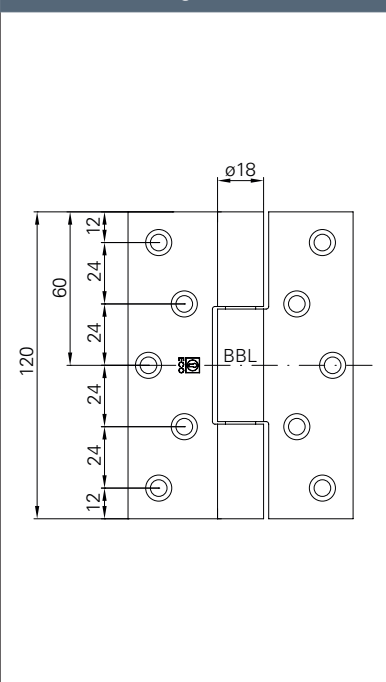


Product characteristics

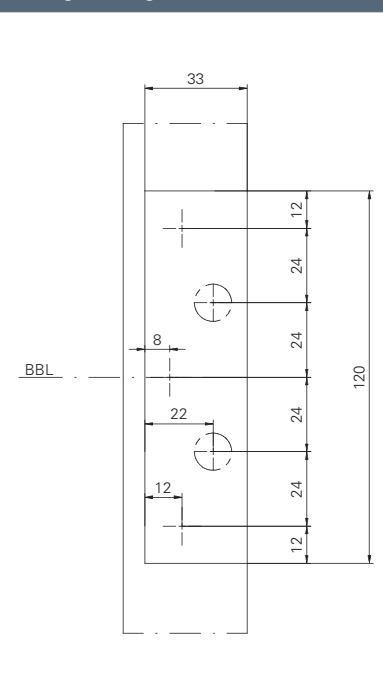
Size	120 mm	
Ø Barrel diameter	18 mm	
Material thickness	3 mm / 3,5 mm	
Screws	5 x 50 mm	
DIN left / DIN right	■	
Milling diameter	24 mm	
Milling length	120 mm	
Milling depth	3 mm / 3,5 mm	
Door types	Rebated	-
	Unrebated	■
Frame types	Wood	■
	Steel	■
	Aluminium	■
Suitable for fire doors		■
Loading capacity Class 11 (maximum door load)		■
	Norm	80 kg
	ECO loading capacity	120 kg
Finishes	Stainless steel (ER)	■
	ER polished	□
	PVD coating (brass)	□
	PVD coating in RAL colours	□

■ Yes - No □ On request

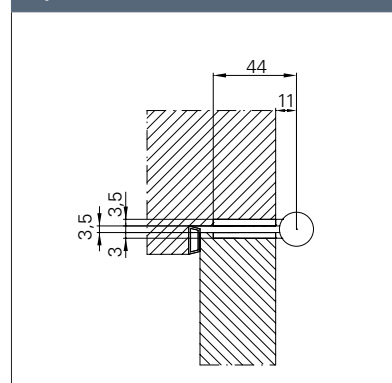
Dimension drawing



Milling drawing



Top view



PRODUCT FAMILY ■ MORTISE FLUSH DOOR 3D HINGE



OBN-18-4141/160.ER



OBN-18-4141/120.ER round



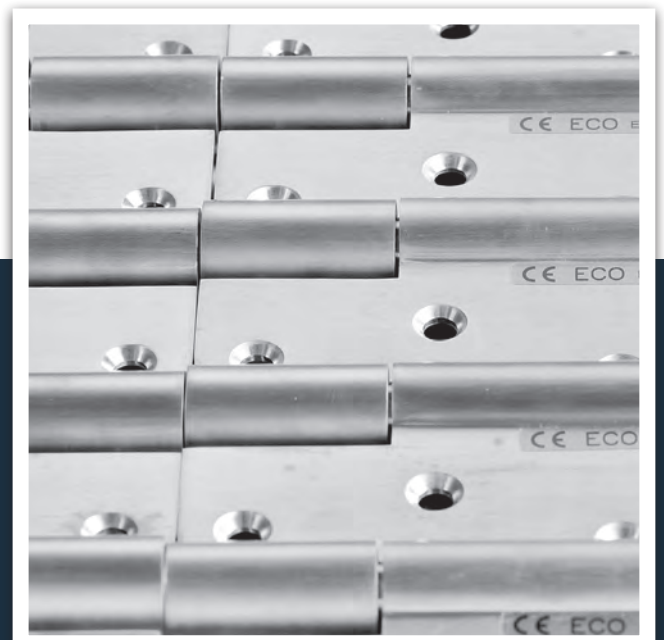
Description

ECO project hinge OBN-18-4141/120 square

- For unrebated doors on upright standing pillars
- Inner, firmly rotating axis
- Wear and maintenance-free ball bearing technology
- Suitable for fire doors
- Can be used DIN left and DIN right without modification

F **EN 1935** **CE** **ER**  Wooden door

OBN-18-4141 mortise flush door 3D hinge for upright stand- ing pillars square	Dimensions	Article number
OBN-18-4141/120.ER	Ø 18 x 120 mm	460843.46
OBN-18-4141/120.St.Ni	Ø 18 x 120 mm	460843.42
OBN-18-4141/120.St.Zc	Ø 18 x 120 mm	460843.43



Adjustable frame boxes

Cover plates

Lifting lug



OBX-3001-3D



Description

ECO-Adjustable frame box OBX-3001-3D

- Adjustable frame box for project hinges OBX in sizes 120 mm and 160 mm
- On upright standing pillar frames with rebated and unrebated doors
- Adjustable in three dimensions
 - + / - 3 mm Side
 - + / - 3 mm Height
 - + / - 3 mm Pressure
- Surface: Steel zinc plated

Adjustable frame box for upright standing pillars OBX-3001-3D	Material	Article number
OBX-3001-3D	Steel zinc plated	459301.43

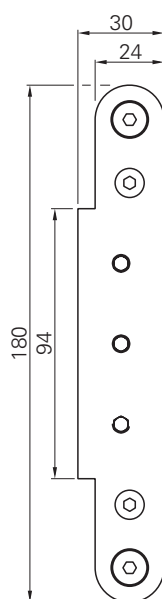


Please directly order the necessary cover plates!
Page 620

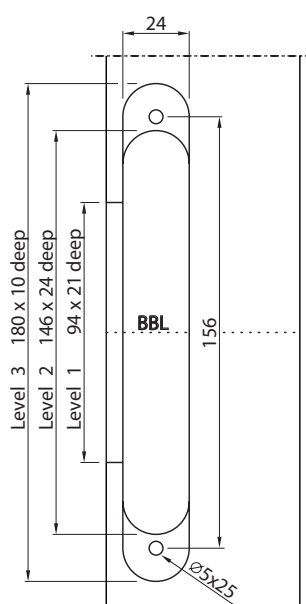
Advantages adjustable frame box

- Nylon-guided adjusting spindle supplies additional stability
- Nylon-guided push plate enables easy mounting.
The insertion of the OBX hinge is simplified enormously.
- Adjustable in three dimensions
The exact adjustment of the door is simplified.

Dimension drawing



Milling drawing



Description

ECO-Adjustable frame box OBX-3002-3D

- Adjustable frame box for project hinges OBX in sizes 120 mm and 160 mm
- For timber frames with rebated and unrebuted doors
- Adjustable in three dimensions
 - + / - 3 mm Side
 - + / - 3 mm Height
 - + / - 3 mm Pressure
- Surface: Steel zinc plated

Adjustable frame box for timber frames OBX-3002-3D	Material	Article number
OBX-3002-3D	Steel zinc plated	459302.43



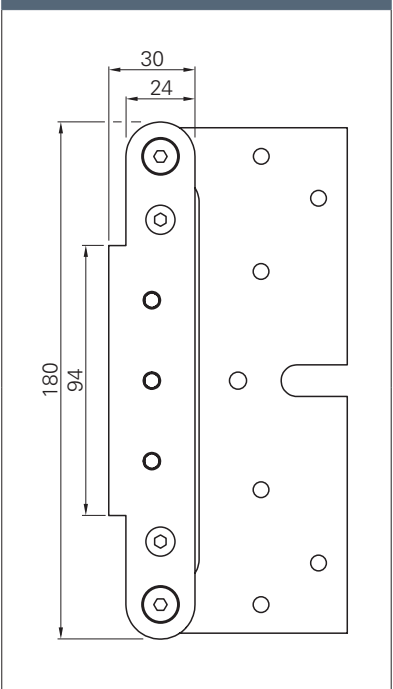
Please directly order the necessary cover plates!
Page 620

Advantages adjustable frame box

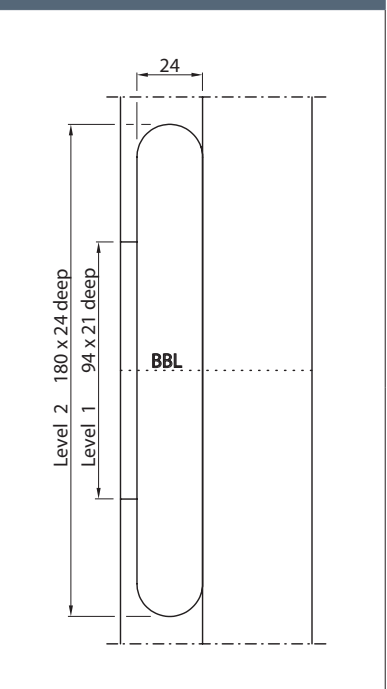
- Nylon-guided adjusting spindle supplies additional stability
- Nylon-guided push plate enables easy mounting.
The insertion of the OBX hinge is simplified enormously.
- Adjustable in three dimensions
The exact adjustment of the door is simplified.



Dimension drawing



Milling drawing



OBX-3011-3D



Description

ECO-Adjustable frame box OBX-3011-3D

- Adjustable frame box for project hinges OBX in sizes 120 mm and 160 mm
- On steel frames with rebated and unrebated doors
- Adjustable in three dimensions
 - + / - 3 mm Side
 - + / - 3 mm Height
 - + / - 3 mm Pressure
- Surface: Steel zinc plated

Adjustable frame box For steel frames OBX-3011-3D	Material	Article number
OBX-3011-3D ¹	Steel zinc plated	459311.43
OBX-3012-3D ²	Steel zinc plated	459312.43

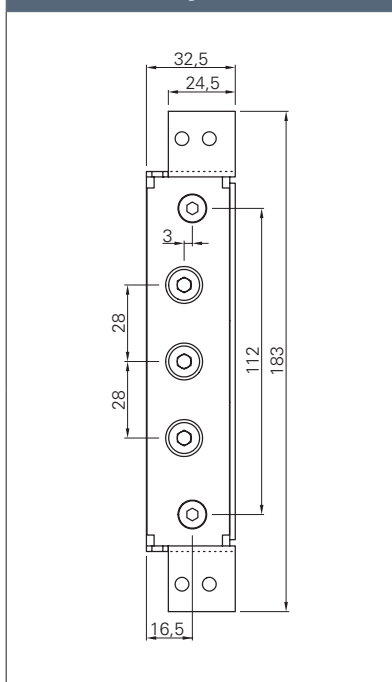
¹ With welding points

² Without welding points

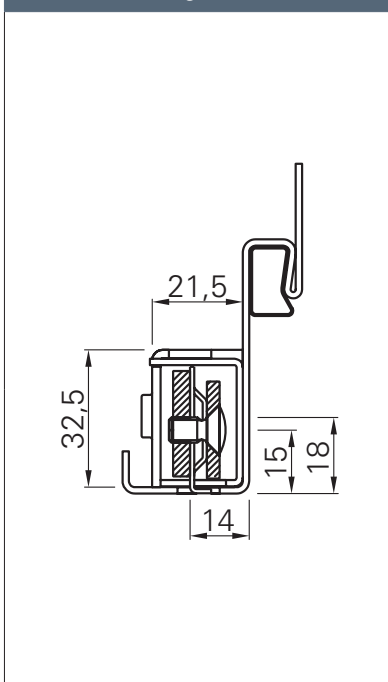
Advantages adjustable frame box

- Nylon-guided adjusting spindle supplies additional stability
- Nylon-guided push plate enables easy mounting.
The insertion of the OBX hinge is simplified enormously.
- Adjustable in three dimensions
The exact adjustment of the door is simplified.

Dimension drawing



Dimension drawing



Description

ECO-Adjustable frame box OBX-3021-3D

- Adjustable frame box for project hinges OBX in sizes 120 mm and 160 mm
- On aluminium frames with rebated and unrebated doors
- Adjustable in three dimensions
 - + / - 3 mm Side
 - + / - 3 mm Height
 - + / - 3 mm Pressure
- Surface: Steel zinc plated

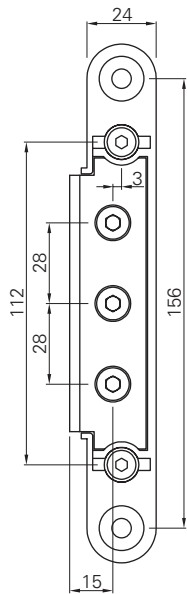
Adjustable frame box Aluzarge OBX-3021-3D	Material	Article number
OBX-3021-3D	Steel zinc plated	459321.43

Advantages adjustable frame box

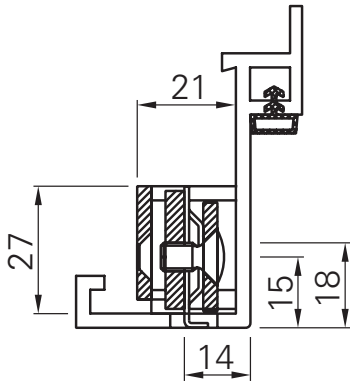
- Nylon-guided adjusting spindle supplies additional stability
- Nylon-guided push plate enables easy mounting.
The insertion of the OBX hinge is simplified enormously.
- Adjustable in three dimensions
The exact adjustment of the door is simplified.



Dimension drawing



Dimension drawing



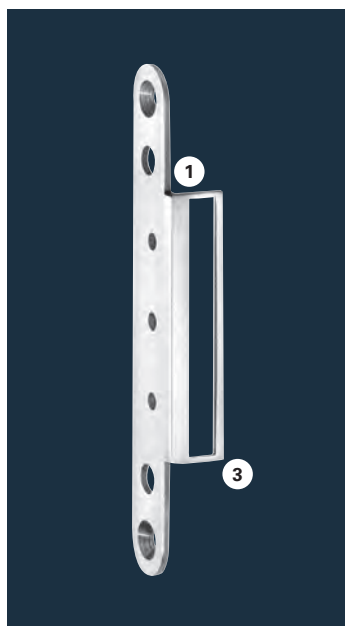
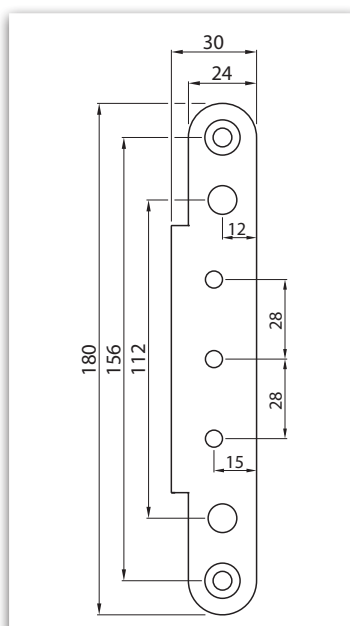
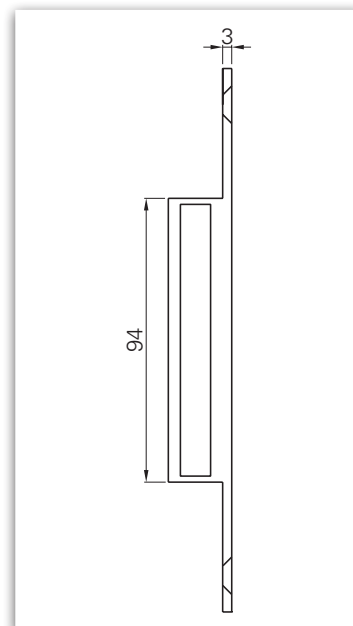


Illustration: Cover plate OBX-3096



Dimension: Cover plate OBX-3096

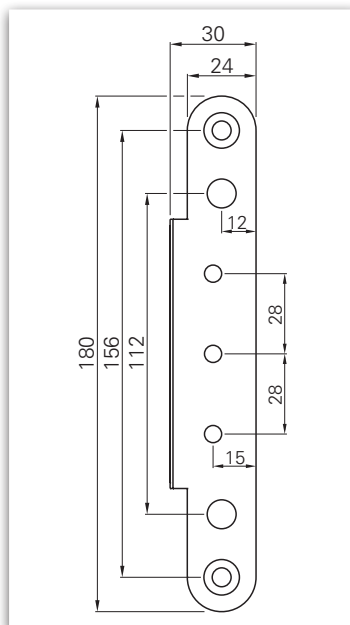


Dimension: Cover plate OBX-3096

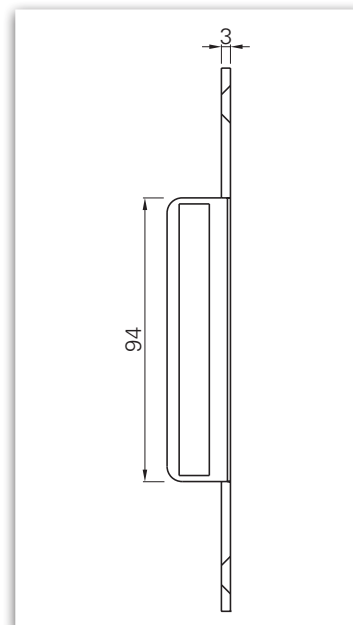
Cover plate OBX-3096	Material	Angle · Ending	Article number
OBX-3096.ER	Stainless steel satin	square - square	459396.46
OBX-3096.St.Ni	Steel satin zinc plated	square - square	459396.42
OBX-3096.St.Zk	Steel zinc plated	square - square	459396.43



Illustration: Cover plate OBX-3097



Dimension: Cover plate OBX-3097



Dimension: Cover plate OBX-3097

Cover plate OBX-3097	Material	Angle · Ending	Article number
OBX-3097.ER	Stainless steel satin	square - round	459397.46
OBX-3097.St.Ni	Steel satin zinc plated	square - round	459397.42
OBX-3097.St.Zk	Steel zinc plated	square - round	459397.43

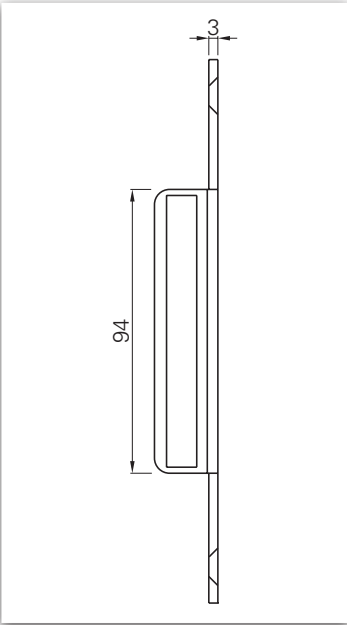
① square angle

② round angle

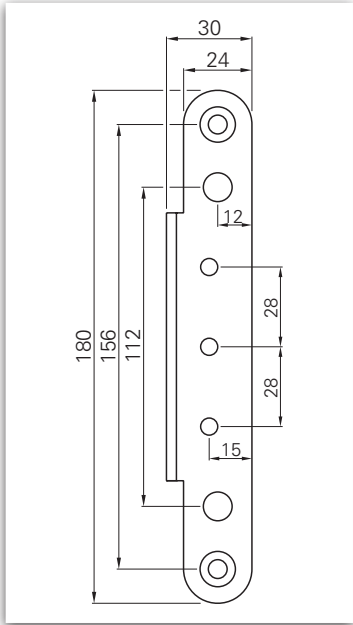
③ square ending

④ round ending

Cover plates for adjustable frame boxes



Dimension: Cover plate OBX-3098



Dimension: Cover plate OBX-3098

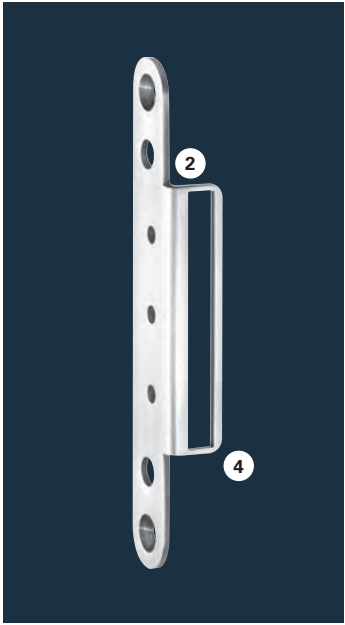
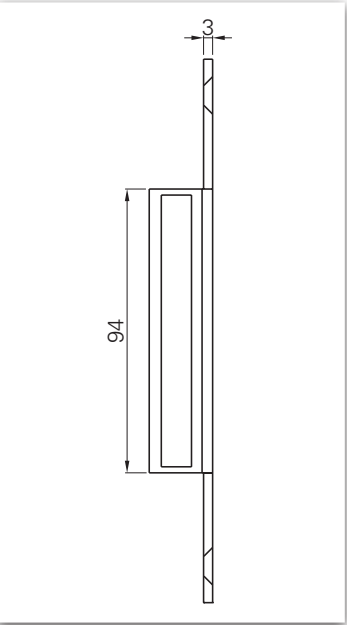
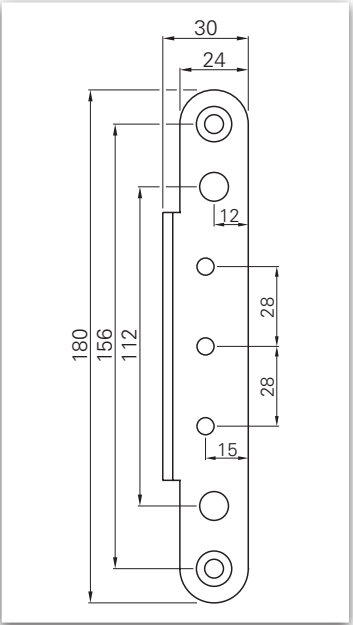


Illustration: Cover plate OBX-3098

Cover plate OBX-3098	Material	Angle · Ending	Article number
OBX-3098.ER	Stainless steel satin	round - round	459398.46
OBX-3098.St.Ni	Steel satin zinc plated	round - round	459398.42
OBX-3098.St.Zk	Steel zinc plated	round - round	459398.43



Dimension: Cover plate OBX-3099



Dimension: Cover plate OBX-3099

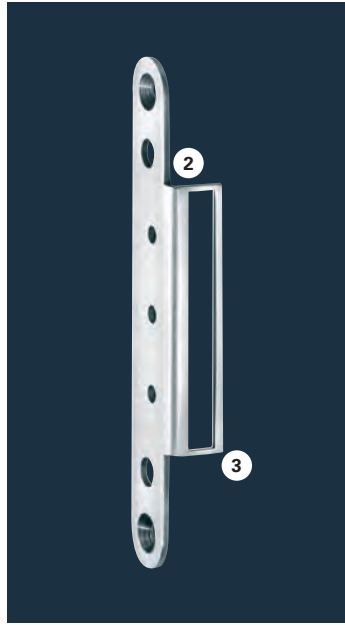


Illustration: Cover plate OBX-3099

Cover plate OBX-3099	Material	Angle · Ending	Article number
OBX-3099.ER	Stainless steel satin	round - square	459399.46
OBX-3099.St.Ni	Steel satin zinc plated	round - square	459399.42
OBX-3099.St.Zk	Steel zinc plated	round - square	459399.43

- 1 square angle
- 2 round angle
- 3 square ending
- 4 round ending



Illustration: Lifting lug OBX-6012 steel zinc plated

Lifting lug

The use of lifting lugs is recommended for additional stabilization of the hinge - depending on use, construction and load of the door. Lifting lugs relieve the fixing screws and stabilize the hinge parts in the door frame. The lifting lugs transfer the forces into the stabilized door frame so the forces can be better absorbed. The lifting lug is only stabilizing, not increasing the loading capacity.

Lifting lug in order to stabilize the hinge	Material	Master gauge	Article number
OBX-6012.St.Zk	Steel zinc plated	for 7 point master gauge for holes	459905.43

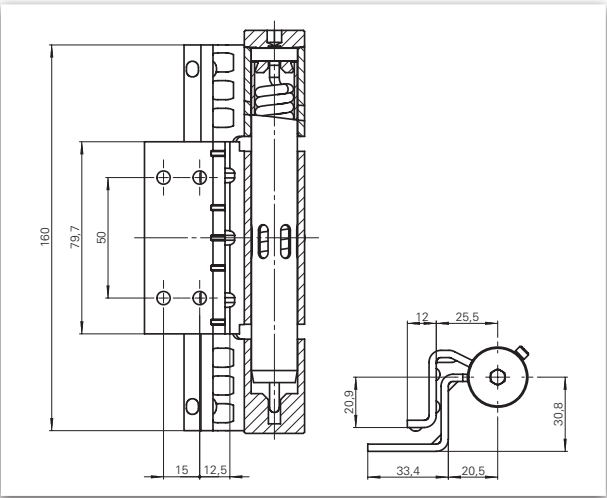
Laser-welded steel hinges



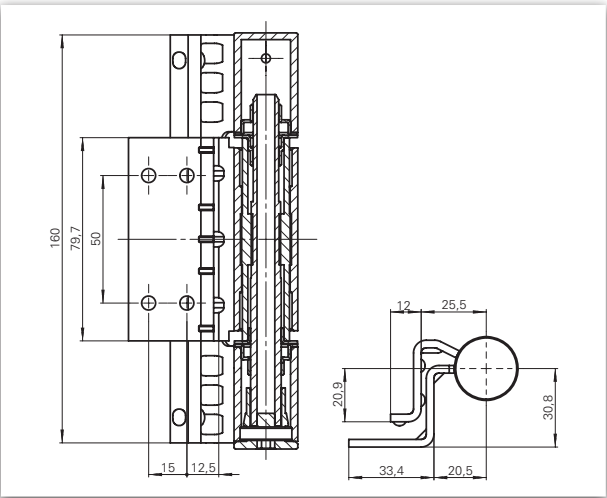


Product characteristics		
Size		160 mm
Ø Barrel diameter		25 mm
Material thickness		3 mm
DIN left / DIN right		■
Frame type	Steel	■
Suitable for fire doors	F	■
Loading capacity Class 12 (maximum door load)	Hinge with spring max.	80 kg
	KO-Band EN 1935	100 kg
	Norm DIN 18 272	80 kg
Finishes	Steel zinc plated frame - and door parts	■
Hinge type	Three-part standard hinge, laser-welded	
Bearing technology	Washed bearing	■
	Ball bearing	-
Fixing	Welded to the door frame screwed to the casement frame	

■ Yes - No *according to



Hinge with spring



KO hinge

ECO-Genius LHA
three-part standard hinge to be welded on,
adjustable in height (±3 mm)

Description:
ECO spring hinge / KO hinge set adjustable in height.
Spring hinge: based on **DIN 18272** KO-hinge: acc. **EN 1935**

Mounting:
Easy mounting of the hinge parts with the help of the hinge bolt

Special feature:
Height adjustment through comfortable handling.

Usage:
For the use in doors with requirements in regards to smoke- and fire protection as well as in emergency and escape exits.

As construction hinge set (KO) also suitable for heavy doors.





F **DIN 18 272**  Steel door

GENIUS LHA SET	Material		Dimensions	Article number
GENIUS LHA Set	Steel zinc plated	Set	Ø 25 x 160	Customize



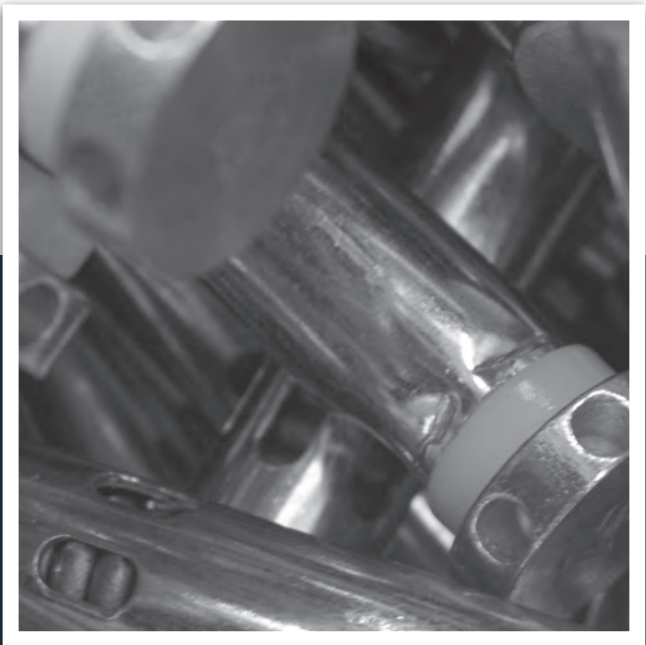
F **DIN 18 272**  Steel door

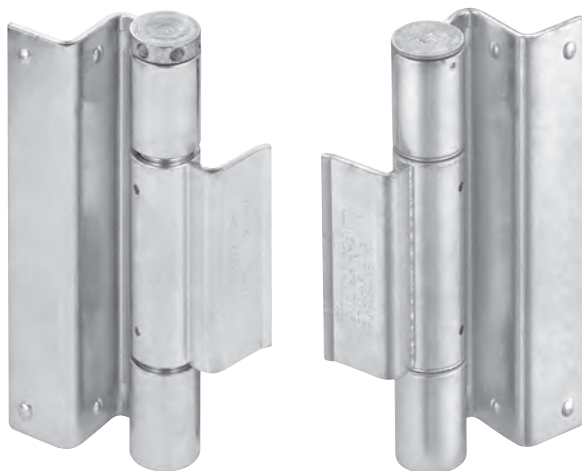
GENIUS LHA Hinge with spring	Material		Dimensions	Article number
GENIUS LHA hinge with spring	Steel zinc plated	Hinge with spring	Ø 25 x 160	Customize



F **DIN 18 272** **EN 1935**  Steel door

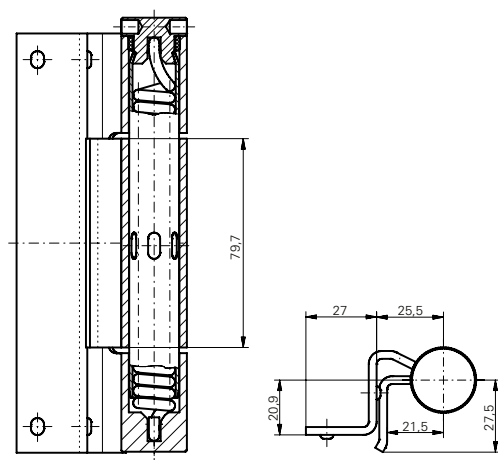
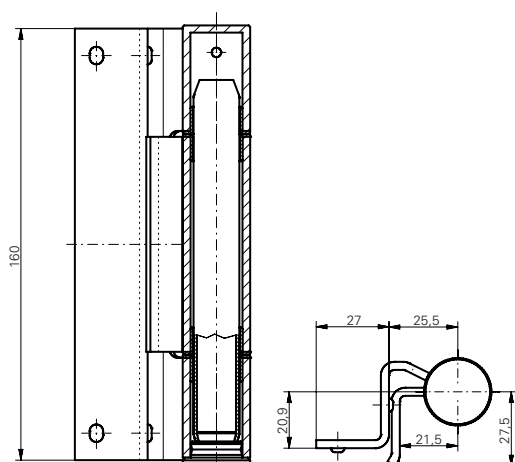
GENIUS LHA (KO hinge)	Material		Dimensions	Article number
GENIUS LHA KO hinge	Steel zinc plated	KO hinge	Ø 25 x 160	Customize



STANDARD-SET 3 mm

Product characteristics

Size		160 mm
Ø Barrel diameter		25 mm
Material thickness		3 mm
DIN left / DIN right		■
Frame type	Steel	■
Suitable for fire doors	F	■
Loading capacity Class 12 (maximum door load)	Hinge with spring max.	80 kg
	KO-Band EN 1935	100 kg
	Norm DIN 18 272 *	80 kg
Finishes	Steel zinc plated frame - and door parts	■
Hinge type	Three-part standard hinge, laser-welded	
Bearing technology	Washed bearing	■
	Ball bearing	-
Fixing	Welded to the door frame screwed to the casement frame	

■ Yes - No


Hinge with spring

KO hinge
**ECO-standard hinge to be welded
three-part standard hinge to be welded on (3 mm)**

Description:

ECO spring hinge / KO hinge set.

Spring hinge: based on **DIN 18272** KO-hinge: acc. **EN 1935**

Mounting:

Easy mounting of the hinge parts with the help of the hinge bolt.

Usage: For the use in doors with requirements in regards to smoke- and fire protection as well as in emergency and escape exits.

Laser-welded steel hinges ■ Standard hinge with spring / KO-Set 3 mm



F **DIN 18 272**  Steel door

Standard Hinge with spring / KO - Set 3 mm	Material		Dimensions	Article number
Standard-Set	Steel zinc plated	Set	Ø 25 x 160	Customize



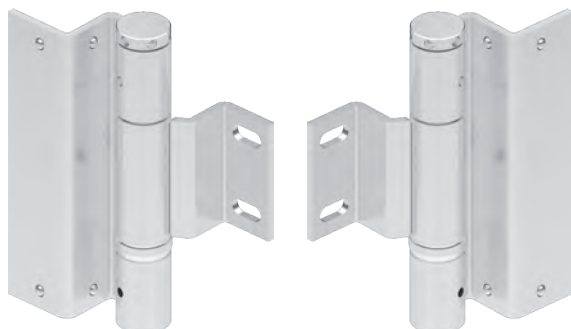
F **DIN 18 272**  Steel door

Standard Hinge with spring 3 mm	Material		Dimensions	Article number
Hinge with spring	Steel zinc plated	Hinge with spring	Ø 25 x 160	Customize



F **DIN 18 272** **EN 1935**  Steel door

Standard KO hinge 3 mm	Material		Dimensions	Article number
KO hinge	Steel zinc plated	KO hinge	Ø 25 x 160	Customize

STANDARD-SET 4 mm

Product characteristics

Size	160 mm	
Ø Barrel diameter	27 mm	
Material thickness	4 mm	
DIN left / DIN right	■	
Frame type	Steel	■
Suitable for fire doors	F	■
Loading capacity Class 13 (maximum door load)	Hinge with spring max.	80 kg
	KO-Hinge EN 1935	120 kg
	Norm DIN 18 272 *	80 kg
Finishes	Steel zinc plated frame - and door parts	■
Hinge type	Three-part standard hinge, laser-welded	
Bearing technology	Washed bearing	■
	Ball bearing	-
Fixing	Welded to the door frame screwed to the casement frame	

■ Yes - No *according to

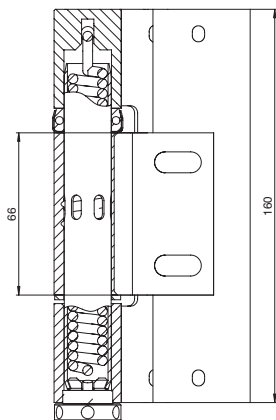
**ECO-standard hinge to be welded
three-part standard hinge to be welded on (4 mm)**

Description:
ECO spring hinge / KO hinge set.
Spring hinge: based on **DIN 18272** KO-hinge: acc. **EN 1935**

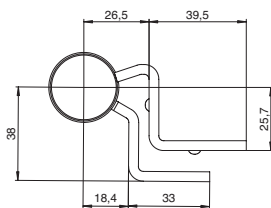
Mounting:
Easy mounting of the hinge parts with the help of the hinge bolt.

Usage:
For the use in doors with requirements in regards to smoke- and fire protection as well as in emergency and escape exits.

As construction hinge set (KO) also suitable for heavy doors.



Hinge with spring



KO hinge

Laser-welded steel hinges ■ Standard hinge with spring / KO-Set 4 mm



F **DIN 18 272**  Steel door

Standard Hinge with spring / KO - Set 4 mm	Material		Dimensions	Article number
Standard-Set	Steel zinc plated	Set	Ø 27 x 160	Customize



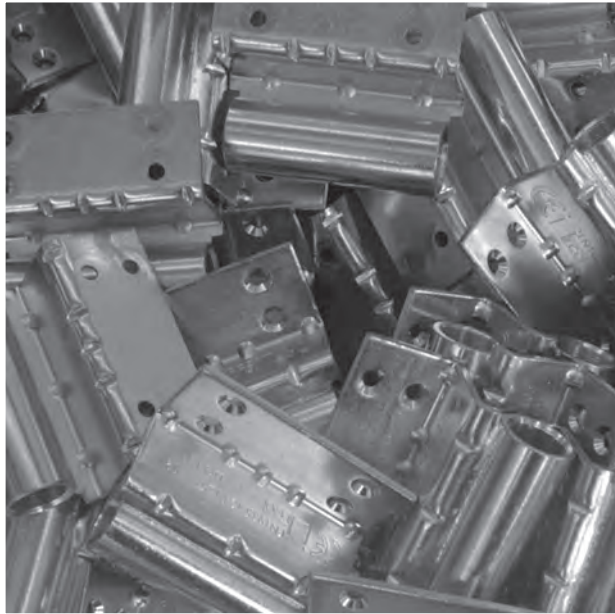
F **DIN 18 272**  Steel door

Standard Hinge with spring 4 mm	Material		Dimensions	Article number
Hinge with spring	Steel zinc plated	Hinge with spring	Ø 27 x 160	Customize



F **EN 1935**  Steel door

Standard KO hinge 4 mm	Material		Dimensions	Article number
KO hinge	Steel zinc plated	KO-Band	Ø 27 x 160	Customize



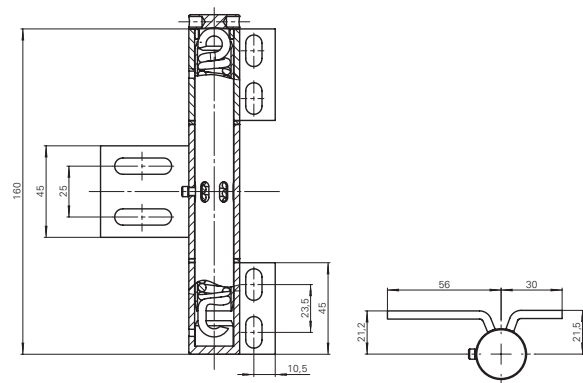
STANDARD-SET 3 mm ADJUSTMENT IN HEIGHT AND SIDE



Product characteristics

Size		160 mm
Ø Barrel diameter		25 mm
Material thickness		3 mm
DIN left / DIN right		■
Frame type	Steel	■
Suitable for fire doors	F	■
Finishes	Steel zinc plated frame - and door parts	■
Hinge type	Three - part hinge to be screwed on laser welded	
Bearing technology	Washed bearing	■
	Ball bearing	-
Fixing	Screwed to the door frame Screwed to the casement frame	

■ Yes - No



Hinge with spring

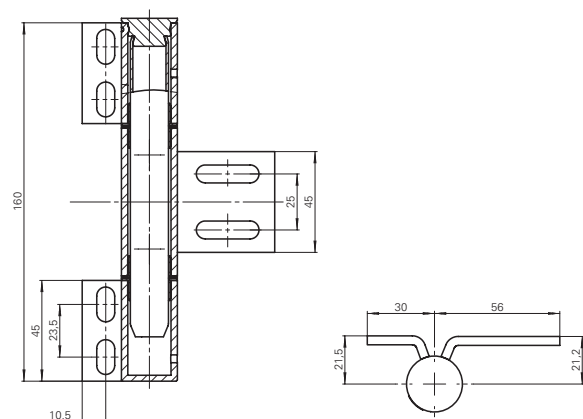
ECO-Standard hinge three-part hinge to be screwed on, adjustable in height and side (3 mm)

Description:
ECO spring hinge / KO hinge set adjustable in height and side.

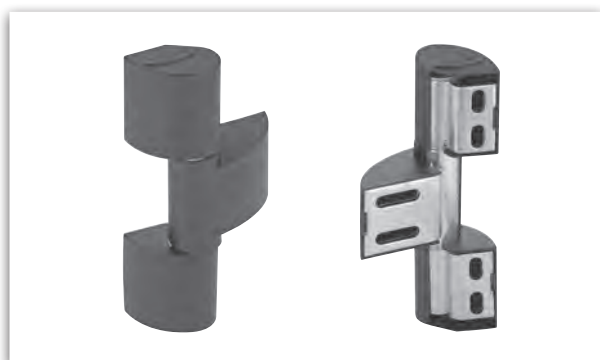
Special feature:
Nylon covers (black)

Usage:
For the use in doors with requirements in regards to smoke- and fire protection as well as in emergency and escape exits.

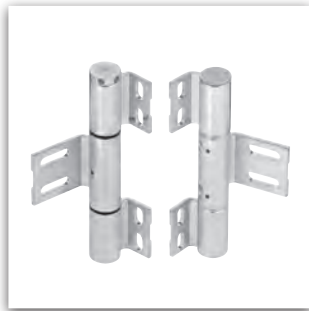
As construction hinge set (KO) also suitable for heavy doors.



KO hinge

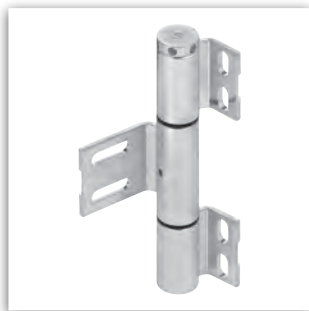


Laser-welded steel hinges ■ Hinge with spring / KO-Set 3 mm ■ Adjustable in height and side



F  Steel door

Hinge with spring / KO - Set 3 mm adjustable in height and side	Material		Dimensions	Article number
Standard-Set	Steel zinc plated	Set	Ø 25 x 160	Customize



F  Steel door

Hinge with spring 3 mm adjustable in height and side	Material		Dimensions	Article number
Hinge with spring	Steel zinc plated	Hinge with spring	Ø 25 x 160	Customize



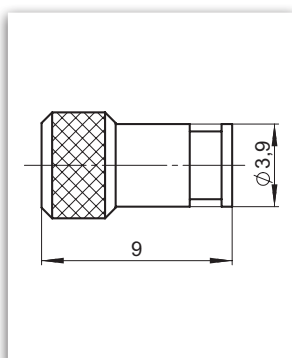
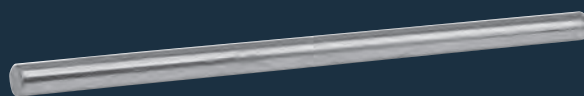
F  Steel door

KO hinge 3 mm adjustable in height and side	Material		Dimensions	Article number
KO hinge	Steel zinc plated	KO-Band	Ø 25 x 160	Customize

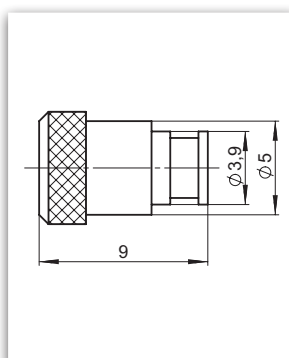
Locking pin



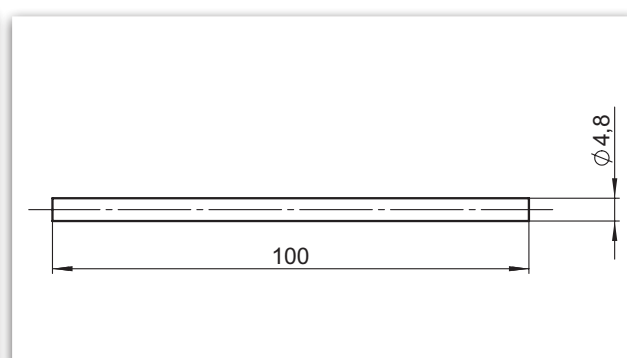
Spring pin



3 mm



4 mm



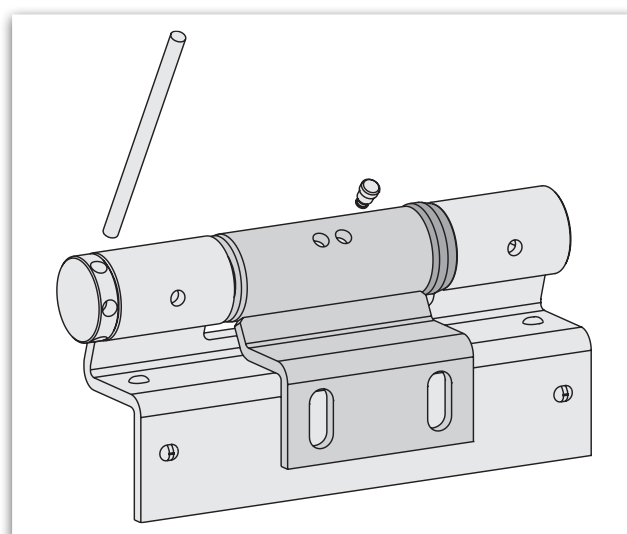
Locking pin	Article number	Material
Locking pin 5 x 9 mm for 3 mm material thickness	90031443	Steel zinc plated
Locking pin 6 x 9 mm for 4 mm material thickness	90031343	Steel zinc plated

Spring pin	Article number	Material
Spring pin 4,8 x 100 mm	93031643	Steel zinc plated

Tensioning and fixing of spring hinges

Fire-protection doors are equipped with one spring hinge and one KO hinge. In order to dismantle the door leaf, the hinge bolts have to be expelled to the door centre. When spring hinge is on tension, the **locking pin** has to be removed first.

If you want to put tension on the spring hinge, you have to enter the **spring pin** in one of the drill holes of the spring hinge head (when door is closed). Turning the split pin away from the door leaf puts tension on the spring. Putting the **locking pin** into one of the drill holes of the middle hinge roll, holds the position. The pre-tension has to be adjusted in that way that the door leaf is closing independently from an opening angle of approx. 30°.





ECO Hinge Technology

Defying the laws of leverage

Good hinges ensure that doors open the way we expect them to. They define the fulcrum - and thereby the mobility of the door - and give the door leaf a solid support.

Door hinges must be precisely coordinated to the dimensions of a door - to its measurements, weight, type of mounting and location. They are not just hard-wearing components of a door. ECO Schulte can look back on decades of experience in the manufacture of hinges. ECO hinges are premium products that comply with the standard **EN 1935**. They bear the CE mark and are tested in the highest standard class (14).

ECO Schulte GmbH & Co. KG
Iserlohner Landstraße 89
D-58706 Menden

Telefon: +49 2373/92 76-0
Fax: +49 2373/92 76-40

info@eco-schulte.de
www.eco-schulte.de

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