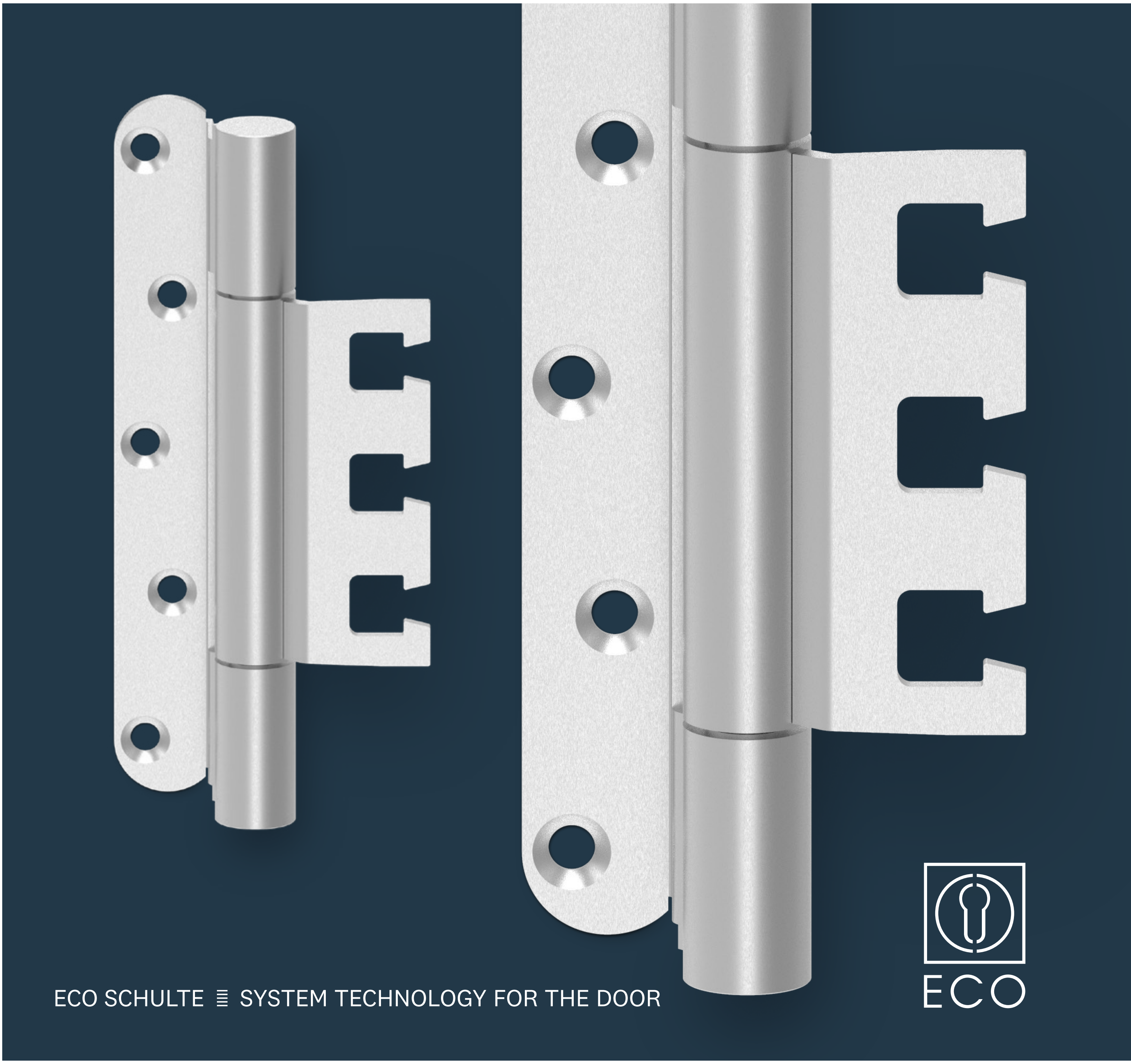
Door hinges

Technical manual



ECO SCHULTE ≣ SYSTEM TECHNOLOGY FOR THE DOOR

ECO

The whole is greater than the sum of its parts

Experience the ECO Schulte system – we unite function and design with building safety.

Find out more

ECO Schulte – the system

Safety is integral

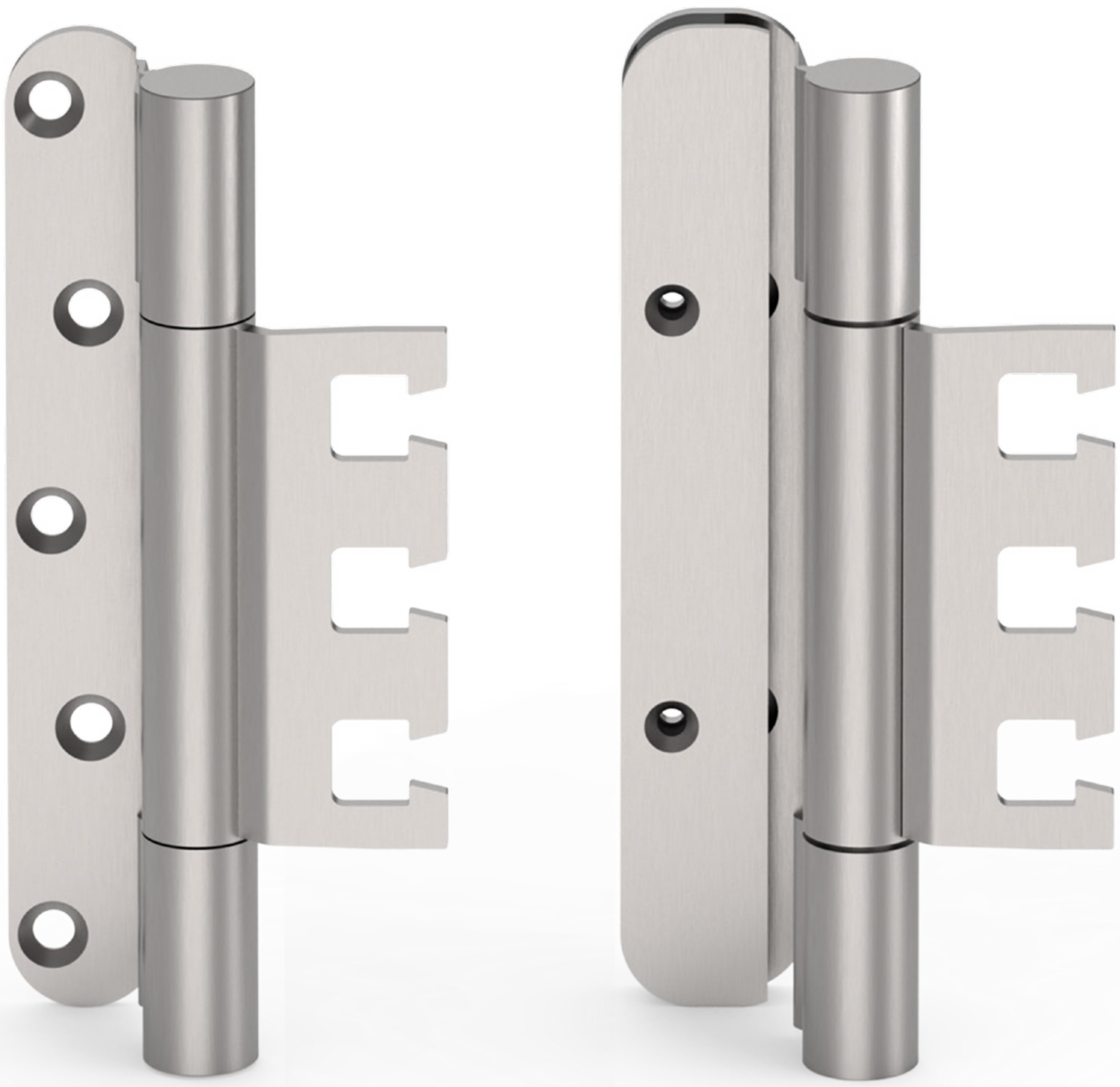
We are committed to door technology. We have adopted a holistic approach in this field: ECO Schulte is one of the few system providers worldwide.

We work closely with partners in industry and trade. Together, we coordinate optimized products and technologies. This enables us to guarantee the highest possible functionality and safety.

We offer a complete product range, including door closers and hinges, locks and handles, mechanics and automation.

Products from ECO Schulte guarantee a perfectly balanced interplay of all elements of the door. We consider the door to be a complex security system.

ECO Schulte
Hinges



ECO

ECO OBX Horizon hinges

Premium products of the highest class

More than the EN 1935 standard

ECO OBX Horizon hinges have the CE mark, have been tested to the standards of the highest hinge class (14) and **even go above and beyond the requirements of the EN 1935 standard** in a number of aspects, such as: The **load-bearing capacity** of the ECO OBX Horizon hinges is up to 200 kg per hinge pair – that exceeds the highest door weight required by the class 7 standard by 25 per cent.

Our patent

We use lasers to weld this most underrated door component. The automated, innovative production technology allows for minimum tolerances and gap dimensions, guaranteeing secure functionality for the life of the product.

OBX Horizon
Maintenance-free hinges

eco-schulte.com/en/obx-horizon-door-hinges

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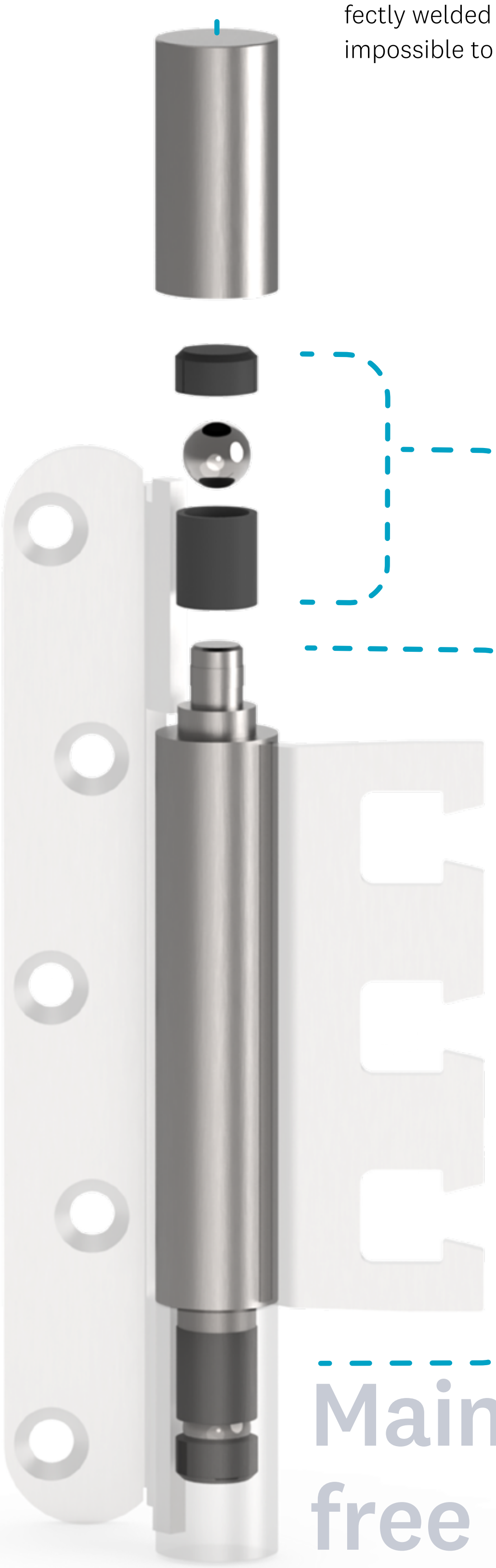
Perfectly closed

Each ECO OBX Horizon hinge is a closed system. The perfectly welded hinge knuckle without a cover head makes it impossible to pry open the closed hinge knuckle.



Ball bearing permanently free from play

Our ECO OBX Horizon hinge sets benchmarks for wooden doors – with a patented ball bearing that is free from play.

Bearing
Each knuckle moves up and down on a steel ball; the steel balls are mounted in high-strength nylon cases. These bearings are wear-free and ensure the door will move smoothly. They control the axial and radial forces reliably and permanently.

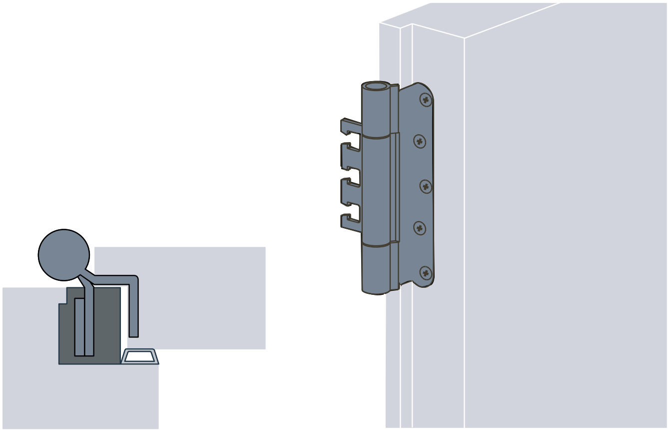
Pin fixation not required
The integrated axis is permanently mounted. Pin fixation is not necessary.

Maintenance-free
Grease and oil residue on visible components is now a thing of the past. ECO OBX Horizon hinges move incredibly smoothly.

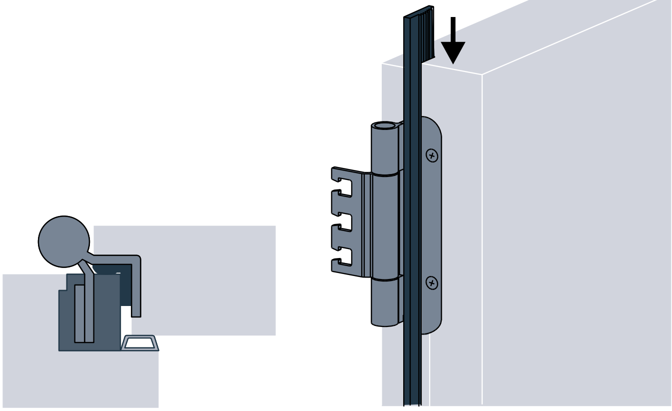
Maintenance-free and free from play

For all door stops

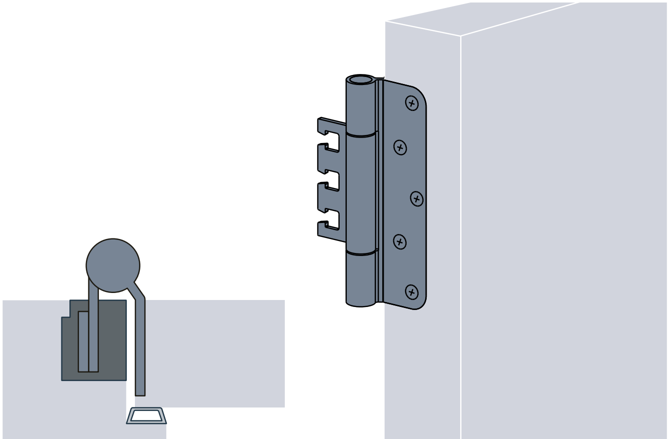
Technical, structural and aesthetic requirements determine the shape of the door leaf edges – and we always have the perfect hinge.



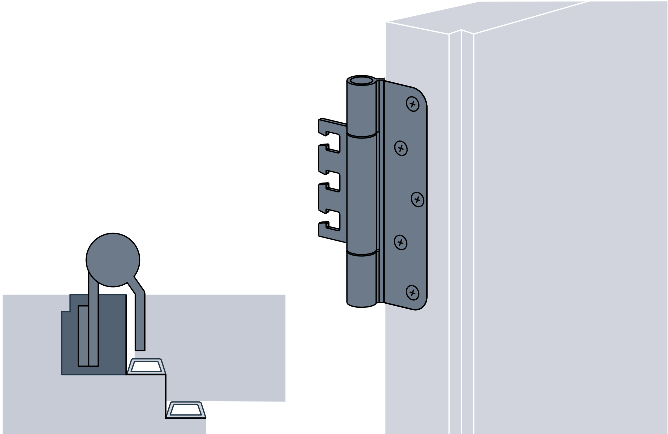
Rebated door



Rebated door with leaf seal



Flush-closing door



Flush-closing door with rebate

ECO Horizon door hinges are designed for heavy loads

Door hinges not only bear the weight of the door itself, but much higher loads as well, depending on where they are used. In schools and nurseries, for instance, day-to-day use involves frequent opening of doors, door slamming and exceptional stresses.

In such situations, conventional hinges can quickly reach their load limit if they are only designed to handle the door weight.

ECO Horizon hinges, on the other hand, go above and beyond the standard in a number of ways.
They have a closed, laser-welded hinge knuckle which prevents the knuckle bending open. We haven't compromised on the material thickness of the hinges either.

Load-bearing capacity

200 kg

Made-to-order industrial hinges for steel doors

We offer door manufacturers and processors an extensive range of individually developed hinges for steel doors – protected by German patent 102008049740.1 and European patent 09008617.4.

We develop and produce these hinges for series production according to our customers' precise specifications. Our most advanced OEM solution is ECO GENIUS LHA, an industrial hinge manufactured using laser welding technology.

Laser welding technology allows for precise, high-strength and minimally visible weld joints. It unites exceptional precision in manufacturing with a high load-bearing capacity.

The fact that the height of the hinge can be adjusted with a conventional Allen key also makes installation easier.

Hinge designed as spring hinge

Product highlights

- Frame and leaf parts available separately
- Set comprising: spring hinge and standard hinge (KO hinge) that supports the closing force of the door
- Various material thicknesses (3, 4 or 5 mm)
- Flexible installation
- Flexible tools for flexible manufacturing approach

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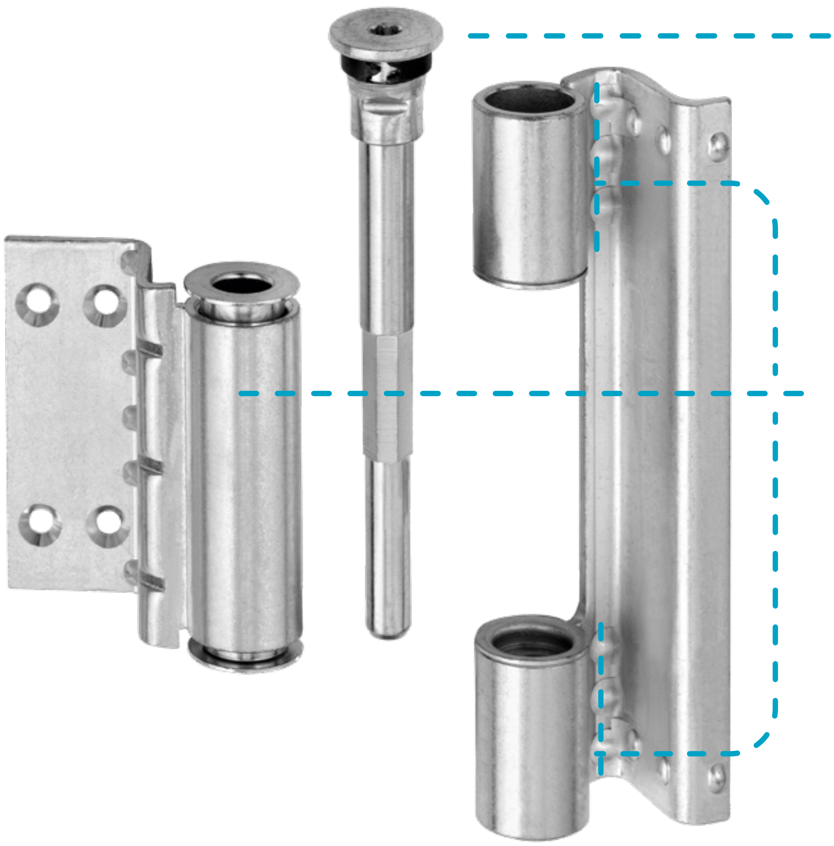
LHA
‘Laser hinge adjustable’

Laser-welded and height-adjustable



Easy height adjustment with Allen key

Installation benefit: mortised knuckle

Precise, high-strength and minimally visible laser-welded joints

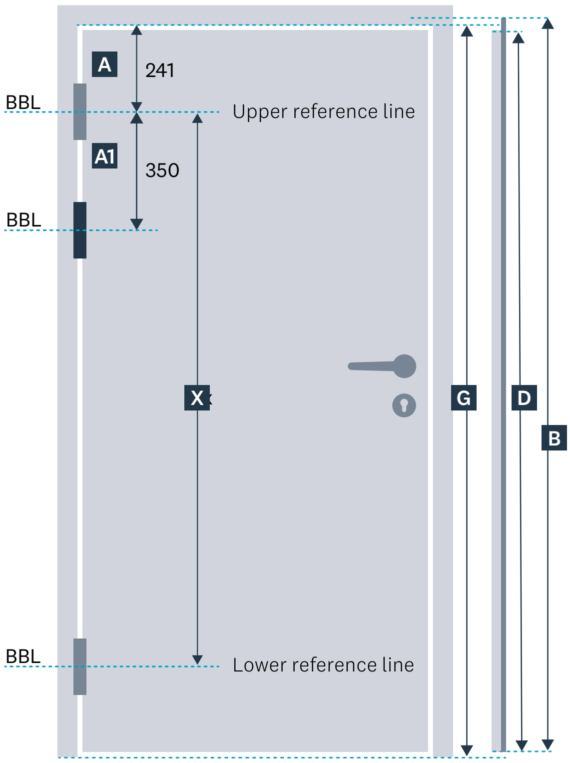
Contents

Hinge technology

Hinge positioning
Interior doors

ECO

Hinge reference line in accordance with DIN 18268 for standardised doors according to DIN 18101



The hinge reference line in accordance with DIN 18268 is the defined line of a door hinge that sits at a specific distance from the top edge of the door rebate and from the reference edge of the frame rebate.

Only when the hinge reference line is precisely defined for the upper and lower door hinge can the door leaf, door hinge and door frame work in perfect interplay with one another. This reference line allows industrially manufactured doors and frames to be produced separately.

The hinge reference line is used as a measurement regardless of the hinge type or manufacturer.

Key

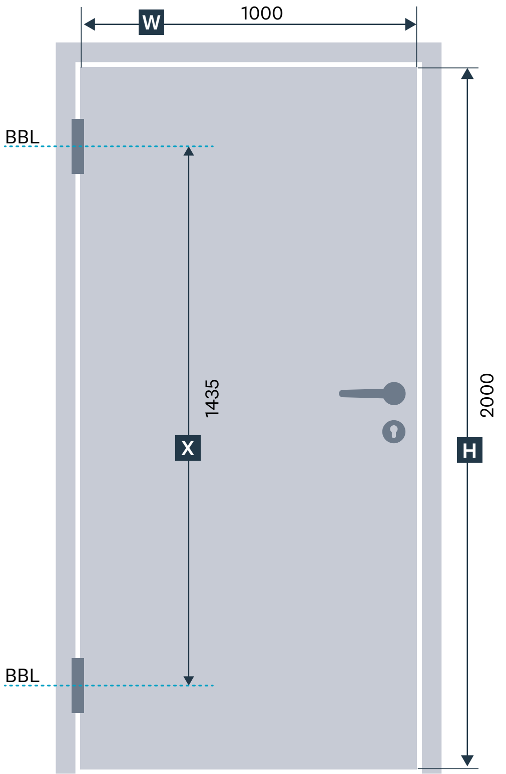
A	**Height of upper reference line to frame rebate** is defined at **241 mm as standard**
A1	**Distance of third hinge to upper reference line** is defined at **350 mm as standard**
B	**Door leaf exterior dimensions for rebated doors** (standardised size, rebated doors)
D	**Door leaf exterior dimensions for flush-closing doors and rebate dimensions for rebated doors** (standardized size, flush doors)
G	**Height in frame rebate or lower edge to upper frame** (upper reference edge) **Height of G deviates** Measurement X also applies to deviating values in the table of limit values
X	**Hinge gap between the hinge reference lines for the upper and lower hinge**

Heights (mm) for door leafs and frames

B	D +2/0	G 0/-2	G deviates	X ±0.5
1610	1597	1608	1546 to 1670	1060
1735	1722	1733	1671 to 1795	1185
1860	1847	1858	1796 to 1920	1310
1985	1972	1983	1921 to 2045	1435
2110	2097	2108	2046 to 2170	1435
2235	2222	2233	2171 to 2295	1685
2360	2347	2358	2296 to 2420	1810
2485	2472	2483	2421 to 2545	1935
2610	2597	2606	2546 to 2670	2060
2735	2722	2733	2671 to 2795	2185

Source: DIN 18268/DIN 18268

Hinge load factor
Basics



Basics of choosing hinges

When selecting a hinge, people often equate the load with the door weight alone. However, the actual load on the hinge can be many times the weight of the door, depending on a range of differen factors.

Consequently, an additional reserve load should always be taken into account in any calculations. Exceptional loads often occur in public buildings such as nurseries and hospitals, as the doors are opened frequently and are subjected to unpredictable stresses.

A properly measured, professionally designed stop in accordance with the ECO Schulte mounting instructions is always required.

Reference values

W	**Door leaf width:** 1000 mm
H	**Door leaf height:** 2000 mm
X	**Hinge gap:** 1435 mm

Reference data

The load values indicated for our hinges are based on a maximum door weight. Additionally, the factors listed below, which impact the load on the hinges, must be taken into account individually.

Factors that impact hinge load

- Location of door (residential building, public building, school, public administrative office, barracks, nursery, etc.)
- Door dimensions (extra-wide door, for instance)
- Alignment of the hinges
- Doors that open to the outside (wind load)
- Type of material
- Frequency of opening
- Installation of the hinges
- Door stop
- Door closer
- Swing leaf door operator
- Door coordinator
- Wall reveals, etc.

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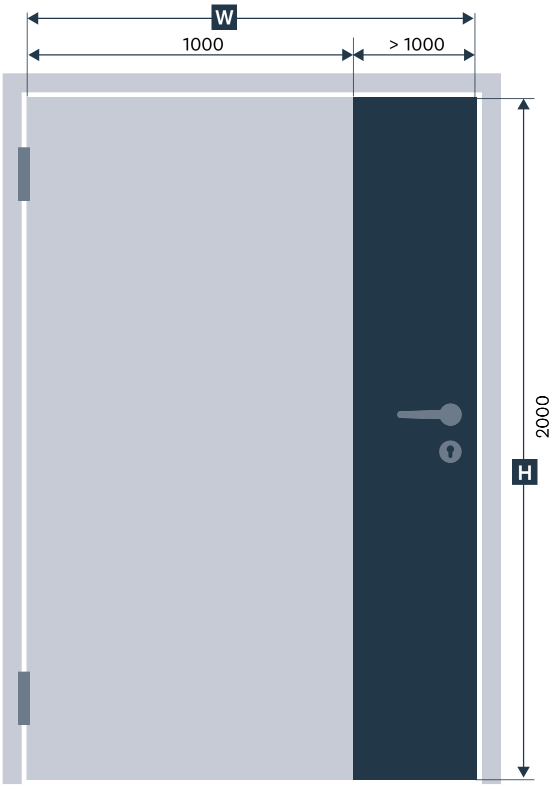
Hinge load factor
Extra-wide doors



The impact of extra-wide doors

The load values are generally based on a maximum door weight and a door (1000 x 2000 mm) fastened with two hinges (or sometimes with three hinges).
Please note that the load on the hinges begins to increase disproportionately from a door width of 1000 mm.

Increasing the door weight

$$(2-(^{H}/_{B}))\times 100\%$$

a) Height of the door divided by the width of the door = H/W
b) (Factor 2 - H/W) x 100% = increase in the door weight in %
Sample calculation:
Door leaf height 2000 mm
Door leaf width 1100 mm
a) $^{2000}/_{1100} = 1.82$
b) 2 – 1.82 = 0.18 x 100% = increase in the door weight of 18%

Key

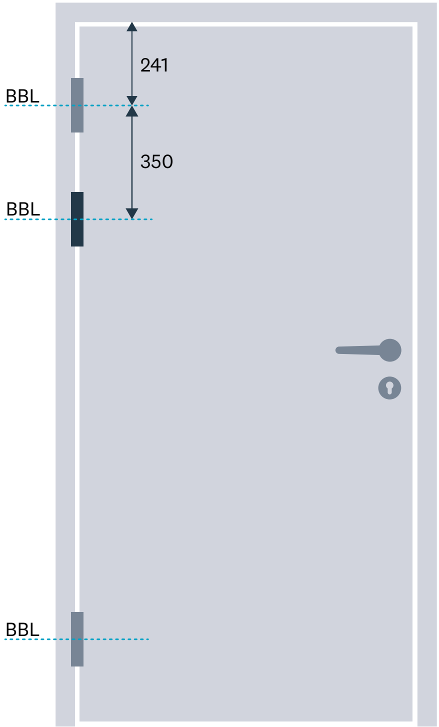
W	**Door leaf width**
H	**Door leaf height**

Additional weight for extra-wide doors

H mm	W mm	Factor	% increase in door weight
2000	1000	2	0
2000	1050	1.90	10
2000	1100	1.82	18
2000	1150	1.74	26
2000	1200	1.66	33
2000	1250	1.60	40

Source: DIN 1935:2002, Appendix D

Hinge load factor
Third hinge

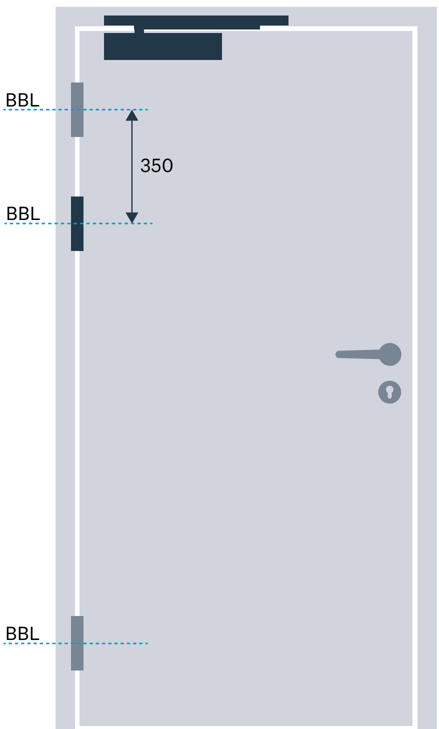


A third hinge influences the load value of doors

Positioning in the centre:
The third hinge is frequently placed in the centre between the two outer hinges to create an aesthetic look and to ensure that the sealing pressure is evenly distributed.

Placement in the upper third:
In the case of extra-wide doors (> 1000 mm) or increased lever action on the door, the upper hinge requires additional support. In such situations, the third hinge is positioned in the upper third of the door. This increases the load value. The DIN 18101 standard recommends fastening the third hinge 350 mm below the upper hinge.

Additional support:
A third hinge not only increases the load value; it also provides support. This is particularly important in situations where the door is subject to additional stresses, due to door closers or heavy traffic, for instance.



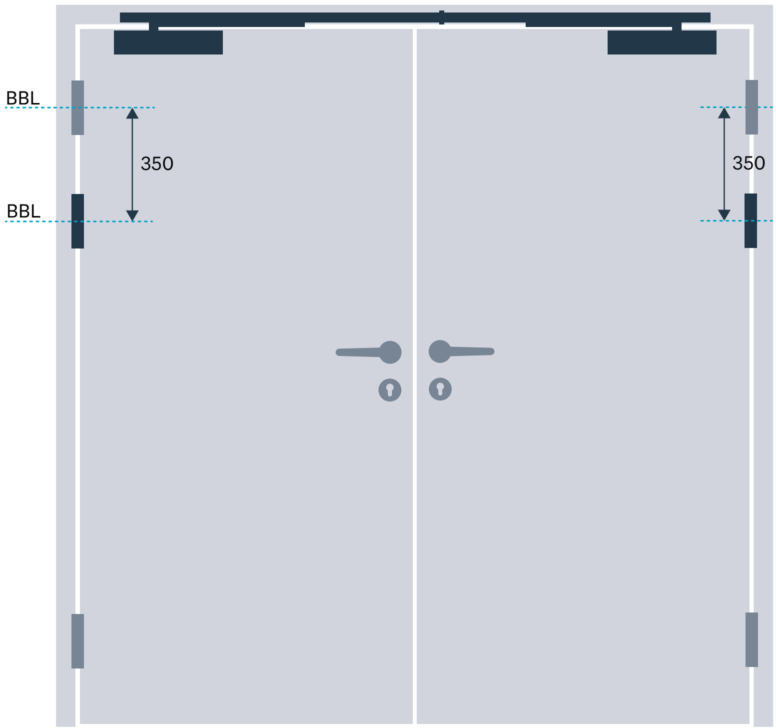
High traffic

For doors that are used frequently, we recommend installing an additional hinge in the upper third.

Door closer

In doors with overhead door closers, the effective door weight increases by 20 per cent. Door closers with back-check increase the effective weight by a whopping 75 per cent. In such cases, we recommend a third hinge in line with EN 1935.

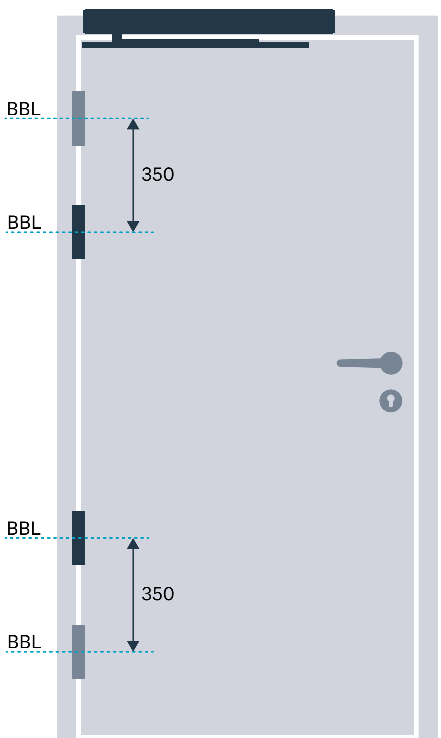
Correct adjustment of the door closer is essential for ensuring that it continues to function properly over the long term.



Door coordinator

When a door coordinator is used on double-leaf doors, a damped locking mechanism must be installed in the active leaf. This is the only way to prevent the forces from being fully transmitted to the hinges.

In this case, we recommend placing a third hinge in the upper third of the door.



Electric motor drives for doors

When using a swing leaf door operator, we recommend installing a total of four hinges, with one pair at the top and one at the bottom. The distance between the hinges in a pair should not exceed 350 mm.

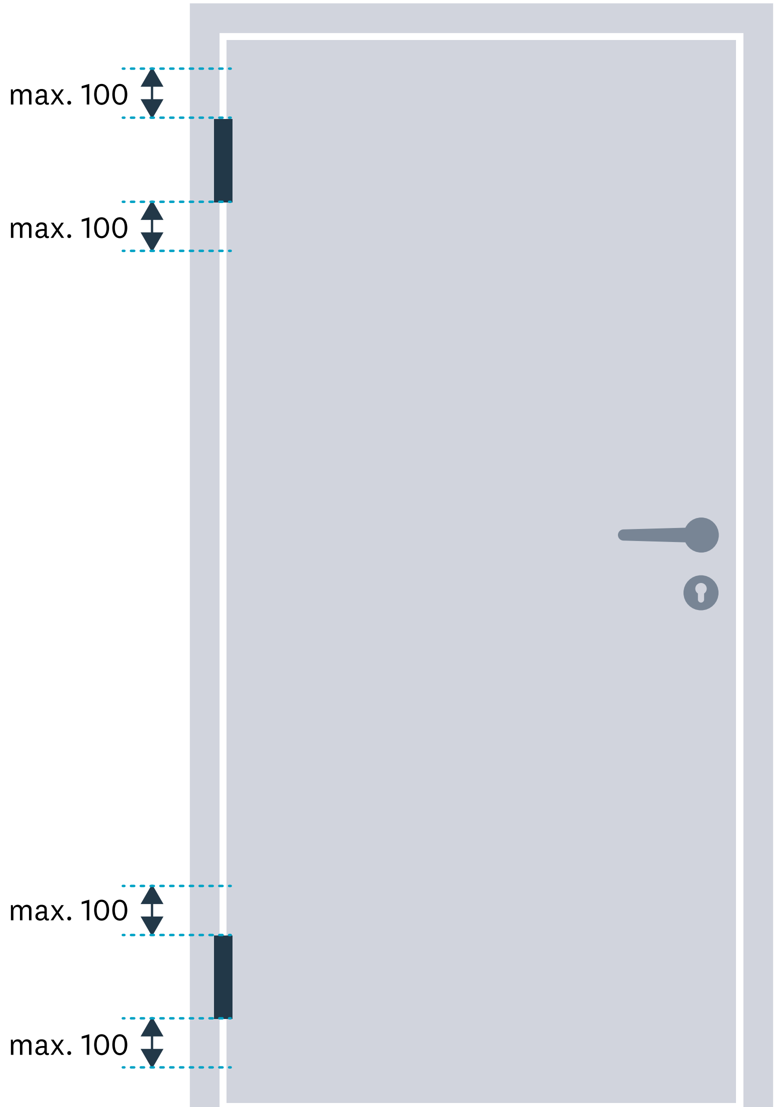
Hinge load factor
Frame

Proper, professional frame fixing

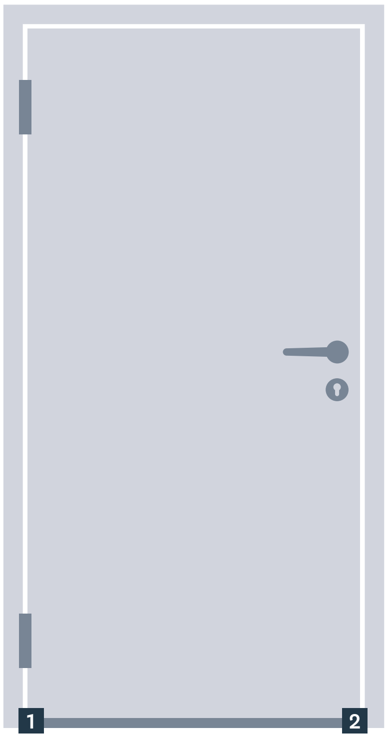
Proper, professional installation of all components is absolutely necessary in order to achieve the maximum load value of a door hinge. The manner in which the door element is fixed to the wall is particularly important.

Closed frames made of steel, aluminium or wooden materials are often intrinsically highly unstable. Close attention must be paid to how the frame is fixed to the masonry or to the substructure here.

If a door weighs more than 60 kg, using only foam in this area is not recommended.
In this case, a frictional connection must be established using a screw or dowelled connection – either through the hinge attachment or at a point a maximum of 100 mm removed from the outer edge of the hinges.



Hinge load factor
Floor

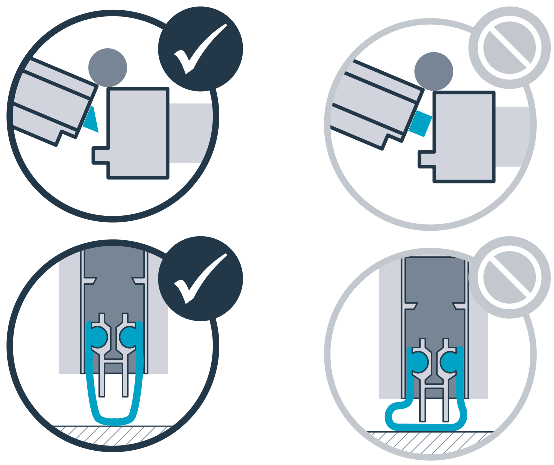


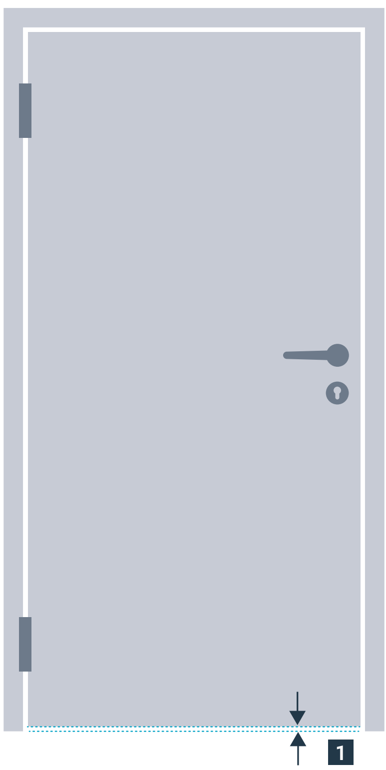
Floor seal

A floor seal must be adjusted properly in order to prevent unnecessary additional loads on the lower hinge. In particular, **pinching caused by the 'trigger' in the rebate area** and excessively **high pressure exerted by the seal against the floor** are factors that must be avoided.

1

2





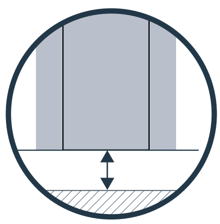
Floor clearance

Sufficient floor clearance must be allowed across the entire opening angle of the door. For interior doors, DIN 18101 stipulates a nominal size of **7 mm for the air gap** at the bottom of the door.

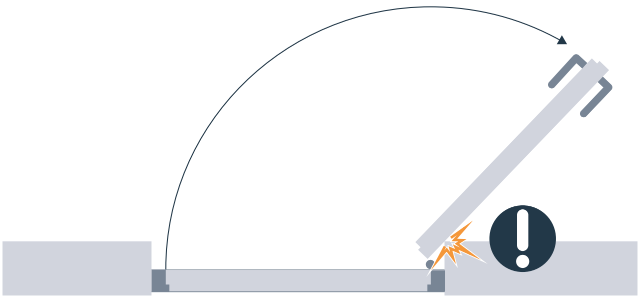
For uneven or sloping floors, it may be necessary to adapt the floor clearance accordingly. From a technical perspective, it is normal for a door to sag slightly across the entire length of the opening angle; this sag depends on the door width, door weight and a number of other factors.

Key

1	**Nominal size of the air gap at the bottom of the door** 7 mm



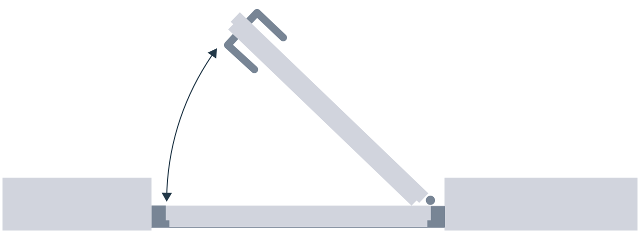
Hinge load factor
Position



Protruding wall reveals

Factors such as protruding wall reveals, etc., can exert leverage if the door opens too wide; these factors are not generally taken into account. In such cases, the weight of the door can quickly cause damage to the fixing, hinge, etc.

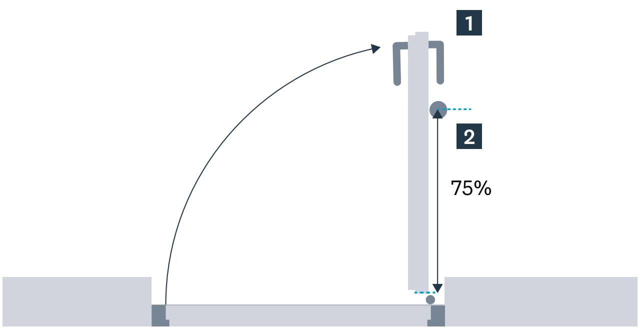
Recommendation – door closer with opening limiter:
such as ECO TS-61 G H + ÖB



Resting position

Cutting-edge ECO Schulte door hinges are equipped with high-quality nylon friction bearings. The bearing technology used in these hinges meets the highest standards in terms of durability, freedom from maintenance and ease of movement. This ease of movement can result in the door moving independently, depending on how and where the door is installed and the design and weight of the door leaf. Particularly in doors with multiple axes, it can be impossible to guarantee that a certain resting position – at 90° or 180°, for instance – will be maintained over the long term.

Recommendation – door closer with hold-open device:
such as ECO TS-61 with hold-open arm



Key

1	**Door stop**
2	**Distance to the door stop:** approx. 75%

Door stop

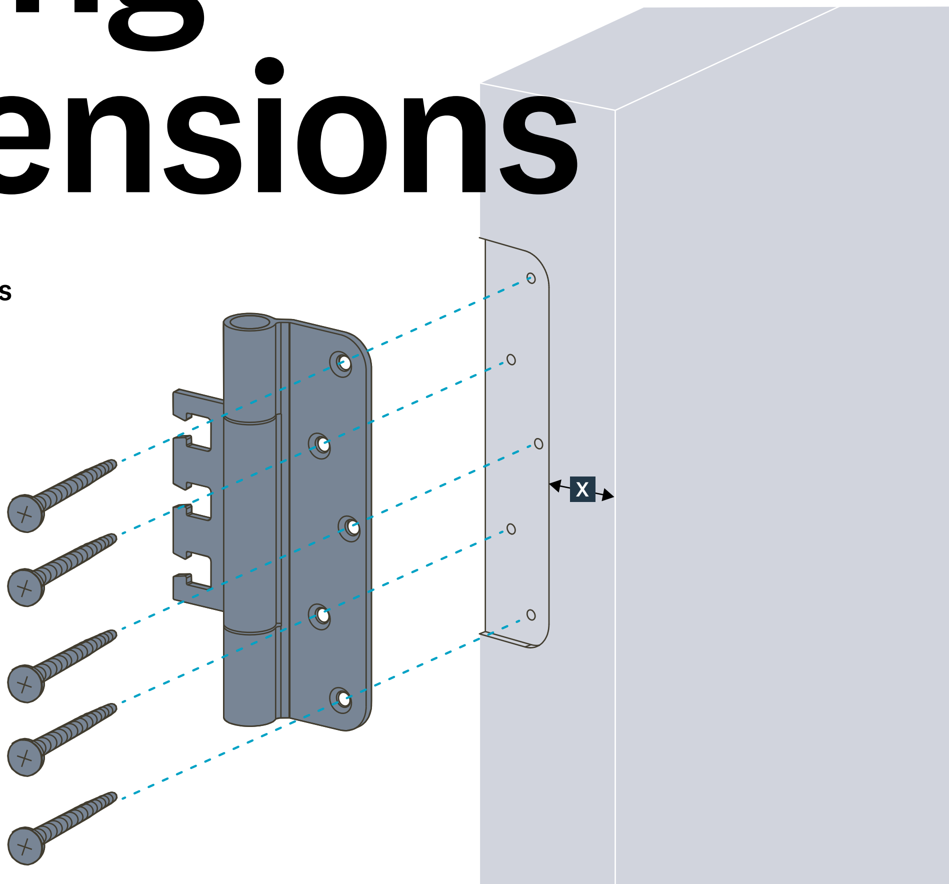
A door stop on the wall or the floor should be fitted at a distance of approximately 75 per cent of the door width from the hinge axis in the direction of the handle.

Recommendation – do not use a door stop;
select a door closer with an opening limiter:
such as ECO TS-61 GS H + ÖB

Calculating milling dimensions

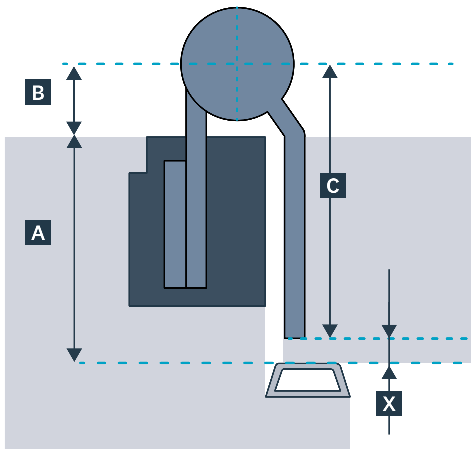
Precise milling dimensions

Flush doors have different designs. Consequently, the precise milling dimensions for the hinges must be determined in advance.



Key

A	**Frame rebate depth up to the level of the seal**
B	**Hinge gap to the frame face**
C	**Width of hinge leaf part**
X	**Milling width**



X=A+B-C

Milling width

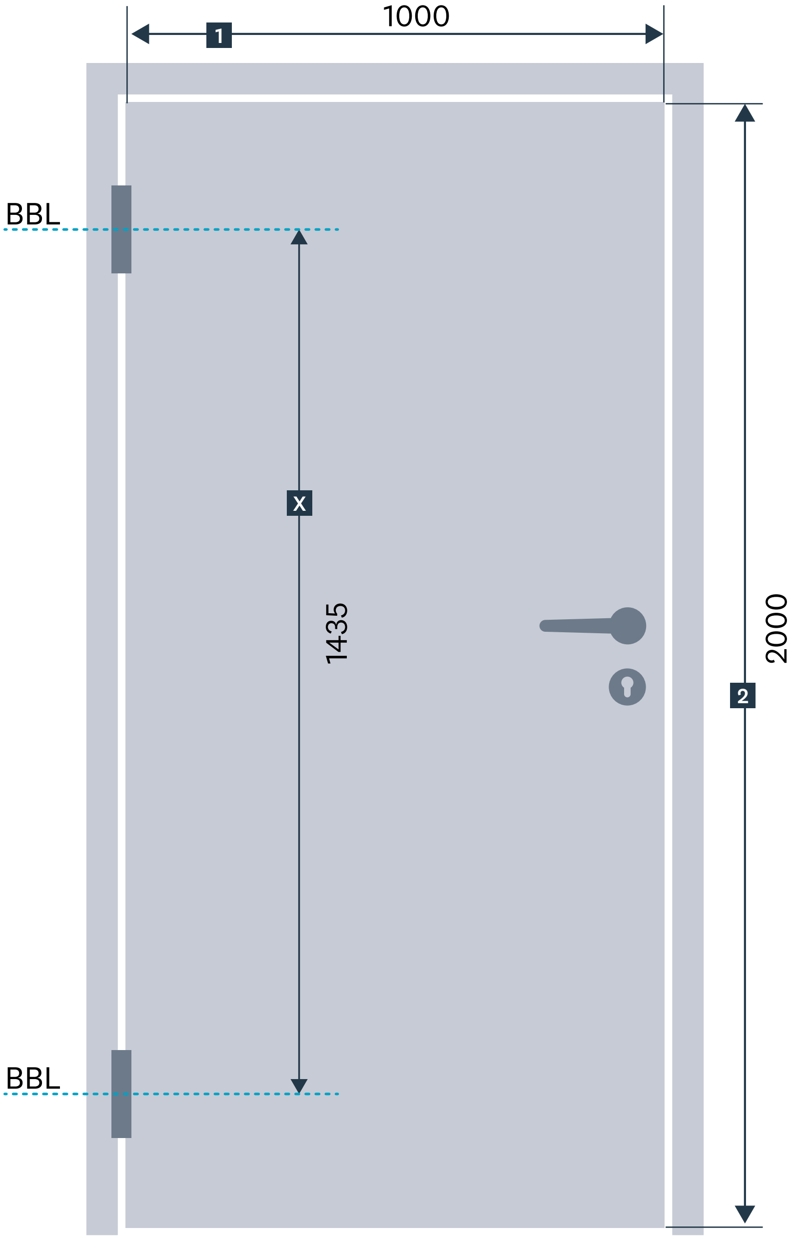
Load values

Reference door

Standardised door

Our reference values are based on a door leaf size of 1000 x 2000 mm, the use of two hinges and a hinge gap of 1435 mm. Different width and height ratios will result in different permitted load values.

The information provided in this handbook is only intended to serve as a guideline. If your load requirements are close to the limits listed here, please contact us.



For standardised door elements, the hinge gap measurements laid out in DIN 18101 should be observed.

DIN 18101

Reference values

1	**Door leaf width:** 1000 mm
2	**Door leaf height:** 2000 mm
X	**Hinge gap:** 1435 mm

02.2025

Load values
Tables

Permitted load values of single-axis hinges

The tables display the maximum load values of the individual hinge types. The interplay between the door width, door height and hinge gap has been taken into account.

Maximum load values 200 kg single-axis hinges

SD-H	DL-H	HG	SD-W 1000 / DL-W 985	1125 / 1110	1250 / 1235	1375 / 1360	1500 / 1485	1625 / 1610
2000	1985	1435	200	158	121	-	-	-
2125	2110	1435	200	180	142	-	-	-
2125	2110	1560	200	180	142	-	-	-
2250	2235	1685	200	200	162	129	-	-
2375	2360	1810	200	200	182	147	-	-
2500	2485	1935	200	200	200	165	-	-
2625	2610	2060	200	200	200	184	184	-
2750	2735	2185	200	200	200	200	200	-
2875	2860	2310	200	200	200	200	200	200
3000	2985	2435	200	200	200	200	200	200
3125	3110	2560	200	200	200	200	200	200

Key

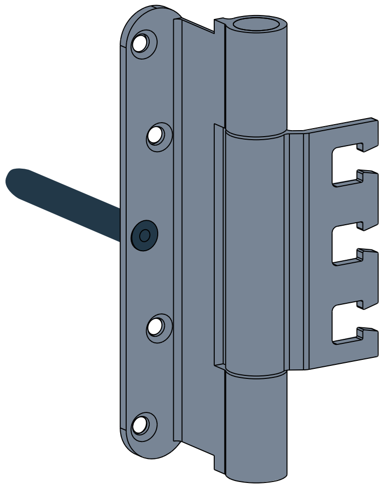
DL-H	Door leaf height
DL-W	Door leaf width
HG	Hinge gap
SD-H	Standard dimension height
SD-W	Standard dimension width
	Load value = reference value
	Reference value
	Load value < reference value

Maximum load values 160 kg single-axis hinges

SD-H	DL-H	HG	SD-W 1000 / DL-W 985	1125 / 1110	1250 / 1235	1375 / 1360	1500 / 1485	1625 / 1610
2000	1985	1435	160	126	97	-	-	-
2125	2110	1435	160	144	113	-	-	-
2125	2110	1560	160	144	113	-	-	-
2250	2235	1685	160	160	130	103	-	-
2375	2360	1810	160	160	146	118	-	-
2500	2485	1935	160	160	160	132	-	-
2625	2610	2060	160	160	160	147	147	-
2750	2735	2185	160	160	160	160	160	-
2875	2860	2310	160	160	160	160	160	160
3000	2985	2435	160	160	160	160	160	160
3125	3110	2560	160	160	160	160	160	160

Models

Horizon hinges

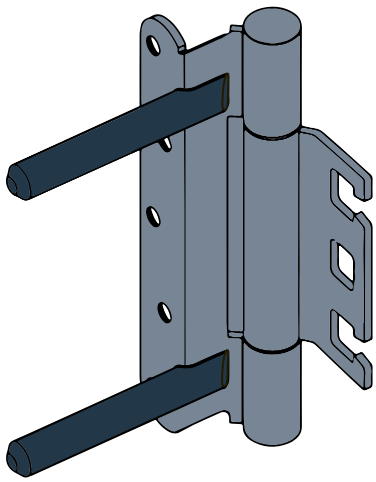


Load-bearing stud

The use of a load-bearing stud is recommended for additional stabilisation of the hinge plates, depending on the area of application, design and load on the door.

A load-bearing stud relieves the load on the fixing screws and stabilises the hinge plates in the door frame. This ensures that any forces are better absorbed and safely transferred into the stabilised frame.

Please keep in mind that a load-bearing stud only **provides additional stabilisation; it does not increase the load-bearing capacity**.

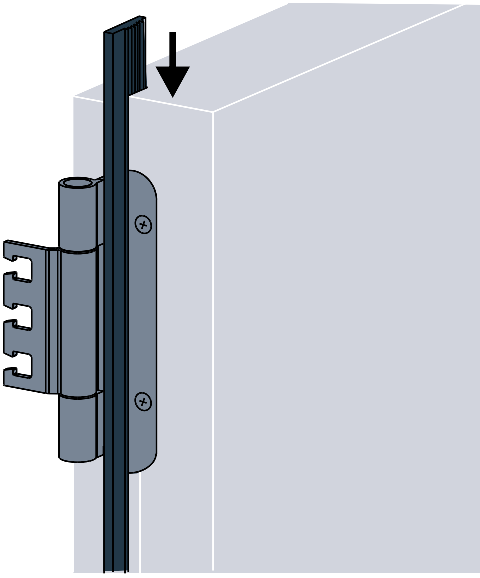


Safety bolt

We offer hinges that are suitable for burglar-resistant doors. Multiple tests with various door elements have proven the effectiveness of these hinges.

From resistance class 3 (in accordance with DIN EN 1627 et seq.) and up, the use of hinges with safety bolts is recommended. These welded-on bolts differ from bolted-on load-bearing studs in that they can absorb loads from levering tools in addition to providing extra stabilisation.

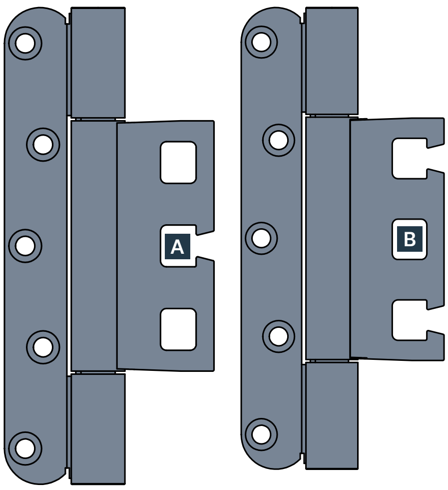
ECO



Leaf seals

ECO Schulte Horizon hinges are also available as an FD (= leaf seal) model for soundproof doors with a leaf seal in the door leaf.

These hinges have a groove for the continuous seal along the door overhang, so the seal does not need to be notched at the hinges.



Highly resistant RC hinges

The hinge plates, which are closed either on the outer edges or in the center, provide additional protection from break-ins and vandalism. It is impossible for them to slip out of the frame box.

Key

A	**RC A** (Resistance class A), closed on outer edges
B	**RC B** (Resistance class B), closed in the centre

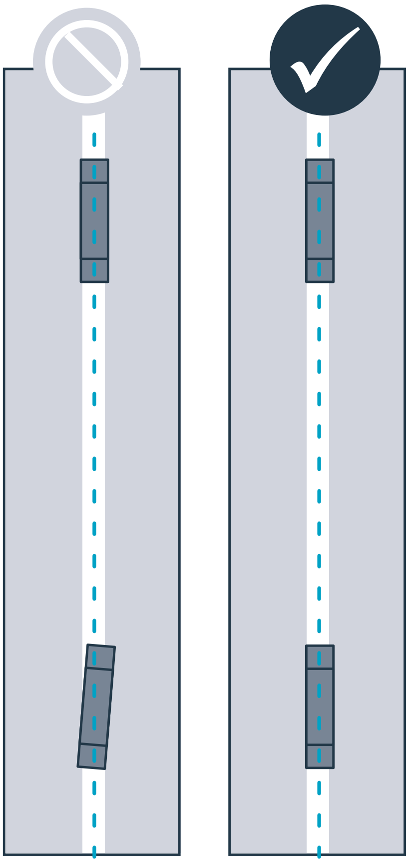
Fine-tuning

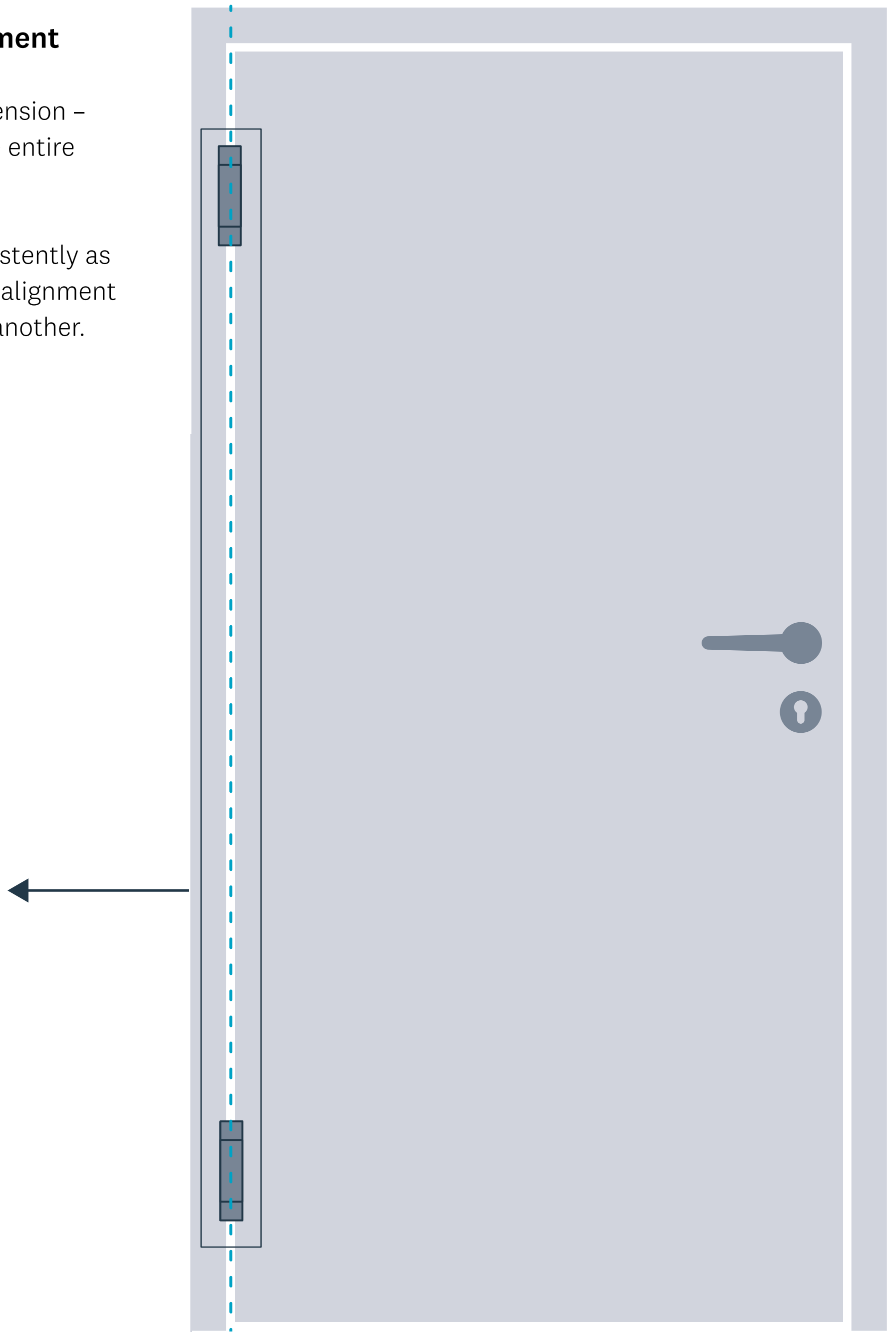
Proper alignment

Freedom from tension in alignment

All adjustments must be free from tension – both within a given hinge and for the entire door.

Adjustments must be made as consistently as possible so that the hinges are all in alignment – individually and in relation to one another.



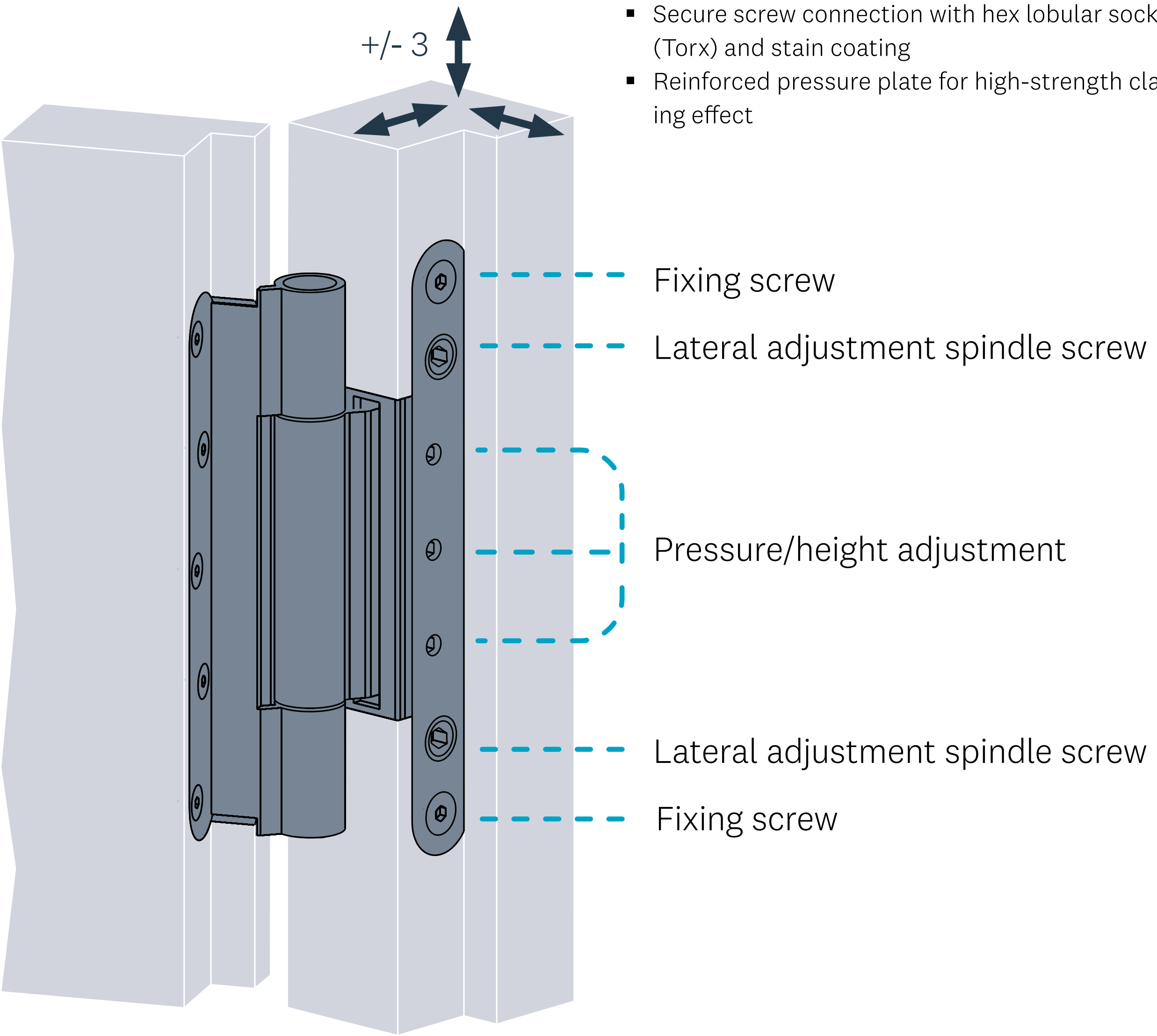


Fine-tuning
Settings

Optimally adjusted hinges

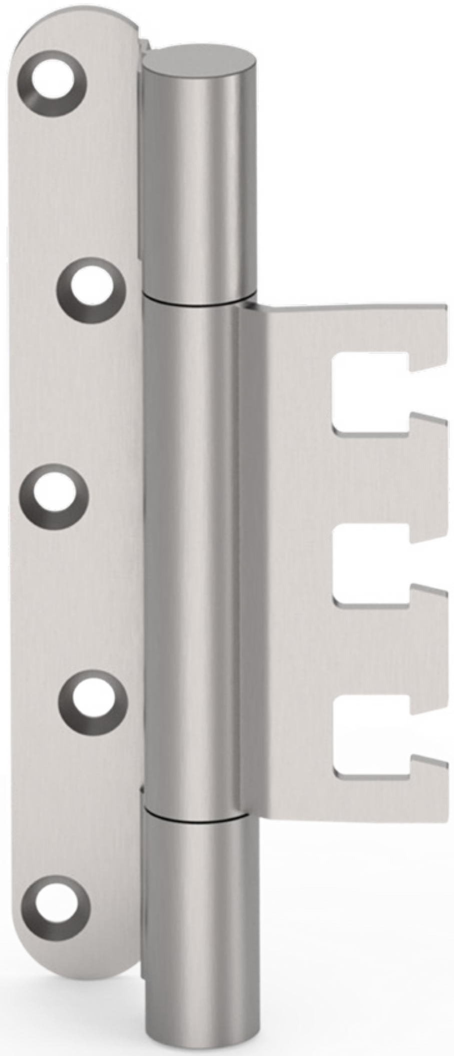
With the right ECO Schulte frame boxes, the door is very easy to adjust – three-dimensional adjustments are precise and smooth.

- Freely adjustable in three dimensions: +/- 3 mm lateral, +/- 3 mm height, +/- 3 mm pressure
- Optimum setting options thanks to stable adjustment spindles
- Secure screw connection with hex lobular socket (Torx) and stain coating
- Reinforced pressure plate for high-strength clamping effect



Standards guide

EN 1935



For single-axis door and window hinges

The European standard EN 1935:2002 'Single-axis door and window hinges' classifies hinges according to the type of stress and other relevant criteria, including the permissible torque, fire resistance, and weight of the door or window leaf.

The standard defines the requirements and testing procedures for single-axis screw-on hinges and hinges with fixed pins for entrance doors and windows. The requirements are summarised in an eight-digit classification key.

Standards at a glance

eco-schulte.com/en/service/standards-1

First digit			Second digit		Third digit		Fourth digit	Fifth digit	Sixth digit	Seventh digit	Eighth digit
Use class			Testing cycles for continuous operation		Mass of the test door		Fire resistance	Safety	Corrosion resistance	Protection	Hinge class
Use	Class	Application	Class	Number of test cycles	Class	Weight in kg	Class	Class	Class	Class	Class
Light	1	Window	3	10,000	0	10	0 or 1	1	0, 1, 2, 3, 4	0 or 1	**1**
Light	1	Window	3	10,000	1	20	0 or 1	1	0, 1, 2, 3, 4	0 or 1	**2**
Light	1	Door or window	4	25,000	1	20	0 or 1	1	0, 1, 2, 3, 4	0 or 1	**3**
Moderate	2	Door	7	200,000	1	20	0 or 1	1	0, 1, 2, 3, 4	0 or 1	**4**
Light	1	Window	3	10,000	2	40	0 or 1	1	0, 1, 2, 3, 4	0 or 1	**5**
Light	1	Door or window	4	25,000	2	40	0 or 1	1	0, 1, 2, 3, 4	0 or 1	**6**
Moderate	2	Door	7	200,000	2	40	0 or 1	1	0, 1, 2, 3, 4	0 or 1	**7**
Light	1	Window	3	10,000	3	60	0 or 1	1	0, 1, 2, 3, 4	0 or 1	**8**
Light	1	Door or window	4	25,000	3	60	0 or 1	1	0, 1, 2, 3, 4	0 or 1	**9**
Moderate	2	Door	7	200,000	3	60	0 or 1	1	0, 1, 2, 3, 4	0 or 1	**10**
Heavy	3	Door	7	200,000	4	80	0 or 1	1	0, 1, 2, 3, 4	0 or 1	**11**
Very heavy	4	Door	7	200,000	5	100	0 or 1	1	0, 1, 2, 3, 4	0 or 1	**12**
Very heavy	4	Door	7	200,000	6	120	0 or 1	1	0, 1, 2, 3, 4	0 or 1	**13**
Very heavy	4	Door	7	200,000	7	160	0 or 1	1	0, 1, 2, 3, 4	0 or 1	**14**

Classification key

EN 1935

Classification key
Example: ECO OBX- and OBN-18 hinges

1	2	3	4	5	6	7	8
4	7	7	1	1	3	1	14

1 Use class

Class 1: **Light use**
For use in buildings, houses or other residential areas, low frequency of use, strong intention to use with care, low risk of accidents or misuse

Class 2: **Moderate use**
For use in buildings, houses or other residential areas, moderate frequency of use, reasonable intention to use with care, some risk of accidents or misuse

Class 3: **Heavy use**
For use in buildings, high frequency of use, minimal intention to use with care, some risk of accidents or misuse

Class 4: **Very heavy use**
Hinges for doors that are subjected to frequent and heavy use

2 Long-term operability

Class 3: 10,000 Test cycles (window hinges only)
Class 4: 25,000 Test cycles (door and window hinges)
Class 7: 200,000 Test cycles (door hinges only)

3 Mass of the test door

Class 0: 10 kg
Class 1: 20 kg
Class 2: 40 kg
Class 3: 60 kg
Class 4: 80 kg
Class 5: 100 kg
Class 6: 120 kg
Class 7: 160 kg

4 Suitability for fire/smoke control doors

Class 0: Not suitable for use on fire/smoke control doors
Class 1: Suitable for use on fire/smoke control doors **(EN 1634-1)**

5 Safety – personal protection

Class 1: All hinges must meet the basic requirements in terms of safety of use, so class 1 is the only class here.

6 Corrosion resistance

In accordance with the classes laid out in **EN 1670**
Class 0: 0 h (No defined corrosion resistance)
Class 1: 24 h (Low corrosion resistance)
Class 2: 48 h (Moderate corrosion resistance)
Class 3: 96 h (High corrosion resistance)
Class 4: 240 h (Very high corrosion resistance)

7 Protection – burglary protection

Class 0: Not suitable for use on burglar-resistant doors
Class 1: Potentially suitable for use on burglar-resistant doors, depending on the assessment of how the hinges contribute to the burglary protection aspects of the burglar-resistant door in question

8 Hinge class

There are **14 defined hinge classes**, as shown in the table

Care instructions
Stainless steel

Stainless steel

Stainless steel is the term used to describe certain types of particularly corrosion-resistant and hygienic steels. The surface is non-porous and does not require additional sealing. It cannot chip, and microorganisms and dirt do not stick to it.

However, it still requires care and maintenance. Stainless steel has properties that make it an excellent material for an endless range of applications:

- High corrosion resistance,
- Heat resistance
- Full recyclability
- Food safety
- High material strength

This stainless steel (1.4301 (X5CrNi18-10), AISI 304, (V2A), SUS304) is resistant to water, water vapour, humidity, acids in food, and weak organic and inorganic acids. It has a very broad range of potential applications, including in the food industry, mechanical engineering, beverage production, the pharmaceutical and cosmetic industry, the manufacturing of chemical apparatuses, architecture, vehicle manufacturing, for household items, utensils, and appliances, for surgical instruments, and in cabinet and kitchen manufacturing.

This Cr-Ni steel is not suitable for applications in chlorinated environments, nor is it suitable for use in swimming pools or seawater.

General care

Stainless steel is easy to care for, but it does still require some degree of maintenance. It must be rinsed off regularly with water (ideally lukewarm) and wiped down with a soft cloth.

However, as a general rule of thumb, you should not use any abrasive cleaning agents. The milder the cleaning agents, the better. The cleaning agents must not contain hydrochloric acid, chlorinated ingredients, etc. Sticky food residue should be removed with water-based detergents; fats and oils can be cleaned off using special alkaline and/or acidic cleaning agents containing surfactants. Fatty or lipophilic pigments are generally easy to remove with a neutral or all-purpose detergent.

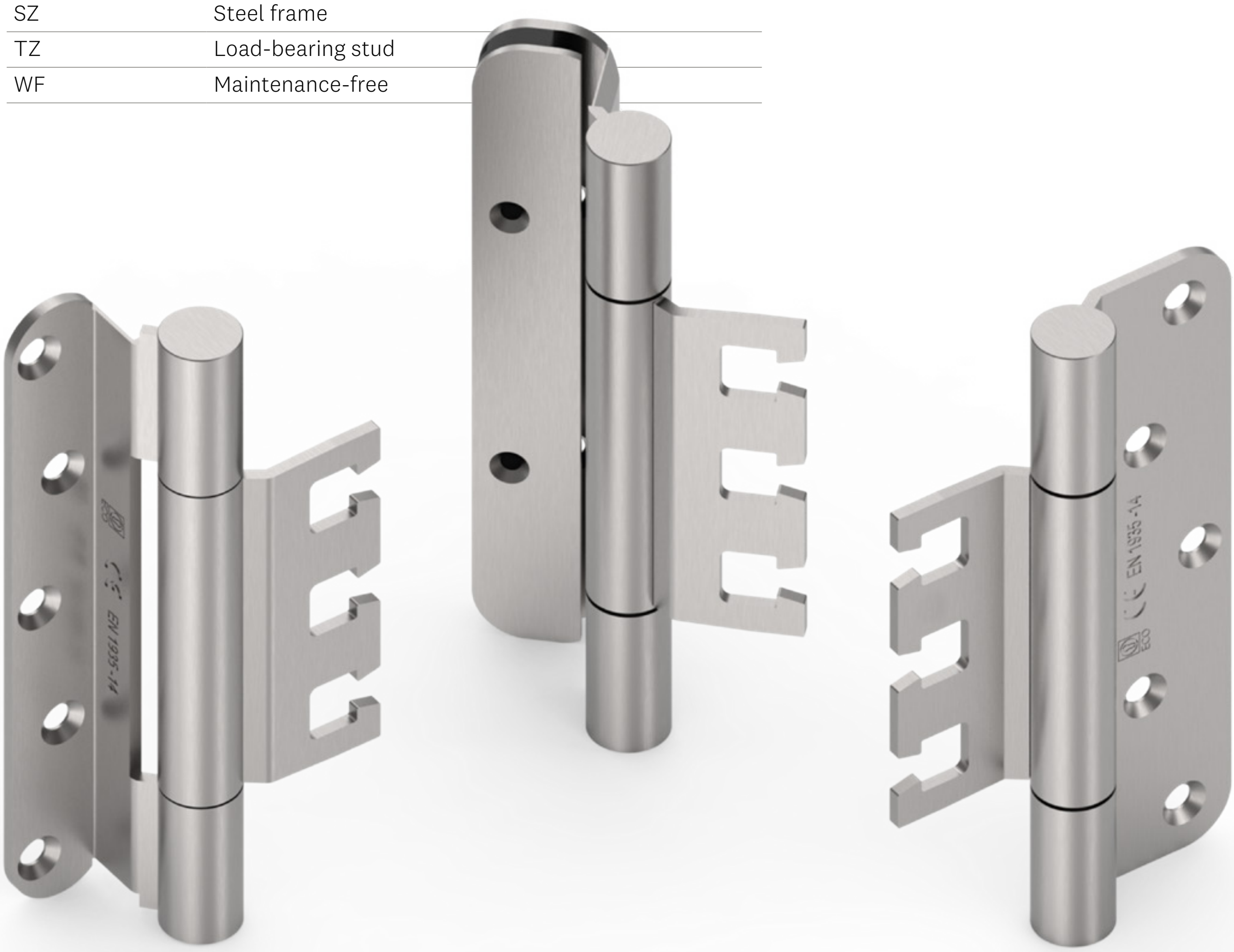
Stainless steel surfaces are easy to wash down, brush off or wipe clean with a damp cloth. However, please make sure to choose appropriate implements for manual cleaning. We recommend a microfibre cloth. Apply the stainless steel care product (such as stainless steel care spray) and leave it on briefly to allow it to take effect, then wipe off the surface with a cloth in the direction of the grain. If you need to clean coarse dirt off large surfaces, it is best to use brushes with natural bristles or special stainless steel brushes. Some nylon brushes contain abrasives, making these brushes unsuitable for stainless steel.

All stainless steel surfaces that are touched frequently need to be cleaned, disinfected and subsequently treated with stainless steel care products on a regular basis. Add detergent and disinfectant to the (ideally lukewarm) water.

02.2025

Abbreviations
Glossary

Abbreviation	Description/explanation
ER	Stainless steel, matt brushed
FD	Leaf seal
FZ	Casing frame
OBN	Object hinge for flush doors
OBX	Object hinge, fully adjustable in three dimensions
RC	Resistance class
RC-A	Resistance class A, hinge plates closed on outer edges
RC-B	Resistance class B, hinge plates closed in the middle
RR	Tubular frame, profile frame
Si	Securing stud
SZ	Steel frame
TZ	Load-bearing stud
WF	Maintenance-free



ECO reference project Motel One Berlin

The Motel One Berlin-Alexanderplatz is just a few steps away from the TV Tower, Berlin City Hall and Berlin Cathedral. The Alexanderplatz S- and U-Bahn station connects the hotel with Museum Island and the Brandenburg Gate, as well as with the different districts of the city. Alexanderplatz is emblematic of the diversity and contrasts of life in the big city.

The cultural diversity and urbanity of Berlin also characterise the style of the Motel One Berlin-Alexanderplatz. Only high-quality products were used for its construction; these fit seamlessly into the design concept and offer guests a high level of access convenience – in compliance with all current EN standards, of course.

ECO Schulte products were the perfect choice for this property. Our system technology is specifically designed for highly frequented, special-function doors. Our products combine elegant design, functionality and the convenience of easy opening.

ECO reference project Infinity Office Düsseldorf, Germany

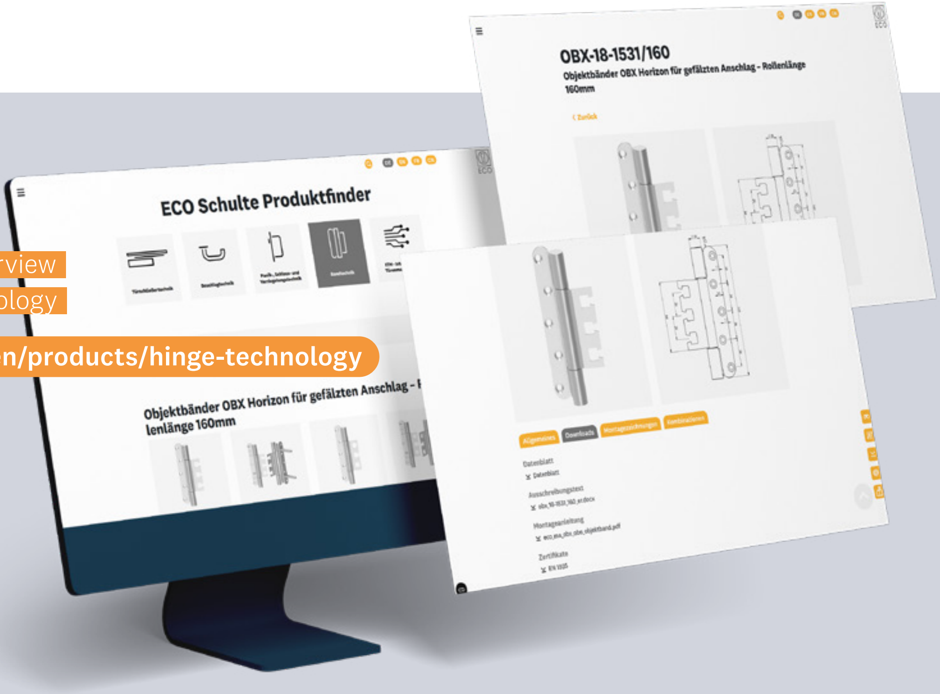
The Infinity Office on Düsseldorf's Schwannstraße, on the prestigious Kennedydamm, offers around 19,000 square metres of rental space on a plot spanning just under 8,000 square meters. What makes this building so special is its free-form structure in a figure-of-eight shape.

Here, modern architecture is linked with technical expertise: the building is designed to allow all users to concentrate 100% on their work.

The professional planning, advice and sampling from ECO Schulte were second to none, as was the holistic approach. All types of functional doors – both purely mechanical and automatic – could be implemented from the company's own product portfolio.

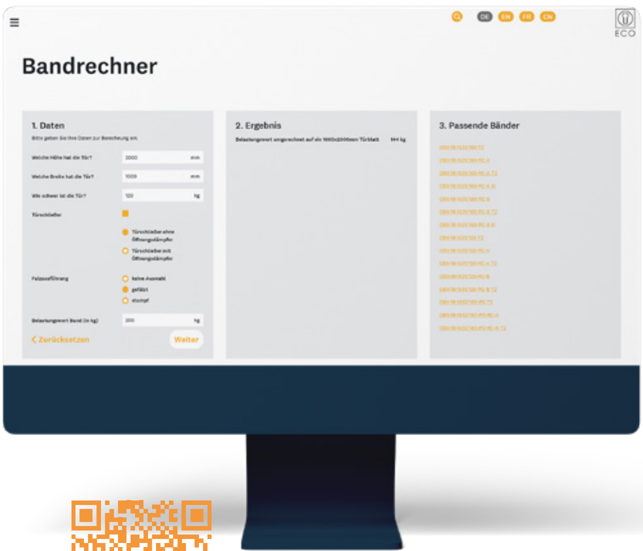
Discover more

Hinge product finder



Product overview
Hinge technology

eco-schulte.com/en/products/hinge-technology



Test our hinge
calculator for yourself

eco-schulte.com/en/service/hinge-calculator

eco-schulte.com/en/service/eco-toolbox

Test our
tools for yourself.

Toolbox

We offer the most important planning aids for door systems directly on our website:

ECO product finder – a direct route to the perfect product

ECO lock finder – a clear path to the right lock

ECO cable plans – no more tangled cables on the door

ECO excess pressure calculator – complex calculations made quickly and reliably

ECO hinge calculator – the perfect hinge every time

ECO Schulte support

Friendly assistance: Service and support are all part of our corporate culture.

Your contacts

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eco-schulte.com/en/service/customer-service-centre

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