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# **BOS** Best Of Steel

# **Technical Information**

### Key to abbreviations

AMB	= Overall width
AMH	= Overall height
BA	= Distance between hinges
BBL	= Hinge position
BE	= Foundation bedding
DH	= Handle height
FB	= Rebate width
FMB	= Rebate measurement width
FMH	= Rebate measurement

/H = Rebate measu height FT = Rebate depth

GT

PH PV

- = Total profile depth
- LDB = Clearance width
- LDH = Clearance height
- MR = Metre mark
- MW = Receiving opening
- OFF = Top level of finished floor
  - = Backbend (back)
  - = Backbend (front)

- RNB = Nominal wall opening width
- RRH = Nominal wall opening height
- SLDH = Sliding door clearance height
- SpV = Architrave (front)
- SpH = Architrave (back)
- TAB = Overall door leaf width
- TAH = Overall door leaf height

### **Profile key**

- A = Blind rebate frame
- B = Block profile
- C = Shadow groove; V shape
- D = Passage profile
- E = Corner profile
- F = Double rebate
- G = Counter profile
- H = Expansion joint frame
- I = Negative architrave/folded outwards
- J = Venetian blind case
- K = Transom bar
- L = Soffit
- M = Shadow groove; Z shape
- N = Shadow groove; U shape
- O = Interconnecting door profile
- P = Double acting door profile
- Q = Non-standard profile
- R = Semicircle radius
- T = Planar/sports hall profile
- U = Wrap around sprofile
- V = Total profile (in total depth)
- X = Negative shadow groove
- Y = Backbend with a double fold
- Z = 2 part, screwed in the rebate

- a = double back fold in the soffit
- b = door leaf side
- c = slanting
- d = seal
- e = one sided
- g = opposite door leaf side
- h = 180° backfold
- i = adjustable, without a fold
- j = adjustable, with fold
- k = adjustable, folded back
- m = central
- n = special rebate form
- o = without architrave
- p = buffer
- q = elliptical
- r = quarter circle radius
- s = flush
- u = rebated
- v = offset
- w = 2 part (split)
- x = multiple parts
- z = two sided or both sides

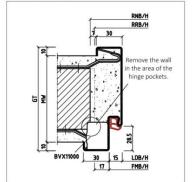


# The basics of steel frames

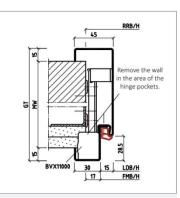
#### **DIN** measurement table

(All measurements given are in mm)				Overall door leaf measurement rebated doors DIN 18101		Overall door leaf measurement flush doors DIN 18101					
RRB	RRH	RNB	RNH	FMB	FMH	LDB	LDH	Rebated		Flush	
625	1875	635	1880	591	1858	561	1843	610	1860	584	1847
750	1875	760	1880	716	1858	686	1843	735	1860	709	1847
875	1875	885	1880	841	1858	811	1843	860	1860	834	1847
1000	1875	1010	1880	966	1858	936	1843	985	1860	959	1847
1125	1875	1135	1880	1091	1858	1061	1843	1110	1860	1084	1847
1250	1875	1260	1880	1216	1858	1186	1843	1235	1860	1209	1847
625	2000	635	2005	591	1983	561	1968	610	1985	584	1972
750	2000	760	2005	716	1983	686	1968	735	1985	709	1972
875	2000	885	2005	841	1983	811	1968	860	1985	834	1972
1000	2000	1010	2005	966	1983	936	1968	985	1985	959	1972
1125	2000	1135	2005	1091	1983	1061	1968	1110	1985	1084	1972
1250	2000	1260	2005	1216	1983	1186	1968	1235	1985	1209	1972
625	2125	635	2130	591	2108	561	2093	610	2110	584	2097
750	2125	760	2130	716	2108	686	2093	735	2110	709	2097
875	2125	885	2130	841	2108	811	2093	860	2110	834	2097
1000	2125	1010	2130	966	2108	936	2093	985	2110	959	2097
1125	2125	1135	2130	1091	2108	1061	2093	1110	2110	1084	2097
1250	2125	1260	2130	1216	2108	1186	2093	1235	2110	1209	2097
625	2250	635	2255	591	2233	561	2218	610	2235	584	2222
750	2250	760	2255	716	2233	686	2218	735	2235	709	2222
875	2250	885	2255	841	2233	811	2218	860	2235	834	2222
1000	2250	1010	2255	966	2233	936	2218	985	2235	959	2222
1125	2250	1135	2255	1091	2233	1061	2218	1110	2235	1084	2222
1250	2250	1260	2255	1216	2233	1186	2218	1235	2235	1209	2222

#### Non-standard frame similar to DIN 18111



#### 15ZBud, 2 part split



The structural wall opening measurement is the ideal measurement for installing the 15ZBud.

-Overall door leaf measurement rebated doors

4 Overall door leaf measurement flush doors

-

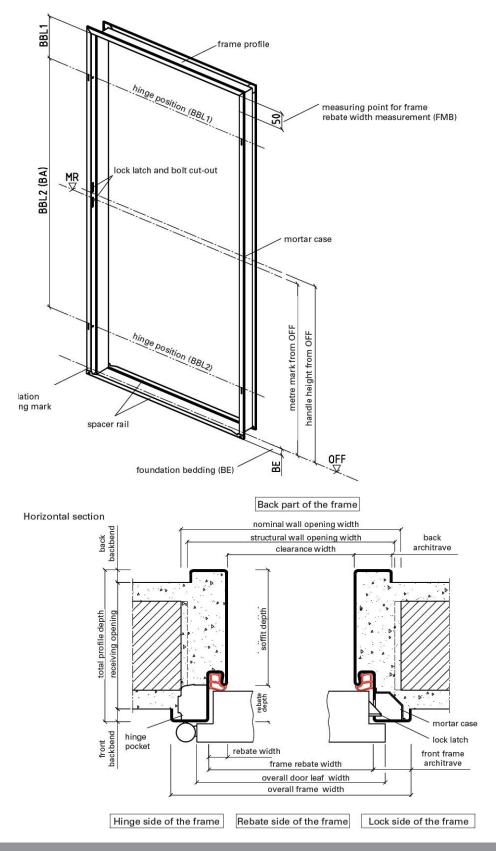
Key:	
RRB/H:	Structural wall opening width/height
RNB/H:	Nominal wall opening width/height
FMB/H:	Rebate width/height
LDB/H:	Clearance width/ height
GT:	Total depth
MW:	Receiving opening



# The basics of steel frames

# Outline of a wrap around frame

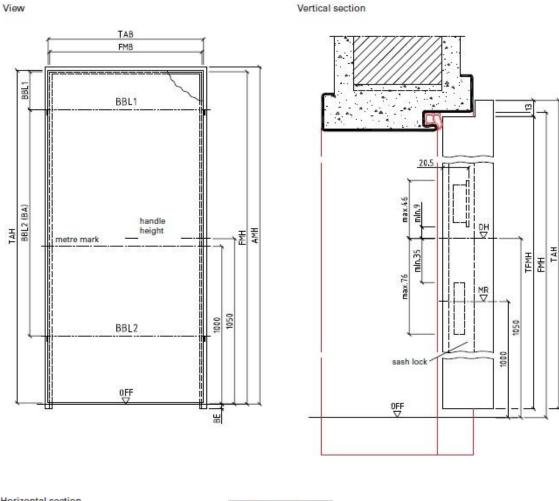
for brick walls with rebated door leaf (Uud)





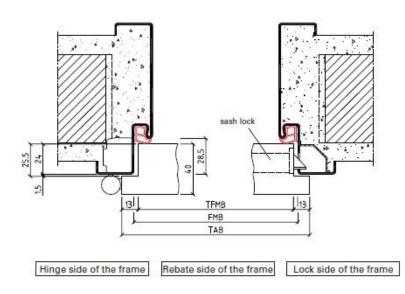
# The basics of steel frames

### Outline of a door leaf



Horizontal section

Back part of the door



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# Advantages of 2 part split frames in comparison to those with 1 part

Advantages in regard to the frame	1 part	2 part split
Screw connection not visible	-	$\checkmark$
Levelling anchor	-	$\checkmark$
Powder coating (final coating)	- *	$\checkmark$
No backfilling necessary**	-	V
Subsequent removal possible**	-	$\checkmark$
With various adjustment areas possible	-	$\checkmark$

Advantages in regard to the wall and floor	1 part	2 part split
Connection to virtually all wall types	-	$\checkmark$
Connection to narrow wall connections	-	$\checkmark$
Optimal installation of the marginal strip insulation in the wall jamb (sound protection)	-	V
Optimal fitting of a moisture barrier in the wall jamb	-	$\checkmark$
Optimal fitting of the floor covering in the soffit	-	$\checkmark$
It is not necessary to work the floor covering to the soffit of the frame	-	$\checkmark$
Suitable for standard structural openings	$\checkmark$	$\checkmark$
Installation between 2 walls using a substructure supplied on site	-	$\checkmark$
Solution for exposed masonry and concrete without damaging the wall	-	$\checkmark$

Perfect coordination in the construction process	1 part	2 part split
Invitation to tender in a trade (door leaf and frame)	-	$\checkmark$
Subsequent installation in the finished wall opening on top level of finished floor	-	$\checkmark$
Installation together with the door	-	$\checkmark$
With adjustment area as an option	-	$\checkmark$
Over an existing frame possible (renovation frame)	-	$\checkmark$
Standard frames***	$\checkmark$	$\checkmark$

\* possible, but not recommended: potential on site damage to the powder coating during construction process

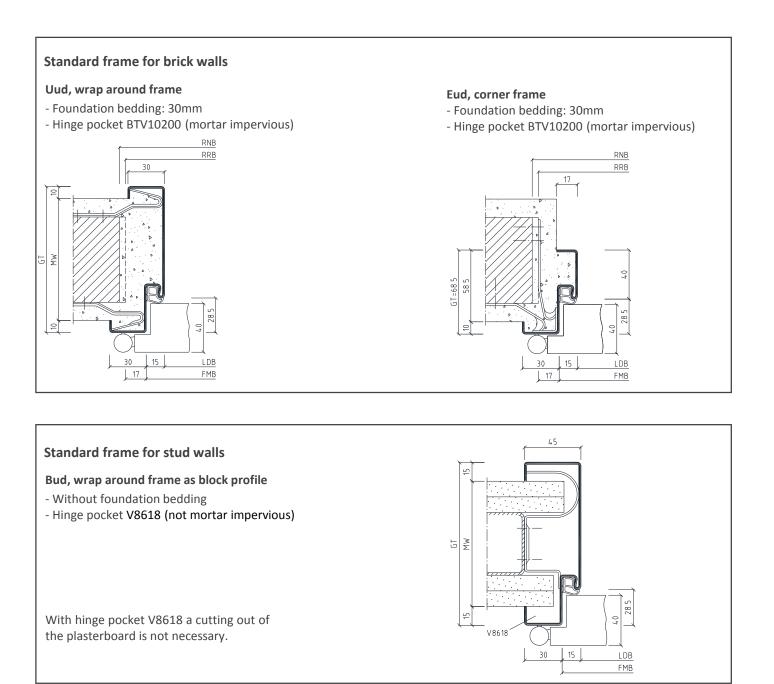
\*\* if no requirements are present for sound and fire protection, see "TTZ Installation Guidelines"

\*\*\* in conventional preferred sizes in rebated design



# Standard frames

BOS standard frames are one part for rebated doors. They are produced according to DIN 18111 Part 1 and 2 for brick and stud walls. Standard frames are usable left/right. The surface is hot-dip galvanized and coated with Aqua-Air-primer.



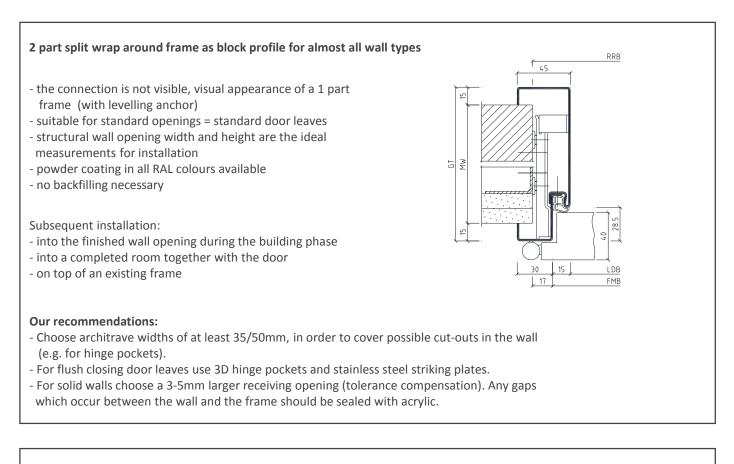
#### Note:

In standard frames and those from stock, the latch and bolt cut-outs as well as the hinge pockets are provided for DIN left and right.



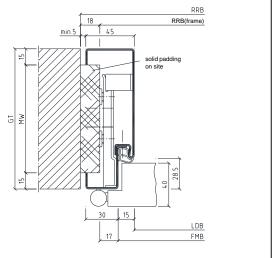
# Duo 15Z frames

2 part split frames are suitable for almost all wall types and ensure an easy installation – even in narrow wall connections. A wide range of designs and fittings are available.



#### Example for installation in the soffit:

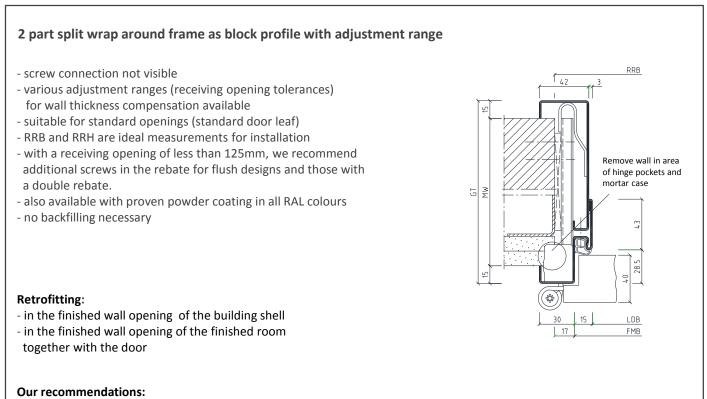
- for a DIN door leaf choose a larger RRM of the wall
- solid padding to be provided on site
- simple installation without mortar using patented levelling anchor





# 2 part split wrap around frame as block profile with adjustment range

2 part split wrap around frames with adjustment range are suitable for almost all wall types and make easy installation possible, even in narrow wall connections. They are available in a variety of designs with numerous equipment details.



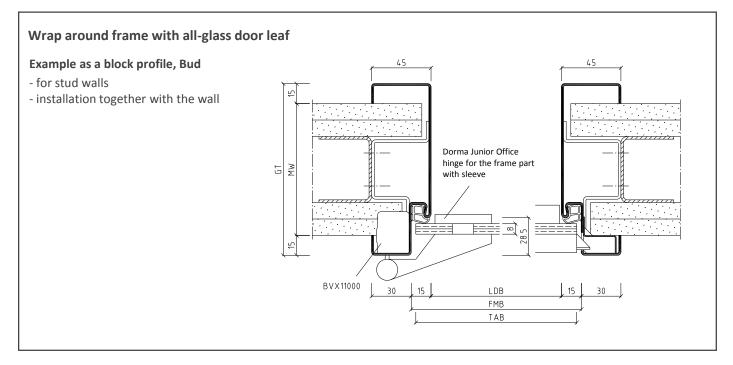
- Choose an architrave width of at least 35/47mm, in order to optimally cover any possible cut-outs in the wall (e.g. for hinge pockets).
- Use 3D hinge pockets and stainless steel striking plates for flush closing door leaves.
- Choose a 3-5mm larger receiving opening for solid walls (tolerance compensation). Any gaps which may occur between the wall and the frame should be sealed with acrylic.



### Frames for all-glass door leaves

All-glass door leaves of 8mm glass thickness require the rebate depth of a rebated frame (28.5mm).

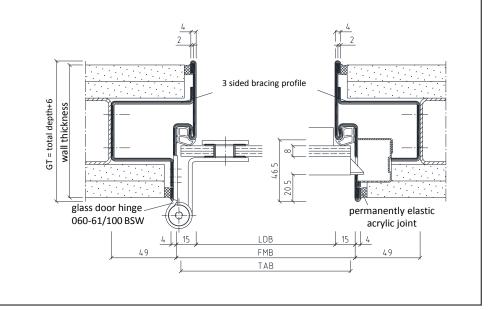
With a thicker all-glass door leaf, the rebate depth increases accordingly (e.g. 30.5mm for a door leaf thickness of 10mm).



# Sino frame with all-glass door leaf

#### Example for flush closing door leaves

- with glass door leaf hinge
- the door leaf is set back accordingly

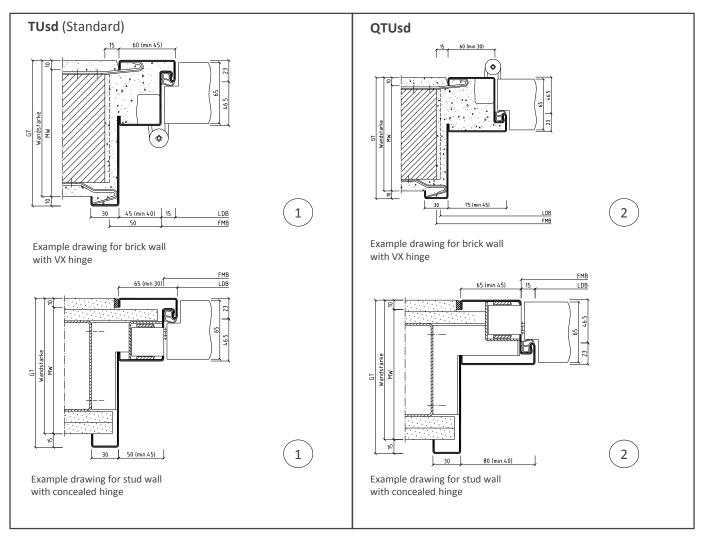




# **Planar soffit frames**

Planar soffit frames are constructed so that the door and frame are flush with the corridor wall – even when the door opens into the room. The Planar soffit frame allows for a uniform appearance in a corridor, regardless of the door being opened into a room (Option 1) or a corridor (Option 2).

Versions for a flush door leaf and single rebate: The drawing must be attached to the tender spefication!

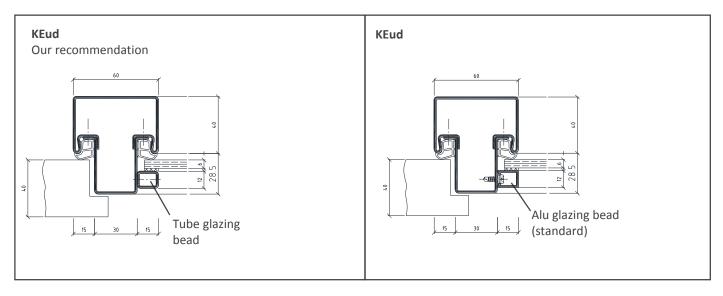


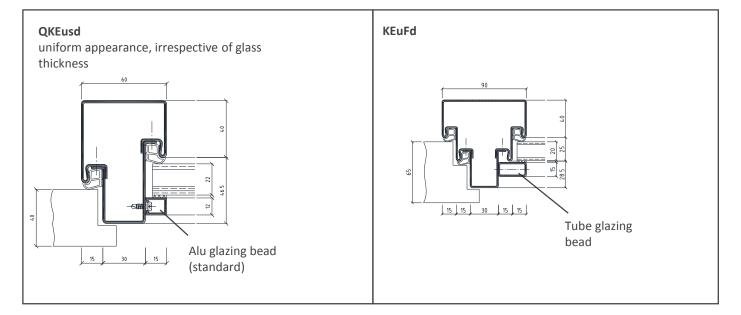
#### Our recommendation:

Use a door stop, door opening restrictor or a door closer so that the door does not hit the frame or wall when being opened.



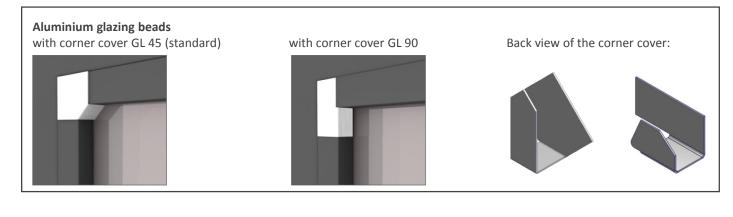
# Transom bar profiles

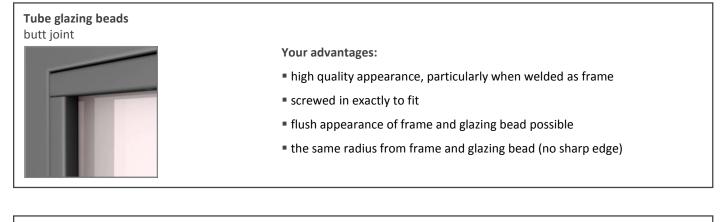




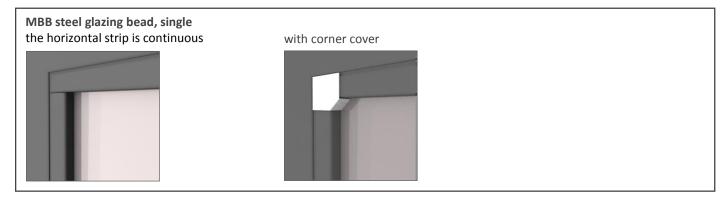


**Glazing beads** 









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### Seals

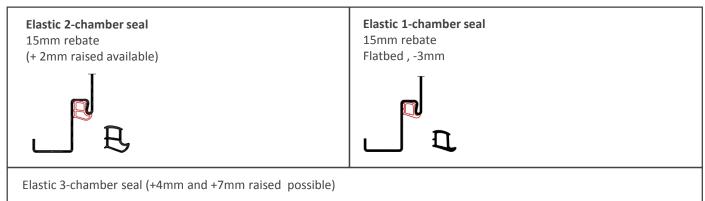
### Application of the sealing materials

BOS supplies various seals separately. There is a choice of different materials and colours, with removable supporting web or in raised designs.

Seals are inserted without a mitre cut (in the headpiece first).

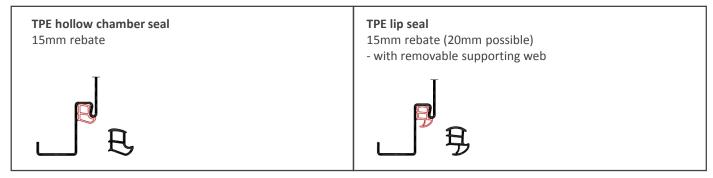
#### Elastic hollow chamber seal

- Standard seal, is mostly used for standard and non-standard frames
- BOS solely recommends the use of alkyd resin varnish or 2K PUR varnish.



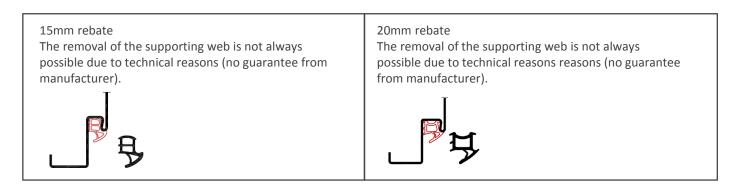
#### TPE seals are compatible with almost all coatings.

- Recommended for commercial buildings



### **APTK lip seal**

- for smoke, fire and sound protection elements
- compatible with all coatings (chemically resistant)
- The talc is a wear material. The brushing with talc is a part of operator maintainance.

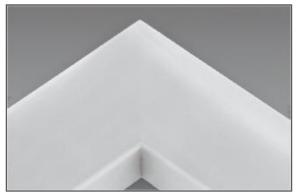




# **Materials and surfaces**

Hot-dip galvanized sheet (according to DIN 10143)

### Aqua-Air primer:

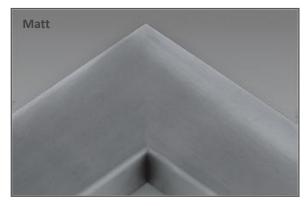


- water-based
- very environmentally friendly
- solvent proportion less than 3%
- (meets the VOC Directive)
- fulfills the DGNB criteria
- (German Sustainable Building Council)

### Powder coating :









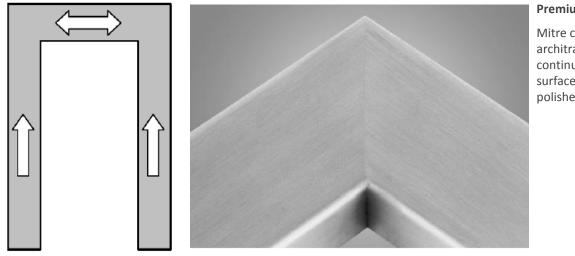


# **Materials and Surfaces**

#### **Stainless Steel**

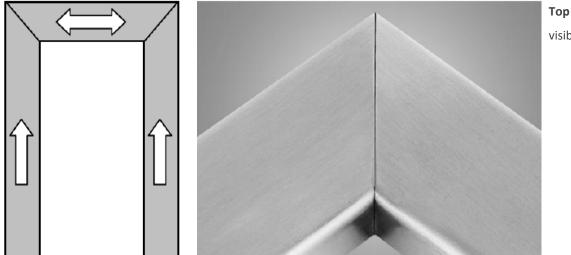
Stainless steel meets modern architectural requirements and is primarily used where appearance, special resistance against dampness as well as a high level of hygiene is required. Stainless steel is absolutely ideal for use in extreme surroundings (e.g. sea water baths), as the material is corrosion resistant and has a high resistance in general.

#### **Grinding patterns**



#### **Premium Quality**

Mitre connection in the architrave and backbend continuously welded, visible surfaces brushed and polished



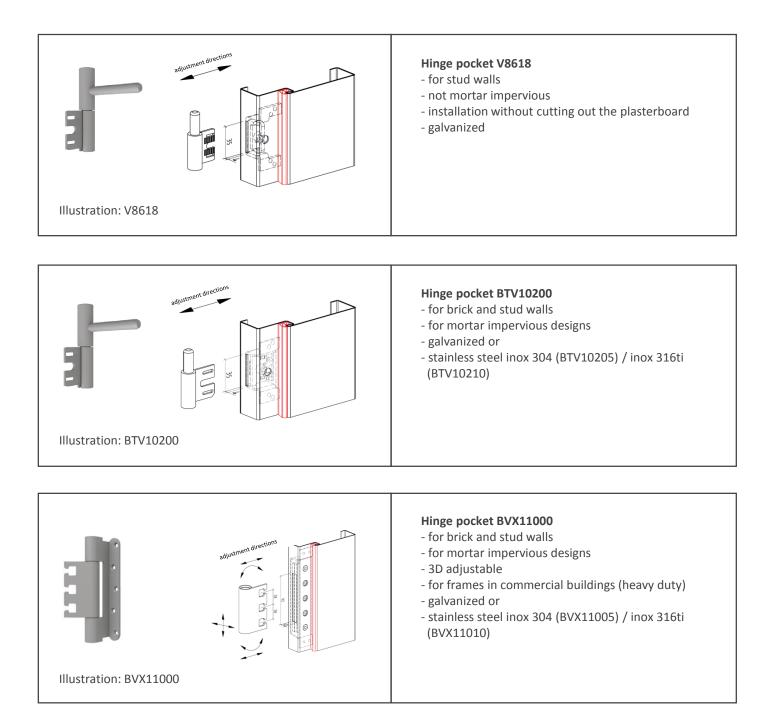
# **Top P Quality** visible mitre



# **Mounting parts**

#### Hinges and hinge pockets

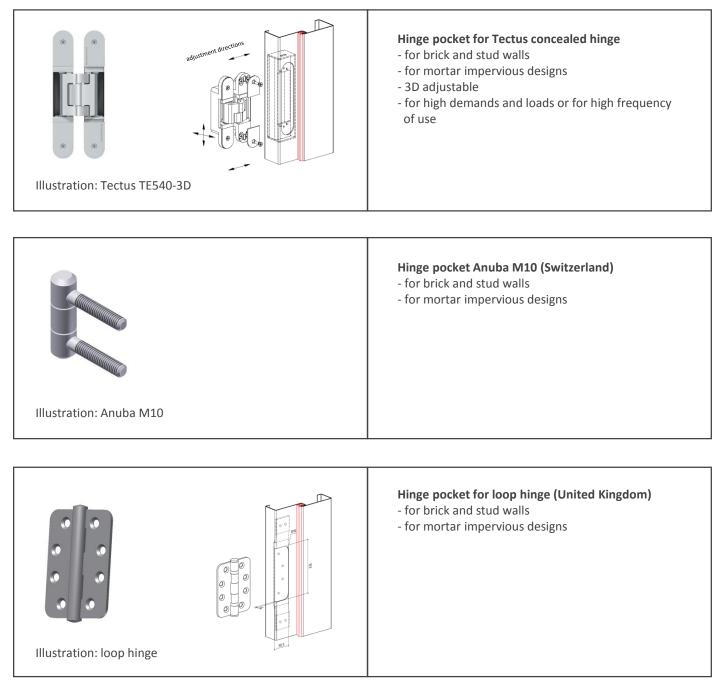
BOS offers a huge choice of hinges and hinge pockets from various manufacturers for a wide variety of requirements, whether for large or heavy doors, areas of frequent use or if concealed hinges are required.





# **Mounting parts**

### Hinges and hinge pockets





# **Mounting parts**

#### **Fittings and provisions**

Additional attachment parts should be considered during the planning phase, as a later installation on site is not always possible and can incur high costs and a loss of quality.

BOS can supply (mounted or separate):	BOS can make provisions for:		
<ul> <li>Hinge pockets</li> <li>BOS stainless steel striking plates</li> <li>Latch entry guard Fix &amp; Cover</li> <li>Bolt and latch hole reinforcements</li> <li>Latch adjustments</li> <li>Earthing contacts (potential equation)</li> <li>Earthing screws (potential equation)</li> <li>Anti-noise inlays</li> </ul>	<ul> <li>Hinge side security</li> <li>Electrical door openers</li> <li>Cable transitions</li> <li>Magnetic contacts</li> <li>Multi-point locks</li> <li>Bolt switch contacts</li> <li>Striking plates</li> <li>Blocking devices</li> <li>Door closers (overhead/integrated)</li> <li>Door gap security</li> <li>Empty conduit (optional)</li> </ul>		

#### Hinge side security

The hinge side security prevents the door from being pried open from the outside.

#### **Magnetic contacts**

A magnetic contact is an automatic warning device for monitoring doors, windows or other moving parts. Unauthorised opening of the door or window opens the contact as the magnet is removed (change in magnetic field) which interrupts the signal line.

#### **Bolt switch contacts**

A bolt switch contact is used to monitor the locking of doors. The bolt switch contact is actuated by the lock bolt. The signal can be displayed on alarm systems, building surveillance systems, tableaus, signal transmitters etc.

#### **Blocking device**

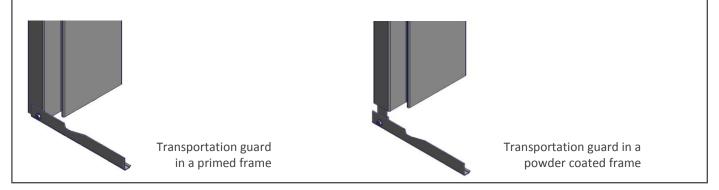
A blocking device offers optimum protection against breaking and levering open of the door on the hinge and lock side.

#### Anti-noise inlays

Anti-noise inlays are made of bitum impregnated felt cardboard. These materials have a stabilizing, stiffening and weight increasing impact on all metals and plastics, resulting in a sound-absorbing effect.

#### Transportation guards (spacer rails)

Transportation guards are transport and installation aids which are fastened at the bottom of the steel frame to the side parts. In primed frames they can be used as an installation aid and then removed directly after installation. In powder coated frames the transportation guards must be removed before installation.

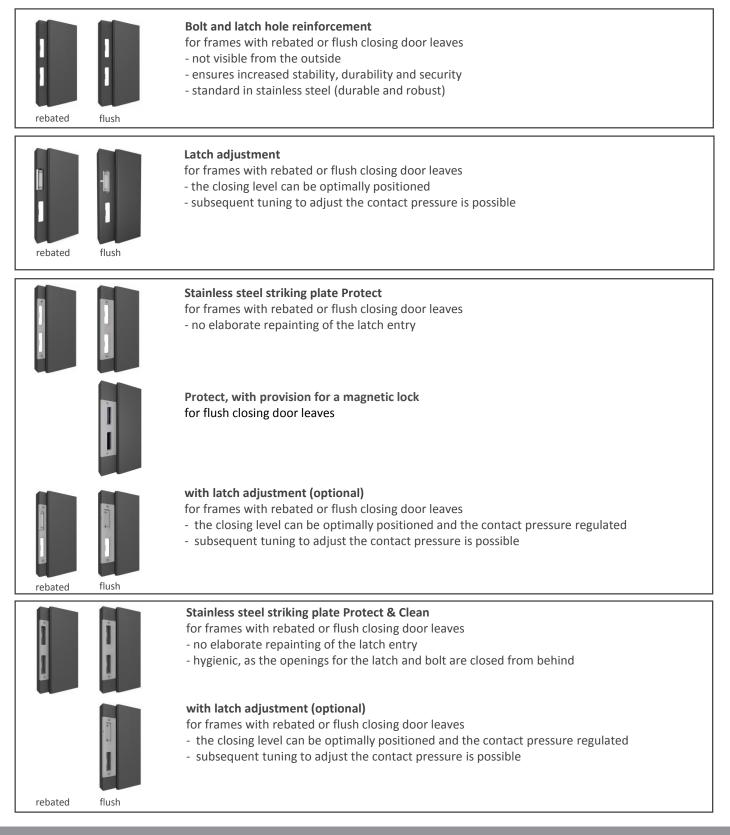






### Attachment parts for the locking area

Striking plate and bolt and latch hole reinforcement prevent to a great extent a tearing of the latch/bolt hole cut-out. Striking plates prevent flaking of the paint in the latch area, which can be caused by closing the door. Latch/bolt hole cut-outs are equipped with a mortar protection cover by default.

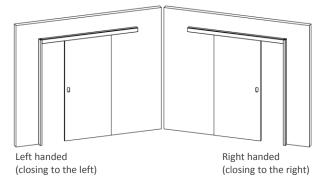




# Sliding door frames

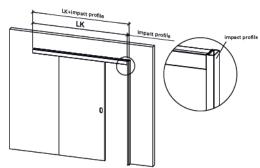
### DIN directions according to DIN 107

Sliding door running in front of the wall



- When push handles are used, the usable clearance width (LDB) is smaller.
- For sliding doors running in the wall, please note that the usable clearance height (LDH) is smaller due to the inspection strip (=SLDH):

#### **Track case length**



### Manual design:

#### **Opening style**

- 1 and 2 leaf designs
- Telescopic design
- Synchronised track (2 leaf design)

# - Linear return

- Fittings
- Hinged cover
- Lead lining
- Potential equalisation
- Sealed closing version
- Push-to-close Softmaster
- Softslide closing cushioning
- Catch stopper
- Floor guides in steel

### Automatic design:

#### **Opening style**

- 1 and 2 leaf designs
- Synchronised track (2 leaf design)

#### **Operating methods**

- Movement sensor
- Surface button
- 'Snap Line' button in architrave
- Remote control
- Active infra-red light curtain (safety curtain)
- Control system for barrier-free WC facilities (CS 80 MAGNEO)
- Fittings
- Hinged cover
- Lead lining
- Potential equalisation

#### Programming

- Hand terminal



# Equipment for sliding door frames

For further options and combinations please visit the website of the respective fittings supplier.

#### Manual design

#### Push-to-close Softmaster:

The Softmaster is a practical opening aid for sliding doors running in the wall. For optical reasons and also to be able to use the entire clearance width, the door should slide completely into the wall.

By simply touching the door, the Softmaster pushes it out of the wall casing a little bit, to enable convenient closing.

#### Softslide closing cushioning:

The door is brought perfectly into position - without unrestricted impact on the stopper and without springing back. The cushioning gently slows the door down and automatically pulls it into the end position. This protects the door and fittings and increases their service life.

#### **Catch stopper:**

- against unintentional sliding out of the sliding door
- e.g. for sealed closing sliding doors

#### Automatic design

#### Lock for DORMA CS 80 MAGNEO:

- protects rooms against unauthorised access
- without bolt and latch hole cut-out
- programming switch EPS-S3 necessary

#### Control system for barrier-free WC facilities:

- only possible with DORMA CS 80 MAGNEO



### **Requirements on door and frame**

In the case of technical requirements (e.g. fire or sound protection), BOS steel frames are manufactured, prepared and delivered in accordance with the approval of the door leaf manufacturer.

In general, only certified door elements are to be installed, consisting of a door leaf, frame and the necessary door components such as a sealing system.

#### **Fire protection**

- Fire protection doors must be self-closing elements.

- Only special fittings may be used, which in turn usually meet their own specified standards/approval criteria.

#### **Smoke protection**

- A smokeproof door must be tested according to DIN 18095.
- Smoke protection doors must be self-closing elements.
- Door closers according to DIN 18263 should be used for smoke protection doors .
- The self closing of a smoke protection door can only be impeded using a hold open system with verified viability.

#### Sound proofing

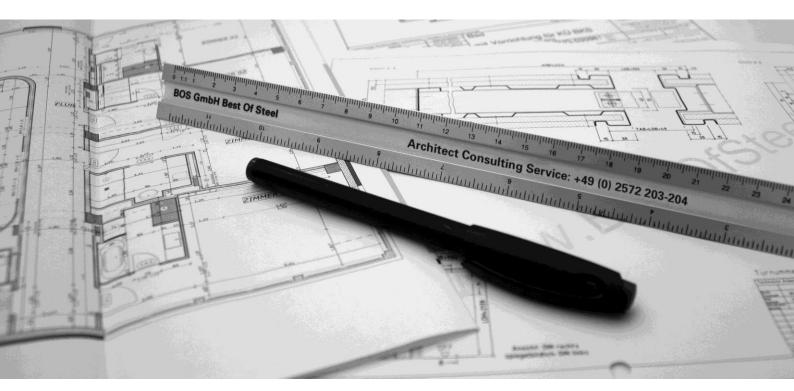
- Suitable glass muss be used for light openings.
- Installation exactly according to manufacturer specifications.
- Installation conditions must be correct (wall, floor and ceiling connections)

#### **Burglar resistance**

- Since April 1999, burglar resistant door elements have been divided into 6 classes according to ENV 1627.
- The different resistance classes are mainly attained through special door constructions and changes of fittings.



# Just contact us, we are here for you!



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