

STEEL FRAMES FOR EXPERTS



Design · Function · Efficiency

STEEL FRAME SPECIALISTS SINCE 1967

Awarded for excellent design and manufactured with the know-how of more than 55 years: Steel frames for doors and windows from the market leader BOS Best Of Steel. Our name stands for consequent customer orientation, reliability and punctuality as well as maximum flexibility. That is why BOS is the market leader in Germany and leading in many other European countries.

Our quality promise: as a system supplier and problem solver we do our best to continue to improve our recognized high level of quality in all areas. Every one of our over 450 employees contribute decisively to our mutual success with their commitment and service to our customers – every day.



BOS Best Of Steel has been manufacturing frames since 1967



KEY TO ABBREVIATIONS

AMB	= Overall width	LDH	=	Clearance height
AMH	= Overall height	LDH effekti	v =	Effective clearance height
BA	= Distance between hinges	LK	=	Track case
BE	= Foundation bedding	MW	=	Receiving opening
DH	= Handle height	OFF	=	Top level of finished floor
FB	= Rebate width	RNB	=	Nominal wall opening width
FMB	= Rebate measurement width	RNH	=	Nominal wall opening height
FMH	= Rebate measurement height	RRB	=	Structural wall opening width
FT	= Rebate depth	RRH	=	Structural wall opening height
GT	= Total profile depth	TAB	=	Overall door leaf width
LDB	= Clearance width	TAH	=	Overall door leaf height

LDB effektiv = Effective clearance width

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SUSTAINABLE BUILDING

BOS Best Of Steel combines frame design with sustainable building. BOS steel frames in various designs that have been evaluated according to LEED and DGNB criteria can be found on the service platform www.building-material-scout.com.



Subject to technical change. The illustrations are not for static information.

Steel frames for active leaf doors **Profile versions**



Steel frames for sliding doors **Profile versions**



Steel frames Diversity of design

Shadow groove frame	Round architrave frame	SafetyDesign frame	Wrap around frame
	I I		
Curved wall frame	Planar soffit frame	Duplex frame	Timber infill frame
Glass infill frame	Top-light frame	Side part frame	Top-light/side part frame
H-frame	Blind rebate frame	Slanting soffit frame	Double acting door frame
			[]
LineaCompact	LineaLevel	LineaOutside	Lineaset

Steel frames Materials and surfaces

STEEL



Aqua-Air primer

- Water-based
- Very environmentallyfriendly
- Solvent proportion less than 3%. Meets the VOC Directive.

STAINLESS STEEL



Premium quality

mitre connection in the architrave and backbend continuously welded, brushed and polished



Powder coating – silk gloss finish



Top P quality visible mitre joint



Powder coating – textured finish





BOS frames can be given a powder coating finish in all RAL colours as an option. Special colours are available on request.



Many building projects where Aqua-Air primer has been used have already received an Environmental Award from the DGNB (German Sustainable Building Council).

Steel frames for active leaf doors

The character of a room is shaped right from the entry area – steel frames are an indispensible part of modern interior design. A steel frame is a frame which provides the connection between wall and door, being produced to exactly fit the wall opening and the door. The frames can be supplied in one part or as a two part split frame, for installation together with the wall or afterwards.

The areas of application for frames are varied and comprehensive. You can find well thought-out solutions for different wall types here, which represent just a selection out of our programme.

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Steel frames for active leaf doors **DIN** measurement table

(All measurements given are in mm)								Overall o measu rebated o 18	door leaf rement doors DIN 101	Overall measurer doors D	door leaf ment flusł IN 18101		
						Single	rebate	Double	rebate				
RRB	RRH	RNB	RNH	FMB	FMH	LDB	LDH	LDB LDH		Rebated		Flush	
625	1875	635	1880	591	1858	561	1843	531	1828	610	1860	584	1847
750	1875	760	1880	716	1858	686	1843	656	1828	735	1860	709	1847
875	1875	885	1880	841	1858	811	1843	781	1828	860	1860	834	1847
1000	1875	1010	1880	966	1858	936	1843	906	1828	985	1860	959	1847
1125	1875	1135	1880	1091	1858	1061	1843	1031	1828	1110	1860	1084	1847
1250	1875	1260	1880	1216	1858	1186	1843	1156	1828	1235	1860	1209	1847
625	2000	635	2005	591	1983	561	1968	531	1953	610	1985	584	1972
750	2000	760	2005	716	1983	686	1968	656	1953	735	1985	709	1972
875	2000	885	2005	841	1983	811	1968	781	1953	860	1985	834	1972
1000	2000	1010	2005	966	1983	936	1968	906	1953	985	1985	959	1972
1125	2000	1135	2005	1091	1983	1061	1968	1031	1953	1110	1985	1084	1972
1250	2000	1260	2005	1216	1983	1186	1968	1156	1953	1235	1985	1209	1972
625	2125	635	2130	591	2108	561	2093	531	2078	610	2110	584	2097
750	2125	760	2130	716	2108	686	2093	656	2078	735	2110	709	2097
875	2125	885	2130	841	2108	811	2093	781	2078	860	2110	834	2097
1000	2125	1010	2130	966	2108	936	2093	906	2078	985	2110	959	2097
1125	2125	1135	2130	1091	2108	1061	2093	1031	2078	1110	2110	1084	2097
1250	2125	1260	2130	1216	2108	1186	2093	1156	2078	1235	2110	1209	2097
625	2250	635	2255	591	2233	561	2218	531	2203	610	2235	584	2222
750	2250	760	2255	716	2233	686	2218	656	2203	735	2235	709	2222
875	2250	885	2255	841	2233	811	2218	781	2203	860	2235	834	2222
1000	2250	1010	2255	966	2233	936	2218	906	2203	985	2235	959	2222
1125	2250	1135	2255	1091	2233	1061	2218	1031	2203	1110	2235	1084	2222
1250	2250	1260	2255	1216	2233	1186	2218	1156	2203	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		Overall door leaf measurement flush doors			
Key:					
RRB/H:	Structural wall				
	opening width/height				
RNB/H:	Nominal wall				
	opening width/height				
FMB/H:	Rebate measurement				
	width/height				
LDB/H:	Clearance width/				
	height				
GT:	Total profile depth				
MW:	Receiving opening				



For flush frames the wall needs to be removed in the area of the mortar case as well.

Steel frames for active leaf doors Planning of wall openings

The rules for planning and producing door openings in walls are described in DIN 18100. The measurements are derived from the "Dimensional coordination in construction building" according to DIN 4172.

The designation of a wall opening according to the basic dimensions of e.g. 875mm width and 2000mm height means a wall opening of 875 x 2000 according to DIN 18100 (see page 9: structural wall opening width RRB and structural wall opening height RRH).

Permissible deviations:

- + 10mm for the width
- + 10mm for the height
- 5mm for the height

The following applies within the scope of the standard:

Nominal measurement of the wall opening width= basic dimensions + 10mmNominal measurement of the wall opening height= basic dimensions + 5mmMinimum permissible measurement= basic dimension(nominal measurement - 10mm for the wall opening width)

Maximum permissible measurement

- (nominal measurement 10mm for the wall opening width)
 (nominal measurement 5mm for the wall opening height)
 = basic dimension + 20mm for the wall opening width (nominal measurement +10mm)
 - basic dimension + 15mm for the wall opening height (nominal measurement +10mm)

Plan and vertical section example (nominal measurement of opening 885 x 2005mm)



Derivation of the nominal measurements from the construction dimensions:

As the nominal measurements refer to the finished floor level for the height, it is necessary for metre marks to be positioned on the walls on site (marking of the nominal position of the finished floor level plus 1000mm).

Steel frames for active leaf doors Backfilling of frames

DIN 18111 PART 3:

DIN 18111 Part 3 specifies the installation of steel frames. The basis for the installation and backfilling of frames is the ttz guidelines for installation of steel frames, published by the German Industrial Association for doors and frames. Information on the use of backfilling materials is generally to be specified by the client.

Backfilling of one part frames for brick walls

According to DIN 18111-3, Sections 5.2.2 and following:

"The cavity between the steel frame and the wall must be completely filled with backfill materials. Partial backfilling (but at least 50%) is to be agreed between the client and the contractor. In the case of a partial backfilling, the backfill materials are to be applied where the highest loads occur, e.g. in the hinge and lock area. The type of backfill material is to be determined by the client. Suitable backfill materials are:

Mortar in accordance with DIN EN 1996-1-1, DIN EN 1996-1-1/NA, DIN EN 1996-2, DIN EN 1996-2/NA, DIN EN 1996-3, DIN EN 1996-3/NA earth-moist processed or frame grouting mortar. Note: Due to the residual stress of the cold-formed sheet metal and the shrinkage process of the mortar, a permissible separation between the sheet metal and the backfill material can occur. No installation defect can be derived from this.

Installation foams (preferably two-component expansion adhesives)

The backfill materials must not form compounds with the other materials that lead to corrosion or chemical reactions. The mortar must form a material bond with the wall, however, not to the steel frame. Installation foams must form a material bond with the frame. The hardened installation foams must be form-stable, i.e. they must neither shrink nor expand. Installation foams (two-component expansion adhesives), low-viscosity grouting mortar and low-viscosity gypsum dry mortar require an additional sealing of the hinge sub-structures and mortar protection cases. For doors with special requirements, the backfilling specifications of the door leaf manufacturer must be followed."

Backfilling of frames in stud walls and 2 part split frames

According to DIN 18111-3, Sections 5.3.2 and 5.4.2:

"The backfilling of frames in stud walls and 2 part split frames for doors without special requirements is generally not necessary. For doors with special requirements, the backfilling specifications of the door leaf manufacturer must be followed."

TTZ INSTALLATION GUIDELINES:

"After agreement between the client and the contractor, a partial backfilling of at least 50% of the cavity between the wall and the steel frame can take place. In this case, installation foams are to be applied where the highest loads occur, e.g. in the hinge and lock area."

Notes:

- Installation foams and low-viscosity backfill materials require an additional sealing of the hinge pockets and lock cases.
- For doors with special requirements, the backfill specifications of the door leaf manufacturer must be followed.
- **7** For on-site foaming, slotted holes in the sealing groove and mortar-tight hinge pockets can be selected.

Steel frames for active leaf doors for brick walls









Steel frames for active leaf doors for stud walls





Steel frames for active leaf doors for almost all wall types



OUR RECOMMENDATIONS



- For fairfaced brickwork
- · Easy mortar-free installation with levelling anchor
- · Illustration with levelling anchor, hinge pocket BVX11000 and small mortar protection case



Steel frames for active leaf doors for almost all wall types





• illustration with levelling anchor and hinge pocket V8618

Steel frames for active leaf doors between two walls





ADVANTAGES OF THE 2 PART SPLIT STEEL FRAME:

- ➔ Subsequent installation together with the door leaf, therefore tendering is possible in one trade
- オ Installation in narrow walls possible
- Optimal solution for exposed masonry and exposed concrete as well as for installation between two walls

INSTALLATION PROCEDURE FOR THE 2 PART SPLIT FRAME 15ZBud



Steel frames for active leaf doors between two walls



Steel frames for active leaf doors Element frames

Element frames provide pleasant light conditions and greater transparency within buildings. As well as top-light, side part and top-light/side part frames, BOS Best Of Steel offers steel frames for timber and glass infills.

The frame profiles can be designed individually. For example shadow groove and Sino frames can be supplied as elements and a side part frame can be combined with a timber infill.



Steel frames for active leaf doors Transom bar profiles | Glazing beads for element frames

BOS Best Of Steel offers a wide choice of transom bar profiles and glazing beads. Here you can find well thought-out solutions for every requirement and design preference, which represent just a selection out of our programme.





Steel frames for active leaf doors Attachment parts | hinges | hinge pockets

The following attachment parts are supplied by BOS (mounted or separate):

- Hinge pockets
- BOS stainless steel striking plates
- Stainless steel bolt and latch hole reinforcements
- Electric door opener 118 with striking plate
- Latch adjustments
- Escape door opener
- Magnetic contacts
- Potential equalisation
- Bolt switch contacts

Provisions are made by BOS for the following mounting parts and accessories:

- Blocking devices
- Bolt switch contacts
- Cable transition
- Door closers (OTS, ITS, BTS)
- Door gap security
- Electric door openers
- Escape door opener
- Hinge side safeguards
- Magnetic contacts
- Multiple locks
- Power transmitters
- Striking plates

Do you have further requirements? Please contact us.

Hinge		Hinge pocket	Wall type	For rebated doors	For flush doors
Adjustment area		V8618	Stud wall	۲	0
Hinge with 2 adjustment areas	age with 2 adjustment areas		Stud wall Brick wall	O O	0 0
VX hinge with 3D adjustment	Our recommendation:	BVX11000	Stud wall Brick wall	00	00
	Adjustment area	Tectus	Stud wall Brick wall	O	O O
Concealed hinge with 3D adjustment	+ 0000	Pivota	Stud wall Brick wall	O	000

BOS supplies the provision for these hinges.

Steel frames for active leaf doors Distances between hinges according to DIN 18101





Rebate measurement height (FMH)	Distance between hinges (BA)
in mm	in mm
1546 - 1670	1060
1671 - 1795	1185
1796 - 1920	1310
1921 - 2170	1435
2171 - 2295	1685
2296 - 2420	1810
2421 - 2545	1935
2546 - 2670	2060
2671 - 2795	2185

Distance between hinges according to DIN 18101. Other distances between hinges (BA) and hinge positions (BBL) are possible.

Steel frames for active leaf doors Add-on components for the lock area

A door frame is only as sturdy as its striking plate. Striking plates reinforce the recesses which accommodate the latch and bolt.



rebated

flush

Latch adjustment

With the BOS latch adjustment the contact pressure from the door to the seal can be easily adjusted. Any later difficulties of movement when using the door handle which could possibly arise can also be relieved through simple adjustment.

Your advantages:

- ↗ No filing
- I Latch cut-out protection, tearing out is prevented to the greatest extent
- Subsequent tuning to adjust the contact pressure is possible



rebated

flush

Stainless steel striking plate Protect

The stainless steel striking plate Protect is set into the frame instead of the latch/bolt cut-out.

Your advantages:

- No elaborate repainting of the latch entry
- Iatch/bolt cut-out protection, a tearing out is prevented to the greatest possible extent
- Increases the life-span of the frame and offers investment security



rebated

flush

Stainless steel striking plate Protect & Clean for higher hygienic demands The stainless steel striking plate Protect & Clean is set into the frame instead of the latch/bolt cut-out.

Also available with latch adjustment (for flush doors). Recommended for

Your advantages:

- Hygienic, as the openings for the latch and bolt are closed from behind
- No elaborate repainting of the latch entry
- Iatch/bolt cut-out protection, a tearing out is prevented to the greatest possible extent
- Increases the life-span of the frame and offers investment security



rebated

flush

Stainless steel striking plate Protect with latch adjustment

The stainless steel striking plate Protect is set into the frame instead of the latch/bolt cut-out. The latch adjustment allows the closing level to be ideally positioned and for the contact pressure to be regulated.

Your advantages:

- ↗ No filing
- Subsequent tuning to adjust the contact pressure is possible
- No elaborate repainting of the latch entry
- Jatch/bolt cut-out protection, a tearing out is prevented to the greatest possible extent
- Increases the life-span of the frame and offers investment security

Recommended for

Steel frames for active leaf doors Wall connections

When using wall tiles there are various solutions:



If flush frames are used, the wall tiles can be set into the wall to achieve a completely flush appearance.

When using a skirting board there are various solutions:



frame.

contact us.

Flush Planar If flush frames are used, the skirting can be soffit frame set into the wall to achieve a completely flush appearance.

Steel frames for sliding doors

Sliding doors provide tangible benefits. The strongest argument for the use of a sliding door is the significant gain in space, as the space needed for the pivot range of a conventional active leaf door is no longer required: sliding doors are therefore clearly the No. 1.

The product range LineaLine from BOS Best Of Steel offers the right frame for all sliding door variations: sliding door frames for sliding doors running in front of and in the wall, as well as sliding door frames for doors running in the recess. In addition to this, BOS also offers sliding door frames for operating theatre areas.



The areas of application for sliding doors are considerable. You can find various well thought-out solutions here, which represent just a selection out of our programme.

LineaOutside for brick walls	26
LineaOutside for stud walls	27
LineaCompact for brick stud walls	28
LineaSet LineaSet One for stud walls	29
LineaECON5	30



Steel frames for sliding doors

All sliding door frames are also available in larger sizes as 1 or 2 leaf designs. They are made of steel or stainless steel and can be optionally given a powder coating finish. The sliding door frames can be combined with any conventional door leaf from a renowned manufacturer.

Options for manual design:

Opening style

- \cdot 1 and 2 leaf designs
- · Synchronised track design
- · Linear return

Options for automatic design:

Opening style

- \cdot 1 and 2 leaf designs
- · Synchronised track design

Operation methods

- · Movement sensor
- · Surface switch
- · Switch in architrave
- · Remote control
- · Active infra-red light curtain
- · Control system for barrier-free WC facilities

Fittings

- · Hinged cover
- · Lead lining
- · Potential equalisation
- · Sealed closing version
- · Opening aid Push-to-close T-Master (Softmaster)
- · Closure cushioning Softslide
- · Catch stopper

Fittings

- · Hinged cover
- · Lead lining
- · Potential equalisation

Programming

For further options and combinations please contact us.

· Hand terminal



Steel frames for sliding doors LineaOutside for brick walls





Steel frames for sliding doors LineaOutside for stud walls





Steel frames for sliding doors LineaCompact for brick | stud walls





· Other measurements and designs possible

Steel frames for sliding doors LineaSet | LineaSet One for stud walls



LineaSet is a dismantled sliding door case for doors running in the wall. It is installed together with the wall and can be used universally in combination with timber, aluminium or steel frames. Alternatively, the passageway can be given a discreet appearance using plasterboard.

LineaSet One has an identical design to LineaSet. This sliding door case is pre-assembled as 1 part.

LineaECON5 is a disassembled cover frame for LineaSet and LineaSet One (see page 30).

LineaSet, LineaSet One and ECON5 are available from stock at short notice.



PlankoFix for 150mm wall thickness (optional)

For central positioning of the 75mm deep sliding door case on a 100mm UA profile: the PlankoFix is hung in the end profile of the stud wall and then the sliding door case is pushed onto the UA profile. The perforated wings of the PlankoFix are bent 90° and hold the UA profile. The sliding door case is then perfectly positioned for triple panelling on both sides.



Basic anchor (optional)

Order at the same time: the cost-effective fastening option to the unfinished floor, which gives the sliding door case the necessary stability and is suitable for installation before the screed is laid.

Can be used from a distance to unfinished floor of min. 20mm to max. 150mm.

Adjustment area: max. 130mm



Telescopic anchor (optional)

For increased stability of the sliding door case, we recommend telescopic anchors, which are fastened to the unfinished floor and are ideally suitable for installation before the screed is laid.

Can be used from a distance to unfinished floor of min. 105mm to max. 175mm. Adjustment area: max. 70mm



Steel removable inspection cover (pair)

In contrast to a usual plaster panel, the use of the steel inspection cover means the installation and removal of the door leaf is possible without damaging the wall. This simplifies the conversion and retrofitting of the overhead track considerably.

Galvanised and primed, no damping possible with use of ALU 80 BOS.

Steel frames for sliding doors LineaECON5 for LineaSet and LineaSet One





Steel frame measuring aid for active leaf doors



□ Call for tender and order □ Enquiry Date: Shipping address: Person of contact: Commission: Order no.: Requested date: □ stud wall Material strength: 1.5mm 2.0mm □ brick wall Type of wall: Surface: □ galvanized primed DIN direction: DIN left DIN right □ double leaf Hinge pockets: Profile: □ subsequent installation Quantity: 🗆 2 pieces pieces Front architrave width: 30mm BTV 8618 □ BTV 8618 (S) □ Type: mm □ BTV 10200 □ BVX 11000 Front backbend: 🗆 10mm □15mm mm □ 3rd hinge, distance between Distance between hinges: hinges below BBL 1: Front shadow groove: 🗆 10mm 15mm Standard acc. to DIN 18101 250mm mm mm 🗆 350mm Total wall thickness: mm Hinge position (BBL) / Distance between hinges (BA) for 2 hinges: 🗆 15mm Back shadow groove: 🗆 10mm BTV 10200 / BTV 8618 (S) BVX 11000 mm Back backbend: 🗆 10mm 🗆 15mm шш mm 241 Back architrave width:
30mm 45mm BBL 1 Rebate height (FMH) Distance between hinges (BA) mm Standard hinge Standard hinge Nominal wall Nominal wall with short frame part opening height: opening width: mm mm mm mm Rebate width: **Rebate height:** Rebate width (FMB) BBL 2 Handle height: Top level 🗌 1050mm of finished floor 850mm Rebate design: mm Rebated Flush height (FMH) Rebate depth 28.5mm Rebate depth 46.5mm mm mm Doube rebate Doube rebate ebate height (DH) Rebate depth 2 Rebate depth 2 25mm 25mm mm mm andle Closing level 4.5mm Closing level 17mm mm mm Top level of finished floor Foundation bedding: 3 30mm □ without mm Other notes:

Speciality is our standard

BOS Best Of Steel with more than 450 employees is the market leader in Germany in the steel frame sector and leading in many European countries. We offer our customers special, non-standard and standard frames in top quality and excellent advisory, delivery and after sales services – with amongst others our experienced Architect Consulting Service.

BOS products have received many awards, including the Red Dot Award, the Iconic Award, the German Design Award, the Universal Design Award and the Plus X Award.

Architect Consulting Service

We are here for you!

The friendly team at BOS Architect Consulting Service can be reached at:

Phone:	+49	(0)	2572	203-204
Fax:	+49	(0)	2572	203-209

or send us an E-Mail: architekten@BestOfSteel.de

Monday to Thursday | 8am to 5pm Friday | 8am to 3pm

We can offer you:

- Concept solutions for your project
- Complete system solutions for door elements
- Individual solutions for your requirements
- CAD drawings
- BIM models (Revit families)

We can advise you on the telephone, personally at our Technical Centre or at your location.

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