

BORDER

ALUMINIUM PERMANENT AND TEMPORARY RAILINGS

SIMPLE

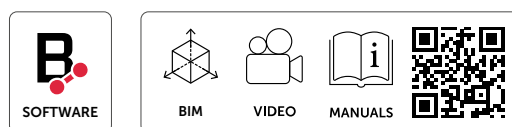
Featuring easy and fast assembly, it can be installed in just a few steps thanks to the innovative snap-fit system.

COMPATIBLE

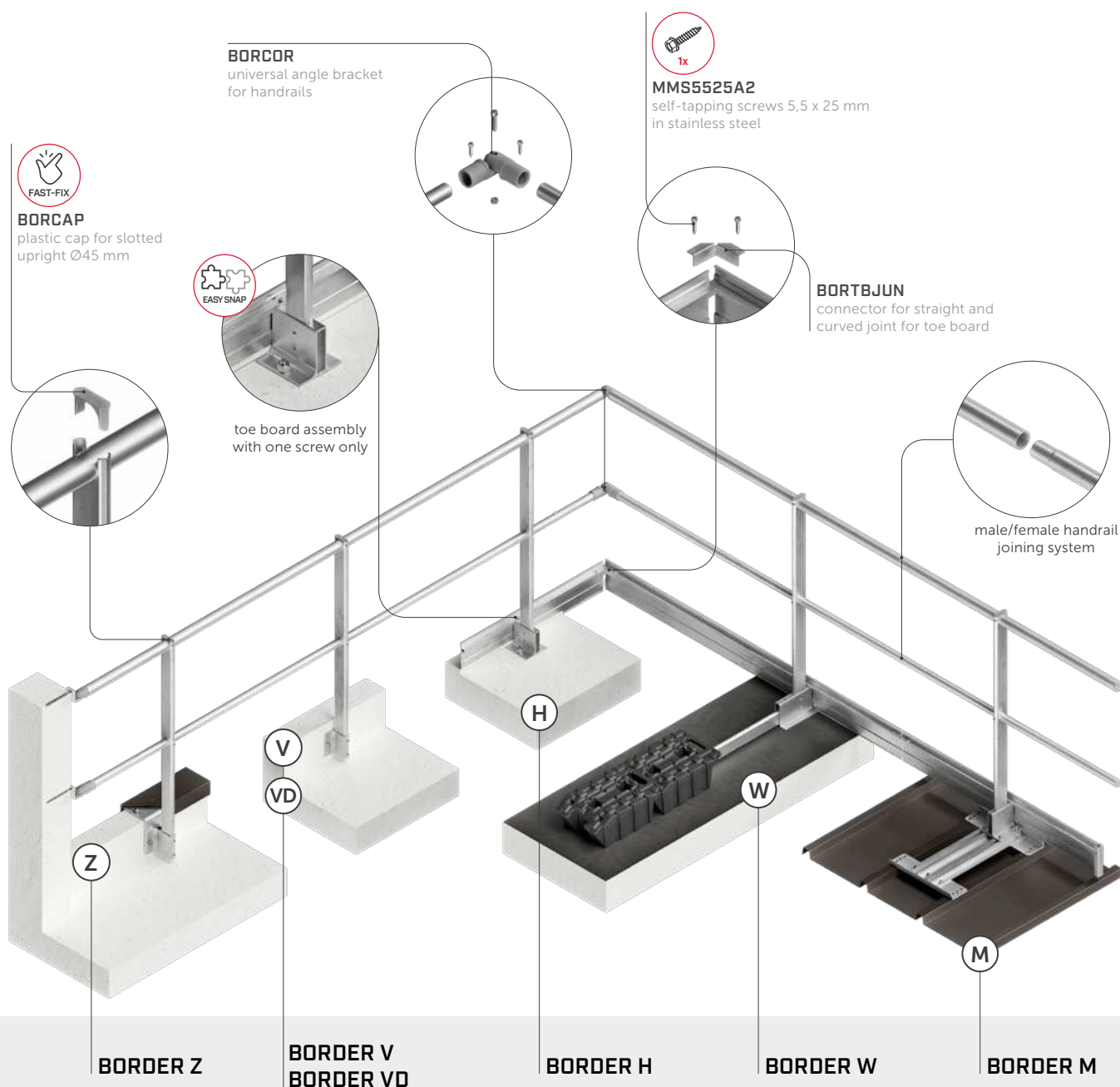
The modular system can meet any design requirement thanks to the wide range of available accessories.

AESTHETICS AND DURABILITY

Made of aluminium alloy, the railing guarantees a good corrosion resistance and a pleasing appearance.



BORDER | TYPES AND KEY ELEMENTS



UPRIGHT TYPES



AVAILABLE COLOURS

On request: anodised or powder-coated (RAL colours)

material:
EN AW 6005A-T6

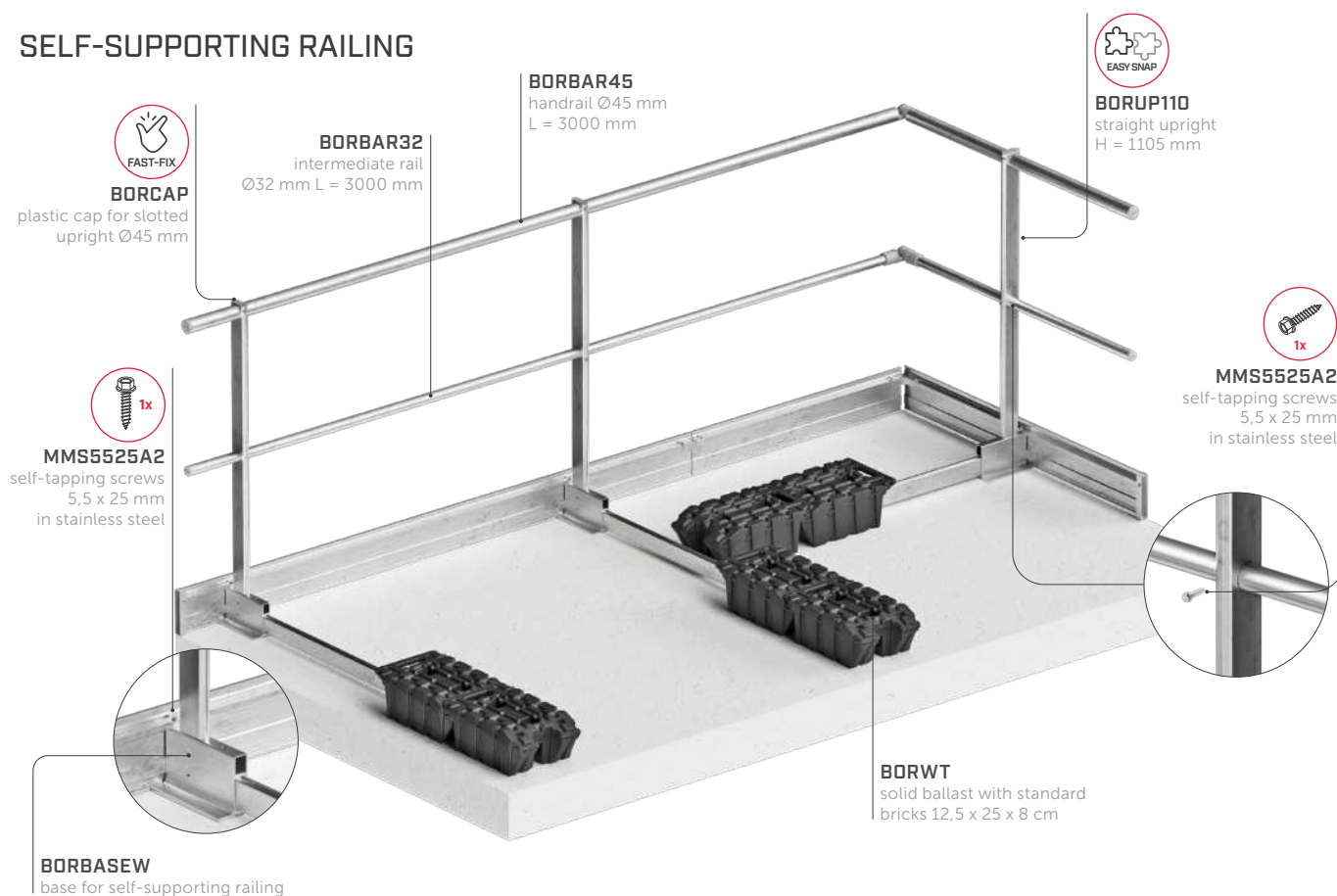
alu
6005A



All railing types are available in straight, curved and folding versions. See page 145.

BORDER W

SELF-SUPPORTING RAILING



snap-fit cap and upright



rapid installation with snap-fit system,
without the need for additional screws



use of only one screw
for railing installation



toe board assembly
with one screw only

SPACING

upright/frets	H _{uprights}	standards			
		EN 14122-3: 2016	NTC 2018 + DLgs.61/08	EN 13374+A1: 2024 A	NF E85-015: 2019
straight + folding	110 cm	150	100	250	150
	100 cm	160*	100*	250*	160*
curved	113 cm	145*	100*	250*	145*

* Spacings are interpolated based on the most critical case.
See the technical data sheet for spacings related to standards not included in the table.

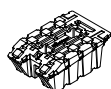
substructure



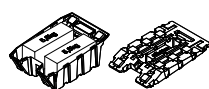
C20/25 **CLT** **SHEATH** **PVC**

BORDER W can be installed on all 4 of the substructures without fasteners.

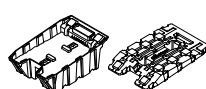
BALLAST TYPES



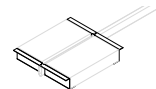
BORWT
ballast with standard
bricks 12,5 x 25 x 8 cm weight 12,5 kg



BORWTBOX
hollow ballast to be filled with 2 bricks
measuring 12,5 x 25 x 8 cm
(not included)



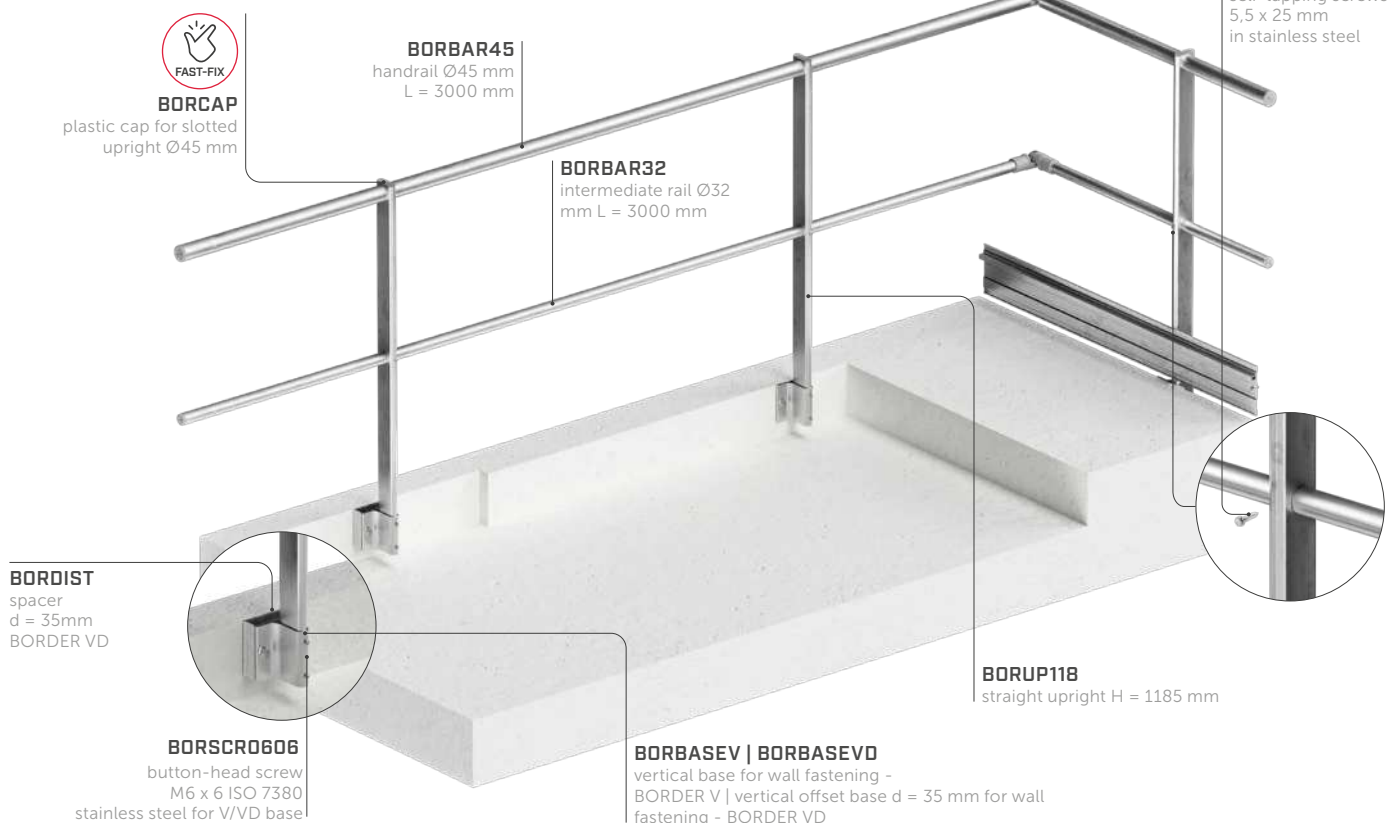
BORWTBOX
hollow ballast to be filled
with concrete or sand



BORWTFRAME
frame for ballast with standard
concrete slabs

BORDER V/BORDER VD

RAILING VERTICAL AND VERTICAL SPACED FASTENING



snap-fit cap and upright



use of only one screw
for railing installation

SPACING

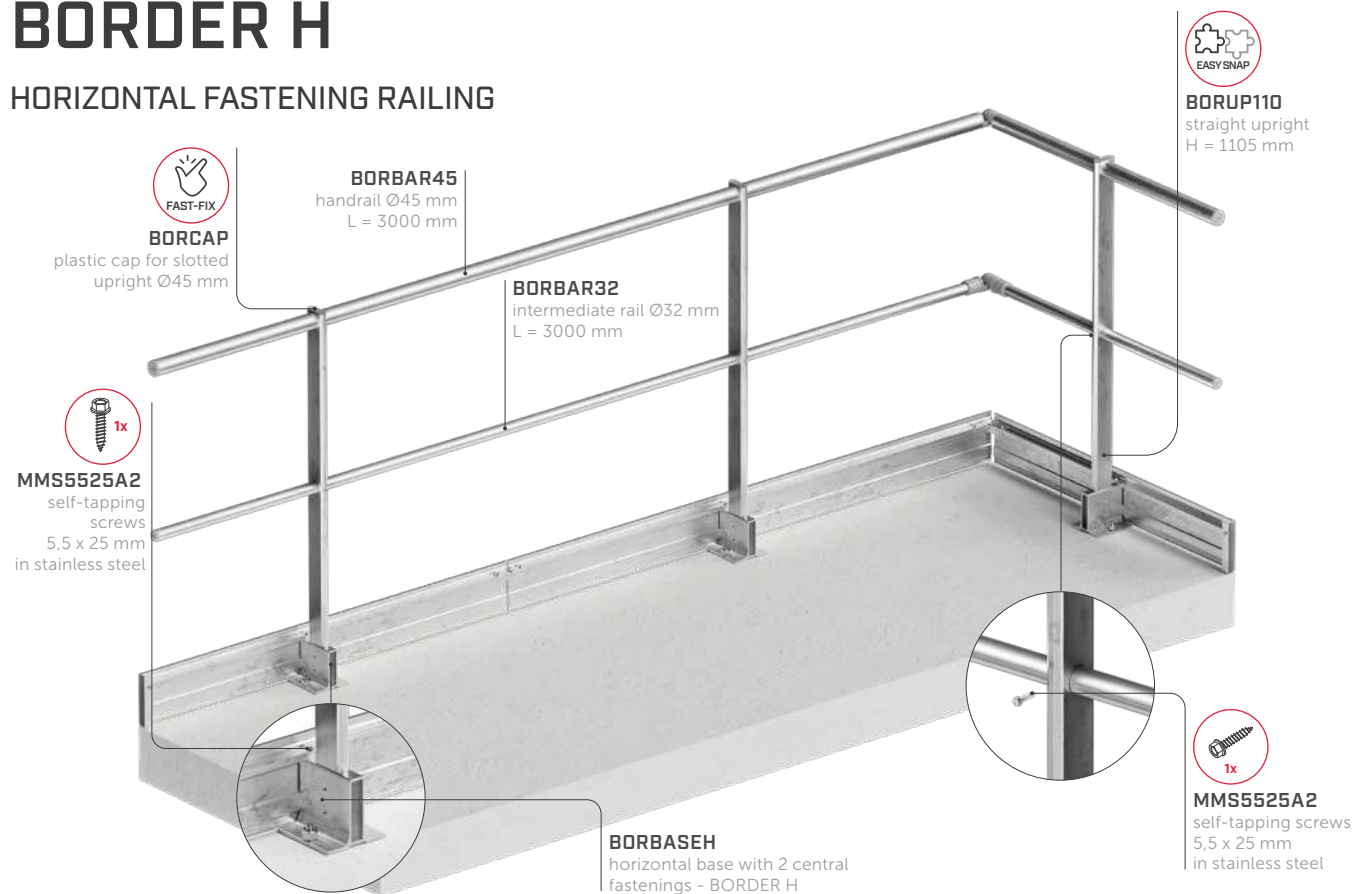
upright/frets	H _{uprights}	spacing between uprights [cm]			
		EN 14122-3: 2016	NTC 2018 + DLgs.81/08	EN 13374+A1: 2024 A	NF E85-015: 2019
straight	130 cm	150	150	-	150
	118 cm	160*	160*	-	160*
straight + folding	110 cm	165*	170*	250	165*
	100 cm	170*	180*	250*	170*
straight	76 cm	185*	180*	-	185*
curved	113 cm	160*	170*	-	160*

* Spacings are interpolated based on the most critical case.
See the technical data sheet for spacings related to standards not included in the table.

substructure	fasteners
C20/25	AB1 Ø12
	SKR Ø12
	INA Ø12 VIN-FIX

BORDER H

HORIZONTAL FASTENING RAILING



snap-fit cap and upright



rapid installation with snap-fit system, without the need for additional screws



use of only one screw for railing installation



toe board assembly with one screw only

SPACING

upright/frets	H _{uprights}	spacing between uprights [cm]			
		EN 14122-3: 2016	NTC 2018 + DLGS.81/08	EN 13374+A1: 2024 A	NF E85-015: 2019
straight + folding	110 cm	160	180	250	160
	100 cm	170*	180*	250*	170*
straight	53 cm	190*	180*	-	190*
curved	113 cm	155*	180*	-	155*

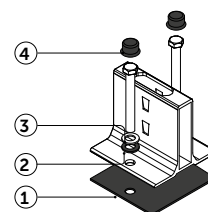
*Spacings are interpolated based on the most critical case.
See the technical data sheet for spacings related to standards not included in the table.

substructure	fasteners
C20/25	AB1 Ø12
	SKR Ø12
	INA Ø12 VIN-FIX
CLT	VGS Ø13 HUS Ø12

BASE H WATERPROOFING KIT

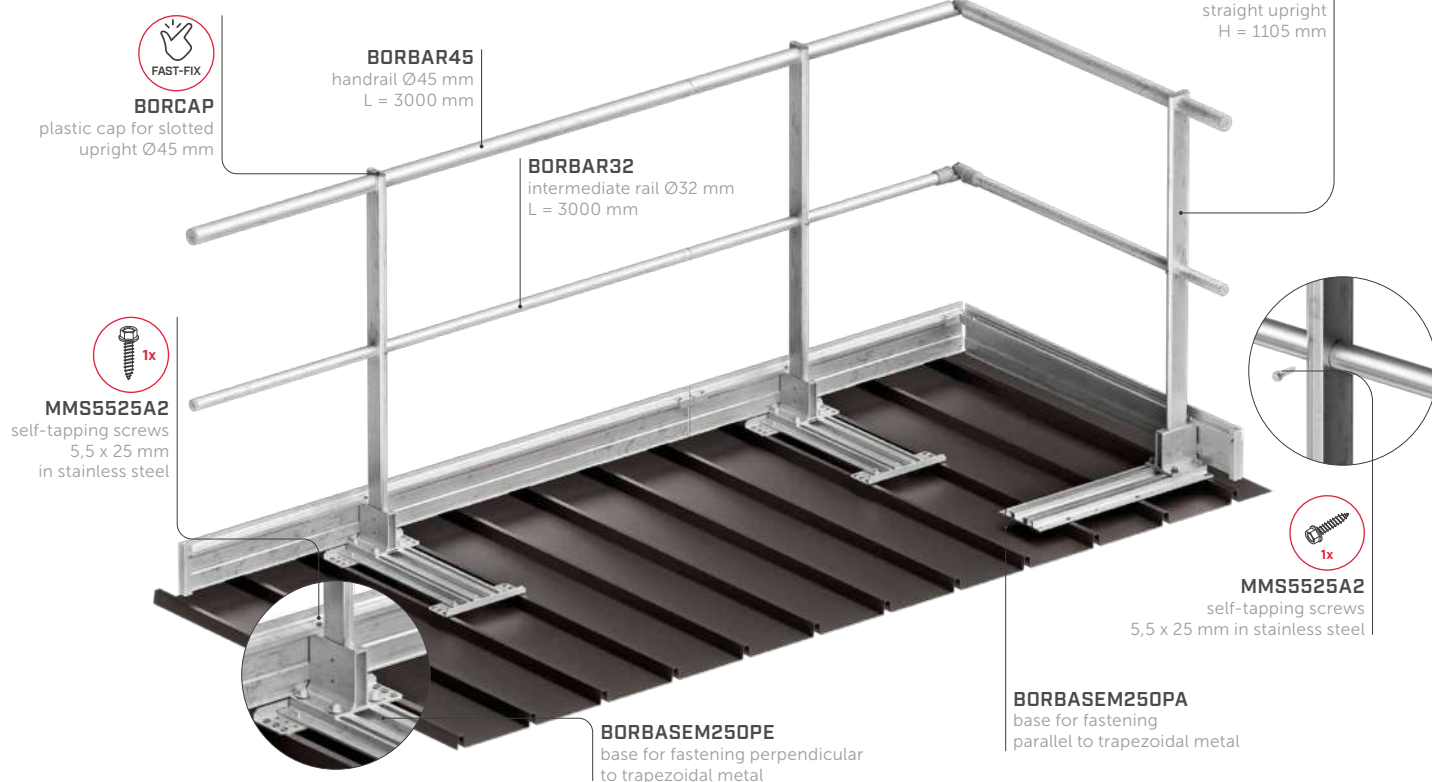
The waterproofing kit (code BORBASEHKIT) consists of washers and gaskets combined with chemical fastening. It ensures waterproofing and prevents water infiltration into the concrete structure.

- 1 x EPDM gasket
- 2 x EPDM washers for M12
- 2 x washers for M12
- 2 x protective caps for M12 nut



BORDER M

RAILING FASTENING ON TRAPEZOIDAL METAL ROOF



snap-fit cap and upright



rapid installation with snap-fit system, without the need for additional screws



use of only one screw for railing installation



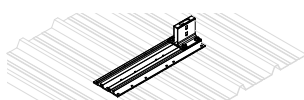
toe board assembly with one screw only

SPACING BY FASTENER TYPE

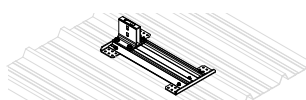
		EN 14122-3: 2016 NTC 2018 + DLGS 81/08 EN 13374+A1: 2024 A NF E85-015: 2019					
upright/frets	H _{uprights}	spacing between uprights [cm]				substructure	fasteners
straight + folding + fret 250 mm	 110 cm	150	-	-	150		rivet 6,3 
	 100 cm	150*	-	-	150*		
straight + folding + fret 333 mm	 110 cm	166	-	-	166		
	 100 cm	166*	-	-	166*		

* Spacings are interpolated based on the most critical case.
See the technical data sheet for spacings related to standards not included in the table.

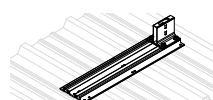
BASE TYPES (excluding EPDM gasket and rivets)



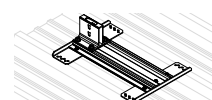
BORBASEM250PA
base for trapezoidal metal for BORDER parallel to the frets, pitch 200 - 250mm



BORBASEM250PE
base for trapezoidal metal for BORDER perpendicular to the frets, pitch 200 - 250mm



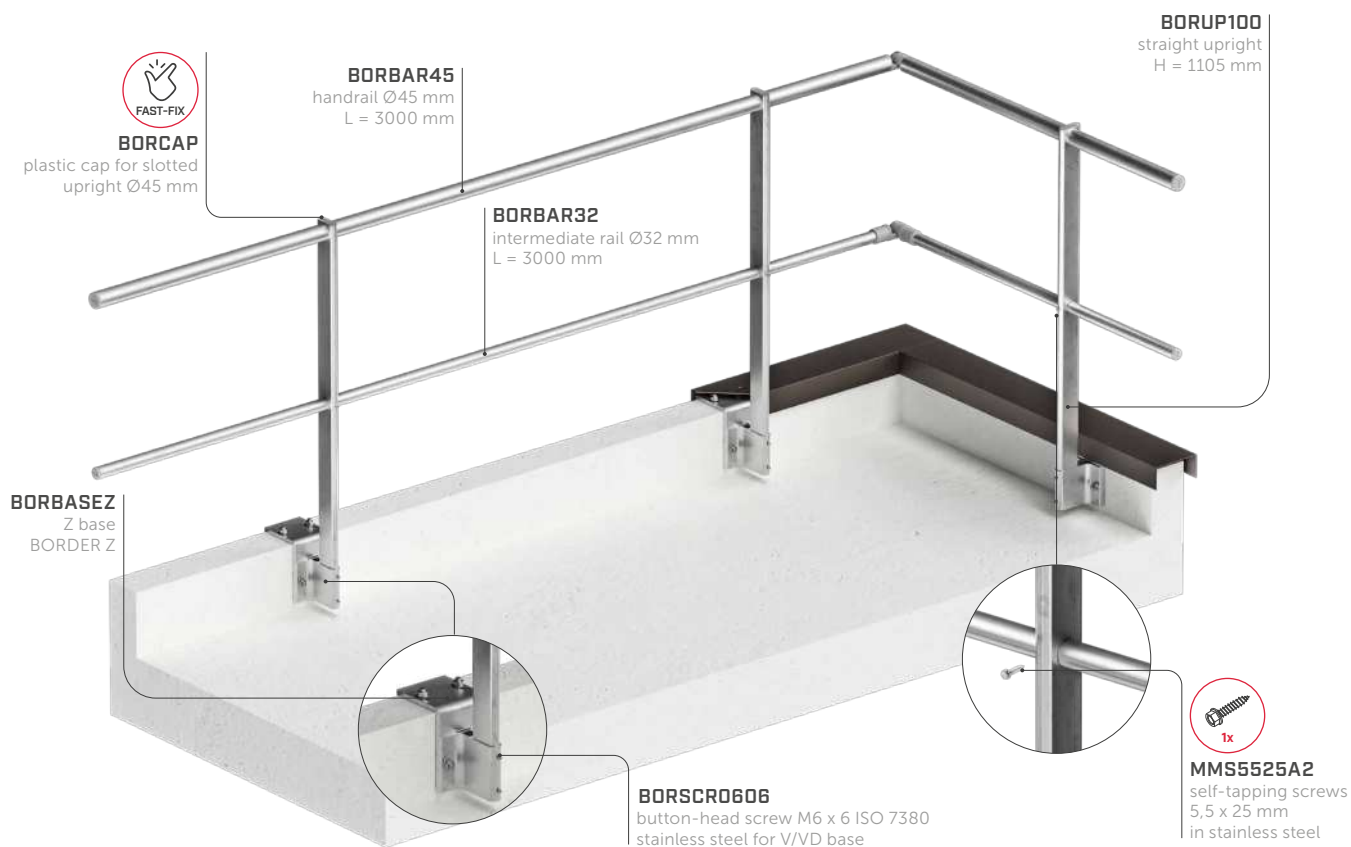
BORBASEM333PA
base for trapezoidal metal for BORDER parallel to the frets, pitch 333 - 350mm



BORBASEM333PE
base for trapezoidal metal for BORDER perpendicular to the frets, pitch 333-350 mm

BORDER Z

A Z FASTENING RAILING



snap-fit cap and upright



use of only one screw
for railing installation



toe board assembly
with one screw only

SPACING

upright/frets	H _{uprights}	standards			
		EN 14122-3: 2016	NTC 2018 + DLgs.81/08	EN 13374+A1: 2024 A	NF E85-015: 2019
straight + folding	110 cm	150	140	-	150
	100 cm	160*	140*	-	160*
curved	113cm	145*	100*	-	145*

* spacings are interpolated based on the most critical case.
See the technical data sheet for spacings related to standards not included in the table.

substructure	fasteners
C20/25	AB1 Ø12
	SKR Ø12
	INA Ø12 VIN-FIX

BASE TYPES



BORBASEZ
for kerb without insulation layer



BORBASEZ70
for kerb with 70 mm thick insulation layer



BORBASEZ100
for kerb with 100 mm thick insulation layer



BORBASEZ130
for kerb with 130 mm thick insulation layer



BORBASEZ160
for kerb with 160 mm thick insulation layer

BORDER | components

RAILS | CODES AND DIMENSIONS

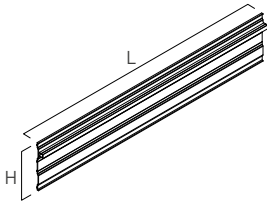
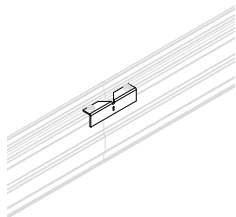
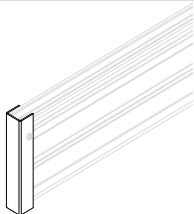
CODE	description	d [mm] [in]	L [mm] [in]	pcs	
BORBAR45	tapered handrail	45 1.77	3000 118 1/8	1	
BORBAR32	tapered intermediate rail	32 1.26	3000 118 1/8	1	
BORBAR45F	handrail for folding railing	45 1.77	3000 118 1/8	1	
BORBAR32F	non-tapered intermediate rail for folding railing	32 1.26	3000 118 1/8	1	
BORBAR45R	tapered and reinforced handrail	45 1.77	3000 118 1/8	1	

UPRIGHTS | CODES AND DIMENSIONS

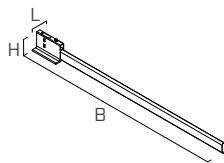
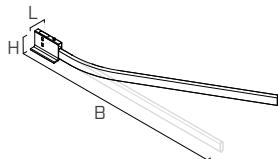
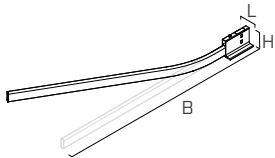
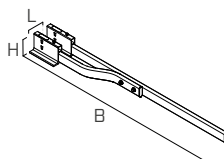
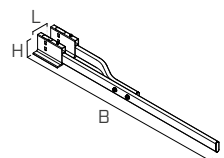
CODE	description	H [mm] [in]	pcs	
BORUP530WH	straight upright without holes for intermediate rail	535 21 1/16	1	
BORUP760WH	straight upright without holes for intermediate rail	765 30 1/8	1	
BORUP100	straight upright	1005 39 9/16	1	
BORUP110	straight upright	1105 43 1/2	1	
BORUP118	straight upright	1185 46 5/8	1	
BORUP130	straight upright	1305 51 3/8	1	
BORUP100F	folding upright	1005 39 9/16	1	
BORUP110F	folding upright	1105 43 1/2	1	
BORUP113C	15° curved upright	1125 44 5/16	1	
BORUP100R	reinforced straight upright for EN 13374 and BS 13700	1005 39 9/16	1	
BORUP110R	reinforced straight upright for EN 13374 and BS 13700	1105 43 1/2	1	
BORUP100AS	straight upright (AS 1657:2018)	1005 39 9/16	1	
BORUP107US	straight upright (OSHA 1910.29)	1075 42 5/16	1	

BORDER | components

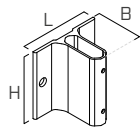
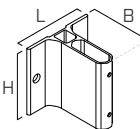
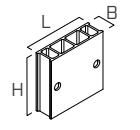
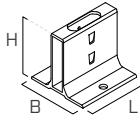
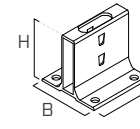
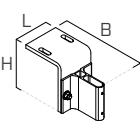
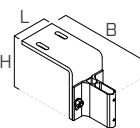
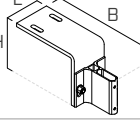
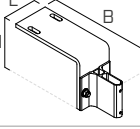
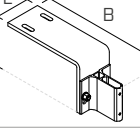
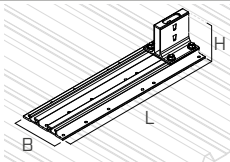
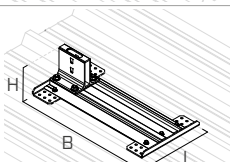
TOE BOARD | CODES AND DIMENSIONS

CODE	description	H [mm] [in]	L [mm] [in]	pcs	
BORTB	toe board	150 6	3000 118 1/8	1	
BORTBJUN	connector for straight and curved joint for toe board	- -	- -	1	
BORTBCAP	end cap for toe board	- -	- -	1	

BASES | CODES AND DIMENSIONS

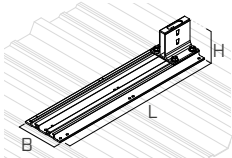
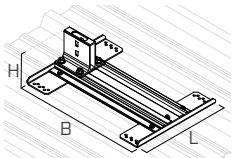
CODE	description	B [mm] [in]	H [mm] [in]	L [mm] [in]	pcs	
BORBASEW	base for self-supporting railing - BORDER W	1400 55 1/8	115 4 1/2	100 4	1	
BORBASEWFCL	base for left-hand folding self-supporting curve - BORDER W	1400 55 1/8	115 4 1/2	100 4	1	
BORBASEWFCR	base for right-hand folding self-supporting curve - BORDER W	1400 55 1/8	115 4 1/2	100 4	1	
BORBASEWFL	base for left-hand folding self-supporting railing - BORDER W	750 29 1/2	115 4 1/2	100 4	1	
BORBASEWFR	base for right-hand folding self-supporting railing - BORDER W	750 29 1/2	115 4 1/2	100 4	1	

BASES | CODES AND DIMENSIONS

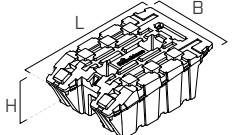
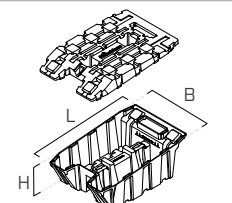
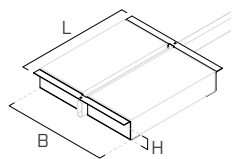
CODE	description	B [mm] [in]	H [mm] [in]	L [mm] [in]	pcs	
BORBASEV	vertical base for wall fastening - BORDER V	80 3 1/8	115 4 1/2	120 4 3/4	1	
BORBASEVD	vertical offset base d = 35 mm for wall fastening - BORDER VD	107 4 3/16	115 4 1/2	120 4 3/4	1	
BORDIST	spacer d = 35 mm - BORDER VD	35 1 3/8	115 4 1/2	120 4 3/4	1	
BORBASEH	horizontal base with 2 central fastenings - BORDER H	120 4 3/4	115 4 1/2	125 4 15/16	1	
BORBASEH4H	horizontal base with 4 fastenings for timber roofs - BORDER H	120 4 3/4	115 4 1/2	125 4 15/16	1	
BORBASEZ	Z-base for kerb without insulation layer - BORDER Z	250 10	167 6 9/16	120 4 3/4	1	
BORBASEZ70	Z-base for kerb with 70 mm thick insulation layer - BORDER Z	310 12 3/16	167 6 9/16	120 4 3/4	1	
BORBASEZ100	Z-base for kerb with 100 mm thick insulation layer - BORDER Z	340 13 3/8	167 6 9/16	120 4 3/4	1	
BORBASEZ130	Z-base for kerb with 130 mm thick insulation layer - BORDER Z	370 14 9/16	167 6 9/16	120 4 3/4	1	
BORBASEZ160	Z-base for kerb with 160 mm thick insulation layer - BORDER Z	400 15 3/4	167 6 9/16	120 4 3/4	1	
BORBASEM250PA	base for trapezoidal metal for BORDER parallel to the frets, pitch 200-250 mm - BORDER M	175 6 7/8	140 5 1/2	630 24 13/16	1	
BORBASEM250PE	base for trapezoidal metal for BORDER perpendicular to the frets, pitch 200-250 mm - BORDER M	540 21 1/4	143 5 5/8	280 11	1	

BORDER | components

BASES | CODES AND DIMENSIONS

CODE	description	B [mm] [in]	H [mm] [in]	L [mm] [in]	pcs	
BORBASEM333PA	base for trapezoidal metal for BORDER parallel to the frets, pitch 333 - 350mm - BORDER M	175 6 7/8	140 5 1/2	730 28 3/4	1	
BORBASEM333PE	base for trapezoidal metal for BORDER perpendicular to the frets, pitch 333 - 350 mm - BORDER M	540 21 1/4	143 5 5/8	380 15	1	

BALLAST | CODES AND DIMENSIONS

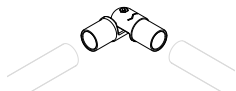
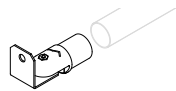
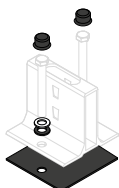
CODE	description	B [mm] [in]	H [mm] [in]	L [mm] [in]	pcs	
BORWT	recycled PP plastic-coated ballast, weight 12,5 kg	265 10 7/16	50 1 15/16	400 15 3/4	1	
BORWTBOX	recycled PP plastic container for ballast for bricks or free-flowing material (concrete or sand)	265 10 7/16	50 1 15/16	400 15 3/4	1	
BORWTFRAME	frame for ballast with concrete slabs	570 22 7/16	80 3 1/8	530 20 7/8	2	

ACCESSORIES | CODES AND DIMENSIONS

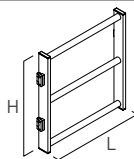
CODE	description	pcs	
BORCAP45	plastic cap for handrail Ø45 mm (Ø1.77 inch)	1	
BORCAP32	plastic cap for intermediate rail Ø32 mm (Ø1.26 inch)	1	
BORCAP	plastic cap for slotted upright Ø45 mm (Ø1.77 inch)	1	

BORDER | components

ACCESSORIES | CODES AND DIMENSIONS

CODE	description	pcs	
BORCOR	universal angle bracket for handrail and rails	1	
BORWALL	universal wall-mounted end element for handrail and rails	1	
BORBASEHKIT	waterproofing kit for BORDER H base	1	

SAFETY GATE | CODES AND DIMENSIONS

CODE	description	L [mm] [in]	H [mm] [in]	pcs	
BORGATE600	safety gate with mounted hinges	600 23 5/8	630 24 13/16	1	

INSTALLATION FASTENERS | CODES AND DIMENSIONS

CODE	description	d [mm] [in]	H [mm] [in]	pcs	
MMS5525A2	self-tapping screw A2 Ø5,5 x 25 mm	5,5 0.22	25 1	50	

TECHNICAL MANUALS | CODES AND DIMENSIONS

CODE	description	pcs	
BORMANW	manual for BORDER W	1	
BORMANV	manual for BORDER V/VD	1	
BORMANH	manual for BORDER H	1	
BORMANM	manual for BORDERM	1	
BORMANZ	manual for BORDER Z	1	