BORDER

ALUMINIUM PERMANENT AND TEMPORARY RAILINGS

EN 14122-3: 2016 | EN 13374+A1: 2024 A | NTC 2018 + DLgs81/08 | NF E85-015: 2019 | AS 1657:2018 | ANSI OSHA 1910.29 | BS 13700:2021

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.

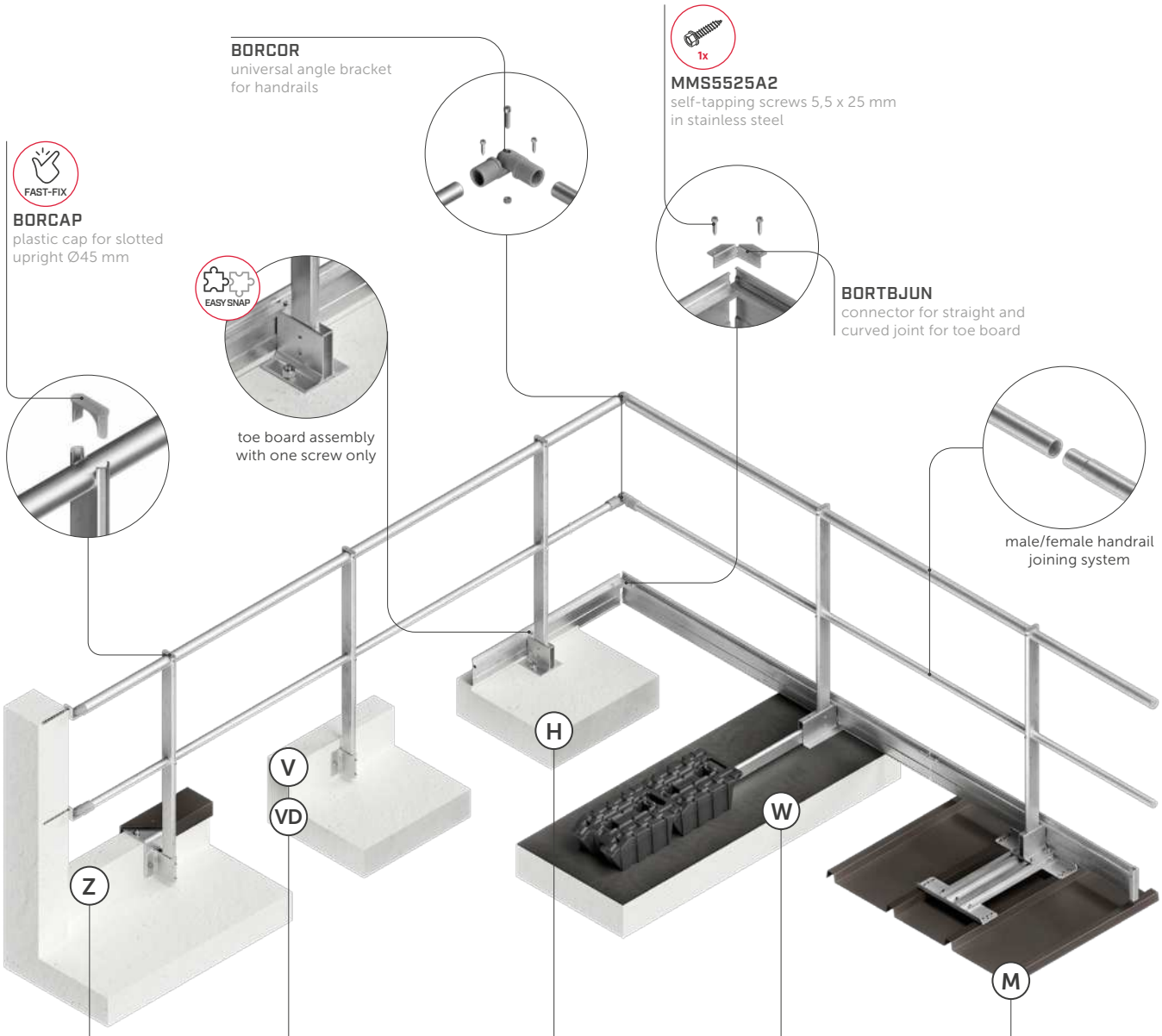
AESTHETICS AND DURABILITY

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

MY PROJECT SAFETY

BIM | VIDEO | MANUALS

BORDER | TYPES AND KEY ELEMENTS



UPRIGHT TYPES

STRAIGHT UPRIGHT

CURVED UPRIGHT

FOLDING UPRIGHT

AVAILABLE COLOURS

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

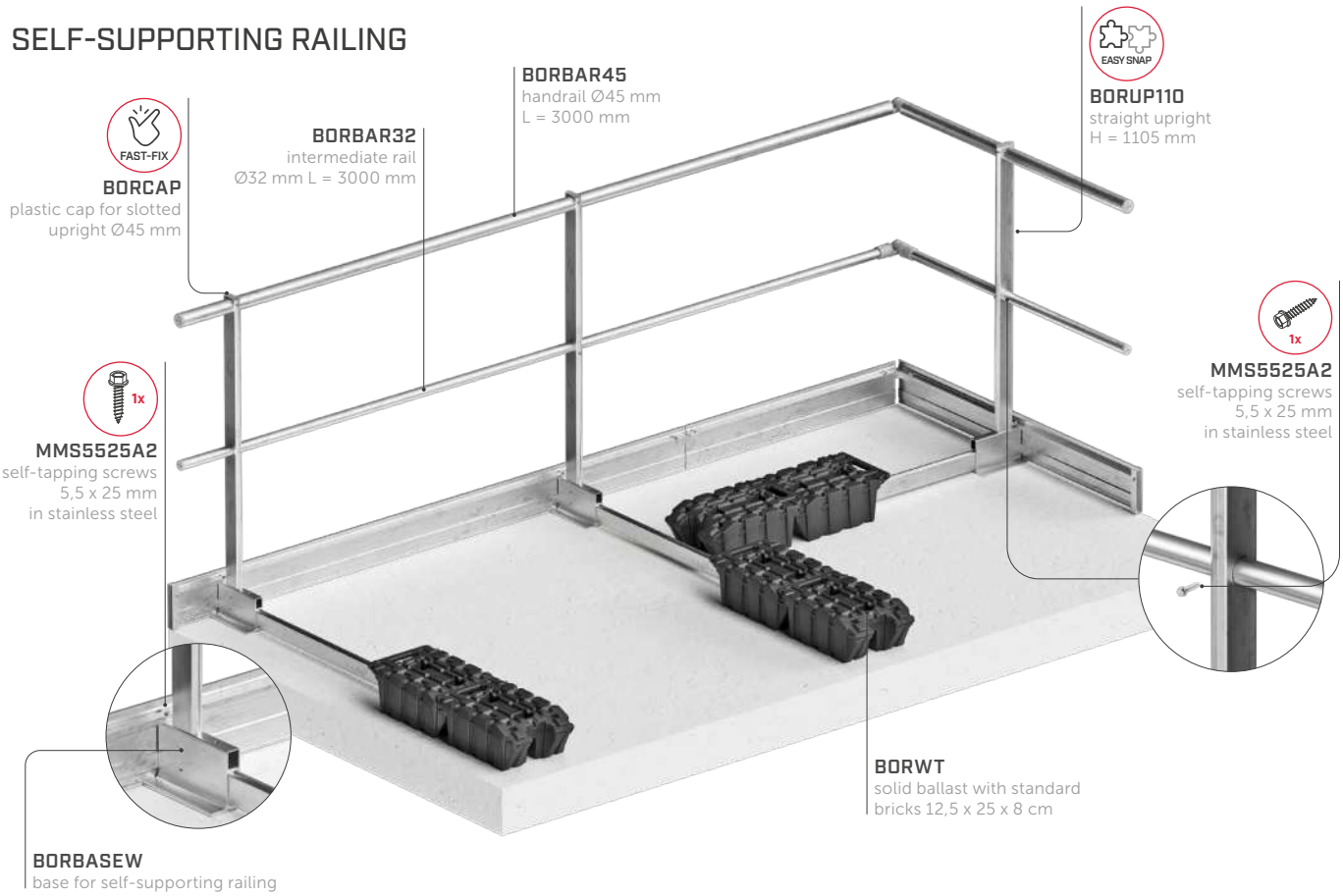
material:
EN AW 6005A-T6

alu 6005A

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

BORDER W

SELF-SUPPORTING RAILING



FAST-FIX
snap-fit cap and upright

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

1x
use of only one screw for railing installation

1x
toe board assembly with one screw only

SPACING

upright/frets	$H_{uprights}$	EN 14122-3: 2016	NTC 2018 + D.Lgs.81/08	EN 13374+A1: 2024 A	NF E85-015: 2019
		spacing between uprights [cm]			
straight + folding	110 cm	150	100	250	150
	100 cm	160*	100*	250*	160*
curved	113 cm	145*	100*	250*	145*

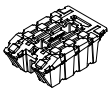
** Spacings are interpolated based on the most critical case.*
See the technical data sheet for spacings related to standards not included in the table.

substructure

C20/25 | CLT | SHEATH | PVC

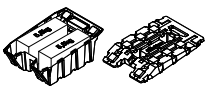
BORDER W can be installed on all 4 of the substructures without fasteners.

BALLAST TYPES



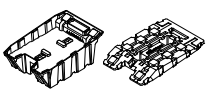
BORWT
ballast with standard bricks 12,5 x 25 x 8 cm weight 12,5 kg

option 1

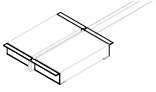


BORWTBOX
hollow ballast to be filled with 2 bricks measuring 12,5 x 25 x 8 cm (not included)

option 2



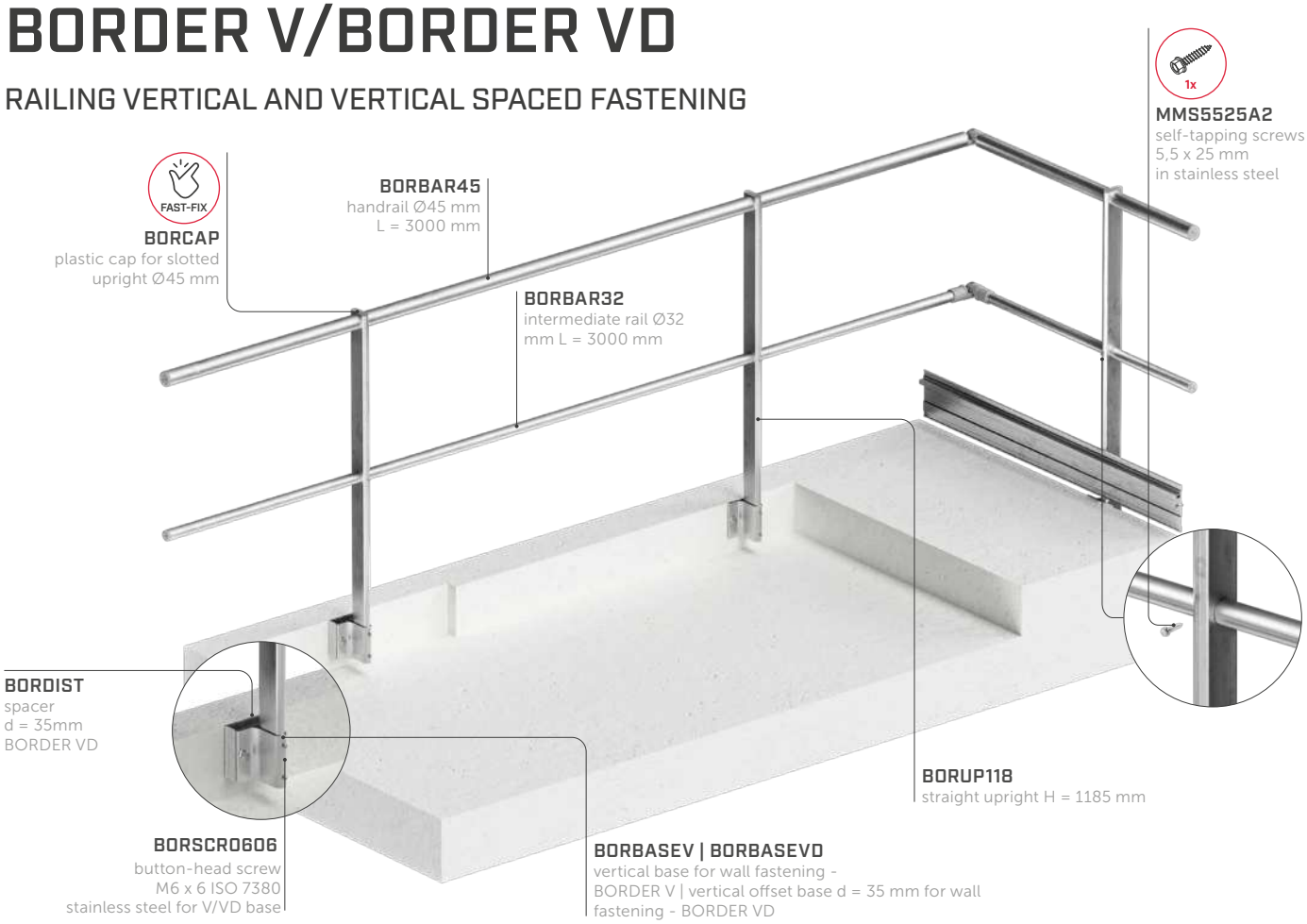
BORWTBOX
hollow ballast to be filled with concrete or sand



BORWTFRAME
frame for ballast with standard concrete slabs

BORDER V/BORDER VD

RAILING VERTICAL AND VERTICAL SPACED FASTENING



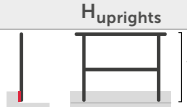
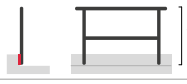
FAST-FIX

snap-fit cap and upright

1x

use of only one screw for railing installation

SPACING

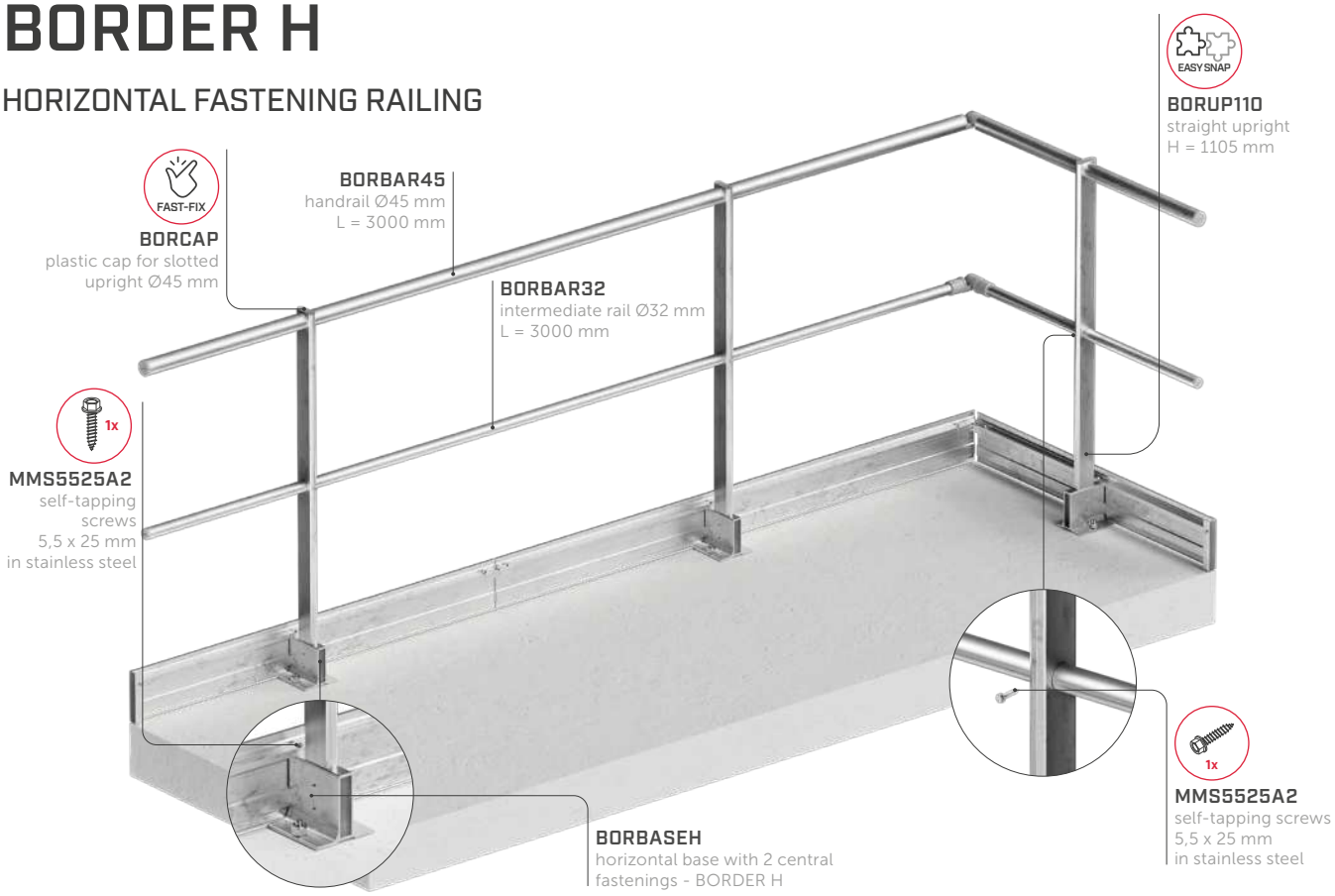
upright/frets	$H_{uprights}$		spacing between uprights [cm]			
			EN 14122-3: 2016	NTC 2018 + D.Lgs.81/08	EN 13374+A1: 2024 A	NF E85-015: 2019
straight		130 cm	150	150	-	150
		118 cm	160*	160*	-	160*
straight + folding		110 cm	165*	170*	250	165*
		100 cm	170*	180*	250*	170*
straight		76 cm	185*	180*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

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

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

BORDER H

HORIZONTAL FASTENING RAILING



FAST-FIX
snap-fit cap and upright

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

1x
use of only one screw for railing installation

1x
toe board assembly with one screw only

SPACING

upright/frets	$H_{uprights}$	spacing between uprights [cm] EN 14122-3: 2016	NTC 2018 + D.Lgs.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*

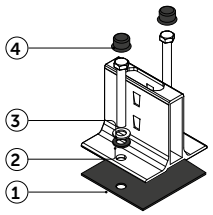
substructure	fasteners
C20/25	AB1 Ø12
	SKR Ø12
	INA Ø12 VIN-FIX
CLT	VGS Ø13 HUS Ø12

**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 H WATERPROOFING KIT

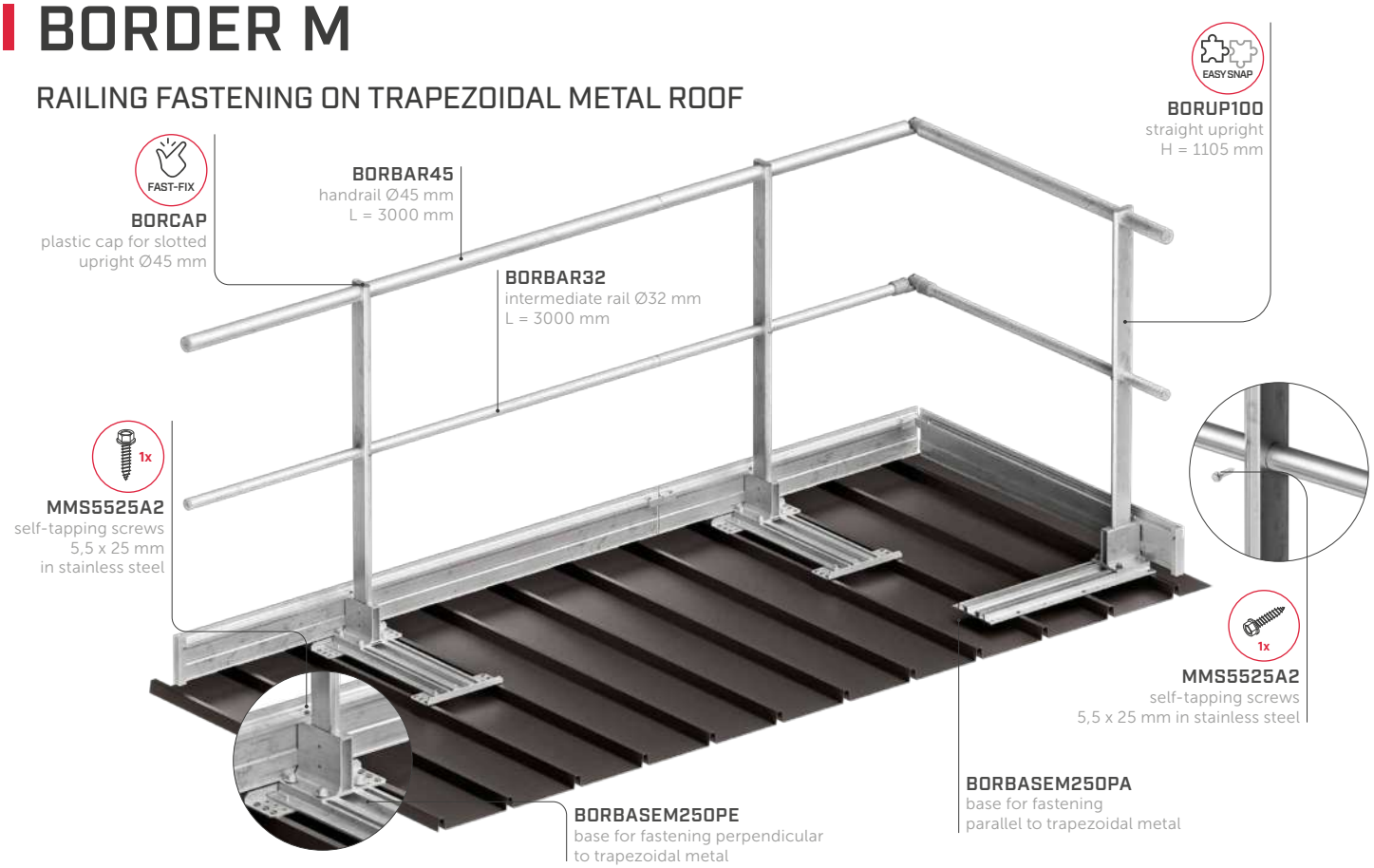
The waterproofing kit (code BORBASEHKIT) consists of washers and gaskets combined with chemical fastening. It ensures waterproofing and prevents water infiltration into the concrete structure.

1. 1 x EPDM gasket
2. 2 x EPDM washers for M12
3. 2 x washers for M12
4. 2 x protective caps for M12 nut



BORDER M

RAILING FASTENING ON TRAPEZOIDAL METAL ROOF



FAST-FIX
snap-fit cap and upright

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

1x
use of only one screw for railing installation

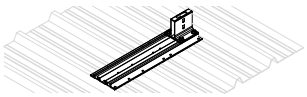
1x
toe board assembly with one screw only

SPACING BY FASTENER TYPE

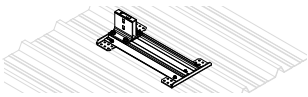
upright/frets	$H_{uprights}$		spacing between uprights [cm] EN 14122-3: 2016	NTC 2018 + DLgs.81/08	EN 13374+A1: 2024 A	NF E85-015: 2019	substructure	fasteners
straight + folding + fret 250 mm	110 cm		150	-	-	150		rivet 6,3
	100 cm		150*	-	-	150*		
straight + folding + fret 333 mm	110 cm		166	-	-	166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

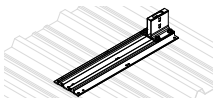
BASE TYPES (excluding EPDM gasket and rivets)



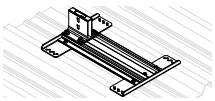
BORBASEM250PA
base for trapezoidal metal for BORDER parallel to the frets, pitch 200 - 250mm



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



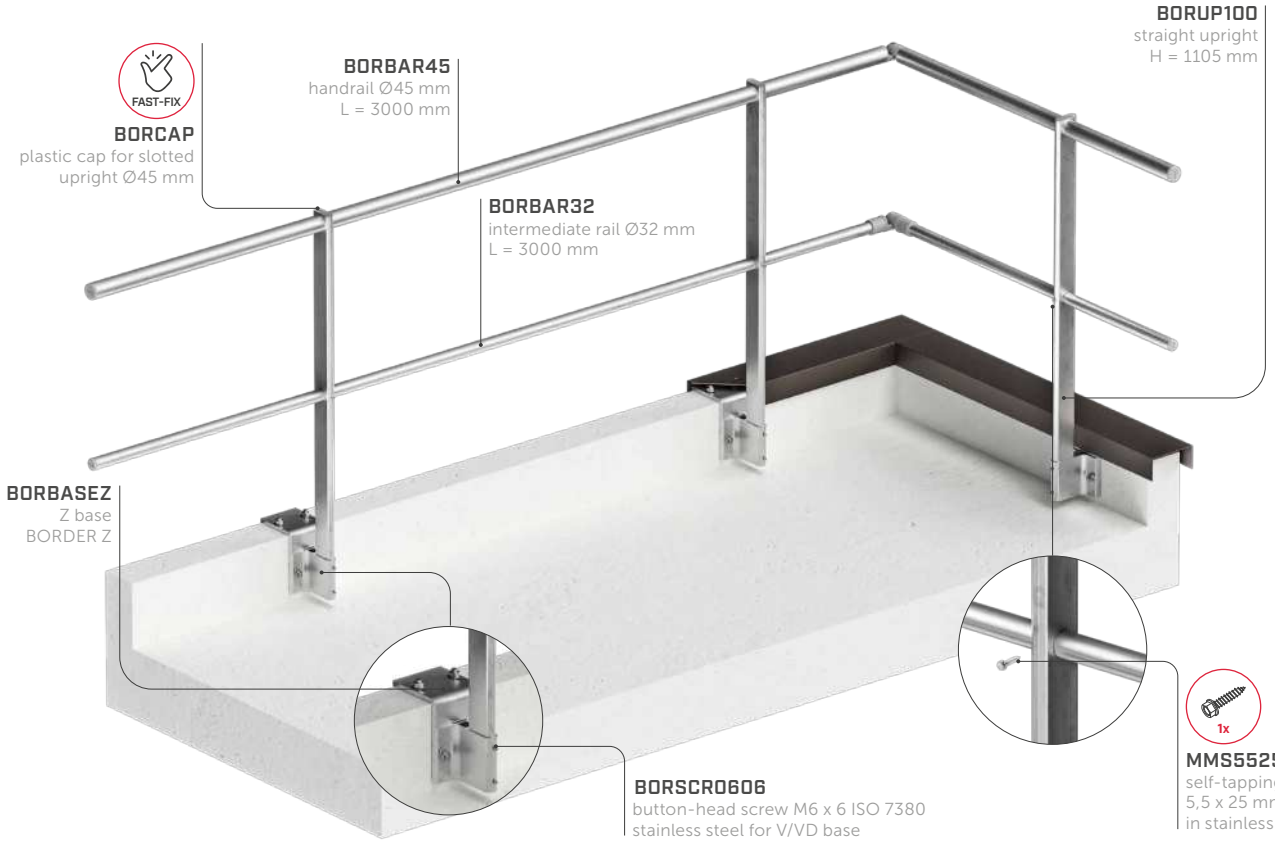
BORBASEM333PA
base for trapezoidal metal for BORDER parallel to the frets, pitch 333 - 350mm



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

BORDER Z

A Z FASTENING RAILING



FAST-FIX
snap-fit cap and upright

1x
use of only one screw
for railing installation

1x
toe board assembly
with one screw only

SPACING

upright/frets	$H_{uprights}$	spacing between uprights [cm]			
		EN 14122-3: 2016	NTC 2018 + D.Lgs.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*

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

** 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

BORBASEZ
for kerb without insulation layer

BORBASEZ70
for kerb with 70 mm thick insulation layer

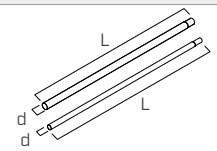
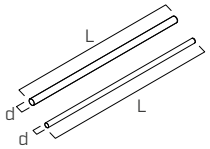
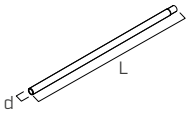
BORBASEZ100
for kerb with 100 mm thick insulation layer

BORBASEZ130
for kerb with 130 mm thick insulation layer

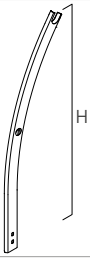
BORBASEZ160
for kerb with 160 mm thick insulation layer

BORDER | components

RAILS | CODES AND DIMENSIONS

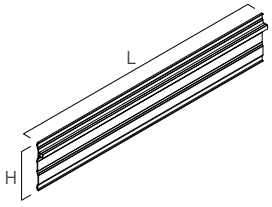
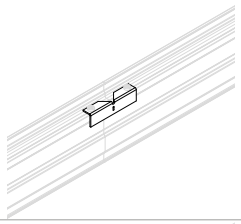
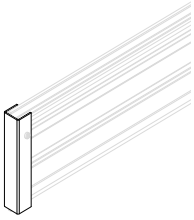
CODE	description	d [mm] *[in]*	L [mm] *[in]*	pcs	
BORBAR45	tapered handrail	45 *1.77*	3000 *118 1/8*	1	
BORBAR32	tapered intermediate rail	32 *1.26*	3000 *118 1/8*	1	
BORBAR45F	handrail for folding railing	45 *1.77*	3000 *118 1/8*	1	
BORBAR32F	non-tapered intermediate rail for folding railing	32 *1.26*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

UPRIGHTS | CODES AND DIMENSIONS

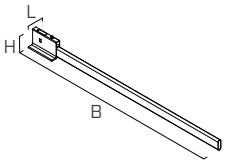
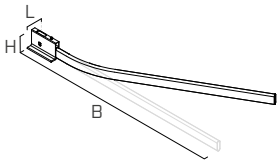
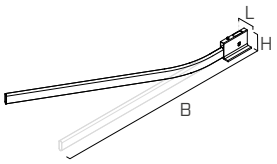
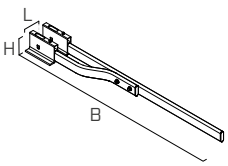
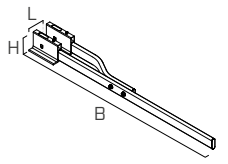
CODE	description	H [mm] *[in]*	pcs	
BORUP530WH	straight upright without holes for intermediate rail	535 *21 1/16*	1	
BORUP760WH	straight upright without holes for intermediate rail	765 *30 1/8*	1	
BORUP100	straight upright	1005 *39 9/16*	1	
BORUP110	straight upright	1105 *43 1/2*	1	
BORUP118	straight 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

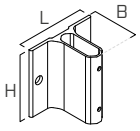
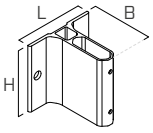
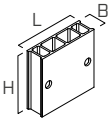
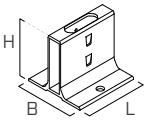
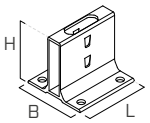
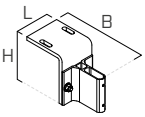
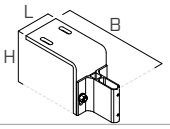
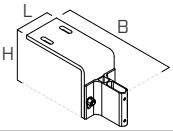
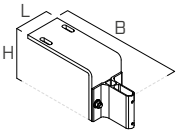
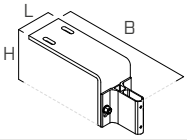
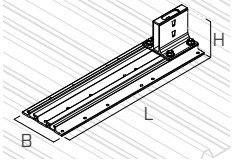
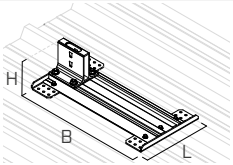
CODE	description	H [mm] *[in]*	L [mm] *[in]*	pcs	
BORTB	toe board	150 *6*	3000 *118 1/8*	1	
BORTBJUN	connector for straight and curved joint for toe board	- -	- -	1	
BORTBCAP	end cap for toe board	- -	- -	1	

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	

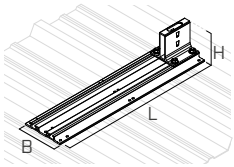
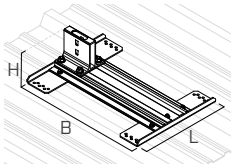
BORDER | components

BASES | CODES AND DIMENSIONS

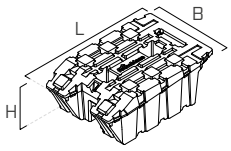
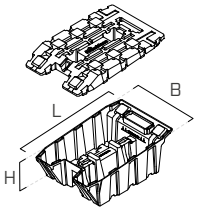
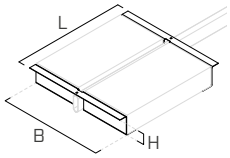
CODE	description	B [mm] *[in]*	H [mm] *[in]*	L [mm] *[in]*	pcs	
BORBASEV	vertical base for wall fastening - BORDER V	80 *3 1/8*	115 *4 1/2*	120 *4 3/4*	1	
BORBASEVD	vertical offset base d = 35 mm for wall fastening - BORDER VD	107 *4 3/16*	115 *4 1/2*	120 *4 3/4*	1	
BORDIST	spacer d = 35 mm - BORDER 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

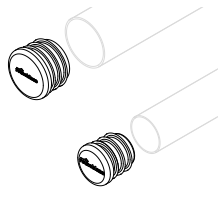
BASES | CODES AND DIMENSIONS

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

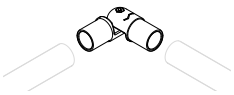
CODE	description	B [mm] *[in]*	H [mm] *[in]*	L [mm] *[in]*	pcs	
BORWT	recycled PP plastic-coated ballast, weight 12,5 kg	265 *10 7/16*	50 *1 15/16*	400 *15 3/4*	1	
BORWTBOX	recycled PP plastic container for ballast for bricks or free-flowing material (concrete or sand)	265 *10 7/16*	50 *1 15/16*	400 *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

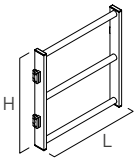
CODE	description	pcs	
BORCAP45	plastic cap for handrail Ø45 mm (*Ø1.77 inch*)	1	
BORCAP32	plastic cap for intermediate rail Ø32 mm (*Ø1.26 inch*)	1	
BORCAP	plastic cap for slotted upright Ø45 mm (*Ø1.77 inch*)	1	

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	