







Colour Guide

The colours in the tables will help you select your products material and finish. These will also be displayed in the page footer throughout this section. Products not colour coded will state their material or finish below the table.

	Grade 304 Stainless steel (Internal)
	Grade 316 Stainless steel (External)
	Zamac (Zinc aluminium alloy)
	Zinc coated steel
	Mild steel
	Galvanised steel
	Aluminium
	Duplex 2205 (Ultra marine stainless)

Icons

Throughout this section there are various icons to help you with your product selection.

	Diameter
	Square Solid
	Technical information that can be found on our website
	Handy tip for quicker and more effortless installation
	Important note, please read
	Scan for more information

Stainless Steel

All stainless steel fittings have a 2mm wall thickness unless otherwise stated and are supplied satin finish grit 320 and mirror finish grit 800.

**TESTED TO
BS 6180**

UK standard for the construction of barriers in and around buildings

**TESTED TO
BS 4211**

UK standard for ladders for permanent access to high structures

**TESTED TO
BS 4592**

UK standard for flooring, stair treads and handrails for industrial use

**TESTED TO
BS 14122-4**

Requirements for safe access to machines, where a fixed means of access is necessary

**TESTED TO
BS 8300**

Conforms to the requirements that handrails should not be cold to the touch

**TESTED TO
BS 6399-1**

UK standard loading for buildings. Code of practice for dead & imposed loads

**TESTED TO
BS 4592:0**

Conforms to the common requirements and recommendations for installations.

HANDRAILING



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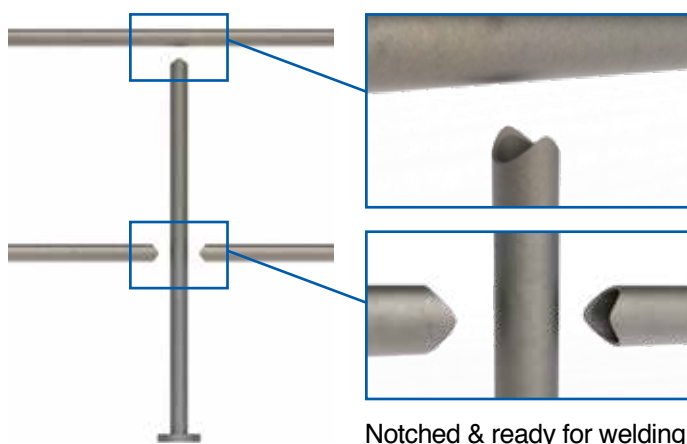
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Handrailing
website section



Notched & ready for welding

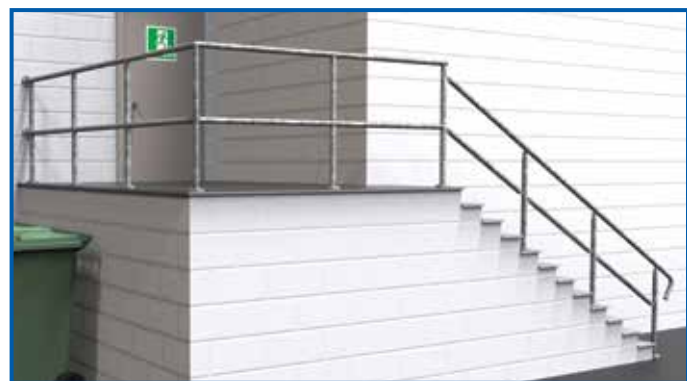
Designed to make the fabricators' life easier, the Ø 48.3mm mild steel tube with posts is supplied notched and ready for welding, plus all the components required to complete the job.

- Can be galvanised, zinc plated or powder coated after fabrication
- Labour saving by cutting out preparation time
- Suitable for both commercial and private installations
- Grade S235

Just choose your system!

Tubular Rail System

Glass Infill System



**We supply glass!
Please enquire.**

Plain Notched Post

Mid Rail

Top Rail

90° Bend



Splice lock ready!

Height mm	To Suit Ø mm	Code
1065	48.3	1301708D

To give 1100mm when top rail welded.

Length mm	To Suit Ø mm	Code
1178	48.3	1301758D

Notched both ends.

Length m	To Suit Ø mm	Code
7.5	48.3	300648332

3mm wall thickness.

Legs mm	To Suit Ø mm	Code
248	48.3	1301B48248

See page 415 for splice locks.

Round Fixing Plate

Round Cover

Square Fixing Plate

Square Cover



Ø mm	To Suit Ø mm	Code
100.0	33.7	1301207B
108.5	42.4	1301207C
114.8	48.3	1301207D

Plate thickness 8mm. Fixing holes 15.4 x 10.4mm.

To Suit Ø mm	Code
33.7	1301208B
42.4	1301208C
48.3	1301208D
48.3	1804208D
48.3	1806208D

■ mm	To Suit □ mm	Code
79	30	130120730
89	40	130120740
99	50	130120750

Plate thickness 8mm. Fixing holes 15.4 x 10.4mm.

To Suit □ mm	Code
30	130120830
40	130120840
50	130120850



Weld-A-Rail

All components to suit Ø 48.3 x 3.0mm tube

Weld-On Glass Clamp

Short



Size mm	Code
80 x 40 x 6	1801405F
80 x 40 x 6	1801407F

Weld-On Glass Clamp

Long



Size mm	Code
120 x 40 x 6	1801406F
120 x 40 x 6	1801408F

Bolt-On Glass Clamp



Code
1802401DZ

Zamac.

Weld-On Glass Clamp



H x W x D mm	Code
40 x 80 x 25	1801401F

BZP tabs with cast steel lug.

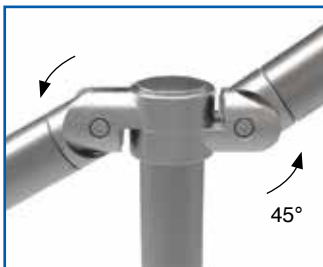
If you have overhanging balconies and balustrading we recommend that you use our glass clamps that use bolts/pins to fix through pre-drilled glass.

Flexirail® System



The most flexible handrailing solution for stairs, gradients and corners. Made with Ø 48.3 x 3.2mm galvanised tube.

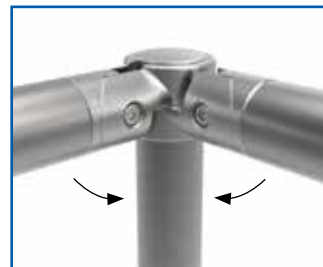
Variable Angles



Straight Runs



Variable Corners

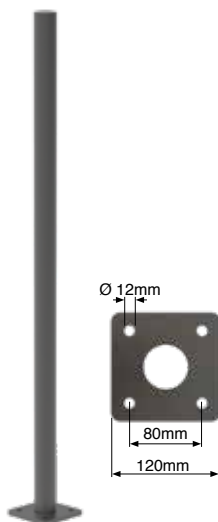


Exploded View



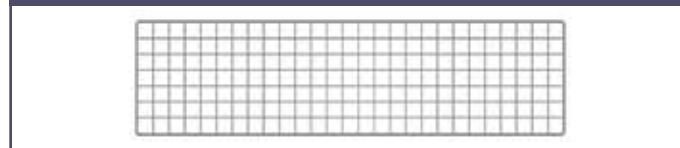
Bolt-Down Post

With steel end cap

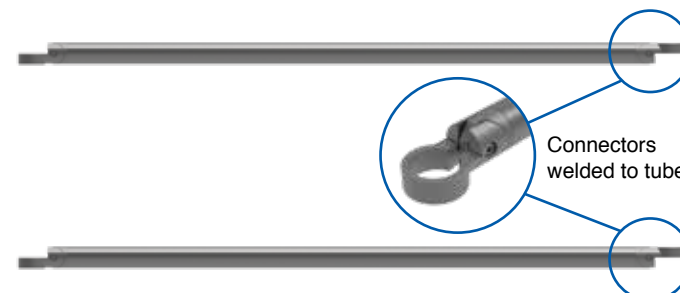


Height mm	Code
1100	62SP48B

Flexirail is compatible with all of our mesh infill panels, see page 428.



Top/Mid Rail



Post Centres mm	Code
1200	62SR48

Sold separately.

Internal Joint



Code
16150D

For shorter post centres cut rail and join using an internal joint code: 16150D.

Connector



Suitable for	Code
Glue Fit	6202R48

Steel
Wrought Iron Components
Gate Hardware
Sliding Door Gear
Gate Automation
Mesh
Decking & Subframe
Flooring & Stair Treads
Handrailing
Fencing
Fixings

Round Connector



Connector On A Crossrail



Square Connector



Round Threaded Connector



To Suit Ø mm	Code
48.3	1301223D

For use with zinc plated, powder coated and painted installations.

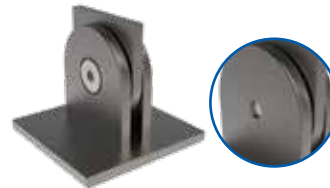
Round Bolted Connector



To Suit Ø mm	Code
42.4	1301224C
48.3	1301224D

For use with galvanised installations.

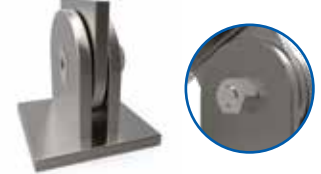
Square Threaded Connector



To Suit ■ mm	Code
40	130122340

For use with zinc plated, powder coated and painted installations.

Square Bolted Connector



To Suit ■ mm	Code
40	130122440
50	130122450

For use with galvanised installations.

Make Your Own Handrail Brackets

Handrail Bracket Plates



To Suit Ø mm	Ø mm	Code
12	77	130120712
16	77	130120716

Fixing holes 6mm.

Standard Cranked Arm



To Suit Ø mm	Length mm	Code
12	80	1301359R12
16	80	1301359R16

Extended Length Cranked Arm



To Suit Ø mm	Length mm	Code
12	150	1301359L12
16	150	1301359L16

Handrail Saddles



To Suit Ø mm	Code
33.7	1301351B
42.4	1301351C
48.3	1301351D
60.3	1301351E

Handrail Brackets

Weldable Handrail Bracket

Fixed washer



Wall to Bracket Centre mm	Code
83	1301301

To fit square: □ 40, 50, 60, 70 and 75mm. To fit round: Ø 42.4, 48.3 and 60.3mm.

Handrail Bracket With Saddle

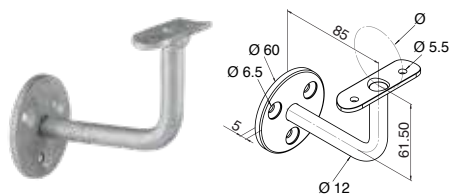
Fixed washer



Ø mm	Wall to Bracket Centre mm	Code
42.4	90	1301301C
48.3	90	1301301D

To fit square: □ 40, 50, 60, 70 and 75mm. To fit round: Ø 42.4, 48.3 and 60.3mm.

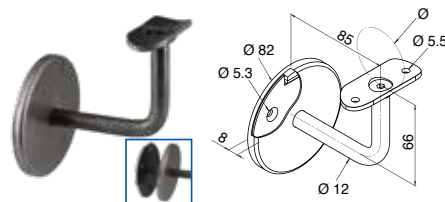
Wall/Tube



Ø mm	Code
42.4 or 48.3	171178K
42.4 or 48.3	171177K

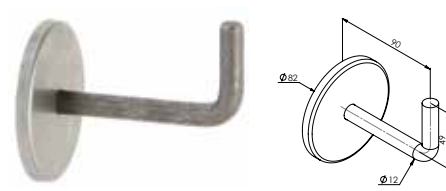
Three Ø 6.5mm countersunk fixing plate holes.

Wall/Tube



Ø mm	Code
42.4 or 48.3	171179K

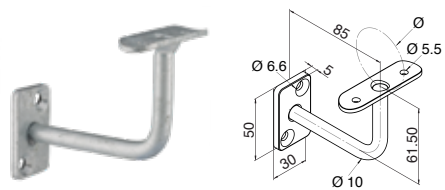
Supplied with snap fit cover plate. Three Ø 5.3mm countersunk fixing plate holes.



Description	Code
Cover Plate & Bracket	171167
Bracket only	171167B
Cover Plate only	171162C

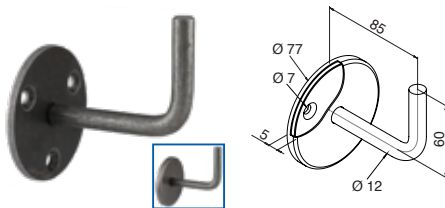
90mm distance from wall to centre of bracket.

Wall/Tube



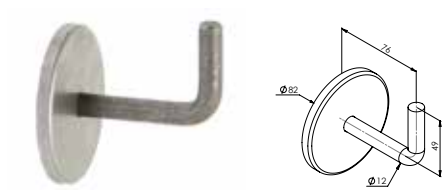
Ø mm	Code
42.4 or 48.3	171181K
42.4 or 48.3	171180K

Two Ø 6.6mm countersunk fixing plate holes.



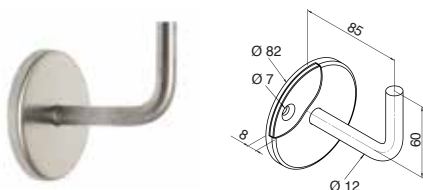
Description	Code
Bracket Only	171182K
Cover Plate & Bracket	171182

Three Ø 7mm countersunk fixing plate holes.



Description	Code
Cover Plate & Bracket	171162
Bracket only	171162B
Cover Plate only	171162C

76mm distance from wall to centre of bracket.



Code
171166K
171169K

Three Ø 7mm countersunk fixing plate holes.



Description	Code
Cover Plate & Bracket	171166
Cover Plate & Bracket	171169

76mm distance from wall to centre of bracket.

Universal Plug & Screw Jars



Size Ø mm	Pack Qty	Code
6	500	50UPS6R

6 x 28mm plugs, 4.5 x 40mm screws.



Size Ø mm	Pack Qty	Code
7	450	50UPS7B

7 x 30mm plugs, 4.0 x 40mm screws.

Decorative Handrail Brackets



H x W mm	Code
120 x 90	0512304483

H x W mm	Code
225 x 70	0512704075

■ 14mm hammered bar.



You can order online 24 hours a day, 7 days a week. Visit our website: www.fhbrundle.co.uk

Steel

Wrought Iron Components

Gate Hardware

Sliding Door Gear

Gate Automation

Mesh

Decking & Subframe

Flooring & Stair Treads

Handrailing

Fencing

Fixings

- Steel
- Wrought Iron
- Gate Hardware
- Sliding Door Gear
- Gate Automation
- Mesh
- Decking & Subframe
- Flooring & Stair Treads
- Handrailing
- Fencing
- Fixings



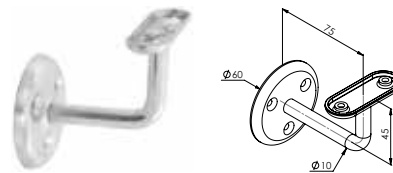
Wall/Flat



Wall to Bracket Centre mm	Code
63	171161

Domed disc fixing plate. BZP.

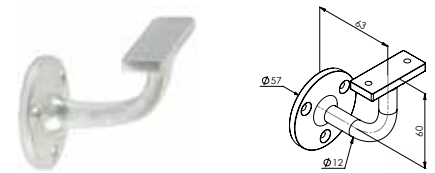
Wall/Flat



Wall to Bracket Centre mm	Code
75	171163

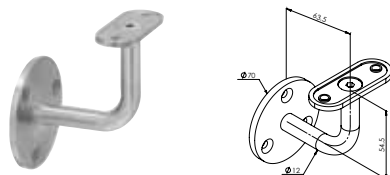
Domed disc fixing plate. BZP.

Wall/Flat



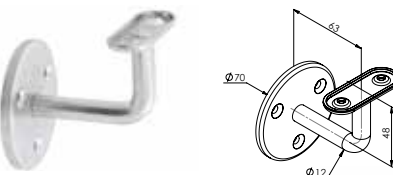
Wall to Bracket Centre mm	Code
63	171165

Wall/Flat



Wall to Bracket Centre mm	Code
63.5	1804305FF

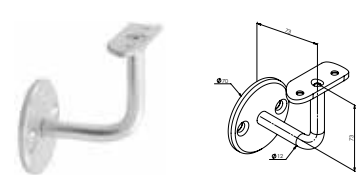
Wall/Flat



Wall to Bracket Centre mm	Code
63	171164

Solid disc fixing plate. BZP.

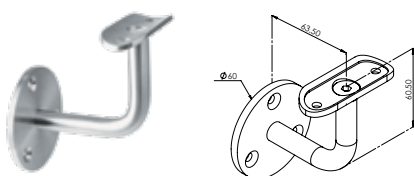
Wall/Tube



Ø mm	Wall to Bracket Centre mm	Code
42.4	72	1310223

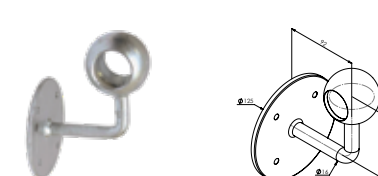
Zinc plated.

Wall/Tube



Ø mm	Wall to Bracket Centre mm	Code
42.4	63.5	1804305FC
48.3	63.5	1804305FD
42.4	63.5	1806305FC
48.3	63.5	1806305FD

Wall/Tube



Ø mm	Wall to Bracket Centre mm	Code
33.7	92	171168B
42.4	92	171168C
48.3	92	171168D

Universal Plug & Screw Jars



Size Ø mm	Pack Qty	Code
6	500	50UPS6R

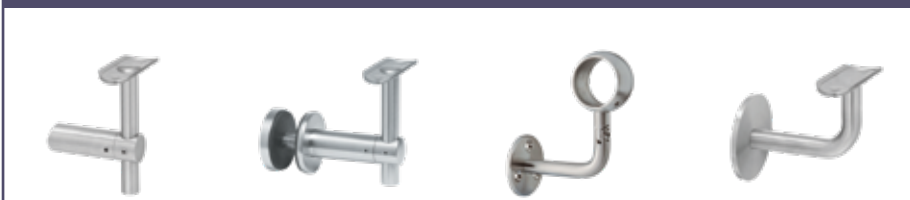
6 x 28mm plugs, 4.5 x 40mm screws.



Size Ø mm	Pack Qty	Code
7	450	50UPS7B

7 x 30mm plugs, 4.0 x 40mm screws.

For our range of stainless steel handrail brackets see page 539.



A great new range of cast steel handrail fittings. Suitable for welding, galvanising, powder coating and gluing. Only for use with our Ø 48.3 x 2mm steel tube. Some fittings also supplied in bright zinc plated.

Seamless Tube



Ø mm	Length m	Thickness mm	Code
48.3	5.8	2	130148258
48.3	3.0	2	13024823*

*BZP.

90° Elbow Radiused Corner



Ø mm	Code
48.3	1301200D
48.3	1302200D*

*BZP.

90° Elbow Round Corner



Ø mm	Code
48.3	1301201D

Scroll End



Ø mm	Code
48.3	1301221D
48.3	1302221D*

*BZP.

Adjustable Elbow



Ø mm	Code
48.3	1301203D
48.3	1302203D*

*BZP.

Base Plate



Ø mm	Code
48.3	1301228D

Base Cover Plate



Ø mm	Code
48.3	1301208D
48.3	1302208D*

*BZP.

In-Line Connector



Ø mm	Code
48.3	1301206D
48.3	1302206D*

*BZP.

End Cap



Ø mm	Code
48.3	1301214D

High Strength Glue

For use with tube fittings



ml	Code
50	1899007638

Adhesive activator

Reduces curing time when used with Loctite 638



ml	Code
150	18990087649

Example Of BZP Finish

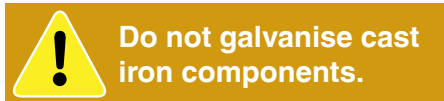




Cast-A-Rail is a versatile self-assembly railing system suitable for welding and galvanising. The range works with fittings available exclusively from F.H. Brundle. It provides an alternative railing solution to cast iron.

Pre-Assembled Post Features:

- Bolt-down & pre-assembled ready for use
- Two horizontal rails can be added
- By using the tube insert it is possible to change the horizontal rails from Ø 48.3 to 42.4mm tube or even mix & match them



Do not galvanise cast iron components.

Concrete Screw



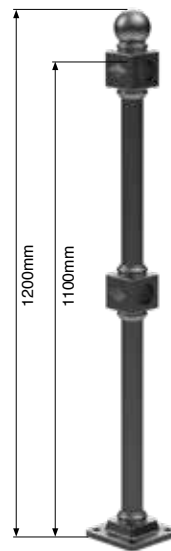
Size mm	Code
M12 x 100	5002HCS12100

Through Bolt R-XPT



Size mm	Code
M12 x 100	162412

Pre-Assembled Post



Post Ø mm	Code
48.3	63BSCP

Do not galvanise cast iron components. Self colour.

Tube Insert End Cap



Code
63BE

Tube Insert



To Suit Ø mm	Code
42.4	63B042

Tube For Inserts



Ø mm	Length m	Code
42.4	7.5	300642432
48.3	7.5	300676132
42.4	6.5	160242
48.3	6.5	160248

Make Your Own Cast-A-Rail® System

Tube For Posts & Inserts

Bolt-down or concrete-in



Ø mm	Length m	Code
42.4	7.5	300642432
48.3	7.5	300676132
42.4	6.5	160242*
48.3	6.5	160248*

*Used for inserts only.

Solid Sphere

To be added to the top block



Ø mm	Code
80	0513249
90	0513250
100	0513251

Base Plate



To Suit Ø mm	■ mm	Height mm	Code
48.3	155	80	63B001

Fixing holes Ø 17.5mm.

Block



To Suit Ø mm	H x W x D mm	Code
48.3	120 x 85 x 97	63B002

Hole suits Ø 48.3mm inserts. Any number can be welded to a post.

Tube Insert End Cap



Code
63BE

Tube Insert



To Suit Ø mm	Code
42.4	63B042

Concrete Screw



Size mm	Code
M12 x 100	5002HCS12100

Through Bolt R-XPT



Size mm	Code
M12 x 100	162412



Make Your Own Cast-A-Rail® System

Examples of double, triple and footer rails

Double, Triple & Foot-Rails

Any quantity of Cast-A-Rail blocks can be placed at any height, with horizontal rails in mixed styles or sizes, double, triple and even foot-rails can easily be created using tube, twisted, square or flat bar. It really is that versatile!

Triple Rail - Bolt-Down Posts

With Ø 48.3mm tube



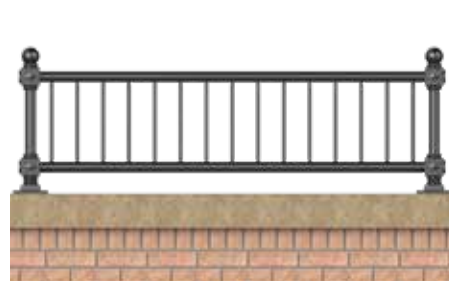
Double Rail - Bolt-Down Posts

With Ø 48.3mm tube



Low Rail - Bolt-Down Posts

With Ø 48.3mm tube & Ø16mm tube



Trip-Rail - Bolt Down Posts

With Ø 48.3mm tube



Trip-Rail - Bolt Down Posts

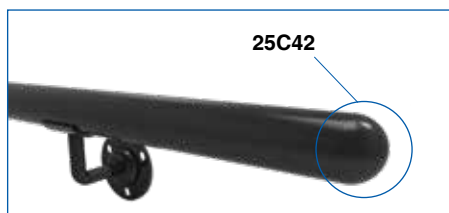
With twisted bar



Domed Caps



To Suit Ø mm	Height mm	Thickness mm	Code
26.9	20	3.5	25C26
33.7	26	3.5	25C34
40.0	20	3.0	051325140H
42.4	29	3.5	25C42
48.3	31	3.5	25C48
50.0	25	3.0	0505003001
60.0	30	3.0	0506003001
60.3	35	3.5	25C60
70.0	35	3.0	0507003001
76.1	45	3.5	25C76
80.0	40	3.0	0508003001
88.9	50	3.5	25C88
90.0	45	3.0	051325190H
100.0	50	3.0	0513251100H
114.3	63	3.5	25C114
120.0	60	3.0	0512503001
150.0	65	3.0	0515003001



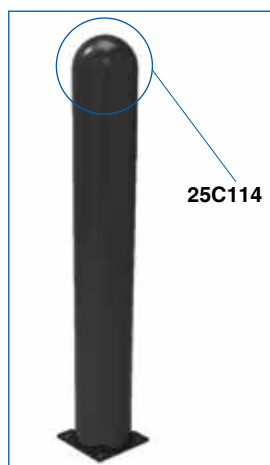
Handrail weld cap.

Tubular Handrail Knuckles



To Suit Ø mm	Knuckle Ø mm	Code
33.7	63	25K25
33.7	82	25K2576
42.4	82	25K32
48.3	82	25K40
48.3	95	25K40L

Black lacquer finish.



Bollard weld cap.

Caps & Elbows

90° Weldable Elbows



To Suit Ø mm	Code
26.9	25E26
33.7	25E34
42.4	25E42
48.3	25E48
60.3	25E60
76.1	25E76
88.9	25E88
114.3	25E114
139.7	25E139
168.3	25E168

Stainless Weldable Elbows



Ø mm	Code
42.4	1804E42
48.3	1804E48
42.4	1806E42
48.3	1806E48

Steel

Wrought Iron Components

Gate Hardware

Sliding Door Gear

Gate Automation

Mesh

Decking & Subframe

Flooring & Stair Treads

Handrailing

Fencing

Fixings

Tubular Handrail Standards



Mild steel or galvanised to fit Ø 33.7, 42.4 & 48.3mm tube

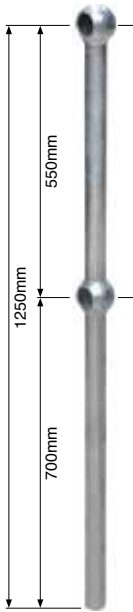


- Mild steel vented for galvanising
- M8 clamping screws fitted to balls
- Other dimensions can be supplied quickly, to order

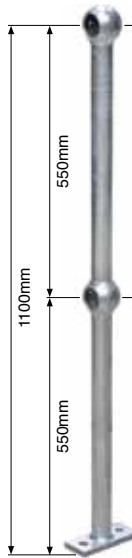
Great for use with double mesh panels see page 419.



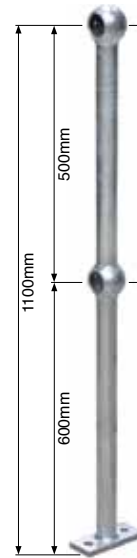
FHB 1A



FHB 4D



FHB 5E



Ø mm	Code
33.7	25011
42.4	2501142
48.3	2501148
33.7	25021
42.4	2502142
48.3	2502148

Not drilled and tapped.

Ø mm	Code
33.7	25014
42.4	2501442
48.3	2501448
33.7	25024
42.4	2502442
48.3	2502448

12mm flat drilled base plate. Ø 18mm holes for M16 bolts.

Ø mm	Code
33.7	25015
42.4	2501542
48.3	2501548
33.7	25025
42.4	2502542
48.3	2502548

12mm flat drilled base plate. Ø 18mm holes for M16 bolts.

Galvanised Tube

Length Of Galvanised Tube Stocked



Colour	Type	Ø mm	1.044m	1.050m	1.075m	1.15m	1.45m	2.0m	3.0m	6.5m
Galv.	A	26.9	-	-	-	-	-	-	16022530	160225
	B	33.7	-	-	1602341075*	-	-	16023420	16023430	160234
			-	-	-	-	-	-	160234L***	
	C	42.4	-	1602421050*	1602421075	1602421150**	1602421450***	16024220	16024230	160242
			-	-	-	-	-	-	-	160242L***
D	48.3	1602481044*	-	1602481075	1602481150**	1602481450***	16024820	16024830	160248	
		-	-	-	-	-	-	-	160248L****	
E	60.3	-	-	-	-	-	-	-	-	160260
		-	-	-	-	-	-	-	-	-
PPC Yellow RAL 1018	C	42.4	-	1602421050Y	-	-	-	-	-	160242Y
	D	48.3	1602481044Y	-	-	-	-	-	-	160248Y
PPC Black RAL 9005	C	42.4	-	1602421050B	-	-	-	-	-	160242B
	D	48.3	1602481044B	-	-	-	-	-	-	160248B

*To give 1100mm high posts. **To give 1.2m post centres. ***To give 1.5m post centres. 3.25mm thickness. ****Tube is 2.4mm thickness.

Tubular Handrail Standards

Mild steel or galvanised to fit Ø 33.7, 42.4 & 48.3mm tube



Steel

Wrought Iron Components

Gate Hardware

Sliding Door Gear

Gate Automation

Mesh

Decking & Subframe

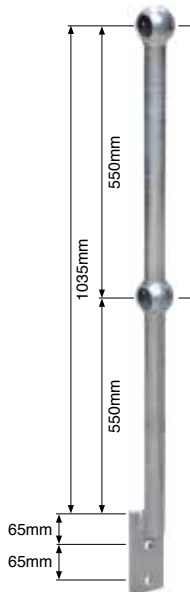
Flooring & Stair Treads

Handrailing

Fencing

Fixings

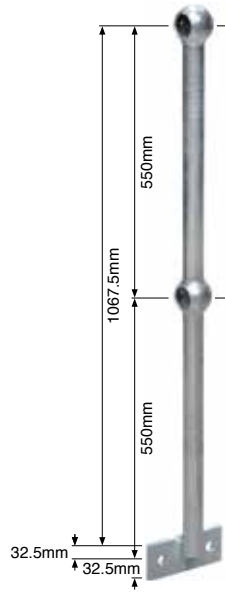
FHB 3C



Ø mm	Code
33.7	25013
42.4	2501342
48.3	2501348
33.7	25023
42.4	2502342
48.3	2502348

12mm flat drilled base plate. Ø 18mm holes for M16 bolts.

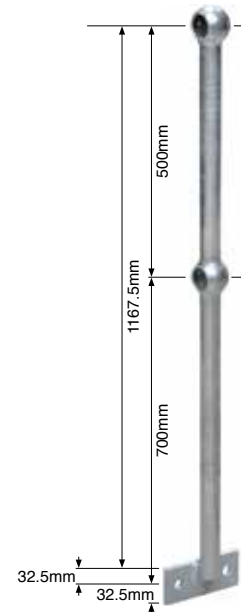
FHB 2B



Ø mm	Code
33.7	25012
42.4	2501242
48.3	2501248
33.7	25022
42.4	2502242
48.3	2502248

12mm flat drilled base plate. Ø 18mm holes for M16 bolts.

FHB 6F



Ø mm	Code
33.7	25016
42.4	2501642
48.3	2501648
33.7	25026
42.4	2502642
48.3	2502648

12mm flat drilled base plate. Ø 18mm holes for M16 bolts.

Splice Locks

For joining tube

Effective joint stiffeners, splice locks are proven to be the best mechanical splice available for pipe and tubular handrail joints.

Single Splice Lock

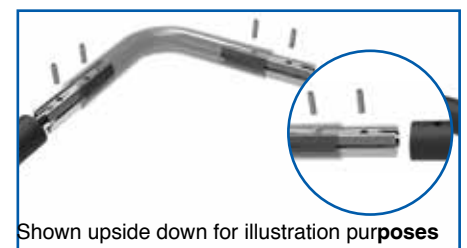


Ø mm	Length mm	Code
33.7	95.25	2502SL6
42.4	95.25	2502SL7
48.3	95.25	2502SL8

Double Splice Lock



Ø mm	Length mm	Code
42.4	152.4	2502SL7D
48.3	152.4	2502SL8D



[View our video on YouTube](#)

Adjustarail

Galvanised to fit Ø 33.7, 42.4 & 48.3mm tube



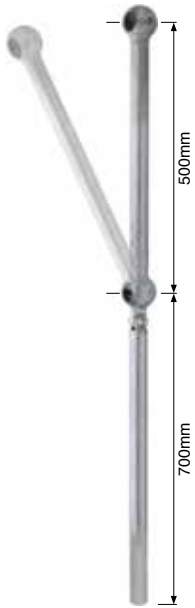
TESTED TO
BS 4592

- Load tested
- No fabrications of raked specials required
- Flexible on site adjustment
- Delivery from stock
- Ball centres 500mm

For handrail bends see page 418.

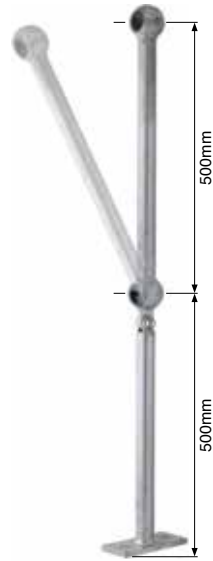
F.H. Brundle Patented Design.

FHB 1A Adjustable



Ø mm	Code
33.7	25A25011
48.3	25A2501148

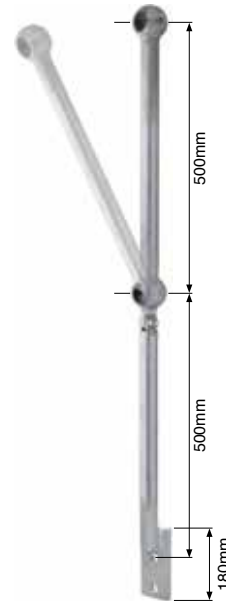
FHB 4D Adjustable



Ø mm	Code
33.7	25A25024
42.4	25A2502442
48.3	25A2502448

12mm flat drilled base plate.
Ø 18mm holes for M16 bolts.

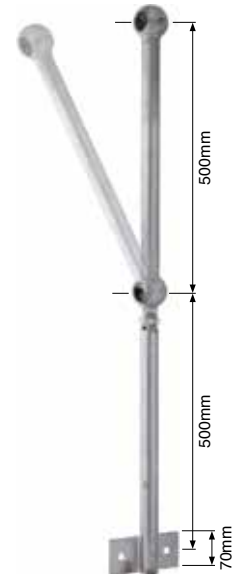
FHB 3C Adjustable



Ø mm	Code
33.7	25A25023
42.4	25A2502342
48.3	25A2502348

12mm flat drilled base plate.
Ø 18mm holes for M16 bolts.

FHB 2B Adjustable



Ø mm	Code
33.7	25A25022
42.4	25A2502242

12mm flat drilled base plate.
Ø 18mm holes for M16 bolts.

Fixings For Internal Use

Hex Head Set Bolts



Pack Qty	Ø mm	Length mm	Code
100	M10	50	50HS10X50

BZP.

Penny Washers



Pack Qty	To Suit Ø mm	Code
100	M10	50PW10

BZP.

Hex Full Nut



Pack Qty	To Suit Ø mm	Code
100	M10	50HN10

BZP.

Hex Full Nut



Pack Qty	To Suit Ø mm	Code
100	M10	50HL10

BZP.

Fixings For External Use

Concrete Bolt

Self-tapping



Size mm	Code
M12 x 100	5002HCS12100

For cracked and non-cracked concrete.

Through Bolt

R-XPT



Size mm	Code
M12 x 100	162412

Zinc plated.

Tarmac Fixing

With rubber sleeve



Size mm	Code
M12 x 125	1205TF12

BZP.

We stock a huge range of flooring & stair treads from page 384.



Tubular Handrail Knuckle



To Suit Ø mm	Ø mm	Code
33.7	63	25K25
33.7	82	25K2576
42.4	82	25K32
48.3	82	25K40
48.3	95	25K40L

Grub Screws



To Suit Ø mm	Length mm	Code
33.7 x 63	8 x 16	25GRUB1
33.7 x 82	8 x 25	25GRUB3
42.4 x 82	8 x 20	25GRUB2
48.3 x 82	8 x 20	25GRUB2
48.3 x 95	8 x 25	25GRUB3

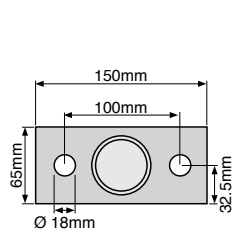
Round Hollow Section



To Suit Ø mm	Thickness mm	Code
33.7	3.0	30063373
42.4	2.5	300642425
42.4	3.0	300642432
48.3	3.0	300648332

Length 7.5m.

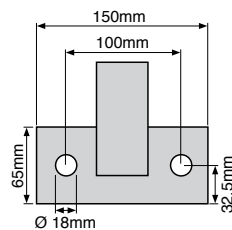
Base Options Rectangular Flat Base



Thickness mm	Code
12	25F0112*

*Same plate as horizontal side palm.

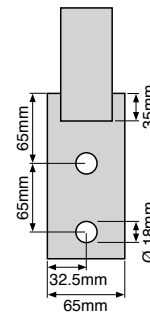
Horizontal Side Palm



Thickness mm	Code
12	25F0112*

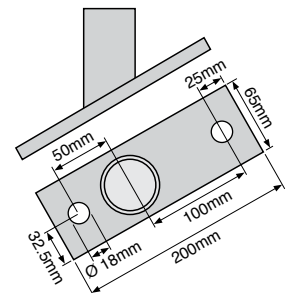
*Same plate as rectangular flat base.

Long Side Palm



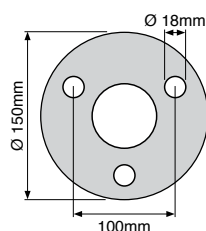
Thickness mm	Code
12	25F0312

Rectangular Raked Flat Base



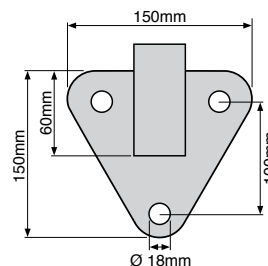
Thickness mm	Code
12	25F0412

Round Base



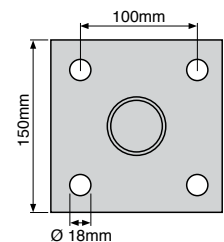
Thickness mm	Code
12	25F0512

Triangular Side Palm



Thickness mm	Code
12	25F0612

Square Base



Thickness mm	Code
12	25F0712

Dimension B is to the bottom of the base plate if flat base or centre of top hole if side mount.

For joining tube we have single or double splice locks, sleeves & internal joints see page 415.



F.H. Brundle is continually striving to make installations quicker and easier. Tubular bends in both galvanised and mild steel for Ø 33.7, 42.4 and 48.3mm tube will do just that. These bends are designed for Handrail Standards, Adjustarail and Tube Clamps. Joining bends to handrail tube couldn't be simpler.

90° Bend



Ø mm	Code
33.7	25B25143
42.4	25B32143
48.3	25B40143
33.7	25B25243
42.4	25B32243
48.3	25B40243

300mm legs.

90° Bend



Splice lock ready

Ø mm	Code
48.3	1301B48248

248mm legs.

Adjustarail Return Bend

500mm centres



Ø mm	Code
33.7	25BA25113
42.4	25BA32113
48.3	25BA40113
33.7	25BA25213
42.4	25BA32213
48.3	25BA40213

300mm legs.

Ramp Bend



MADE TO ORDER

500mm legs. Required angle and tube diameter size needs to be confirmed at the time of ordering.

Standard Return Bend

550mm centres



Ø mm	Code
33.7	25B25113
42.4	25B32113
48.3	25B40113
33.7	25B25213
42.4	25B32213
48.3	25B40213

300mm legs.

Stair Return Bend



400mm legs. Required angle and tube diameter size needs to be confirmed at the time of ordering.

Length Of Galvanised Tube Stocked

Finish	Type	Ø mm	1.044m	1.050m	1.075m	1.15m	1.45m	2.0m	3.0m	6.0m	6.5m
Galv.	A	26.9	-	-	-	-	-	-	16022530	-	160225
	B	33.7	-	-	1602341075*	-	-	16023420	16023430	-	160234
			-	-	-	-	-	-	-	160234L****	
	C	42.4	-	1602421050*	1602421075	1602421150**	1602421450***	16024220	16024230	-	160242
			-	-	-	-	-	-	-	-	160242L****
D	48.3	1602481044*	-	1602481075	1602481150**	1602481450***	16024820	16024830	-	160248	
E	60.3	-	-	-	-	-	-	-	-	-	160248L****
											160260

*To give 1100mm high posts. **To give 1.2m post centres. ***To give 1.5m post centres. 3.25mm thickness. **** Tube is 2.4mm thickness.

Length Of Mild Steel Tube Stocked

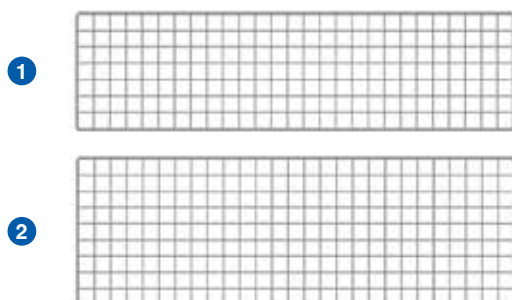
Finish	Type	Ø mm	7.5m
Mild steel self colour	B	33.7	30063373
	D	48.4	300648332
Mild steel self colour	C	42.4	300642432
	C	42.4	300642425*

Tube is 3.0mm thickness.

Tube is 3.0mm thickness. *Tube is 2.6mm thickness.



Double Mesh Panels



Panel	Panel H x W mm	Post Centres m	Code
1	369 x 1082	1.2	0102005B
	369 x 1382	1.5	0102001B
2	470 x 1082	1.2	0102006B
	470 x 1382	1.5	0102002B

2 x 2" mesh, 10 gauge with an Ø 8mm frame.

Tube Clamp Fittings

90° Elbow



Ø mm	Code
42.4	16125C
48.3	16125D

Internal Joint



Ø mm	Code
42.4	16150C
48.3	16150D

Accessories

Mesh Panel Clip Single



Ø mm	Code
42.4	16170C
48.3	16170D

Also available in stainless steel Grade 316. See page 330.

Mesh Panel Clip Double



Ø mm	Code
42.4	16171C
48.3	16171D

Also available in stainless steel Grade 316. See page 330.

Cable Ties



Size mm	Qty	Code
300 x 4.6	100	50CTS30046

Wall Flange



Ø mm	Code
42.4	16131C
48.3	16131D

In-Line Swivel Fitting



Ø mm	Code
42.4	16BC538C
48.3	16BC538D

This fitting is not to be used as a base plate for guardrails or dependent structures.

For a full range of tube clamp fittings see pages 430.



Handrail Standard Gates

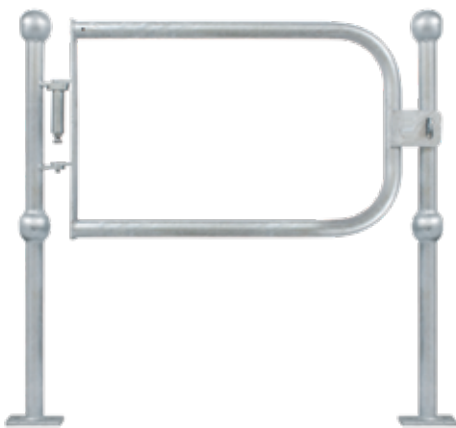


Self-closing

- Steel
- Wrought Iron Components
- Gate Hardware
- Sliding Door Gear
- Gate Automation
- Mesh
- Decking & Subframe
- Flooring & Stair Treads
- Handrailing
- Fencing
- Fixings



Self-Closing Gate & Handrail Standard Posts



- Supplied with hinge post & slam plate
- Galvanised
- Height 1100mm
- Horizontal tube centres 550mm on horizontal rails
- Gate post centres 1070mm
- Lockable with padlock through Ø 15mm hole
- Base plate: 2 x Ø 18mm holes at 100mm centres
- Image shows right hand opening inwards

Ø mm	Base Plate mm	Left Hand	Right Hand
33.7	65 x 150 x 12	25SG01L	25SG01R
42.4	65 x 150 x 15	25SG02L	25SG02R
48.3	65 x 150 x 15	25SG03L	25SG03R

Self-Closing Gate - Made To Order

- Made to size, can be supplied with or without posts
- Suitable for welding to your existing posts or existing access ladder installations
- Supplied mild steel or galvanised



Self-Closing Universal Gate Hinges

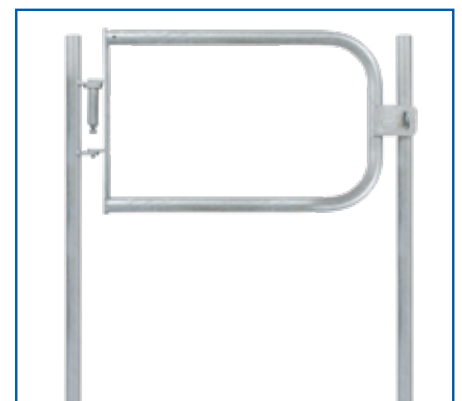
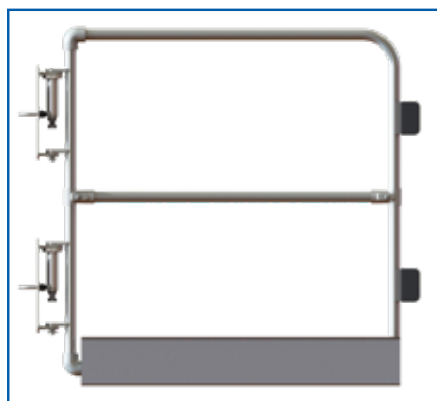
Gate hinge set contains top and bottom hinge with adjustable closing speed, for welding to tubular and square sections.



Code
25SGHU



Code
18SGH





A fully adjustable range of self-closing safety gates which have been designed to easily fit to new or existing structures where a gate is required. Our gates are spring loaded so will automatically close behind the user, thus maintaining a safe barrier. Gates can easily be cut to size on site for a perfect fit.

Features & Benefits

- Spring loaded gates automatically close
- Galvanised or polyester powder coated yellow
- Comply with test requirements of EN 13374 Class A & EN 14122 Part 3 & Part 4, & OSHA
- Reversible, hinges can be on the left or right hand side of an opening to allow easy installation
- Quick & easy to assemble
- Fully adjustable height & width
- Easily cut to size on site
- Can be used for external & internal applications
- For use on round or square surfaces
- To suit Ø 33.7, 42.4 & 48.3mm
- Retro-fits to existing structures
- Single gates are supplied with welded on slam plate

Single Leaf Gate

Galvanised



Height mm	Width m	Code
600	1.0	1603TCG3D

Single Leaf Gate

Polyester powder coated yellow



Height mm	Width m	Code
600	1.0	1603TCG3DY

Full Single Leaf Gate

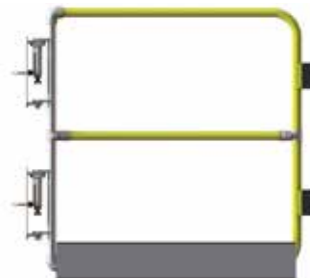
Galvanised



Height mm	Width m	Code
1100	1.0	1603TCG5D

Full Single Leaf Gate

Polyester powder coated yellow



Height mm	Width m	Code
1100	1.0	1603TCG5DY

Double Leaf Gate

Galvanised



Height mm	Max. Width m	Code
600	2.06	1603TCG4D

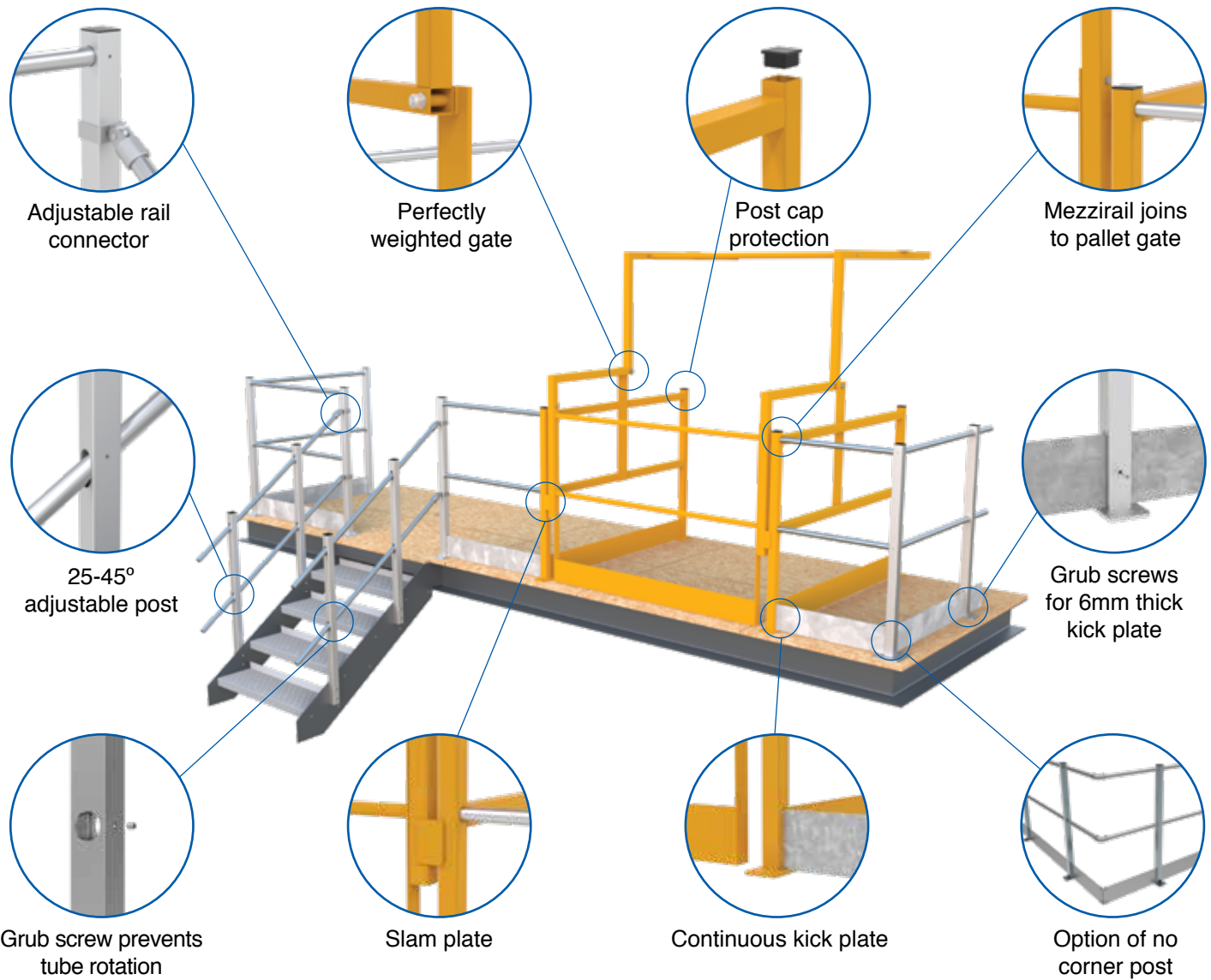
Double Leaf Gate

Polyester powder coated yellow

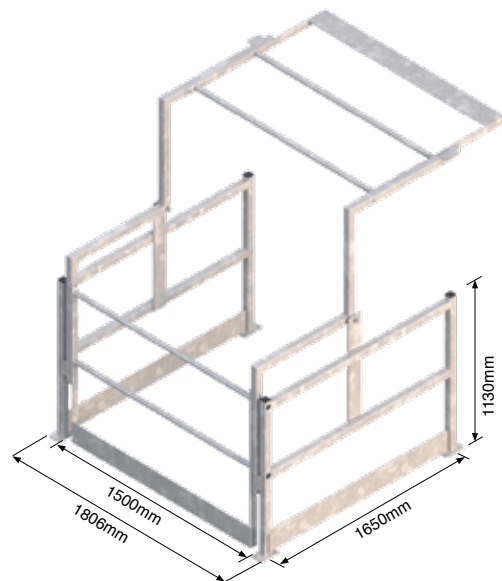
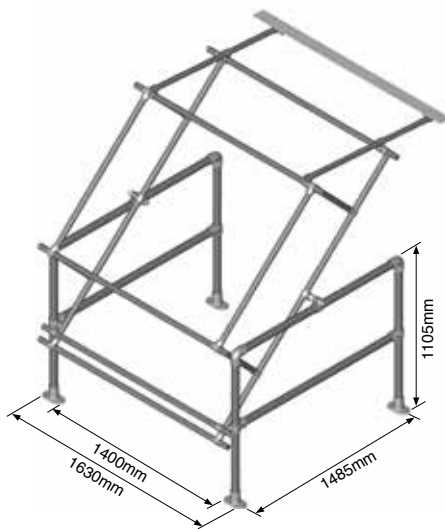
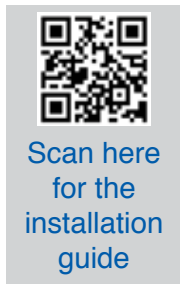


Height mm	Max. Width m	Code
600	2.06	1603TCG4DY

- Steel
- Wrought Iron Components
- Gate Hardware
- Sliding Door Gear
- Gate Automation
- Mesh
- Decking & Subframe
- Flooring & Stair Treads
- Handrailing
- Fencing
- Fixings



Pallet Gates



Sides Ø mm	Gate Ø mm	Max. Pallet H m	Max. Pallet W x D m	Code
48.3	33.7	1.6	1.4 x 1.48	1603PAD
48.3	33.7	1.6	1.4 x 1.48	1603PADY*

Colour	Sides mm	Gate Ø mm	Max. Pallet H m	Max. Pallet W x D m	Code
Galvanised	50 x 50	33.7	2.05	1.5 x 1.65	25PG175
PPC Yellow*	50 x 50	33.7	2.05	1.5 x 1.65	25PG175Y

*Polyester powder coated yellow RAL 1021.

*RAL 1003. Powder coated only, not galvanised

Posts

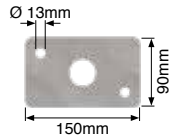
Bolt-Down End



Height mm	□ mm	Thickness mm	Code
1130	50	2.5	25SPE

To suit any Ø 33.7mm tube. BZP.

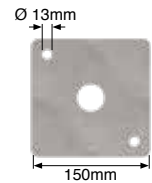
Bolt-Down Mid



Height mm	□ mm	Thickness mm	Code
1130	50	2.5	25SPi

To suit any Ø 33.7mm tube. BZP.

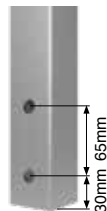
Bolt-Down Corner



Height mm	□ mm	Thickness mm	Code
1130	50	2.5	25SPC

Corner post is only suitable for FHB seamless 2mm thick tube code: **13023373**. BZP.

Side-Fix For Flats

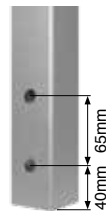


Height mm	□ mm	Thickness mm	Code
1250	50	2.5	25SFi

To suit any Ø 33.7mm tube. Fixing holes Ø 13mm, to suit M12. BZP.

Side-Fix For Angles

25 - 45°



Height mm	□ mm	Thickness mm	Code
1130	50	2.5	25SFis

To suit any Ø 33.7mm tube. Fixing holes Ø 13mm, to suit M12. BZP.

Connector



Code
6202S34

To suit any Ø 33.7mm tube and 50 x 50mm post.

Tube & Fittings

Tube



Ø mm	Length m	Code
33.7	3	13023373

2mm thickness. BZP.

Internal Connector



Code
1302206B

Glue fit. To suit Ø 33.7 x 2mm wall thickness. See page 721 for Loctite 638. BZP.

External Sleeve Joint



Code
16149B

For use with all Ø 33.7mm tube.

External Swivel



Code
16BC538B

For use with all Ø 33.7mm tube.

Steel

Wrought Iron Components

Gate Hardware

Sliding Door Gear

Gate Automation

Mesh

Decking & Subframe

Flooring & Stair Treads

Handrailing

Fencing

Fixings

Kick Plates



- Steel
- Wrought Iron
- Gate Hardware
- Sliding Door Gear
- Gate Automation
- Mesh
- Decking & Subframe
- Flooring & Stair Treads
- Handrailing
- Fencing
- Fixings

Flat Profile



Length m	Height mm	Thickness mm	Code
3	100	6	25KP04
3	150	6	25KP02

Flat Profile



Length m	Height mm	Thickness mm	Code
4	100	3	30031003
4	150	3	3003150341
6	100	6	30031006
6	150	6	30031506

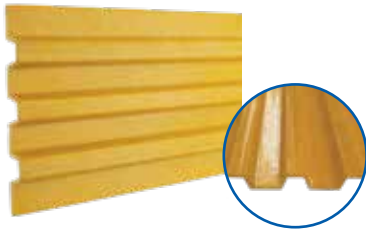
Folded



Length m	Height mm	Thickness mm	Code
3	100	3	25KP03

1.5mm thick folded sheet.

GRP Yellow "W"



Length m	Height mm	Width mm	Thickness mm	Code
6	100	14	3	33KP02Y6

Can be used with GRP foot code: 33132DY.
See page 444 for GRP foot.

GRP



Colour	Length m	Height mm	Thickness mm	Code
Yellow	3	150	6	33KP01Y3

Kick Plate Clamp



Type	Code
C	16142C
D	16142D

1 Kick Plate Clamp



To Suit Ø mm	Code
33.7	25KP25
42.4 or 48.3	25KP40

2 Straight Connector



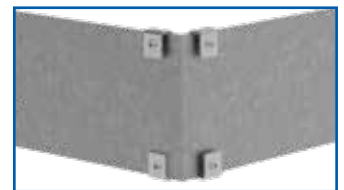
Code
25KCB3

3 External Corner Connector



Code
25KCB2

4 Internal Corner Connector



Code
25KCB1



Kick Plate Bracket



Height mm	Width mm	Depth mm	Thickness mm	Code
69	100	69	4.7	25KP01

Fixing holes Ø 10mm. BZP.



As the installation of kick plates has become more prevalent in mezzanines around factories, warehouses and the work place, so has our range of accessories to help the installer retro fit and conform to changing building regulations.

C Section Kick Plate



Length m	Height mm	Width mm	Thickness mm	Code
3	150	25	2.2	25KF3000

Adjustable Connector



Code
25KFPH

Plastic.

End Cap



Code
25KFPE

Plastic.

Post Connector



To Suit Ø mm	Code
33.7	25KFSP25
42.4 or 48.3	25KFSP40



See our full range of GRP profiles, fitting and flooring from page 399, for GRP handrailing & fittings see from page 443.

Steel

Wrought Iron
Components

Gate
Hardware

Sliding
Door Gear

Gate
Automation

Mesh

Decking &
Subframe

Flooring &
Stair Treads

Handrailing

Fencing

Fixings

Aluminium Tube

Ideal for use with tube clamps.



Steel

Wrought Iron Components

Gate Hardware

Sliding Door Gear

Gate Automation

Mesh

Decking & Subframe

Flooring & Stair Treads

Handrailing

Fencing

Fixings



Request a free tube sample.

Lightweight and easy to handle aluminium tube with a superior smooth surface, ideal for use with tube clamp fittings.

- Aluminium with a superior smooth surface
- Powder coated & anodised finish
- Mill finish available for a colour of your choice
- Lightweight and easy to handle
- 42.4mm diameter, C tube
- Ideal for use with tube clamp fittings
- 3mm wall thickness
- 6m lengths

Grey RAL 7012



Type	Ø mm	Length m	Thickness mm	Code
C	42.4	6	3	7605700CA

Blue RAL 5010



Type	Ø mm	Length m	Thickness mm	Code
C	42.4	6	3	7605700CB

Oak Wood Effect



Type	Ø mm	Length m	Thickness mm	Code
C	42.4	6	3	7605700CO

Anodised



Type	Ø mm	Length m	Thickness mm	Code
C	42.4	6	3	7605700C

Mill Finish



Type	Ø mm	Length m	Thickness mm	Code
C	42.4	6	3	7605700CR

Samples Available



Picture for illustration purposes only.

For a full range of tube clamp fittings see page 430.



2.4mm thick galvanised tube is thinner & more economical than our traditional 3.2mm.



Make Life Easier With Online Ordering!



- Order products 24/7
- Check prices
- View purchase history
- Create quotes

Visit www.fhbrundle.co.uk

Tube Clamp fittings are manufactured with simplicity and ease of use in mind. Specialised skills are not required. No welding, no bending, no threading, just an Allen key to tighten the set screws and you can join tubes together in a matter of seconds. The comprehensive range of fittings and sizes means tube clamps can be used in a wide variety of temporary or permanent applications. For example in the construction of:

- Handrails
- Safety Barriers
- Awnings and Carports
- Support Structures
- Children's Play Equipment
- Market Stalls
- Exhibition Stands
- Temporary Buildings
- Lighting Grids
- Pallet or Garment Racking



Tube - Easy To Order

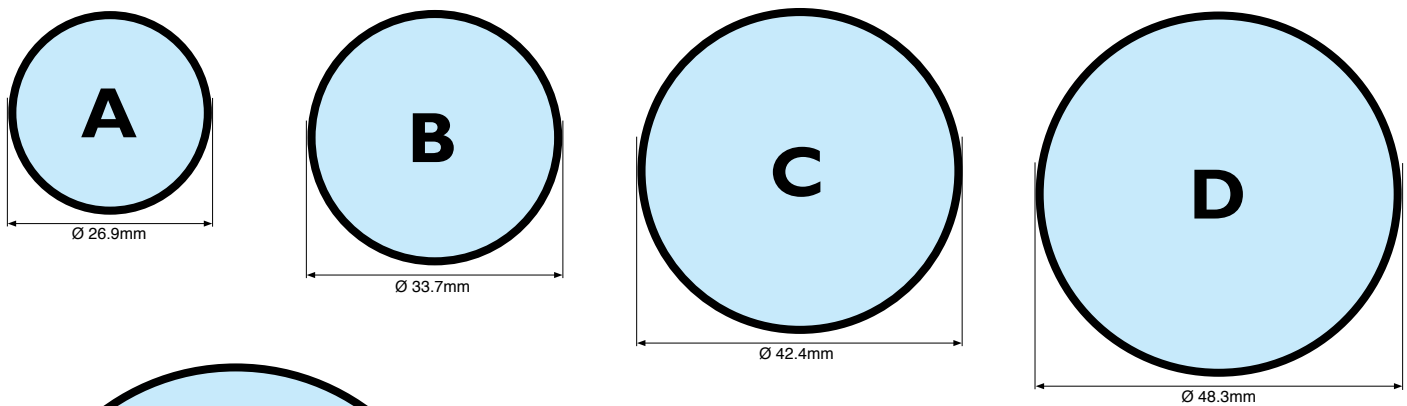
As with the fittings we've also made ordering simple. Each illustration carries a number - for example 16101. Look under the type column in the table below and you will see that this fitting is available in five different sizes A, B, C, D and E. Each of these letters refers to the size of the tube on which the fitting is to be used as indicated below. No letter after the fitting number indicates that size is not available at the time of printing. For example 16191 is only available to suit size D tubing.

Galvanised Tube

Length Of Galvanised Tube Stocked

Colour	Type	Ø mm	1.044m	1.050m	1.075m	1.15m	1.45m	2.0m	3.0m	6.5m
Galv.	A	26.9	-	-	-	-	-	-	16022530	160225
	B	33.7	-	-	1602341075*	-	-	16023420	16023430	160234
			-	-	-	-	-	-	160234L****	
	C	42.4	-	1602421050*	1602421075	1602421150**	1602421450***	16024220	16024230	160242
			-	-	-	-	-	-	-	160242L****
D	48.3	1602481044*	-	1602481075	1602481150**	1602481450***	16024820	16024830	160248	
		-	-	-	-	-	-	-	160248L****	
E	60.3	-	-	-	-	-	-	-	-	160260
		-	-	-	-	-	-	-	-	-
PPC Yellow RAL 1018	C	42.4	-	1602421050Y	-	-	-	-	-	160242Y
	D	48.3	1602481044Y	-	-	-	-	-	-	160248Y
PPC Black RAL 9005	C	42.4	-	1602421050B	-	-	-	-	-	160242B
	D	48.3	1602481044B	-	-	-	-	-	-	160248B

*To give 1100mm high posts. **To give 1.2m post centres. ***To give 1.5m post centres. ****Tube is 2.4mm thickness.



Special lengths cut to order.

Splice Locks



See page 415.

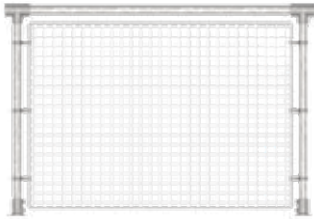
Material Specifications

- Malleable cast iron to BS EN 1562 - grade 330 - 08
- Ductile cast iron to BS EN 1563 - grade 450 - 10
- Hot dipped galvanised to BS EN ISO 1461 - minimum 45 microns

NOTE: The standard finish is hot-dipped galvanised to BS EN ISO 1461. Tube clamps and tube can also be supplied to order, polyester powder coated in a range of colours.

Tube Clamp Post Systems

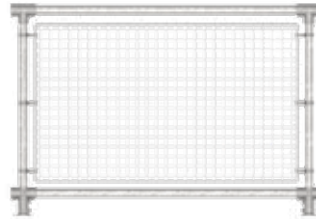
With optional mesh infills



Top Rail Post



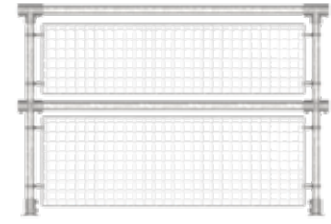
Post Type	Ø 42.4mm Code	Ø 48.3mm Code
End	1603004C	1603004D
Mid	1603005C	1603005D
Corner	1603006C	1603006D



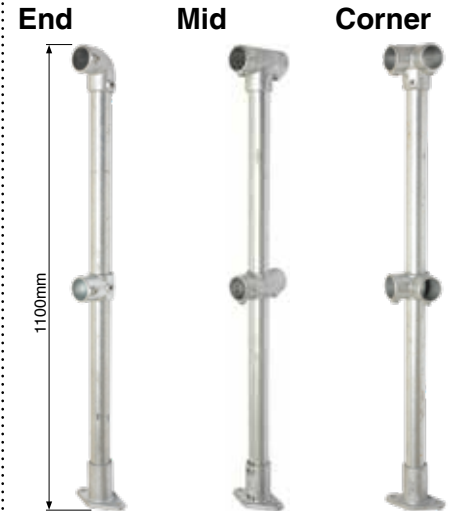
Top & Bottom Rail Post



Post Type	Ø 48.3mm Code
End	1603007D
Mid	1603008D
Corner	1603009D



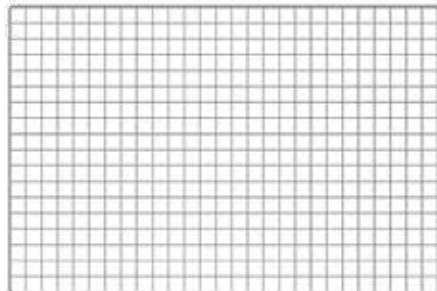
Top & Mid Rail Post



Post Type	Ø 42.4mm Code	Ø 48.3mm Code
End	1603001C	1603001D
Mid	1603002C	1603002D
Corner	1603003C	1603003D

Single Mesh Panel

For use with a top rail post

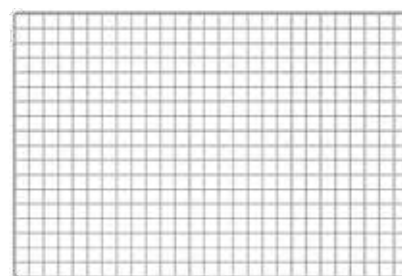


Panel H x W mm	Post Centres m	Code
972 x 1082	1.2	0102007B
972 x 1382	1.5	0102003B

2 x 2" mesh, 10 gauge with an Ø 8mm frame.

Single Mesh Panel

For use with a top & bottom rail post

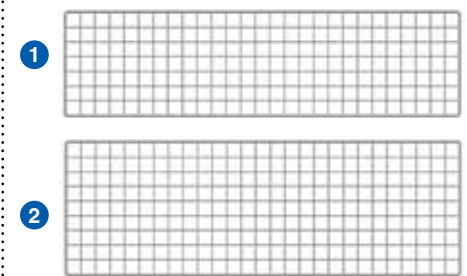


Panel H x W mm	Post Centres m	Code
826 x 1082	1.2	0102008B
826 x 1382	1.5	0102004B

2 x 2" mesh, 10 gauge with an Ø 8mm frame.

Double Mesh Panel

For use with a top & mid rail post



Panel	Panel H x W mm	Post Centres m	Code
1	369 x 1082	1.2	0102005B
	369 x 1382	1.5	0102001B
2	470 x 1082	1.2	0102006B
	470 x 1382	1.5	0102002B

2 x 2" mesh, 10 gauge with an Ø 8mm frame.

Top Rail Tube



Ø mm	Length m	Code
42.4	6.5	160242
48.3	6.5	160248

Other lengths available, see page 427.

Mid Rail Tube



Ø mm	Post Centres m	Length m	Code
42.4	1.2	1.15	1602421150
48.3	1.2	1.15	1602481150
42.4	1.5	1.45	1602421450
48.3	1.5	1.45	1602481450

Mesh Clips

Single

Double



Description	Ø mm	Code
Single Clip	42.4	16170C
	48.3	16170D
Double Clip	42.4	16171C
	48.3	16171D

Also available in stainless steel Grade 316.
See page 330.

Diagram shows a typical **DDA** range installation

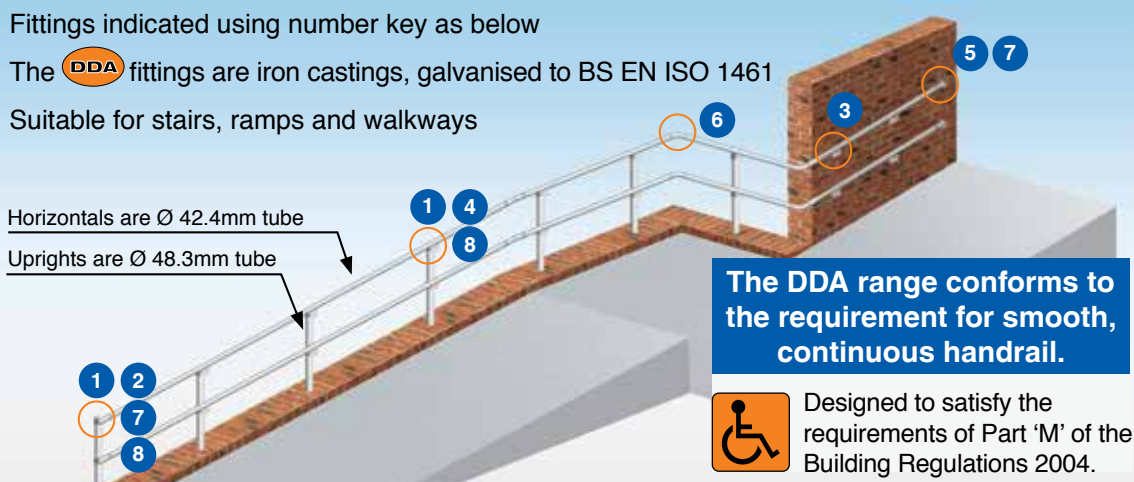
Fittings indicated using number key as below

The **DDA** fittings are iron castings, galvanised to BS EN ISO 1461

Suitable for stairs, ramps and walkways

Horizontals are Ø 42.4mm tube

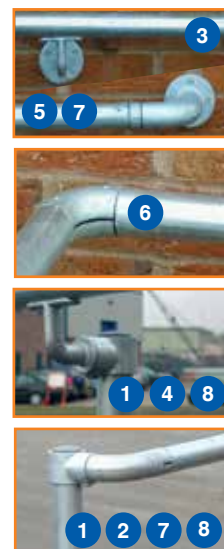
Uprights are Ø 48.3mm tube



The DDA range conforms to the requirement for smooth, continuous handrail.



Designed to satisfy the requirements of Part 'M' of the Building Regulations 2004.



Upright Connector



Ø mm	Code
48.3	16DDA01

Handrail Curve

For use with 16DDA01



Ø mm	Code
42.4	16DDA02

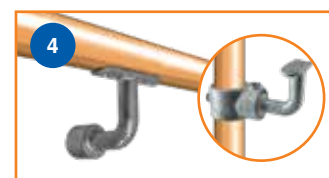
Wall Bracket



Ø mm	Code
42.4	16DDA03

Intermediate Bracket

For use with 16DDA01



Ø mm	Code
42.4	16DDA04

Wall Mounted Handrail Joiner



Ø mm	Code
42.4	1699580C

End Return

For use with 16150C



Ø mm	Code
42.4	16DDA05

90° Bend



Ø mm	Code
42.4	16DDA06

Adjustable Bend

For use with 16150C



Ø mm	Code
42.4	16DDA09

Internal Joint



Ø mm	Code
42.4	16150C

Expanding Fitting



Ø mm	Code
48.3	16750CD

Washers



Ø mm	Code
42.4	1699508C

Rubber.

Stop End



Ø mm	Code
48.3	16133D

Plastic.

The standard finish is hot-dipped galvanised to BS EN ISO 1461.

Enquire now for Warmagrip™ 'warm to the touch' handrail system See page 447.

Tube Clamps



Short Tee



Type	Code
A	16101A
B	16101B
C	16101C
D	16101D
E	16101E

Add On Short Tee



Type	Code
A	-
B	-
C	16A101C
D	16A101D
E	-

Long Tee



Type	Code
A	16104A
B	16104B
C	16104C
D	16104D
E	16104E

Corner

With through centre tube



Type	Code
A	16116A
B	16116B
C	16116C
D	16116D
E	16116E

L/H Sloping Down Side Outlet Tee

30 - 45° slope



Type	Code
A	-
B	-
C	16A116LHC
D	16A116LHD
E	-

R/H Sloping Down Side Outlet Tee

30 - 45° slope



Type	Code
A	-
B	-
C	16A116RHC
D	16A116RHD
E	-

Two Socket Cross

With centre vertical tube



Type	Code
A	16119A
B	16119B
C	16119C
D	16119D
E	16119E

Acute Angle Elbow

30 - 45° slope



Type	Code
A	-
B	-
C	16122C
D	16122D
E	-

Acute Angle Elbow

11 - 30° slope



Type	Code
A	-
B	-
C	16A122C
D	16A122D
E	-

Acute Angle Elbow

40 - 70° slope



Type	Code
A	-
B	-
C	16123C
D	16123D
E	-

Variable Elbow

15 - 60° from horizontal



Type	Code
A	-
B	16124B
C	16124C
D	16124D
E	-

Variable Elbow

11 - 30° slope



Type	Code
A	-
B	-
C	16A124C
D	16A124D
E	-

Ⓐ size to suit Ø 26.9mm tube Ⓑ size to suit Ø 33.7mm tube Ⓒ size to suit Ø 42.4mm tube

Ⓓ size to suit Ø 48.3mm tube Ⓔ size to suit Ø 60.3mm tube

*These fittings are not to be used as a base plate for guardrails or dependent structures. No structure should be built using swivel fittings only.

90° Elbow



Type	Code
A	16125A
B	16125B
C	16125C
D	16125D
E	16125E

Three Way 90° Elbow



Type	Code
A	16128A
B	16128B
C	16128C
D	16128D
E	16128E

L/H Sloping Down Side Outlet Elbow

30 - 45° slope



Type	Code
A	-
B	-
C	16A128LHC
D	16A128LHD
E	-

R/H Sloping Down Side Outlet Elbow

30 - 45° slope



Type	Code
A	-
B	-
C	16A128RHC
D	16A128RHD
E	-

Adjustable Short Tee

30 - 60° slope



Type	Code
A	-
B	16129B
C	16129C
D	16129D
E	-

Two Socket Cross

With adjustable centre 30 - 45°



Type	Code
A	-
B	16130B
C	16130C
D	16130D
E	-

For Use In Retail



Wall Flange



Type	Code
A	16131A
B	16131B
C	16131C
D	16131D
E	16131E

Railing Base Flange



Type	Code
A	16132A
B	16132B
C	16132C
D	16132D
E	16132E

Stop End



Type	Code
A	16133A
B	16133B
C	16133C
D	16133D
E	16133E

Plastic.

Ground Socket



Type	Code
A	-
B	16134B
C	16134C
D	16134D
E	-

Clamp On Tee



Type	Code
A	16135A
B	16135B
C	16135C
D	16135D
E	16135E

Gate Eye



Type	Code
A	16138A
B	16138B
C	16138C
D	16138D
E	-

Gate Hinge



Type	Code
A	16140A
B	16140B
C	16140C
D	16140D
E	-

Railing Side Support



Type	Code
A	-
B	16141B
C	16141C
D	16141D
E	-

Kick Plate Clamp



Type	Code
A	-
B	-
C	16142C
D	16142D
E	-



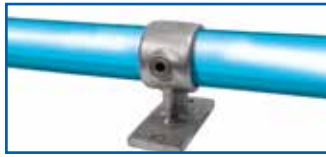
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Steel
Wrought Iron Components
Gate Hardware
Sliding Door Gear
Gate Automation
Mesh
Decking & Subframe
Flooring & Stair Treads
Handrailing
Fencing
Fixings

Handrail Bracket



Type	Code
A	16143A
B	16143B
C	16143C
D	16143D
E	-

Railing Side Support

Vertical base



Type	Code
A	-
B	16144B
C	16144C
D	16144D
E	-

Railing Side Support

Horizontal base



Type	Code
A	-
B	16145B
C	16145C
D	16145D
E	-

Side Palm Fixing



Type	Code
A	-
B	16146B
C	16146C
D	16146D
E	-

Internal Swivel Tee



Type	Code
A	-
B	16147B
C	16147C
D	16147D
E	-

For Use In Offices



Short Swivel Tee

Used in pairs



Type	Code
A	16148A
B	16148B
C	16148C
D	16148D
E	16148E

Sleeve Joint



Type	Code
A	16149A
B	16149B
C	16149C
D	16149D
E	16149E

Internal Joint



Type	Code
A	-
B	16150B
C	16150C
D	16150D
E	-

Angle Base Flange

11 - 30° slope



Type	Code
A	-
B	-
C	16151C
D	16151D
E	-

Angle Base Flange

30 - 45° slope



Type	Code
A	-
B	-
C	16A151C
D	16A151D
E	-

Base Flange

Allows slope up to 11°



Type	Code
A	-
B	-
C	16152C
D	16152D
E	-

Short Tee

Allows slope up to 11°



Type	Code
A	-
B	-
C	16153C
D	16153D
E	-

Elbow

Allows slope up to 11°



Type	Code
A	-
B	-
C	16154C
D	16154D
E	-

Long Tee

Allows slope up to 11°



Type	Code
A	-
B	-
C	16155C
D	16155D
E	-

Two Socket Cross

Allows slope up to 11°



Type	Code
A	-
B	-
C	16156C
D	16156D
E	-

(A) size to suit Ø 26.9mm tube (B) size to suit Ø 33.7mm tube (C) size to suit Ø 42.4mm tube

(D) size to suit Ø 48.3mm tube (E) size to suit Ø 60.3mm tube

*These fittings are not to be used as a base plate for guardrails or dependent structures. No structure should be built using swivel fittings only.

Four Way Cross

With centre tube



Type	Code
A	16158A
B	16158B
C	16158C
D	16158D
E	16158E

Clamp On Crossover



Type	Code
A	16160A
B	16160B
C	16160C
D	16160D
E	16160E

90° Crossover

Also available in C/B, D/C, D/B



Type	Code
A	16161A
B	16161B
C	16161C
D	16161D
E	16161E

90° Combination Crossover



Type	Code
C/B	16161CB
D/B	16161DB
D/C	16161DC

For Recreational Use



Add On Crossover



Type	Code
A	-
B	-
C	16A161C
D	16A161D
E	-

Combination Socket

Tee & crossover



Type	Code
A	16165A
B	16165B
C	16165C
D	16165D

Double Swivel Combination



Type	Code
A	16167A
B	16167B
C	16167C
D	16167D
E	16167E

Double Male Section of Swivel



Type	Code
A	16167AM
B	16167BM
C	16167CM
D	16167DM
E	16167EM

90° Corner Swivel Combination



Type	Code
A	16168A
B	16168B
C	16168C
D	16168D
E	-

90° Corner Swivel Male Combination



Type	Code
A	16168AM
B	16168BM
C	16168CM
D	16168DM
E	-

Swivel Base



Type	Code
A	16169A
B	16169B
C	16169C
D	16169D
E	16169E

Swivel Base Section



Code
16169M

Mesh Panel Clip Single

Available in stainless steel Grade 316



Type	Code
A	16170A
B	16170B
C	16170C
D	16170D
E	16170E

Mesh Panel Clip Double

Available in stainless steel Grade 316



Type	Code
A	16171A
B	16171B
C	16171C
D	16171D
E	16171E

Single Swivel Combination



Type	Code
A	16173A
B	16173B
C	16173C
D	16173D
E	16173E



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.Step files are now available on our website: www.fhbrundle.co.uk

Tube Clamps



Steel
Wrought Iron
Gate
Hardware
Sliding
Door Gear
Automation
Mesh
Decking &
Subframe
Flooring &
Stair Treads
Handrailing
Fencing
Fixings

Female Section Of Swivel



Type	Code
A	16173AF
B	16173BF
C	16173CF
D	16173DF
E	16173EF

Single Male Section Of Swivel



Type	Code
A	16173AM
B	16173BM
C	16173CM
D	16173DM
E	16173EM

Swivel Tee



Type	Code
A	-
B	-
C	-
D	16174D
E	-

Swivel Elbow



Type	Code
A	-
B	-
C	-
D	16175D
E	-

Side Outlet Tee



Type	Code
A	16176A
B	16176B
C	16176C
D	16176D
E	16176E

Three Socket Tee

11 - 30° slope



Type	Code
A	-
B	-
C	16177C
D	16177D
E	-

Two Socket Cross

11 - 30° slope



Type	Code
A	-
B	-
C	16178C
D	16178D
E	-

Locking Collar



Type	Code
A	16179A
B	16179B
C	16179C
D	16179D
E	16179E

Hook



Type	Code
A	16182A
B	16182B
C	16182C
D	16182D
E	-

For Use With Signage



45° Tee



Type	Code
A	-
B	16184B
C	16184C
D	16184D
E	-

27½° Eaves Fitting



Type	Code
A	-
B	-
C	-
D	16185D
E	-

27½° Ridge Fitting



Type	Code
A	-
B	-
C	-
D	16191D
E	-

Base Flange Weather Shield



Type	Code
A	-
B	16192B
C	16192C
D	16192D
E	-

Adjustable Fixing Bracket



Type	Code
A	-
B	16199B
C	16199C
D	16199D
E	-

In-Line Swivel Fitting



Type	Code
A	-
B	16BC538B
C	16BC538C
D	16BC538D
E	-

Ⓐ size to suit Ø 26.9mm tube Ⓑ size to suit Ø 33.7mm tube Ⓒ size to suit Ø 42.4mm tube

Ⓓ size to suit Ø 48.3mm tube Ⓔ size to suit Ø 60.3mm tube

*These fittings are not to be used as a base plate for guardrails or dependent structures. No structure should be built using swivel fittings only.

For our range of aluminium tube see page 426.

Special tube lengths cut to order.

Sloping Down Tee

30 - 45° slope



Type	Code
A	-
B	-
C	16204C
D	16204D
E	-

Sloping Up Tee

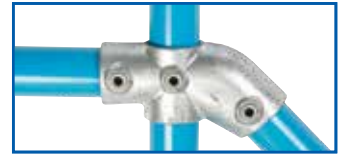
30 - 45° slope



Type	Code
A	-
B	-
C	16A204C
D	16A204D
E	-

Sloping Down/Up Cross

30 - 45° slope



Type	Code
A	-
B	-
C	16219C
D	16219D
E	-

Single Socket Tee

11 - 30° slope



Type	Code
A	-
B	-
C	16229C
D	16229D
E	-

For Commercial Use



Metal Stop Ends



Type	Code
A	16236A
B	16236B
C	16236C
D	16236D
E	16136E

Three Socket Tee

30 - 45° slope



Type	Code
A	-
B	-
C	16277C
D	16277D
E	-

Single Glass clamp



Type	Code
A	-
B	-
C	-
D	16401D
E	-

Double Glass clamp



Type	Code
A	-
B	-
C	16402C
D	16402D
E	-

Expanding Fitting

Also available in C/D



Type	Code
A	-
B	-
C	16750C
D	16750D
E	-

Ladder Wall Clamp



Type	Code
A	-
B	-
C	-
D	25SL109D
E	-

Cradle



Type	Code
A	-
B	-
C	-
D	16KG135D
E	-

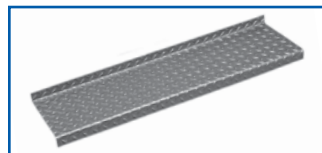
Stair Tread Bracket



Type	Code
A	-
B	-
C	-
D	169972D
E	-

Durbar Stair Tread

40mm turn up/down



W x D mm	Code
1000 x 265	44001

Can be used with stair tread bracket code: **169972D**.

Durbar Stair Tread

40mm turn up/down



W x D mm	Code
1000 x 265	44001TC

Ø 42.4mm tube. Can be used with stair tread bracket code: **169972D**.



.dwg files are now available on our website: www.fhbrundle.co.uk



.Step files are now available on our website: www.fhbrundle.co.uk

Pole Holder



Type	Code
B	16FPH1B

2 Position Pole Holder



Type	Code
B	16FPH2B

Single Sign Holder



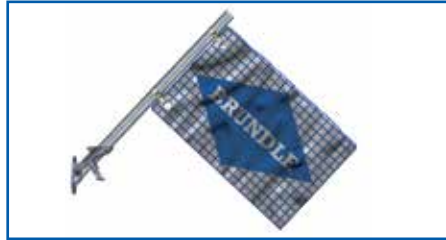
Type	Code
D	16523D

2 Sided Sign Holder



Type	Code
D	16523DZ

Pole Holder Application



Swivel Wheel Application



Single Sign Holder Application



Swivel Wheel With Expander & Brake

Expands to grip the inside of the tube



For mobile frames, carts, furniture & more.

Colour	Wheel Ø mm	Height mm	Type	Code
Black	50	69*	A	16ZWB50A
			B	16ZWB50B
			C	16ZWB50C
			D	16ZWB50D
	75	100*	A	16ZWB75A
			B	16ZWB75B
			C	16ZWB75C
			D	16ZWB75D

Colour	Wheel Ø mm	Height mm	Type	Code
Silver	50	69*	A	16ZWS50A
			B	16ZWS50B
			C	16ZWS50C
			D	16ZWS50D
	75	100*	A	16ZWS75A
			B	16ZWS75B
			C	16ZWS75C
			D	16ZWS75D

50mm: Dynamic load capacity 40kg, static load capacity 80kg. 75mm: Dynamic load capacity 75kg, static load capacity 150kg. *Height is to shoulder of wheel only.

Galvanised Tube



For our range of galvanised tube see page 427.



Ratchet Set



Type	Code
A - E	16233

Allen Key



Type	Code
A - C	16232ABC
D - E	16232D

Grub Screw Protectors



Type	Code
A - B	16305BC
C - E	16305DE

Plastic.

Grub Screws



Type	Code
A	16231A
B - C	16231BC
D - E	16231DE

Concrete Bolt

Self-tapping



Size mm	Code
M12 x 100	5002HCS12100

For cracked and non-cracked concrete.

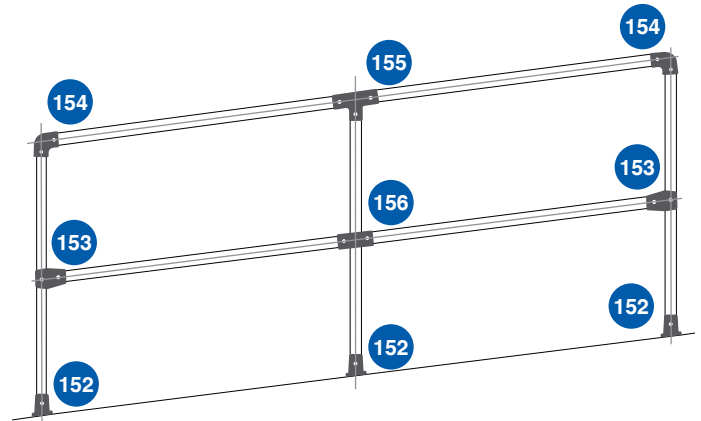
Through Bolt

R-XPT



Size mm	Code
M12 x 100	162412

Zinc plated.



For railings on slopes and ramps between 0 - 70°. Available to suit Ø 42.4 and 48.3mm tube (C and D size).

N.B. The tolerance on standard tube clamp fittings is between 3 and 5°.

For Slopes Up To 11°

Base Flange



Type	Code
C	16152C
D	16152D

Short Tee



Type	Code
C	16153C
D	16153D

Elbow



Type	Code
C	16154C
D	16154D

Long Tee



Type	Code
C	16155C
D	16155D

Two Socket Cross



Type	Code
C	16156C
D	16156D



For Slopes 11 - 30°

Angle Base Flange



Type	Code
C	16151C
D	16151D

Three Socket Tee



Type	Code
C	16177C
D	16177D

Two Socket Cross



Type	Code
C	16178C
D	16178D

Acute Angle Elbow



Type	Code
C	16A122C
D	16A122D

Variable Elbow



Type	Code
C	16A124C
D	16A124D

For slope applications greater than 11° see page 440.

Tube Clamp Slope Fittings

For slopes 30 - 45°



Steel
Wrought Iron
Hardware
Sliding Door Gear
Automation
Mesh
Decking & Subframe
Flooring & Stair Treads
Handrailing
Fencing
Fixings

L/H Sloping Down Side Outlet Tee



Type	Code
C	16A116LHC
D	16A116LHD

R/H Sloping Down Side Outlet Tee



Type	Code
C	16A116RHC
D	16A116RHD

Acute Angle Elbow



Type	Code
C	16122C
D	16122D

L/H Sloping Down Side Outlet Elbow



Type	Code
C	16A128LHC
D	16A128LHD

R/H Sloping Down Side Outlet Elbow



Type	Code
C	16A128RHC
D	16A128RHD

Two Socket Cross

With adjustable centre 30 - 45°



Type	Code
B	16130B
C	16130C
D	16130D

Angle Base Flange



Type	Code
C	16A151C
D	16A151D

Sloping Down Tee



Type	Code
C	16204C
D	16204D

Sloping Up Tee



Type	Code
C	16A204C
D	16A204D

Sloping Down/Up Cross



Type	Code
C	16219C
D	16219D

Three Socket Tee



Type	Code
C	16277C
D	16277D

For slopes applications greater than 30° see page 440.

For our range of galvanised tube see page 427.

For Slopes 30° & Above

Variable Elbow

15 - 60° from horizontal



Type	Code
B	16124B
C	16124C
D	16124D

Adjustable Short Tee

30 - 60° slope



Type	Code
B	16129B
C	16129C
D	16129D

Acute Angle Elbow

40 - 70° slope



Type	Code
C	16123C
D	16123D



.dwg files are now available on our website: www.fhbrundle.co.uk



.Step files are now available on our website: www.fhbrundle.co.uk



- Galvanised square hollow tube – 2.5mm wall thickness to EN 10219 parts 1 and 2 2006 Grade S235JRH
- Fittings are black malleable iron with a hot dip galvanised finish. Clamps supplied with fitted grub screws

Short Tee



Code
16S101

Long Tee



Code
16S104

3 Way Corner



Code
16S116

Socket Cross



Code
16S119

Internal Connector



Code
32S150

Plastic.

90° Elbow



Code
16S125

3 Way Elbow



Code
16S128

3 Way Outlet Tee



Code
16S176

Square Base Flange



Code
16S131

Railing Base Flange



Code
16S132

Rail Support



Code
16S143

4 Way Cross



Code
16S158

Swivel Locating Flange



Code
16S169

Single Swivel



Code
16S173

Male Swivel



Code
16S173M

Female Swivel



Code
16S173F

Hook Turned



Code
16S182

Hook Straight



Code
16S183

Double Sided Bracket



Code
16S198

Single Lugged Bracket



Code
16S199

Square Tube



Size mm	Code
3m x 2.5mm	16024030S
6m x 2.5mm	160240S

Steel

Wrought Iron
Components

Gate
Hardware

Sliding
Door Gear

Gate
Automation

Mesh

Decking &
Subframe

Flooring &
Stair Treads

Handrailing

Fencing

Fixings

Application Guide

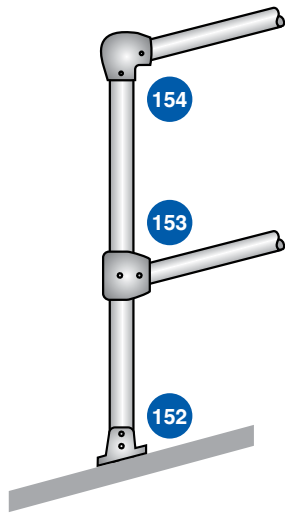
Construction of an in-line guardrail - sloping



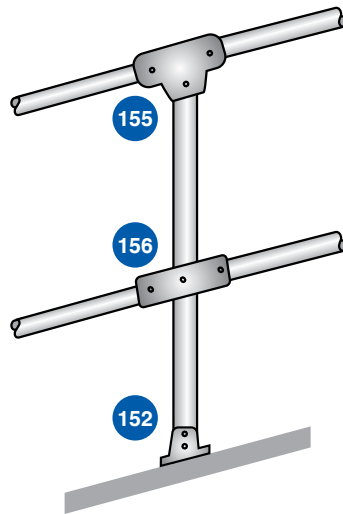
- Steel
- Wrought Iron
- Gate Hardware
- Sliding Door Gear
- Gate Automation
- Mesh
- Decking & Subframe
- Flooring & Stair Treads
- Handrailing
- Fencing
- Fixings

For Slopes 0 - 11°

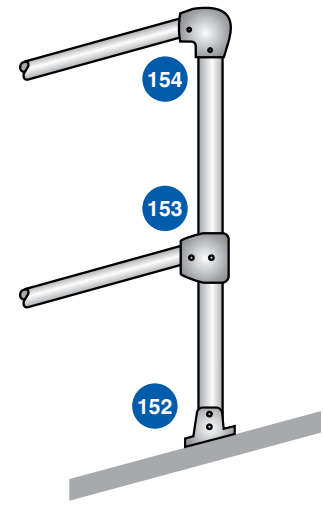
Bottom End Post



Mid Post

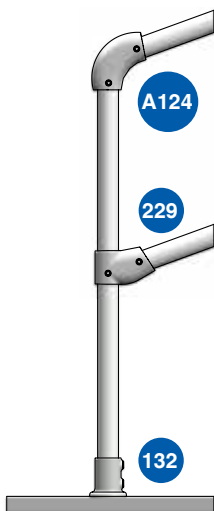


Top End Post

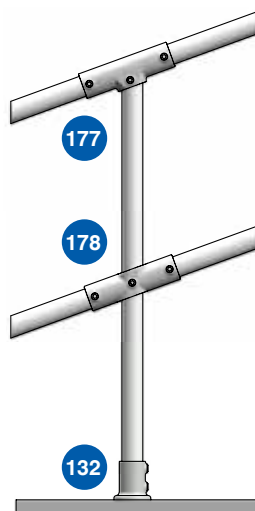


For Slopes 11 - 30°

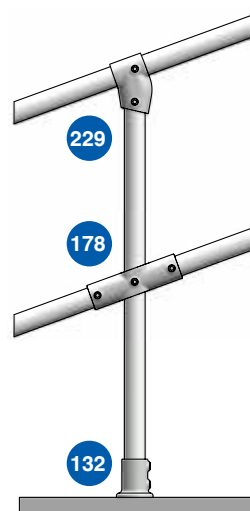
Bottom End Post



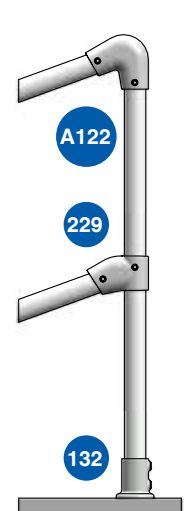
Mid Post



Mid Post

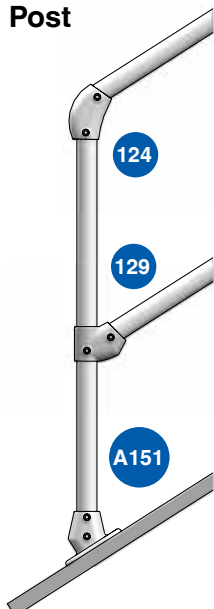


Top End Post

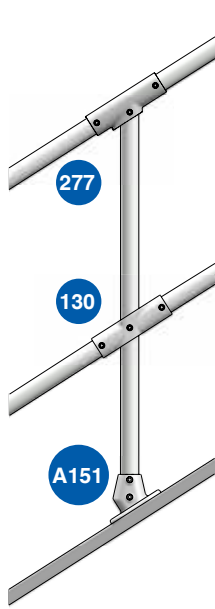


For Slopes 30 - 45°

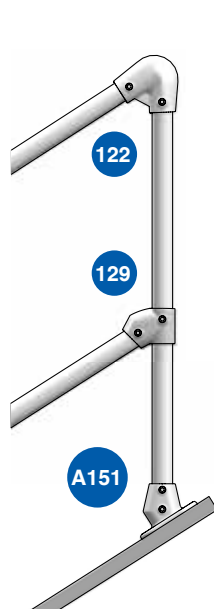
Bottom End Post



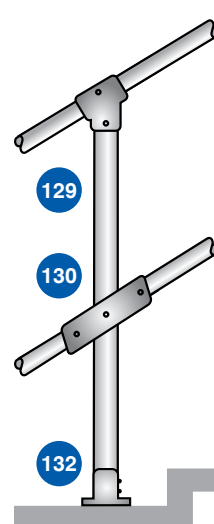
Mid Post



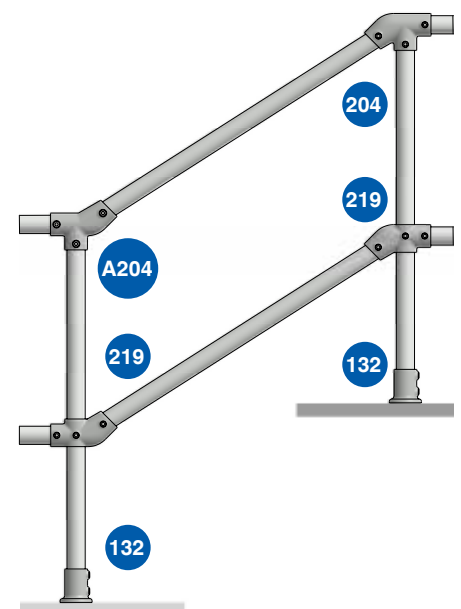
Top End Post



Adjustable

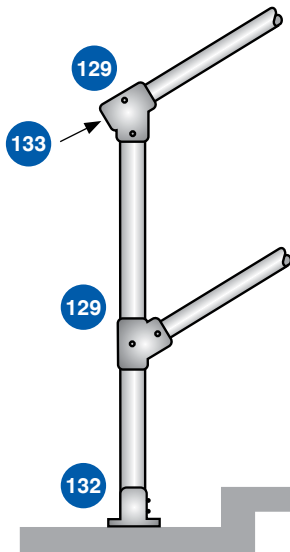


Level To Sloping

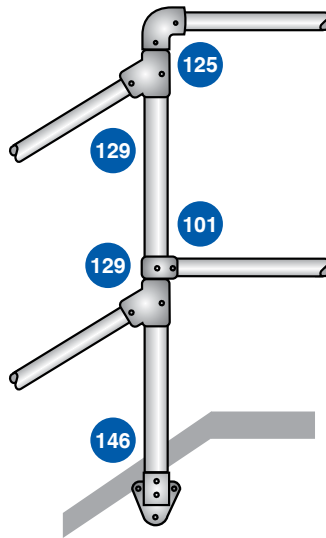


For Slopes 30 - 60°

Adjustable

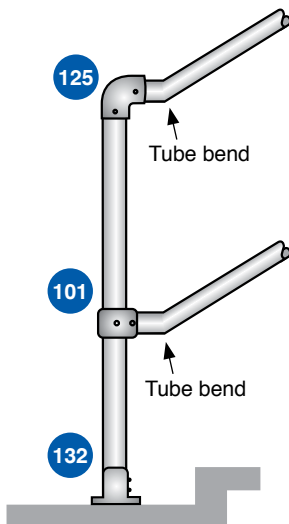


Level To Sloping

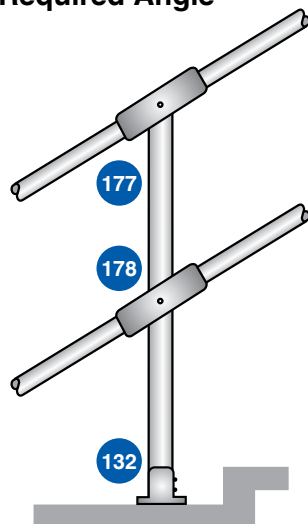


Variable Slopes

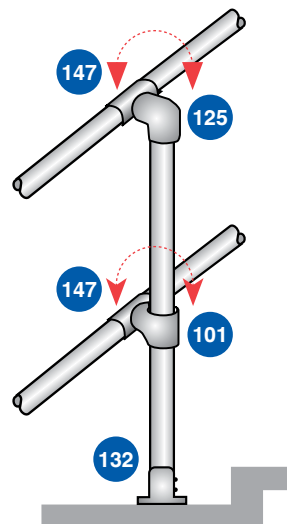
Variable



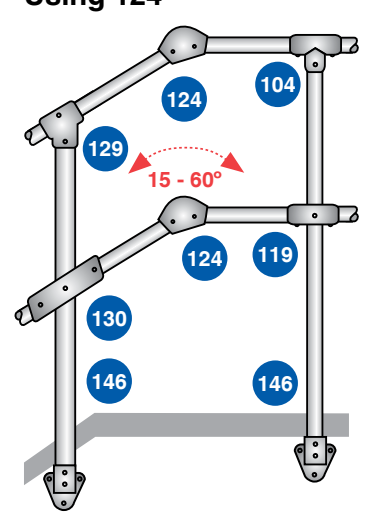
0 - 45° Machined To Required Angle



360° Rotation

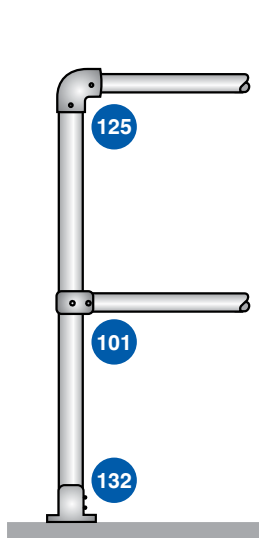


Level To Sloping Using 124

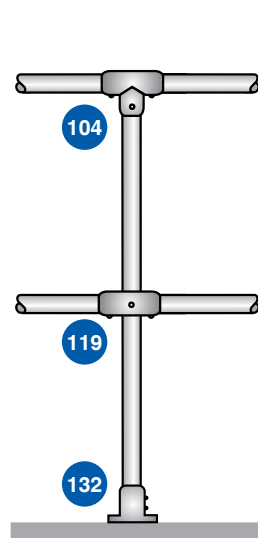


Construction Of An In-Line Guardrail - Level

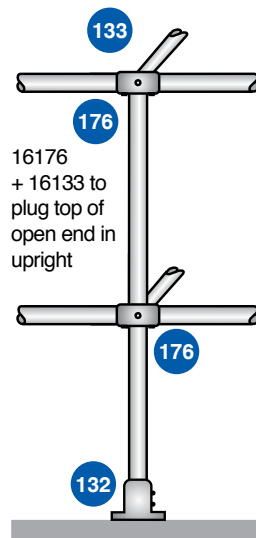
End Post



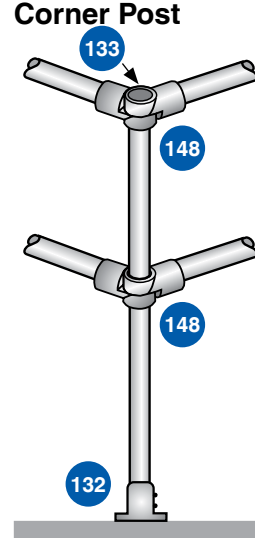
Mid Post



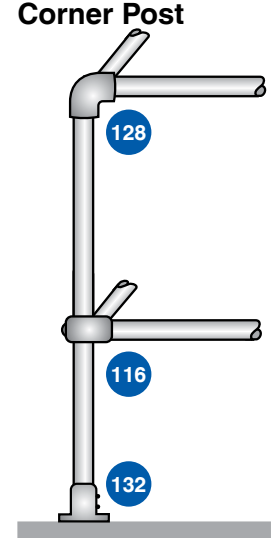
Divider



90 - 180° Corner Post



90° Corner Post



Steel

Wrought Iron
Components

Gate
Hardware

Sliding
Door Gear

Gate
Automation

Mesh

Decking &
Subframe

Flooring &
Stair Treads

Handrailing

Fencing

Fixings

RSJ Post System



- Steel
- Wrought Iron Components
- Gate Hardware
- Sliding Door Gear
- Gate Automation
- Mesh
- Decking & Subframe
- Flooring & Stair Treads
- Handrailing
- Fencing
- Fixings



Specification:

- Upright 50 x 100mm
- Galvanised
- Suits Ø 48.3mm tube
- Overall height 1130mm
- Base plate 200 x 200mm
- Base plate fixing holes 22 x 40mm

For our range of galvanised tube see page 427.

2 Rail Post



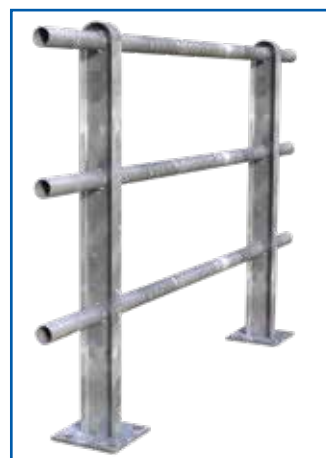
Code
25RSJ02



3 Rail Post



Code
25RSJ03



Tube



Length m	Code
3.0	16024830
6.5	160248

Wall Flange



Code
16131D

90° Elbow



Code
16125D

Locking Collar



Code
16179D

Sleeve Joint



Code
16149D

Internal Joint



Code
16150D

Single Splice Lock



Code
2502SL8

Zinc plated.

Double Splice Lock



Code
2502SL8D

Zinc plated.

Stop Ends

Plastic

Metal



Material	Code
Plastic	16133D
Metal	16236D

Concrete Screw



Size mm	Code
M12 x 100	5002HCS12100

Through Bolt R-XPT



Size mm	Code
M12 x 100	162412

Tarmac Fixing



Size mm	Code
M12 x 80	1205TF12

For high strength retainer glue use code: 1899007638.



TESTED TO BS4592:0

Our modular GRP handrail system in yellow; it is lightweight and easy to install with low maintenance costs. Simply cut tube and fix on site. All posts and fittings are suitable for Ø 50mm tube.

Pre-Assembled Posts

To give 1100mm finished handrail height

End



Code
3350791Y

Mid



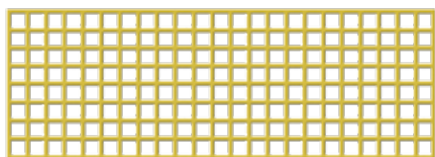
Code
3350792Y

Corner



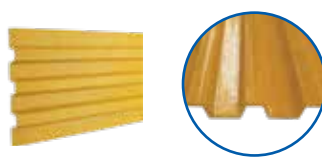
Code
3350793Y

GRP Mesh Infill Panel



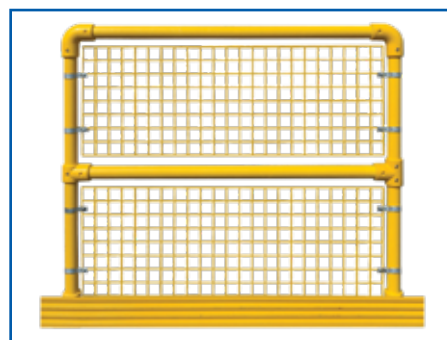
Mesh mm	Frame Depth mm	Panel H x W mm	Code
50 x 50	12	462 x 1172	33IP015012Y

GRP Yellow 'W' Kick Plate



Length m	Height mm	Width mm	Thickness mm	Code
6	100	14	3	33KP02Y6

Can be used with GRP foot code: 33132DY.



Tube



Ø mm	Length m	Thickness mm	Code
50	5	5	33065055Y

For plastic cap use code: 3203505.

Single Mesh Clips



Ø mm	Code
48.3	16170D
48.3	1806170D

Double Mesh Clips



Ø mm	Code
48.3	16171D
48.3	1806171D

GRP Round Fittings



A comprehensive range of yellow fittings suitable for Ø 50mm tube, simplifies the construction of an in-line handrail for a wide range of environments. Variable slopes and gradients are overcome with our range of adjustable fittings.

90° Mid Rail Cross

With centre vertical tube



Code
33119DY

Requires 3 fixing sets.

Mid Rail Corner

With through centre tube



Code
33116DY

Requires 4 fixing sets.

60° Mid Cross Rail

With centre vertical tube



Code
33130DY

Requires 3 fixing sets.

Adjustable External Elbow



Code
33166DY

Requires 1 fixing set.

Adjustable Internal Elbow



Code
33764DY

Requires 1 fixing set.

Top Rail Corner



Code
33128DY

Requires 3 fixing sets.

Single Adjustable



Code
33173DY

Requires 2 fixing sets.

Double Adjustable



Code
33167DY

Requires 3 fixing sets.

60° Elbow



Code
33124DY

Requires 2 fixing sets.

90° Elbow



Code
33125DY

Requires 2 fixing sets.

90° Short Tee



Code
33101DY

Requires 2 fixing sets.

90° Long Tee



Code
33104DY

Requires 3 fixing sets.

60° Short Tee



Code
33129DY

Requires 2 fixing sets.

Side Mount



Code
33146DY

Fixing holes Ø 8mm.

Railing Flange



Code
33131DY

Fixing holes Ø 8mm.

Base Foot



Code
33132DY

Fixing holes Ø 13mm. Can be used with GRP 'W' profile kick plate.

Hex Head With Flange



Ø x L mm	Code
M8 x 75	5002HCS1075

Pack quantity 100.

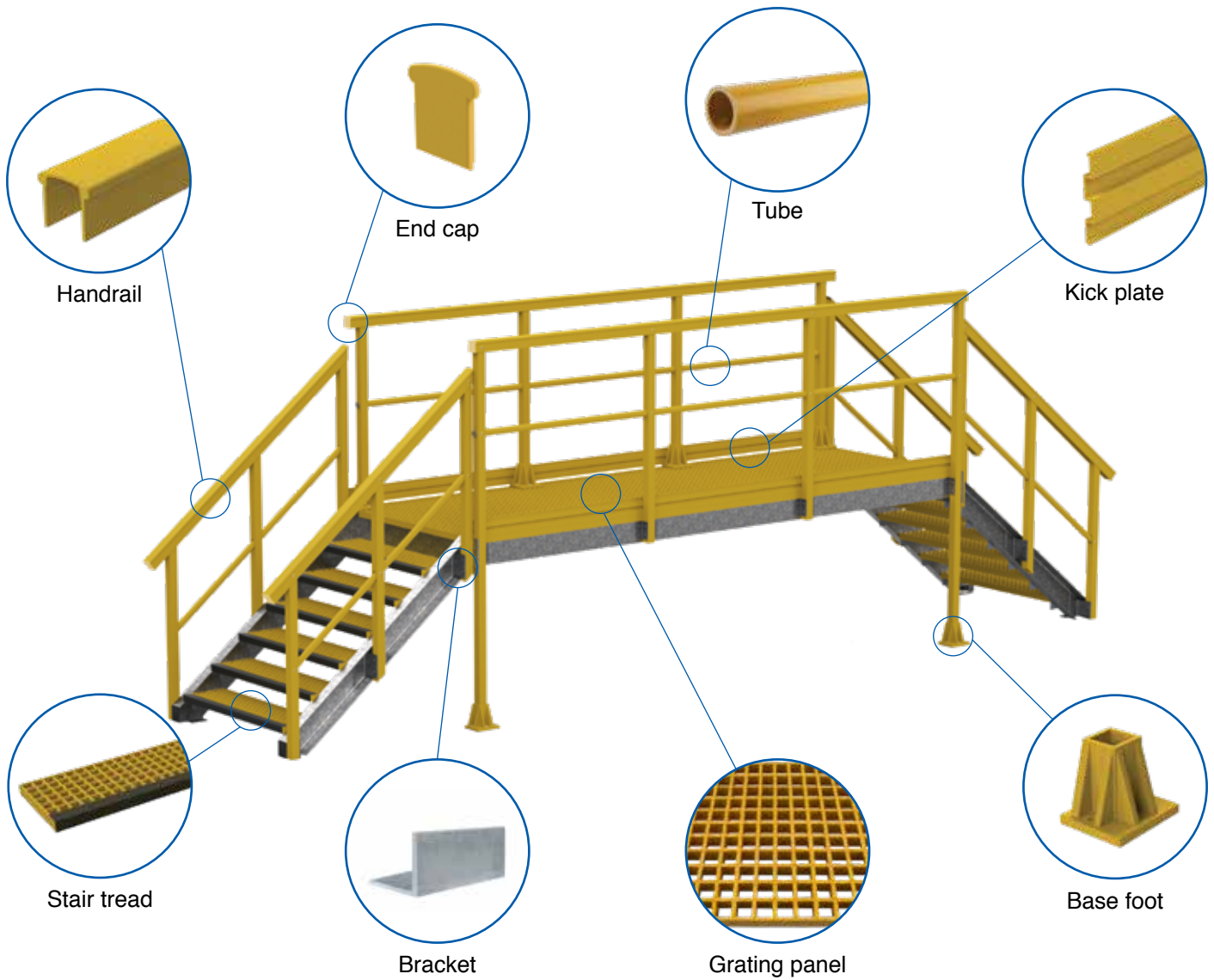
Fixing Set



Length	Code
50mm	3399M6X60

Sold as single. M6. For rivet tool use code: 189900667.

For GRP posts & mesh infill panels see page 443.



Application Image

With kick plate

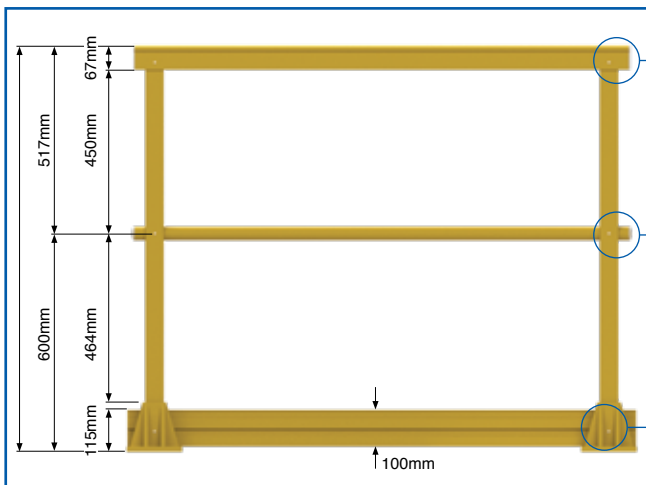


Image shows pre-drilled posts code: **33792S50Y** in use with 'u' handrail code: **337057650Y**, tube code: **3306383Y**, base foot code: **33132S50Y**. and kick plate code: **33KP02Y6**.

Fixing end cap to handrail
Secure end cap in place using Clear Adhesive code: **3399001**

Fixing tube to post
Secure tube in place using Tek Screw code: **5002TEK35532**

Fixing base foot to post
Secure base foot in place using Tek Screw code: **5002TEK35532**

For a full range of structural GRP profiles see pages 402 & 449 or visit www.fnbrundle.co.uk



- Steel
- Wrought Iron Components
- Gate Hardware
- Sliding Door Gear
- Gate Automation
- Mesh
- Decking & Subframe
- Flooring & Stair Treads
- Handrailing
- Fencing
- Fixings

For our full range of GRP flooring & stair treads see page 399.

Pre-Drilled Posts

Bolt-Down With base plate



Height mm	□ mm	Code
1100	51	33792S50Y

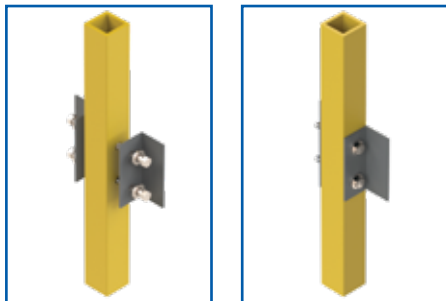
6.3mm wall thickness. Supplied with base foot.

Tube For use as mid rail



Ø mm	Length m	Wall Thickness mm	Code
38	6	3	3306383Y

Application Of Base Foot & Kick Plate



Hex No. 3 Drill Screw



Size mm	Pack Qty	Code
Ø 5.5 x 32	100	5002TEK35532

Side-Fix / Concrete-In



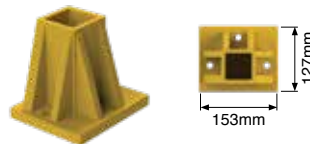
Height mm	□ mm	Code
1450	51	33795S50Y

Plastic End Cap For use with tube



Size Ø mm	Wall Thickness mm	Code
38	1.0 - 3.0	320337

Base Foot To suit hollow box section



To suit □ mm	Base Plate Thickness mm	Code
51	15	33132S50Y

Ø 12mm fixing holes.

Angle For side-fix posts



Height mm	Width mm	Length m	Code
50	50	6	3304503GY

3mm thickness.

Adhesive



Colour	ml	Code
Clear	310	3399001

For use with a sealant gun code: **189900666**.

Handrail & End Cap

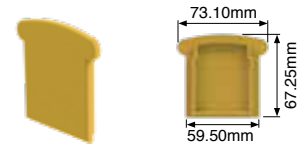
'U' Handrail



Size mm	Length m	To suit □ mm	Code
67 x 73	6	51	337057650Y

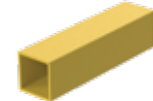
5mm wall thickness.

End Cap For use with 'U' handrail



Code
334137650Y

Hollow Box Section



□ mm	Length m	Wall Thickness mm	Code
51	6	3.2	33055132Y

Kick Plate



Length m	Height mm	Code
6	100	33KP02Y6

Hex Head Bolt Set

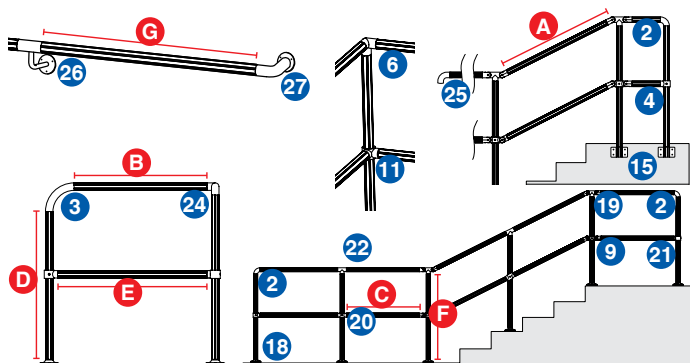
For fixing angles & side-fix posts



Code
3399M10X100

Supplied with 1 x M10 x 100mm stainless steel hexagon head set screw, 2 x M10 plain washers and 1 x M10 nyloc nut

For GRP square post system see page 445.



PVC Handrail Tube



	Length mm	Ø mm	Thickness mm	Grey Code	Yellow Code
A	790	45	6	52A014G790	52A014Y790
B	800	45	6	52A014G800	52A014Y800
C	845	45	6	52A014G845	52A014Y845
D	890	45	6	52A014G890	52A014Y890
E	900	45	6	52A014G900	52A014Y900
F	990	45	6	52A014G990	52A014Y990
G	1400	45	6	52A014G1400	52A014Y1400

Choice Of Top Rail Fittings

90° Elbow



Colour	Code
Grey	52A002G
Yellow	52A002Y

2 fixing sets supplied.

Hand Rail Bend



Colour	Code
Grey	52A003G
Yellow	52A003Y

2 fixing sets supplied.

90° Tee



Colour	Code
Grey	52A022G
Yellow	52A022Y

3 fixing sets supplied.

Adjustable Tee



Colour	Code
Grey	52A019G
Yellow	52A019Y

3 fixing sets supplied.

3 Way Elbow



Colour	Code
Grey	52A006G
Yellow	52A006Y

3 fixing bolts supplied.

For our GRP flooring see page 400.

Choice Of Mid Rail Fittings

Mid Rail Single



Colour	Code
Grey	52A021G
Yellow	52A021Y

2 fixing sets supplied.

Adjustable Mid Rail Single



Colour	Code
Grey	52A004G
Yellow	52A004Y

2 fixing sets supplied.

Mid Rail Double



Colour	Code
Grey	52A020G
Yellow	52A020Y

3 fixing sets supplied.

Warmagrip™ Original

A "warm to the touch" DDA compliant handrail component system



- Steel
- Wrought Iron
- Gate
- Sliding Door Gear
- Gate
- Automation
- Mesh
- Decking & Subframe
- Flooring & Stair Treads
- Handrailing
- Fencing
- Fixings

Adjustable Mid Rail Double



Colour	Code
Grey	52A009G
Yellow	52A009Y

3 fixing sets supplied.

Mid Rail Corner



Colour	Code
Grey	52A011G
Yellow	52A011Y

2 fixing sets supplied.

Choice Of Base Fittings Base Foot Flange



Colour	Code
Grey	52A018G
Yellow	52A018Y

1 fixing set supplied.

Handrail & Adjustable Connector Fittings Adjustable Connector Set



Colour	Code
Grey	52A024G
Yellow	52A024Y

2 fixing sets supplied.

Wall Mounted Tee



Colour	Code
Grey	52A026G
Yellow	52A026Y

2 fixing sets supplied.

Side Mount Bracket



Colour	Code
Grey	52A015G
Yellow	52A015Y

1 fixing set supplied.

Wall Mounted Elbow



Colour	Code
Grey	52A027G
Yellow	52A027Y

1 fixing set supplied.

Scroll End



Colour	Code
Grey	52A025G
Yellow	52A025Y

1 fixing set supplied.

For GRP posts & mesh infill panels see page 443.

Accessories

Handrail Fixing Caps



Colour	Code
Grey	52HFCEG
Yellow	52HFCEY

Plastic.

Floor Fixing Caps



Colour	Code
Grey	52FFCEG
Yellow	52FFCEY

Plastic.

Fixing Set



Length mm	Code
40	52SFS
50	52LFS

Supplied with components.

Security Fixing Set Drill Bit



Code
52FSD

Security Fixing Tool



Code
52FSA

Deburring Tool



Code
5299001

Hand held.

Tube



Colour	Length mm	Ø mm	Wall Thickness mm	Code
Grey	6000	19.00	3.00	3306193GY
Grey	6000	22.00	2.50	33062225GY
Grey	6000	25.00	2.50	33062525GY
Grey	6000	31.00	3.00	3306313GY
Yellow	6000	31.00	3.00	3306313Y
Grey	6000	38.00	3.00	3306383GY
Yellow	6000	38.00	3.00	3306383Y
Grey	1000	45.00	6.00	33064561GY
Yellow	1000	45.00	6.00	33064561Y
Grey	6000	45.00	6.00	33064566GY
Yellow	6000	45.00	6.00	33064566Y
Yellow	6000	48.50	6.75	33064867Y
Red	6000	48.50	6.75	33064867R
Grey	5000	50.00	5.00	33065055GY
Yellow	5000	50.00	5.00	33065055Y

Hollow Box Section



Colour	Length mm	Width mm	Height mm	Thickness mm	Code
Grey	6000	25.00	25.00	3.00	3305253GY
Grey	6000	38.00	38.00	3.20	33053832GY
Yellow	6000	38.00	38.00	3.20	33053832Y
Grey	6000	38.00	38.00	5.00	3305385GY
Yellow	6000	38.00	38.00	5.00	3305385Y
Grey	6000	44.00	44.00	6.00	3305446GY
Yellow	6000	44.00	44.00	6.00	3305446Y
Grey	6000	51.00	51.00	3.20	33055132GY
Yellow	6000	51.00	51.00	3.20	33055132Y
Grey	6000	51.00	51.00	6.35	3305516GY
Yellow	6000	51.00	51.00	6.35	3305516Y
Green	6000	51.00	51.00	6.35	3305516GN
Grey	6000	60.00	60.00	4.50	3305606045GY
Yellow	6000	60.00	60.00	4.50	3305606045Y
Green	6000	60.00	60.00	4.50	3305606045GN
Grey	6000	76.00	76.00	6.35	33057676635GY
Grey	6000	101.60	101.60	6.35	330510161016635GY
Green	6000	101.60	101.60	6.35	330510161016635GN

Rounded Ribbed Plastic Insert



Size mm	Wall Thickness mm	Code
50	5.0	3203505

Flat Bar



Colour	Length mm	Width mm	Thickness mm	Code
Grey	6000	40	5.0	3303405GY
Grey	6000	80	8.0	3303808GY
Grey	3000	200	9.5	330320095GY
Green	3000	200	9.5	330320095GN
Grey	3000	936	3.1	330393631GY

Box End Cap

Inserts



Colour	To Suit Hollow Section W x T mm	Code
Black	51 x 3.00	333202513
Black	51 x 6.00	333202516
Black	60 x 4.50	33320160
Black	76 x 6.35	33320176
Black	101 x 6.35	333201101

Ladder Rung

Ribbed



Colour	Length mm	Outside Ø mm	Inside Ø mm	Thickness mm	Code
Grey	6000	34.5	25.5	3.25	33R01GY
Yellow	6000	34.5	25.5	3.25	33R01Y

For our GRP flooring see page 400.

Vertical Access Ladder Kits



Original ladder kit

Steel

Wrought Iron Components

Gate Hardware

Sliding Door Gear

Gate Automation

Mesh

Decking & Subframe

Flooring & Stair Treads

Handrailing

Fencing

Fixings



Self-Closing Half Gate & 20mm Round Bar Rungs



The original ladder kit is of a safe, simple modular design offering individual parts which bolt together to form a complete ladder. These original ladder kits have rungs made from 20mm round bar. This system tries to eliminate the need for expensive site surveys and the preparation of detailed drawings which add to delivery time. It is flexible, easy to install and will solve virtually any access problem. Available from 2 - 6m, ladders are supplied "flat-pack" for ease of transportation.

Full Ladder Kits

Rise Size mm	Code
2000 - 2300	25AX2000
2400 - 2700	25AX2500
2800 - 3200	25AX3000
3300 - 3800	25AX3500

Half height self-closing gate not supplied. Use code: **25AXSG04**.

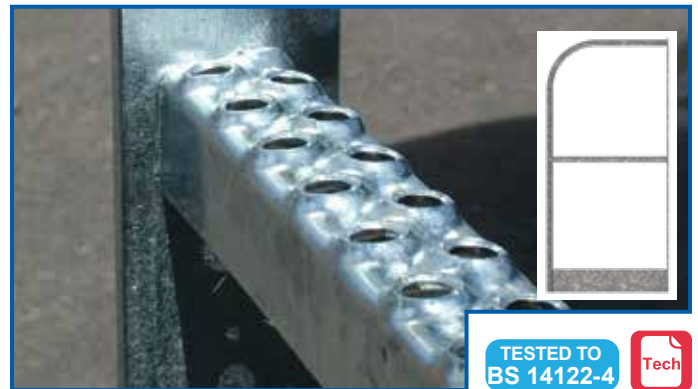
Rise Size mm	Code
3900 - 4300	25AX4000
4400 - 5200	25AX4500
5300 - 6000	25AX5500

Half height self-closing gate not supplied. Use code: **25AXSG04**.

European Ladder Kit



Self-Closing Full Height Gate & Punched Ladder Rungs



Developed from the Original Ladder Kits, but with extra safety in mind. These European Kits have been designed with enhanced slip resistant ladder rungs, produced from punched ladder rung O₂-30 / 30. This pattern has surface holes of Ø 9mm punched up and 5mm drainage holes affording both high slip resistance properties and excellent drainage. As with the Original Kits, these are available in 2 - 6m ladders and are supplied "flat-pack" for ease of transportation.

Components are generally compatible to BS EN ISO 14122-4:2004+A1:2010 (E). Ladder sections have been independently tested and they comply with the loading requirements as detailed in BS EN 131-2:2010+A1:2012.

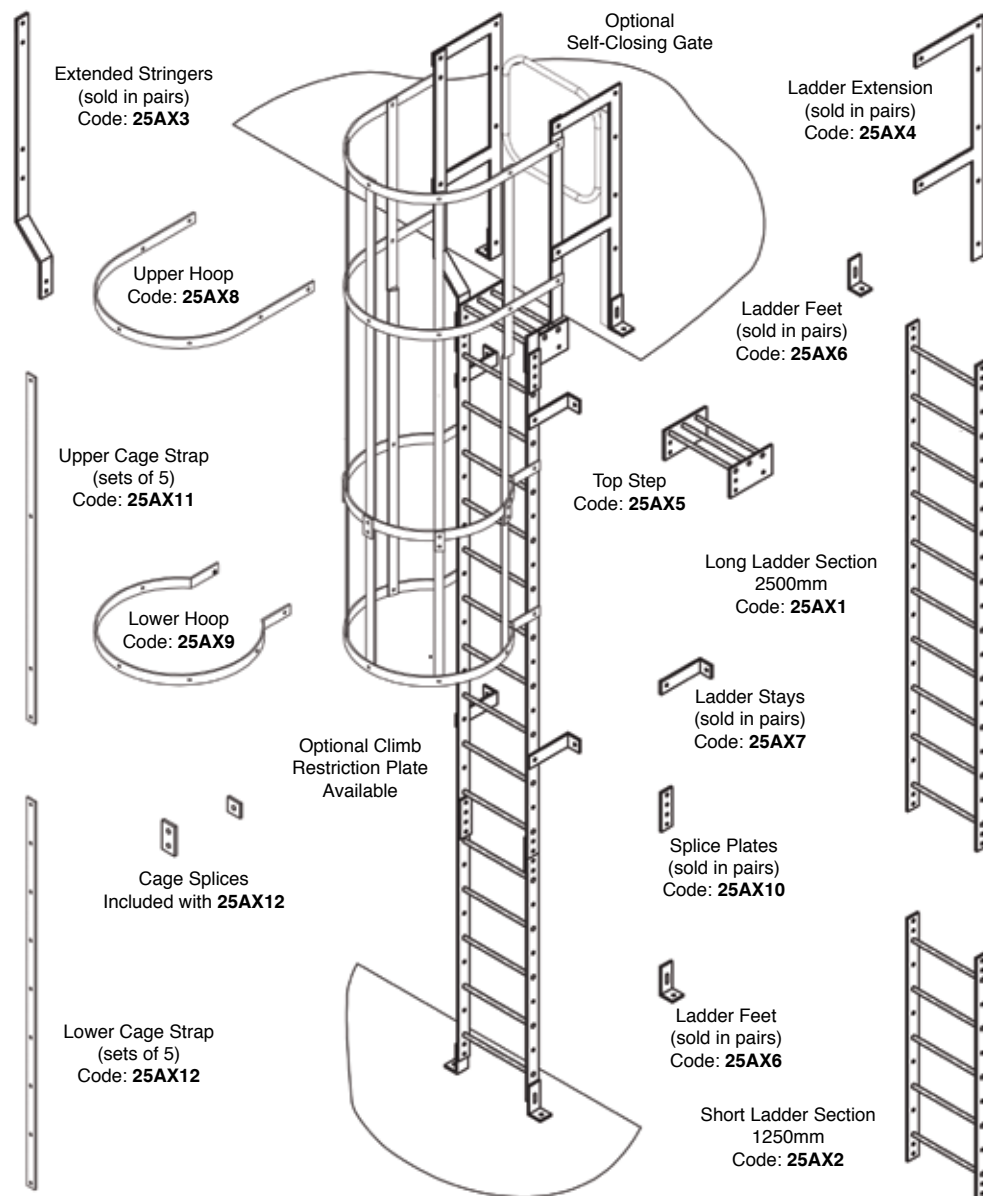
Full Ladder Kits

Rise Size mm	Code
1825 - 2150	25EX2000
2200 - 2650	25EX2500
2700 - 3150	25EX3000
3200 - 3650	25EX3500
3700 - 4150	25EX4000

Full height self-closing gate not supplied. Use code: **25AXSG05** which conforms with BS EN 14122-4.

Rise Size mm	Code
4200 - 4650	25EX4500
4700 - 5150	25EX5000
5200 - 5650	25EX5500
5700 - 6000	25EX6000

Full height self-closing gate not supplied. Use code: **25AXSG05** which conforms with BS EN 14122-4.



Universal Self-Closing Half Gate

Supplied with fixing bolts



Height mm	Code
550	25AXSG04

Ladder Security Plate

Supplied with fixing bolts



Height mm	Width mm	Code
2000	415	25AXLSP01

Lock not included.

Ladder Wall Clamp



Ø mm	Plate H x W mm	Code
48.3	75 x 125	25SL109D

125 x 51 mm back plate.
70 x Ø 11.7 mm thread.

Component Description	Code
Long ladder section - 2500mm	25AX1
Short ladder section - 1250mm	25AX2
Extended stringers (sold in pairs) - includes four M12 x 35mm bolts	25AX3
Ladder extension (sold in pairs) - includes four M12 x 35mm bolts	25AX4
Top step - includes four M12 x 50mm bolts	25AX5
Ladder feet (sold in pairs) - includes four M12 x 35mm bolts	25AX6
Ladder stays (sold in pairs) - includes four M12 x 35mm bolts	25AX7
Upper hoop - Ø 700 x 750mm with holes - includes five M12 x 36mm bolts	25AX8
Lower hoop - Ø 700 x 750mm with holes - includes five M12 x 36mm bolts	25AX9
Splice plates (sold in pairs) - includes six M12 x 35mm bolts	25AX10
Upper cage strap (sets of 5)	25AX11
Lower cage strap (set of 5) - includes cage splices and ten M12 x 50mm bolts	25AX12

Upper Hoop

Without holes



Ø x L mm	Bar Size mm	Code
700 x 750	50 x 8	25GC11

Lower Hoop

Without holes



Ø x L mm	Bar Size mm	Code
700 x 750	50 x 8	25GC12

Ladder Rung



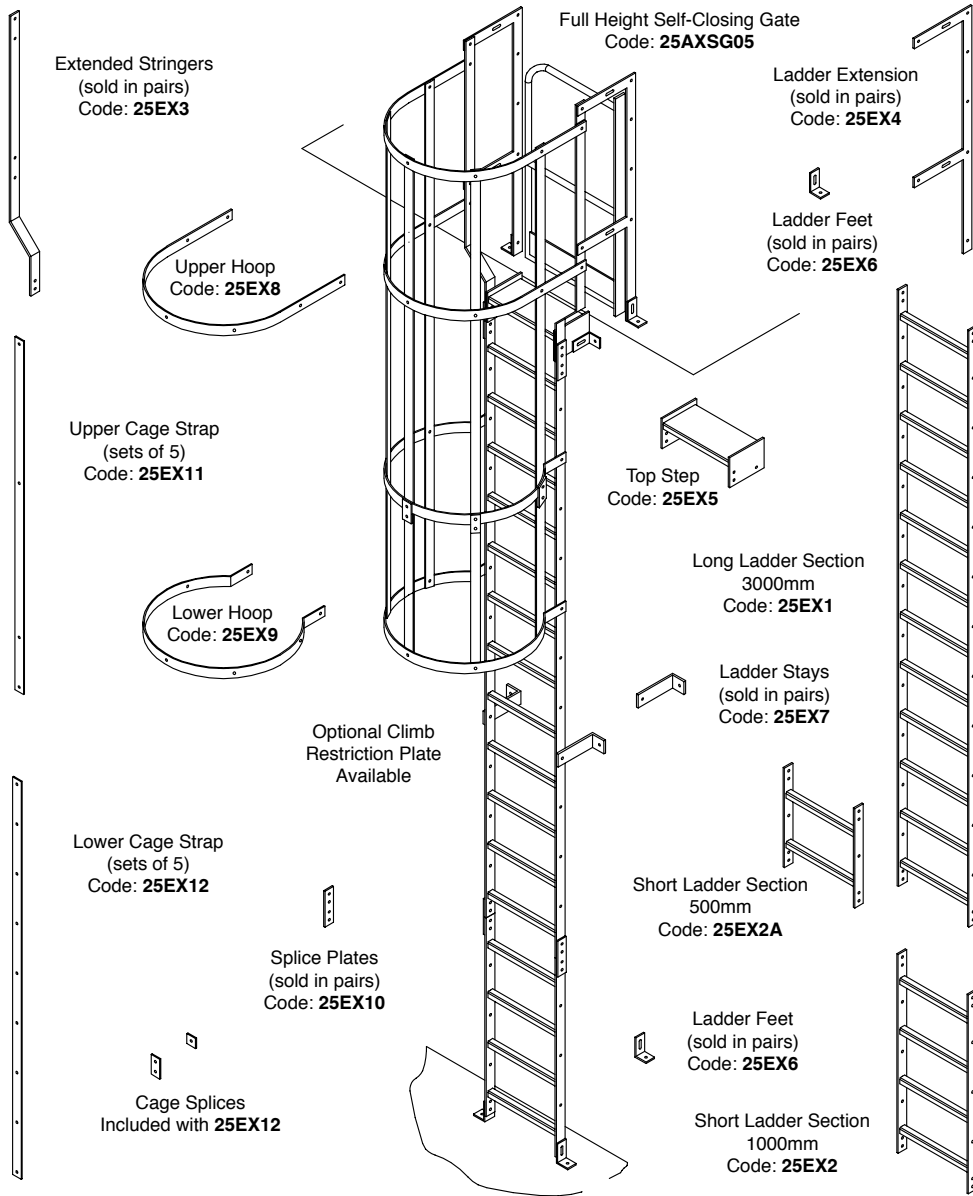
Length mm	H x W mm	Code
2100	30 x 30	25R01

European Ladder Kit

Enhanced slip resistant rungs included & self-closing gate as an optional extra

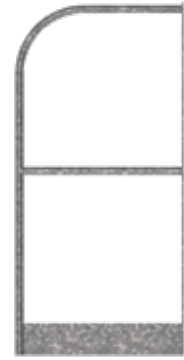


- Steel
- Wrought Iron Components
- Gate Hardware
- Sliding Door Gear
- Gate Automation
- Mesh
- Decking & Subframe
- Flooring & Stair Treads
- Handrailing
- Fencing
- Fixings



Universal Self-Closing Full Gate

Supplied with fixing bolts



Height mm	Code
1100	25AXSG05

Ladder Security Plate

Supplied with fixing bolts



Component Description	Code
Long ladder section - 3000mm	25EX1
Short ladder section - 1000mm	25EX2
Short ladder section - 500mm	25EX2A
Extended stringers (sold in pairs) - includes four M12 x 35mm bolts	25EX3
Ladder extension (sold in pairs) - includes four M12 x 35mm bolts	25EX4
Top step - includes four M12 x 50mm bolts	25EX5
Ladder feet (sold in pairs) - includes four M12 x 35mm bolts	25EX6
Ladder stays (sold in pairs) - includes four M12 x 35mm bolts	25EX7
Upper hoop - Ø 700 x 750mm with holes - includes five M12 x 36mm bolts	25EX8
Lower hoop - Ø 700 x 750mm with holes - includes five M12 x 36mm bolts	25EX9
Splice plates (sold in pairs) - includes six M12 x 35mm bolts	25EX10
Upper cage strap (sets of 5)	25EX11
Lower cage strap (set of 5) - includes cage splices and ten M12 x 50mm bolts	25EX12

Height mm	Width mm	Code
2000	415	25AXLSP01

Lock not included.

Ladder Wall Clamp



Ø mm	Plate H x W mm	Code
48.3	75 x 125	25SL109D

125 x 51 mm back plate.
70 x Ø 11.7mm thread.

Upper Hoop

Without holes



Ø x L mm	Bar Size mm	Code
700 x 750	50 x 8	25GC11

Lower Hoop

Without holes



Ø x L mm	Bar Size mm	Code
700 x 750	50 x 8	25GC12

Ladder Rung



Length mm	H x W mm	Code
2100	30 x 30	25R01



Roof Edge Protection can now be designed and calculated to meet the new BS 13700 counterweighted guardrail systems standard. The Roof Edge Protection system requires no fixings or drilling and subsequently no repair to the roof membrane. It is suitable for flat or nearly flat roofs. The system operates on a counterbalance principle using PVC counterweights as the main component. A galvanised foot supports the handrail post, this includes an integral toeplate facility which is a requirement if there is no perimeter edge upstand.

Features:

- TUV Certificate no. Z1A 04 03 50796 001
- Complies with BS EN 14122-3:2001 & EN 13374
- Rapid installation
- 25kg maximum component weight
- We can provide BS 1300 calculations
- No welding or special tools required
- Bolt on toeplate facility to comply with HSG 33
- For use on asphalt, coated steel sheet or concrete mineral felt roofs. The system is effectively maintenance free with galvanised to BS EN ISO 1461 malleable iron fittings, PVC counterweights & galvanised tube

Upright Post



Post Height mm	Ø mm	Code
1100	48.3	16REG40

Includes post, 1.575m tube, collar and recycled PVC counterweight.

End Post



Post Height mm	Ø mm	Code
1100	48.3	16REG40E

Includes post, 1.575m tube, collar and 2 x recycled PVC counterweight.

Curved Post



Post Height mm	Ø mm	Code
1100	48.3	16REG40SS

Includes post, 1.075m tube, collar and recycled PVC counterweight.

90° Elbow



Ø mm	Code
48.3	16125D

Wall Flange



Ø mm	Code
48.3	16131D

Sleeve Joint



Ø mm	Code
48.3	16149D

Tube



Ø mm	Length m	Code
42.4	1.0	1602421075
48.3	3.0	16024830
48.3	6.5	160248

For additional counterweights see page 454.

Foldshield® System



Free standing roof edge protection - **Now available to comply with BS 13700**

- Steel
- Wrought Iron Components
- Gate Hardware
- Sliding Door Gear
- Gate Automation
- Mesh
- Decking & Subframe
- Flooring & Stair Treads
- Handrailing
- Fencing
- Fixings



Foldshield® is the perfect solution for free standing edge protection when working on roofs. It can be easily folded, so it does not reduce the buildings aesthetics. Designed for use on slopes up to 10°, this folding system is suitable for use on asphalt, concrete, mineral felt or PVC sheet covered roofs and complies with the requirements of EN 13374.

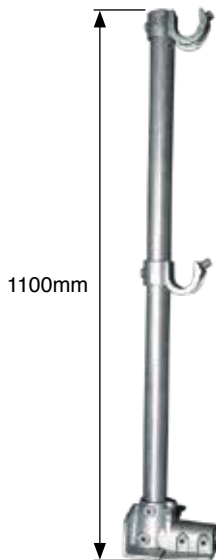
Features & Benefits

- Galvanised
- Suits Ø 48.3mm tube
- Can comply to BS 13700, EN 13374 & 14122
- Recycled PVC feet do not penetrate the roof membrane
- Folds down when not in use
- Does not spoil building aesthetics
- System can be raised & lowered in sections



The guard rail can easily be lifted into place when work is in progress and then quickly folded back down when finished. A simple locking pin is all that needs to be removed from the fitting to allow it to pivot.

Upright Post



Ø mm	Code
48.3	16RE00G40HBF

Counterweight



Ø mm	Tube Length m	Code
48.3	1.075	16RE11G40SS
48.3	1.575	16RE11G40

Includes locking collar. Recycled PVC moulding.

Run End Counterweight



Ø mm	Tube Length m	Code
48.3	1.575	16RE12G40

Includes bar, long tee and locking collars. Recycled PVC moulding.

Sleeve Joint



Ø mm	Code
48.3	16149D

Internal Joint



Ø mm	Code
48.3	16150D

90° Elbow



Ø mm	Code
48.3	16125D

Stop End



Ø mm	Code
48.3	16133D

Plastic.

Hinged Base Foot



Ø mm	Code
48.3	16KG134D

Cradle



Ø mm	Code
48.3	16KG135D

Tube



Ø mm	Length m	Code
42.4	1.0	1602421075
48.3	3.0	16024830
48.3	6.5	160248

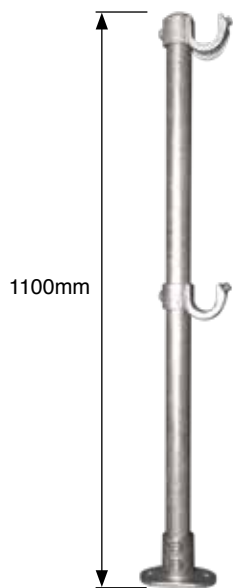


Topfix provides a roof edge protection solution for metal profile and standing seam roofs up to 45° pitch. The specially designed base plate, which incorporates multiple fixing centres, allows installation to a wide range of popular roofs. Base plates for standing seam roofs are fixed using non-penetrative 2-part clamps and metal profile roofs are fixed with minimal penetrations using rivets and butyl sealing strip to maintain the roof's integrity.

Features & Benefits

- Galvanised
- Suits Ø 48.3mm tube
- Complies with the test requirements of BS EN 14122 Part 3 & EN 13374 Class A
- Fixing centres for standing seam roofs: 305, 400 & 500mm
- Fixing centres for trapezoidal profile roof panels: 310, 333, 400 & 500mm
- Easier specification means less site visits
- Non-penetrative solution for standing seam roofs
- Watertight fixings for metal profile roofs

Upright Post



Ø mm	Code
48.3	16RE00G40RBF

Order 2 x 5002M1230SET for fixing to base plate.

Base Plate



L x W mm	Code
538 x 380	16KGTF1

Sleeve Joint



Ø mm	Code
48.3	16149D

90° Elbow



Ø mm	Code
48.3	16125D

Stop End



Ø mm	Code
48.3	16133D

Plastic.

For self-closing gates see page 420.

Cradle



Ø mm	Code
48.3	16KG135D

Angle Base Flange

30 - 45° slope



Ø mm	Code
48.3	16A151D

Adjustable Short Tee

30 - 60° slope



Ø mm	Code
48.3	16129D



Standing Seam Clamp



Code
16WPF6

Sealing Strip



Roll m	Width mm	Code
15	40	16KGSEAL

Butyl.

Rivets



Ø x L mm	Code
6 x 14.5	16KGRIVET

Pack of 100.

Fixing Set



Ø mm	Code
M12	5002M1230SET

Includes bolt, nut & washer.

Tube



Ø mm	Length m	Code
48.3	3.0	16024830
48.3	6.5	160248

Self-Closing Fabricated Gates

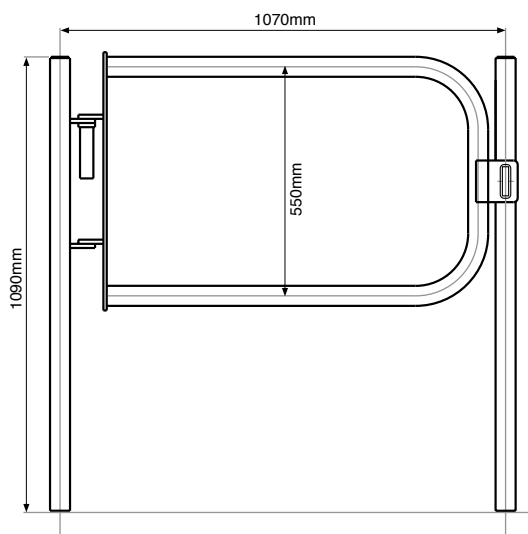


- Steel
- Wrought Iron Components
- Gate Hardware
- Sliding Door Gear
- Gate Automation
- Mesh
- Decking & Subframe
- Flooring & Stair Treads
- Handrailing
- Fencing
- Fixings



Self-Closing Gate

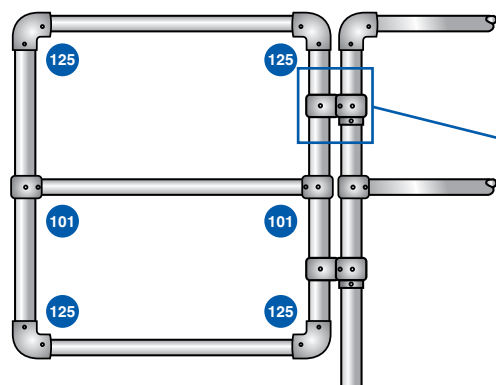
For use with tube clamps & roof edge protection system.



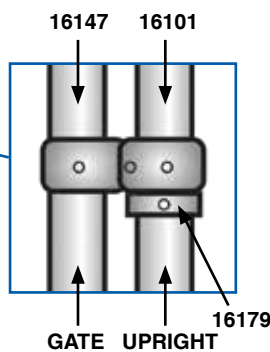
- Supplied with hinge, post and slam post
- Galvanised
- Height 1100mm when tube clamp fitted
- Lockable with padlock through Ø 15mm hole
- Gate post centres 1070mm
- Not supplied with base fittings
- Image shows left hand opening inwards

Ø mm	Left Hand	Right Hand
33.7	1603TCG1B	1603TCG2B
42.4	1603TCG1C	1603TCG2C
48.3	1603TCG1D	1603TCG2D

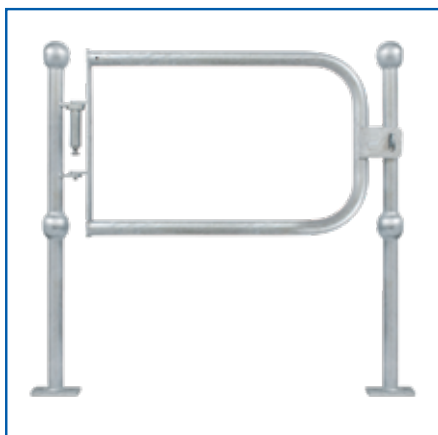
Gate Construction



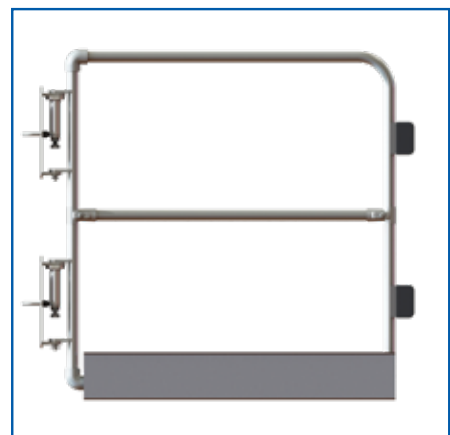
Heavy Duty Gate Hinge



- Tighten the setscrew on the **16147** to the gate
- Tighten the setscrew on the **16101** to the **16147**
- Tighten the setscrew on the **16179** to the upright
- Leave the setscrew on the **16101** to the upright loose



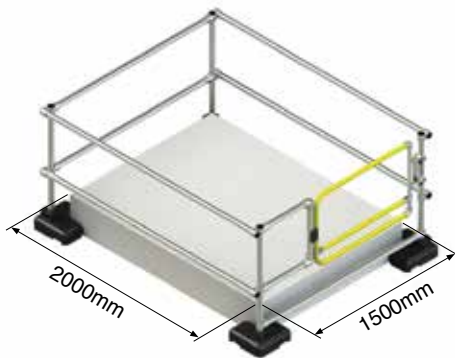
For self-closing handrail standards gates see page 420.



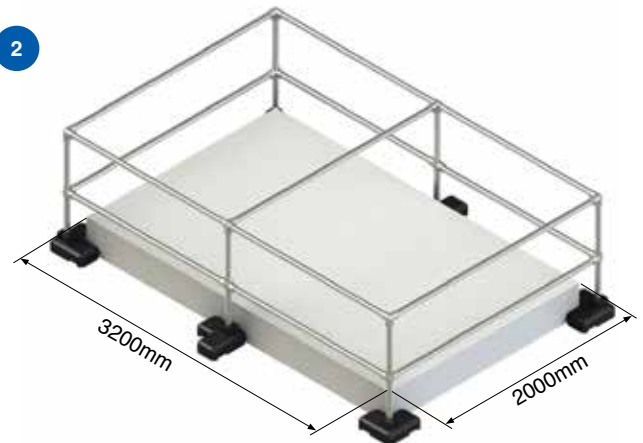


Roof Dome Maxi is a modular system designed specifically to prevent falls through skylights, roof hatches, and other roof openings. Sturdy recycled PVC bases lock the posts into position around the corners of a skylight then tube clamp fittings and tube are used to construct a rigid frame. Additionally, a gate can be incorporated for access to roof hatches.

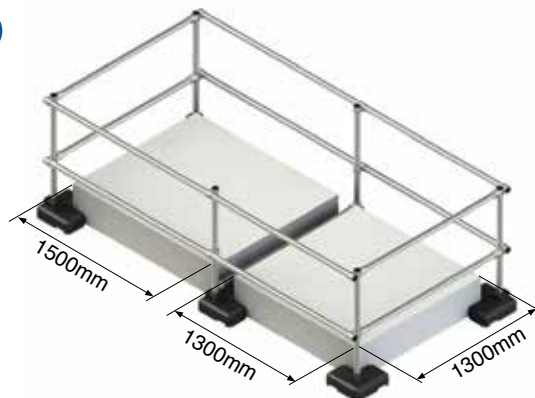
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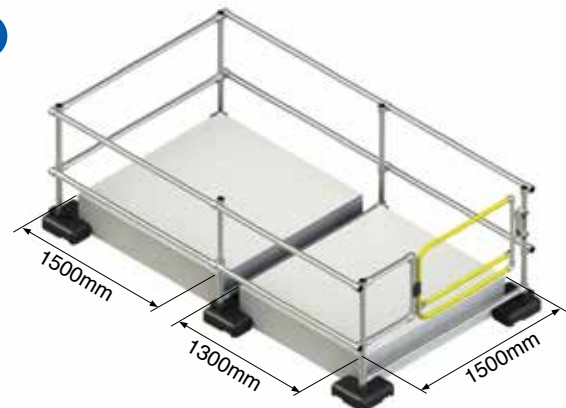
2



3



4



Completely free standing & eliminates the risk of damage to the roof membrane.

Kit	L x W mm	Code
1	2000 x 1500	16KDH3
2	4000 x 2000	16KDK3
3	3200 x 1500	16KDH2
4	3200 x 1500	16KDH1

FEATURES

- Modular system using standard components
- Made from Ø 48.3mm tube (size D)
- Galvanised to BS EN ISO 1461
- Complies with EN 14122 pt3
- Recycled PVC feet
- Suitable for use on all roof surfaces with a maximum pitch of 3°

- Steel
- Wrought Iron
- Gate Hardware
- Sliding Door Gear
- Gate Automation
- Mesh
- Decking & Subframe
- Flooring & Stair Treads
- Handrailing
- Fencing
- Fixings



Rope End

Handrail Bracket



Material	To Suit Ø mm	Code
Brass	28	06001B
Chrome	28	06001C

Material	To Suit Ø mm	Code
Brass	28	06004B
Chrome	28	06004C

Rope Eye On Plate

Rope Hook



Material	To Suit Ø mm	Code
Brass	28	06003B
Chrome	28	06003C

Material	To Suit Ø mm	Code
Brass	28	06002B
Chrome	28	06002C

3 Strand Polyhemp Rope



Length m	Ø mm	Code
1	28	06005RM



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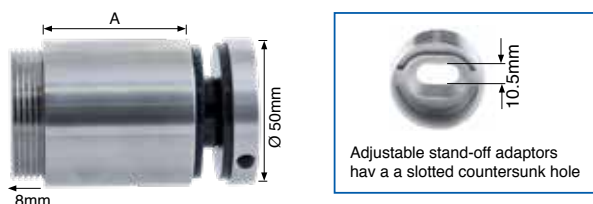
liveconfigurator™
BALUSTRADES

The UK's largest stockist of components for immediate delivery



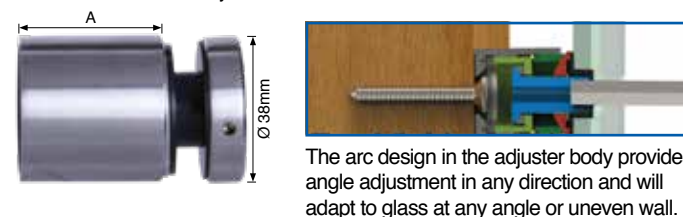
Adjustable Hollow

Flat front



Tilt Adjustable Hollow

Flat front with 2° tilt adjustment



(A) mm	Glass mm	Glass Hole Ø mm	Satin Polish Code	Mirror Finish Code	PPC Black Code
20	12.76 - 17.50	26	1806459	1806459M	—
30	12.76 - 25.50	26	1806460	1806460M	1806460B
40	8.00 - 25.50	26	1806461	1806461M	1806461B
50	8.00 - 25.50	26	1806462	1806462M	1806462B

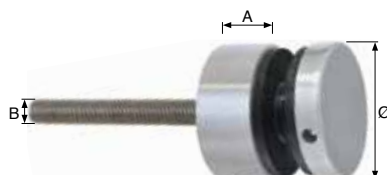
(A) mm	Glass mm	Glass Hole Ø mm	Satin Polish Code
38	10 - 21.5	22	1822464

Fixing bolt not supplied. Use code: 5004RS10100F.

Fixing bolt not supplied. Use code: 5004RS10100F.

Solid

Flat front



(Ø) mm	(A) mm	(B) mm	Glass mm	Glass Hole Ø mm	Satin Polish Code	Mirror Finish Code
30	15	8	6 - 12	15	1802404F	—
30	15	8	6 - 12	15	1806404F	—
50	20	10	8 - 19	22	1806455	1806455M
50	30	10	8 - 19	22	1806456	1806456M
50	40	10	8 - 19	22	1806457	1806457M
50	50	10	8 - 19	22	1806458	1806458M

Solid

Domed front



Glass mm	Glass Hole Ø mm	Satin Polish Code	Mirror Finish Code
8 - 19	22	1804454F	—
8 - 19	22	1806454F	1806454FM

RKER II Hybrid Resin

Suitable for use in dry & wet substrates & water filled holes



ml	Code
300	50RKER300

Spanner



To Suit Ø mm	Code
30 - 50	189900104

Internal Threaded Anchor

For use with adjustable stand-off adaptor



Size mm	Code
M10 x 100	5004RS10100F

Pack quantity 1.

Countersunk Screw

CR-LX-CS-ZF



Size mm	Code
M10 x 75	5002CCS875
M10 x 100	5002CCS10100

Pack quantity 1.

Mesh Sleeve



Size mm	Code
M10	50WMS101000

- Steel
- Wrought Iron
- Gate Hardware
- Sliding Door Gear
- Gate Automation
- Mesh
- Decking & Subframe
- Flooring & Stair Treads
- Handrailing
- Fencing
- Fixings



Design and personalise our **range of products** with Liveconfigurator™

CREATE A **FREE ACCOUNT** TODAY!

Top Rail

Please note when using a gasket this will add a few millimetres to the overall height.

Square Slim
See page 495

Aluminium Rectangular
See page 496

Square Mini
See page 497

Round Mini
See page 498

Round
See page 499

Rectangular
See page 500



Oval
See page 501

Aluminium Round
See page 502

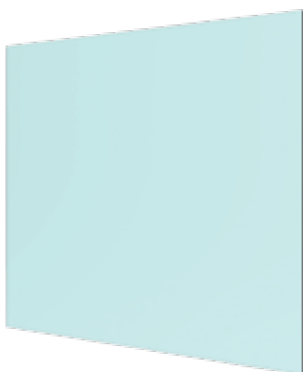
Aluminium Square
See page 502

Aluminium Rectangular
See page 502

Mirror Finish Round
See page 565



12mm Glass Panels



Thickness mm	Height mm	Width mm	Code
12	1087	500	1855125001087
12	1087	600	1855126001087
12	1087	700	1855127001087
12	1087	800	1855128001087
12	1087	900	1855129001087
12	1087	1000	18551210001087
12	1087	1200	18551212001087

For 15mm standard glass panels or made to order glass panels please see from page 470.

Hex Head With Flange
See page 711

Hex Head Multi-Fix Bolt
See page 711

Through Bolt
See page 712

Countersunk Concrete Screw
See page 711

Resin Socket
See page 713

R-Stud With Flat Head
See page 713



For our full range of fixings see page 704.

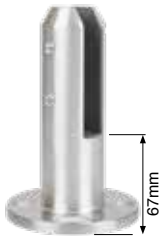


Features:

- Economic frameless glass solution
- For use with 10 - 21.5mm glass

Round Spigot

No holes in glass needed



Finish	Code
Satin	1822009
Mirror	1822009M
PPC Black	1822009B

To suit 12 - 15mm glass. Height to glass from base is 67mm.
For M8 x 75mm bolt use code: **5002CCS875**. For M8 x 100mm bolt use code: **5002CCS8100**.

Grade 316 Cover Cap

To suit duplex round spigot



Finish	Code
Satin	1822009CP
Mirror	1822009MCP
PPC Black	1822009CPB

Round Spigot

No holes in glass needed



Description	Code
Round spigot	1822007
Cover cap	1822007CP

10 - 21.5mm Glass thickness. Height to glass when packer fitted is 45mm.

Square Spigot

No holes in glass needed



Description	Code
Square spigot	1822008
Cover cap	1822008CP

10 - 21.5mm Glass thickness. Height to glass when packer fitted is 45mm.

Square Spigot

No holes in glass needed



Description	Code
PPC Black Square Spigot	1822011B
PPC Black Cover Cap	1822011CPB
Satin Square Spigot	1822011
Satin Cover Cap	1822011CP

12mm Glass thickness. Height to glass when packer fitted is 53mm.

Fixings

Description	Size mm	Pack Qty	Code
Locator Nut - For use with cover plate. Excess thread to be cut off after installation	M12	1	1829012N
Covered Locator Nut - For use instead of cover cap. Hides bolt thread under nut	M12	1	1829012DN
Lag Screw with Allen key head	M12 x 120	1	1899006124
Concrete Bolt Self-tapping - For cracked and non-cracked concrete	M12 x 75	1	5002HCS1275
Concrete Bolt Self-tapping - For cracked and non-cracked concrete	M12 x 100	1	5002HCS12100

- Duplex 2205 (ultra marine stainless) option, stronger & reduced cleaning frequency when compared to Grade 316

Square Spigot

No holes in glass needed



Glass Thickness mm	Code
12 - 21.50	1822010

Supplied with nut socket.
To be used with M12 x 120mm lag screw with Allen key head code: **1899006124**.

Packing Shim

No holes in glass needed



Thickness mm	Code
3	1822010S

Lag Screw

With Allen key head



Size mm	Code
M12 x 120	1899006124

Please order nut code: **189900639** and washer code: **189900633**.

Steel

Wrought Iron Components

Gate Hardware

Sliding Door Gear

Gate Automation

Mesh

Decking & Subframe

Flooring & Stair Treads

Handrailing

Fencing

Fixings

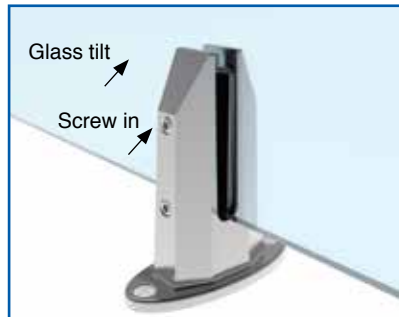
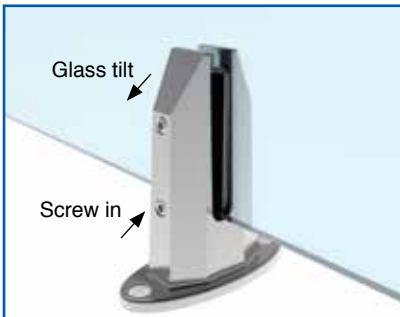


Features:

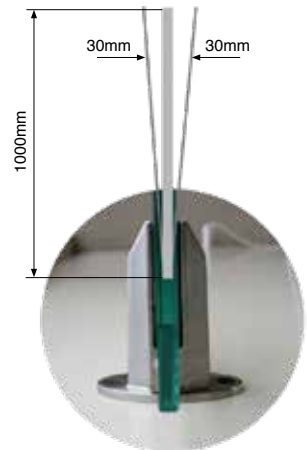
- Duplex 2205 (ultra marine stainless)
- Satin polish
- New adjustable Tilt-Loc™ technology
- Adjustment from one side



Tilt-Loc™ Tightening



Tilt-Loc™ Adjustment



Level by hand and tighten the grub screws once in position for a perfect finish in half the time compared to a standard non-adjustable spigot. The Tilt-Loc™ system can easily be hand adjusted from one side by one person.

Tilt-Loc™ - Bolt Down



Glass mm	Height to Glass with Packer mm	Code
12 - 17.50	51	1822001
19 - 25.50	46	1822002

Tilt-Loc™ - Side - Adjustable Tilt



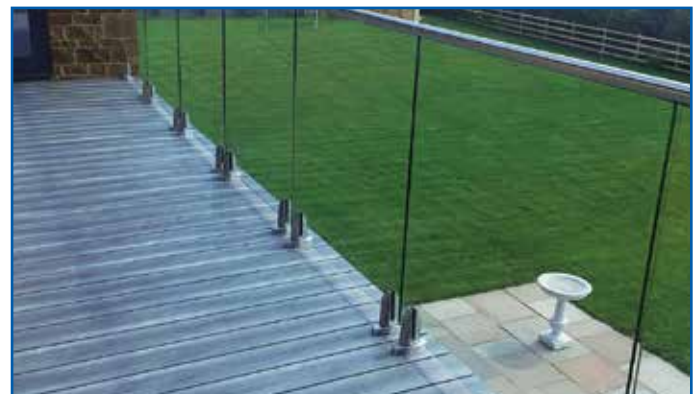
Glass mm	Height from Packer to Top of Fitting mm	Code
10 - 17.52	120	1822013

Tilt-Loc™ - Edge



Glass mm	Height to Glass with Packer mm	Code
12 - 17.50	43	1822005
19 - 25.50	43	1822006

Cover cap included.

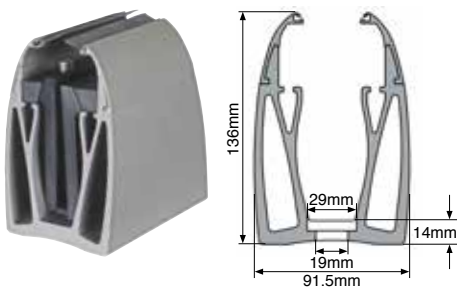




Using a similar but updated clamping and adjusting method as the Posi-Glaze balustrade system to give a quick and easy installation, Spig-Lite Pro can be bolted directly into the substrate without the need for a channel, ensuring clean lines and greater visibility. Our channel free system allows a 23mm gap between the substrate and glass enabling free dispersal of water and debris such as leaves.

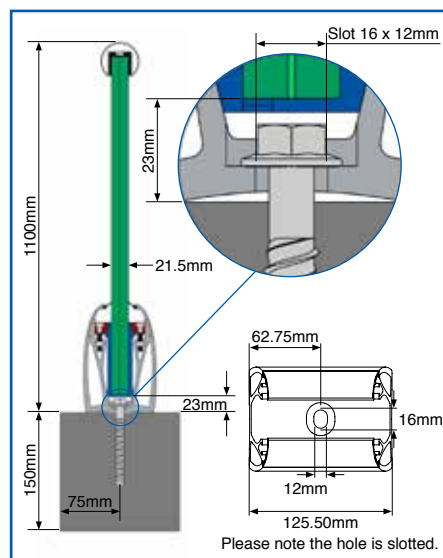
With only two spigots required per metre of glass and only a single bolt per spigot, this system is currently one of the fastest to install on the market. Our new vertical adjustment device ensures each panel of glass can be horizontally adjusted once in position, and now tightened to a torque guaranteeing alignment and efficient installation every time.

Spig-Lite Pro Kit



Glass mm	Height to Glass with Packer mm	Code
12.0	23	180500212
15.0	23	180500215
21.5	23	1805002215

Kit includes: 2 x glass spigots, 2 x glass clamps, 4 x top clips, 4 x gasket sections. 5mm Allen key is required to tighten glass clamps code: **189900602**.



End Cap



Code
1805002EC

Optional end caps can be fitted using a similar process to top clips (point 4 below).

Suitable for fixing to various substrates including concrete & steel.

Installation



Position spigots at 500mm centre's on 1 metre panels, starting 250mm from the end. Use appropriate M10 fixing as per manufacturers specification.



Support the glass off the floor using suitable blocks and loosely fit the slip clamps. Slide the halves together and position for spigots and squeeze tight. Lower glass into spigots.



Place cap screw through the clamp bar and loosely screw on the nut, angled side of bar should be nearest the glass. Slide unit into V in profile, then use 5mm Hex key to tighten screws on both sides to hold glass in desired position. Finish tightening using torque wrench to 6Nm.



Insert gasket into the top clips and cut to size. Slide clips onto spigots. Apply neutral cure silicone to the underside of the bead, remove any excess. Once finished clean the system with a non abrasive cloth, warm water and neutral detergent.

For our range of glass panels see from page 470.



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NEW & IMPROVED CONFIGURATORS FOR...

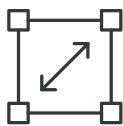
Balustrades

Stairways

Bespoke Glass

Decking

We'll help create your project from start to finish



1. Design your build

Our groundbreaking software allows you to configure your own project in a matter of minutes, using our templates.

- ✓ Real-time design
- ✓ Completely customisable
- ✓ Eliminate mistakes



2. Receive a quote pack

Within minutes you'll receive a comprehensive quote pack, complete with parts list, and free detailed drawings and 3D models.

- ✓ Receive your pack in minutes
- ✓ Fully detailed drawings
- ✓ Accurate 3D visuals



3. Place your order

Give our sales team a call to get your order placed and they'll be more than happy to answer any questions, too.

- ✓ Discuss with our experts
- ✓ Nationwide distribution
- ✓ No wastage



Balustrades

We supply a wide range of glass balustrade systems for both indoor and outdoor applications, from glass spigot balustrades and frameless glass balustrades, to stand-off adaptors which can be configured for your own measurements.

Stairways

Use our stairways balustrade configurator to design and draw bespoke glass, handrails, posts, and fittings for internal and external stairways, produced according to your dimensions.



Bespoke Glass

Use our bespoke glass configurator for your special glass panels. You can also add up to 14 holes wherever you need them. Rectangles and parallelograms are ready to be configured, and we also have a wide range of standard panels in stock.

Decking

For decking we have a simple to use calculator to help select the numbers of deck boards and clips you will need. Our range of decking covers a wide choice of eco-friendly boards and modern colours, to bring your vision to life.



The perfect tool for everyone.
Come and have a look and start designing your project at

liveconfigurator.co.uk

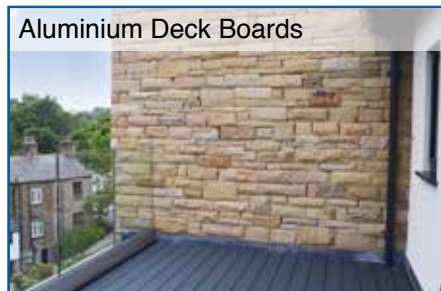
As part of our Synergised decking system we offer two high quality, cost effective and non-combustible decking solutions that will help transform your outdoor space.

Both systems are easy to install and are suitable for domestic and commercial environments. Installation could not be easier, with our high-quality porcelain tiles installed directly onto a flat concrete floor. Our aluminium deck boards can be mounted onto our mill finished adjustable cradles and joists. Or combined with our unique innovative perimeter base system, which allows for a wide range of base fix handrailing solutions to be bolted to the perimeter, providing a safe edge protection where there is a fall of more than 600mm.

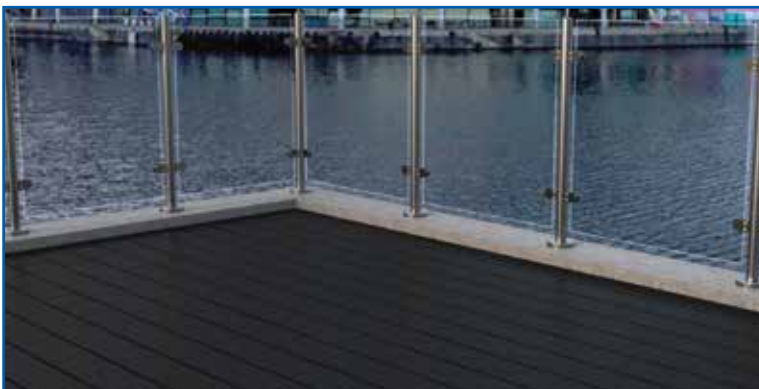
Porcelain Tiles



- Italian porcelain from one of Italy's top design houses
- Stunningly realistic natural wood effect
- Low maintenance & easy to install
- Low surface temperature & UV resistant
- Anti-slip
- Non-combustible
- Two collections with a choice of 5 colours in each
- 100% recyclable
- Ideal for elevated patios, all decking applications, and all types of balconies



Aluminium Deck Boards



- Achieves Euroclass Classifications of A1 & A2fl-s1
- Made from structural grade 6063 T6 aluminium
- Ideal for high rise concrete balconies & terraces
- Up to 50% cost saving compared to other systems
- 100 micron Qualicoat™ premium powder coating
- Low surface temperatures
- Long lasting and low maintenance
- Lightweight and easy to install

Request a **FREE** sample today!

For more details see from page 374.



Balustrade Systems

- Systems to suit 12 - 33mm glass
- Aluminium, anodised aluminium, PPC black & mill
- Side or base-fix options
- Adjustable for ease of use
- Satin polish or mirror finish
- Tested to British Standards



Wedge-Loc® Slim
See page 472



Wedge-Loc® F Channel
See page 475



Wedge-Loc® Duo
See page 476



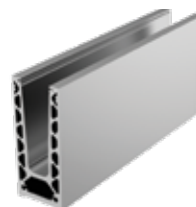
Tilt-Loc™
See page 478



Posi-Glaze
See page 480



Posi-Glaze R-Lock
See page 482



Onlevel Type 6020 & 6021
See page 486



Onlevel Type 3010
See page 488



Mega-Grip 3kN
See page 492



Onlevel Type 3011
See page 489

Steel
Wrought Iron Components
Gate Hardware
Sliding Door Gear
Gate Automation
Mesh
Decking & Subframe
Flooring & Stair Treads
Handrailing
Fencing
Fixings

Stacked Glass Panels

Frameless glass & spigot systems



Full technical details can be found on our website: www.fhbrundle.co.uk

- 12 & 15mm thick toughened monolithic clear float glass
- 17.5 & 21.5mm thick PVB toughened laminated glass
- Polished all round and dubbed corners
- Handrail should be used with toughened glass

12mm Toughened Panels

Thickness mm	Height mm	Width mm	Code
12	1087	500	1855125001087
12	1087	600	1855126001087
12	1087	700	1855127001087
12	1087	800	1855128001087
12	1087	900	1855129001087
12	1087	1000	18551210001087
12	1087	1200	18551212001087

15mm Toughened Panels

Thickness mm	Height mm	Width mm	Code
15	1087	500	1855155001087
15	1087	600	1855156001087
15	1087	700	1855157001087
15	1087	800	1855158001087
15	1087	900	1855159001087
15	1087	1000	18551510001087
15	1087	1200	18551512001087

17.5mm PVB Toughened Laminated Panels

Thickness mm	Height mm	Width mm	Code
17.5	1087	500	18561755001087
17.5	1087	600	18561756001087
17.5	1087	700	18561757001087
17.5	1087	800	18561758001087
17.5	1087	900	18561759001087
17.5	1087	1000	185617510001087
17.5	1087	1200	185617512001087

21.5mm PVB Toughened Laminated Panels

Thickness mm	Height mm	Width mm	Code
21.5	1087	500	18562155001087
21.5	1087	600	18562156001087
21.5	1087	700	18562157001087
21.5	1087	800	18562158001087
21.5	1087	900	18562159001087
21.5	1087	1000	185621510001087
21.5	1087	1200	185621512001087

Top Rail

Please note when using a gasket this will add a few millimetres to the overall height.

Square Slim
See page 495



Aluminium Rectangular
See page 496



Square Mini
See page 497



Round Mini
See page 498



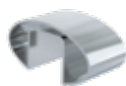
Round
See page 499



Rectangular
See page 500



Oval
See page 501



Aluminium Round
See page 502



Aluminium Square
See page 502



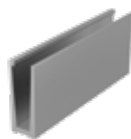
Aluminium Rectangular
See page 502



Mirror Finish Round
See page 565



Spigots & Frameless Glass



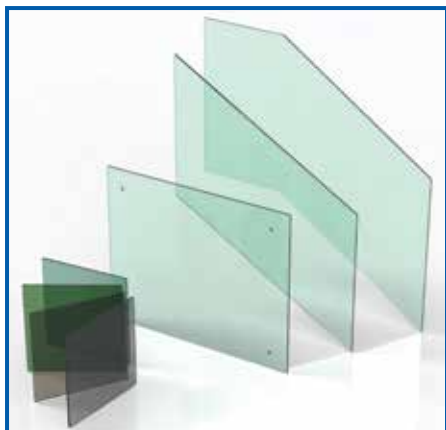
For our range of pre-assembled posts see from page 512.

For our range of glass stand-off adaptors see page 461.



Made To Order Glass

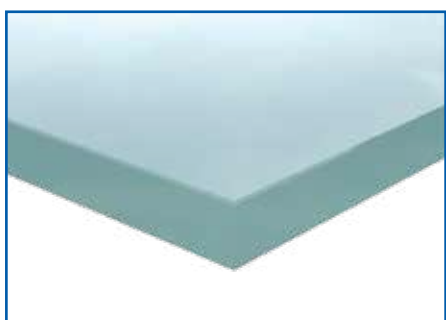
Square metre panels



Our custom sized per square metre glass panels are polished on all edges and come with docked corners for safety and aesthetic reasons. Glass can be supplied with radius corners, shaped, with cut-outs and drilled at extra cost. A range of coloured glass, etched glass and self-clean coatings also available. The current meterage rates can be checked online using the following codes and we can then prepare a detailed quote to meet your exact requirements. You will need to add 30% to the meterage price for shapes and cut-outs.

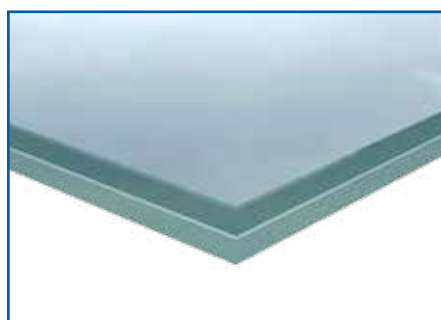
Consult with local building authorities and structural engineers to ensure correct glass specifications and fixings are used to achieve the required loadings. Where possible we have tested our systems and individual test reports are available online. For further information on the classification of building occupancy & glass loadings, visit www.fhbrundle.co.uk.

Toughened Glass



Thickness mm	Code
8	185508M
10	185510M
12	185512M
15	185515M
19	185519M
25	185525M

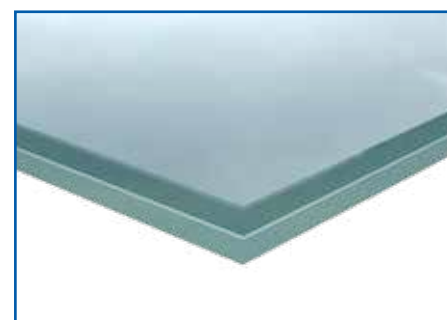
Toughened Laminated Glass



Thickness mm	Code
11.52	1856115M
13.52	1856135M
17.50	1856175M
21.50	1856215M
25.50	1856255M

SentryGlas®

Ionoplast interlayer toughened glass



Thickness mm	Code
12.89	18571289M
16.89	18571689M
20.89	18572089M
25.50	1857255M

Up to 5 times stronger and 100 times stiffer than conventional interlayers.

Templating Sheets



We can provide suitable templating material that can be cut to suit any special shapes on site. This is sent to our factory for production to match the template exactly, using modern imaging scanning technology to duplicate your design. Price and availability for bespoke panels are available on application.

Height mm	Width mm	Thickness mm	Code
2440	1220	4	185900201

Bond It Glass Cleaner

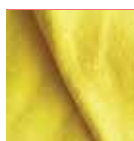
Fast acting all purpose cleaner with non smear formulation



Litre	Code
1	1859GC1

Micro Fibre Cloth

Pack of 10



Colour	Size mm	Code
Yellow	400 x 400	29MFC40

Glass Cleaning

For stainless steel cleaner see page 722.

Steel

Wrought Iron Components

Gate Hardware

Sliding Door Gear

Gate Automation

Mesh

Decking & Subframe

Flooring & Stair Treads

Handrailing

Fencing

Fixings

Wedge-Loc™ System

Slim channel



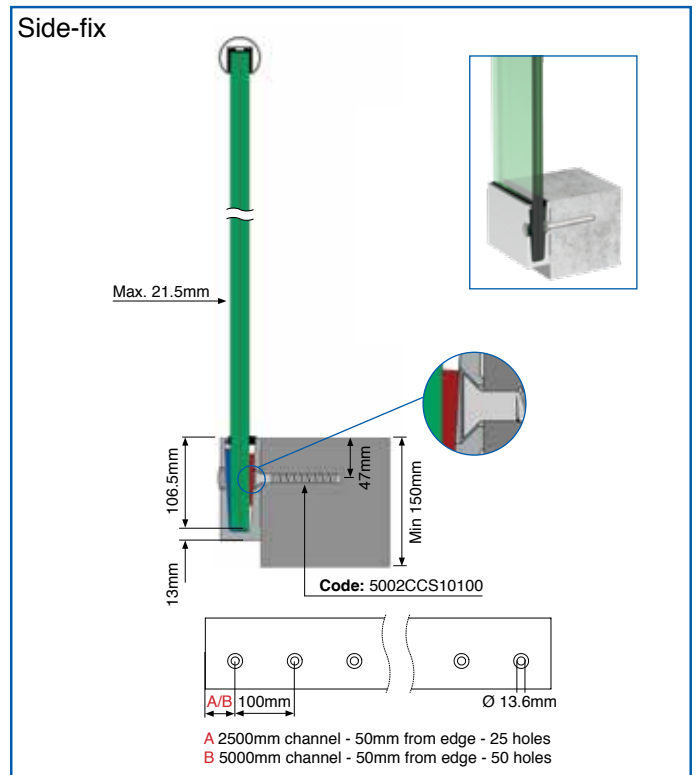
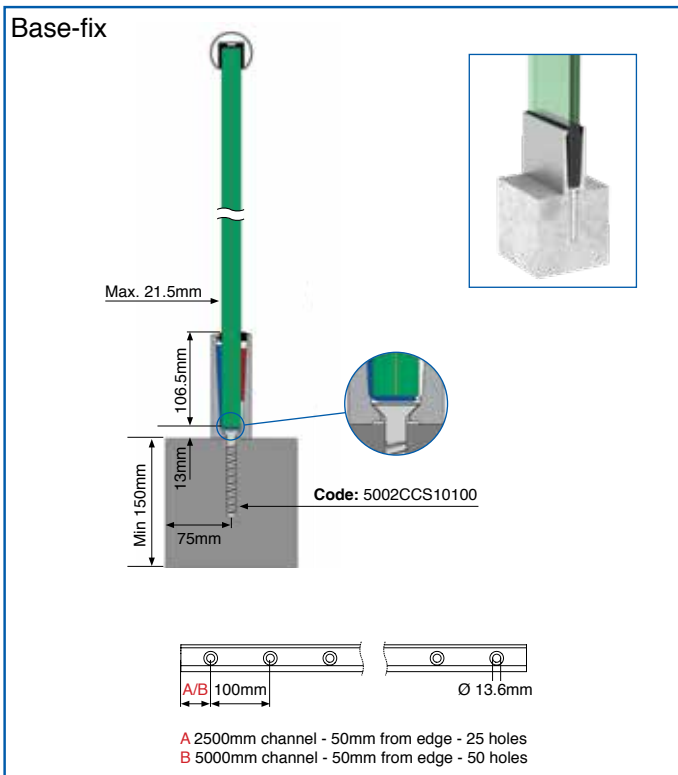
- Steel
- Wrought Iron
- Gate
- Hardware
- Sliding Door Gear
- Gate Automation
- Mesh
- Decking & Subframe
- Flooring & Stair Treads
- Handrailing
- Fencing
- Fixings



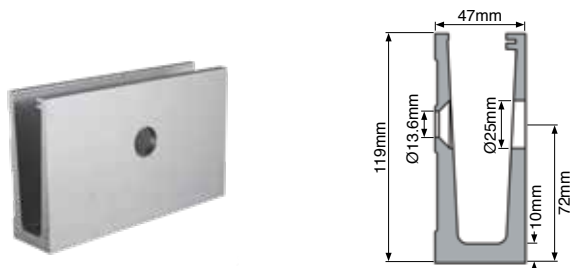
TESTED TO BS 6180

Features:

- Available in satin anodised & mill finish
- Stainless cladding not required
- Great value
- Quick to install
- Pre-drilled channel fixing holes
- Height to glass when packer fitted is 13mm
- Packer height 2mm



Side-Fix Channel



Internal 90° Corner

For use with side-fix channel



External 90° Corner

For use with side-fix channel



Glass Thickness mm	Length m	Height to Glass with Packer mm	Finish	Code
12 - 21.5	2.5	13	Satin Anodised	1805440SSA
12 - 21.5	5.0	13	Satin Anodised	1805440SSA

Channel fixing holes are Ø 13.6mm at 100mm centres to suit a Ø 12mm bolt with a Ø 22mm countersunk head.

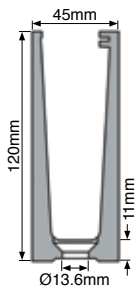
Finish	Code
Satin Anodised	1805440SIC

Inside length 155mm each side.
 Outside length 200mm each side.

Finish	Code
Satin Anodised	1805440SEC

Inside length 155mm each side.
 Outside length 200mm each side.

Base-Fix Channel



Internal 90° Corner

For use with base-fix channel



External 90° Corner

For use with base-fix channel



Glass Thickness mm	Length m	Height to Glass with Packer mm	Finish	Code
12 - 21.5	2.5	13	Satin Anodised	1805440BSA
12 - 21.5	2.5	13	Mill Finish	1805440BR
12 - 21.5	5.0	13	Satin Anodised	18054405BSA

Channel fixing holes are Ø 13.6mm at 100mm centres to suit a Ø 12mm bolt with a Ø 22mm countersunk head.

Material/Finish	Code
Satin Anodised	1805440BIC
Mill Finish	1805440BICR

Inside length 155mm each side.
Outside length 200mm each side.

Material/Finish	Code
Satin Anodised	1805440BEC
Mill Finish	1805440BECR

Inside length 155mm each side.
Outside length 200mm each side.

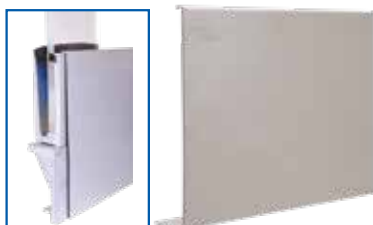
Base Plate

To side fix a base channel



Underside Cladding

For use with base plate & base fix channel



End Cap

For use with underside cladding



End Cap

For use without cladding



Material/Finish	Code
Mill Finish	1805445R

Supplied with countersunk bolt and nut.

Material/Finish	Code
Satin Anodised	1805443UC

Material/Finish	Code
Satin Anodised	1805443EC

Material/Finish	Code
Stainless Steel	1805442E
Mill Finish	1805442ER

Wedge Set



Glass Thickness mm	Code
12.00 - 12.76	180544112
13.52	180544113
15.00	180544115
16.76	180544116
17.50	180544117
19.00	180544119
20.76	180544120
21.50	180544121

Supplied with rubbers and wedges. To suit 2.5m long channel.

Wedge Insertion & Removal Tool



Code
180599001

Concrete Screw



Size mm	Pack Qty	Code
M10 x 100	1	5002CCS10100

Plug

For side-fix channel



Code
1805444PP

Plastic.

Boxed Sample



Code
18SLIM1

Our frameless balustrade systems also look great with our top rail systems see page 494.

See page 704 for a full range of fixings.

Sample cost refunded against your first order.



Design and configure your **bespoke glass balustrade** system in minutes

We supply quality, bespoke glass balustrade systems for balconies and stairs, indoor and outdoor mezzanines, gardens, patios and pool areas, and raised walkways.

1. Select the balustrade design best suited to your project and head to our configurator to start customising!
2. With complete freedom over every element, including metal types and finishing touches, our glass balustrades can be configured to your custom specifications, ready for seamless installation into any space.
3. Leave our software to crunch the numbers, and we'll email you a detailed quote pack within minutes, including free 3D models and technical drawings, a parts list and a quote - everything you need to get started!



The perfect tool for everyone.

Start designing and receive your free CAD drawings at

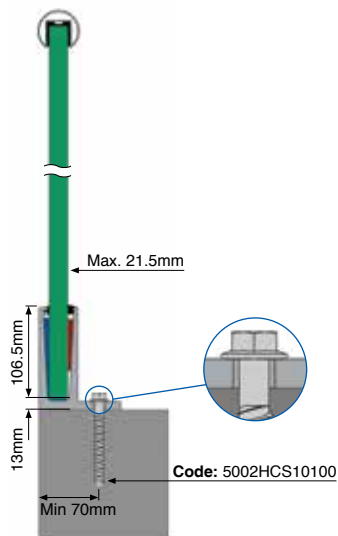
liveconfigurator.co.uk



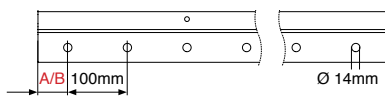
liveconfigurator[™]
BALUSTRADES

The UK's largest stockist of components for immediate delivery

Base-fix

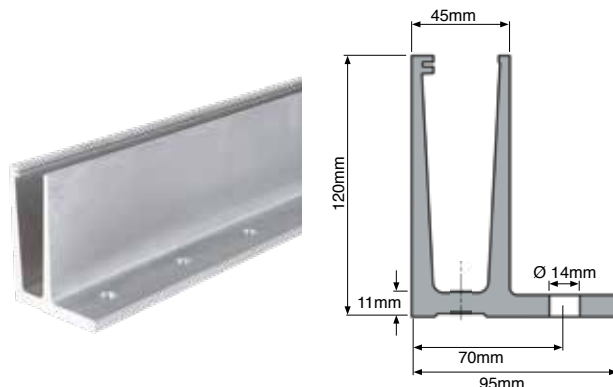


- For installations under screed or decking subframes
- F profile allows flush fitting to the edge of your substrate
- Available in satin anodised finish



A 2500mm channel - 50mm from edge - 25 holes
 B 5000mm channel - 50mm from edge - 50 holes

Base-Fix Channel



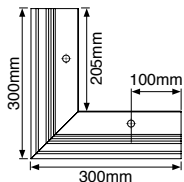
Glass Thickness mm	Length m	Height to Glass with Packer mm	Code
12 - 21.5	2.5	13	1805570BSA
12 - 21.5	5.0	13	18055705BSA

Channel fixing holes are Ø 14mm at 100mm centres to suit a Ø 12mm bolt.



Internal 90° Corner

For use with base-fix channel



Glass Thickness mm	Code
12 - 21.5	1805570BIC

Satin anodised.

End Cap



Material/Finish	Code
Satin Anodised	1805572E

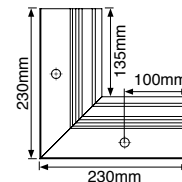
Wedge Insertion & Removal Tool



Code
180599001

External 90° Corner

For use with base-fix channel



Glass Thickness mm	Code
12 - 21.5	1805570BEC

Satin anodised.

Wedge Set



Glass Thickness mm	Code
12.00 - 12.76	180544112
13.52	180544113
15.00	180544115
16.76	180544116
17.50	180544117
19.00	180544119
20.76	180544120
21.50	180544121

Supplied with rubber gasket and wedges. To suit 2.5m long channel.

Concrete Bolt

Self-Tapping



Size mm	Pack Qty	Code
M10 x 100	1	5002HCS10100

For fixing to cracked and non-cracked concrete.

Boxed Sample



Code
18FTYPE1

Sample cost refunded against your first order.

See page 704 for a full range of fixings.

Wedge-Loc™ System



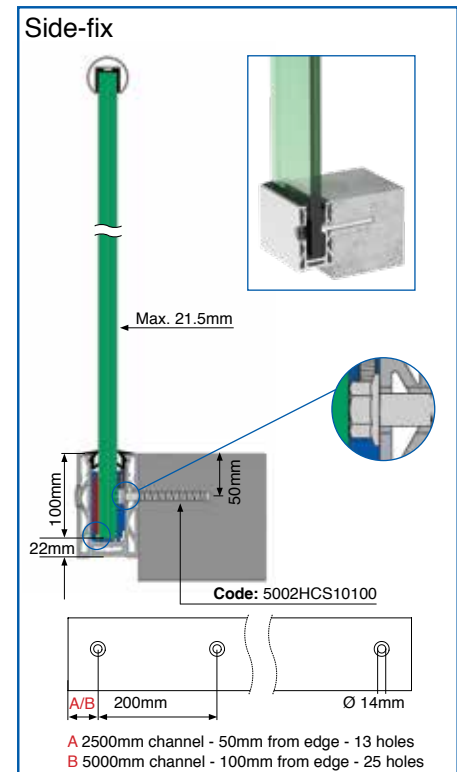
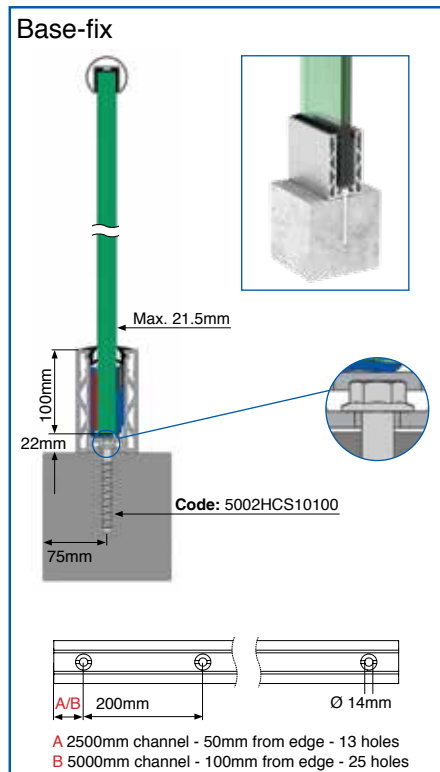
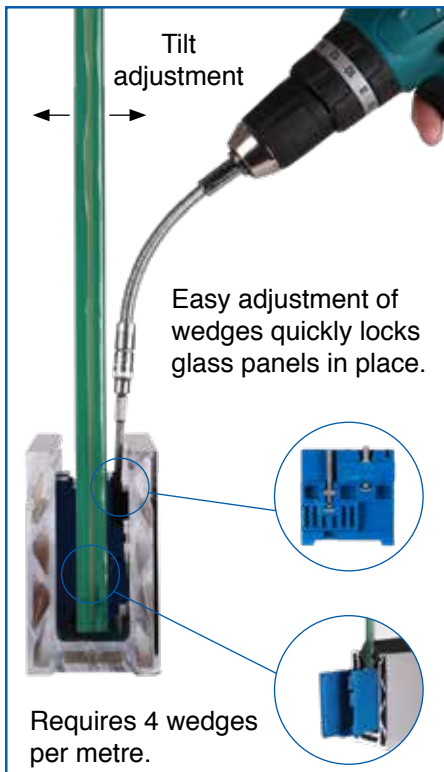
Duo

- Steel
- Wrought Iron
- Gate Hardware
- Sliding Door Gear
- Gate Automation
- Mesh
- Decking & Subframe
- Flooring & Stair Treads
- Handrailing
- Fencing
- Fixings



Features:

- Adjustable grips to allow quick alignment of glass
- A fast and cost effective frameless glass solution
- Available in satin anodised, PPC black & mill finish
- For installations up to 1.5kN in commercial applications
- +/-1° adjustment on glass

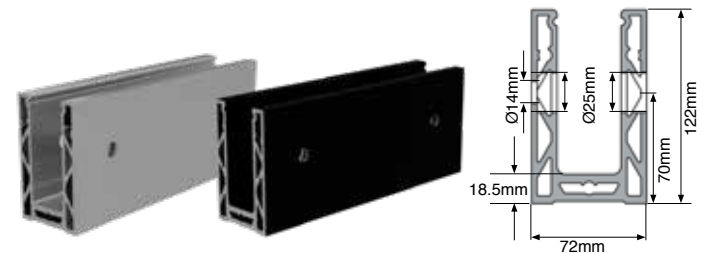


Base-Fix Channel



Glass Thickness mm	Length m	Finish	Code
15 - 21.5	2.5	PPC Black	180556025BB
15 - 21.5	2.5	Satin Anodised	180556025BSA
15 - 21.5	2.5	Mill Finish	180556025BR
15 - 21.5	5.0	PPC Black	18055605BB
15 - 21.5	5.0	Satin Anodised	18055605BSA
15 - 21.5	5.0	Mill Finish	18055605BR

Side-Fix Channel

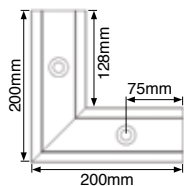


Glass Thickness mm	Length m	Finish	Code
15 - 21.5	2.5	PPC Black	180556025SB
15 - 21.5	2.5	Satin Anodised	180556025SSA
15 - 21.5	2.5	Mill Finish	180556025SR
15 - 21.5	5.0	PPC Black	18055605SB
15 - 21.5	5.0	Satin Anodised	18055605SSA
15 - 21.5	5.0	Mill Finish	18055605SR

Base and side-fix channel fixing holes are Ø 14mm at 200mm centres to suit 12mm bolts. Height to glass with packer 22mm.

Internal 90° Corner

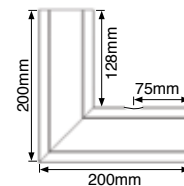
For use with base-fix channel



Finish	Code
Satin Anodised	1805560BIC
PPC Black	1805560BICB

Internal 90° Corner

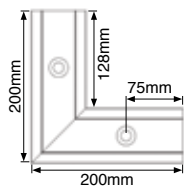
For use with side-fix channel



Finish	Code
Satin Anodised	1805560SIC
PPC Black	1805560SICB

External 90° Corner

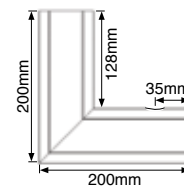
For use with base-fix channel



Finish	Code
Satin Anodised	1805560BEC
PPC Black	1805560BECB

External 90° Corner

For use with base-fix channel



Finish	Code
Satin Anodised	1805560SEC
PPC Black	1805560SECB

Cladding

For side-fix channel



Finish	Code
Satin Anodised	1805565S
PPC Black	1805565SB

2.5m length.

End Cap

For base & side-fix channel



Finish	Code
Satin Anodised	1805562
PPC Black	1805562B

Plug

For side-fix channel

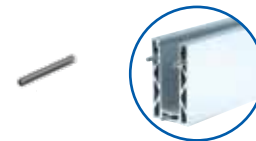


Finish	Code
Satin Anodised	1805564
PPC Black	1805564B

13 plugs per 2.5m, 26 plugs per 5m channel and 2 plugs per corner.

Connecting Pin

For base & side-fix channel



Code
1805569

Please order 2 pins per connection.

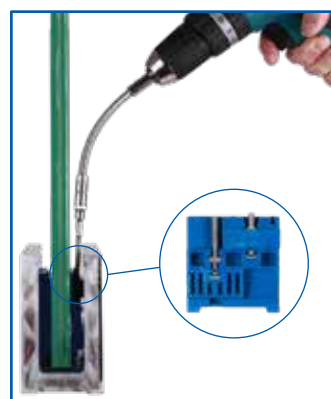
Adjustable Wedge Pack

For 2.5m length



Glass Thickness mm	Code
15.00	180556115
16.76 - 17.50	180556117
19.00	180556119
20.76 - 21.50	180556120

Includes rubber & wedges. Requires flexible hex bit, code: **1805566**.



Flexible Hex Bit

For adjustable wedges



Code
1805566

Attaches to a standard powerdriver for ease of tightening wedges.

Boxed Sample



Code
18DUO1

Concrete Bolt

Self-tapping



Size mm	Pack Qty	Code
M10 x 100	1	5002HCS10100

For fixing to cracked and non-cracked concrete.

Loctite 638 Adhesive

For use with tube fittings



ml	Code
50	1899007638

See page 704 for a full range of fixings.

Sample cost refunded against your first order.

For our Pro-Railing® Protect Range see page 572.

Steel

Wrought Iron Components

Gate Hardware

Sliding Door Gear

Gate Automation

Mesh

Decking & Subframe

Flooring & Stair Treads

Handrailing

Fencing

Fixings

Tilt-Loc™ Channel

TL86 Series



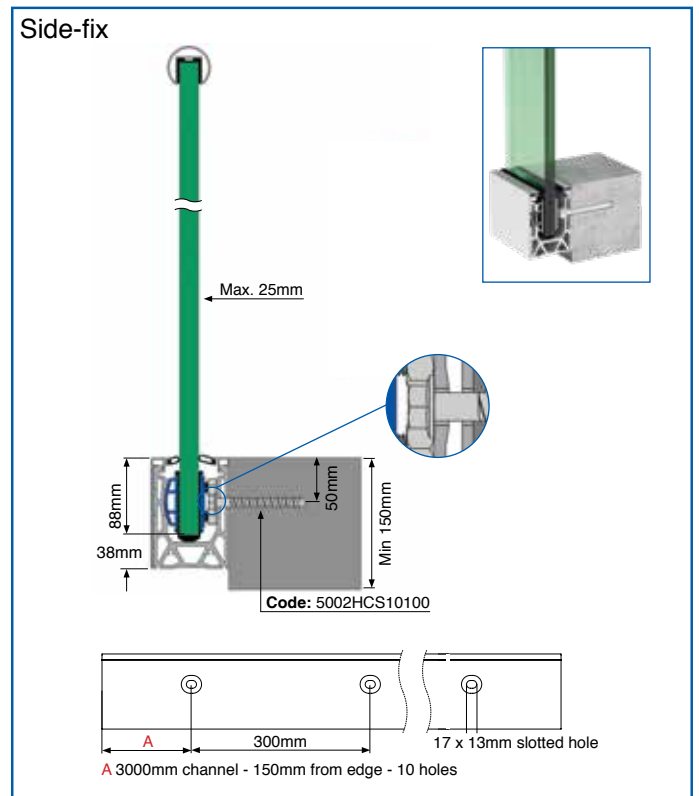
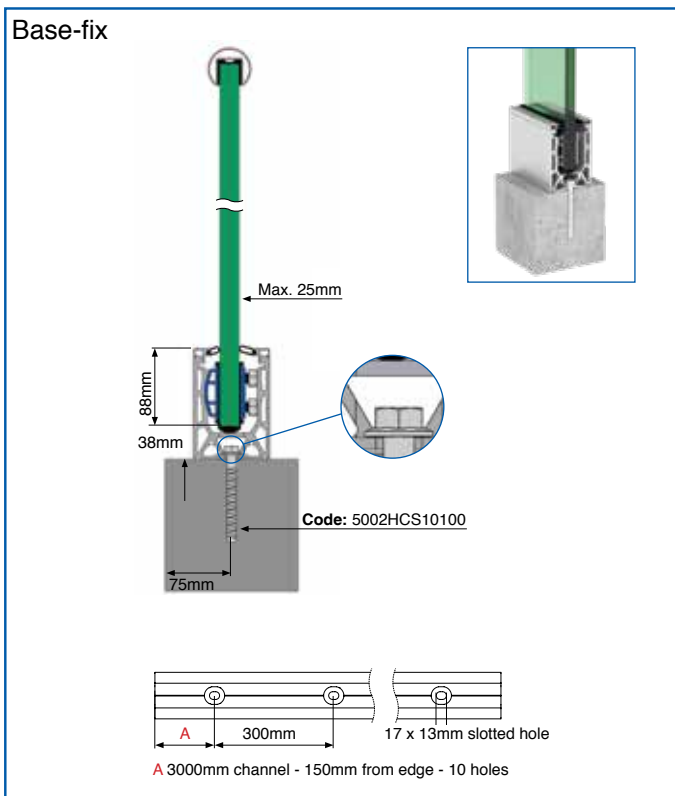
- Steel
- Wrought Iron
- Gate Hardware
- Sliding Door Gear
- Gate Automation
- Mesh
- Decking & Subframe
- Flooring & Stair Treads
- Handrailing
- Fencing
- Fixings



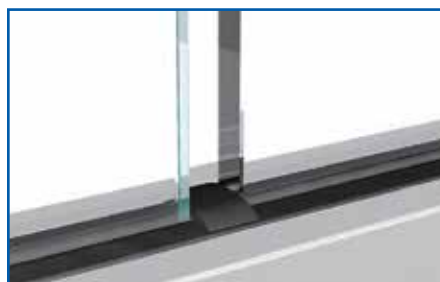
Our top quality aluminium Tilt-Loc™ System has a unique patented rotating pressure plate system which allows for fast easy installation of frameless glass.

FEATURES:

- Satin anodised (Grade 6063 T6) aluminium
- Up to 30mm tilt adjustment on glass
- Adjustment from inside the balcony
- All holes are pre-drilled and fixings can be concealed
- Suitable for glass from 12 - 25mm thickness
- Glass easily installed and aligned with a spanner



Up to 30mm tilt adjustment back and forward from inside the balcony.



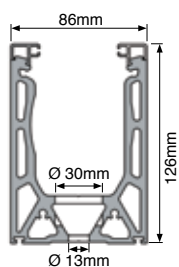
EDPM dividing gasket to expel water and dirt.



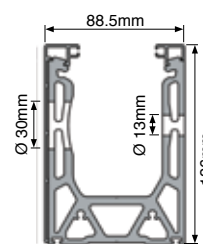
Alignment pins x 2 included in channel kit.

A full range of glass is available from page 470.

Base-Fix



Side-Fix



Channel Kits Include:

- 1 x 3m aluminium channel
- 2 x top cladding & rubber gaskets for base fix kit only
- 1 x top, 1 x side cladding & rubber gaskets for side fix kit only
- 2 x alignment pins
- Adjustable grips to suit a 3m channel for relevant glass thickness

Satin Anodised Base-Fix Channel Kit

Fixing Type	Glass Thickness mm	Clamps Supplied Per Kit	Clamps Needed Per m	Height to Glass with Packer mm	3m Channel Code
Base	12.0	6	2	38	1805540B12
	15.0	9	3	38	1805540B15
	17.5	6	2	38	1805540B175
	19.0	9	3	38	1805540B19
	21.5	9	3	38	1805540B215
	25.0	6	2	38	1805540B25



Satin Anodised Side-Fix Channel Kit

Fixing Type	Glass Thickness mm	Clamps Supplied Per Kit	Clamps Needed Per m	Height to Glass with Packer mm	3m Channel Code
Side	12.0	6	2	38	1805540S12
	15.0	9	3	38	1805540S15
	17.5	6	2	38	1805540S175
	19.0	9	3	38	1805540S19
	21.5	9	3	38	1805540S215
	25.0	6	2	38	1805540S25



Internal 90° Corner

For base & side-fix channel



Description	Code
Base-Fix	1805540BIC
Side-Fix	1805540SIC

External 90° Corner

For base & side-fix channel



Description	Code
Base-Fix	1805540BEC
Side-Fix	1805540SEC

End Cap

For base & side-fix channel



Description	Code
Base-Fix	1805547B
Side-Fix	1805547S

Inside length 64mm each side. Outside length 150mm each side.

Concrete Bolt

Self-tapping



Size mm	Pack Qty	Code
M10 x 100	1	5002HCS10100

For fixing to cracked and non-cracked concrete.

Racheting Spanner

For use with clamps



Quick lock function.

Size	Code
M12	1805546

Boxed Sample



Code
18TILT1

Sample cost refunded against your first order.

Posi-Glaze System



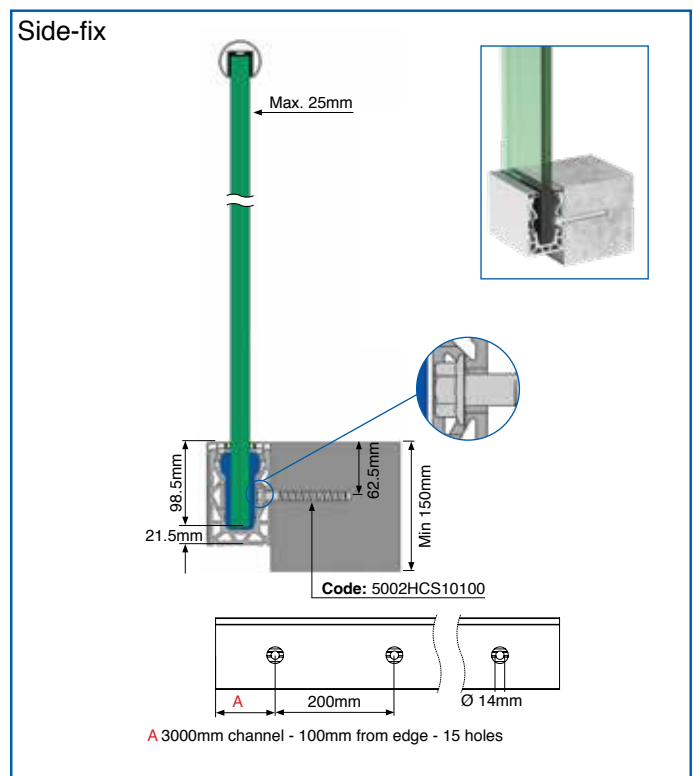
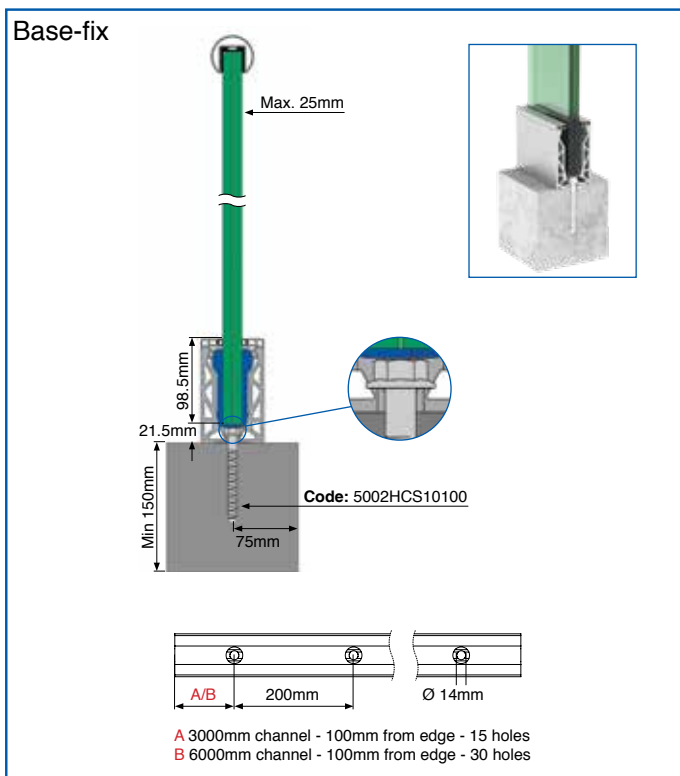
Steel
Wrought Iron Components
Gate Hardware
Sliding Door Gear
Gate Automation
Mesh
Decking & Subframe
Flooring & Stair Treads
Handrailing
Fencing
Fixings



Posi-Glaze is our innovative aluminium channel system that holds glass panels in place for use on balustrades and partitions. Posi-Glaze allows the installer to easily adjust the glass panels once in place. Simply adjust the bolt screw to align the glass. Fast and simple saving both time and money!

Features:

- Fast install and fully adjustable
- Light weight and extremely strong
- Suitable for domestic and commercial applications
- Available in silver anodised brush or black finish



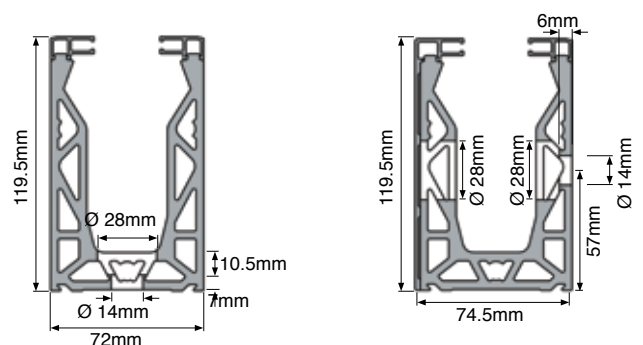
Anodised Finish

Black Finish



Base-Fix

Side-Fix



Channel Kits Include:

- 1 x aluminium channel
- 2 x top cladding for base-fix kit only
- 1 x top & 1 x side cladding for side-fix kit only
- 2 x rubber gasket seals
- 4 x clamps per metre for relevant glass thickness
- Available in silver anodised brush or black finish

Satin Anodised Base-Fix Channel Kit

Fixing Type	Glass Thickness mm	Height to Glass with Packer mm	3m Length Code	6m Length Code
Base	12.0	24.5	1805470BM12	18054706BM12
	13.5	22.5	1805470BM135	18054706BM135
	15.0	23.0	1805470BM15	18054706BM15
	17.5	22.5	1805470BM175	18054706BM175
	19.0	21.5	1805470BM19	18054706BM19
	21.5	22.5	1805470BM215	18054706BM215



Satin Anodised Side-Fix Channel Kit

Fixing Type	Glass Thickness mm	Length m	Height to Glass with Packer mm	Code
Side	12.0	3	24.5	1805470SM12
	13.5	3	22.5	1805470SM135
	15.0	3	23.0	1805470SM15
	17.5	3	22.5	1805470SM175
	19.0	3	21.5	1805470SM19
	21.5	3	22.5	1805470SM215



Black Base-Fix Channel Kit

Fixing Type	Glass Thickness mm	Length m	Height to Glass with Packer mm	Code
Base	12.0	3	24.5	1805470BM12B
	13.5	3	22.5	1805470BM135B
	15.0	3	23.0	1805470BM15B
	17.5	3	22.5	1805470BM175B
	19.0	3	21.5	1805470BM19B
	21.5	3	22.5	1805470BM215B



Additional Components

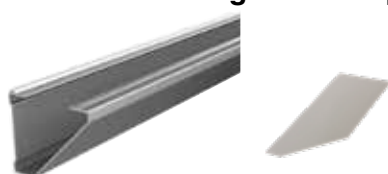
90° Corner



Anodised Code	Black Code
1805470C	1805470CB

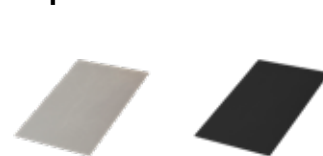
Outside length 135mm. For use with base-fix channel.

Underside Cladding & End Cap



Description	Length m	Code
Underside cladding	3	1805475U
End cap - left side	-	1805478L
End cap - right side	-	1805478R

End Cap



Finish	Description	Code
Anodised	Without cladding	1805477
Anodised	One side cladding	1805477S
Anodised	Both sides cladding	1805477B
Black	Without cladding	1805477BB*

*Pre-drilled.

Sample cost refunded against your first order.

Sample



Code
18POSI1

Concrete Bolt

Self-tapping



Size mm	Pack Qty	Code
M10 x 100	1	5002HCS10100

For fixing to cracked and non-cracked concrete.

Clamp Spanner



To Suit	Code
M10	1805476

Joining Dowels



Code
1805479

Hycote

Touch up paint



ml	Code
125	180547PB125

Steel

Wrought Iron Components

Gate Hardware

Sliding Door Gear

Gate Automation

Mesh

Decking & Subframe

Flooring & Stair Treads

Handrailing

Fencing

Fixings

Posi-Glaze R-Lock System

0.74kN



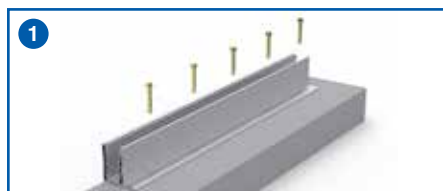
TESTED TO BS 6180

Designed to provide the simplest possible adjustment, this system enables each glass panel to be perfectly aligned during installation. The perfect choice for residential installations where access to one side of the balustrade during installation is challenging. Using a wedge and resin-pod system, R-Lock is as easy to install as it is to uninstall and its F-profile allows it to be installed flush to the edge of your concrete or steel substrate.

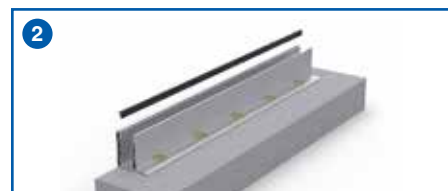
Features:

- Installation from one side
- F-profile for flush edge fitting
- Easily adjust the glass once in place
- Lightweight & strong
- Use with 21.5mm PVB laminate Glass
- Fully anodised in stainless steel effect

Installation:



Fit channel to steel or concrete substrate using an appropriate screw or bolt.



Clip external rubber gasket to the outside edge of the channel. It is essential you carry out this step at this stage.



Assemble the resin pods and attach to the underside of the glass, making sure the funnel side is on the inside.



Make up the wedge holders and place them between the pods on the outer edge of the glass panel.



Slide wedge against the wedge holders, the serrated edges need to grip each other. Knock these in so they are flush with the top of the wedge holder.



Adjust glass by hand so it sits in the desired position. From vertical there is 10mm movement outwards and 23mm movement inwards at 1100mm.

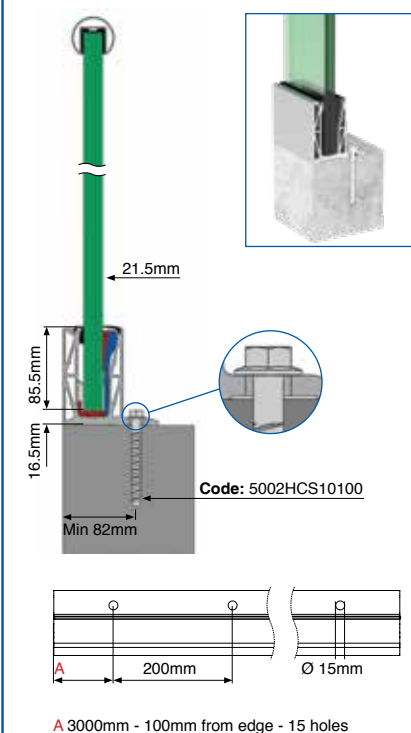


Use a sealant gun to pump the R-Lock resin into the pods through the funnels until the resin starts seeping from the pods inside the channel. 20 minutes gel time at 5°C, shorter in warm conditions.



Attach the internal rubber gasket to the inside edge of the channel.

Base-fix

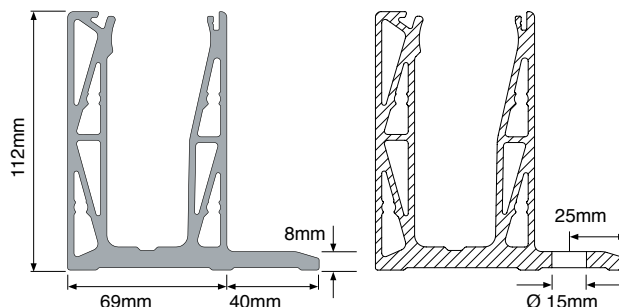


You can order online
24 hours a day, 7 days
a week.

Visit www.fhbrundle.co.uk

Base-Fix Channel Kit

Complete with channel, grips & seals



Glass Thickness mm	Length m	Height to Glass with Packer mm	Code
21.5	3	16.5	1805550BM215

Channel fixing holes are Ø 15mm at 200mm centres to suit Ø 12mm bolts. Holes start 100mm in from edge of channel.



Channel Kit Includes:

- 1 x 3m aluminium channel
- 2 x wedge holders
- 1 x external cladding
- 1 x internal cladding
- 4 x resin pod kits
- 1 x R-Lock resin

90° Corner

For use with base-fix channel



Size mm	Code
200 x 200	1805550C

Stainless steel effect.

Joining Dowels



Code
1805559

Sold in pairs.

End Cap



Thickness mm	Code
0.9	1805557

Brushed finish.

Wedge Breaker

De-glazing tool



Code
180555WBT

Fixings & Accessories

Concrete Bolt

Self-tapping



Size mm	Pack Qty	Code
M12 x 100	1	5002HCS10100

For fixing to cracked and non-cracked concrete.

Component	Description	Code
Resin Pod Kit	Complete set for 3m channel. For use with 21.5mm glass	1805551215
External Gasket	Fits the outer side of the channel. Rubber	1805555AB
Internal Gasket	Fits the inner side of the channel. Rubber	1805555IB

21.5mm PVB Toughened Laminated Panels



Thickness mm	Height mm	Width mm	Code
21.5	1087	500	18562155001087
21.5	1087	600	18562156001087
21.5	1087	700	18562157001087
21.5	1087	800	18562158001087
21.5	1087	900	18562159001087
21.5	1087	1000	185621510001087
21.5	1087	1200	185621512001087

It's a lifestyle choice...



PRO-RAILING
The Stainless Steel Handrail Component System

rinato™ boards
without compromise



SYNERGISED
INNOVATIVE DECKING SOLUTIONS

**TO SEE THE FULL RANGE OF
COMPONENTS USED TO
CREATE THIS DESIGN SCAN HERE**





OnLevel's unique frameless glass balustrade systems are slimline, low-maintenance, cost effective and elegant. They have a pivot point of the glass on the same level as the rubber seals, therefore the rubber seals are never directly subjected to an increased or decreased load. As a result dirt affects the balustrade much less.

Features:

- Slender, attractive design & low maintenance
- Wider drilling distances means reduced costs
- Increased stability
- Drainage holes
- Available in aluminium, anodised aluminium & mill finish
- Suitable for use with bolt anchors
- Flex-Fit set adjusts the position of each glass panel up to 34mm in relation to the vertical axis
- Connecting pins allow high precision fit
- Suitable for all surface types
- For use with 12 - 21.50mm glass thicknesses

Currently In Our OnLevel Range We Stock:

- **TYPE 6020** - Wider mounting distances, enables the use of the profile also on an anchor bolt without countersunk head. Therefore, mounting the product is not only faster & more cost efficient, but also statics have improved considerably.
- **TYPE 6021** - This is the side fix system of Type 6020.
- **TYPE 3010** - Very well suited for balconies & terraces. It enables an especially small edge distance & therefore gains valuable additional space on the deck itself. Moreover, this system is ideally suited for new installations under screed.
- **TYPE 3011** - Elongated fixing holes allows easy height adjustment. The profile is suited for both interior and exterior applications.

Drainage Holes

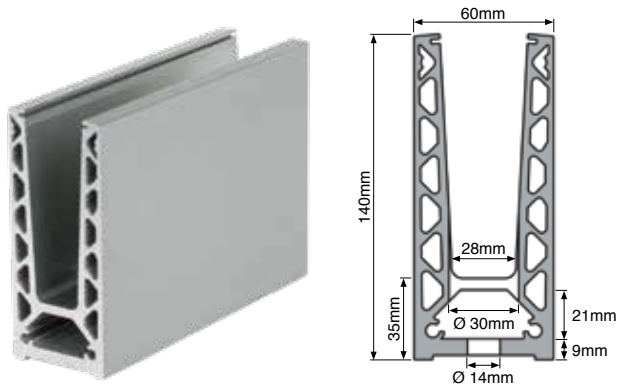
A combination of water and cold can be detrimental to glass balustrades. To avoid problems, OnLevel base and side fix channels include drainage holes at 1m intervals.



Installation



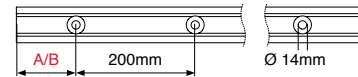
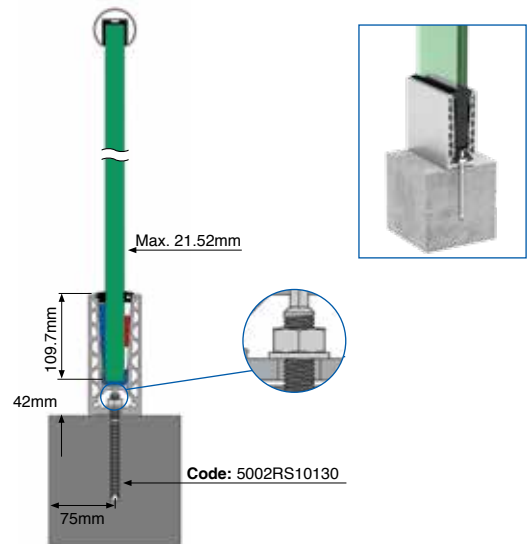
Base-Fix Channel



Finish	Length m	Height to Glass with Packer mm	Code
Mill Finish	5.0	42	1805490B5
Anodised	2.5	42	1805490BA25
Anodised	5.0	42	1805490BA5

Channel fixing holes are Ø 14mm at 200mm centres to suit Ø 12mm bolts.

Base-fix



A 2500mm channel - 50mm from edge - 13 holes
B 5000mm channel - 100mm from edge - 25 holes

Left/Right End Cap



Finish	Code
Mill Finish	1805497B
Anodised	1805497BA

Internal/External 90° Corner

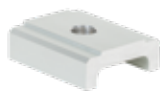


Finish	Code
Mill Finish	1805490CB
Anodised	1805490CBA

Inside length 140mm each side.
Outside length 200mm each side.

Drainage Spacer

For use where there is no drainage on a balcony



Finish	Code
Mill Finish	1805494

Fixing hole Ø 14mm. 13 per pack.

Concrete Bolt

Self-tapping



Drill Size mm	Ø mm	Length mm	Code
10	12.5	100	5002HCS10100

Pack quantity 1. For fixing to cracked and non-cracked concrete.

Joining Dowels



Ø mm	Length mm	Code
6	40	1805499

8 per pack.

R-Stud

With flat head



Thread Ø mm	Anchor Length mm	Code
M10	130	5002RS10130

Pack quantity 1.

For Flex-Fit set & tools see page 490.



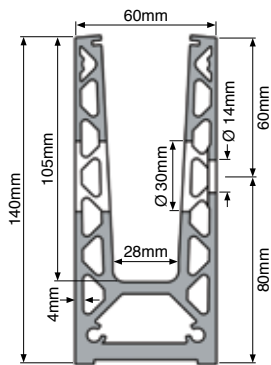
Sample



Sample cost refunded against your first order.

Code
18ONLE1

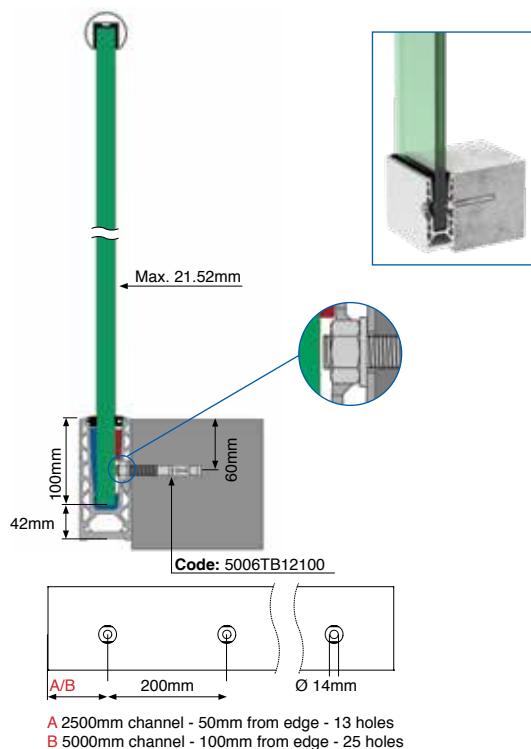
Side-Fix Channel



Finish	Length m	Height to Glass with Packer mm	Code
Mill Finish	5.0	42	1805490S5
Anodised	2.5	42	1805490SA25
Anodised	5.0	42	1805490SA5

Channel fixing holes are Ø 14mm at 200mm centres to suit Ø 12mm bolts.

Side-fix



End Cap



Finish	Side	Code
Mill Finish	Left	1805497LS
Anodised	Left	1805497LSA
Mill Finish	Right	1805497RS
Anodised	Right	1805497RSA

End Cap

For use with side cladding



Finish	Side	Code
Mill Finish	Left	1805497LSC
Anodised	Left	1805497LSAC
Mill Finish	Right	1805497RSC
Anodised	Right	1805497RSAC

Internal 90° Corner



Finish	Code
Mill Finish	1805490ICS
Anodised	1805490ICSA

Inside length 140mm each side.
Outside length 200mm each side.

External 90° Corner



Finish	Code
Mill Finish	1805490ECS
Anodised	1805490ECSA

Inside length 140mm each side.
Outside length 200mm each side.

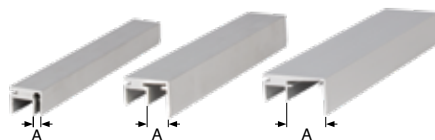
Side Cladding

With mounting strip



Finish	Length m	Code
Anodised	2.5	1805495SA25
Anodised	5.0	1805495SA5

Top Cladding



Finish	(A) mm	Code
Anodised	3	1805495TA503
Anodised	10	1805495TA510
Anodised	20	1805495TA520

5m length.

Joining Dowels



Ø mm	Length mm	Code
6	40	1805499

8 per pack.

Plug



Ø mm	Colour	Code
30	Grey	1805494P

10 per pack. 17 required per 2.5m.



Through Bolt



Size mm	Pack Qty	Code
M12 x 100	1	5006TB12100

For fixing to cracked and non-cracked concrete.

Steel

Wrought Iron Components

Gate Hardware

Sliding Door Gear

Gate Automation

Mesh

Decking & Subframe

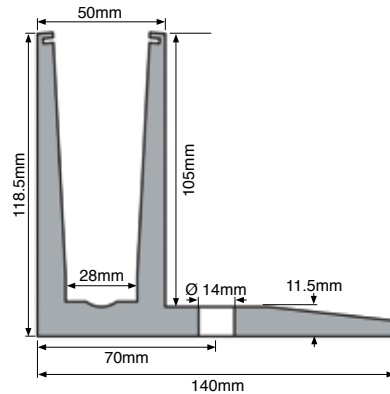
Flooring & Stair Treads

Handrailing

Fencing

Fixings

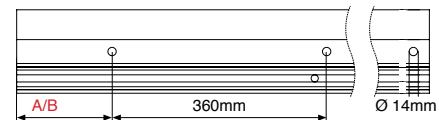
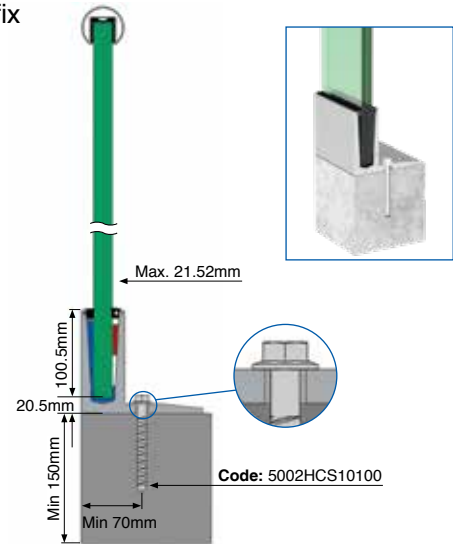
Base-Fix Channel



Finish	Length m	Height to Glass with Packer mm	Code
Mill Finish	5.0	20.5	1805500B5
Anodised	2.5	20.5	1805500BA25
Anodised	5.0	20.5	1805500BA5

Channel fixing holes are Ø 14mm at 360mm centres to suit Ø 12mm bolts.

Base-fix



A 2500mm channel - 170mm from edge - 7 holes
B 5000mm channel - 160mm from edge - 14 holes

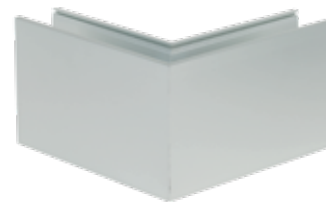
Internal 90° Corner



Finish	Code
Mill Finish	1805500iCB
Anodised	1805500iCBA

Inside length 60mm each side. Outside length 200mm each side.

External 90° Corner



Finish	Code
Mill Finish	1805500ECB
Anodised	1805500ECBA

Inside length 60mm each side. Outside length 200mm each side.

End Cap



Finish	Side	Code
Mill Finish	Left	1805507LS
Anodised	Left	1805507LSA
Mill Finish	Right	1805507RS
Anodised	Right	1805507RSA

End Cap

For use with cladding



Finish	Side	Code
Mill Finish	Right	1805507RSC

Concrete Bolt

Self-tapping



Size mm	Pack Qty	Code
M12 x 100	1	5002HCS12100

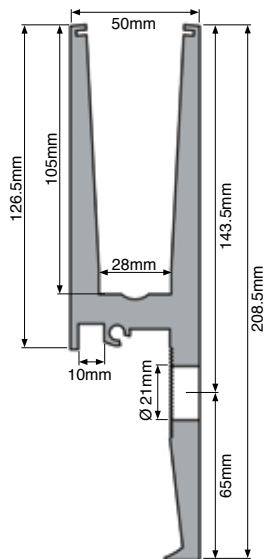
For fixing to cracked and non-cracked concrete.



For our glass panels see page 514.

For Flex-Fit set & tools see page 490.

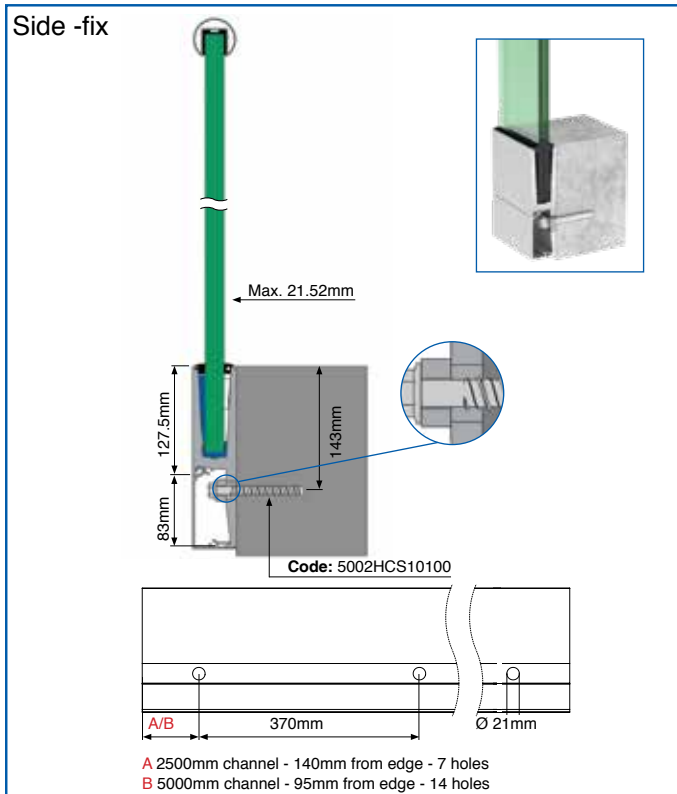
Side-Fix Channel



Finish	Length m	Height to Glass with Packer mm	Code
Mill Finish	5.0	110	1805520B5
Anodised	2.5	110	1805520BA25
Anodised	5.0	110	1805520BA5

Channel fixing holes are Ø 21mm at 370mm centres to suit Ø 12mm bolts.

Side -fix



A 2500mm channel - 140mm from edge - 7 holes
B 5000mm channel - 95mm from edge - 14 holes

End Cap



Finish	Side	Code
Anodised	Left	1805527LSA

End Cap

For use with cladding



Finish	Side	Code
Mill Finish	Left	1805527LSC
Anodised	Left	1805527LSAC
Mill Finish	Right	1805527RSC
Anodised	Right	1805527RSAC

Internal 90° Corner



Finish	Code
Mill Finish	1805520iCB
Anodised	1805520iCBA

Inside length 150mm each side.
Outside length 200mm each side.

External 90° Corner



Finish	Code
Mill Finish	1805520ECB
Anodised	1805520ECBA

Inside length 150mm each side.
Outside length 200mm each side.

Side Cladding



Finish	Length m	Code
Anodised	5.0	1805520SA5

Not available in 2.5m length.

Spacer Plate

For drainage when used outdoors



Finish	Code
Anodised	1805524

To create space between the base shoe and the facade of the balcony.

Mounting Block

With teeth for force-locked connection



Finish	Code
Anodised	1805525

Requires 7 blocks per 2.5m length. Fixing hole Ø 11mm. 8 per pack.

Joining Dowels



Ø mm	Length mm	Code
6	40	1805499

8 per pack.

Concrete Bolt

Self-tapping



Size mm	Pack Qty	Code
M12 x 100	1	5002HCS12100

For fixing to cracked and non-cracked concrete.

See from page 704 for a full range of fixings.

OnLevel Systems

Type 6020, 6021, 3010 & 3011



- Steel
- Wrought Iron Components
- Gate Hardware
- Sliding Door Gear
- Gate Automation
- Mesh
- Decking & Subframe
- Flooring & Stair Treads
- Handrailing
- Fencing
- Fixings



Flex-Fit Set

All of the OnLevel systems are easily installed using the Flex-Fit set. It can adjust any glass panel individually while positioning it up to 34mm in relation to the vertical axis. It can be handled exclusively from the balcony side, this applies to the entire installation, making it much safer and saving unnecessary costs for scaffolding or lifting platforms. With one single hand movement Flex-Fit set can adjust the glass with precision.

Neutral Position

The slide is in neutral position and so is the glass.

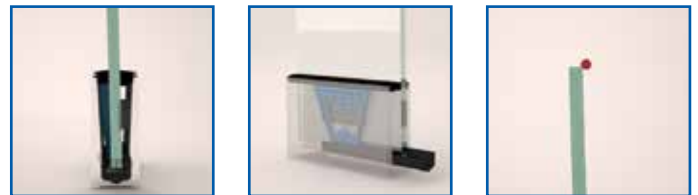


Flex-Fit Set



Glass Thickness mm	For 2.5m Length Code	For 5.0m Length Code
12.00	18054911225	1805491125
12.76	1805491127625	180549112765
13.52	1805491135225	180549113525
15.00	18054911525	1805491155
16.76	1805491167625	180549116765
17.50	1805491175225	180549117525
19.00	18054911925	1805491195
20.76	1805491207625	180549120765
21.50	1805491215225	180549121525

Adjustment 1 - Tilt the glass towards the balcony side, to do so move the slide to the right.



Adjustment 2 - Tilt the glass towards the void side, to do so move the slide to the left.



Flex-Fit Tool



Code
180599FFT

Combi Tool



Code
180599CT



For our range of glass panels see page 470.

Create a stunning finish with glass and top rail

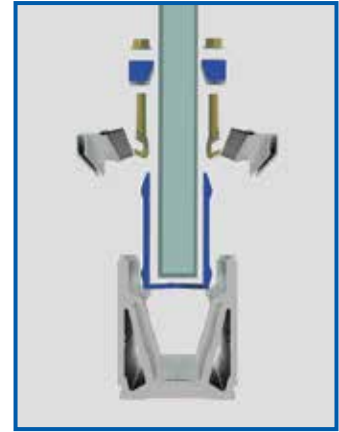


Mega-Grip System

3kN



- Steel
- Wrought Iron Components
- Gate Hardware
- Sliding Door Gear
- Gate Automation
- Mesh
- Decking & Subframe
- Flooring & Stair Treads
- Handrailing
- Fencing
- Fixings



This heavy-duty and fully adjustable 3kN frameless balustrade system provides public safety and durability in large commercial installations. Mega-Grip has been produced specifically for public spaces with high volumes of people traffic.

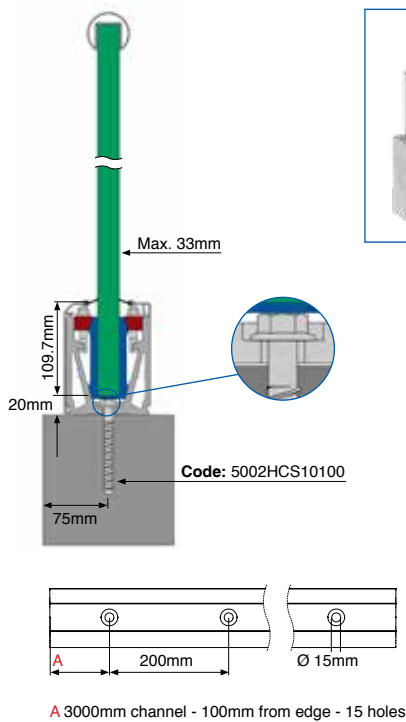
Our latest patented design uses a 13mm hexagonal bolt, making it incredibly easy to adjust and fix the glass with a 1/4" torque wrench and extension arm. This also means it is possible to install the glass from one side.

Mega-Grip works with many glass thicknesses by simply changing the internal clamps.

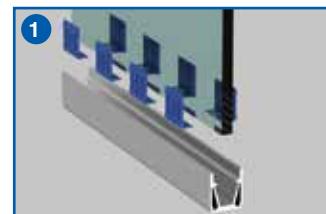
Features:

- **3kN Loadings**
25 - 33mm glass types all achieve less than 25mm deflection
- **No Specialist Tools**
Standard 13mm socket to adjust & tighten the clamp
- **Durable**
Aluminium anodised in stainless steel effect
- **Simple To Install**
Clamps simply attach to the glass & can be placed in the channel
- **Safety Standards**
Tested to BS 6180

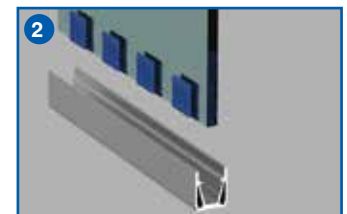
Base-fix



Installation



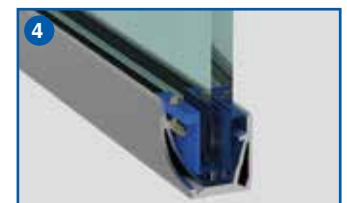
1 Squeeze the glass clamps onto the glass (4 per metre).



2 Seat the glass within the channel.



3 Insert the clamp bar through the anchor and loosely tighten the bolt.



4 Slide the clamp bars down and through the channel so they sit in position on the glass clamp.



5 Adjust the glass into desired position and tighten the nuts on each side of the system to 15Nm.



6 Finally, insert the gasket into the top recess of the cladding and firmly press on to the channel.

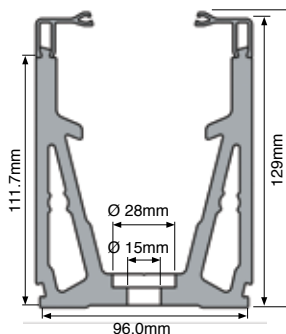
Channel Kit

Complete with channel, clamps & seals



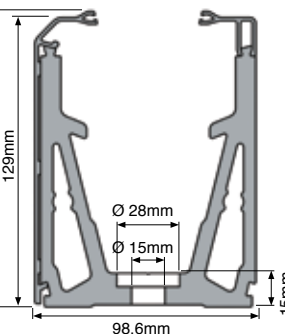
Base-Fix

With top cladding



Base-Fix

With side cladding



Fixing Type	Glass Thickness mm	Length m	Height to Glass with Packer mm	Top Cladding Kit Code	Side Cladding Kit Code
Base	25.0	3	22	1805480BMA25	1805480BM25
	25.5	3	23	1805480BMA255	1805480BM255
	31.5	3	20	1805480BMA315	1805480BM315
	33.0	3	20	1805480BMA33	1805480BM33

Channel fixing holes are Ø 13mm at 200mm centres to suit Ø 12mm bolts.

Top Cladding Channel Kit Includes:

- 1 x 3m anodised aluminium channel
- 2 x top cladding
- 2 x rubber gasket seals
- 12 x clamps (4 per metre), for relevant glass thickness
- 12 x clamp bars

Side Cladding Channel Kit Includes:

- 1 x 3m mill finish aluminium channel
- 2 x side cladding
- 2 x rubber gasket seals
- 12 x clamps (4 per metre), for relevant glass thickness
- 12 x clamp bars



Additional Components

End Cap



Description	Code
With top cladding	1805487
With side cladding	1805487B

90° Corner



Code
1805480C

Joining Dowels



Code
1805479

Sold in pairs.

Concrete Bolt

Self-tapping



Size mm	Pack Qty	Code
M10 x 100	1	5002HCS10100

For fixing to cracked and non-cracked concrete.

Steel

Wrought Iron Components

Gate Hardware

Sliding Door Gear

Gate Automation

Mesh

Decking & Subframe

Flooring & Stair Treads

Handrailing

Fencing

Fixings

Top Rail Systems




- Systems to suit 8 - 21.50mm glass
- Anodised, PPC black or stainless steel Grade 304 & 316
- Reduced visual impact


- No welding required
- Satin polish or mirror finish
- Choice of 11 profiles

- Steel
- Wrought Iron Components
- Gate Hardware
- Sliding Door Gear
- Gate Automation
- Mesh
- Decking & Subframe
- Flooring & Stair Treads
- Handrailing
- Fencing
- Fixings


Square Slim
See page 495




Aluminium Rectangular
See page 496




Square Mini
See page 497




Round Mini
See page 498




Round
See page 499




Rectangular
See page 500




Oval
See page 501




Aluminium Round
See page 502



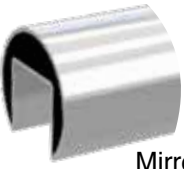
Aluminium Square
See page 502



Aluminium Rectangle
See page 502



Mirror Finish Round
See page 565

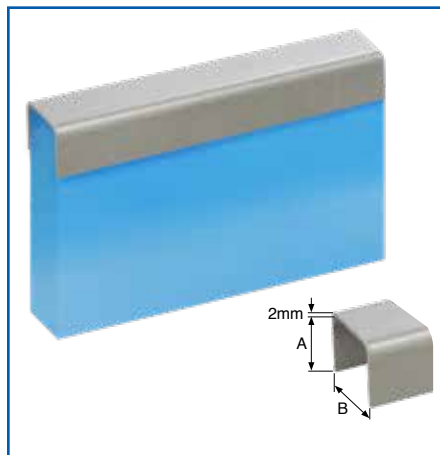




Anodised Aluminium



To Suit Glass mm	Length m	(A) mm	(B) mm	Code
12.00	2.5	13	12.5	150501
15.00	2.5	13	15.5	150502
16.76 - 17.50	2.5	18	18.0	150503
19.00	2.5	18	19.5	150504
21.50	2.5	18	22.0	150505



Stainless Steel

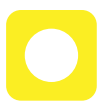


To Suit Glass mm	Length m	(A) mm	(B) mm	Code
12.00	2.5	13	12.5	150601
15.00	2.5	13	15.5	150602
16.76 - 17.50	2.5	18	18.0	150603
19.00	2.5	18	19.5	150604
21.50	2.5	18	22.0	150605

FREE* DELIVERY on orders over £150!



Wrought Iron Components



Perforated Metal



Expanded Metal



Welded Wire Mesh



Woven Wire Mesh



Gate Hardware



Gate Automation



Flooring & Stair Treads



Decking & Subframe



Cantilever Gate Components



Steel Section



Sliding Door Gear



Handrailing & Components



Glass



Fixings & Tools



Tube Clamps



Crash Barrier



Gates & Railings



Fencing & Security



Working at Height

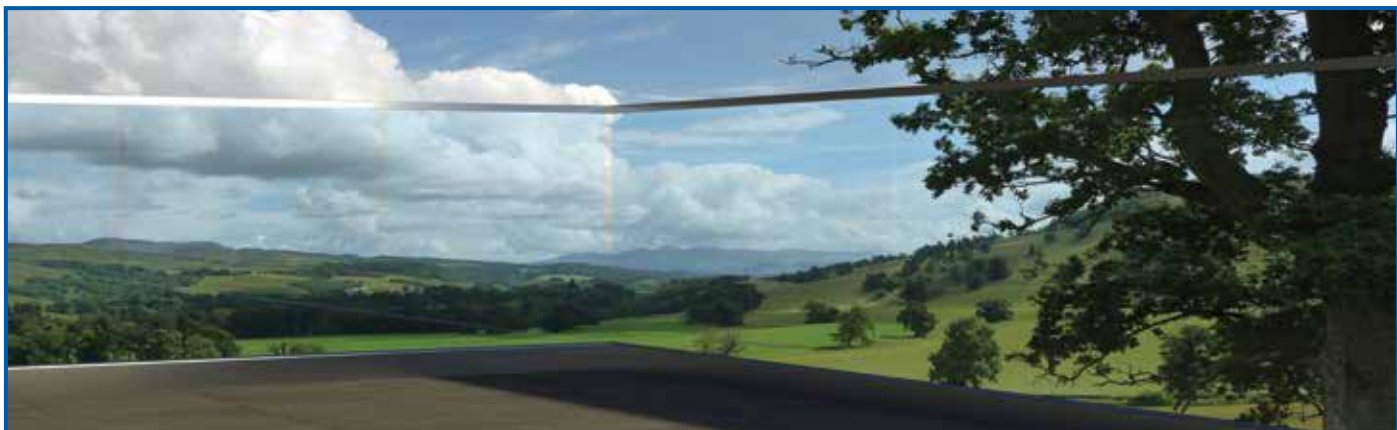
*Within our standard area and elsewhere at cost.

Aluminium Top Rail System

30 x 28mm profile

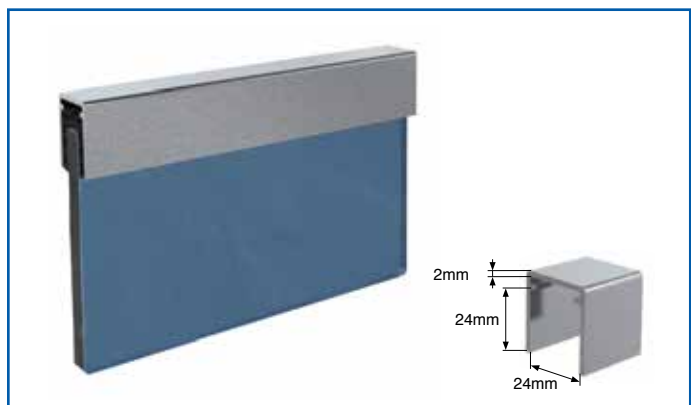


- Steel
- Wrought Iron
- Gate Hardware
- Sliding Door Gear
- Gate Automation
- Mesh
- Decking & Subframe
- Flooring & Stair Treads
- Handrailing
- Fencing
- Fixings



FEATURES

- Designed for 8 - 21.5mm glass with rubber gasket
- No welding required
- Reduced visual impact of top rail
- Connectors simply slide into the top rail for a neat joint
- Flush fit fittings
- Satin anodised aluminium & PPC black RAL 9005



Top Rail



Length m	Anodised Code	PPC Black Code
3	1505063	1505063B

90° Top Rail



Anodised Code	PPC Black Code
150506411	150506411B

Inside length 342mm each side. Outside length 370mm each side.

Internal Connector



Length mm	Code
100	150506412

90° Corner Internal Connector



Code
15050641290

Inside length 76.5mm each side. Outside length 100mm each side.

End Cap



Anodised Code	PPC Black Code
150506413	150506413B

Gasket



To Suit Glass mm	Length m	Code
8 - 11	1	189903811C
11.5 - 13.5	1	189903115135C
15	1	18990315C
16 - 17.5	1	18990316175C
19	1	18990319C
20 - 21.5	1	18990320215C

Rubber. Sold in 1m lengths.

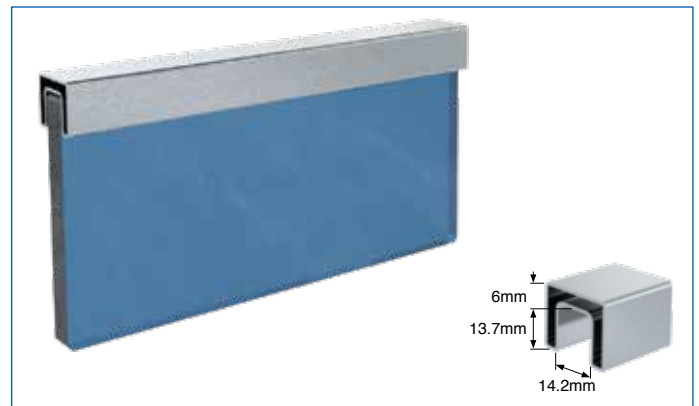


For our range of glass panels see pages 470, 471 & 515.



FEATURES:

- Designed for 10 - 12mm glass with rubber gasket
- No welding required
- Reduced visual impact of top rail
- Straight joiner slides into the top rail for a neat joint
- Flush fit fittings
- All products are satin polish finish stainless steel Grade 316



Split Tube



Length m	Code
3.0	18067053S25
5.8	1806705S25

Gasket



To Suit Glass mm	Length m	Code
10	1	1899031010

Rubber. Sold in 1m lengths.

Gasket



To Suit Glass mm	Length m	Code
12	1	1899031012

Rubber. Sold in 1m lengths.

Adjustable Corner



Code
1806418S25

90° Joiner



Code
1806411S25

Adjustable Joiner



Code
1806416S25

End Cap



Code
1806413S25

Wall Bracket



Code
1806415S25

Joiner



Code
1806412S25

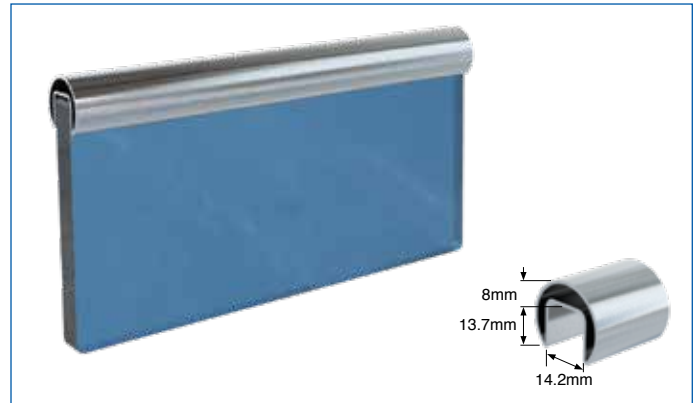
Round Mini Top Rail System

Ø 25mm profile



FEATURES:

- Designed for 10 - 12mm glass with rubber gasket
- No welding required
- Reduced visual impact of top rail
- Straight joiner slides into the top rail for a neat joint
- Flush fit fittings
- All products are satin polish finish stainless steel Grade 316



Split Tube



Length m	Code
3.0	18067053A
5.8	1806705A

Gasket



To Suit Glass mm	Length m	Code
10	1	1899031010

Rubber. Sold in 1m lengths.

Gasket



To Suit Glass mm	Length m	Code
12	1	1899031012

Rubber. Sold in 1m lengths.

90° Joiner



Code
1806411A

Adjustable Corner



Code
1806418A

Adjustable Joiner



Code
1806416A

End Cap



Code
1806413A

Wall Bracket



Code
1806415A

Joiner

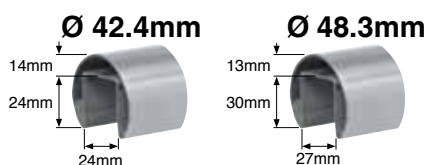


Code
1806412A



The round top rail system offers a stylish solution to the top of any glass balustrade and also provides a visual break. We can shape to match if you're planning radiused glass in your design.

Split Tube



Ø mm	3m Length Code	5.8m Length Code
42.4	18047053C	1804706C
48.3	18047053D	1804706D
42.4	18067053C	1806706C
48.3	18067053D	1806706D

1.5mm wall thickness.

Gasket



To Suit Glass mm	Ø 42.4mm Code	Ø 48.3mm Code
8 - 11	189903811C	189903811D
11.5 - 13.5	189903115135C	189903115135D
15	18990315C	18990315D
16 - 17.5	18990316175C	18990316175D
19	18990319C	18990319D
20 - 21.5	18990320215C	18990320215D

Rubber. Sold in 1m lengths.

90° Horizontal Corner



Ø mm	Code
42.4	1804411C
48.3	1804411D
42.4	1806411C
48.3	1806411D

Adjustable Corner



Ø mm	Code
42.4	1806418C

25 - 55° Downwards Adjustable Connector



Ø mm	Code
42.4	1804416C
48.3	1804416D
42.4	1806416C
48.3	1806416D

25 - 55° upwards Adjustable Connector



Ø mm	Code
42.4	1804417C
48.3	1804417D
42.4	1806417C
48.3	1806417D

90° Vertical Corner



Ø mm	Code
42.4	1804410C
48.3	1804410D
42.4	1806410C
48.3	1806410D

End Cap



Ø mm	Code
42.4	1804413C
48.3	1804413D
42.4	1806413C
48.3	1806413D

Wall/Floor Flange



Ø mm	Code
42.4	1804415C
48.3	1804415D
42.4	1806415C
48.3	1806415D

Tube Adaptor



Ø mm	Code
42.4	1804414C

In-Line Connector



Ø mm	Code
42.4	1804412C
48.3	1804412D
42.4	1806412C
48.3	1806412D

For our mirror finish round top rail system see page 565.

Rectangular Top Rail System

40 x 30mm profile

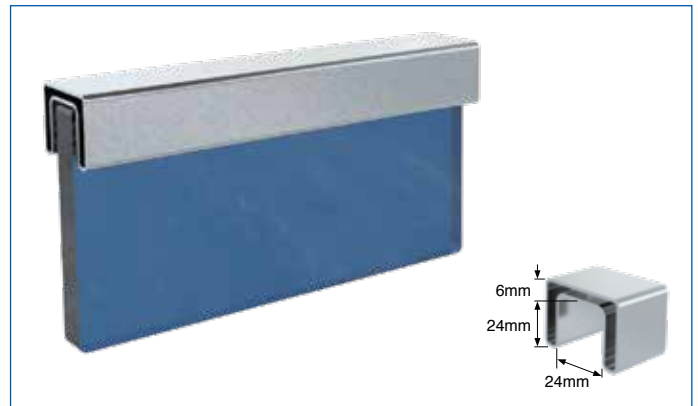


- Steel
- Wrought Iron
- Gate Hardware
- Sliding Door Gear
- Gate Automation
- Mesh
- Decking & Subframe
- Flooring & Stair Treads
- Handrailing
- Fencing
- Fixings



FEATURES:

- Designed for 8 - 21.5mm glass with rubber gasket
- No welding required
- Joiner simply slides into the top rail for a neat joint
- Flush fit fittings
- Split tube is stainless steel Grade 316 with a satin polish finish
- Components are Duplex 2205 with a satin polish finish



Split Tube



Length m	Code
3	180670534030
6	18067054030

Gasket



To Suit Glass mm	Length m	Code
8 - 11	1	189903811C
11.5 - 13.5	1	189903115135C
15	1	18990315C

Rubber. Sold in 1m lengths.

To Suit Glass mm	Length m	Code
16 - 17.5	1	18990316175C
19	1	18990319C
20 - 21.5	1	18990320215C

Rubber. Sold in 1m lengths.

90° Joiner



Code
18224114030

Adjustable Corner 90° - 180° Left or Right



Code
18224184030

Adjustable Joiner 45° Up & 90° Down



Code
18224164030

End Cap



Code
18224134030

Wall Bracket



Code
18224154030

Joiner



Code
18224124030



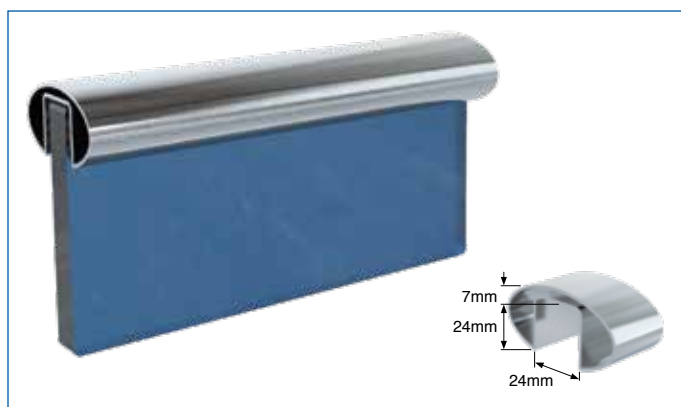
Oval Top Rail System

60 x 30mm profile



FEATURES:

- Designed for 8 - 21.5mm glass with rubber gasket
- No welding required
- Joiner simply slides into the top rail for a neat joint
- Flush fit fittings
- Split tube is stainless steel Grade 316 with a satin polish finish
- Components are Duplex 2205 with a satin polish finish



Split Tube



Length m	Code
3	180670536030
6	18067056030

Gasket



To Suit Glass mm	Length m	Code
8 - 11	1	189903811C
11.5 - 13.5	1	189903115135C
15	1	18990315C

To Suit Glass mm	Length m	Code
16 - 17.5	1	18990316175C
19	1	18990319C
20 - 21.5	1	18990320215C

Rubber.

Rubber.

90° Joiner



Code
18224116030

Adjustable Corner 90° - 180° Left or Right



Code
18224186030

Adjustable Joiner 45° Up & 90° Down



Code
18224166030

End Cap



Code
18224136030

Wall Bracket



Code
18224156030

Joiner



Code
18224126030

Steel

Wrought Iron
Components

Gate
Hardware

Sliding
Door Gear

Gate
Automation

Mesh

Decking &
Subframe

Flooring &
Stair Treads

Handrailing

Fencing

Fixings

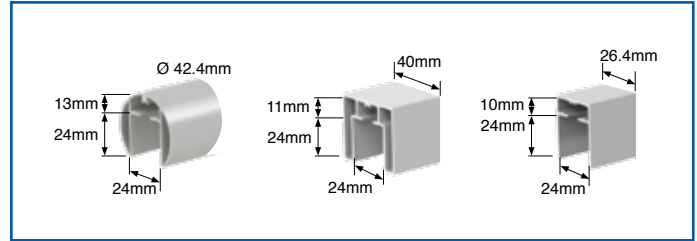
Aluminium Top Rail Systems

Round, square & rectangular profiles



FEATURES

- Designed for 8 - 21.5mm glass with rubber gasket
- No welding required
- Reduced visual impact of top rail
- Connectors simply slide into the top rail for a neat joint on flat runs & staircases
- Satin anodised aluminium & PPC black RAL 9005



Split Tube

Round



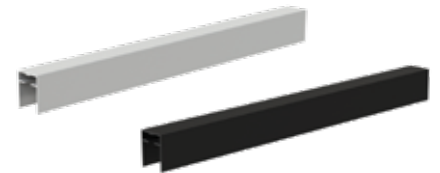
Length m	Anodised Code	PPC Black Code
2.5	1805707C	1805707CB

Square



Length m	Anodised Code	PPC Black Code
2.5	1805707S40	1805707S40B

Rectangular



Length m	Anodised Code	PPC Black Code
2.5	1805707S264	1805707S264B

Gasket



To Suit Glass mm	Code
8 - 11	189903811C
11.5 - 13.5	189903115135C
15	18990315C
16 - 17.5	18990316175C
19	18990319C
20 - 21.5	18990320215C

Rubber. Sold in 1m lengths.

For our range of glass panels see pages 470, 471 & 515.

End Cap

Round



Anodised Code	PPC Black Code
1805413C	1805413CB

Suitable for round split tube.

Square



Anodised Code	PPC Black Code
1805413S40	1805413S40B

Suitable for square split tube.

Rectangular



Anodised Code	PPC Black Code
1805413S264	1805413S264B

Suitable for rectangular split tube.

Wall Flange

Round



Anodised Code	PPC Black Code
1805415C	1805415CB

Suitable for round split tube.

Square



Anodised Code	PPC Black Code
1805415S40	1805415S40B

Suitable for square split tube.

Rectangular



Anodised Code	PPC Black Code
1805415S264	1805415S264B

Suitable for rectangular split tube.

180° Connector



Size mm	Code
100	1805412

For use with all split tube on this page.

90° Connector



Size mm	Code
50	180541290

For use with all split tube on this page.

90°-180° Adjustable Connector Horizontal



Size mm	Code
50*	1805418

For use with all split tube on this page. *50mm each side up to hinge position.

90°-180° Adjustable Connector Vertical



Size mm	Code
50*	1805416

For use with all split tube on this page. *50mm each side up to hinge position.



High quality **glass balustrade stairway systems** configured to your specifications

We supply quality, pre-assembled post balustrade systems for stairs and balconies, decks and raised patios in indoor and outdoor settings.

1. Our amazing stairways configurator will configure flights of stairs with landings using our Bolt-down posts. Saving hours of time, it offers unerring accuracy to make life easier.
2. Liveconfigurator™ stairways comes complete with impressive detailed technical drawings showing the layout and glass sizes and angles. You will also receive a quote, a parts list, and free CAD drawings and 3D models.
3. Our stairways balustrades are excellent value and are suitable for internal or external use and are also perfect for offices.



Bolt-down

Our stair balustrades use our pre-assembled bolt-down posts, with bespoke posts produced where necessary

The perfect tool for everyone.

Start designing and receive your free CAD drawings at

liveconfigurator.co.uk



liveconfigurator[™]
STAIRWAYS

The UK's largest stockist of components for immediate delivery



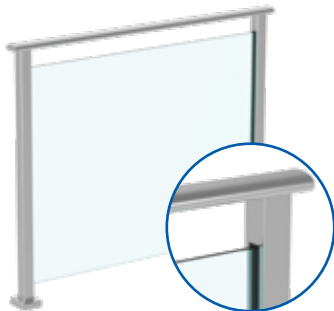
Marano® Edge and Curve are a range of innovative railing systems designed to be fully modular. The pre-assembled aluminium posts have a stunning satin anodised finish and are available in square and round profiles ready to install. Fully engineered to meet the requirements of most applications, the systems can be installed with or without a top rail to provide an economical solution for a post and glass panel design. Each system can be fully fitted using basic equipment.

Features:

- Fully assembled posts
- Aluminium & satin anodised finish
- To suit 10mm glass
- Suitable for indoor & outdoor installations
- Quick, safe & easy installation
- Gap between handrail & glass is 80mm
- Bottom edge of glass to floor is 90mm
- Tested to 1.2m posts centres
- Posts available in bolt-down & side-fix
- Posts are supplied complete

Square Posts With Handrail

Railing height 1125mm



- Glass panel is H 930 x W 1174mm

Square Posts Without Handrail

Post height to 1100mm



- Glass panel is H 1010 x W 1174mm
- You will need to buy blanking caps or notched post caps to suit design

When using standard glass width 1174mm, you will have approximately 13mm between post centre and glass for ease of installation.



Image shows a square post using a rectangular handrail.



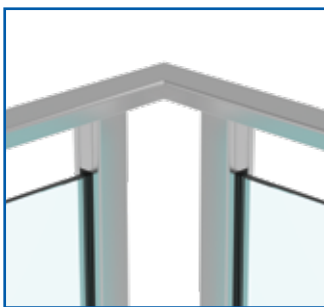
Image shows a round post using an oval handrail.

Rectangular & oval handrails can be used with both square & round posts. For handrails see page 507.

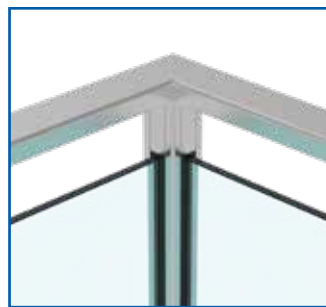


How To Tackle Corners

Mitred Cut Without Post



Mitred Cut With Post

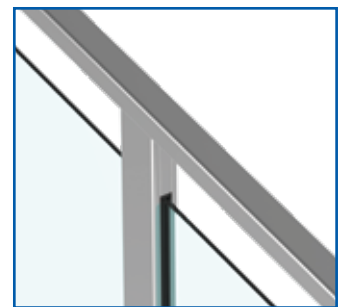


How To Tackle Gradients

Mitred Cut Handrail



Mitred Cut Post



Fitting Glass

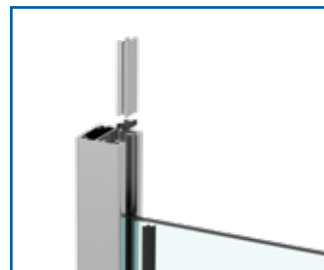
Fitting glass is easy with our 4 step guide.



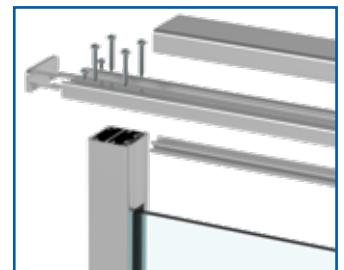
Fit back rubber to the post.



Slide glass in from the top between posts.



Fit glass retaining rubber, top packer & infill.



Fit the handrail (using the location jig, see pages, 506 & 509). Slide on the handrail under-cap and top handrail.

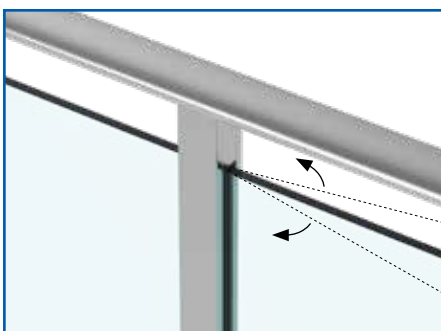


When fitting glass make sure the back rubber is fitted to the post, then install retaining rubber once glass is in place.



Installation guide & video can be found on our website: www.fhbrundle.co.uk

Post Height



- Posts can be cut down if a shorter height is needed
- Capping will slide back in to give 80mm gap from glass to rail
- Allows 8 - 10° glass angle each side with rubbers

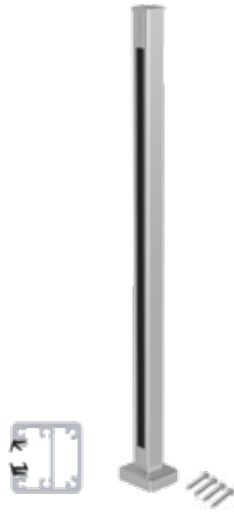


Spray soapy water on rubbers to help slide glass into rubber locators.

For glass panels see page 506.

Posts

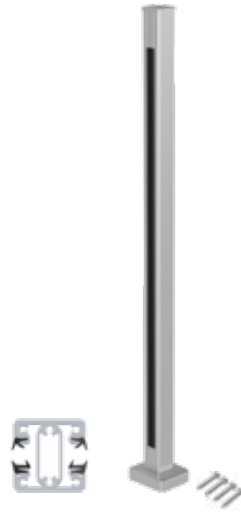
Bolt-Down End



Height mm	□ mm	Code
1100	50	6805791S50

Supplied with post caps, packers, rubbers, handrail screws and base plate cover.

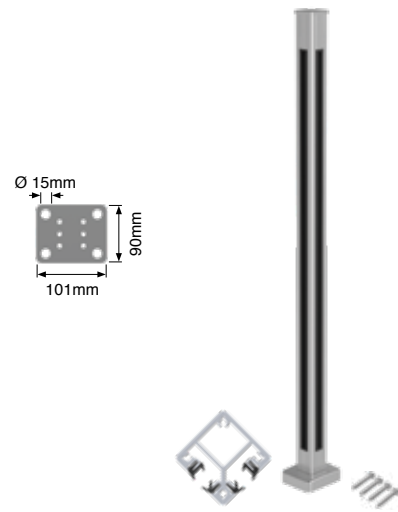
Bolt-Down Mid



Height mm	□ mm	Code
1100	50	6805792S50

Supplied with post caps, packers, rubbers, handrail screws and base plate cover.

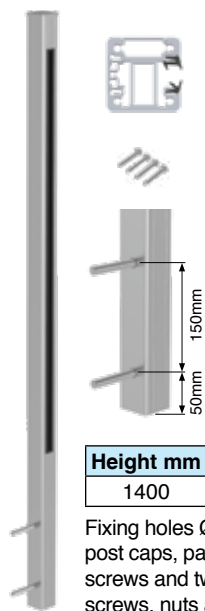
Bolt-Down Corner



Height mm	□ mm	Code
1100	50	6805793S50

Supplied with post caps, packers, rubbers, handrail screws and base plate cover.

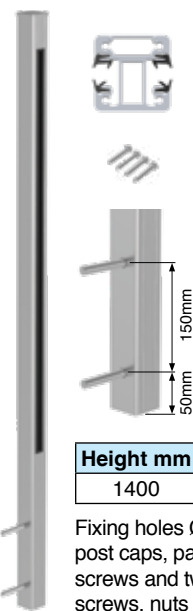
Side-Fix End



Height mm	□ mm	Code
1400	50	6805794S50

Fixing holes Ø 13mm. Supplied with post caps, packers, rubbers, handrail screws and two M12 x 120mm fixing screws, nuts and washers.

Side-Fix Mid



Height mm	□ mm	Code
1400	50	6805795S50

Fixing holes Ø 13mm. Supplied with post caps, packers, rubbers, handrail screws and two M12 x 120mm fixing screws, nuts and washers.

Clear Float Toughened Glass Panel

For use without handrail



Height mm	Width mm	Code
1010	1174	18551010101174

Clear Float Toughened Glass Panel

For use with Marano top rails



Height mm	Width mm	Code
930	1174	1855109301174

Notched Post Caps - brings post height to 1100mm

End Cap



Code
6805ECES50

Mid Cap



Code
6805ECMS50

Corner Cap



Code
6805ECCS50

Handrail/Post Location Jigs

End/Mid Jig

For drilling through handrail

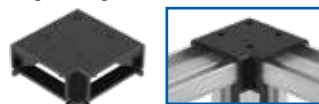


Code
6899732J

Plastic.

Corner Jig

For drilling through handrail



Code
6899733J

Plastic.

Fixings

Concrete Bolt

Self-tapping

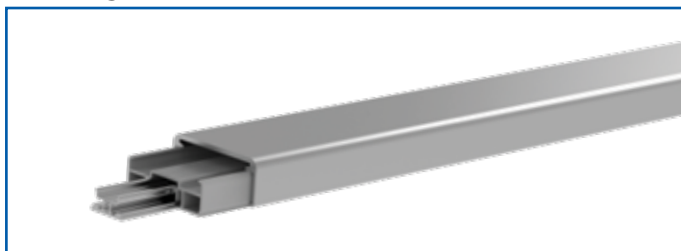


Size mm	Pack Qty	Code
M12 x 100	1	5002HCS12100

For cracked and non-cracked concrete.

Handrails

Rectangular Handrail



Length m	□ mm	Code
3.0	62 x 25	680570536225
5.8	60 x 25	68057056225

Oval Handrail

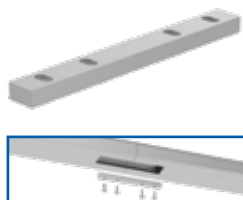


Length m	∩ mm	Code
3.0	72 x 27	680570537227
5.8	72 x 27	68057057227

Handrail Connectors

In-Line connector

For rectangular & oval handrails

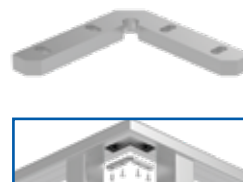


Code
6805412i

Internal fix. Supplied with four screws.

90° Corner Connector

For rectangular & oval handrails



Code
6805411i

Internal fix. Supplied with four screws.

Adjustable Handrail Joiners

Vertical - 35° Up/80° Down

For use with rectangular handrail



Code
68054166225

Supplied with four screws.

Horizontal +/- 80°

For use with rectangular handrail



Code
68054186225

Supplied with two screws.

Vertical - 35° Up/80° Down

For use with oval handrail



Code
68054167227

Supplied with four screws.

Horizontal +/- 80°

For use with oval handrail



Code
68054187227

Supplied with four screws.

Handrail End Caps

End Cap

For use with rectangular handrail



Code
68054136225

Supplied with two screws.

Wall Bracket

For use with rectangular handrail



Code
68054156225

Supplied with four screws.

End Cap

For use with oval handrail



Code
68054137227

Supplied with two screws.

Wall Bracket

For use with oval handrail



Code
68054157227

Supplied with four screws.

Product	Code
Rubber gasket set 1100mm	68RG1100
Rubber gasket set 6000mm	68RG6000
Eraser for cleaning marks and scratches on anodising	6899AE01
Assembly tool. For rubber sealing strips	6899RR01

For corners with no post use a 90° corner connector to strengthen the handrail.

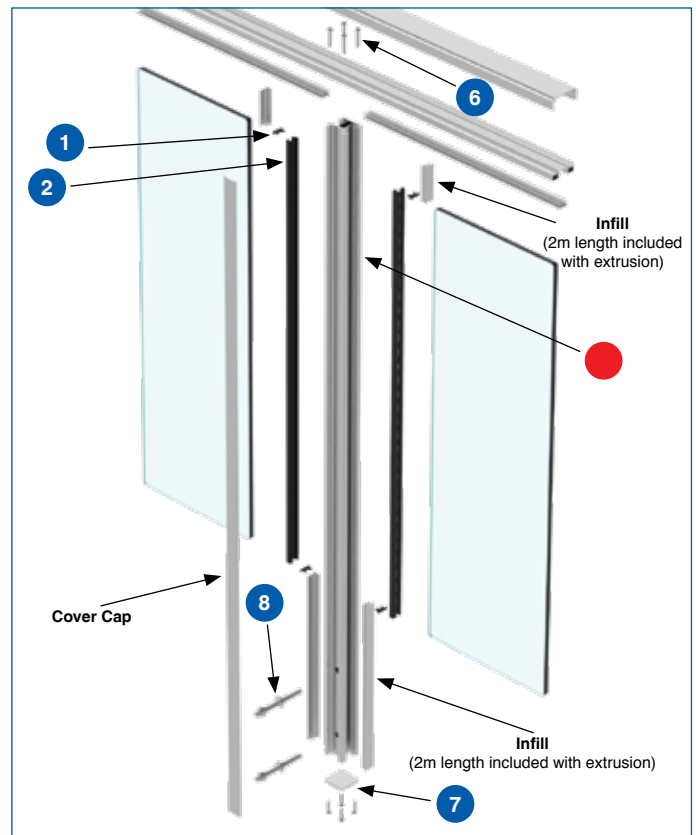
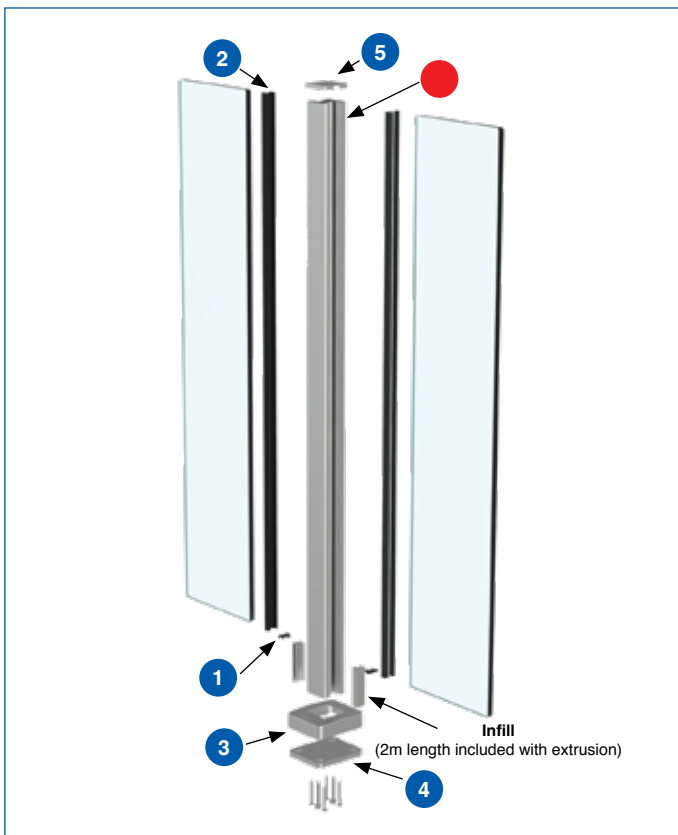
If no handrail is required, 1100mm rubbers will need to be ordered.

Marano® Make Your Own Posts



Edge

Create your own posts, for any height, using our individual components below.



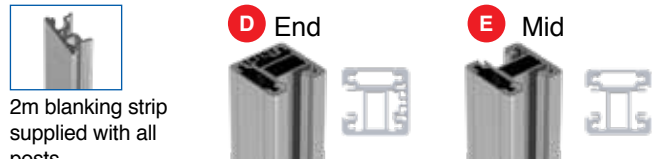
Cut To Size Bolt-Down Extrusion



Post	Height m	□ mm	Code
End	6	50	6805691S50
Mid	6	50	6805692S50
Corner	6	50	6805693S50

Supplied with 2m infill. Please order rubber gaskets separately.

Cut To Size Side-Fix Extrusion



Post	Height m	□ mm	Code
End	6	50	6805694S50
Mid	6	50	6805695S50

Supplied with 2m infill and 6m cover cap. Please order rubber gaskets separately.

Choose from the components below to suit your exact requirements.

Packers



Code
68PP01

Pack of 10. Plastic.

Rubber Gaskets



Length m	Code
1.1	68RG1100
6.0	68RG6000

Sold in pairs, 1 x back rubber & 1 x glass retaining rubber.

Cover Plate

Use with bolt-down base plate



Code
680520850

Base Plate

Use with bolt-down posts



Code
680520750

Supplied with 6 fixings to attach to extrusion.

Post Cap



Code
6805PC01

Top Rail Fixings



Code
68HF01

Pack of 4. For attaching handrail to post.

Post Base Cover

Use with side-fix posts



Code
6805PBC01

Supplied with 4 fixings.

Post Fixings

Use with side-fix posts



Code
68PF01

Sold in pairs.



Steel

Wrought Iron Components

Gate Hardware

Sliding Door Gear

Gate Automation

Mesh

Decking & Subframe

Flooring & Stair Treads

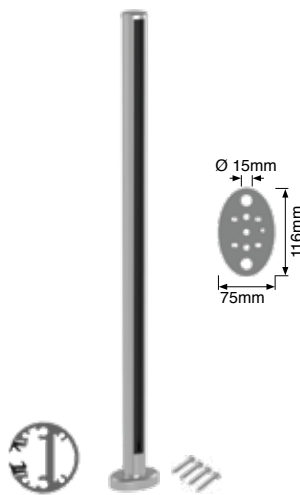
Handrailing

Fencing

Fixings

Posts

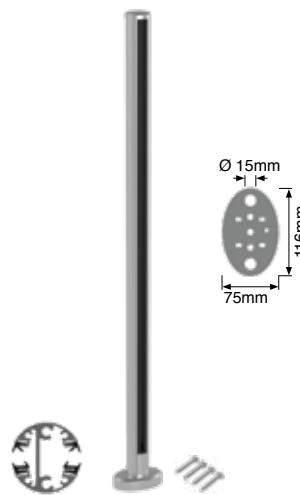
Bolt-Down End



Height mm	Ø mm	Code
1100	54	6805791R54

Supplied with post caps, packers, rubbers, handrail screws and base plate cover.

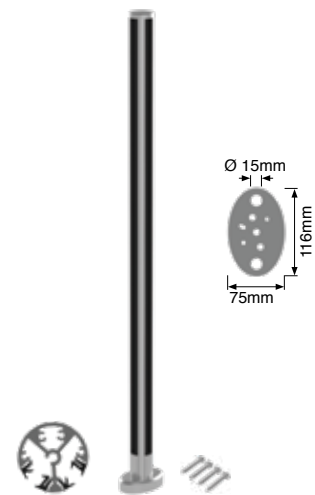
Bolt-Down Mid



Height mm	Ø mm	Code
1100	54	6805792R54

Supplied with post caps, packers, rubbers, handrail screws and base plate cover.

Bolt-Down Corner



Height mm	Ø mm	Code
1100	54	6805793R54

Supplied with post caps, packers, rubbers, handrail screws and base plate cover.

Base Plate Cover



Code
680520854

To suit Ø 54mm round post.

Clear Float Toughened Glass Panel

For use without handrail



Height mm	Width mm	Code
1010	1174	18551010101174

Clear Float Toughened Glass Panel

For use with Marano top rails



Height mm	Width mm	Code
930	1174	1855109301174

Handrail/Post Location Jigs

End/Mid Jig

For drilling through handrail

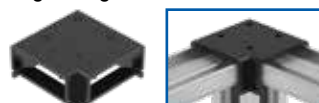


Code
6899732J54

Plastic.

Corner Jig

For drilling through handrail



Code
6899733J54

Plastic.

Fixings

Concrete Bolt

Self-tapping



Size mm	Pack Qty	Code
M12 x 100	1	5002HCS12100

For cracked and non-cracked concrete.

For square posts see page 506.



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NEW & IMPROVED CONFIGURATORS FOR...

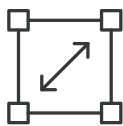
Balustrades

Stairways

Bespoke Glass

Decking

We'll help create your project from start to finish



1. Design your build

Our groundbreaking software allows you to configure your own project in a matter of minutes, using our templates.

- ✓ Real-time design
- ✓ Completely customisable
- ✓ Eliminate mistakes



2. Receive a quote pack

Within minutes you'll receive a comprehensive quote pack, complete with parts list, and free detailed drawings and 3D models.

- ✓ Receive your pack in minutes
- ✓ Fully detailed drawings
- ✓ Accurate 3D visuals



3. Place your order

Give our sales team a call to get your order placed and they'll be more than happy to answer any questions, too.

- ✓ Discuss with our experts
- ✓ Nationwide distribution
- ✓ No wastage



Balustrades

We supply a wide range of glass balustrade systems for both indoor and outdoor applications, from glass spigot balustrades and frameless glass balustrades, to stand-off adaptors which can be configured for your own measurements.

Stairways

Use our stairways balustrade configurator to design and draw bespoke glass, handrails, posts, and fittings for internal and external stairways, produced according to your dimensions.



Bespoke Glass

Use our bespoke glass configurator for your special glass panels. You can also add up to 14 holes wherever you need them. Rectangles and parallelograms are ready to be configured, and we also have a wide range of standard panels in stock.

Decking

For decking we have a simple to use calculator to help select the numbers of deck boards and clips you will need. Our range of decking covers a wide choice of eco-friendly boards and modern colours, to bring your vision to life.



 **liveconfigurator™**

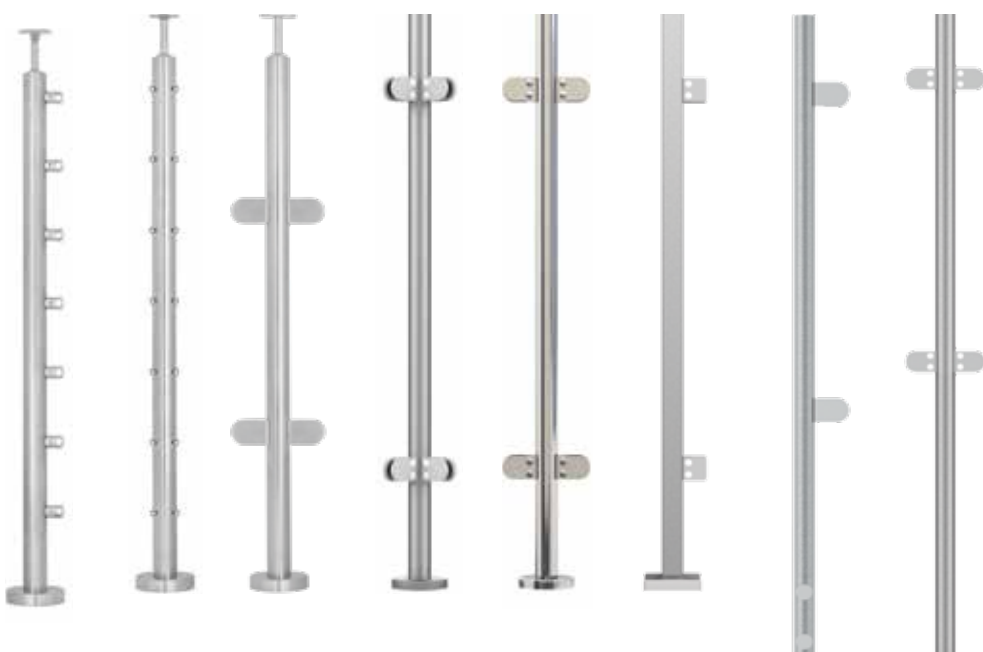
The perfect tool for everyone.
Come and have a look and start designing your project at

liveconfigurator.co.uk

- Steel
- Wrought Iron Components
- Gate Hardware
- Sliding Door Gear
- Gate Automation
- Mesh
- Decking & Subframe
- Flooring & Stair Treads
- Handrailing
- Fencing
- Fixings



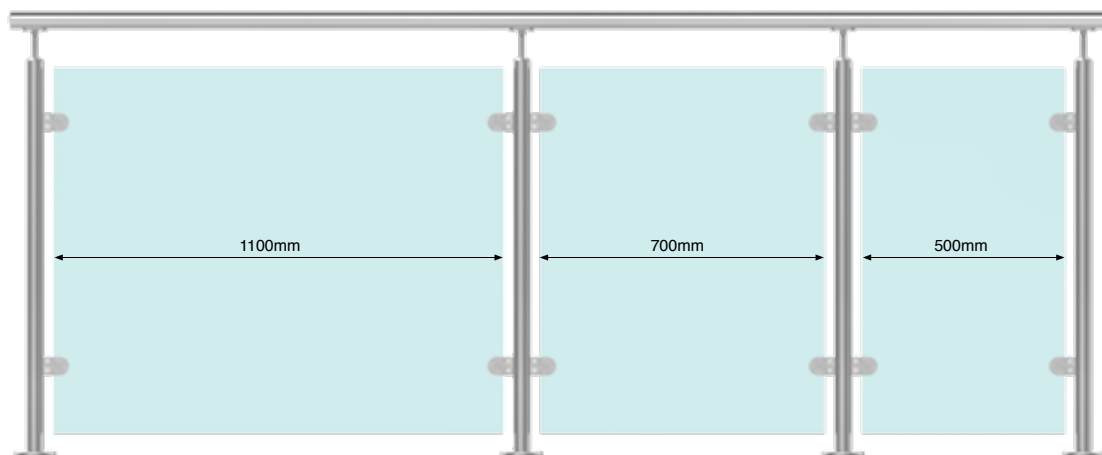
Save a huge amount of time and money with our extensive range of pre-assembled posts, supplied from stock. They are all tested to BS 6180. No drilling of tubes, no bolting on of glass clamps and no welding of base plates required. We've done the work for you!



- Straight out of the box and Ready to install:
- Ø 42.4 & 48.3mm round posts
 - 40 x 40mm square posts
 - Strand wire rope posts
 - Crossbar holder posts
 - Satin & mirror finish
 - Stainless steel Grade 304 & 316

Standard glass panels

We stock a large range of widths of 10mm toughened glass panels in 100mm increments to make your installations even quicker, easier and more cost effective. See page 515 for our full range.



For competitive square metre glass panel prices visit www.fhbrundle.co.uk



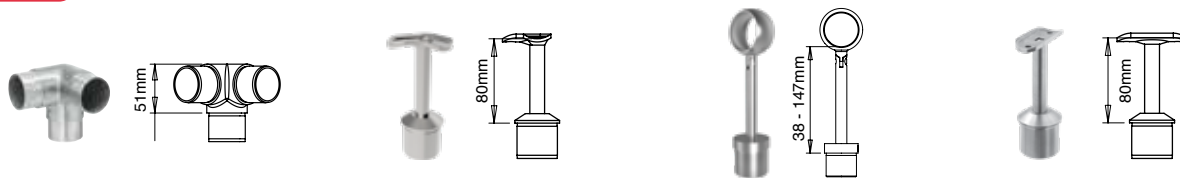
Pre-Assembled Posts

Choose your own post top

Our pre-assembled glass clamp posts are supplied without a saddle or post cap, so you can choose the exact design to suit your requirement. The choice of tops available allows you to pick and mix from a huge range of options that will allow you to end up with your very own bespoke solution.



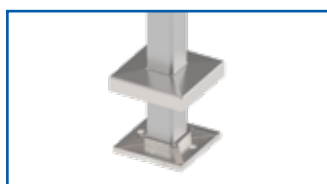
Here are some useful dimensions to help design your installation. All our posts are designed to give an installation height of 1100mm or more.



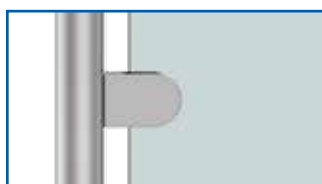
For full technical drawings visit our website. If you don't see what you need please ask.



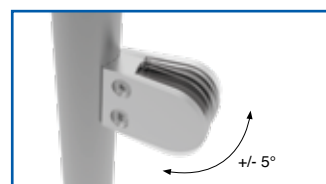
Welded base fitting complete with rubber 'O' ring and cover.



Welded base fitting complete with cover.

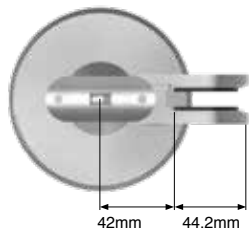


Glass clamp for 10mm glass (8 and 12mm rubbers available).

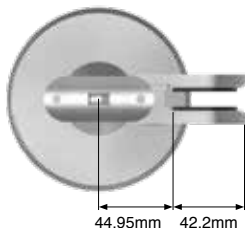


Variable fixing bolt.

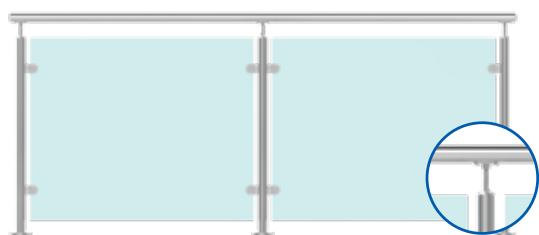
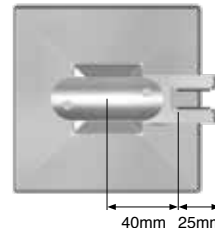
Ø 42.4mm Posts



Ø 48.3mm Posts

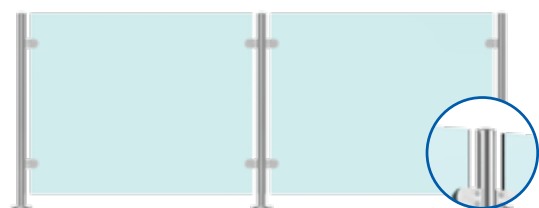


40 x 40mm Posts



Timeless - Stainless Steel Posts And Glass Panels With Handrail

Our Timeless post systems that use 10mm glass panels and have a top rail, are all tested to BS6180 loading requirements.



Contemplation – Stainless Steel Posts And Glass Panels Without Handrail

Our Contemplation post systems that use 10mm glass panels and have no top rail, will not pass BS6180 loading requirements and should therefore only be used as demarcation, or in areas where the fall is not more than 600mm.

For our Pro-Railing® Protect Range see page 519.

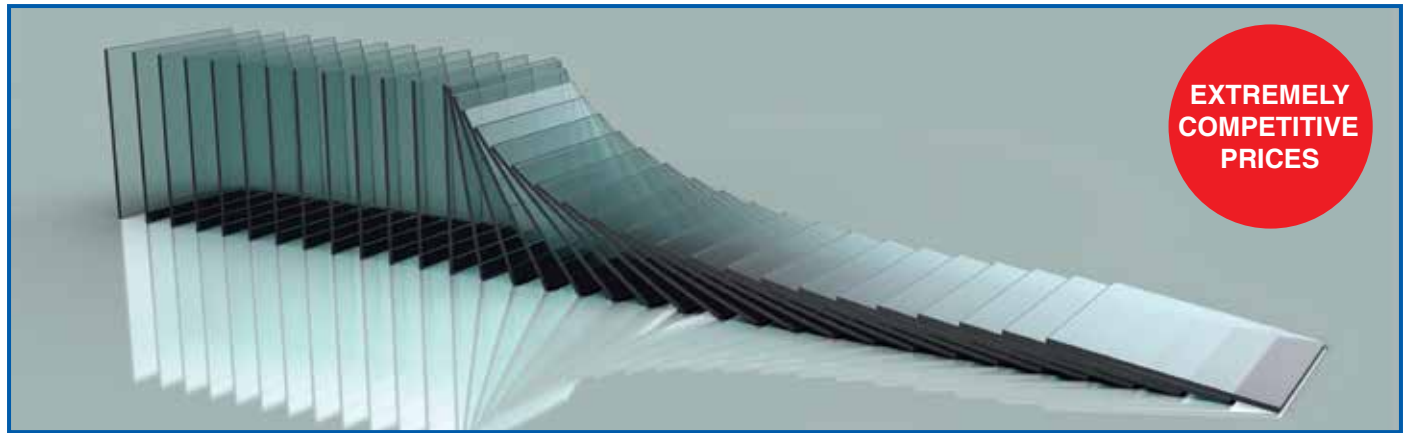
For our standard stocked glass panels see pages 515.

Made To Order Glass

Square metre panels



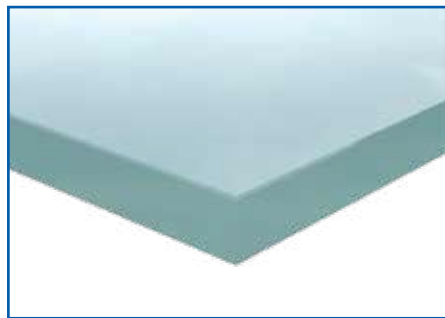
- Steel
- Wrought Iron Components
- Gate Hardware
- Sliding Door Gear
- Gate Automation
- Mesh
- Decking & Subframe
- Flooring & Stair Treads
- Handrailing
- Fencing
- Fixings



Our custom sized per square metre glass panels are polished on all edges and come with docked corners for safety and aesthetic reasons. Glass can be supplied with radiused corners, shaped, with cut-outs and drilled at extra cost. A range of coloured glass, etched glass and self-clean coating is also available. The current meterage rates can be checked online using the following codes and we can then prepare a detailed quote to meet your exact requirements. You will need to add 30% to the meterage price for shapes and cut-outs.

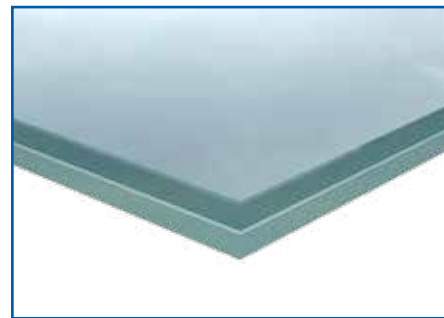
Consult with local building authorities and structural engineers to ensure correct glass specifications and fixings are used to achieve the required loadings. Where possible we have tested our systems and individual test reports are available online. For further information on the classification of building occupancy & glass loadings, visit www.fhbrundle.co.uk

Toughened Glass



Thickness mm	Code
8	185508M
10	185510M
12	185512M
15	185515M
19	185519M
25	185525M

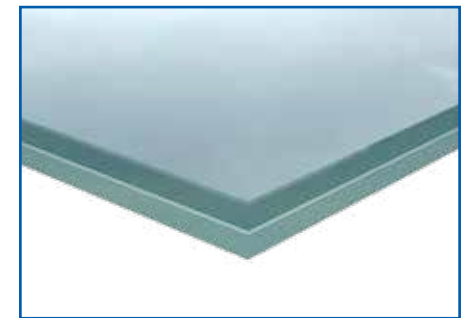
Toughened Laminated Glass



Thickness mm	Code
11.52	1856115M
13.52	1856135M
17.50	1856175M
21.50	1856215M
25.50	1856255M

SentryGlas®

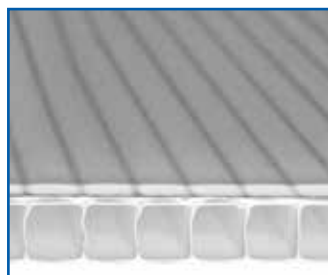
Ionoplast interlayer toughened glass



Thickness mm	Code
12.89	18571289M
16.89	18571689M
20.89	18572089M
25.50	1857255M

Up to 5 times stronger and 100 times stiffer than conventional interlayers.

Templating Sheets

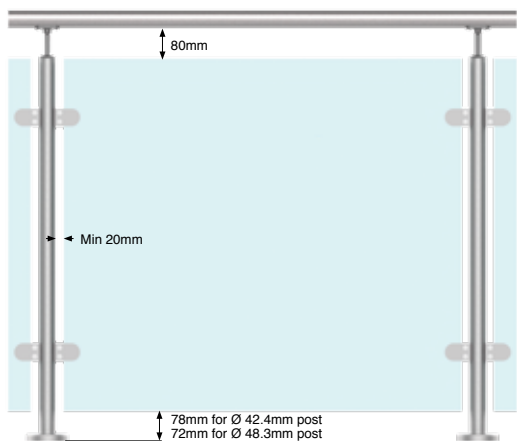


We can provide suitable templating material that can be cut to suit any special shapes on site. This is sent to our factory for production to match the template exactly, using modern imaging scanning technology to duplicate your design. Price and availability for bespoke panels are available on application.

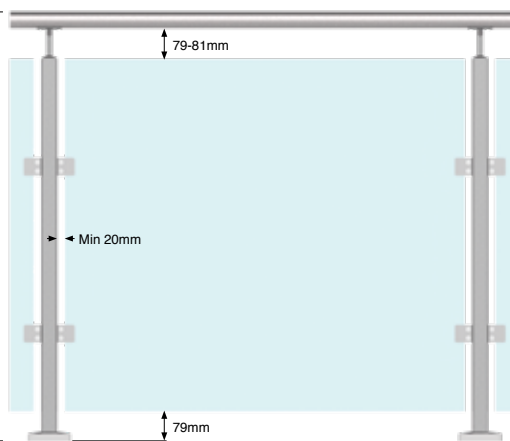
Height mm	Width mm	Thickness mm	Code
2440	1220	4	185900201

FOR UP TO DATE PRICES ON BESPOKE SIZES, HOLES OR SHAPES CONTACT US NOW.

Timeless - Round Posts



Timeless - Square Posts



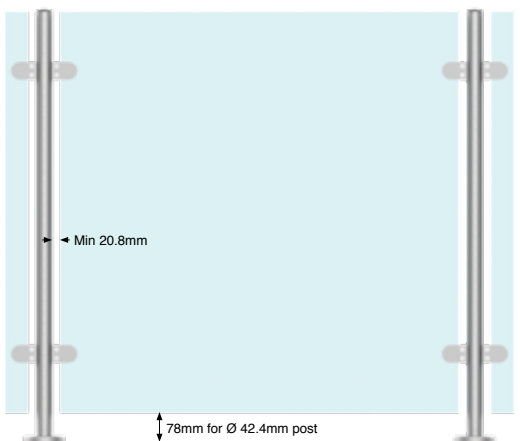
Timeless - Glass Panels



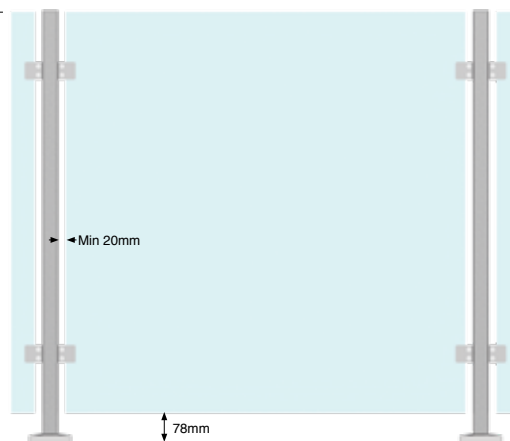
Thickness mm	Height mm	Width mm	Minimum* Post Centres For			Code
			Ø 42.4mm Post	Ø 48.3mm Post	□ 40mm Post	
10	900	100	184	190	180	185510100900
10	900	200	284	290	280	185510200900
10	900	300	384	390	380	185510300900
10	900	400	484	490	480	185510400900
10	900	500	584	590	580	185510500900
10	900	600	684	690	680	185510600900
10	900	700	784	790	780	185510700900
10	900	800	884	890	880	185510800900
10	900	900	984	990	980	185510900900
10	900	1000	1084	1090	1080	1855101000900
10	900	1100	1184	1190	1180	1855101100900

*Minimum only applies to round posts, square posts are fixed centres.

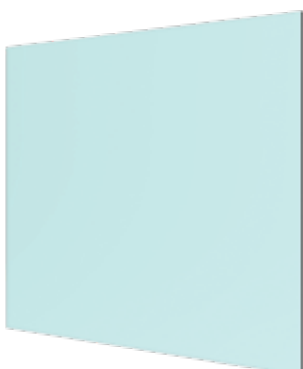
Contemplation - Round Posts



Contemplation - Square Posts



Contemplation - Glass Panels



Thickness mm	Height mm	Width mm	Minimum* Post Centres For			Code
			Ø 42.4mm Post	Ø 48.3mm Post	□ 40mm Post	
10	1024	100	184	190	180	1855101001024
10	1024	200	284	290	280	1855102001024
10	1024	300	384	390	380	1855103001024
10	1024	400	484	490	480	1855104001024
10	1024	500	584	590	580	1855105001024
10	1024	600	684	690	680	1855106001024
10	1024	700	784	790	780	1855107001024
10	1024	800	884	890	880	1855108001024
10	1024	900	984	990	980	1855109001024
10	1024	1000	1084	1090	1080	18551010001024
10	1024	1100	1184	1190	1180	18551011001024

*Minimum only applies to round posts, square posts are fixed centres.

Bolt-down round post - satin finish

- Steel
- Wrought Iron
- Gate Hardware
- Sliding Door Gear
- Gate Automation
- Mesh
- Decking & Subframe
- Flooring & Stair Treads
- Handrailing
- Fencing
- Fixings

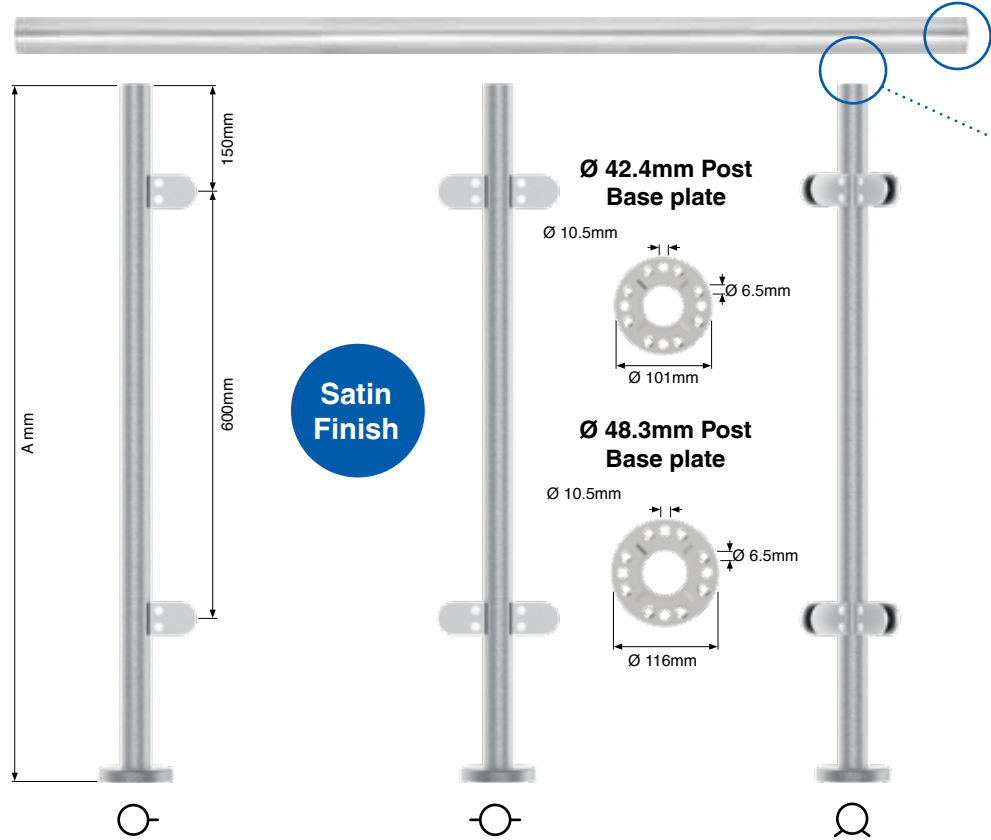


Choose Your Post & Top

End Post

Mid Post

Corner Post



Ø mm	A mm	Code
42.4	978	1804791C
48.3	972	1804791D
42.4	978	1806791C
48.3	972	1806791D

Dim A is post only with no top.
Top fitting not included.

Ø mm	A mm	Code
42.4	978	1804792C
48.3	972	1804792D
42.4	978	1806792C
48.3	972	1806792D

Dim A is post only with no top.
Top fitting not included.

Ø mm	A mm	Code
42.4	978	1804793C
48.3	972	1804793D
42.4	978	1806793C
48.3	972	1806793D

Dim A is post only with no top.
Top fitting not included.

Hex Head With Flange

For fixing to concrete



Ø mm	Length mm	Code
M8	75	5002HCS875

Pack quantity 1.

Multi-Fix Hex Head Bolt

For fixing to wood



Ø mm	Length mm	Code
M10	75	5002MF10875

Pack quantity 100.

Loctite 638 Adhesive

For use with tube fittings



ml	Code
50	1899007638

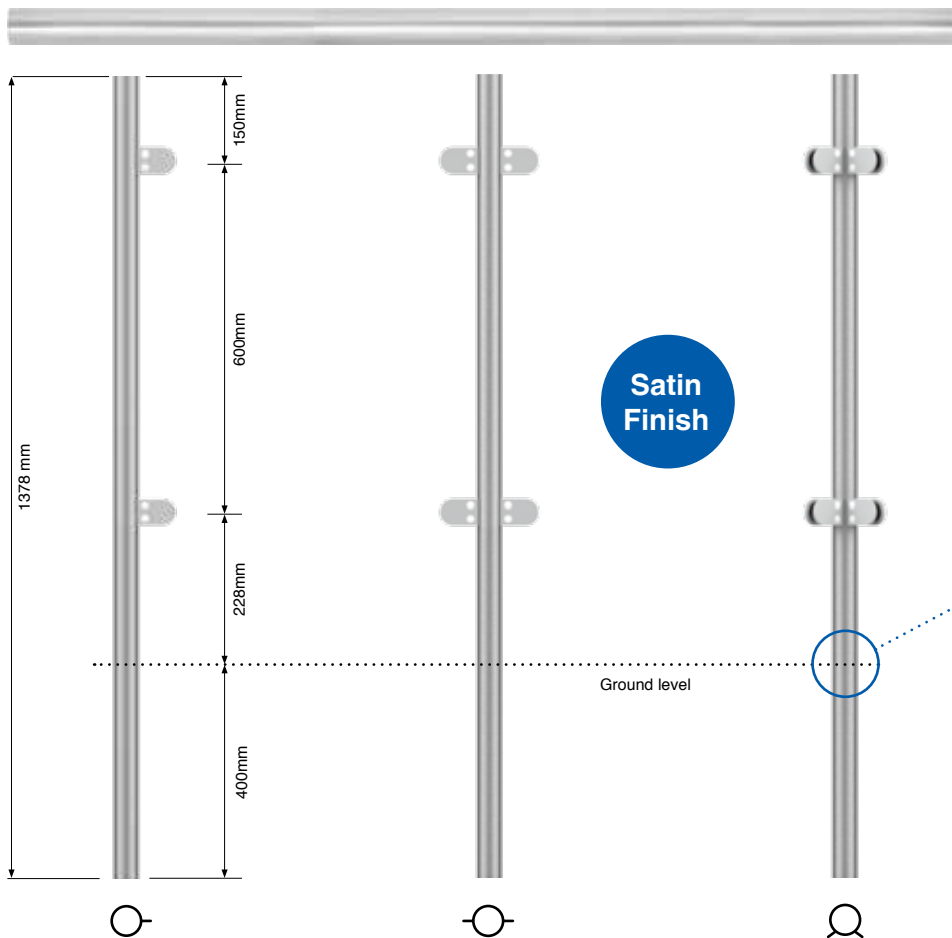


Choose Your Post & Top

End Post

Mid Post

Corner Post



Ø mm	Code
42.4	1806781C

Height of post only with no top. Top fitting not included.

Ø mm	Code
42.4	1806782C

Height of post only with no top. Top fitting not included.

Ø mm	Code
42.4	1806783C

Height of post only with no top. Top fitting not included.

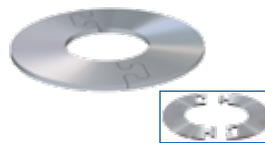
Donut Cover Plate



Ø mm	Code
42.4	1806247C

Fit at time of installation. For silicone use code: **189901201**.

Retro-Fit Cover Plate



Ø mm	Code
42.4	1806248C

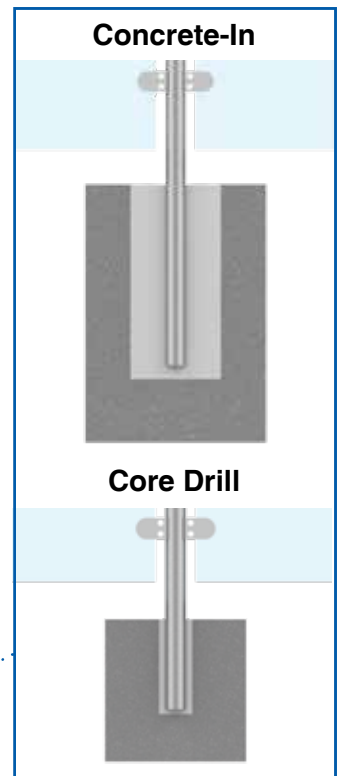
Retro-fitted after installation. For silicone use code: **189901201**.

Cover Cap



Ø mm	Code
42.4	1806208C

Fit at time of installation. For silicone use code: **189901201**.



These posts can be used with our side-fix fascia brackets. See page 543.



Post Concrete

Coarse aggregate blend



kg	Code
20	50CR20

Fast set. A 20kg bag will fill a hole W 20 x D 45cm.



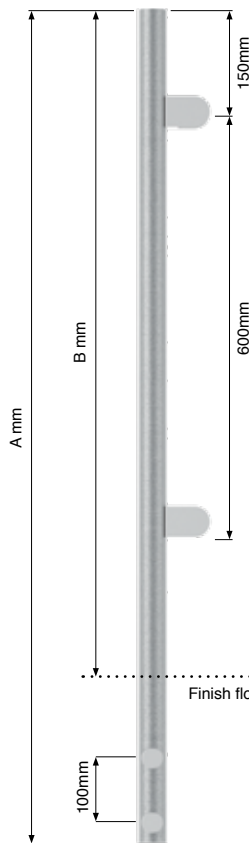
See our range of glass panels from page 515.

TESTED TO BS 6180

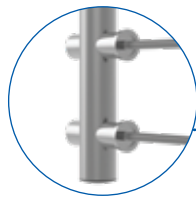
Choose Your Post & Top

End Post

Mid Post



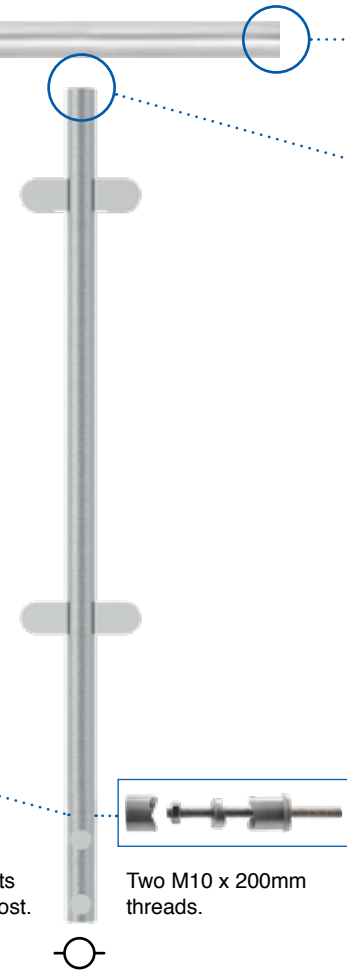
satin finish



Posts supplied with fascia brackets and end cap for the base of the post.

Ø mm	A mm	B mm	Code
42.4	1178	978	1806794C
48.3	1172	972	1806794D

Dim A & B is post only with no top. Top fitting not included.



Two M10 x 200mm threads.

Ø mm	A mm	B mm	Code
42.4	1178	978	1806795C
48.3	1172	972	1806795D

Dim A & B is post only with no top. Top fitting not included.



When using side-fix posts glass should be drilled & security pins should be used. Code: 189900401 for 8 - 10mm thick glass or code: 189900402 for 12mm thick glass.



RKER II Hybrid Resin



ml	Code
300	50RKER300

Suitable for use in dry and wet substrates and water filled holes.

Wire Mesh Sleeve

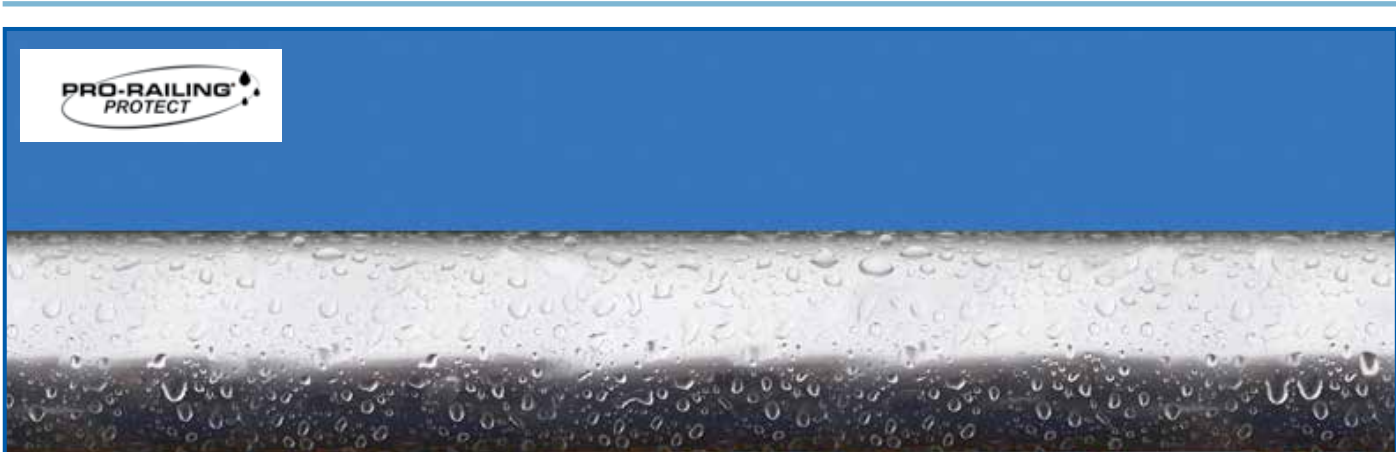
For use with R Stud



Ø mm	Sleeve Size mm	Code
M10	16 x 1000	50WMS101000

Pack quantity 1.

For Loctite adhesives & glue see page 721.



PRO-RAILING®
PROTECT

Pro-Railing® Protect provides a highly durable, flexible, super smooth, breathable and 'superphobic' Nano coating which has the added benefit of being organic. This means that it repels oil, water, and dry soiling. Contaminants will not stick to the treated surface and liquids are unable to penetrate the coating. This is because each filament of every fibre is protected with a nanoscale layer of glass. Most significantly, almost all treated surfaces can be cleaned with water alone.

- Protect all your glass & metal surfaces from weathering, corrosion & climatic degradation
- 100% invisible, anti-abrasion, anti-bacterial & superphobic
- Easy to apply system using our convenient wipes or larger kits – instruction videos available online
- Single application can last up to 2 years

Clean & Protect Wipe

Easy to apply using the 2 wipes.

Contents:

- 1 x 6ml pre-cleaner wipe
- 1 x 6ml surface protection coating wipe



Coverage m ²	Code
2	1899009LGSS

Clean & Protect Standard Kit

For use on newly installed products to prevent the build up of pollutants and discolouration.

Contents:

- 1 x 100ml pre-cleaner
- 1 x 100ml surface protection
- 1 x microfibre cloth



Coverage m ²	Code
10	1899009LGSK

Clean & Protect Refresher Kit

For use on older already installed products and contains a stainless steel cleaner to use before you apply the other products.

Contents:

- 1 x 50ml stainless steel cleaner
- 1 x 100ml pre-cleaner
- 1 x 100ml surface protection
- 1 x microfibre cloth



Coverage m ²	Code
10	1899009LGSRK

Clean & Protect Trade Refresher Kit

Larger version of the standard refresher kit.

Contents:

- 1 x 250ml stainless steel cleaner
- 1 x 1000ml micro-particle remover
- 1 x 1000ml pre-cleaner
- 1 x 1000ml surface protection
- 1 x decontamination towel
- 10 x microfibre cloths



Coverage m ²	Code
200	1899009LGTRK

Protect Metal Surfaces

Avoid weathering, corrosion and degradation with Pro-Railing Protect.

If heavy staining is already present, the 3-Part Tea Staining Cleaner Kit which contains stainless cleaner, purified water and a stainless polish can remove this. To remove heavy discolouration use the Pickling Gel before treatment with the 3-Part Tea Staining Cleaner Kit.



Steel

Wrought Iron
Components

Gate
Hardware

Sliding
Door Gear

Gate
Automation

Mesh

Decking &
Subframe

Flooring &
Stair Treads

Handrailing

Fencing

Fixings

Contemplation

Bolt-down round post - satin finish



- Steel
- Wrought Iron Components
- Gate Hardware
- Sliding Door Gear
- Gate Automation
- Mesh
- Decking & Subframe
- Flooring & Stair Treads
- Handrailing
- Fencing
- Fixings



! 10mm glass infill panels, without a handrail, will not pass building regulations. This system is only suitable where a drop of less than 600mm is present.

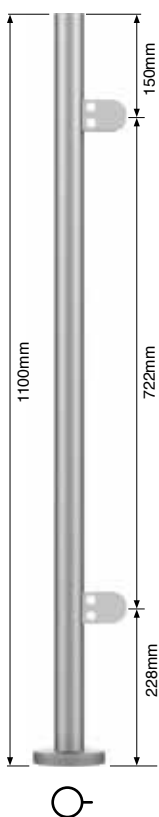
Range Of End Caps

To be used with bolt-down and concrete-in posts. See page 538.

Raised Top

7 Groove Flat Top

End Post



Ø mm	Code
42.4	1806761C
48.3	1806761D

Top fitting not included.

Mid Post



Satin finish

Ø mm	Code
42.4	1806762C
48.3	1806762D

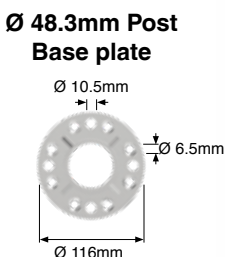
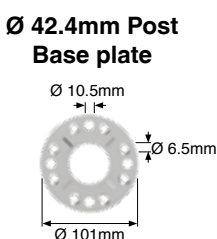
Top fitting not included.

Corner Post



Ø mm	Code
42.4	1806763C
48.3	1806763D

Top fitting not included.



GLASS PANELS

For our full range of standard glass panels to suit our Contemplation range, see page 515.

Concrete Fixings

Hex Head With Flange



Ø mm	Length mm	Code
M8	75	5002HCS875

Sold as single.

Multi-Fix Hex Head Bolt



Ø mm	Length mm	Code
M10	75	5002MF10875

Pack quantity 100.

Through Bolt



Ø mm	Length mm	Code
M8	95	5006TB08100

Sold as single.

Allen Key

For glass clamps

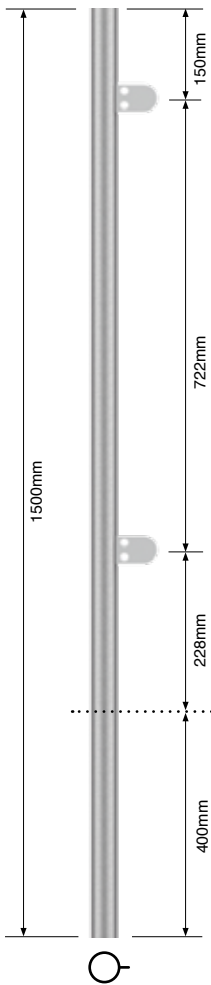


Code
189900606



Also perfect for side-fixing through a decking subframe. Just cut to size!

End Post



Ø mm	Code
42.4	1806751C

Top fitting not included.

Mid Post



Ø mm	Code
42.4	1806752C

Top fitting not included.

Corner Post

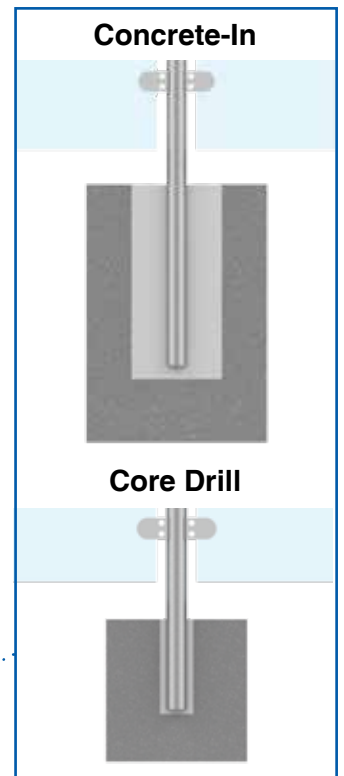


Ø mm	Code
42.4	1806753C

Top fitting not included.

Satin finish

Ground level



Baluster Brackets

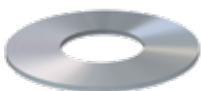
2 Hole Round



Ø mm	Code
42.4	1806212C

For side-fixing.posts.

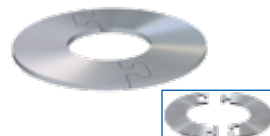
Donut Cover Plate



Ø mm	Code
42.4	1806247C

Fit at time of installation. For silicone use code: 189901201.

Retro-Fit Cover Plate



Ø mm	Code
42.4	1806248C

Retro-fitted after installation. For silicone use code: 189901201.

Cover Cap



Ø mm	Code
42.4	1806208C

Fit at time of installation. For silicone use code: 189901201.

Adjustable Corner Internal / External



Ø mm	Code
42.4	1806253C

For side-fixing.posts.

Contemplation

Bolt-down square post - satin finish



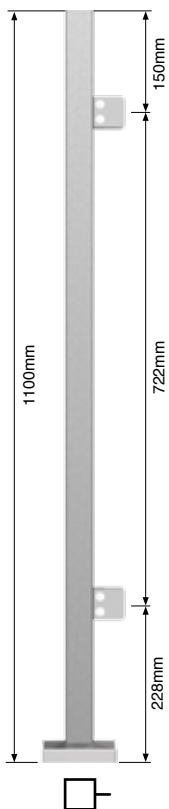
We stock a range of standard 10mm glass panels in 100mm increments to reduce supply times, see page 515. Get a whole system including glass in as little as 48 hours.

Flat Top End cap



Code: 1806215S40

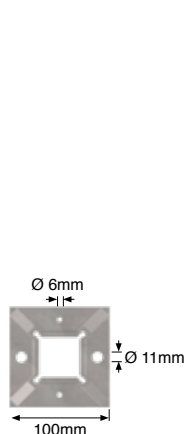
End Post



□ mm	Code
40	1806761S40

Top fitting not included.

Mid Post



□ mm	Code
40	1806762S40

Top fitting not included.

Corner Post

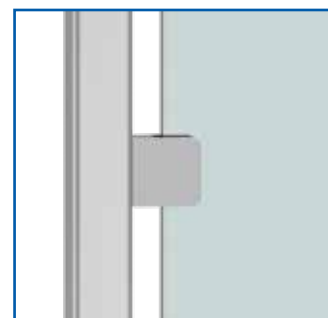


□ mm	Code
40	1806763S40

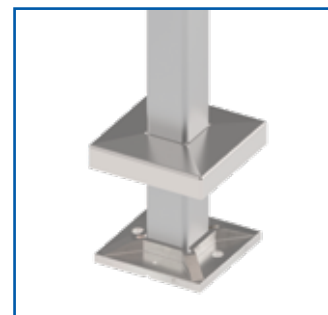
Top fitting not included.

Satin finish

All Posts Have:



Glass clamps for 10mm glass (8mm rubbers available).



Welded base fitting complete with cover.

Concrete Fixings

Hex Head With Flange



Ø mm	Length mm	Code
M8	75	5002HCS875

Sold as single.

Multi-Fix Hex Head Bolt



Ø mm	Length mm	Code
M10	75	5002MF10875

Pack quantity 100.

Through Bolt



Ø mm	Length mm	Code
M8	95	5006TB08100

Sold as single.

For our full range of square fittings see page 553.

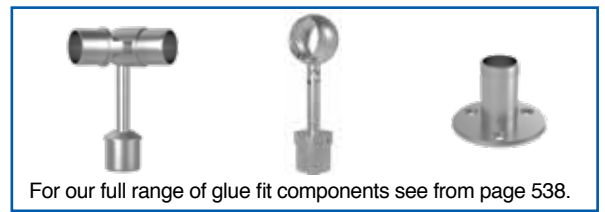


Pre-Assembled Plain Post

Stainless Steel Tube No Holes

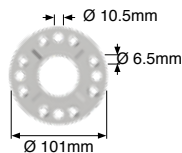


For our full range of glue fit components see from page 538.

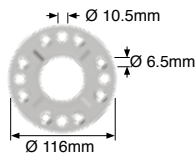


For our full range of glue fit components see from page 538.

Ø 42.4mm Post Base Plate



Ø 48.3mm Post Base Plate



Satin Finish

Ø mm	A mm	Code
48.3	972	1806799D
42.4	978	1806799C
42.4	1100	1806760C
48.3	1100	1806760D

Mirror Finish

42.4	978	1806799CM
------	-----	-----------

Dim A is post only with no top. Top fitting not included.

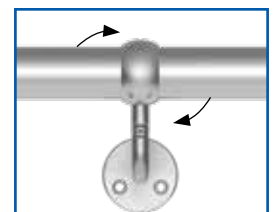
Ø mm	Height mm	Code
42.4	1000	1804708CB
48.3	1000	1804708DB
42.4	1000	1806708CB
48.3	1000	1806708DB
42.4	1200	1804708CL
48.3	1200	1804708DL
42.4	1200	1806708CL
48.3	1200	1806708DL
42.4	1500	1804708CXL
48.3	1500	1804708DXL
42.4	1500	1806708CXL
48.3	1500	1806708DXL

Mirror Finish

42.4	1000	1806708CBM
48.3	1000	1806708DBM

These posts can be drilled, bolted, cut to size, welded & more!

Handrail Kit



Length m	Ø mm	Code
1.2	42.4	1804803C

Kit includes 1.2m stainless steel Grade 304 tube and 2 x wall brackets.

Extend your handrail kit to any length with these additional components.

In-Line Connector



Ø mm	Code
42.4	1804206C

Scroll End



Ø mm	Code
42.4	1804221C

Raised Top



Ø mm	Code
42.4	1804215C

Adjustable Elbow

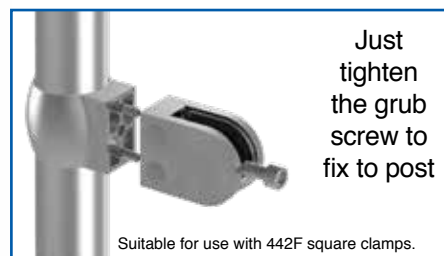
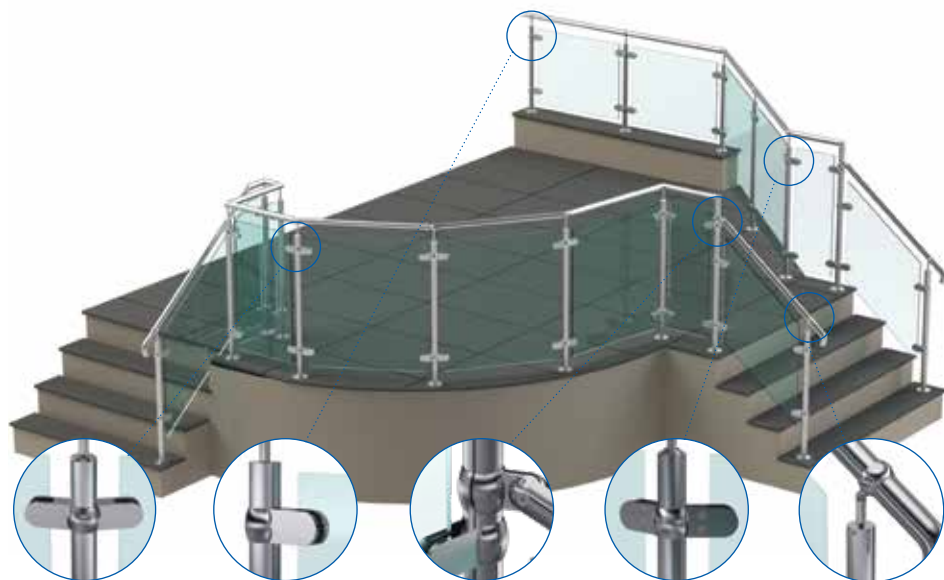


Ø mm	Code
42.4	1804203C

Sleeve Fit Brackets



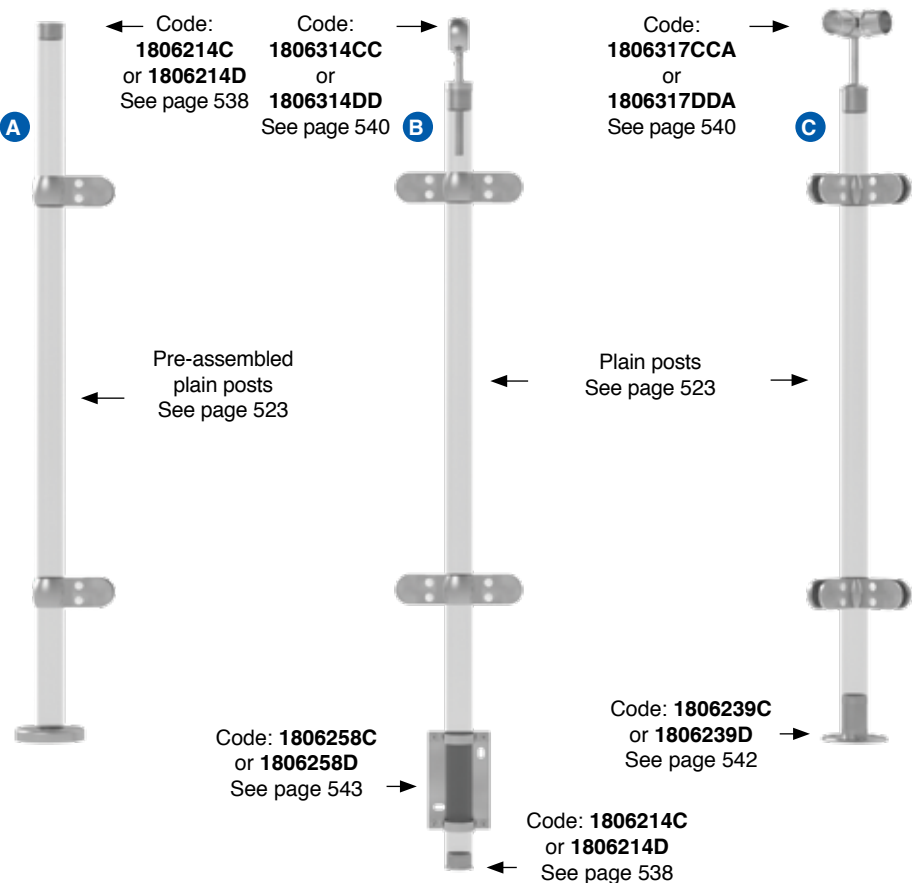
- Steel
- Wrought Iron
- Gate Hardware
- Sliding Door Gear
- Gate Automation
- Mesh
- Decking & Subframe
- Flooring & Stair Treads
- Handrailing
- Fencing
- Fixings



Create A Wide Range Of Posts With No Drilling!

- 1 Select your post height.
- 2 Choose your post top (end caps page 538, railing saddles page 540)
- 3 Choose your base (Bolt-down page 542, side-fix page 543)

Mid bracket Code: **1806522C10** End bracket Code: **1806521C10** Adjustable angle bracket Code: **1806318CC** Adjustable corner bracket Code: **1806523C10** Adjustable handrail support bracket Code: **1806314CC**

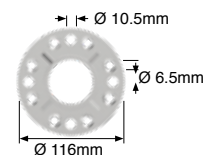
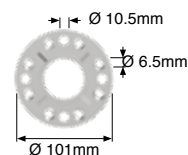


Stainless Steel Tube



Ø 42.4mm Post Base Plate

Ø 48.3mm Post Base Plate



Just slide everything into place & tighten!

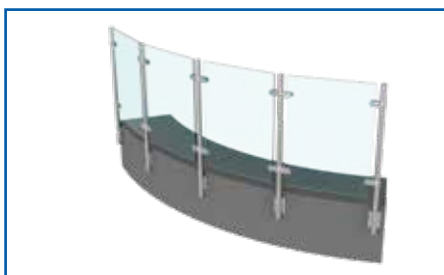
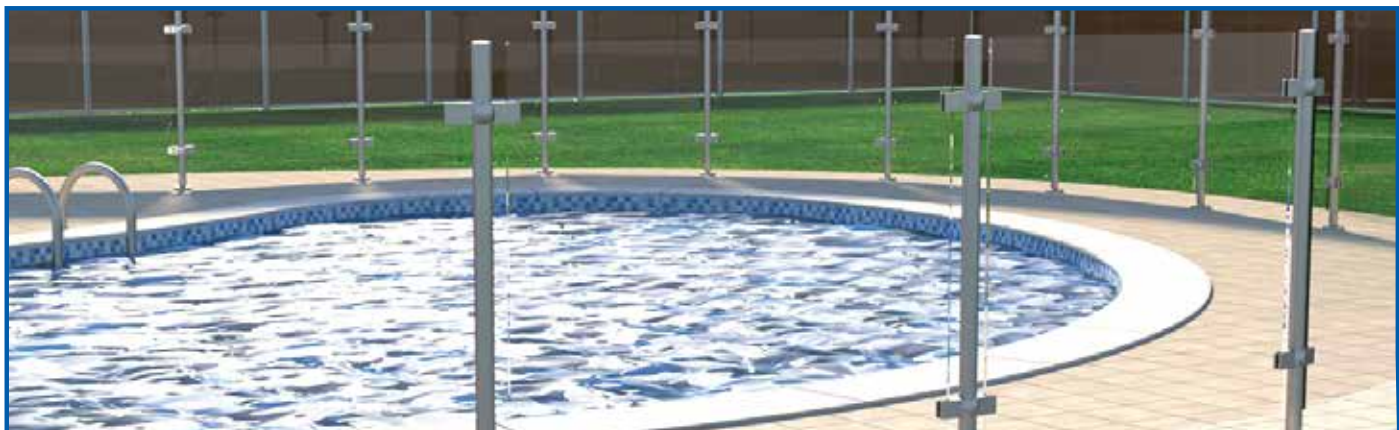


Image shows sleeve fit brackets being used on a curve.



The enlarged image shows sleeve fit brackets being used on a staircase.

Post	Length mm	Ø mm	Code
A	1100	42.4	1806760C
	1100	48.3	1806760D
B	1500	42.4	1806708CXL
	1500	48.3	1806708DXL
C	978	42.4	1806799C
	972	48.3	1806799D



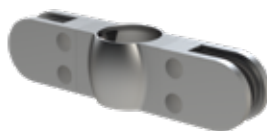
End Bracket



Glass Thickness mm	Ø mm	Code
10	42.4	1806521C10
10	48.3	1806521D10

8 or 12mm rubbers available below.

Mid Bracket



Glass Thickness mm	Ø mm	Code
10	42.4	1806522C10
10	48.3	1806522D10

8 or 12mm rubbers available below.

75 - 185° Adjustable Corner Bracket



Glass Thickness mm	Ø mm	Code
10	42.4	1806523C10
10	48.3	1806523D10

8 or 12mm rubbers available below.

Adjustable Angle Bracket

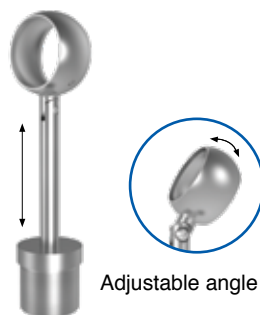


Adjustable angle

Ø mm	Code
42.4	1806318CC
48.3	1806318DD

Locked in place with a grub screw.

Adjustable Handrail Support Bracket



Adjustable angle

Ø mm	Code
42.4	1806314CC
48.3	1806314DD

Handrail Bracket With +/- 90° Adjustable Elbow



Adjustable angle

Ø mm	Code
42.4	1806317CCA
48.3	1806317DDA

Fascia Bracket

For tube



Ø mm	Code
42.4	1806258C
48.3	1806258D

Internal Fit Tube Flange

Hammer-fix



Ø mm	Code
42.4	1806239C
48.3	1806239D

End Cap

Flat top



Ø mm	Code
42.4	1806214C
48.3	1806214D

Rubber

For use with 401 clamps



Size mm	Code
8	189900108
12	189900112

Sold as singles.

Wire Rope System



- Steel
- Wrought Iron Components
- Gate Hardware
- Sliding Door Gear
- Gate Automation
- Mesh
- Decking & Subframe
- Flooring & Stair Treads
- Handrailing
- Fencing
- Fixings



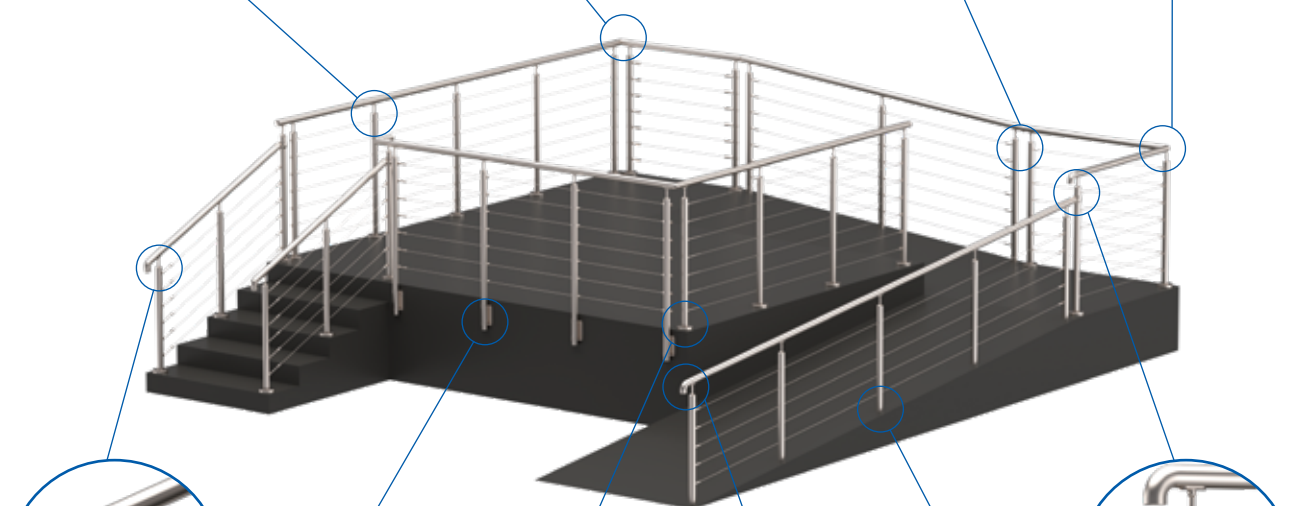
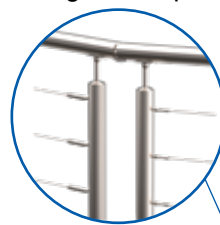
Stainless steel Ø 3 and 6mm strand wire rope system is a simple and cost effective alternative to our crossbar system. It can be fixed to most surfaces including wood, metal and brick and is ideal for external applications in residential and commercial environments. Suitable for self assembly and simple to install using self locking, crimped or glued connectors.

Wire lockable collars

90 degree elbow

Swageless ball socket fittings for slopes

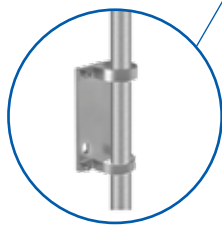
90 degree elbow handrail bracket



Swageless cable tensioner



Sleeve fit adjustable angle bracket



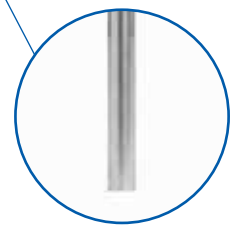
Side fix bracket



Bolt-down post



Scroll end



Concrete-in post

Wire Rope Systems:

System 1 - page 530 →

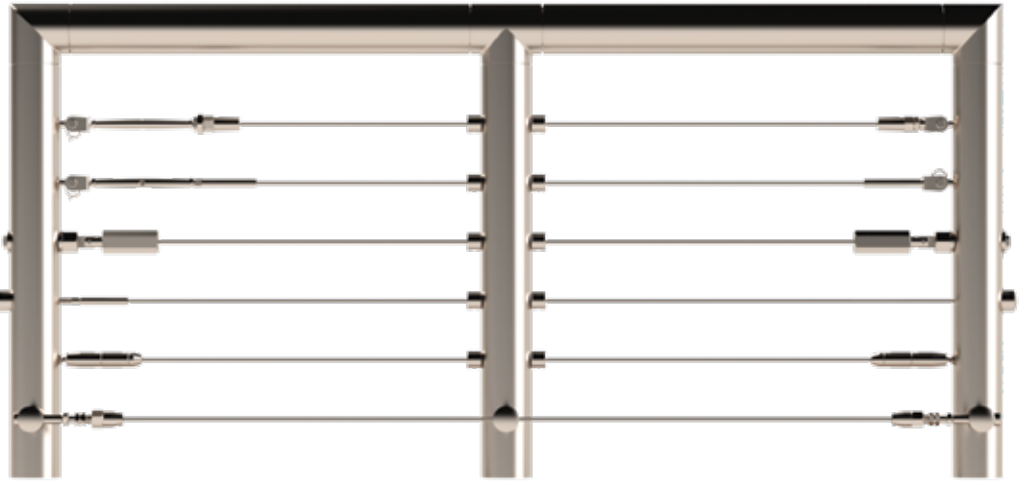
System 2 - page 530 →

System 3 - page 531 →

System 4 - page 532 →

System 5 - page 533 →

System 6 - page 534 →



System 7 - page 534 →

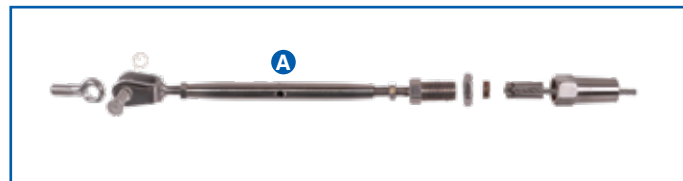
System 8 - page 534 →



Please note that our posts are not to be used with 6mm wire.

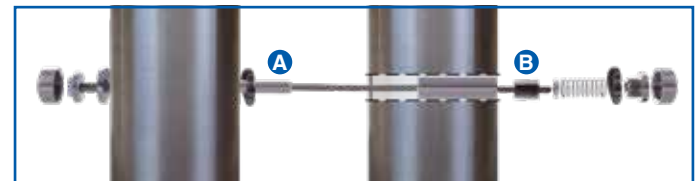
	System 1 (Swageless)	System 2 (Swaged)	System 3 (Swageless)	System 4 (Swaged)	System 5 (Swageless)	System 6 (Swaged)
3mm wire	✓	✓	✓	✓	✓	✓
Grade 316	✓	✓	✓	✓	✓	✓
Face fix	-	-	-	-	✓	-
In-line	✓	✓	✓	✓	✓	✓
Pre-assembled posts	✓	✓	-	-	-	-
Bespoke posts	-	-	✓	✓	✓	✓
Bespoke posts on stairs	✓	✓	✓	✓	✓	✓
Wooden posts	-	-	-	-	-	✓
Square posts	✓	✓	-	✓	✓	✓
Ø 42.4mm posts	✓	✓	✓	✓	✓	-
Ø 48.3mm posts	✓	✓	✓	✓	✓	-

Swageless (no crimp)



A Tension the wire by inserting a screwdriver and rotating.

Swaged (crimp)



A Secure the wire by crimping or gluing. **B** Swaged connector.



Scan here for our Wire Rope installation guide.

Steel

Wrought Iron Components

Gate Hardware

Sliding Door Gear

Gate Automation

Mesh

Decking & Subframe

Flooring & Stair Treads

Handrailing

Fencing

Fixings

Wire Rope System



Posts & fittings

7 Hole End/Mid Post

M6 eyebolts

14 Hole Mid Straining Post

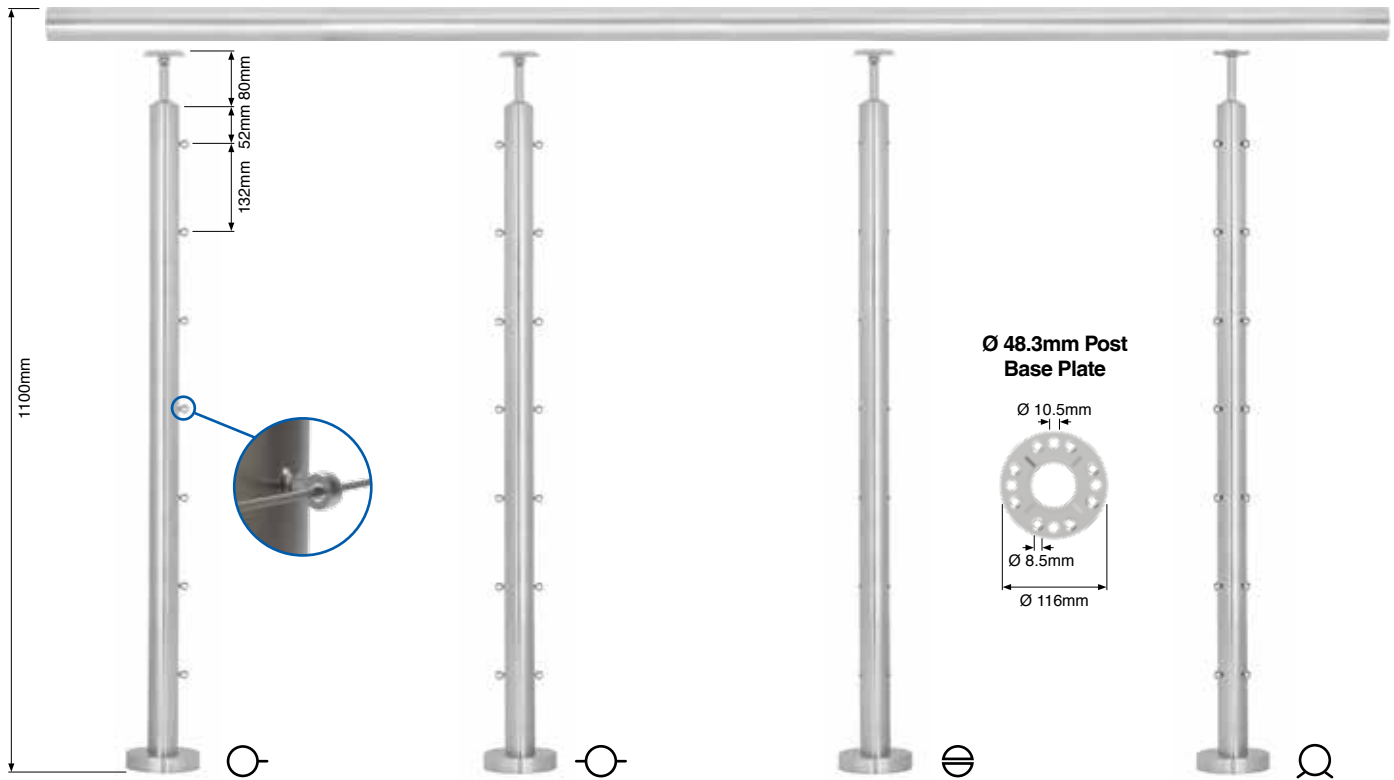
M6 eyebolts

14 Hole Mid Post

Ø 6mm through holes

14 Hole Corner Post

M6 eyebolts



Ø mm	Code
48.3	1806741D

For use with Ø 3mm wire only.

Ø mm	Code
48.3	1806742D

For use with Ø 3mm wire only.

Ø mm	Code
48.3	1806742DT

For use with Ø 3mm wire only.

Ø mm	Code
48.3	1806743D

For use with Ø 3mm wire only.

Thimble



To Suit Wire Ø mm	Code
3	1806610
6	1806670

Ferrule



To Suit Wire Ø mm	Code
3	1806609
3	1301609
6	1806669

Locking Collar



To Suit Wire Ø mm	Code
3	1806604
6	1806664

Eyebolt Connector



To Suit Wire Ø mm	Code
3	1806603
3	1301603
6	1806663*

M6 thread. *M10 thread.

Post Fitting Adaptor Ring



Ø mm	Code
42.4	1806335C
48.3	1806335D

M6 thread.

Swageless Cable Tensioner



To Suit Wire Ø mm	Code
3	1806611
6	1806671

Swageless Buckle



To Suit Wire Ø mm	Code
3	1806612
6	1806672

Swaged Cable Tensioner



To Suit Wire Ø mm	Code
3	1806601
6	1806661

Swaged Buckle Connector



To Suit Wire Ø mm	Code
3	1806602
6	1806662

For adhesive, crimping & cutting tools see page 531.

Swageless Internal Threaded Terminal

With thread for metal posts



To Suit Wire Ø mm	Screw Size	Suitable For Maximum Angle	Code
3	M6	24°	1806625M
6	M8	34°	1806685M

Swageless Internal Threaded Terminal

With screw for wooden posts



To Suit Wire Ø mm	Suitable For Maximum Angle	Code
3	24°	1806625W
6	34°	1806685W

Suitable for maximum 24 & 34° angles.

Cable Tensioner

For flat runs



To Suit Wire Ø mm	Size mm	Code
3	Flat	1806617
3	42.4	1806617C
3	48.3	1806617D
6	Flat	1806667
6	42.4	1806667C
6	48.3	1806667D

Includes 1 x threaded cable tensioner, cover cap and end fitting.

Cable Tensioner

For stairs and slopes



To Suit Wire Ø mm	Size mm	Code
3	Flat	1806618
3	42.4	1806618C
3	48.3	1806618D
6	Flat	1806677
6	42.4	1806677C
6	48.3	1806677D

Includes 1 x threaded cable tensioner, cover cap and end fitting.

Upward Angled Wire Rope Holder

For angles + / - 35°



To Suit Wire Ø mm	Size mm	Code
3	Flat	1806622
3	42.4	1806622C
3	48.3	1806622D
6	Flat	1806682
6	42.4	1806682C
6	48.3	1806682D

Downward Angled Wire Rope Holder

For angles + / - 35°



To Suit Wire Ø mm	Size mm	Code
3	Flat	1806621
3	42.4	1806621C
3	48.3	1806621D
6	Flat	1806681
6	42.4	1806681C
6	48.3	1806681D

Cable Tensioner

Through fitting



To Suit Wire Ø mm	Size mm	Code
3	N/A	1806613
6	N/A	1806673

Angled Wire Rope Holder

Left hand side



Tighteners to secure wire.

To Suit Wire Ø mm	Size mm	Code
3 & 6	Flat	1806615
3	42.4	1806615C
3	48.3	1806615D

Order screws code: 189900603.

Angled Wire Rope Holder

Middle



To Suit Wire Ø mm	Size mm	Code
3	Flat	1806616
3	42.4	1806616C
3	48.3	1806616D
6	Flat	1806676

Order screws code: 189900603.

Angled Wire Rope Holder

Right hand side



To Suit Wire Ø mm	Size mm	Code
3 & 6	Flat	1806614
3	42.4	1806614C
3	48.3	1806614D

Order screws code: 189900603.

Wire Rope

1 x 19 strands



Length m	Thickness mm	Code
10	3	180660510
10	6	180666510
50	3	180660550
50	6	180666550
100	3	1806605100
100	6	1806665100

Articulated Wire Tensioner



Ø mm	To Suit Wire Ø mm	Code
42.4	3	1804607C
42.4	3	1806607C
48.3	3	1806607D

Secured with grub screw.

Pad Eye



To Suit Wire Ø mm	Code
3	1806608
6	1806668

Fixing holes Ø 4.5mm.

Eyebolt Woodscrew Thread



To Suit Wire Ø mm	Code
3	1806606
6	1806666

Cover Cap

With locking ends



To Suit Wire Ø mm	Code
3 & 6	1806619

End Fitting



To Suit Wire Ø mm	Code
3	1806624
6	1806684

Cable Release Tool

For end fitting



To Suit Wire Ø mm	Code
3	1806620
6	1806680

Counter Sunk Screw



Ø x L mm	Code
M6 x 20	189900603

Steel

Wrought Iron Components

Gate Hardware

Sliding Door Gear

Gate Automation

Mesh

Decking & Subframe

Flooring & Stair Treads

Handrailing

Fencing

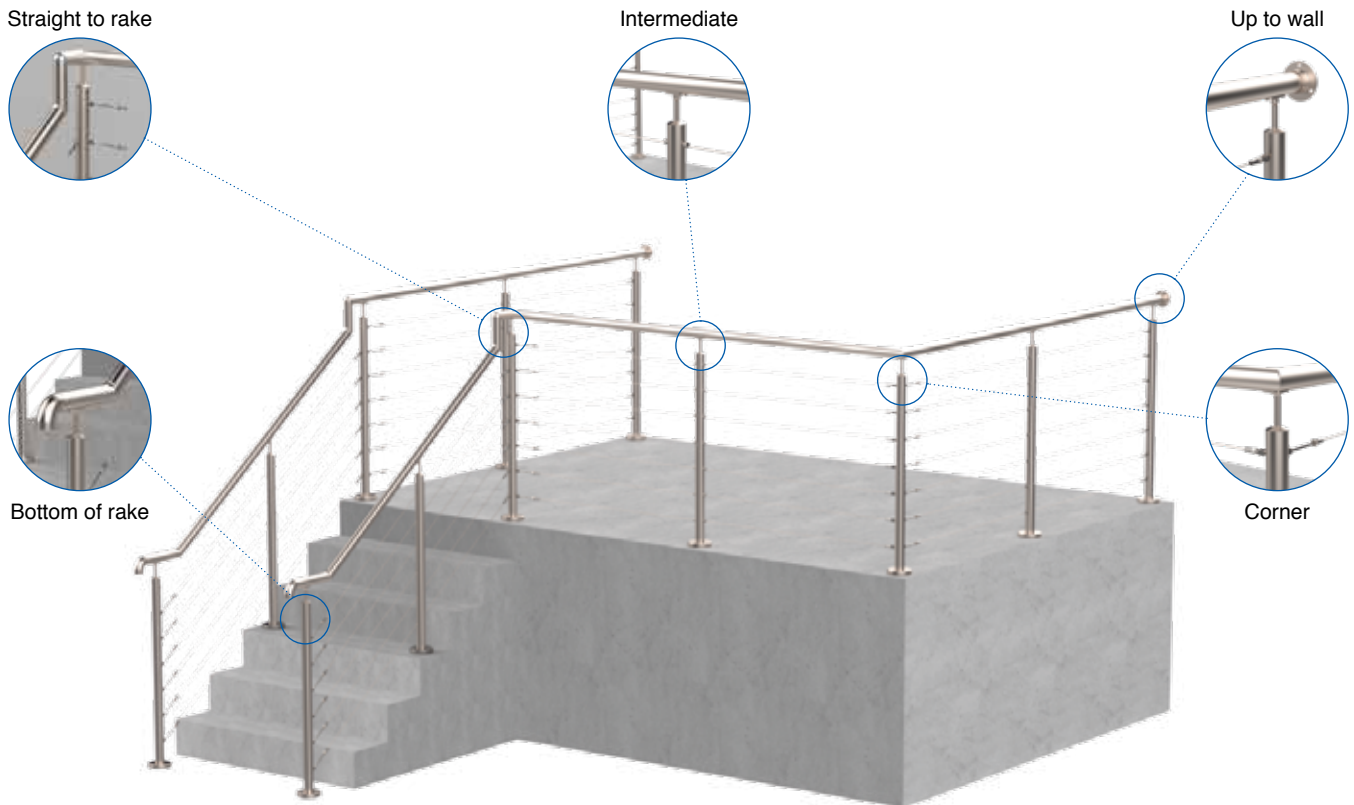
Fixings

Wire Rope System

System 1 & 2 in-line



- Steel
- Wrought Iron
- Gate Hardware
- Sliding Door Gear
- Gate Automation
- Mesh
- Decking & Subframe
- Flooring & Stair Treads
- Handrailing
- Fencing
- Fixings



Locking Collar



To Suit Wire Ø mm	Code
3	1806604

Eyebolt Connector



Thread mm	To Suit Wire Ø mm	Code
M6	3	1806603

M6 thread.

Post Fitting Adaptor Ring



Ø mm	Code
42.4	1806335C
48.3	1806335D



No need to drill posts.

Example of post fitting adaptor ring with 6mm eye bolt code: **1806663** and swaged buckle connector code: **1806602**

Swageless Cable Tensioner



To Suit Wire Ø mm	Code
3	1806611

Swageless Buckle



To Suit Wire Ø mm	Code
3	1806612

Swaged Cable Tensioner



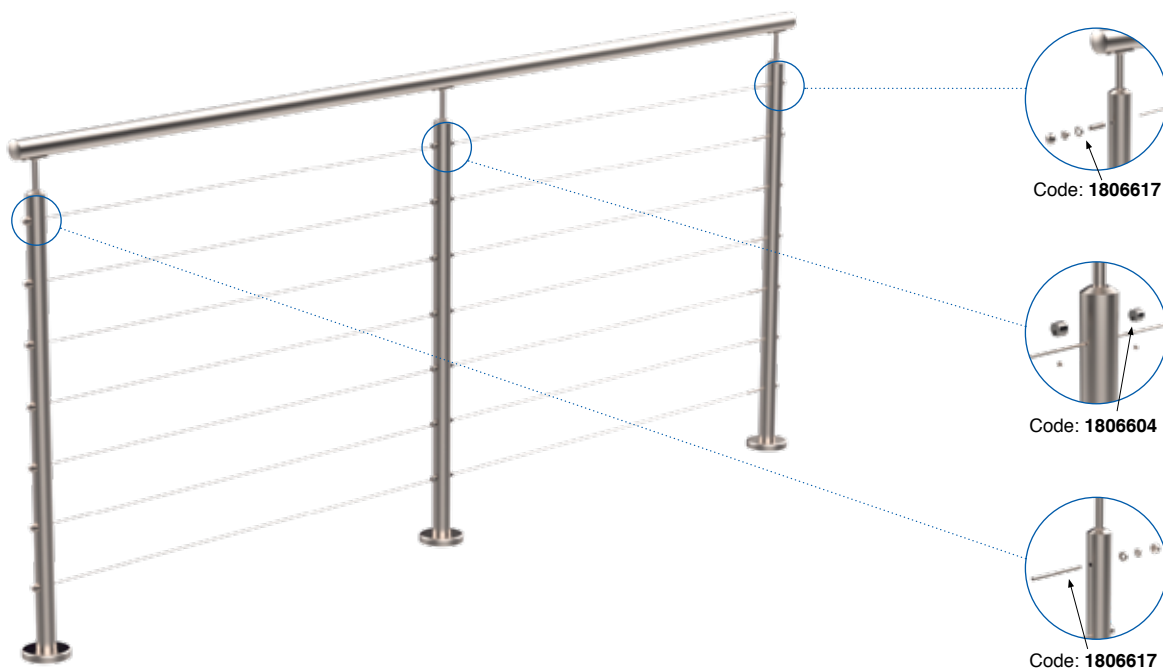
To Suit Wire Ø mm	Code
3	1806601

Swaged Buckle Connector



To Suit Wire Ø mm	Code
3	1806602

Swageless connectors can be secured using the 454 Loctite adhesive code: 1899007454. when left for 72 hours they will be able to carry a load of 322kgs. so in a 7 wire system the infill at one end of the post can resist over 2 tonnes!



Cable Tensioner

For flat runs



Locking Collar



To Suit Wire Ø mm	Size mm	Code
3	Flat	1806617
3	42.4	1806617C
3	48.3	1806617D

Includes 1 x threaded cable tensioner, cover cap and end fitting.

To Suit Wire Ø mm	Code
3	1806604

For wire rope see page 529.

Universal Strand Wire Components



Make your own handrailing, in stainless, aluminium or mild steel and create your infills using our range of universal components to suit Ø 3 & 6mm wire.

Crimping Tool



Code
189900102

Hydraulic Crimping Tool



Code
189900103

Wire Cutting Tool



Code
080569

Instant Adhesive

For gluing wire in crimped connectors



ml	Code
50	1899007454

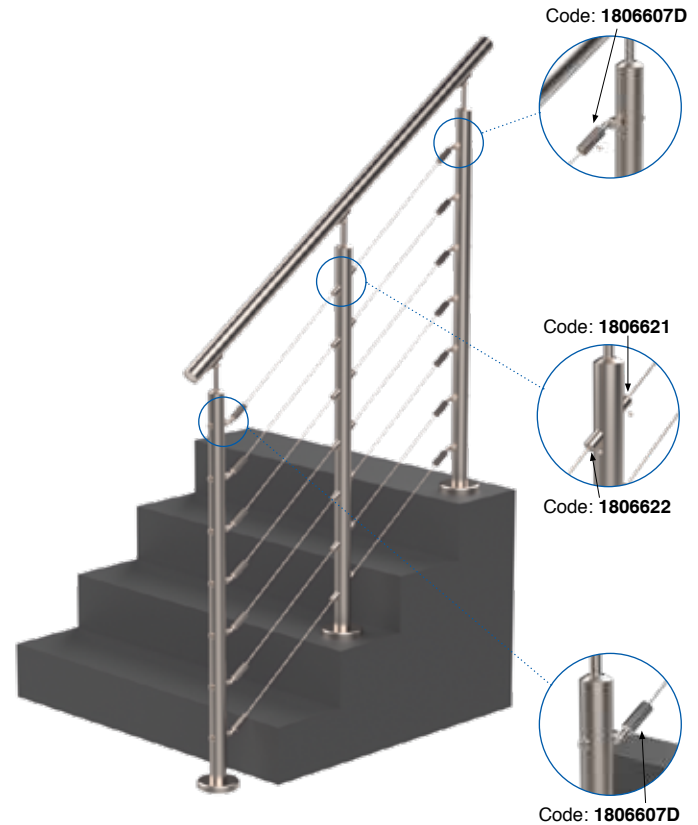
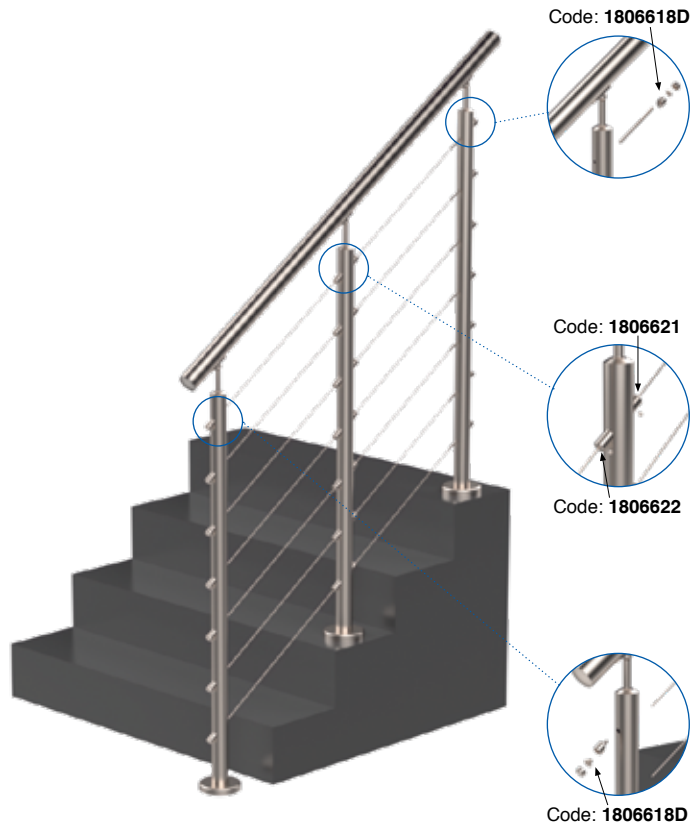
Supplied with plunger and needle for accurate application.

Wire Rope System

System 3 & 4 for stairs



- Steel
- Wrought Iron
- Gate Hardware
- Sliding Door Gear
- Gate Automation
- Mesh
- Decking & Subframe
- Flooring & Stair Treads
- Handrailing
- Fencing
- Fixings



Cable Tensioner

For stairs and slopes



To Suit Wire Ø mm	Size mm	Code
3	Flat	1806618
3	42.4	1806618C
3	48.3	1806618D

Includes 1 x threaded cable tensioner, cover cap and end fitting.

Upward Angled Wire Rope Holder

For angles + / - 35°



To Suit Wire Ø mm	Size mm	Code
3	Flat	1806622
3	42.4	1806622C
3	48.3	1806622D

Downward Angled Wire Rope Holder

For angles + / - 35°



To Suit Wire Ø mm	Size mm	Code
3	Flat	1806621
3	42.4	1806621C
3	48.3	1806621D

Articulated Wire Tensioner

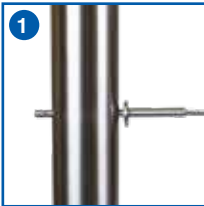


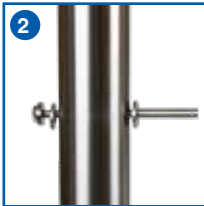
Ø mm	To Suit Wire Ø mm	Code
42.4	3	1806607C
48.3	3	1806607D

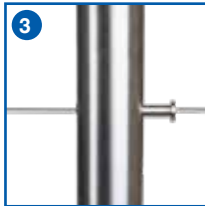
Secured with grub screw.


For cable release tool see page 529.

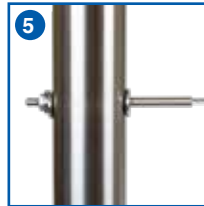
Installation Using Cable Tensioner


- 

1 Crimp wire into cable tensioner and insert through pre-drilled hole on starter post.
- 

2 Add washer and nut and loosely tighten.
- 

3 Insert end fitting through end post, pull tight, cut wire flush with fitting.
- 

4 Screw on cover cap.
- 

5 Tighten nut on starter post to bring the wire under tension.
- 

6 Cut excess protruding thread and screw on cover cap.

For Loctite adhesives & glue see page 721.

For a full range of stainless steel tube, handrail fittings & accessories see from page 538.



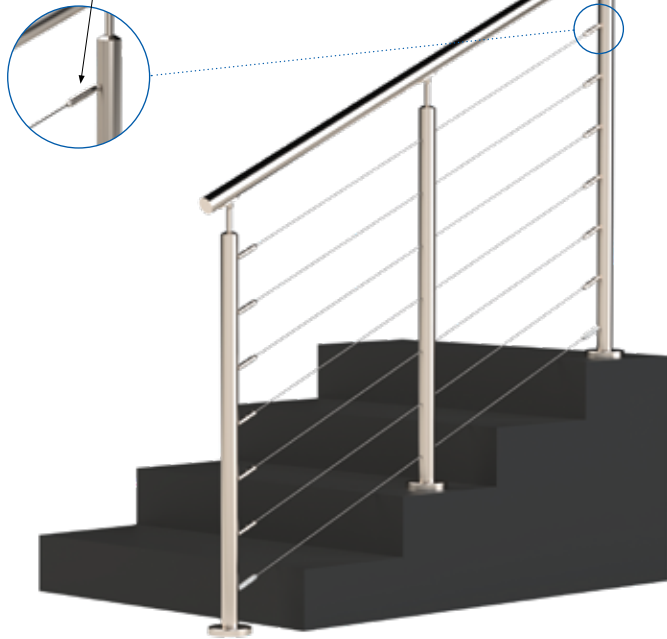
Wire Rope System

System 5 for steps on 24 or 34 degrees

24° Stairs

Using Ø 3mm wire

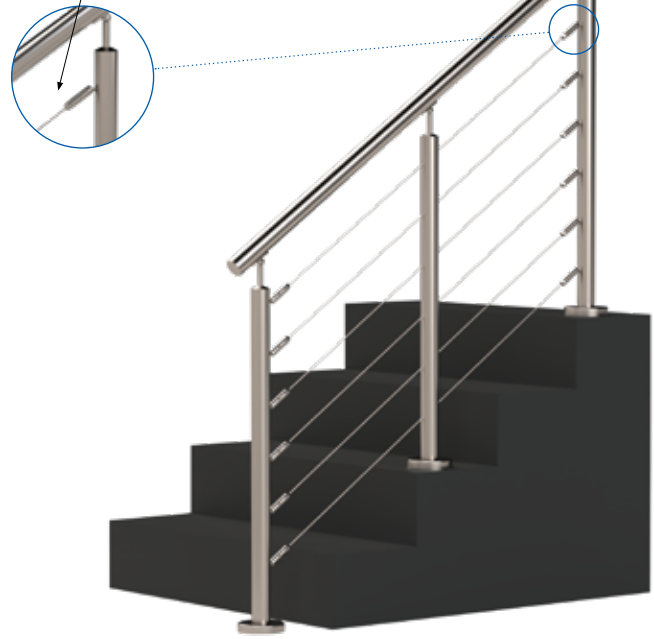
Code: 1806625M



34° Stairs

Using Ø 6mm wire

Code: 1806685M



Swageless Internal Threaded Terminal

With thread for metal posts



Suitable for maximum
24 & 34° angles.



To Suit Wire Ø mm	Screw Size	Suitable For Maximum Angle	Code
3	M6	24°	1806625M

To Suit Wire Ø mm	Screw Size	Suitable For Maximum Angle	Code
6	M8	34°	1806685M



You can order online 24 hours a day, 7 days a week, scan here or visit www.fhbrundle.co.uk

Steel

Wrought Iron Components

Gate Hardware

Sliding Door Gear

Gate Automation

Mesh

Decking & Subframe

Flooring & Stair Treads

Handrailing

Fencing

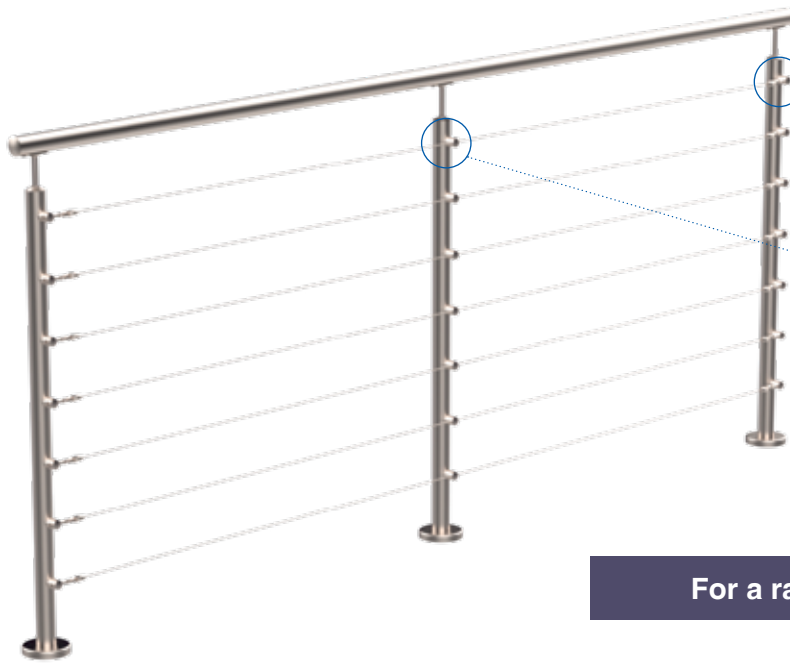
Fixings

Wire Rope System

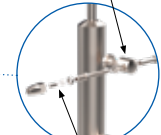
System 6 for flat runs



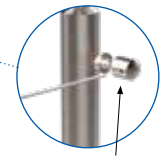
- Steel
- Wrought Iron
- Gate
- Hardware
- Sliding Door Gear
- Automation
- Mesh
- Decking & Subframe
- Flooring & Stair Treads
- Handrailing
- Fencing
- Fixings



Code: 1806614



Code: 1806613



Code: 1806616

For a range of posts see page 528.

Cable Tensioner

Through fitting



To Suit Wire Ø mm	Code
3	1806613

Angled Wire Rope Holder

Left hand side



Tighteners to secure wire.

To Suit Wire Ø mm	Size mm	Code
3 and 6	Flat	1806615
3	42.4	1806615C
3	48.3	1806615D

Order screws code: 189900603.

Angled Wire Rope Holder

Middle



To Suit Wire Ø mm	Size mm	Code
3	Flat	1806616
3	42.4	1806616C
3	48.3	1806616D

Order screws code: 189900603.

Angled Wire Rope Holder

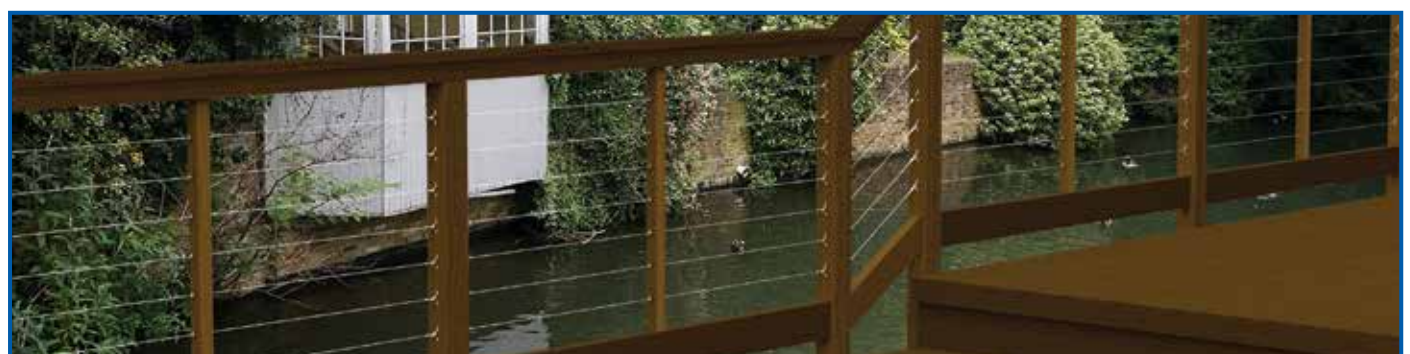
Right hand side



To Suit Wire Ø mm	Size mm	Code
3 and 6	Flat	1806614
3	42.4	1806614C
3	48.3	1806614D

Order screws code: 189900603.

Systems 7 & 8 For Wooden Posts



Swageless Internal Threaded Terminal



To Suit Wire Ø mm	Code
3	1806625W
6	1806685W

With screw for wooden posts.

Thimble



To Suit Wire Ø mm	Code
3	1806610

Ferrule



To Suit Wire Ø mm	Code
3	1806609
3	1301609

Pad Eye



To Suit Wire Ø mm	Code
3	1806608

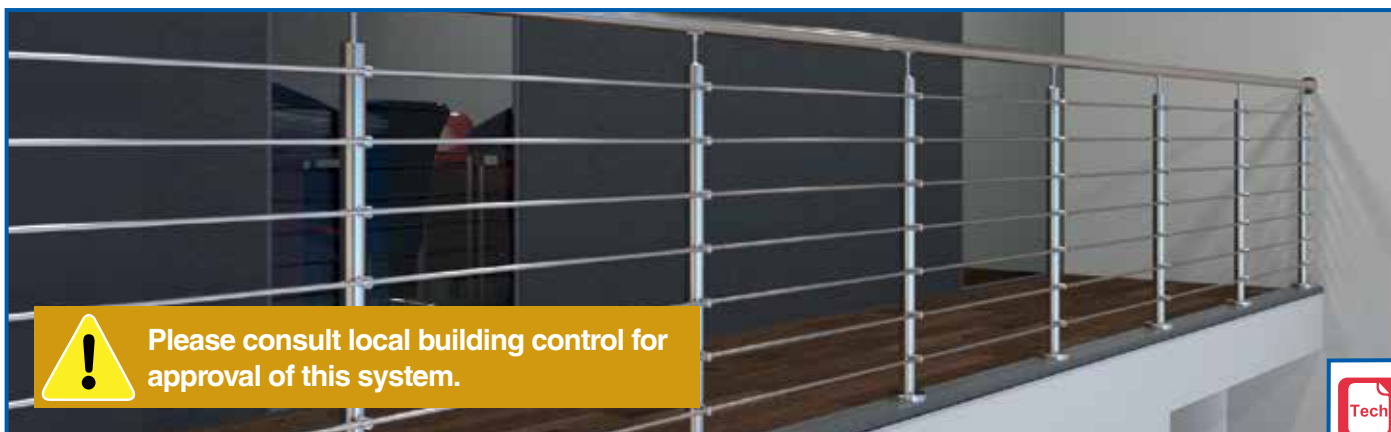
Fixing holes Ø 4.5mm.

Eyebolt With Woodscrew Thread



To Suit Wire Ø mm	Code
3	1806606

For Loctite adhesives & glue see page 721.

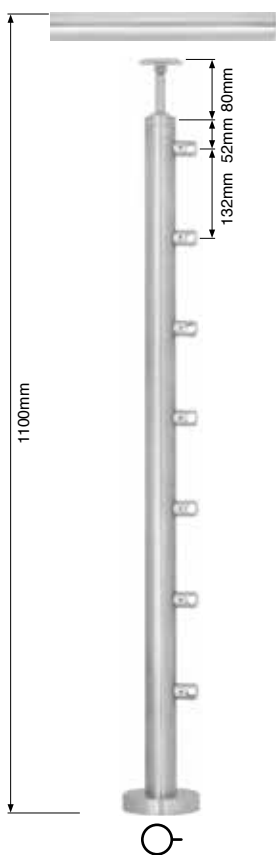


! Please consult local building control for approval of this system.



Our crossbar system can provide a modern handrail and balustrade for many applications. Offering another practical alternative to a glazed balustrade. Flexible components allow for 7 rails to be fitted as standard.

Round 7 Hole Post



Ø mm	Code
42.4	1806737C
48.3	1806737D

Fitted with 12mm bar/tube holders.

Solid Bar



Ø mm	Code
12	1804500
12	1806500

3m length.

Tube Connector



Ø mm	Code
12	1804524
12	1806524

Solid End Ball



Ø mm	Code
20	1301502
20	1804502
20	1806502

Hex Head With Flange



Metric Ø x L mm	Length mm	Code
M8 x 75	75	5002HCS875

Pack quantity 1.

Multi-Fix Hex Head Bolt



Ø mm	Length mm	Code
M10	75	5002MF10875

Pack quantity 100.

Hollow Tube



Ø mm	Code
12	1804510
12	1806510

3m length. 1mm wall thickness.

Crossbar Holder

Flat mounting



Code
1804501F

Ø 12.2mm through hole requires M6 button head fixing bolt code: 5006BS06X20.

Crossbar Holder

Tube mounting



Ø mm	Code
42.4	1804501C
48.3	1804501D
42.4	1806501C
48.3	1806501D

Ø 12.2mm through hole requires M6 button head fixing bolt code: 5006BS06X20.

Angle Joint Connector



Code
1804507
1806507

90° Elbow Radiused Corner



Ø mm	Code
12	1804525
12	1806525

Allen Key & Button Head Bolt

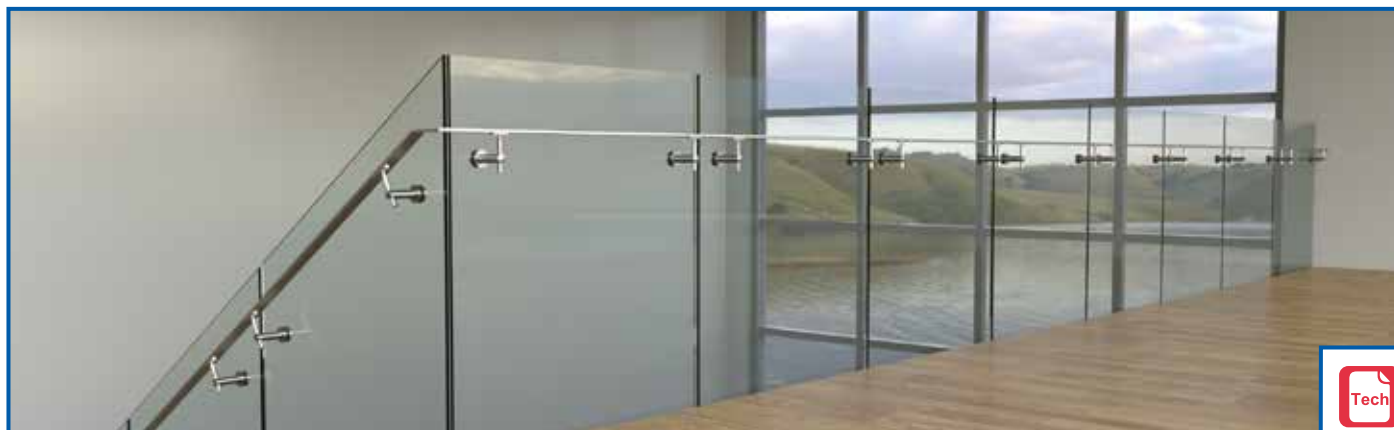


Description	Ø x L mm	Code
Allen Key	-	189900607
Bolt	M6 x 20	5006BS06X20

For Loctite adhesives & glue see page 721.

Rectangular Handrail System

Type 40 x 10mm



Our 40 x 10mm rectangular handrailing system adds a contemporary look to your installation. It's easy to glue together and can work with any number of flat top saddle handrail brackets.

Rectangular Handrail



Length m	Code
3.0	18067044010
6.0	18067004010

1.5mm wall thickness.

Joiner



Code
18062064010

90° Joiner



Code
18062024010

Adjustable Connector



Code
18062274010

End Cap



Code
18062144010

Handrail Bracket

Wall mounting



Code
18063054010

Adjustable Handrail Bracket

Glass/flat



Ø mm	To Suit	Code
50	Flat	1806334FF

82mm distance from glass to centre of bracket. To suit 12 - 30mm glass thickness.

Adjustable Handrail Bracket

Wall/flat



□ mm	To Suit	Code
40	Flat	1806303S40F

92mm distance from wall to centre of bracket. Requires threaded dowel code: **189900622** for wall fixing.

FREE* DELIVERY on orders over £150!



Wrought Iron Components



Perforated Metal



Expanded Metal



Welded Wire Mesh



Woven Wire Mesh



Gate Hardware



Gate Automation



Flooring & Stair Treads



Decking & Subframe



Cantilever Gate Components



Steel Section



Sliding Door Gear



Handrailing & Components



Glass



Fixings & Tools



Tube Clamps



Crash Barrier



Gates & Railings



Fencing & Security



Working at Height



Steel

Wrought Iron Components

Gate Hardware

Sliding Door Gear

Gate Automation

Mesh

Decking & Subframe

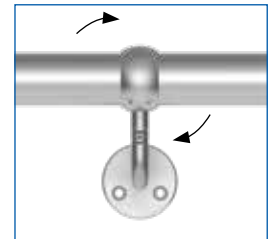
Flooring & Stair Treads

Handrailing

Fencing

Fixings

Flexible,
easy to install,
easy to extend,
looks Stunning.



Length m	Ø mm	Code
1.2	42.4	1804803C

Kit includes 1.2m stainless steel Grade 304 tube and 2 x wall brackets.

Extend your handrail kit to any length with these additional components.

Handrail Bracket

Wall/tube



Adjustable angle

Ø mm	Code
42.4	1804308FC

85mm distance from wall to centre of bracket.

Hollow Tube



Ø mm	Code
42.4	1804708CL

1.2m length.

Adjustable Elbow



Ø mm	Code
42.4	1804203C

In-Line Connector



Ø mm	Code
42.4	1804206C

Scroll End



Ø mm	Code
42.4	1804221C

Raised Top



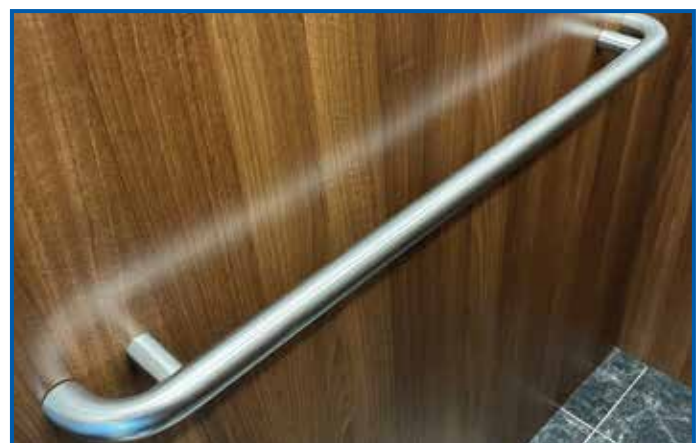
Ø mm	Code
42.4	1804215C

Wall/Tube



Ø mm	Length mm	Code
42.4	42.5	1804309FC

Elevator Rail Bracket



Hollow Tube For Handrails & Posts



1.0m Length

Ø mm	Code
42.4	1804708CB
48.3	1804708DB
42.4	1806708CB
48.3	1806708DB

2mm wall thickness.

1.2m Length

Ø mm	Code
42.4	1804708CL
48.3	1804708DL
42.4	1806708CL
48.3	1806708DL

2mm wall thickness.

1.5m Length

Ø mm	Code
42.4	1804708CXL
48.3	1804708DXL
42.4	1806708CXL
48.3	1806708DXL

2mm wall thickness.

3.0m Length

Ø mm	Code
42.4	1804704C
48.3	1804704D
42.4	1806704C
48.3	1806704D

2mm wall thickness.

5.8m Length

Ø mm	Code
42.4	1804701C
48.3	1804701D
42.4	1806701C
48.3	1806701D

2mm wall thickness.

Hollow Tube



Ø mm	Length m	Code
12	3	1804510
12	3	1806510

1mm wall thickness.

Solid Bar



Ø mm	Length m	Code
12	3	1804500
12	3	1806500

Edging Section



Ø mm	Length m	Code
18	3	1504P011

1.25mm wall thickness.

Square Hollow Tube



□ mm	Length m	Code
40	2.9	1806704S40
40	5.8	1806700S40

2.5mm wall thickness.

All stainless fittings are supplied in a satin polish finish grit 320. They can also be supplied in a mirror polish finish. See page 564.

End Caps

Flat Top



Ø mm	Code
42.4	1804214C
48.3	1804214D
42.4	1806214C
48.3	1806214D

7 Groove Flat Top



Ø mm	Code
42.4	1806274C
48.3	1806274D

Glue fit.

Raised Top



Ø mm	Code
42.4	1804215C
48.3	1804215D
42.4	1806215C
48.3	1806215D

Dome Top



Ø mm	Code
42.4	1804216C
48.3	1804216D
42.4	1806216C
48.3	1806216D

For our range of mirror finish components see from page 564.



Adjustable Height - Fixed Spigot

Wall/Tube



Ø mm	Code
42.4	1804303FC
48.3	1804303FD
42.4	1806303FC
48.3	1806303FD

68mm distance from wall to centre of bracket.

Glass/Tube



Ø mm	Code
42.4	1804333FC
48.3	1804333FD
42.4	1806333FC
48.3	1806333FD

82mm distance from glass to centre of bracket.
To suit 12 - 30mm glass thickness.

Single Wall Mount

Wall/Tube



Ø mm	Code
42.4	1806315FC
48.3	1806315FD

72mm distance from wall to centre of bracket.

Fixed Spigot

Wall/Tube



Ø mm	Code
42.4	1804305FC
48.3	1804305FD
42.4	1806305FC
48.3	1806305FD

63.5mm distance from wall to centre of bracket.

Wall/Tube



Ø mm	Code
42.4	1804305FCB
48.3	1804305FDB
42.4	1806305FCB
48.3	1806305FDB

85mm distance from wall to centre of bracket.

Wall/Flat



Code
1804305FF

63.5mm distance from wall to centre of bracket.

Adjustable Spigot

Wall/tube



Adjustable angle

Ø mm	Code
42.4	1804308FC
48.3	1804308FD
42.4	1806308FC
48.3	1806308FD

85mm distance from wall to centre of bracket.

Satin Polish Weldable Handrail Bracket & Cover Plate



Code
171166
171169

76mm distance from wall to centre of bracket.

Handrail Bracket Plate & Rubbers

To suit glass balustrading



Ø mm	Glass mm	Code
50	8 - 19	1804358G
50	8 - 19	1806358G

Glass hole size Ø 22mm. M8 thread.

Allen Key

For tightening grub screws in handrail brackets



Code
189900607

Fixings

Countersunk Screw

For fixing flat saddles



Ø x L mm	Pack Qty	Code
M5 x 20	1	189900619

Self-tapping. Pilot holes required. Use drill bit code: **189901004**.

Pan Head Screw

For fixing Ø 42.4 & 48.3mm saddles



Ø x L mm	Pack Qty	Code
M5 x 20	1	189900620

Self-tapping. Pilot holes required. Use drill bit code: **189901004**.

Button Head Bolt

For fixing handrail brackets in threaded holes



Ø x L mm	Pack Qty	Code
M5 x 20	1	5006BS05X20
M6 x 20	1	5006BS06X20

Pilot holes required.

Steel

Wrought Iron Components

Gate Hardware

Sliding Door Gear

Gate Automation

Mesh

Decking & Subframe

Flooring & Stair Treads

Handrailing

Fencing

Fixings

Railing Saddles



Steel
Wrought Iron Components
Gate Hardware
Sliding Door Gear
Gate Automation
Mesh
Decking & Subframe
Flooring & Stair Treads
Handrailing
Fencing
Fixings

Fixed Spigot

Floor/Tube



Ø mm	Code
42.4	1804307FC
48.3	1804307FD
42.4	1806307FC
48.3	1806307FD

Tube/Tube



Ø mm	Code
42.4	1804310CC
48.3	1804310DD
42.4	1806310CC
48.3	1806310DD

90° Tube/Tube



Ø mm	Code
42.4	1804311CC
48.3	1804311DD
42.4	1806311CC
48.3	1806311DD

Height 62mm.

For 201 type elbows used with handrails.

Adjustable Spigots

Tube/Tube



Adjustable angle

Ø mm	Code
42.4	1804312CC
48.3	1804312DD
42.4	1806312CC
48.3	1806312DD

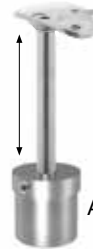
Tube/Tube



Adjustable angle and height

Ø mm	Code
42.4	1806322CC
48.3	1806322DD

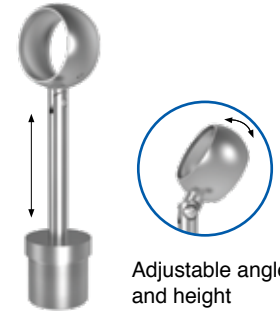
90° Fixed Saddle Tube/Tube



Adjustable height

Ø mm	Code
42.4	1806321CC
48.3	1806321DD

Adjustable Handrail Support Bracket



Adjustable angle and height

Ø mm	Code
42.4	1804314CC
48.3	1804314DD
42.4	1806314CC
48.3	1806314DD

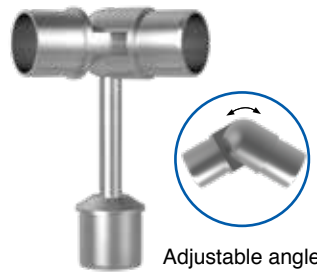
Handrail Support Brackets

Handrail Bracket With 90° Fixed Elbow



Ø mm	Code
42.4	1804311CCA
48.3	1804311DDA
42.4	1806311CCA
48.3	1806311DDA

Handrail Bracket With +/- 90° Adj Elbow



Adjustable angle

Ø mm	Code
42.4	1804317CCA
48.3	1804317DDA
42.4	1806317CCA
48.3	1806317DDA

Fixed Saddles 90° Corner Top



Ø mm	Code
42.4	1804356C
48.3	1804356D
48.3	1806356D
Flat	1804356F

Straight Top



Ø mm	Code
42.4	1804351C
48.3	1804351D
42.4	1806351C
48.3	1806351D
Flat	1804351F
Flat	1806351F

Pan Head Thread Rolling Bolt

For fixing railing saddles to tube



Ø x L mm	Pack Qty	Code
M5 x 20	1	189900686

Self-tapping. Pilot holes required. Use drill bit code: 189901005.

Cobalt Drill Bit

To suit 5mm screws & bolts



Description	Code
4.2mm drill for self-tapping screw	189901004
4.5mm drill for thread rolling bolt	189901005

For Loctite adhesives & glue see page 721.

90° Elbow Radiused Corner



Ø mm	Code
42.4	1804200C
48.3	1804200D
42.4	1806200C
48.3	1806200D

90° Elbow Round Corner



Ø mm	Code
42.4	1804201C
48.3	1804201D
42.4	1806201C
48.3	1806201D

90° Elbow Square Corner



Ø mm	Code
42.4	1804202C
48.3	1804202D
42.4	1806202C
48.3	1806202D

135° Elbow



Ø mm	Code
42.4	1804220C
48.3	1804220D
42.4	1806220C
48.3	1806220D

90° Weldable Elbow



Ø mm	Code
42.4	1804E42
48.3	1804E48
42.4	1806E42
48.3	1806E48

Adjustable Elbow +/- 90°



Ø mm	Code
42.4	1804203C
48.3	1804203D
42.4	1806203C
48.3	1806203D

Adjustable Elbow Smooth 0 - 70°



Ø mm	Code
42.4	1804227C
48.3	1804227D
42.4	1806227C
48.3	1806227D

Rotating Elbow



Ø mm	Code
42.4	1804233C
48.3	1804233D
42.4	1806233C
48.3	1806233D

Adjustable Handrail Adaptor 0 - 70°



Ø mm	Code
42.4	1806316CC
48.3	1806316DD

Tube Adaptor



Ø mm	Code
42.4	1804313CC
48.3	1804313DD
42.4	1806313CC
48.3	1806313DD

3 Way Corner



Ø mm	Code
42.4	1804204C
48.3	1804204D
42.4	1806204C
48.3	1806204D

Long Tee



Ø mm	Code
42.4	1804205C
48.3	1804205D
42.4	1806205C
48.3	1806205D

4 Way Cross



Ø mm	Code
42.4	1804222C
48.3	1804222D
42.4	1806222C
48.3	1806222D

In-Line Connector



Ø mm	Code
42.4	1804206C
48.3	1804206D
42.4	1806206C
48.3	1806206D

Scroll End



Ø mm	Code
42.4	1804221C
48.3	1804221D
42.4	1806221C
48.3	1806221D

Extended Scroll End



Ø mm	Length mm	Code
42.4	400	1804EA42180
48.3	400	1804EA48180
42.4	400	1806EA42180
48.3	400	1806EA48180

Panel Infill Adaptor



Ø mm	Code
42.4	1804503C
42.4	1806503C

Suits material 1.5 - 10mm thick. Requires 6mm fixing bolt code: 5006BS06X20.

Adjustable Angle Bracket



Adjustable angle

Ø mm	Code
42.4	1806318CC
48.3	1806318DD

Locked in place with grub screw.

Steel

Wrought Iron Components

Gate Hardware

Sliding Door Gear

Gate Automation

Mesh

Decking & Subframe

Flooring & Stair Treads

Handrailing

Fencing

Fixings

Flanges & Base Plates



- Steel
- Wrought Iron
- Gate Hardware
- Sliding Door Gear
- Gate Automation
- Mesh
- Decking & Subframe
- Flooring & Stair Treads
- Handrailing
- Fencing
- Fixings

External Round Tube Flange



Ø mm	Code
42.4	1804209C
48.3	1804209D
42.4	1806209C
48.3	1806209D

Square Edge Tube Flange



Ø mm	Code
42.4	1804210C
48.3	1804210D
42.4	1806210C
48.3	1806210D

Weldable Round Wall Flange



Ø mm	Code
42.4	1804217C
48.3	1804217D
42.4	1806217C
48.3	1806217D

Cover Plate To suit 217



Ø mm	Code
42.4	1804218C
48.3	1804218D
42.4	1806218C
48.3	1806218D

Adjustable Internal Fit Base Flange +/- 55°



Ø mm	Code
42.4	1804234C
48.3	1804234D
42.4	1806234C
48.3	1806234D

Internal Fit Floor Base Glue fix



Ø mm	Code
42.4	1804225C
48.3	1804225D
42.4	1806225C
48.3	1806225D

Weld On Round Base Plate With 'O' ring & cover



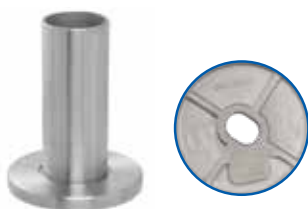
Ø mm	Code
42.4	1804228C
48.3	1804228D
42.4	1806228C
48.3	1806228D

Adjustable Elbow Tube Flange



Ø mm	Code
42.4	1804229C
48.3	1804229D
42.4	1806229C
48.3	1806229D

Internal Fit Tube Flange Glue fix, no cover plate required



Ø mm	Code
42.4	1804237C
48.3	1804237D
42.4	1806237C
48.3	1806237D

Internal Fit Tube Flange Glue fix



Ø mm	Code
42.4	1804235C
48.3	1804235D
42.4	1806235C
48.3	1806235D

Internal Fit Tube Flange Hammer fix



Ø mm	Code
42.4	1804239C
48.3	1804239D
42.4	1806239C
48.3	1806239D

Weld-On Round Base Plate



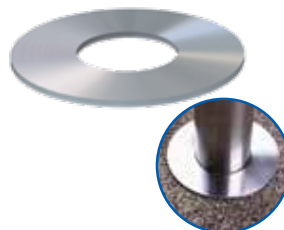
Ø mm	Code
42.4	1804207C
48.3	1804207D
42.4	1806207C
48.3	1806207D

Cover Cap



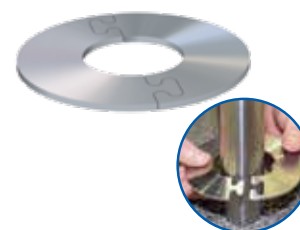
Ø mm	To Suit 207 Code	To Suit 225 Code	To Suit 235 Code
42.4	1804208C	1804226C	1804236C
48.3	1804208D	1804226D	1804236D
42.4	1806208C	1806226C	1806236C
48.3	1806208D	1806226D	1806236D

Donut Cover Plate



Ø mm	Code
42.4	1806247C
48.3	1806247D

Retro-Fit Cover Plate



Ø mm	Code
42.4	1806248C
48.3	1806248D

Fit at time of installation. For silicone use code: **189901201**.

Fit at time of installation. For silicone use code: **189901201**.

Retro-fitted after installation. For silicone use code: **189901201**.

2 Hole Round



Ø mm	Code
42.4	1804212C
48.3	1804212D
42.4	1806212C
48.3	1806212D

2 Hole Round With tube support spigot



Ø mm	Code
42.4	1804219C
48.3	1804219D
42.4	1806219C
48.3	1806219D

2 Hole Round Folded Weld fix



Ø mm	Code
42.4	1806256C
48.3	1806256D

Adjustable Corner - Internal/External



Ø mm	Code
42.4	1806253C
48.3	1806253D

Rectangular Back



Ø mm	Code
42.4	1806213C
48.3	1806213D

Fascia Bracket



Ø mm	Code
42.4	1806258C
48.3	1806258D

Wall Bracket



Ø mm	Code
48.3	1806257D

Tube Support



Ø mm	Code
48.3	1806519D

Single Side Support



Ø mm	Code
42.4	1804511C
42.4	1806511C
48.3	1806511D

Double Side support



Ø mm	Code
42.4	1804512C
42.4	1806512C
48.3	1806512D

Tube To Wall Connector



Ø mm	Code
42.4	1804255C
48.3	1804255D
42.4	1806255C
48.3	1806255D

For extra support.



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Glass Clamp Angle Adaptors



Convert standard posts into adjustable angles



- Allows for angles +/- 85 degrees
- Minimum radius achievable is 1.5m
- No specialist drilling needed. Mid post can be used to change the angle of a straight run with the addition of the angles

Tube Fix



Ø mm	Code
42.4	1806401HC
48.3	1806401HD

Supplied with 1 x M8 bolt.

Flat Fix

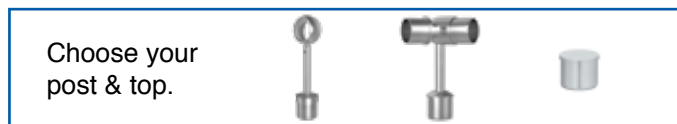


Code
1806401HF

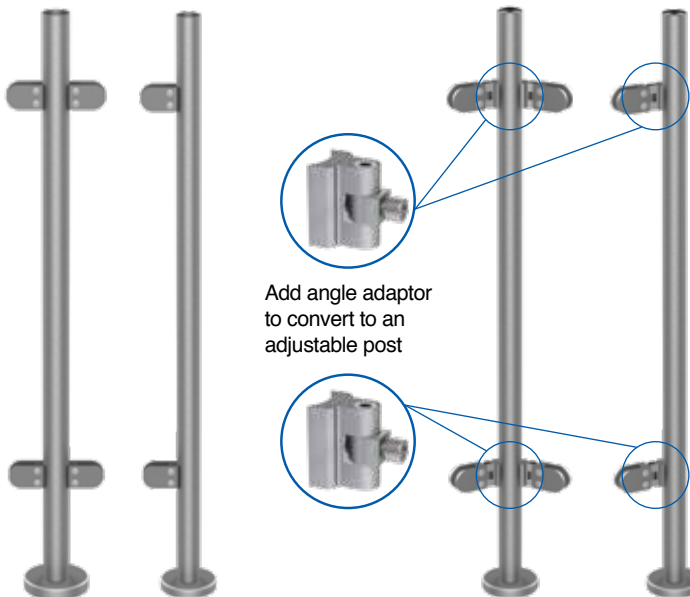
Supplied with 1 x M8 bolt.

Convert Standard Posts To Adjustable Posts

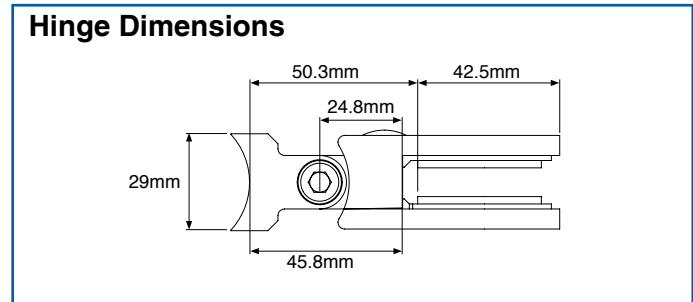
Using our standard mid or end posts and adding 2 of these angle adaptors to each side of the post, you can create a post that can be adjusted to the required angle at the point of installation.



Standard Post → Adjustable Post

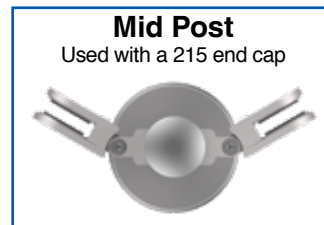


Add angle adaptor to convert to an adjustable post



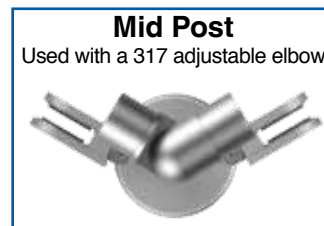
Plan View

Showing adaptors in use with no handrail and Contemplation Posts



Plan View

Showing adaptors in use with handrail and Timeless Posts



If the angle adaptors are required with a top rail, the installer needs to be aware that the glass panels and top rail will not run in alignment.

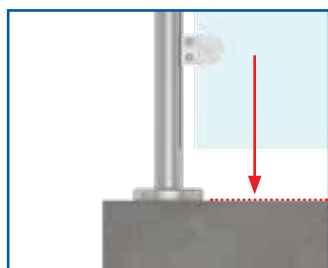


For our glass range, See pages 470, 471 & 515.

The most popular method for providing a glazed balustrade, while at the same time keeping the outlook open and views beyond visible. Glass clamps are simple to install and are offered in either a square or radiused option, providing a glazed system between posts. Compatible with 8 to 21.5mm thick glass, clamps can be used over any length of installation as well as slopes and staircases.

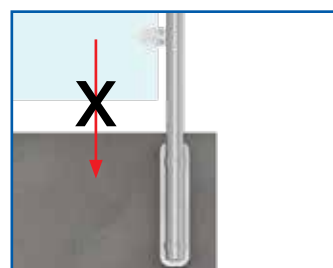
Glass Fixing Information

If using glass clamps in any installation where the glass is fixed to the outside of a staircase and overhanging, then security pins (code: **189900401** or **189900402**) and drilled glass must be used.



X Pin - **189900401** or **189900402** not required

✓ Pin - **189900401** or **189900402** required
Requires a minimum Ø 10mm holes in glass.



- Cast Zamac clamps are a cheaper alternative to stainless steel. Available in a mirror finish, satin finish or mill finish (suitable for powder coating). Not for external use.
- Cast Aluminium clamps are a new innovation, that can be used internally or externally.
- Cast Stainless 304 clamps are available in satin polish and are for internal use.
- Cast Stainless 316 clamps are available in both mirror and satin polish and for external use.
- Cast Duplex 2205 (ultra marine) for external applications, ideal for use in close proximity to the coast.

Cast Zamac



Cast Aluminium



Grade 304



Grade 316



Duplex 2205



Satin Finish Small

Flat back



Glass mm	Code
6	1806400F06
8	1806400F

Not suitable for handrailing applications. Typical uses are for display and shelving.
H 20 x L 40 x D 16mm.

Shelf Clamp



Glass Clamps



- Steel
- Wrought Iron
- Gate Hardware
- Sliding Door Gear
- Gate Automation
- Mesh
- Decking & Subframe
- Flooring & Stair Treads
- Handrailing
- Fencing
- Fixings

Mirror Finish

Flat back



Glass mm	Back	Code
8	Flat	1802401FP08
10	Flat	1802401FP

Type 401.

Raw Finish

Round back



Glass mm	Ø mm	Code
8	42.4	1802401CZ08
10	42.4	1802401CZ
8	48.3	1802401DZ08
10	48.3	1802401DZ

Type 401.
Suitable for powder coating.

Raw Finish

Flat back



Glass mm	Back	Code
8	Flat	1802401FZ08
10	Flat	1802401FZ

Type 401.
Suitable for powder coating.

Round Glass Clamp

Flat back



Glass mm	Back	Code
10	Flat	1805401FBS

Supplied as a pack of 4, with cover caps and bolts for fixing to post.
Cast aluminium.

Mirror Finish

Round back



Glass mm	Ø mm	Code
8	42.4	1806401CM08
10	42.4	1806401CM
8	48.3	1806401DM08
10	48.3	1806401DM

Type 401.

Mirror Finish

Flat back

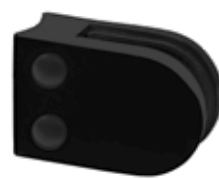


Glass mm	Code
8	1806401FM08
10	1806401FM

Type 401.

PPC Matt Black

Round back



Glass mm	Ø mm	Code
8	42.4	1805401CB08
10	42.4	1805401CB
12	42.4	1805401CB12
8	48.3	1805401DB08
10	48.3	1805401DB
12	48.3	1805401DB12

Type 401. Cast aluminium.

PPC Matt Black

Flat back



Glass mm	Code
8	1805401FB08
10	1805401FB
12	1805401FB12

Type 401. Cast aluminium.

Satin Finish

Round back



Glass mm	Ø mm	Code
8	42.4	1802401C08
10	42.4	1802401C
8	48.3	1802401D08
10	48.3	1802401D
8	42.4	1804401C08
10	42.4	1804401C
12	42.4	1804401C12
8	48.3	1804401D08
10	48.3	1804401D
12	48.3	1804401D12
8	42.4	1806401C08
10	42.4	1806401C
12	42.4	1806401C12
8	48.3	1806401D08
10	48.3	1806401D
12	48.3	1806401D12

Type 401.

Satin Finish

Flat back



Glass mm	Code
8	1802401F08
10	1802401F
8	1804401F08
10	1804401F
12	1804401F12
8	1806401F08
10	1806401F
12	1806401F12

Type 401.

Black Rubber Gasket

Make your own glass clamp rubbers



Code
1899001CS15

300 x 40 x 1.5mm.
Self-adhesive backing.

Satin Finish 180° Double



Glass mm	Code
8	180440118008
10	1804401180
12	180440118012
8	180640118008
10	1806401180
12	180640118012

H 45 x L 107 x D 28mm.

Satin Finish 90° Double

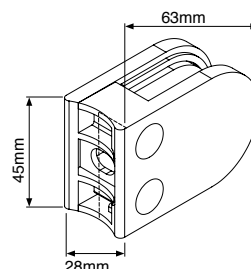


Glass mm	Code
8	18044019008
10	180440190
12	18044019012
8	18064019008
10	180640190
12	18064019012

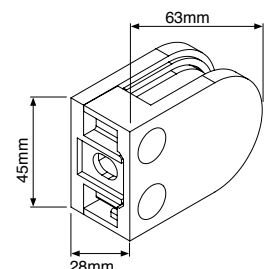
H 45 x L 73 x W 73 x D 28mm.

Dimension Drawings

401 Round Back



401 Flat Back



Satin Finish

Round back



Glass mm	Ø mm	Code
6	42.4	1806442C06
8	42.4	1806442C08
10	42.4	1806442C
6	48.3	1806442D06
8	48.3	1806442D08
10	48.3	1806442D

Type 442.

Satin Finish

Flat back



Glass mm	Code
6	1806442F06
8	1806442F08
10	1806442F

Type 442.

Satin Finish 180° Double



Glass mm	Code
6	180644218006
8	180644218008
10	1806442180

H 45 x L 70 x D 27.6mm.

Satin Finish 90° Double



Glass mm	Code
6	18064429006
8	18064429008
10	180644290

H 45 x W 60 x D 27.5mm.

Satin Finish

Round back



Glass mm	Ø mm	Code
8	42.4	1804402C08
10	42.4	1804402C
12	42.4	1804402C12
8	48.3	1804402D08
10	48.3	1804402D
12	48.3	1804402D12
8	42.4	1806402C08
10	42.4	1806402C
12	42.4	1806402C12
8	48.3	1806402D08
10	48.3	1806402D
12	48.3	1806402D12

Type 402.

Satin Finish

Flat back



Glass mm	Code
8	1802402F08
10	1802402F
12	1802402F12
8	1804402F08
10	1804402F
12	1804402F12
8	1806402F08
10	1806402F
12	1806402F12

Type 402.

Satin Finish

Flat back



Glass mm	Code
15.0	1806445F
17.5	1806445F175
19.0	1806445F19
21.5	1806445F215

H 70 x L 60 x D 44mm. Type 445.

Satin Finish

Flat back



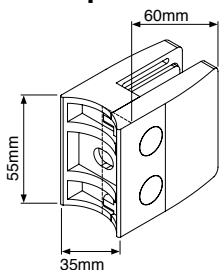
Glass mm	Code
15.0	1806440F
17.5	1806440F175
19.0	1806440F19
21.5	1806440F215

H 70 x L 60 x D 41mm. Type 440.

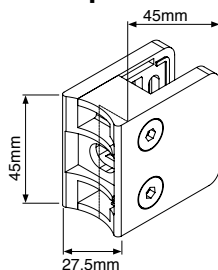
For our range of sleeve fit brackets see page 525.

Dimension Drawings

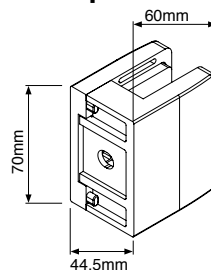
402 Clamp



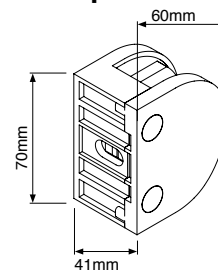
442 Clamp



445 Clamp



440 Clamp



Fixings

Metal Security Pins

For Glass



For Clamp	Pack Qty	Code
401	1	189900401
402	1	189900402
440	1	189900440
445	1	189900445

Requires min. Ø 10mm hole in glass.

Variable Fixing Bolt

+/- 5° adj on round back clamps



Description	Code
M8 x 20mm	189900602A
Allen Key*	189900606

*Allen key is used for glass clamps.

Socket Head Cap Screw

For fixing clamps into posts



Size mm	Code
M8 x 20	13i0323*
M6 x 20	189900601
M8 x 20	189900602

*Zinc plated.

Plastic Screw Cover Caps



Colour	Pack Qty	Code
Grey	1	189900501
Silver	1	189900502

Allen Key



To suit	Code
8mm bolts	189900605

Face Fix Glass Clamps

For square posts



- Suitable for 8 - 12mm glass thickness
- To suit minimum 40mm box section
- Satin finish, Duplex 2205 for strength & corrosion resistance
- 180°, 90° internal, 90° external & end clamp models

Make your own RHS posts to complement this stylish, modern glass clamp system.

Min/max glass from post centre

Installation examples

Images are for illustration purposes only

Exploded view of 180° clamp

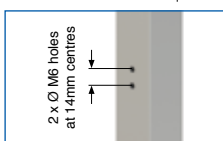
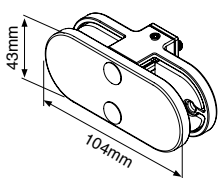
More information available online

Security Pin

Pack Qty	Code
1	189900403

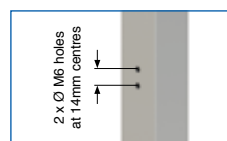
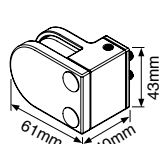
For use in any installation where glass is overhanging the outside of a floor or staircase. Drilled glass requires and needs minimum Ø 10mm hole.

180° Mid Clamp



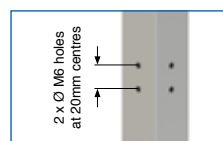
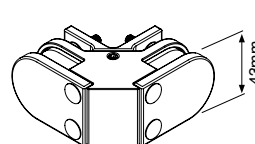
Glass mm	Code
8	182243208
10	1822432
12	182243212

90° End Clamp



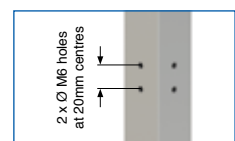
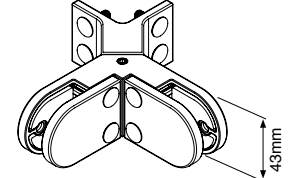
Glass mm	Code
8	1822432E08
10	1822432E
12	1822432E12

90° Corner Clamp External

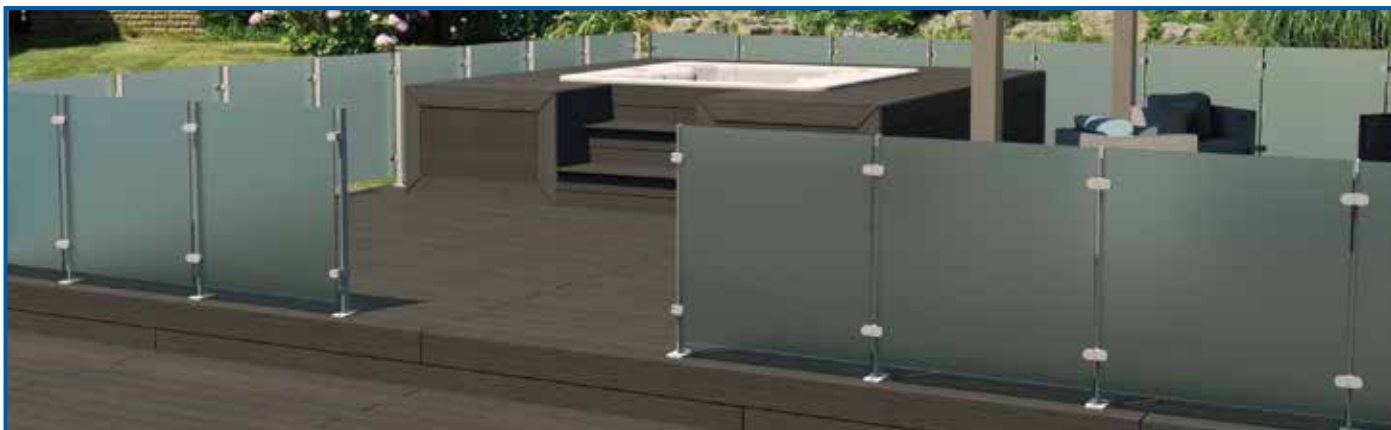


Glass mm	Code
8	1822432EC08
10	1822432EC
12	1822432EC12

90° Corner Clamp Internal



Glass mm	Code
8	1822432IC08
10	1822432IC
12	1822432IC12



- Suitable for 8 - 12mm glass thickness
- To suit 10 - 12mm flat bar
- Satin finish, Duplex 2205 for strength & corrosion resistance
- 180°, 90° internal, 90° external & end clamp models

Make your own blade posts to complement this stylish, modern glass clamp system.

Min/max glass from post centre

Min 16 / Max 27mm

Installation examples

1024mm, 1100mm, 80mm, 150mm, 600mm, 900mm, 1100mm, 80mm, 150mm

Images are for illustration purposes only

Exploded view of 90° external clamp

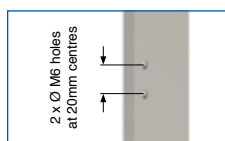
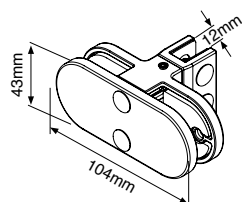
More information available online

Security Pin

Pack Qty	Code
1	189900403

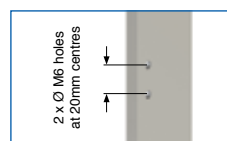
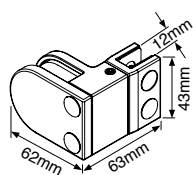
For use in any installation where glass is overhanging the outside of a floor or staircase. Drilled glass requires and needs minimum Ø 10mm hole.

180° Mid Clamp



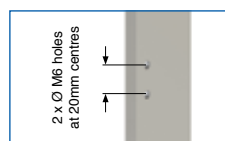
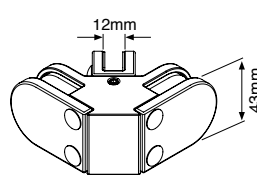
Glass mm	Code
8	182243108
10	1822431
12	182243112

90° End Clamp



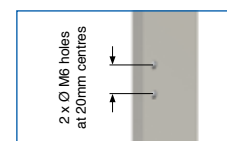
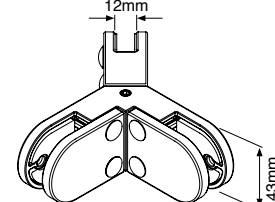
Glass mm	Code
8	1822431E08
10	1822431E
12	1822431E12

90° Corner Clamp External



Glass mm	Code
8	1822431EC08
10	1822431EC
12	1822431EC12

90° Corner Clamp Internal



Glass mm	Code
8	1822431IC08
10	1822431IC
12	1822431IC12

- Steel
- Wrought Iron
- Gate Hardware
- Sliding Door Gear
- Gate Automation
- Mesh
- Decking & Subframe
- Flooring & Stair Treads
- Handrailing
- Fencing
- Fixings



FEATURES:

- To join glass panels & tie glass panels back to the building
- To suit 10 - 21.5mm glass thickness
- Made from cast steel or duplex 2205 ultra marine stainless
- Available in a BZP with PPC matt black finish or satin polish

90° Bracket



Glass mm	Code
10.00 - 12.00	180242112B
13.52 - 15.00	180242115B
16.76 - 19.00	180242119B
20.00 - 21.50	180242122B

180° Bracket



Glass mm	Code
10.00 - 12.00	180242212B
16.76 - 19.00	180242219B
20.00 - 21.50	180242222B

Adjustable 90 - 180° Bracket



Glass mm	Code
10.00 - 12.00	180242312B
13.52 - 15.00	180242315B
16.76 - 19.00	180242319B
20.00 - 21.50	180242322B

Wall Bracket



Glass mm	Code
10.00 - 12.00	180242012B
13.52 - 15.00	180242015B
16.76 - 19.00	180242019B
20.00 - 21.50	180242022B



Glass mm	Code
10.00 - 12.00	182242112
13.52 - 15.00	182242115
16.76 - 19.00	182242119
20.00 - 21.50	182242122



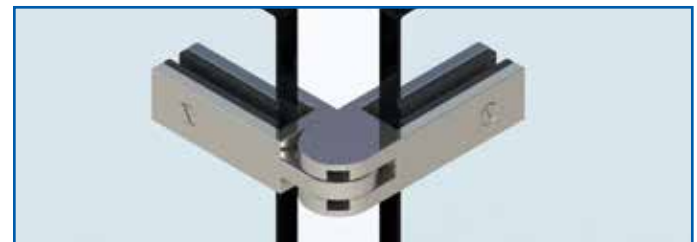
Glass mm	Code
10.00 - 12.00	182242212
13.52 - 15.00	182242215
16.76 - 19.00	182242219
20.00 - 21.50	182242222



Glass mm	Code
10.00 - 12.00	182242312
13.52 - 15.00	182242315
16.76 - 19.00	182242319
20.00 - 21.50	182242322



Glass mm	Code
10.00 - 12.00	182242012
13.52 - 15.00	182242015
16.76 - 19.00	182242019
20.00 - 21.50	182242022



Glass Connector

Domed Front & Back



Ø mm	Glass mm	Code
50	12 - 21.5	1806454





An economic alternative to the traditional glass clamp system. They not only look good, but are easy to install with no on-site fixing and if required the mild steel clamps can be galvanised and powder coated after fabrication.

Specification:

- Stainless steel Grade 316 M8 dome nut & countersunk bolt
- Rubber washer
- 6mm plate & disc
- Suits 8 - 12mm glass thickness
- Mild steel & stainless steel

Short Single



Size mm	Code
80 x 40 x 6	1801405F
80 x 40 x 6	1801407F*
80 x 40 x 6	1806405F

*With stainless steel discs.

Long Single



Size mm	Code
120 x 40 x 6	1801406F
120 x 40 x 6	1801408F*
120 x 40 x 6	1806406F

*With stainless steel discs.

Straight Double



Size mm	Code
160 x 40 x 6	1801409F
160 x 40 x 6	1806409F

External Corner



Size mm	Code
80 x 80 x 40 x 6	1801409EC

Nylon Spacer



Ø mm	Code
15	1899405NS

Round Disc



Ø mm	Code
40	1899405RD

Rubber Inlay



Ø mm	Code
40	1899405Ri

Bolt & Dome Nut



Ø x Length mm	Code
M8 x 34.6	1899405TA

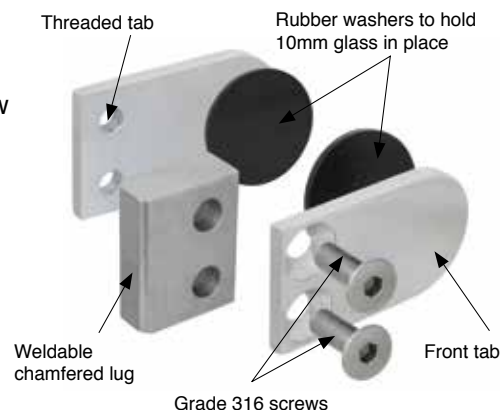
Specification:

- Weldable lug
- For square or round steel posts
- Size 40 x 80 x 26mm
- No pre-drilled glass required
- Stainless steel Grade 316 flush 8mm screw
- Suitable for 10mm glass



Description	Code
BZP tabs with cast steel lug	1801401F
Satin polished 316 tabs with cast steel lug	1801401F316
Satin polished 316 tabs with cast stainless steel 316 lug	1806401W
Spare rubber washer for 1801401F clamp	1899001RW

Only use where glass does not overhang an edge/balcony.



You can order online 24 hours a day, 7 days a week.
Visit our website: www.fhbrundle.co.uk

Bolt-down square post - satin finish



Choose Your Post & Handrail Tube

End Post

Mid Post

Corner Post

Square Posts Can Be Used With:



Round tube



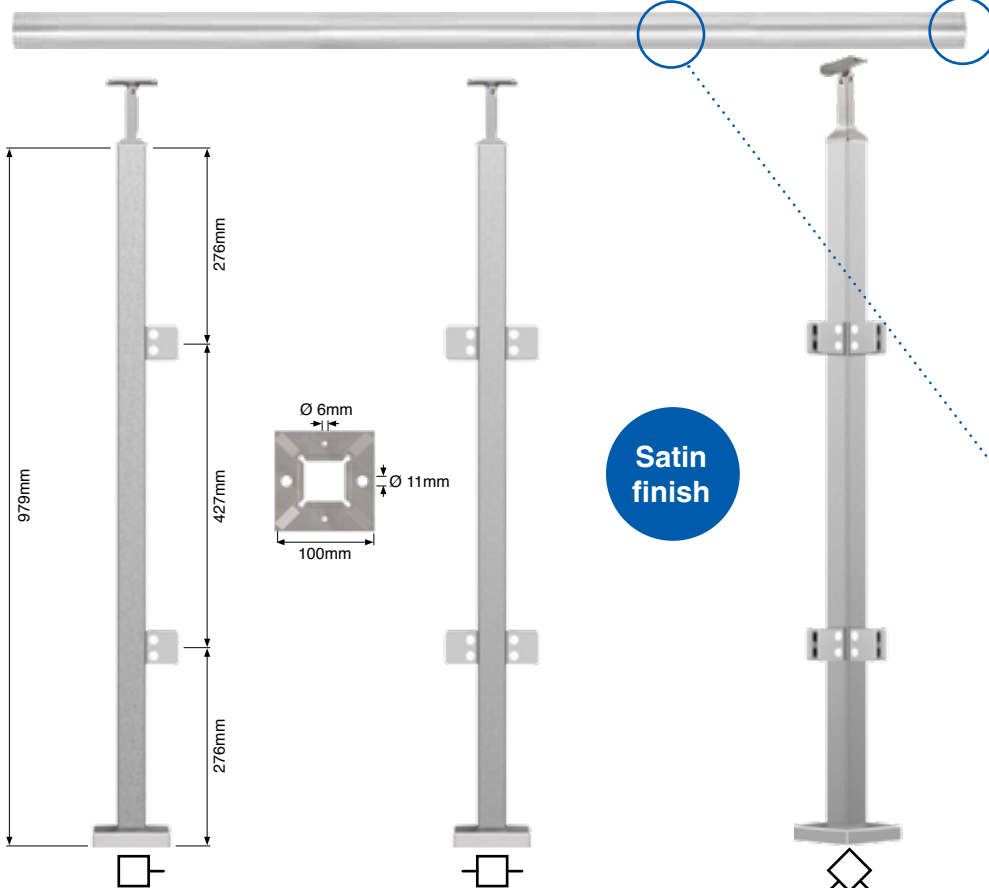
Square tube

For our full range of tube see pages 538.

For compatible handrail fittings see page 553.



Satin finish



□ mm	Code
40	1806731S40

Comes with adjustable saddle code: **1806312S40C**.

□ mm	Code
40	1806732S40

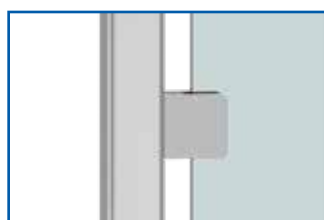
Comes with adjustable saddle code: **1806312S40C**.

□ mm	Code
40	1806733S40

Comes with adjustable saddle code: **1806312S40C**.

We stock a range of standard 10mm glass panels in 100mm increments to reduce supply time, see page 515.

ALL POSTS HAVE:





Square Fittings

Adjustable Spigot Saddle

Tube/tube



□ mm	To Suit Ø mm	Code
40	42.4	1806312S40C

90° Fixed Spigot Saddle

Tube/tube



□ mm	To Suit Ø mm	Code
40	42.4	1806311S40C

Adjustable Spigot Saddle

Tube/flat



□ mm	To Suit Ø mm	Code
40	Flat	1806312S40F

90° Fixed Spigot Saddle

Tube/flat



□ mm	To Suit Ø mm	Code
40	Flat	1806311S40F

Adjustable Handrail Bracket

Wall/tube



□ mm	To Suit Ø mm	Code
40	42.4	1806303S40C

Adjustable Handrail Bracket

Wall/flat



□ mm	To Suit	Code
40	Flat	1806303S40F

2 Hole Baluster Bracket



□ mm	Code
40	1806256S40

Weld fix.

Square Balustrade Bracket



□ mm	Code
40	1806213S40

90° Elbow



□ mm	Code
40	1806202S40

3 Way Corner



□ mm	Code
40	1806204S40

Long Tee



□ mm	Code
40	1806205S40

Adjustable Elbow



□ mm	Code
40	1806227S40

In-Line Connector



□ mm	Code
40	1806206S40

Flat Top End Cap



□ mm	Code
40	1806215S40

Cover Plate



□ mm	Code
40	1806208S40

To suit code: **1806207S40**.

Weld On Base plate



□ mm	Code
40	1806207S40

Wall Flange



□ mm	Code
40	1806209S40

Tube



Length m	Code
2.9	1806704S40
5.8	1806700S40

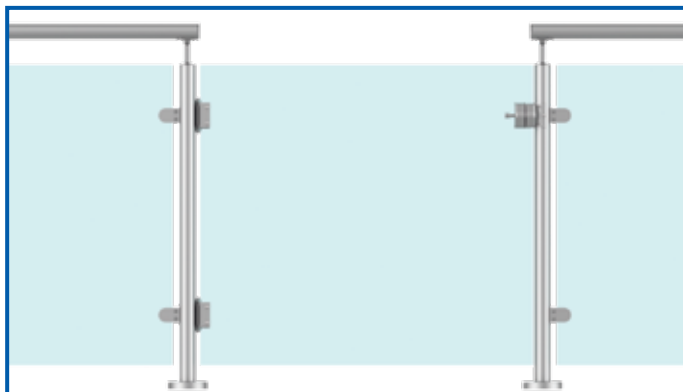
□ 40 x 40mm. 2.5mm wall thickness.

For square glass clamps see page 547.

For Loctite adhesives & glue see page 721.

Steel
Wrought Iron
Gate
Hardware
Sliding
Door Gear
Automation
Mesh
Decking &
Subframe
Flooring &
Stair Treads
Handrailing
Fencing
Fixings

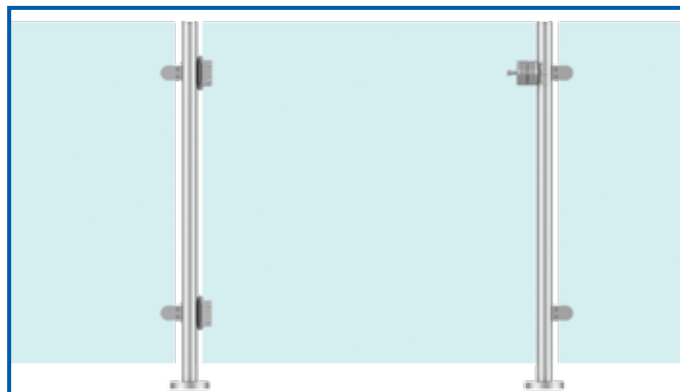
Timeless



Panel	Thickness mm	Height mm	Width mm	Code
Gate	10	900	1000	185510GSP01

Gives 1100mm handrail height when used on a flat surface with saddles and top rail. Achievable with round or square posts and fittings.

Contemplation



Panel	Thickness mm	Height mm	Width mm	Code
Gate	10	1024	1000	185510GSP61

Gives 1100mm glass height when used on a flat surface with end caps. Achievable with round or square posts and fittings.

Hinges & Latches

Magnetic Latch

Glass to round post



To Suit Glass mm	Code
8 - 12	1806518C

Self-Closing Hinge

Glass to round post



To Suit Glass mm	Code
8 - 12	1806516C

Sold in pairs.

Magnetic Latch

Glass to square post



To Suit Glass mm	Code
8 - 12	1806518F

Self-Closing Hinge

Glass to square post



To Suit Glass mm	Code
8 - 10	1806516F

Sold in pairs.

Magnetic Latch

Glass to glass



To Suit Glass mm	Code
8 - 12	1806517

Holes required in glass, screws compress plate onto glass. For use where there are no posts.

Self-Closing Hinge

Glass to glass



To Suit Glass mm	Code
8 - 12	1806515

Sold in pairs. For use where there are no posts.

Self-Closing Glass Gate Hinge



Type	To Suit Ø mm	Code
Vinyl	50	05GC09

For fixing 8 and 10mm glass weighing up to 25kg on to round posts. Glass needs to be pre-drilled. Sold in pairs.

Self-Closing Safety Gate Hinge



Description	Code
For stainless tube	18SGH

Weldable.

Latch & Catch



Ø mm	Code
42.4	1806513C
48.3	1806513D

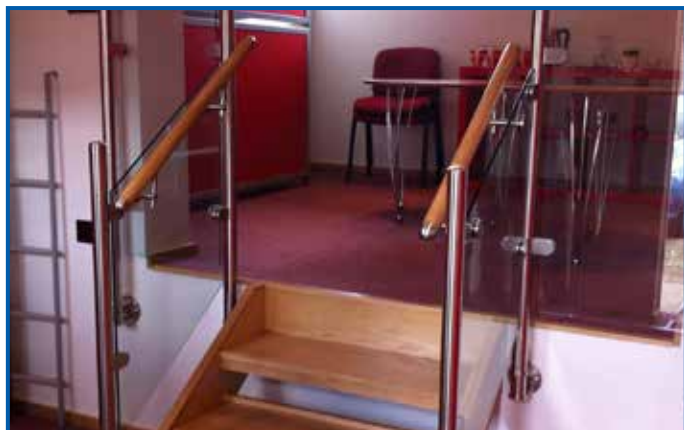
Gate Hinge Pin & Bolt



Ø mm	Code
42.4	1806514C
48.3	1806514D

For our full range of standard 10mm glass panels see page 515.

For Pro-Railing® Protect see page 519.



If you would prefer the benefits of a wooden handrail system, the fusion of wood with stainless steel is possible with our integration range of components with handrails available in hard or softwood.

Fittings To Suit Ø 45mm Wooden Handrails

Flat End Cap



Code
1807214C

Supplied with 1 x plastic support.

Rounded End Cap



Code
1807215C

Supplied with 1 x plastic support.

Handrail Connector



Code
1807206C

Supplied with 2 x plastic supports.

Elbow Round Corner



Code
1807201C

Supplied with 2 x plastic supports.

Adjustable Elbow



Code
1807203C

Supplied with 2 x plastic supports.

Cranked Handrail Support

Threaded insert & set screw supplied



Code
1807305FC

Spare Plastic Support



Code
189900701

Included with above tube fittings.

Threaded Dowel

For use with handrail brackets



Ø mm	Length mm	Code
M8	50	189900622

BZP.

Ø 45mm Softwood For Internal Use

Untreated



Length m	Code
3.0	18077033

Varnished



Length m	Code
3.0	18077013

Beech Effect



Length m	Code
3.0	18077003

Wengé Effect



Length m	Code
3.0	18077023



You can order online 24 hours a day, 7 days a week.
Visit our website: www.fhbrundle.co.uk

Wooden Handrail Systems



Ø 48.3mm handrail



These three fittings have been developed for wood-to-wood and wood-to-stainless balustrades, allowing a smooth transition between Ø 48.3mm solid wooden handrail and all of the standard Ø 48.3mm Pro-Railing tube and fittings.

Fittings To Suit Ø 48.3mm Wooden Handrails

End Cap



Code
1807230D
1807233D

Requires code: 1807232D.

Connector



Code
1807231D
1807234D

Fixing hole Ø 6mm.

Adaptor



Code
1807232D

Not supplied with screws. Fixing hole Ø 6mm.

How To Use These Fittings



Stainless / Wood Fusion



Scroll End To Wood



End Cap



Wood To Wood Connector



90° Elbow To Wood



We are able to offer a wide range of solid hardwood handrails which are available unfinished for a final stain or lacquer to be applied after installation. High grade raw materials ensure consistent top quality handrails and our unique adaptor allows the use of our stainless steel components to simplify the installation.

Ø 48.3mm Hardwood For External Use

American White Oak



Length m	Code
3.0	18077063

European Brown Oak



Length m	Code
3.0	18077073



Free delivery on all orders over £150.00



Illumirail is a stylish and practical lighting application for incorporating into handrailing installations. With the option of RGB, coloured and bright white LEDs, it doesn't just aesthetically provide the finishing touch to any handrail project, it also offers a solution to safety and security issues surrounding dark stairwells and walkways. Illumirail can be fitted in wall mounted or post mounted handrailing.

There are 3 choices for illuminating your handrail:

- Strip System – Fitted into our standard 42.4mm split tube handrail and will accept generic LED lights. It uses 12V DC, and requires a 33W transformer connected to a 240V AC 50Hz supply, that is supplied in the LED kit
- Bar System – Fits into our standard 42.4mm split tube handrail. It uses 24V DC and requires a 100W transformer connected to 240V AC 50Hz
- Pod System - Can be fitted into any round 42.4 or 48.3mm handrailing. It uses a 12V DC and requires a 70W transformer connected to 230V AC 50Hz

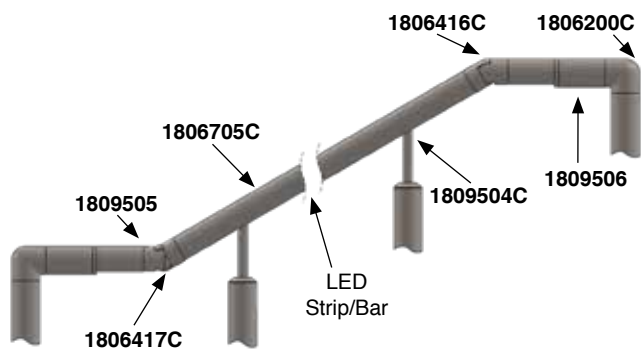
Illumirail strip system ideal for specification in a wide range of applications including residential, restaurants, offices, night clubs, leisure and retail. In fact anywhere that requires inside illumination. This system is not waterproof and rated to IP20.

Illumirail bar system is ideal for specification in a wide range of applications including residential, restaurants, offices, night clubs, leisure and retail. In fact anywhere that requires illumination, inside or out, with stainless steel Grade 316 as standard. These systems are waterproof and fully rated to IP67. They can be used with PIR movement sensors, daylight sensors (dusk to dawn) and the solid colours can also be linked into emergency lighting back-up systems.

Mounting Guides For Strip & Bar System

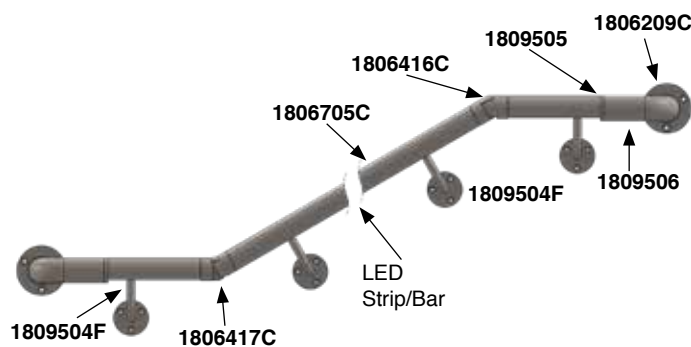
Handrail With Return To Floor Ends

Front view



Handrail With Return To Wall Ends For Cable

Front view



For further technical information & wiring solutions, download a copy of our Illumirail® technicals, visit www.fhbrundle.co.uk

Illumirail® Strip System



Fittings

White LED Strip Kit

To suit aluminium profile



Colour	LED Strip Length m	Code
White	5	1809602

Supplied with LED driver, cables, wires and connectors.

RGB LED Strip Kit

To suit aluminium profile



Colour	LED Strip Length m	Code
RGB - 7.2w	5	1809602RGB*
RGB - 14.4w	5	1809603RGB*

Supplied with LED driver, infra red controller & receiver, remote control, cables, wires and connectors.

Aluminium Profile

For use with LED strips or coils



Length m	Code
5	1809601

For use with LED strips or coils.

For all handrail components see page 560.

LED Strip Installation

Exploded view



LED Strip Installation

Section view



Illumirail® Bar System

Bar & Lighting Information

LED Bar Installation

Exploded view



Our Illumirail LED bar fits discreetly and securely into our Ø 42.4mm split tube. It can be fitted with an optional trunking that offers a tidy cable management system. Plus a full range of fittings to provide a handrailing solution that can work on post or wall mounted handrails.

Illumirail LED bar is available in both 425 and 850mm lengths. The standard length is 850mm and is designed to fit between our 1200mm Pro-Railing post centres.

Standard colours:

- Warm white (3000K), 1035 lumens per metre and 135 lumens per watt
- RGB (colour changing)

Single colour LED bars in red, green, blue and yellow are available to order.

LED bar is a sealed one piece unit rated to IP67, with 54 LEDs totalling 12.24W. With a brightness of 3000K. They are supplied with a 200mm cable with waterproof connectors.

Steel
Wrought Iron
Gate
Hardware
Sliding Door Gear
Automation
Mesh
Decking & Subframe
Flooring & Stair Treads
Handrailing
Fencing
Fixings



Illumirail® Bar System

Fixed colours & RGB colour changing



Colour	425mm Length Code	850mm Length Code
White (3000K)	18095015	1809501
Blue	18095015B	1809501B
Green	18095015G	1809501G
Red	18095015R	1809501R
Yellow	18095015Y	1809501Y

Supplied with 2 gel crimps.

Colour	425mm Length Code	850mm Length Code
RGB	18095015RGB	1809501RGB

Supplied with 4 gel crimps.

Choose Your Internal/External Handrailing Colours With Our Colourtouch 4.3" Controller



With thousands of colours to choose from, it's easy to create the right mood or ambience in any environment. The ColourTouch 4.3" controller is at the heart of the RGB bar system enabling it to change colour, flash, pulse, dim and fade on and off. The ColourTouch controller can be sited in any location up to 50m from the installation and requires a 24V DC supply. Where this is outdoor, the unit must be contained within a waterproof enclosure. Our bar system can be used with a variety of infill options such as glass, wire rope or our 7 bar systems.

Cables

Description	Fixed Colour	RGB	Length	Code
2 pin M-F, over-moulded IP67 cable. 5 amp max. DC connection cable for LED bar	✓		5m	180919
2 pin M-F, over-moulded IP67 cable. 5 amp max. DC extension cable	✓		10m	180919B
2 pin small sealing cap M. Makes end of run of LED bar watertight. For DC power cables	✓			180926
4 pin M-F over-moulded IP67 cable. 5 amp max. DC connection cable		✓	5m	180919A
4 pin M-F, over-moulded IP67 cable. 5 amp max. DC connection cable		✓	10m	180919C
4 pin M-F, over-moulded IP67 cable. 5 amp max. DC connection cable		✓	20m	180919E
3 pin sealing cap M. Makes end of run of cables watertight. For signal cables	✓	✓		180925B
4 pin sealing cap M. Makes end of run of cables watertight. For RGB power cables		✓		180925A
STP signal cable, bare ends. Connects between PIR enclosures and ColourTouch controller		✓	Per metre	180927
STP signal cable, bare ends to M. Connects in-line relays and PWM's to PIR or ColourTouch enclosure	✓	✓	10m	180927A
STP signal connection cable M to M. Connects between PWMs and in-line relays	✓	✓	10m	180927B
STP signal connection patch cable M to M. Connects between PWMs and in-line relays	✓	✓	300mm	180927C
STP signal extension cable M to F. Extends cables	✓	✓	10m	180927D

Controls

Description	Fixed Colour	RGB	Code
ColourTouch control enclosure with colour changing system and built in timer		✓	1809507
In-line PWM RGB driver module. Male 2 pole female 4 pole, one per transformer		✓	180929A
Power supply for ColourTouch control		✓	1809507PS
PIR enclosure, one or many per installation	✓	✓	1809PIR
In-line relay module, one per transformer	✓		1809IR

LED Driver



Specification:

- 100W
- 230V AC to 24V DC
- CE approved
- IP67, supplied with waterproof connector on the DC output
- PFC - 98%
- Efficiency >88%
- Supplied with one end cap

Description	Code
LED Driver - 24V DC/100W - IP67 Rated	1809006

Steel

Wrought Iron Components

Gate Hardware

Sliding Door Gear

Gate Automation

Mesh

Decking & Subframe

Flooring & Stair Treads

Handrailing

Fencing

Fixings

Illumirail® Strip & Bar Fittings



- Steel
- Wrought Iron
- Gate Hardware
- Sliding Door Gear
- Gate Automation
- Mesh
- Decking & Subframe
- Flooring & Stair Treads
- Handrailing
- Fencing
- Fixings

Split Tube

1.5mm wall thickness



Ø mm	Length m	Code
42.4	3	18067053C

Cable Tidy

Glue fit



Ø mm	Length mm	Depth mm	Code
42.4	300	20	1809CTC

Thickness 1.2mm.



For ease of application use pre-assembled posts, see page 512. Then just add the saddle code: 1809504C.



Wall Bracket

For split tube clamping



Clip Length mm	Code
60	1809504F

With cable hole.

25 - 55° Upwards Adjustable Connector



Ø mm	Code
42.4	1806417C

Handrail Saddle, Adjustable Spigot

For split tube clamping



Ø mm	Clip Length mm	Code
42.4	85	1809504C

With cable hole.

Split Tube To Plain Tube Connector



Ø mm	Code
42.4	1809505

25 - 55° Downwards Adjustable Connector



Ø mm	Code
42.4	1806416C

In-Line Connector



Ø mm	Code
42.4	1806412C

90° Elbow Radiused Corner



Ø mm	Code
42.4	1806200C

Scroll End



Ø mm	Code
42.4	1806221C

Tube Section



Ø mm	Length mm	Code
42.4	55	1809508
42.4	70	1809506

End Cap



Ø mm	Code
42.4	1806413C

Wall Connector



Ø mm	Code
42.4	1809209C

With cable hole.

Short Clip

For securing LED bar



Code
1809502

Two clips required per LED.

High Strength Retainer

1



2



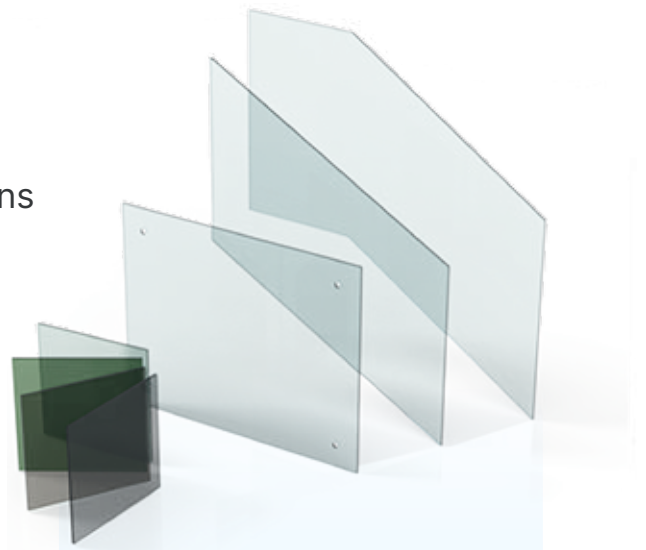
Number	Description	ml	Code
1	For use with tube fittings	50	1899007638
2	For use on assembled posts	10	189900763810



Quality **bespoke glass** cut to custom sizes and angles for all applications

Use our bespoke glass configurator to design glass panels produced to your own specifications for internal or external applications.

1. With the capacity to add holes to your design if required, our configurator enables you to produce free technical drawings for your bespoke glass panels with ease.
2. Liveconfigurator™ bespoke glass provides detailed drawings showing hole positions, angles and sizes for as many panels as you require. You will also receive a quote, parts list and free CAD and 3D models.
3. We can arrange delivery to your door. Your new glass panels are safely packed on stillages for your convenience, with the weight of the panels shown on our bespoke glass configurator.



Bespoke Glass

We offer various thicknesses in toughened glass as well as laminated glass.

The perfect tool for everyone.

Start designing and receive your free CAD drawings at

liveconfigurator.co.uk



liveconfigurator™
BESPOKE GLASS

The UK's largest stockist of
components for immediate delivery

Bolt-down round post - mirror finish

- Steel
- Wrought Iron
- Gate
- Hardware
- Sliding Door Gear
- Gate Automation
- Mesh
- Decking & Subframe
- Flooring & Stair Treads
- Handrailing
- Fencing
- Fixings



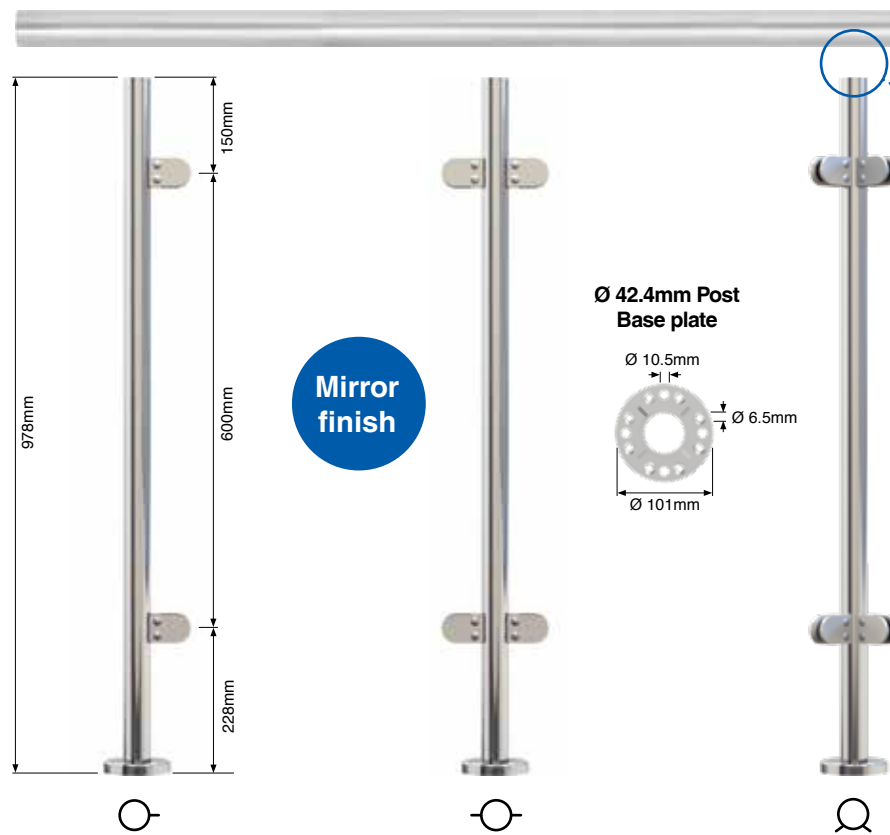
TESTED TO BS 6180

Choose Your Post & Top

End Post

Mid Post

Corner Post



Mirror finish

For our full range of mirror finish tube see page 564.

See handrail fittings for use in the top of your post on page 564.

For compatible handrail fittings see page 564.

Ø mm	Code
42.4	1806791CM

Ø mm	Code
42.4	1806792CM

Ø mm	Code
42.4	1806793CM

Please phone our sales team for a competitive quote on made to order glass panels.

3-Part Tea Staining Cleaner Kit

Keeps stainless handrail & fittings in top condition long after installation



Code
189900902

Stainless Steel Cleaner

Degreases & cleans surfaces ready for gluing



ml	Code
400	18990097063

Bond It Glass Cleaner

Fast acting all purpose cleaner with non smear formulation



Litre	Code
1	1859GC1



Steel

Wrought Iron Components

Gate Hardware

Sliding Door Gear

Gate Automation

Mesh

Decking & Subframe

Flooring & Stair Treads

Handrailing

Fencing

Fixings



10mm glass infill panels, without a handrail, will not pass building regulations. This system is only suitable where a drop of less than 600mm is present.

Range of end caps

To be used with bolt-down and concrete-in posts. See page 564.

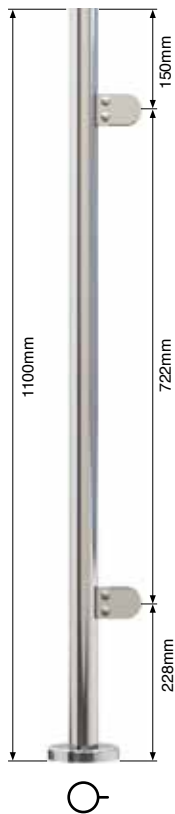


Raised Top



7 Groove Flat Top

End Post



Ø mm	Code
42.4	1806761CM

Top fitting not included.

Mid Post

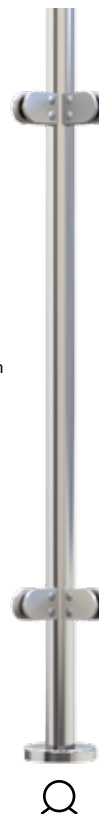


Mirror finish

Ø mm	Code
42.4	1806762CM

Top fitting not included.

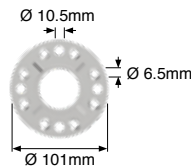
Corner Post



Ø mm	Code
42.4	1806763CM

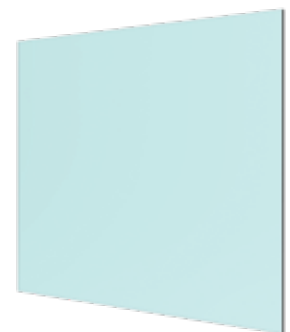
Top fitting not included.

Ø 42.4mm Post Base plate



Glass Panels

For our full range of standard glass panels to suit our Contemplation range, see page 517.



Concrete Fixings

Hex Head With Flange



Ø mm	Length mm	Code
M8	75	5002HCS875

Sold as single.

Multi-Fix Hex Head Bolt



Ø mm	Length mm	Code
M10	75	5002MF10875

Pack quantity 100.

Through Bolt



Ø mm	Length mm	Code
M8	95	5006TB08100

Sold as single.

Allen Key

For glass clamps



Code
189900606

Mirror Finish Fittings



Steel
Wrought Iron
Gate
Hardware
Sliding
Door Gear
Gate
Automation
Mesh
Decking &
Subframe
Flooring &
Stair Treads
Handrailing
Fencing
Fixings

Handrail Bracket Fixed Spigot

Wall/tube



Ø mm	Wall to Bracket Centre mm	Code
42.4	85	171176CM
48.3	85	171176DM

90° Fixed Spigot Saddle

Tube/tube



Ø mm	Code
42.4	1806311CCM

Adjustable Spigot Saddle

Tube/tube



Ø mm	Code
42.4	1806312CCM

90° Elbow Round Corner



Ø mm	Code
42.4	1806201CM

Adjustable Elbow



Ø mm	Code
42.4	1806203CM

Adjustable Elbow Smooth



Ø mm	Code
42.4	1806227CM

Scroll End



Ø mm	Code
42.4	1806221CM

In-Line Connector



Ø mm	Code
42.4	1806206CM

External Round Tube Flange



Ø mm	Code
42.4	1806209CM

2 Hole Baluster Bracket



Ø mm	Code
42.4	1806212CM

Weld On Base Plate

With 'O' Ring & Cover



Ø mm	Code
42.4	1806228CM

Cover Plate

To suit 235C, see page 542



Ø mm	Code
42.4	1806236CM

Raised Top End Cap



Ø mm	Code
42.4	1806215CM

7 Groove Flat Top End Cap



Ø mm	Code
42.4	1806274CM
48.3	1806274DM

Glue fit.

Tube



Ø mm	Length m	Code
42.4	3.0	1806704CM
42.4	5.8	1806701CM
48.3	3.0	1806704DM
48.3	5.8	1806701DM

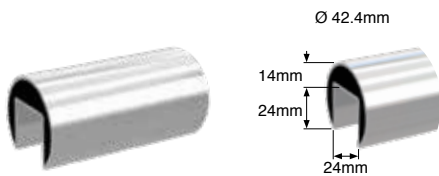
2mm thickness.

For mirror finish pre-assembled posts see from page 562.

For Loctite adhesives & glue see page 721.



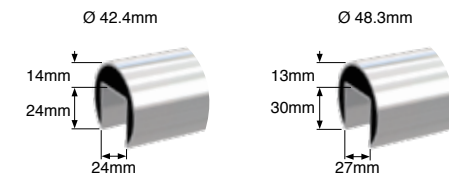
Split Tube



3m Length

Ø mm	Code
42.4	18067053CM
48.3	18067053DM

1.5mm wall thickness.



5.8m Length

Ø mm	Code
42.4	1806706CM
48.3	1806706DM

1.5mm wall thickness.

6m Length

Ø mm	Code
48.3	1806705DM

1.5mm wall thickness.

Gasket



Ø 42.4mm

Glass Thickness mm	Code
8 - 11	189903811C
11.5 - 13.5	189903115135C
15	18990315C
16 - 17.5	18990316175C
19	18990319C
20 - 21.5	18990320215C

Rubber. Sold in 1m lengths.

Ø 48.3mm

Glass Thickness mm	Code
8 - 11	189903811D
11.5 - 13.5	189903115135D
15	18990315D
16 - 17.5	18990316175D
19	18990319D
20 - 21.5	18990320215D

Rubber. Sold in 1m lengths.

90° Horizontal Corner



Ø mm	Code
42.4	1806411CM
48.3	1806411DM

25 - 55° Downwards Adjustable Connector



Ø mm	Code
42.4	1806416CM
48.3	1806416DM

25 - 55° Upwards Adjustable Connector



Ø mm	Code
42.4	1806417CM
48.3	1806417DM

End Cap



Ø mm	Code
42.4	1806413CM
48.3	1806413DM

Wall/Floor Flange



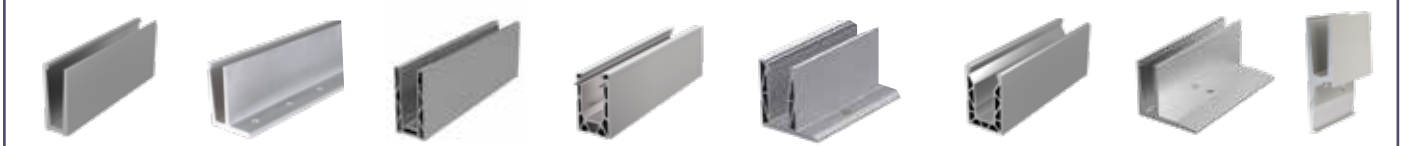
Ø mm	Code
42.4	1806415CM
48.3	1806415DM

In-Line Connector



Ø mm	Code
42.4	1806412CM
48.3	1806412DM

For our full range of balustrade systems see page 469.



Elegance Juliet Balcony

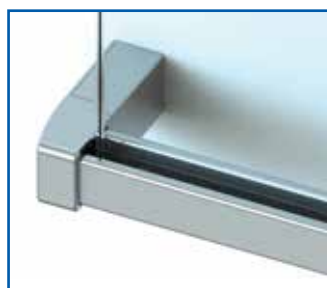
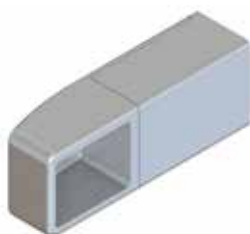


TESTED TO
BS 6180

FEATURES:

- To suit 40 x 30mm rectangular top rail system, see page 500
- No welding required
- Designed for 12 - 21.5mm glass
- Reduced visual impact
- Glass is 80mm off the wall
- All products are satin polish finish

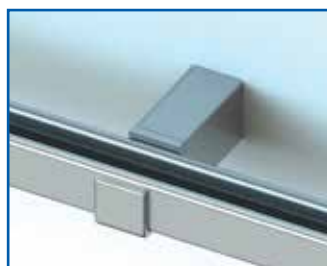
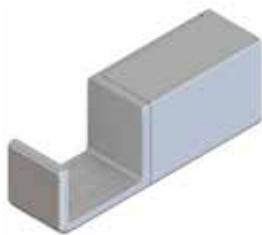
Bracket Set



Fixing Holes Ø mm	Code
12	1822JBS4030

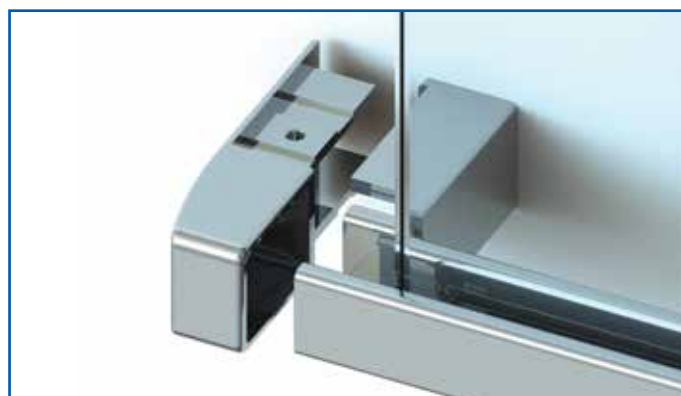
Sold in pairs, left & right hand side.

Centre Support Bracket



Fixing Hole Ø mm	Code
12	1822CSB4030

Exploded Bracket



Glass Support Bracket



Fixing Hole mm	Code
13 x 22	1822GSBS

Split Tube



Length m	Code
3	180670534030
6	18067054030

Gasket



To Suit Glass mm	Length m	Code
8 - 11	1	189903811C
11.5 - 13.5	1	189903115135C
15	1	18990315C
16 - 17.5	1	18990316175C
19	1	18990319C
20 - 21.5	1	18990320215C

Rubber. Sold in 1m lengths.

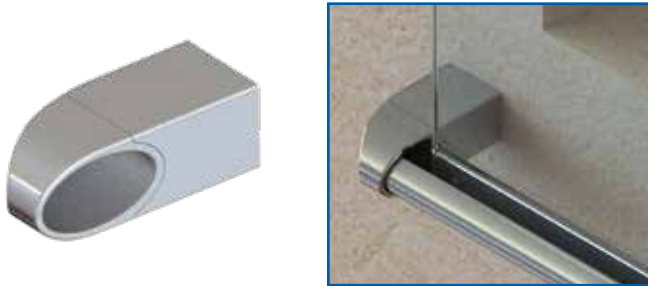
For our full range of glass panels see pages 470, 471 & 515.



FEATURES:

- To suit 60 x 30mm oval top rail system, see page 501
- No welding required
- Designed for 12 - 21.5mm glass
- Reduced visual impact
- Glass is 80mm off the wall
- All products are satin polish finish

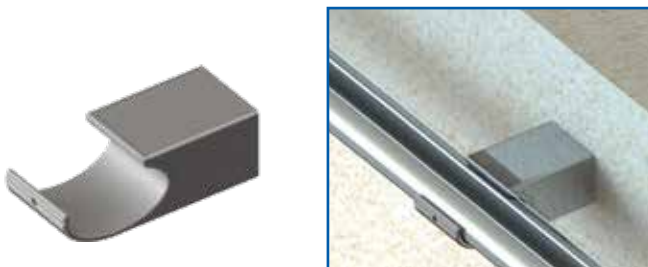
Bracket Set



Fixing Hole Ø mm	Code
12	1822JBS6030

Sold in pairs, left & right hand side.

Centre Support Bracket



Fixing Hole Ø mm	Code
12	1822CSB6030

Split Tube



Length m	Code
3	180670536030
6	18067056030

For our full range of glass panels see pages 470, 471 & 515.

Exploded Bracket



Glass Support Bracket



Fixing Hole mm	Code
13 x 22	1822GSBR

Gasket



To Suit Glass mm	Length m	Code
8 - 11	1	189903811C
11.5 - 13.5	1	189903115135C
15	1	18990315C
16 - 17.5	1	18990316175C
19	1	18990319C
20 - 21.5	1	18990320215C

Rubber. Sold in 1m lengths.

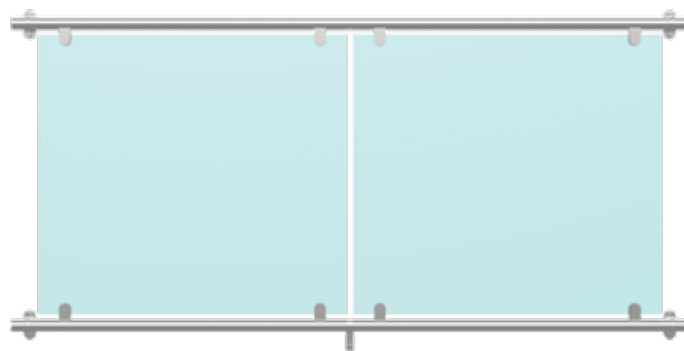
Verona Juliet Balcony



- Steel
- Wrought Iron Components
- Gate Hardware
- Sliding Door Gear
- Gate Automation
- Mesh
- Decking & Subframe
- Flooring & Stair Treads
- Handrailing
- Fencing
- Fixings



Glass Clamps On Top & Bottom Rail Kit



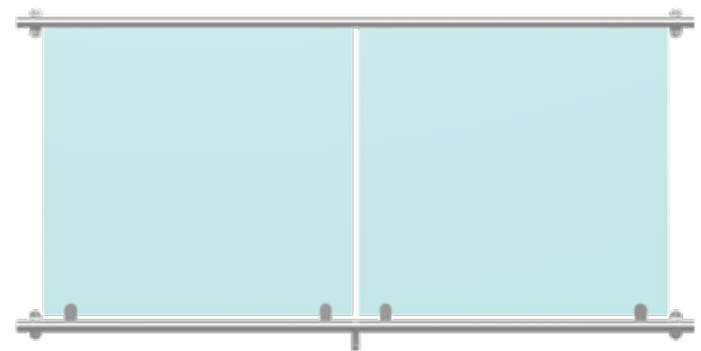
Opening Width mm	Overall Width mm	Ø mm	Glass Thickness mm	Code
2300	2650	48.3	10	18068JBGC

Please order glass panels separately. Supplied with four wall brackets and one trellis bracket.



For extra wall or tube support brackets see page 543.

Split Tube On Top Rail & Glass Clamps On Bottom Rail Kit

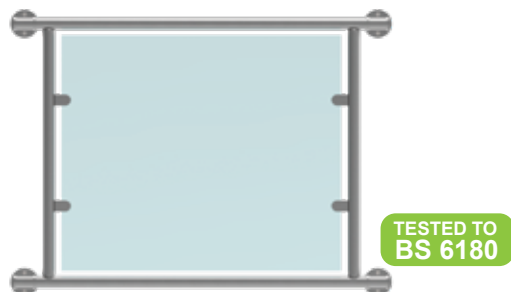


Opening Width mm	Overall Width mm	Ø mm	Glass Thickness mm	Code
2300	2650	48.3	10	18068JBST

Please order glass panels separately. Supplied with four wall brackets and one trellis bracket.

For our full range of glass panels see from page 515.

Juliet Balcony Kit

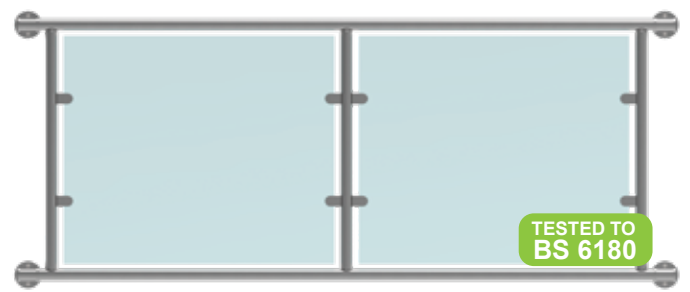


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Single Door Kit

Finish	Ø mm	Max Opening m	Glass H x W mm	Code
Satin	48.3	1.1	900 x 1100	1806811D
Mirror	48.3	1.1	900 x 1100	1806811DM

To suit 10mm glass thickness. If glass is required please order code: 1855101100900.



TESTED TO BS 6180

Double Door Kit

Finish	Ø mm	Max Opening m	Glass H x W mm	Code
Mirror	48.3	2.3	900 x 1100	1806812DM

To suit 10mm glass thickness. If glass is required please order 2 x code: 1855101100900.

Both kits require upright posts to be glued to cross rails.



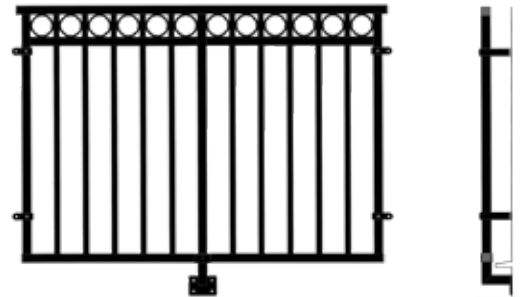
Small Panel



Width mm	Height mm	Frame □ mm	Bar ■ mm	Code
1314	1120	38	25	58JB13

Supplied with plastic caps and side fixing brackets. UV powder coated stylish black sand RAL 9005.

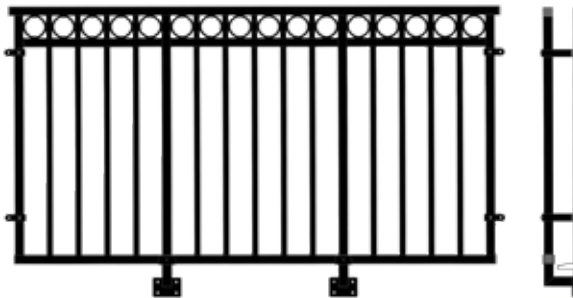
Medium Panel



Width mm	Height mm	Frame □ mm	Bar ■ mm	Code
1564	1120	38	25	58JB16

Supplied with plastic caps, bottom and side fixing brackets. UV powder coated stylish black sand RAL 9005.

Large Panel



Width mm	Height mm	Frame □ mm	Bar ■ mm	Code
2077	1120	38	25	58JB21

Supplied with plastic caps, bottom and side fixing brackets. UV powder coated stylish black sand RAL 9005.



Your Juliet balcony will be supplied with the appropriate number of brackets, fixings and caps.

Side Fixing Brackets



Bottom Fixing Brackets



Plastic Caps



Brackets For Making Your Own Juliet Balconies.

Bracket	Code
Side fixing	58JBSFB
Bottom fixing	58JBBFB

For our full range of plastic caps see page 15.

For glass Juliet balconies see page 570.

Sky Force Balcony

The system of invisibility



- Steel
- Wrought Iron
- Gate Hardware
- Sliding Door Gear
- Gate Automation
- Mesh
- Decking & Subframe
- Flooring & Stair Treads
- Handrailing
- Fencing
- Fixings



Sky Force French balcony is the first practically invisible system on the market. Cost effective and simple to install thanks to its 'slide & click' design, it can be mounted directly on the window frame or masonry. Best of all, Sky Force can cover widths of up to 3000mm with only one 2-part balcony kit.

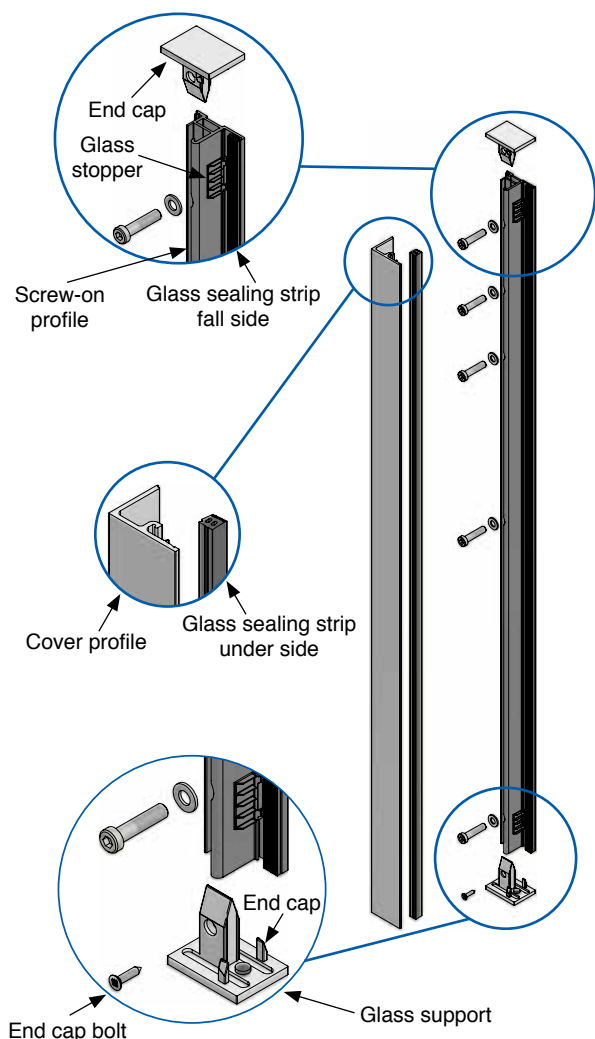
Features:

- Quick and simple mounting on stone, concrete, steel, plastic, aluminium & wooden frames
- Max. width up to 3000mm
- Aluminium anodised
- With drainage channel
- Suitable for 10 - 21.50 mm glass
- General building inspection test certificate ABP & BS 6180

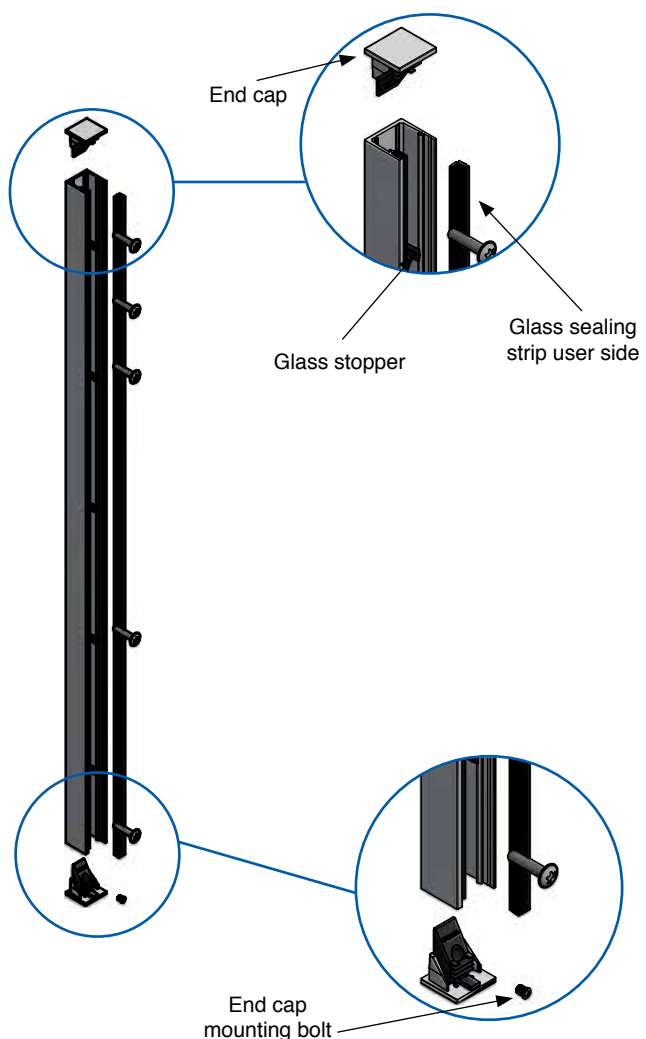
Kit Includes:

Each 2-part balcony kit includes two sets of the parts listed below, for the left & right hand side of the balcony. Centrepiece includes one set of the top-fix parts listed below. Each balcony kit requires 10 fixing anchors, that's 5 per post to fix onto a frame. Centrepiece requires 5 fixing anchors.

Top

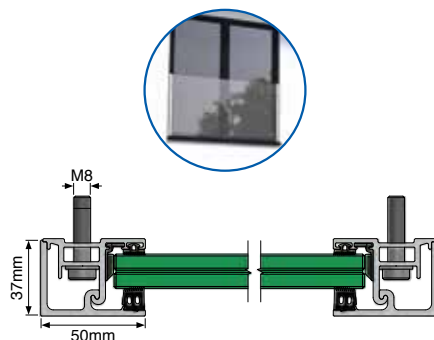


Side-Mount



2-Part Balcony Kit

Front-fix TOP

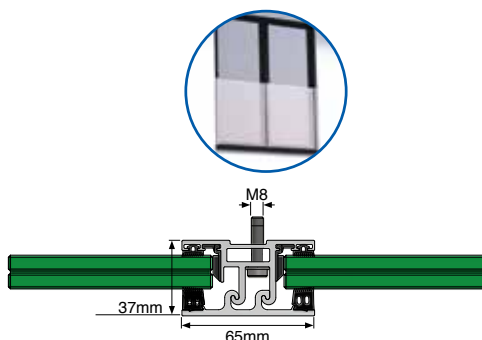


Glass Thickness mm	1000mm Height Code	1100mm Height Code
10.00 - 13.50	18057BK1010	18057BK1110
16.76 - 21.50	18057BK10175	18057BK11175

Glass not included.

Middle Piece Kit

Front-fix for added support TOP

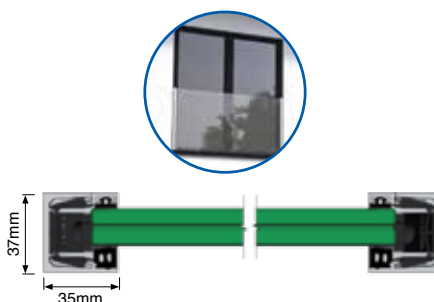


Glass Thickness mm	1000mm Height Code	1100mm Height Code
10.00 - 13.50	18057CP1010	18057CP1110
16.76 - 21.50	18057CP10175	18057CP11175

Glass not included.

2-Part Balcony Kit

Side-fix



Glass Thickness mm	1000mm Height Code	1100mm Height Code
10.00 - 13.50	18057BKS1010	18057BKS1110
16.76 - 21.50	18057BKS10175	18057BKS11175

Glass not included.

Fixings

Fixing Anchor

For plastic frames



Length mm	Pack Qty	Code
55	20	1899006133
65	20	1899006134
75	20	1899006135
85	12	1899006136
95	12	1899006137
105	20	1899006138
125	20	1899006139
150	20	1899006140

Suitable for top-fix and side-fix kits.

Fixing Anchor

For aluminium frames



Description	Pack Qty	Code
Top-Fix	10	1899006115

Fixing Anchor

For steel



Description	Pack Qty	Code
Top-Fix	10	1899006117

Fixing Anchor

For concrete



Description	Pack Qty	Code
Top-Fix	10	1899006119
Side-Fix	10	1899006130

Fixing Anchor

For stone



Description	Pack Qty	Code
Top-Fix	10	1899006118
Side-Fix	10	1899006131

Assembly Tool

For rubber sealing strips



Code
1899006RAT



Free delivery on all orders over £150.00

For Pro-Railing® Protect see page 519.

Clean & Protect Wipe



- Contents:
- 1 x 6ml pre-cleaner wipe
 - 1 x 6ml surface protection coating wipe

Coverage m ²	Code
2	1899009LGSS

Clean & Protect Standard Kit



- Contents:
- 1 x 100ml pre-cleaner
 - 1 x 100ml surface protection
 - 1 x microfibre cloth

Coverage m ²	Code
10	1899009LGSK

Clean & Protect Refresher Kit



- Contents:
- 1 x 50ml stainless steel cleaner
 - 1 x 100ml pre-cleaner
 - 1 x 100ml surface protection
 - 1 x microfibre cloth

Coverage m ²	Code
10	1899009LGSRK

Clean & Protect Trade Refresher Kit



- Contents:
- 1 x 250ml stainless steel cleaner
 - 1 x 1000ml micro-particle remover
 - 1 x 1000ml pre-cleaner
 - 1 x 1000ml surface protection
 - 1 x decontamination towel
 - 10 x microfibre cloths

Coverage m ²	Code
200	1899009LGTRK

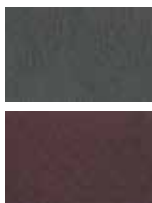
Stainless Steel Cleaning Methods

To achieve maximum protection for your stainless steel, we recommend using Pro-Railing Clean & Protect products directly after installation and then use the cleaning methods below where applicable.

Problem	Cleaning Method	Comments
Standard cleaning	Soap & water	Sponge, rinse with clean water and wipe dry
Fingerprints	Soap & warm water or stainless steel cleaner (18990097063)	Rinse with clean water and wipe dry
Oil/grease marks, other stains & light discolouration	Either use Pro-Railing Protect refresher kits (1899009LGSRK or LGTRK) or Pro-Railing Enviro-Shield (189900902)	Follow instructions on the box
Heavy discolouration	Stainless steel cleaning gel (18990094023)	Rinse well with clean water then use either Pro-Railing Protect refresher kits (1899009LGSRK or LGTRK) or Pro-Railing Enviro-Shield (189900902)
Scratches on satin finish (Mirror finish will need repolishing properly)	<u>Slight scratches</u> Use fine polishing cloth (189901101) coated with stainless steel cleaner (18990097063) <u>Deeper scratches</u> Use coarse cloth (189901102) first then fine cloth with cleaner (as above)	Do not use steel based cleaning products (wire wool) as this will embed in the surface & will cause further surface damage & discolouration
Paint/Graffiti	Use a generic paint stripper dependent on type of paint	Use a soft bristle brush & treat afterwards with either Pro-Railing Protect refresher kits (1899009LGSRK or LGTRK) or Pro-Railing Enviro-Shield (189900902)

Polishing Cloths

For removal of light scratches on stainless tube & fittings



Description	Code
Fine (Grey)	189901101
Medium (Red)	189901102

Stainless Steel Cleaner (400ml)

Degreases & cleans surfaces ready for gluing



Code
18990097063

Stainless Cleaning Gel (2kg)

Pickling gel helps remove rust, dirt & grime from stainless steel



Code
18990094023

After Care Tea Staining 3-Part Cleaner Kit

Keeps stainless handrail & fittings in top condition long after installation



Code
189900902

Glass Handling Accessories



Latex Gloves

Size	Code
8	185900101

The PGK10 glove from Marigold is based around a 10 gauge 100% Kevlar liner with a natural rubber latex crinkle coating that provides good grip in wet or dry conditions, abrasion & tear resistant. The thumb is fully coated to protect the most vulnerable part of the hand.



Degreasing

Dirt left on the surface after the fabrication process can have a serious affect on the corrosion resistance of stainless steel. Not only will it prevent the steel from oxidizing, it can contain corrosive particles, which will start rusting at a later date.

Pickling

Pickling requires the use of strong chemicals (hydrofluoric acid and nitric acid) to dissolve the surface of the steel. This process completely removes any surface contaminants and will help to restore the chromium level to the weld affected areas.

The heat from the welding process drives chromium away from the weld area. The area adjacent to the weld is often low in chromium and high in iron. These areas are always the most susceptible to corrosion once the component is in use.

Iron dissolves more readily than chromium, therefore, the pickling process leaves the surface chromium-rich and in a condition where it can form a dense oxide layer.

Passivation

Stainless steel will passivate in the open atmosphere - assuming that it is spotlessly clean to begin with and so is the air it is sat in. It is a slow process and, depending on the grade of stainless, can take between 24 - 48 hours to occur.

The chromium-oxide layer that protects stainless from corrosion is relatively fragile. It can be broken or damaged during fabrication, if scratched and/or contamination is allowed to settle on the surface.

The most effective way to form the passive layer is to force it by subjecting the steel to an oxidizing chemical. These are typically acid solutions containing nitric acid or citric acid. This process speeds up the reaction time and typically takes around 2-3 hours contact time to fully form a dense and effective layer.

Simply cleaning a corroded piece of stainless steel with a stainless steel cleaner and a scouring pad (usually phosphoric acid or citric acid based) does not passivate it. These acids will help to dissolve the corrosion (iron oxides) and leave the surface in a condition in which it can self-passivate.

Rain washing regularly will reduce the risk of tea staining (brown discolouration). This is a visual impairment only, and does not affect the structural integrity or longevity of the material. The best way to prevent it is to follow the cleaning chart below, but as a general rule of thumb the recommendation is that the stainless steel needs cleaning as often as the glass.

Remember bad design can result in poor performance e.g. partially sheltered systems will greatly reduce the benefit of natural washing by rain. Maintenance of stainless steel should be considered in the design process.

Recommended Cleaning Intervals For Stainless Steel Handrail Systems

Building	Roof or wall washed by rain		Eaves, Soffits or sheltered areas not washed by rain	
	No deposits	Deposits accumulate	No deposits	Deposits accumulate
Cleaning in rural, suburban & residential areas	4/year	6/year	12/year	24/year
Cleaning for seaside, industrial & severe areas	8/year	12/year	24/year	52/year

Notes:
 Cleaning frequency is dependant on surface finish, design details, environment, cleaning procedure & expectations of performance
 Cleaning involves using Pro-Railing Enviro-Shield (189900902) - which comprises of stainless steel cleaner, demineralised water & protection spray.

Stainless steel is not self-cleaning!

- Steel
- Wrought Iron Components
- Gate Hardware
- Sliding Door Gear
- Gate Automation
- Mesh
- Decking & Subframe
- Flooring & Stair Treads
- Handrailing
- Fencing
- Fixings

Approach To Buildings

Other than dwelling



Generally any raised area with an unprotected edge, such as a walkway, platform or staircase, from which a fall of more than 0.5m could happen, must be fitted with a guardrail. These may be of tubular or solid construction or a combination of both.

Handrails supplied from the Pro-Railing range follow the recommendations of BS 6399 Part 1, BS 5395 and BS 6180. Usually 2 horizontal rails, consisting of a top rail and a mid-rail or alternatively a top rail and an infill panel. For staircases or ladders bounded by a wall, only a single handrail is required with a minimum hand clearance of 65mm as recommended by EEUA.

Wherever possible handrails should be continuous and follow the exposed edge of the raised platform and/or staircase. The minimum handrail height for platforms and walkways is 100mm above the surface and for staircases the handrail height is between 900 and 1100mm above the pitch line. Handrails should finish in a swept end, either to the wall, knee rail or return to the upright standard.

Sharp corners, protrusions and exposed ends should be avoided and return bends should not protrude more than 350mm from the centre line of the upright. At the foot of staircases no extrusion should extend beyond the maximum extension of the stringer.

BS 5395: Part 3 recommends the minimum design imposed lateral loads that should be used in industrial situations:

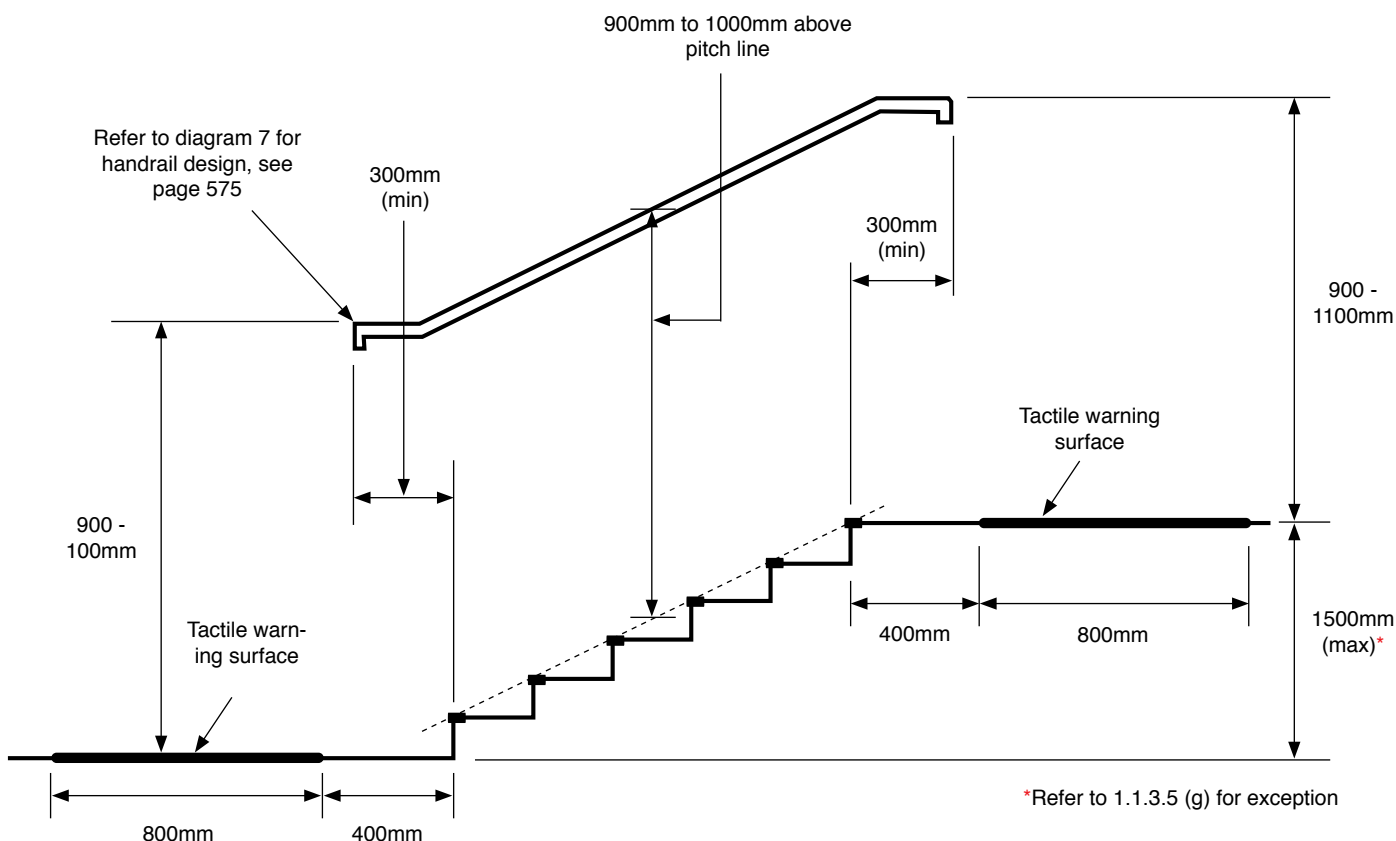
LIGHT DUTY – Access limited to one person:
0.36 kN/m

GENERAL DUTY – Regular pedestrian traffic:
0.36kN/m

HEAVY DUTY – High density traffic (escape route):
0.74kN/m

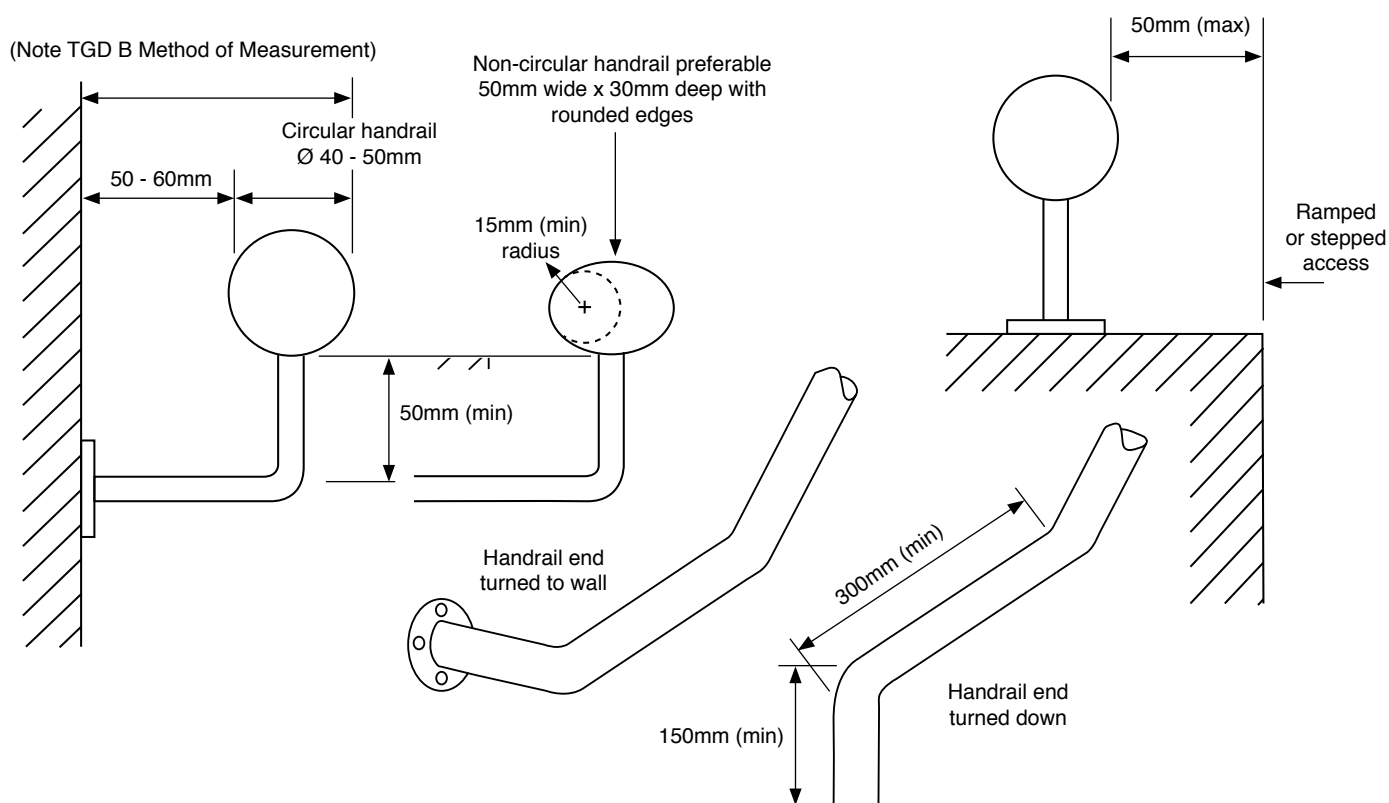
Areas subject to crowding **OVER 3m WIDE**:
3.00kN/mm

Diagram 6 External Steps & Stairs - Key Dimensions



Extract from Building Regulations Part K & Part M can be found on our website.

Diagram 7 Handrail Design



Extract From Building Regulations Part K & Part M;

1.1.3.6 Handrails

General guidance on handrails and guarding is given in TGD K, but the guidance that follows applies to handrails on accessible access routes.

Where handrails are provided on a ramped or stepped access route:

(a) The vertical height to the top of the upper handrail from the pitch line of the surface of a flight should be between 900 and 1000mm and from the surface of a landing should be between 900 and 1100mm (refer to Diagram 6). Where a second handrail on stairs is provided for children or those of short stature the vertical height to the top of a second lower handrail from the pitch line of the surface of a flight should be between 600 and 700mm;

(b) Where there are two or more flights separated by a landing or landings, the handrails should be continuous across flights and landings, except where broken by side access routes on landings;

(c) Where the handrail is not continuous the handrail should extend at least 300mm beyond the top and bottom of a ramped approach and the top and bottom risers of a stepped approach, and terminate in a closed end which does not project into a route of travel. Handrails should be terminated in such a way that reduces the risk of clothing being caught;

(d) The background against which the handrails are seen should contrast visually without being highly reflective (refer to 1.6.4);

(e) The profile should be either circular with a diameter of between 40 to 50mm or oval with a width of 50mm (refer to Diagram 7);

(f) Handrails should not protrude more than 100mm into the surface width of the access route where this would impinge on the stair width requirement of TGD B – Methods of Measurement;

(g) There should be a clearance of at least 50 to 60mm between the handrail and any adjacent wall surface (refer to Diagram 7);

(h) There should be a clearance of at least 50mm between a cranked support and the underside of the handrail (refer to Diagram 7). The handrail support should meet the handrail centrally on its underside. Rationale: This will minimise the risk of the handrail supports interrupting the smooth running of a person's hand along the rail;

(i) The handrails inner face should be located no more than 50mm beyond the surface width of the access route (refer to Diagram 7);

(j) Handrail fixings should be designed to meet the loading recommendations of I.S. EN 1991-1-1:2002.

Guidelines For The Use Of Glass



In protective barriers

F.H. Brundle has found the following extracts from leading authorities in the field of glass, which you may find useful for UK projects. We cannot be held liable for the compliance of our components to local or national building regulations. In some instances we have tested our handrail systems to certain criteria. These reports can be found online. Regulations are always changing and it is highly recommended that you consult with local structural engineers, building inspectors and local regulations in the country of the installation. It remains the responsibility of the customer to ensure the current regulations are met.

Tables based on page 7, section 7, Architectural Glazing Systems, of the Glass Loading Data Sheet 7.2 publication November 2014, with glass loading guidelines as issued by the Glass and Glazing Federation.

TABLE A1 - Classification of building occupancy types by barrier loadings.

Class	Occupancy
1	Domestic and Residential – single family dwellings Office and Work Areas – light pedestrian traffic routes
2	Domestic and Residential – multi-occupancy, balconies and edges of roofs Office and Work Areas – areas not susceptible to over crowding Areas without obstacles for moving people and not susceptible to over crowding – stairs, landing, corridors, and balconies
3	Areas where people might congregate – areas having fixed seating within 530mm of the barrier Areas with tables or fixed seating – restaurants and bars Areas susceptible to over crowding – footways or footpaths less than 3 metres wide, adjacent to sunken areas Retail areas – all retail areas including banks, building societies or betting shops
4	Areas susceptible to over crowding – theatres, cinemas, shopping malls, assembly areas. Footways or pavements greater than 3 metres wide adjacent to sunken areas

TABLE A2 - Design loads for protective barriers.

Building Occupancy Class	Design Loads		
	Line load in kN/m run applied 1100mm above finished floor level	UDL (Uniformly Distributed Load) in kN/m ² applied to the whole of the infill panel below the line load height	Concentrated load in kN applied to any part of the infill panel below the line load height
1	0.36	0.50	0.25
2	0.74	1.00	0.50
3	1.50	1.50	1.50
4	3.00	1.50	1.50

TABLE A7 - Thickness of glass required for single glazed free standing glass protective barriers.

Building Occupancy Class	Thickness For Glass Type mm				
	Thermally toughened safety glass	Toughened/laminated safety glass using PVB interlayer		Toughened/laminated safety glass using Ionoplast interlayer	
		With handrail	With handrail	Without handrail	With handrail
1	12	15.5	17.5	13.5	17.5
2	15	19.5	21.5	15.5	19.5
3	19	23.5	31.5	19.5	25.5
4	25	28.5	39.5	25.5	31.5



A full 'Glass Loading data sheet 7.2' can be found on our website: www.fhbrundle.co.uk

TABLE 3 - Glass thickness for free-standing protective barriers - Pilkington Toughened Safety Glass. Based on page 7, section Design, of the Glass and Mechanical Strength Technical Bulletin publication January 2001, with glass loading guidelines as issued by Pilkingtons Glass.

Design Level Horizontal UDL (Line Load) (kN/m)	Pilkington Toughened Safety Glass Thickness (mm)
0.36	12
0.74	15
1.50	19
3.00	25

Infill Panels For Barriers

TABLE 4 - Maximum spans for bolted Pilkington Toughened Safety Glass Infill panels for barriers (Applicable only for pane widths greater than 700mm). Based on page 8, section Design, of the Glass and Mechanical Strength Technical Bulletin publication January 2001, with glass loading guidelines as issued by Pilkingtons Glass.

Infill Loading From BS 6180		Span Limit For Bolted Pilkington Toughened Glass (mm)			
UDL (kN/m ²)	Point Load (kN)	6mm*	8mm*	10mm	12mm
0.5	0.25	1400	1750	2100	2400
1.0	0.50	900	1450	1750	2050
1.5	1.50	n/a	n/a	1200	1600

*6 and 8mm Pilkington Toughened Safety Glass will not be suitable if the free path perpendicular to the barrier is larger than 1.5m, since it will not give containment (i.e. remain intact) at Class A of BS 6206: 1981.



The Full 'Pilkington Glass And Mechanical Strength Technical Bulletin' can be found on our website: www.fhbrundle.co.uk

Guidance On Position Of Holes In Glass

For The Quality Of Thermally Toughened Soda Lime Silicate Safety Glass For Building

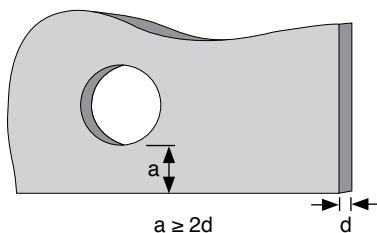
Information based on page 4 - 5, section 4, Products, Glazing Techniques and Maintenance, of the GGF Standard Data Sheet 4.4 publication October 2004, with guidelines as issued by the Glass and Glazing Federation.

6.3.3 LIMITATIONS ON POSITION OF HOLES - In general, the limitations on hole positions relative to the edges of the glass pane, the corners of the glass pane and to each other depends on:

- The nominal glass thickness (**d**)
- The dimensions of the pane (**B, H**)
- The diameter of hole (**ø**)
- The shape of the pane
- The number of holes

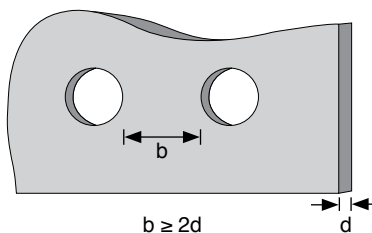
The recommendations given below are those, which are normally available and are limited to panes with a maximum of 4 holes.

Figure 7: Relationship Between Hole And Edge Of Pane



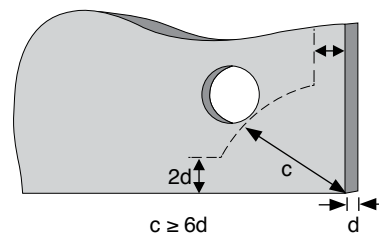
1) The distance, a, of the edge of a hole to the edge of the glass should be not less than 2d.

Figure 8: Relationship Between Two Holes



2) The distance, b between the edges of two holes should be not less than 2d.

Figure 9: Relationship Between Hole And Corner Of Pane



3) The distance, c, of the edge of a hole to the corner of the glass should not be less than 6d.

Note: If one of the distances from the edge of the hole to the edge of the glass is less than 35mm, it can be necessary to position the hole asymmetrically with respect to the corner. The manufacturers should be consulted.



A full 'GGF Standard data sheet 4.4' can be found on our website: www.fhbrundle.co.uk

Create a stunning finish with Rinato™ deck boards





Fortitude Traditional railings are one of the easiest, most versatile, off-the-shelf handrail solutions on the market today. The range consists of a series of railing panels, posts and brackets that can provide a number of different design solutions. Available in a long lasting, UV resistant, stylish black sand finish.

The steel panels can be cut to size on site, to suit different post centres. The innovative and unique steel raking panel can be adjusted, to allow the installation of railings on stairs and gradients, without needing to pre-fabricate. The panels are cleverly designed to conceal the pivot points of each spindle.

Our Fortitude Contemplation range of posts with glass clamps and 10mm standard glass panels, provide an off-the-shelf, stylish handrailing system, which maximises the view from your deck. There is nothing to stop the mixing of Traditional steel panels and Contemplation glass panels, to open up the view in specific sections of an installation.

The two styles of Contemporary Glass Panels or Slats, are supplied in a kit with an aluminium top and bottom rail, that cleverly integrates the glass into the design. The glass is available in a clear or grey tint. If you wish to cut the kits to length, glass can be supplied made to order to suit.

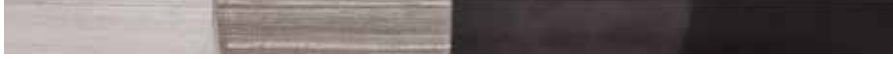


Introduction to the range

Available in a contemporary polyester powder coated black sand finish. Fortitude is a high quality, long lasting handrailing solution. It is made from pre-galvanised steel, which is then sprayed with a protective zinc phosphate coating, then treated with a further coating, before finally getting treated with a high quality Akzo Nobel UV resistant powder coated finish.

FORTITUDE RAILINGS • PURE QUALITY • PREMIUM FINISH

1. Made from pre-galv steel
2. Zinc Phosphate pre-treatment
3. Electro coated
4. Quality Akzo Nobel powder coated finish



Request a **FREE** sample.

For ease and simplicity all our brackets are supplied with suitable fixings for use on steel or wooden posts.

Bracket For Steel Posts



Bracket For Brick Pillars



Bracket For Wooden Posts



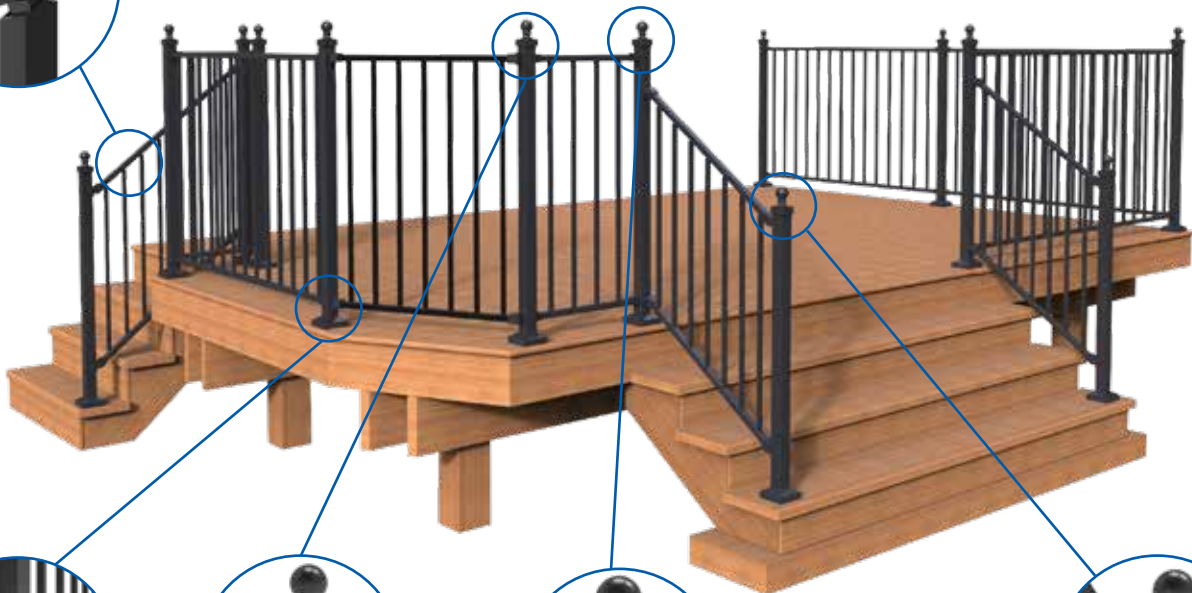
Glass Clamps For Steel Posts



Raking panels adjust to max. 40°



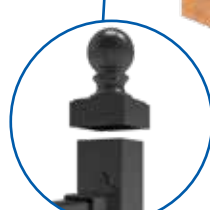
To complement your Fortitude handrail, why not take a look at our composite deck boards on page 361.



Posts include a two part cover cap



Corner brackets adjust to 120°



Post caps easily slide on top of the posts

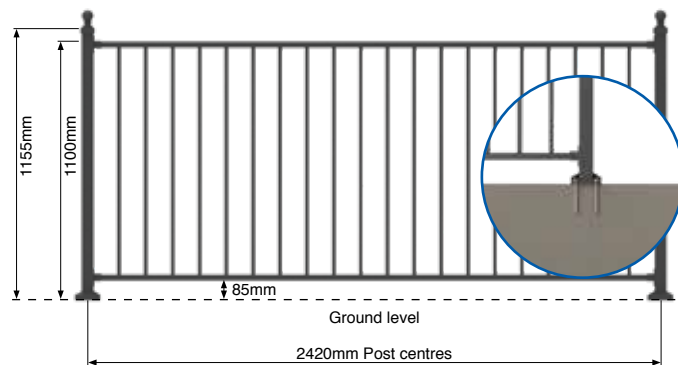


Stair bracket can adjust 60° up/down & angle adaptor can adjust to 40° up/down or left/right

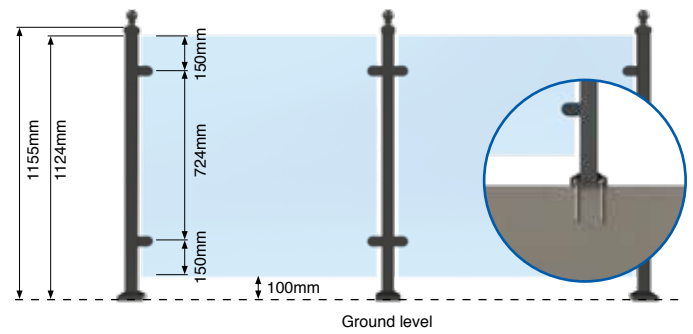


Application Scenarios

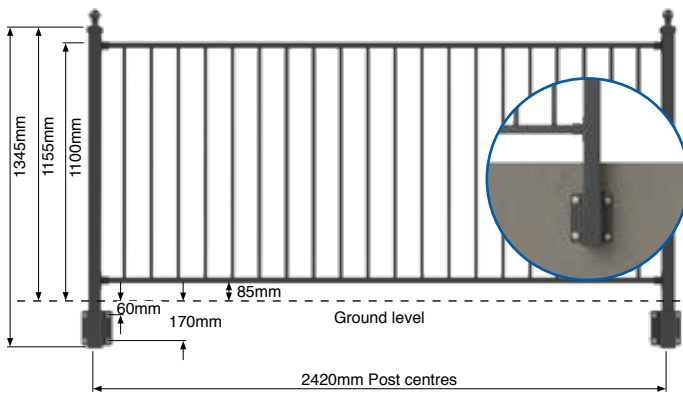
Bolt-Down Posts



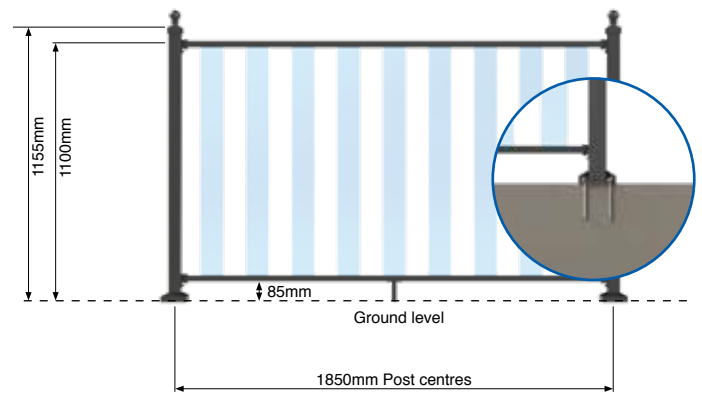
Pre-Drilled Posts For Glass Clamps



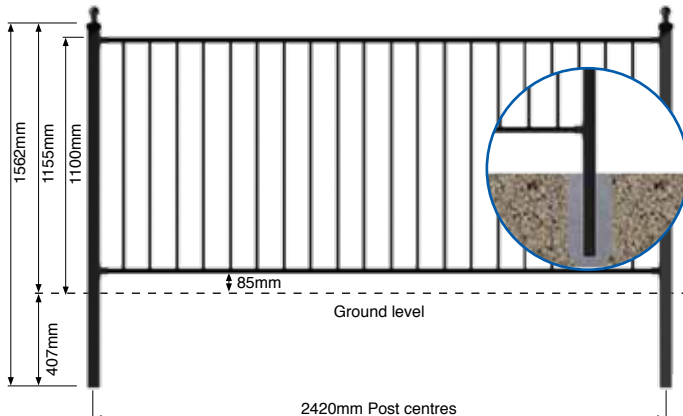
Side-Fix Posts With Fascia Brackets



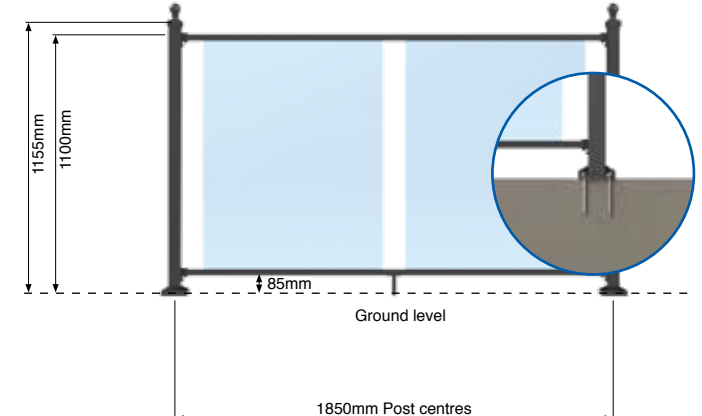
Channel Kit With Glass Slats



Concrete-In Posts



Channel Kit With Glass Panels



Steel

Wrought Iron Components

Gate Hardware

Sliding Door Gear

Gate Automation

Mesh

Decking & Subframe

Flooring & Stair Treads

Handrailing

Fencing

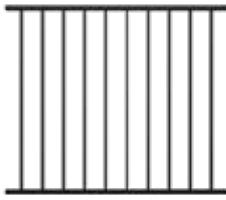
Fixings

Steel

Traditional Steel Railing Panels

Fixed Railing Panel

To give 1100mm high railings

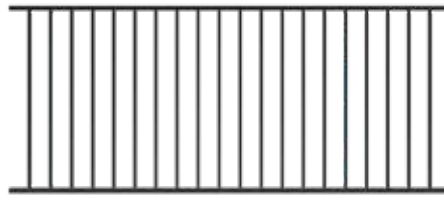


Colour	Height mm	Width mm	Code
Black Sand	1016	1200	64FR1012B

Horizontal rails: □ 25mm x 1.5mm wall thickness.
Infill bars: □ 16mm x 1.2mm wall thickness.

Fixed Railing Panel

To give 1100mm high railings

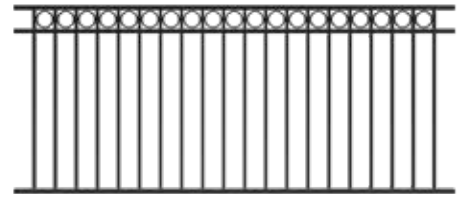


Colour	Height mm	Width mm	Code
Black Sand	1016	2370	64FR10B

Horizontal rails: □ 25mm x 1.5mm wall thickness.
Infill bars: □ 16mm x 1.2mm wall thickness.

Fixed Circles Railing Panel

To give 1100mm high railings



Colour	Height mm	Width mm	Code
Black Sand	1016	2370	64FRC10B

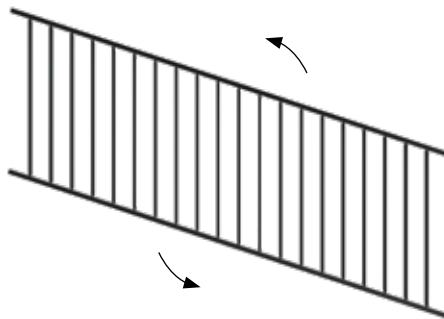
Horizontal rails: □ 25mm x 1.5mm wall thickness.
Infill bars: □ 16mm x 1.2mm wall thickness.
Circles: Ø 96 x 8mm.

Wrought Iron Components

Gate Hardware

Adjustable Raking panel

For stairs & slopes, up to 40°



Colour	Height mm	Width mm	Code
Black Sand	863	2320	64ARP10B

Horizontal rails: □ 25mm x 1.5mm wall thickness. Infill bars: □ 16mm x 1.2mm wall thickness.

A time & money saving solution for stairs or slopes



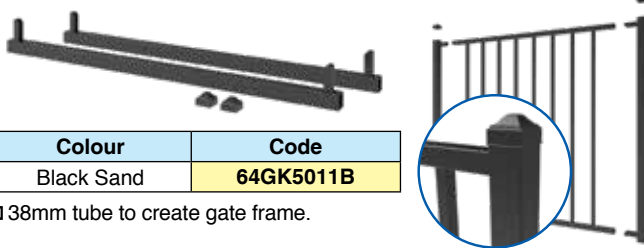
Sliding Door Gear

Gate Automation

Mesh

Railing Gate Kit

To be used with a cut to size railing panel



Colour	Code
Black Sand	64GK5011B

□ 38mm tube to create gate frame.



Decking & Subframe

Flooring & Stair Treads

Unsprung Hinge

Suitable for 25 - 50mm posts



H x W mm	Code
90 x 70	09FA30
110 x 75	09FA31

Maximum gate weight 50kg per pair. Polymer.

Gate Hinge

With 2 legs



Size mm	Code (Pair)
23 / 23	09FA20

Maximum gate weight 52kg per pair. Polymer.

Magna-Latch

General purpose magnetic gate latch



Code
09FA27

Non-lockable. Side Pull. Polymer.

Handrailing

Fencing

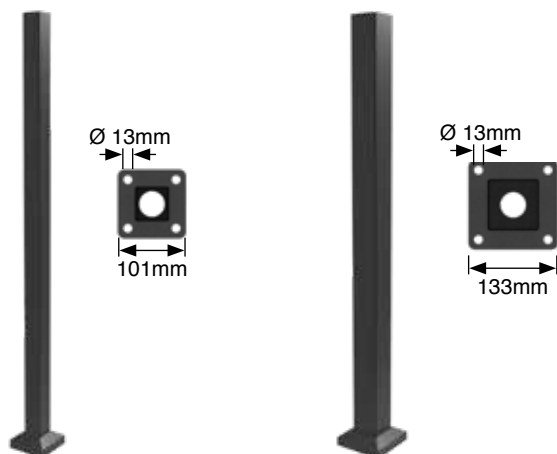
Fixings

For our range of posts see pages 583 & 584.

Bolt-Down Posts

50mm

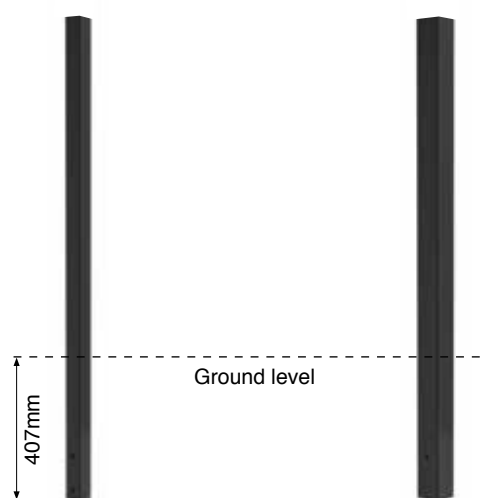
75mm



Concrete-In Posts

50mm

75mm



Colour	Height mm	□ mm	Thickness mm	Code
Black Sand	1155	50	2.3	64PB5011B
Black Sand	1155	75	2.3	64PB7511B
Black Sand	1155	50	3.0	59PBF5011BS*
Black Sand	1155	75	3.0	59PBF7511BS*

Colour	Height mm	□ mm	Code
Black Sand	1562	50	64PC5011B
Black Sand	1562	75	64PC7511B

2.3mm thickness. Supplied with protective cap.

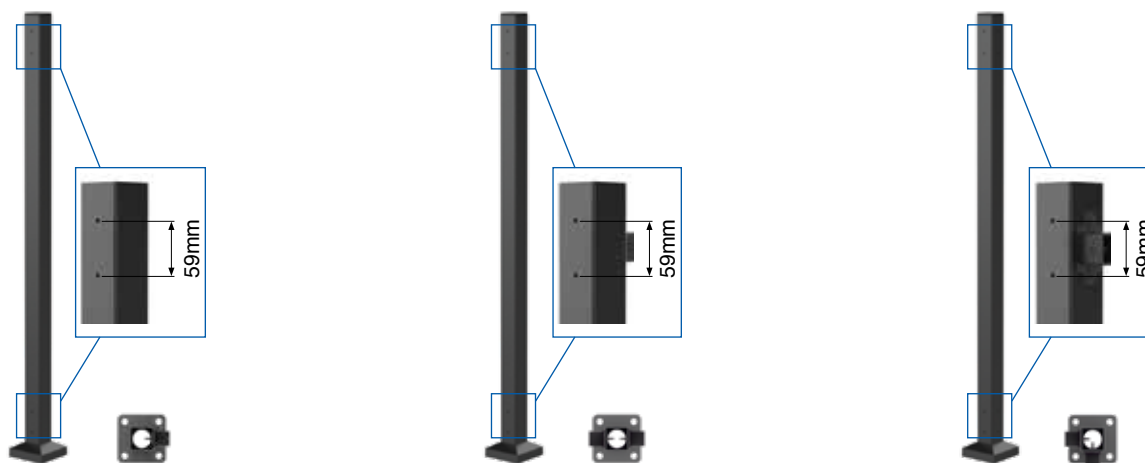
Supplied with base cover plate & protective cap. For fixing bolts use code: 5002HCS1075. *Marano® aluminium posts.

For post caps & brackets see page 585.

Pre-Drilled Bolt-Down End

Mid

Corner



Only for use with superior horizontal angle bracket or superior universal bracket.

Description	Colour	Height mm	□ 50mm Code	□ 75mm Code
End	Black Sand	1155	64PBE5011B	64PBE7511B
Mid	Black Sand	1155	64PBM5011B	64PBM7511B
Corner	Black Sand	1155	64PBC5011B	64PBC7511B

2.3mm thickness. Supplied with base cover plate & protective cap. Ø 5mm pre-drilled holes. For use with fixed panels. Gives 1100mm high handrail on flat surfaces. For fixing bolts use code: 5002HCS1075.

Hex Head With Flange

R-LX-HF-ZF



Description	Size mm	Pack Qty	Code
For fixing fascia brackets	M10 x 75	1	5002HCS1075
For bolt-down posts	M12 x 75	1	5002HCS1275

For cracked and non-cracked concrete. Wood fixings available on request.

R-Stud

With hex head

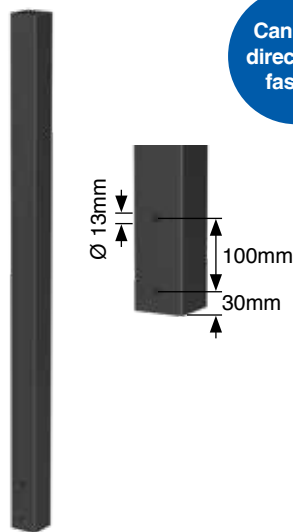
Description	Size mm	Pack Qty	Code
For fixing 75mm posts	M10 x 130	1	5002RS10130

- Steel
- Wrought Iron
- Gate Hardware
- Sliding Door Gear
- Gate Automation
- Mesh
- Decking & Subframe
- Flooring & Stair Treads
- Handrailing
- Fencing
- Fixings

Marano® Side-Fix Post

Aluminium

75mm



Colour	Size □ mm	Height mm	Code
Black Sand	75	1345	59PSF7513BS

3mm thickness. Post cap sold separately, see page 585.

For railing panels see page 582.

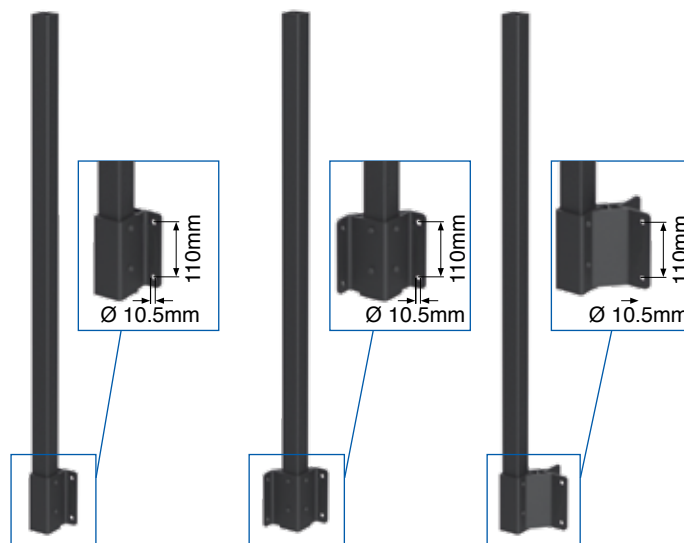
Marano® Side-Fix Posts With Fascia Bracket

Aluminium

End/Mid

Inside Corner

Outside Corner



Description	Colour	Size □ mm	Height mm	Black Code
End	Black Sand	50	1345	59PSM50BS
Inside Corner	Black Sand	50	1345	59PSIC50BS
Outside Corner	Black Sand	50	1345	59PSOC50BS

3mm thickness. Post supplied with fascia bracket and 4 screws to assemble. Post cap sold separately. See page 585.

Hex Head With Flange

R-LX-HF-ZF



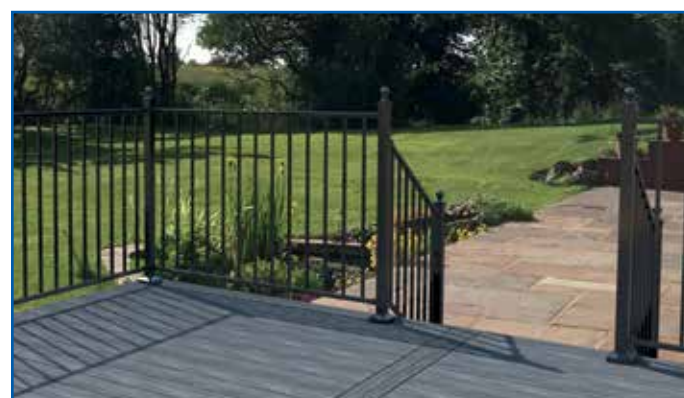
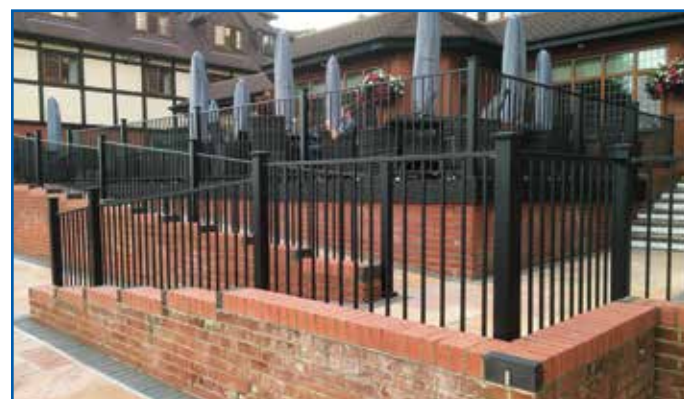
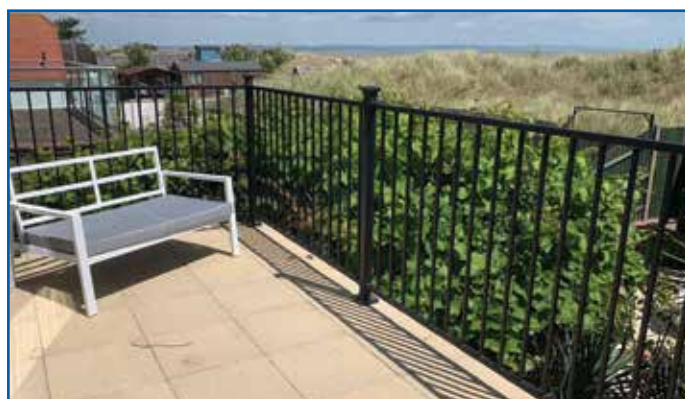
Description	Size mm	Pack Qty	Code
For fixing fascia brackets	M10 x 75	1	5002HCS1075
For bolt-down posts	M12 x 75	1	5002HCS1275

For cracked and non-cracked concrete. Wood fixings available on request.

R-Stud

With hex head

Description	Size mm	Pack Qty	Code
For fixing 75mm posts	M10 x 130	1	5002RS10130



Ball Post Cap



50mm cap



75mm cap

Colour	To Suit □ mm	Code
Black Sand	50	64CB50B
Black Sand	75	64CB75B

Pressed Post Cap



Colour	To Suit □ mm	Code
Black Sand	50	64CD50B
Black Sand	75	64CD75B

Pyramid Post Cap



Colour	To Suit □ mm	Code
Black Sand	50	64CP50B
Black Sand	75	64CP75B

Choice Universal Bracket

For use with fixed & raking panels



Colour	To Suit □ mm	Code
Black Sand	25	64CUB25B

Supplied as a pack of 4, with steel & wood fixings.

Choice Angle Adaptor

For horizontal & vertical angle applications, using the choice universal bracket, 40° left/right & up/down



Colour	Code
Black Sand	64CAA25B

Supplied as a pack of 4, with set screws to screw to the universal bracket.

Superior Stair Bracket

For use with raking panel, 60° up & down



Colour	To Suit □ mm	Code
Black Sand	25	64SSB25B

Supplied as a pack of 4, with steel & wood fixings.

Superior Horizontal Angle Bracket

For use with fixed panels, 60° left & right



Colour	To Suit □ mm	Code
Black Sand	25	64SCB25B

Supplied as a pack of 4, with steel & wood fixings.

Superior Universal Bracket

For use with fixed panels



Colour	To Suit □ mm	Code
Black Sand	25	64SUB25B

Supplied as a pack of 4, with steel & wood fixings.

Cap Rail Clip

For wooden handrail



Colour	To Suit □ mm	Code
Black Sand	25	64CR25B

Supplied as a pack of 4, with wood/composite fixings.

Touch Up Paints

Spray



Colour	ml	Code
Black Sand	400	29PC400SBS

Brushable



Colour	ml	Code
Black Sand	125	29PC125TBS

Supplied with brush.

Drilling Template

Universal Bracket Template

To ensure quick & easy positioning of brackets



Code
64UT25

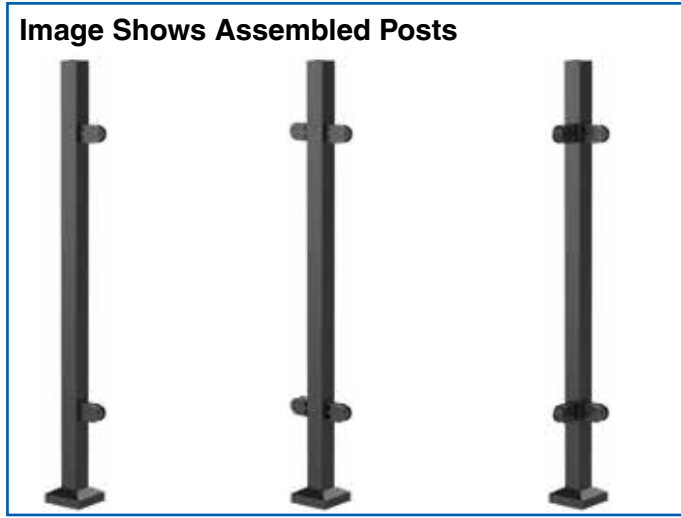


Image Shows Assembled Posts

Glass Panels

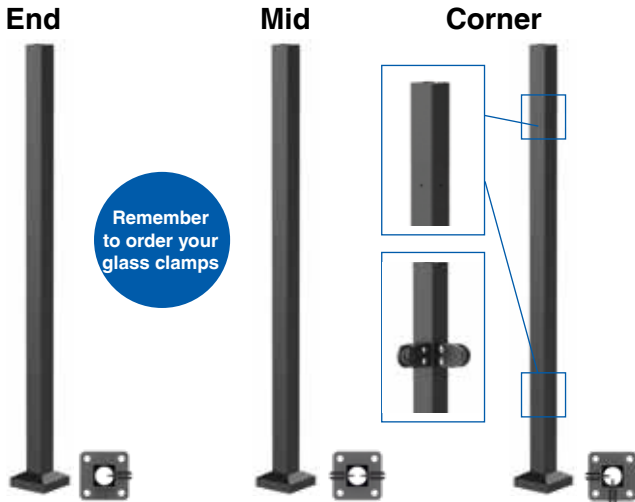
1024mm height x 10mm thickness



Width mm	Code
100	1855101001024
200	1855102001024
300	1855103001024
400	1855104001024
500	1855105001024
600	1855106001024
700	1855107001024
800	1855108001024
900	1855109001024
1000	18551010001024
1100	18551011001024

Gives 1100mm high handrail on flat surfaces.

Pre-Drilled Posts For Glass Clamps

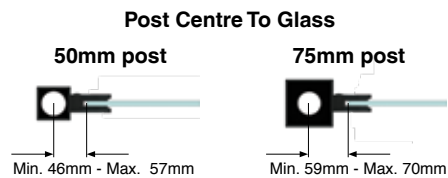


Description	Colour	Height mm	□ 50mm Code	□ 75mm Code
End	Black Sand	1155	64PB76150B	64PB76175B
Mid	Black Sand	1155	64PB76250B	64PB76275B
Corner	Black Sand	1155	64PB76350B	64PB76375B

2.3mm thickness. Supplied with base cover plate & protective cap.
Pre-drilled holes for use with glass clamps code: **1805401FBS**. For fixing bolts use code: **5002HCS1075**.

Aluminium Round Glass Clamp

Flat back



Colour	To Suit Glass	Code
Black Sand	10mm	1805401FBS

Supplied as a pack of 4, with cover caps and bolts for fixing to post. Cast aluminium.

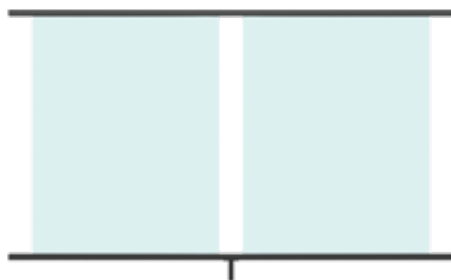
Choose your post cap from page 585.



For our glass slats & panel systems see page 587.



Glass Panels System



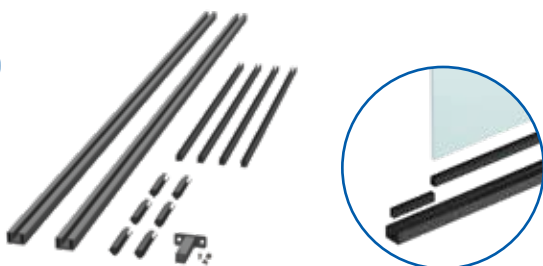
To achieve this look, order:

- 1 x channel kit, colour options below
- 2 x glass panels 760 x 1000 x 8mm, code: **1855087601000**
- 1 x railing bracket (pack of 4) colour options below

Marano® Aluminium Railing Kit

To suit 8mm glass panels

Don't forget to order railing brackets!



Finish/Colour	Length m	Height mm	Width mm	Code
Black Gloss	1.8	25	38	59AC3818BG
Black Sand	1.8	25	38	59AC3818BS

Kit includes 2 x channels, 4 x gaskets, 6 x wedges, 1 x support foot with 1 x wood screw and 2 x self-drilling screws. Glass and railing brackets sold separately.

Marano® Aluminium Railing Bracket

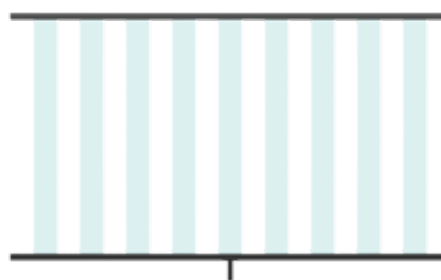
Pack of 4



Finish/Colour	To suit □ mm	Code
Black Gloss	25 x 38	59BR3825B
Black Sand	25 x 38	59BR3825BS

Supplied as a pack of 4, with 12 x self-drilling screws.

Glass Slats System



To achieve this look, order:

- 1 x channel kit, colour options below
- 1 x glass slats kit, see glass colour options right
- 1 x railing bracket (pack of 4) colour options below

Glass Slats Kit

For use with Channel Kit



Glass	Height m	Width mm	Thickness mm	Code
Clear	1.0	95	8	59GP188C
Grey Tinted	1.0	95	8	59GP188T

Kit includes 9 x slats, 18 x gaskets and 14 x wedges to cover a 1.8m length.

For our range of posts see pages 583 & 584.

Bolt-Down



Concrete-In



Side-Fix



Steel

Wrought Iron Components

Gate Hardware

Sliding Door Gear

Gate Automation

Mesh

Decking & Subframe

Flooring & Stair Treads

Handrailing

Fencing

Fixings