



Section	07.01
Date:	March 09
Revision:	00.01

Profile System Technical Data

Name	Matrix FS70
Description	Fully sculptured, steel reinforced PVC-U window and door system
Material	Unplasticized polyvinylchloride (PVC-U) Manufactured and certified to BS EN 12608 VEKA BSI Kitemark Licence KM 12875
Colours	White (RAL 9003), Golden Oak and Rosewood Other colours available
Glazing	Standard: 28mm dry glazed, double glazed units Glazing range: 28mm to 40mm
Construction	Fully welded construction, Type Tested to enable BS 7412 or BBA certified window manufacture
Performance (Windows)	Weather performance certified to BS 6375 Part 1 Matrix FS70 performance rating: 2400 Special VEKA BSI Kitemark Licence KM12875
Window Security	Manufactured and certified to BS 7950 VEKA BSI Kitemark Licence KM 33520
Door Security	Manufactured and certified to PAS 24 VEKA BSI Kitemark Licence KM 60983
Energy Rating	Windows certified by BFRC to A, B & C Ratings
Sound Insulation	Up to R_w 33 dB with standard 28mm glazing. Up to R_w 40 dB with 32mm glazing.



Section	07.02
Date:	March 09
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MATRIX FS70 SYSTEM **FEATURES AND BENEFITS**

GENERAL DESCRIPTION

A fully integrated three chambered, sculptured, 70mm system with steel and aluminium reinforcement sections designed around a central glass position with identical upstand and bead athletics. The profile range enables internally beaded products to be manufactured, including:

Casement windows and tilt & turn windows.
Tilt & slide patio doors.
French doors and residential doors.

All the main profiles contain fully weldable weather seals / glazing gaskets. The glazing bead range allows the use of glazing units from standard 28mm to 40mm thick, enabling product optimisation for acoustic and / or thermal performance. Available in many colour options including white, golden oak and rosewood on a brown base.

OUTER FRAMES

A set of three frame profiles with heights of 56mm, 70mm and 85mm, enabling profile optimisation when manufacturing the variety of windows and doors within the system's capability. The three chamber frame design provides a central, isolated reinforcement chamber and all the necessary features for face or base drainage on either side of the central chamber. The raised bead platform provides location for all gearing elements including friction stays, locking keeps and clip-in glass packers. The dovetail bead groove provides secure retention of the glazing beads. The four leg design provides location and clip retention of ancillary products including couplings, cills and installation brackets.

MULLIONS

A set of four T & Z mullion profiles with widths of 64mm and 86mm, each with a standard duty or heavy duty steel reinforcement section, enabling flexibility and optimisation in window or door design. A 110mm T door midrail profile that can also be used within windows for consistency of sightline. The mullions can be welded into each other and/or frame and sash profiles or mechanically coupled using aluminium reinforcement sections. All mullion profiles incorporate the raised bead platform to provide location for all gearing elements including friction stays, locking keeps and clip-in glass packers. The dovetail bead groove provides secure retention of the glazing beads.

SASHES

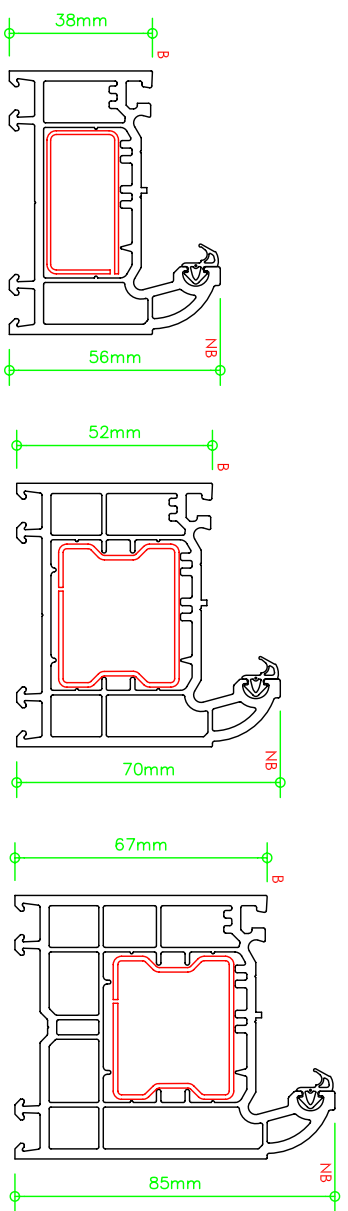
A full range of sashes includes:

75mm, Internally beaded, casement sash.
80mm, Internally beaded, tilt & turn.
95mm, Internally beaded inward and outward French door sashes.
110mm, Internally beaded inward and outward French door and residential door sashes.

The three chamber sash design allows for concealed drainage. All sash profiles incorporate the raised bead platform to provide location for clip-in glass packers and the dovetail bead groove to provides secure retention of the glazing beads.

GEARING

The Matrix FS70 System is well established. Profile related gearing products are readily available from all of the major gearing manufacturers, providing a large choice of products for use with the system.



56mm outer frame
box reinforcement
channel reinforcement

101160
113245
113317

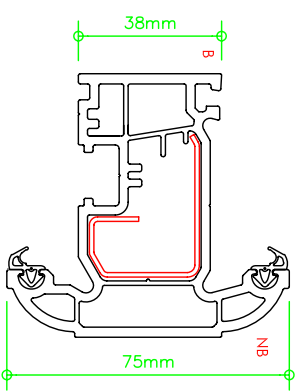
70mm outer frame
box reinforcement
cranked reinforcement

101161
113378
113371

85mm outer frame
box reinforcement
cranked reinforcement

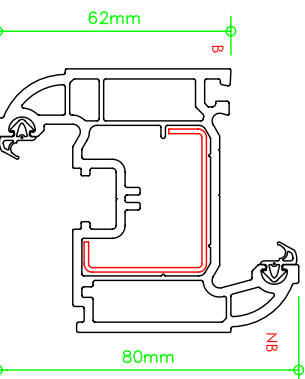
101162
113378
113371

outer frame



75mm casement sash
reinforcement

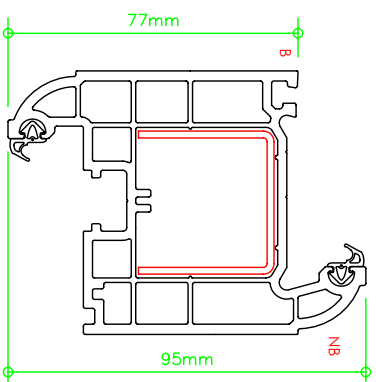
103264
113372
113039



80mm tilt & turn sash
reinforcement

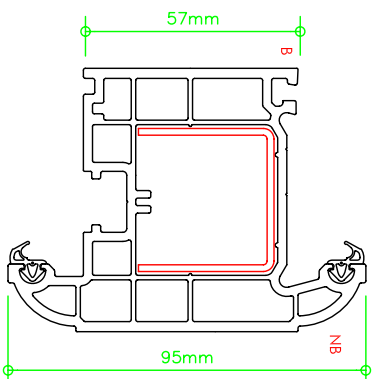
103267
113373

window sash



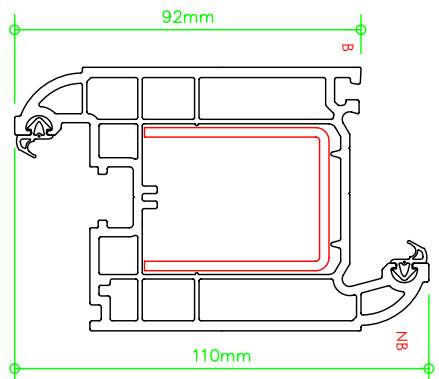
95mm z door sash
reinforcement
prepared reinforcement

103265
113375
113374



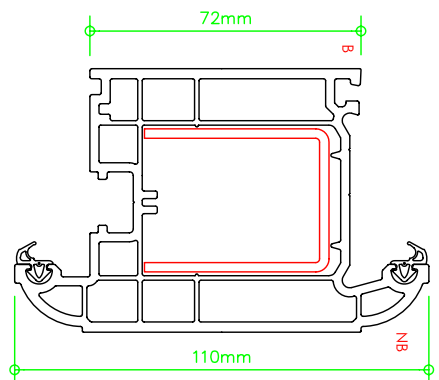
95mm t door sash
reinforcement
prepared reinforcement

103266
113375
113374



110mm z door sash
box reinforcement
channel reinforcement
prepared reinforcement

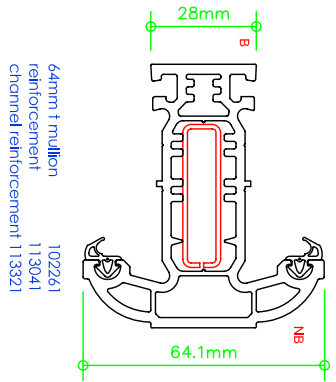
105168
113231
113320
113318



110mm t door sash
box reinforcement
channel reinforcement
prepared reinforcement

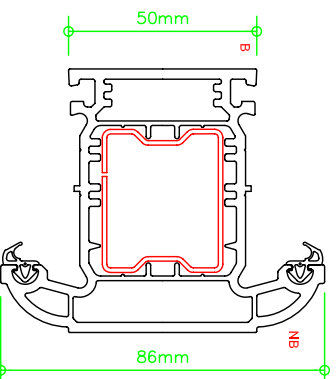
105169
113231
113320
113318

door sash



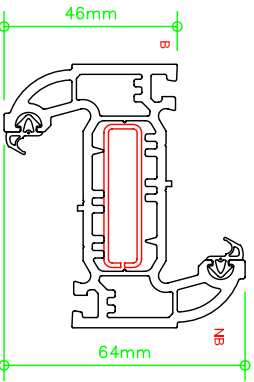
64mm t mullion
reinforcement
channel reinforcement

102261
113041
113321



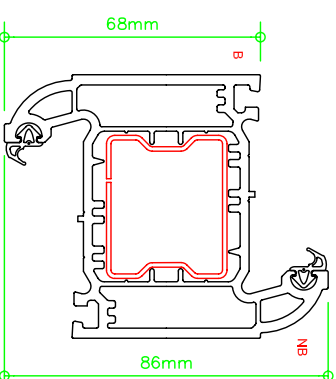
86mm t mullion
reinforcement
channel reinforcement
box reinforcement
cranked reinforcement

102263
113041
113321
113378
113371



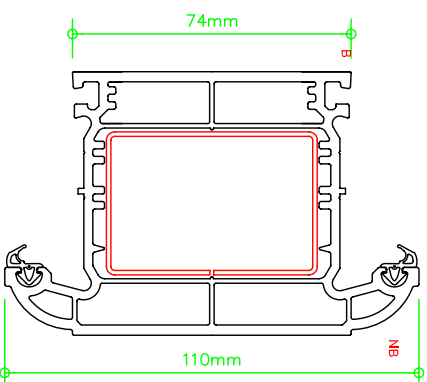
64mm z mullion
reinforcement
channel reinforcement

102260
113041
113321



86mm z mullion
reinforcement
channel reinforcement
box reinforcement
cranked reinforcement

102262
113041
113321
113378
113371



110mm mullion
reinforcement

102264
113376

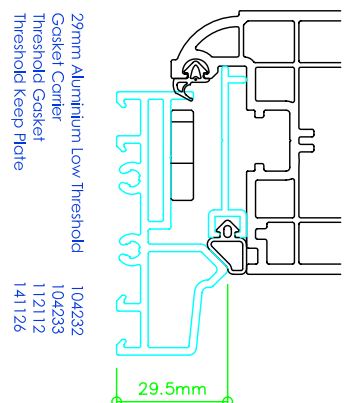
bead / gasket



3.5mm Fold Gasket
112072

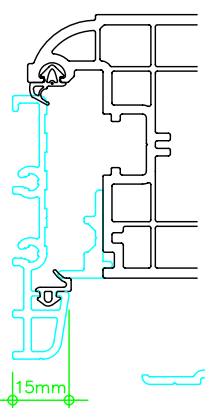
bead / gasket

ancillaries



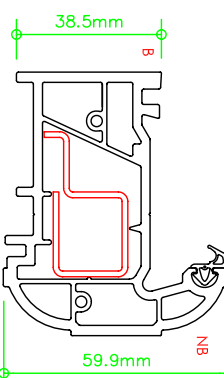
29mm Aluminium Low Threshold
Gasket Carrier
Threshold Gasket
Threshold Keep Plate

104232
104233
112112
141126



15mm Aluminium Low Threshold
Sash Sealing Strip
Threshold Gasket

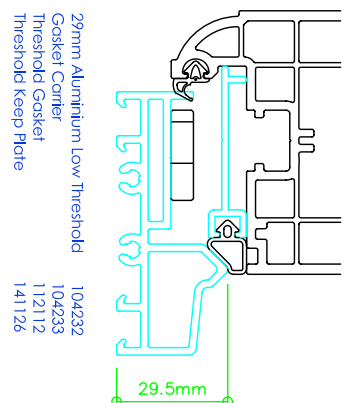
104224
104225
112072



60mm Fold Mullion
Box Reinforcement
Cranked Reinforcement

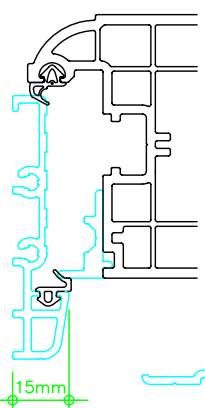
102245
113019
113316

ancillaries



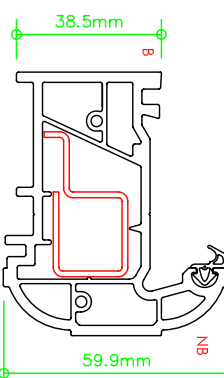
29mm Aluminium Low Threshold
Gasket Carrier
Threshold Gasket
Threshold Keep Plate

104232
104233
112112
141126



15mm Aluminium Low Threshold
Sash Sealing Strip
Threshold Gasket

104224
104225
112072



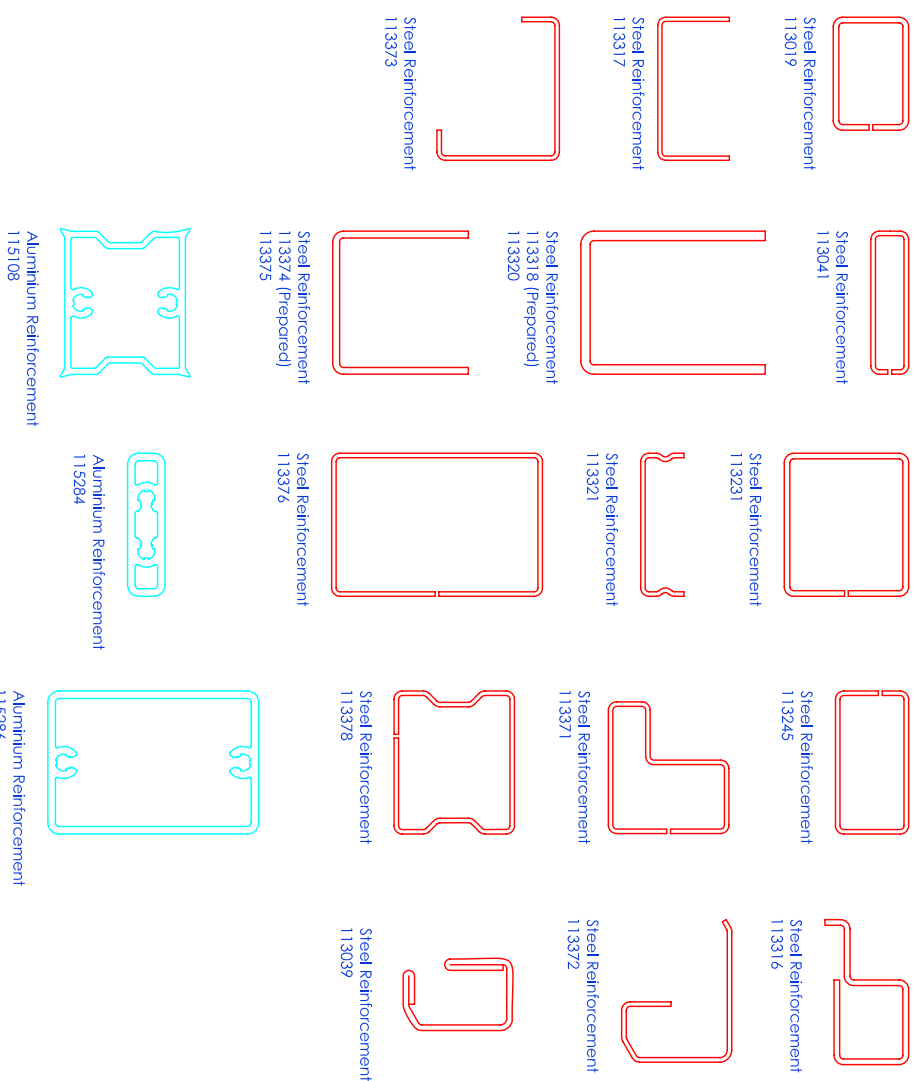
60mm Fold Mullion
Box Reinforcement
Cranked Reinforcement

102245
113019
113316

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mullion / transom

reinforcement

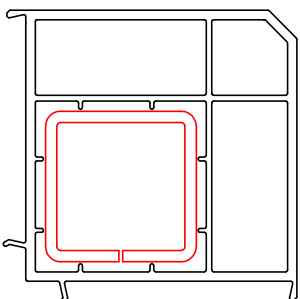


Caseмент Horn Cover Moulding
109549 LH/RH

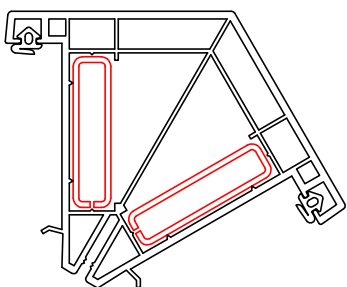
Caseмент Horn Base Moulding
109539 LH/RH

casement horns

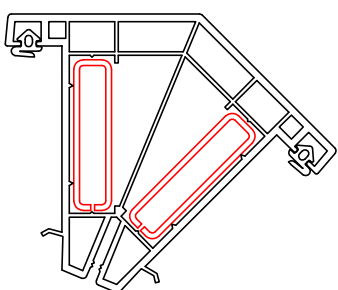
bay poles



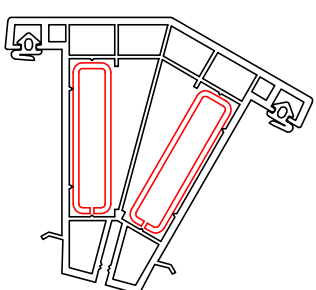
90deg Corner post reinforcement 116200
adjustment nut 141444
LOAD BEARING



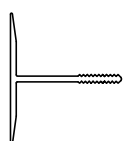
120° corner post reinforcement gasket 116016
113028
112003



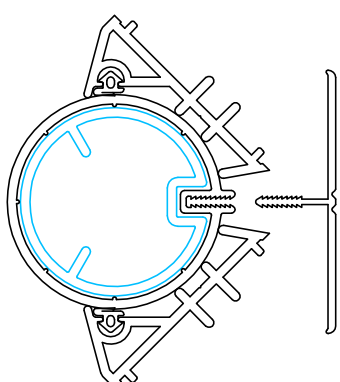
135° corner post reinforcement gasket 116015
113028
112003



150° corner post reinforcement gasket 116017
113028
112003

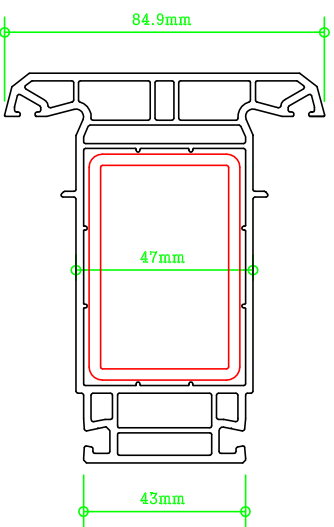


T-piece for fixed angle bay poles 116033

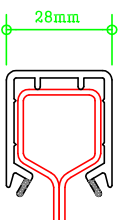


Bay pole cover 116047
Aluminum bay pole 104157
Bay pole shoe 116049
Gasket 112003
Cover piece 116048
adjustment nut 141437.2
LOAD BEARING

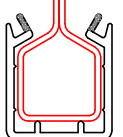
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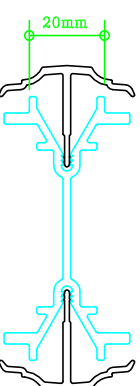
Coupling profile 116202
Steel reinforcement 113011
adjustment nut 141.439



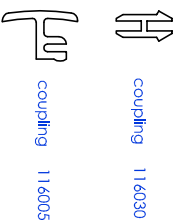
dogbone coupling covers 113112
116012



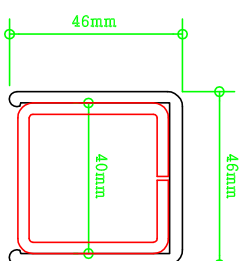
small H coupling 116058



cover profile aluminum reinforcement 116060
104210

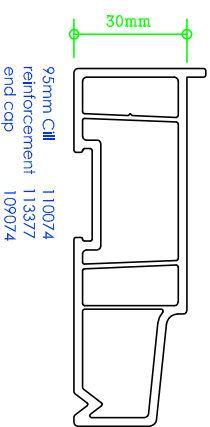


coupling 116030
coupling 116005

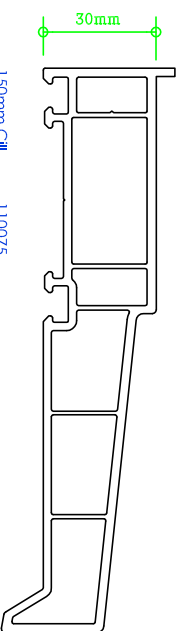


cover profile 109195
Steel reinforcement 113128

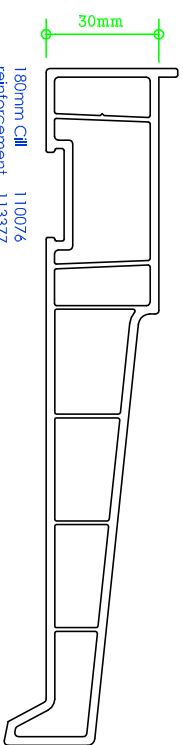
couplers



95mm Cill reinforcement 110074
end cap 109074

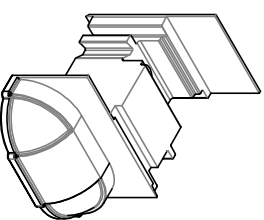


150mm Cill reinforcement 110075
113317
113245
Straight Cill joint 109085
135° Cill joint 109084
90° Cill joint 109089
end cap 109075



180mm Cill reinforcement 110076
113377
end cap 109090

False mullion cap

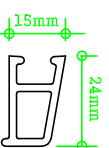


False Mullion End Cap Moulding 109525 LH/RH
(for 102245)

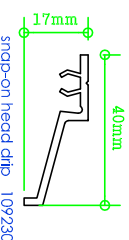
drips & beads



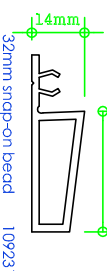
Eurogroove Infill 109045



drip mould 109122
end cap 109141



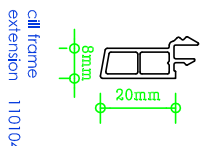
snap-on head drip 109230



32mm snap-on bead 109231

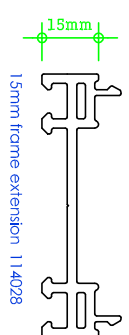
cills

cill extensions

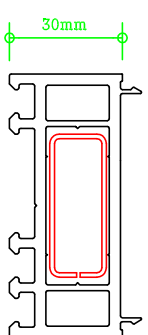


cill home extension 110104

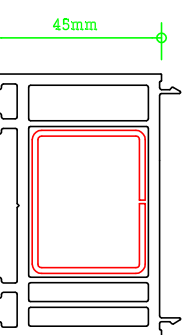
frame extensions



15mm frame extension 114028



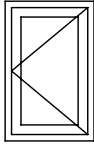
30mm frame extension 114014
Reinforcement 113073



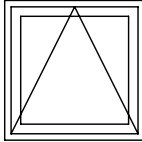
45mm frame extension 114202
Reinforcement 113271

frame extensions

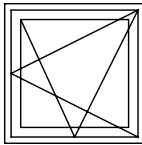
Matrix FS70 Maximum Sash Sizes



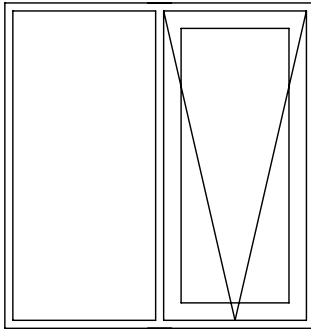
Casement Window	Side Hung Sashes	Max. Width	Max. Height
	Un-reinforced	700mm	1000mm
	Fully Reinforced	700mm	1400mm



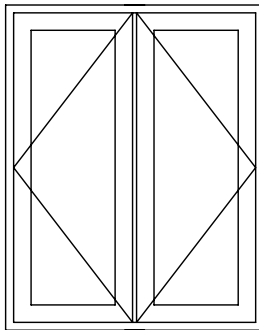
Casement Window	Top Hung Sashes	Max. Width	Max. Height
	Un-reinforced	1000mm	1000mm
	Fully Reinforced	1300mm	1200mm



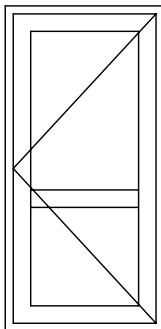
Tilt & Turn Window	80mm Sash	Max. Width	Max. Height
	Un-reinforced	1100mm	1100mm
	Fully Reinforced	1640mm	1800mm



Tilt & Slide Door	80mm & 110mm Sashes	Max. Width	Max. Height
	80mm Sash, Fully Reinforced	1200mm	2125mm
	110mm Sash, Fully Reinforced	1450mm	2125mm



French Door	95mm & 110mm Sashes	Max. Width	Max. Height
	95mm Sash, Fully Reinforced	745mm	2125mm
	110mm Sash, Fully Reinforced	995mm	2125mm



Residential Door	110mm Sashes	Max. Width	Max. Height
	Fully Reinforced	1075mm	2125mm

Notes:

Coloured profiles must be fully reinforced with a maximum fixing centre distance of 300mm
 When using any espagnolette sash, the bottom rail of the sash, when over 900mm, should be reinforced with the appropriate prepared steel section.
 All sash sizes are based on 2 x 4mm double glazed units. Glass weight and total sash weight on gearing components must always be considered.
 The glass must be supported on bridge packers and packed at all hinge points, locking points, cavity locking wedge positions and run-up block positions.
 Use cavity locking wedges and run-up blocks as detailed in the manual.
 Only tested and approved screws should be used in conjunction with this specification.



Section	07.06
Date:	March 10
Revision:	00.01

Matrix Fully Sculptured - Double Glazed Casement Window U-values & Energy Ratings

Frame (56mm) 101160 Steel 113245 Sash (75mm) 103264 Steel 113039
 T Mullion (64mm) 102261 Steel 113041 Bead 107155
 Z Mullion (64mm) 102260 Steel 113041

Outer Glass	Gas	Spacer Bar	Inner Glass	Emissivity	Whole Window U-value	Energy Index	Energy Rating
Pilkington - Optifloat	Air	TGI Spacer	Pilkington - S4	0.04	1.6 W/(m ² ·K)	-20 kWh/(m ² ·yr)	C
AGC - Planibel Clear	90% Argon	Aluminium	AGC - Planibel A	0.10	1.7 W/(m ² ·K)	-19 kWh/(m ² ·yr)	C
AGC - Planibel Clear	Air	Thermix TX.N	AGC - Planibel A	0.10	1.7 W/(m ² ·K)	-18 kWh/(m ² ·yr)	C
Pilkington - Optiwhite	Air	Thermix TX.N	Pilkington - K	0.15	1.8 W/(m ² ·K)	-17 kWh/(m ² ·yr)	C
Pilkington - Optifloat	90% Argon	TGI Spacer	Pilkington - K	0.15	1.7 W/(m ² ·K)	-17 kWh/(m ² ·yr)	C
Pilkington - Optiwhite	Air	SuperSpacer	Pilkington - K	0.15	1.8 W/(m ² ·K)	-16 kWh/(m ² ·yr)	C
Pilkington - Optifloat	90% Argon	Thermix TX.N	Pilkington - K	0.15	1.7 W/(m ² ·K)	-16 kWh/(m ² ·yr)	C
AGC - Planibel Clear	Air	SuperSpacer	AGC - Planibel A	0.10	1.7 W/(m ² ·K)	-16 kWh/(m ² ·yr)	C
Guardian - Clear Float	90% Argon	SuperSpacer	Guardian - ClimaGuarg D	0.05	1.6 W/(m ² ·K)	-16 kWh/(m ² ·yr)	C
Pilkington - Optifloat	90% Argon	SuperSpacer	Pilkington - K	0.15	1.7 W/(m ² ·K)	-15 kWh/(m ² ·yr)	C
Saint-Gobain - Planilux	90% Argon	Aluminium	Saint-Gobain - Total +	0.05	1.6 W/(m ² ·K)	-15 kWh/(m ² ·yr)	C
Euroglas - Eurofloat	90% Argon	Thermix TX.N	Euroglas - Silverstar Enplus	0.03	1.4 W/(m ² ·K)	-15 kWh/(m ² ·yr)	C
AGC - Planibel Clear	90% Argon	SuperSpacer	AGC Planibel G	0.15	1.6 W/(m ² ·K)	-14 kWh/(m ² ·yr)	C
Saint-Gobain - Planilux	Air	SwisSpacer V	Saint-Gobain - Total +	0.05	1.6 W/(m ² ·K)	-12 kWh/(m ² ·yr)	C
Euroglas - Eurowhite	90% Argon	Thermix TX.N	Euroglas - Silverstar Enplus	0.03	1.4 W/(m ² ·K)	-8 kWh/(m ² ·yr)	B
Pilkington - Optifloat	90% Argon	SuperSpacer	Pilkington - S4	0.04	1.4 W/(m ² ·K)	-8 kWh/(m ² ·yr)	B
AGC - Planibel Clearvision	90% Argon	SuperSpacer	AGC Planibel G	0.15	1.7 W/(m ² ·K)	-6 kWh/(m ² ·yr)	B
Pilkington - Optiwhite	90% Argon	SuperSpacer	Pilkington - K	0.15	1.7 W/(m ² ·K)	-6 kWh/(m ² ·yr)	B
AGC - Planibel Clear	90% Argon	SuperSpacer	AGC - Planibel A	0.10	1.6 W/(m ² ·K)	-6 kWh/(m ² ·yr)	B
Guardian - Clear Float	90% Argon	SuperSpacer	Guardian - ClimaGuarg A	0.05	1.4 W/(m ² ·K)	-5 kWh/(m ² ·yr)	B
Pilkington - Optiwhite	90% Argon	Thermix TX.N	Pilkington - S4	0.04	1.5 W/(m ² ·K)	-2 kWh/(m ² ·yr)	B
Pilkington - Optiwhite	90% Argon	TGI Spacer	Pilkington - S4	0.04	1.5 W/(m ² ·K)	-2 kWh/(m ² ·yr)	B
Guardian - ExtraClear Plus	90% Argon	SuperSpacer	Guardian - ClimaGuarg A	0.05	1.4 W/(m ² ·K)	-1 kWh/(m ² ·yr)	B
Saint-Gobain - Planilux	90% Argon	SwisSpacer V	Saint-Gobain - Total +	0.05	1.4 W/(m ² ·K)	0 kWh/(m ² ·yr)	A
AGC - Planibel Clearvision	90% Argon	SuperSpacer	AGC - Planibel A	0.10	1.6 W/(m ² ·K)	1 kWh/(m ² ·yr)	A
Pilkington - Optiwhite	90% Argon	SuperSpacer	Pilkington - S4	0.04	1.4 W/(m ² ·K)	1 kWh/(m ² ·yr)	A
Saint-Gobain - Diamant	90% Argon	SwisSpacer V	Saint-Gobain - Total +	0.05	1.4 W/(m ² ·K)	2 kWh/(m ² ·yr)	A



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Matrix Fully Sculptured - Double Glazed Casement Window U-values & Energy Ratings

Frame (56mm) 101160 Steel 113245 Sash (75mm) 103264 Steel 113372
 T Mullion (64mm) 102261 Steel 113041 Bead 107155
 Z Mullion (64mm) 102260 Steel 113041

Outer Glass	Gas	Spacer Bar	Inner Glass	Emissivity	Whole Window U-value	Energy Index	Energy Rating
Pilkington - Optifloat	Air	TGI Spacer	Pilkington - S4	0.04	1.7 W/(m ² ·K)	-22 kWh/(m ² ·yr)	D
AGC - Planibel Clear	90% Argon	Aluminium	AGC - Planibel A	0.10	1.8 W/(m ² ·K)	-22 kWh/(m ² ·yr)	D
AGC - Planibel Clear	Air	Thermix TX.N	AGC - Planibel A	0.10	1.8 W/(m ² ·K)	-21 kWh/(m ² ·yr)	D
Pilkington - Optiwhite	Air	Thermix TX.N	Pilkington - K	0.15	1.8 W/(m ² ·K)	-20 kWh/(m ² ·yr)	C
Pilkington - Optifloat	90% Argon	TGI Spacer	Pilkington - K	0.15	1.7 W/(m ² ·K)	-19 kWh/(m ² ·yr)	C
Pilkington - Optiwhite	Air	SuperSpacer	Pilkington - K	0.15	1.8 W/(m ² ·K)	-18 kWh/(m ² ·yr)	C
Pilkington - Optifloat	90% Argon	Thermix TX.N	Pilkington - K	0.15	1.7 W/(m ² ·K)	-18 kWh/(m ² ·yr)	C
AGC - Planibel Clear	Air	SuperSpacer	AGC - Planibel A	0.10	1.7 W/(m ² ·K)	-19 kWh/(m ² ·yr)	C
Guardian - Clear Float	90% Argon	SuperSpacer	Guardian - ClimaGuarg D	0.05	1.6 W/(m ² ·K)	-18 kWh/(m ² ·yr)	C
Pilkington - Optifloat	90% Argon	SuperSpacer	Pilkington - K	0.15	1.7 W/(m ² ·K)	-17 kWh/(m ² ·yr)	C
Saint-Gobain - Planilux	90% Argon	Aluminium	Saint-Gobain - Total +	0.05	1.7 W/(m ² ·K)	-17 kWh/(m ² ·yr)	C
Euroglas - Eurofloat	90% Argon	Thermix TX.N	Euroglas - Silverstar Enplus	0.03	1.5 W/(m ² ·K)	-17 kWh/(m ² ·yr)	C
AGC - Planibel Clear	90% Argon	SuperSpacer	AGC Planibel G	0.15	1.7 W/(m ² ·K)	-17 kWh/(m ² ·yr)	C
Saint-Gobain - Planilux	Air	SwisSpacer V	Saint-Gobain - Total +	0.05	1.6 W/(m ² ·K)	-14 kWh/(m ² ·yr)	C
Euroglas - Eurowhite	90% Argon	Thermix TX.N	Euroglas - Silverstar Enplus	0.03	1.5 W/(m ² ·K)	-12 kWh/(m ² ·yr)	C
Pilkington - Optifloat	90% Argon	SuperSpacer	Pilkington - S4	0.04	1.5 W/(m ² ·K)	-9 kWh/(m ² ·yr)	B
AGC - Planibel Clearvision	90% Argon	SuperSpacer	AGC Planibel G	0.15	1.7 W/(m ² ·K)	-10 kWh/(m ² ·yr)	B
Pilkington - Optiwhite	90% Argon	SuperSpacer	Pilkington - K	0.15	1.7 W/(m ² ·K)	-8 kWh/(m ² ·yr)	B
AGC - Planibel Clear	90% Argon	SuperSpacer	AGC - Planibel A	0.10	1.6 W/(m ² ·K)	-9 kWh/(m ² ·yr)	B
Guardian - Clear Float	90% Argon	SuperSpacer	Guardian - ClimaGuarg A	0.05	1.5 W/(m ² ·K)	-8 kWh/(m ² ·yr)	B
Pilkington - Optiwhite	90% Argon	Thermix TX.N	Pilkington - S4	0.04	1.5 W/(m ² ·K)	-5 kWh/(m ² ·yr)	B
Pilkington - Optiwhite	90% Argon	TGI Spacer	Pilkington - S4	0.04	1.5 W/(m ² ·K)	-5 kWh/(m ² ·yr)	B
Guardian - ExtraClear Plus	90% Argon	SuperSpacer	Guardian - ClimaGuarg A	0.05	1.5 W/(m ² ·K)	-5 kWh/(m ² ·yr)	B
Saint-Gobain - Planilux	90% Argon	SwisSpacer V	Saint-Gobain - Total +	0.05	1.5 W/(m ² ·K)	-4 kWh/(m ² ·yr)	B
AGC - Planibel Clearvision	90% Argon	SuperSpacer	Guardian - ClimaGuarg A	0.05	1.5 W/(m ² ·K)	-4 kWh/(m ² ·yr)	B
AGC - Planibel Clearvision	90% Argon	SuperSpacer	AGC - Planibel A	0.10	1.6 W/(m ² ·K)	-2 kWh/(m ² ·yr)	B
Pilkington - Optiwhite	90% Argon	SuperSpacer	Pilkington - S4	0.04	1.5 W/(m ² ·K)	-2 kWh/(m ² ·yr)	B
Saint-Gobain - Diamant	90% Argon	SwisSpacer V	Saint-Gobain - Total +	0.05	1.5 W/(m ² ·K)	1 kWh/(m ² ·yr)	A



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Matrix Fully Sculptured - Double Glazed Casement Window U-values & Energy Ratings

Frame (70mm) 101161 113378 Steel 103264 Steel 113372
 T Mullion (64mm) 102261 113041 Steel 107155
 Z Mullion (64mm) 102260 113041 Steel 107155
 Sash (75mm) Bead

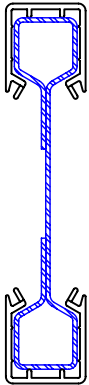
Outer Glass	Gas	Spacer Bar	Inner Glass	Emissivity	Whole Window U-value	Energy Index	Energy Rating
Saint-Gobain - Planilux	Air	SwisSpacer V	Saint-Gobain - Total +	0.05	1.6 W/(m ² K)	-19 kWh/(m ² ·yr)	C
Euroglas - Eurowhite	90% Argon	Thermix TX.N	Euroglas - Silverstar Enplus	0.03	1.5 W/(m ² K)	-17 kWh/(m ² ·yr)	C
Pilkington - Optifloat	90% Argon	SuperSpacer	Pilkington - S4	0.04	1.5 W/(m ² K)	-14 kWh/(m ² ·yr)	C
AGC - Planibel Clearvision	90% Argon	SuperSpacer	AGC Planibel G	0.15	1.7 W/(m ² K)	-14 kWh/(m ² ·yr)	C
Pilkington - Optiwhite	90% Argon	SuperSpacer	Pilkington - K	0.15	1.7 W/(m ² K)	-13 kWh/(m ² ·yr)	C
AGC - Planibel Clear	90% Argon	SuperSpacer	AGC - Planibel A	0.10	1.6 W/(m ² K)	-13 kWh/(m ² ·yr)	C
Guardian - Clear Float	90% Argon	SuperSpacer	Guardian - ClimaGuarg A	0.05	1.5 W/(m ² K)	-13 kWh/(m ² ·yr)	C
Pilkington - Optiwhite	90% Argon	Thermix TX.N	Pilkington - S4	0.04	1.5 W/(m ² K)	-9 kWh/(m ² ·yr)	B
Pilkington - Optiwhite	90% Argon	TGI Spacer	Pilkington - S4	0.04	1.5 W/(m ² K)	-10 kWh/(m ² ·yr)	B
Guardian - ExtraClear Plus	90% Argon	SuperSpacer	Guardian - ClimaGuarg A	0.05	1.5 W/(m ² K)	-10 kWh/(m ² ·yr)	B
Saint-Gobain - Planilux	90% Argon	SwisSpacer V	Saint-Gobain - Total +	0.05	1.5 W/(m ² K)	-8 kWh/(m ² ·yr)	B
AGC - Planibel Clearvision	90% Argon	SuperSpacer	Guardian - ClimaGuarg A	0.05	1.5 W/(m ² K)	-9 kWh/(m ² ·yr)	B
AGC - Planibel Clearvision	90% Argon	SuperSpacer	AGC - Planibel A	0.10	1.6 W/(m ² K)	-7 kWh/(m ² ·yr)	B
Pilkington - Optiwhite	90% Argon	SuperSpacer	Pilkington - S4	0.04	1.5 W/(m ² K)	-7 kWh/(m ² ·yr)	B
Saint-Gobain - Diamant	90% Argon	SwisSpacer V	Saint-Gobain - Total +	0.05	1.5 W/(m ² K)	-4 kWh/(m ² ·yr)	B



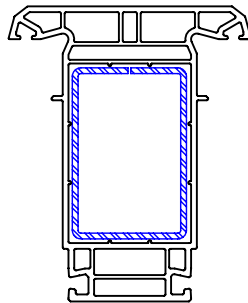
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FS70mm Coupling Systems

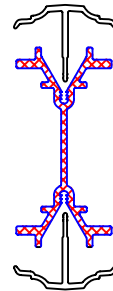
The following coupling are used to provide both additional strength and expansion allowance



Cover Profile: 116012
Steel: 113112
I-Value: 57.0 cm⁴



Coupling Profile: 116202
Steel: 113011
I-Value: 22.4 cm⁴



Cover Profile: 116060
Aluminium: 104210
I-Value: 21.8 cm⁴
(Steel Equivalent I-Value: 6.8 cm⁴)

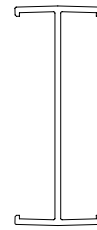
The following coupling are used when expansion allowance is not required



Coupling Profile: 116030
(Concealed Coupling)



Coupling Profile: 116005
(2mm Mini H Coupling)



Coupling Profile: 116058
(2mm H Coupling)



Cover Profile: 116029
Steel: 113119
I-Value: 28.5 cm⁴



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PROFILE REINFORCEMENT STRENGTHS - MATRIX FS70

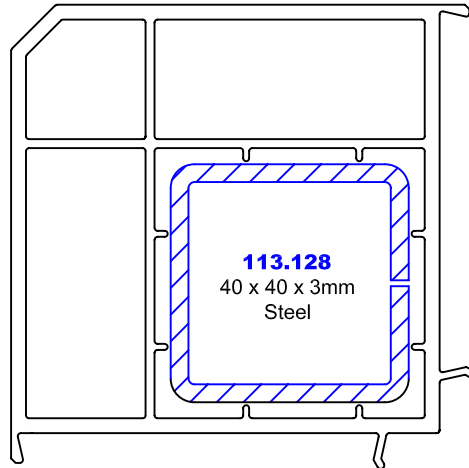
Profile Part No.	Description	Steel Part No.	Description	Thickness	Dead Load I - Value	Wind Load I - Value
101160	56mm Outer Frame	113245 113317	Box	0.9 mm	0.61 cm ⁴	1.77 cm ⁴
			U' Channel	0.9 mm	0.24 cm ⁴	1.49 cm ⁴
101161	70mm Outer Frame	113371 113378 113378	L' Shaped	1.2 mm	1.95 cm ⁴	1.94 cm ⁴
			Box	1.2mm	2.38 cm ⁴	2.84 cm ⁴
			Box	2.5 mm	4.48 cm ⁴	5.08 cm ⁴
101162	85mm Outer Frame	113371 113378 113378	L' Shaped	1.2 mm	1.95 cm ⁴	1.94 cm ⁴
			Box	1.2mm	2.38 cm ⁴	2.84 cm ⁴
			Box	2.5 mm	4.48 cm ⁴	5.08 cm ⁴
102260	64mm 'Z' Mullion	113041 113321	Box	1.1 mm	0.17 cm ⁴	1.45 cm ⁴
			U' Channel	0.9 mm	0.06 cm ⁴	1.02 cm ⁴
102261	64mm 'T' Mullion	113041 113321	Box	1.1 mm	0.17 cm ⁴	1.45 cm ⁴
			U' Channel	0.9 mm	0.06 cm ⁴	1.02 cm ⁴
102262	86mm 'Z' Mullion	113041 113321 113371 113378 113378	Box	1.1 mm	0.17 cm ⁴	1.45 cm ⁴
			U' Channel	0.9 mm	0.06 cm ⁴	1.02 cm ⁴
			L' Shaped	1.2 mm	1.95 cm ⁴	1.94 cm ⁴
			Box	1.2mm	2.38 cm ⁴	2.84 cm ⁴
			Box	2.5mm	4.48 cm ⁴	5.08 cm ⁴
			Box	1.1 mm	0.17 cm ⁴	1.45 cm ⁴
102263	86mm 'T' Mullion	113041 113321 113371 113378 113378	U' Channel	0.9 mm	0.06 cm ⁴	1.02 cm ⁴
			L' Shaped	1.2 mm	1.95 cm ⁴	1.94 cm ⁴
			Box	1.2mm	2.38 cm ⁴	2.84 cm ⁴
			Box	2.5 mm	4.48 cm ⁴	5.08 cm ⁴
			Box	1.2 mm	9.67 cm ⁴	5.30 cm ⁴
			C' Shaped	1.2 mm	1.35 cm ⁴	1.20 cm ⁴
102264	110mm 'T' Mullion	113376	Box	1.2 mm	9.67 cm ⁴	5.30 cm ⁴
103264	75mm 'T' Sash	113372	C' Shaped	1.2 mm	1.35 cm ⁴	1.20 cm ⁴
103267	80mm 'Z' Sash	113373	L' Shaped	1.2 mm	1.23 cm ⁴	1.90 cm ⁴



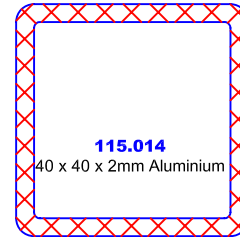
Section	07.12
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Non-Structural bay posts

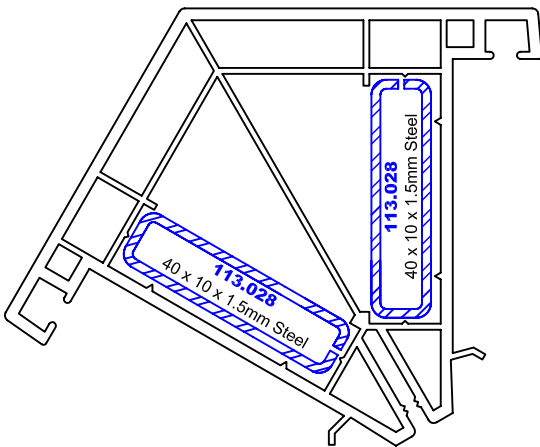
116200
90° Bay Post



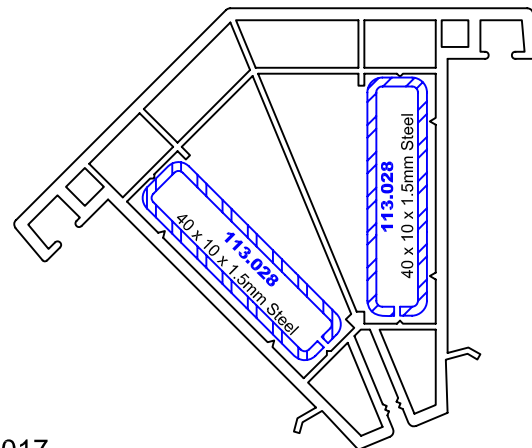
Aluminium Alternative



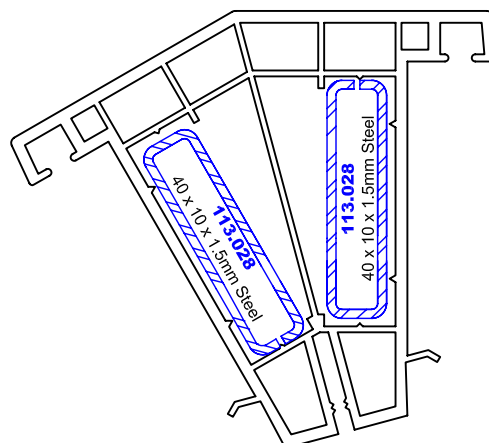
116016
120° Bay Post



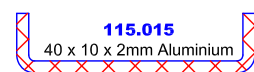
116015
135° Bay Post



116017
150° Bay Post



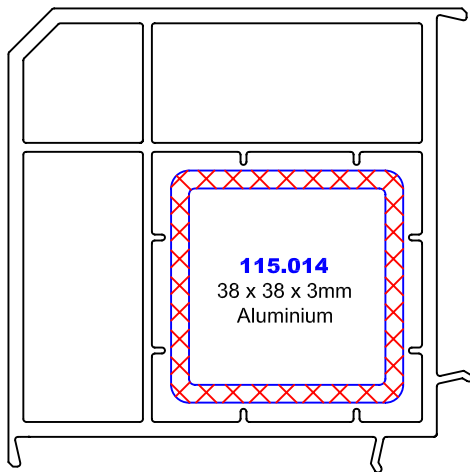
Aluminium Alternative



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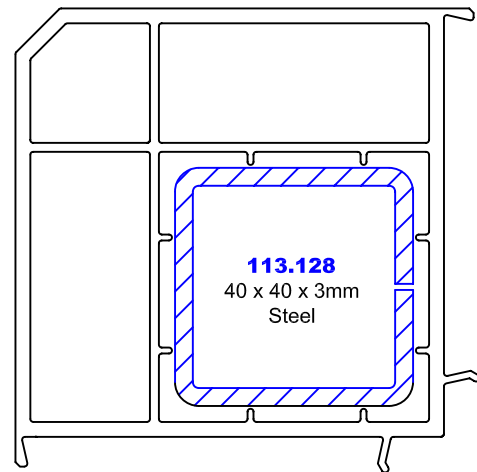
Structural bay posts

116200
90° Bay Post



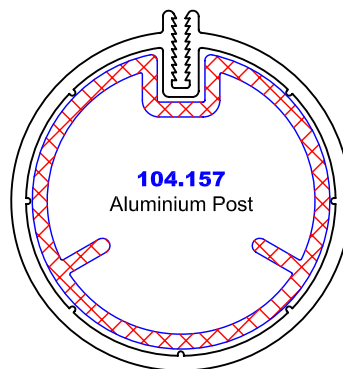
I Value
8.20cm⁴

Steel Equivalent
2.55cm⁴



I Value
9.62cm⁴

116047
Adjustable Bay Post



104.157
Aluminium Post

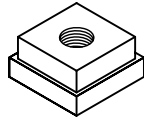
I Value
8.98cm⁴

Steel Equivalent
2.80cm⁴



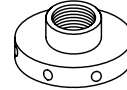
Section	07.14
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Structural bay post jacking plates



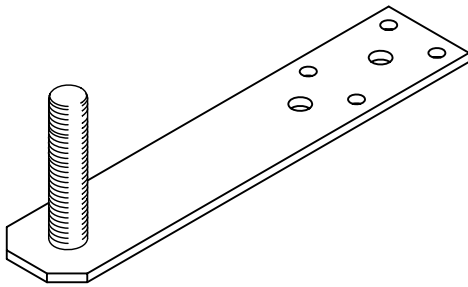
Article No 14144420000

For use with 116.014



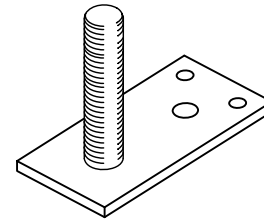
Article No 14143720000

For use with 116.047



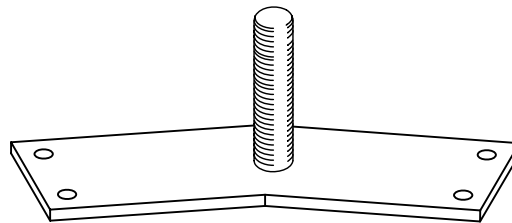
Article No 14143710000

Long Bearing Plate



Article No; 14143730000

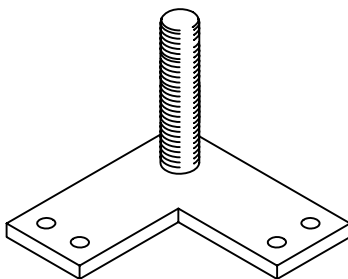
Short Bearing Plate



Article No 14144310000

(150°)

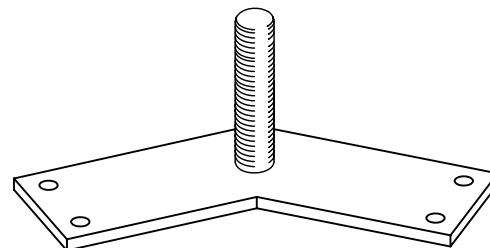
Load Bearing Plate



Article No 14144130000

(90°)

Load Bearing Plate



Article No 14144230000

(135°)

Load Bearing Plate



Section	07.15
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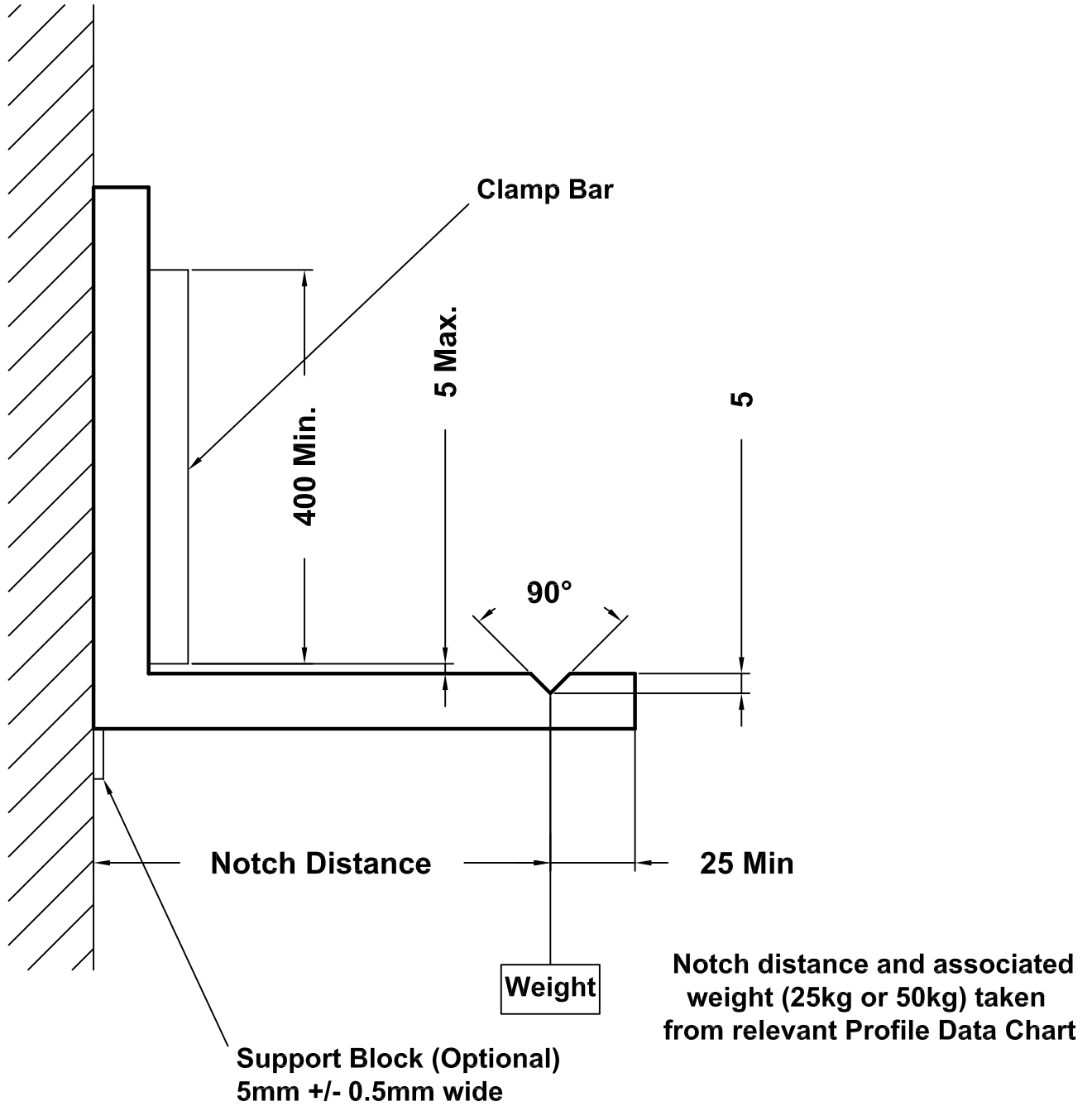
Corner Weld Testing Profile Data

Matrix FS70

Product	'l' Value	'e' Value	Minimum Load (kg)	Average Load (kg)	BS 7412 25 kg	BS 7412 50 kg
101.160/1	18.22	32.03	38.7	48.3	464	232
101.161/1	38.22	38.91	66.8	83.4	801	401
101.162/1	72.66	47.24	104.5	130.7	1254	627
102.260/1	18.32	32.00	38.9	48.6	467	233
102.261/1	18.32	32.00	38.9	48.6	467	233
102.262/1	54.09	43.00	85.5	106.9	1026	513
102.263/1	54.09	43.00	85.5	106.9	1026	513
102.264/1	123.24	55.00	152.3	190.3	1827	914
103.264/1	32.70	37.96	58.5	73.2	702	351
103.265/1	73.73	48.55	103.2	129.0	1238	619
103.266/1	73.73	48.55	103.2	129.0	1238	619
103.267/1	40.18	40.30	67.8	84.7	813	407
105.168/1	121.29	56.57	145.7	182.1	1748	874
105.169/1	121.28	56.57	145.7	182.1	1748	874

Section	07.16
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Basic Set-up For Weld Testing BS EN 514.

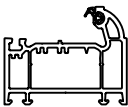
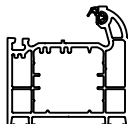
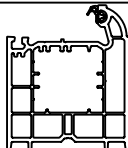
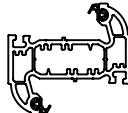
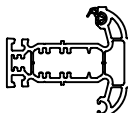
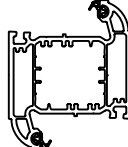
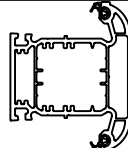
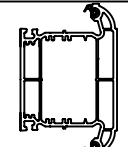




Section	07.17
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Kitemark Schedule BS EN 12608 Licence No. KM 12875

1.0 FS70 PVC-U Profile & Reinforcement

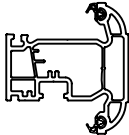
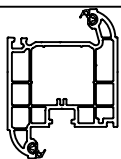
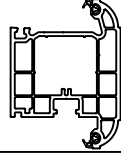
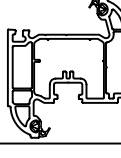
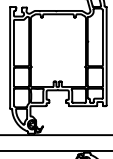
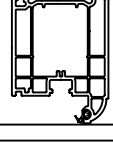

Symbol	Code	Description	Reinforcement Code
	101.160	56mm Outer Frame Casement / Tilt & Turn	Steel 113.245 (1.0mm) 113.317 (1.0mm)
	101.161	70mm Outer Frame Casement / Tilt & Turn	Steel 113.041 (1.1mm) 113.378 (1.2mm & 2.5mm) 113.371 (1.2mm)
	101.162	85mm Outer Frame Casement / Tilt & Turn	Steel 113.041 (1.1mm) 113.378 (1.2mm & 2.5mm) 113.371 (1.2mm)
	102.260	64mm 'Z' Transom / Mullion Casement / Tilt & Turn	Steel 113.041 (1.1mm)
	102.261	64mm 'T' Transom / Mullion Casement / Tilt & Turn	Steel 113.041 (1.1mm)
	102.262	86mm 'Z' Transom / Mullion Casement / Tilt & Turn	Steel 113.041 (1.1mm) 113.378 (1.2mm & 2.5mm) 113.371 (1.2mm)
	102.263	86mm 'T' Transom / Mullion Casement / Tilt & Turn	Steel 113.041 (1.1mm) 113.378 (1.2mm & 2.5mm) 113.371 (1.2mm)
	102.264	110m 'T' Transom / Mullion / Midrail Casement / Tilt & Turn	Steel 113.376 (1.2mm)



Section	07.18
Date:	March 09
Revision:	00.01

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1.0 FS70 PVC-U Profile & Reinforcement (cont.)

Symbol	Code	Description	Reinforcement Code
	103.264	75mm Espagnolette 'T' Sash Casement	Steel 113.372 (1.2mm)
	103.265	95mm Espagnolette 'Z' Sash Double Door	Steel 113.374 (1.8mm) 113.375 (1.8mm)
	103.266	95mm Espagnolette 'T' Sash Double Door	Steel 113.374 (1.8mm) 113.375 (1.8mm)
	103.267	80mm Espagnolette 'Z' Sash Tilt & Turn	Steel 113.373 (1.2mm)
	105.168	110mm Espagnolette 'Z' Sash Residential Door	Steel 113.231 (1.2mm & 2.5mm) 113.318 (2.0mm) 113.320 (2.3mm)
	105.169	110mm Espagnolette 'T' Sash Residential Door	Steel 113.231 (1.2mm & 2.5mm) 113.318 (2.0mm) 113.320 (2.3mm)
	107.155	28mm Glazing Bead	n/a

2.0 Glazing Gasket / Weatherstrip

112.324		112.355	
PCE Glazing Gasket / Weatherstrip		Glazing Gasket / Weatherstrip	
112.384		112.346	
Glazing Gasket / Weatherstrip		PCE Bead Glazing Gasket	