

# System 5-20D/Hi+ Dual Colour Door



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# Specification



## System 5-20D/Hi+

DOOR SYSTEM

**The Metal Technology Thermally Broken 5-20D Hi+ Door System has been designed to offer the specifier the advantages of polyamide thermal break technology in meeting the latest thermal requirements of the current building regulations.**

### Introduction

The 5-20D Hi+ Door System makes use of the standard System 5-20 Hi+ outer frames together with the standard mullion and transom options. Included in the basic suite of profiles are drip rails to divert driving rain. Various other profiles can be designed and incorporated allowing architects to achieve flexible designs. The system is glazed internally and accommodates a range of glazing options.

As with all Metal Technology systems, the 5-20D Hi+ Door System is manufactured to exacting standards enabling economy to be combined with strength to give many years of aesthetic, trouble-free operation.

### Scope

This specification defines materials, construction, finishes and size limits for the System 5-20D Hi+ Doors.

### Materials

Aluminum profiles are extruded from aluminium alloy 6060T6, T5 or T4 complying with the recommendations of BS EN 12020-2/BS EN 755-Parts 1 to 9. Polyamide thermal breaks are produced from glass reinforced nylon sections designed to withstand temperatures in excess of 200°C, allowing the sections to be powder coated after thermal breaking.

### Finishes

The range of sections can be provided in either of the following range of finishes:  
1. Anodised to BS EN 12373-1 or BS 3987  
2. Powder organic coated to BS 6496 or BS EN 12206-1

The System 5-20D Hi+ Door can accommodate a different colour/finish internally to that used externally.

### Construction

Frame and door sash members are mitre cut at 45°. Corners are reinforced with extruded aluminium crimping cleats and corner braces. A secure joint is formed by pneumatically crimping into the extruded crimping cleat. Mullion and transom bars are square cut, shaped and fixed securely to the frame by means of stainless steel screws and fixing cleats. All frame joints are sealed during construction against entry of water using a suitable sealant. Extruded weatherstrips and glazing gaskets are provided to resist the ingress of water.

Metal Technology recommend that only A2 or A4 Austenitic (300 series/class 70) stainless steel fixing screws are used in the assembly of their products.

### Glazing

Glass is set against co-extruded gaskets externally which are fitted into gasket grooves in the frame upstand. Clip in beads are then fitted to the inside of the frame and held secure by means of colour coded wedge gaskets internally. For glass support purpose made setting/location blocks are provided to locate into the sections. Where open out doors and fixed lights are required, liner bars to give internal glazing to fixed lights should be considered.

### Installation

Detailed installation instructions are provided within this and the System 5-20 Hi+ Tilt and Turn Window Manual which should be strictly followed.

### Door Fittings

The sections are designed to suit a range of hinges, locks, shoot bolts, cylinders, handles, panic exit gearing and closers. See relevant section of this manual for details of fitting requirements for specific door sizes and applications.

In exposed applications Metal Technology advise the use of surface mounted door closers, with a back check facility, to reduce the risk of damage resulting from the doors being forced/blown open past 90°.

### Size Limitations

	Door sash width	Door sash height
Maximum	1200mm	2500mm
Minimum	650mm	1900mm

Maximum door weight with 3 hinges 90 Kg.

**Size limitations will vary subject to ironmongery requirements. For complete details of maximum/minimum size limits see the limitation charts in Section 3 of this manual.**

### Performance

The flush and semi-rebated low rise threshold options are suitable for moderately exposed ground floor applications only. Where performance is critical, or above ground floor, fully rebated doors must be used.

Single and double doors have been tested to BS6375 and/or PAS 23. Performance data on individual configurations can be obtained from Metal Technology's Technical Department.

### Security

System 5-20D Hi+ Door has passed PAS 24 "Enhanced Security Performance Requirements for Door Assemblies" as generally accepted on Secure by Design projects. To conform, the door must be in accordance with the samples tested, with ironmongery options as detailed in section 3 of this manual.

In order to comply with PAS 24, doorsets should be glazed in accordance with the methods in BS 6262 and BS 8000-7. The units should also be sealed conforming to BS EN 1279 and incorporating glass conforming to BS EN 356 Class P1A minimum.

### Development

Our policy is to continually research the market for new and improved products. We must therefore retain the right to amend specifications without prior notice. It is recognised at Metal Technology that in some instances special sections may be required for particular projects. When this occurs it may be possible to produce bespoke profiles subject to there being sufficient quantity and adequate time.

# Specification



## System 5-20D/Hi+

DOOR SYSTEM

### Thermal Performance

Metal Technology's **THERMAL** range, in conjunction with the correct glass specification, is designed to aid compliance with the latest thermal requirements of the current building regulations.

The polyamide thermal break profiles have been specifically designed to minimise heat transfer across the door profiles. This innovative and advanced thermal break technology provides the basis of the 5-20D system.

The 5-20DHi+ System further boosts thermal performance through the introduction of specially designed thermal foam profiles. These reduce radiation heat loss across the air cavities within the window profiles to provide additional thermal enhancement.

The 5-20DHi+ system offers significantly improved U-frame values over more traditional thermally broken aluminium door systems. Where a less onerous thermal specification is required the foams may be omitted, resulting in the system being referred to as System 5-20D. Fabricators should however always use the 061 flipper gasket.

	U-frame values	
	5-20D	5-20D Hi+
Outer frame and open out sash	<b>2.55W/m<sup>2</sup>K</b>	<b>2.40W/m<sup>2</sup>K</b>
Outer frame and open in sash	<b>2.53W/m<sup>2</sup>K</b>	<b>2.38W/m<sup>2</sup>K</b>

The following table, based on standard fully glazed single/double door configurations and warm edge spacers, demonstrates how such improved U-frame values then contribute to improving the overall thermal performance of a complete door.

Achievable whole door U-values	Centre pane U-value	
	1.1W/m <sup>2</sup> K	0.6W/m <sup>2</sup> K
5-20D open out single door	<b>1.71W/m<sup>2</sup>K</b>	<b>1.38W/m<sup>2</sup>K</b>
5-20D open in single door	<b>1.70W/m<sup>2</sup>K</b>	<b>1.37W/m<sup>2</sup>K</b>
5-20D open out double door	<b>1.75W/m<sup>2</sup>K</b>	<b>1.42W/m<sup>2</sup>K</b>
5-20D open in double door	<b>1.74W/m<sup>2</sup>K</b>	<b>1.42W/m<sup>2</sup>K</b>
5-20D Hi+ open out single door	<b>1.66W/m<sup>2</sup>K</b>	<b>1.33W/m<sup>2</sup>K</b>
5-20D Hi+ open in single door	<b>1.65W/m<sup>2</sup>K</b>	<b>1.32W/m<sup>2</sup>K</b>
5-20D Hi+ open out double door	<b>1.69W/m<sup>2</sup>K</b>	<b>1.36W/m<sup>2</sup>K</b>
5-20D Hi+ open in double door	<b>1.68W/m<sup>2</sup>K</b>	<b>1.36W/m<sup>2</sup>K</b>

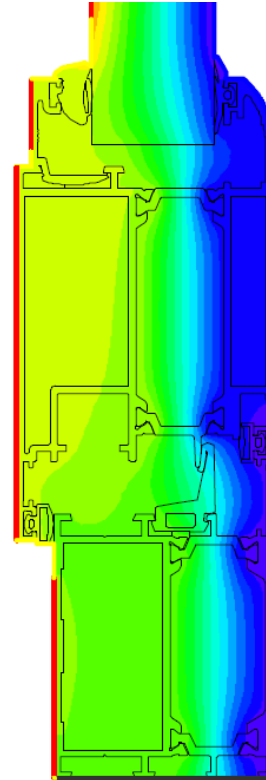
Metal Technology can provide tailored U-value calculations using their dedicated estimating software to calculate overall project average U-values for their full range of systems.

### Door Energy Rating

Metal Technology's 5-20DHi+ System has been assessed by an approved simulator in accordance with the BFRC's guidelines, using their official Energy Rating software, and has been proven to be capable of achieving a 'B' rating.

EWER Rating Scale	Door Rating
A+	<b>B</b>
A	
B	
C	
D	
E	
F	

### 5-20D Door



### 5-20D Hi+ Door



# Profile Index



## System 5-20D/Hi+

DOOR SYSTEM

PROFILE ILLUSTRATION	SHEET REF NUMBER	COMPUTER REF NUMBER	PERIMETER mm
	520D Hi+/1/90	0038	113
	520D Hi+/1/90	0048	99
	520D Hi+/1/90	0050	164
	520D Hi+/1/90	047	158
	520D Hi+/1/90	048	100
	520D Hi+/1/10	101	158
	520D Hi+/1/10	201	181
	520D Hi+/1/10	102	203
	520D Hi+/1/10	202	209
	520D Hi+/1/30	102	204
	520D Hi+/1/30	228	223
	520D Hi+/1/20	102	204
	520D Hi+/1/20	234	223
	520D Hi+/1/90	102	204
	520D Hi+/1/90	242	192
	520D Hi+/1/50	103	219
	520D Hi+/1/50	201	181
	520D Hi+/1/10	103	219
	520D Hi+/1/10	203	221
	520D Hi+/1/10	105	222
	520D Hi+/1/10	205	243
	520D Hi+/1/20	105	222
	520D Hi+/1/20	220	334
	520D Hi+/1/30	105	222
	520D Hi+/1/30	227	340
	520D Hi+/1/60	106	266
	520D Hi+/1/60	206	228
	520D Hi+/1/60	107	360
	520D Hi+/1/60	206	228
	520D Hi+/1/20	108	280
	520D Hi+/1/20	208	297
	520D Hi+/1/30	108	280
	520D Hi+/1/30	226	297
	520D Hi+/1/60	113	224
	520D Hi+/1/60	213	192
	520D Hi+/1/50	116	259
	520D Hi+/1/50	206	226
	520D Hi+/1/50	117	136
	520D Hi+/1/50	217	257
	520D Hi+/1/50	119	181
	520D Hi+/1/50	219	302
	520D Hi+/1/20	120	136
	520D Hi+/1/20	204	244
	520D Hi+/1/30	120	136
	520D Hi+/1/30	216	251
	520D Hi+/1/40	138	256
	520D Hi+/1/40	238	339
	520D Hi+/1/40	139	395
	520D Hi+/1/40	239	190
	520D Hi+/1/70	142	264
	520D Hi+/1/70	201	181
	520D Hi+/1/70	143	315
	520D Hi+/1/70	201	181
	520D Hi+/1/40	148	270
	520D Hi+/1/40	238	339
	520D Hi+/1/40	149	408
	520D Hi+/1/40	239	190
	520D Hi+/1/10	185	179
	520D Hi+/1/10	686	139

Scale 1:3

# Profile Index



## System 5-20D/Hi+

DOOR SYSTEM

PROFILE ILLUSTRATION	SHEET REF NUMBER	COMPUTER REF NUMBER	PERIMETER mm
007	520D Hi+/1/100	007	166
008	520D Hi+/1/100	008	166
009	520D Hi+/1/100	009	302
	520D Hi+/1/110	0036 0037	248 181
	520D Hi+/1/110	0036 169	248 131
	520D Hi+/1/110	0037 0037	181 181
	520D Hi+/1/110	0037 169	181 131
165-165	520D Hi+/1/90	044	139
165-166	520D Hi+/1/100	051	135
165-167	520D Hi+/1/100	052	102
166-167	520D Hi+/1/100	053	158
668-669	520D Hi+/1/80	165 165	180 180
	520D Hi+/1/80	165 166	180 91
	520D Hi+/1/80	165 167	180 261
	520D Hi+/1/80	166 167	91 261
	520D Hi+/1/110	169 169	131 131
0036-0037	520D Hi+/1/100	310	99
0037-0037	520D Hi+/1/100	328	107
0036-169	520D Hi+/1/100	332	79
0037-169	520D Hi+/1/90	668 669	131 150
169-169	520D Hi+/1/110	PCD28	105
PCD28	520D Hi+/1/100	SD158	133
310	520D Hi+/1/100	TT16	117
332	520D Hi+/1/100	TT17A	96
328	520D Hi+/1/100	TW05	80
TT16			
TT17A			
TW05			
SD158			
051			
052			
053			
044			

Scale 1:3

# Component Identification



## System 5-20D/Hi+

DOOR SYSTEM

<p><b>774 DRAINAGE CAP</b> (Stepped for externally beaded applications)</p> <p><b>775 DRAINAGE CAP</b> (Flush for internally beaded applications)</p>		<p><b>CA23</b> (Large) <b>CA24</b> (Medium) CORNER BRACES</p>	<p><b>SD40</b> STILE GROMMET (Black)</p>	<p><b>745</b> GLAZING SUPPORT BLOCK</p>
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<p>CORNER CLEATS (CRIMPED JOINT)</p>		<p><b>001</b></p> <p><b>5500</b> - Cut @ 7.5mm</p>	<p><b>PCD19A</b></p> <p><b>526</b> - Cut @ 22.5mm</p>	<p>CORNER BRACE</p> <p><b>PCW14</b></p> <p><b>535</b> - Cut @ 6.4mm</p>
<p><b>046</b></p> <p><b>533</b> - Cut @ 23.2mm <b>534</b> - Cut @ 7.5mm</p>	<p><b>PCW14</b></p> <p><b>516</b> - Cut @ 22.5mm</p>	<p><b>TT15</b></p> <p><b>511</b> - Cut @ 22.5mm <b>6510</b> - Cut @ 14.6mm</p>	<p><b>7019</b> MOULDED CORNER BRACE</p>	

<p><b>740</b> STANDARD</p>	<p><b>744</b> EXTENDED FIXING LUGS (Galvanised steel)</p>
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<b>020</b>	CLEAT REF	SIZE	SECTION	741 GRUB SCREWS REQUIRED
	521	11mm	202	1
	522	16mm	201 and 203	1
	523	38.5mm	206	2
	524	21mm	213	1
	536	46.5mm	205	2

<p><b>7016</b> END CAP (UNIT = PAIR)</p>	<p><b>PCD85</b> END CAP (UNIT = PAIR)</p>	<p><b>702A</b> ANCILLARY HINGE SECURITY DEVICE</p>	<p><b>7168</b> ANCILLARY HINGE SECURITY DEVICE</p>	<p><b>5510</b> SECURITY KEEP</p>
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<p><b>7097</b> ADJUSTABLE ANTI-FINGER TRAP HINGE <b>7098</b> ANTI-FINGER TRAP PACKER</p>	<p><b>7099</b> ADJUSTABLE COMMERCIAL HINGE</p>	<p><b>7017</b> CLAMP-ON DOMESTIC HINGE</p>
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Not to Scale

# Component Identification



## System 5-20D/Hi+

DOOR SYSTEM

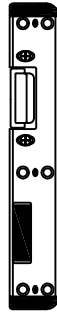


Based on doors viewed from outside.

OPEN OUT DOORS  
Left hand hinged door  
centre keep.

OPEN IN DOORS  
Right hand hinged door  
centre keep.

**7048A** - LATCH AND  
DEADBOLT KEEP



Based on doors viewed from outside.

OPEN OUT DOORS  
Right hand hinged door  
centre keep.

OPEN IN DOORS  
Left hand hinged door  
centre keep.

**7048B** - LATCH AND  
DEADBOLT KEEP

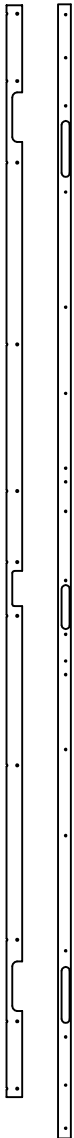


Based on doors viewed from outside.

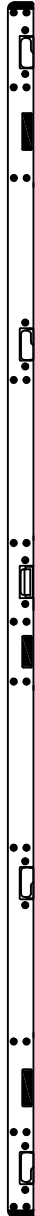
OPEN OUT DOORS  
Left hand hinged door  
centre keep.

OPEN IN DOORS  
Right hand hinged door  
centre keep.

**7152A** - CENTRAL KEEP



**6509**  
**5516**  
LONG KEEP  
SUPPORTS



Based on doors viewed from outside.

OPEN OUT DOORS  
Left hand hinged door  
one-piece keep.

OPEN IN DOORS  
Right hand hinged  
door one-piece keep.

**7058A** - LATCH AND  
DEADBOLT KEEP



Based on doors viewed from outside.

OPEN OUT DOORS  
Right hand hinged door  
one-piece keep.

OPEN IN DOORS  
Left hand hinged door  
one-piece keep.

**7058B** - LATCH AND  
DEADBOLT KEEP

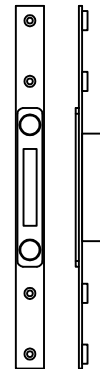


Based on doors viewed from outside.

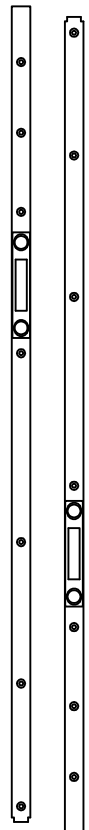
OPEN OUT DOORS  
Right hand hinged door  
centre keep.

OPEN IN DOORS  
Left hand hinged door  
centre keep.

**7152B** - CENTRAL KEEP



**7155**  
SINGLE HOOK  
KEEP



**7154**  
EXTENDED  
KEEP SET


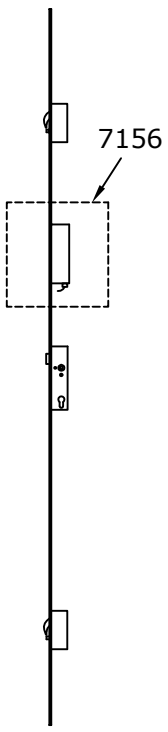
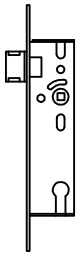
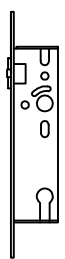


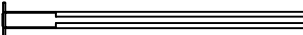
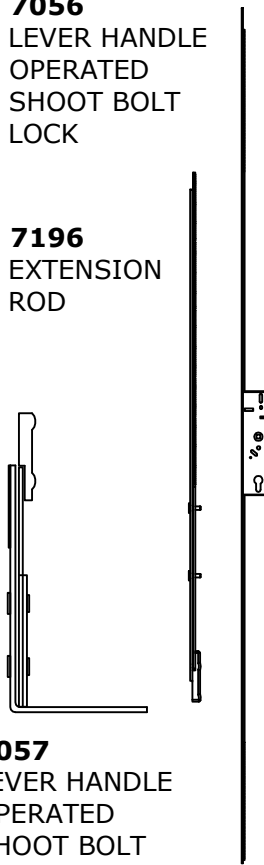
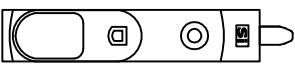
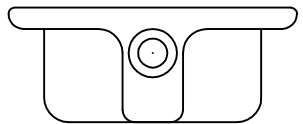
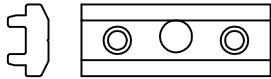
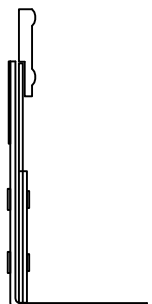
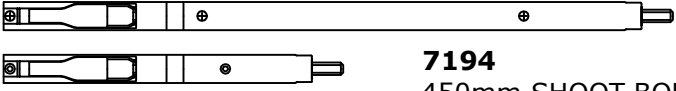

Not to Scale

# Component Identification



## System 5-20D/Hi+

DOOR SYSTEM

<p>Lock is not handed, as latch is reversible</p>  <p><b>7065</b> - DOOR LOCK  <b>7066</b> - CORNER TRANSMISSION  <b>7074</b> - OFFSET CORNER TRANSMISSION  <b>7049</b> - TOP EXTENSION  <b>7195</b> - TOP EXTENSION  <b>7165</b> - DEAD LOCK WITH ROLLERBALL</p>	<p>Based on doors viewed from outside.</p> <p>OPEN OUT DOORS          Door hinged on right needs right hand lock.          Door hinged on left needs left hand lock.</p> <p>OPEN IN DOORS          Door hinged on right needs left hand lock.          Door hinged on left needs right hand lock.</p> <p><b>7150</b> ELECTRICALLY OPERATED AUTO LOCK WITHOUT DEADBOLT  <b>7151</b> ELECTRICALLY OPERATED AUTO LOCK WITH DEADBOLT  <b>7156</b> ADD ON MOTOR SEPARATELY SUPPLIED</p> 		
<p>Lock is not handed, as latch is reversible</p>  <p><b>7094</b> SINGLE POINT DEAD LOCK WITH LATCH</p>	 <p><b>7095</b> SINGLE POINT DEAD LOCK WITH ROLLERBALL</p>	 <p><b>7164</b> SPLIT SPINDLE</p>  <p><b>7179</b> STANDARD SPINDLE</p>  <p><b>7197</b> EXTENDED SPINDLE</p>	<p><b>7056</b> LEVER HANDLE OPERATED SHOOT BOLT LOCK</p> <p><b>7196</b> EXTENSION ROD</p> 
 <p><b>7064</b> SHOOT BOLT</p>	 <p><b>7070</b> COMPRESSION KEEP</p>	 <p><b>7063A</b> SHOOT BOLT KEEP</p>	 <p><b>7057</b> LEVER HANDLE OPERATED SHOOT BOLT</p>
 <p><b>7062</b> SHOOT BOLT</p> <p><b>7194</b> 450mm SHOOT BOLT</p>	 <p><b>5563</b> SHOOT BOLT KEEP</p>		

Not to Scale



# Component Identification



## System 5-20D/Hi+

DOOR SYSTEM

<p><b>7060A</b> LEVER HANDLE SET</p>	<p><b>7166A</b> PADDLE / LEVER HANDLE SET</p>		
<p><b>7060AE</b> LEVER HANDLE (External)</p>	<p><b>7060AI</b> LEVER HANDLE (Internal)</p>	<p><b>7166AE</b> PADDLE HANDLE (External)</p>	<p><b>7160</b> ESCUTCHEON</p>
<p><b>7169AE</b> BLANK BASE PLATE (External)</p>	<p><b>7169AI</b> BLANK BASE PLATE (Internal)</p>	<p><b>7177AE</b> BASE PLATE WITH CYLINDER PREP (External)</p>	<p><b>7177AI</b> BASE PLATE WITH CYLINDER PREP (Internal)</p>
<p><b>7025</b> BS EN 8300 COMPLIANT HANDLE</p>	<p><b>70477060A</b> FIXED PAD / LEVER HANDLE SET</p>		

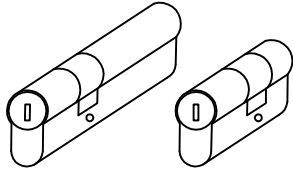
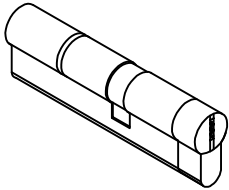
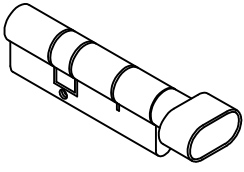

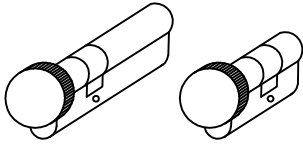
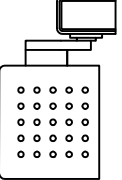

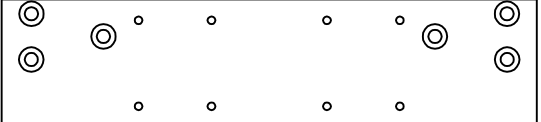
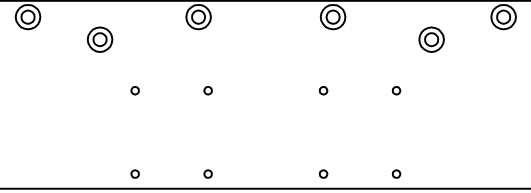
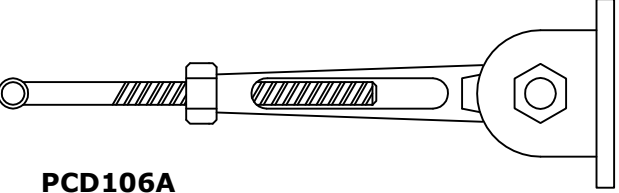
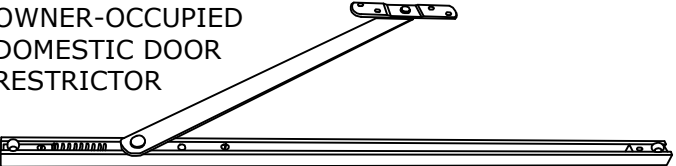
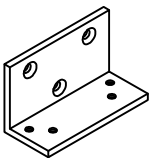
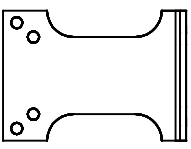
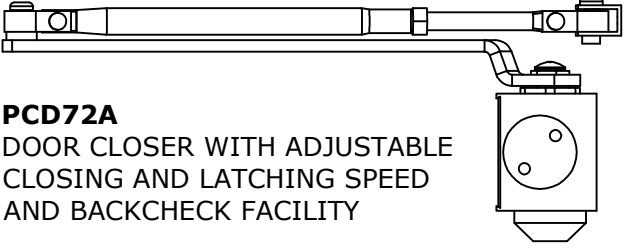
Not to Scale

# Component Identification



## System 5-20D/Hi+

DOOR SYSTEM

 <p><b>7061</b> EURO CYLINDER  <b>7171</b> HALF EURO CYLINDER (55mm)  <b>7172</b> HALF EURO CYLINDER (30mm)</p>	 <p><b>7161</b> SECURITY EURO CYLINDER FOR OPEN OUT DOOR  <b>7162</b> SECURITY EURO CYLINDER FOR OPEN IN DOOR</p>	 <p><b>7175</b> SECURITY T/TURN/KEY CYLINDER FOR OPEN OUT DOOR  <b>7176</b> SECURITY T/TURN/KEY CYLINDER FOR OPEN IN DOOR</p>	 <p><b>7059</b> EURO CYLINDER GUARD</p>
 <p><b>7072</b> THUMBTURN CYLINDERS FOR OPEN-OUT DOORS  <b>7073</b> THUMBTURN CYLINDERS FOR OPEN-IN DOORS  <b>7173</b> HALF THUMBTURN CYLINDERS FOR OPEN-OUT DOORS  <b>7174</b> HALF THUMBTURN CYLINDERS FOR OPEN-IN DOORS</p>	<p><b>7198</b> SLIDE ARM CLOSER FOR OPEN-IN DOOR  <b>7199</b> SLIDE ARM CLOSER FOR OPEN-OUT DOOR  <b>7401</b> MECHANICAL HOLD OPEN DEVICE  <b>7402</b> CUSHIONED LIMIT STAY</p>		
<p><b>5508</b> DROP PLATE</p> 			
 <p><b>PCD104</b> DROP PLATE</p>	 <p><b>PCD105A</b> DROP PLATE</p>		
 <p><b>PCD106A</b> HOLD OPEN ARM</p>	<p><b>7189</b> OWNER-OCCUPIED DOMESTIC DOOR RESTRICTOR</p>  <p>Must not be used for communal or commercial entrance doors.</p>		
 <p><b>7163</b> FIXING ANGLE</p>	 <p><b>7167</b> HOLD OPEN ARM BRACKET</p>	 <p><b>PCD72A</b> DOOR CLOSER WITH ADJUSTABLE CLOSING AND LATCHING SPEED AND BACKCHECK FACILITY</p>	

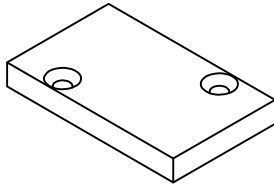
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# Component Identification

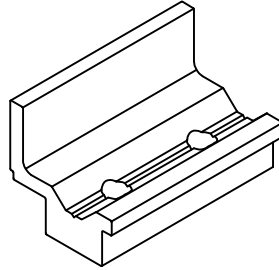


**System 5-20D/Hi+**

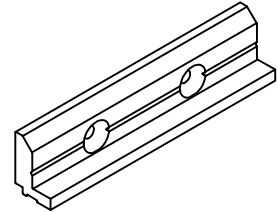
DOOR SYSTEM



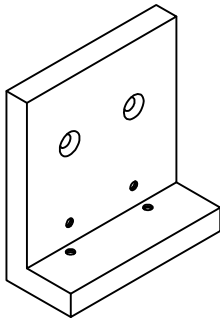
**5564**  
LATCH PLATE



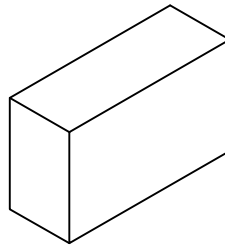
**5555**  
THRESHOLD STOP



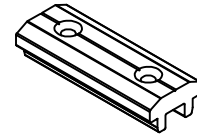
**5501**  
ANGLE FIXING SUPPORT



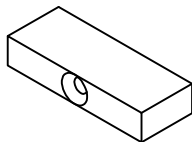
**5502**  
KEEP SUPPORT ANGLE



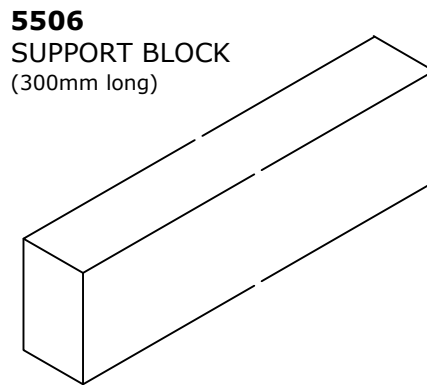
**5503**  
SUPPORT BLOCK



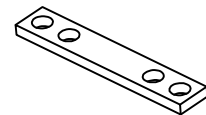
**5504**  
FRAME ALIGNMENT WEDGE



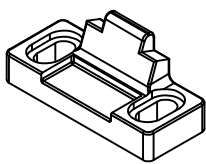
**5505**  
SASH ALIGNMENT WEDGE



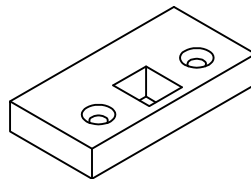
**5506**  
SUPPORT BLOCK  
(300mm long)



**5507**  
SECURITY DEVICE PACKER



**7184A/BK**  
SURFACE MOUNTED TOP KEEP



**7148**  
THRESHOLD KEEP

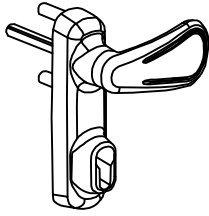
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# Component Identification

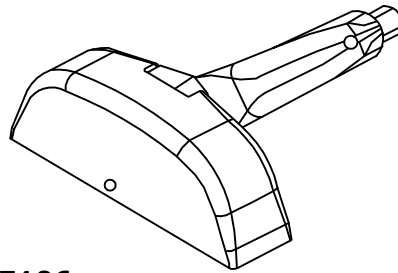


## System 5-20D/Hi+

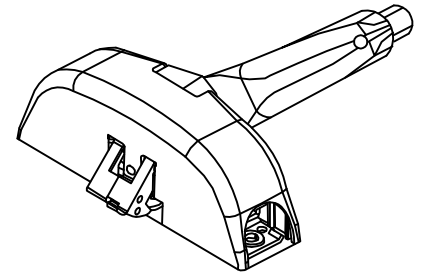
DOOR SYSTEM



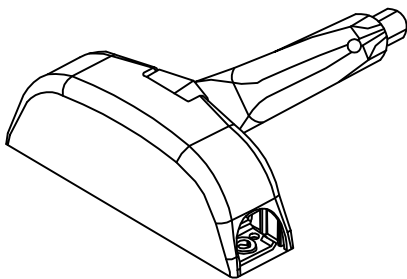
**7122**  
EXTERNAL ACCESS DEVICE  
(to suit 7102, 7107, 7119 and 7126)



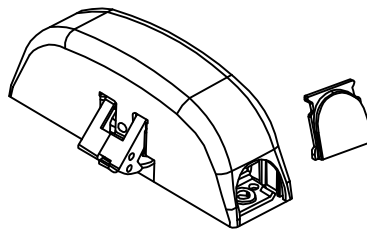
**7106**  
PUSH RAIL CENTRAL SUPPORT  
WITH DOGGING DEVICE



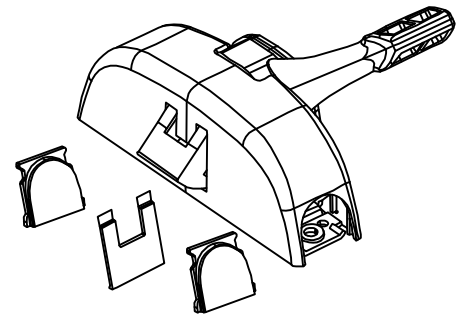
**7127**  
PUSH RAIL MASTER LEAF  
CENTRAL LOCK



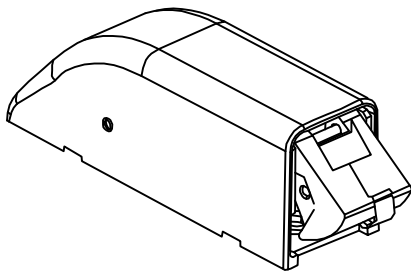
**7125**  
PUSH RAIL SLAVE  
LEAF CENTRAL LOCK



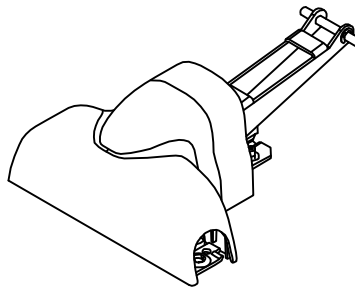
**7130**  
SIDE OPERATING LATCH



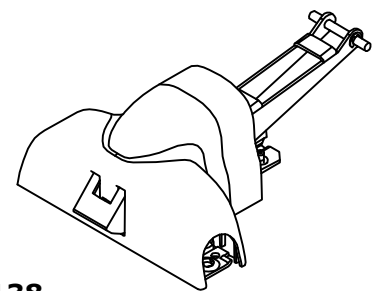
**7118**  
PUSH PAD CENTRAL LOCK  
(not available with dogging facility)



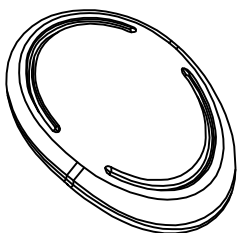
**7113**  
VERTICAL LATCH



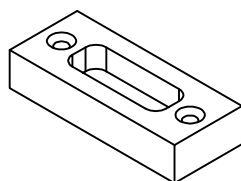
**7109**  
TOUCH BAR SLAVE LEAF  
CENTRAL LOCKING



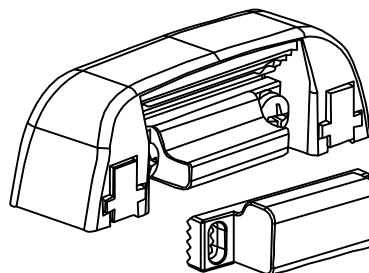
**7138**  
TOUCH BAR MASTER  
LEAF CENTRAL LOCKING



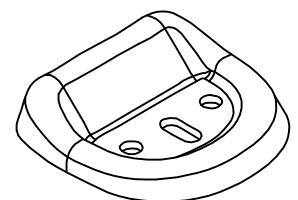
**7119**  
PUSH PAD



**5554**  
PANIC BAR FLOOR KEEP



**7115**  
ADJUSTABLE KEEP



**7110A**  
PANIC BAR FLOOR KEEP

Not to Scale

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SHEET 520D Hi+ / 0 / 110

rev 2

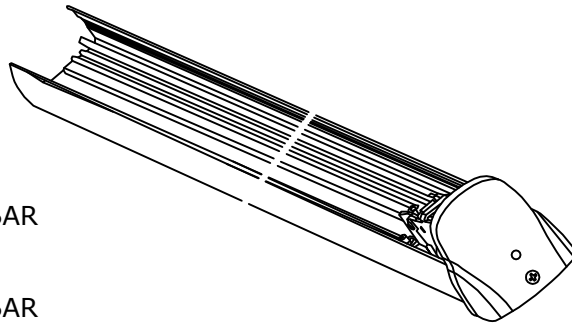
04/04/14

# Component Identification

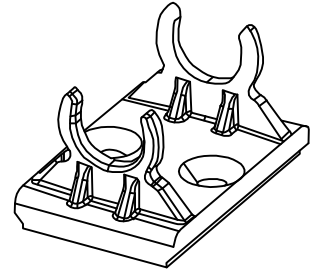


## System 5-20D/Hi+

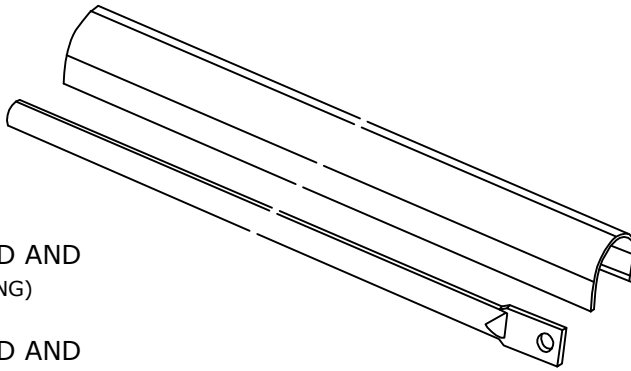
DOOR SYSTEM



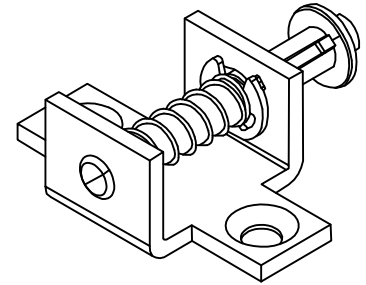
**7101/MEDIUM**  
PANIC BAR SUPPORT BAR  
(1235mm LONG)  
**7101/NARROW**  
PANIC BAR SUPPORT BAR  
(935mm LONG)



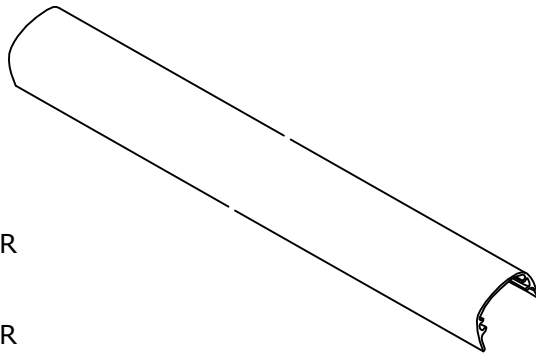
**7114**  
CONNECTING ROD SUPPORT



**7111**  
CONNECTING ROD AND  
COVER (950mm LONG)  
**7112**  
CONNECTING ROD AND  
COVER (1369mm LONG)



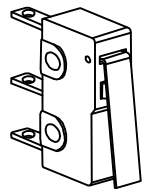
**7103**  
TOUCH BAR DOGGING DEVICE



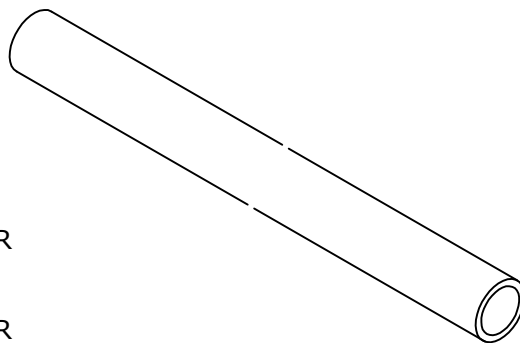
**7102/MEDIUM**  
PANIC BAR TOUCH BAR  
(1170mm LONG)  
**7102/NARROW**  
PANIC BAR TOUCH BAR  
(870mm LONG)



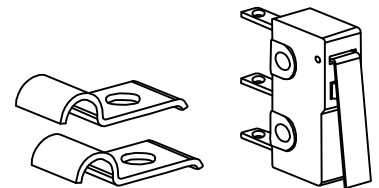
**7139**  
SET OF CAPS



**7124**  
MICRO SWITCH  
TO SUIT PUSH  
RAIL



**7107**  
PANIC BAR PUSH BAR  
(1130mm LONG)  
**7126**  
PANIC BAR PUSH BAR  
(830mm LONG)



**7121**  
MICRO SWITCH TO SUIT  
TOUCH BAR

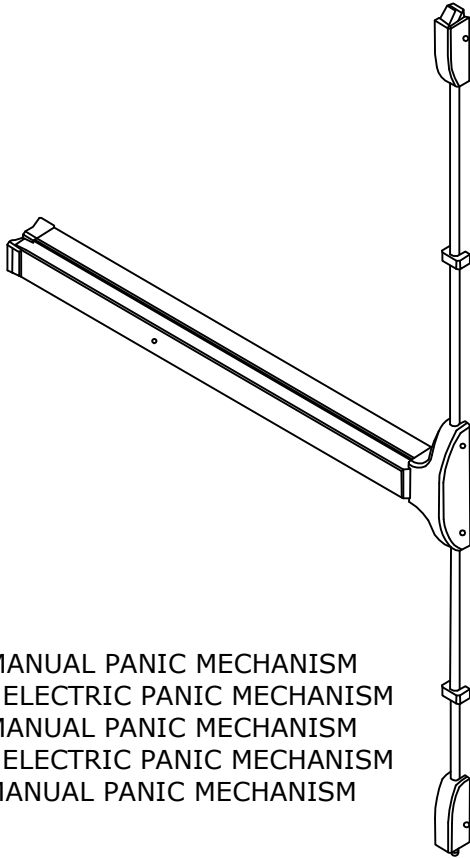
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# Component Identification

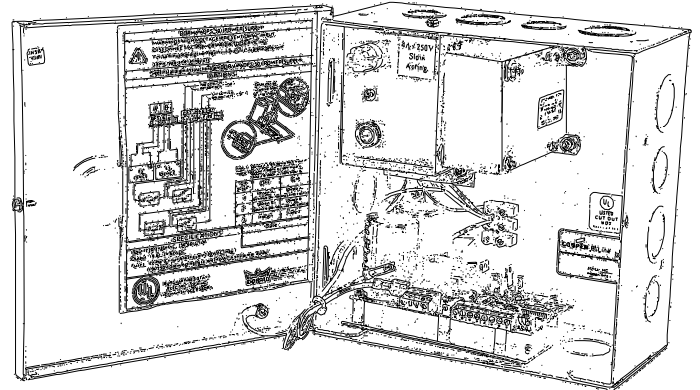


## System 5-20D/Hi+

DOOR SYSTEM



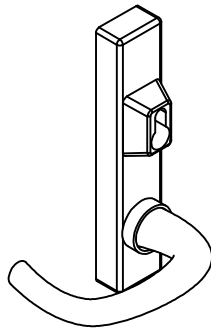
- 7183A** - MANUAL PANIC MECHANISM
- 7183AE** - ELECTRIC PANIC MECHANISM
- 7183B** - MANUAL PANIC MECHANISM
- 7183BE** - ELECTRIC PANIC MECHANISM
- 7183C** - MANUAL PANIC MECHANISM



**7406**  
POWER SUPPLY UNIT (for  
use with 7183AE and 7183BE)

**7407**  
POWER SUPPLY CARD (for  
use with 7406 power supply unit)

**7408**  
MONITOR SWITCH (for use  
with 7183 panic mechanisms)



**7186A**  
EXTERNAL ACCESS DEVICE  
(to suit 7183 mechanisms)

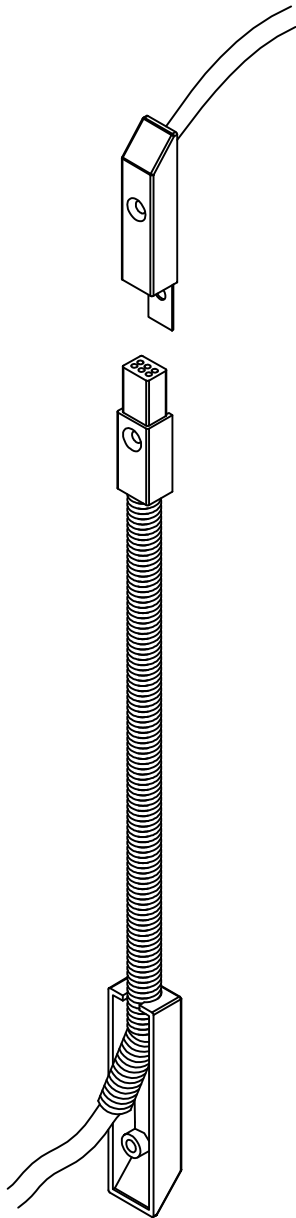
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# Component Identification

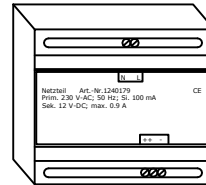


## System 5-20D/Hi+

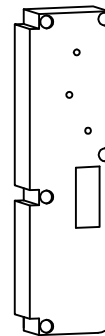
DOOR SYSTEM



**7153B**  
CABLE TRANSITION  
(for use with 7150 and 7151 locks)



**7157**  
12v DC POWER SUPPLY TRANSFORMER  
(for use with 7150 and 7151 locks)



**7156**  
ADD-ON MOTOR  
(for use with 7150 and 7151 locks)











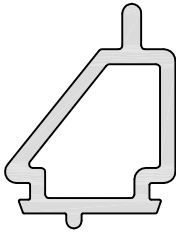

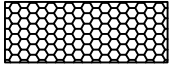
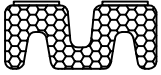

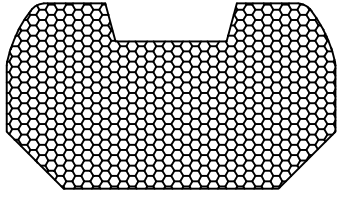
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# Component Identification









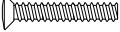





















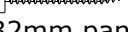






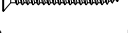







## System 5-20D/Hi+

DOOR SYSTEM

<p>WEDGE</p> <ul style="list-style-type: none"> <li><b>CA27</b>  White</li> <li><b>CA29</b>  Black</li> <li><b>063</b>  Black</li> <li><b>066</b>  Grey</li> <li><b>SD36</b>  Black</li> </ul>	<p>GASKETS</p> <ul style="list-style-type: none"> <li><b>CA25</b>  Red</li> <li><b>CA25A</b>  Black</li> <li><b>PCD82</b>  Black</li> </ul>	 <p><b>TT27</b> BUBBLE SEAL</p>
 <p><b>061</b> - FLIPPER SEAL <b>062</b> - MOULDED CORNER</p>	 <p><b>PCD95</b> ANTI-FINGERTRAP GASKET</p>	<p><b>7018</b> <b>SD44</b> BRUSH SEAL</p> 
 <p><b>HR50184</b> SELF ADHESIVE THERMAL FOAM</p>	 <p><b>6743</b> SELF ADHESIVE THERMAL D.G.U. FOAM</p>	<p><b>VS118A</b> WOOLPILE</p>    <p><b>6744</b> LONG LEG OUTER FRAME THERMAL FOAM</p>

Not to Scale



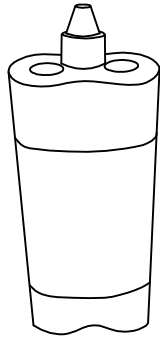
<p><b>741</b>  M5 x 30mm grub screw</p> <p><b>7178</b>  M5 x 70mm countersunk machine screw</p> <p><b>7200</b>  No 6 x 12mm countersunk self tap screw</p> <p><b>7204</b>  No 8 x 16mm countersunk self tap screw</p> <p><b>7209</b>  M5 countersunk aluminium rivnut</p> <p><b>7210</b>  M5 x 25mm countersunk machine screw</p> <p><b>7211</b>  M5 x 30mm countersunk machine screw</p> <p><b>7215</b>  No 10 x 19mm socket head self tap screw</p> <p><b>7220</b>  No 10 x 45mm countersunk self tap screw</p> <p><b>7221</b>  No 10 x 70mm countersunk self tap screw</p> <p><b>7222</b>  No 6 x 19mm countersunk self tap screw</p> <p><b>7223</b>  No 7 x 25mm countersunk self drill screw</p> <p><b>7224</b>  M5 x 16mm pan head machine screw</p> <p><b>7225</b>  No 10 x 19mm pan head self tap screw</p>	<p><b>7227</b>  M5 x 16mm countersunk machine screw</p> <p><b>7230</b>  No 8 x 12mm countersunk self tap screw</p> <p><b>7231</b>  No 8 x 19mm countersunk self tap screw</p> <p><b>7232</b>  M4 countersunk aluminium rivnut</p> <p><b>7233</b>  M4 x 16mm countersunk machine screw</p> <p><b>7235</b>  No 8 x 38mm pan head self tap screw</p> <p><b>7237</b>  No 10 x 32mm countersunk self tap screw</p> <p><b>7238</b>  No 6 x 9.5mm countersunk self tap screw</p> <p><b>7241</b>  M5 x 25mm pan head machine screw</p> <p><b>7248</b>  No 10 x 38mm countersunk self tap screw</p> <p><b>7249</b>  No 10 x 50mm countersunk self tap screw</p> <p><b>7252</b>  M6 countersunk aluminium rivnut</p> <p><b>7254</b>  No 8 x 25mm countersunk self tap screw</p> <p><b>7256</b>  No 7 x 16mm countersunk self drill screw</p> <p><b>7257</b>  No 10 x 32mm pan head self tap screw</p>	<p><b>7258</b>  No 6 x 32mm countersunk self tap screw</p> <p><b>7259</b>  No 8 x 38mm countersunk self tap screw</p> <p><b>7263</b>  No 10 x 38mm cap head self tap screw</p> <p><b>7266</b>  No 8 x 45mm pan head self tap screw</p> <p><b>7271</b>  No 8 x 50mm countersunk self tap screw</p> <p><b>7272</b>  M5 x 50mm countersunk machine screw</p> <p><b>7275</b>  No 8 x 32mm countersunk self tap screw</p> <p><b>7277</b>  M6 x 25mm countersunk machine screw</p> <p><b>7280</b>  M6 x 20mm cap head high tensile screws</p> <p><b>7281</b>  No 8 x 70mm pan head self tap screw</p> <p><b>7287</b>  No 8 x 60mm countersunk self tap screw</p> <p><b>7293</b>  M5 x 6mm pan head machine screw</p> <p><b>CA15</b>  Pop rivets</p> <p><b>HR5092</b>  M8 washer</p>
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# Component Identification



## System 5-20D/Hi+

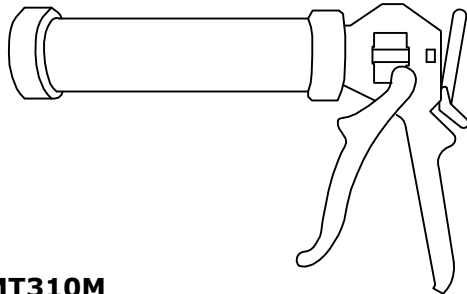
DOOR SYSTEM



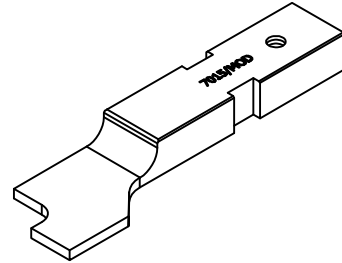
**MT1803**  
2-PART ADHESIVE (grey, white)



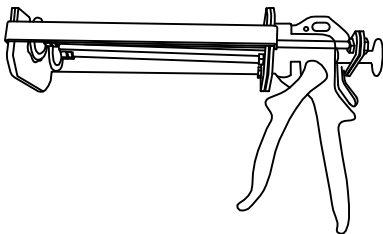
**MT60**  
SURFACE CLEANER



**MT310M**  
MANUAL APPLICATOR GUN  
FOR SINGLE ADHESIVE



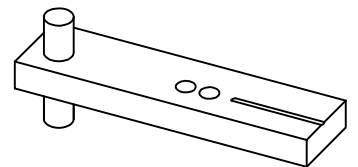
**7015/MOD**  
CRIMPING KNIVES (UNIT = SET)



**MT900M**  
MANUAL APPLICATOR GUN  
FOR 2-PART ADHESIVE



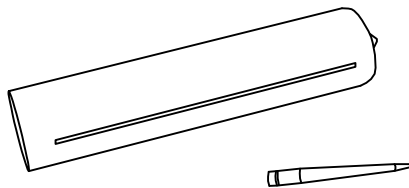
**MT1804**  
STATIC MIXING TUBE



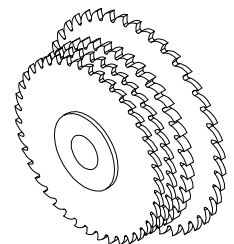
**JIG4-20001**  
MULLION END HOLES JIG



**7400**  
SILICONE SPRAY



**HR50328A**  
BLACK GASKET ADHESIVE/SEALANT



**JIG5-20004**  
END MILLING BLADES  
(with 40mm Ø spindle)

Not to Scale

# Section Drawings

This system is only compatible with the profiles shown in this manual, subject to ironmongery requirements and site conditions.

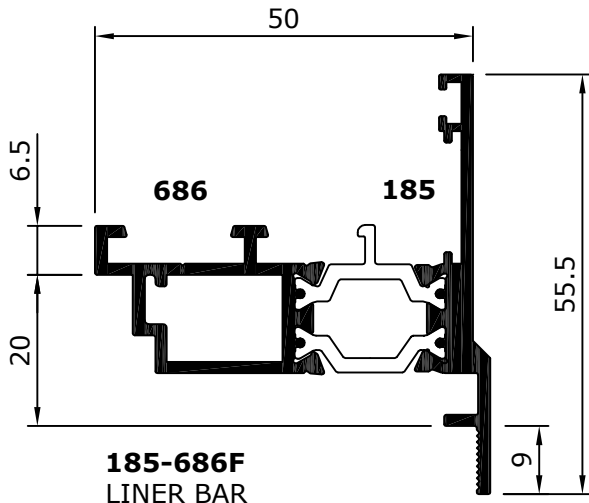
\* This profile is only compatible for use with 7017 clamp-on domestic hinge.

\*\* This profile is not suitable for use with 7165 rollerball lock.

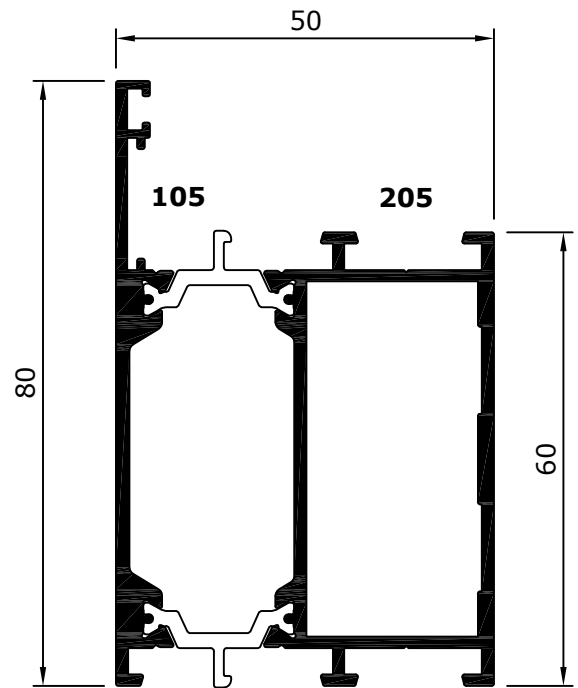


**System 5-20D/Hi+**

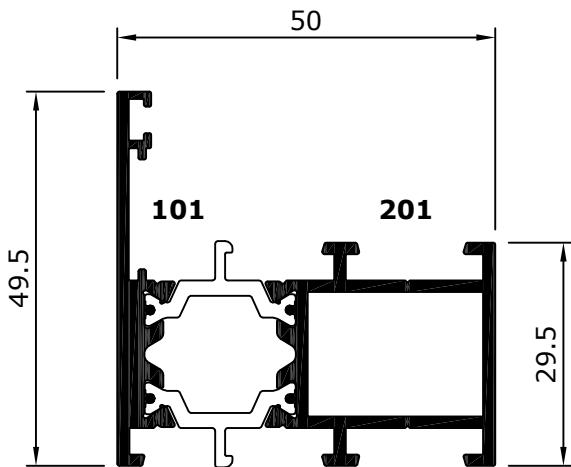
DOOR SYSTEM



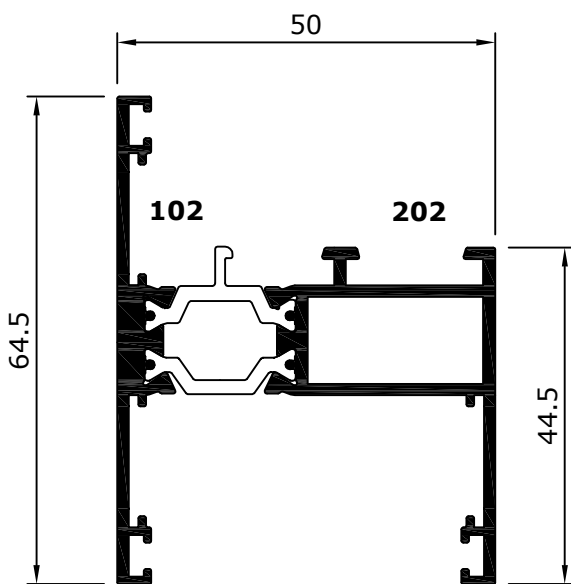
**185-686F**  
LINER BAR



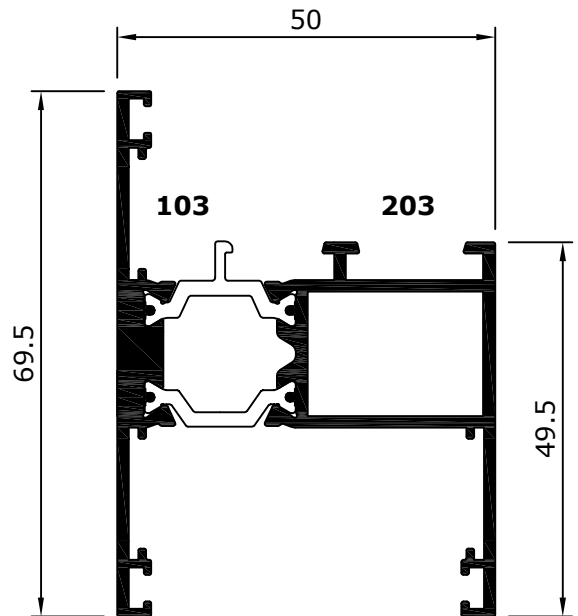
**105-205FF**  
HEAVY SHORT LEG OUTER FRAME



**101-201FF \***  
MEDIUM SHORT LEG OUTER FRAME



**102-202F \*\***  
STANDARD LONG LEG OUTER FRAME



**103-203F**  
MEDIUM LONG LEG OUTER FRAME

Scale 1:1

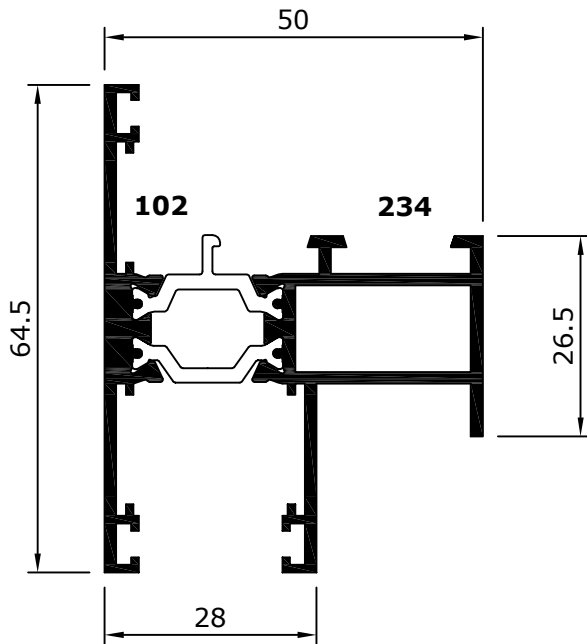
# Section Drawings



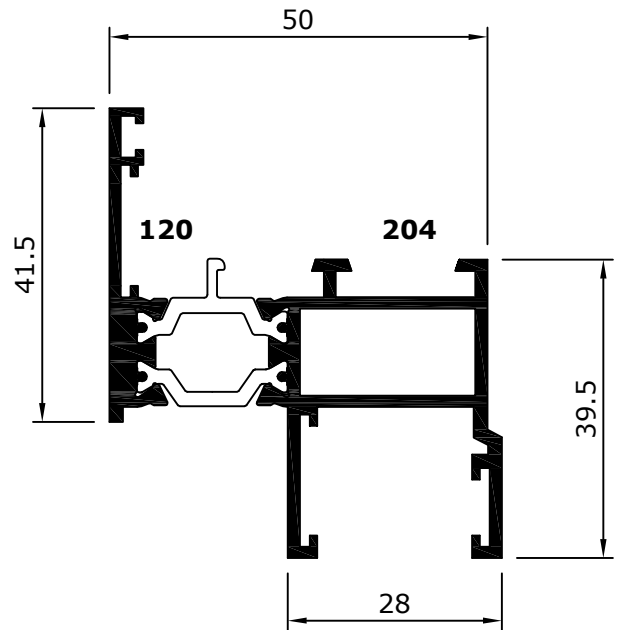
## System 5-20D/Hi+

DOOR SYSTEM

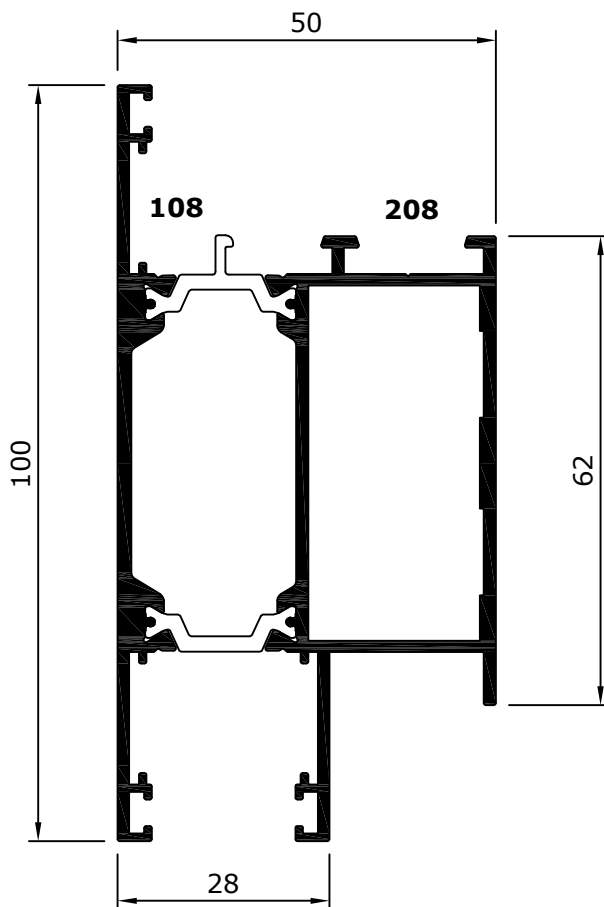
\* These profiles are only compatible for use with 7017 clamp-on domestic hinge.



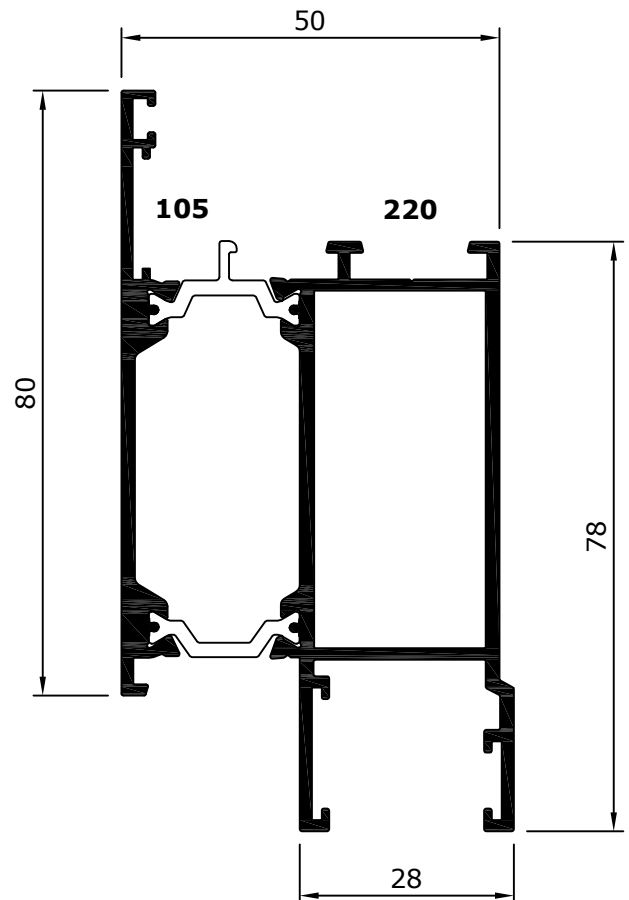
**102-234F \***  
28mm CURTAIN WALL INSERT  
(Open in door)



**120-204F \***  
28mm CURTAIN WALL INSERT  
(Open out door)



**108-208F**  
28mm CURTAIN WALL INSERT  
(Open in door)



**105-220F**  
28mm CURTAIN WALL INSERT  
(Open out door)

Scale 1:1

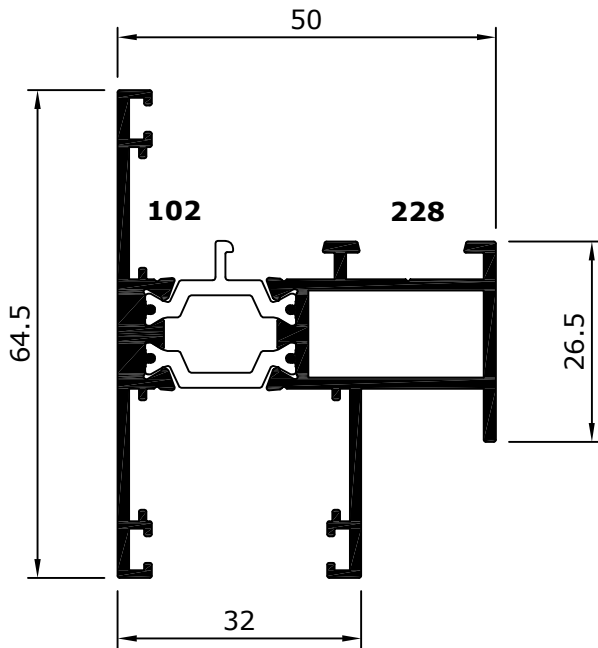
# Section Drawings



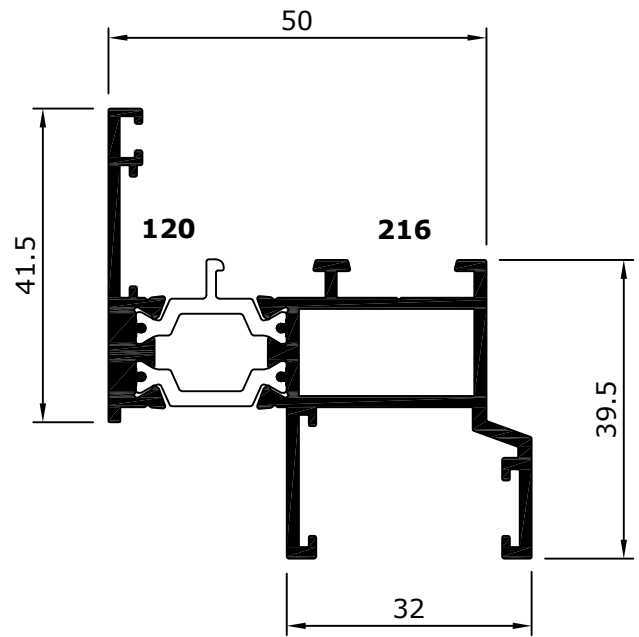
## System 5-20D/Hi+

DOOR SYSTEM

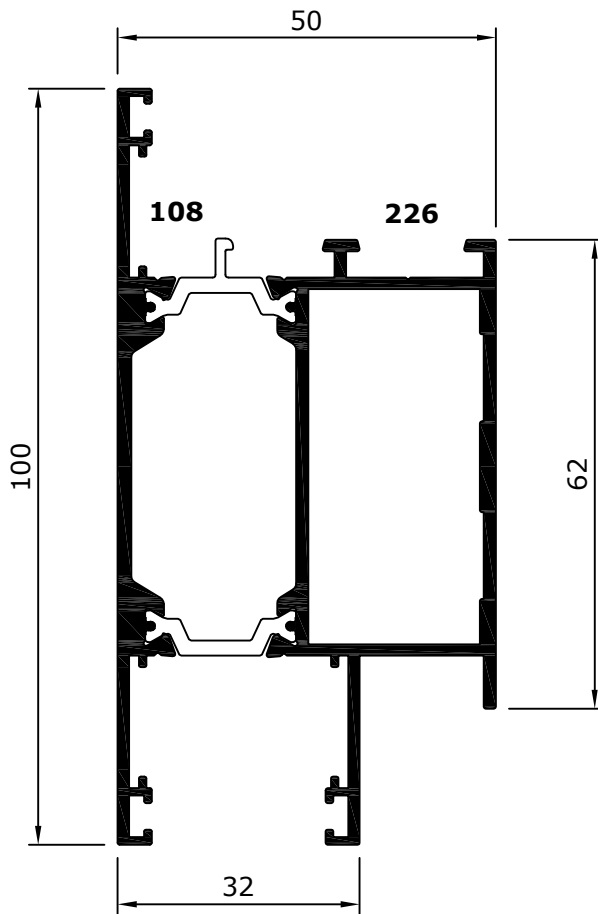
\* These profiles are only compatible for use with 7017 clamp-on domestic hinge.



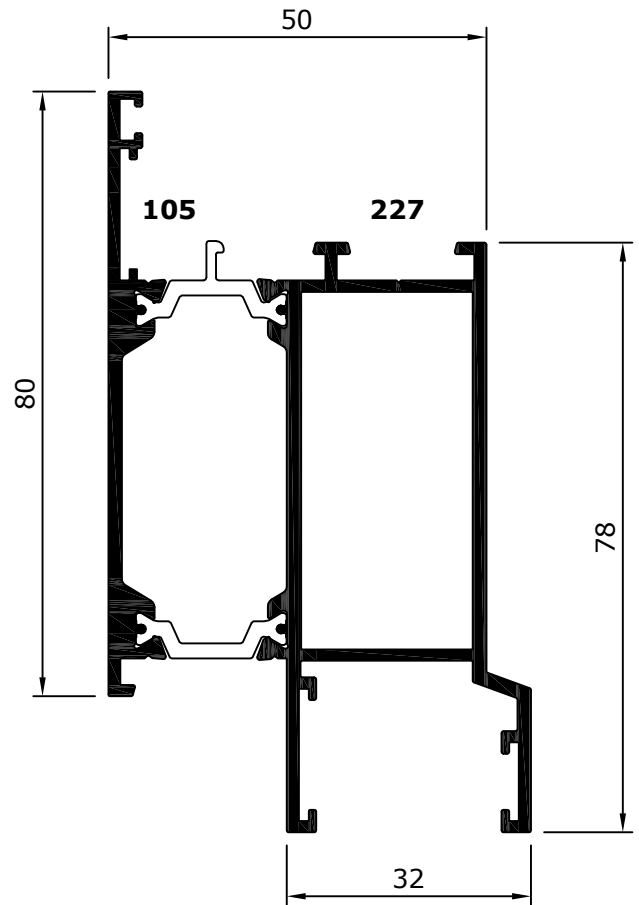
**102-228F \***  
32mm CURTAIN WALL INSERT  
(Open in door)



**120-216F \***  
32mm CURTAIN WALL INSERT  
(Open out door)



**108-226F**  
32mm CURTAIN WALL INSERT  
(Open in door)



**105-227F**  
32mm CURTAIN WALL INSERT  
(Open out door)

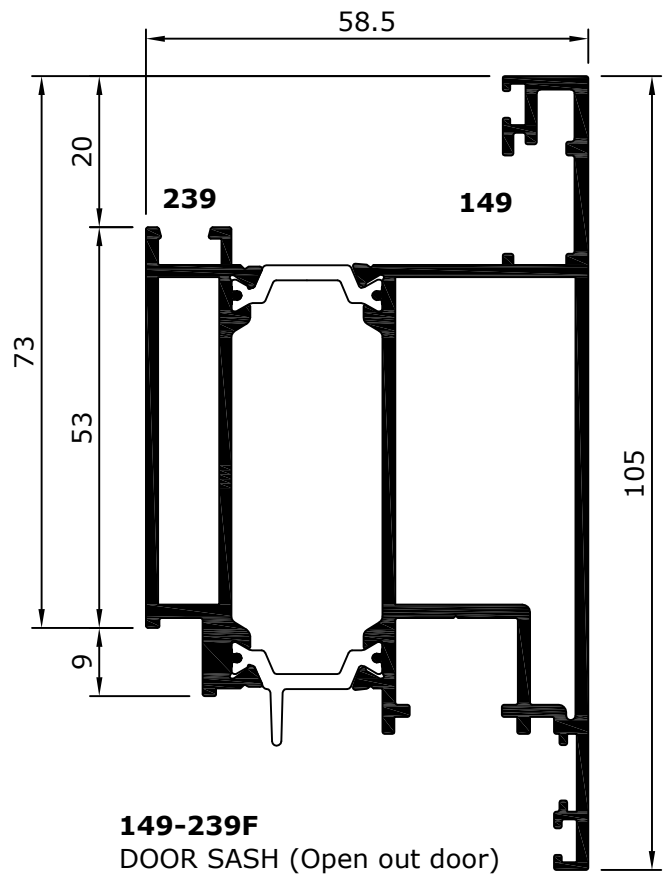
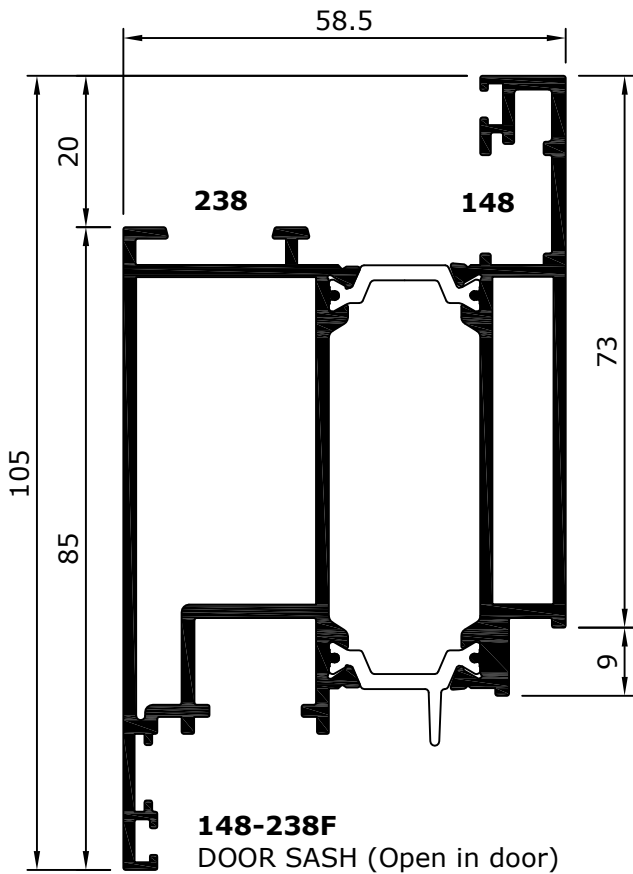
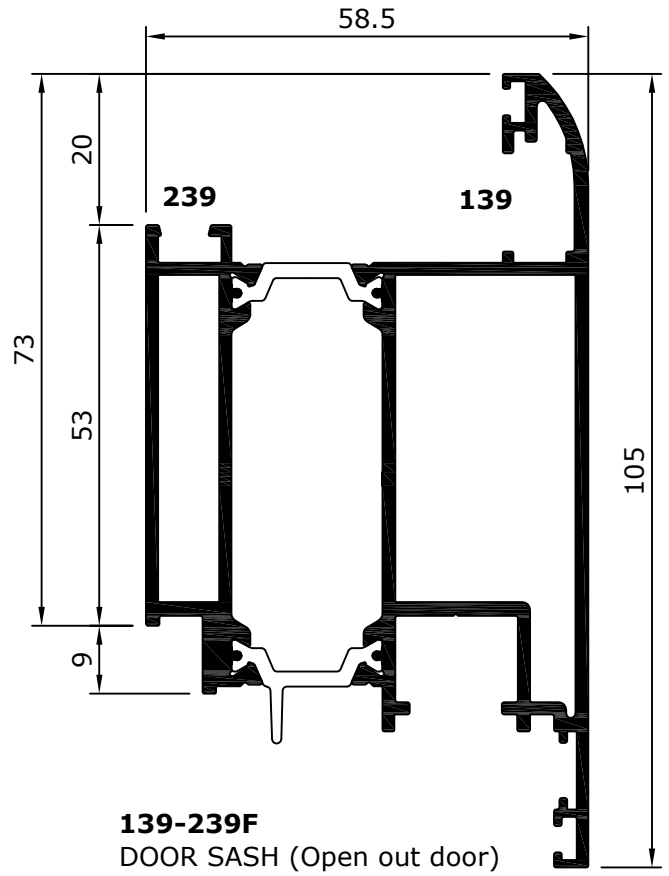
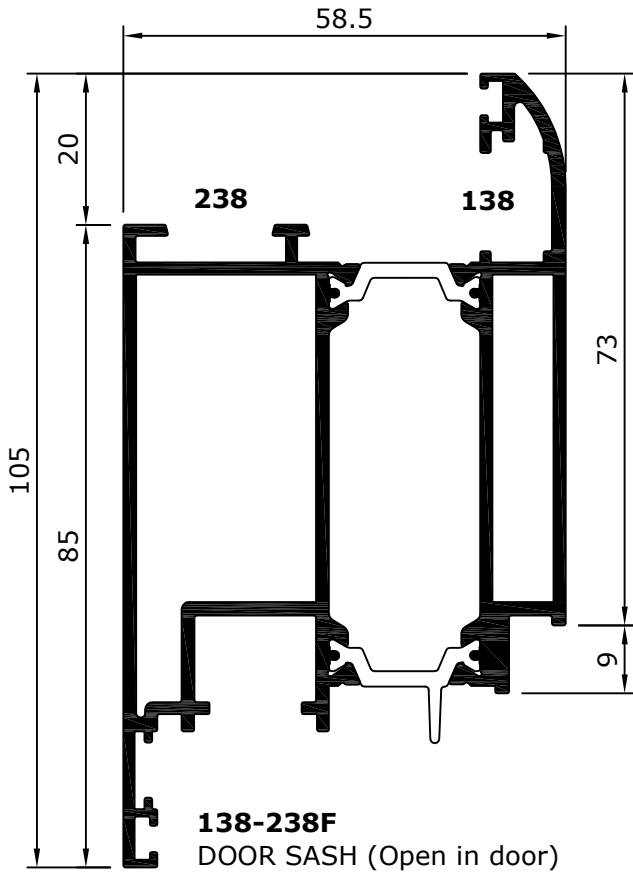
Scale 1:1

# Section Drawings



## System 5-20D/Hi+

DOOR SYSTEM



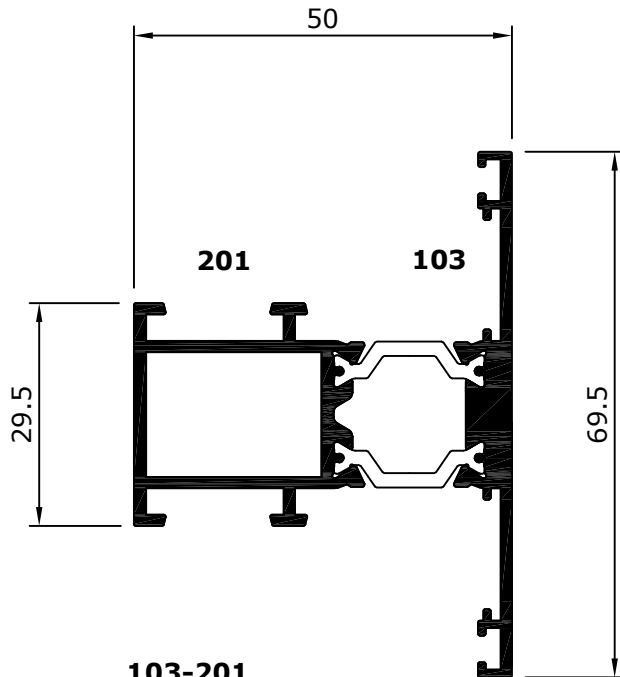
Scale 1:1

# Section Drawings

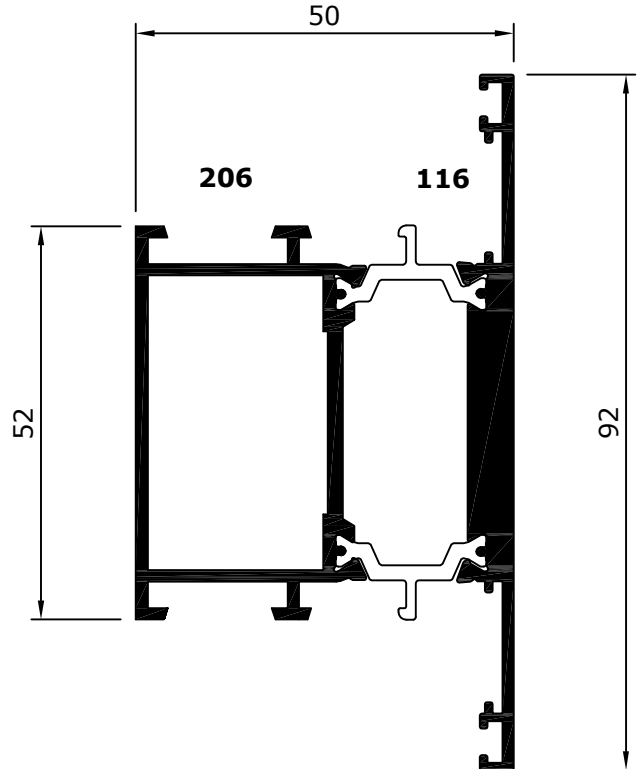


## System 5-20D/Hi+

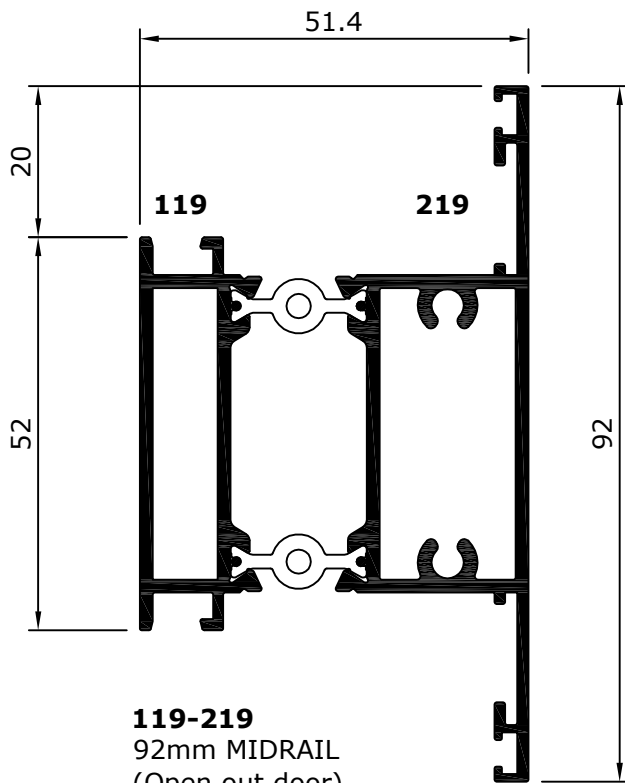
DOOR SYSTEM



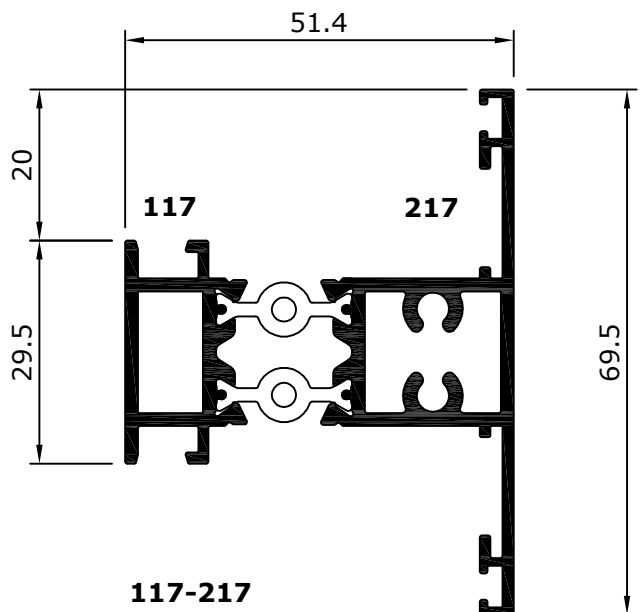
**103-201**  
69.5mm MIDRAIL  
(Open in door)



**116-206FF**  
92mm MIDRAIL/MULLION/TRANSOM  
(Open in door)



**119-219**  
92mm MIDRAIL  
(Open out door)



**117-217**  
69.5mm MIDRAIL  
(Open out door)

Scale 1:1

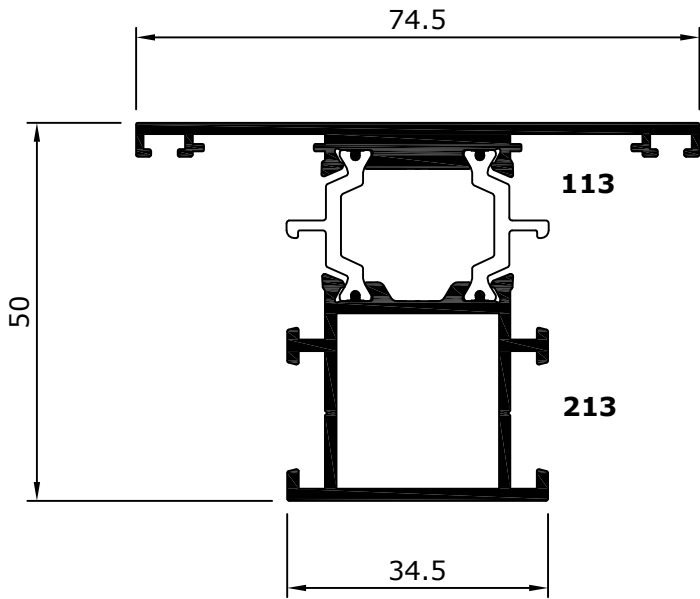
# Section Drawings



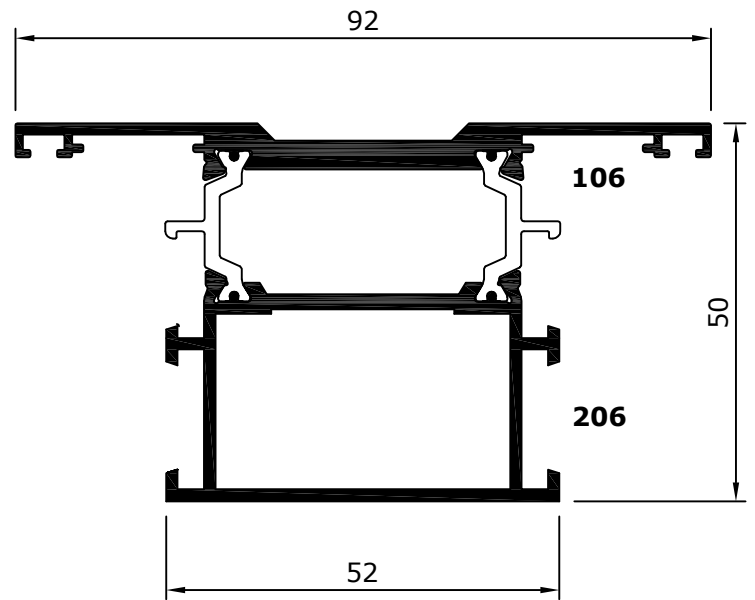
**System 5-20D/Hi+**

DOOR SYSTEM

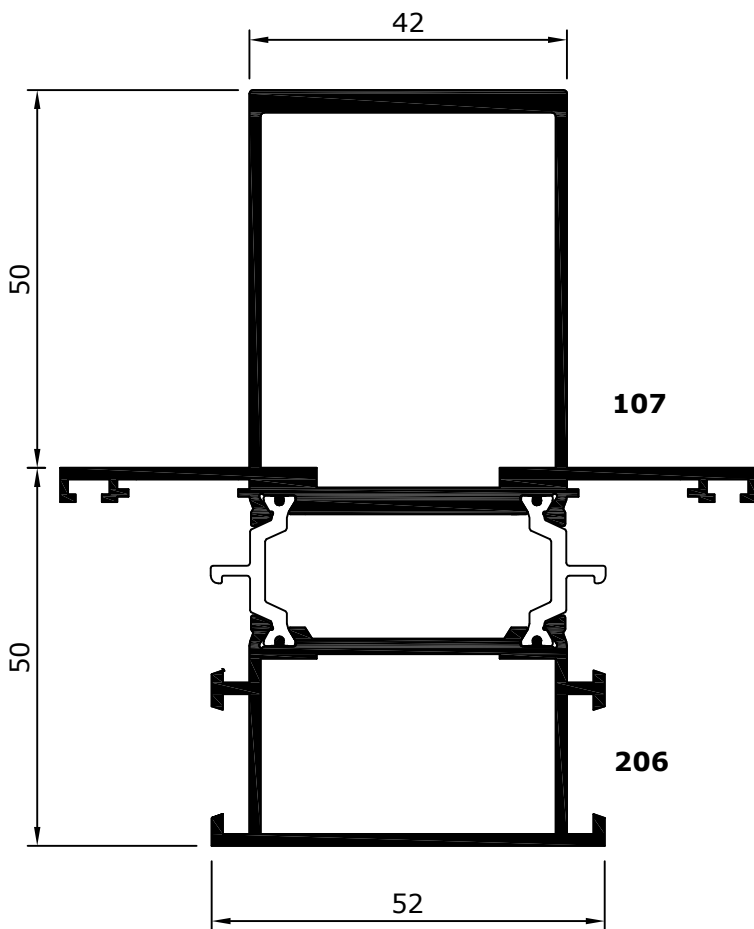
\* This profile is not suitable for use with PCD72A door closer.



**113-213FF \***  
DEEP MULLION/TRANSOM



**106-206FF**  
HEAVY DUTY MULLION/TRANSOM



**107-206FF**  
HEAVY DUTY MULLION WITH BOX

Scale 1:1

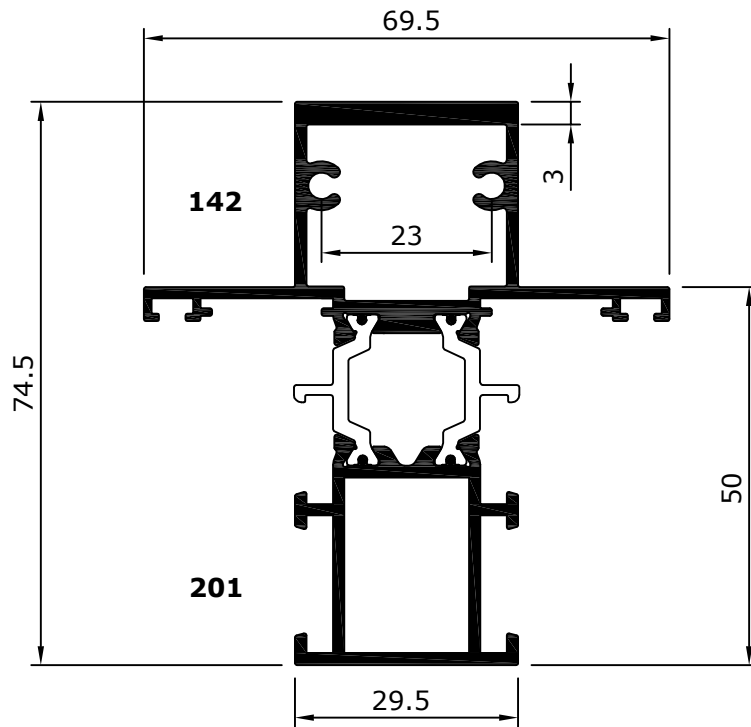


# Section Drawings

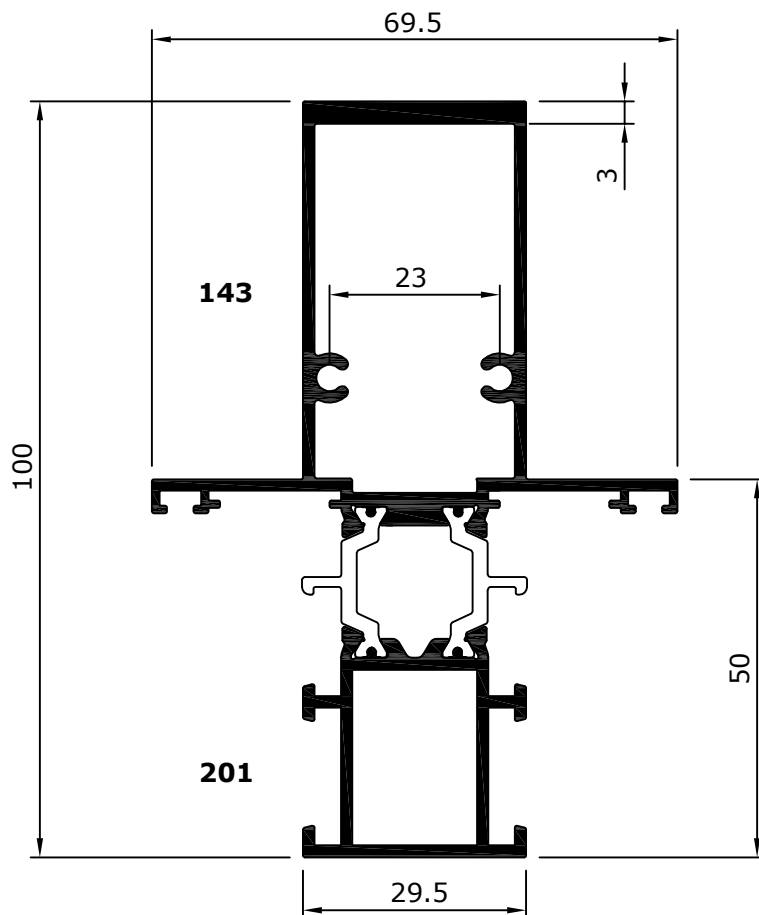


## System 5-20D/Hi+

DOOR SYSTEM



**142-201FF**  
75mm BOX MULLION



**143-201FF**  
100mm BOX MULLION

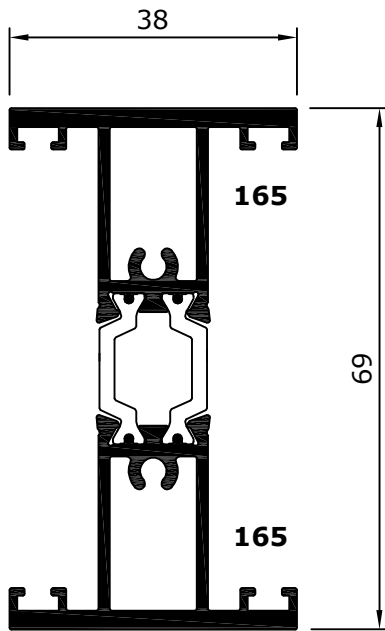
Scale 1:1

# Section Drawings

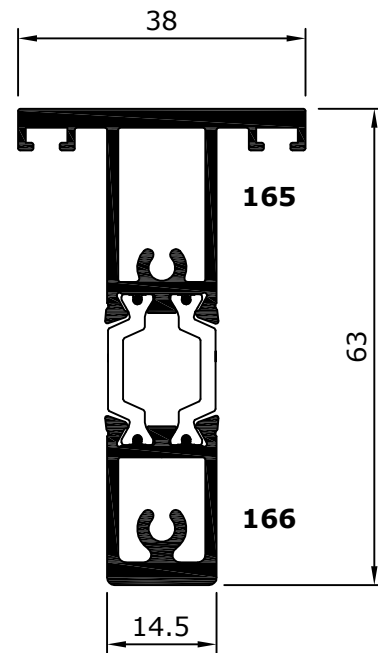


## System 5-20D/Hi+

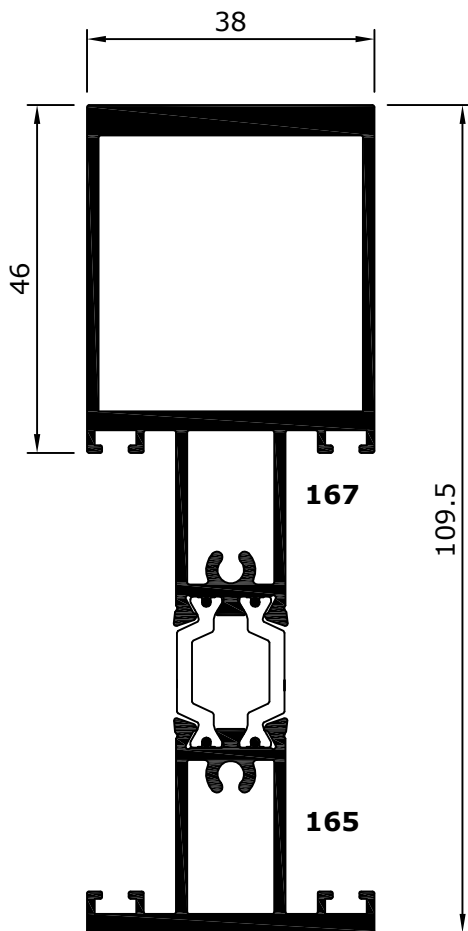
DOOR SYSTEM



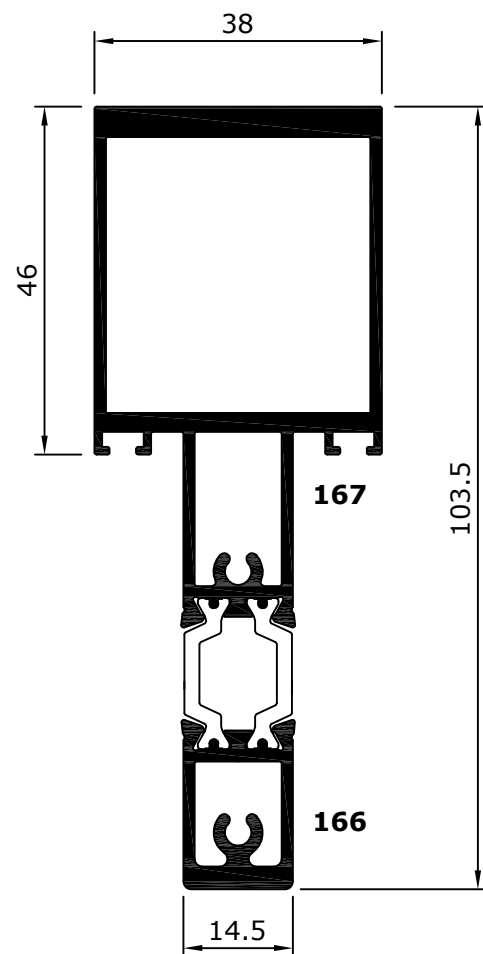
**165-165**  
I COUPLING MULLION



**165-166**  
T COUPLING MULLION



**165-167**  
BOX I COUPLING MULLION



**166-167**  
BOX T COUPLING MULLION

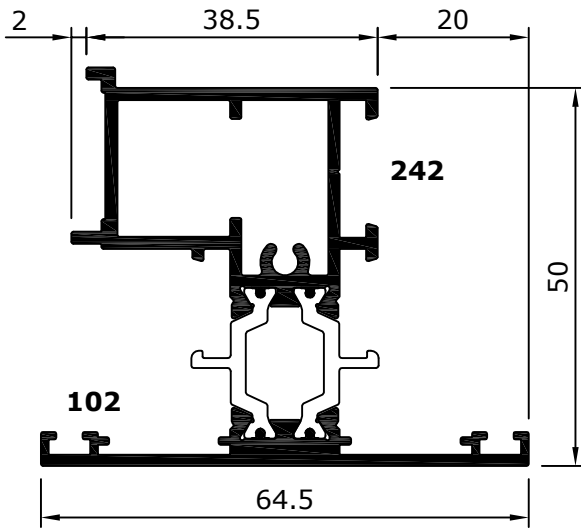
Scale 1:1

# Section Drawings

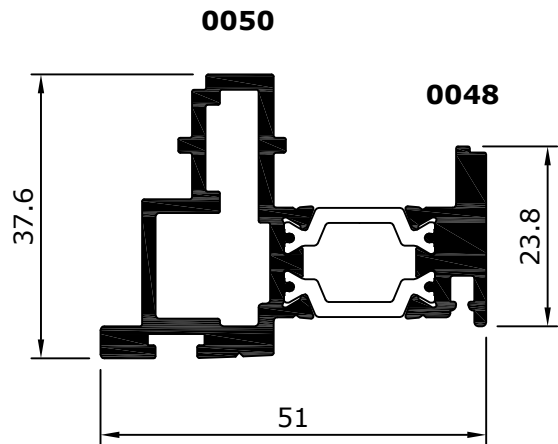


**System 5-20D/Hi+**

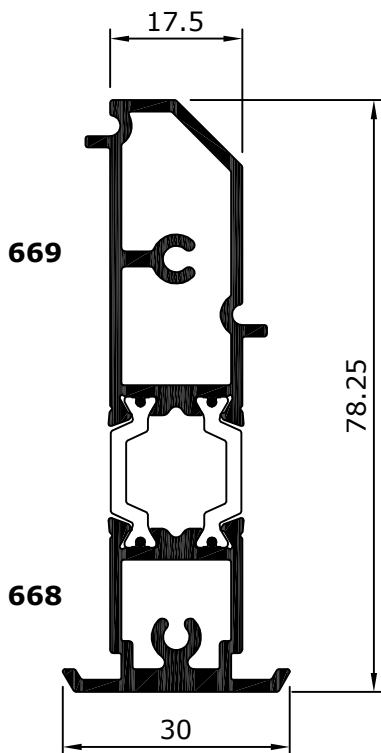
DOOR SYSTEM



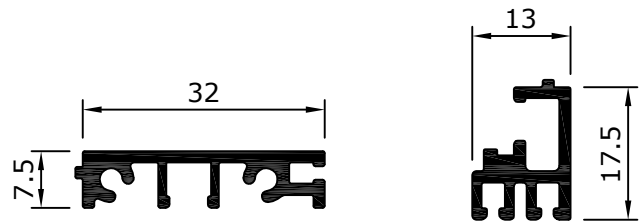
**102-242FF**  
REBATED DOUBLE DOOR ADAPTOR



**0048-0050**  
FLUSH MEETING STILE ADAPTOR  
(Open out door)

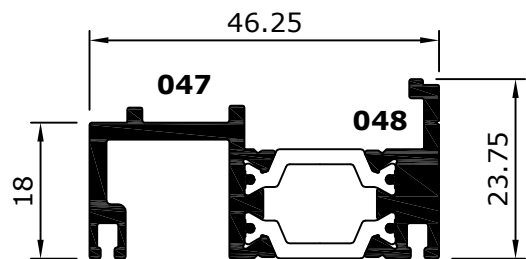


**668-669**  
COUPLING MULLION ADAPTOR



**044**  
CLIP-ON BRUSH  
SEAL CARRIER

**0038**  
BRUSH SEAL  
CARRIER



**047-048**  
BRUSH SEAL CARRIER

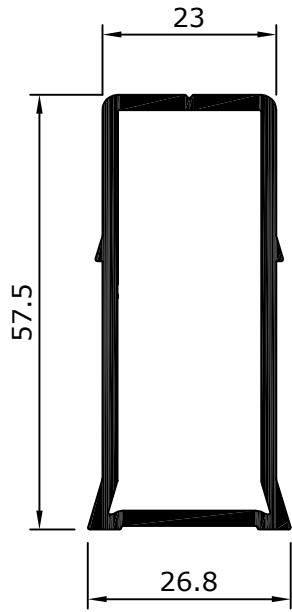
Scale 1:1

# Section Drawings

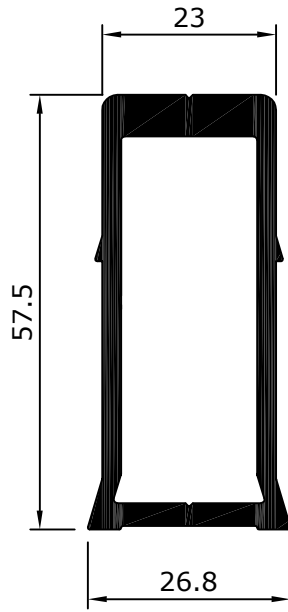


## System 5-20D/Hi+

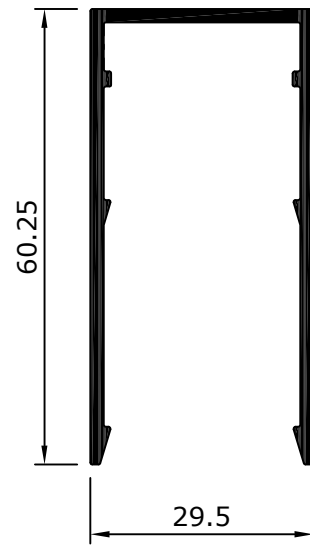
DOOR SYSTEM



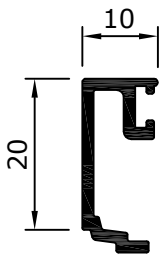
**007**  
SMALL MULLION STIFFENER



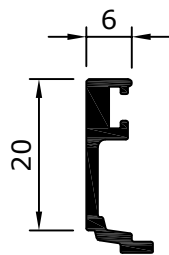
**008**  
LARGE MULLION STIFFENER



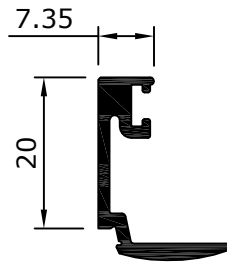
**009**  
MULLION STIFFENER SHEATH



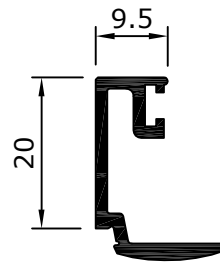
**310**  
GLAZING BEAD  
(Open out door)



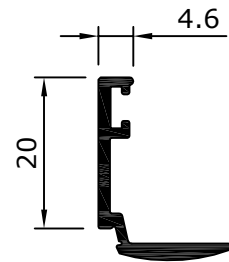
**332**  
GLAZING BEAD  
(Open out door)



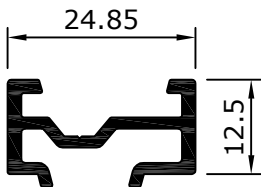
**328**  
GLAZING BEAD  
(Open in door)



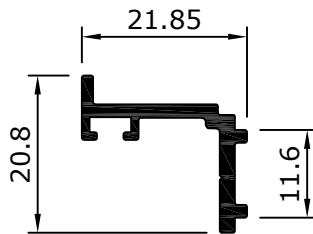
**TT16**  
GLAZING BEAD  
(Open in door)



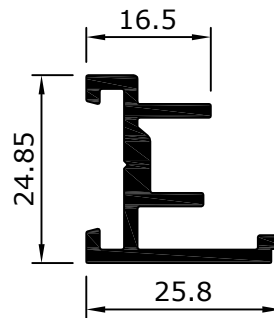
**TT17A**  
GLAZING BEAD  
(Open in door)



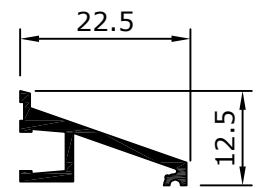
**051**  
ANTI-FINGERTRAP  
ADAPTOR FRAME



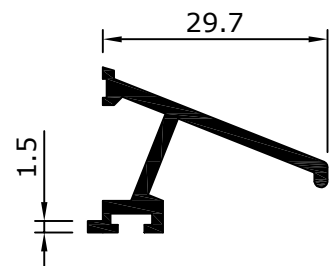
**052**  
ANTI-FINGERTRAP  
ADAPTOR REBATE



**053**  
ANTI-FINGERTRAP  
ADAPTOR NON-REBATE



**TW05**  
DRIP RAIL



**SD158**  
DRIP RAIL

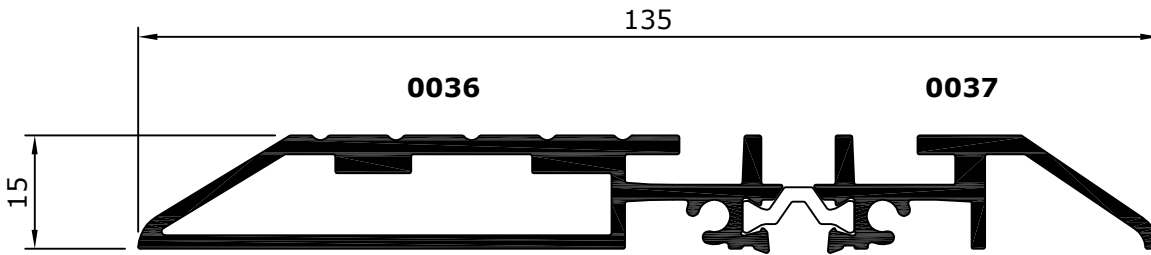
Scale 1:1

# Section Drawings

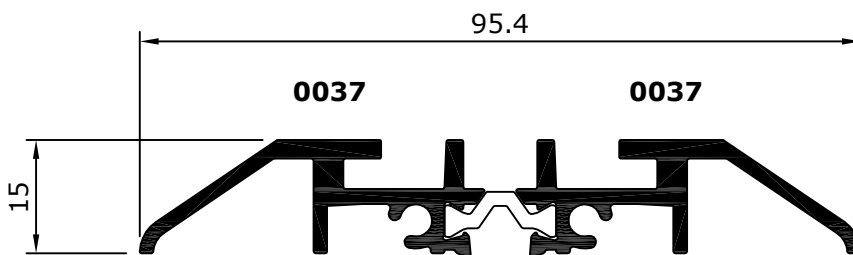


**System 5-20D/Hi+**

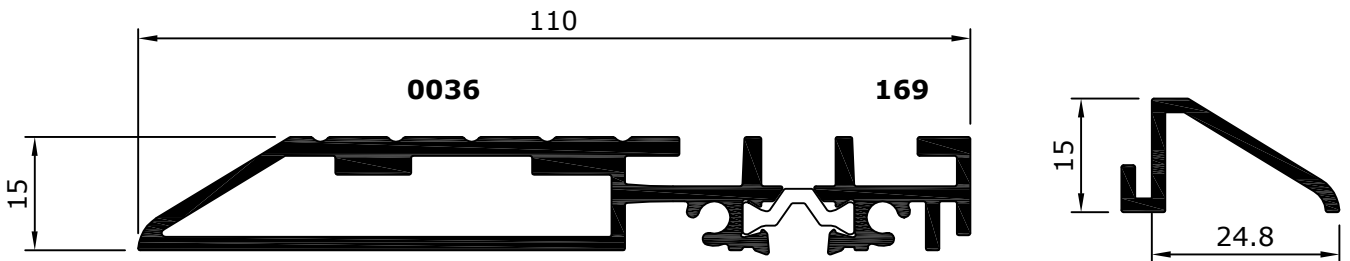
DOOR SYSTEM



**0036-0037**  
PANIC EXIT RAMPED THRESHOLD  
(For open out applications only)

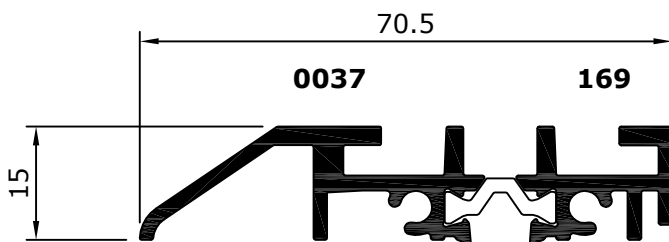


**0037-0037**  
DOUBLE RAMPED THRESHOLD

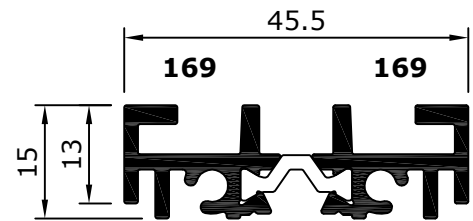


**0036-169**  
PANIC EXIT THRESHOLD  
(For open out applications only)

**PCD28**  
THRESHOLD RAMP



**0037-169**  
SINGLE RAMPED THRESHOLD



**169-169**  
LOW THRESHOLD

Scale 1:1

# General Arrangement

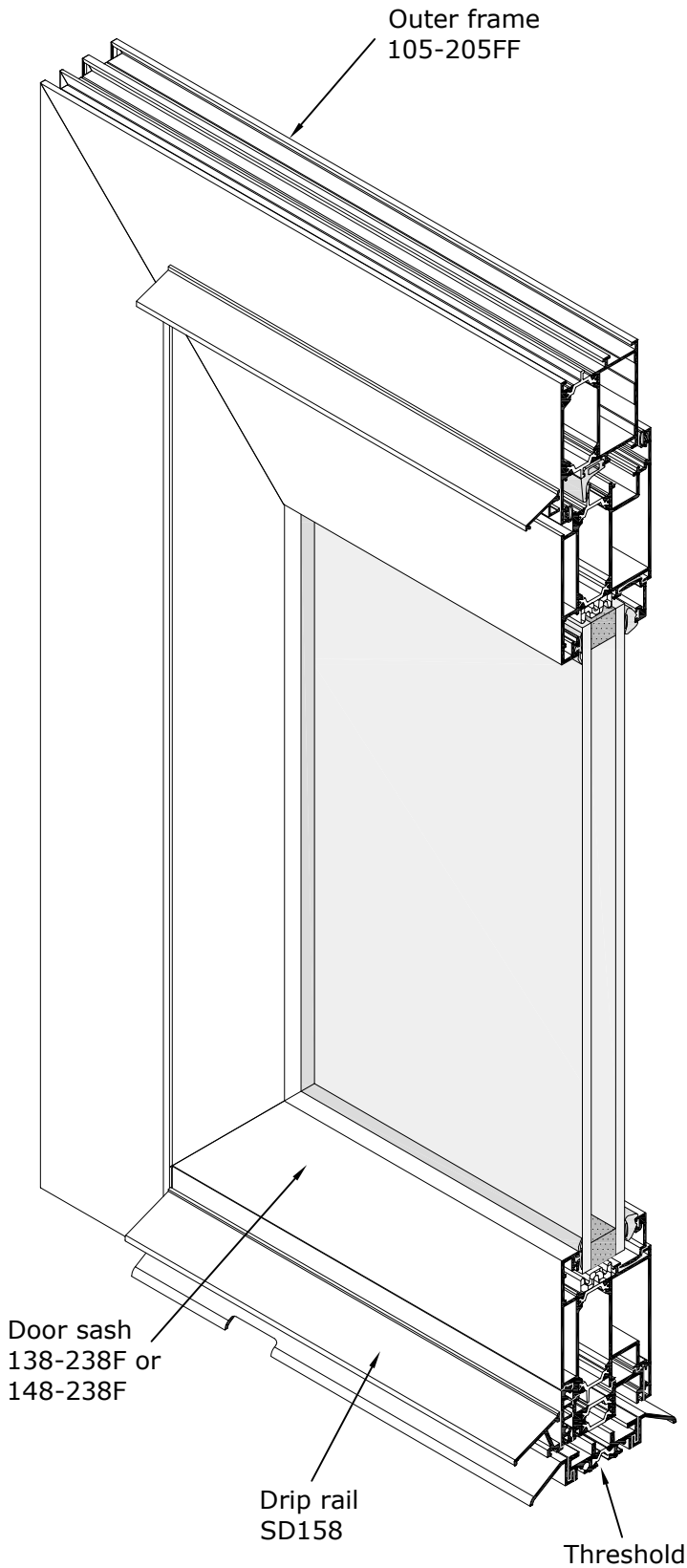
## 5-20D Hi+ 3-Dimensional Assembly Detail with Low Threshold



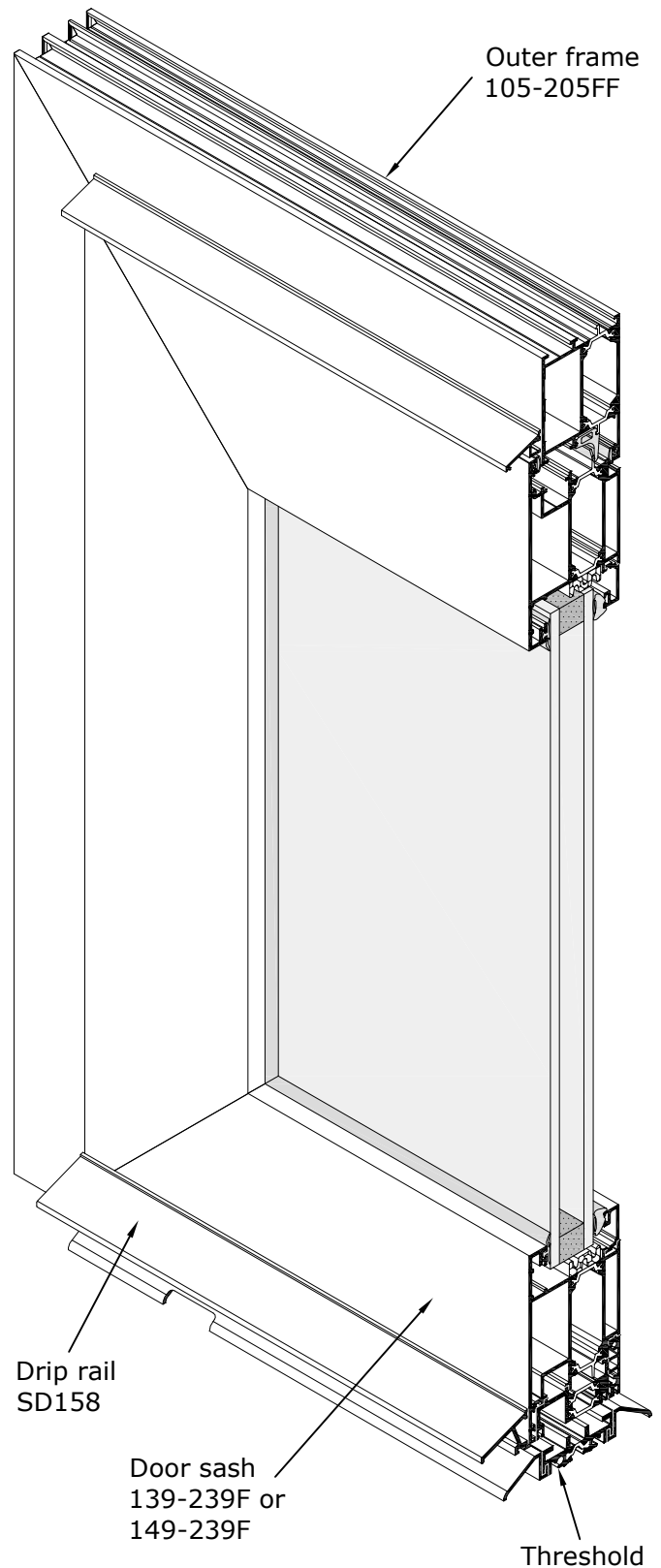
### System 5-20D/Hi+

DOOR SYSTEM

#### OPEN IN DOOR



#### OPEN OUT DOOR



Not to Scale

# General Arrangement

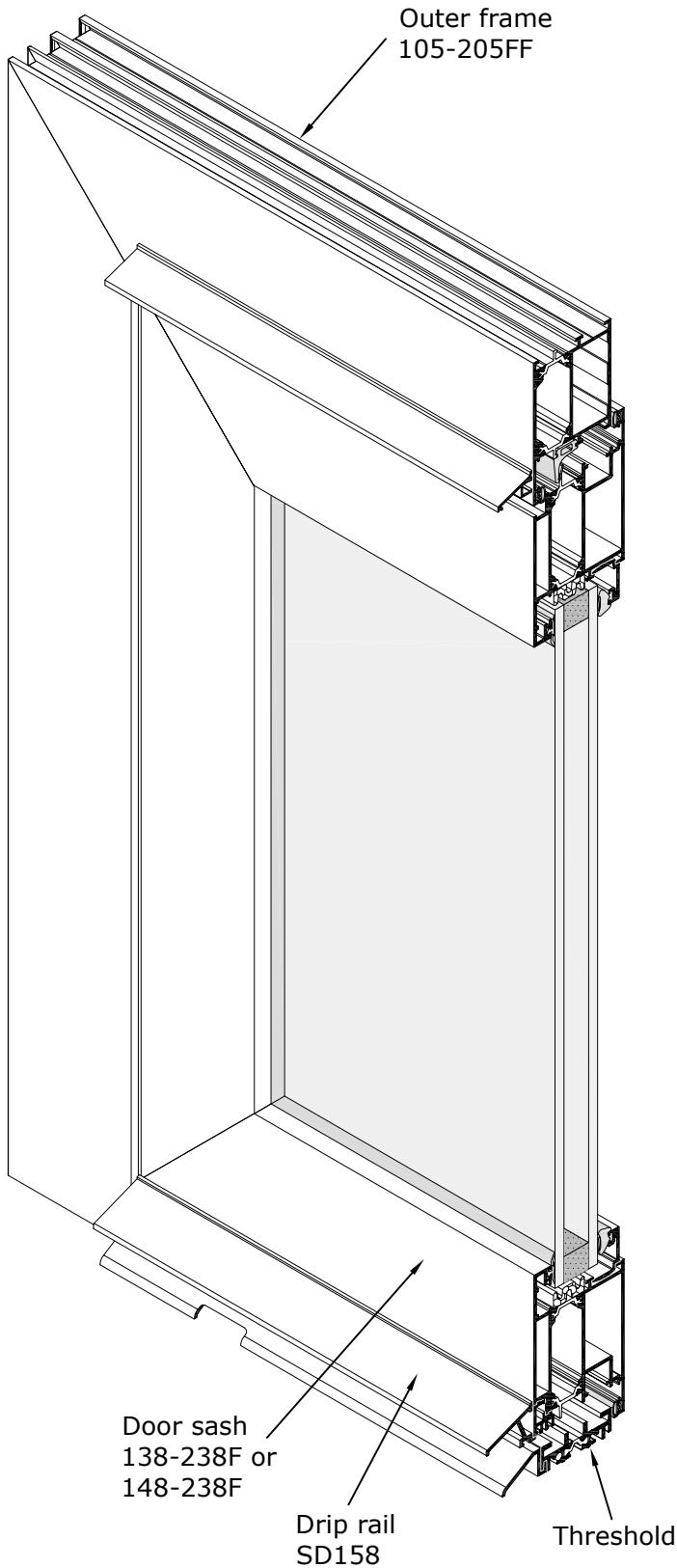
## 5-20D Hi+ 3-Dimensional Assembly Detail with Semi-Rebated Threshold



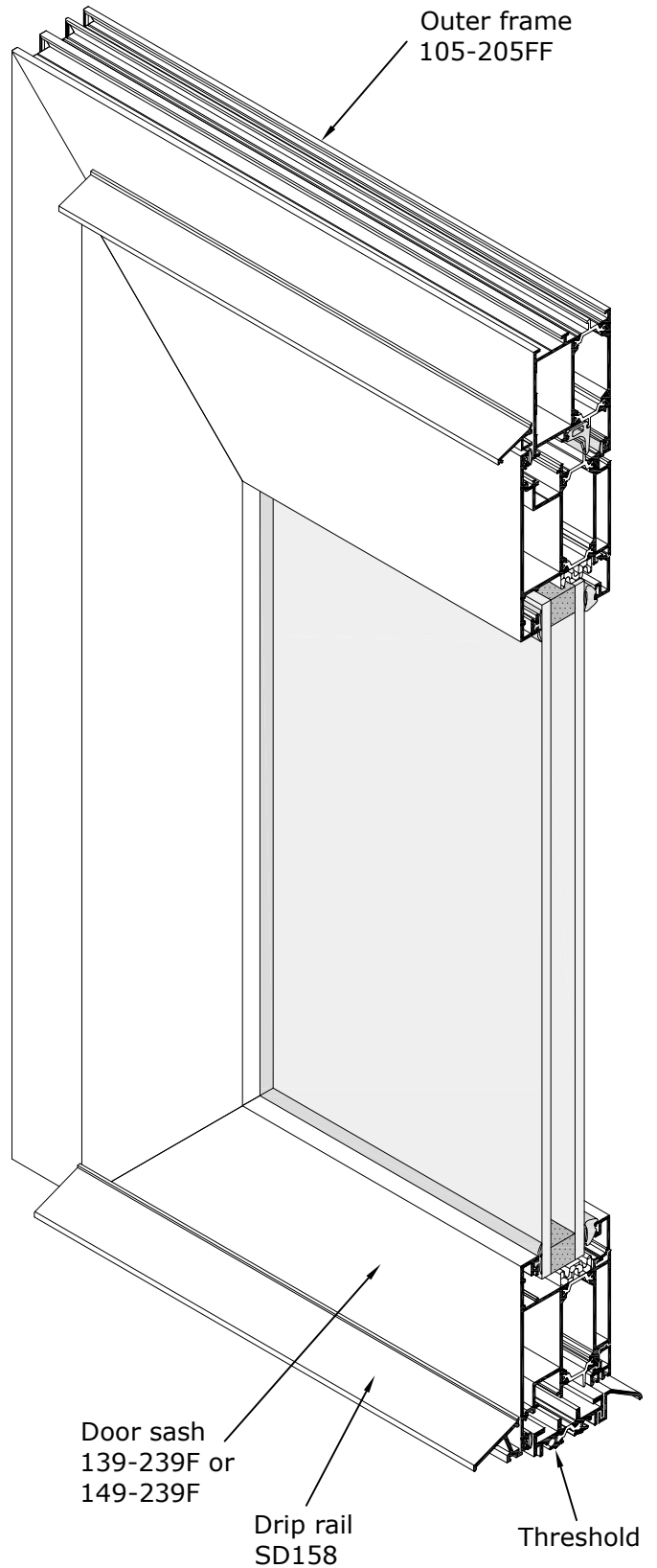
## System 5-20D/Hi+

DOOR SYSTEM

### OPEN IN DOOR



### OPEN OUT DOOR



Not to Scale

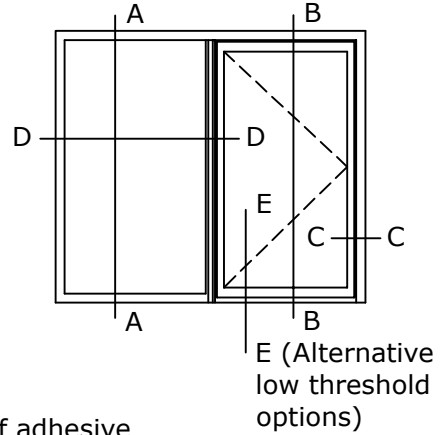
# Single Door Open-In



## System 5-20D/Hi+

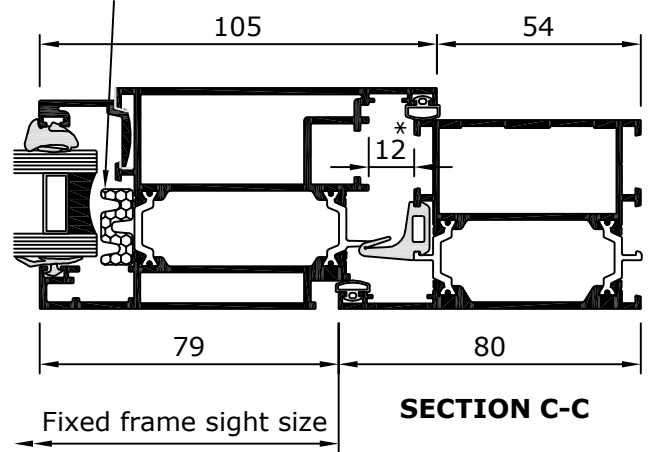
DOOR SYSTEM

- \* Tolerance to be in accordance with door lock manufacturers recommendations.
- \*\* Gasket may be notched/omitted locally for pressure equalisation in exposed applications.



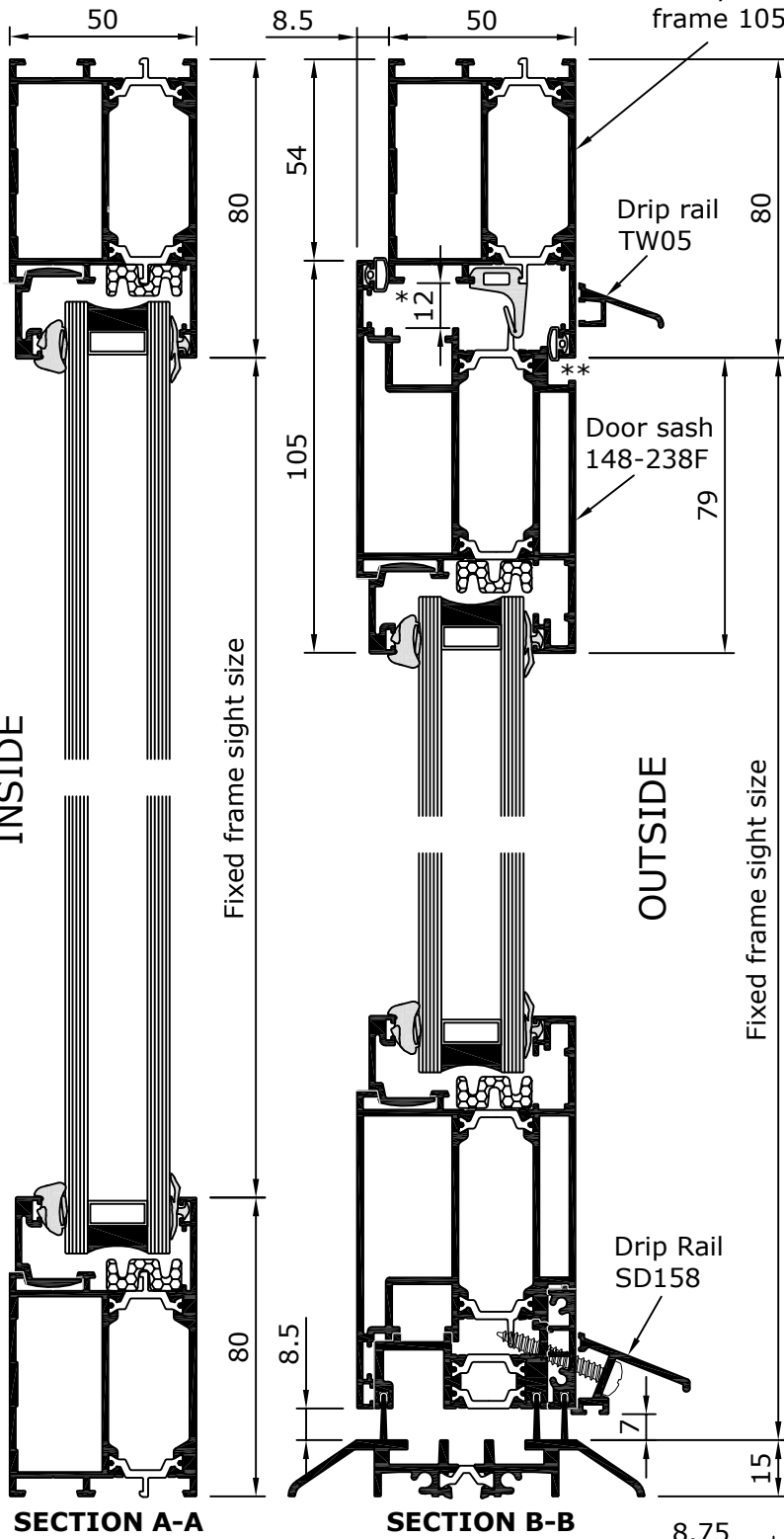
Self adhesive thermal D.G.U. foam 6743

INSIDE



Door sash 148-238F

Self adhesive thermal D.G.U. foam 6743

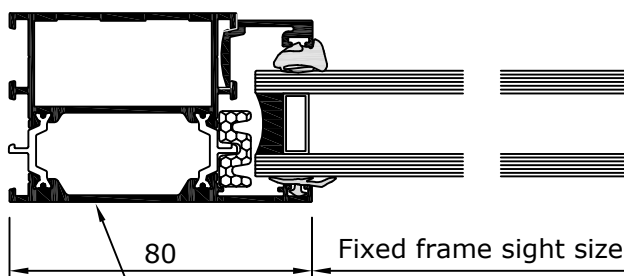


INSIDE

OUTSIDE

SECTION A-A

SECTION B-B



Heavy short leg outer frame 105-205FF

OUTSIDE

Box mullion 142-201FF

Box mullion 143-201FF

SECTION D-D

Scale 1:2

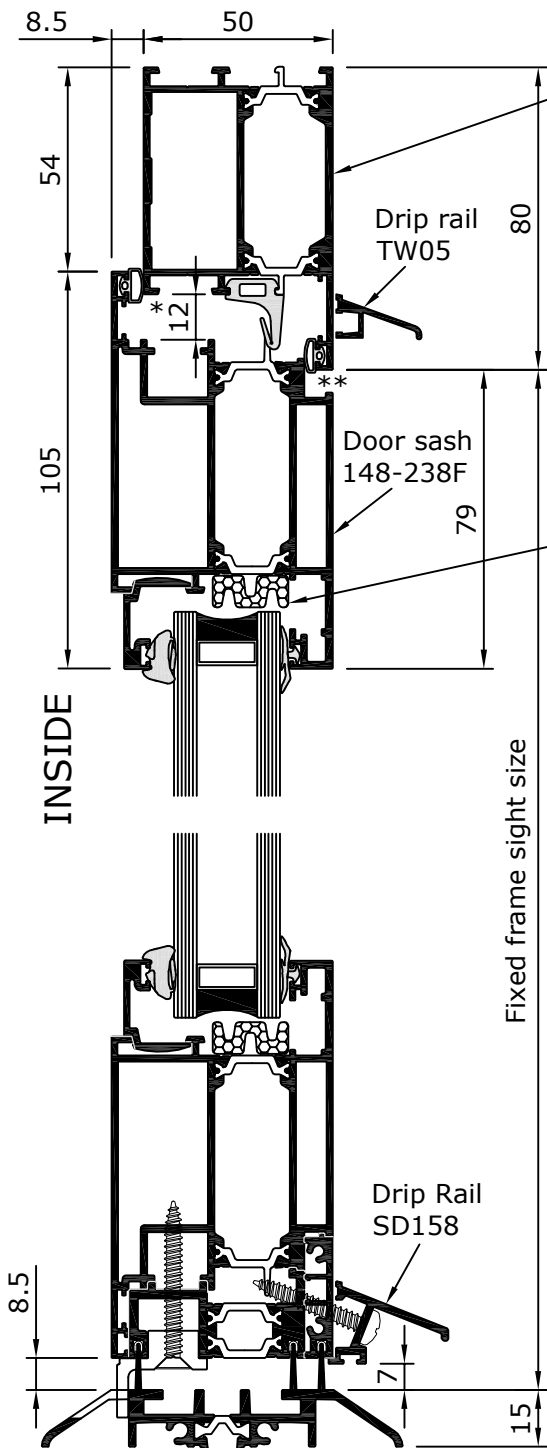


# Double Door Open-In



## System 5-20D/Hi+

DOOR SYSTEM

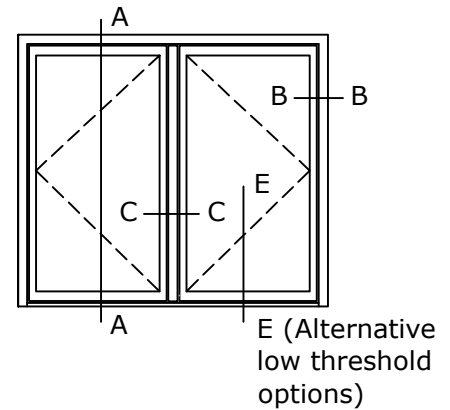


Heavy short leg  
outer frame  
105-205FF

\* Tolerance to be in  
accordance with door  
lock manufacturers  
recommendations.

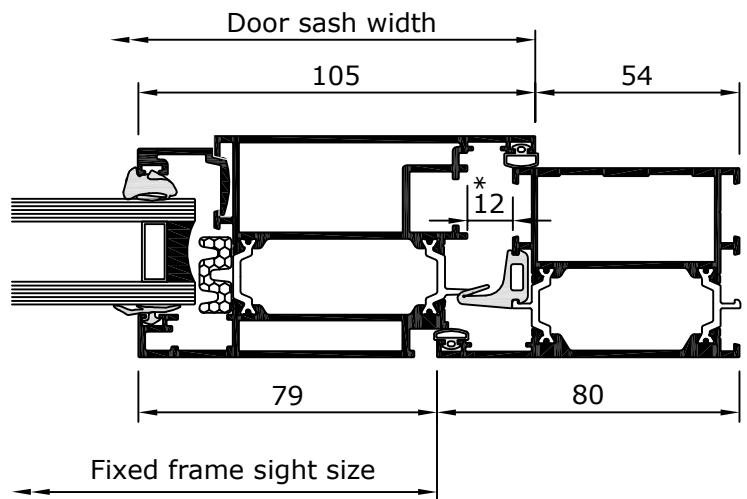
\*\* Gasket may be  
notched/omitted locally  
for pressure equalisation  
in exposed applications.

Self adhesive  
thermal D.G.U.  
foam 6743



E (Alternative  
low threshold  
options)

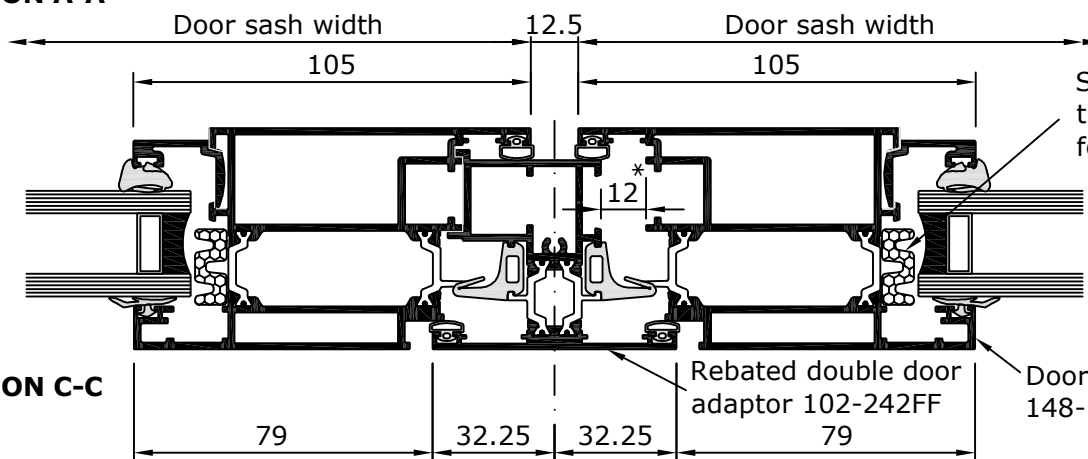
OUTSIDE



INSIDE

SECTION B-B

SECTION A-A



SECTION C-C

Self adhesive  
thermal D.G.U.  
foam 6743

Rebated double door  
adaptor 102-242FF  
79

Door sash  
148-238F

Scale 1:2

DOOR

OUTSIDE

SHEET 520D Hi+ / 2 / 40  
rev 1 04/11/13

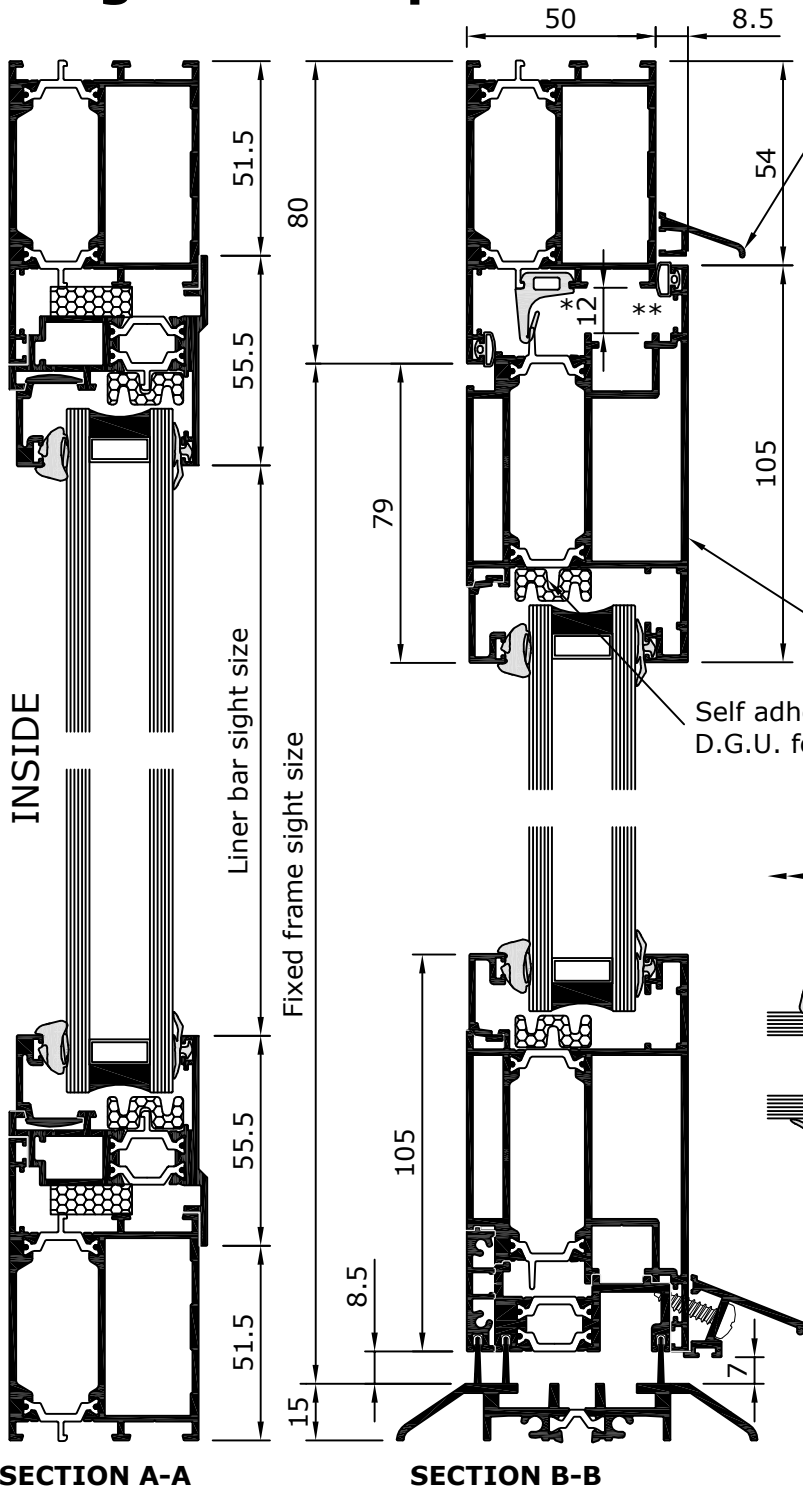
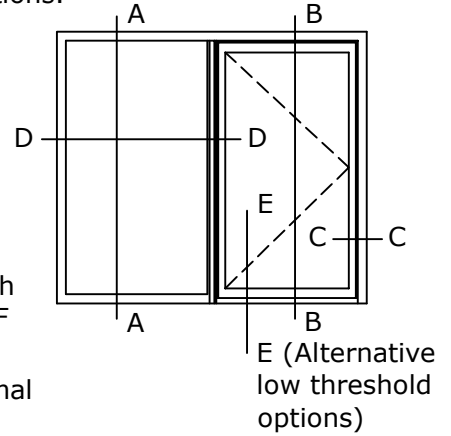
# Single Door Open-Out



## System 5-20D/Hi+

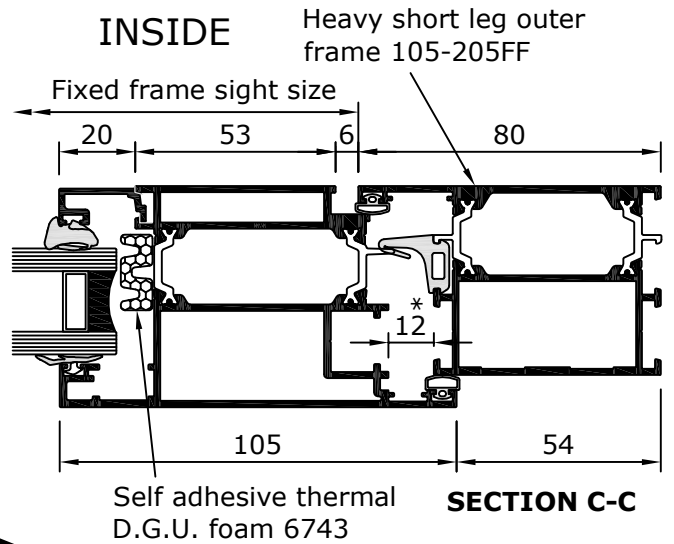
.....  
**DOOR SYSTEM**  
 .....

- \* Tolerance to be in accordance with door lock manufacturers recommendations.
- \*\* Gasket may be notched/omitted locally for pressure equalisation in exposed applications.

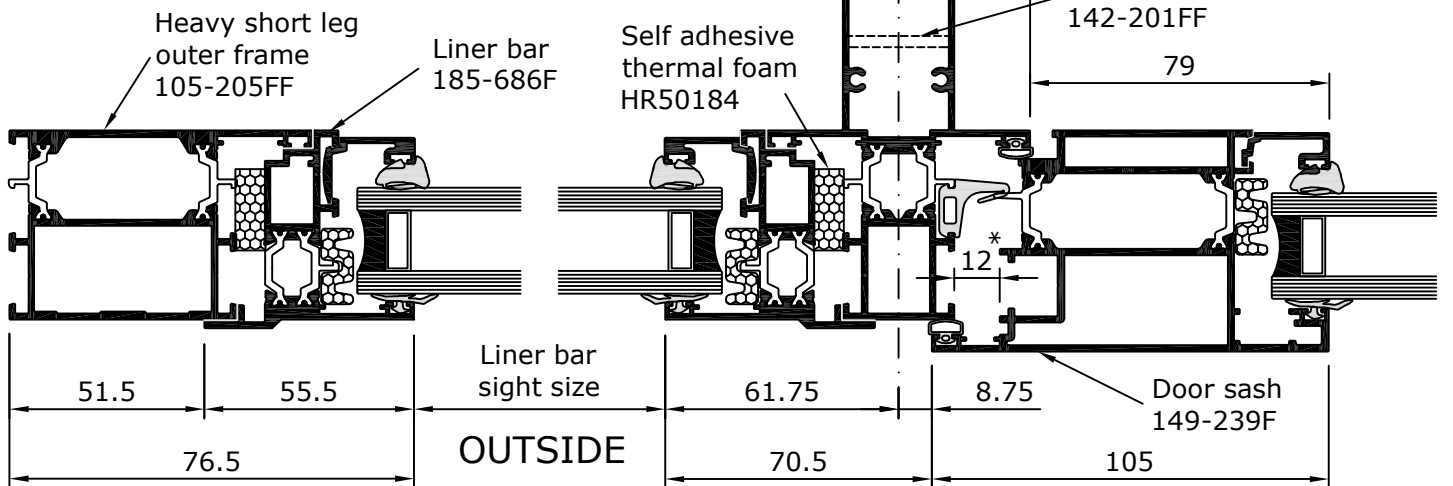


**OUTSIDE**

**INSIDE**



**SECTION C-C**



**OUTSIDE**

**SECTION D-D**

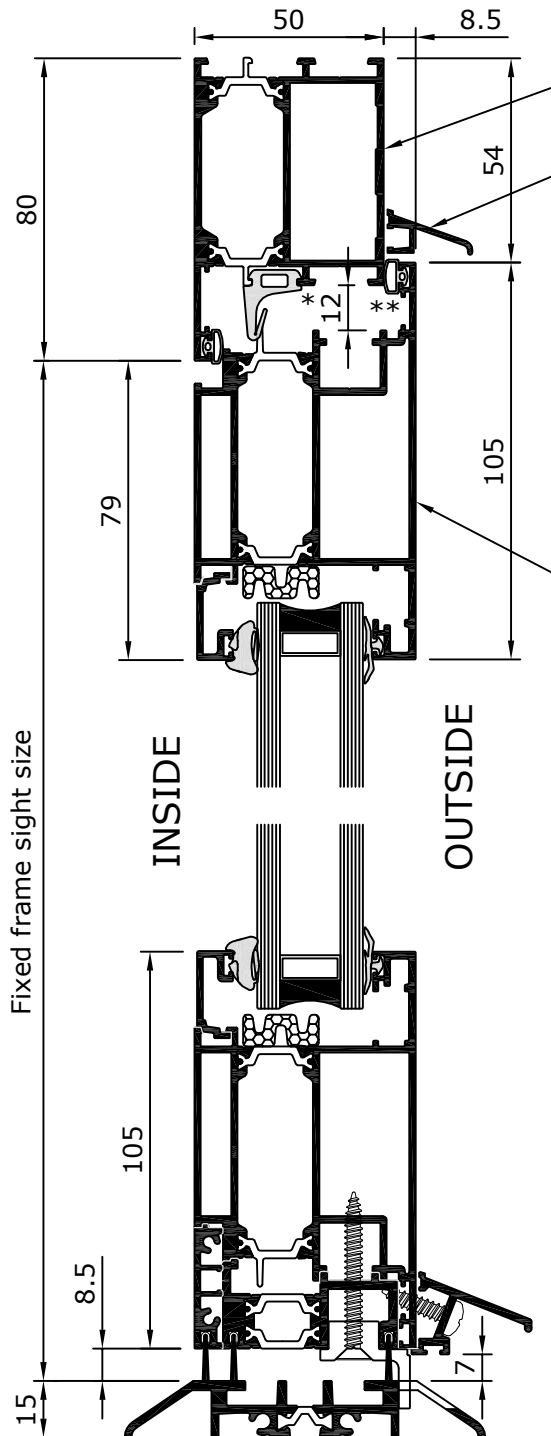
Scale 1:2

# Double Door Open-Out



## System 5-20D/Hi+

.....  
DOOR SYSTEM  
.....



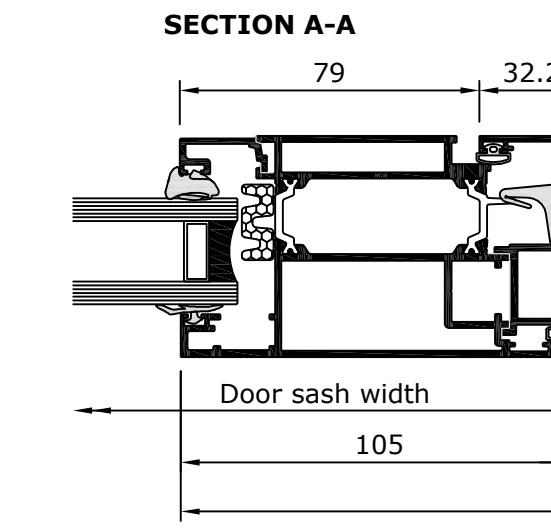
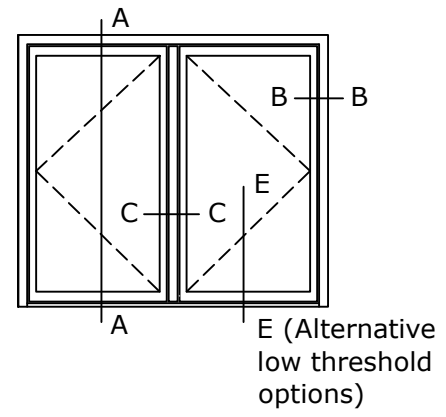
Heavy short leg  
outer frame  
105-205FF

Drip rail  
TW05

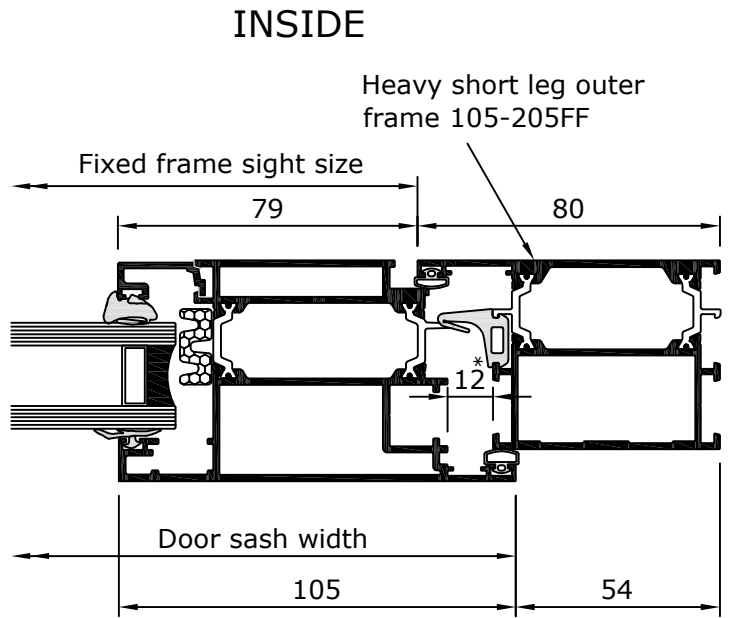
\* Tolerance to be in  
accordance with door  
lock manufacturers  
recommendations.

\*\* Gasket may be  
notched/omitted  
locally for pressure  
equalisation in  
exposed applications.

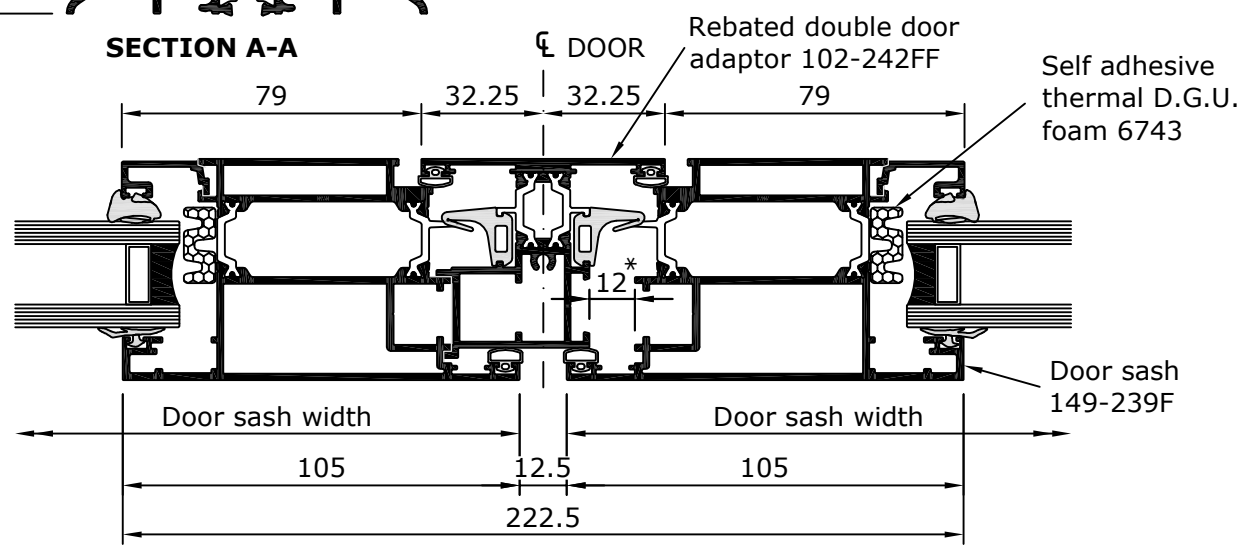
Door sash  
149-239F



**SECTION A-A**



**SECTION B-B**



**SECTION C-C**

**OUTSIDE**

Scale 1:2

SHEET 520D Hi+ / 2 / 60  
rev 1 04/11/13

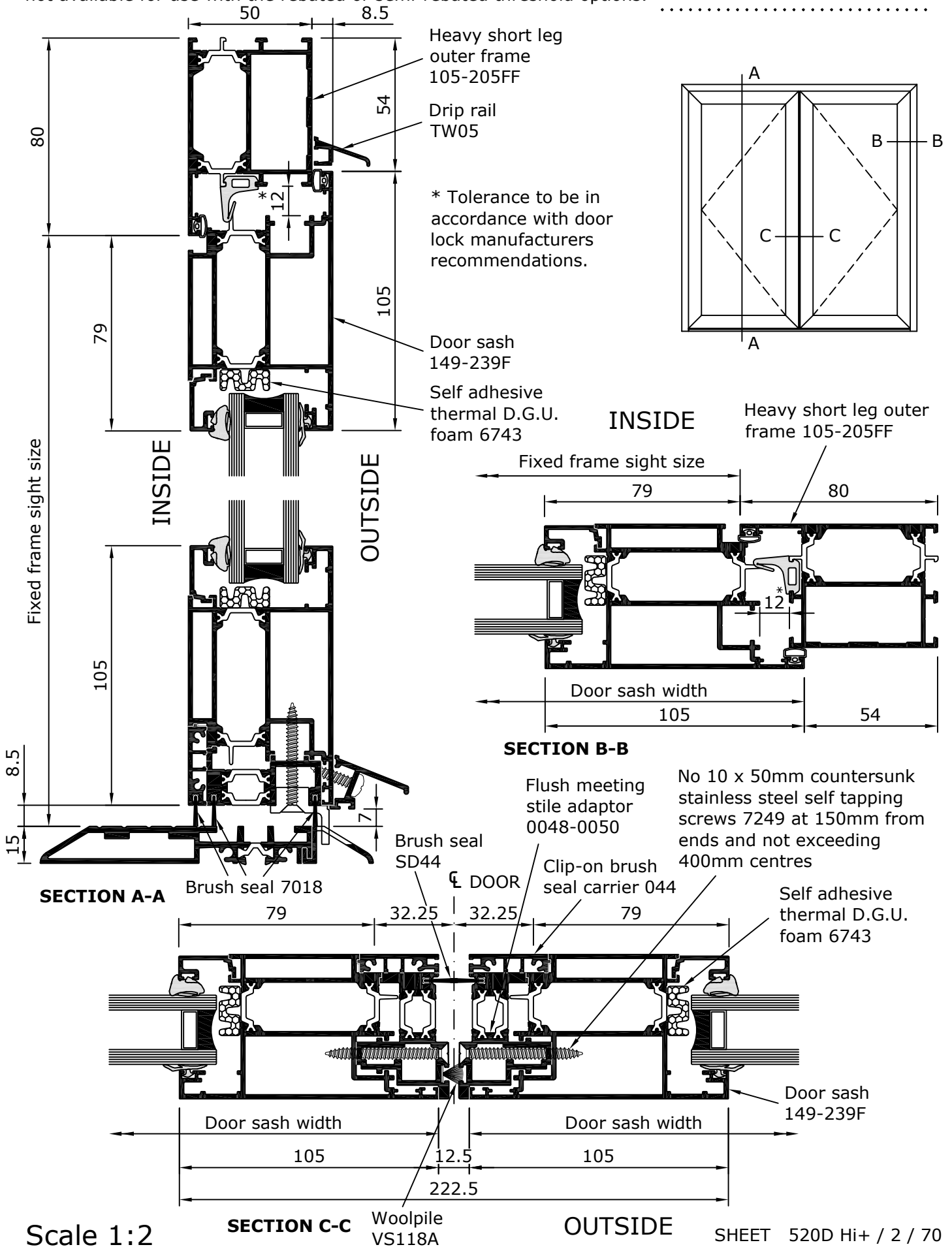
# Flush Meeting Stile - Open Out Panic Exit Doors Only



## System 5-20D/Hi+

DOOR SYSTEM

Due to the weather performance of the flush meeting stile this option is not available for use with the rebated or semi-rebated threshold options.



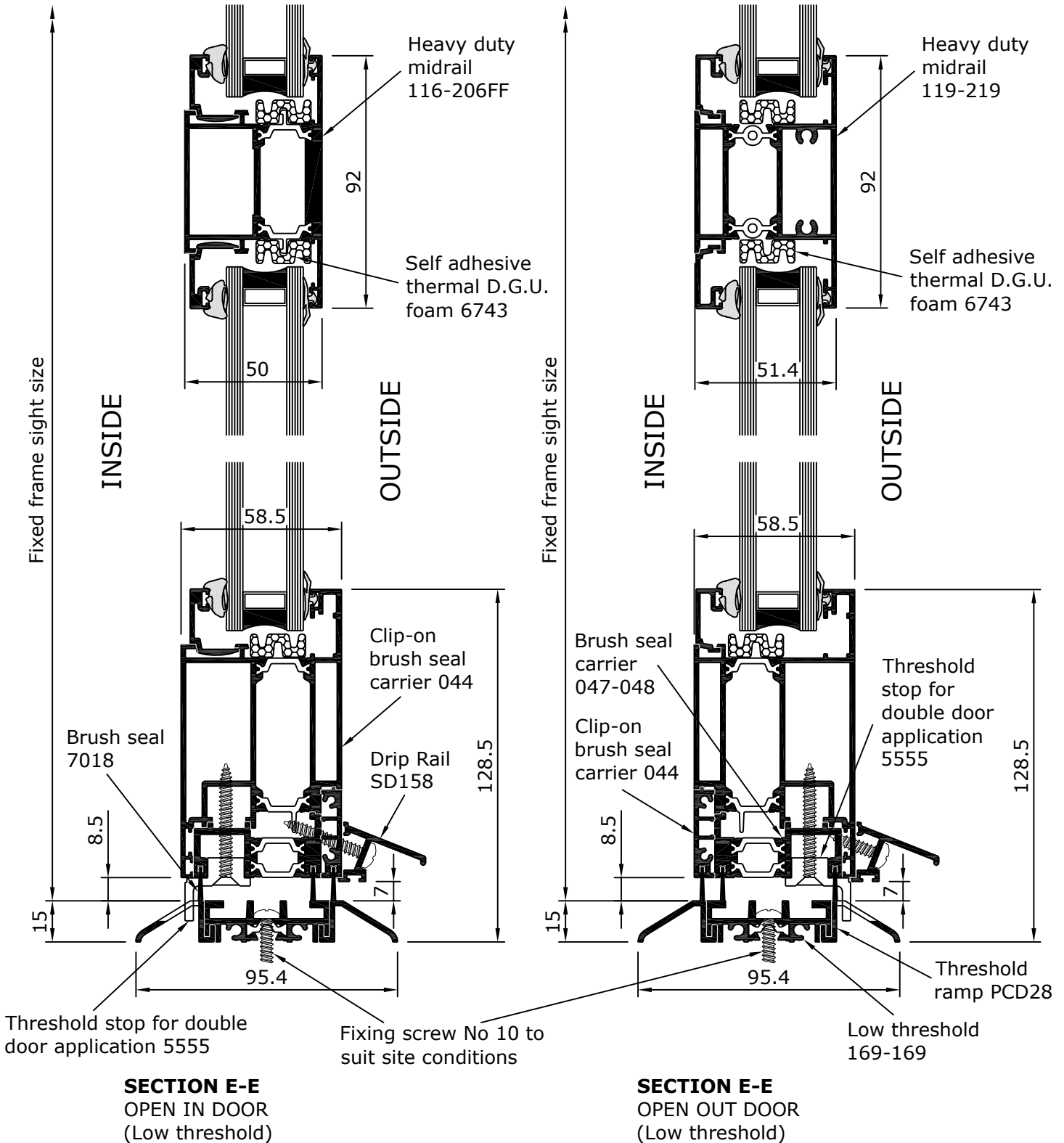
Scale 1:2

# Low Threshold and Midrail Options



## System 5-20D/Hi+

DOOR SYSTEM



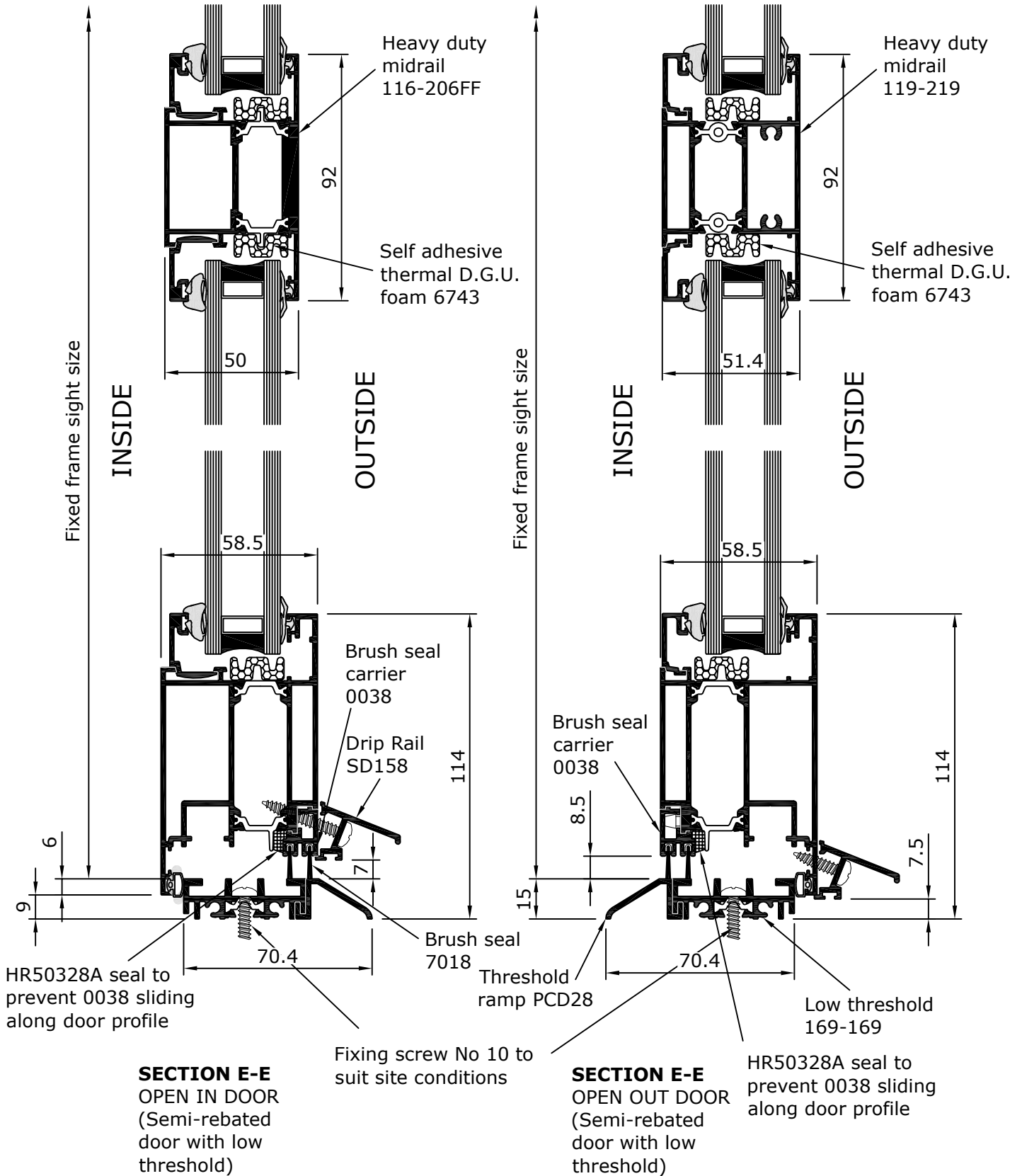
Scale 1:2

# Semi-Rebated Doors with Low Threshold and Midrail Options



## System 5-20D/Hi+

DOOR SYSTEM



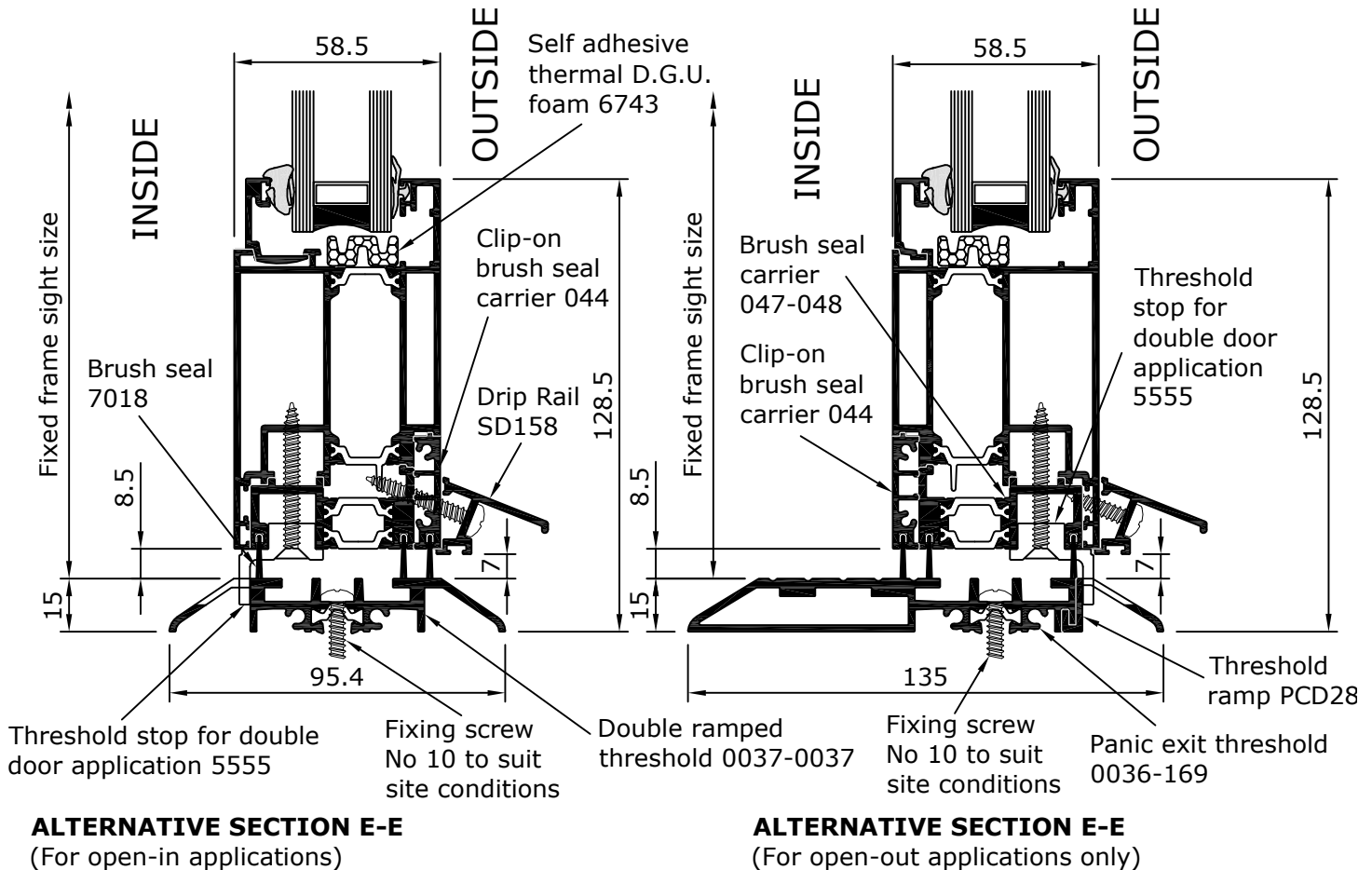
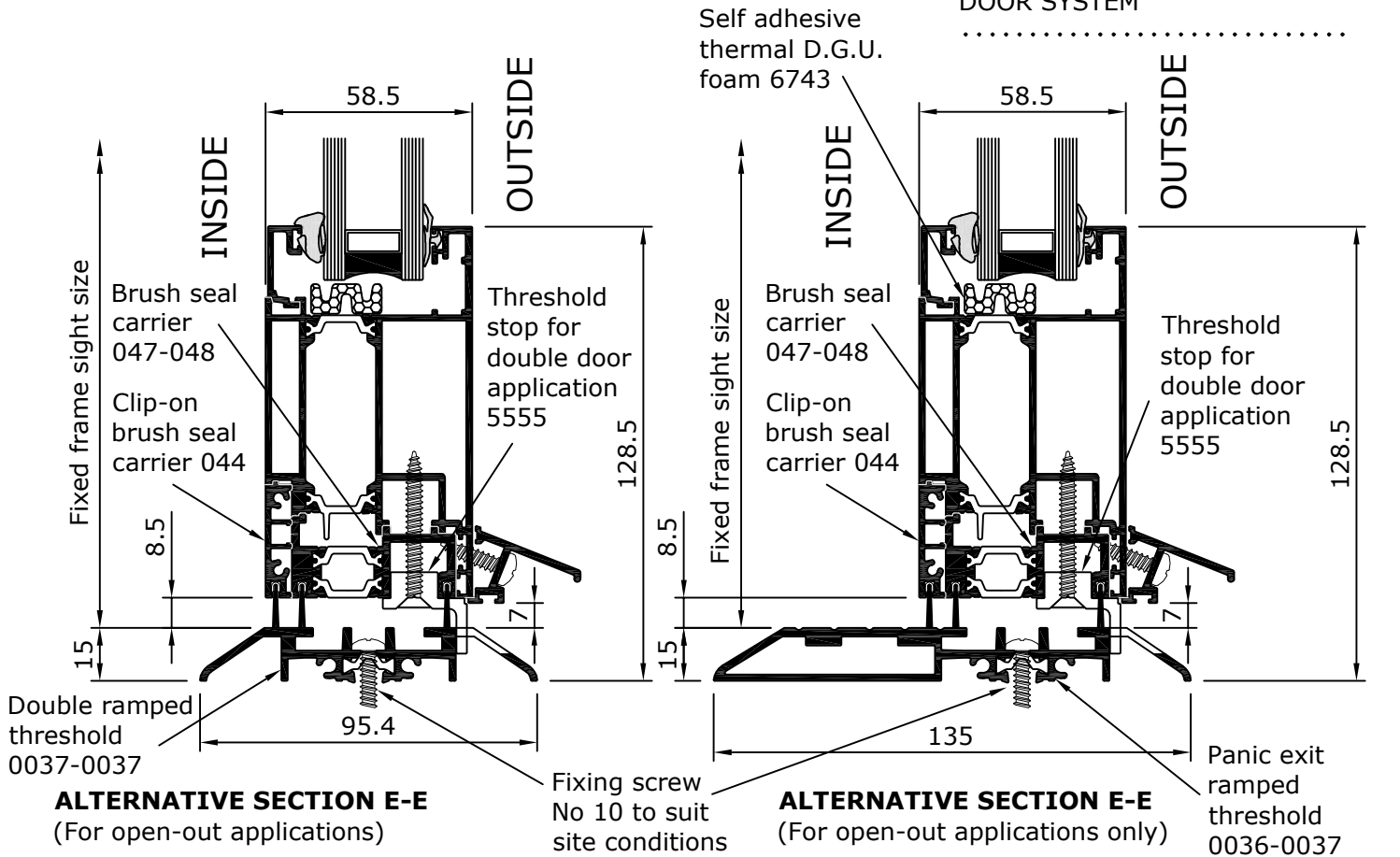
Scale 1:2

# Low Threshold Options



## System 5-20D/Hi+

DOOR SYSTEM



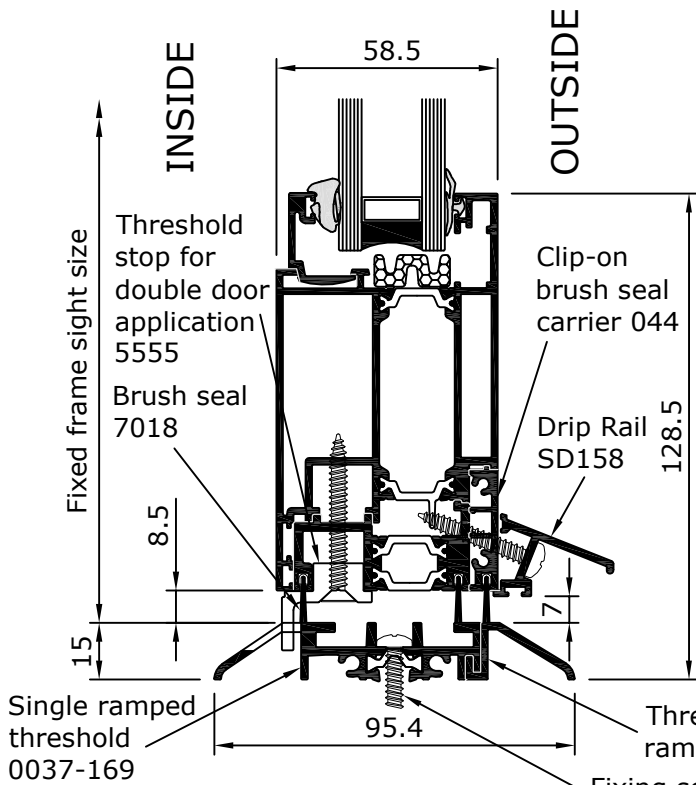
Scale 1:2

# Low and Semi-Rebated Threshold Options

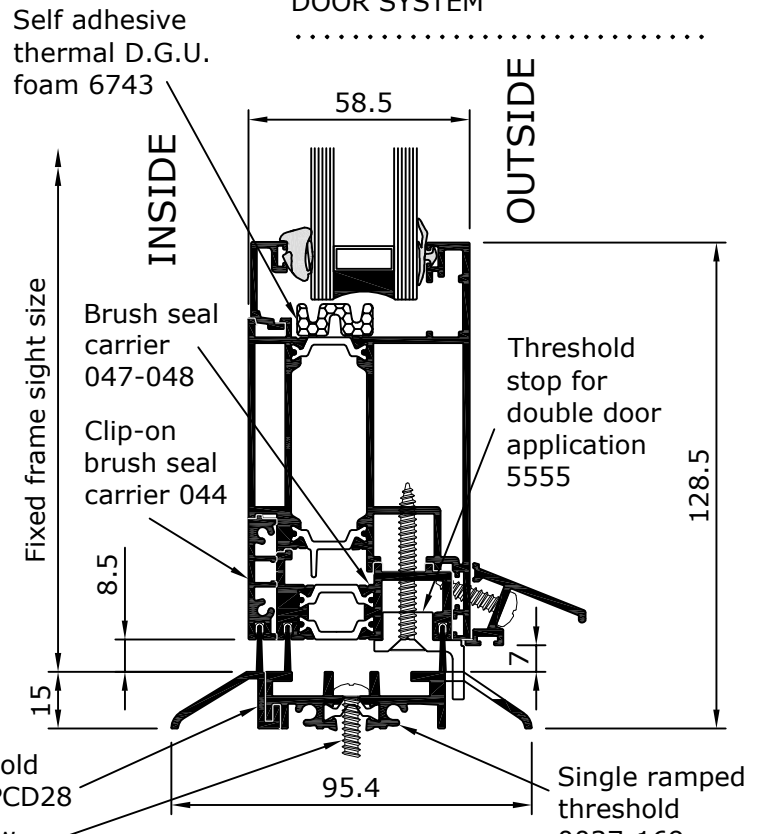


## System 5-20D/Hi+

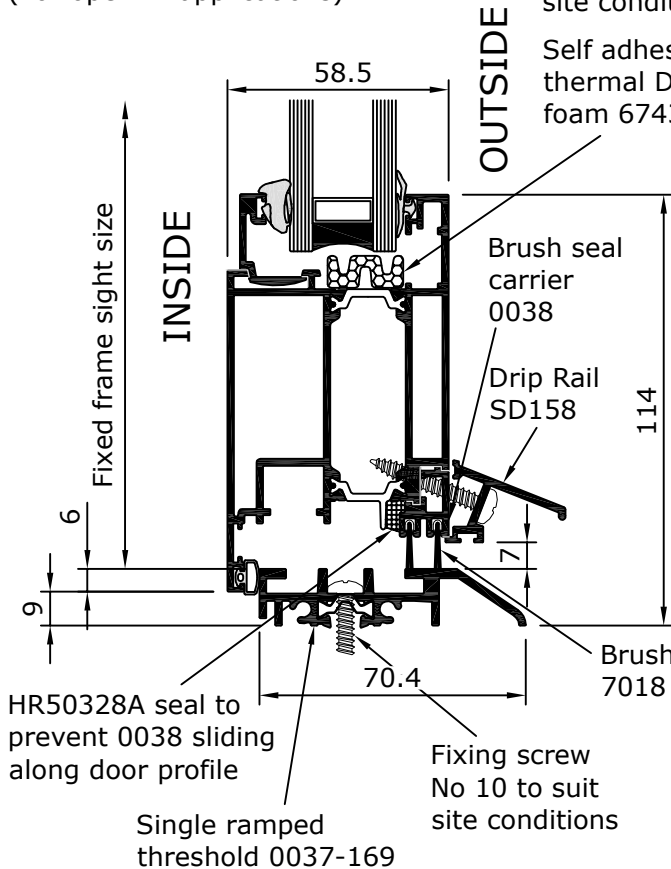
DOOR SYSTEM



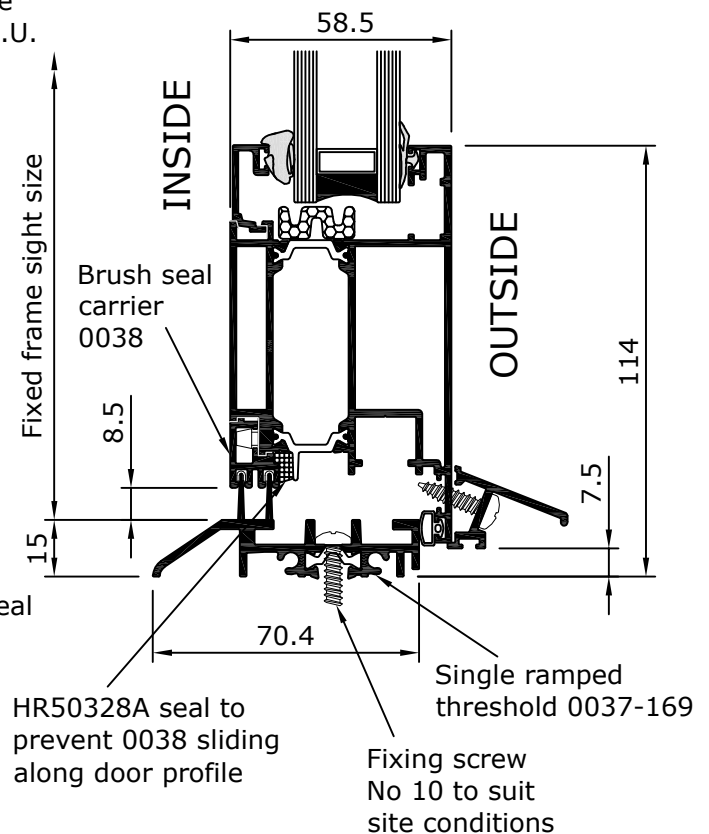
**ALTERNATIVE SECTION E-E**  
(For open-in applications)



**ALTERNATIVE SECTION E-E**  
(For open-out applications)



**ALTERNATIVE SECTION E-E**  
(For open-in applications)



**ALTERNATIVE SECTION E-E**  
(For open-out applications)

Scale 1:2



# Anti-Fingertrap for Open-In and Open-Out Doors

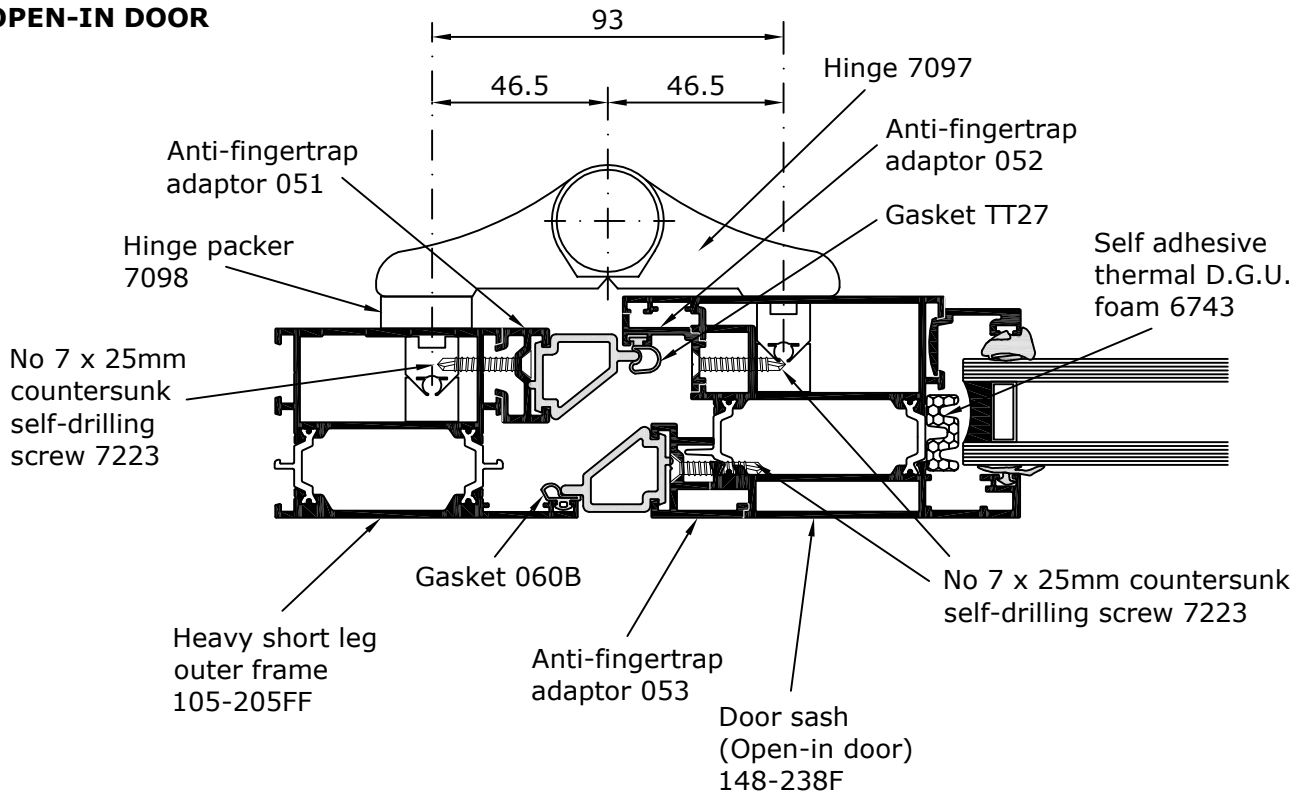


**System 5-20D/Hi+**

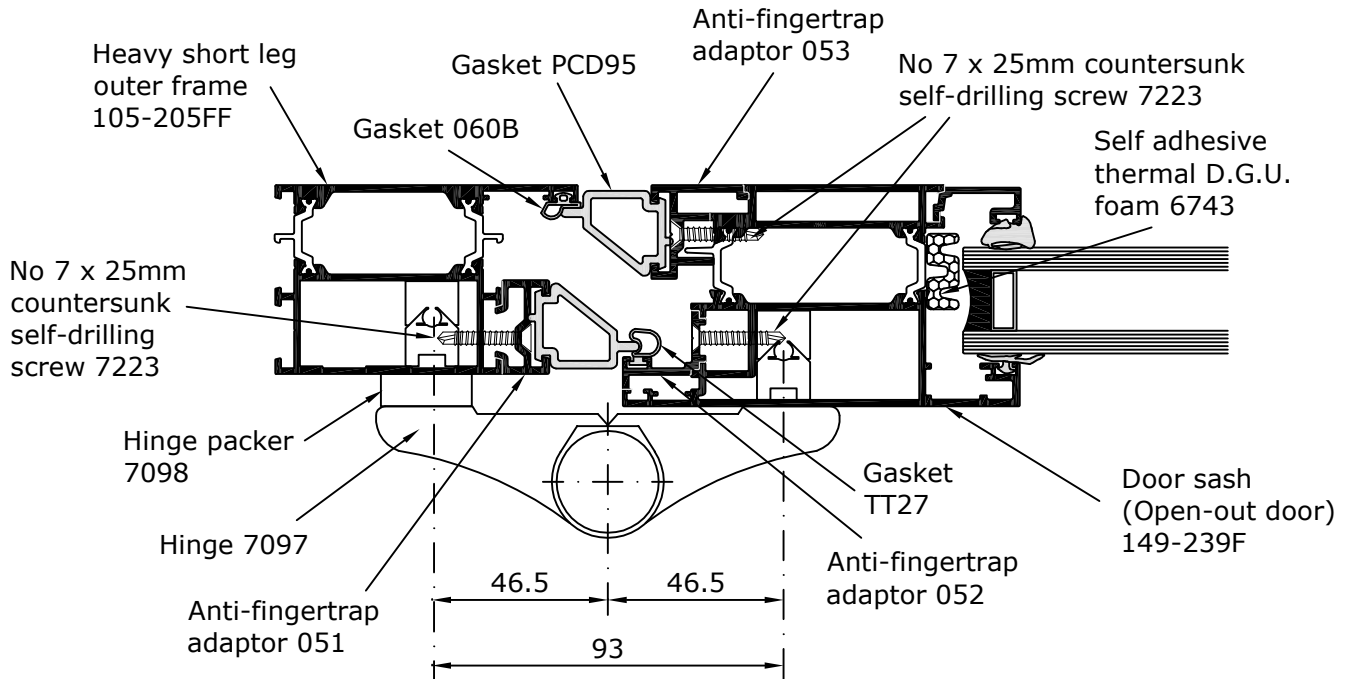
DOOR SYSTEM

INSIDE

## OPEN-IN DOOR



## OPEN-OUT DOOR



OUTSIDE

Scale 1:2

# Coupling Detail



## System 5-20D/Hi+

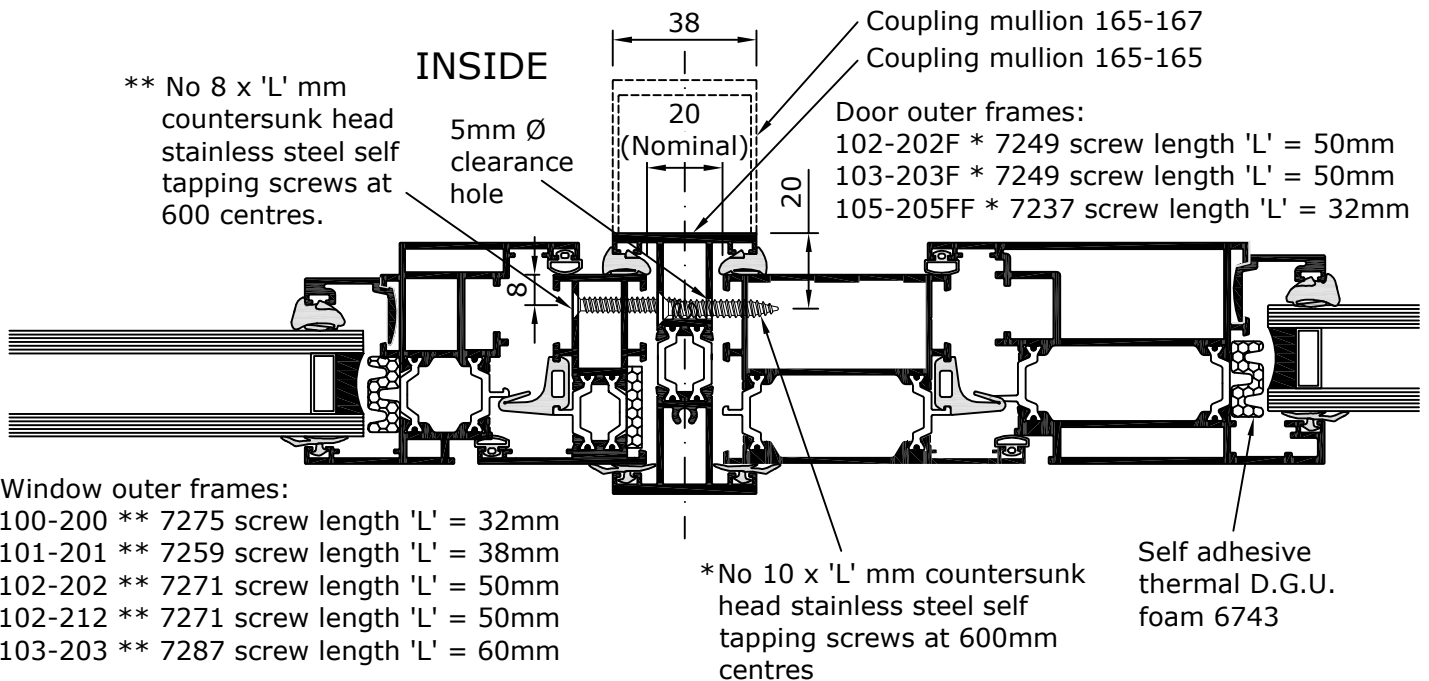
DOOR SYSTEM

These profiles are not intended for use as coupling transoms. The fabricator must ensure that the window design and coupling details can adequately accommodate the anticipated expansion and contraction required for the window configuration. For further advice please contact Metal Technology's Technical Department.

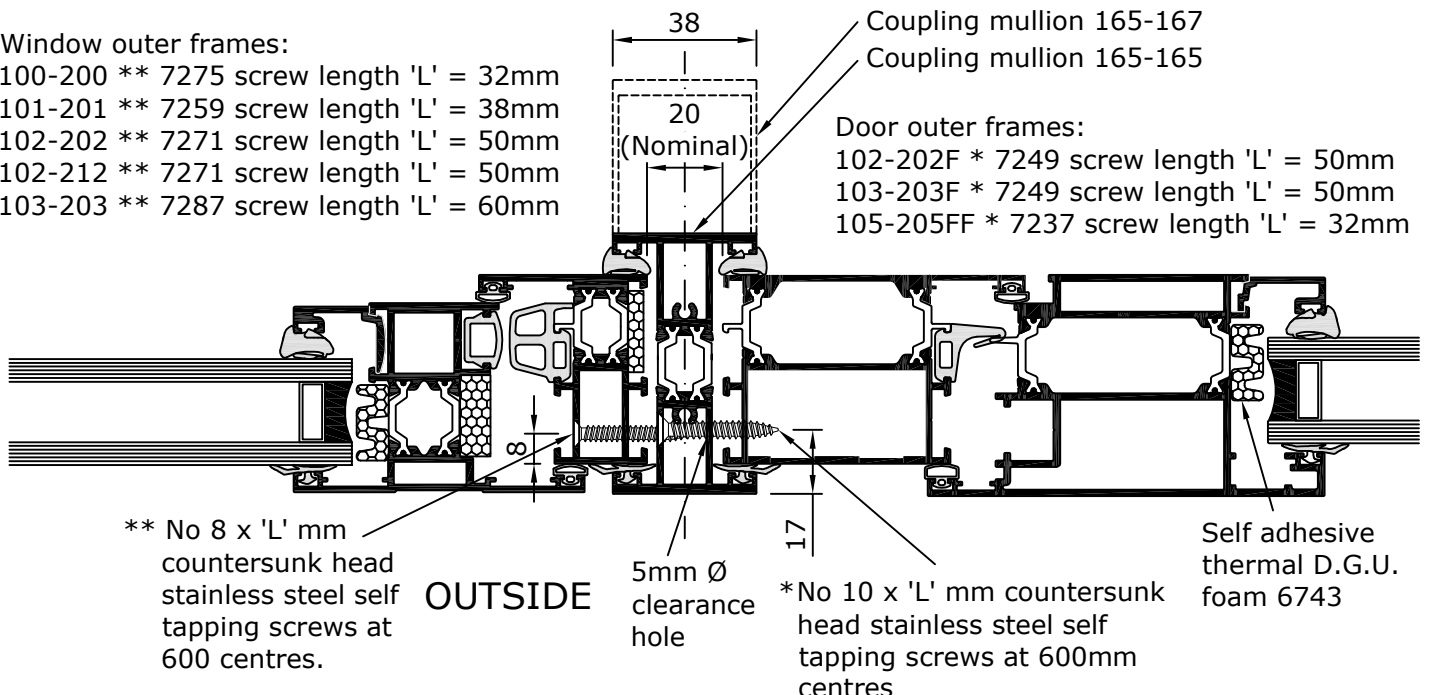
Coupling mullions 165-165 and 165-167 are not suitable for use with 101-201FF door outer frame.

Windows/doors to be screw fixed to coupling mullion at 600mm centres with additional fixings 25mm above and below hinge positions. Coupling mullion to be lug fixed back to structure at head and cill using plates/straps (by fabricator) fixed to integral screwports within coupling mullion using 2 x No 8 x 32mm countersunk screws 7275. Metal Technology recommend that the coupling mullion be secured to the door outer frame, as indicated, prior to installation on site.

### OPEN-IN DOOR WITH SYSTEM 5-20Hi+ TILT AND TURN



### OPEN-OUT DOOR WITH SYSTEM 4-20Hi+ CASEMENT



Scale 1:2

# Coupling Detail



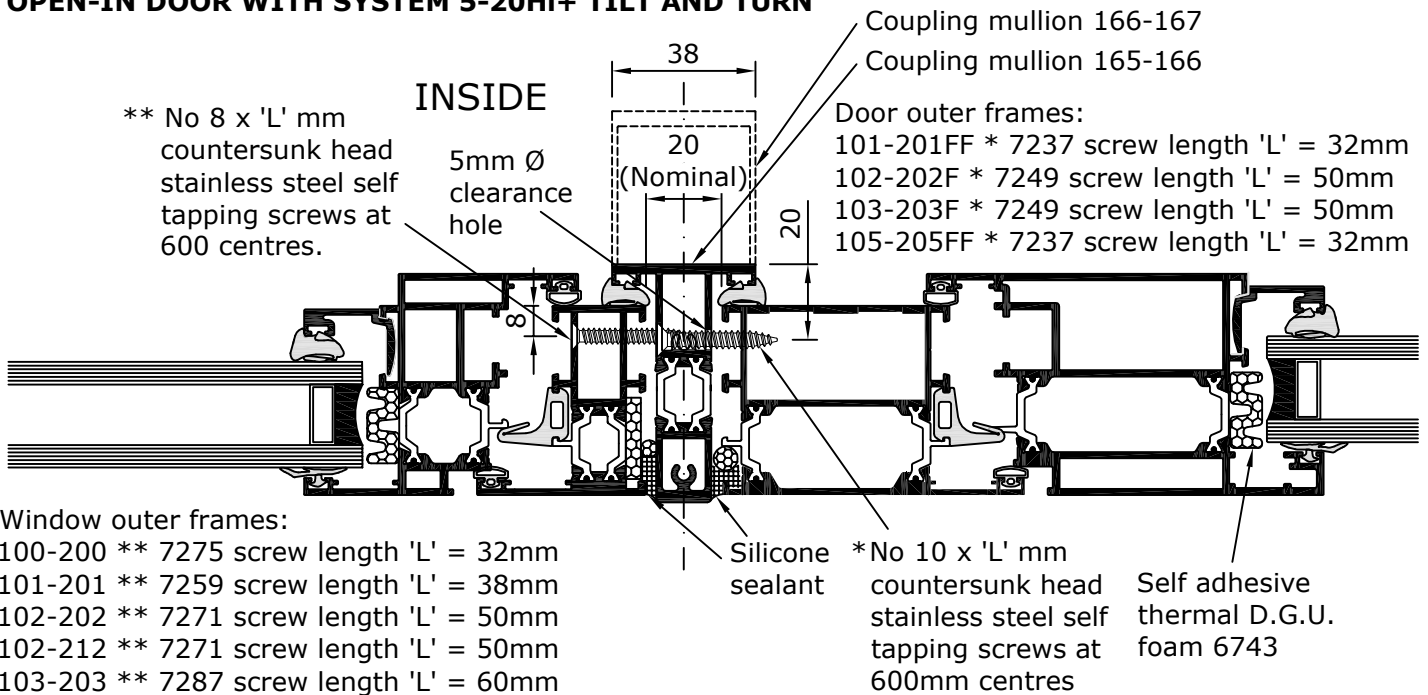
## System 5-20D/Hi+

.....  
DOOR SYSTEM  
.....

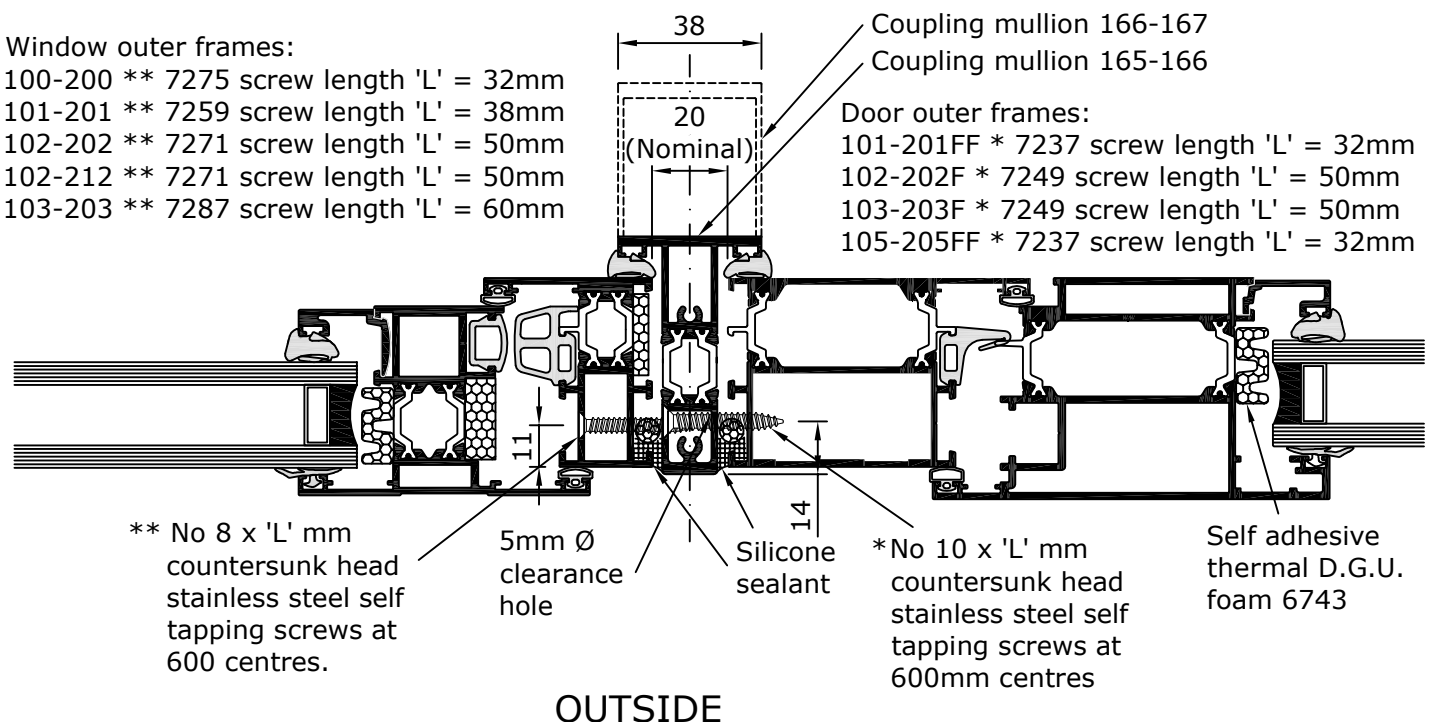
These profiles are not intended for use as coupling transoms. The fabricator must ensure that the window design and coupling details can adequately accommodate the anticipated expansion and contraction required for the window configuration. For further advice please contact Metal Technology's Technical Department.

Windows/doors to be screw fixed to coupling mullion at 600mm centres with additional fixings 25mm above and below hinge positions. Coupling mullion to be lug fixed back to structure at head and cill using plates/straps (by fabricator) fixed to integral screwports within coupling mullion using 2 x No 8 x 32mm countersunk screws 7275. Metal Technology recommend that the coupling mullion be secured to the door outer frame, as indicated, prior to installation on site.

### OPEN-IN DOOR WITH SYSTEM 5-20Hi+ TILT AND TURN



### OPEN-OUT DOOR WITH SYSTEM 4-20Hi+ CASEMENT



Scale 1:2

# Coupling Detail



## System 5-20D/Hi+

DOOR SYSTEM

668-669 is not intended for use as a coupling transom. While the fabricator must ensure that the window design can adequately accommodate the anticipated expansion and contraction, this coupling detail does not offer this facility, and provides a tight butt joint only. For further advice please contact Metal Technology's Technical Department.

Windows/doors to be screw fixed to coupling mullion at 600mm centres with additional fixings 25mm above and below hinge positions. Coupling mullion to be lug fixed back to structure at head and cill using plates/straps (by fabricator) fixed to integral screwports within 668-669 profile using 2 x No 8 x 32mm countersunk screws 7275. Metal Technology recommend that the 668-669 coupling mullion be secured to the 105-205F outer frame, as indicated, prior to installation on site.

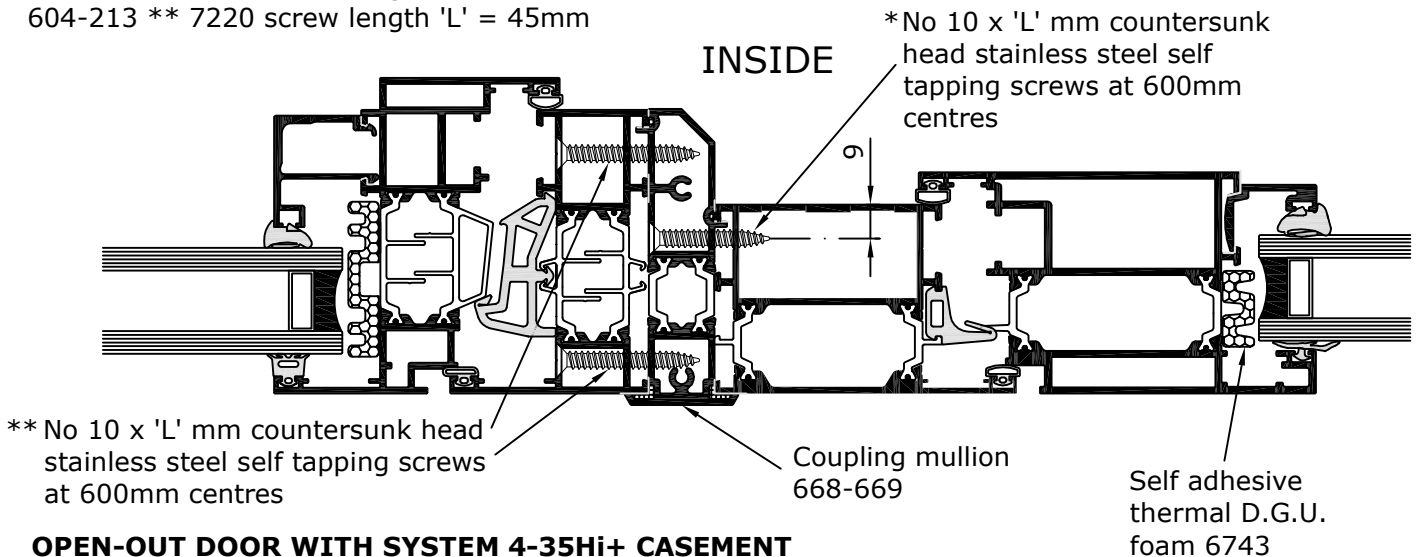
### OPEN-IN DOOR WITH SYSTEM 5-35Hi+ TILT AND TURN

Window outer frames:

- 600-200 \*\* 7237 screw length 'L' = 32mm
- 601-201 \*\* 7248 screw length 'L' = 38mm
- 602-202 \*\* 7249 screw length 'L' = 50mm
- 602-212 \*\* 7249 screw length 'L' = 50mm
- 604-213 \*\* 7220 screw length 'L' = 45mm

Door outer frames:

- 101-201FF \* 7237 screw length 'L' = 32mm
- 102-202F \* 7249 screw length 'L' = 50mm
- 103-203F \* 7249 screw length 'L' = 50mm
- 105-205FF \* 7237 screw length 'L' = 32mm



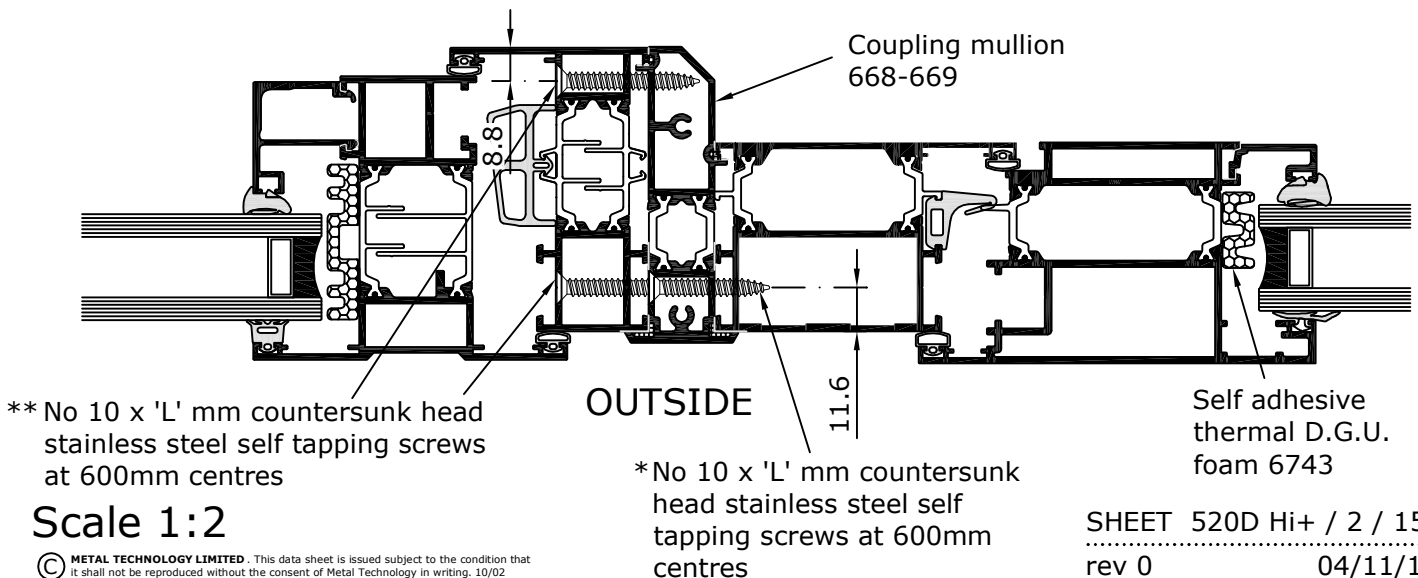
### OPEN-OUT DOOR WITH SYSTEM 4-35Hi+ CASEMENT

Window outer frames:

- 600-200 \*\* 7237 screw length 'L' = 32mm
- 601-201 \*\* 7248 screw length 'L' = 38mm
- 602-202 \*\* 7249 screw length 'L' = 50mm
- 602-212 \*\* 7249 screw length 'L' = 50mm
- 604-213 \*\* 7220 screw length 'L' = 45mm

Door outer frames:

- 101-201FF \* 7237 screw length 'L' = 32mm
- 102-202F \* 7249 screw length 'L' = 50mm
- 103-203F \* 7249 screw length 'L' = 50mm
- 105-205FF \* 7237 screw length 'L' = 32mm



Scale 1:2

# Curtain Wall Insert

## Open In Door



## System 5-20D/Hi+

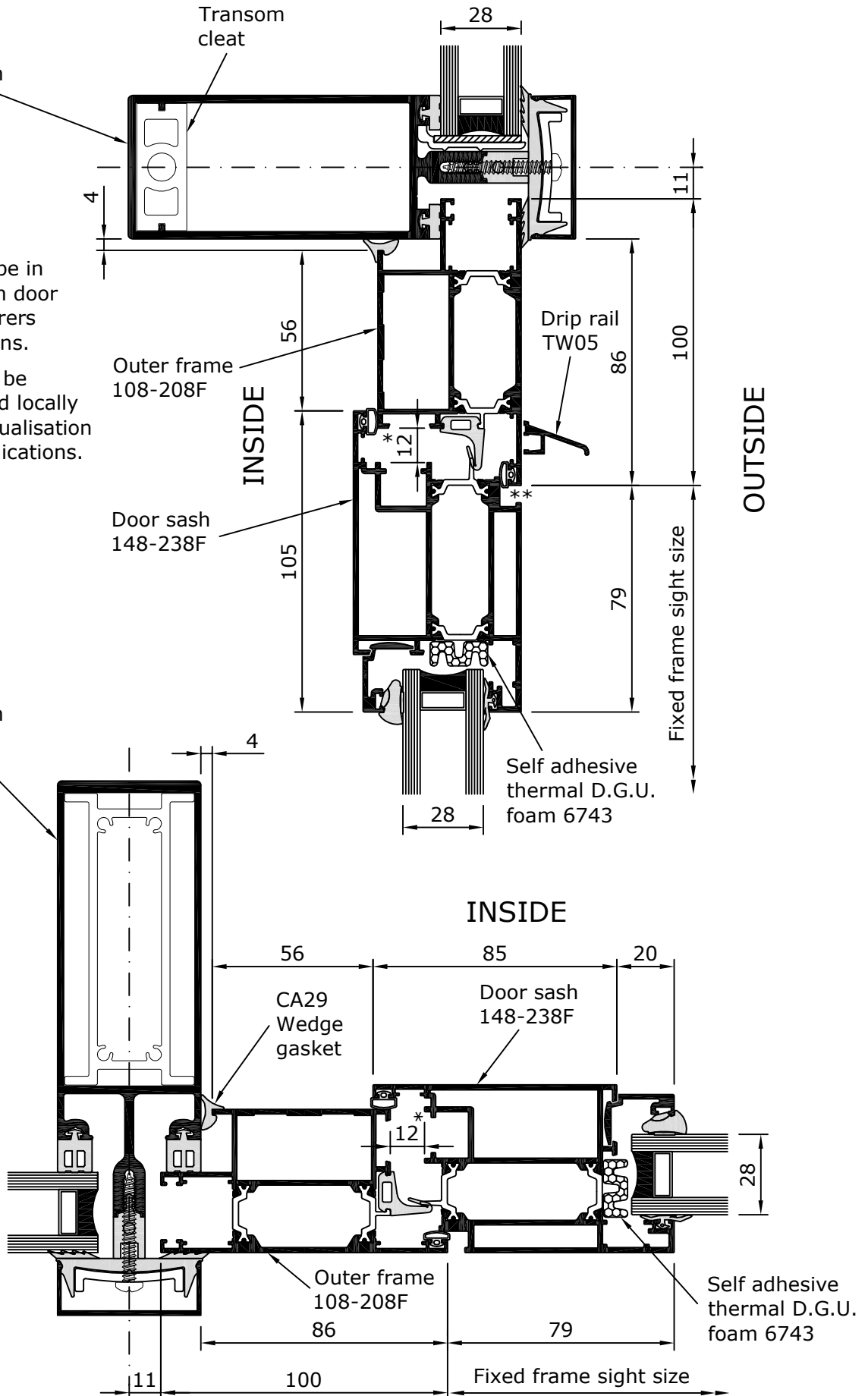
DOOR SYSTEM

Typical 50mm high rise curtain walling shown (System 17)

\* Tolerance to be in accordance with door lock manufacturers recommendations.

\*\* Gasket may be notched/omitted locally for pressure equalisation in exposed applications.

Typical 50mm high rise curtain walling shown (System 17)



Scale 1:2

OUTSIDE

# Curtain Wall Insert

## Open Out Door



## System 5-20D/Hi+

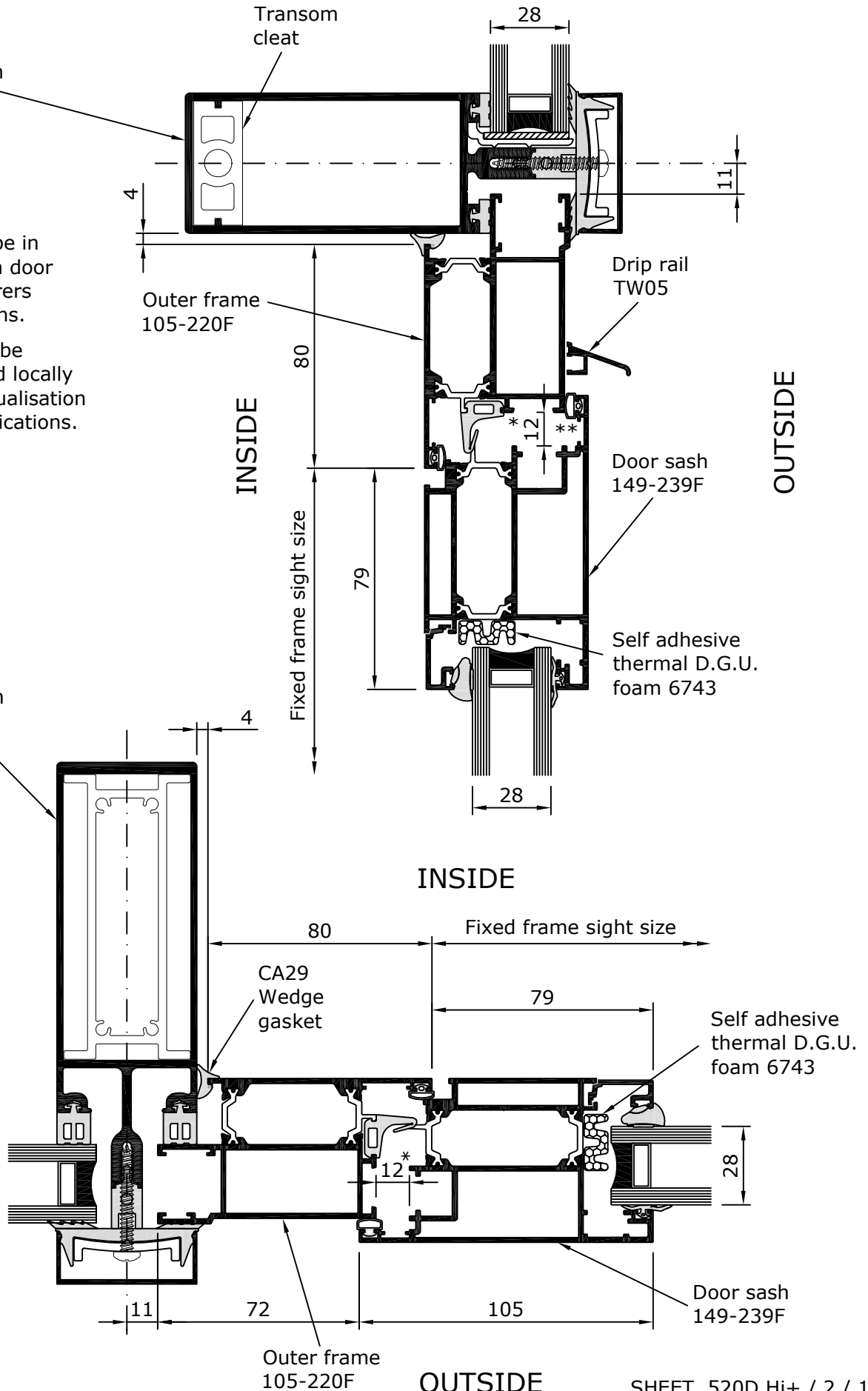
DOOR SYSTEM

Typical 50mm high rise curtain walling shown (System 17)

\* Tolerance to be in accordance with door lock manufacturers recommendations.

\*\* Gasket may be notched/omitted locally for pressure equalisation in exposed applications.

Typical 50mm high rise curtain walling shown (System 17)



Scale 1:2

# General Cautionary Notes



## System 5-20D/Hi+

DOOR SYSTEM

All sheets in the manual are labelled as System 5-20D/Hi+. However, thermal foams may be omitted where there is a less onerous thermal requirement, resulting in the system being referred to as System 5-20D. Fabricators should however always use the 061 flipper gasket. Where fabrication details have no impact on the thermal foams, these have been omitted for clarity.

Metal Technology's 5-20D Hi+ Door System offers the customer the option of single and double, open-in and open-out door configurations with a range of threshold options.

Low thresholds are primarily intended to facilitate access and egress in ground floor applications, and are designed to comply with the current building regulations for disabled access. As security may also be a consideration in ground floor applications, a number of door configurations incorporating low thresholds have been tested to the relevant PAS 23/24 security requirements. The low thresholds offer an integral drainage facility for weathering purposes, which may be further improved by utilising the semi-rebated option.

Where doors are required above ground floor level weathering usually becomes the primary concern, with security and disabled access often no longer applicable. In such applications Metal Technology recommends using fully rebated doors due to their enhanced weathering performance. Fully rebated doors have not been tested to PAS 23/24, nor do they provide disabled access.

Performance test data for low, semi-rebated, and fully rebated thresholds is available from Metal Technology's Technical Department upon request.

When considering door configurations fabricators should look at each application in relation to the sections used and the ironmongery required in order to determine compatibility (i.e. that there is sufficient depth of section to accommodate the combination of profiles in conjunction with the ironmongery, drip rails and drainage requirements). Similar consideration should be given to the door perimeter and structural interface details. Metal Technology recommend that each application is drawn out with all structure, ironmongery and fixing details applied in order to determine compatibility. Customers must also select the appropriate combination of lock, spindle, handle, cylinder and other ironmongery requirements to suit their project specific access and egress needs.

Fabricators should be aware that when working with large size doors the adherence to tight tolerances of  $\pm 1\text{mm}$  is critical in order to maintain adequate and equal gasket cover around the door. All fixings must be sealed in place using HR50328A. All fixings must be compatible with the materials into which they are fastened. i.e. when attaching into aluminium, austenitic stainless steel fixings are recommended. Fabricators must ensure that all adhesives and sealants are fully compatible with the materials and finish they are to be in contact with. Metal Technology recommend that fabricators sample all proposed adhesives and sealants to ensure compatibility on a project-by-project basis. Frame should be set aside after gluing to allow glue to harden.

Fabricators must ensure all areas adjacent to ironmongery, particularly electrical components, are free of aluminium debris/swarf/shavings. Any such debris could potentially result in an electrical short circuit or mechanical issues with the operation of the ironmongery.

## Adhesives and Sealants

Metal Technology offers a two part adhesive to ensure high bond strength to all corner, mullion and transom joints. To compliment the application of this adhesive we supply mixing tubes and manual applicators. The two part adhesive has a 45-60 minute cure period and is available in grey and white. Technical and safety data sheets are available on request.

### Handles

Metal Technology offers a range of handles to suit a wide number of applications. Handles and base plates can be combined in a variety of combinations to suit application / locking mechanism.

Reference	Colour	Description	Unit
7025	Silver chrome, black, white	BS EN 8300 compliant lever / lever handles	Pair
70477060A	Silver chrome	Fixed pad / lever handle set	Pair
7060A	Silver chrome, black, white	Lever / lever handles	Pair
7060AI	Silver chrome	Lever handle (Internal)	Each
7060AE	Silver chrome	Lever handle (External)	Each
7166A	Silver chrome	Paddle / lever handles	Pair
7166AE	Silver chrome	Paddle handle (External)	Each
7169AI	Silver chrome	Blank base plate (Internal)	Each
7169AE	Silver chrome	Blank base plate (External)	Each
7177AI	Silver chrome	Base plate with cylinder prep (Internal)	Each
7177AE	Silver chrome	Base plate with cylinder prep (External)	Each
7160	Satin anodised	Escutcheon	Each

### Fixing Screws

When handles are purchased as unit "Pair", fixing screws come supplied.

When handles are purchased as unit "Each", 2 no x 7178 fixing screws must be purchased separately.

Reference	Quantity required	Description	Unit
7178	2	Fixing screw, satin chrome	Each

### Spindles

When handles are purchased as unit "Pair", standard spindle comes supplied.

When handles are purchased as unit "Each", spindles must be purchased separately.

Reference	Description	Unit
7179	Standard spindle	Each
7164	Split spindle	Each
7197	Extended spindle	Each

**Standard spindle (7179)** : A solid square bar which links the internal handle to the external handle. Where doors have a handle to only one side, spindle should be cut down to suit.

**Split spindle (7164)** : Only suitable for use with 7065 lock. Normally used to prevent the external handle from operating the latch mechanism. This may be used to allow key re-entry only to the building, by using the key to retract the latch. The door may still be deadlocked from the outside by lifting the external handle to engage the hook and dead bolts. The latch and dead bolt mechanism operate as normal internally. Split spindle must be inserted with the "c" clip and spring towards the external handle. Please note that, subject to the hinging and handing of the door, when using the split spindle it may still be possible that the latch be operated by the handle. To overcome this, ensure the split spindle setting screw is rotated to the correct position. In order to adjust this setting screw, remove the latch by undoing its fixing screws, rotate the setting screw by 180°, and replace the latch.

For further information refer to technical literature supplied at time of ordering, or upon request.

Split spindle needs to be cut down to 50mm from the centre line of the split, as follows :

Open-in doors: Cut non-sprung internal side.

Open-out doors: Cut sprung external side. Do not cut spring.

**Extended spindle (7197)** : A solid bar which links the external lever handle 7186A to the 7183 internal panic mechanism to facilitate external access.



### Locks

Metal Technology offers a range of locks to suit a wide number of applications :

Reference	Description	Unit	Keep
7065	Multi-point dead lock with latch	Each	7058A or 7058B
7165	3-point dead lock with rollerball	Each	7152A or 7152B, plus 7155
7094	Single point dead lock with latch	Each	7048A or 7048B
7095	Single point dead lock with rollerball	Each	7048A or 7048B
7150	Electrically operated multi-point auto locking system without dead lock	Each	7152A or 7152B, plus 7154
7151	Electrically operated multi-point auto locking system with dead lock	Each	7152A or 7152B, plus 7154

**Multi-point dead lock (7065)** : For use with rebated or low thresholds on either ground floor or more exposed applications. Manually operated using lever or paddle handles. Lock incorporates two hook locks, a dead lock, a latch, and four compression keeps. Pull handle upwards to engage hook locks and dead bolt. Secure with key. To unlock door turn key and push handle down to disengage hook locks, dead bolt and latch. Therefore lever or paddle handles are required on both sides of the door. For further information refer to technical literature supplied at time of ordering, or upon request.

**3-point dead lock with rollerball (7165)** : For use with flush thresholds on ground floor applications only. Manually operated using key. Lock incorporates two hook locks, a dead lock, and rollerball. Rotate key 720° to engage / disengage locking points. When doors are intended to be operated without a closer, the rollerball may be adjusted to help retain the door in the closed position. When doors are fitted with a closer, rollerball can be retracted. These locks should be used with 2 No 7160 escutcheons, as lever or paddle handles are not required (ie - fixed push / pull handles only). For further information refer to technical literature supplied at time of ordering, or upon request.

**Single point dead lock with latch (7094)** : For use on low exposure sites with low thresholds, in ground floor applications only. Manually operated using lever or paddle handles. Lock incorporates single dead bolt and latch. To secure door turn key 360° to engage dead bolt. To unlock door turn key 360° to disengage dead bolt. To retract latch push handle down or turn key / thumbturn a further 90°. Once unlocked (ie - dead bolt has been retracted by the key), when closed the door is secured by the latch only. A lever or paddle handle (or key / thumbturn) is then required to open the door. This therefore offers the option to omit the lever / paddle handle from one side of the door where key-only access is required.

**Single point dead lock with rollerball (7095)** : For use on low exposure sites with low thresholds, in ground floor applications only. Lock incorporates single dead bolt and rollerball. Rollerball can be manually retracted, using an allen key, in order to minimise / eliminate interference as door closes. To secure door turn key 360° to engage dead bolt. To unlock door turn key 360° to disengage dead bolt. Once unlocked when closed the door may be held in place by the rollerball (if not fully retracted). Door may simply be pushed / pulled open. Lever / paddle handles must not be fitted.

**Electrically operated auto lock without dead lock (7150)** : For use with low thresholds on ground floor applications only. Electrically operated for controlled access. Lock incorporates two hook locks and a latch. Characteristics of this lock include :

- Lever (or paddle) handle must not be fitted externally.
- External key over-ride option available.
- In the event of a power cut doors will default to their mechanically engaged locking mode. ie - closed doors will remain locked; open doors will automatically lock when they return to the closed position. This can be manually overridden using a key internally or externally, or the lever handle internally.
- A lever handle may be fitted internally. These can be omitted in lieu of an internal switching mechanism. However, in the event of a power failure, egress is only possible using a key.
- In the closed position, when activated, the lock remains retracted for four seconds before automatically re-engaging. An additional time delay can be achieved by including a relay switch (by others) within the access control wiring.
- In double door applications the electric lock can only be applied to the master leaf. Slave door must be secured at all times when electronic access via the master leaf is required.
- The following ancillary components are also required :
  - 7156 Add-on motor
  - 7157 12v. DC power supply transformer
  - 7153B Cable transition
- For further information refer to technical literature supplied at time of ordering, or upon request.

**Electrically operated auto lock with dead lock (7151)** : For use with low thresholds on ground floor applications only. Electrically operated for controlled access. Lock incorporates two hook locks, a latch, and an additional deadbolt. This lock includes all the features and component requirements of 7150 plus the following :

- Key operated deadbolt over-rides the electric locking mechanism. Once engaged it is only possible to gain access / egress using a key (or thumbturn internally).
- This lock is not recommended for communal entrances.
- For further information refer to technical literature supplied at time of ordering, or upon request.

Electrically operated locks can be activated using a variety or combination of switching mechanisms. ie - key fob, card reader, relays, intercom, buzzer release, etc. (not supplied by Metal Technology). Due to the complexities of the 7150/7151 locks, the options available, and variety of switching configurations, Metal Technology recommend that a comprehensive access/egress specification is obtained from the client, and the components necessary to facilitate these requirements are confirmed with Metal Technology's Technical Department prior to ordering.

Locking systems should be fully tested electrically prior to dispatch to site. Ensure all relevant components, information and documents, including wiring details and Certificate of Conformity are forwarded to site/end user.

Doors should be commissioned on site by a suitably qualified/experienced Access Control Specialist. Doors should be commissioned with a suitable A/C battery back up (not supplied by Metal Technology) wired via the transformer. For further guidance on access control options and wiring details refer to Metal Technology's Technical Department.

## Lock Extensions

Corner transmissions and extension pieces are suitable for use with 7065 lock only. They are required for doors with fully rebated frames to all sides, including the threshold. See following sheets for further information on corner transmission and extension piece combinations for applicable door kitting.

Reference	Description	Unit	Keep
7066	Corner transmission	Each	7070
7074	Off-set corner transmission	Each	7070
7049	Top extension	Each	None required
7195	Top extension	Each	None required

## Cylinders

Metal Technology offers a range of cylinders to suit a variety of applications, as follows :

Reference	Description	Unit
7061	Key / key euro cylinder	Each
7072*	Key / thumbturn euro cylinder for open-out doors	Each
7073*	Key / thumbturn euro cylinder for open-in doors	Each
7171*	Key half euro cylinder (55mm)	Each
7172	Key half euro cylinder (30mm)	Each
7173*	Thumbturn half euro cylinder for open-out doors	Each
7174*	Thumbturn half euro cylinder for open-in doors	Each
7161	Key / key security cylinder for open-out doors	Each
7162	Key / key security cylinder for open-in doors	Each
7175	Key / thumbturn security cylinder for open-out doors	Each
7176	Key / thumbturn security cylinder for open-in doors	Each
7059	Cylinder guard	Each

In security applications one of the above security cylinders must be used in conjunction with the cylinder guard.

\* These cylinders do not include fixing screw. Additional 1 x M5 x 20mm countersunk screw 7272 also required.

## Shoot Bolts

In double door applications all slave leaves must be secured at the head and cill using manually operated shoot bolts, even when using electrically operated locks on the master leaf.

Shoot bolts are either individually manually operated or linked via lever / lever handles.

Reference	Quantity	Description	Keep
7064	1	Shoot bolt for rebated head and cill	7063A
7062	1	Shoot bolt for low threshold/rebated head	None required/5563
7194	1	Shoot bolt for rebated head	5563
7056*	1	Lock for lever handle operated shoot bolt	None required
7057	2	Corner shoot bolt for lever handle operated shoot bolt	Rebated threshold : 2 x 5563 Low threshold : 1 x 5563 Low threshold - security: 1 x 5563, 1 x 7148
7196	Depends on door height	Extension for lever handle operated shoot bolt	None required

\* 7056 lever handle operated shoot bolt lock is only suitable for use with 7065, 7150 and 7151 locks. Additional handles and suited cylinder are required for the slave leaf.

## Hinges

The following hinge options are available :

Reference	Description
7017	3-part clamp-on domestic hinge.
7099	2-part adjustable commercial hinge.
7097 / 7098	3-part adjustable anti-fingertrap flag hinge and packer.

Metal Technology recommends a minimum of three hinges per door leaf. Refer to the relevant section of this manual for further details.

### Door Closers

The PCD72A closer offers adjustable closing speed, latching speed, and backcheck facility. This closer may be fitted to the door using a standard elbow configuration. It is available with an optional hold-open facility.

.....  
DOOR SYSTEM  
.....

Following installation and glazing all door closers must have the backcheck facility engaged, and adjusted to suit site application, by the installer.

Requirements when using standard face fitted door closer:

Reference	Description	Open-in	Open-out
PCD72A	Face-fitted door closer	1	1
PCD104	Drop plate	1	-
7163/S	Angle bracket	-	1
PCD105A	Drop plate	-	1

When a hold-open facility is required the following additional items must be ordered:

Reference	Description	Open-in	Open-out
PCD106A	Hold-open arm	1	1
7167	Hold-open arm bracket	-	1

The 7198 and 7199 closers offer adjustable closing speed, latching speed, backcheck facility, and delayed close facility, and are supplied complete with an arm and channel to offer a cam action slide arm configuration. The 7198 slide arm closer for open-in doors will allow a maximum opening angle of 180° subject to structural conditions. The 7199 slide arm closer for open-out doors will allow a maximum opening angle of 120° subject to selection of hinge and structural conditions.

Following installation and glazing all door closers must have the backcheck facility engaged, and adjusted to suit site application, by the installer. Backcheck must also be engaged in addition to use of optional cushioned limit stay 7402.

Requirements when using cam action slide arm face fitted door closer:

Reference	Description	Open-in	Open-out
7198	Face-fitted door closer with slide arm, channel and mounting plate	1	-
7199	Face-fitted door closer with slide arm, channel and mounting plate	-	1
5508	Drop plate	-	1
7402	Cushioned limit stay	1 (optional)	1 (optional)

When a hold-open facility is required the following additional item must be ordered:

Reference	Description	Open-in	Open-out
7401	Mechanical hold-open device	1	1

The hold open device enables the door to be held open at a desired angle up to 150° (open-in) or 120° (open-out). The hold open function can be switched on and off by the user, and the release force can be adjusted to suit the application.

### Threshold Stop

For doors with high volume traffic, Metal Technology recommends the use of the 5555 threshold stop to facilitate the correct alignment of shoot bolts (including panic mechanism) in flush low threshold double door applications. This is fitted into the 047-048 brush seal carrier, secured to the bottom rail, and locates against the threshold.

### Ancillary Hinge Security Devices

Only required for security applications. Please refer to the relevant sheet of this manual for further details.

Reference	Unit per hinge	Description
702A	Pair	Security device for 7017 hinge.
7168	Each	Security device for 7099 hinge.
5510	Each	Security keep for 7099 hinge.
5507	Each	Security device packer for 7168.

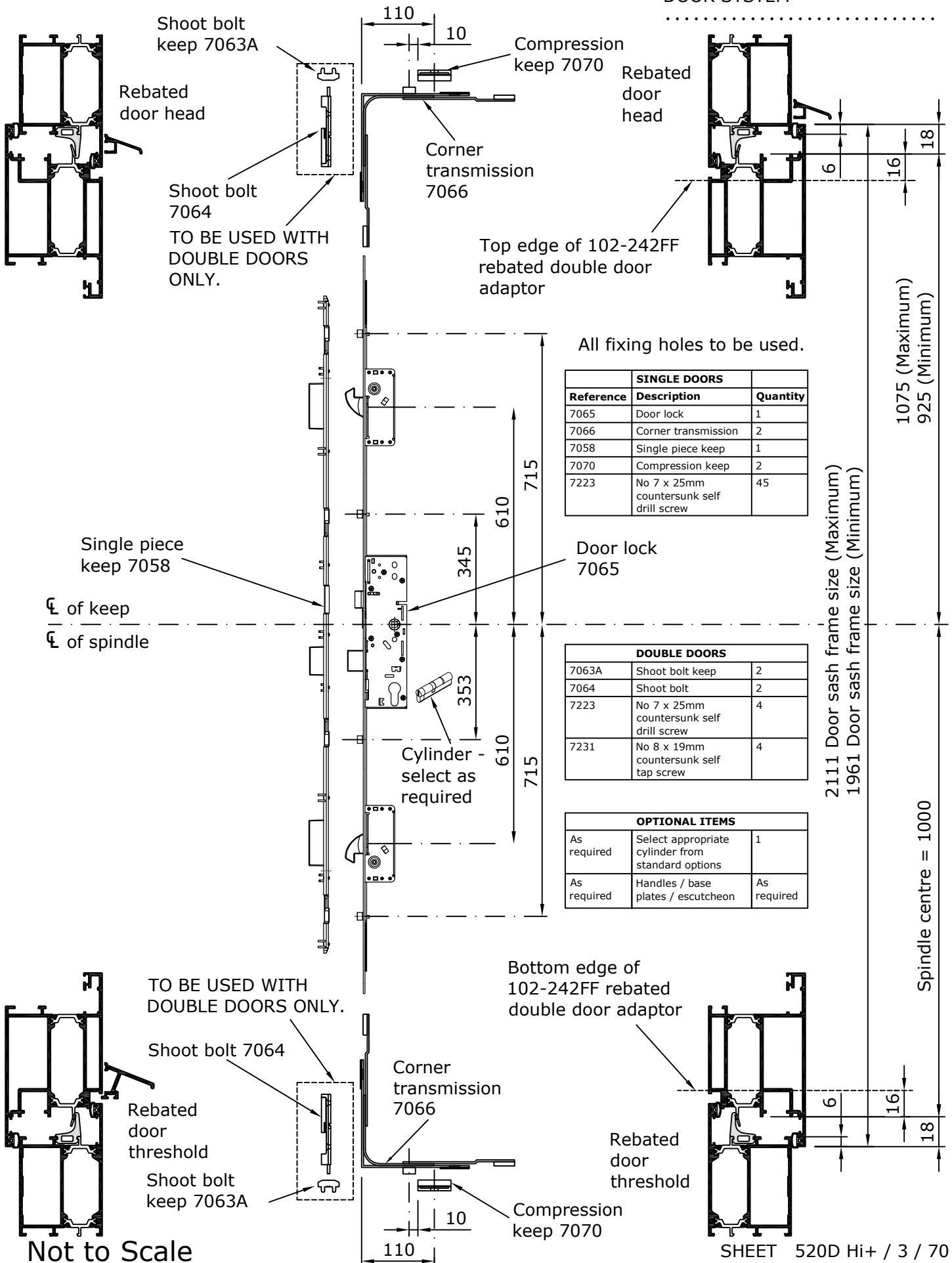
# 7065 Lock and Keep Details

Single and Double Doors 1961mm to 2111mm  
Open In and Open Out with Rebated Threshold



**System 5-20D/Hi+**

DOOR SYSTEM



All fixing holes to be used.

SINGLE DOORS		
Reference	Description	Quantity
7065	Door lock	1
7066	Corner transmission	2
7058	Single piece keep	1
7070	Compression keep	2
7223	No 7 x 25mm countersunk self drill screw	45

DOUBLE DOORS		
7063A	Shoot bolt keep	2
7064	Shoot bolt	2
7223	No 7 x 25mm countersunk self drill screw	4
7231	No 8 x 19mm countersunk self tap screw	4

OPTIONAL ITEMS		
As required	Select appropriate cylinder from standard options	1
As required	Handles / base plates / escutcheon	As required

Not to Scale

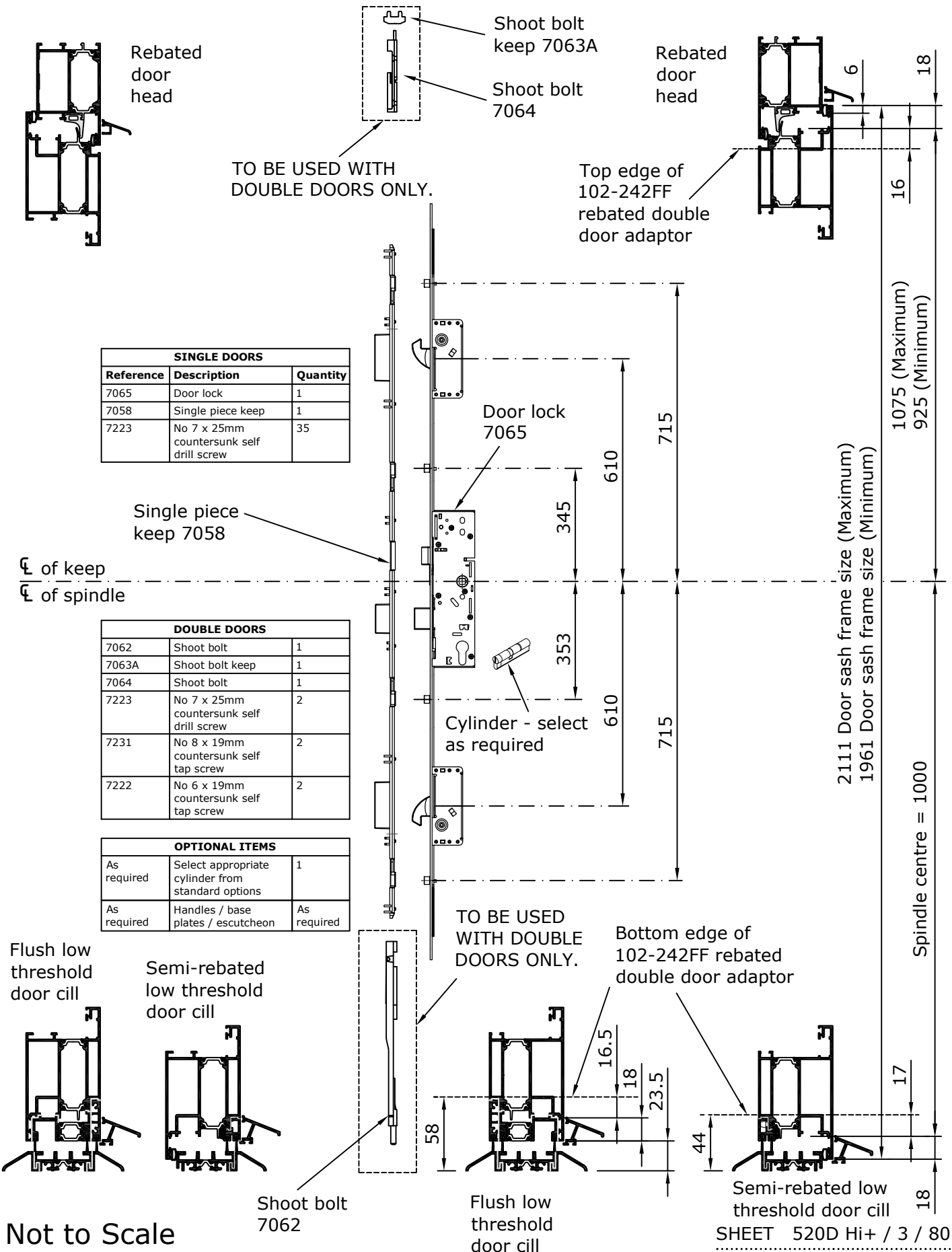
# 7065 Lock and Keep Details

Single and Double Doors 1961mm to 2111mm Open In and Open Out with Flush and Semi-Rebated Low Thresholds



## System 5-20D/Hi+

DOOR SYSTEM



SINGLE DOORS		
Reference	Description	Quantity
7065	Door lock	1
7058	Single piece keep	1
7223	No 7 x 25mm countersunk self drill screw	35

DOUBLE DOORS		
Reference	Description	Quantity
7062	Shoot bolt	1
7063A	Shoot bolt keep	1
7064	Shoot bolt	1
7223	No 7 x 25mm countersunk self drill screw	2
7231	No 8 x 19mm countersunk self tap screw	2
7222	No 6 x 19mm countersunk self tap screw	2

OPTIONAL ITEMS		
Reference	Description	Quantity
As required	Select appropriate cylinder from standard options	1
As required	Handles / base plates / escutcheon	As required

Not to Scale

# 7065 Lock and Keep Details with Top Extensions

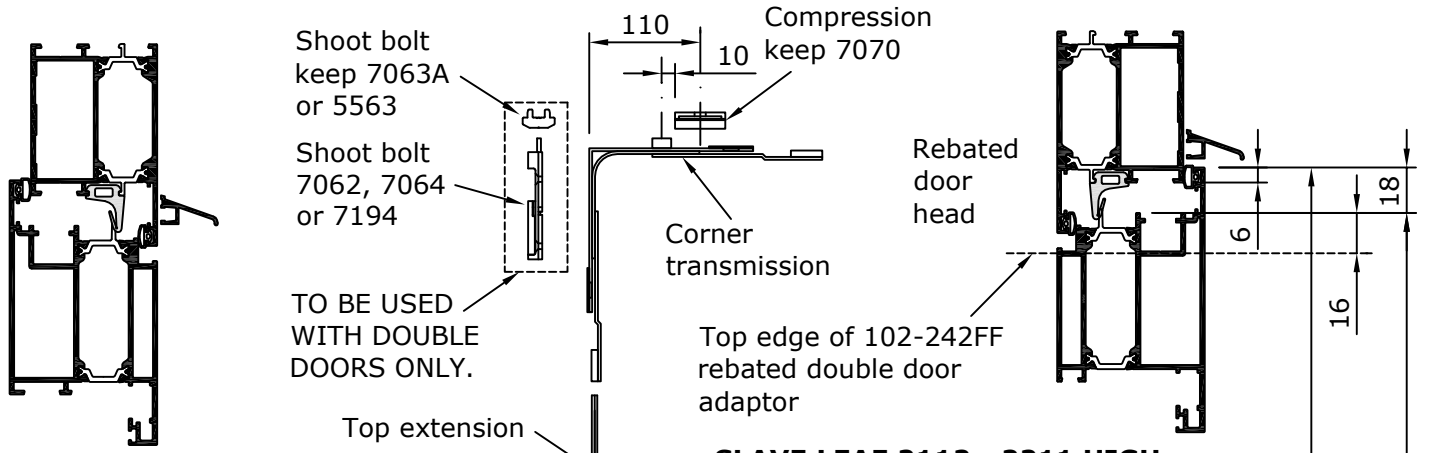
Single and Double Doors 2112mm to 2500mm Open-In and Open-Out



**System 5-20D/Hi+**

DOOR SYSTEM

Suitable for use with flush, semi-rebated and rebated thresholds. All fixing holes to be used. 7065 door lock and top extension to be trimmed to suit application.



## MASTER LEAF 2112 - 2211 HIGH

Reference	Description	Rebated threshold	Flush and semi-rebated low threshold
7065	Door lock	1	1
7066	Corner transmission	1	0
7049	Top extension	1	0
7058	Single piece keep	1	1
7070	Compression keep	2	0
7074	Top corner transmission	1	0
7223	No 7 x 25mm countersunk self drill screw	48	35

## MASTER LEAF 2212 - 2350 HIGH

Reference	Description	Rebated threshold	Flush and semi-rebated low threshold
7065	Door lock	1	1
7066	Corner transmission	2	1
7049	Top extension	1	1
7058	Single piece keep	1	1
7070	Compression keep	2	1
7223	No 7 x 25mm countersunk self drill screw	49	44

## MASTER LEAF 2351 - 2500 HIGH

Reference	Description	Rebated threshold	Flush and semi-rebated low threshold
7065	Door lock	1	1
7066	Corner transmission	2	1
7195	Top extension	1	1
7058	Single piece keep	1	1
7070	Compression keep	2	1
7223	No 7 x 25mm countersunk self drill screw	49	44

OPTIONAL ITEMS			
As required	Select appropriate cylinder from standard options	1	1
As required	Handles / base plates / escutcheon	As required	As required

## SLAVE LEAF 2112 - 2211 HIGH

Reference	Description	Rebated threshold	Flush and semi-rebated low threshold
7062	Shoot bolt	0	1
7063A	Shoot bolt keep	2	1
5563	Shoot bolt keep	0	0
7064	Shoot bolt	2	1
7223	No 7 x 25mm countersunk self drill screw	4	2
7222	No 6 x 19mm countersunk self tap screw	0	2
7231	No 8 x 19mm countersunk self tap screw	4	2

## SLAVE LEAF 2212 - 2300 HIGH

Reference	Description	Rebated threshold	Flush and semi-rebated low threshold
7062	Shoot bolt	1	2
7063A	Shoot bolt keep	1	0
5563	Shoot bolt keep	1	1
7064	Shoot bolt	1	0
7223	No 7 x 25mm countersunk self drill screw	4	2
7222	No 6 x 19mm countersunk self tap screw	2	4
7231	No 8 x 19mm countersunk self tap screw	2	0

## SLAVE LEAF 2301 - 2500 HIGH

Reference	Description	Rebated threshold	Flush and semi-rebated low threshold
7062	Shoot bolt	0	1
7063A	Shoot bolt keep	1	0
7064	Shoot bolt	1	0
5563	Shoot bolt keep	1	1
7194	Shoot bolt	1	1
7223	No 7 x 25mm countersunk self drill screw	4	2
7222	No 6 x 19mm countersunk self tap screw	3	5
7231	No 8 x 19mm countersunk self tap screw	2	0

2500 Door sash frame size (Maximum)  
2112 Door sash frame size (Minimum)

1464 (Maximum)  
1076 (Minimum)

of spindle and keep

Door lock 7065  
Single piece keep 7058  
Cylinder - select as required

Not to Scale

# 7165 Lock and Keep Details

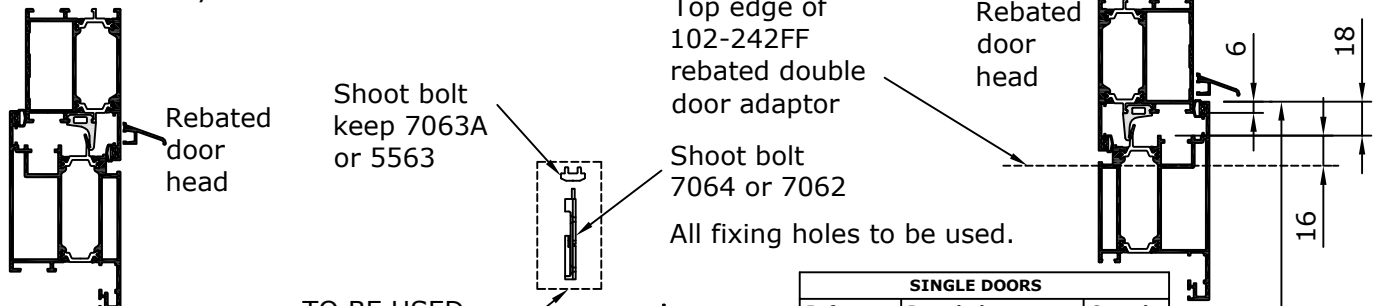
Single and Double Doors 1980mm to 2500mm Open-In and Open-Out with Flush and Semi-Rebated Low Thresholds



**System 5-20D/Hi+**

DOOR SYSTEM

Although this lock incorporates the facility to accommodate a square spindle it should not be used with lever or paddle handles. As double doors must use rebated meeting stiles the slave leaf must be secured using shoot bolts, and access be gained via the master leaf only. To discourage access via the slave leaf, push/pull handles should only be fitted to the master leaf.



TO BE USED WITH DOUBLE DOORS ONLY.

For double doors between 1980mm - 2010mm fabricators must provide an additional fixing within the hook bolt recess as illustrated.

Single hook keep 7155

Door lock 7165

Centre keep 7152A or B

℄ of sash\*  
℄ of spindle

For double doors over 2300mm high, upper shoot bolt lever may prove difficult to reach. This locking configuration is not compatible with the longer shoot bolt 7194.

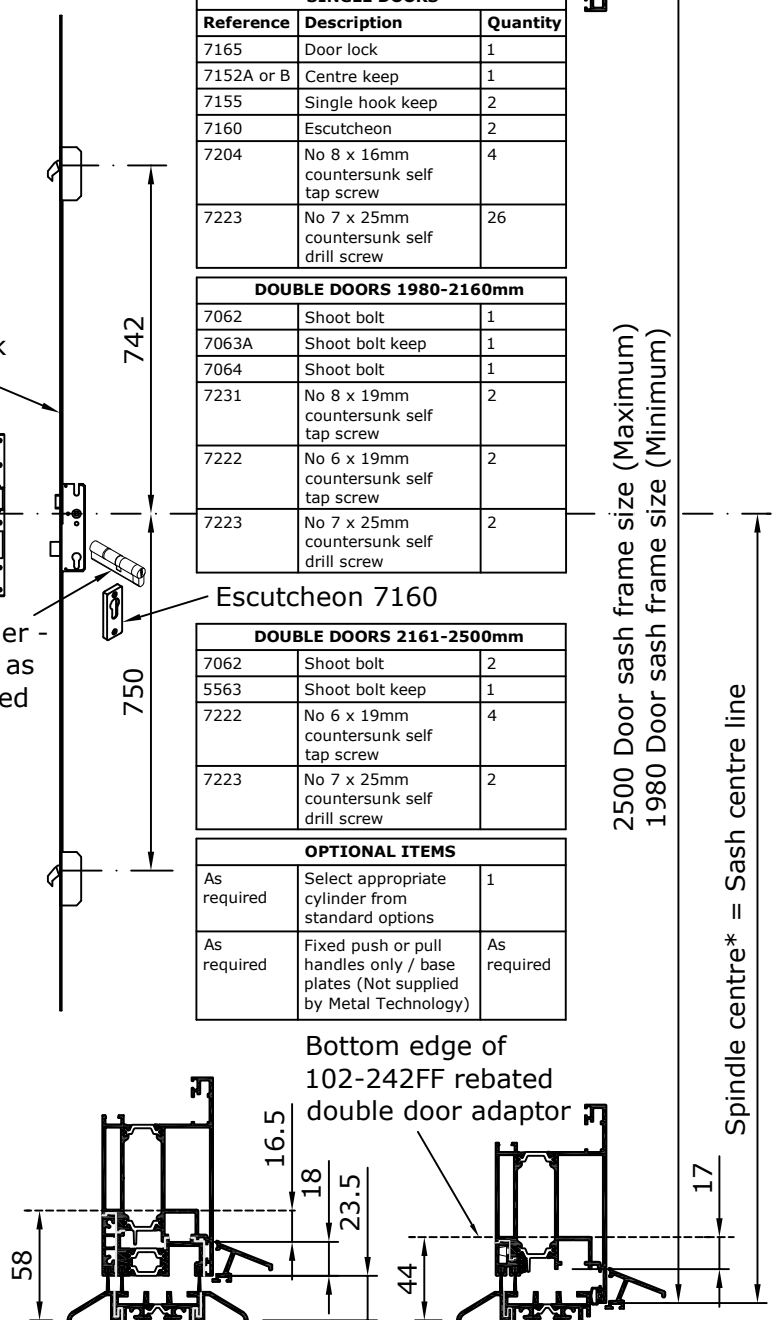
\*In double door applications, minimum "Spindle centre" dimension is 1080mm. Where overall door sash height exceeds 2160mm, spindle to be centred on sash.

TO BE USED WITH DOUBLE DOORS ONLY.

Flush low threshold door cill

Semi-rebated low threshold door cill

Shoot bolt 7062



2500 Door sash frame size (Maximum)  
1980 Door sash frame size (Minimum)

Spindle centre\* = Sash centre line

SINGLE DOORS		
Reference	Description	Quantity
7165	Door lock	1
7152A or B	Centre keep	1
7155	Single hook keep	2
7160	Escutcheon	2
7204	No 8 x 16mm countersunk self tap screw	4
7223	No 7 x 25mm countersunk self drill screw	26

DOUBLE DOORS 1980-2160mm		
Reference	Description	Quantity
7062	Shoot bolt	1
7063A	Shoot bolt keep	1
7064	Shoot bolt	1
7231	No 8 x 19mm countersunk self tap screw	2
7222	No 6 x 19mm countersunk self tap screw	2
7223	No 7 x 25mm countersunk self drill screw	2

DOUBLE DOORS 2161-2500mm		
Reference	Description	Quantity
7062	Shoot bolt	2
5563	Shoot bolt keep	1
7222	No 6 x 19mm countersunk self tap screw	4
7223	No 7 x 25mm countersunk self drill screw	2

OPTIONAL ITEMS		
As required	Description	Quantity
As required	Select appropriate cylinder from standard options	1
As required	Fixed push or pull handles only / base plates (Not supplied by Metal Technology)	As required

Not to Scale



# 7150, 7151 Lock and Keep Details

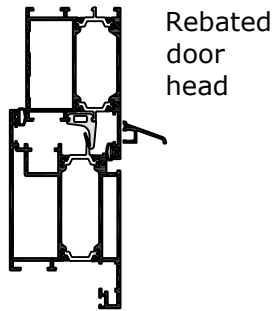


## System 5-20D/Hi+

DOOR SYSTEM

Single and Double Doors Open-In and Open-Out 1980mm to 2300mm with Flush and Semi-Rebated Low Thresholds

As double doors must use rebated meeting stiles the slave leaf must be secured at all times when electronic access via the master leaf is required.



Rebated door head

Shoot bolt keep 7063A or 5563

Shoot bolt 7064 or 7062

TO BE USED WITH DOUBLE DOORS ONLY.

For double doors between 1980mm - 2010mm fabricators must provide an additional fixing within the hook bolt recess as illustrated.

Extended keep set 7154

Centre keep 7152A or B

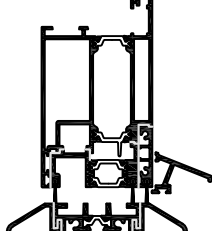
℄ of spindle

Refer to sheet "Ironmongery" for the ancillary components required for use with locks 7150 and 7151.

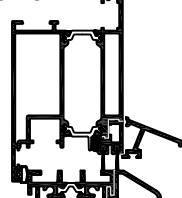
Cylinder - select as required

TO BE USED WITH DOUBLE DOORS ONLY.

Flush low threshold door cill

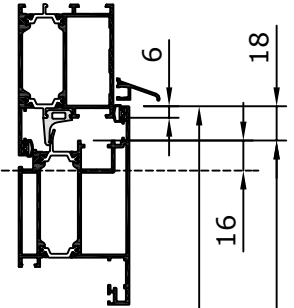


Semi-rebated low threshold door cill



Top edge of 102-242FF rebated double door adaptor

Rebated door head



SINGLE DOORS		
Reference	Description	Quantity
7150 or 7151	Door lock	1
7152A or B	Centre keep	1
7154	Extended keep set	1
7223	No 7 x 25mm countersunk self drill screw	32

DOUBLE DOORS 1980-2200mm		
7062	Shoot bolt	1
7063A	Shoot bolt keep	1
7064	Shoot bolt	1
7231	No 8 x 19mm countersunk self tap screw	2
7222	No 6 x 19mm countersunk self tap screw	2
7223	No 7 x 25mm countersunk self drill screw	2

DOUBLE DOORS 2200-2300mm		
7062	Shoot bolt	2
5563	Shoot bolt keep	1
7222	No 6 x 19mm countersunk self tap screw	4
7223	No 7 x 25mm countersunk self drill screw	2

OPTIONAL ITEMS		
As required	Select appropriate cylinder from standard options	1
As required	Fixed push or pull handles only / base plates / escutcheon	As required
7060AI	Internal lever handle	As required
7178	Handle fixing screws	As required
7179	Standard spindle trimmed to suit	As required

Door locks 7150, 7151

2300 Door sash frame size (Maximum)  
1980 Door sash frame size (Minimum)

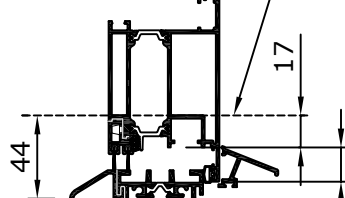
1184 (Maximum)  
864 (Minimum)

Spindle centre = 1080

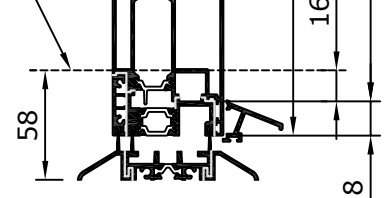
Shoot bolt 7062

Bottom edge of 102-242FF rebated double door adaptor

Flush low threshold door cill



Semi-rebated low threshold door cill



SHEET 520D Hi+ / 3 / 110  
rev 5

Not to Scale

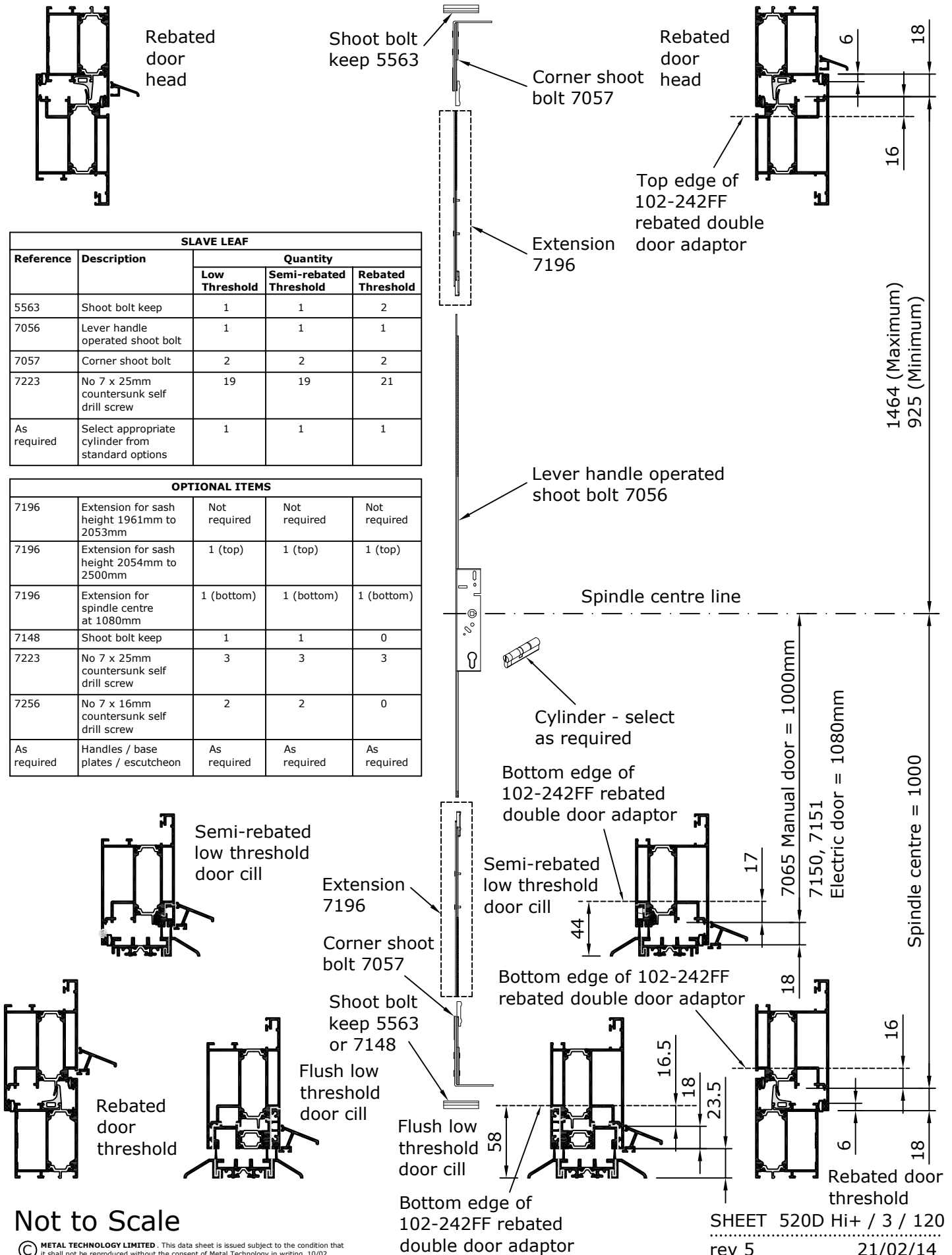
# 7056 Lever Handle Operated Shoot Bolt Details



## System 5-20D/Hi+

DOOR SYSTEM

May be used in lieu of manually operated shoot bolts 7062, 7064 and 7194 and keeps 7063A and 5563.



SLAVE LEAF				
Reference	Description	Quantity		
		Low Threshold	Semi-rebated Threshold	Rebated Threshold
5563	Shoot bolt keep	1	1	2
7056	Lever handle operated shoot bolt	1	1	1
7057	Corner shoot bolt	2	2	2
7223	No 7 x 25mm countersunk self drill screw	19	19	21
As required	Select appropriate cylinder from standard options	1	1	1

OPTIONAL ITEMS				
7196	Extension for sash height 1961mm to 2053mm	Not required	Not required	Not required
7196	Extension for sash height 2054mm to 2500mm	1 (top)	1 (top)	1 (top)
7196	Extension for spindle centre at 1080mm	1 (bottom)	1 (bottom)	1 (bottom)
7148	Shoot bolt keep	1	1	0
7223	No 7 x 25mm countersunk self drill screw	3	3	3
7256	No 7 x 16mm countersunk self drill screw	2	2	0
As required	Handles / base plates / escutcheon	As required	As required	As required

Not to Scale

# Security Requirements

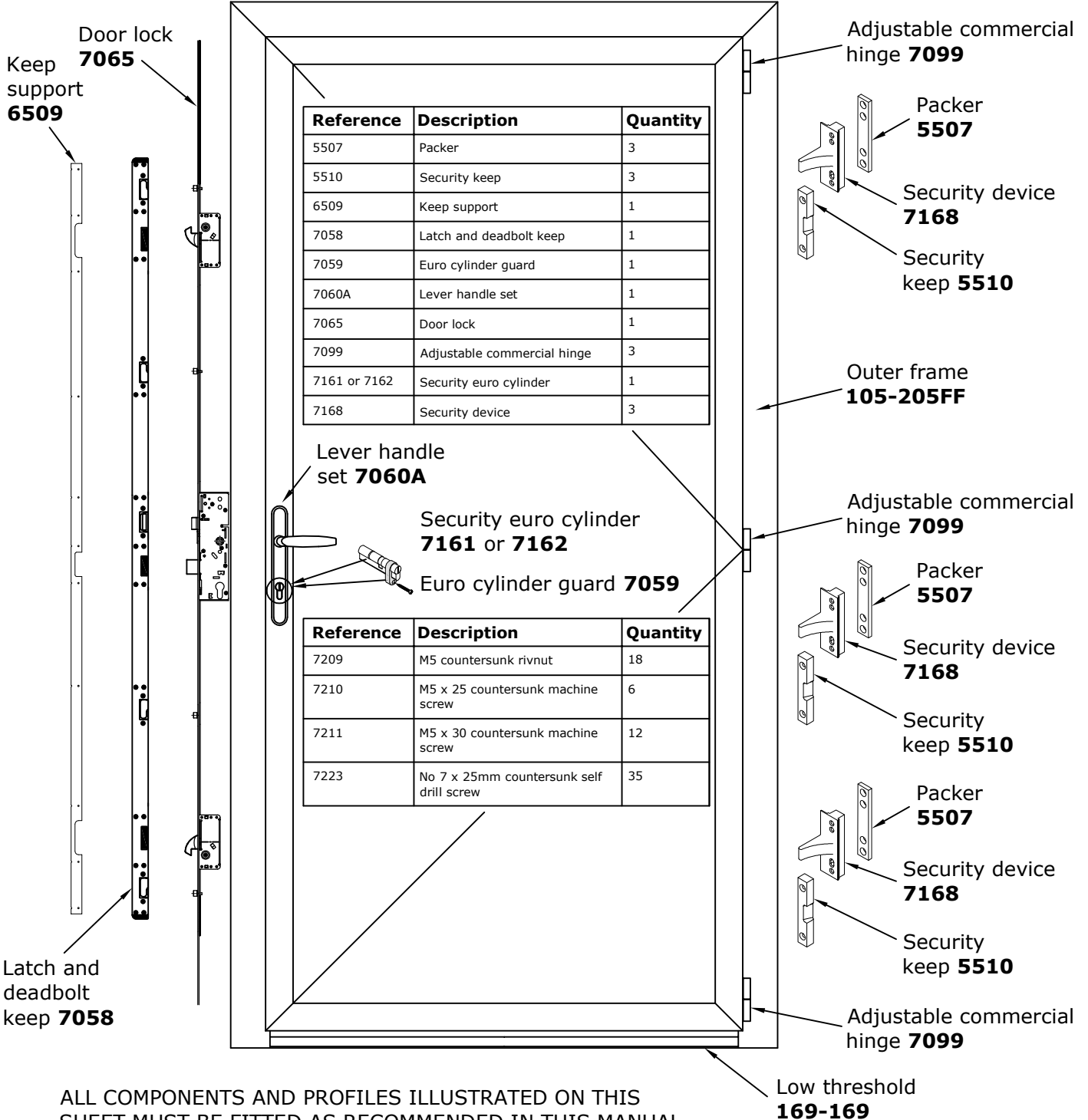


## Manually Operated Lock with Adjustable Hinges System 5-20D/Hi+

System 5-20D Hi+ Door has passed PAS 24 "Enhanced Security Performance Requirements for Door Assemblies" as generally accepted on Secure by Design projects. To conform, the doors must be in accordance with the samples tested, with ironmongery options as detailed in Section 3 of this manual.

Metal Technology has successfully tested System 5-20D Hi+ Doors with a sash size of 894 (W) x 2024 (H) to achieve PAS 23/24 using the profiles and ironmongery illustrated below:

DOOR SYSTEM



ALL COMPONENTS AND PROFILES ILLUSTRATED ON THIS SHEET MUST BE FITTED AS RECOMMENDED IN THIS MANUAL.

The following alternative profiles are compatible, but have not been tested:

Outer frames: 105-220F, 105-227F Mullions: 106-206FF, 107-206FF Transom: 116-206FF  
108-208F, 108-226F 116-206FF

Final approval for these alternative profiles must be sought from the appointed Secure by Design Architectural Liaison Officer.

Not to Scale

# Security Requirements



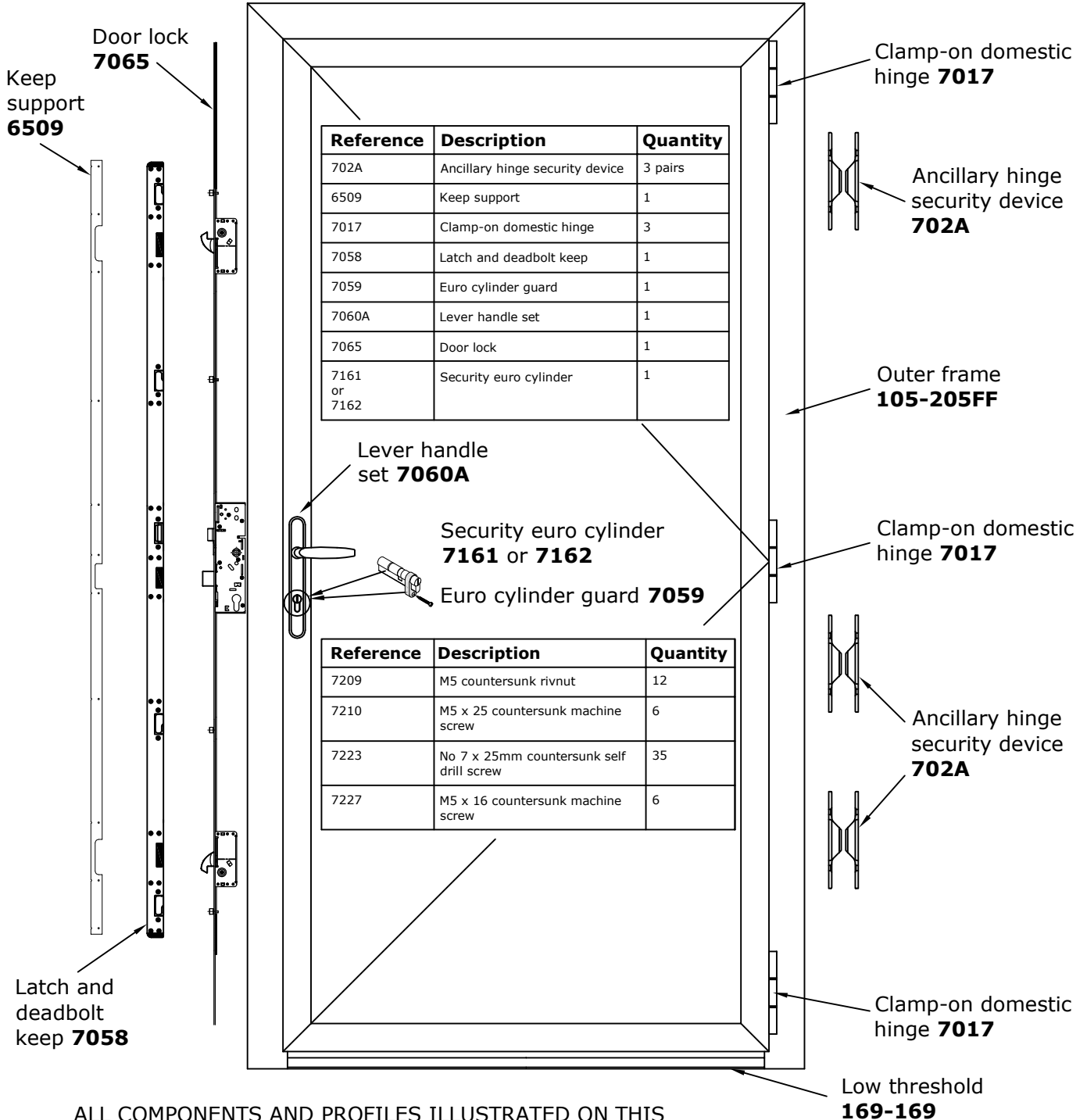
## Manually Operated Lock with Clamp-on Hinges

## System 5-20D/Hi+

System 5-20D Hi+ Door has passed PAS 24 "Enhanced Security Performance Requirements for Door Assemblies" as generally accepted on Secure by Design projects. To conform, the doors must be in accordance with the samples tested, with ironmongery options as detailed in Section 3 of this manual.

DOOR SYSTEM

Metal Technology has successfully tested System 5-20D Hi+ Doors with a sash size of 894 (W) x 2024 (H) to achieve PAS 23/24 using the profiles and ironmongery illustrated below:



ALL COMPONENTS AND PROFILES ILLUSTRATED ON THIS SHEET MUST BE FITTED AS RECOMMENDED IN THIS MANUAL.

The following alternative profiles are compatible, but have not been tested:

Outer frames: 105-220F, 105-227F Mullions: 106-206FF, 107-206FF Transom: 116-206FF  
108-208F, 108-226F 116-206FF

Final approval for these alternative profiles must be sought from the appointed Secure by Design Architectural Liaison Officer.

Not to Scale

# Security Requirements

## Electric Release Auto Lock with Adjustable Hinges

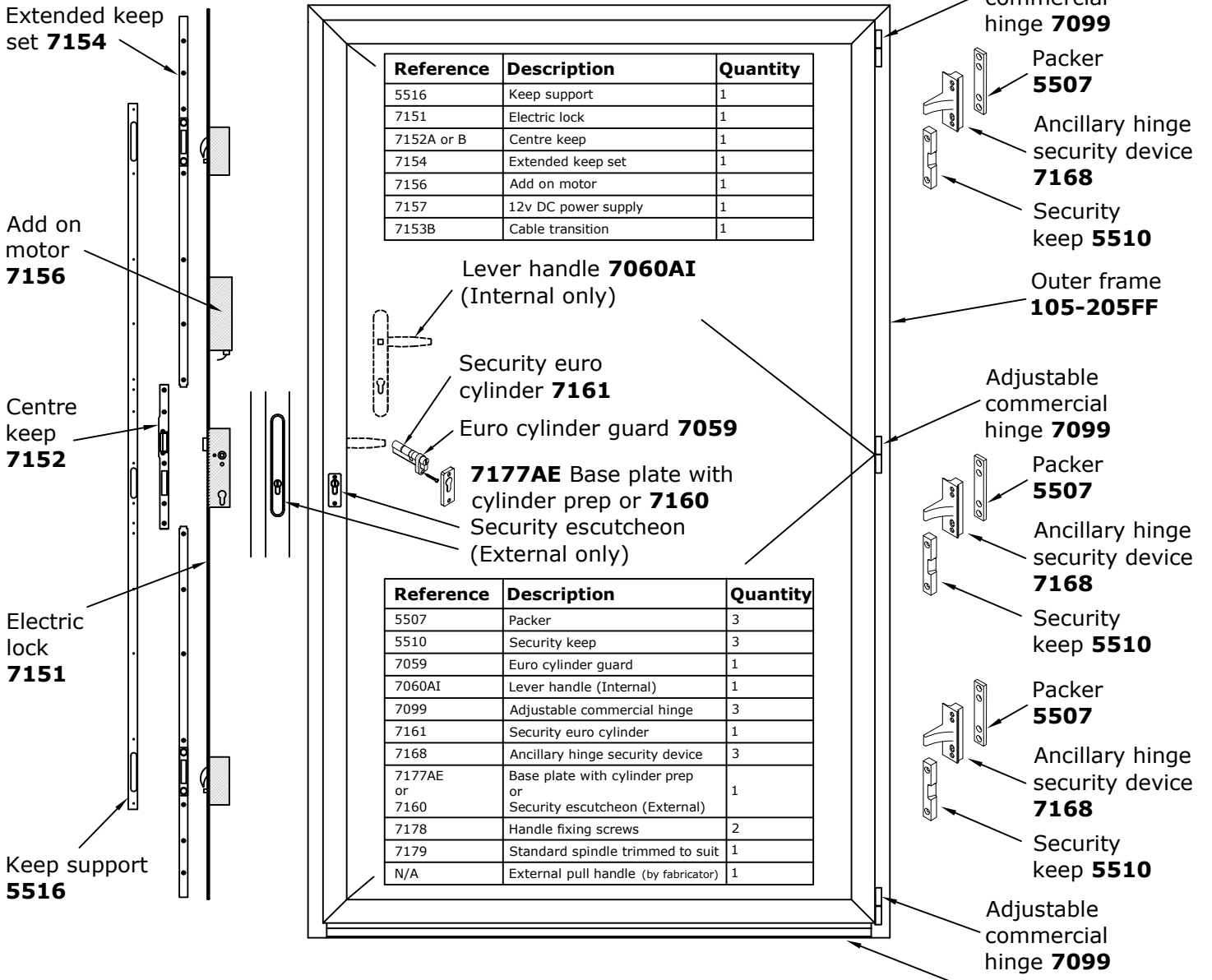
System 5-20D Hi+ Door has passed PAS 24 "Enhanced Security Performance Requirements for Door Assemblies" as generally accepted on Secure by Design projects. To conform, the doors must be in accordance with the samples tested, with ironmongery options as detailed in Section 3 of this manual.

Metal Technology has successfully tested System 5-20D Hi+ Doors with a sash size of 894 (W) x 2024 (H) to achieve PAS 23/24 using the profiles and ironmongery illustrated below:



## System 5-20D/Hi+

DOOR SYSTEM



Reference	Description	Quantity
7209	M5 countersunk rivnut	18
7210	M5 x 25 countersunk machine screw	6
7211	M5 x 30 countersunk machine screw	12

Reference	Description	Quantity
7222	No 6 x 19mm countersunk self tap screw	2
7223	No 7 x 25mm countersunk self drill screw	32
7258	No 6 x 32mm countersunk self tap screw	1

Low threshold 169-169

ALL COMPONENTS AND PROFILES ILLUSTRATED ON THIS SHEET MUST BE FITTED AS RECOMMENDED IN THIS MANUAL.

The following alternative profiles are compatible, but have not been tested:

Outer frames: 105-220F, 105-227F Mullions: 106-206FF, 107-206FF Transom: 116-206FF 116-206FF

Final approval for these alternative profiles must be sought from the appointed Secure by Design Architectural Liaison Officer.

Not to Scale

# Security Requirements

## Manually Operated Lever Lock and Lever Shootbolt with Adjustable Hinges

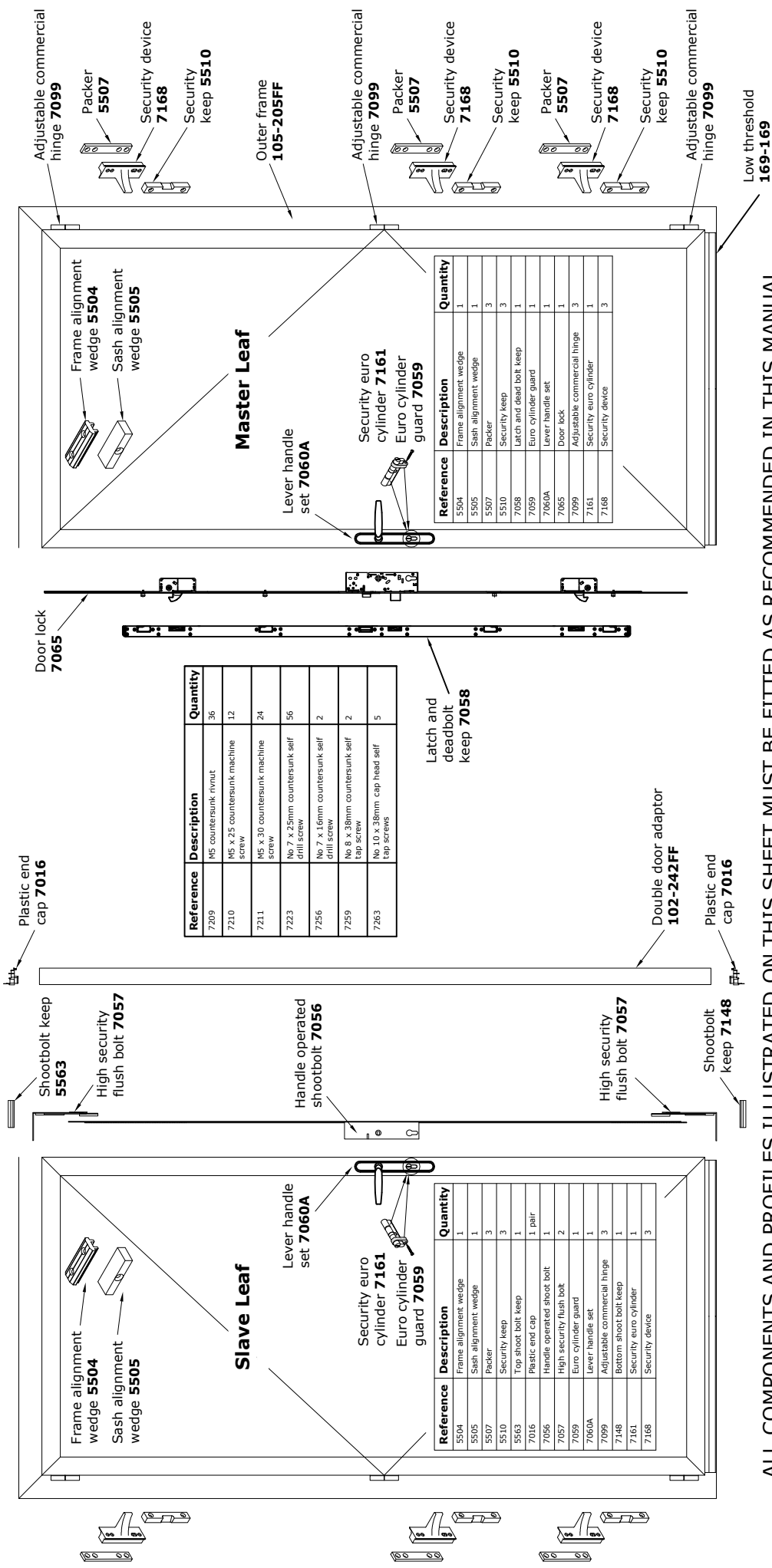


## System 5-20D / Hi+

System 5-20D Hi+ Door has passed PAS 24 "Enhanced Security Performance Requirements for Door Assemblies" as generally accepted on Secure by Design projects. To conform, the doors must be in accordance with the samples tested, with ironmongery options as detailed in Section 3 of this manual.

Metal Technology has successfully tested System 5-20D Hi+ Doors with sash sizes of 855 (W) x 2039 (H) to achieve PAS 23/24 using the profiles and ironmongery illustrated below:

DOOR SYSTEM



ALL COMPONENTS AND PROFILES ILLUSTRATED ON THIS SHEET MUST BE FITTED AS RECOMMENDED IN THIS MANUAL.

The following alternative profiles are compatible, but have not been tested:

Outer frames: 105-220F, 105-227F Mullions: 106-206FF, 107-206FF Transom: 116-206FF  
116-206FF

Not to Scale

SHEET 520D Hi+ / 3 / 160  
rev 5 19/03/14

Final approval for these alternative profiles must be sought from the appointed Secure by Design Architectural Liaison Officer.

### Standard Panic / Emergency Exit Mechanisms

Metal Technology offers the following forms of standard panic / emergency exit mechanisms :

- Push rail - suitable for use in accordance with BS EN 1125.
- Touch bar - suitable for use in accordance with BS EN 1125.
- Push pad - suitable for use in accordance with BS EN 179.

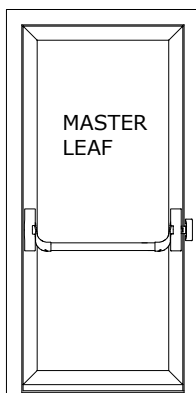
The fabricator must select the most suitable exit device in accordance with the project requirements and relevant standards. Touch bars are considered more suitable for use in school applications.

#### Requirements for single/master leaf doors with single point lock:

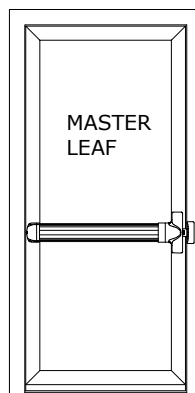
Reference	Description	Push rail		Touch bar		Push pad Door leaf up to 2100 H
		Door leaf up to 1000 W x 2100 H	Door leaf up to 1200 W x 2100 H	Door leaf up to 1000 W x 2100 H	Door leaf up to 1200 W x 2100 H	
7101/MEDIUM	Support bar				1	
7101/NARROW	Support bar			1		
7102/MEDIUM	Touch bar				1	
7102/NARROW	Touch bar			1		
7103	Dogging device			1 (optional)	1 (optional)	
7106	Central support with dogging device	1	1			
7107	Push rail		1			
7115	Adjustable keep	1	1	1	1	1
7118	Central lock					1
7119	Push pad					1
7121	Micro switch to suit touch bar			1 (optional)	1 (optional)	
7122*	Lockable external access handle*	1 (optional)	1 (optional)	1 (optional)	1 (optional)	1 (optional)
7124	Micro switch to suit push rail	1 (optional)	1 (optional)			
7126	Push rail	1				
7127	Master leaf central lock	1	1			
7138	Master leaf central lock			1	1	
7139	Central lock caps	1	1	1	1	1
7172*	30mm half euro cylinder for 7122*	1 (optional)	1 (optional)	1 (optional)	1 (optional)	1 (optional)

\* 7122 Lockable external access handle is supplied without euro cylinder. The half euro cylinder 7172 must be purchased separately, either as a single item, or on project-specific applications a quantity may be keyed alike on special request.

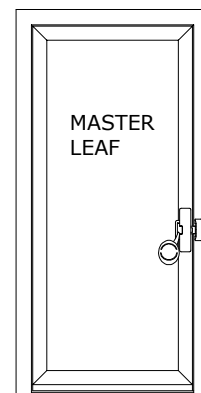
Refer to Section 7 for fixing screws subject to threshold and latch requirements.



**PUSH RAIL FOR  
SINGLE DOOR**



**TOUCH BAR FOR  
SINGLE DOOR**



**PUSH PAD FOR  
SINGLE DOOR**

### Standard Panic / Emergency Exit Mechanisms

#### Requirements for single/master leaf doors with 3-point locking:

Reference	Description	Push rail		Touch bar		Push pad Door leaf up to 2500 H
		Door leaf up to 1000 W x 2500 H	Door leaf up to 1200 W x 2500 H	Door leaf up to 1000 W x 2500 H	Door leaf up to 1200 W x 2500 H	
5554**/**	Floor keep**/**	1	1	1	1	1
5564	Latch plate	1	1	1	1	1
7101/MEDIUM	Support bar				1	
7101/NARROW	Support bar			1		
7102/MEDIUM	Touch bar				1	
7102/NARROW	Touch bar			1		
7103	Dogging device			1 (optional)	1 (optional)	
7106	Central support with dogging device	1	1			
7107	Push rail		1			
7110A**/**	Floor keep**/**	1	1	1	1	1
7111	Connecting rod and cover	1	1	1	1	1
7112	Connecting rod and cover	1	1	1	1	1
7113*** †	Vertical latch	2	2	2	2	2
7114	Connecting rod support	2	2	2	2	2
7115	Adjustable keep	2	2	2	2	2
7118	Central lock					1
7119	Push pad					1
7121	Micro switch to suit touch bar			1 (optional)	1 (optional)	
7122*	Lockable external access handle*	1 (optional)	1 (optional)	1 (optional)	1 (optional)	1 (optional)
7124	Micro switch to suit push rail	1 (optional)	1 (optional)			
7126	Push rail	1				
7127	Master leaf central lock	1	1			
7138	Master leaf central lock			1	1	
7172*	30mm half euro cylinder for 7122*	1 (optional)	1 (optional)	1 (optional)	1 (optional)	1 (optional)

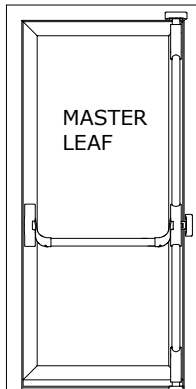
\* 7122 Lockable external access handle is supplied without euro cylinder. The half euro cylinder 7172 must be purchased separately, either as a single item, or on project-specific applications a quantity may be keyed alike on special request.

\*\* Floor keep 7110A to be used with thresholds 0037-0037, 0037-169, 169-169.  
Floor keep 5554 to be used with thresholds 0036-0037, 0036-169.

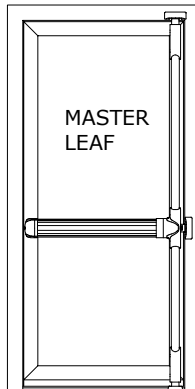
\*\*\* In rebated double door applications side operating latch 7130 must be used in lieu of the vertical latch 7113, and 7115 adjustable keep used in lieu of floor keep.

† In single door applications with a transom/fanlight, fabricators should use side operating latch 7130 in lieu of 7113 vertical latch at head.

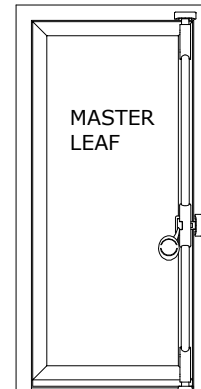
Refer to Section 7 for fixing screws subject to threshold and latch requirements.



**PUSH RAIL FOR SINGLE DOOR**



**TOUCH BAR FOR SINGLE DOOR**



**PUSH PAD FOR SINGLE DOOR**



### Standard Panic / Emergency Exit Mechanisms

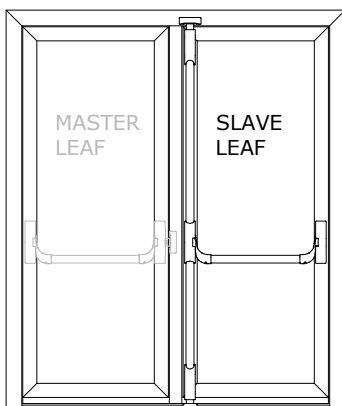
Fabricators should be aware that in order for rebated panic/emergency exit doors to operate successfully the slave leaf must close before the master leaf. Fabricators should either adjust the door closer speed accordingly, fit a door selector (by fabricator) or use the flush meeting stile 0048-0050.

#### Additional requirements for slave leaf double door applications using 102-242FF rebated meeting stile:

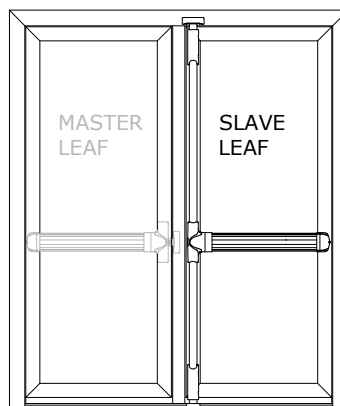
Reference	Description	Push rail		Touch bar		Push pad Door leaf up to 2500 H
		Door leaf up to 1000 W x 2500 H	Door leaf up to 1200 W x 2500 H	Door leaf up to 1000 W x 2500 H	Door leaf up to 1200 W x 2500 H	
5554**	Floor keep**	1	1	1	1	1
5555	Threshold stop	2	2	2	2	2
5564	Latch plate	1	1	1	1	1
7101/MEDIUM	Support bar				1	
7101/NARROW	Support bar			1		
7102/MEDIUM	Touch bar				1	
7102/NARROW	Touch bar			1		
7103	Dogging device			1 (optional)	1 (optional)	
7106	Central support with dogging device	1	1			
7107	Push rail		1			
7109	Slave leaf central lock			1	1	
7110A**	Floor keep**	1	1	1	1	1
7111	Connecting rod and cover	1	1	1	1	1
7112	Connecting rod and cover	1	1	1	1	1
7113	Vertical latch	2	2	2	2	2
7114	Connecting rod support	2	2	2	2	2
7115	Adjustable keep	1	1	1	1	1
7118	Central lock					1
7119	Push pad					1
7121	Micro switch to suit touch bar			1 (optional)	1 (optional)	
7124	Micro switch to suit push rail	1 (optional)	1 (optional)			
7125	Slave leaf central lock	1	1			
7126	Push rail	1				

\*\* Floor keep 7110A to be used with thresholds 0037-0037, 0037-169, 169-169.  
 Floor keep 5554 to be used with thresholds 0036-0037, 0036-169.

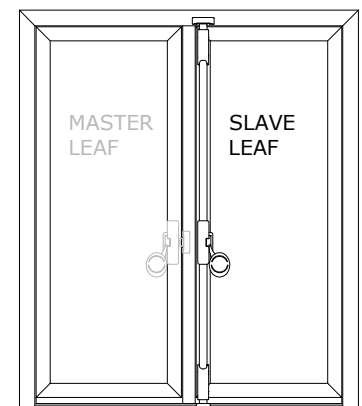
Refer to Section 7 for fixing screws subject to threshold and latch requirements.



**PUSH RAIL FOR  
DOUBLE DOOR**



**TOUCH BAR FOR  
DOUBLE DOOR**



**PUSH PAD FOR  
DOUBLE DOOR**

#### Requirements for single door with 2-point locking:

Use the above lists, omitting 5555 threshold stops.

Standard Panic / Emergency Exit Mechanisms  
**Requirements for double doors using 0048-0050 flush meeting stile adaptor. The following ironmongery is for both door leaves and provides 4-point locking. It is only suitable for use with flush meeting stiles.**

Reference	Description	Push rail		Touch bar		Push pad Door leaves up to 2500 H
		Door leaves up to 1000 W x 2500 H	Door leaves up to 1200 W x 2500 H	Door leaves up to 1000 W x 2500 H	Door leaves up to 1200 W x 2500 H	
5554**	Floor keep**	2	2	2	2	2
5555	Threshold stop	2	2	2	2	2
5564	Latch plate	2	2	2	2	2
7101/MEDIUM	Support bar				2	
7101/NARROW	Support bar			2		
7102/MEDIUM	Touch bar				2	
7102/NARROW	Touch bar			2		
7103	Dogging device			2 (optional)	2 (optional)	
7106	Central support with dogging device	2	2			
7107	Push rail		2			
7109	Central lock			2	2	
7110A**	Floor keep**	2	2	2	2	2
7111	Connecting rod and cover	2	2	2	2	2
7112	Connecting rod and cover	2	2	2	2	2
7113	Vertical latch	4	4	4	4	4
7114	Connecting rod support	4	4	4	4	4
7115	Adjustable keep	2	2	2	2	2
7118	Central lock					2
7119	Push pad					2
7121	Micro switch to suit touch bar			2 (optional)	2 (optional)	
7122*	Lockable external access handle*	1 (optional)	1 (optional)	1 (optional)	1 (optional)	1 (optional)
7124	Micro switch to suit push rail	2 (optional)	2 (optional)			
7125	Central lock	2	2			
7126	Push rail	2				

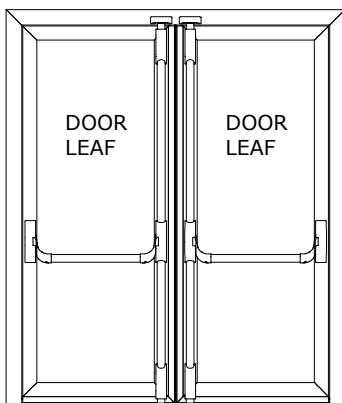
\* 7122 Lockable external access handle is supplied without euro cylinder. The half euro cylinder 7172 must be purchased separately, either as a single item, or on project-specific applications a quantity may be keyed alike on special request.

\*\*Floor keep 7110A to be used with thresholds 0037-0037, 0037-169, 169-169.  
 Floor keep 5554 to be used with thresholds 0036-0037, 0036-169.

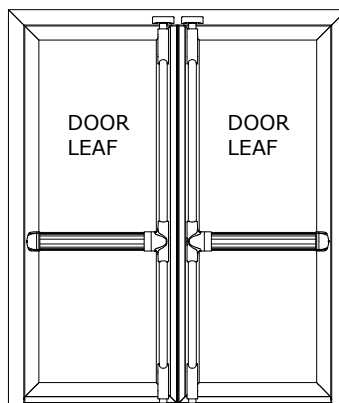
**Dogging facility :** A dogging device is available which allows the mechanism to be manually disabled to permit unrestricted access and egress. This mechanism is engaged and disengaged using a screwdriver. The dogging device comes as standard with the push rail mechanism, but is an optional item with the touch bar. It is not available for use with the push pad.

**Micro switch :** A micro switch may be used in lieu of the dogging device (ie - remove dogging device and insert micro switch in its place.) The micro switch can be wired into an alarm system (by others) which is triggered when the door is opened. It is available with the push rail and the touch bar, but not with the push pad.

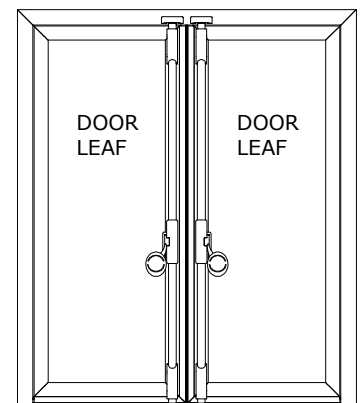
Refer to Section 7 for fixing screws subject to threshold and latch requirements.



**PUSH RAIL FOR DOUBLE DOOR**



**TOUCH BAR FOR DOUBLE DOOR**



**PUSH PAD FOR DOUBLE DOOR**

# Ironmongery

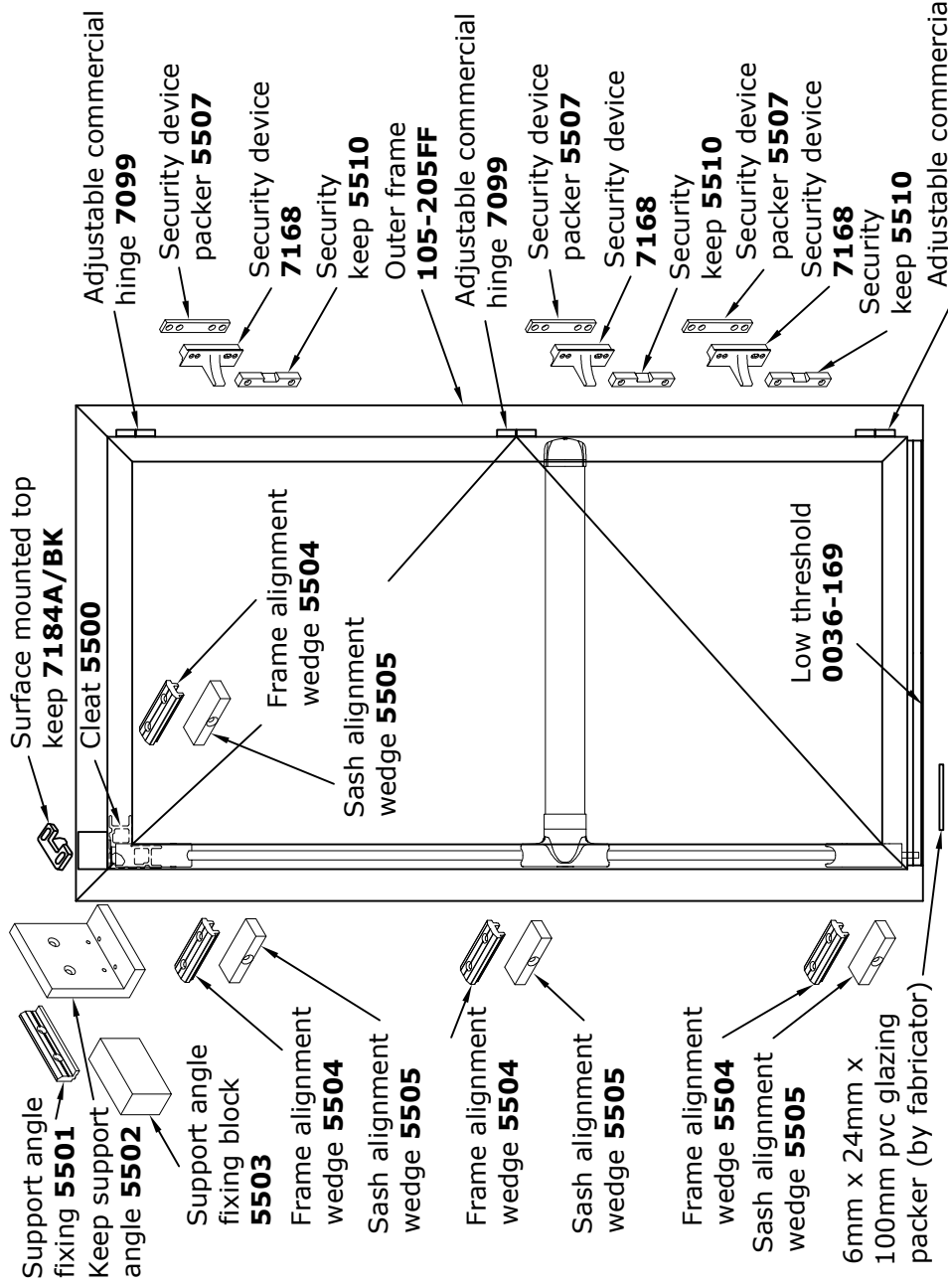


## Security Panic / Emergency Exit Mechanisms for Single Panic Door

## System 5-20D / Hi+

System 5-20D Hi+ Door has passed PAS 24 "Enhanced Security Performance Requirements for Door Assemblies" as generally accepted on Secure by Design projects. To conform, the doors must be in accordance with the samples tested, with ironmongery options as detailed in Section 3 of this manual. Metal Technology has successfully tested System 5-20D Hi+ Doors with a sash size 1002 (W) x 2000 (H) to achieve PAS 23/24 using the following ironmongery and additional components:

DOOR SYSTEM



The following alternative profiles are compatible, but have not been tested:  
 Outer frames: 105-220F, 105-227F Mullions: 106-206FF, 107-206FF Transom: 116-206FF  
 116-206FF

Final approval for these alternative profiles must be sought from the appointed Secure by Design Architectural Liaison Officer.

### Not to Scale

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ALL COMPONENTS AND PROFILES ILLUSTRATED ON THIS SHEET MUST BE FITTED AS RECOMMENDED IN THIS MANUAL.

Reference	Description	Quantity
5500	Sash corner cleat	1
5501	Support angle fixing	1
5502	Keep support angle	1
5503	Support angle fixing block	1
5504	Frame alignment wedge	4
5505	Sash alignment wedge	4
5507	Security device packer	3
5510	Security keep	3
7099	Adjustable commercial hinge	3
7168	Security device	3
7183A*	fits 1200mm wide sash, can be cut to sash 879mm wide on site.	1 per sash
7183B*	fits 965mm wide sash, can be cut to sash 726mm wide on site.	1 per sash
7183C*	fits 965mm wide sash, can be cut to sash 652mm wide on site.	1 per sash
7184A/BK	Surface mounted top keep	1
7209	M5 countersunk rivnut	26
7210	M5 x 25 countersunk machine screw	6
7211	M5 x 30 countersunk machine screw	12
7223	No 7 x 25mm countersunk self drill screw	10
7224	M5 x 16 pan head machine screw	5
7227	M5 x 16 countersunk machine screw	4
7230	No 8 x 12mm countersunk self tap screw	1
7233	M4 x 16 countersunk machine screw	2
7241	M5 x 25 pan head machine screw	2
7259	No 8 x 38mm countersunk self tap screw	4
7272	M5 x 50 countersunk machine screw	2
7280	M6 x 20 socket head cap screw	2

\* Select one per sash, according to sash width

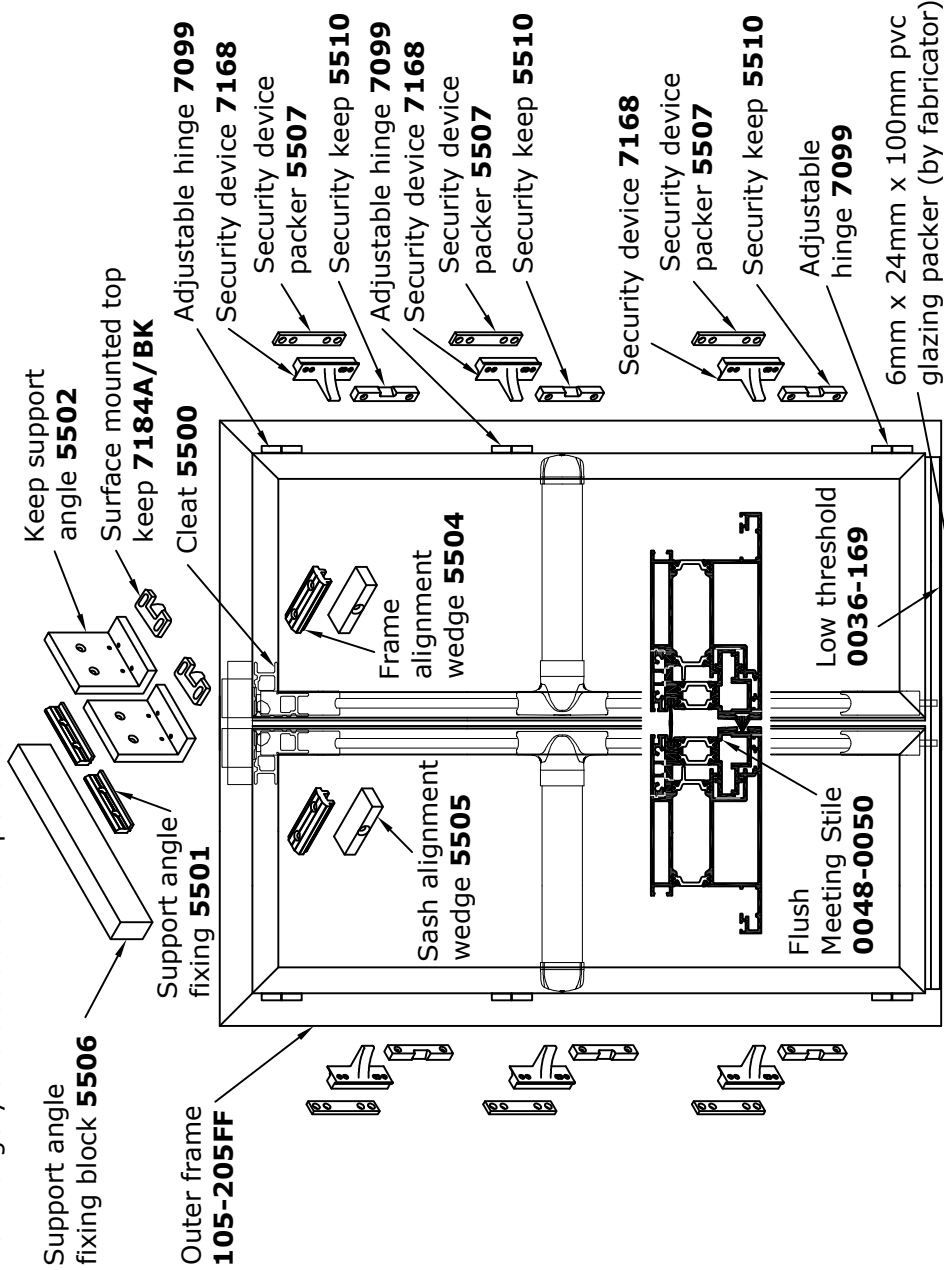
# Ironmongery

## Security Panic / Emergency Exit Mechanisms for Double Doors with Flush Meeting Stiles



## System 5-20D/Hi+

System 5-20D Hi+ Door has passed PAS 24 "Enhanced Security Performance Requirements for Door Assemblies" as generally accepted on Secure by Design projects. To conform, the doors must be in DOOR SYSTEM accordance with the samples tested, with ironmongery options as detailed in Section 3 of this manual. Metal Technology has successfully tested System 5-20D Hi+ Doors with a sash size 1000 (W) x 2122 (H) to achieve PAS 23/24 using the following ironmongery and additional components:



The following alternative profiles are compatible, but have not been tested:  
 Outer frames: 105-220F, 105-227F Mullions: 106-206FF, 107-206FF Transom: 116-206FF  
 116-206FF

Final approval for these alternative profiles must be sought from the appointed Secure by Design Architectural Liaison Officer.

**Not to Scale**

ALL COMPONENTS AND PROFILES ILLUSTRATED ON THIS SHEET MUST BE FITTED AS RECOMMENDED IN THIS MANUAL.

Reference	Description	Quantity
5500	Sash corner cleat	2
5501	Support angle fixing	2
5502	Keep support angle	2
5504	Frame alignment wedge	2
5505	Sash alignment wedge	2
5506	Support angle fixing block	1
5507	Security device packer	6
5510	Security keep	6
7099	Adjustable heavy duty hinge	6
7168	Security device	6
7183A*	fits 1200mm wide sash, can be cut to sash 879mm wide on site.	1 per sash
7183B*	fits 965mm wide sash, can be cut to sash 726mm wide on site.	1 per sash
7183C*	fits 965mm wide sash, can be cut to sash 652mm wide on site.	1 per sash
7184A/BK	Surface mounted top keep	2
7209	M5 countersunk rivnut	52
7210	M5 x 25 countersunk machine screw	12
7211	M5 x 30 countersunk machine screw	24
7223	No 7 x 25mm countersunk self drill screw	8
7224	M5 x 16 pan head machine screw	10
7227	M5 x 16 countersunk machine screw	8
7233	M4 x 16 countersunk machine screw	4
7241	M5 x 25 pan head machine screw	4
7259	No 8 x 38mm countersunk self tap screw	2
7272	M5 x 50 countersunk machine screw	4
7280	M6 x 20 socket head cap screw	4

\* Select one per sash, according to sash width

#### Electric Panic Mechanisms (7183AE and 7183BE)

Reference	Description	Unit
7183AE	Electric panic mechanism for door leaf widths 892mm to 1200mm	1 per door sash
7183BE	Electric panic mechanism for door leaf widths 739mm to 965mm	1 per door sash

7183AE and 7183BE provide a solenoid concealed within the panic exit touch bar. The solenoid is wired to a switching mechanism (not supplied by Metal Technology) to facilitate the remote retraction of the latch bolts, and provide free access through the door.

**Power supply unit (7406)** : To be used in conjunction with 7183AE and 7183BE. The power supply unit is capable of powering and controlling 2 no. electric panic mechanisms, in accordance with the recommendations of the manufacturers literature.

**Power supply card (7407)** : To be used in conjunction with the 7406 power supply unit to facilitate the powering and controlling of an additional 2 electrically operated panic exit mechanisms (4 in total).

**Monitor switch (7408)** : Suitable for use with both manual and electric panic exit mechanisms. A micro switch concealed in the touch bar assembly which provides local and/or remote notification when the touch bar has been depressed. (Remote notification mechanism is not provided by Metal Technology).

**External access device (7186A)** : Key operated euro cylinder unlocks the lever handle, which may then be used to retract the panic/emergency exit shoot bolts to facilitate external access. To prevent further external access, handle must be re-locked from the outside.

To be used in conjunction with 7197 spindle and 7161 cylinder. While 7186A external access device is compatible with the security panic/emergency exit mechanism, both manual and electric, this has not been security tested. Approval to use this on Secure by Design projects must be obtained from the Architectural Liaison Officer.

# Size Limitation Chart

## Open-In and Open-Out Doors using 7065 Multi Point Dead Lock with Latch



## System 5-20D/Hi+

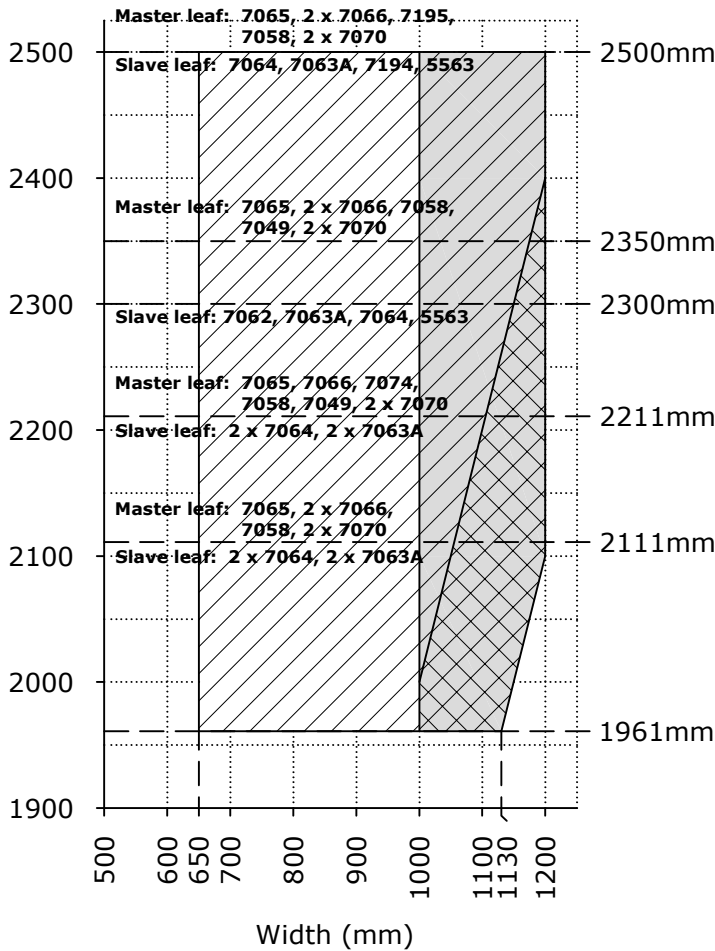
.....  
DOOR SYSTEM  
.....

Metal Technology recommend 3 hinges located at top, bottom and centrally be fitted to all door sashes. These charts are for doors fitted with PCD72A overhead closer with backcheck facility engaged, and adjusted to suit site conditions.

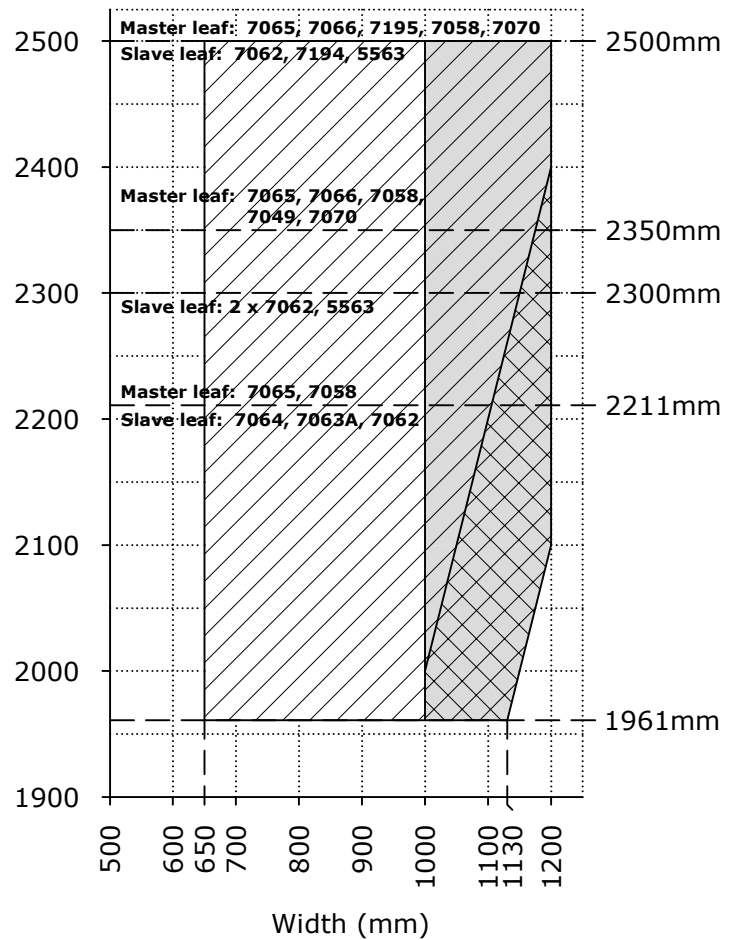
For details of hinge fixings see Section 7 of this manual.

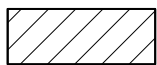

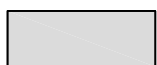
Fabricator may use 7056 lever handle operated shoot bolts in lieu of shoot bolts 7062, 7064 and 7194. Refer to "7056 Lever Handle Operated Shoot Bolt Details" sheet for requirements.

### Rebated threshold



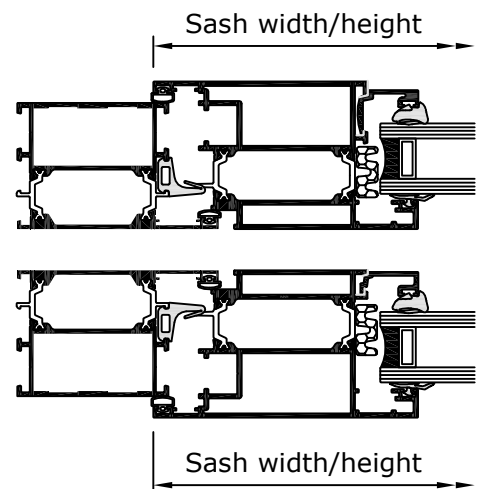
### Flush and semi-rebated low threshold



-  Maximum sash weight limitation = 90Kg.
-  Maximum sash weight limitation = 75Kg.
-  Doors must be single pane.

These configurations are using 7099 adjustable commercial hinge or 7097 adjustable anti finger trap hinge.

Where there is a muntin (i.e. mullion/transom) contained within a sash the maximum weight shall be 75Kg.



# Size Limitation Chart - Domestic

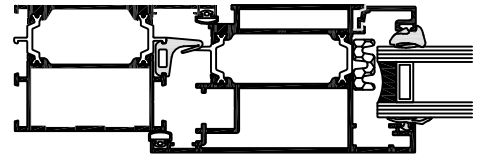
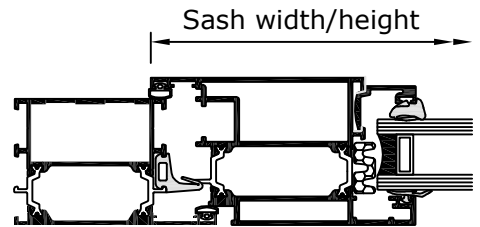
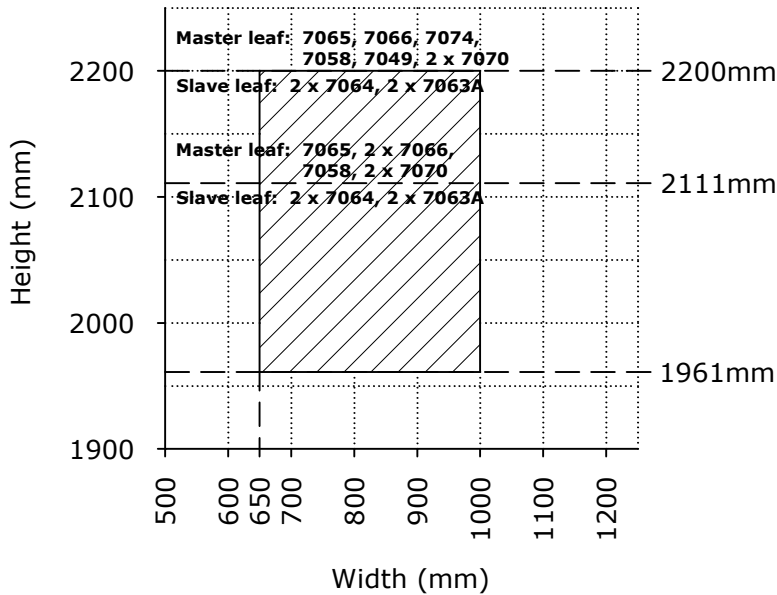
Open-In and Open-Out Doors using 7065  
Multi Point Dead Lock with Latch

**System 5-20D/Hi+**  
.....  
DOOR SYSTEM  
.....

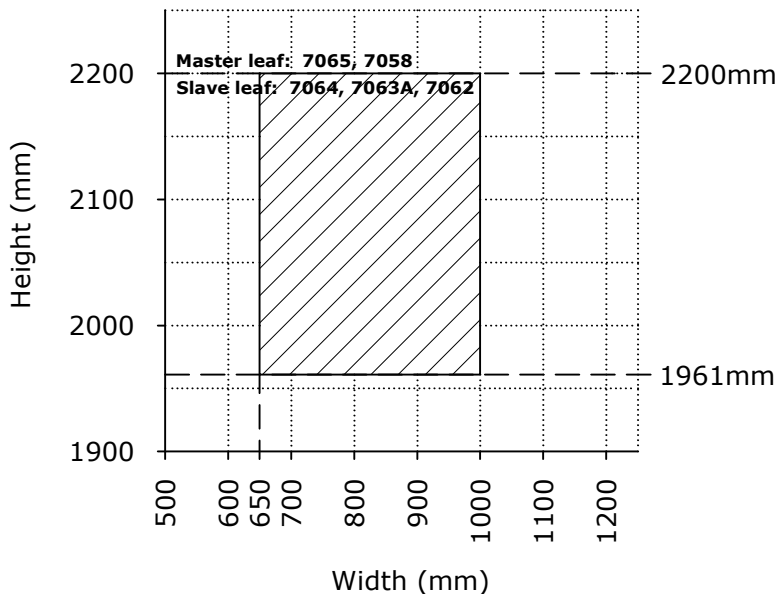
Metal Technology recommend 3 hinges located at top, bottom and centrally be fitted to all door sashes. These charts are for owner-occupied domestic applications only fitted with the 7189 door restrictor. For details of hinge fixings see Section 7 of this manual.

Fabricator may use 7056 lever handle operated shoot bolts in lieu of shoot bolts 7062 and 7064. Refer to "7056 Lever Handle Operated Shoot Bolt Details" sheet for requirements.

## Rebated threshold



## Flush and semi-rebated low threshold



Maximum sash weight limitation using 7017 clamp on domestic hinge = 75Kg

# Size Limitation Chart

## Open-In and Open-Out Doors using 7165 3-Point Dead Lock with Roller Ball

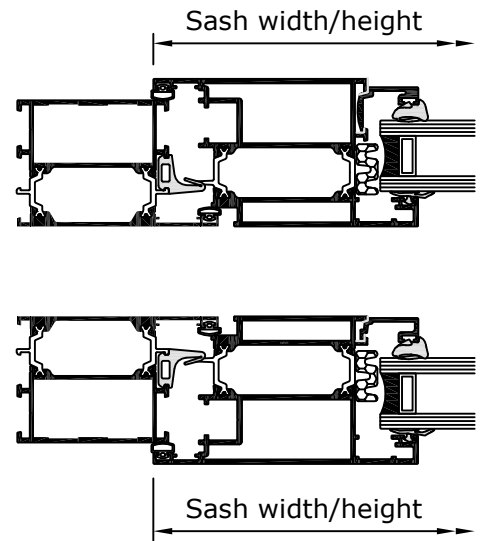
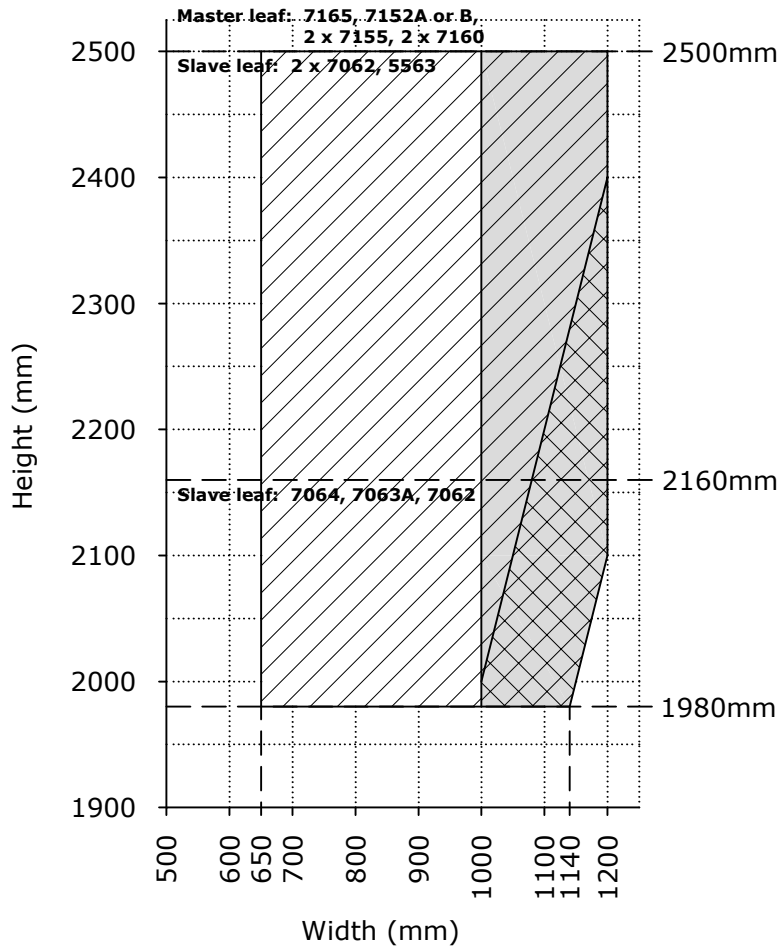




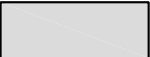
### System 5-20D/Hi+

DOOR SYSTEM

Metal Technology recommend 3 hinges located at top, bottom and centrally be fitted to all door sashes. This chart is for doors fitted with PCD72A overhead closer with backcheck facility engaged, and adjusted to suit site conditions. Door lock and pull handles fitted centrally on sash.

For details of hinge fixings see Section 7 of this manual.



-  Maximum sash weight limitation = 90Kg.
-  Maximum sash weight limitation = 75Kg.
-  Doors must be single pane.

These configurations are using 7099 adjustable commercial hinge or 7097 adjustable anti finger trap hinge.

Where there is a muntin (i.e. mullion/transom) contained within a sash the maximum weight shall be 75Kg.



# Size Limitation Chart

## Open-In and Open-Out Doors using 7094 and 7095 Single Point Locks



### System 5-20D/Hi+

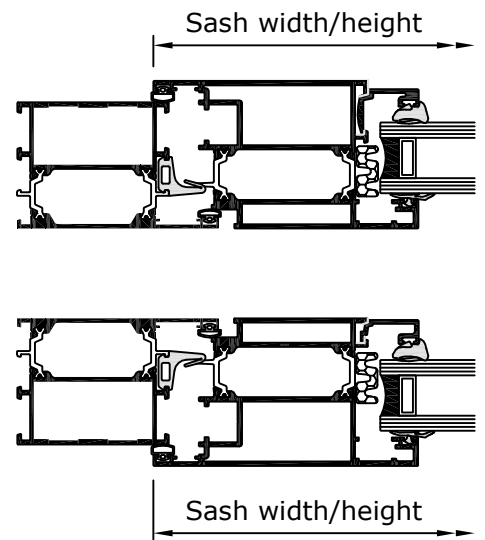
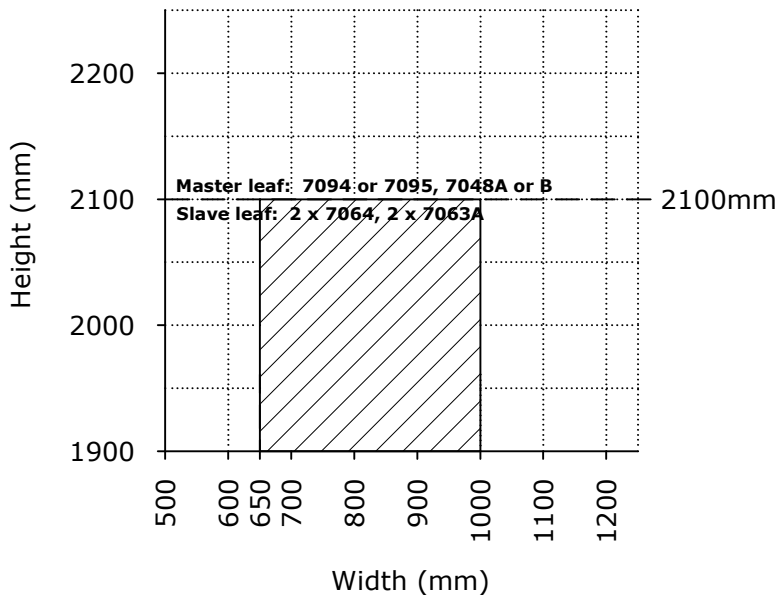
DOOR SYSTEM

Metal Technology recommend 3 hinges located at top, bottom and centrally be fitted to all door sashes. This chart is for doors fitted with PCD72A overhead closer with backcheck facility engaged, and adjusted to suit site conditions.

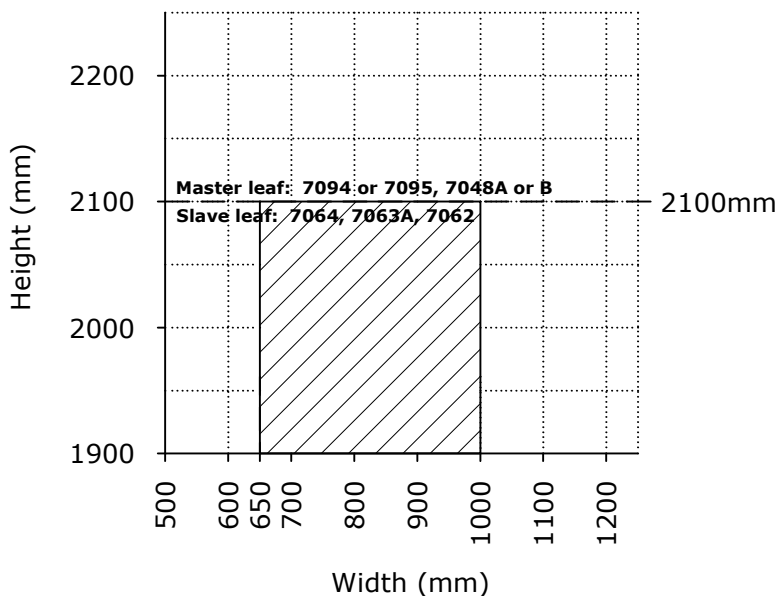
For details of hinge fixings see Section 7 of this manual.

Fabricator may use 7056 lever handle operated shoot bolts in lieu of shoot bolts 7062 and 7064. Refer to "7056 Lever Handle Operated Shoot Bolt Details" sheet for requirements.

#### Rebated threshold



#### Flush and semi-rebated low threshold



- Maximum sash weight limitation using 7099 adjustable commercial hinge = 90Kg
- Maximum sash weight limitation using 7097 adjustable anti finger trap hinge = 90Kg
- Maximum sash weight limitation using 7017 clamp on domestic hinge = 75Kg

Where there is a muntin (i.e. mullion/transom) contained within a sash the maximum weight shall be 75Kg.

# Size Limitation Chart

## Open-In and Open-Out Doors using 7150, and 7151 Electrically Operated Locking System



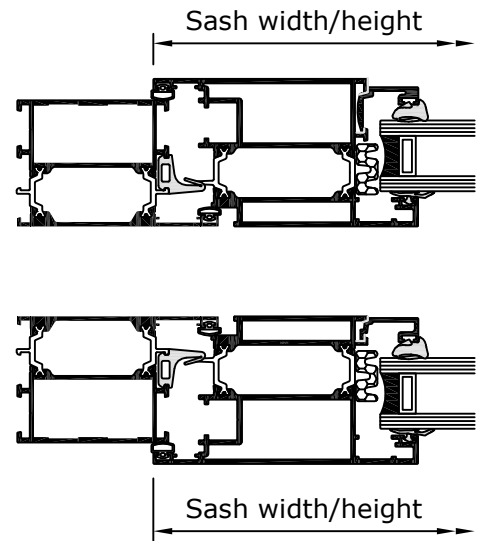
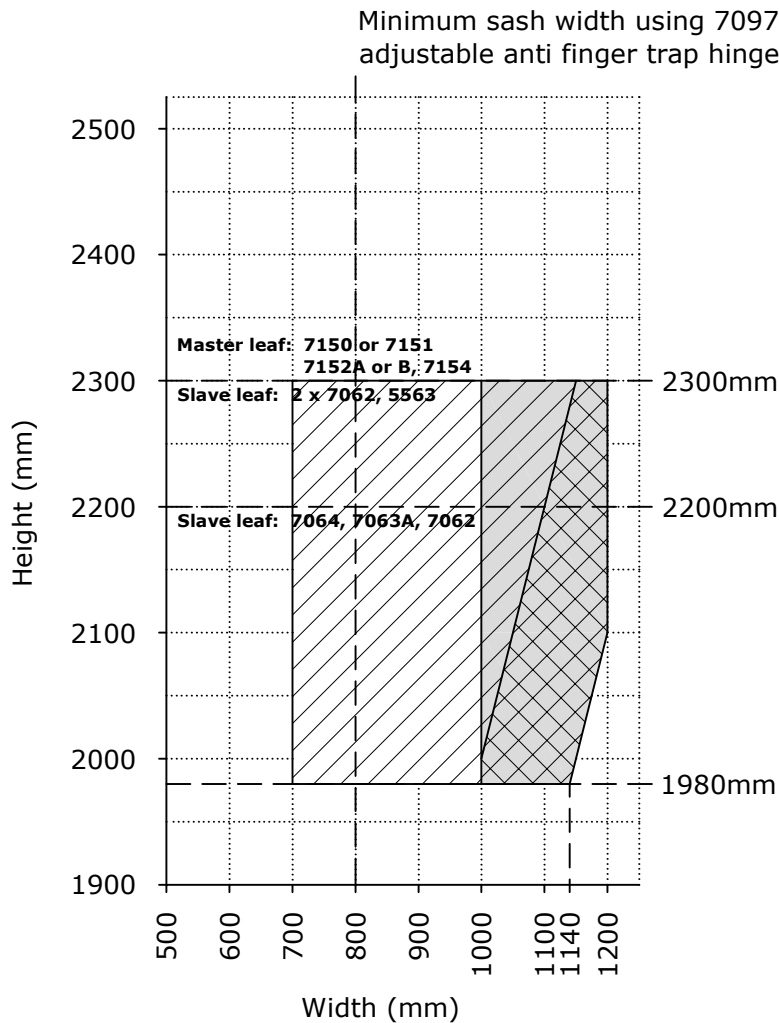
### System 5-20D/Hi+


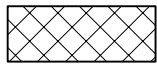
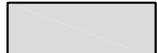
DOOR SYSTEM

Metal Technology recommend 3 hinges located at top, bottom and centrally be fitted to all door sashes. This chart is for doors fitted with PCD72A overhead closer with backcheck facility engaged, and adjusted to suit site conditions.

For details of hinge fixings see Section 7 of this manual.

Fabricator may use 7056 lever handle operated shoot bolts in lieu of shoot bolts 7062 and 7064. Refer to "7056 Lever Handle Operated Shoot Bolt Details" sheet for requirements.



-  Maximum sash weight limitation = 90Kg.
-  Maximum sash weight limitation = 75Kg.
-  Doors must be single pane.

These configurations are using 7099 adjustable commercial hinge or 7097 adjustable anti finger trap hinge.

Where there is a muntin (i.e. mullion/transom) contained within a sash the maximum weight shall be 75Kg.

# Size Limitation Chart

Open-Out **Single** Doors using the Standard Panic / Emergency Exit Mechanisms

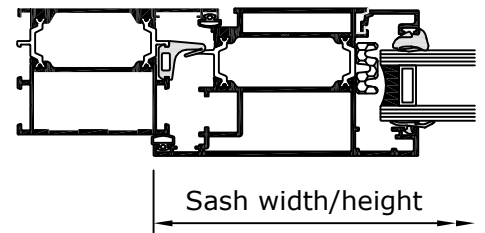
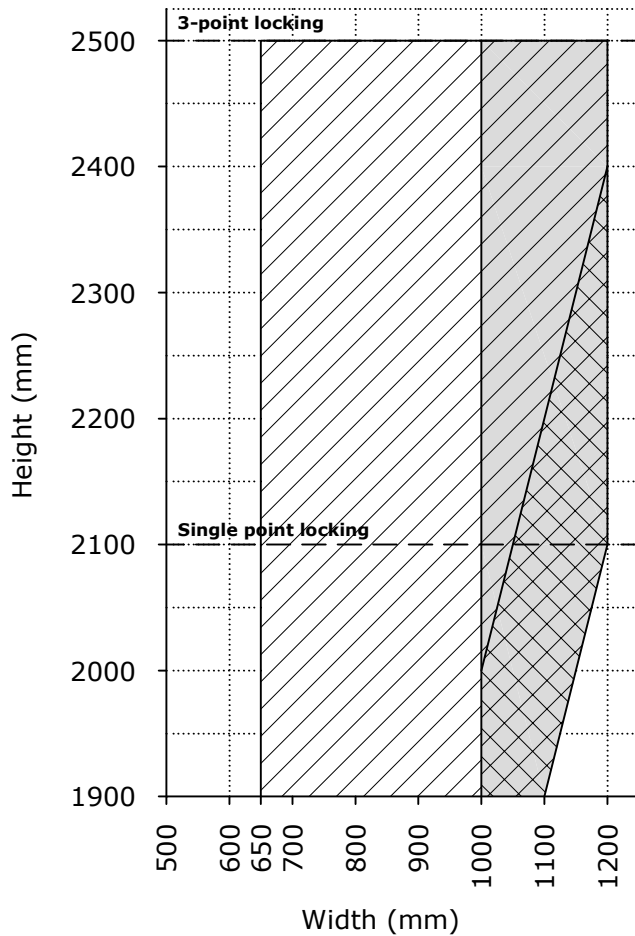




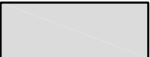
**System 5-20D/Hi+**

DOOR SYSTEM

Metal Technology recommend 3 hinges located at top, bottom and centrally be fitted to all door sashes. This chart is for doors fitted with PCD72A overhead closer with backcheck facility engaged, and adjusted to suit site conditions (subject to approval of the appropriate fire authority/officer).

For details of hinge fixings see Section 7 of this manual.



-  Maximum sash weight limitation = 90Kg.
-  Maximum sash weight limitation = 75Kg.
-  Doors must be single pane.

These configurations are using 7099 adjustable commercial hinge or 7097 adjustable anti finger trap hinge.

Where there is a muntin (i.e. mullion/transom) contained within a sash the maximum weight shall be 75Kg.

# Size Limitation Chart

Open-Out **Double** Doors using the Standard Panic / Emergency Exit Mechanisms and Rebated Meeting Stile



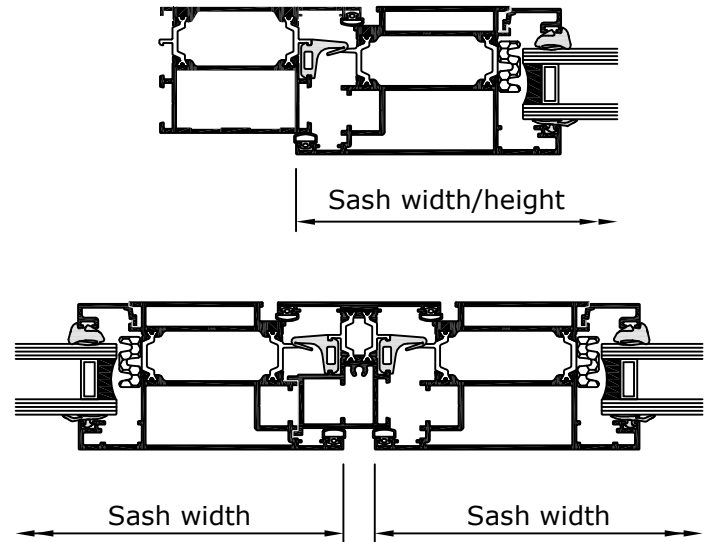
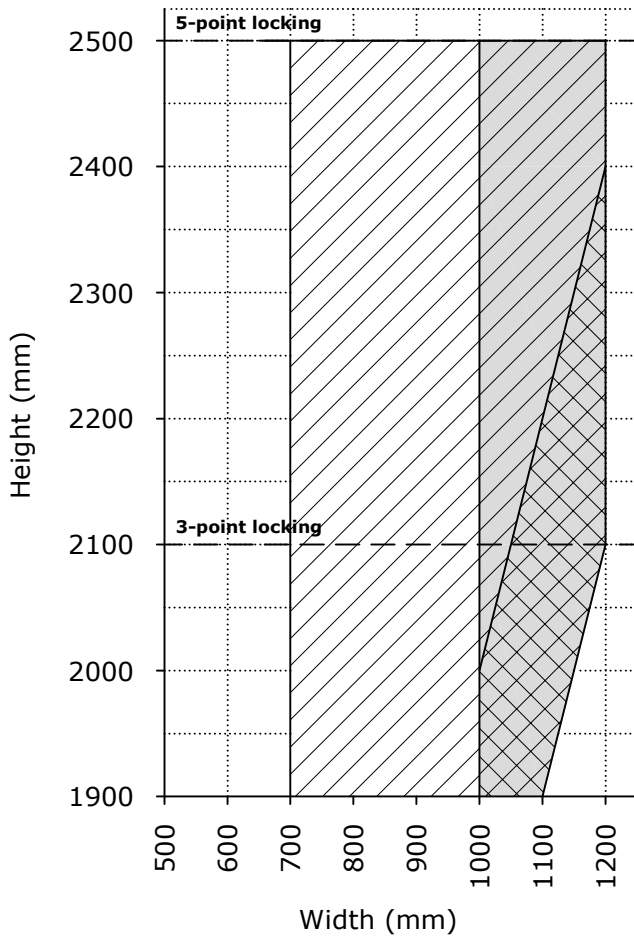
**System 5-20D/Hi+**




.....  
DOOR SYSTEM  
.....

This application is only suitable for use with 7099 adjustable commercial hinge.

Metal Technology recommend 3 hinges located at top, bottom and centrally be fitted to all door sashes. This chart is for doors fitted with PCD72A overhead closer with backcheck facility engaged, and adjusted to suit site conditions (subject to approval of the appropriate fire authority/officer).

For details of hinge fixings see Section 7 of this manual.



-  Maximum sash weight limitation = 90Kg.
-  Maximum sash weight limitation = 75Kg.
-  Doors must be single pane.

Where there is a muntin (i.e. mullion/transom) contained within a sash the maximum weight shall be 75Kg.

# Size Limitation Chart

Open-Out **Double** Doors using the Standard Panic / Emergency Exit Mechanisms and Flush Meeting Stile

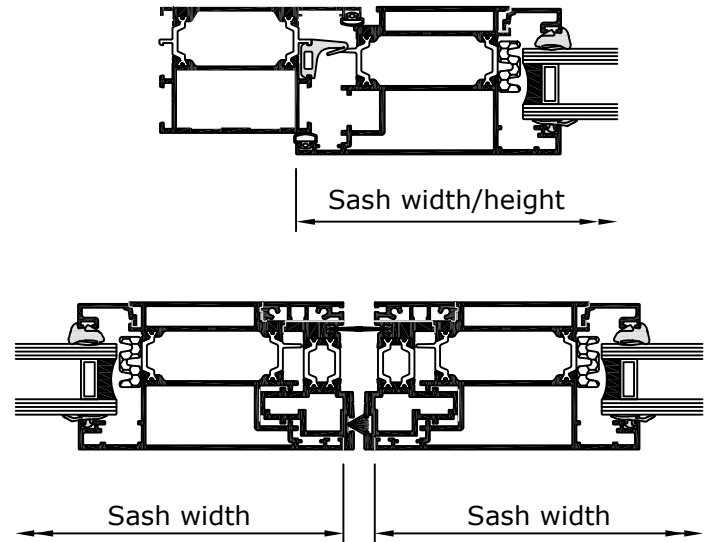
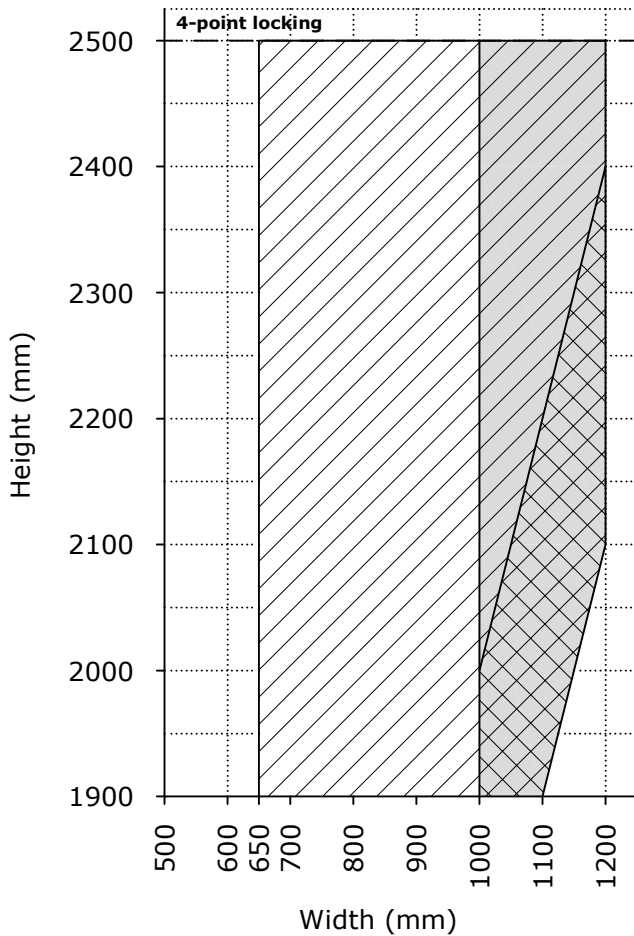


**System 5-20D/Hi+**

.....  
DOOR SYSTEM  
.....

Metal Technology recommend 3 hinges located at top, bottom and centrally be fitted to all door sashes. This chart is for doors fitted with PCD72A overhead closer with backcheck facility engaged, and adjusted to suit site conditions (subject to approval of the appropriate fire authority/officer).

For details of hinge fixings see Section 7 of this manual.



- Maximum sash weight limitation = 90Kg.
- Maximum sash weight limitation = 75Kg.
- Doors must be single pane.

These configurations are using 7099 adjustable commercial hinge or 7097 adjustable anti finger trap hinge.

Where there is a muntin (i.e. mullion/transom) contained within a sash the maximum weight shall be 75Kg.

# Size Limitation Chart

Open-Out Single and Double Doors using the Security Panic / Emergency Exit Mechanisms and Flush Meeting Stile



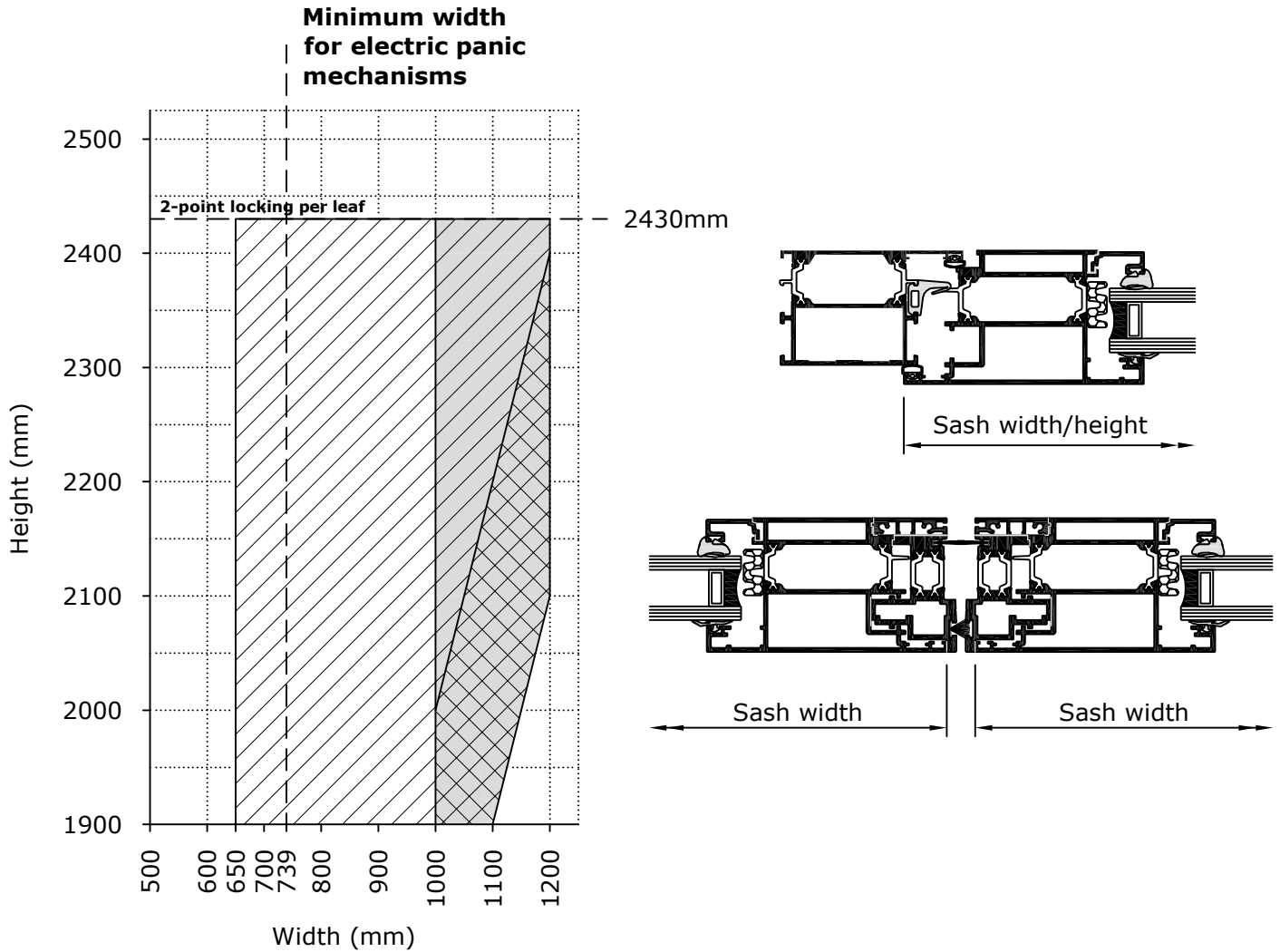
**System 5-20D/Hi+**

.....  
DOOR SYSTEM  
.....

This application is only suitable for use with 7099 adjustable commercial hinge.

Metal Technology recommend 3 hinges located at top, bottom and centrally be fitted to all door sashes. This chart is for doors fitted with PCD72A overhead closer with backcheck facility engaged, and adjusted to suit site conditions (subject to approval of the appropriate fire authority/officer).

For details of hinge fixings see Section 7 of this manual.



- Maximum sash weight limitation = 90Kg.
- Maximum sash weight limitation = 75Kg.
- Doors must be single pane.

Where there is a muntin (i.e. mullion/transom) contained within a sash the maximum weight shall be 75Kg.

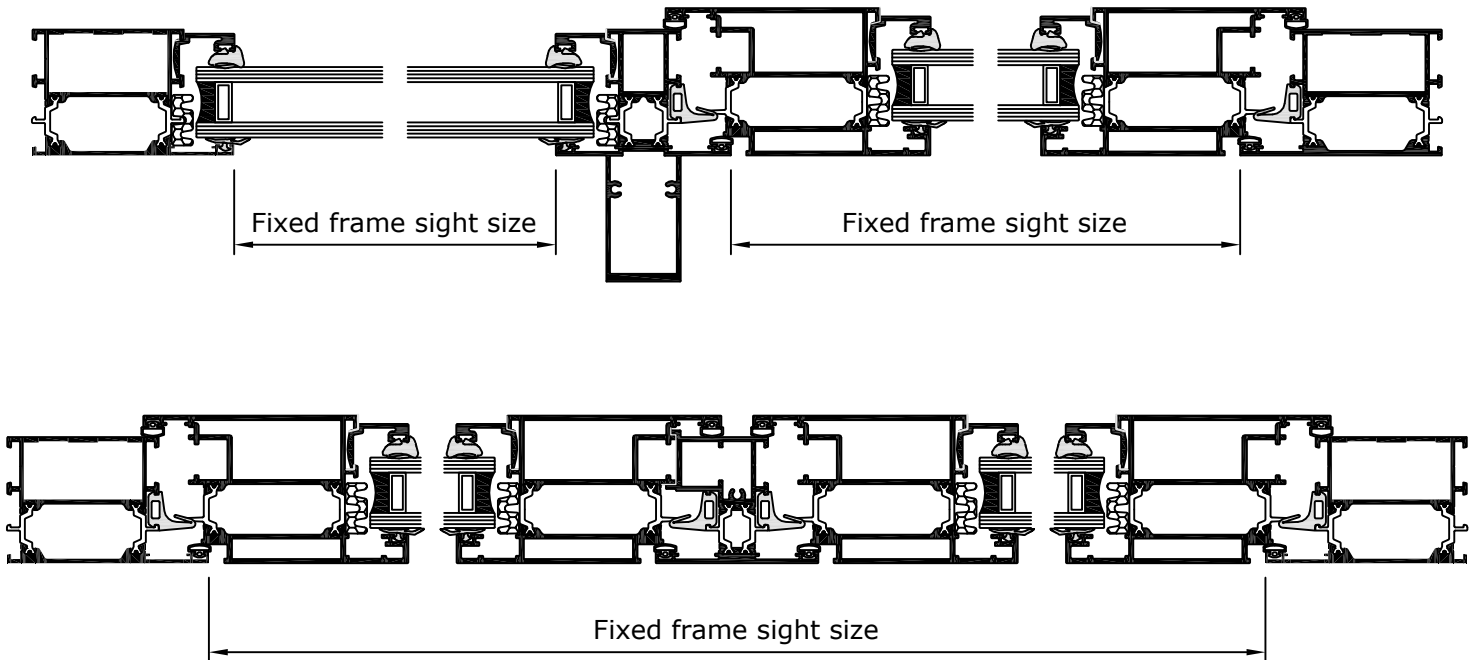
# Bar Cutting Sizes



**System 5-20D/Hi+**

DOOR SYSTEM

All cutting sizes in this range are calculated from the fixed frame sight sizes - this is the distance measured between the tops of the glazing legs as illustrated below.



The fixed frame sight size can be calculated from the Ready Reckoner in System 5-20 Hi+ manual, the section drawings or dimensioned general arrangement drawings provided.

For the fabrication and cutting sizes for the outer frames and fixed light glass and beads see the fabrication sheets entitled "Fabrication and Cutting Sizes - Outer Frames" and "Fabrication and Cutting Sizes - Fixed Light Beads and Glass Sizes" and for open-in and open-out doors the drawing specific to the sash section used in section 4 of this manual.

The length of integral mullions or transoms should be calculated on the basis of fixed frame sight size plus 50mm using the end preparation shown on the applicable "Mullion/Transom End Prep" fabrication sheets.

Note: Where the mullions/transoms with extended back boxes are used an appropriate adjustment must be made if the end of the bar is more than 25mm beyond the line of the top of the glazing leg. See applicable "Mullion/Transom End Prep" fabrication sheets.





















Scale 1:3

# FFSS Ready Reckoner

(To calculate fixed frame sight sizes)

The following grid can be used to calculate the fixed frame sight sizes (F.F.S.S.) directly from your fabrication sizes. Select the appropriate sections from the horizontal and vertical axes and read across to their point of intersection on the grid. Subtract the resultant figure from your fabrication size to obtain the appropriate fixed frame sight size (F.F.S.S.).

All mullion / transom dimensions are calculated from the section centre line. When incorporating liner bar 185-686F add 54mm to the dimension stated in the grid and subtract the total from your fabrication size to determine your liner bar sight size (L.B.S.S.).

113-213FF 	86.75	96.75	101.75	106.75	117.25	135.25	137.25	72	83.25	74.5
106-206FF, 107-206FF 116-206FF 	95.5	105.5	110.5	115.5	126	144	146	80.75	92	83.25
142-201FF, 143-201FF 	84.25	94.25	99.25	104.25	114.75	132.75	134.75	69.5	80.75	72
108-208F, 108-226F 	-	-	-	-	180	-	200	134.75	146	137.25
105-220F, 105-227F 	-	-	-	-	178	196	-	132.75	144	135.25
105-205FF 	-	-	-	-	160	178	180	114.75	126	117.25
103-203F 	119	-	-	139	-	-	-	104.25	115.5	106.75
102-202F, 102-234F 102-228F 	-	-	129	-	-	-	-	99.25	110.5	101.75
120-204F, 120-216F 	-	119	-	-	-	-	-	94.25	105.5	96.75
101-201FF 	99	-	-	119	-	-	-	84.25	95.5	86.75
	101-201FF 	120-204F 120-216F 	102-202F 102-234F 102-228F 	103-203F 	105-205FF 	105-220F 105-227F 	108-208F 108-226F 	142-201FF 143-201FF 	106-206FF, 107-206FF 116-206FF 	113-213FF 

Scale 1:7



# Fabrication and Cutting Sizes

Fixed Light Beads and Glass Sizes (Not Including Outer Frame)

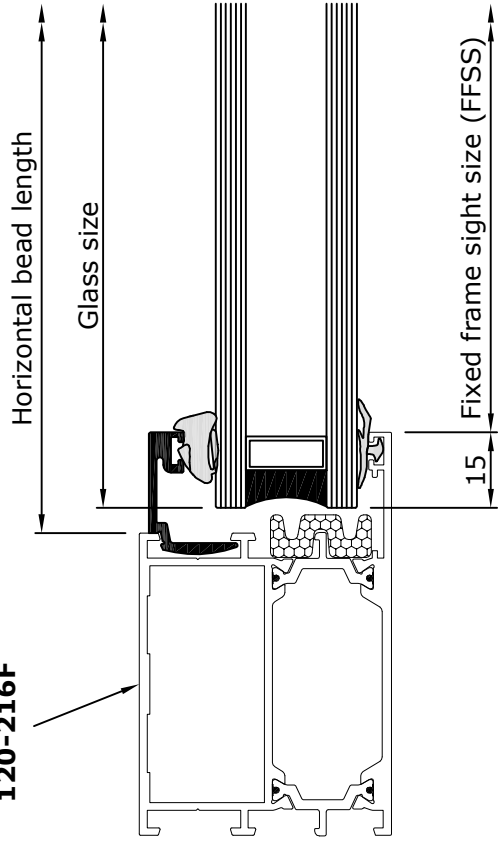
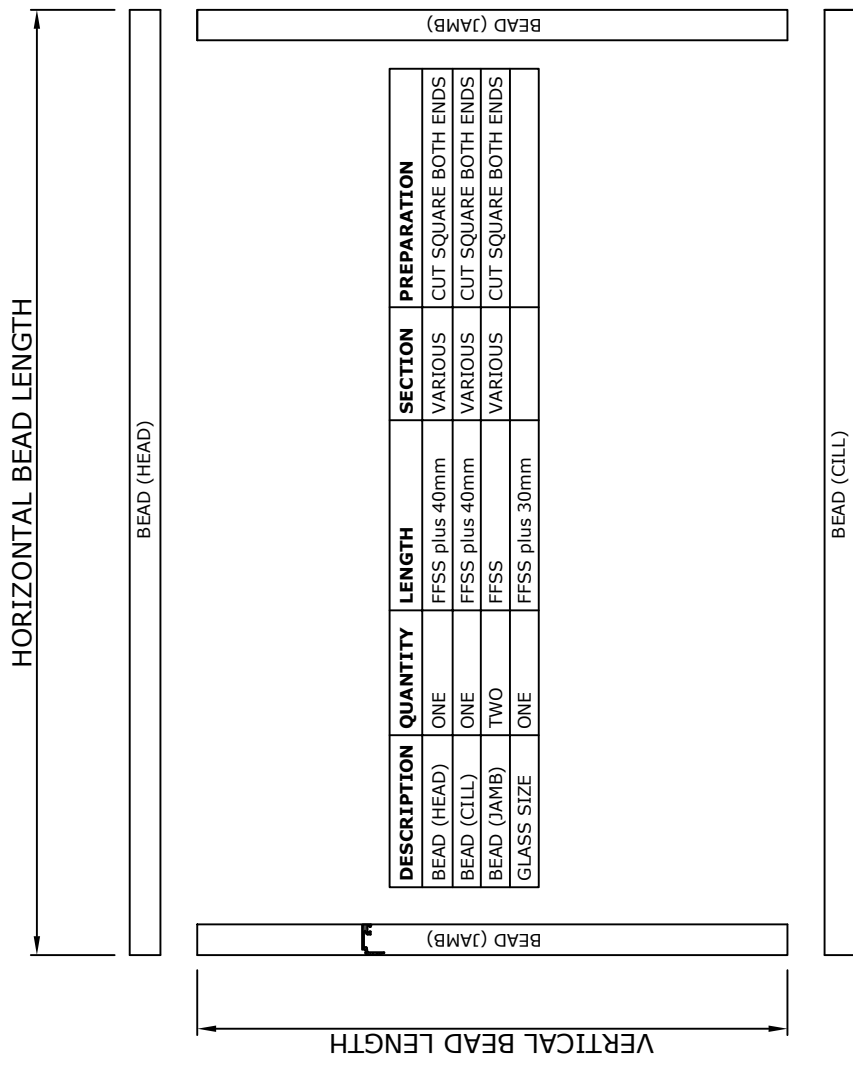


**System 5-20D / Hi+**

Outer frame

- 101-201FF
- 102-202F
- 102-228F
- 102-234F
- 103-203F
- 105-205FF
- 105-220F
- 105-227F
- 108-208F
- 108-226F
- 120-204F
- 120-216F

DOOR SYSTEM



Note :-

All bead lengths are tight sizes. Clearance of not more than 0.5mm should be allowed at each end of the glazing bead.

Not to Scale

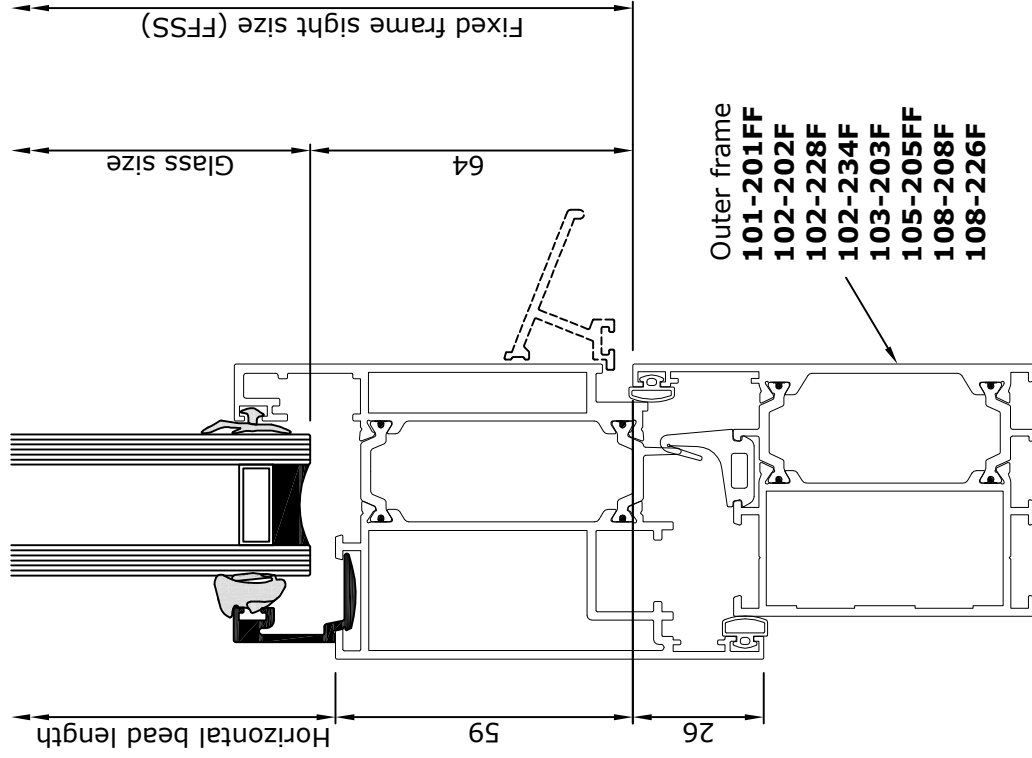
# Fabrication and Cutting Sizes

Beads and Glass Sizes for Single and Double Open-In Doors and Double Open-In Doors with Rebated Threshold



**System 5-20D / Hi+**

DOOR SYSTEM



Note :-

All bead lengths are tight sizes. Clearance of not more than 0.5mm should be allowed at each end of the glazing bead.

HORIZONTAL BEAD LENGTH



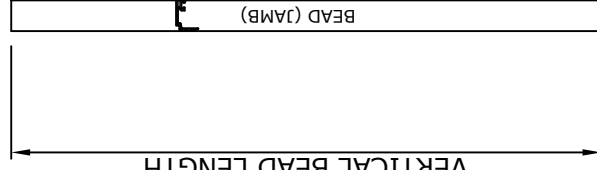
## SINGLE DOOR SASH

DESCRIPTION	QUANTITY	LENGTH	SECTION	PREPARATION
BEAD (HEAD)	ONE	FFSS less 118mm	VARIOUS	CUT SQUARE BOTH ENDS
BEAD (CILL)	ONE	FFSS less 118mm	VARIOUS	CUT SQUARE BOTH ENDS
BEAD (JAMB)	TWO	FFSS less 158mm	VARIOUS	CUT SQUARE BOTH ENDS
GLASS SIZE SINGLE LEAF	ONE	WIDTH = FFSS less 128mm HEIGHT = FFSS less 128mm		

## DOUBLE DOOR SASHES (with equal size sashes)

DESCRIPTION	QUANTITY	LENGTH	SECTION	PREPARATION
BEAD (HEAD)	TWO	$\frac{\text{FFSS less } 300.5\text{mm}}{2}$	VARIOUS	CUT SQUARE BOTH ENDS
BEAD (CILL)	TWO	$\frac{\text{FFSS less } 300.5\text{mm}}{2}$	VARIOUS	CUT SQUARE BOTH ENDS
BEAD (JAMB)	FOUR	FFSS less 158mm	VARIOUS	CUT SQUARE BOTH ENDS
GLASS SIZE DOUBLE DOOR WITH EQUAL SIZE SASHES	TWO	WIDTH = $\frac{\text{FFSS less } 320.5\text{mm}}{2}$ HEIGHT = FFSS less 128.5mm		

VERTICAL BEAD LENGTH



BEAD (CILL)

Not to Scale

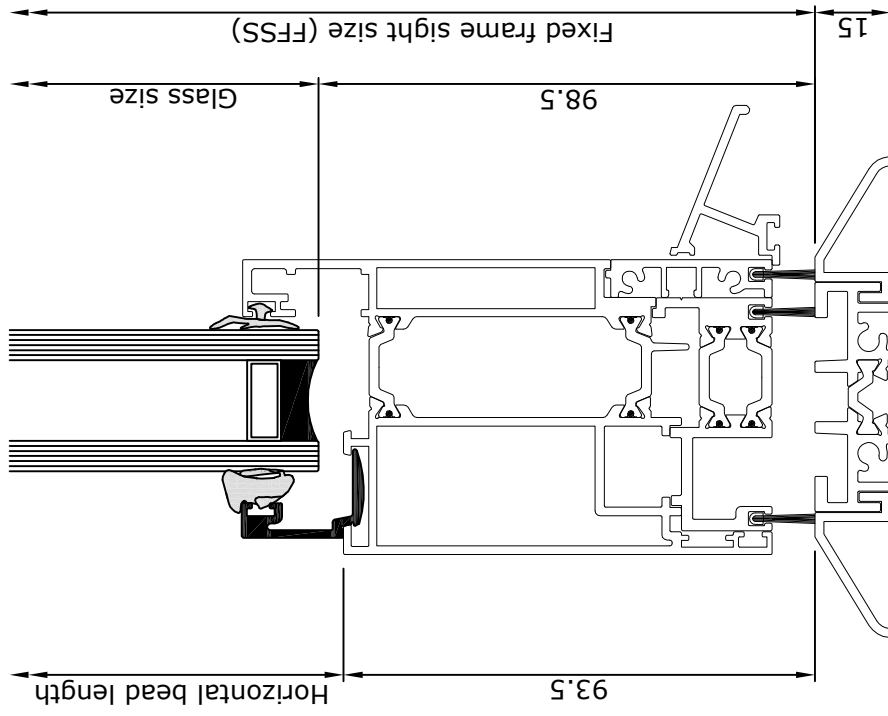
# Fabrication and Cutting Sizes

Beads and Glass Sizes for Single and Double Open-In Doors and Double Open-In Doors with Flush Low Threshold



**System 5-20D / Hi+**

DOOR SYSTEM



**Note :-**  
 All bead lengths are tight sizes.  
 Clearance of not more than 0.5mm should be allowed at each end of the glazing bead.

Threshold  
**0037-0037**  
**0037-169**  
**169-169**

HORIZONTAL BEAD LENGTH

BEAD (HEAD)

## STANDARD SINGLE DOOR SASH

DESCRIPTION	QUANTITY	LENGTH	SECTION	PREPARATION
BEAD (HEAD)	ONE	FFSS less 118mm	VARIOUS	CUT SQUARE BOTH ENDS
BEAD (CILL)	ONE	FFSS less 118mm	VARIOUS	CUT SQUARE BOTH ENDS
BEAD (JAMB)	TWO	FFSS less 192.5mm	VARIOUS	CUT SQUARE BOTH ENDS
GLASS SIZE SINGLE LEAF	ONE	WIDTH = FFSS less 128mm HEIGHT = FFSS less 162.5mm		

## ANTI-FINGERTRAP SINGLE DOOR SASH

DESCRIPTION	QUANTITY	LENGTH	SECTION	PREPARATION
BEAD (HEAD)	ONE	FFSS less 156.5mm	VARIOUS	CUT SQUARE BOTH ENDS
BEAD (CILL)	ONE	FFSS less 156.5mm	VARIOUS	CUT SQUARE BOTH ENDS
BEAD (JAMB)	TWO	FFSS less 192.5mm	VARIOUS	CUT SQUARE BOTH ENDS
GLASS SIZE SINGLE LEAF	ONE	WIDTH = FFSS less 166.5mm HEIGHT = FFSS less 162.5mm		

VERTICAL BEAD LENGTH

BEAD (JAMB)

## STANDARD DOUBLE DOOR SASHES (with equal size sashes)

DESCRIPTION	QUANTITY	LENGTH	SECTION	PREPARATION
BEAD (HEAD)	TWO	FFSS less $\frac{300.5mm}{2}$	VARIOUS	CUT SQUARE BOTH ENDS
BEAD (CILL)	TWO	FFSS less $\frac{300.5mm}{2}$	VARIOUS	CUT SQUARE BOTH ENDS
BEAD (JAMB)	FOUR	FFSS less 192.5mm	VARIOUS	CUT SQUARE BOTH ENDS
GLASS SIZE DOUBLE DOOR	TWO	WIDTH = FFSS less $\frac{320.5mm}{2}$ HEIGHT = FFSS less 162.5mm		

## ANTI-FINGERTRAP DOUBLE DOOR SASHES (with equal size sashes)

DESCRIPTION	QUANTITY	LENGTH	SECTION	PREPARATION
BEAD (HEAD)	TWO	FFSS less $\frac{377.5mm}{2}$	VARIOUS	CUT SQUARE BOTH ENDS
BEAD (CILL)	TWO	FFSS less $\frac{377.5mm}{2}$	VARIOUS	CUT SQUARE BOTH ENDS
BEAD (JAMB)	FOUR	FFSS less 192.5mm	VARIOUS	CUT SQUARE BOTH ENDS
GLASS SIZE DOUBLE DOOR	TWO	WIDTH = FFSS less $\frac{397.5mm}{2}$ HEIGHT = FFSS less 162.5mm		

BEAD (CILL)

**Not to Scale**

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SHEET 520D Hi+ / 4 / 50  
 rev 1

06/11/13

# Fabrication and Cutting Sizes

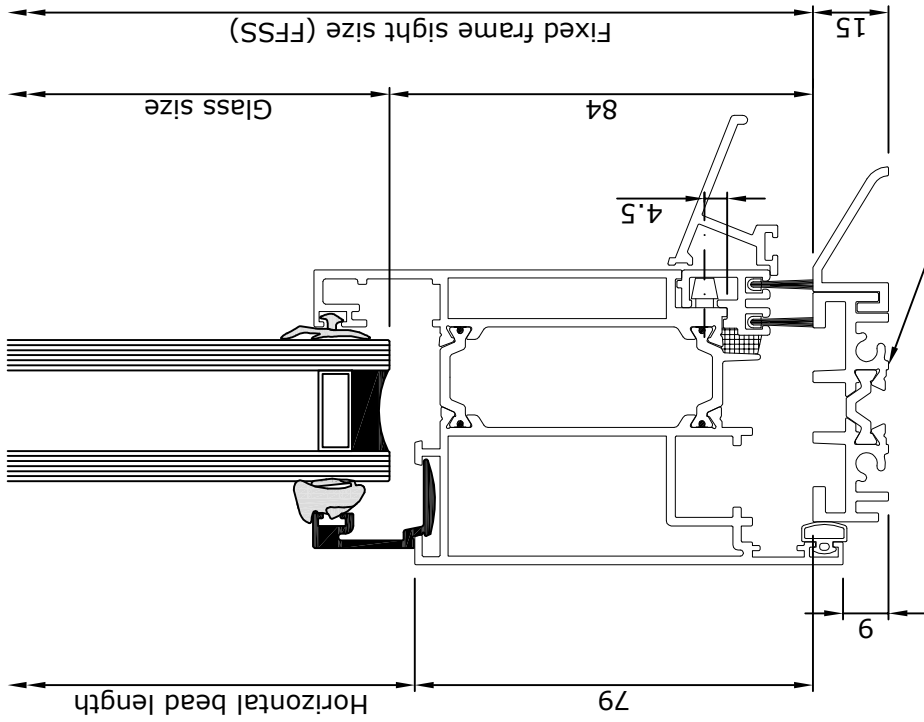
Beads and Glass Sizes for Single and Double Open-In and Double Open-In Doors with Semi Rebated Low Threshold



# System 5-20D / Hi+

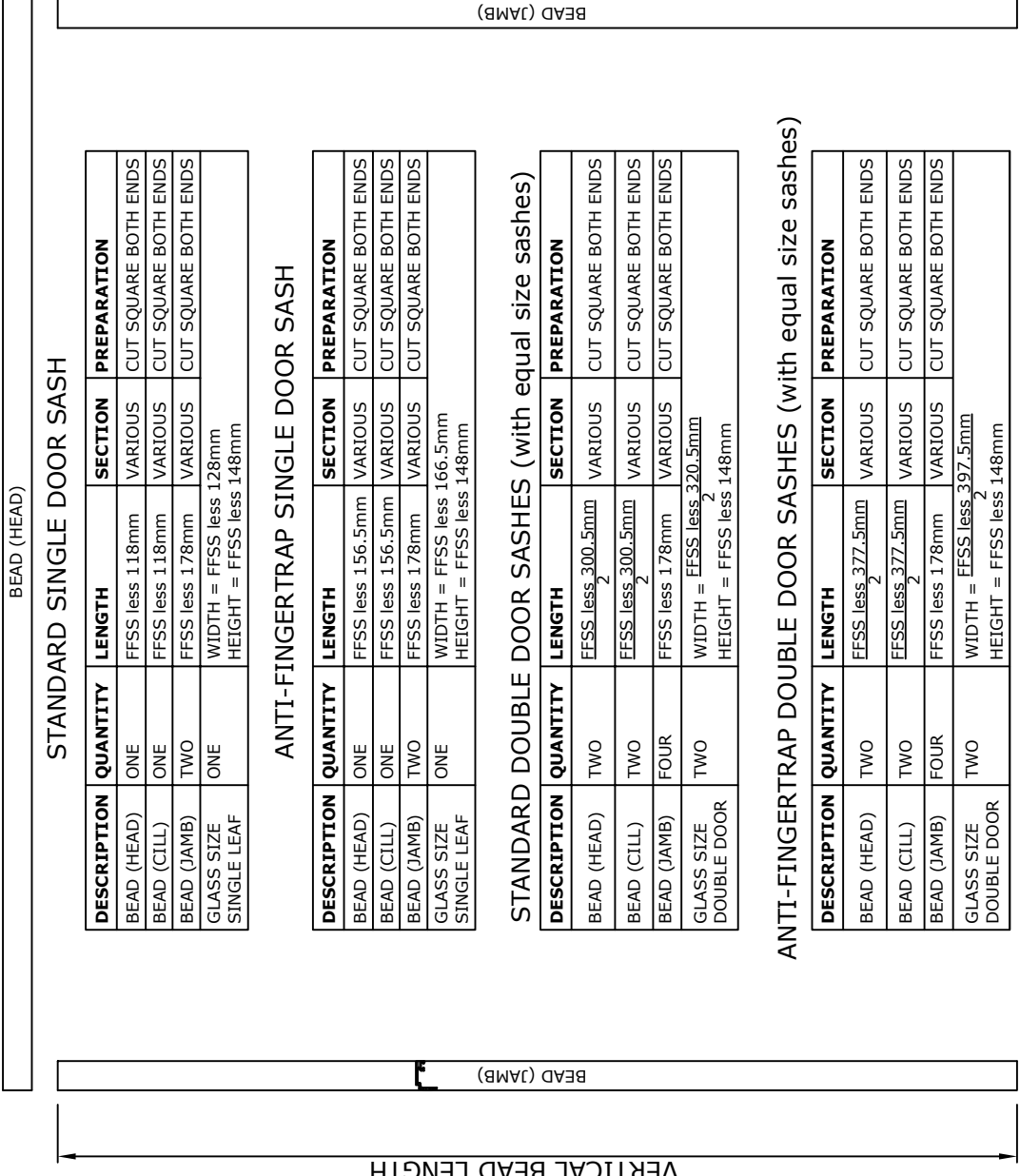
DOOR SYSTEM

HORIZONTAL BEAD LENGTH



Note :-  
 All bead lengths are tight sizes.  
 Clearance of not more than 0.5mm should be allowed at each end of the glazing bead.

Threshold  
**0037-169**  
**169-169**



DESCRIPTION	QUANTITY	LENGTH	SECTION	PREPARATION
BEAD (HEAD)	ONE	FFSS less 118mm	VARIOUS	CUT SQUARE BOTH ENDS
BEAD (CILL)	ONE	FFSS less 118mm	VARIOUS	CUT SQUARE BOTH ENDS
BEAD (JAMB)	TWO	FFSS less 178mm	VARIOUS	CUT SQUARE BOTH ENDS
GLASS SIZE SINGLE LEAF	ONE	WIDTH = FFSS less 128mm HEIGHT = FFSS less 148mm		

DESCRIPTION	QUANTITY	LENGTH	SECTION	PREPARATION
BEAD (HEAD)	ONE	FFSS less 156.5mm	VARIOUS	CUT SQUARE BOTH ENDS
BEAD (CILL)	ONE	FFSS less 156.5mm	VARIOUS	CUT SQUARE BOTH ENDS
BEAD (JAMB)	TWO	FFSS less 178mm	VARIOUS	CUT SQUARE BOTH ENDS
GLASS SIZE SINGLE LEAF	ONE	WIDTH = FFSS less 166.5mm HEIGHT = FFSS less 148mm		

DESCRIPTION	QUANTITY	LENGTH	SECTION	PREPARATION
BEAD (HEAD)	TWO	FFSS less 300.5mm <sub>2</sub>	VARIOUS	CUT SQUARE BOTH ENDS
BEAD (CILL)	TWO	FFSS less 300.5mm <sub>2</sub>	VARIOUS	CUT SQUARE BOTH ENDS
BEAD (JAMB)	FOUR	FFSS less 178mm	VARIOUS	CUT SQUARE BOTH ENDS
GLASS SIZE DOUBLE DOOR	TWO	WIDTH = FFSS less 320.5mm <sub>2</sub> HEIGHT = FFSS less 148mm		

DESCRIPTION	QUANTITY	LENGTH	SECTION	PREPARATION
BEAD (HEAD)	TWO	FFSS less 377.5mm <sub>2</sub>	VARIOUS	CUT SQUARE BOTH ENDS
BEAD (CILL)	TWO	FFSS less 377.5mm <sub>2</sub>	VARIOUS	CUT SQUARE BOTH ENDS
BEAD (JAMB)	FOUR	FFSS less 178mm	VARIOUS	CUT SQUARE BOTH ENDS
GLASS SIZE DOUBLE DOOR	TWO	WIDTH = FFSS less 397.5mm <sub>2</sub> HEIGHT = FFSS less 148mm		

Not to Scale

BEAD (CILL)

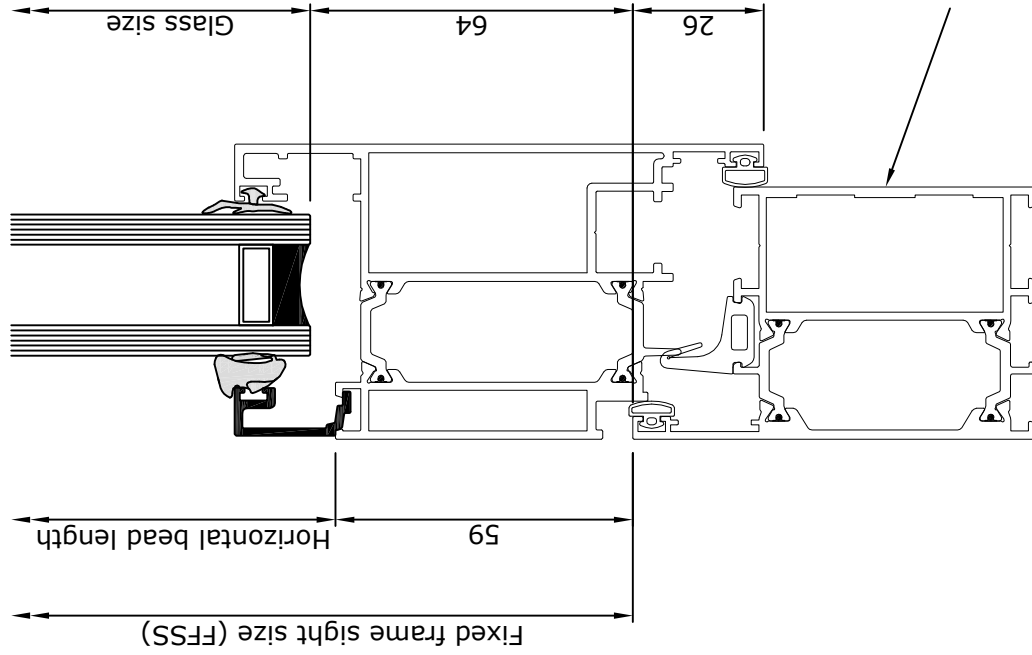
# Fabrication and Cutting Sizes

Beads and Glass Sizes for Single and Double Open-Out Doors with Rebated Threshold



**System 5-20D / Hi+**

DOOR SYSTEM



**Note :-**  
All bead lengths are tight sizes. Clearance of not more than 0.5mm should be allowed at each end of the glazing bead.

**Not to Scale**

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HORIZONTAL BEAD LENGTH



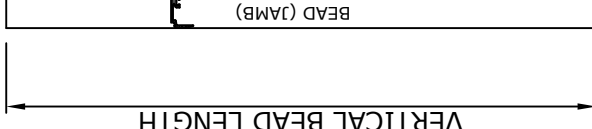
## SINGLE DOOR SASH

DESCRIPTION	QUANTITY	LENGTH	SECTION	PREPARATION
BEAD (HEAD)	ONE	FFSS less 118mm	VARIOUS	CUT SQUARE BOTH ENDS
BEAD (CILL)	ONE	FFSS less 118mm	VARIOUS	CUT SQUARE BOTH ENDS
BEAD (JAMB)	TWO	FFSS less 158mm	VARIOUS	CUT SQUARE BOTH ENDS
GLASS SIZE SINGLE LEAF	ONE	WIDTH = FFSS less 128mm HEIGHT = FFSS less 128mm		

## DOUBLE DOOR SASHES (with equal size sashes)

DESCRIPTION	QUANTITY	LENGTH	SECTION	PREPARATION
BEAD (HEAD)	TWO	$\frac{\text{FFSS less } 300.5\text{mm}}{2}$	VARIOUS	CUT SQUARE BOTH ENDS
BEAD (CILL)	TWO	$\frac{\text{FFSS less } 300.5\text{mm}}{2}$	VARIOUS	CUT SQUARE BOTH ENDS
BEAD (JAMB)	FOUR	FFSS less 158mm	VARIOUS	CUT SQUARE BOTH ENDS
GLASS SIZE DOUBLE DOOR WITH EQUAL SIZE SASHES	TWO	WIDTH = $\frac{\text{FFSS less } 320.5\text{mm}}{2}$ HEIGHT = FFSS less 128.5mm		

VERTICAL BEAD LENGTH

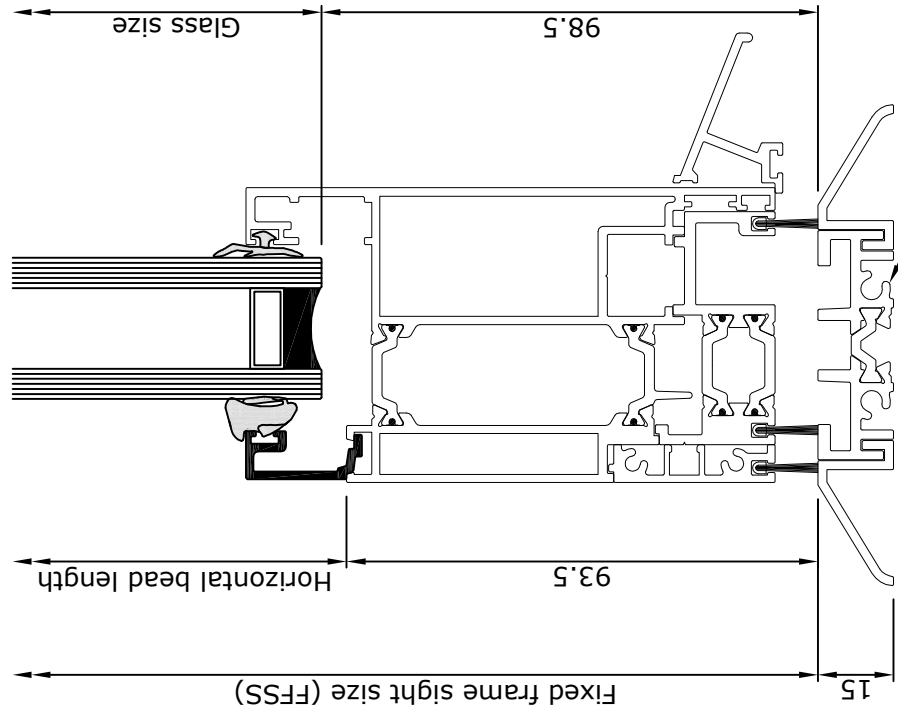


# Fabrication and Cutting Sizes



Beads and Glass Sizes for Single and Double Open-Out Doors and Double Open-Out Doors with Flush Low System 5-20D / Hi+ Threshold

DOOR SYSTEM



Threshold  
**0036-0037**  
**0036-169**  
**0037-0037**  
**0037-169**  
**169-169**

Note :-  
 All bead lengths are tight sizes.  
 Clearance of not more than 0.5mm should be allowed at each end of the glazing bead.

HORIZONTAL BEAD LENGTH



## STANDARD SINGLE DOOR SASH

DESCRIPTION	QUANTITY	LENGTH	SECTION	PREPARATION
BEAD (HEAD)	ONE	FFSS less 118mm	VARIOUS	CUT SQUARE BOTH ENDS
BEAD (CILL)	ONE	FFSS less 118mm	VARIOUS	CUT SQUARE BOTH ENDS
BEAD (JAMB)	TWO	FFSS less 192.5mm	VARIOUS	CUT SQUARE BOTH ENDS
GLASS SIZE SINGLE LEAF	ONE	WIDTH = FFSS less 128mm HEIGHT = FFSS less 162.5mm		

## ANTI-FINGERTRAP SINGLE DOOR SASH

DESCRIPTION	QUANTITY	LENGTH	SECTION	PREPARATION
BEAD (HEAD)	ONE	FFSS less 156.5mm	VARIOUS	CUT SQUARE BOTH ENDS
BEAD (CILL)	ONE	FFSS less 156.5mm	VARIOUS	CUT SQUARE BOTH ENDS
BEAD (JAMB)	TWO	FFSS less 192.5mm	VARIOUS	CUT SQUARE BOTH ENDS
GLASS SIZE SINGLE LEAF	ONE	WIDTH = FFSS less 166.5mm HEIGHT = FFSS less 162.5mm		

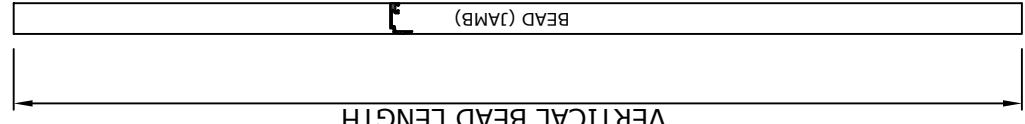
## STANDARD DOUBLE DOOR SASHES (with equal size sashes)

DESCRIPTION	QUANTITY	LENGTH	SECTION	PREPARATION
BEAD (HEAD)	TWO	$\frac{\text{FFSS less } 300.5\text{mm}}{2}$	VARIOUS	CUT SQUARE BOTH ENDS
BEAD (CILL)	TWO	$\frac{\text{FFSS less } 300.5\text{mm}}{2}$	VARIOUS	CUT SQUARE BOTH ENDS
BEAD (JAMB)	FOUR	FFSS less 192.5mm	VARIOUS	CUT SQUARE BOTH ENDS
GLASS SIZE DOUBLE DOOR	TWO	WIDTH = $\frac{\text{FFSS less } 320.5\text{mm}}{2}$ HEIGHT = FFSS less 162.5mm		

## ANTI-FINGERTRAP DOUBLE DOOR SASHES (with equal size sashes)

DESCRIPTION	QUANTITY	LENGTH	SECTION	PREPARATION
BEAD (HEAD)	TWO	$\frac{\text{FFSS less } 377.5\text{mm}}{2}$	VARIOUS	CUT SQUARE BOTH ENDS
BEAD (CILL)	TWO	$\frac{\text{FFSS less } 377.5\text{mm}}{2}$	VARIOUS	CUT SQUARE BOTH ENDS
BEAD (JAMB)	FOUR	FFSS less 192.5mm	VARIOUS	CUT SQUARE BOTH ENDS
GLASS SIZE DOUBLE DOOR	TWO	WIDTH = $\frac{\text{FFSS less } 397.5\text{mm}}{2}$ HEIGHT = FFSS less 162.5mm		

VERTICAL BEAD LENGTH



BEAD (CILL)

Not to Scale

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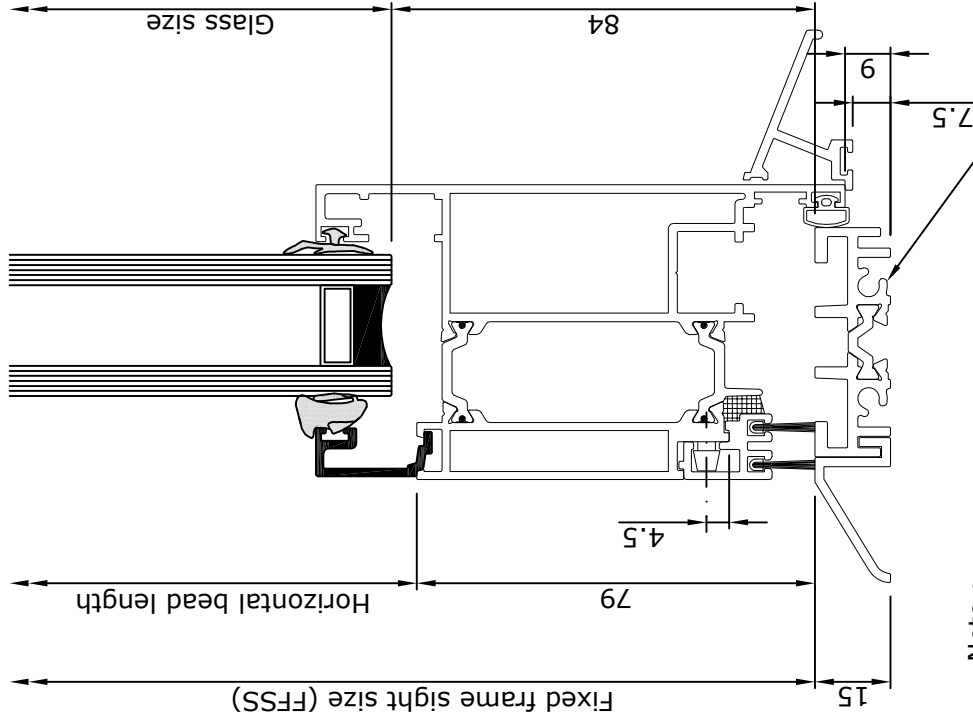
# Fabrication and Cutting Sizes

Beads and Glass Sizes for Single and Double Open-Out Doors with Semi Rebated Low Threshold



## System 5-20D / Hi+

DOOR SYSTEM



Note :-

All bead lengths are tight sizes.  
Clearance of not more than 0.5mm should be allowed at each end of the glazing bead.

Threshold  
**0036-0037**  
**0036-169**  
**0037-0037**  
**0037-169**  
**169-169**



### STANDARD SINGLE DOOR SASH

DESCRIPTION	QUANTITY	LENGTH	SECTION	PREPARATION
BEAD (HEAD)	ONE	FFSS less 118mm	VARIOUS	CUT SQUARE BOTH ENDS
BEAD (CILL)	ONE	FFSS less 118mm	VARIOUS	CUT SQUARE BOTH ENDS
BEAD (JAMB)	TWO	FFSS less 178mm	VARIOUS	CUT SQUARE BOTH ENDS
GLASS SIZE SINGLE LEAF	ONE	WIDTH = FFSS less 128mm HEIGHT = FFSS less 148mm		

### ANTI-FINGERTRAP SINGLE DOOR SASH

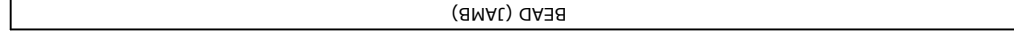
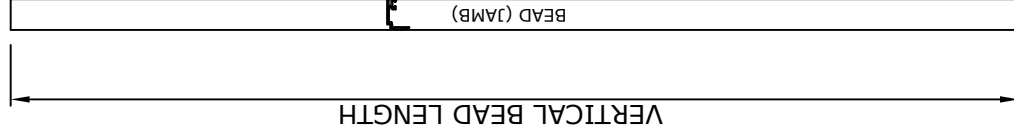
DESCRIPTION	QUANTITY	LENGTH	SECTION	PREPARATION
BEAD (HEAD)	ONE	FFSS less 156.5mm	VARIOUS	CUT SQUARE BOTH ENDS
BEAD (CILL)	ONE	FFSS less 156.5mm	VARIOUS	CUT SQUARE BOTH ENDS
BEAD (JAMB)	TWO	FFSS less 178mm	VARIOUS	CUT SQUARE BOTH ENDS
GLASS SIZE SINGLE LEAF	ONE	WIDTH = FFSS less 166.5mm HEIGHT = FFSS less 148mm		

### STANDARD DOUBLE DOOR SASHES (with equal size sashes)

DESCRIPTION	QUANTITY	LENGTH	SECTION	PREPARATION
BEAD (HEAD)	TWO	$\frac{\text{FFSS less } 300.5\text{mm}}{2}$	VARIOUS	CUT SQUARE BOTH ENDS
BEAD (CILL)	TWO	$\frac{\text{FFSS less } 300.5\text{mm}}{2}$	VARIOUS	CUT SQUARE BOTH ENDS
BEAD (JAMB)	FOUR	FFSS less 178mm	VARIOUS	CUT SQUARE BOTH ENDS
GLASS SIZE DOUBLE DOOR	TWO	WIDTH = $\frac{\text{FFSS less } 320.5\text{mm}}{2}$ HEIGHT = FFSS less 148mm		

### ANTI-FINGERTRAP DOUBLE DOOR SASHES (with equal size sashes)

DESCRIPTION	QUANTITY	LENGTH	SECTION	PREPARATION
BEAD (HEAD)	TWO	$\frac{\text{FFSS less } 377.5\text{mm}}{2}$	VARIOUS	CUT SQUARE BOTH ENDS
BEAD (CILL)	TWO	$\frac{\text{FFSS less } 377.5\text{mm}}{2}$	VARIOUS	CUT SQUARE BOTH ENDS
BEAD (JAMB)	FOUR	FFSS less 178mm	VARIOUS	CUT SQUARE BOTH ENDS
GLASS SIZE DOUBLE DOOR	TWO	WIDTH = $\frac{\text{FFSS less } 397.5\text{mm}}{2}$ HEIGHT = FFSS less 148mm		



BEAD (CILL)

Not to Scale

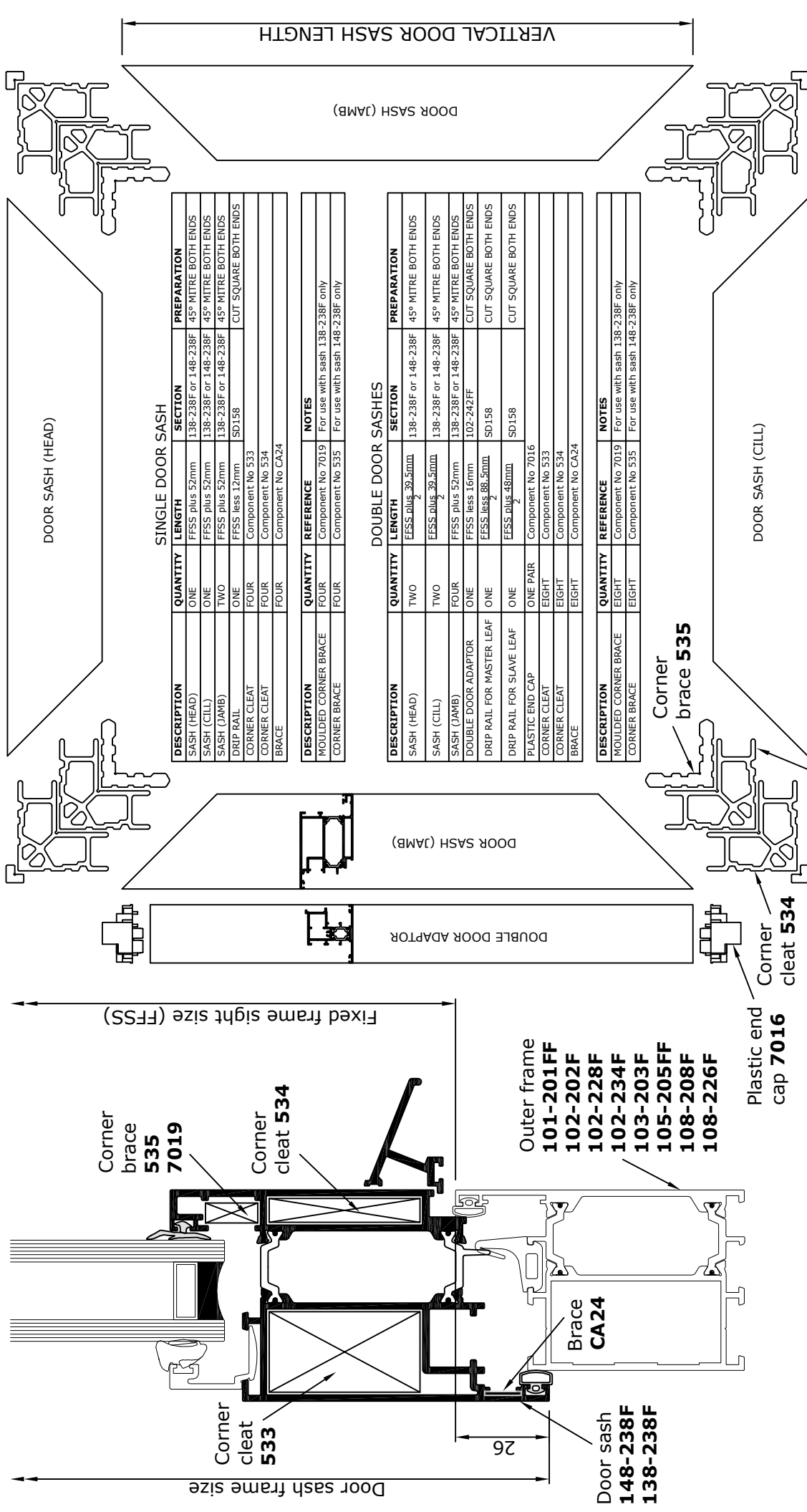
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SHEET 520D Hi+ / 4 / 90  
rev 1

06/11/13

# Fabrication and Cutting Sizes

For Standard Single and Double Open-In Doors with Rebated Meeting Stile **System 5-20D/Hi+** and Threshold



**SINGLE DOOR SASH**

DESCRIPTION	QUANTITY	LENGTH	SECTION	PREPARATION
SASH (HEAD)	ONE	FFSS plus 52mm	138-238F or 148-238F	45° MITRE BOTH ENDS
SASH (CILL)	ONE	FFSS plus 52mm	138-238F or 148-238F	45° MITRE BOTH ENDS
SASH (JAMB)	TWO	FFSS plus 52mm	138-238F or 148-238F	45° MITRE BOTH ENDS
DRIP RAIL	ONE	FFSS less 12mm	SD158	CUT SQUARE BOTH ENDS
CORNER CLEAT	FOUR	Component No 533		
CORNER CLEAT	FOUR	Component No 534		
BRACE	FOUR	Component No CA24		

**DOUBLE DOOR SASHES**

DESCRIPTION	QUANTITY	LENGTH	SECTION	PREPARATION
SASH (HEAD)	TWO	FFSS plus 39.5mm	138-238F or 148-238F	45° MITRE BOTH ENDS
SASH (CILL)	TWO	FFSS plus 39.5mm	138-238F or 148-238F	45° MITRE BOTH ENDS
SASH (JAMB)	FOUR	FFSS plus 52mm	138-238F or 148-238F	45° MITRE BOTH ENDS
DOUBLE DOOR ADAPTOR	ONE	FFSS less 16mm	102-242FF	CUT SQUARE BOTH ENDS
DRIP RAIL FOR MASTER LEAF	ONE	FFSS less 88.5mm	SD158	CUT SQUARE BOTH ENDS
DRIP RAIL FOR SLAVE LEAF	ONE	FFSS plus 48mm	SD158	CUT SQUARE BOTH ENDS
PLASTIC END CAP	ONE PAIR	Component No 7016		
CORNER CLEAT	EIGHT	Component No 533		
CORNER CLEAT	EIGHT	Component No 534		
BRACE	EIGHT	Component No CA24		

DESCRIPTION	QUANTITY	REFERENCE	NOTES
MOULDED CORNER BRACE	EIGHT	Component No 7019	For use with sash 138-238F only
CORNER BRACE	EIGHT	Component No 535	For use with sash 148-238F only

Not to Scale

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# Fabrication and Cutting Sizes

For Standard Single and Double Open-In Doors with Rebated Meeting Stile and Flush Low Threshold



## System 5-20D/Hi+

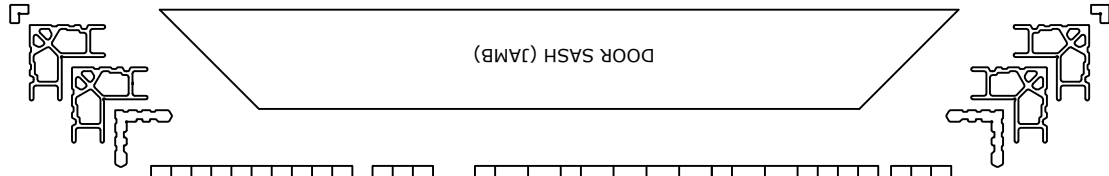
DOOR SYSTEM

HORIZONTAL DOOR SASH LENGTH



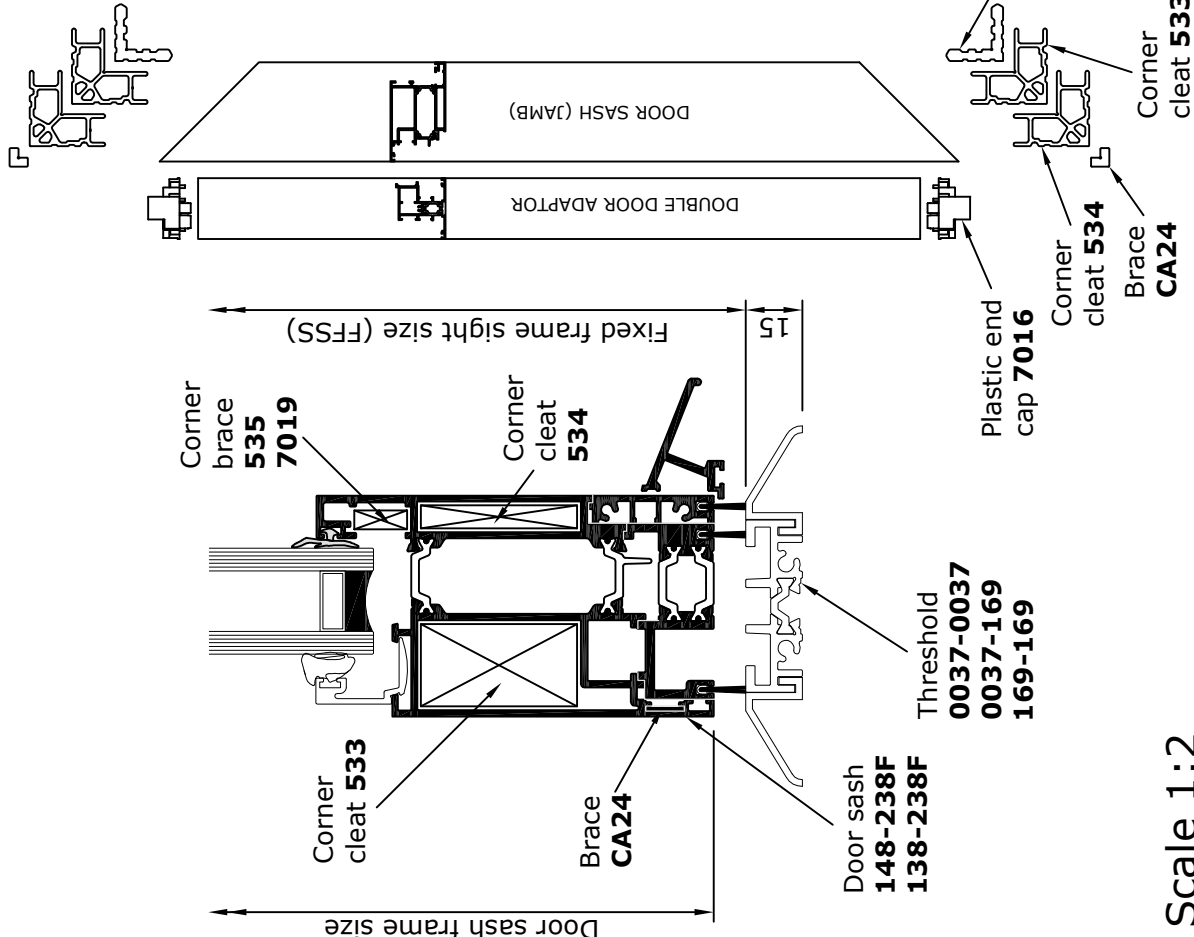
SINGLE DOOR SASH			
DESCRIPTION	QUANTITY	LENGTH	SECTION PREPARATION
SASH (HEAD)	ONE	FFSS plus 52mm	138-238F or 148-238F 45° MITRE BOTH ENDS
SASH (CILL)	ONE	FFSS plus 52mm	138-238F or 148-238F 45° MITRE BOTH ENDS
SASH (JAMB)	TWO	FFSS plus 17.5mm	138-238F or 148-238F 45° MITRE BOTH ENDS
BRUSH SEAL CARRIER	ONE	FFSS plus 33mm	047-048 CUT SQUARE BOTH ENDS
CLIP-ON BRUSH SEAL CARRIER	ONE	FFSS less 12mm	044 CUT SQUARE BOTH ENDS
DRIP RAIL	ONE	FFSS less 12mm	SD158 CUT SQUARE BOTH ENDS
CORNER CLEAT	FOUR	Component No 533	
CORNER CLEAT	FOUR	Component No 534	
BRACE	FOUR	Component No CA24	

VERTICAL DOOR SASH LENGTH



DOUBLE DOOR SASHES			
DESCRIPTION	QUANTITY	LENGTH	SECTION PREPARATION
SASH (HEAD)	TWO	FFSS plus 39.5mm	138-238F or 148-238F 45° MITRE BOTH ENDS
SASH (CILL)	TWO	FFSS plus 39.5mm	138-238F or 148-238F 45° MITRE BOTH ENDS
SASH (JAMB)	FOUR	FFSS plus 17.5mm	138-238F or 148-238F 45° MITRE BOTH ENDS
BRUSH SEAL CARRIER FOR MASTER LEAF	ONE	FFSS	047-048 CUT SQUARE BOTH ENDS
BRUSH SEAL CARRIER FOR SLAVE LEAF	ONE	FFSS plus 85.5mm	047-048 CUT SQUARE BOTH ENDS
MASTER LEAF	ONE	FFSS less 88.5mm	044 CUT SQUARE BOTH ENDS
CLIP-ON BRUSH SEAL CARRIER FOR MASTER LEAF	ONE	FFSS plus 48mm	044 CUT SQUARE BOTH ENDS
CLIP-ON BRUSH SEAL CARRIER FOR SLAVE LEAF	ONE	FFSS less 51mm	102-242FF CUT SQUARE BOTH ENDS
DOUBLE DOOR ADAPTOR	ONE	FFSS less 88.5mm	SD158 CUT SQUARE BOTH ENDS
DRIP RAIL FOR MASTER LEAF	ONE	FFSS plus 48mm	SD158 CUT SQUARE BOTH ENDS
DRIP RAIL FOR SLAVE LEAF	ONE	Component No 7016	
PLASTIC END CAP	ONE PAIR	Component No 7016	
CORNER CLEAT	EIGHT	Component No 533	
CORNER CLEAT	EIGHT	Component No 534	
BRACE	EIGHT	Component No CA24	

NOTES			
DESCRIPTION	QUANTITY	REFERENCE	NOTES
MOULDED CORNER BRACE	EIGHT	Component No 7019	For use with sash 138-238F only
CORNER BRACE	EIGHT	Component No 535	For use with sash 148-238F only



Scale 1:2

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# Fabrication and Cutting Sizes

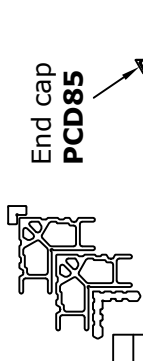
For Anti-fingertrap Single and Double Open-In Doors with Rebated Meeting Stile and Flush Low Threshold



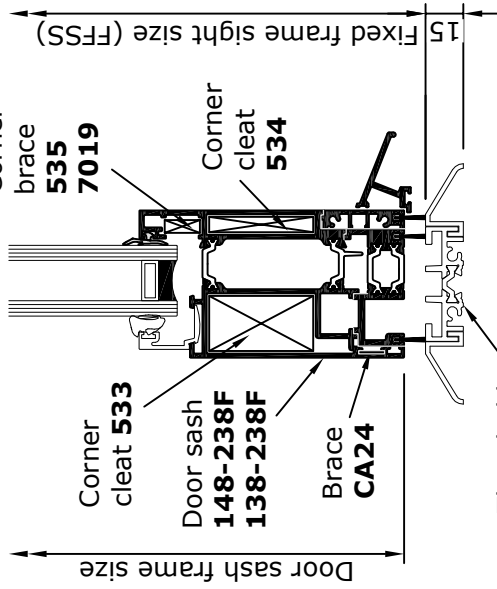
**System 5-20D / Hi+**

HORIZONTAL DOOR SASH LENGTH

DOOR SYSTEM



DOOR SASH (HEAD)



Threshold  
**0037-0037**  
**0037-169**  
**169-169**

Outer frame  
**105-205FF**  
**108-208F**  
**108-226F**

Fixed frame sight size (FFSS)

Plastic end cap **7016**  
 Corner cleat **534**  
 Corner cleat **533**  
 Brace **CA24**

ANTI-FINGERTRAP SINGLE DOOR			
DESCRIPTION	QUANTITY	LENGTH	SECTION PREPARATION
SASH (HEAD)	ONE	FFSS plus 13.5mm	138-238F or 148-238F 45° MITRE BOTH ENDS
SASH (CILL)	ONE	FFSS plus 13.5mm	138-238F or 148-238F 45° MITRE BOTH ENDS
SASH (JAMB)	TWO	FFSS plus 17.5mm	138-238F or 148-238F 45° MITRE BOTH ENDS
BRUSH SEAL CARRIER	ONE	FFSS plus 4mm	047-048 SEE DETAIL
CLIP-ON BRUSH SEAL CARRIER	ONE	FFSS less 18.5mm	044 SEE DETAIL
ANTI-FINGERTRAP ADAPTOR	ONE	FFSS plus 20mm	051 CUT SQUARE BOTH ENDS
ANTI-FINGERTRAP GASKET (FRAME)	ONE	FFSS plus 20mm	PCD95 CUT SQUARE BOTH ENDS
ANTI-FINGERTRAP ADAPTOR	ONE	FFSS plus 9.5mm	052 SEE DETAIL
ANTI-FINGERTRAP GASKET (SASH)	ONE	FFSS	PCD95 CUT SQUARE BOTH ENDS
ANTI-FINGERTRAP ADAPTOR	ONE	FFSS less 13mm	053 SEE DETAIL
DRIP RAIL	ONE	FFSS less 26mm	SD158 CUT SQUARE BOTH ENDS
END CAP	ONE PAIR	Component No PCD85	
CORNER CLEAT	FOUR	Component No 533	
CORNER CLEAT	FOUR	Component No 534	
CORNER BRACE	FOUR	Component No 7019 (using sash 138-238F) or 535 (using sash 148-238F)	
BRACE	FOUR	Component No CA24	

### ANTI-FINGERTRAP DOUBLE DOOR

DESCRIPTION	QUANTITY	LENGTH	SECTION PREPARATION
SASH (HEAD)	TWO	FFSS less 37.5mm	138-238F or 148-238F 45° MITRE BOTH ENDS
SASH (CILL)	TWO	FFSS less 37.5mm	138-238F or 148-238F 45° MITRE BOTH ENDS
SASH (JAMB)	FOUR	FFSS plus 17.5mm	138-238F or 148-238F 45° MITRE BOTH ENDS
BRUSH SEAL CARRIER FOR MASTER LEAF	ONE	FFSS less 56mm	047-048 SEE DETAIL
BRUSH SEAL CARRIER FOR SLAVE LEAF	ONE	FFSS plus 27.5mm	047-048 SEE DETAIL
CLIP-ON BRUSH SEAL CARRIER FOR MASTER LEAF	ONE	FFSS less 101.5mm	044 SEE DETAIL
CLIP-ON BRUSH SEAL CARRIER FOR SLAVE LEAF	ONE	FFSS plus 39.5mm	044 SEE DETAIL
ANTI-FINGERTRAP ADAPTOR	TWO	FFSS plus 20mm	051 CUT SQUARE BOTH ENDS
ANTI-FINGERTRAP GASKET (FRAME)	TWO	FFSS plus 20mm	PCD95 CUT SQUARE BOTH ENDS
ANTI-FINGERTRAP ADAPTOR	TWO	FFSS plus 9.5mm	052 SEE DETAIL
ANTI-FINGERTRAP GASKET (SASH)	TWO	FFSS	PCD95 CUT SQUARE BOTH ENDS
ANTI-FINGERTRAP ADAPTOR	TWO	FFSS less 13mm	053 SEE DETAIL
DOUBLE DOOR ADAPTOR	ONE	FFSS less 51mm	102-242FF CUT SQUARE BOTH ENDS
DRIP RAIL FOR MASTER LEAF	ONE	FFSS less 116.5mm	SD158 CUT SQUARE BOTH ENDS
DRIP RAIL FOR SLAVE LEAF	ONE	FFSS plus 24.5mm	SD158 CUT SQUARE BOTH ENDS
END CAP	ONE PAIR	Component No PCD85	
PLASTIC END CAP	ONE PAIR	Component No 7016	
CORNER CLEAT	EIGHT	Component No 533	
CORNER CLEAT	EIGHT	Component No 534	
CORNER BRACE	EIGHT	Component No 7019 (using sash 138-238F) or 535 (using sash 148-238F)	
BRACE	EIGHT	Component No CA24	



DOOR SASH (CILL)

Corner brace **535**

CLIP-ON BRUSH SEAL CARRIER

DRIP RAIL

BRUSH SEAL CARRIER

Scale 1:3

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SHEET 520D Hi+ / 4 / 120  
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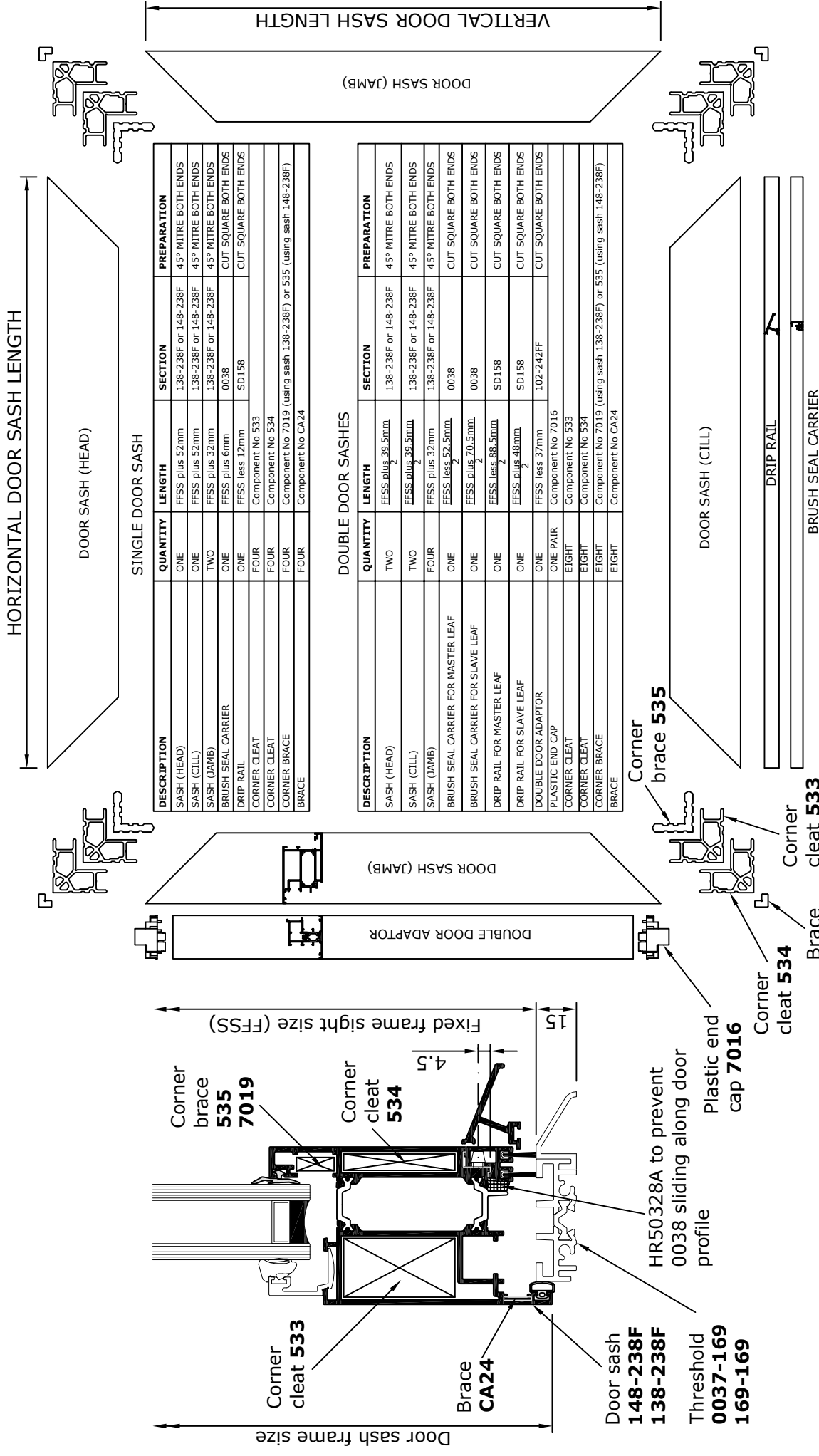
# Fabrication and Cutting Sizes

For Standard Single and Double Open-In Doors with Rebated Meeting Stile and Semi-Rebated Low Threshold



## System 5-20D/Hi+

DOOR SYSTEM



DESCRIPTION	QUANTITY	LENGTH	SECTION	PREPARATION
SASH (HEAD)	ONE	FFSS plus 52mm	138-238F or 148-238F	45° MITRE BOTH ENDS
SASH (CILL)	ONE	FFSS plus 52mm	138-238F or 148-238F	45° MITRE BOTH ENDS
SASH (JAMB)	TWO	FFSS plus 32mm	138-238F or 148-238F	45° MITRE BOTH ENDS
BRUSH SEAL CARRIER	ONE	FFSS plus 6mm	0038	CUT SQUARE BOTH ENDS
DRIP RAIL	ONE	FFSS less 12mm	SD158	CUT SQUARE BOTH ENDS
CORNER CLEAT	FOUR	Component No 533		
CORNER BRACE	FOUR	Component No 534		
CORNER BRACE	FOUR	Component No 7019 (using sash 138-238F) or 535 (using sash 148-238F)		
BRACE	FOUR	Component No CA24		

DESCRIPTION	QUANTITY	LENGTH	SECTION	PREPARATION
SASH (HEAD)	TWO	FFSS plus 39.5mm	138-238F or 148-238F	45° MITRE BOTH ENDS
SASH (CILL)	TWO	FFSS plus 39.5mm	138-238F or 148-238F	45° MITRE BOTH ENDS
SASH (JAMB)	FOUR	FFSS plus 32mm	138-238F or 148-238F	45° MITRE BOTH ENDS
BRUSH SEAL CARRIER FOR MASTER LEAF	ONE	FFSS less 52.5mm	0038	CUT SQUARE BOTH ENDS
BRUSH SEAL CARRIER FOR SLAVE LEAF	ONE	FFSS plus 70.5mm	0038	CUT SQUARE BOTH ENDS
DRIP RAIL FOR MASTER LEAF	ONE	FFSS less 88.5mm	SD158	CUT SQUARE BOTH ENDS
DRIP RAIL FOR SLAVE LEAF	ONE	FFSS plus 48mm	SD158	CUT SQUARE BOTH ENDS
DOUBLE DOOR ADAPTOR	ONE	FFSS less 37mm	102-242FF	CUT SQUARE BOTH ENDS
PLASTIC END CAP	ONE PAIR	Component No 7016		
CORNER CLEAT	EIGHT	Component No 533		
CORNER CLEAT	EIGHT	Component No 534		
CORNER BRACE	EIGHT	Component No 7019 (using sash 138-238F) or 535 (using sash 148-238F)		
BRACE	EIGHT	Component No CA24		

Scale 1:2

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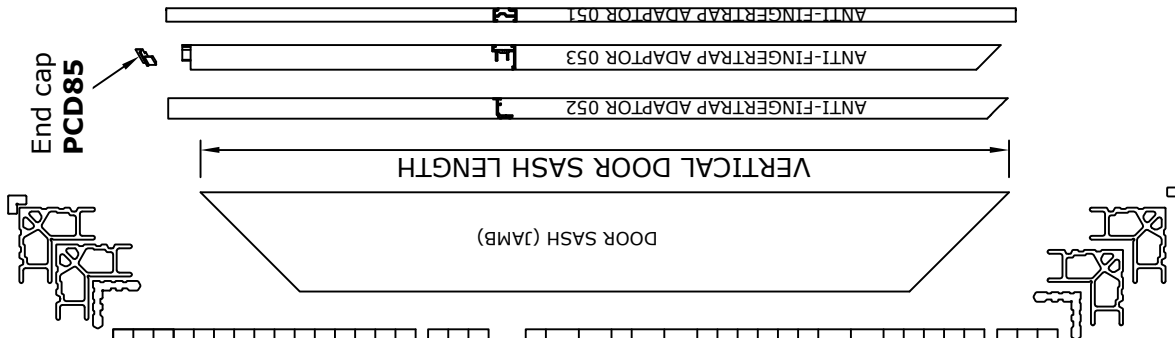
# Fabrication and Cutting Sizes

For Anti-fingertrap Single and Double Open-In Doors with Rebated Meeting Stile and Semi-Rebated Low Threshold



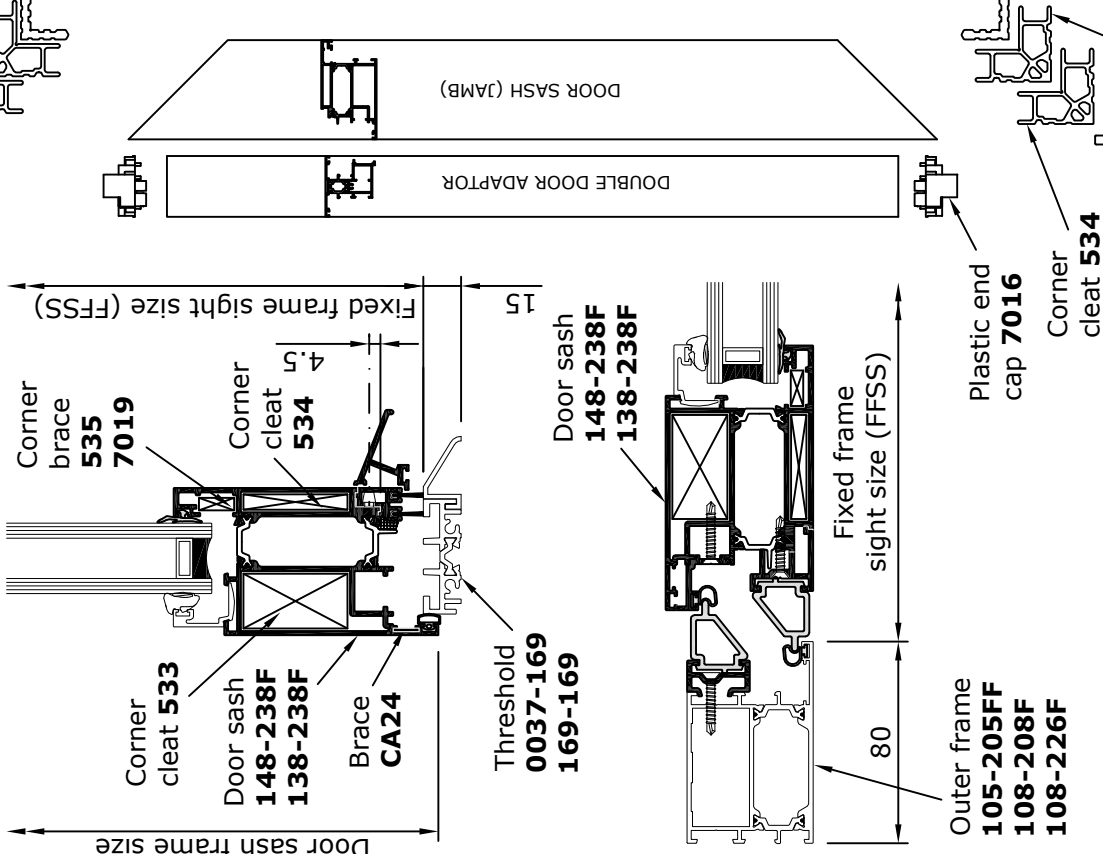
## System 5-20D / Hi+

DOOR SYSTEM



SINGLE DOOR SASH			
DESCRIPTION	QUANTITY	LENGTH	SECTION PREPARATION
SASH (HEAD)	ONE	FFSS plus 13.5mm	138-238F or 148-238F 45° MITRE BOTH ENDS
SASH (CILL)	ONE	FFSS plus 13.5mm	138-238F or 148-238F 45° MITRE BOTH ENDS
SASH (JAMB)	TWO	FFSS plus 32mm	138-238F or 148-238F 45° MITRE BOTH ENDS
BRUSH SEAL CARRIER	ONE	FFSS less 24mm	0038 SEE DETAIL
ANTI-FINGERTRAP ADAPTOR	ONE	FFSS plus 20mm	051 CUT SQUARE BOTH ENDS
ANTI-FINGERTRAP GASKET (FRAME)	ONE	FFSS plus 20mm	PCD95 CUT SQUARE BOTH ENDS
ANTI-FINGERTRAP ADAPTOR	ONE	FFSS plus 16mm	052 CUT SQUARE BOTH ENDS
ANTI-FINGERTRAP GASKET (SASH)	ONE	FFSS	PCD95 CUT SQUARE BOTH ENDS
ANTI-FINGERTRAP ADAPTOR	ONE	FFSS plus 1.5mm	053 SEE DETAIL
DRIP RAIL	ONE	FFSS less 26mm	SD158 CUT SQUARE BOTH ENDS
END CAP	ONE PAIR	Component No PCD85	
CORNER CLEAT	FOUR	Component No 533	
CORNER CLEAT	FOUR	Component No 534	
BRACE	FOUR	Component No CA24	
DESCRIPTION	QUANTITY	REFERENCE	NOTES
MOULDED CORNER BRACE	FOUR	Component No 7019	For use with sash 138-238F only
CORNER BRACE	FOUR	Component No 535	For use with sash 148-238F only

DOUBLE DOOR SASHES			
DESCRIPTION	QUANTITY	LENGTH	SECTION PREPARATION
SASH (HEAD)	TWO	FFSS less 37.5mm	138-238F or 148-238F 45° MITRE BOTH ENDS
SASH (CILL)	TWO	FFSS less 37.5mm	138-238F or 148-238F 45° MITRE BOTH ENDS
SASH (JAMB)	FOUR	FFSS plus 32mm	138-238F or 148-238F 45° MITRE BOTH ENDS
BRUSH SEAL CARRIER FOR MASTER LEAF	ONE	FFSS less 112.5mm	0038 SEE DETAIL
BRUSH SEAL CARRIER FOR SLAVE LEAF	ONE	FFSS plus 10.5mm	0038 SEE DETAIL
ANTI-FINGERTRAP ADAPTOR	TWO	FFSS plus 20mm	051 CUT SQUARE BOTH ENDS
ANTI-FINGERTRAP GASKET (FRAME)	TWO	FFSS plus 20mm	PCD95 CUT SQUARE BOTH ENDS
ANTI-FINGERTRAP ADAPTOR	TWO	FFSS plus 16mm	052 CUT SQUARE BOTH ENDS
ANTI-FINGERTRAP GASKET (SASH)	TWO	FFSS	PCD95 CUT SQUARE BOTH ENDS
DOUBLE DOOR ADAPTOR	ONE	FFSS less 51mm	102-242FF SEE DETAIL
DRIP RAIL FOR MASTER LEAF	ONE	FFSS less 116.5mm	SD158 CUT SQUARE BOTH ENDS
DRIP RAIL FOR SLAVE LEAF	ONE	FFSS plus 24.5mm	SD158 CUT SQUARE BOTH ENDS
END CAP	ONE PAIR	Component No PCD85	
PLASTIC END CAP	ONE PAIR	Component No 7016	
CORNER CLEAT	EIGHT	Component No 533	
CORNER CLEAT	EIGHT	Component No 534	
BRACE	EIGHT	Component No CA24	
DESCRIPTION	QUANTITY	REFERENCE	NOTES
MOULDED CORNER BRACE	EIGHT	Component No 7019	For use with sash 138-238F only
CORNER BRACE	EIGHT	Component No 535	For use with sash 148-238F only



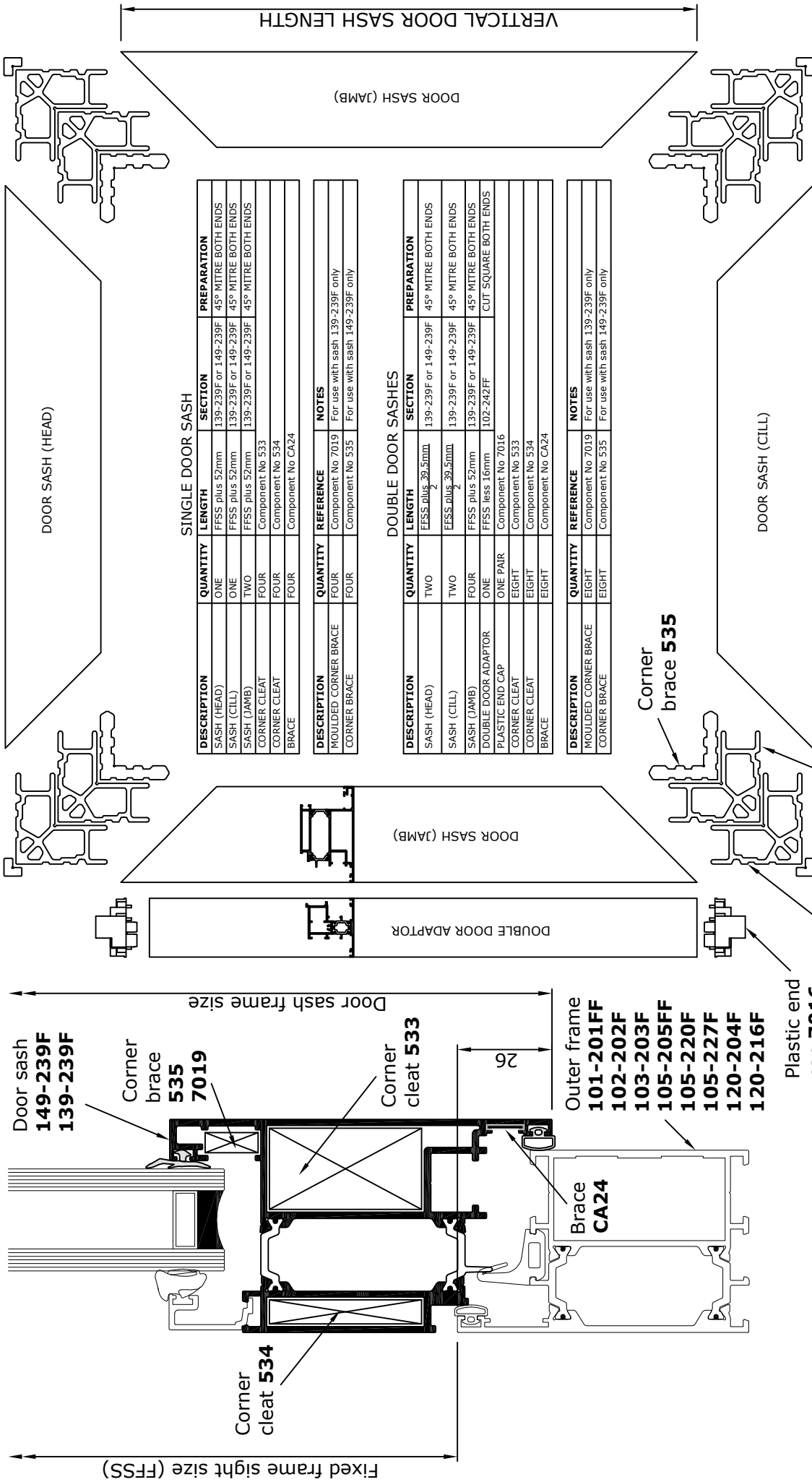
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# Fabrication and Cutting Sizes



For Standard Single and Double Open-Out Doors with Rebated Meeting Stile **System 5-20D/Hi+** and Threshold



### SINGLE DOOR SASH

DESCRIPTION	QUANTITY	LENGTH	SECTION	PREPARATION
SASH (HEAD)	ONE	FFSS plus 52mm	139-239F or 149-239F	45° MITRE BOTH ENDS
SASH (CILL)	ONE	FFSS plus 52mm	139-239F or 149-239F	45° MITRE BOTH ENDS
SASH (JAMB)	TWO	FFSS plus 52mm	139-239F or 149-239F	45° MITRE BOTH ENDS
CORNER CLEAT	FOUR	Component No 533		
CORNER CLEAT BRACE	FOUR	Component No 534		

DESCRIPTION	QUANTITY	REFERENCE	NOTES
MOULDED CORNER BRACE	FOUR	Component No 7019	For use with sash 139-239F only
CORNER BRACE	FOUR	Component No 535	For use with sash 149-239F only

### DOUBLE DOOR SASHES

DESCRIPTION	QUANTITY	LENGTH	SECTION	PREPARATION
SASH (HEAD)	TWO	FFSS plus 39.5mm	139-239F or 149-239F	45° MITRE BOTH ENDS
SASH (CILL)	TWO	FFSS plus 39.5mm	139-239F or 149-239F	45° MITRE BOTH ENDS
SASH (JAMB)	FOUR	FFSS plus 52mm	139-239F or 149-239F	45° MITRE BOTH ENDS
DOUBLE DOOR ADAPTOR	ONE	FFSS less 16mm	102-242FF	CUT SQUARE BOTH ENDS
PLASTIC END CAP	ONE PAIR	Component No 7016		
CORNER CLEAT	EIGHT	Component No 533		
CORNER CLEAT BRACE	EIGHT	Component No 534		

DESCRIPTION	QUANTITY	REFERENCE	NOTES
MOULDED CORNER BRACE	EIGHT	Component No 7019	For use with sash 139-239F only
CORNER BRACE	EIGHT	Component No 535	For use with sash 149-239F only

Not to Scale

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SHEET 520D Hi+ / 4 / 150  
rev 1  
06/11/13

# Fabrication and Cutting Sizes

For Standard Single and Double Open-Out Doors with Rebated Meeting Stile  
and Flush Low Threshold



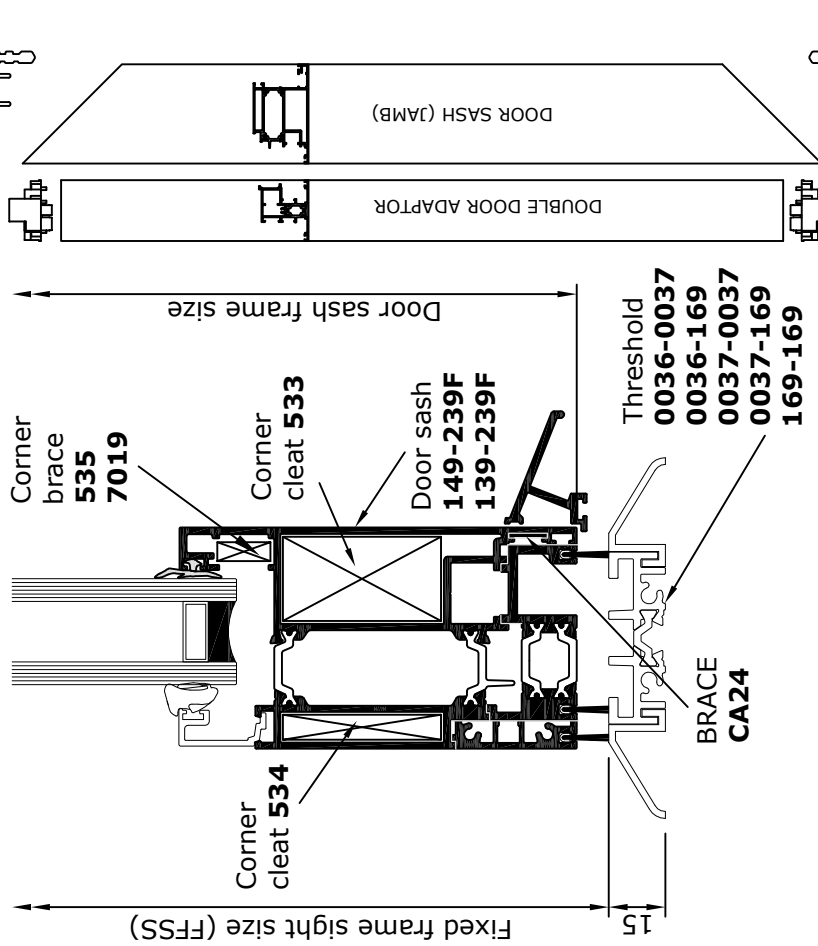
**System 5-20D/Hi+**

DOOR SYSTEM

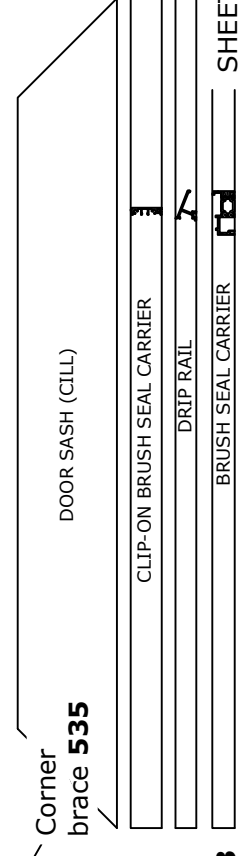
HORIZONTAL DOOR SASH LENGTH



SINGLE DOOR SASH			
DESCRIPTION	QUANTITY	LENGTH	SECTION PREPARATION
SASH (HEAD)	ONE	FFSS plus 52mm	139-239F or 149-239F 45° MITRE BOTH ENDS
SASH (CILL)	ONE	FFSS plus 52mm	139-239F or 149-239F 45° MITRE BOTH ENDS
SASH (JAMB)	TWO	FFSS plus 17.5mm	139-239F or 149-239F 45° MITRE BOTH ENDS
BRUSH SEAL CARRIER	ONE	FFSS plus 33mm	047-048 CUT SQUARE BOTH ENDS
CLIP-ON BRUSH SEAL CARRIER	ONE	FFSS less 12mm	044 CUT SQUARE BOTH ENDS
DRIP RAIL	ONE	FFSS less 52mm*	SD158 CUT SQUARE BOTH ENDS
CORNER CLEAT	FOUR	Component No 533	
CORNER CLEAT	FOUR	Component No 534	
BRACE	FOUR	Component No CA24	
DESCRIPTION REFERENCE NOTES			
MOULDED CORNER BRACE	FOUR	Component No 7019	For use with sash 139-239F only
CORNER BRACE	FOUR	Component No 535	For use with sash 149-239F only



DOUBLE DOOR SASHES			
DESCRIPTION	QUANTITY	LENGTH	SECTION PREPARATION
SASH (HEAD)	TWO	FFSS plus 39.5mm	139-239F or 149-239F 45° MITRE BOTH ENDS
SASH (CILL)	TWO	FFSS plus 39.5mm	139-239F or 149-239F 45° MITRE BOTH ENDS
SASH (JAMB)	FOUR	FFSS plus 17.5mm	139-239F or 149-239F 45° MITRE BOTH ENDS
BRUSH SEAL CARRIER FOR MASTER LEAF	ONE	FFSS	047-048 CUT SQUARE BOTH ENDS
BRUSH SEAL CARRIER FOR SLAVE LEAF	ONE	FFSS plus 85.5mm	047-048 CUT SQUARE BOTH ENDS
CLIP-ON BRUSH SEAL CARRIER FOR MASTER LEAF	ONE	FFSS less 88.5mm	044 CUT SQUARE BOTH ENDS
CLIP-ON BRUSH SEAL CARRIER FOR SLAVE LEAF	ONE	FFSS plus 48mm	044 CUT SQUARE BOTH ENDS
DOUBLE DOOR ADAPTOR	ONE	FFSS less 51mm	102-242FF CUT SQUARE BOTH ENDS
DRIP RAIL FOR MASTER LEAF	ONE	FFSS plus 39mm*	SD158 CUT SQUARE BOTH ENDS
DRIP RAIL FOR SLAVE LEAF	ONE	FFSS plus 39mm*	SD158 CUT SQUARE BOTH ENDS
PLASTIC END CAP	ONE PAIR	Component No 7016	
CORNER CLEAT	EIGHT	Component No 533	
CORNER CLEAT	EIGHT	Component No 534	
BRACE	EIGHT	Component No CA24	
DESCRIPTION REFERENCE NOTES			
MOULDED CORNER BRACE	EIGHT	Component No 7019	For use with sash 139-239F only
CORNER BRACE	EIGHT	Component No 535	For use with sash 149-239F only



\* Drip rail dimension may need to be reduced to suit site conditions and outer frame used. See "Drip Rail Applications" sheet.

Scale 1:2

SHEET 520D Hi+ / 4 / 160

01/04/14

rev 2

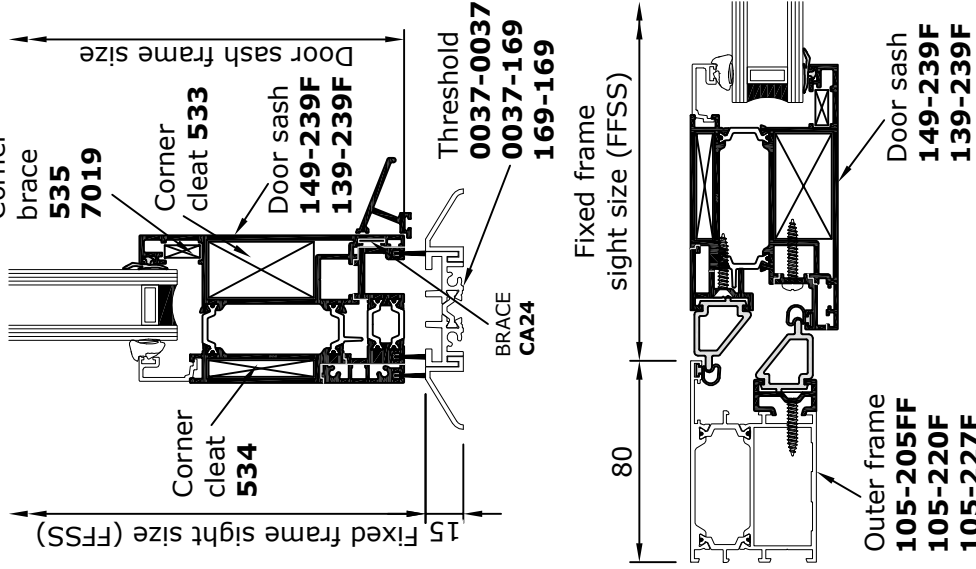
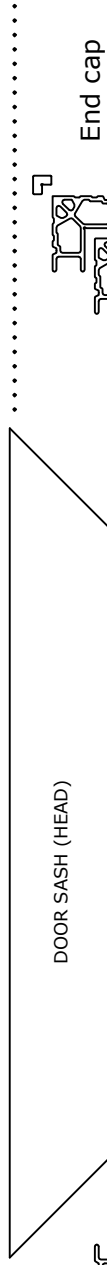
# Fabrication and Cutting Sizes



For Anti-fingertrap Single and Double Open-Out Doors with Rebated Meeting System 5-20D / Hi+ Stile and Flush Low Threshold

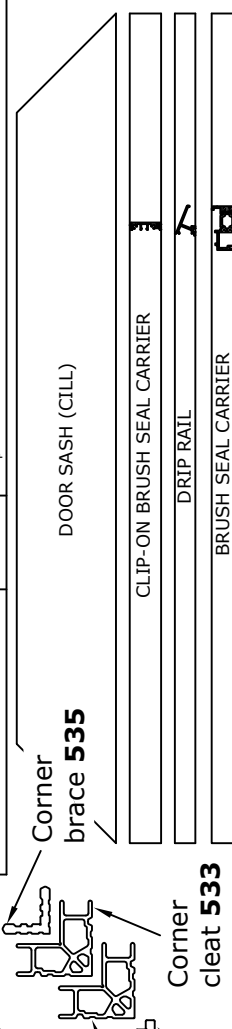
HORIZONTAL DOOR SASH LENGTH

DOOR SYSTEM



ANTI-FINGERTRAP SINGLE DOOR			
DESCRIPTION	QUANTITY	LENGTH	PREPARATION
SASH (HEAD)	ONE	FFSS plus 13.5mm	139-239F or 149-239F 45° MITRE BOTH ENDS
SASH (CILL)	ONE	FFSS plus 13.5mm	139-239F or 149-239F 45° MITRE BOTH ENDS
SASH (JAMB)	TWO	FFSS plus 17.5mm	139-239F or 149-239F 45° MITRE BOTH ENDS
BRUSH SEAL CARRIER	ONE	FFSS plus 4mm	047-048 SEE DETAIL
CLIP ON BRUSH SEAL CARRIER	ONE	FFSS less 18.5mm	044 SEE DETAIL
ANTI-FINGERTRAP ADAPTOR	ONE	FFSS plus 20mm	051 CUT SQUARE BOTH ENDS
ANTI-FINGERTRAP GASKET (FRAME)	ONE	FFSS plus 20mm	PCD95 CUT SQUARE BOTH ENDS
ANTI-FINGERTRAP ADAPTOR	ONE	FFSS plus 9.5mm	052 SEE DETAIL
ANTI-FINGERTRAP GASKET (SASH)	ONE	FFSS	PCD95 CUT SQUARE BOTH ENDS
ANTI-FINGERTRAP ADAPTOR	ONE	FFSS less 13mm	053 SEE DETAIL
END CAP	ONE PAIR	FFSS plus 13.5mm*	SD158 CUT SQUARE BOTH ENDS
CORNER CLEAT	FOUR	Component No PCD85	
CORNER CLEAT	FOUR	Component No 533	
CORNER BRACE	FOUR	Component No 7019 (using sash 139-239F) or 535 (using sash 149-239F)	
BRACE	FOUR	Component No CA24	

ANTI-FINGERTRAP DOUBLE DOOR			
DESCRIPTION	QUANTITY	LENGTH	PREPARATION
SASH (HEAD)	TWO	FFSS less 37.5mm	139-239F or 149-239F 45° MITRE BOTH ENDS
SASH (CILL)	TWO	FFSS less 37.5mm	139-239F or 149-239F 45° MITRE BOTH ENDS
SASH (JAMB)	FOUR	FFSS plus 17.5mm	139-239F or 149-239F 45° MITRE BOTH ENDS
BRUSH SEAL CARRIER FOR MASTER LEAF	ONE	FFSS less 56mm	047-048 SEE DETAIL
BRUSH SEAL CARRIER FOR SLAVE LEAF	ONE	FFSS plus 27.5mm	047-048 SEE DETAIL
CLIP ON BRUSH SEAL CARRIER FOR MASTER LEAF	ONE	FFSS less 101.5mm	044 SEE DETAIL
CLIP ON BRUSH SEAL CARRIER FOR SLAVE LEAF	ONE	FFSS plus 39.5mm	044 SEE DETAIL
ANTI-FINGERTRAP ADAPTOR	TWO	FFSS plus 20mm	051 CUT SQUARE BOTH ENDS
ANTI-FINGERTRAP GASKET (FRAME)	TWO	FFSS plus 20mm	PCD95 CUT SQUARE BOTH ENDS
ANTI-FINGERTRAP ADAPTOR	TWO	FFSS plus 9.5mm	052 SEE DETAIL
ANTI-FINGERTRAP GASKET (SASH)	TWO	FFSS	PCD95 CUT SQUARE BOTH ENDS
ANTI-FINGERTRAP ADAPTOR	ONE	FFSS less 13mm	053 SEE DETAIL
DOUBLE DOOR ADAPTOR	ONE	FFSS less 51mm	102-242FF CUT SQUARE BOTH ENDS
DRIP RAIL FOR MASTER LEAF	ONE	FFSS less 37.5mm*	SD158 CUT SQUARE BOTH ENDS
DRIP RAIL FOR SLAVE LEAF	ONE	FFSS less 37.5mm*	SD158 CUT SQUARE BOTH ENDS
END CAP	ONE PAIR	Component No PCD85	
PLASTIC END CAP	ONE PAIR	Component No 7016	
CORNER CLEAT	FOUR	Component No 533	
CORNER CLEAT	FOUR	Component No 534	
CORNER BRACE	FOUR	Component No 7019 (using sash 139-239F) or 535 (using sash 149-239F)	
BRACE	FOUR	Component No CA24	



Scale 1:3

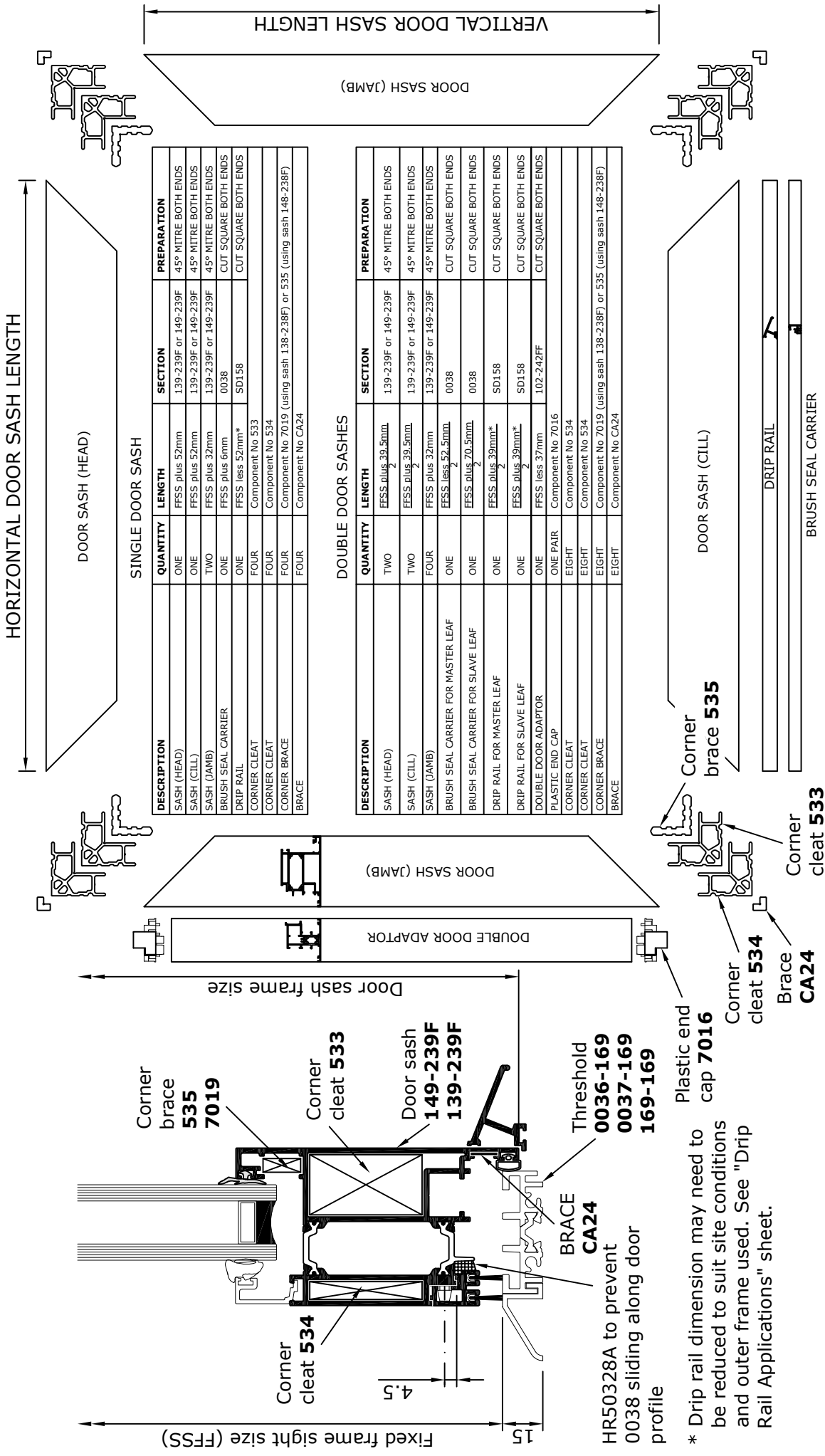
\* Drip rail dimension may need to be reduced to suit site conditions and outer frame used. See "Drip Rail Applications" sheet.

# Fabrication and Cutting Sizes

For Standard Single and Double Open-Out Doors with Rebated Meeting Stile **System 5-20D/Hi+** and Semi-Rebated Low Threshold



**System 5-20D/Hi+**  
DOOR SYSTEM



DESCRIPTION	QUANTITY	LENGTH	SECTION	PREPARATION
SASH (HEAD)	ONE	FFSS plus 52mm	139-239F or 149-239F	45° MITRE BOTH ENDS
SASH (CILL)	ONE	FFSS plus 52mm	139-239F or 149-239F	45° MITRE BOTH ENDS
SASH (JAMB)	TWO	FFSS plus 32mm	139-239F or 149-239F	45° MITRE BOTH ENDS
BRUSH SEAL CARRIER	ONE	FFSS plus 6mm	0038	CUT SQUARE BOTH ENDS
DRIP RAIL	ONE	FFSS less 52mm*	SD158	CUT SQUARE BOTH ENDS
CORNER CLEAT	FOUR	Component No 533		
CORNER CLEAT	FOUR	Component No 534		
CORNER BRACE	FOUR	Component No 7019 (using sash 138-238F) or 535 (using sash 148-238F)		
BRACE	FOUR	Component No CA24		

DESCRIPTION	QUANTITY	LENGTH	SECTION	PREPARATION
SASH (HEAD)	TWO	FFSS plus 39.5mm <sup>2</sup>	139-239F or 149-239F	45° MITRE BOTH ENDS
SASH (CILL)	TWO	FFSS plus 39.5mm <sup>2</sup>	139-239F or 149-239F	45° MITRE BOTH ENDS
SASH (JAMB)	FOUR	FFSS plus 32mm	139-239F or 149-239F	45° MITRE BOTH ENDS
BRUSH SEAL CARRIER FOR MASTER LEAF	ONE	FFSS less 52.5mm <sup>2</sup>	0038	CUT SQUARE BOTH ENDS
BRUSH SEAL CARRIER FOR SLAVE LEAF	ONE	FFSS plus 70.5mm <sup>2</sup>	0038	CUT SQUARE BOTH ENDS
DRIP RAIL FOR MASTER LEAF	ONE	FFSS plus 39mm*	SD158	CUT SQUARE BOTH ENDS
DRIP RAIL FOR SLAVE LEAF	ONE	FFSS plus 39mm*	SD158	CUT SQUARE BOTH ENDS
DOUBLE DOOR ADAPTOR	ONE PAIR	FFSS less 37mm	102-242FF	CUT SQUARE BOTH ENDS
PLASTIC END CAP	EIGHT	Component No 7016		
CORNER CLEAT	EIGHT	Component No 534		
CORNER CLEAT	EIGHT	Component No 534		
CORNER BRACE	EIGHT	Component No 7019 (using sash 138-238F) or 535 (using sash 148-238F)		
BRACE	EIGHT	Component No CA24		

\* Drip rail dimension may need to be reduced to suit site conditions and outer frame used. See "Drip Rail Applications" sheet.

Scale 1:2



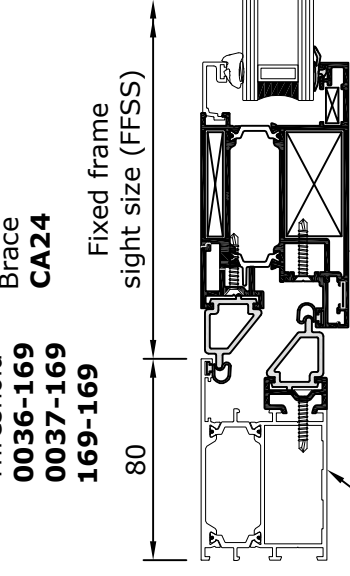
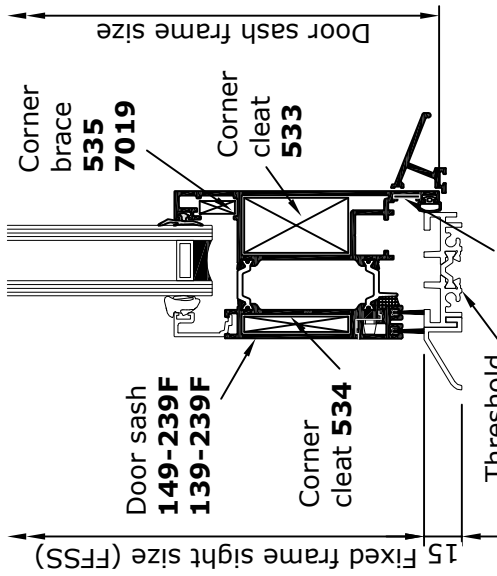
# Fabrication and Cutting Sizes



For Anti-fingertrap Single and Double Open-Out Doors with Rebated Meeting **System 5-20D / Hi+** Stile and Low Threshold

HORIZONTAL DOOR SASH LENGTH

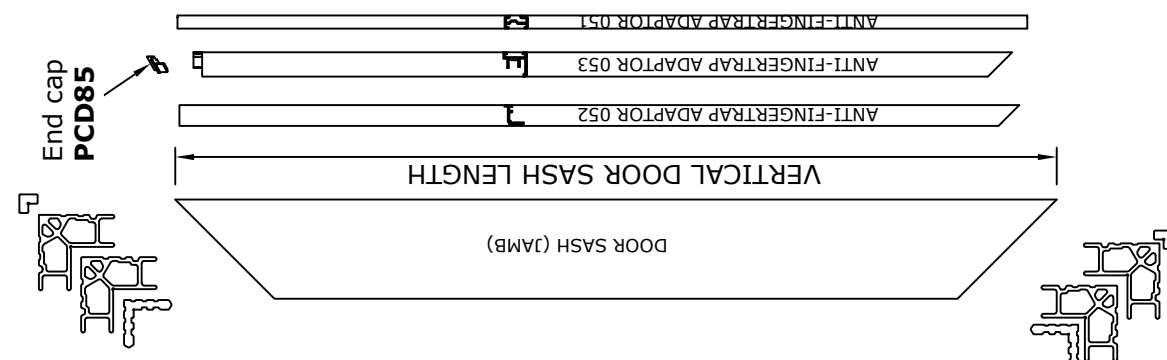
DOOR SYSTEM



\* Drip rail dimension may need to be reduced to suit site conditions and outer frame used. See "Drip Rail Applications" sheet.

Scale 1:3

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SINGLE DOOR SASH

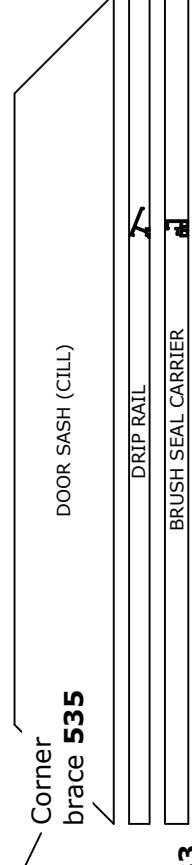
DESCRIPTION	QUANTITY	LENGTH	SECTION	PREPARATION
SASH (HEAD)	ONE	FFSS plus 13.5mm	139-239F or 149-239F	45° MITRE BOTH ENDS
SASH (CILL)	ONE	FFSS plus 13.5mm	139-239F or 149-239F	45° MITRE BOTH ENDS
SASH (JAMB)	TWO	FFSS plus 32mm	139-239F or 149-239F	45° MITRE BOTH ENDS
BRUSH SEAL CARRIER	ONE	FFSS less 24mm	0038	SEE DETAIL
ANTI-FINGERTRAP ADAPTOR	ONE	FFSS plus 20mm	PCD95	CUT SQUARE BOTH ENDS
ANTI-FINGERTRAP GASKET (FRAME)	ONE	FFSS plus 20mm	051	CUT SQUARE BOTH ENDS
ANTI-FINGERTRAP ADAPTOR	ONE	FFSS plus 16mm	052	CUT SQUARE BOTH ENDS
ANTI-FINGERTRAP GASKET (SASH)	ONE	FFSS	PCD95	CUT SQUARE BOTH ENDS
ANTI-FINGERTRAP ADAPTOR	ONE	FFSS plus 1.5mm	053	SEE DETAIL
DRIP RAIL	ONE	FFSS less 26mm*	SD158	CUT SQUARE BOTH ENDS
END CAP	ONE PAIR	Component No PCD85		
CORNER CLEAT	FOUR	Component No 533		
CORNER CLEAT	FOUR	Component No 534		
BRACE	FOUR	Component No CA24		

DOUBLE DOOR SASHES

DESCRIPTION	QUANTITY	REFERENCE	NOTES
MOULDED CORNER BRACE	FOUR	Component No 7019	For use with sash 139-239F only
CORNER BRACE	FOUR	Component No 535	For use with sash 149-239F only

DOUBLE DOOR SASHES

DESCRIPTION	QUANTITY	LENGTH	SECTION	PREPARATION
SASH (HEAD)	TWO	FFSS less 37.5mm	139-239F or 149-239F	45° MITRE BOTH ENDS
SASH (CILL)	TWO	FFSS less 37.5mm	139-239F or 149-239F	45° MITRE BOTH ENDS
SASH (JAMB)	FOUR	FFSS plus 32mm	139-239F or 149-239F	45° MITRE BOTH ENDS
BRUSH SEAL CARRIER FOR MASTER LEAF	ONE	FFSS less 112.5mm	0038	SEE DETAIL
BRUSH SEAL CARRIER FOR SLAVE LEAF	ONE	FFSS plus 10.5mm	0038	SEE DETAIL
ANTI-FINGERTRAP ADAPTOR	TWO	FFSS plus 20mm	051	CUT SQUARE BOTH ENDS
ANTI-FINGERTRAP GASKET (FRAME)	TWO	FFSS plus 20mm	PCD95	CUT SQUARE BOTH ENDS
ANTI-FINGERTRAP ADAPTOR	TWO	FFSS plus 16mm	052	CUT SQUARE BOTH ENDS
ANTI-FINGERTRAP GASKET (SASH)	TWO	FFSS	PCD95	CUT SQUARE BOTH ENDS
ANTI-FINGERTRAP ADAPTOR	TWO	FFSS plus 1.5mm	053	SEE DETAIL
DOUBLE DOOR ADAPTOR	ONE	FFSS less 51mm	I02-242FF	CUT SQUARE BOTH ENDS
DRIP RAIL FOR MASTER LEAF	ONE	FFSS less 37.5mm*	SD158	CUT SQUARE BOTH ENDS
DRIP RAIL FOR SLAVE LEAF	ONE	FFSS less 37.5mm*	SD158	CUT SQUARE BOTH ENDS
END CAP	ONE PAIR	Component No PCD85		
PLASTIC END CAP	ONE PAIR	Component No 7016		
CORNER CLEAT	EIGHT	Component No 533		
CORNER CLEAT	EIGHT	Component No 534		
BRACE	EIGHT	Component No CA24		



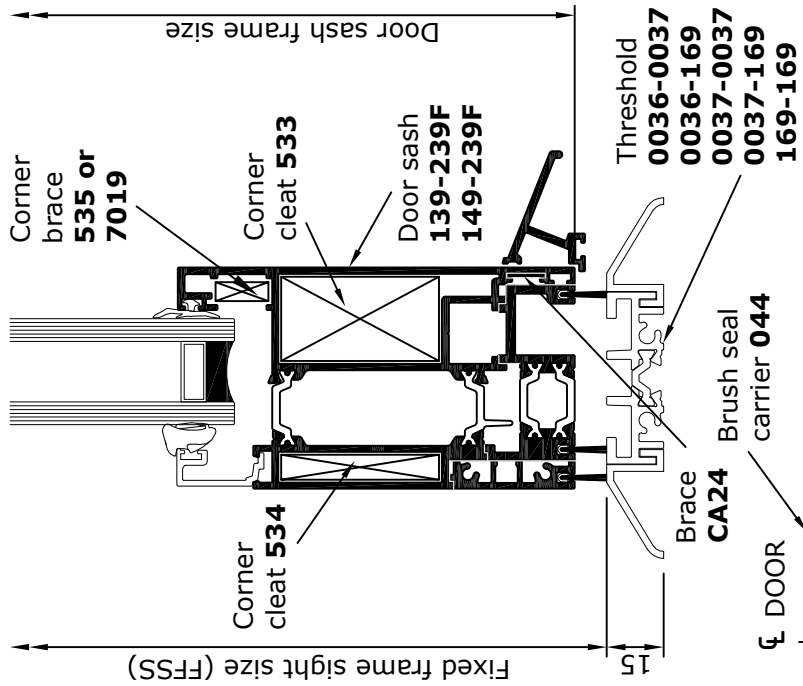
SHEET 520D Hi+ / 4 / 190  
rev 1  
06/11/13

# Fabrication and Cutting Sizes

For Standard Double Open-Out Doors with Flush Meeting Stile and Flush Low System **5-20D/Hi+**



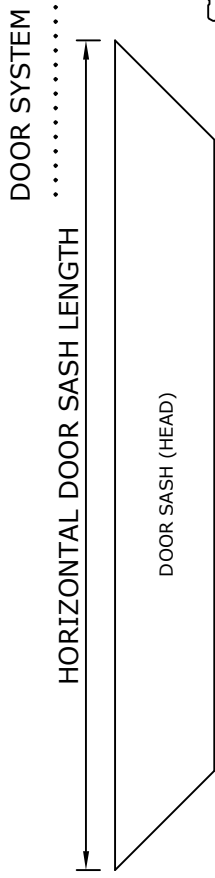
Threshold



Flush meeting stile adaptor **0048-0050**

Scale 1:2

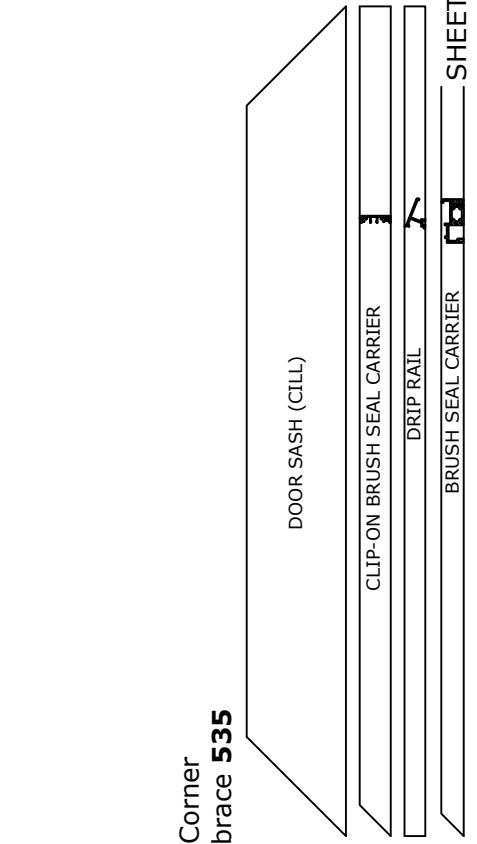
\* Drip rail dimension may need to be reduced to suit site conditions and outer frame used. See "Drip Rail Applications" sheet.



## DOUBLE DOOR SASHES

DESCRIPTION	QUANTITY	LENGTH	SECTION	PREPARATION
SASH (HEAD)	TWO	FFSS plus 39.5mm <sub>2</sub>	139-239F or 149-239F	45° MITRE BOTH ENDS
SASH (CILL)	TWO	FFSS plus 39.5mm <sub>2</sub>	139-239F or 149-239F	45° MITRE BOTH ENDS
SASH (JAMB)	FOUR	FFSS plus 17.5mm	139-239F or 149-239F	45° MITRE BOTH ENDS
BRUSH SEAL CARRIER	TWO	FFSS plus 20.5mm <sub>2</sub>	047-048	SEE DETAIL
CLIP-ON BRUSH SEAL CARRIER (CILL)	TWO	FFSS less 24.5mm <sub>2</sub>	044	SEE DETAIL
CLIP-ON BRUSH SEAL CARRIER (JAMB)	TWO	FFSS less 14.5mm	044	SEE DETAIL
FLUSH MEETING STILE ADAPTOR	TWO	FFSS plus 21.75mm	0048-0050	SEE DETAIL
DRIP RAIL	TWO	FFSS plus 47.5mm <sub>2</sub>	SD1 58	CUT SQUARE BOTH ENDS
CORNER CLEAT	EIGHT	Component No 533		
CORNER CLEAT	EIGHT	Component No 534		
BRACE	EIGHT	Component No CA24		

DESCRIPTION	QUANTITY	REFERENCE	NOTES
MOULDED CORNER BRACE	EIGHT	Component No 7019	For use with sash 139-239F only
CORNER BRACE	EIGHT	Component No 535	For use with sash 149-239F only



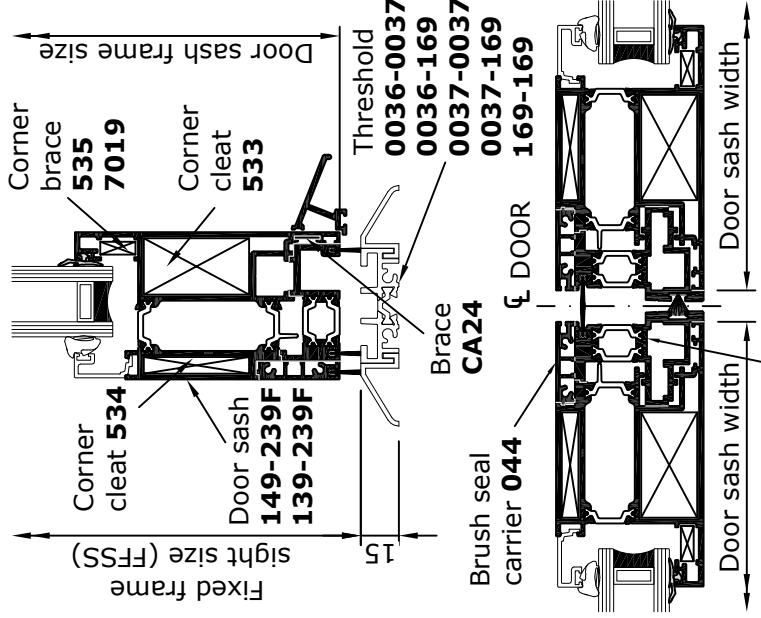
# Fabrication and Cutting Sizes

For Anti-fingertrap Double Open-Out Doors with Flush Meeting Stile and



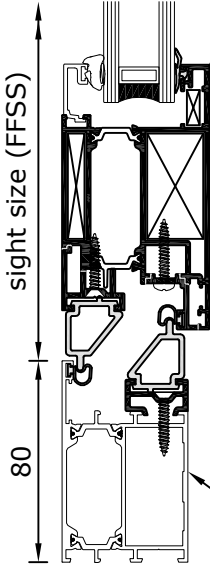
**System 5-20D/Hi+**

Flush Low Threshold



Flush meeting stile adaptor **0048-0050**

Fixed frame sight size (FFSS)



Outer frame **105-205FF**  
**105-220F**  
**105-227F**

Door sash **149-239F**  
**139-239F**

Brace **CA24**

Corner cleat **533**

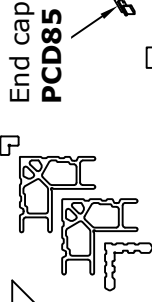
Corner cleat **534**

Scale 1:3

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DOOR SYSTEM

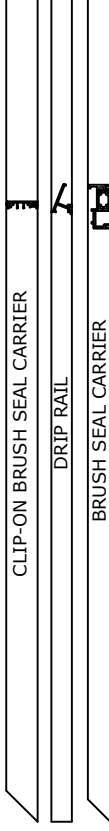
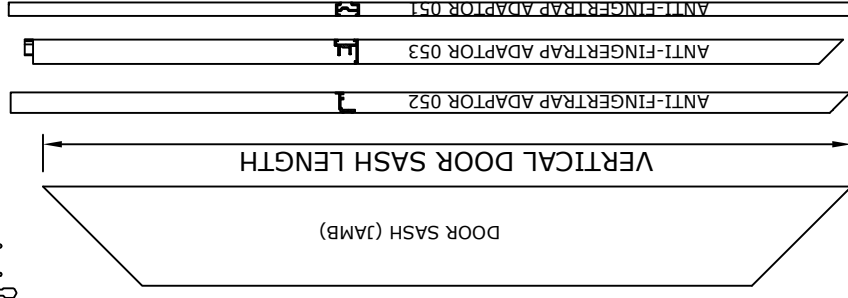
HORIZONTAL DOOR SASH LENGTH



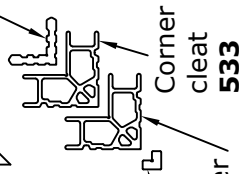
## ANTI-FINGERTRAP DOUBLE DOOR

DESCRIPTION	QUANTITY	LENGTH	SECTION	PREPARATION
SASH (HEAD)	TWO	FFSS less 37.5mm 2	139-239F or 149-239F	45° MITRE BOTH ENDS
SASH (CILL)	TWO	FFSS less 37.5mm 2	139-239F or 149-239F	45° MITRE BOTH ENDS
SASH (JAMB)	FOUR	FFSS plus 17.5mm	139-239F or 149-239F	45° MITRE BOTH ENDS
BRUSH SEAL CARRIER	TWO	FFSS less 37.5mm 2	047-048	SEE DETAIL
CLIP ON BRUSH SEAL CARRIER (CILL)	TWO	FFSS less 37.5mm 2	044	SEE DETAIL
CLIP ON BRUSH SEAL CARRIER (JAMB)	TWO	FFSS less 14.5mm	044	SEE DETAIL
ANTI-FINGERTRAP ADAPTOR	TWO	FFSS plus 20mm	051	CUT SQUARE BOTH ENDS
ANTI-FINGERTRAP GASKET (FRAME)	TWO	FFSS plus 20mm	PCD95	CUT SQUARE BOTH ENDS
ANTI-FINGERTRAP ADAPTOR	TWO	FFSS plus 9.5mm	052	SEE DETAIL
ANTI-FINGERTRAP GASKET (SASH)	TWO	FFSS	PCD95	CUT SQUARE BOTH ENDS
ANTI-FINGERTRAP ADAPTOR	TWO	FFSS less 13mm	053	SEE DETAIL
FLUSH MEETING STILE ADAPTOR	TWO	FFSS plus 21.75mm	0048-0050	SEE DETAIL
DRIP RAIL	TWO	FFSS less 29.5mm * 2	SD158	CUT SQUARE BOTH ENDS
END CAP	ONE PAIR	Component No PCD85		
CORNER CLEAT	EIGHT	Component No 533		
CORNER CLEAT	EIGHT	Component No 534		
BRACE	EIGHT	Component No CA24		

DESCRIPTION	QUANTITY	REFERENCE	NOTES
MOULDED CORNER BRACE	EIGHT	Component No 7019	For use with sash 139-239F only
CORNER BRACE	EIGHT	Component No 535	For use with sash 149-239F only



Corner brace **535**



Corner cleat **534**

# Fabrication and Cutting Sizes



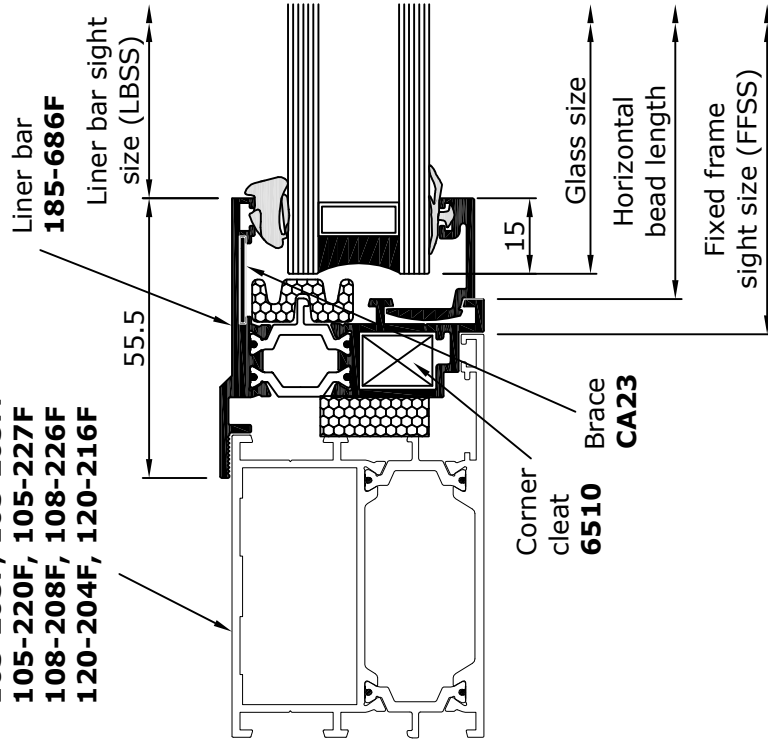
## Standard Glaze Out Liner - Window Assembly (Not Including Outer Frame)

## System 5-20D / Hi+

DOOR SYSTEM

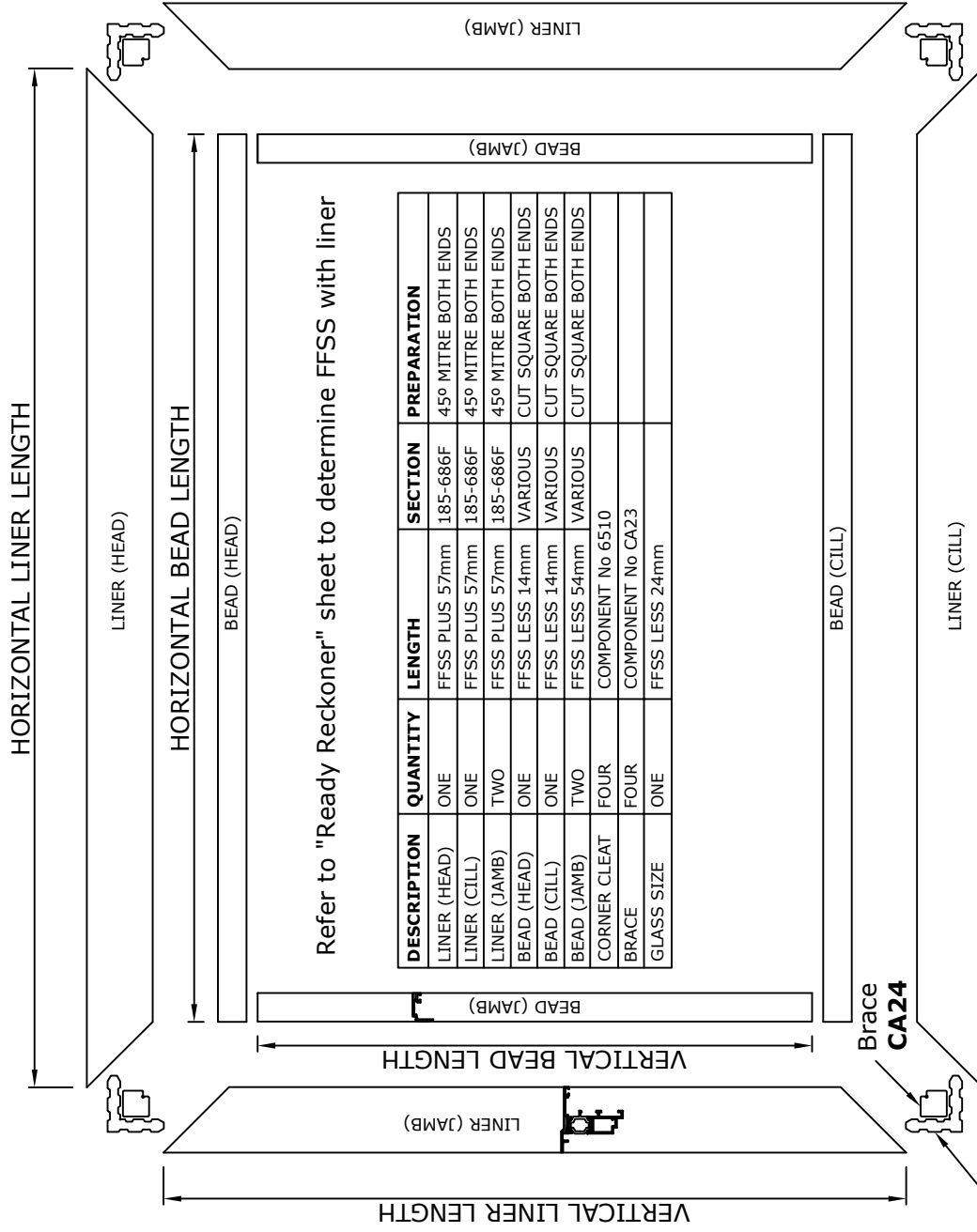
Outer frame

- 101-201FF, 102-202F
- 102-228F, 102-234F
- 103-203F, 105-205FF
- 105-220F, 105-227F
- 108-208F, 108-226F
- 120-204F, 120-216F



Note :-

All bead lengths are tight sizes. Clearance of not more than 0.5mm should be allowed at each end of the glazing bead.



DESCRIPTION	QUANTITY	LENGTH	SECTION	PREPARATION
LINER (HEAD)	ONE	FFSS PLUS 57mm	185-686F	45° MITRE BOTH ENDS
LINER (CILL)	ONE	FFSS PLUS 57mm	185-686F	45° MITRE BOTH ENDS
LINER (JAMB)	TWO	FFSS PLUS 57mm	185-686F	45° MITRE BOTH ENDS
BEAD (HEAD)	ONE	FFSS LESS 14mm	VARIOUS	CUT SQUARE BOTH ENDS
BEAD (CILL)	ONE	FFSS LESS 14mm	VARIOUS	CUT SQUARE BOTH ENDS
BEAD (JAMB)	TWO	FFSS LESS 54mm	VARIOUS	CUT SQUARE BOTH ENDS
CORNER CLEAT	FOUR	COMPONENT No 6510		
BRACE	FOUR	COMPONENT No CA23		
GLASS SIZE	ONE	FFSS LESS 24mm		

Corner cleat **6510**

Not to Scale

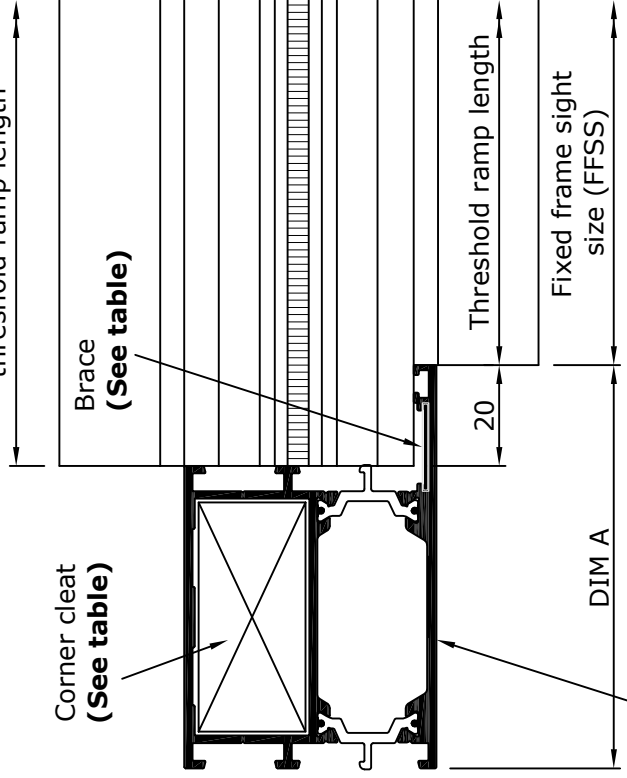
# Fabrication and Cutting Sizes

## Outer Frame and Low Threshold Options for Single and Double Open-In and System 5-20D / Hi+

### Open-Out Doors

To suit thresholds: **0036-0037**  
**0036-169**  
**0037-0037**  
**0037-169**  
**169-169**

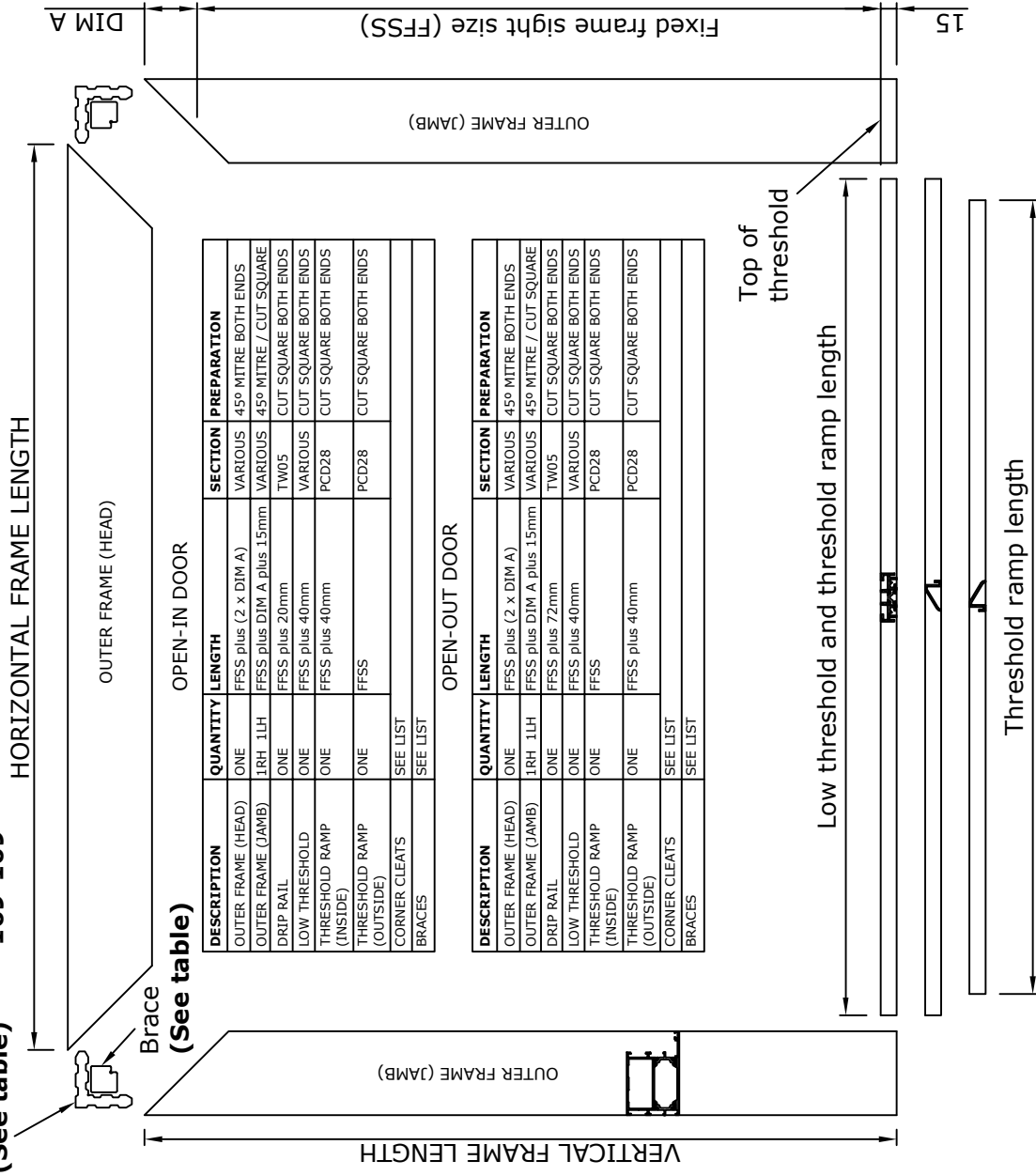
DOOR SYSTEM



Outer Frame	DIM A	Braces Required	CA23	CA24	511	516	526
<b>101-201FF</b>	49.5mm	TWO	-	-	-	TWO	-
<b>102-202F</b>	64.5mm	SIX	-	TWO	-	-	-
<b>102-228F</b>	64.5mm	SIX	-	TWO	-	-	-
<b>102-234F</b>	64.5mm	SIX	-	TWO	-	-	-
<b>103-203F</b>	69.5mm	SIX	-	-	-	TWO	-
<b>105-205FF</b>	80mm	TWO	-	-	-	-	TWO
<b>105-220F</b>	98mm	FOUR	TWO	-	-	-	TWO
<b>105-227F</b>	98mm	FOUR	TWO	-	-	-	TWO
<b>108-208F</b>	100mm	SIX	-	-	-	-	TWO
<b>108-226F</b>	100mm	SIX	-	-	-	-	TWO
<b>120-204F</b>	59.5mm	FOUR	TWO	TWO	-	-	-
<b>120-216F</b>	59.5mm	FOUR	TWO	TWO	-	-	-

Not to Scale

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(See table)

DESCRIPTION	QUANTITY	LENGTH	SECTION	PREPARATION
OUTER FRAME (HEAD)	ONE	FFSS plus (2 x DIM A)	VARIOUS	45° MITRE BOTH ENDS
OUTER FRAME (JAMB)	1RH 1LH	FFSS plus DIM A plus 15mm	VARIOUS	45° MITRE / CUT SQUARE
DRIP RAIL	ONE	FFSS plus 20mm	TW05	CUT SQUARE BOTH ENDS
LOW THRESHOLD	ONE	FFSS plus 40mm	VARIOUS	CUT SQUARE BOTH ENDS
THRESHOLD RAMP (INSIDE)	ONE	FFSS plus 40mm	PCD28	CUT SQUARE BOTH ENDS
THRESHOLD RAMP (OUTSIDE)	ONE	FFSS	PCD28	CUT SQUARE BOTH ENDS
CORNER CLEATS	SEE LIST			
BRACES	SEE LIST			

(See table)

DESCRIPTION	QUANTITY	LENGTH	SECTION	PREPARATION
OUTER FRAME (HEAD)	ONE	FFSS plus (2 x DIM A)	VARIOUS	45° MITRE BOTH ENDS
OUTER FRAME (JAMB)	1RH 1LH	FFSS plus DIM A plus 15mm	VARIOUS	45° MITRE / CUT SQUARE
DRIP RAIL	ONE	FFSS plus 72mm	TW05	CUT SQUARE BOTH ENDS
LOW THRESHOLD	ONE	FFSS plus 40mm	VARIOUS	CUT SQUARE BOTH ENDS
THRESHOLD RAMP (INSIDE)	ONE	FFSS	PCD28	CUT SQUARE BOTH ENDS
THRESHOLD RAMP (OUTSIDE)	ONE	FFSS plus 40mm	PCD28	CUT SQUARE BOTH ENDS
CORNER CLEATS	SEE LIST			
BRACES	SEE LIST			

# Rebated Double Door Adaptor End Prep



## System 5-20D/Hi+

DOOR SYSTEM

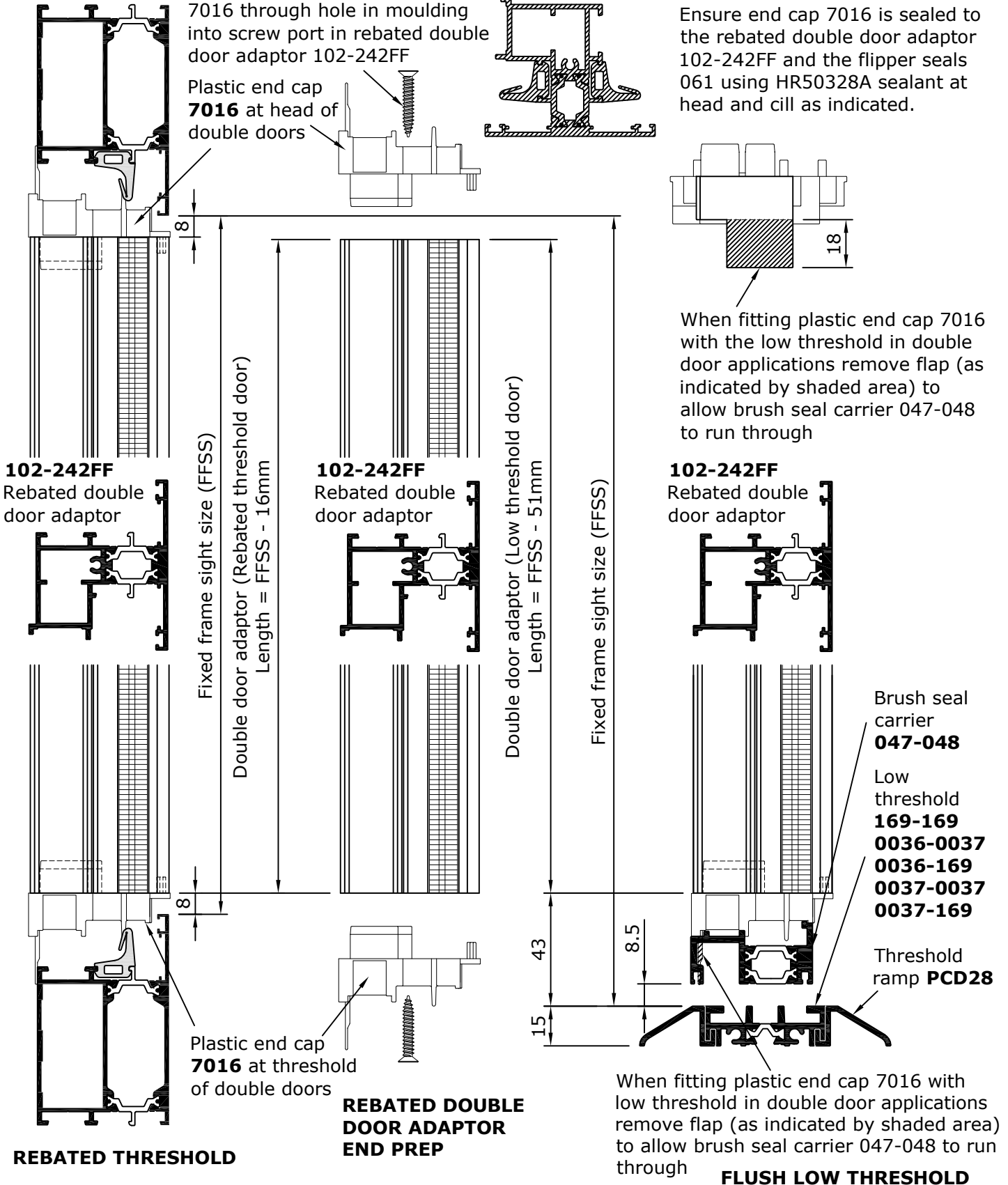
Open-In and Open-Out Doors with Rebated and Flush Low Thresholds

No 8 x 25mm countersunk stainless steel self tapping screw 7254 to secure plastic end cap 7016 through hole in moulding into screw port in rebated double door adaptor 102-242FF

Plastic end cap **7016** at head of double doors

HR50328A SEALANT/ADHESIVE

Ensure end cap 7016 is sealed to the rebated double door adaptor 102-242FF and the flipper seals 061 using HR50328A sealant at head and cill as indicated.



Scale 1:2

# Rebated Double Door Adaptor End Prep

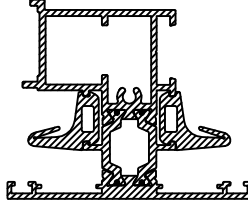


## System 5-20D/Hi+

DOOR SYSTEM

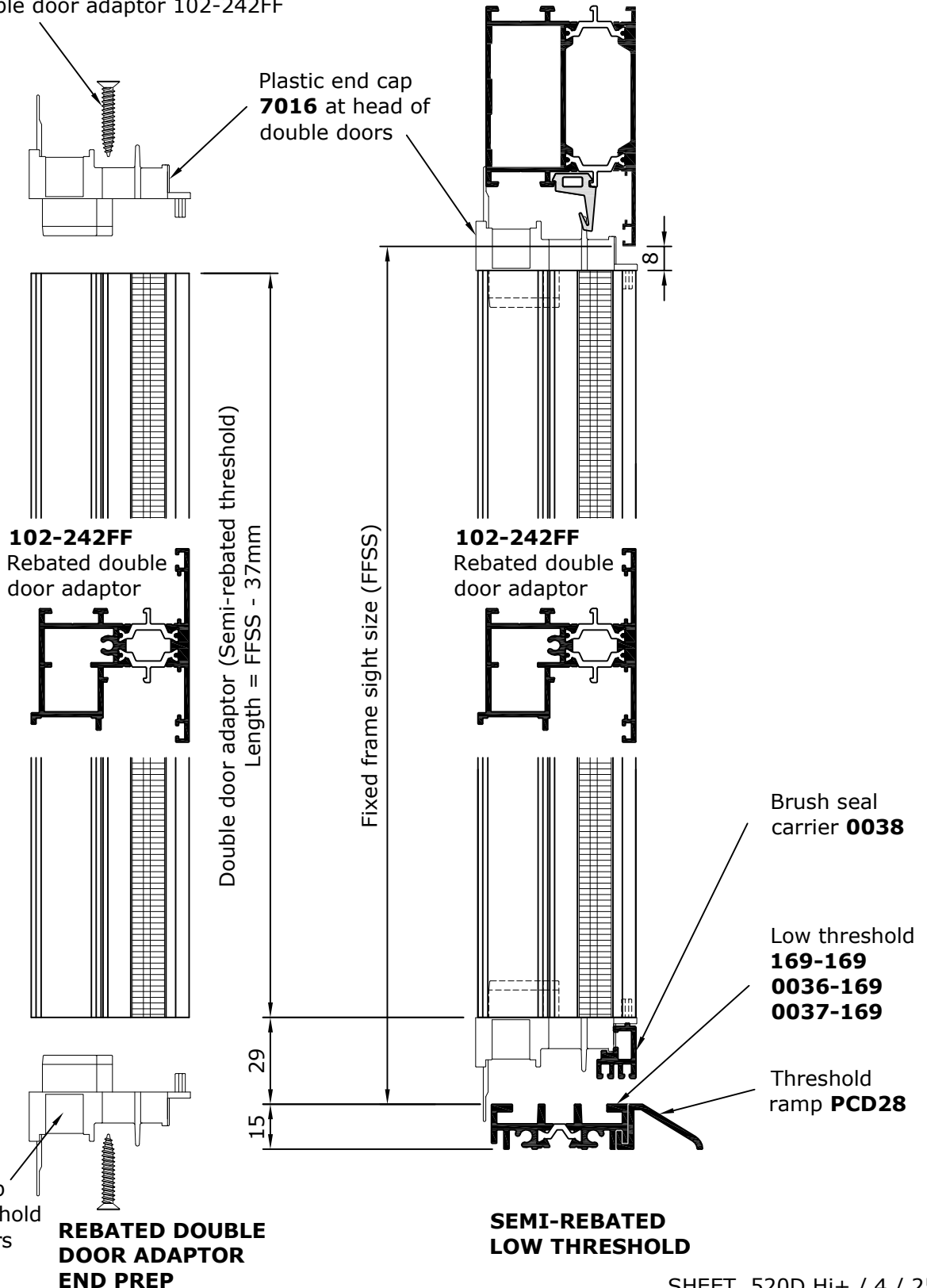
Open-In and Open-Out Doors with  
Semi-Rebated Low Threshold

HR50328A  
SEALANT/ADHESIVE



Ensure end cap 7016 is sealed to the rebated double door adaptor 102-242FF and the flipper seals 061 using HR50328A sealant at head and cill as indicated.

No 8 x 25mm countersunk stainless steel self tapping screw 7254 to secure plastic end cap 7016 through hole in moulding into screw port in rebated double door adaptor 102-242FF



Scale 1:2

# 0048-0050 Flush Meeting Stile Adaptor Preps

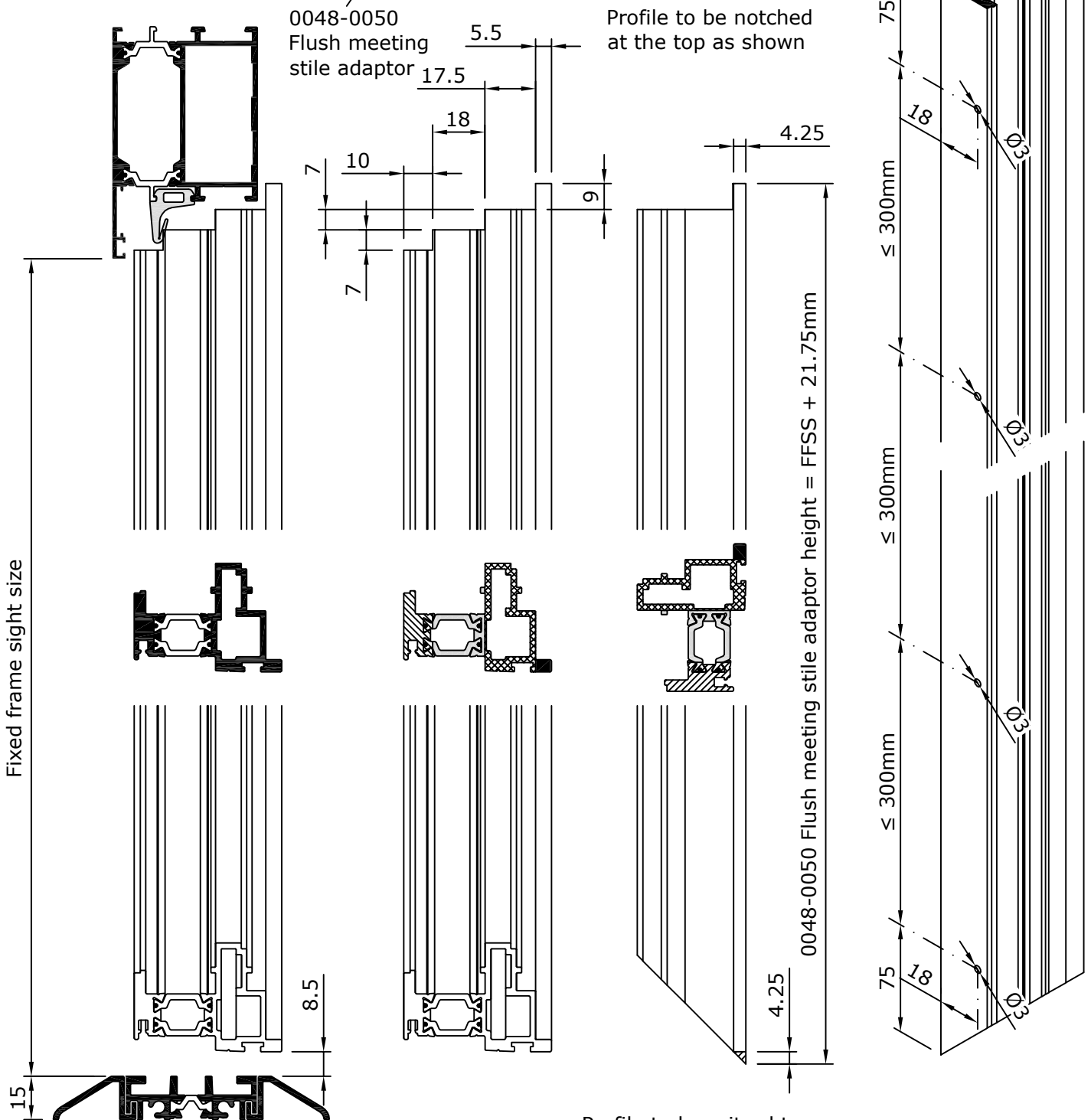
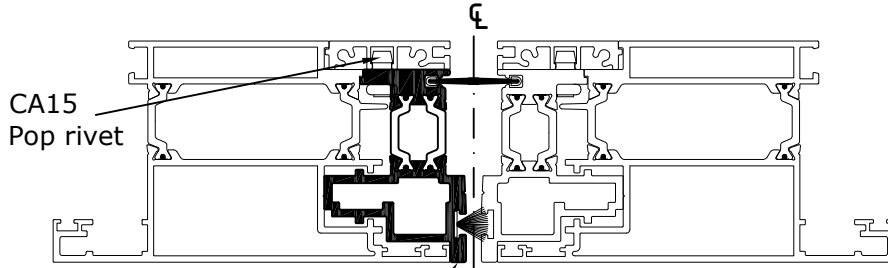


**System 5-20D/Hi+**

DOOR SYSTEM

## Open-Out Doors with Low Threshold

Drill 3mm  $\varnothing$  pilot holes to accommodate CA15 pop rivets as indicated and at centres not greater than 300mm.



Scale 1:2



# 044 Flush Meeting Stile Adaptor

## Preps

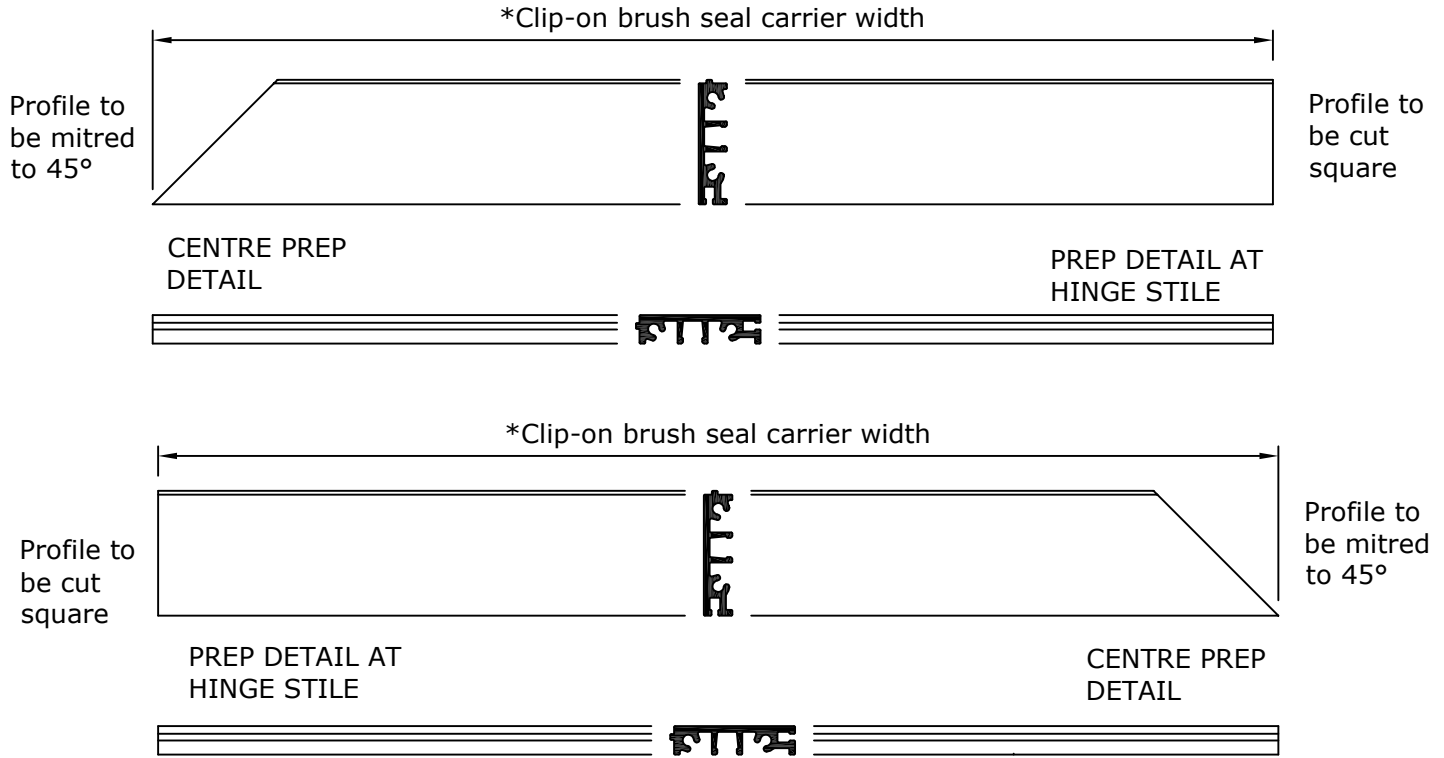
**System 5-20D/Hi+**

.....  
DOOR SYSTEM  
.....

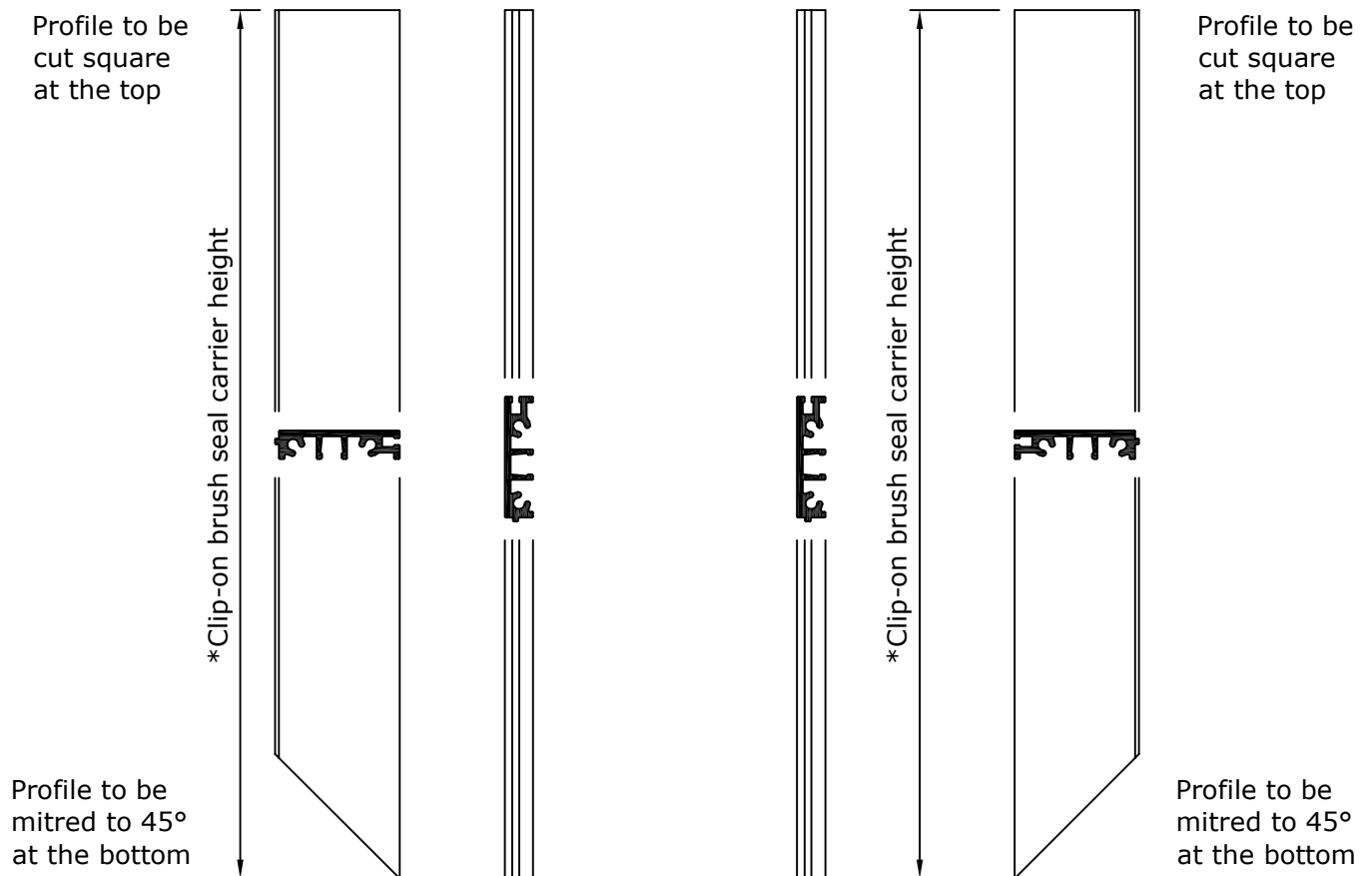
### Open-Out Doors with Low Threshold

\*See "Fabrication and Cutting Sizes" sheets for relevant dimensions.  
Refer to "0048-0050 Flush Meeting Stile Adaptor Preps" sheet for fixing details.

#### 044 HORIZONTAL CLIP-ON BRUSH SEAL CARRIER



#### 044 VERTICAL CLIP-ON BRUSH SEAL CARRIER



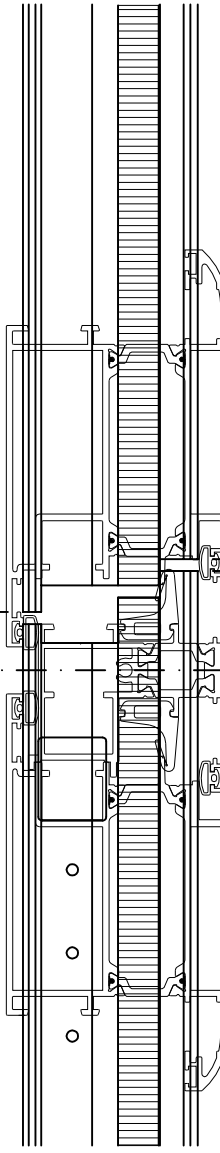
Scale 1:2

# Brush Seal Carrier End Prep

For Standard Single and Double Open-In and Open-Out Doors with Rebated Adaptor and Flush Low Threshold

**OPEN-IN DOOR**

16.5



PREP DETAIL AT SLAVE STILE

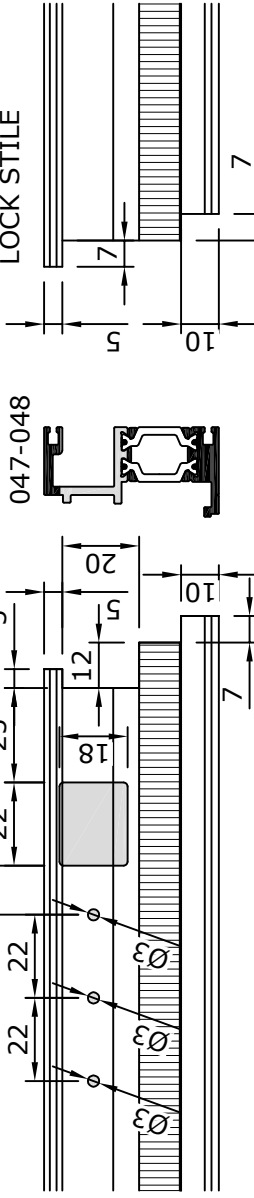
Brush seal carrier 047-048

PREP DETAIL AT LOCK STILE

PREP DETAIL AT HINGE STILE

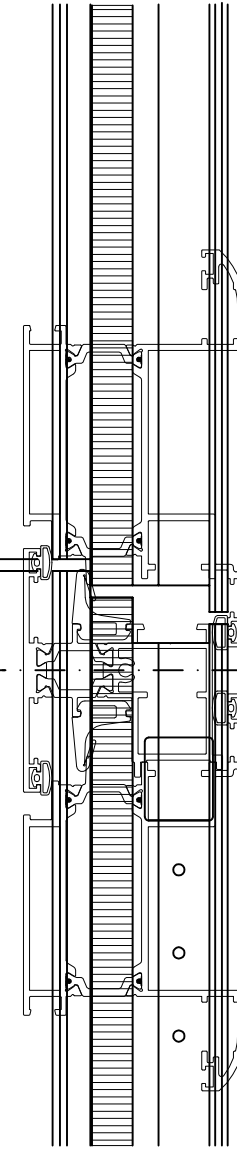
Setting out point when fixing brush seal carrier to door leaf

16.5



**OPEN-OUT DOOR**

16.5



PREP DETAIL AT SLAVE STILE

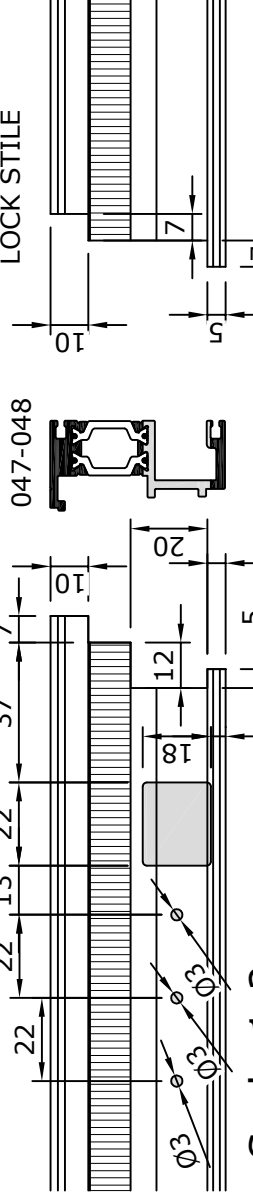
Brush seal carrier 047-048

PREP DETAIL AT LOCK STILE

PREP DETAIL AT HINGE STILE

Setting out point when fixing brush seal carrier to door leaf

16.5



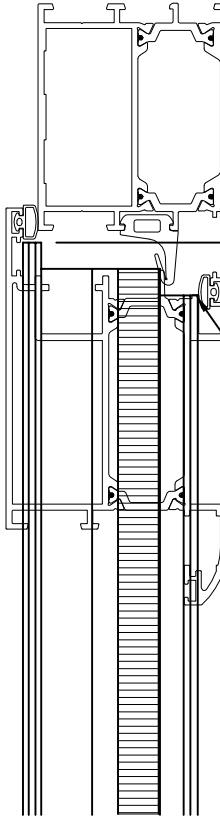
Scale 1:2

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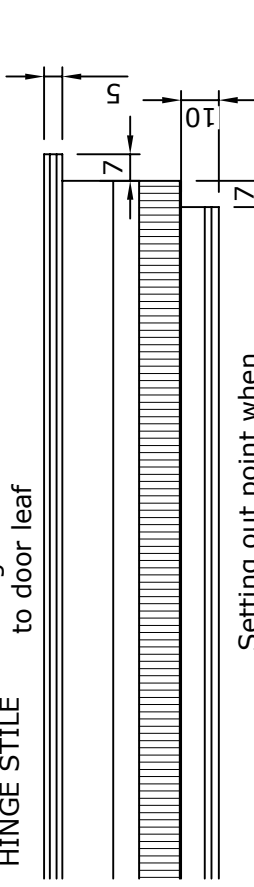
**System 5-20D/Hi+**

DOOR SYSTEM



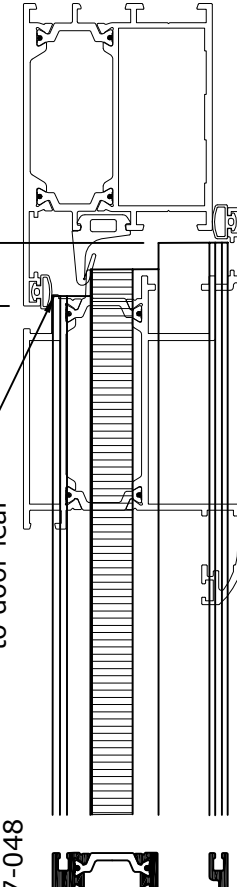
Setting out point when fixing brush seal carrier to door leaf

16.5



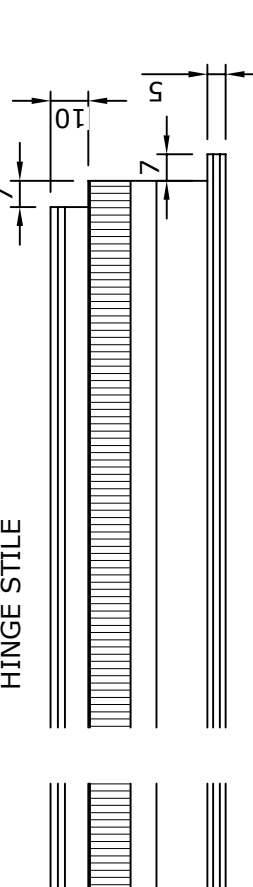
Brush seal carrier 047-048

16.5



Setting out point when fixing brush seal carrier to door leaf

16.5



rev 1

ADDITIONAL PREP FOR 7057 FLUSH BOLT

SHEET 520D Hi+ / 4 / 280  
06/11/13

# Brush Seal Carrier End Prep

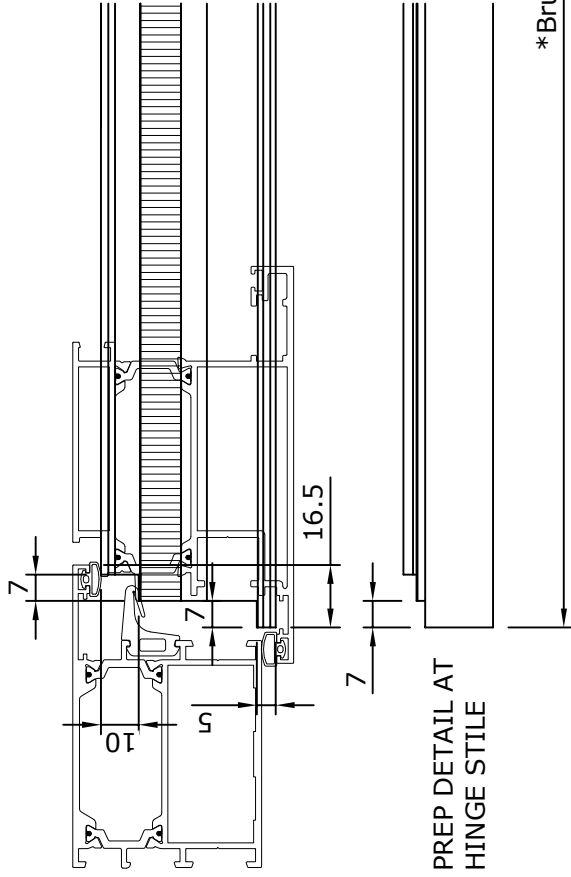
For Standard Double Open-Out Doors with Flush Meeting Stile Adaptors and  
Flush Low Threshold



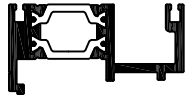
**System 5-20D/Hi+**

DOOR SYSTEM

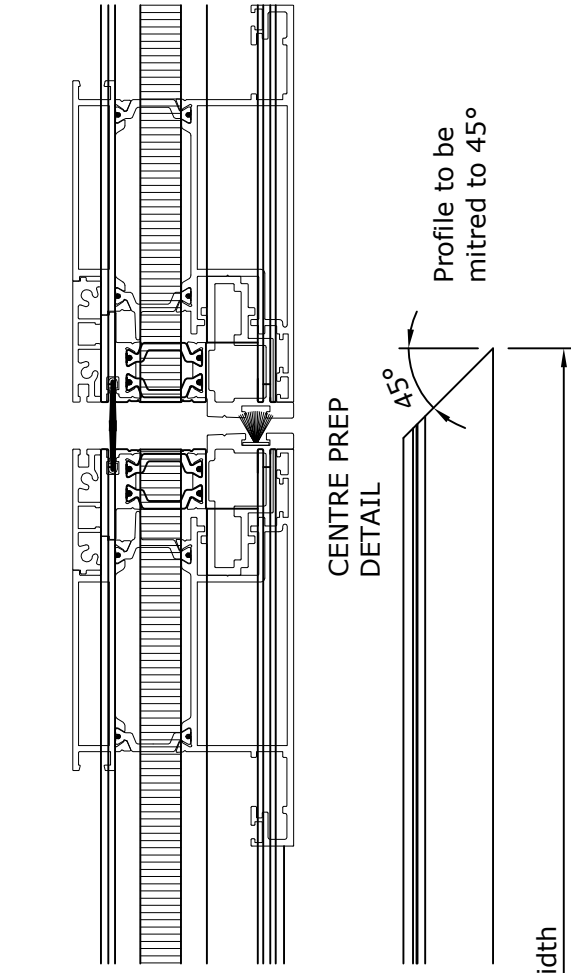
\* See "Fabrication and Cutting Sizes" sheets for relevant dimensions.



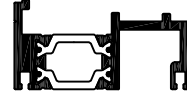
Brush seal carrier 047-048



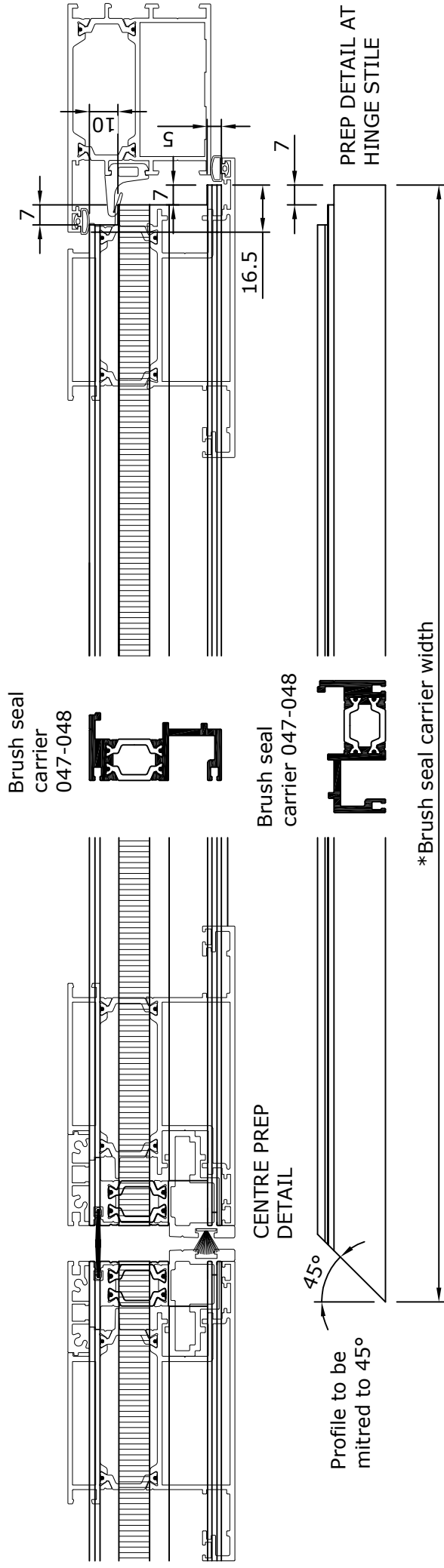
Brush seal carrier 047-048



Brush seal carrier 047-048



Brush seal carrier 047-048



Scale 1:2

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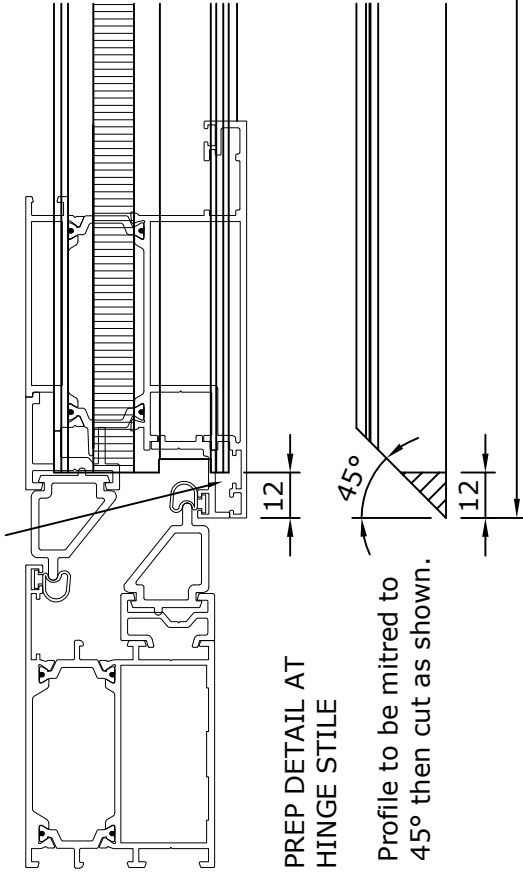
SHEET 520D Hi+ / 4 / 290  
rev 1  
06/11/13

# Brush Seal Carrier End Prep

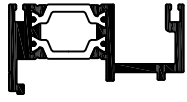
For Anti-fingertrap Double Open-Out Doors with Flush Meeting Stile Adaptors System 5-20D/Hi+ and Flush Low Threshold



7018 brush seal to project 12mm past end of 047-048 carrier



Brush seal carrier 047-048

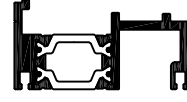


Brush seal carrier 047-048



\*Brush seal carrier width

Brush seal carrier 047-048



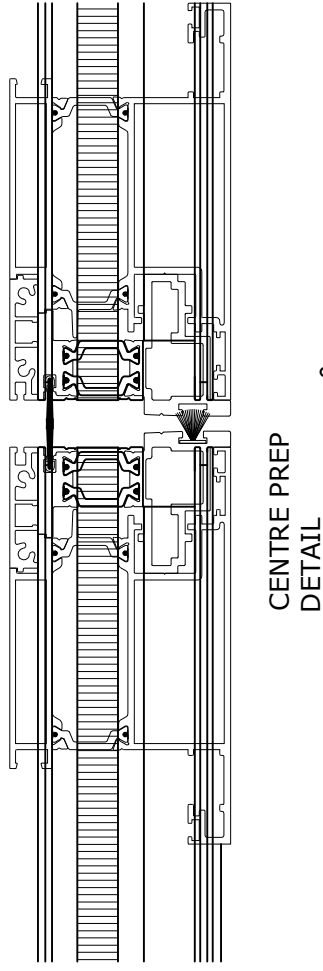
Brush seal carrier 047-048



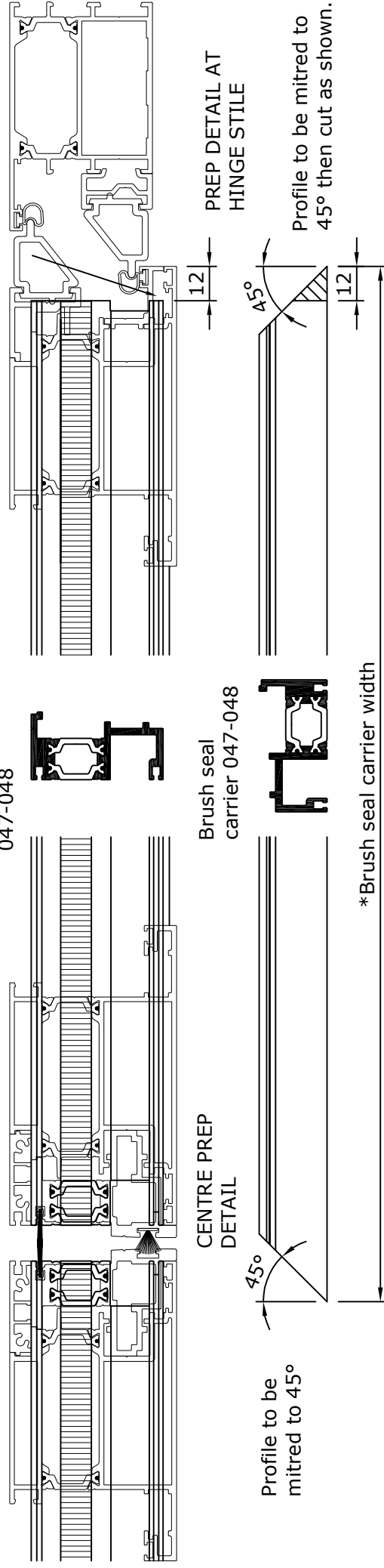
\*Brush seal carrier width

\* See "Fabrication and Cutting Sizes" sheets for relevant dimensions.

DOOR SYSTEM



7018 brush seal to project 12mm past end of 047-048 carrier



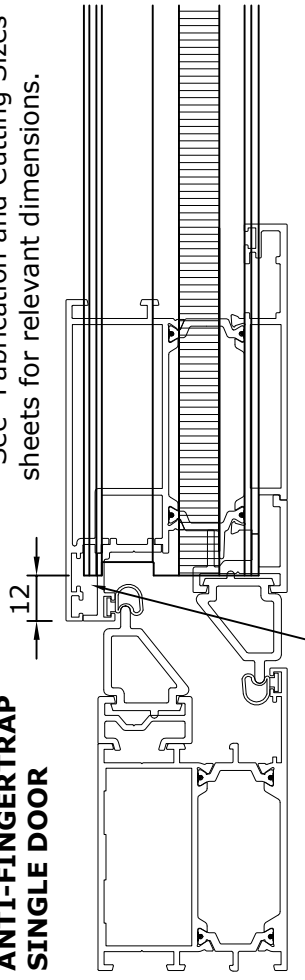
Scale 1:2

# Brush Seal Carrier End Prep

For Anti-fingertrap Single and Double Open-In Doors with Rebated Adaptor and Flush Low Threshold

## ANTI-FINGERTRAP SINGLE DOOR

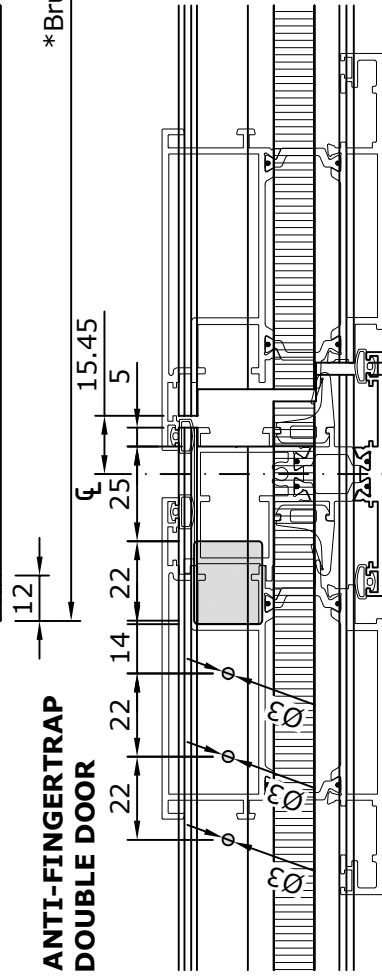
\*See "Fabrication and Cutting Sizes" sheets for relevant dimensions.



7018 brush seal to project 12mm past end of 047-048 carrier

## PREP DETAIL AT HINGE STILE

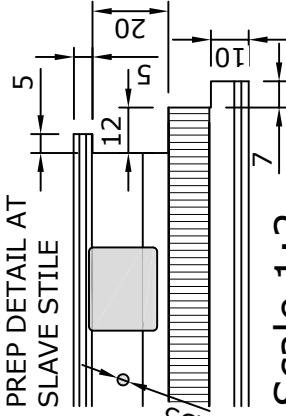
Profile to be mitred to 45° then cut as shown.



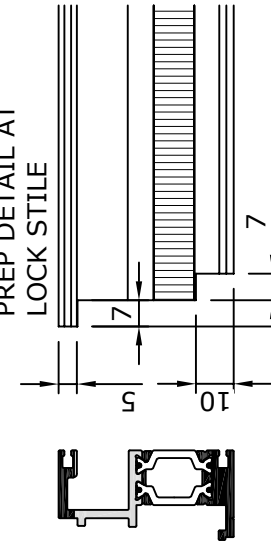
## ANTI-FINGERTRAP DOUBLE DOOR

\*Brush seal carrier width

## PREP DETAIL AT SLAVE STILE



## PREP DETAIL AT LOCK STILE



Scale 1:2

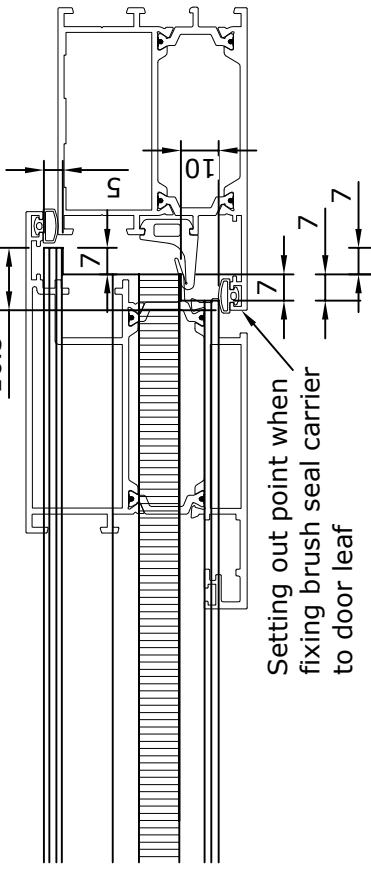
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# System 5-20D/Hi+

DOOR SYSTEM

16.5

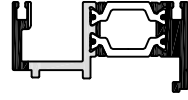


Setting out point when fixing brush seal carrier to door leaf

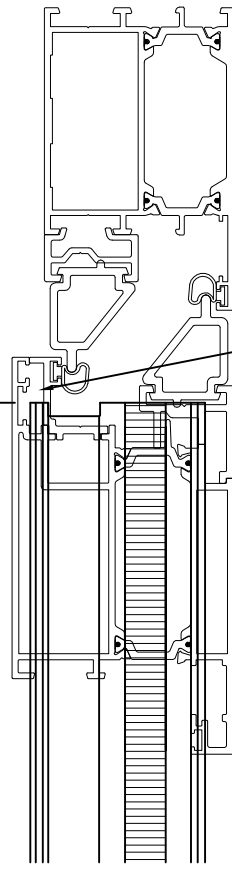
## PREP DETAIL AT LOCK STILE



Brush seal carrier 047-048



12

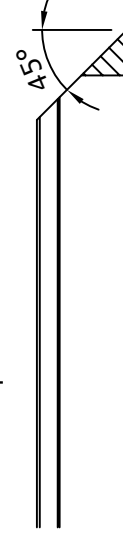


7018 brush seal to project 12mm past end of 047-048 carrier

Brush seal carrier 047-048



## PREP DETAIL AT HINGE STILE



Profile to be mitred to 45° then cut as shown.

ADDITIONAL PREP FOR 7057 FLUSH BOLT

\*Brush seal carrier width

SHEET 520D Hi+ / 4 / 310

rev 1

06/11/13

# Brush Seal Carrier End Prep

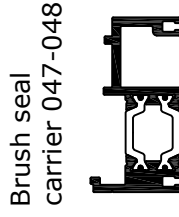
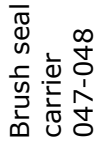
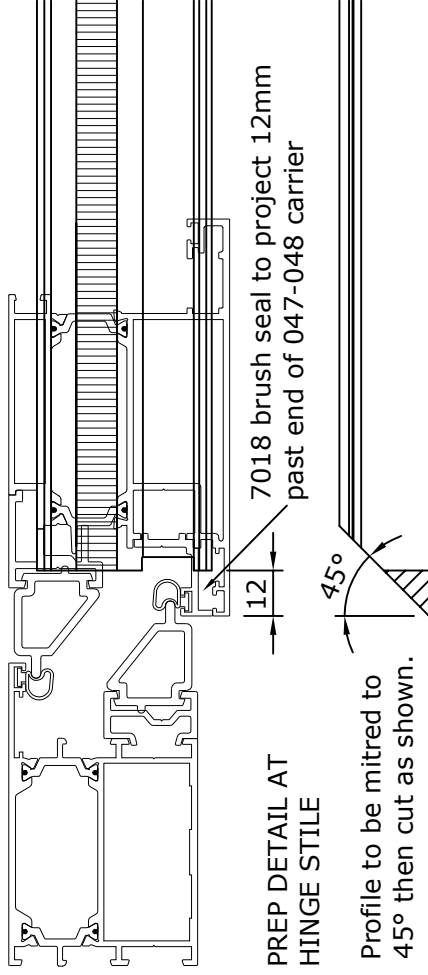
For Anti-fingertrap Single and Double Open-Out Doors with Rebated Adaptor System 5-20D/Hi+ and Flush Low Threshold



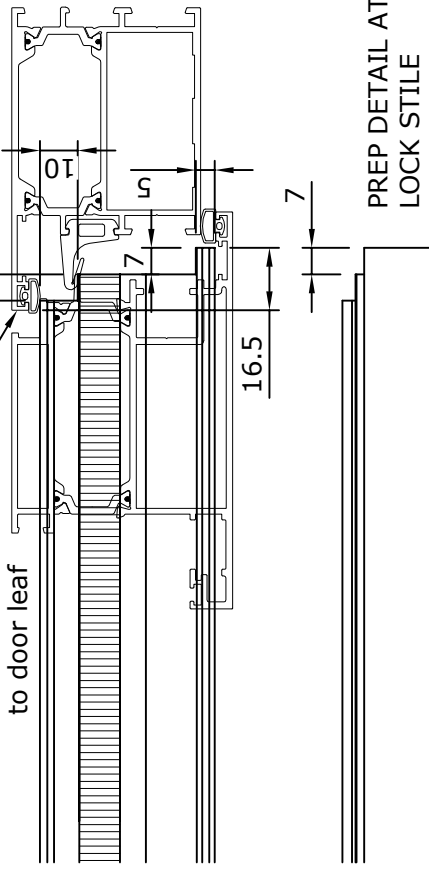
DOOR SYSTEM

## ANTI-FINGERTRAP SINGLE DOOR

\*See "Fabrication and Cutting Sizes" sheets for relevant dimensions.

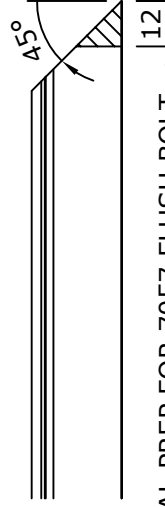
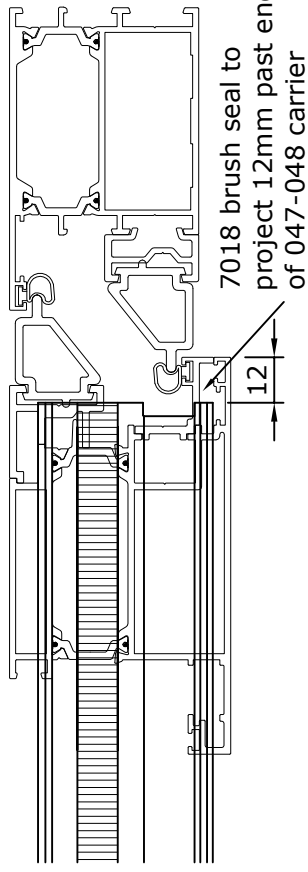
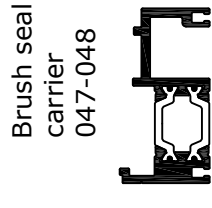
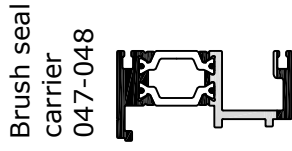
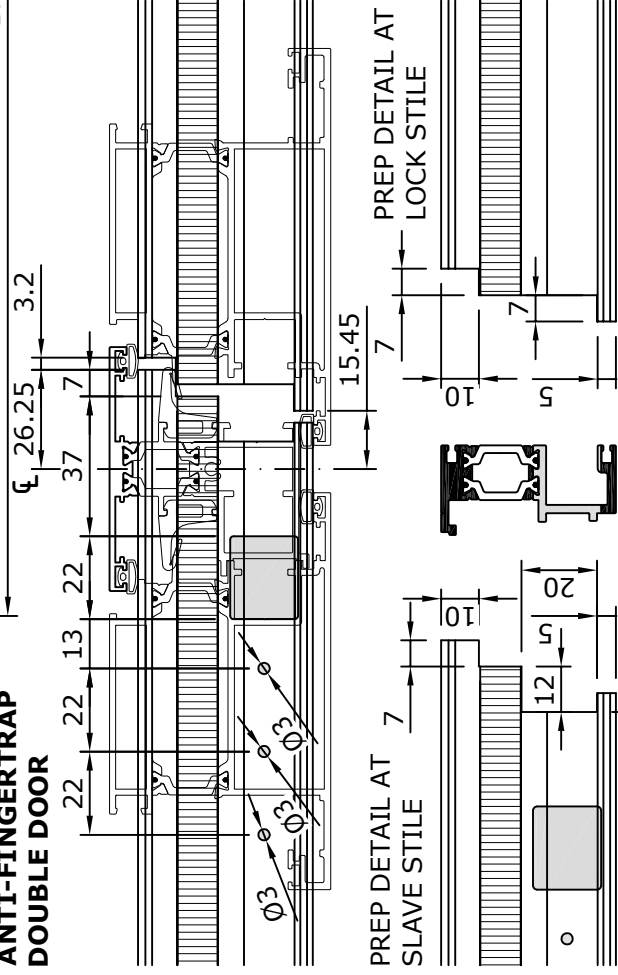


Setting out point when fixing brush seal carrier to door leaf



## ANTI-FINGERTRAP DOUBLE DOOR

\*Brush seal carrier width

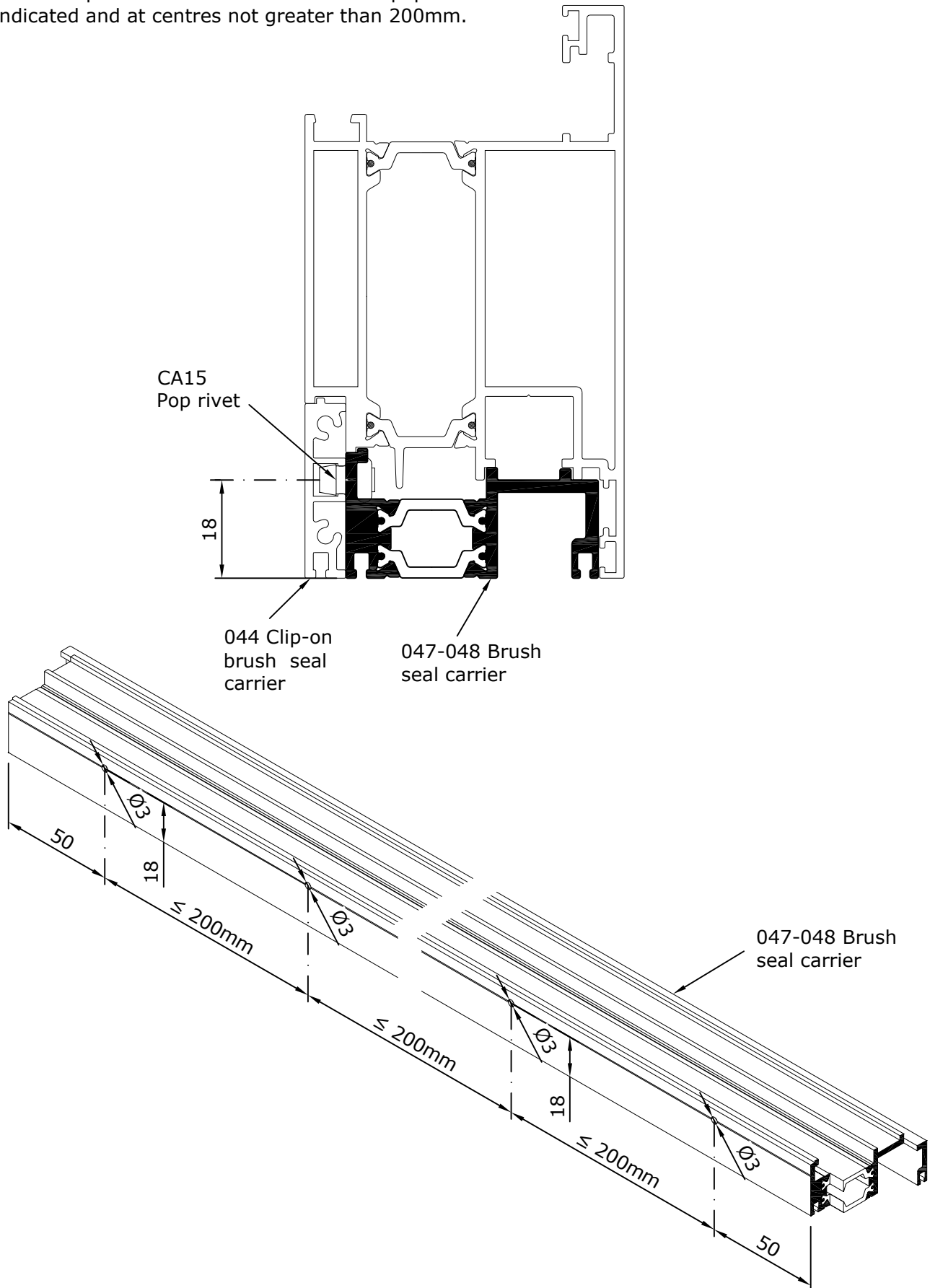


Scale 1:2

# 047-048 Brush Seal Carrier Prep for 044 Clip-on Brush Seal Carrier

**System 5-20D/Hi+**  
.....  
DOOR SYSTEM  
.....

Drill 3mm Ø pilot holes to accommodate CA15 pop rivets as indicated and at centres not greater than 200mm.



Not to Scale

# Brush Seal Carrier End Prep

For Standard Single and Double Open-In and Open-Out Doors with Rebated Meeting Stile and Semi-Rebated Low Threshold

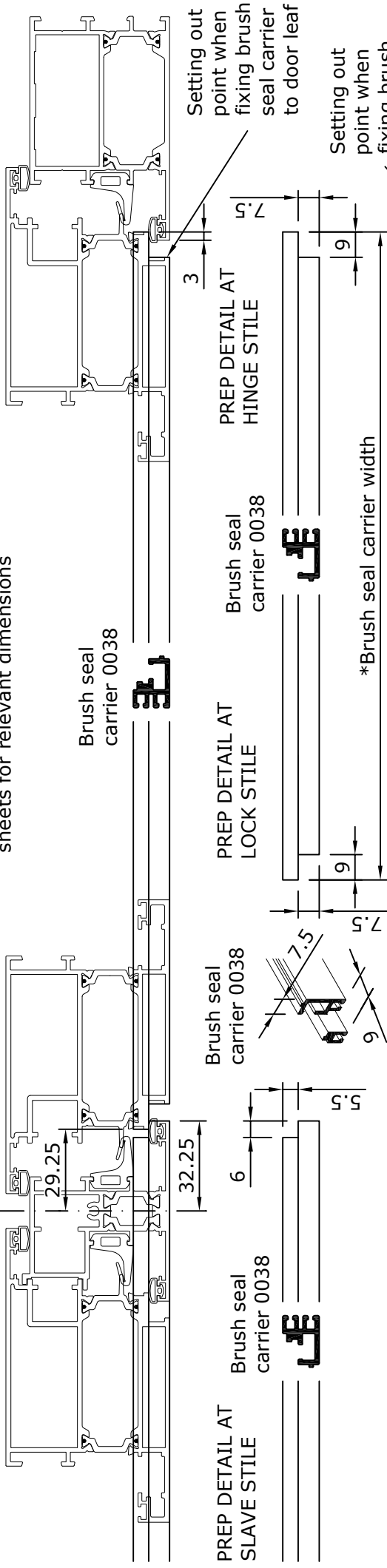


**System 5-20D/Hi+**

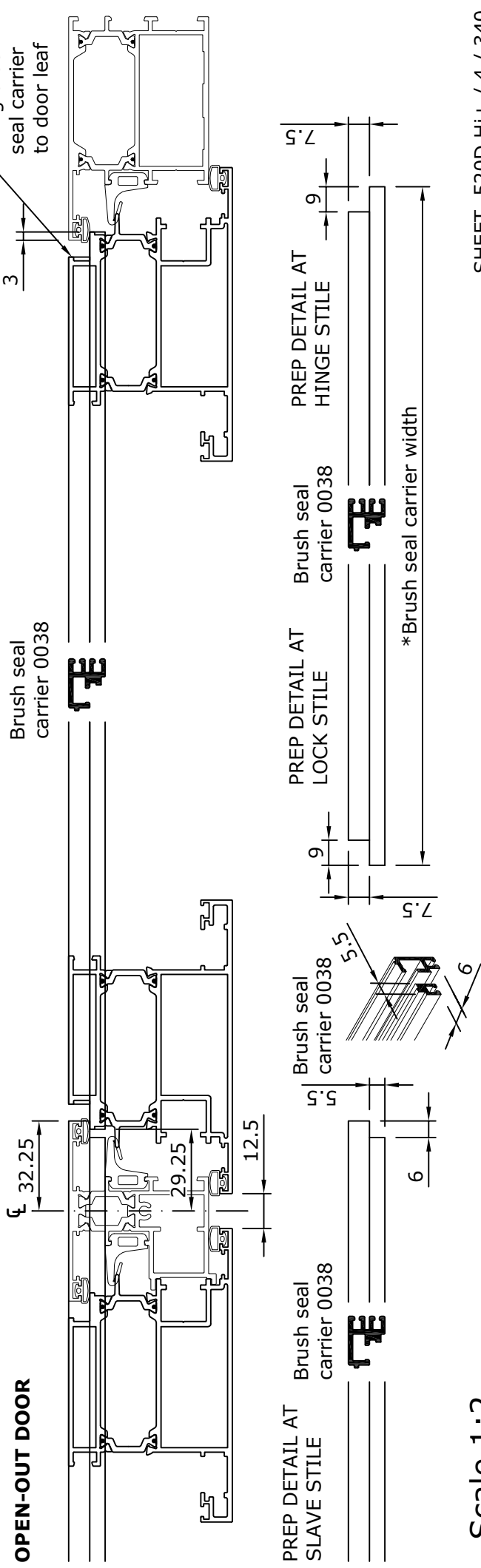
DOOR SYSTEM

## OPEN-IN DOOR

\*See "Fabrication and Cutting Sizes" sheets for relevant dimensions



## OPEN-OUT DOOR



Scale 1:2



# Brush Seal Carrier End Prep

For Anti-fingertrap Single and Double Open-In Doors with Rebated Meeting Stile and Semi-Rebated Low Threshold

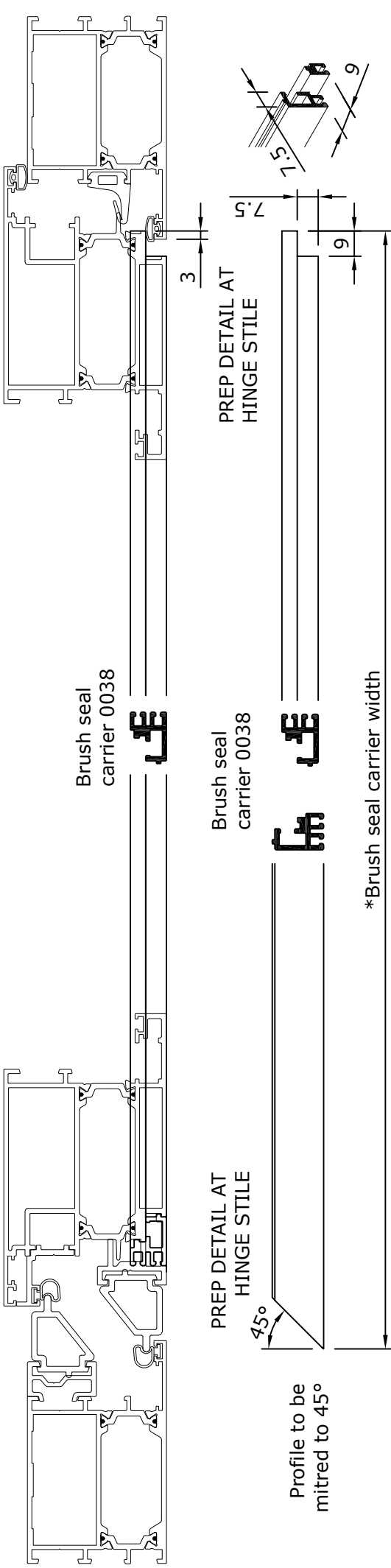


# System 5-20D / Hi+

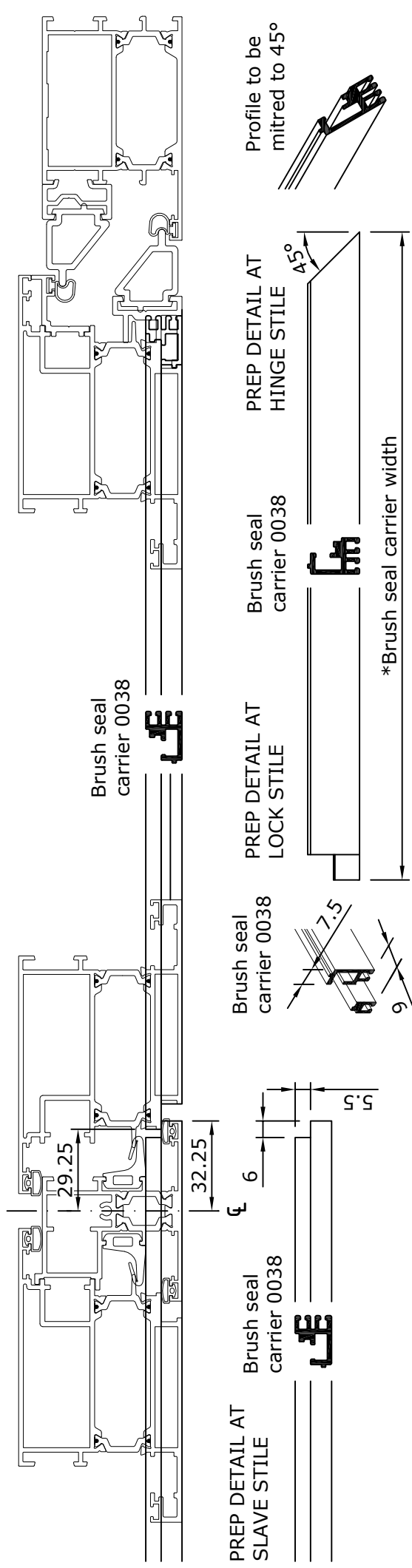
DOOR SYSTEM

\*See "Fabrication and Cutting Sizes" sheets for relevant dimensions.

## ANTI-FINGERTRAP SINGLE DOOR



## ANTI-FINGERTRAP DOUBLE DOOR



Scale 1:2

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SHEET 520D Hi+ / 4 / 350  
rev 0  
06/11/13

# Brush Seal Carrier End Prep

For Anti-fingertrap Single and Double Open-Out Doors with Rebated Meeting Stile and Semi-Rebated Low Threshold

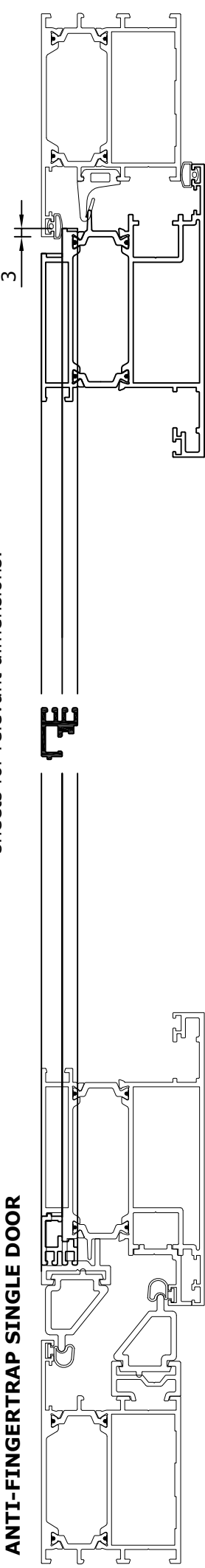


# System 5-20D/Hi+

DOOR SYSTEM

\*See "Fabrication and Cutting Sizes" sheets for relevant dimensions.

## ANTI-FINGERTRAP SINGLE DOOR



PREP DETAIL AT HINGE STILE

45°

Profile to be mitred to 45°

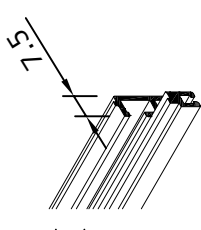
Brush seal carrier 0038



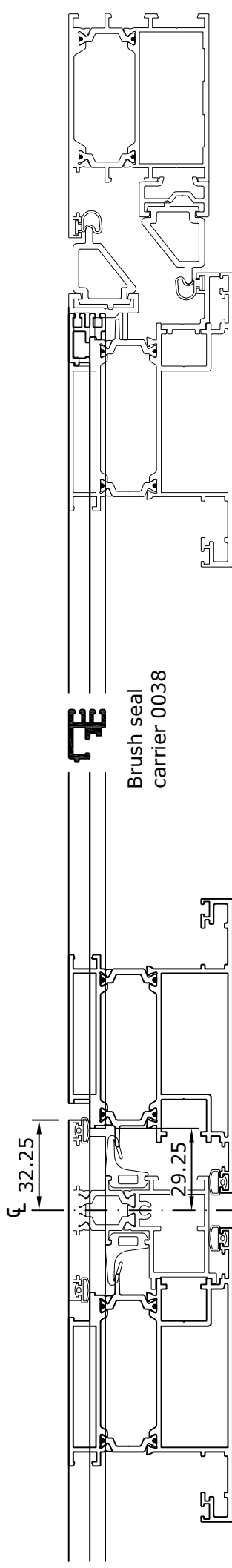
\*Brush seal carrier width

PREP DETAIL AT HINGE STILE

9



## ANTI-FINGERTRAP DOUBLE DOOR



32.25

Brush seal carrier 0038

PREP DETAIL AT SLAVE STILE

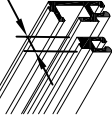
Brush seal carrier 0038



Brush seal carrier 0038

5.5

5.5



PREP DETAIL AT LOCK STILE

Brush seal carrier 0038

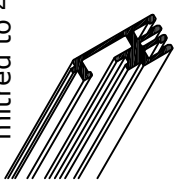


\*Brush seal carrier width

PREP DETAIL AT HINGE STILE

45°

Profile to be mitred to 45°



Scale 1:2

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SHEET 520D Hi+ / 4 / 360  
rev 0  
06/11/13

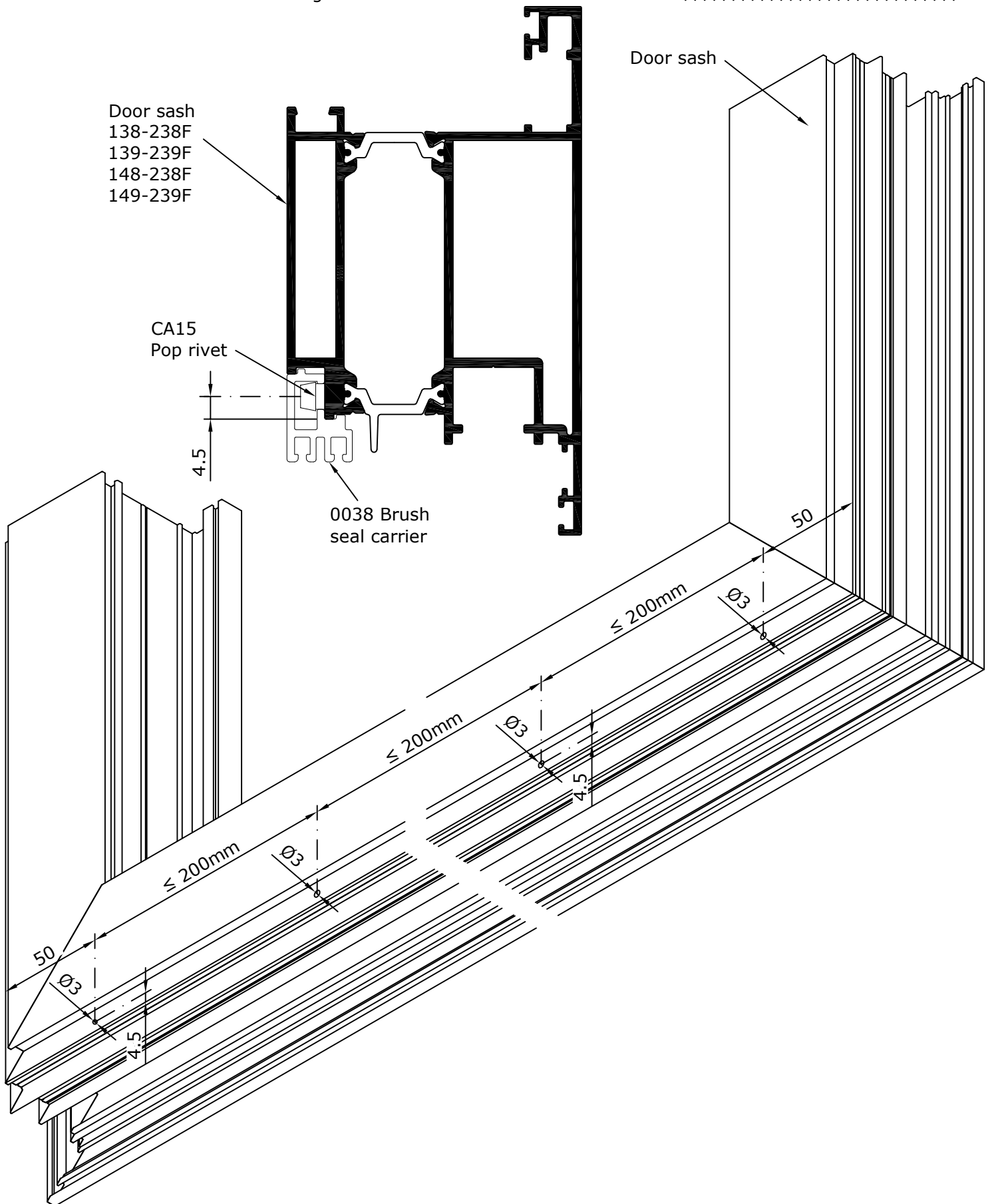
# Door Sash Prep for 0038 Brush Seal Carrier



**System 5-20D/Hi+**

DOOR SYSTEM

Drill 3mm  $\varnothing$  pilot holes to accommodate CA15 pop rivets as indicated and at centres not greater than 200mm.



Not to Scale

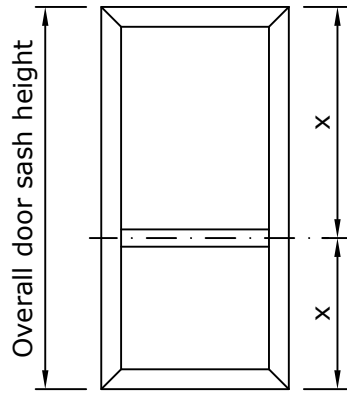
# Midrail End Prep

## Open-Out Doors



## System 5-20D/Hi+

DOOR SYSTEM



### MIDRAIL 117-217

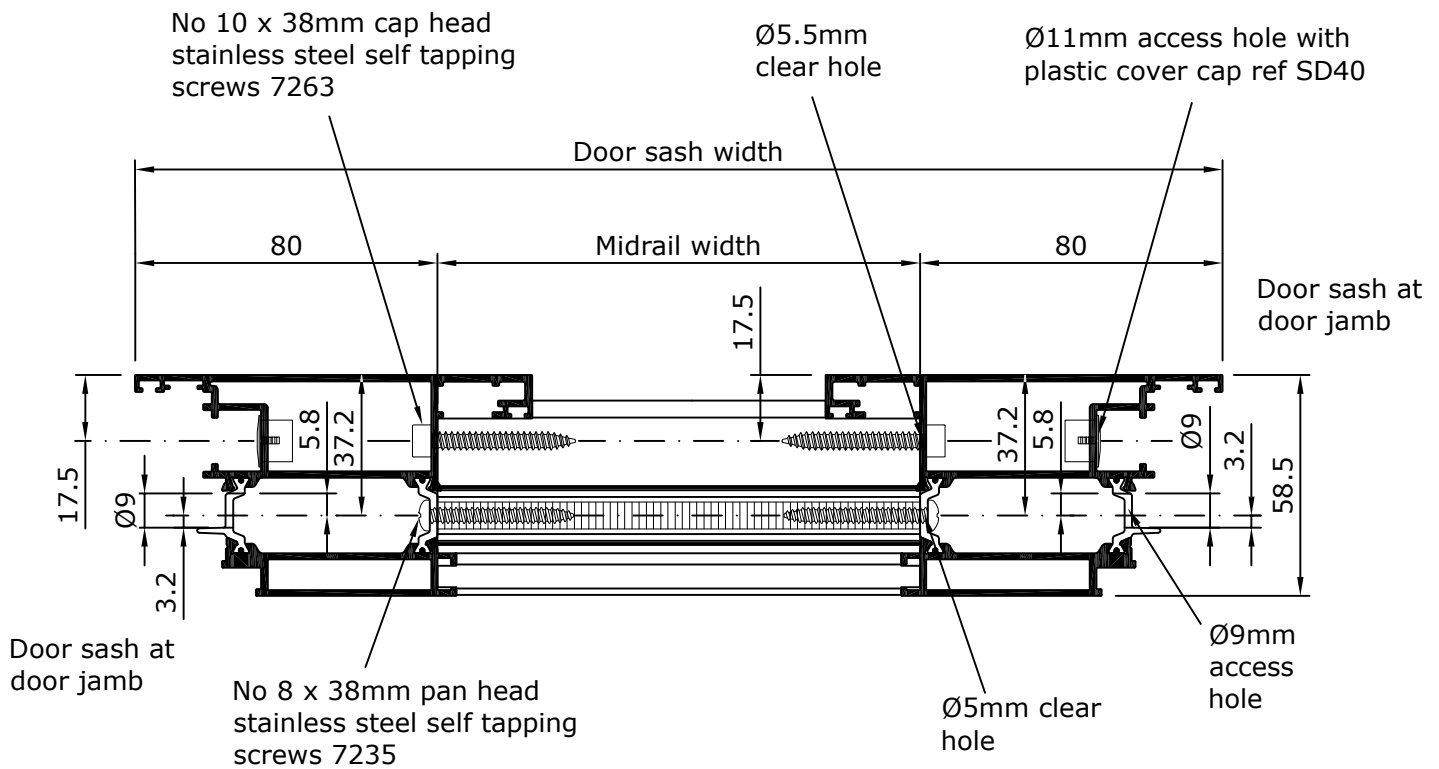
Glass height =  $X - 109.75$

Bead height =  $X - 139.75$

### MIDRAIL 119-219

Glass height =  $X - 121$

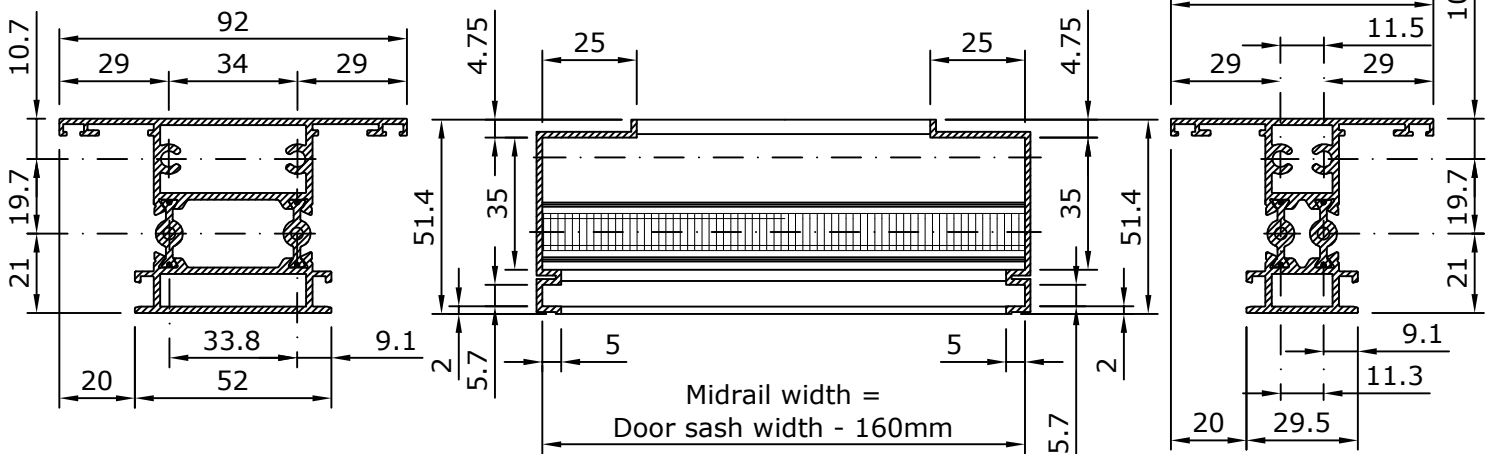
Bead height =  $X - 151$



### MIDRAIL END PREP

92mm midrail  
119-219

69.5mm midrail  
117-217



ADHESIVE MT1803 ADHESIVE SHOULD BE APPLIED TO THE SHAPED ENDS OF THE MIDRAIL PROFILES

Scale 1:2

# Midrail End Prep

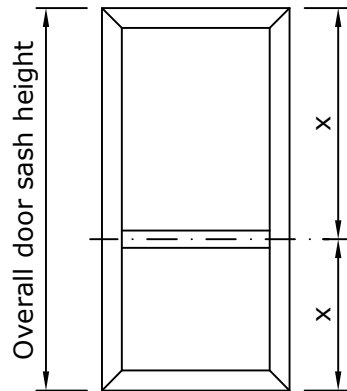
## Open-In Doors

Only the following mullions/transoms may be used within sashes:  
103-201, 116-206FF



## System 5-20D/Hi+

DOOR SYSTEM



### MIDRAIL 103-201

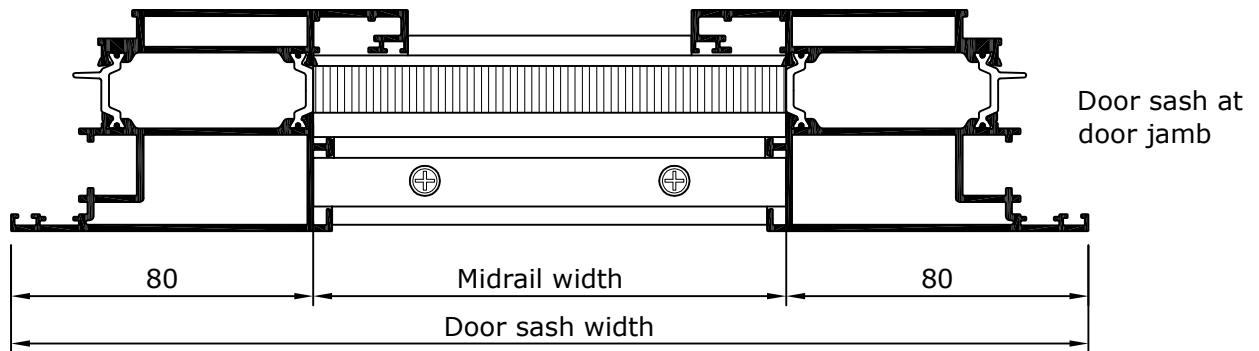
Glass height =  $X - 109.75$

Bead height =  $X - 139.75$

### MIDRAIL 116-206FF

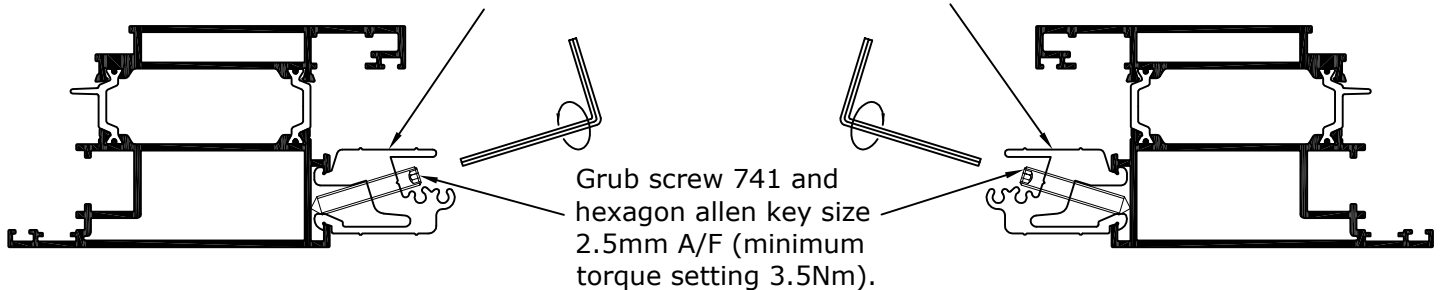
Glass height =  $X - 121$

Bead height =  $X - 151$

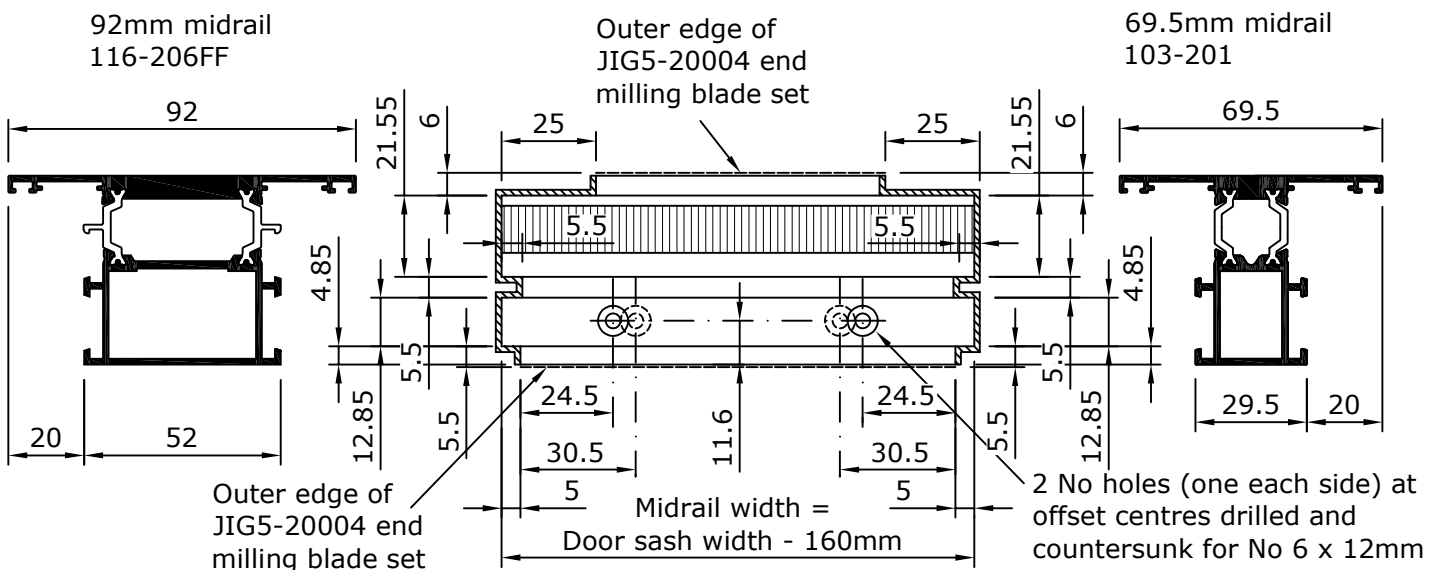


Mullion/transom cleat  
523 (38.5mm wide) for  
92mm midrail 116-206FF

Mullion/transom cleat  
522 (16mm wide) for  
69.5mm midrail 103-201



### MIDRAIL END PREP



92mm midrail  
116-206FF

Outer edge of  
JIG5-20004 end  
milling blade set

69.5mm midrail  
103-201

Outer edge of  
JIG5-20004 end  
milling blade set

Midrail width =  
Door sash width - 160mm

2 No holes (one each side) at  
offset centres drilled and  
countersunk for No 6 x 12mm  
stainless steel countersunk self  
tapping screws 7200



MT1803 ADHESIVE SHOULD BE APPLIED TO  
THE SHAPED ENDS OF THE MIDRAIL PROFILES

Scale 1:2

# Mullion End Prep

## Rebated Outer Frame



### System 5-20D/Hi+

DOOR SYSTEM

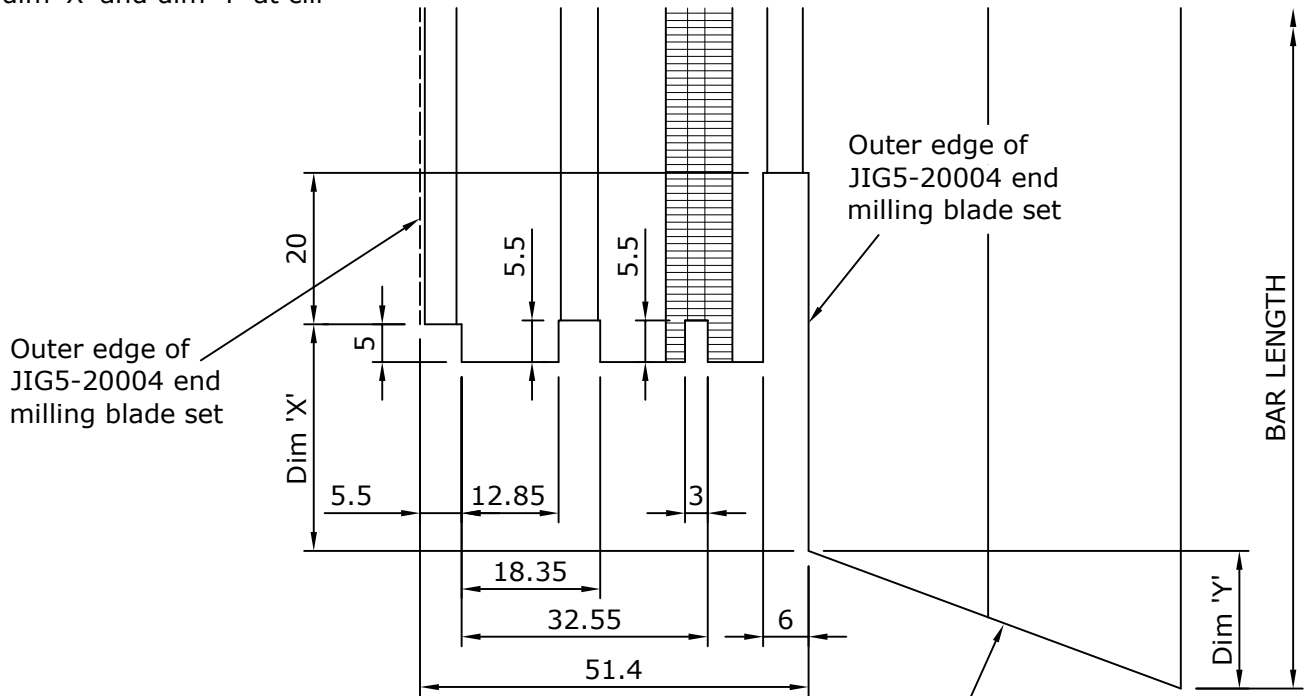
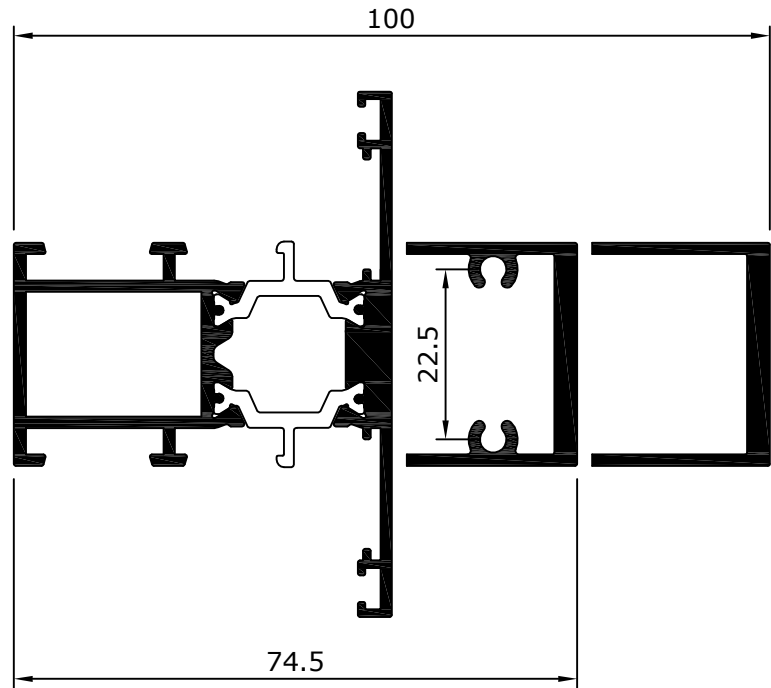
#### Mullions

- 113-213FF
- 142-201FF
- 143-201FF

#### Notes:

1. Please note these sections are not intended for use as transoms.
2. Box mullion should be notched over outer frame, and cill liner if applicable, to suit application.
3. For further advice please contact Metal Technology's Technical Department.

**Bar length** = Fixed frame sight size + 40mm + dim 'X' and dim 'Y' at head + dim 'X' and dim 'Y' at cill



Section	Dim 'X'	Dim 'Y'
101-201FF	29.5	as specified by fabricator
102-202F	44.5	as specified by fabricator
103-203F	49.5	as specified by fabricator
105-205FF	60	as specified by fabricator

If 'Y' is specified as 0, bar will be square ended. Values of 'X' and 'Y' must be provided for both ends of the bar.

Scale 1:1

# Mullion/Transom End Prep

## Rebated Outer Frame



## System 5-20D/Hi+

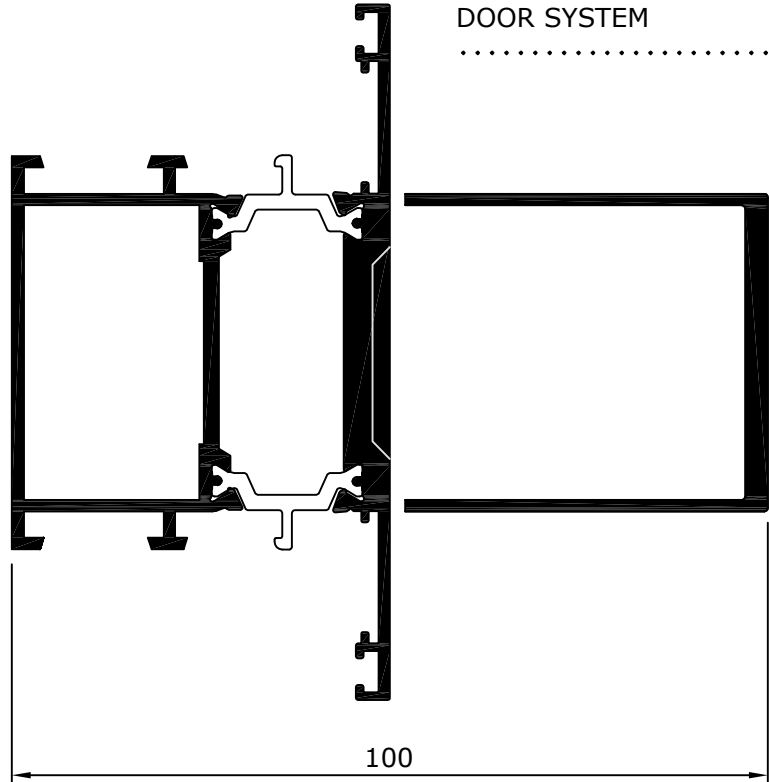
DOOR SYSTEM

**Mullions**  
106-206FF  
116-206FF  
107-206FF

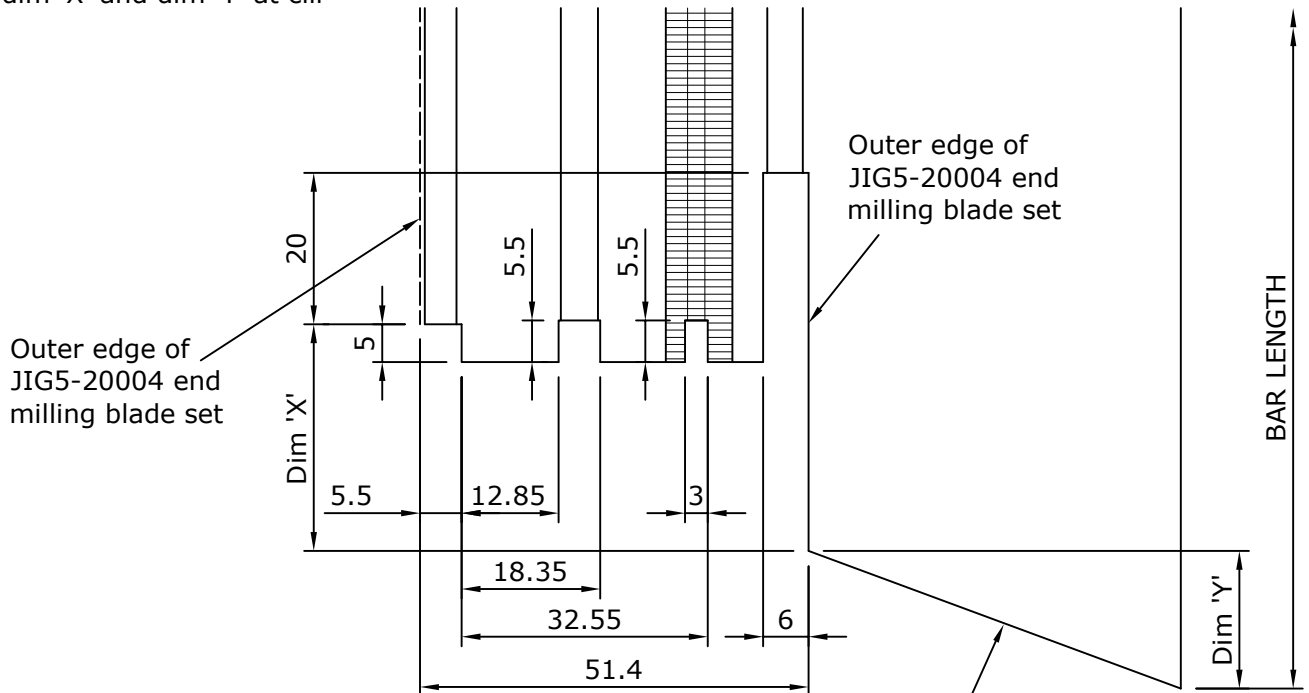
**Transom**  
116-206FF

**Notes:**

1. Please note that only 116-206FF is suitable for use as a transom.
2. Box mullion should be notched over outer frame, and cill liner if applicable, to suit application.
3. For further advice please contact Metal Technology's Technical Department.



**Bar length** = Fixed frame sight size + 40mm + dim 'X' and dim 'Y' at head + dim 'X' and dim 'Y' at cill



Section	Dim 'X'	Dim 'Y'
101-201FF	29.5	as specified by fabricator
102-202F	44.5	as specified by fabricator
103-203F	49.5	as specified by fabricator
105-205FF	60	as specified by fabricator

If 'Y' is specified as 0, bar will be square ended. Values of 'X' and 'Y' must be provided for both ends of the bar.

Scale 1:1

# Outer Frame End Prep

## Outer Frame Butt Joint to Mullion

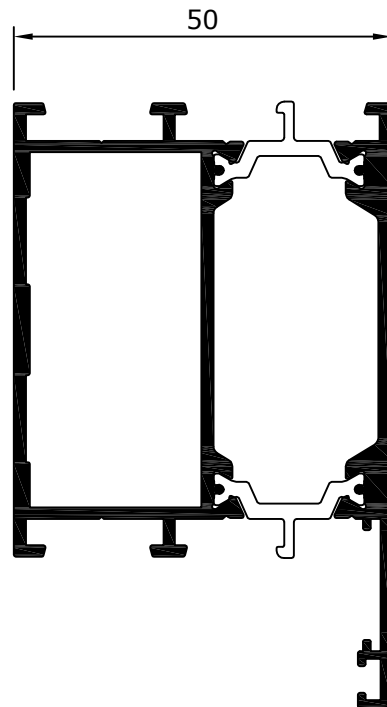


**System 5-20D/Hi+**

DOOR SYSTEM

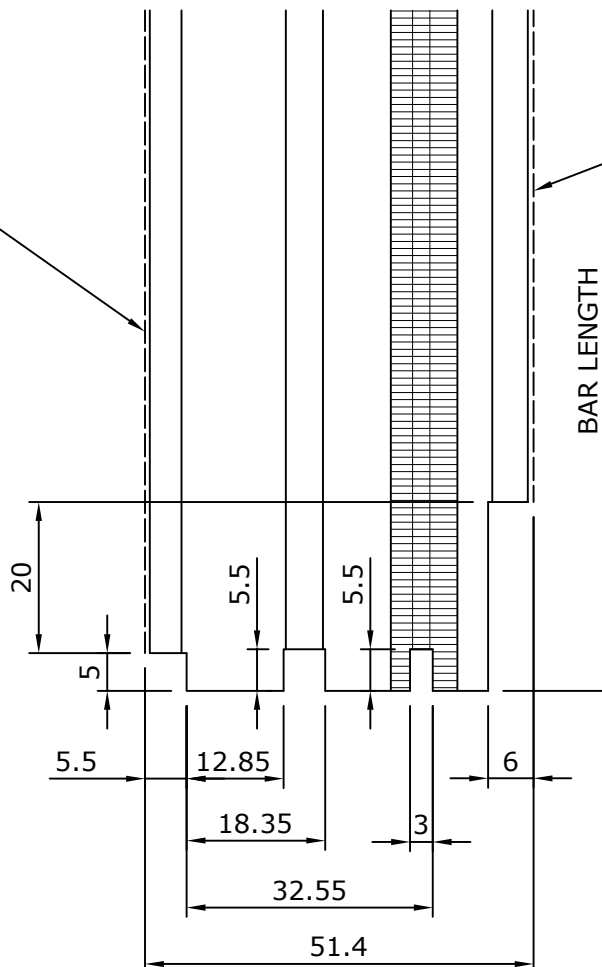
### Outer frames

- 101-201FF
- 102-202F
- 103-203F
- 105-205FF



Outer edge of  
JIG5-20004 end  
milling blade set

Outer edge of  
JIG5-20004 end  
milling blade set



Scale 1:1



# Mullion End Prep

## Rebated Head and Low Threshold



## System 5-20D/Hi+

DOOR SYSTEM

### Mullions

106-206FF, 107-206FF  
 113-213FF, 116-206FF  
 142-201FF, 143-201FF

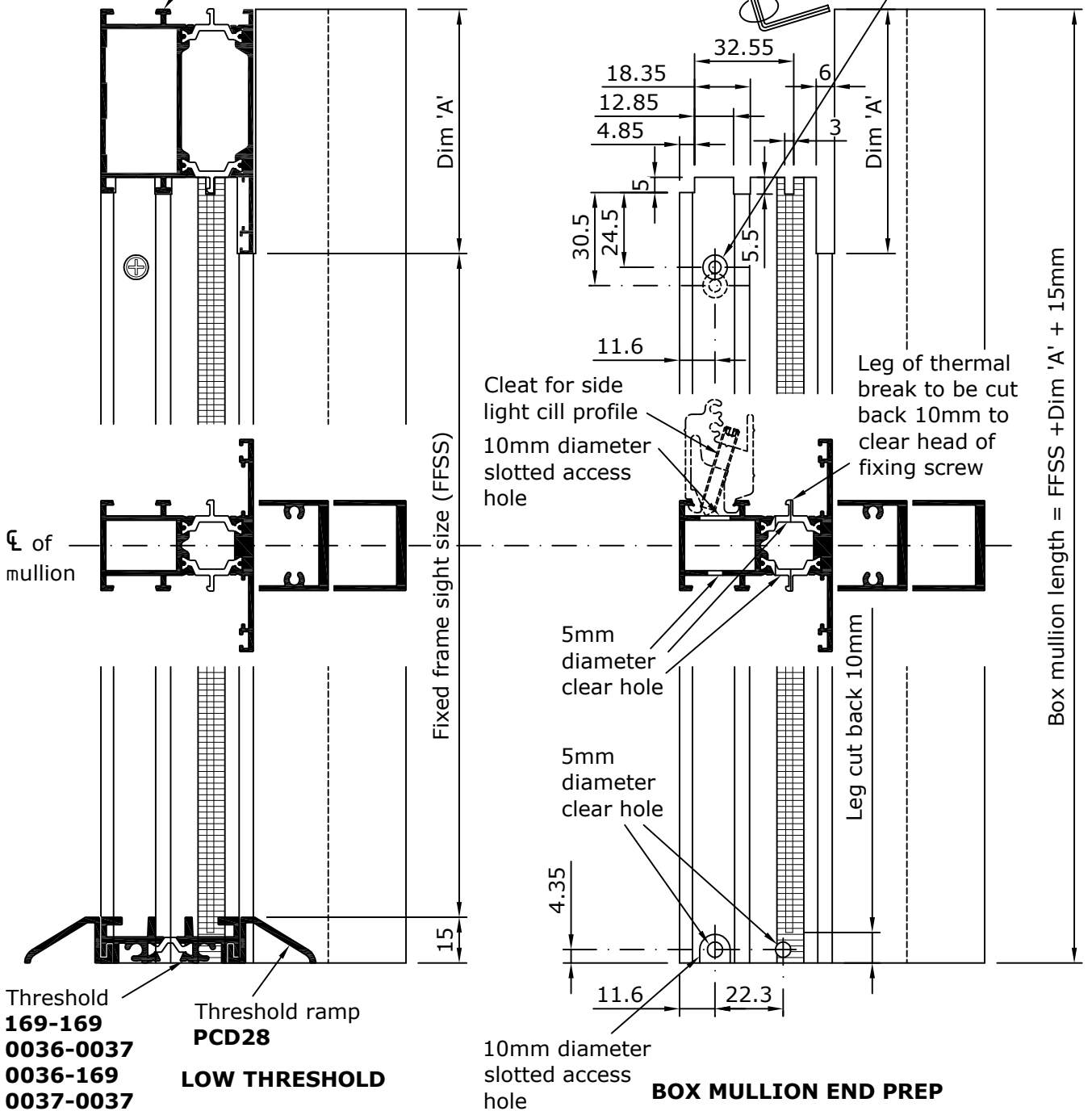
Outer frame	Dim 'A'
101-201FF	49.5mm
102-202F	64.5mm
103-203F	69.5mm
105-205FF	60mm

Mullion/transom cleat

Grub screw 741 and hexagon allen key size 2.5mm A/F (minimum torque setting 3.5Nm).

2 No holes (one each side) at offset centres drilled and countersunk for No 6 x 12mm stainless steel countersunk self tapping screws 7200

Outer frame at door head



Scale 1:2

# Mullion Stiffener Prep



**System 5-20D/Hi+**

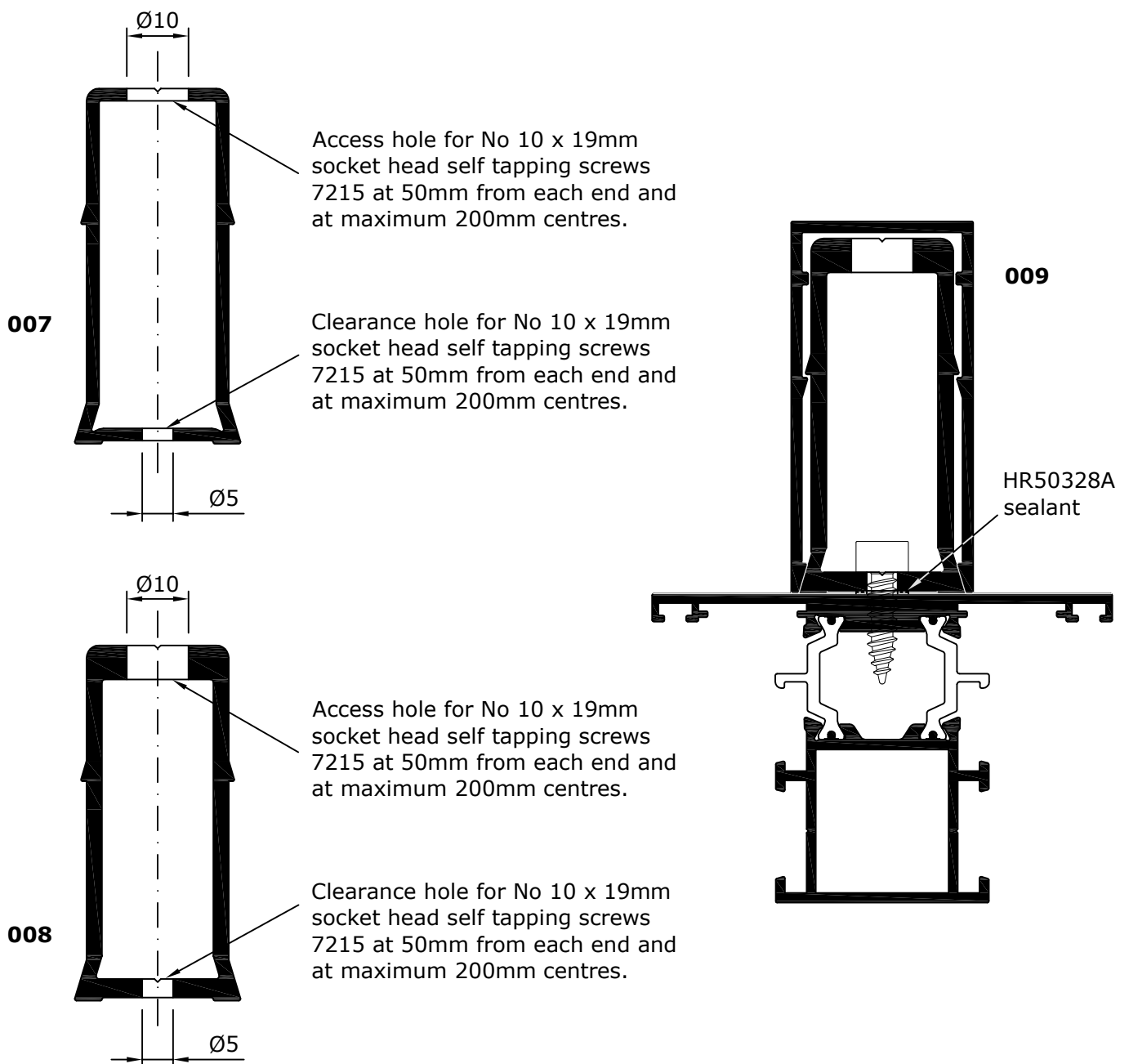
DOOR SYSTEM

Metal Technology recommend that the No 10 x 19mm socket head self tapping screws 7215 are fixed at 200mm centres and sealed in position using HR50328A sealant. Variation from these centres will affect the structural performance of the combined mullion and must be checked and confirmed by a structural engineer.

Cutting sizes to be calculated to suit site application.

Care should be taken to accommodate cill and head liner profiles.

These profiles are only suitable for use with 113-213FF and 116-206FF , when used as mullions, and should be fixed to profiles 113 and 116 only.



Scale 1:1

# Drainage Details

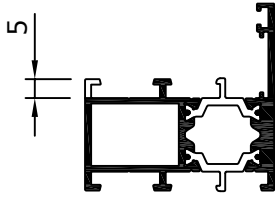
## To Suit Rebated Outer Frames

### Outer frame prep for open out sash



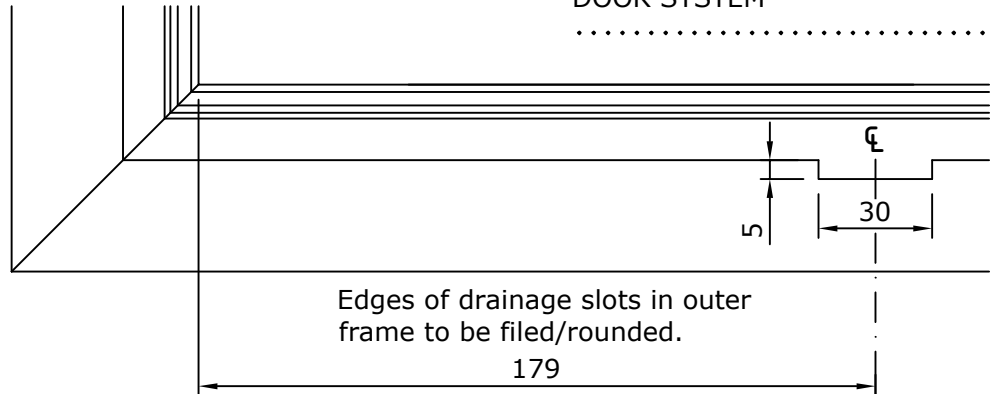
## System 5-20D/Hi+

DOOR SYSTEM

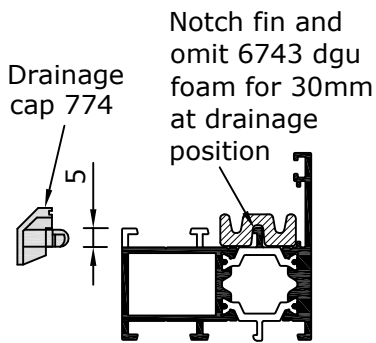


Outer frames:

**101-201FF 102-202F**  
**103-203F 105-205FF**  
**105-220F 105-227F**  
**120-204F 120-216F**

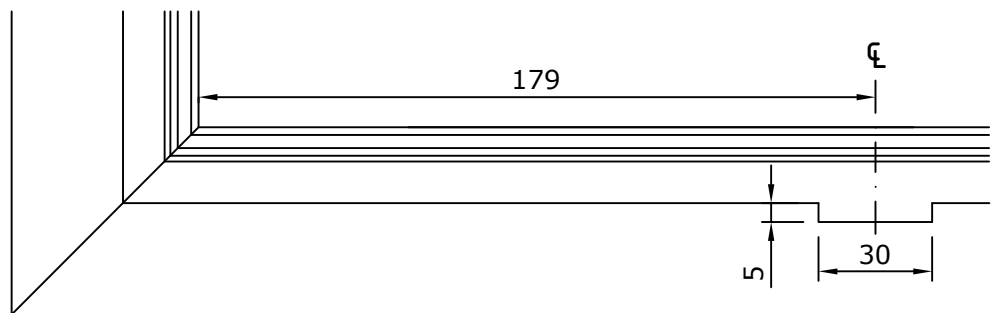


### Outer frame prep for externally beaded fixed light

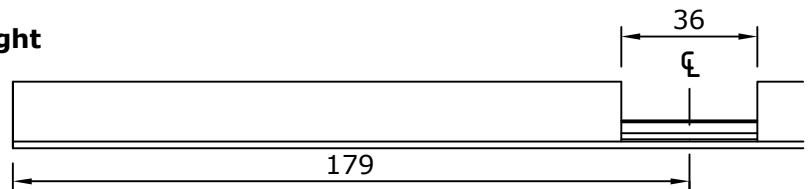


Outer frames:

**101-201FF 102-202F**  
**103-203F 105-205FF**  
**105-220F 105-227F**  
**120-204F 120-216F**



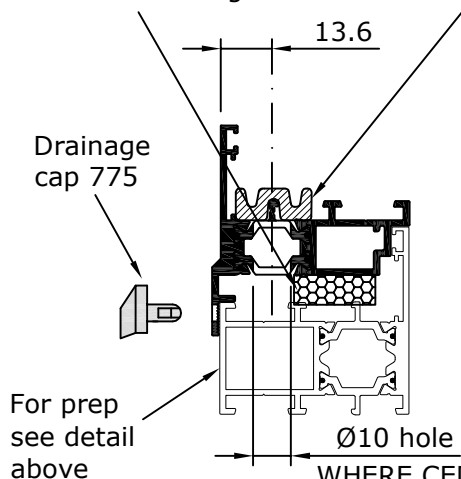
### Bead prep for externally beaded fixed light



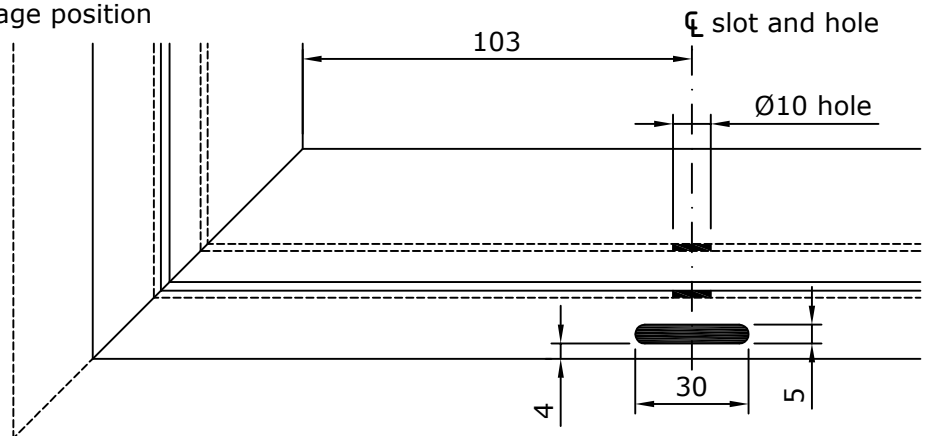
### Liner bar prep for internally beaded fixed light with open out sash

Ensure HR50184 foam does not interfere with liner bar drainage holes

Notch fin and omit 6743 D.G.U. foam for 30mm at drainage position



Liner Bar  
**185-686F**



WHERE CENTRES OF DRAINAGE PREPS EXCEED 1000mm:

1. FOR FIXED LIGHTS PROVIDE AN EXTRA CENTRAL PREP
2. FOR DOUBLE DOORS PROVIDE 2 ADDITIONAL DRAINAGE PREPS, 200mm EITHER SIDE OF DOOR CENTRE LINE.

Scale 1:2

SHEET 520D Hi+ / 5 / 10

rev 2

17/12/13

# Drainage Details

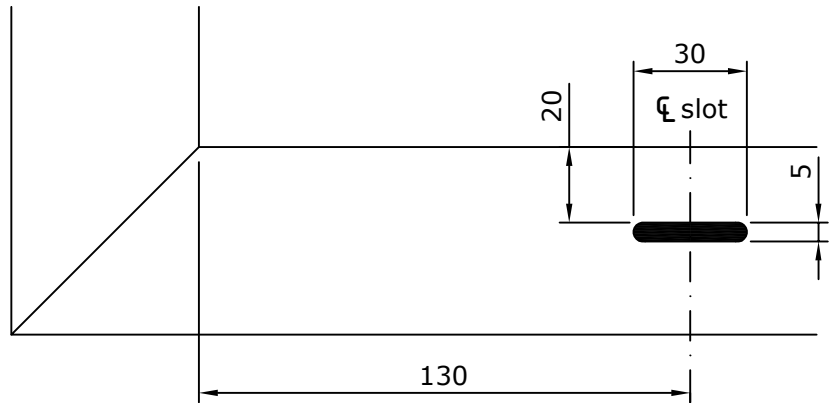
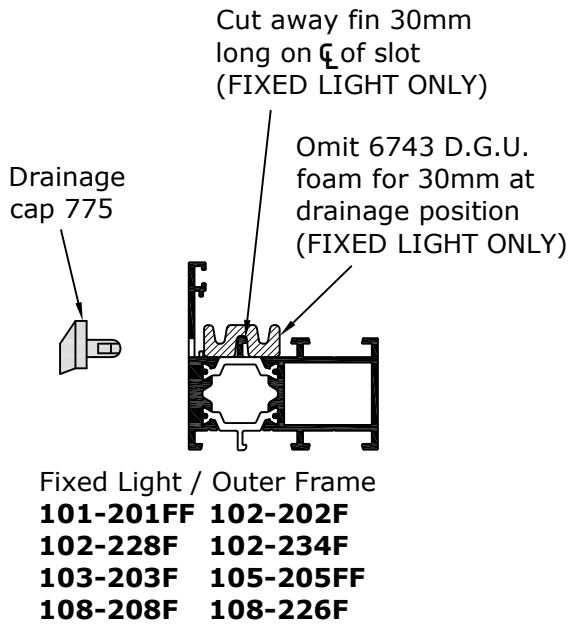
## To Suit Rebated Outer Frames



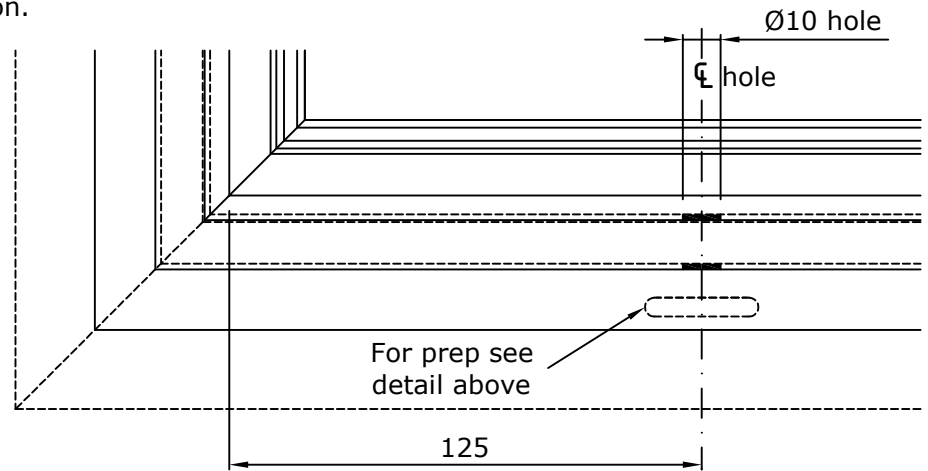
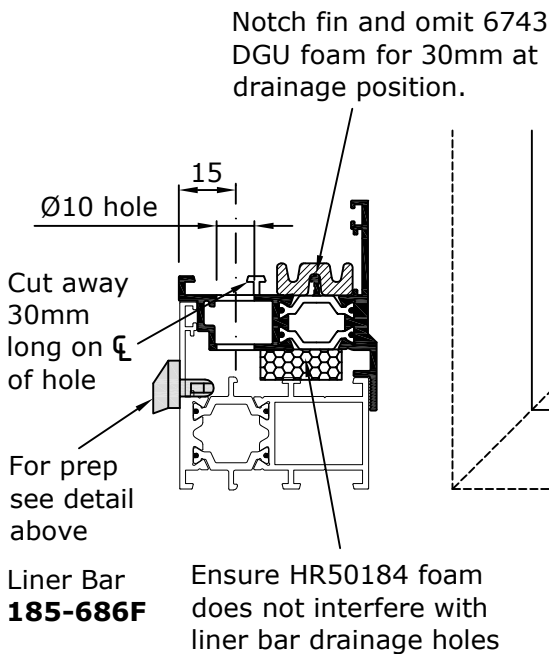
**System 5-20D/Hi+**

DOOR SYSTEM

### Outer frame prep for open in sash or internally beaded fixed light



### Liner bar prep for externally beaded fixed light with open in sash



WHERE CENTRES OF DRAINAGE PREPS EXCEED 1000mm:  
 1. FOR FIXED LIGHTS PROVIDE AN EXTRA CENTRAL PREP  
 2. FOR DOUBLE DOORS PROVIDE 2 ADDITIONAL DRAINAGE PREPS, 200mm EITHER SIDE OF DOOR CENTRE LINE.

Scale 1:2

# Drainage Details

To Suit Transom and Liner Bar



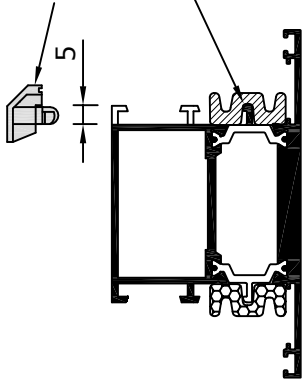
**System 5-20D/Hi+**

DOOR SYSTEM

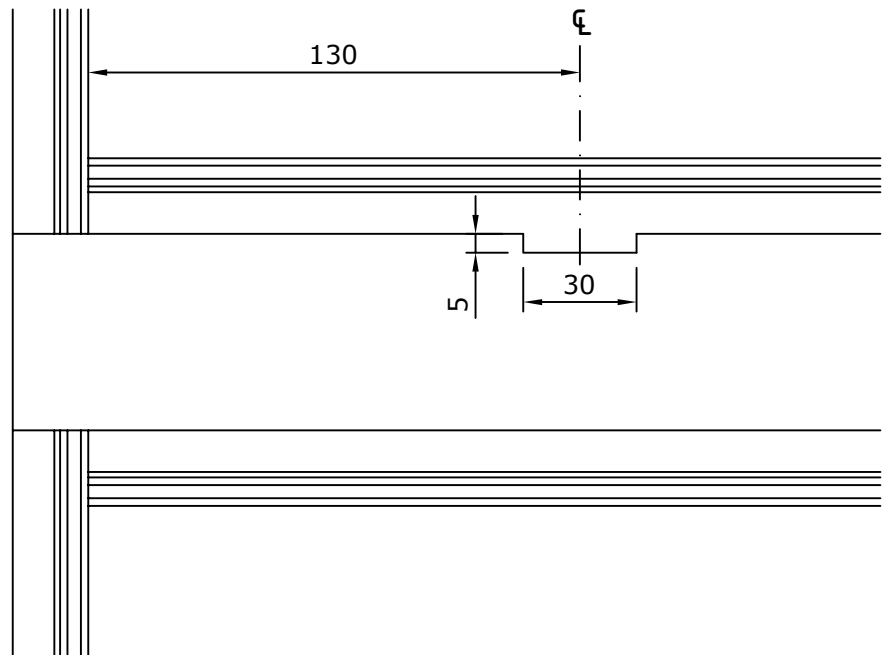
## Transom prep for externally beaded fixed light with open out sash

Notch fin and omit 6743 dgu foam for 30mm at drainage position

Drainage cap 774



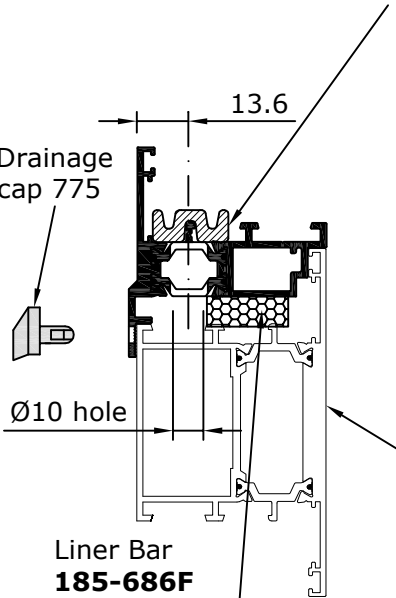
Transom  
**116-206FF**



## Liner bar prep for internally beaded fixed light with open out sash

Notch fin and omit 6743 D.G.U. foam for 30mm at drainage position (FIXED LIGHT ONLY)

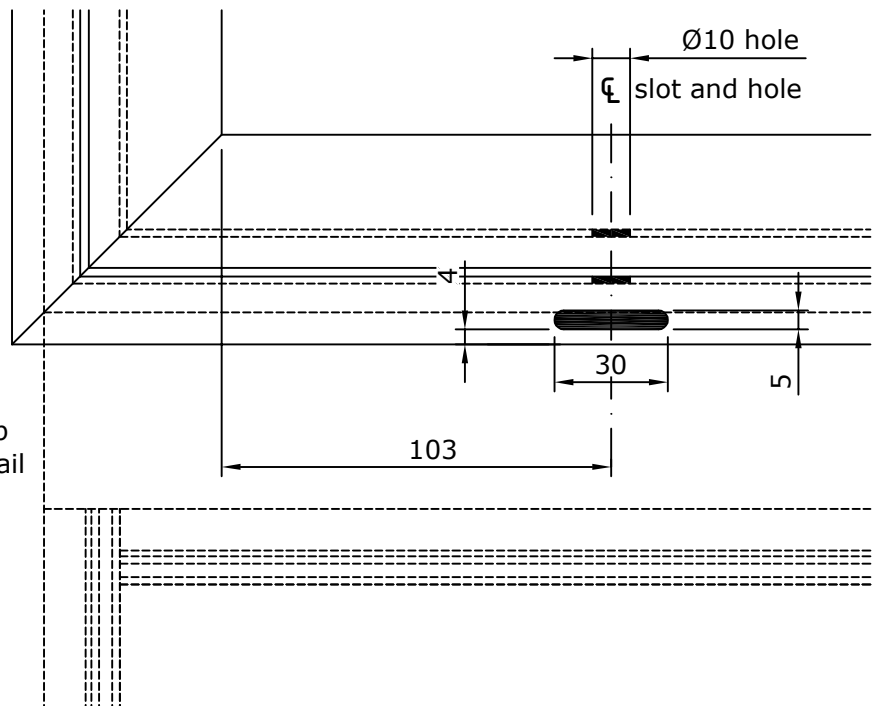
Drainage cap 775



Liner Bar  
**185-686F**

Ensure HR50184 foam does not interfere with liner bar drainage holes

For prep see detail above



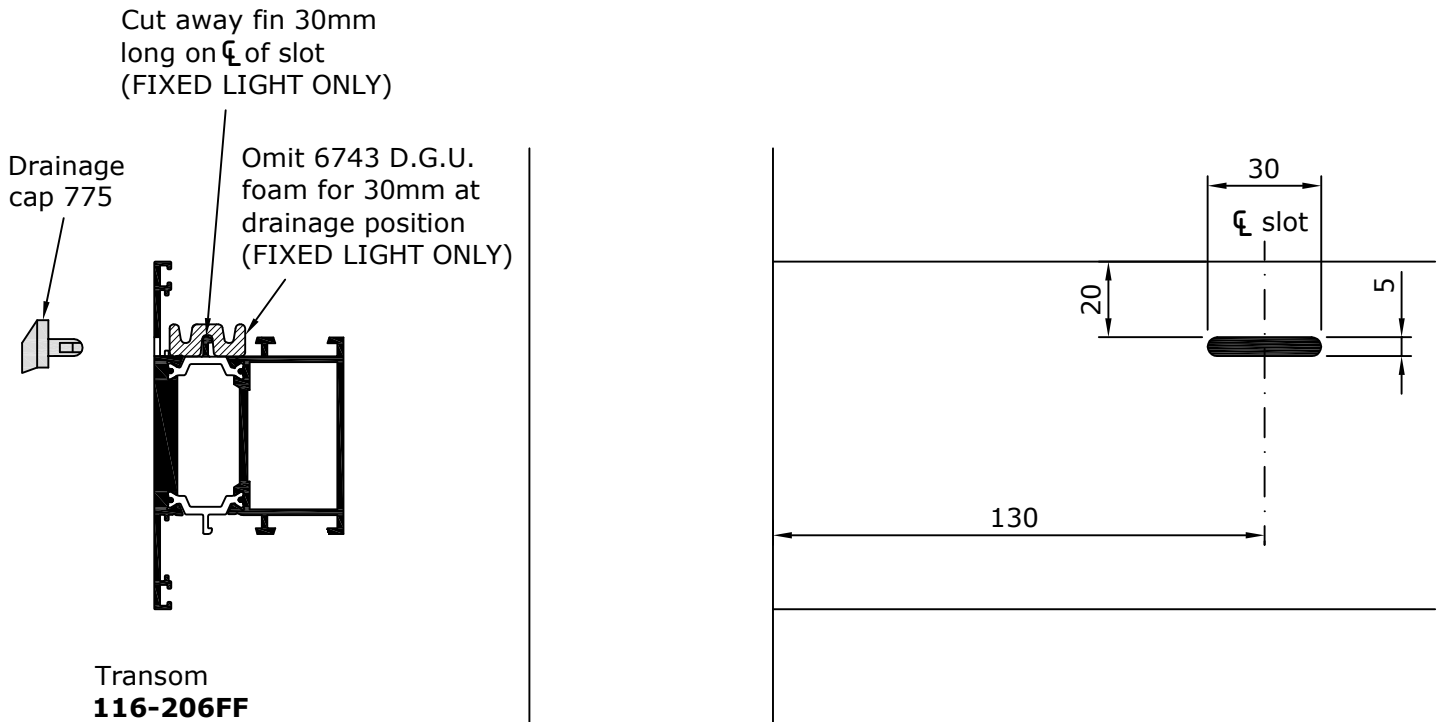
WHERE CENTRES OF DRAINAGE PREPS EXCEED 1000mm PROVIDE AN EXTRA CENTRAL PREP.

Scale 1:2

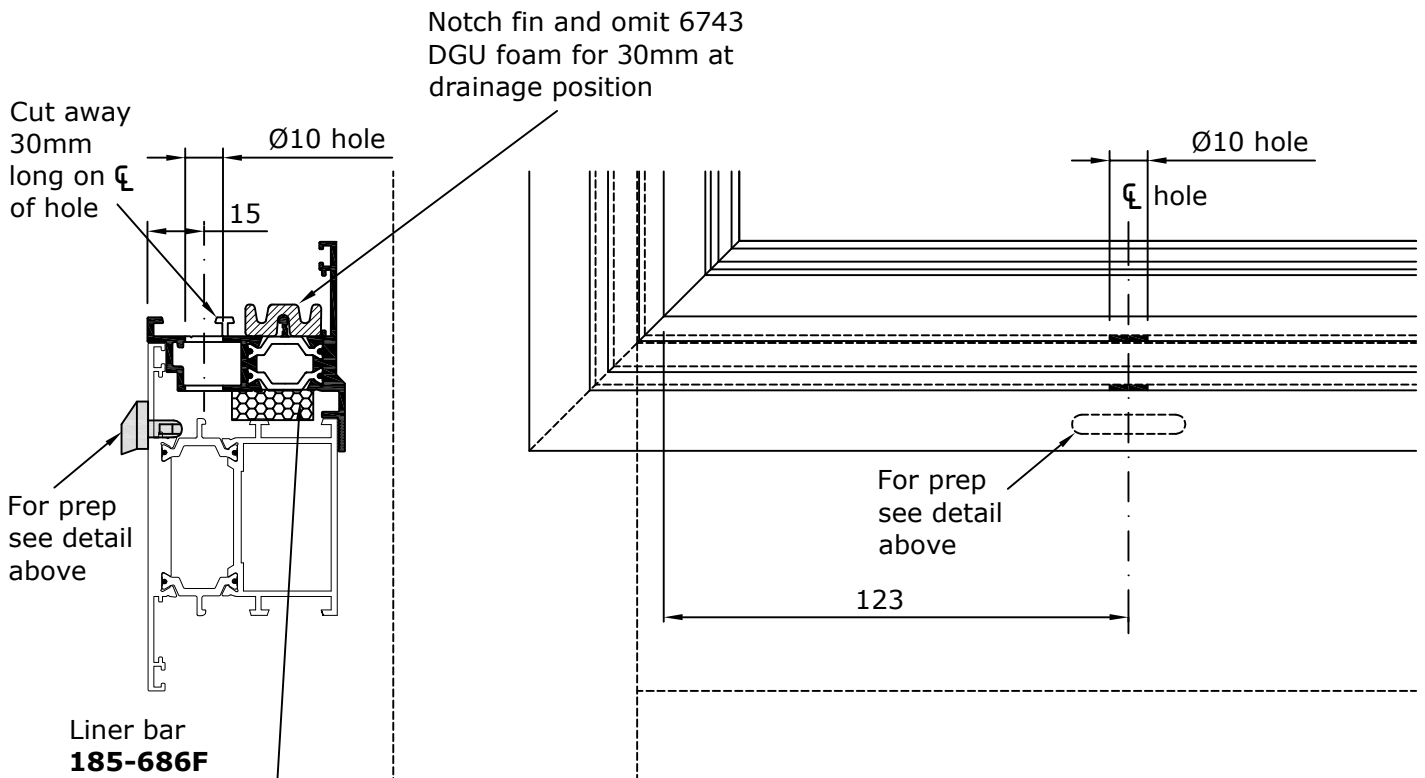
# Drainage Details

## To Suit Transom and Liner Bar

### Transom prep for internally beaded fixed light with open in sash



### Liner bar prep for externally beaded fixed light with open in sash



WHERE CENTRES OF DRAINAGE PREPS EXCEED 1000mm PROVIDE AN EXTRA CENTRAL PREP.

Scale 1:2

# Drainage Details

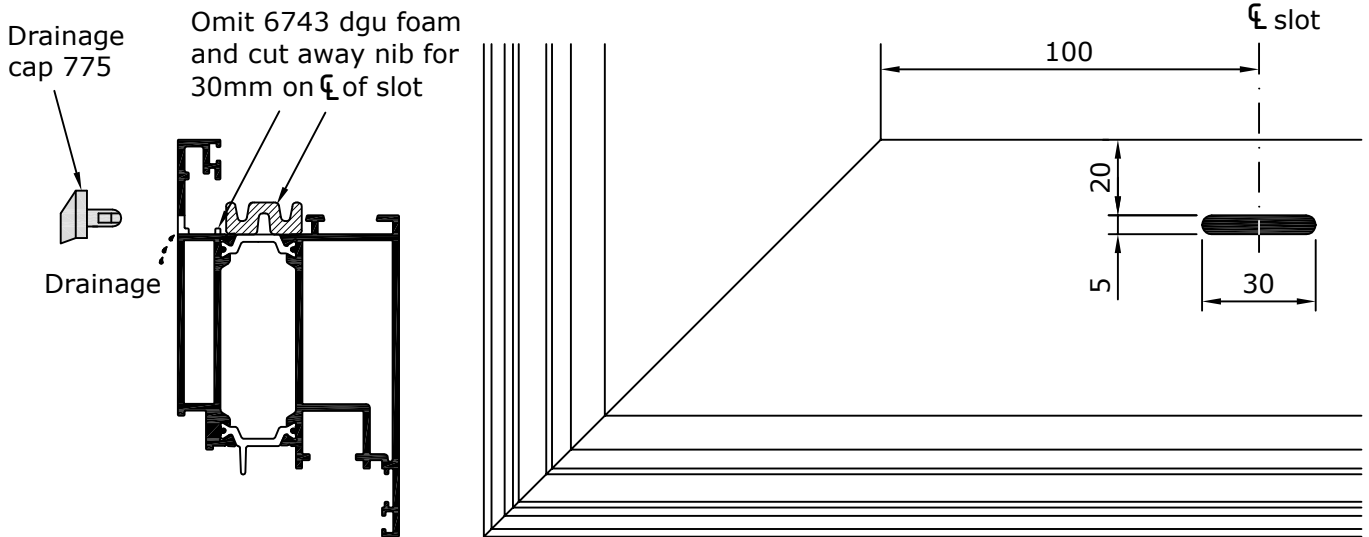
To Suit Open-In and Open-Out Door Sashes



**System 5-20D/Hi+**

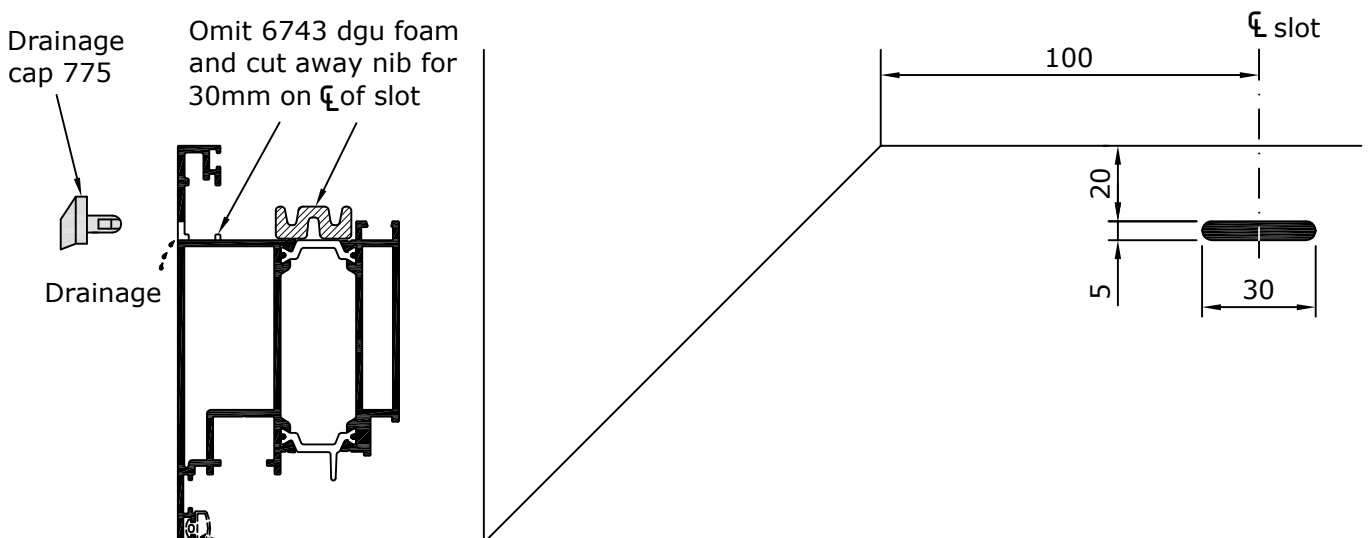
DOOR SYSTEM

## OPEN-IN



Open in door sashes:  
**138-238F**  
**148-238F**

## OPEN-OUT



Drainage

Gasket cut away 30mm long on centreline of slot for fully and semi rebated threshold applications.

Open out door sashes:  
**139-239F**  
**149-239F**

Scale 1:2

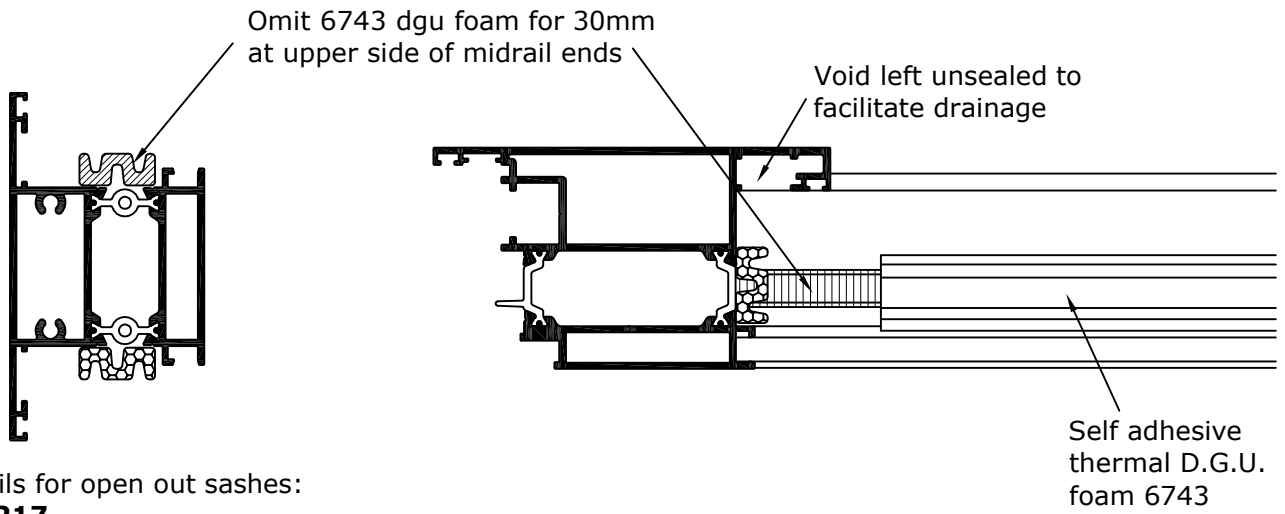
# Drainage Details

To Suit Midrails



**System 5-20D/Hi+**

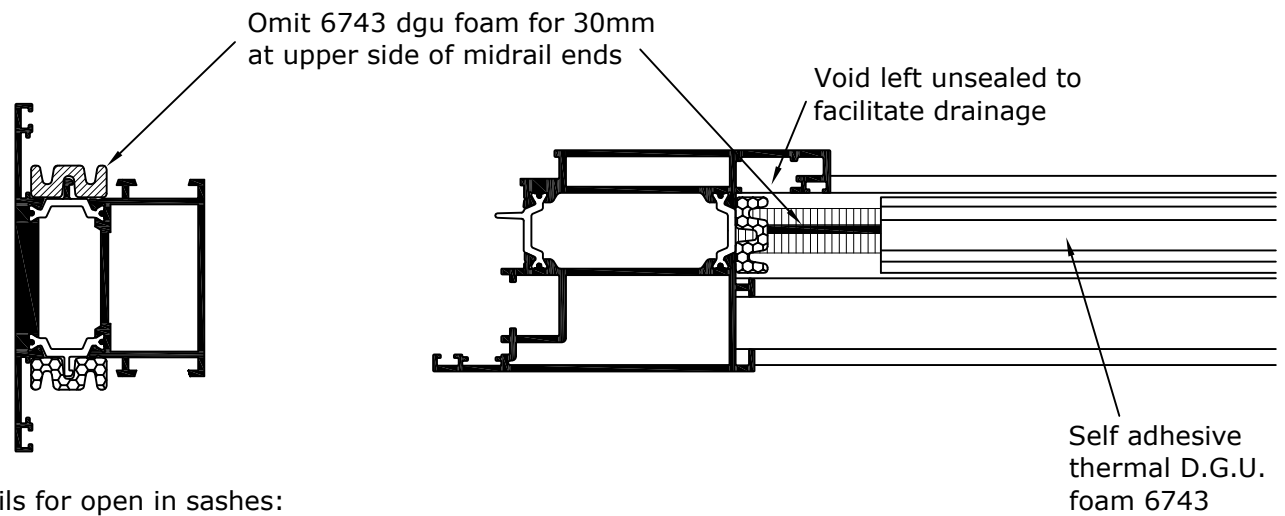
DOOR SYSTEM



Midrails for open out sashes:

**117-217**

**119-219**



Midrails for open in sashes:

**103-201**

**116-206FF**

Scale 1:2



# 169-169 Drainage Details

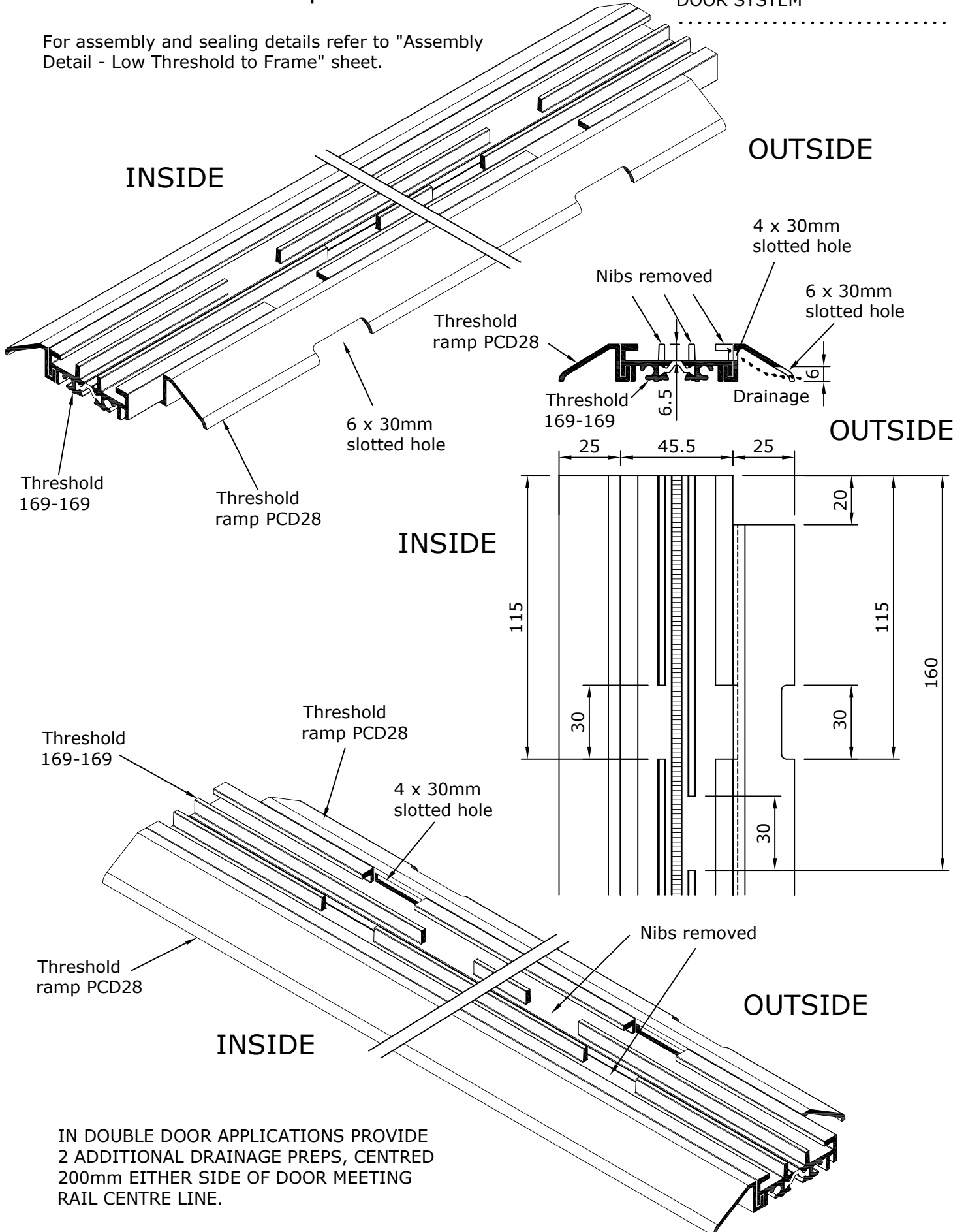
To Suit Open-In Door with Flush Low Threshold and Ramps



**System 5-20D/Hi+**

DOOR SYSTEM

For assembly and sealing details refer to "Assembly Detail - Low Threshold to Frame" sheet.



IN DOUBLE DOOR APPLICATIONS PROVIDE 2 ADDITIONAL DRAINAGE PREPS, CENTRED 200mm EITHER SIDE OF DOOR MEETING RAIL CENTRE LINE.

Scale 1:2

# 169-169 Drainage Details

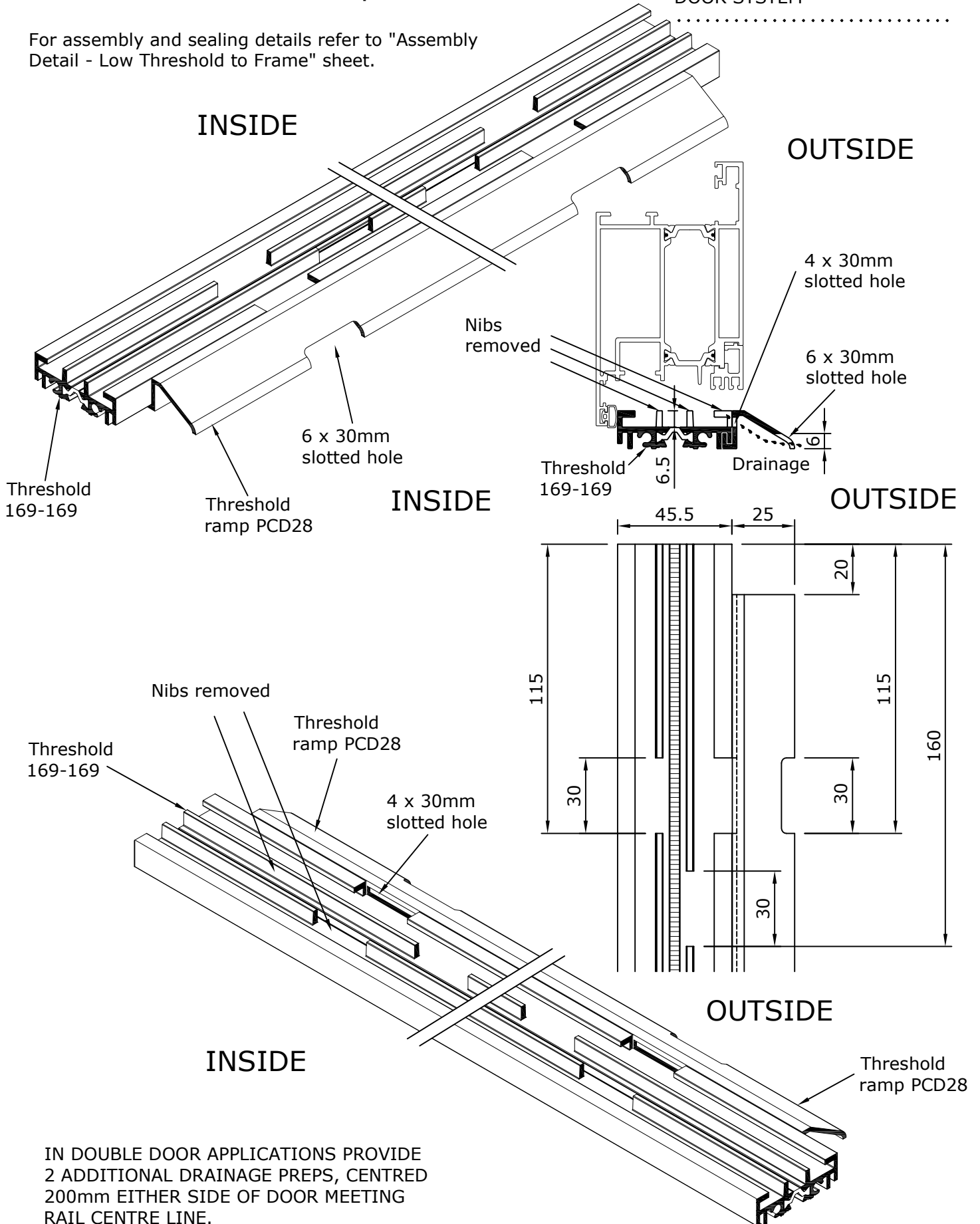
To Suit Open-In Door with Semi-Rebated Low Threshold and Ramp



**System 5-20D/Hi+**

DOOR SYSTEM

For assembly and sealing details refer to "Assembly Detail - Low Threshold to Frame" sheet.



Scale 1:2

# 169-169 Drainage Details

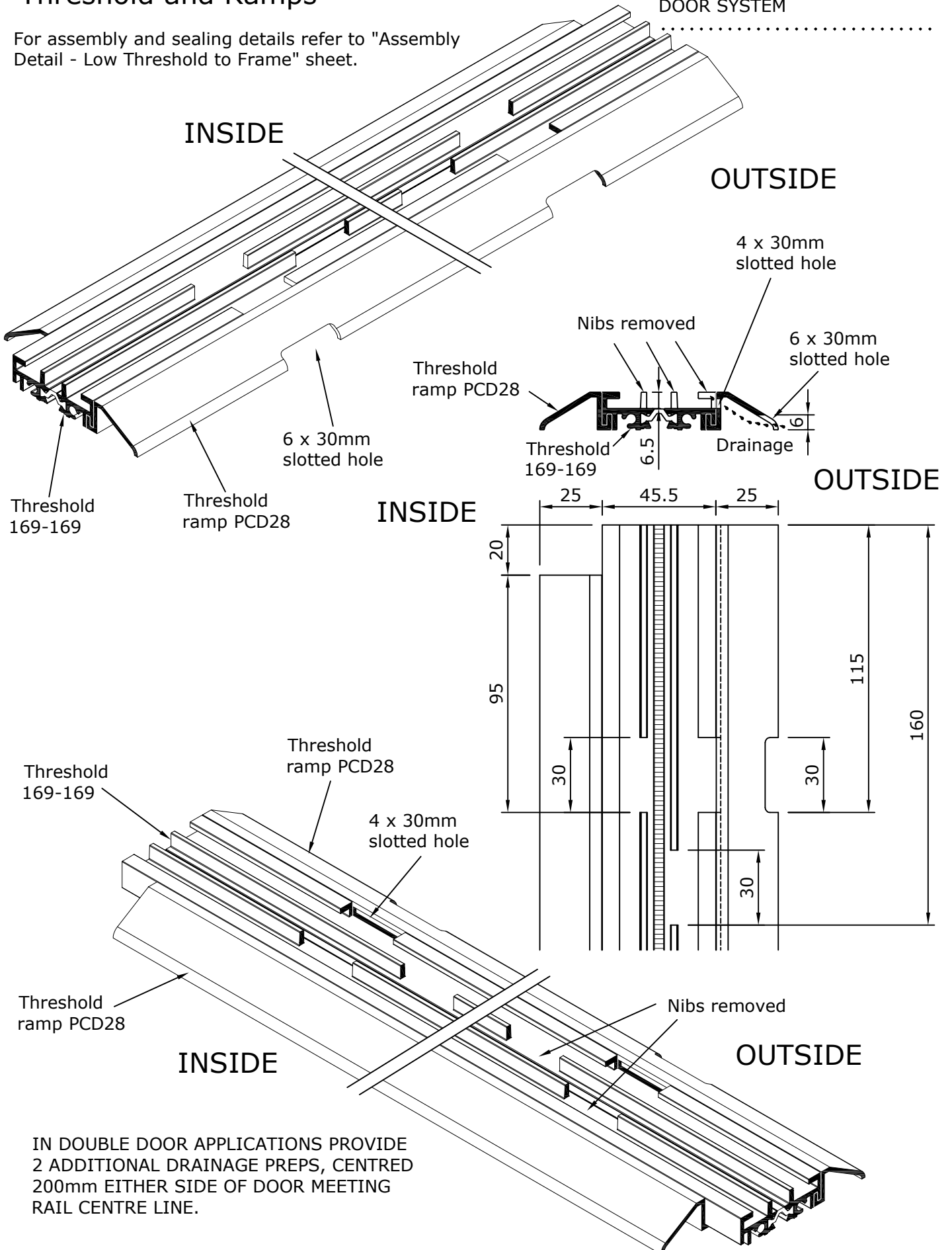
To Suit Open-Out Door with Flush Low Threshold and Ramps



**System 5-20D/Hi+**

DOOR SYSTEM

For assembly and sealing details refer to "Assembly Detail - Low Threshold to Frame" sheet.



IN DOUBLE DOOR APPLICATIONS PROVIDE 2 ADDITIONAL DRAINAGE PREPS, CENTRED 200mm EITHER SIDE OF DOOR MEETING RAIL CENTRE LINE.

Scale 1:2

# 169-169 Drainage Details

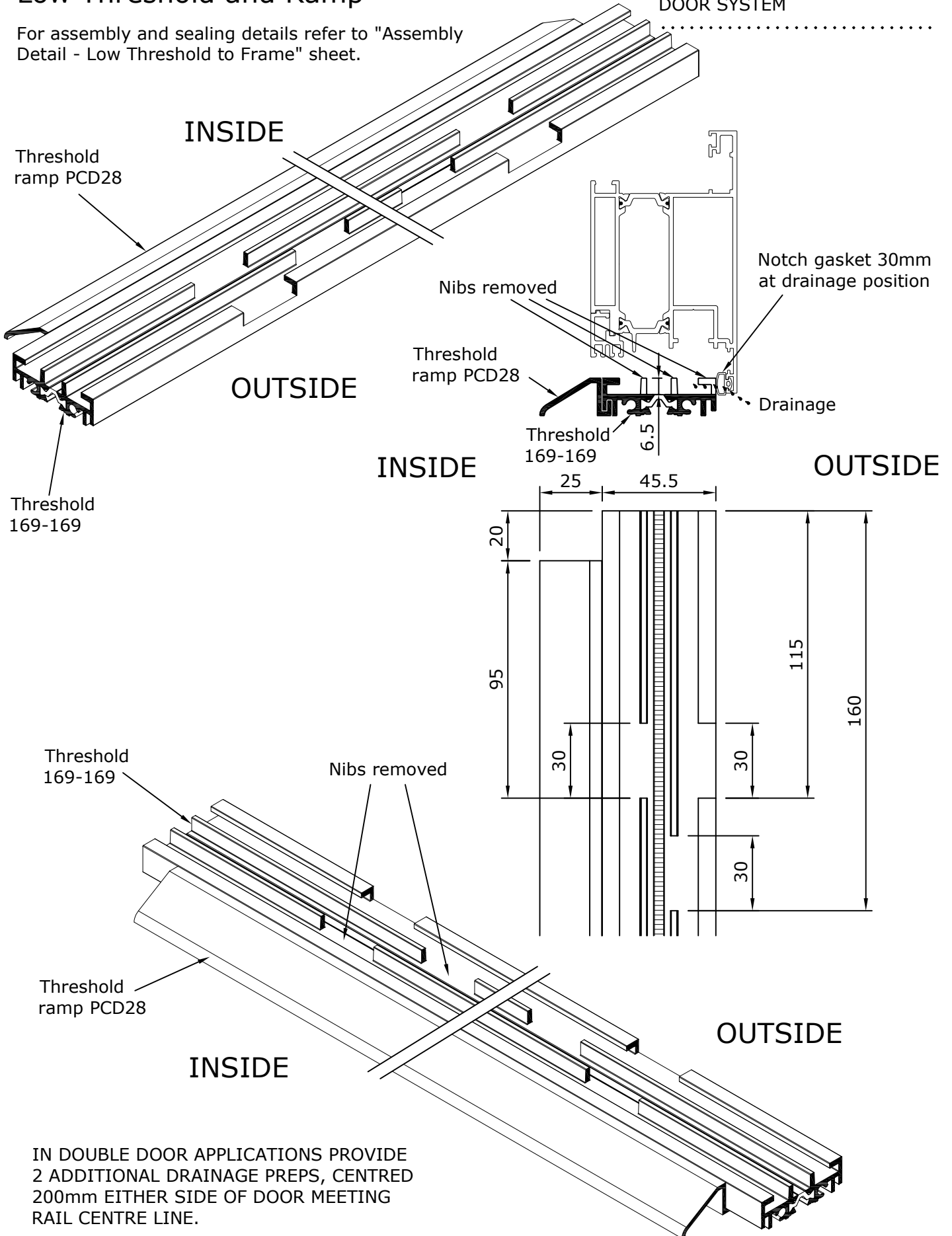
To Suit Open-Out Door with Semi-Rebated Low Threshold and Ramp



**System 5-20D/Hi+**

DOOR SYSTEM

For assembly and sealing details refer to "Assembly Detail - Low Threshold to Frame" sheet.



IN DOUBLE DOOR APPLICATIONS PROVIDE 2 ADDITIONAL DRAINAGE PREPS, CENTRED 200mm EITHER SIDE OF DOOR MEETING RAIL CENTRE LINE.

Scale 1:2

# 0037-0037 Drainage Details

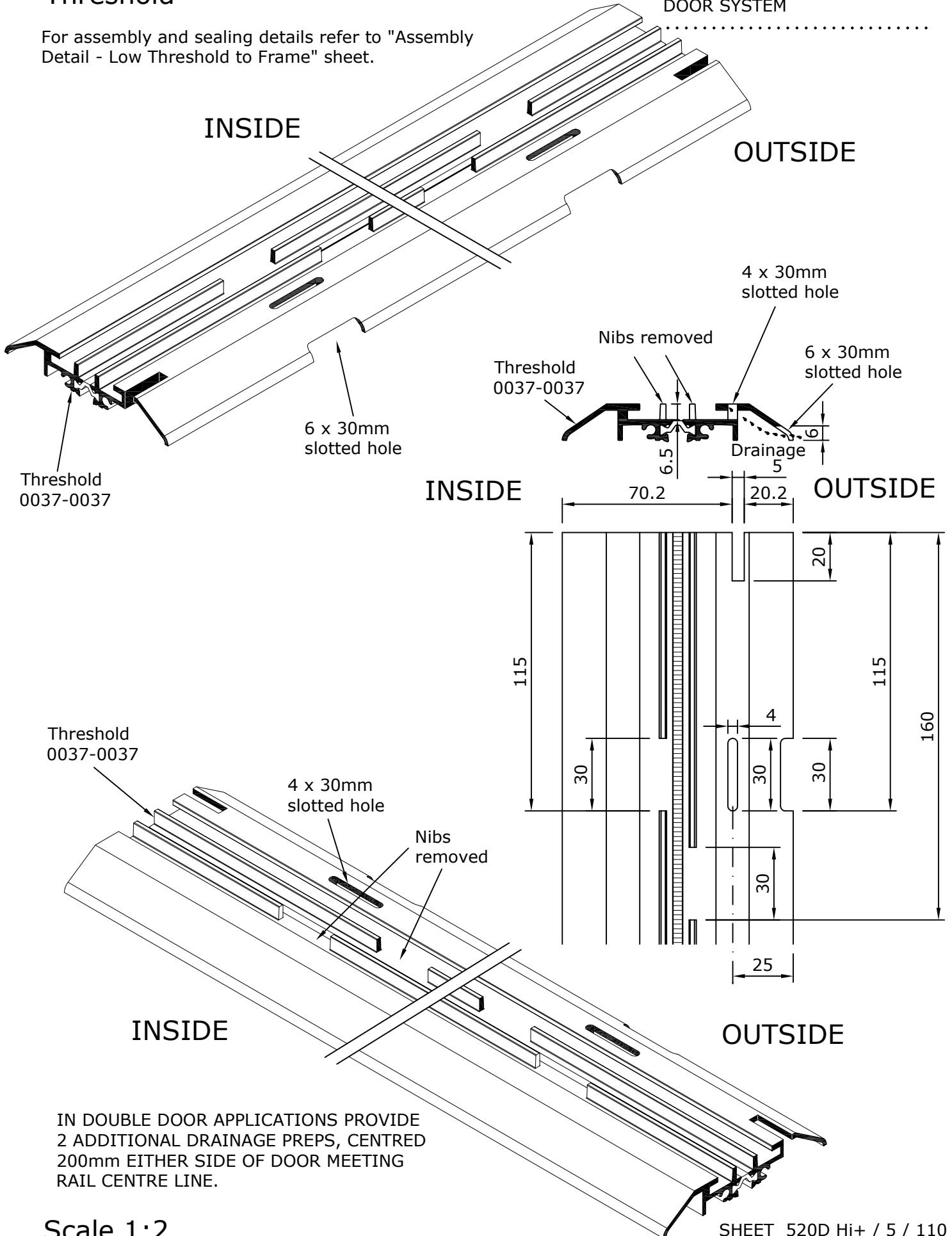
To Suit Open-In Door with Flush Low Threshold



**System 5-20D/Hi+**

DOOR SYSTEM

For assembly and sealing details refer to "Assembly Detail - Low Threshold to Frame" sheet.



IN DOUBLE DOOR APPLICATIONS PROVIDE 2 ADDITIONAL DRAINAGE PREPS, CENTRED 200mm EITHER SIDE OF DOOR MEETING RAIL CENTRE LINE.

Scale 1:2

# 0037-0037 Drainage Details

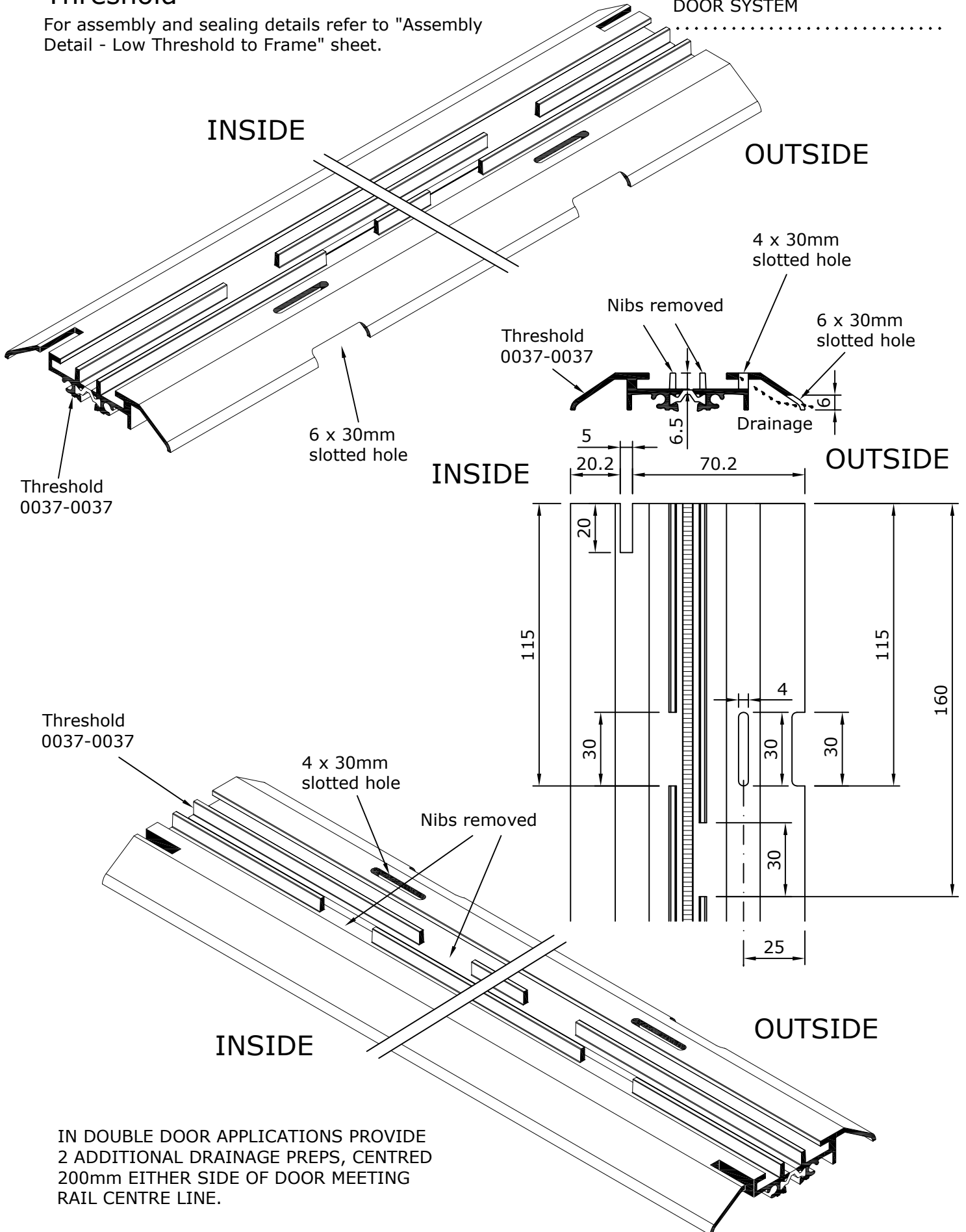
To Suit Open-Out Door with Flush Low Threshold

For assembly and sealing details refer to "Assembly Detail - Low Threshold to Frame" sheet.



**System 5-20D/Hi+**

DOOR SYSTEM



IN DOUBLE DOOR APPLICATIONS PROVIDE 2 ADDITIONAL DRAINAGE PREPS, CENTRED 200mm EITHER SIDE OF DOOR MEETING RAIL CENTRE LINE.

Scale 1:2

# 0037-169 Drainage Details

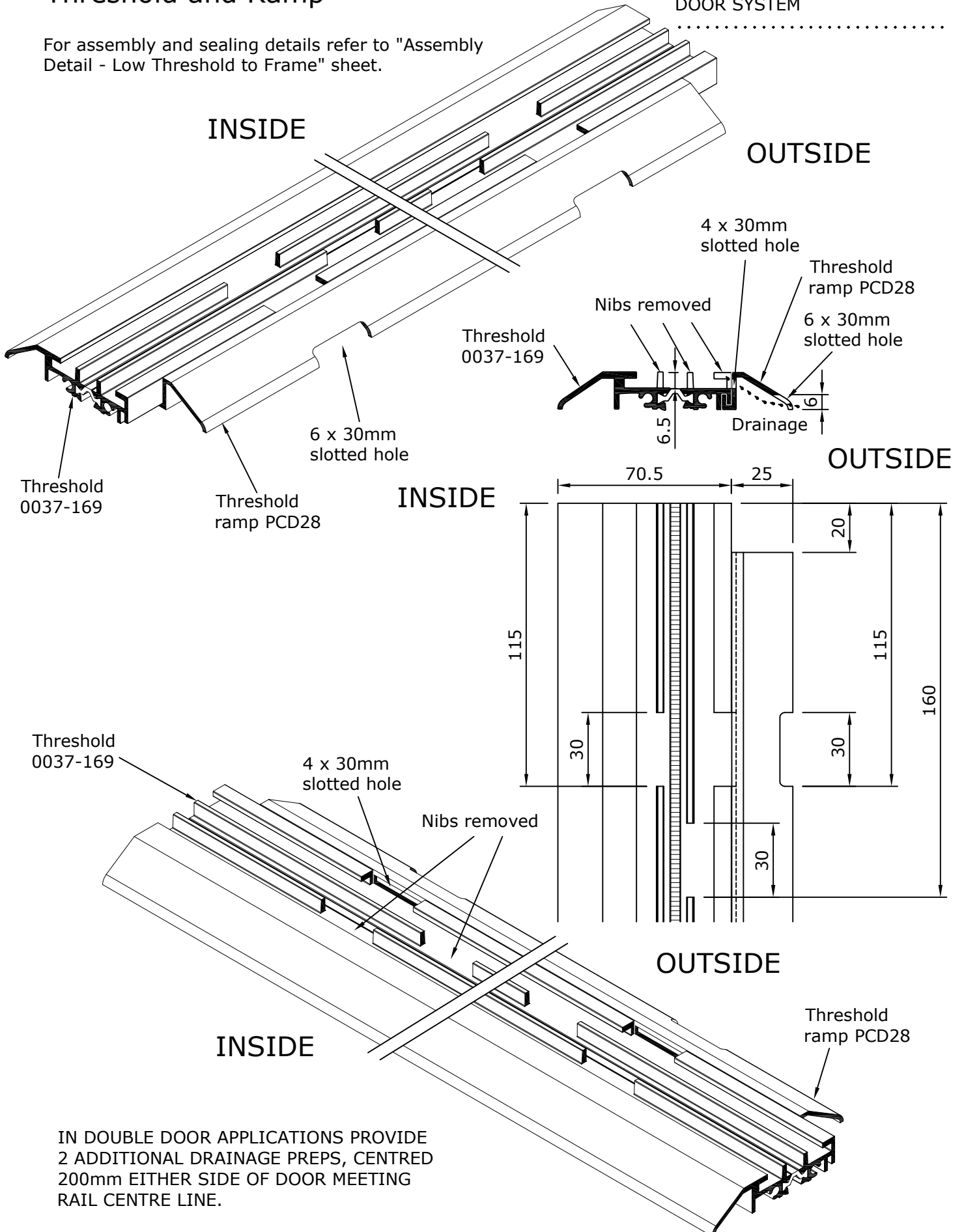
To Suit Open-In Door with Flush Low Threshold and Ramp



**System 5-20D/Hi+**

DOOR SYSTEM

For assembly and sealing details refer to "Assembly Detail - Low Threshold to Frame" sheet.



IN DOUBLE DOOR APPLICATIONS PROVIDE 2 ADDITIONAL DRAINAGE PREPS, CENTRED 200mm EITHER SIDE OF DOOR MEETING RAIL CENTRE LINE.

Scale 1:2

# 0037-169 Drainage Details

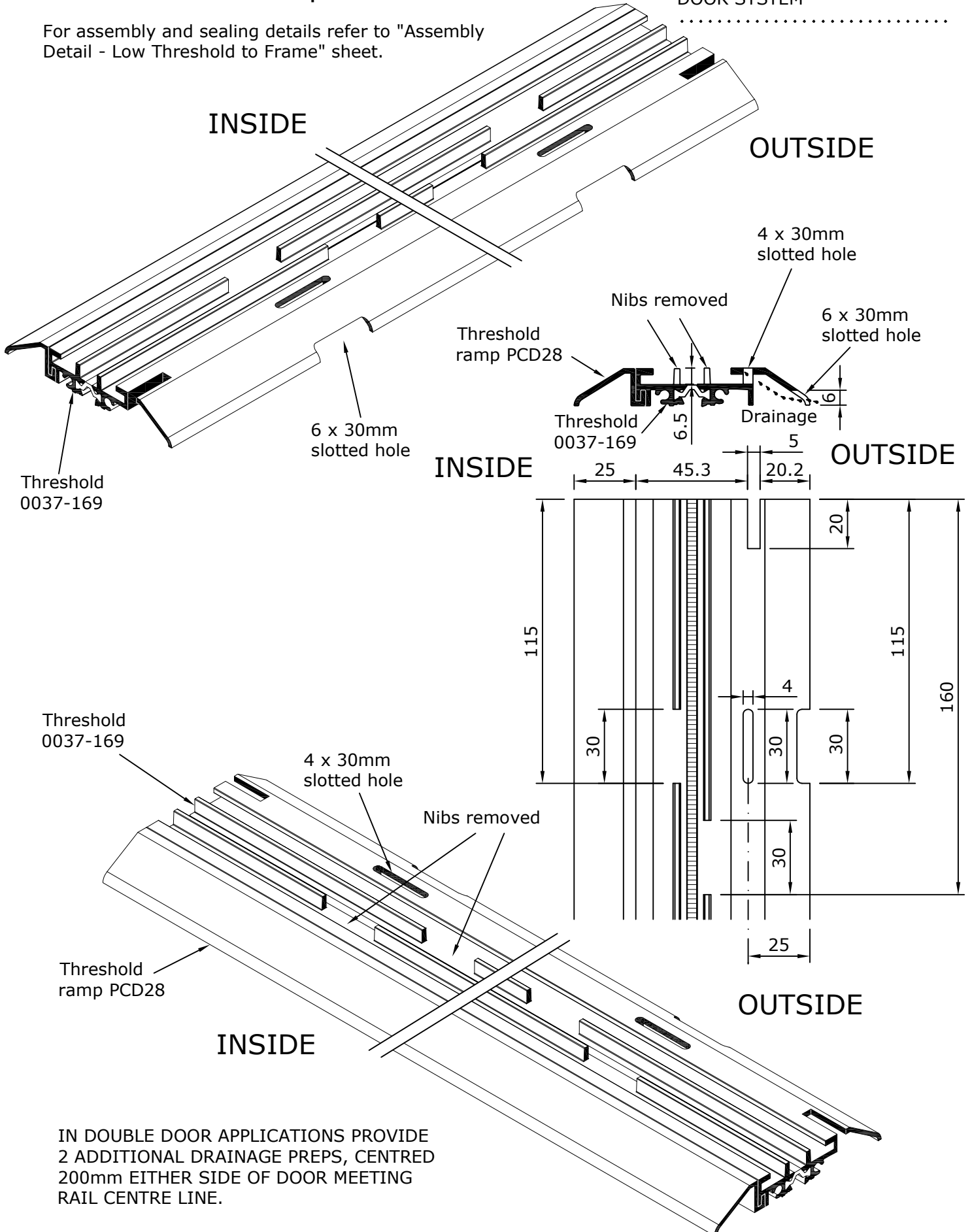
To Suit Open-In Door with Flush Low Threshold and Ramp



**System 5-20D/Hi+**

DOOR SYSTEM

For assembly and sealing details refer to "Assembly Detail - Low Threshold to Frame" sheet.



IN DOUBLE DOOR APPLICATIONS PROVIDE 2 ADDITIONAL DRAINAGE PREPS, CENTRED 200mm EITHER SIDE OF DOOR MEETING RAIL CENTRE LINE.

Scale 1:2



# 0037-169 Drainage Details

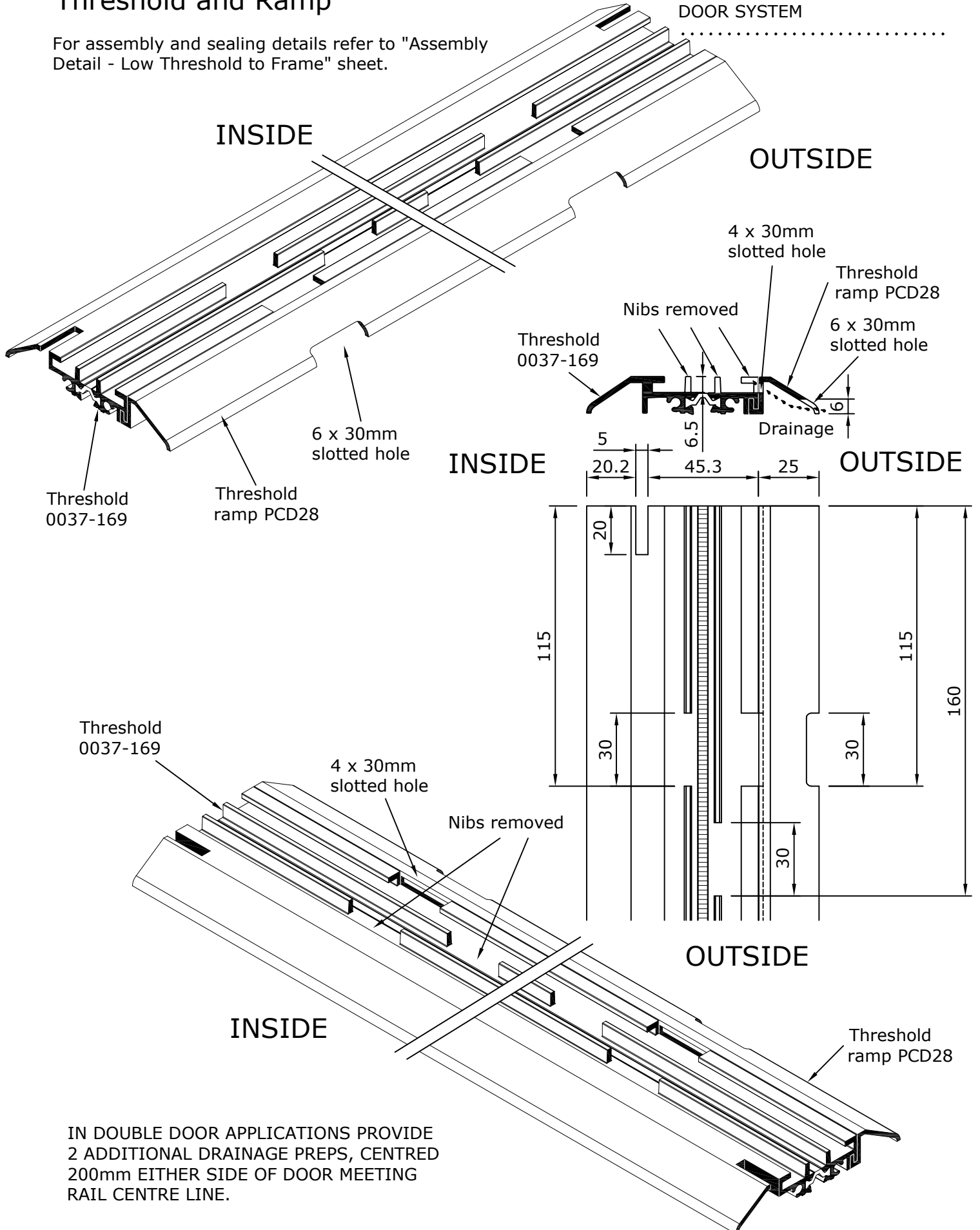
To Suit Open-Out Door with Flush Low Threshold and Ramp



**System 5-20D/Hi+**

DOOR SYSTEM

For assembly and sealing details refer to "Assembly Detail - Low Threshold to Frame" sheet.



IN DOUBLE DOOR APPLICATIONS PROVIDE 2 ADDITIONAL DRAINAGE PREPS, CENTRED 200mm EITHER SIDE OF DOOR MEETING RAIL CENTRE LINE.

Scale 1:2

# 0037-169 Drainage Details

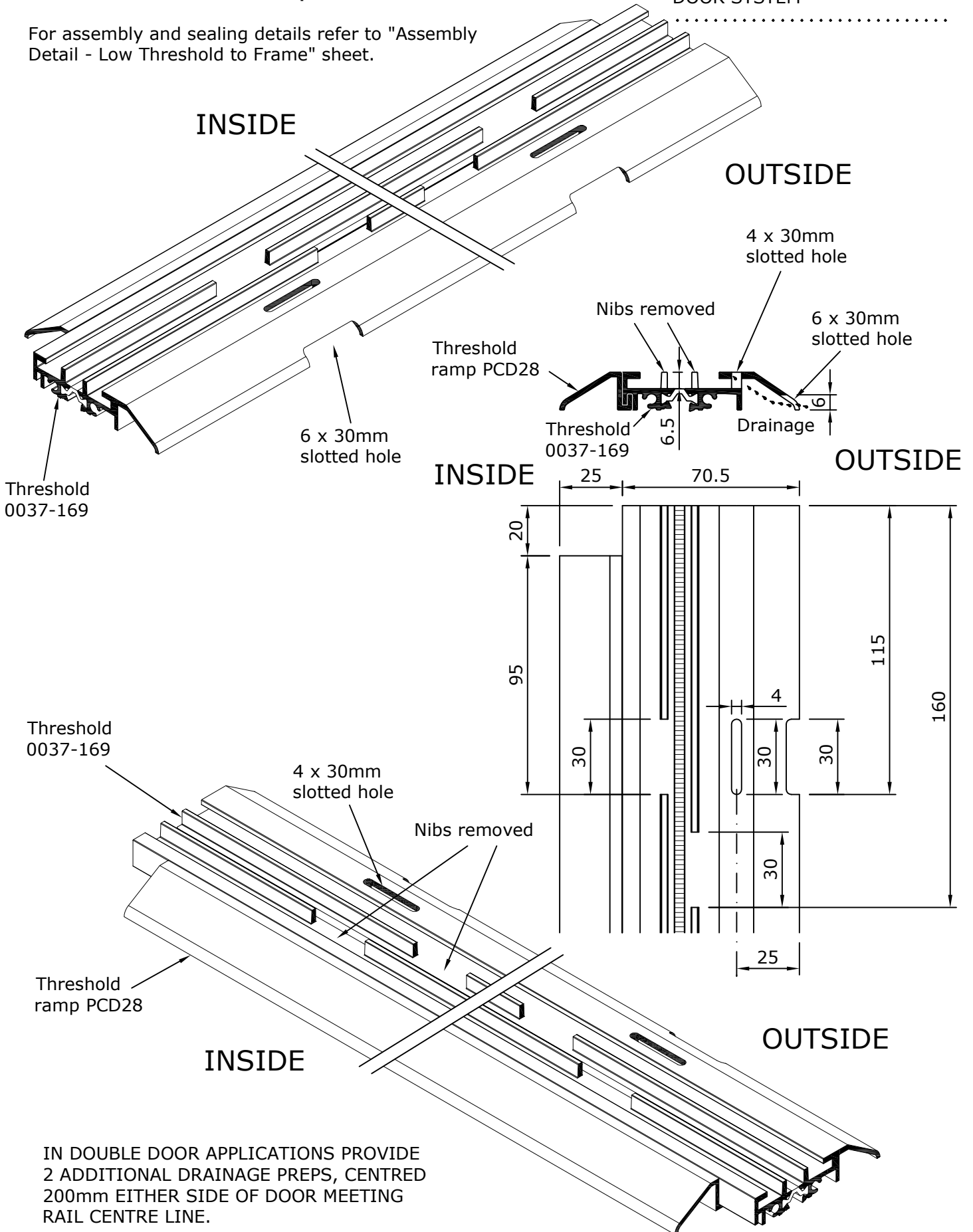
To Suit Open-Out Door with Flush Low Threshold and Ramp



**System 5-20D/Hi+**

DOOR SYSTEM

For assembly and sealing details refer to "Assembly Detail - Low Threshold to Frame" sheet.



IN DOUBLE DOOR APPLICATIONS PROVIDE 2 ADDITIONAL DRAINAGE PREPS, CENTRED 200mm EITHER SIDE OF DOOR MEETING RAIL CENTRE LINE.

Scale 1:2

# 0037-169 Drainage Details

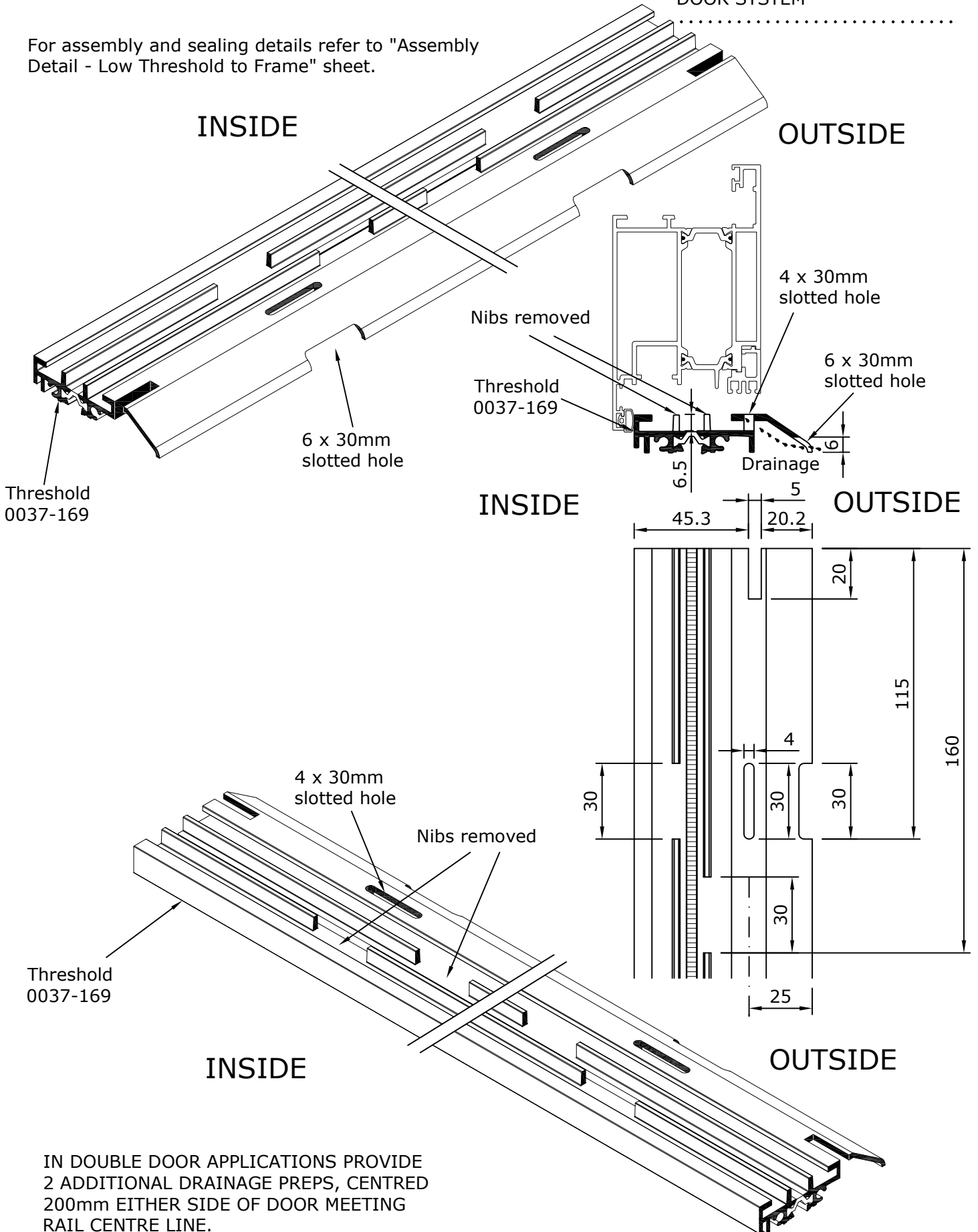
To Suit Open-In Door with Semi-Rebated Low Threshold



**System 5-20D/Hi+**

DOOR SYSTEM

For assembly and sealing details refer to "Assembly Detail - Low Threshold to Frame" sheet.



IN DOUBLE DOOR APPLICATIONS PROVIDE 2 ADDITIONAL DRAINAGE PREPS, CENTRED 200mm EITHER SIDE OF DOOR MEETING RAIL CENTRE LINE.

Scale 1:2

# 0037-169 Drainage Details

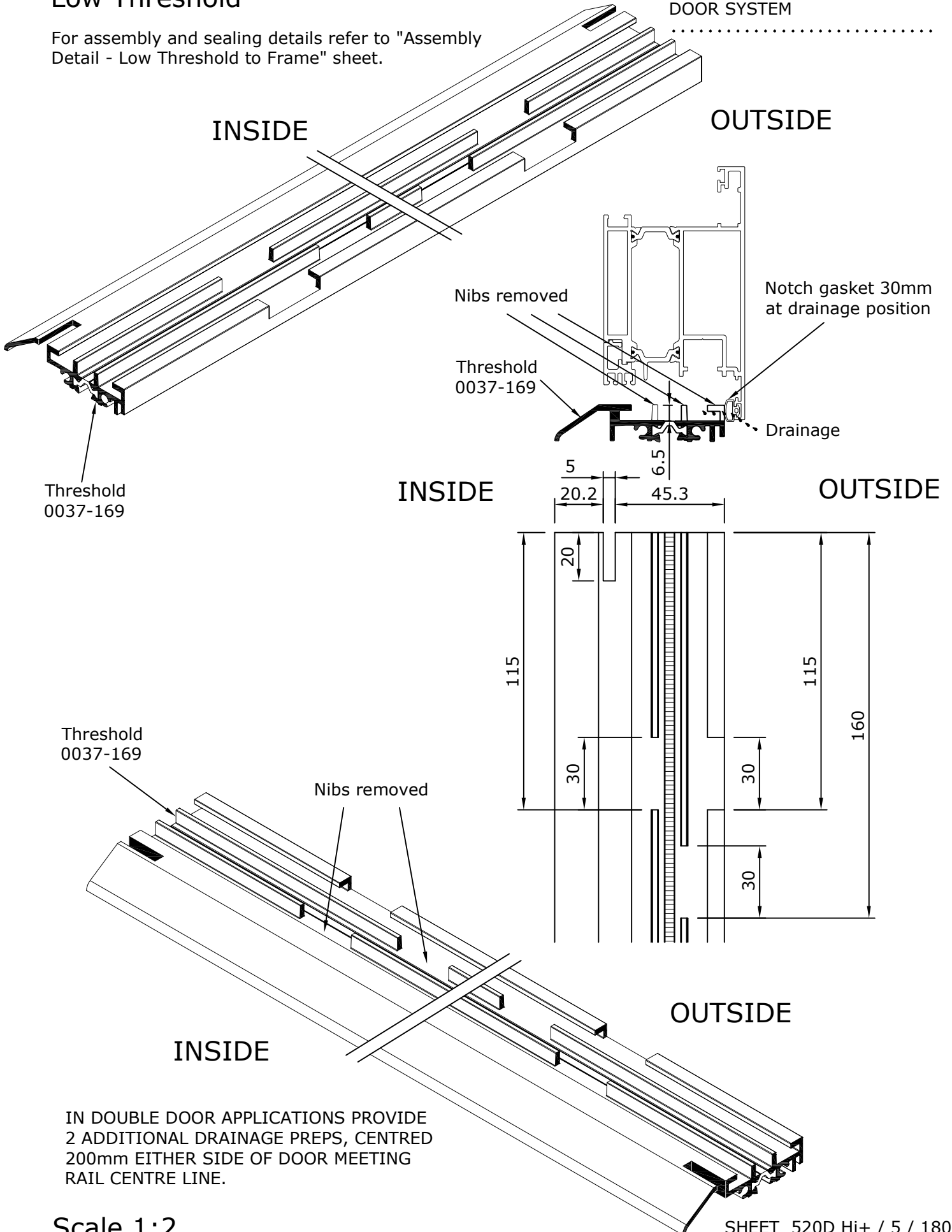
To Suit Open-Out Door with Semi-Rebated Low Threshold



**System 5-20D/Hi+**

DOOR SYSTEM

For assembly and sealing details refer to "Assembly Detail - Low Threshold to Frame" sheet.



IN DOUBLE DOOR APPLICATIONS PROVIDE 2 ADDITIONAL DRAINAGE PREPS, CENTRED 200mm EITHER SIDE OF DOOR MEETING RAIL CENTRE LINE.

Scale 1:2

# 0036-169 Drainage Details

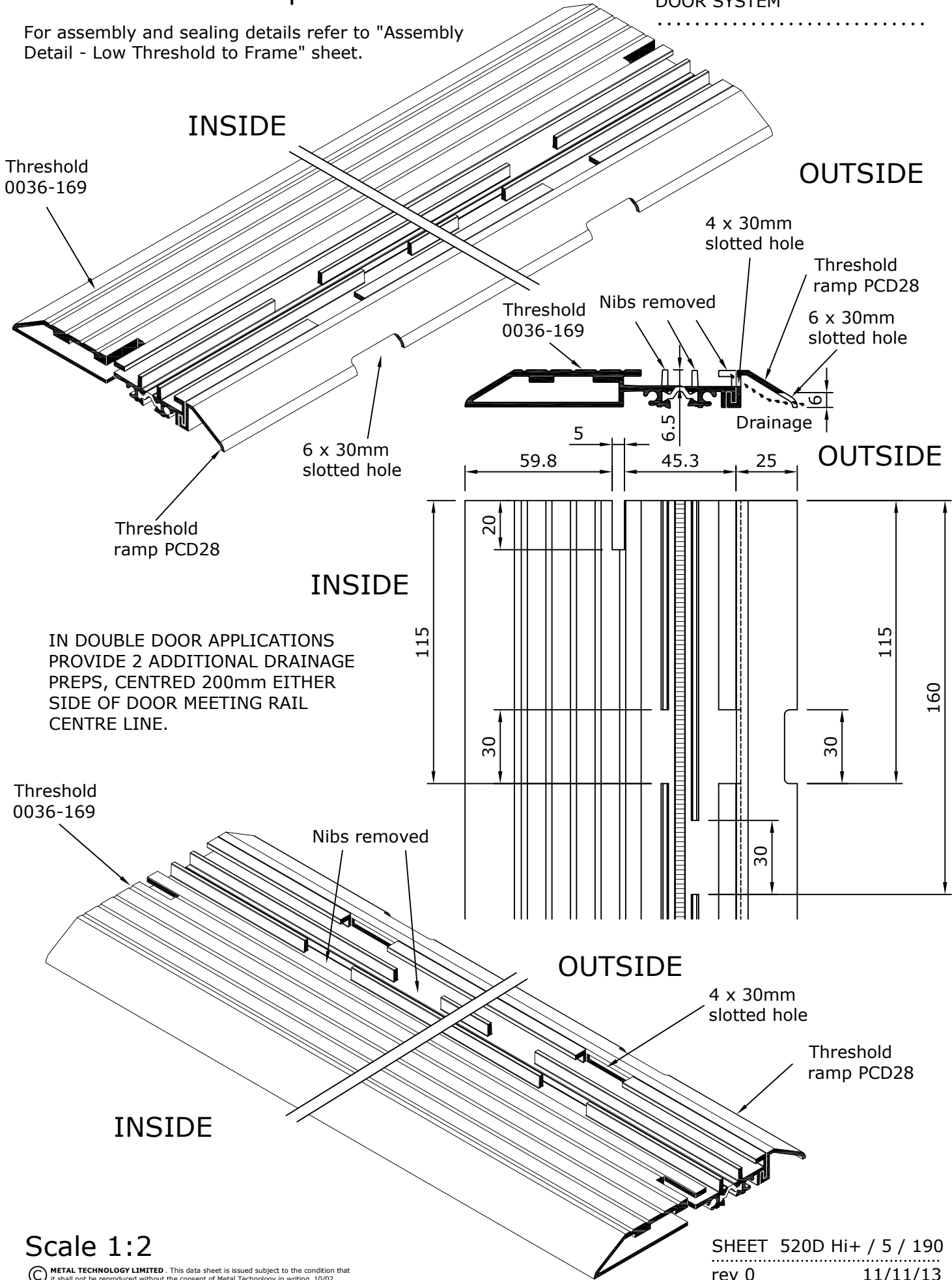
To Suit Open-Out Door with Flush Low Threshold and Ramp



**System 5-20D/Hi+**

DOOR SYSTEM

For assembly and sealing details refer to "Assembly Detail - Low Threshold to Frame" sheet.



IN DOUBLE DOOR APPLICATIONS PROVIDE 2 ADDITIONAL DRAINAGE PREPS, CENTRED 200mm EITHER SIDE OF DOOR MEETING RAIL CENTRE LINE.

Scale 1:2

# 0036-169 Drainage Details

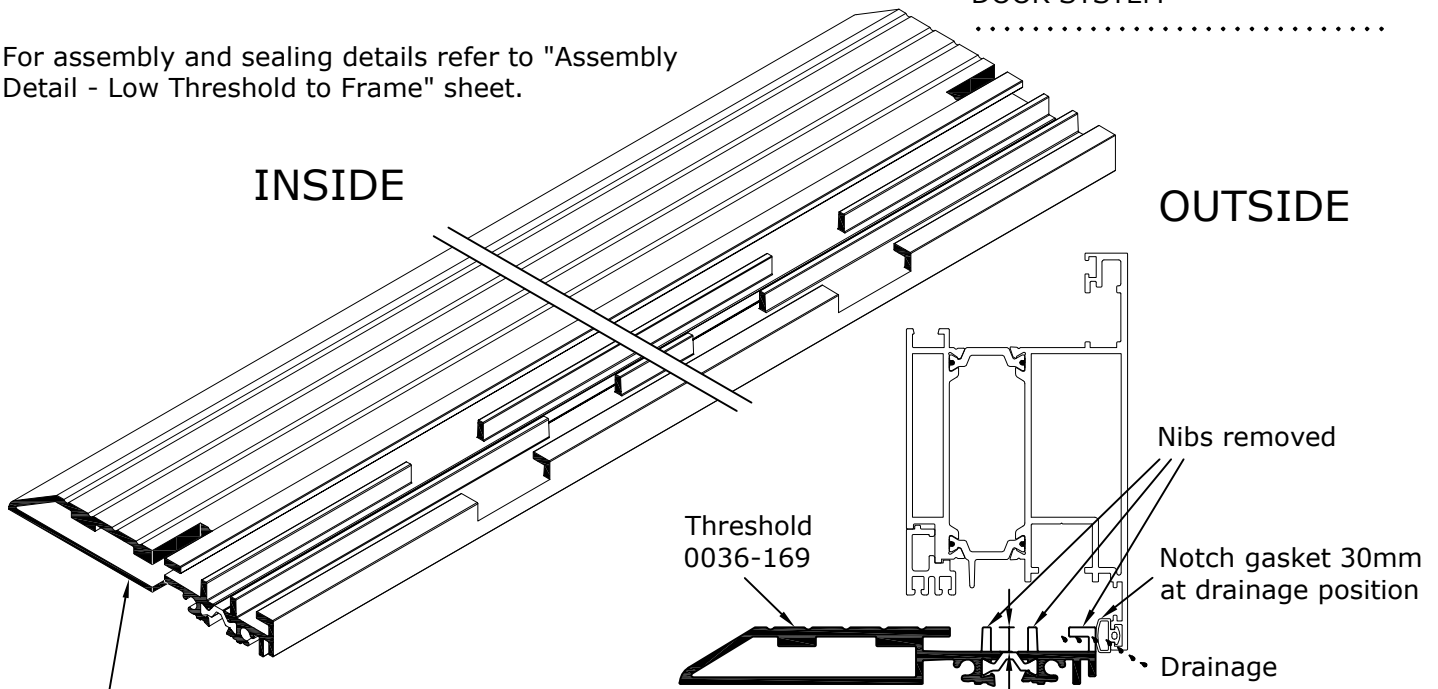
To Suit Open-Out Door with Semi-Rebated Low Threshold



**System 5-20D/Hi+**

DOOR SYSTEM

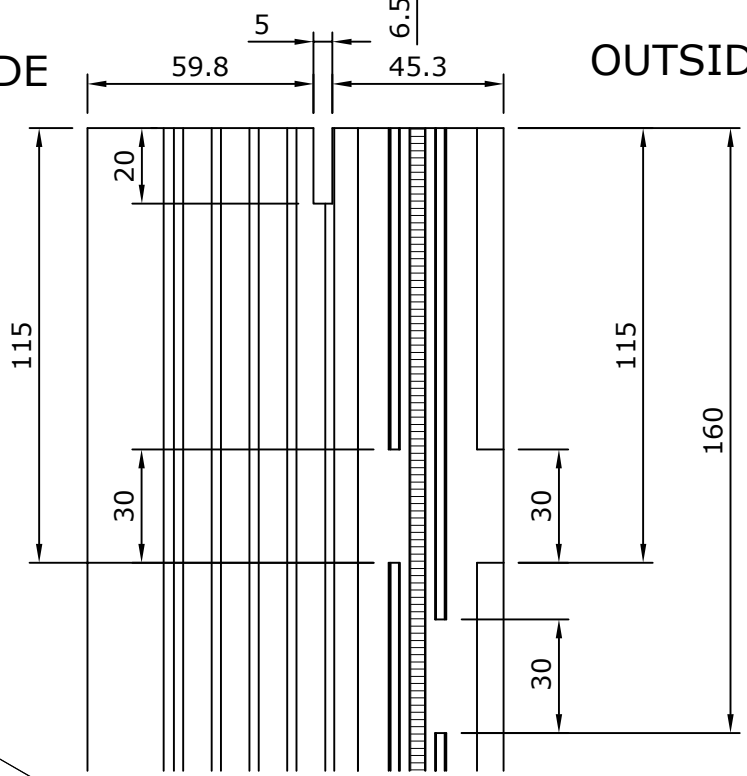
For assembly and sealing details refer to "Assembly Detail - Low Threshold to Frame" sheet.



Threshold  
0036-169

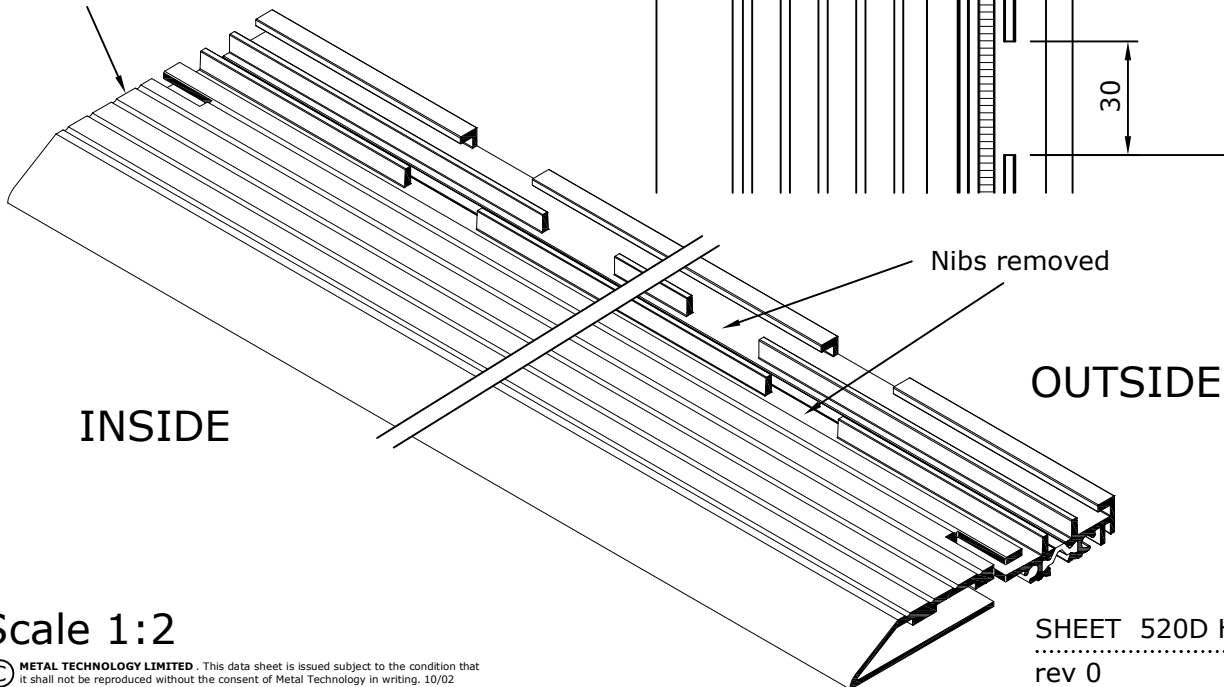
INSIDE

OUTSIDE



IN DOUBLE DOOR APPLICATIONS  
PROVIDE 2 ADDITIONAL DRAINAGE  
PREPS, CENTRED 200mm EITHER  
SIDE OF DOOR MEETING RAIL  
CENTRE LINE.

Threshold  
0036-169



INSIDE

OUTSIDE

Scale 1:2

# 0036-0037 Drainage Details

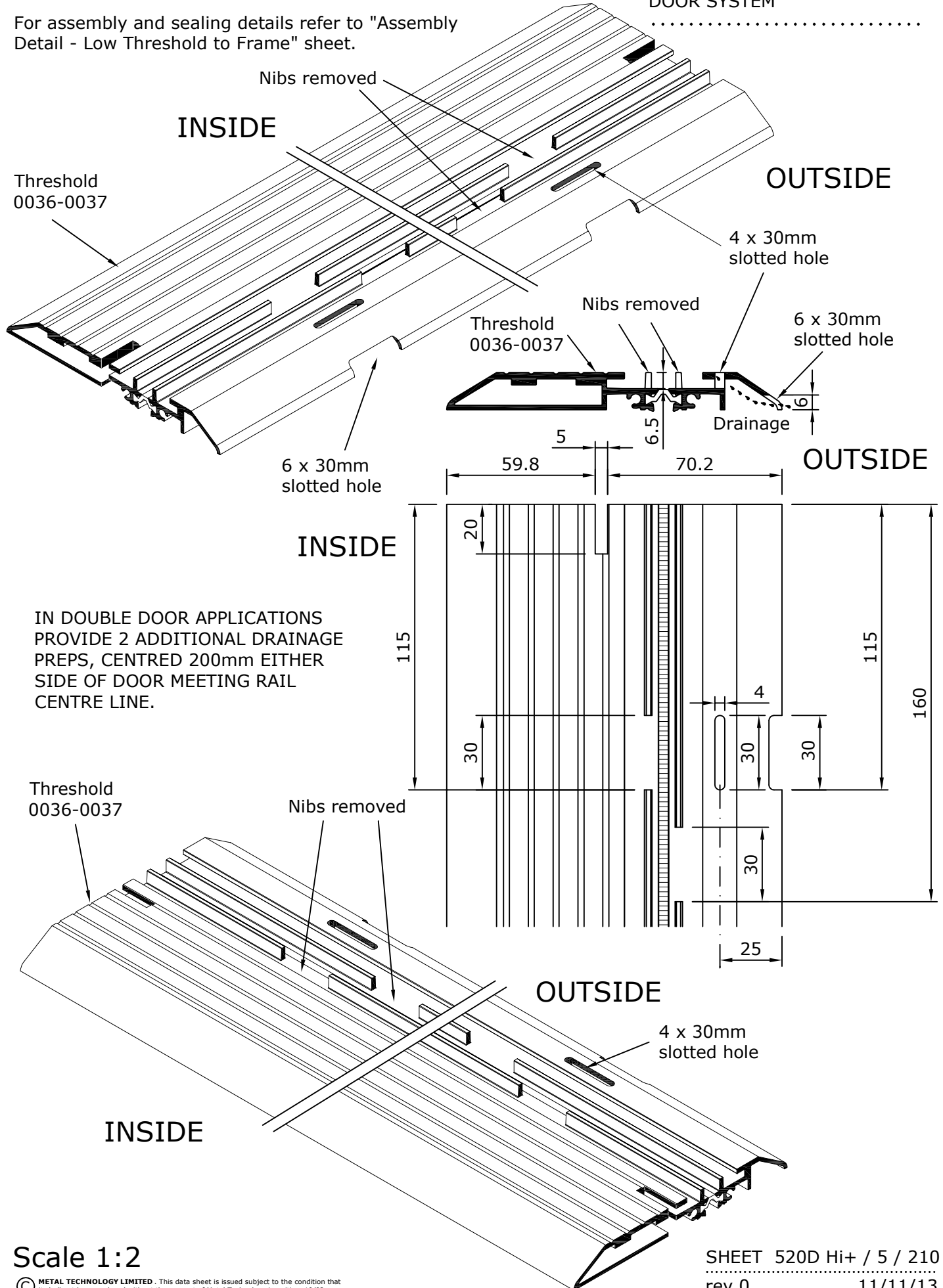
To Suit Open-Out Door with Flush Low Threshold



**System 5-20D/Hi+**

DOOR SYSTEM

For assembly and sealing details refer to "Assembly Detail - Low Threshold to Frame" sheet.



IN DOUBLE DOOR APPLICATIONS PROVIDE 2 ADDITIONAL DRAINAGE PREPS, CENTRED 200mm EITHER SIDE OF DOOR MEETING RAIL CENTRE LINE.

Scale 1:2

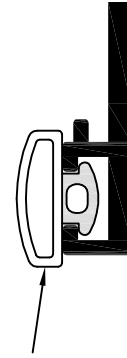
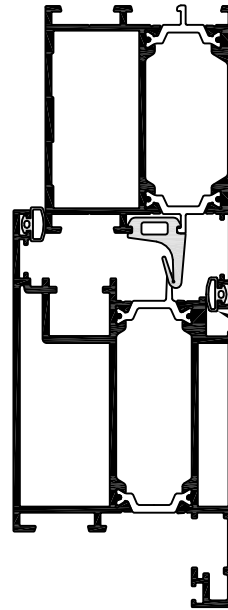
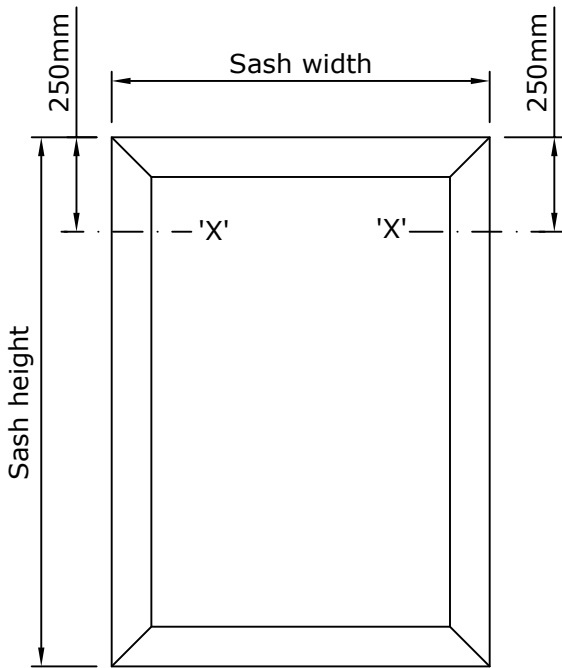
# Pressure Equalization

## For Fully Rebated Applications Only



### System 5-20D/Hi+

DOOR SYSTEM



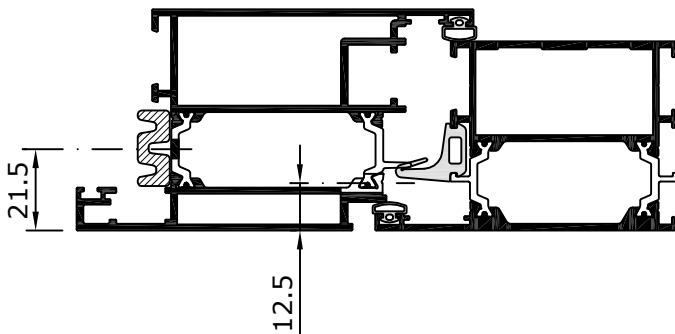
Outer frame gasket 060B to be omitted/notched externally at head of opening sashes for pressure equalisation of the drainage cavity. Gasket may be notched for 100mm centrally at head of sash. However, in exposed conditions this notch may be increased, or the gasket omitted across the head of the sash for the full width.

5 x 15mm slot at top corners of profile to give pressure equalisation and allow drainage (at positions marked 'X' above)

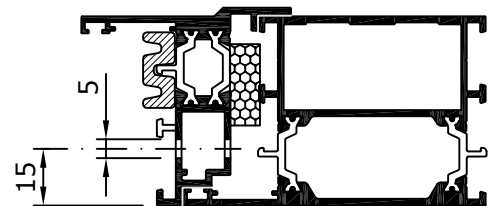
In Hi+ applications omit foam for 30mm at pressure equalisation positions.

#### INSIDE

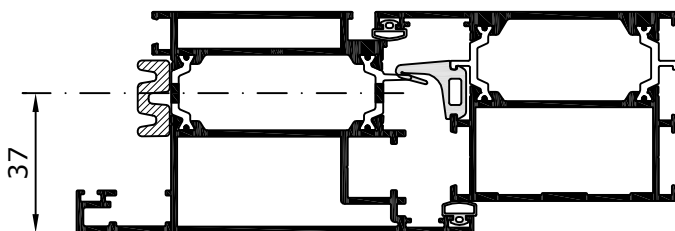
Open in door sash:  
138-238F  
148-238F



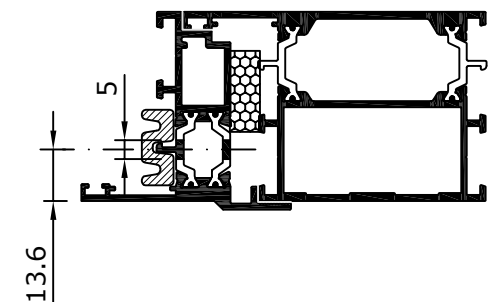
Liner bar glazed out:  
185-686F



Open out door sash:  
139-239F  
149-239F



Liner bar glazed in:  
185-686F



#### OUTSIDE

Scale 1:2



# Corner Assembly Details



## System 5-20D/Hi+

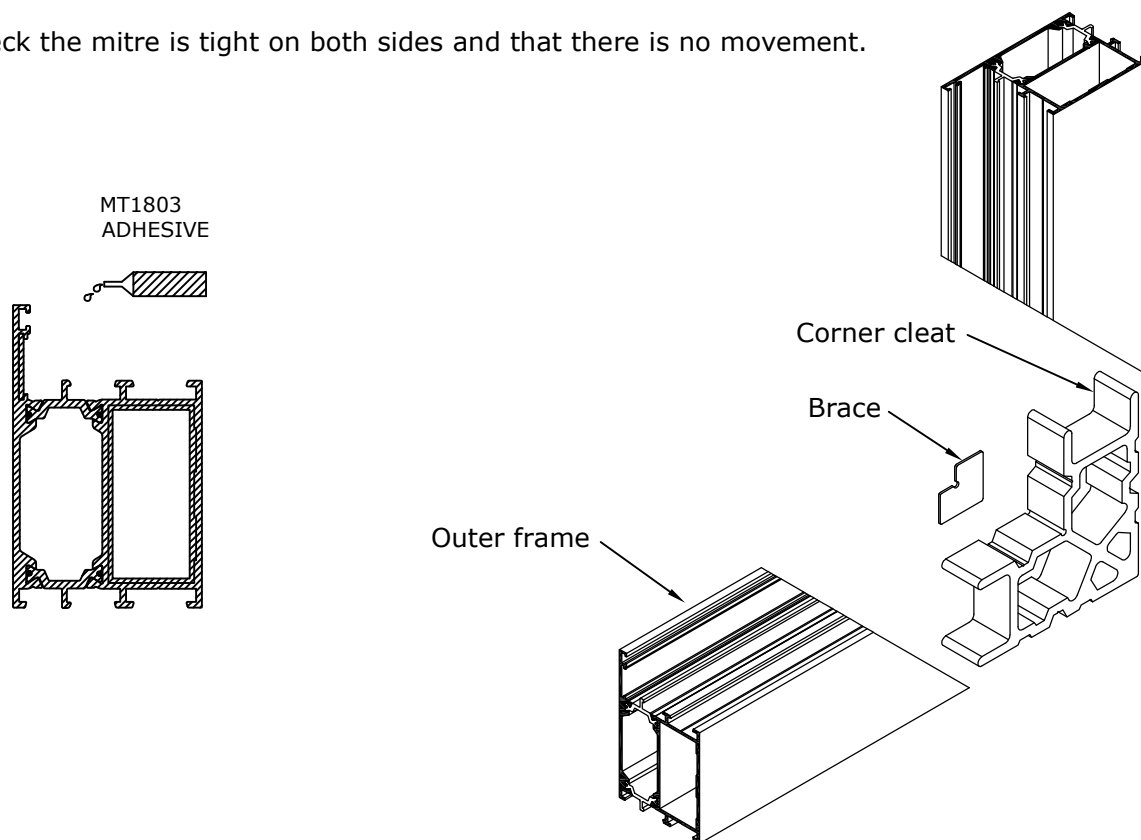
DOOR SYSTEM

IMPORTANT: PLEASE READ THESE NOTES BEFORE CORNER ASSEMBLY.

METAL TECHNOLOGY RECOMMEND THE USE OF PNEUMATIC CRIMPERS, AND MT1803 ADHESIVE TO ENSURE THE STABILITY OF CORNER JOINTS. PARTICULAR ATTENTION SHOULD BE PAID TO THE BONDING OF THE CORNER BRACES TO THE PROFILE.

TO ACHIEVE THE DOUBLE CRIMP WHERE REQUIRED METAL TECHNOLOGY OFFER CRIMPING KNIVES (REF 7015), SUITABLE FOR USE WITH THE ELUMATIC EP124 CRIMPER.

1. Before applying MT1803 adhesive ensure all surfaces to be glued are free from grease or dust. Clean all aluminium mating surfaces with MT60 surface cleaner and allow to dry. Fabricator must ensure MT60 surface cleaner is fully compatible with surface finish on a project-by-project basis.
2. Apply MT1803 adhesive to the mating surfaces of the mitre cut aluminium and thermal break profiles. Adhesive need only be applied to one side of the mitred joint.
3. Apply MT1803 adhesive to the internal perimeter of the cleat chambers and corner brace grooves of the frame sections. This must be applied to both sides of the mitred joint and to sufficient depth to ensure full bonding/sealing of the cleats and braces.
4. Insert corner cleats and braces and push sections together. Ensure mitred joint is aligned and true. Crimp fully assembled mitred corner.
5. Wipe away any excess adhesive from the mitred joint using MT60 surface cleaner and allow to dry. Ensure all bead and gasket recesses are clear of adhesive.
6. Seal crimps with HR50328A sealant.
7. Check the mitre is tight on both sides and that there is no movement.



MT1803 ADHESIVE SHOULD BE APPLIED TO THE PERIMETER OF THE CLEAT CHAMBER OF THE FRAME SECTION AND THE CORNER BRACE GROOVE.

Not to Scale

# Corner Crimping Detail

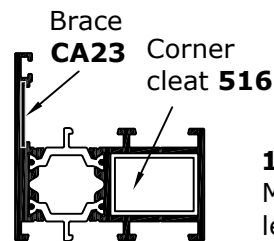
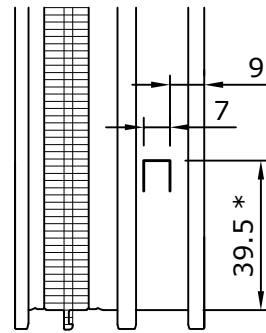
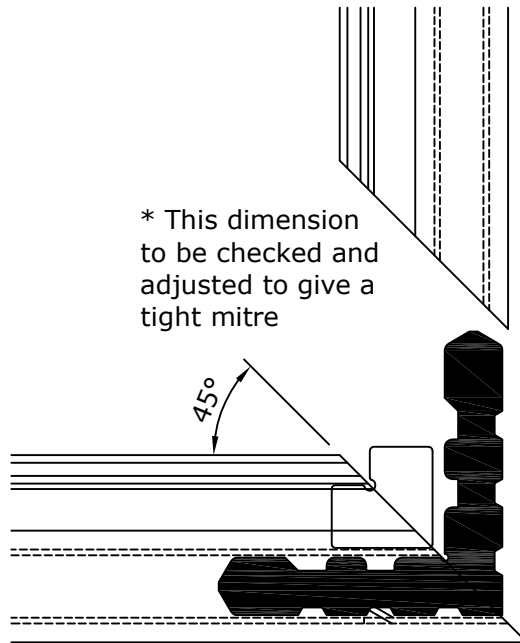
## Short Leg Outer Frames

For typical details of corner assembly and adhesive/sealant application see "Corner Assembly Details" sheet.

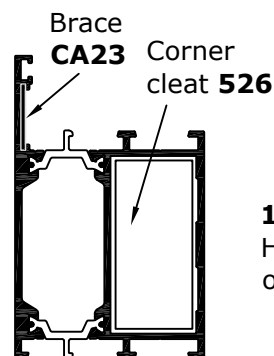
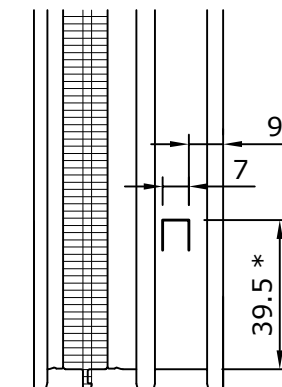
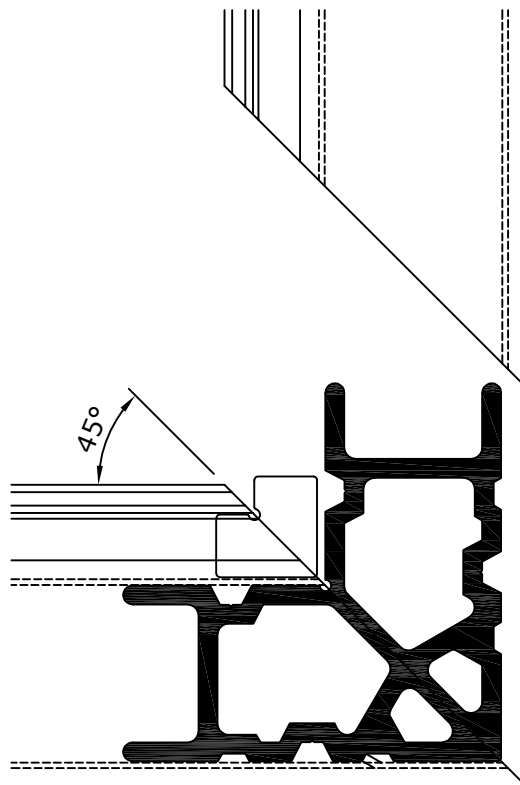


## System 5-20D/Hi+

DOOR SYSTEM

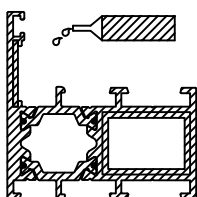


**101-201FF**  
Medium short leg outer frame



**105-205FF**  
Heavy short leg outer frame

MT1803  
ADHESIVE



MT1803 ADHESIVE SHOULD BE APPLIED TO THE PERIMETER OF THE CLEAT CHAMBER OF THE FRAME SECTION AND THE CORNER BRACE GROOVE.

Scale 1:2

# Corner Crimping Detail

## Long Leg Outer Frames

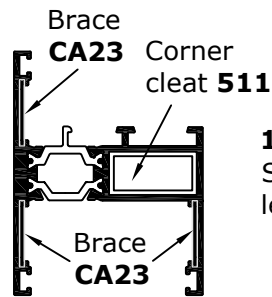
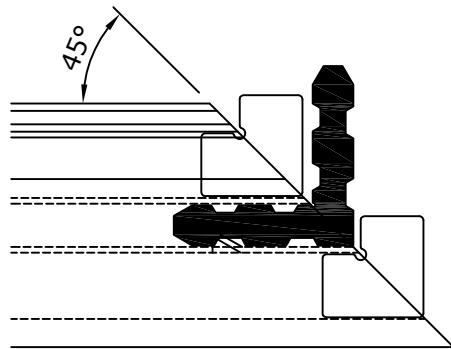
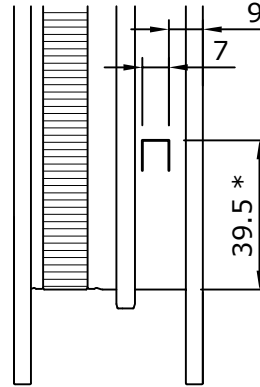
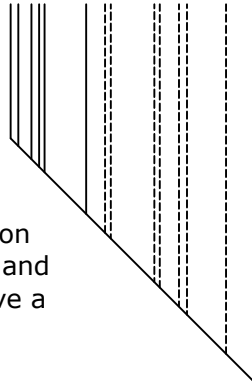
For typical details of corner assembly and adhesive/sealant application see "Corner Assembly Details" sheet.



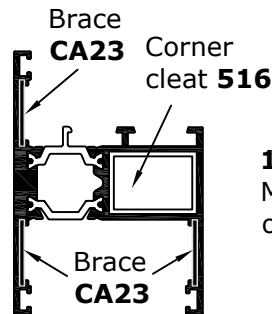
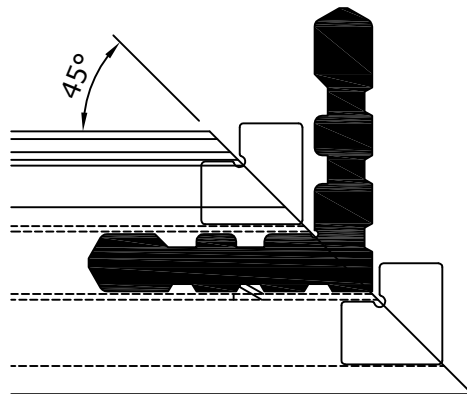
## System 5-20D/Hi+

DOOR SYSTEM

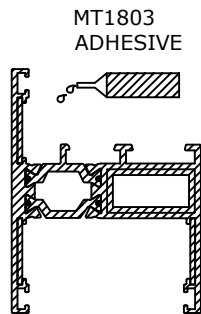
\* This dimension to be checked and adjusted to give a tight mitre



**102-202F**  
Standard long leg outer frame



**103-203F**  
Medium long leg outer frame



MT1803 ADHESIVE SHOULD BE APPLIED TO THE PERIMETER OF THE CLEAT CHAMBER OF THE FRAME SECTION AND THE CORNER BRACE GROOVE.

Scale 1:2

# Corner Crimping Detail

## Open Out Door Curtain Walling Frames

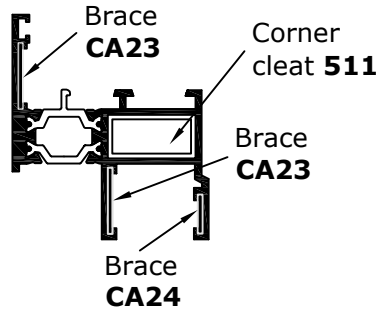
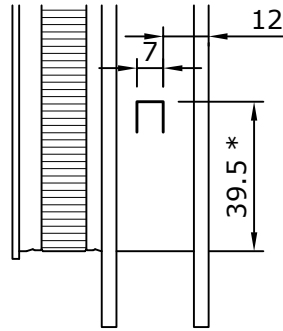
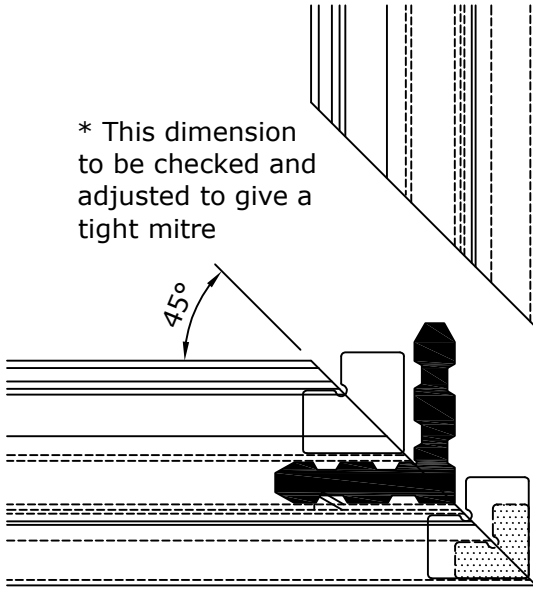
For typical details of corner assembly and adhesive/sealant application see "Corner Assembly Details" sheet.



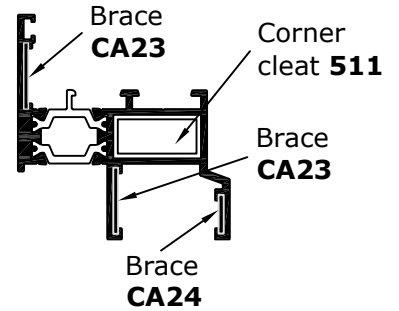
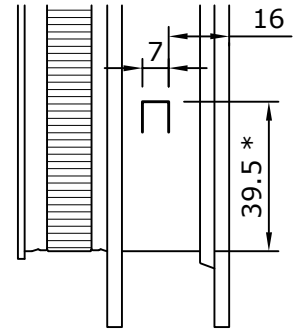
## System 5-20D/Hi+

DOOR SYSTEM

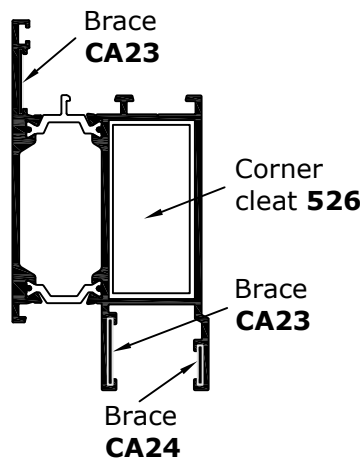
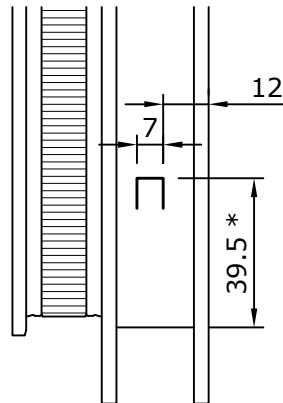
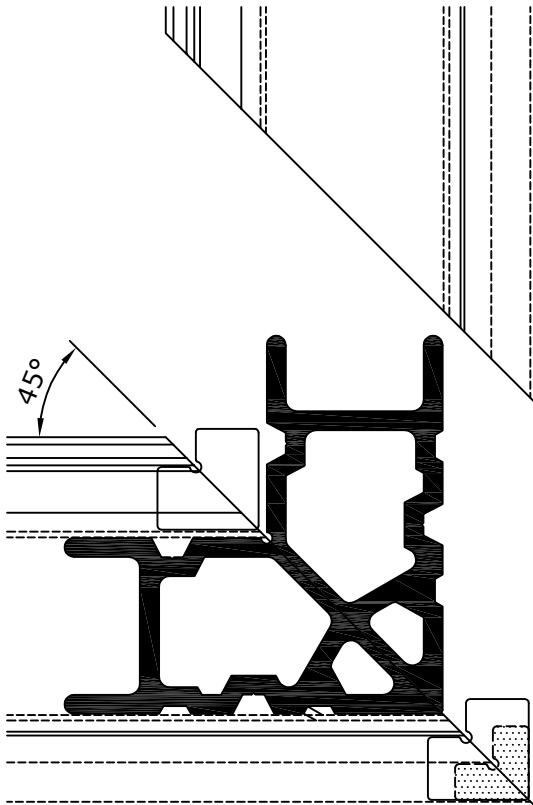
\* This dimension to be checked and adjusted to give a tight mitre



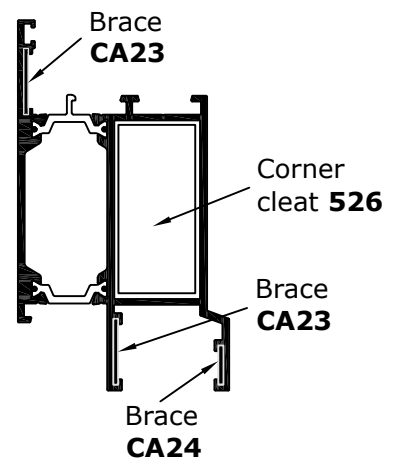
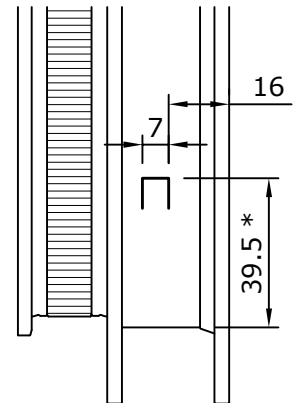
**120-204F**  
28mm Curtain walling frame



**120-216F**  
32mm Curtain walling frame

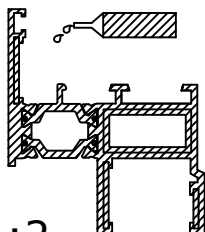


**105-220F**  
28mm Curtain walling frame



**105-227F**  
32mm Curtain walling frame

MT1803  
ADHESIVE



MT1803 ADHESIVE SHOULD BE APPLIED TO THE PERIMETER OF THE CLEAT CHAMBER OF THE FRAME SECTION AND THE CORNER BRACE GROOVE.

Scale 1:2

# Corner Crimping Detail

## Open In Door Curtain Walling Frames

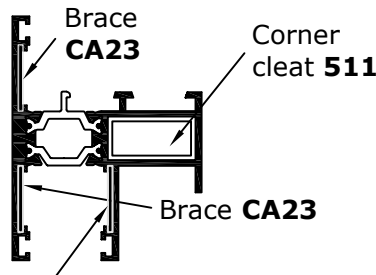
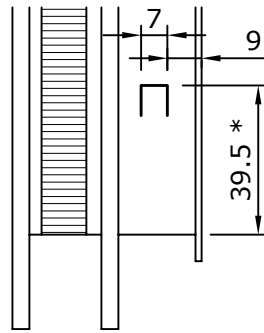
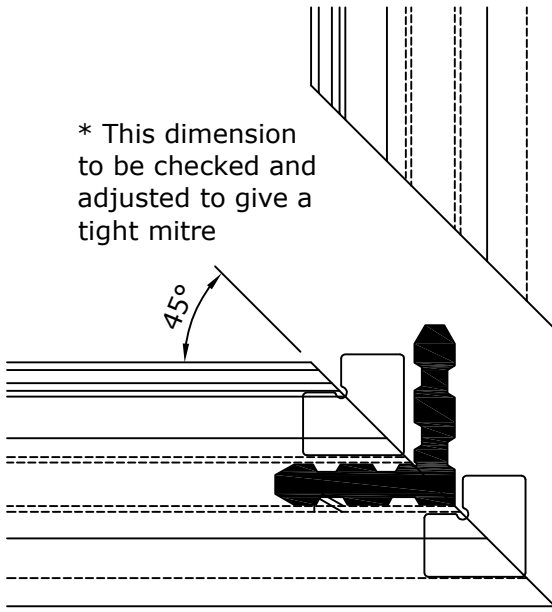
For typical details of corner assembly and adhesive/sealant application see "Corner Assembly Details" sheet.



## System 5-20D/Hi+

DOOR SYSTEM

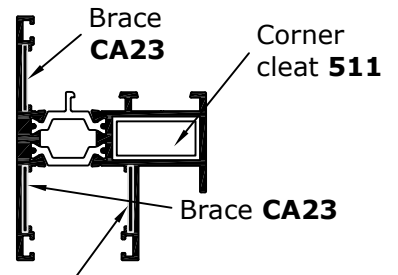
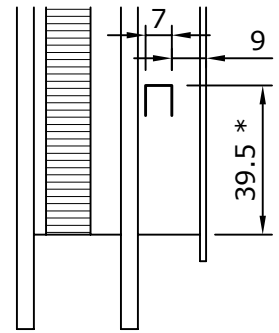
\* This dimension to be checked and adjusted to give a tight mitre



Brace CA23

**102-234F**

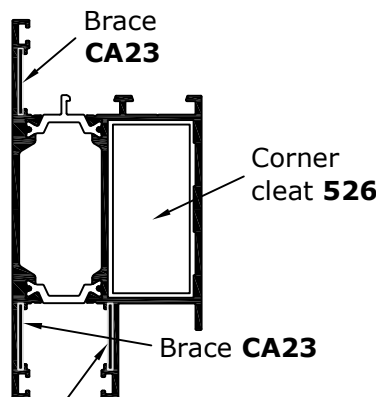
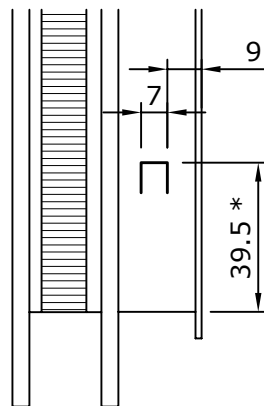
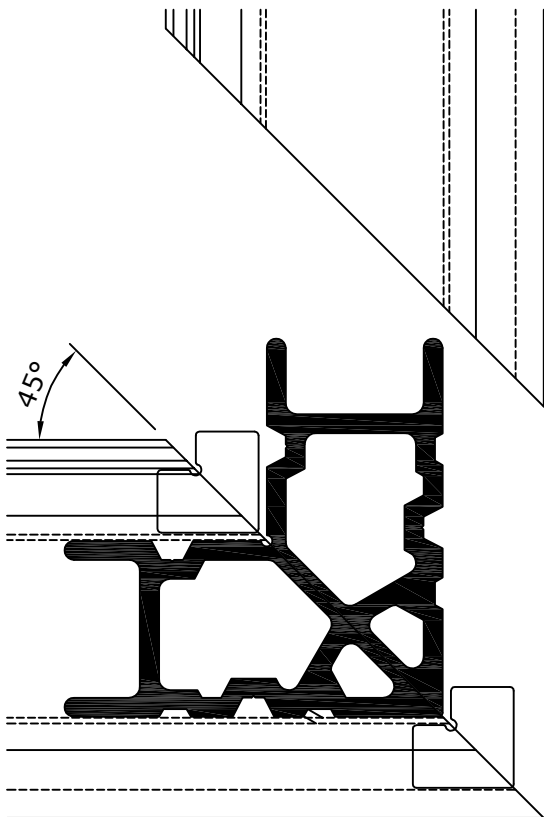
28mm Curtain walling frame



Brace CA23

**102-228F**

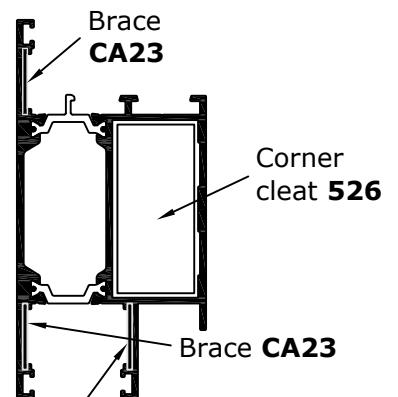
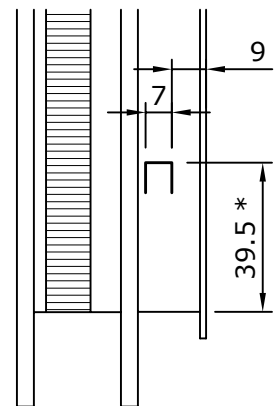
32mm Curtain walling frame



Brace CA23

**108-208F**

28mm Curtain walling frame

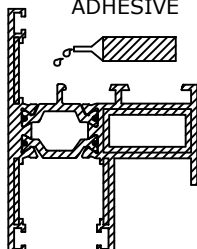


Brace CA23

**108-226F**

32mm Curtain walling frame

MT1803 ADHESIVE



MT1803 ADHESIVE SHOULD BE APPLIED TO THE PERIMETER OF THE CLEAT CHAMBER OF THE FRAME SECTION AND THE CORNER BRACE GROOVE.

Scale 1:2

# Corner Crimping Detail

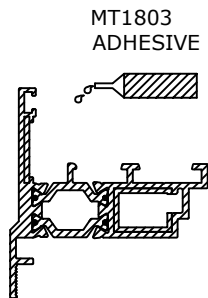
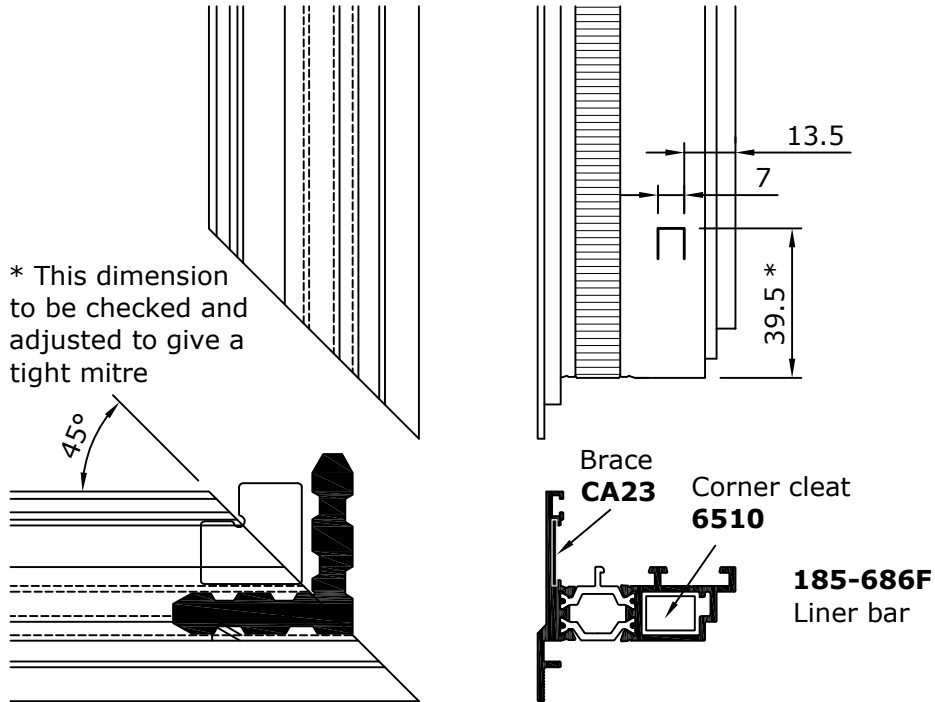
## Liner Bar

For typical details of corner assembly and adhesive/sealant application see "Corner Assembly Details" sheet.



## System 5-20D/Hi+

DOOR SYSTEM



MT1803 ADHESIVE SHOULD BE APPLIED TO THE PERIMETER OF THE CLEAT CHAMBER OF THE FRAME SECTION AND THE CORNER BRACE GROOVE.

Scale 1:2

# Corner Crimping Detail

## Sashes 138-238F and 139-239F

For typical details of corner assembly and adhesive/sealant application see "Corner Assembly Details" sheet.

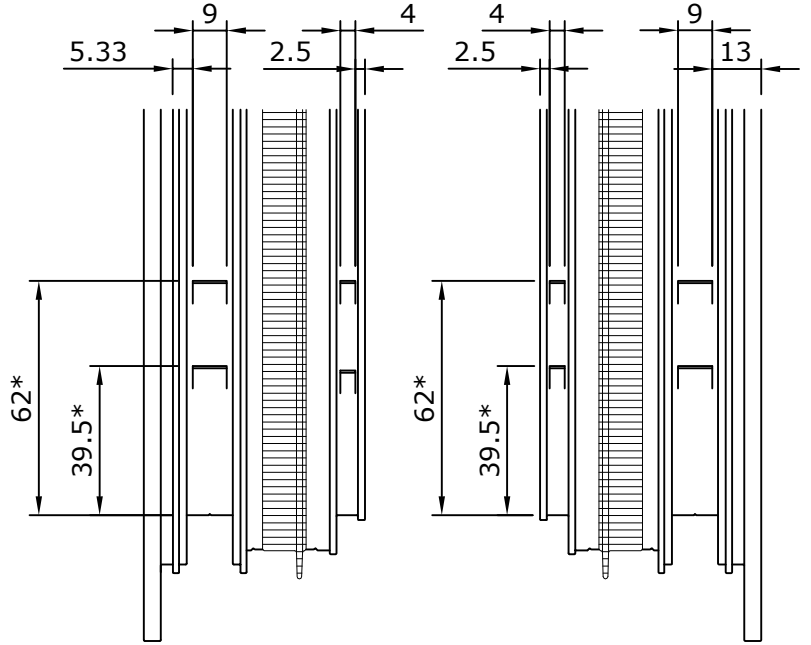
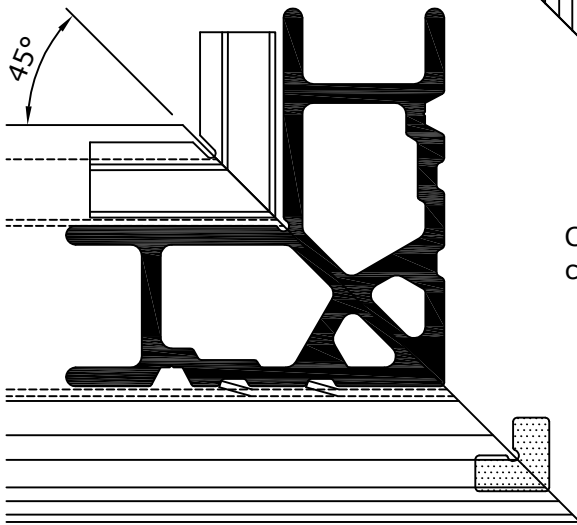
TO ACHIEVE THE DOUBLE CRIMP SHOWN METAL TECHNOLOGY OFFER CRIMPING KNIVES (REF 7015), SUITABLE FOR USE WITH THE ELUMATIC EP124 CRIMPER.



## System 5-20D/Hi+

DOOR SYSTEM

\* This dim to be checked and adjusted to give a tight mitre.



Moulded corner brace **7019**

Moulded corner brace **7019**

Corner cleat **533**

Corner cleat **533**

Corner cleat **534**

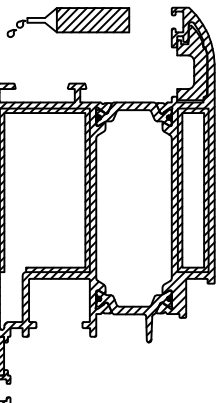
Brace **CA24**

Brace **CA24**

**138-238F**  
Open in door sash

**139-239F**  
Open in door sash

MT1803  
ADHESIVE



MT1803 ADHESIVE SHOULD BE APPLIED TO THE PERIMETER OF THE CLEAT CHAMBER OF THE FRAME SECTION AND THE CORNER BRACE GROOVE.

Scale 1:2

# Corner Crimping Detail

## Sashes 148-238F and 149-239F

For typical details of corner assembly and adhesive/sealant application see "Corner Assembly Details" sheet.

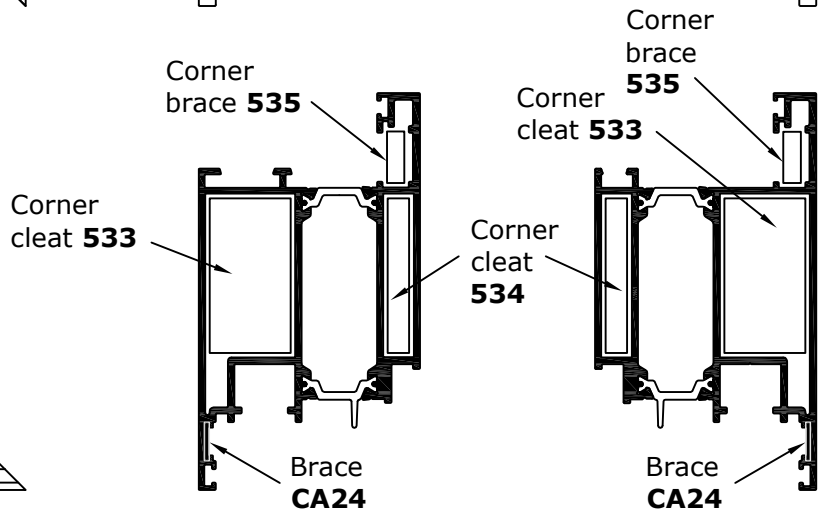
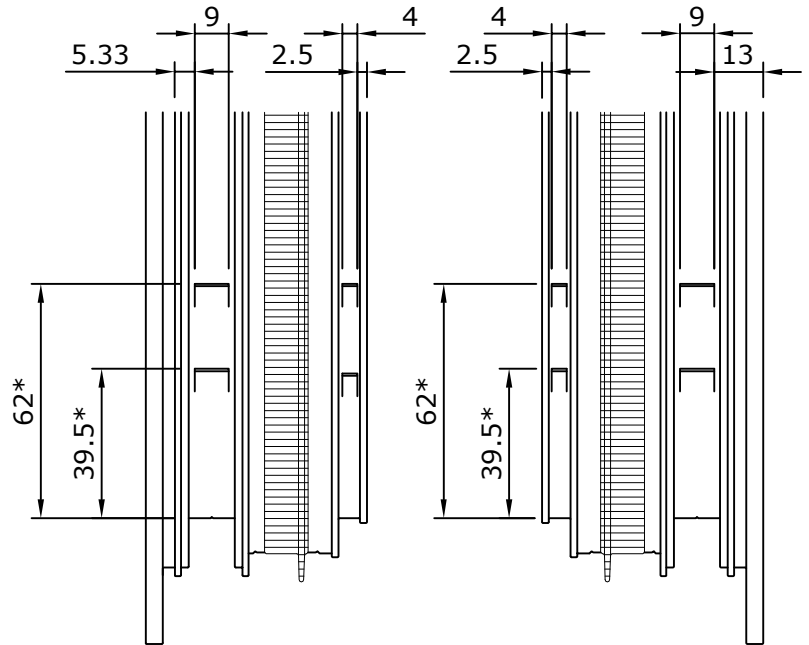
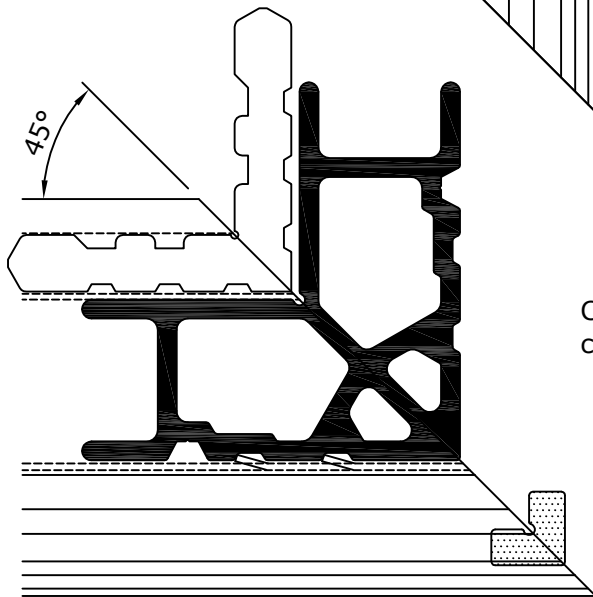


## System 5-20D/Hi+

DOOR SYSTEM

TO ACHIEVE THE DOUBLE CRIMP SHOWN METAL TECHNOLOGY OFFER CRIMPING KNIVES (REF 7015), SUITABLE FOR USE WITH THE ELUMATIC EP124 CRIMPER.

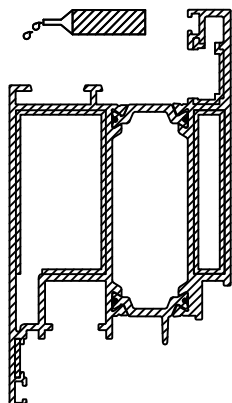
\* This dim to be checked and adjusted to give a tight mitre.



**148-238F**  
Open in door sash

**149-239F**  
Open in door sash

MT1803  
ADHESIVE



MT1803 ADHESIVE SHOULD BE APPLIED TO THE PERIMETER OF THE CLEAT CHAMBER OF THE FRAME SECTION AND THE CORNER BRACE GROOVE.

Scale 1:2



# Mullion Assembly

## Cleated sections



## System 5-20D/Hi+

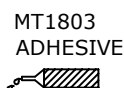
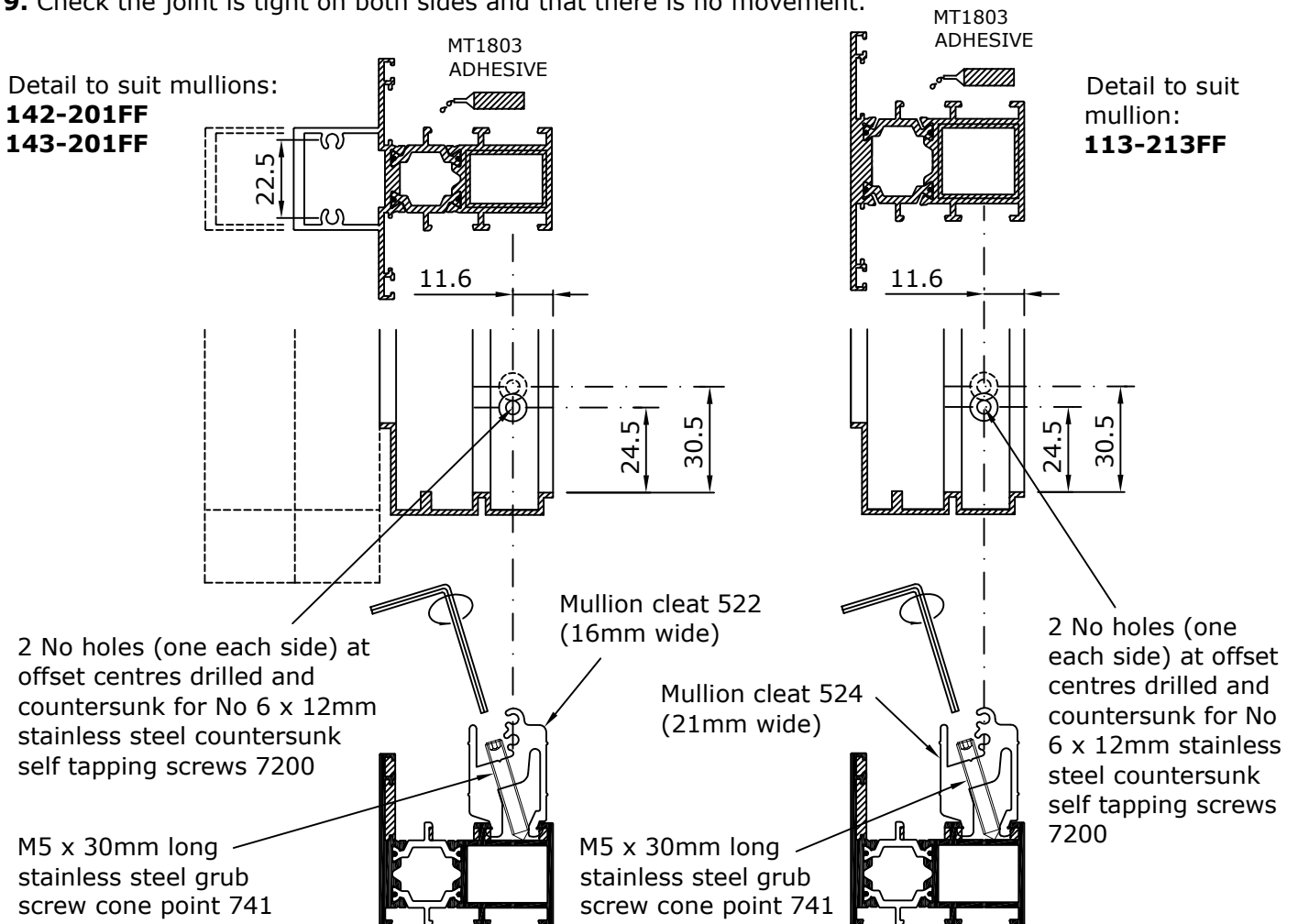
DOOR SYSTEM

IMPORTANT: PLEASE READ THESE NOTES BEFORE ASSEMBLY.

NOTE: Transoms must be installed before frame corners are crimped.

THIS SHEET TO BE READ IN CONJUNCTION WITH "MULLION/TRANSOM SEALING DETAIL" AND "TRANSOM BRACE APPLICATION DETAIL" SHEETS.

1. Drill and countersink the offset screw holes in the mullion at the positions shown.
2. Before applying MT1803 adhesive ensure all surfaces are free from grease or dust. Clean all aluminium mating surfaces with MT60 surface cleaner and allow to dry. Fabricator must ensure MT60 surface cleaner is fully compatible with surface finish on a project-by-project basis.
3. Insert transom braces 768 as required.
4. Apply MT1803 adhesive to the mating surfaces of the cut aluminium, cleat and thermal break profiles (as shown).
5. Apply MT1803 adhesive to the internal perimeter of the cleat chamber, and to sufficient depth to ensure full bonding/sealing of the cleat.
6. Clip cleat into section as shown below. Tighten 741 grub screw (minimum torque setting 3.5Nm) and ensure cleat is firmly attached.
7. Align the sections over cleats and screw tightly into the offset screwports using 7200 self-tapping screws, ensuring all screws are bedded and sealed.
8. Wipe away any excess adhesive from the joint using MT60 surface cleaner and allow to dry. Ensure all bead and gasket recesses are clear of adhesive.
9. Check the joint is tight on both sides and that there is no movement.



MT1803 ADHESIVE SHOULD BE APPLIED TO THE PERIMETER OF THE CLEAT CHAMBER OF THE FRAME SECTION AND THE CORNER BRACE GROOVE

Scale 1:2

# Heavy Duty Mullion/Transom Assembly

## Cleated sections



**System 5-20D/Hi+**

DOOR SYSTEM

IMPORTANT: PLEASE READ THESE NOTES BEFORE ASSEMBLY.

NOTE: Transoms must be installed before frame corners are crimped.

THIS SHEET TO BE READ IN CONJUNCTION WITH "MULLION/TRANSOM SEALING DETAIL" AND "TRANSOM BRACE APPLICATION DETAIL" SHEETS.

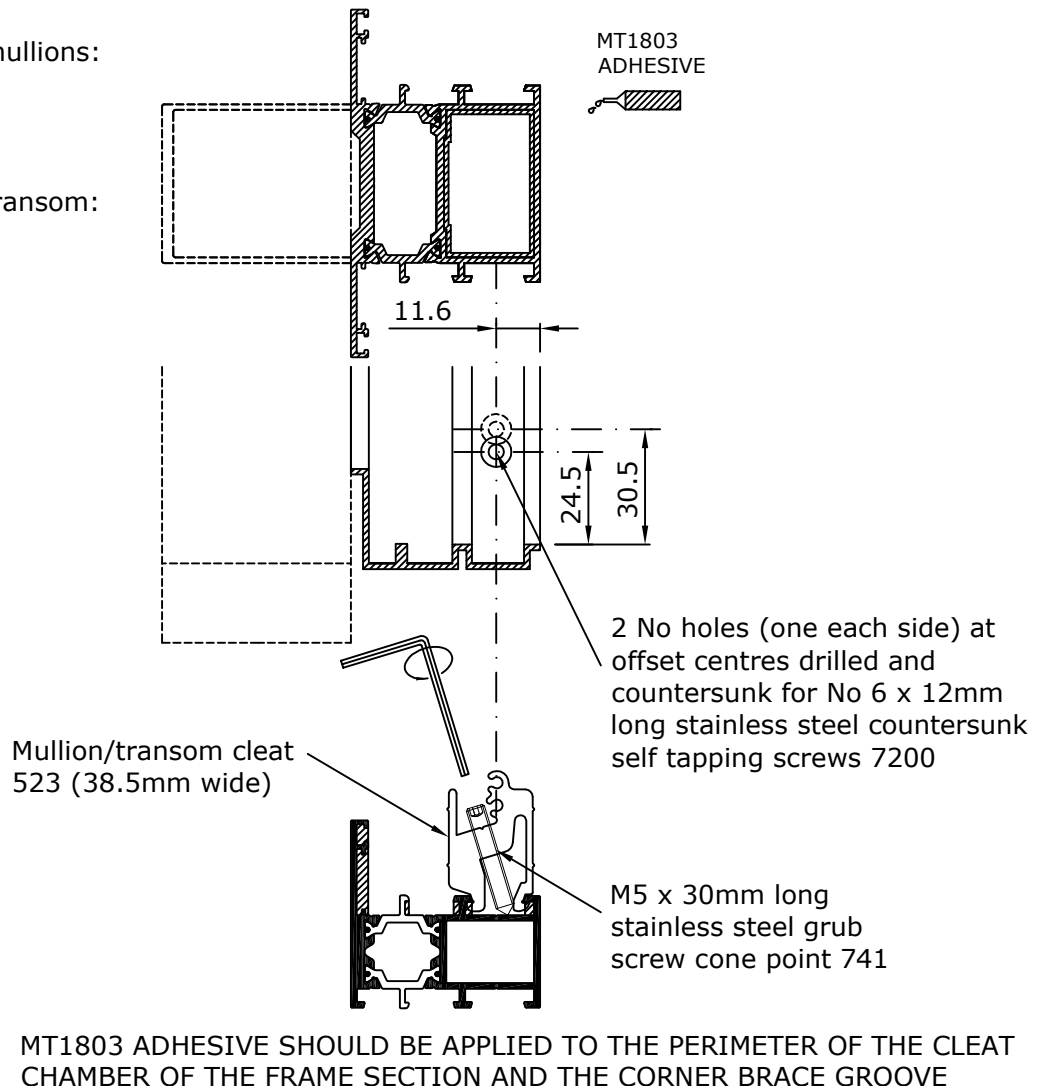
1. Drill and countersink the offset screw holes in the mullion/transom at the positions shown.
2. Before applying MT1803 adhesive ensure all surfaces are free from grease or dust. Clean all aluminium mating surfaces with MT60 surface cleaner and allow to dry. Fabricator must ensure MT60 surface cleaner is fully compatible with surface finish on a project-by-project basis.
3. Insert transom braces 768 as required.
4. Apply MT1803 adhesive to the mating surfaces of the cut aluminium cleat, and thermal break profiles (as shown).
5. Apply MT1803 adhesive to the internal perimeter of the cleat chamber, and to sufficient depth to ensure full bonding/sealing of the cleat.
6. Clip cleat into section as shown below. Tighten 741 grub screw (minimum torque setting 3.5Nm) and ensure cleat is firmly attached.
7. Align the sections over cleats and screw tightly into the offset screwports using 7200 self-tapping screws, ensuring all screws are bedded and sealed.
8. Wipe away any excess adhesive from the joint using MT60 surface cleaner and allow to dry. Ensure all bead and gasket recesses are clear of adhesive.
9. Check the joint is tight on both sides and that there is no movement.

Detail to suit mullions:

**106-206FF**  
**107-206FF**  
**116-206FF**

Detail to suit transom:

**116-206FF**



Scale 1:2

# Mullion Assembly Detail

## For Sidelight With Low Threshold



### System 5-20D/Hi+

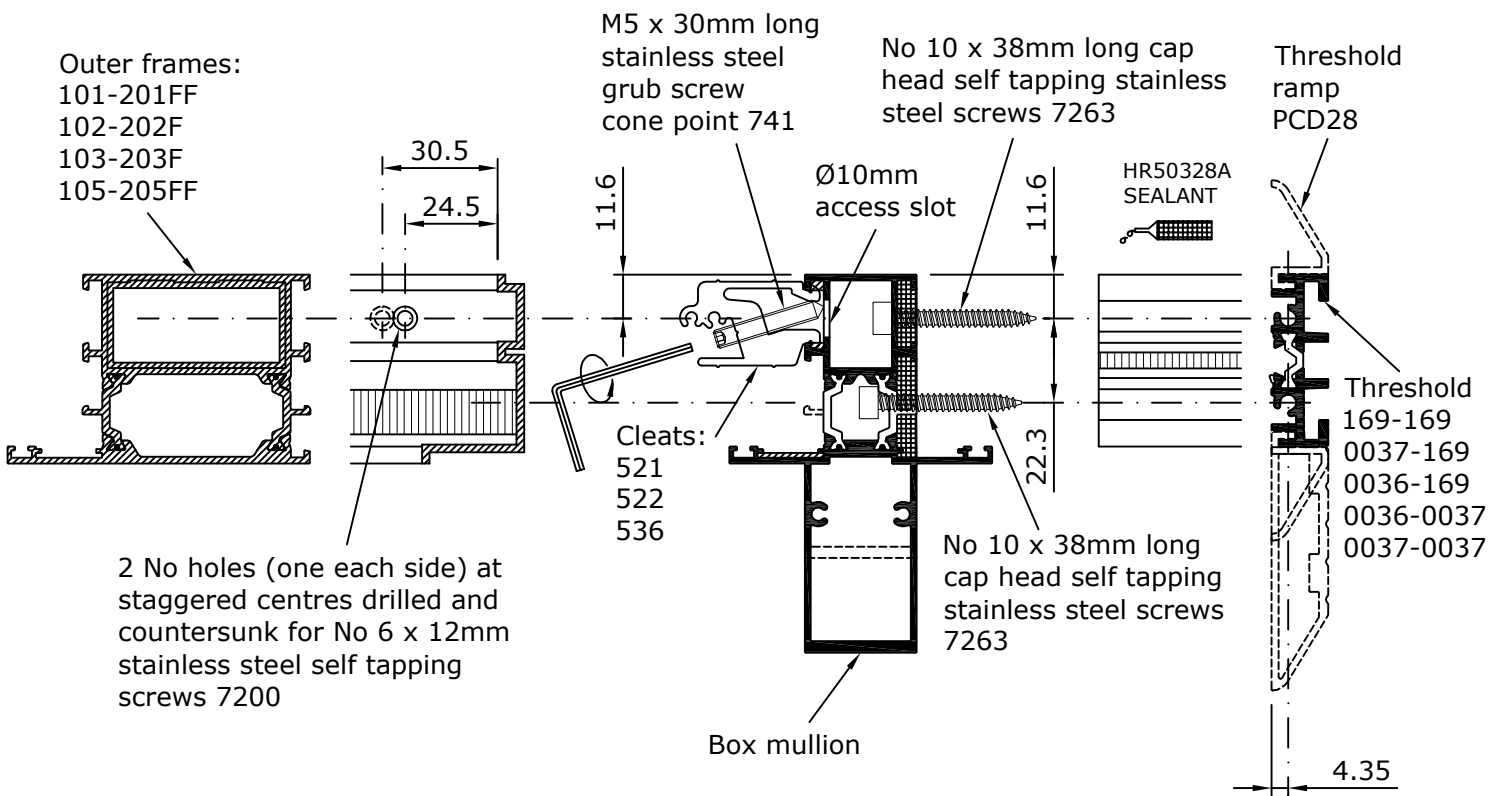
DOOR SYSTEM

IMPORTANT: PLEASE READ THESE NOTES BEFORE ASSEMBLY.

THIS SHEET TO BE READ IN CONJUNCTION WITH "MULLION/TRANSOM SEALING DETAIL" AND "TRANSOM BRACE APPLICATION DETAIL" SHEETS.

METAL TECHNOLOGY RECOMMEND THE USE OF MT1803 ADHESIVE TO ENSURE THE STABILITY OF JOINTS.

1. Drill and countersink the screw holes in the outer frame at the positions shown. Refer to "Mullion End Prep" sheets in section 4 of this manual for mullion prep details.
2. Before applying MT1803 adhesive ensure all surfaces are free from grease or dust. Clean all aluminium mating surfaces with MT60 surface cleaner and allow to dry. Fabricator must ensure MT60 surface cleaner is fully compatible with surface finish on a project-by-project basis.
3. Insert transom braces 768 as required.
4. Align threshold with holes in mullion and screw into the screwports ensuring screws are bedded and sealed using HR50328A sealant/adhesive.
5. Apply a fillet of HR50328A sealant/adhesive between mullion and threshold as indicated below.
6. Apply MT1803 adhesive to the mating surfaces of the cut aluminium and thermal break of the outer frame profiles (as shown).
7. Apply MT1803 adhesive to the internal perimeter of the cleat chamber, and to sufficient depth to ensure full bonding/sealing of the cleat.
8. Release grub screw and clip cleat into section as shown below. Tighten grub screw (minimum torque setting 3.5Nm) and ensure cleat is firmly attached.
9. Align the sections over cleats and screw tightly into the screwports ensuring all screws are bedded and sealed. Use a single transom brace 768 (as sheet "Transom Brace Application Detail" to give additional stability to joint.
10. Wipe away any excess adhesive from the joint using MT60 surface cleaner and allow to dry. Ensure all bead and gasket recesses are clear of adhesive.
11. Check the joint is tight on both sides and that there is no movement.



MT1803 ADHESIVE SHOULD BE APPLIED TO THE PERIMETER OF THE CLEAT CHAMBER OF THE FRAME SECTION AND THE TRANSOM BRACE GROOVE

Scale 1:2

# Assembly Detail

## Low Threshold to Frame

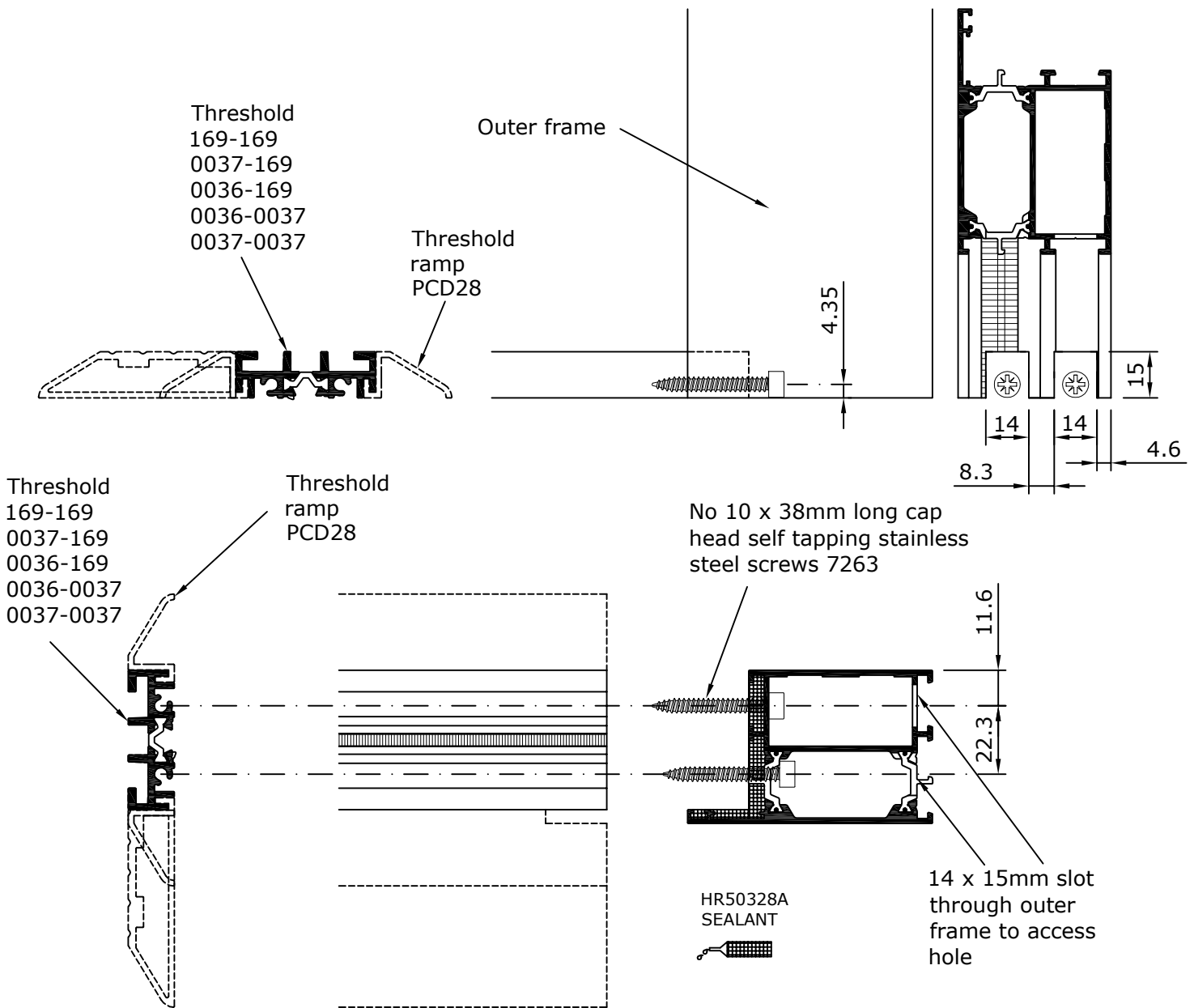


## System 5-20D/Hi+

DOOR SYSTEM

IMPORTANT: PLEASE READ THESE NOTES BEFORE ASSEMBLY.

1. Drill screw holes and notch outer frame as shown.
2. Before applying HR50328A sealant/adhesive ensure all surfaces are free from grease or dust. Clean all aluminium mating surfaces with MT60 surface cleaner and allow to dry. Fabricator must ensure MT60 surface cleaner is fully compatible with surface finish on project-by-project basis.
3. Align threshold with holes in outer frame and screw into the screwports ensuring screws are bedded and sealed using HR50328A sealant/adhesive.
4. Apply a fillet of HR50328A sealant between outer frame and threshold as indicated below.
5. Wipe away any excess sealant from the joint using MT60 surface cleaner and allow to dry. Ensure all bead and gasket recesses are clear of adhesive.
6. Check the joint is tight on both sides and that there is no movement.



Scale 1:2

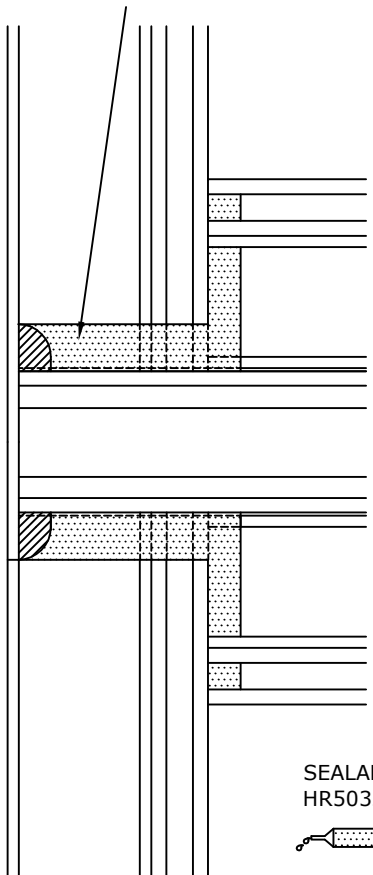
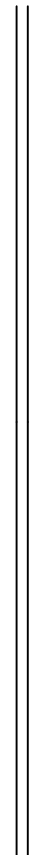
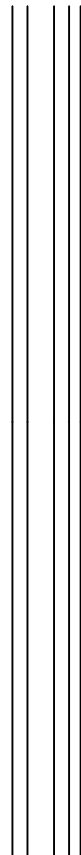
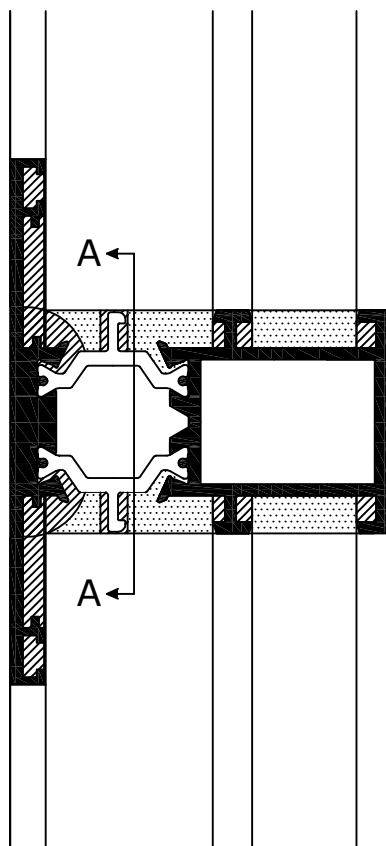
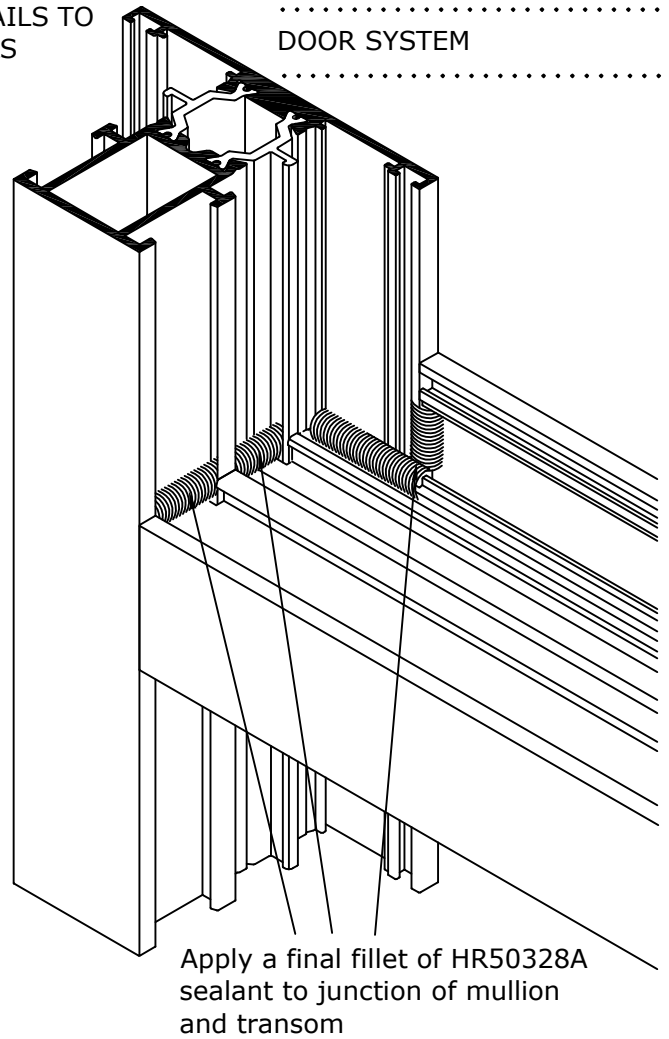
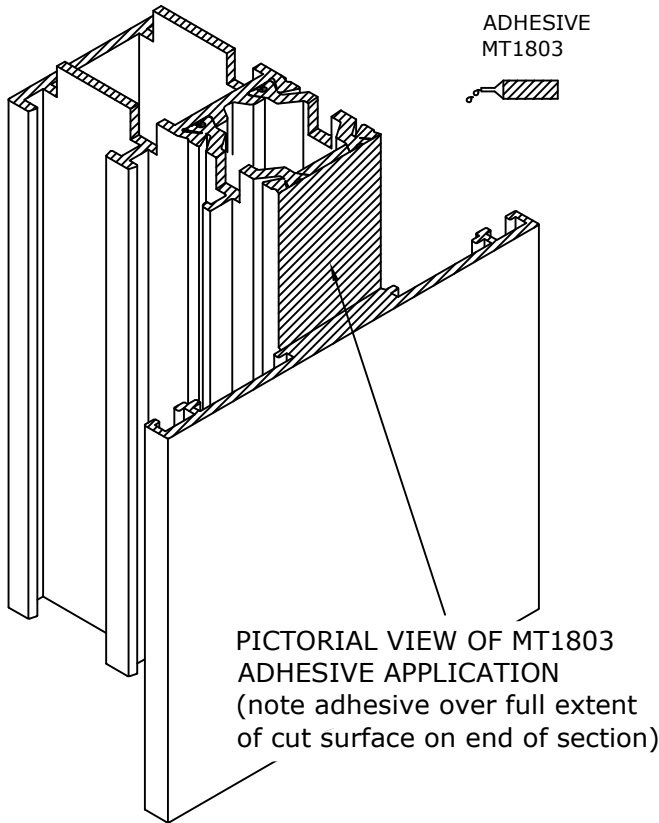
# Mullion/Transom Sealing Detail



## System 5-20D/Hi+

DOOR SYSTEM

IMPORTANT: THE FOLLOWING DETAIL SHOULD BE APPLIED TO ALL MULLION/TRANSOM SECTIONS. THESE DETAILS TO BE READ IN CONJUNCTION WITH ASSEMBLY DETAILS



Not to Scale

VIEW ON A-A

SHEET 520D Hi+ / 6 / 130  
rev 1 15/11/13

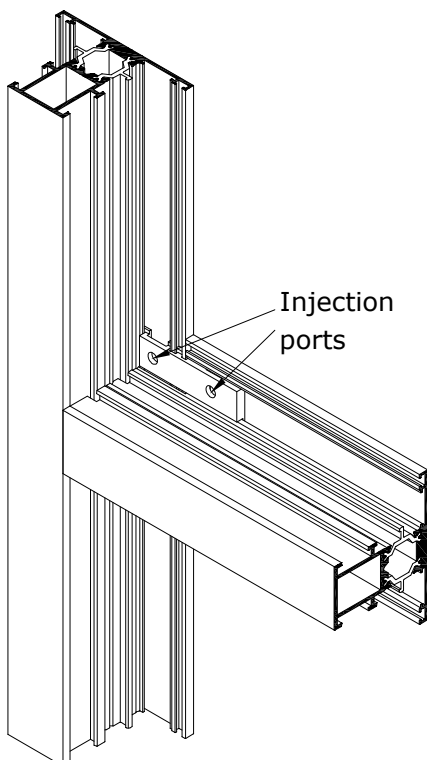
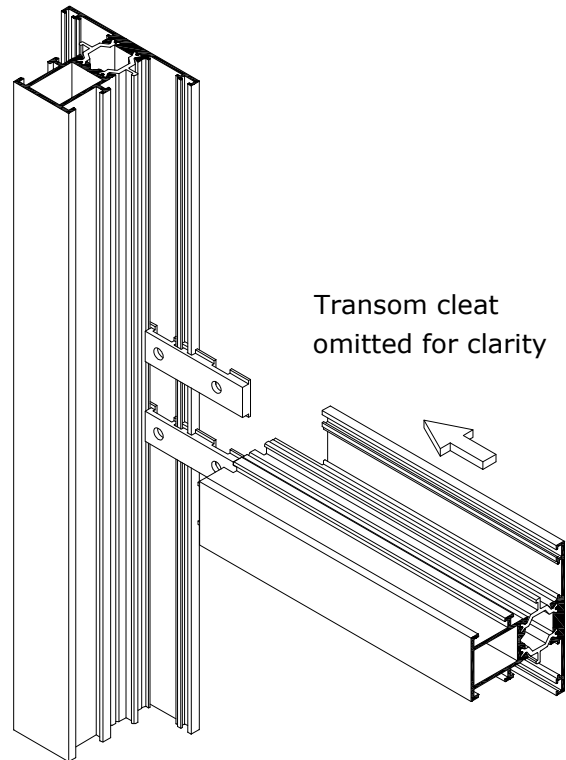
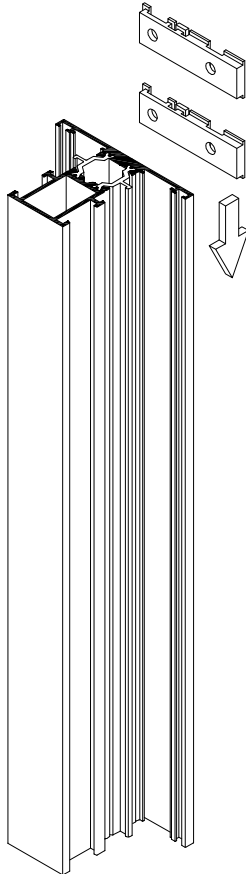
# Transom Brace Application Detail



**System 5-20D/Hi+**

DOOR SYSTEM

Transom brace (768) should be used on transoms above and below opening sashes. Braces to be securely bonded using MT1803 adhesive. Metal Technology offer the optional use of transom braces 768 on all other transom/mullion connections, at the discretion of the fabricator.



## Fabrication method:

1. Slide 768 transom braces into mullion/outer frame prior to frame assembly.
2. Mullion/transom joint to be fabricated as per "Mullion Assembly" sheets. Apply MT1803 adhesive to transom ends. (Refer to sheet "Mullion/Transom Sealing Detail").
3. Slide transom over transom cleat (where required) and braces.
4. Secure transom to framing via cleat.
5. Assemble frame and crimp corners as per "Corner Assembly Details" and "Corner Crimping Detail" sheets.
6. Apply MT1803 adhesive into injection ports of transom brace until visible at edges.
7. Complete transom end sealing detail as per sheet "Mullion/Transom Sealing Detail".

Not to Scale

# Double Door Adaptors Assembly

## Detail

### Rebated Double Door Adaptor

**System 5-20D/Hi+**

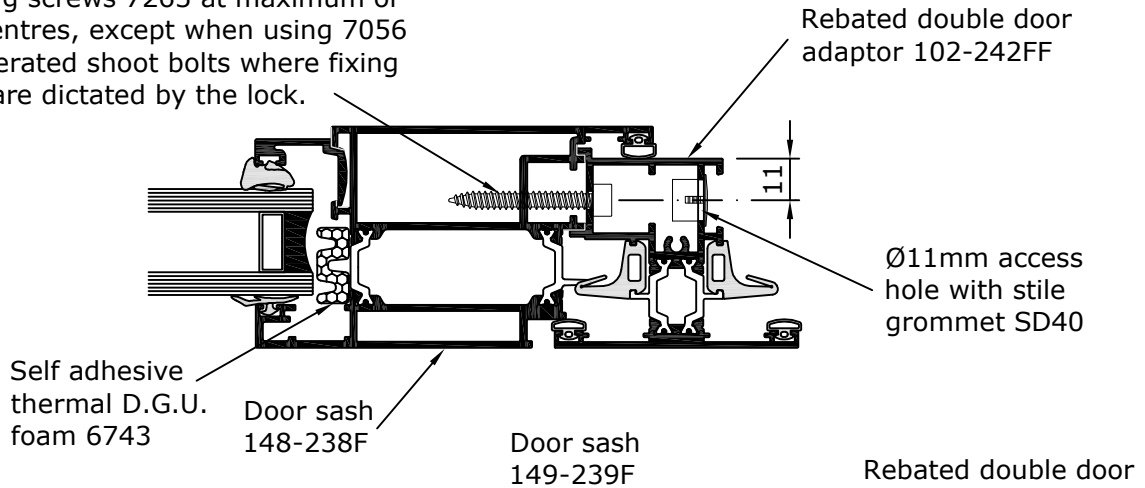
DOOR SYSTEM

All fixings must be sealed using HR50328A adhesive/sealant.

ENSURE 060B BUBBLE SEAL AND 061 FLIPPER SEAL ARE FITTED BEFORE 102-242FF DOUBLE DOOR ADAPTOR IS APPLIED.

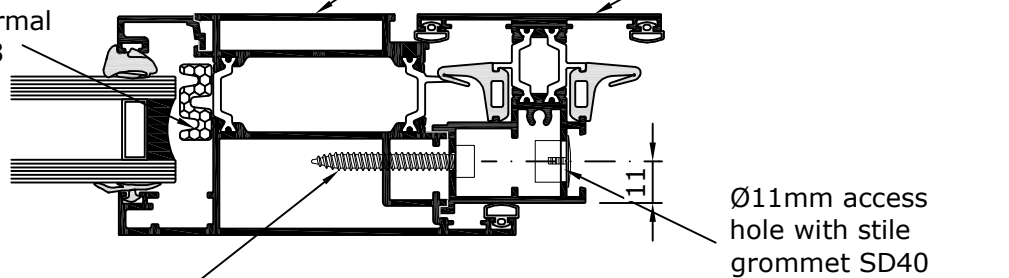
#### SLAVE LEAF OPEN IN APPLICATION

No 10 x 38mm cap head stainless steel self tapping screws 7263 at maximum of 200mm centres, except when using 7056 handle operated shoot bolts where fixing positions are dictated by the lock.



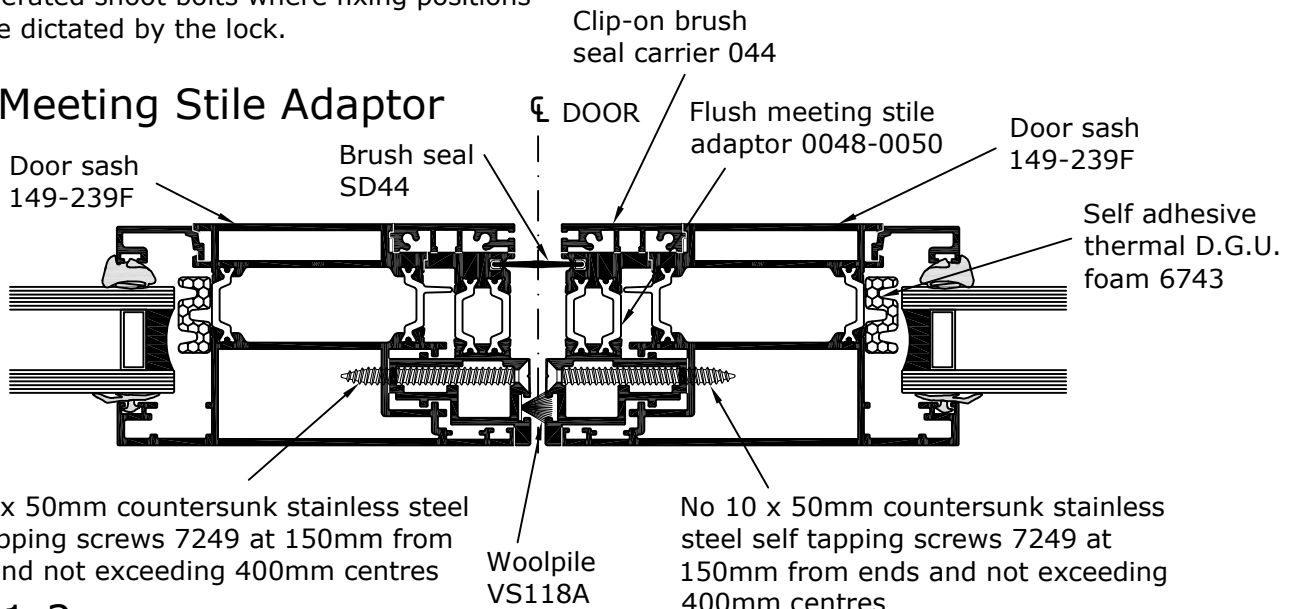
#### SLAVE LEAF OPEN OUT APPLICATION

Self adhesive thermal D.G.U. foam 6743



No 10 x 38mm cap head stainless steel self tapping screws 7263 at maximum of 200mm centres, except when using 7056 handle operated shoot bolts where fixing positions are dictated by the lock.

#### Flush Meeting Stile Adaptor



No 10 x 50mm countersunk stainless steel self tapping screws 7249 at 150mm from ends and not exceeding 400mm centres

No 10 x 50mm countersunk stainless steel self tapping screws 7249 at 150mm from ends and not exceeding 400mm centres

Scale 1:2

# Brush Seal Carrier Details

## Low Threshold

SECURE BRUSH SEALS 7018  
AT ENDS TO RETAIN CARRIER.

### OPEN IN DOOR

No 10 x 32mm pan head  
stainless steel self tapping  
screws 7257 at 50mm from  
ends and not exceeding  
200mm centres

INSIDE

Brush seal  
7018

Brush seal  
carrier  
047-048

**m<sup>t</sup>**  
**System 5-20D/Hi+**  
.....  
DOOR SYSTEM  
.....

Self adhesive  
thermal D.G.U.  
foam 6743

Door sash  
148-238F

Clip-on  
brush seal  
carrier 044

Pop rivet CA15 at  
50mm from ends  
and not exceeding  
200mm centres

OUTSIDE

18

### OPEN OUT DOOR

No 10 x 32mm pan head  
stainless steel self tapping  
screws 7257 at 50mm from  
ends and not exceeding  
200mm centres

INSIDE

Pop rivet CA15 at  
50mm from ends  
and not exceeding  
200mm centres

Clip-on  
brush seal  
carrier 044

18

Brush seal  
7018

Self adhesive  
thermal D.G.U.  
foam 6743

Door sash  
149-239F

Brush seal  
carrier 047-048

OUTSIDE

Scale 1:1



# 5555 Threshold Stop Prep Details

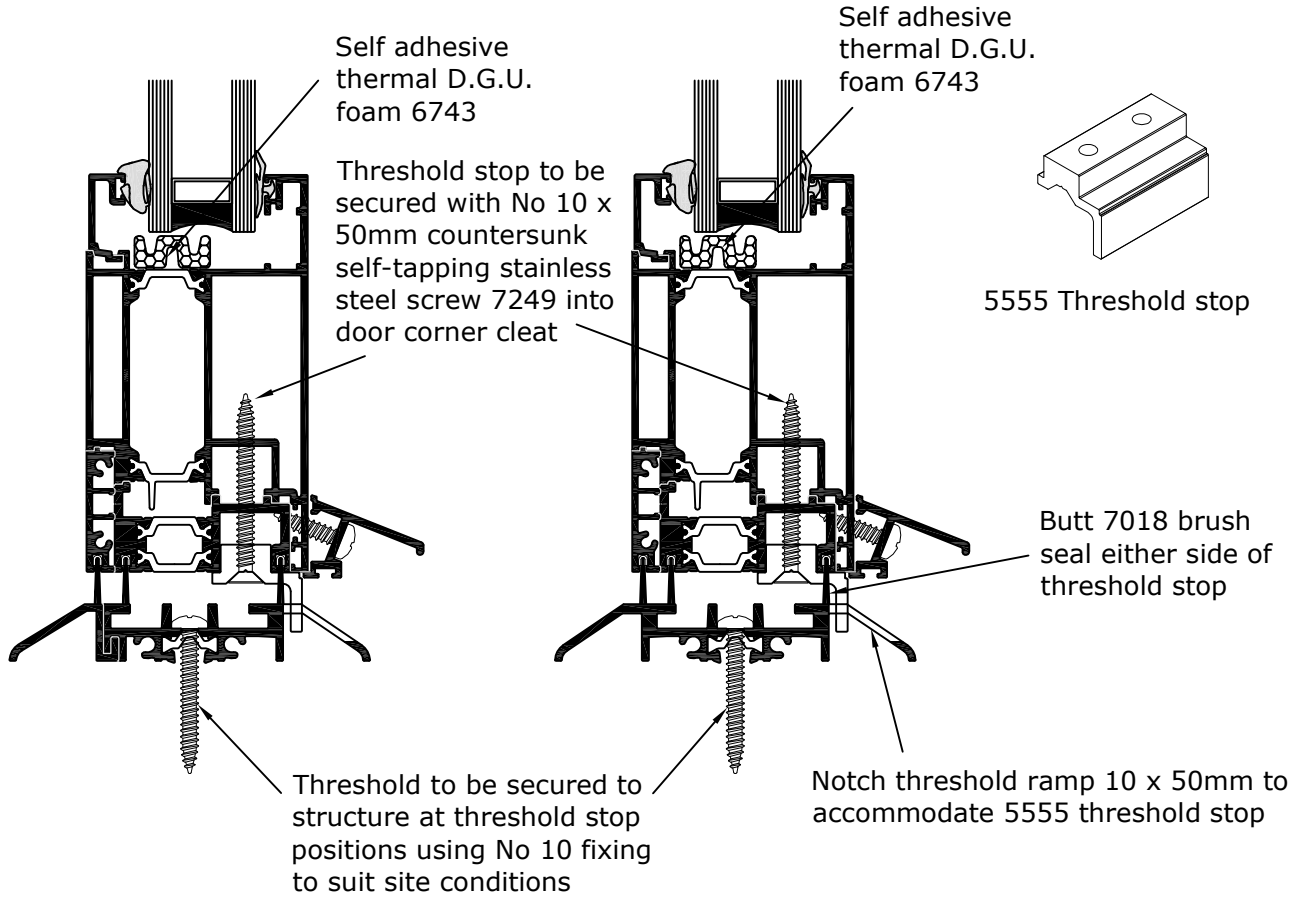
## Open-Out Doors



### System 5-20D/Hi+

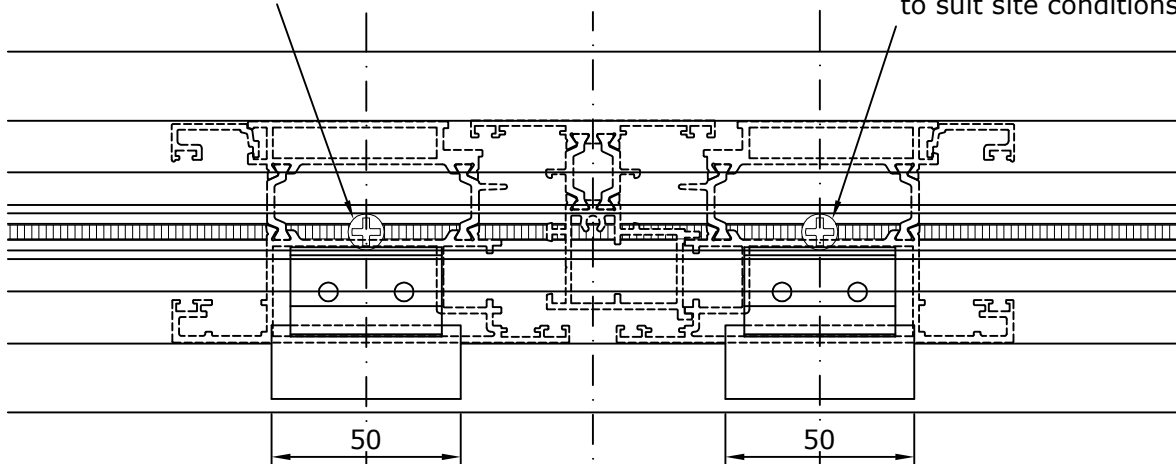
DOOR SYSTEM

5555 Threshold stop was designed for use primarily with non-ramped low thresholds 169-169, 0036-169, 0037-169. Ramped low thresholds PCD28, 0036-0037 and 0037-0037 may be used, but offer less site tolerance and will need to be prepped as shown below.



Threshold to be secured to structure at threshold stop positions using No 10 fixing to suit site conditions

Threshold to be secured to structure at threshold stop positions using No 10 fixing to suit site conditions



∅ of double doors

\* When using the 7056 lever handle operated shoot bolts this dimension should be increased to 130mm

Scale 1:2

# 5555 Threshold Stop Prep Details

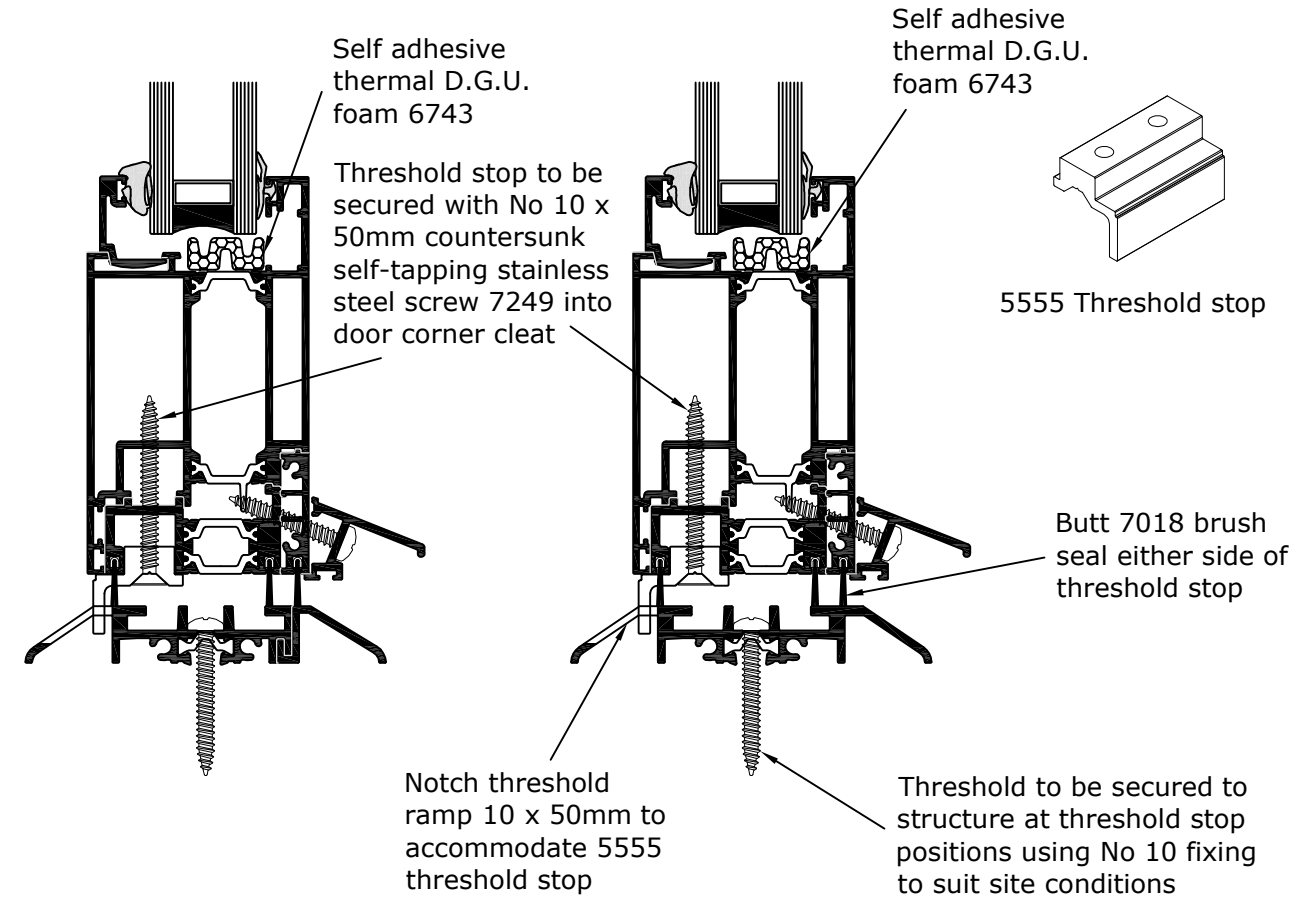
## Open-In Doors



## System 5-20D/Hi+

DOOR SYSTEM

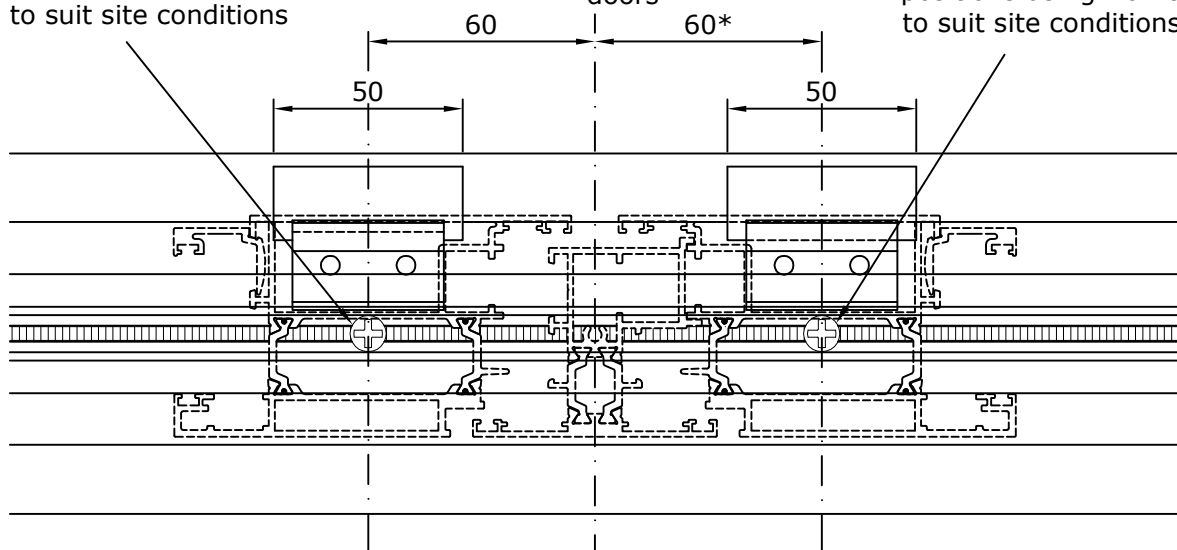
5555 Threshold stop was designed for use primarily with non-ramped low thresholds 169-169, 0037-169. Ramped low thresholds PCD28, 0037-0037 may be used, but offer less site tolerance and will need to be prepped as shown below.



Threshold to be secured to structure at threshold stop positions using No 10 fixing to suit site conditions

℄ of double doors

Threshold to be secured to structure at threshold stop positions using No 10 fixing to suit site conditions



\* When using the 7056 lever handle operated shoot bolts this dimension should be increased to 130mm

Scale 1:2

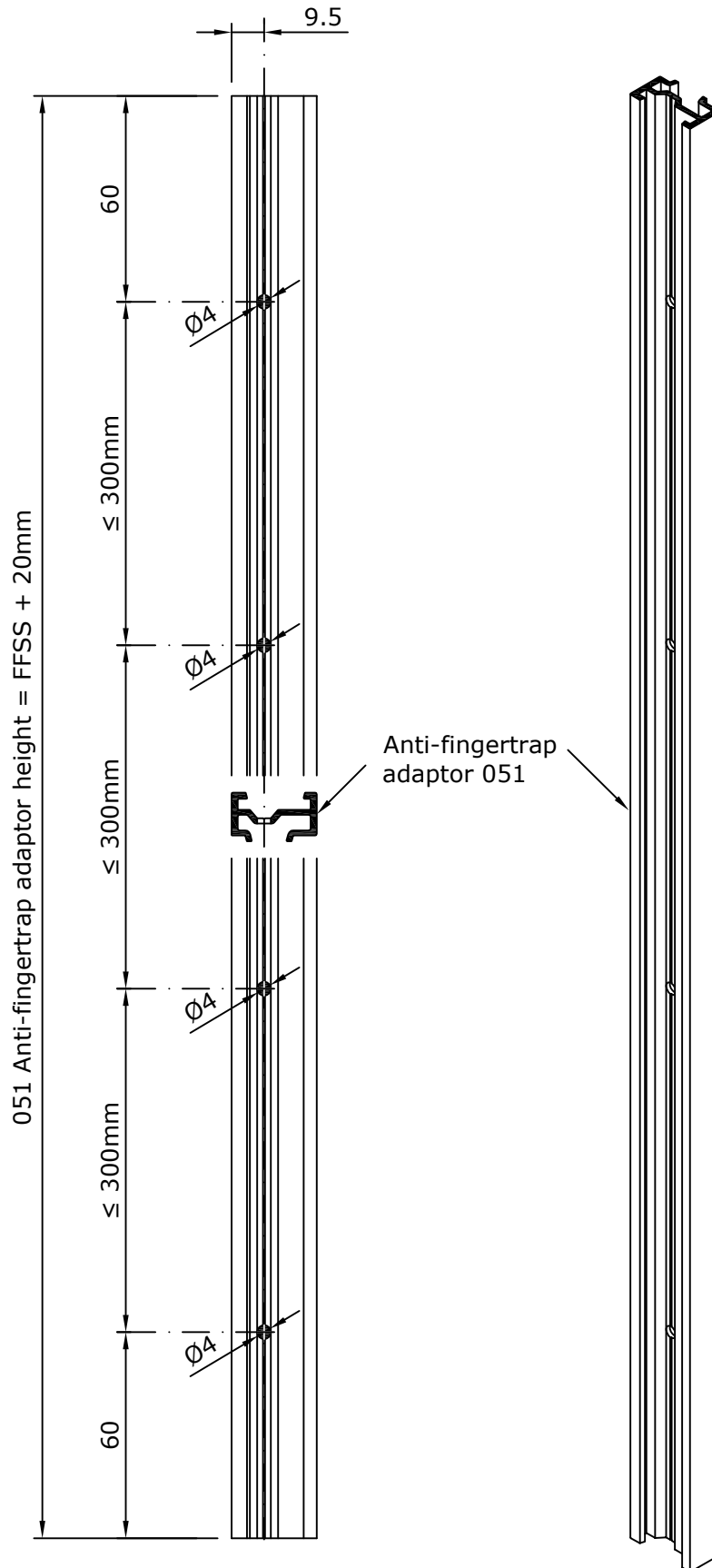
# 051 Anti-Fingertrap Door Prep Details



**System 5-20D/Hi+**

DOOR SYSTEM

Drill 4mm  $\varnothing$  clearance holes to accommodate No 7 x 25mm countersunk self-drill screws 7223 as indicated and at centres not greater than 300mm.



Scale 1:2

# 053 Anti-Fingertrap Door Prep Details



**System 5-20D/Hi+**

DOOR SYSTEM

Single and Double Open-In and Open-Out Doors with Rebated Meeting Stile and Flush Low Threshold

Drill and countersink 4mm Ø clearance holes to accommodate No 7 x 25mm countersunk self-drill screws 7223 as indicated and at centres not greater than 300mm.

## 053 ANTI-FINGERTRAP ADAPTOR

Based on doors viewed from outside.

OPEN OUT DOORS  
Right hand hinged door

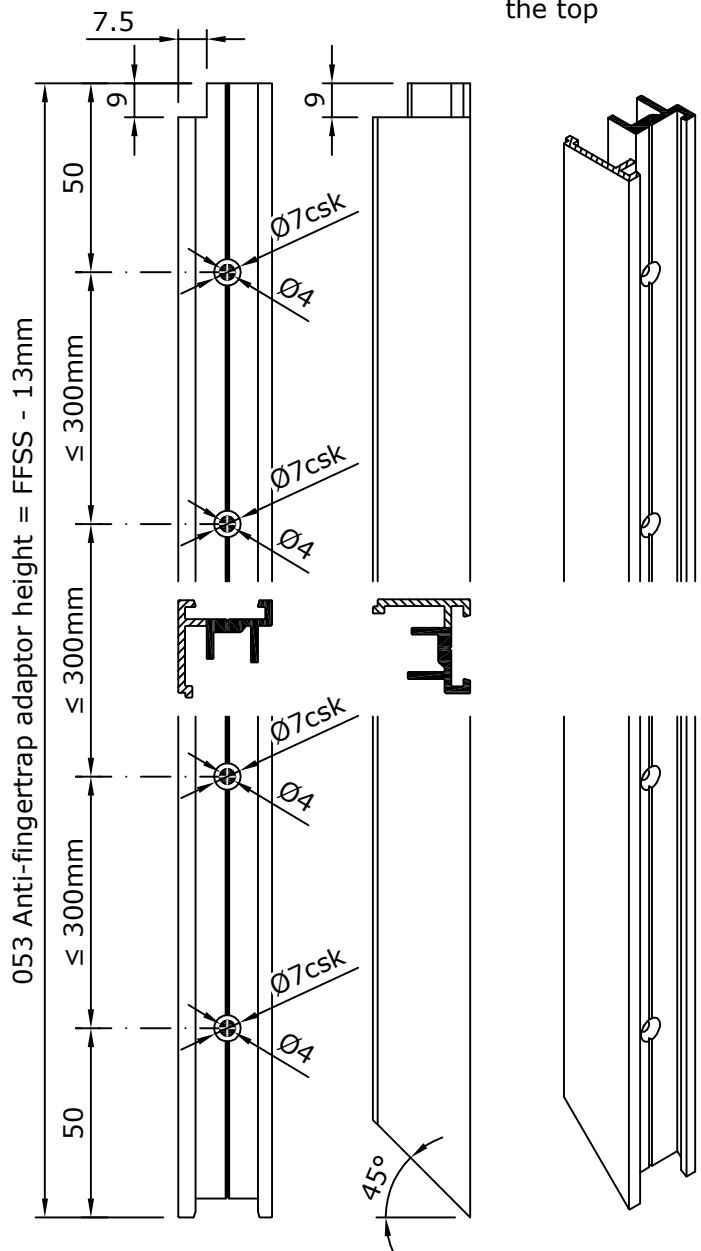
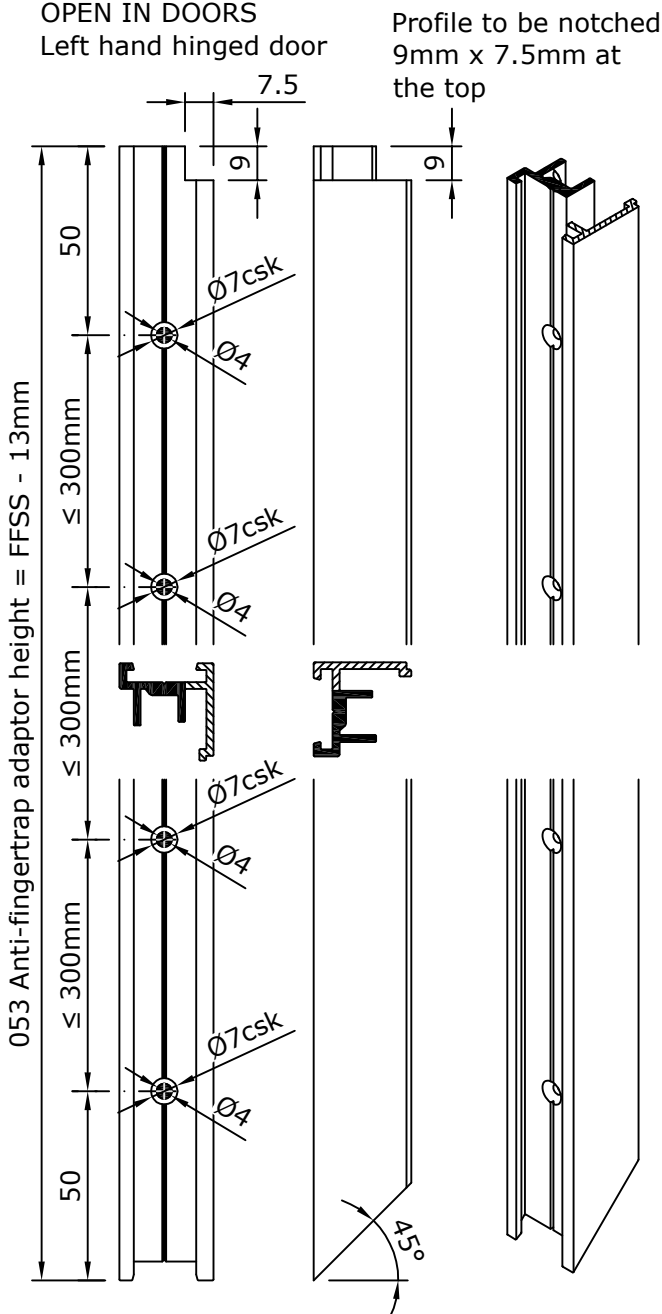
OPEN IN DOORS  
Left hand hinged door

Based on doors viewed from outside.

OPEN OUT DOORS  
Left hand hinged door

OPEN IN DOORS  
Right hand hinged door

Profile to be notched 9mm x 7.5mm at the top



Profile to be mitred to 45° at the bottom

Profile to be mitred to 45° at the bottom

Scale 1:2

# 044 and 052 Anti-Fingertrap Door Prep Details



**System 5-20D/Hi+**

DOOR SYSTEM

Single and Double Open-In and Open-Out Doors with Rebated Meeting Stile and Flush Low Threshold

\*See "Fabrication and Cutting Sizes" sheets for relevant dimensions.

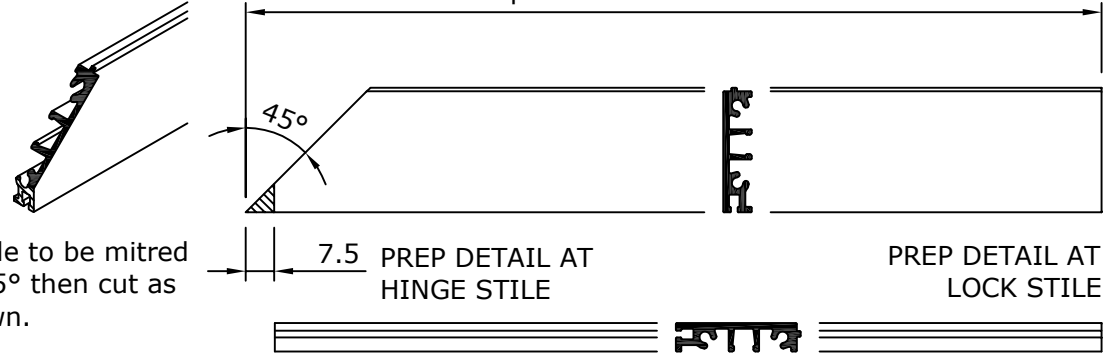
## 044 CLIP-ON BRUSH SEAL CARRIER

Based on doors viewed from outside.

OPEN OUT DOORS  
Right hand hinged door

OPEN IN DOORS  
Left hand hinged door

Profile to be mitred to 45° then cut as shown.



Based on doors viewed from outside.

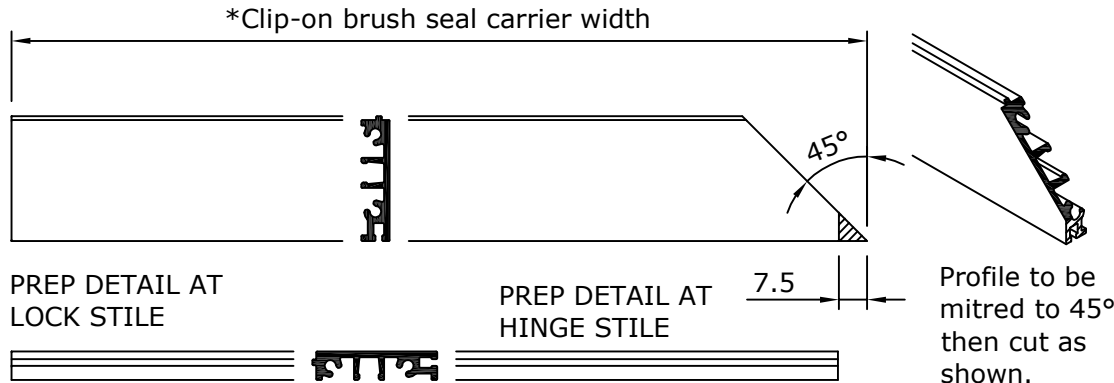
OPEN OUT DOORS  
Left hand hinged door

OPEN IN DOORS  
Right hand hinged door

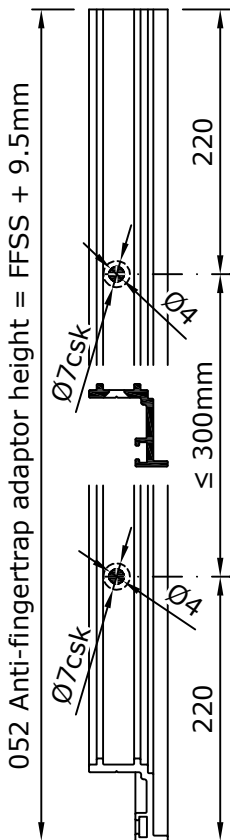
PREP DETAIL AT LOCK STILE

PREP DETAIL AT HINGE STILE

Profile to be mitred to 45° then cut as shown.



## 052 ANTI-FINGERTRAP ADAPTOR

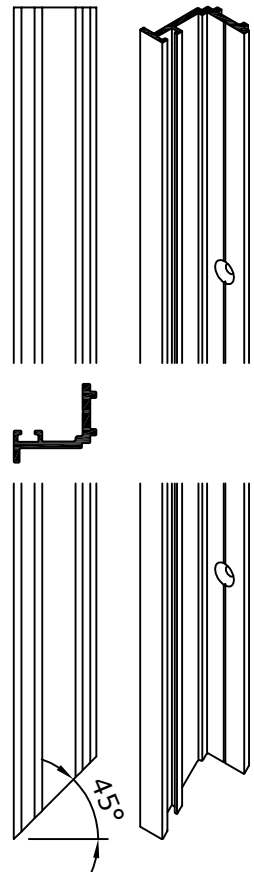


Based on doors viewed from outside.

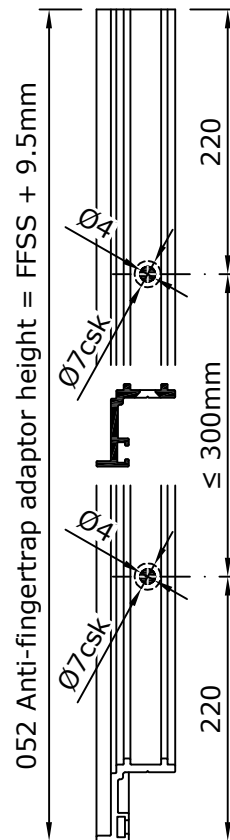
OPEN OUT DOORS - Right hand hinged door  
OPEN IN DOORS - Left hand hinged door

Profile to be cut square at the top

Drill and countersink 4mm Ø clearance holes to accommodate No 7 x 25mm countersunk self-drill screws 7223 as indicated and at centres not greater than 300mm.

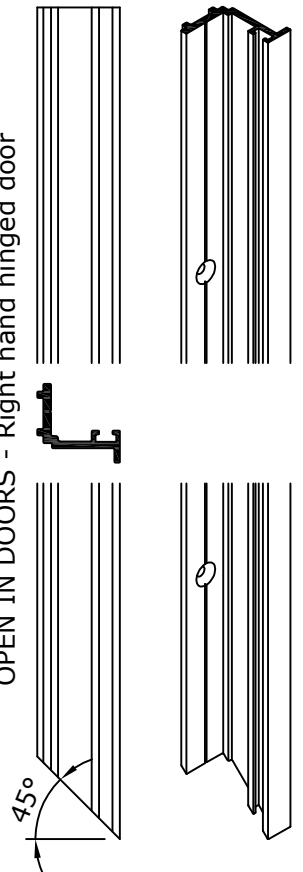


Profile to be mitred to 45° at the bottom



Based on doors viewed from outside.

OPEN OUT DOORS - Left hand hinged door  
OPEN IN DOORS - Right hand hinged door



Scale 1:2

# 053 Anti-Fingertrap Door Prep Details



**System 5-20D/Hi+**

DOOR SYSTEM

## Single and Double Open-In and Open-Out Doors with Rebated Meeting Stile and Semi-Rebated Low Threshold

Drill and countersink 4mm  $\varnothing$  clearance holes to accommodate No 7 x 25mm countersunk self-drill screws 7223 as indicated and at centres not greater than 300mm.

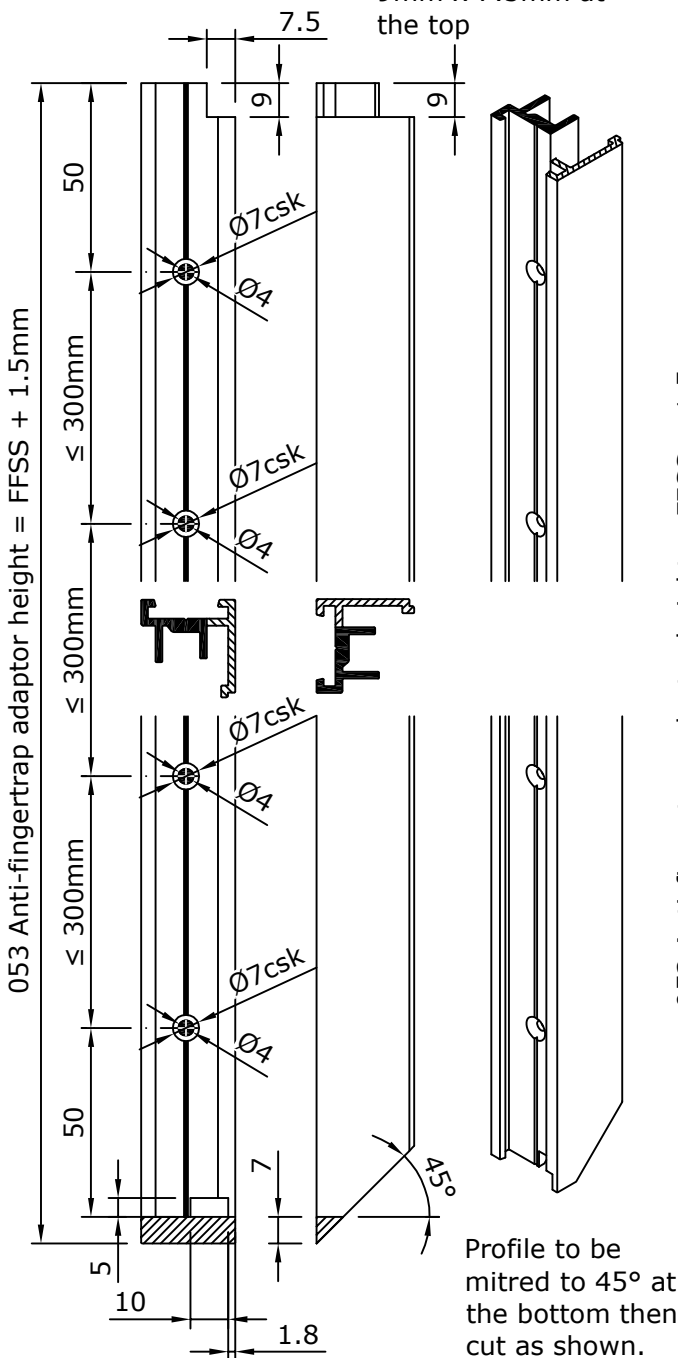
### 053 ANTI-FINGERTRAP ADAPTOR

Based on doors viewed from outside.

OPEN OUT DOORS  
Right hand hinged door

OPEN IN DOORS  
Left hand hinged door

Profile to be notched 9mm x 7.5mm at the top

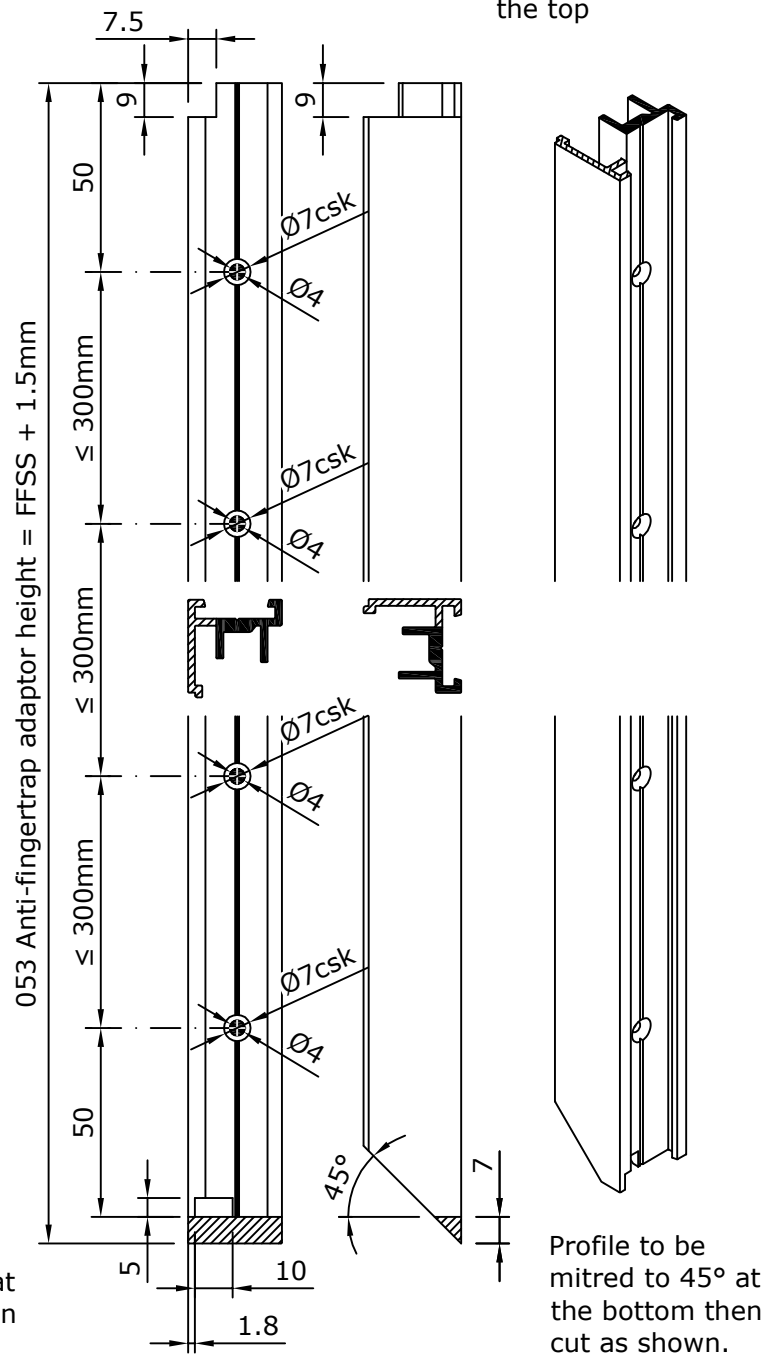


Based on doors viewed from outside.

OPEN OUT DOORS  
Left hand hinged door

OPEN IN DOORS  
Right hand hinged door

Profile to be notched 9mm x 7.5mm at the top



Scale 1:2

# 044 Anti-Fingertrap Door Prep Details



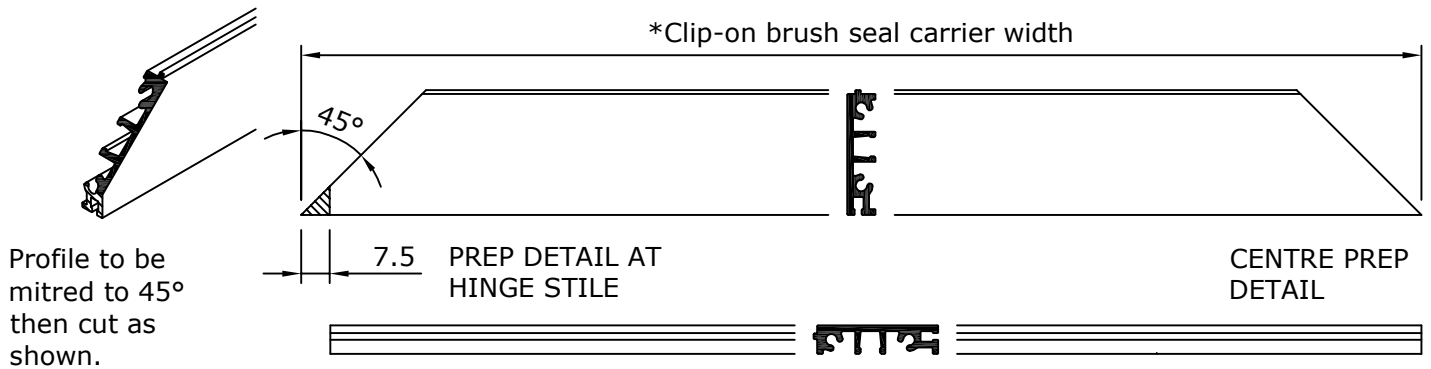
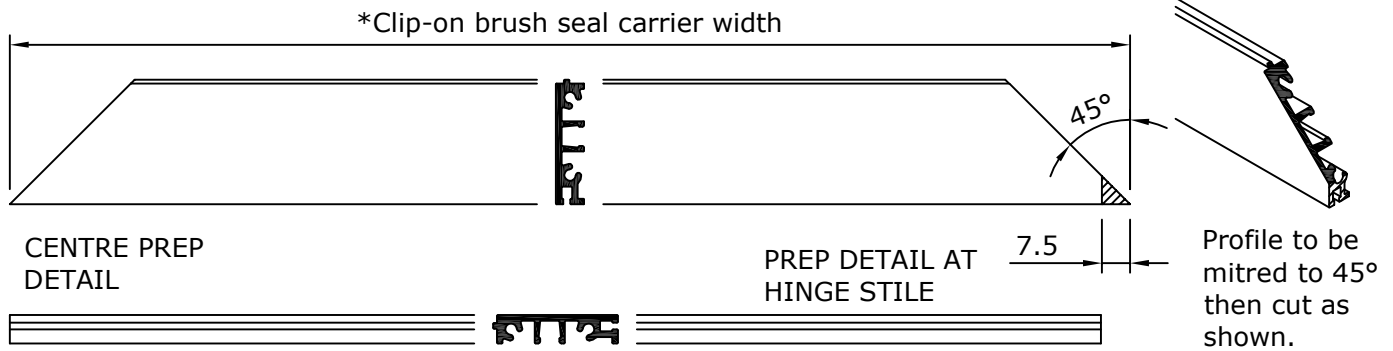
**System 5-20D/Hi+**

DOOR SYSTEM

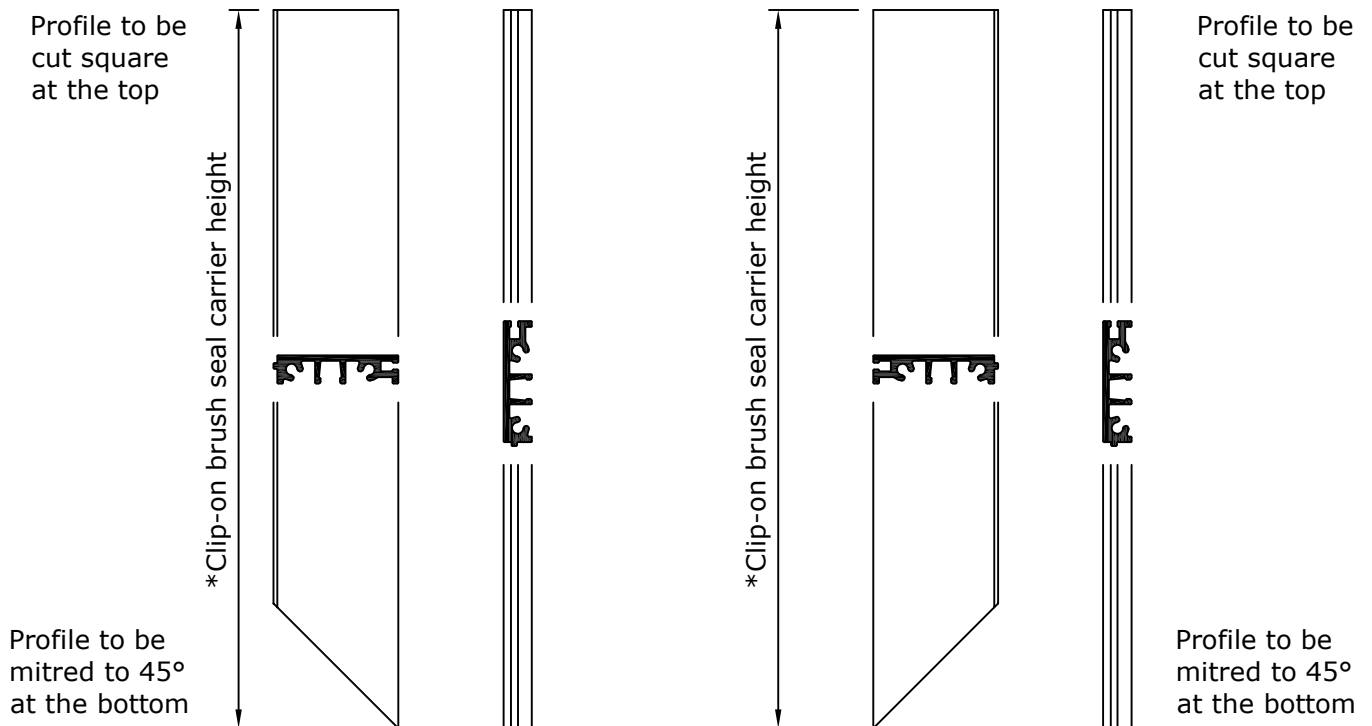
Double Open-Out Doors with Flush Meeting Stile and Flush Low Threshold

\*See "Fabrication and Cutting Sizes" sheets for relevant dimensions.

## 044 HORIZONTAL CLIP-ON BRUSH SEAL CARRIER



## 044 VERTICAL CLIP-ON BRUSH SEAL CARRIER



Scale 1:2

# 052 and 053 Anti-Fingertrap Door Prep Details



## System 5-20D/Hi+

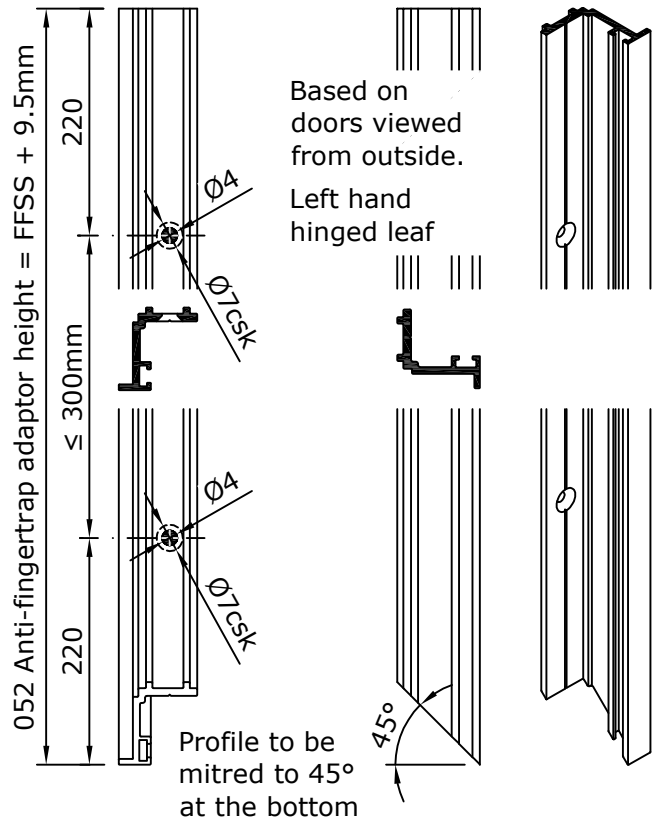
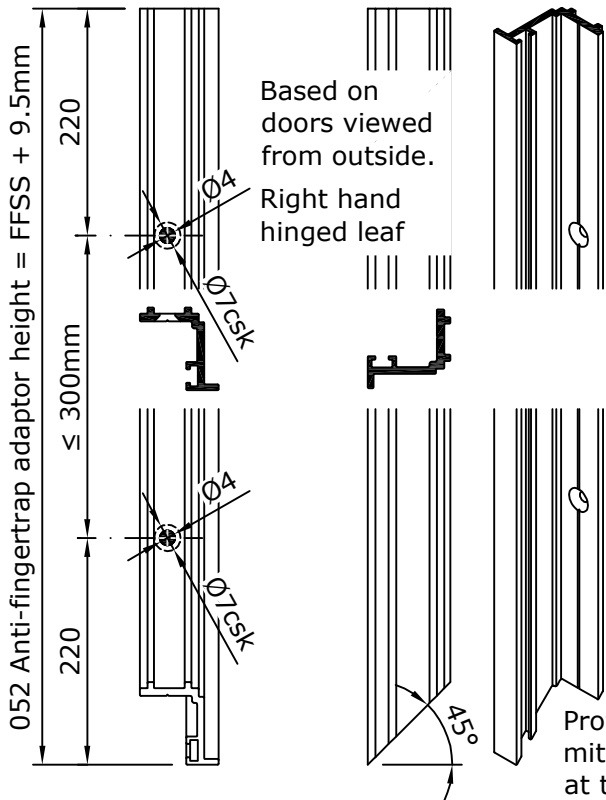
DOOR SYSTEM

### Double Open-Out Doors with Flush Meeting Stile and Flush Low Threshold

Drill and countersink 4mm  $\varnothing$  clearance holes to accommodate No 7 x 25mm countersunk self-drill screws 7223 as indicated and at centres not greater than 300mm.

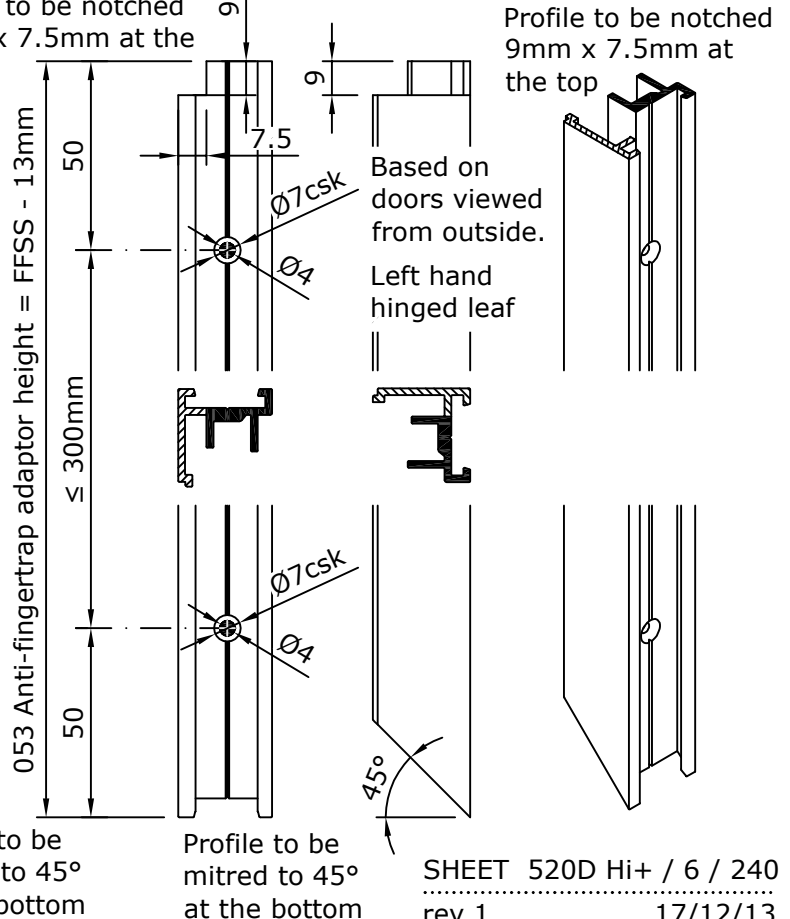
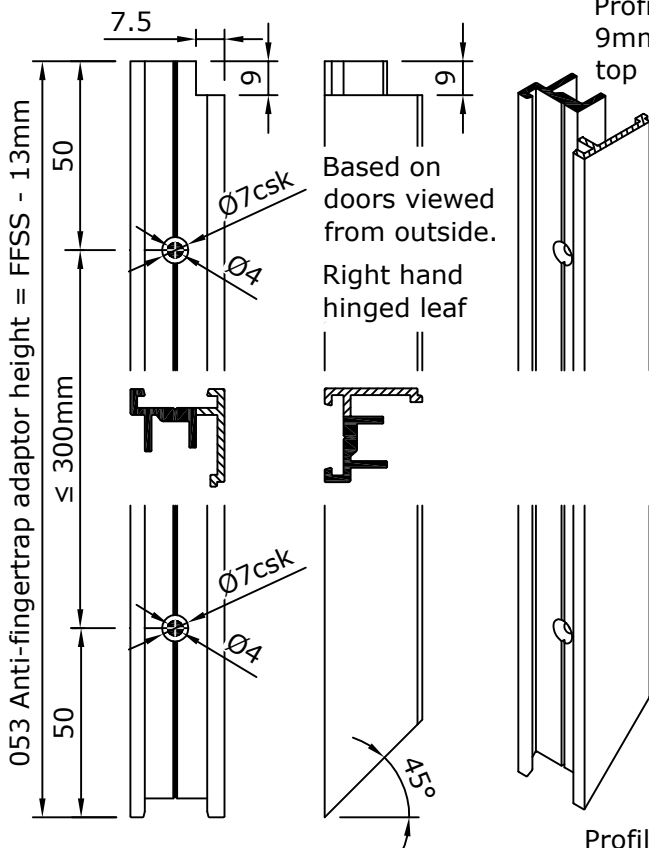
#### 052 ANTI-FINGERTRAP ADAPTOR

Profile to be cut square at the top



#### 053 ANTI-FINGERTRAP ADAPTOR

Profile to be notched 9mm x 7.5mm at the top



Scale 1:2



# Anti-Fingertrap Assembly

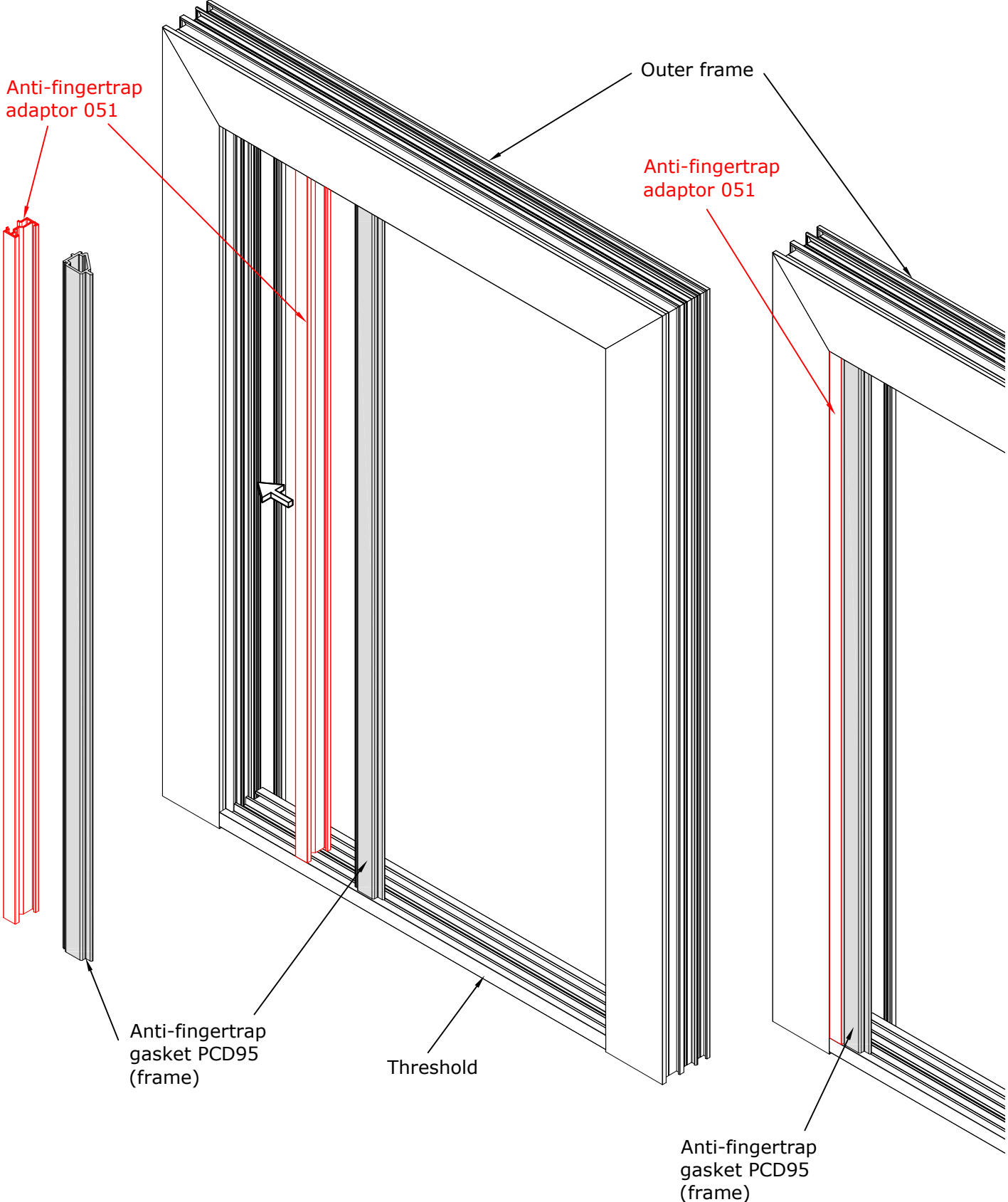
## Outer Frame



## System 5-20D/Hi+

DOOR SYSTEM

See relevant anti-finger trap door "Fabrication and Cutting Sizes" sheet in section 4 of this manual.



Not to Scale

# Anti-Fingertrap Assembly

## Low Threshold Sash

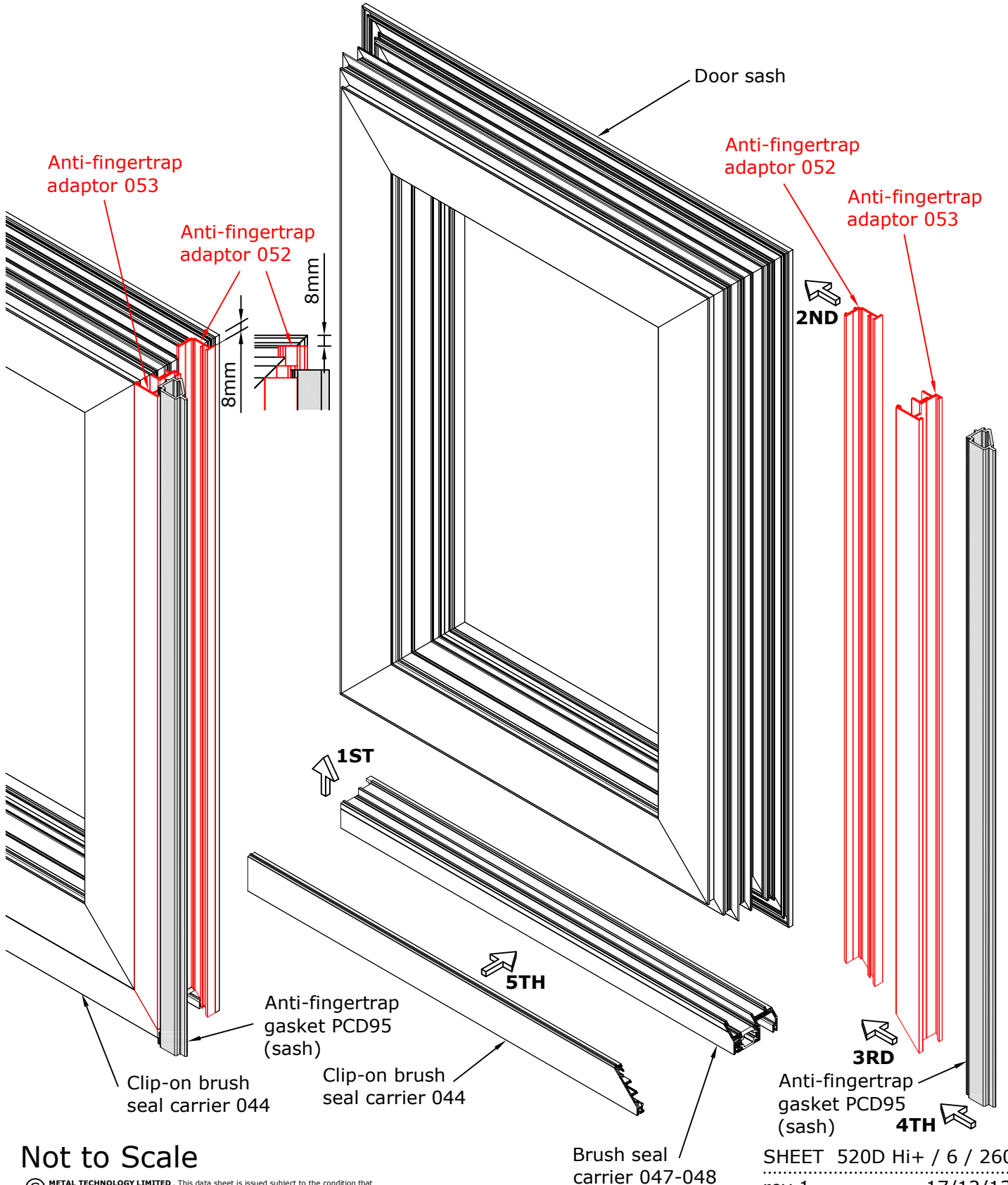


## System 5-20D/Hi+

DOOR SYSTEM

This sheet must be read in conjunction with the following sheets:

- See relevant anti-finger trap door "Fabrication and Cutting Sizes" sheet in section 4 of this manual.
- See relevant anti-finger trap door "Brush Seal Carrier End Prep" sheet in section 4 of this manual.
- See relevant "044 Anti-Fingertrap Door Prep Details" sheet in section 6 of this manual.
- See relevant "052 Anti-Fingertrap Door Prep Details" sheet in section 6 of this manual.
- See relevant "053 Anti-Fingertrap Door Prep Details" sheet in section 6 of this manual.
- See "PCD85 End Cap Application" sheet in section 6 of this manual.



Not to Scale

# Anti-Fingertrap Assembly

## Semi-Rebated Threshold Sash

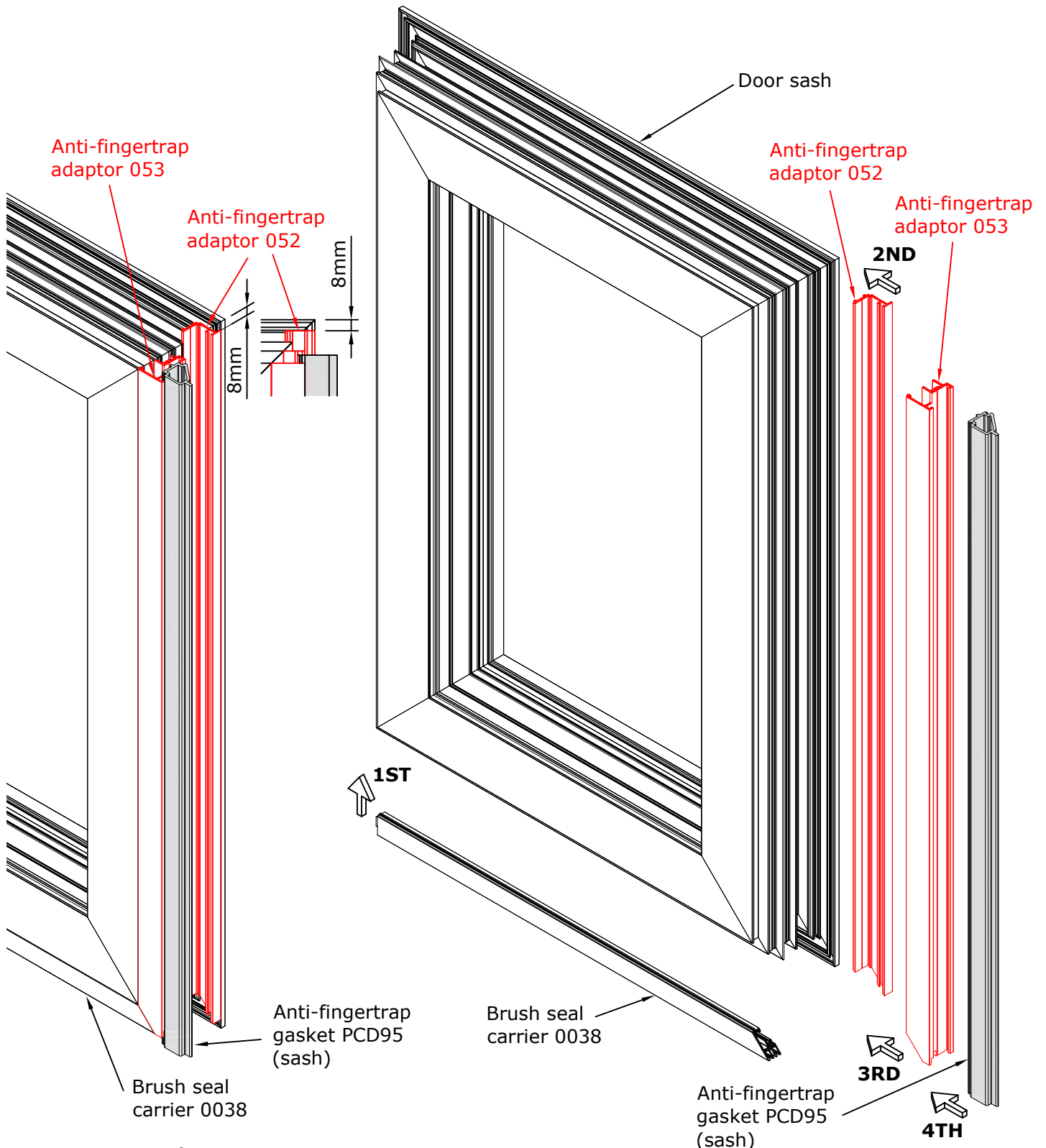


## System 5-20D/Hi+

DOOR SYSTEM

This sheet must be read in conjunction with the following sheets:

- See relevant anti-finger trap door "Fabrication and Cutting Sizes" sheet in section 4 of this manual.
- See relevant anti-finger trap door "Brush Seal Carrier End Prep" sheet in section 4 of this manual.
- See relevant "044 Anti-Fingertrap Door Prep Details" sheet in section 6 of this manual.
- See relevant "052 Anti-Fingertrap Door Prep Details" sheet in section 6 of this manual.
- See relevant "053 Anti-Fingertrap Door Prep Details" sheet in section 6 of this manual.
- See "PCD85 End Cap Application" sheet in section 6 of this manual.



Not to Scale

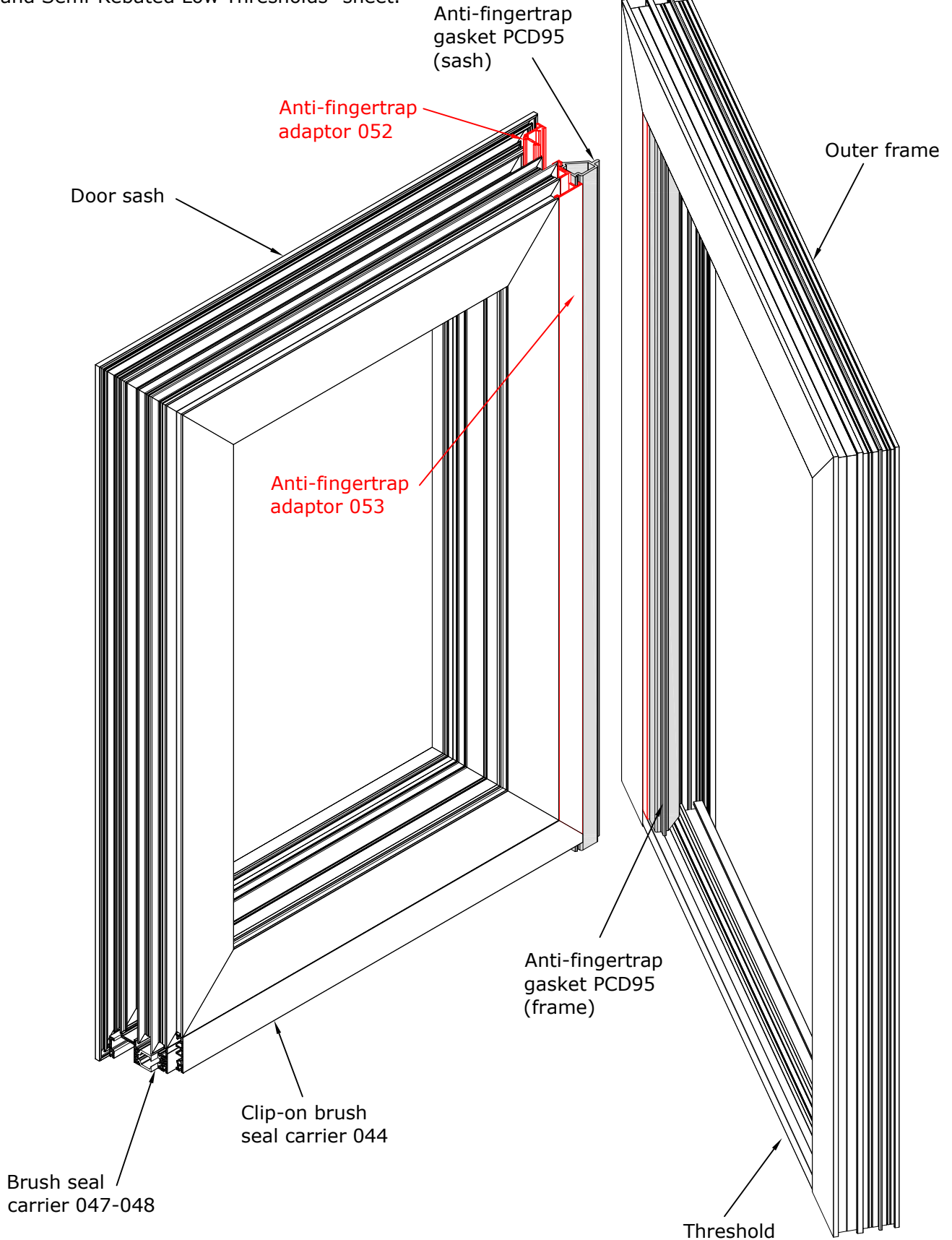
# Anti-Fingertrap Assembly



## System 5-20D/Hi+

DOOR SYSTEM

This sheet must be read in conjunction with "7097 Anti-Fingertrap Hinge Fitting Details - For Open-In and Open-Out Doors with Flush and Semi-Rebated Low Thresholds" sheet.



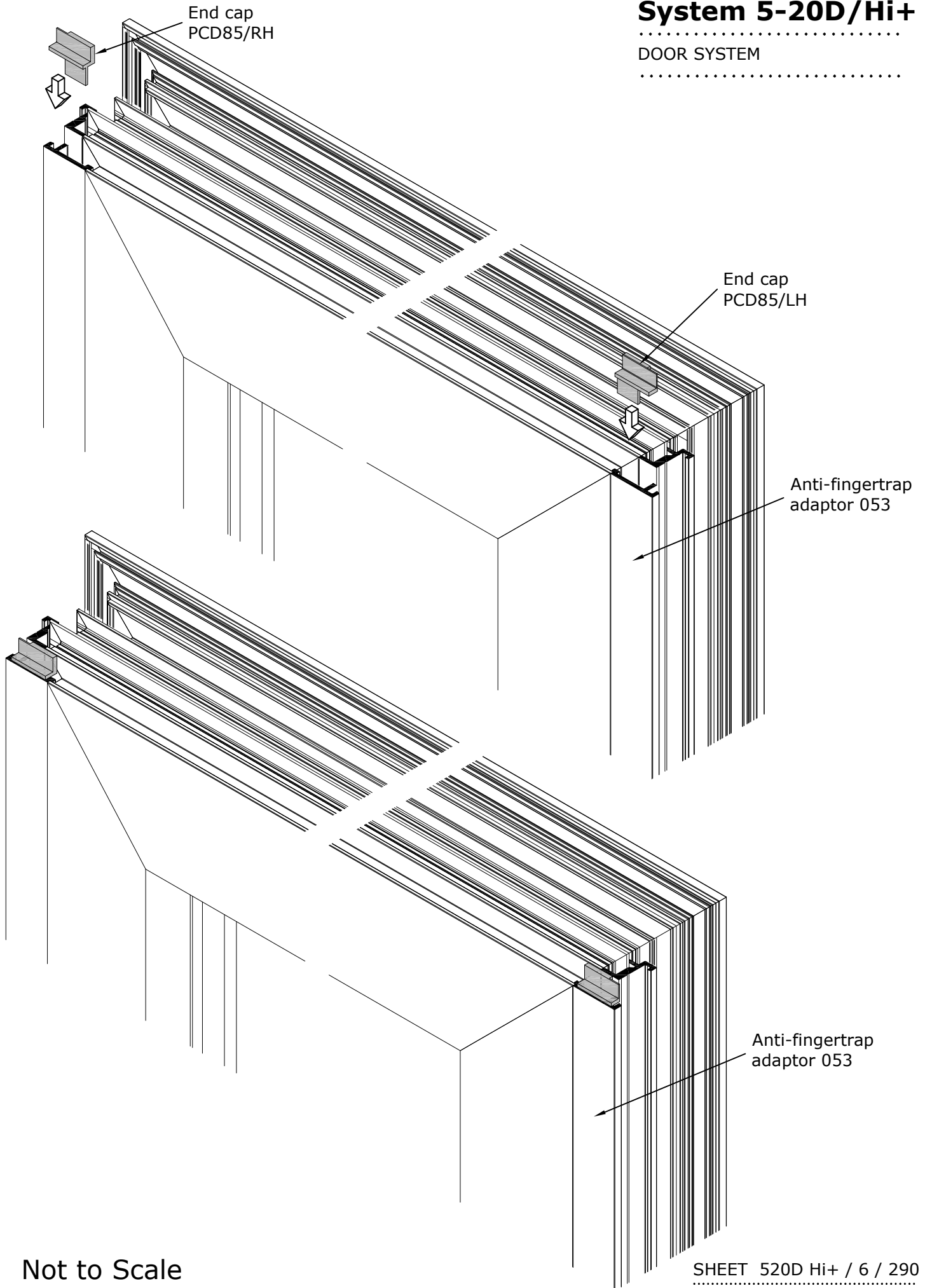
Not to Scale

# PCD85 End Cap Application



**System 5-20D/Hi+**

DOOR SYSTEM



Not to Scale

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SHEET 520D Hi+ / 6 / 290

rev 0

18/11/13

# Drip Rails

## Preparation Details for Rebated Head and Cill

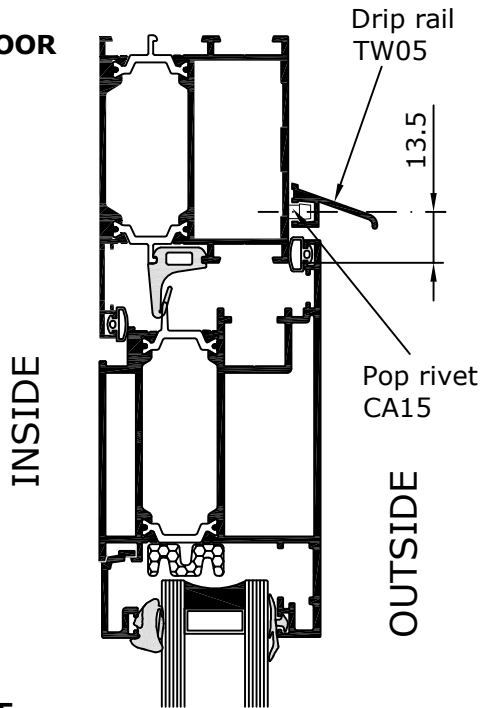


## System 5-20D/Hi+

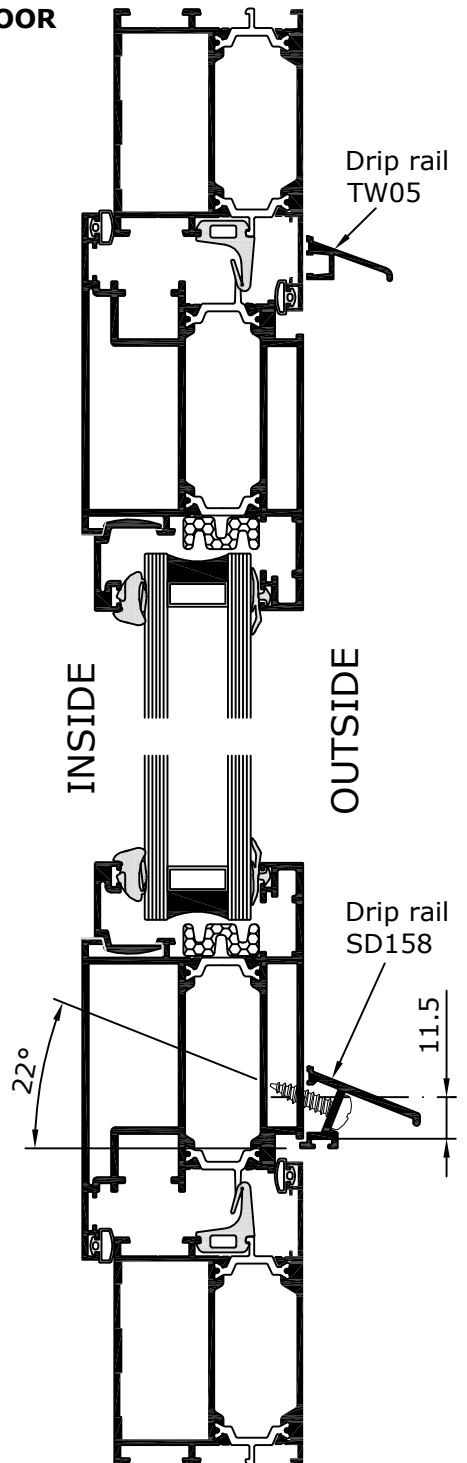
DOOR SYSTEM

All fixings must be sealed using HR50328A sealant.

### OPEN-OUT DOOR



### OPEN-IN DOOR



### Drip rail TW05

The drip rail should be used in all door conditions. A length of drip rail TW05 should be secured to the frame directly above the door as shown.

A series of 3mm pilot holes should be drilled, commencing 75mm in from each end and at the required intervals to accept the CA15 drip rail rivets (not exceeding 250mm centres).

When the rivets are in place a bead of silicone should then be applied to the silicone groove extruded in the drip rail. The drip rail is then simply push-fitted over the rivets.

For length of the drip rail above the door sash see "Fabrication and Cutting Sizes" in section 4 of this manual.

### Drip rail SD158

The drip rail should be used in all open-in door cill conditions. A length of drip rail SD158 should be secured to the sash cill of the open-in door as shown.

A series of pilot holes should be drilled in the drip rail and door, commencing 75mm in from each end and at the required intervals (not exceeding 250mm centres) to accept No 10 x 19mm pan head self tapping screws 7225.

A bead of silicone should be applied to the silicone groove extruded in the drip rail.

The drip rail should then be screwed to the door sash.

For length of the drip rail at sash cill see "Fabrication and Cutting Sizes" in section 4 of this manual.

### OPEN-IN DOOR (Rebated threshold)

Drip rail is not required at cill of open-out doors with rebated threshold.

Scale 1:2

# Drip Rails

## Preparation Details for Doors with Flush and Semi-Rebated Low Thresholds



**System 5-20D/Hi+**

DOOR SYSTEM

### Drip rail SD158

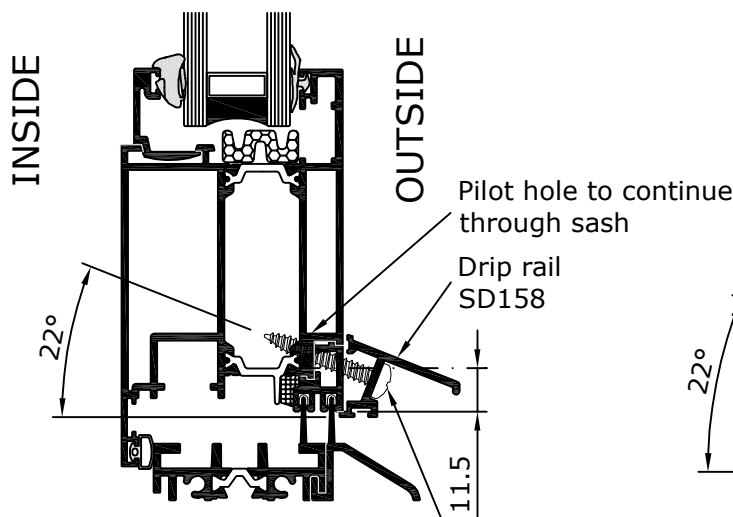
The drip rail should be used in all open-in and open-out low threshold door cill conditions. A length of drip rail SD158 should be secured to the sash cill/brush seal carrier of the door as shown.

A series of pilot holes should be drilled in the drip rail and door, commencing 75mm in from each end and at the required intervals (not exceeding 250mm centres) to accept No 10 x 19mm 7225 and No 10 x 32mm 7257 pan head self tapping screws.

A bead of silicone should be applied to the silicone groove extruded in the drip rail.

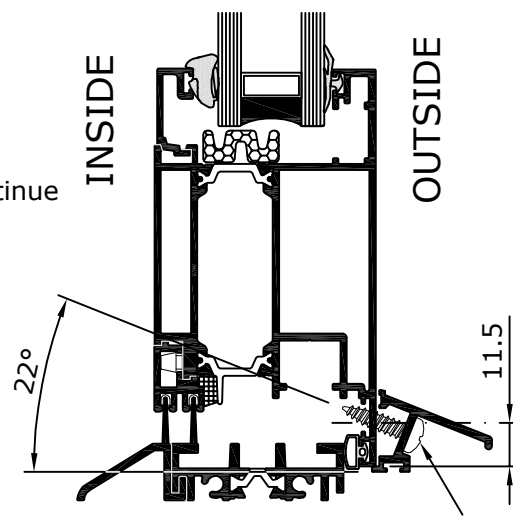
The drip rail should then be screwed to the door sash.

For length of the drip rail at sash cill see "Fabrication and Cutting Sizes" in section 4 of this manual.



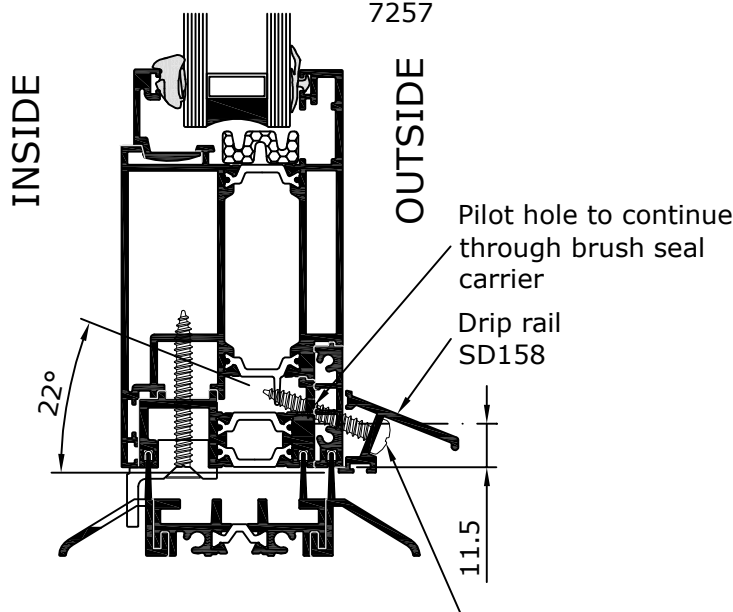
OPEN IN DOOR  
(Semi-rebated  
low threshold)

No 10 x 32mm pan  
head stainless steel  
self tapping screws  
7257



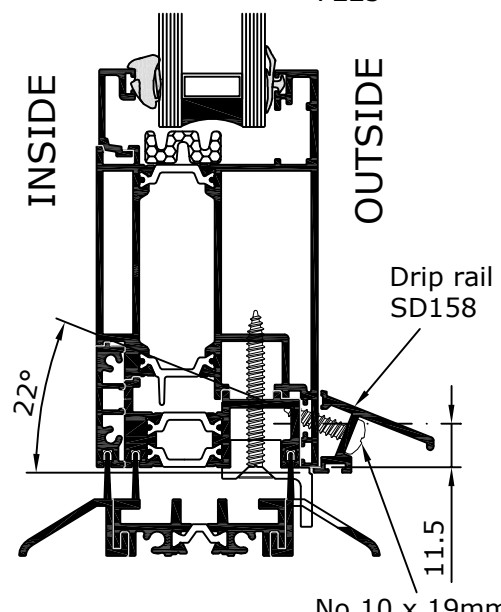
OPEN OUT DOOR  
(Semi-rebated  
low threshold)

No 10 x 19mm pan  
head stainless steel  
self tapping screws  
7225



OPEN IN DOOR  
(Flush low threshold)

No 10 x 32mm pan  
head stainless steel  
self tapping screws  
7257



OPEN OUT DOOR  
(Flush low threshold)

No 10 x 19mm pan  
head stainless steel  
self tapping screws  
7225

Scale 1:2

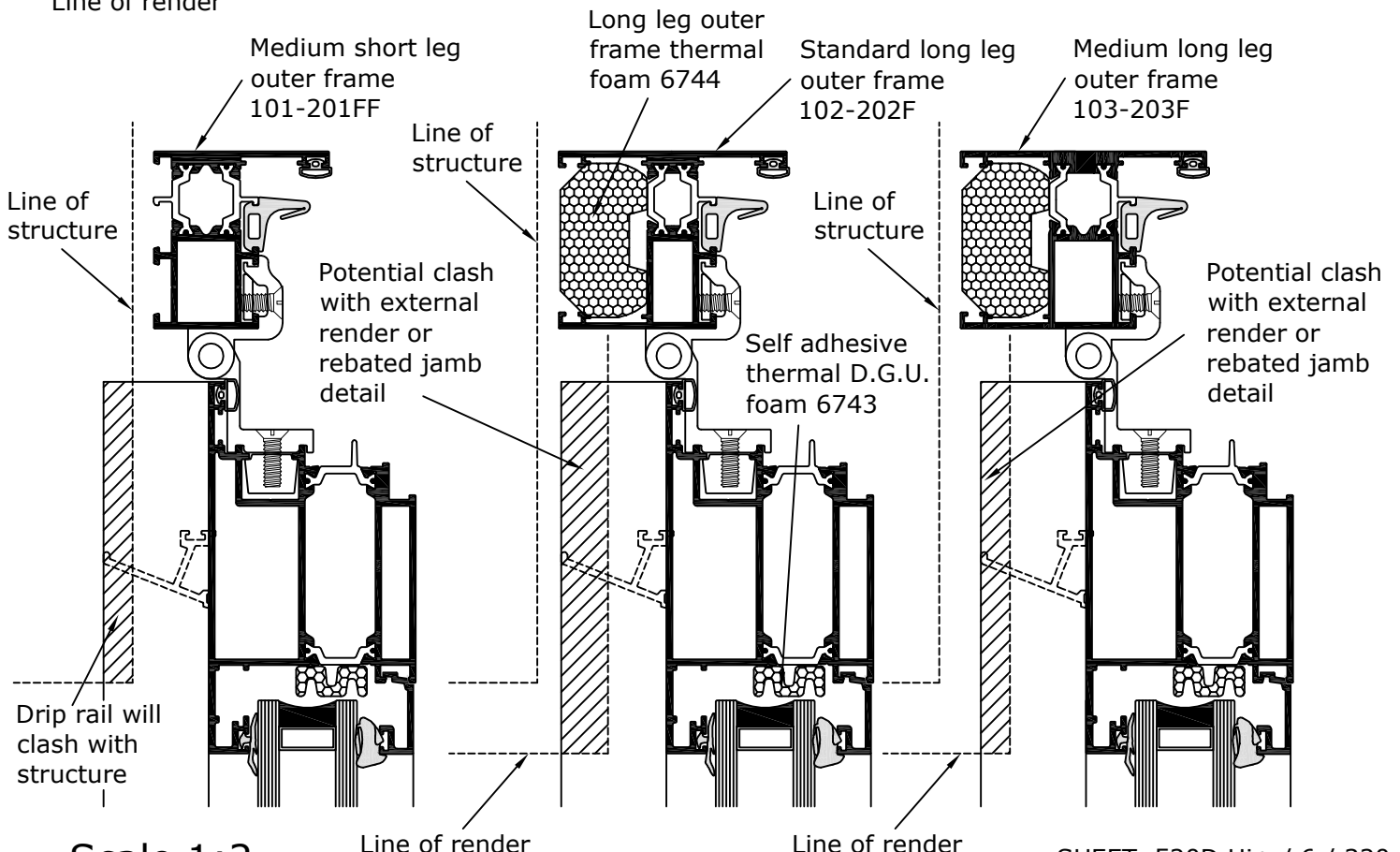
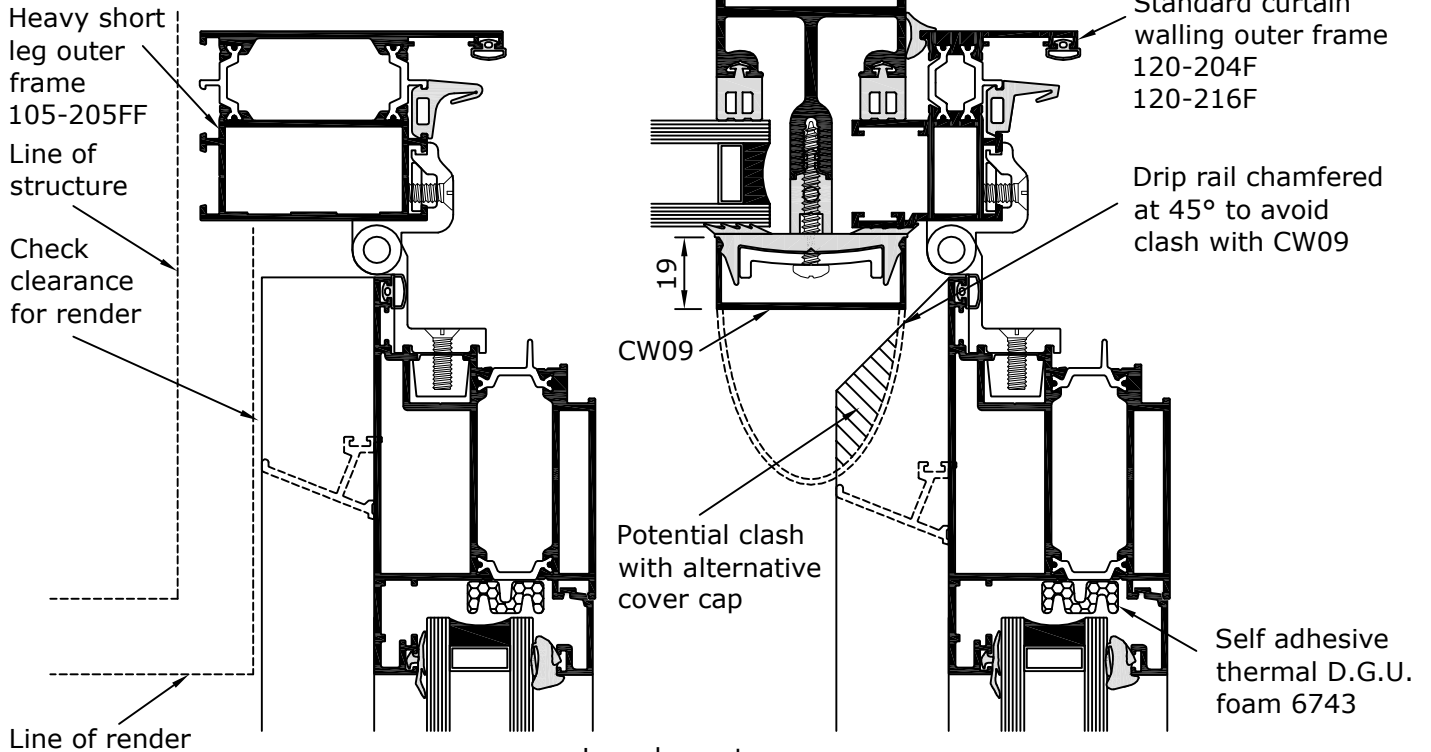
# Drip Rail Applications using 7017m<sup>®</sup>

## Hinge - Outer Frames

### System 5-20D/Hi+

.....  
DOOR SYSTEM  
.....

Metal Technology recommends that consideration be given to the selection of appropriate outer frames to suit site conditions. This is particularly important for open out applications, where drip rails may clash with perimeter structure as indicated below. Subject to site conditions doors should be restricted to a 90° opening and an overhead surface mounted closer with backcheck facility should be fitted to the heavy outer frames. Where doors are incorporated in screens with sidelights and are required to open beyond 90° the drip rail may need to be chamfered to suit. To ensure selection of the correct profiles and prepping, doors should be set out in the open position, giving consideration to external and internal finishes / render / curtain wall profiles / coupling, etc.



Scale 1:2

Line of render

Line of render

SHEET 520D Hi+ / 6 / 320

rev 0

18/11/13



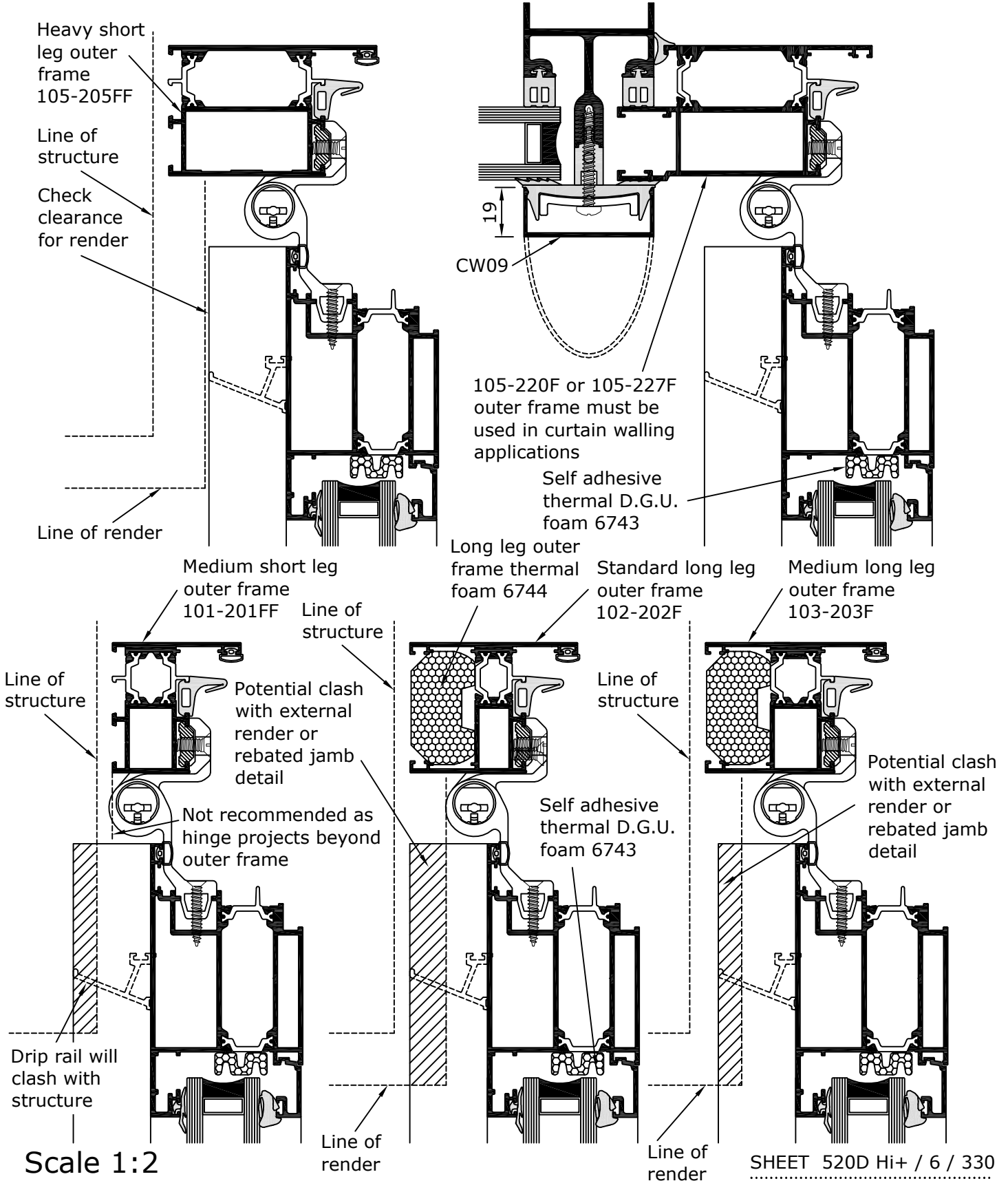
# Drip Rail Applications using 7099<sup>®</sup>

## Hinge

Metal Technology recommends that consideration be given to the selection of appropriate outer frames to suit site conditions. This is particularly important for open out applications, where drip rails and hinges may clash with perimeter structure as indicated below. Subject to site conditions doors should be restricted to a 90° opening and an overhead surface mounted closer with backcheck facility should be fitted to the heavy outer frames. Where doors are incorporated in screens with sidelights and are required to open beyond 90° the drip rail may need to be chamfered to suit. To ensure selection of the correct profiles and prepping, doors should be set out in the open position, giving consideration to external and internal finishes / render / curtain wall profiles / coupling, etc.

## System 5-20D/Hi+

DOOR SYSTEM



# Liner Bar Fixings

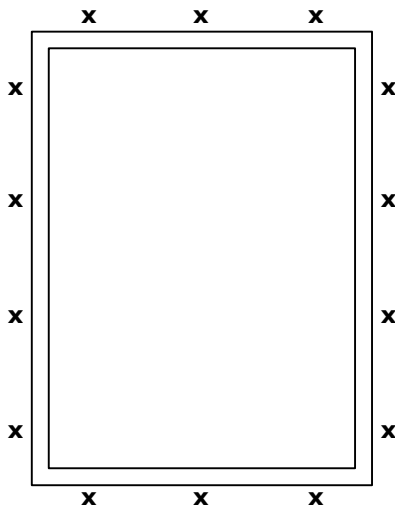


## System 5-20D/Hi+

DOOR SYSTEM

All fixings must be sealed using HR50328A sealant.

Metal Technology do NOT recommend that System 5-20D/Hi+ door sashes be hung off liner bars.



Positions of fixings  
75mm from corners  
and maximum  
250mm centres

### Maximum glass weights:

Fixed light inserts = 50Kg

Window inserts = 50Kg

For drainage details  
refer to section 5 of  
this manual

Glazing supports  
to be positioned to  
avoid screw heads

Silicone seal

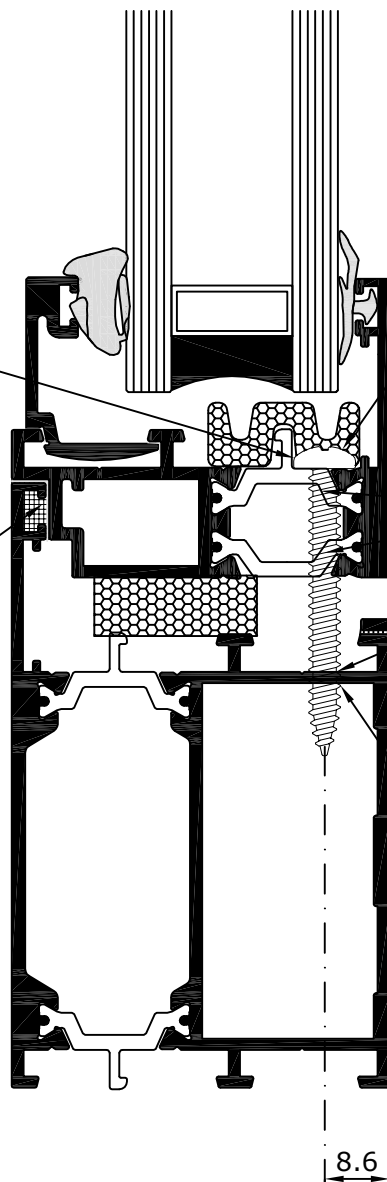
No 8 x 38mm pan head stainless  
steel self tapping screw 7235 (do  
not overtighten). All screws to be  
sealed with HR50328A sealant.  
Screw may be secured in place  
after application of foam.

Access holes Ø4mm

HR50328A sealant to be  
applied to end of screw  
before insertion

Silicone seal

Pilot hole Ø3.8mm



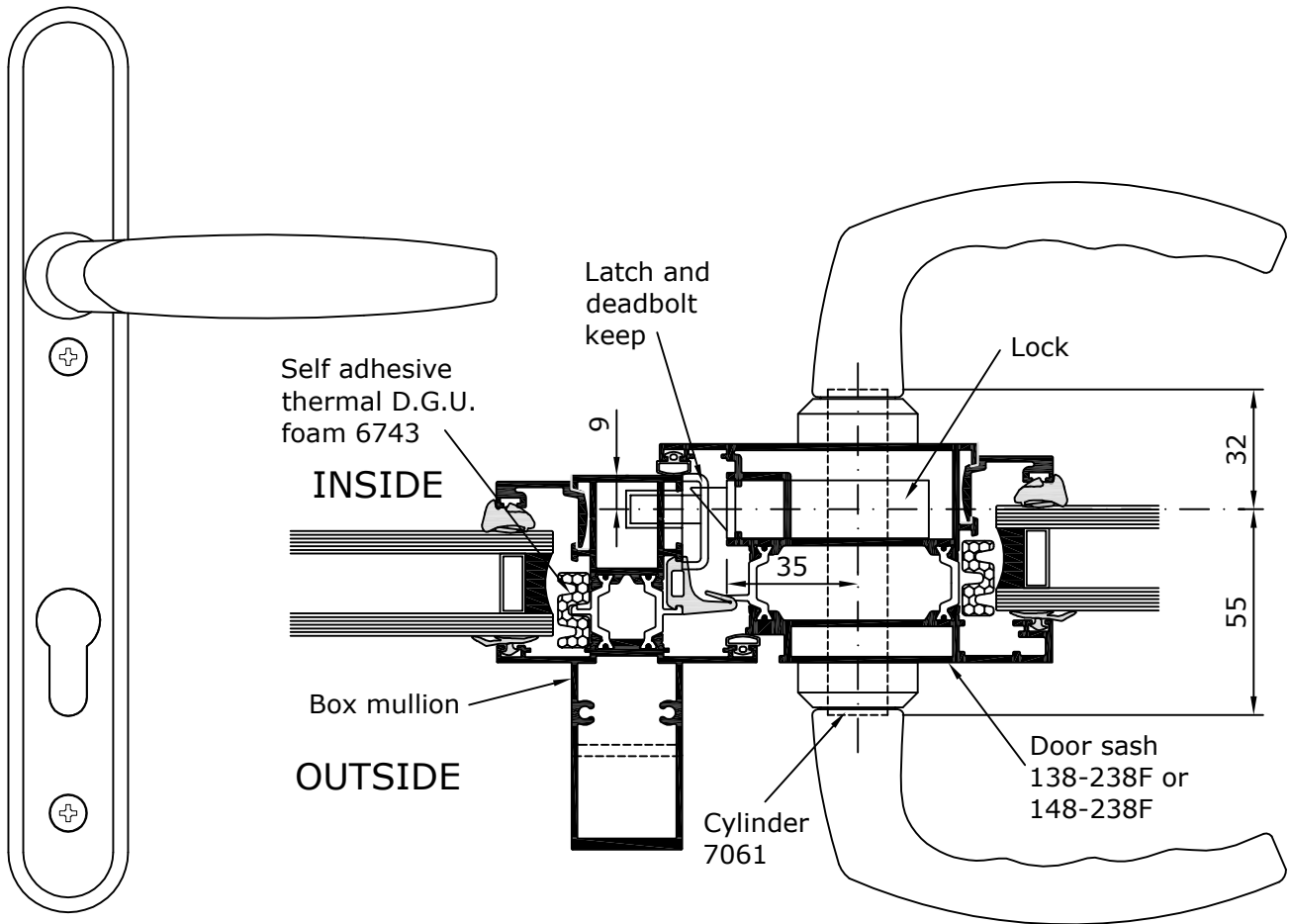
Scale 1:1

# Handle and Lock Details for Single and Double Open-In Doors

**System 5-20D/Hi+**

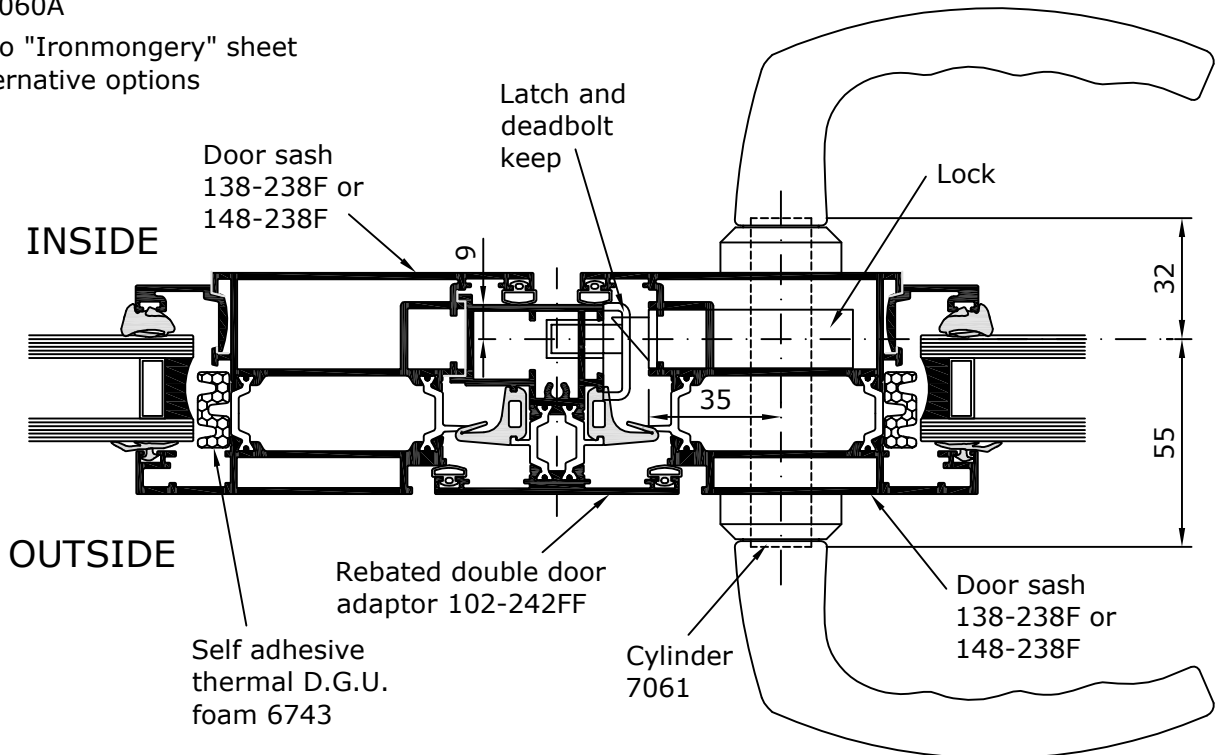
DOOR SYSTEM

All fixings must be sealed using HR50328A sealant.



Lever handle set - 7060A

Refer to "Ironmongery" sheet for alternative options



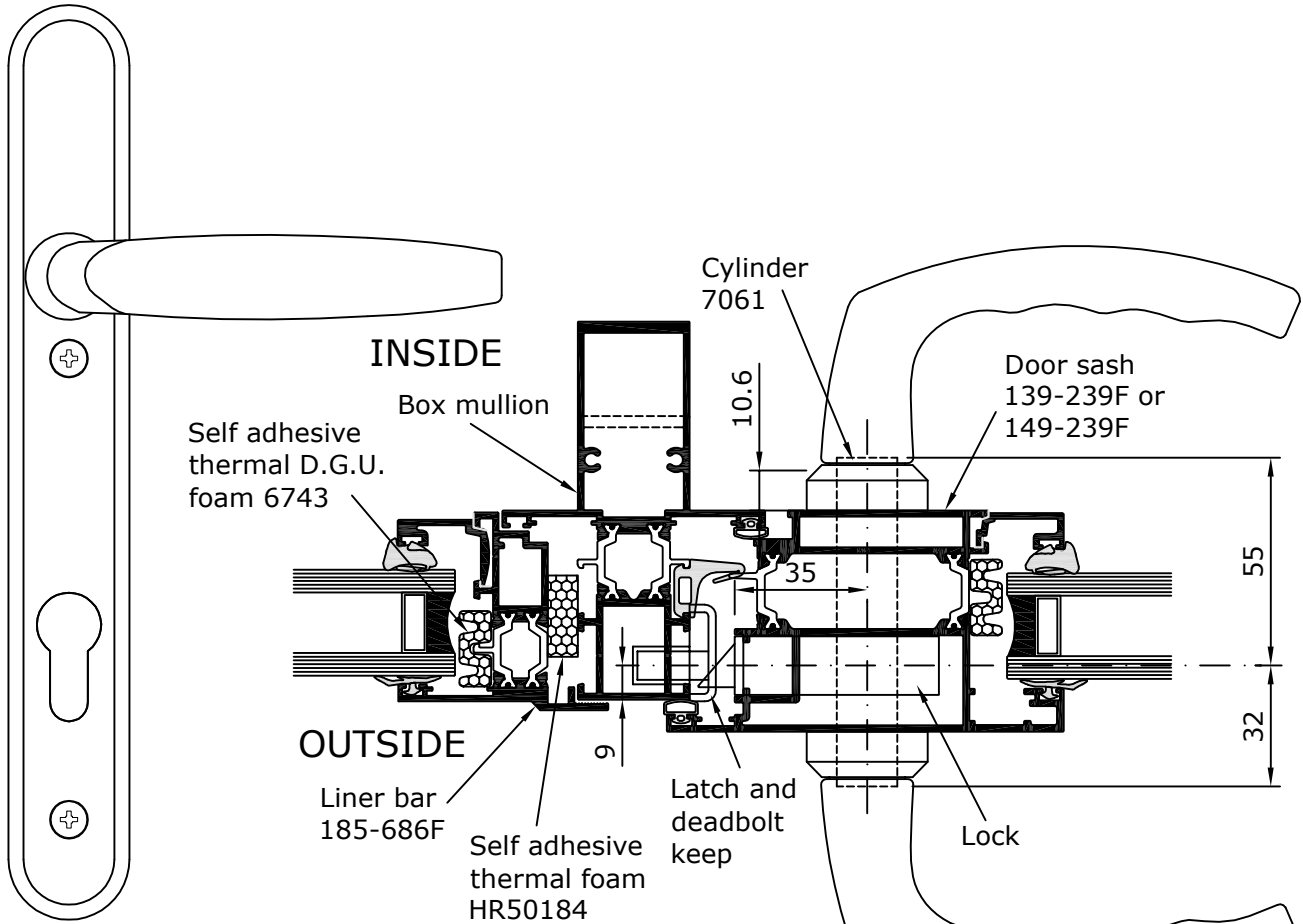
Scale 1:2

# Handle and Lock Details for Single and Double Open-Out Doors

**System 5-20D/Hi+**

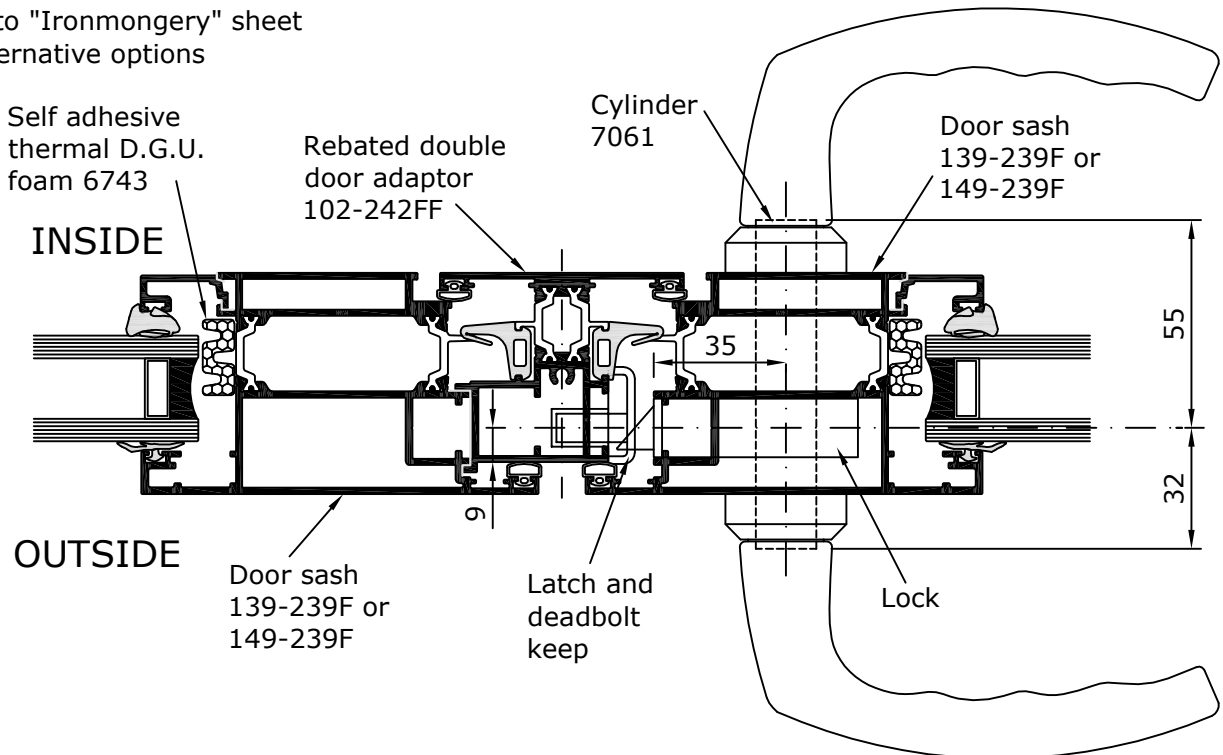
DOOR SYSTEM

All fixings must be sealed using HR50328A sealant.



Lever handle set - 7060A

Refer to "Ironmongery" sheet for alternative options



Scale 1:2

# Prep for Multi-Point Dead Lock 7065 and Handles



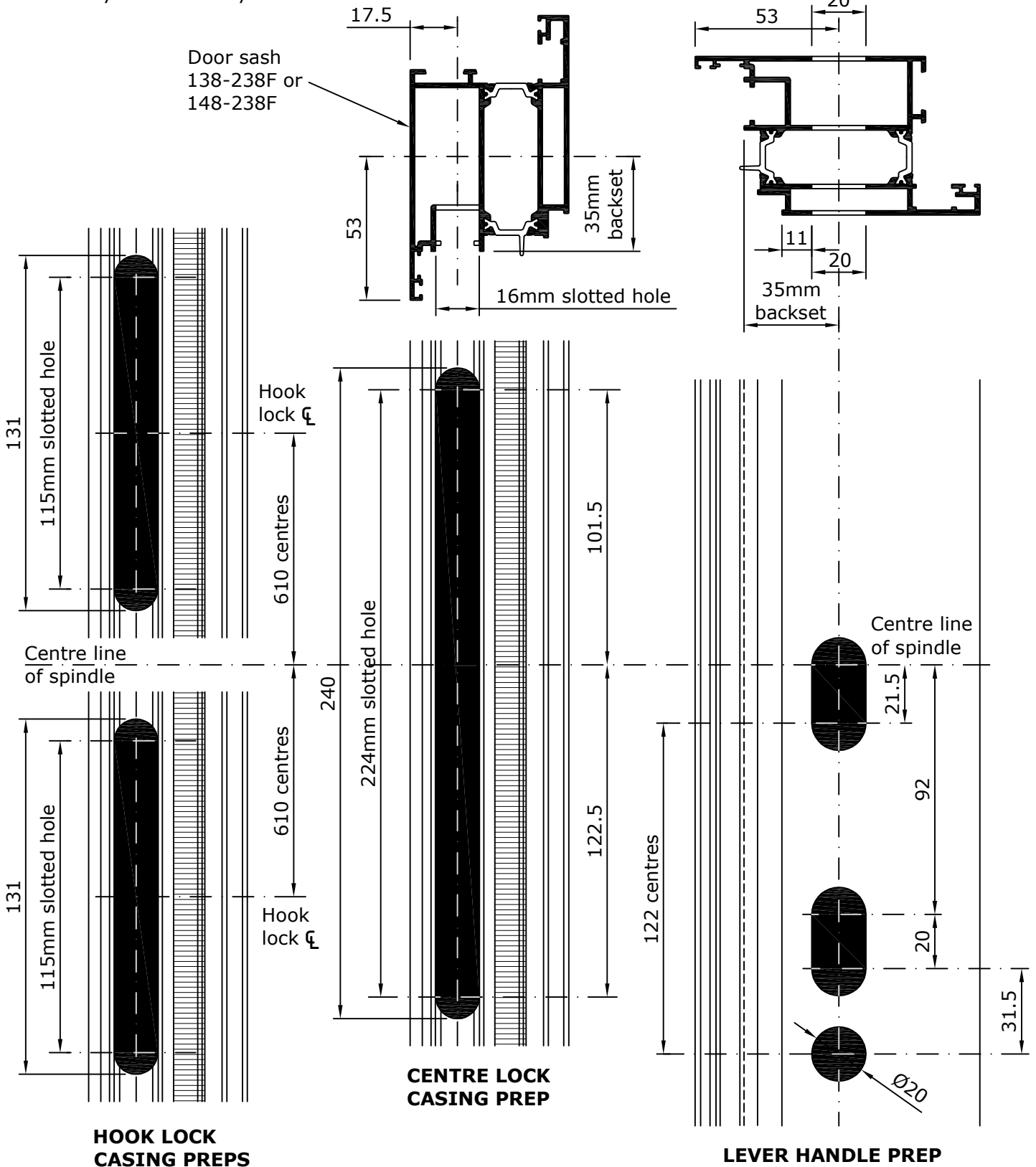
**System 5-20D/Hi+**

DOOR SYSTEM

Open-In Door Sash 138-238F or 148-238F

Locks to be secured with 13 x No 7 x 25mm self-drilling countersunk screws 7223 located into pre-punched fixing holes in lock face.

This prep detail is suitable for any combination of lever handle, paddle handle and base plate fixed externally and internally.



Scale 1:2

# Prep for Multi-Point Dead Lock 7065 and Handles



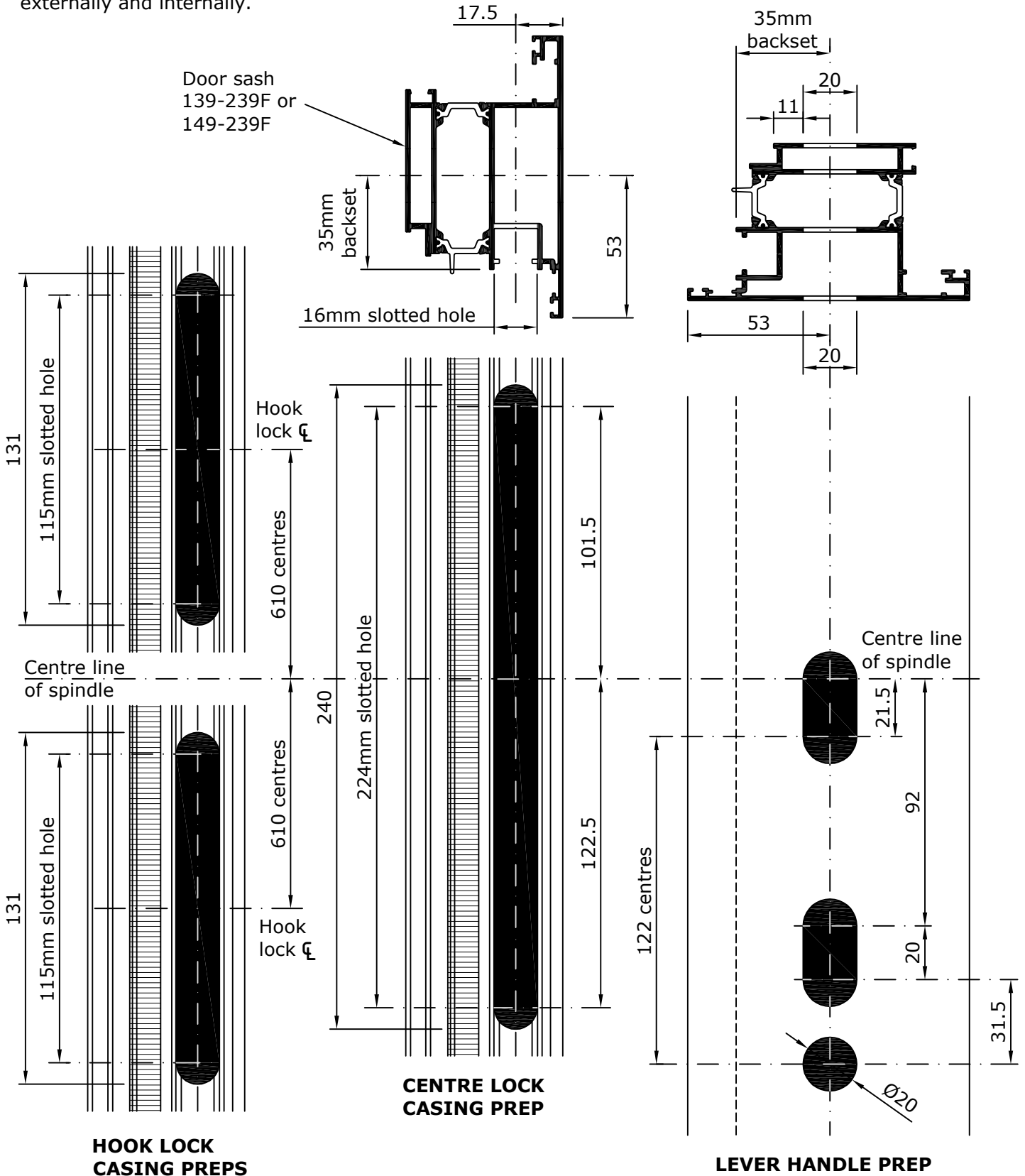
**System 5-20D/Hi+**

DOOR SYSTEM

Open-Out Door Sash 139-239F or 149-239F

Locks to be secured with 13 x No 7 x 25mm self-drilling countersunk screws 7223 located into pre-punched fixing holes in lock face.

This prep detail is suitable for any combination of lever handle, paddle handle and base plate fixed externally and internally.



Scale 1:2

# Prep for 3-Point Dead Lock with Rollerball 7165

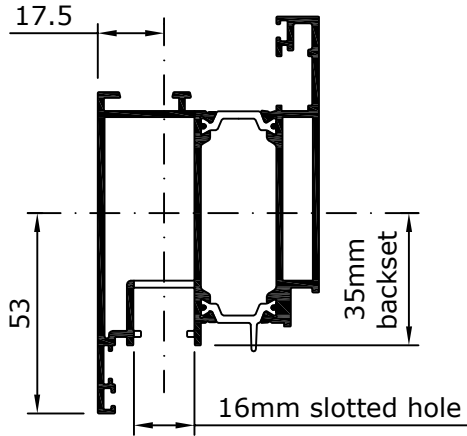


**System 5-20D/Hi+**

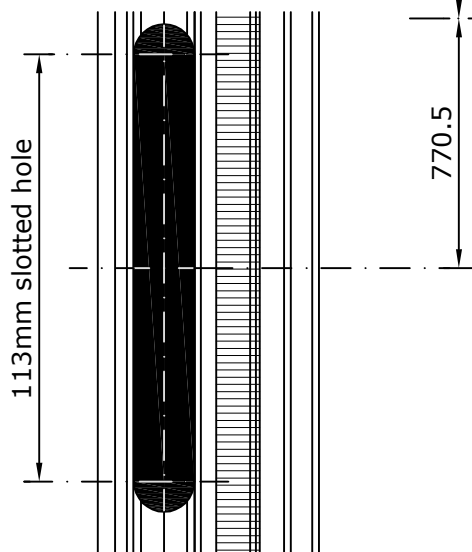
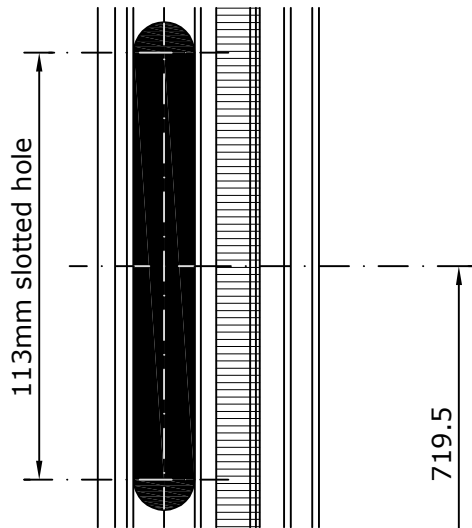
DOOR SYSTEM

Open-In Door Sash 138-238F or 148-238F

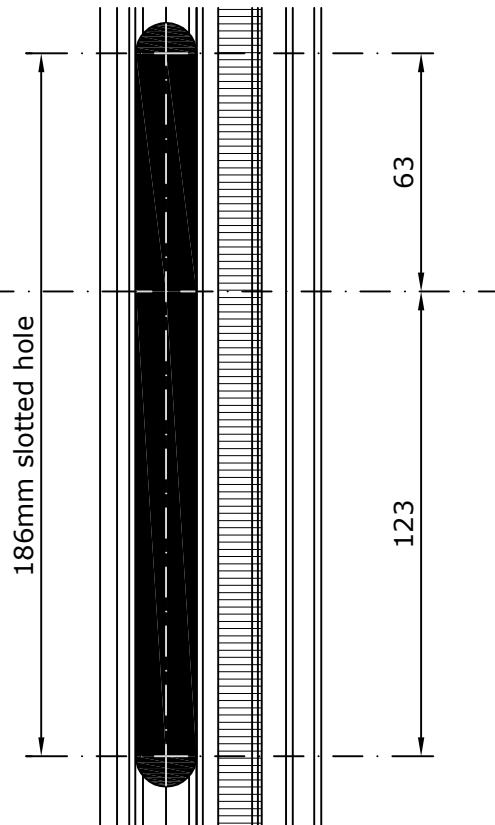
Locks to be secured with 13 x No 7 x 25mm self-drilling countersunk screws 7223 located into pre-punched fixing holes in lock face.



See also sheet "3-Point Dead Lock with Rollerball - Prep for 7160 Escutcheon and Cylinder".



**HOOK LOCK CASING PREPS**



**CENTRE LOCK CASING PREP**

Scale 1:2

# 3-Point Dead Lock with Rollerball - Prep for 7160 Escutcheon and Cylinder

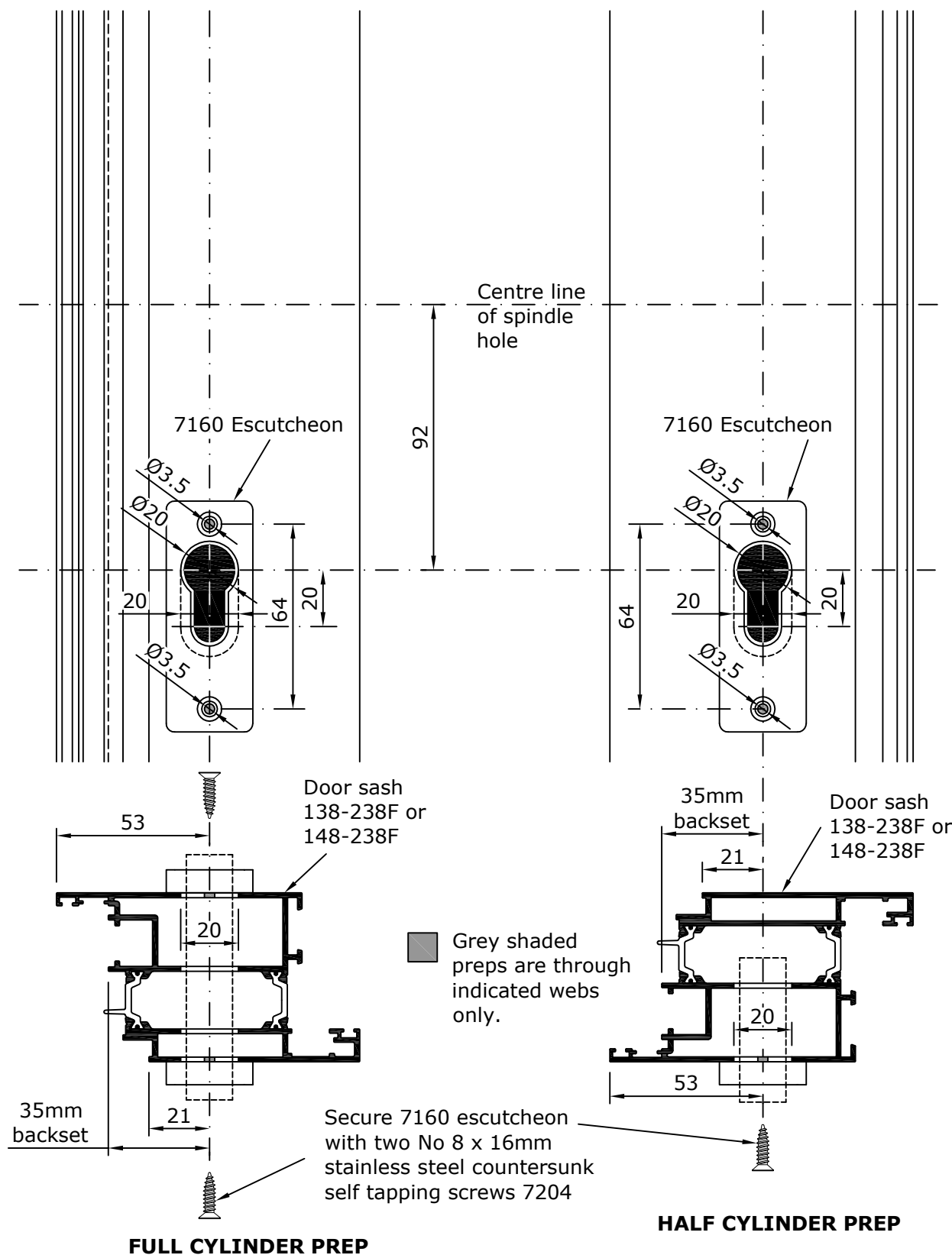
Open-In Door Sash 138-238F or 148-238F



**System 5-20D/Hi+**

DOOR SYSTEM

This prep detail should be used with 3-point deadlock with rollerball 7165.



Scale 1:2



# Prep for 3-Point Dead Lock with Rollerball 7165

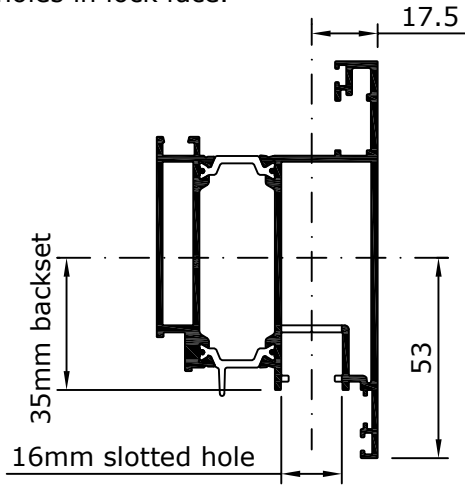


**System 5-20D/Hi+**

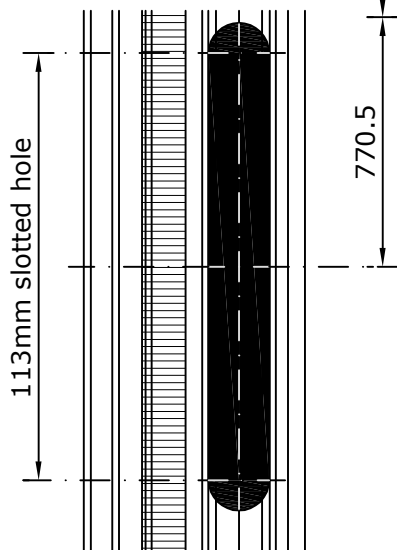
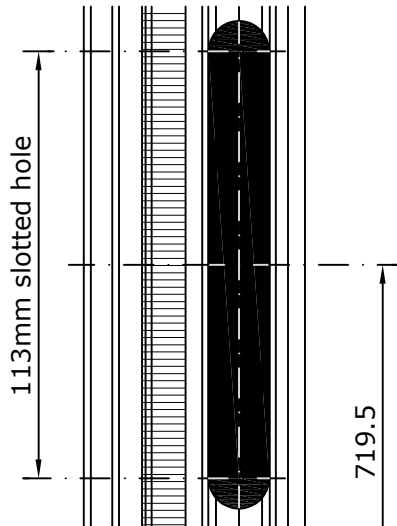
DOOR SYSTEM

Open-Out Door Sash 139-239F or 149-239F

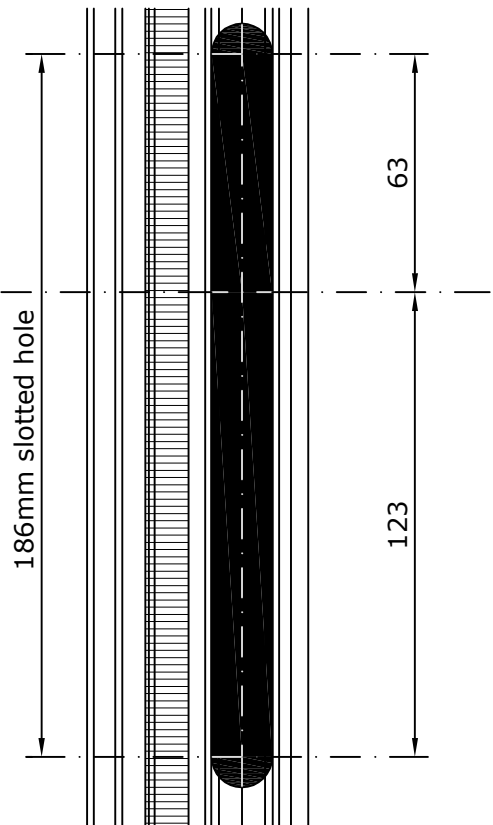
Locks to be secured with 13 x No 7 x 25mm self-drilling countersunk screws 7223 located into pre-punched fixing holes in lock face.



See also sheet "3-Point Dead Lock with Rollerball - Prep for 7160 Escutcheon and Cylinder".



**HOOK LOCK CASING PREPS**



**CENTRE LOCK CASING PREP**

Scale 1:2

# 3-Point Dead Lock with Rollerball - Prep for 7160 Escutcheon and Cylinder

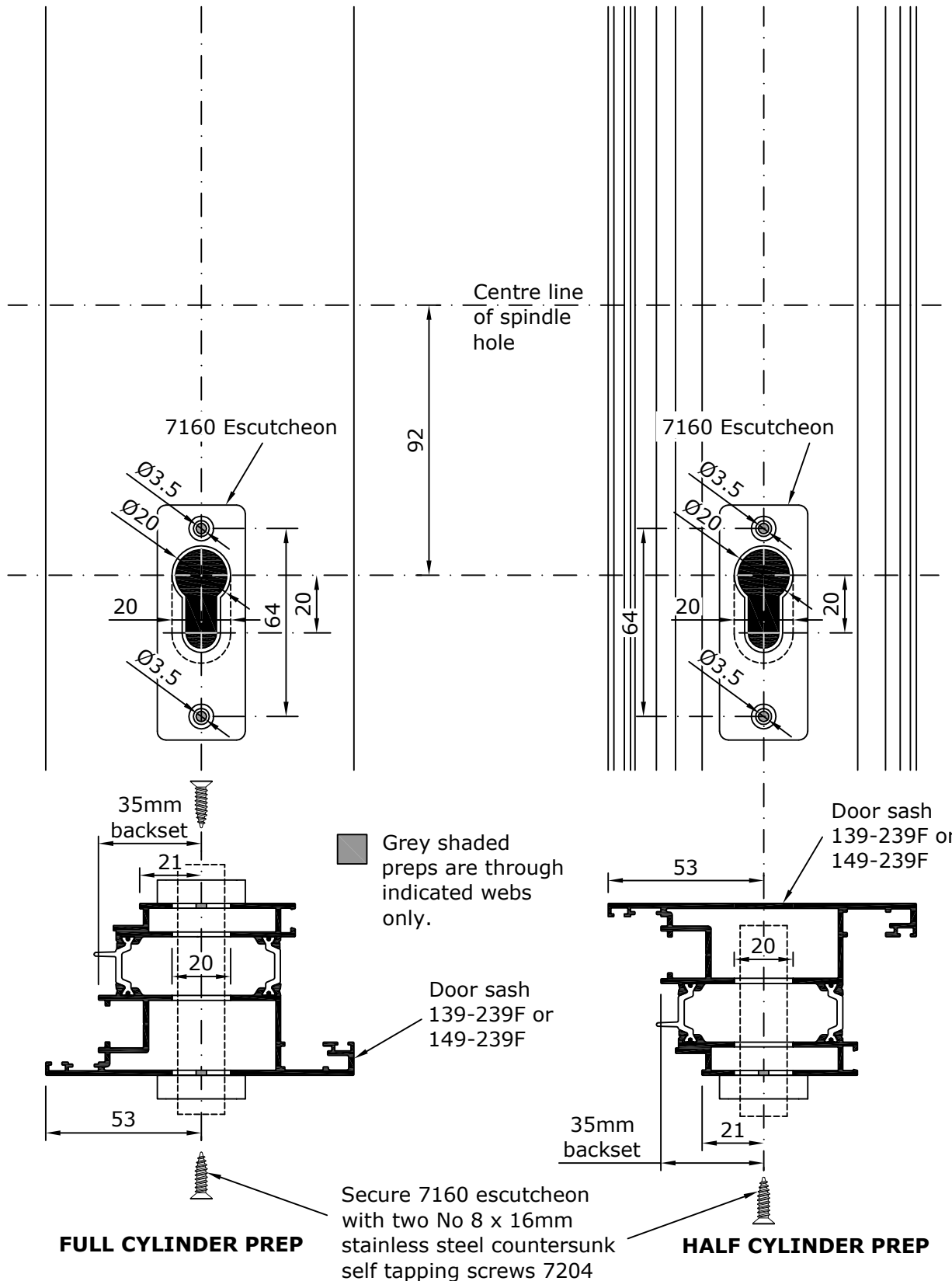
Open-Out Door Sash 139-239F or 149-239F



**System 5-20D/Hi+**

DOOR SYSTEM

This prep detail should be used with 3-point deadlock with rollerball 7165.



Scale 1:2

# Prep for Single Point Dead Lock with Latch 7094 and Handles



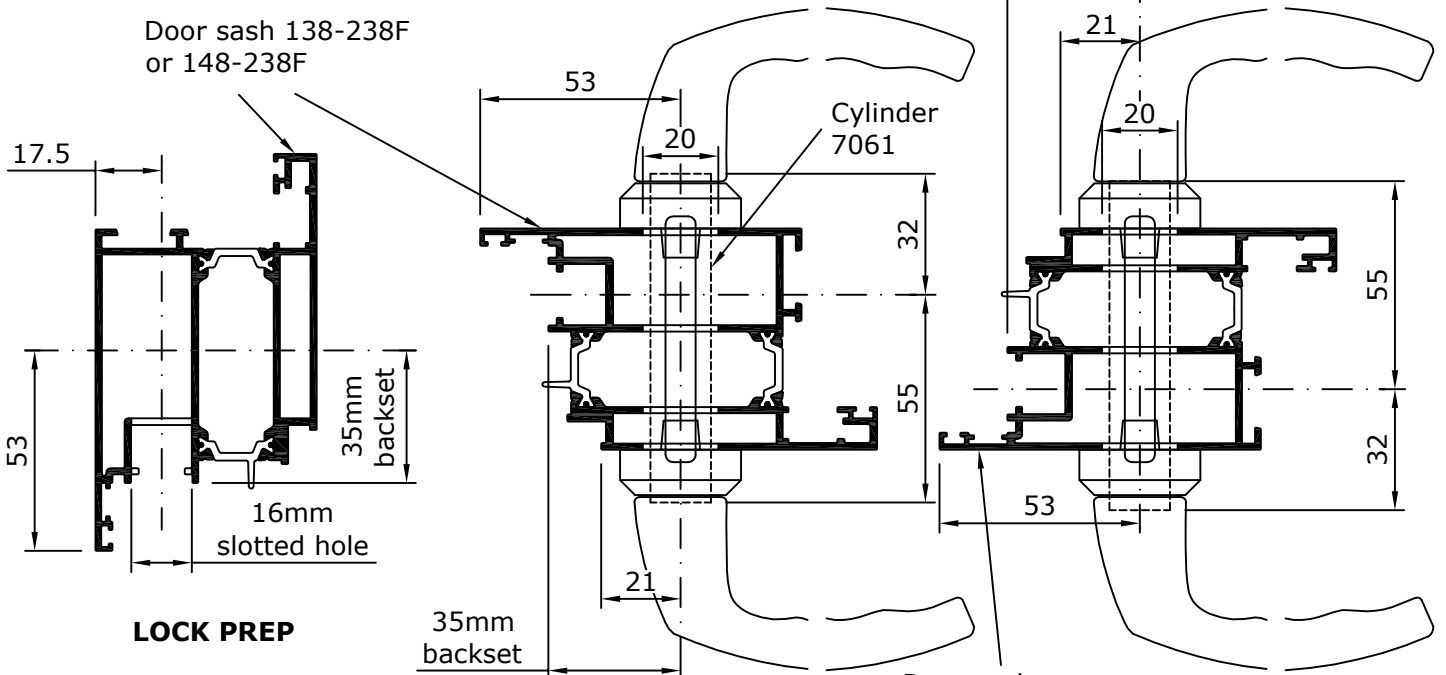
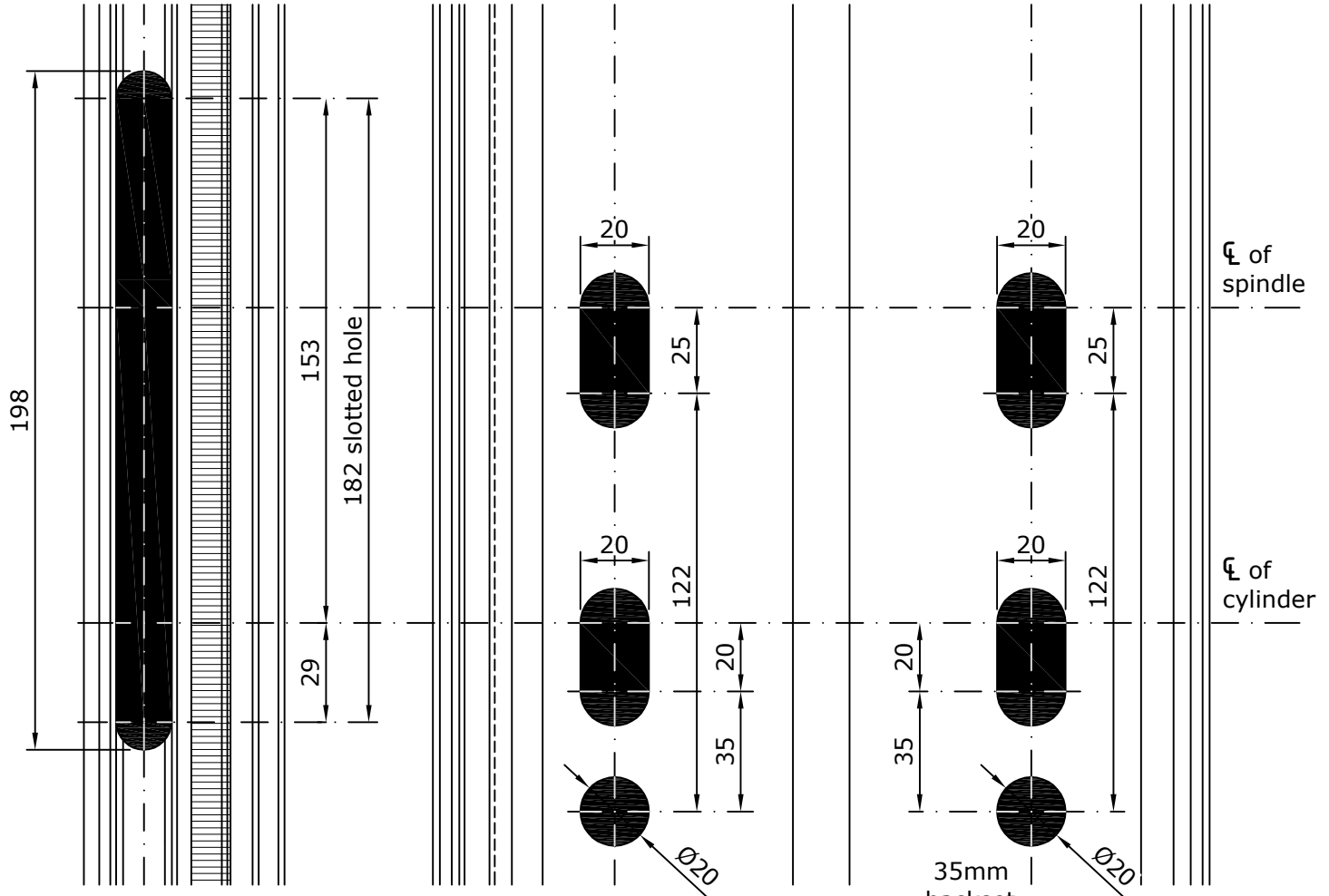
**System 5-20D/Hi+**

DOOR SYSTEM

Open-In Door Sash 138-238F or 148-238F

7094 = dead lock with latch (latch retracts with handle and/or key operation)

Lock to be secured with 2 No 8 x 25mm countersunk self-tapping screws 7254 located into pre-punched fixing holes in lock face.



Scale 1:2

# Prep for Single Point Dead Lock with Latch 7094 and Handles



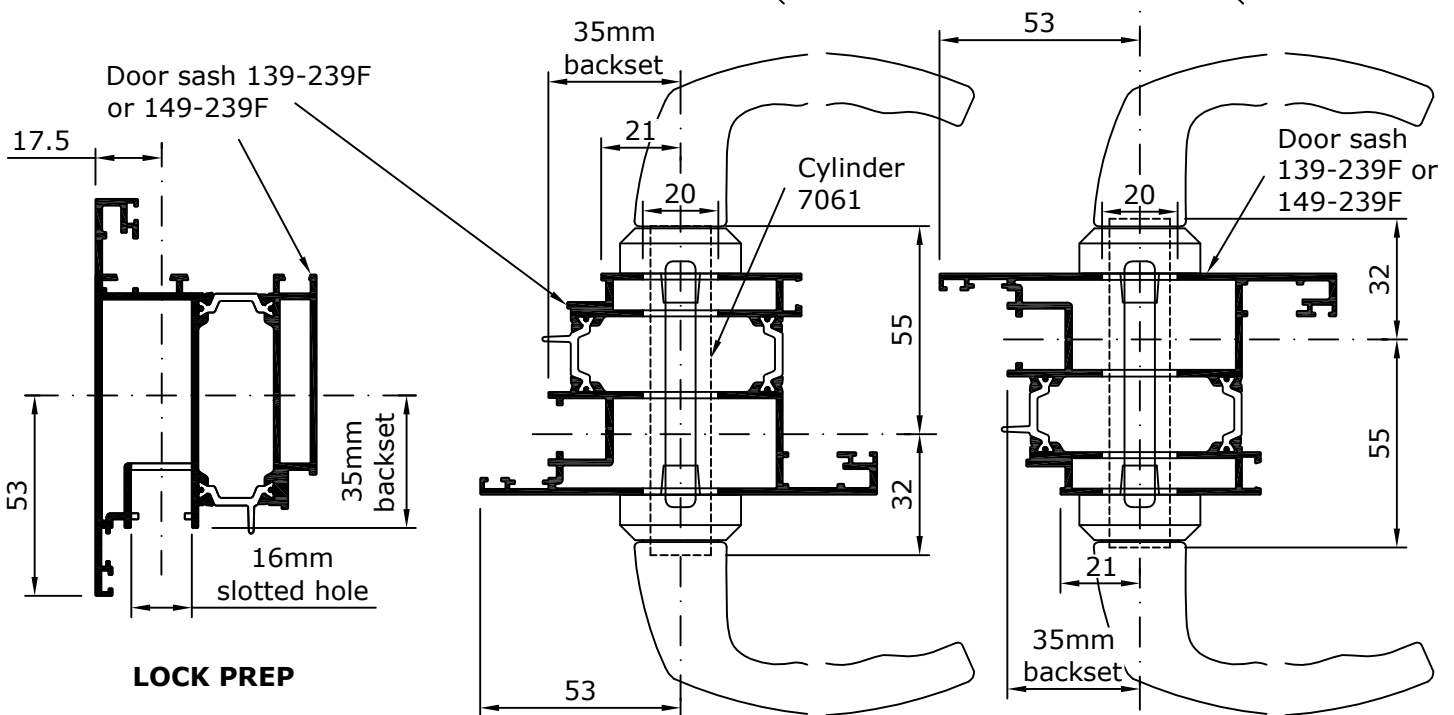
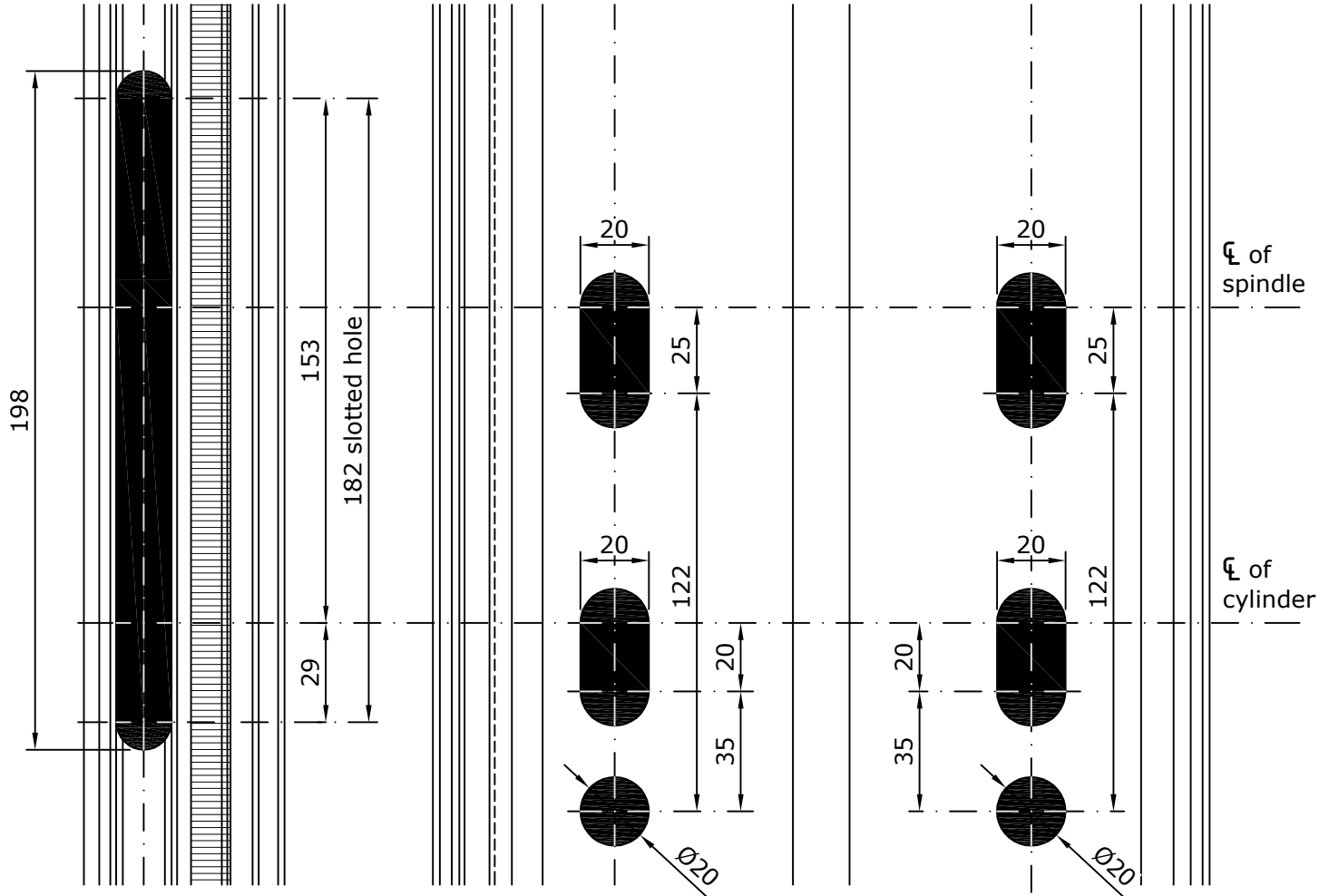
**System 5-20D/Hi+**

DOOR SYSTEM

Open-Out Door Sash 139-239F or 149-239F

7094 = dead lock with latch (latch retracts with handle and/or key operation)

Lock to be secured with 2 No 8 x 25mm countersunk self-tapping screws 7254 located into pre-punched fixing holes in lock face.



**LOCK PREP**

Scale 1:2

# Prep for Single Point Dead Lock with Rollerball 7095 and Escutcheons 7160



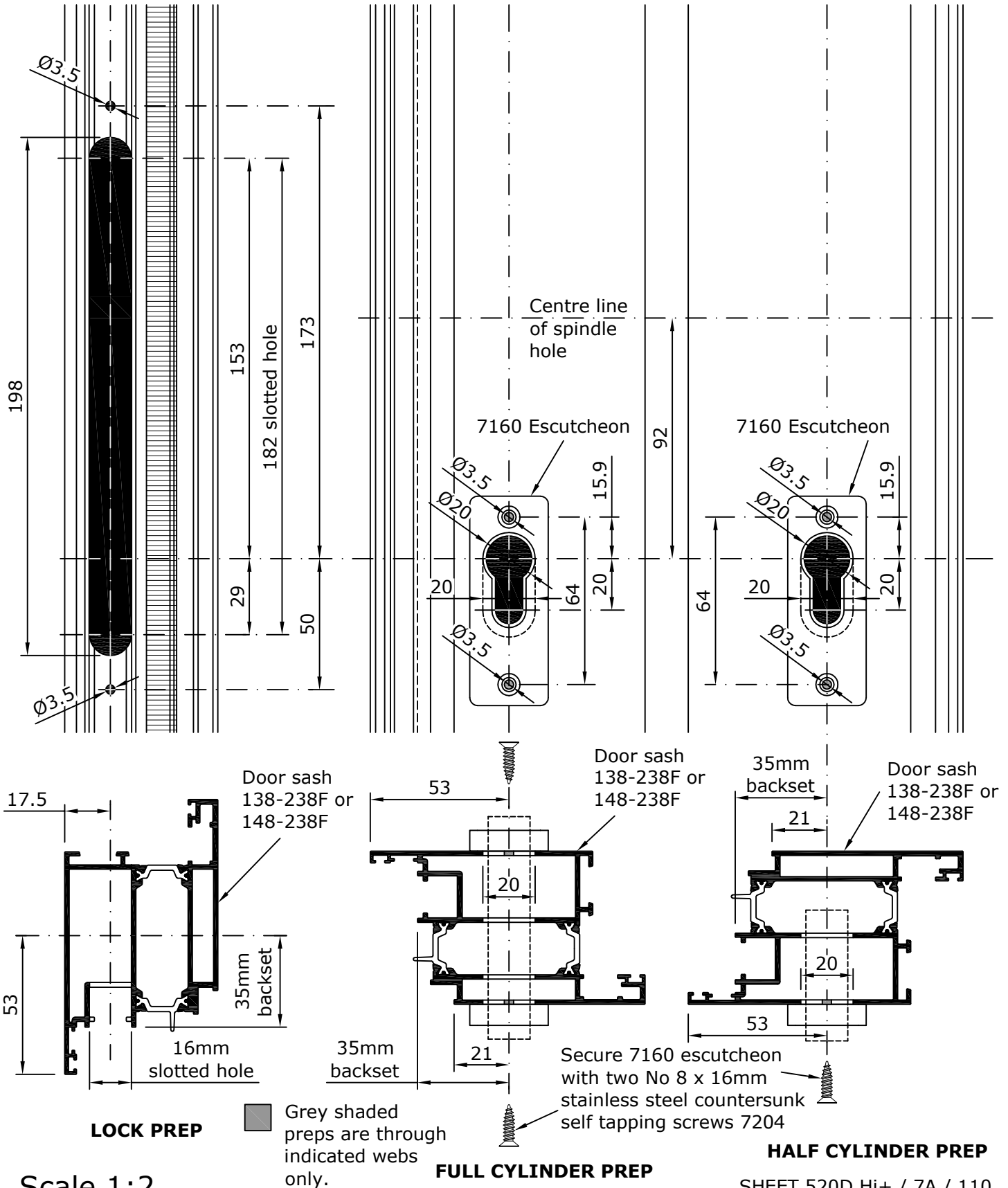
**System 5-20D/Hi+**

DOOR SYSTEM

## Open-In Door Sash 138-238F or 148-238F

7095 = dead lock with rollerball (not suitable for use with lever handle)

Lock to be secured with 2 x No 8 x 25mm countersunk self-tapping screws 7254 located into pre-punched fixing holes in lock face.



Scale 1:2

# Prep for Single Point Dead Lock with Rollerball 7095 and Escutcheons 7160



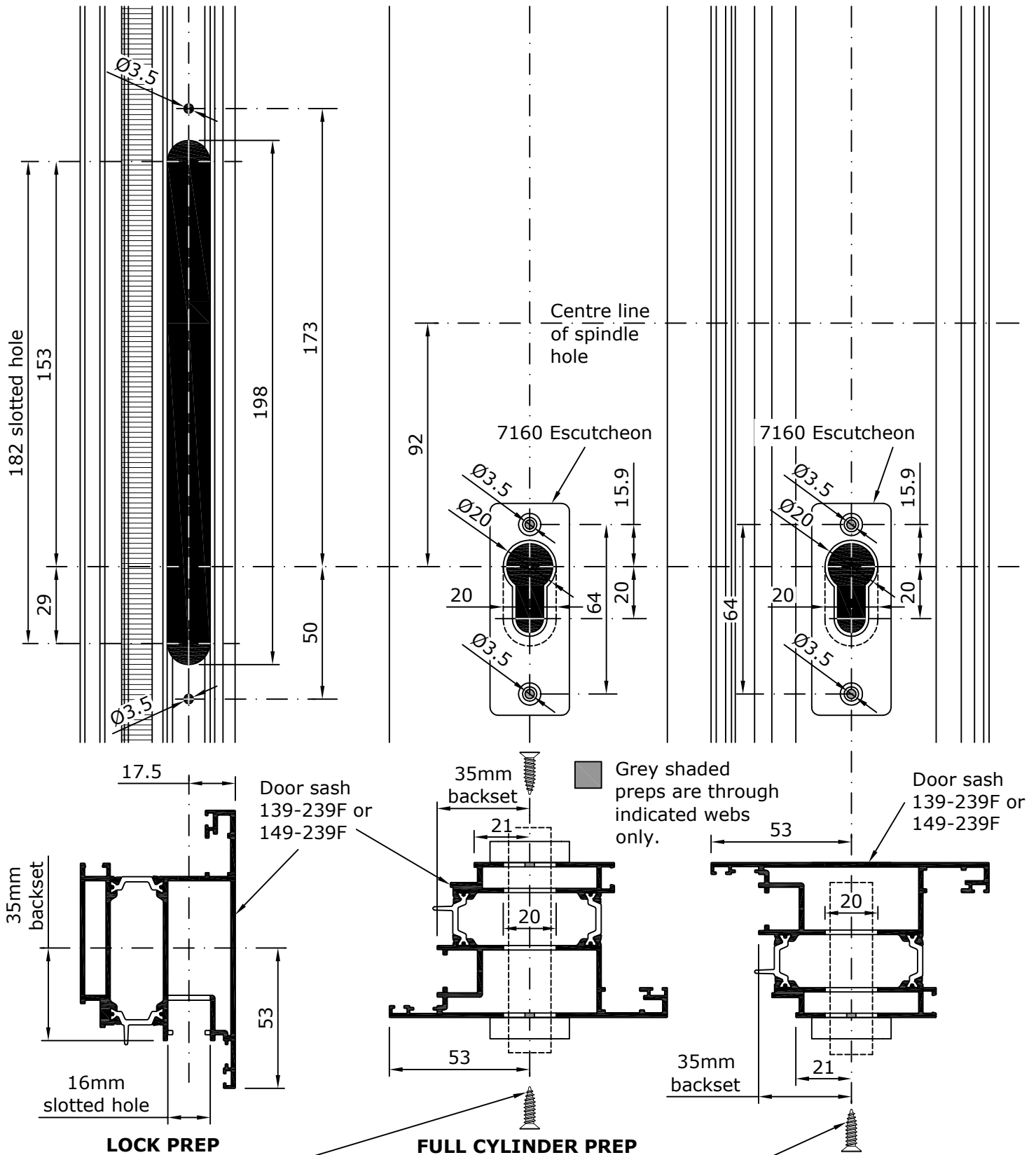
**System 5-20D/Hi+**

DOOR SYSTEM

## Open-Out Door Sash 139-239F or 149-239F

7095 = dead lock with rollerball (not suitable for use with lever handle)

Lock to be secured with 2 x No 8 x 25mm countersunk self-tapping screws 7254 located into pre-punched fixing holes in lock face.



Secure 7160 escutcheon with two No 8 x 16mm stainless steel countersunk self tapping screws 7204

Scale 1:2

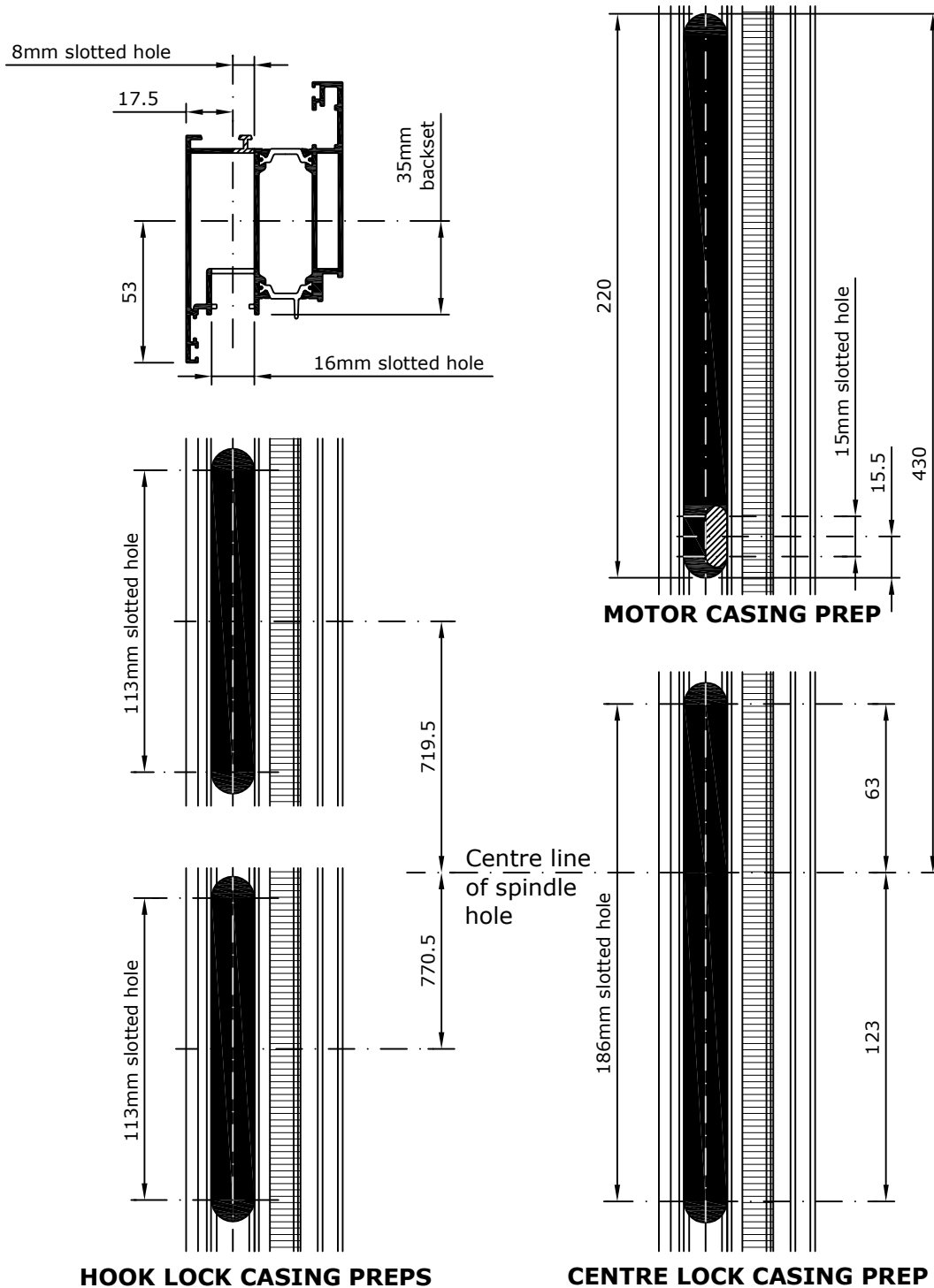
**SHEET 520D Hi+ / 7A / 120**  
rev 1 24/06/14

# Prep for Electrically Operated Auto Locks 7150/7151

## Open-In Door Sash 138-238F or 148-238F

When using electrically operated locking systems lever or paddle handle must not be fitted externally. Ensure correct sheets are referred to for handle and cylinder preps.

Locks to be secured with 13 x No 7 x 25mm self-drilling countersunk screws 7223 located into pre-punched fixing holes in lock face.



Not to Scale

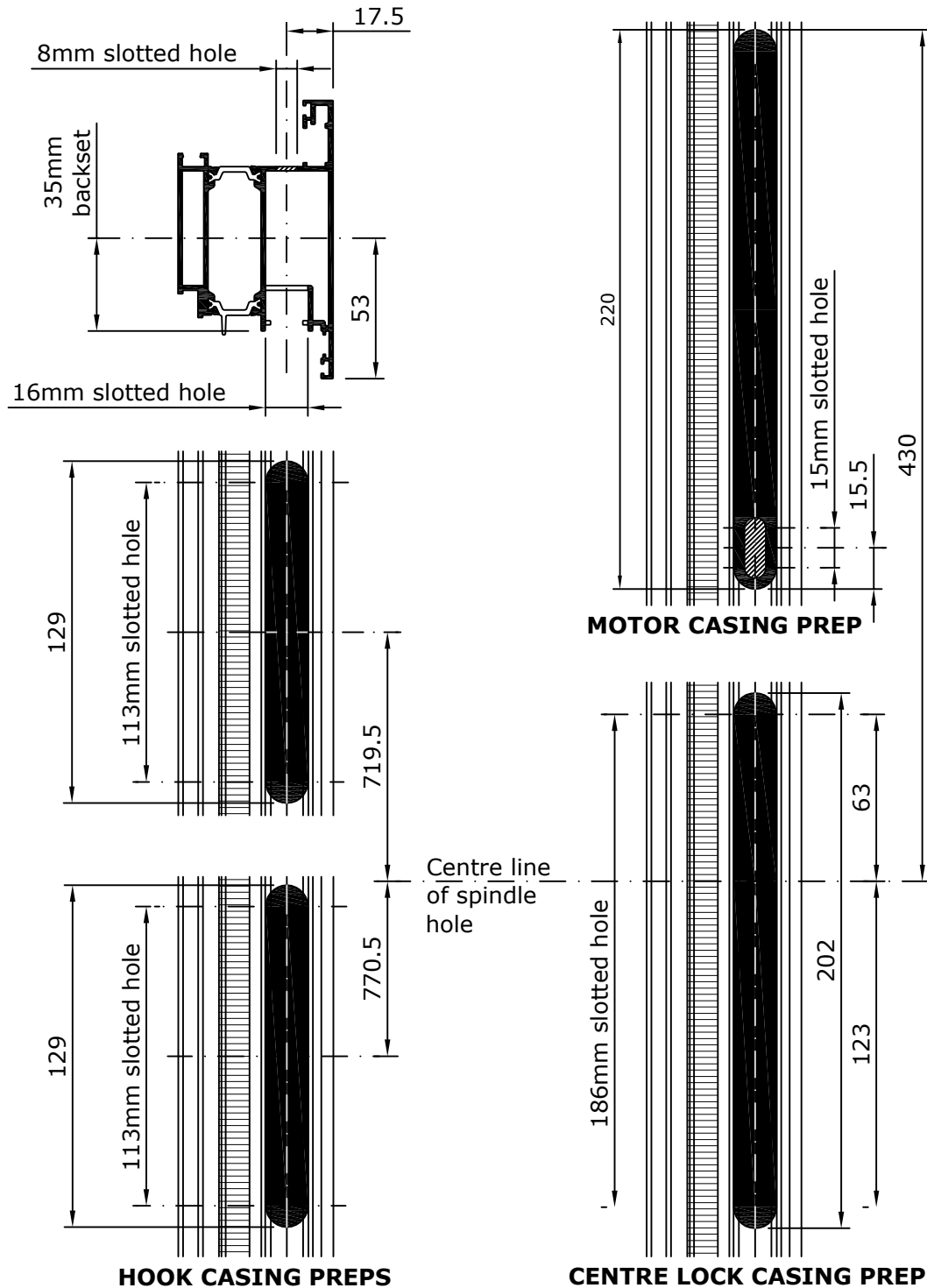
# Prep for Electrically Operated Auto Locks 7150/7151

## Open-Out Door Sash 139-239F or 149-239F

**m<sup>t</sup>**  
**System 5-20D/Hi+**  
 .....  
 DOOR SYSTEM  
 .....

When using electrically operated locking systems lever or paddle handle must not be fitted externally. Ensure correct sheets are referred to for handle and cylinder preps.

Locks to be secured with 13 x No 7 x 25mm self-drilling countersunk screws 7223 located into pre-punched fixing holes in lock face.



Not to Scale



# Electrically Operated Locks - Prep for Single Handle with 7160 Escutcheon

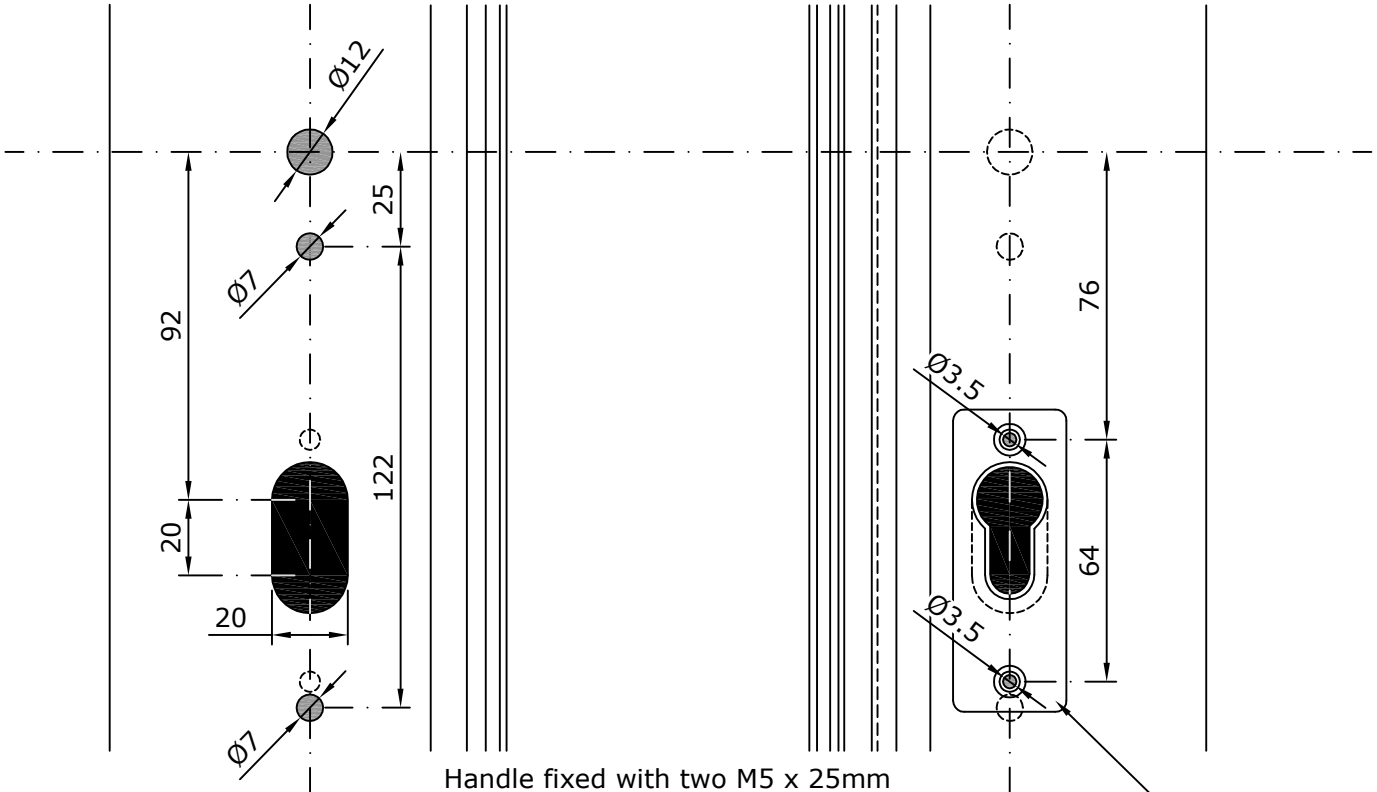


**System 5-20D/Hi+**

DOOR SYSTEM

Open-In Door Sash 138-238F or 148-238F

This detail is not suitable for use in high-volume traffic situations. In high-volume applications Metal Technology recommends using an internal handle bolted through to an external base plate. This prep detail should be used for an internal handle with external keyed access, with locks 7150 and 7151.



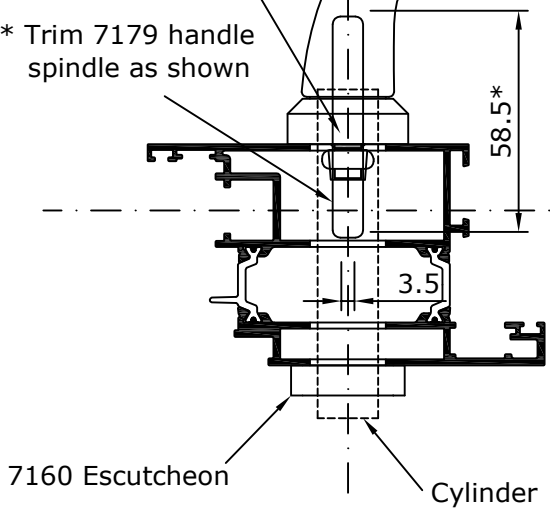
Handle fixed with two M5 x 25mm countersunk stainless steel machine screws 7210 into M5 countersunk rivnut 7209, in lieu of 7178 fixing screws

7160 Escutcheon

Using 13mm drill bit, drill back protruding bushes flush with edge of back-plate

\* Trim 7179 handle spindle as shown

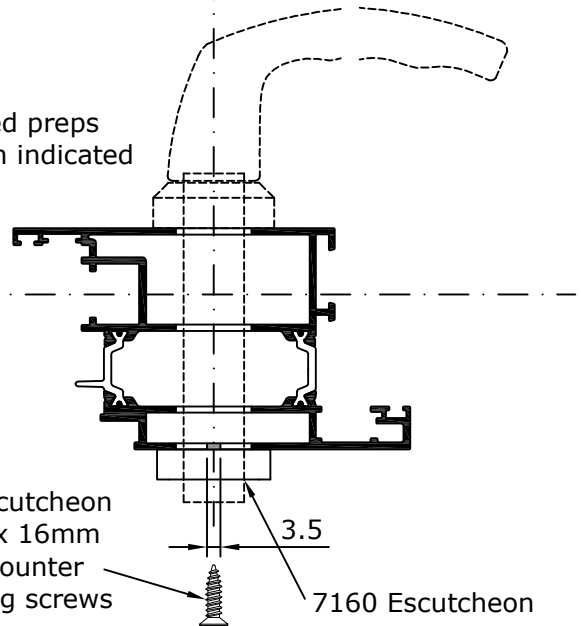
Grey shaded preps are through indicated webs only.



7160 Escutcheon

Cylinder

**SINGLE HANDLE PREP.**



Secure 7160 escutcheon with two No. 8 x 16mm stainless steel counter sunk self tapping screws 7204

7160 Escutcheon

**ESCUTCHEON PREP.**

Scale 1:2

# Electrically Operated Locks - Prep for Single Handle with 7160 Escutcheon

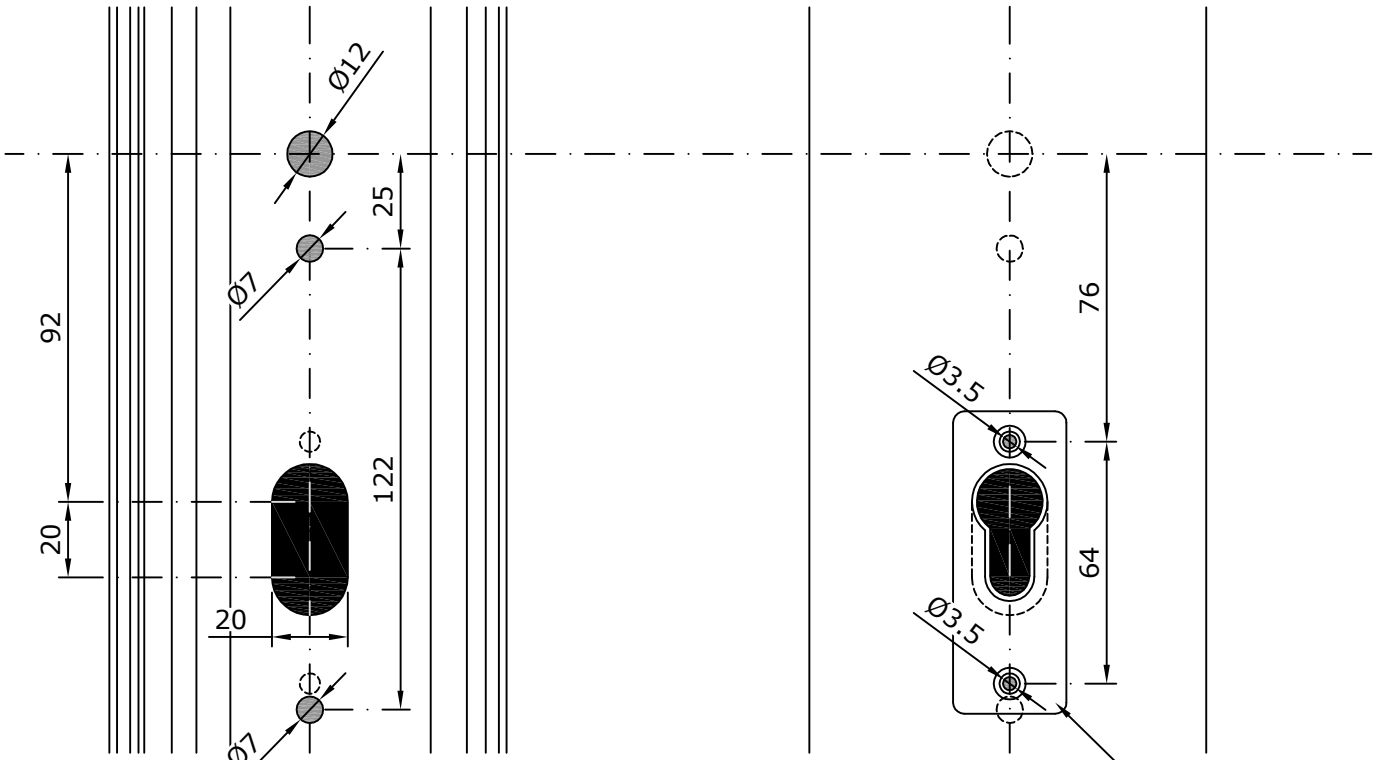


**System 5-20D/Hi+**

DOOR SYSTEM

Open-Out Door Sash 139-239F or 149-239F

This detail is not suitable for use in high-volume traffic situations. In high-volume applications Metal Technology recommends using an internal handle bolted through to an external base plate. This prep detail should be used for an internal handle with external keyed access, with locks 7150 and 7151.



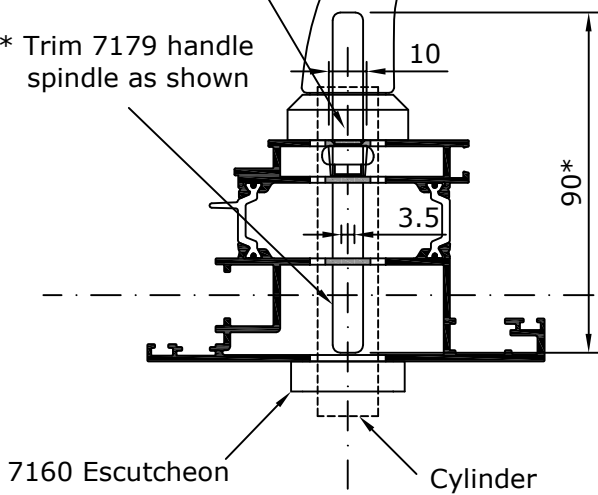
Handle fixed with two M5 x 25mm countersunk stainless steel machine screws 7210 into M5 countersunk rivnut 7209, in lieu of 7178 fixing screws

7160 Escutcheon

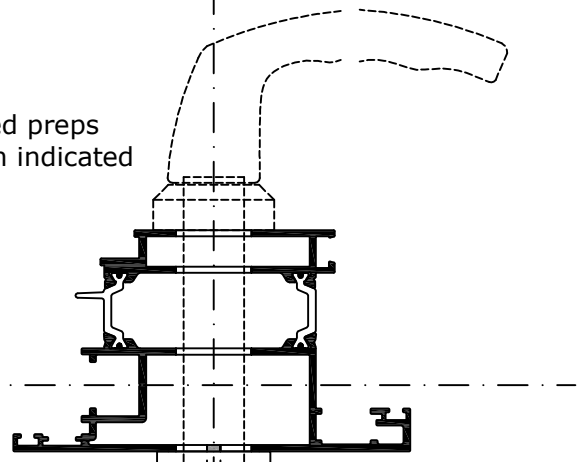
Using 13mm drill bit, drill back protruding bushes flush with edge of back-plate

\* Trim 7179 handle spindle as shown

Grey shaded preps are through indicated webs only.



**SINGLE HANDLE PREP.**



Secure 7160 escutcheon with two No. 8 x 16mm stainless steel counter sunk self tapping screws 7204

**ESCUTCHEON PREP.**

Scale 1:2

SHEET 520D Hi+ / 7A / 160

rev 2

05/03/14

# Multi-Point Dead Lock 7065 - Security Prep for 7059 Cylinder Guard with Handles



**System 5-20D/Hi+**

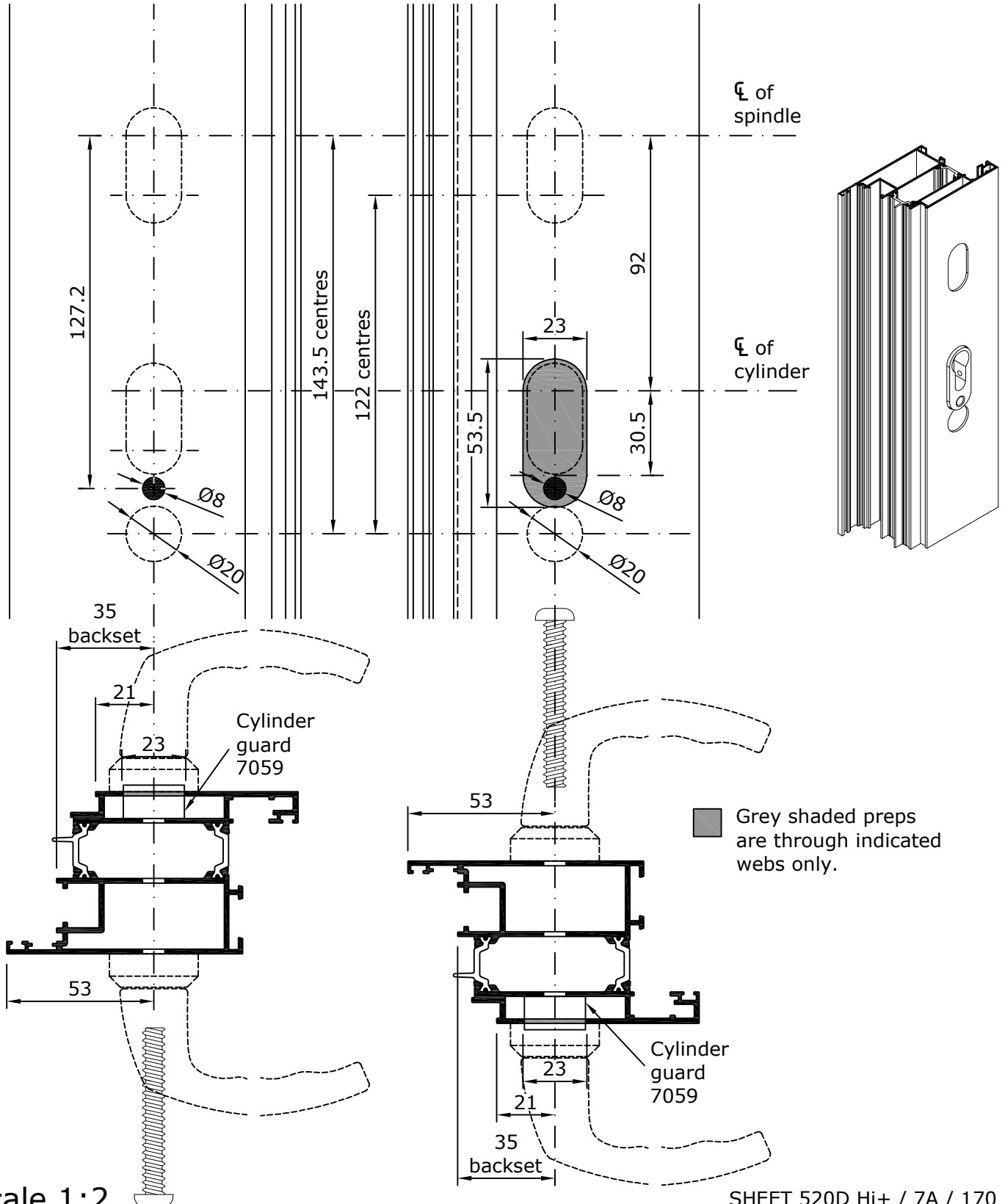
DOOR SYSTEM

Open-In Door Sash 138-238F or 148-238F

This prep detail is suitable for 7060A lever handles with lock 7065. Refer also to sheet "Prep for Multi-Point Dead Lock 7065 and Handles".

## PREP CONTINUOUS THROUGH PROFILE

## PREP OUTSIDE FACE OF PROFILE ONLY



Scale 1:2

# Multi-Point Dead Lock 7065 - Security Prep for 7059 Cylinder Guard with Handles



**System 5-20D/Hi+**

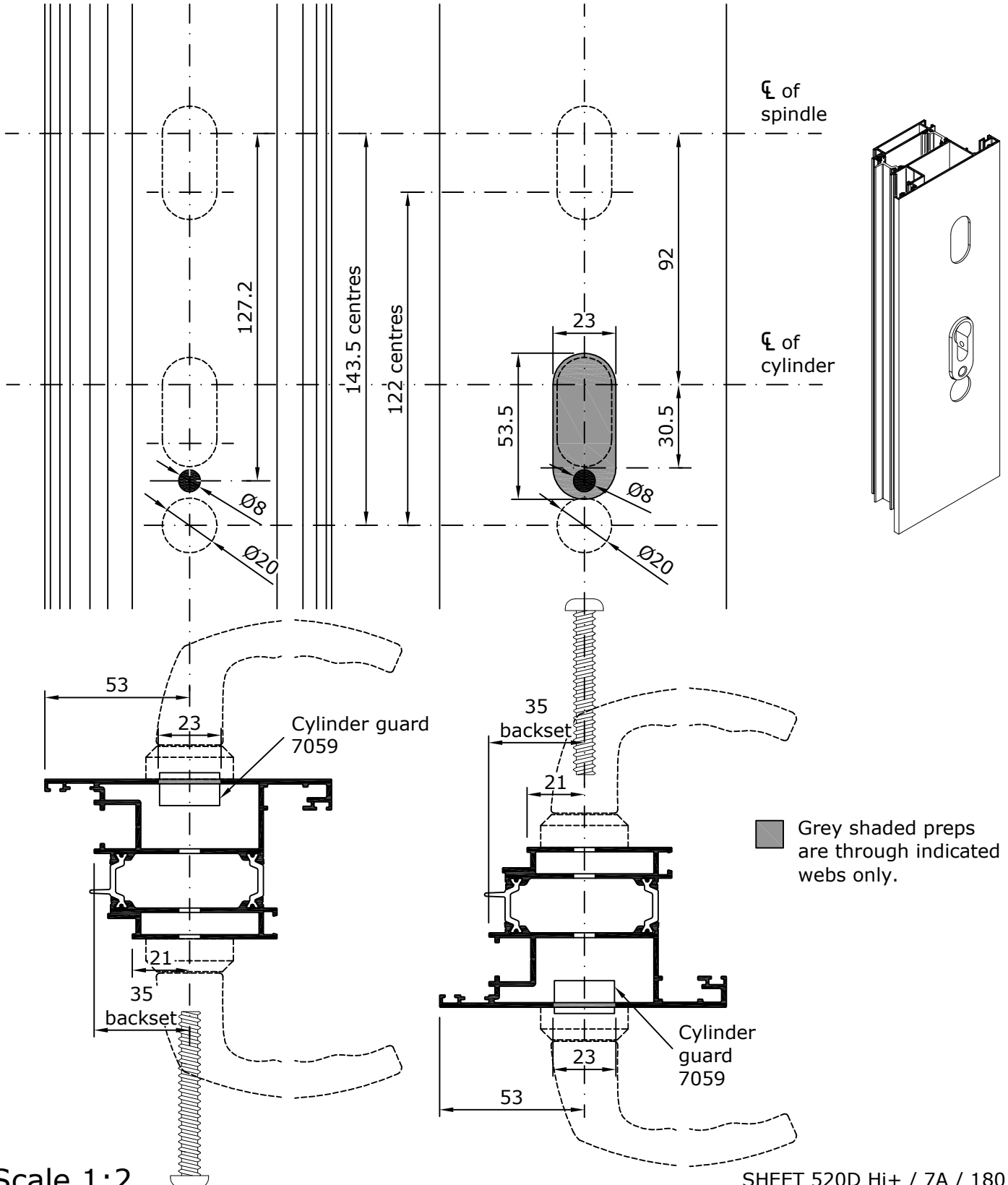
DOOR SYSTEM

Open-Out Door Sash 139-239F or 149-239F

This prep detail is suitable for 7060A handles with lock 7065. Refer also to sheet "Prep for Multi-Point Dead Lock 7065 and Handles".

## PREP CONTINUOUS THROUGH PROFILE

## PREP OUTSIDE FACE OF PROFILE ONLY



Scale 1:2

# Electrically Operated Locks - Security Prep for 7059 Cylinder Guard with Single Handle



**System 5-20D/Hi+**

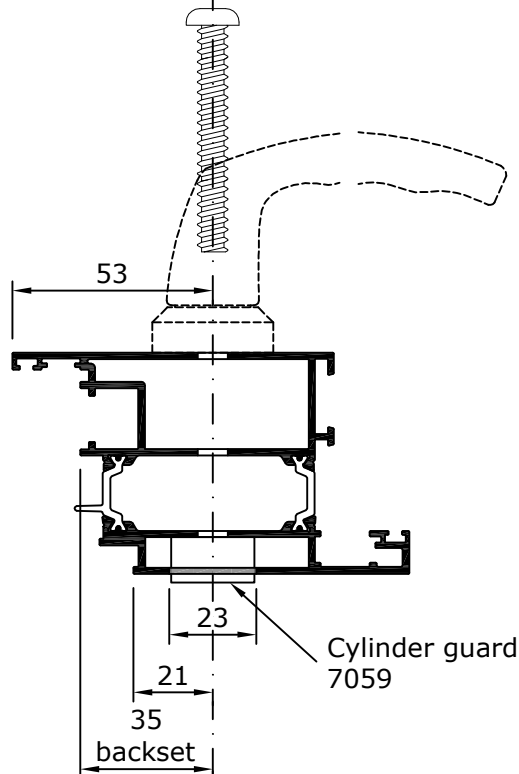
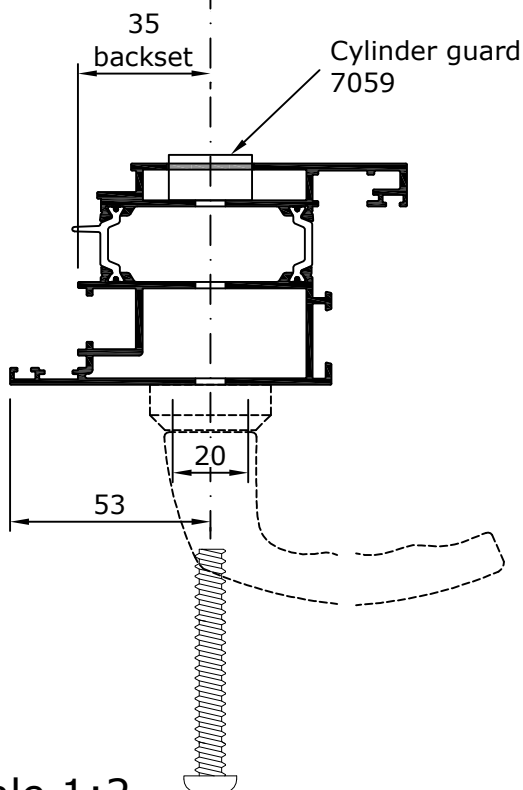
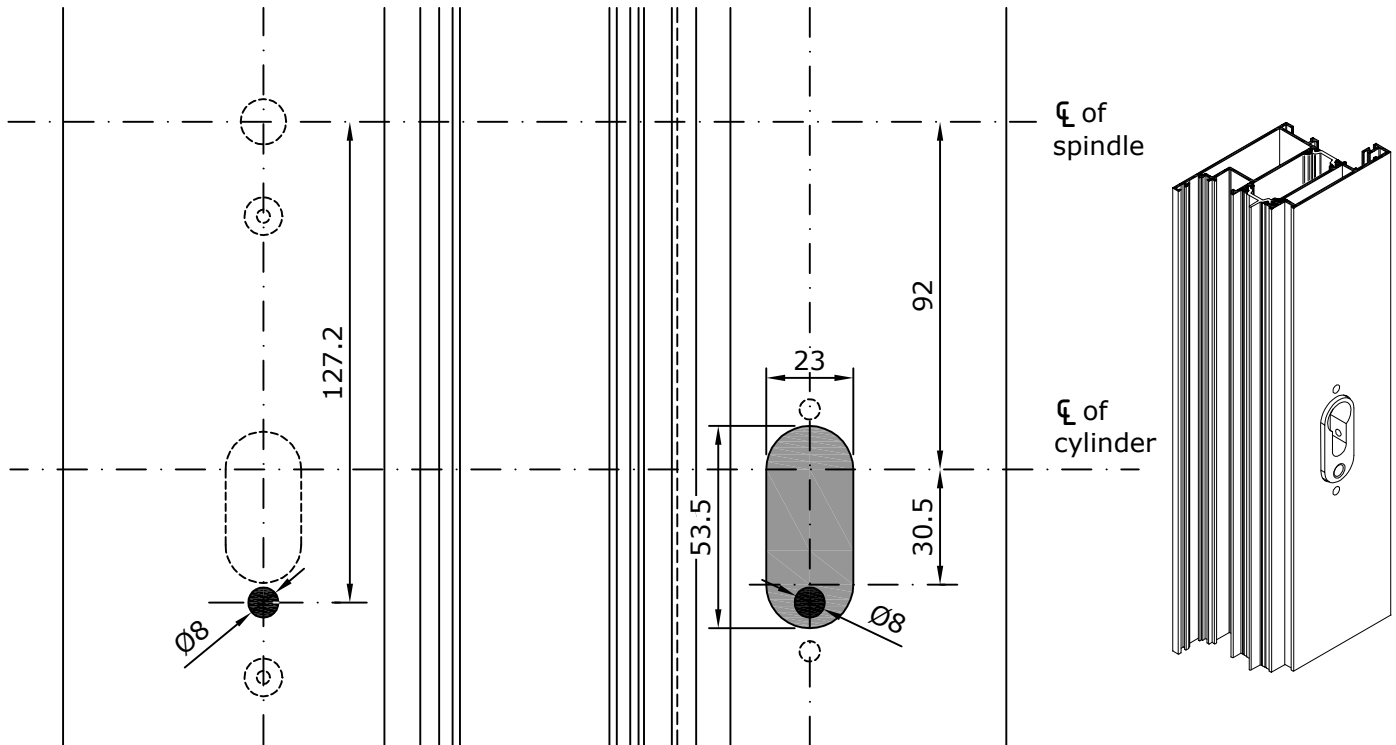
DOOR SYSTEM

Open-In Door Sash 138-238F or 148-238F

When using electrically operated locking systems lever or paddle handle must not be fitted externally. Refer also to sheets "Electrically Operated Locks - Prep for Single Handle with 7160 Escutcheon" and "Installation of 7160 Escutcheon for Security Applications". If securing internal handle to external base plate 7177AE, use sheet "Multi-Point Dead Lock 7065 - Security Prep for 7059 Cylinder Guard with Handles"

## PREP CONTINUOUS THROUGH PROFILE

## PREP OUTSIDE FACE OF PROFILE ONLY



Scale 1:2

# Electrically Operated Locks - Security Prep for 7059 Cylinder Guard with Single Handle



System 5-20D/Hi+

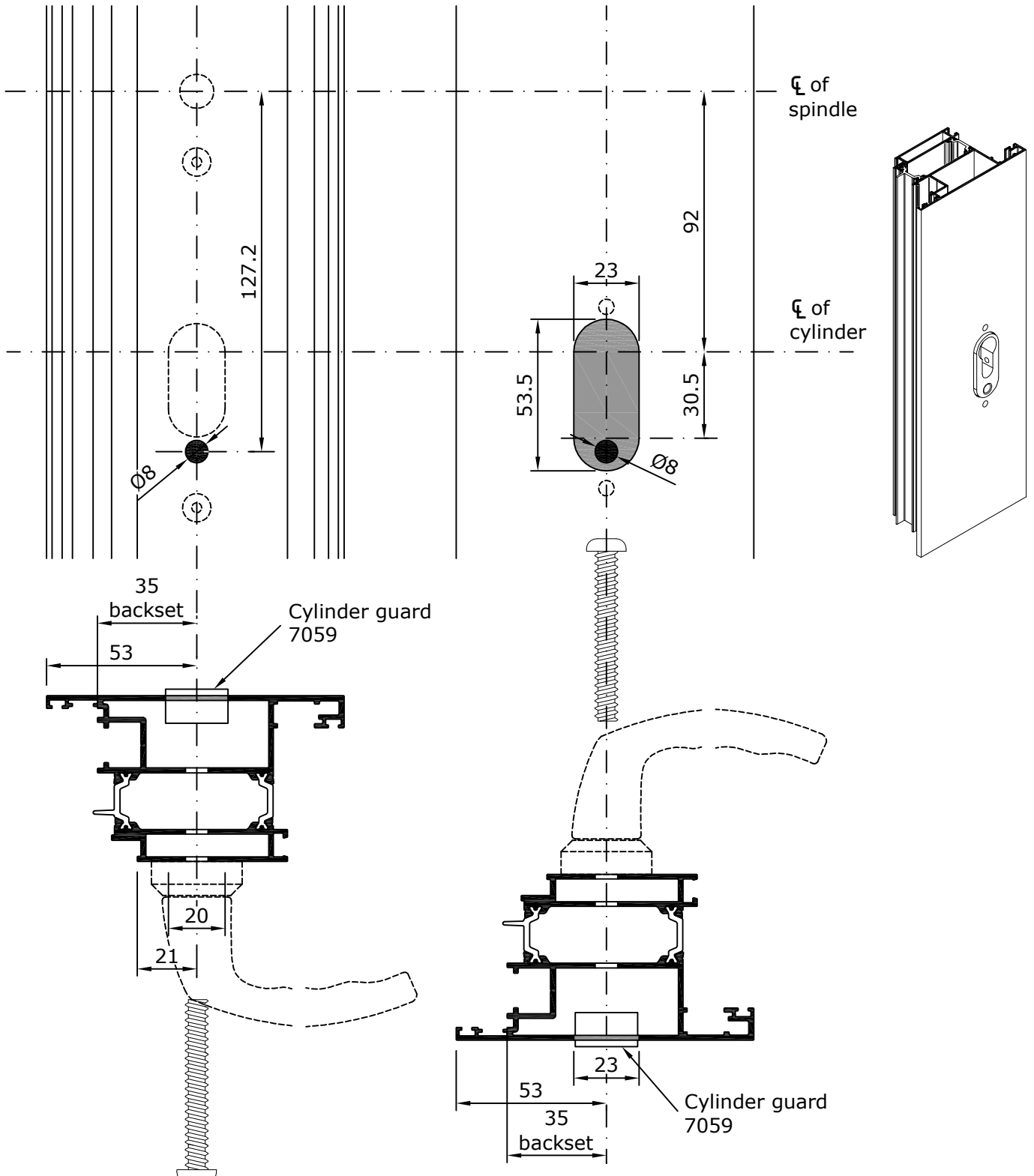
DOOR SYSTEM

Open-Out Door Sash 139-239F or 149-239F

When using electrically operated locking systems lever or paddle handle must not be fitted externally. Refer also to sheets "Electrically Operated Locks - Prep for Single Handle with 7160 Escutcheon" and "Installation of 7160 Escutcheon for Security Applications". If securing internal handle to external base plate 7177AE, use sheet "Multi-Point Dead Lock 7065 - Security Prep for 7059 Cylinder Guard with Handles"

## PREP CONTINUOUS THROUGH PROFILE

## PREP OUTSIDE FACE OF PROFILE ONLY



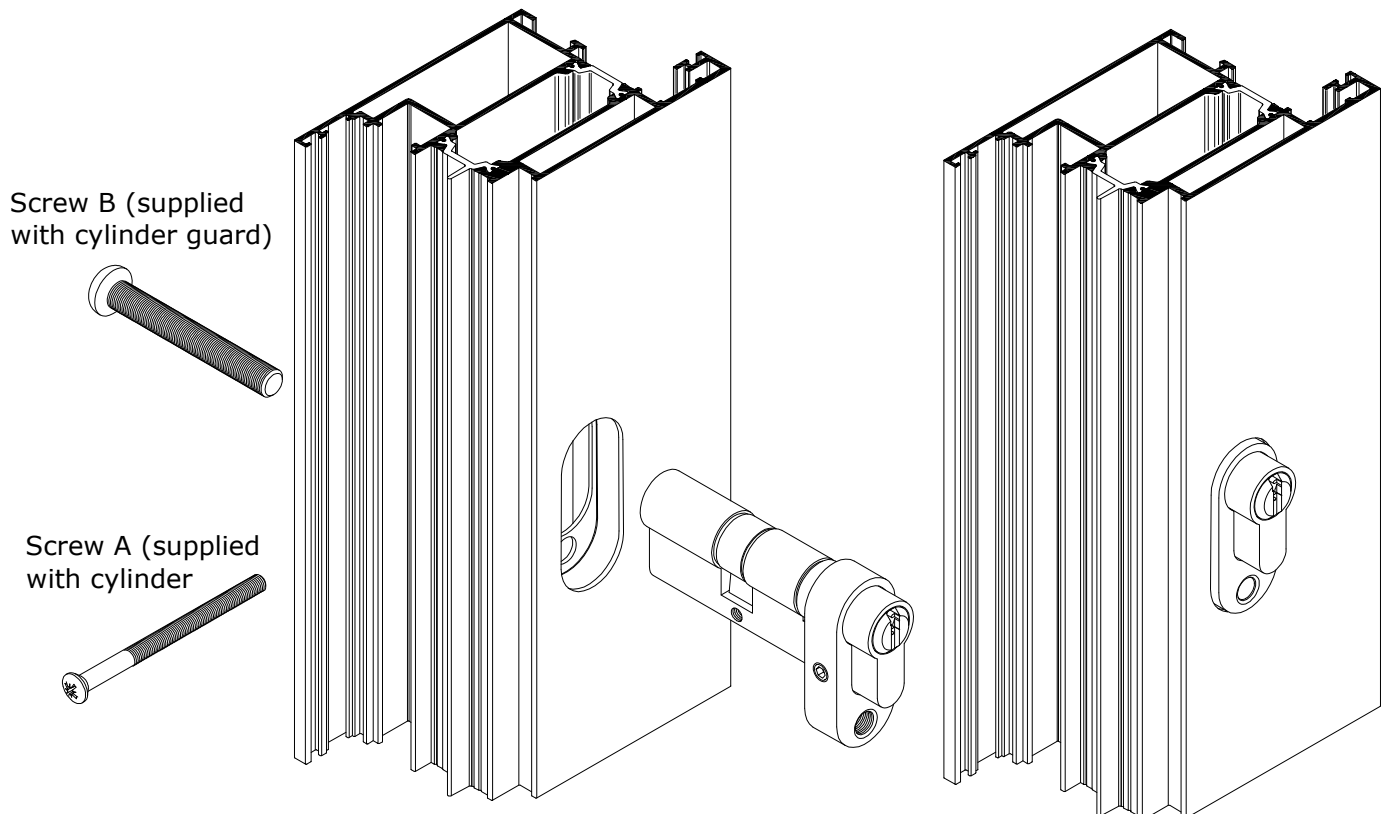
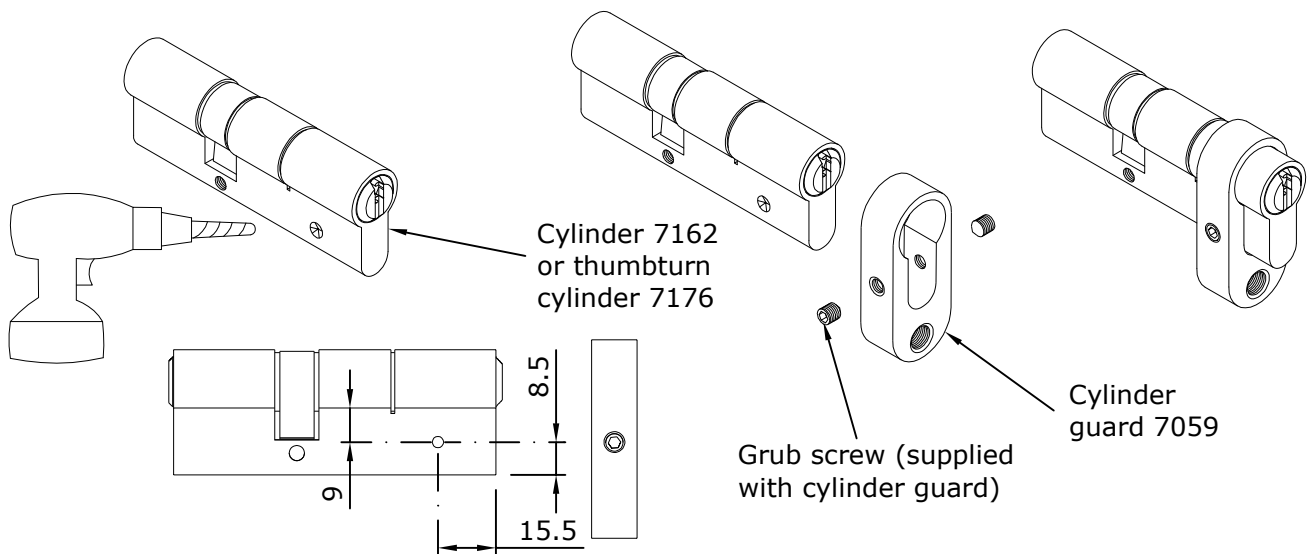
Scale 1:2

# Installation of Cylinder Guard 7059 and Cylinders 7162/7176 for Security Applications

**m<sup>t</sup>**  
System 5-20D/Hi+  
.....  
DOOR SYSTEM  
.....

Open-In Door Sash 138-238F or 148-238F

1. Use drill to create 2 no small indents on each side of cylinder at the position shown below to receive grub screws located in cylinder guard. (Drill bit size 3mm)
2. Fix cylinder guard to cylinder by tightening grub screws. Grub screws should locate into indent in cylinder.
3. Once guard is secured onto cylinder, feed both into position within lock stile and lock.
4. Insert screw A and tighten to secure 7162/7176 cylinder into position.
5. Insert screw B and tighten to secure 7059 cylinder guard into position.



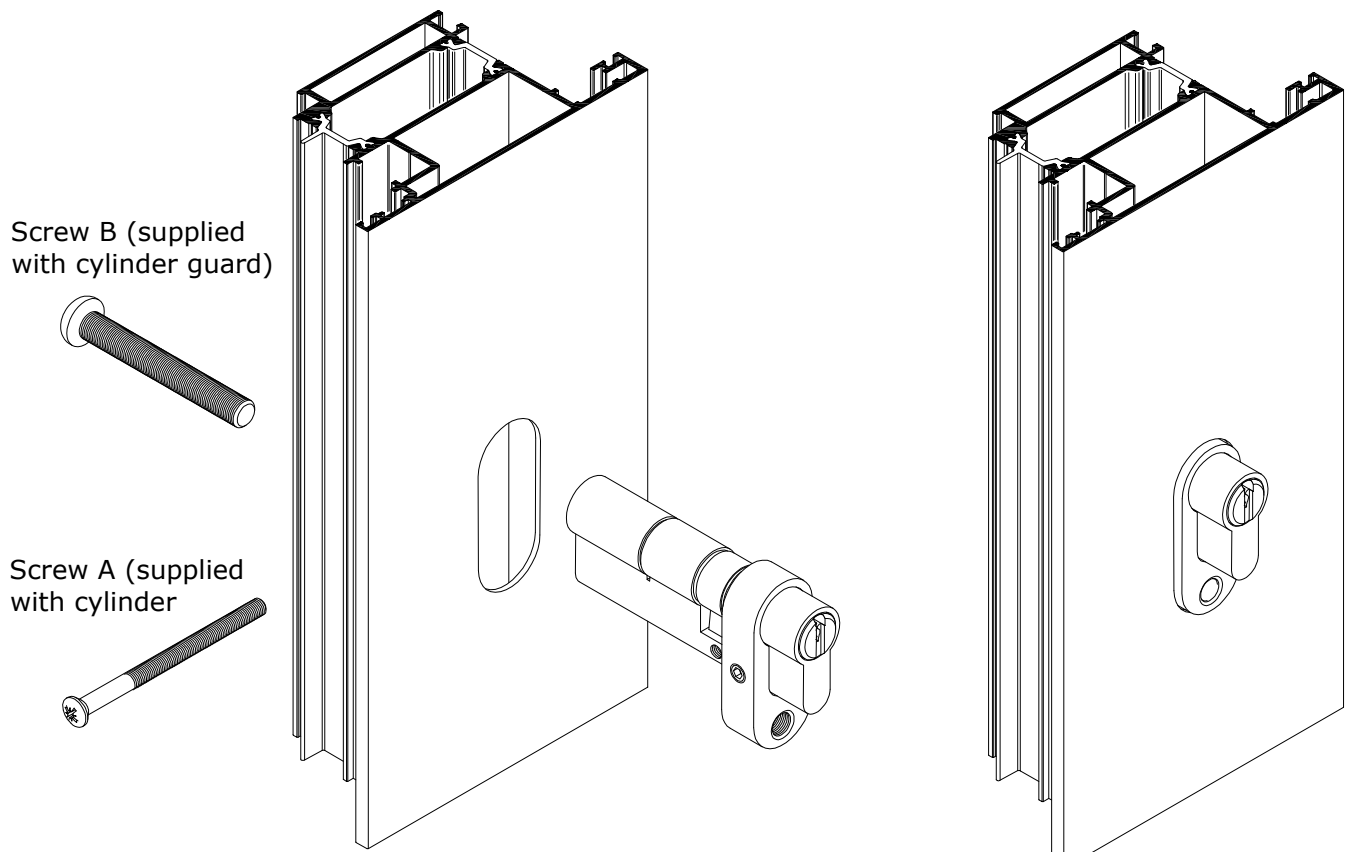
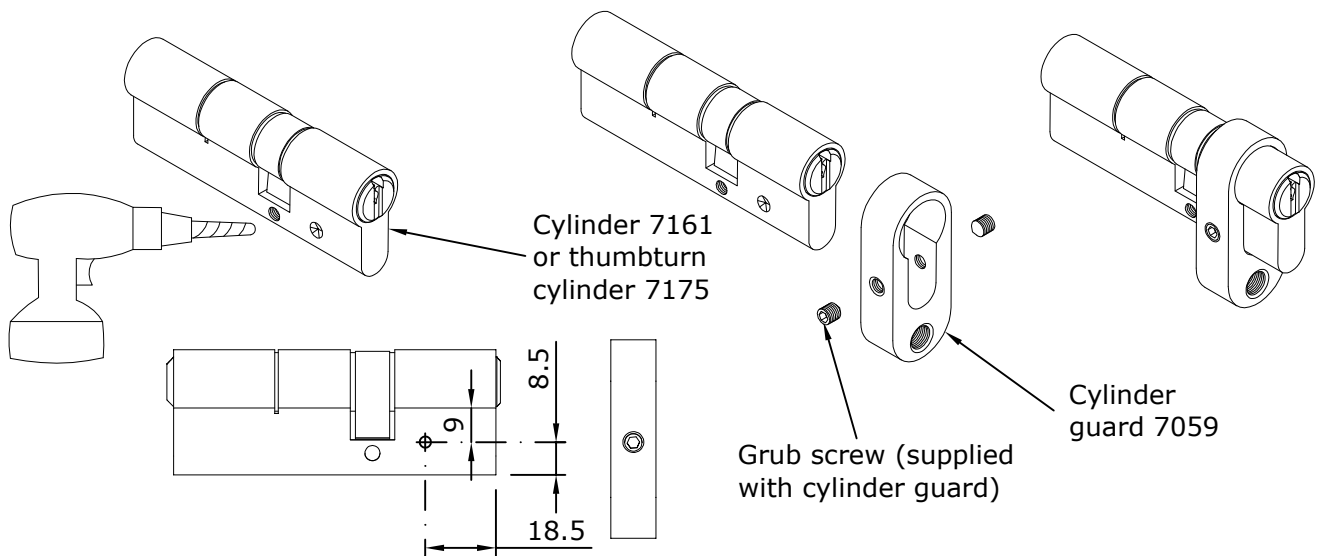
Not to Scale

# Installation of Cylinder Guard 7059 and Cylinders 7161/7175 for Security Applications

**m<sup>t</sup>**  
System 5-20D/Hi+  
.....  
DOOR SYSTEM  
.....

Open-Out Door Sash 139-239F or 149-239F

1. Use drill to create 2 no small indents on each side of cylinder at the position shown below to receive grub screws located in cylinder guard. (Drill bit size 3mm)
2. Fix cylinder guard to cylinder by tightening grub screws. Grub screws should locate into indent in cylinder.
3. Once guard is secured onto cylinder, feed both into position within lock stile and lock.
4. Insert screw A and tighten to secure 7161/7175 cylinder into position.
5. Insert screw B and tighten to secure 7059 cylinder guard into position.



Not to Scale



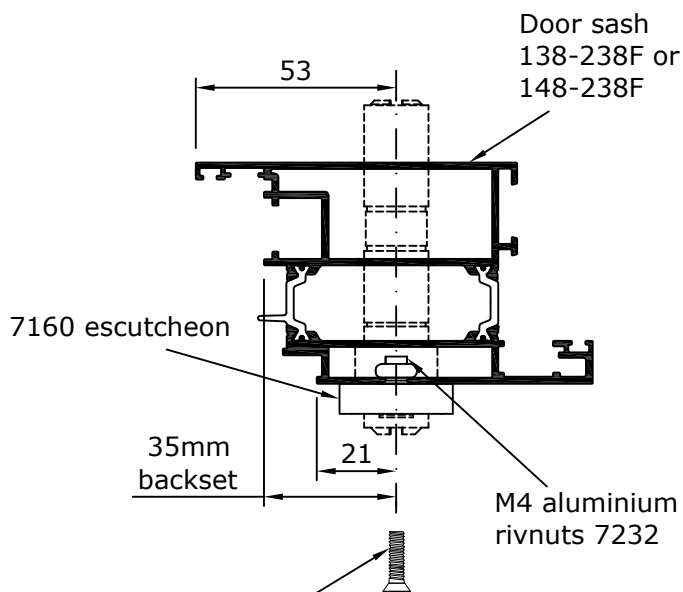
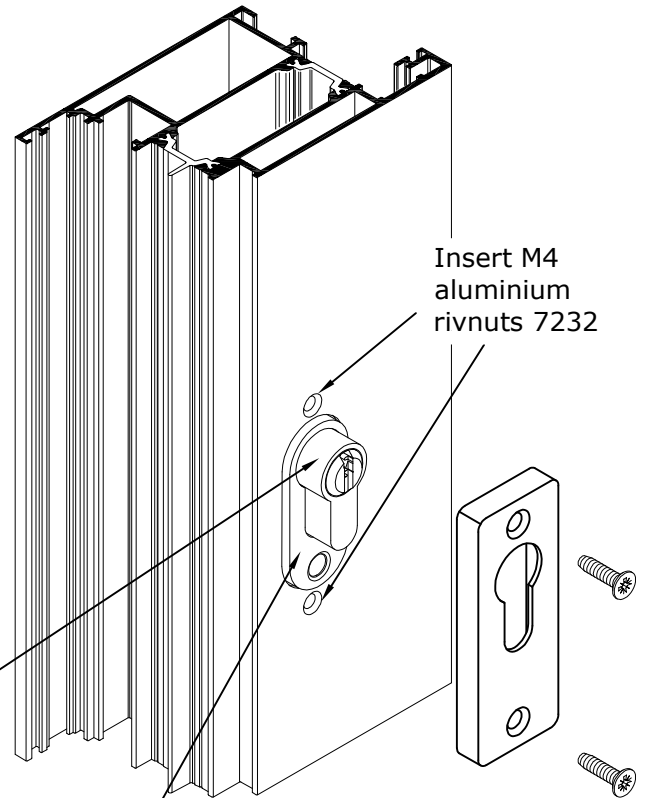
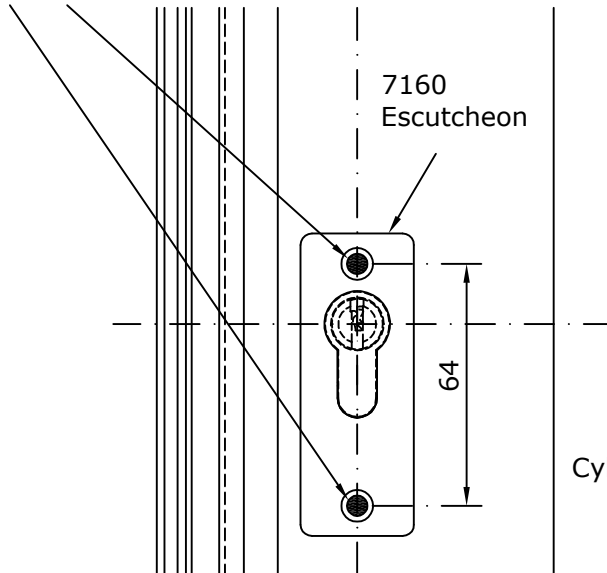
# Installation of 7160 Escutcheon

**System 5-20D/Hi+**

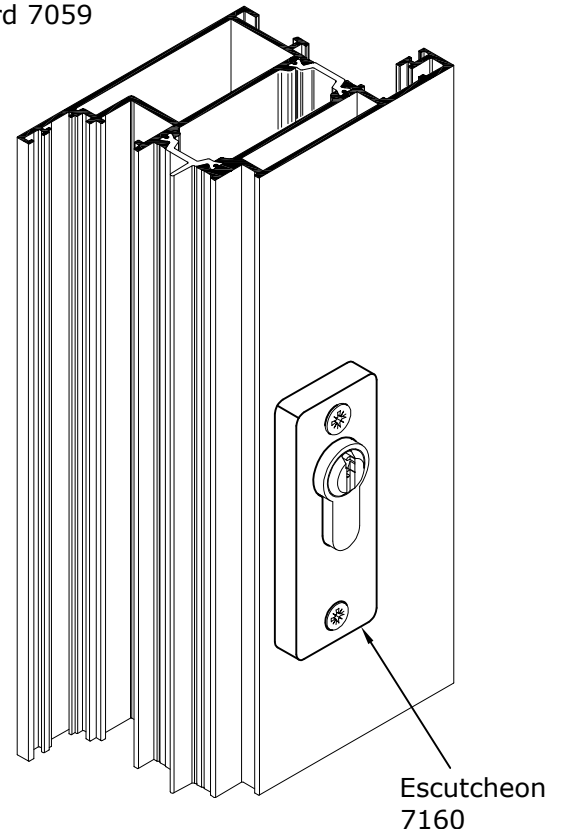
DOOR SYSTEM

Open-In Door Sash 138-238F or 148-238F

Drill out existing 3.5mm holes to 6mm for M4 countersunk rivnut and stainless steel countersunk machine screw.



Secure 7160 escutcheon with 2 M4 x 16mm stainless steel countersunk machine screws 7233



Not to Scale

# Installation of 7160 Escutcheon for Security Applications

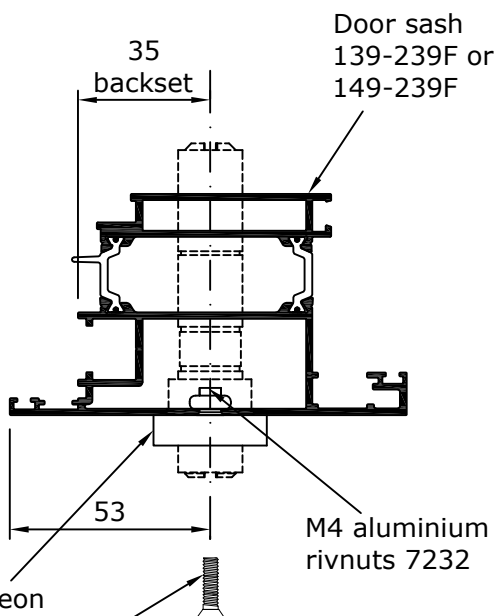
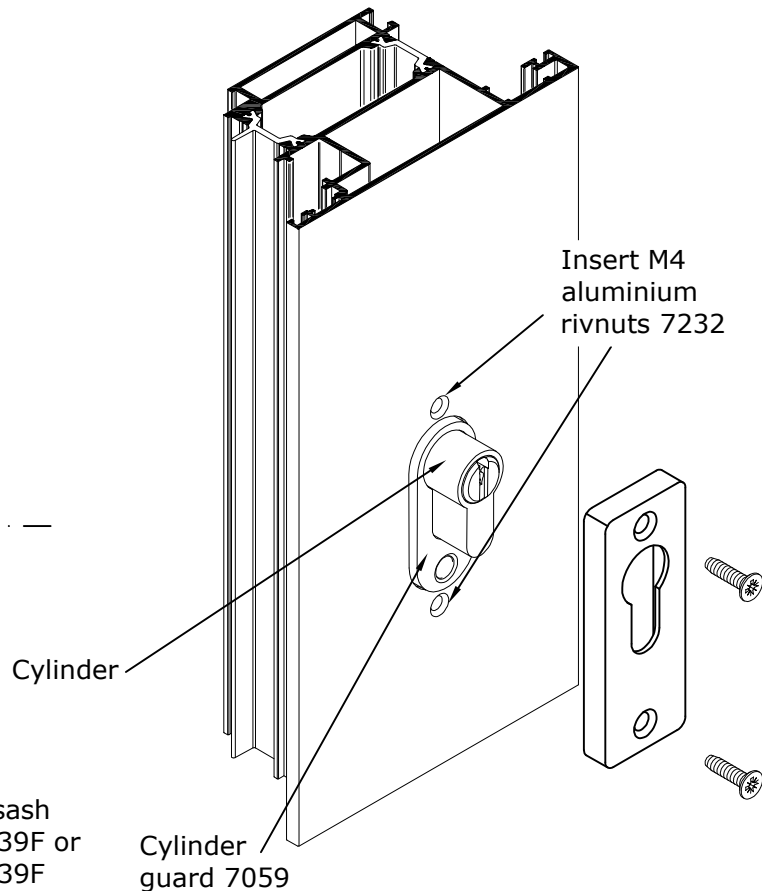
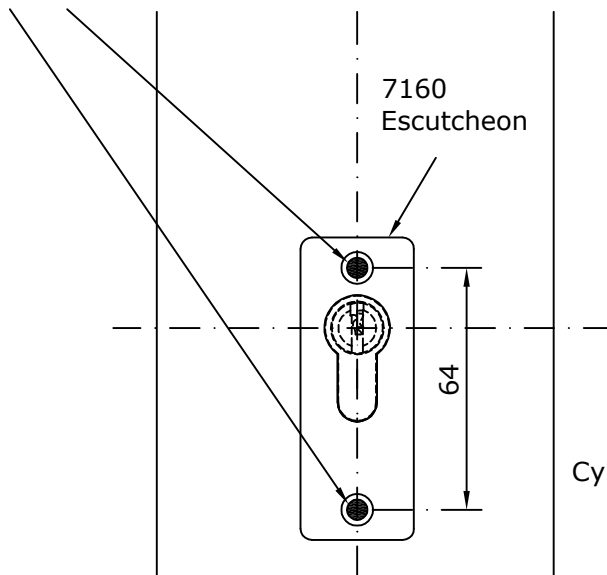


**System 5-20D/Hi+**

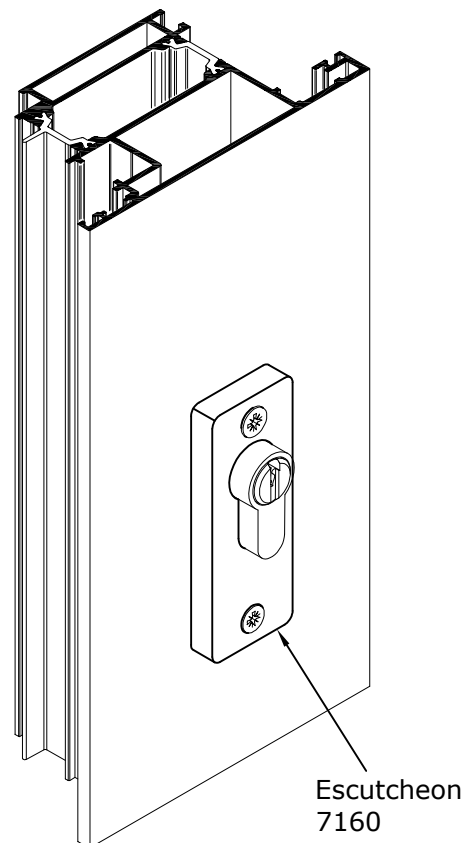
DOOR SYSTEM

Open-Out Door Sash 139-239F or 149-239F

Drill out existing 3.5mm holes to 6mm for M4 countersunk rivnut and stainless steel countersunk machine screw.



Secure 7160 escutcheon with 2 M4 x 16mm stainless steel countersunk machine screws 7233



Not to Scale

# Outer Frame Preps for 7058 and 7070 Keeps

**System 5-20D/Hi+**

DOOR SYSTEM

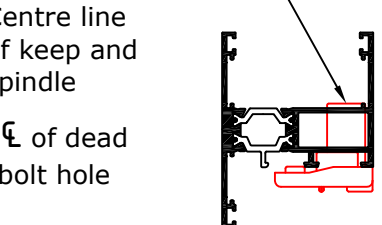
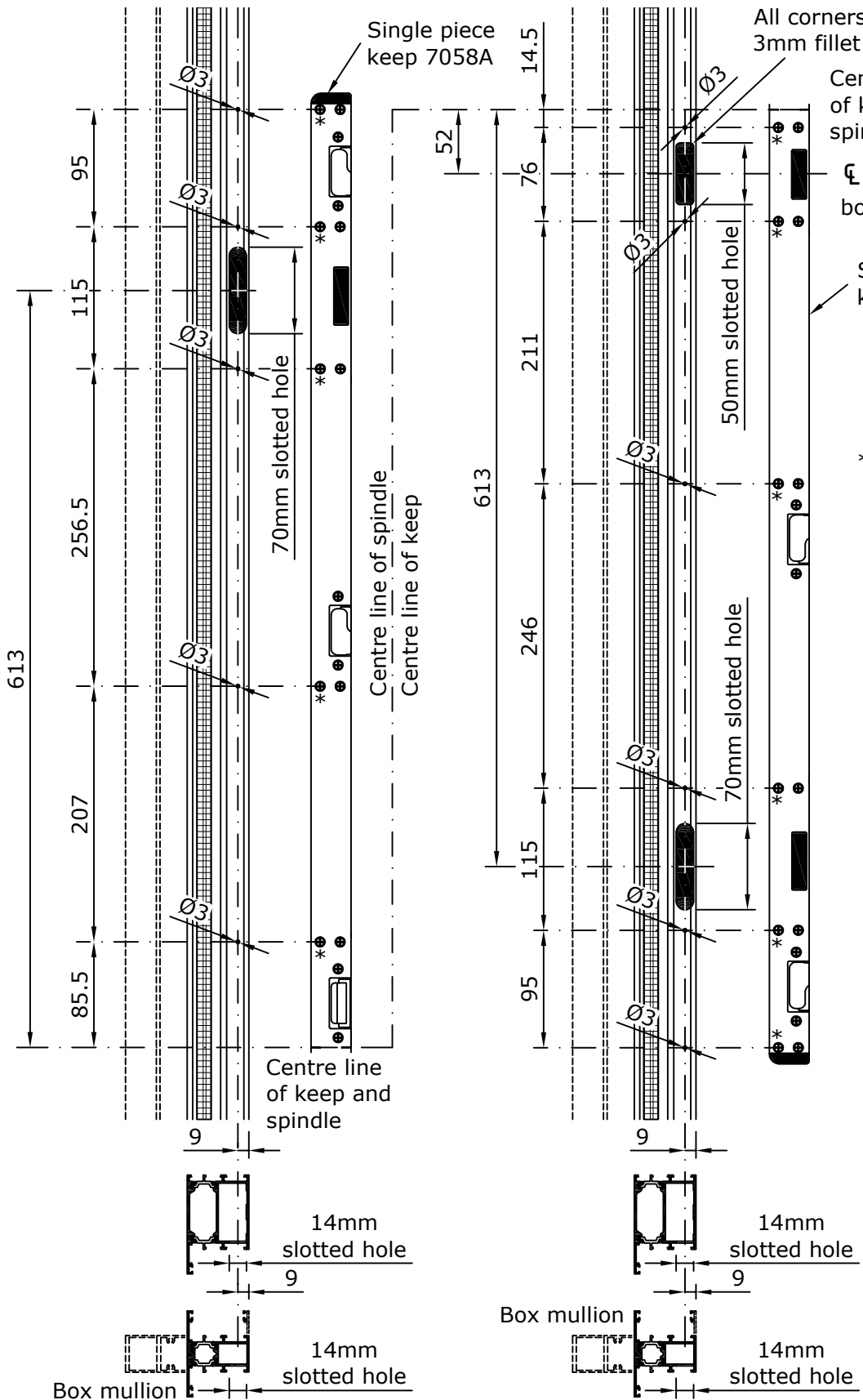
Suitable for Lock 7065

See "Component Identification" sheet for guidance on handing of keeps.

Keeps to be secured with No 7 x 25mm self-drilling countersunk screws 7223.

When using 7058 single piece keep with outer frame 102-202F plastic dust bucket on keep needs to be removed.

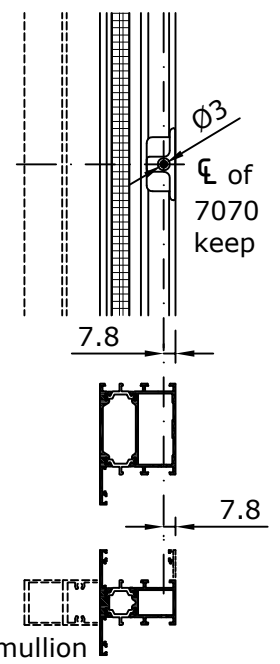
## 7058 SINGLE PIECE KEEP PREP



\* Do not drill these holes. Use holes in keep to locate self-drilling screws.

## 7070 COMPRESSION KEEP PREP

Refer to Section 3 "Lock and Keep Details" for position of centre line of 7070 keep relevant to locking point.



Not to Scale

# Rebated Double Door Adaptor Preps for 7058 and 7070 Keeps



**System 5-20D/Hi+**

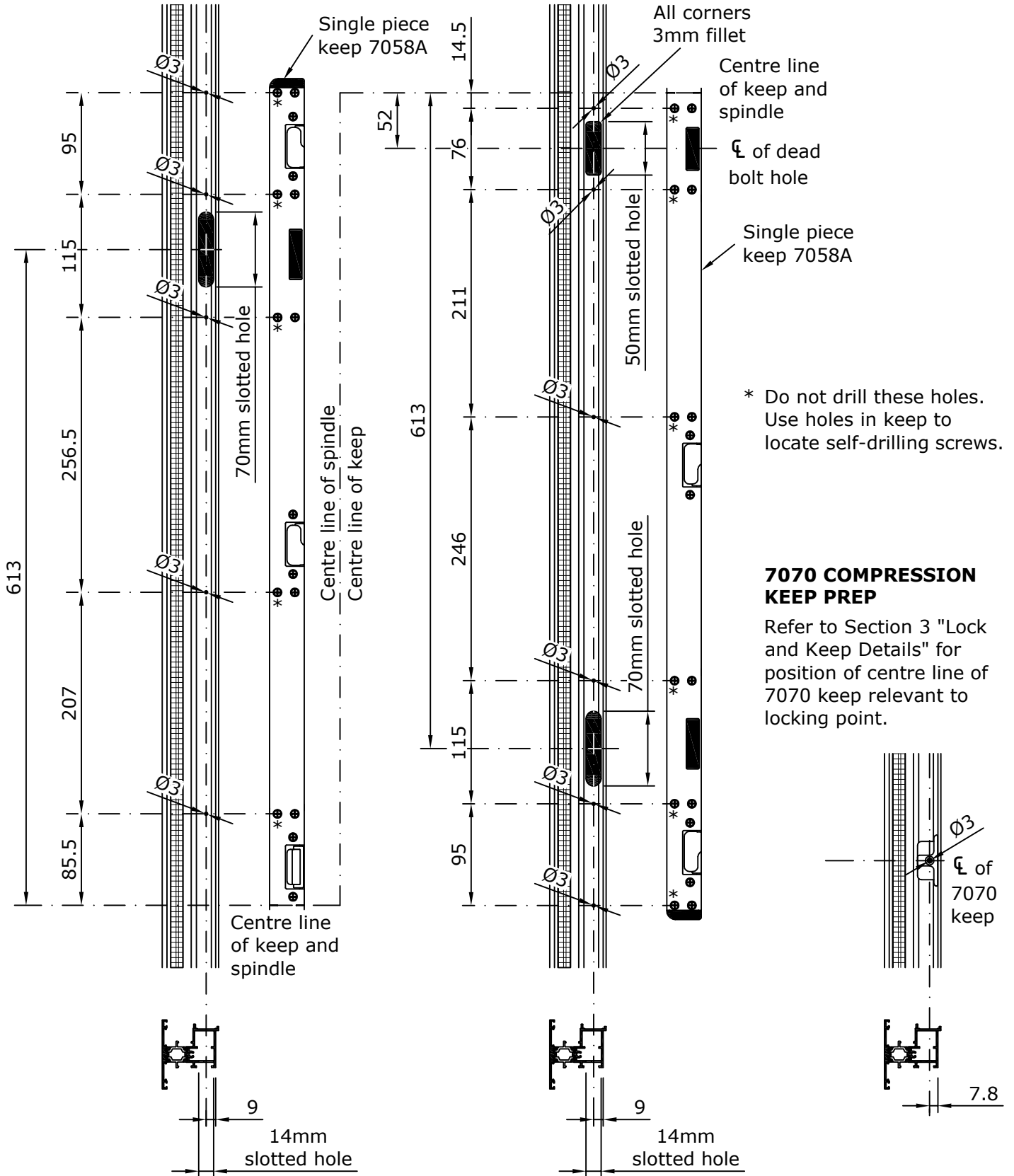
DOOR SYSTEM

Suitable for Lock 7065

See "Component Identification" sheet for guidance on handing of keeps.

Keeps to be secured with No 7 x 25mm self-drilling countersunk screws 7223.

## 7058 SINGLE PIECE KEEP PREP



Not to Scale

# Security Outer Frame Preps for 7058 Keeps



**System 5-20D/Hi+**

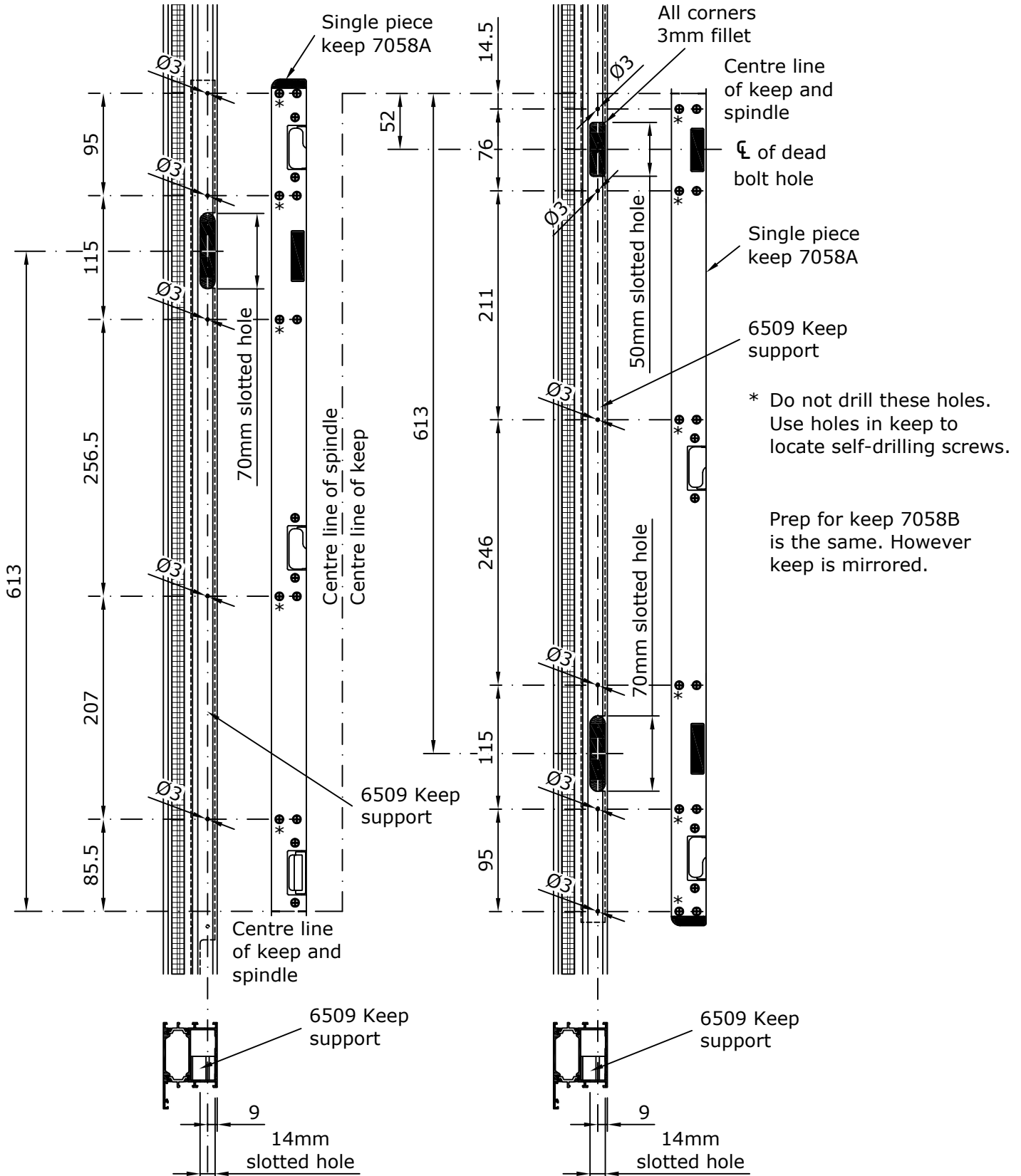
DOOR SYSTEM

Suitable for Lock 7065

See "Component Identification" sheet for guidance on handing of keeps.

Keeps to be secured with No 7 x 25mm self-drilling countersunk screws 7223.

## 7058 SINGLE PIECE KEEP PREP



Not to Scale









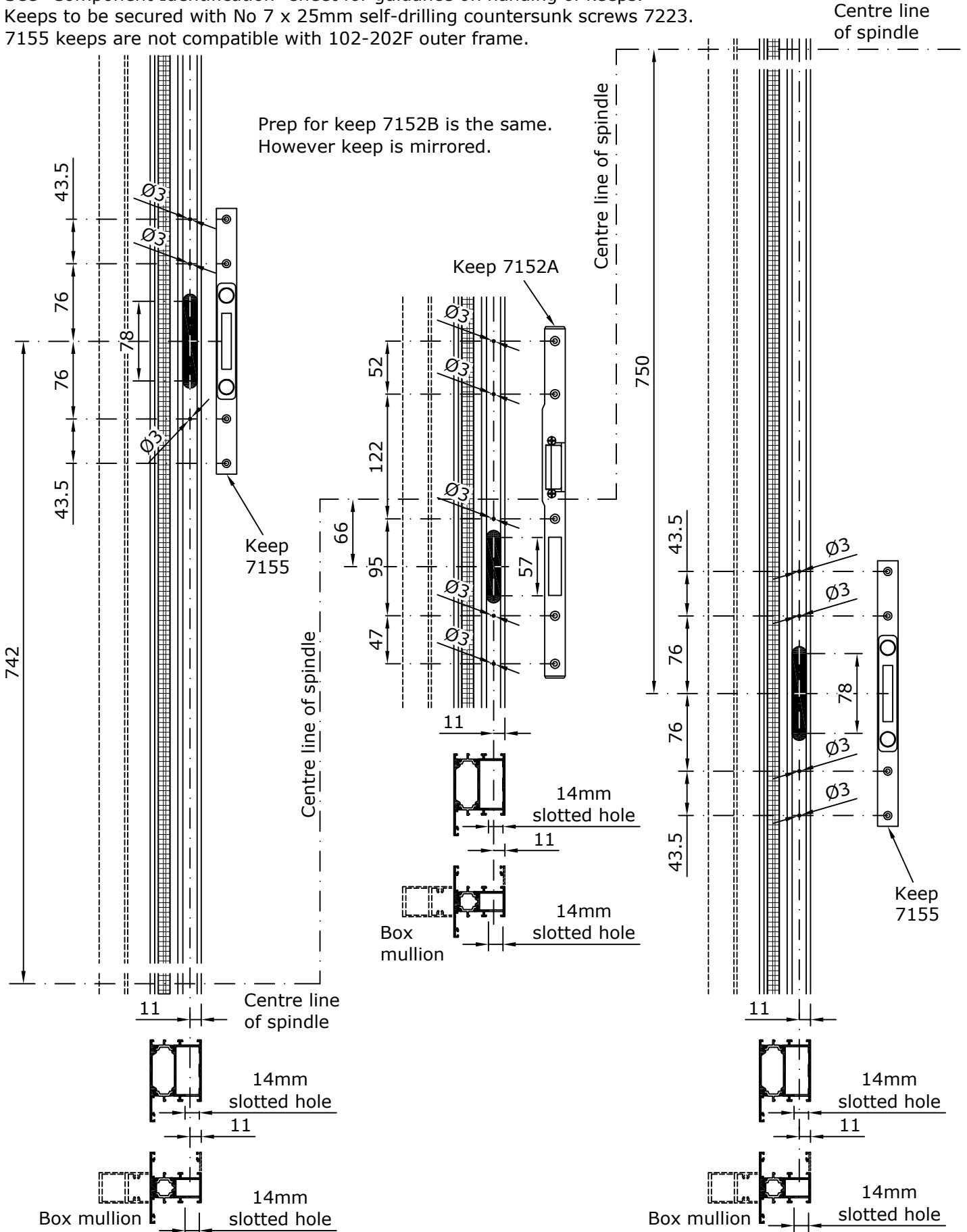
# Outer Frame Preps for 7152 and 7155 Keeps

**System 5-20D/Hi+**

DOOR SYSTEM

Suitable for Lock 7165

See "Component Identification" sheet for guidance on handing of keeps.  
 Keeps to be secured with No 7 x 25mm self-drilling countersunk screws 7223.  
 7155 keeps are not compatible with 102-202F outer frame.



Not to Scale

SHEET 520D Hi+ / 7B / 70

rev 1

19/11/13

# Rebated Double Door Adaptor Preps for 7152 and 7155 Keeps

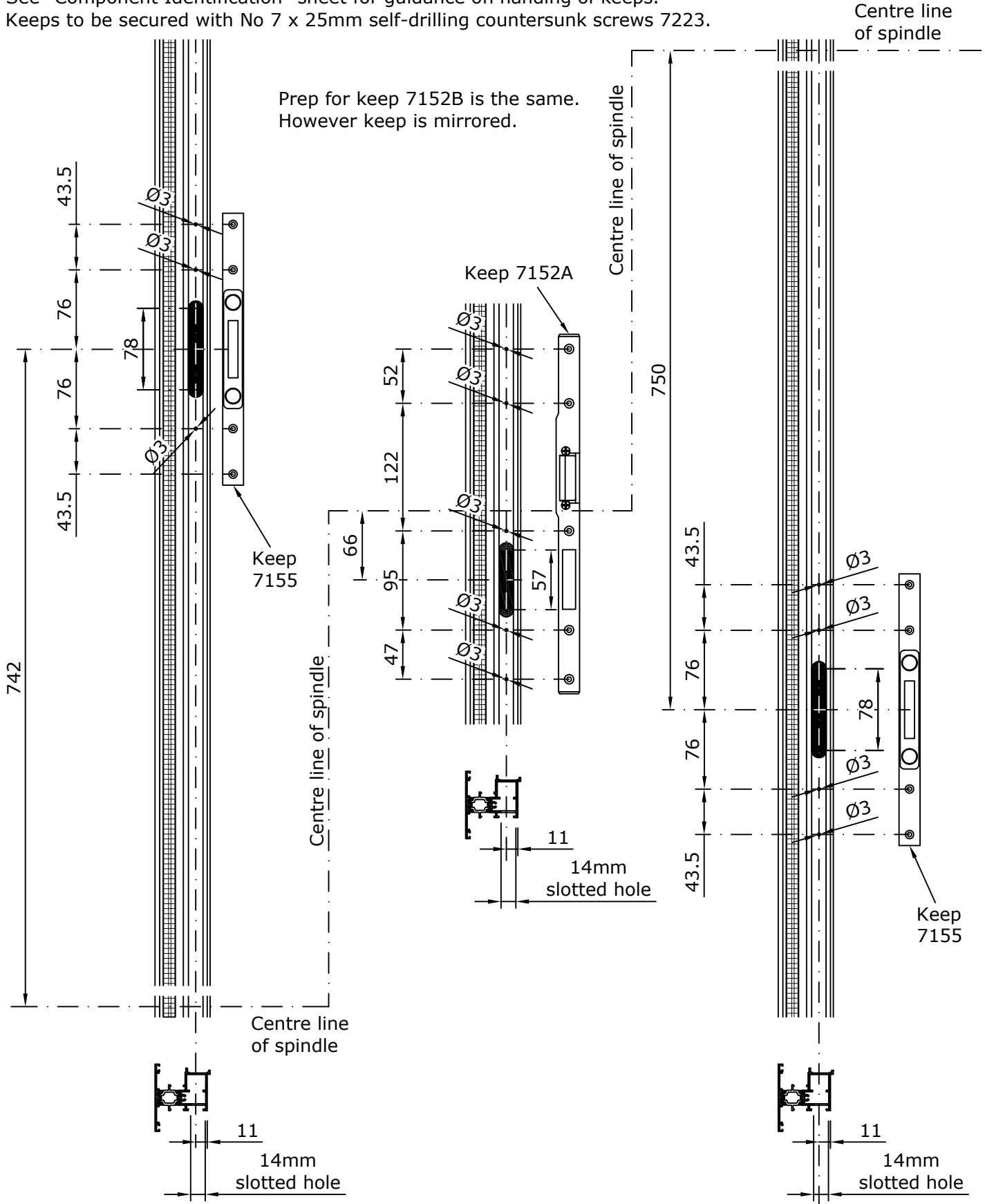


System 5-20D/Hi+

DOOR SYSTEM

Suitable for Lock 7165

See "Component Identification" sheet for guidance on handing of keeps.  
Keeps to be secured with No 7 x 25mm self-drilling countersunk screws 7223.



Prep for keep 7152B is the same.  
However keep is mirrored.

Not to Scale

# Outer Frame and Rebated Double Door Adaptor Prep for 7048 Keep

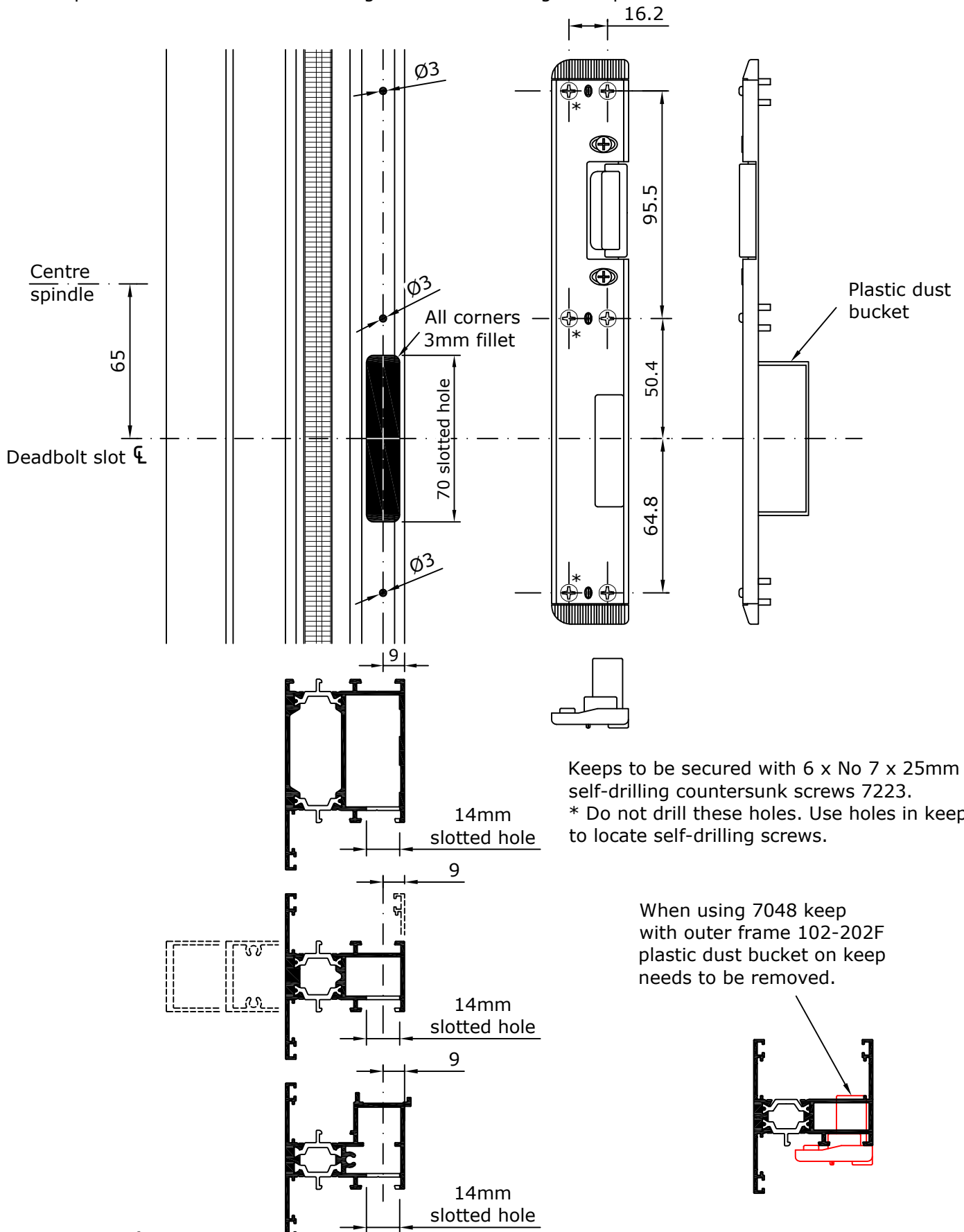


**System 5-20D/Hi+**

DOOR SYSTEM

Suitable for Locks 7094 and 7095

See "Component Identification" sheet for guidance on handing of keeps.



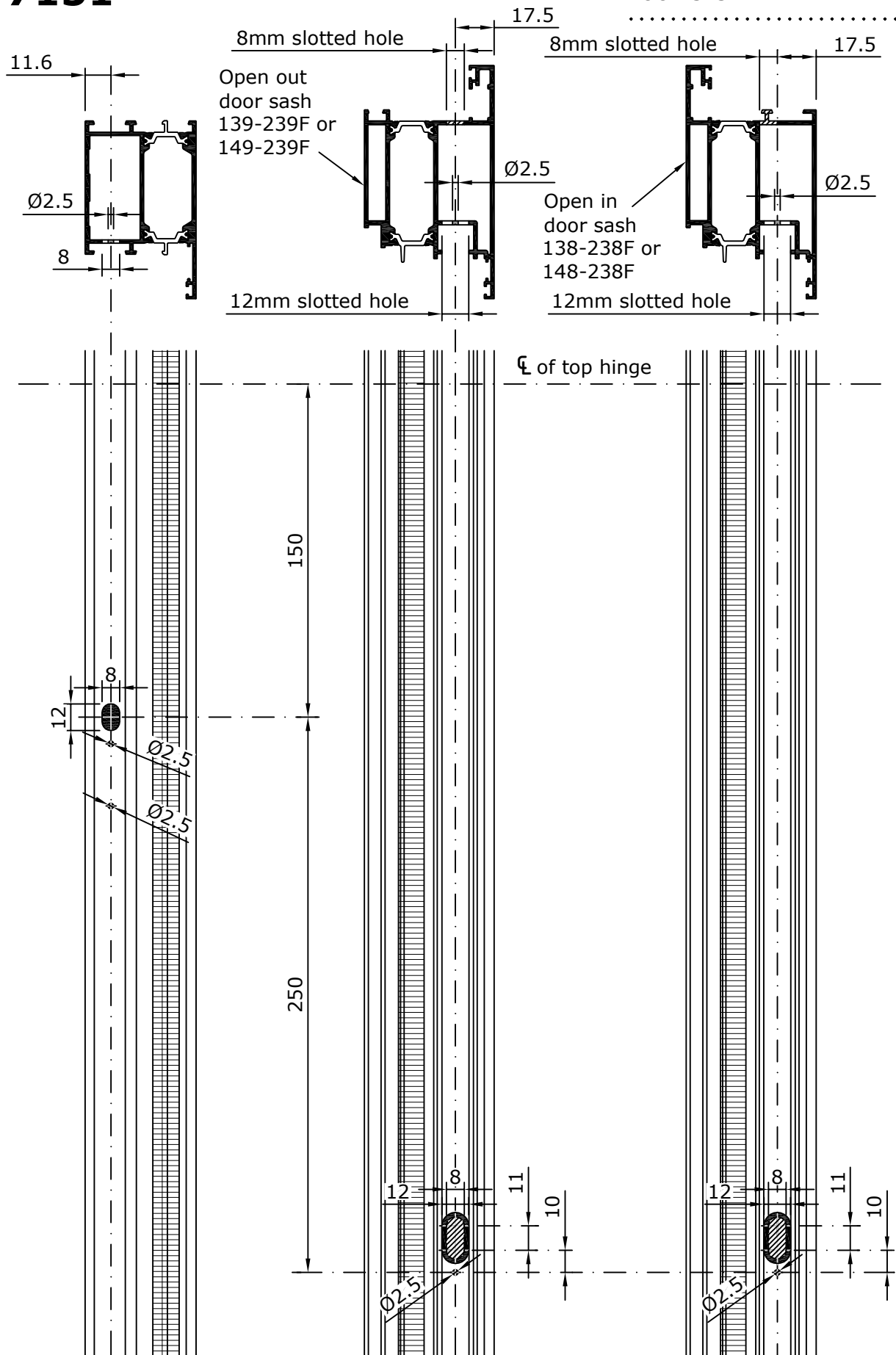
Not to Scale

# Standard Door Prep for 7153B Cable Transition for Locks 7150 and 7151



System 5-20D/Hi+

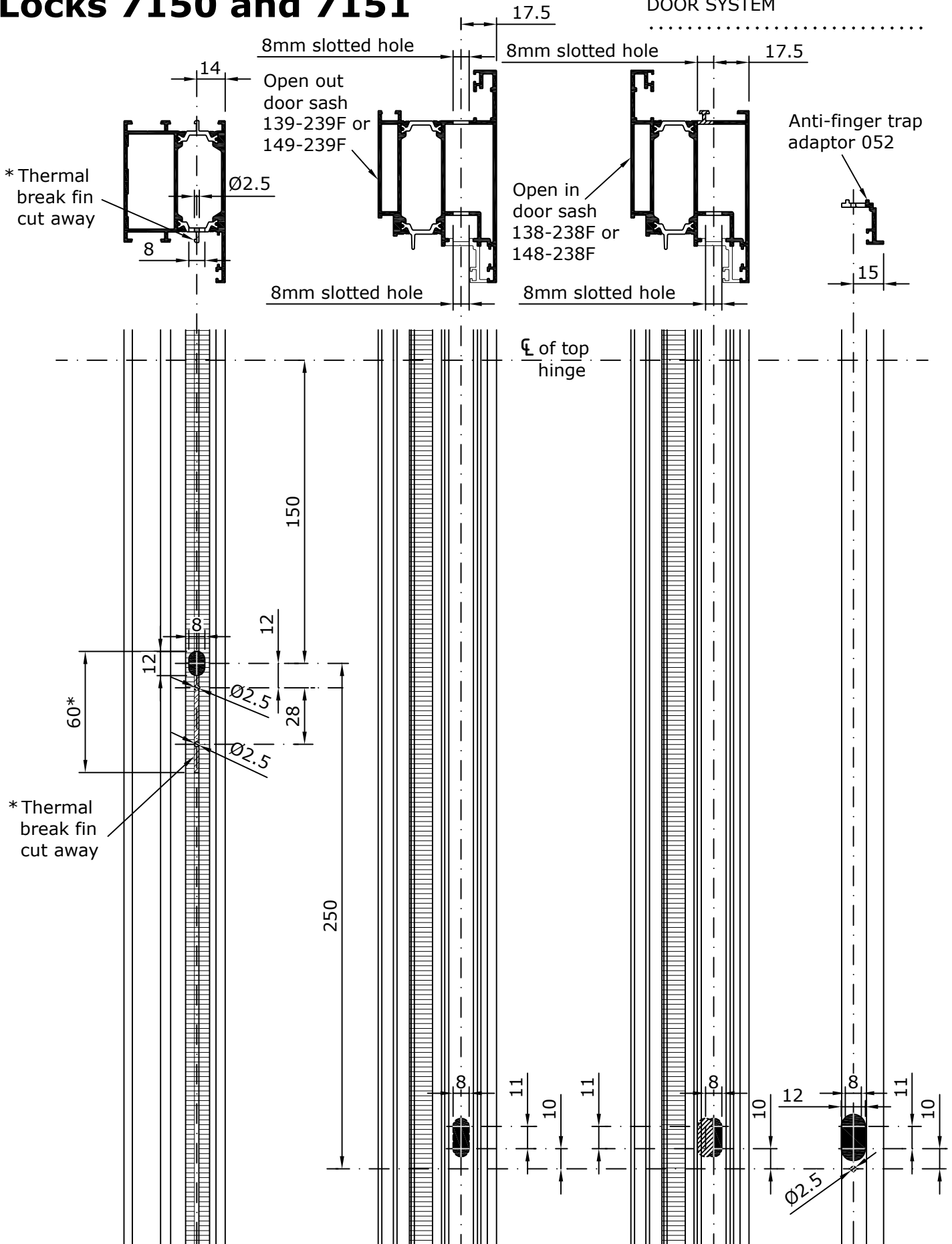
DOOR SYSTEM



Not to Scale

# Anti-fingertrap Door Prep for 7153B Cable Transition for Locks 7150 and 7151

**m<sup>®</sup>**  
**System 5-20D/Hi+**  
DOOR SYSTEM



Not to Scale

SHEET 520D Hi+ / 7B / 110  
rev 2 24/02/14

# Details for 7153B Cable Transition for Locks 7150 and 7151

Open-In Door Sash 138-238F or 148-238F

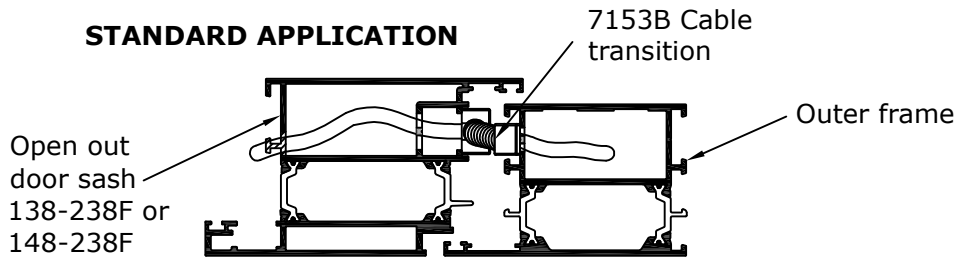
See sheets "Prep for 7153B Cable Transition for Locks 7150 and 7151" for relevant dimensions.



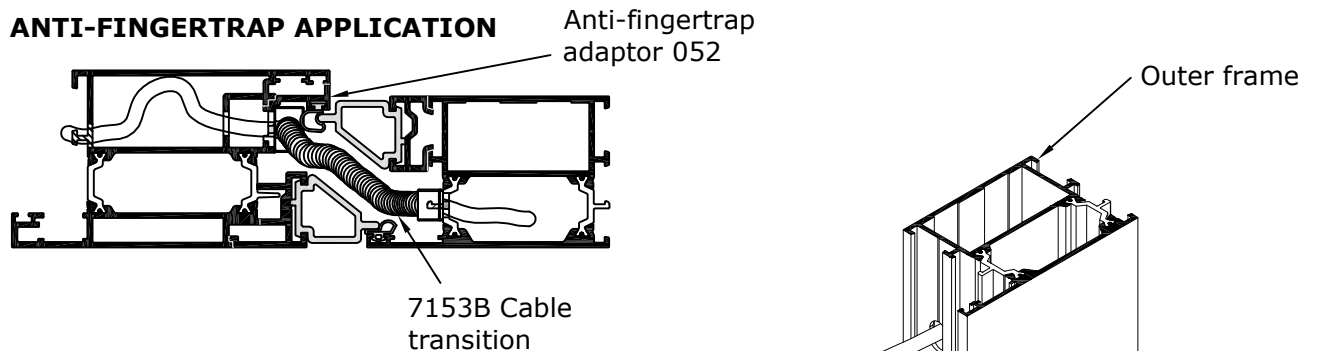
**System 5-20D/Hi+**

DOOR SYSTEM

## STANDARD APPLICATION



## ANTI-FINGERTRAP APPLICATION



No 6 x 19mm countersunk self-tapping screw 7222

Open out door sash 138-238F or 148-238F



7153B Cable transition

No 6 x 'L' mm countersunk self-tapping screw  
 Standard application  
 7258 screw length 'L' = 32mm  
 Anti-fingertrap application  
 7238 screw length 'L' = 9.5mm

Not to Scale

# Details for 7153B Cable Transition for Locks 7150 and 7151



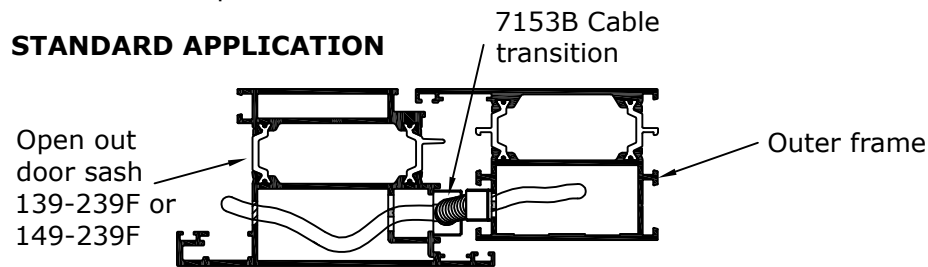
**System 5-20D/Hi+**

DOOR SYSTEM

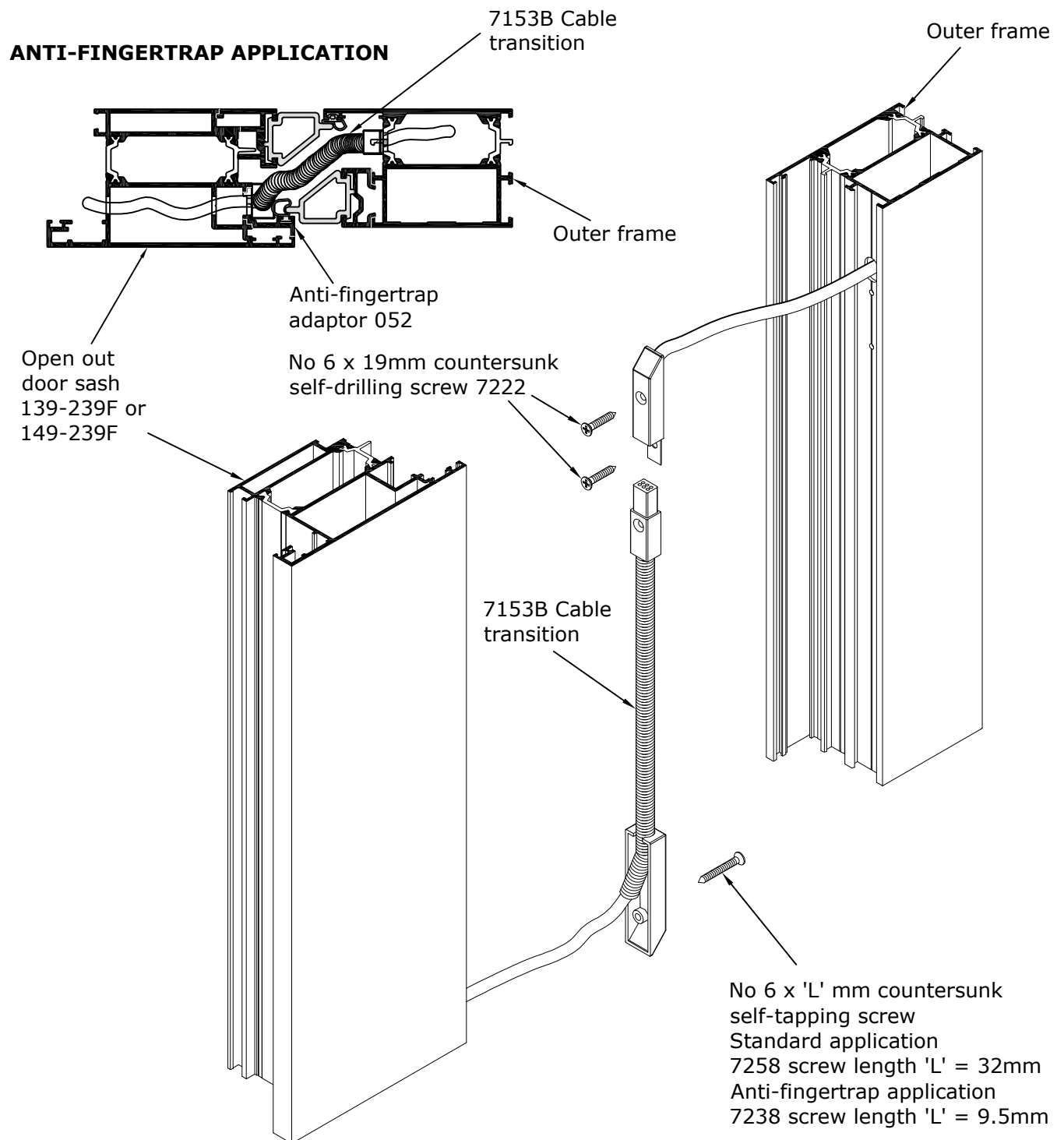
## Open-Out Door Sash 139-239F or 149-239F

See sheets "Prep for 7153B Cable Transition for Locks 7150 and 7151" for relevant dimensions.

### STANDARD APPLICATION



### ANTI-FINGERTRAP APPLICATION



Not to Scale

SHEET 520D Hi+ / 7B / 130

rev 3

05/03/14

# 7064 Shoot Bolt Details for Rebated Head and Threshold



**System 5-20D/Hi+**

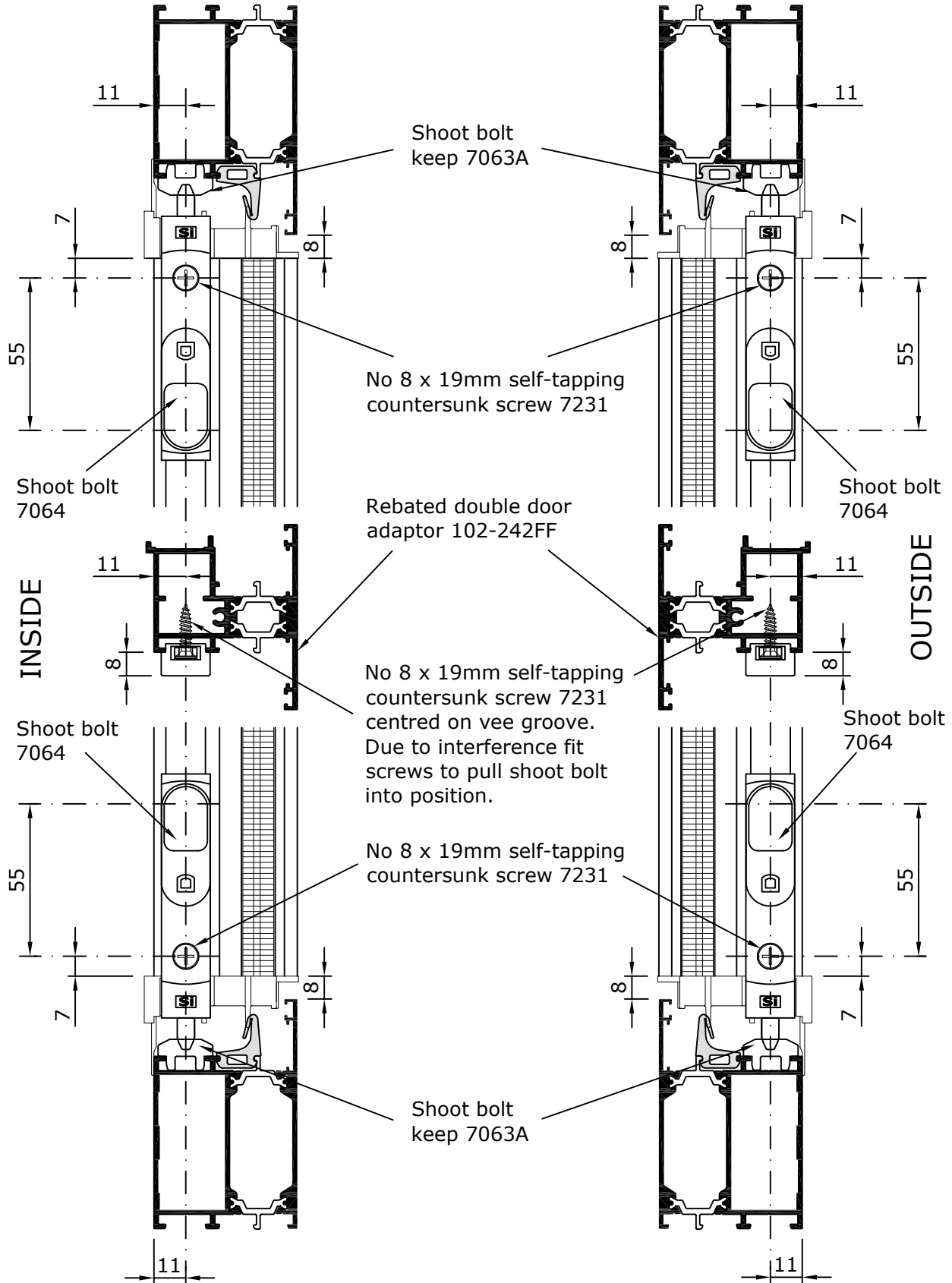
DOOR SYSTEM

All fixings must be sealed using HR50328A sealant.

Shoot bolt 7064 to be secured with 2 No 8 x 19mm self tapping countersunk screws 7231.

**OPEN IN DOOR**

**OPEN OUT DOOR**



Scale 1:2



# 7063A Shoot Bolt Keep Location for 7064 Shoot Bolt

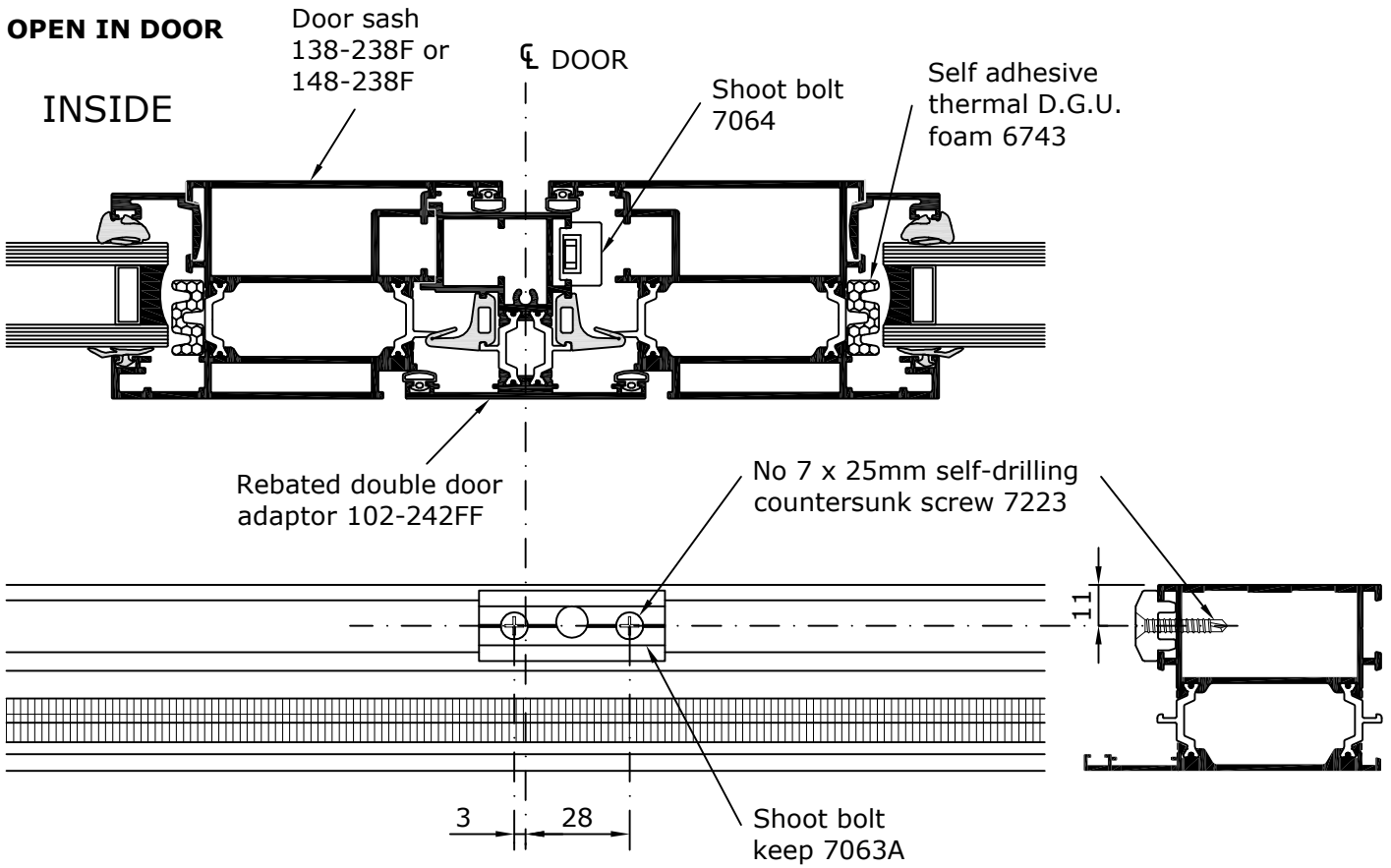
**System 5-20D/Hi+**  
 .....  
 DOOR SYSTEM  
 .....

NO BOTTOM KEEP REQUIRED FOR FLUSH OR SEMI-REBATED LOW THRESHOLD OPTIONS

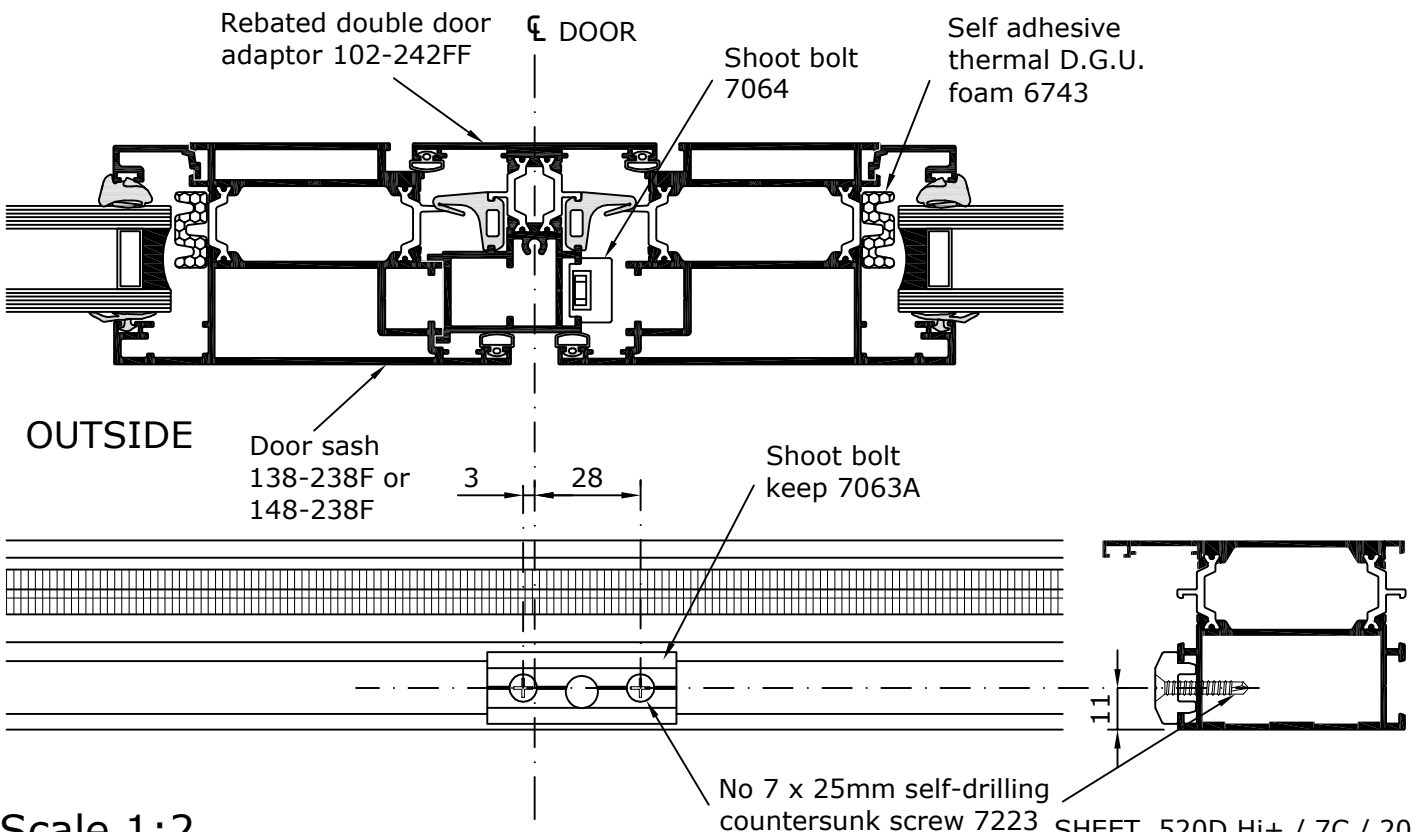
All fixings must be sealed using HR50328A sealant.

Keeps 7063A to be secured with 2 No 7 x 25mm self-drilling countersunk screws 7223.

## OPEN IN DOOR



## OPEN OUT DOOR



Scale 1:2

# 7062 Shoot Bolt Details for Flush Low Threshold



**System 5-20D/Hi+**

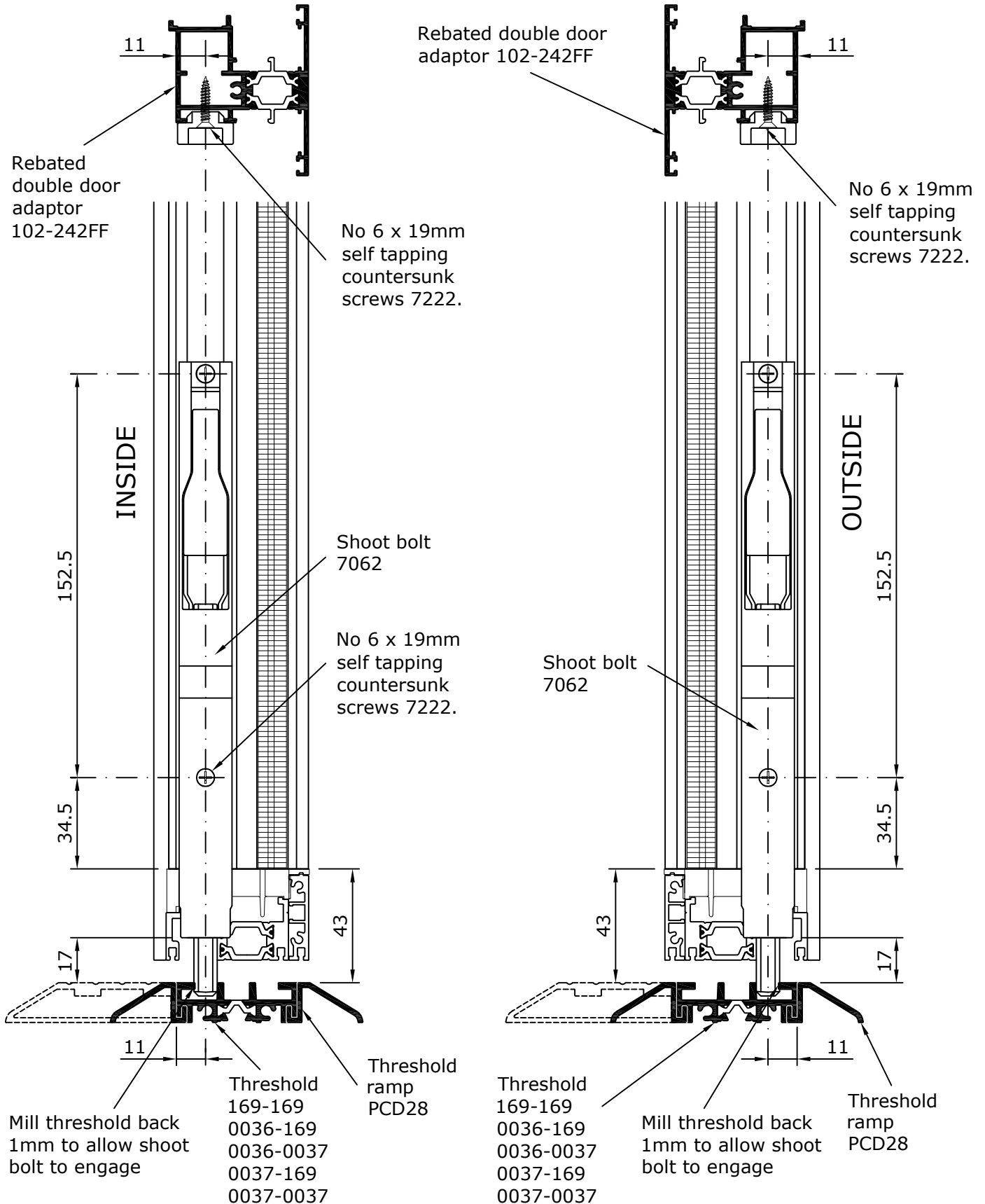
DOOR SYSTEM

All fixings must be sealed using HR50328A sealant.

Shoot bolt 7062 to be secured with 2 No 6 x 19mm self tapping countersunk screws 7222.

## OPEN IN DOOR

## OPEN OUT DOOR



Scale 1:2

# 7062 Shoot Bolt Details for Semi-Rebated Low Threshold



**System 5-20D/Hi+**

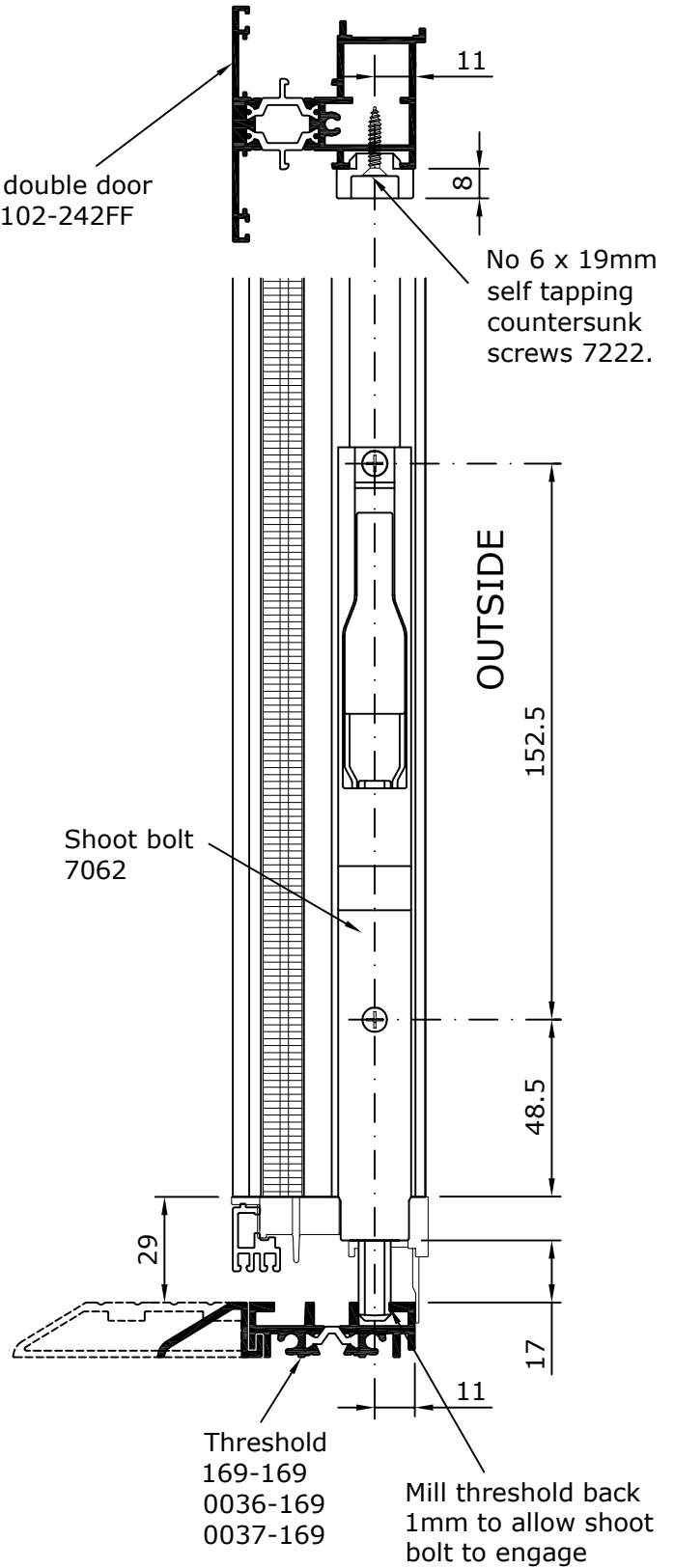
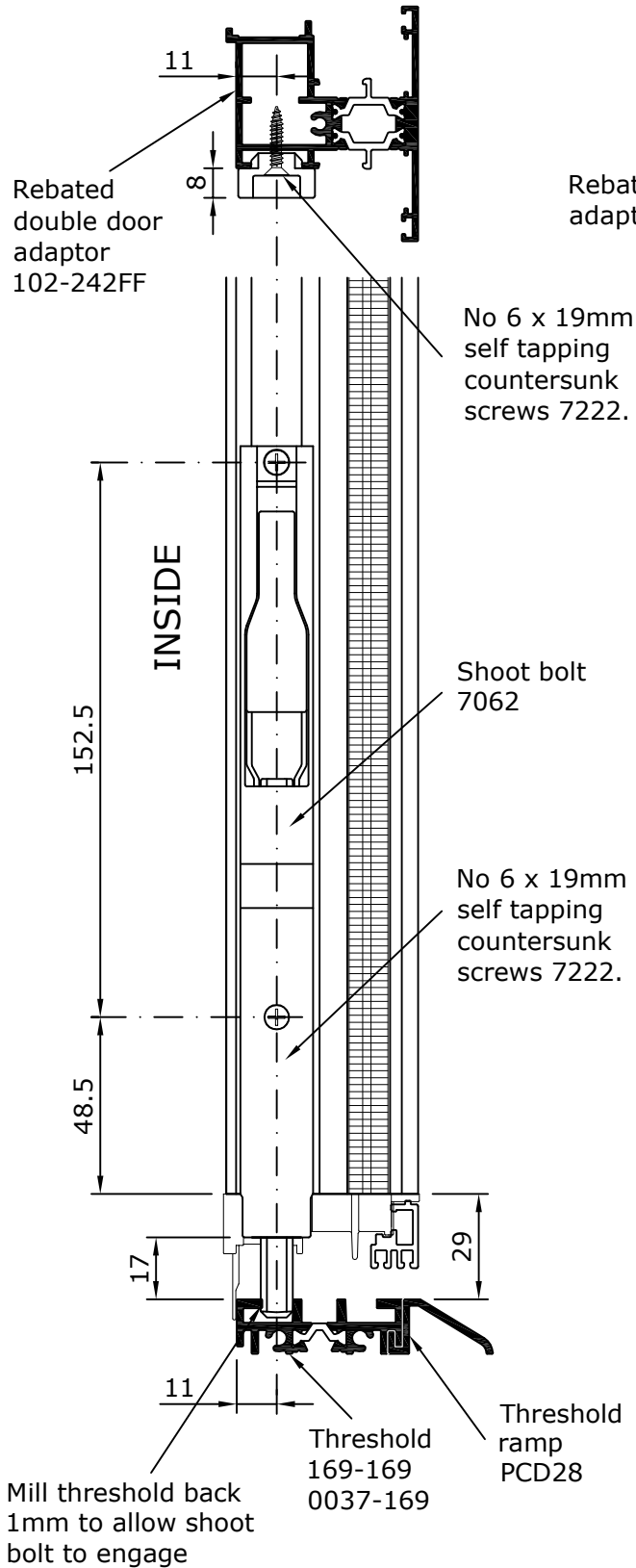
DOOR SYSTEM

All fixings must be sealed using HR50328A sealant.

Shoot bolt 7062 to be secured with 2 No 6 x 19mm self tapping countersunk screws 7222.

## OPEN IN DOOR

## OPEN OUT DOOR



Scale 1:2

SHEET 520D Hi+ / 7C / 40

rev 0

16/09/13

# 7062 Shoot Bolt Details for Rebated Head



**System 5-20D/Hi+**

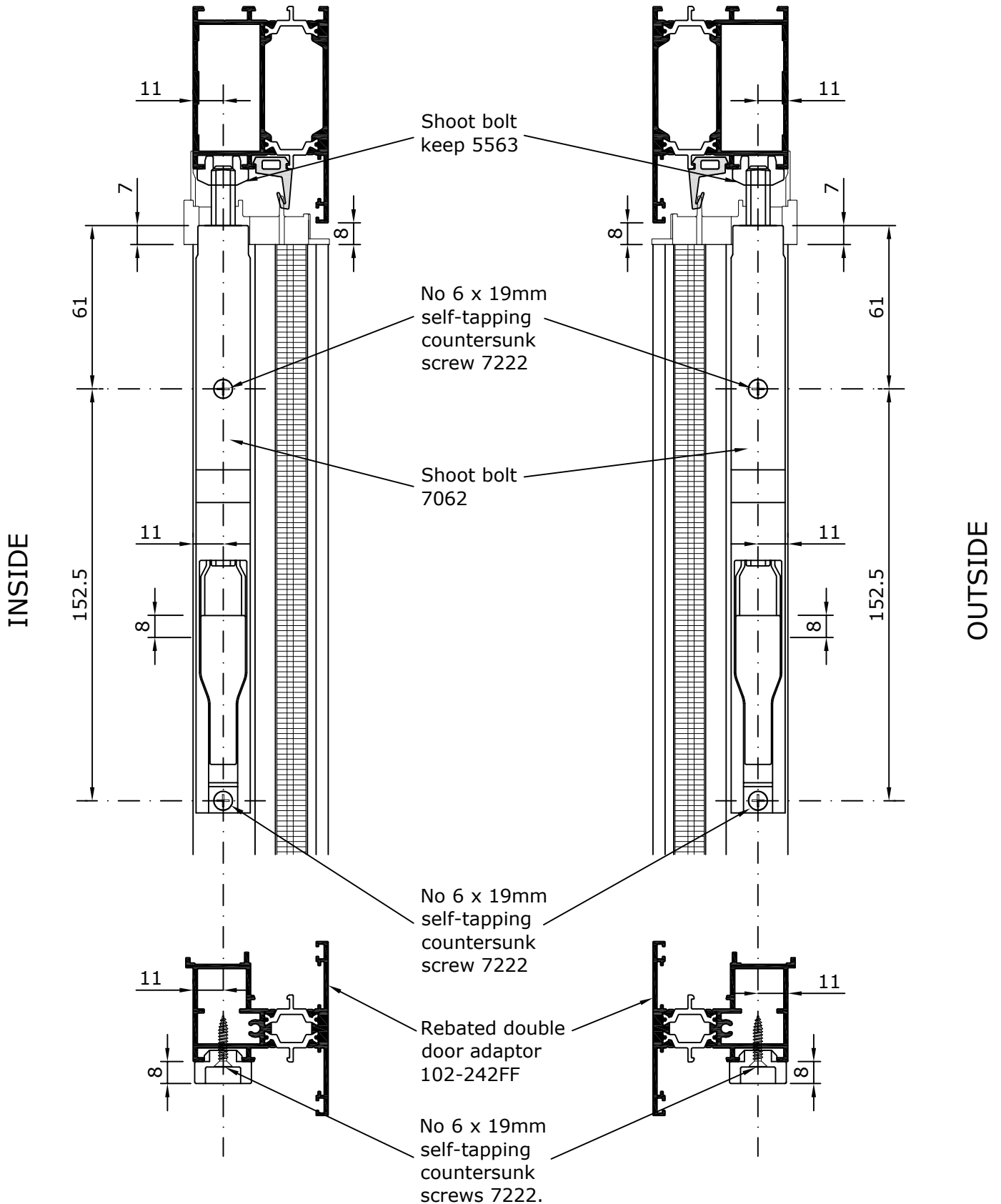
DOOR SYSTEM

All fixings must be sealed using HR50328A sealant.

Shoot bolt 7062 to be secured with 2 No 6 x 19mm self tapping countersunk screws 7222.

**OPEN IN DOOR**

**OPEN OUT DOOR**



Scale 1:2

SHEET 520D Hi+ / 7C / 50

rev 1

12/11/13

# 7194 Shoot Bolt Details for Rebated Head

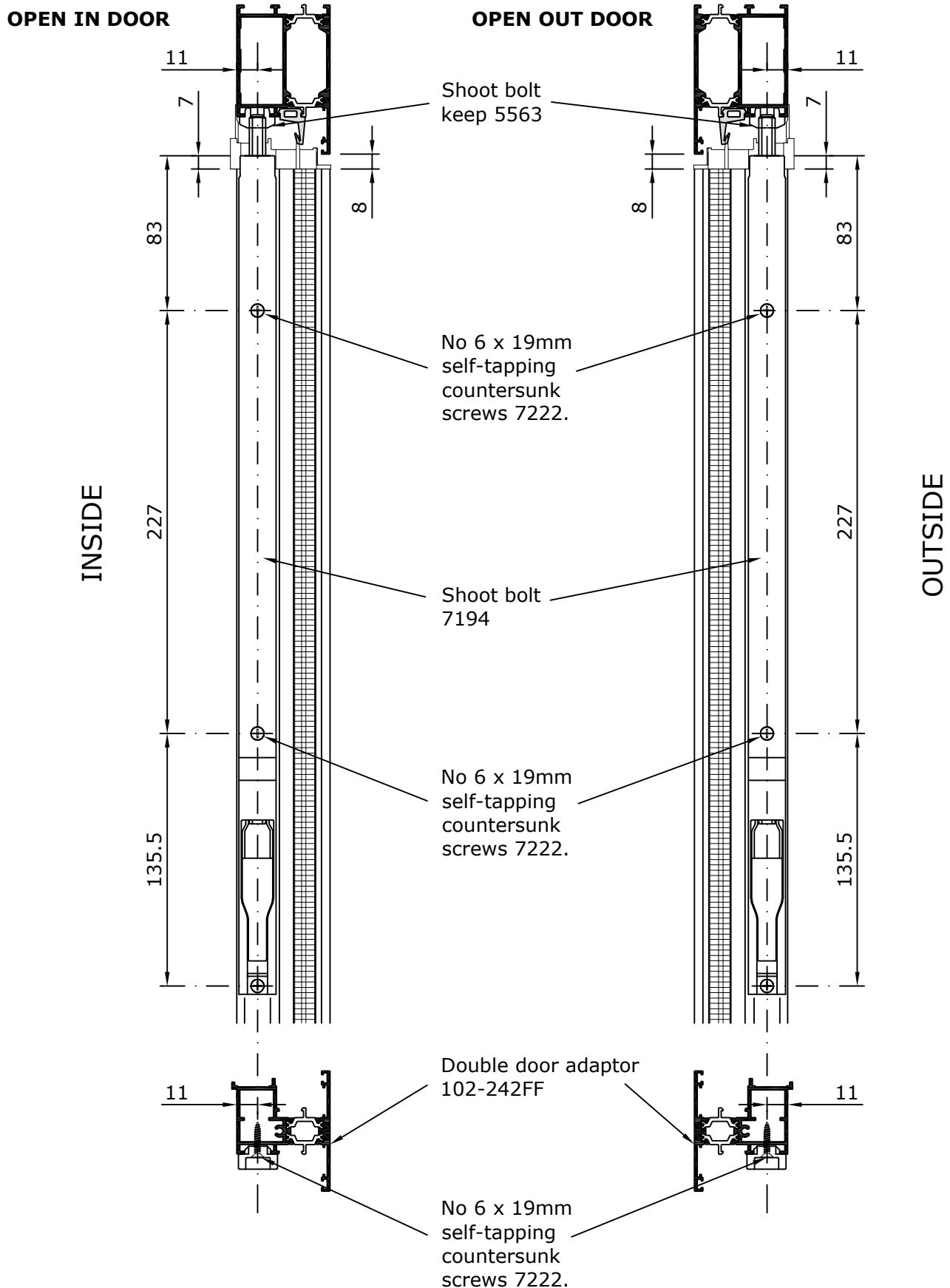


**System 5-20D/Hi+**

DOOR SYSTEM

All fixings must be sealed using HR50328A sealant.

Shoot bolt 7194 to be secured with 3 No 6 x 19mm self tapping countersunk screws 7222.



Scale 1:3

# 5563 Shoot Bolt Keep Location for 7062 or 7194 Shoot Bolt



**System 5-20D/Hi+**

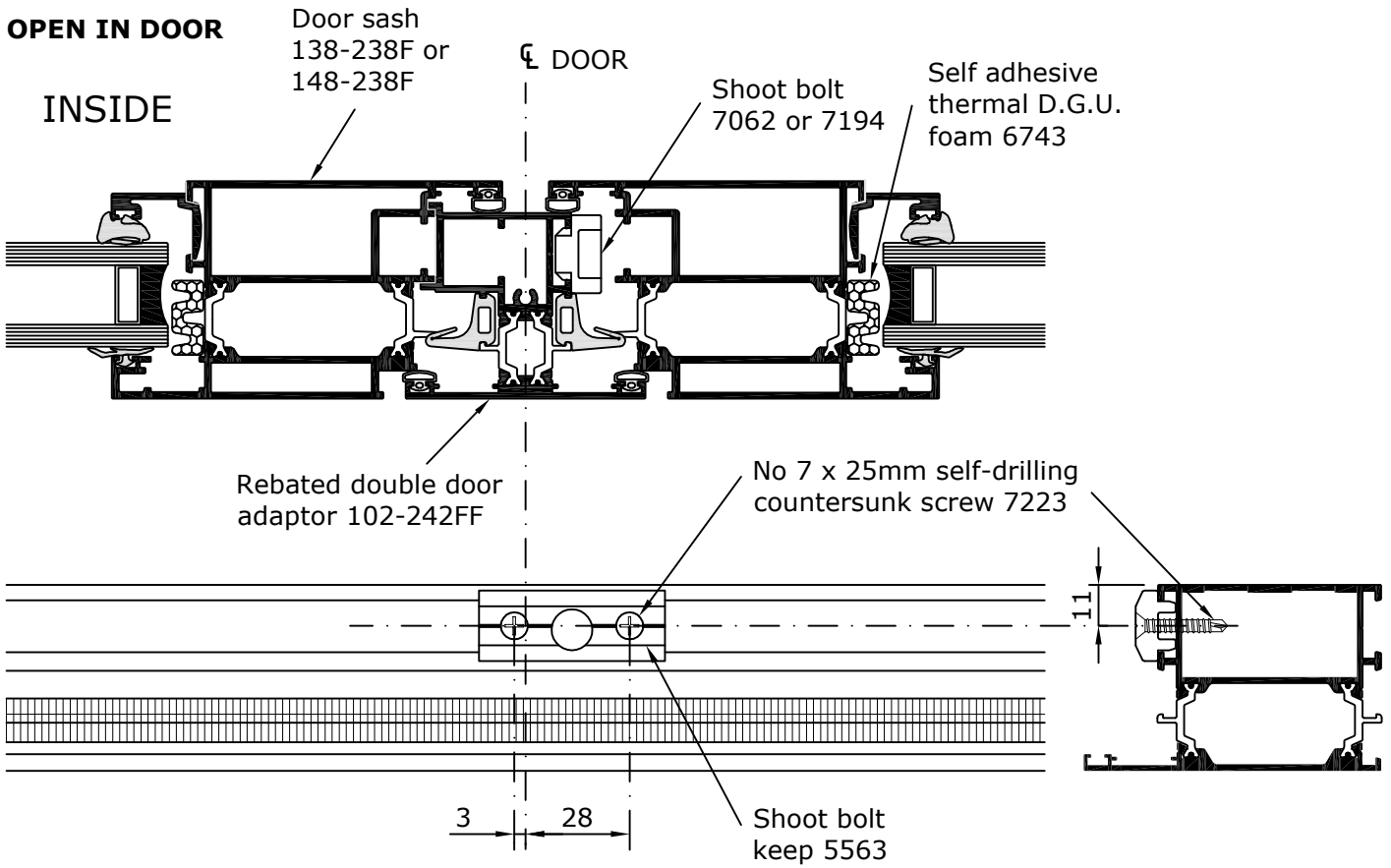
DOOR SYSTEM

NO BOTTOM KEEP REQUIRED FOR FLUSH OR SEMI-REBATED LOW THRESHOLD OPTIONS

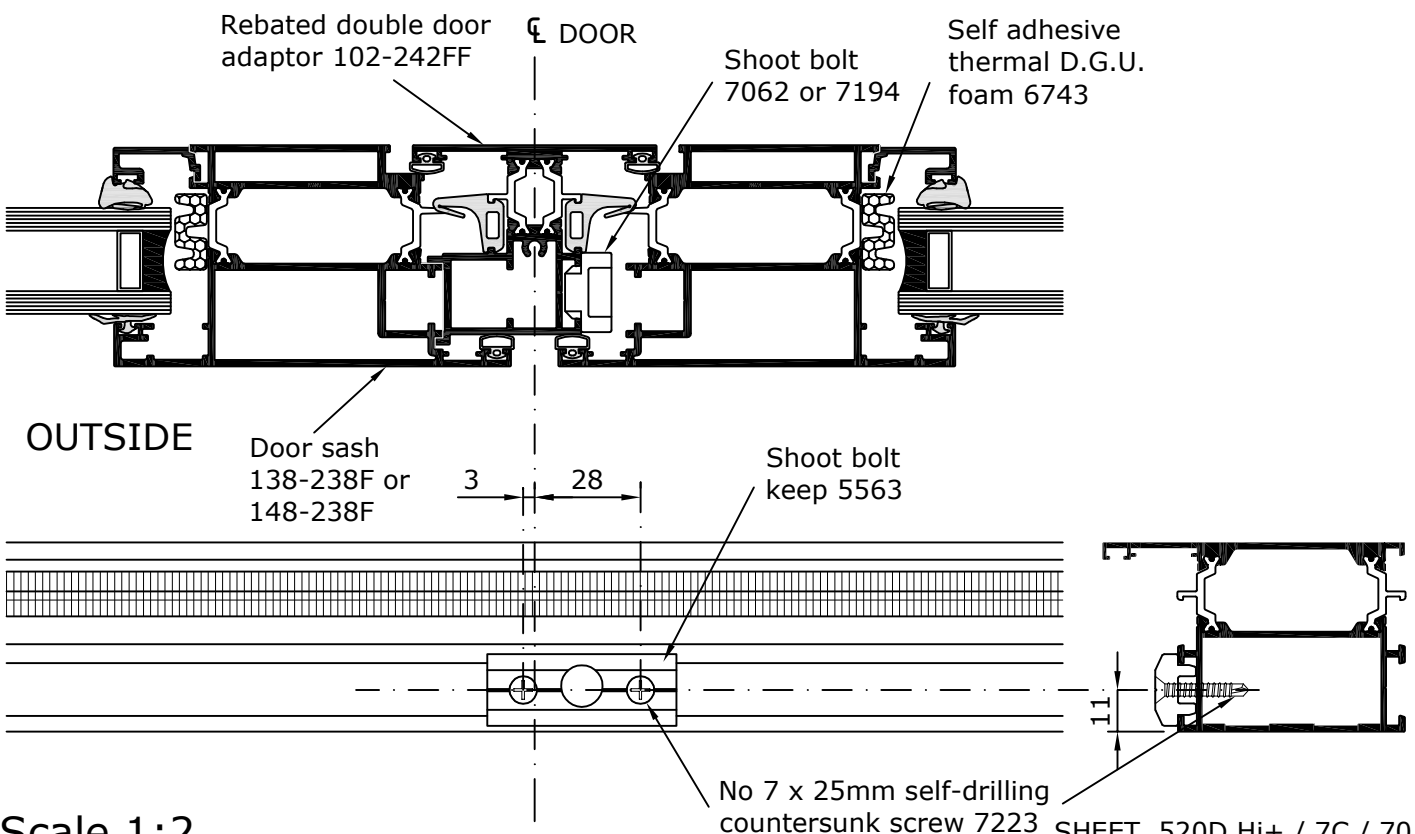
All fixings must be sealed using HR50328A sealant.

Keeps 5563 to be secured with 2 No 7 x 25mm self-drilling countersunk screws 7223.

## OPEN IN DOOR



## OPEN OUT DOOR

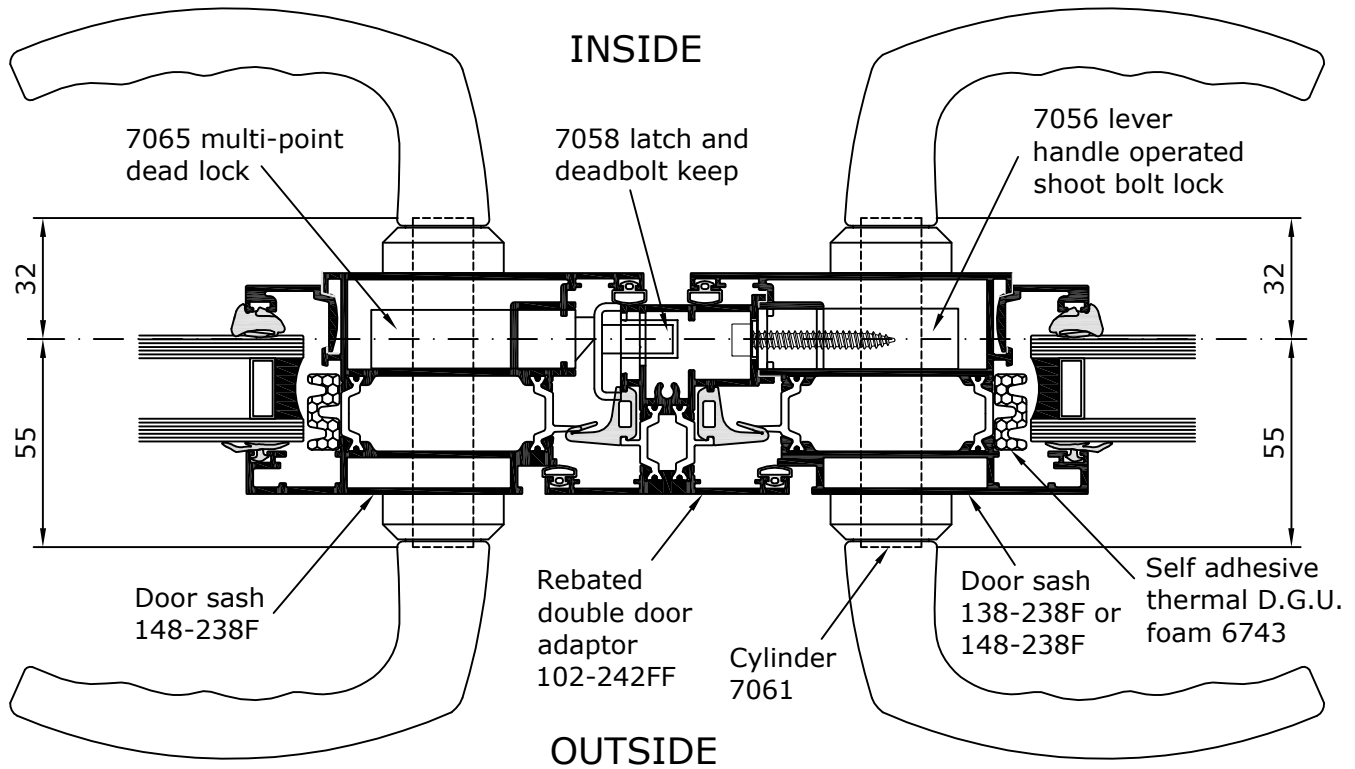


Scale 1:2

# Handle and Lock Details for Double Door with 7056 Lever Handle Operated Shoot Bolt

Open-In Doors

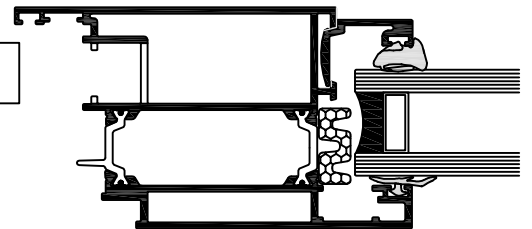
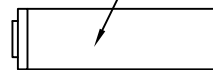
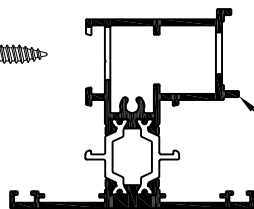
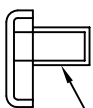
**m<sup>t</sup>**  
**System 5-20D/Hi+**  
 .....  
 DOOR SYSTEM  
 .....



SD40 grommet to cover Ø11mm access holes where visible

No 10 x 38mm cap head stainless steel self tapping screws 7263

7056 lever handle operated shoot bolt lock



7058 latch and deadbolt keep

Rebated double door adaptor 102-242FF

Rebated double door adaptor 102-242FF to be prepped to accommodate master lock keep 7058, with additional holes to facilitate fixing 102-242FF to slave sash via holes in lever handle operated shoot bolt lock.

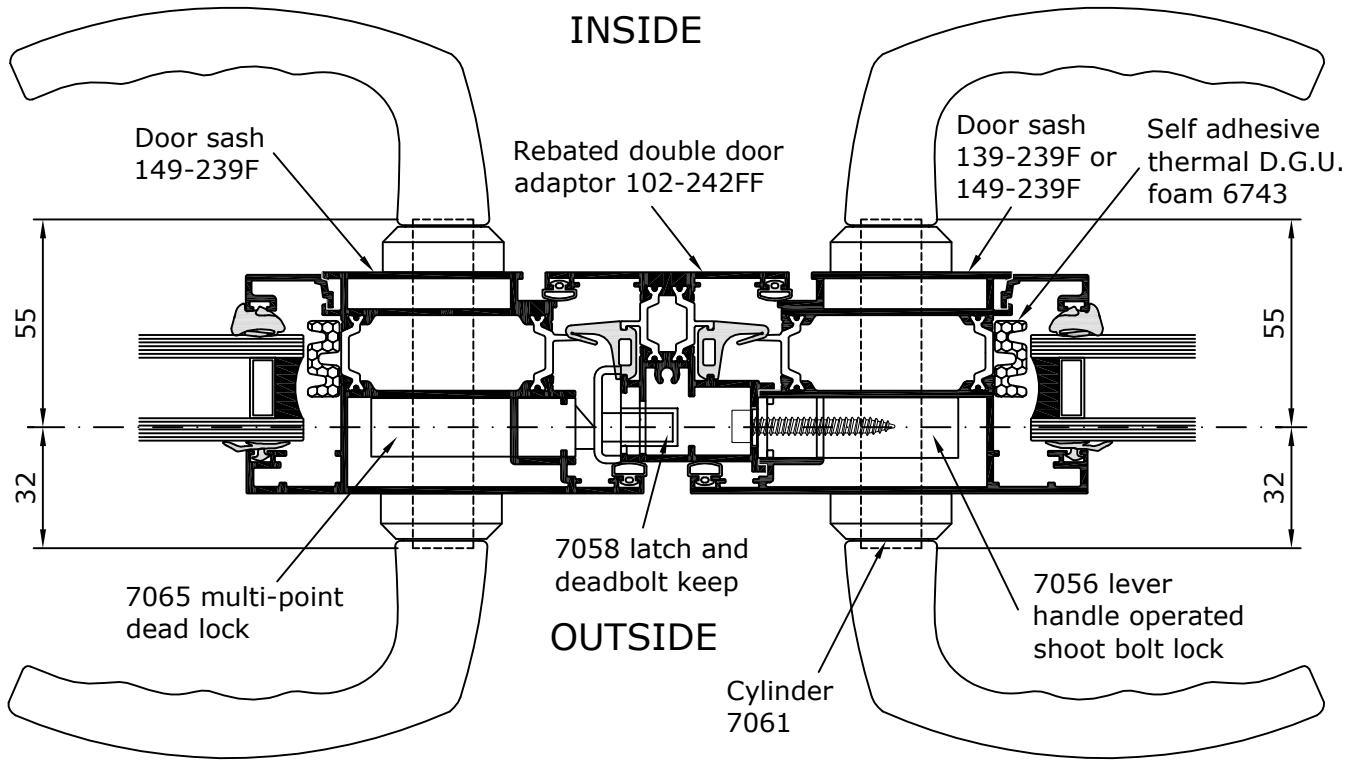
Door sash 138-238F or 148-238F

Scale 1:2

# Handle and Lock Details for Double Door with 7056 Lever Handle Operated Shoot Bolt

## Open-Out Doors

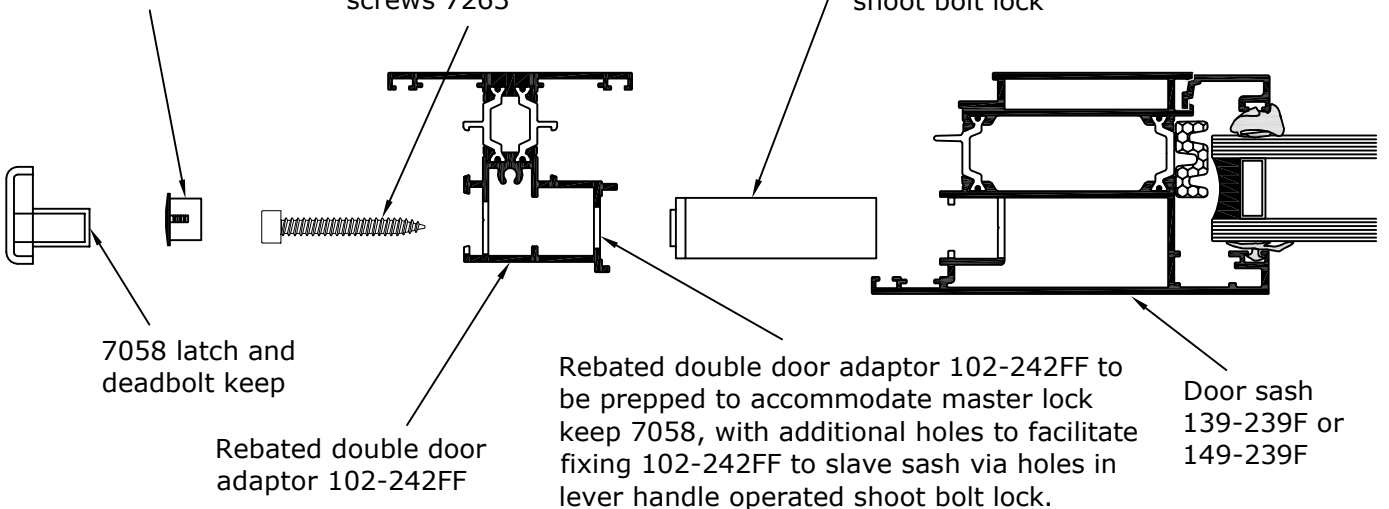
**m<sup>t</sup>**  
**System 5-20D/Hi+**  
 .....  
 DOOR SYSTEM  
 .....



SD40 grommet to cover Ø11mm access holes where visible

No 10 x 38mm cap head stainless steel self tapping screws 7263

7056 lever handle operated shoot bolt lock

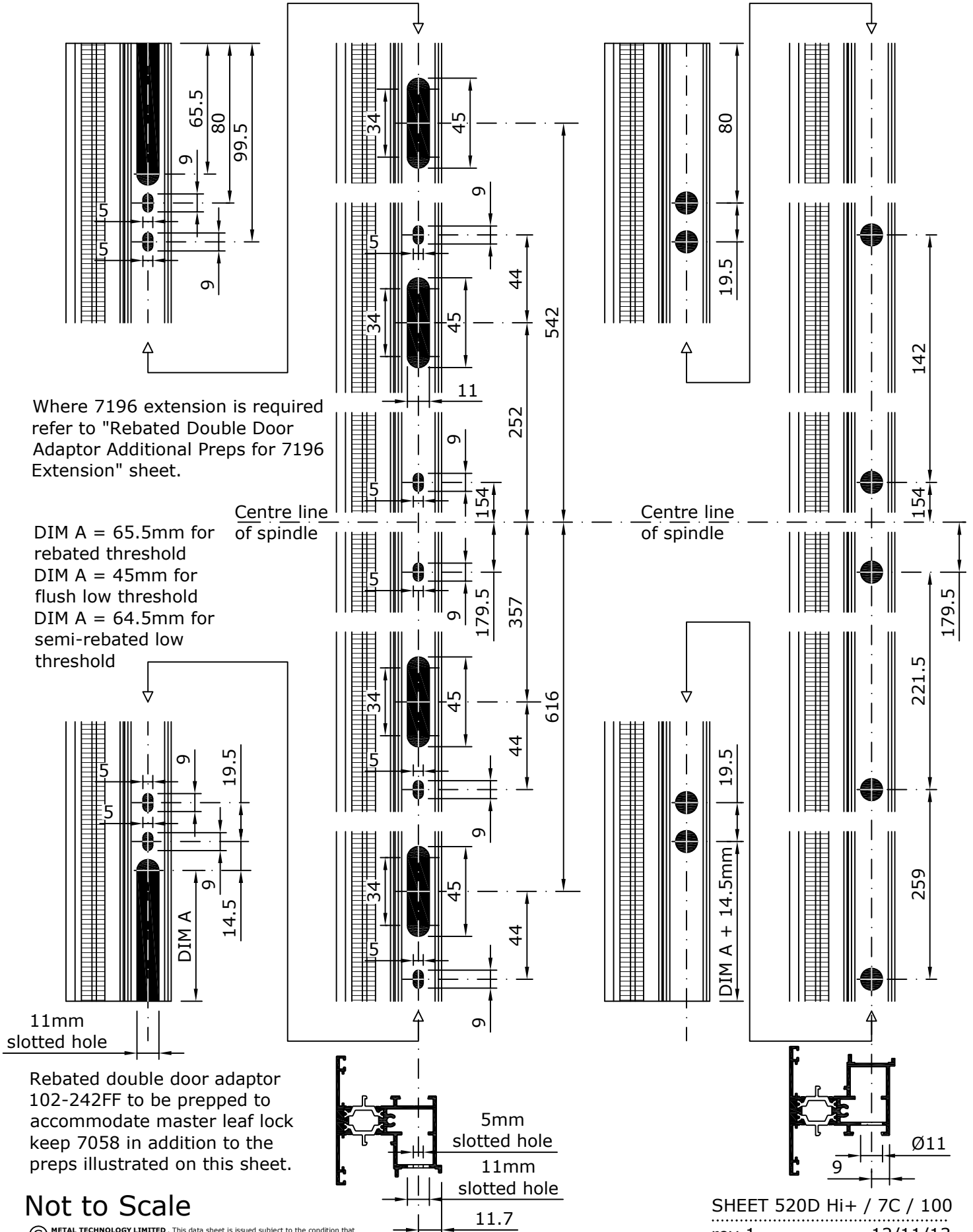


Scale 1:2



# Rebated Double Door Adaptor Preps for 7056 and 7057 Lever Handle Operated Shoot Bolts

Open-In and Open-Out Doors



Not to Scale

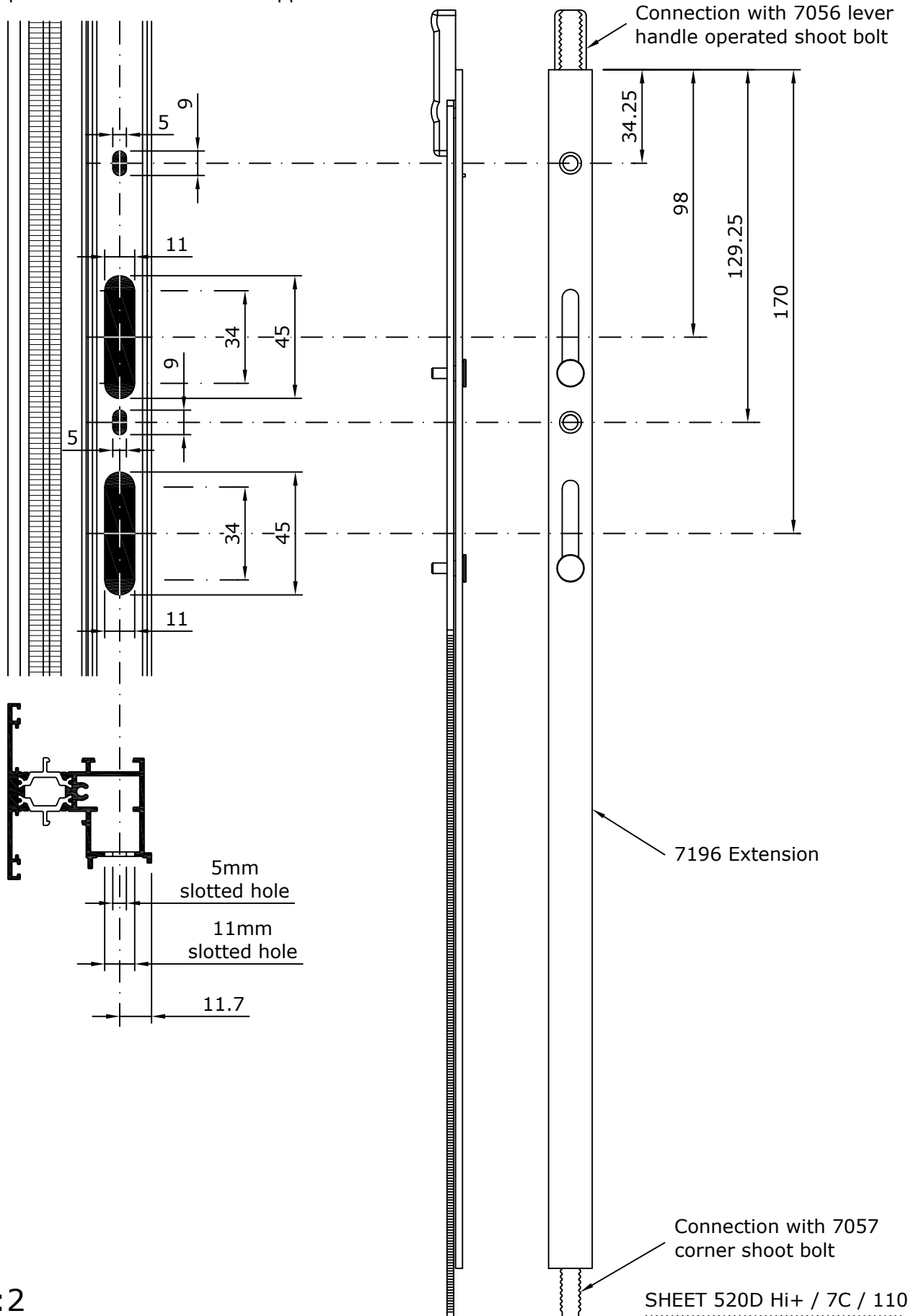
# Rebated Double Door Adaptor Additional Preps for 7196 Extension



**System 5-20D/Hi+**

DOOR SYSTEM

Where 7196 extension is required additional slotted holes must be routed in the rebate adaptor as shown. Orientate prep to suit head or threshold application.



Scale 1:2

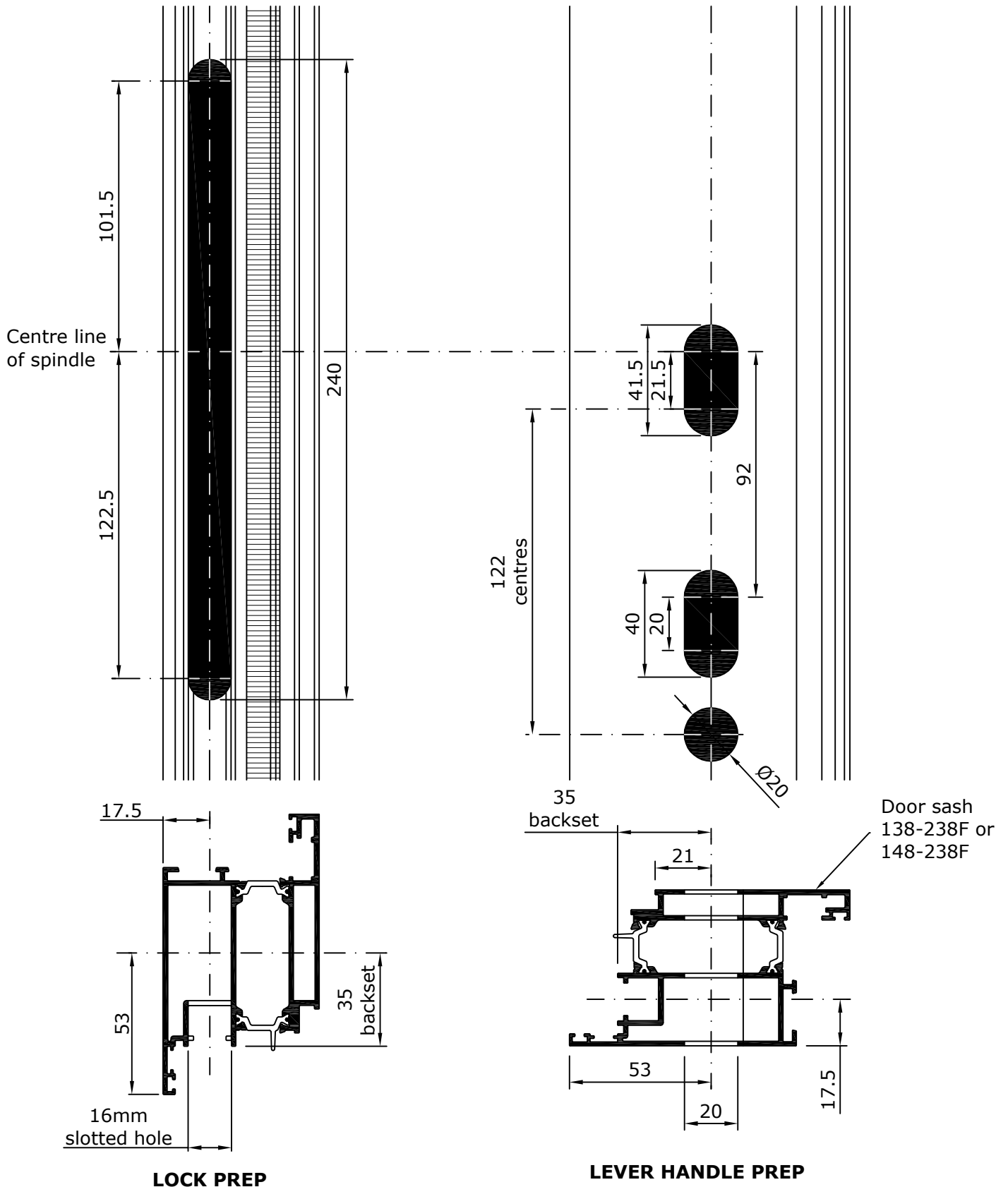
# Slave Door Preps for 7056 Lever Handle Operated Shoot Bolts

System 5-20D/Hi+

Open-In Door Sash 138-238F or 148-238F

DOOR SYSTEM

Lever handle operated shoot bolt lock to be fixed with 5 x No 7 x 25mm self-drilling countersunk screws 7223 located into pre-punched fixing holes in lock face.



Door sash  
138-238F or  
148-238F

**LOCK PREP**

**LEVER HANDLE PREP**

Scale 1:2

SHEET 520D Hi+ / 7C / 120

rev 1

12/11/13

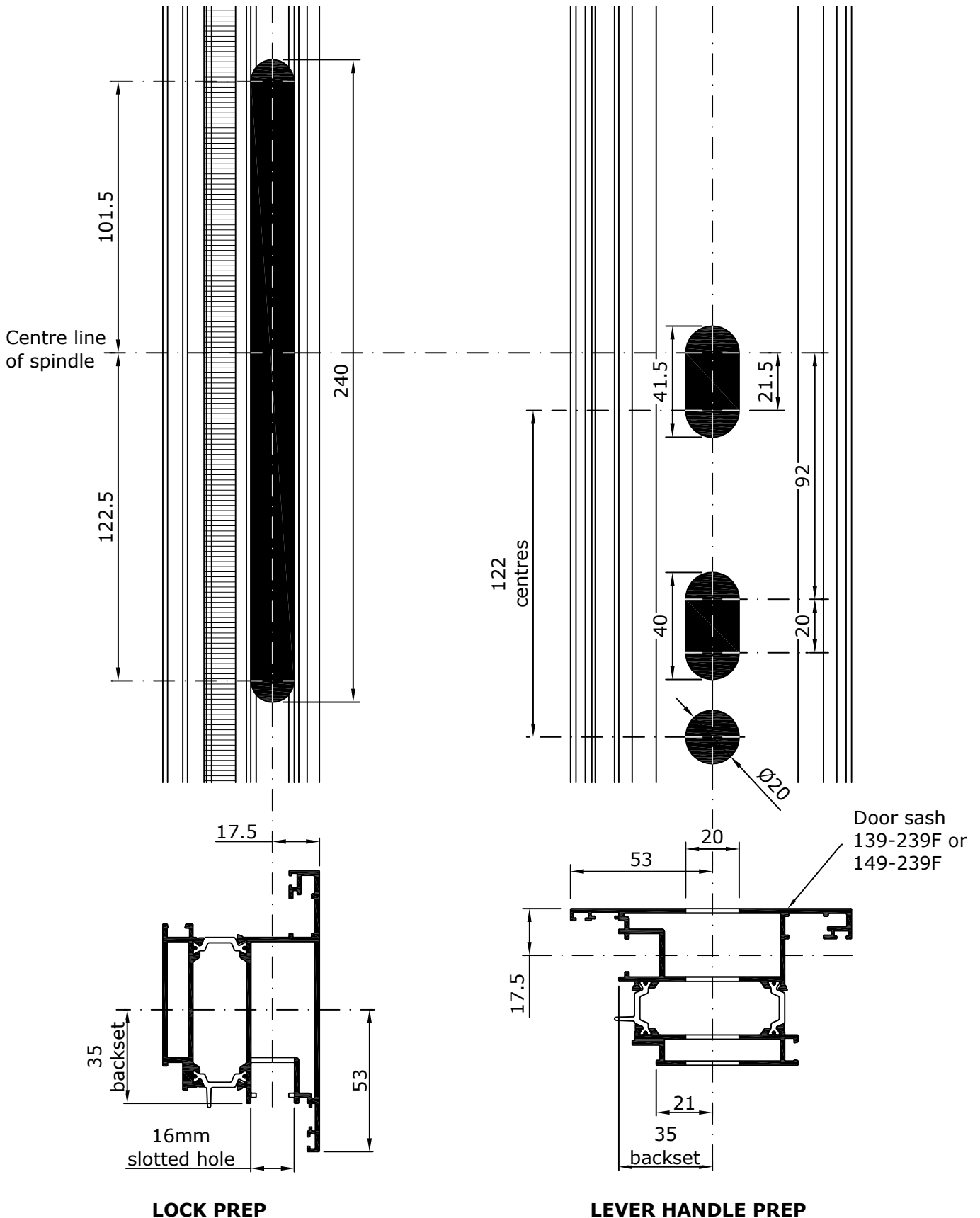
# Slave Door Preps for 7056 Lever Handle Operated Shoot Bolts

**System 5-20D/Hi+**

Open-Out Door Sash 139-239F or 149-239F

DOOR SYSTEM

Lever handle operated shoot bolt lock to be fixed with 5 x No 7 x 25mm self-drilling countersunk screws 7223 located into pre-punched fixing holes in lock face.



**LOCK PREP**

**LEVER HANDLE PREP**

Scale 1:2

SHEET 520D Hi+ / 7C / 130

rev 1

12/11/13

# 7057 Lever Handle Operated Shoot Bolt Details for Flush Low Threshold



**System 5-20D/Hi+**

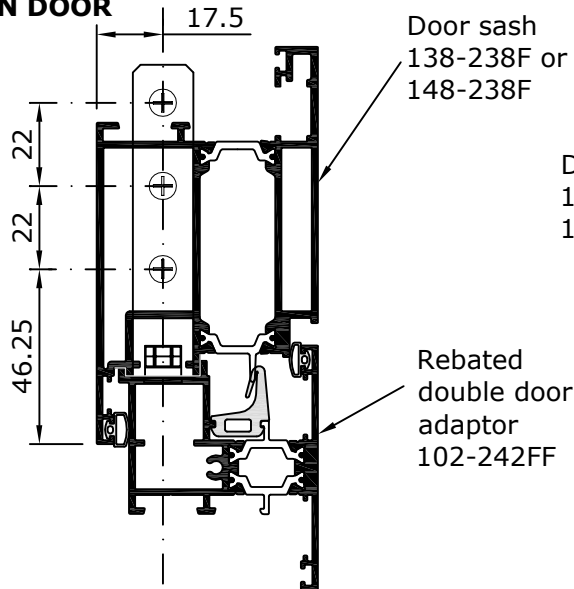
DOOR SYSTEM

All fixings must be sealed using HR50328A sealant.

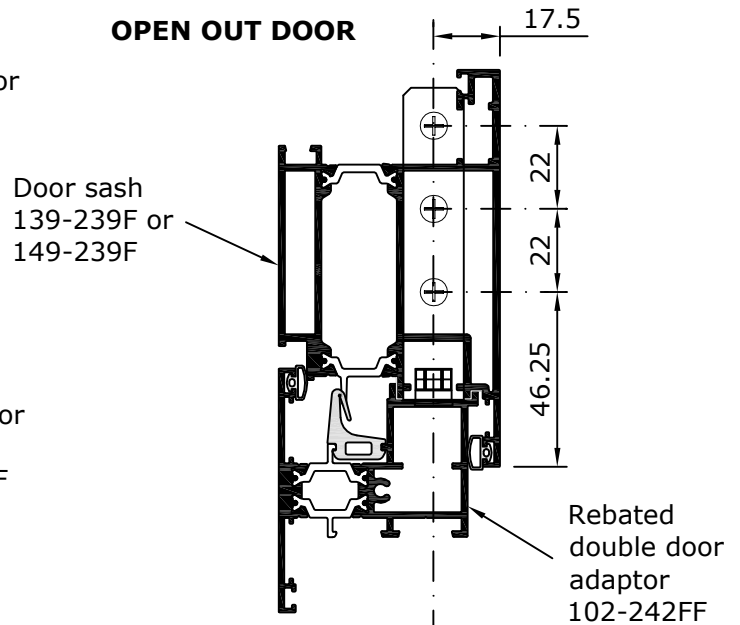
Shoot bolt 7057 to be secured with 5 No 7 x 25mm self-drilling countersunk screws 7223.

Refer to "7148 Shoot Bolt Keep Location for 7057 Lever Handle Operated Shoot Bolt - Security" for PAS 24 compliance.

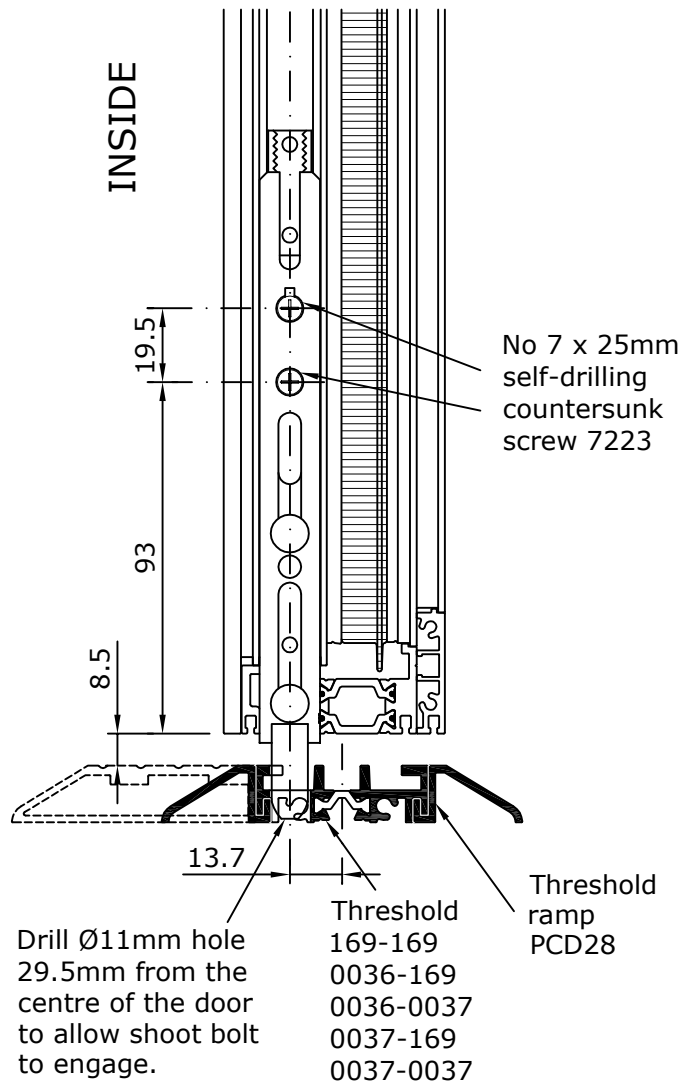
## OPEN IN DOOR



## OPEN OUT DOOR



INSIDE

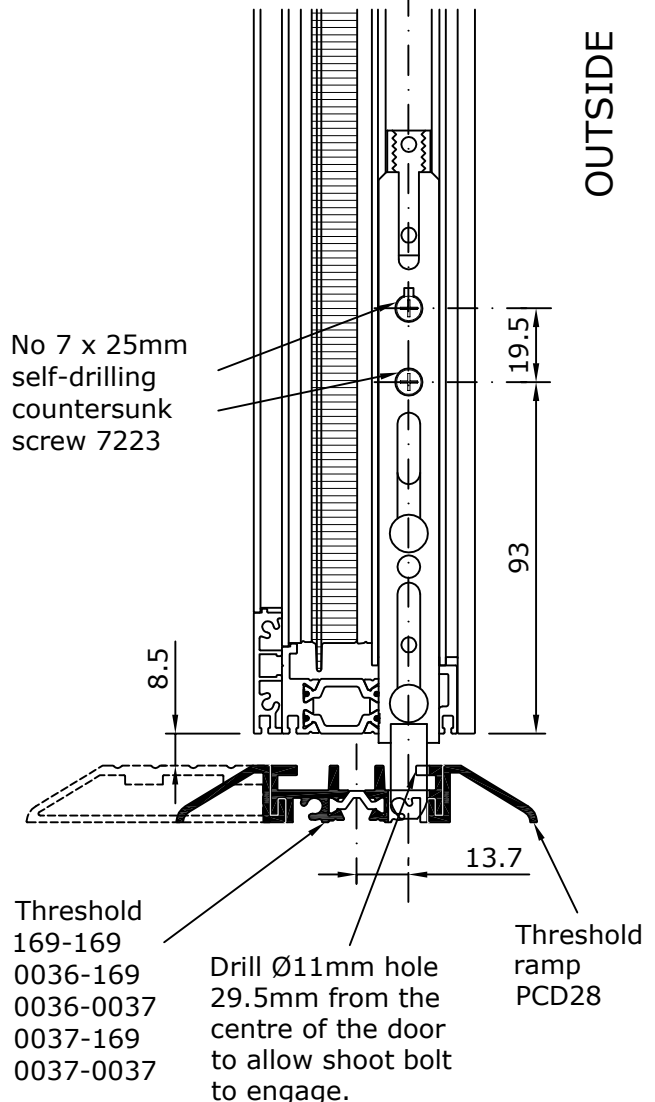


Drill Ø11mm hole  
29.5mm from the  
centre of the door  
to allow shoot bolt  
to engage.

Threshold  
169-169  
0036-169  
0036-0037  
0037-169  
0037-0037

Threshold  
ramp  
PCD28

OUTSIDE



Threshold  
169-169  
0036-169  
0036-0037  
0037-169  
0037-0037

Drill Ø11mm hole  
29.5mm from the  
centre of the door  
to allow shoot bolt  
to engage.

Threshold  
ramp  
PCD28

Scale 1:2

# 7057 Lever Handle Operated Shoot Bolt Details for Semi-Rebated Low Threshold



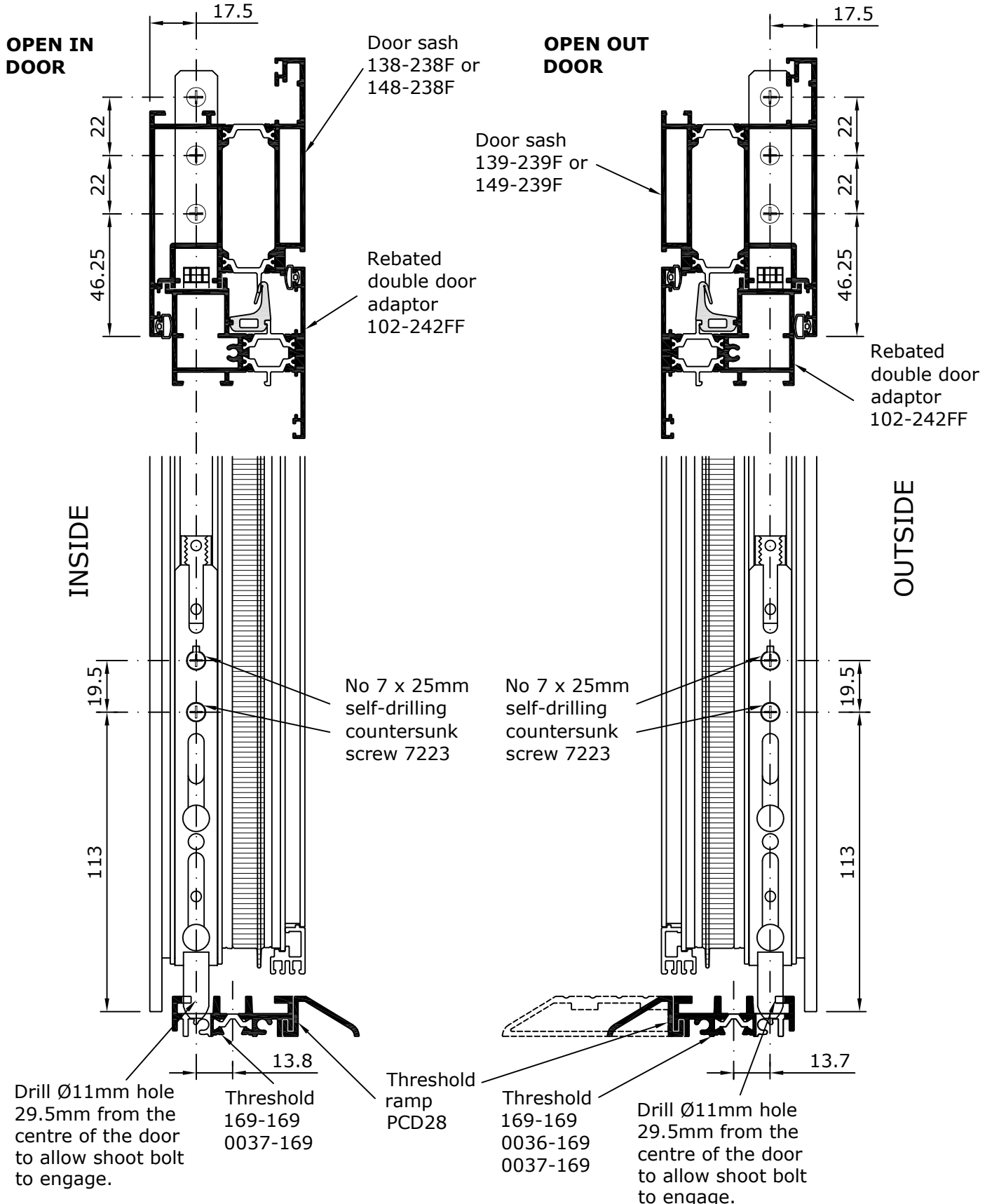
**System 5-20D/Hi+**

DOOR SYSTEM

All fixings must be sealed using HR50328A sealant.

Shoot bolt 7057 to be secured with 5 No 7 x 25mm self-drilling countersunk screws 7223.

Refer to "7148 Shoot Bolt Keep Location for 7057 Lever Handle Operated Shoot Bolt - Security" for PAS 24 compliance.



Scale 1:2

SHEET 520D Hi+ / 7C / 150

rev 1

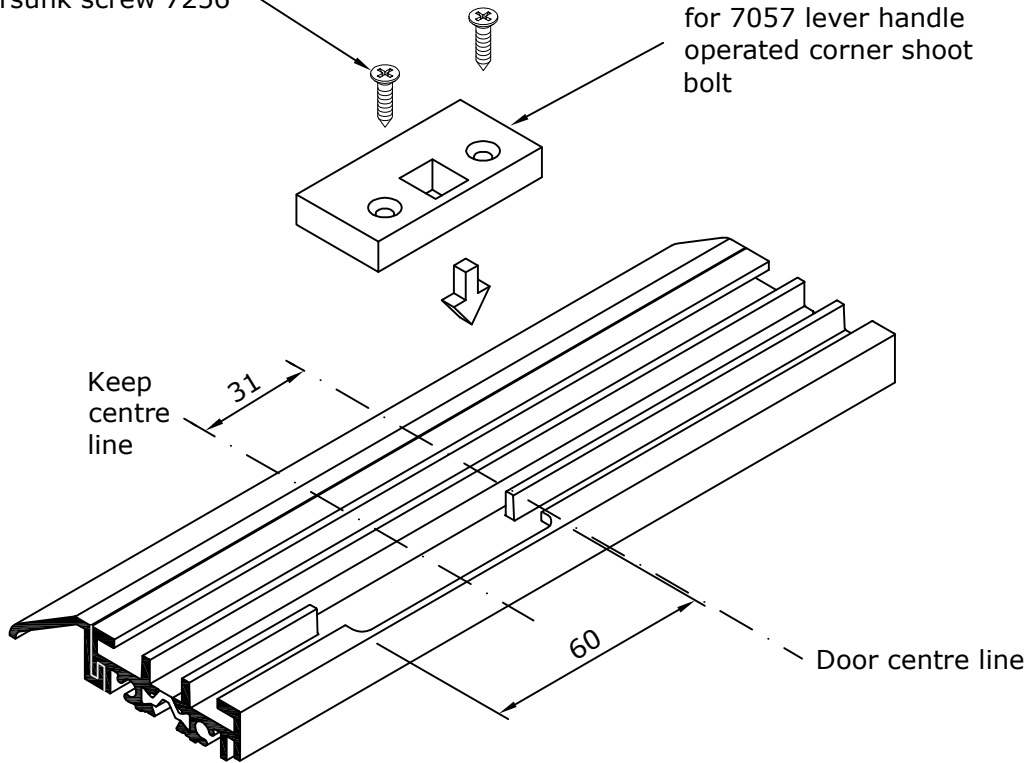
12/11/13

# 7148 Shoot Bolt Keep Location for 7057 Lever Handle Operated Shoot Bolt - Security

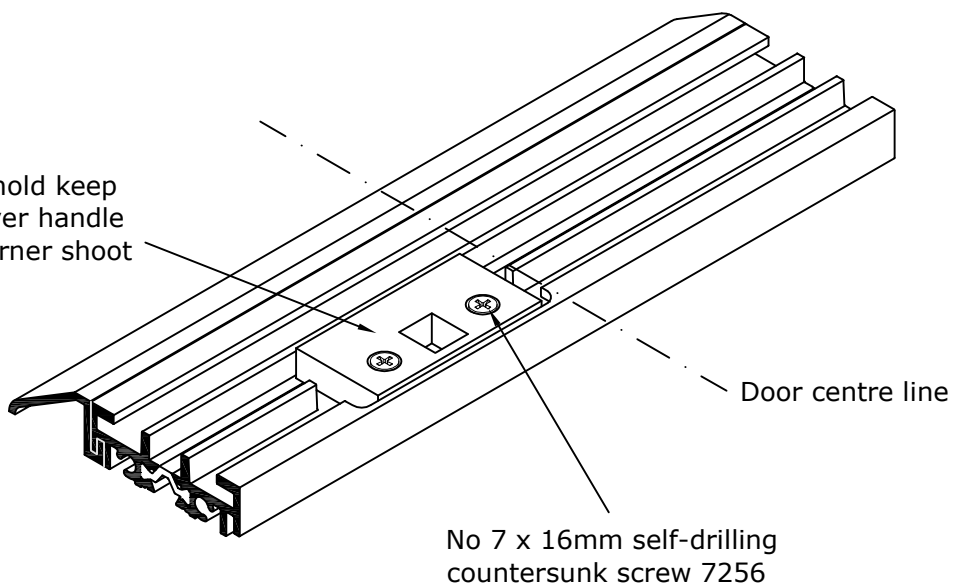
**m<sup>®</sup>**  
**System 5-20D/Hi+**  
 .....  
 DOOR SYSTEM  
 .....

No 7 x 16mm self-drilling  
countersunk screw 7256

7148 Threshold keep  
for 7057 lever handle  
operated corner shoot  
bolt



7148 Threshold keep  
for 7057 lever handle  
operated corner shoot  
bolt



Scale 1:2

# 7057 Shoot Bolt Details for Rebated Head and Threshold

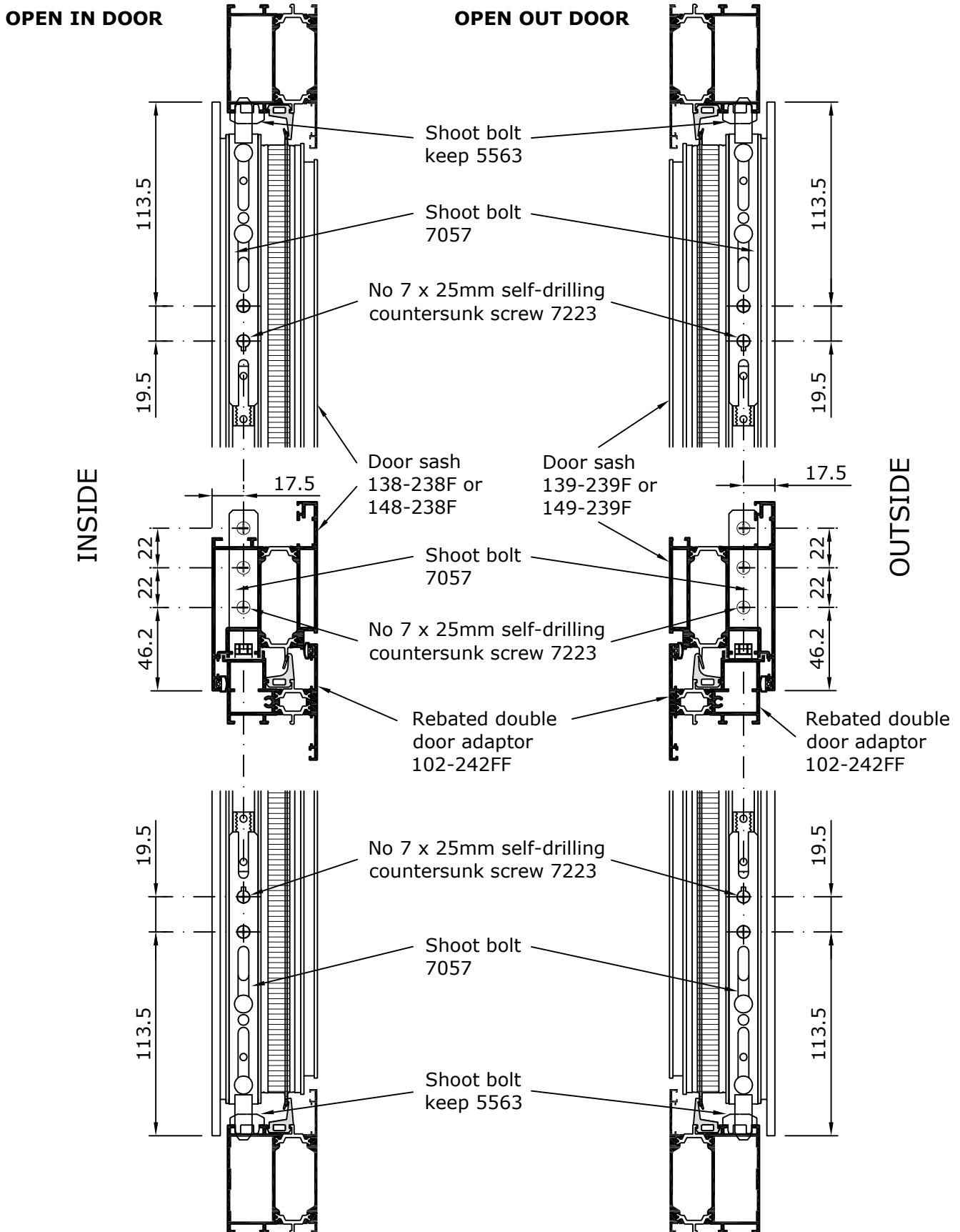


**System 5-20D/Hi+**

DOOR SYSTEM

All fixings must be sealed using HR50328A sealant.

Shoot bolt 7057 to be secured with 5 No 7 x 25mm self-drilling countersunk screws 7223



Scale 1:3



# 5563 Shoot Bolt Keep Location for 7057 Lever Handle Operated Shoot Bolt



**System 5-20D/Hi+**

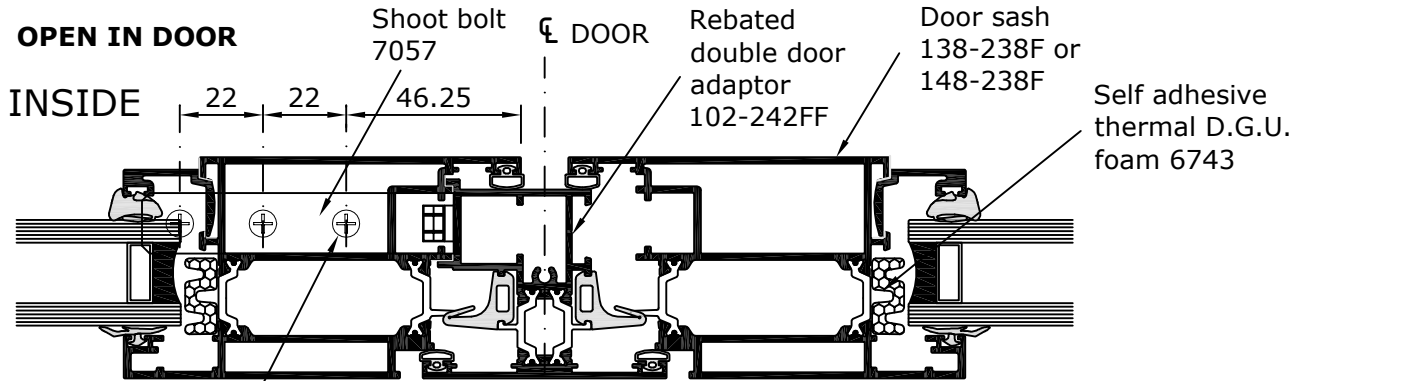
DOOR SYSTEM

NO BOTTOM KEEP REQUIRED FOR FLUSH OR SEMI-REBATED LOW THRESHOLD OPTIONS

All fixings must be sealed using HR50328A sealant.

Keeps 5563 to be secured with 2 No 7 x 25mm self-drilling countersunk screws 7223.

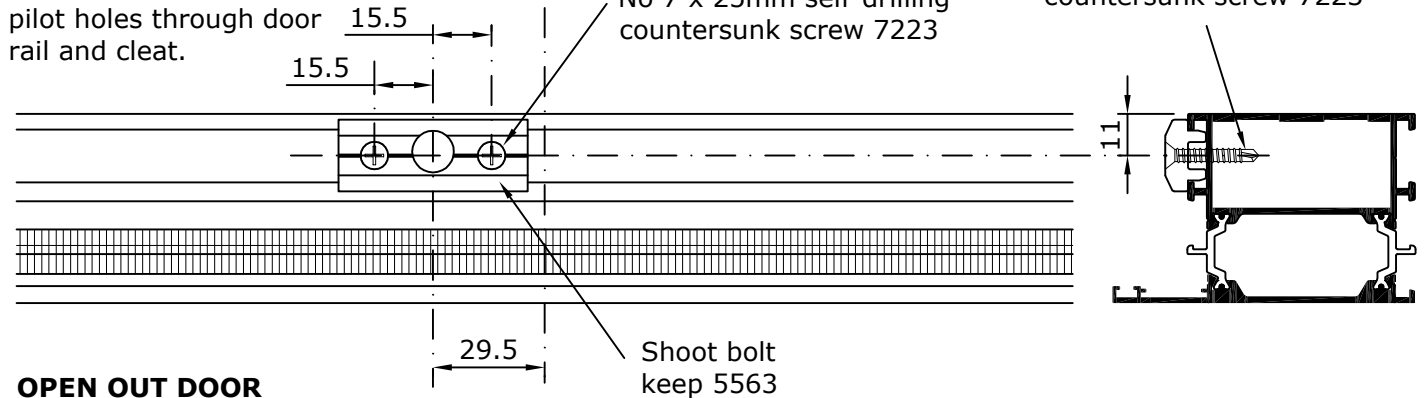
## OPEN IN DOOR



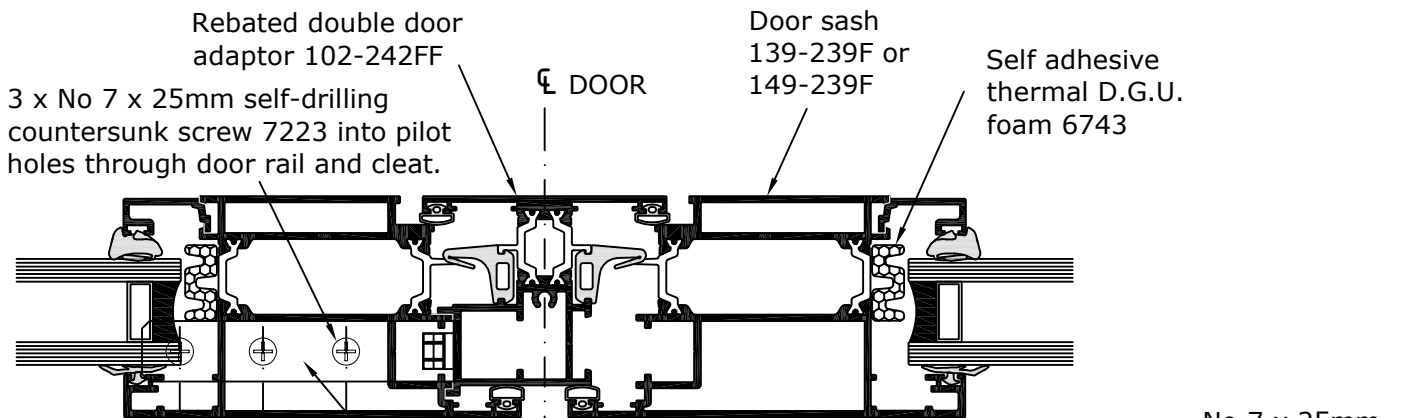
3 x No 7 x 25mm self-drilling countersunk screw 7223 into pilot holes through door rail and cleat.

No 7 x 25mm self-drilling countersunk screw 7223

No 7 x 25mm self-drilling countersunk screw 7223

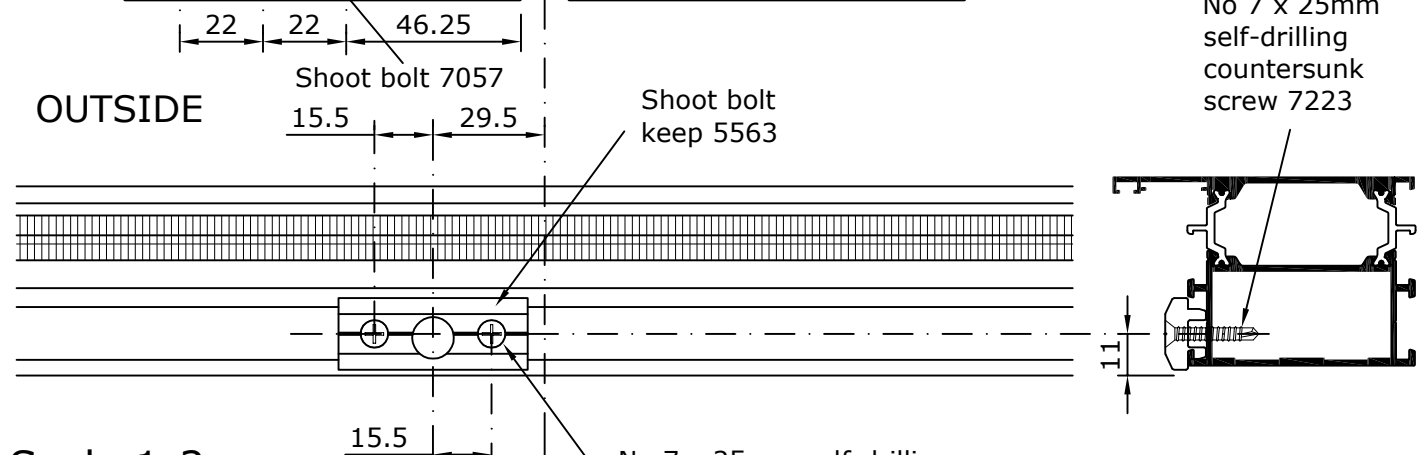


## OPEN OUT DOOR



3 x No 7 x 25mm self-drilling countersunk screw 7223 into pilot holes through door rail and cleat.

Self adhesive thermal D.G.U. foam 6743



No 7 x 25mm self-drilling countersunk screw 7223

No 7 x 25mm self-drilling countersunk screw 7223

Scale 1:2

SHEET 520D Hi+ / 7C / 180  
rev 0 12/11/13

# 7099 Adjustable Commercial Hinge Fitting Details

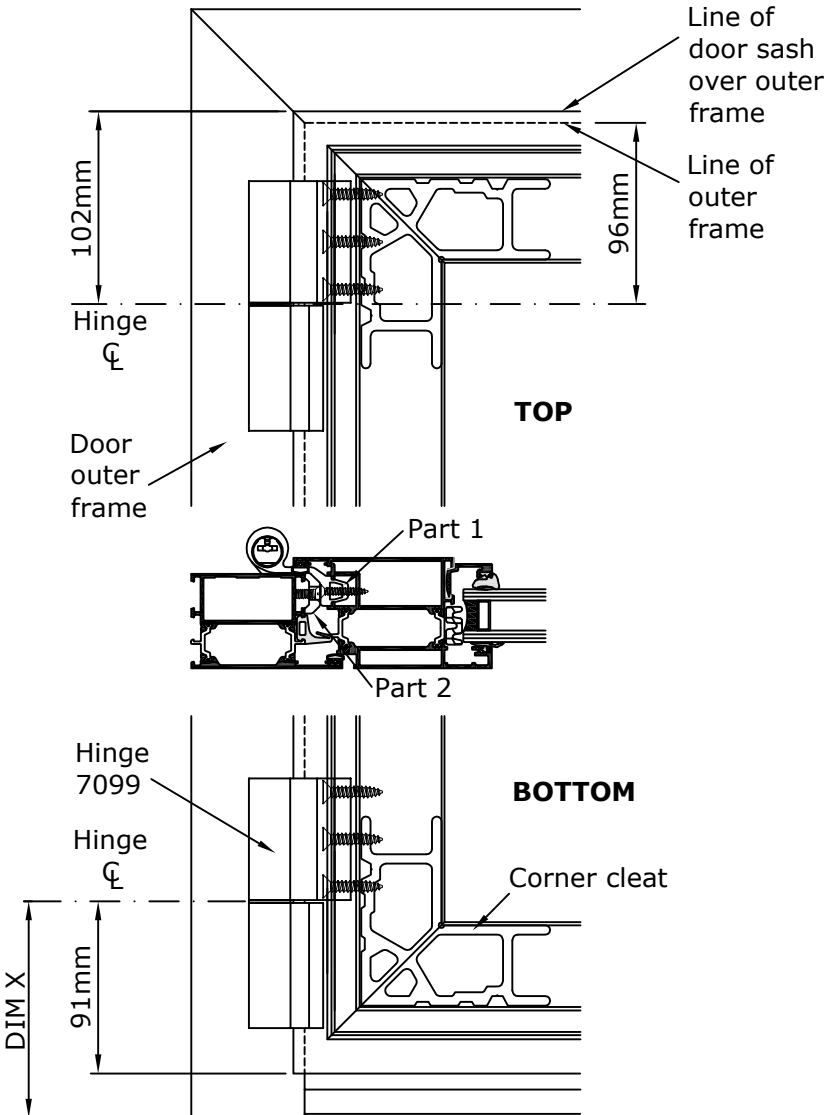


## System 5-20D/Hi+

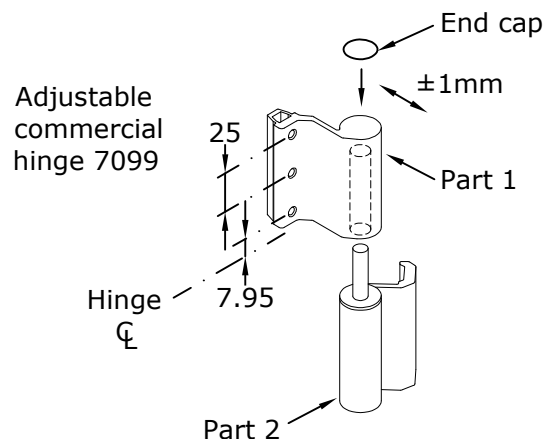
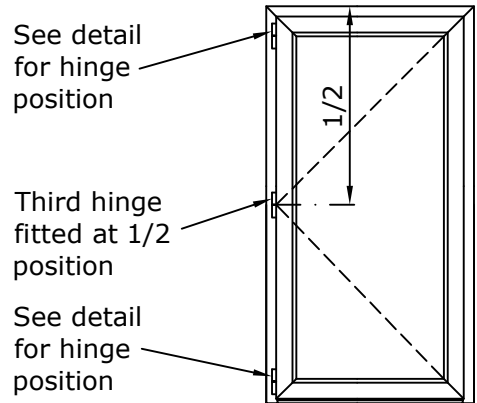
.....  
DOOR SYSTEM  
.....

For Open-In and Open-Out Doors with Flush and Semi-Rebated Low Thresholds

Only suitable for use with outer frames 102-202F, 103-203F, 105-205FF, 105-220F, 105-227F, 108-208F and 108-226F and mullions 106-206FF, 107-206FF, 113-213FF, 116-206FF, 142-201FF and 143-201FF.



When using 185-686F liner bar in side light applications with 142-201FF or 143-201FF mullions, leg of rebate adaptor will need to be notched 5mm x 135mm at hinge positions. Cut edges to be touched up to match paint finish.



**For flush low threshold applications DIM X = 114.5mm**  
**For semi-rebated low threshold applications DIM X = 100mm**

### HINGE FITTING INSTRUCTIONS

1. Remove clamping plates and slide into outer frame prior to crimping/fabrication.
2. After crimping door sash, position Part 1 hinge sections within eurogroove at head, cill, and mid position ensuring plastic core is aligned within central groove in hinge barrel. See diagram above.
3. Use hole positions in Part 1 hinge sections to drill 4.5mm dia pilot holes before fixing screws supplied.
4. Fix Part 2 hinge sections loosely to clamping plates within outer frames.
5. With door lying horizontally position vent centrally within outer frame.
6. Slide Part 2 hinge assemblies in outer frame at head and cill tight against underside of Part 1 hinge section and secure with 3 No. clamping screws.
7. Slide the central Part 2 hinge assembly to align with the central Part 1 hinge section, and secure with clamping screws.
8. After door has been installed and correctly aligned by "heel and toeing" the glass it may then be adjusted to suit site conditions. To adjust hinges, remove door leaf. Remove plastic cores from hinge barrels. Rotate plastic cores, realigning spuds into alternative groove either side of central position to suit application. Re-insert plastic cores into hinge barrels and re-hang door. Vertical adjustment can be achieved using the clamping plates within the outer frame. Ensure hinge is locked into its final position by inserting the upper end cap.

Scale 1:4

SHEET 520D Hi+ / 7D / 10

rev 4

19/03/14

# 7099 Adjustable Commercial Hinge Fitting Details

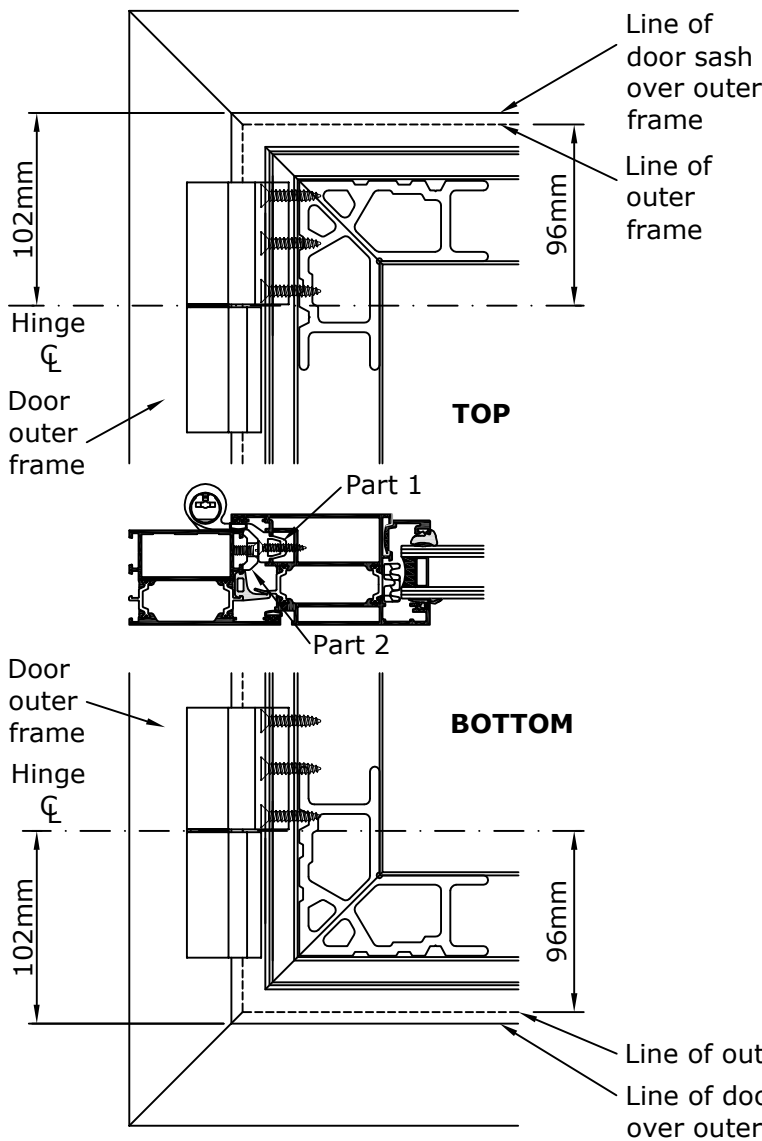
For Open-In and Open-Out Doors with Rebated Threshold

Only suitable for use with outer frames 102-202F, 103-203F, 105-205FF, 105-220F, 105-227F, 108-208F and 108-226F and mullions 106-206FF, 107-206FF, 113-213FF, 116-206FF, 142-201FF and 143-201FF.

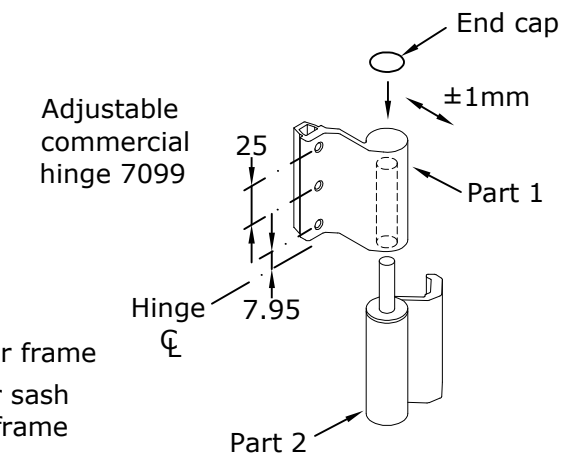
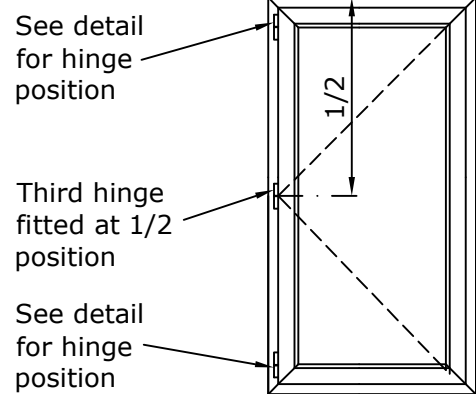


**System 5-20D/Hi+**

DOOR SYSTEM



When using 185-686F liner bar in side light applications with 142-201FF or 143-201FF mullions, leg of rebate adaptor will need to be notched 5mm x 135mm at hinge positions. Cut edges to be touched up to match paint finish.



## HINGE FITTING INSTRUCTIONS

1. Remove clamping plates and slide into outer frame prior to crimping/fabrication.
2. After crimping door sash, position Part 1 hinge sections within eurogroove at head, cill, and mid position ensuring plastic core is aligned within central groove in hinge barrel. See diagram above.
3. Use hole positions in Part 1 hinge sections to drill 4.5mm dia pilot holes before fixing screws supplied.
4. Fix Part 2 hinge sections loosely to clamping plates within outer frames.
5. With door lying horizontally position vent centrally within outer frame.
6. Slide Part 2 hinge assemblies in outer frame at head and cill tight against underside of Part 1 hinge section and secure with 3 No. clamping screws.
7. Slide the central Part 2 hinge assembly to align with the central Part 1 hinge section, and secure with clamping screws.
8. After door has been installed and correctly aligned by "heel and toeing" the glass it may then be adjusted to suit site conditions. To adjust hinges, remove door leaf. Remove plastic cores from hinge barrels. Rotate plastic cores, realigning spuds into alternative groove either side of central position to suit application. Re-insert plastic cores into hinge barrels and re-hang door. Vertical adjustment can be achieved using the clamping plates within the outer frame. Ensure hinge is locked into its final position by inserting the upper end cap.

Scale 1:4

SHEET 520D Hi+ / 7D / 20

rev 4

19/03/14

# 7017 Clamp-on Domestic Hinge Fitting Details



**System 5-20D/Hi+**

DOOR SYSTEM

For Open-In and Open-Out Doors with Flush and Semi-Rebated Low Thresholds

Suitable for use with outer frames 101-201FF, 102-202F, 102-228F, 102-234F, 103-203F, 105-205FF, 105-220F, 105-227F, 108-208F, 108-226F, 120-204F and 120-216F and mullions 106-206FF, 107-206FF, 113-213FF, 116-206FF, 142-201FF and 143-201FF.

Set hinge assembly tight against outer frame

Align hinge tapping block with bottom/top edge of door sash.

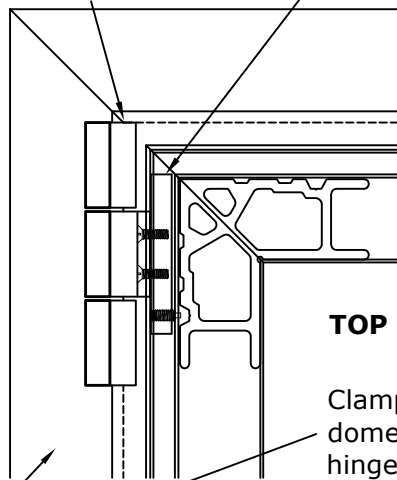
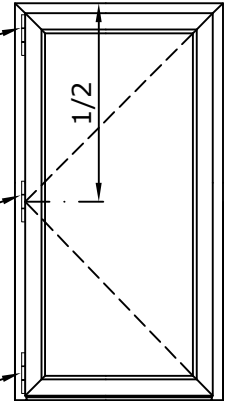
Line of door sash over outer frame

Line of outer frame

See detail for hinge position

Third hinge fitted at 1/2 position

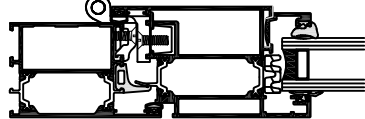
See detail for hinge position



**TOP**

Clamp-on domestic hinge 7017

Door outer frame



Clamp-on domestic hinge 7017

**BOTTOM**

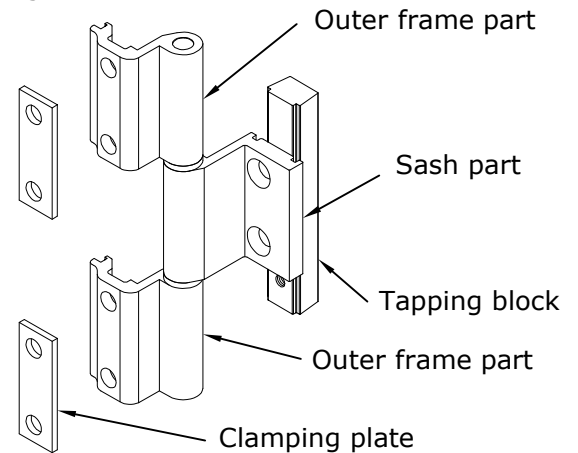
Piercing grub screw to lock off hinge after positioning

Corner cleat

Low threshold  
169-169  
0036-169  
0036-0037  
0037-169  
0037-0037

DIM X

Clamp-on domestic hinge 7017



## HINGE FITTING INSTRUCTIONS

**For flush low threshold applications DIM X = 29.5mm**  
**For semi-rebated low threshold applications DIM X = 15mm**

1. Remove tapping block from hinge assembly and slide into sash profile prior to crimping.
2. Slacken clamping plate and slide remaining hinge assembly into outer frame prior to crimping/fabrication.
3. After crimping, position top and bottom hinge assemblies tight against outer frame at head and cill, and secure with clamping screws.
4. Position third hinge assembly 1/2 way down from head on outer frame, and secure with clamping screws.
5. Position top and bottom hinge tapping blocks within crimped door sash, and align with upper/lower edge of eurogroove as indicated.
6. Temporarily hold hinge tapping block in position, using grub screw, but DO NOT pierce profile.
7. Position vent within outer frame, align top and bottom hinges with tapping plates, and secure with clamping screws.
8. Slide the third tapping plate to align with the third hinge assembly, and secure with clamping screws.
9. After door has been installed and correctly aligned by "heel and toeing" the glass, hinges can be permanently fixed by further tightening the grub screw to pierce the profile.

Scale 1:4

SHEET 520D Hi+ / 7D / 30

rev 3

19/03/14

# 7017 Clamp-on Domestic Hinge Fitting Details

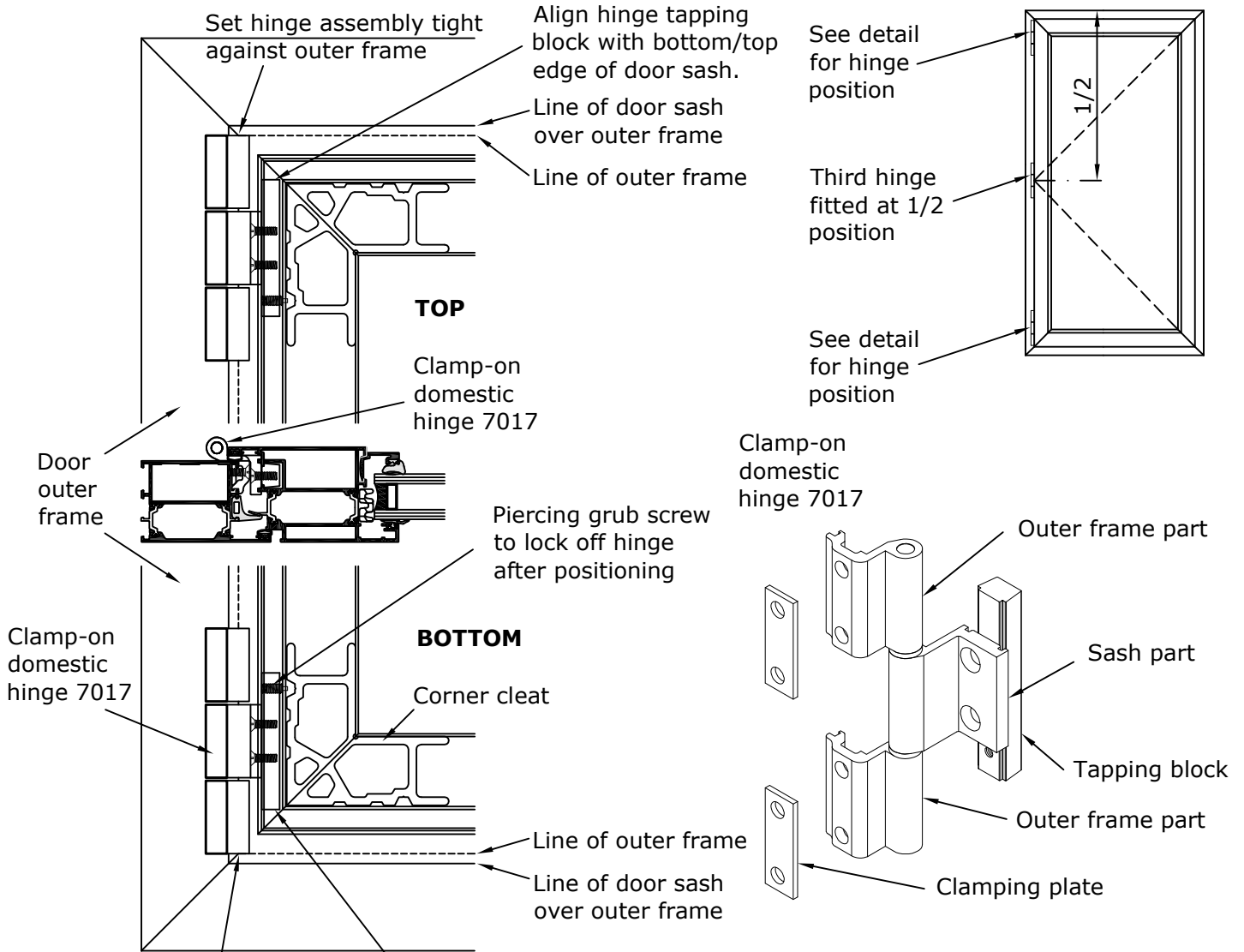


**System 5-20D/Hi+**

DOOR SYSTEM

## For Open-In and Open-Out Doors with Rebated Thresholds

Suitable for use with outer frames 101-201FF, 102-202F, 102-228F, 102-234F, 103-203F, 105-205FF, 105-220F, 105-227F, 108-208F, 108-226F, 120-204F and 120-216F and mullions 106-206FF, 107-206FF, 113-213FF, 116-206FF, 142-201FF and 143-201FF.



Set hinge assembly tight against outer frame      Align hinge tapping block with bottom/top edge of door sash.

### HINGE FITTING INSTRUCTIONS

1. Remove tapping block from hinge assembly and slide into sash profile prior to crimping.
2. Slacken clamping plate and slide remaining hinge assembly into outer frame prior to crimping/fabrication.
3. After crimping, position top and bottom hinge assemblies tight against outer frame at head and cill, and secure with clamping screws.
4. Position third hinge assembly 1/2 way down from head on outer frame, and secure with clamping screws.
5. Position top and bottom hinge tapping blocks within crimped door sash, and align with upper/lower edge of eurogroove as indicated.
6. Temporarily hold hinge tapping block in position, using grub screw, but DO NOT pierce profile.
7. Position vent within outer frame, align top and bottom hinges with tapping plates, and secure with clamping screws.
8. Slide the third tapping plate to align with the third hinge assembly, and secure with clamping screws.
9. After door has been installed and correctly aligned by "heel and toeing" the glass, hinges can be permanently fixed by further tightening the grub screw to pierce the profile.

Scale 1:4

SHEET 520D Hi+ / 7D / 40

rev 3

19/03/14

# 7097 Anti-Fingertrap Hinge Fitting Details

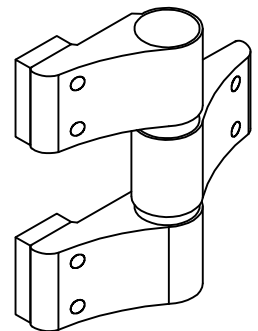
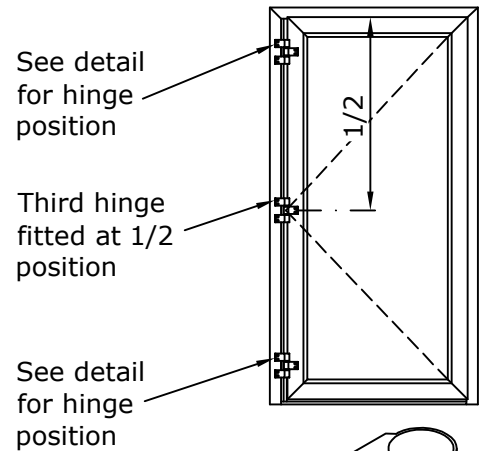
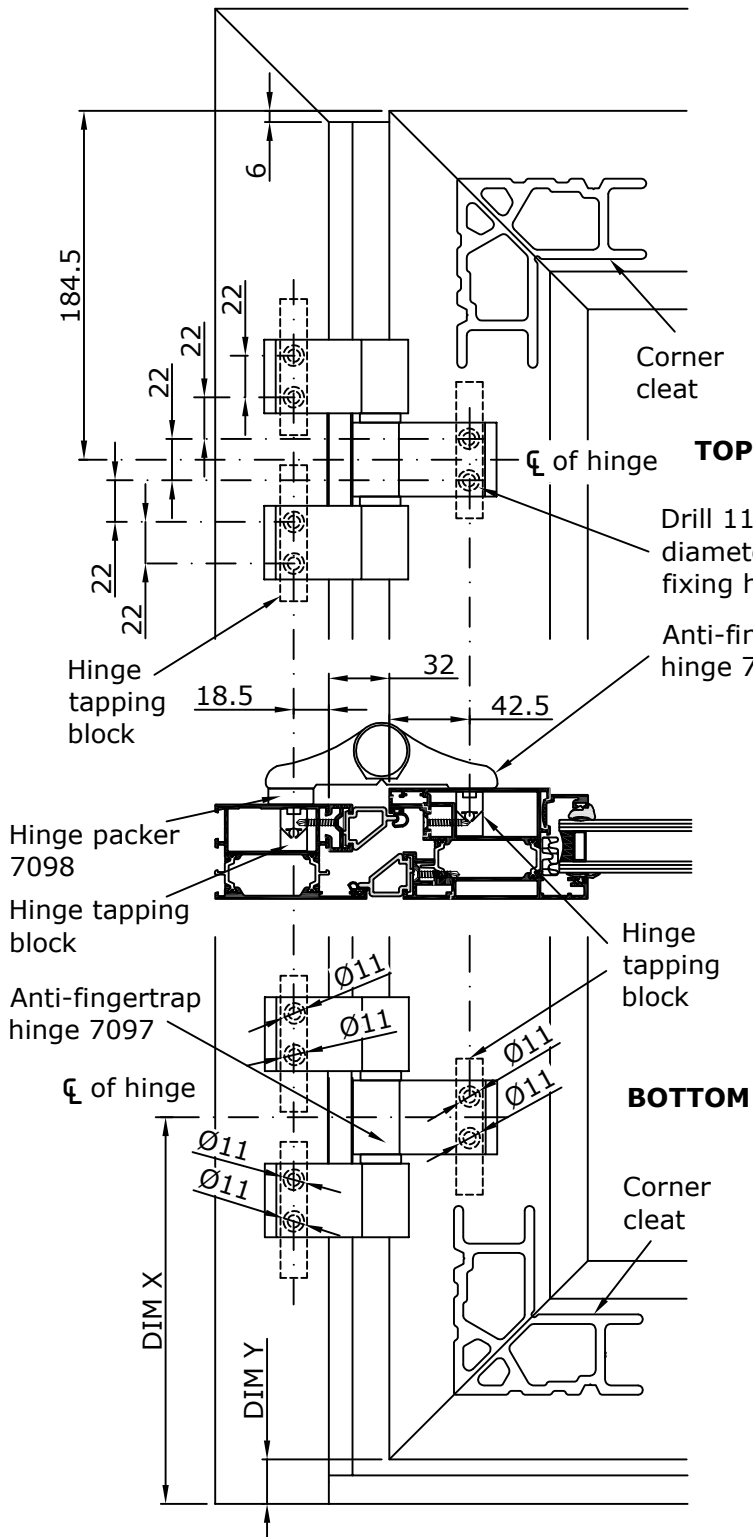
For Open-In and Open-Out Doors with Flush and Semi-Rebated Low Thresholds

Only suitable for use with outer frames 105-205FF, 105-220F, 105-227F, 108-208F and 108-226F and mullions 106-206FF, 107-206FF and 116-206FF.



**System 5-20D/Hi+**

DOOR SYSTEM



Anti-fingertrap hinge 7097 shown with 2 x 7098 hinge packers

## HINGE FITTING INSTRUCTIONS

1. Drill fixing holes for 3 No. hinges as illustrated.
2. Position tapping blocks (supplied with hinges) within outer frame and sash profiles prior to crimping.
3. Temporarily secure tapping blocks using machine screws supplied with hinges.
4. Assemble and crimp outer frame and door sash(es).
5. Lay door outer frame on horizontal flat surface and correctly position sash.
6. Assemble 7097 hinge in accordance with manufacturers instructions supplied.
7. Locate 7098 hinge packers into fixing holes in outer frame.
8. Secure 7097 hinge through 7098 hinge packer to the tapping blocks in the outer frame using long machine screws supplied with packers (remove temporary fixings as required).
9. Secure 7097 hinge to the tapping block in the sash using 2 of the machine screws supplied with the hinge (remove temporary fixings as required).
10. Secure hinge covers using machine screws supplied, and fit upper and lower end caps.
11. After the door has been installed and glazed on site final adjustment can be made to the sash position, via the hinge, using the "Adjustment instructions" provided.
12. Ensure end caps are firmly secured in position after final adjustment.

**For flush low threshold applications**  
**DIM X = 204.5mm; DIM Y = 23.5mm**  
**For semi-rebated low threshold applications**  
**DIM X = 190mm; DIM Y = 9mm**

Scale 1:4

# Preps for 7168 and 5510 Ancillary Hinge Security Devices



## System 5-20D/Hi+

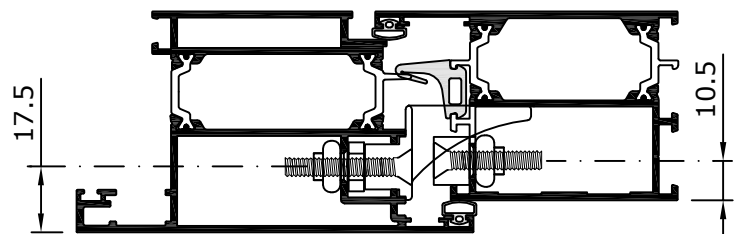
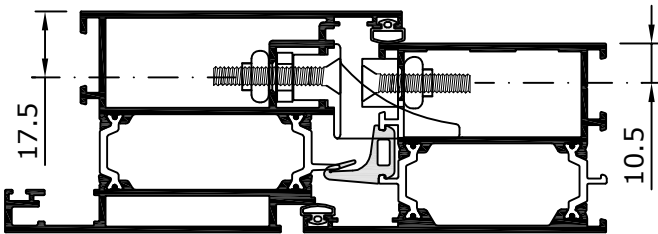
To Suit 7099 Hinges for Single and Double  
Open-In and Open-Out Doors

DOOR SYSTEM

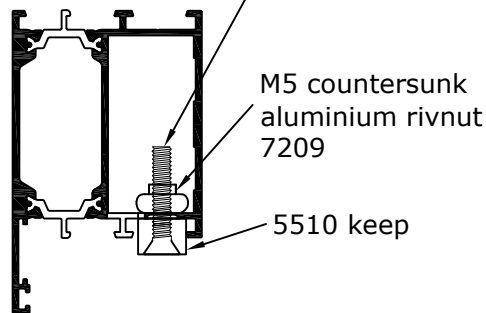
All fixings must be sealed using HR50328A sealant.

### OPEN-IN DOOR

### OPEN-OUT DOOR



#### OUTER FRAME



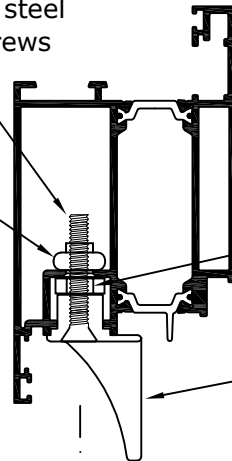
M5 x 25mm  
countersunk  
stainless steel  
fixing screws  
7210

M5 x 30mm  
countersunk  
stainless steel  
fixing screws  
7211

M5 countersunk  
aluminium rivnut  
7209

5510 keep

#### OPEN-IN SASH



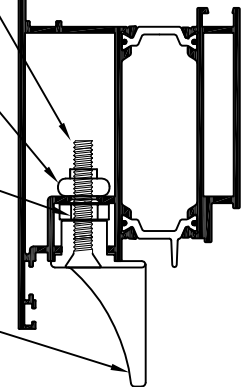
M5 x 30mm  
countersunk  
stainless steel  
fixing screws  
7211

M5 countersunk  
aluminium rivnut  
7209

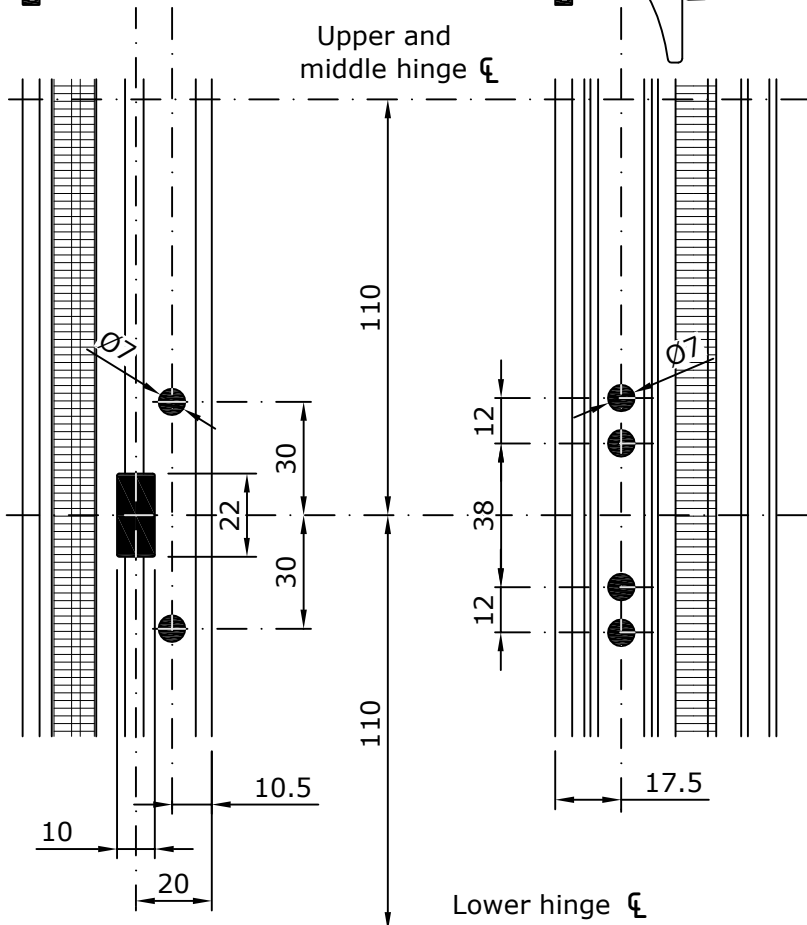
Component 5507  
to support 7168

7168 Ancillary  
hinge security  
device

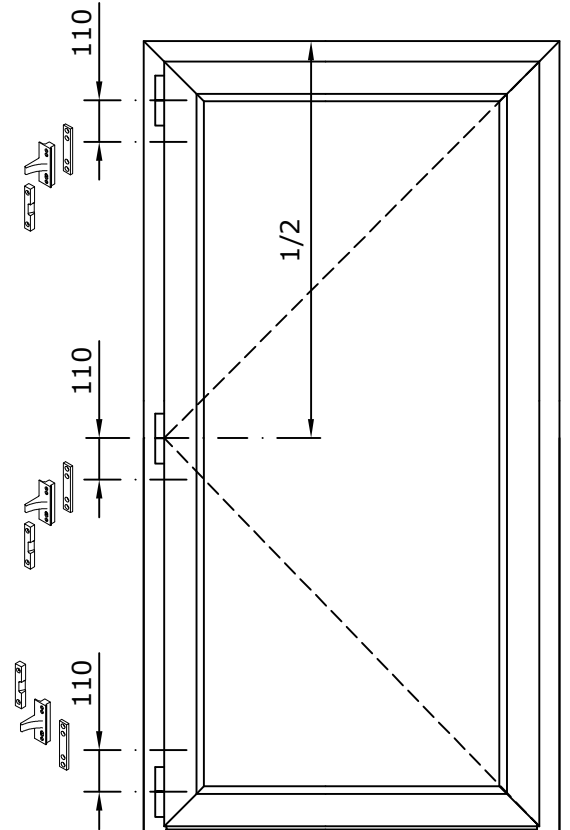
#### OPEN-OUT SASH



Upper and  
middle hinge  $\phi$



Lower hinge  $\phi$



Scale 1:2

# Preps for 702A Ancillary Hinge Security Devices



**System 5-20D/Hi+**

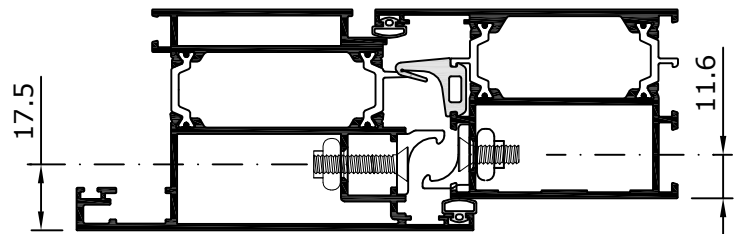
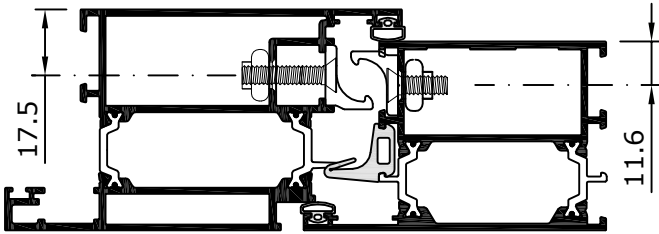
DOOR SYSTEM

To Suit 7017 Hinges for Open-In and Open-Out Doors

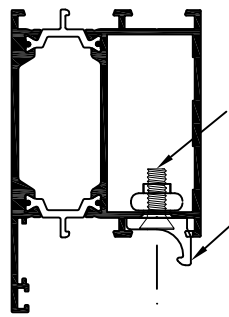
All fixings must be sealed using HR50328A sealant.

## OPEN-IN DOOR

## OPEN-OUT DOOR



### OUTER FRAME

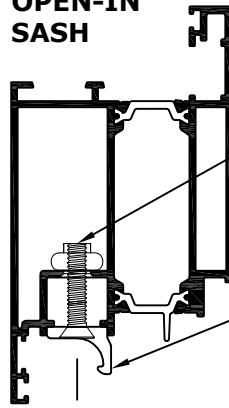


2 No M5 countersunk aluminium rivnuts 7209 with M5 x 16mm stainless steel countersunk screws 7227 located on vee grooves of profiles.

702A Ancillary hinge security device

Upper and middle hinge  $\varphi$

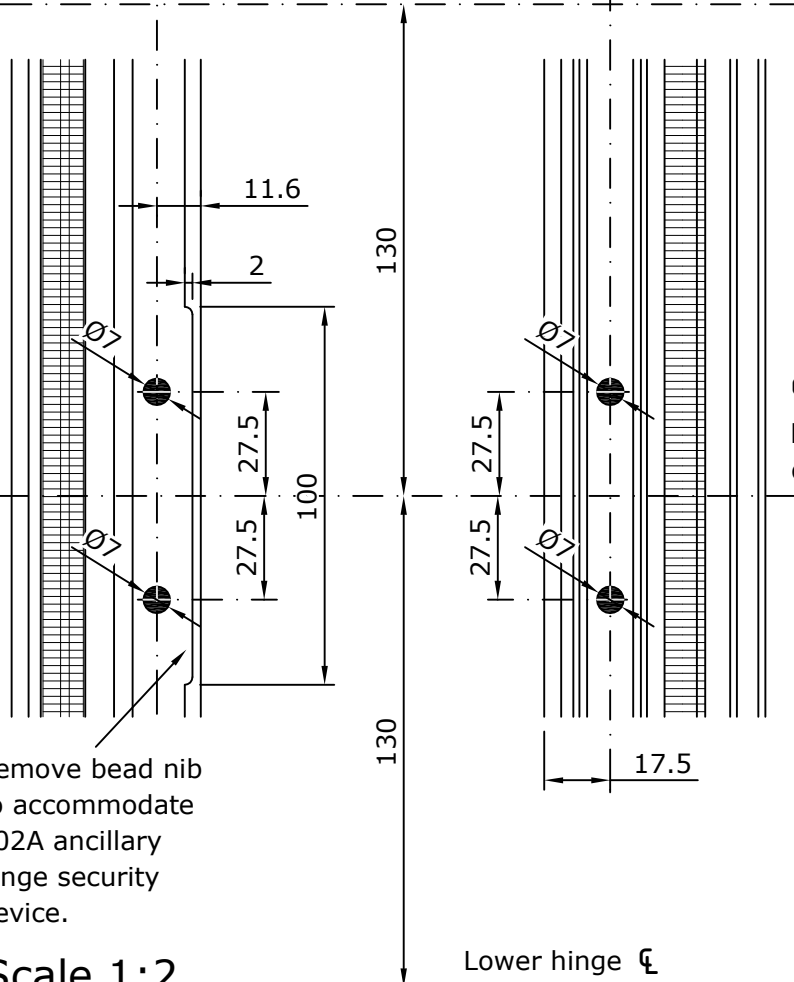
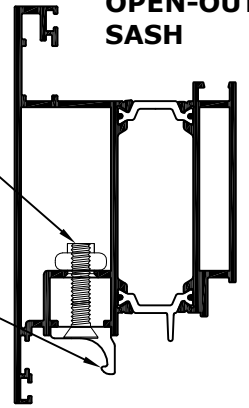
### OPEN-IN SASH



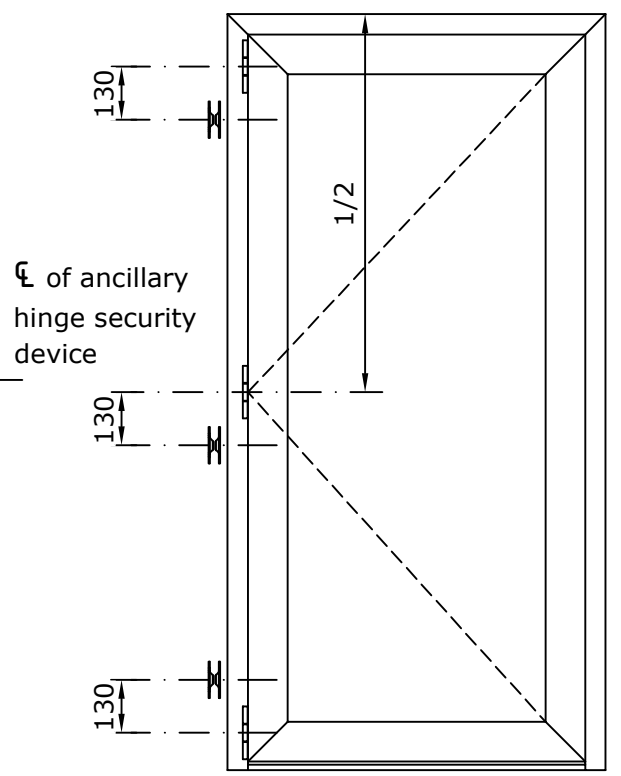
2 No M5 countersunk aluminium rivnuts 7209 with M5 x 25mm stainless steel countersunk screws 7210 located on vee grooves of profiles.

702A Ancillary hinge security device

### OPEN-OUT SASH



Remove bead nib to accommodate 702A ancillary hinge security device.



Scale 1:2

Lower hinge  $\varphi$



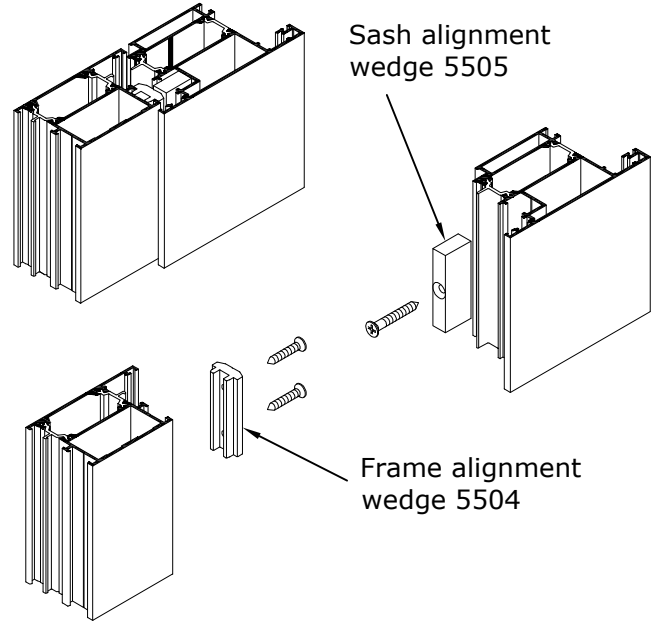
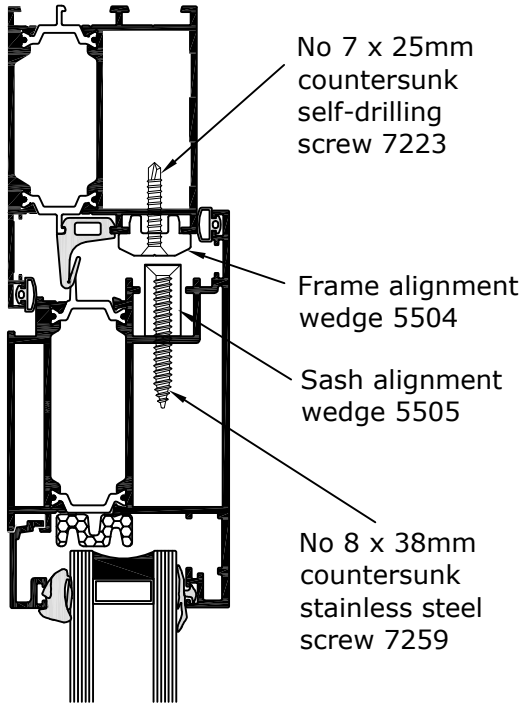
# Prep Details for 5504 and 5505 Security Alignment Wedges

For Flush and Semi-Rebated Low Thresholds

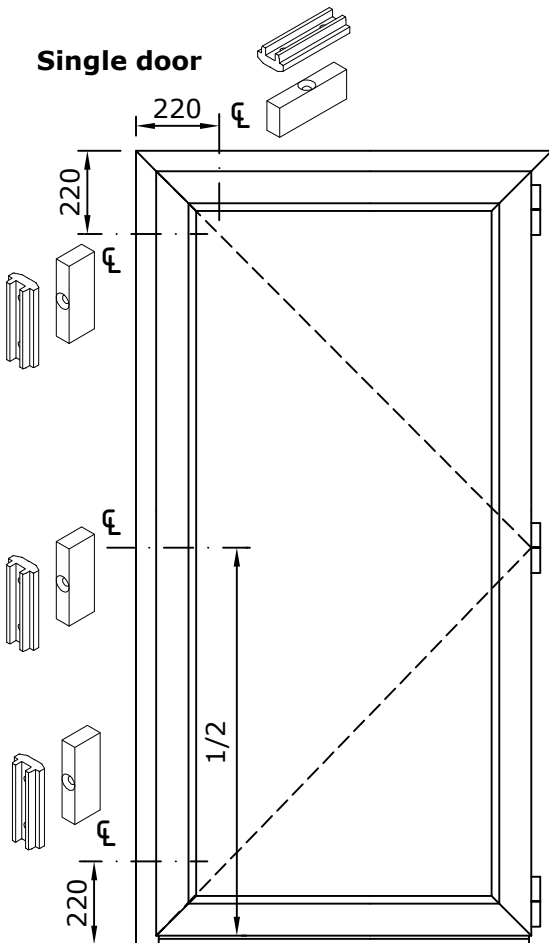


**System 5-20D/Hi+**

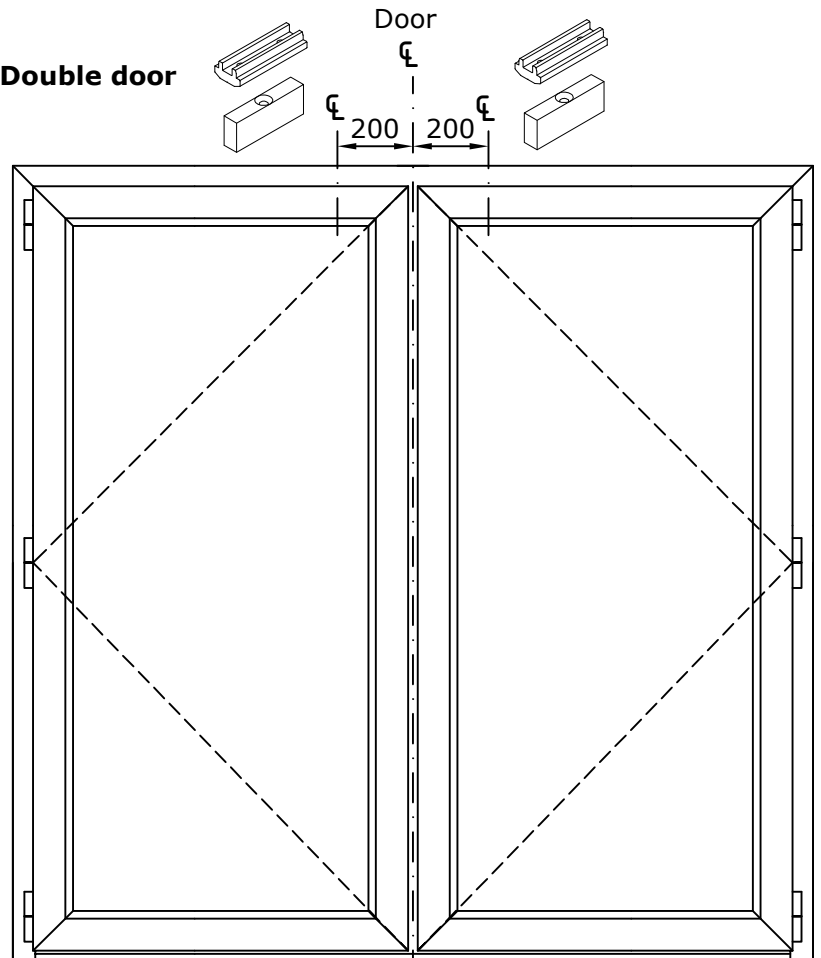
DOOR SYSTEM



**Single door**



**Double door**



Scale 1:2

# Panic Exit Mechanisms

## Push Rail for Single Door

See installation instructions included with product.

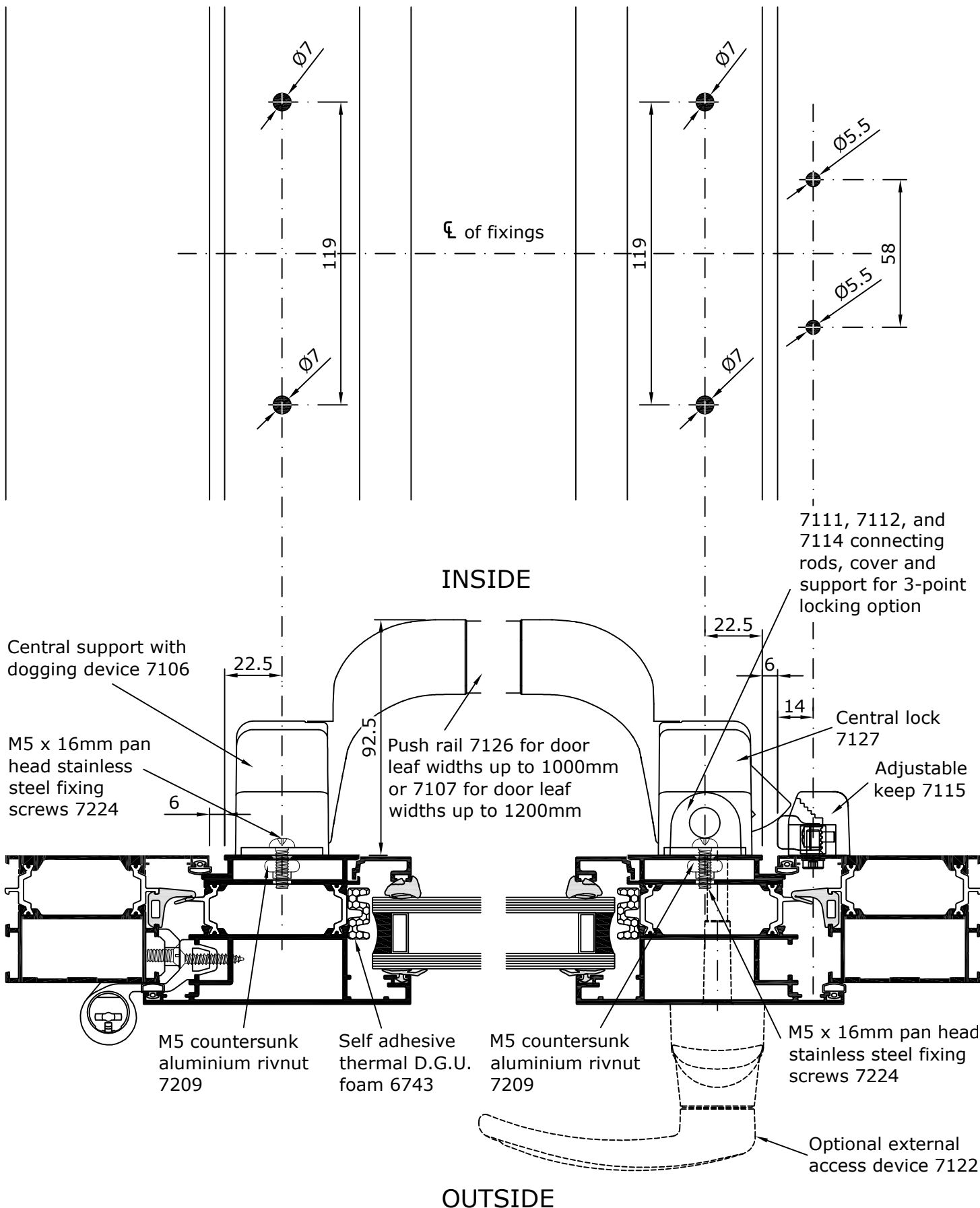
Panic exit mechanisms to be fitted in accordance with BS EN 1125

Ensure door is glazed and beaded prior to finally fixing panic exit mechanism.



## System 5-20D/Hi+

DOOR SYSTEM



Scale 1:2

# Panic Exit Mechanisms

## Push Rail for Double Doors with Rebated Double Door Adaptor



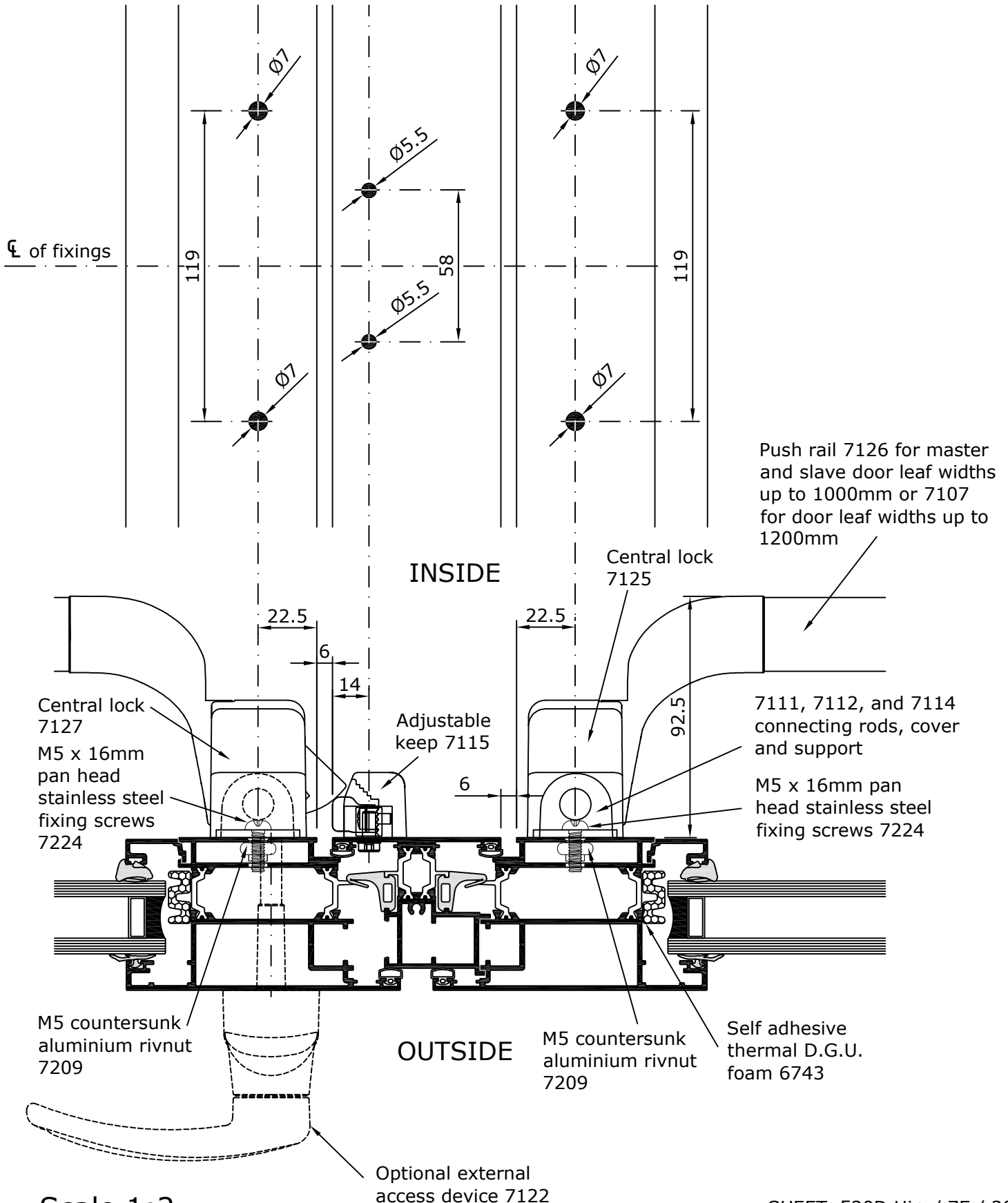
**System 5-20D/Hi+**

DOOR SYSTEM

See installation instructions included with product.

Panic exit mechanisms to be fitted in accordance with BS EN 1125

Ensure door is glazed and beaded prior to finally fixing panic exit mechanism.



Scale 1:2

# Panic Exit Mechanisms

## Push Rail for Double Doors with Flush Meeting Stile



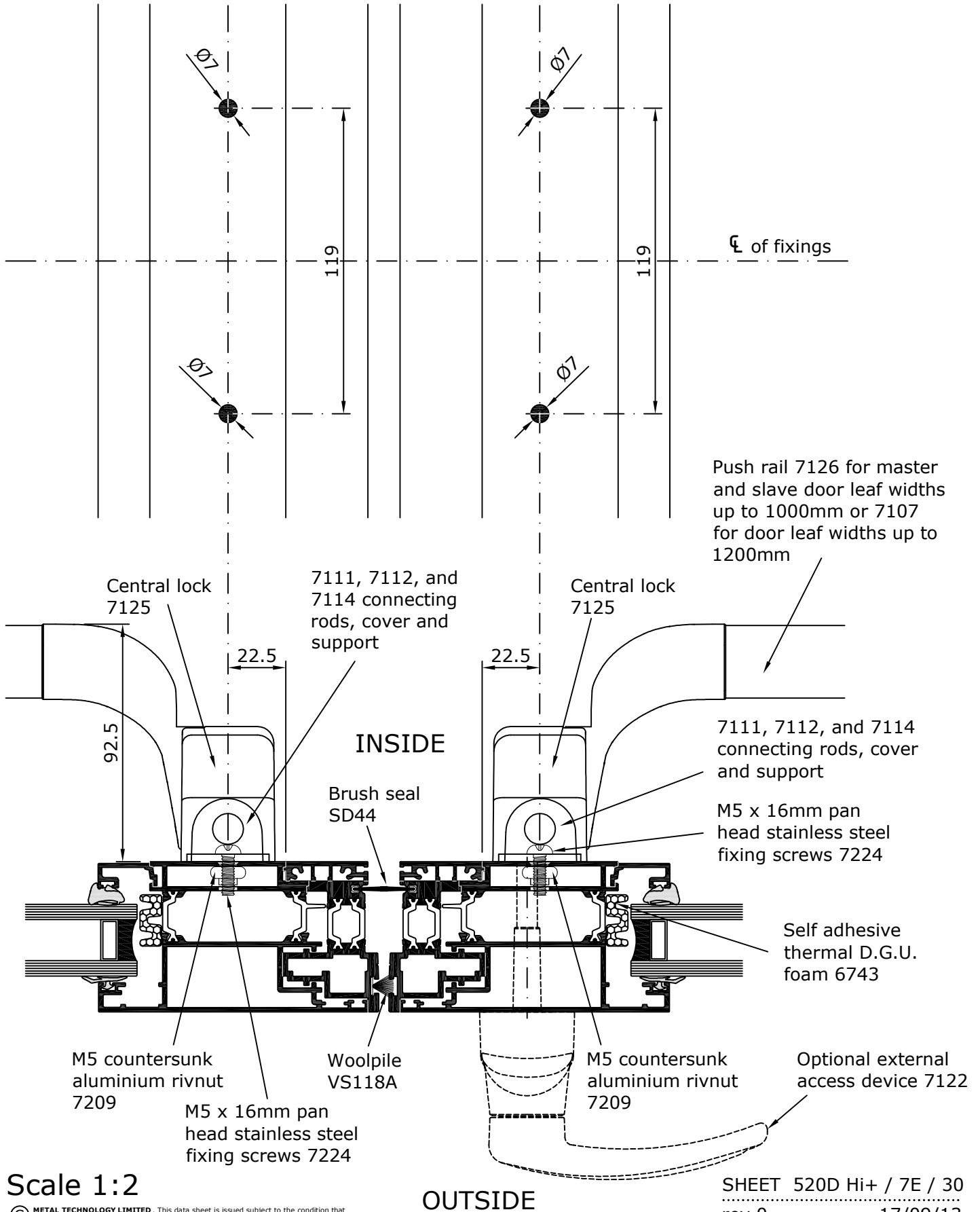
### System 5-20D/Hi+

DOOR SYSTEM

See installation instructions included with product.

Panic exit mechanisms to be fitted in accordance with BS EN 1125

Ensure door is glazed and beaded prior to finally fixing panic exit mechanism.



Scale 1:2

# Panic Exit Mechanisms

## Touch Bar for Single Door



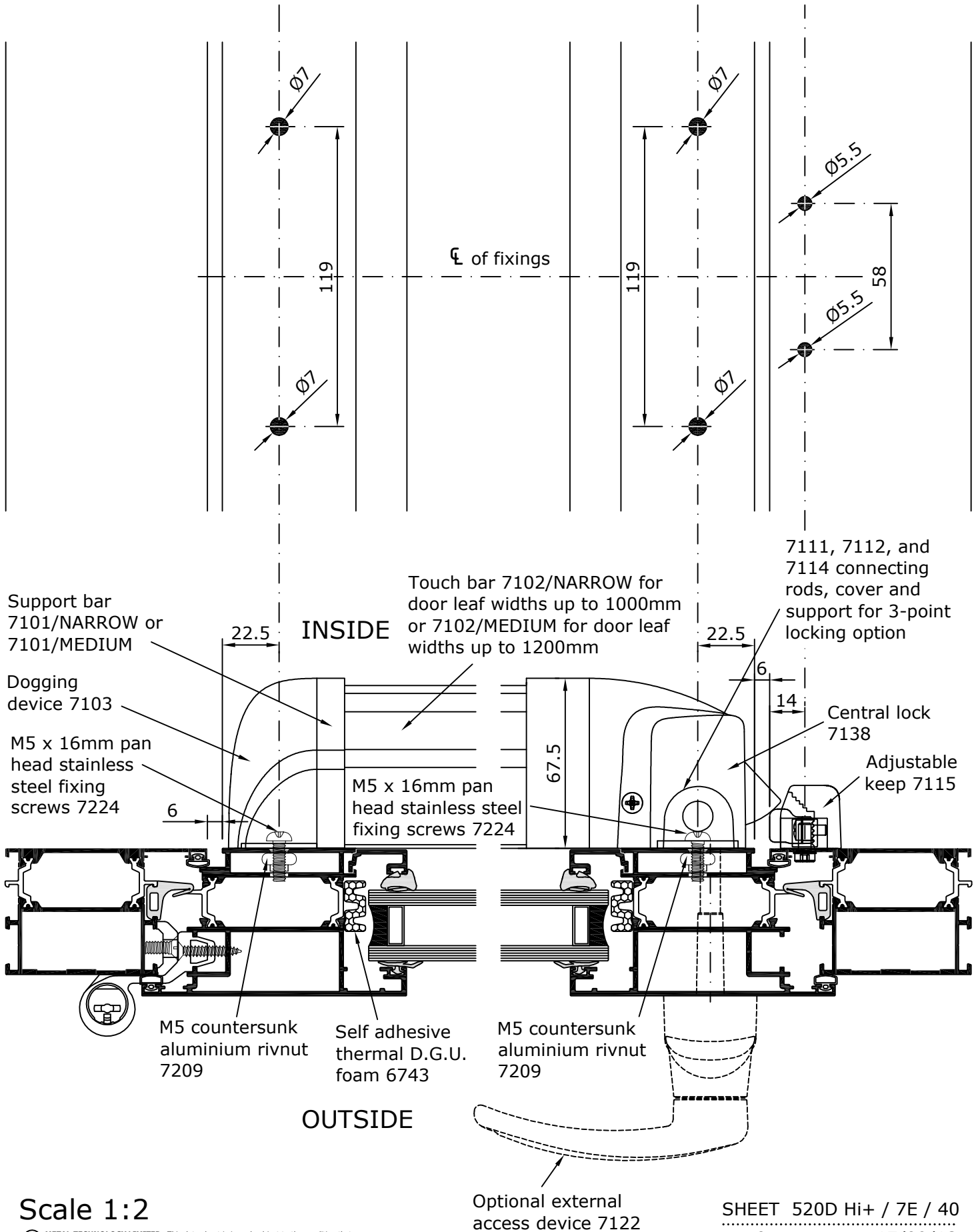
## System 5-20D/Hi+

DOOR SYSTEM

See installation instructions included with product.

Panic exit mechanisms to be fitted in accordance with BS EN 1125

Ensure door is glazed and beaded prior to finally fixing panic exit mechanism.



Scale 1:2

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rev 0

17/09/13

# Panic Exit Mechanisms

## Touch Bar for Double Doors with Rebated Double Door Adaptor



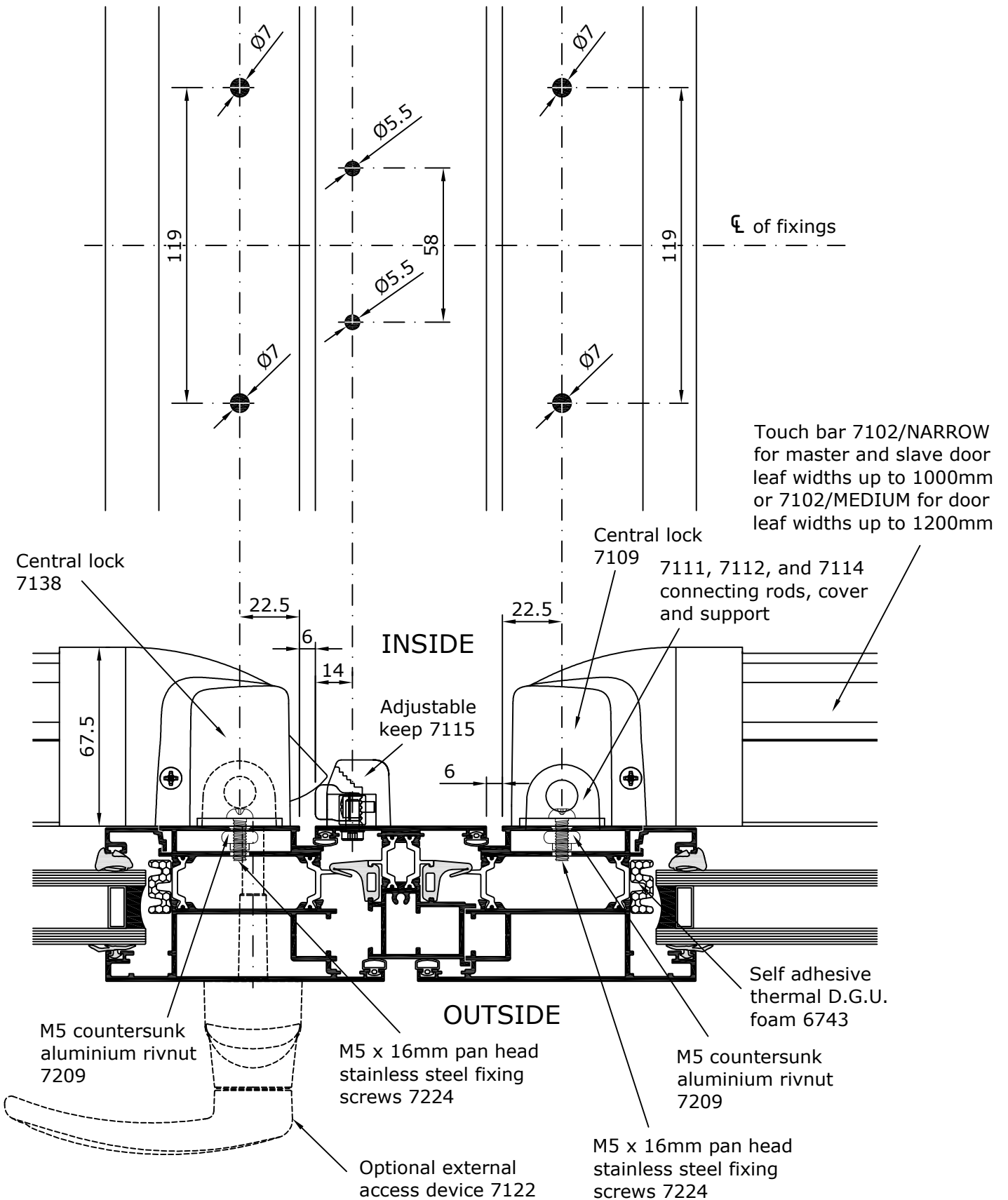
### System 5-20D/Hi+

DOOR SYSTEM

See installation instructions included with product.

Panic exit mechanisms to be fitted in accordance with BS EN 1125

Ensure door is glazed and beaded prior to finally fixing panic exit mechanism.



Scale 1:2

# Panic Exit Mechanisms

## Touch Bar for Double Doors with Flush Meeting Stile



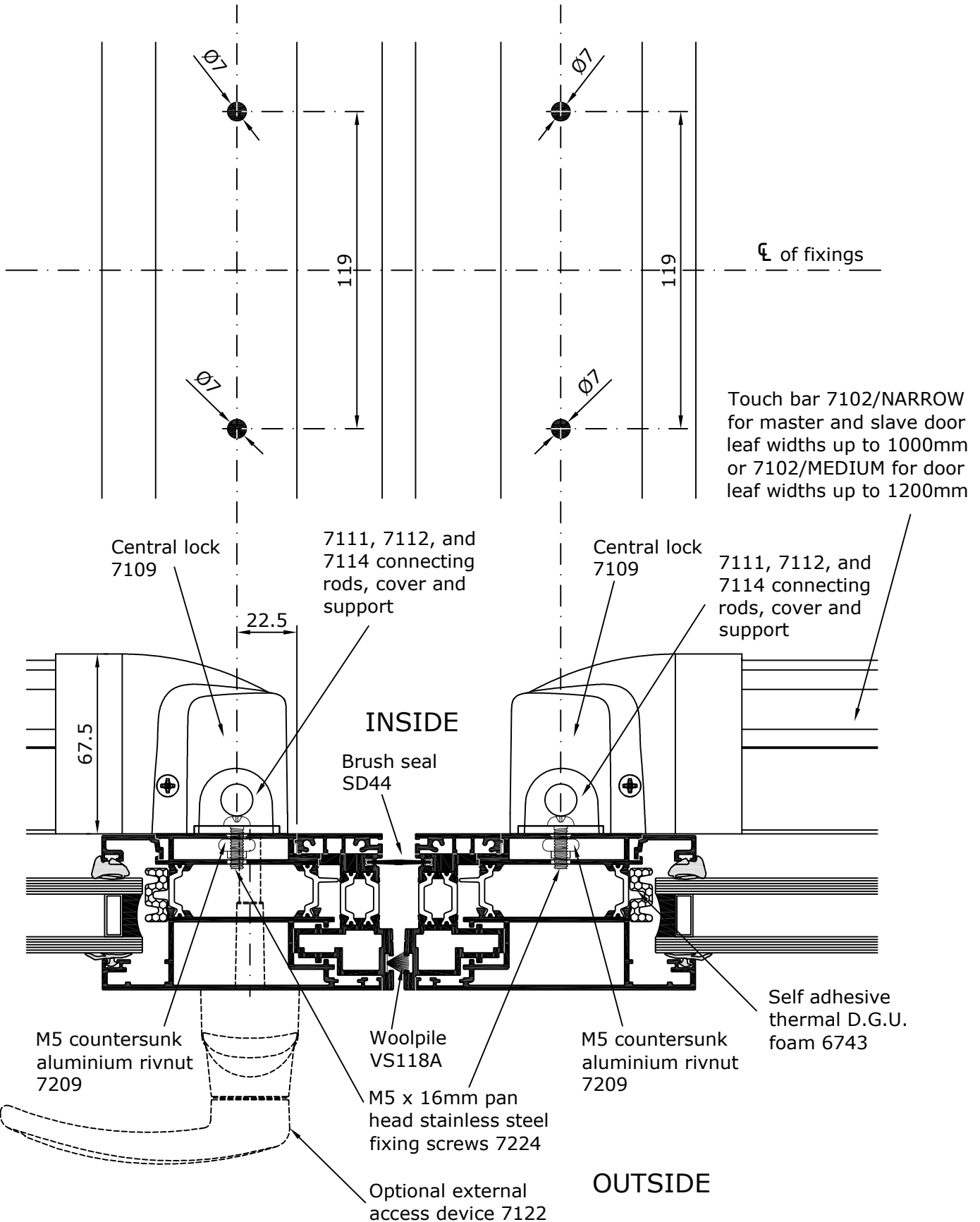
### System 5-20D/Hi+

DOOR SYSTEM

See installation instructions included with product.

Panic exit mechanisms to be fitted in accordance with BS EN 1125

Ensure door is glazed and beaded prior to finally fixing panic exit mechanism.



Scale 1:2

# Panic Exit Mechanisms

## Pad Handle 7118/7119 for Single Door



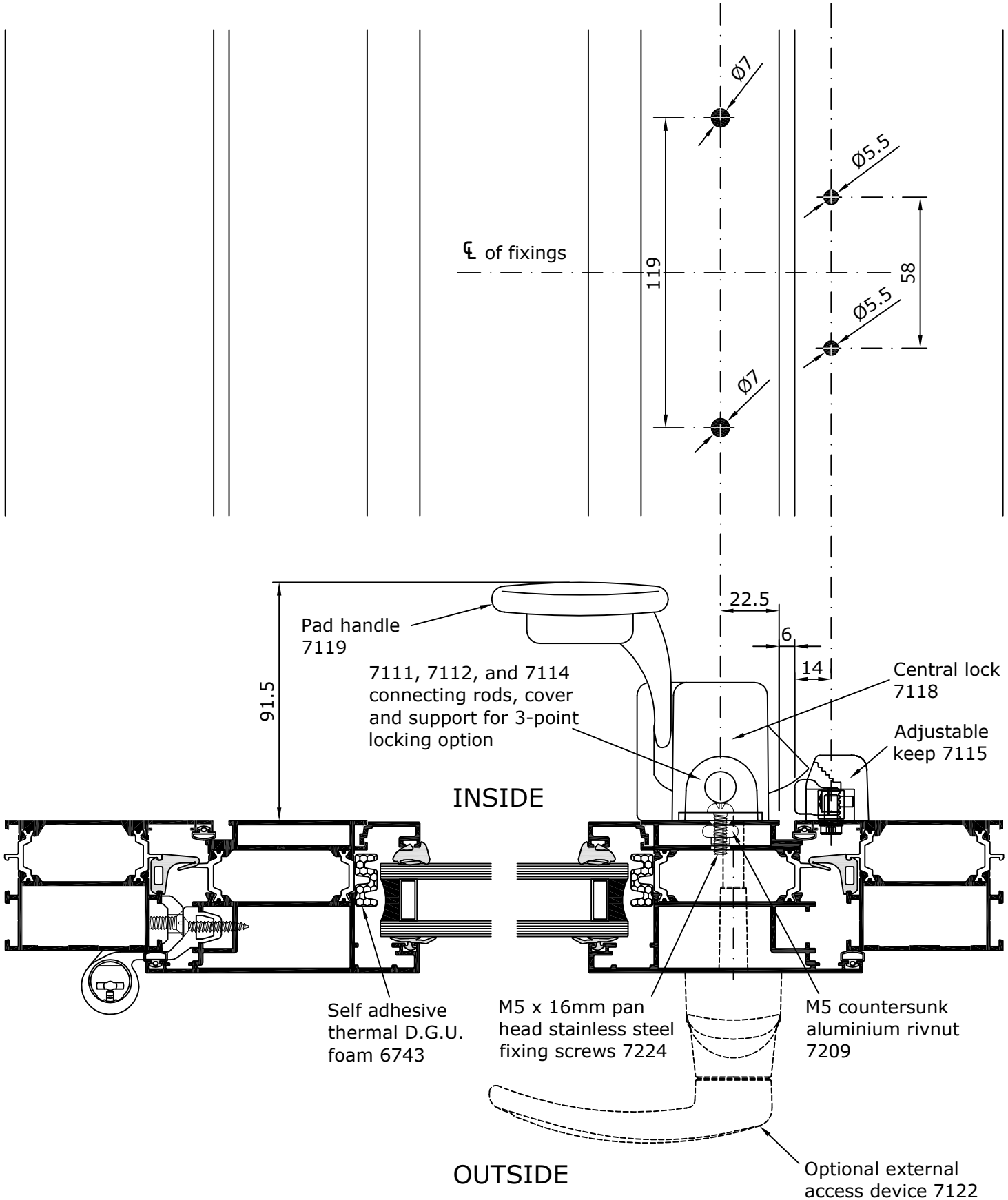
## System 5-20D/Hi+

DOOR SYSTEM

See installation instructions included with product.

Panic exit mechanisms to be fitted in accordance with BS EN 179.

Ensure door is glazed and beaded prior to finally fixing panic exit mechanism.



Scale 1:2



# Panic Exit Mechanisms

## Pad Handle 7118/7119 for Double Doors with Rebated Double Door Adaptor



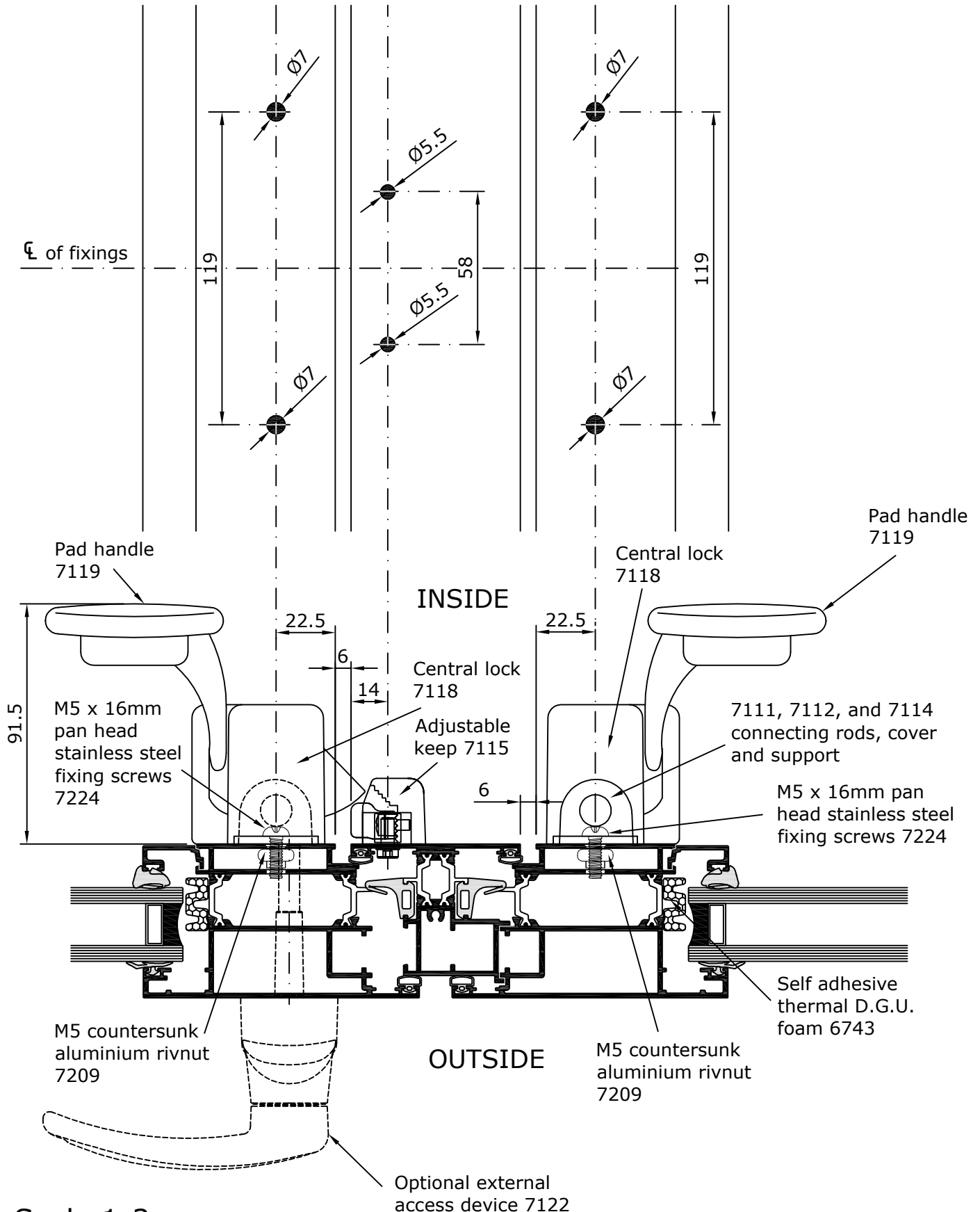
**System 5-20D/Hi+**

DOOR SYSTEM

See installation instructions included with product.

Panic exit mechanisms to be fitted in accordance with BS EN 179.

Ensure door is glazed and beaded prior to finally fixing panic exit mechanism.



Scale 1:2

# Panic Exit Mechanisms

## Pad Handle 7118/7119 for Double Doors with Flush Meeting Stile



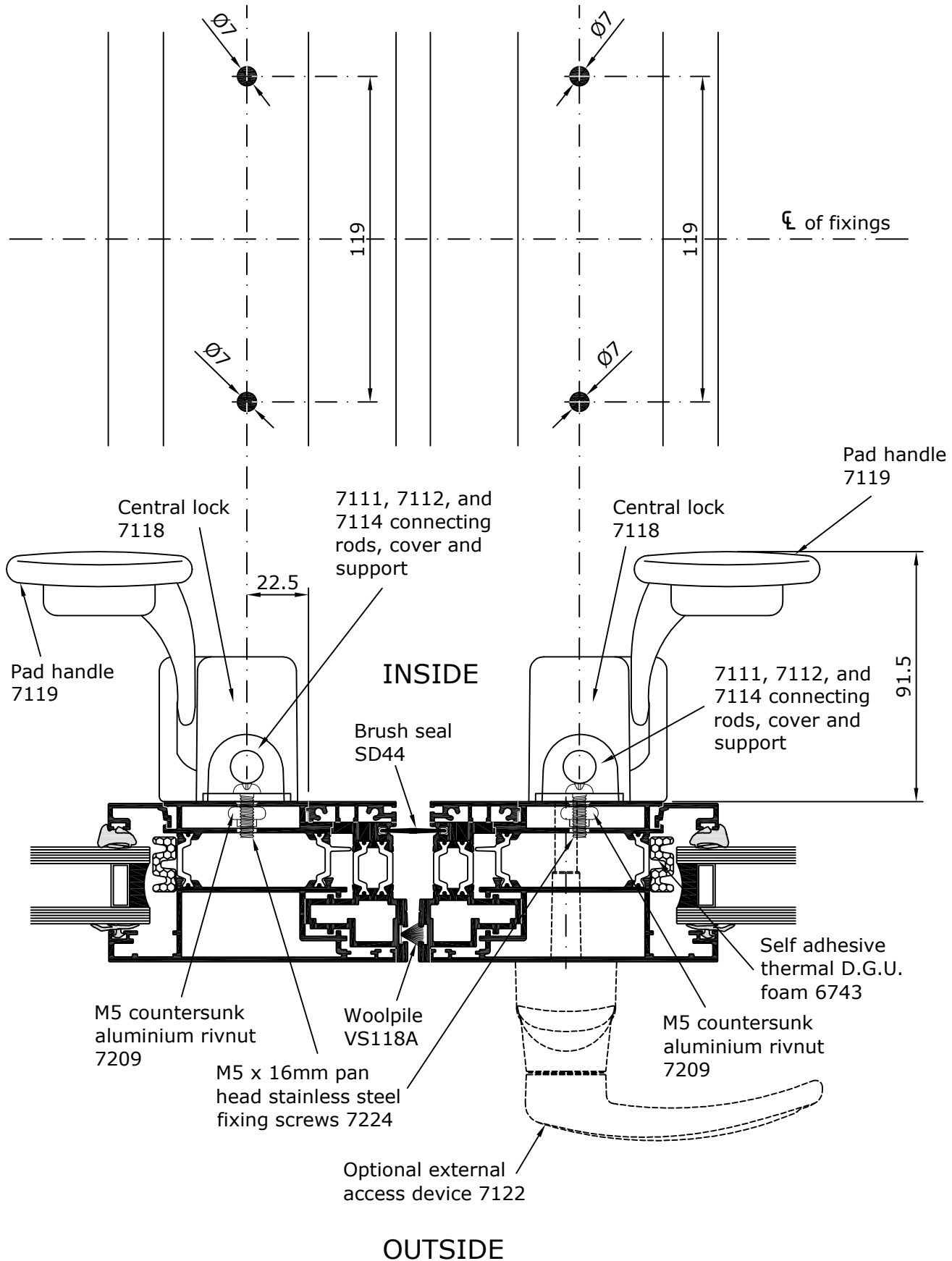
### System 5-20D/Hi+

DOOR SYSTEM

See installation instructions included with product.

Panic exit mechanisms to be fitted in accordance with BS EN 179.

Ensure door is glazed and beaded prior to finally fixing panic exit mechanism.



Scale 1:2

# Panic Exit Mechanisms Fitted at Mullion



## System 5-20D/Hi+

DOOR SYSTEM

See installation instructions included with product.

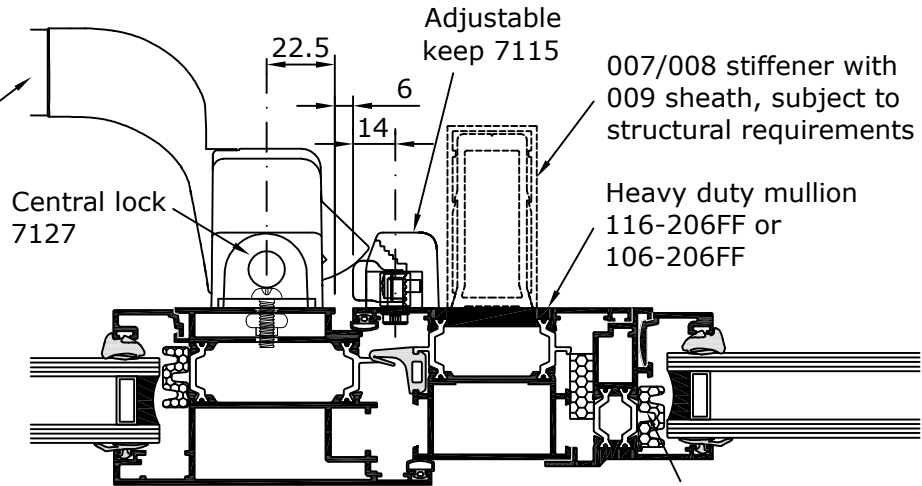
Ensure door is glazed and beaded prior to finally fixing panic exit mechanism.

Where a single door is fitted with the locking stile adjacent to an integral mullion, only the following mullion profiles can be used: 106-206FF

116-206FF

### PUSH RAIL

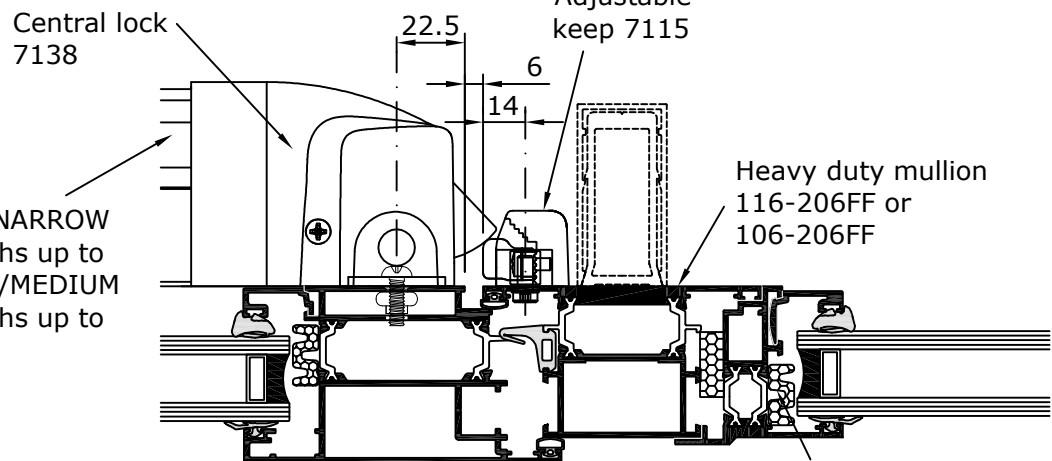
Push rail 7126 for door leaf widths up to 1000mm or 7107 for door leaf widths up to 1200mm



Self adhesive thermal D.G.U. foam 6743

### TOUCH BAR

Touch bar 7102/NARROW for door leaf widths up to 1000mm or 7102/MEDIUM for door leaf widths up to 1200mm

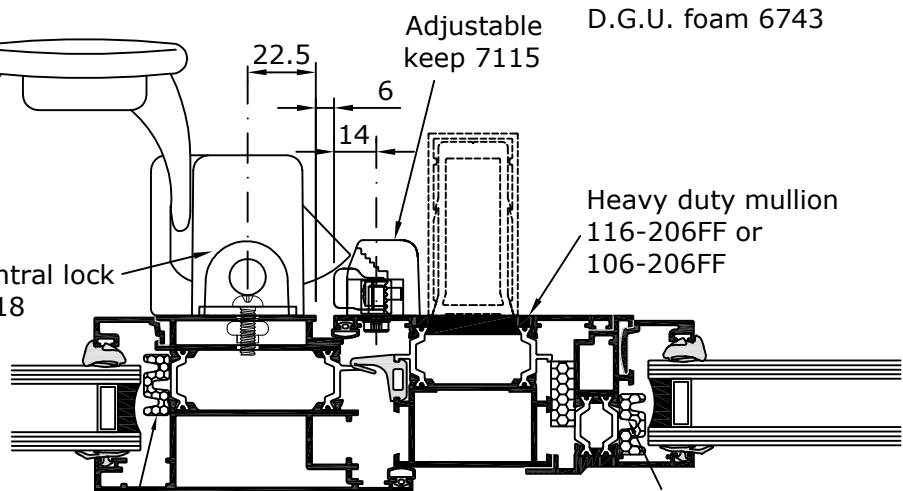


Self adhesive thermal D.G.U. foam 6743

### PAD HANDLE

Pad handle 7119

Central lock 7118



Self adhesive thermal D.G.U. foam 6743

Self adhesive thermal D.G.U. foam 6743

Not to scale

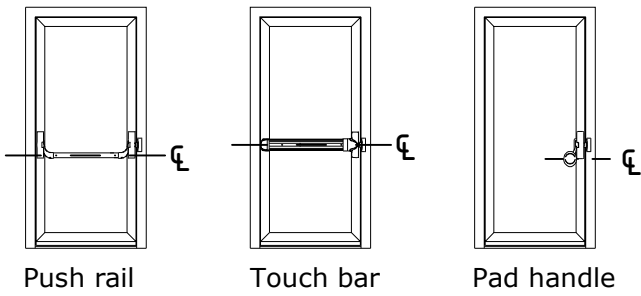
# Panic Exit Mechanism Preps for External Access Device 7122



**System 5-20D/Hi+**

DOOR SYSTEM

See installation instructions included with product.



Push rail      Touch bar      Pad handle

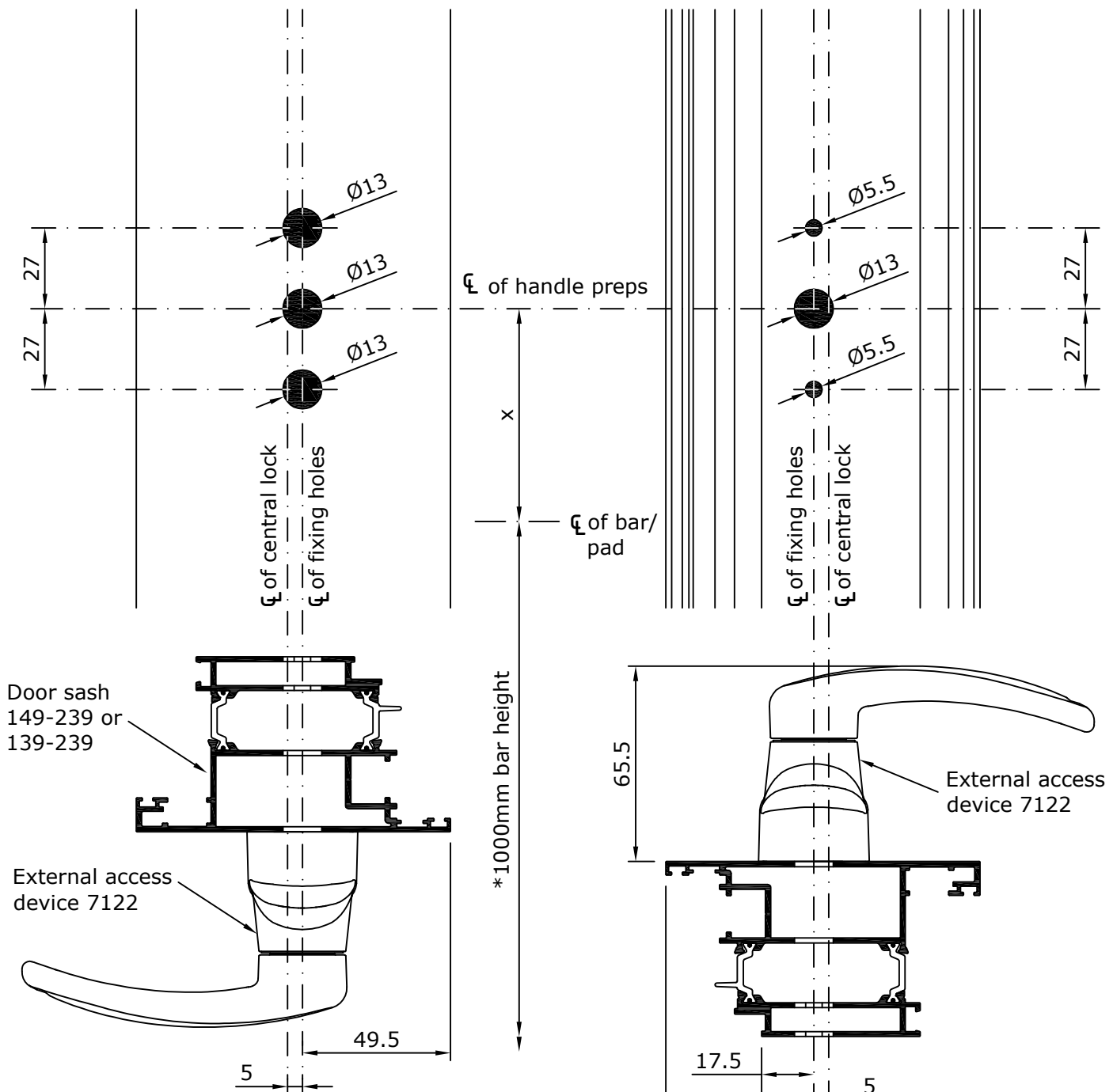
Also suitable for double door applications

- x = 59mm for push rail 7107 or 7126
- x = 0mm for touch bar 7102/NARROW or 7102/MEDIUM
- x = 75mm for pad handle 7119

\* Where it is known that the majority of the occupants may be young children, consideration may be given to reducing the height of the bar, in accordance with the relevant BS/EN Standards, further to consultation with Metal Technology's Technical Department.

## SASH PREPARATION OUTSIDE VIEW

## SASH PREPARATION INSIDE VIEW



Scale 1:2

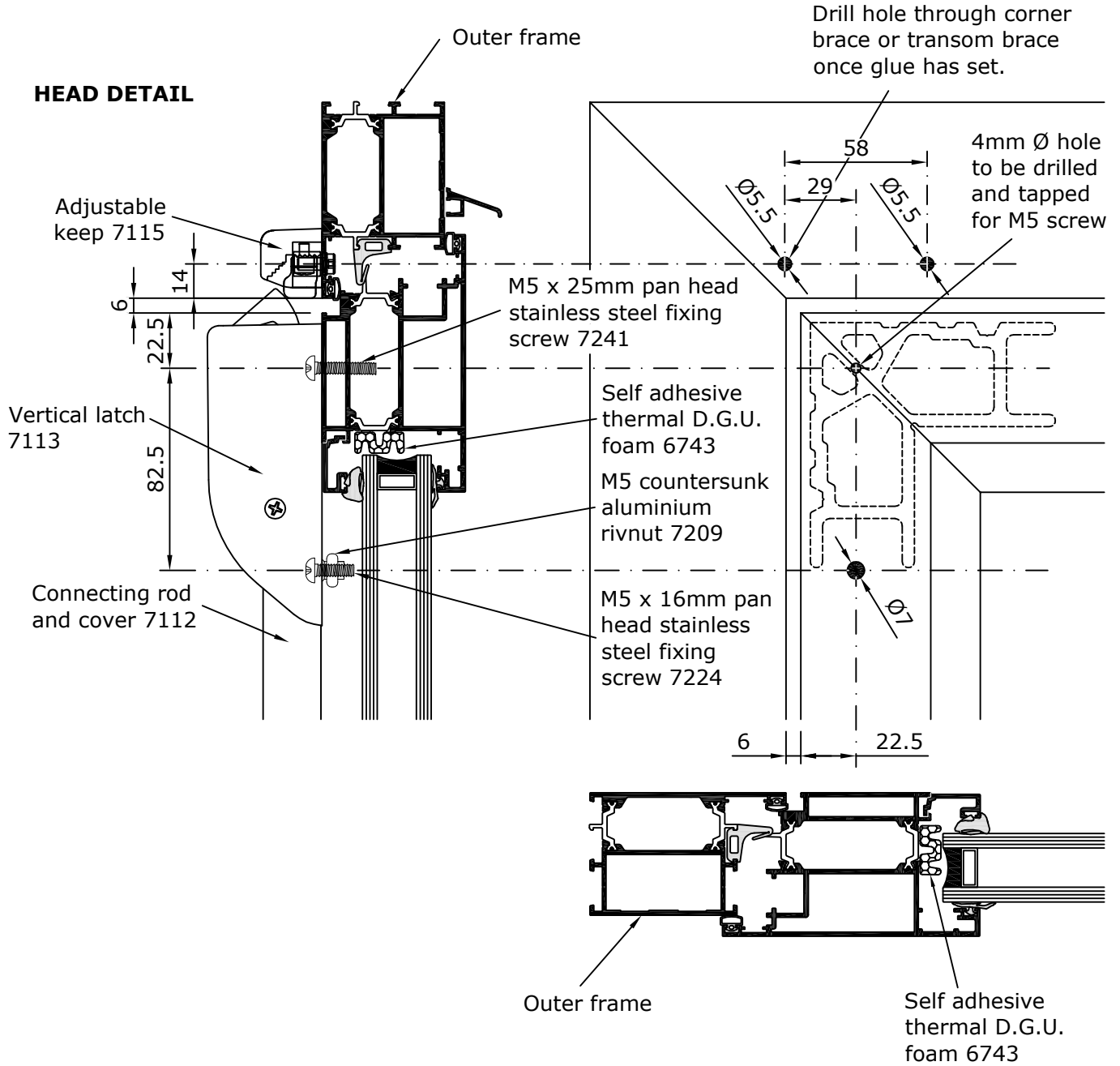
# Panic Exit Mechanism Preps for Top Latches Without Fanlight



## System 5-20D/Hi+

DOOR SYSTEM

See installation instructions included with product. Panic exit mechanisms to be fitted in accordance with BS EN 1125. Ensure door is glazed and beaded prior to finally fixing panic exit mechanism.



Not to scale

# Panic Exit Mechanism Preps for Top Latches With Fanlight

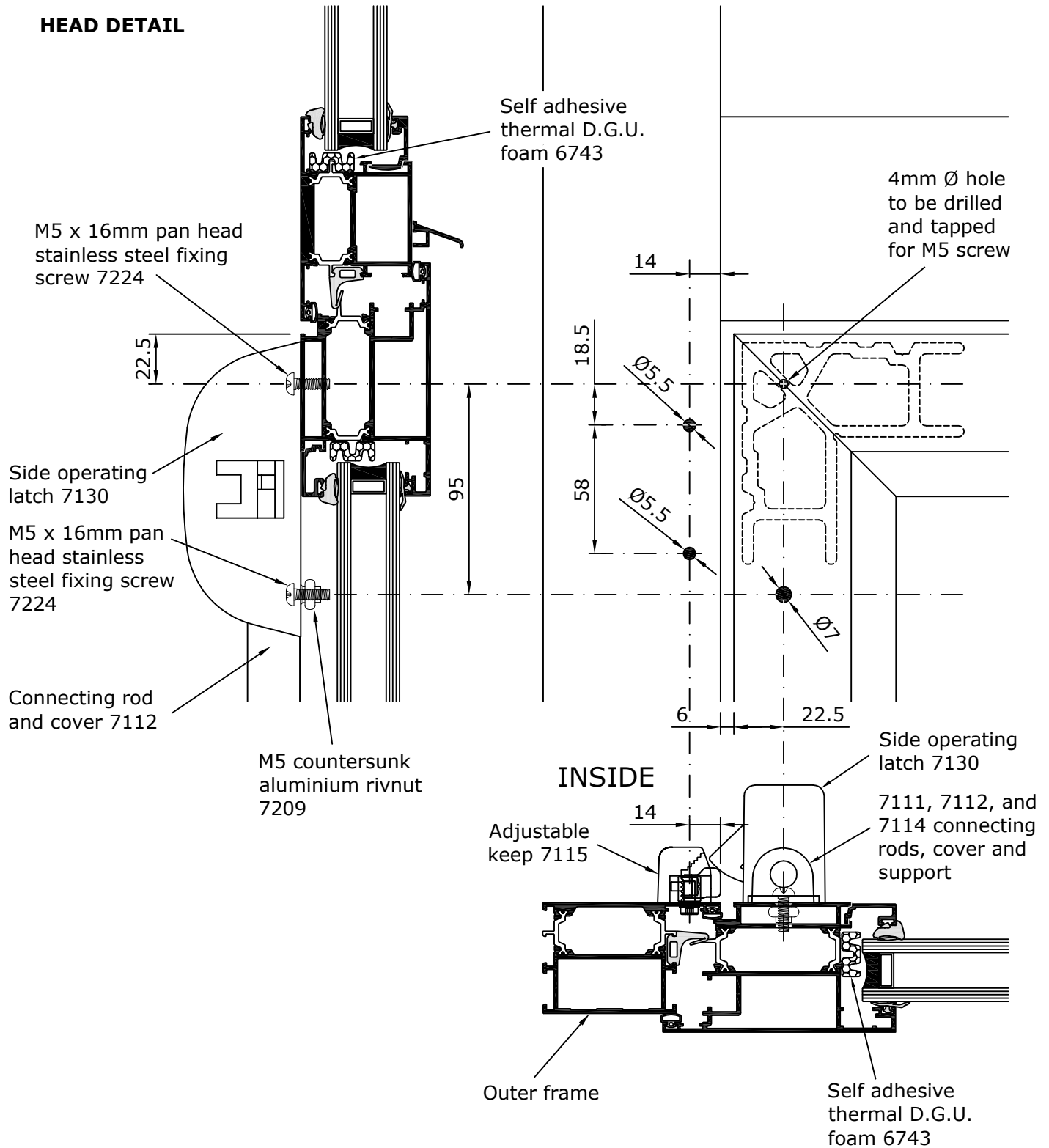


**System 5-20D/Hi+**

DOOR SYSTEM

See installation instructions included with product. Panic exit mechanisms to be fitted in accordance with BS EN 1125. Ensure door is glazed and beaded prior to finally fixing panic exit mechanism.

## HEAD DETAIL



Not to scale

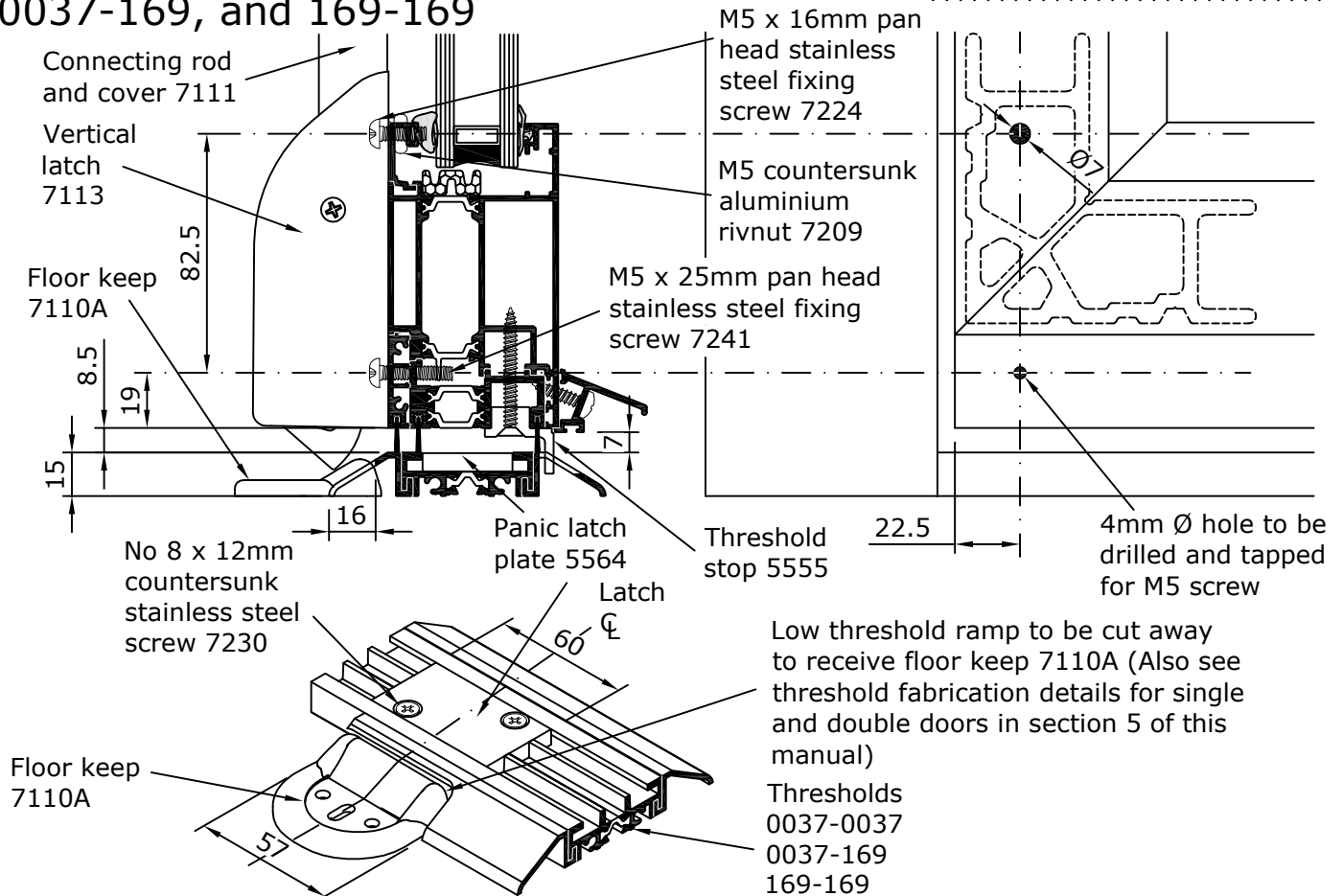
# Panic Exit Mechanism Preps for Bottom Latches



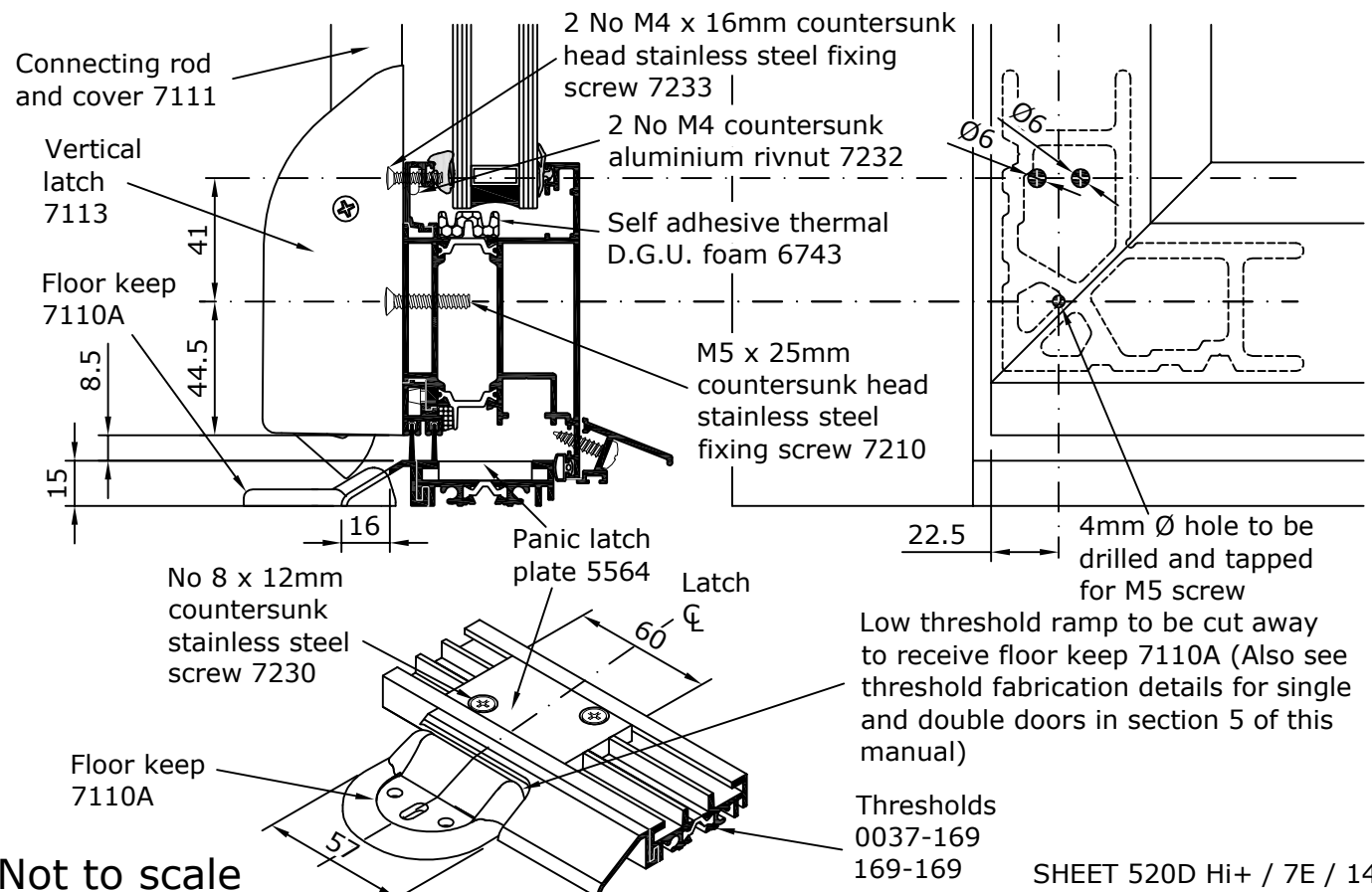
## System 5-20D/Hi+

DOOR SYSTEM

To Suit Flush Low Thresholds 0037-0037, 0037-169, and 169-169



To Suit Semi-Rebated Low Thresholds 0037-169 and 169-169



Not to scale

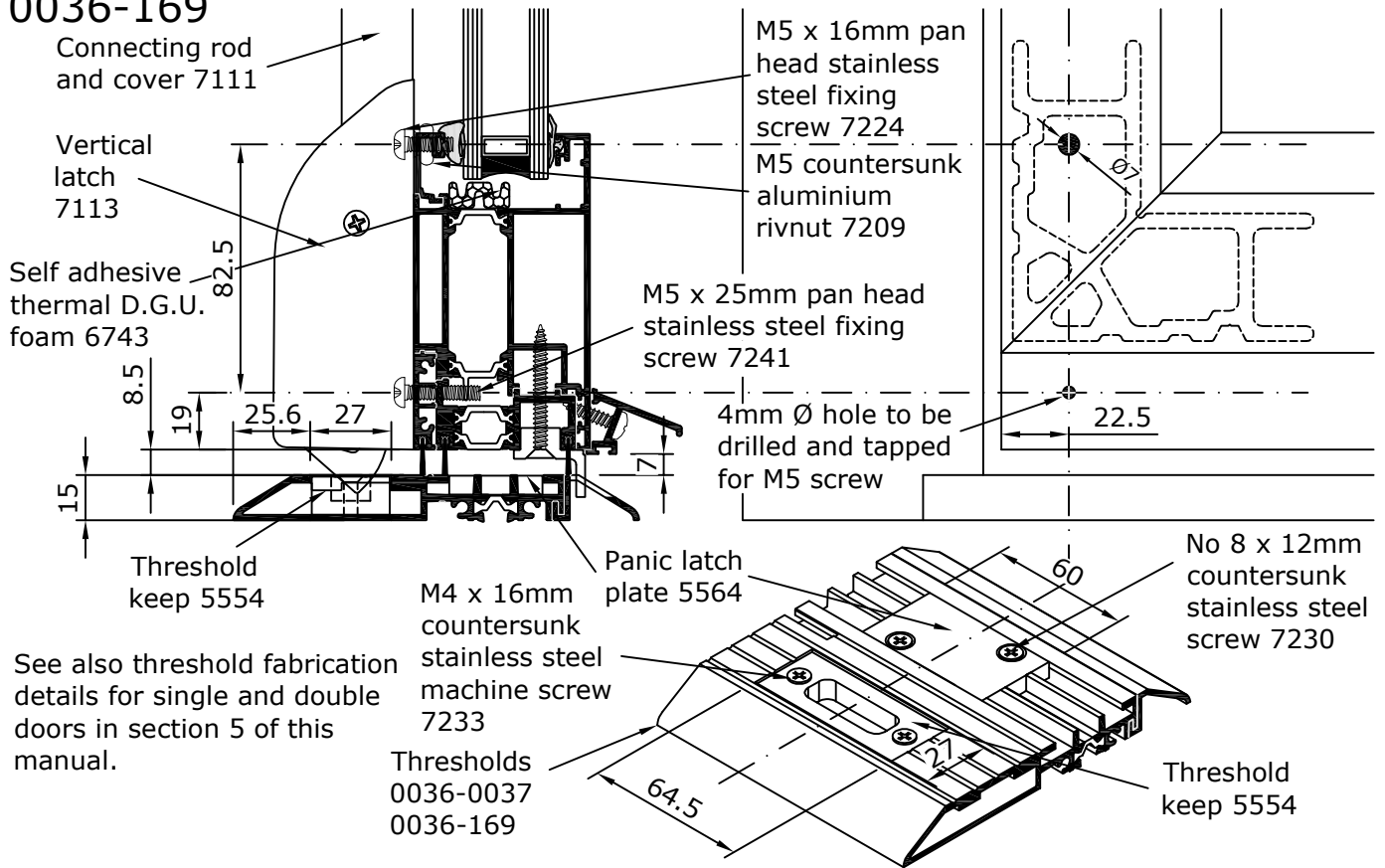
# Panic Exit Mechanism Preps for Bottom Latches



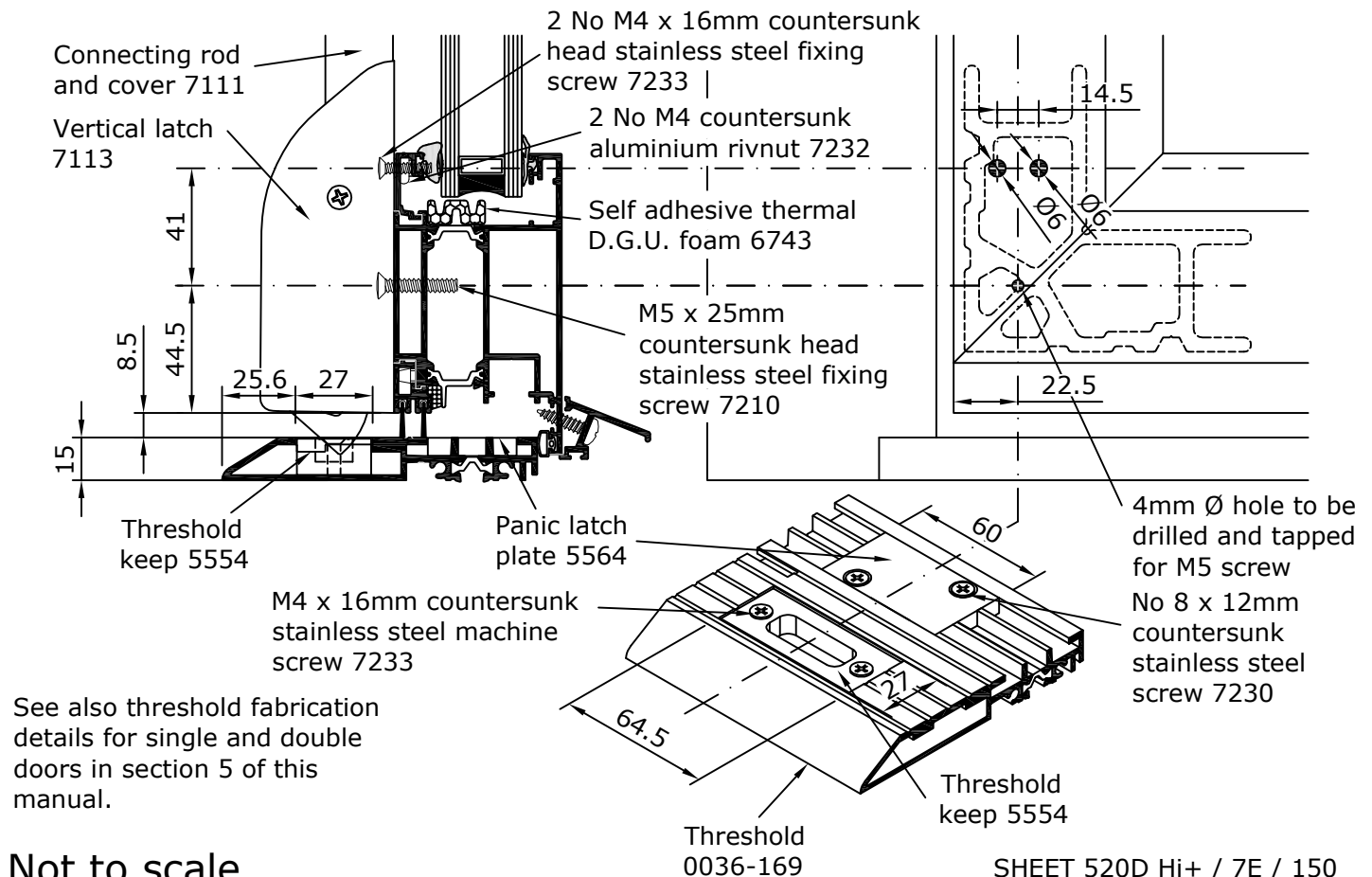
## System 5-20D/Hi+

DOOR SYSTEM

To Suit Flush Low Thresholds 0036-0037 and 0036-169



To Suit Semi-Rebated Low Threshold 0036-169



Not to scale



# Panic Exit Mechanism Preps for 7130 Side Operating Latches To Suit Flush Low Thresholds

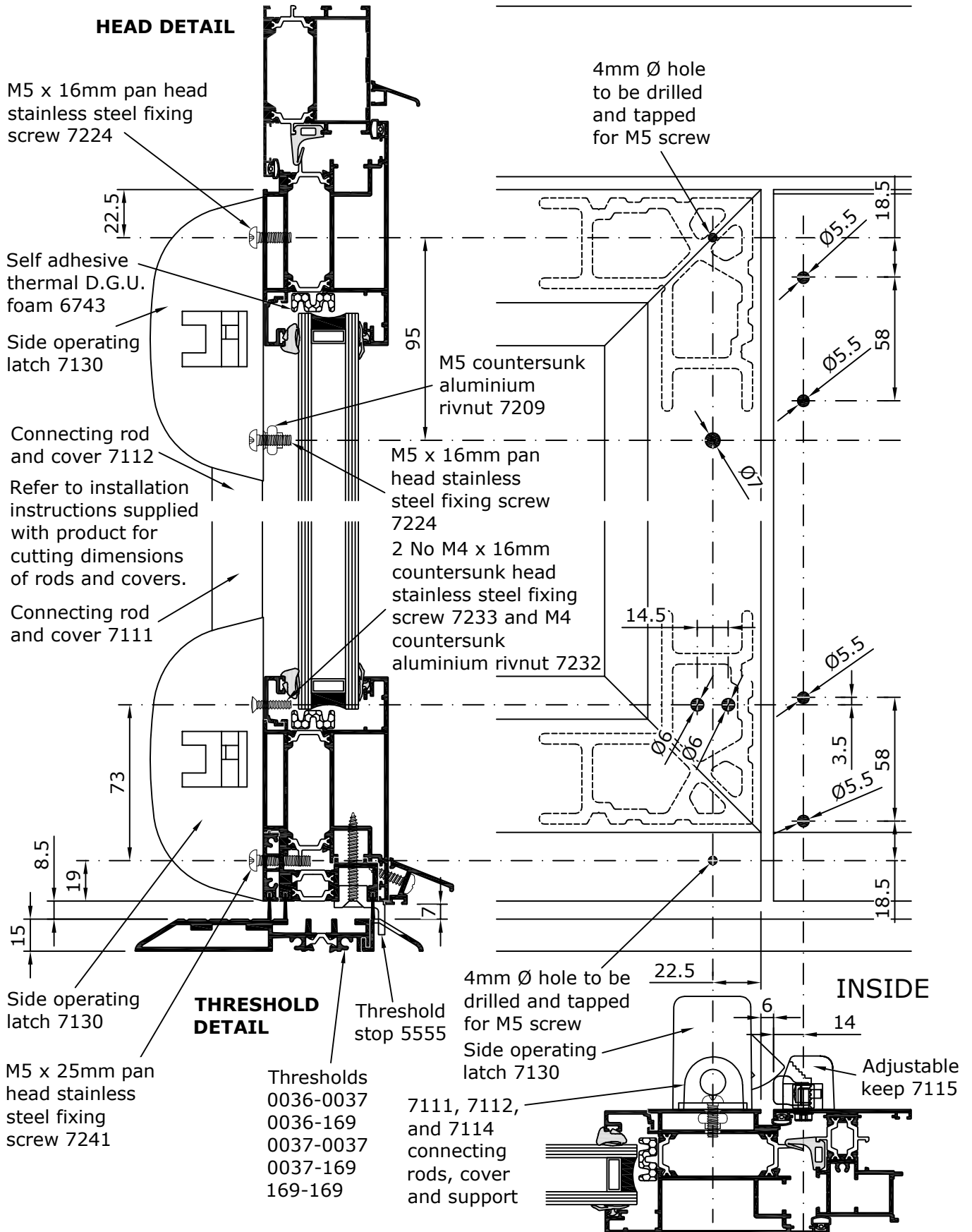


**System 5-20D/Hi+**

DOOR SYSTEM

For use on master leaf in rebated double door applications

See installation instructions included with product. Panic exit mechanisms to be fitted in accordance with BS EN 1125. Ensure door is glazed and beaded prior to finally fixing panic exit mechanism.



Not to scale

# Panic Exit Mechanism Preps for 7130 Side Operating Latches To Suit Semi-Rebated Low Thresholds

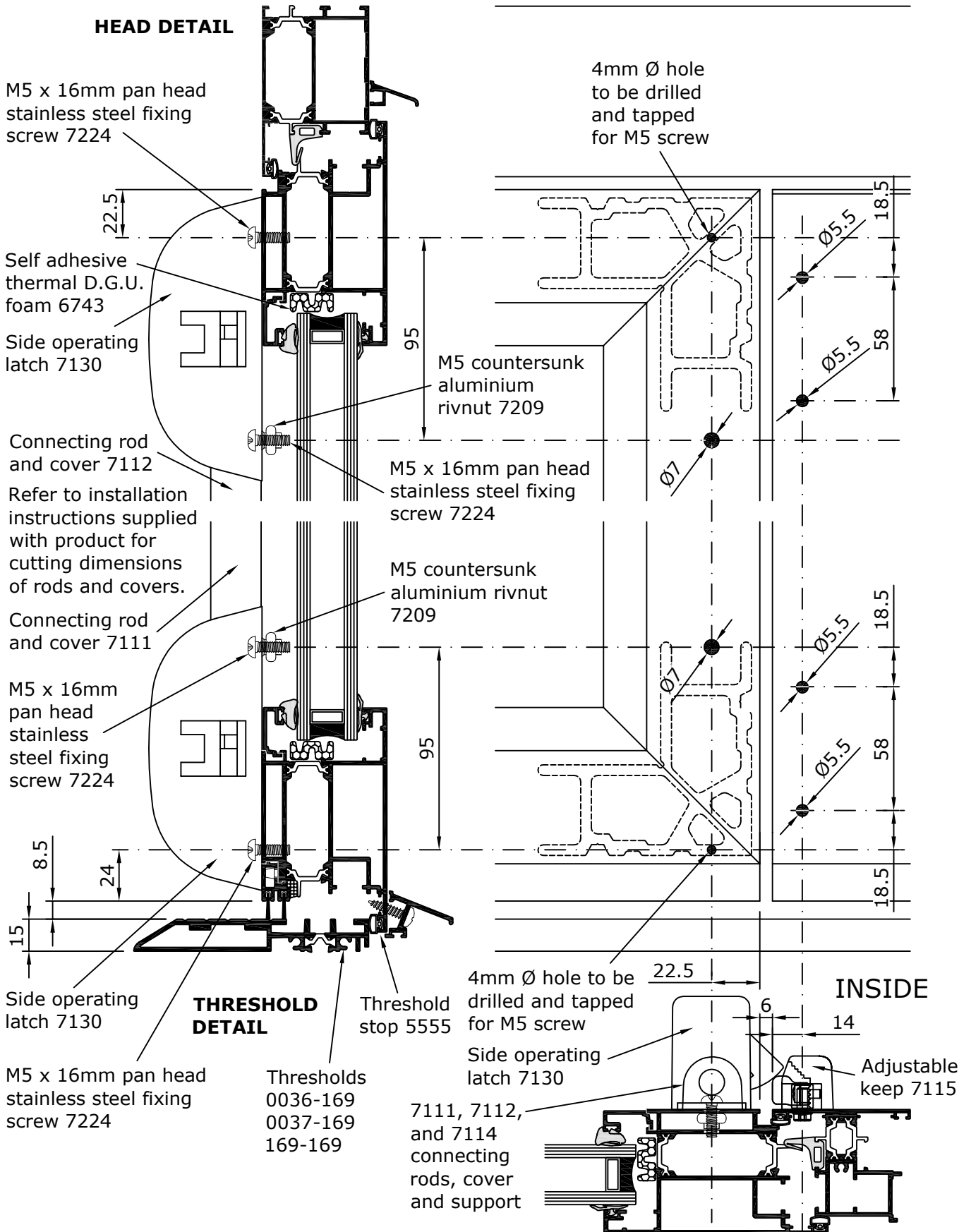


**System 5-20D/Hi+**

DOOR SYSTEM

For use on master leaf in rebated double door applications

See installation instructions included with product. Panic exit mechanisms to be fitted in accordance with BS EN 1125. Ensure door is glazed and beaded prior to finally fixing panic exit mechanism.



Not to scale

# Security Panic Exit Mechanisms



## Touch Bar for Single Door

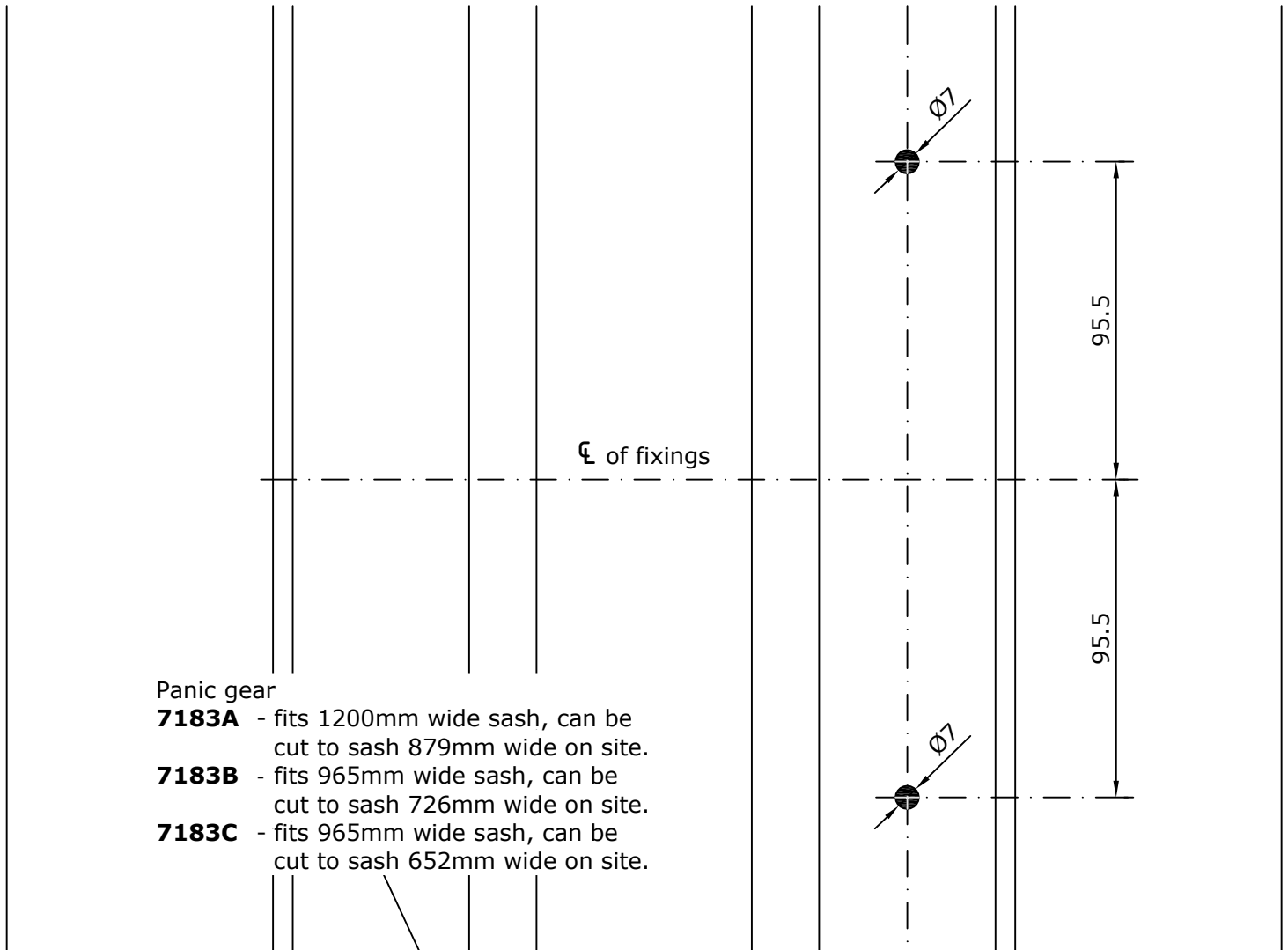
## System 5-20D/Hi+

See installation instructions included with product.

Panic exit mechanisms to be fitted in accordance with BS EN 1125

Ensure door is glazed and beaded prior to finally fixing panic exit mechanism.

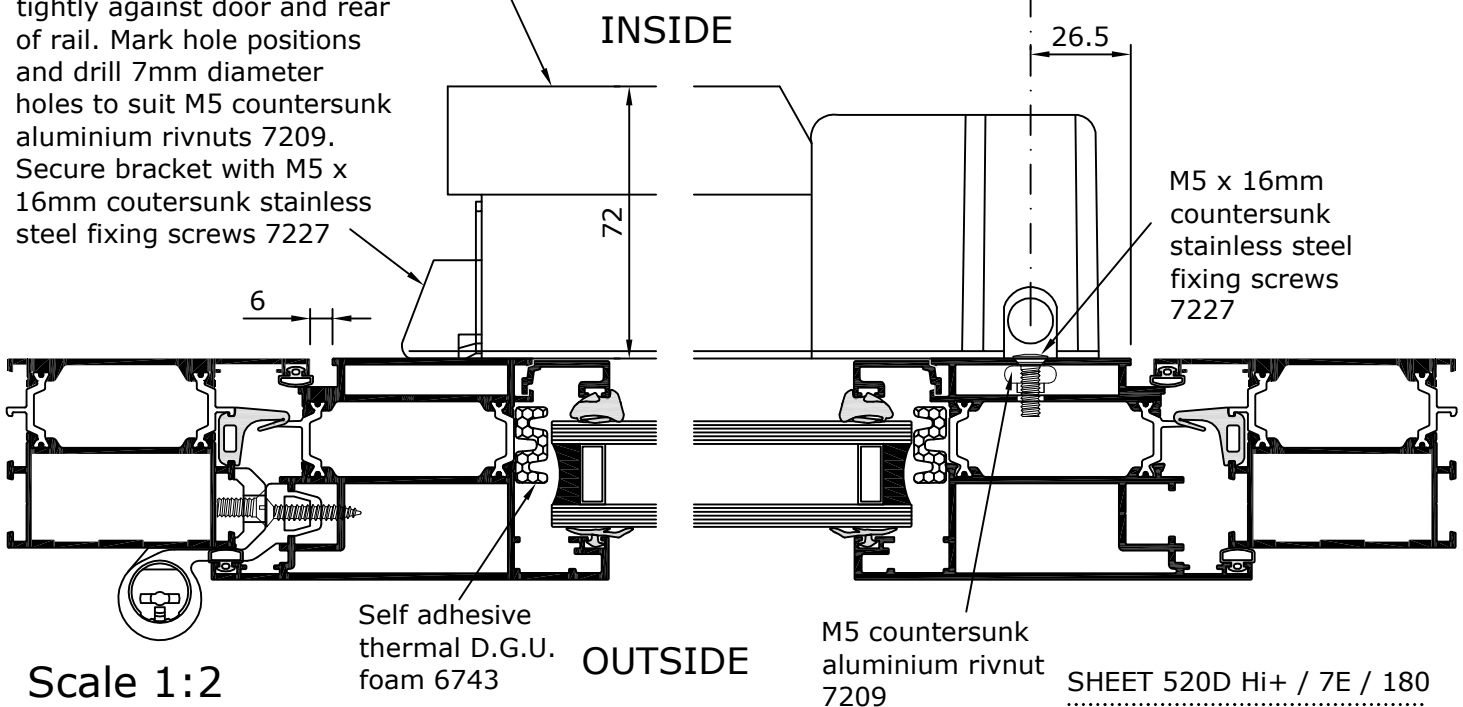
DOOR SYSTEM



Panic gear

- 7183A** - fits 1200mm wide sash, can be cut to sash 879mm wide on site.
- 7183B** - fits 965mm wide sash, can be cut to sash 726mm wide on site.
- 7183C** - fits 965mm wide sash, can be cut to sash 652mm wide on site.

Hold rear mounting bracket tightly against door and rear of rail. Mark hole positions and drill 7mm diameter holes to suit M5 countersunk aluminium rivnuts 7209. Secure bracket with M5 x 16mm countersunk stainless steel fixing screws 7227



Scale 1:2

Self adhesive thermal D.G.U. foam 6743

OUTSIDE

M5 countersunk aluminium rivnut 7209

SHEET 520D Hi+ / 7E / 180

rev 1

13/11/13

# Security Panic Exit Mechanisms



## Touch Bar for Double Doors with Flush Meeting Stile

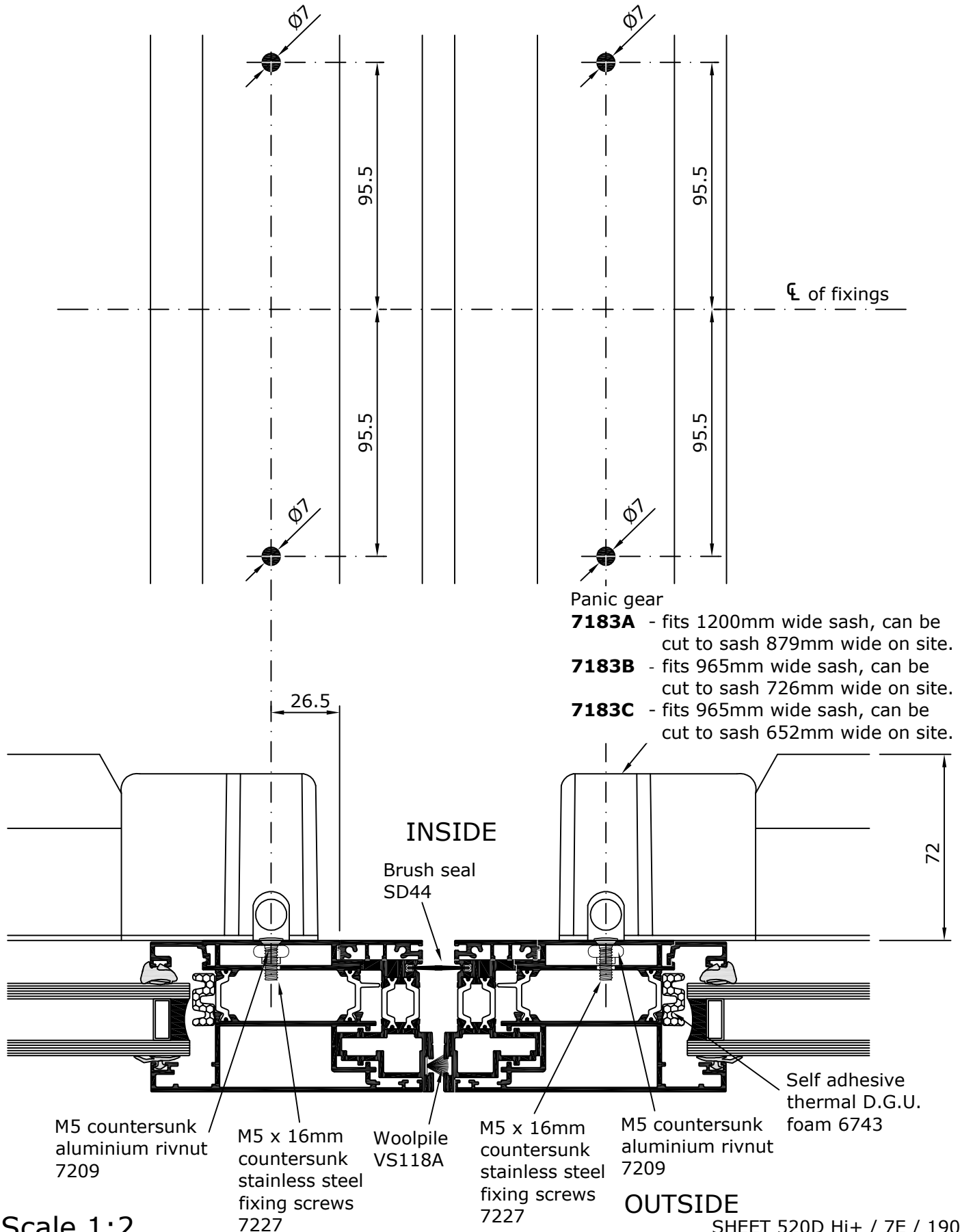
### System 5-20D/Hi+

DOOR SYSTEM

See installation instructions included with product.

Panic exit mechanisms to be fitted in accordance with BS EN 1125

Ensure door is glazed and beaded prior to finally fixing panic exit mechanism.



# Security Panic Exit Mechanism Preps for Top Latches

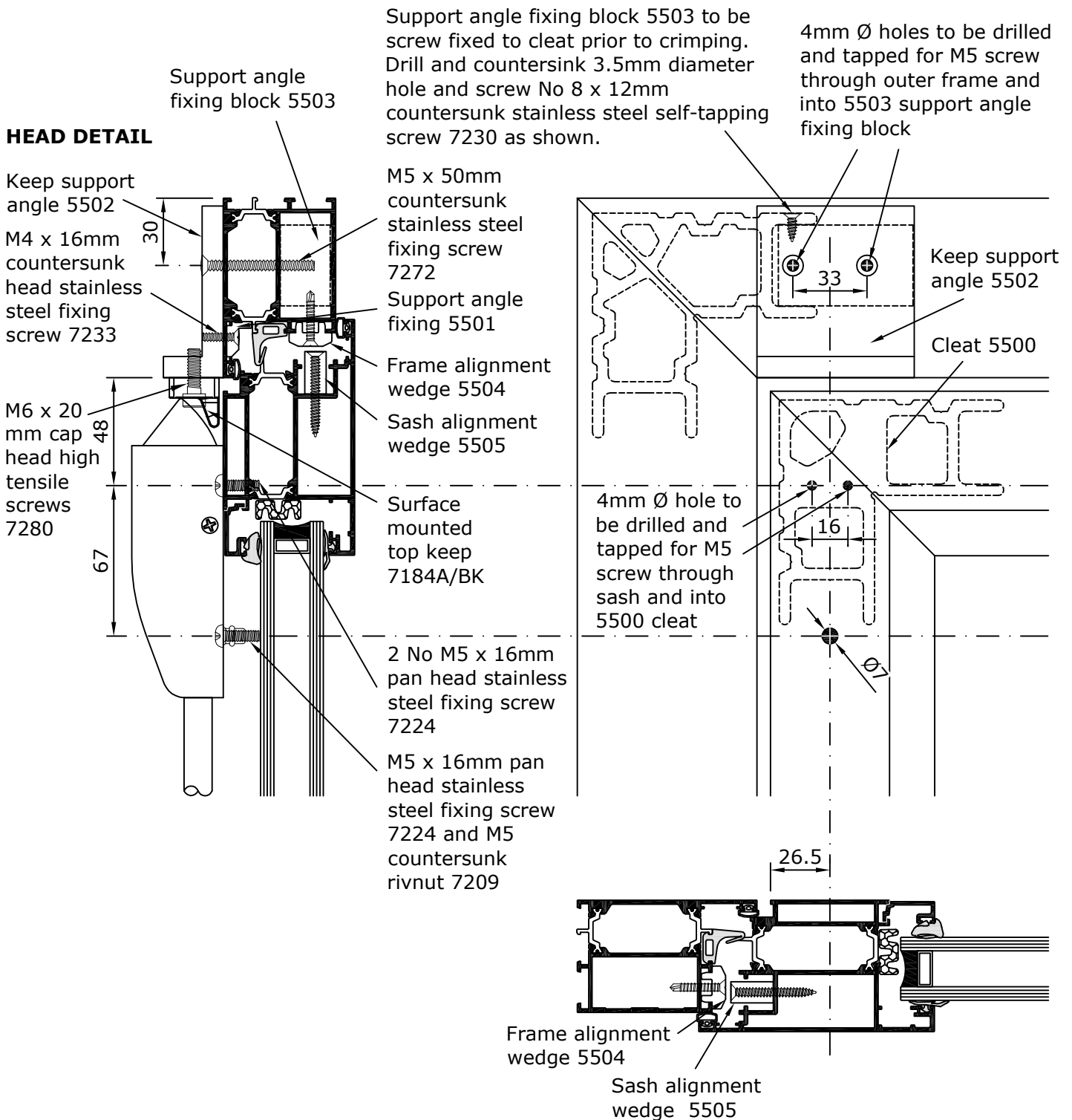


**System 5-20D/Hi+**

DOOR SYSTEM

See installation instructions included with product. Panic exit mechanisms to be fitted in accordance with BS EN 1125. Ensure door is glazed and beaded prior to finally fixing panic exit mechanism.

Refer to installation instructions supplied with product for cutting dimensions of rods.



Not to scale

SHEET 520D Hi+ / 7E / 200

rev 4

14/03/14

# Security Panic Exit Mechanism Preps for Bottom Latches



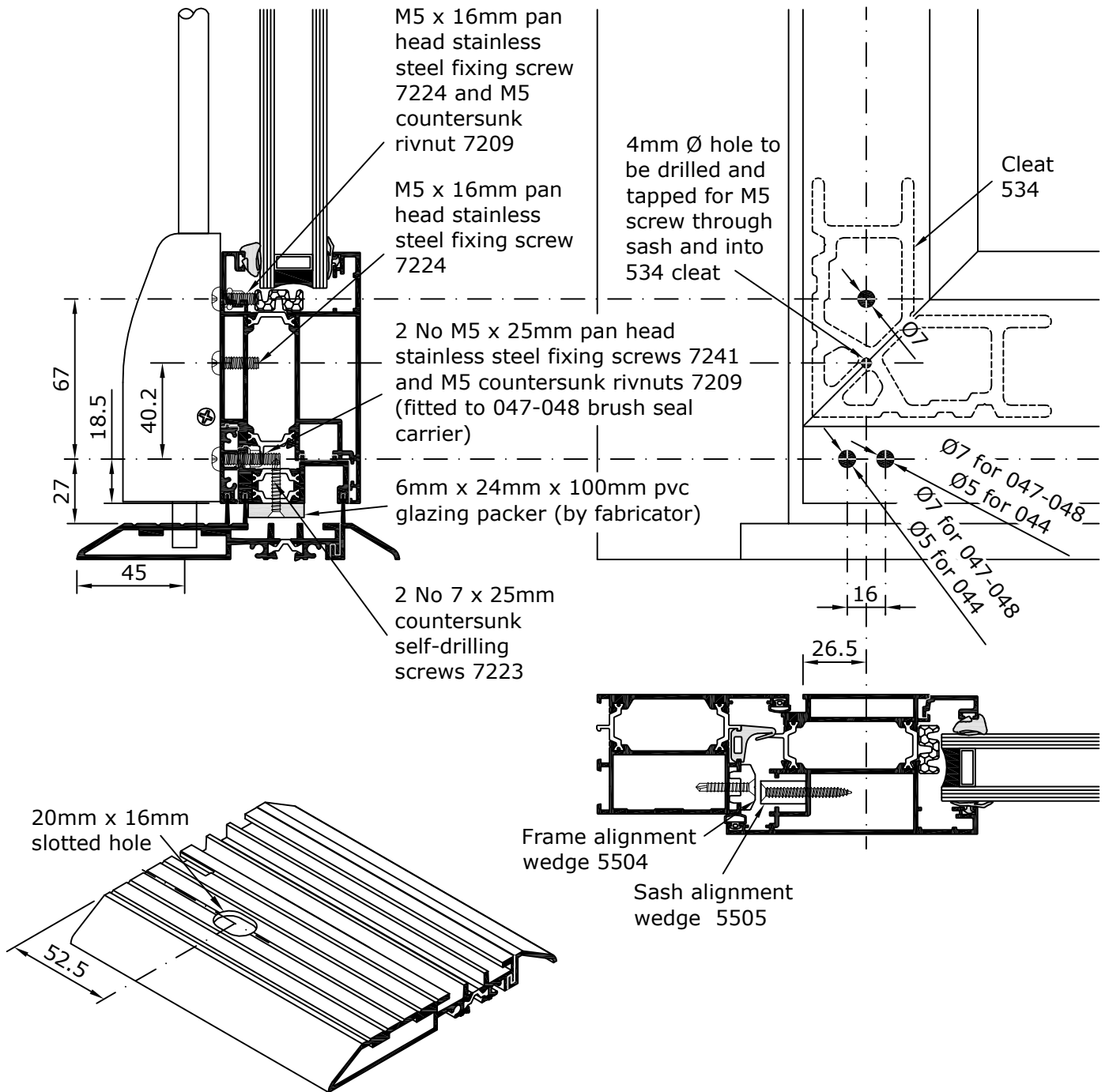
**System 5-20D/Hi+**

DOOR SYSTEM

To Suit Single Doors with Flush Low  
Thresholds 0036-0037 or 0036-169

See installation instructions included with product. Panic exit mechanisms to be fitted in accordance with BS EN 1125. Ensure door is glazed and beaded prior to finally fixing panic exit mechanism.

Refer to installation instructions supplied with product for cutting dimensions of rods.



Not to scale

# Security Panic Exit Mechanism Preps for Top Latches



**System 5-20D/Hi+**

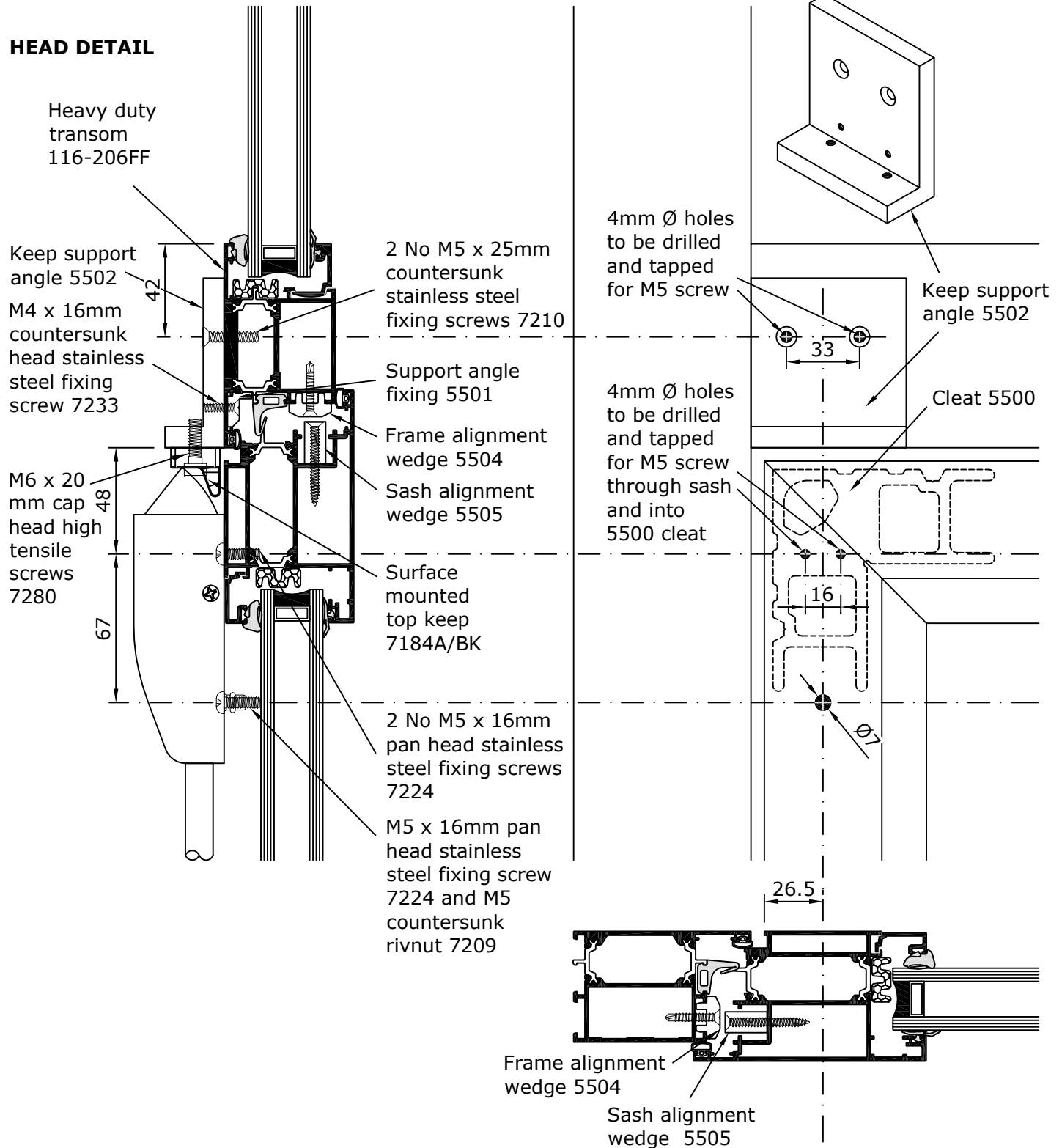
DOOR SYSTEM

To Suit Single Doors with Transom/Fanlight  
Above the Door

See installation instructions included with product. Panic exit mechanisms to be fitted in accordance with BS EN 1125. Ensure door is glazed and beaded prior to finally fixing panic exit mechanism.

Refer to installation instructions supplied with product for cutting dimensions of rods.

## HEAD DETAIL



Not to scale

# Security Panic Exit Mechanism Preps for Top Latches

To Suit Double Doors

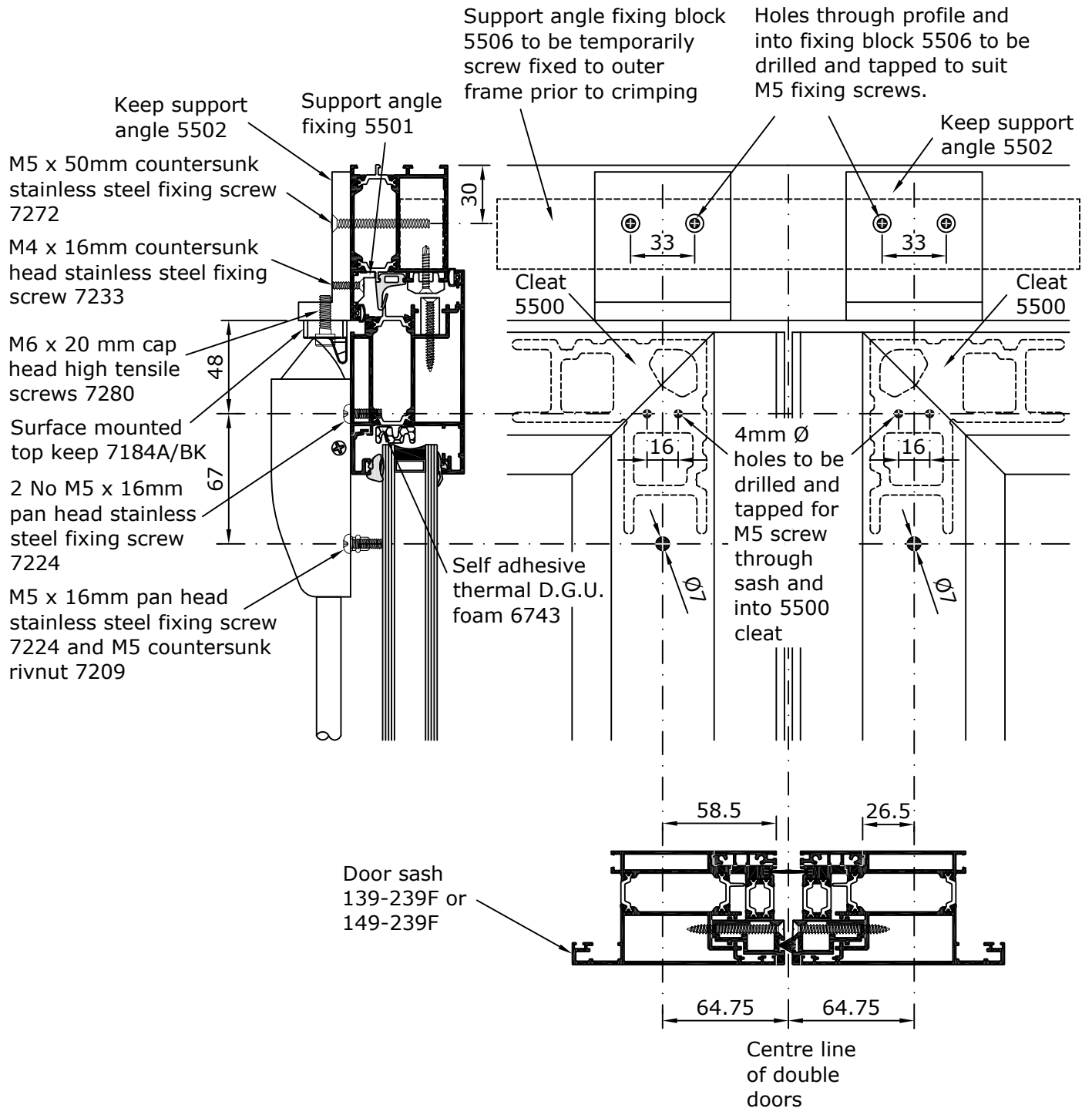


**System 5-20D/Hi+**

DOOR SYSTEM

See installation instructions included with product. Panic exit mechanisms to be fitted in accordance with BS EN 1125. Ensure door is glazed and beaded prior to finally fixing panic exit mechanism.

Refer to installation instructions supplied with product for cutting dimensions of rods.



Not to scale



# Security Panic Exit Mechanism Preps for Bottom Latches

To Suit Double Doors

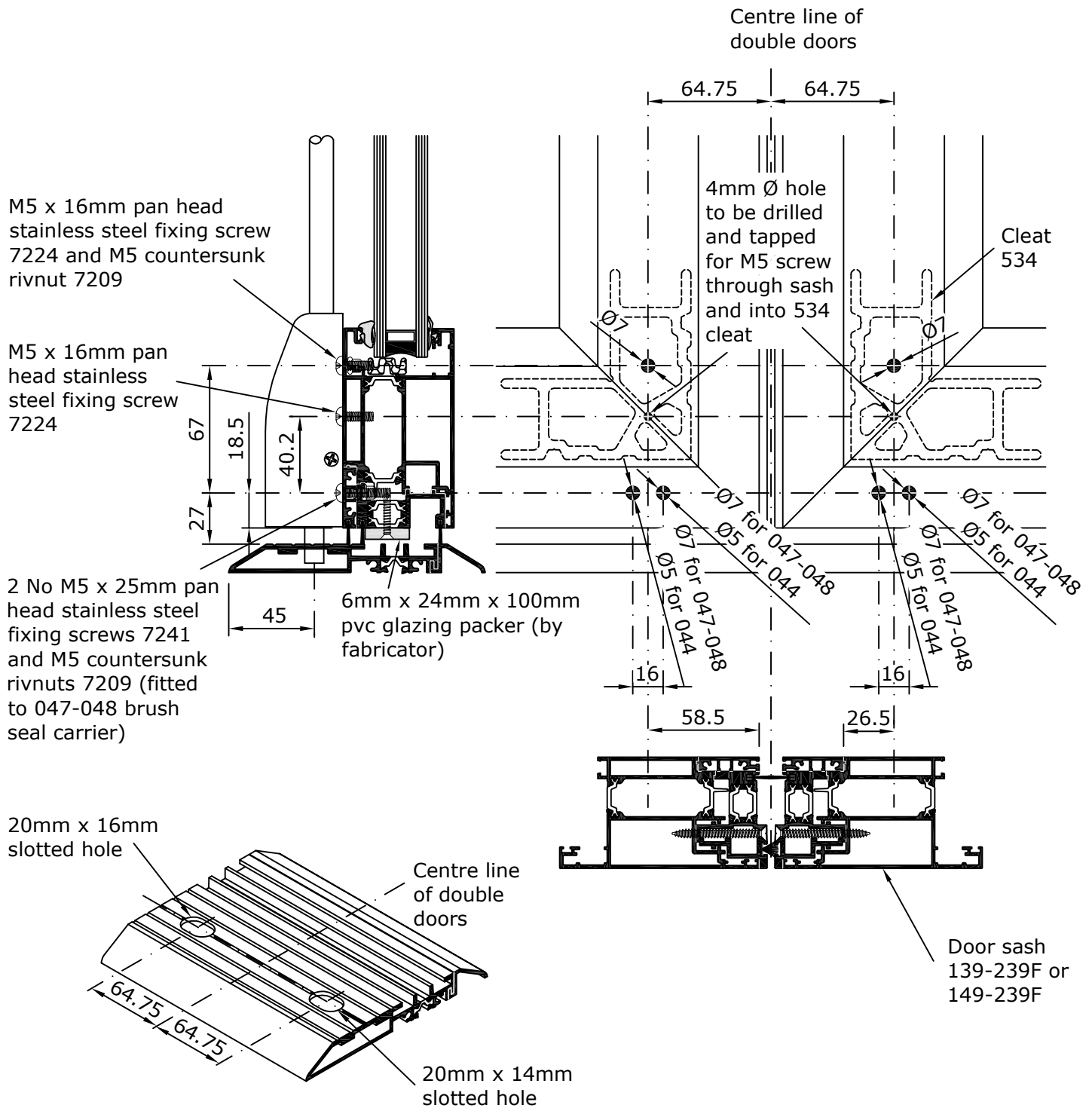


**System 5-20D/Hi+**

DOOR SYSTEM

See installation instructions included with product. Panic exit mechanisms to be fitted in accordance with BS EN 1125. Ensure door is glazed and beaded prior to finally fixing panic exit mechanism.

Refer to installation instructions supplied with product for cutting dimensions of rods.



Not to scale

# Preps for External Access Device **MT**

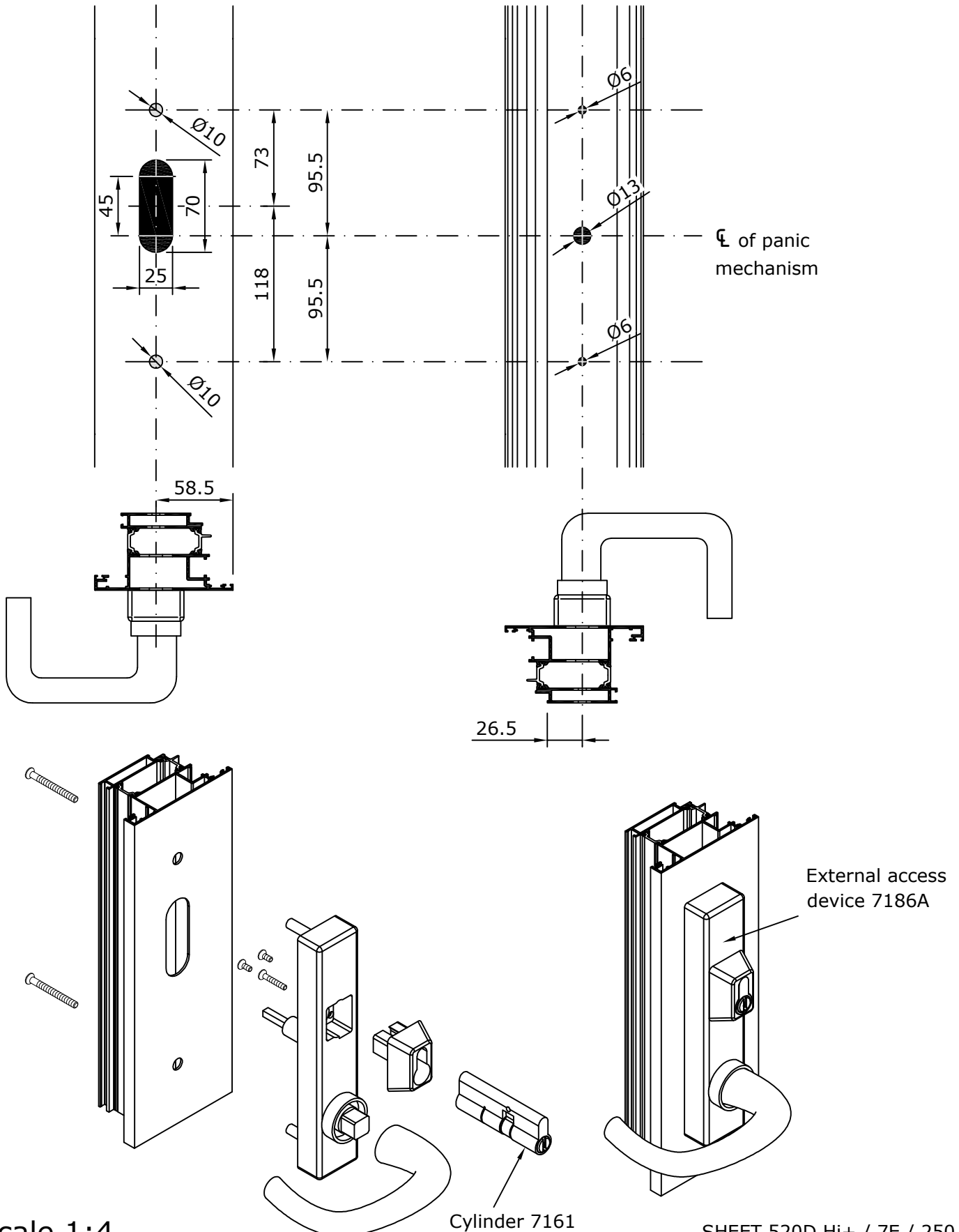
## 7186A

To Suit 7183 Panic Exit Mechanism

**System 5-20D/Hi+**

DOOR SYSTEM

External access device 7186A must be fitted in conjunction with the Panic Exit Mechanism in accordance with installation instructions included with product. 7197 spindle needs to be ordered with handle.



Scale 1:4

# Door Closer Prep Details

## Open-In Doors

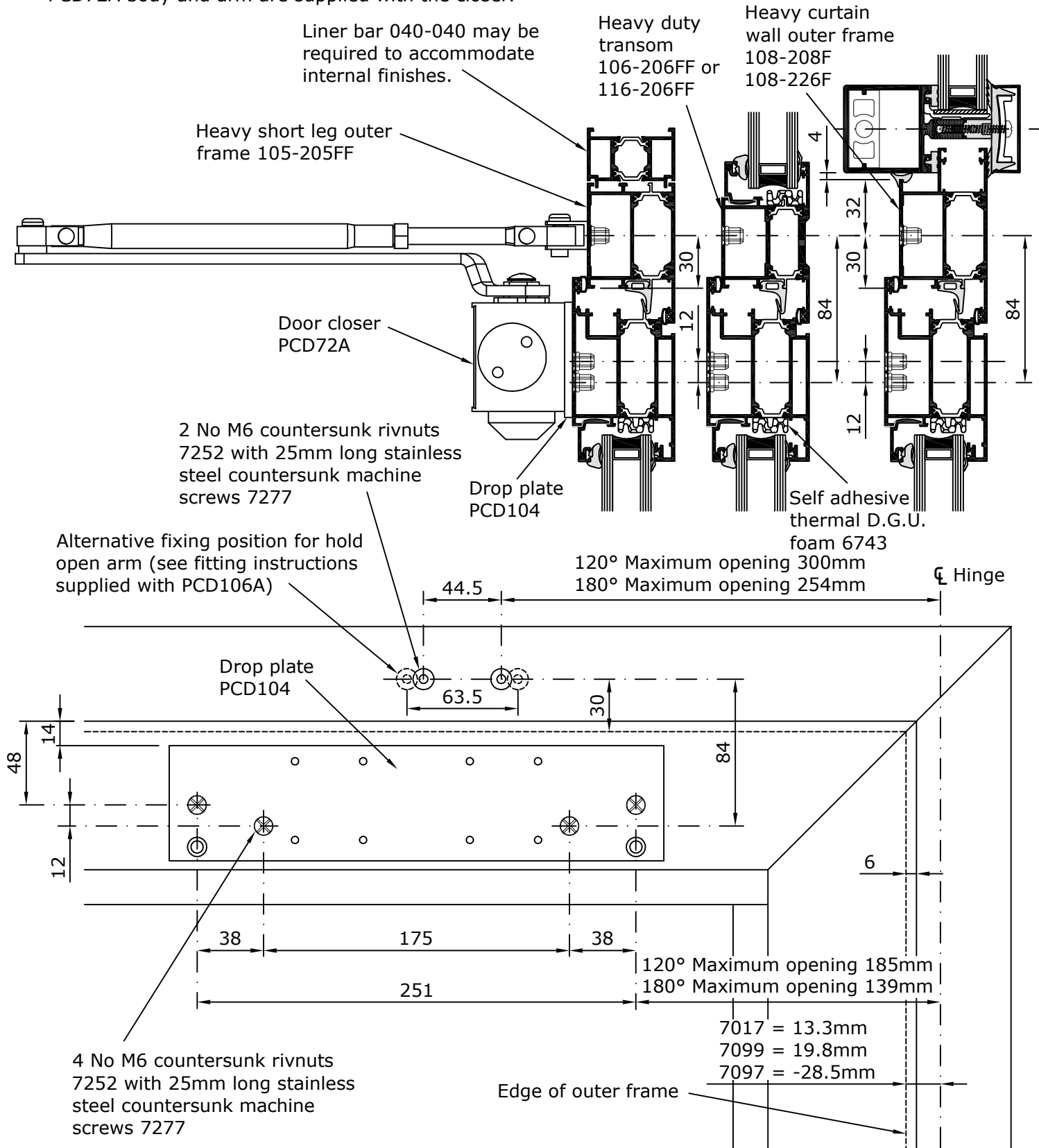


## System 5-20D/Hi+

DOOR SYSTEM

Only suitable for use with 105-205FF, 108-208F, 108-226F, 106-206FF and 116-206FF. PCD72A closer offers adjustable closing speed, latching speed, and backcheck facility. An additional arm PCD106A must be used when a hold open facility is required.

For details of door closer installation and adjustment see fixing instructions supplied with door closer. Following installation and glazing all door closers must have the backcheck facility engaged and be adjusted by the installer to suit site application and applicable disabled access requirements. Fixing screws for PCD72A body and arm are supplied with the closer.



Scale 1:3

# Door Closer Prep Details

## Open-Out Doors, No Hold

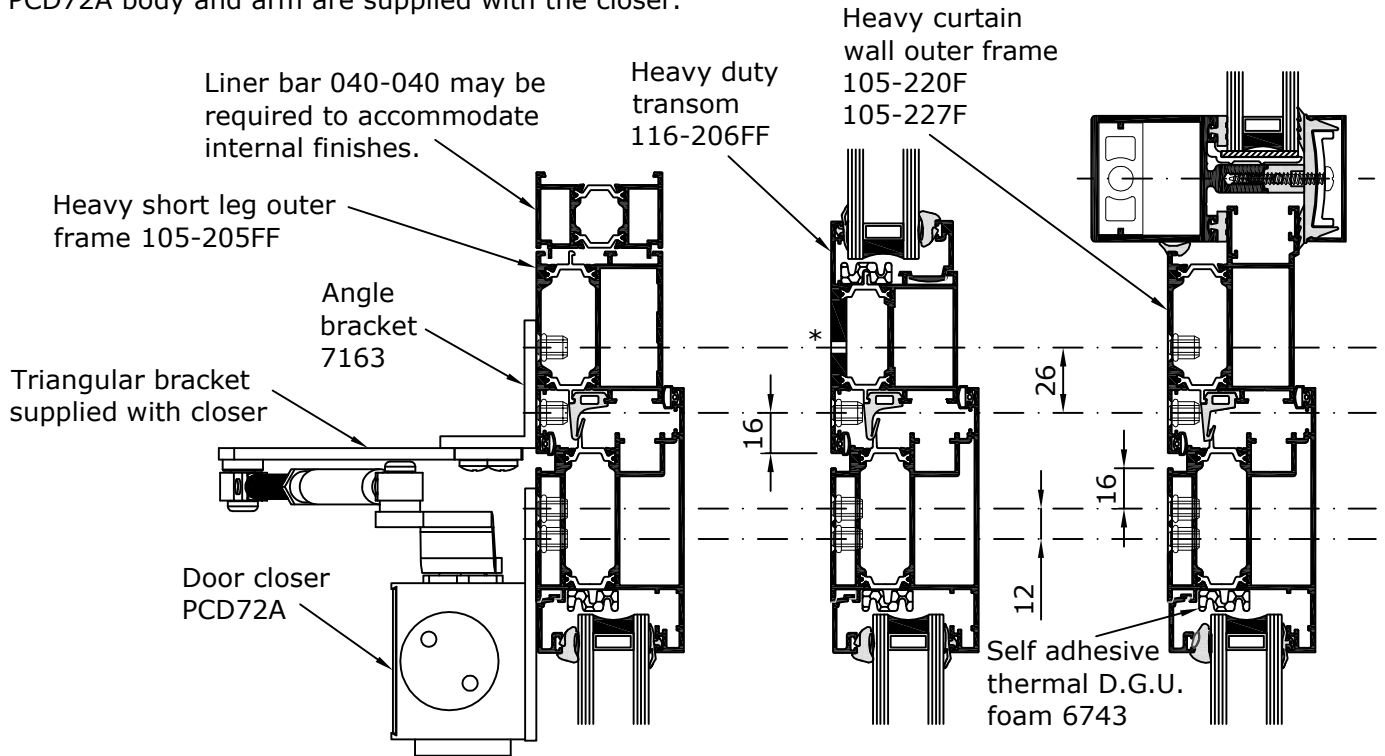
Only suitable for use with 105-205FF, 105-220F, 105-227F and 116-206FF. PCD72A closer offers adjustable closing speed, latching speed, and backcheck facility.

For details of door closer installation and adjustment see fixing instructions supplied with door closer. Following installation and glazing all door closers must have the backcheck facility engaged and be adjusted by the installer to suit site application and applicable disabled access requirements. Fixing screws for PCD72A body and arm are supplied with the closer.

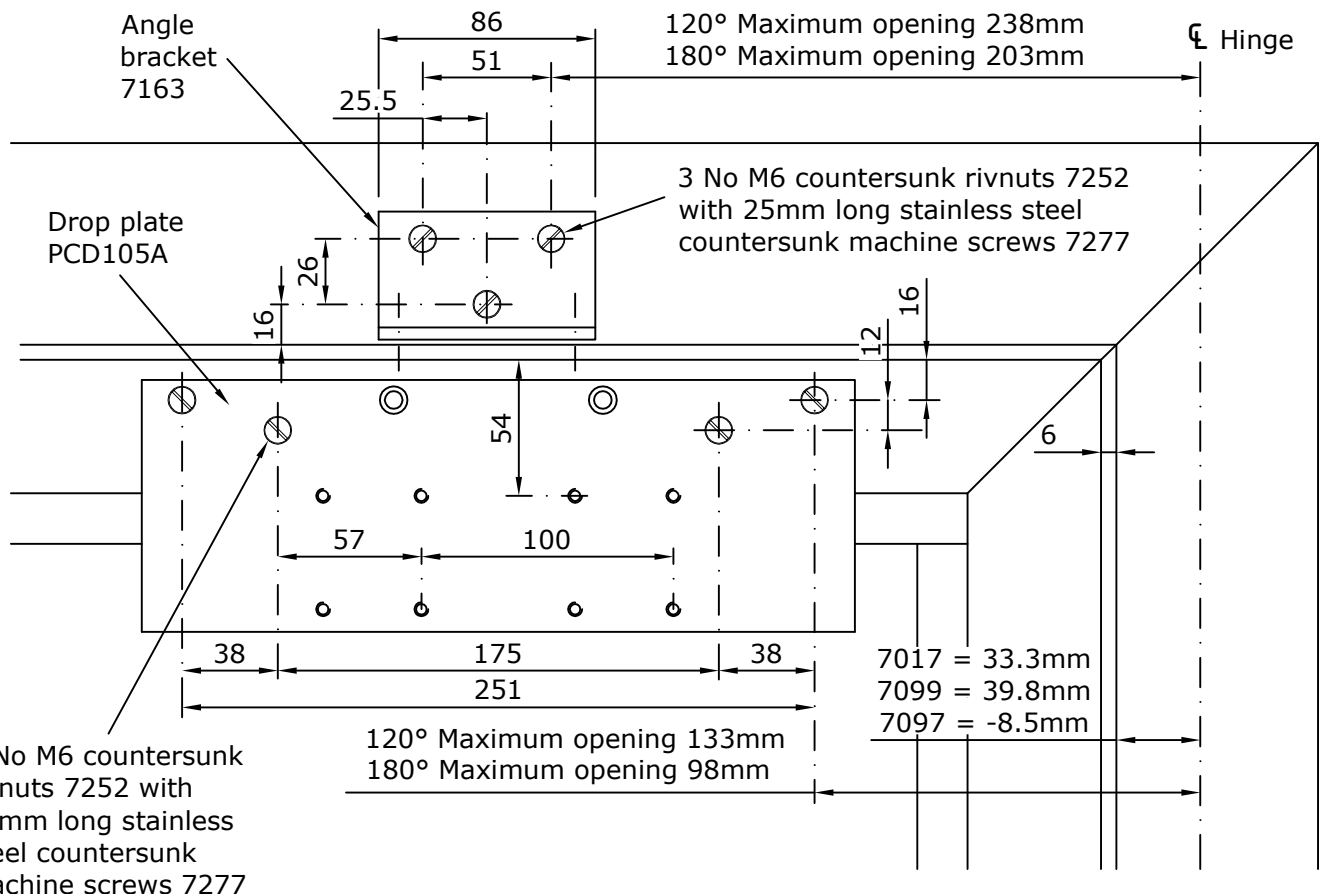


## System 5-20D/Hi+

DOOR SYSTEM



\*5mm Ø hole to be drilled and tapped for M6 screw



Scale 1:3

# Door Closer Prep Details

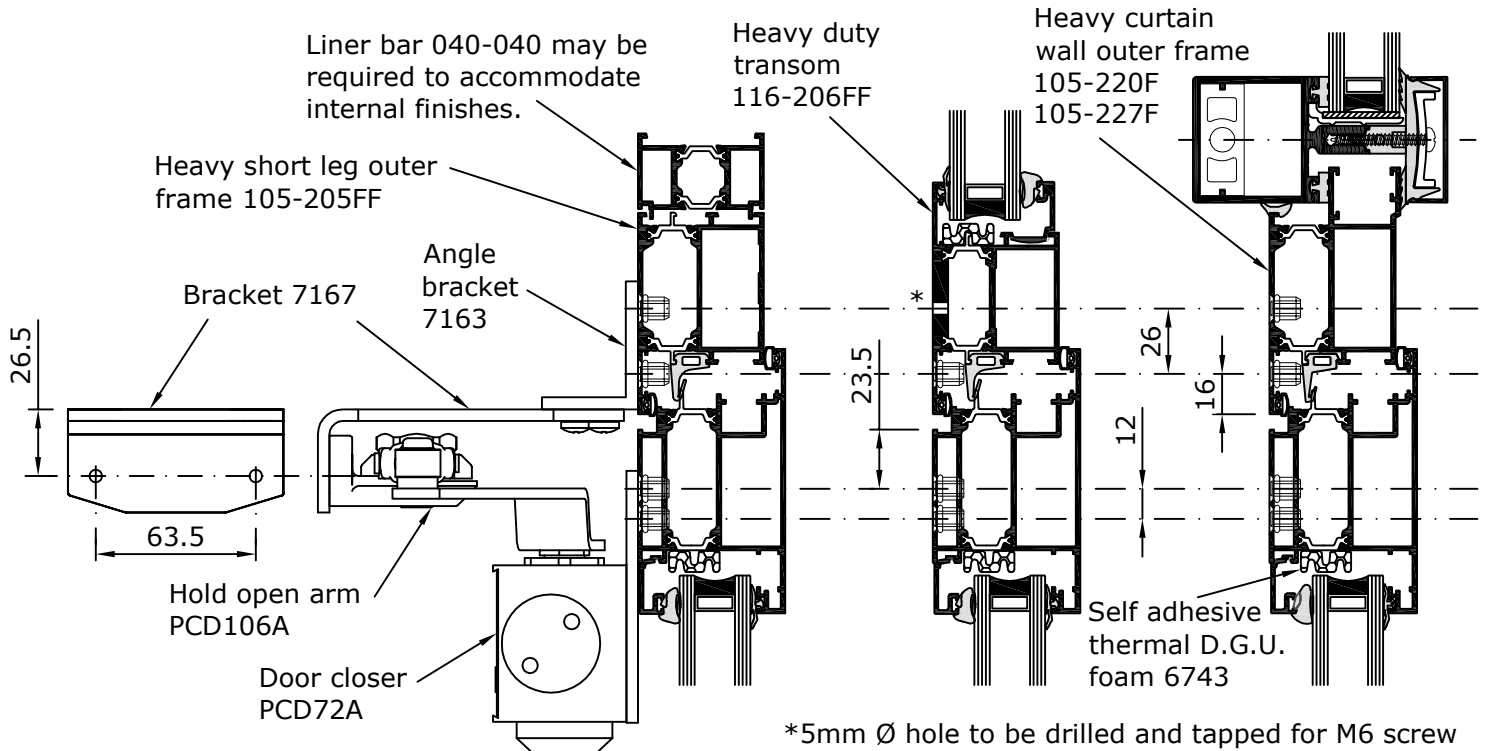
## Open-Out Doors, with PCD106A Hold Open Arm



## System 5-20D/Hi+

DOOR SYSTEM

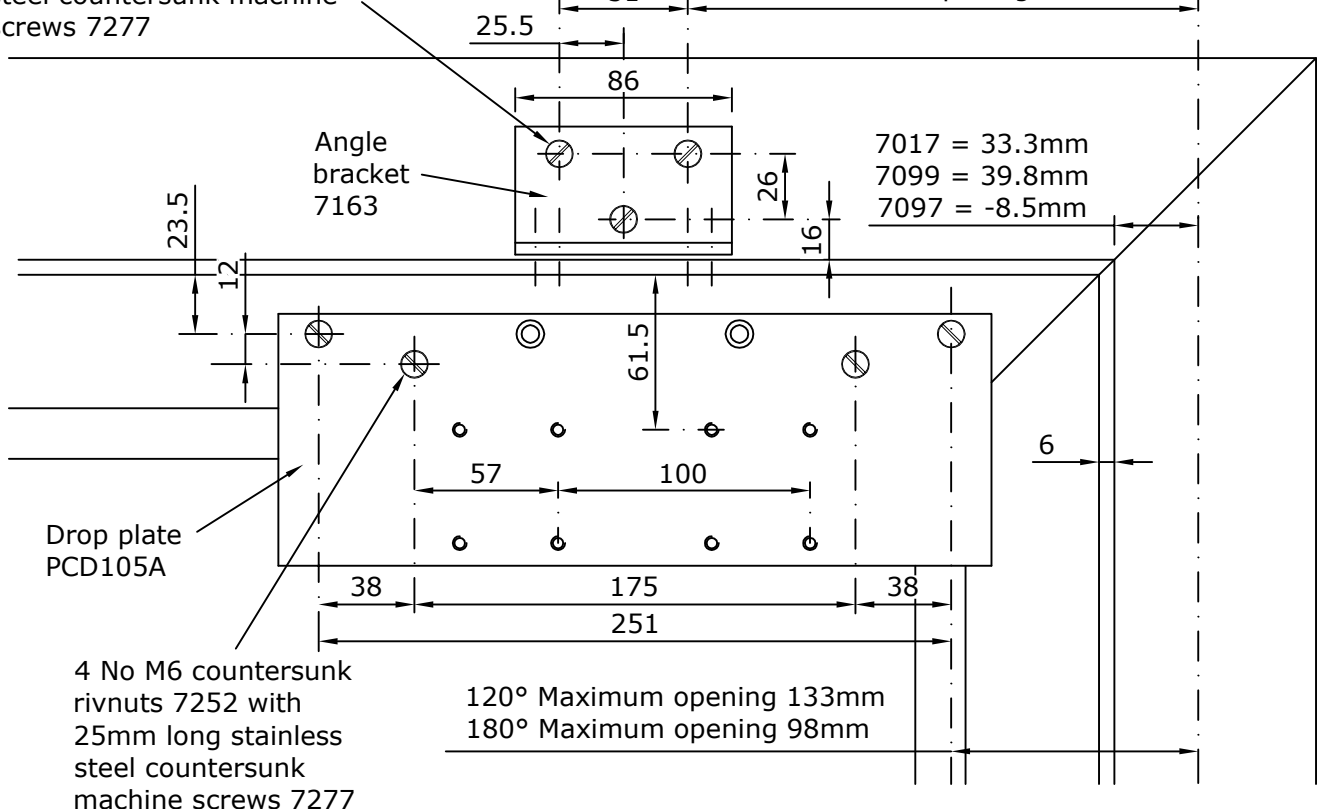
Only suitable for use with 105-205FF, 105-220F, 105-227F and 116-206FF. PCD72A closer offers adjustable closing speed, latching speed, and backcheck facility. An additional arm PCD106A must be used. For details of door closer installation and adjustment see fixing instructions supplied with door closer. Following installation and glazing all door closers must have the backcheck facility engaged and be adjusted by the installer to suit site application and applicable disabled access requirements. Fixing screws for PCD72A body are supplied with the closer.



3 No M6 countersunk rivnuts 7252 with 25mm long stainless steel countersunk machine screws 7277

120° Maximum opening 237.5mm  
180° Maximum opening 202.5mm

Hinge



Scale 1:3

# Door Closer Prep Details - Slide Arm



## System 5-20D/Hi+

DOOR SYSTEM

### Open-In Doors

Only suitable for use with 105-205FF, 108-208F, 108-226F, 106-206FF and 116-206FF. 7198 closer offers adjustable closing speed, latching speed, backcheck facility and delayed close facility. Maximum opening angle 180° subject to structural conditions. An additional accessory 7401 must be used when a hold open facility is required (Hold-open force and position are adjustable). A 7402 cushioned limit stay may also be incorporated within the slide channel. For details of door closer installation and adjustment see fixing instructions supplied with door closer. Following installation and glazing all door closers must have the backcheck facility engaged and be adjusted by the installer to suit site application and applicable disabled access requirements. Fixing screws for 7198 body and arm are supplied with the closer.

Liner bar 040-040 may be required to accommodate internal finishes.

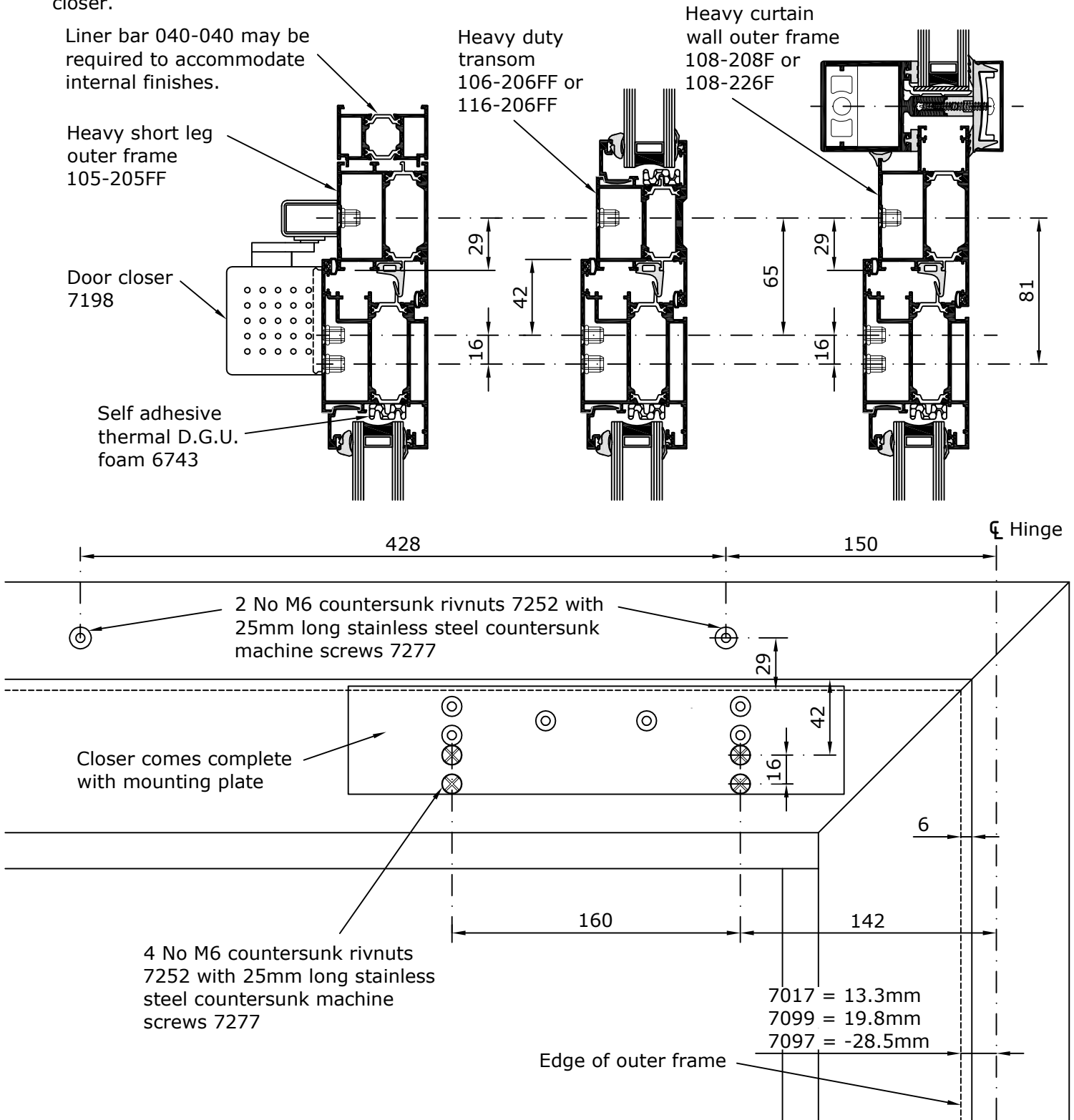
Heavy short leg outer frame 105-205FF

Door closer 7198

Self adhesive thermal D.G.U. foam 6743

Heavy duty transom 106-206FF or 116-206FF

Heavy curtain wall outer frame 108-208F or 108-226F



Not to Scale

# Door Closer Prep Details - Slide Arm



## System 5-20D/Hi+

DOOR SYSTEM

### Open-Out Doors

Only suitable for use with 105-205FF, 105-220F, 105-227F and 116-206FF. 7199 closer offers adjustable closing speed, latching speed, backcheck facility and delayed close facility. Maximum opening angle 120° subject to selection of hinge and structural conditions. An additional item 7401 must be used when a hold open facility is required (Hold-open force and position are adjustable). A 7402 cushioned limit stay may also be incorporated within the slide channel. For details of door closer installation and adjustment see fixing instructions supplied with door closer. Following installation and glazing all door closers must have the backcheck facility engaged and be adjusted by the installer to suit site application and applicable disabled access requirements. Fixing screws for 7199 body and arm are supplied with the closer.

Liner bar 040-040 may be required to accommodate internal finishes.

Heavy short leg outer frame 105-205FF

Drop plate 5508

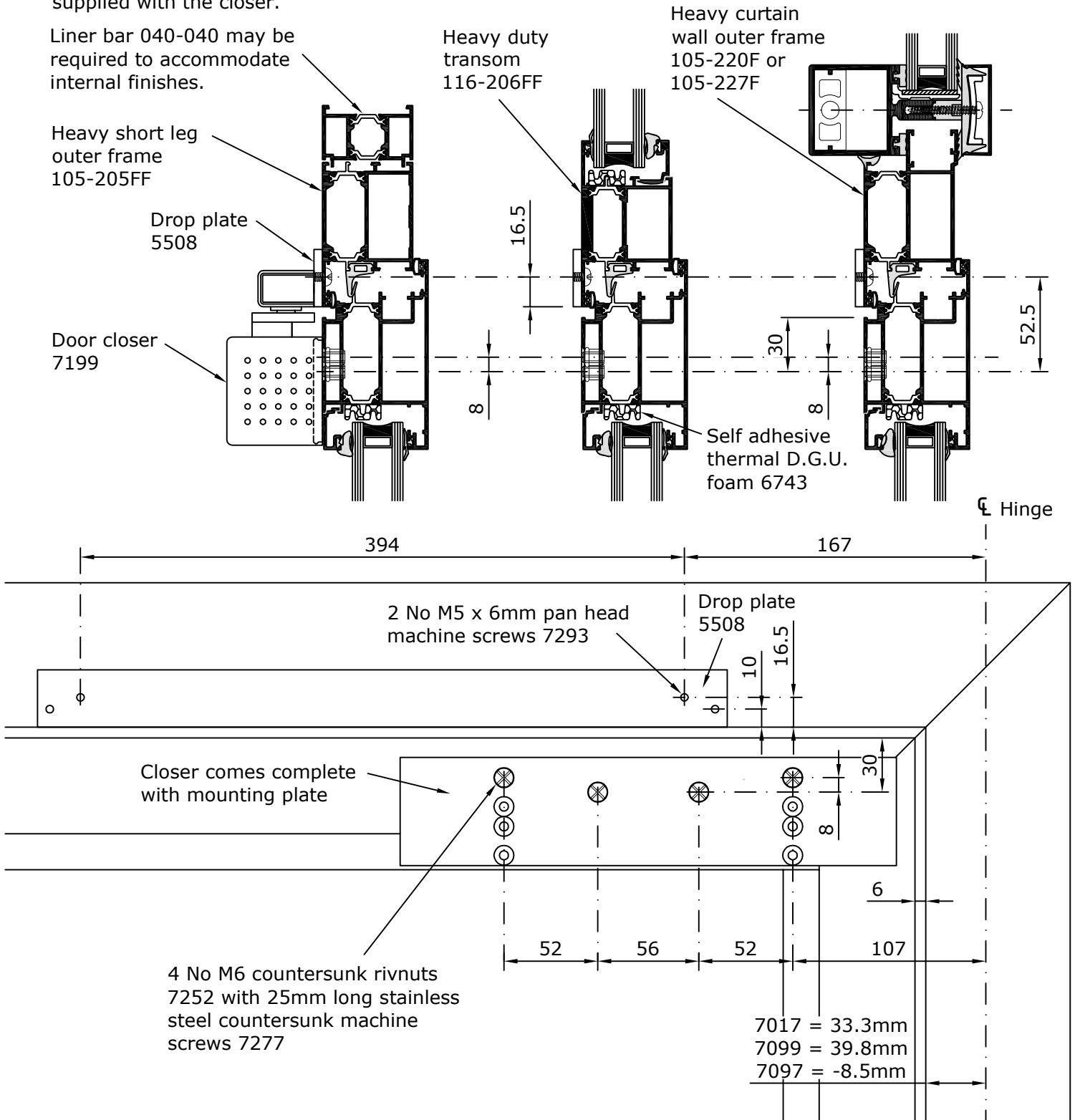
Door closer 7199

Heavy duty transom 116-206FF

Heavy curtain wall outer frame 105-220F or 105-227F

Self adhesive thermal D.G.U. foam 6743

Hinge



Not to Scale

SHEET 520D Hi+ / 7F / 50

rev 1

18/12/13

# 7189 Door Restrictor Prep

## Details For Owner-Occupied Domestic Applications Only



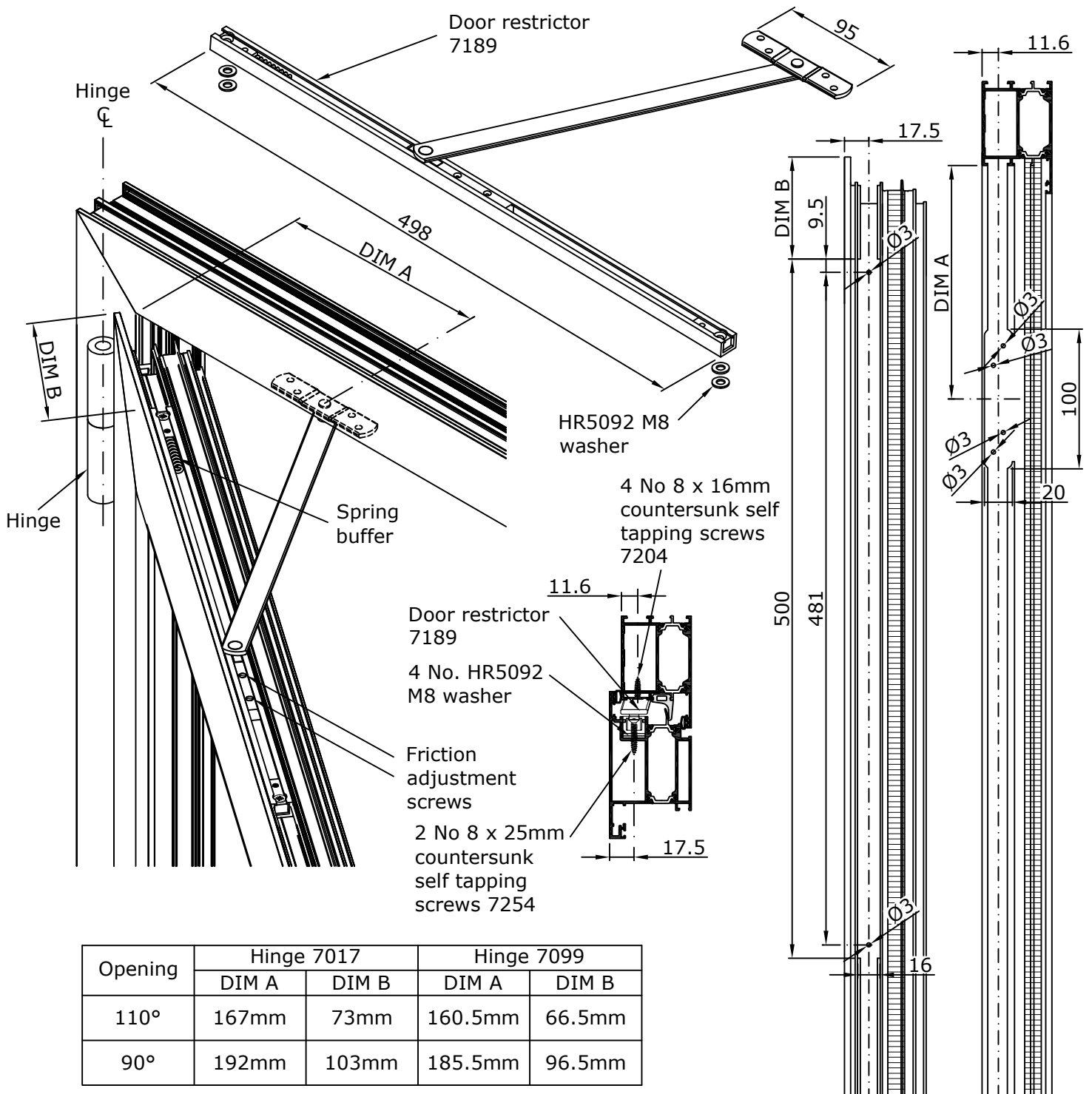
### System 5-20D/Hi+

DOOR SYSTEM

When doors may be subject to abuse, exposed to high wind loads, or for use in high volume applications Metal Technology do not recommend using this restrictor. In such applications PCD72A surface mounted closer (with the backcheck facility engaged) must be used.

Fabricator must ensure that the friction facility in the friction adjustment block is engaged by tightening the friction adjustment screws to adequately reduce the speed at which the door may be opened and closed. This must be monitored and maintained on a regular basis. Doors that are left to swing freely to the restricted position will damage the hinges or their attachment to the frames. Metal Technology recommend that the 7189 door restrictor is fitted in conjunction with a floor mounted door stop which engages at the same point as the restrictor in its fully open position.

Note that the spring in the channel should be positioned nearest to hanging edge and the friction adjustment block away from the arm allowing access to the adjustment screws when the door is open.






Opening	Hinge 7017		Hinge 7099	
	DIM A	DIM B	DIM A	DIM B
110°	167mm	73mm	160.5mm	66.5mm
90°	192mm	103mm	185.5mm	96.5mm



Scale 1:4



### GLAZING BEAD AND GASKET DETAILS (OPEN-IN)

Unit Size	External Gasket	Internal Gasket	Bead
24mm 26mm	CA25/CA25A CA25/CA25A	063 (black) 066 (grey)	 TT16
28mm	CA25/CA25A	066 (grey)	 328
32mm 34mm	CA25/CA25A PCD82	CA27 (white) CA27 (white)	 TT17A

### GLAZING BEAD AND GASKET DETAILS (OPEN-OUT)

Unit Size	External Gasket	Internal Gasket	Bead
28mm	CA25/CA25A	066 (grey)	 310
30mm 32mm 34mm	CA25/CA25A CA25/CA25A CA25/CA25A	SD36 (black) CA27 (white) CA27 (white)+	 332

+ 1mm strip must be removed.

These unit sizes (i.e. 24mm to 34mm) are based on nominal sizes. Where unit tolerance is at its extreme ( $\pm 0.5\text{mm}$ ) or where alternative glass thicknesses are being considered the gasket/bead/section combination should be physically checked on a sample window.

# Weatherseal Application Details



## Weatherseal 060B

## System 5-20D/Hi+

DOOR SYSTEM

Cut weatherseal into four individual lengths with mitred corners.

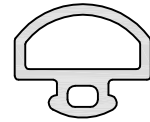
Push fit weatherseal into section grooves. See detail below for fitting direction.

Weatherseals must not be stretched and should be cut 1-3% oversize as required to accommodate shrinkage. When oversizing the gasket to accommodate any anticipated potential shrinkage, fabricators should ensure gasket is not installed so that it remains wrinkled. While it is preferable that gaskets be installed too long, rather than too short, excessive wrinkles or distortion should be avoided once the gasket has had an opportunity to settle into its natural state within its final intended environment.

All corners to be bonded with cyanoacrylate (superglue) adhesive.

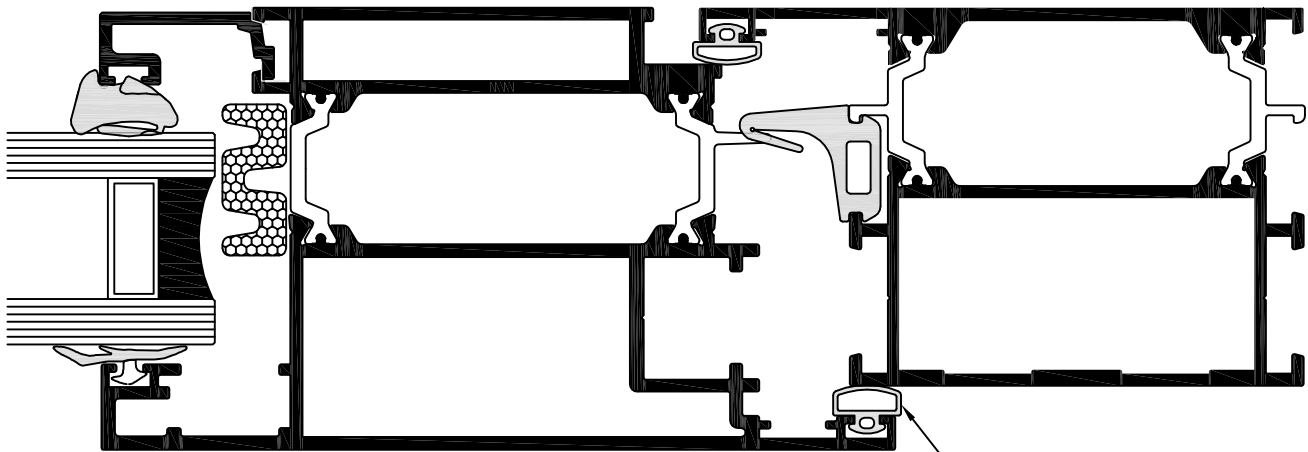
External weatherseal to be notched 30mm locally at fully rebated outer frame drainage slots.

Where gaskets are supplied in a bag, the bag should be re-sealed to prevent drying out. Should gaskets become dry and difficult to apply, they can be re-lubricated using 7400 silicone spray as they are inserted into the window frames.

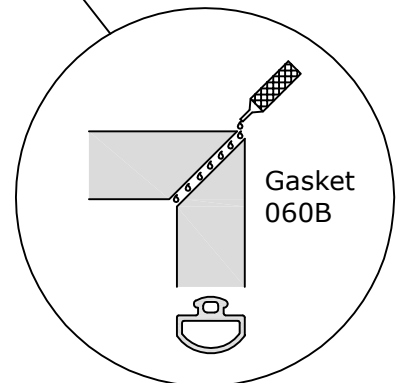


Weatherseal gasket 060B

Scale 2:1



Cyanoacrylate  
(superglue)  
adhesive



Scale 1:1

# Weatherseal Application Details



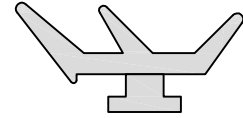
Gasket CA25, CA25A, PCD82 (Outside)  
Wedge 063, 066, CA27 or SD36 (Inside)

**System 5-20D/Hi+**

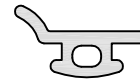
.....  
DOOR SYSTEM  
.....

Cut CA25/CA25A or PCD82 gasket into four individual lengths with mitred corners and fit into section grooves. See detail below for fitting direction. In internally beaded applications, factory bond gasket corners using cyanoacrylate (superglue) adhesive. In externally beaded applications, mitred gasket corners may be sealed using HR50328A on site.

Gasket CA25, CA25A (Outside)

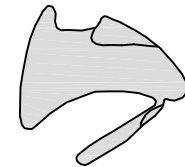


Gasket PCD82 (Outside)



Metal Technology recommend installers apply HR50328A sealant to the mating surface of the retained gasket with the glass, at the mitred corners, on site immediately prior to offering up the glazing units.

Wedge 063, 066, CA27 or SD36 (Inside)

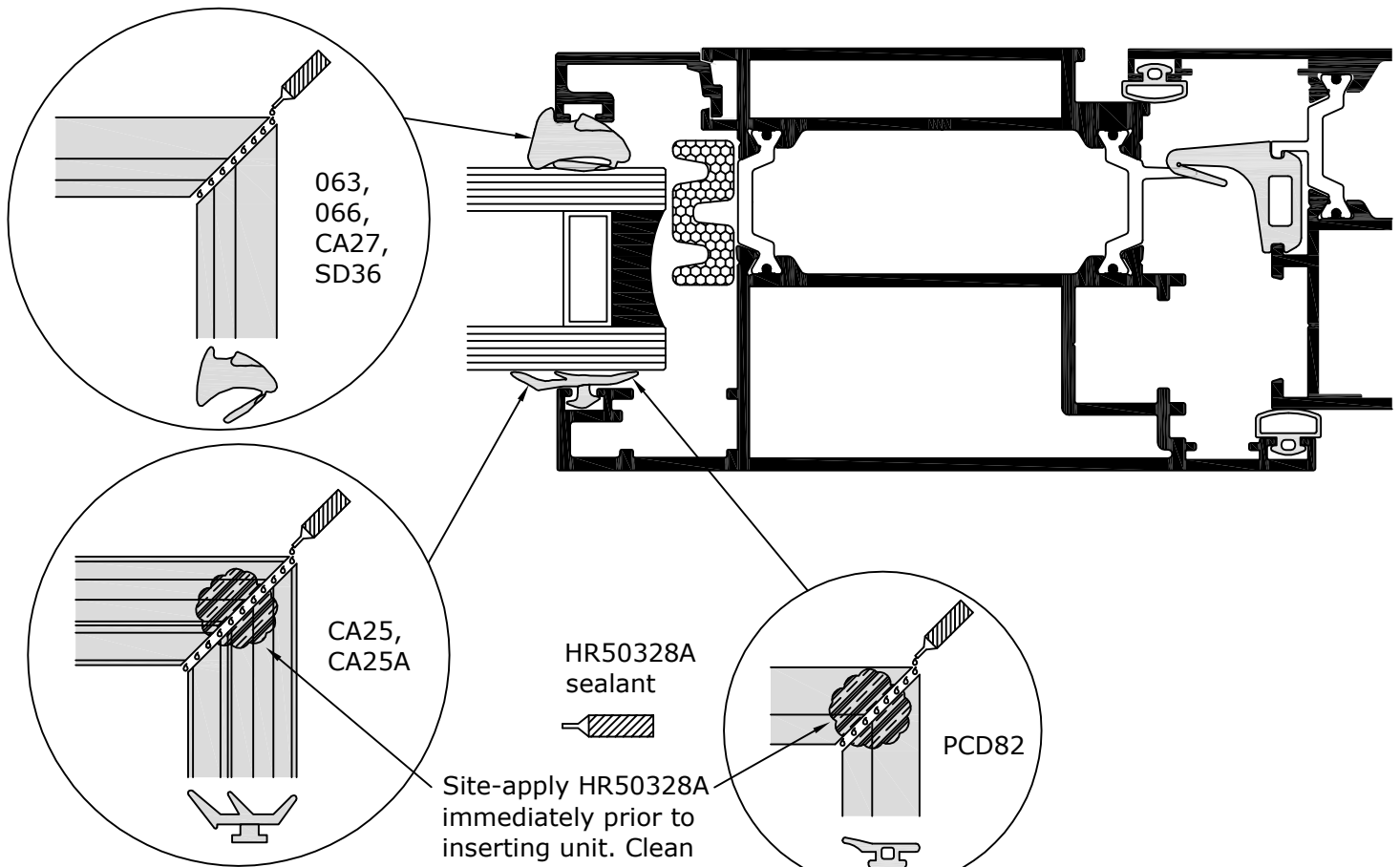


After locating glass and inserting bead, cut wedge gasket into four individual lengths and push fit between profile and glazing unit. Corners and joints to be sealed using HR50328A sealant as indicated.

Gaskets must not be stretched and should be cut 1-3% oversize as required to accommodate shrinkage. When oversizing the gasket to accommodate any anticipated potential shrinkage, fabricators should ensure gasket is not installed so that it remains wrinkled. While it is preferable that gaskets be installed too long rather than too short, excessive wrinkles or distortion should be avoided once the gasket has had an opportunity to settle into its natural state within its final intended environment.

Scale 2:1

Where gaskets are supplied in a bag, the bag should be re-sealed to prevent drying out. Should gaskets become dry and difficult to apply, they can be re-lubricated using 7400 silicone spray as they are inserted into the window frames.



Scale 1:1

# Weatherseal Application Details



## Flipper Seal 061 and Moulded Corner 062

### System 5-20D/Hi+

DOOR SYSTEM

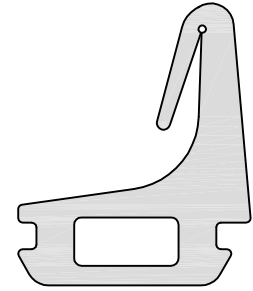
Cut 061 flipper seal into four individual lengths with square cut ends.

Push fit gasket into groove in outer frame/transom/mullion to perimeter of sash. Square cut and butt joint gasket 061 with moulded corner gasket 062 into section grooves. See detail below for fitting direction.

Thermal centre gasket should not be stretched and may be cut 1-3% oversize as required to accommodate shrinkage.

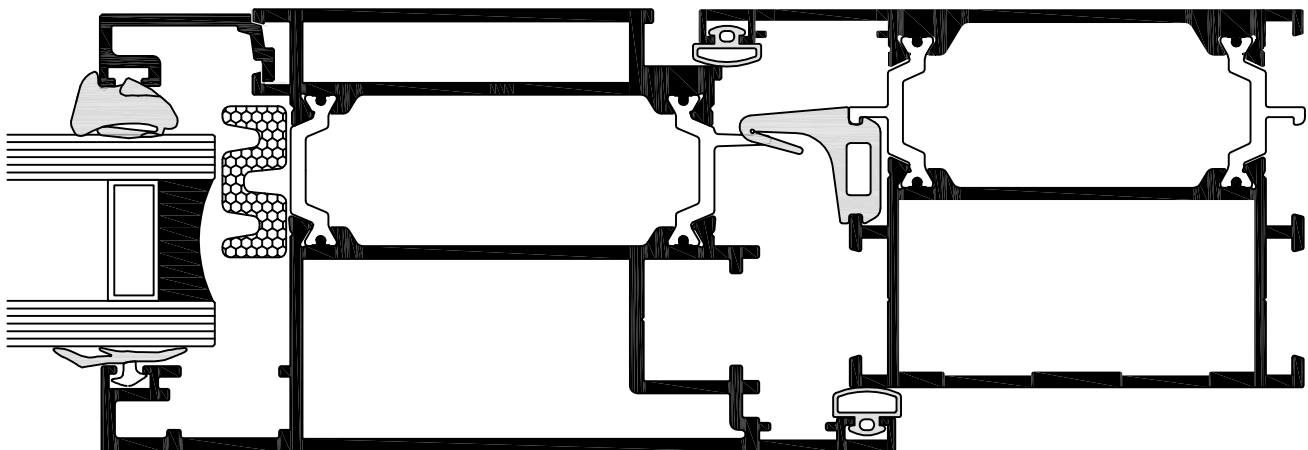
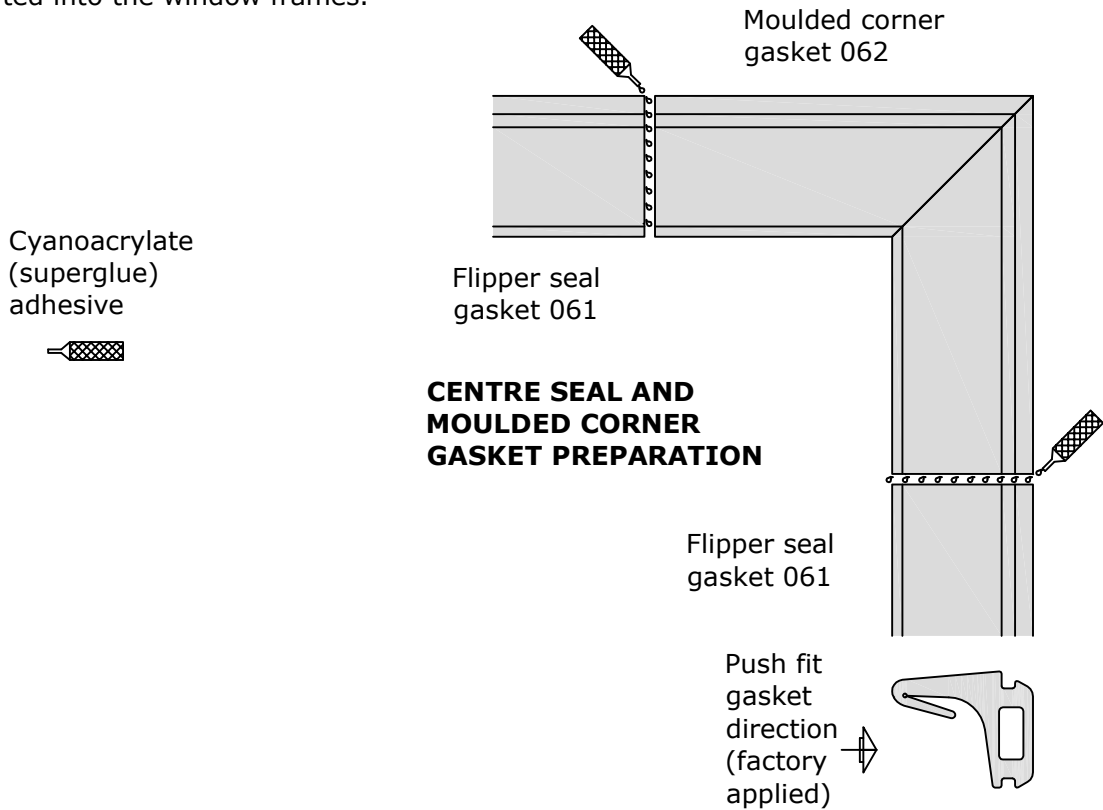
All corners and joints to be bonded with cyanoacrylate (superglue) adhesive.

Where gaskets are supplied in a bag, the bag should be resealed to prevent drying out. Should gaskets become dry and difficult to apply, they can be re-lubricated using 7400 silicone spray as they are inserted into the window frames.



Flipper seal gasket 061.

Scale 2:1



Scale 1:1

# Foam Application Details

## Perimeter Foam 6744



## System 5-20D/Hi+

DOOR SYSTEM

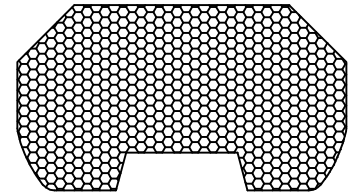
Perimeter foam 6744 may also be used in Hi applications to facilitate perimeter pointing/sealing.

Thermal foams should not be exposed to UV light and must be kept in a clean, dry and dust free environment at between 5° and 35°C. Fabricators should minimise exposure period of the foams to the elements and provide additional on-site protection to prevent depositing of builders debris.

Cut 6744 perimeter foam into four individual lengths with square cut ends.

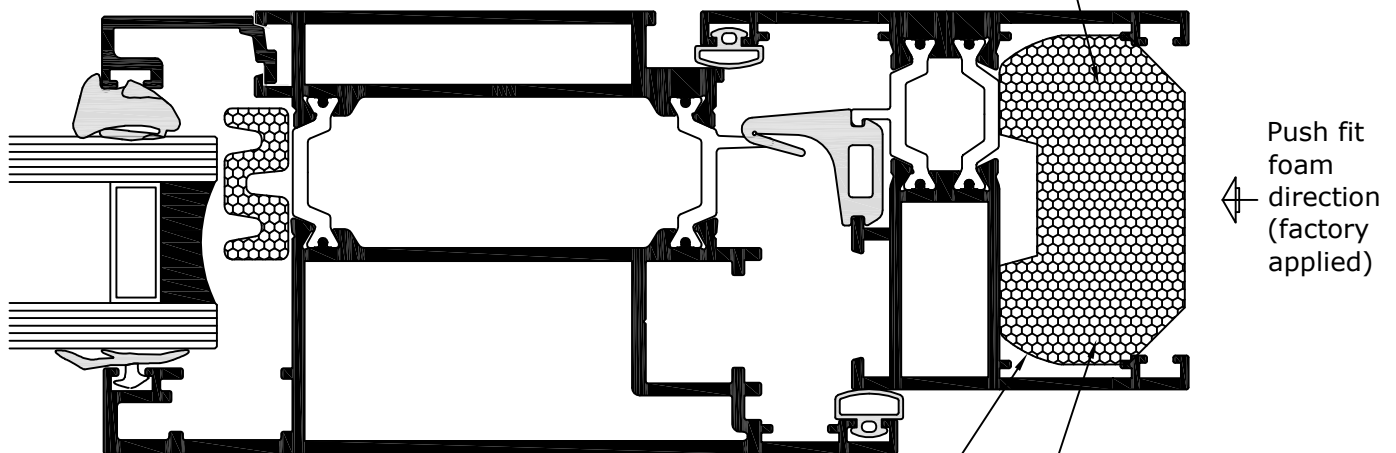
Push fit perimeter foam into section.

All perimeter foam corners to be butt jointed without gap.

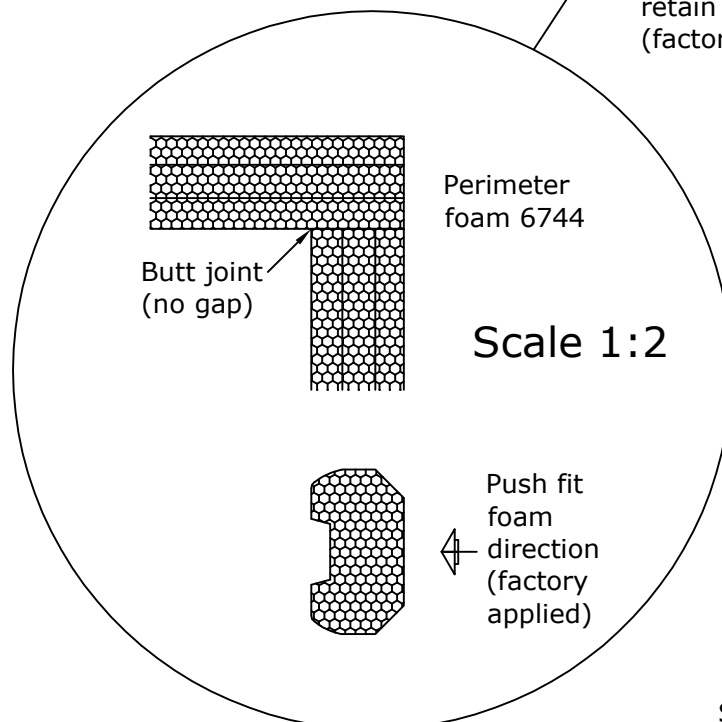


Perimeter foam 6744.

Push fit foam and retain in outer section (factory applied)



Push fit foam and retain in outer section (factory applied)



Scale 1:1

# Foam Application Details

## Glazing Unit Perimeter Foam 6743



### System 5-20D/Hi+

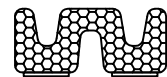
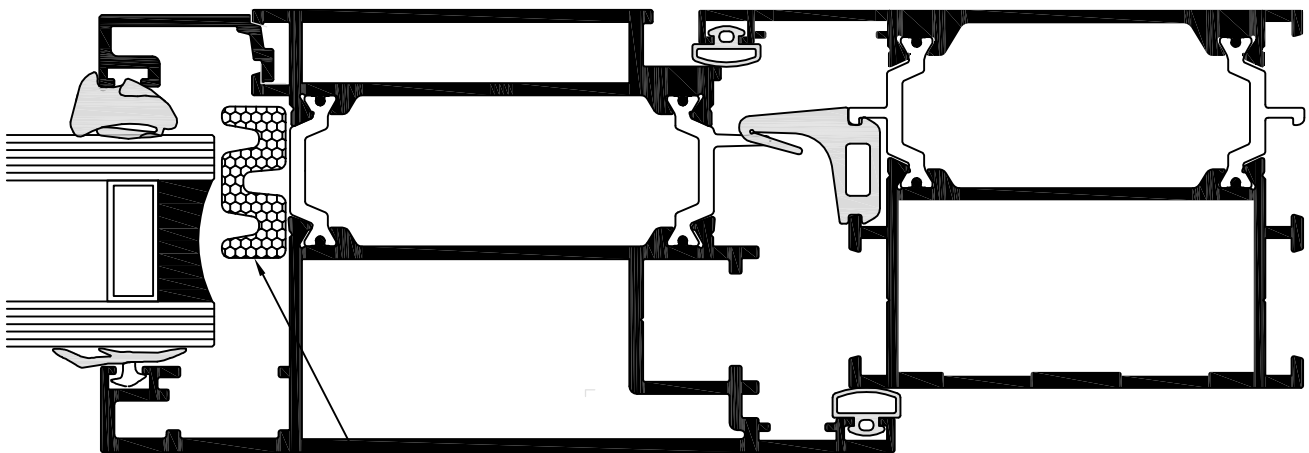
DOOR SYSTEM

Thermal foams should not be exposed to UV light, and must be kept in a clean, dry, and dust-free environment at between 5° and 35°C. Minimum recommended application temperature for adhesive thermal foams is 20°C and therefore these should be applied in clean, dry, and dust-free factory conditions. Before applying self-adhesive foams ensure all surfaces are free from grease or dust. Clean all mating surfaces with suitable cleaning agent. Fabricators should minimise the exposure period of the foams to the elements and provide additional on-site protection to prevent depositing of builders debris.

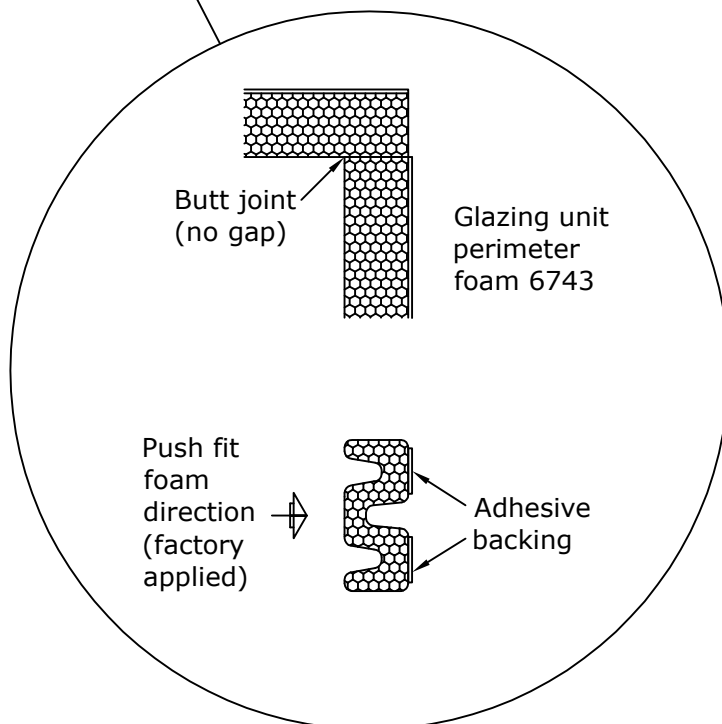
Cut 6743 glazing unit perimeter foam into four individual lengths with square cut ends.

All foam corners to be butt jointed without gap.

Glazing unit perimeter foam to be factory applied to sash/frame where DGUs are to be installed. Remove release strip from rear of foam and bond to frame, omitting foam at glazing support, pressure equalisation and drainage locations.



Glazing unit closed cell foam 6743 bond to section using self-adhesive backing.



Scale 1:1

# Foam Application Details

## Liner Bar Foam HR50184



## System 5-20D/Hi+

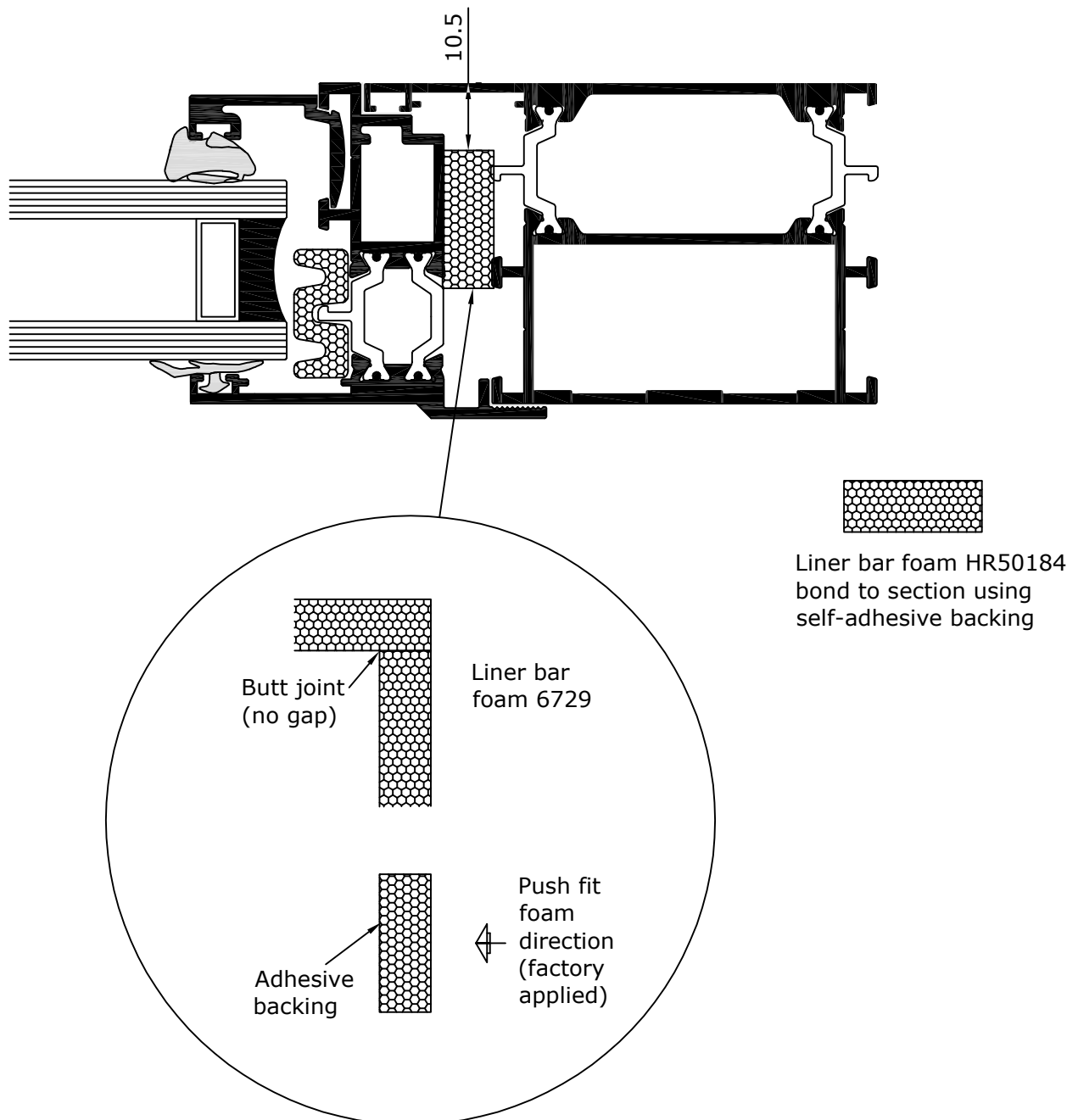
DOOR SYSTEM

Thermal foams should not be exposed to UV light, and must be kept in a clean, dry, and dust-free environment at between 5° and 35°C. Minimum recommended application temperature for adhesive thermal foams is 20°C and therefore these should be applied in clean, dry, and dust-free factory conditions. Before applying self-adhesive foams ensure all surfaces are free from grease or dust. Clean all mating surfaces with suitable cleaning agent. Fabricators should minimise the exposure period of the foams to the elements and provide additional on-site protection to prevent depositing of builders debris.

Cut HR50184 liner bar foam into four individual lengths with square cut ends.

All foam corners to be butt jointed without gap.

Liner bar foam to be factory applied to liner bar. Remove release strip from rear of foam and bond to frame, omitting foam at glazing support, pressure equalisation and drainage locations.



Scale 1:1

# Installation Procedures



## System 5-20D/Hi+

DOOR SYSTEM

The following instructions are a general guideline and cover the most common conditions. For further information, advice or project specific applications contact Metal Technology's Technical Department.

All frames should be adequately protected against minor scuffs and abrasions during installation. This can be achieved using a suitable low tack tape to all exposed surfaces of the frame. Low tack tape should be periodically renewed and should not remain on the frames for more than 6 months from the date of application. (This period may vary depending on exposure, application and manufacturers instructions)  
**LOW TACK TAPE IS NOT A SUBSTITUTE FOR CAREFUL HANDLING.**

Ensure that the brickwork opening is the correct size and square, with sufficient clearance to accommodate any expansion, contraction, building movement and the minimum joint width requirement for the applicable sealant.

Where door units are installed within a run of windows (i.e. ribbon windows etc..) a subcill may be used. Where joints are required within the subcill these should be butt jointed and sealed using a suitable butt strap/splice plate. Where required the joint should be designed to accommodate all applicable movement, expansion and contraction. All subcills should be positioned on top of a continuous EPDM membrane returned upward, behind the window frame and sealed and bonded where required.

All aluminium should be isolated from direct contact with masonry, concrete and other incompatible materials by means of packing pieces, EPDM membranes, suitable paint or similar materials.

Metal Technology recommend the use of fixing lugs where practical. These should be fitted to the frames prior to offering the door into the opening. The choice of fixing lug will depend on site application (see enclosed for available options). The number and position of fixing lugs will depend on the door size and applicable loading. General fixing lug locations are 150mm from the corner, 150mm either side of a mullion/transom and at a maximum of 600mm centres (see enclosed detail for further clarification). Fixings should be doubled up at hinge positions.

Where required fixing lugs may be cranked to accommodate the gap between the door frame and the structure. This should be done prior to snapping the lug into the frame.

Alternatively, where the gap between the frame and the structure is not suitable for adequately cranking the fixing lug, frame packers may be used.

Where direct 'through the frame' fixing is required this should be achieved using proprietary frame anchors to suit application. All through the frame fixings should be suitable and adequate for the application and applied loadings. The number and position of the fixings will depend on door size and applied loads, etc. However the general position for 'through the frame' fixing is as per lug fixing stated previously. All fixings should be made through the aluminium portion of the door frame and must be compatible with the frame and substrate and/or be isolated from any incompatible materials in such a way as to avoid any adverse reaction.



# Installation Procedures



## System 5-20D/Hi+

DOOR SYSTEM

cont...

All 'through the frame' fixings must be adequately sealed in position using a suitable sealant to prevent any water from permeating past the fixing into the cleat chambers, flashing areas and/or surrounding structure and into the building.

Ensure appropriate thermal foam is applied to the perimeter of the frames, as per "Foam Application Details" sheets.

Position the frame within the opening ensuring that all exposed aluminium is isolated from any material which may react unfavourably with it. This also applies to the fixings used to secure the doors. Metal Technology recommend that all fastenings to aluminium be Austenitic Stainless Steel A2-A4 grade, aluminium or other such compatible materials.

Suitable proprietary frame packers should be used to ensure the door is plumb, square, level, vertical and centralised within the opening.

Door frames must be continuously supported along the threshold and adequately packed at the fixing points, to ensure the load is directly transferred to the structure below. Frame packers should not protrude past the external line of the door frame in order not to interfere with sealing the door to the structure.

Fix the door to the opening as required ensuring that the outer frame is not bowed or distorted and that the fixings used are adequate and suitable for the applicable loading conditions and application.

Ensure that the structure to which the door is fixed is sound and capable of adequately accepting the fixings and the subsequent loads transferred by them.

Check the diagonals, plumb, level and verticality as the frame is finally tightened.

Apply a suitable sealant to the perimeter of the frame as per the sealant manufacturers recommendations and instructions. Any excess sealant should be removed so as not to detract from the finished product/installation.

Cement and plaster can damage the finish of this product if they are not removed promptly. Any such contaminants should be removed using a weak solution of mild detergent in water. (i.e. 5% of Teepol in water)

Finished surfaces should be cleaned with a soft cloth or sponge. Where stubborn marks persist a natural bristle brush may be used with care. Abrasive cleaners, solvents or other cleaning agents should not be used.

To prevent handles being damaged on site Metal Technology recommend that they be protected with low tack tape. At handover all doors should be secured in the closed and locked position and keys removed.

For additional information on window installation and glazing refer to BS 6262, other relevant British Standards and/or Metal Technology's Technical Department.

Metal Technology recommend that doors should be installed by experienced and qualified installers. All installers should be fully trained and qualified with regard to the relevant Health and Safety requirements for the applicable site operations and should possess a current CSCS card endorsed with a relevant and recognised NVQ or CWCT Window Installers Part 1 qualification.

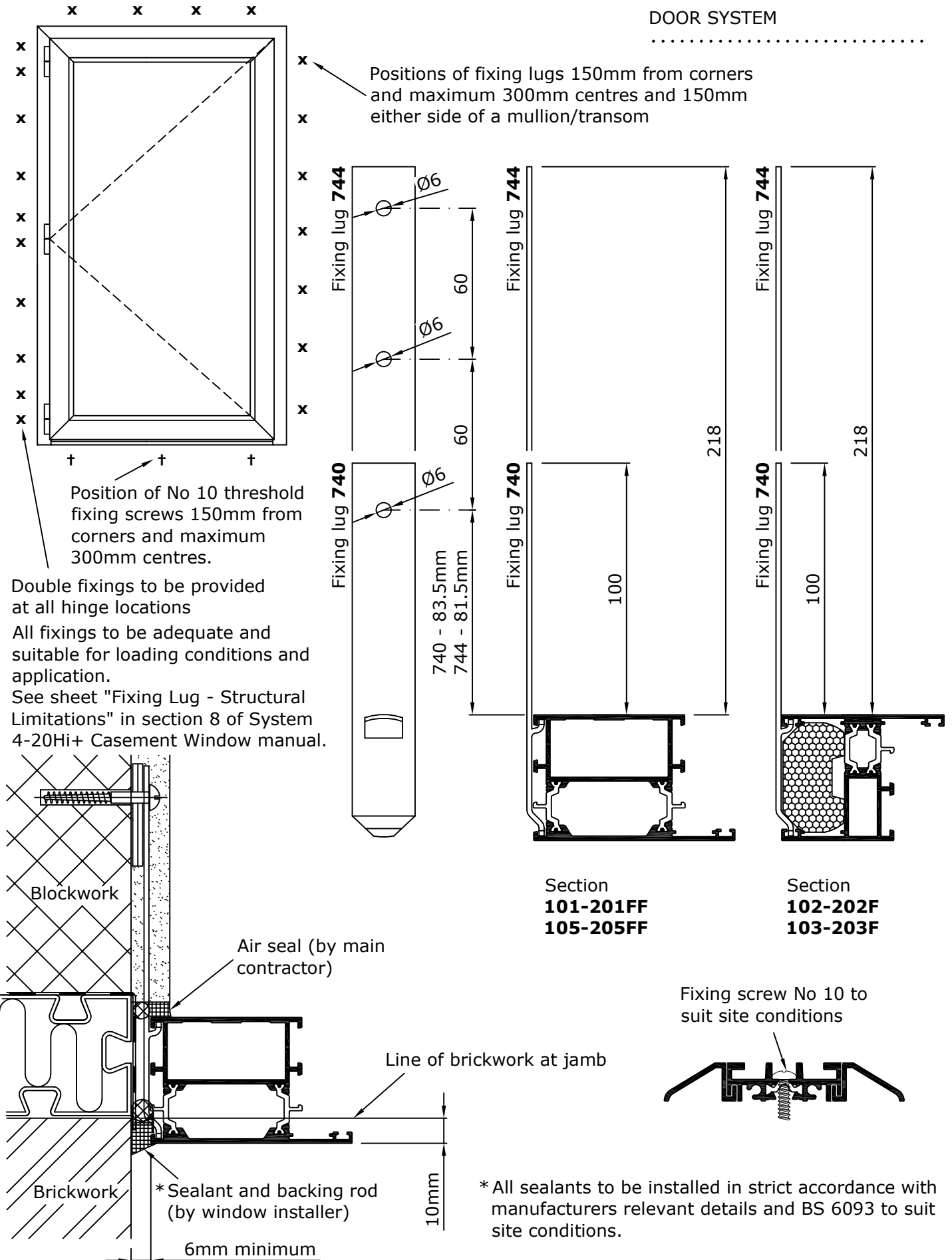
# Typical Fixing Detail

Fixing lugs provide lateral restraint only. Dead load support to be provided by perimeter structure.



**System 5-20D/Hi+**

DOOR SYSTEM



Scale 1:2

# Typical Curtain Wall Fixing Detail



## System 5-20D/Hi+

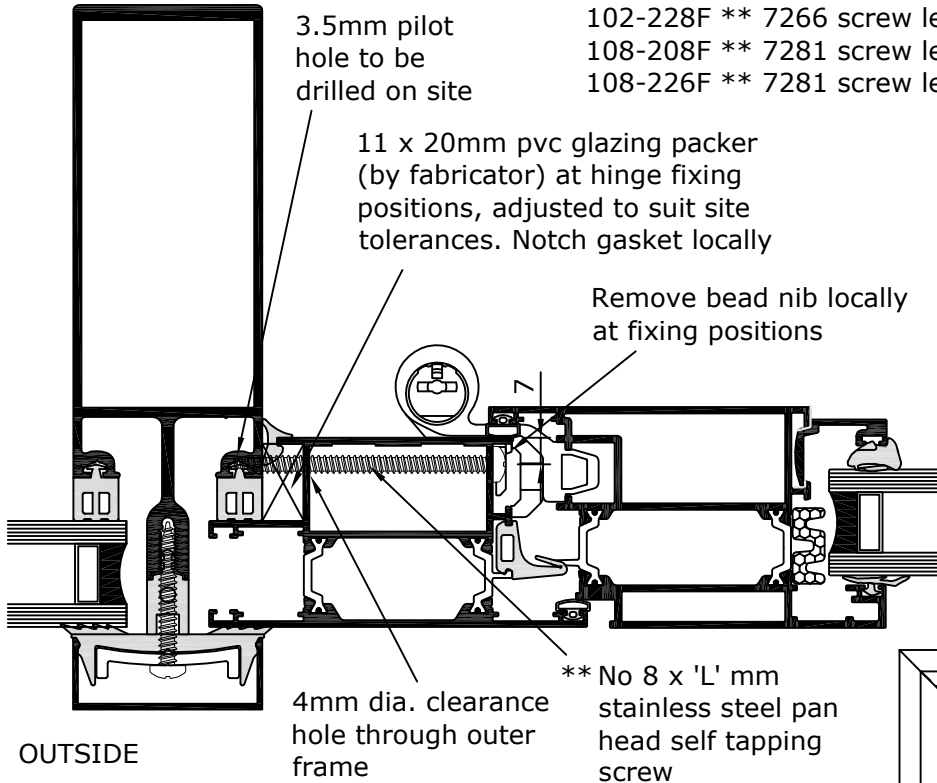
DOOR SYSTEM

### OPEN IN DOOR

INSIDE

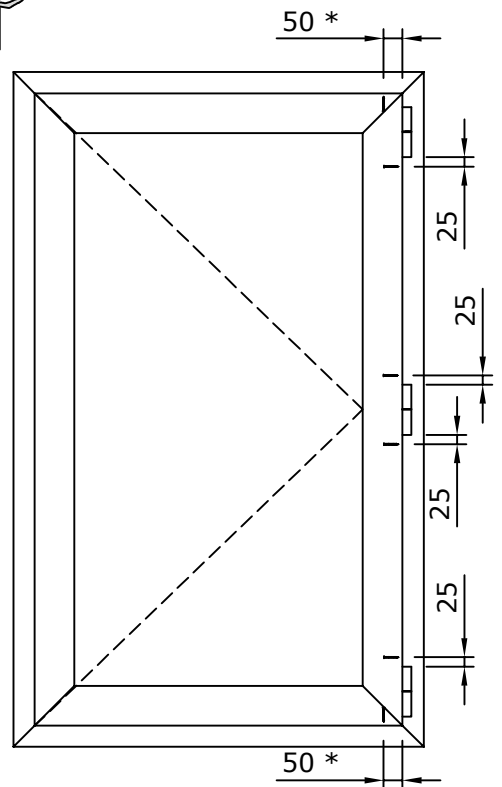
Outerframe

- 102-234F \*\* 7266 screw length 'L' = 45mm
- 102-228F \*\* 7266 screw length 'L' = 45mm
- 108-208F \*\* 7281 screw length 'L' = 70mm
- 108-226F \*\* 7281 screw length 'L' = 70mm



When hinges are not fitted tight into the mitred corners of the outer frame fixings to be positioned 25mm above and below the hinge

\* Measured from internal mitre of outer frame



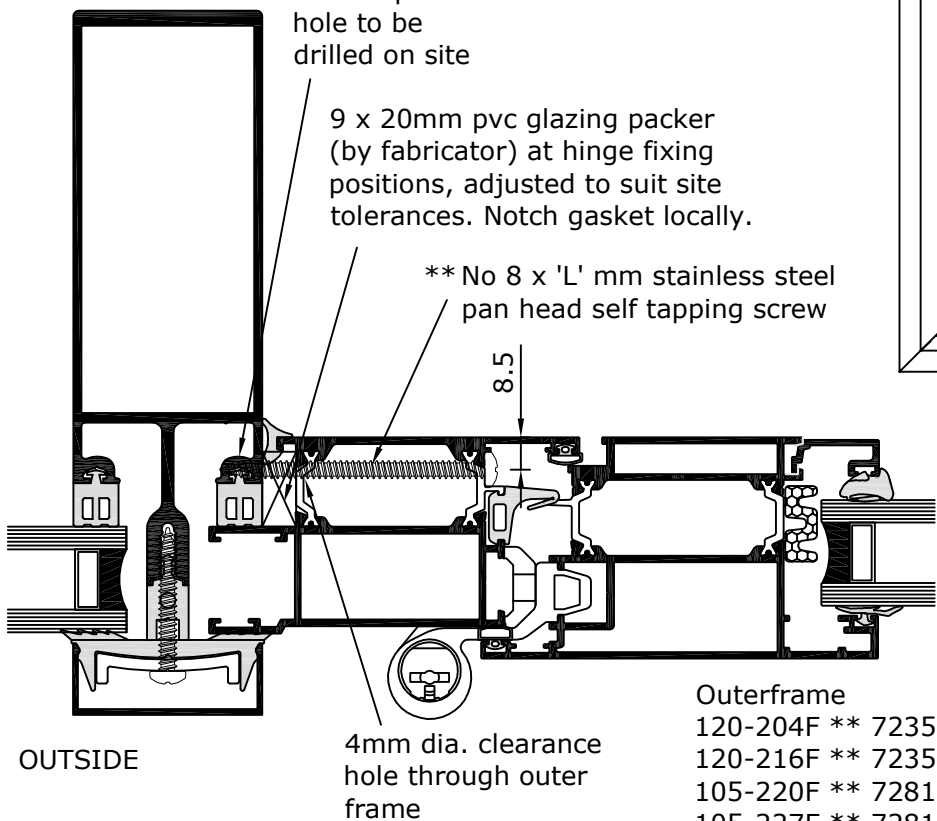
### OPEN OUT DOOR

INSIDE

3.5mm pilot hole to be drilled on site

9 x 20mm pvc glazing packer (by fabricator) at hinge fixing positions, adjusted to suit site tolerances. Notch gasket locally.

\*\* No 8 x 'L' mm stainless steel pan head self tapping screw



Outerframe

- 120-204F \*\* 7235 screw length 'L' = 38mm
- 120-216F \*\* 7235 screw length 'L' = 38mm
- 105-220F \*\* 7281 screw length 'L' = 70mm
- 105-227F \*\* 7281 screw length 'L' = 70mm

Scale 1:2

# Glazing Details

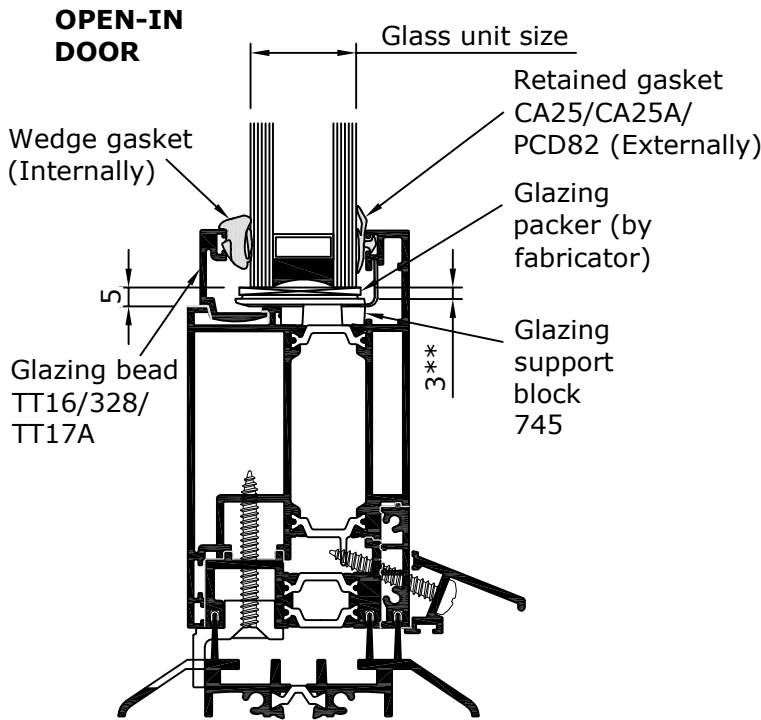


## System 5-20D/Hi+

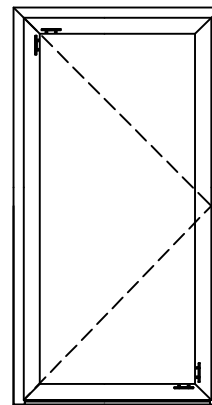
.....  
DOOR SYSTEM  
.....

Metal Technology recommend that the maximum size of any fixed pane should not exceed 4m<sup>2</sup> or 120kg. To be read in conjunction with System 4-20/5-20 wind and dead loading charts

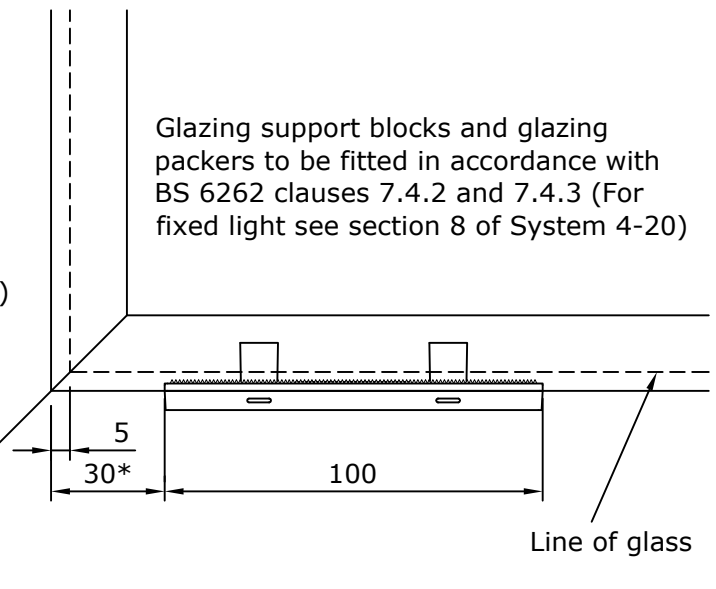
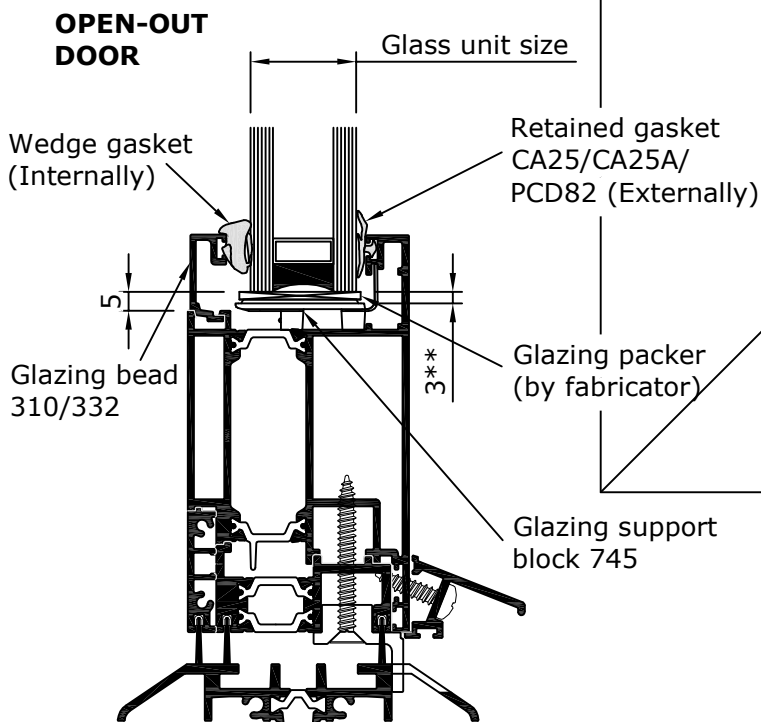
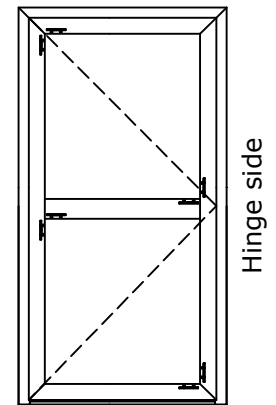
Vent size and weight limitations also apply - see graph in Section 3 of this manual.



**OPEN IN AND OPEN OUT DOOR**



**OPEN IN AND OPEN OUT DOOR WITH MIDRAIL**



- \* Minimum dimension. Setting blocks to be positioned to avoid drainage slots.
- \*\* Additional glazing packers by window installer. Approximate thickness 3mm, adjusted to suit glass tolerance.

Scale 1:2

# Site Glazing Procedures



## System 5-20D/Hi+

DOOR SYSTEM

1. Clean gasket mounting surfaces and races. Ensure glazing cavity is clean and free from debris and swarf and that all drainage slots are adequate and free of obstruction.
2. Check that the gaskets are clean and in a relaxed condition. If gaskets have been stretched they should be left for a sufficient period to allow them to return to their natural state.
3. If the gaskets show visible imperfections, such as cuts or abrasions, they should be changed.
4. Clean the perimeter of the glass and check for any imperfections and/or damage.
5. Place glazing support blocks (745) in position within the frame ensuring that drainage slots are not obstructed.
6. Insert the glass and centralise within the frame, with additional glass packers at setting and location block positions as required. See "Glazing Details" sheet.
7. Fit the beads to the frame.
8. Mitre cut wedge gasket into four individual lengths. Where required these may be cut oversize by 1% - 3% to accommodate possible shrinkage.
9. Fit wedge gasket into corners first, then at the centre and then install the centre of each loop until complete.
10. Ensure that the gasket is properly located in the race/nib.
11. Ensure that the wedge gasket forces the glass onto the pre-installed retained gasket (CA25, CA25A or PCD82) and is not loose. Gaskets should be tight to fit - slack gaskets cause leaks. If lubricant is necessary Metal Technology suggest spraying glass edge with 7400 silicone spray or a weak solution of mild detergent in water (subject to confirmation of compatibility with glass coatings i.e. self-cleaning glass).
12. Ensure that there are no gaps or overlaps at the corners of the gaskets.
13. Seal all gasket corner joints on site using HR50238A sealant or superglue, as per "Weatherseal Application Details" sheets.
14. Fully rebated doors require that the weatherseal be omitted/notched at the head and cill to allow pressure equalisation and to accommodate drainage.
15. Gaskets should be fitted using the correct installation equipment.
16. For additional information on window installation and glazing refer to BS 6262, other relevant British Standards and/or Metal Technology's Technical Department.

Upon completion of glazing, installers to ensure doors are operating correctly and that all ironmongery has been adjusted and/or lubricated in accordance with the component manufacturers recommendations.

Hinges must be adjusted to ensure sash is centred within opening and door is correctly balanced. Ensure keeps do not interfere with door when opening/closing.

PCD72A closer to be adjusted for closing and latching speeds to ensure door closes adequately and latch engages correctly. Installers to ensure that, where required, opening forces do not exceed the forces stated within the relevant building regulations and/or BS EN 8300. A suitable set of Macro scales and/or pressure dynamometer will be required in order to measure the relevant opening forces. Installers MUST engage and set the back-check facility within the PCD72A closer to suit door size and site conditions. The back-check should be set to prevent the door from clashing off the surrounding structure and to minimise the potential risk of damage from gusts of wind by limiting the speed at which the door can be opened past a pre-determined position. Failure to engage the back-check facility will result in damage to the door hinges, profile and closers.

Once hinges and closers have been adjusted, fine-tuning can be achieved by adjusting keeps to ensure that the door engages correctly, provides adequate compression, and is secure. Latch, compression, and dead-lock keeps may be adjustable subject to lock type installed.

Installers should check handing of latch as some locks have reversible latches. The amount of engagement of the rollerball latch into its keep may also need to be adjusted. This needs to be off-set against the force applied by the closer, to facilitate closing of the door.

All electric locks and associated components must be installed and commissioned by a qualified access engineer.

For further information on the installation and adjustment of components please refer to the specific manufacturers technical literature, available from Metal Technology's Technical Department.



## APPENDIX

### Section 0: Specification, Profile Index and Component ID

520D Hi+/0/10 rev 0	Specification
520D Hi+/0/20 rev 1	Specification
520D Hi+/0/30 rev 1	Profile Index
520D Hi+/0/40 rev 2	Profile Index
520D Hi+/0/50 rev 3	Component Identification
520D Hi+/0/60 rev 1	Component Identification
520D Hi+/0/70 rev 2	Component Identification
520D Hi+/0/80 rev 3	Component Identification
520D Hi+/0/90 rev 3	Component Identification
520D Hi+/0/100 rev 1	Component Identification
520D Hi+/0/110 rev 2	Component Identification
520D Hi+/0/120 rev 1	Component Identification
520D Hi+/0/130 rev 1	Component Identification
520D Hi+/0/140 rev 2	Component Identification
520D Hi+/0/150 rev 1	Component Identification
520D Hi+/0/160 rev 1	Component Identification
520D Hi+/0/170 rev 0	Component Identification

### Section 1: Section Drawings

520D Hi+/1/10 rev 4	Section Drawings
520D Hi+/1/20 rev 2	Section Drawings
520D Hi+/1/30 rev 2	Section Drawings
520D Hi+/1/40 rev 1	Section Drawings
520D Hi+/1/50 rev 1	Section Drawings
520D Hi+/1/60 rev 1	Section Drawings
520D Hi+/1/70 rev 0	Section Drawings
520D Hi+/1/80 rev 0	Section Drawings
520D Hi+/1/90 rev 0	Section Drawings
520D Hi+/1/100 rev 0	Section Drawings
520D Hi+/1/110 rev 0	Section Drawings

## Section 2: General Arrangement Drawings



520D Hi+/2/10 rev 1	General Arrangement - 5-20D Hi+ 3-Dimensional Assembly Detail with Low Threshold
520D Hi+/2/20 rev 1	General Arrangement - 5-20D Hi+ 3-Dimensional Assembly Detail with Semi-Rebated Threshold
520D Hi+/2/30 rev 1	Single Door Open-In
520D Hi+/2/40 rev 1	Double Door Open-In
520D Hi+/2/50 rev 2	Single Door Open-Out
520D Hi+/2/60 rev 1	Double Door Open-Out
520D Hi+/2/70 rev 1	Flush Meeting Stile - Open Out Panic Exit Doors Only
520D Hi+/2/80 rev 1	Low Threshold and Midrail Options
520D Hi+/2/90 rev 1	Semi-Rebated Doors with Low Threshold and Midrail Options
520D Hi+/2/100 rev 1	Low Threshold Options
520D Hi+/2/110 rev 1	Low and Semi-Rebated Threshold Options
520D Hi+/2/120 rev 1	Anti-Fingertrap for Open-In and Open-Out Doors
520D Hi+/2/130 rev 2	Coupling Detail
520D Hi+/2/140 rev 1	Coupling Detail
520D Hi+/2/150 rev 0	Coupling Detail
520D Hi+/2/160 rev 1	Curtain Wall Insert - Open In Door
520D Hi+/2/170 rev 1	Curtain Wall Insert - Open Out Door

## Section 3: Ironmongery Requirements

520D Hi+/3/10 rev 1	General Cautionary Notes and Adhesives and Sealants
520D Hi+/3/20 rev 1	Ironmongery - Handles, Fixing Screws, Spindles
520D Hi+/3/30 rev 1	Ironmongery - Locks
520D Hi+/3/40 rev 4	Ironmongery
520D Hi+/3/50 rev 4	Ironmongery - Lock Extensions, Cylinders, Shoot Bolts, Hinges
520D Hi+/3/60 rev 3	Ironmongery - Door Closers, Threshold Stop, Ancillary Hinge Security Devices
520D Hi+/3/70 rev 4	7065 Lock and Keep Details - Single and Double Doors 1961mm to 2111mm Open In and Open Out with Rebated Threshold
520D Hi+/3/80 rev 2	7065 Lock and Keep Details - Single and Double Doors 1961mm to 2111mm Open In and Open Out with Flush and Semi-Rebated Low Thresholds
520D Hi+/3/90 rev 2	7065 Lock and Keep Details with Top Extensions - Single and Double Doors 2112mm to 2500mm Open-In and Open-Out
520D Hi+/3/100 rev 2	7165 Lock and Keep Details - Single and Double Doors 1980mm to 2500mm Open-In and Open-Out with Flush and Semi-Rebated Low Thresholds
520D Hi+/3/110 rev 5	7150, 7151 Lock and Keep Details - Single and Double Doors Open-In and Open-Out 1980mm to 2300mm with Flush and Semi-Rebated Low Thresholds
520D Hi+/3/120 rev 5	7056 Lever Handle Operated Shoot Bolt Details
520D Hi+/3/130 rev 6	Security Requirements - Manually Operated Lock with Adjustable Hinges
520D Hi+/3/140 rev 5	Security Requirements - Manually Operated Lock with Clamp-on Hinges
520D Hi+/3/150 rev 5	Security Requirements - Electric Release Auto Lock with Adjustable Hinges



520D Hi+/3/160 rev 5	Security Requirements - Manually Operated Lever Lock and Lever Shootbolt with Adjustable Hinges
520D Hi+/3/170 rev 5	Ironmongery - Standard Panic / Emergency Exit Mechanisms
520D Hi+/3/180 rev 2	Ironmongery - Standard Panic / Emergency Exit Mechanisms
520D Hi+/3/190 rev 3	Ironmongery - Standard Panic / Emergency Exit Mechanisms
520D Hi+/3/200 rev 2	Ironmongery - Standard Panic / Emergency Exit Mechanisms
520D Hi+/3/210 rev 4	Ironmongery - Security Panic / Emergency Exit Mechanisms for Single Panic Door
520D Hi+/3/220 rev 4	Ironmongery - Security Panic / Emergency Exit Mechanisms for Double Doors with Flush Meeting Stiles
520D Hi+/3/230 rev 5	Ironmongery - Optional Items for Security Panic / Emergency Exit Mechanisms
520D Hi+/3/240 rev 5	Size Limitation Chart - Open-In and Open-Out Doors using 7065 Multi Point Dead Lock with Latch
520D Hi+/3/250 rev 4	Size Limitation Chart - Domestic - Open-In and Open-Out Doors using 7065 Multi Point Dead Lock with Latch
520D Hi+/3/260 rev 4	Size Limitation Chart - Open-In and Open-Out Doors using 7165 3-Point Dead Lock with Roller Ball
520D Hi+/3/270 rev 4	Size Limitation Chart - Open-In and Open-Out Doors using 7094 and 7095 Single Point Locks
520D Hi+/3/280 rev 4	Size Limitation Chart - Open-In and Open-Out Doors using 7150 and 7151 Electrically Operated Locking System
520D Hi+/3/290 rev 4	Size Limitation Chart - Open-Out Single Doors using the Standard Panic / Emergency Exit Mechanisms
520D Hi+/3/300 rev 5	Size Limitation Chart - Open-Out Double Doors using the Standard Panic / Emergency Exit Mechanisms and Rebated Meeting Stile
520D Hi+/3/310 rev 5	Size Limitation Chart - Open-Out Double Doors using the Standard Panic / Emergency Exit Mechanisms and Flush Meeting Stile
520D Hi+/3/320 rev 6	Size Limitation Chart - Open-Out Single and Double Doors using the Security Panic / Emergency Exit Mechanisms and Flush Meeting Stile



**Section 4: Profile Cutting and Prepping Details**

520D Hi+/4/10 rev 2	Bar Cutting Sizes
520D Hi+/4/20 rev 1	FFSS Ready Reckoner - (To calculate fixed frame sight sizes)
520D Hi+/4/30 rev 1	Fabrication and Cutting Sizes - Fixed Light Beads and Glass Sizes (Not Including Outer Frame)
520D Hi+/4/40 rev 1	Fabrication and Cutting Sizes - Beads and Glass Sizes for Single and Double Open-In Doors with Rebated Threshold
520D Hi+/4/50 rev 1	Fabrication and Cutting Sizes - Beads and Glass Sizes for Single and Double Open-In Doors with Flush Low Threshold
520D Hi+/4/60 rev 1	Fabrication and Cutting Sizes - Beads and Glass Sizes for Single and Double Open-In Doors with Semi Rebated Low Threshold
520D Hi+/4/70 rev 1	Fabrication and Cutting Sizes - Beads and Glass Sizes for Single and Double Open-Out Doors with Rebated Threshold
520D Hi+/4/80 rev 1	Fabrication and Cutting Sizes - Beads and Glass Sizes for Single and Double Open-Out Doors with Flush Low Threshold
520D Hi+/4/90 rev 1	Fabrication and Cutting Sizes - Beads and Glass Sizes for Single and Double Open-Out Doors with Semi Rebated Low Threshold
520D Hi+/4/100 rev 1	Fabrication and Cutting Sizes - For Standard Single and Double Open-In Doors with Rebated Meeting Stile and Threshold
520D Hi+/4/110 rev 2	Fabrication and Cutting Sizes - For Standard Single and Double Open-In Doors with Rebated Meeting Stile and Flush Low Threshold
520D Hi+/4/120 rev 1	Fabrication and Cutting Sizes - For Anti-fingertrap Single and Double Open-In Doors with Rebated Meeting Stile and Flush Low Threshold
520D Hi+/4/130 rev 2	Fabrication and Cutting Sizes - For Standard Single and Double Open-In Doors with Rebated Meeting Stile and Semi-Rebated Low Threshold
520D Hi+/4/140 rev 1	Fabrication and Cutting Sizes - For Anti-fingertrap Single and Double Open-In Doors with Rebated Meeting Stile and Semi-Rebated Low Threshold
520D Hi+/4/150 rev 1	Fabrication and Cutting Sizes - For Standard Single and Double Open-Out Doors with Rebated Meeting Stile and Threshold
520D Hi+/4/160 rev 2	Fabrication and Cutting Sizes - For Standard Single and Double Open-Out Doors with Rebated Meeting Stile and Flush Low Threshold



520D Hi+/4/170 rev 1	Fabrication and Cutting Sizes - For Anti-fingertrap Single and Double Open-Out Doors with Rebated Meeting Stile and Flush Low Threshold
520D Hi+/4/180 rev 1	Fabrication and Cutting Sizes - For Standard Single and Double Open-Out Doors with Rebated Meeting Stile and Semi-Rebated Low Threshold
520D Hi+/4/190 rev 1	Fabrication and Cutting Sizes - For Anti-fingertrap Single and Double Open-Out Doors with Rebated Meeting Stile and Low Threshold
520D Hi+/4/200 rev 1	Fabrication and Cutting Sizes - For Standard Double Open-Out Doors with Flush Meeting Stile and Flush Low Threshold
520D Hi+/4/210 rev 1	Fabrication and Cutting Sizes - For Anti-fingertrap Double Open-Out Doors with Flush Meeting Stile and Flush Low Threshold
520D Hi+/4/220 rev 3	Fabrication and Cutting Sizes - Standard Glaze Out Liner - Window Assembly (Not Including Outer Frame)
520D Hi+/4/230 rev 1	Fabrication and Cutting Sizes - Outer Frame and Low Threshold Options for Single and Double Open-In and Open-Out Doors
520D Hi+/4/240 rev 1	Rebated Double Door Adaptor End Prep - Open-In and Open-Out Doors with Rebated and Flush Low Thresholds
520D Hi+/4/250 rev 1	Rebated Double Door Adaptor End Prep - Open-In and Open-Out Doors with Semi-Rebated Low Threshold
520D Hi+/4/260 rev 2	0048-0050 Flush Meeting Stile Adaptor Preps - Open-Out Doors with Low Threshold
520D Hi+/4/270 rev 2	044 Flush Meeting Stile Adaptor Preps - Open-Out Doors with Low Threshold
520D Hi+/4/280 rev 1	Brush Seal Carrier End Prep - For Standard Single and Double Open-In and Open-Out Doors with Rebated Adaptor and Flush Low Threshold
520D Hi+/4/290 rev 1	Brush Seal Carrier End Prep - For Standard Double Open-Out Doors with Flush Meeting Stile Adaptors and Flush Low Threshold
520D Hi+/4/300 rev 1	Brush Seal Carrier End Prep - For Anti-fingertrap Double Open-Out Doors with Flush Meeting Stile Adaptors and Flush Low Threshold
520D Hi+/4/310 rev 1	Brush Seal Carrier End Prep - For Anti-fingertrap Single and Double Open-In Doors with Rebated Adaptor and Flush Low Threshold
520D Hi+/4/320 rev 1	Brush Seal Carrier End Prep - For Anti-fingertrap Single and Double Open-Out Doors with Rebated Adaptor and Flush Low Threshold
520D Hi+/4/330 rev 2	047-048 Brush Seal Carrier Prep for 044 Clip-on Brush Seal Carrier
520D Hi+/4/340 rev 0	Brush Seal Carrier End Prep - For Standard Single and Double Open-In and Open-Out Doors with Rebated Meeting Stile and Semi-Rebated Low Threshold
520D Hi+/4/350 rev 0	Brush Seal Carrier End Prep - For Anti-fingertrap Single and Double Open-In Doors with Rebated Meeting Stile and Semi-Rebated Low Threshold
520D Hi+/4/360 rev 0	Brush Seal Carrier End Prep - For Anti-fingertrap Single and Double Open-Out Doors with Rebated Meeting Stile and Semi-Rebated Low Threshold
520D Hi+/4/370 rev 1	Door Sash Prep for 0038 Brush Seal Carrier
520D Hi+/4/380 rev 0	Midrail End Prep - Open-Out Doors
520D Hi+/4/390 rev 1	Midrail End Prep - Open-In Doors
520D Hi+/4/400 rev 1	Mullion End Prep - Rebated Outer Frame
520D Hi+/4/410 rev 2	Mullion/Transom End Prep - Rebated Outer Frame
520D Hi+/4/420 rev 1	Outer Frame End Prep - Outer Frame Butt Joint to Mullion
520D Hi+/4/430 rev 1	Mullion End Prep - Rebated Head and Low Threshold
520D Hi+/4/440 rev 0	Mullion Stiffener Prep

#### Section 5: Drainage Details

520D Hi+/5/10 rev 2	Drainage Details - To Suit Rebated Outer Frames
520D Hi+/5/20 rev 1	Drainage Details - To Suit Rebated Outer Frames
520D Hi+/5/30 rev 1	Drainage Details - To Suit Transom and Liner Bar
520D Hi+/5/40 rev 1	Drainage Details - To Suit Transom and Liner Bar
520D Hi+/5/50 rev 1	Drainage Details - To Suit Open-In and Open-Out Door Sashes



520D Hi+/5/60 rev 1	Drainage Details - To Suit Midrails
520D Hi+/5/70 rev 1	169-169 Drainage Details - To Suit Open-In Door with Flush Low Threshold and Ramps
520D Hi+/5/80 rev 1	169-169 Drainage Details - To Suit Open-In Door with Semi-Rebated Low Threshold and Ramp
520D Hi+/5/90 rev 1	169-169 Drainage Details - To Suit Open-Out Door with Flush Low Threshold and Ramps
520D Hi+/5/100 rev 1	169-169 Drainage Details - To Suit Open-Out Door with Semi-Rebated Low Threshold and Ramp
520D Hi+/5/110 rev 1	0037-0037 Drainage Details - To Suit Open-In Door with Flush Low Threshold
520D Hi+/5/120 rev 1	0037-0037 Drainage Details - To Suit Open-Out Door with Flush Low Threshold
520D Hi+/5/130 rev 1	0037-169 Drainage Details - To Suit Open-In Door with Flush Low Threshold and Ramp
520D Hi+/5/140 rev 1	0037-169 Drainage Details - To Suit Open-In Door with Flush Low Threshold and Ramp
520D Hi+/5/150 rev 1	0037-169 Drainage Details - To Suit Open-Out Door with Flush Low Threshold and Ramp
520D Hi+/5/160 rev 1	0037-169 Drainage Details - To Suit Open-Out Door with Flush Low Threshold and Ramp
520D Hi+/5/170 rev 1	0037-169 Drainage Details - To Suit Open-In Door with Semi-Rebated Low Threshold
520D Hi+/5/180 rev 1	0037-169 Drainage Details - To Suit Open-Out Door with Semi-Rebated Low Threshold
520D Hi+/5/190 rev 0	0036-169 Drainage Details - To Suit Open-Out Door with Flush Low Threshold and Ramp
520D Hi+/5/200 rev 0	0036-169 Drainage Details - To Suit Open-Out Door with Semi-Rebated Low Threshold
520D Hi+/5/210 rev 0	0036-0037 Drainage Details - To Suit Open-Out Door with Flush Low Threshold
520D Hi+/5/220 rev 1	Pressure Equalization - For Fully Rebated Applications Only

#### **Section 6: Assembly Details**

520D Hi+/6/10 rev 1	Corner Assembly Details
520D Hi+/6/20 rev 1	Corner Crimping Detail - Short Leg Outer Frames
520D Hi+/6/30 rev 1	Corner Crimping Detail - Long Leg Outer Frames
520D Hi+/6/40 rev 2	Corner Crimping Detail - Open Out Door Curtain Walling Frames
520D Hi+/6/50 rev 2	Corner Crimping Detail - Open In Door Curtain Walling Frames
520D Hi+/6/60 rev 2	Corner Crimping Detail - Liner Bar
520D Hi+/6/70 rev 2	Corner Crimping Detail - Sashes 138-238F and 139-239F
520D Hi+/6/80 rev 2	Corner Crimping Detail - Sashes 148-238F and 149-239F
520D Hi+/6/90 rev 2	Mullion Assembly - Cleated sections
520D Hi+/6/100 rev 2	Heavy Duty Mullion/Transom Assembly - Cleated sections
520D Hi+/6/110 rev 2	Mullion Assembly Detail - For Sidelight With Low Threshold
520D Hi+/6/120 rev 1	Assembly Detail - Low Threshold to Frame
520D Hi+/6/130 rev 1	Mullion/Transom Sealing Detail
520D Hi+/6/140 rev 2	Transom Brace Application Detail
520D Hi+/6/150 rev 2	Double Door Adaptors Assembly Detail - Rebated Double Door Adaptor
520D Hi+/6/160 rev 1	Brush Seal Carrier Details - Low Threshold



520D Hi+/6/170 rev 1	5555 Threshold Stop Prep Details - Open-Out Doors
520D Hi+/6/180 rev 1	5555 Threshold Stop Prep Details - Open-In Doors
520D Hi+/6/190 rev 2	051 Anti-Fingertrap Door Prep Details
520D Hi+/6/200 rev 2	053 Anti-Fingertrap Door Prep Details - Single and Double Open-In and Open-Out Doors with Rebated Meeting Stile and Flush Low Threshold
520D Hi+/6/210 rev 1	044 and 052 Anti-Fingertrap Door Prep Details - Single and Double Open-In and Open-Out Doors with Rebated Meeting Stile and Flush Low Threshold
520D Hi+/6/220 rev 1	053 Anti-Fingertrap Door Prep Details - Single and Double Open-In and Open-Out Doors with Rebated Meeting Stile and Semi-Rebated Low Threshold
520D Hi+/6/230 rev 0	044 Anti-Fingertrap Door Prep Details - Double Open-Out Doors with Flush Meeting Stile and Flush Low Threshold
520D Hi+/6/240 rev 1	052 and 053 Anti-Fingertrap Door Prep Details - Double Open-Out Doors with Flush Meeting Stile and Flush Low Threshold
520D Hi+/6/250 rev 1	Anti-Fingertrap Assembly - Outer Frame
520D Hi+/6/260 rev 1	Anti-Fingertrap Assembly - Low Threshold Sash
520D Hi+/6/270 rev 1	Anti-Fingertrap Assembly - Semi-Rebated Threshold Sash
520D Hi+/6/280 rev 1	Anti-Fingertrap Assembly
520D Hi+/6/290 rev 0	PCD85 End Cap Application
520D Hi+/6/300 rev 0	Drip Rails - Preparation Details for Rebated Head and Cill
520D Hi+/6/310 rev 0	Drip Rails - Preparation Details for Doors with Flush and Semi-Rebated Low Thresholds
520D Hi+/6/320 rev 0	Drip Rail Applications using 7017 Hinge - Outer Frames
520D Hi+/6/330 rev 0	Drip Rail Applications using 7099 Hinge
520D Hi+/6/340 rev 1	Liner Bar Fixings

## Section 7: Ironmongery and Component Assembly

### 7A: Handle, lock and cylinder preps

520D Hi+/7A/10 rev 4	Handle and Lock Details for Single and Double Open-In Doors
520D Hi+/7A/20 rev 4	Handle and Lock Details for Single and Double Open-Out Doors
520D Hi+/7A/30 rev 0	Prep for Multi-Point Dead Lock 7065 and Handles - Open-In Door Sash 138-238F or 148-238F
520D Hi+/7A/40 rev 0	Prep for Multi-Point Dead Lock 7065 and Handles - Open-Out Door Sash 139-239F or 149-239F
520D Hi+/7A/50 rev 1	Prep for 3-Point Dead Lock with Rollerball 7165 - Open-In Door Sash 138-238F or 148-238F
520D Hi+/7A/60 rev 1	3-Point Dead Lock with Rollerball - Prep for 7160 Escutcheon and Cylinder - Open-In Door Sash 138-238F or 148-238F
520D Hi+/7A/70 rev 1	Prep for 3-Point Dead Lock with Rollerball 7165 - Open-Out Door Sash 139-239F or 149-239F
520D Hi+/7A/80 rev 1	3-Point Dead Lock with Rollerball - Prep for 7160 Escutcheon and Cylinder - Open-Out Door Sash 139-239F or 149-239F
520D Hi+/7A/90 rev 2	Prep for Single Point Dead Lock with Latch 7094 and Handles - Open-In Door Sash 138-238F or 148-238F
520D Hi+/7A/100 rev 2	Prep for Single Point Dead Lock with Latch 7094 and Handles - Open-Out Door Sash 139-239F or 149-239F
520D Hi+/7A/110 rev 1	Prep for Single Point Dead Lock with Rollerball 7095 and Escutcheons 7160 - Open-In Door Sash 138-238F or 148-238F
520D Hi+/7A/120 rev 1	Prep for Single Point Dead Lock with Rollerball 7095 and Escutcheons 7160 - Open-In Door Sash 139-239F or 149-239F
520D Hi+/7A/130 rev 0	Prep for Electrically Operated Auto Locks 7150/7151 - Open-In Door Sash 138-238F or 148-238F
520D Hi+/7A/140 rev 0	Prep for Electrically Operated Auto Locks 7150/7151 - Open-Out Door Sash 139-239F or 149-239F



520D Hi+/7A/150 rev 2	Electrically Operated Locks - Prep for Single Handle with 7160 Escutcheon - Open-In Door Sash 138-238F or 148-238F
520D Hi+/7A/160 rev 2	Electrically Operated Locks - Prep for Single Handle with 7160 Escutcheon - Open-Out Door Sash 139-239F or 149-239F
520D Hi+/7A/170 rev 3	Multi-Point Dead Lock 7065 - Security Prep for 7059 Cylinder Guard with Handles - Open-In Door Sash 138-238F or 148-238F
520D Hi+/7A/180 rev 3	Multi-Point Dead Lock 7065 - Security Prep for 7059 Cylinder Guard with Handles - Open-Out Door Sash 139-239F or 149-239F
520D Hi+/7A/190 rev 1	Electrically Operated Locks - Security Prep for 7059 Cylinder Guard with Single Handle - Open-In Door Sash 138-238F or 148-238F
520D Hi+/7A/200 rev 1	Electrically Operated Locks - Security Prep for 7059 Cylinder Guard with Single Handle - Open-Out Door Sash 139-239F or 149-239F
520D Hi+/7A/210 rev 2	Installation of Cylinder Guard 7059 and Cylinders 7162/7176 for Security Applications - Open-In Door Sash 138-238F or 148-238F
520D Hi+/7A/220 rev 2	Installation of Cylinder Guard 7059 and Cylinders 7161/7175 for Security Applications - Open-Out Door Sash 139-239F or 149-239F
520D Hi+/7A/230 rev 1	Installation of 7160 Escutcheon for Security Applications - Open-In Door Sash 138-238F or 148-238F
520D Hi+/7A/240 rev 1	Installation of 7160 Escutcheon for Security Applications - Open-Out Door Sash 139-239F or 149-239F

#### **7B: Keep and cable transition preps**

520D Hi+/7B/10 rev 2	Outer Frame Preps for 7058 and 7070 Keeps - Suitable for Lock 7065
520D Hi+/7B/20 rev 0	Rebated Double Door Adaptor Preps for 7058 and 7070 Keeps - Suitable for Lock 7065
520D Hi+/7B/30 rev 0	Security Outer Frame Preps for 7058 Keeps - Suitable for Lock 7065
520D Hi+/7B/40 rev 2	Outer Frame Preps for 7152 and 7154 Keeps - Suitable for Locks 7150 and 7151
520D Hi+/7B/50 rev 1	Rebated Double Door Adaptor Preps for 7152 and 7154 Keeps - Suitable for Locks 7150 and 7151
520D Hi+/7B/60 rev 1	Security Outer Frame Preps for 7152 and 7154 Keeps - Suitable for Lock 7151
520D Hi+/7B/70 rev 1	Outer Frame Preps for 7152 and 7155 Keeps - Suitable for Lock 7165
520D Hi+/7B/80 rev 0	Rebated Double Door Adaptor Preps for 7152 and 7155 Keeps - Suitable for Lock 7165
520D Hi+/7B/90 rev 3	Outer Frame and Rebated Double Door Adaptor Prep for 7048 Keep - Suitable for Locks 7094 and 7095
520D Hi+/7B/100 rev 2	Standard Door Prep for 7153B Cable Transition for Locks 7150 and 7151
520D Hi+/7B/110 rev 2	Anti-fingertrap Door Prep for 7153B Cable Transition for Locks 7150 and 7151
520D Hi+/7B/120 rev 3	Details for 7153B Cable Transition for Locks 7150 and 7151 - Open-In Door Sash 138-238F or 148-238F
520D Hi+/7B/130 rev 3	Details for 7153B Cable Transition for Locks 7150 and 7151 - Open-Out Door Sash 139-239F or 149-239F

#### **7C: Shoot bolt preps**

520D Hi+/7C/10 rev 0	7064 Shoot Bolt Details for Rebated Head and Threshold
520D Hi+/7C/20 rev 0	7063A Shoot Bolt Keep Location for 7064 Shoot Bolt
520D Hi+/7C/30 rev 0	7062 Shoot Bolt Details for Flush Low Threshold
520D Hi+/7C/40 rev 0	7062 Shoot Bolt Details for Semi-Rebated Low Threshold
520D Hi+/7C/50 rev 1	7062 Shoot Bolt Details for Rebated Head
520D Hi+/7C/60 rev 0	7194 Shoot Bolt Details for Rebated Head
520D Hi+/7C/70 rev 1	5563 Shoot Bolt Keep Location for 7062 or 7194 Shoot Bolt
520D Hi+/7C/80 rev 2	Handle and Lock Details for Double Door with 7056 Lever Handle Operated Shoot Bolt - Open-In Doors
520D Hi+/7C/90 rev 2	Handle and Lock Details for Double Door with 7056 Lever Handle Operated Shoot Bolt - Open-Out Doors



520D Hi+/7C/100 rev 1	Rebated Double Door Adaptor Preps for 7056 and 7057 Lever Handle Operated Shoot Bolts - Open-In and Open-Out Doors
520D Hi+/7C/110 rev 2	Rebated Double Door Adaptor Additional Preps for 7196 Extension
520D Hi+/7C/120 rev 1	Slave Door Preps for 7056 Lever Handle Operated Shoot Bolts - Open-In Door Sash 138-238F or 148-238F
520D Hi+/7C/130 rev 1	Slave Door Preps for 7056 Lever Handle Operated Shoot Bolts - Open-Out Door Sash 139-239F or 149-239F
520D Hi+/7C/140 rev 1	7057 Lever Handle Operated Shoot Bolt Details for Flush Low Threshold
520D Hi+/7C/150 rev 1	7057 Lever Handle Operated Shoot Bolt Details for Semi-Rebated Low Threshold
520D Hi+/7C/160 rev 1	7148 Shoot Bolt Keep Location for 7057 Lever Handle Operated Shoot Bolt - Security
520D Hi+/7C/170 rev 1	7057 Shoot Bolt Details for Rebated Head and Threshold
520D Hi+/7C/180 rev 0	5563 Shoot Bolt Keep Location for 7057 Lever Handle Operated Shoot Bolt

#### **7D: Hinge, ancillary hinge security device, and alignment wedge preps**

520D Hi+/7D/10 rev 4	7099 Adjustable Commercial Hinge Fitting Details - For Open-In and Open-Out Doors with Flush and Semi-Rebated Low Thresholds
520D Hi+/7D/20 rev 4	7099 Adjustable Commercial Hinge Fitting Details - For Open-In and Open-Out Doors with Rebated Threshold
520D Hi+/7D/30 rev 3	7017 Clamp-on Domestic Hinge Fitting Details - For Open-In and Open-Out Doors with Flush and Semi-Rebated Low Thresholds
520D Hi+/7D/40 rev 3	7017 Clamp-on Domestic Hinge Fitting Details - For Open-In and Open-Out Doors with Rebated Thresholds
520D Hi+/7D/50 rev 2	7097 Anti-Fingertrap Hinge Fitting Details - For Open-In and Open-Out Doors with Flush and Semi-Rebated Low Thresholds
520D Hi+/7D/60 rev 1	Preps for 7168 and 5510 Ancillary Hinge Security Devices - To Suit 7099 Hinges for Single and Double Open-In and Open-Out Doors
520D Hi+/7D/70 rev 0	Preps for 702A Ancillary Hinge Security Devices - To Suit 7017 Hinges for Open-In and Open-Out Doors
520D Hi+/7D/80 rev 0	Prep Details for 5504 and 5505 Security Alignment Wedges - For Flush and Semi-Rebated Low Thresholds

#### **7E: Panic exit mechanism preps**

520D Hi+/7E/10 rev 0	Panic Exit Mechanisms - Push Rail for Single Door
520D Hi+/7E/20 rev 0	Panic Exit Mechanisms - Push Rail for Double Doors with Rebated Double Door Adaptor
520D Hi+/7E/30 rev 0	Panic Exit Mechanisms - Push Rail for Double Doors with Flush Meeting Stile
520D Hi+/7E/40 rev 0	Panic Exit Mechanisms - Touch Bar for Single Door
520D Hi+/7E/50 rev 0	Panic Exit Mechanisms - Touch Bar for Double Doors with Rebated Double Door Adaptor
520D Hi+/7E/60 rev 0	Panic Exit Mechanisms - Touch Bar for Double Doors with Flush Meeting Stile
520D Hi+/7E/70 rev 0	Panic Exit Mechanisms - Pad Handle 7118/7119 for Single Door
520D Hi+/7E/80 rev 0	Panic Exit Mechanisms - Pad Handle 7118/7119 for Double Doors with Rebated Double Door Adaptor
520D Hi+/7E/90 rev 0	Panic Exit Mechanisms - Pad Handle 7118/7119 for Double Doors with Flush Meeting Stile
520D Hi+/7E/100 rev 2	Panic Exit Mechanisms Fitted at Mullion
520D Hi+/7E/110 rev 0	Panic Exit Mechanism Preps for External Access Device 7122
520D Hi+/7E/120 rev 1	Panic Exit Mechanism Preps for Top Latches - Without Fanlight
520D Hi+/7E/130 rev 1	Panic Exit Mechanism Preps for Top Latches - With Fanlight
520D Hi+/7E/140 rev 1	Panic Exit Mechanism Preps for Bottom Latches - To Suit Flush Low Thresholds 0037-0037, 0037-169 and 169-169
520D Hi+/7E/150 rev 2	Panic Exit Mechanism Preps for Bottom Latches - To Suit Flush Low Thresholds 0036-0037 and 0036-169



520D Hi+/7E/160 rev 2	Panic Exit Mechanism Preps for 7130 Side Operating Latches - To Suit Flush Low Thresholds
520D Hi+/7E/170 rev 2	Panic Exit Mechanism Preps for 7130 Side Operating Latches - To Suit Semi-Rebated Low Thresholds
520D Hi+/7E/180 rev 1	Security Panic Exit Mechanisms - Touch Bar for Single Door
520D Hi+/7E/190 rev 1	Security Panic Exit Mechanisms - Touch Bar for Double Doors with Flush Meeting Stile
520D Hi+/7E/200 rev 4	Security Panic Exit Mechanism Preps for Top Latches - To Suit Single Doors without Fanlight
520D Hi+/7E/210 rev 3	Security Panic Exit Mechanism Preps for Bottom Latches - To Suit Single Doors with Flush Low Thresholds 0036-0037 or 0036-169
520D Hi+/7E/220 rev 2	Security Panic Exit Mechanism Preps for Top Latches - To Suit Single Doors with Transom/Fanlight Above the Door
520D Hi+/7E/230 rev 1	Security Panic Exit Mechanism Preps for Top Latches - To Suit Double Doors
520D Hi+/7E/240 rev 1	Security Panic Exit Mechanism Preps for Bottom Latches - To Suit Double Doors
520D Hi+/7E/250 rev 0	Preps for External Access Device 7186A - To Suit 7183 Panic Exit Mechanism

#### **7F: Door closer and restrictor preps**

520D Hi+/7F/10 rev 2	Door Closer Prep Details - Open-In Doors
520D Hi+/7F/20 rev 2	Door Closer Prep Details - Open-Out Doors, No Hold
520D Hi+/7F/30 rev 5	Door Closer Prep Details - Open-Out Doors, with PCD106A Hold Open Arm
520D Hi+/7F/40 rev 1	Door Closer Prep Details - Slide Arm - Open-In Doors
520D Hi+/7F/50 rev 1	Door Closer Prep Details - Slide Arm - Open-Out Doors
520D Hi+/7F/60 rev 1	7189 Door Restrictor Prep Details - For Owner-Occupied Domestic Applications Only

#### **Section 8: Gaskets, Glazing, and Installation**

520D Hi+/8/10 rev 0	Glazing Details
520D Hi+/8/20 rev 1	Weatherseal Application Details - Weatherseal 060B
520D Hi+/8/30 rev 1	Weatherseal Application Details - Gasket CA25, CA25A, PCD82 (Outside), Wedge 063, 066, CA27 or SD36 (Inside)
520D Hi+/8/40 rev 1	Weatherseal Application Details - Flipper Seal 061 and Moulded Corner 062
520D Hi+/8/50 rev 1	Foam Application Details - Perimeter Foam 6744
520D Hi+/8/60 rev 1	Foam Application Details - Glazing Unit Perimeter Foam 6743
520D Hi+/8/70 rev 2	Foam Application Details - Liner Bar Foam HR50184
520D Hi+/8/80 rev 1	Installation Procedures
520D Hi+/8/90 rev 2	Installation Procedures
520D Hi+/8/100 rev 1	Typical Fixing Detail
520D Hi+/8/110 rev 0	Typical Curtain Wall Fixing Detail
520D Hi+/8/120 rev 0	Glazing Details
520D Hi+/8/130 rev 1	Site Glazing Procedures
520D Hi+/8/140 rev 1	Site Adjustment Procedures