



origin

DOORS AND WINDOWS

Bi-fold Door Specification File





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Specification overview

Thermally Broken Aluminium Bi-folding Door

External view of
bi-folding doors



Internal view of
bi-folding doors



Profile specification

Outer Frame Depth	75mm
Sash Depth	59mm
Sash Sightline	72mm
Track Height (not including rebate)	50mm
Mobility Threshold* Height	20mm

Features

- ▶ 20 year guarantee
- ▶ The doors are bottom running and incorporate a unique free glide carriage assembly, which uses acetal rollers with sealed SKF stainless steel bearings on an 8mm hardened stainless steel axle
- ▶ Chamfered bead internally and externally
- ▶ Packaged in kit form for easy transportation and installation
- ▶ 8 point locking system which conforms to Secure by Design standards, and includes chamfered 20mm linear bolts and deep throw 25mm security hooks
- ▶ Each door comes with three solid zinc security hinges

Options and extras

- ▶ Single, French, Bi-fold and Moving Corner Bi-Fold Doors
- ▶ Accommodates double and triple glazing with unit sizes of 24mm, 28mm or 32mm
- ▶ Weathered or non-weathered and mobility (Class 4A) thresholds available
- ▶ Open in or open out
- ▶ Cill options shown on page 38 are: 95, 155, 180 and 225mm
- ▶ Available in over 150 different colours
- ▶ Fork colours include black, white, stainless steel finish or colour coded options
- ▶ Standard, 1 star or 3 star keyed cylinder options
- ▶ Hinge colours: black, white, stainless steel finish, colour coded
- ▶ Gaskets available in 7 different colours: black, white, light grey, graphite grey, light oak, bronze, chestnut brown
- ▶ Door to window coupling
- ▶ 2500EA & 5000EA Trickle Vents available
- ▶ Marine finish
- ▶ Comprehensive handle range, including colour matched options

*Mobility threshold available on Single and French Doors.

Available in the following colour finishes



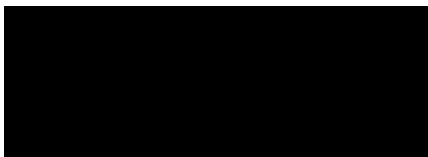
Origin's Popular Colour Range is available on 'Your lead time, not ours'



Dark Silver Metallic (9007M)



Black Grey (7021M)



Jet Black (9005M)



Slate Grey (7015M)



Light Silver Metallic (9006M)



Hipca White (9910G)



Anthracite Grey (7016M)



9910G / 7016M (Dual Colour)

Dual Colour is available on a 3 week lead time

Origin's 4 woodgrain colours are available on 'Your lead time, not ours'



Natural Oak



Golden Oak



Mahogany



Walnut



Origin's special RAL colours are available on a 3 week lead time

Door Colour	Recommended Q-Lon Gasket Colour	
A. 7015M, 7016M and 9007M	Graphite Grey	
B. 9005M and 7021M	Black	
C. 9006M	Light Grey	
D. 9910G	White	
E. Natural Oak and Golden Oak	Light Oak	
F. Walnut	Bronze	
G. Mahogany	Chestnut Brown	

Security

Origin's Multi-Point Lock

All lead doors, greater than 1125mm tall, contain the Origin Multi-Point Lock

The Origin Multi-Point Lock offers 8 points of locking and is part of the reason our overall door system is Pas 24 & 23 certified

In the image below you will see 6 points of locking, we then add a shoot bolt that goes into the bottom track and another shoot bolt into the top, resulting in a total of 8 points of locking



Barrels

We offer 3 types of locking barrel/cylinder, our standard barrel and the Magnum barrel

Our standard barrel has been independently certified to BS EN 1303 - Grade 6

The Magnum barrel upgrade is a TS007 1 Star cylinder

Our most secure locking barrel is a TS007 3 Star cylinder

Standard Barrel



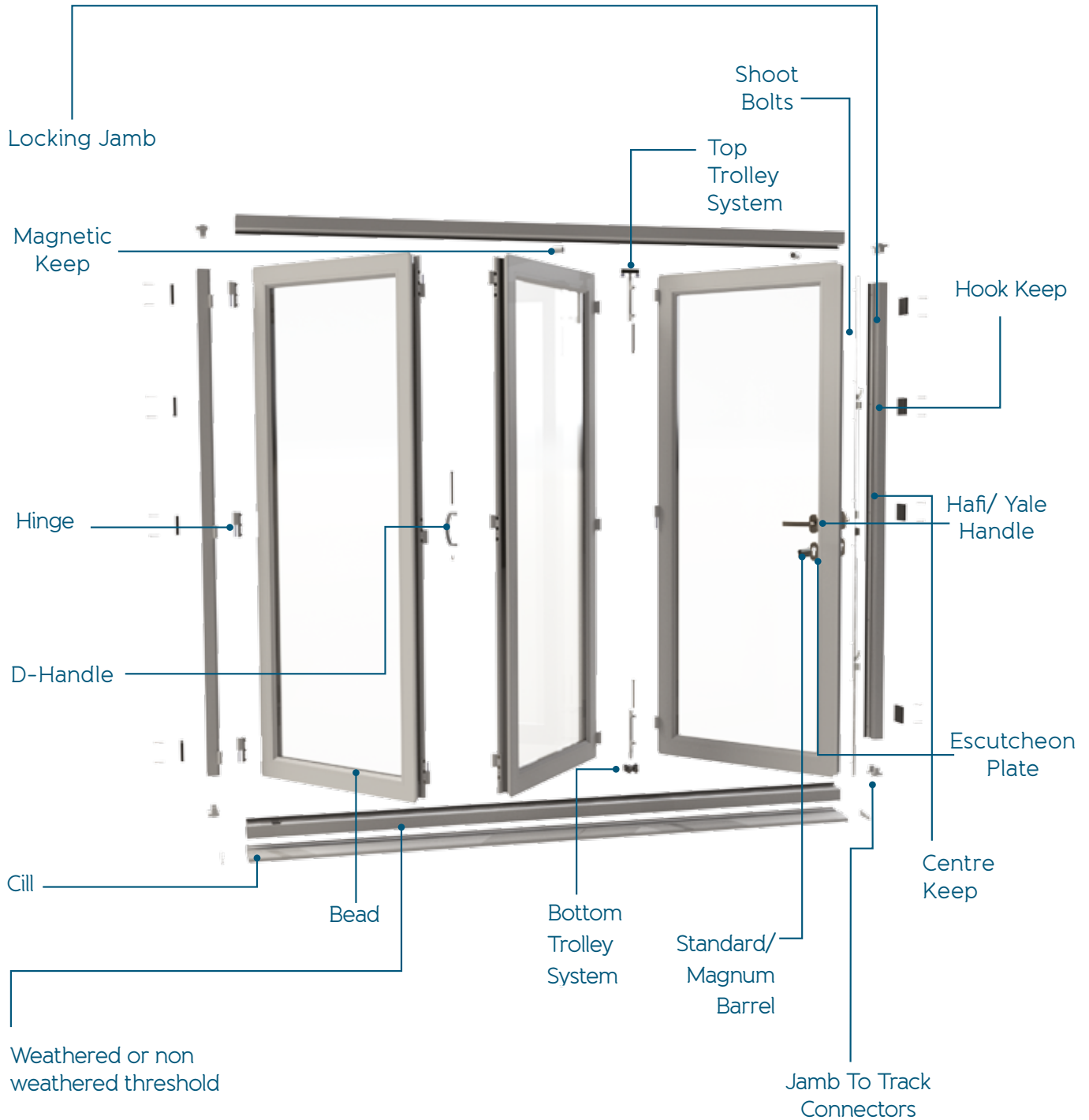
Magnum Barrel

Available with
origin

Offering the highest levels of security through unique features

- ANTI-PICK
- ANTI-SNAP
- ANTI-DRILL
- ANTI-BUMP

Bi-fold Door Make-Up



Performance & Limitations

Origin Thermal Ratings

Origin Bi-Fold Door Double Glazed	1.6 W/(m ² K)
Origin Bi-Fold Door Triple Glazed (with krypton)	1.3 W/(m ² K)
Origin Bi-Fold Door Triple Glazed (with argon)	1.5 W/(m ² K)
Energy Rating	D

Weather

Air Permeability	600pa Class 4
Water Tightness	Class 9A 600 pa
Resistance to Wind Load	1200pa Class A3
Exposure Category	1200 Special

Performance Testing

PAS 24 & 23 Certified

Passed 50,000 lead door cycles and 10,000 full cycles, equating to 25 years of use

Accreditation

ISO 9001

Building Regulation Requirements

New Build and Extensions 2.0 W/(m²K)

Replacements 1.8 W/(m²K)

Energy Rating E or better

(All doors must conform to these requirements)

Size limitations

	Width	Height
Minimum door panel (mm)		
Even No. Same Direction	700	400
Odd No. Same Direction	400	400
Maximum door panel (mm)		
Standard	1200	2500
Oversized	variable	>2700
With multi-point lock		
Minimum (mm)	N/A	1125
Maximum (mm)	N/A	2700

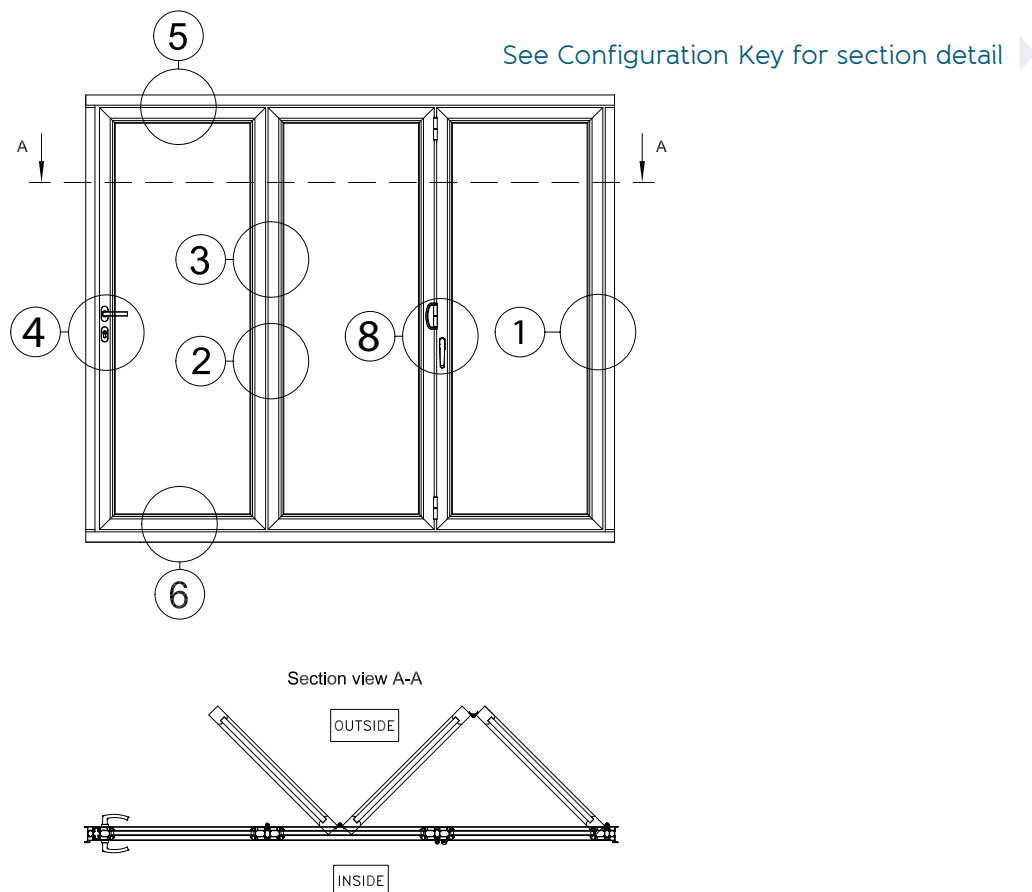
▶ Maximum steel deflection -3mm



Master Configurations

Master Configuration 3 Door Left

Master drawing and all technical detail drawings are also applicable to the following configurations: 5+0, 7+0



3 Door Left



5+0



7+0

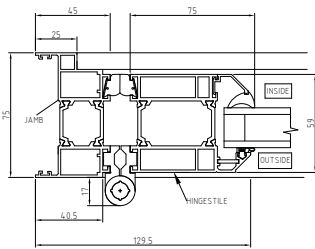
See page 62 for configurations

Key features

- ▶ Origin 8 point locking system
- ▶ Everyday access door
- ▶ All doors open in the same direction

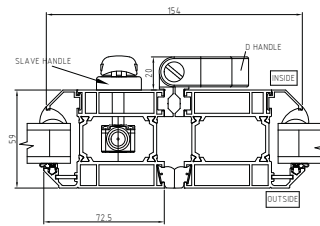
Configuration key

1 - Hinge Jamb Detail



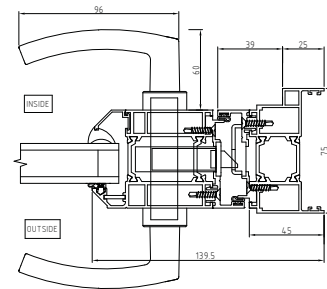
See page 26

2 - Outward Opening Stiles



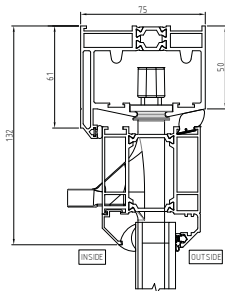
See page 27

4 - Locking Jamb Detail



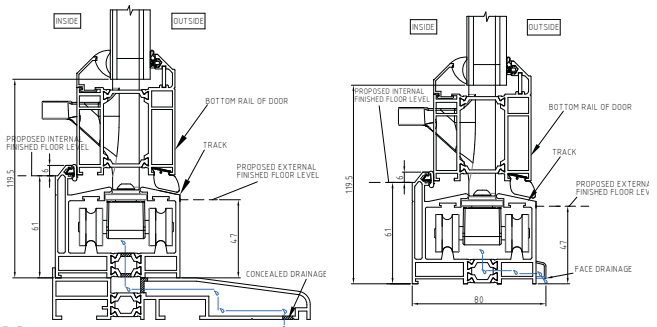
See page 29

5 - Top Track Detail



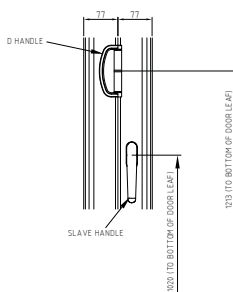
See page 30

6a, 6b - Bottom Track Detail



See pages 31-32

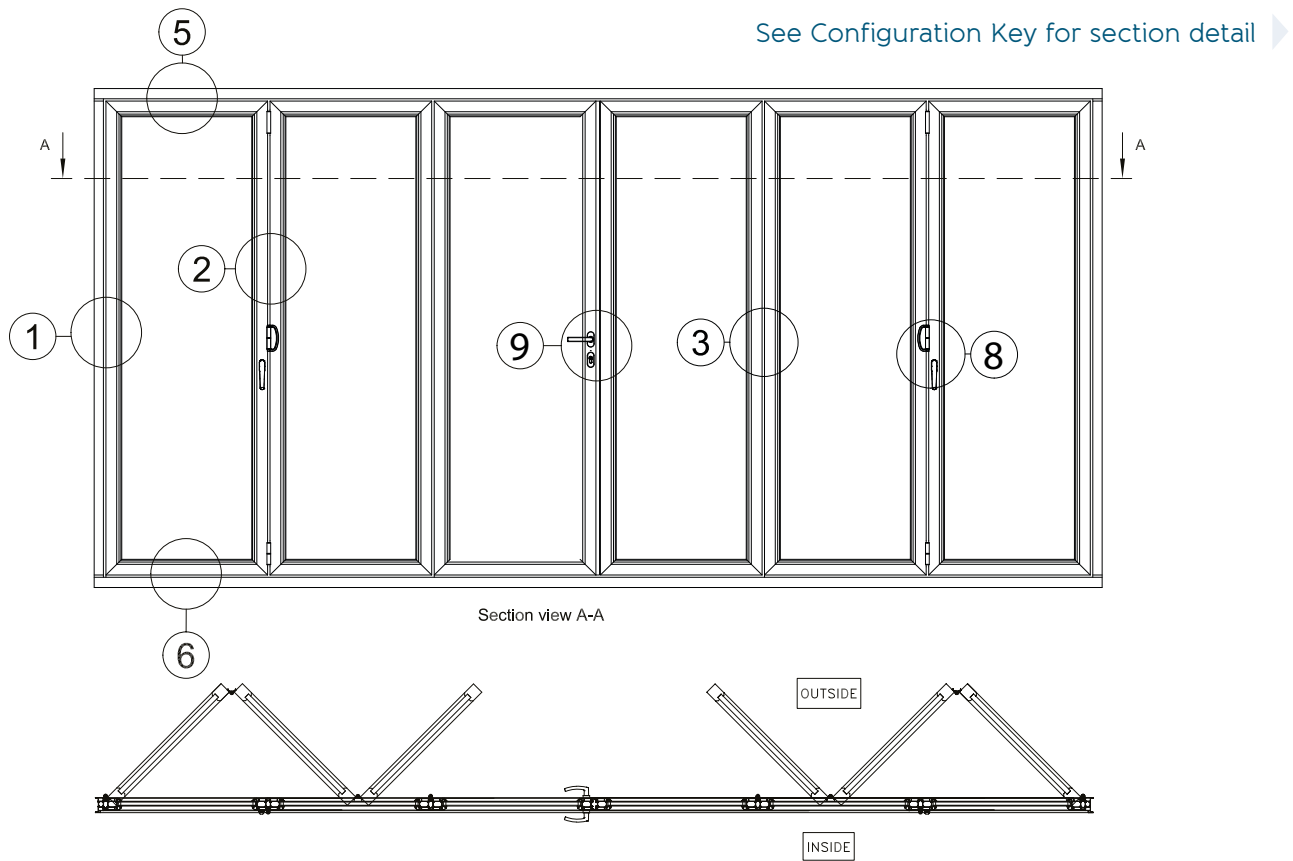
8 - Slave Handle Layout



See page 34

Master Configuration 3+3

Master drawing and all technical detail drawings are also applicable to the following configurations: 3+1, 5+1, 5+3



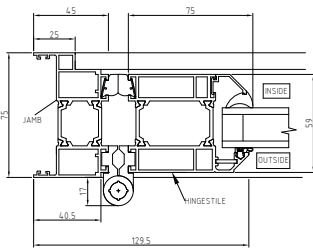
See page 62 for configurations

Key features

- ▶ Origin 8 point locking system
- ▶ Everyday access door
- ▶ Lead door and slave door can behave as French doors

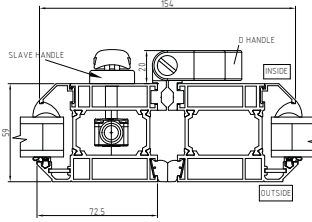
Configuration key

1 - Hinge Jamb Detail



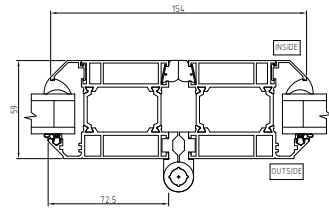
See page 26

2 - Outward Opening Stiles



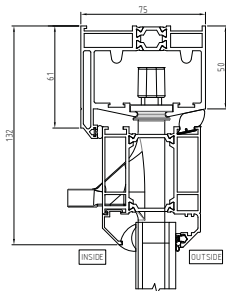
See page 27

3 - Inward Opening Stiles



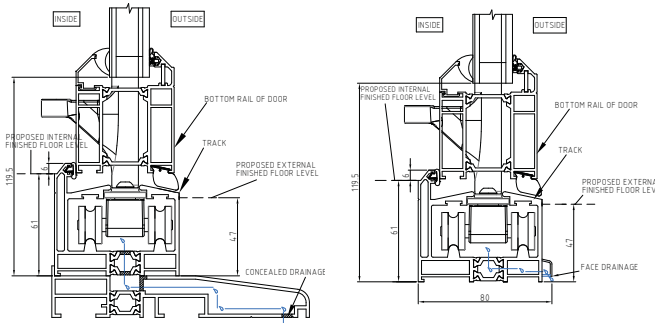
See page 28

5 - Top Track Detail



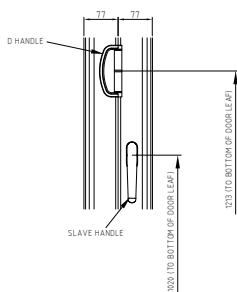
See page 30

6a, 6b - Bottom Track Detail



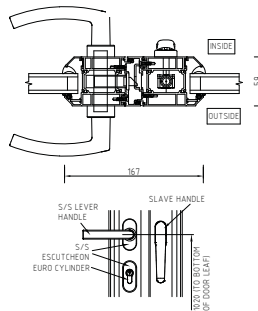
See pages 31-32

8 - Slave Handle Layout



See page 34

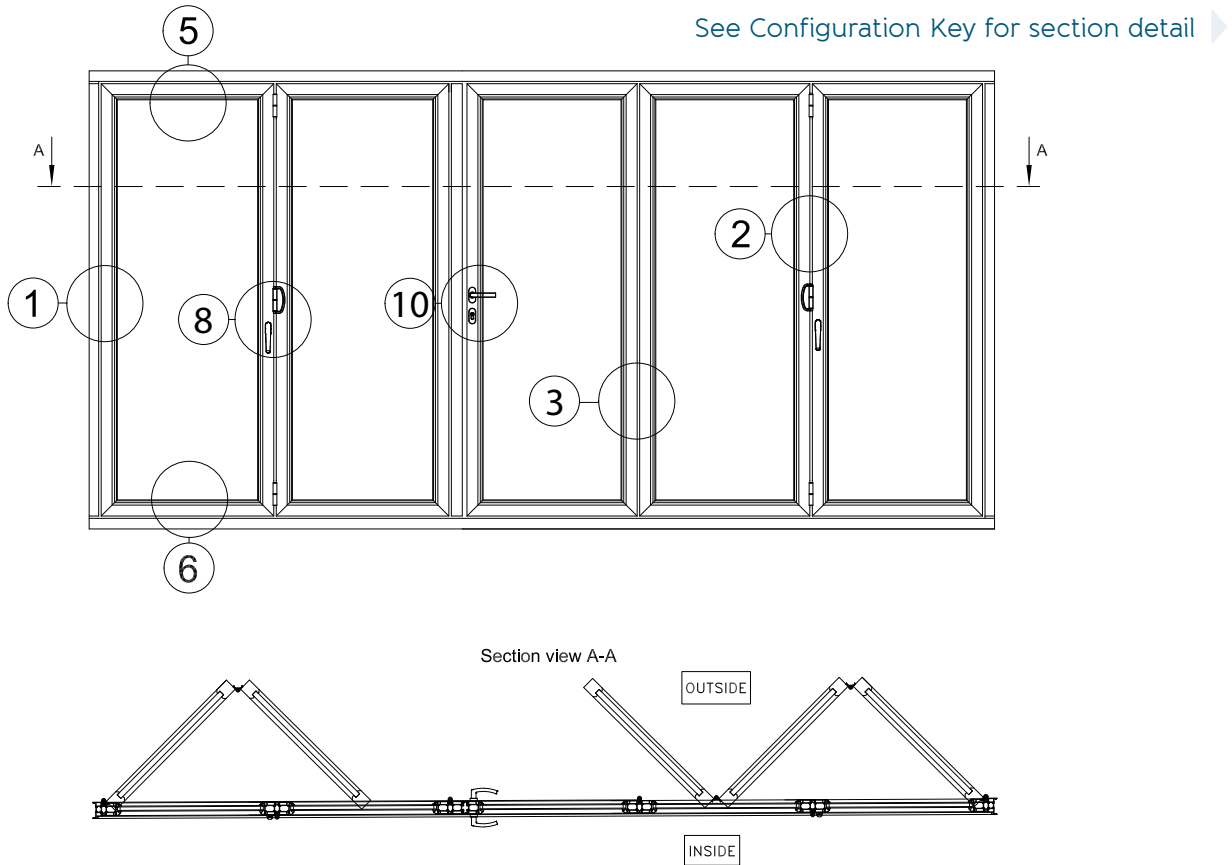
9 - Locking Slave Detail



See page 35

Master Configuration 3+2

Master drawing and all technical detail drawings are also applicable to the following configurations: 2+1, 4+1, 6+1, 4+3



3+2



2+1



4+1



6+1

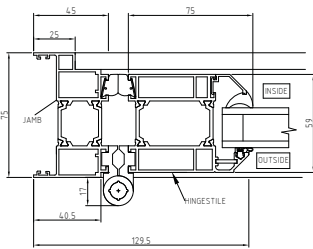
Key features

- ▶ Origin 8 point locking system
- ▶ Everyday access door
- ▶ Doors open to both sides

See page 62 for configurations

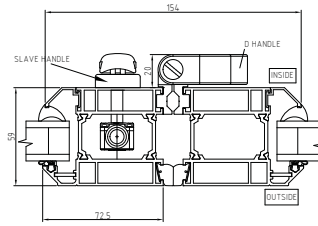
Configuration key

1 - Hinge Jamb Detail



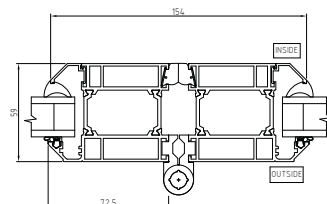
See page 26

2 - Outward Opening Stiles



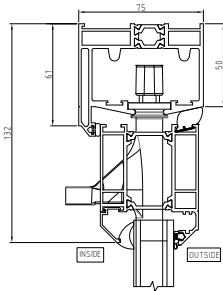
See page 27

3 - Inward Opening Stiles



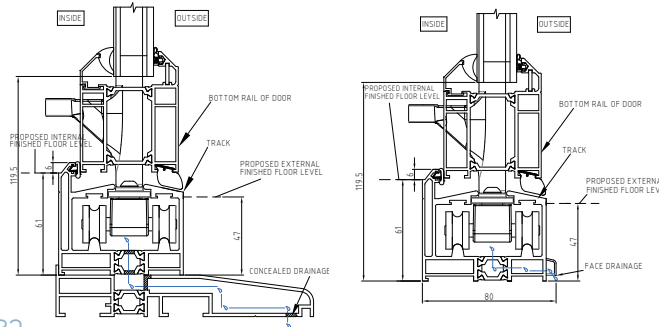
See page 28

5 - Top Track Detail



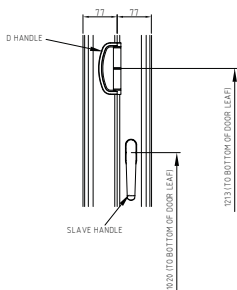
See page 30

6a, 6b - Bottom Track Detail



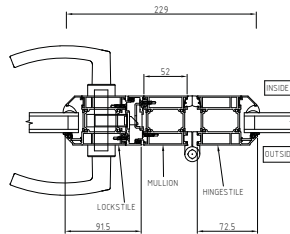
See pages 31-32

8 - Slave Handle Layout



See page 34

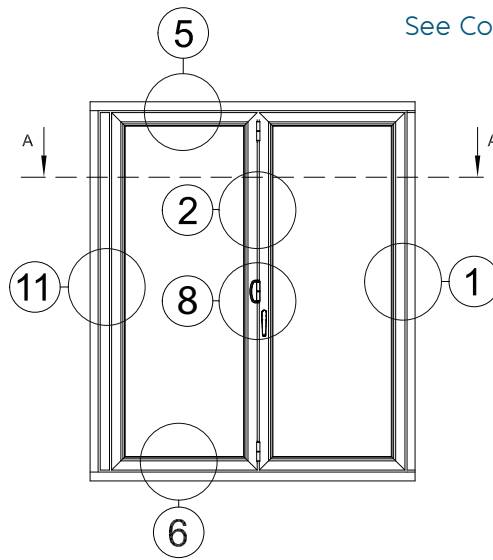
10 - Locking Mullion Detail



See page 36

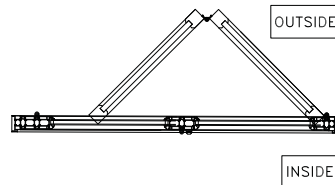
Master Configuration 2 Door

Master drawing and all technical detail drawings are also applicable to the following configurations: 4+0, 6+0, 8+0



See Configuration Key for section detail ▶

Section view A-A



2 Door Left



4+0



6+0



8+0

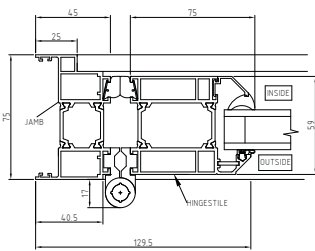
See page 62 for configurations

Key features

- ▶ All doors open in the same direction
- ▶ No multi-point lock available on this configuration
- ▶ Requires a mullion

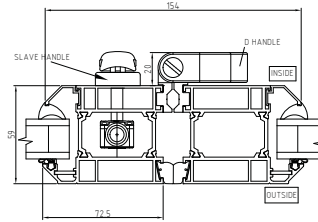
Configuration key

1 - Hinge Jamb Detail



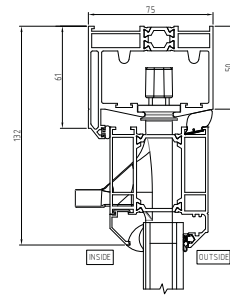
See page 26

2 - Outward Opening Stiles



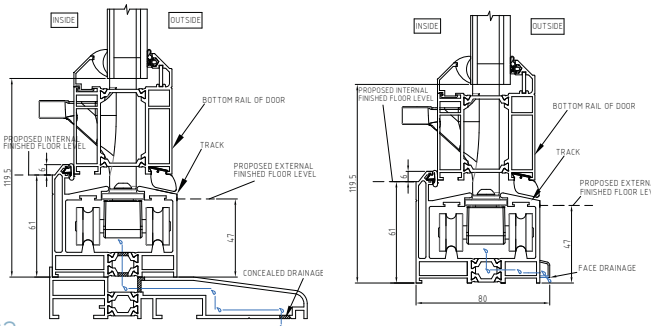
See page 27

5 - Top Track Detail



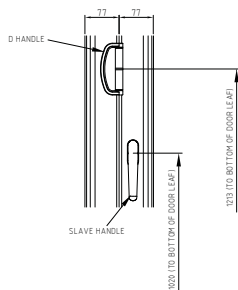
See page 30

6a, 6b - Bottom Track Detail



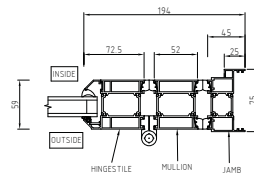
See pages 31-32

8 - Slave Handle Layout



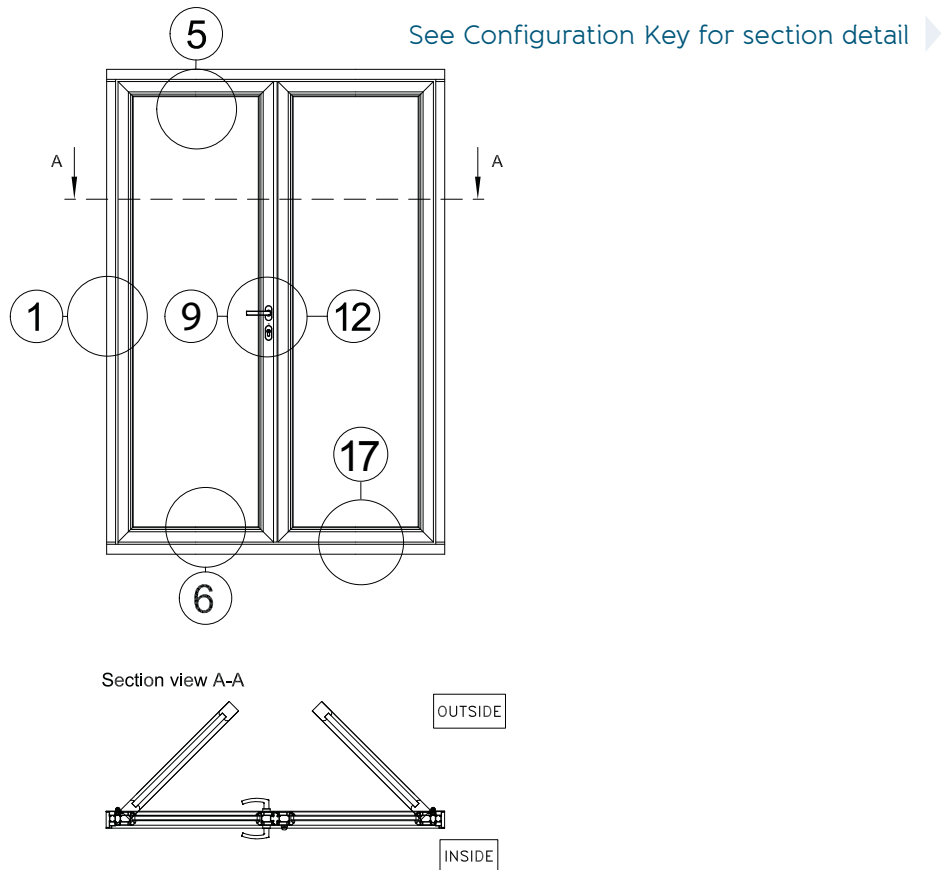
See page 34

11 - Standard Mullion Detail



See page 37

Master Configuration French Door



French Door

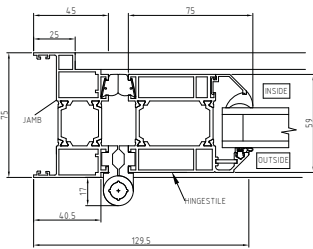
See page 62 for configurations

Key features

- ▶ Origin 8 point locking system
- ▶ Works as a French door

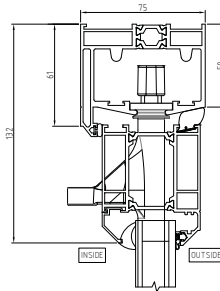
Configuration key

1 - Hinge Jamb Detail



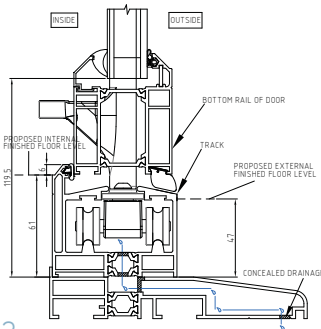
See page 26

5 - Top Track Detail

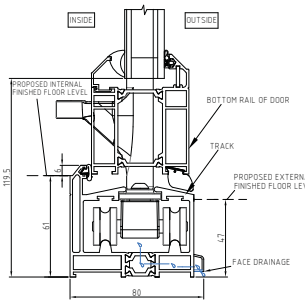


See page 27

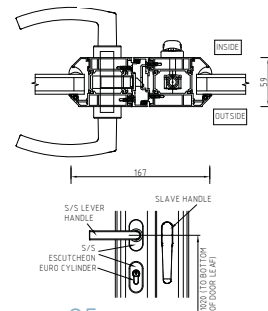
6a, 6b - Bottom Track Detail



See pages 31-32

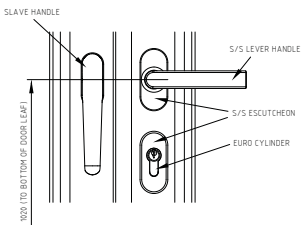


9 - Locking Slave Detail



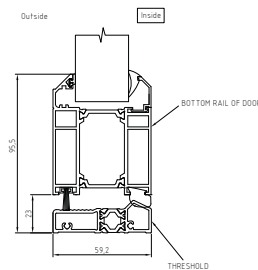
See page 35

12 - Locking Slave Handle Detail



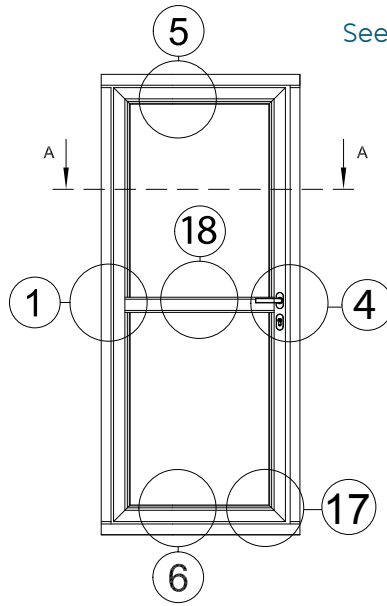
See page 38

17 - Mobility Threshold Detail



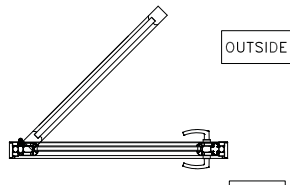
See page 44

Master Configuration Single Door



See Configuration Key for section detail ▶

Section view A-A



Single Door

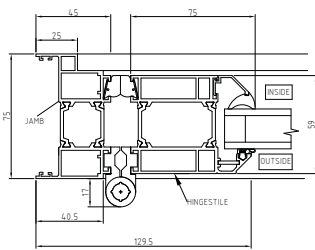
See page 62 for configurations

Key features

- ▶ Origin 8 point locking system
- ▶ Is able to be used for an everyday access door

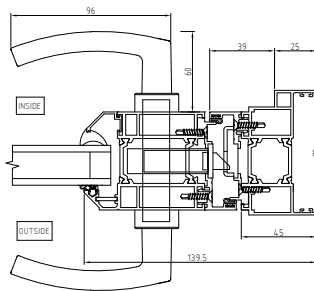
Configuration key

1 - Hinge Jamb Detail



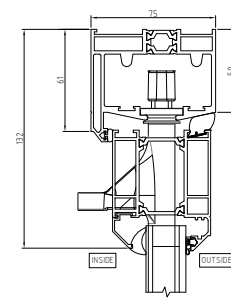
See page 26

4 - Locking Jamb Detail



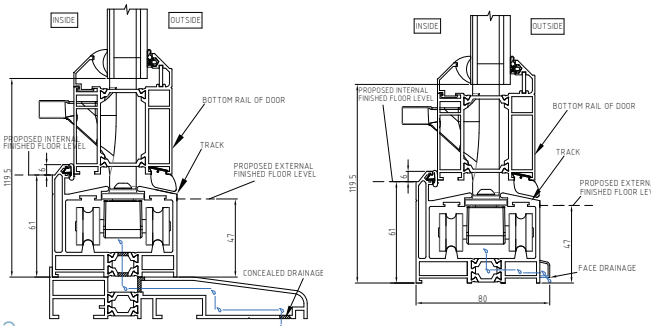
See page 29

5 - Top Track Detail



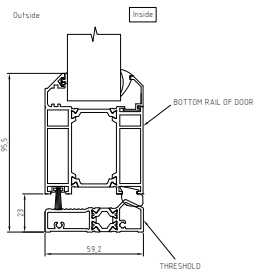
See page 30

6a, 6b - Bottom Track Detail



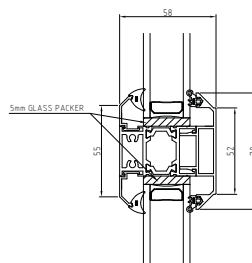
See pages 31-32

17 - Mobility Threshold Detail



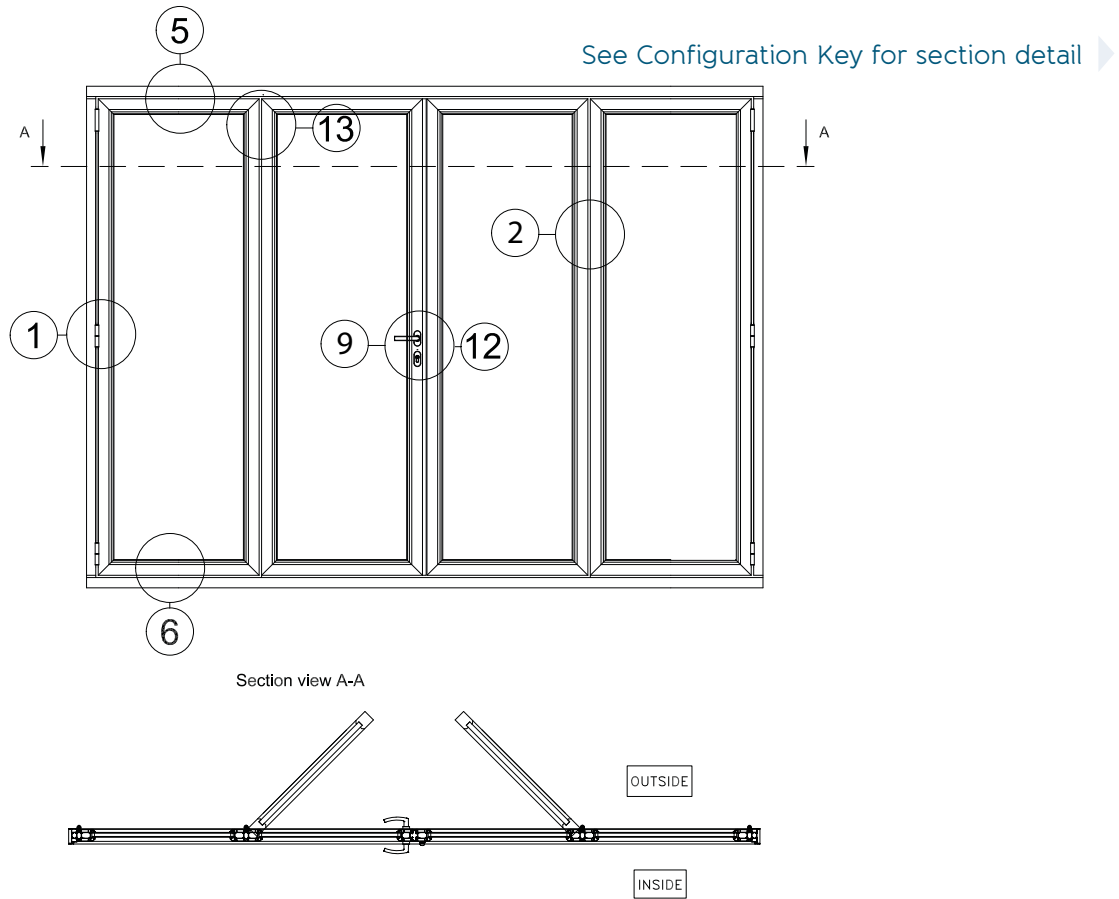
See page 44

18 - Midrail Detail



See page 45

Master Configuration French Door With Fixed Panels



French Door with Fixed Panels

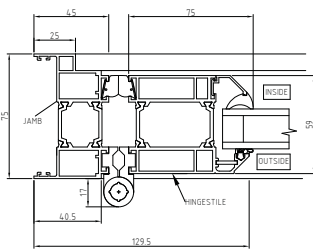
See page 62 for configurations

Key features

- ▶ Origin 8 point locking system
- ▶ Fixed panels and can vary in size
- ▶ Ideal for Juliette balconies

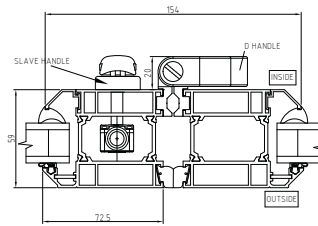
Configuration key

1 - Hinge Jamb Detail



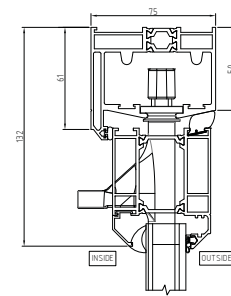
See page 26

2 - Outward Opening Stiles



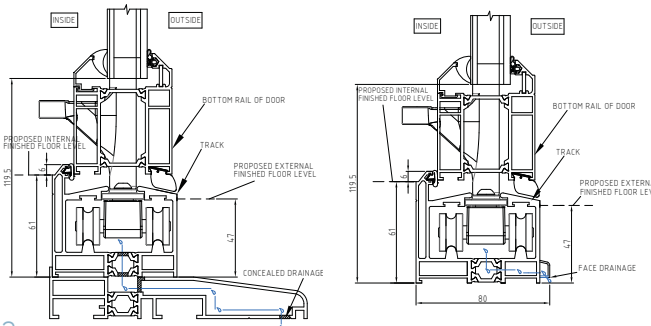
See page 27

5 - Top Track Detail



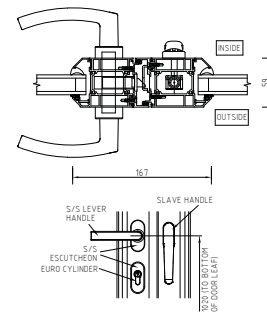
See page 30

6a, 6b - Bottom Track Detail



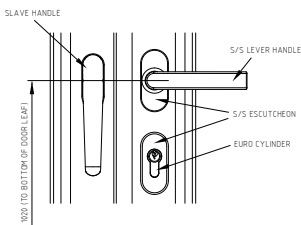
See pages 31-32

9 - Locking Slave Detail



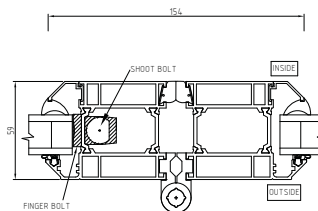
See page 35

12 - Locking Slave Handle Detail



See page 38

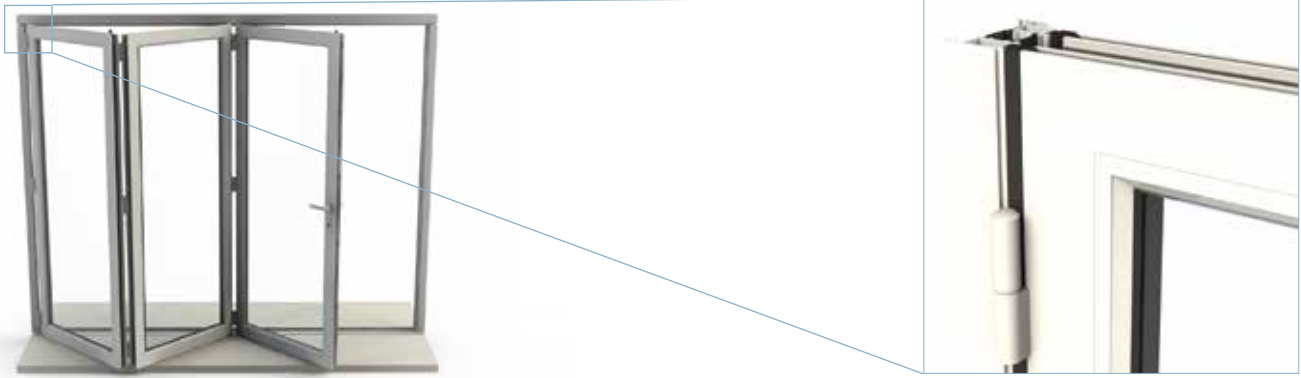
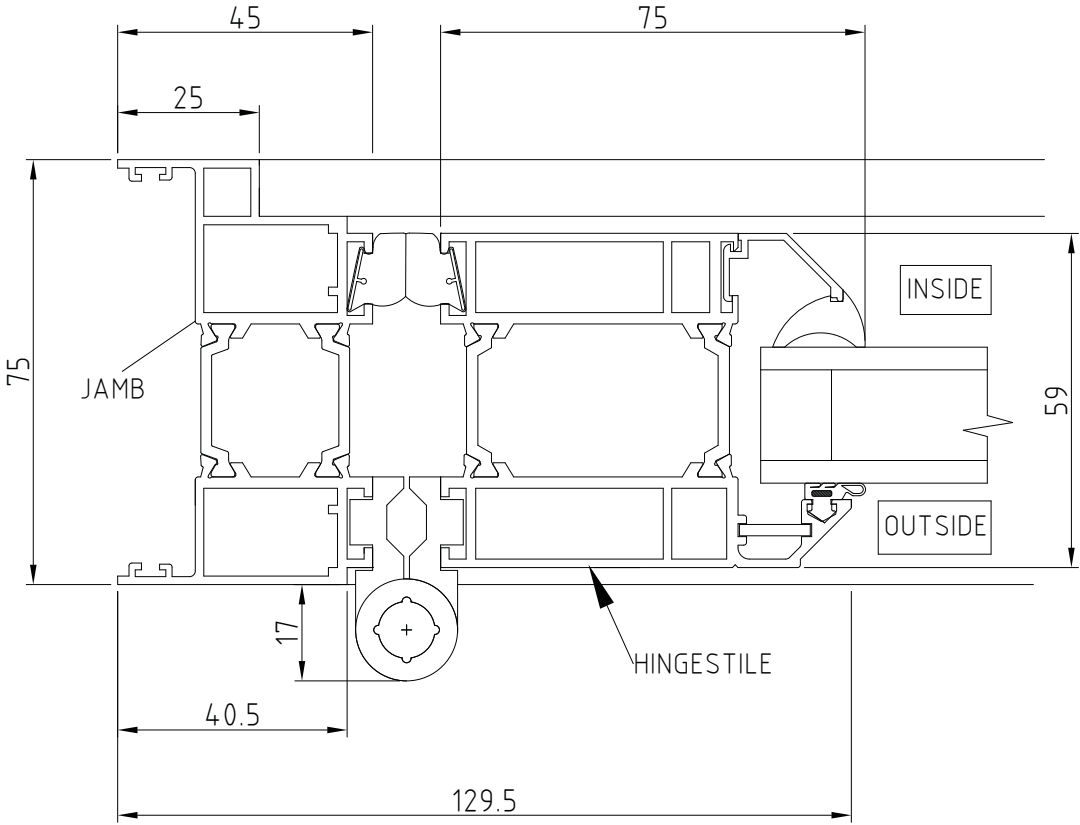
13 - Concealed Bolt Sash Locking



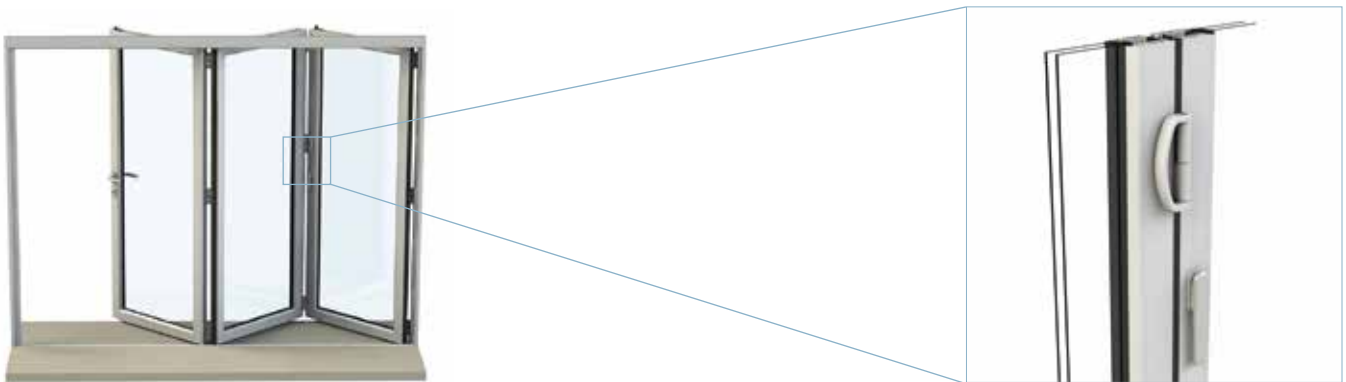
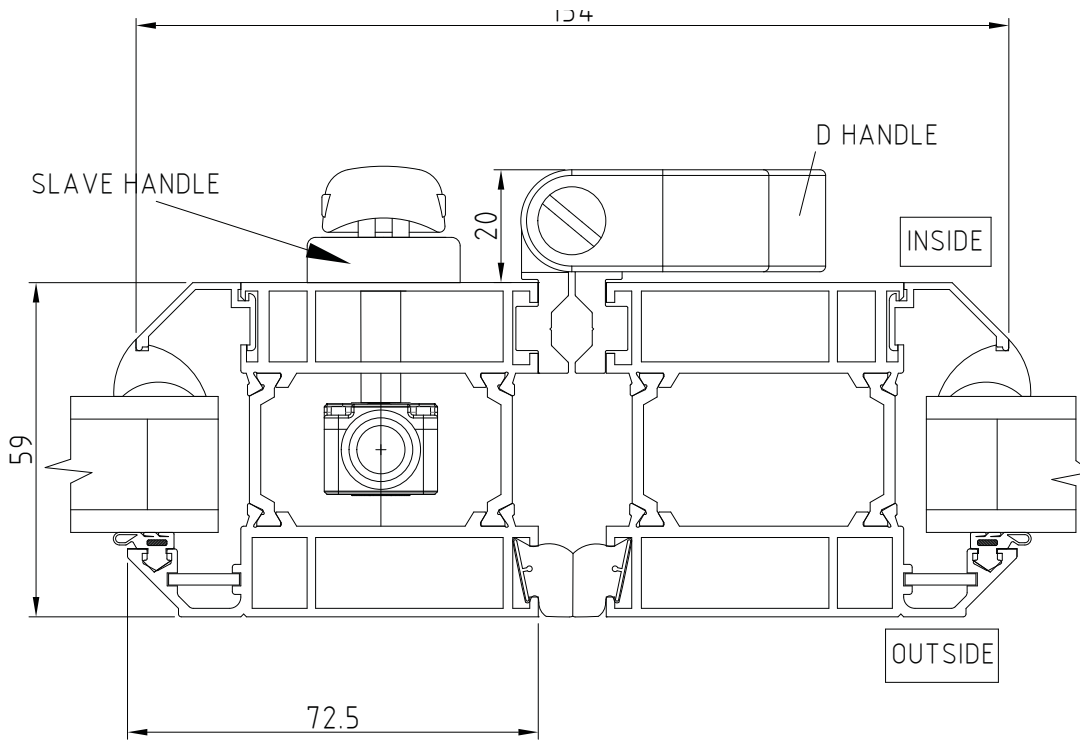
See page 39

Technical drawings

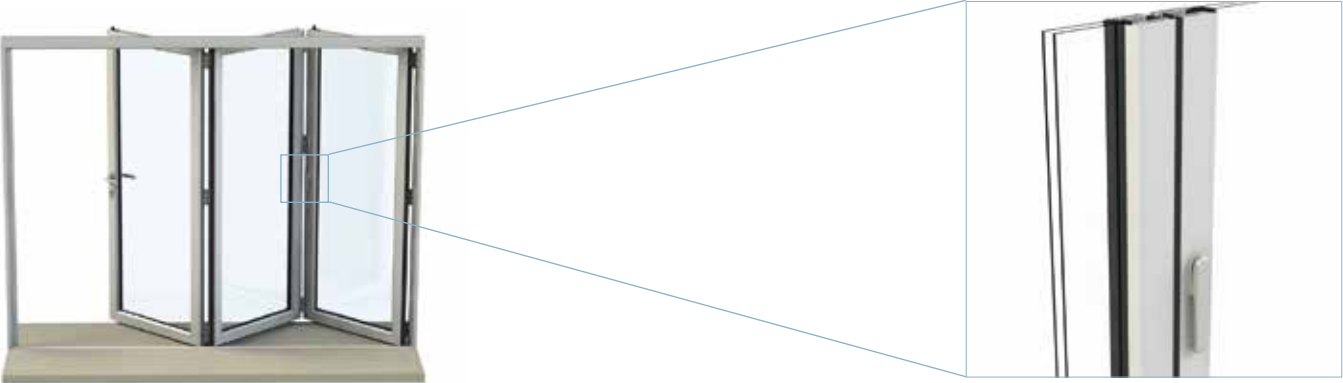
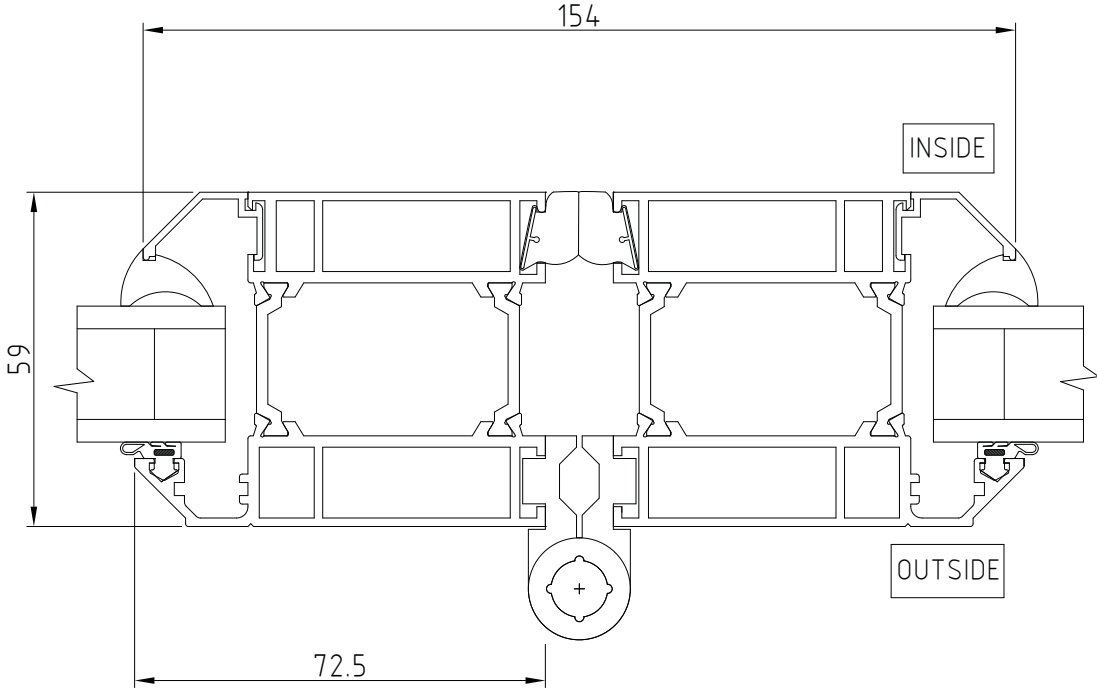
1 Hinge Jamb Detail



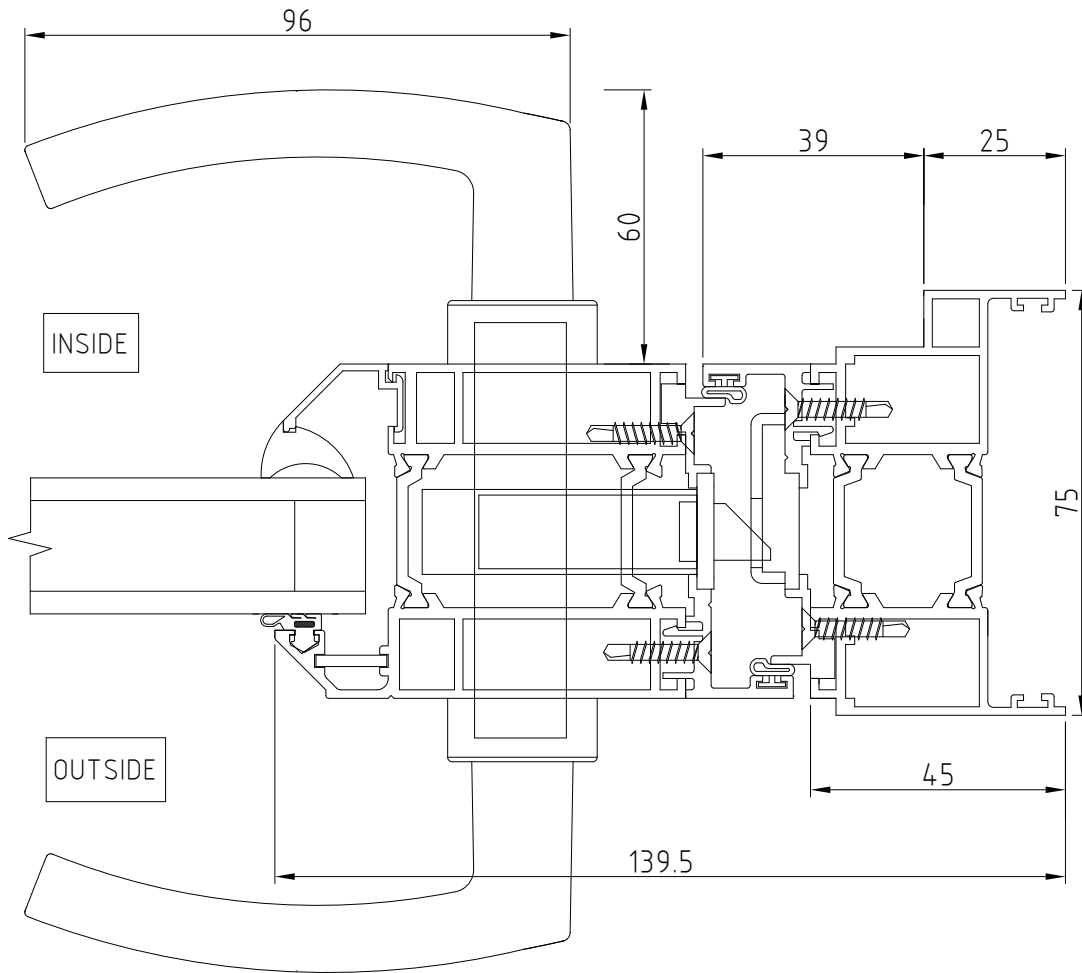
2 Outward Opening Stiles



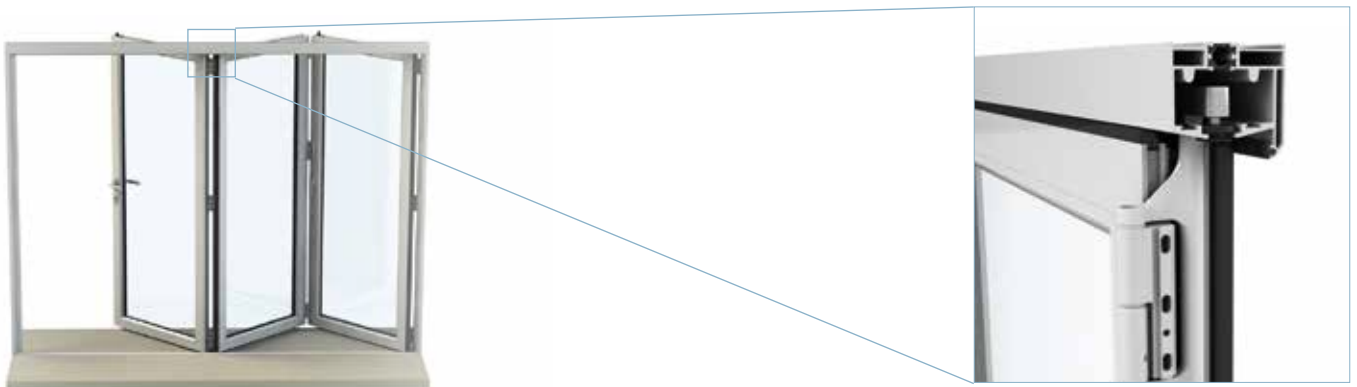
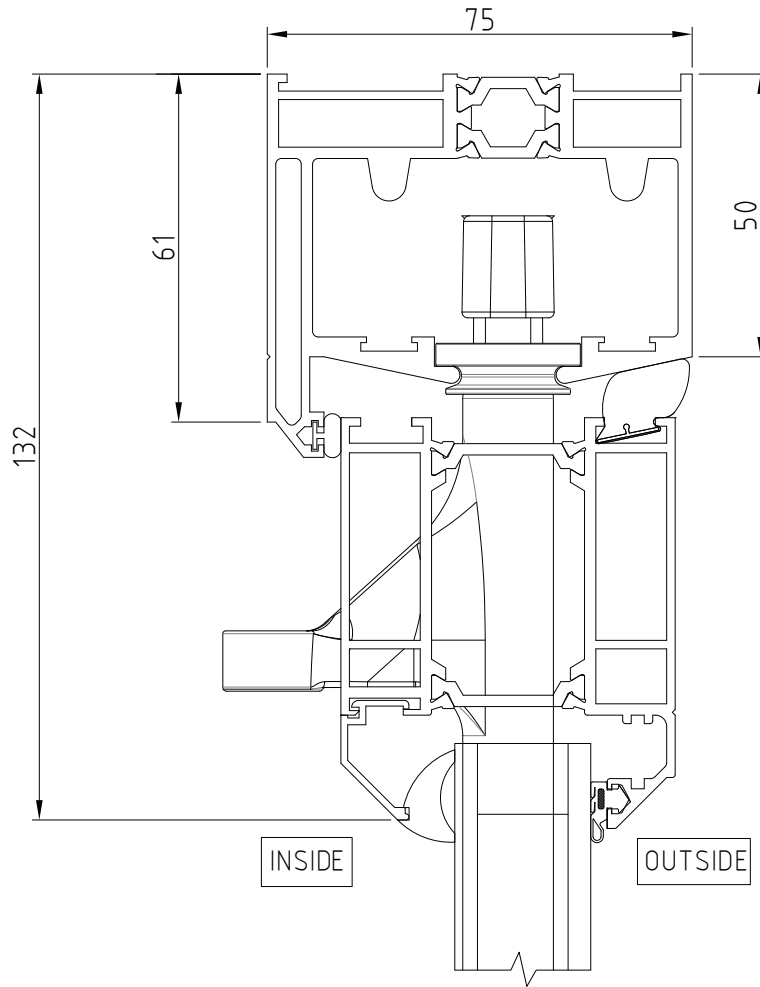
3 Inward Opening Stiles



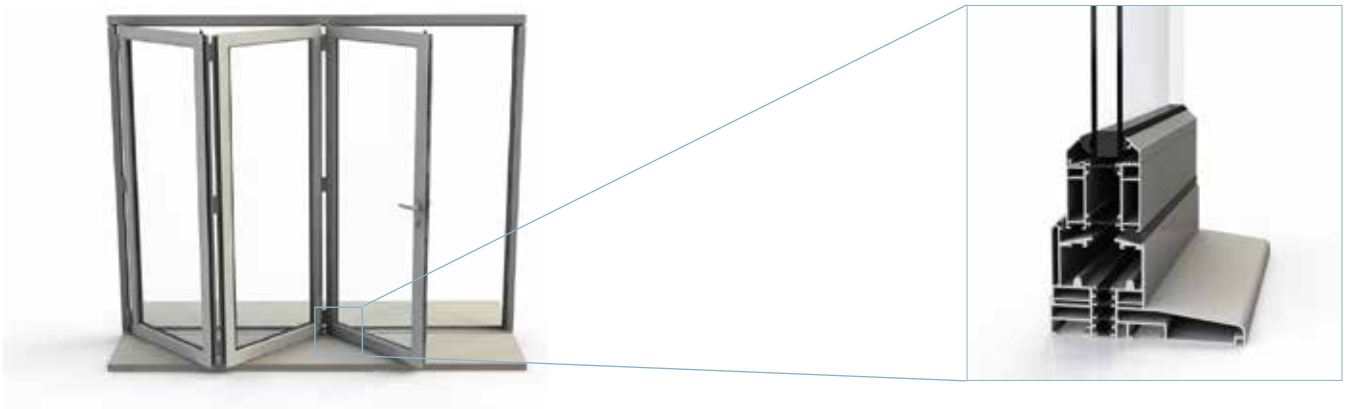
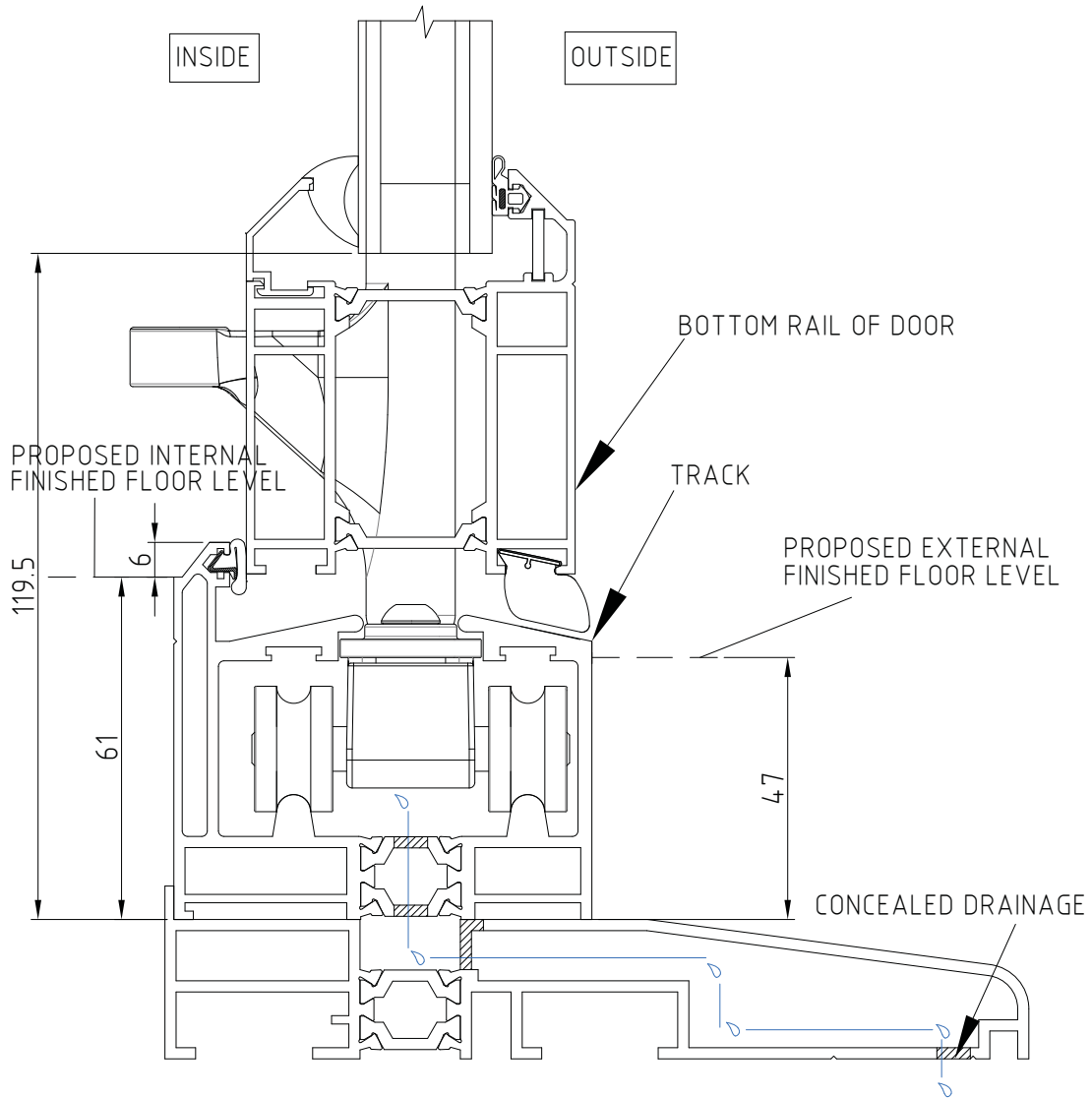
4 Locking Jamb Detail



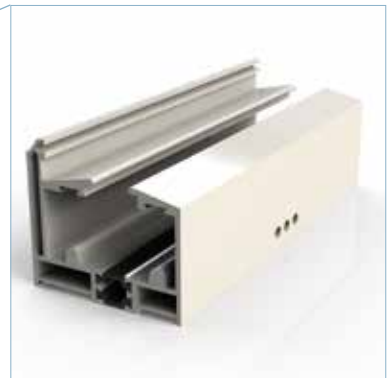
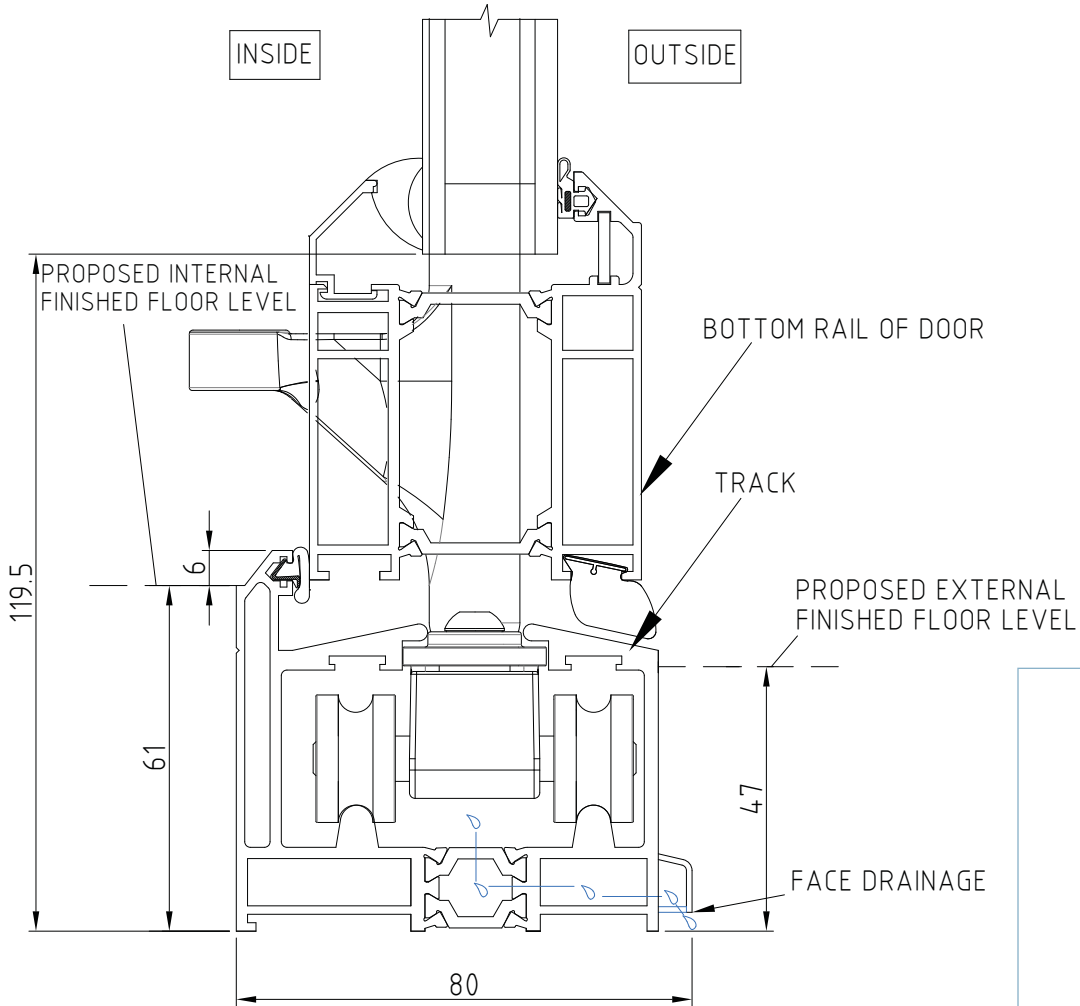
5 Top Track Detail



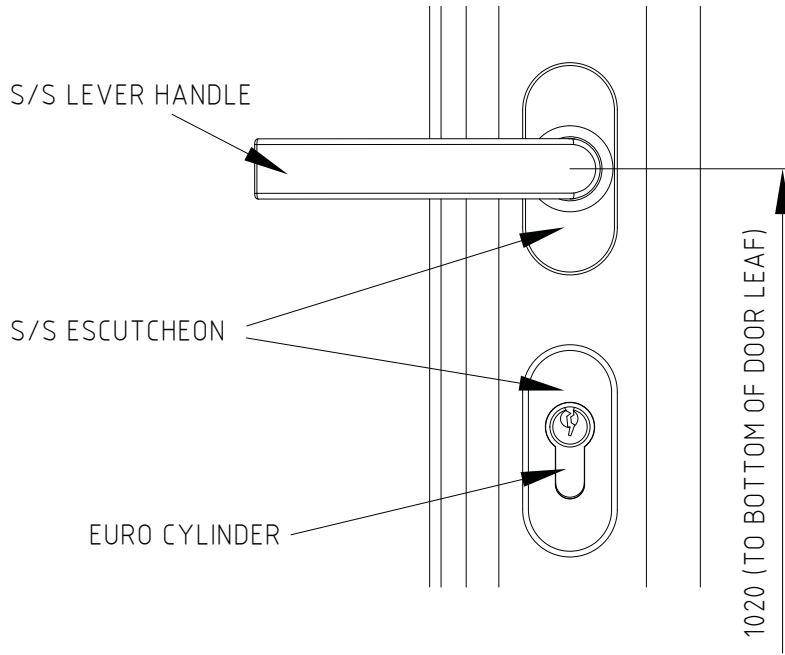
6a Bottom Track Detail Concealed Drainage



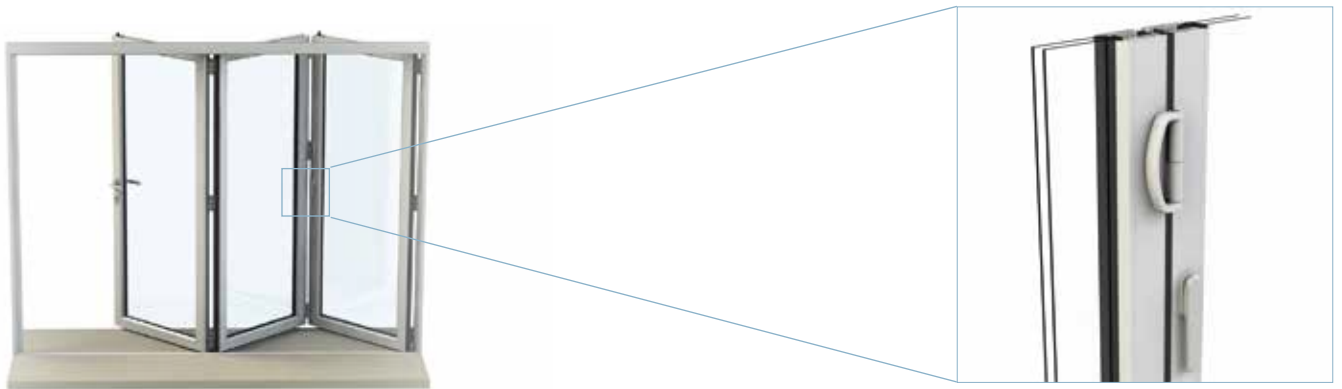
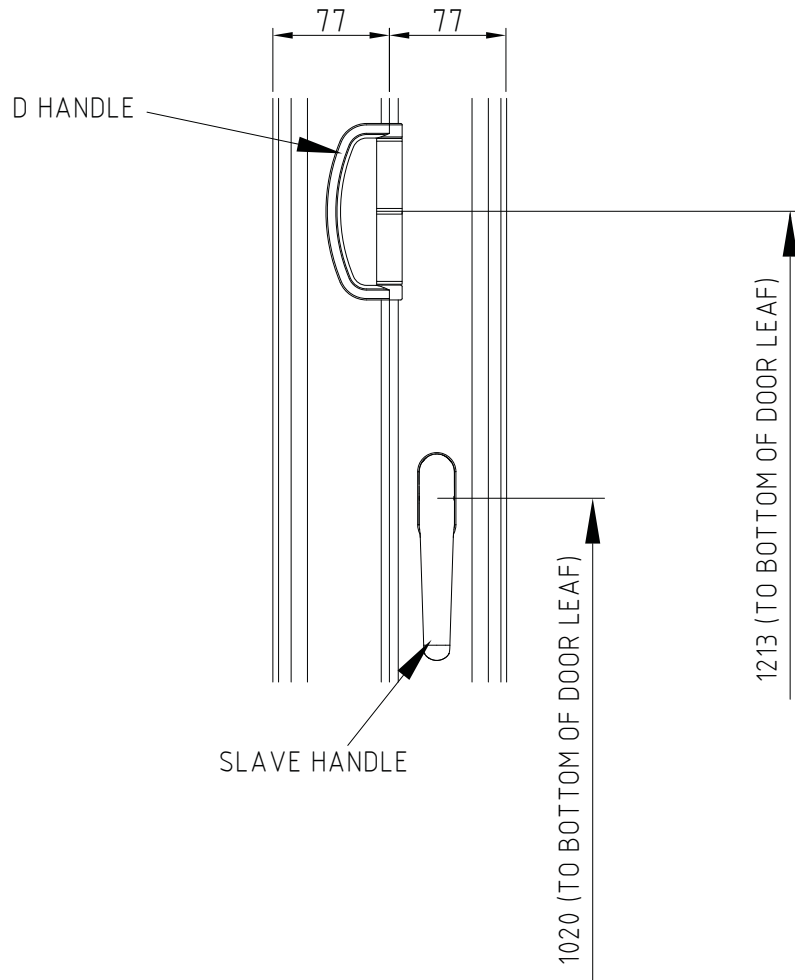
6b Bottom Track Detail Face Drainage



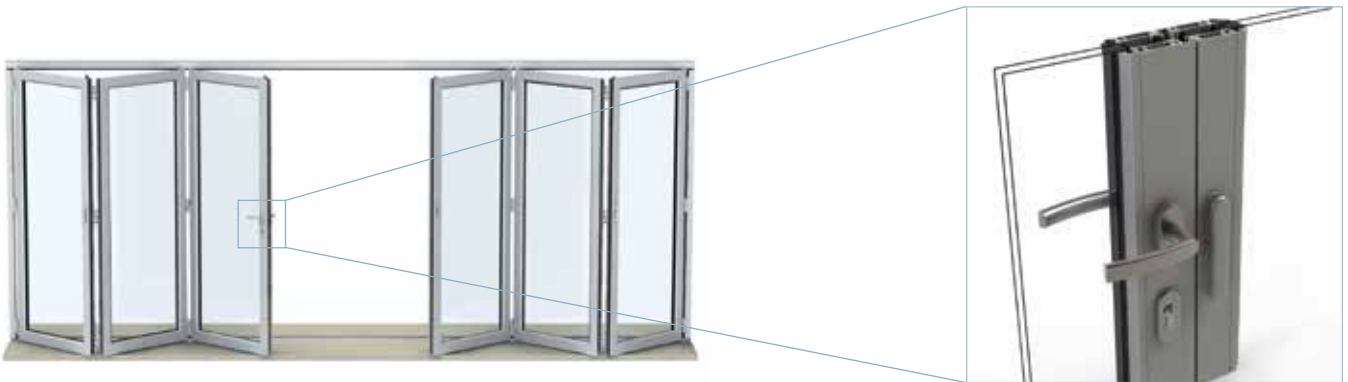
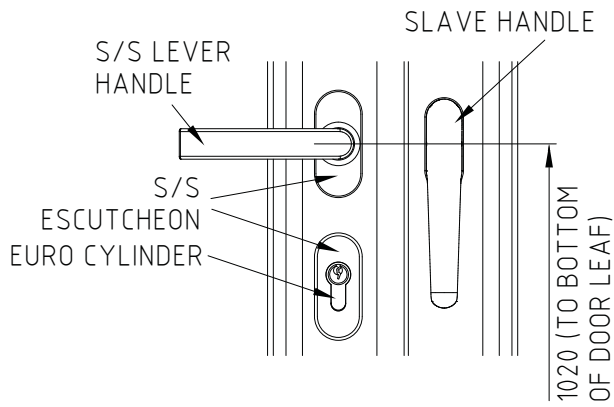
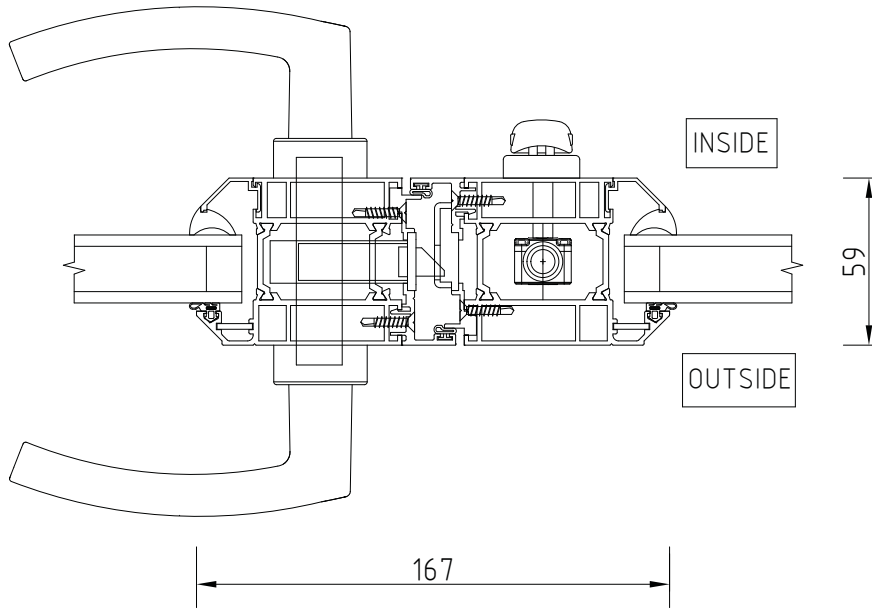
7 Hafit Handle Detail



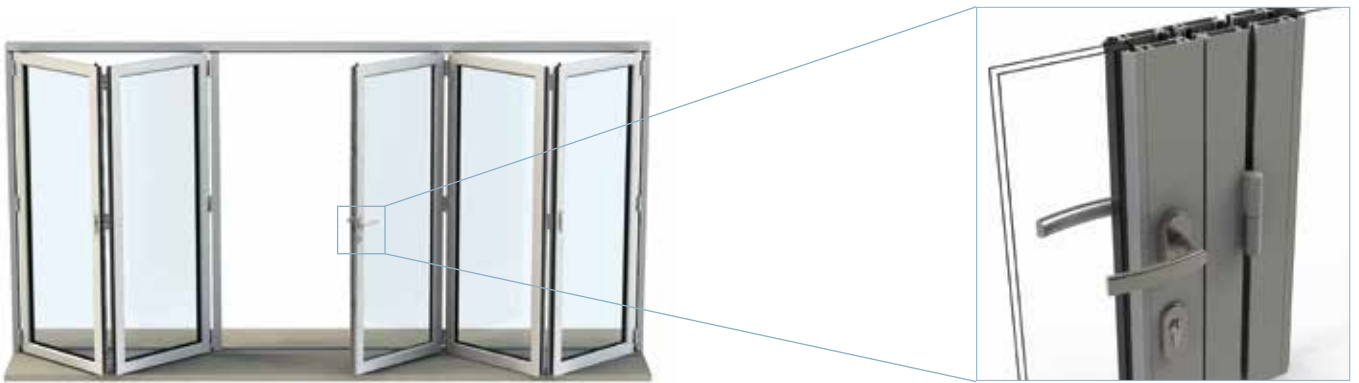
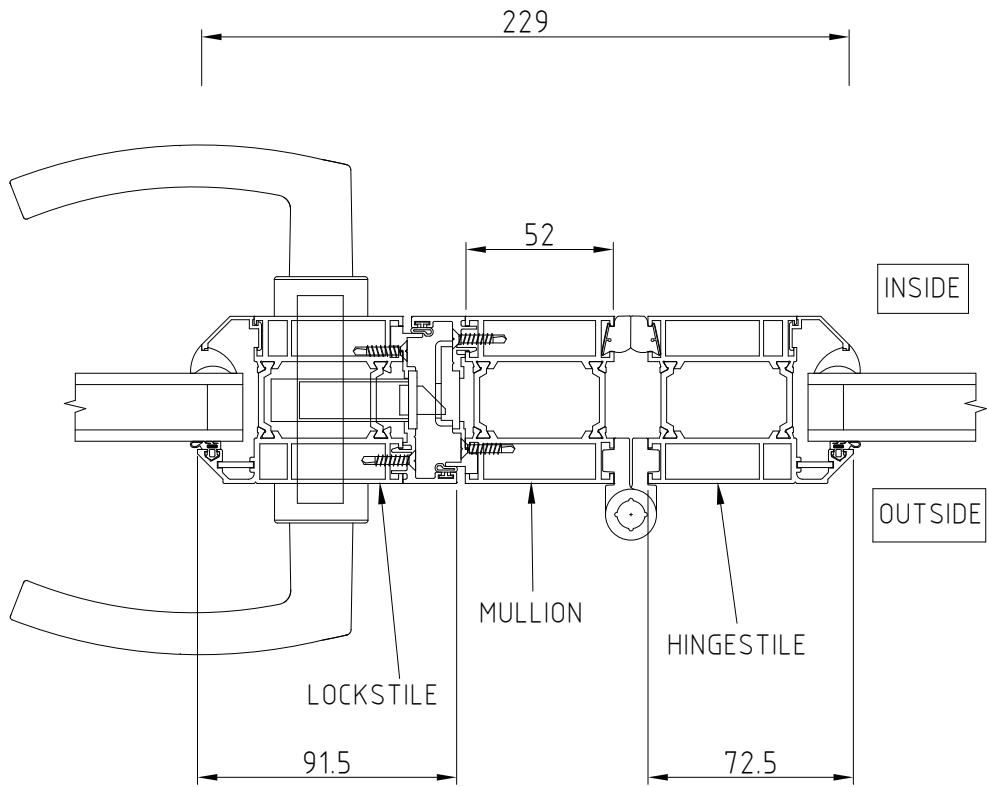
8 Slave Handle Layout



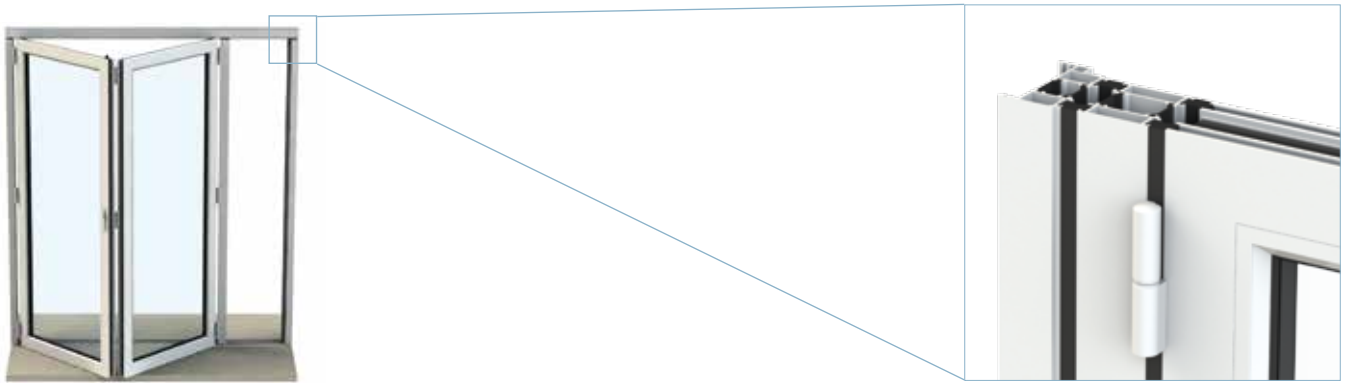
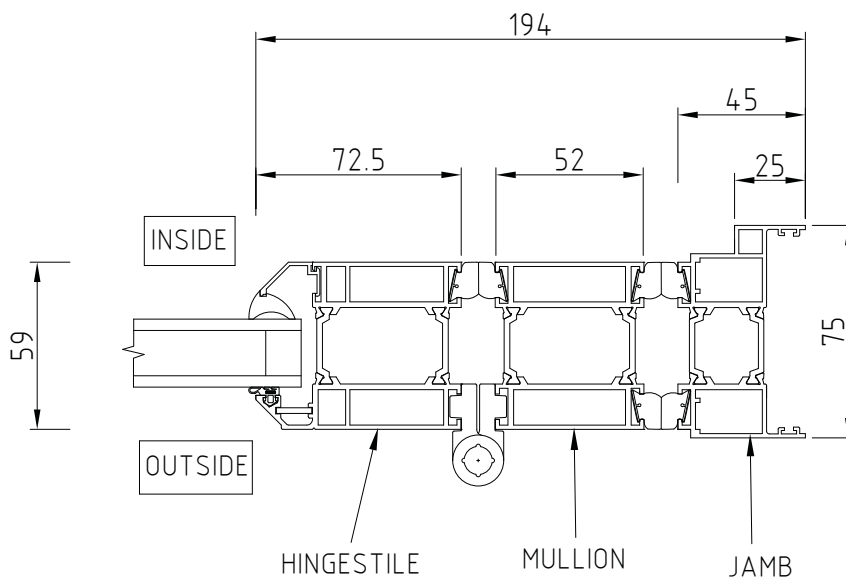
9 Locking Slave Detail



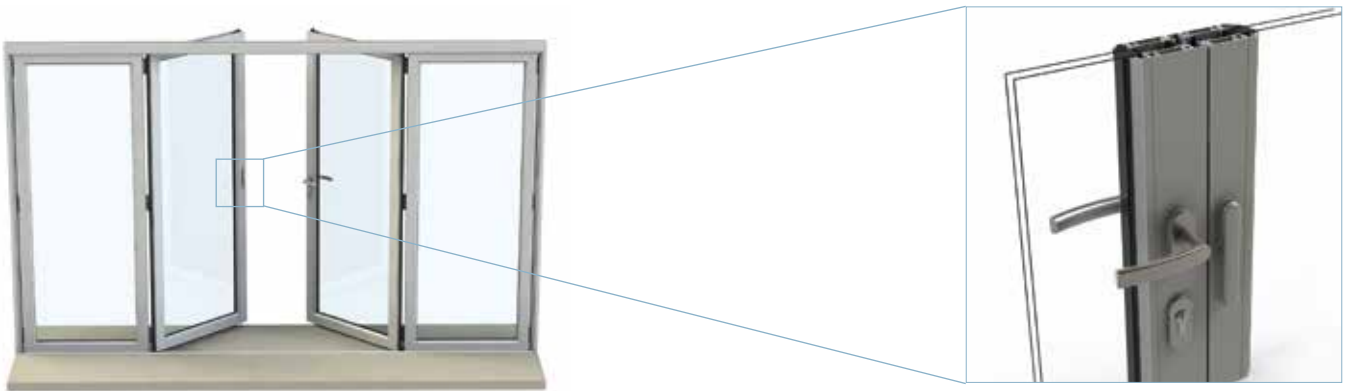
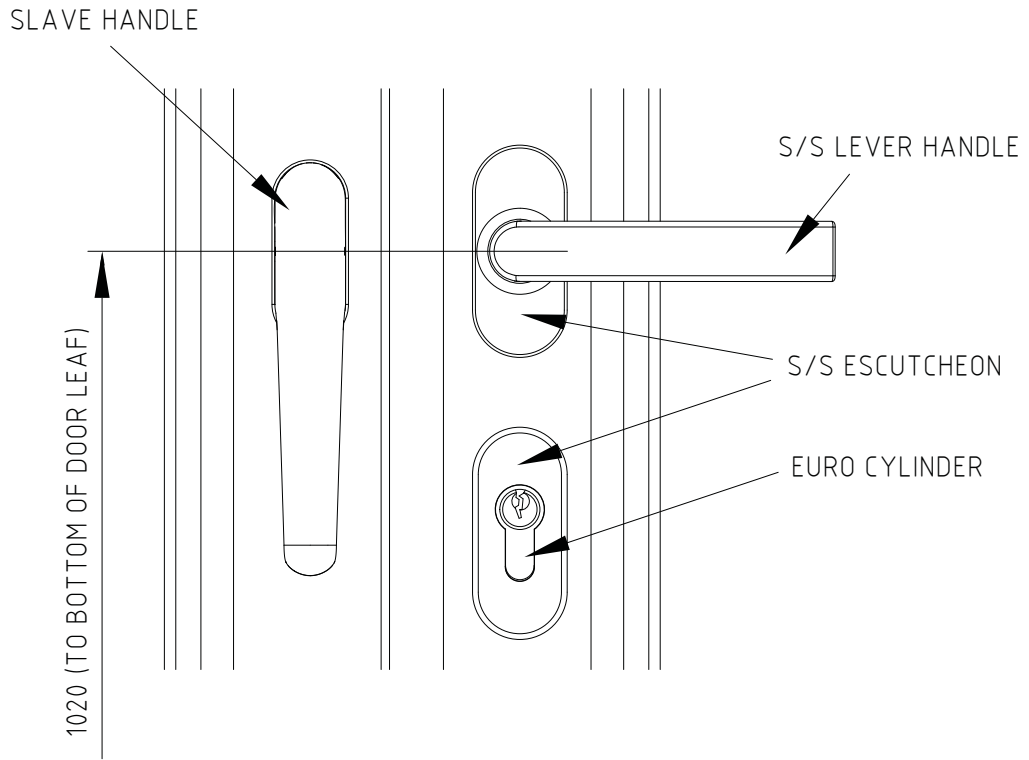
10 Locking Mullion Detail



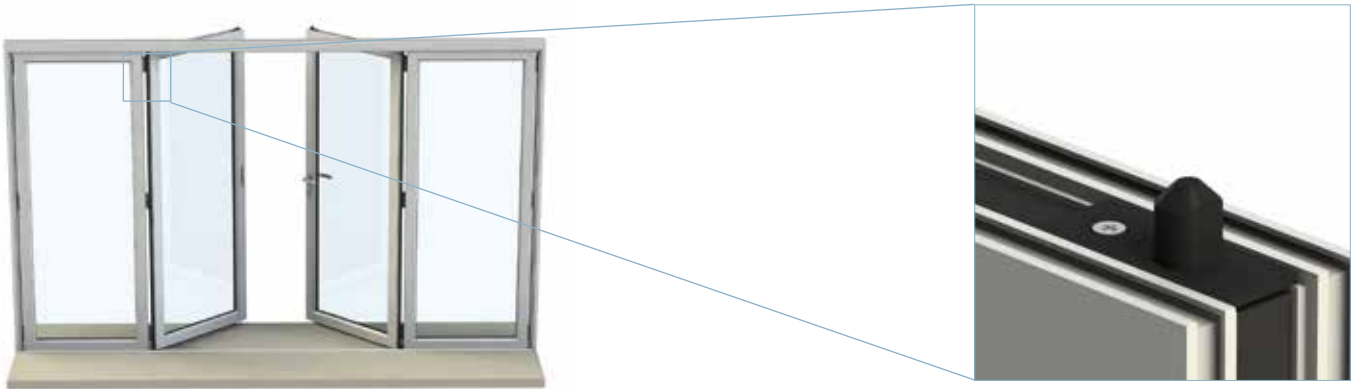
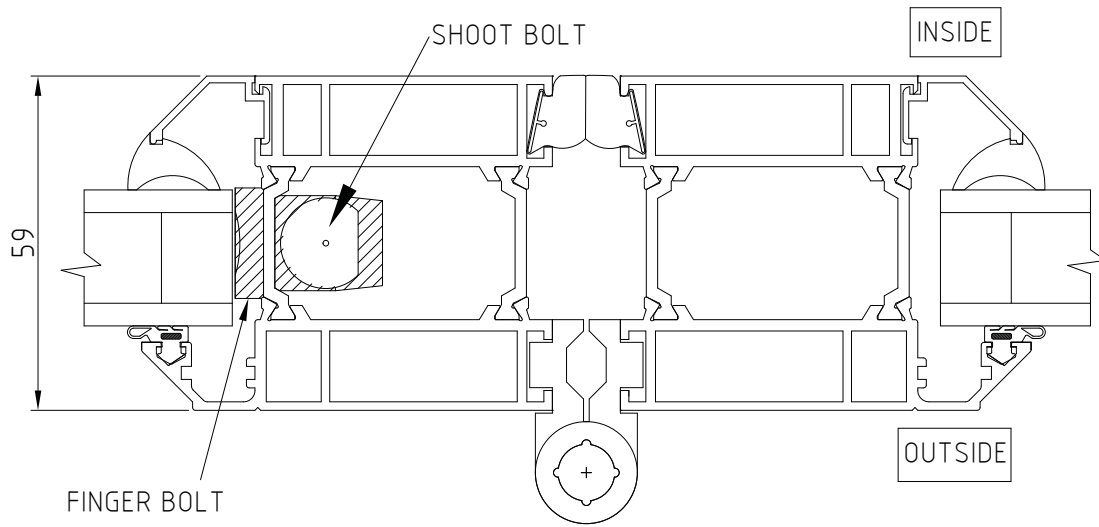
11 Standard Mullion Detail



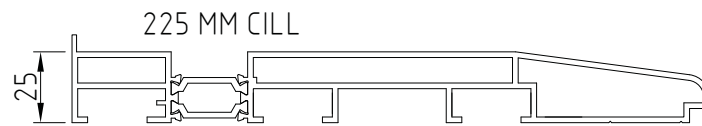
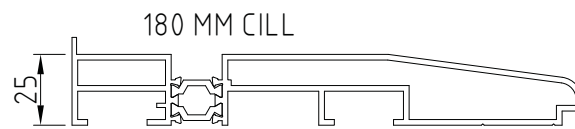
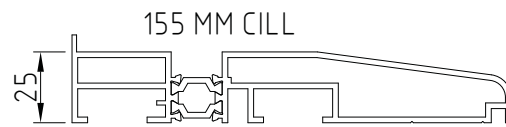
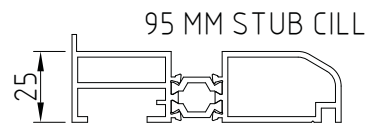
12 Locking Slave Handle Detail



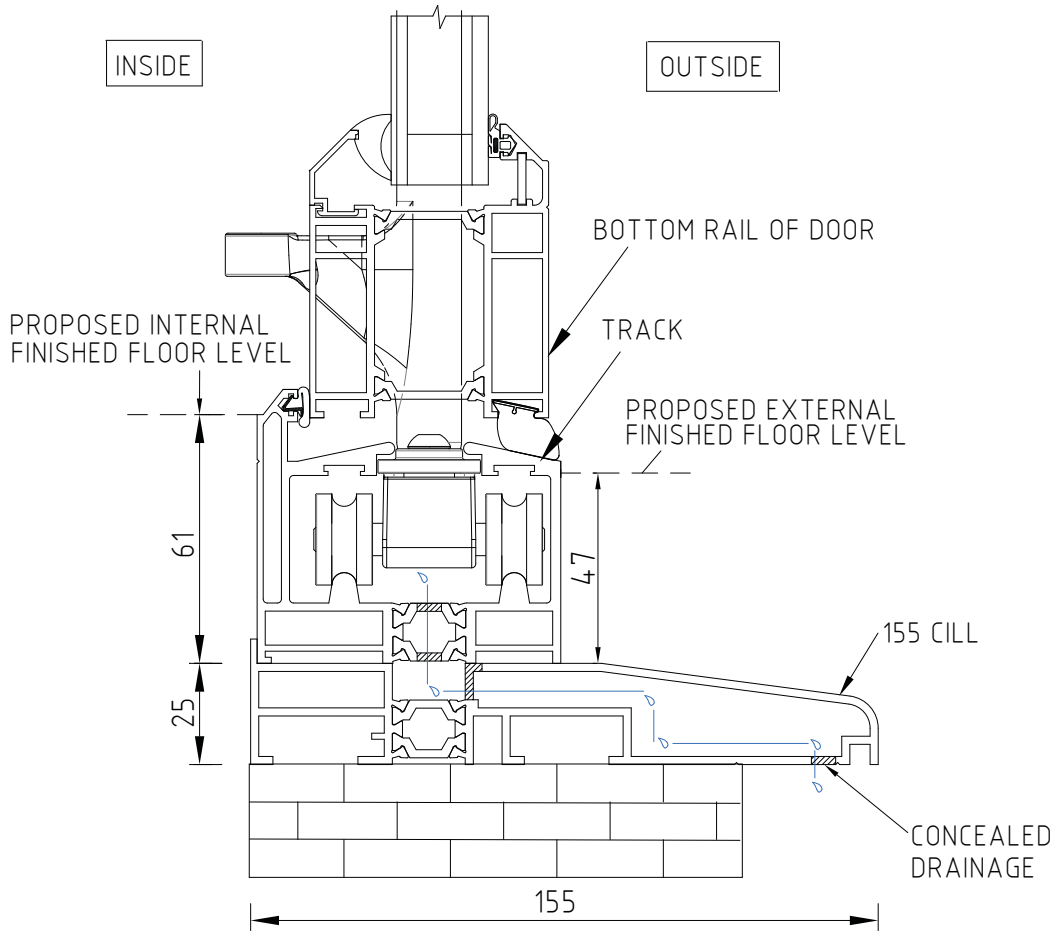
13 Concealed Bolt Sash Locking



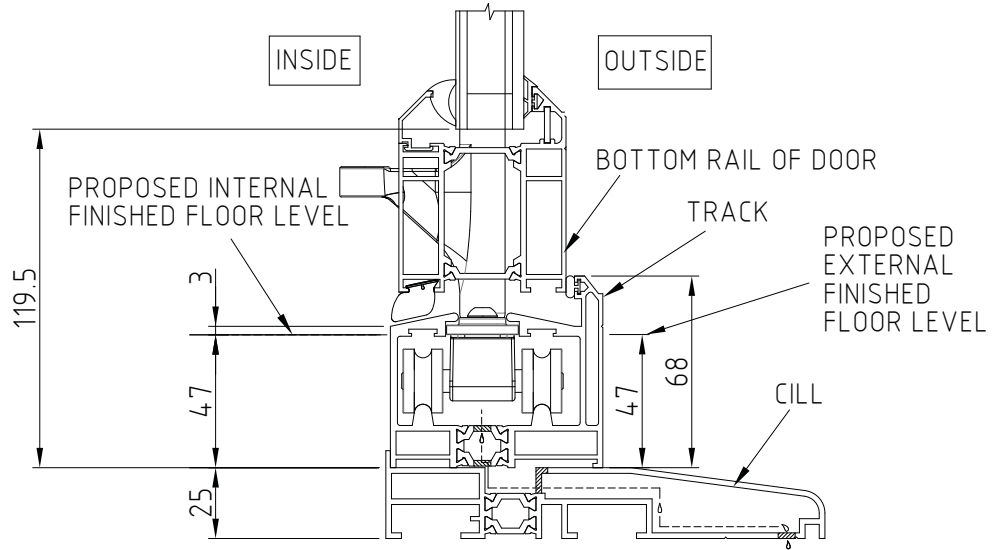
14 Cills



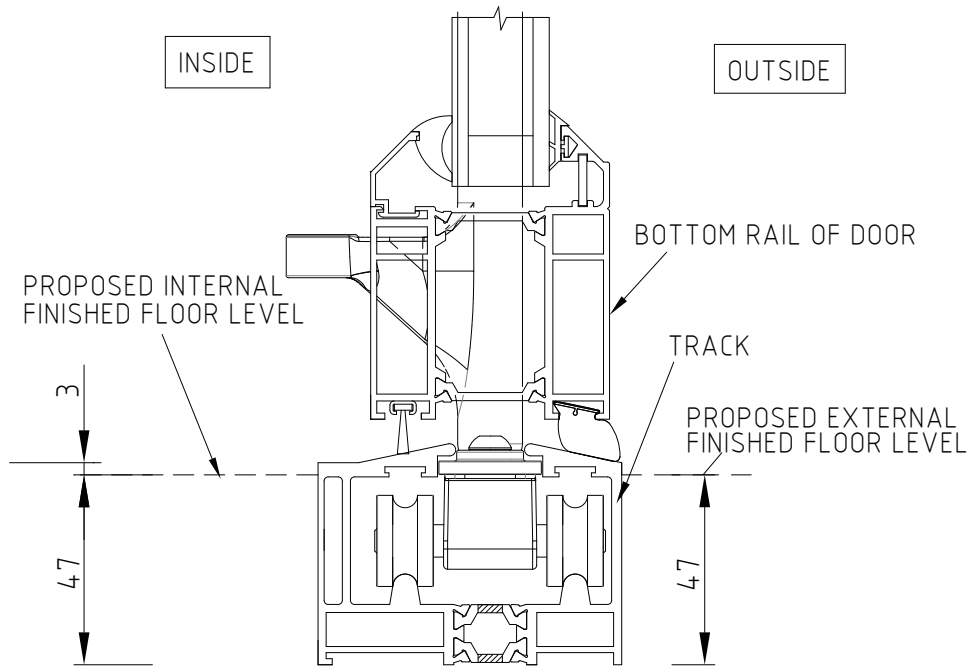
15 Rebated Threshold Detail with concealed drainage



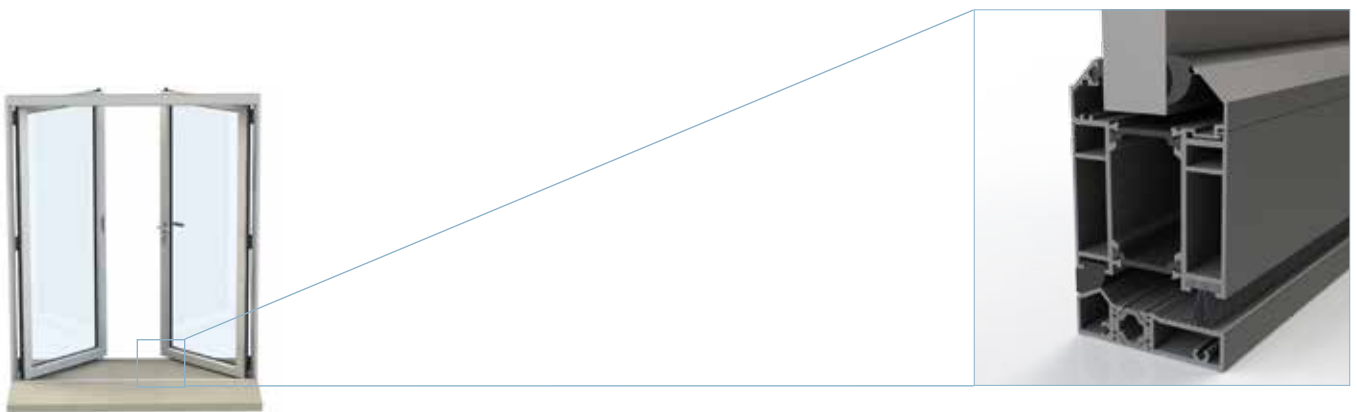
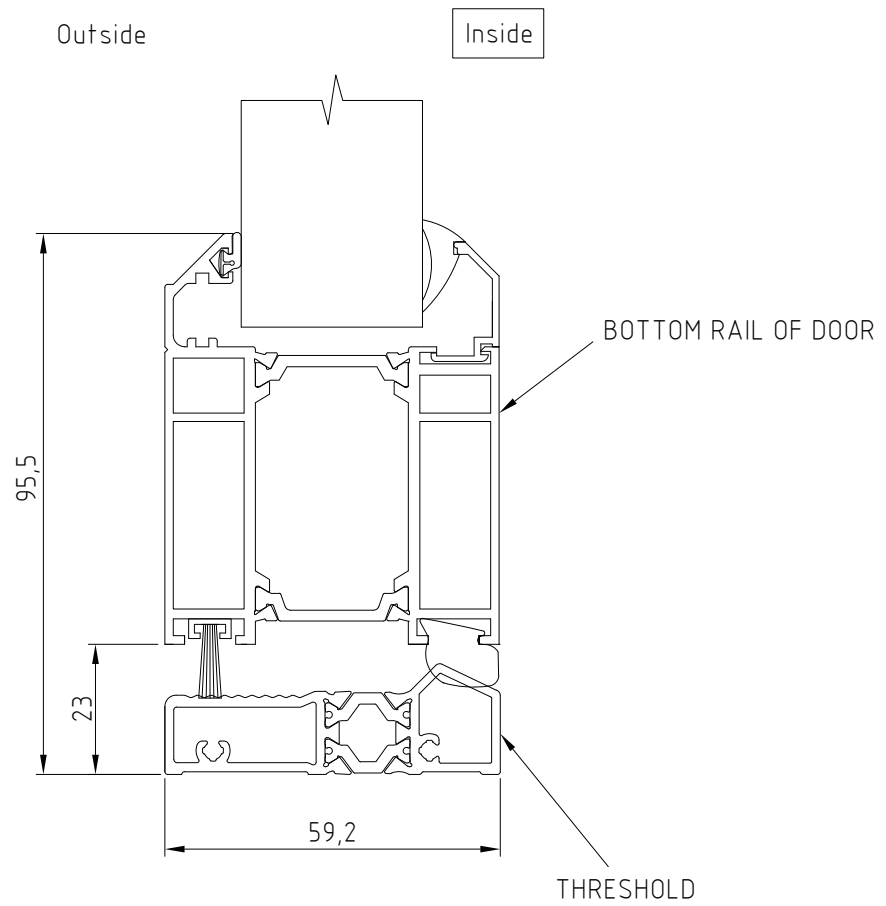
15b Bottom Track Detail (Open in)



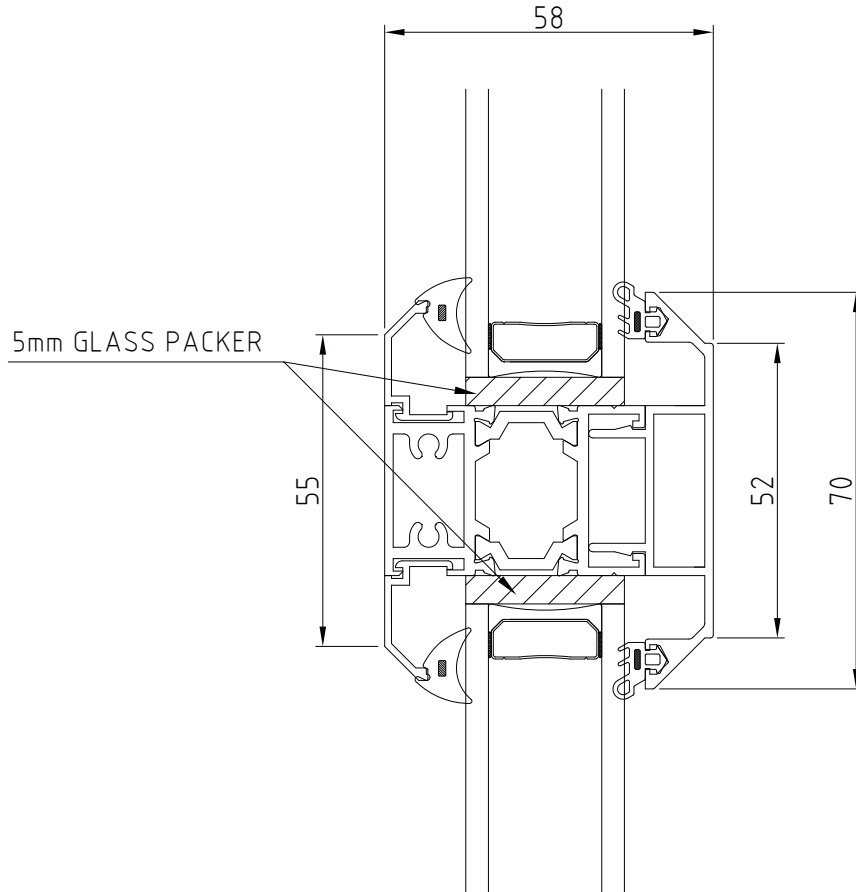
16b Non-Weathered Threshold Detail



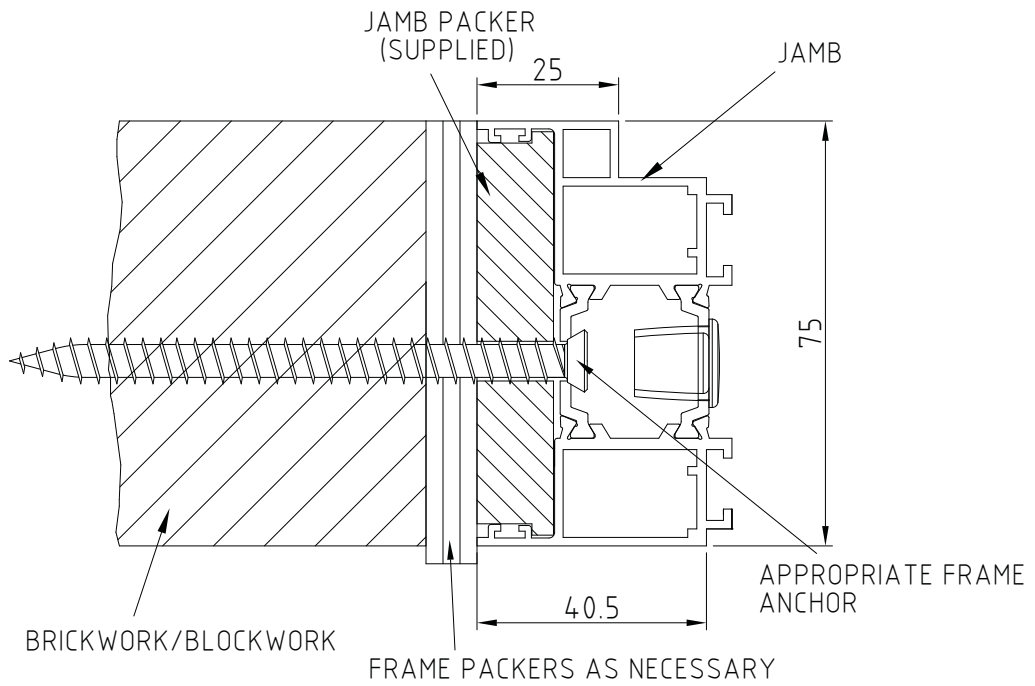
17 Mobility Threshold Detail



Mobility threshold available on Single and French Doors.

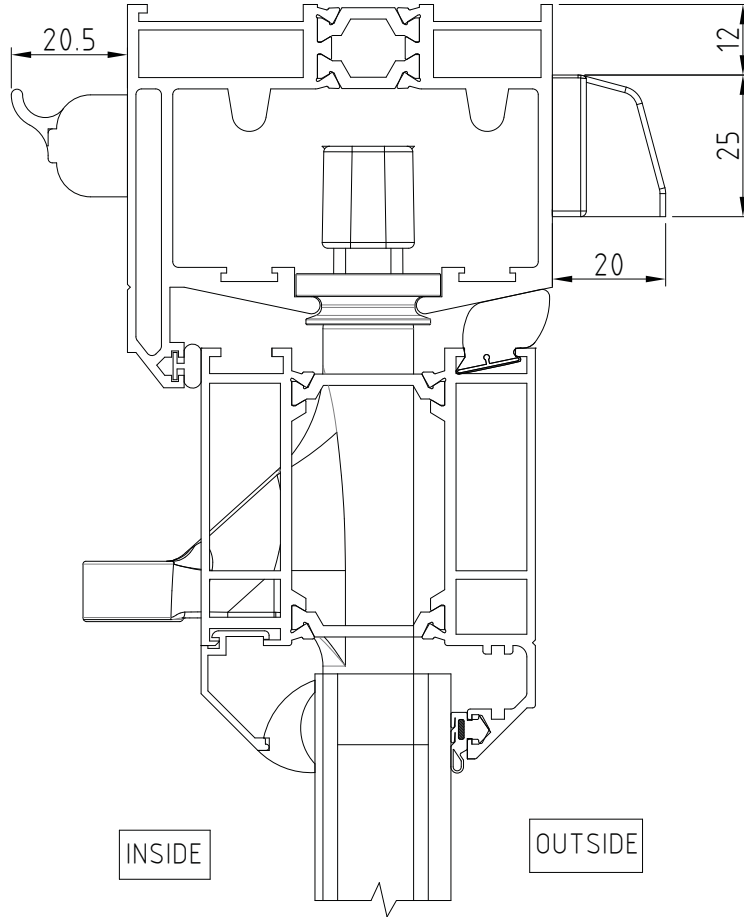


22 Jamb Fixing Detail



27

Trickle Vent



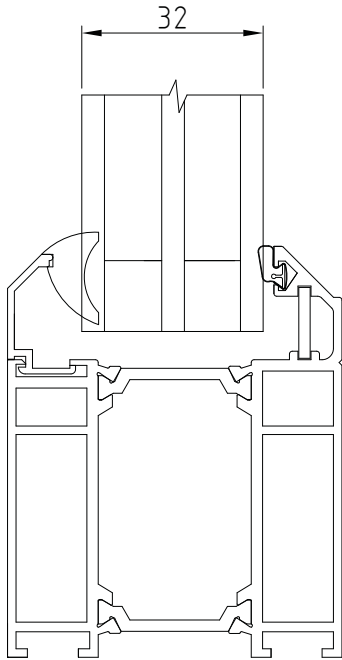
Internal view



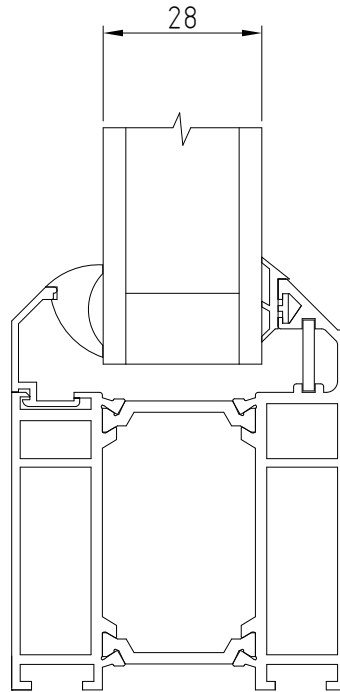
External View

28

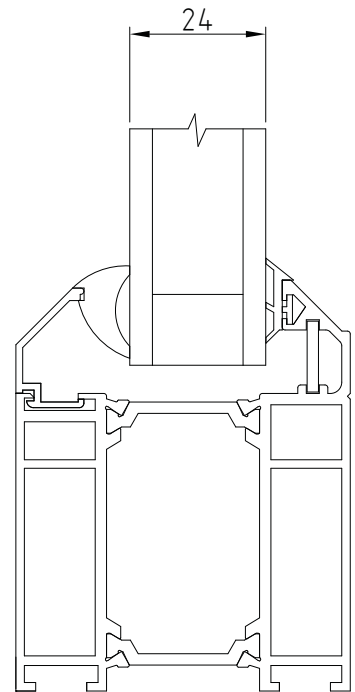
32mm Glazing Unit



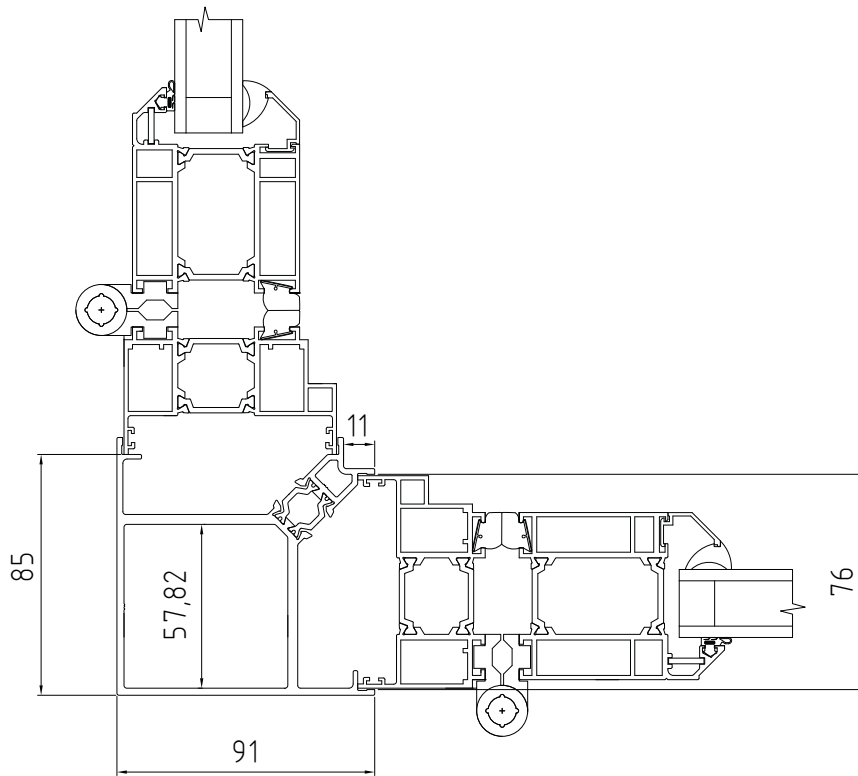
28mm Glazing Unit



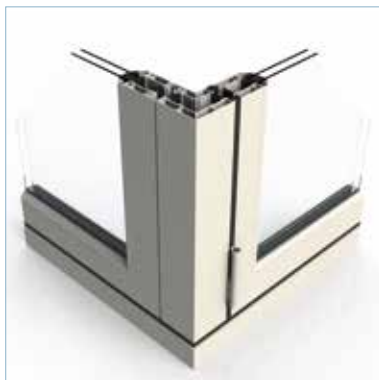
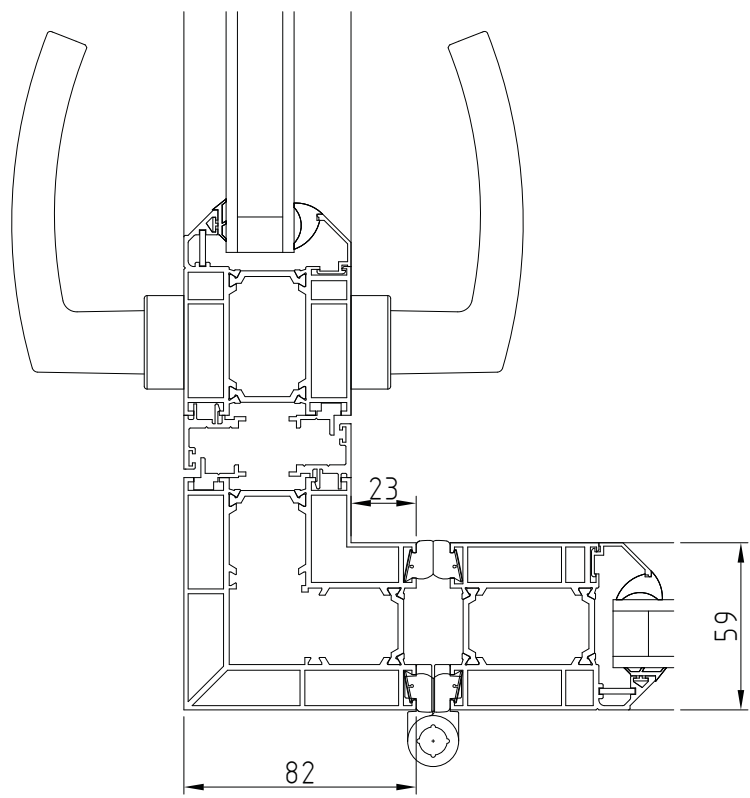
24mm Glazing Unit



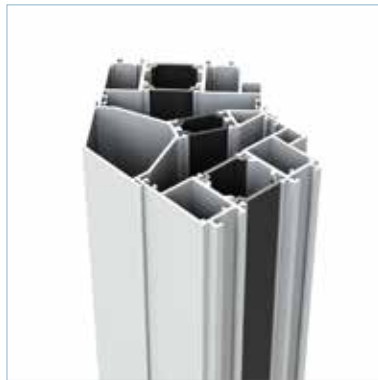
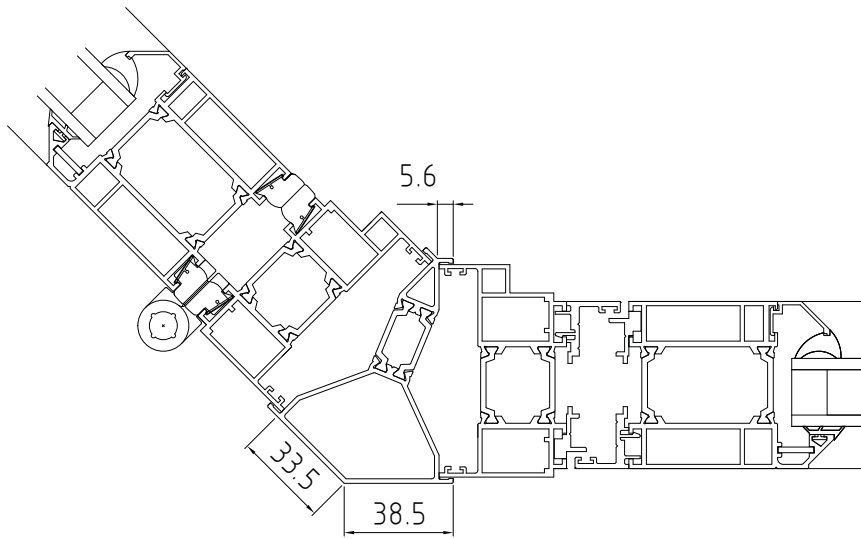
29 90° Fixed Corner Post



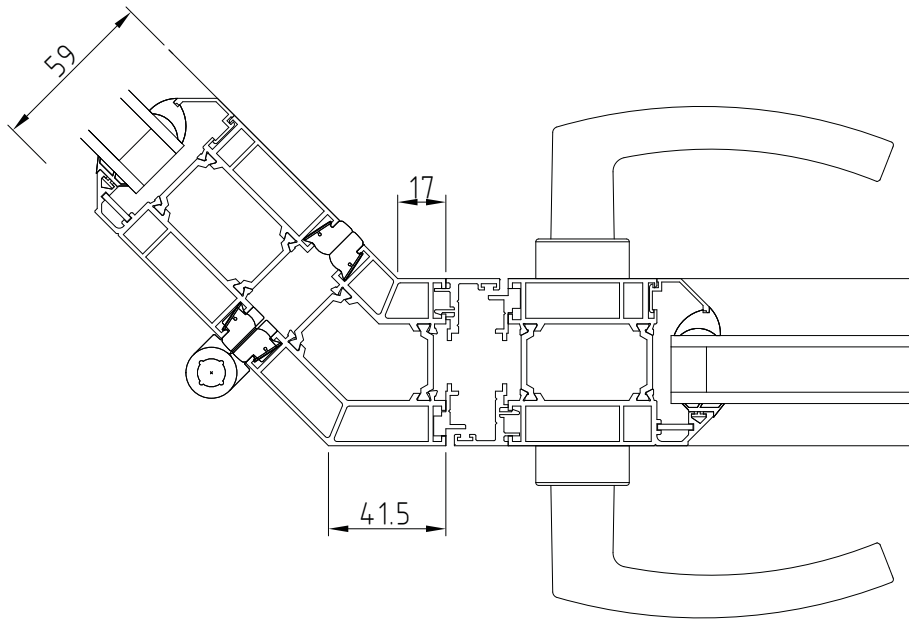
24 90° Moving Corner Post



30 135° Fixed Corner Post

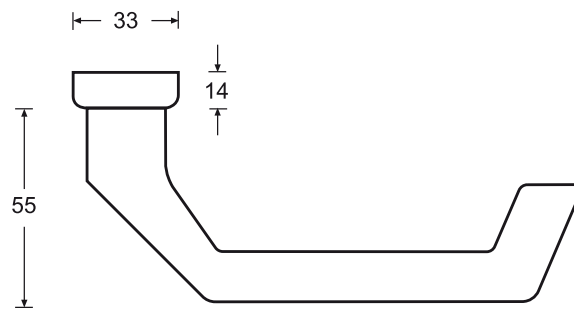
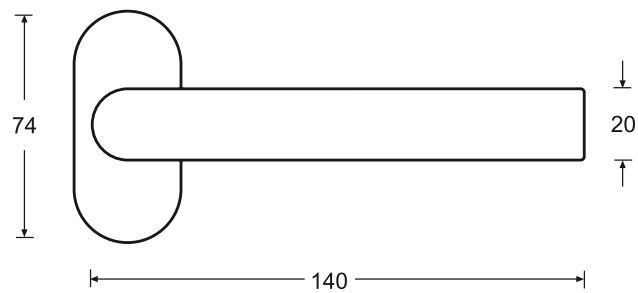


23 135° Moving Corner Post

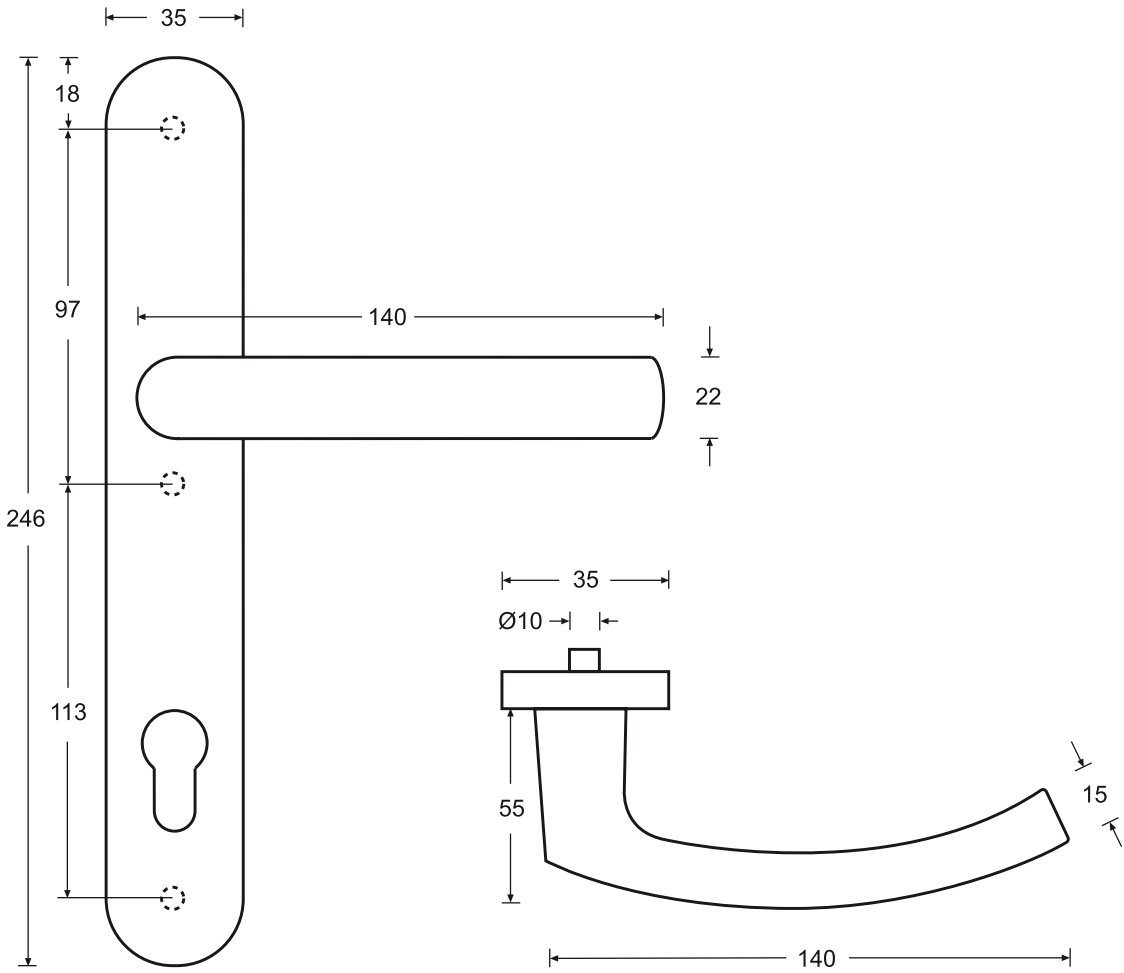


Handles

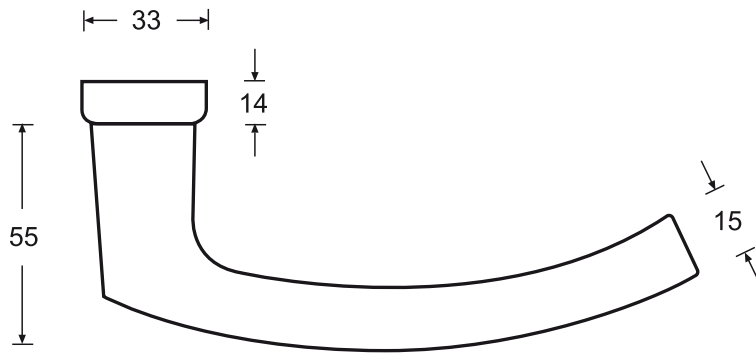
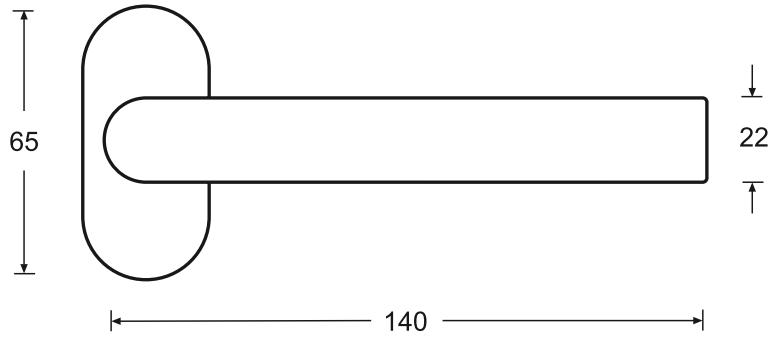
Hafi handle 251/280



Hafi handle 253/270

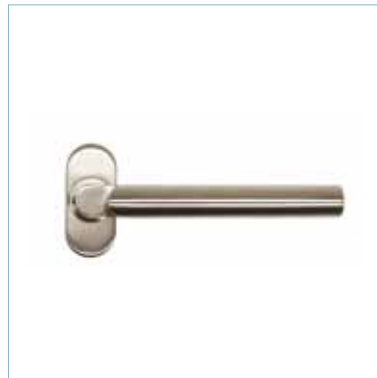
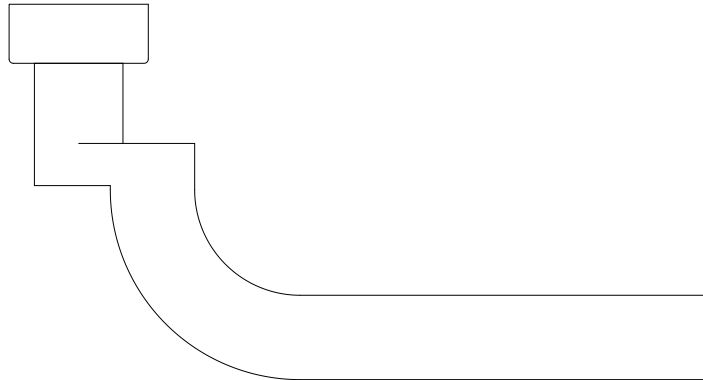
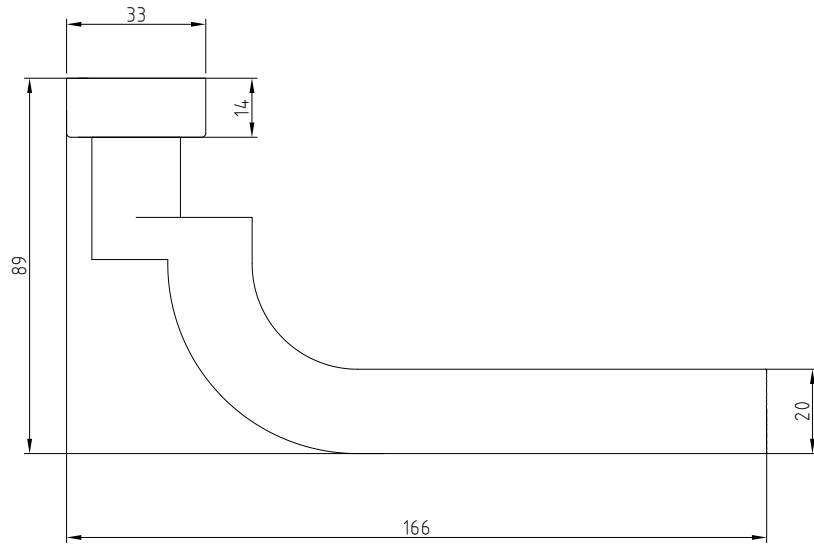


Hafi handle 253/280

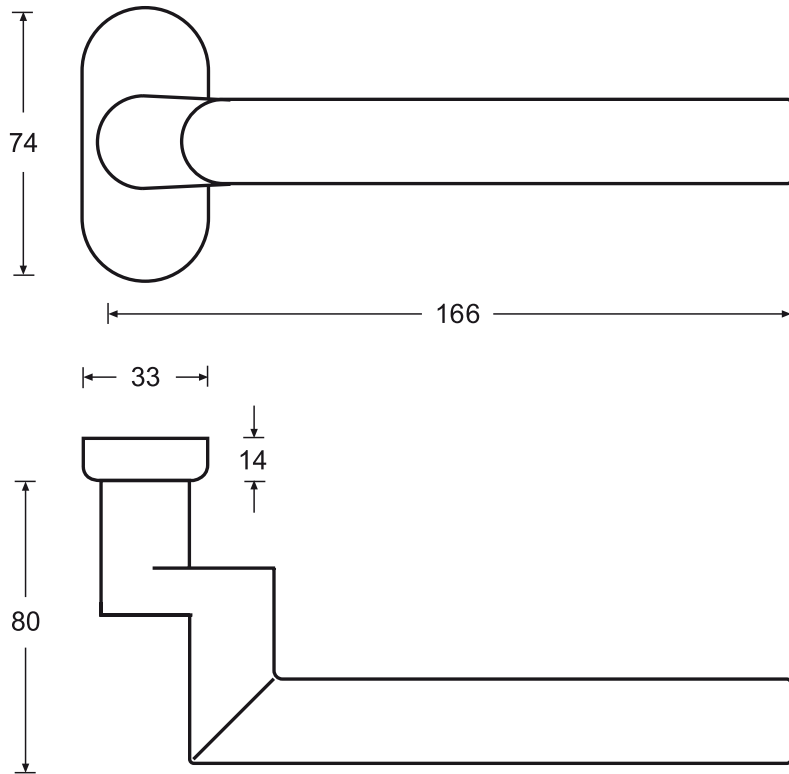


Handles

Hafi handle 301/280

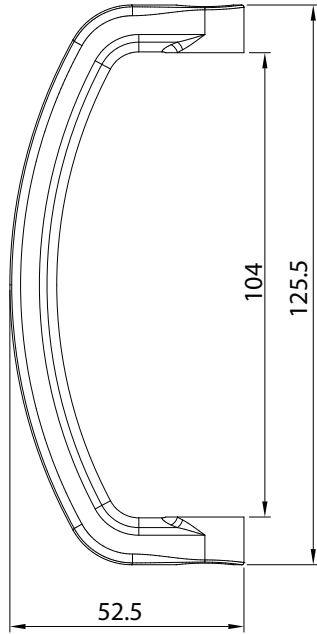


Hafi handle 303/280

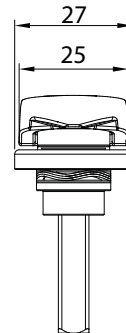
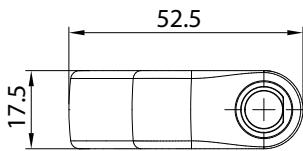
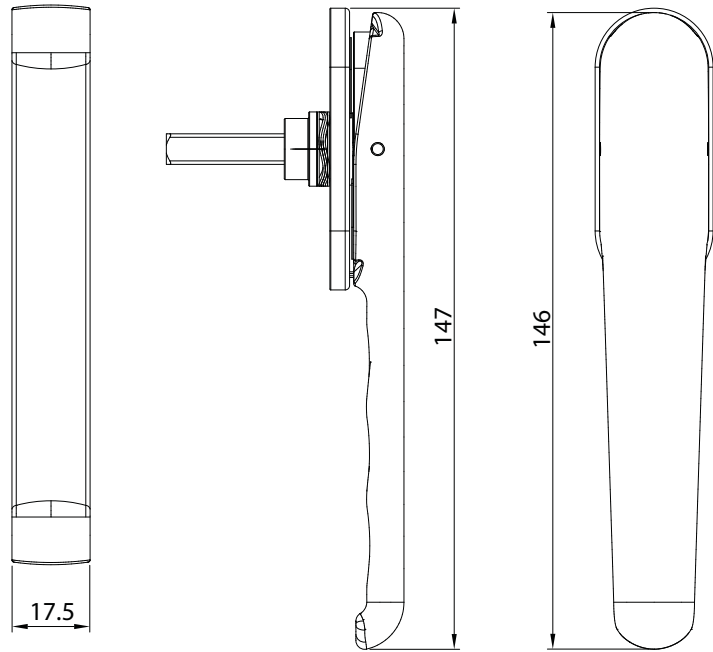


Handles

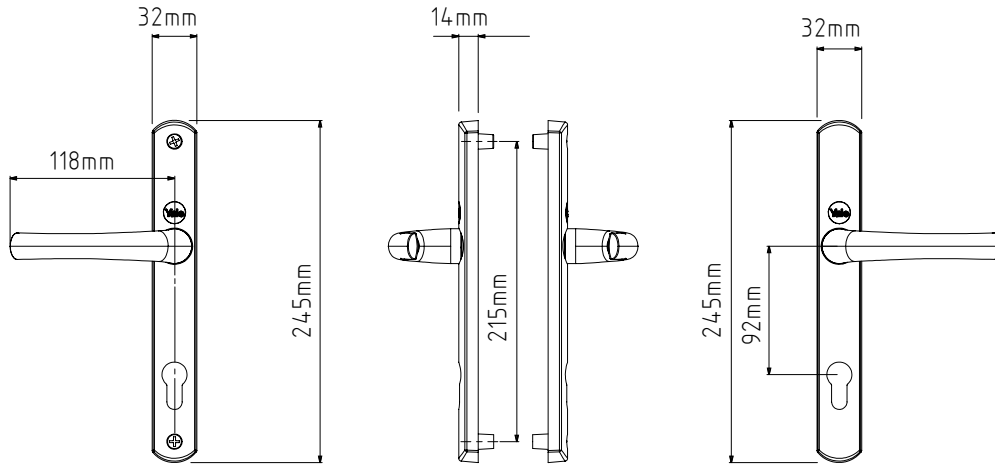
D-handle



Slave handle



Yale handle



Lever/lever

Available in 4 popular colours:
white, chrome, black and gold.



Gaskets

Double Glazing Gaskets 24mm & 28mm

Glazing Rebate E3434



Glazing Wedge W474



Sash Side QL9135*



Locking Rebate QL4636



Track Rebate QL9257



Sash Top and Bottom QL9141*



Triple Glazing Gaskets 32mm

Glazing Rebate QL4627



Glazing Wedge W474



*Available in colours mentioned on page 7

Size Guidelines

Configuration table

approximate opening

	0.6 Metres	1.0 Metres	1.4 Metres	1.8 Metres	2.2 Metres	2.6 Metres	3.0 Metres	3.4 Metres	3.8 Metres	4.2 Metres	4.6 Metres	5.0 Metres	5.4 Metres	5.8 Metres	6.2 Metres	6.6 Metres	7.0 Metres	7.4 Metres	7.8 Metres	8.2 Metres	8.6 Metres	9.0 Metres	9.4 Metres	
1 door	Optimum	Wide																						
2 door		Optimum	Optimum	Wide	Wide																			
3 door			Optimum	Optimum	Optimum	Optimum	Optimum	Wide																
4 door				Optimum	Optimum	Optimum	Optimum	Optimum	Optimum	Wide	Wide													
5 door					Optimum	Optimum	Optimum	Optimum	Optimum	Optimum	Optimum	Wide	Wide											
6 door						Optimum	Optimum	Optimum	Optimum	Optimum	Optimum	Optimum	Optimum	Wide	Wide	Wide								
7 door							Optimum	Optimum	Optimum	Optimum	Optimum	Optimum	Optimum	Optimum	Optimum	Optimum	Optimum	Wide	Wide	Wide				
8 door								Optimum	Optimum	Optimum	Optimum	Optimum	Optimum	Optimum	Optimum	Optimum	Optimum	Optimum	Optimum	Optimum	Wide	Wide	Wide	Wide

*Above sizes are for guidance only and are subject to glass specification.

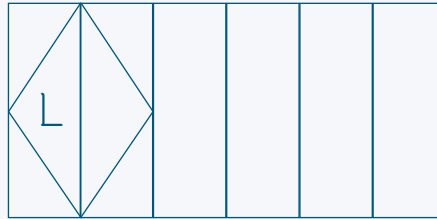
Key:

 Optimum door leaf sizes	 Wide door leaf sizes	 Narrow door leaf sizes
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All Configurations

Code example

5+1 – OI – L
C **A** **B** **D**



A The second number indicates where the lead/access door is. As 1 is the second number it means that is where the lead door is. If it had been 1+5 the last pair on the 5 door would be the lead door.

B OI = Open in. OO = Open out.

C The 5 is the number of doors folding the opposite way.

D L or R indicates which way the set with the lead door fold as viewed from outside.
 I.E - 5+1 – OI – L means the 1 door is folding to the left.

1 Door Configuration



0+1 – OO – L

Other variations: 1+0 – OI – L
 0+1 – OI – R
 0+1 – OO – R

2 Door Configurations



2+0 – OO – L

Other variations: 2+0 – OI – L
 2+0 – OI – R
 2+0 – OO – R



1+1 – OO – L

Other variations: 1+1 – OI – L
 1+1 – OI – R
 1+1 – OO – R

3 Door Configurations



3+0 – OO – L










Other variations: 3+0 – OI – L
 3+0 – OI – R
 3+0 – OO – R












2+1 – OO – L

Other variations: 2+1 – OI – L
 2+1 – OI – R
 2+1 – OO – R

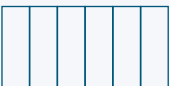











4 Door Configurations

	<p>IN </p> <p>OUT </p>	4+0 – OO – L	<p>Other variations: 4+0 – OI – L 4+0 – OI – R 4+0 – OO – R</p>
	<p>IN </p> <p>OUT </p>	3+1 – OO – L	<p>Other variations: 3+1 – OI – L 3+1 – OI – R 3+1 – OO – R</p>
	<p>IN </p> <p>OUT </p>	1+3 – OO – L	<p>Other variations: 1+3 – OI – L 1+3 – OI – R 1+3 – OO – R</p>

5 Door Configurations








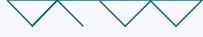
	<p>IN </p> <p>OUT </p>	5+0 – OO – L	<p>Other variations: 5+0 – OI – L 5+0 – OI – R 5+0 – OO – R</p>
	<p>IN </p> <p>OUT </p>	2+3 – OO – L	<p>Other variations: 2+3 – OI – L 2+3 – OI – R 2+3 – OO – R</p>
	<p>IN </p> <p>OUT </p>	4+1 – OO – L	<p>Other variations: 4+1 – OI – L 4+1 – OI – R 4+1 – OO – R</p>

6 Door Configurations











	<p>IN </p> <p>OUT </p>	6+0 – OO – L	<p>Other variations: 6+0 – OI – L 6+0 – OI – R 6+0 – OO – R</p>
	<p>IN </p> <p>OUT </p>	5+1 – OO – L	<p>Other variations: 5+1 – OI – L 5+1 – OI – R 5+1 – OO – R</p>
	<p>IN </p> <p>OUT </p>	1+5 – OO – L	<p>Other variations: 1+5 – OI – L 1+5 – OI – R 1+5 – OO – R</p>
	<p>IN </p> <p>OUT </p>	3+3 – OO – L	<p>Other variations: 3+3 – OI – L 3+3 – OI – R 3+3 – OO – R</p>

All Configurations


7 Door Configurations

	<p>IN</p>  <p>OUT</p>	$7+0 - OO - L$	<p>Other variations:</p> <ul style="list-style-type: none"> $7+0 - OI - L$ $7+0 - OI - R$ $7+0 - OO - R$
	<p>IN</p>  <p>OUT</p>	$6+1 - OO - L$	<p>Other variations:</p> <ul style="list-style-type: none"> $6+1 - OI - L$ $6+1 - OI - R$ $6+1 - OO - R$
	<p>IN</p>  <p>OUT</p>	$2+5 - OO - L$	<p>Other variations:</p> <ul style="list-style-type: none"> $2+5 - OI - L$ $2+5 - OI - R$ $2+5 - OO - R$
	<p>IN</p>  <p>OUT</p>	$4+3 - OO - L$	<p>Other variations:</p> <ul style="list-style-type: none"> $4+3 - OI - L$ $4+3 - OI - R$ $4+3 - OO - R$

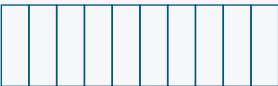


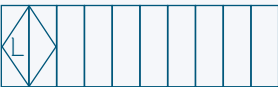


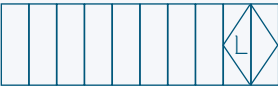









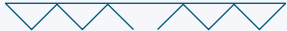

8 Door Configurations

	<p>IN</p>  <p>OUT</p>	$8+0 - OO - L$	<p>Other variations:</p> <ul style="list-style-type: none"> $8+0 - OI - L$ $8+0 - OI - R$ $8+0 - OO - R$
	<p>IN</p>  <p>OUT</p>	$7+1 - OO - L$	<p>Other variations:</p> <ul style="list-style-type: none"> $7+1 - OI - L$ $7+1 - OI - R$ $7+1 - OO - R$
	<p>IN</p>  <p>OUT</p>	$1+7 - OO - L$	<p>Other variations:</p> <ul style="list-style-type: none"> $1+7 - OI - L$ $1+7 - OI - R$ $1+7 - OO - R$
	<p>IN</p>  <p>OUT</p>	$5+3 - OO - L$	<p>Other variations:</p> <ul style="list-style-type: none"> $5+3 - OI - L$ $5+3 - OI - R$ $5+3 - OO - R$
	<p>IN</p>  <p>OUT</p>	$3+5 - OO - L$	<p>Other variations:</p> <ul style="list-style-type: none"> $3+5 - OI - L$ $3+5 - OI - R$ $3+5 - OO - R$

9 Door Configurations

	IN  OUT 	9+0 – OO – L	Other variations: 9+0 – OI – L 9+0 – OI – R 9+0 – OO – R
	IN  OUT 	8+1 – OO – L	Other variations: 8+1 – OI – L 8+1 – OI – R 8+1 – OO – R
	IN  OUT 	2+7 – OO – L	Other variations: 2+7 – OI – L 2+7 – OI – R 2+7 – OO – R
	IN  OUT 	6+3 – OO – L	Other variations: 6+3 – OI – L 6+3 – OI – R 6+3 – OO – R
	IN  OUT 	4+5 – OO – L	Other variations: 4+5 – OI – L 4+5 – OI – R 4+5 – OO – R

10 Door Configurations

	IN  OUT 	10+0 – OO – L	Other variations: 10+0 – OI – L 10+0 – OI – R 10+0 – OO – R
	IN  OUT 	9+1 – OO – L	Other variations: 9+1 – OI – L 9+1 – OI – R 9+1 – OO – R
	IN  OUT 	1+9 – OO – L	Other variations: 1+9 – OI – L 1+9 – OI – R 1+9 – OO – R
	IN  OUT 	7+3 – OO – L	Other variations: 7+3 – OI – L 7+3 – OI – R 7+3 – OO – R
	IN  OUT 	3+7 – OO – L	Other variations: 3+7 – OI – L 3+7 – OI – R 3+7 – OO – R
	IN  OUT 	5+5 – OO – L	Other variations: 5+5 – OI – L 5+5 – OI – R 5+5 – OO – R

All Configurations

Corner Configurations

IC = Internal Corner EC = External Corner



1+1 - OO - L - EC

Other variations: OI - R - IC OI - R - EC
 1+1 - OO - R - EC 1+1 - OI - L - EC 1+1 - OO - L - IC 1+1 - OO - R - IC 1+1 - OI - L - IC



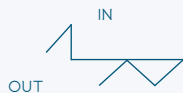
2+1 - OO - L - EC

Other variations: OI - R - IC OI - R - EC
 2+1 - OO - R - EC 2+1 - OI - L - EC 2+1 - OO - L - IC 2+1 - OO - R - IC 2+1 - OI - L - IC



1+3 - OO - L - EC

Other variations: OI - R - IC OI - R - EC
 1+3 - OO - R - EC 1+3 - OI - L - EC 1+3 - OO - L - IC 1+3 - OO - R - IC 1+3 - OI - L - IC



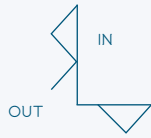
3+1 - OO - L - EC

Other variations: OI - R - IC OI - R - EC
 3+1 - OO - R - EC 3+1 - OI - L - EC 3+1 - OO - L - IC 3+1 - OO - R - IC 3+1 - OI - L - IC



4+1 - OO - L - EC

Other variations: OI - R - IC OI - R - EC
 4+1 - OO - R - EC 4+1 - OI - L - EC 4+1 - OO - L - IC 4+1 - OO - R - IC 4+1 - OI - L - IC



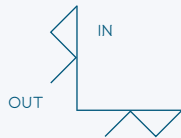
3+2 - OO - L - EC

Other variations: OI - R - IC OI - R - EC
 3+2 - OO - R - EC 3+2 - OI - L - EC 3+2 - OO - L - IC 3+2 - OO - R - IC 3+2 - OI - L - IC



1+5 - OO - L - EC

Other variations: OI - R - IC OI - R - EC
 1+5 - OO - R - EC 1+5 - OI - L - EC 1+5 - OO - L - IC 1+5 - OO - R - IC 1+5 - OI - L - IC



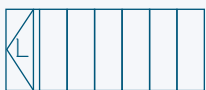
3+3 - OO - L - EC

Other variations: OI - R - IC OI - R - EC
 3+3 - OO - R - EC 3+3 - OI - L - EC 3+3 - OO - L - IC 3+3 - OO - R - IC 3+3 - OI - L - IC



5+1 - OO - L - EC

Other variations: OI - R - IC OI - R - EC
 5+1 - OO - R - EC 5+1 - OI - L - EC 5+1 - OO - L - IC 5+1 - OO - R - IC 5+1 - OI - L - IC



6+1 - OO - L - EC

Other variations: OI - R - IC OI - R - EC
 6+1 - OO - R - EC 6+1 - OI - L - EC 6+1 - OO - L - IC 6+1 - OO - R - IC 6+1 - OI - L - IC


All Configurations

Corner Configurations



$2+5 - OO - L - EC$

Other variations: OI - R - IC OI - R - EC
 $2+5 - OO - R - EC$ $2+5 - OI - L - EC$ $2+5 - OO - L - IC$ $2+5 - OO - R - IC$ $2+5 - OI - L - IC$




$4+3 - OO - L - EC$

Other variations: OI - R - IC OI - R - EC
 $4+3 - OO - R - EC$ $4+3 - OI - L - EC$ $4+3 - OO - L - IC$ $4+3 - OO - R - IC$ $4+3 - OI - L - IC$



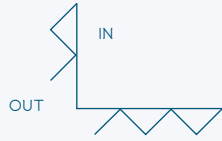
$1+7 - OO - L - EC$

Other variations: OI - R - IC OI - R - EC
 $1+7 - OO - R - EC$ $1+7 - OI - L - EC$ $1+7 - OO - L - IC$ $1+7 - OO - R - IC$ $1+7 - OI - L - IC$



$3+5 - OO - L - EC$

Other variations: OI - R - IC OI - R - EC
 $3+5 - OO - R - EC$ $3+5 - OI - L - EC$ $3+5 - OO - L - IC$ $3+5 - OO - R - IC$ $3+5 - OI - L - IC$



5+3 - OO - L - EC

Other variations: OI - R - IC OI - R - EC
 5+3 - OO - R - EC 5+3 - OI - L - EC 5+3 - OO - L - IC 5+3 - OO - R - IC 5+3 - OI - L - IC



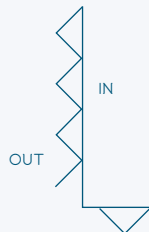
7+1 - OO - L - EC

Other variations: OI - R - IC OI - R - EC
 7+1 - OO - R - EC 7+1 - OI - L - EC 7+1 - OO - L - IC 7+1 - OO - R - IC 7+1 - OI - L - IC



8+1 - OO - L - EC

Other variations: OI - R - IC OI - R - EC
 8+1 - OO - R - EC 8+1 - OI - L - EC 8+1 - OO - L - IC 8+1 - OO - R - IC 8+1 - OI - L - IC

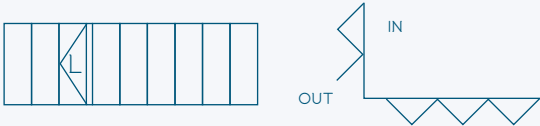


2+7 - OO - L - EC

Other variations: OI - R - IC OI - R - EC
 2+7 - OO - R - EC 2+7 - OI - L - EC 2+7 - OO - L - IC 2+7 - OO - R - IC 2+7 - OI - L - IC

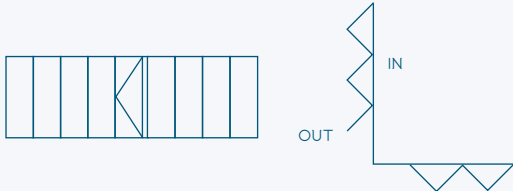
All Configurations

Corner Configurations



$6+3 - OO - L - EC$

Other variations: $OI - R - IC$ $OI - R - EC$
 $6+3 - OO - R - EC$ $6+3 - OI - L - EC$ $6+3 - OO - L - IC$ $6+3 - OO - R - IC$ $6+3 - OI - L - IC$



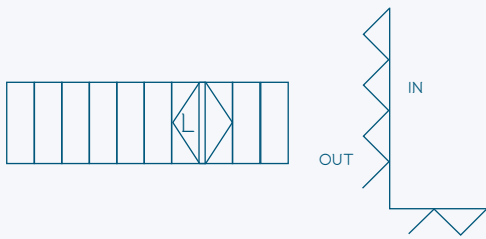
$4+5 - OO - L - EC$

Other variations: $OI - R - IC$ $OI - R - EC$
 $4+5 - OO - R - EC$ $4+5 - OI - L - EC$ $4+5 - OO - L - IC$ $4+5 - OO - R - IC$ $4+5 - OI - L - IC$



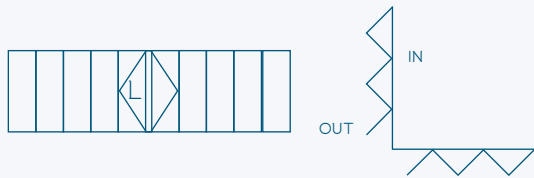
$1+9 - OO - L - EC$

Other variations: $OI - R - IC$ $OI - R - EC$
 $1+9 - OO - R - EC$ $1+9 - OI - L - EC$ $1+9 - OO - L - IC$ $1+9 - OO - R - IC$ $1+9 - OI - L - IC$



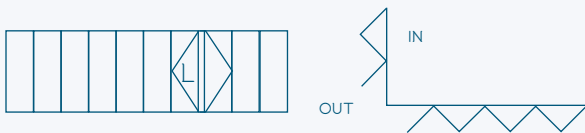
3+7 - OO - L - EC

Other variations: OI - R - IC OI - R - EC
 3+7 - OO - R - EC 3+7 - OI - L - EC 3+7 - OO - L - IC 3+7 - OO - R - IC 3+7 - OI - L - IC



5+5 - OO - L - EC

Other variations: OI - R - IC OI - R - EC
 5+5 - OO - R - EC 5+5 - OI - L - EC 5+5 - OO - L - IC 5+5 - OO - R - IC 5+5 - OI - L - IC



7+3 - OO - L - EC

Other variations: OI - R - IC OI - R - EC
 7+3 - OO - R - EC 7+3 - OI - L - EC 7+3 - OO - L - IC 7+3 - OO - R - IC 7+3 - OI - L - IC



9+1 - OO - L - EC

Other variations: OI - R - IC OI - R - EC
 9+1 - OO - R - EC 9+1 - OI - L - EC 9+1 - OO - L - IC 9+1 - OO - R - IC 9+1 - OI - L - IC


All Configurations

Wrapping Corner Configurations



1+2 (0+3) – OO – R – EC

Other variations: OI – R – IC OI – R – EC
 1+2 – OO – L – EC 1+2 – OI – L – EC 1+2 – OO – L – IC 1+2 – OO – R – IC 1+2 – OI – L – IC



1+4 (0+5) – OO – R – EC

Other variations: OI – R – IC OI – R – EC
 1+4 – OO – L – EC 1+4 – OI – L – EC 1+4 – OO – L – IC 1+4 – OO – R – IC 1+4 – OI – L – IC



1+6 (0+7) – OO – R – EC

Other variations: OI – R – IC OI – R – EC
 1+6 – OO – L – EC 1+6 – OI – L – EC 1+6 – OO – L – IC 1+6 – OO – R – IC 1+6 – OI – L – IC



1+8 (0+9) – OO – R – EC

Other variations: OI – R – IC OI – R – EC
 1+8 – OO – L – EC 1+8 – OI – L – EC 1+8 – OO – L – IC 1+8 – OO – R – IC 1+8 – OI – L – IC



2+2 (1+3) – OO – R – EC

Other variations:
2+2 – OO – L – EC

OI – R – IC
2+2 – OI – L – EC

OI – R – EC
2+2 – OO – L – IC

2+2 – OO – R – IC

2+2 – OI – L – IC



2+4 (1+5) – OO – R – EC

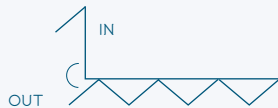
Other variations:
2+4 – OO – L – EC

OI – R – IC
2+4 – OI – L – EC

OI – R – EC
2+4 – OO – L – IC

2+4 – OO – R – IC

2+4 – OI – L – IC



2+6 (1+7) – OO – R – EC

Other variations:
2+6 – OO – L – EC

OI – R – IC
2+6 – OI – L – EC

OI – R – EC
2+6 – OO – L – IC

2+6 – OO – R – IC

2+6 – OI – L – IC



2+8 (1+9) – OO – R – EC

Other variations:
2+8 – OO – L – EC

OI – R – IC
2+8 – OI – L – EC


OI – R – EC
2+8 – OO – L – IC

2+8 – OO – R – IC

2+8 – OI – L – IC


All Configurations

Wrapping Corner Configurations



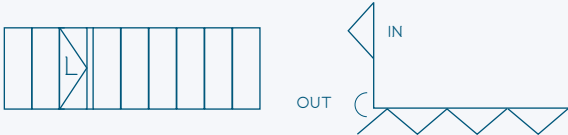
$3+2 (2+3) - OO - R - EC$

Other variations: $OI - R - IC$ $OI - R - EC$
 $3+2 - OO - L - EC$ $3+2 - OI - L - EC$ $3+2 - OO - L - IC$ $3+2 - OO - R - IC$ $3+2 - OI - L - IC$



$3+4 (2+5) - OO - R - EC$

Other variations: $OI - R - IC$ $OI - R - EC$
 $3+4 - OO - L - EC$ $3+4 - OI - L - EC$ $3+4 - OO - L - IC$ $3+4 - OO - R - IC$ $3+4 - OI - L - IC$



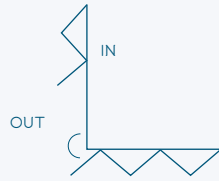
$3+6 (2+7) - OO - R - EC$

Other variations: $OI - R - IC$ $OI - R - EC$
 $3+6 - OO - L - EC$ $3+6 - OI - L - EC$ $3+6 - OO - L - IC$ $3+6 - OO - R - IC$ $3+6 - OI - L - IC$



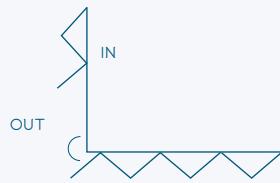
$4+2 (3+3) - OO - R - EC$

Other variations: $OI - R - IC$ $OI - R - EC$
 $4+2 - OO - L - EC$ $4+2 - OI - L - EC$ $4+2 - OO - L - IC$ $4+2 - OO - R - IC$ $4+2 - OI - L - IC$



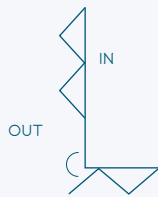
4+4 (3+5) – OO – R – EC

Other variations: OI – R – IC OI – R – EC
 4+4 – OO – L – EC 4+4 – OI – L – EC 4+4 – OO – L – IC 4+4 – OO – R – IC 4+4 – OI – L – IC



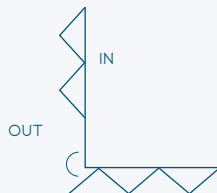
4+6 (3+7) – OO – R – EC

Other variations: OI – R – IC OI – R – EC
 4+4 – OO – L – EC 4+4 – OI – L – EC 4+4 – OO – L – IC 4+4 – OO – R – IC 4+4 – OI – L – IC



5+2 (4+3) – OO – R – EC

Other variations: OI – R – IC OI – R – EC
 5+2 – OO – L – EC 5+2 – OI – L – EC 5+2 – OO – L – IC 5+2 – OO – R – IC 5+2 – OI – L – IC



5+4 (4+5) – OO – R – EC

Other variations: OI – R – IC OI – R – EC
 5+4 – OO – L – EC 5+4 – OI – L – EC 5+4 – OO – L – IC 5+4 – OO – R – IC 5+4 – OI – L – IC

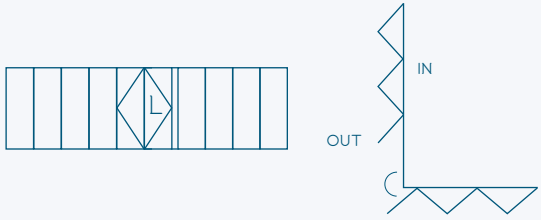
All Configurations

Wrapping Corner Configurations



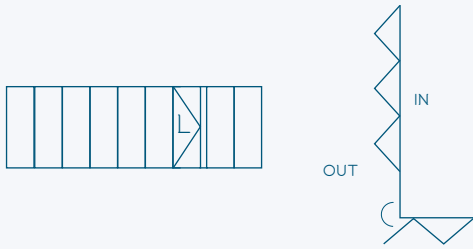
$6+2 (5+3) - OO - R - EC$

Other variations: $OI - R - IC$ $OI - R - EC$
 $6+2 - OO - L - EC$ $6+2 - OI - L - EC$ $6+2 - OO - L - IC$ $6+2 - OO - R - IC$ $6+2 - OI - L - IC$



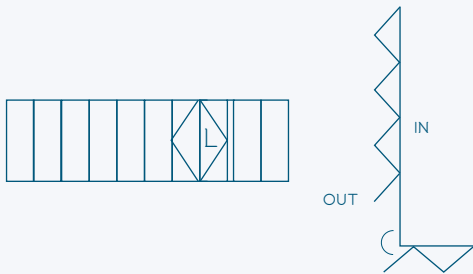
$6+4 (5+5) - OO - R - EC$

Other variations: $OI - R - IC$ $OI - R - EC$
 $6+4 - OO - L - EC$ $6+4 - OI - L - EC$ $6+4 - OO - L - IC$ $6+4 - OO - R - IC$ $6+4 - OI - L - IC$



7+2 (6+3) – OO – R – EC

Other variations: OI – R – IC OI – R – EC
 7+2 – OO – L – EC 7+2 – OI – L – EC 7+2 – OO – L – IC 7+2 – OO – R – IC 7+2 – OI – L – IC



8+2 (7+3) – OO – R – EC

Other variations: OI – R – IC OI – R – EC
 8+2 – OO – L – EC 8+2 – OI – L – EC 8+2 – OO – L – IC 8+2 – OO – R – IC 8+2 – OI – L – IC

Warranty

ORIGIN FRAMES LIMITED 20 YEAR WARRANTY FOR ORIGIN DOORS

Your attention is drawn in particular to the provisions of clause 3.

The warranty set out in clause 1 (this “Warranty”) is given by Origin Frames Limited (registered number 4449292) whose registered office is at 1st Floor, Bridge House, 25 Fiddlebridge Lane, Hatfield, Hertfordshire, AL10 0SP (“Origin”) in respect of Easifold doors (“the Doors”) and is subject to all of the provisions set out herein.

1. WHAT THE WARRANTY COVERS

- ▶ **1.1** Origin warrants for 1 year from the date of installation of the Doors (Standard Warranty Period) that the Doors will be free from defects in design, material and workmanship, subject to clause 1.2, 1.3 and 1.4.
- ▶ **1.2** If: you give notice in writing (at the address, fax number or email address shown below) to Origin during the Standard Warranty Period (or where applicable the Extended Standard Warranty or Extended Marine Warranty).
 - (a)** within a reasonable time of discovery that part of or the whole of the Doors do not comply with the provisions of clause 1.1; and
 - (b)** Origin has a reasonable opportunity of examining such affected Doors; Origin may at its sole discretion and subject to the terms and conditions herein repair the defective Doors (or part in question affected) at no cost to you, up to a cost equal to the original purchase price paid for the Doors. If Origin decides that the Doors cannot be repaired or it is uneconomical to repair them then Origin will at its discretion replace the Doors with the same or similar make and specification. All replaced or repaired Doors shall be warranted for the unexpired portion of the Standard Warranty Period (or where applicable the Extended Standard Warranty or Extended Marine Warranty).
- ▶ **1.3** The Standard Warranty Period shall be extended to 20 years (from date of installation of the Doors (Extended Standard Warranty) to end-users who register their unique door serial number on our website (www.origin-global.com) or over the phone (0845 450 6662) within 90 days of the Doors being installed PROVIDED THAT the Extended Standard Warranty shall not be available where such doors are to be located Close to a Marine Environment (in which event only the

Standard Warranty Period would apply), where Close to a Marine Environment is defined as any door installed:

- (a)** within 5,000 meters of the sea according to an ordnance survey map; or
- (b)** in a room with an indoor swimming pool.

- ▶ **1.4** Where the Doors are installed Close to a Marine Environment the Standard Warranty Period shall be extended to 10 years (from the date of installation of the Doors) (Extended Marine Warranty) to end-users where the Doors are finished with the Origin marine finish and Origin is in receipt of a completed 'Hazardous Environment Project Guarantee form' (on receipt of which Origin will arrange for a 'Marine Finish Maintenance' form to be passed to the end-user).

2. GENERAL CONDITIONS

- ▶ **2.1** This Warranty is given by Origin subject to the following conditions:
 - (a)** Origin shall be under no liability under this Warranty if the Doors are not purchased from an authorised Origin supplier and if the Doors are not clearly marked as Origin Doors and do not carry an Origin serial number.
 - (b)** This Warranty is only transferrable to subsequent owners of the property to which the Doors were originally installed. This Warranty will not be transferrable in any other circumstances. For the avoidance of doubt, this Warranty does not apply to Doors which are purchased second hand or through private sales separately from the property to which they were originally installed.
 - (c)** This Warranty is governed by and in accordance with the laws of England and Wales and each party submits to the jurisdiction of the English Courts unless otherwise agreed in writing by the parties.
 - (d)** In the event that Origin replaces the Doors you may dispose of the original Doors if they are in your possession. Origin will not be responsible for any costs that you may incur in disposing of the original Doors.
 - (e)** Origin will require access to your property in which the Doors are installed and will require a reasonable period of time to carry out any repairs or supply any replacements.
 - (f)** This Warranty does not apply to glass installed in the Doors or any parts or components supplied by third parties for the Doors.
 - (g)** Origin will not be responsible for any form of decoration or making good associated with the repairing or replacing of the Doors.
 - (h)** This Warranty does not apply to the installation of the Doors.

3. WARRANTY EXCLUSIONS AND LIMITATION

- ▶ **3.1** Origin shall not be liable for the Doors failure to comply with the Warranty in any of the following events:
 - (a)** if the defect arises because you failed to follow Origin's oral or written instructions as to the storage, installation, use and maintenance of the Doors.
 - (b)** if you alter or repair the Doors without the written consent of Origin or you use the Doors for any purpose other than as intended.
 - (c)** if the defect arises as a result of wilful, malicious or accidental damage, improper use, negligence, or abnormal storage or working conditions.
 - (d)** if the defect arises as a result of damage caused by fire or explosion.
 - (e)** if the total price of the Doors has not been paid by the due date for payment.
 - (f)** if the Doors have not been fitted or installed correctly, have not been fitted or installed by an Origin approved installer or have not been fitted or installed by an installer who has received delegated approval status from Origin.
 - (g)** if Origin was not notified as the time of purchase that the Doors were going to be fitted in a property which is in close proximity to the sea.
 - (h)** if a defect arises because of floods, lightening, or extreme weather conditions, or any other external influences.
- ▶ **3.2** All benefits under this Warranty will be forfeited if a fraudulent declaration or claim is made.
- ▶ **3.3** If any claim is invalid Origin may make a charge for any costs and expenses incurred in investigating the claim and charge for any repairs or replacements made.
- ▶ **3.4** This Warranty is in addition to your statutory and other legal rights. Advice about your legal rights is available from your local Citizens' Advice Bureau or trading standards office.
- ▶ **3.5** Subject to clause 3.6 and 3.7 Origin shall not be responsible to you for losses that you suffer arising out of or in connection with this Warranty.
- ▶ **3.6** Nothing in this Warranty excludes or limits in any way Origins liability for:

- (a)** death or personal injury caused by Origins negligence;
- (b)** fraud or fraudulent misrepresentation;
- (c)** any breach of the obligations implied by section 12 of the Sale of Goods Act 1979 or section 2 of the Supply of Goods and Services Act 1982;
- (d)** defective products under the Consumer Protection Act 1987; or
- (e)** any other matter for which it would be illegal or unlawful for Origin to exclude or attempt to exclude it's liability.

▶ **3.7** Subject to clause 3.6 Origin shall not be responsible for:

- (a)** loss of income or revenue;
- (b)** loss of profit;
- (c)** loss of business loss of anticipated savings;
- (d)** loss of data;
- (e)** any waste of time; or
- (f)** any express terms of the agreement for sale of the Doors between you and the supplier. However, this clause 3.7 shall not prevent claims for foreseeable loss of, or damage to, your physical property.

▶ **3.8** Origin shall not be liable to you under this Warranty by reason of any failure to perform any of Origin's obligations in relation to the Doors if the failure was due any cause beyond Origin's reasonable control.

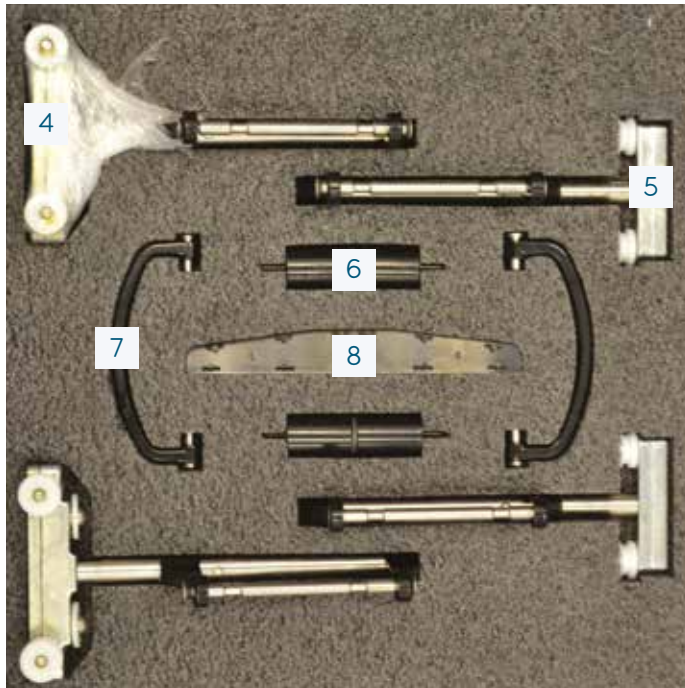
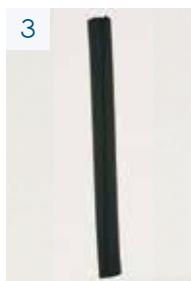
4. CLAIMS PROCEDURE

▶ **4.1** To contact Origin regarding a claim please write to Origin by any of the following:

- (a)** Post: Origin Frames Limited,
Sands 10 Industrial Estate, Hillbottom Road,
High Wycombe, Buckinghamshire, HP12 4HS.
- (b)** Fax: 0845 4506663
- (c)** Email: info@origin-global.com

Installation Guide

Components box



Contents

- ▶ 1. Fixing plugs
- ▶ 2. Fork pin cover caps
- ▶ 3. Wedge gasket
- ▶ 4. Bottom trolley
- ▶ 5. Top trolley
- ▶ 6. Magnetic keep
- ▶ 7. D-handle
- ▶ 8. Cill end cap
- ▶ 9. Long back plate lever/lever handle

1. Tools list

1.1. Fixing kit to install up to 8 door leaves, including a selection of packers 1mm-6mm, 35 4mm x 40mm glazing packers and screws.

- ▶ 25mm self-tapping screws
- ▶ Appropriate fixings for lintel
- ▶ Mixed selection of frame packers
- ▶ 4mm glazing packers (min 32mm wide)
- ▶ Appropriate drill bits for drilling lintel and jamb packers
- ▶ 13mm HSS or blade type drill bit
- ▶ Long series 3.5mm drill bit
- ▶ SDS drill with appropriate size drill bits for your preferred frame fixings
- ▶ Battery screwdriver
- ▶ Saw for cutting aluminium cill
- ▶ Long straight edge
- ▶ Long spirit level
- ▶ String line
- ▶ Measuring staff
- ▶ Phillips 2, Pozi 2 & large flat hand screw drivers
- ▶ 1 x 4mm Allen key
- ▶ 2.5mm Allen key
- ▶ 3mm Allen key
- ▶ Flat bar
- ▶ Plastic/ rubber hammer
- ▶ Glazing paddle
- ▶ Gasket sheers
- ▶ Foam gun
- ▶ Silicone & gun
- ▶ T30 torx key / small 1/4 ratchet with T30 bit

Note

If it is necessary to pack the outer frame by more than 6mm, a solid plastic or hardwood packer should be used.

2. Preparation

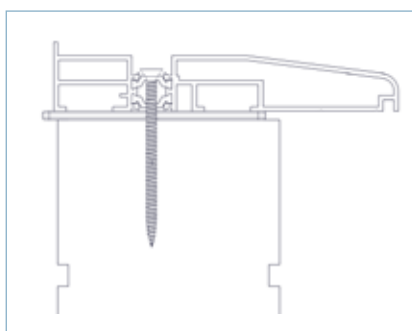
- ▶ **2.1.** Measure the opening and check it fits with all measurements on your Origin paperwork.
- ▶ **2.2.** Carefully unpack the tracks and jambs.
- ▶ **2.3.** On the hinge jamb, place a jamb packer level with each hinge. Position the jamb packers within 150mm of corner, and 600mm apart on centers.

Repeat this for locking jamb.
- ▶ **2.4** On the locking jamb, place a jamb packer 50mm down and 50mm up from the top and bottom of the jamb. With the remaining jamb packers, place one above and one below the centre keep.
- ▶ **2.5.** Secure jamb packers by inserting a screw either side, see FIG 2A.
- ▶ **2.6.** Spaced at a maximum of 500mm apart, place the correct frame packers along the length of the opening, creating a level, well supported platform for the track/cill to sit.

FIG 2A



FIG 3A



3. Cill (if no cill, move to step 4.)

- ▶ **3.1.** Cut the cill to the correct length to fit the opening with or without horns.
- ▶ **3.2.** Using an appropriate silicone sealant, fill the ends of the cill section and install the end caps.
- ▶ **3.3.** Place the cill on the prepared frame packers in the opening.
- ▶ **3.4.** Recheck for level, adjust if necessary.

NOTE: Move on to step 4 if the width is under 3600mm.

- ▶ **3.5.** Using a string line, make sure the cill does not have a bow.
- ▶ **3.6.** Fix the cill through the thermal break every 1000mm (shown in FIG 3A) using your preferred fixings. Fill each hole with silicone before inserting the fixing.
- ▶ **3.7.** Recheck for level, adjust if necessary.

Note

The cill should be positioned with the back edge overhanging the building cavity; the distance specified by the local authority building regulations.

4. Outer frame

- ▶ **4.1.** Joining tracks (if applicable).
- ▶ **4.1.1.** All joints in the track are pre-made in the factory and separated for transport. When joints are pre-made, we recommend clear silicone to seal the joint.
- ▶ **4.2.** Carefully remove the gasket from each end of the top and bottom track by approximately 200mm.
- ▶ **4.3.** Where possible, lay out the tracks and jambs in the correct positions with all labels facing up, being careful not to scratch the powder coat.
- ▶ **4.4.** Position the jambs into the tracks using the connectors provided as shown in FIG 4A.
NOTE: For mobility thresholds, after completing step 4.4, secure the jambs to the threshold using two of the supplied 3.5mm screws. Seal the mating faces with silicone.
- ▶ **4.5.** Using a rubber mallet, gently tap the jambs in to the track as shown in FIG 4B.
NOTE: If more than a tap is needed, the connectors are not aligned with the tracks.
- ▶ **4.6.** If applicable, using silicone, seal along the two ends and back lip of the cill where the bottom track will sit.
- ▶ **4.7.** Install the outer frame and insert frame packers above the top track at each end, compressing tracks, jambs and cill (if fitted), together closing all unwanted gaps and temporarily holding the frame in position as shown in FIG 4C.
- ▶ **4.8.** Make sure the bottom track is pushed up against the lip at the back of the cill (if fitted) and is central in the opening.

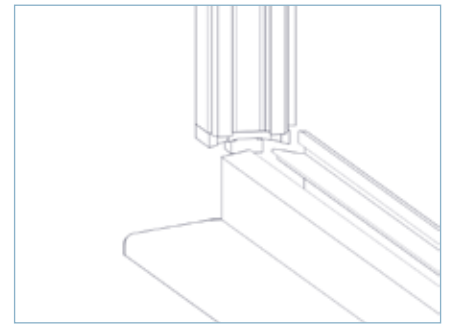


FIG 4A

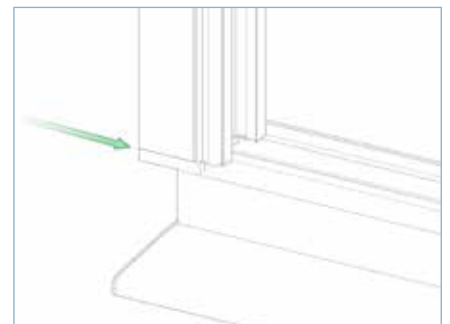


FIG 4B

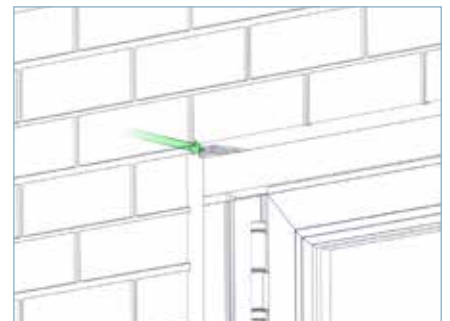


FIG 4C

5. Fixing the outer frame

▶ **5.1.** Fix the bottom track and cill as shown in FIG 5A. Position the fixings approximately 100mm in from each end of the track and one fixing every door width along the length. If there is no cill, fix the bottom track to the brick/ block below, making sure it is straight and remains level

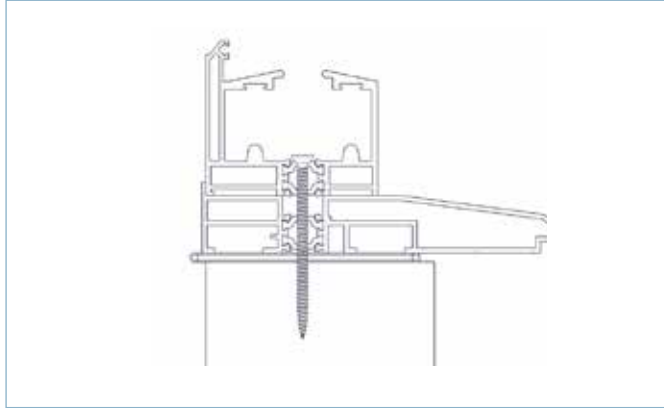


FIG 5A

▶ **5.2.** Using a 13mm drill bit, make a hole in the outer layer of polyamide, level with the centre of each jamb packer. This will allow installation of the fixing plug as shown in FIG 5B.

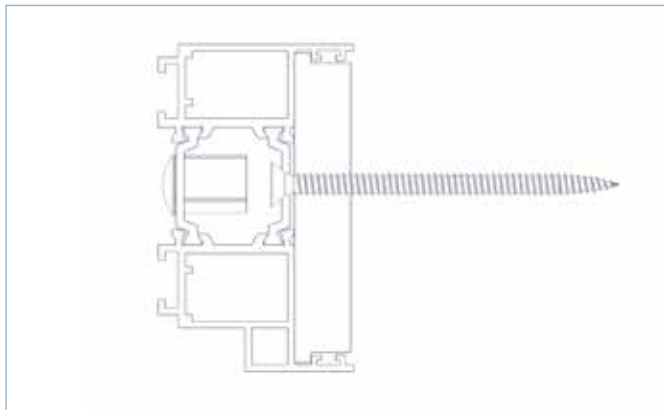


FIG 5B

▶ **5.3.** Using the correct size HSS bit for your preferred fixing, drill through each jamb packer. To protect your drill bit, place a putty knife (or similar) between the jamb packer and brick.

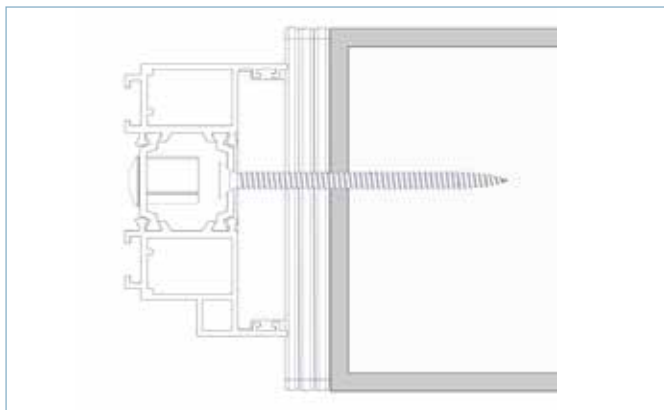


FIG 5C

▶ **5.4.** Align the bottom of the jambs with the end of the bottom track. Using frame packers between the jamb packers and the wall, level out the jambs in all directions and fix into position with your preferred fixings as shown in FIG 5C.

5. Fixing the outer frame continued

▶ **5.5.** Align the end of the top track with the top of the jamb as shown in FIG 5D.

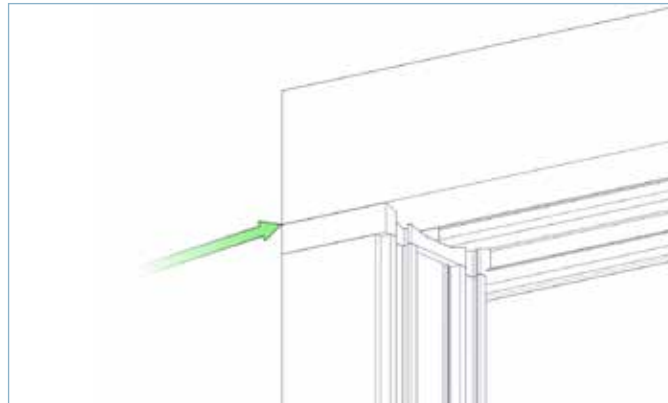


FIG 5D

▶ **5.6.** Install a fixing in the top track approximately 100mm in from the jamb as shown in FIG 5E, being careful not to lift the track from the top of the jamb when the fixing is tightened.

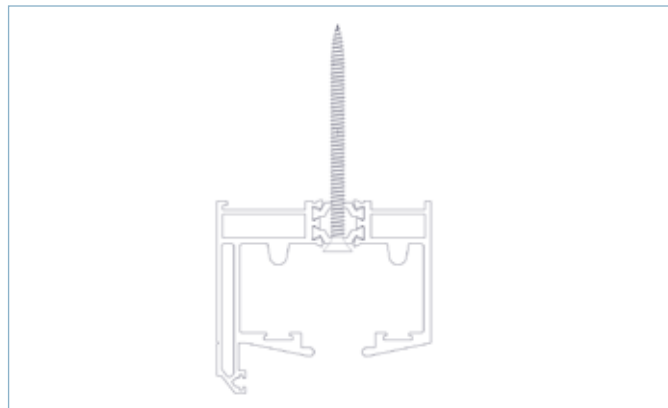


FIG 5E

▶ **5.7.** Using the string line and pinch rod or measuring staff, make sure the track does not bow inside to out, or up and down, as shown in FIG 5F.

▶ **5.8.** Install the remaining fixings into the top track in line with the bottom track fittings, being careful not to bow or twist the track.

▶ **5.9.** Trim and reinstall the track gasket.

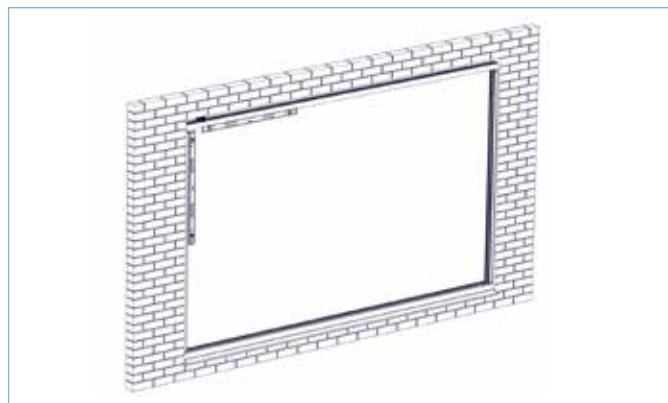


FIG 5F

6. Top and bottom fork

- ▶ **6.1.** Remove the bottom carriage and fork assembly from its packaging, and using a 4mm frame packer, check the ride height is set correctly as shown in FIG 6A.
- ▶ **6.2.** Place the bottom carriage and fork assembly into the bottom track as shown in FIG 6B. The fork should point to the outside if the doors are open out, and inside if the doors open in. Repeat this process until all bottom carriage assemblies have been installed.
- ▶ **6.3.** Install all top fork guide wheels and move down the track to the opposite end. The thicker side of the wheel should be on top as shown in FIG 6C.
- ▶ **6.4.** Insert the top fork between two guide wheels and lower down to locate the pins into them from above, as shown in FIG 6D&E. Repeat this process until all top forks are installed.



FIG 6A

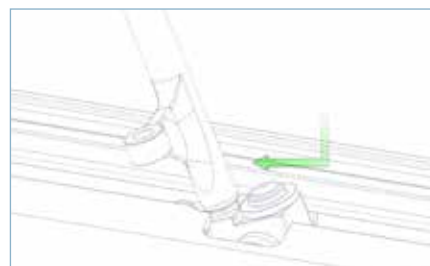


FIG 6B

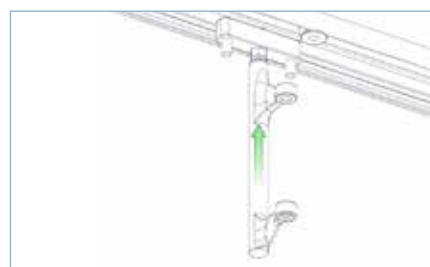


FIG 6D

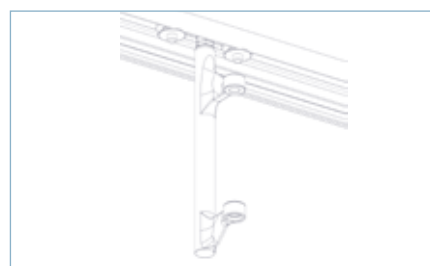


FIG 6E

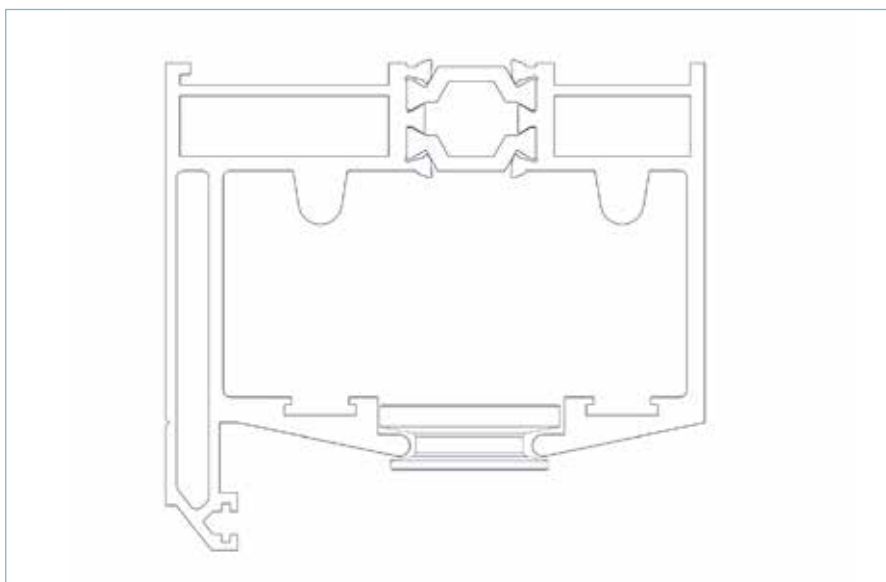


FIG 6C

7. Door leaves

- ▶ **7.1.** Locate the fork pins and bolts from the components bag.
- ▶ **7.2.** Hang the first door on the hinge jamb as shown in FIG7 A&B with the label at the top and facing out.
- ▶ **7.3.** Hang the second door onto the hinges of the first door, again with the label at the top and facing out as shown in FIG 7C.
- ▶ **7.4.** Close the two doors across the track and lock into place with the slave handle, being careful not to scratch the track as the doors cross it.
- ▶ **7.5.** Hang the third door onto the centre hinge and insert a screwdriver through the top hinge; this will support the door whilst the forks are located as seen in FIG 7D.
- ▶ **7.6.** With the third door completely open, locate the bottom fork around the bottom hinge between the second and third doors.
- ▶ **7.7.** Remove the screw and insert the fork pin into the bottom fork and hinge using a plastic hammer to gently tap the pin in fully, being careful to align the hinge and fork as the pin goes through as shown in FIG 7E.
- ▶ **7.8.** Reinstall the screw and tighten using a t30 Torx key.
- ▶ **7.9.** Remove the screwdriver from the top hinge and locate the top fork around the hinge.
- ▶ **7.10.** Insert the second fork pin bolt as described in points 7.8. and 7.9.
- ▶ **7.11.** Repeat steps 7.1 to 7.12 until all door leaves are hung.

Note

When closing the master/lead door for the first time, ensure that contact with the locking jamb or stile does not occur. If contact occurs, adjust the doors as described in section 14.

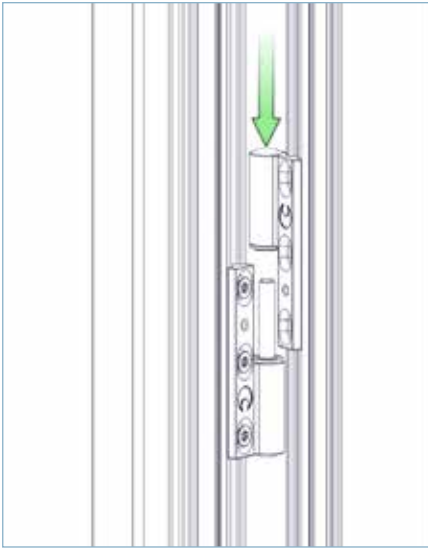


FIG 7A

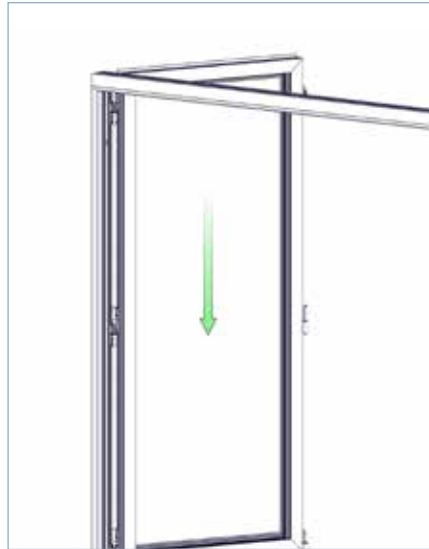


FIG 7B

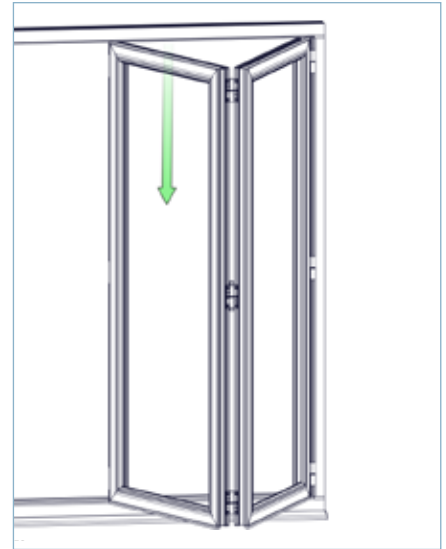


FIG 7C

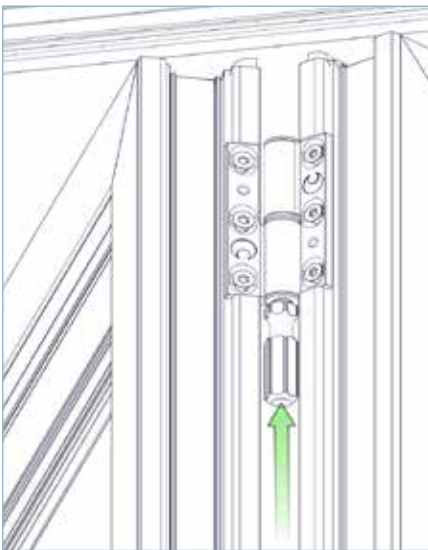


FIG 7D

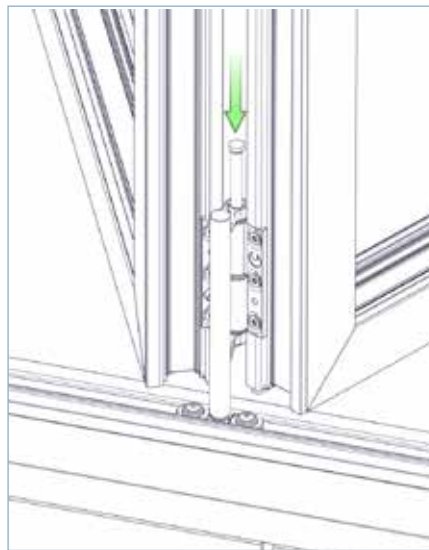


FIG 7E

8. False mullion

(even number of doors moving in the same direction only)

- ▶ **8.1.** Remove the centre hinge from the mullion.
- ▶ **8.2.** With the last door at 90° to the tracks, locate the top and bottom forks around the hinges.
- ▶ **8.3.** Position the mullion into the tracks and slide along to mate with the hinges and forks as shown in FIG 8A.
- ▶ **8.4.** Insert both top and bottom fork pins as described in the previous section.
- ▶ **8.5.** Replace the centre hinge and screws being careful not to cross thread the screws.

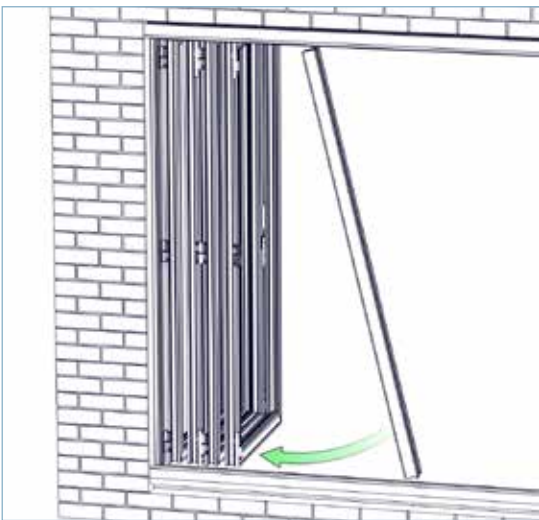


FIG 8A

9. Handles

D-handles (open out only)

- ▶ **9.1.** Position the D-handle over the centre hinge above the slave handle.
- ▶ **9.2.** Fix the handle top and bottom using the D-handle fixings. These may need a gentle tap to locate the thread.

D-handle



Hafi handles



(Style 253/280)



(Style 251/280)



(Style 301/280)



(Style 303/280)

Long Back Plate Lever/ Lever Handles

- ▶ **9.3.** Remove the screws from the lever handle, allowing the two halves to be separated.
- ▶ **9.4.** Insert the spindle and a return spring (if supplied) into the outer part of the handle. (The outer handle will have the thread for the handle screws).
- ▶ **9.5.** Making sure the lever is across the glass, insert the spindle into the lock.
- ▶ **9.6.** Locate the handle around the barrel and flush against the door.
- ▶ **9.7.** Install the internal part of the handle and second return spring (if supplied), again with the lever across the glass.

NOTE: Always keep a hand on the external handle to prevent damage.

NOTE: It may be necessary to slacken the retaining screw on the barrel to help alignment. Always re tighten.

- ▶ **9.8.** Install the two screws and carefully tighten with a hand screwdriver only.

Hafi Stainless Steel Handles (separate handle and barrel)

- ▶ **9.9.** Locate the handles and 4 no. 20mmxM5 screws from the components box.
 - ▶ **9.10.** Remove the escutcheons from both handles.
 - ▶ **9.11.** Insert the spindle into one lever and nip the grub screw using a 3mm Allen key.
 - ▶ **9.12.** Install the handle and spindle into the door with the lever across the glass.
 - ▶ **9.13.** Insert the 20mm x M5 screws and tighten using a Pozi 2 hand screwdriver only, being careful not to cross thread the screws.
 - ▶ **9.14.** Install the remaining lever onto the door and secure in place, as described in the previous step and nip the remaining grub screw.
 - ▶ **9.15.** Install both inner and outer escutcheons with the small cut out pointing down.
- NOTE:** It may be necessary to use a rubber mallet to gently tap the escutcheons fully into position.

10. Centre hinge

(open in only)

- ▶ **10.1.** Open the doors and locate the missing centre hinges.
- ▶ **10.2.** Making sure the two halves of the top and bottom hinges are together, install the centre hinge, being careful not to cross thread the screws.

NOTE: All hinges will be found in the components box.

11. Glazing the doors

- ▶ **11.1.** Close all doors and fully engage the locks.
- ▶ **11.2.** Starting with the door next to the hinge jamb, remove the 4 glazing beads.
- ▶ **11.3.** Place 2 no. 4mm packers (32mm wide minimum) in the bottom of the glazing chamber spaced approximately 50mm in from each corner at 90° to the door, as shown in FIG 11A.
- ▶ **11.4.** Install the glass on to the packers, taking care not to pinch the gasket on the outside.
- ▶ **11.5.** Insert another 4mmpacker (32mm wide minimum) to the side of the glass diagonally opposite the toe and heel plate about 50mm up from the corner, making sure to support the inner and outer layers of the glass, as shown in FIG 11B.
- ▶ **11.6.** Using a glazing paddle at the bottom, lift the glass and turn the packer which is diagonally opposite the toe and heel plate so it is in line with the glass, making sure inner and outer layers are supported, as shown in FIG 11B.
- ▶ **11.7.** Remove the second packer from under the glass and insert into the side, at the top of the door diagonally opposite the first two packers, making sure inner and outer layers of glass are supported.
- ▶ **11.8.** Using the glazing paddle, lever the door up and place a 4mm glazing packer (32mm wide minimum) between the top of the glass and the toe and heel plate, making sure both inner and outer layers of the glass are supported.
- ▶ **11.9.** Reinstall all 4 glazing beads starting with the top and bottom.
- ▶ **11.10.** Repeat steps 11.4 to 11.9 until all the glass is in place.

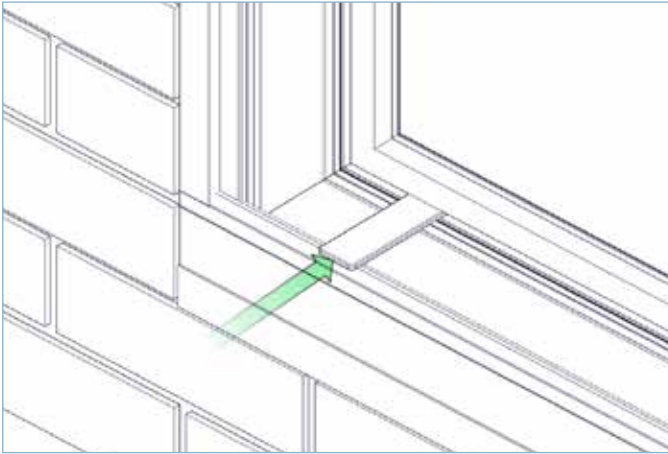


FIG 11A

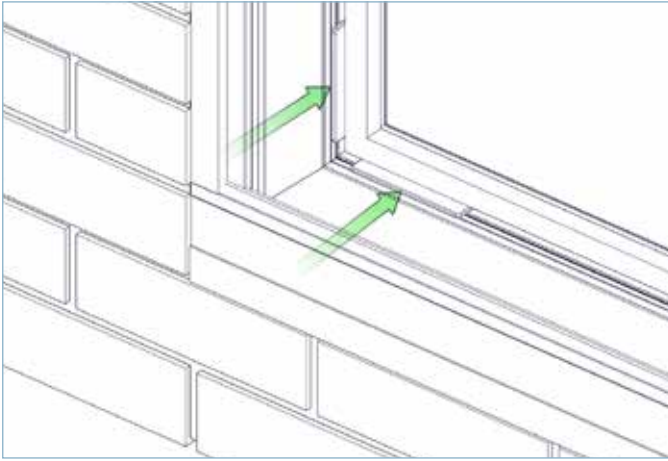


FIG 11B



FIG 11C

Notes

The packer positions will always be set by the location of the toe and heel plate and will be opposite to the adjoining door, as shown in FIG 11C.

If the glass is not square or stepped, it may be necessary to use a thinner packer between the glass and toe and heel plate. These should always be a minimum of 32mm wide.

12. Installing the wedge gasket

- ▶ **12.1.** Starting with the bottom bead, use the glazing paddle to gently lever the bead away from the glass and into the correct position whilst lifting the side beads.
- ▶ **12.2.** Place the gasket between the glass and bead with the concave side against the glass.
- ▶ **12.3.** Feed the gasket behind the side bead until it stops and then continue along the bottom bead compressing the gasket towards the start point.
- ▶ **12.4.** Repeat steps 12.1 to 12.3 with the top bead.
- ▶ **12.5.** Cut a slight angle on the end of the gasket and insert behind the side bead pushing up to meet the top gasket.
- ▶ **12.6.** Continue to feed the gasket along the side bead, compressing towards the starting point.
- ▶ **12.7.** Once the bottom is reached, cut the gasket approximately 5mmpast the bottom gasket again with a slight angle to meet the bottom gasket.
- ▶ **12.8.** Repeat steps 12.5 to 12.7 with the remaining side.
- ▶ **12.9.** Repeat steps 12.1 to 12.8 with the remaining doors.

13. Toe and heel adjustment

- ▶ **13.1.** If adjustment is needed, you will find a toe and heel device in the top of each door.
- ▶ **13.2.** Open the doors so that you can get access to the toe and heel device at the top of the door. Using a 4mm Allen key, wind the bolt clockwise, causing the side of the door to rise.
- ▶ **13.3.** Re-close the doors and check that they run parallel and evenly to the top and bottom tracks. If they do not, then repeat as necessary.
- ▶ **13.4.** Once you have adjusted the doors, make sure that each toe and heel plate is tight to the glass in each door, this will prevent the doors from settling over time.

14. Adjustment

NOTE: All adjustment comes from the outer frame.

Tracks

- ▶ **14.1.** To check the top and bottom tracks are parallel, open all the door leaves completely.
- ▶ **14.2.** At this point, the pins in the centre of the top guide wheel should be fairly flush with the visible face of the guide wheel, as shown in FIG 14A. Move the doors along the track whilst monitoring the pins in the top guide wheels. If the top and bottom tracks are parallel, the visible pin should remain the same as at the start.
- ▶ **14.3.** If the visible pin decreases at any point, the top track will need repacking to raise it up at these points.
- ▶ **14.4.** If the visible pin increases at any point, the top track will need repacking to lower it at these points.

NOTE: The bottom track must be well supported and level for the description above to be correct.

Jamb

- ▶ **14.5.** When the lead door is closed, there should be a visible gap of 4mm between itself and the jamb or locking style, adjust as follows if necessary.*
- ▶ **14.6.** Remove the two centre fixings from one jamb.
- ▶ **14.7.** Remove the top fixing from that jamb.
- ▶ **14.8.** Repack the top of the jamb to give a 4mm gap between the edge of the lead door and jamb.
- ▶ **14.9.** Replace the fixing in the top of the jamb.
- ▶ **14.10.** Remove the bottom fixing from the jamb.
- ▶ **14.11.** Repack the bottom of the jamb to give a 4mm gap between the edge of the lead door and jamb.
- ▶ **14.12.** Replace the fixing in the bottom of the jamb.
- ▶ **14.13.** Pack and replace the remaining two fixings, keeping the even 4mm gap.

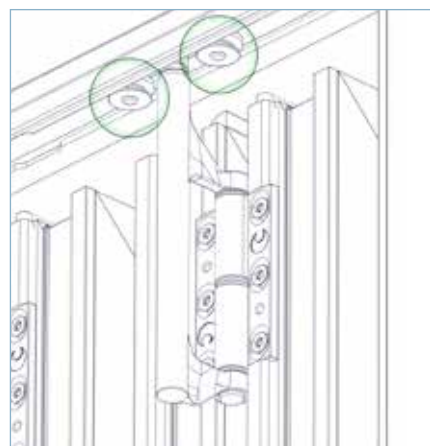


FIG 14A

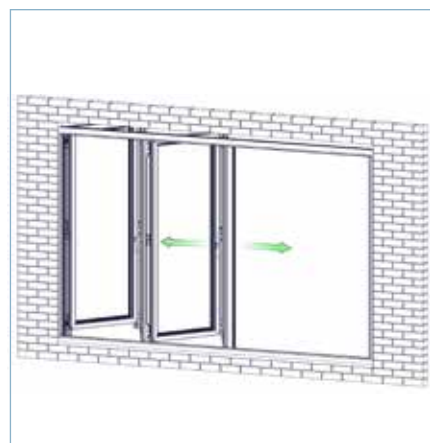


FIG 14B

*This is temperature dependent. When installing in particularly hot weather, the gap along the slam and rebate may need reducing slightly. In particularly cold weather, this gap may require increasing slightly. This accounts for the minimal potential expansion and contraction with the aluminium profile.

15. Magnetic keep

- ▶ **15.1** Locate the magnetic keep from the components box.
- ▶ **15.2** Open the lead door almost 180° until the handle is approximately 10mm from the adjoining door and hold in position.
- ▶ **15.3** Position the complete magnetic keep up between the top of both doors and move along until it is wedged between them, as shown in FIG 15A.
- ▶ **15.4** Using a pencil, mark the magnet holder position on the lead door.
- ▶ **15.5** Close the lead door.
- ▶ **15.6** Return the magnet holder to your mark and move up or down to position in the centre of the door profile. The centre of the hole should be 26mm down from the top of the door.
- ▶ **15.7** Using a 3.5mm drill bit, mark the door through the hole in the magnet holder, as shown in FIG15B.
- ▶ **15.8** Remove the holder and using the 3.5mmdrill bit, drill a hole on the previously made mark.
- ▶ **15.9** Install the magnet and cover plate.
- ▶ **15.10** Place the two halves of the magnetic keep together.
- ▶ **15.11** Open the lead door against the adjoining door to locate the second half and mark with a pencil.
- ▶ **15.12** Fix in position as previously described.
- ▶ **15.13** Install cover plate.



FIG 15A



FIG 15B

16. Finishing touches

- ▶ **16.1** Insert fixing plugs provided into the 13mm holes drilled into the jambs.
- ▶ **16.2.** Insert the hinge plugs into the top and bottom of all open hinges.
- ▶ **16.3.** We recommend you use expanding foam to fill the gaps between the outer frame and building on all 4 sides.

NOTE: The weather seal around the outer frame to the building is the responsibility of the installer. Silicone and trim kits are available from Origin.

Contact

Accounts

t 08448 802 371 or 01494 416895 **e** finance@origin-global.com

Marketing

t 08448 802 374 or 01494 416897 **e** marketing@origin-global.com

Sales

t 0808 168 5816 or 01494 686868 **e** sales@origin-global.com

Technical

t 08448 802 373 or 01494 416896 **e** technical@origin-global.com

Fleet and Logistics

t 08448 802 378 or 01494 416898 **e** logistics@origin-global.com