



origin  
DOORS AND WINDOWS

# Bi-fold Door Specification File





# Contents

Specification Overview	04
Security	08
Bi-fold Door Make Up	09
Performance & Limitations	10
Master Configurations	12
Technical Drawings	26
Handles	49
All Configurations	57
Warranty	73
Installation Guide	80

# Specification overview

## Thermally Broken Aluminum Bi-folding Door

External view of  
bi-folding doors

---



Internal view of  
bi-folding doors

---



## Profile specification

Outer Frame Depth	3"
Sash Depth	2 1/4"
Sash Sightline	2 3/4"
Track Height (not including rebate)	2"

## Features

- ▶ 10 year warranty
- ▶ The doors are bottom running and incorporate a unique free glide carriage assembly, which uses acetal rollers with sealed SKF stainless steel bearings on a hardened stainless steel axle
- ▶ Chamfered bead internally and externally
- ▶ Packaged in kit form for easy transportation and installation
- ▶ Industry unique 8-point locking system for supreme security, which includes chamfered 0.8" linear bolts and deep throw 1" security hooks
- ▶ Each door comes with three solid zinc security hinges

## Options and extras

- ▶ Single, French, Bi-fold and Moving Corner Bi-Fold Doors are available
- ▶ Accommodates double, triples and laminated glazing with glass thickness of 1", 11/8" and 11/4"
- ▶ Weathered or non-weathered thresholds are available
- ▶ Open in or open out options
- ▶ Sill options available are 6 1/8" and 8 7/8"
- ▶ Available in over 150 different RAL colors, woodgrain effects or in AAMA 2605 (Kynar 500® or Hylar®)
- ▶ Trolley colors include black, white, stainless steel finish or color coded options
- ▶ Standard, 1 star or 3 star keyed cylinder options
- ▶ Hinges can be specified in a stainless steel finish or in any color
- ▶ Gaskets are available in 7 different colors: black, white, light gray, graphite gray, light oak, bronze, chestnut brown
- ▶ Comprehensive handle range, including color matched options

## Available in the following color finishes

The Origin Bi-fold Door can be manufactured in over 150 different RAL colors, as well as a split color option.

Additionally, Origin products are also available in AAMA 2605 (Kynar 500®) or (Hylar®) finishes.

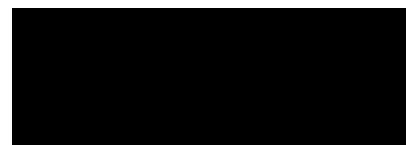
To the right demonstrates our most popular colors and authentic woodgrain effects.

If you choose to order your doors in either Patio White, Slate Gray, Southern Bronze, Jet Black, Clear Anodized and Bronze Anodized, these are available on an industry-leading 2-week lead time.

For the full range, please visit [originbifolds.com](http://originbifolds.com)



Bronze Anodized (MX5)



Jet Black (9005M)



Slate Gray (7015M)



Clear Anodized (AA25)



Patio White (YA103E)



Southern Bronze (YL222E)



Natural Oak



Golden Oak



Mahogany

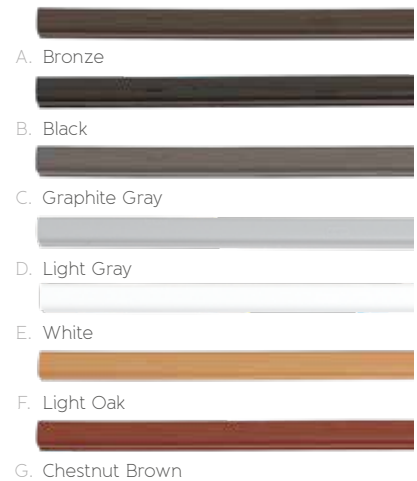


Walnut



With our custom door system, even the gaskets are down to your specification. The below are our recommendations.

Door Color	Recommended Q-Lon Color
A. Walnut	Bronze
B. (9005M) and (YL222E)	Black
C. (7015M) and (MX5)	Graphite Gray
D. (AA25)	Light Gray
E. (YA103E)	White
F. Natural Oak and Golden Oak	Light Oak
G. Mahogany	Chestnut Brown



## White Glove Delivery Service



One of our priorities is the safe delivery of our products to you. With this in mind, we introduced our White Glove Delivery Service. This is designed to operate as follows:

- The delivery driver will unload freight from their trailer via lift gate (pending it fits onto the gate)
- Delivery driver will take freight inside a residence or business, place it where it belongs, and unwrap it if specified by the customer
- This service usually comes with a guaranteed transit if that is necessary
- We can generally get a rate to have the driver handle a forklift if there is one on site. Some LTL carriers will comply with driving a forklift, but almost all truckload carriers will drive a forklift at the site(s)
- Freight is always loaded and unloaded with extra care so as to not break or get damaged while in transit. Extra attention is spent on loading and unloading with Origin's White Glove Delivery Service
- All door and window glass panels are individually packaged so as to keep it protected during transit and while at the jobsite or stored in the warehouse

# Security

## Origin's Multi-Point Lock

All lead doors greater than 44" 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 passed the forced entry resistance test in compliance with AAMA 1304-02 and TAS 202

In the image opposite, you will see the 8 points of locking on one of our Mid-rail options. Included in this are shoot bolts that go into the top and bottom track, deep throw security hooks and lock.



The Origin Bi-fold Door is one of the select few doors of its kind to pass Florida's rigorous High Velocity Hurricane Zone (HVHZ) testing standards.

## Barrels

We offer 2 types of locking barrel/cylinder in addition to our standard barrel.

The ATK barrel is certified to 3 Star British Kite Mark TS007:2014

Our most secure locking barrel is a 3 Star British Kite Mark TS007:2014, with coded magnetic keys

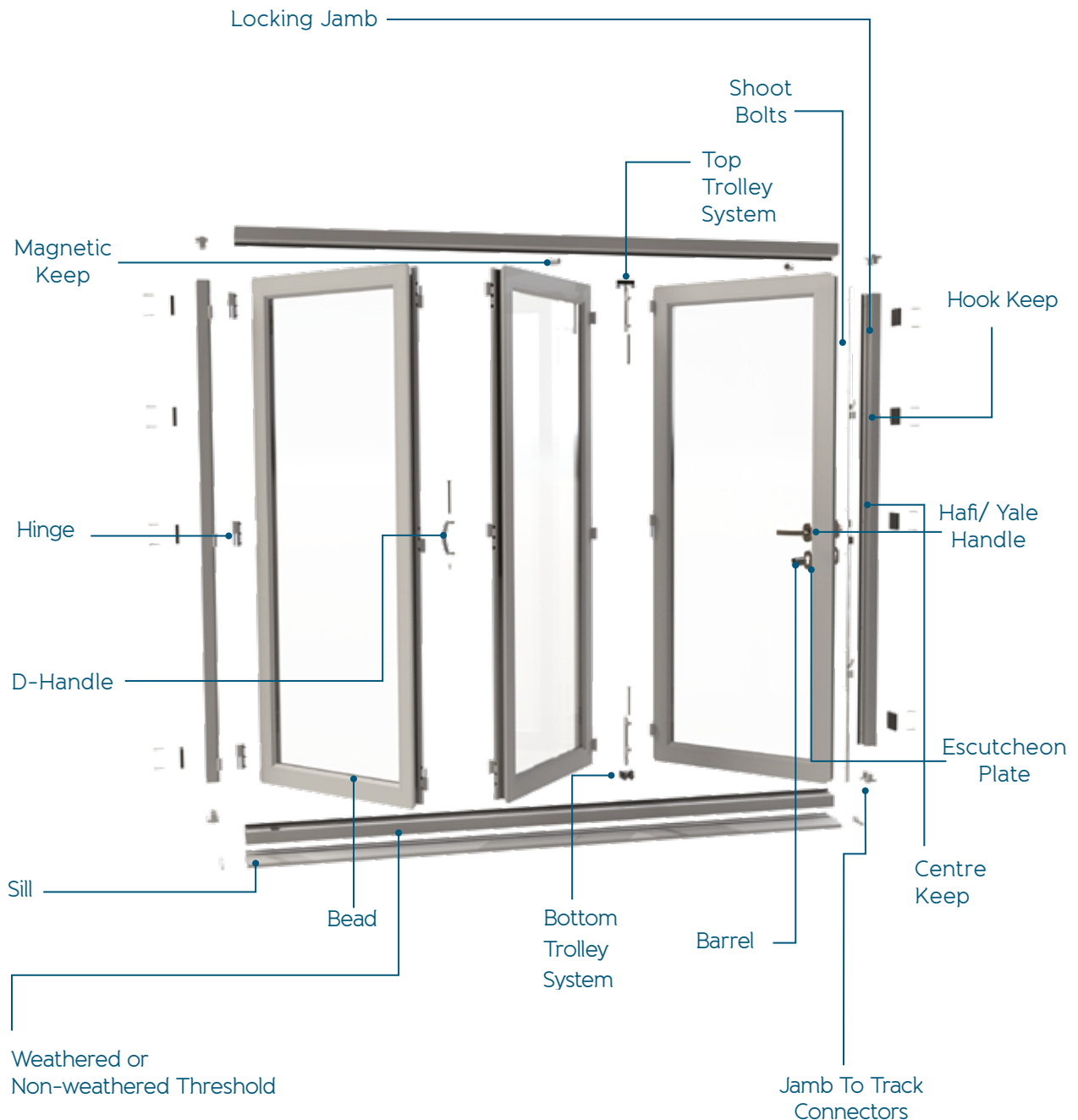
Standard Barrel  
- 3 Star ATK

3 Star British  
Kite Marked ABS  
Barrel with coded  
magnetic keys





# Bi-fold Door Make-Up



# Performance & Limitations

## Size Limitations

Maximum door panel size for hurricane zones	36 3/4" x 96"
Maximum door panel size for non-hurricane zones	Most width or length combinations that equal or are less than 24 1/2 square feet.

## Configurations

Open out ☒ Open in ☒ Limitless span ☒ 90° corner ☒ 135° corner\* ☒  
\*Available in most states

## Best Thermal Performance

	U-Factor	SHGC
Hurricane Impact	0.33	0.17
Non-impact	0.28	0.15



## Glass Options

Tints ☒ Internal Grids ☒ Muntins ☒

## Structure

Design Pressure	+50/-55
Air	0.10 cfm/ft <sup>2</sup>
Water	7.52 psf

## Threshold Options

Weathered: Maximum weather protection with ½" riser (2" bottom track)

ADA: Non-Weathered Threshold – minimal threshold (2" bottom track)

Low Threshold track is ADA compliant when recessed

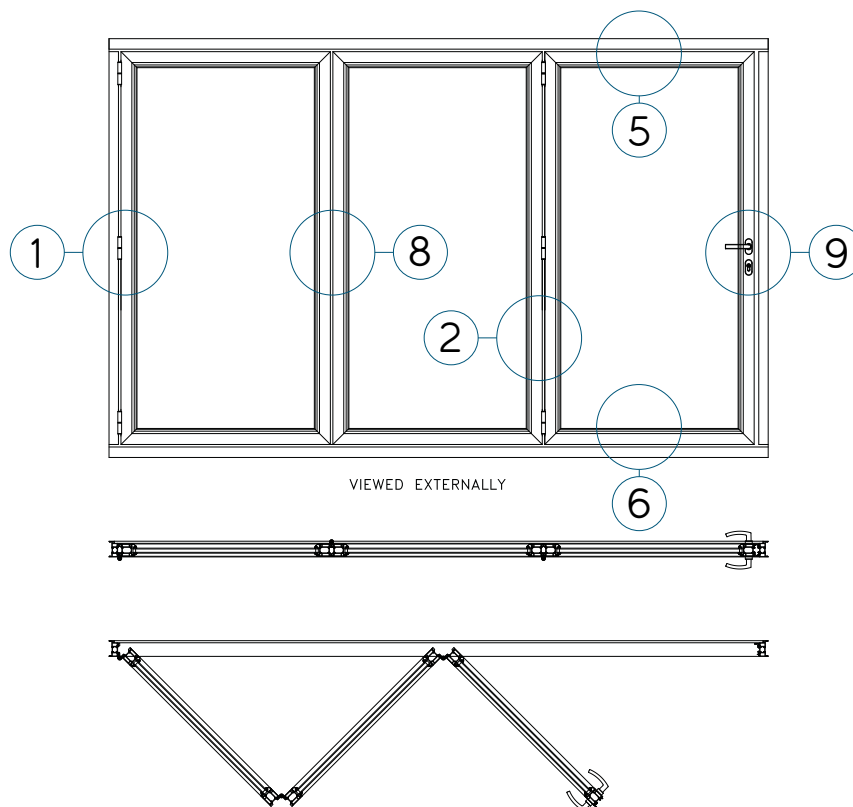


# Master Configurations

## Master Configuration 3 Door Left

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

See Configuration Key for section detail ►



3 Door Left



5+0



7+0

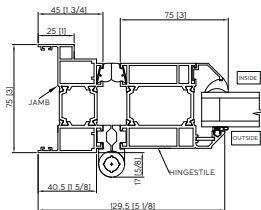
### Key features

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

See page 57 for configurations

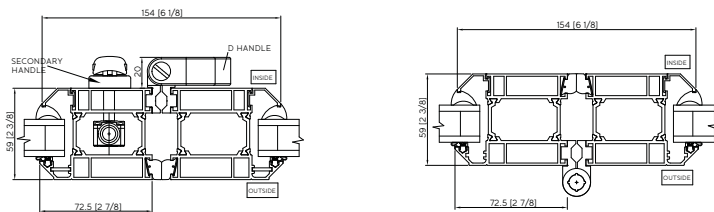
## Configuration key

### 1 - Hinge Jamb Detail



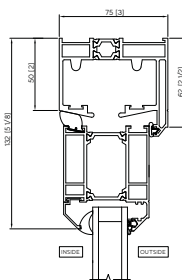
See page 26

### 2a, 2b - Opening Stiles



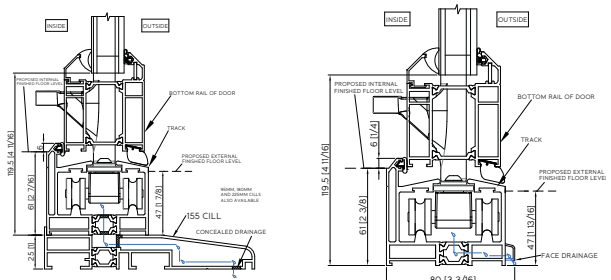
See page 27

### 5 - Top Track Detail



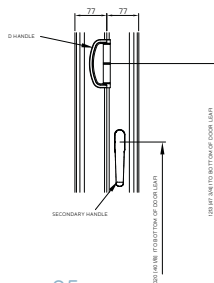
See page 30

### 6a-6d - Bottom Track Detail



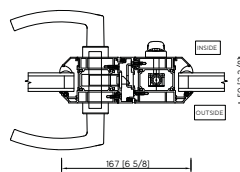
See pages 31-33

### 8 - Secondary Handle Layout



See page 35

### 9 - Locking Secondary Detail

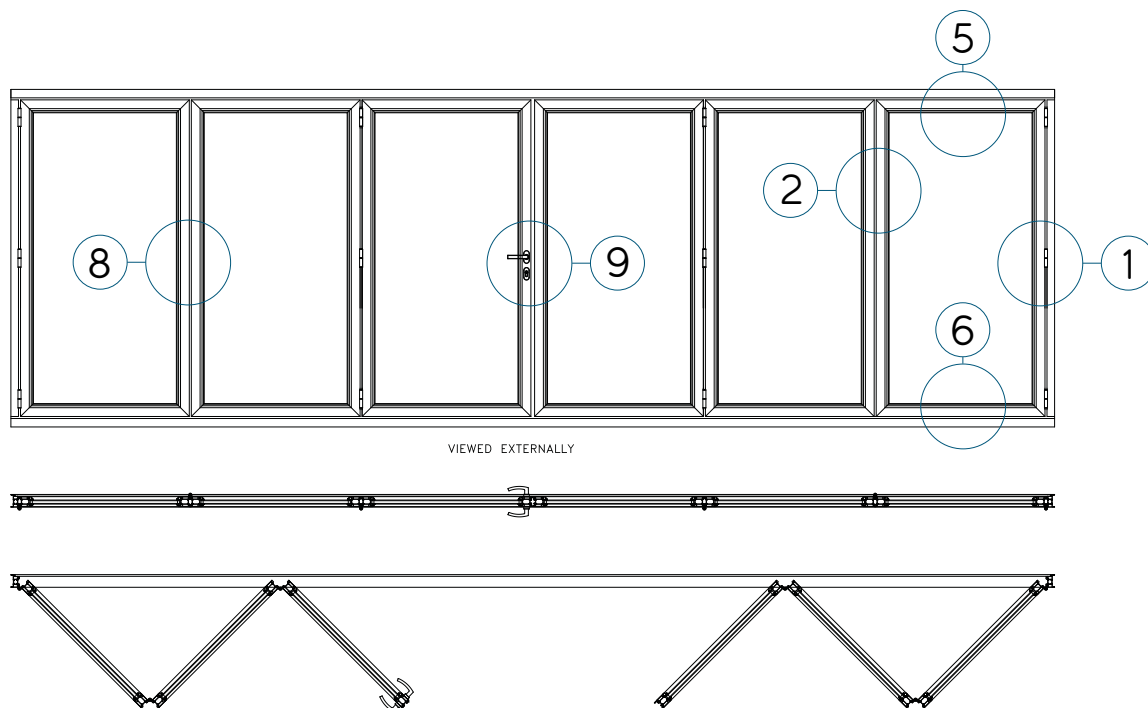


See pages 36

## 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 Configuration Key for section detail ►



3+3

3+1

5+1

5+3

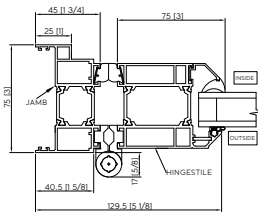
See page 57 for configurations

### Key features

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

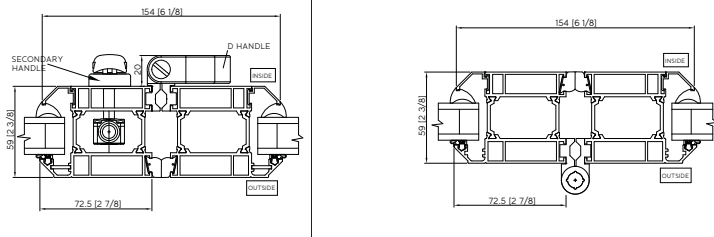
## Configuration key

### 1 - Hinge Jamb Detail



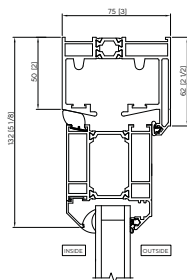
See page 26

### 2a, 2b - Opening Stiles



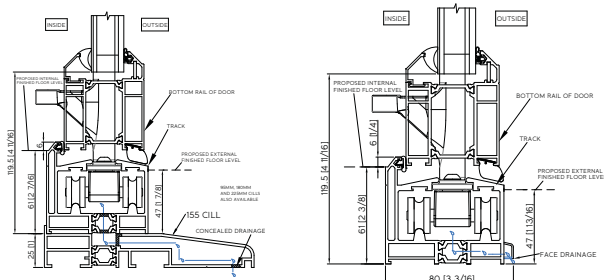
See page 27

### 5 - Top Track Detail



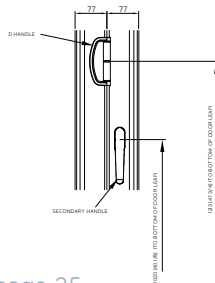
See page 30

### 6a-6d - Bottom Track Detail



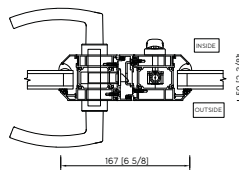
See pages 31-33

### 8 - Secondary Handle Layout



See page 35

### 9 - Locking Secondary Detail

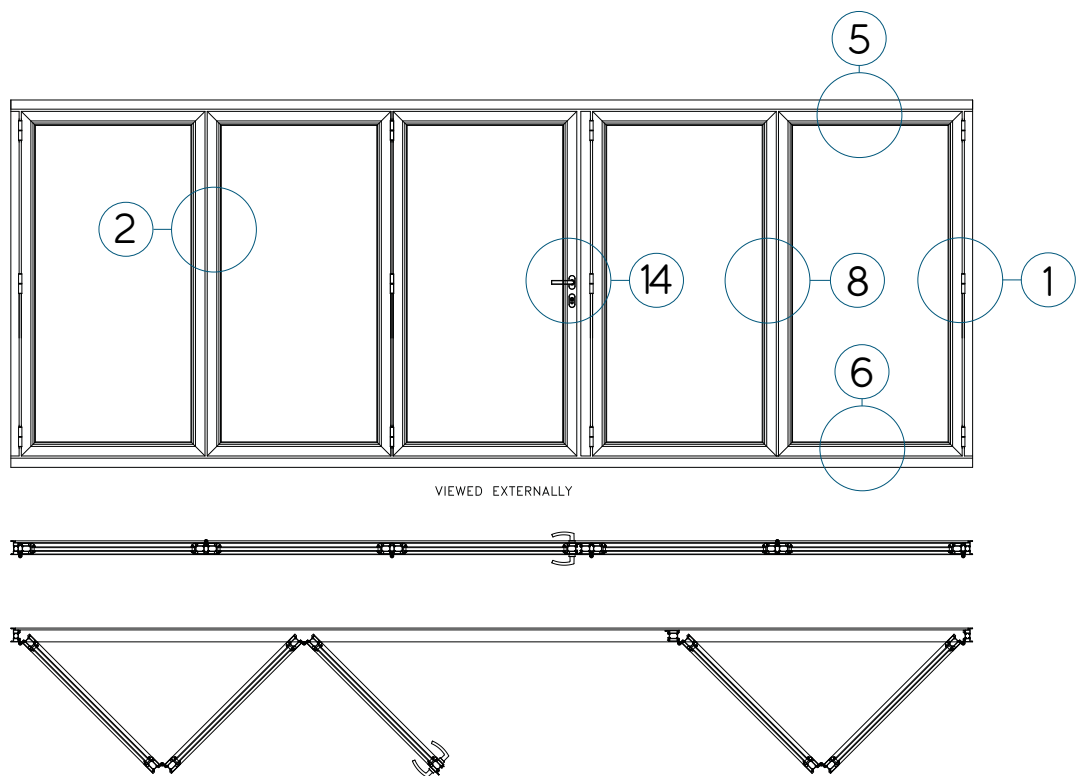


See pages 36

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

See Configuration Key for section detail ▶



3+2



2+1



4+1



6+1

Key features

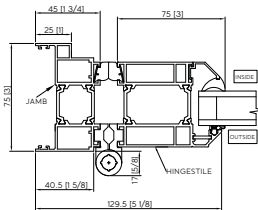
- ▶ Origin 8 point locking system
- ▶ Everyday access door
- ▶ Doors open to both sides

See page 57 for configurations



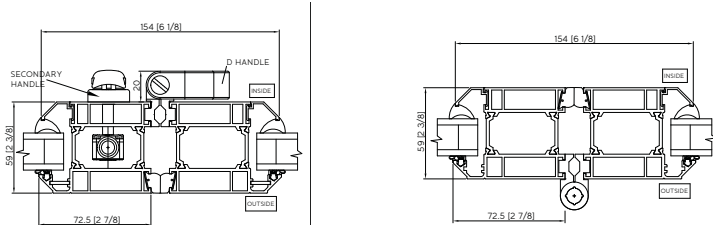
## Configuration key

### 1 - Hinge Jamb Detail



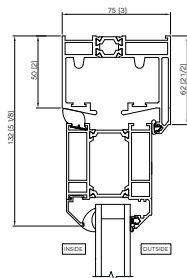
See page 26

### 2a, 2b - Opening Stiles



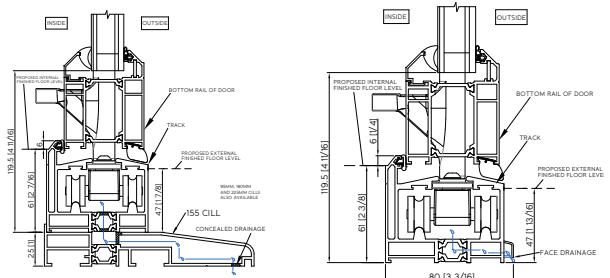
See page 27

### 5 - Top Track Detail



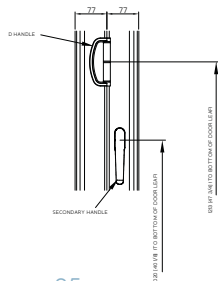
See page 30

### 6a-6d - Bottom Track Detail



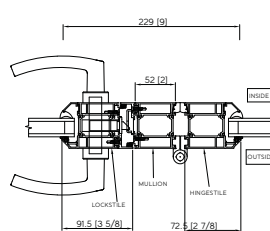
See pages 31-33

### 8 - Secondary Handle Layout



See page 35

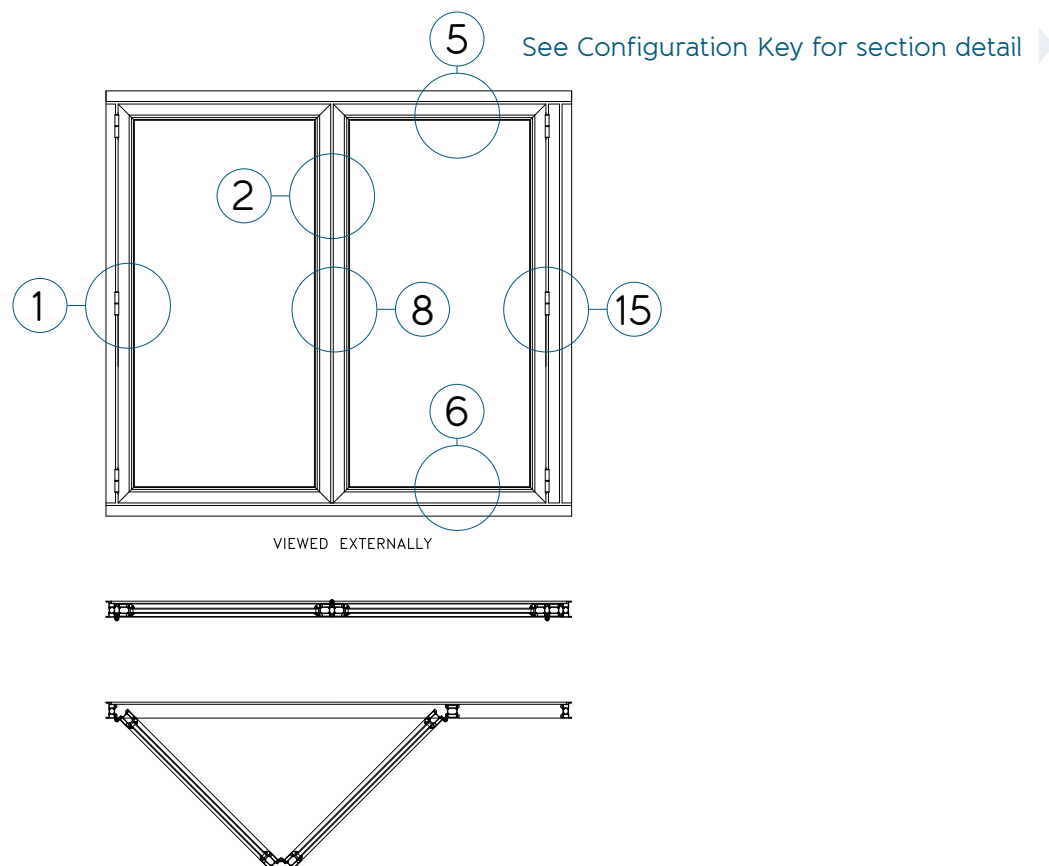
### 14 - Locking Mullion Detail



See page 41

## Master Configuration 2 Door

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



2 Door Left



4+0



6+0



8+0

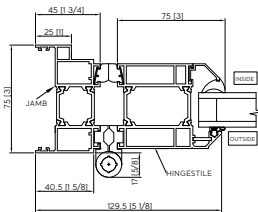
See page 57 for configurations

### Key features

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

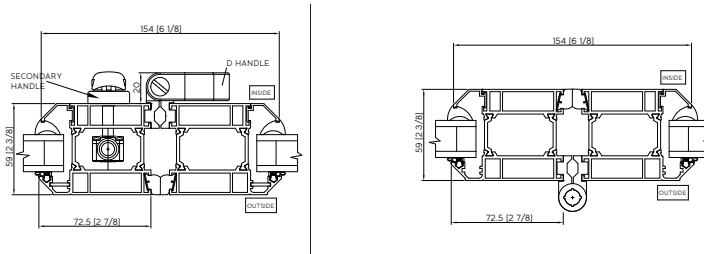
## Configuration key

### 1 - Hinge Jamb Detail



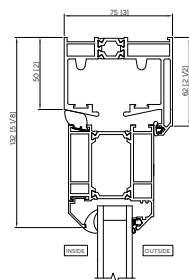
See page 26

### 2a, 2b - Opening Stiles



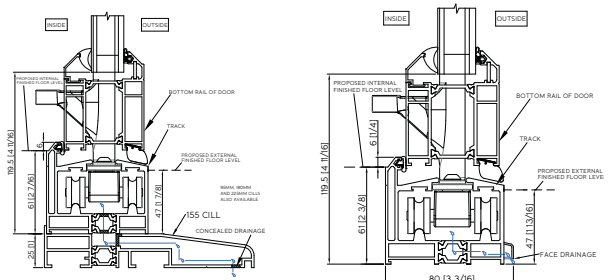
See page 27

### 5 - Top Track Detail



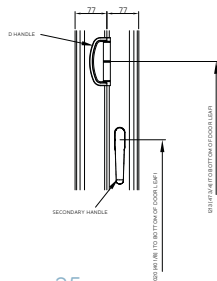
See page 30

### 6a-6d - Bottom Track Detail



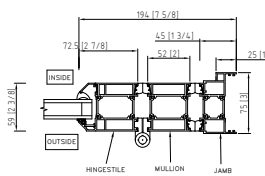
See pages 31-33

### 8 - Secondary Handle Layout



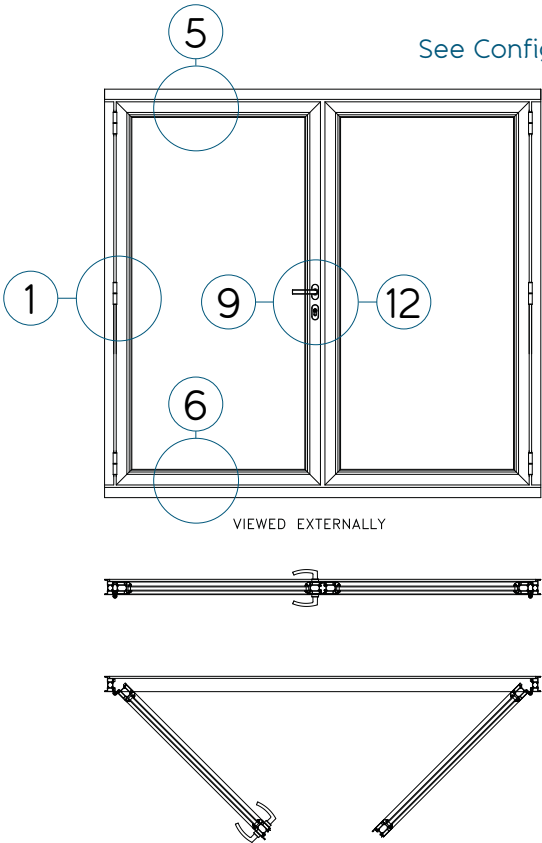
See page 35

### 15 - Standard Mullion Detail



See pages 42

Master Configuration French Door



See Configuration Key for section detail ▶



French Door

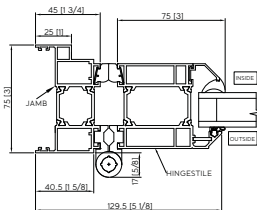
Key features

▶ Origin 8 point locking system

See page 57 for configurations

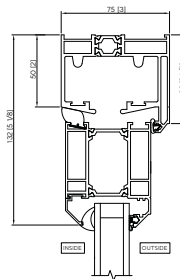
## Configuration key

### 1 - Hinge Jamb Detail



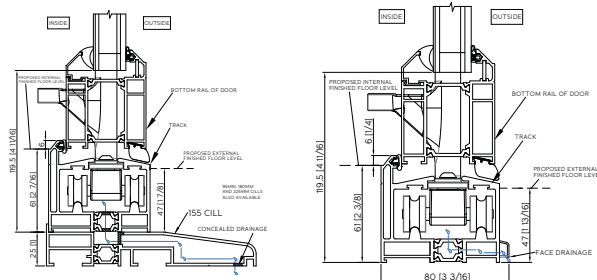
See page 26

### 5 - Top Track Detail



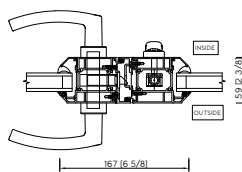
See page 30

### 6a-6d - Bottom Track Detail



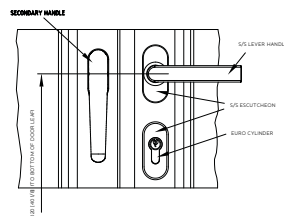
See pages 31-33

### 9 - Locking Secondary Detail



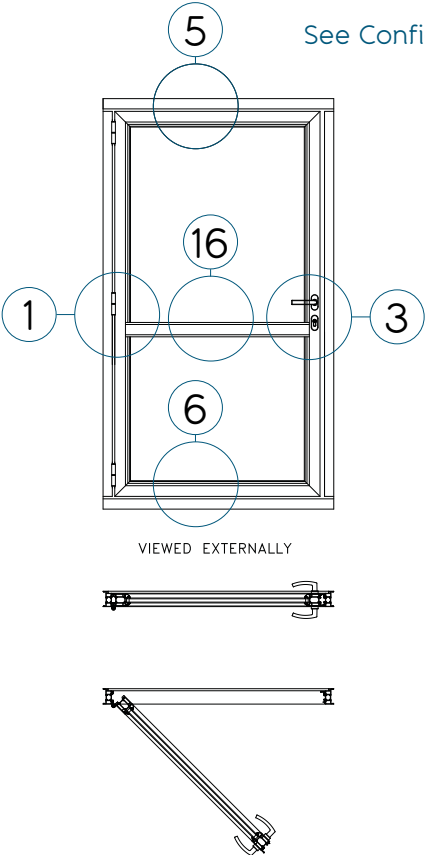
See pages 36

### 12 - Locking Secondary Handle Detail



See page 39

Master Configuration Single Door



See Configuration Key for section detail ▶



Single Door

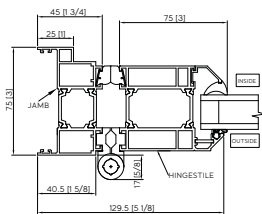
Key features

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

See page 57 for configurations

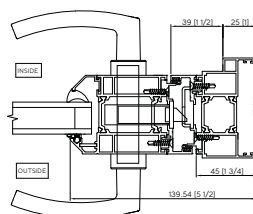
## Configuration key

1 - Hinge Jamb Detail



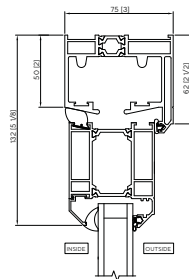
See page 26

3 - Locking Jamb Detail



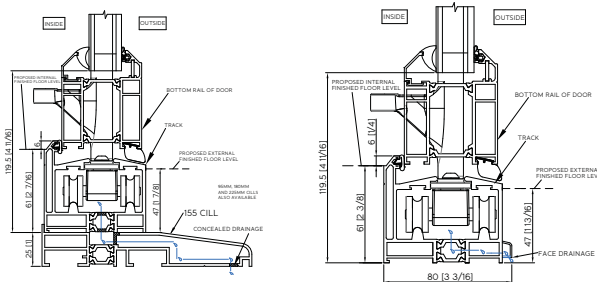
See page 28

5 - Top Track Detail



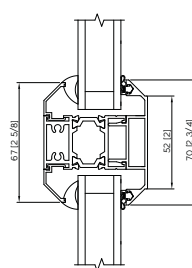
See page 30

6a-6d - Bottom Track Detail



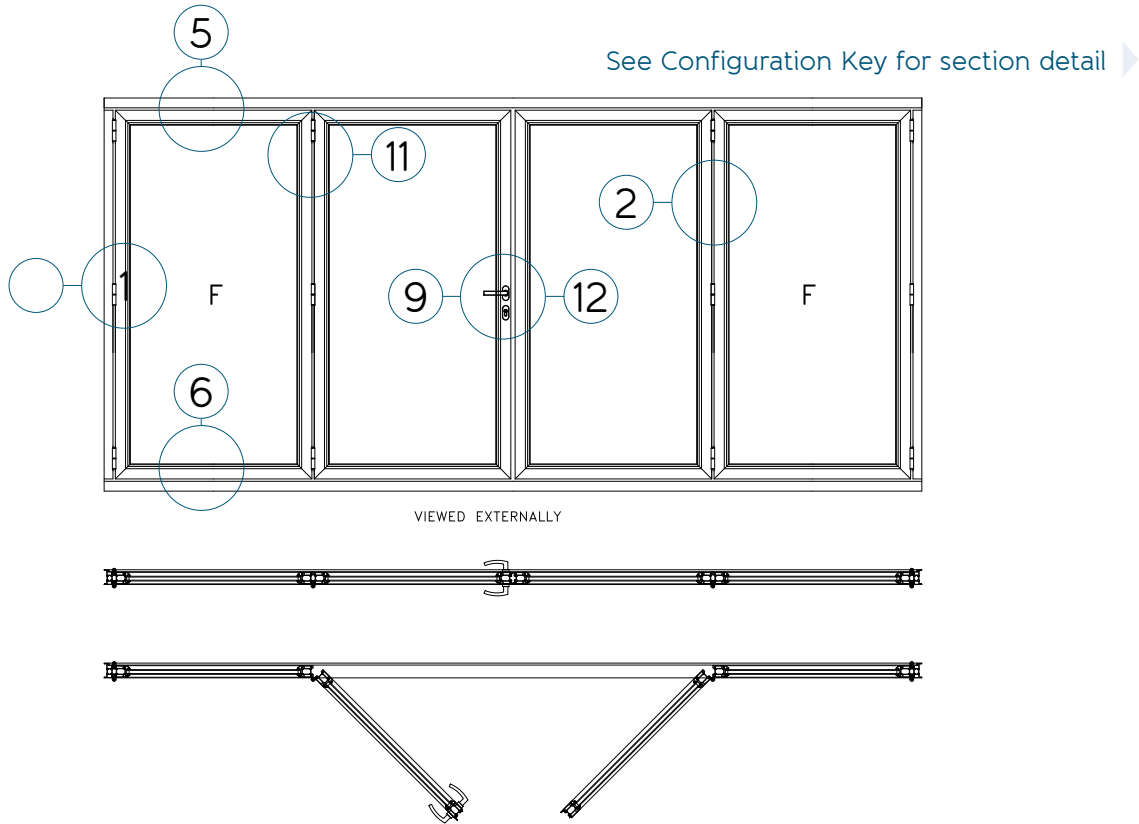
See pages 31-33

16 - Midrail Detail



See page 43

## Master Configuration French Door With Fixed Panels



French Door with Fixed Panels

See page 57 for configurations

\*Any fixed panels will be manufactured with dummy hinges for alignment and structural purposes

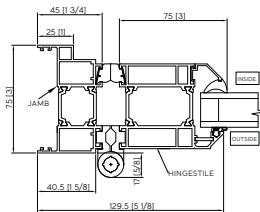
### Key features

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



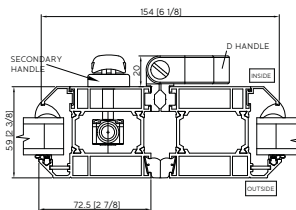
## Configuration key

### 1 - Hinge Jamb Detail

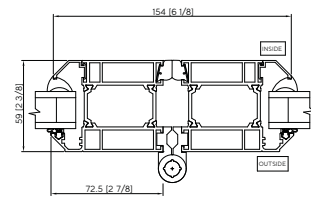


See page 26

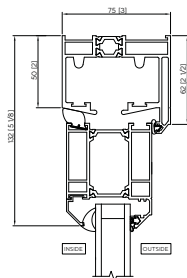
### 2a, 2b - Opening Stiles



See page 27

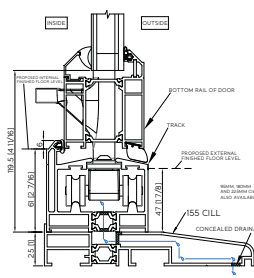


### 5 - Top Track Detail

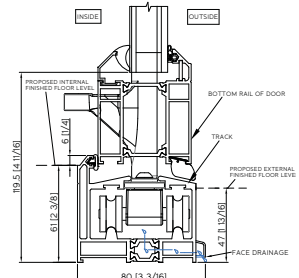


See page 30

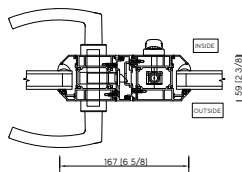
### 6a-6d - Bottom Track Detail



See pages 31-33

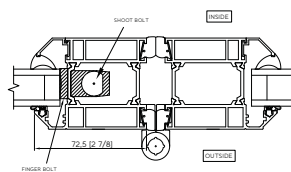


### 9 - Locking Secondary Detail



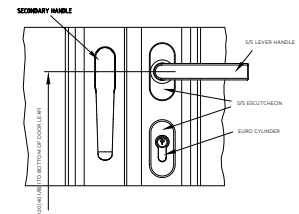
See pages 36

### 11 - Concealed Bolt Sash Locking



See page 38

### 12 - Locking Secondary Handle Detail



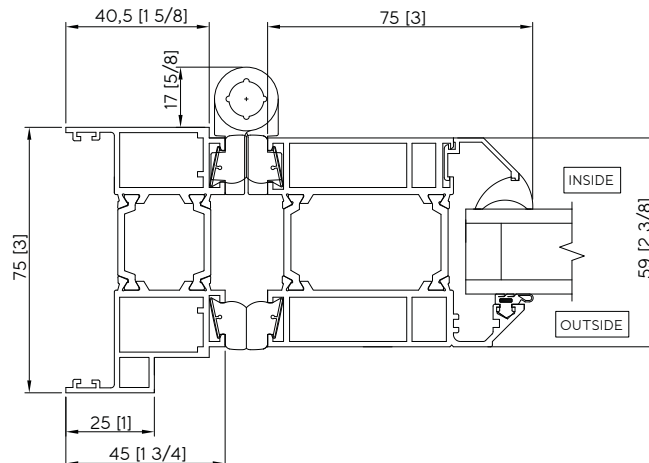
See page 39

# Technical drawings

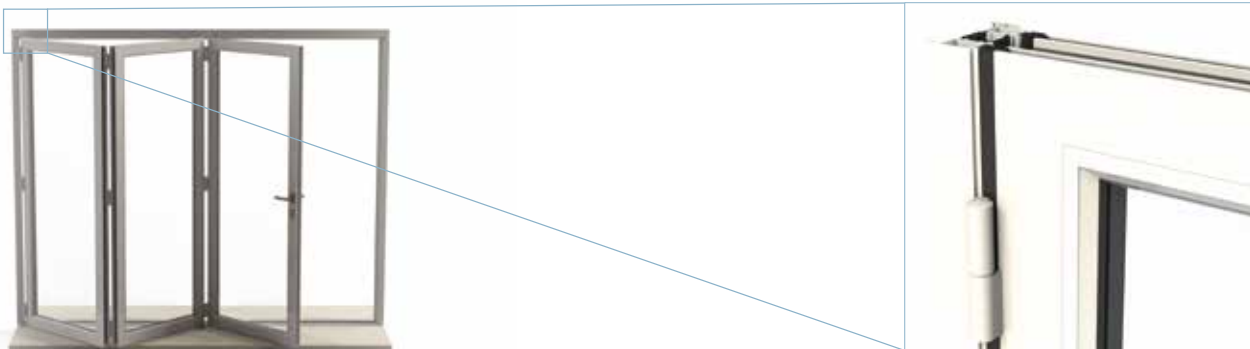
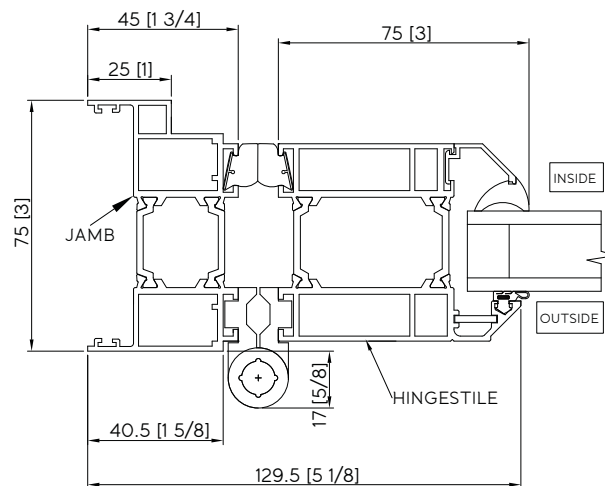
1a-1b

## Hinge Jamb Detail

Open in

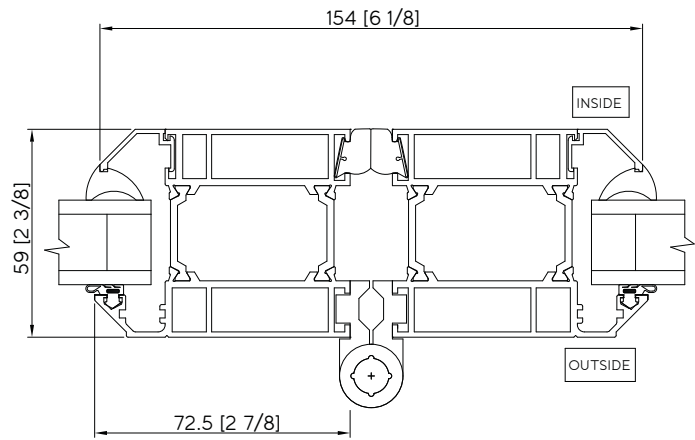


Open out

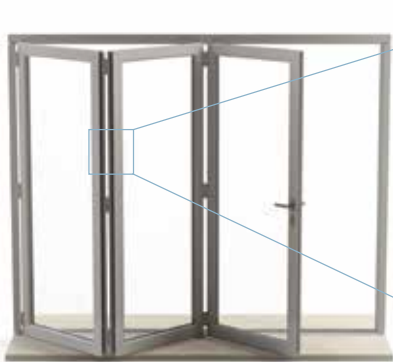
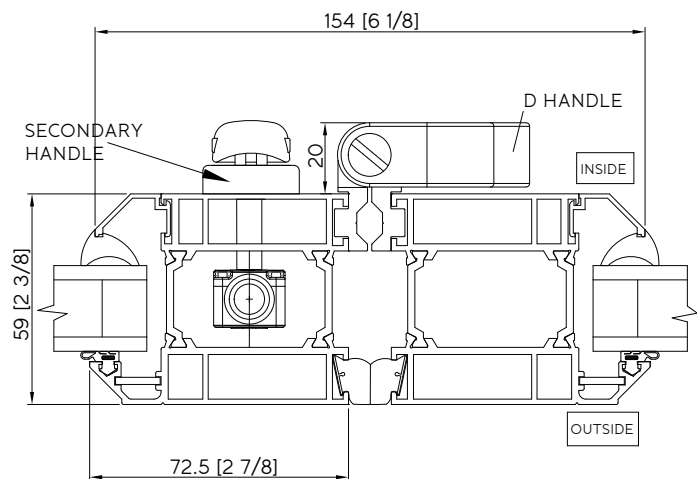


## 2a-2b Opening Stiles

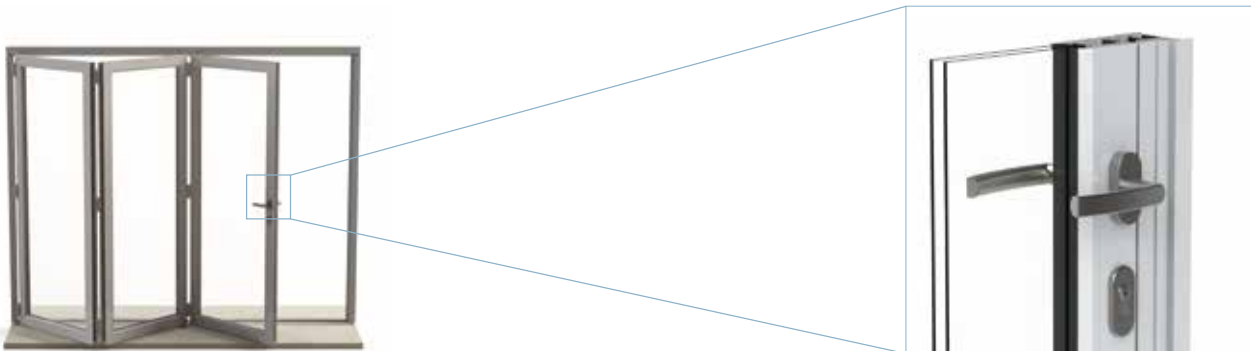
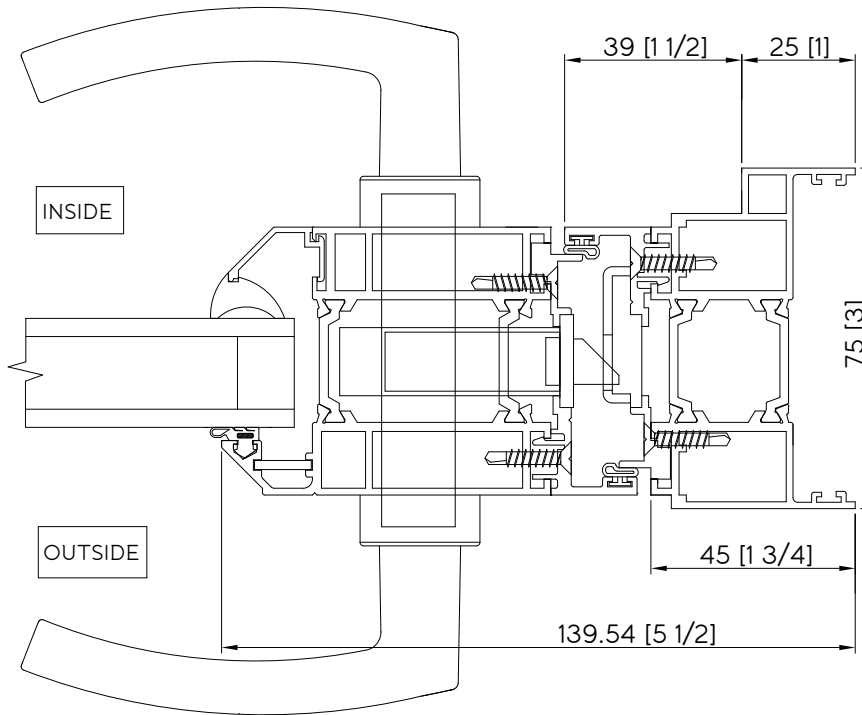
Open in



Open out

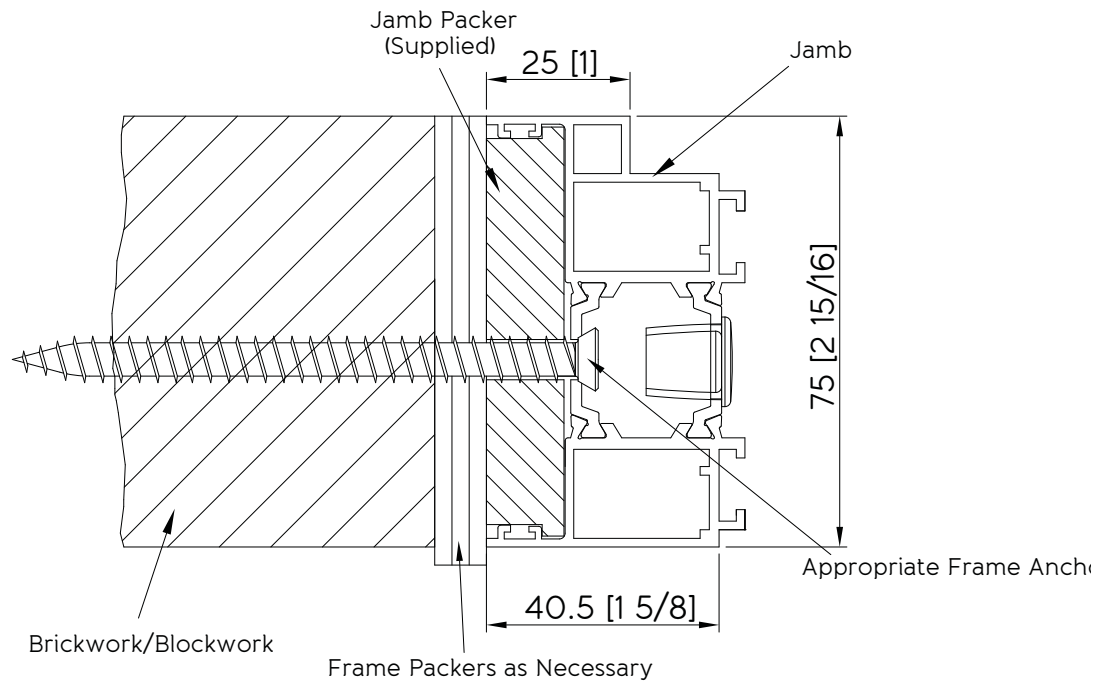


### 3 Locking Jamb Detail



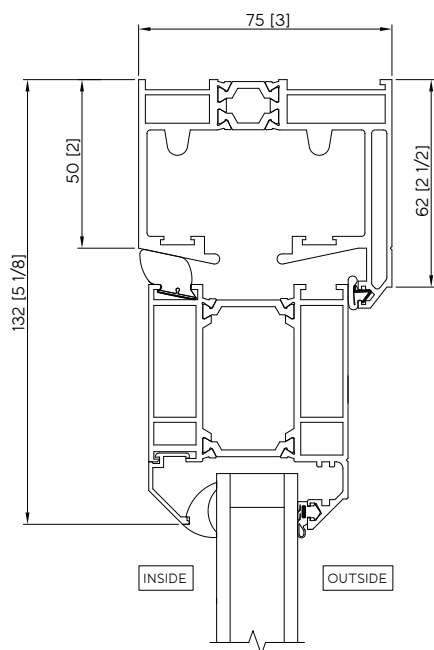
4

## Jamb Fixing Detail

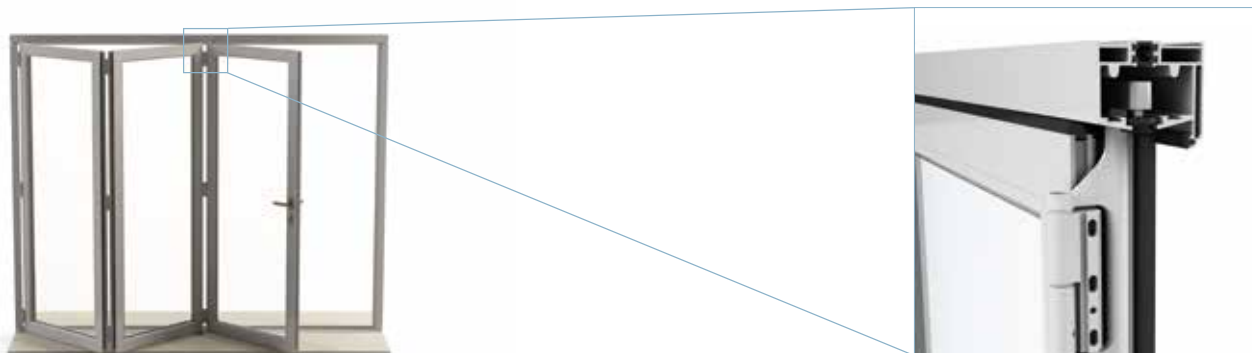
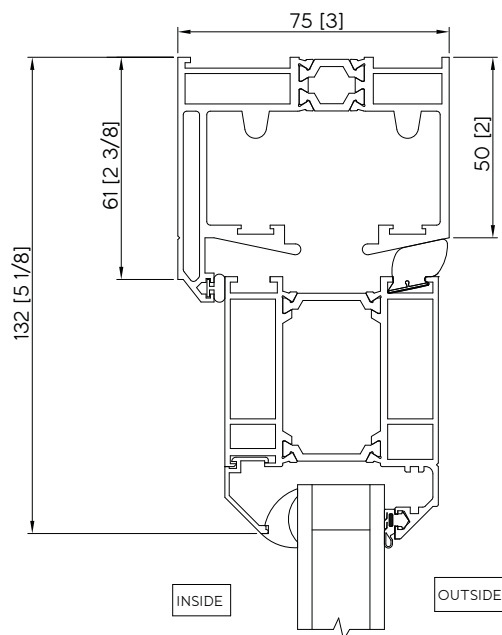


## 5a-5b Top Track Detail

Open in



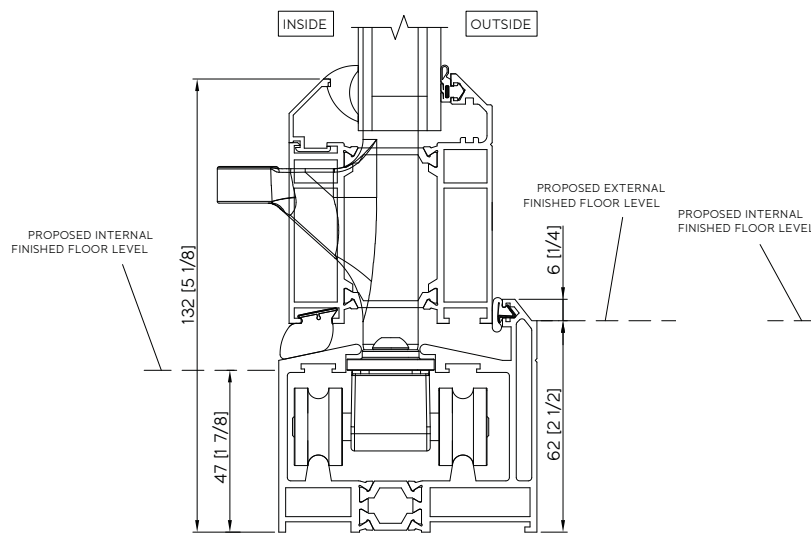
Open out



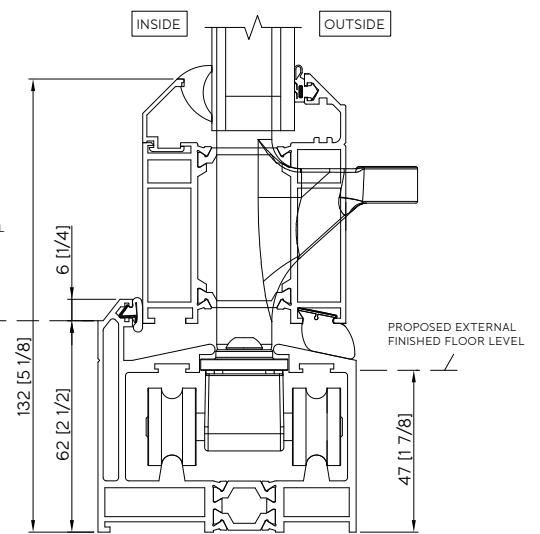
6a-6b

## Bottom Track Detail

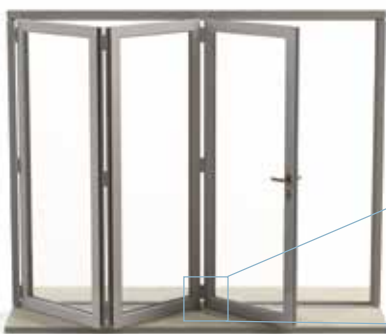
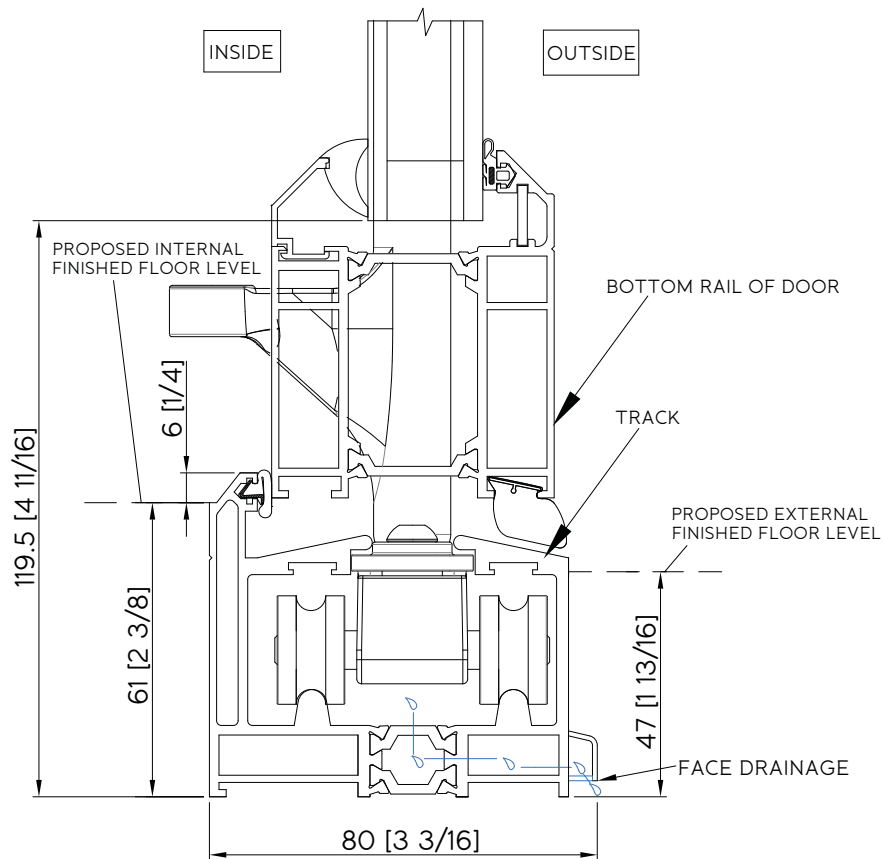
Open in



Open out

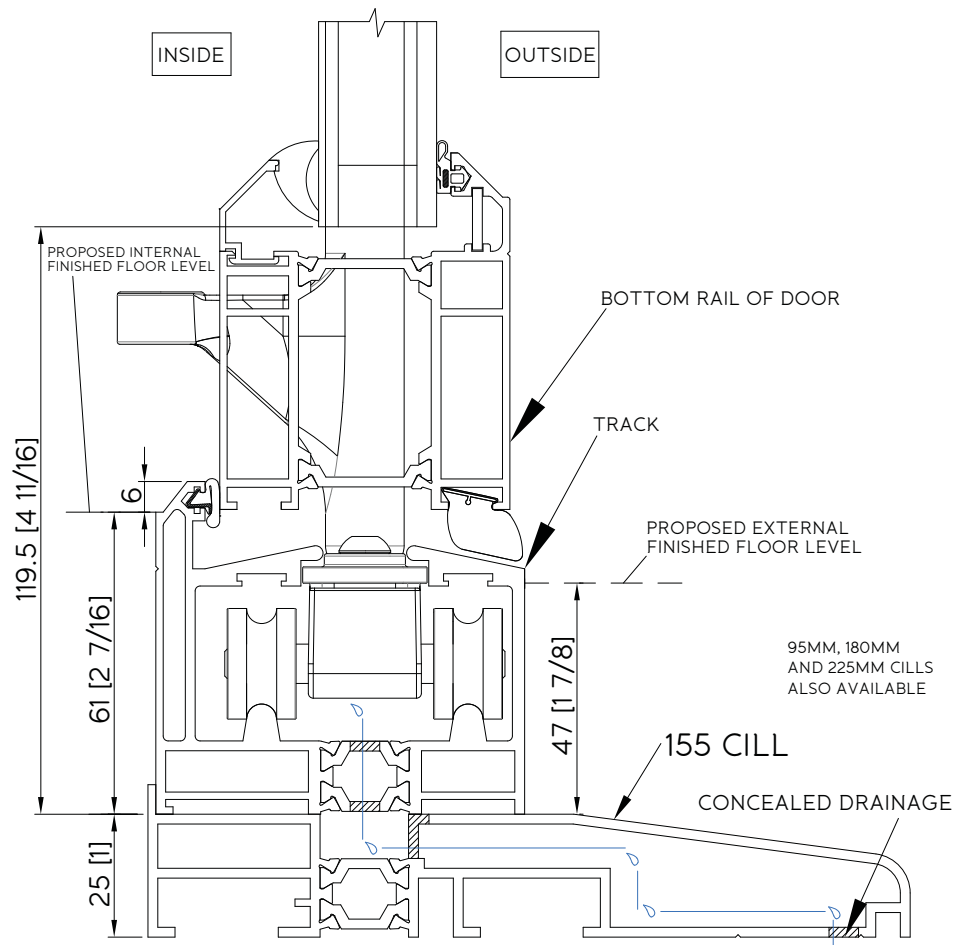


## 6c Bottom Track Detail Face Drainage





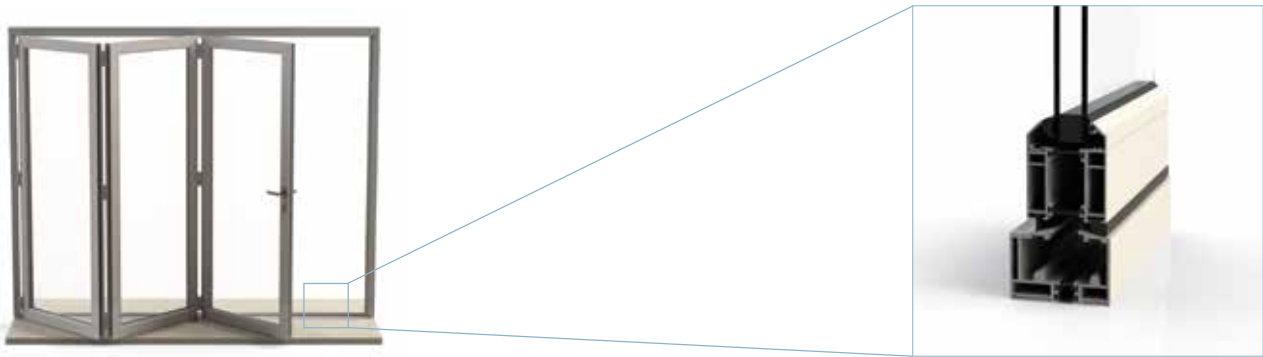
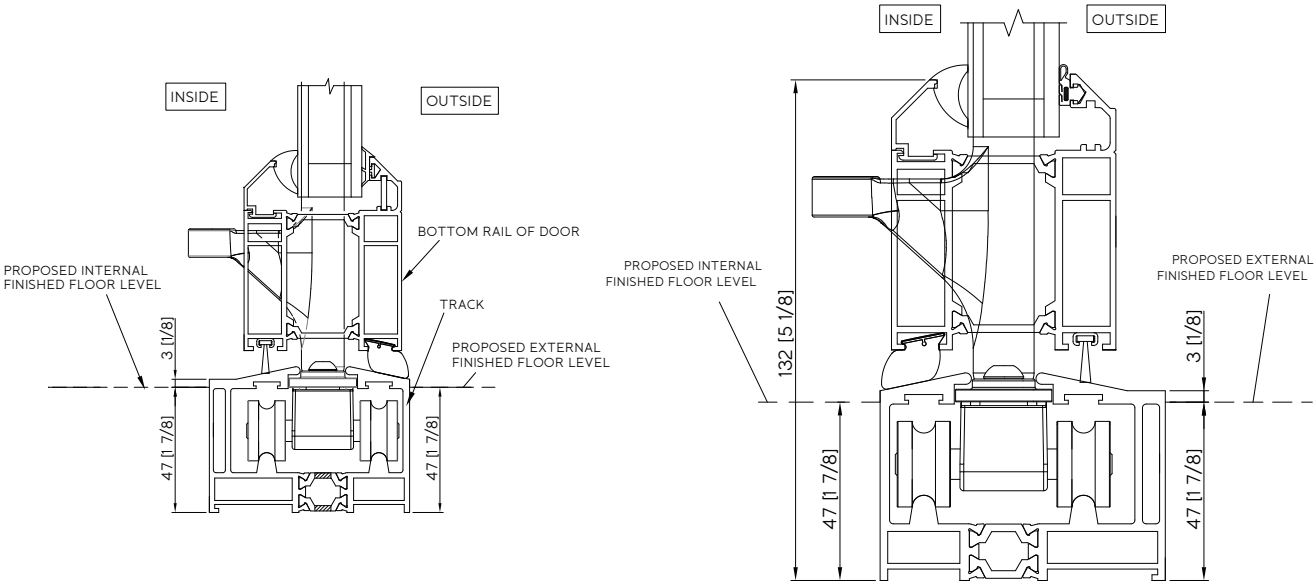
## 6d Bottom Track Detail Concealed Drainage



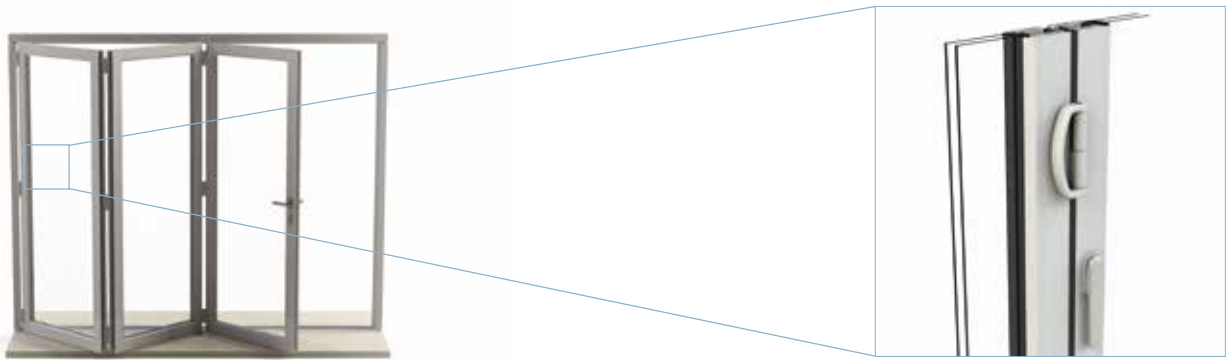
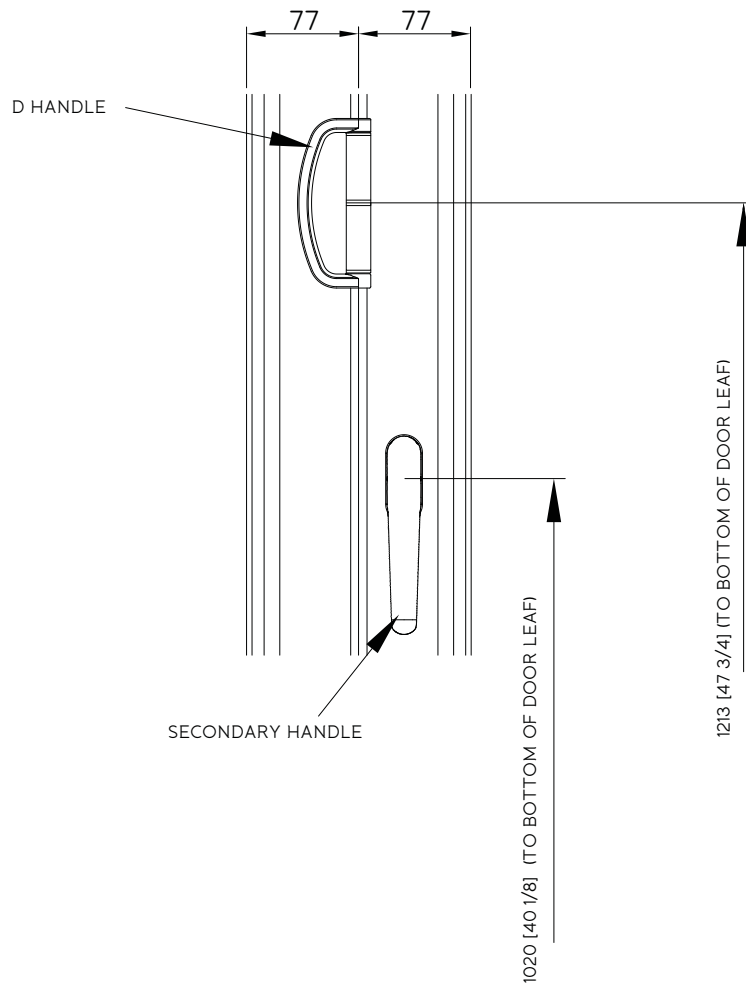
7a-7b Non-Weathered Threshold Detail

Open in

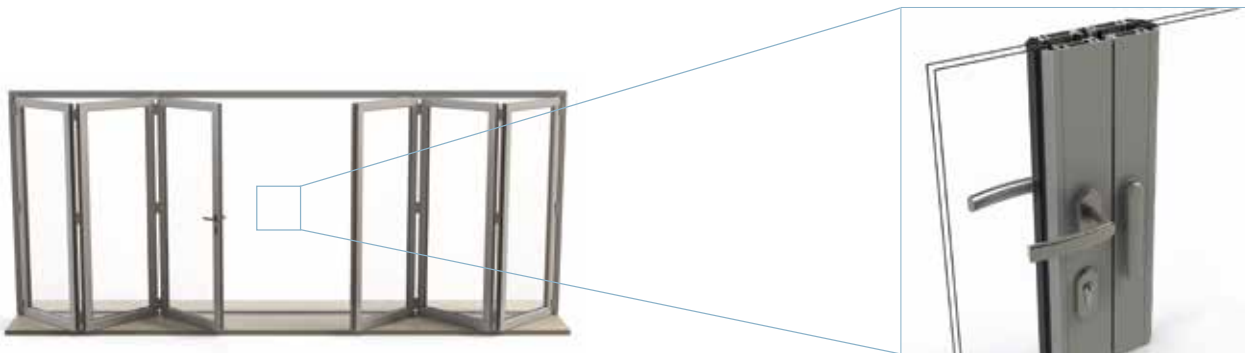
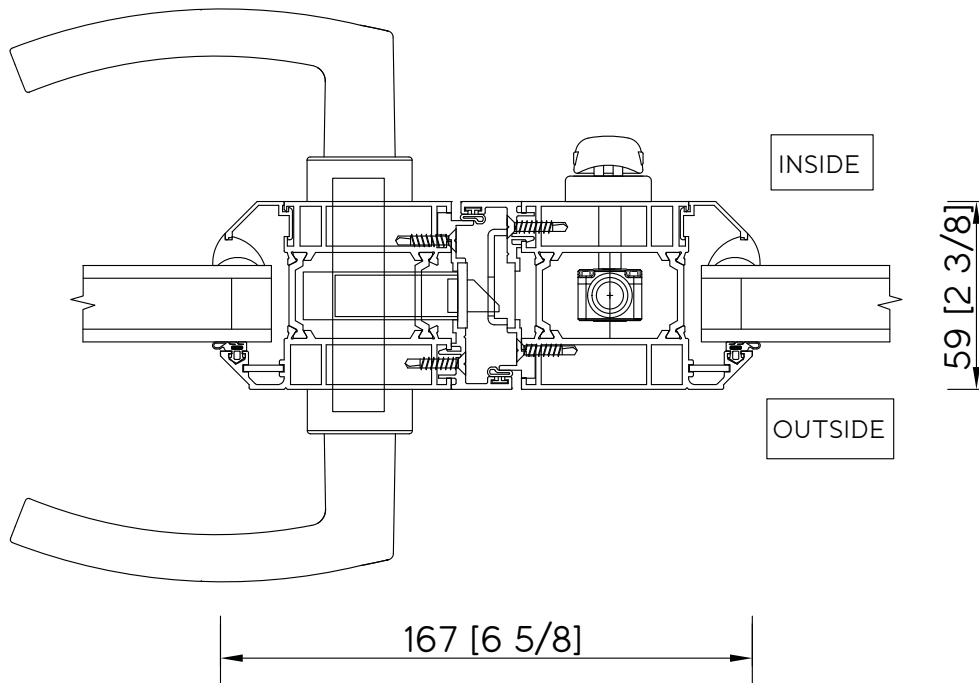
Open out



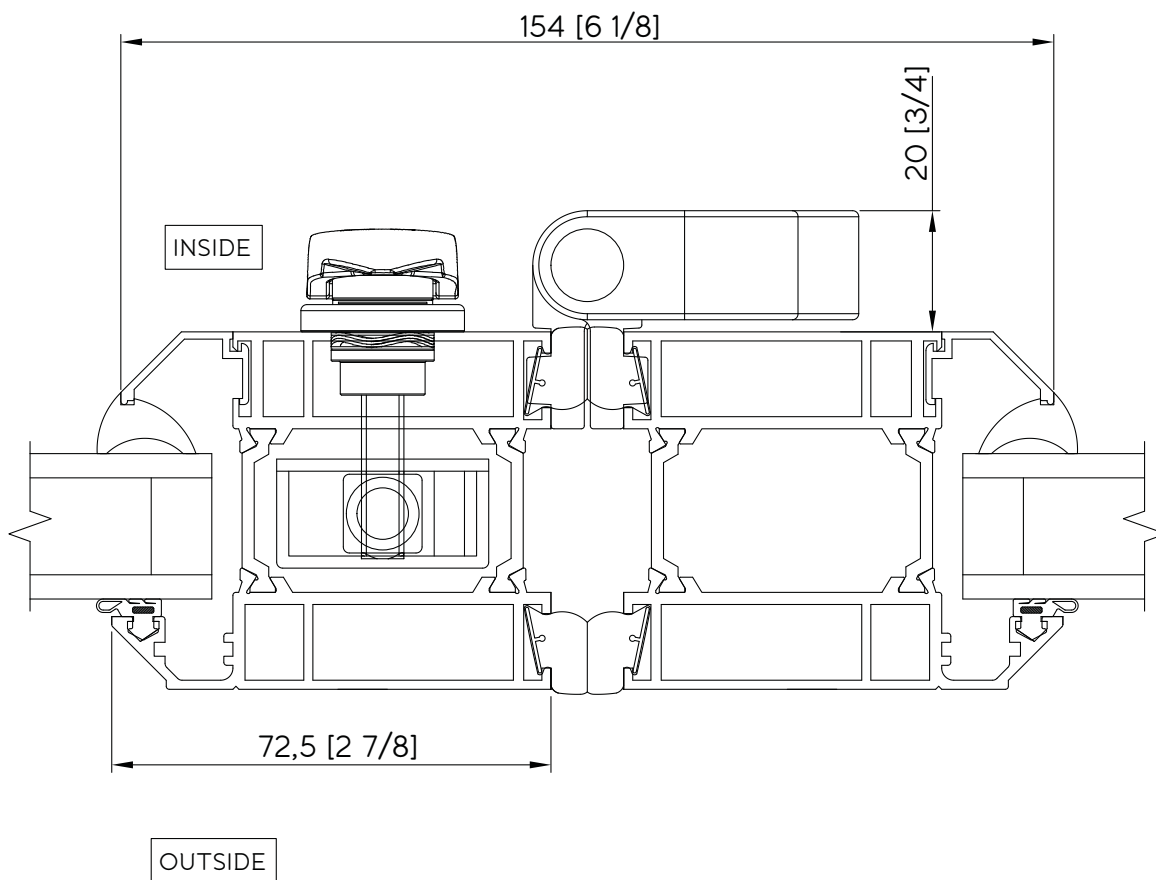
## 8 Secondary Handle Layout



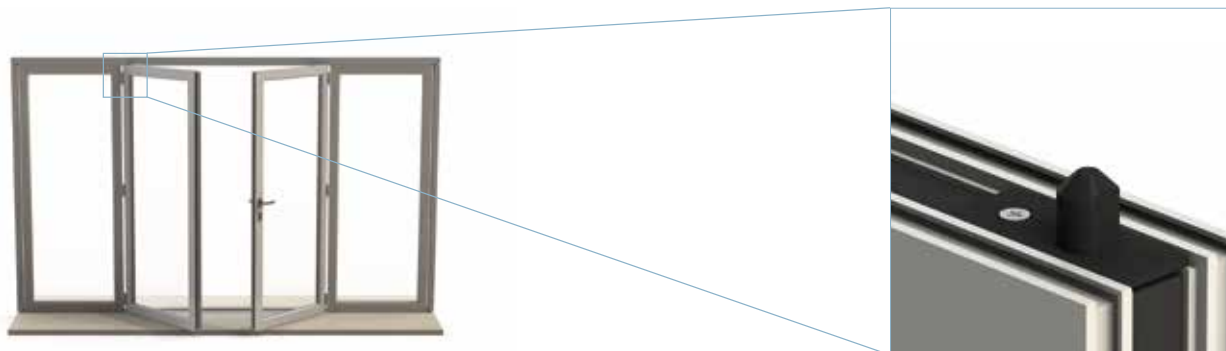
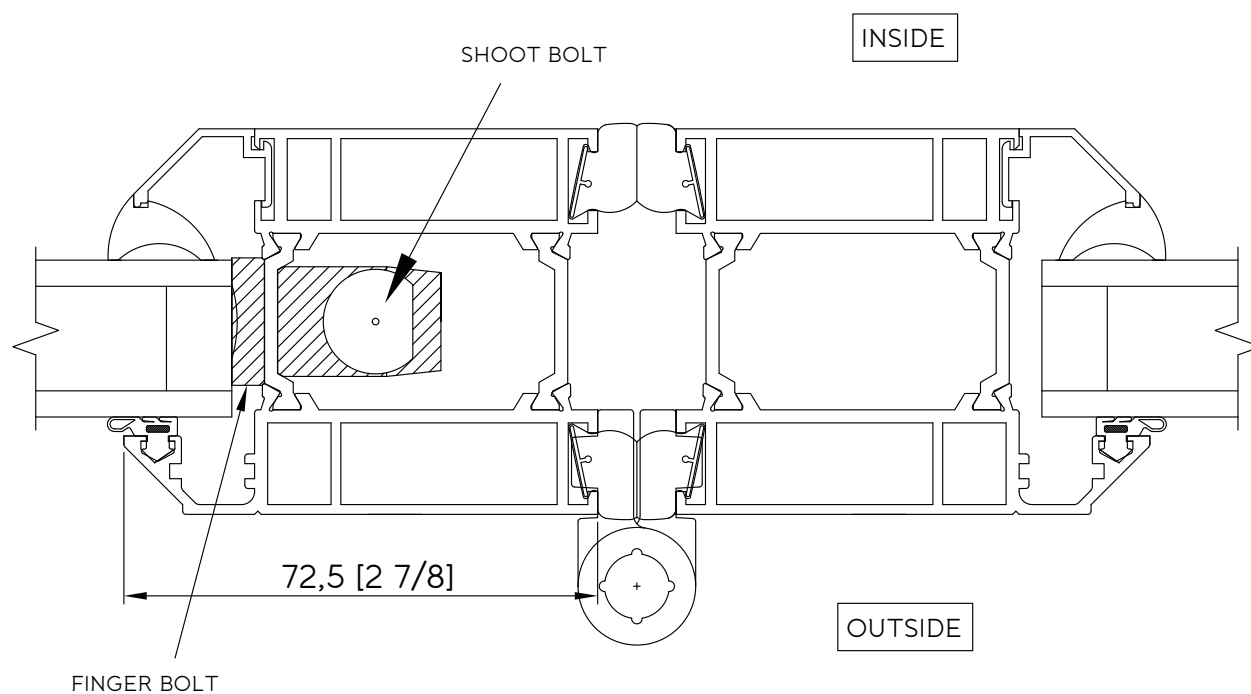
## 9 Locking Secondary Detail



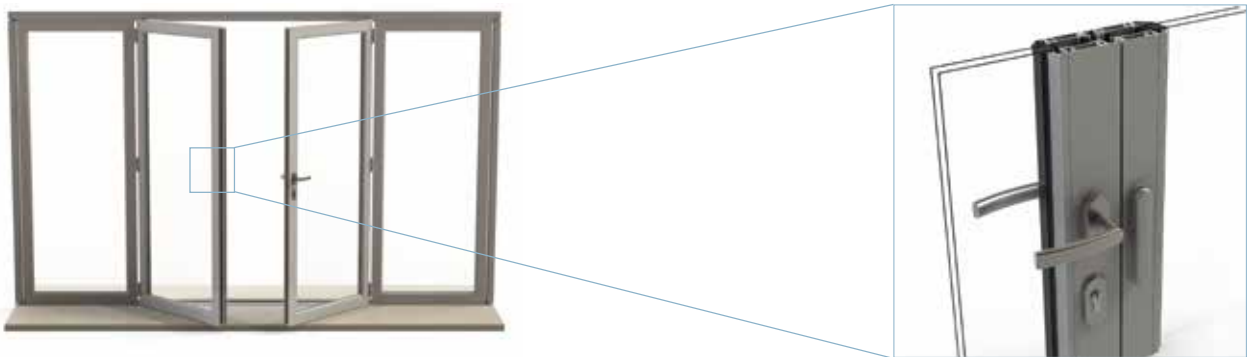
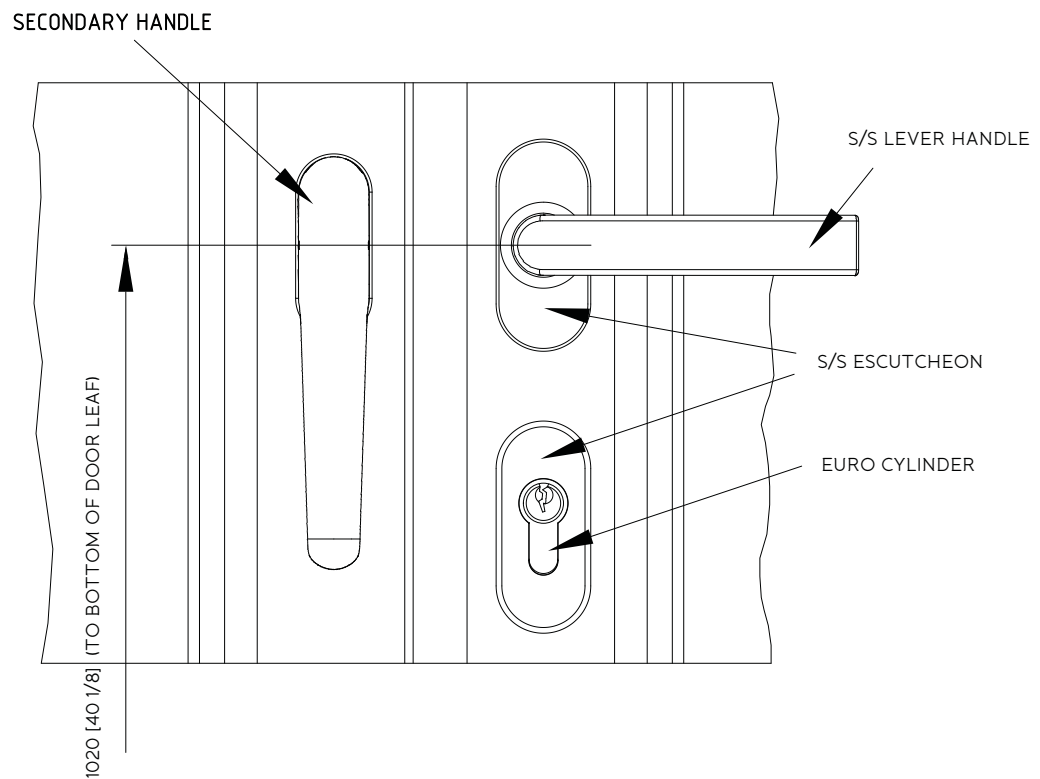
## 10 Keyed Locking Secondary



## 11 Fixed Door Concealed Locking

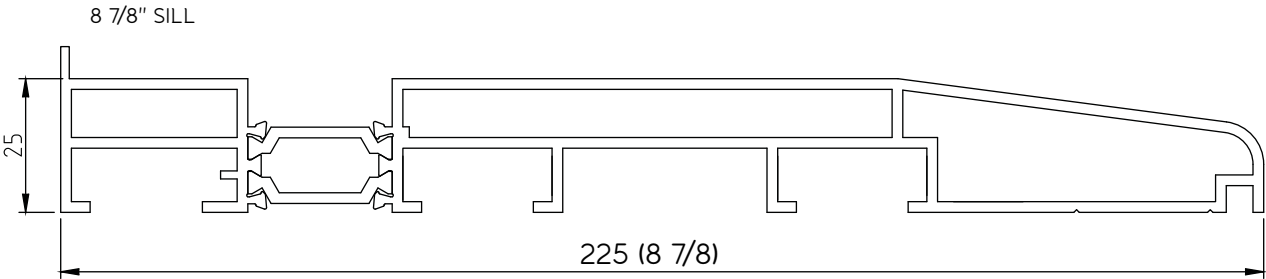
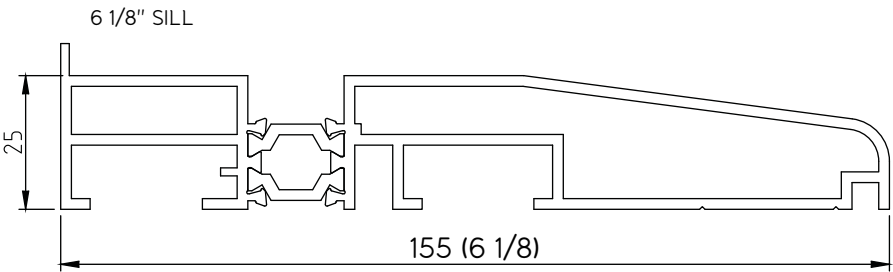


## 12 Locking Secondary Handle Detail



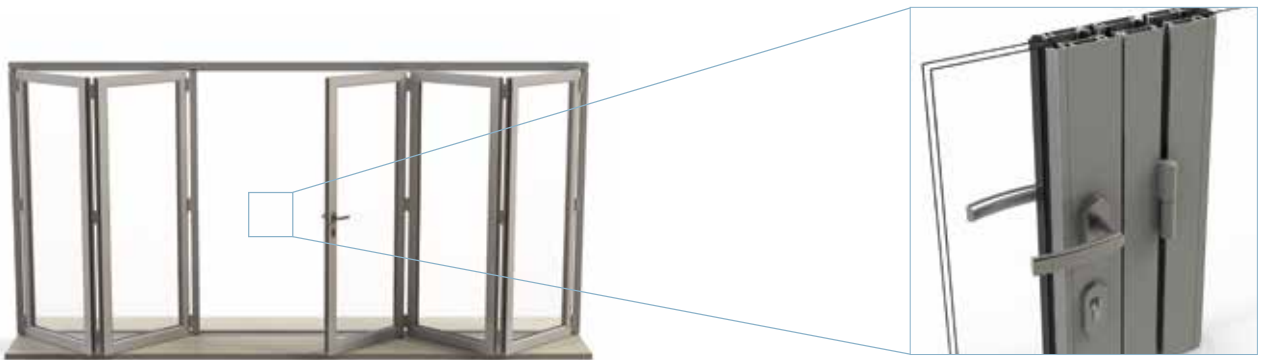
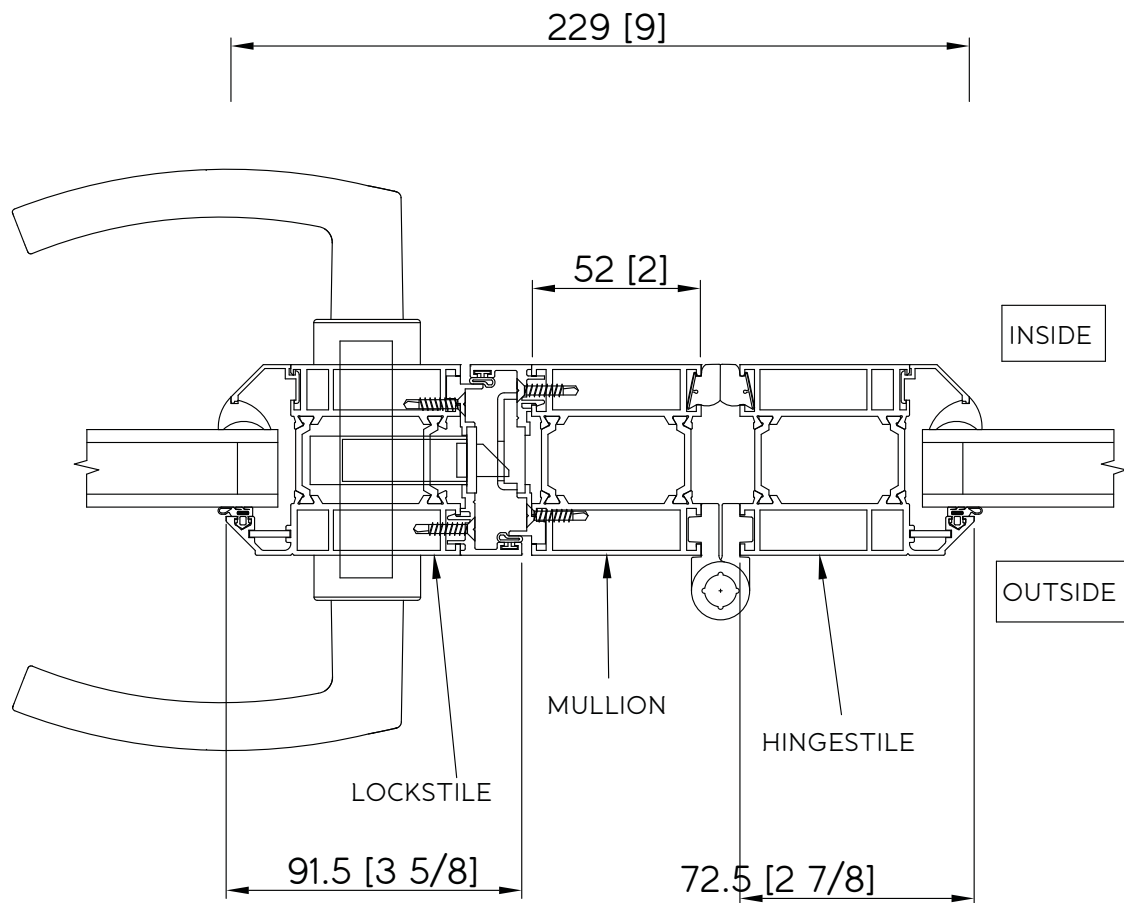
13

Sills

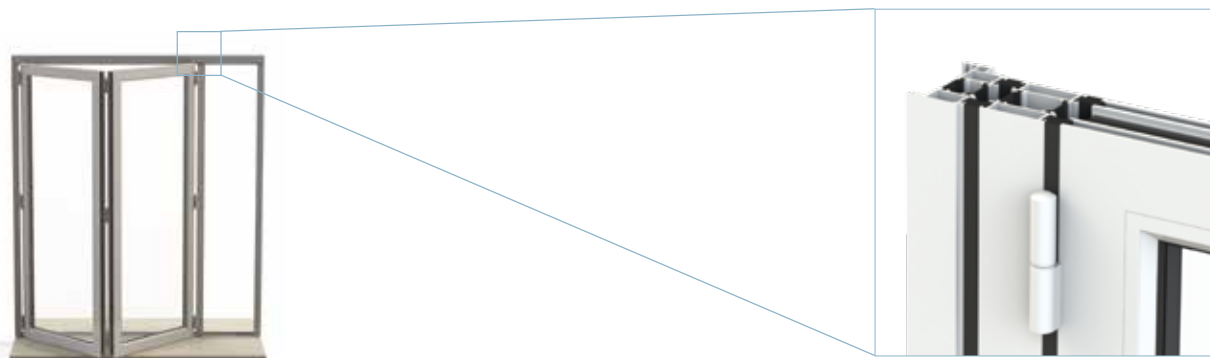
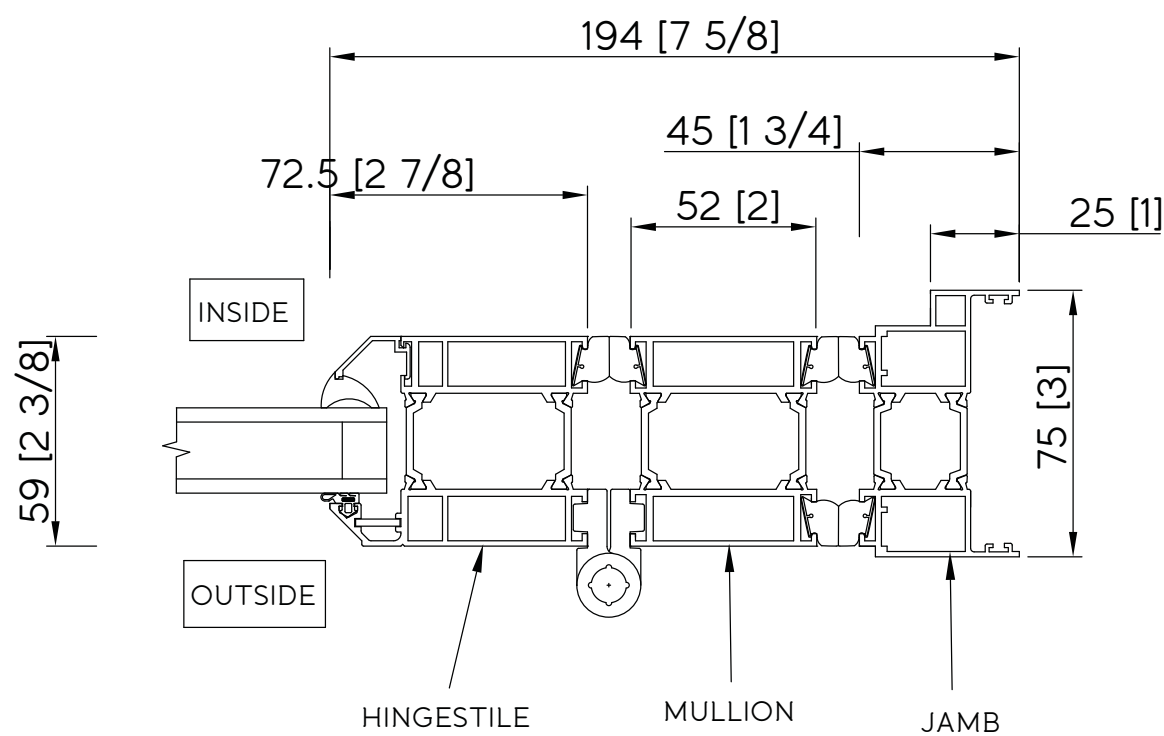




## 14 Locking Mullion Detail

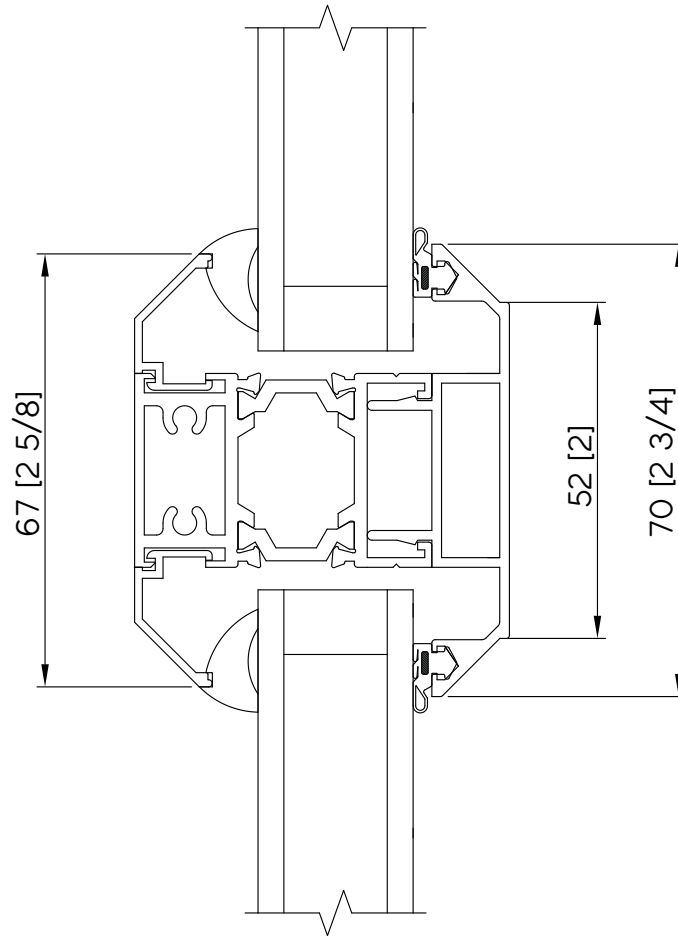


15 Standard Mullion Detail

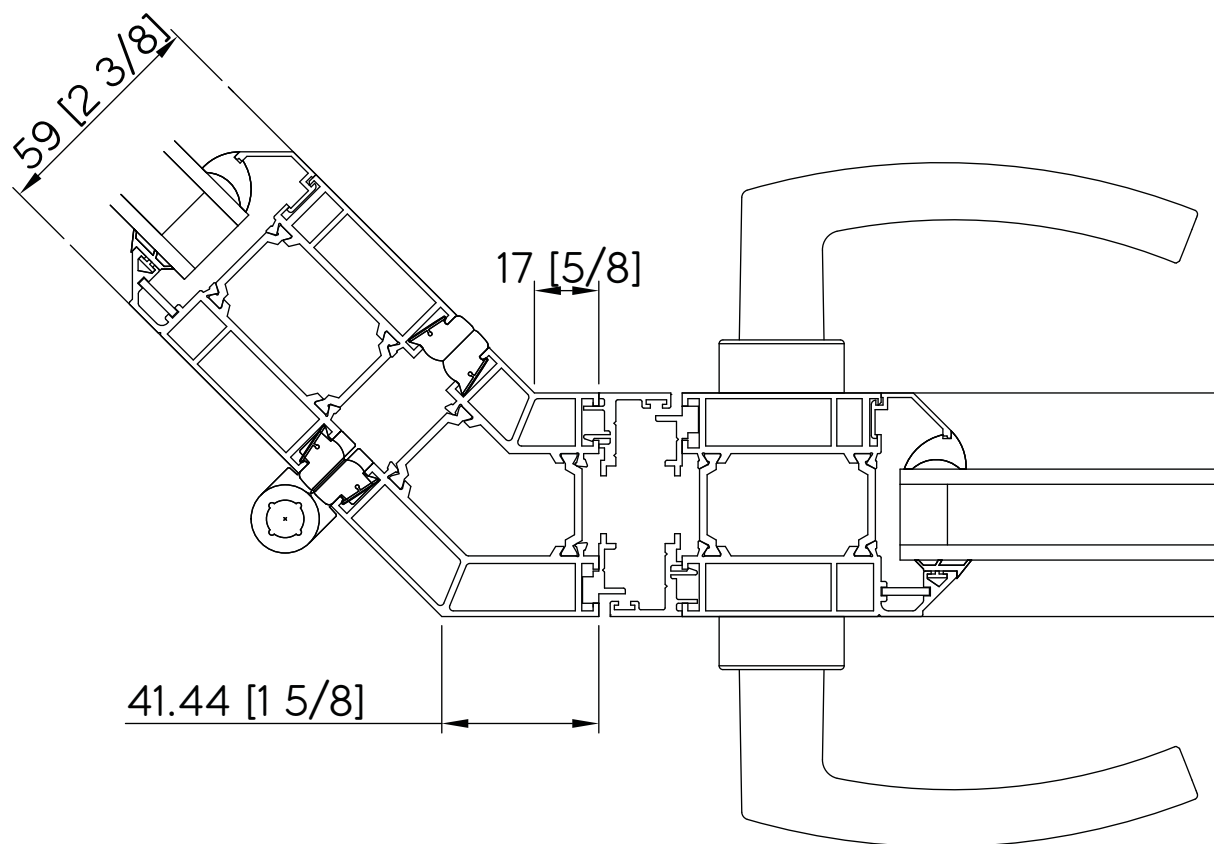


16

# Midrail Detail



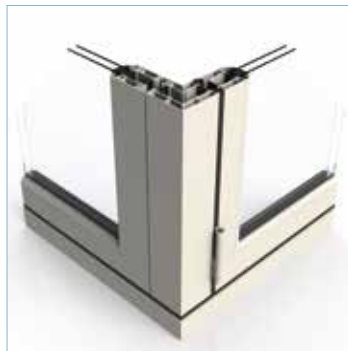
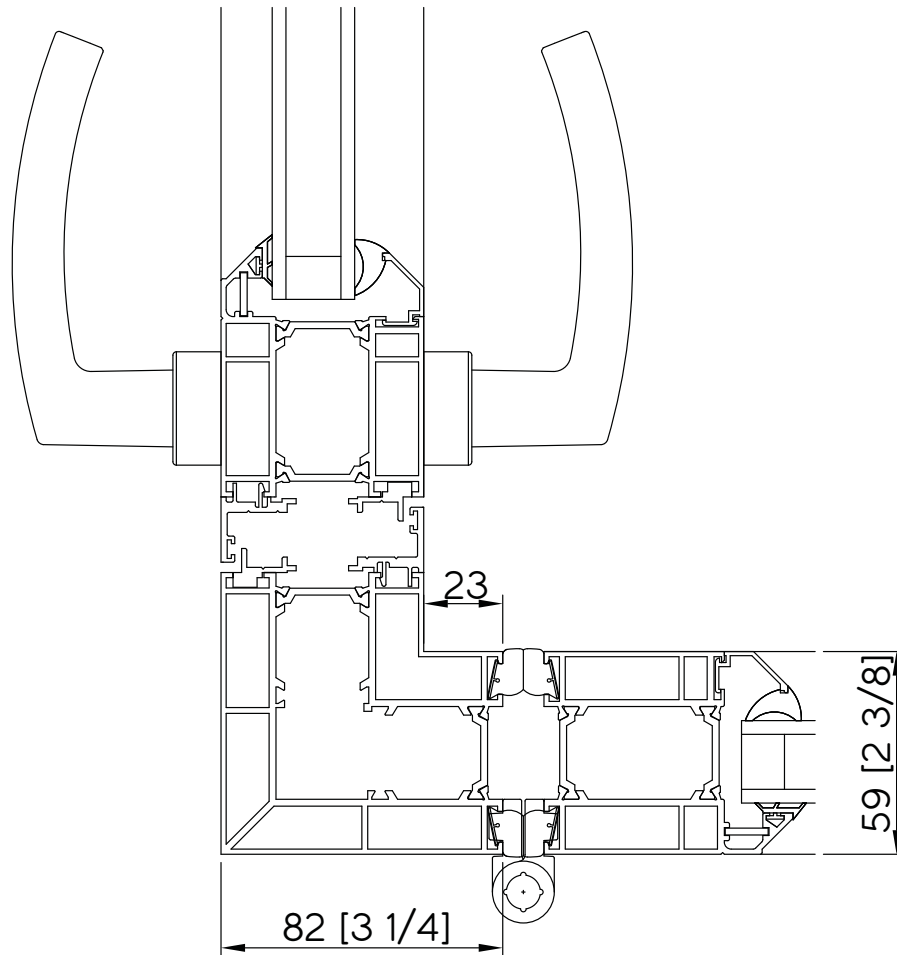
17 135° Moving Corner Post



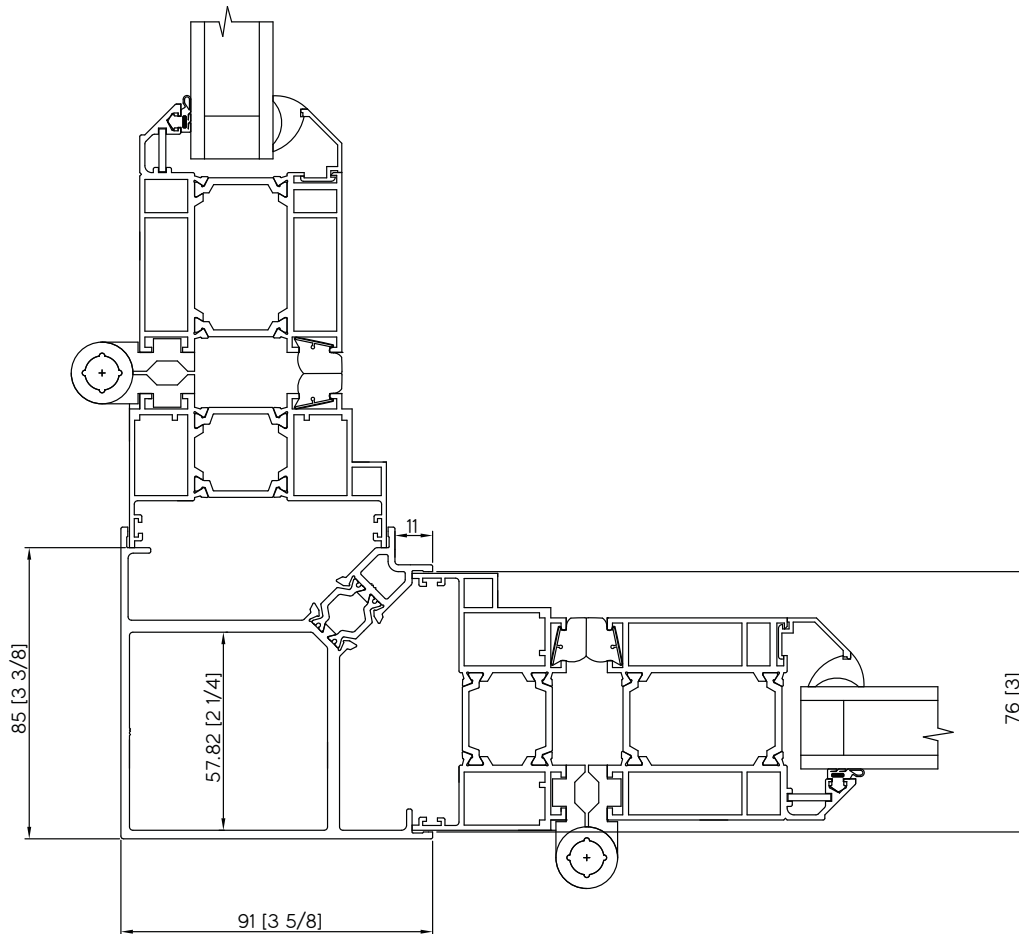
\*not available in HVHZ zones

18

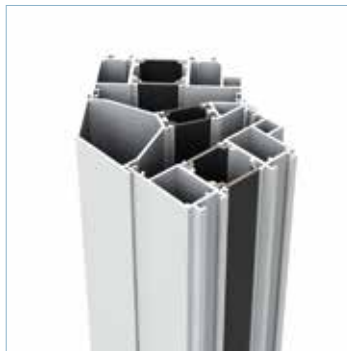
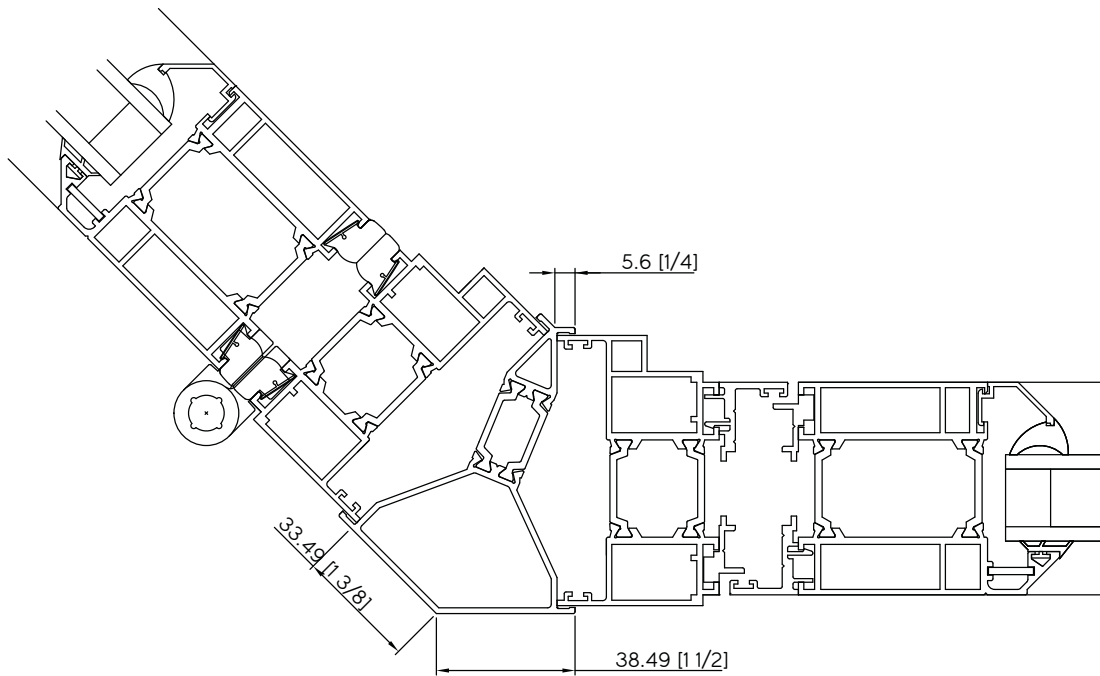
## 90° Moving Corner Post



## 19 90° Fixed Corner Post



## 20 135° Fixed Corner Post



\*not available in HVHZ zones

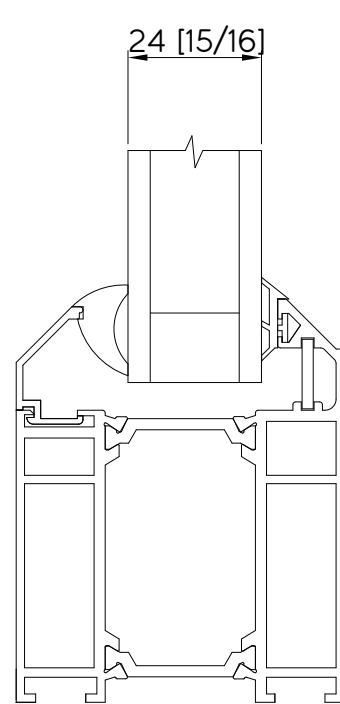
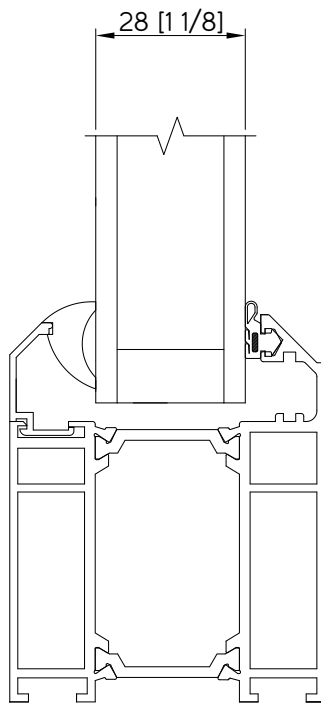
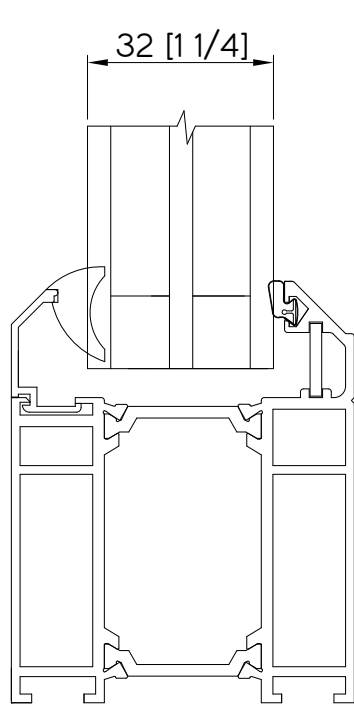
origin

21

1.3" Glazing Unit

1.1" Glazing Unit

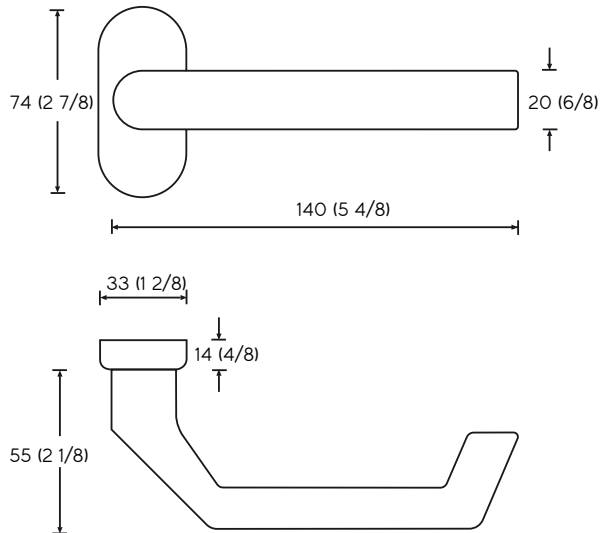
0.9" Glazing Unit



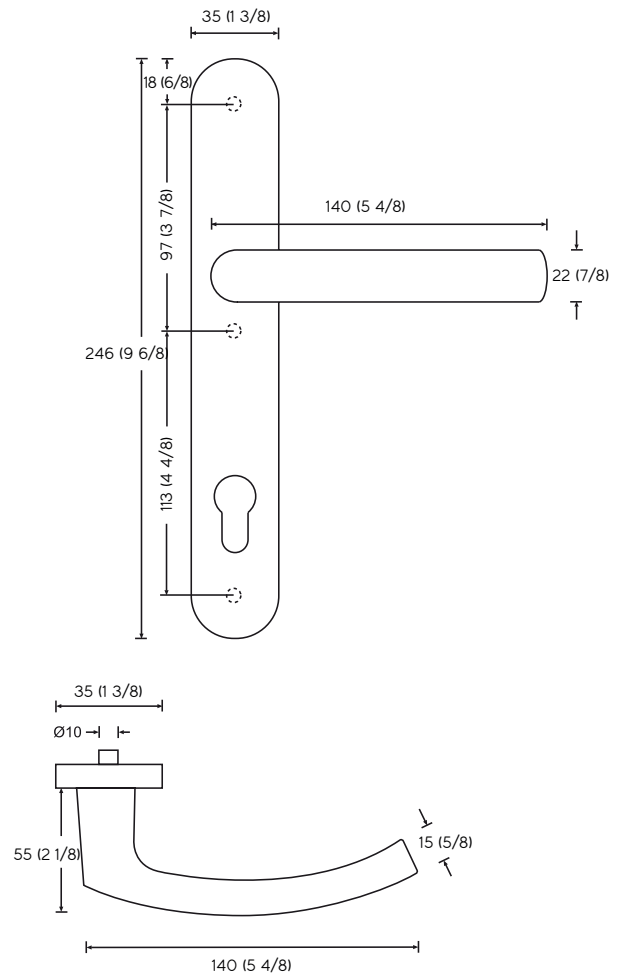


# Handles

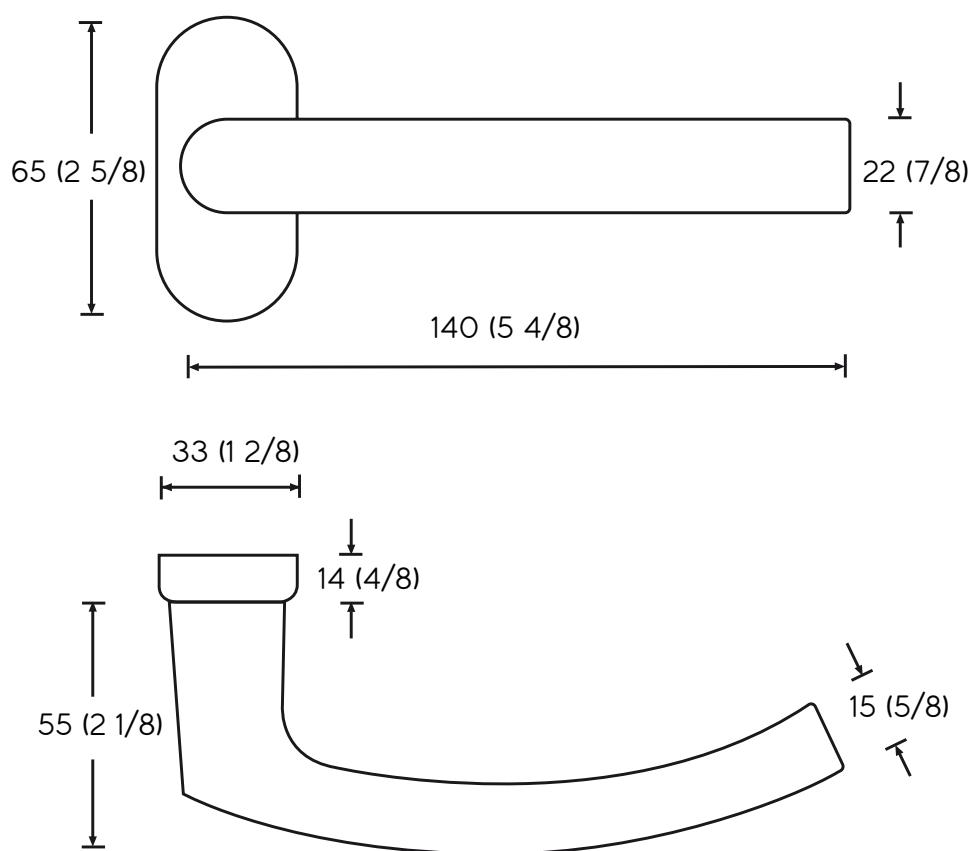
Hafi handle 251/280



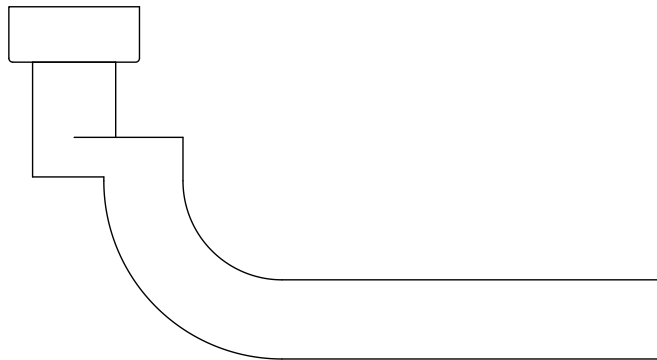
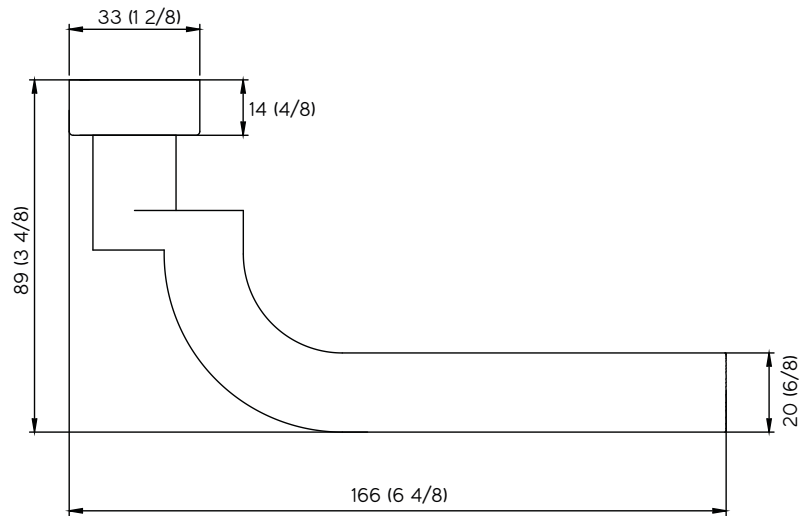
Hafi handle 253/270



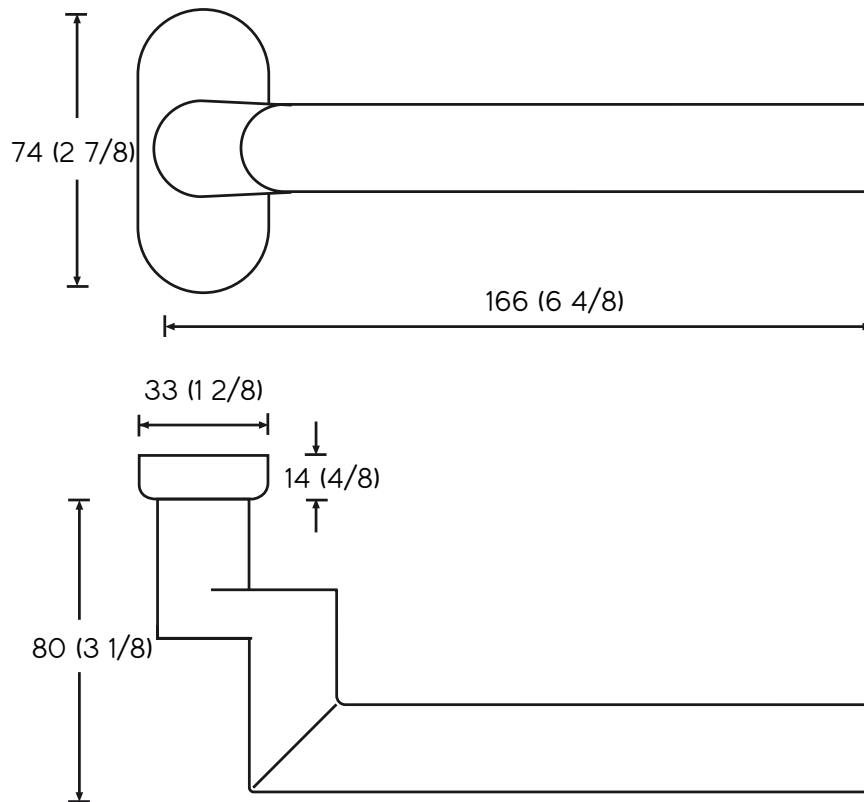
Hafi handle 253/280



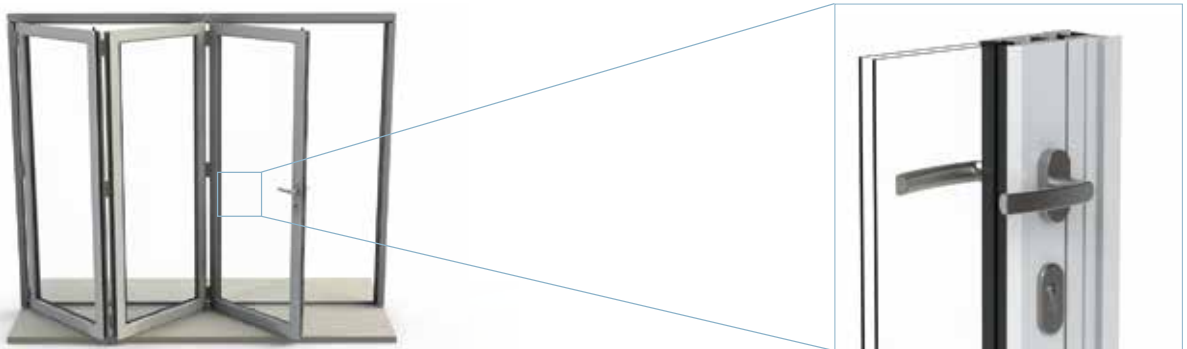
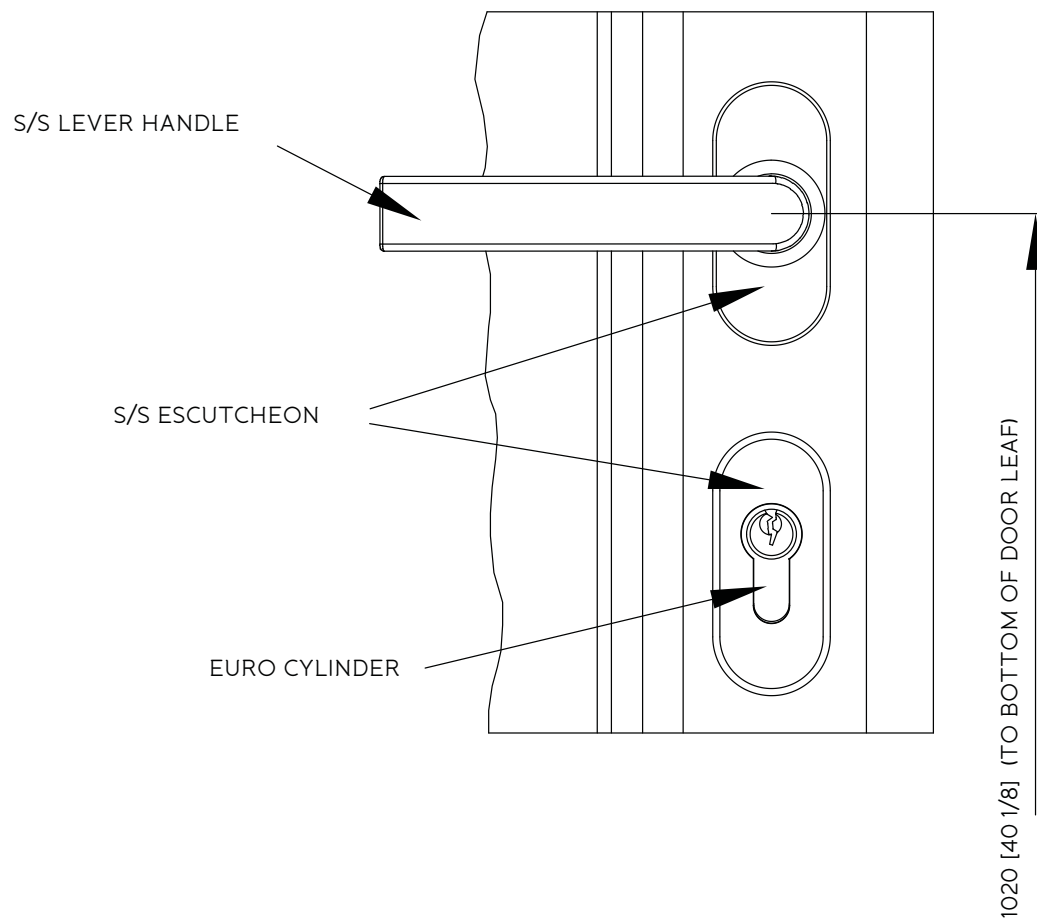
## Hafi handle 301/280



Hafi handle 303/280

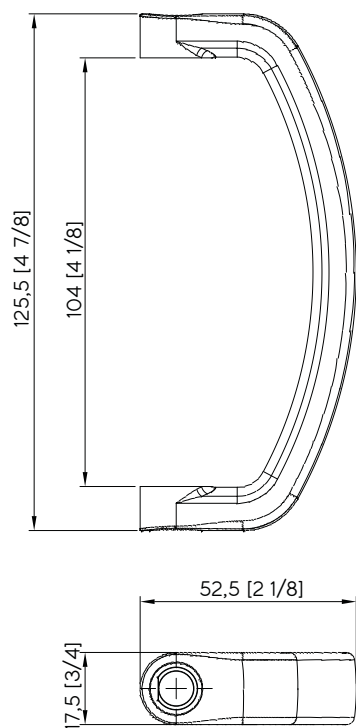


## Hafi Handle Detail

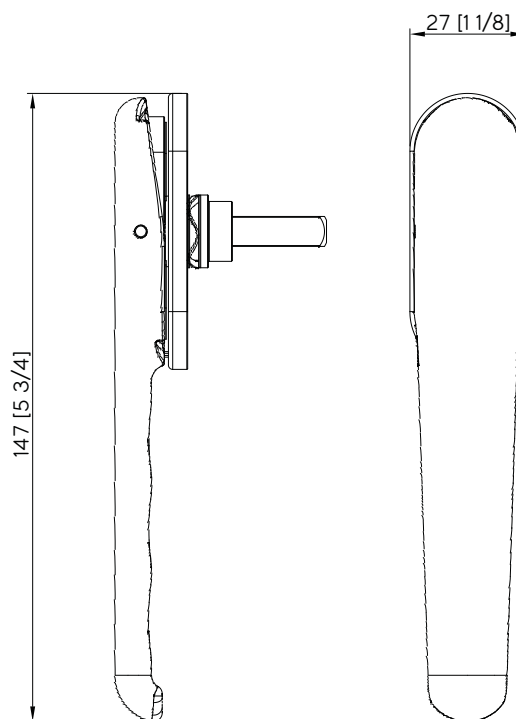


## Handles

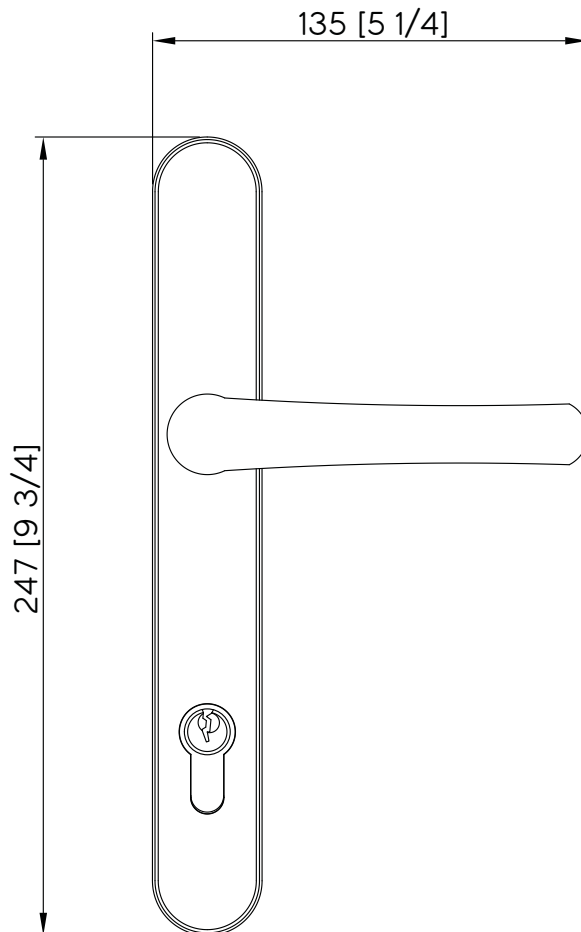
D-handle



Secondary handle



## Yale handle



Available in 4 popular colors:  
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



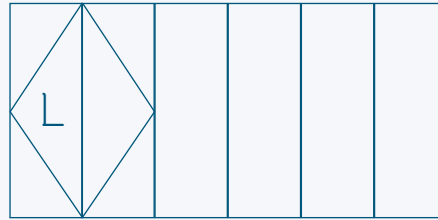
\*Available in colors mentioned on page 7



# 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 pane 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

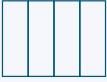










2+1 – OO – L










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

## All Configurations













### 4 Door Configurations

	IN  OUT 	$4+0 - \text{OO} - \text{L}$	Other variations: $4+0 - \text{OI} - \text{L}$ $4+0 - \text{OI} - \text{R}$ $4+0 - \text{OO} - \text{R}$
	IN  OUT 	$3+1 - \text{OO} - \text{L}$	Other variations: $3+1 - \text{OI} - \text{L}$ $3+1 - \text{OI} - \text{R}$ $3+1 - \text{OO} - \text{R}$
	IN  OUT 	$1+3 - \text{OO} - \text{L}$	Other variations: $1+3 - \text{OI} - \text{L}$ $1+3 - \text{OI} - \text{R}$ $1+3 - \text{OO} - \text{R}$













### 5 Door Configurations

	IN  OUT 	$5+0 - \text{OO} - \text{L}$	Other variations: $5+0 - \text{OI} - \text{L}$ $5+0 - \text{OI} - \text{R}$ $5+0 - \text{OO} - \text{R}$
	IN  OUT 	$2+3 - \text{OO} - \text{L}$	Other variations: $2+3 - \text{OI} - \text{L}$ $2+3 - \text{OI} - \text{R}$ $2+3 - \text{OO} - \text{R}$
	IN  OUT 	$4+1 - \text{OO} - \text{L}$	Other variations: $4+1 - \text{OI} - \text{L}$ $4+1 - \text{OI} - \text{R}$ $4+1 - \text{OO} - \text{R}$














### 6 Door Configurations

	IN  OUT 	$6+0 - \text{OO} - \text{L}$	Other variations: $6+0 - \text{OI} - \text{L}$ $6+0 - \text{OI} - \text{R}$ $6+0 - \text{OO} - \text{R}$
	IN  OUT 	$5+1 - \text{OO} - \text{L}$	Other variations: $5+1 - \text{OI} - \text{L}$ $5+1 - \text{OI} - \text{R}$ $5+1 - \text{OO} - \text{R}$
	IN  OUT 	$1+5 - \text{OO} - \text{L}$	Other variations: $1+5 - \text{OI} - \text{L}$ $1+5 - \text{OI} - \text{R}$ $1+5 - \text{OO} - \text{R}$
	IN  OUT 	$3+3 - \text{OO} - \text{L}$	Other variations: $3+3 - \text{OI} - \text{L}$ $3+3 - \text{OI} - \text{R}$ $3+3 - \text{OO} - \text{R}$

## 7 Door Configurations

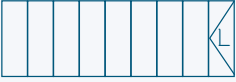



	IN  OUT 	7+0 – OO – L	Other variations: 7+0 – OI – L 7+0 – OI – R 7+0 – OO – R
	IN  OUT 	6+1 – OO – L	Other variations: 6+1 – OI – L 6+1 – OI – R 6+1 – OO – R
	IN  OUT 	2+5 – OO – L	Other variations: 2+5 – OI – L 2+5 – OI – R 2+5 – OO – R
	IN  OUT 	4+3 – OO – L	Other variations: 4+3 – OI – L 4+3 – OI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

## 8 Door Configurations



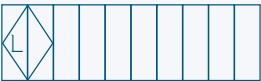

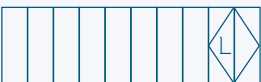







	IN  OUT 	8+0 – OO – L	Other variations: 8+0 – OI – L 8+0 – OI – R 8+0 – OO – R
	IN  OUT 	7+1 – OO – L	Other variations: 7+1 – OI – L 7+1 – OI – R 7+1 – OO – R
	IN  OUT 	1+7 – OO – L	Other variations: 1+7 – OI – L 1+7 – OI – R 1+7 – OO – R
	IN  OUT 	5+3 – OO – L	Other variations: 5+3 – OI – L 5+3 – OI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

## All Configurations

### 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

## Corner Configurations

IC = Internal Corner EC = External Corner



1+1 – OO – L – EC

Other variations:

1+1 – OO – R – EC

OI – R – IC

1+1 – OI – L – EC

OI – R – EC

1+1 – OO – L – IC

1+1 – OO – R – IC

1+1 – OI – L – IC



2+1 – OO – L – EC

Other variations:

2+1 – OO – R – EC

OI – R – IC

2+1 – OI – L – EC

OI – R – EC

2+1 – OO – L – IC

2+1 – OO – R – IC

2+1 – OI – L – IC



1+3 – OO – L – EC

Other variations:

1+3 – OO – R – EC

OI – R – IC

1+3 – OI – L – EC

OI – R – EC

1+3 – OO – L – IC

1+3 – OO – R – IC

1+3 – OI – L – IC



3+1 – OO – L – EC

Other variations:

3+1 – OO – R – EC

OI – R – IC

3+1 – OI – L – EC

OI – R – EC

3+1 – OO – L – IC

3+1 – OO – R – IC

3+1 – OI – L – IC



4+1 – OO – L – EC

Other variations:

4+1 – OO – R – EC

OI – R – IC

4+1 – OI – L – EC

OI – R – EC

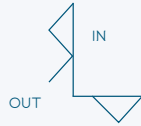
4+1 – OO – L – IC

4+1 – OO – R – IC

4+1 – OI – L – IC

## All Configurations

### Corner Configurations



3+2 – OO – L – EC

Other variations:

3+2 – OO – R – EC

OI – R – IC

3+2 – OI – L – EC

OI – R – EC

3+2 – OO – L – IC

3+2 – OO – R – IC

3+2 – OI – L – IC



1+5 – OO – L – EC

Other variations:

1+5 – OO – R – EC

OI – R – IC

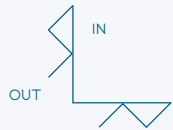
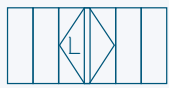
1+5 – OI – L – EC

OI – R – EC

1+5 – OO – L – IC

1+5 – OO – R – IC

1+5 – OI – L – IC



3+3 – OO – L – EC

Other variations:

3+3 – OO – R – EC

OI – R – IC

3+3 – OI – L – EC

OI – R – EC

3+3 – OO – L – IC

3+3 – OO – R – IC

3+3 – OI – L – IC



5+1 – OO – L – EC

Other variations:

5+1 – OO – R – EC

OI – R – IC

5+1 – OI – L – EC

OI – R – EC

5+1 – OO – L – IC

5+1 – OO – R – IC

5+1 – OI – L – IC



6+1 – OO – L – EC

Other variations:

6+1 – OO – R – EC

OI – R – IC

6+1 – OI – L – EC

OI – R – EC

6+1 – OO – L – IC

6+1 – OO – R – IC

6+1 – OI – L – IC



2+5 – OO – L – EC

Other variations:

2+5 – OO – R – EC

OI – R – IC

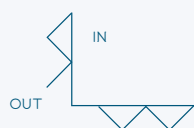
2+5 – OI – L – EC

OI – R – EC

2+5 – OO – L – IC

2+5 – OO – R – IC

2+5 – OI – L – IC



4+3 – OO – L – EC

Other variations:

4+3 – OO – R – EC

OI – R – IC

4+3 – OI – L – EC

OI – R – EC

4+3 – OO – L – IC

4+3 – OO – R – IC

4+3 – OI – L – IC



1+7 – OO – L – EC

Other variations:

1+7 – OO – R – EC

OI – R – IC

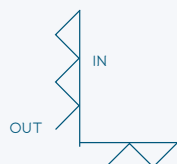
1+7 – OI – L – EC

OI – R – EC

1+7 – OO – L – IC

1+7 – OO – R – IC

1+7 – OI – L – IC



3+5 – OO – L – EC

Other variations:

3+5 – OO – R – EC

OI – R – IC

3+5 – OI – L – EC

OI – R – EC

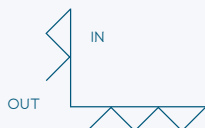
3+5 – OO – L – IC

3+5 – OO – R – IC

3+5 – OI – L – IC

## All Configurations

### Corner Configurations



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

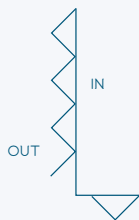
8+1 – OO – R – EC

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

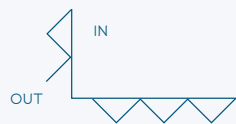
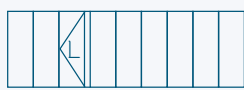
2+7 – OI – L – EC

2+7 – OO – L – IC

2+7 – OO – R – IC

2+7 – OI – L – IC





6+3 – OO – L – EC

Other variations:

OI – R – IC

OI – R – EC

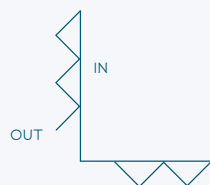
6+3 – OO – R – EC

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

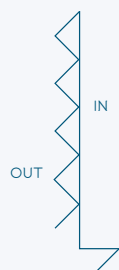
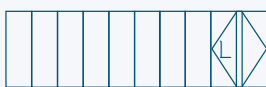
4+5 – OO – R – EC

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

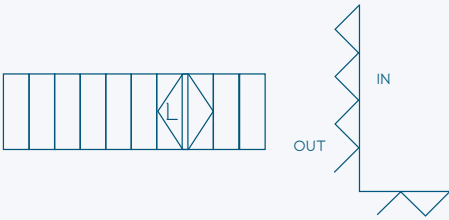
1+9 – OO – L – IC

1+9 – OO – R – IC

1+9 – OI – L – IC

All Configurations

Corner Configurations



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

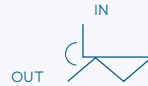
9+1 – OI – L – EC

9+1 – OO – L – IC

9+1 – OO – R – IC

9+1 – OI – L – IC

## Wrapping Corner Configurations



1+2 (0+3) – OO – R – EC

Other variations:

1+2 – OO – L – EC

OI – R – IC

1+2 – OI – L – EC

OI – R – 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:

1+4 – OO – L – EC

OI – R – IC

1+4 – OI – L – EC

OI – R – 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:

1+6 – OO – L – EC

OI – R – IC

1+6 – OI – L – EC

OI – R – 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:

1+8 – OO – L – EC

OI – R – IC

1+8 – OI – L – EC

OI – R – EC

1+8 – OO – L – IC

1+8 – OO – R – IC

1+8 – OI – L – IC

## All Configurations

### Wrapping Corner Configurations



2+2 (1+3) – OO – R – EC

Other variations:

OI – R – IC

OI – R – EC

2+2 – OO – L – EC

2+2 – OI – L – 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:

OI – R – IC

OI – R – EC

2+4 – OO – L – EC

2+4 – OI – L – 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:

OI – R – IC

OI – R – EC

2+6 – OO – L – EC

2+6 – OI – L – 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:

OI – R – IC

OI – R – EC

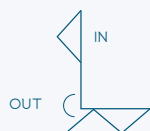
2+8 – OO – L – EC

2+8 – OI – L – EC

2+8 – OO – L – IC

2+8 – OO – R – IC

2+8 – OI – L – IC



3+2 (2+3) – OO – R – EC

Other variations:

3+2 – OO – L – EC

OI – R – IC

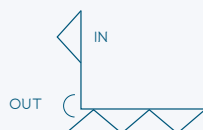
3+2 – OI – L – EC

OI – R – 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:

3+4 – OO – L – EC

OI – R – IC

3+4 – OI – L – EC

OI – R – 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:

3+6 – OO – L – EC

OI – R – IC

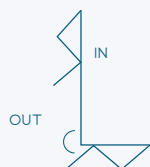
3+6 – OI – L – EC

OI – R – 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:

4+2 – OO – L – EC

OI – R – IC

4+2 – OI – L – EC

OI – R – EC

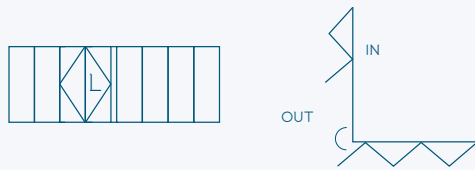
4+2 – OO – L – IC

4+2 – OO – R – IC

4+2 – OI – L – IC

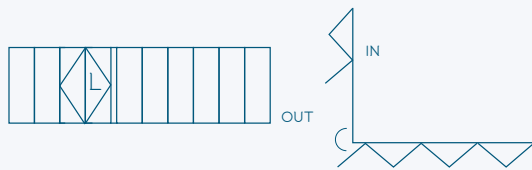
## All Configurations

### Wrapping Corner Configurations



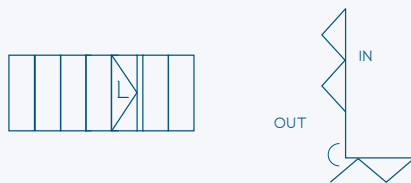
$$4+4 (3+5) - \text{OO} - \text{R} - \text{EC}$$

Other variations:       $\text{OI} - \text{R} - \text{IC}$        $\text{OI} - \text{R} - \text{EC}$   
 $4+4 - \text{OO} - \text{L} - \text{EC}$      $4+4 - \text{OI} - \text{L} - \text{EC}$      $4+4 - \text{OO} - \text{L} - \text{IC}$      $4+4 - \text{OO} - \text{R} - \text{IC}$      $4+4 - \text{OI} - \text{L} - \text{IC}$



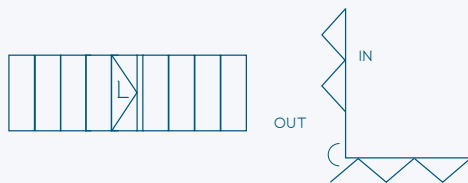
$$4+6 (3+7) - \text{OO} - \text{R} - \text{EC}$$

Other variations:       $\text{OI} - \text{R} - \text{IC}$        $\text{OI} - \text{R} - \text{EC}$   
 $4+4 - \text{OO} - \text{L} - \text{EC}$      $4+4 - \text{OI} - \text{L} - \text{EC}$      $4+4 - \text{OO} - \text{L} - \text{IC}$      $4+4 - \text{OO} - \text{R} - \text{IC}$      $4+4 - \text{OI} - \text{L} - \text{IC}$



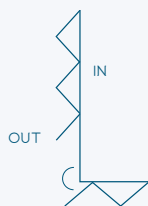
$$5+2 (4+3) - \text{OO} - \text{R} - \text{EC}$$

Other variations:       $\text{OI} - \text{R} - \text{IC}$        $\text{OI} - \text{R} - \text{EC}$   
 $5+2 - \text{OO} - \text{L} - \text{EC}$      $5+2 - \text{OI} - \text{L} - \text{EC}$      $5+2 - \text{OO} - \text{L} - \text{IC}$      $5+2 - \text{OO} - \text{R} - \text{IC}$      $5+2 - \text{OI} - \text{L} - \text{IC}$



$$5+4 (4+5) - \text{OO} - \text{R} - \text{EC}$$

Other variations:       $\text{OI} - \text{R} - \text{IC}$        $\text{OI} - \text{R} - \text{EC}$   
 $5+4 - \text{OO} - \text{L} - \text{EC}$      $5+4 - \text{OI} - \text{L} - \text{EC}$      $5+4 - \text{OO} - \text{L} - \text{IC}$      $5+4 - \text{OO} - \text{R} - \text{IC}$      $5+4 - \text{OI} - \text{L} - \text{IC}$



6+2 (5+3) – OO – R – EC

Other variations:

6+2 – OO – L – EC

OI – R – IC

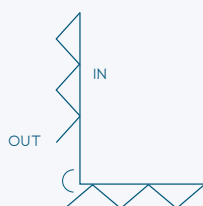
6+2 – OI – L – EC

OI – R – 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:

6+4 – OO – L – EC

OI – R – IC

6+4 – OI – L – EC

OI – R – EC

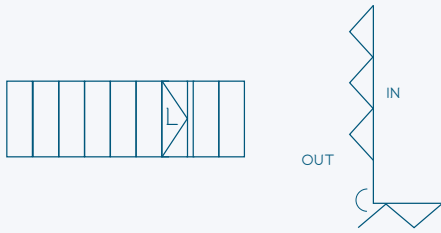
6+4 – OO – L – IC

6+4 – OO – R – IC

6+4 – OI – L – IC

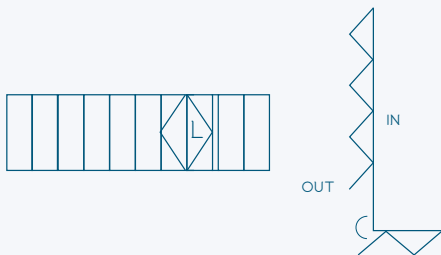
All Configurations

Wrapping Corner Configurations



$7+2\ (6+3) - \text{OO} - \text{R} - \text{EC}$

Other variations:     $\text{OI} - \text{R} - \text{IC}$              $\text{OI} - \text{R} - \text{EC}$   
 $7+2 - \text{OO} - \text{L} - \text{EC}$      $7+2 - \text{OI} - \text{L} - \text{EC}$      $7+2 - \text{OO} - \text{L} - \text{IC}$      $7+2 - \text{OO} - \text{R} - \text{IC}$      $7+2 - \text{OI} - \text{L} - \text{IC}$



$8+2\ (7+3) - \text{OO} - \text{R} - \text{EC}$

Other variations:     $\text{OI} - \text{R} - \text{IC}$              $\text{OI} - \text{R} - \text{EC}$   
 $8+2 - \text{OO} - \text{L} - \text{EC}$      $8+2 - \text{OI} - \text{L} - \text{EC}$      $8+2 - \text{OO} - \text{L} - \text{IC}$      $8+2 - \text{OO} - \text{R} - \text{IC}$      $8+2 - \text{OI} - \text{L} - \text{IC}$



# Warranty

ORIGIN FRAMES LIMITED 10 YEAR WARRANTY FOR ORIGIN DOORS

## Product Warranty Consumer

1.

Origin has a 10-year limited warranty on non-glass portions of Origin windows and doors (including non-electric operators, locks, lifts, balance systems, hinges, handles, insect screens, weather stripping, exterior trim, sash and frame members) are warranted to be free from defects in manufacturing, materials and workmanship from the date of purchase. This limited warranty does not apply to Origin electric window operators, retractable insect screens or finishes on bright brass and satin nickel door hardware. In the event a component other than glass fails as a result of a defect in manufacturing, materials or workmanship within the limited warranty period, Origin, at its option, will (a) provide replacement parts to the Origin retailer/dealer you specify -labor not included; (b) provide a factory-authorized repair to the existing component at no cost to the Customer; or (c) refund the original purchase price or Origin retailer/dealer's price at the time of the original purchase, whichever is less. Such replacement parts or repairs are warranted for the remainder of the original limited warranty period.

2.

Corrosion-resistant hardware (includes lock mechanisms for inswing and outswing patio doors and outswing patio door corrosion-resistant hinges) is warranted to be free from mechanical failure due to corrosion cause by an electrolytic chemical reaction involving atmospheric salts, such as what may occur in coastal applications for a period of ten (10) years from the date of purchase from Origin.

What is not covered by this corrosion-resistant hardware warranty: any and all aesthetic discoloration or pitting that may occur due to environmental conditions. Minimum maintenance such as cleaning with a mild detergent on a regular basis may be necessary to maintain the original hardware appearance.

3.

The finish on corrosion-resistant outswing patio door hinges is warranted to be free from defects in manufacturing, materials and workmanship and warranted not to tarnish, peel, pit, flake, discolor, or corrode for a period of ten (10) years from the date of purchase from Origin.

In the event there is a mechanical failure of the lock mechanism for inswing or outswing patio doors or the exterior hinges of an outswing hinged patio door or there is a defect in the finish on corrosion-resistant hinges or the finish on corrosion-resistant hardware within the limited warranty period, Origin, at its option, will: (a) provide replacement parts to the Origin retailer/dealer you specify -labor not included; or (b) refund the original purchase price or Origin retailer/dealer's price at the time of the original purchase, whichever is less. Such replacement parts or repairs are warranted for the remainder of the original limited warranty period.

4.

The Customer acknowledges that while every attempt is made to match paint colors on the Goods, slight variations may occur and during the Warranty Period such paint finishes may dull due to weathering. Origin shall not be responsible or liable for any such dulling to the paint finishes.

5.

The Customer acknowledges that the installation instructions are provided with delivery of the Goods and show the correct installation method and usage. An operational guide is also supplied with the Goods which must be passed to the End-User of the Goods. It is the responsibility of the Customer to ensure receipt of these documents by the End-User and that the operational manual is passed to the End-User

6.

The Customer agrees to maintain the entire door system (glass, tracks, jambs, seals and frames) with regular cleaning, careful handling etc. Failure to do so will cause the warranty to void. Use of low concentration of soapy water followed by a rinse of fresh water is permitted, as is periodic usage of glass cleaners. Use of any other common cleaners or chemicals will void the warranty.

7.

Exclusion of Implied Warranty of Merchantability and Implied Warranty of Fitness for a Particular Purpose. There are no warranties which extend beyond the description on the face of the attached warranty. Origin specifically disclaims any warranties implied under Florida law or the Uniform Commercial Code, and specifically disclaims any implied warranty of merchantability or implied warranty of fitness for a particular purpose.

## 8.

The following shall NOT be covered by this limited warranty:

- ▶ Glass shall not be included as part of the Goods and Origin shall not have liability to the Customer in respect of any glass fitted or installed in the Goods.
- ▶ Origin makes no warranty or representation regarding the installation of the Goods.
- ▶ Origin makes no warranty or representation that condensation will not occur or will be eliminated by the Goods and Origin shall not be liable for any condensation.
- ▶ Adjustments or corrections due to improper installation of the Goods.
- ▶ Failures due to product modifications or glass shading devices (e.g., glass tinting, security systems, improper painting or staining, insulated coverings, etc.).
- ▶ Units improperly assembled or improperly mulled by others.
- ▶ Failure due to the application of non-Origin hardware (e.g. locksets, trim sets, hinges, panic hardware, closers, etc.).
- ▶ Failure to properly install Origin hardware and/or exterior trim. Products not manufactured by Origin.
- ▶ Slight glass curvature, minor scratches or other imperfections in the glass that do not impair structural integrity or significantly obscure normal vision.
- ▶ Rattling of grille bars within an air space.
- ▶ Tarnish or corrosion to hardware finishes, except on outswing patio door corrosion-resistant hinges.
- ▶ Service trips to provide instruction on product use.

## 9.

Any ten-year warranty offered by Origin is limited to a 5-year warranty for coastal areas. "Coastal areas" is defined as property located within two (2) miles of salt water.

10.

Any warranty offered on wood grain finishes is limited to a three-year warranty.

11.

As a material term and condition of this purchase contract and the attached warranty, Customer must inspect the Origin product upon delivery and report any damage within five (5) days of receipt of the product. The failure to do so will void the attached warranty for all defects whatsoever.

12.

The attached warranty does not apply to any defects in work performed by any persons hired by Origin or by Customer to perform installation of any Origin product, nor does it apply to any damage caused by such installers. All installers are independent contractors and are not employees, agents, or representatives of Origin.

---

## Product Warranty Commercial

1.

Origin has a 1-year limited warranty on non-glass portions of Origin windows and doors (including non electric operators, locks, lifts, balance systems, hinges, handles, insect screens, weather stripping, exterior trim, sash and frame members) are warranted to be free from defects in manufacturing, materials and workmanship from the date of purchase. This limited warranty does not apply to Origin electric window operators, retractable insect screens or finishes on bright brass and satin nickel door hardware. In the event a component other than glass fails as a result of a defect in manufacturing, materials or workmanship within the limited warranty period, Origin, at its option, will (a) provide replacement parts to the Origin retailer/dealer you specify -labor not included; (b) provide a factory-authorized repair to the existing component at no cost to the Customer; or (c) refund the original purchase price or Origin retailer/dealer's price at the time of the original purchase, whichever is less. Such replacement parts or repairs are warranted for the remainder of the original limited warranty period.

---

2.

Corrosion-resistant hardware (includes lock mechanisms for inswing and outswing patio doors and outswing patio door corrosion-resistant hinges) is warranted to be free from mechanical failure due to corrosion caused by an electrolytic chemical reaction involving atmospheric salts, such as what may occur in coastal applications for a period of one (1) year from the date of purchase from Origin.

What is not covered by this corrosion-resistant hardware warranty: any and all aesthetic discoloration or pitting that may occur due to environmental conditions. Minimum maintenance such as cleaning with a mild detergent on a regular basis may be necessary to maintain the original hardware appearance.

3.

The finish on corrosion-resistant outswing patio door hinges is warranted to be free from defects in manufacturing, materials and workmanship and warranted not to tarnish, peel, pit, flake, discolor, or corrode for a period of one (1) year from the date of purchase from Origin.

In the event there is a mechanical failure of the lock mechanism for inswing or outswing patio doors or the exterior hinges of an outswing hinged patio door or there is a defect in the finish on corrosion-resistant hinges or the finish on corrosion-resistant hardware within the limited warranty period, Origin, at its option, will: (a) provide replacement parts to the Origin retailer/dealer you specify -labor not included; or (b) refund the original purchase price or Origin retailer/dealer's price at the time of the original purchase, whichever is less. Such replacement parts or repairs are warranted for the remainder of the original limited warranty period.

4.

The Customer acknowledges that while every attempt is made to match paint colors on the Goods, slight variations may occur and during the Warranty Period such paint finishes may dull due to weathering. Origin shall not be responsible or liable for any such dulling to the paint finishes.

5.

The Customer acknowledges that the installation instructions are provided with delivery of the Goods and show the correct installation method and usage. An operational guide is also supplied with the Goods which must be passed to the End-User of the Goods. It is the responsibility of the Customer to ensure receipt of these documents by the End-User and that the operational manual is passed to the End-User.

6.

The Customer agrees to maintain the entire door system (glass, tracks, jambs, seals and frames) with regular cleaning, careful handling etc. Failure to do so will cause the warranty to void. Use of low concentration of soapy water followed by a rinse of fresh water is permitted, as is periodic usage of glass cleaners. Use of any other common cleaners or chemicals will void the warranty.

7.

Exclusion of Implied Warranty of Merchantability and Implied Warranty of Fitness for a Particular Purpose. There are no warranties which extend beyond the description on the face of the attached warranty. Origin specifically disclaims any warranties implied under Florida law or the Uniform Commercial Code, and specifically disclaims any implied warranty of merchantability or implied warranty of fitness for a particular purpose.

8.

The following shall NOT be covered by this limited warranty:

- ▶ Glass shall not be included as part of the Goods and Origin shall not have liability to the Customer in respect of any glass fitted or installed in the Goods.
- ▶ Origin makes no warranty or representation regarding the installation of the Goods.
- ▶ Origin makes no warranty or representation that condensation will not occur or will be eliminated by the Goods and Origin shall not be liable for any condensation.
- ▶ Adjustments or corrections due to improper installation of the Goods.

- ▶ Failures due to product modifications or glass shading devices (e.g., glass tinting, security systems, improper painting or staining, insulated coverings, etc.).
- ▶ Units improperly assembled or improperly mulled by others.
- ▶ Failure due to the application of non-Origin hardware (e.g. locksets, trim sets, hinges, panic hardware, closers, etc.).
- ▶ Failure to properly install Origin hardware and/or exterior trim.
- ▶ Products not manufactured by Origin.
- ▶ Slight glass curvature, minor scratches or other imperfections in the glass that do not impair structural integrity or significantly obscure normal vision.
- ▶ Rattling of grille bars within an air space.
- ▶ Tarnish or corrosion to hardware finishes, except on outswing patio door corrosion-resistant hinges.
- ▶ Service trips to provide instruction on product use.

## 9.

As a material term and condition of this purchase contract and the attached warranty, Customer must inspect the Origin product upon delivery and report any damage within five (5) days of receipt of the product. The failure to do so will void the attached warranty for all defects whatsoever.

## 10.

The attached warranty does not apply to any defects or negligence in work performed by any persons hired by Origin or by Customer to perform installation of any Origin product, nor does it apply to any damage caused by such installers. All installers are independent contractors and are not employees, agents, or representatives of Origin.

# Installation Guide



## Performance rating

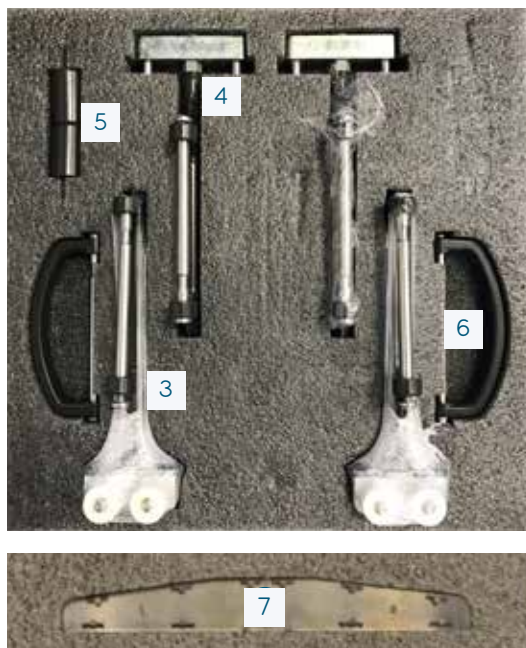
Tested door size <i>(See general note 15)</i>	Leaf quantity and configuration <i>(see general note 15)</i>	Design pressure	Impact rating
77-5/16" X 101-7/8"	XX Opens in Opens out	+50 / -55	Large and small missile impact



## General notes

1. THIS PRODUCT HAS BEEN TESTED EVALUATED AND DESIGNED TO THE DESIGN PRESSURE(S) STATED HEREIN AS FOLLOWS.
  - 1.1 IN COMPLIANCE WITH THE 2010 FLORIDA BUILDING CODE – SECTIONS 1606.1.2, 1626, 1715.5.2, 1715.5.3, 1715.5.4 AND 2411.3.
  - 1.2 IN COMPLIANCE WITH THE 2010 FLORIDA RESIDENTIAL CODE – SECTIONS R301.2.1.2, R612.6, R612.8, R612.10, R4403.16 AND R4410.2.3.
  - 1.3 PERFORMANCE STANDARDS
    - 1.3.1 TAS 201
    - 1.3.2 TAS 202
    - 1.3.3 TAS 203
2. THIS PRODUCTS DETAILS CONTAINED HEREIN ARE BASED UPON SIGNED AND SEALED TEST REPORT NO.D0973.01-401-18 AND ASSOCIATED LABORATORY DRAWINGS BY ARCHITECTURAL TESTING, INC.
3. THIS PRODUCT EVALUATION DOCUMENT IS FOR USE IN THE HIGH VELOCITY HURRICANE ZONE (HVHZ).
4. ADEQUACY OF THE EXISTING STRUCTURAL CONCRETE/MASONRY, 2X FRAMING AND METAL FRAMING SUBSTRATES AS A MAIN WIND FORCE RESISTIG SYSTEM CAPABLE OF WITHSTANDING AND TRANSFERRING APPLIED PRODUCT LOADS TO THE FOUNDATION IS THE RESPONSIBILITY OF THE LICENSED PROFESSIONAL ENGINEER OR REGISTERED ARCHITECT ACTING AS THE DESIGN PROFESSIONAL OF RECORD FOR THE PROJECT OF INSTALLATION.
5. 1X AND 2X BUCKS (WHEN USED) SHALL BE DESIGNED AND ANCHORED TO PROPERLY TRANSFER ALL LOADS TO THE STRUCTURE. BUCK DESIGN AND INSTALLATION IS THE RESPONSIBILITY OF THE LICENSED PROFESSIONAL ENGINEER OR REGISTERED ARCHITECT ACTING AS THE DESIGN PROFESSIONAL OF RECORD FOR THE PROJECT OF INSTALLATION.
6. AN APPROVED IMPACT PROTECTIVE SYSTEM IS NOT REQUIRED ON THIS PRODUCT WHEN INSTALLED IN AREAS REQUIRING WIND BRONE DEBRIS PROTECTION THIS INCLUDES THE HIGH VELOCITY WIND ZONE (HVHZ).
7. SITE CONDITIONS NOT COVERED IN THIS PRODUCT EVALUATION DOCUMENT ARE SUBJECT TO ADDITIONAL ENGINEERING ANALYSIS BY A LICENSED PROFESSIONAL ENGINEER OR REGISTERED ARCHITECT AS REQUIRED BY THE AUTHORITY HAVING JURISDICTION.
8. MATERIALS
  - 8.1 DOOR FRAME MATERIAL: 6063-T5
  - 8.2 GLAZING GASKET: MEETS ASTM E 2203-2 IN ACCORDANCE WITH THE 2010 FBC, SECTION 2411.3.4 AND 2010 FRC, SECTION R4410.2.3.4.
  - 8.3 GLAZING INTERLAYER: DUPONT SG INTERPLAYER PER MD NOA NO. 11-0624.02.
  - 8.4 THERMAL BREAK MATERIAL: POLYAMIDE BY TECHNOFORM OR CORTIZO.
9. LOCKING HARDWARE
  - 9.1 MILLENCO MULTI-POINT LOCK SYSTEM WITH LATCH AND DEADBOLT TWO HOOKS WITH TOP AND BOTTOM FLUSH BOLTS.
10. GLASS MEETS THE REQUIREMENTS OF ASTM E1300-09A.
11. DESIGNATIONS "X" STANDS FOR OPERABLE LEAF (PANEL).
12. IN ACCORDANCE WITH THE 2010 FBC, SECTION 2003.8.4 DISSIMILAR METALS INCLUDING FASTENERS THAT MAY COME INTO CONTACT WITH ALUMINIUM FRAMING SHALL HAVE BEEN PROTECTED AS DEFINED IN SECTION 2003.8.4.2.
13. IN ACCORDANCE WITH THE 2010 FBC, SECTION 2411.3.3.3, WOOD BUCKS SHALL HAVE BEEN PRESERVATIVE TREATED OR SHALL BE OF A DURABLE SPECIES AS DEFINED IN SECTION 2326.2.
14. THESE DRAWINGS CERTIFY THE DOOR INSTALLATION ONLY. WATER RESISTIVE SEALING OF THE INSTALLED DOOR IS NOT PART OF THIS INSTALLATION CERTIFICATION, THAT RESPONSIBILITY SHALL BE THAT OF THE SPECIFIER AND/OR THE INSTALLER.
15. FOLDING DOOR AND LEAF PANEL CONFIGURATIONS:
  - 15.1 THE PANEL DOORS WHERE TESTED WITH 8 LEAFS FOLDING TO THE INSIDE (8 + 0 CONFIGURATION), FIVE LEAFS LEFT/3 LEAFS RIGHT FOLDING TO THE INSIDE (5 + 3 CONFIGURATION) AND GIVE LEAFS LEFT/3 LEAFS RIGHT FOLDING TO THE OUTSIDE (5 + 3 CONFIGURATION). THIS TESTING COVERED ALL STILE CONDITIONS AND ALLOWS FOR FRAME LENGTHS EXCEEDING THOSE USED IN TESTING AND SHOWN IN THIS INSTALLATION DRAWING. THE FOLLOWING LIMITATIONS EXIST ON FRAME AND LEAF SIZING.
    - 15.1.1 FRAME SIZE WILL NOT EXCEED 101-7/8" IN HEIGHT.
    - 15.1.2 LEAFS (PANELS) SHALL NOT EXCEED THE FOLLOWING:
      - 15.1.2.1 ACTIVE AND INACTIVE LEAFS: 36-3/4" X 96"
      - 15.1.2.2 SECONDARY LEAFS: 36" X 96"
  - 15.2 OTHER LEAF CONFIGURATIONS ARE ALLOWED INCLUDING:
    - 15.2.1 VARYING LEAF QUANTITIES CONNECTED ON LEFT AND RIGHT.
    - 15.2.2 OVERALL QUANTITY OF LEAFS, AND
    - 15.2.3 OPENING TO INSIDE OR TO OUTSIDE
  - 15.3 SILL OPTIONS
    - 15.3.1 BOM ITEM NO. 22 AND 23 CAN BE USED INTERCHANGEABILITY.
    - 15.3.2 SEE SHEETS 8 AND 9 FOR INSTALLATION DETAILS.

## Components box



## Contents

- |                     |                                   |
|---------------------|-----------------------------------|
| ▶ 1. Fixing plugs   | ▶ 5. Magnetic keep                |
| ▶ 2. Wedge gasket   | ▶ 6. D-handle                     |
| ▶ 3. Bottom trolley | ▶ 7. Sill end cap (if applicable) |
| ▶ 4. Top trolley    | ▶ 8. Hafi handle                  |

# 1. Tools list

**1.1.** Fixing kit which includes a selection of shims 1mm-6mm and 4mm glazing shims.

- ▶ Appropriate drill bits for drilling fixings - 3/16" drill bit for concrete install (not needed for wood)
- ▶ Impact and regular battery screwdriver
- ▶ Long straight edge
- ▶ Long spirit level
- ▶ String line
- ▶ Measuring staff
- ▶ PH 2 hand screw driver
- ▶ 3/32" (4mm) Allen key
- ▶ Flat bar
- ▶ Plastic/ rubber hammer
- ▶ Gasket sheers
- ▶ Foam gun
- ▶ Silicone & silicone gun
- ▶ Glass suction cups (optional)

## Note

If it is necessary to pack the outer frame by more than 1/4", a solid plastic or hardwood shim should be used. **You can not shim more than 1/4" in Florida.**

## 2. Preparation

### Opening

- ▶ **2.1.** Measure the opening and check it fits with all measurements on your Origin paperwork.
- ▶ **2.2.** Spaced next to pre-drilled holes, place the correct shims along the length of the opening, creating a level, well supported platform for the track / sill to sit.

### Closing

- ▶ **2.3.** Carefully unpack the tracks and jambs.

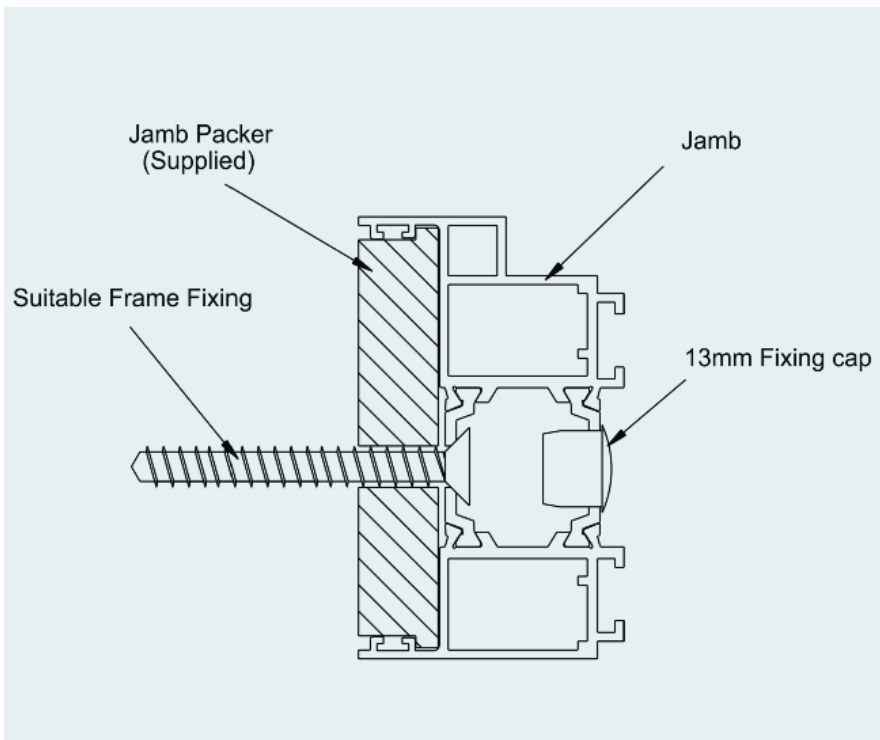


FIG 2

### 3. Sill (if no sill, move to step 4.)

- ▶ **3.1.** Using an appropriate silicone sealant, fill the ends of the sill section and install the end caps.
- ▶ **3.2.** Run a bead of sealant across the layered shims
- ▶ **3.3.** Place the sill on the prepared shims in the opening.
- ▶ **3.4.** Using a string line, make sure the sill does not bow.

## 4. Outer frame

- ▶ **4.1.** Joining tracks (if applicable - oversized jobs and corner posts).
  - ▶ **4.1.1.** All joints in the tracks are pre-made in the factory and separated for transport. When joints are re-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 12".
  - ▶ **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.
  - ▶ **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 sill 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 sill (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 sill (if fitted) and is central in the opening.

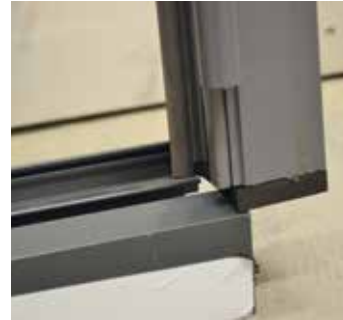


FIG 4A



FIG 4B



FIG 4C

## 5. Fixing the outer frame

**5.1.** Fix the bottom track as shown in FIG 5A or B (through pre-drilled holes).

**5.2.** 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 anchor into position as shown in FIG 5C through pre-drilled holes.

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

**5.4.** Install the first anchor into the top track next to the jamb as shown in FIG 5E, being careful not to lift the track from the top of the jamb when the anchor is tightened. (through pre-drilled holes)

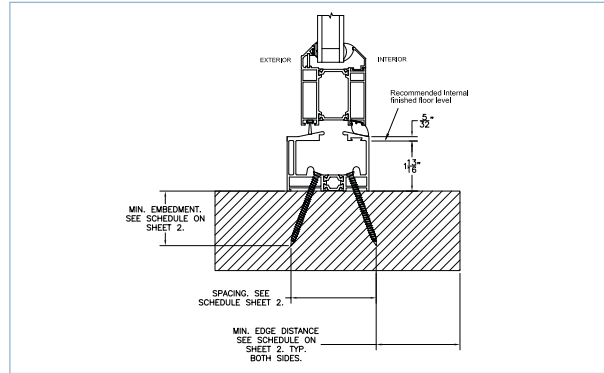


FIG 5A

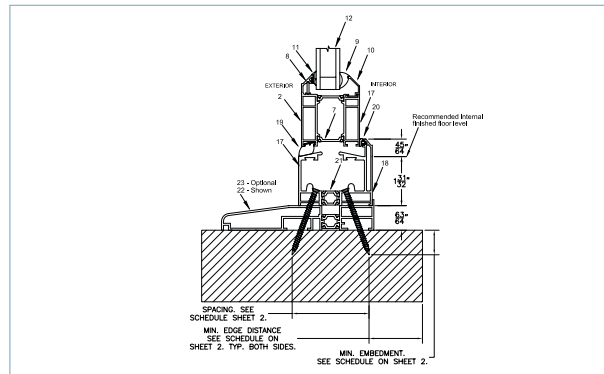


FIG 5B

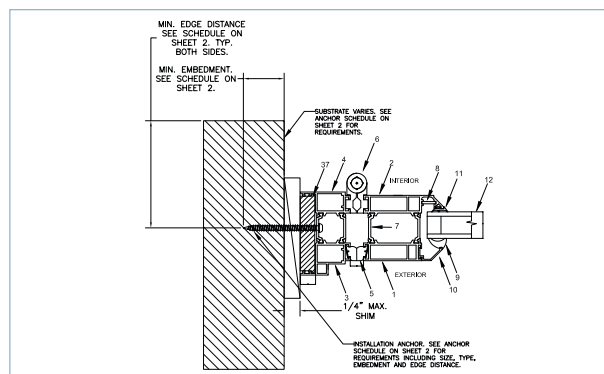


FIG 5C

### 5. Fixing the outer frame continued

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

► **5.6.** Install the remaining anchors into the top track as shown in FIG 5E being careful not to bow or twist the track, (through pre-drilled holes).

► **5.7.** Trim and reinstall the track gasket.



FIG 5D

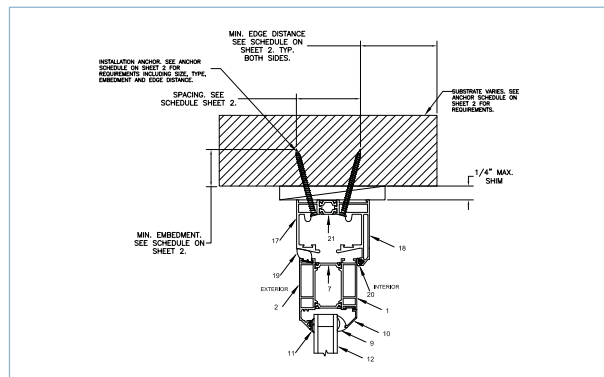


FIG 5E



FIG 5F



## 6. Top and bottom fork

- ▶ **6.1.** Remove the bottom carriage and fork assembly from its packaging, and using a (Blue 5mm) shim, check the ride height of the fork is set correctly as shown in FIG 6A.
- ▶ **6.2.** Locate the fork pins and remove from the trolleys.
- ▶ **6.3.** 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.
- ▶ **6.4.** 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.
- ▶ **6.5.** 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

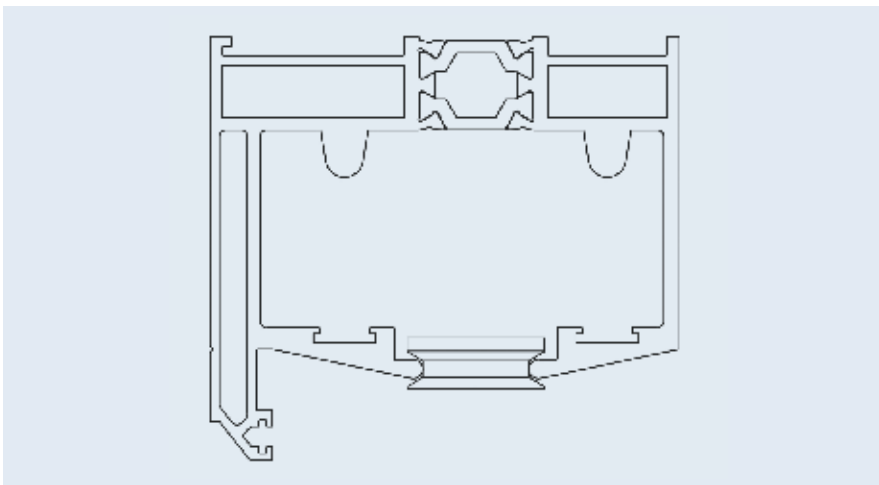


FIG 6C

## 7. Door leaves

- ▶ **7.1.** Locate spare hinge pins in zip lock bag in component box.
- ▶ **7.2.** Locate the door to be connected to the hinge jamb, this will be marked on the label with an X showing its position when viewed outside. Viewed from the outside, doors are always labeled and numbered left to right.
- ▶ **7.3.** Hang the first door on the hinge jamb as shown in FIG 7A&B with the label at the top and facing out.
- ▶ **7.4.** 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. If open out, miss the middle pin (D handle).
- ▶ **7.5.** Close the two doors across the track and lock into place with the secondary handle, being careful not to scratch the track as the doors cross it.
- ▶ **7.6.** Hang the third door onto the center hinge and insert a screwdriver through the top hinge; this will support the door while the forks are located as seen in FIG 7D.
- ▶ **7.7.** With the third door completely open, locate the bottom fork around the bottom hinge between the second and third doors.
- ▶ **7.8.** Remove a screw from pin and locate flat spot on the pin as well as the inside of the trolley fork. Line these up and push (tap) the pin through, being careful to align the hinge and fork. Check one more time for flat spots aligning before pushing the pin down to be flush on top.
- ▶ **7.9.** Install the screw into the fork pin and using a T30 Allen Key (provided), fully tighten.
- ▶ **7.10.** Remove the screwdriver from the top hinge and locate the top fork around the hinge.
- ▶ **7.11.** Insert the second fork pin bolt as described in points 7.8. and 7.9 (inserting from below).
- ▶ **7.13.** Repeat steps 7.1 to 7.12 until all door leaves are installed.

### Note

When closing the master / lead door for the first time, ensure that there are no obstacles that are preventing the door from closing smoothly. If contact occurs, adjust the doors as described in section 14.



FIG 7A



FIG 7B



FIG 7C



FIG 7D

## 8. False mullion

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

- ▶ **8.1.** Remove the center hinge from the mullion.
- ▶ **8.2.** With the last pair of doors 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 center hinge and screws being careful not to cross thread the screws when re-installed.



FIG 8A

## 9. Handles

### D-handles

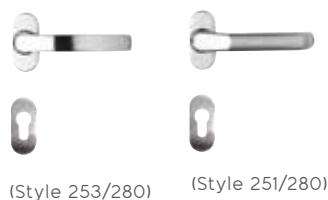
(open out only)

- ▶ **9.1.** Position the D-handle over the center hinge above the secondary handle.
- ▶ **9.2.** Fix the handle with the same pin (provided with handle) used for trolleys (flat spots and just one screw again).

#### D-handle

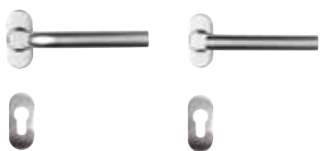


#### Hafi handles



(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 retighten.
- ▶ **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. 20mm x M5 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 1/8" 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 PH 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. Center hinge

(open in only)

- ▶ **10.1.** Open the doors and locate the missing center hinges (in the box inside marked bags).
- ▶ **10.2.** Making sure the two halves of the top and bottom hinges are together, install the center hinge, being careful not to cross thread the screws.

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

## Helpful hint

Using suction cups for handling glass makes glazing easier.

## 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, carefully remove the 4 glazing beads.
- ▶ **11.3.** Place 2 wider yellow shim (4mm) in the bottom of the glazing chamber spaced approximately 2" 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 wide yellow shim (4mm) to the side of the glass diagonally opposite the toe and heel plate about 2" 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 glazing shim 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 glazing shim from under the glass and insert into the side, at the top of the door diagonally opposite the first two glazing shims, making sure inner and outer layers of glass are supported.
- ▶ **11.8.** Using the glazing paddle, lever the door up and place a red (2mm) glazing shim 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, care should be taken when installing the side beads so as not to scratch the top and bottom beads.
- ▶ **11.10.** Repeat steps 11.4 to 11.9 until all the glass is in place.

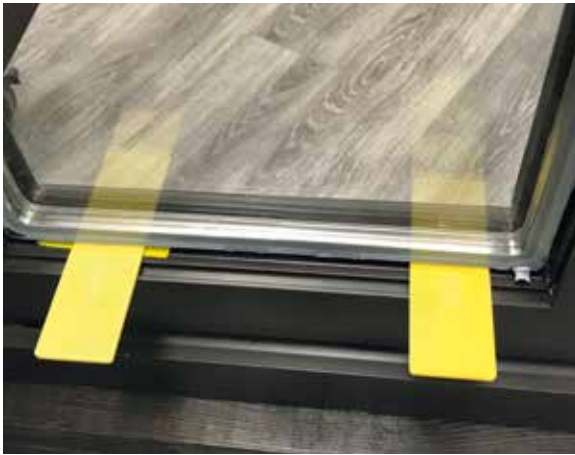


FIG 11A



FIG 11B



FIG 11C

## Notes

The shim 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. (Refer to labels inside each door frame for placement of shims)

## 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. If cut right, the side gasket should look like it has been mitred to the top.
  - ▶ **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 ¼" past 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, this will cause the side of the door to rise.
- ▶ **13.3.** 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.** On doors not needing adjustment, 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.
- ▶ **13.5.** Do not tighten more than 3-4 full turns. If further adjustment is needed, it has to happen on the outer frame. Be sure to not over tighten toe and heel plates.

## 14. Adjustment

**NOTE:** All adjustment comes from the outer frame, hinges should not be moved under any circumstances.

### 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 center 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 while monitoring the pin position 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 re-shimming 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 3mm (green shim) between itself and the jamb or locking style, as shown in FIG 14B. Adjust as follows if necessary.
- ▶ **14.6.** Remove the three center anchors from one jamb.
- ▶ **14.7.** Remove the top anchor from that jamb.
- ▶ **14.8.** Re-shim the top of the jamb to give a 3mm (green shim) gap between the edge of the lead door and jamb at the top.
- ▶ **14.9.** Replace the anchor in the top of the jamb.
- ▶ **14.10.** Remove the bottom anchor from the jamb.
- ▶ **14.11.** Re-shim the bottom of the jamb to give a 3mm (green shim) gap between the edge of the lead door and jamb at the bottom.
- ▶ **14.12.** Replace the anchor in the bottom of the jamb.
- ▶ **14.13.** Shim and replace the remaining three anchors, maintaining the even 3mm (green shim) gap.



FIG 14A



FIG 14B

## 15. Magnetic keep

- ▶ **15.1** Locate the magnetic keep from the components box.
- ▶ **15.2.** Locate pre-drilled holes on door frames (indicated by stickers).
- ▶ **15.3.** Install one half of magnetic keep onto each door leaf. Tighten only enough so the housing doesn't turn.
- ▶ **15.4.** Install rubber cover plate over the magnet to hide screw head.

## 16. Finishing touches

- ▶ **16.1** Insert fixing plugs provided into the ½" holes drilled into the jambs (after inspection, if required).
- ▶ **16.3.** We recommend you use expanding foam to fill the gaps between the outer frame and building on all 4 sides.
- ▶ **16.4.** Using silicone carefully seal along the joint between the tracks and each jamb to track connector and tool in with a suitable tool.
- ▶ **16.5.** Using silicone carefully seal each external mitre from the glass to the flat face of the door sash profile and tool in using a suitable tool

**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.



Origin USA Inc.  
700 Commerce Drive, Suite 16,  
Venice, Florida, 34292

**t** 941-484-4861  
**e** [info@originbifolds.com](mailto:info@originbifolds.com)  
**w** [www.originbifolds.com](http://www.originbifolds.com)