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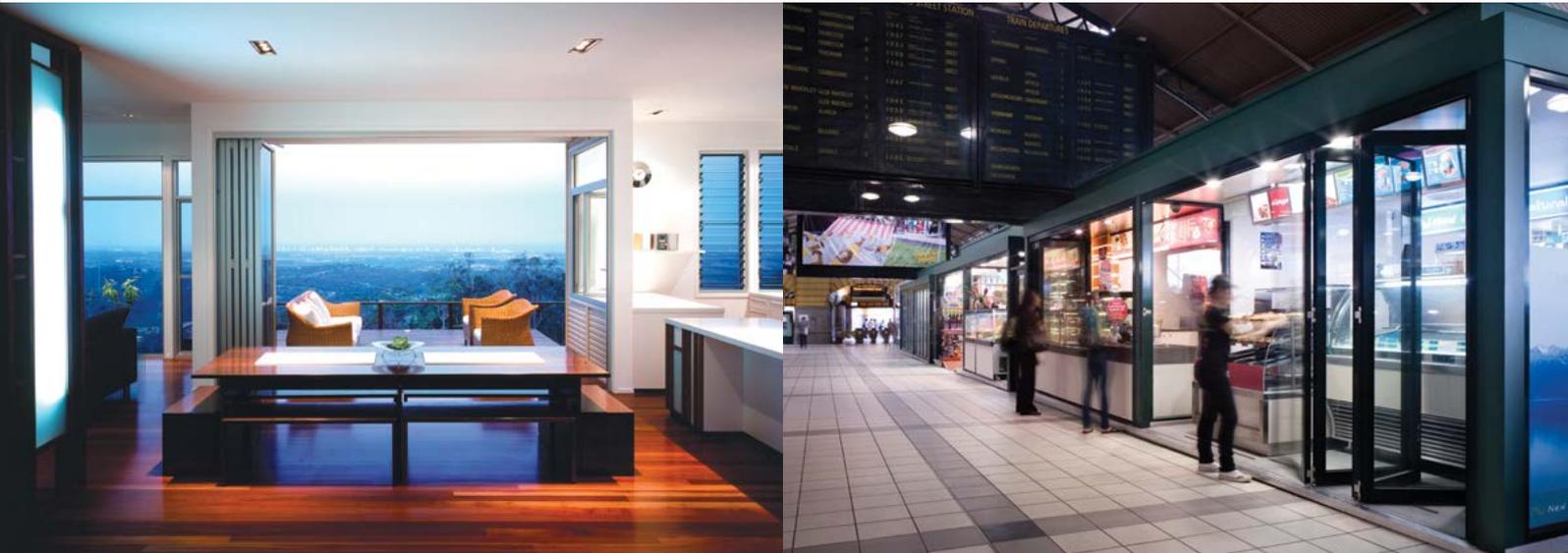
Centor F3 bottom-rolling system for folding doors

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# Centor revolutionised the way folding windows and doors move



## **Making impressions**

Centor opened a world of opportunity in building design when they revolutionised the way folding windows and doors move.

Delivering life-long durability and one touch movement, Centor guided folding windows and doors are making memorable impressions in homes, offices, restaurants and commercial premises all over the world.

The window of opportunity to use this technology has just become a whole lot wider as the company that revolutionised folding movement brings the technology to a much wider audience.





F3 Specifications	
<b>Maximum opening</b>	11.4m (Centor tracks) 14.4m (custom tracks)
<b>Maximum panel weight</b>	80kg each
<b>Maximum panel width</b>	1000mm
<b>Maximum panel height</b>	2700mm
<b>Minimum door thickness</b>	35mm*
<b>Maximum number of doors</b>	8 left + 8 right

\* For panel thickness 40mm or less, panels in some configurations may not sit parallel when doors are fully open.

### Folding doors for all

Centor's new F3 system means folding doors can generally be installed without structural modifications made to the opening, and are now suitable and cost-effective even for small-scale renovations and do-it-yourself projects. This is because the Centor F3 is a bottom-rolling folding system that transfers the door weight from the top of the opening to the bottom, so there is no need for a strong overhead structural beam. The Centor F3 expands market opportunities for door manufacturers, builders and specifiers.

Offering the fingertip operation synonymous with all Centor products, Centor's F3 bottom-rolling system can be installed in any opening, including retrofitting into openings that formerly held sliding doors. Living spaces can be transformed and the line between inside and outside blurred, with the F3 offering openings up to 11.4m wide using Centor tracks, with wider openings possible using custom systems.

# bottom-rolling technology eliminates the need for strong upper beams



Centor top hung folding doors

Bottom-rolling eliminates the need for restricting upper beams

## The new generation bi-fold

Centor asked the question 'how can we help more people enjoy the benefits of bi-folds?' Centor's latest folding innovation is the answer to this question, addressing all the problems previously associated with bottom-rolling folding doors.

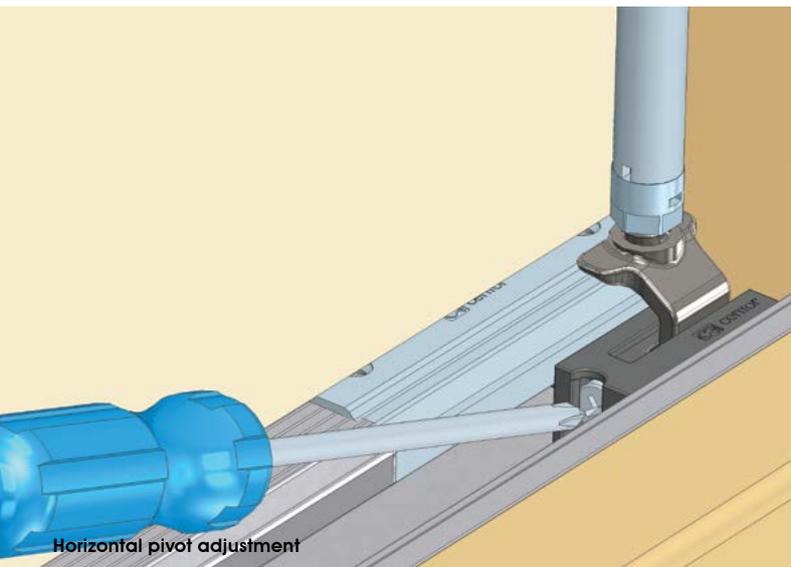
- **Operation** – The Centor F3 glides thanks to sophisticated engineering. Articulated carriers compensate for imperfect doorsills and openings, ensuring smooth operation.
- **Tracks** – Debris getting into tracks is one factor that prevents other bottom-rolling systems from operating smoothly. The F3's bearings and rolling surface are concealed inside the sill away from debris. As well as this, the F3 combats debris with a UV stabilised track seal that can be lifted for cleaning, and sweepers on the carrier that act like a snowplough, keeping grit away from the mechanism. The tapered rollers and angled track are specifically designed to aid grit removal for trouble-free operation.
- **Sills** – Most bottom-rolling systems have intrusive sills, while Centor F3's inline bearings are a unique solution, allowing for a low profile and unobtrusive sill for even smoother outside-inside transitions.

- **Weather sealing** – Doors using Centor technology included in the F3 system have been weather tested to Australian and international standards.
- **Security** – No externally accessible hardware can be compromised, offering a completely secure system.
- **Adjustment** – Like all Centor systems, the F3 can be easily adjusted by the end-user, so doors are always a delight to use.

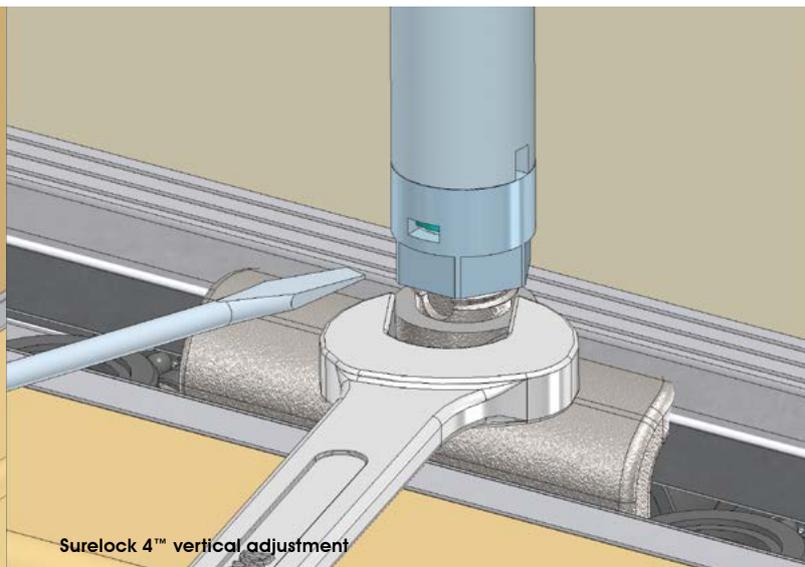
## Installation

For door manufacturers, installing Centor F3 components is easy with quick-fix surface mounted fittings. Centor's innovative hinge system allows for equal-sized door panels, regardless of the configuration.

Doors fitted with Centor F3 bottom-rolling folding hardware are easy to install, using simple hand and power tools. Pre-assembled doors can be simply and quickly fitted into a prepared opening even by do-it-yourself renovators, as no overhead structural support is required.



Horizontal pivot adjustment



Surelock 4™ vertical adjustment

### Adjustment

To compensate for building movement and to maintain the doors' smooth operation, straightforward adjustments can be made using the Centor Surelock 4™ system. Using just simple hand tools, the components can be adjusted both horizontally and vertically. Once door heights are set and locked, the mechanism will not self adjust or loosen over time, meaning doors will not drop.

### Style

The Centor F3 is available in a range of finishes to suit any door or decor: stainless steel, natural anodised and custom powdercoat available to order. Head tracks are produced in clear anodised aluminium with the option of Meranti, New Guinea Rosewood, Surian Red Cedar and Western Red Cedar. Sills are available in clear anodised aluminium with Kwila/Merbau.

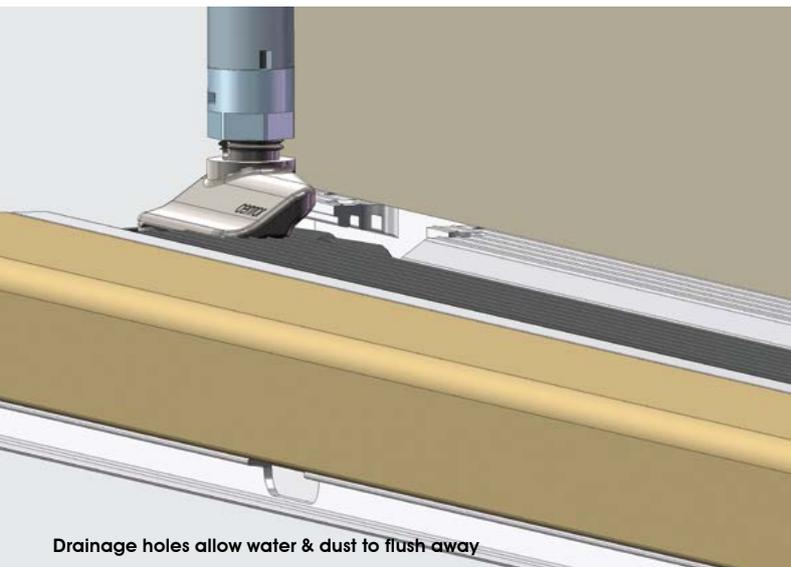
### Durability

The aluminium and stainless steel F3 hardware is durable and hard-wearing, and is guaranteed to endure real-life use. Centor has ensured the F3 will work smoothly well beyond its 10-year warranty period by submitting the system to gruelling testing:

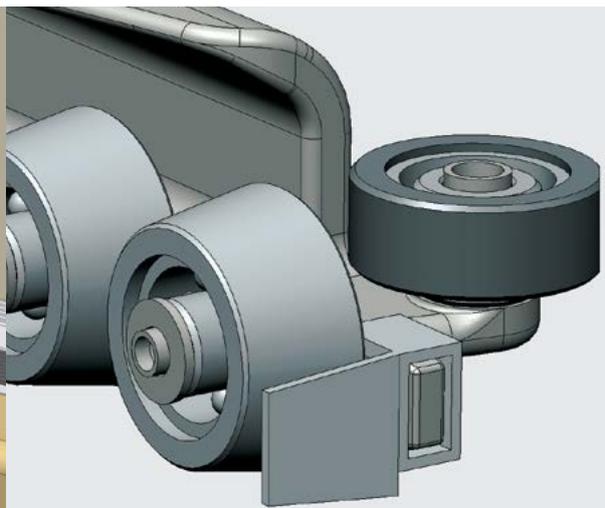
- Cycle testing to over 50,000 cycles at maximum configuration
- Structural testing (including Finite Element Analysis simulation)
- Corrosion testing (including salt spray exposure for 1000 hours)

The F3 is engineered to combat debris getting into the bottom track for consistently smooth performance.

# fully adjustable compensating for less than perfect openings



Drainage holes allow water & dust to flush away



Guards work like a snow plough to remove debris

## Weather performance

Impressive water performance ratings are achievable thanks to Centor's original patented weather-sealing technology. Centor folding systems push door panels snugly against weather seals, providing air infiltration resistance up to 50 times better than sliding doors. This improves thermal performance as well as helping reduce noise penetration. The sills on Centor's F3 system are designed for outward opening configurations where weather protection is required.

## Panel Size and Materials

Centor's innovative hinge system enables the use of uniform width door panels regardless of the door configuration, ensuring maximum efficiency in door manufacture. Easily installed hardware can be teamed with door panels in timber, aluminium, PVC or fibreglass.

## Design Features

Openings fitted with Centor controlled folding windows and doors include protective features not available with other systems. These include:

- the original Centor weathersealed technology
- floating rollers allow for smooth action even with sill bow or twist
- sill covers to avoid dirt collecting in the tracks
- guards which work like a snow plough to remove any debris
- tapered rollers and sloping track facilitate debris removal
- drainage holes to flush away water and dust

## Warranty

Centor F3 bottom-rolling folding systems are backed by a 10-year limited warranty. Intensive testing and use in the field means Centor guarantees doors moved by Centor F3 components can continue to open and close as new long past their 10-year warranty period.

As the F3 is a bottom-rolling system, during transit, the door panels in pre-assembled door sets must be supported on the sill so carriers and bearings do not carry the door weight. Centor recommends using wood packers between the sill and panel. This is a requirement to maintain the F3 system's warranty.





### Screening

Centor's revolutionary retractable insect screens and blinds are the perfect accompaniment to the F3 folding system. The S1E Eco-Screen™ is a two-in-one screen and blind system for architectural openings that unobtrusively screens or shades large spaces.

The Centor Eco-Screen can be operated with the touch of a fingertip and completely retracts out of sight into the frame when not in use. Available with screen, blind or two-in-one options, the S1E offers environment control for every space. The screen provides insect protection, while the blind gives thermal insulation, UV protection and can double as a projection screen.

### Locking

F3 folding systems can be complemented with Centor locking systems, including Centor's award winning, stylish and secure Twinpoint lock, and a range of clean-lined dropbolts.

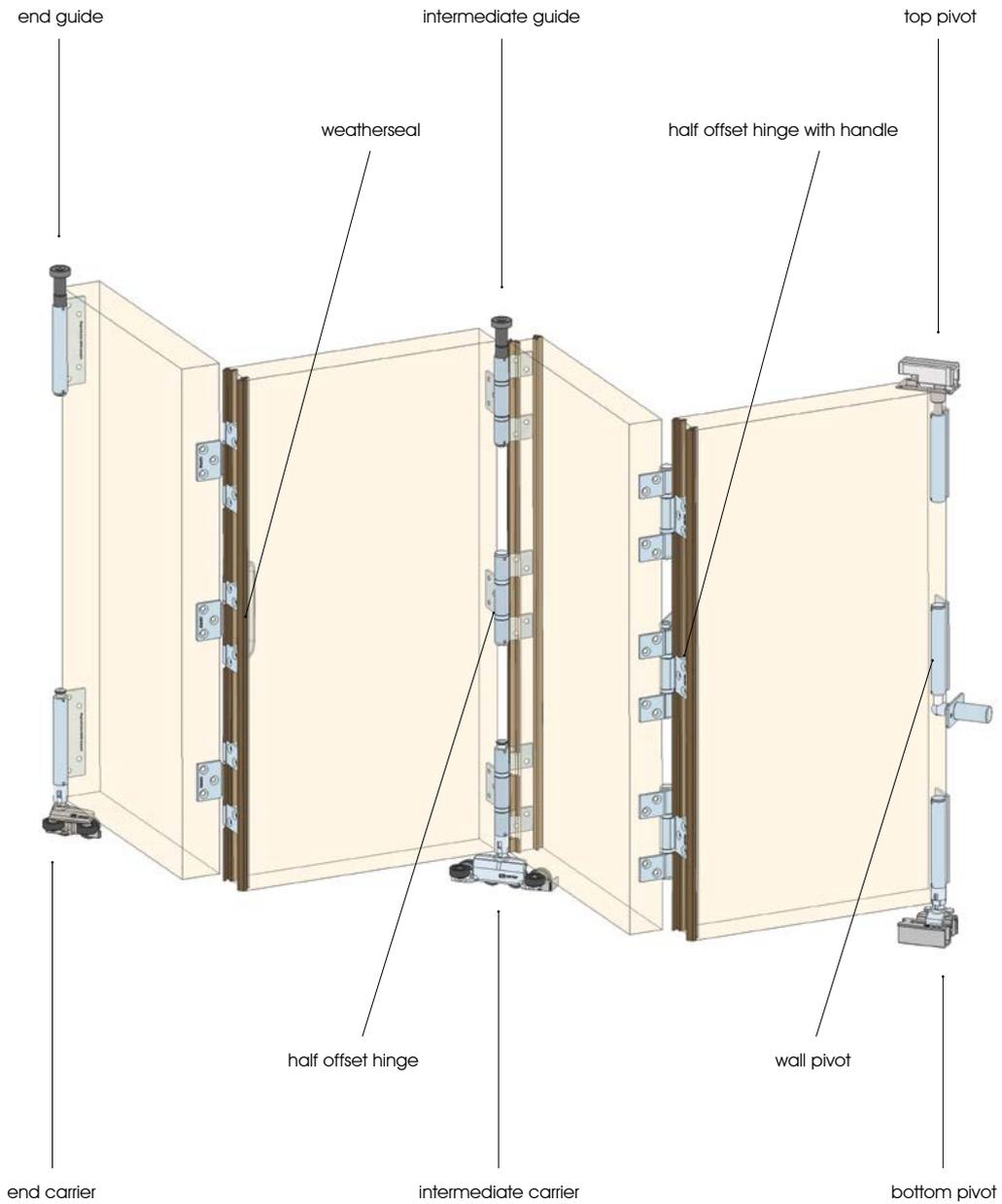


The convenient and stylish Centor Twinpoint lock

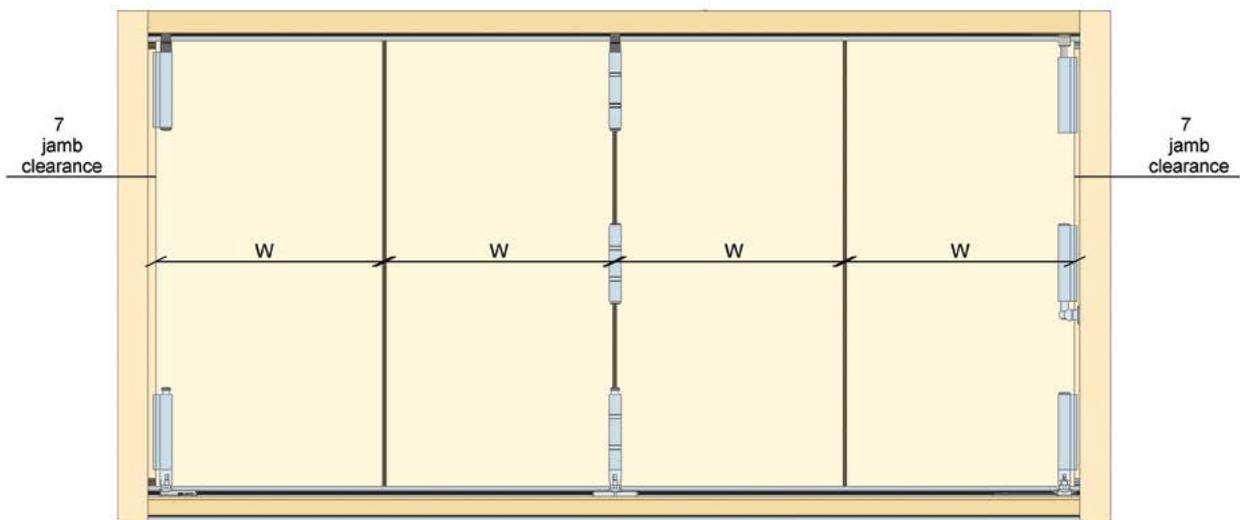
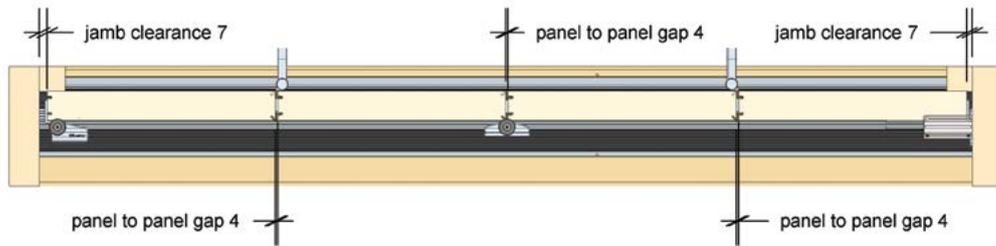
## F3 product details

Downloadable DXF or DWG files ready for use in your own documentation are a convenient resource for architects and specifiers wishing to use Centor systems.

F3 DXF or DWG files can be downloaded from [www.centor.com.au](http://www.centor.com.au)

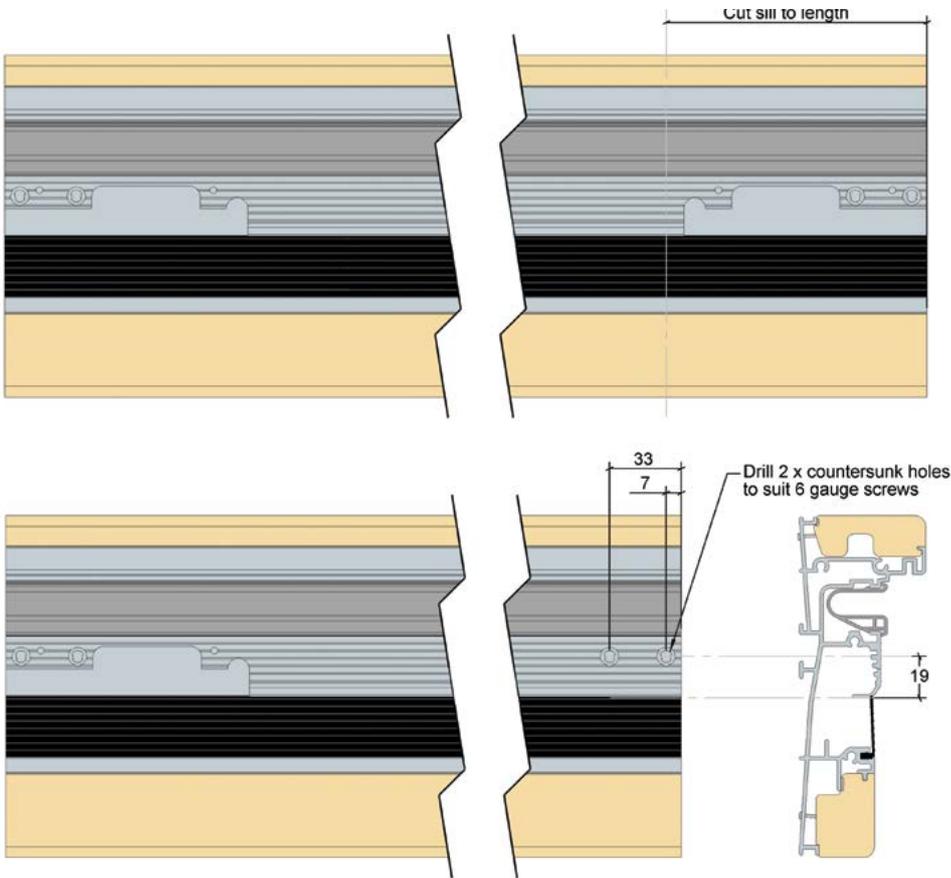


# Architectural detail

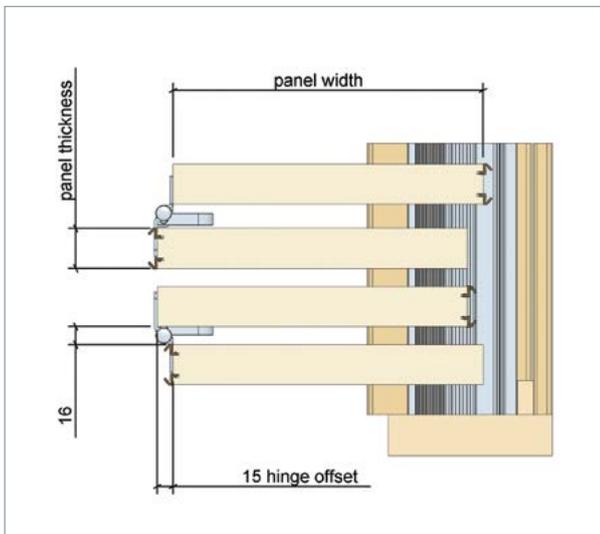


Note: On even panel configurations where a left and right carrier meet (e.g. 2L/2R, 4L/2R) the gap between the panels will be 8mm, and will therefore need weatherseals on both panels.

# Architectural detail

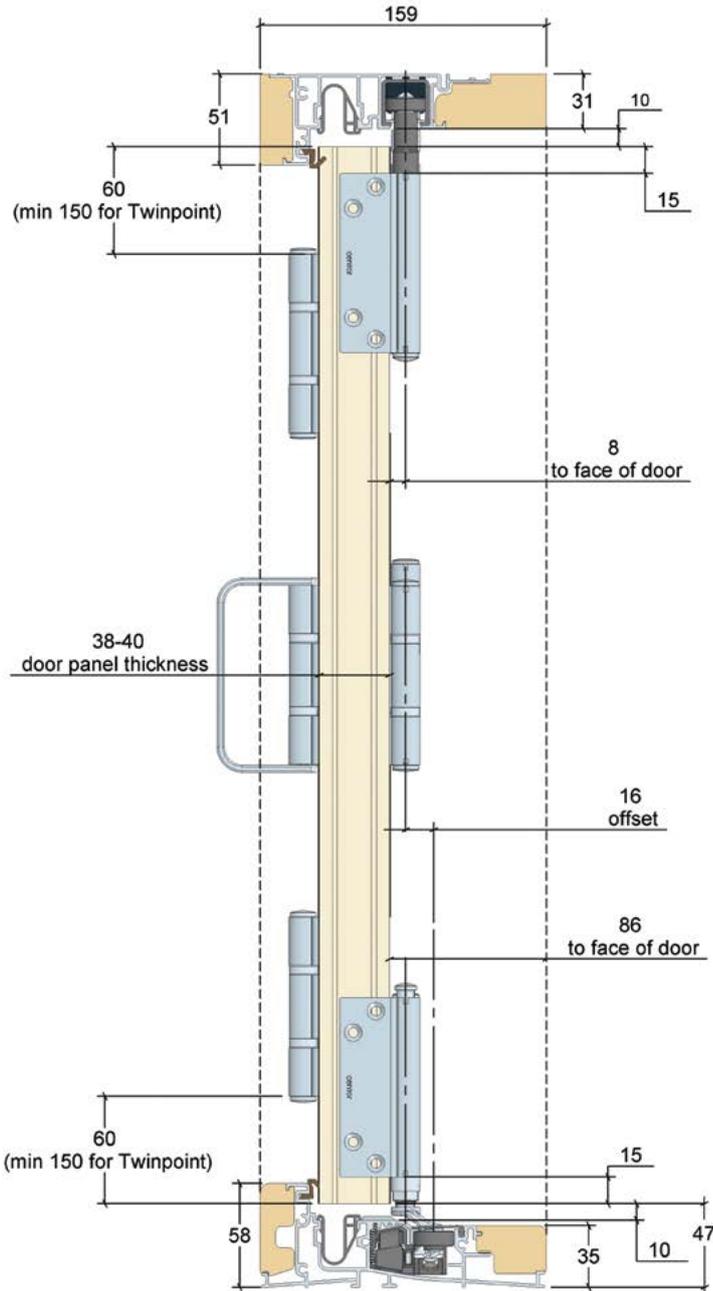


All sills are provided 130mm longer than required, with pivot cutouts at both ends. For single-ended configurations that do not require a second pivot cutout, cut off the non-pivot end to suit the opening size. For double-ended configurations, remove either end when cutting the sill to suit the opening size. To fix off the pivot block, drill two holes as shown. When installing the hardware, feed in the pivot end without the cutout first.



# Architectural detail

## Composite head and sill

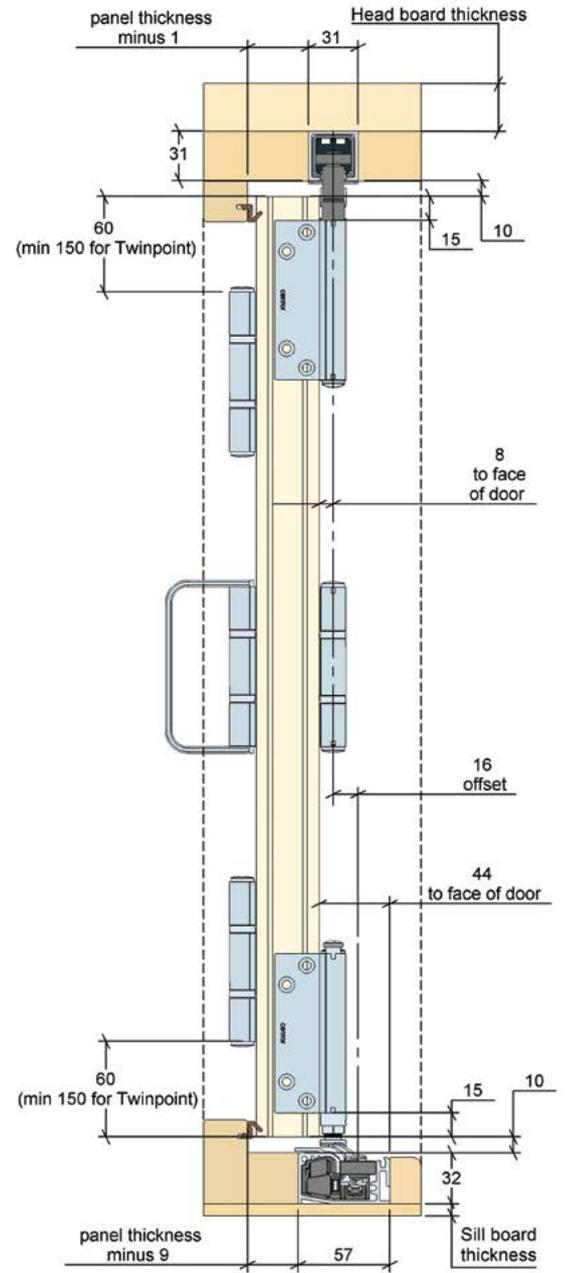


### Perimeter seals according to panel thickness

Panel thickness	Seal gap	Best fit seal
38mm	7	AQ21
40mm	5	AQ21

Note: E4QLS can be used as an alternative to AQ21 on 38mm only.

## Basic head and sill



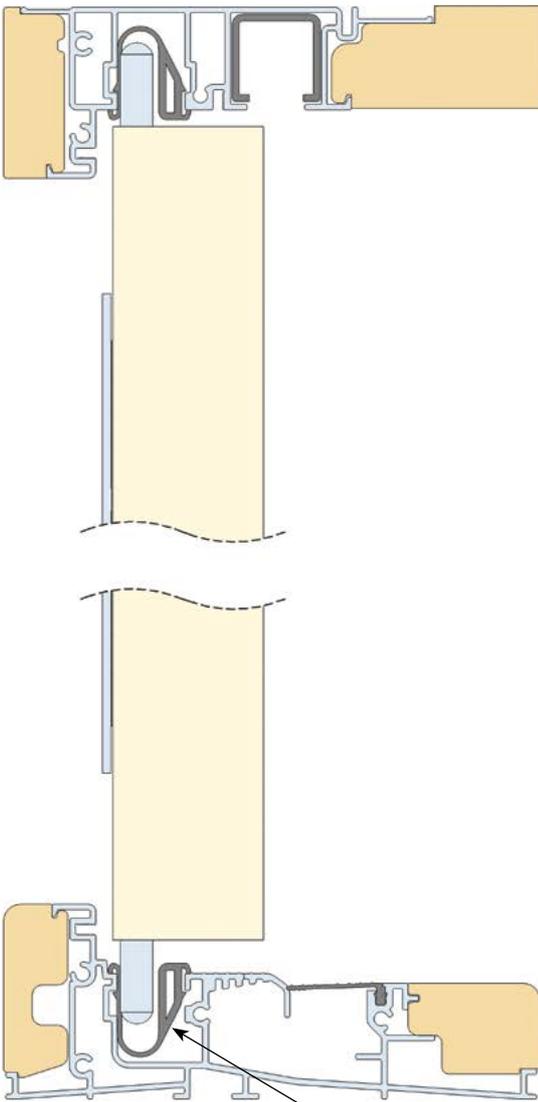
\*dimensions are nominal

Note: minimum recommended perimeter seal gap = 5mm and AQ21 seal

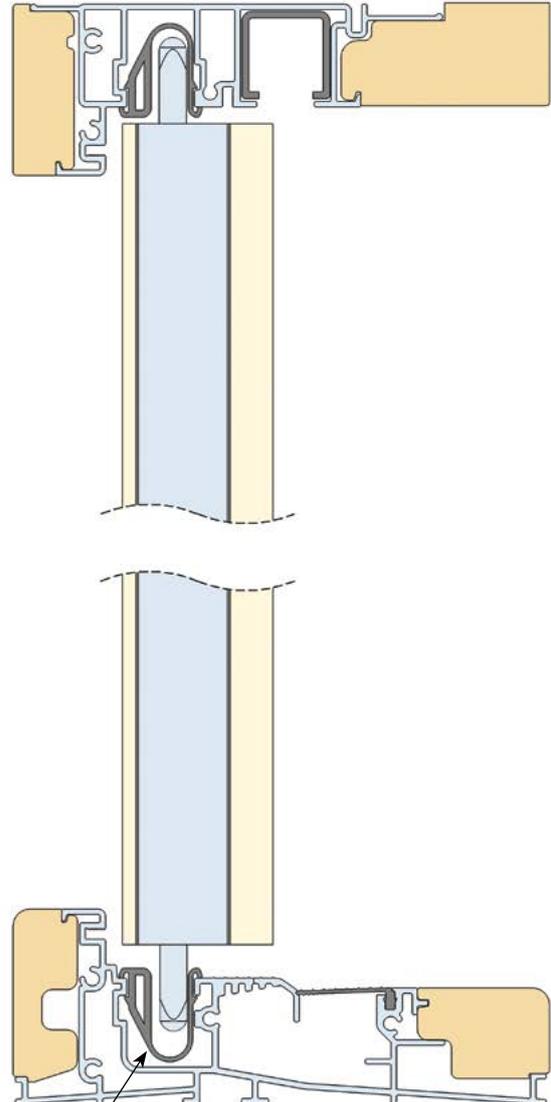
Architectural detail  
Orientation of bolt channel

Dropbolts

DF	suitable for 38mm panels
DOt	suitable for 40mm panels



Twinpoint Lock



Reverse bolt channel orientation

## Component selection

F3 is specified with five separate groups:

- 1 **Head**
- 2 **Sill**
- 3 **Hardware**
- 4 **Weathersealing**
- 5 **Locking**

Components are required from all five groups to build an F3 folding door system.

### Guide channel

PART	PRODUCT CODE	DESCRIPTION
	FRTPCS25P	2630mm straight top guide channel, punched
	FRTPCS36P	3730mm straight top guide channel, punched
	FRTPCS42P	4330mm straight top guide channel, punched
	FRTPCS57P	5830mm straight top guide channel, punched

### Head with guide channel

PART	PRODUCT CODE	DESCRIPTION
	FRAHS25N	2630mm machined head track with guide channel, natural anodised
	FRAHS36N	3730mm machined head track with guide channel, natural anodised
	FRAHS42N	4330mm machined head track with guide channel, natural anodised
	FRAHS57N	5830mm machined head track with guide channel, natural anodised

### Sill with seal

PARTS	PRODUCT CODE	DESCRIPTION
	FRSBMS25N	2630mm machined sill with seal, natural anodised
	FRSBMS36N	3730mm machined sill with seal, natural anodised
	FRSBMS42N	4330mm machined sill with seal, natural anodised
	FRSBMS57N	5830mm machined sill with seal, natural anodised

### Track seal

PARTS	PRODUCT CODE	DESCRIPTION
	FRBTSSI20	20m roll bottom track seal
	FRBTSSI100	100m roll bottom track seal

### Bolt channel

PART	PRODUCT CODE	DESCRIPTION
	FRABCM25	2630mm bolt channel with drainage
	FRABCM36	3730mm bolt channel with drainage
	FRABCM42	4330mm bolt channel with drainage
	FRABCM57	5830mm bolt channel with drainage

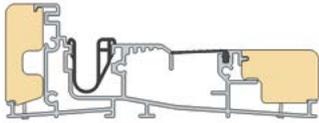
## Component selection

### Head – timber\*

PARTS	PRODUCT CODE	DESCRIPTION
	FRAHT25NMER	2630mm head with timber, natural anodised with meranti
	FRAHT25NNGR	2630mm head with timber, natural anodised with new guinea rosewood
	FRAHT25NSRC	2630mm head with timber, natural anodised with surian cedar
	FRAHT25NWRC	2630mm head with timber, natural anodised with western red cedar
	FRAHT36NMER	3730mm head with timber, natural anodised with meranti
	FRAHT36NNGR	3730mm head with timber, natural anodised with new guinea rosewood
	FRAHT36NSRC	3730mm head with timber, natural anodised with surian cedar
	FRAHT36NWRC	3730mm head with timber, natural anodised with western red cedar
	FRAHT42NMER	4330mm head with timber, natural anodised with meranti
	FRAHT42NNGR	4330mm head with timber, natural anodised with new guinea rosewood
	FRAHT42NSRC	4330mm head with timber, natural anodised with surian cedar
	FRAHT42NWRC	4330mm head with timber, natural anodised with western red cedar
	FRAHT57NMER	5830mm head with timber, natural anodised with meranti
	FRAHT57NNGR	5830mm head with timber, natural anodised with new guinea rosewood
	FRAHT57NSRC	5830mm head with timber, natural anodised with surian cedar
	FRAHT57NWRC	5830mm head with timber, natural anodised with western red cedar

\*Includes bolt channel and guide channel.

### Sill – timber\*

PARTS	PRODUCT CODE	DESCRIPTION
	FRAST25NKWL	2620mm sill with timber, natural anodised with kwila
	FRAST36NKWL	3720mm sill with timber, natural anodised with kwila
	FRAST42NKWL	4320mm sill with timber, natural anodised with kwila
	FRAST57NKWL	5820mm sill with timber, natural anodised with kwila
	FRATTSG	sill gasket for FRAS sill (pair)

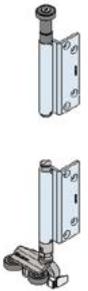
\*Includes bolt channel, guide channel, gaskets and track seal.

### Weatherseal

PART	PRODUCT CODE	PART DESCRIPTION
Perimeter 	AQ21B	Aquamac 21 Schlegel Kerf seal, brown
	AQ21L	Aquamac 21 Schlegel Kerf seal, black
	AQ21W	Aquamac 21 Schlegel Kerf seal, white
Perimeter 	E4QLSB	Schlegel Q-Ion perimeter seal, brown
	E4QLSW	Schlegel Q-Ion perimeter seal, white
Panel to panel 	AQ63B	Aquamac 63 Schlegel Kerf seal, brown
	AQ63L	Aquamac 63 Schlegel Kerf seal, black
Access panel 	AQ109B	Aquamac 109 Schlegel Kerf seal, brown
	AQ109L	Aquamac 109 Schlegel Kerf seal, black

## Hardware selection

### Right carrier set

PARTS	PARTS ON PANELS	PRODUCT CODE	DESCRIPTION
		F3RCSS	right hand carrier set, stainless steel
		F3RCSTG	right hand carrier set, PVD brass
		F3RCSPC*	right hand carrier set, custom powdercoat

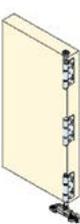
\* Longer lead times apply. Please contact Centor for details.

### Left carrier set

PARTS	PARTS ON PANELS	PRODUCT CODE	DESCRIPTION
		F3LCSS	left hand carrier set, stainless steel
		F3LCSTG	left hand carrier set, PVD brass
		F3LCSPC*	left hand carrier set, custom powdercoat

\* Longer lead times apply. Please contact Centor for details.

### Intermediate carrier set

PARTS	PARTS ON PANELS	PRODUCT CODE	DESCRIPTION
		F3ICSS	intermediate carrier set, stainless steel
		F3ICSTG	intermediate carrier set, PVD brass
		F3ICSPC*	intermediate carrier set, custom powdercoat

Fourth hinge recommended for doors over 2250mm. Use either E3HNH\* or E3H\*

\* Longer lead times apply. Please contact Centor for details.

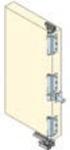
## Hardware Selection

### Pivot set

PARTS	PARTS ON PANELS	PRODUCT CODE	DESCRIPTION
		F3PSS	pivot set, stainless steel
		F3PSTG	pivot set, PVD brass
		F3PSPC*	pivot set, custom powdercoat

\* Longer lead times apply. Please contact Centor for details.

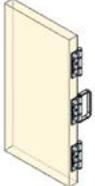
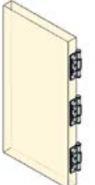
### Wall pivot

PARTS	PARTS ON PANELS	PRODUCT CODE	DESCRIPTION
		E3WPSS	E3 wall pivot set, stainless steel
		E3WPSTG	E3 wall pivot set, PVD brass
		E3WPSPC*	E3 wall pivot set, custom powdercoat

Jamb mounted wall pivot recommended for doors over 2250mm located centrally to limit deflection and bowing.

\* Longer lead times apply. Please contact Centor for details.

### Hinge Set

PARTS	PARTS ON PANELS	PRODUCT CODE	DESCRIPTION
<p>With handle for outward doors</p> 		E3HSS	hinge set with handle, stainless steel
		E3HSTG	hinge set with handle, PVD brass
		E3HSPC*	hinge set with handle, custom powdercoat
<p>Without handle for inward doors</p> 		E3HNHSS	hinge set no handle, stainless steel
		E3HNHSTG	hinge set no handle, PVD brass
		E3HNHSPC*	hinge set no handle, custom powdercoat

\* Longer lead times apply. Please contact Centor for details.

## Hardware selection

### Single hinge

PARTS	PRODUCT CODE	DESCRIPTION
	E3HNHS	single straight hinge, stainless steel
	E3HNHTG	single straight hinge, PVD brass
	E3HS	single straight hinge with handle, stainless steel
	E3HTG	single straight hinge with handle, PVD brass

\* Longer lead times apply. Please contact Centor for details.

### Half offset hinge set

PARTS	PARTS ON PANELS	PRODUCT CODE	DESCRIPTION
<p>With handle for outward doors</p> 		E3HHSS	half offset hinge set with handle, stainless steel
		E3HHSTG	half offset hinge set with handle, PVD brass
		E3HHSPC*	half offset hinge set with handle, custom powdercoat
<p>Without handle for inward doors</p> 		E3HHNHSS	half offset hinge set no handle, stainless steel
		E3HHNHSTG	half offset hinge set no handle, PVD brass
		E3HHNHSPC*	half offset hinge set no handle, custom powdercoat

\* Longer lead times apply. Please contact Centor for details.

## Hardware selection

### Single half offset hinge

PARTS	PRODUCT CODE	DESCRIPTION
	E3HHNHS	single half offset hinge, stainless steel
	E3HHNHTG	single half offset hinge, PVD brass
	E3HHS	single half offset hinge with handle, stainless steel
	E3HHTG	single half offset hinge with handle, natural anodised

\* Longer lead times apply. Please contact Centor for details.

### External handle

PARTS	PARTS ON PANELS	PRODUCT CODE	DESCRIPTION
		E3EHS	external handle, stainless steel
		E3EHTG	external handle, PVD brass
		E3EHPC*	external handle, custom powdercoat
single hinge with handle for outward and inward application			

### Internal handle

PARTS	PARTS ON PANELS	PRODUCT CODE	DESCRIPTION
		DF1IPHS	internal pull handle, stainless steel

### Door catch

PART	PRODUCT CODE	DESCRIPTION
	DCAS	door catch, brushed stainless steel
	DCATG	door catch, PVD brass
	DCAOL	door catch, PVD bronze

## Door size calculator

To calculate the dimensions of the doors or openings we strongly recommend using Centor's "Doorcalc" program, which is a Microsoft Excel spreadsheet. To manually calculate door sizing for an opening, follow these steps:

- 1 Prepare a basic sketch of your door opening (see worked example), to visualise clearances and check sizes.
- 2 The calculation is based on all panels being equal width, using half-offset hinges (Patent Pending). Note that the allowance between each panel is 4mm although hinge thickness is less – this allowance has been determined by consultation with fabricators as the best approximation for calculation. Clearance between hinges and hinge pins, coupled with the pressure from compression seals accounts for the allowance being larger than the nominal hinge flap thickness.

3 Recommended clearances are as follows;

- Jamb to panel (door closed)                      7mm
- Panel to panel (door closed)                      4mm
- Top of panel to head                                  10mm
- Bottom of panel to sill                                10mm

4 Panel width	W
Opening width	L
Total number of panels	N
Panel width is:	$\frac{W = L - 14 - (4 \times (N - 1))^{**}}{N}$

### Worked Examples

Clear opening size 2425 high x 4200 wide (L), and a 3L x 2R arrangement.

$$\frac{W = 4200 - 14 - (4 \times (5 - 1))}{5}$$

$$W = 834\text{mm}$$

Check against your door layout:

$$L = 2(7.0) + 4(4) + 5(834) = 4200 \text{ (OK)}$$

The panel height is the opening height less the nominal top and bottom clearances:

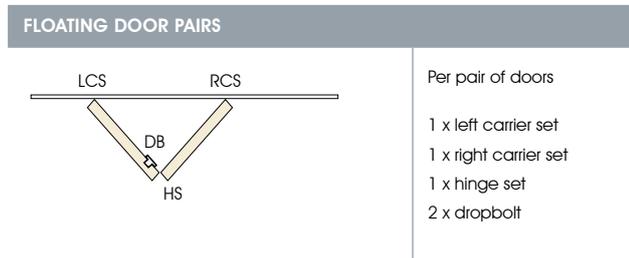
$$\text{Panel Height } H = 2425 - 10 - 10 = 2405\text{mm}$$

**\*\* Note: for even sets, eg 2L2R or 4L2R, the meeting gap would be larger – double seals are used to close the gap.**

$$\frac{W = L - 14 - (4 \times N)}{N}$$

## Common panel layouts

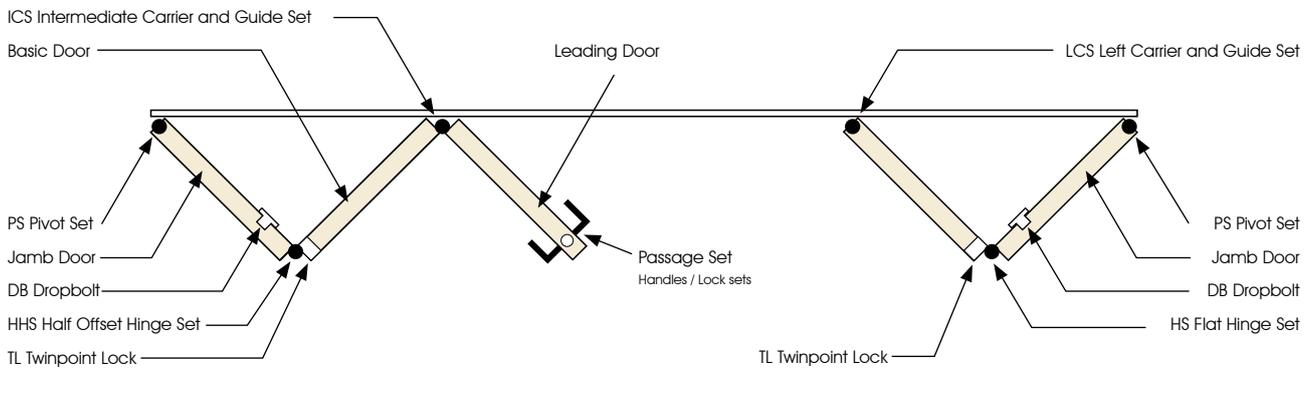
HARDWARE LEGEND	
<b>PS</b> pivot set	<b>HHS</b> half offset hinge set
<b>WPS</b> wall pivot set	<b>HS</b> hinge set (flat)
<b>ICS</b> intermediate carrier set	<b>EH</b> external handle
<b>LCS</b> left carrier set	<b>DB</b> dropbolt
<b>RCS</b> right carrier set	<b>TL</b> twinpoint lock



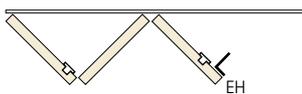
LEGEND	
Passage set Handles / Lock sets	
Dropbolts top and bottom	
Twinpoint lock	

Note > Wall Pivot Set recommended for doors over 2250mm in height.

### HARDWARE APPLICATION (3L2R)



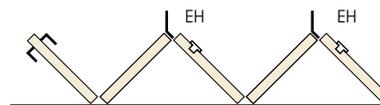
### OUTWARD APPLICATION EXTERIOR HANDLE OPTION



Use one exterior handle on exit door (outward system) where passage set / lock not required. Use dropbolts top and bottom to lock door from the inside only.

Note > Exit door not accessible from exterior in this application.

### INWARD APPLICATION EXTERIOR HANDLE OPTION



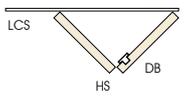
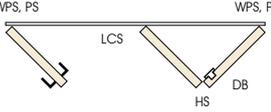
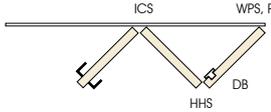
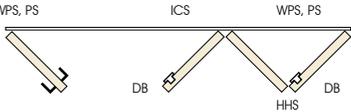
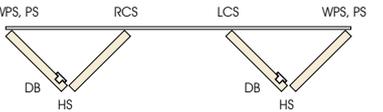
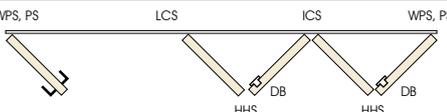
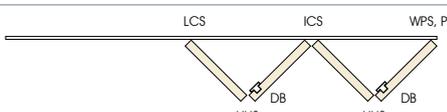
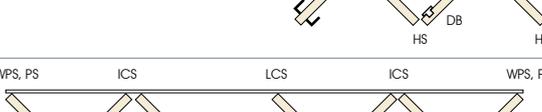
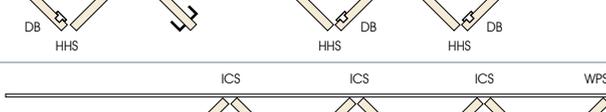
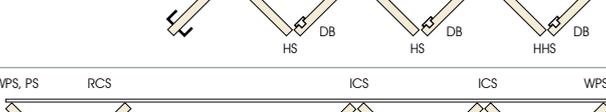
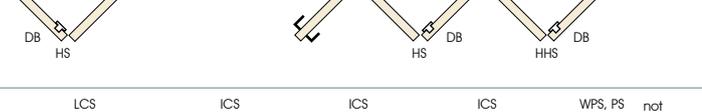
Use one exterior handle on each pair of doors (inward system) to pull open and close doors

## Common panel layouts / Dropbolts

CODE	OPENING CONFIGURATION	HARDWARE
2L	<p>inside WPS, PS not accessible from exterior</p> <p>outside</p>	1 x pivot set (PS) 1 x wall pivot set* (WPS) 1 x right carrier set (RCS) 1 x hinge set (HS) 2 x dropbolt (DB)
2L1R	<p>inside WPS, PS WPS, PS</p> <p>outside</p>	2 x pivot set (PS) 2 x wall pivot set* (WPS) 1 x right carrier set (RCS) 1 x hinge set (HS) 2 x dropbolt (DB)
3L	<p>inside WPS, PS ICS</p> <p>outside</p>	1 x pivot set (PS) 1 x wall pivot set* (WPS) 1 x intermediate carrier set (ICS) 1 x half offset hinge set (HHS) 2 x dropbolt (DB)
3L1R	<p>inside WPS, PS ICS WPS, PS</p> <p>outside</p>	2 x pivot set (PS) 2 x wall pivot set* (WPS) 1 x intermediate carrier set (ICS) 1 x half offset hinge set (HHS) 4 x dropbolt (DB)
4L	<p>inside WPS, PS ICS RCS not accessible from exterior</p> <p>outside</p>	1 x pivot set (PS) 1 x wall pivot set* (WPS) 1 x intermediate carrier set (ICS) 1 x right carrier set (RCS) 2 x half offset hinge set (HHS) 4 x dropbolt (DB)
4L1R	<p>inside WPS, PS ICS WPS, PS</p> <p>outside</p>	2 x pivot set (PS) 2 x wall pivot set* (WPS) 1 x intermediate carrier set (ICS) 1 x right carrier set (RCS) 2 x half offset hinge set (HHS) 4 x dropbolt (DB)
3L2R	<p>inside WPS, PS ICS WPS, PS</p> <p>outside</p>	2 x pivot set (PS) 2 x wall pivot set* (WPS) 1 x intermediate carrier set (ICS) 1 x left carrier set (LCS) 1 x hinge set (HS) 1 x half offset hinge set (HHS) 4 x dropbolt (DB)
5L	<p>inside WPS, PS ICS ICS</p> <p>outside</p>	1 x pivot set (PS) 1 x wall pivot set* (WPS) 2 x intermediate carrier set (ICS) 1 x hinge set (HS) 1 x half offset hinge set (HHS) 4 x dropbolt (DB)
3L3R	<p>inside WPS, PS ICS ICS WPS, PS</p> <p>outside</p>	2 x pivot set (PS) 2 x wall pivot set* (WPS) 2 x intermediate carrier set (ICS) 2 x half offset hinge set (HHS) 6 x dropbolt (DB)
7L	<p>inside WPS, PS ICS ICS ICS</p> <p>outside</p>	1 x pivot set (PS) 1 x wall pivot set* (WPS) 3 x intermediate carrier set (ICS) 2 x hinge set (HS) 1 x half offset hinge set (HHS) 6 x dropbolt (DB)
4L3R	<p>inside WPS, PS ICS RCS ICS WPS, PS</p> <p>outside</p>	2 x pivot set (PS) 2 x wall pivot set* (WPS) 2 x intermediate carrier set (ICS) 1 x right carrier set (RCS) 3 x half offset hinge set (HHS) 6 x dropbolt (DB)
5L2R	<p>inside WPS, PS ICS ICS LCS WPS, PS</p> <p>outside</p>	2 x pivot set (PS) 2 x wall pivot set* (WPS) 2 x intermediate carrier set (ICS) 1 x left carrier set (LCS) 2 x hinge set (HS) 1 x half offset hinge set (HHS) 6 x dropbolt (DB)
5L3R	<p>inside WPS, PS ICS ICS ICS WPS, PS</p> <p>outside</p>	2 x pivot set (PS) 2 x wall pivot set* (WPS) 3 x intermediate carrier set (ICS) 1 x hinge set (HS) 2 x half offset hinge set (HHS) 8 x dropbolt (DB)

\* Wall Pivot Set recommended for doors over 2250mm

## Common panel layouts / Dropbolts

CODE	OPENING CONFIGURATION	HARDWARE
2R	<p>inside PS, WPS not accessible from exterior</p> <p>outside LCS DB HS</p> 	<ul style="list-style-type: none"> <li>1 x pivot set (PS)</li> <li>1 x wall pivot set* (WPS)</li> <li>1 x left carrier set (LCS)</li> <li>1 x hinge set (HS)</li> <li>2 x dropbolt (DB)</li> </ul>
1L2R	<p>inside WPS, PS WPS, PS</p> <p>outside LCS DB HS</p> 	<ul style="list-style-type: none"> <li>2 x pivot set (PS)</li> <li>2 x wall pivot set* (WPS)</li> <li>1 x left carrier set (LCS)</li> <li>1 x hinge set (HS)</li> <li>2 x dropbolt (DB)</li> </ul>
3R	<p>inside ICS WPS, PS</p> <p>outside DB HS</p> 	<ul style="list-style-type: none"> <li>1 x pivot set (PS)</li> <li>1 x wall pivot set* (WPS)</li> <li>1 x intermediate carrier set (ICS)</li> <li>1 x half offset hinge set (HHS)</li> <li>2 x dropbolt (DB)</li> </ul>
1L3R	<p>inside WPS, PS ICS WPS, PS</p> <p>outside DB HS DB</p> 	<ul style="list-style-type: none"> <li>2 x pivot set (PS)</li> <li>2 x wall pivot set* (WPS)</li> <li>1 x intermediate carrier set (ICS)</li> <li>1 x half offset hinge set (HHS)</li> <li>4 x dropbolt (DB)</li> </ul>
2L2R	<p>inside WPS, PS RCS LCS WPS, PS not accessible from exterior</p> <p>outside DB HS DB HS Note: On even panel configurations where a left and right carrier meet (e.g. 2L/2R, 4L/2R) the gap between the panels will be 8mm, and will therefore need weather seals on both panels.</p> 	<ul style="list-style-type: none"> <li>2 x pivot set (PS)</li> <li>2 x wall pivot set* (WPS)</li> <li>1 x right carrier set (RCS)</li> <li>1 x left carrier set (LCS)</li> <li>2 x hinge set (HS)</li> <li>4 x dropbolt (DB)</li> </ul>
1L4R	<p>inside WPS, PS LCS ICS WPS, PS</p> <p>outside DB HS DB HS</p> 	<ul style="list-style-type: none"> <li>2 x pivot set (PS)</li> <li>2 x wall pivot set* (WPS)</li> <li>1 x intermediate carrier set (ICS)</li> <li>1 x left carrier set (LCS)</li> <li>2 x half offset hinge set (HHS)</li> <li>4 x dropbolt (DB)</li> </ul>
4R	<p>inside LCS ICS WPS, PS</p> <p>outside DB HS DB HS</p> 	<ul style="list-style-type: none"> <li>1 x pivot set (PS)</li> <li>1 x wall pivot set* (WPS)</li> <li>1 x intermediate carrier set (ICS)</li> <li>1 x left carrier set (LCS)</li> <li>2 x half offset hinge set (HHS)</li> <li>4 x dropbolt (DB)</li> </ul>
2L3R	<p>inside WPS, PS RCS ICS WPS, PS</p> <p>outside DB HS DB HS</p> 	<ul style="list-style-type: none"> <li>2 x pivot set (PS)</li> <li>2 x wall pivot set* (WPS)</li> <li>1 x intermediate carrier set (ICS)</li> <li>1 x right carrier set (RCS)</li> <li>1 x hinge set (HS)</li> <li>1 x half offset hinge set (HHS)</li> <li>4 x dropbolt (DB)</li> </ul>
5R	<p>inside ICS ICS WPS, PS</p> <p>outside DB HS DB HS</p> 	<ul style="list-style-type: none"> <li>1 x pivot set (PS)</li> <li>1 x wall pivot set* (WPS)</li> <li>2 x intermediate carrier set (ICS)</li> <li>1 x hinge set (HS)</li> <li>1 x half offset hinge set (HHS)</li> <li>4 x dropbolt (DB)</li> </ul>
3L4R	<p>inside WPS, PS ICS LCS ICS WPS, PS</p> <p>outside DB HS DB HS DB HS</p> 	<ul style="list-style-type: none"> <li>2 x pivot set (PS)</li> <li>2 x wall pivot set* (WPS)</li> <li>2 x intermediate carrier set (ICS)</li> <li>1 x left carrier set (LCS)</li> <li>3 x half offset hinge set (HHS)</li> <li>6 x dropbolt (DB)</li> </ul>
7R	<p>inside ICS ICS ICS WPS, PS</p> <p>outside DB HS DB HS DB HS</p> 	<ul style="list-style-type: none"> <li>1 x pivot set (PS)</li> <li>1 x wall pivot set* (WPS)</li> <li>3 x intermediate carrier set (ICS)</li> <li>2 x hinge set (HS)</li> <li>1 x half offset hinge set (HHS)</li> <li>6 x dropbolt (DB)</li> </ul>
2L5R	<p>inside WPS, PS RCS ICS ICS WPS, PS</p> <p>outside DB HS DB HS DB HS</p> 	<ul style="list-style-type: none"> <li>2 x pivot set (PS)</li> <li>2 x wall pivot set* (WPS)</li> <li>2 x intermediate carrier set (ICS)</li> <li>1 x right carrier set (RCS)</li> <li>2 x hinge set (HS)</li> <li>1 x half offset hinge set (HHS)</li> <li>6 x dropbolt (DB)</li> </ul>
8R	<p>inside LCS ICS ICS ICS WPS, PS not accessible from exterior</p> <p>outside DB HS DB HS DB HS DB HS</p> 	<ul style="list-style-type: none"> <li>1 x pivot set (PS)</li> <li>1 x wall pivot set* (WPS)</li> <li>3 x intermediate carrier set (ICS)</li> <li>1 x left carrier set (LCS)</li> <li>2 x hinge set (HS)</li> <li>2 x half offset hinge set (HHS)</li> <li>8 x dropbolt (DB)</li> </ul>

\* Wall Pivot Set recommended for doors over 2250mm

## Common panel layouts / Twinpoint lock

CODE	OPENING CONFIGURATION	HARDWARE
2L		<ul style="list-style-type: none"> <li>1 x pivot set (PS)</li> <li>1 x wall pivot set* (WPS)</li> <li>1 x right carrier set (RCS)</li> <li>1 x hinge set (HS)</li> <li>1 x twinpoint lock (TL)</li> </ul>
2L1R		<ul style="list-style-type: none"> <li>2 x pivot set (PS)</li> <li>2 x wall pivot set* (WPS)</li> <li>1 x right carrier set (RCS)</li> <li>1 x hinge set (HS)</li> <li>1 x twinpoint lock (TL)</li> </ul>
3L		<ul style="list-style-type: none"> <li>1 x pivot set (PS)</li> <li>1 x wall pivot set* (WPS)</li> <li>1 x intermediate carrier set (ICS)</li> <li>1 x half offset hinge set (HHS)</li> <li>1 x twinpoint lock (TL)</li> </ul>
3L1R		<ul style="list-style-type: none"> <li>2 x pivot set (PS)</li> <li>2 x wall pivot set* (WPS)</li> <li>1 x intermediate carrier set (ICS)</li> <li>1 x half offset hinge set (HHS)</li> <li>1 x twinpoint lock (TL)</li> </ul>
4L		<ul style="list-style-type: none"> <li>1 x pivot set (PS)</li> <li>1 x wall pivot set* (WPS)</li> <li>1 x intermediate carrier set (ICS)</li> <li>1 x right carrier set (RCS)</li> <li>2 x half offset hinge set (HHS)</li> <li>2 x twinpoint lock (TL)</li> </ul>
4L1R		<ul style="list-style-type: none"> <li>2 x pivot set (PS)</li> <li>2 x wall pivot set* (WPS)</li> <li>1 x intermediate carrier set (ICS)</li> <li>1 x right carrier set (RCS)</li> <li>2 x half offset hinge set</li> <li>2 x twinpoint lock (TL)</li> </ul>
3L2R		<ul style="list-style-type: none"> <li>2 x pivot set (PS)</li> <li>2 x wall pivot set* (WPS)</li> <li>1 x intermediate carrier set (ICS)</li> <li>1 x left carrier set</li> <li>1 x hinge set (HS)</li> <li>1 x half offset hinge set (HHS)</li> <li>2 x twinpoint lock (TL)</li> </ul>
5L		<ul style="list-style-type: none"> <li>1 x pivot set (PS)</li> <li>1 x wall pivot set* (WPS)</li> <li>2 x intermediate carrier set (ICS)</li> <li>1 x hinge set (HS)</li> <li>1 x half offset hinge set (HHS)</li> <li>2 x twinpoint lock (TL)</li> </ul>
3L3R		<ul style="list-style-type: none"> <li>2 x pivot set (PS)</li> <li>2 x wall pivot set* (WPS)</li> <li>2 x intermediate carrier set (ICS)</li> <li>2 x half offset hinge set (HHS)</li> <li>2 x twinpoint lock (TL)</li> </ul>
7L		<ul style="list-style-type: none"> <li>1 x pivot set (PS)</li> <li>1 x wall pivot set* (WPS)</li> <li>3 x intermediate carrier set (ICS)</li> <li>2 x hinge set (HS)</li> <li>1 x half offset hinge set (HHS)</li> <li>3 x twinpoint lock (TL)</li> </ul>
4L3R		<ul style="list-style-type: none"> <li>2 x pivot set (PS)</li> <li>2 x wall pivot set* (WPS)</li> <li>2 x intermediate carrier set (ICS)</li> <li>1 x right carrier set (RCS)</li> <li>3 x half offset hinge set (HHS)</li> <li>3 x twinpoint lock (TL)</li> </ul>
5L2R		<ul style="list-style-type: none"> <li>2 x pivot set (PS)</li> <li>2 x wall pivot set* (WPS)</li> <li>2 x intermediate carrier set (ICS)</li> <li>1 x left carrier set</li> <li>2 x hinge set (HS)</li> <li>1 x half offset hinge set (HHS)</li> <li>3 x twinpoint lock (TL)</li> </ul>
5L3R		<ul style="list-style-type: none"> <li>2 x pivot set (PS)</li> <li>2 x wall pivot set* (WPS)</li> <li>3 x intermediate carrier set (ICS)</li> <li>1 x hinge set (HS)</li> <li>2 x half offset hinge set (HHS)</li> <li>3 x twinpoint lock (TL)</li> </ul>

\* Wall Pivot Set recommended for doors over 2250mm high

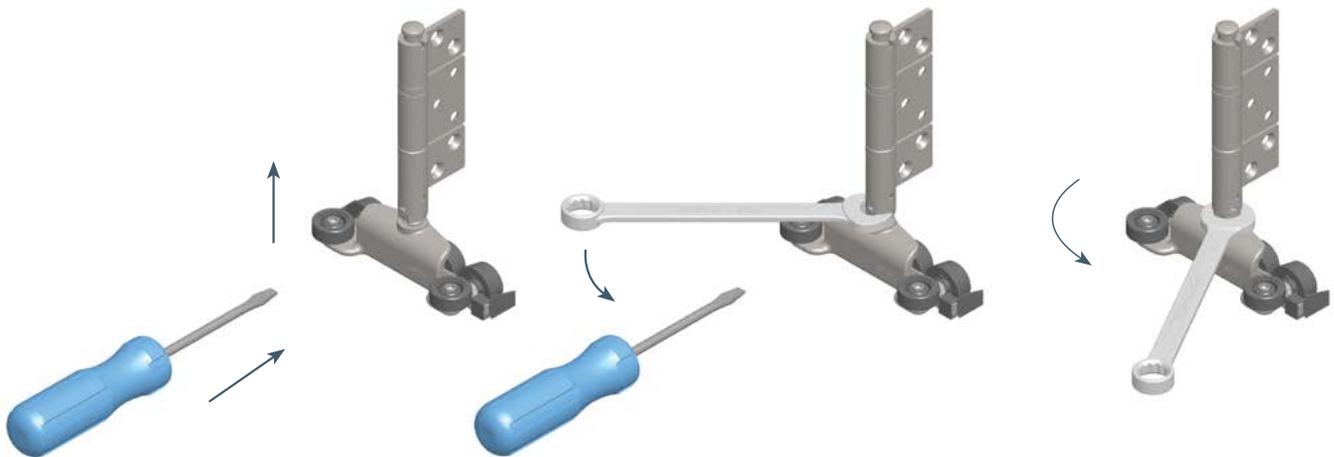
## Common panel layouts / Twinpoint lock

CODE	OPENING CONFIGURATION	HARDWARE
2R	<p><b>inside</b> PS, WPS not accessible from exterior</p> <p><b>outside</b> LCS</p>	1 x pivot set (PS) 1 x wall pivot set* (WPS) 1 x left carrier set (LCS) 1 x hinge set (HS) 1 x twinpoint lock (TL)
1L2R	<p><b>inside</b> WPS, PS</p> <p><b>outside</b> LCS</p>	2 x pivot set (PS) 2 x wall pivot set* (WPS) 1 x left carrier set (LCS) 1 x hinge set (HS) 1 x twinpoint lock (TL)
3R	<p><b>inside</b> ICS WPS, PS</p> <p><b>outside</b> TL</p>	1 x pivot set (PS) 1 x wall pivot set* (WPS) 1 x intermediate carrier set (ICS) 1 x half offset hinge set (HHS) 1 x twinpoint lock (TL)
1L3R	<p><b>inside</b> WPS, PS ICS WPS, PS</p> <p><b>outside</b> TL</p>	2 x pivot set (PS) 1 x wall pivot set* (WPS) 1 x intermediate carrier set (ICS) 1 x half offset hinge set (HHS) 1 x twinpoint lock (TL)
2L2R	<p><b>inside</b> WPS, PS RCS LCS WPS, PS not accessible from exterior</p> <p><b>outside</b> TL</p>	2 x pivot set (PS) 2 x wall pivot set* (WPS) 1 x right carrier set (RCS) 1 x left carrier set (LCS) 2 x hinge set (HS) 2 x twinpoint lock (TL)
1L4R	<p><b>inside</b> WPS, PS LCS ICS WPS, PS</p> <p><b>outside</b> TL</p>	2 x pivot set (PS) 2 x wall pivot set* (WPS) 1 x intermediate carrier set (ICS) 1 x left carrier set (LCS) 2 x half offset hinge set (HHS) 2 x twinpoint lock (TL)
4R	<p><b>inside</b> LCS ICS WPS, PS</p> <p><b>outside</b> TL</p>	1 x pivot set (PS) 1 x wall pivot set* (WPS) 1 x intermediate carrier set (ICS) 1 x left carrier set (LCS) 2 x half offset hinge set (HHS) 2 x twinpoint lock (TL)
2L3R	<p><b>inside</b> WPS, PS RCS ICS WPS, PS</p> <p><b>outside</b> TL</p>	2 x pivot set (PS) 2 x wall pivot set* (WPS) 1 x intermediate carrier set (ICS) 1 x right carrier set (RCS) 1 x hinge set (HS) 1 x half offset hinge set (HHS) 2 x twinpoint lock (TL)
5R	<p><b>inside</b> ICS ICS WPS, PS</p> <p><b>outside</b> TL</p>	1 x pivot set (PS) 1 x wall pivot set* (WPS) 2 x intermediate carrier set (ICS) 1 x hinge set (HS) 1 x half offset hinge set (HHS) 2 x twinpoint lock (TL)
3L4R	<p><b>inside</b> WPS, PS ICS LCS ICS WPS, PS</p> <p><b>outside</b> TL</p>	2 x pivot set (PS) 2 x wall pivot set* (WPS) 2 x intermediate carrier set (ICS) 1 x left carrier set (LCS) 3 x half offset hinge set (HHS) 3 x twinpoint lock (TL)
7R	<p><b>inside</b> ICS ICS ICS WPS, PS</p> <p><b>outside</b> TL</p>	1 x pivot set (PS) 1 x wall pivot set* (WPS) 3 x intermediate carrier set (ICS) 2 x hinge set (HS) 1 x half offset hinge set (HHS) 3 x twinpoint lock (TL)
2L5R	<p><b>inside</b> WPS, PS RCS ICS ICS WPS, PS</p> <p><b>outside</b> TL</p>	2 x pivot set (PS) 2 x wall pivot set* (WPS) 2 x intermediate carrier set (ICS) 1 x right carrier set (RCS) 2 x hinge set (HS) 1 x half offset hinge set (HHS) 3 x twinpoint lock (TL)
8R	<p><b>inside</b> LCS ICS ICS ICS WPS, PS</p> <p><b>outside</b> TL</p>	1 x pivot set (PS) 1 x wall pivot set* (WPS) 3 x intermediate carrier set (ICS) 1 x left carrier set (LCS) 2 x hinge set (HS) 2 x half offset hinge set (HHS) 4 x twinpoint lock (TL)

\* Wall Pivot Set recommended for doors 2250mm high

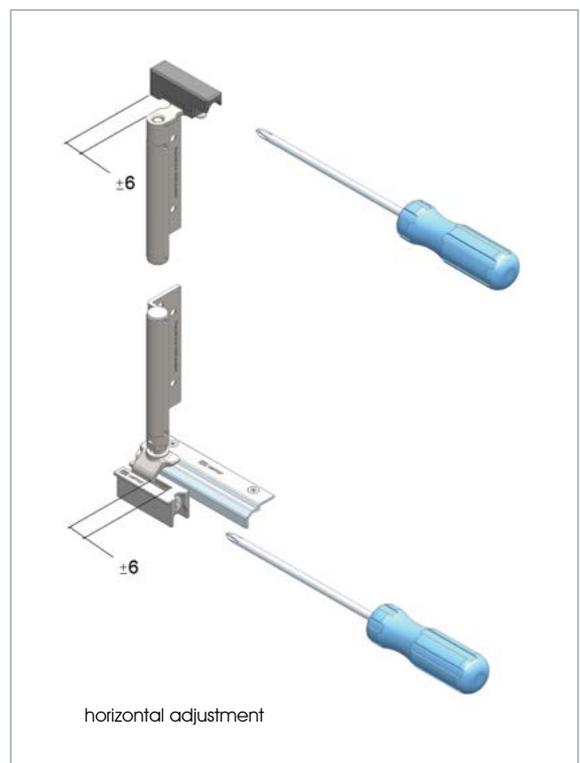
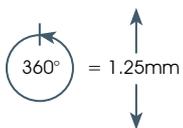
## Surelock 4™ adjustment

Surelock 4™ is Centor's patented carrier pin locking system which ensures that once door heights are set at the top pivots, intermediate and end carriers, they stay set!



### Using Surelock 4™ is simple

- 1 Insert a small flat blade screwdriver into slot and lift the slider.
- 2 With the slider lifted start the adjustment using a 14mm spanner on the adjustment nut.
- 3 Turn the adjustment nut a full revolution until it automatically locks back in place.
- 4 Repeat if necessary (maximum adjustment +/- 4mm).



While every effort has been made to ensure the accuracy of the information in this publication, Centor assume no responsibility for errors or omissions or any consequences of reliance solely on this publication.



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