

SECURITY SHUTTERS

TECHNICAL SPECIFICATIONS



Aluminium Security Shutters

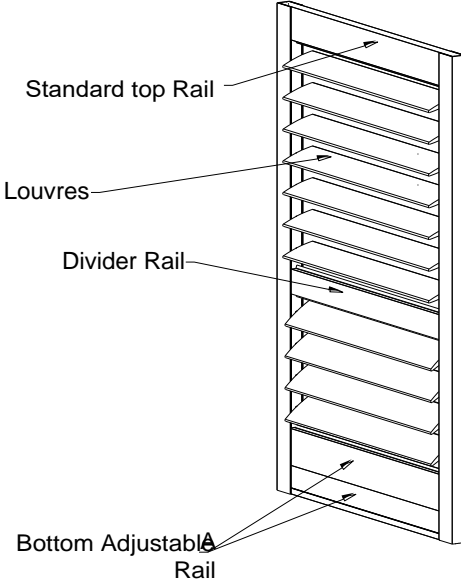
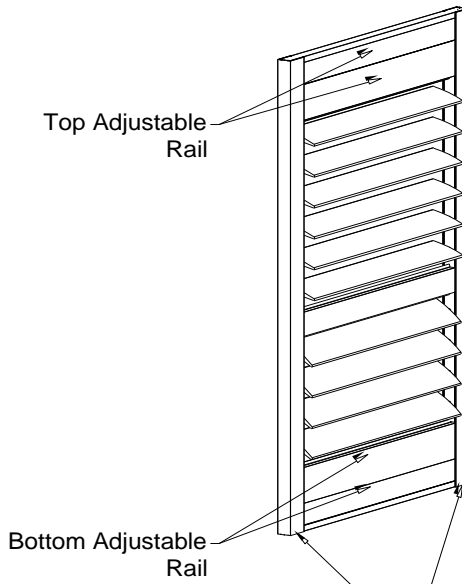
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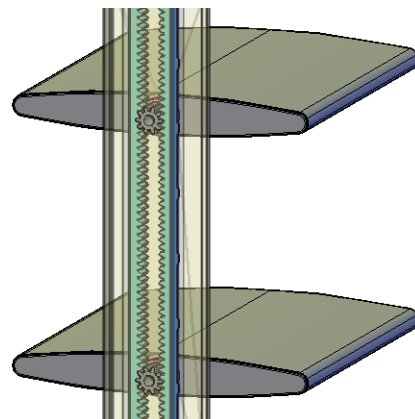
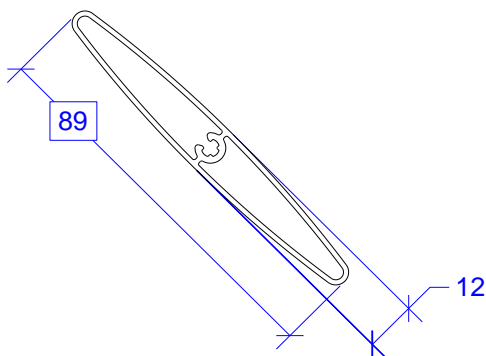
General Specification

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Shutter Panels

Type 1 shutter panel Standard top rail & adjustable bottom rail	Type 2 shutter panel Adjustable top and bottom rails
 <p>Standard top Rail</p> <p>Louvres</p> <p>Divider Rail</p> <p>Bottom Adjustable Rail</p>	 <p>Top Adjustable Rail</p> <p>Bottom Adjustable Rail</p> <p>Stile</p>

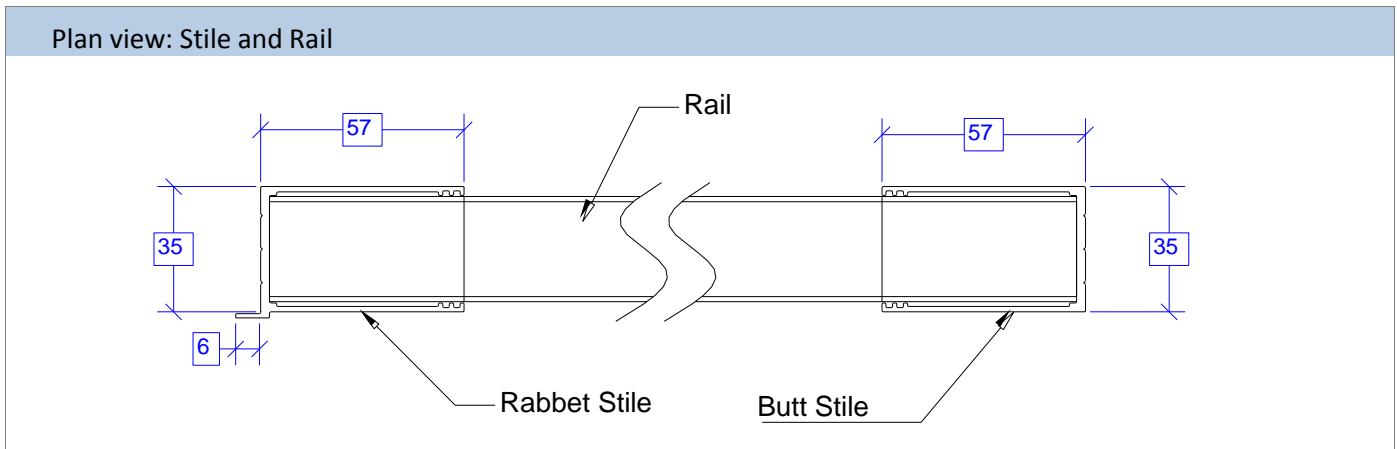
Louvre Operation



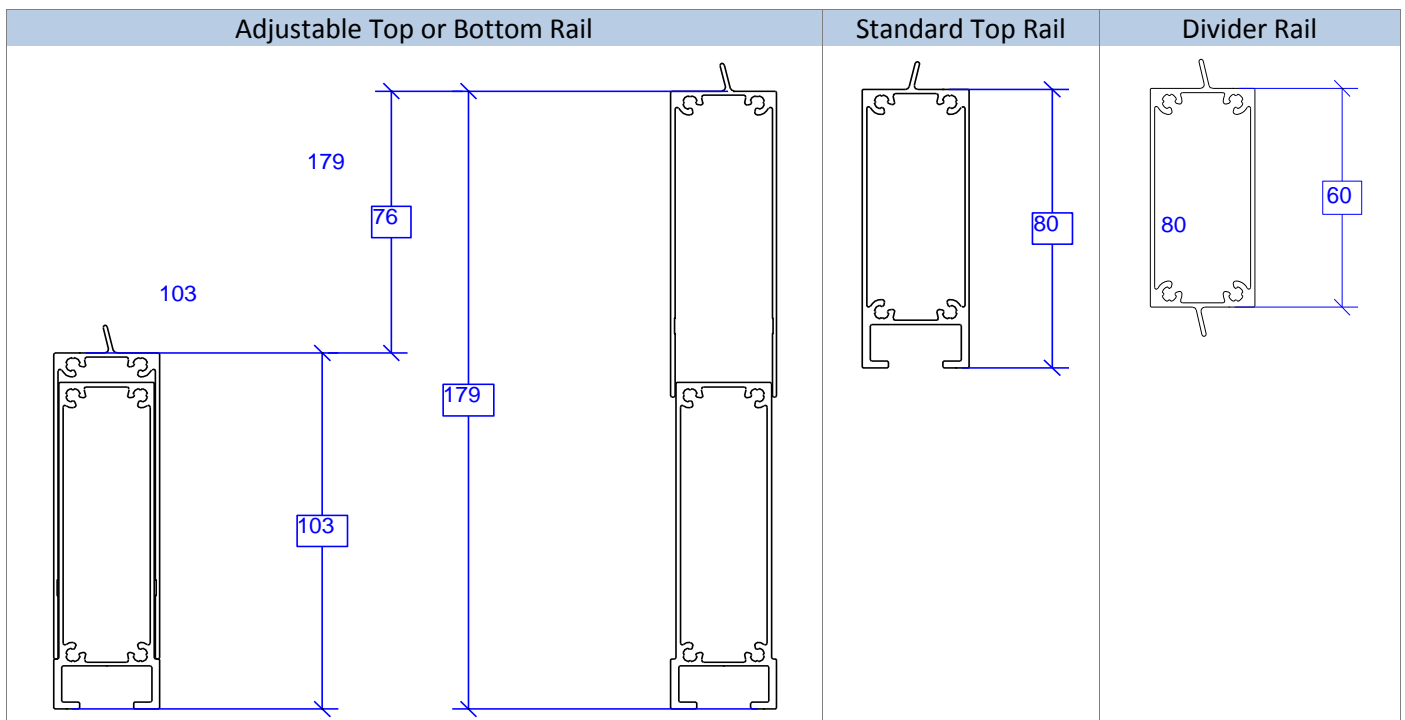
- The maximum number of louvres connected together is 16. Should the number exceed this, they will be split into 2 sections. If this number is an odd number the top section will have 1 more louvre than the bottom section.
- Optional split of a louvre bank should there be less than 16 louvres.
- The gear mechanism is installed on both sides of the shutter panel

Stiles & Rails

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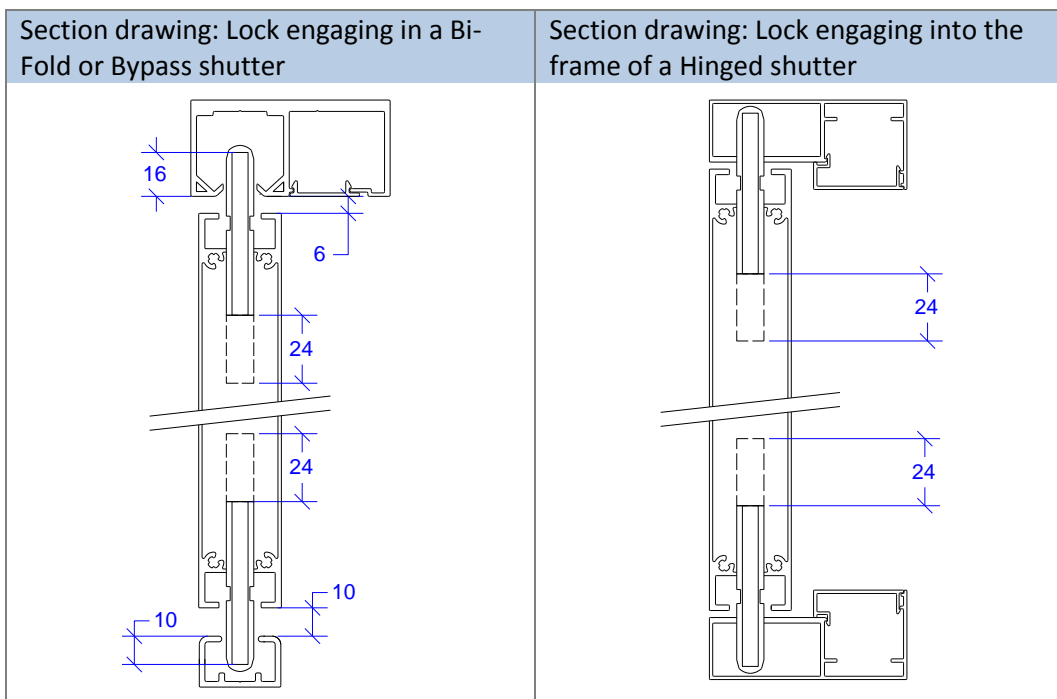


- For the adjustable top / bottom rail: zero adjustment results in a 103mm rail size and the **maximum adjustment could be 76mm** resulting in a 179mm rail size.
- **Type 1** shutter (std top rail & full adjustment on bottom rail) will be the default manufacturing option under the following circumstances
 - Shutter height over 1700mm
 - Shutter height below 1700mm & bottom adjustment less than 30mm
- Rail sizes can be matched across an order, matching is either top or bottom rail sizes.
- When a panel height exceeds **1900mm**, a divider rail is required
- The order measurement required for the location of the divider rail is from the bottom of the opening / frame to the centre of the divider rail.
- The location of the divider rail could vary by **+/- 40mm**

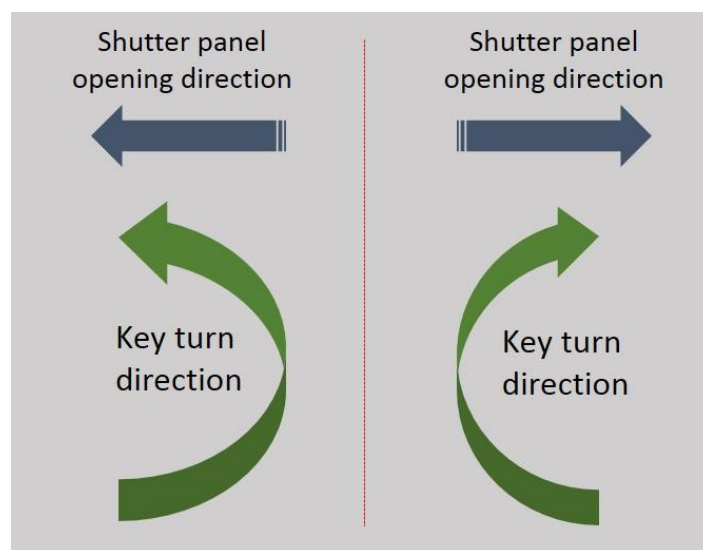
Locks

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- Default lock option is for a single sided lock (only accessible from the face of the shutter)
- Optional double sided lock (key entry from both the front and back of the shutter)
- Choose key alike across an order, or multiple keys in multiple openings
- The lock has a double turning action with a 24mm throw.
- The locking rod can be turned up or down for further adjustment.
- The bolt / locking rod is a 6mm steel rod encased in a 10mm nylon cap
- When selecting a custom lock height, this is measured from the bottom of an opening to the centre of the lock.
- The lock cylinder is made from brass with nickel plating, the inner lock is galvanised steel.



- The key turn direction is dependent on which way a shutter opens. See diagram below



Pull Handle

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- Optional pull handle available in either a **brushed nickel** or **satin white** finish.
- The pull handle is pre-installed over the lock cylinder
- If you order a double sided lock the pull handle will only be installed on the front facing side.



Standard Manufacturing Tolerances

- The width and/or height of the shutter could be $\pm 1.5\text{mm}$ different to the ordered net shutter panel width /height

Hinges

Panel Height		Quantity of Hinges
From:	To:	
0	1200	2
1201	1800	3
1801	2200	4
2201	2800	5
2801		6

- The number of hinges supplied will be determined by the panel height.
- Additional hinges may be fitted for wider panels or where the factory deems necessary
- Hinges are available in the following colours
 - Satin White
 - Pure White
 - Matt Charcoal
 - Natural Anodised
 - Bronze
- For By-Pass configurations that call for joined panels, this will only have a single hinge at the top and bottom.

Colours / Finishes

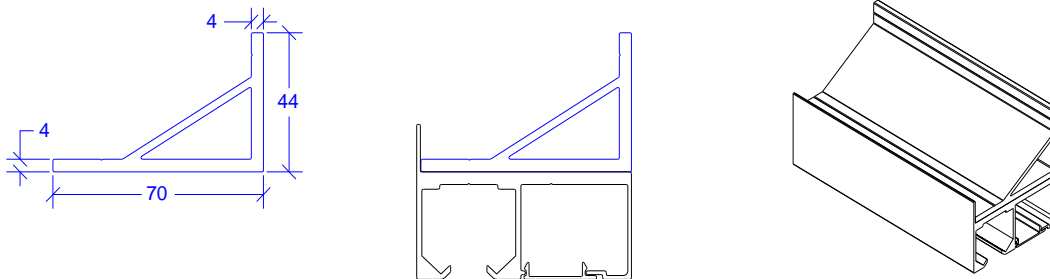
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- The standard colours are:
 - Satin White
 - Charcoal
 - Light Grey (from Nov'17)
- Other powder coating colours are available from the Interpon and Ferro ranges. These should be matt finish and availability of the powder needs to be confirmed with the factory
- An extra 5 days lead time applies to all colour choices other than standard.
- For the nylon / plastic components (louvre cap & sleeve) the colour choice is either
 - **White**
 - **Dark grey**
 - **Light grey**

Bracket Options

Default bracket profile - powder coated aluminium

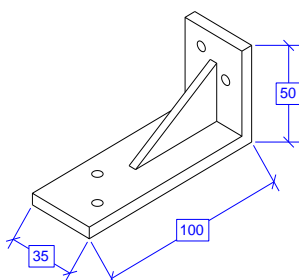
- bracket profile will run full length of top track
- when ordered with the 71mm to tracks, the track will be pre-fixed to the bracket profile
- bracket profile to match the order colour



- Option to request the top track with returns when ordering the bracket profile. Please request in special notes.



Optional brackets - white powder coated 6mm thick aluminium



Warranty

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- All warranties are subject to fair wear and tear and correct routine maintenance.
- **5 year** warranty covering all material defects
- **Moving parts** like wheels / locks etc are covered for a period of **3 years**
- **Exterior** shutter installations are covered for a period of **3 years**

Hinged Shutters

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Panel Size Limitations

Width minimum	300mm	
Width maximum - single hinged	900mm	(eg. LR / L / R)
Width maximum - double hinged	500mm	(eg. LLRR / LRR / LLR)
Height minimum	485mm	
Height maximum	3100mm	

Note:
Panels can be manufactured shorter than 485mm, but it would require a different locking system. Please consult with the factory if this is a requirement.

Default Operation

- For a LR configuration, the R panel will open first, followed by the L panel. This means that the R panel will have a rabbet stile and have the lock installed on it.
- For a LRR, the RR panels will open first and locks positioned accordingly
- For a LLR, the R panel will open first and locks positioned accordingly
- For a LLRR, the RR panels will open first and locks positioned accordingly

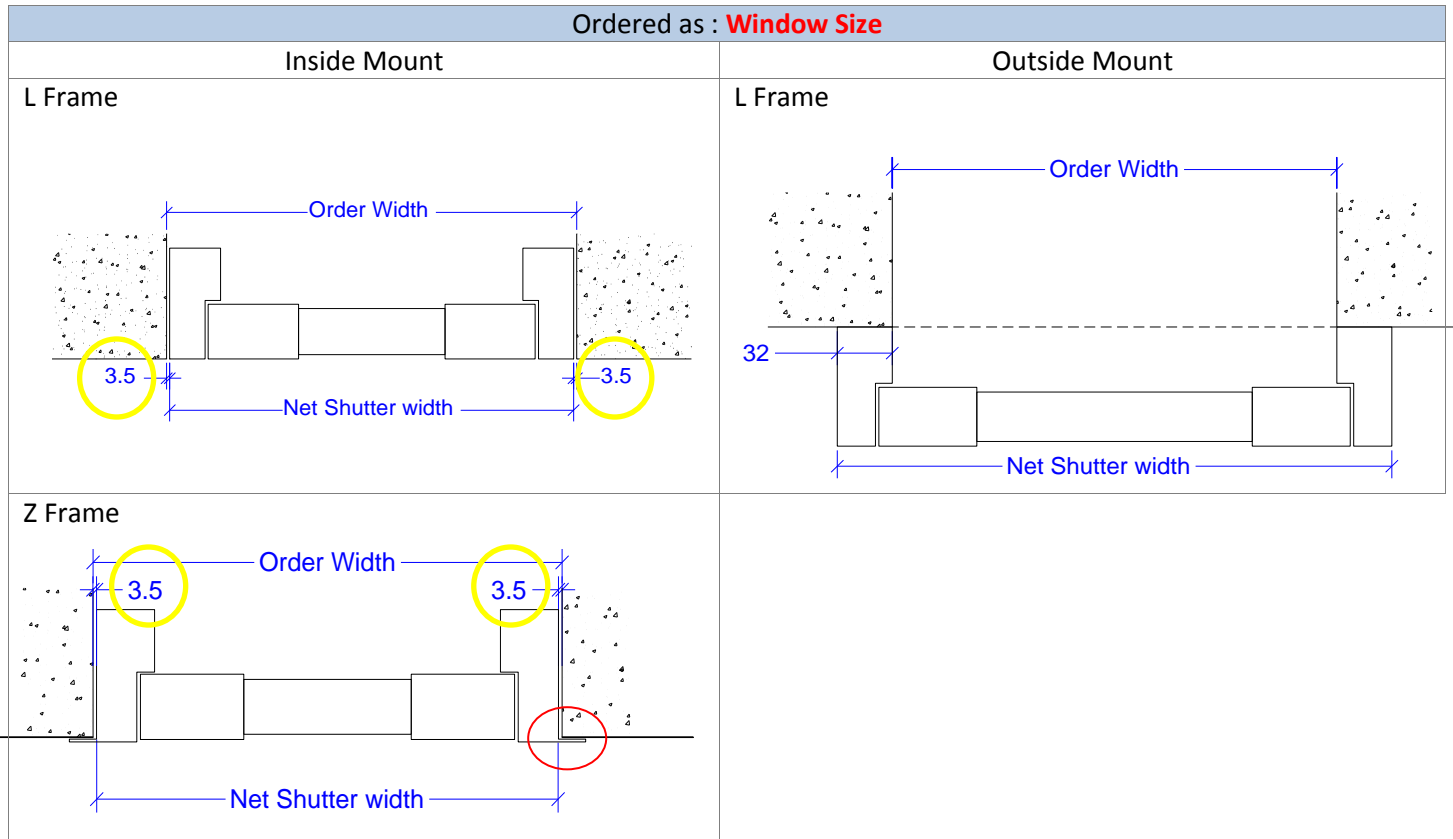
Should you require anything different to the default above, this needs to be specifically requested.

Order Dimensions: Deductions & Additions

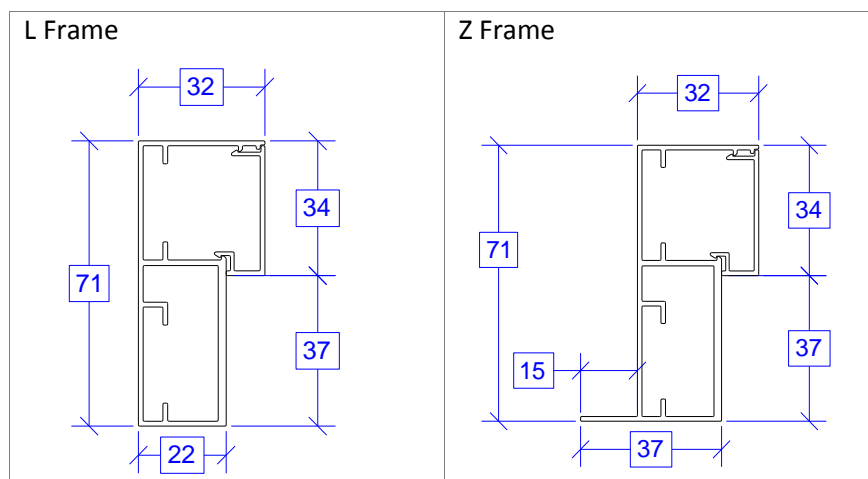
Ordered as:	Mount Type	Net Shutter Width / Height
Window Size	Inside	-3.5mm per frame side
	Outside	+ 32mm per frame side
Frame to Frame Size	Inside	Order Width / Height
	Outside	Order Width / Height

Mount Options

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Frame Options



- 4 sided frame is the best option in terms of security
- If a Z frame is selected, and you have obstructions on one or more sides of the reveal, you can order sill plates. For example LTRB(SP)
- If you are using a 3 sided frame (LRT) for a LR configuration, and it is a doorway or accessible from both sides, it is suggested that you request additional locks. The default would be for only the RHS panel to have a lock.
- Dust Keeps will be provided for orders with no bottom frame. 1 dust keep will be provided per lock.

Bi-fold Shutters

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Panel Size Limitations

Width minimum	200mm
Width Maximum	700mm
Height minimum	550mm
Height maximum	2900mm
Max m ² per panel	1.7 m ²

- Only even number of panels in a bank are warranted, except for a 1L or 1R
- A bank of 2 shutters floating is not warranted

Default Operation

- Where 2 banks of bi-fold shutters meet, the right hand bank will have a rabbit stile overlapping the left hand bank.
- In some instances, generally 2 panel banks, this will mean that the left bank needs to be stacked before the right bank.
- Option to request a different configuration to default

Installation Clearances

	Track centre line from last protrusion
1 or 2 panels connected - eg. L / R / LL / RR / LLRR	55mm
More than 2 panels connected	85mm

- For any non-standard applications, please discuss with our technical team. E.g. Corner windows / outside mount / reverse fold etc

Order Dimensions: Deductions & Additions

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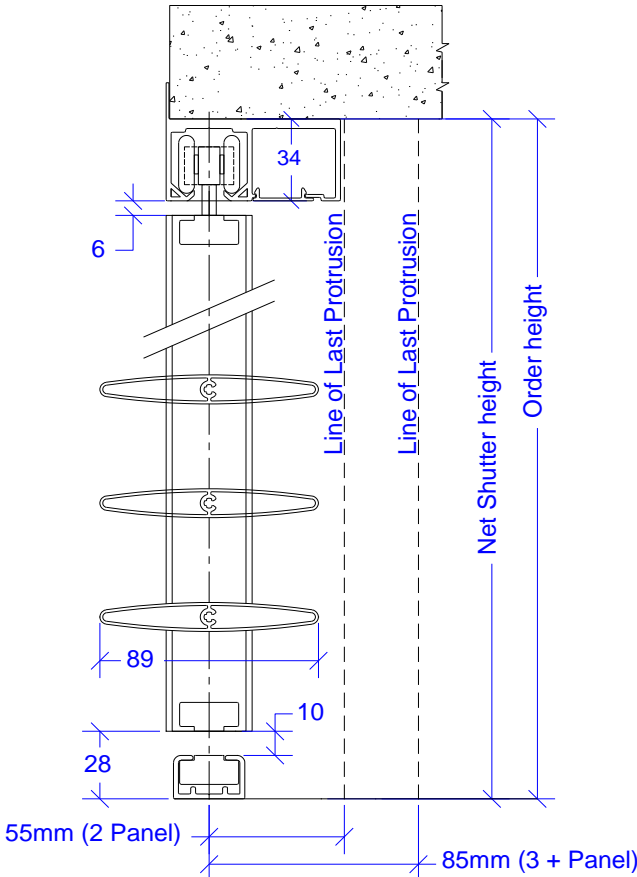
Ordered as:	Mount Type	Net Shutter Width	Net Shutter Height
Window Size	Inside	- 2mm per frame side	Order Height
	Outside	Order Width + 90mm	Order Height + 66mm
Frame to Frame Size	Inside	Order Width	Order Height
	Outside	Order Width	Order Height

- Deductions will be made from the order width for side frame selection
- If you order **max frame to frame** with no side frames, shutters will be sized from edge of panel to edge of panel, no allowance will be made for pivot and non-pivot gaps. If you order a side frame/s, the shutters will be sized from the outside of the side frame, taking into account the pivot / non-pivot gaps

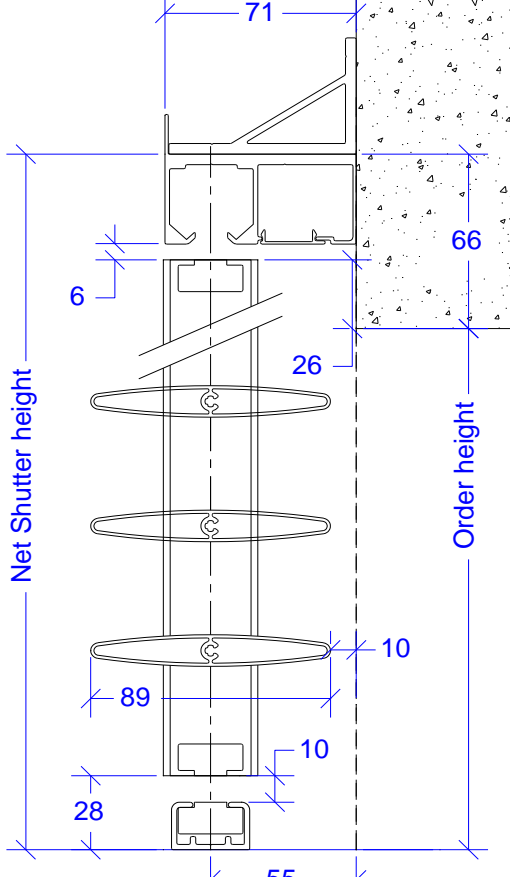
Mount Options

Ordered as: **Window Size**

Inside Mount (section)
Default:- top track installed directly into reveal

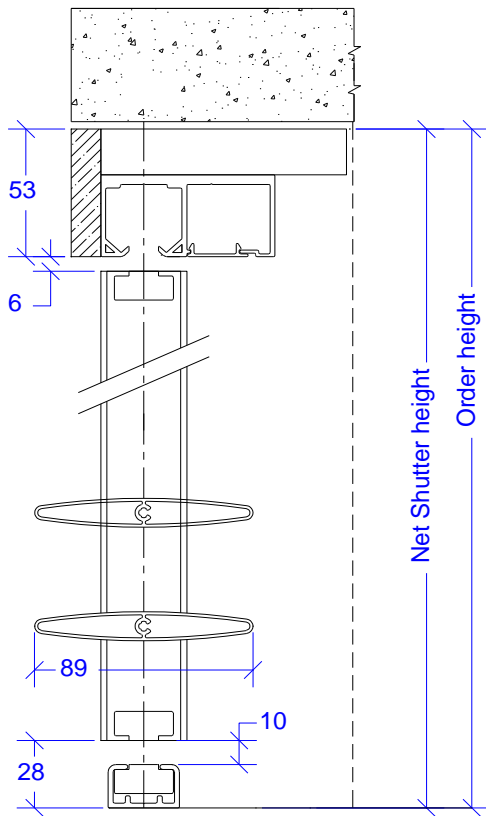


Outside Mount (section)
Default:- bracket profile fixed to 71x34mm track

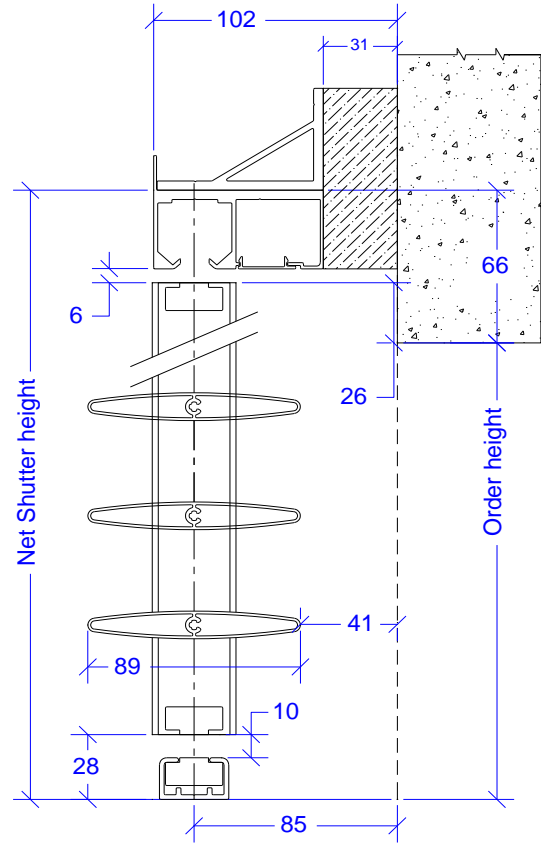


This installation is only suitable for maximum 2 panels connected. For example 1L 1R, 2L 2R

Optional: Installed with a header and pelmet

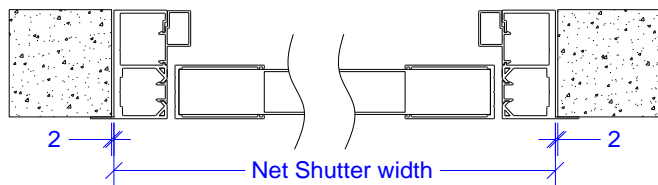


Optional: Order timber spacer for increased centre line



This installation / spacer is suitable for more than 2 panels connected. For example 4L 4R

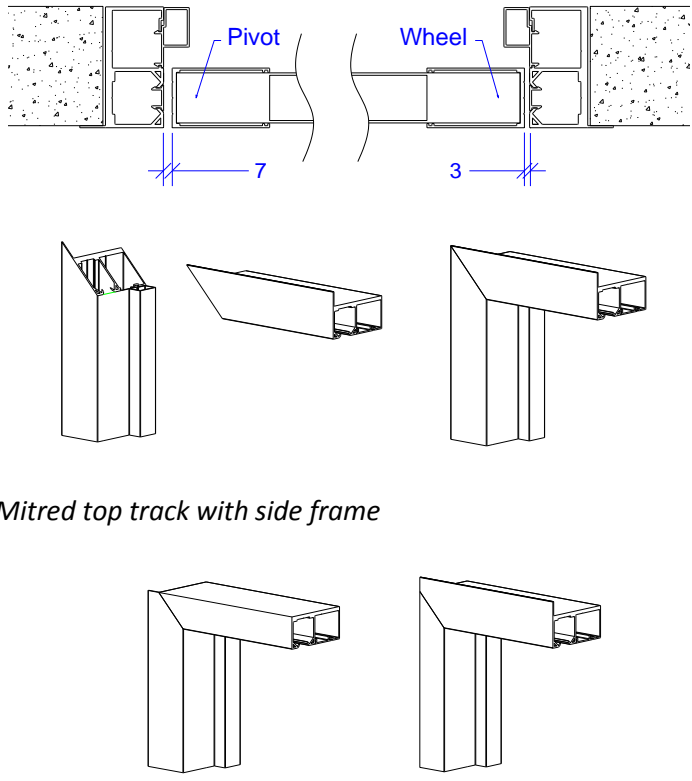
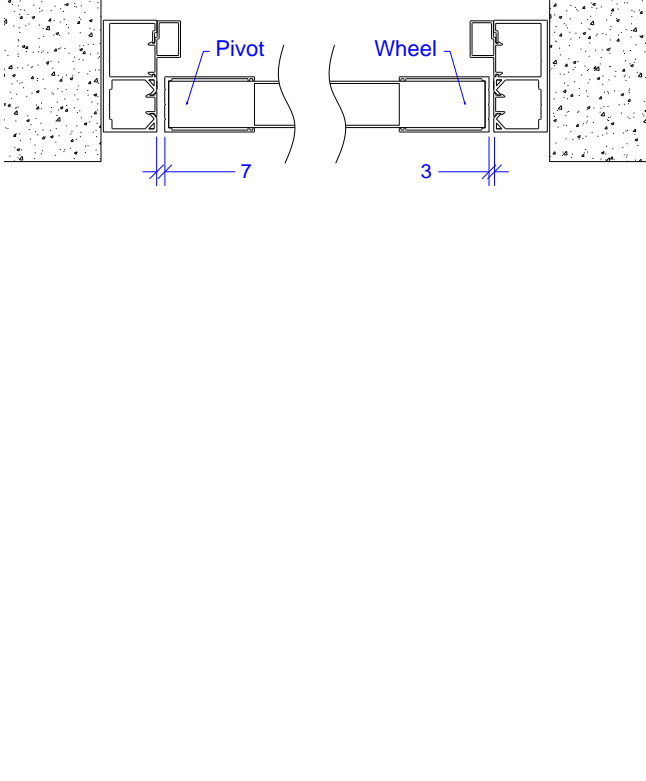
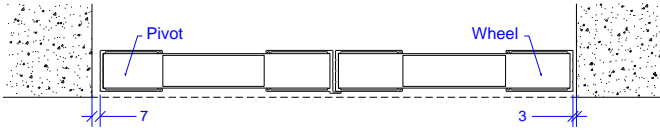
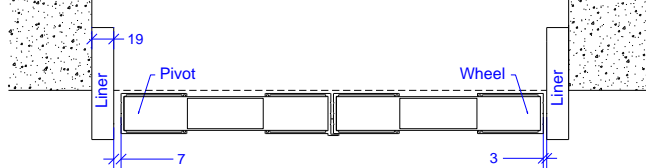
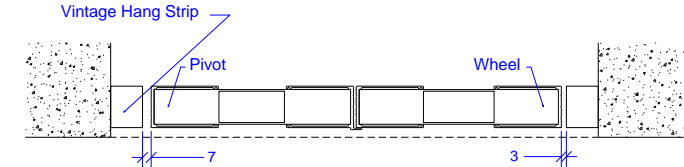
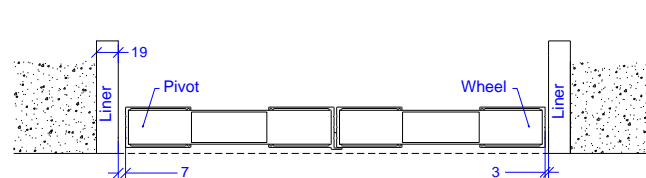
Inside Mount (plan view)



- Floating outside mount bi-fold shutters are not secure. Contact the factory to discuss options. Additional track width needs to be allowed for the track stoppers

Side Frame Options

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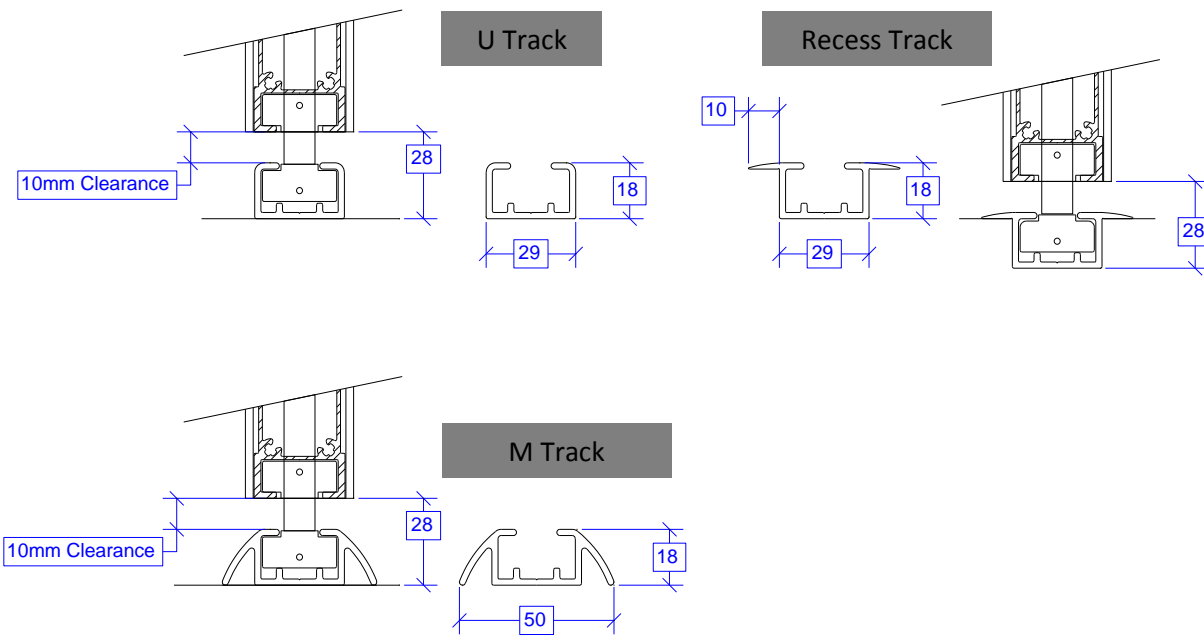
71x34mm Overlap track- side frame detail	71x34mm Std track- side frame detail
 <p><i>Mitred top track with side frame</i></p> <p><i>Mitred top track with side frame – showing sill plate option</i></p>	
No Side Frame	Liner (Protruding)
	
Vintage Hang Strip	Liner (Inside Reveal)
	

- Recommended side frame selection is the Overlap or Std track.
- Side frames provide additional support for the top track, therefore they are recommended
- Liners and Vintage Hang Strips are manufactured from timber with a paint finish.

Bottom Clearances / Bottom Track Options

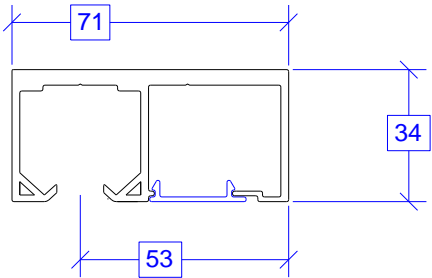
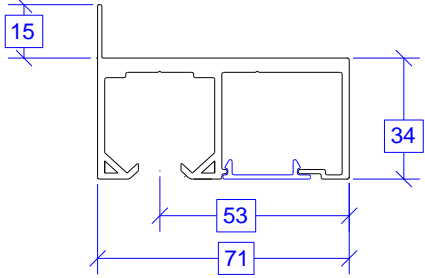
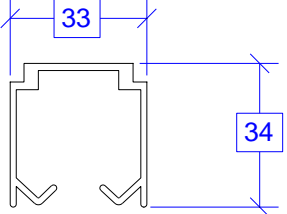
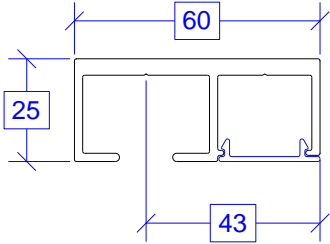
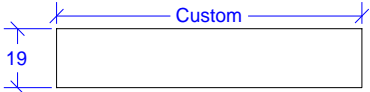
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- Bottom track colour options
 - Satin White
 - Natural Anodised
 - Charcoal
 - Light Grey (from Nov'17)
 - Non-Standard colour
- Default bottom clearance is 28mm
- Bottom track is always required
- Maximum track length is 5800mm



Top Track & Header Options

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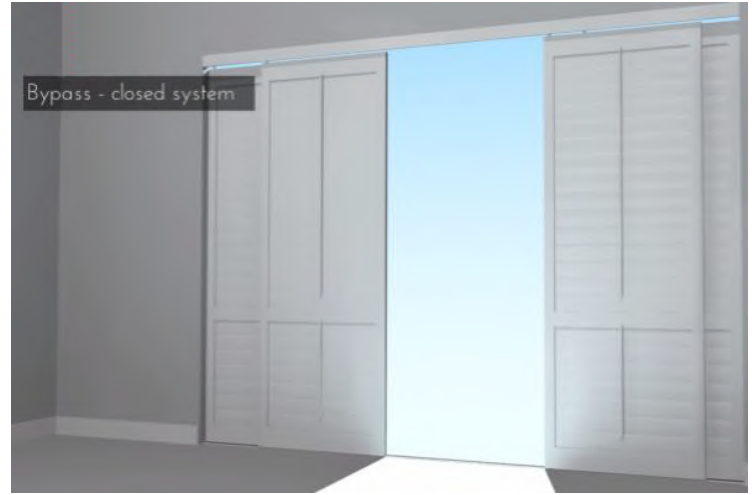
<p>Default: 71x34mm Std</p> 	<p>Default: 71x34mm Overlap</p> 
<p>Optional: 33x34mm</p> 	<p>Optional: 60x25mm (no wheels, only sliding gear)</p> 
<p>Optional: 19mm header</p> 	

Pelmet Options

- Default is no pelmet, top track installed directly into reveal.
- 12mm pelmets are used if requested, this can be ordered to custom sizes.
- If you are not over sizing your pelmet and you are using a 19mm header (inside mount), the standard sized pelmet should be a 12mm x 53mm.

Bypass Shutters

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Panel Size Limitations

Width minimum	200mm
Width Maximum	1050mm
Height minimum	550mm
Height maximum	3100mm

Installation Clearances

Type	1st Track Centreline from last protrusion	1st Track Centreline to 2nd Track Centreline
CLOSED BYPASS (without hinge)	55mm	55mm
CLOSED BYPASS (with hinge)	65mm	65mm
OPEN BYPASS	55mm	100mm

Order Dimensions: Deductions & Additions

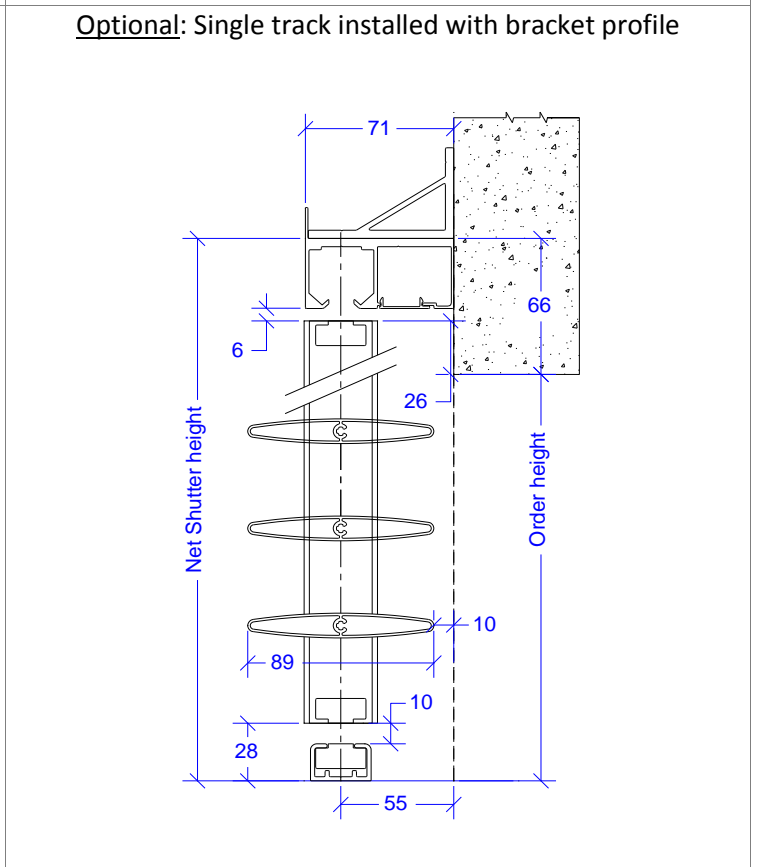
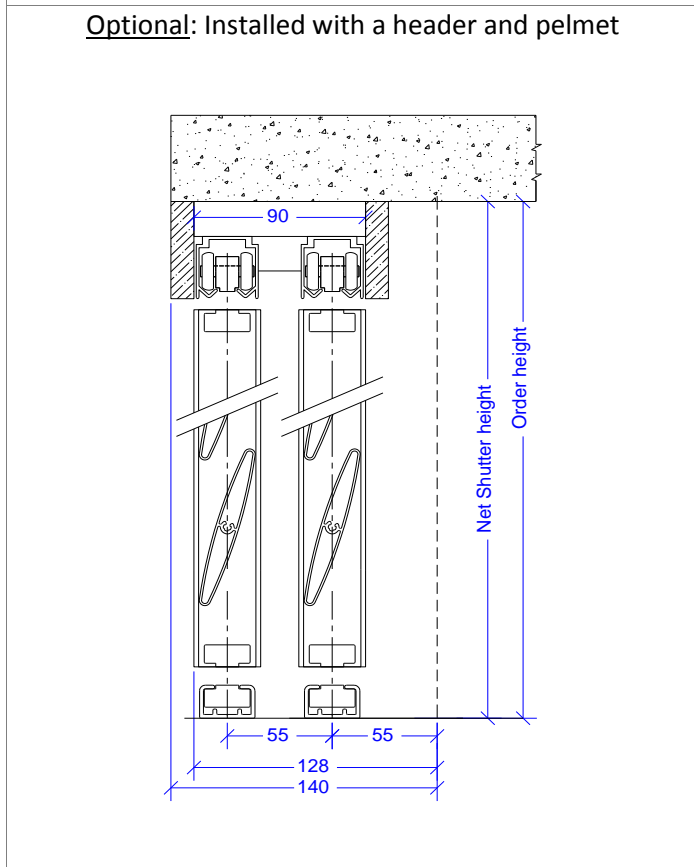
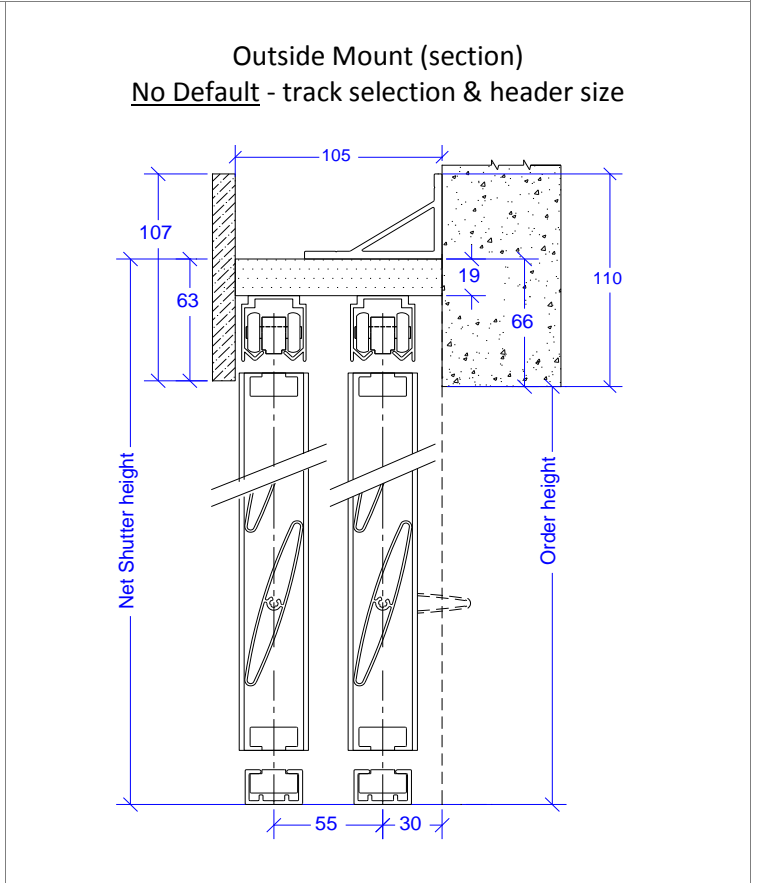
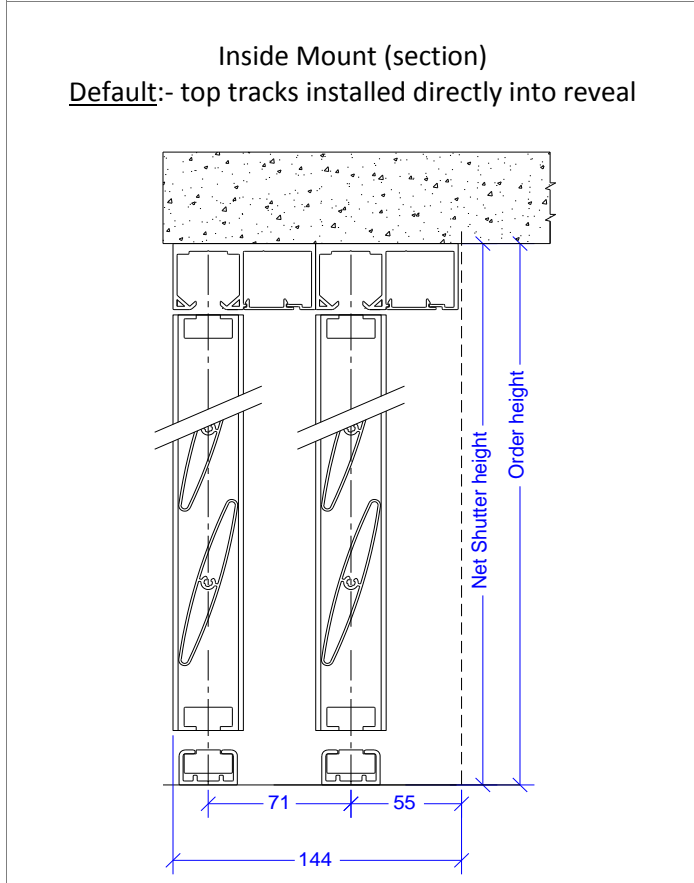
Ordered as:	Mount Type	Net Shutter Width	Net Shutter Height
Window Size	Inside	- 3mm per frame side	Order Height
	Outside	Order Width + 90mm	Order Height + 66mm
Frame to Frame Size	Inside	Order Width	Order Height
	Outside	Order Width	Order Height

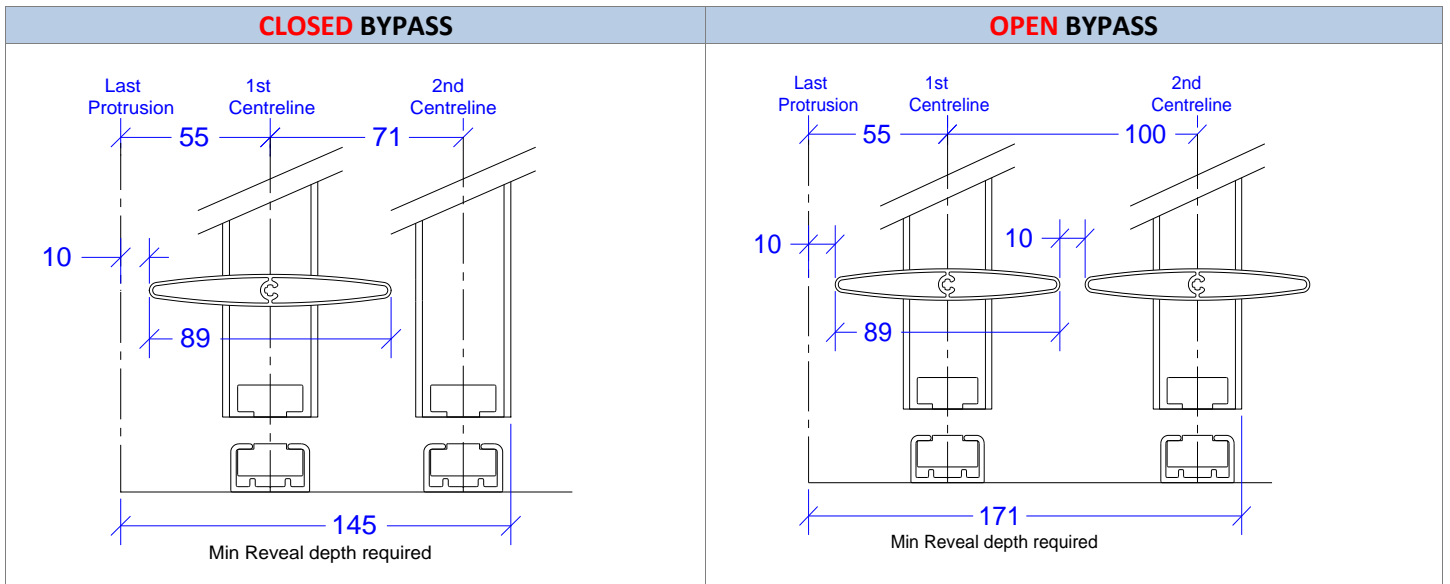
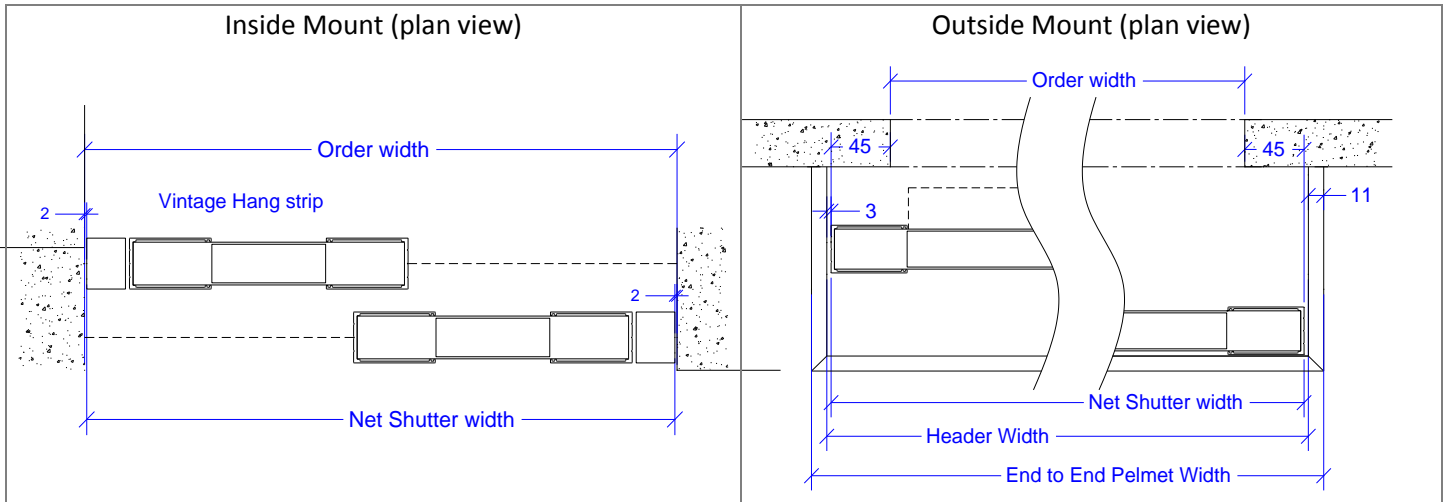
- Deductions will be made from the order width for side frame selection

Mount Options

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Ordered as: **Window Size**
CLOSED BYPASS





Panel Configuration

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1 panel (1 track)

No default lock position

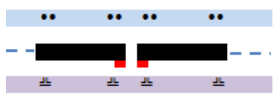


2 panels with hinge (1 track)

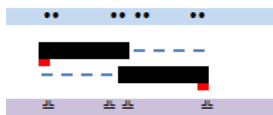
No default lock position



2 panels without hinge (1 track)



2 panels side open



3 panels centre open

No default lock position

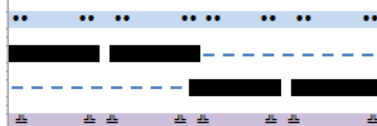


4 panels side open with hinge



4 panels side open without hinge

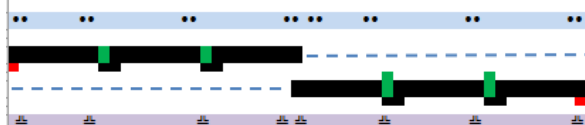
No default lock position



4 panels centre open



6 panels side open with hinge



Key:	
Top detail	
••	Wheels
- - - -	Track /s
█	Hinges
█	Lock location
⌞	Bottom Guides
Bottom detail	

6 panels side open without hinge

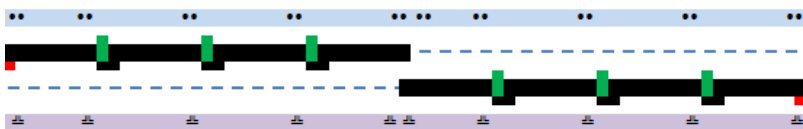
No default lock position



6 panels centre open with hinge



8 panels side open with hinge



8 panels centre open with hinge 4/4



8 panels centre open with hinge 6/2

No default lock position



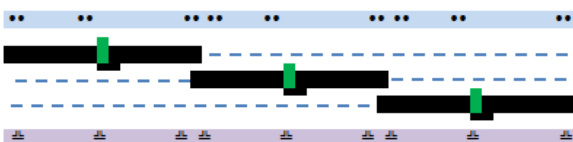
3 panels centre open (3 track)

No default lock position



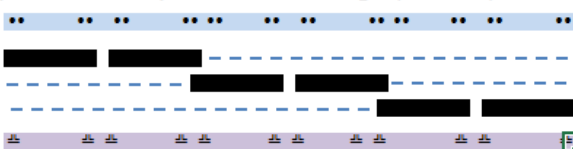
6 panels side open with hinge (3 track)

No default lock position



6 panels side open without hinge (3 track)

No default lock position



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