

BI FOLDING DOORS

Technical Manual



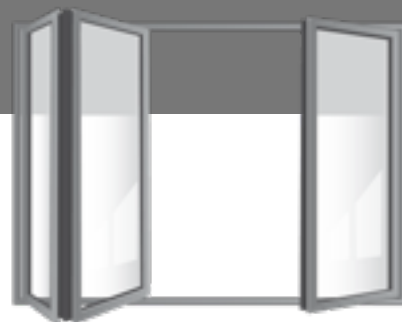
HOMEVIEW

REVISION 1.5



Our technical manual covers everything you need to know about bi-folding doors.

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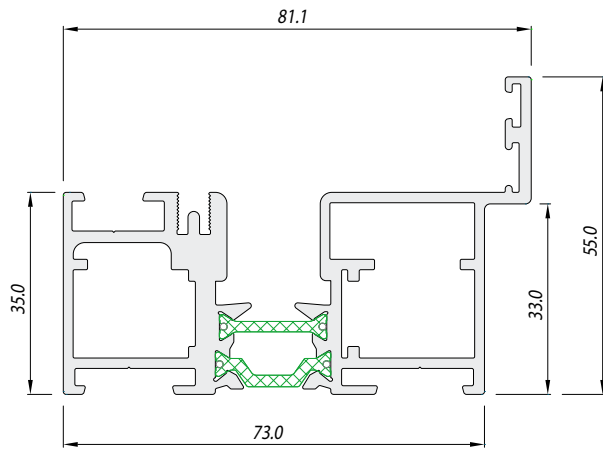
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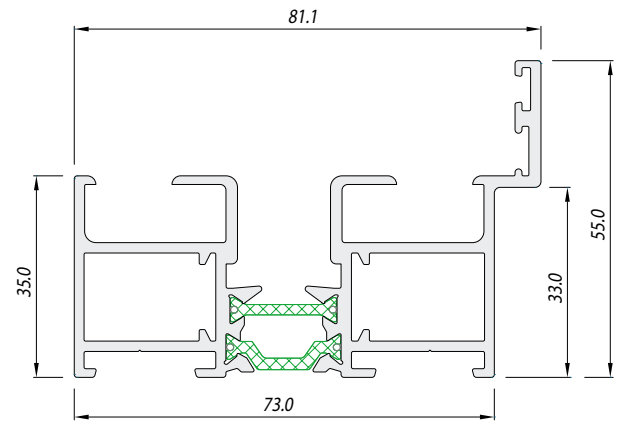
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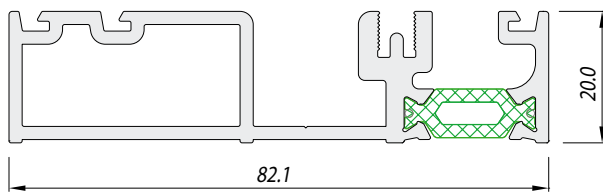
Profile Charts



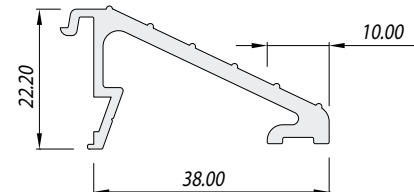
Standard Threshold
DBE-001



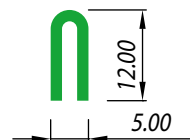
Head/Jamb Outer Frame
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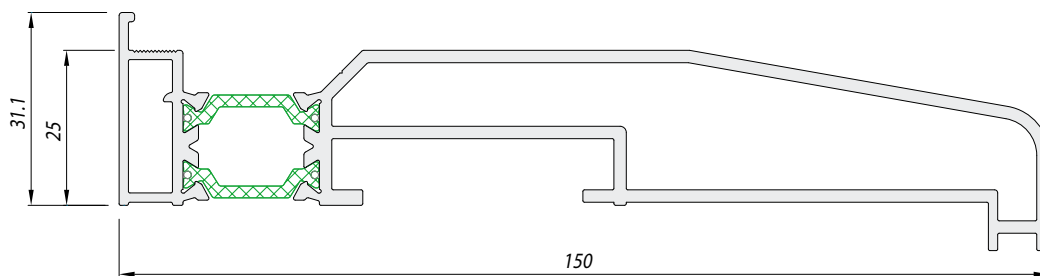
Low Threshold
DBE-004



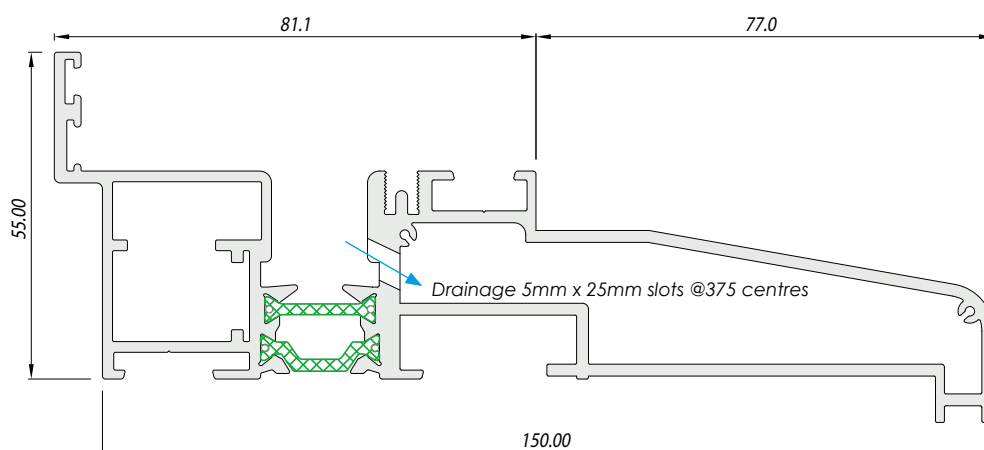
Low Threshold Ramp Add-on
DBE-301



Stainless Steel Running Track
DBPR-001



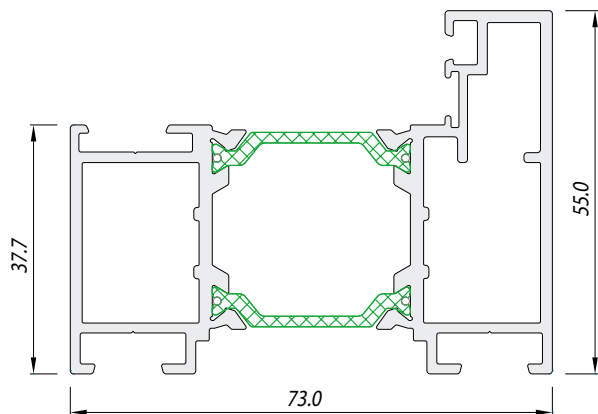
150mm Drainage Sub Cill
DBE-011



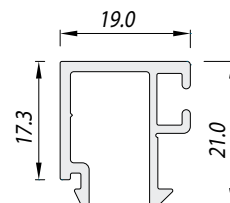
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DBE-014

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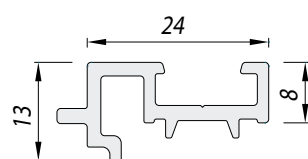




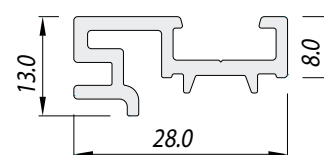
Slim Sash
DBE-101



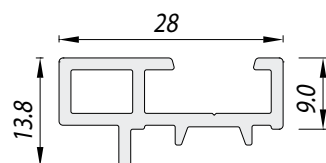
Glazing Bead for 28mm DGU
DBE-170



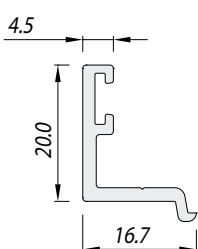
Door Lock Adapter
DBE-204



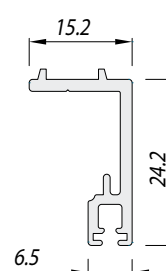
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DBE-205



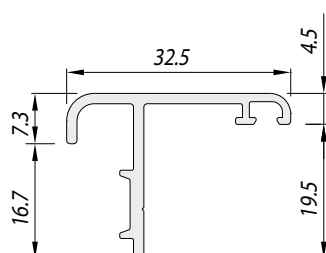
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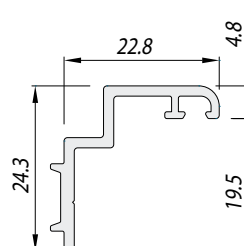
Low Threshold Cill Rebate Add-On
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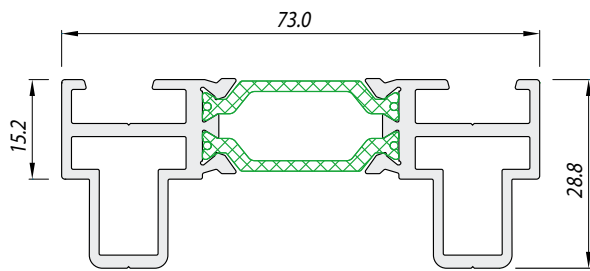
Sash Extension
DBE-303



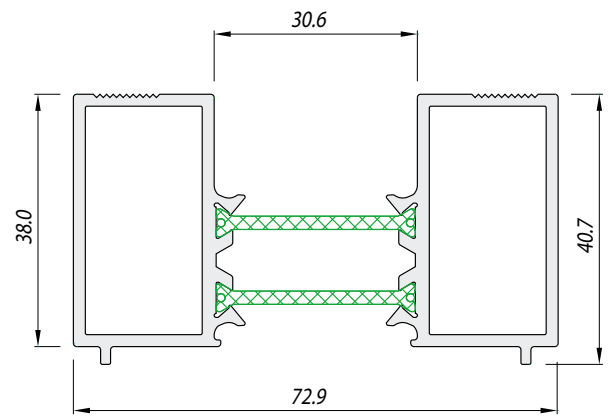
Swing Door Rebate
DBE-304



Swing Door Rebate For Adjustable Jamb
DBE-305



Adjustable Jamb
DBE-201

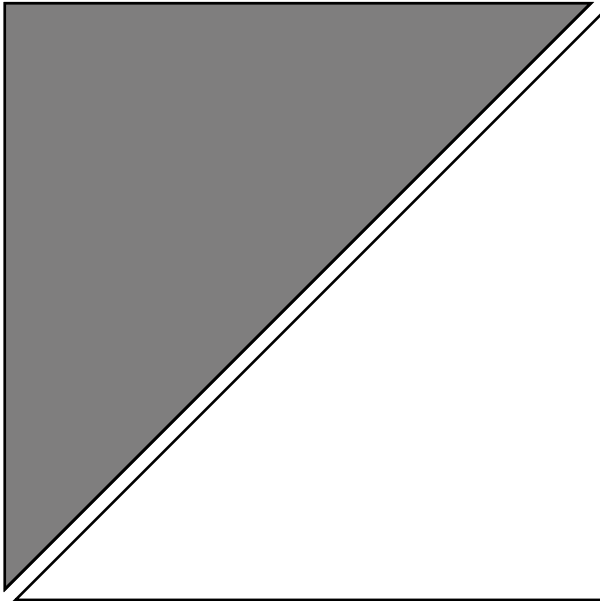


38mm Frame Extender
DBE-203



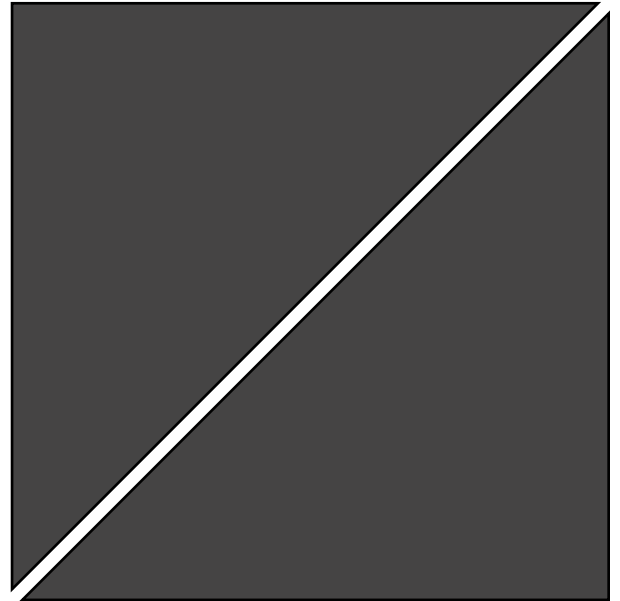
Profile Colours

External
Matt Anthracite (7016)



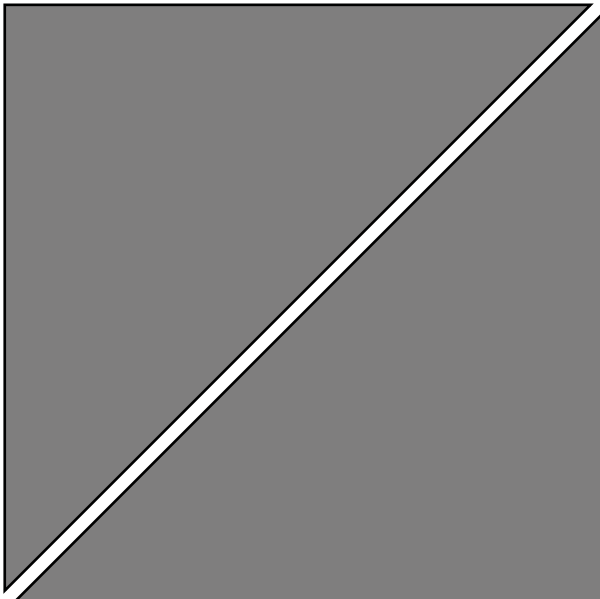
Internal
Gloss White (9016)

External
Matt Black (9005)



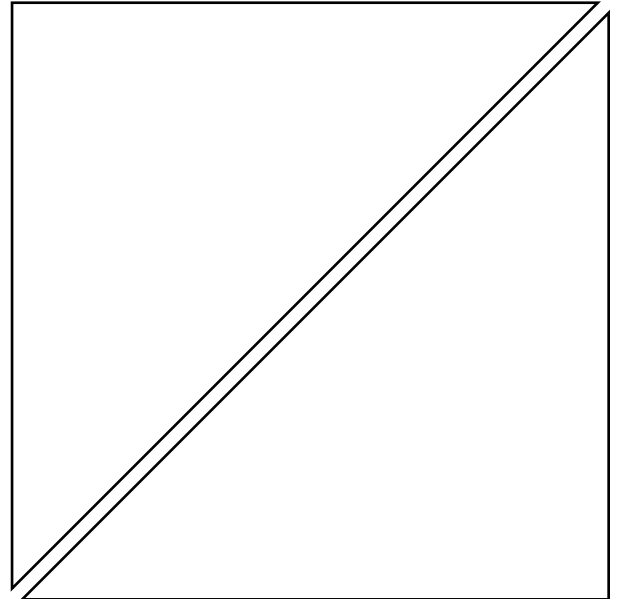
Internal
Matt Black (9005)

External
Matt Anthracite (7016)



Internal
Matt Anthracite (7016)

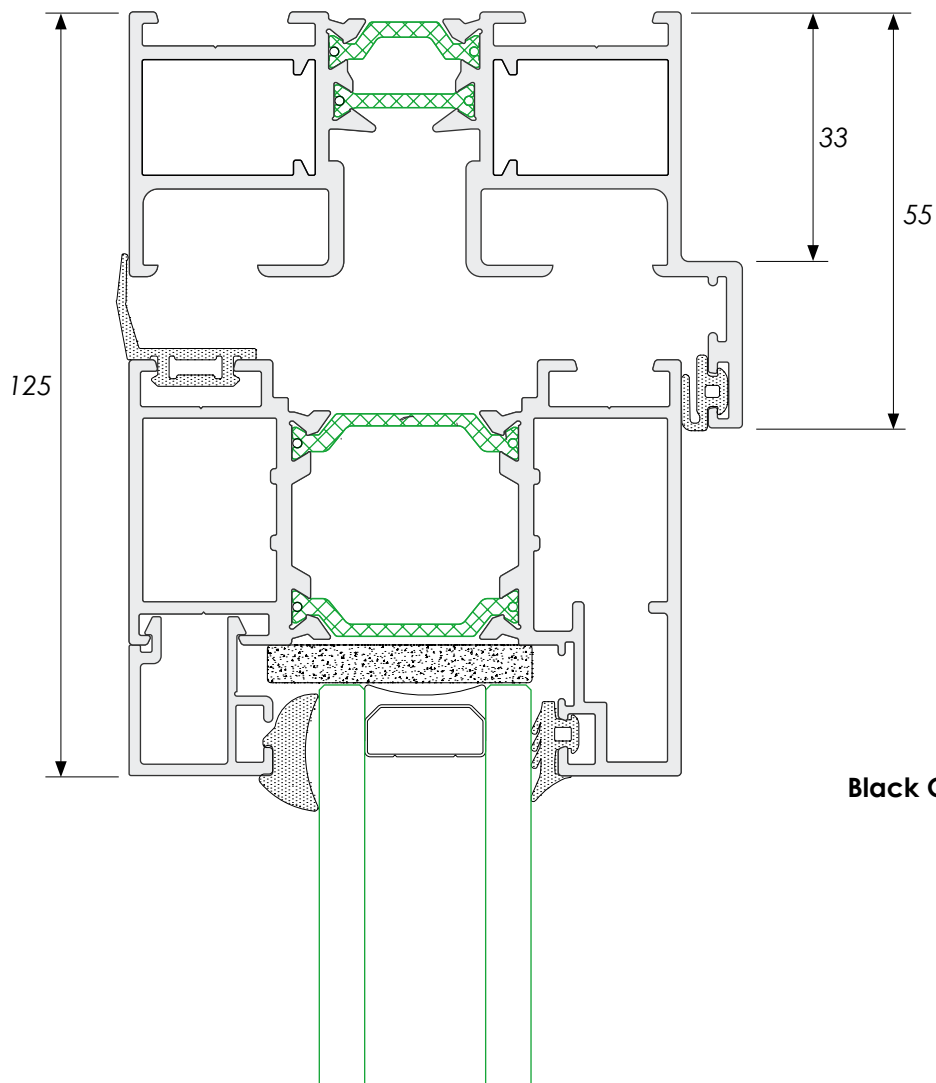
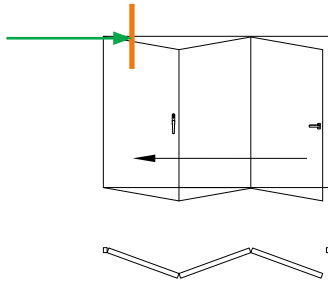
External
Gloss White (9016)



Internal
Gloss White (9016)



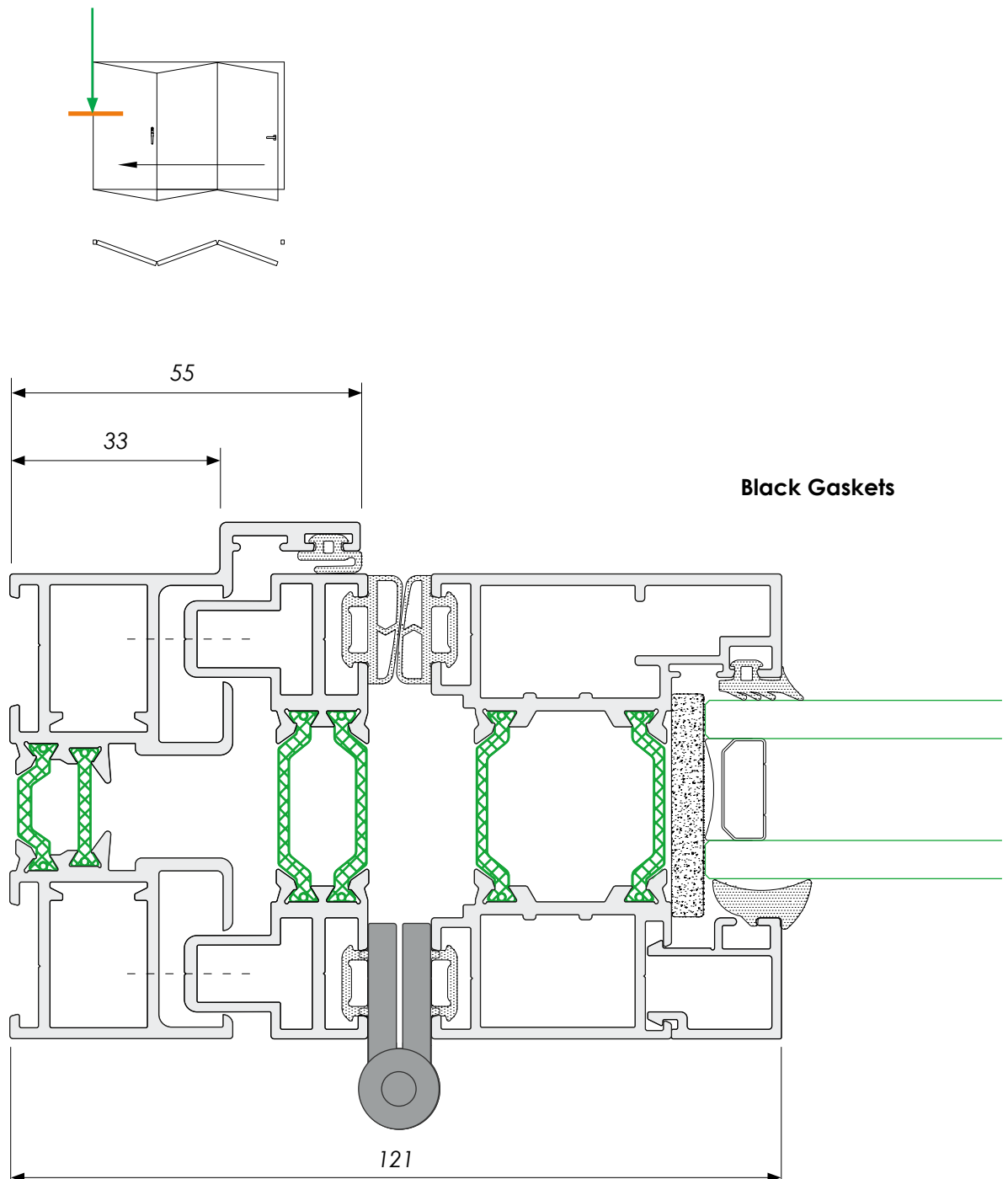
Head



Black Gaskets

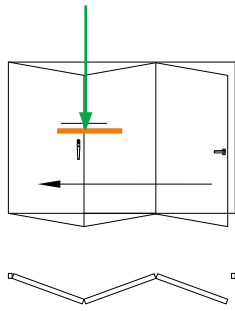


Outer Frame Detail with Adjustable Jamb

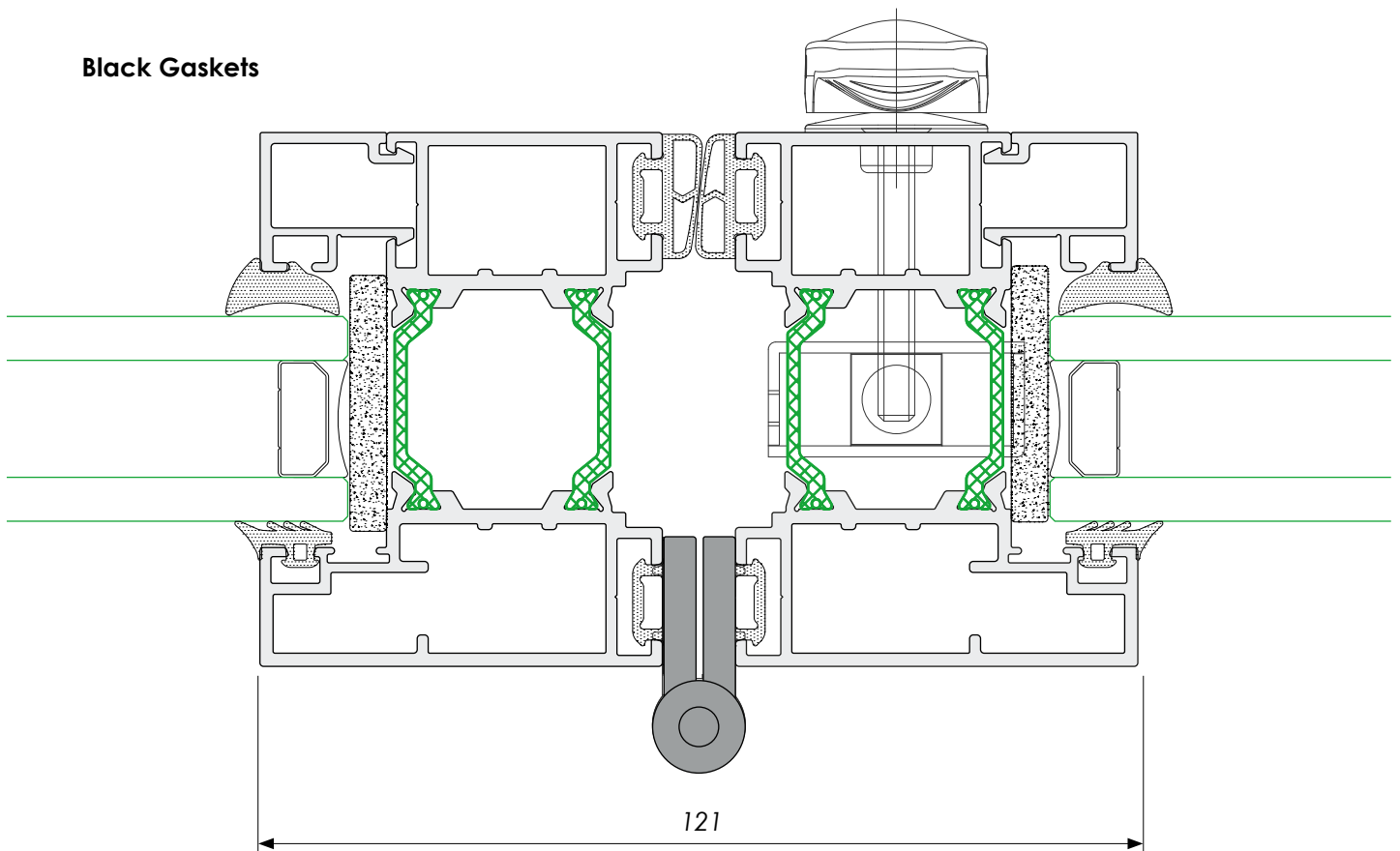




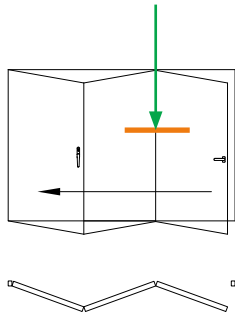
Doors with Hinge



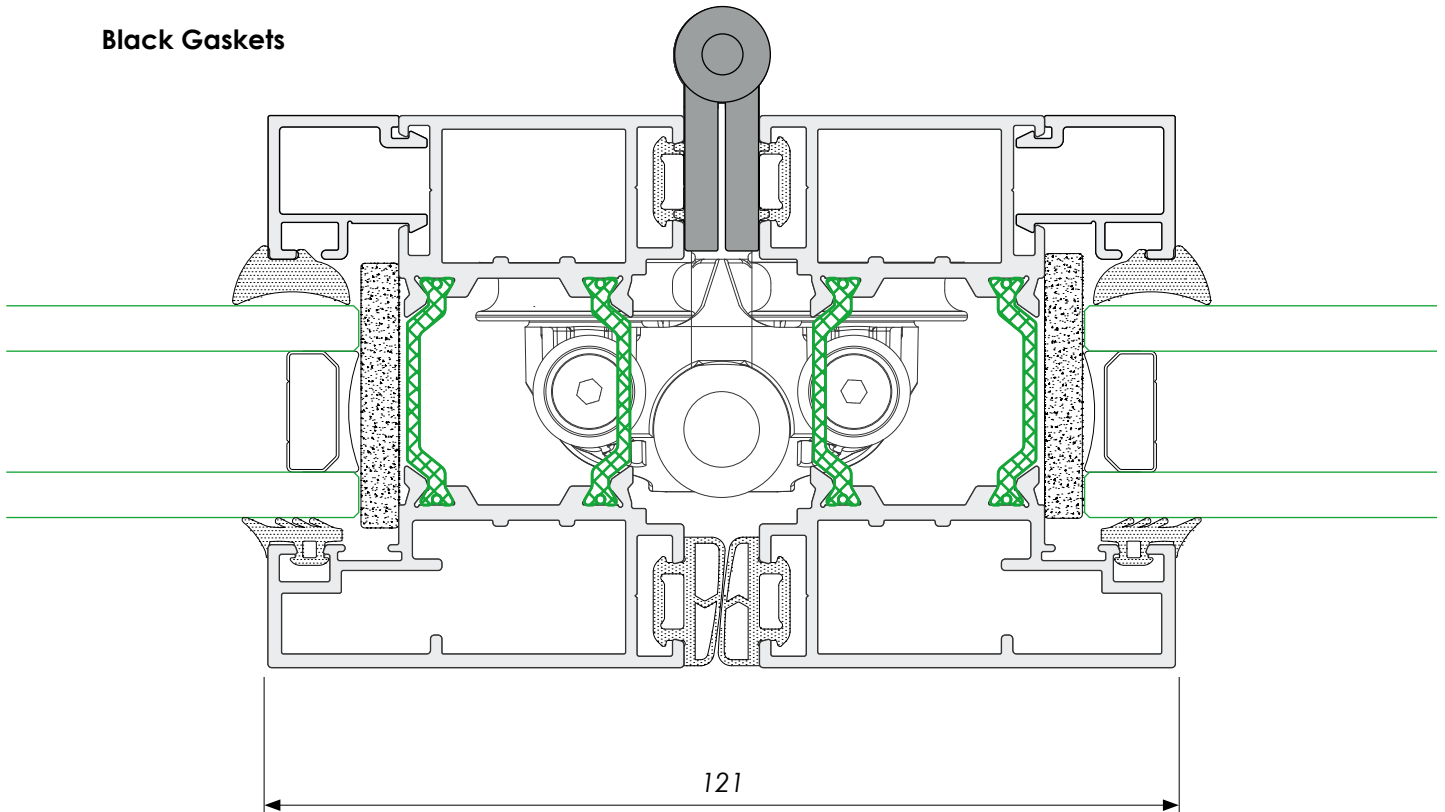
Black Gaskets



Doors with Hinge and Roller

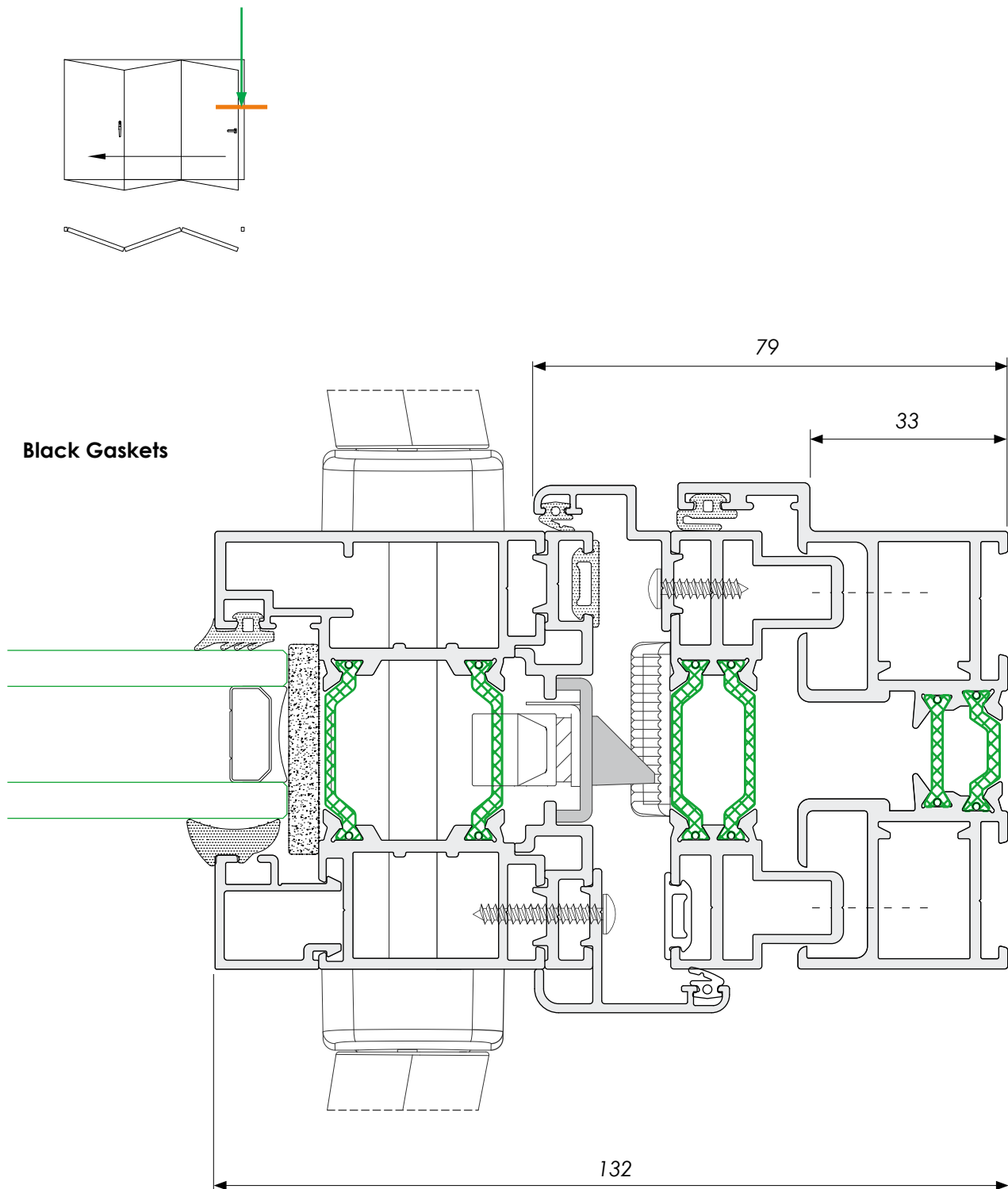


Black Gaskets



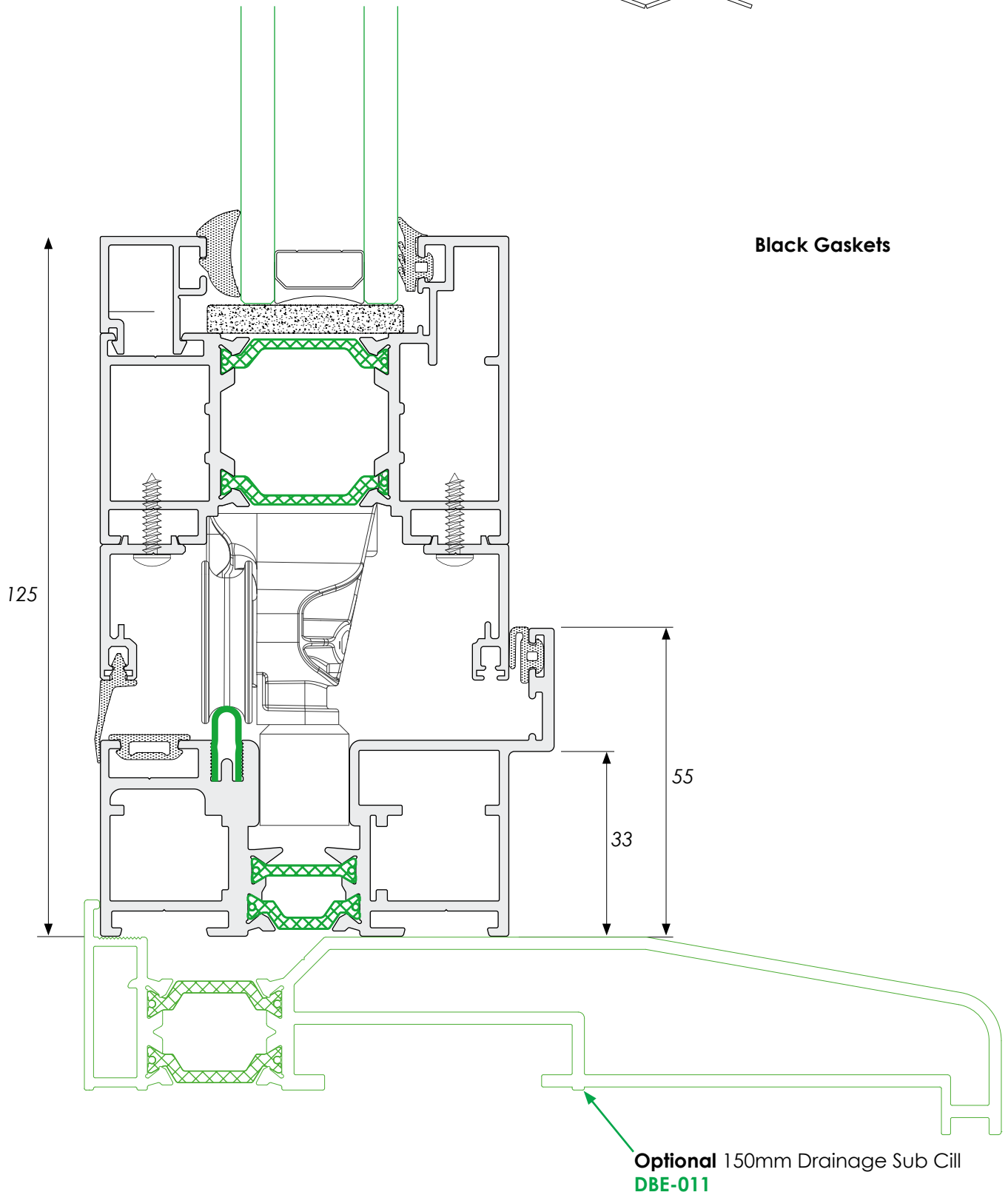
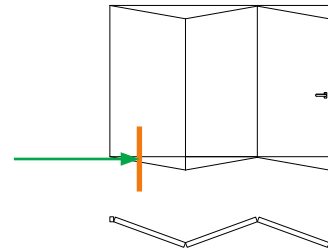


Traffic Door and Outer frame with Adjustable Jamb



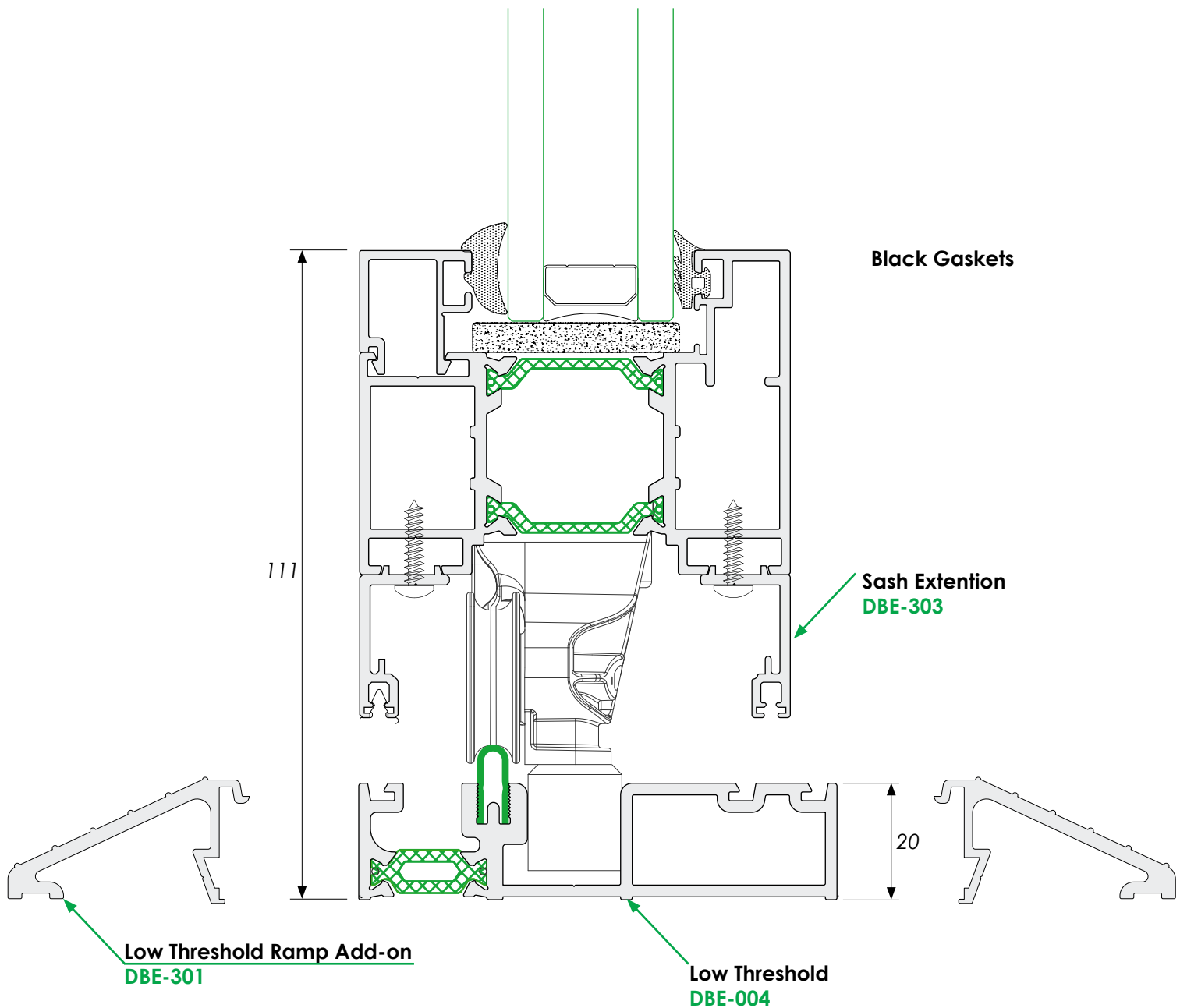
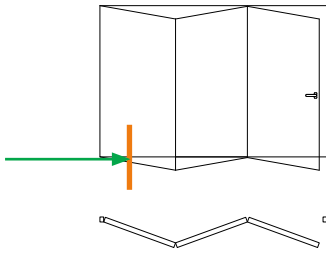


Standard Threshold



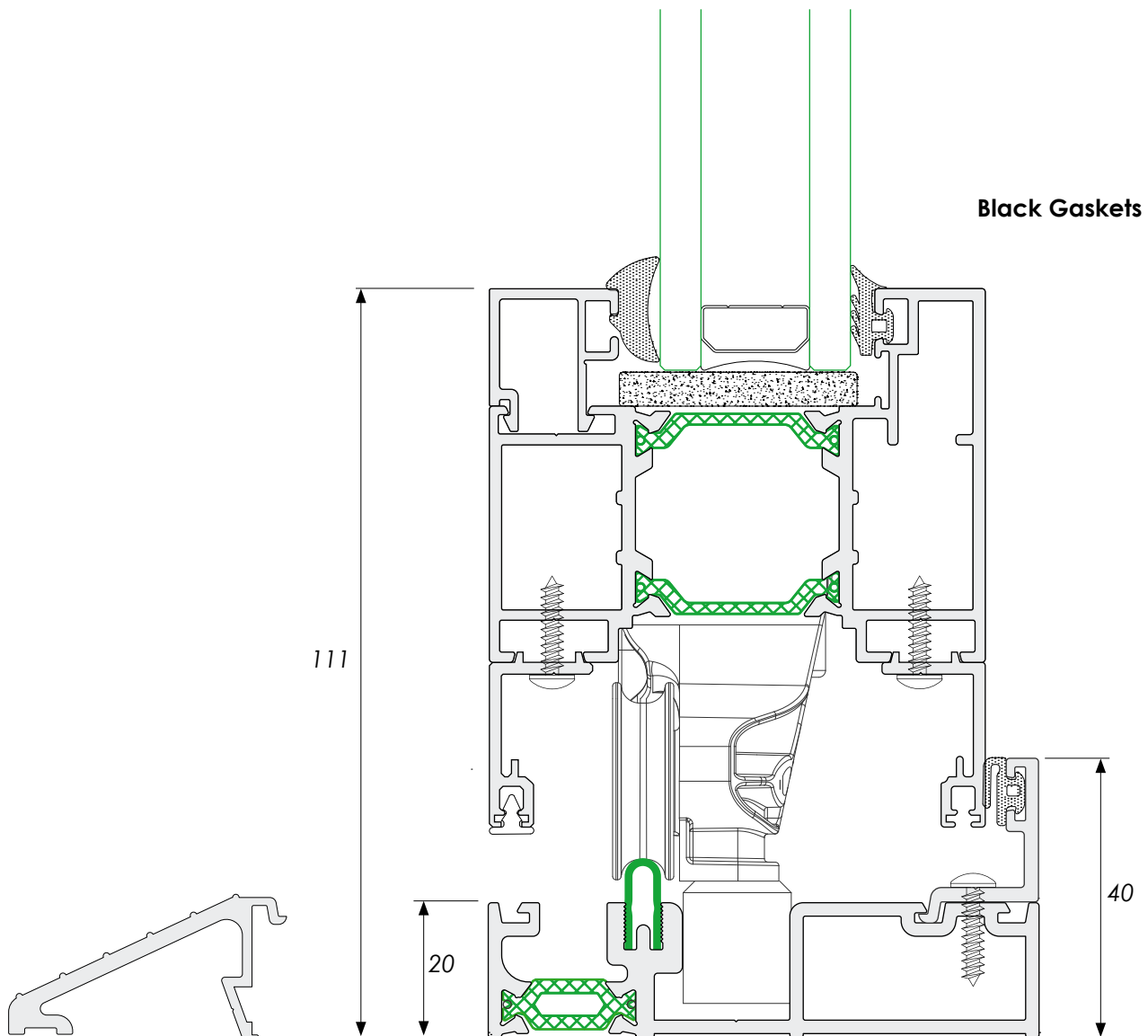
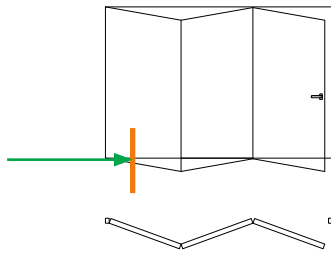


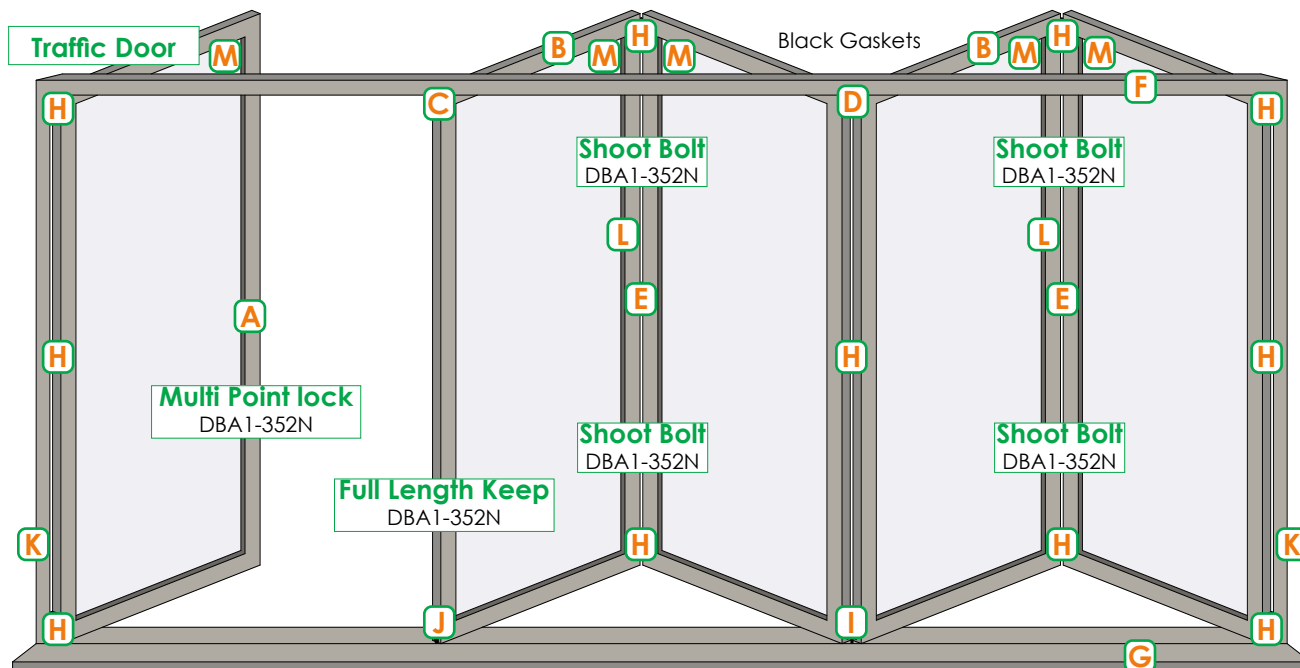
Low Threshold





Low Threshold with Rebate





Cylinder
DB 1212

A **Traffic Handle**
DBHP-01



B **Magnetic catch**
Optional



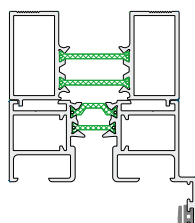
C **Top Half Guide**
DBA1-358 (L/R)



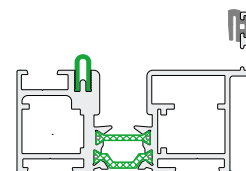
D **Standard Top Guide**
DBA1-352N



E **Pull Handle Hinge**
DBA1-355/6



F **Head with Optional Trickle Vent**
DBE-002 DBE-203



G **Thresholds / Cill**



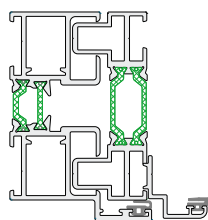
H **Hinge**
DBA-350



I **Standard Bottom Roller**
DBA1-351N



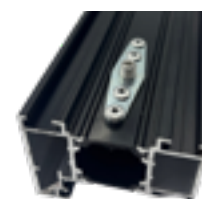
J **Half Bottom Roller**
DBA1-357 (L/R)



K **Outer frame with Adjustable Jamb**
DBE-002 DBE-201



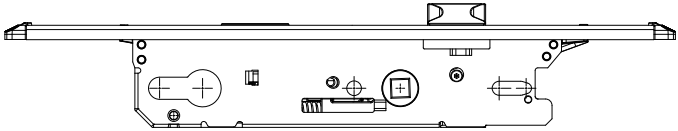
L **Vivo Handle**
DBHL-06
Vivo Handle Escutcheon
Optional DBHL-05



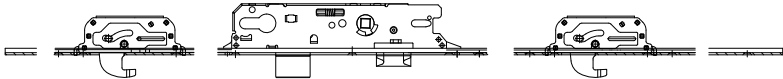
M **Glass Adjuster**
DBGA-001



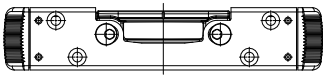
Mortice Lock-DBLK-56



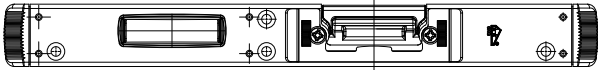
Multi Point Lock-DBLK-57



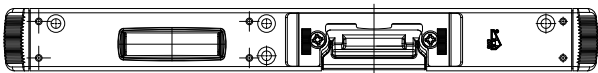
Hook Keep-DBLK-58



Latch Keep LH-DBLK-58/LH



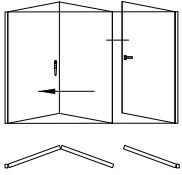
Latch Keep LH-DBLK-58/RH



Sash height under 2100mm

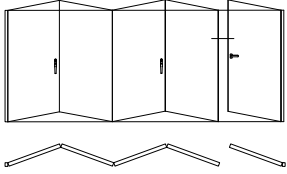
Typical configurations

3-2-1

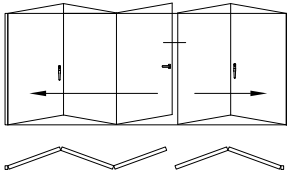


Lock spindle C/L - 1050 mm

5-4-1



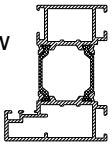
5-3-2



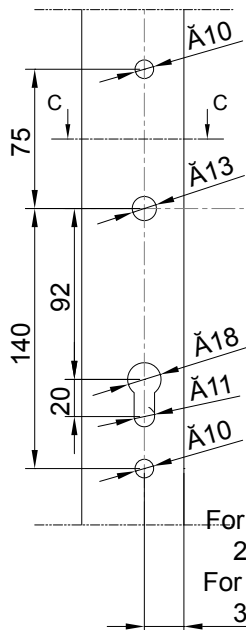
Other configurations:

7-6-1; 7-5-2;
7-3-4;
9-7-2; 9-6-3;
9-5-4;

View
C-C



View B



Trim to size if
applicable



DBLK-50LH Lock

DBA1-358

Hs > 2100 mm

C/L 1050 mm

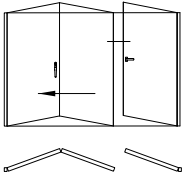
1050

DBA1-357

Sash height over 2100mm

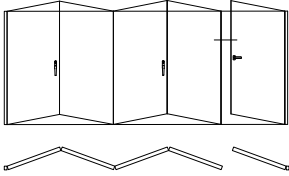
Typical configurations

3-2-1

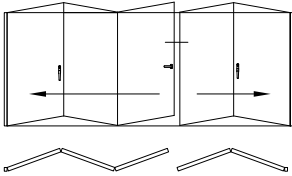


Lock spindle C/L - 1050 mm

5-4-1

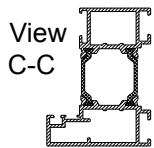


5-3-2

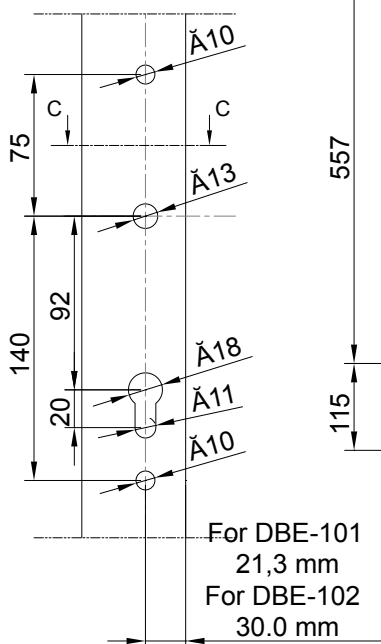


Other configurations:

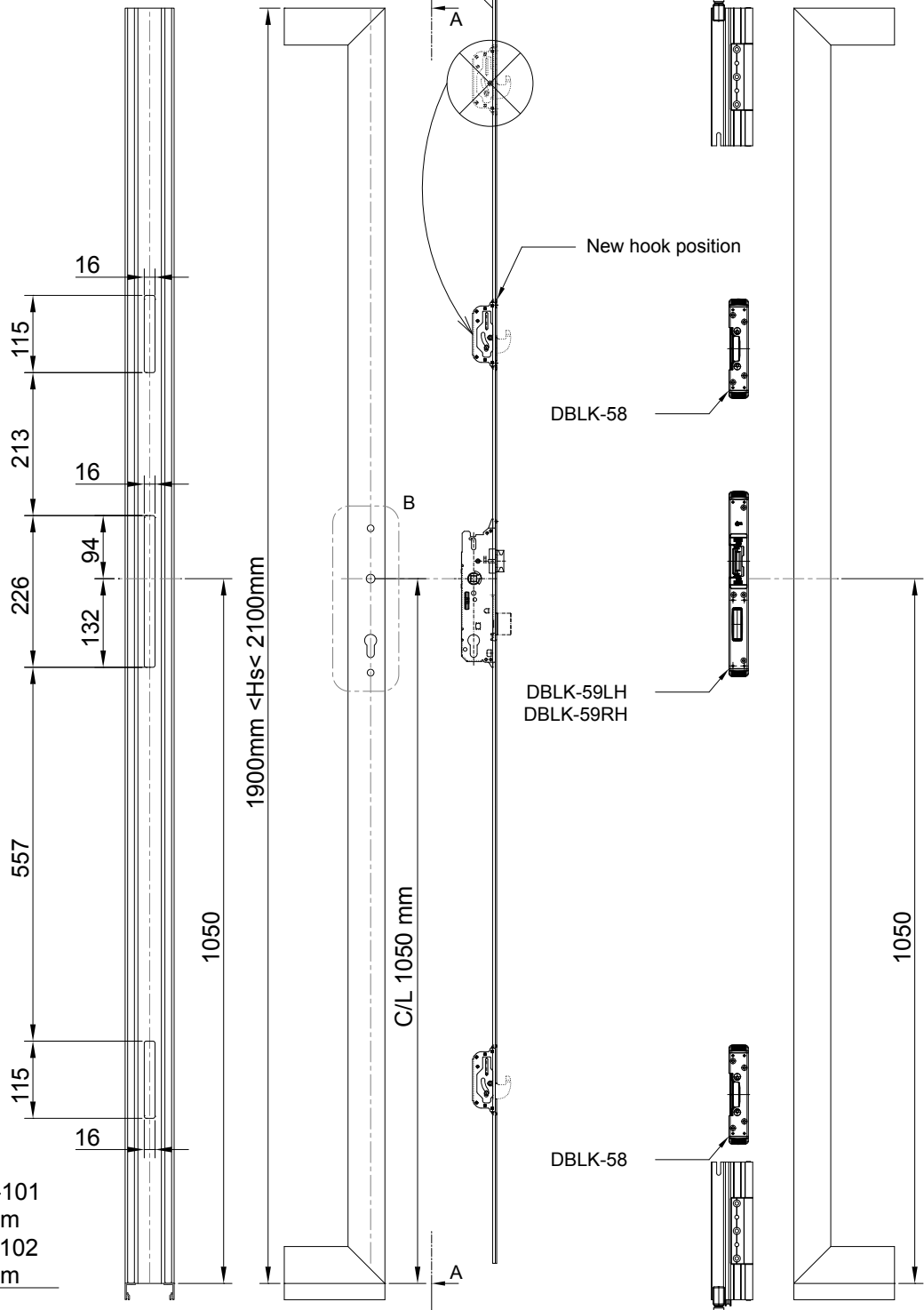
7-6-1; 7-5-2;
7-3-4;
9-7-2; 9-6-3;
9-5-4;



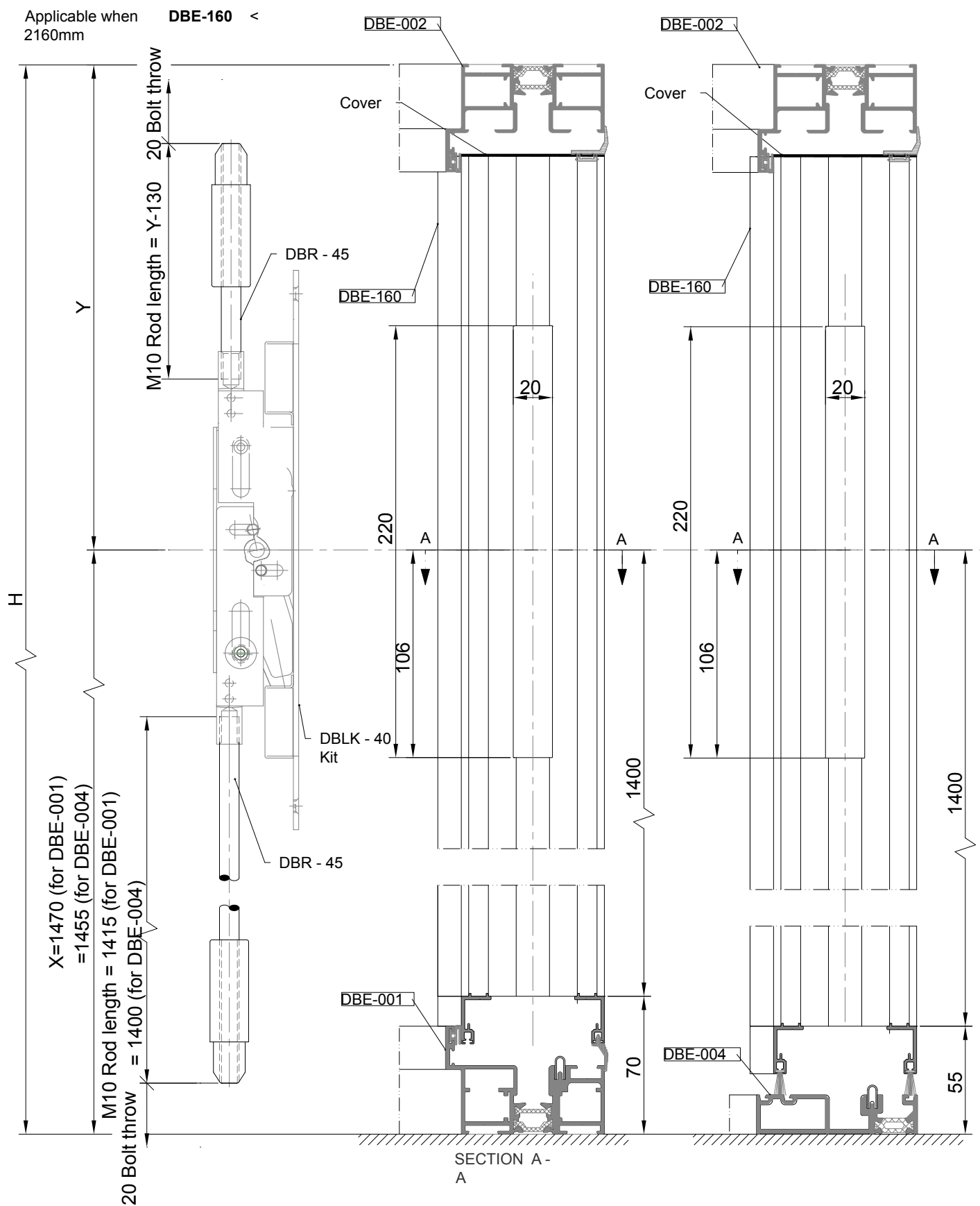
View B



View A-A

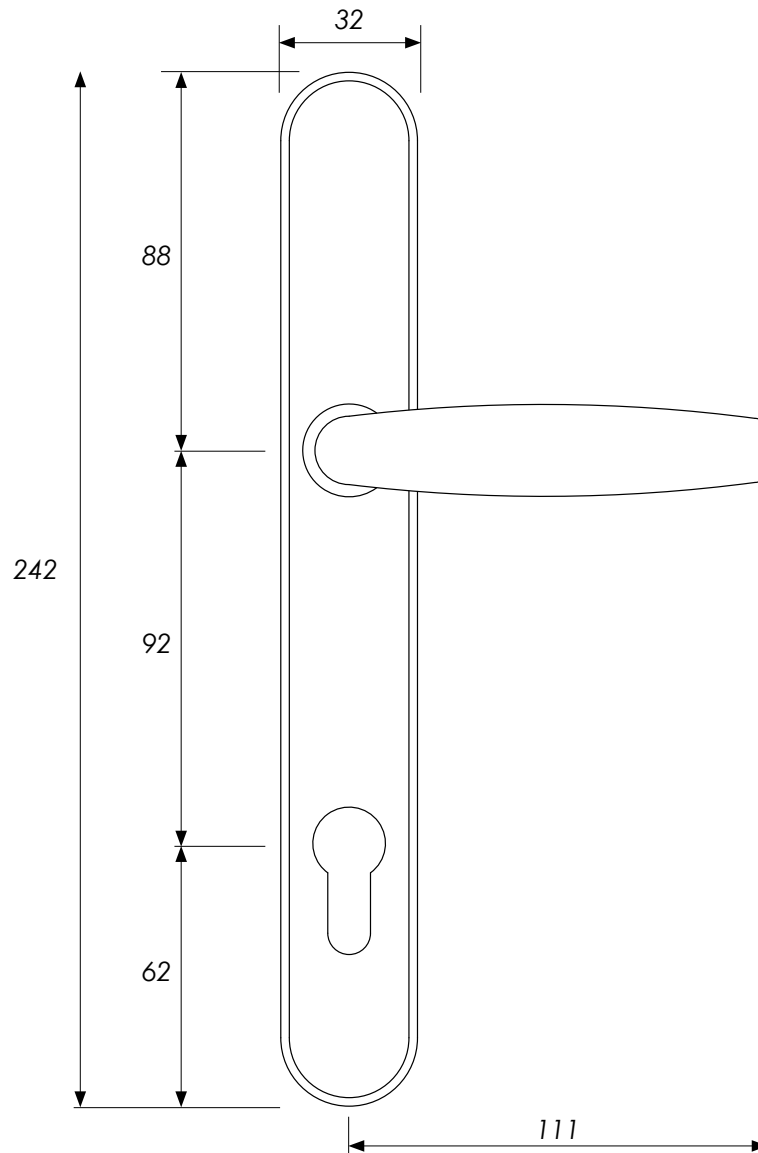


DBA1-357R / DBA1-357L



Atlanta Traffic Handle

Cast aluminium levers. Aluminium backplate with stainless steel under construction.
Fixing lugs fitted on both backplates for a secure fit. Supplied complete with spindles and screws



Black



Chrome



White



Satin Silver

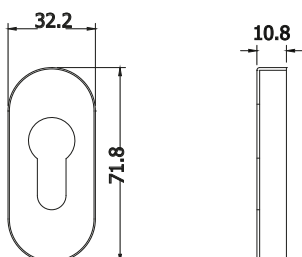
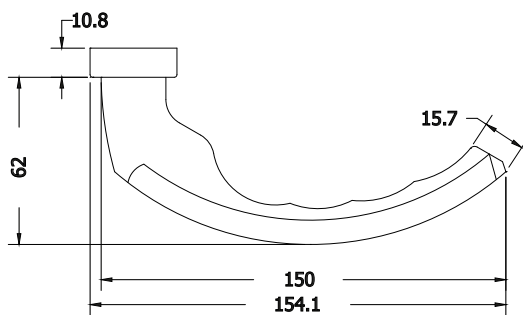
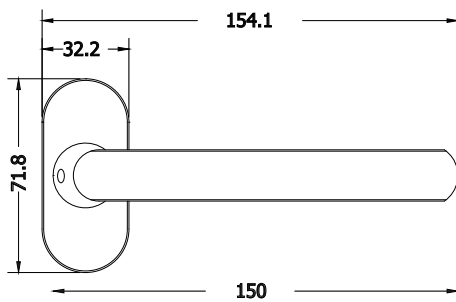


Grey

Rose Handle

- Solid, ergonomic lever on rose provides a modern, contemporary feel
- Fixings concealed behind clip-on oval rose
- Manufactured from 316 Marine Grade Stainless Steel
- Ideal for use where corrosion levels are high such as coastal

Curved Handle



Vivo

Designed for intermediate locking panels on bi-fold doors. The handle end does not protrude outside its own width when turned, thus avoiding any damage to the opposite panel when stacked.

Comes colour matched to the traffic handle.

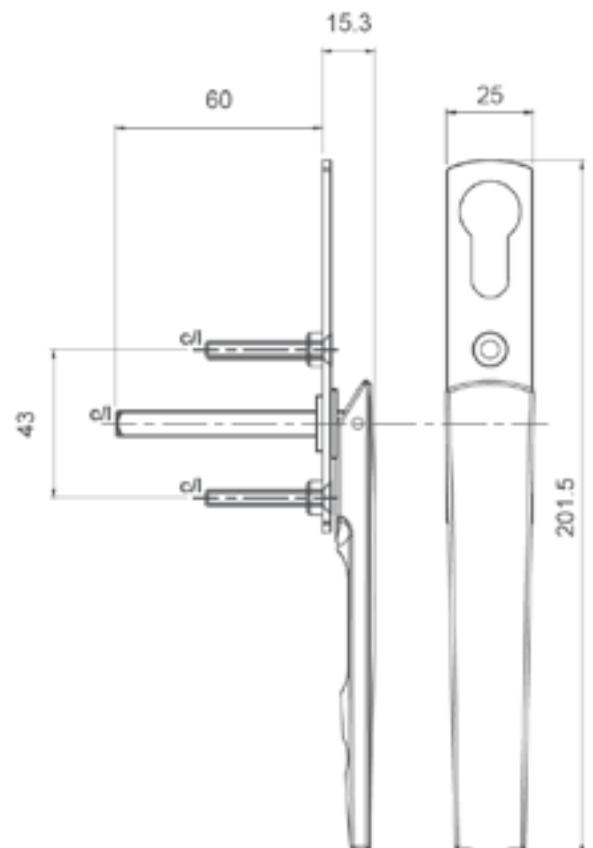
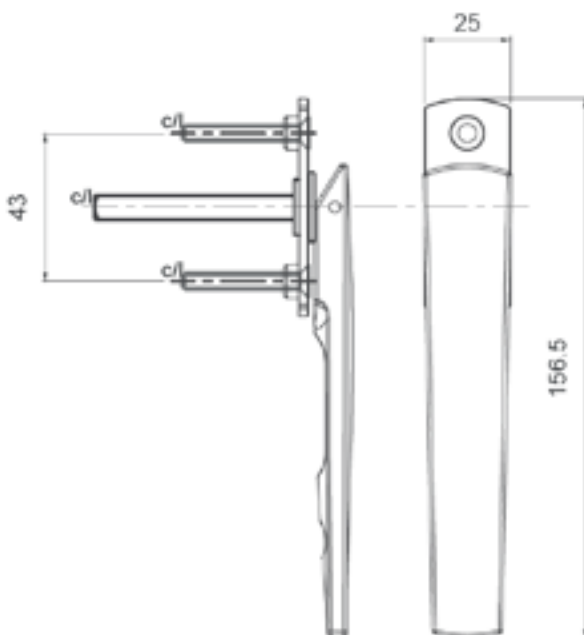
Standard

Vivo without Escutcheon



Optional PAS24

Vivo with Escutcheon



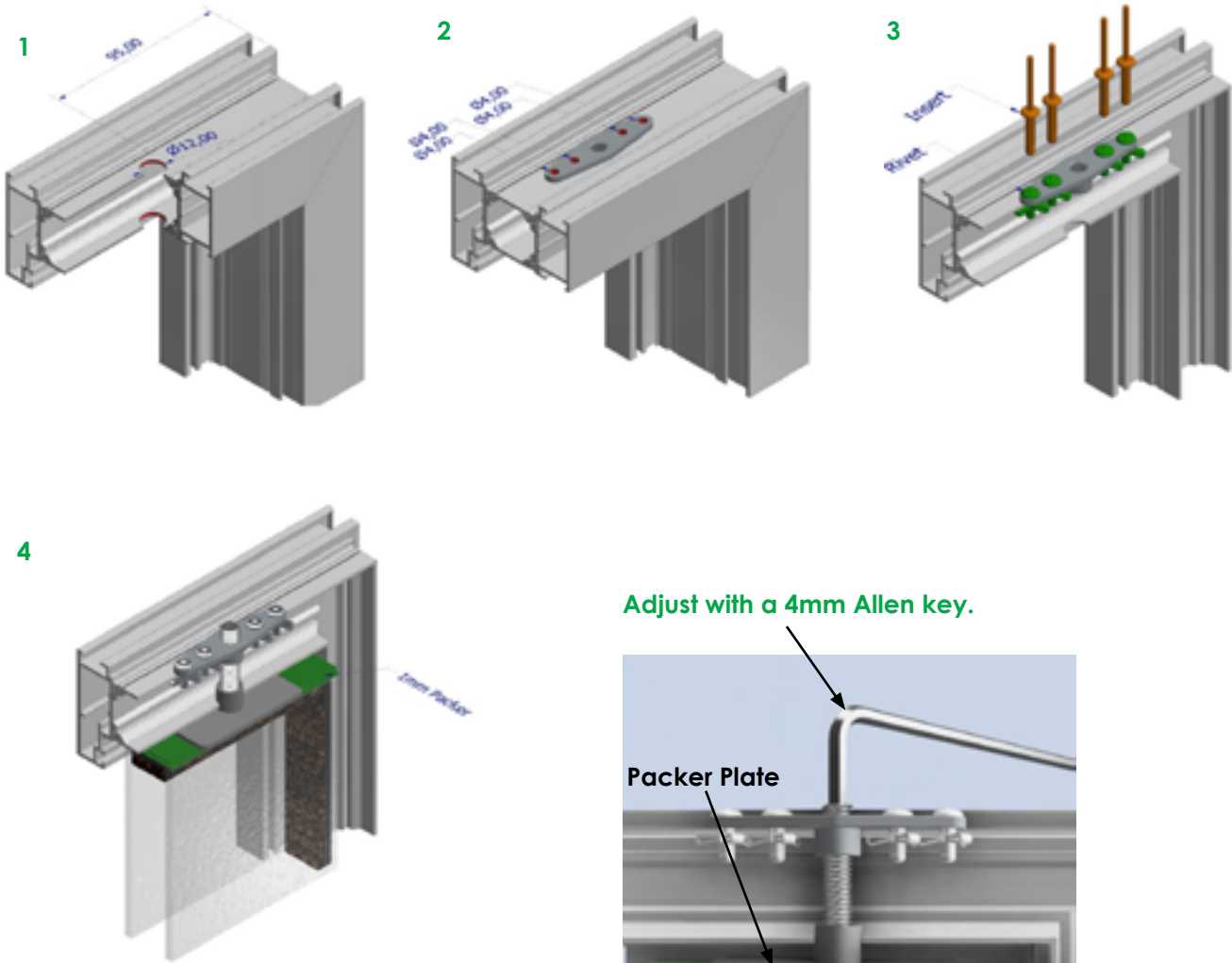
Glass Adjuster

The Glass Adjuster allows you to adjust the glass without removing it. With this device you can quickly and easily make adjustments to ensure optimal door performance and alignment.
Comes as standard on all doors.

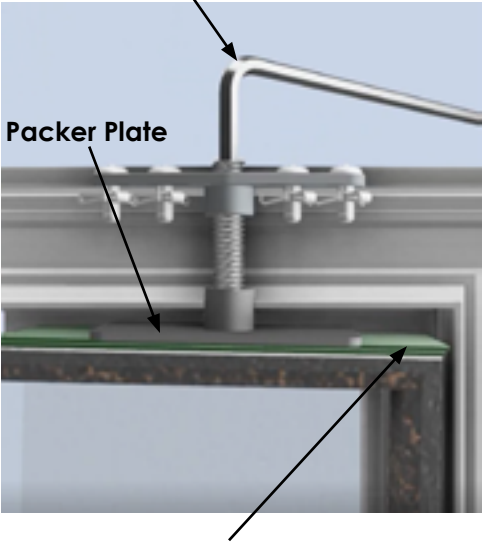
Glass Adjuster
DBGA-001



Installation position

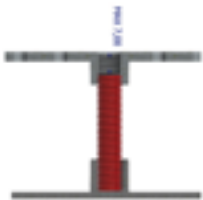


Adjust with a 4mm Allen key.

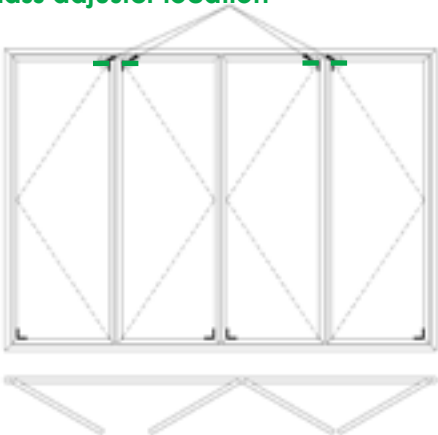


Minimum of a1mm packer must be inserted between the packer plate and the glass

NOTE: Maximum grub screw adjustment is approximately 7.0mm deep inside the top plate.



Glass adjuster location





1 Star Cylinder

- The cylinder comes with a key fob which includes a serial number.
- Over 800,000 different key combinations.
- 6 Pins.
- Unrestricted keyway — easier for customers to get keys cut.
- Supplied with 3 keys

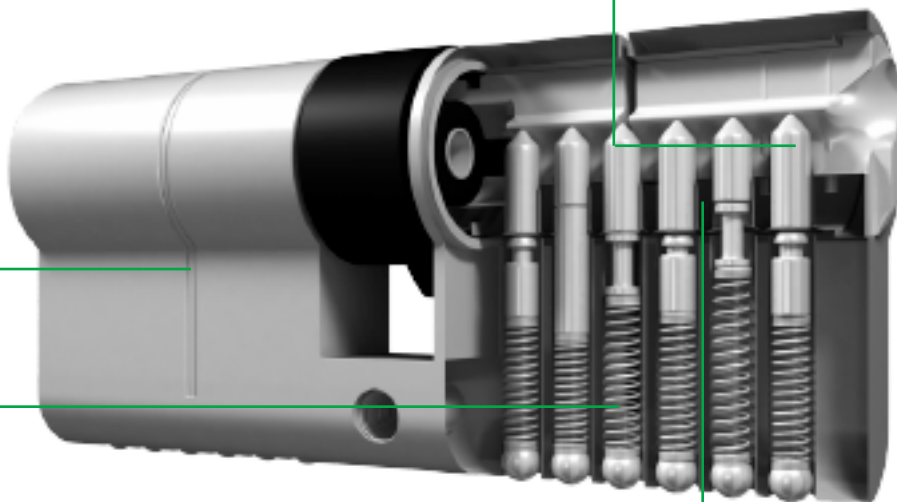


SACRIFICIAL CUT

The cylinder has a sacrificial cut on the each side, so when force is applied to either end, the cylinder will break away to the sacrificial cut line only, leaving the remaining cylinder operational and the locking mechanism intact.

ANTI PICK

Minimum of 3 anti-pick pins in each side of the cylinder makes it extremely difficult for a common burglar to pick the cylinder.



ANTI BUMP

The cylinder has a unique and patented anti-bump system which does not use trap pins. This system makes the turning of the cylinder key extra smooth.

ANTI DRILL

7 x hardened steel anti-drill pins are in each side of the cylinder. Plus all moving pins are nickel plated hardened steel 50 HRC minimum.



3 Star Kinetica Cylinder (Optional upgrade)

- The cylinder comes with a key fob which includes a serial number.
- Over 800,000 different key combinations.
- 6 Pins.
- Unrestricted keyway — easier for customers to get keys cut.
- Supplied with 3 keys

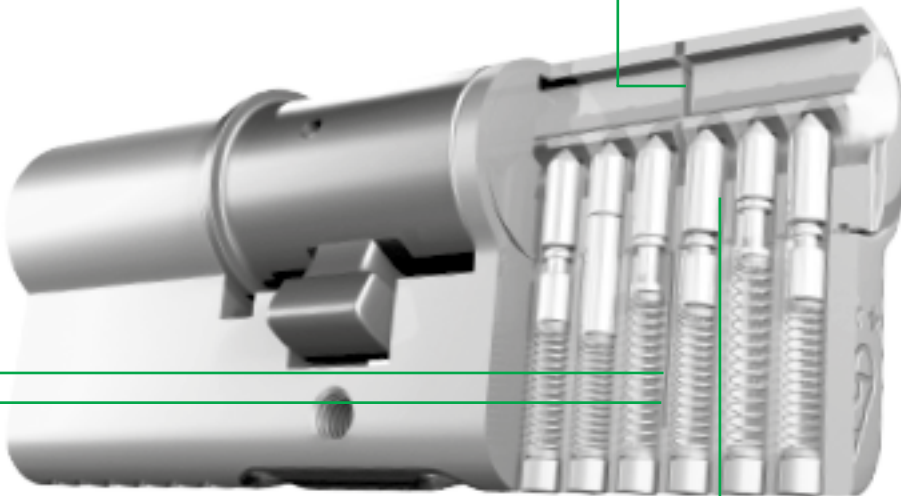


ANTI BUMP

The cylinder has a unique and patented anti-bump system which does not use trap pins. This system makes the turning of the cylinder key extra smooth.

ANTI SNAP

Patent applied for anti tilt mechanism. In normal anti snap cylinders once a cylinder is snapped at the outside end, the inner section is heavier and will tilt allowing the burglar a small gap to gain access to the bolt. But the Fullex anti tilt ring stops this happening.



ANTI PICK


Minimum of 3 anti-pick pins in each side of the cylinder makes it extremely difficult for a common burglar to pick the cylinder.

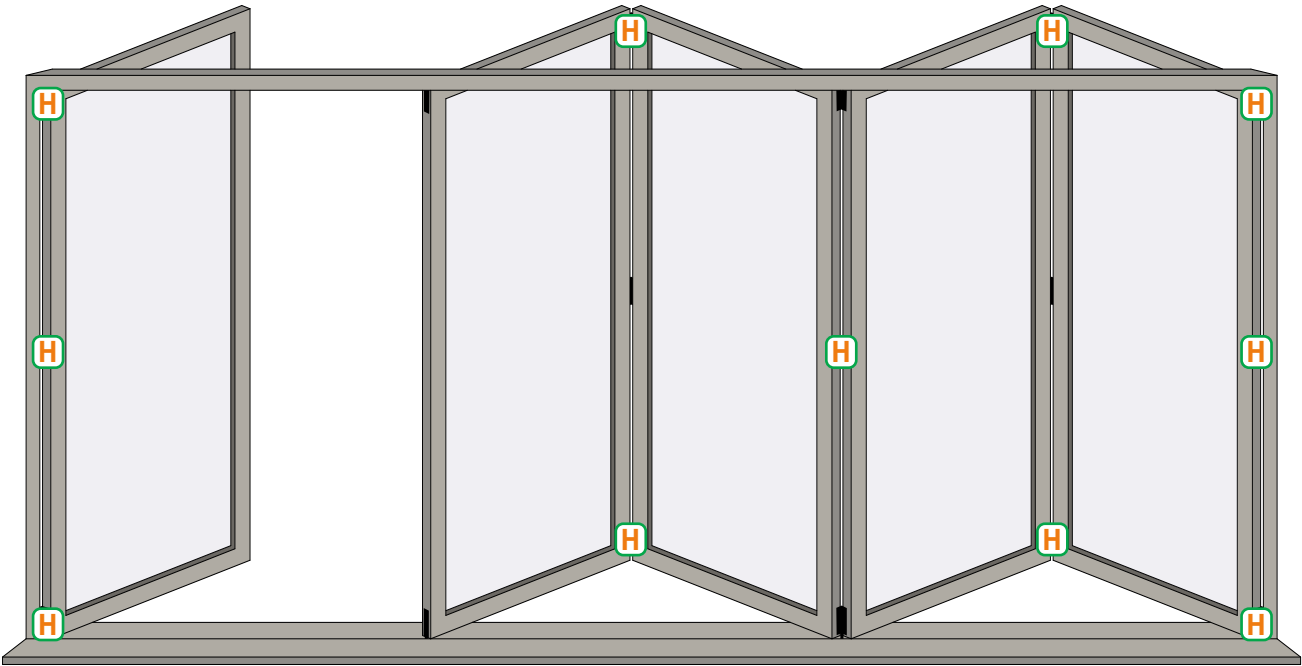
ANTI DRILL

7 x hardened steel anti-drill pins are in each side of the cylinder. Plus all moving pins are nickel plated hardened steel 50 HRC minimum.

Hinge
DBA-350
Available in black



Fits in this position 




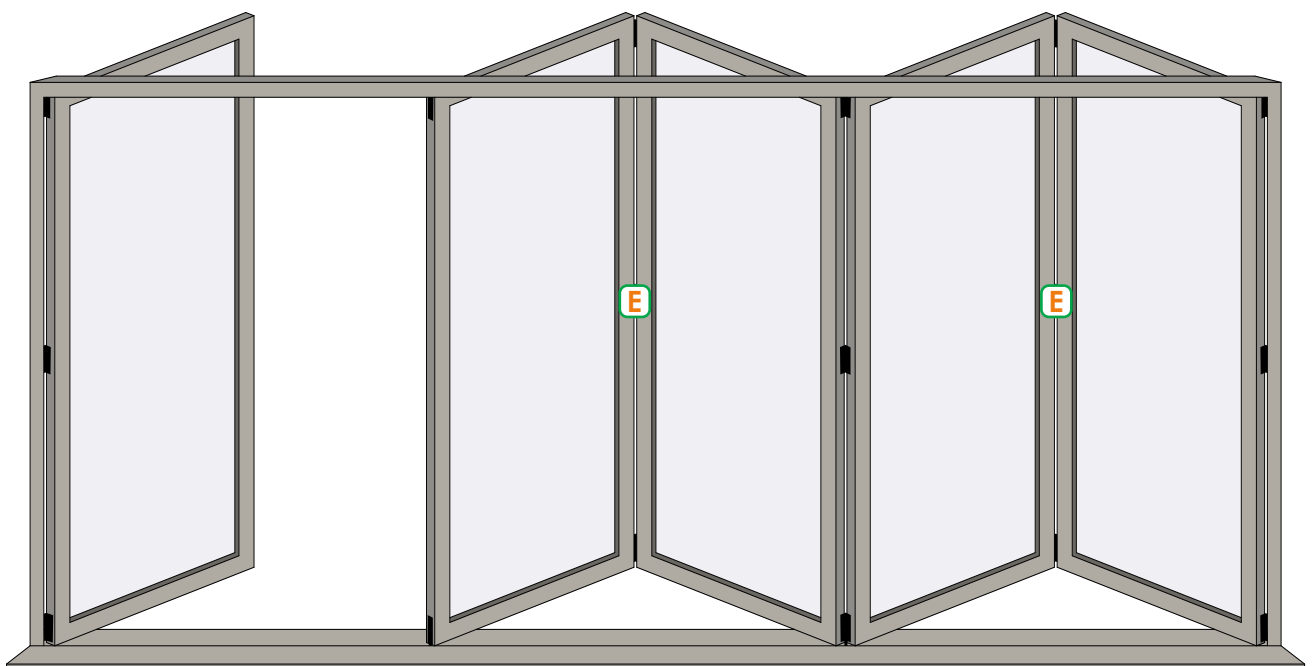
Pull Handle (Open Out)

DBA1-355/6

Available in black



Fits in this position 





Std Bottom Roller

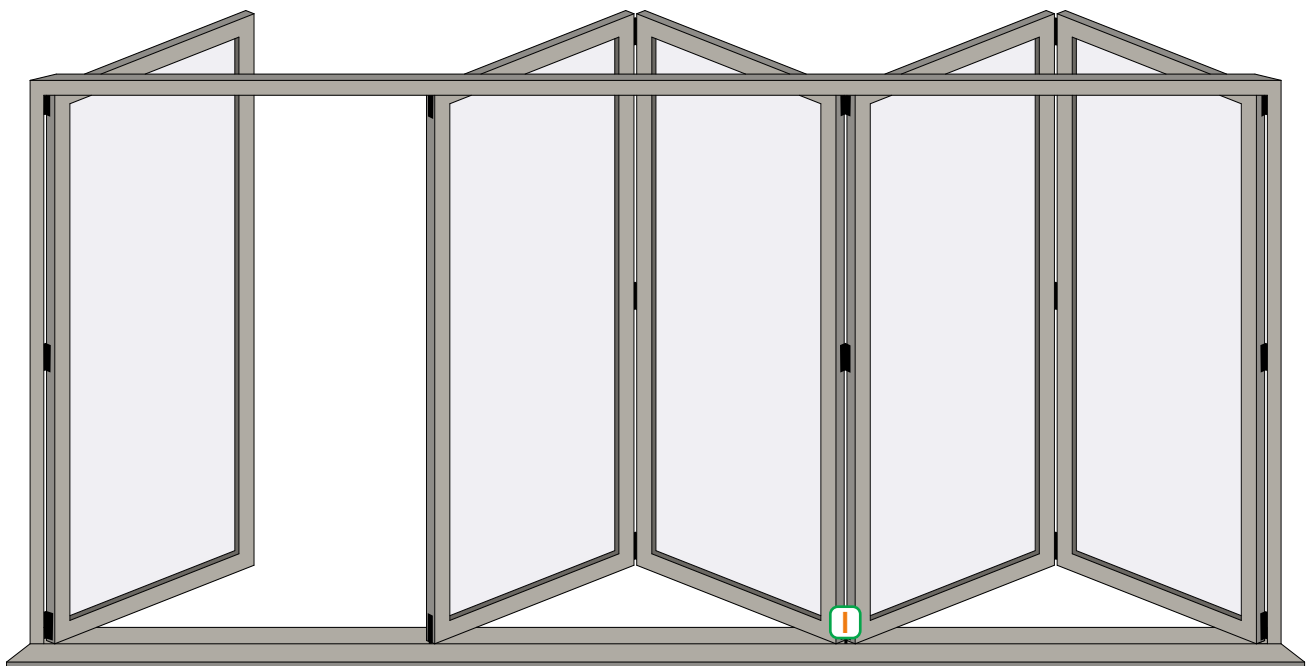
Standard Bottom Roller

DBA1-351N

Available in black



Fits in this position



Half Bottom Roller

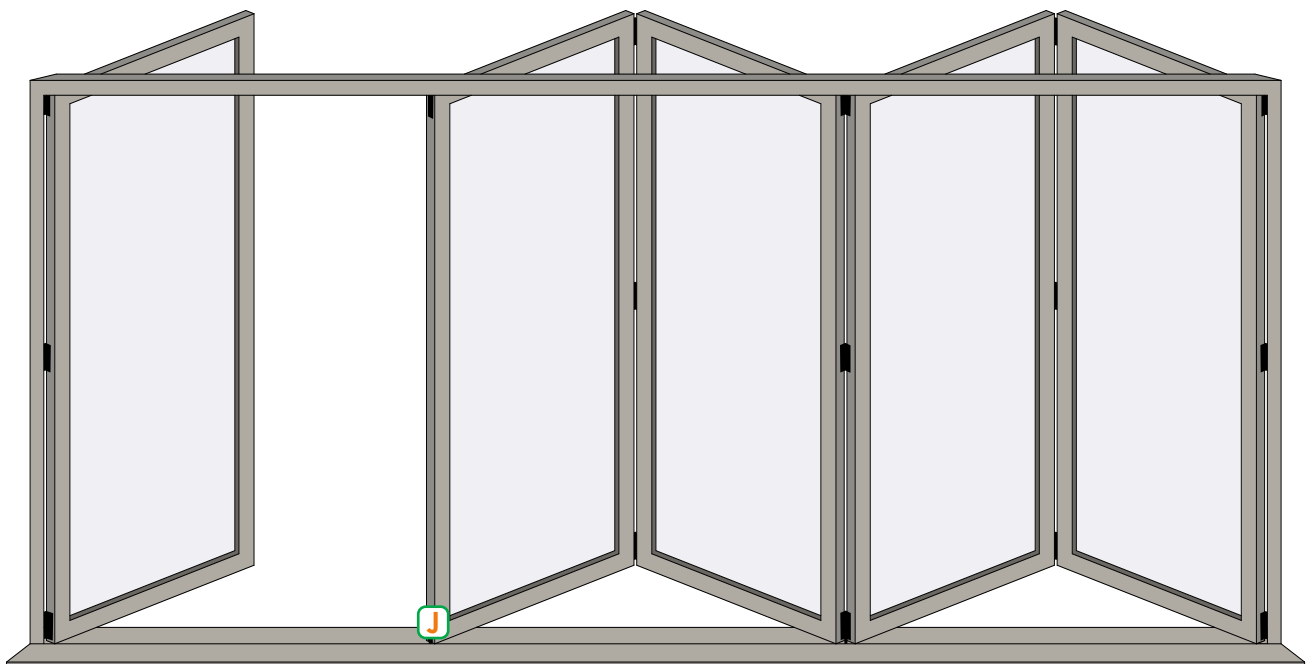
Half Bottom Roller

DBA1-357 (L/R)

Available in black



Fits in this position



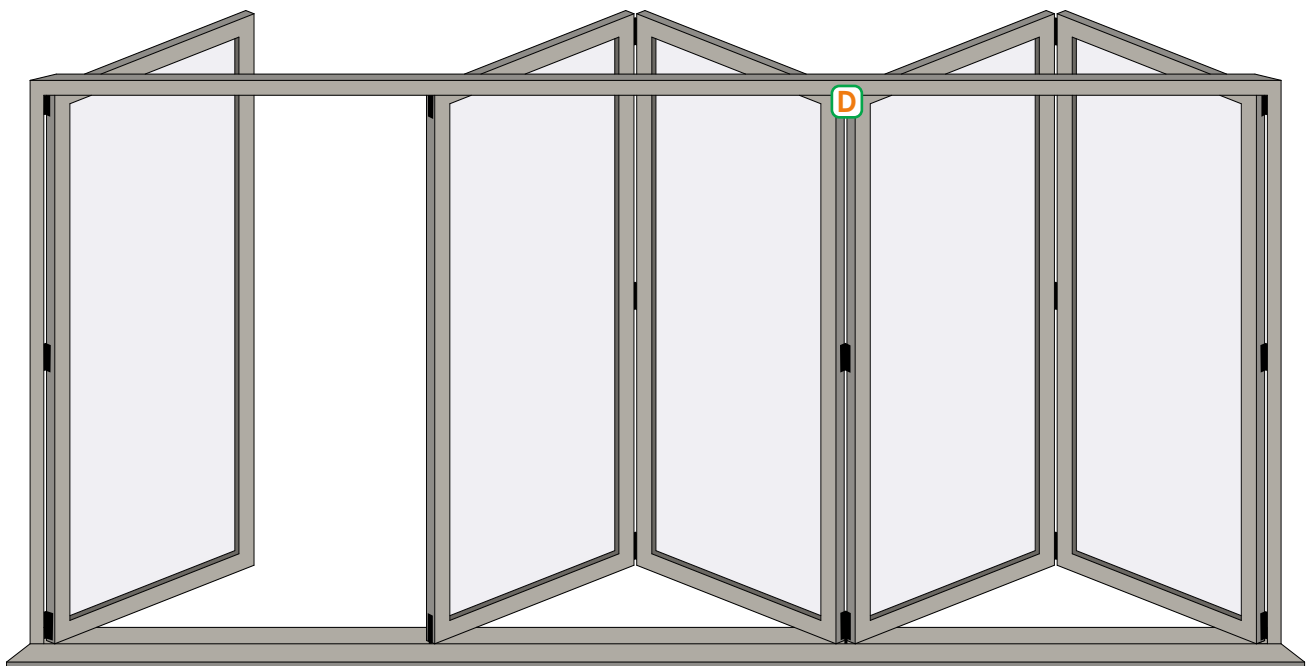
Standard Top Guide

DBA1-352N

Available in black




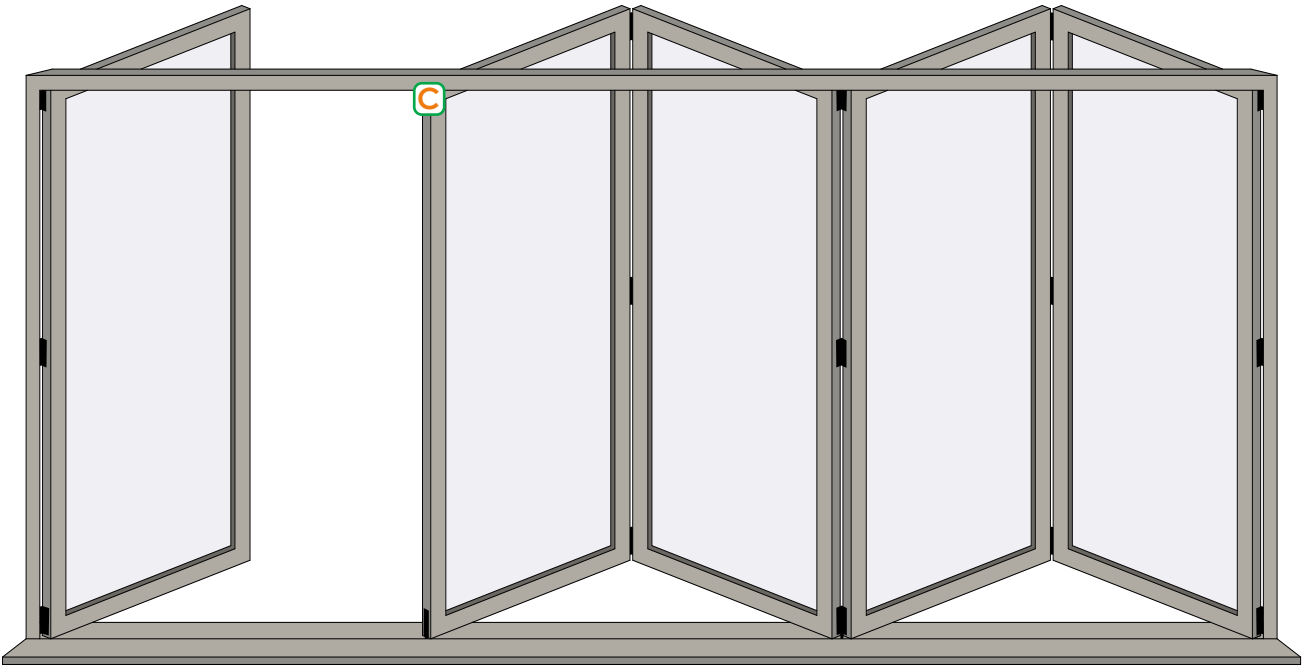
Fits in this position



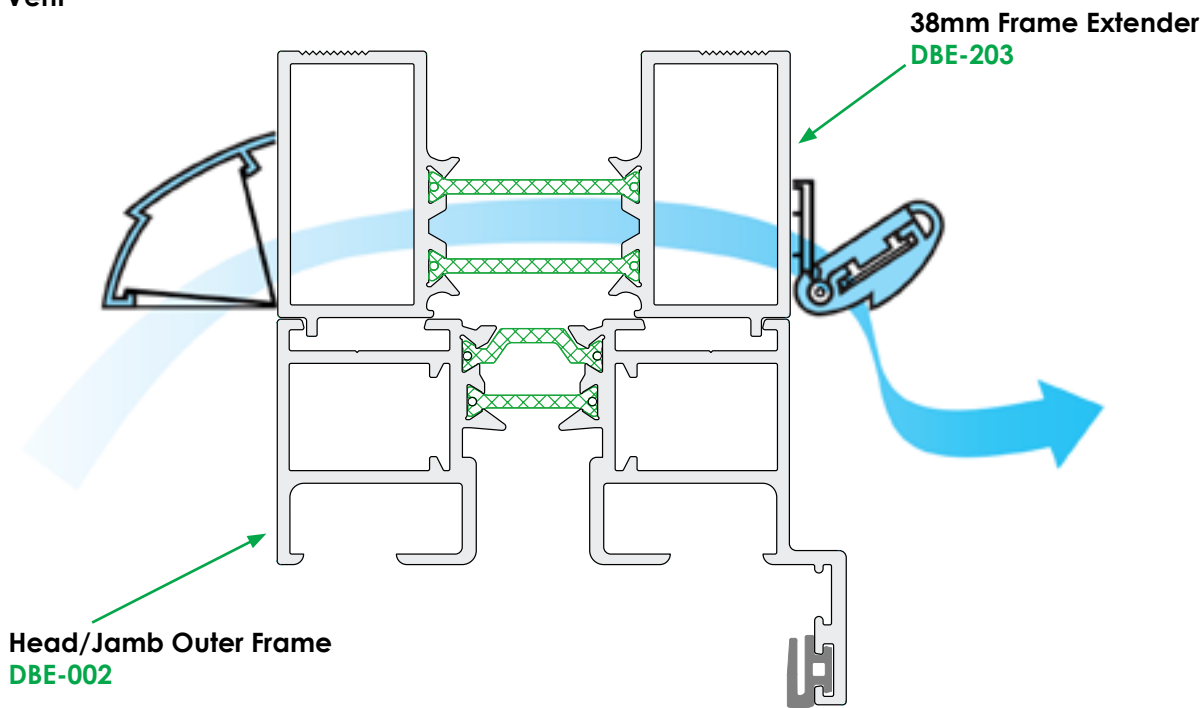
Half Top Guide
DBA1-358 (L/R)
Available in black



Fits in this position 



Trickle Vent



- Smallest 5000mm² equivalent area vent on the market – just 410mm long.
- Suitable for use where a high level of equivalent area is required and to achieve the minimum room requirements under Building Regulations (min 5000mm² ea per room).
- Manufactured from aluminium alloy.
- Excellent air tightness performance, increasingly important with dwelling air pressure tests.
- Aesthetically pleasing design – unobtrusive when installed.

Performance

BS EN 1026: 2000 Air Permeability

Window vent	@ 50Pa (m ³ /hr)	@ 50Pa (l/s)
5000EA	0.61	0.17

BS EN 1027: 2000 Watertightness

Window vent	Pressure at no leakage (Pa)	Classification
5000EA	900	E900

BS EN ISO 717-1: 1997 Airborne Sound Insulation (dB)

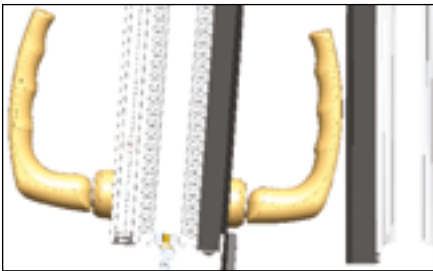
Window vent	Dn,e,w (dB) Open
5000EA	33



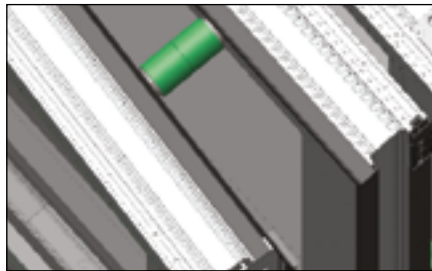
Magnetic catch installation positioning



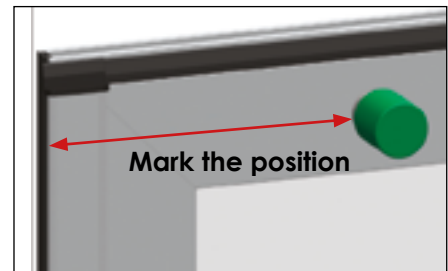
Position the swing door at the point where it will stop.
 Ensure some clearance between the lever handle and next door.
 Use fully assembled panel catch pair to locate the position between two doors.
 Position the catch on swinging door first.



Position the door



Position the assembled panel catch

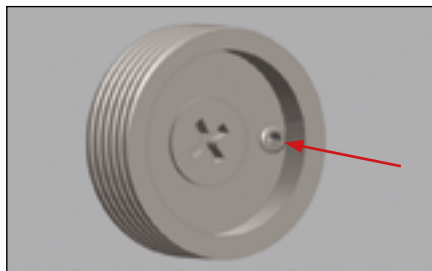


Mark the position with pencil

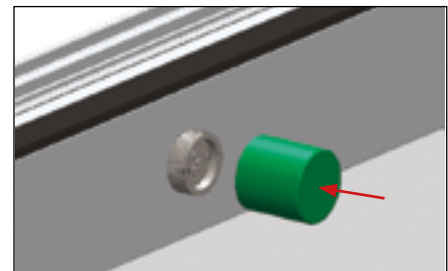
Unscrew panel catch back plate and fix it with choice of fixings provided in the box.
 Ensure the position for anti-rotation screw is pointed towards the hinge side.
 Secure the 3mm pointed anti rotation grub screw.
 Screw the outer sleeve.



Attach with fixing



Secure with 3mm grub screw

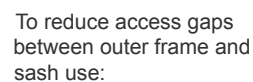


Screw on outer sleeve

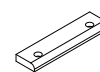
Mark the perfect position for panel catch on the opposite panel.
 Ensure anti rotation screw is pointed to the nearest swinging door hinge.
 Fix the second panel catch by repeating the steps.

Use **60mm magnetic** catch where there is a Traffic handle.
 Use **26mm magnetic** catch where there is a Vivo handle.

Anti Lift and Run Up Block Positions



- 1) DBA1-205 Anti lift blocks at top and bottom as shown.



- 2) DBA1-204 Run Up block at the bottom as shown.



Glass Pack and Setting Block Layout



A - 'Shaded' locations are 'toe and heel' packers between aluminium frame and glass.

- 1) Diagonally across each leaf.
- 2) For adjustment of door to 'square' for set up.



B- Solid filled locations are support packers between aluminium frame and DGU.

- 1) At all hinge and lock points.
- 2) At top and bottom of DGU to prevent slippage.

Configuration Table - max + min's

The above sizes are for guidance only and are dependent upon configuration and glass specification.
Standard glass specification is 28mm Thickness 2 x 4mm toughened glass

KEY:

Narrow Door Width

Optumum Door Width

Wide Door Width

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
	Panel	Panels	Panels	Panels	Panels	Panels	Panels	Panels	Panels	Panels	Panels	Panels	Panels	Panels
0.6m														
1.2m														
1.8m														
2.4m														
3.m														
3.6m														
4.2m														
4.8m														
5.4m														
6m														
6.6m														
7.2m														
7.8m														
8.4m														
9m														
9.6m														
10.2m														
10.8m														
11.4m														
12m														
12.6m														
13.2m														
13.8m														
14.4m														
15m														
15.6m														
16.2m														
16.8m														

ASSEMBLED

KIT FORM

		Width	Height	Max weight per door
Configuration with even groups of doors without Traffic door.	Min	750	1900	120 kg
	Max	1200	3000	
Configuration with Traffic door.	Min	750	1900	
	Max	1200	3000	

Air Permeability Rating:

Class 4 – 600 Pascals (approximately 112kph/70 mph) – the equivalent of over 60Kg (61.18) per m²

A calibrated air pressure is applied to the doors to see what pressure they withstand before leaking air. This pressure is measured in Pascals so the door could achieve anything from 50 Pascals which would be very poor (Class 1), up to 600 Pascals (Class 4) which is the best.

Water Tightness:

Class 9A – 900 Pascals (approximately 137kph/85mph)

A similar test to the above but air-water pressure is applied to the doors to see how much they withstand before leaking water. Again this goes from 50 Pascals (Class 1) up to 900 Pascals (Class 9).

Powder Coated Finish

Qualicoat Powder Coated Finish

Coating thickness ISO 2360

The thickness of the organic coating on each part to be tested shall be measured on the significant surface at not less than five measuring areas (appr.1 cm²).

REQUIREMENTS: Powder coating 3 :

Class 1 : 60 µm

Class 1.5 60 µm

Class 2 : 60 µm

Class 3 : 50 µm

Two-coat powder coating (classes 1 and 2) : 110 µm

Two-coat PVDF powder coating : 80 µm

Two preliminary pretreatments are defined: a) Standard pretreatment (compulsory) The total etching degree shall be at least 1.0 g/m². b) Enhanced pretreatment (for SEASIDE endorsement) This pre-treatment includes degreasing either in an independent step or in a combined degreasing/etching step.


The total etching degree shall be at least 2.0 g/m². For type AA (dual etching) the two final steps shall be at least 0.5 g/m².

Coating applicators who wish to have the endorsement SEASIDE on their licence certificate shall apply to their General Licensee or directly to QUALICOAT in countries without a General Licensee.


- **The powder coated finish is suitable for coastal locations.** The postcode of the installation site must be supplied on the order form to obtain a specific warranty.

The three numbers in the code stand for:

First
Number
Overall number of panels.



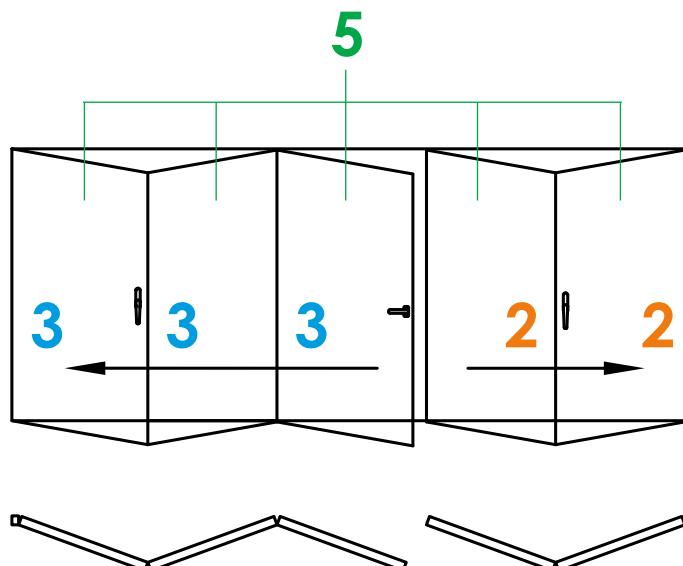
Second
Number
Number of panels hinged from the left.



Third
Number
Number of panels hinged from the right.

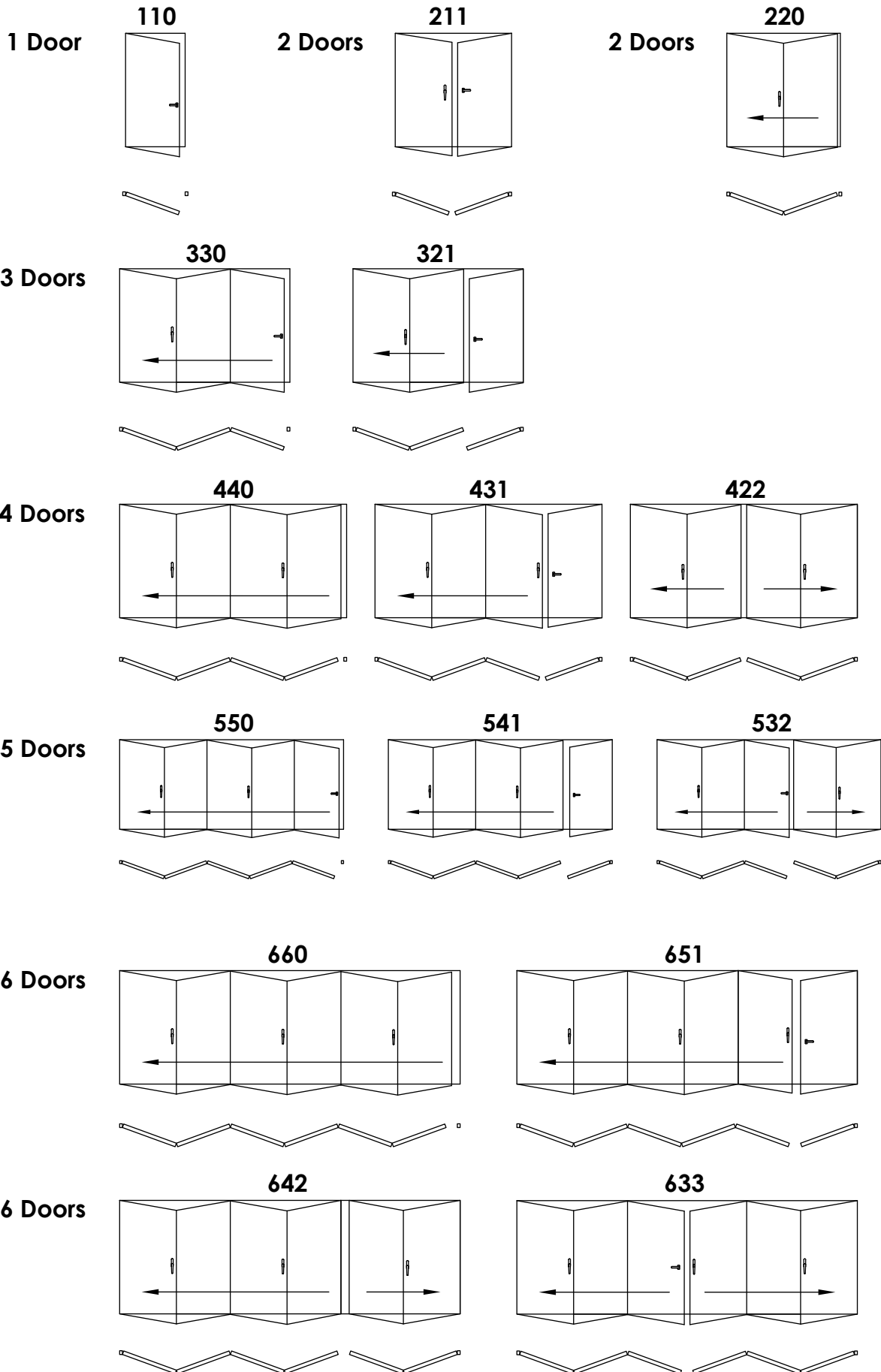
Example: **532**

5 panels in total
3 from the left
2 from the right.

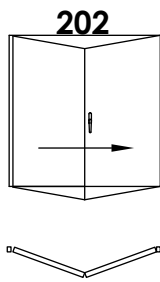


This is a 532 viewed from outside opens out.

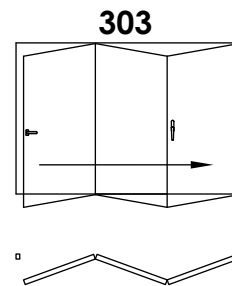
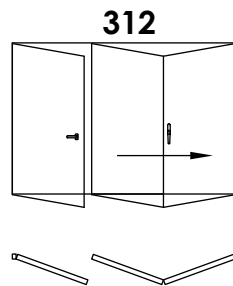
Open OUT



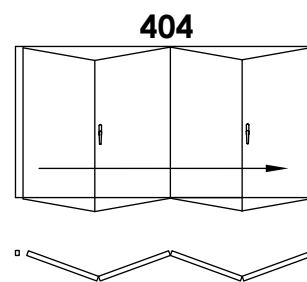
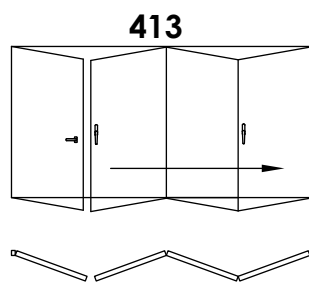
Open OUT



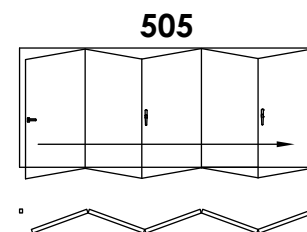
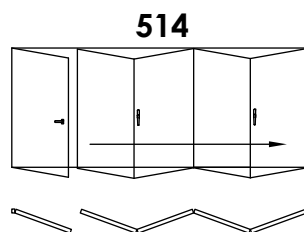
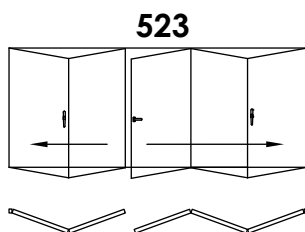
1 Door



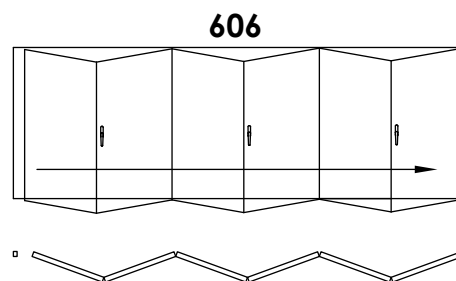
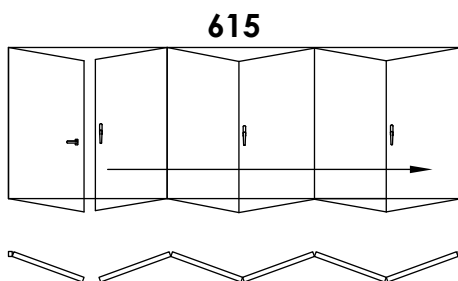
3 Doors



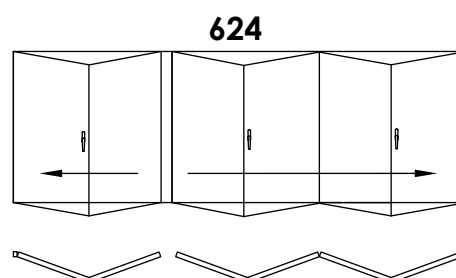
4 Doors



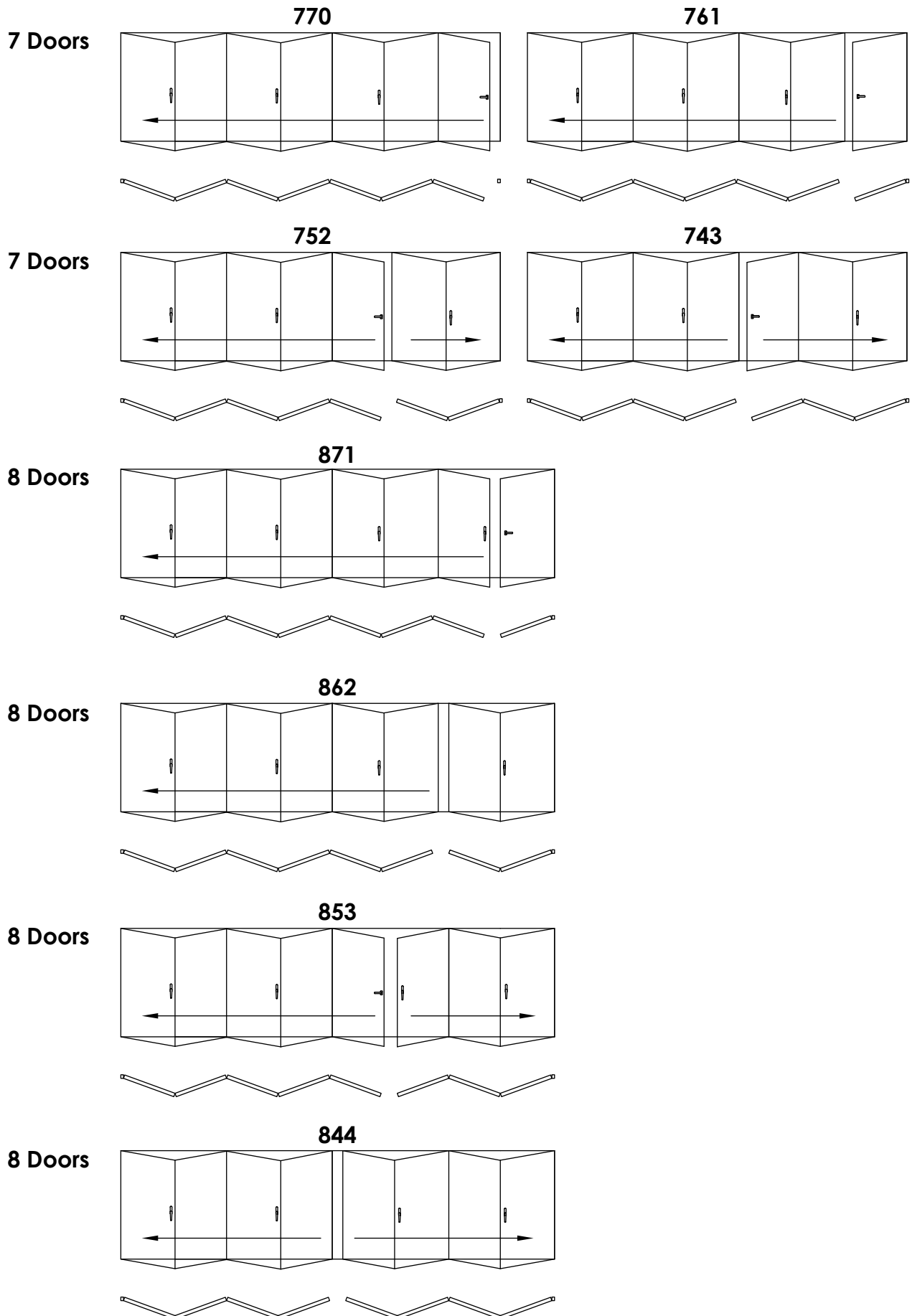
5 Doors



6 Doors

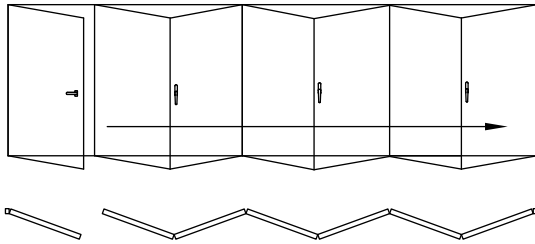


6 Doors

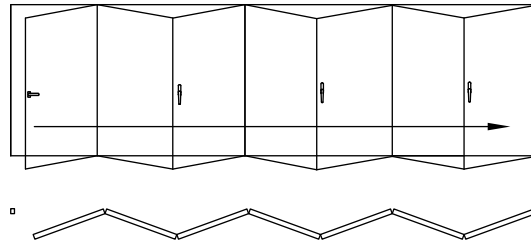


Open OUT

716

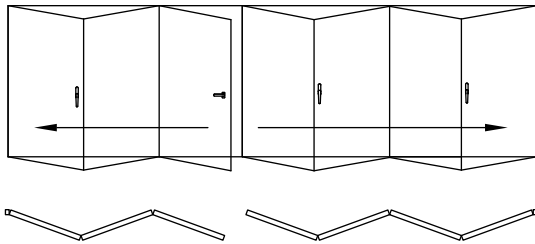


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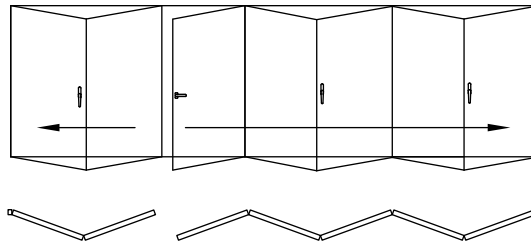


7 Doors

734

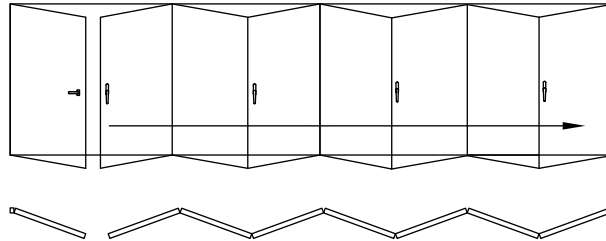


725



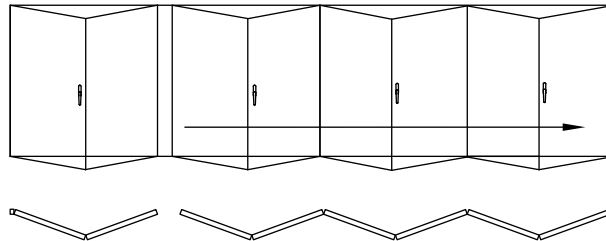
7 Doors

817



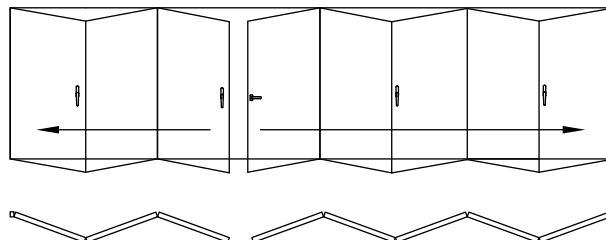
8 Doors

826

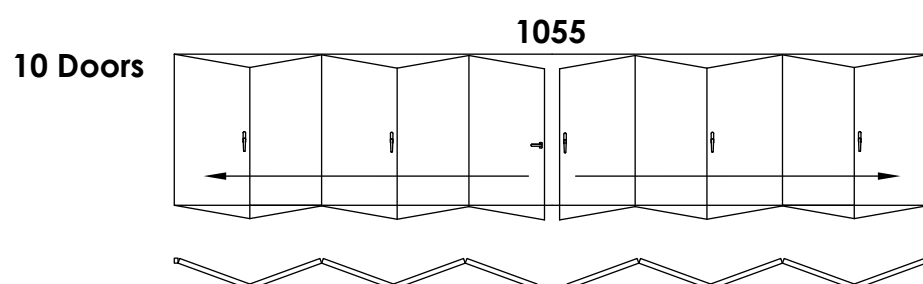
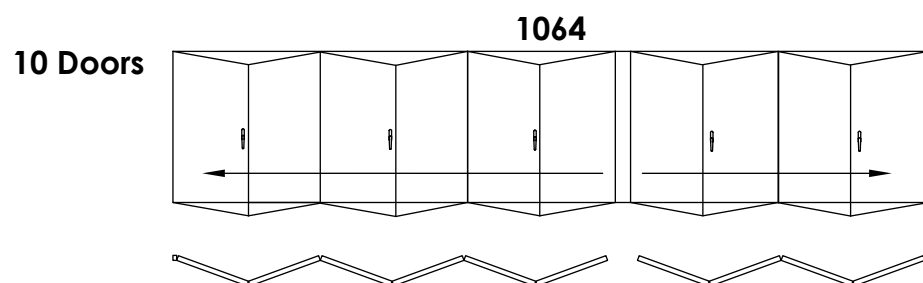
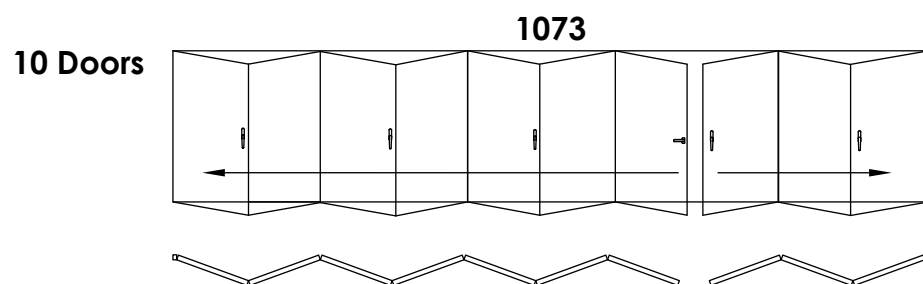
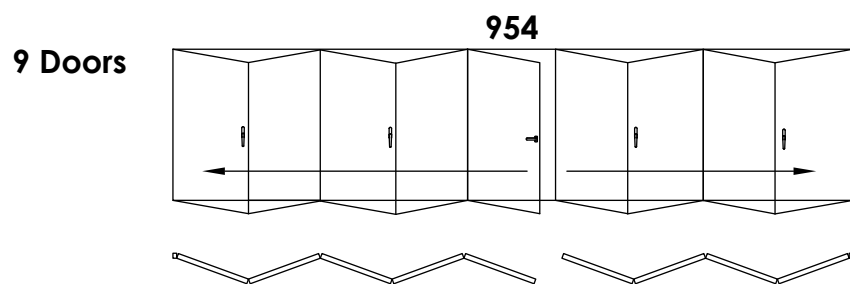
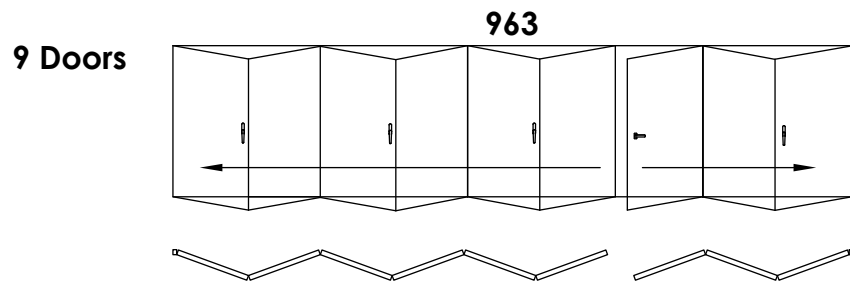
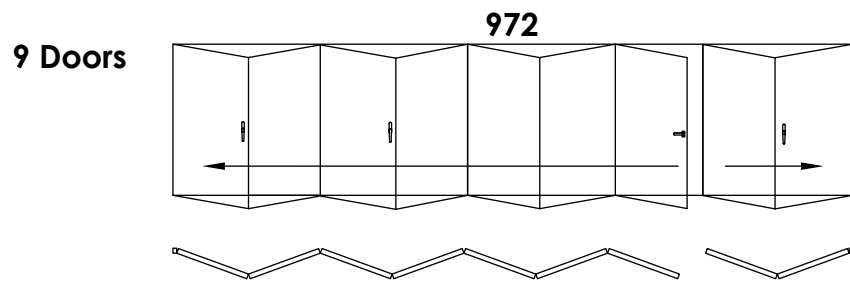


8 Doors

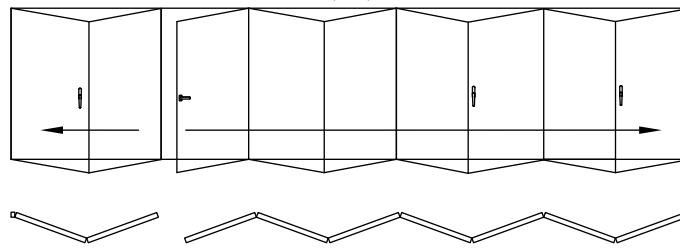
835



8 Doors

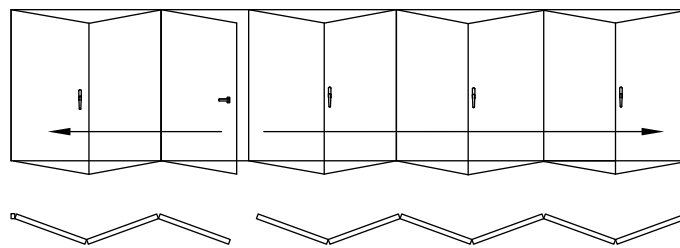


927



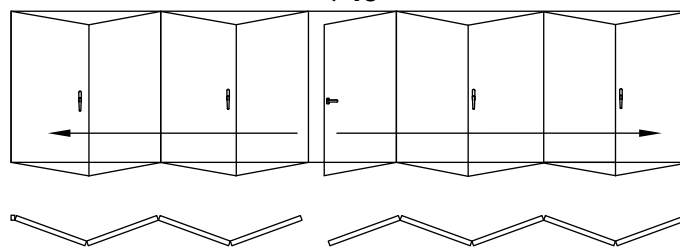
9 Doors

936



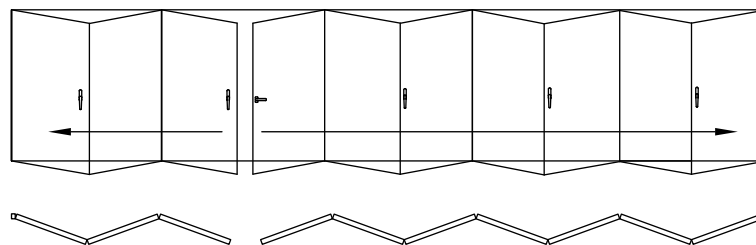
9 Doors

945



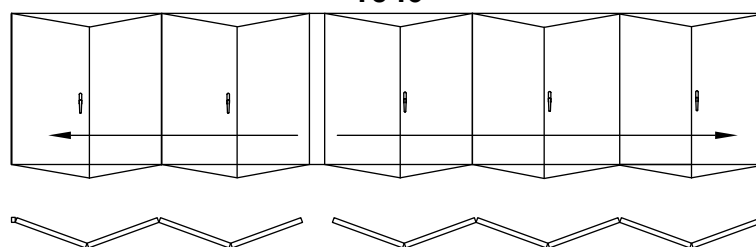
9 Doors

1037

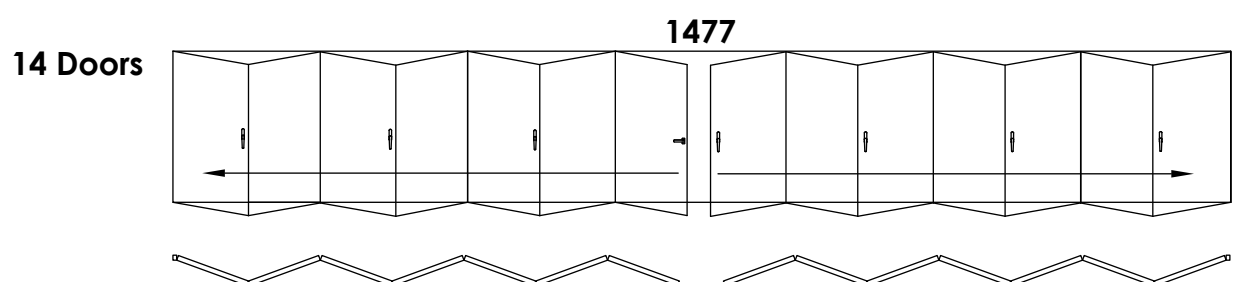
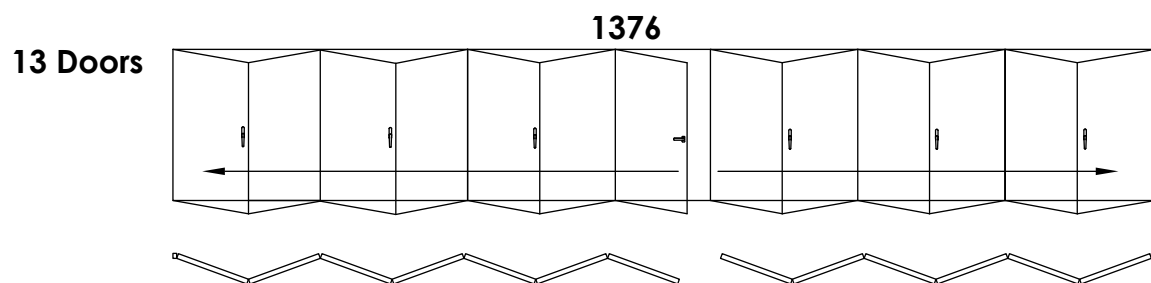
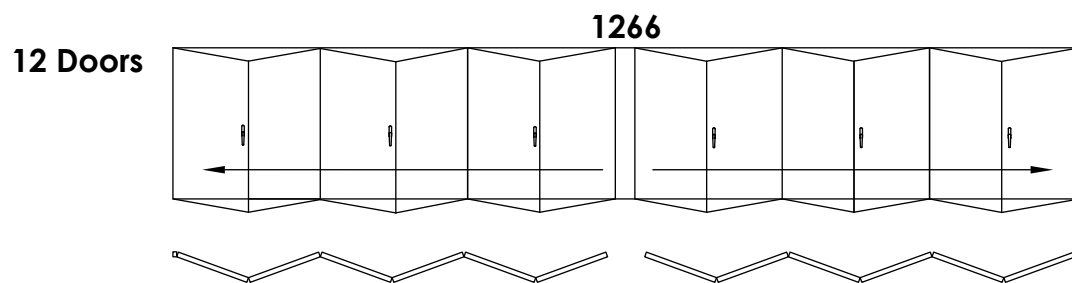
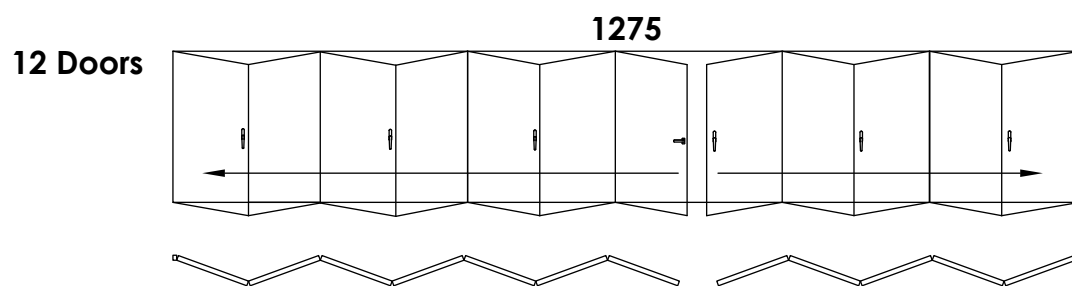
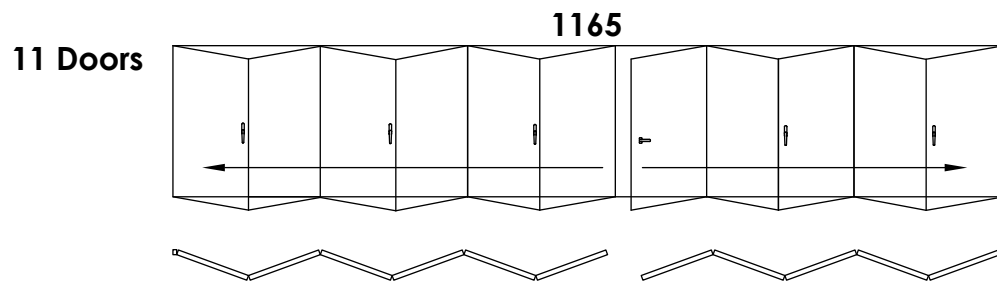
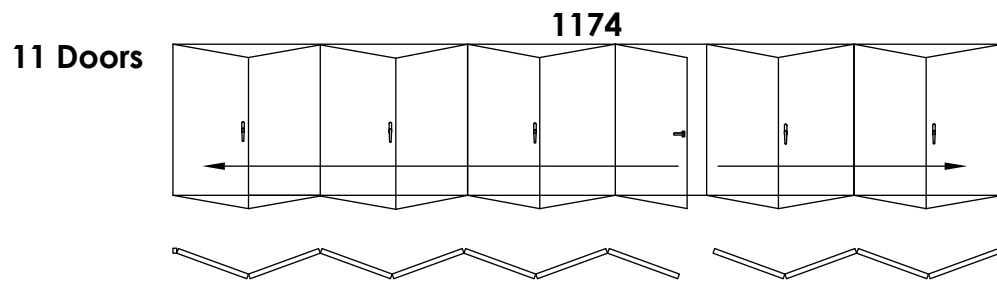


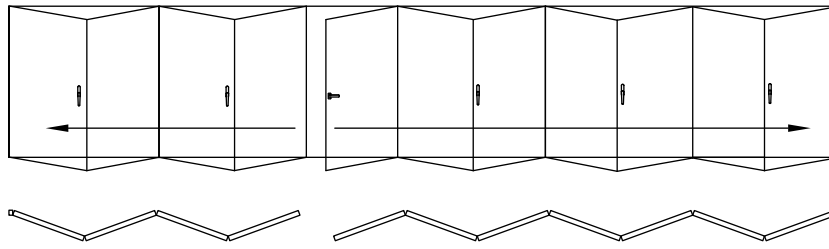
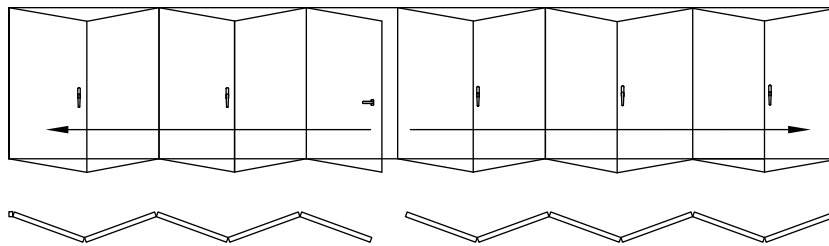
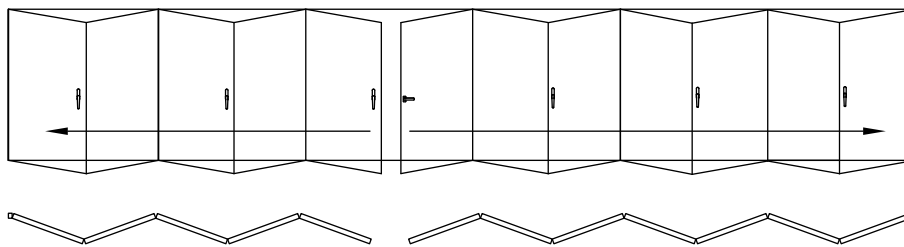
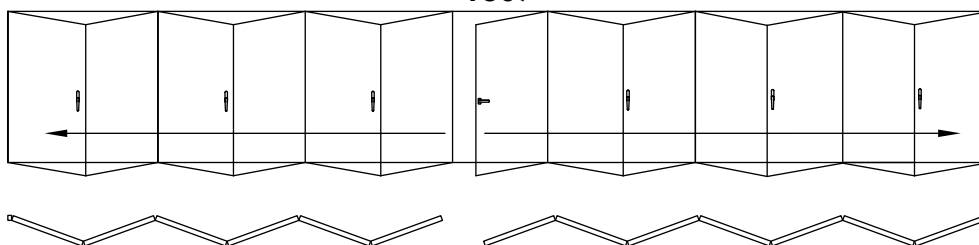
10 Doors

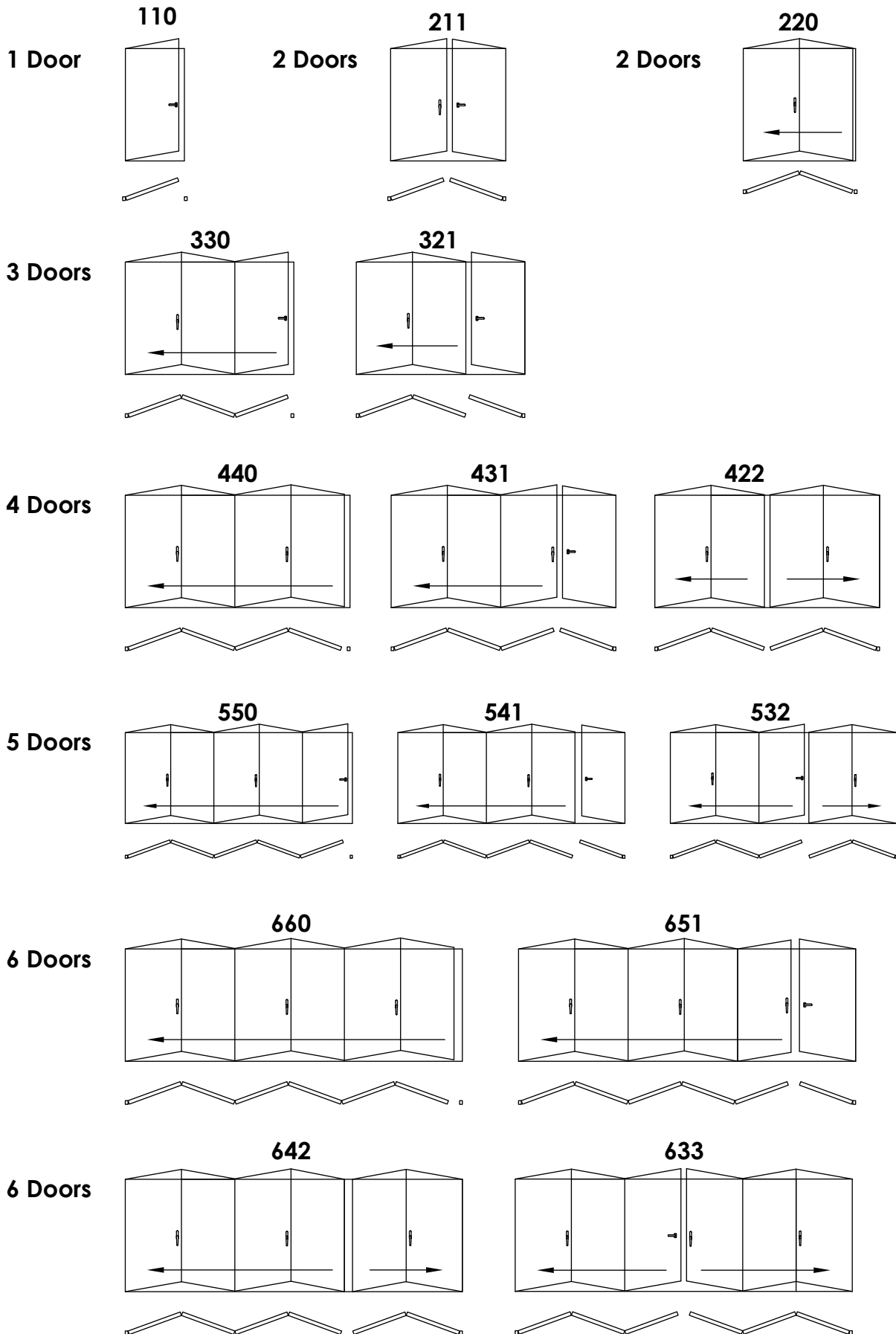
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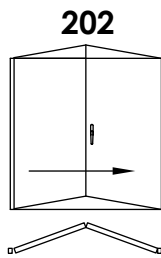
10 Doors



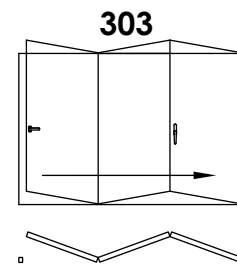
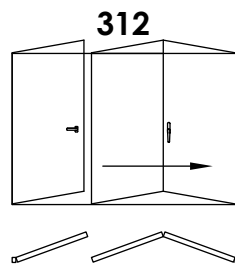
1147**11 Doors****1156****11 Doors****1257****12 Doors****1367****13 Doors**



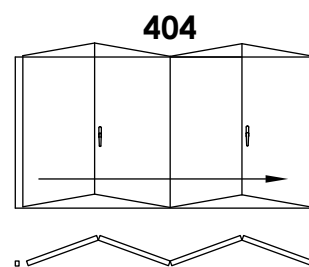
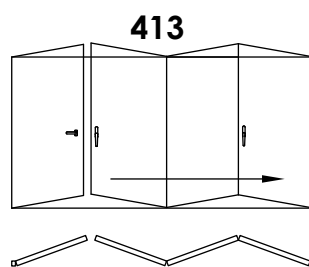
Open IN



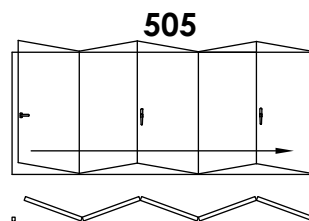
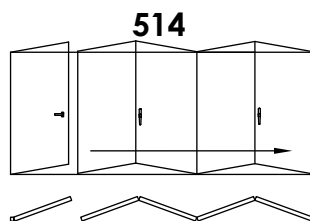
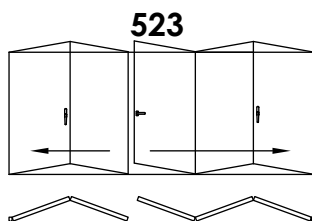
1 Door



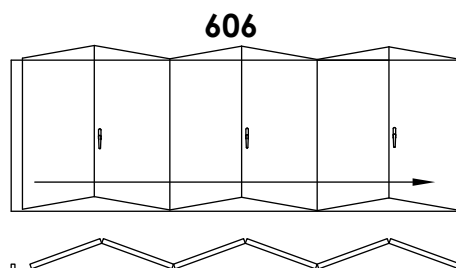
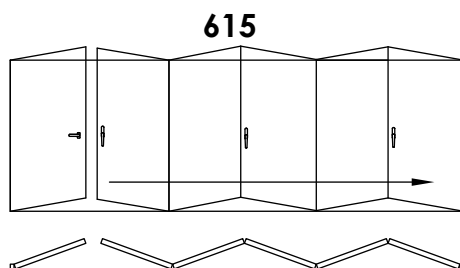
3 Doors



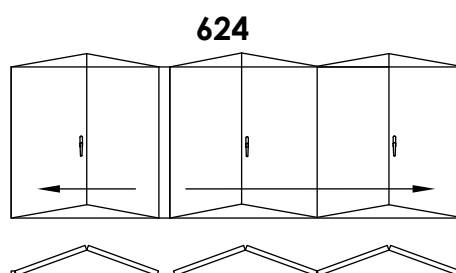
4 Doors



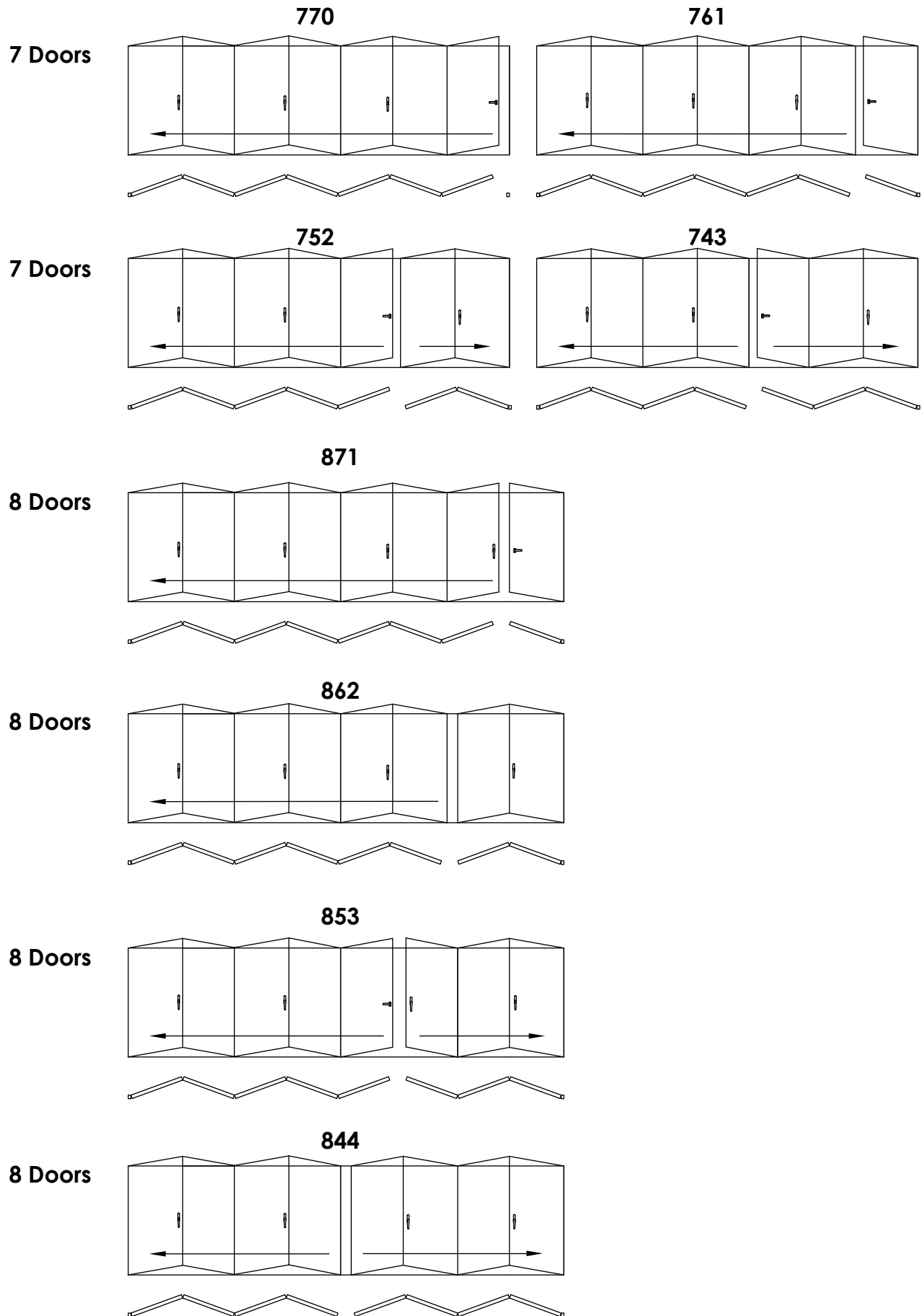
5 Doors



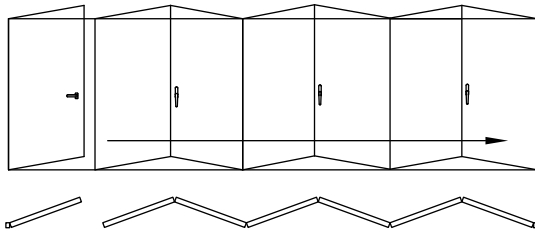
6 Doors



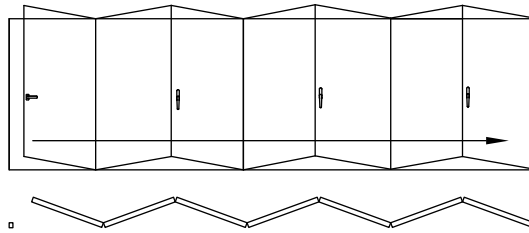
6 Doors



716

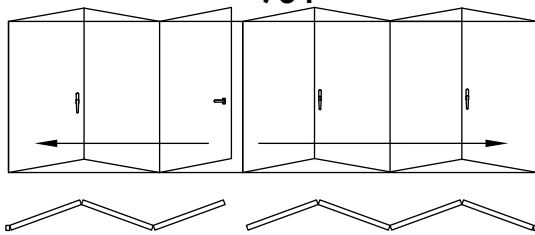


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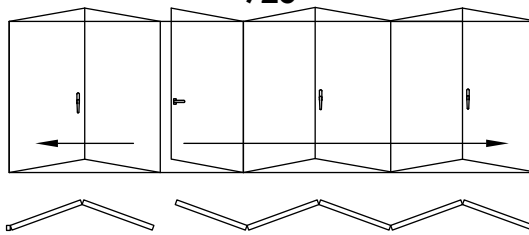


7 Doors

734

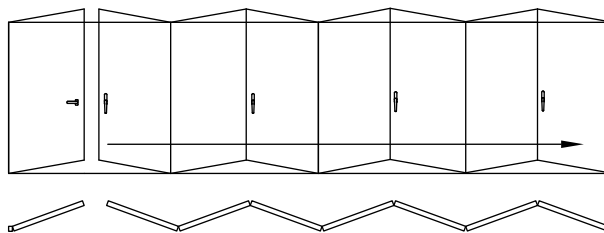


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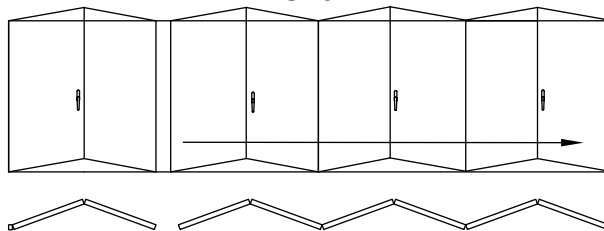
7 Doors

817



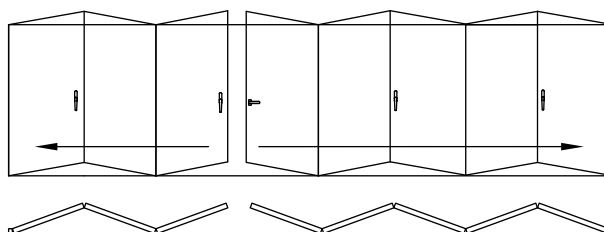
8 Doors

826

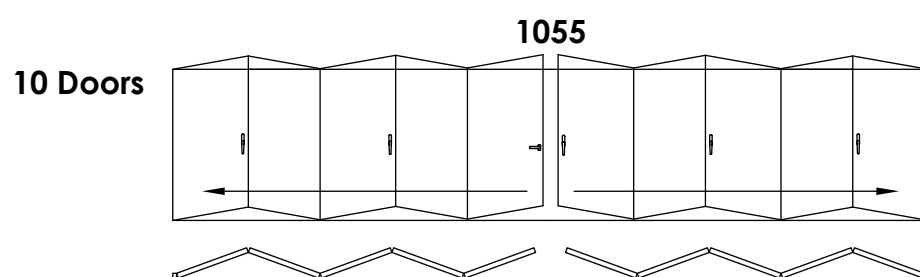
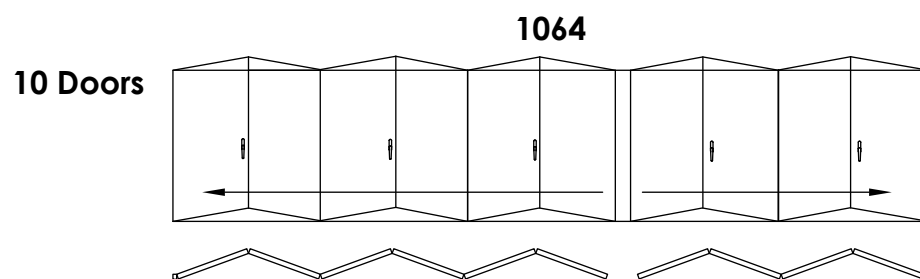
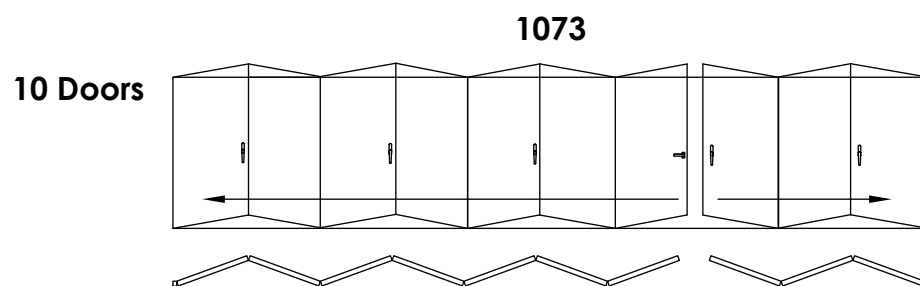
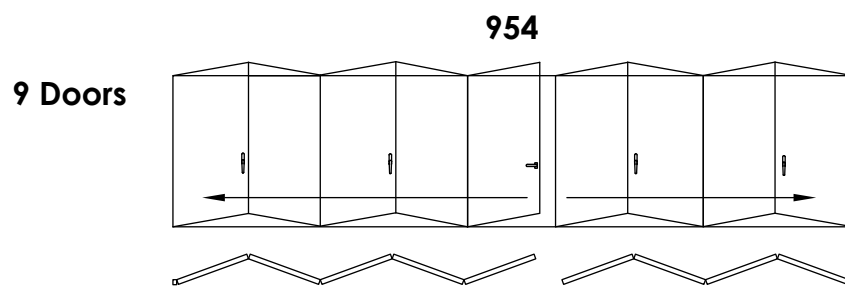
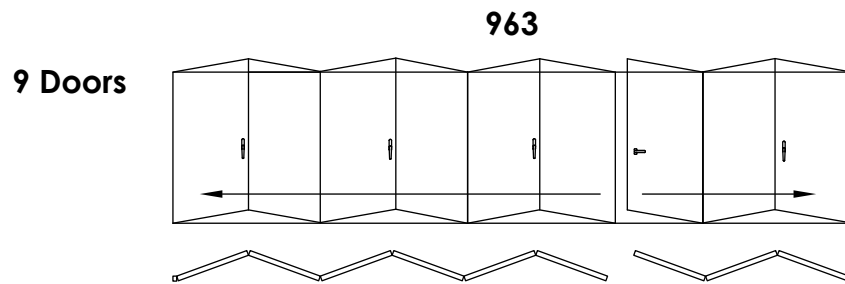
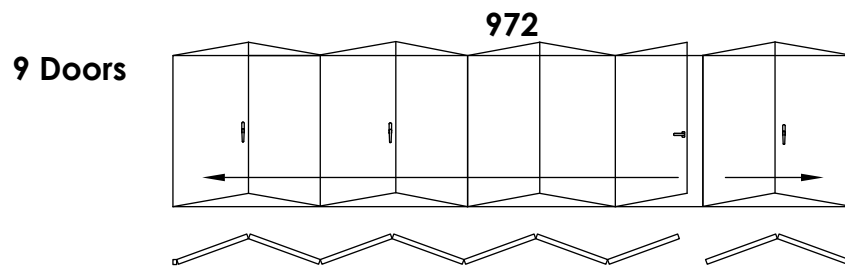


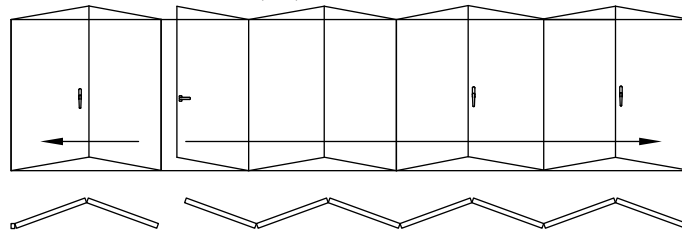
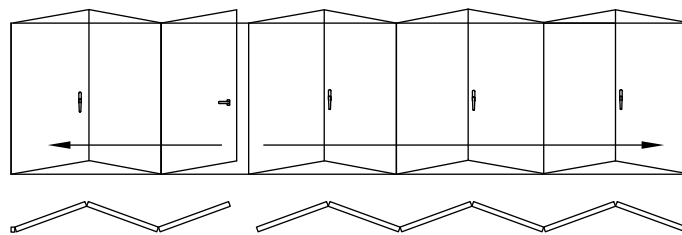
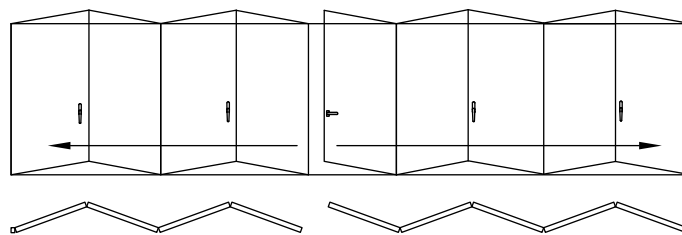
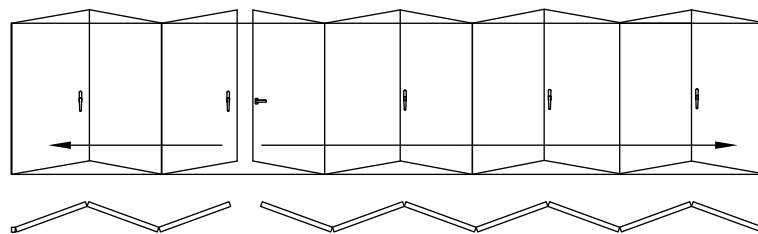
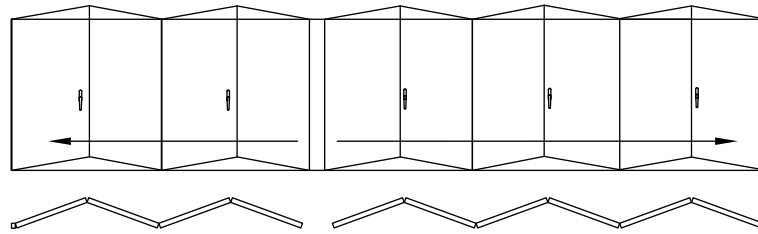
8 Doors

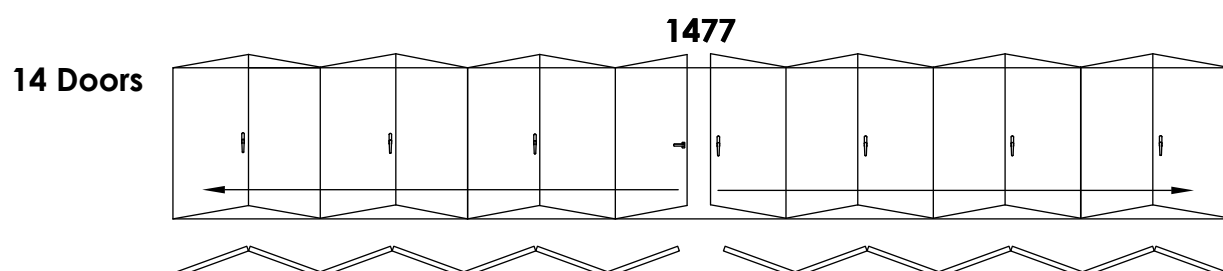
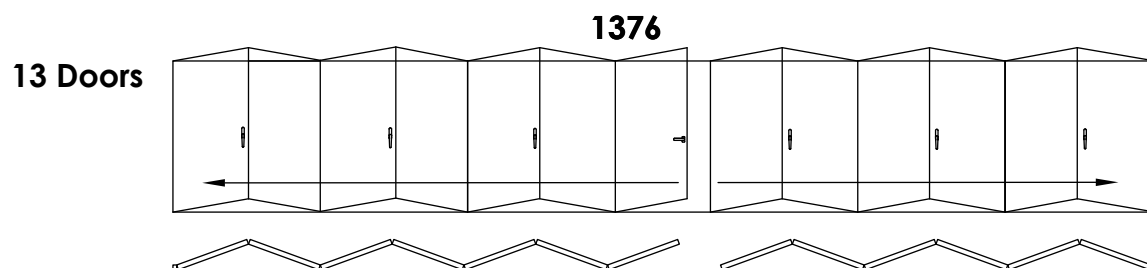
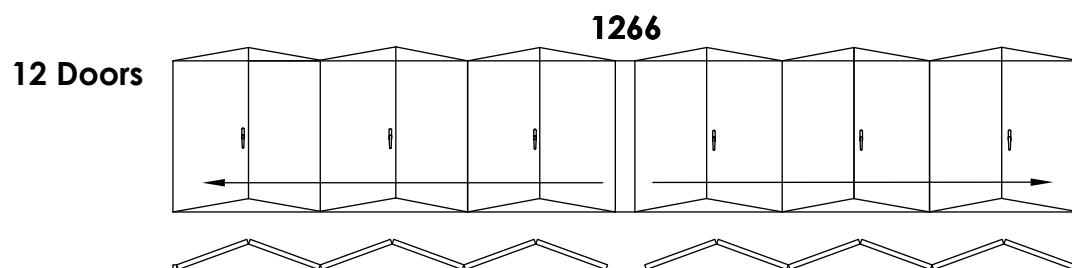
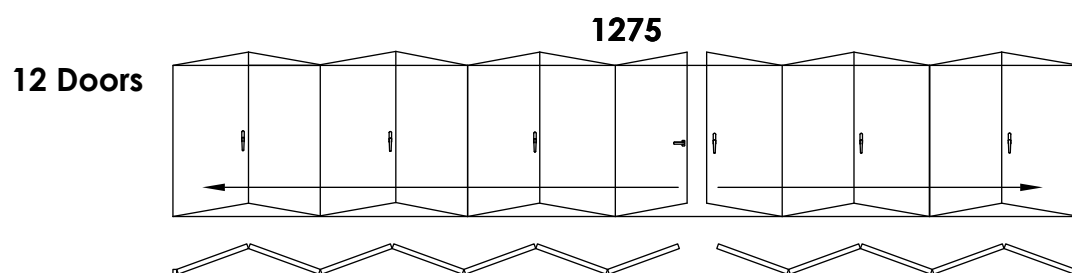
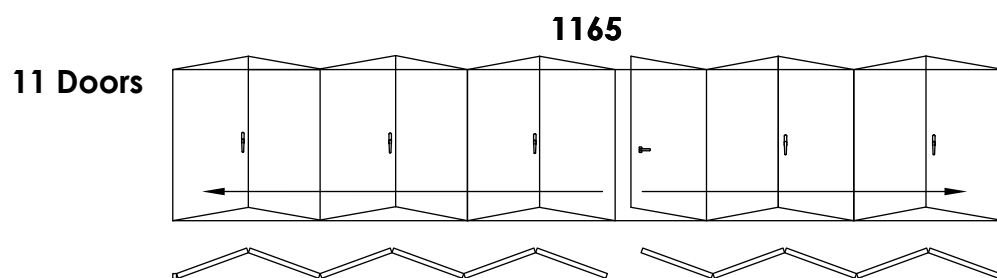
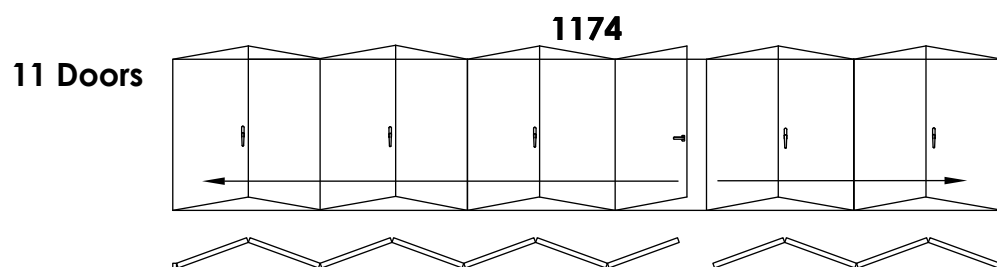
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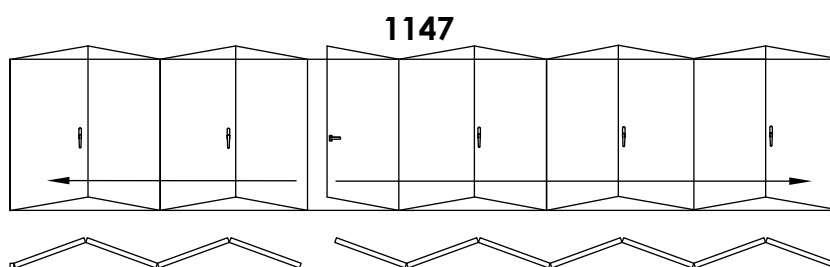


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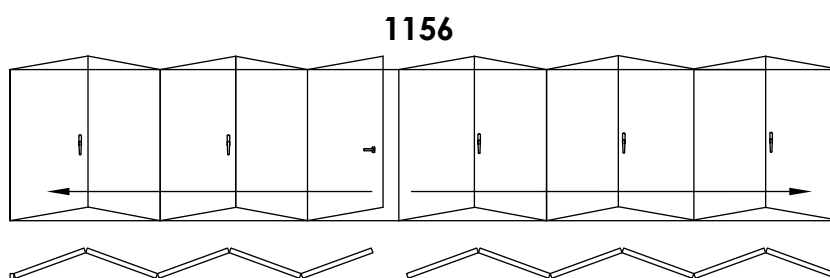


927**9 Doors****936****9 Doors****945****9 Doors****1037****10 Doors****1046****10 Doors**

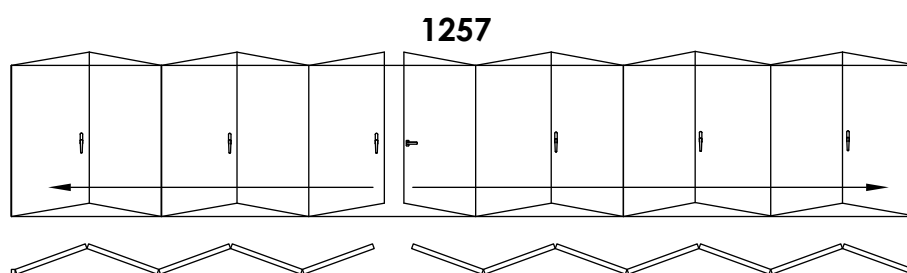




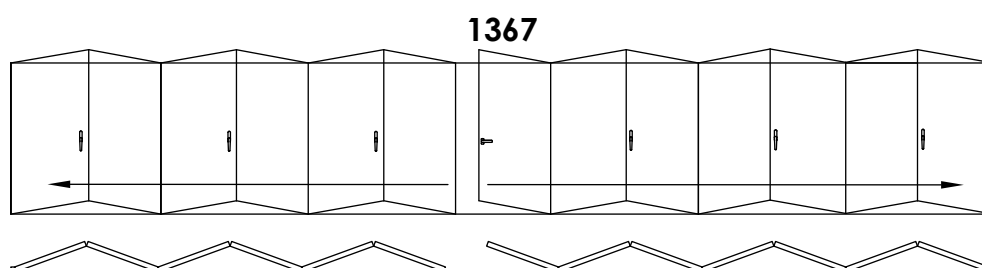
11 Doors



11 Doors



12 Doors



13 Doors