

# GRP DOORS

Technical Manual

HOMEFRAME

REVISION 2.4



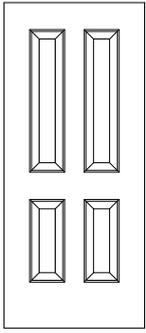
Our technical manual covers everything you need to know about GRP doors.

# CONTENTS

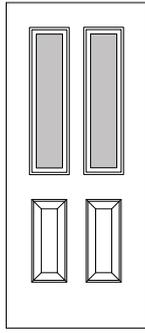
- ▶ **Door Dimensions**
- ▶ **Colours**
  
- ▶ **Internal Construction**
- ▶ **Internal Construction - PAS 24**
- ▶ **Outer Frame Construction Sections**
- ▶ **Construction Section Glazing**
  
- ▶ **Full PVC-U Threshold**
- ▶ **Slim PVC-U Threshold**
- ▶ **Open IN Aluminium Threshold**
- ▶ **Open OUT Aluminium Threshold**
- ▶ **Cill Details**
  
- ▶ **Add On / Frame Extension**
- ▶ **Side Frame Details**
- ▶ **Coupling Bar**
- ▶ **Side Frame / Coupling Bar Max Sizes**
- ▶ **Side Frame Min Sizes / Transoms**
  
- ▶ **Bar Handle Detail**
- ▶ **Bar Handle Fitting Positions**
- ▶ **Escutcheon**
- ▶ **Handles**
- ▶ **Letterplate Positioning**
- ▶ **Letterplate (standard)**
- ▶ **Letterplate (TS008)**
- ▶ **Standard Hinge**
- ▶ **Optional Hinge**
- ▶ **Clear Opening sizes**
  
- ▶ **Lock**
- ▶ **Keeps**
- ▶ **\* Cylinder**
- ▶ **\*\*\*Cylinder**
  
- ▶ **U Values**



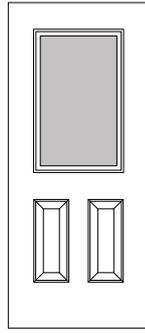
Click on the door style **name** for the dimensions.



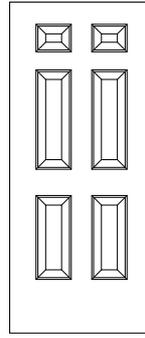
Rome



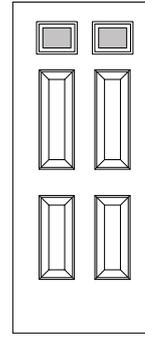
Rome 2



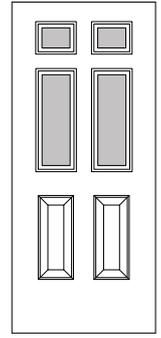
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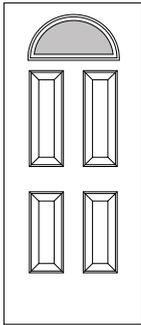
Athens



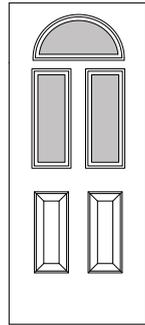
Athens 2



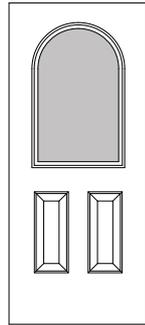
Athens 4



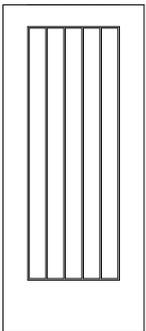
Cannes 1



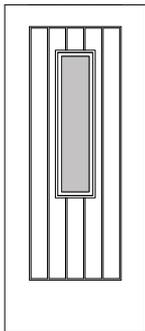
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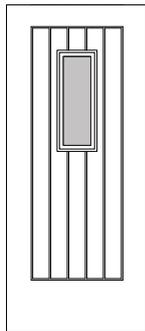
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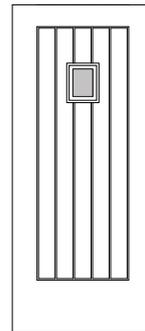
Turin



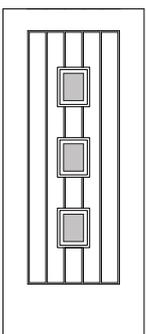
Milan 912



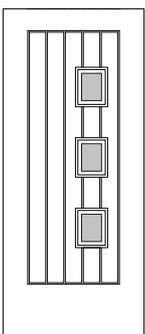
Milan 609



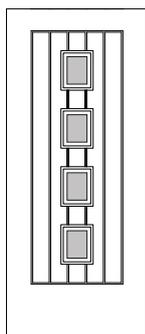
Milan 203



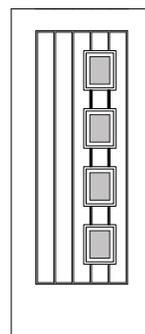
Rotterdam



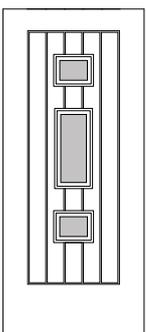
Rotterdam  
Left or Right



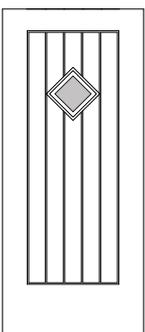
Amsterdam



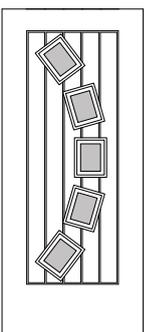
Amsterdam  
Left or Right



Helsinki



Oslo

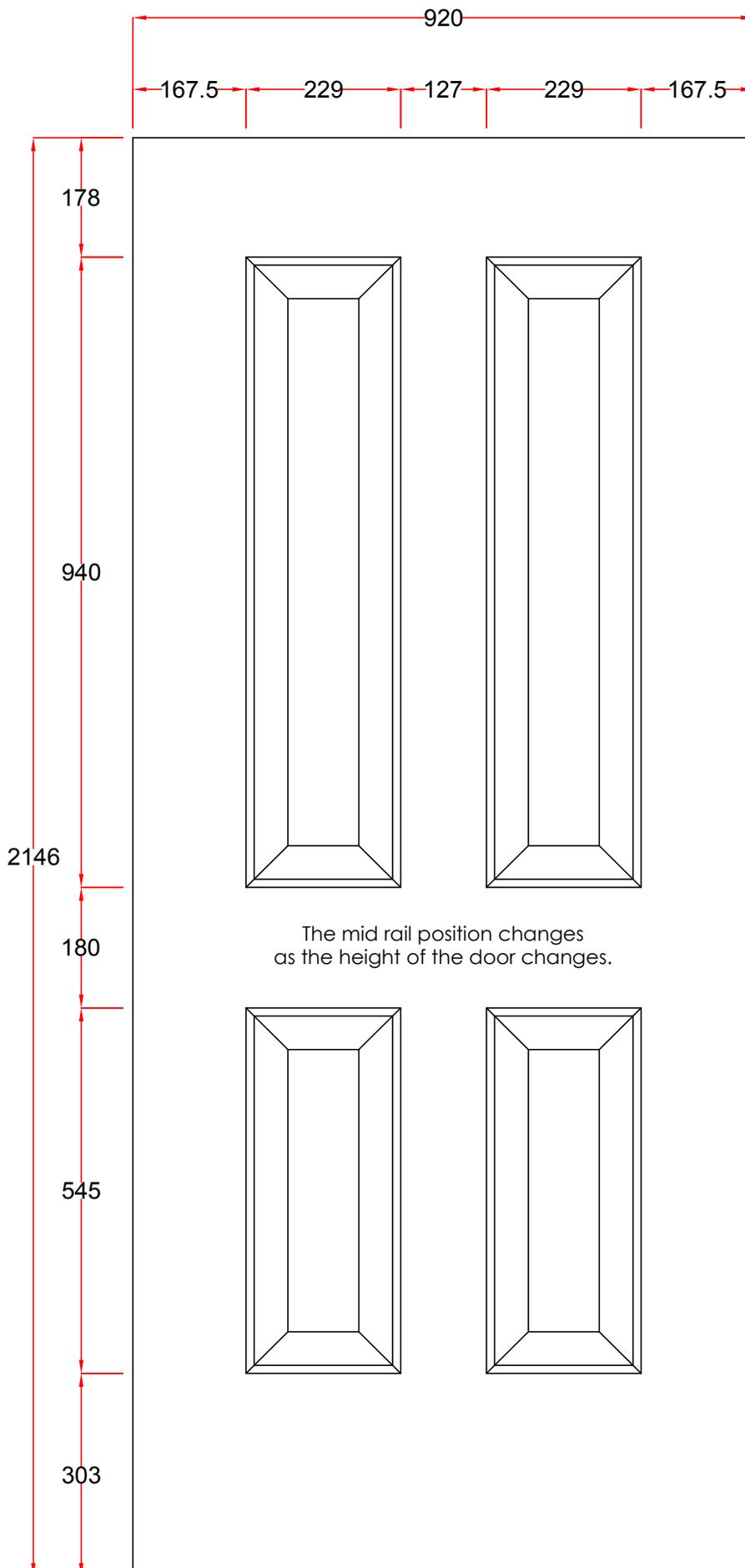


Porto  
Left or Right

# Door Blank Type : T4P

Rome

MAX SASH SIZE: 910mm X 2109mm MIN SASH SIZE: 712mm X 1866mm



The mid rail position changes as the height of the door changes.

### Profile Dimensions:

- 72 Frame:** 52mm+4mm air gap = 56mm
- 52 Threshold:** 32mm+4mm air gap = 36mm
- Ali low threshold open IN = 12mm**
- Ali low threshold open OUT = 12mm**
- Cill = 30mm**

### Width

#### 72 Frame

- Max = (Max sash width + 56mm + 56mm)
- Min = (Min sash width + 56mm + 56mm)

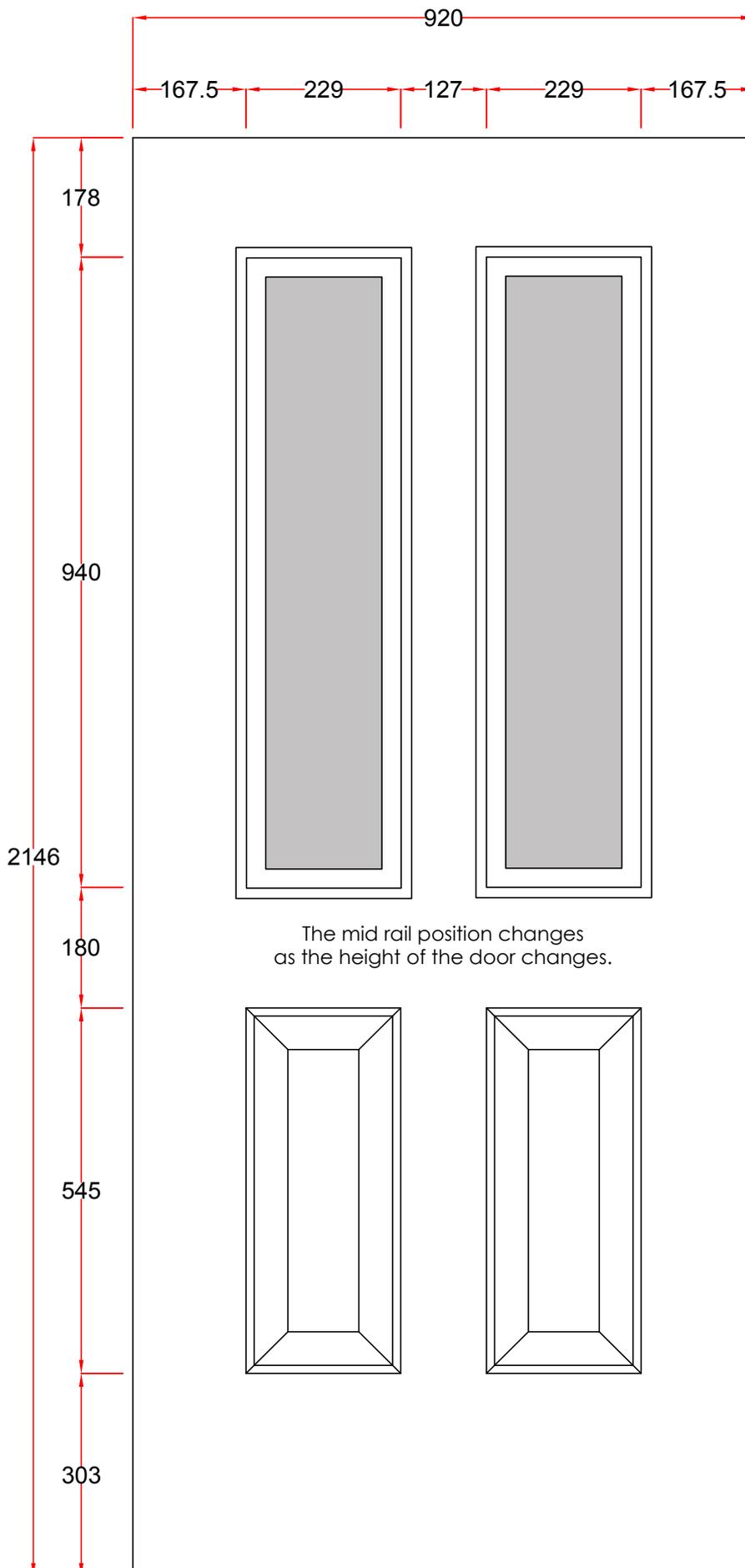
### Height

#### 72 Frame low threshold open IN

- Max = (Max sash height + 56mm + 15mm)
- Min = (Min sash height + 56mm + 15mm)

# Door Blank Type : T4P

MAX SASH SIZE: 910mm X 2109mm MIN SASH SIZE: 712mm X 1866mm



Cassette: 0836  
Cut Out: 229mm X 940mm  
Glass Size: 203mm X 912mm

### Profile Dimensions:

- 72 Frame: 52mm+4mm air gap = 56mm
- 52 Threshold: 32mm+4mm air gap = 36mm
- Ali low threshold open IN = 12mm
- Ali low threshold open OUT = 12mm
- Cill = 30mm

### Width

#### 72 Frame

Max = (Max sash width + 56mm + 56mm)  
Min = (Min sash width + 56mm + 56mm)

### Height

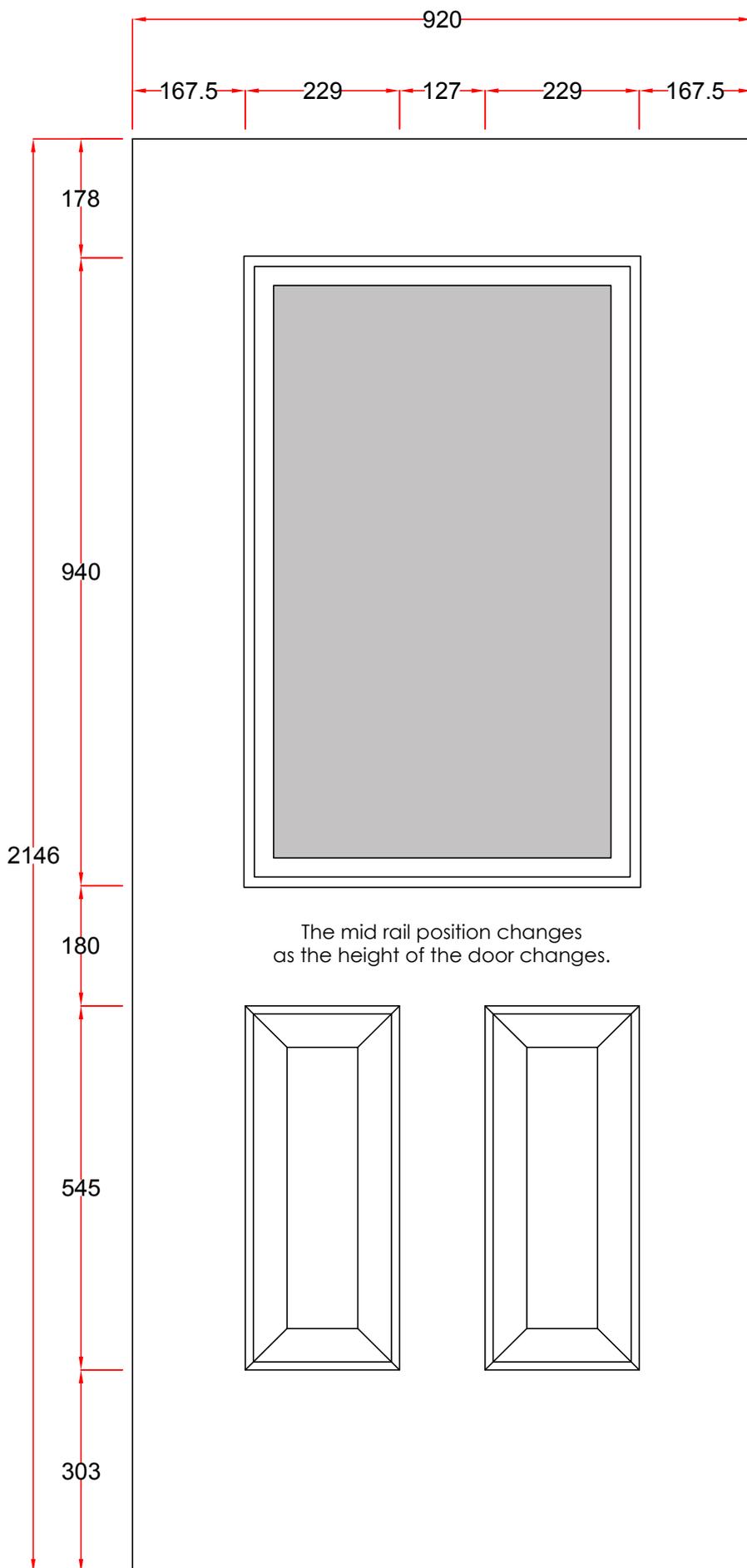
#### 72 Frame low threshold open IN

Max = (Max sash height + 56mm + 15mm)  
Min = (Min sash height + 56mm + 15mm)

# Door Blank Type : T4P

Tuscany

MAX SASH SIZE: 910mm X 2109mm MIN SASH SIZE: 745mm X 1866mm



Cassette: 2236  
Cut Out: 558mm X 940mm  
Glass Size: 585mm X 914mm

### Profile Dimensions:

**72 Frame:** 52mm+4mm air gap = 56mm  
**52 Threshold:** 32mm+4mm air gap = 36mm  
**Ali low threshold open IN** = 12mm  
**Ali low threshold open OUT** = 12mm  
**Cill** = 30mm

### Width

**72 Frame**  
Max = (Max sash width + 56mm + 56mm)  
Min = (Min sash width + 56mm + 56mm)

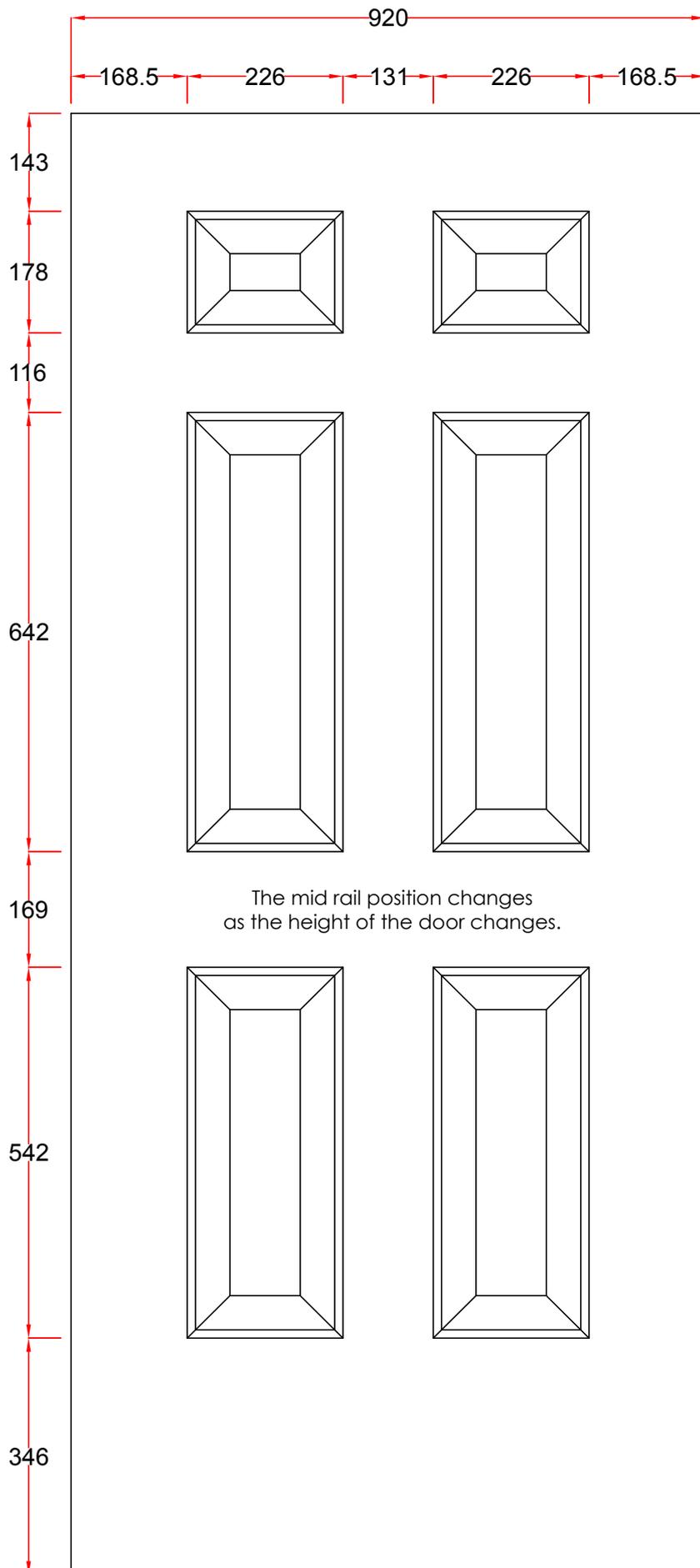
### Height

**72 Frame low threshold open IN**  
Max = (Max sash height + 56mm + 15mm)  
Min = (Min sash height + 56mm + 15mm)

# Door Blank Type : 6P

Athens

MAX SASH SIZE: 910mm X 2109mm MIN SASH SIZE: 712mm X 1866mm



### Profile Dimensions:

**72 Frame:** 52mm+4mm air gap = **56mm**

**52 Threshold:** 32mm+4mm air gap = **36mm**

**Ali low threshold open IN = 12mm**

**Ali low threshold open OUT = 12mm**

**Cill = 30mm**

### Width

**72 Frame**

Max = (Max sash width + 56mm + 56mm)

Min = (Min sash width + 56mm + 56mm)

### Height

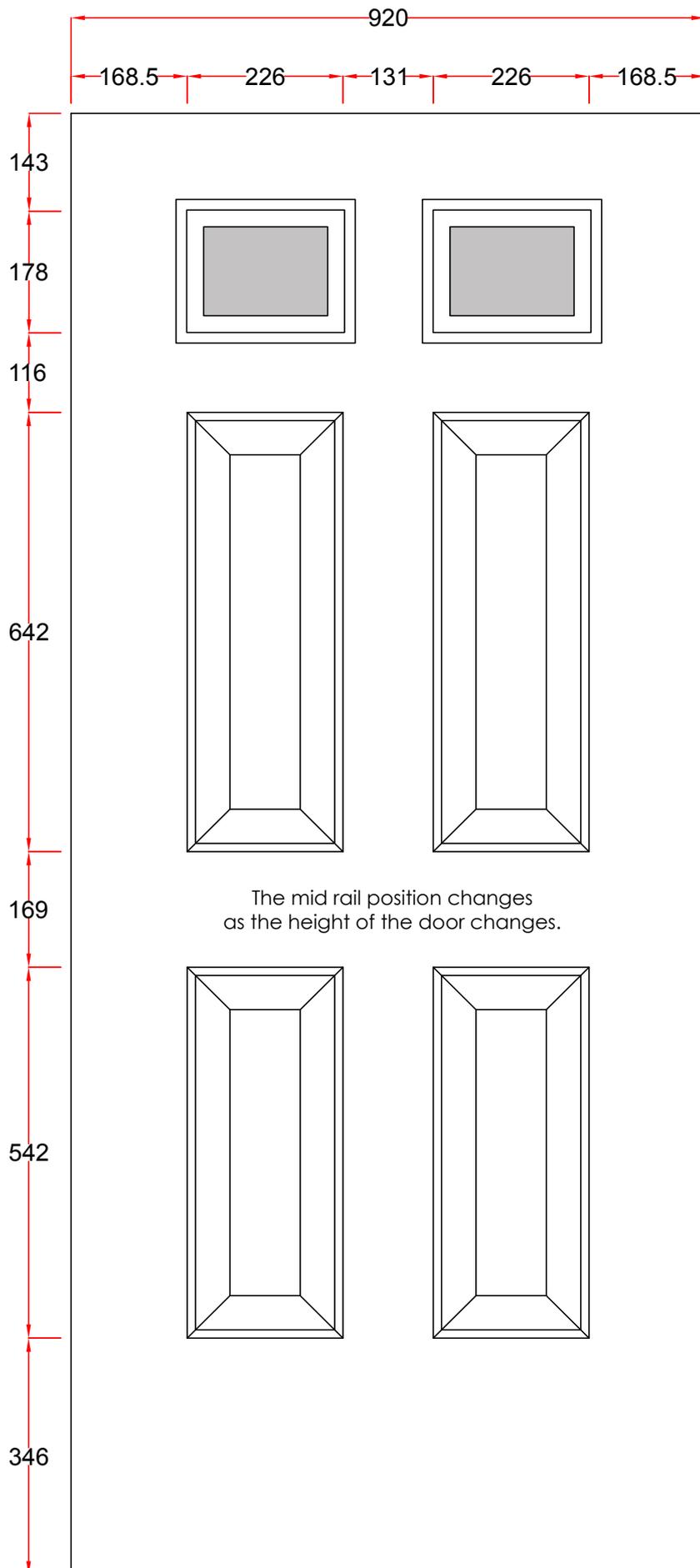
**72 Frame low threshold open IN**

Max = (Max sash height + 56mm + 15mm)

Min = (Min sash height + 56mm + 15mm)

# Door Blank Type : 6P

MAX SASH SIZE: 910mm X 2109mm MIN SASH SIZE: 712mm X 1866mm



Cassette: 0806  
Cut Out: 229mm X 179mm  
Glass Size: 203mm X 154mm

### Profile Dimensions:

- 72 Frame: 52mm+4mm air gap = 56mm
- 52 Threshold: 32mm+4mm air gap = 36mm
- Ali low threshold open IN = 12mm
- Ali low threshold open OUT = 12mm
- Cill = 30mm

### Width

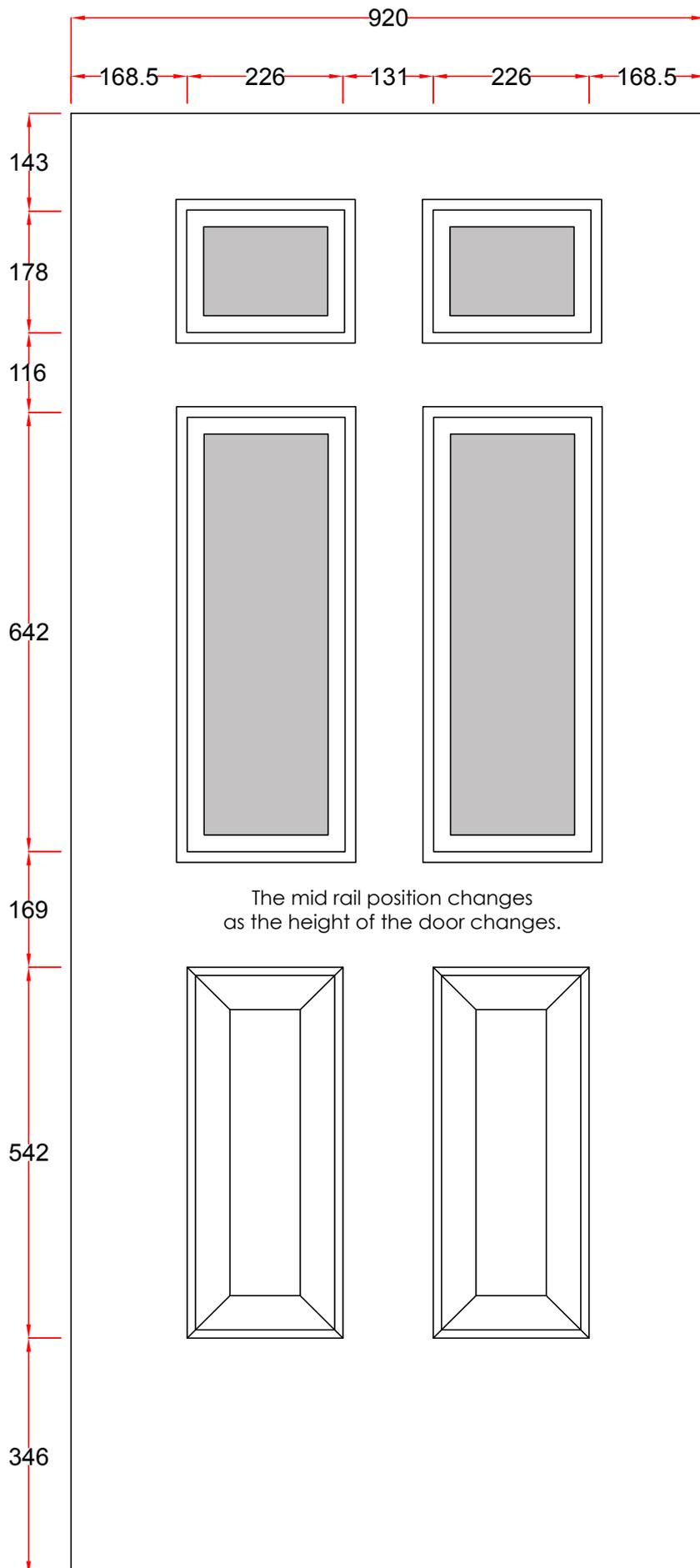
- 72 Frame
- Max = (Max sash width + 56mm + 56mm)
- Min = (Min sash width + 56mm + 56mm)

### Height

- 72 Frame low threshold open IN
- Max = (Max sash height + 56mm + 15mm)
- Min = (Min sash height + 56mm + 15mm)

# Door Blank Type : 6P

MAX SASH SIZE: 910mm X 2109mm MIN SASH SIZE: 745mm X 1866mm



Cassette: 0806  
Cut Out: 229mm X 179mm  
Glass Size: 203mm X 152mm

Cassette: 0824  
Cut Out: 229mm X 635mm  
Glass Size: 203mm X 609mm

### Profile Dimensions:

- 72 Frame:** 52mm+4mm air gap = 56mm
- 52 Threshold:** 32mm+4mm air gap = 36mm
- Ali low threshold open IN = 12mm**
- Ali low threshold open OUT = 12mm**
- Cill = 30mm**

### Width

#### 72 Frame

Max = (Max sash width + 56mm + 56mm)  
Min = (Min sash width + 56mm + 56mm)

### Height

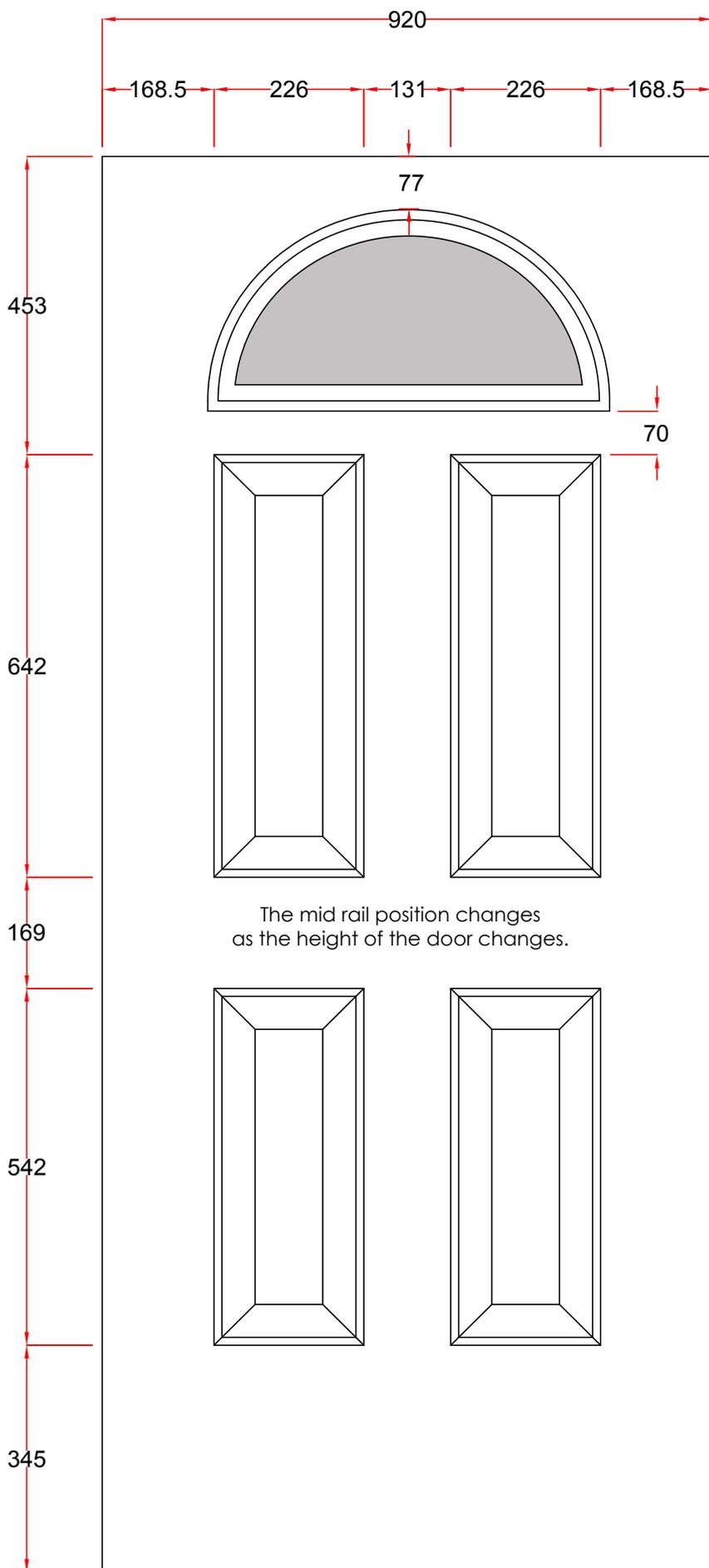
#### 72 Frame low threshold open IN

Max = (Max sash height + 56mm + 15mm)  
Min = (Min sash height + 56mm + 15mm)

# Door Blank Type : 4Pbt

Cannes 1

MAX SASH SIZE: 910mm X 2109mm MIN SASH SIZE: 712mm X 1866mm



Cassette: HR01

Cut Out: 575mm X 275mm

Glass Size: 550mm X 250mm

### Profile Dimensions:

**72 Frame:** 52mm+4mm air gap = 56mm

**52 Threshold:** 32mm+4mm air gap = 36mm

**Ali low threshold open IN = 12mm**

**Ali low threshold open OUT = 12mm**

**Cill = 30mm**

### Width

**72 Frame**

Max = (Max sash width + 56mm + 56mm)

Min = (Min sash width + 56mm + 56mm)

### Height

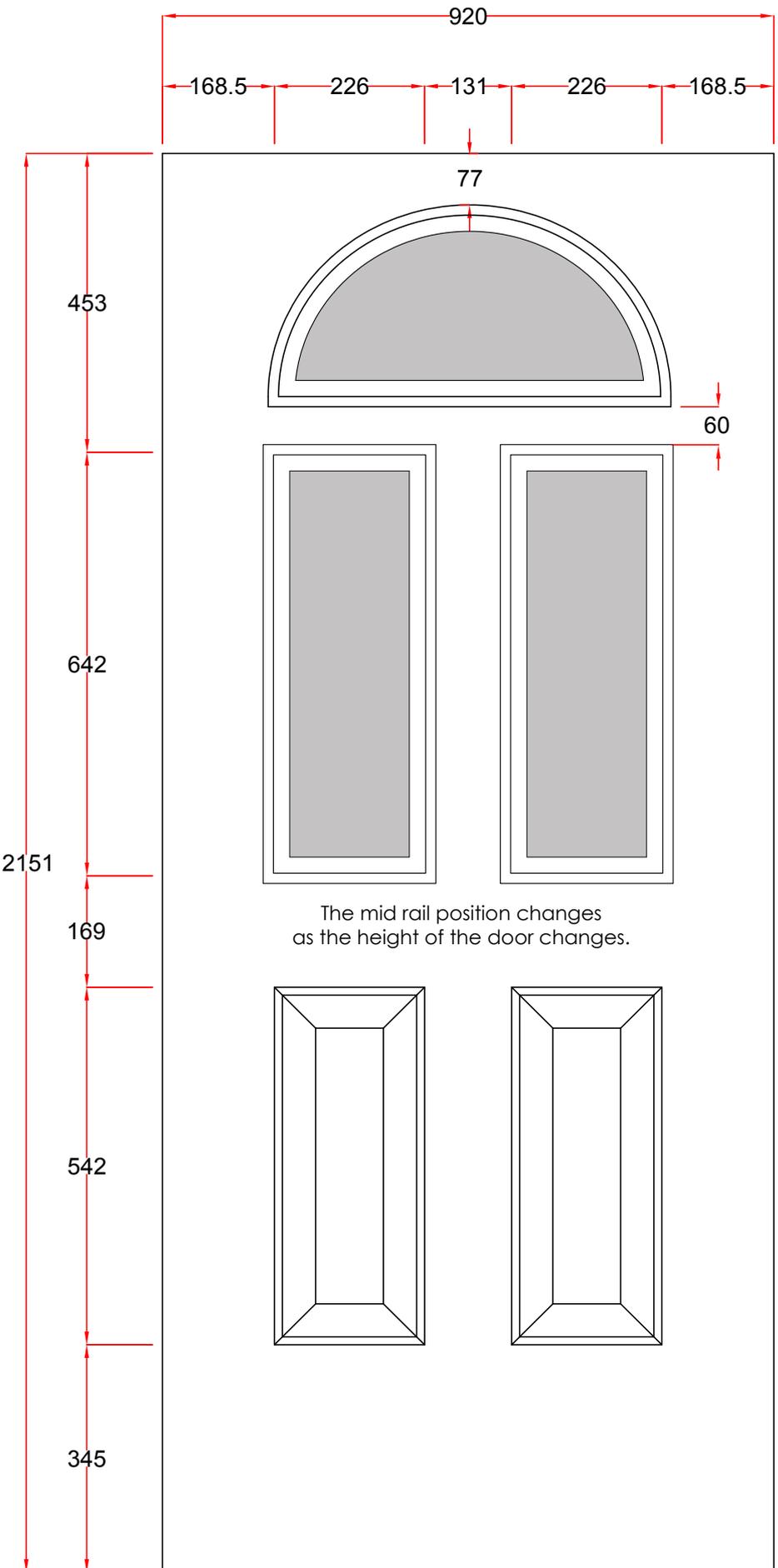
**72 Frame low threshold open IN**

Max = (Max sash height + 56mm + 15mm)

Min = (Min sash height + 56mm + 15mm)

# Door Blank Type : 4Pbt

MAX SASH SIZE: 910mm X 2109mm MIN SASH SIZE: 745mm X 1866mm



Cassette: HR01  
Cut Out: 575mm X 275mm  
Glass Size: 549mm X 250mm

Cassette: 0824  
Cut Out: 229mm X 635mm  
Glass Size: 203mm X 609mm

### Profile Dimensions:

- 72 Frame: 52mm+4mm air gap = 56mm
- 52 Threshold: 32mm+4mm air gap = 36mm
- Ali low threshold open IN = 12mm
- Ali low threshold open OUT = 12mm
- Cill = 30mm

### Width

72 Frame  
Max = (Max sash width + 56mm + 56mm)  
Min = (Min sash width + 56mm + 56mm)

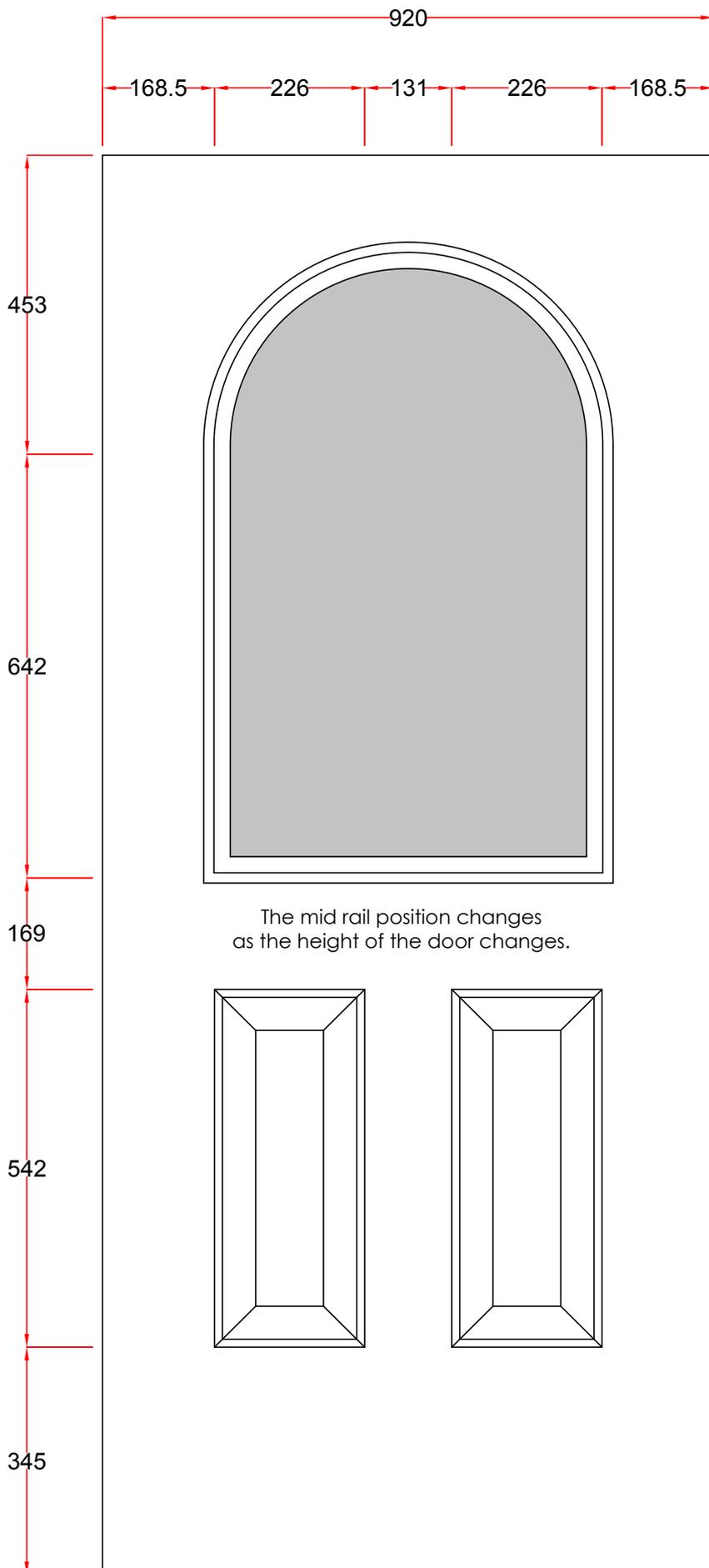
### Height

72 Frame low threshold open IN  
Max = (Max sash height + 56mm + 15mm)  
Min = (Min sash height + 56mm + 15mm)

# Door Blank Type : 4Pbt

MAX SASH SIZE: 910mm X 2109mm MIN SASH SIZE: 745mm X 1866mm

Madeira



Cassette: 2236RT  
Cut Out: 585mm X 940mm  
Glass Size: 558mm X 912mm

### Profile Dimensions:

- 72 Frame:** 52mm+4mm air gap = 56mm
- 52 Threshold:** 32mm+4mm air gap = 36mm
- Ali low threshold open IN = 12mm**
- Ali low threshold open OUT = 12mm**
- Cill = 30mm**

### Width

#### 72 Frame

Max = (Max sash width + 56mm + 56mm)  
Min = (Min sash width + 56mm + 56mm)

### Height

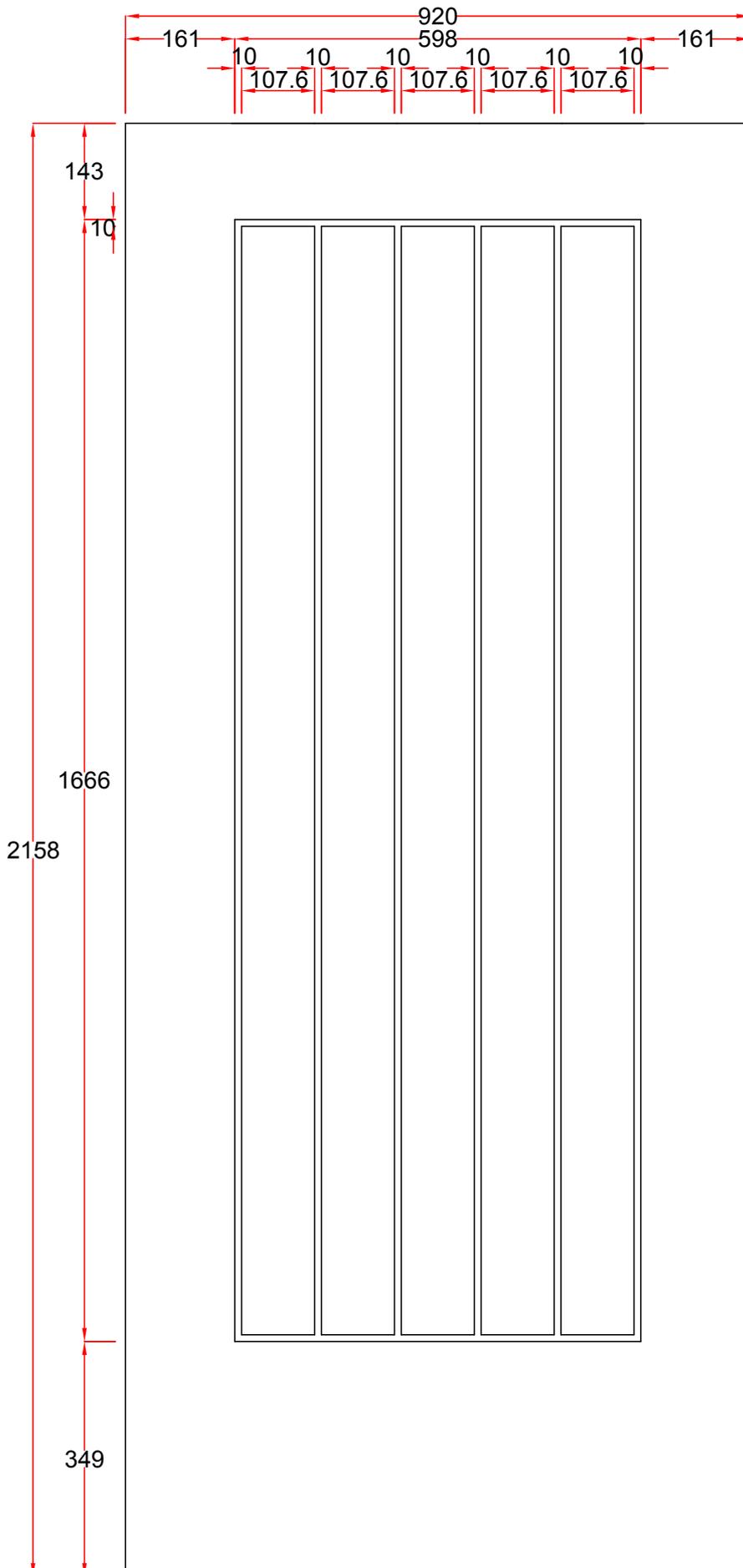
#### 72 Frame low threshold open IN

Max = (Max sash height + 56mm + 15mm)  
Min = (Min sash height + 56mm + 15mm)

# Door Blank Type :PCD

Turin

MAX SASH SIZE: 910mm X 2109mm MIN SASH SIZE: 712mm X 1866mm



### Profile Dimensions:

**72 Frame:** 52mm+4mm air gap = **56mm**

**52 Threshold:** 32mm+4mm air gap = **36mm**

**Ali low threshold open IN = 12mm**

**Ali low threshold open OUT = 12mm**

**Cill = 30mm**

### Width

**72 Frame**

Max = (Max sash width + 56mm + 56mm)

Min = (Min sash width + 56mm + 56mm)

### Height

**72 Frame low threshold open IN**

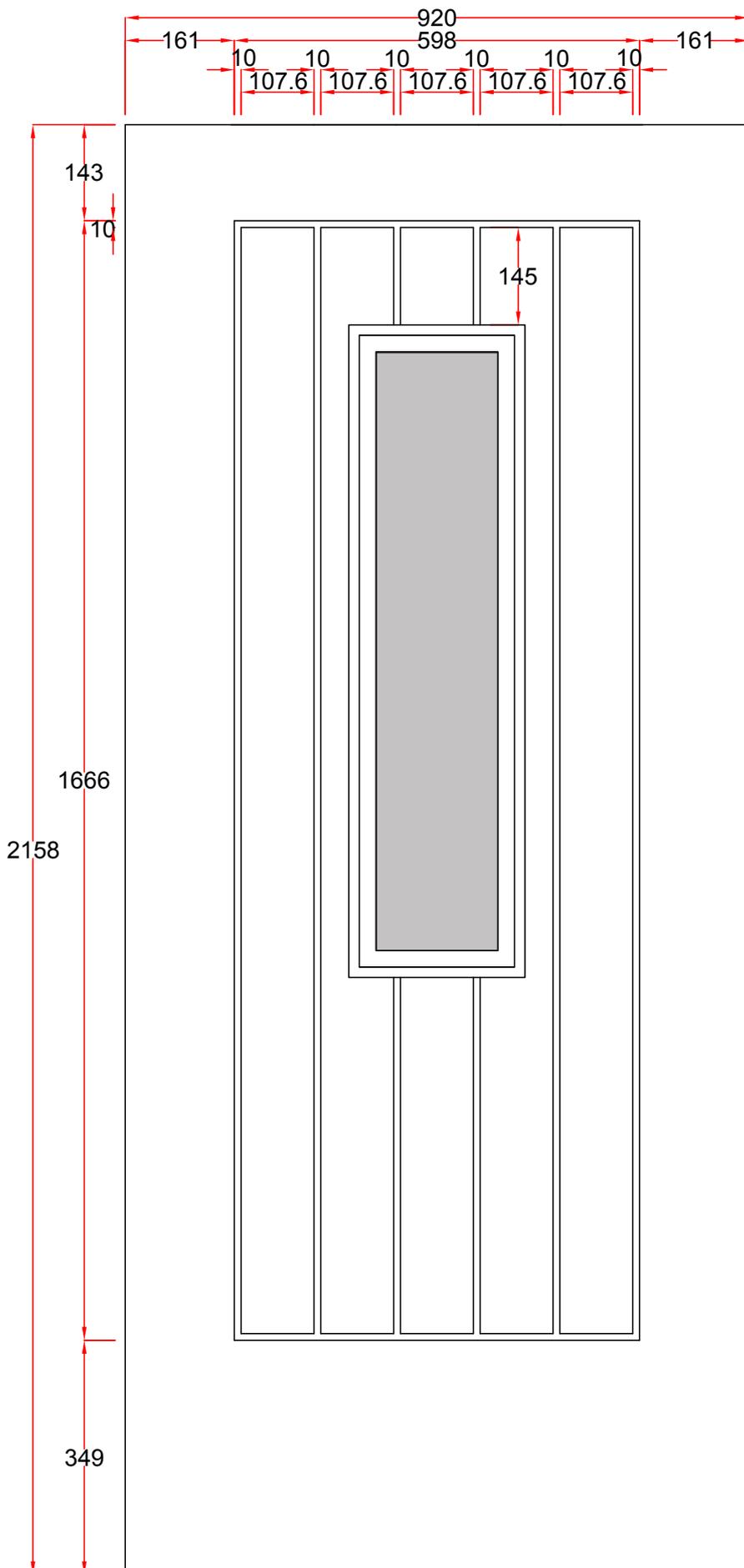
Max = (Max sash height + 56mm + 15mm)

Min = (Min sash height + 56mm + 15mm)

# Door Blank Type :PCD

Milan 912

MAX SASH SIZE: 910mm X 2109mm MIN SASH SIZE: 712mm X 1866mm



Cassette: 0836  
Cut Out: 229mm X 940mm  
Glass Size: 203mm X 912mm

### Profile Dimensions:

- 72 Frame:** 52mm+4mm air gap = 56mm
- 52 Threshold:** 32mm+4mm air gap = 36mm
- Ali low threshold open IN** = 12mm
- Ali low threshold open OUT** = 12mm
- Cill** = 30mm

### Width

- 72 Frame**
- Max = (Max sash width + 56mm + 56mm)
- Min = (Min sash width + 56mm + 56mm)

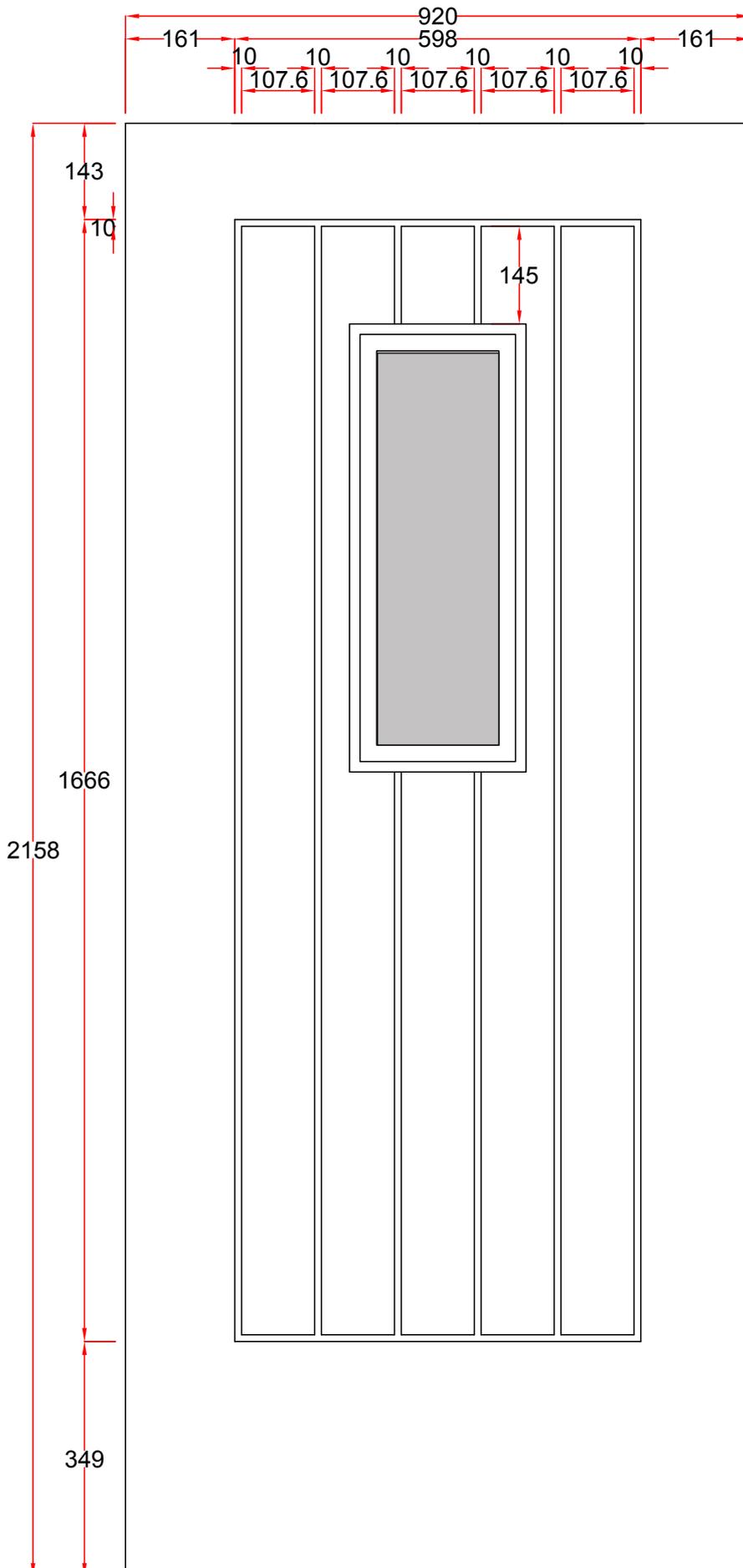
### Height

- 72 Frame low threshold open IN**
- Max = (Max sash height + 56mm + 15mm)
- Min = (Min sash height + 56mm + 15mm)

# Door Blank Type :PCD

Milan 609

MAX SASH SIZE: 910mm X 2109mm MIN SASH SIZE: 712mm X 1866mm



Cassette: 0824

Cut Out: 229mm X 635mm

Glass Size: 203mm X 609mm

### Profile Dimensions:

**72 Frame:** 52mm+4mm air gap = **56mm**

**52 Threshold:** 32mm+4mm air gap = **36mm**

**Ali low threshold open IN** = **12mm**

**Ali low threshold open OUT** = **12mm**

**Cill** = **30mm**

### Width

**72 Frame**

Max = (Max sash width + 56mm + 56mm)

Min = (Min sash width + 56mm + 56mm)

### Height

**72 Frame low threshold open IN**

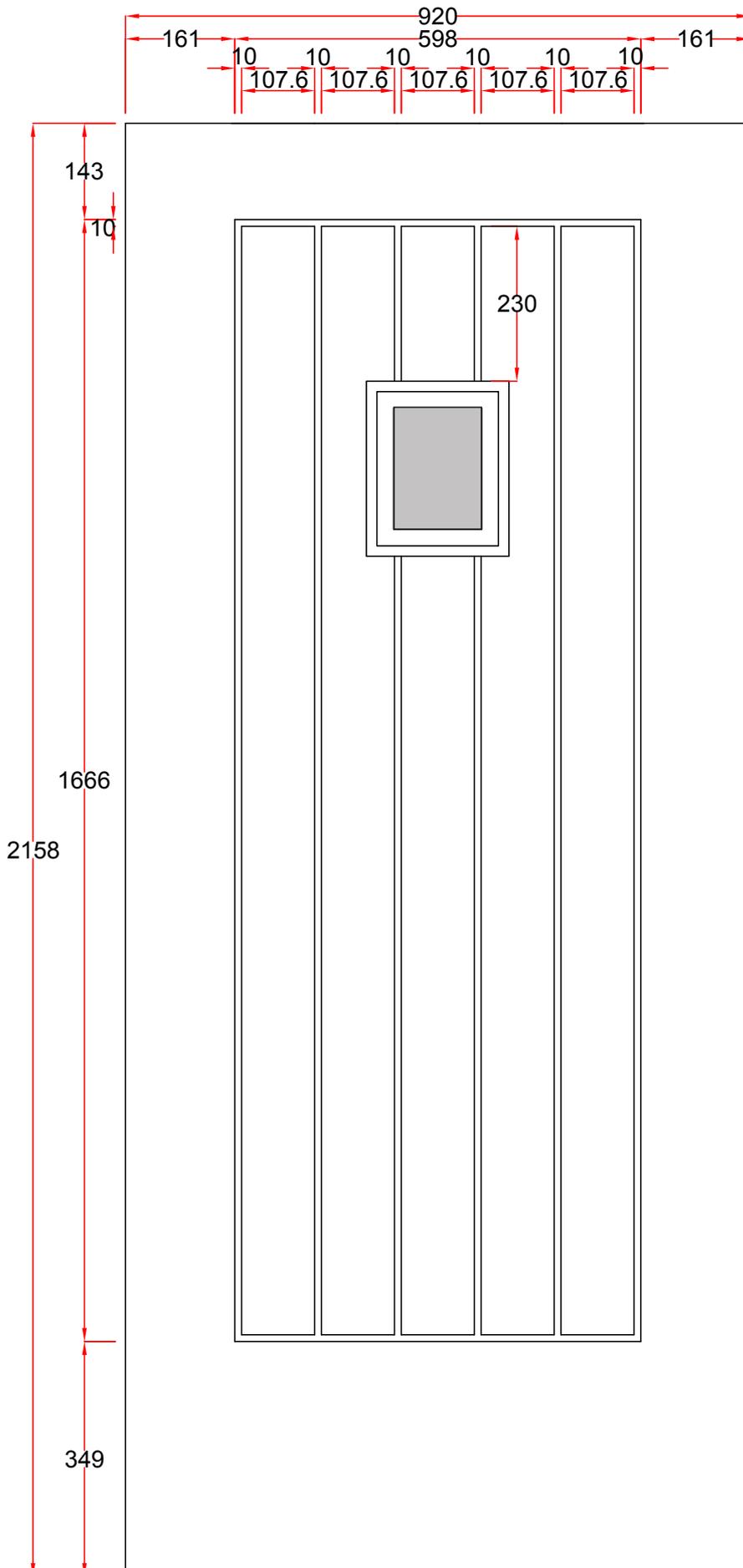
Max = (Max sash height + 56mm + 15mm)

Min = (Min sash height + 56mm + 15mm)

# Door Blank Type :PCD

Milan 203

MAX SASH SIZE: 910mm X 2109mm MIN SASH SIZE: 712mm X 1866mm



Cassette: 0806  
Cut Out: 179mm X 229mm  
Glass Size: 154mm X 203mm

### Profile Dimensions:

- 72 Frame:** 52mm+4mm air gap = **56mm**
- 52 Threshold:** 32mm+4mm air gap = **36mm**
- Ali low threshold open IN** = **12mm**
- Ali low threshold open OUT** = **12mm**
- Cill** = **30mm**

### Width

#### 72 Frame

Max = (Max sash width + 56mm + 56mm)  
Min = (Min sash width + 56mm + 56mm)

### Height

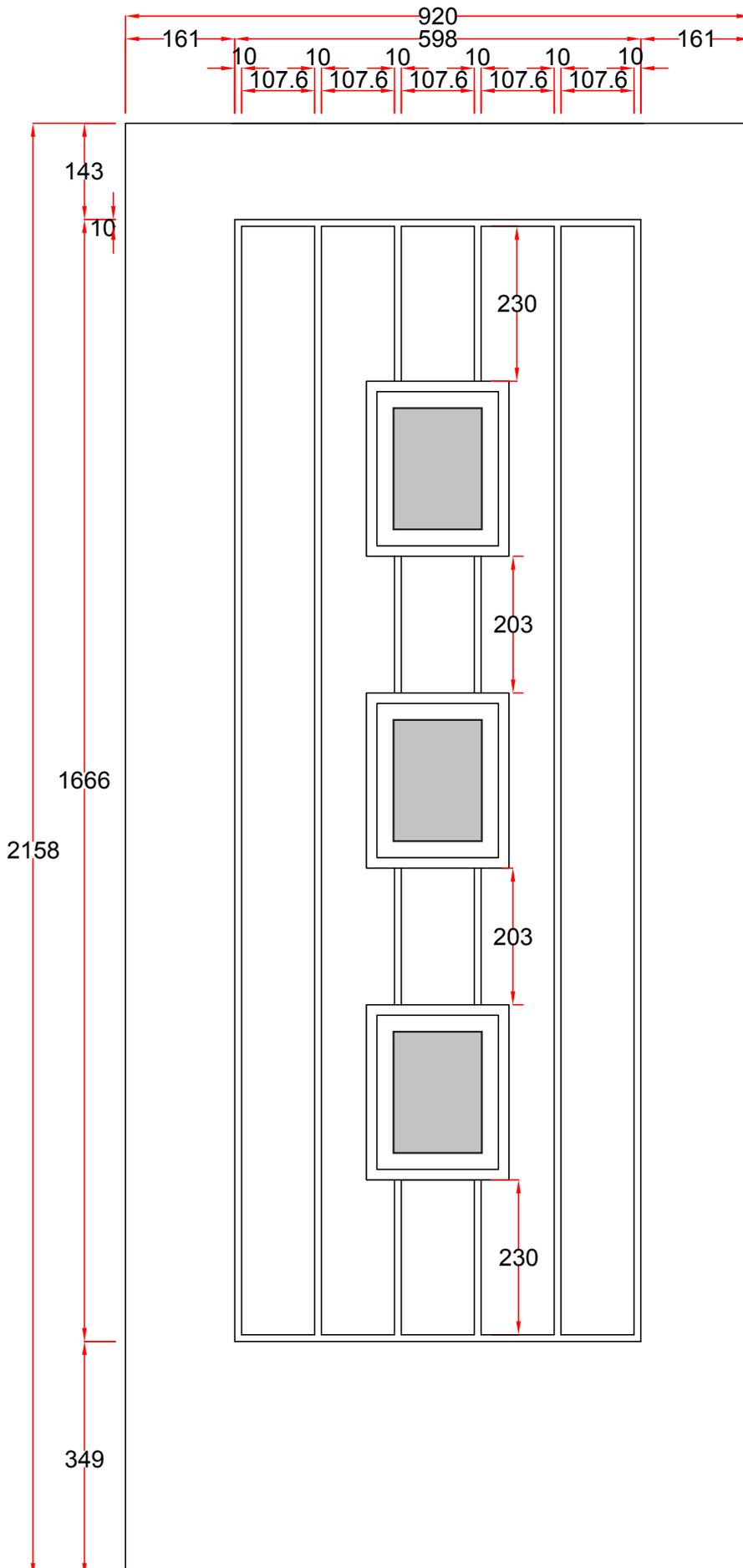
#### 72 Frame low threshold open IN

Max = (Max sash height + 56mm + 15mm)  
Min = (Min sash height + 56mm + 15mm)

# Door Blank Type :PCD

Rotterdam

MAX SASH SIZE: 910mm X 2109mm MIN SASH SIZE: 712mm X 1866mm



3 OFF  
Cassette: 0806  
Cut Out: 179mm X 229mm  
Glass Size: 154mm X 203mm

### Profile Dimensions:

**72 Frame:** 52mm+4mm air gap = 56mm  
**52 Threshold:** 32mm+4mm air gap = 36mm  
**Ali low threshold open IN** = 12mm  
**Ali low threshold open OUT** = 12mm  
**Cill** = 30mm

### Width

#### 72 Frame

Max = (Max sash width + 56mm + 56mm)  
Min = (Min sash width + 56mm + 56mm)

### Height

#### 72 Frame low threshold open IN

Max = (Max sash height + 56mm + 15mm)  
Min = (Min sash height + 56mm + 15mm)

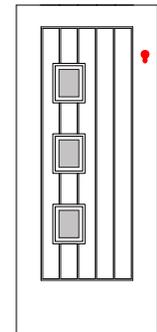
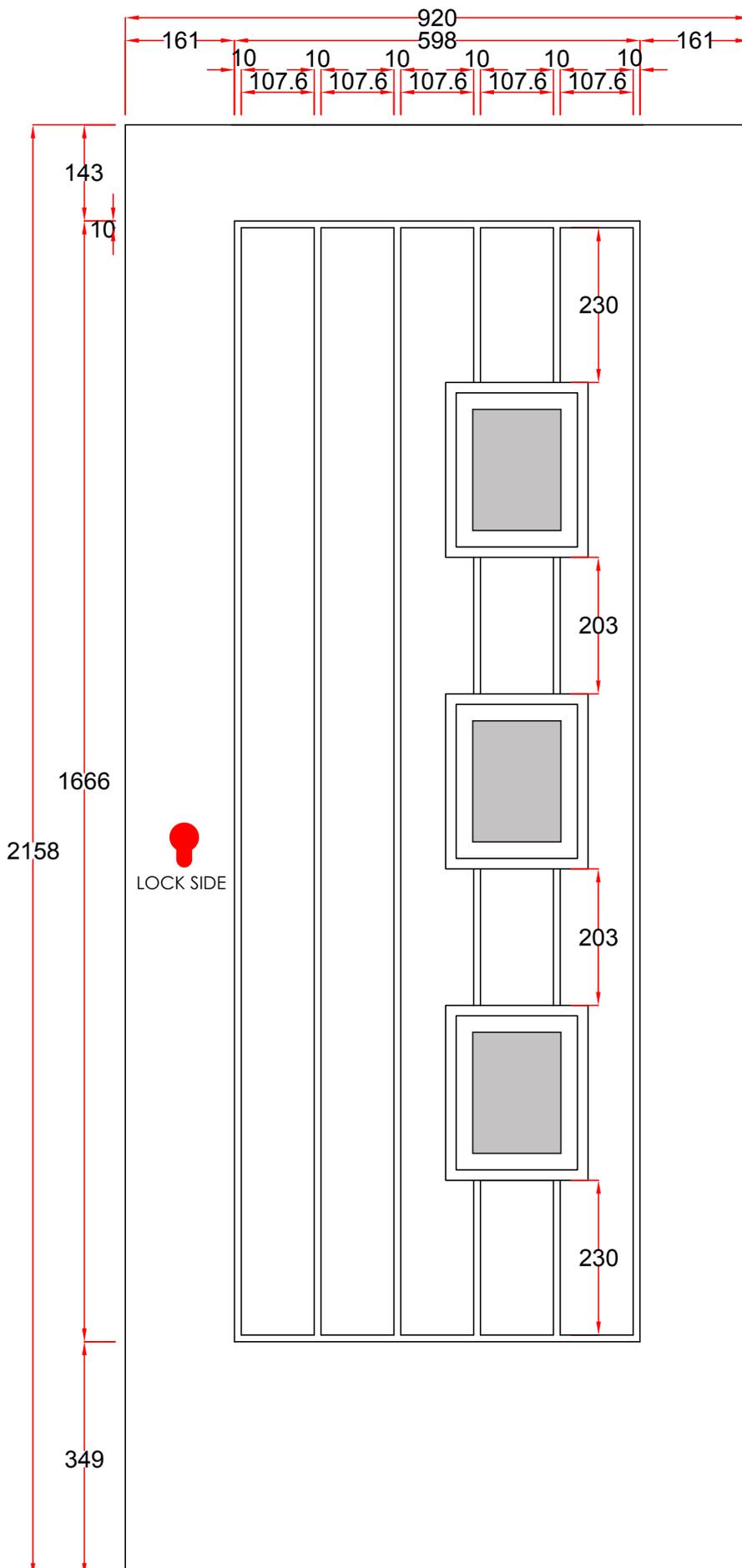
# Door Blank Type :PCD

MAX SASH SIZE: 910mm X 2109mm MIN SASH SIZE: 712mm X 1866mm

Rotterdam RIGHT

Opposite handing

Rotterdam LEFT



3 OFF  
 Cassette: 0806  
 Cut Out: 179mm X 229mm  
 Glass Size: 154mm X 203mm

**Profile Dimensions:**

- 72 Frame:** 52mm+4mm air gap = 56mm
- 52 Threshold:** 32mm+4mm air gap = 36mm
- Ali low threshold open IN = 12mm**
- Ali low threshold open OUT = 12mm**
- Cill = 30mm**

**Width**

**72 Frame**  
 Max = (Max sash width + 56mm + 56mm)  
 Min = (Min sash width + 56mm + 56mm)

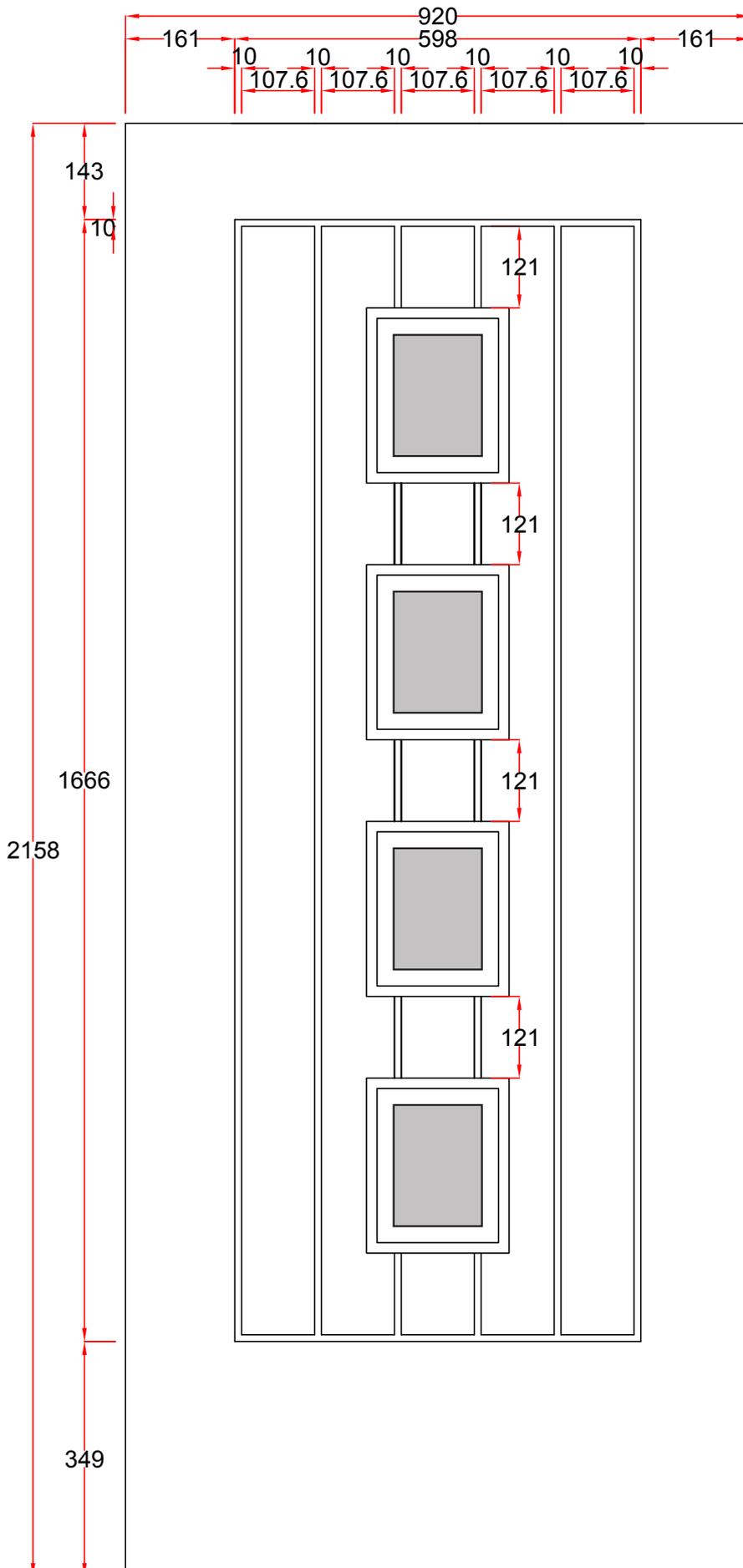
**Height**

**72 Frame low threshold open IN**  
 Max = (Max sash height + 56mm + 15mm)  
 Min = (Min sash height + 56mm + 15mm)

# Door Blank Type :PCD

Amsterdam

MAX SASH SIZE: 910mm X 2109mm MIN SASH SIZE: 712mm X 1866mm



4 OFF  
Cassette: 0806  
Cut Out: 179mm X 229mm  
Glass Size: 154mm X 203mm

### Profile Dimensions:

**72 Frame:** 52mm+4mm air gap = **56mm**  
**52 Threshold:** 32mm+4mm air gap = **36mm**  
**Ali low threshold open IN = 12mm**  
**Ali low threshold open OUT = 12mm**  
**Cill = 30mm**

### Width

#### 72 Frame

Max = (Max sash width + 56mm + 56mm)  
Min = (Min sash width + 56mm + 56mm)

### Height

#### 72 Frame low threshold open IN

Max = (Max sash height + 56mm + 15mm)  
Min = (Min sash height + 56mm + 15mm)

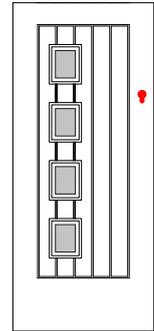
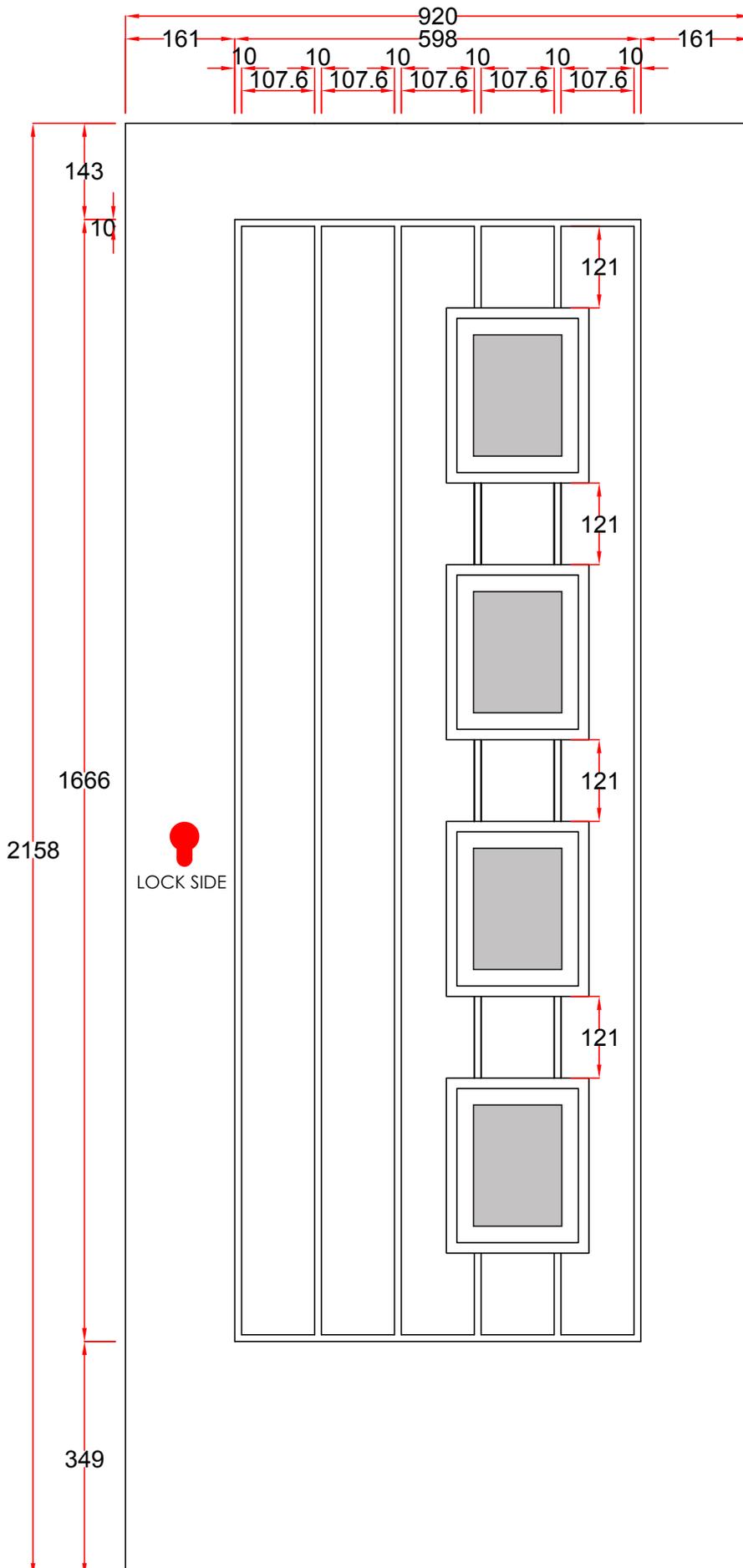
# Door Blank Type :PCD

MAX SASH SIZE: 910mm X 2109mm MIN SASH SIZE: 712mm X 1866mm

Amsterdam RIGHT

Opposite handing

Amsterdam LEFT



4 OFF

Cassette: 0806

Cut Out: 179mm X 229mm

Glass Size: 154mm X 203mm

### Profile Dimensions:

**72 Frame:** 52mm+4mm air gap = 56mm

**52 Threshold:** 32mm+4mm air gap = 36mm

**Ali low threshold open IN = 12mm**

**Ali low threshold open OUT = 12mm**

**Cill = 30mm**

### Width

**72 Frame**

Max = (Max sash width + 56mm + 56mm)

Min = (Min sash width + 56mm + 56mm)

### Height

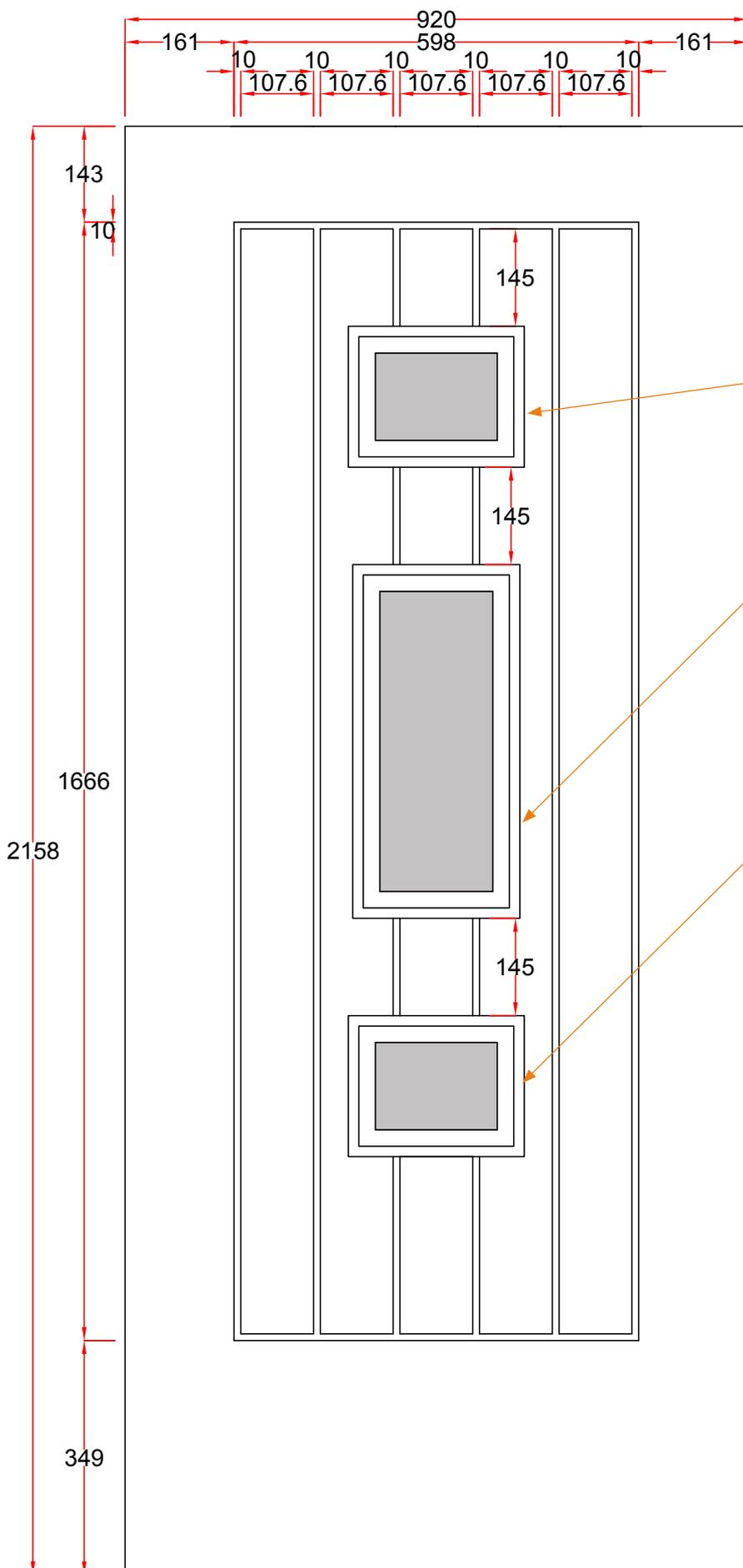
**72 Frame low threshold open IN**

Max = (Max sash height + 56mm + 15mm)

Min = (Min sash height + 56mm + 15mm)

# Door Blank Type :PCD

MAX SASH SIZE: 910mm X 2109mm MIN SASH SIZE: 712mm X 1866mm



Cassette: 0806  
 Cut Out: 229mm X 179mm  
 Glass Size: 203mm X 154mm

Cassette: 0824  
 Cut Out: 229mm X 635mm  
 Glass Size: 203mm X 606mm

Cassette: 0806  
 Cut Out: 229mm X 179mm  
 Glass Size: 203mm X 154mm

**Profile Dimensions:**  
**72 Frame:** 52mm+4mm air gap = **56mm**  
**52 Threshold:** 32mm+4mm air gap = **36mm**  
**Ali low threshold open IN = 12mm**  
**Ali low threshold open OUT = 12mm**  
**Cill = 30mm**

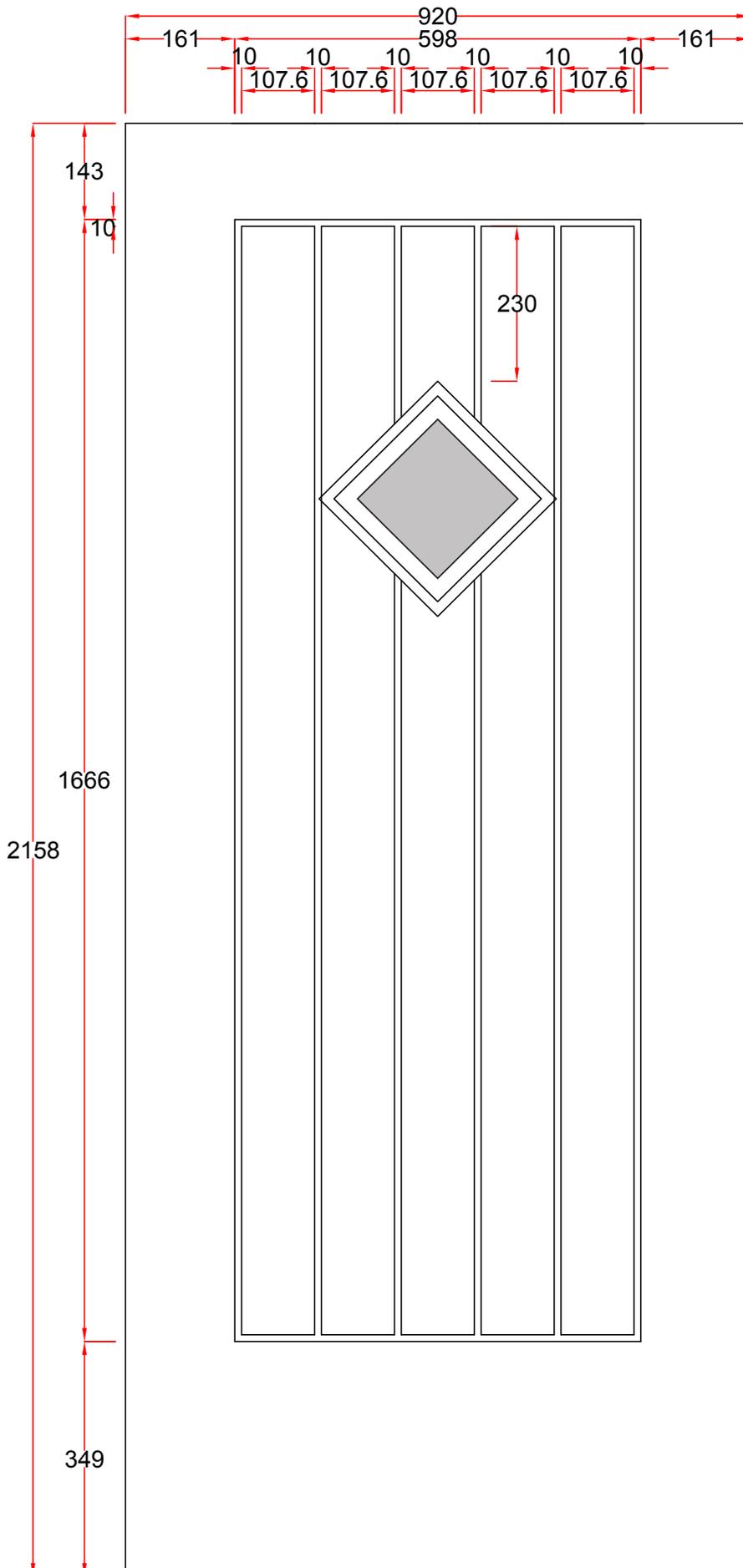
**Width**  
**72 Frame**  
 Max = (Max sash width + 56mm + 56mm)  
 Min = (Min sash width + 56mm + 56mm)

**Height**  
**72 Frame low threshold open IN**  
 Max = (Max sash height + 56mm + 15mm)  
 Min = (Min sash height + 56mm + 15mm)

# Door Blank Type :PCD

Oslo

MAX SASH SIZE: 910mm X 2109mm MIN SASH SIZE: 712mm X 1866mm



Cassette: 0707  
Cut Out: 216mm X 216mm  
Glass Size: 190mm X 190mm

### Profile Dimensions:

- 72 Frame:** 52mm+4mm air gap = **56mm**
- 52 Threshold:** 32mm+4mm air gap = **36mm**
- Ali low threshold open IN** = **12mm**
- Ali low threshold open OUT** = **12mm**
- Cill** = **30mm**

### Width

#### 72 Frame

Max = (Max sash width + 56mm + 56mm)  
Min = (Min sash width + 56mm + 56mm)

### Height

#### 72 Frame low threshold open IN

Max = (Max sash height + 56mm + 15mm)  
Min = (Min sash height + 56mm + 15mm)

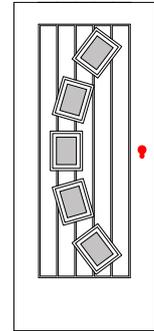
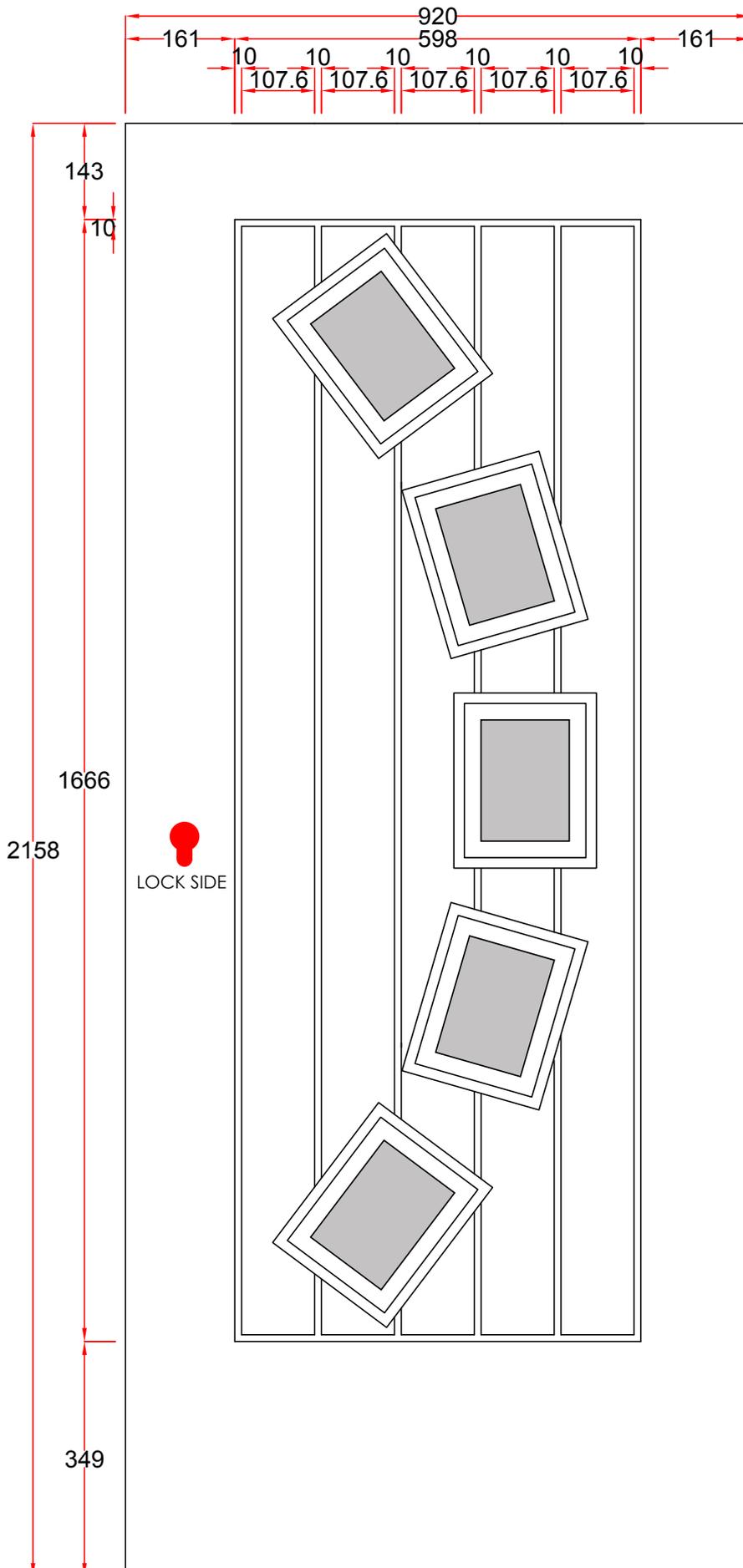
# Door Blank Type :PCD

MAX SASH SIZE: 910mm X 2109mm MIN SASH SIZE: 712mm X 1866mm

Porto RIGHT

Opposite handing

Porto LEFT



5 OFF

Cassette: 0806

Cut Out: 154mm X 203mm

Glass Size: 179mm X 229mm

### Profile Dimensions:

**72 Frame:** 52mm+4mm air gap = 56mm

**52 Threshold:** 32mm+4mm air gap = 36mm

**Ali low threshold open IN = 12mm**

**Ali low threshold open OUT = 12mm**

**Cill = 30mm**

### Width

**72 Frame**

Max = (Max sash width + 56mm + 56mm)

Min = (Min sash width + 56mm + 56mm)

### Height

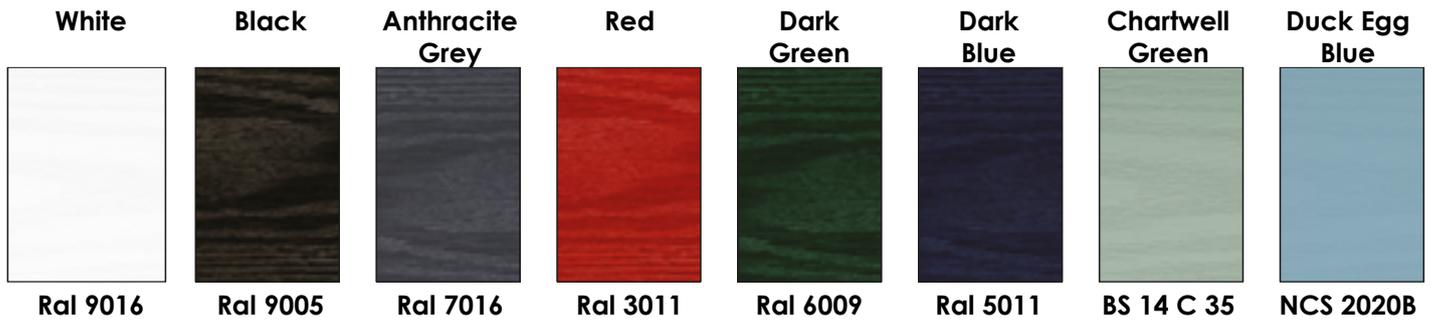
**72 Frame low threshold open IN**

Max = (Max sash height + 56mm + 15mm)

Min = (Min sash height + 56mm + 15mm)

## Colours

### Door and Frame Colours



### Door Colour Options

EXTERNAL	INTERNAL
White	White
Black	White
Grey	White
Red	White
Green	White
Blue	White
Chartwell Green	White
Duck Egg Blue	White

### Frame Colour Options

EXTERNAL	INTERNAL
White	White
Grey	White

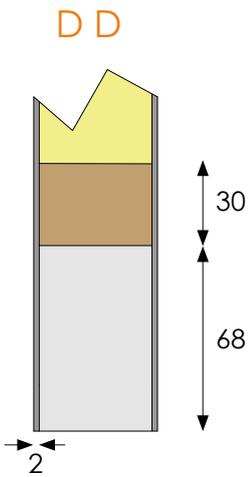
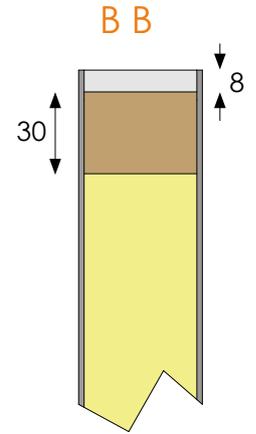
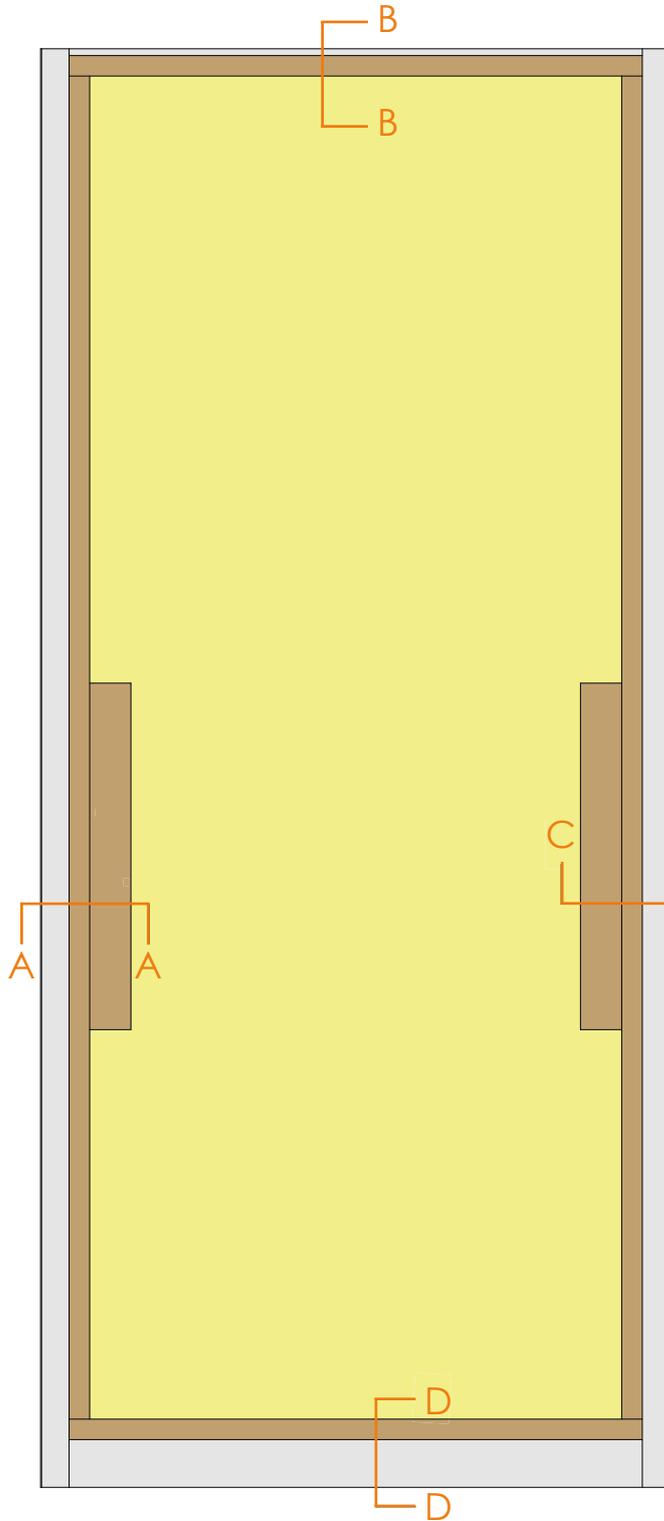
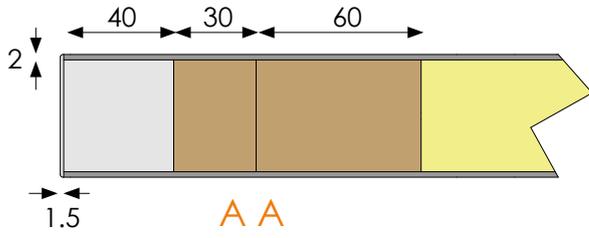
### Furniture Matrix

Orange box shows availability.

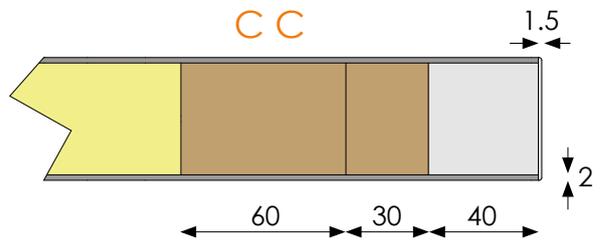
	CHROME	GRAPHITE	GOLD	BLACK	WHITE	STAINLESS	BRASS	NICKEL
LETTER PLATE	Orange	Orange	Orange	Orange	Orange			
TS008 LETTER PLATE	Orange	Orange	Orange	Orange	Orange			
LEVER HANDLE	Orange	Orange	Orange	Orange	Orange			
PAD HANDLE	Orange	Orange	Orange	Orange	Orange			
NUMERALS	Orange	Orange	Orange	Orange				
KNOCKERS	Orange	Orange	Orange	Orange				
KNOBS	Orange	Orange	Orange	Orange				
SPY HOLE	Orange			Orange			Orange	
ESCUTCHEON						Orange		
BAR HANDLE						Orange		
STANDARD HINGE	Orange	Orange	Orange					
OPTIONAL HINGE	Orange	Orange	Orange					
1 STAR CYLINDER								Orange
3 STAR CYLINDER								Orange



# Internal Construction

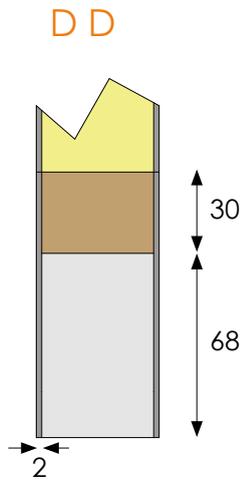
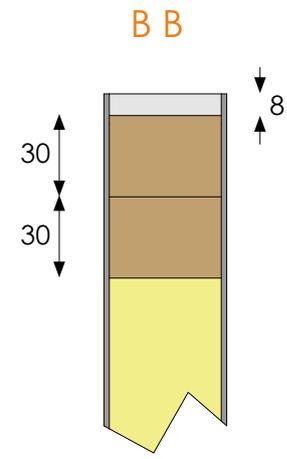
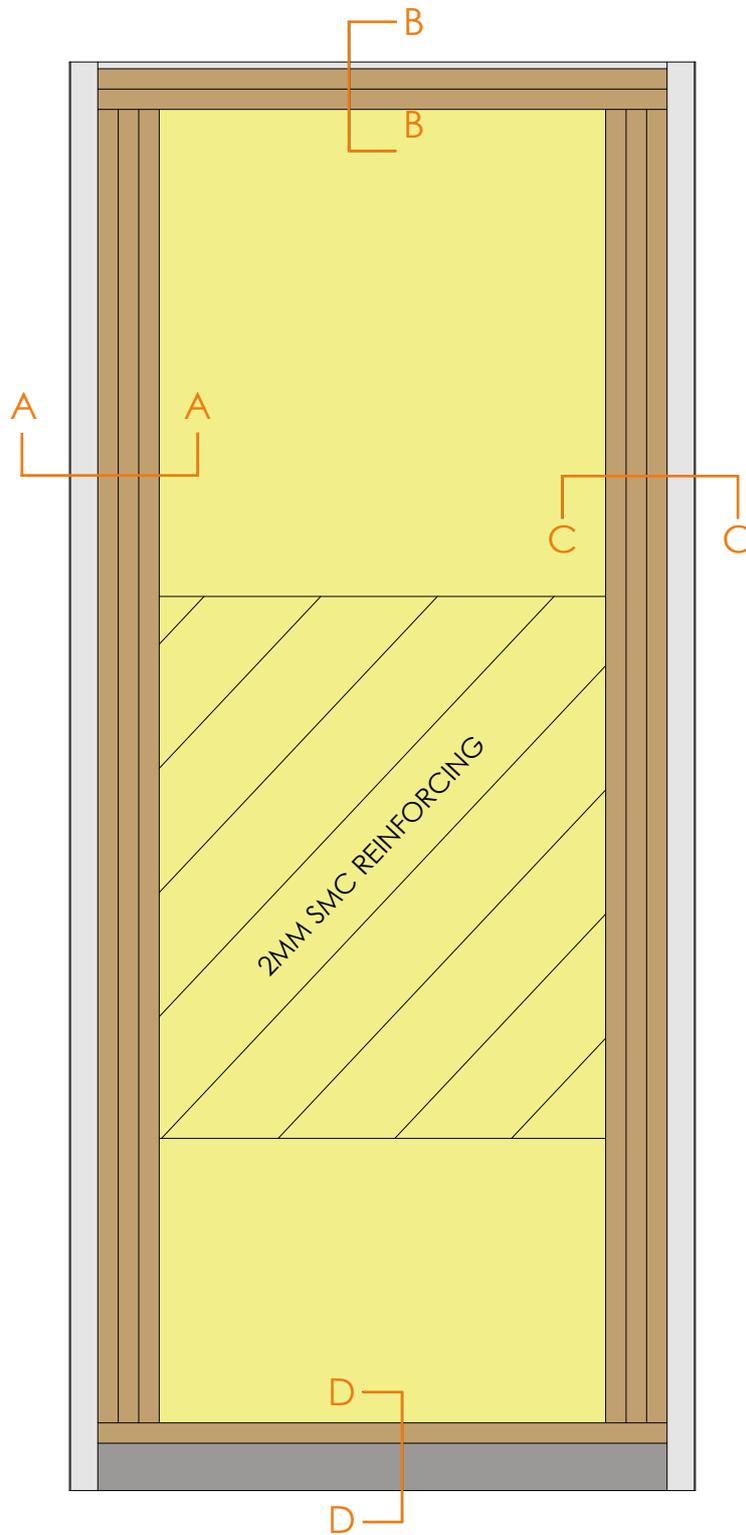
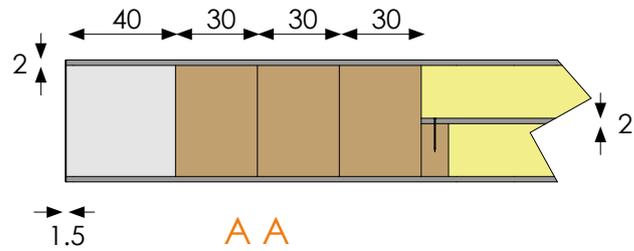


- Polyurethane Foam
- L.V.L (laminated veneer lumber)
- PVC
- S.M.C (Sheet moulding Compound)

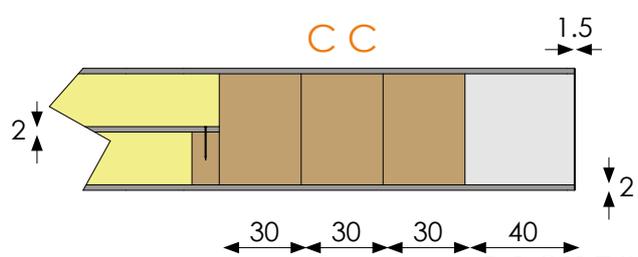




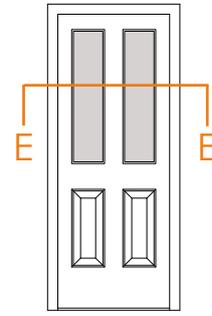
# Internal Construction



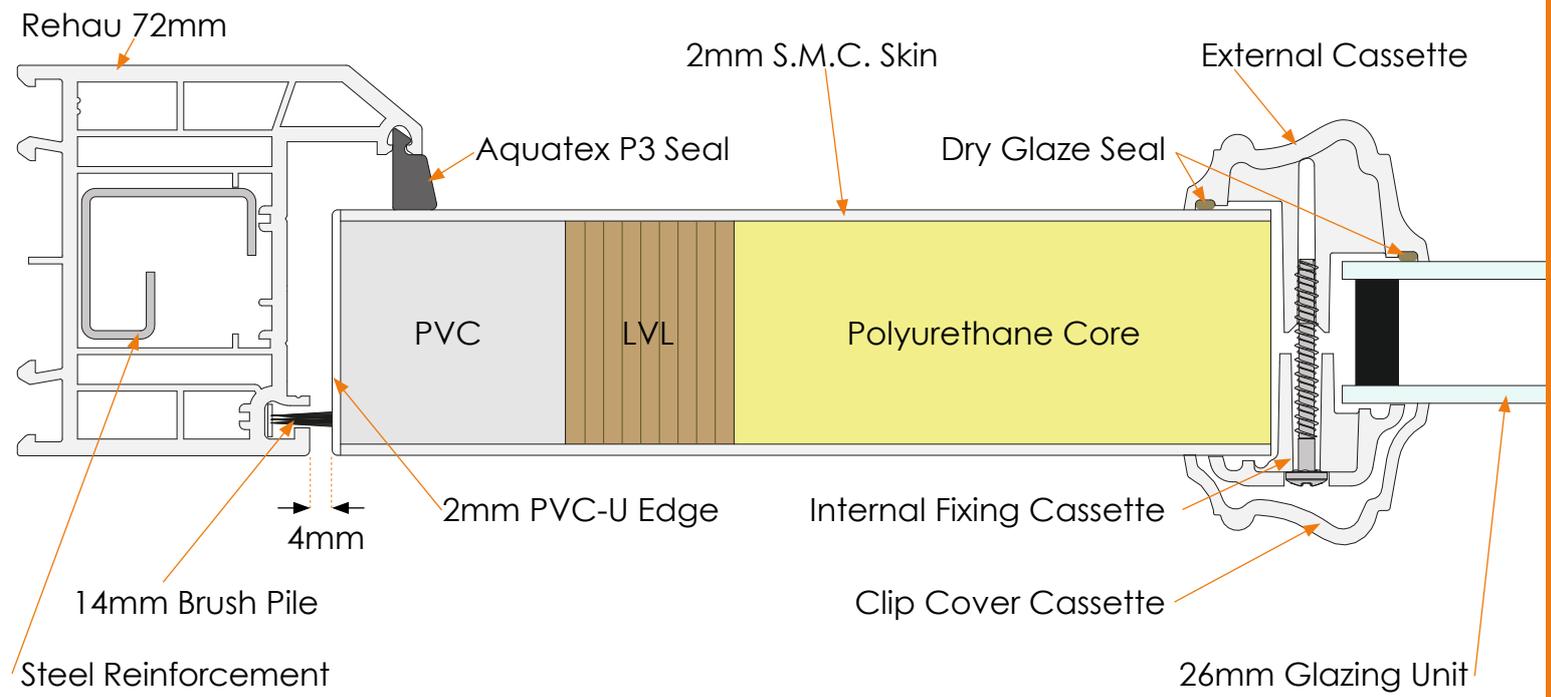
- Polyurethane Foam
- L.V.L (laminated veneer lumber)
- PVC
- S.M.C (Sheet moulding Compound)



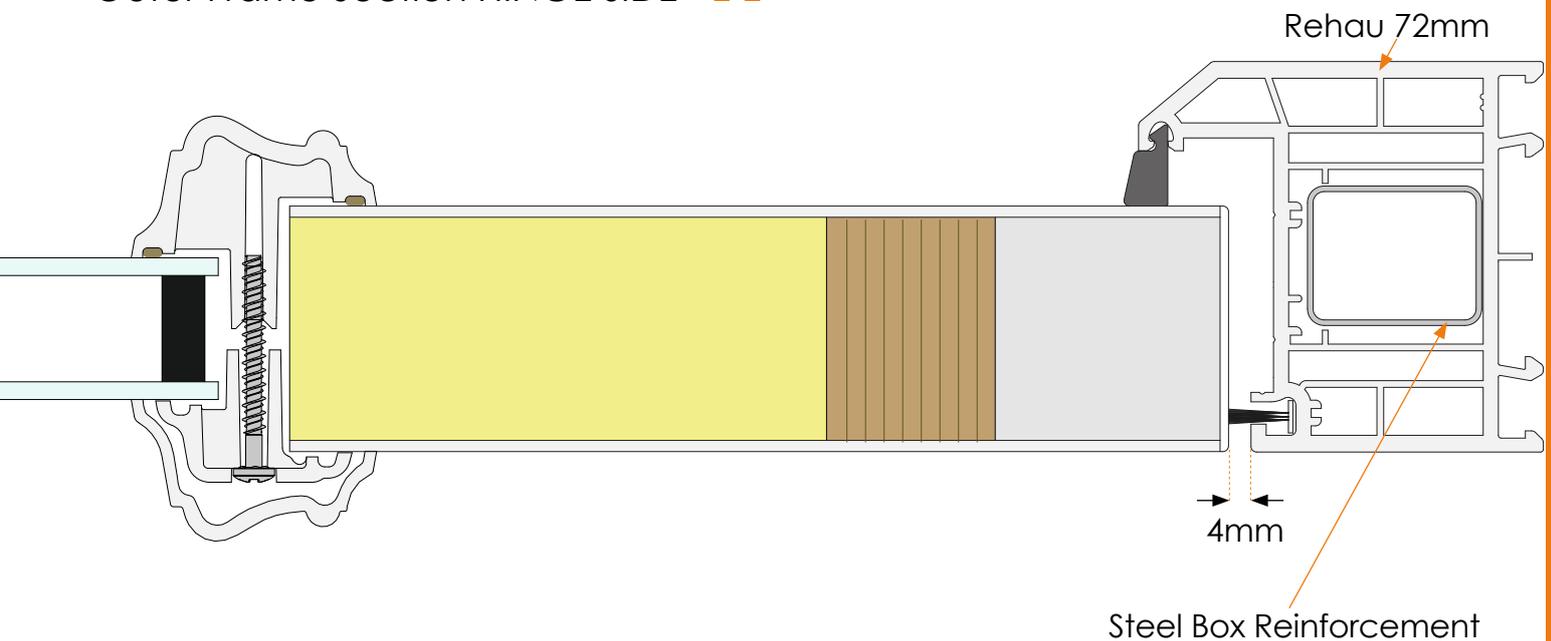
# Outer Frame Construction Sections



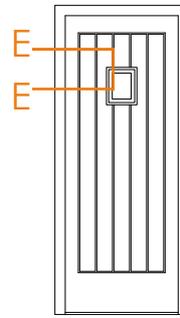
Outer Frame Section KEEP SIDE - E E



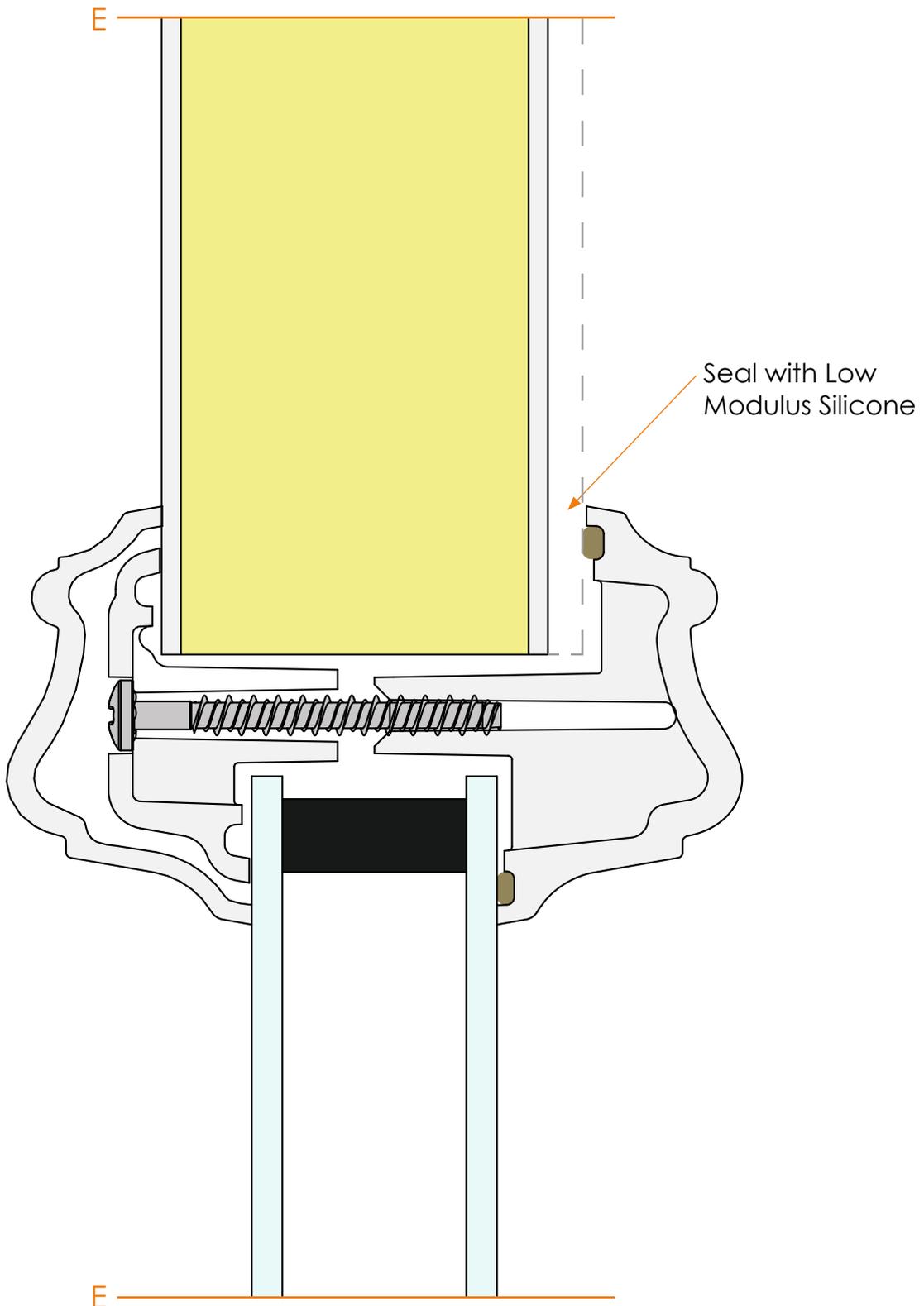
Outer Frame Section HINGE SIDE - E E



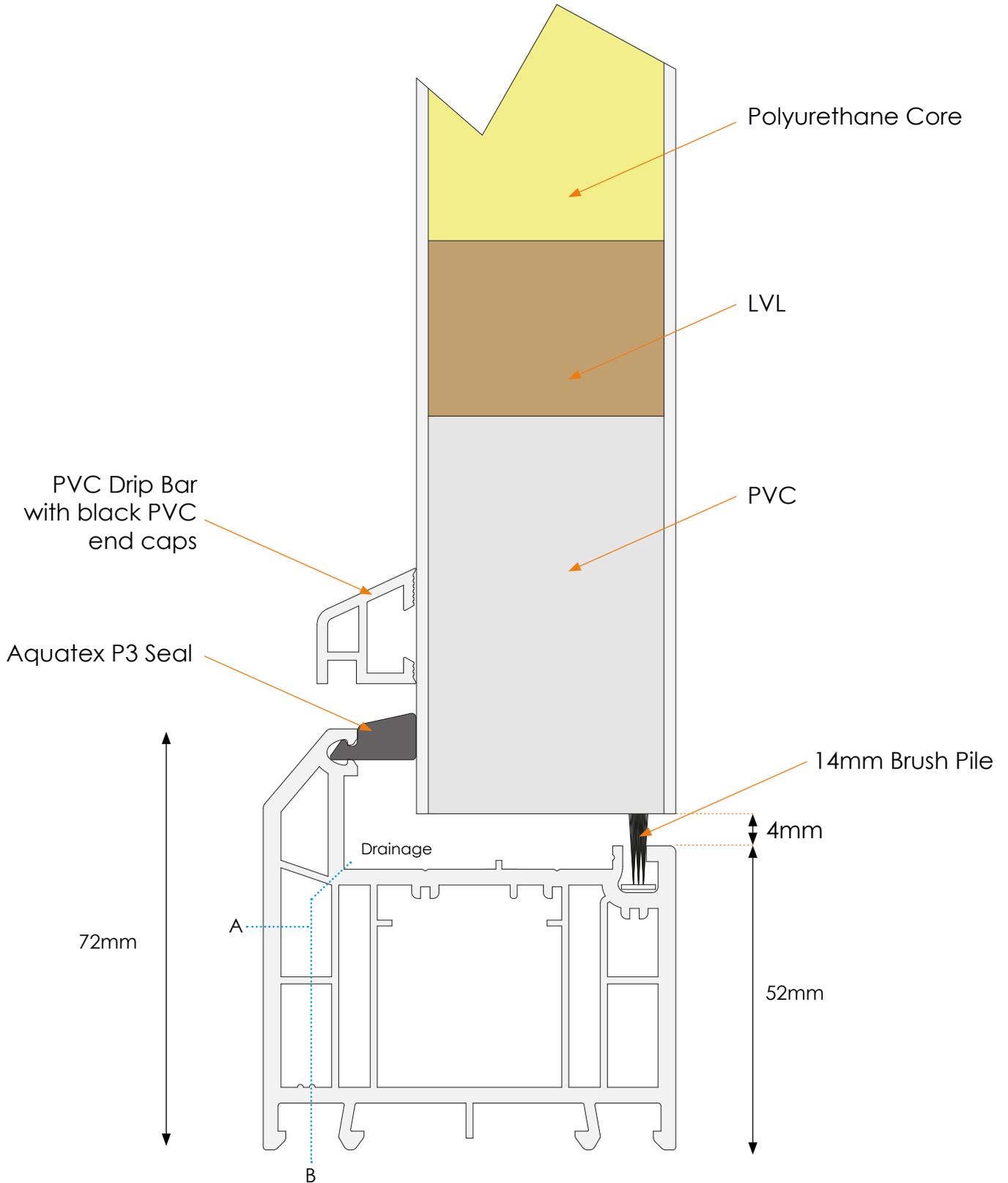
# Construction Section Glazing



Cassette Section in line with the moulding detail



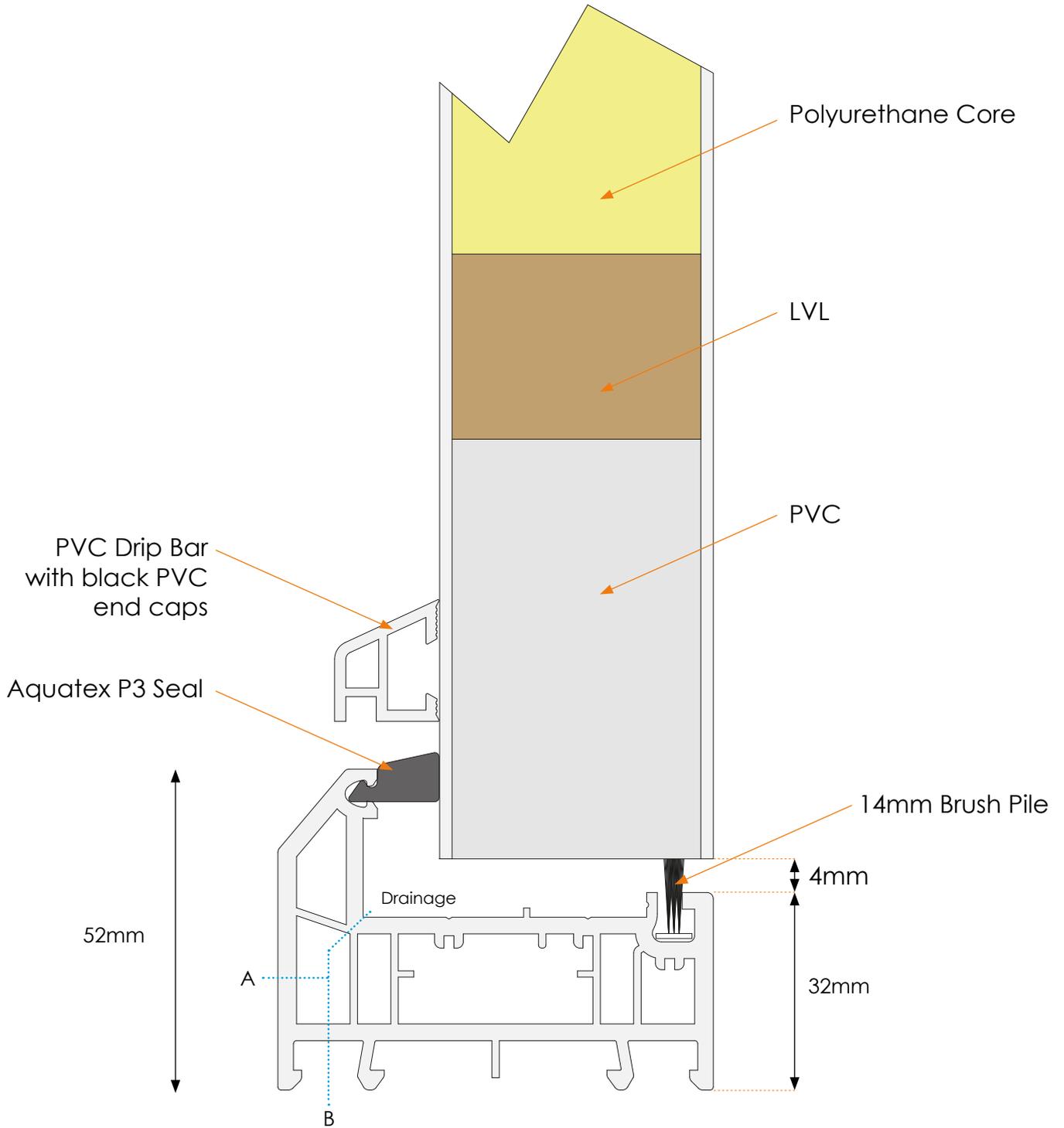
# Full PVC-U Threshold



A= Face Drainage  
(Slots 5mm x 35mm)

B= Concealed Drainage

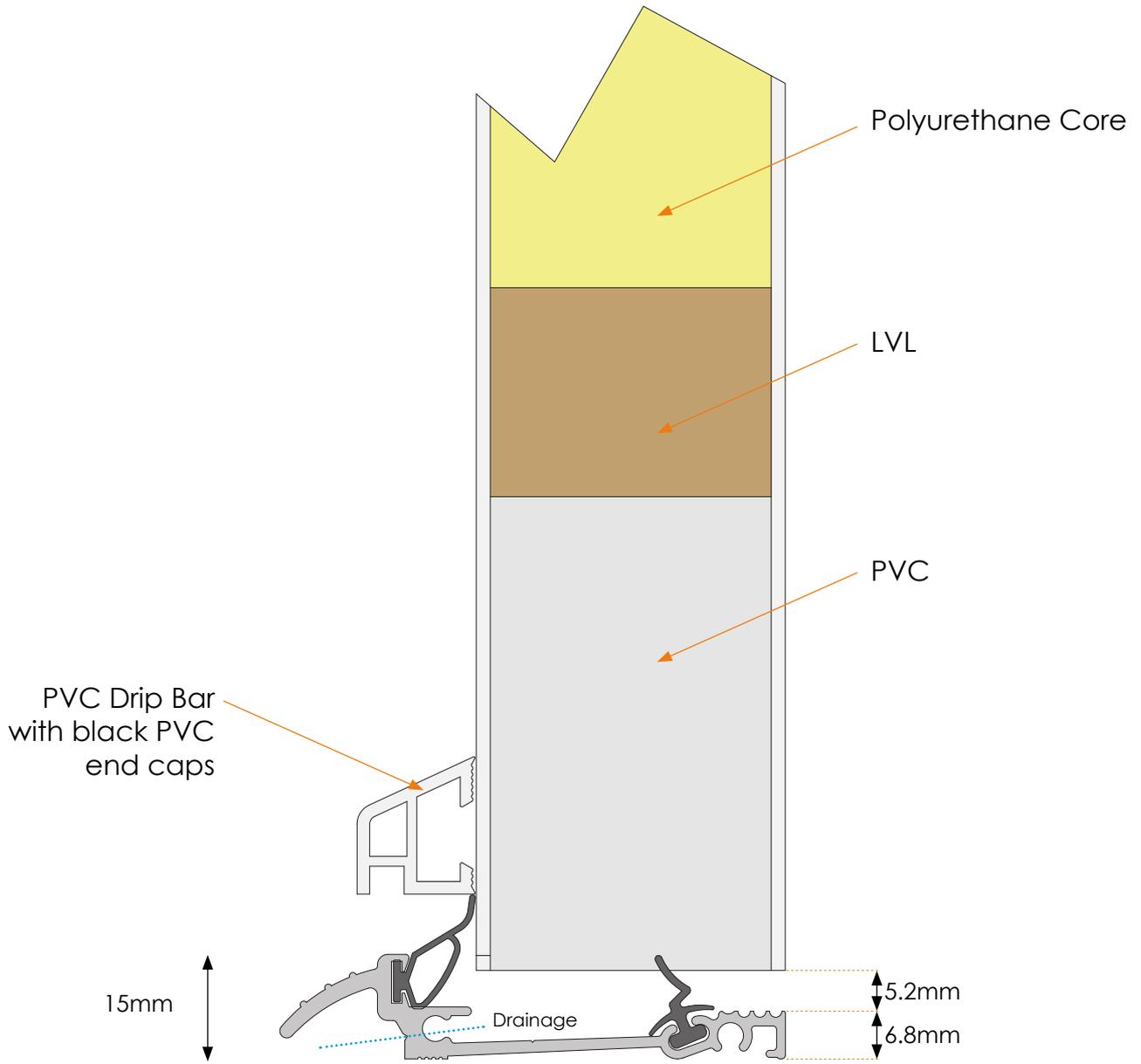
# Slim PVC-U Threshold



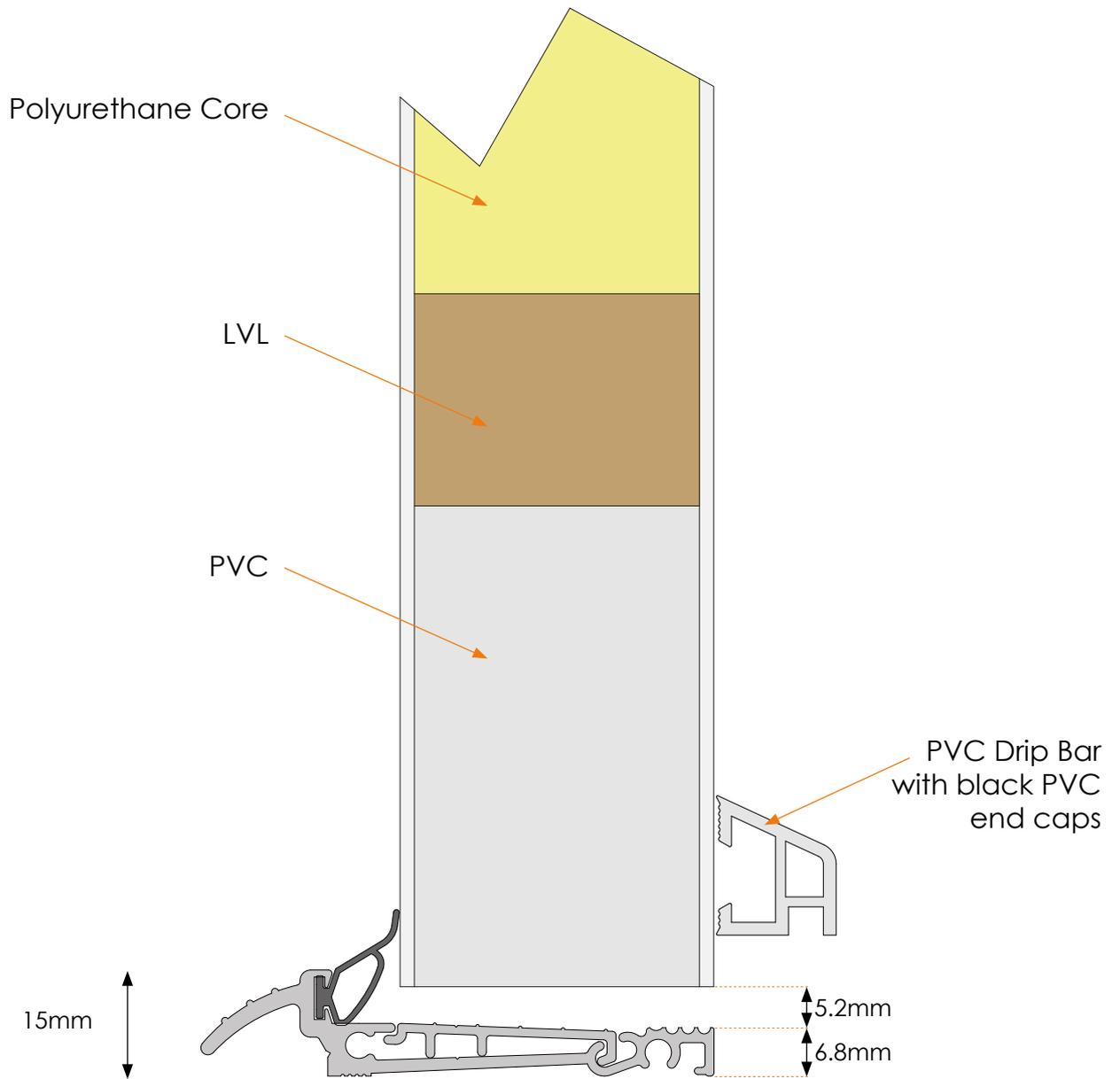
A= Face Drainage  
(Slots 5mm x 35mm)

B= Concealed Drainage

# Open IN Aluminium Threshold



# Open OUT Aluminium Threshold

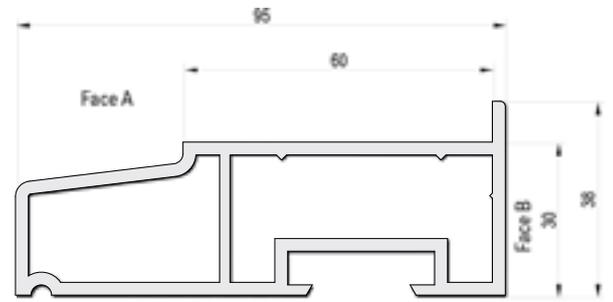


## Cill Details

### 95mm Cill

Art.546360

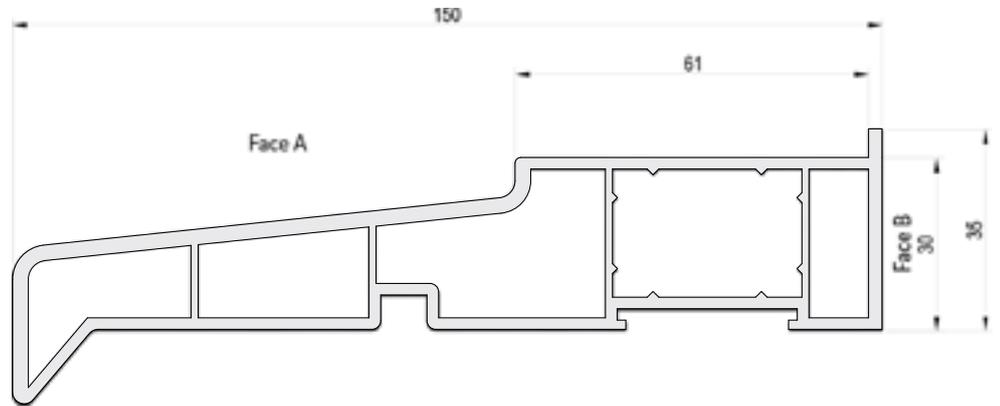
Reinforcement 50 x 15



### 150mm Cill

Art.246330

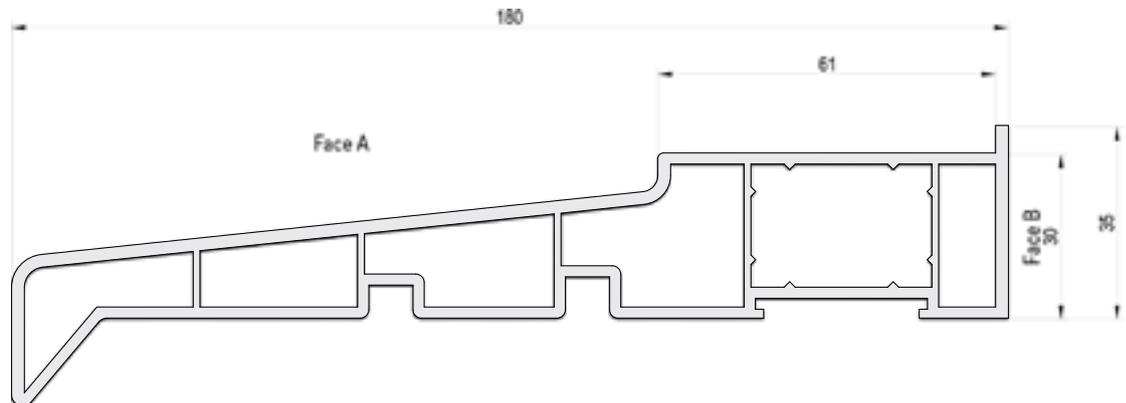
Reinforcement 30 x 20



### 180mm Cill

Art.246340

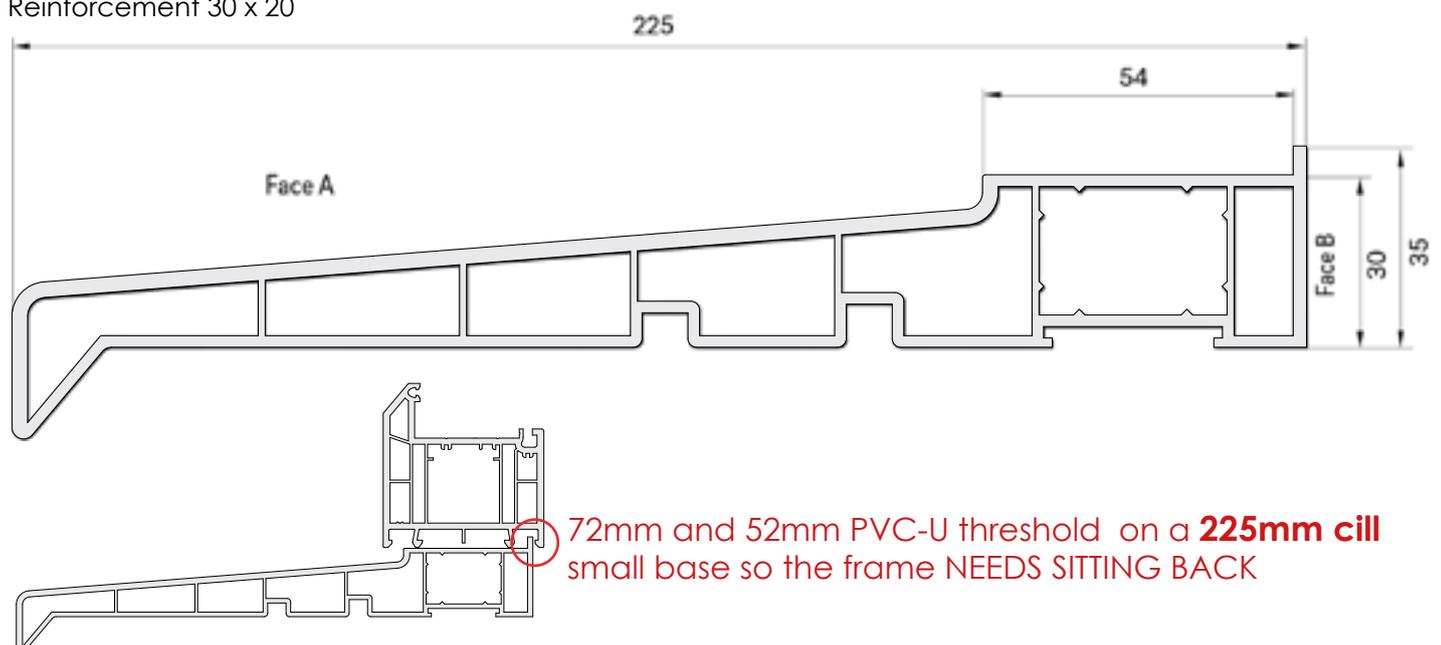
Reinforcement 30 x 20



### 225mm Cill

Art.503940

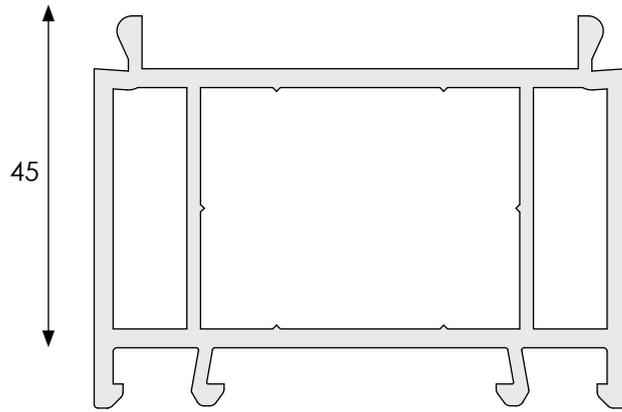
Reinforcement 30 x 20



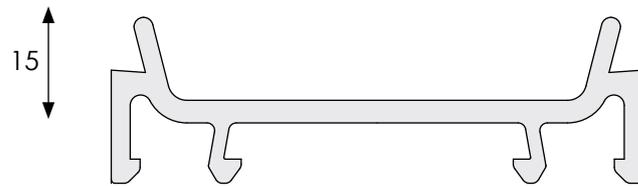
Face A & Face B used to identify foiled face

## Add On / Frame Extension

### 45mm Add On / Frame Extension

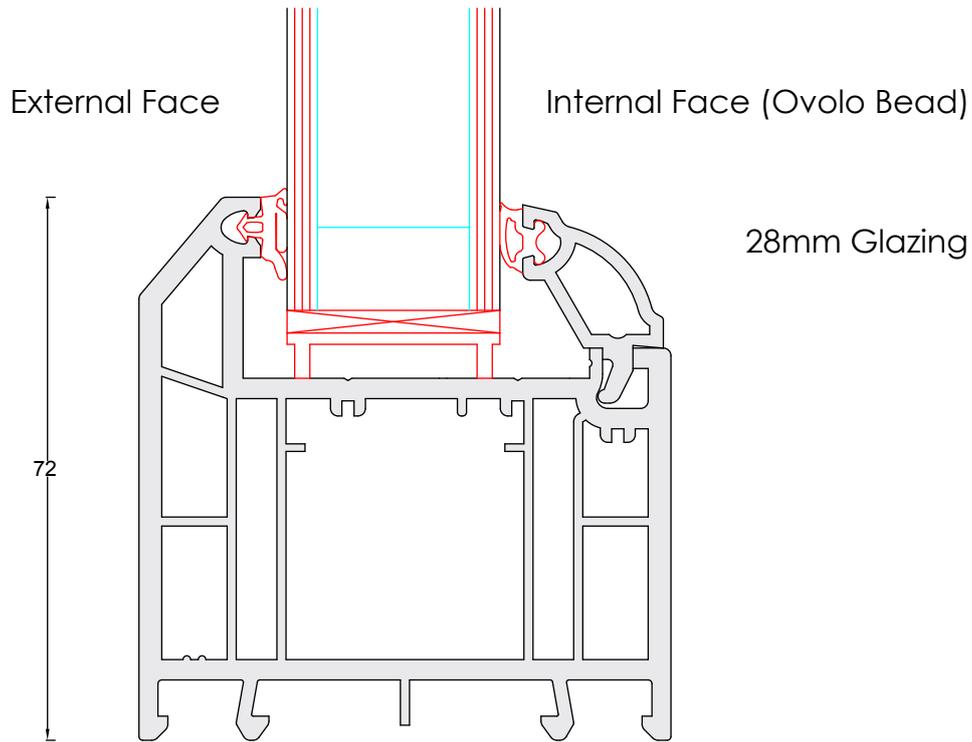


### 15mm Add On / Frame Extension

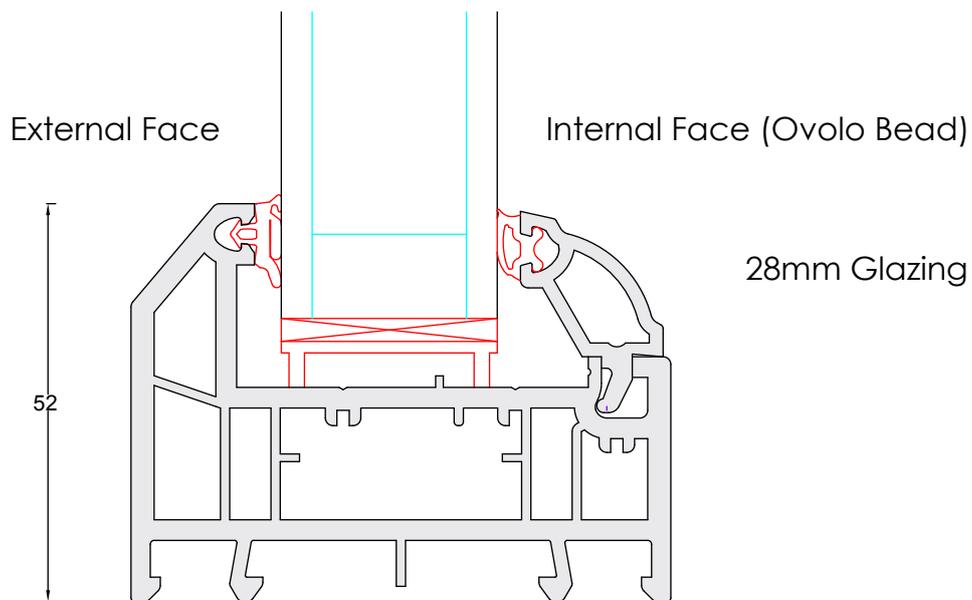


## Side Frame Details

### 72mm Side Frame



### 52mm Side Frame



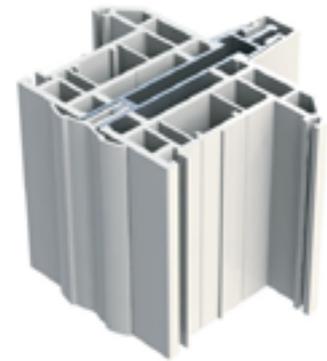
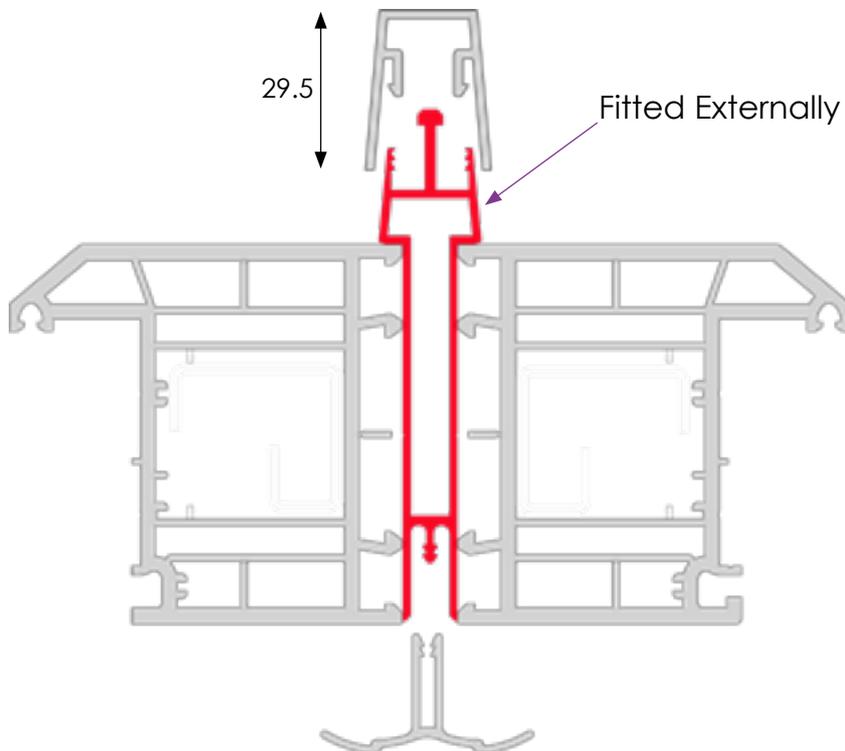
Not used as a door outer frame only used as a low PVCu threshold

## Coupling Bar Detail

### Heavy Weight Coupler (10mm wide)

#### Protruding

Recommended for the higher exposure category. The coupler protrudes this makes it the strongest design of all couplers offered.

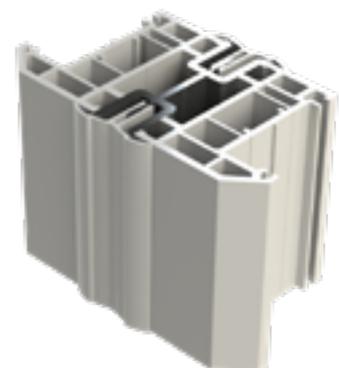
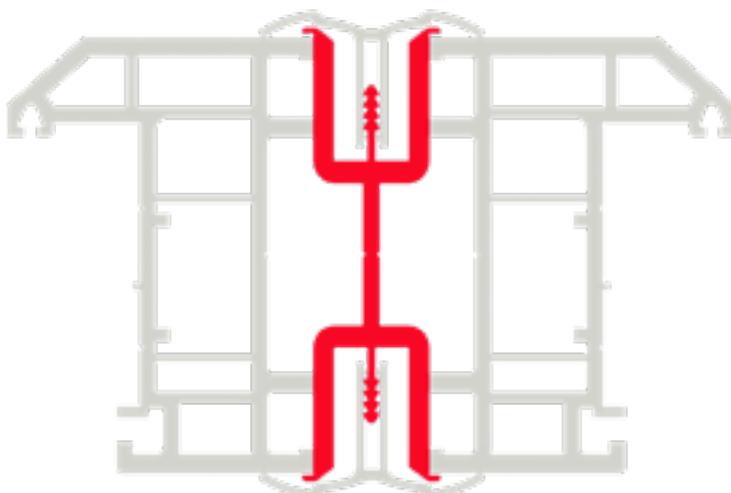


CODE	WWL153
IXX (cm)	27.95
IYY (cm)	0.79
DEDUCTION	5mm Per Frame

### Medium Weight Coupler (20mm wide)

#### Flush Fitting

Recommended where a higher exposure category or larger side frames is requested and the couplers remain Flush to the door frame



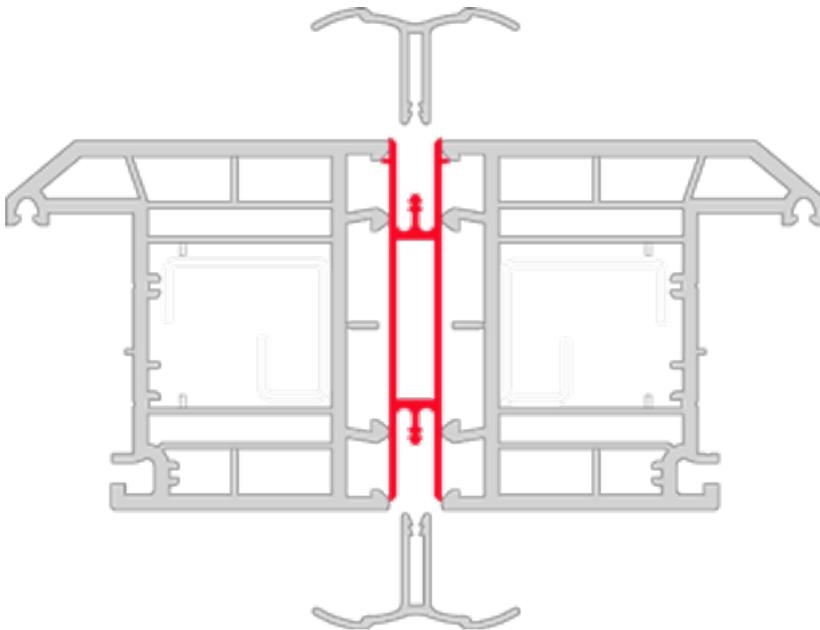
CODE	WWL106
IXX (cm)	24.5
IYY (cm)	2.4
DEDUCTION	10mm Per Frame

## Coupling Bar Detail

**Light Weight Coupler** (10mm wide)

**Flush Fitting**

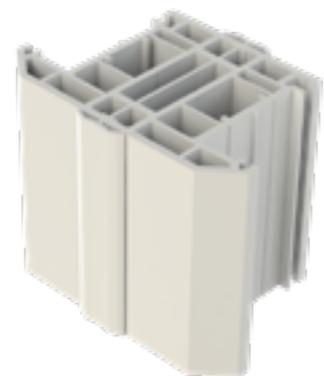
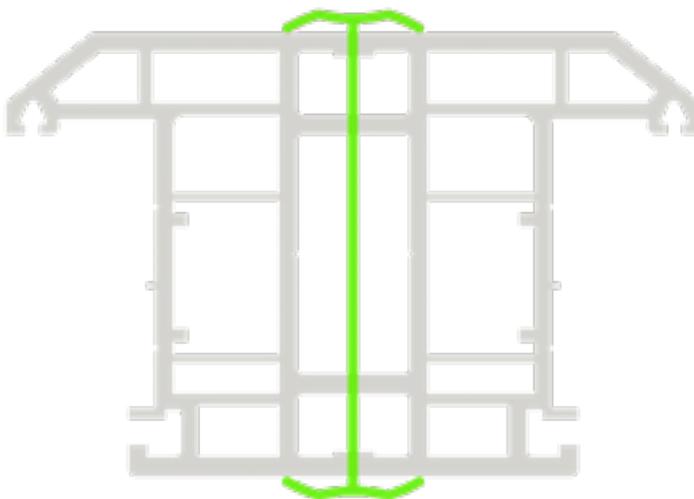
Recommended in lower exposure zones and for the narrower side frames.



CODE	WWL150
IXX (cm)	9.97
IYY (cm)	0.40
DEDUCTION	5mm Per Frame

**1.5mm Coupler** (1.5mm wide)  
PVC-U

**Only** use on single door fanlights



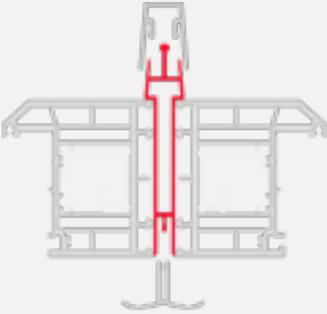
CODE	PFC70
IXX (cm)	0
IYY (cm)	10
DEDUCTION	0.75mm Per Frame

## Side Frame / Coupling Bar Max Sizes

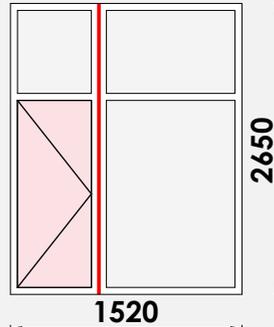
**72mm Reinforced Outer Frame** to achieve 800PA.

**The door size cannot be larger than 900mm x 2070mm**

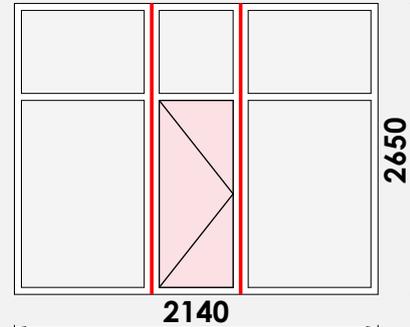
**Heavy Duty** (10mm wide)  
Rigidity : **Very High**



MAX Size with  
**ONE**  
Sideframe



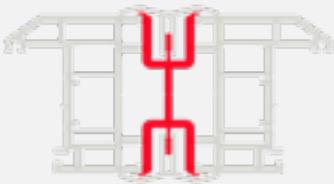
MAX Size with  
**TWO**  
Sideframes



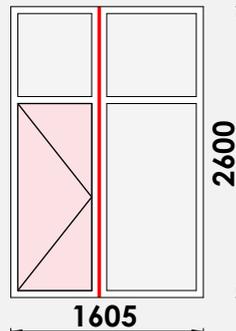
MAX Sizes for Side Frames constructed from  
**72mm Reinforced Outer Frame** using **Heavy Duty Coupler**

**The door size cannot be larger than 900mm x 2070mm**

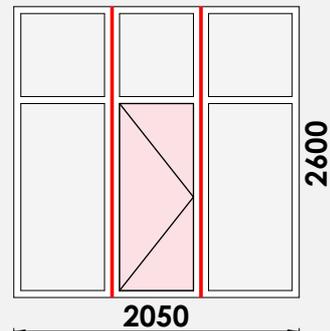
**Medium Duty Coupler** (20mm Wide)  
Rigidity : **High**



MAX Size with  
**ONE**  
Sideframe



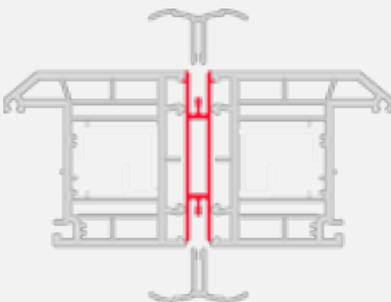
MAX Size with  
**TWO**  
Sideframes



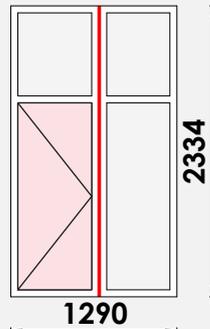
MAX Sizes for Side Frames constructed from  
**72mm Reinforced Outer Frame** using **Medium Duty Coupler**

**The door size cannot be larger than 900mm x 2070mm**

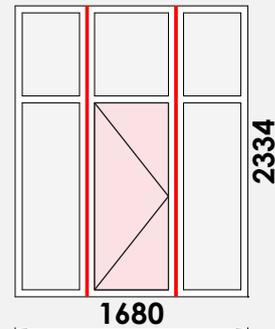
**Light Duty Coupler** (10mm wide)  
Rigidity : **Standard**



MAX Size with  
**ONE**  
Sideframe



MAX Size with  
**TWO**  
Sideframes



MAX Sizes for Side Frames constructed from  
**72mm Reinforced Outer Frame** using **Light Duty Coupler**

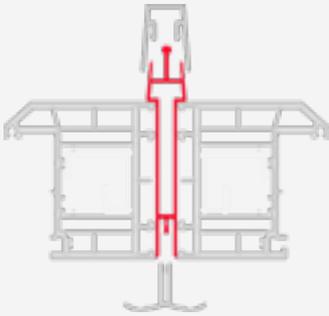
It is the installers responsibility to ensure that the products are fit for purpose for the environment in which they are installed and the correct level of operational performance is achieved.

## Side Frame / Coupling Bar Max Sizes

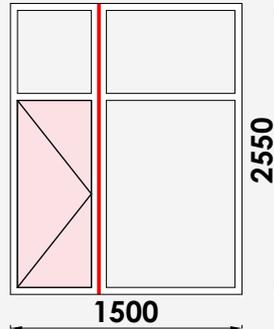
52mm Reinforced Outer Frame to achieve 800PA.

The door size cannot be larger than 900mm x 2070mm

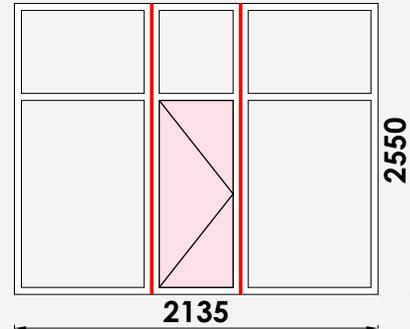
**Heavy Duty** (10mm wide)  
Rigidity : **Very High**



MAX Size with  
**ONE**  
Sideframe



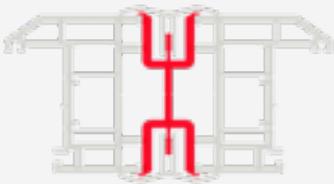
MAX Size with  
**TWO**  
Sideframes



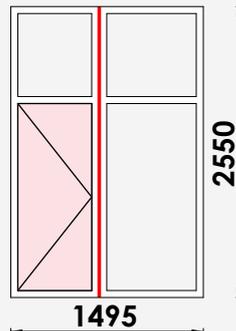
MAX Sizes for Side Frames constructed from  
72mm Reinforced Outer Frame using **Heavy Duty Coupler**

The door size cannot be larger than 900mm x 2070mm

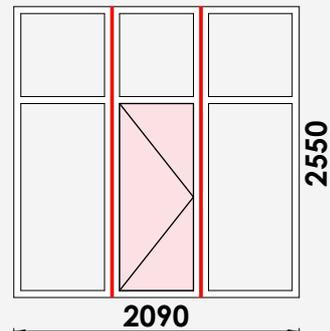
**Medium Duty Coupler** (20mm Wide)  
Rigidity : **High**



MAX Size with  
**ONE**  
Sideframe



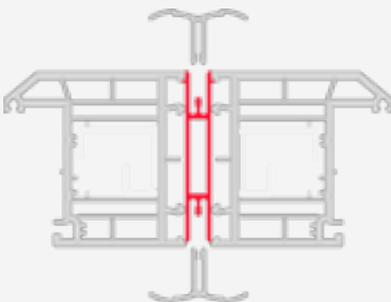
MAX Size with  
**TWO**  
Sideframes



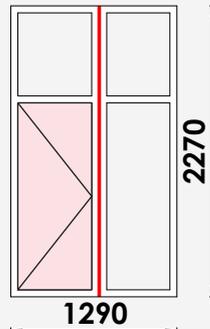
MAX Sizes for Side Frames constructed from  
72mm Reinforced Outer Frame using **Medium Duty Coupler**

The door size cannot be larger than 900mm x 2070mm

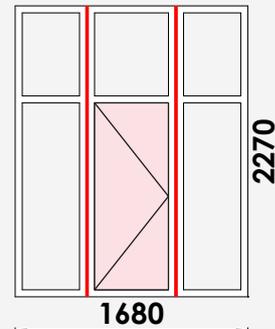
**Light Duty Coupler** (10mm wide)  
Rigidity : **Standard**



MAX Size with  
**ONE**  
Sideframe



MAX Size with  
**TWO**  
Sideframes



MAX Sizes for Side Frames constructed from  
72mm Reinforced Outer Frame using **Light Duty Coupler**

## Side Frame Min Sizes / Transoms

### Sideframe with MIDRAIL

72mm outer with 105.5 Midrail: **min width =323.5mm**

72mm outer with 69 Midrail: **min width =360mm**

52mm outer with 69 Midrail: **min width =320mm**

### Sideframe with NO Midrail GROOVED

72mm outer: **min width =295mm**

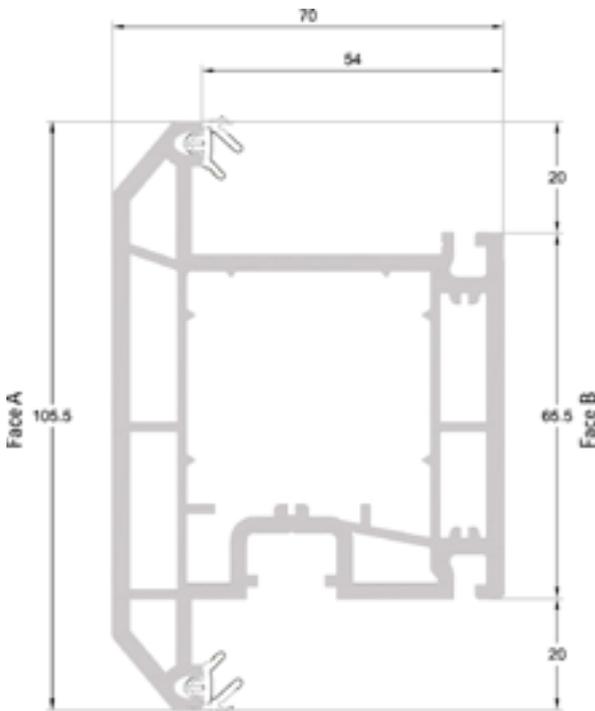
52mm outer: **min width =275mm**

### Sideframe with NO Midrail KNIFED OFF by hand

72mm outer: **min width =190mm**

52mm outer: **min width =190mm**

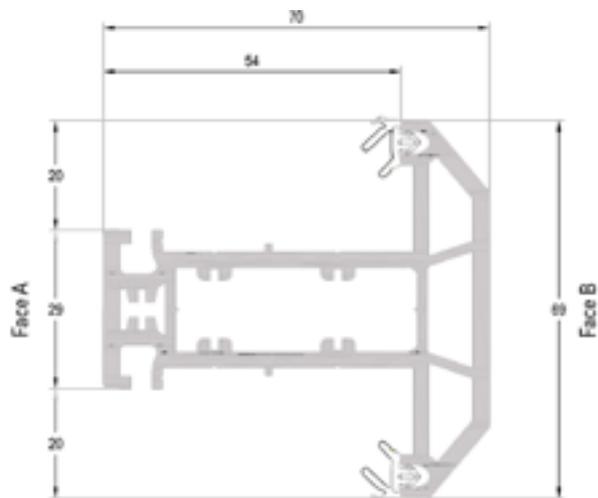
Standard letterplates cannot be fitted into midrails.



**Door T Sash / Midrail 105.5mm**

Standard Midrail in sideframes

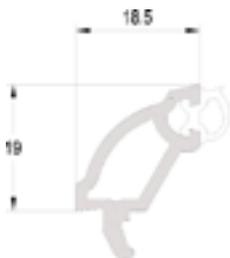
**Art.546635**



**Slim Transom / Mullion T 69mm**

Standard Mullion in Fanlights

**Art.546085**



**Co-extruded Glazing Bead 18.5**

For 28mm sealed units

**Art.546572**

## Bar Handle Detail 1200mm and 600mm

### Technical Information

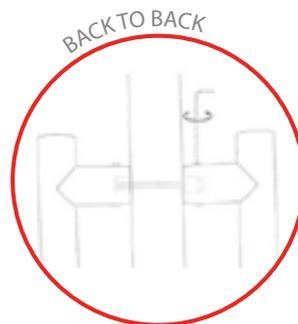
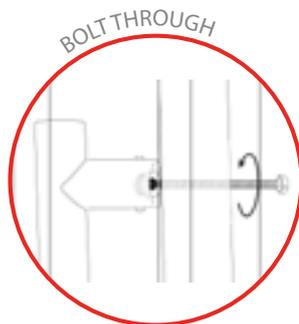
- Made from 1.5mm 316 grade stainless steel
- **32mm diameter** for sturdier construction
- Salt spray tested to ASTM B117 for 2,000 hours

1200mm

600mm



### Fitting



### Maintenance

For continued protection of the quality finish and appearance, we advise routine cleaning.

Moving parts should also be lightly lubricated at least twice a year.

This procedure is particularly essential if products are used within a 25-mile radius of coastal areas or close proximity to building sites or large industrial areas, where more frequent cleaning may be required to prevent the accumulation of corrosive contaminants.

## Offset Bar Handle Detail 1200mm and 600mm

### Technical Information

- Made from 1.5mm 316 grade stainless steel
- **32mm diameter** for sturdier construction
- Salt spray tested to ASTM B117 for 2,000 hours

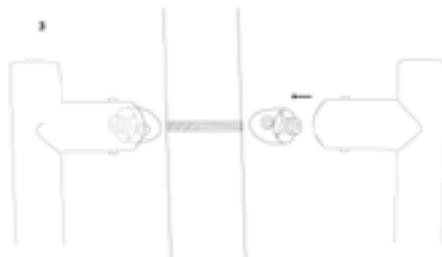
600mm



1200mm



### Fitting



Suitably line the holes up to where the handle will be fitted on the door making sure it is straight.

Take 'fitting A' and feed through the bolt. Screw 'fitting B' onto the other side.

Push each handle onto its fixings.

Screw the grub screws up tightly to secure the fitting.

For security you can round off the grub screws.

### Maintenance

For continued protection of the quality finish and appearance, we advise routine cleaning.

Moving parts should also be lightly lubricated at least twice a year.

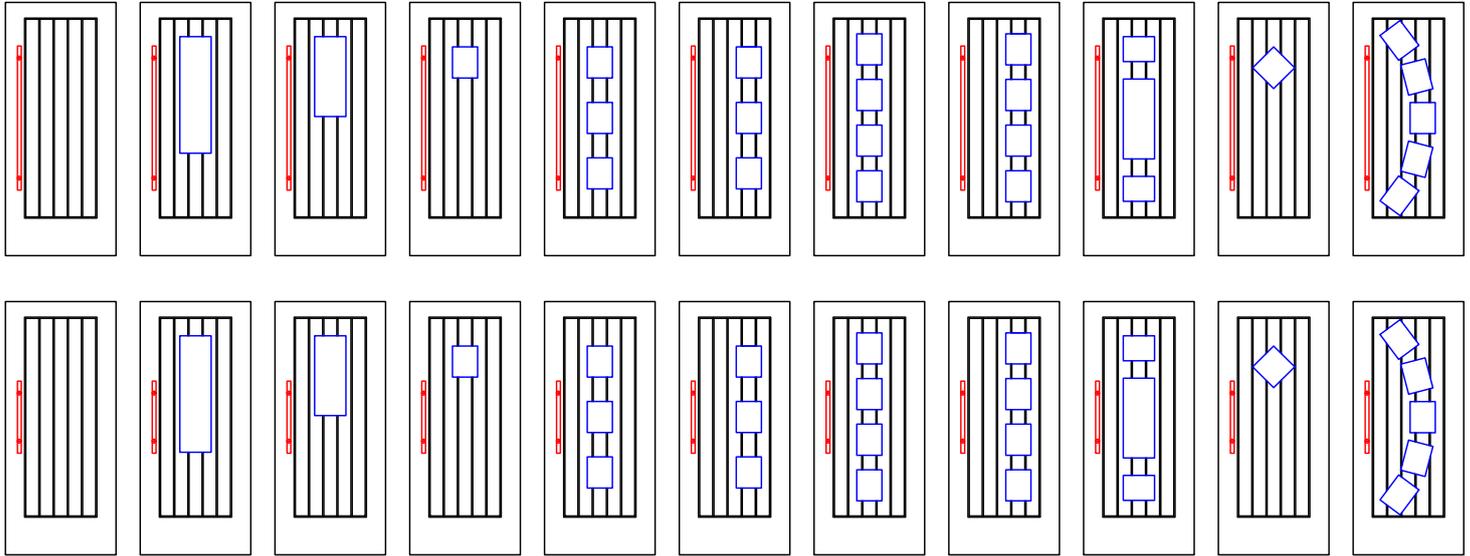
This procedure is particularly essential if products are used within a 25-mile radius of coastal areas or close proximity to building sites or large industrial areas, where more frequent cleaning may be required to prevent the accumulation of corrosive contaminants.

# Bar Handle Fitting positions



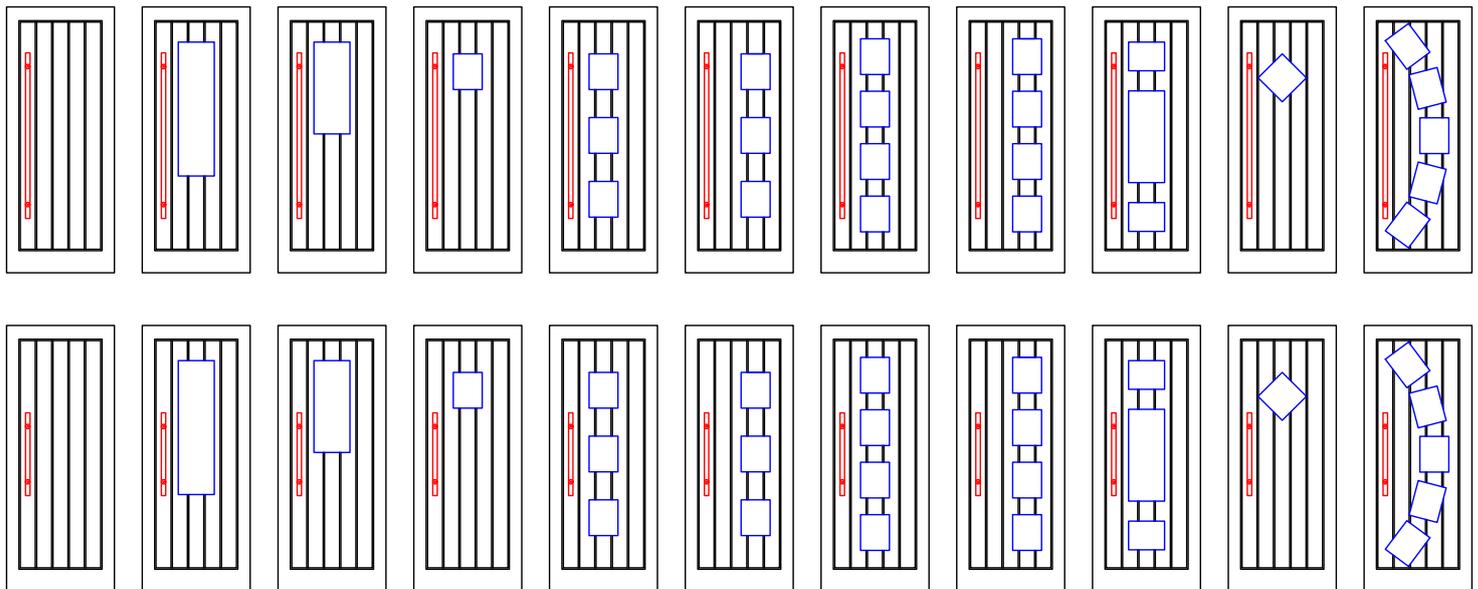
## Sash Size 914mm to 870mm

· Bar handle 115mm from the edge of the sash



## Sash Size 869mm to 776mm

· Bar handle in the centre of the first moulding.

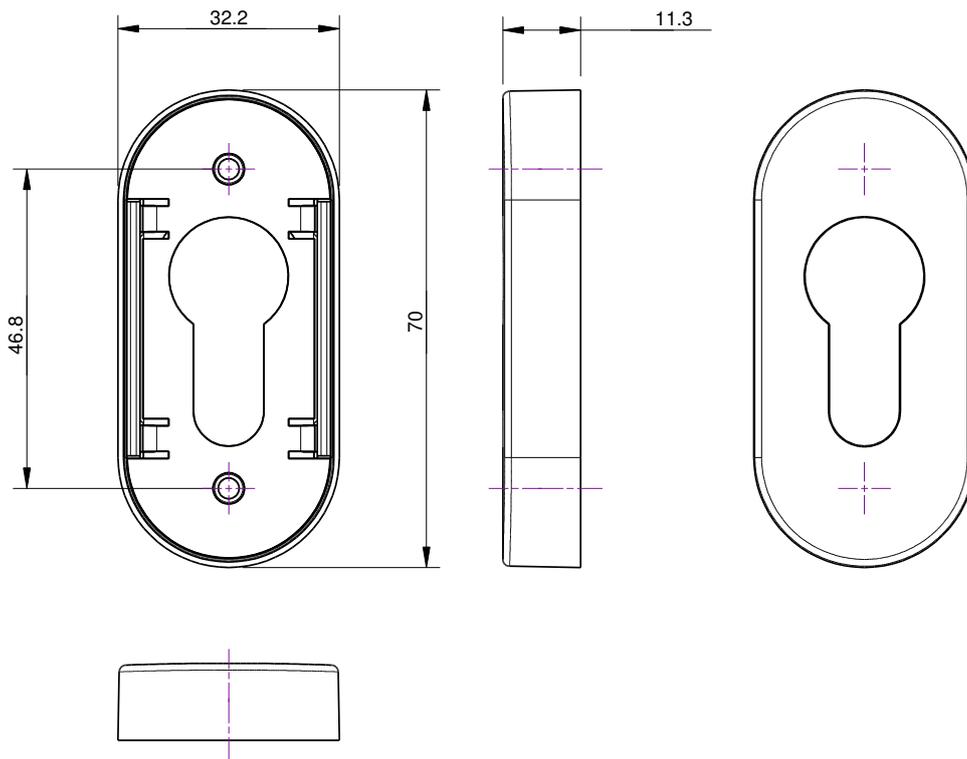


## Escutcheon



### Technical Information

- Made from 1.5mm 316 grade stainless steel
- 32.2 mm wide for sturdier construction
- Salt spray tested to ASTM B117 for 2,000 hours



### Maintenance

For continued protection of the quality finish and appearance, we advise routine cleaning.

Moving parts should also be lightly lubricated at least twice a year.

This procedure is particularly essential if products are used within a 25-mile radius of coastal areas or close proximity to building sites or large industrial areas, where more frequent cleaning may be required to prevent the accumulation of corrosive contaminants.

# Lever Handle

## Technical Information

### Corrosion resistance

Meets the requirements of BS EN 1670:2007 Grade 5 (480 hours)

### Operation

Endurance tested in excess of 200,000 cycles

### Performance

Tested to meet the requirements of PAS 24 as part of a compliant door set. 30 minute fire test to BS 476: Part 20/22: 1987

## Material Specification

### Handle Grip and Backplate:

Meets the requirements of BS EN 1670:2007 Grade 5 (480 hours)

### Silver Spindle / Screws:

Machine screws with colour coordinated heads for handle. 60mm - 70mm profiles (1 x 8mm x 120mm spindle; 2 x M5 x 70mm and 2x M5 x 80mm screws)

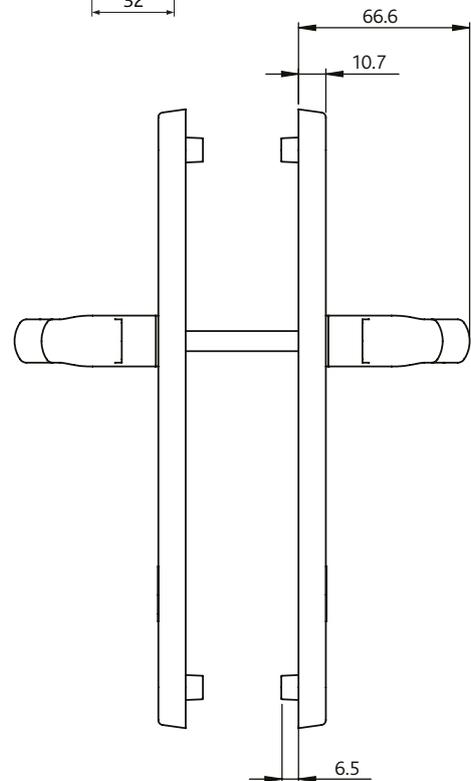
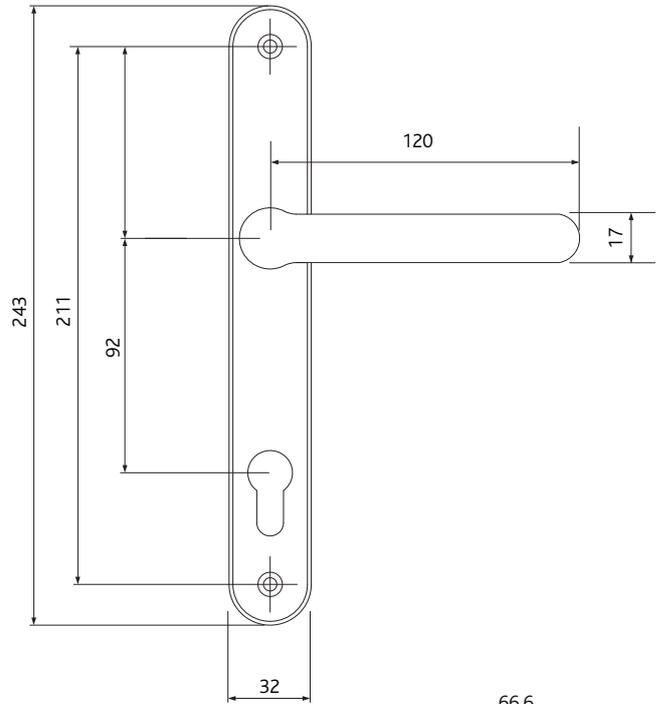
### Cylinder:

Euro Cylinder, 92mm PZ

## Maintenance

For continued protection of the quality finish and appearance, we advise routine cleaning.

Moving parts should also be lightly lubricated at least twice a year. This procedure is particularly essential if products are used within a 25-mile radius of coastal areas or close proximity to building sites or large industrial areas, where more frequent cleaning may be required to prevent the accumulation of corrosive contaminants.



## Pad Handle

### Technical Information

#### Corrosion resistance

Meets the requirements of BS EN 1670:2007 Grade 5 (480 hours)

#### Operation

Endurance tested in excess of 200,000 cycles

#### Performance

Tested to meet the requirements of PAS 24 as part of a compliant door set. 30 minute fire test to BS 476: Part 20/22: 1987

### Material Specification

#### Handle Grip and Backplate:

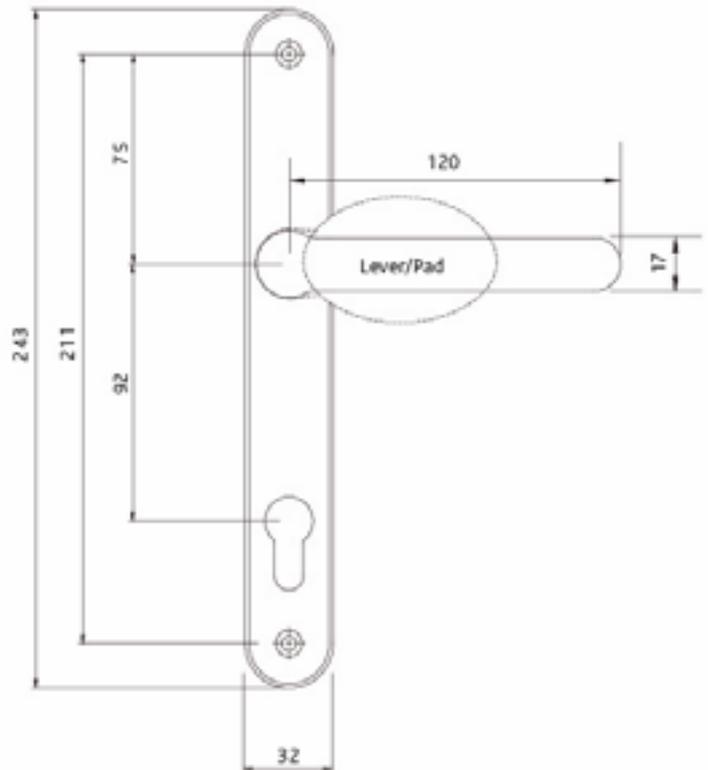
Meets the requirements of BS EN 1670:2007 Grade 5 (480 hours)

#### Silver Spindle / Screws:

Machine screws with colour coordinated heads for handle. 60mm - 70mm profiles (1 x 8mm x 120mm spindle; 2 x M5 x 70mm and 2x M5 x 80mm screws)

#### Cylinder:

Euro Cylinder, 92mm PZ



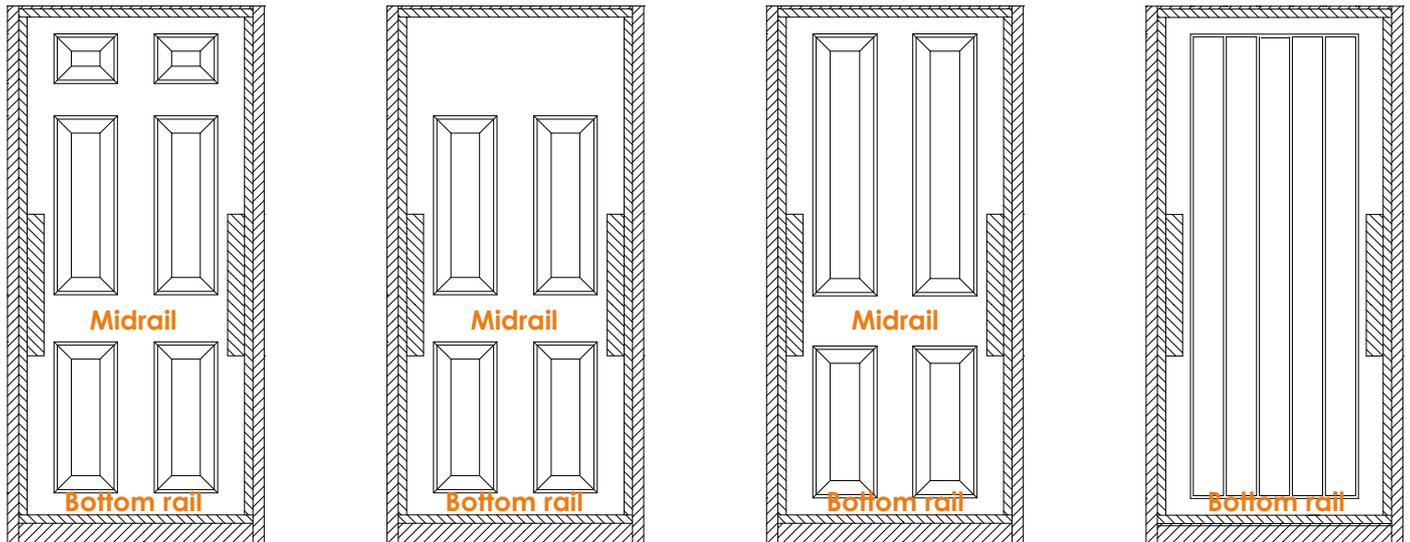
### Maintenance

For continued protection of the quality finish and appearance, we advise routine cleaning.

Moving parts should also be lightly lubricated at least twice a year. This procedure is particularly essential if products are used within a 25-mile radius of coastal areas or close proximity to building sites or large industrial areas, where more frequent cleaning may be required to prevent the accumulation of corrosive contaminants.



## Letterplate Positioning



Door sashes less than 1896 in height cannot have a letterplate fitted in the bottom rail.

Door sashes with a height between 1895 and 1926 can only have standard letterplate fitted in the bottom rail a TS008 will not fit.

Door sashes with a height more than 1927 can have both a standard letterplate fitted in the bottom rail.

Standard letterplates can be fitted in any size door where there is a midrail.

**TS008** letterplates should only be **fitted in the midrail position** as PAS24 & SBD doors with a letterplate must have the letterplate above 700mm from floor level.

# Letterplate (Standard)



## Technical Information

### Corrosion resistance

Meets the requirements of BS EN 1670:2007 Grade 5 (480 hours)

### Operation

Flap cycle tested to 20,000 cycles  
Conforms to the requirements of BS EN 13724: 2002

### Performance

Tested to meet the requirements of PAS 24 as part of a compliant door set. 30 minute fire test to BS 476: Part 20/22: 1987



## Material Specification

### Flap:

High quality Zinc or Aluminium

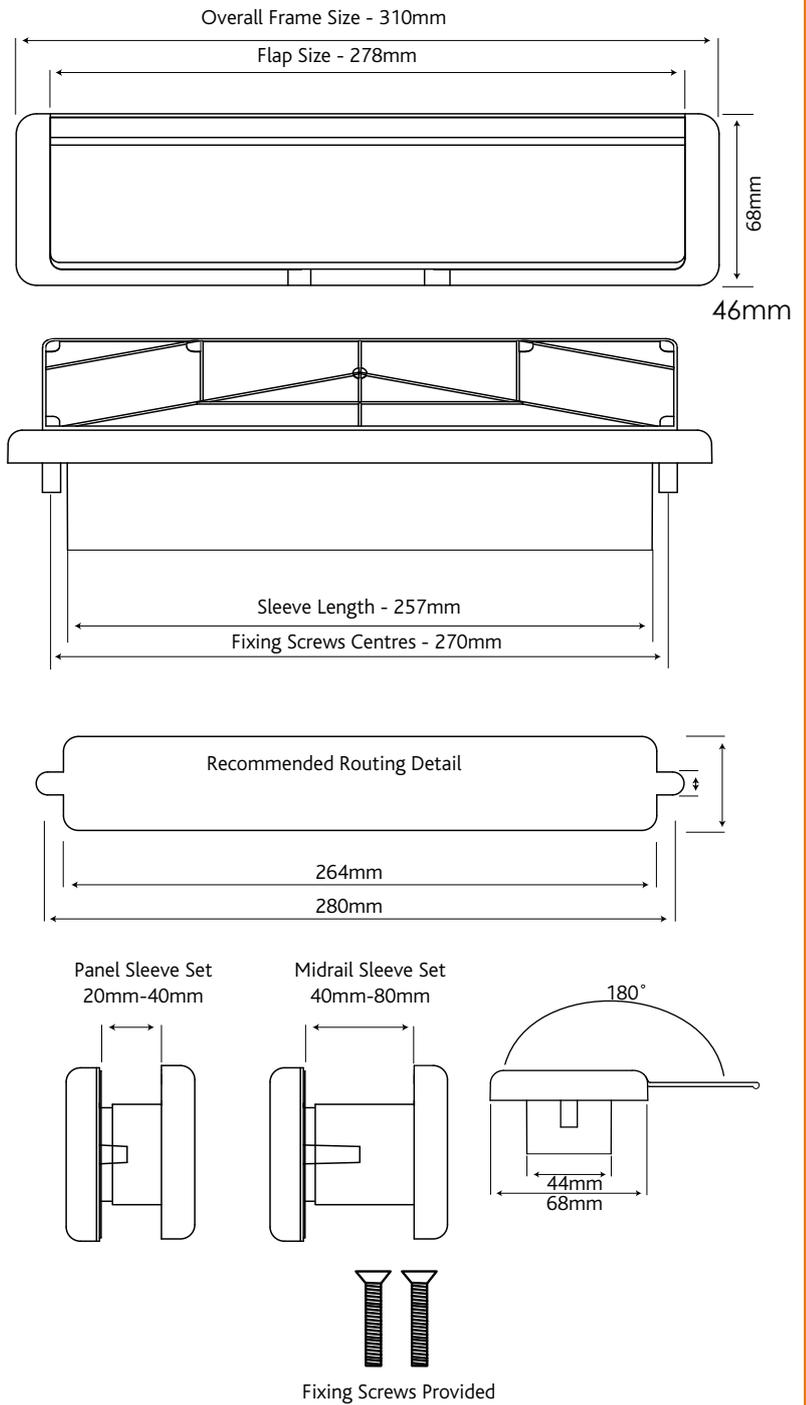
### Frame:

Black ABS

## Maintenance

For continued protection of the quality finish and appearance, we advise routine cleaning.

Moving parts should also be lightly lubricated at least twice a year. This procedure is particularly essential if products are used within a 25-mile radius of coastal areas or close proximity to building sites or large industrial areas, where more frequent cleaning may be required to prevent the accumulation of corrosive contaminants.



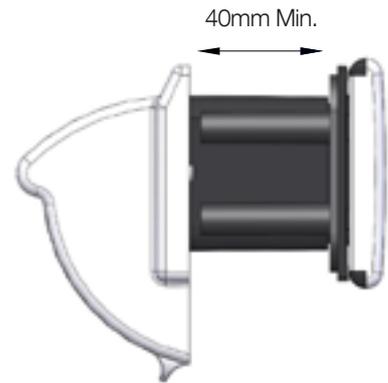
# Letterplate (TS008)



## Technical Information

### Specification

- TS008:2015 accredited
- Conforms to the requirements of PAS 24:2016 and Approved Document Q
- External unit corrosion tested to BS EN 1670 Grade 5-tested in excess of 1000 hours NSST
- Tested to 20,000 cycles



## Material Specification

### External Flap:

Austenitic 304 stainless steel

### Internal Flap:

Aluminium



## Maintenance

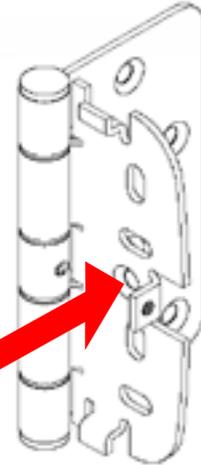
For continued protection of the quality finish and appearance, we advise routine cleaning.

Moving parts should also be lightly lubricated at least twice a year. This procedure is particularly essential if products are used within a 25-mile radius of coastal areas or close proximity to building sites or large industrial areas, where more frequent cleaning may be required to prevent the accumulation of corrosive contaminants.



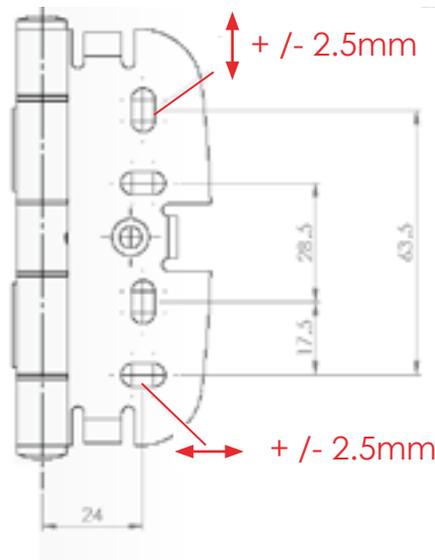
## Standard Hinge (Open in doors only)

2 way adjustment +/- 2.5mm Height and Side adjustment.  
 Face fitting for a flush door to frame finish.  
 Robust 430 stainless steel body designed to carry up to 100kg on 3 hinges.



### FINAL FIX HINGE SCREW

After any hinge adjustments the final fix hinge lock screw must be fixed in the centre hole fixing point.



### Technical Information

Performance: Endurance tested to 100,000 operations, Load tested to 100kg on 3 hinges  
 Corrosion resistance: All finishes meet the requirements of BS EN 1670:2007 - grade 5 (500 hrs Salt Spray)

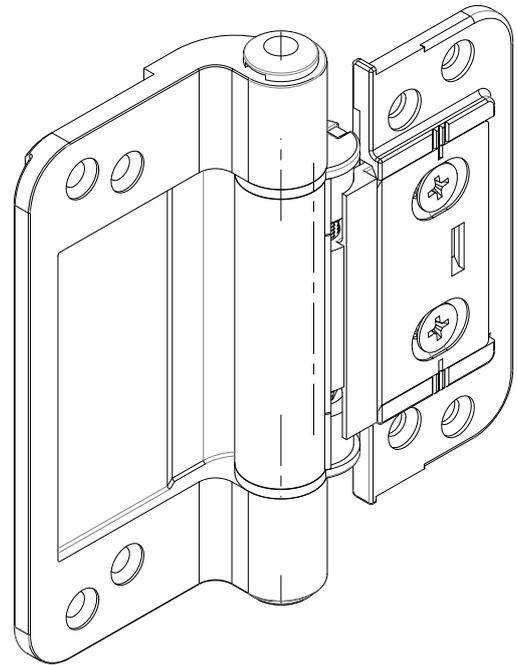
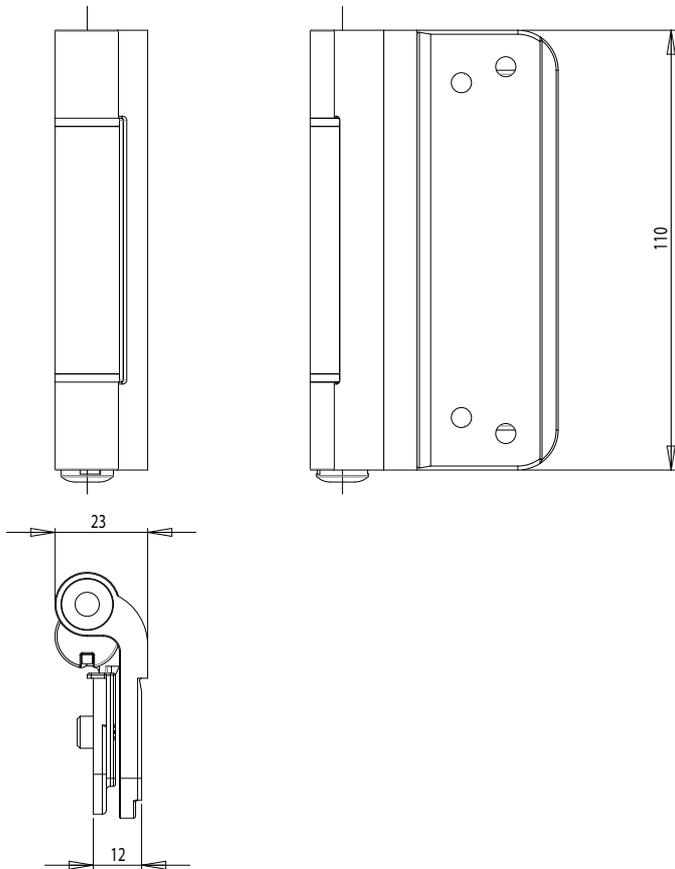
### Material Specification

Hinge Body: 430 Stainless Steel  
 Hinge Cover: Zinc Alloy  
 Pin: 304 Stainless Steel

### Maintenance

We recommend that all moving components are lubricated using a non-acidic mineral oil at least twice a year and surface cleaned with a damp cloth.

## Optional Hinge (Standard on open out doors)



### Technical Information

Performance: Endurance tested to 100,000 operations, Load tested to 100kg on 3 hinges  
 Corrosion resistance: All finishes meet the requirements of BS EN 1670:2007 - grade 5 (500 hrs Salt Spray)

### Adjustment

Lateral +/- 3mm  
 Height +/- 4mm  
 Compression +/- 1.75mm

### Maintenance

We recommend that all moving components are lubricated using a non-acidic mineral oil at least twice a year and surface cleaned with a damp cloth.

# Clear Openings



## Standard Hinge

**CLEAR OPENING = Door Frame width -176mm**

Example:  
A Door frame width of 900mm has a clear opening of 724mm

*To comply with Document M, a private or communal entrance must have a clear opening greater than 775mm.*



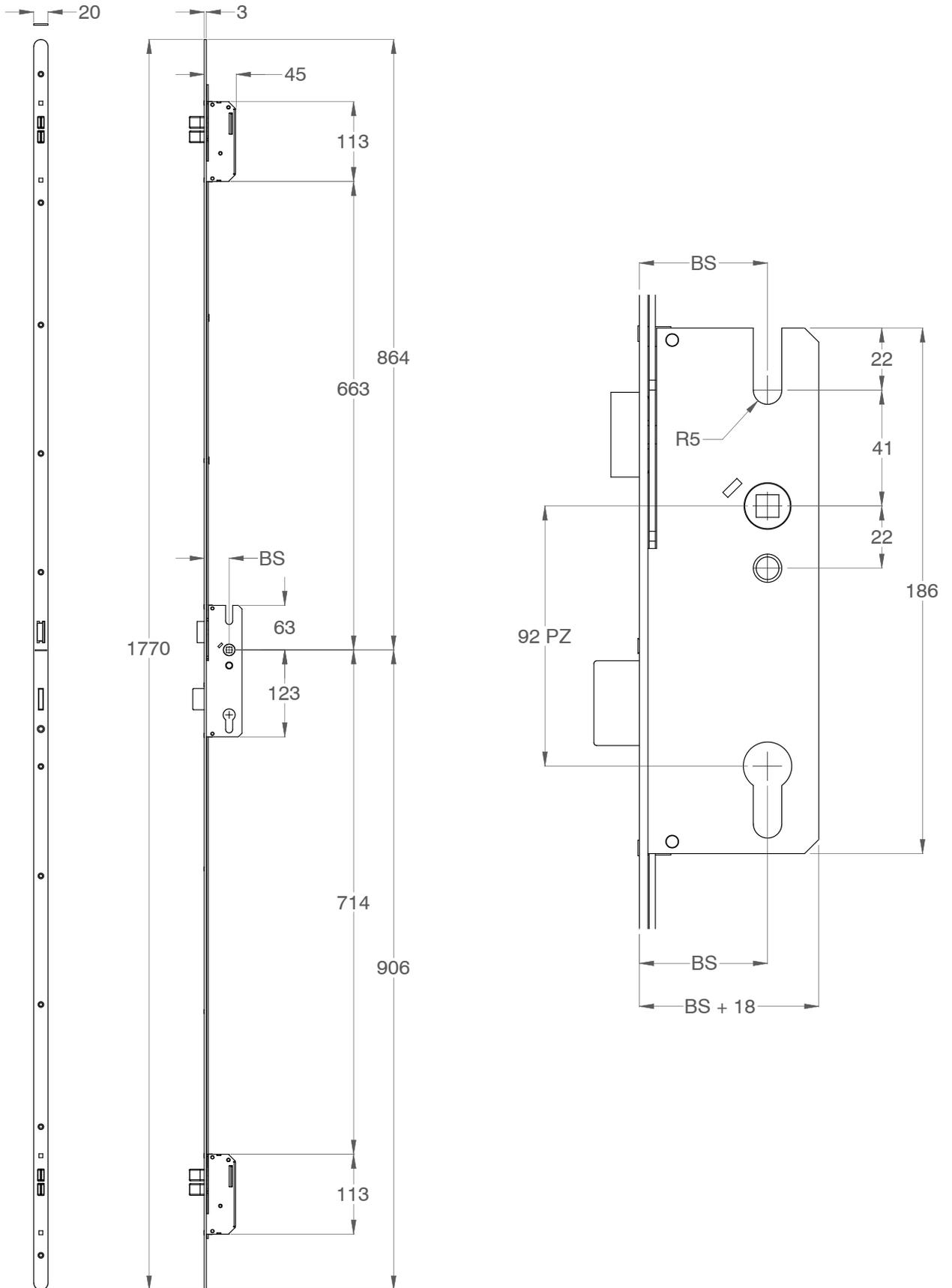
## Optional Hinge

**CLEAR OPENING = Door Frame width -182mm**

Example:  
A Door frame width of 900mm has a clear opening of 718mm

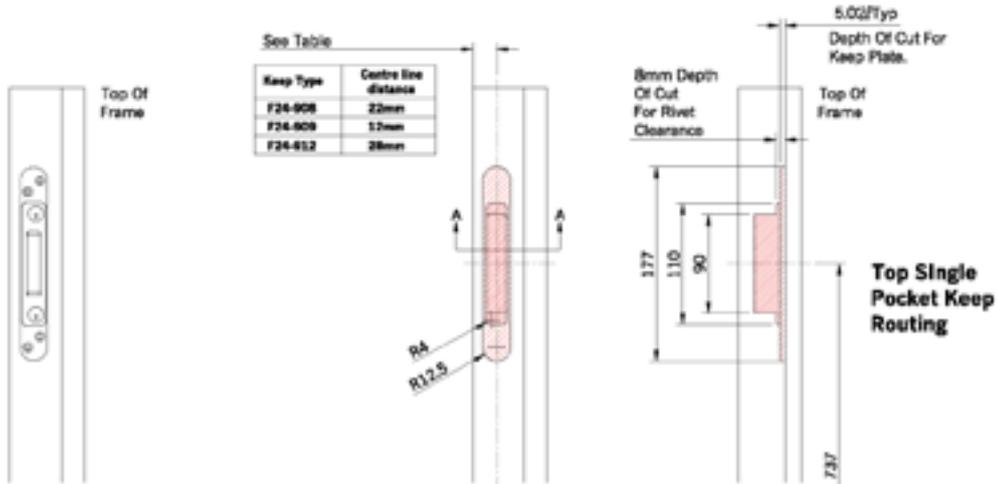
*To comply with Document M, a private or communal entrance must have a clear opening greater than 775mm.*



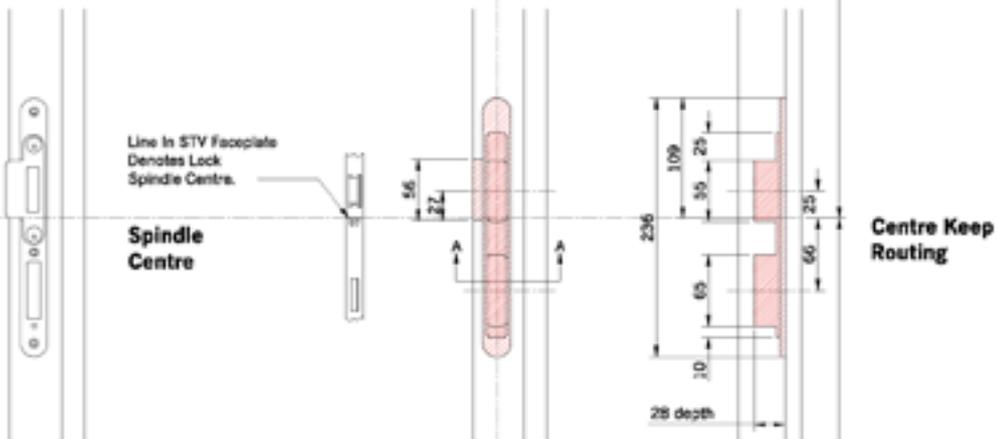


# Keeps

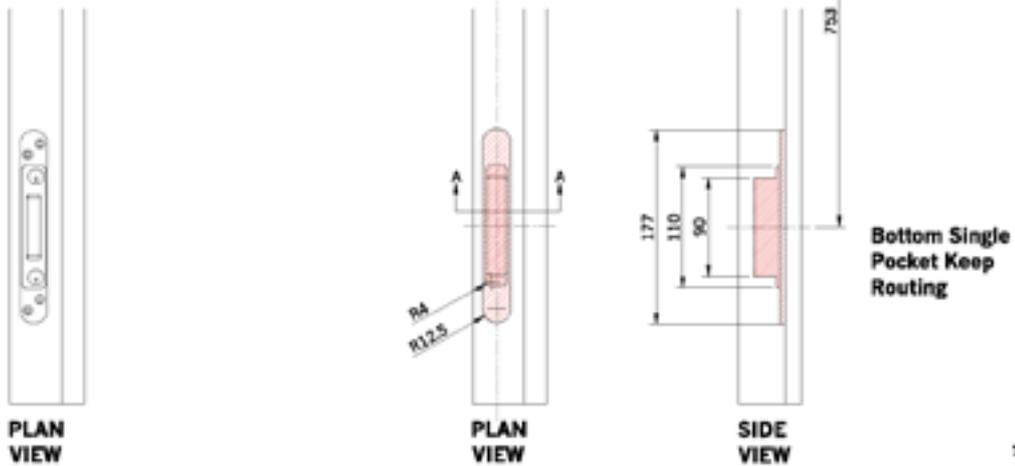
**F24 Rounded End Single Pocket Keep**



**F24 Rounded End Centre Keep**

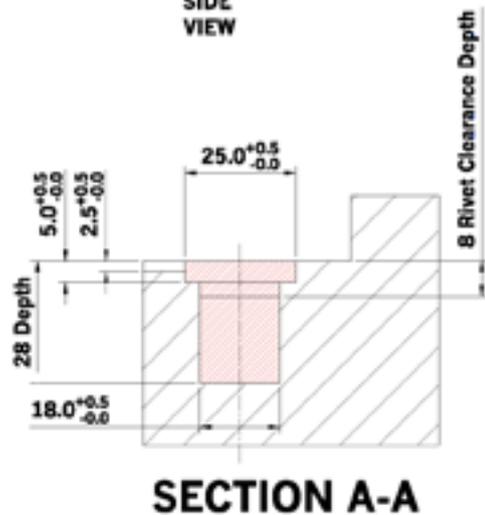


**F24 Rounded End Single Pocket Keep**



 Denotes Routing

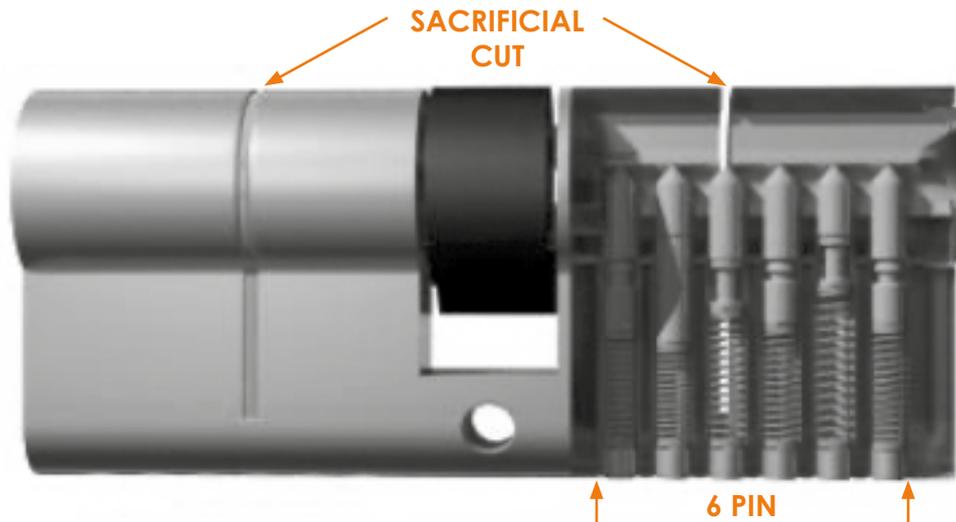
Routing Details Based On Working Air Gap Of 4mm



\*Cylinder also available with a thumbturn option.

## Technical Information

- BSi 1\* Kite-marked - KM561977
- Secured by Design approved
- Supplied with 3 keys
- 6 pins
- Sacrificial cut lines on both sides of the cylinder so can be fitted either way round.
- Over 200,000 different key combinations.



### Sacrificial cut

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

### 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

Anti-drill pins are in each side of the cylinder.

### Anti-pick

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

## Maintenance

We recommend that the area highlighted with **blue** is wiped over with a lemon based very mild soap solution and a soft cloth once a month or every 2 weeks in areas of high sea salt such as coastal areas.

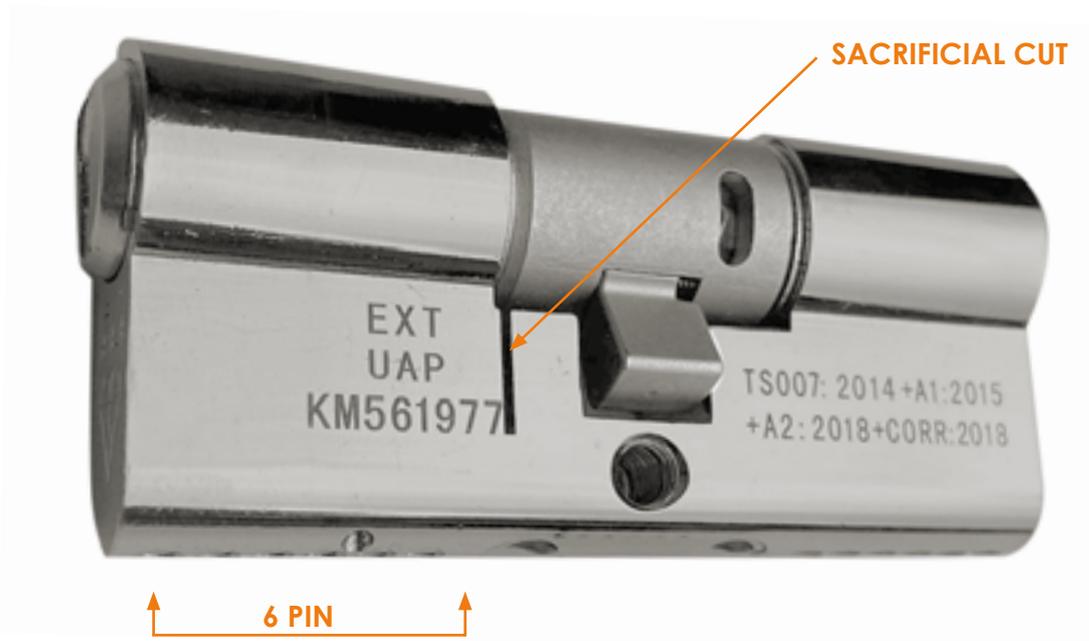
We recommend that the area highlighted with **orange** is lubricate with silicone based oil or graphite once a month or every 2 weeks in areas of high sea salt such as coastal areas.



\*\*\*Cylinder also available with a thumbturn option.

## Technical Information

- BSi 3\* Kitemarked
- Secured by Design Approved
- Sold Secure Approved
- Supplied with 3 Bio keys which have antibacterial and antiviral properties and have been tested to ISO 22196:2011 and ISO 21702:2019
- 6 pins
- Anti snap line on the outside of the cylinder
- Patented anti-bump timing pin system
- Patent applied for anti tilt mechanism
- Anti-pick pins
- Hardened steel anti-drill pins
- Does not use trap pins so no danger of cylinder entrapment
- Cylinder can open from the inside if attacked from the outside
- Over 200,000+ different key combinations
- Unrestricted keyway makes it easier for customers to get keys cut using the Kinetica key blank
- Tested to EN1303:2015



## Maintenance

We recommend that the area highlighted with **blue** is wiped over with a lemon based very mild soap solution and a soft cloth once a month or every 2 weeks in areas of high sea salt such as coastal areas.

We recommend that the area highlighted with **orange** is lubricate with silicone based oil or graphite once a month or every 2 weeks in areas of high sea salt such as coastal areas.



## U Values

Double Glazed PVC Threshold  
K glass one coat

Triple Glazed PVC Threshold  
4/4/4 glass+N23N5M5:NM5:N24

Double Glazed Aluminium Threshold  
K glass one coat

4/4/4/glass

Triple Glazed Aluminium Threshold  
4/4/6.8 glass+N23N5M5:NM5:N24

Double Glazed Aluminium Threshold

Rome	1	1	1	1	1	1
Rome 2	1.2	1.3	1.2	1.3	1.2	1.3
Tuscany	1.2	1.3	1.2	1.3	1.2	1.3
Athens	1	1	1	1	1	1
Athens 2	1	1	1	1	1	1
Athens 4	1.2	1.3	1.2	1.3	1.2	1.3
Cannes 1	1	1	1	1	1	1
Cannes 3	1.2	1.3	1.2	1.3	1.2	1.3
Madeira	1.2	1.3	1.2	1.3	1.2	1.3
Turin	1	1	1	1	1	1
Milan 912	1	1	1	1	1	1
Milan 609	1	1	1	1	1	1
Milan 470	1	1	1	1	1	1
Milan 203	1	1	1	1	1	1
Rotterdam C	1	1	1	1	1	1
Rotterdam L	1	1	1	1	1	1
Rotterdam R	1	1	1	1	1	1
Amsterdam C	1	1	1	1	1	1
Amsterdam L	1	1	1	1	1	1
Amsterdam R	1	1	1	1	1	1
Helsinki	1	1	1	1	1	1
Oslo	1	1	1	1	1	1
Porto Left	1	1	1	1	1	1
Porto Right	1	1	1	1	1	1