



# Revolution 54

Designer's Guide



RECOGNITION

*culture*

ALIVE

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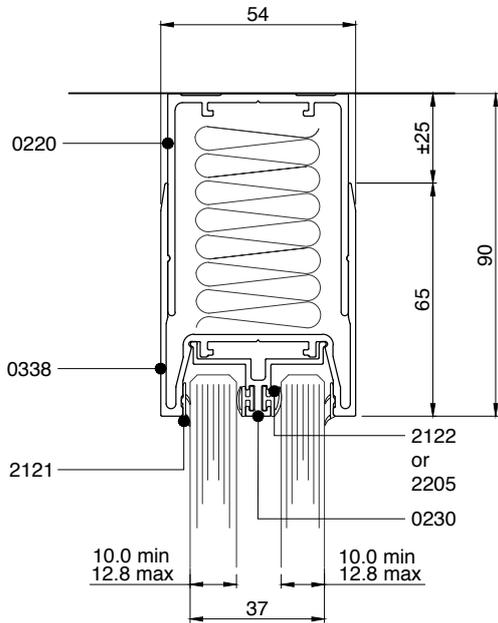
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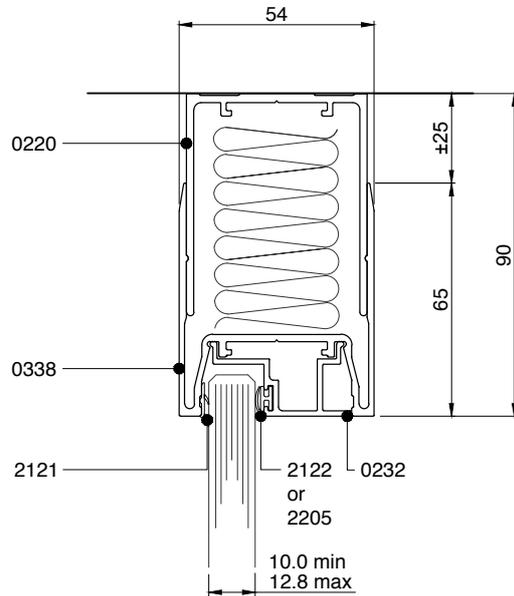
## Head Track Details: Vertical Sections ±25 Internal Deflection Head

**NOTE:** 2122 Glazing Gasket for 12.0 & 12.8mm Glass.  
2205 Glazing Gasket for 10.0 & 10.8mm Glass.



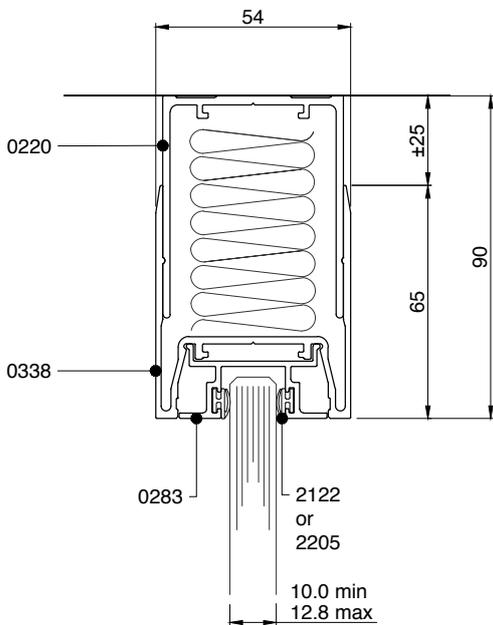
Double glazed head track with inner upper channel ±25 deflection

054002-01



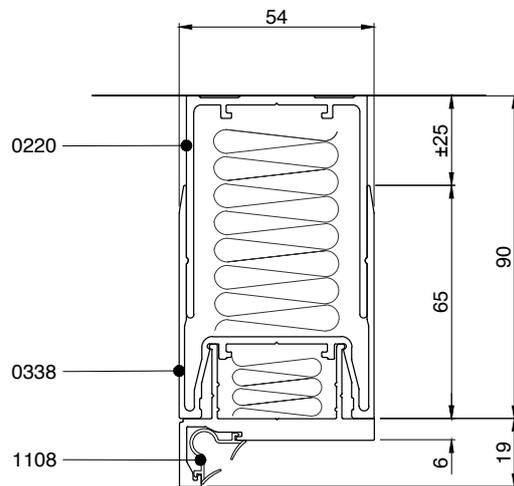
Single glazed head track with inner upper channel ±25 deflection

054002-02



Single glazed head track with inner upper channel ±25 deflection

054002-03



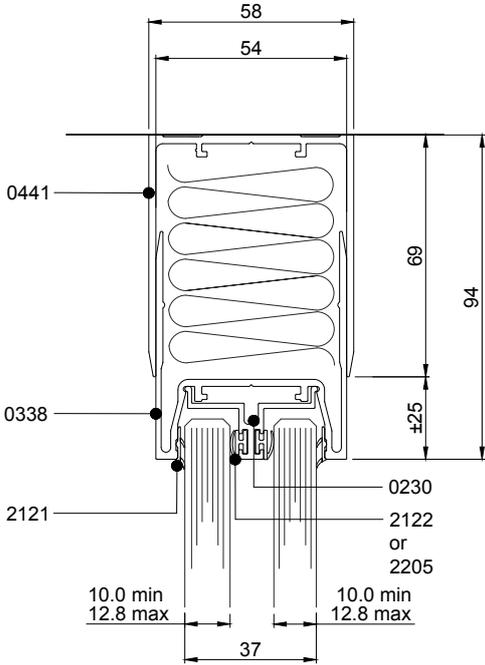
Head track with inner upper channel and D450 head clip ±25 deflection

054002-04

# Revolution 54

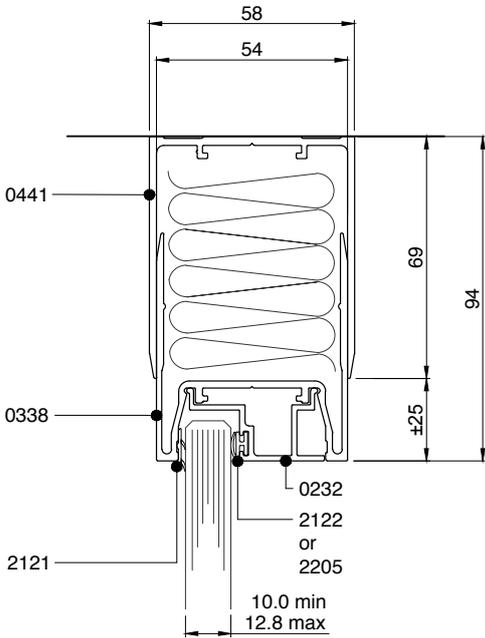
## Head Track Details: Vertical Sections ±25 External Deflection Head

**NOTE:** 2122 Glazing Gasket for 12.0 & 12.8mm Glass.  
 2205 Glazing Gasket for 10.0 & 10.8mm Glass.



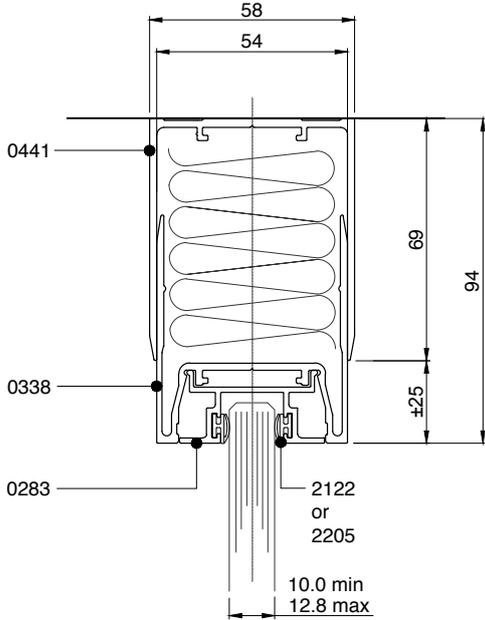
Double glazed head track with outer upper channel ±25 deflection

054003-01



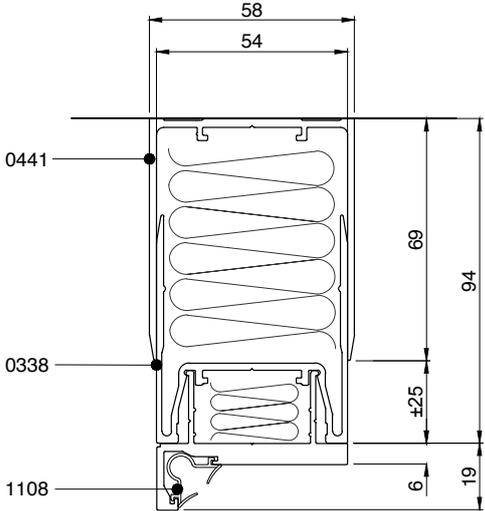
Single glazed head track with outer upper channel ±25 deflection

054003-02



Single glazed head track with outer upper channel ±25 deflection

054003-03



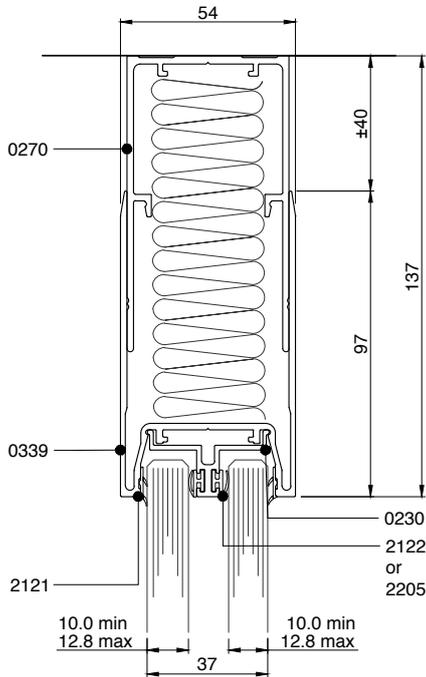
Head track with outer upper channel and D450 head clip ±25 deflection

054003-04

# Revolution 54

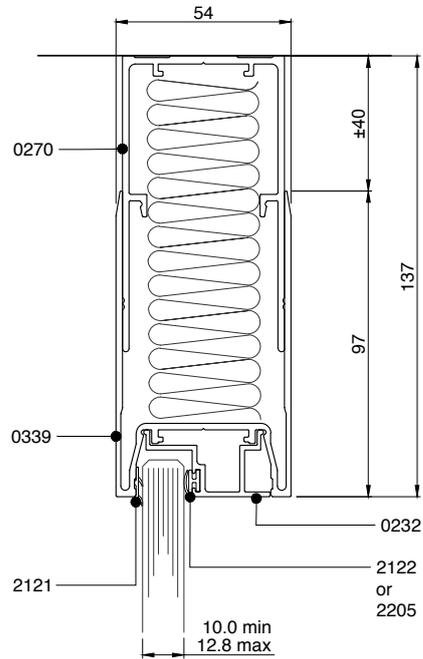
## Head Track Details: Vertical Sections ±40 Internal Deflection Head

**NOTE:** 2122 Glazing Gasket for 12.0 & 12.8 Glass.  
2205 Glazing Gasket for 10.0 & 10.8 Glass.



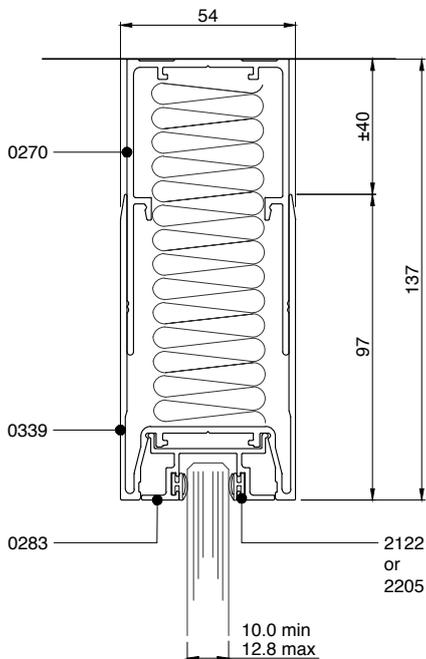
Double glazed head track with inner upper channel ±40 deflection

054004-01



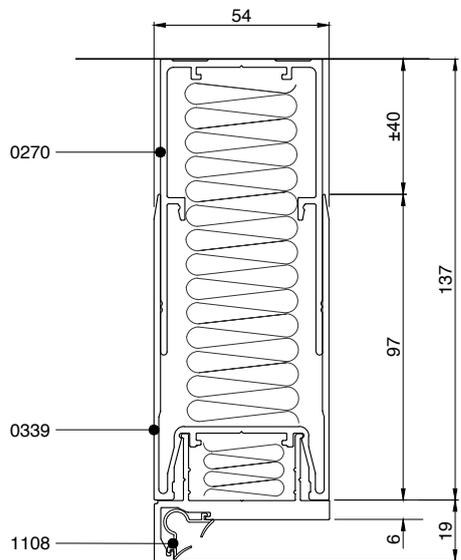
Single glazed head track with inner upper channel ±40 deflection

054004-02



Single glazed head track with inner upper channel ±40 deflection

054004-03



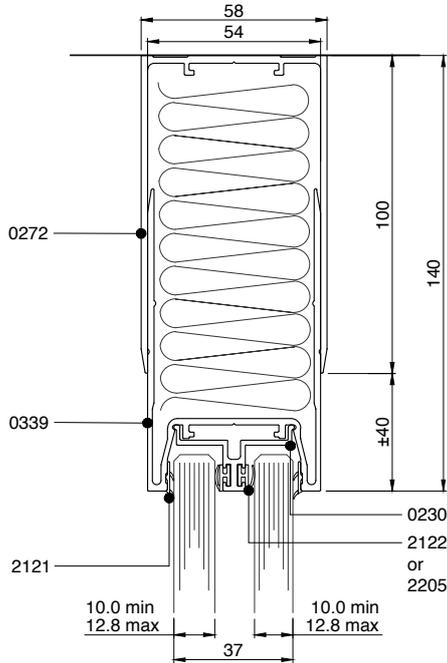
Head track with inner upper channel D450 head clip ±40 deflection

054004-04

# Revolution 54

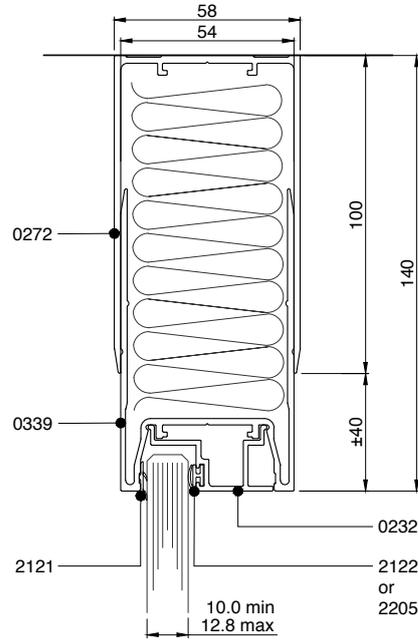
## Head Track Details: Vertical Sections ±40 External Deflection Head

**NOTE:** 2122 Glazing Gasket for 12.0 & 12.8 Glass.  
2205 Glazing Gasket for 10.0 & 10.8 Glass.



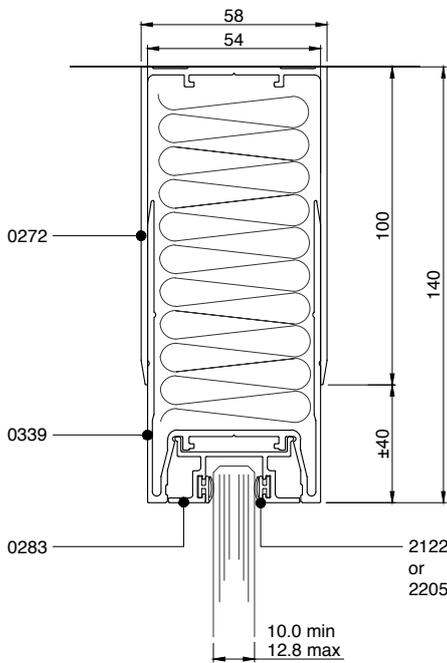
Double glazed head track with outer upper channel ±40 deflection

054005-01



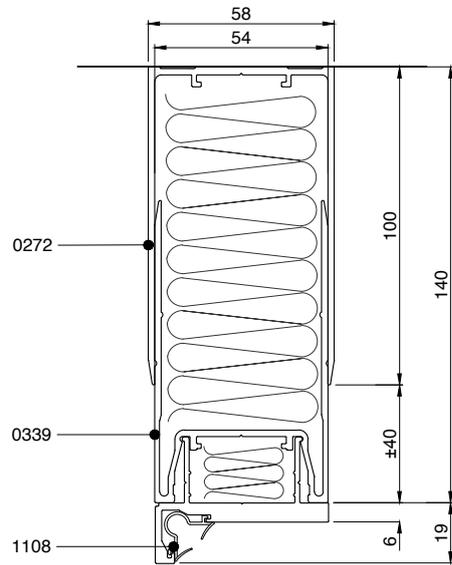
Single glazed head track with outer upper channel ±40 deflection

054005-02



Single glazed head track with outer upper channel ±40 deflection

054005-03



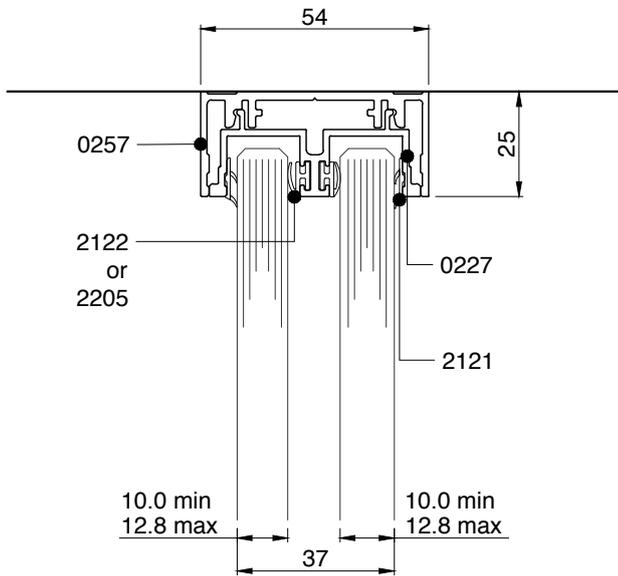
Head track with outer upper channel D450 head clip ±40 deflection

054005-04

# Revolution 54

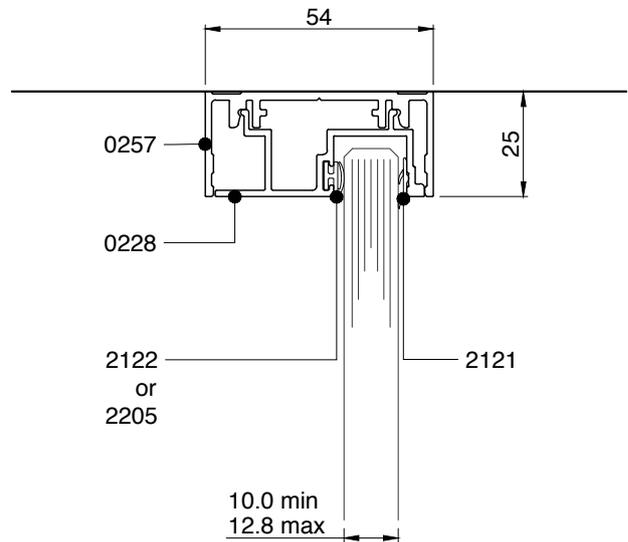
## Head Track Details: 25mm Fixed Head Track Vertical Sections

**NOTE:** 2122 Glazing Gasket for 12.0 & 12.8 Glass.  
2205 Glazing Gasket for 10.0 & 10.8 Glass.



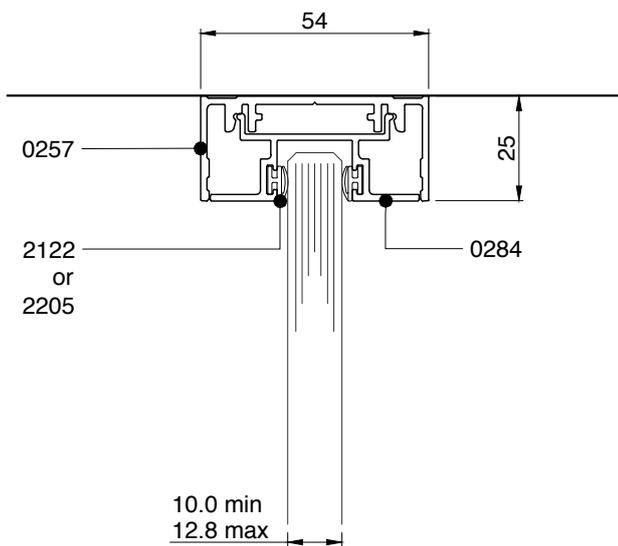
Fixed head track  
25mm double glazed

054006-01



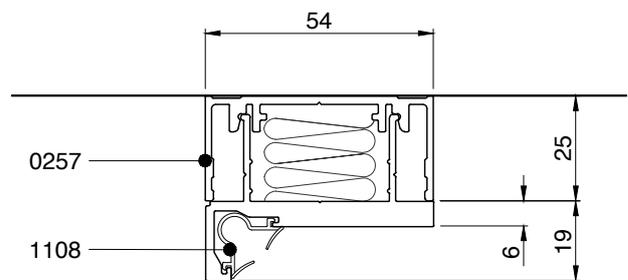
Fixed head track  
25mm single glazed

054006-02



Fixed head track  
25mm single glazed

054006-03



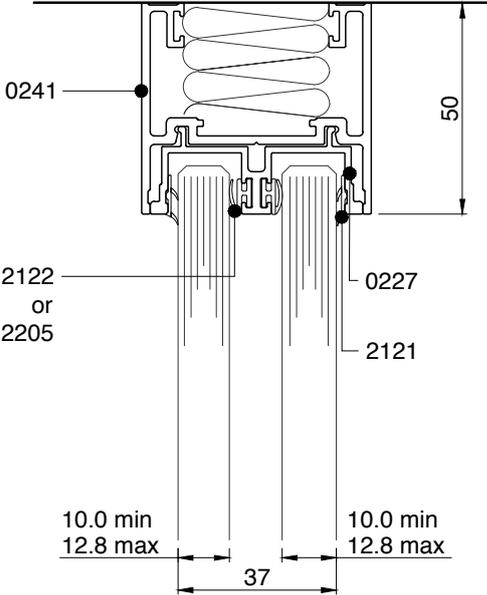
Fixed head track 25mm  
D450 head clip

054006-04

# Revolution 54

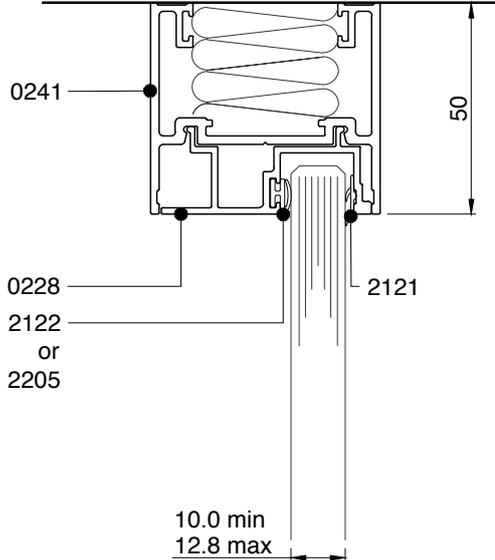
## Head Track Details: 50mm Fixed Head Track Vertical Sections

**NOTE:** 2122 Glazing Gasket for 12.0 & 12.8 Glass.  
 2205 Glazing Gasket for 10.0 & 10.8 Glass.



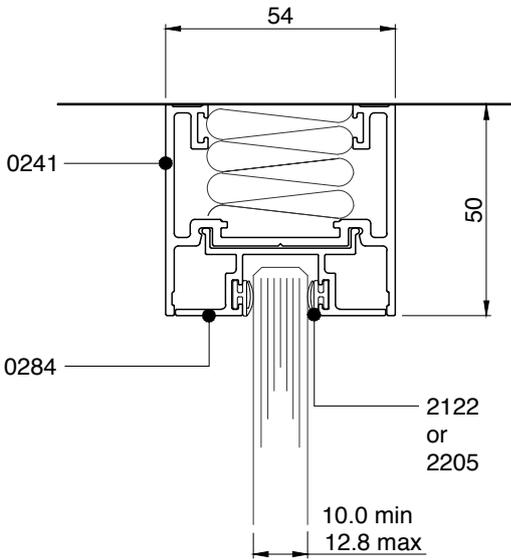
Fixed head track  
 50mm double glazed

054007-01



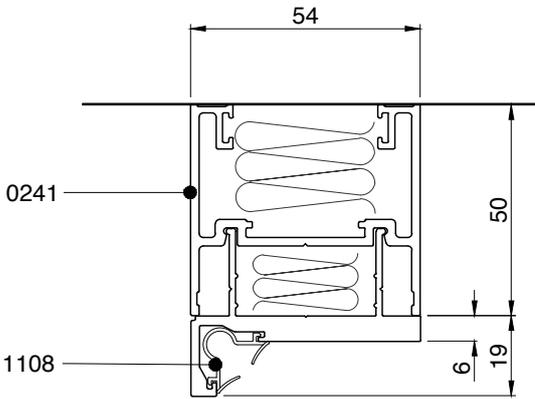
Fixed head track  
 50mm single glazed

054007-02



Fixed head track  
 50mm single glazed

054007-03



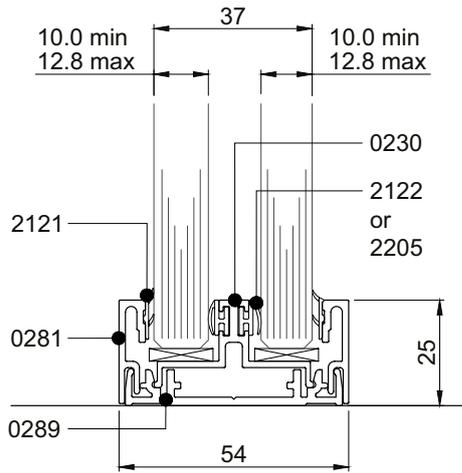
Fixed head track 50mm  
 D450 head clip

054007-04

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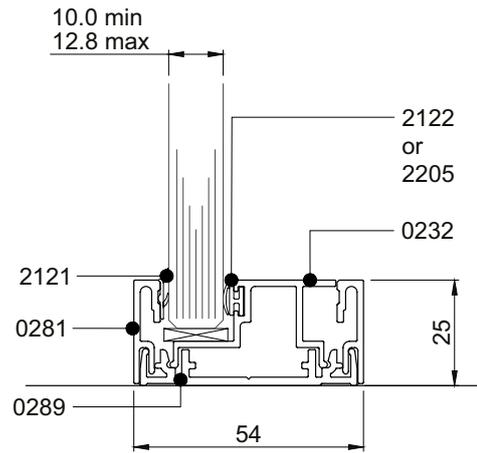
## Floor Track Details: Vertical Sections

**NOTE:** 2122 Glazing Gasket for 12.0 & 12.8 Glass.  
2205 Glazing Gasket for 10.0 & 10.8 Glass.



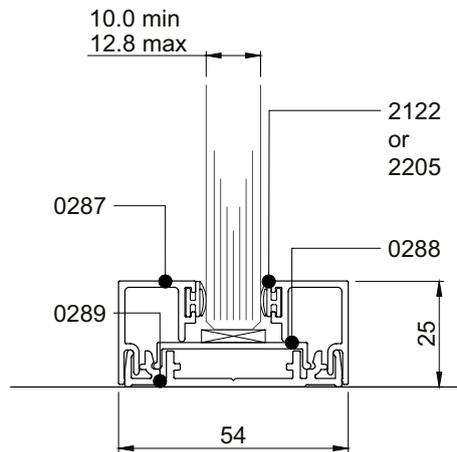
Double glazed floor track 25mm flush clip

054008-01



Single glazed floor track 25mm flush clip

054008-02



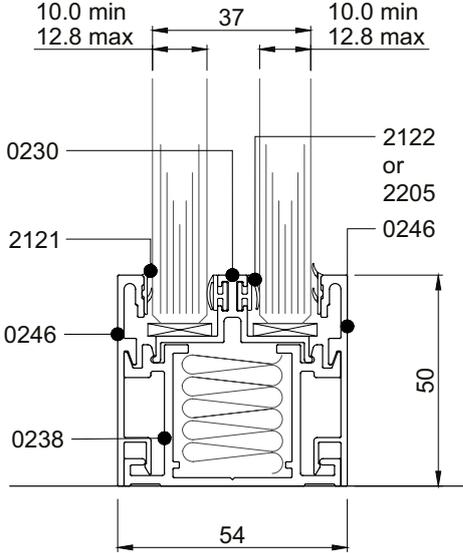
Single glazed floor track 25mm flush clip

054008-03

# Revolution 54

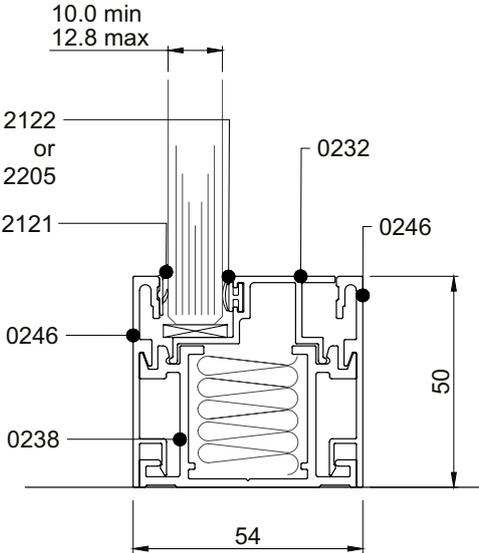
## Floor Track Details: Vertical Sections

**NOTE:** 2122 Glazing Gasket for 12.0 & 12.8 Glass.  
 2205 Glazing Gasket for 10.0 & 10.8 Glass.



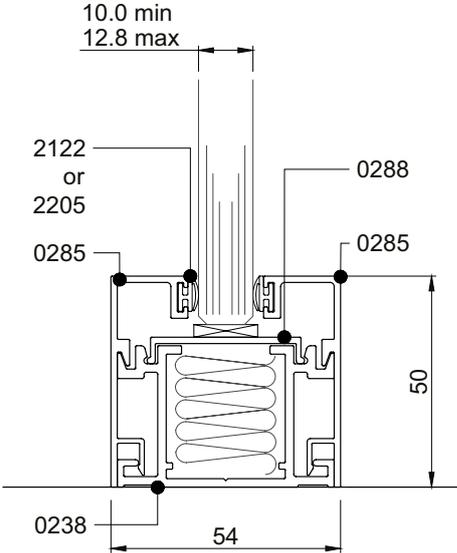
Double glazed floor track 50mm flush clip

054009-04



Single glazed floor track 50mm flush clip

054009-05



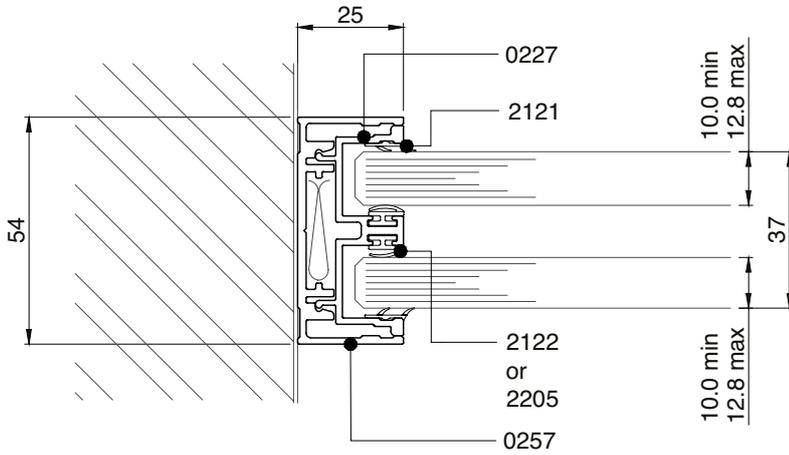
Single glazed floor track 50mm flush clip

054009-06

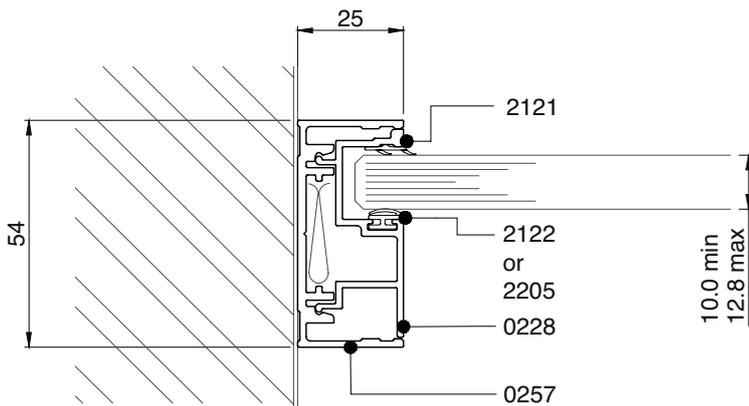
# Revolution 54

## Abutment Details: Horizontal Sections

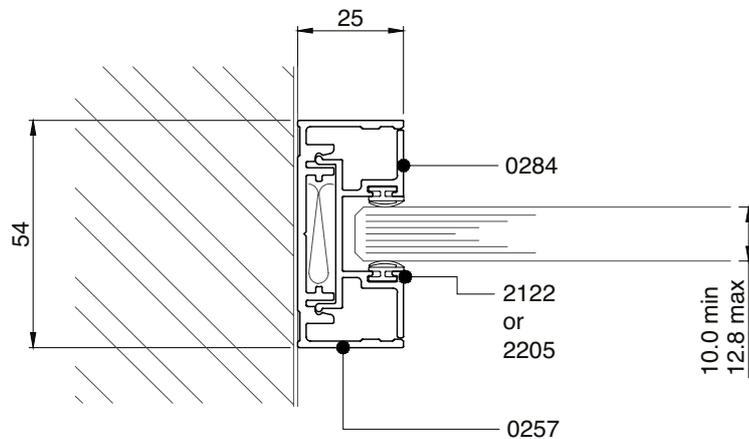
**NOTE:** 2122 Glazing Gasket for 12.0 & 12.8 Glass.  
2205 Glazing Gasket for 10.0 & 10.8 Glass.



Double glazed  
25mm wall abutment  
**054010-01**



Single glazed  
25mm wall abutment  
**054010-02**

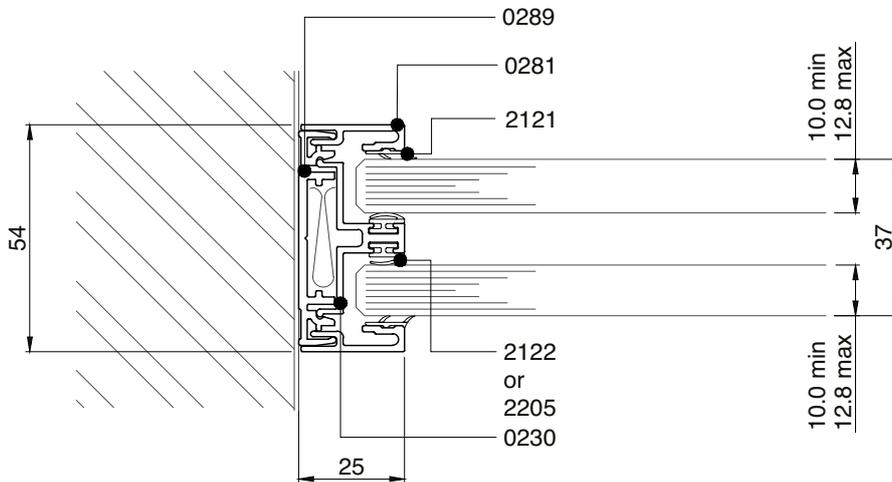


Single glazed  
25mm wall abutment  
**054010-03**

# Revolution 54

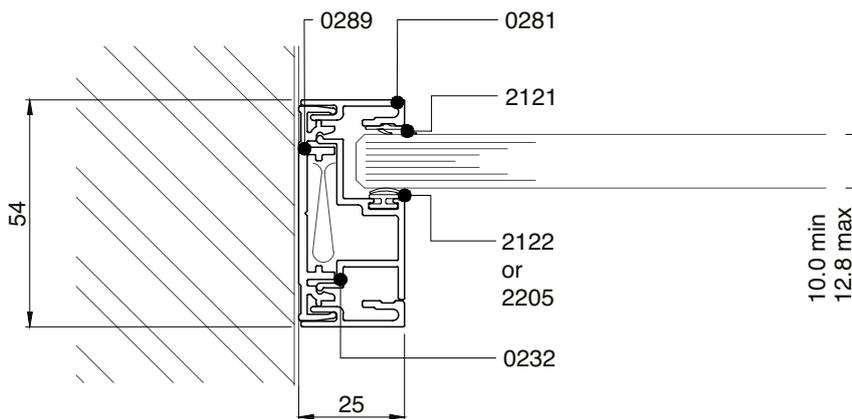
## Abutment Details: Horizontal Sections

**NOTE:** 2122 Glazing Gasket for 12.0 & 12.8 Glass.  
2205 Glazing Gasket for 10.0 & 10.8 Glass.



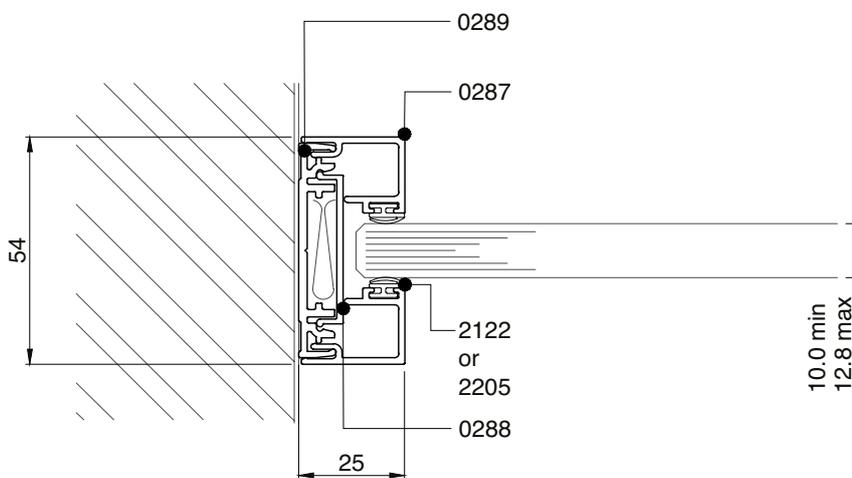
Double glazed  
25mm wall abutment  
with base channel  
profile and flush clip

**054011-01**



Single glazed  
25mm wall abutment  
with base channel  
profile and flush clip

**054011-02**



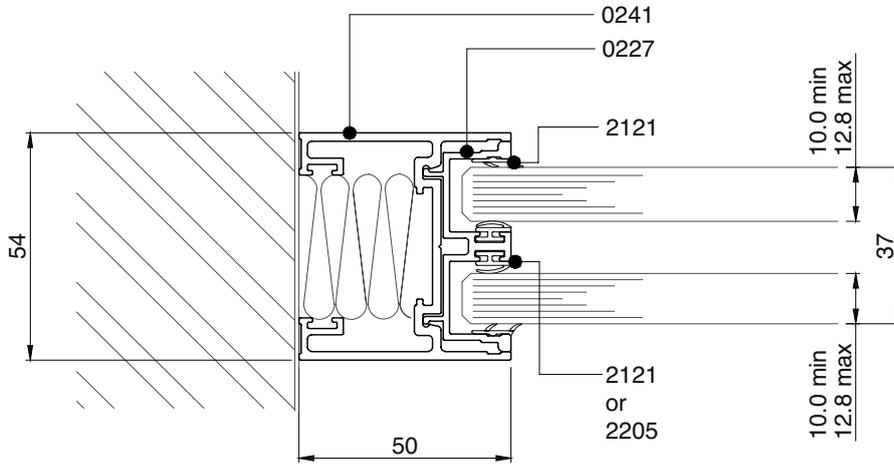
Single glazed  
25mm wall abutment  
with base channel  
profile and flush clip

**054011-03**

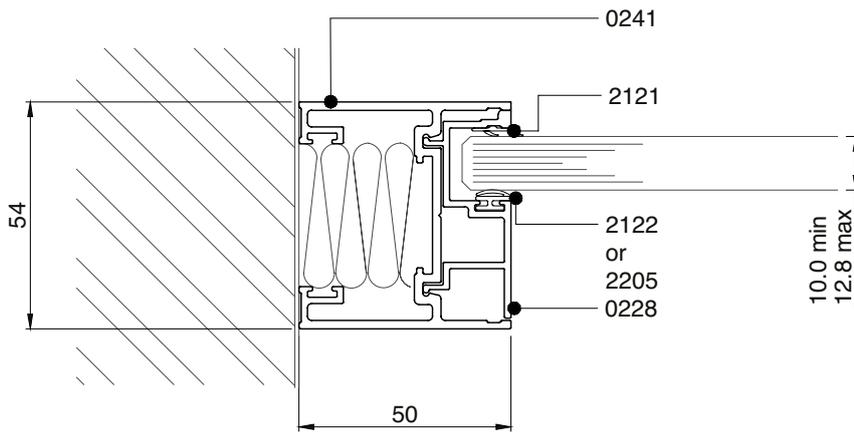
# Revolution 54

## Abutment Details: Horizontal Sections

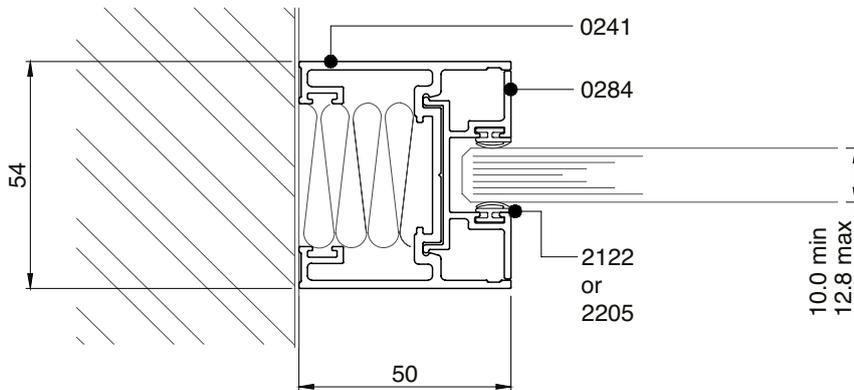
**NOTE:** 2122 Glazing Gasket for 12.0 & 12.8 Glass.  
2205 Glazing Gasket for 10.0 & 10.8 Glass.



Double glazed  
50mm wall abutment  
**054012-01**



Single glazed  
50mm wall abutment  
**054012-02**

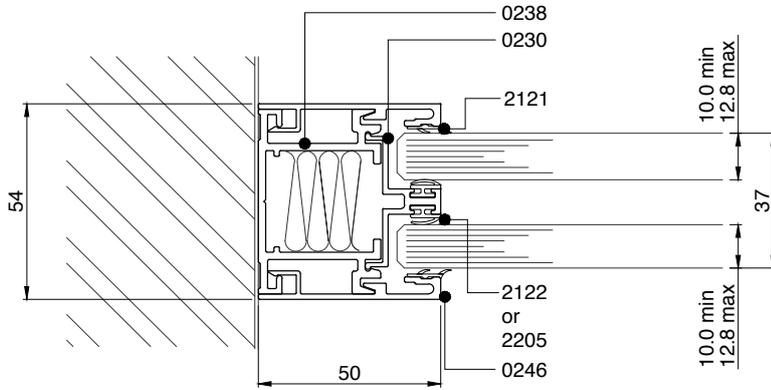


Single glazed  
50mm wall abutment  
**054012-03**

# Revolution 54

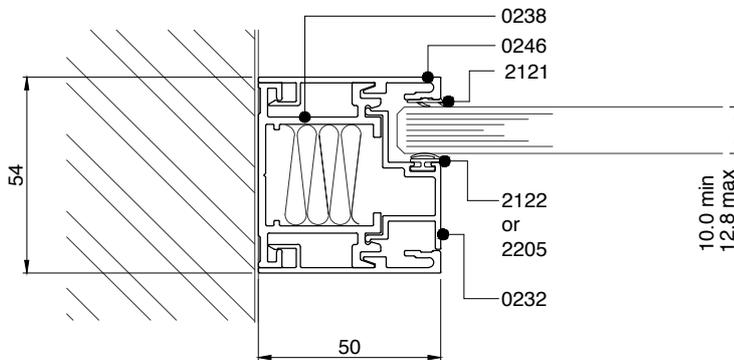
## Abutment Details: Horizontal Sections

**NOTE:** 2122 Glazing Gasket for 12.0 & 12.8 Glass.  
2205 Glazing Gasket for 10.0 & 10.8 Glass.



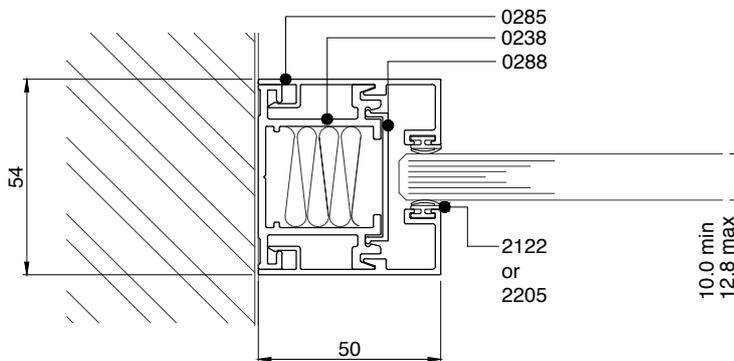
Double glazed  
50mm wall abutment  
with base channel  
profile and flush clip

**054013-01**



Single glazed  
50mm wall abutment  
with base channel  
profile and flush clip

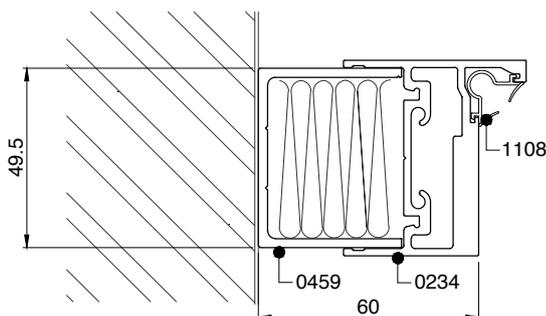
**054013-02**



Single glazed  
50mm wall abutment  
with base channel  
profile and flush clip

**054013-03**

## Abutment Details: Wall Spacer



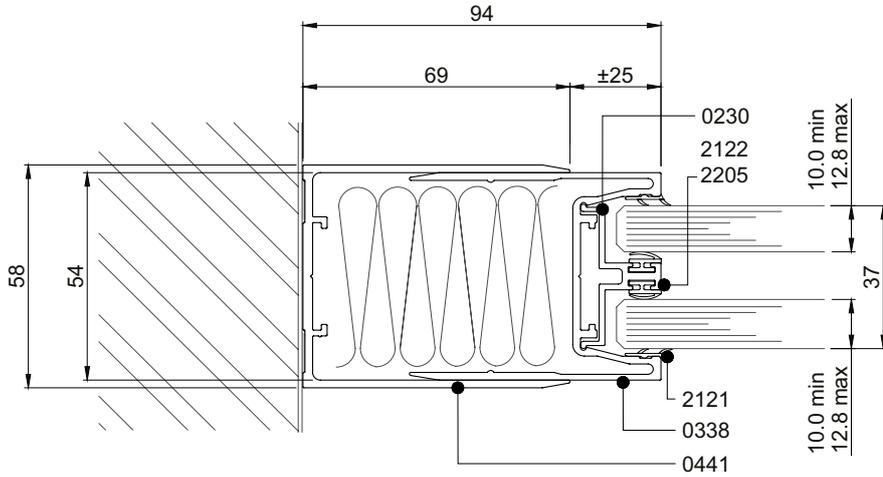
Wall abutment spacer  
49.5mm with D450 door frame

**054013-04**

# Revolution 54

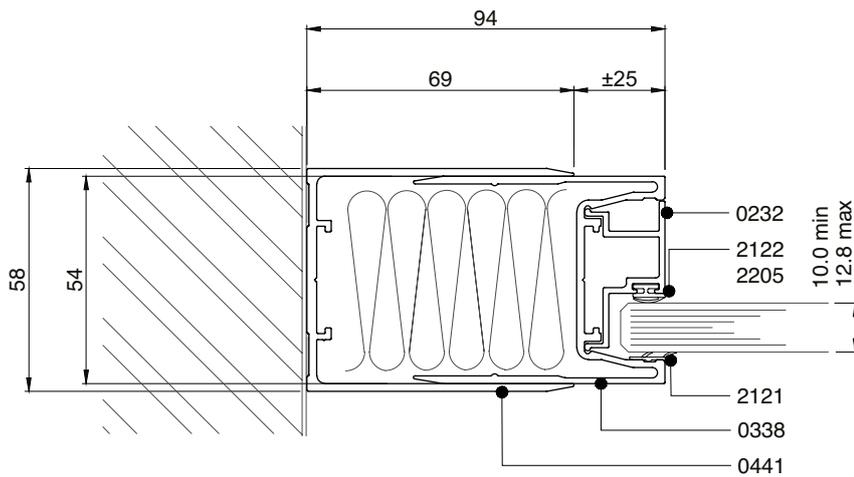
## Abutment Details: Horizontal Sections

**NOTE:** 2122 Glazing Gasket for 12.0 & 12.8 Glass.  
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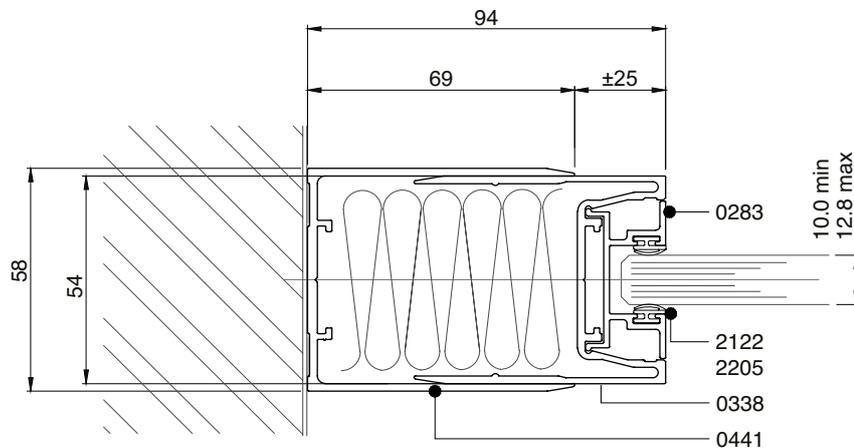
Double glazed head track with outer upper channel  
±25 deflection

**054014-01**



Single glazed head track with outer upper channel  
±25 deflection

**054014-02**



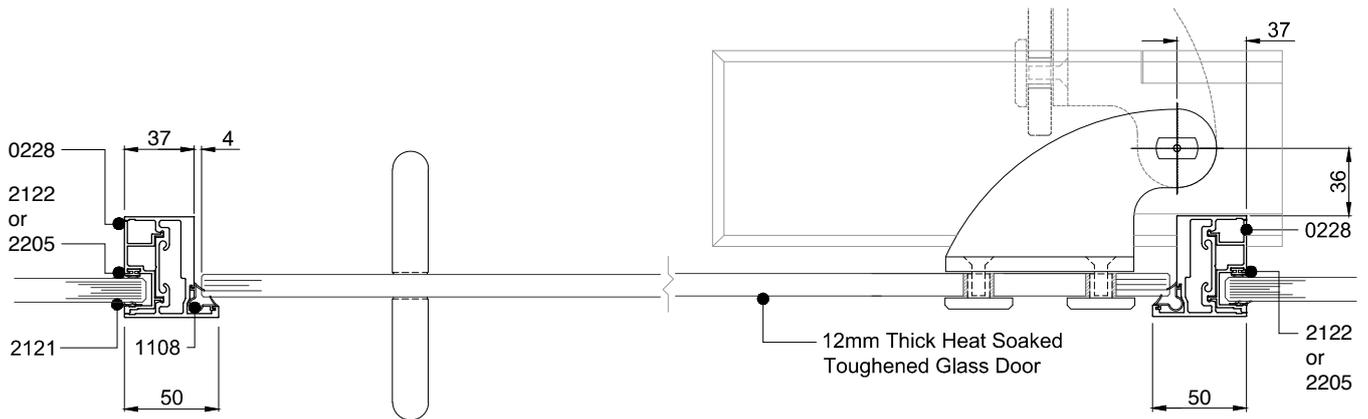
Single glazed head track with outer upper channel  
±25 deflection

**054014-03**

# Revolution 54

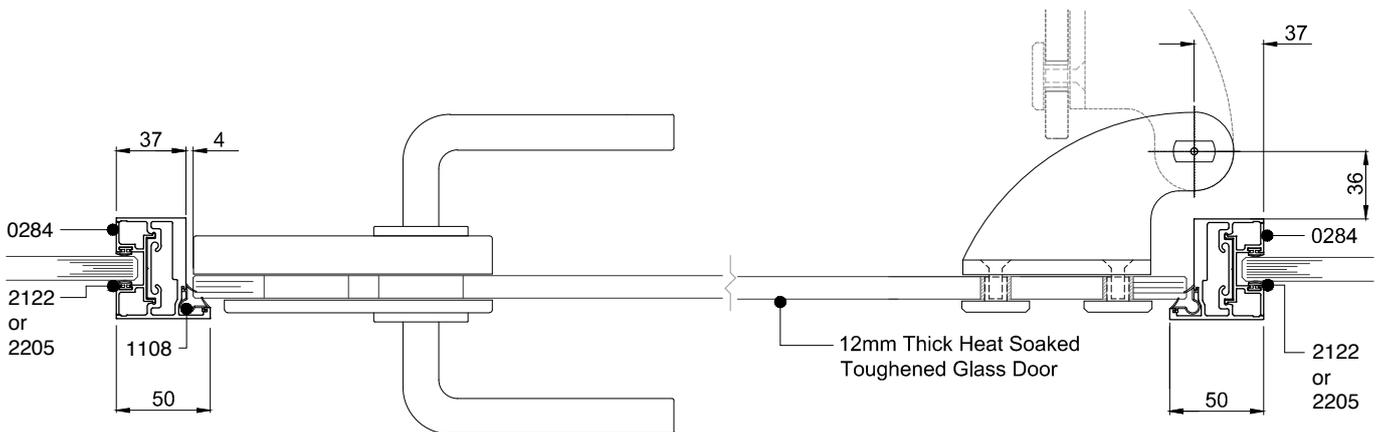
## Door Set Details: Horizontal Sections

**NOTE:** 2122 Glazing Gasket for 12.0 & 12.8 Glass.  
2205 Glazing Gasket for 10.0 & 10.8 Glass.



Single glazed abutment to AXILE Clarity door  
on quad pivot with Microflush D450 door jamb

054015-01

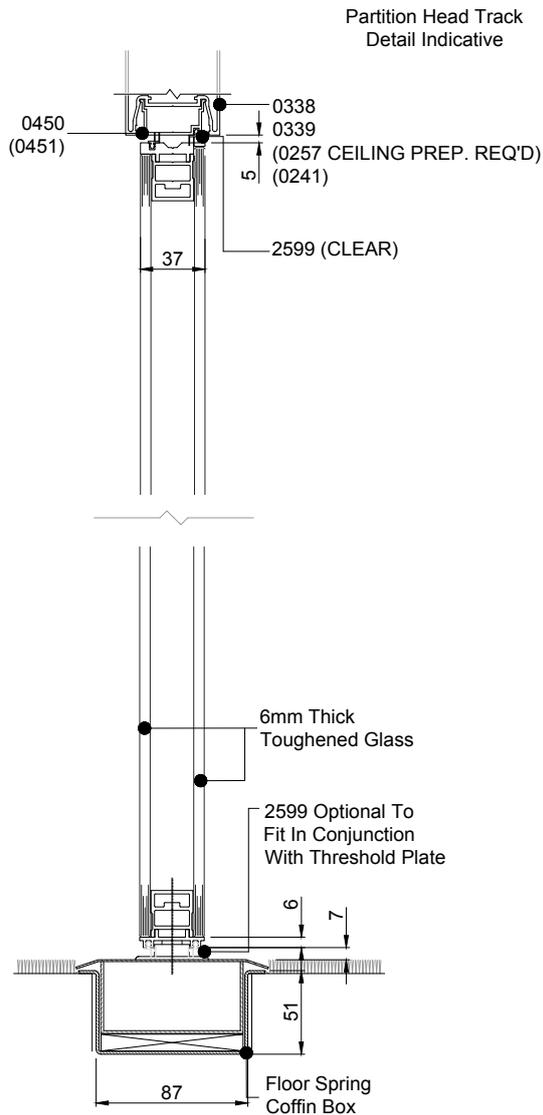


Single glazed abutment to AXILE Clarity door  
on quad pivot with Microflush D450 door jamb

054015-02

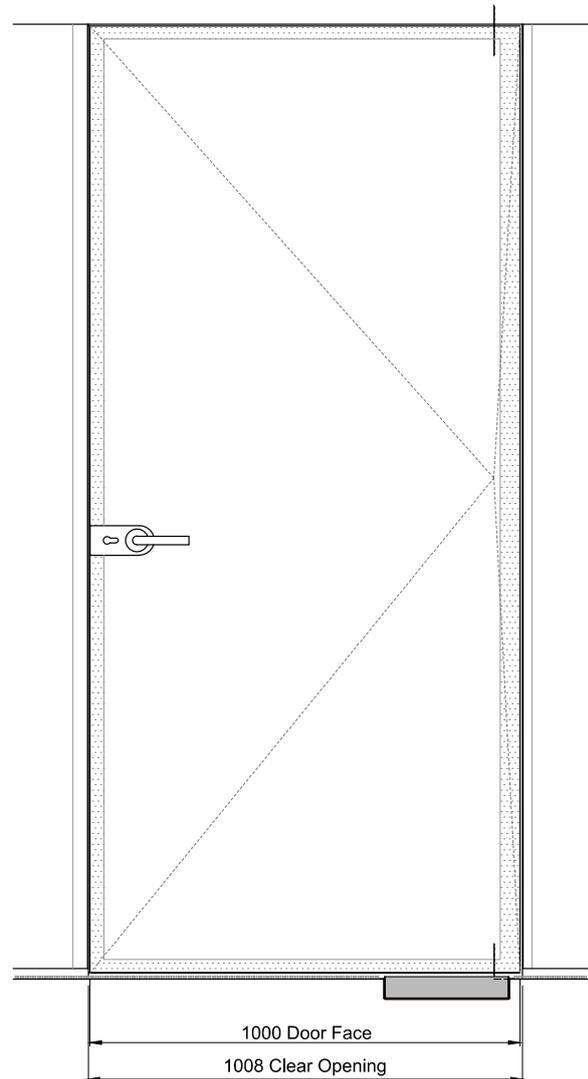
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## Door Set Details: Sections and Elevation



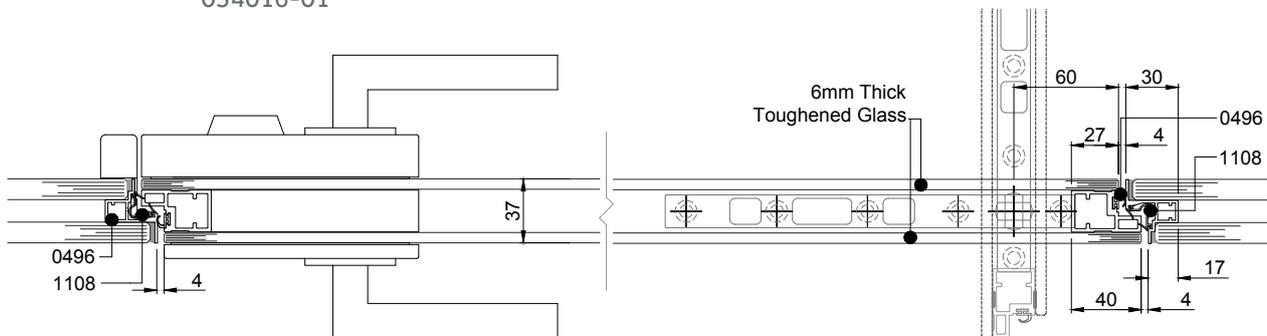
Typical section – AXILE Conceal door  
on in-line pivots in Revolution 54

054016-01



Typical elevation – AXILE Conceal door  
on in-line pivots in Revolution 54

054016-02

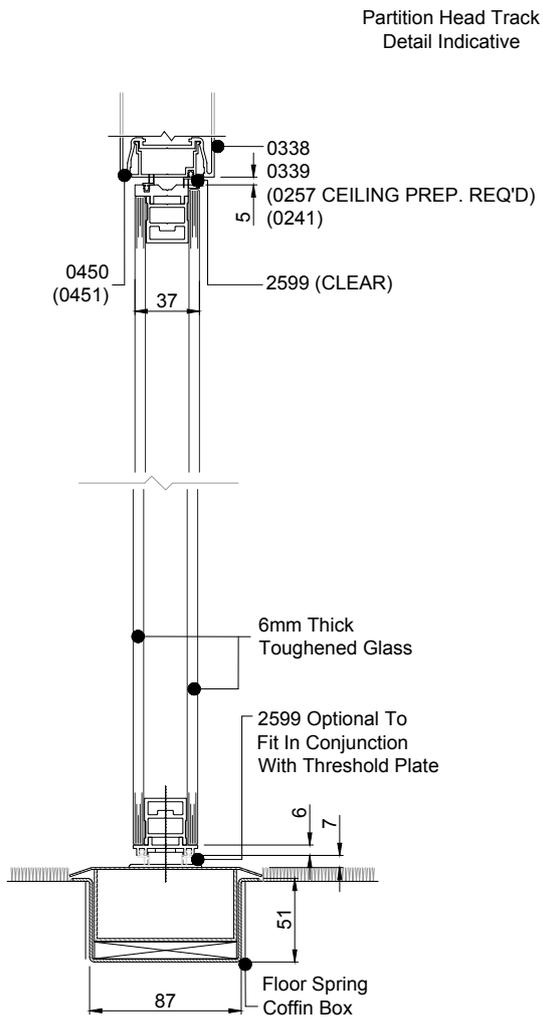


Typical section – AXILE Conceal door on in-line pivots in Revolution 54

054016-03

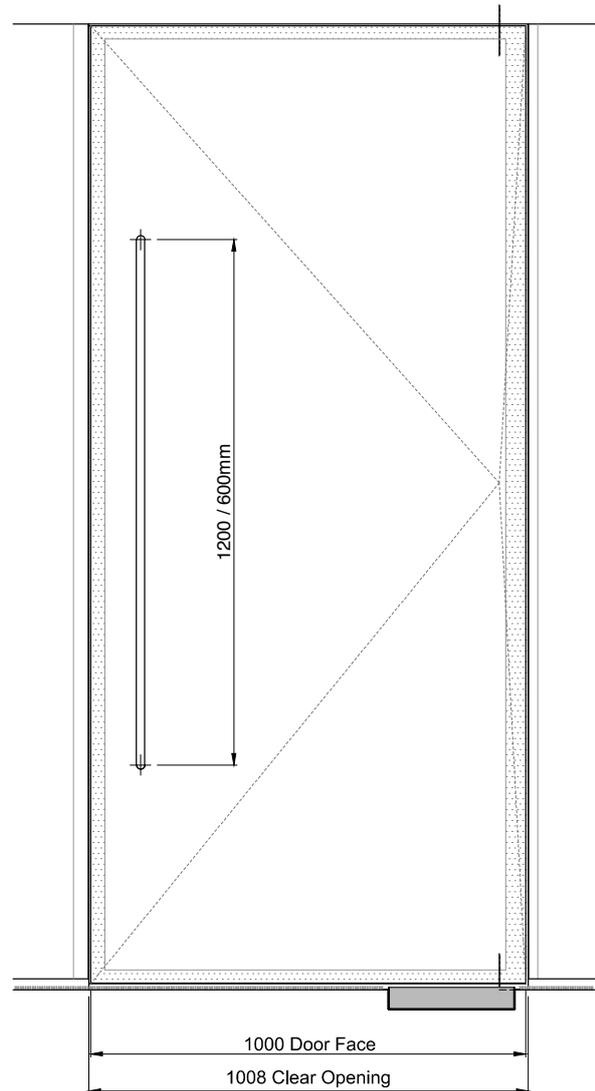
# Revolution 54

## Door Set Details: Sections and Elevation



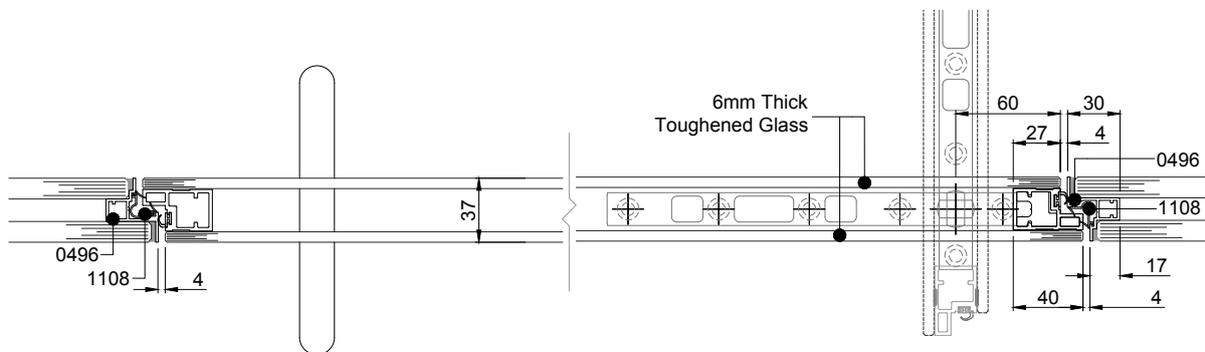
Typical section – AXILE Conceal door  
on in-line pivots in Revolution 54

054017-01



Typical elevation – AXILE Conceal door  
on in-line pivots in Revolution 54

054017-02

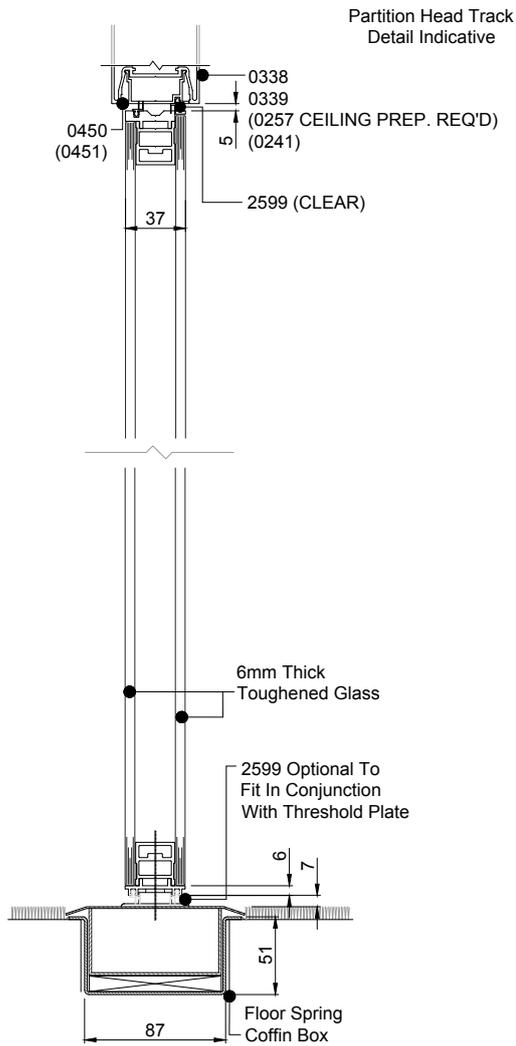


Typical section – AXILE Conceal door on in-line pivots in Revolution 54

054017-03

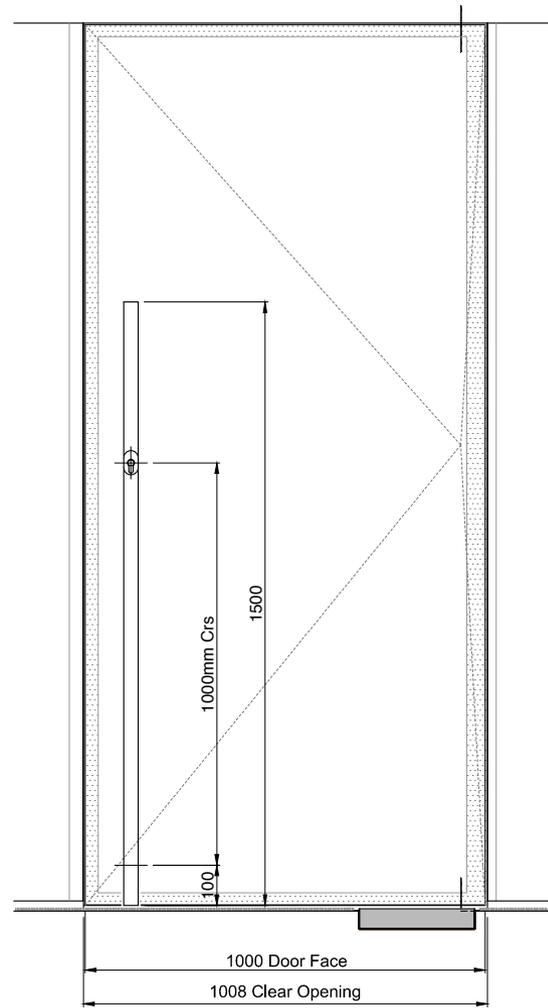
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## Door Set Details: Sections and Elevation



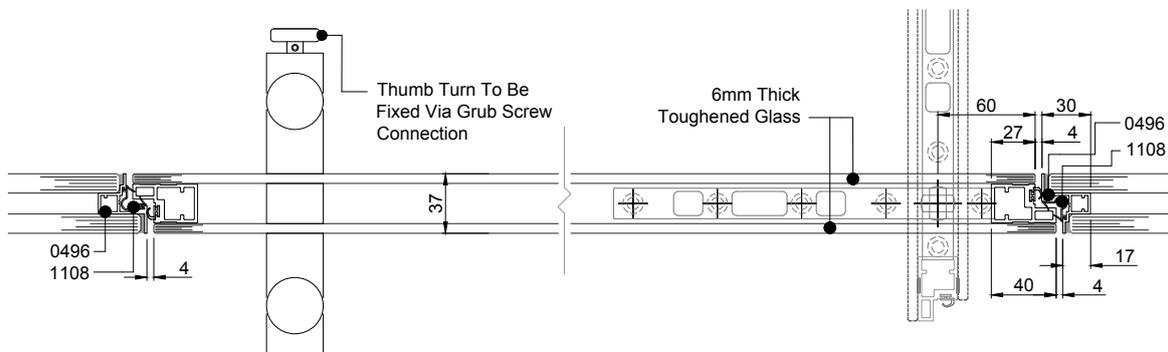
Typical section – AXILE Conceal door on in-line pivots in Revolution 54

054018-01



Typical elevation – AXILE Conceal door on in-line pivots in Revolution 54

054018-02

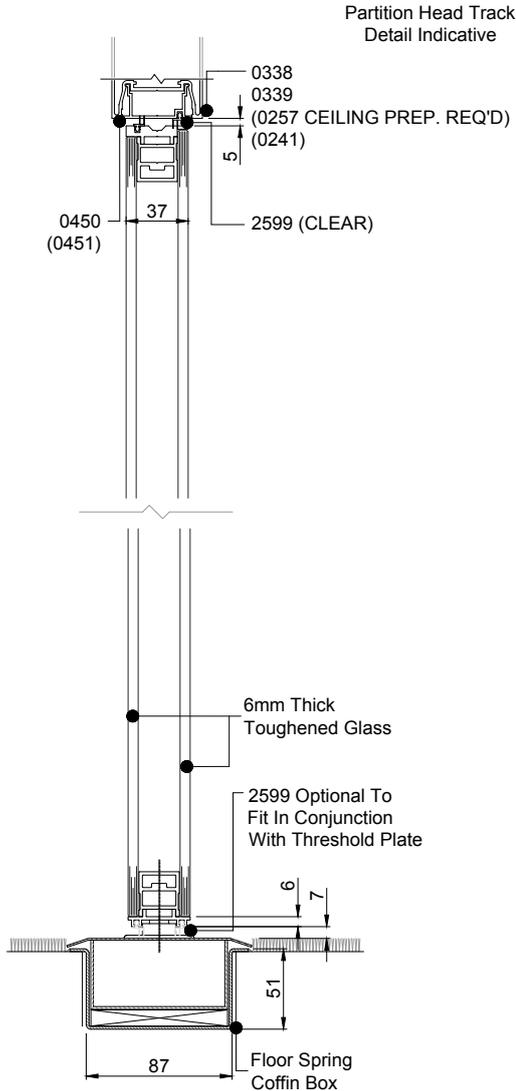


Typical section – AXILE Conceal door on in-line pivots in Revolution 54

054018-03

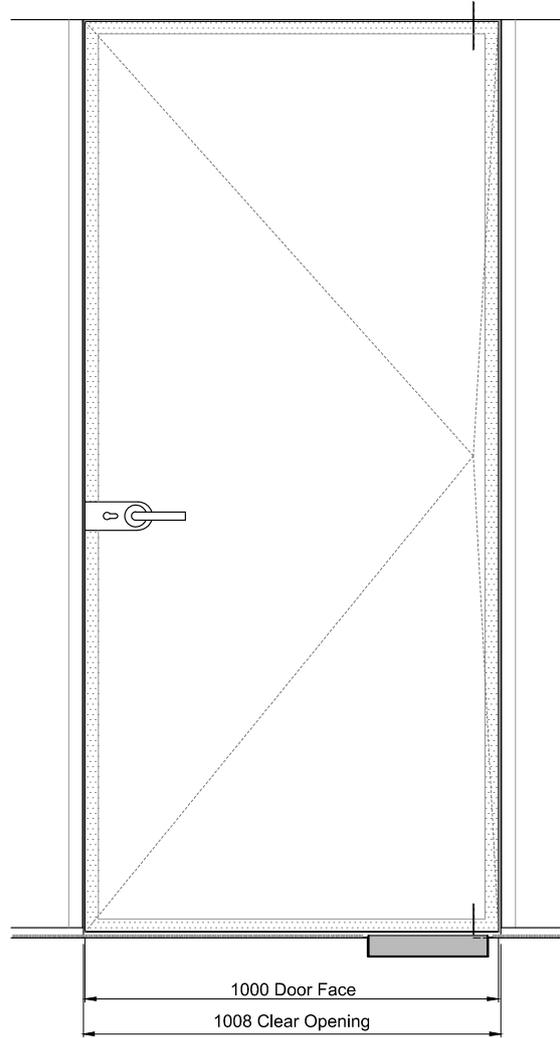
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## Door Set Details: Sections and Elevation



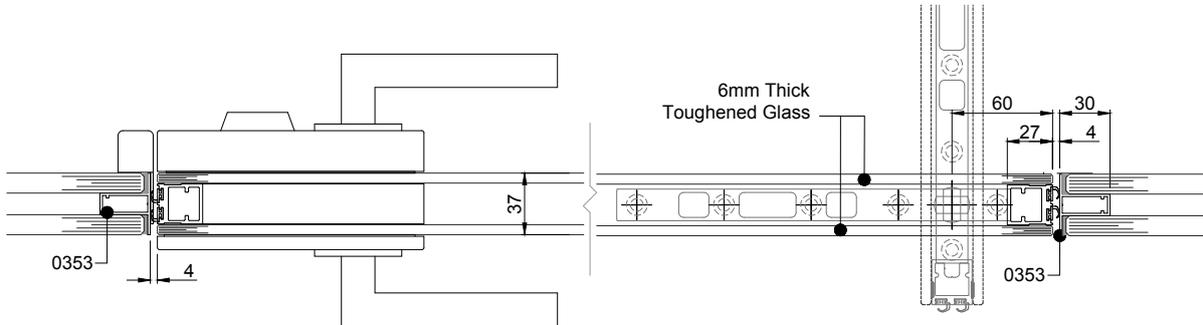
Typical section – AXILE Harmony door on in-line pivots in Revolution 54

054019-01



Typical elevation – AXILE Harmony door on in-line pivots in Revolution 54

054019-02

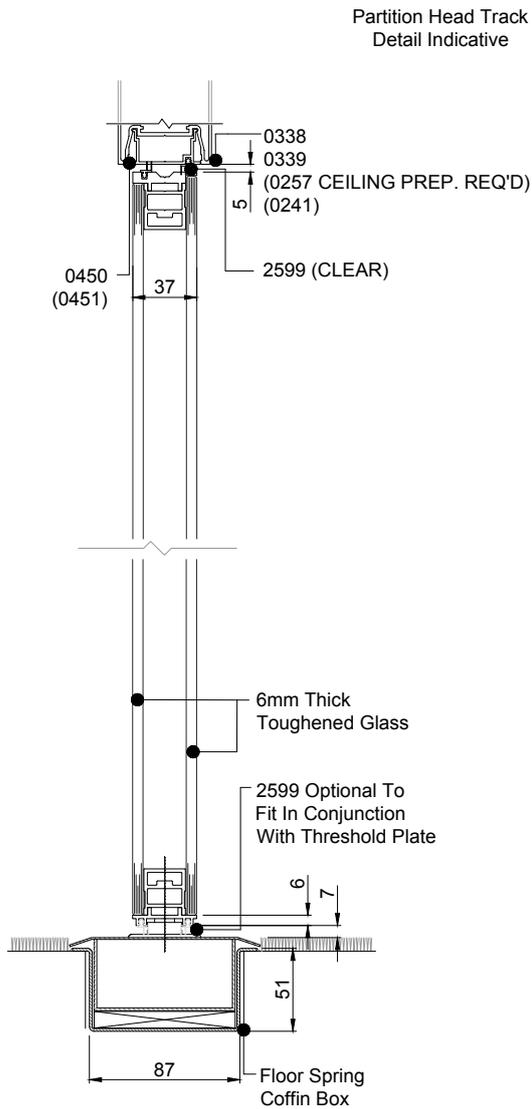


Typical section – AXILE Harmony door on in-line pivots in Revolution 54

054019-03

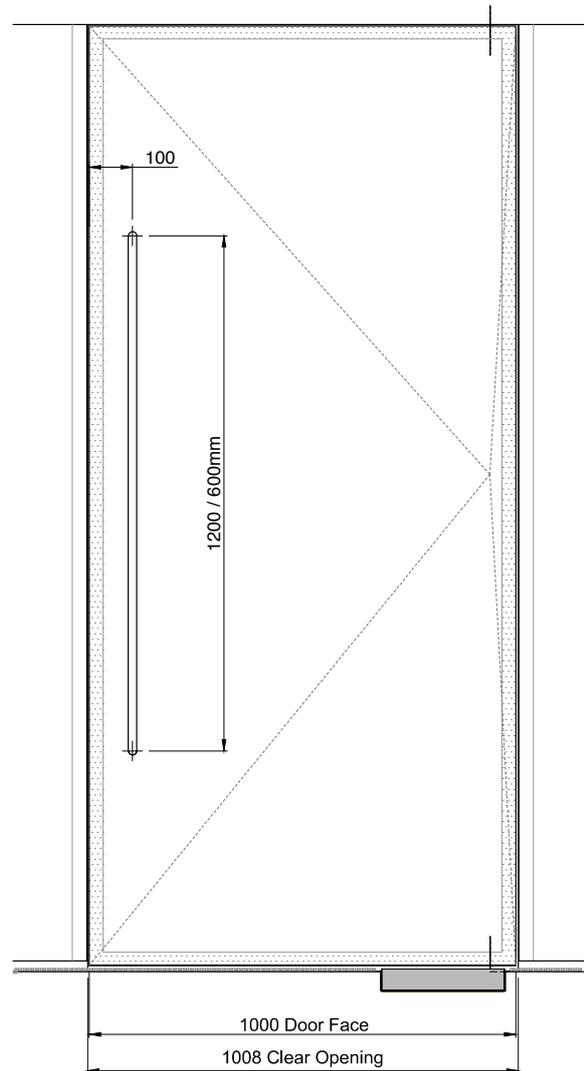
# Revolution 54

## Door Set Details: Sections and Elevation



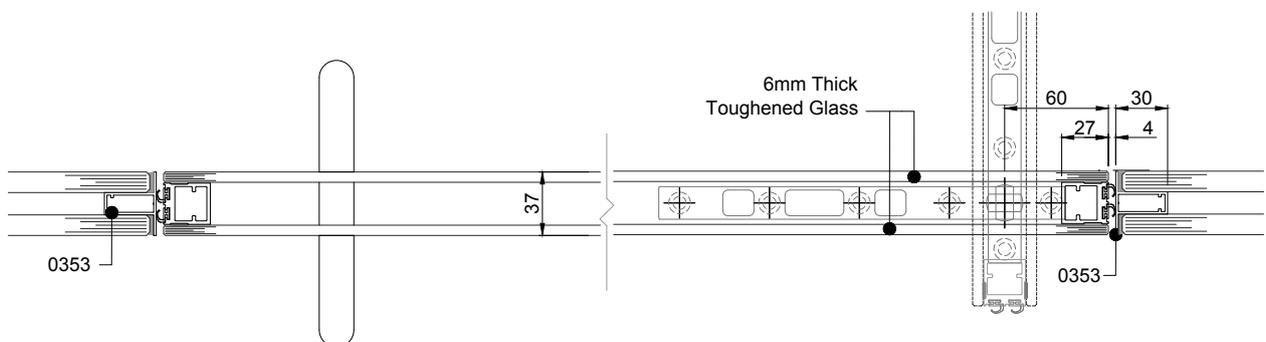
Typical section – AXILE Harmony door on in-line pivots in Revolution 54

054020-01



Typical elevation – AXILE Harmony door on in-line pivots in Revolution 54

054020-02

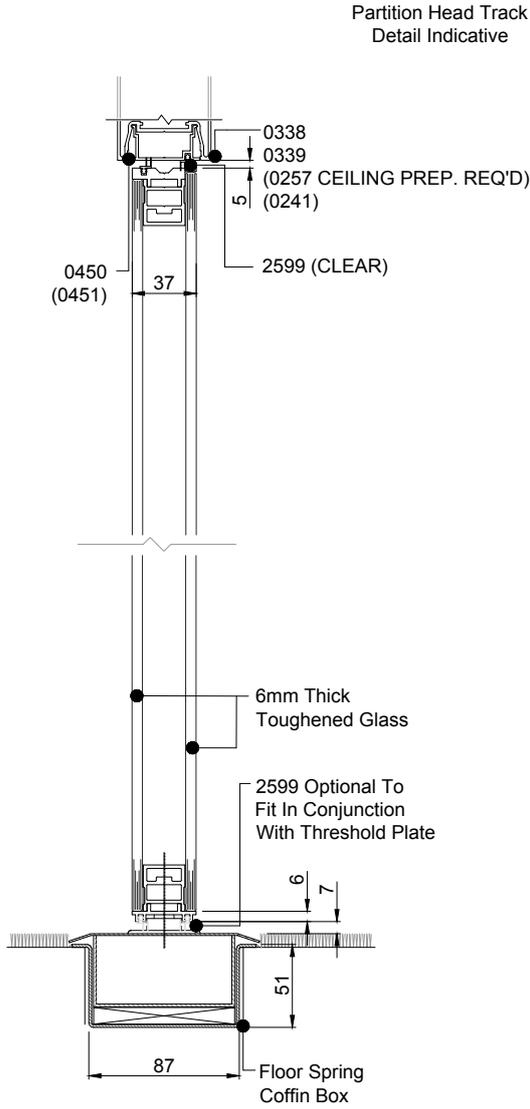


Typical section – AXILE Harmony door on in-line pivots in Revolution 54

054020-03

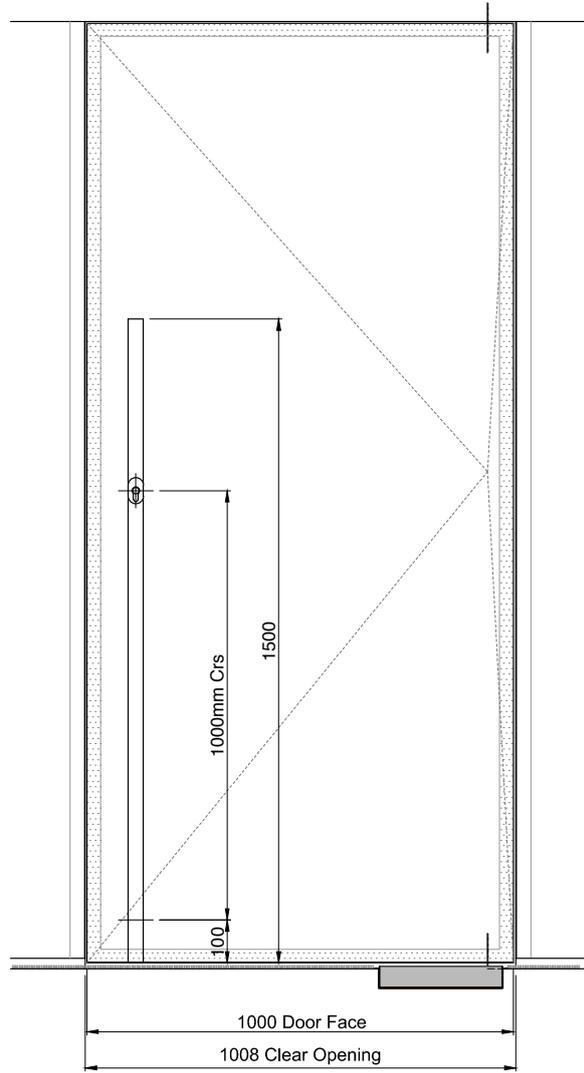
# Revolution 54

## Door Set Details: Sections and Elevation



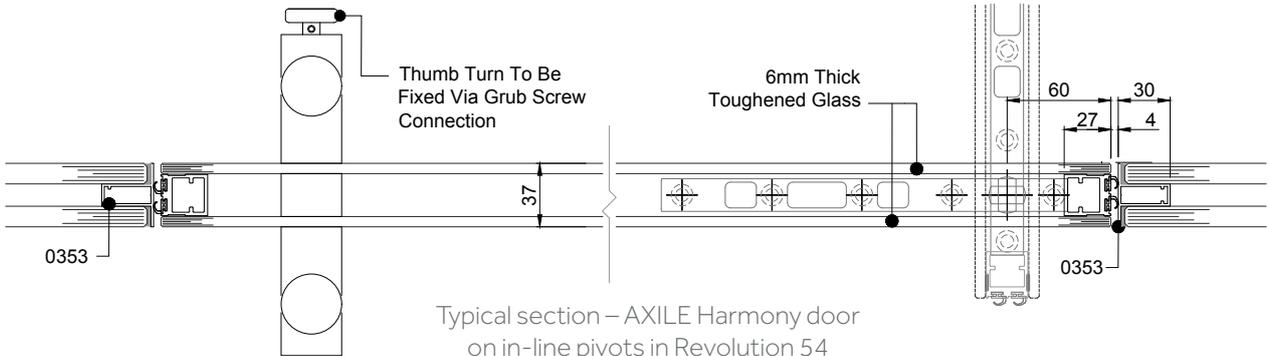
Typical section – AXILE Harmony door on in-line pivots in Revolution 54

054021-01



Typical elevation – AXILE Harmony door on in-line pivots in Revolution 54

054021-02

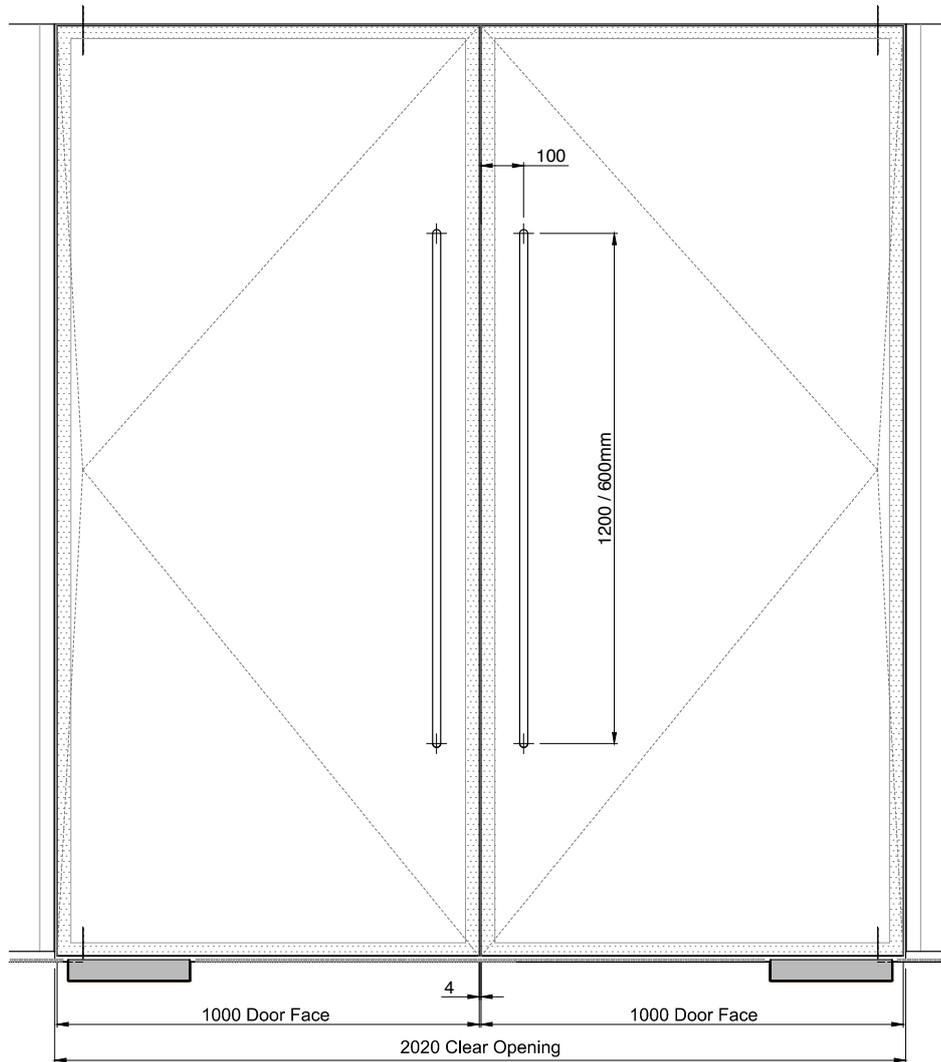


Typical section – AXILE Harmony door on in-line pivots in Revolution 54

054021-03

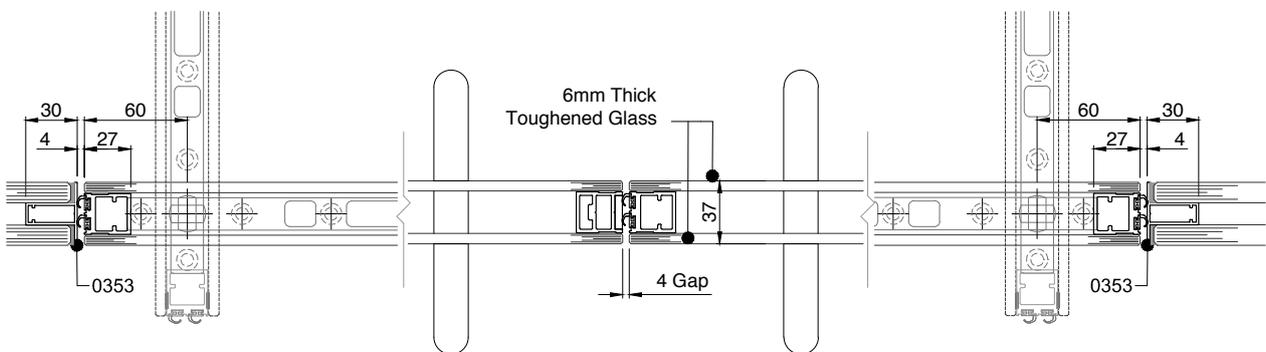
# Revolution 54

## Door Set Details: Sections and Elevation



Typical elevation – AXILE Harmony door  
on in-line pivots in Revolution 54

054022-01

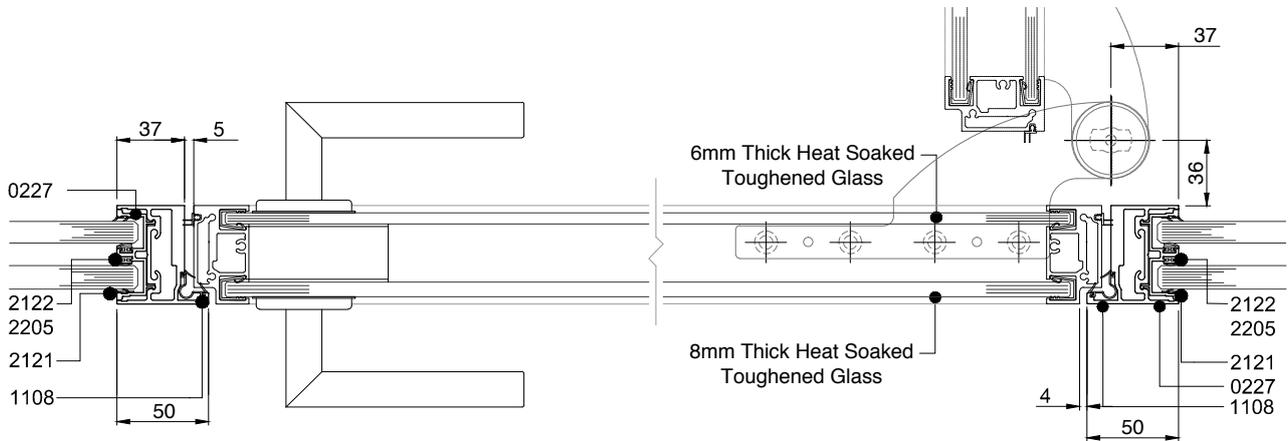


Typical section – AXILE Harmony door on in-line pivots in Revolution 54

054022-02

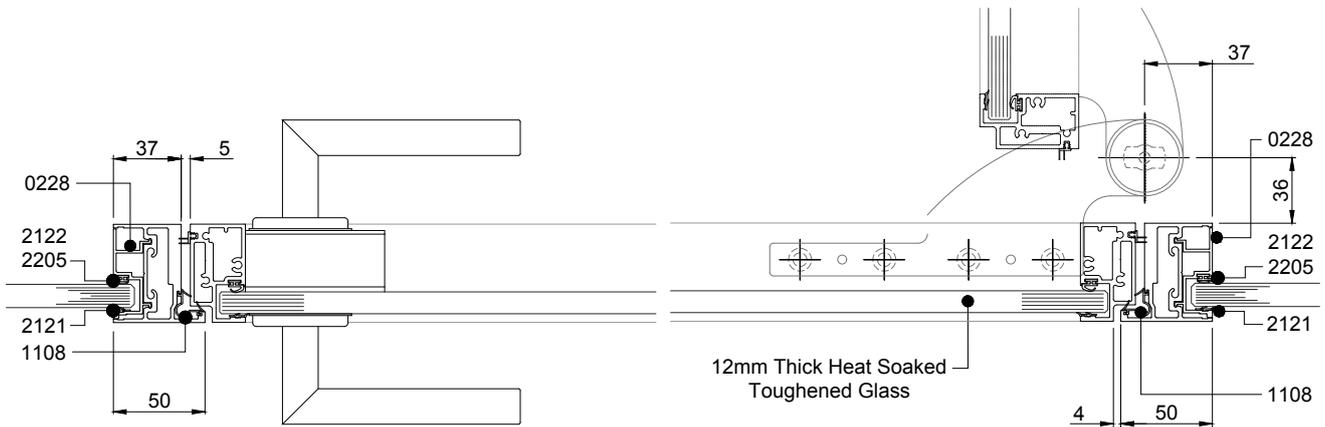
# Revolution 54

## Door Set Details: Horizontal Sections



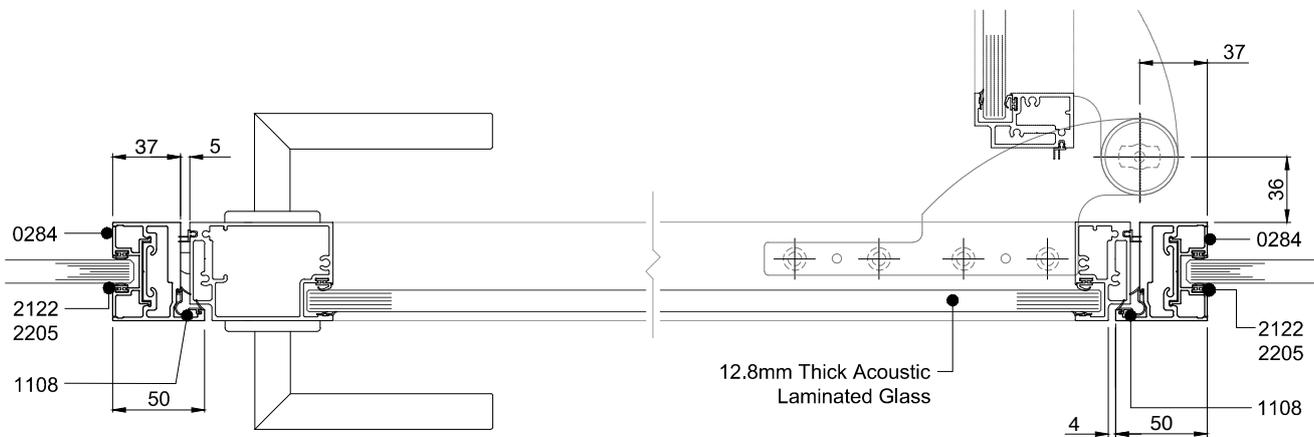
Double glazed abutment to EDGE Symmetry double glazed door on offset pivot with Microflush D450 door jamb

054023-01



Single glazed abutment to EDGE Symmetry single glazed door on offset pivot with Microflush D450 door jamb

054023-02



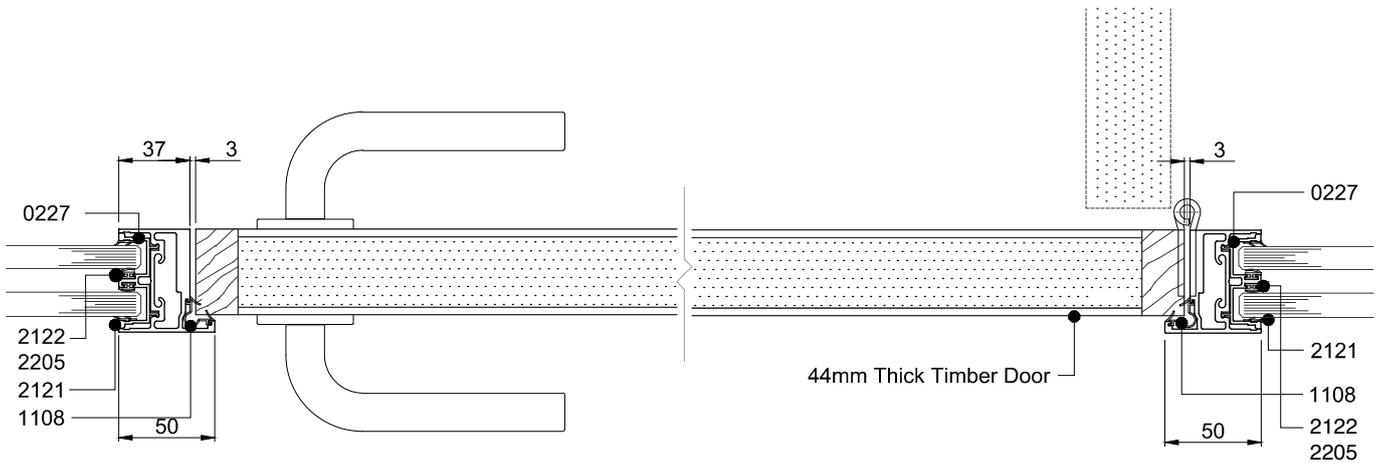
Single glazed abutment to EDGE Affinity single glazed door on offset pivot with Microflush D450 door jamb

054023-03

# Revolution 54

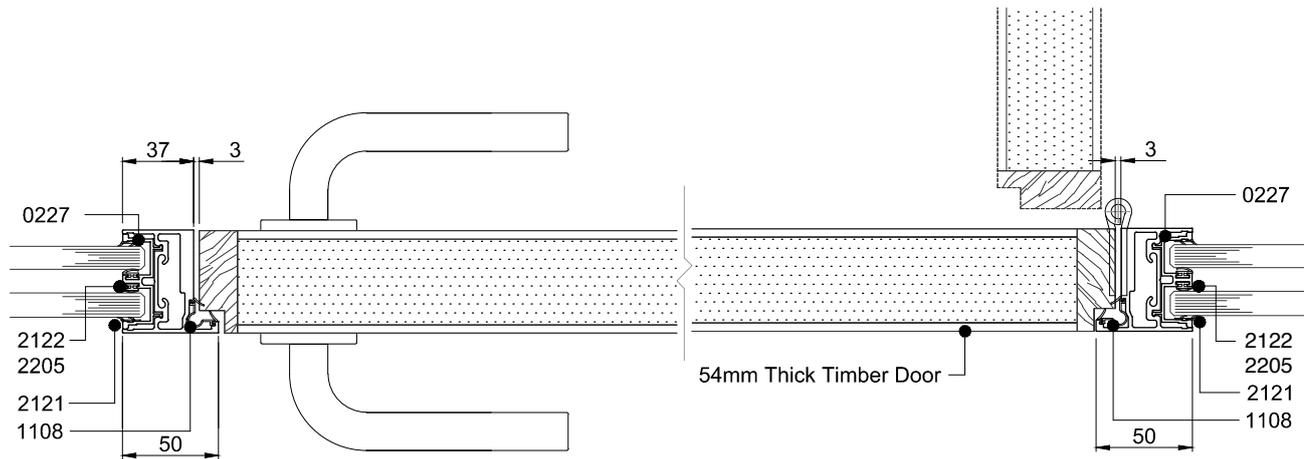
## Door Set Details: Horizontal Sections

**NOTE:** 2122 Glazing Gasket for 12.0 & 12.8 Glass.  
2205 Glazing Gasket for 10.0 & 10.8 Glass.



Double glazed abutment to 44mm thick hinged timber door  
with Microflush D450 door jamb

054024-01

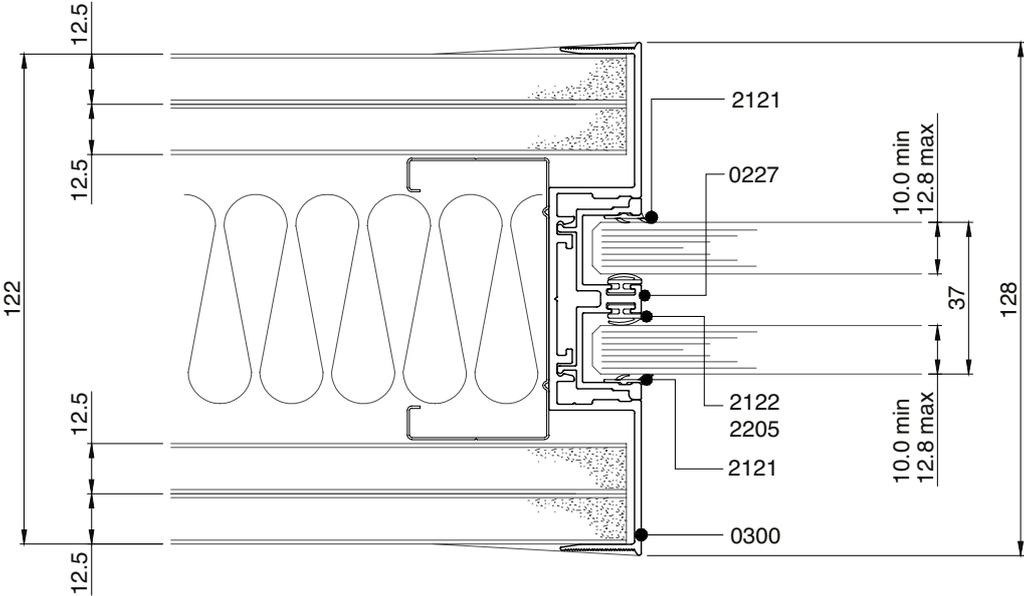


Double glazed abutment to 54mm thick hinged timber door  
with Microflush D450 door jamb

054024-02

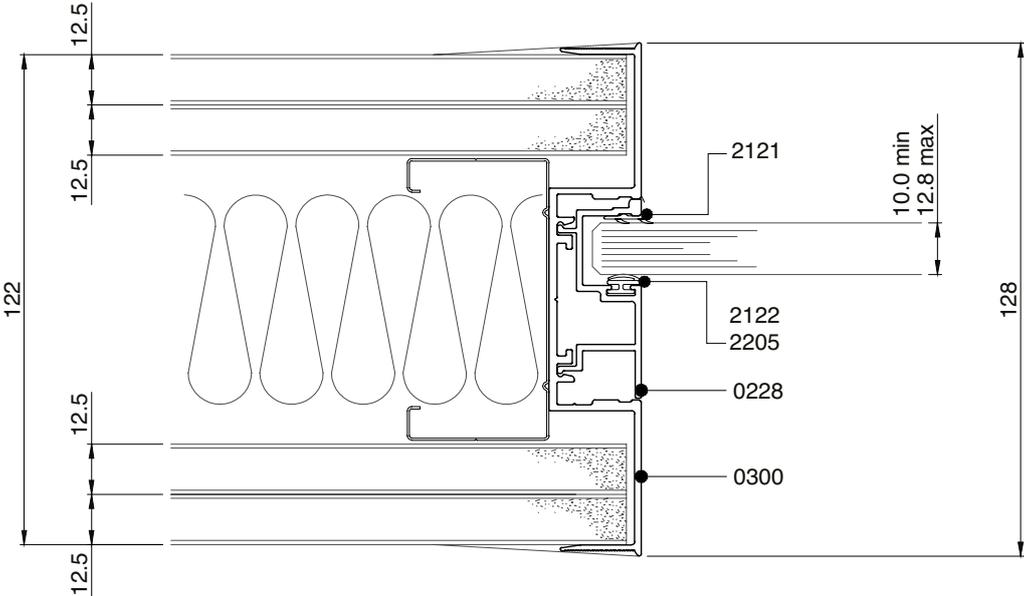
# Revolution 54

## Abutment Details: Horizontal Sections Generic Drywall



Tapeable glazing bar double glazed, double boarded

054025-01



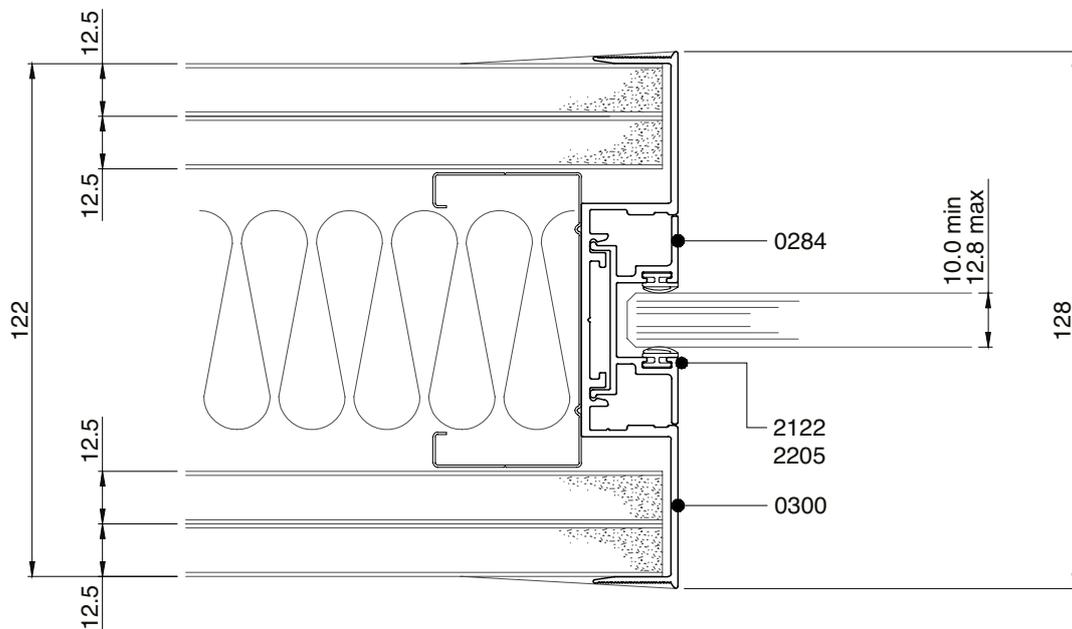
Tapeable glazing bar single glazed, double boarded

054025-02

# Revolution 54

## Abutment Details: Horizontal Sections Generic Drywall

**NOTE:** 2122 Glazing Gasket for 12.0 & 12.8 Glass.  
2205 Glazing Gasket for 10.0 & 10.8 Glass.



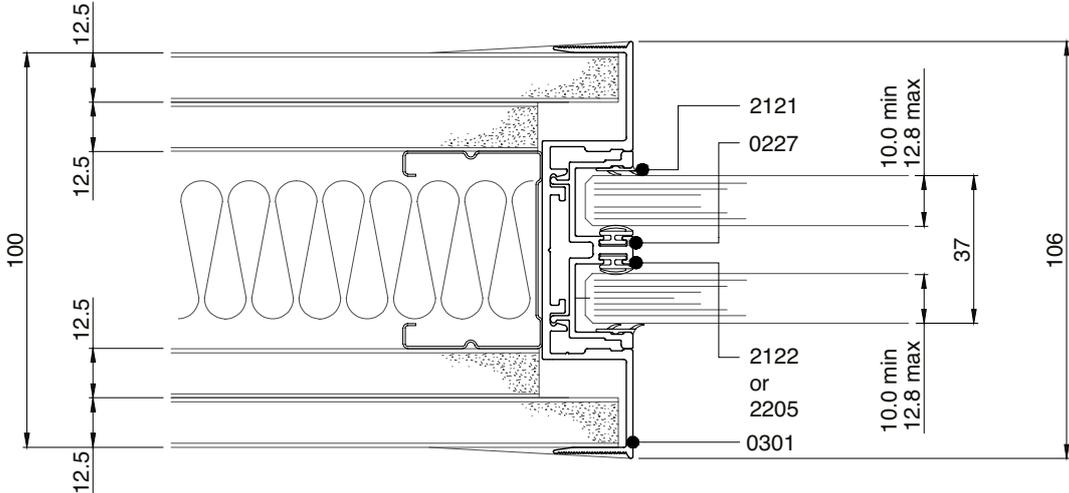
Tapeable glazing bar  
single glazed, double boarded

054026-01

# Revolution 54

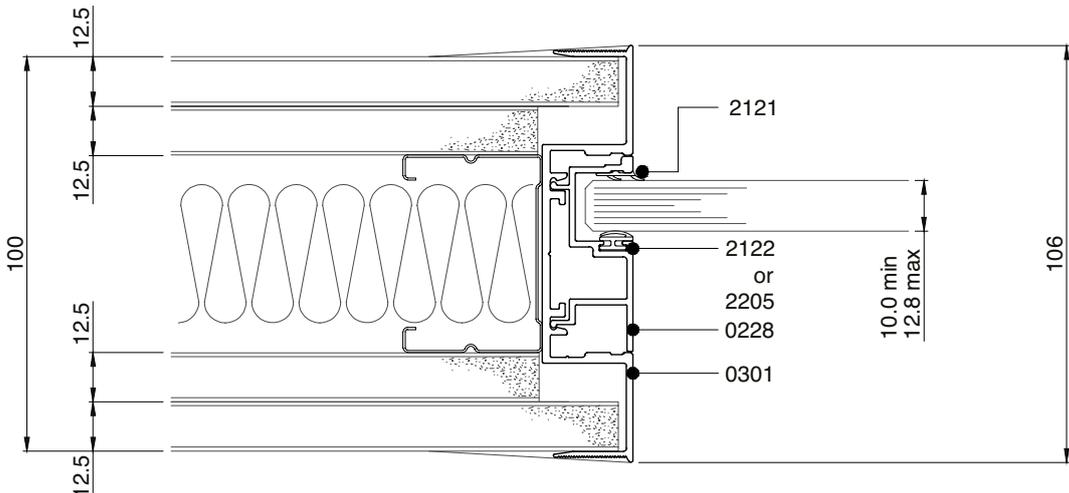
## Abutment Details: Horizontal Sections Generic Drywall

**NOTE:** 2122 Glazing Gasket for 12.0 & 12.8 Glass.  
 2205 Glazing Gasket for 10.0 & 10.8 Glass.



Tapeable glazing bar  
 double glazed, double boarded

054027-01



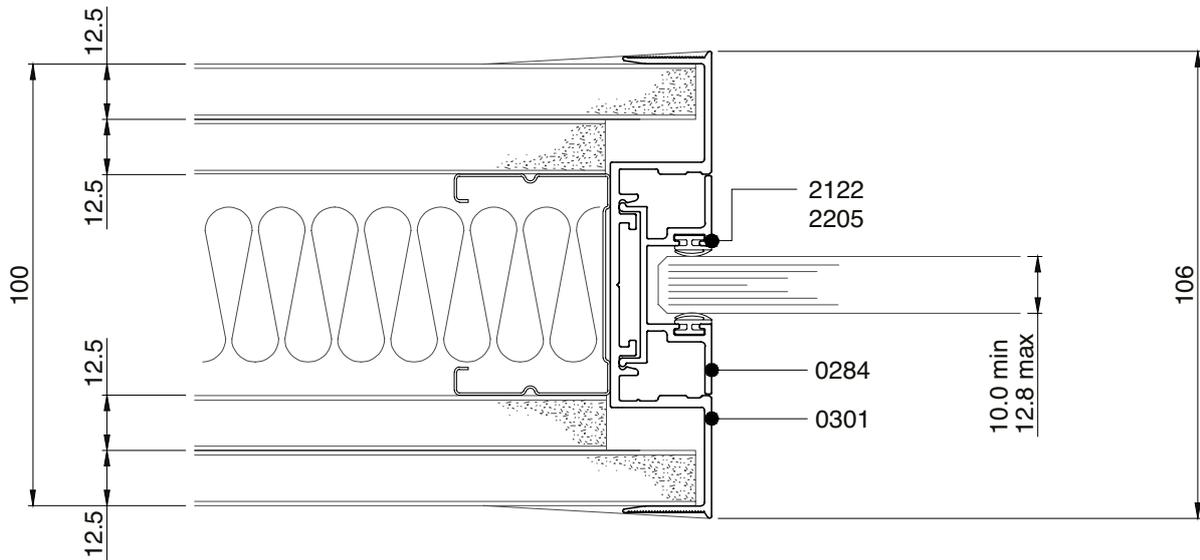
Tapeable glazing bar  
 single glazed, double boarded

054027-02

# Revolution 54

## Abutment Details: Horizontal Sections Generic Drywall

**NOTE:** 2122 Glazing Gasket for 12.0 & 12.8 Glass.  
2205 Glazing Gasket for 10.0 & 10.8 Glass.

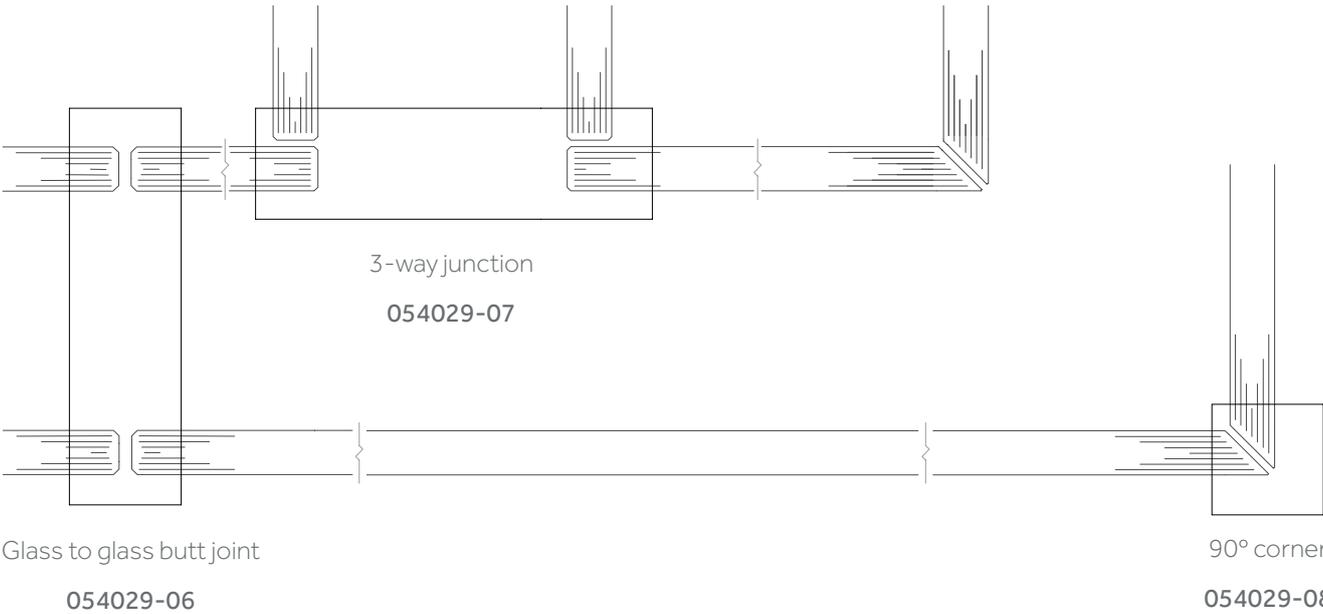
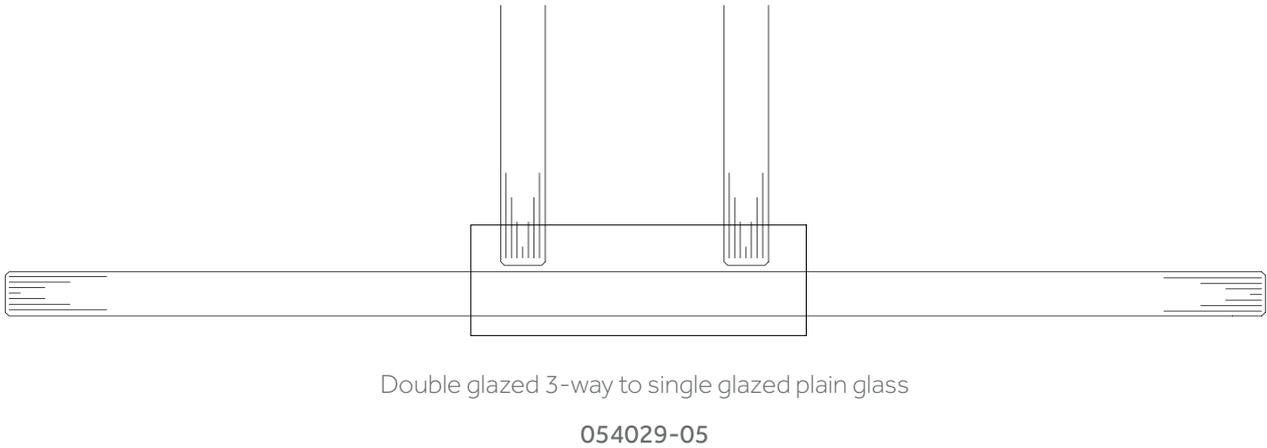
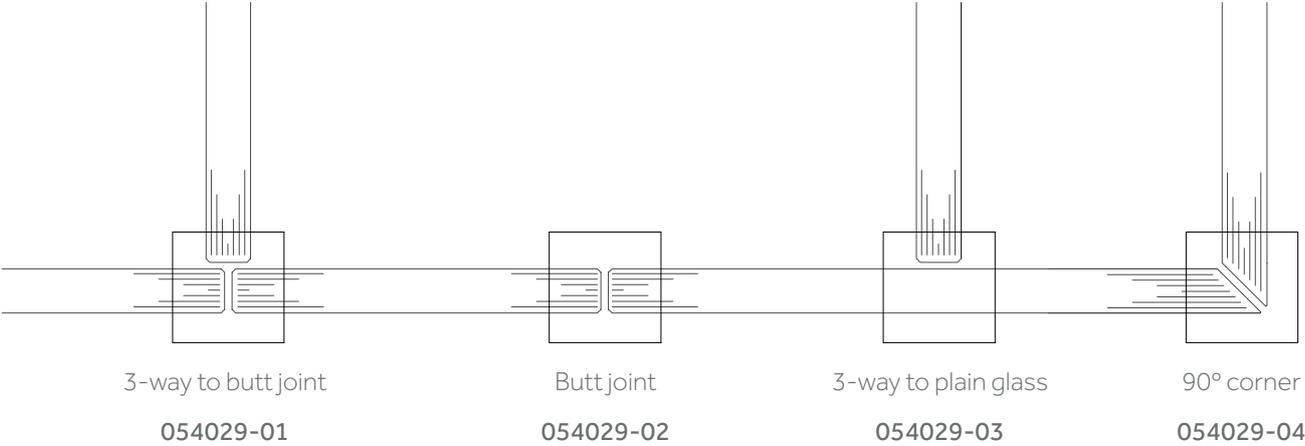


Tapeable glazing bar  
single glazed, double boarded

054028-01

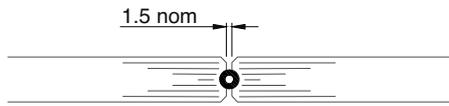
# Revolution 54

## Glass to Glass Joint Options: Horizontal Sections



# Revolution 54

## Glass to Glass Joint Options: Horizontal Sections



Nebula Patented Butt-Joint - All Glass Types

Glass to glass Nebula™  
patented joint dry joint

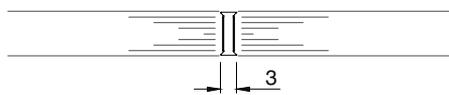
054030-01



0060 - 12mm & 12.8mm glass  
0077 - 10mm & 10.8mm glass

Glass to glass  
aluminium dry joint

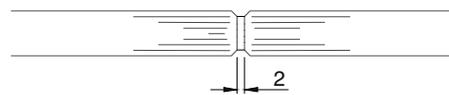
054030-02



1001 - 10mm glass      1201 - 12mm glass  
1081 - 10.8mm glass    1281 - 12.8mm glass

Glass to glass Ghost  
dry joint

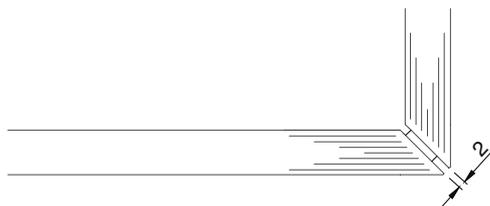
054030-03



4618 - 10mm & 10.8mm glass  
4918 - All other glass thicknesses

Taped dry joint

054030-04



4918 - All glass thicknesses

90° mitre taped  
corner dry joint

054030-05



(Including 3-Way cavity junction in double glazed application)  
0076 - 10mm & 10.8mm glass    0075 - 12mm & 12.8mm glass  
0420 - 16.8mm glass

90° corner aluminium  
dry joint

054030-06



1002 - 10mm glass      1202 - 12mm glass  
1082 - 10.8mm glass    1282 - 12.8mm glass

90° corner Ghost  
dry joint

054030-07



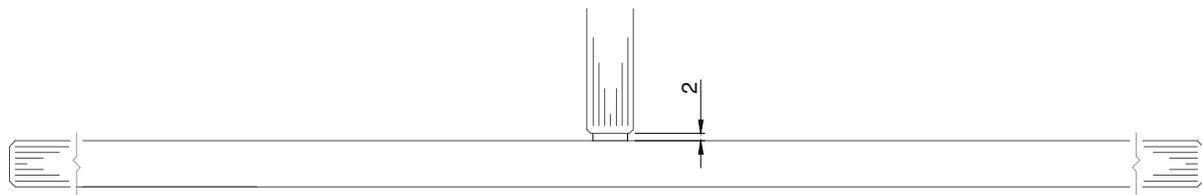
4618 - 10mm & 10.8mm glass  
4918 - All other glass thicknesses

90° taped corner  
dry joint

054030-08

# Revolution 54

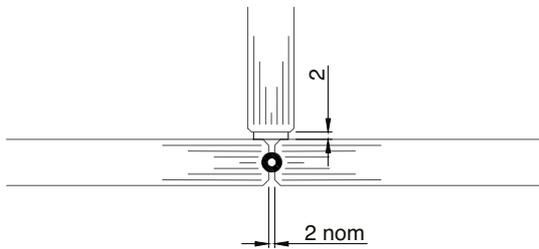
## Glass to Glass Joint Options: Horizontal Sections



4618 - 10mm & 10.8mm glass    4918 - 12mm & 12.8mm glass

Taped 3-way to plain glass

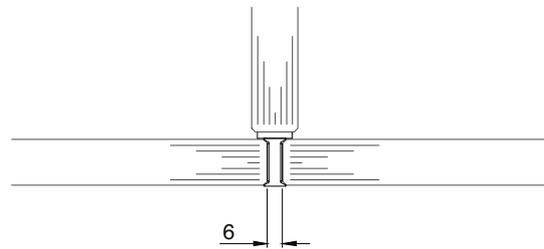
054031-01



4918 -  $\geq 12\text{mm}$  glass only  
Suitable for single glazed applications only.

Taped 3-way to Nebula™  
patented joint

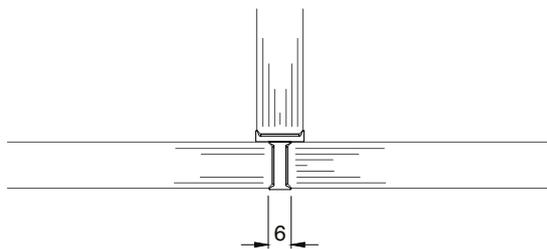
054031-02



4618 - 10mm & 10.8mm glass  
4918 - All other thicknesses

Taped 3-way to  
aluminium dry joint

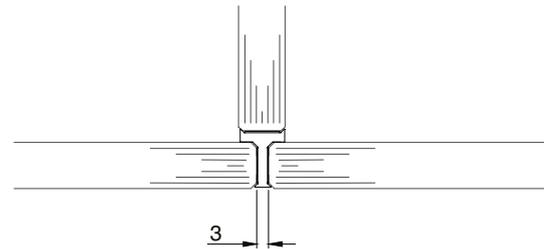
054031-03



0135 - 12mm & 12.8mm glass  
0212 - 10mm & 10.8mm glass

Aluminium 2-way to  
aluminium dry-joint

054031-04



1004 - 10mm glass    1084 - 10.8mm glass  
1204 - 12mm glass    1284 - 12.8mm glass

Ghost 3-way joint

054031-05

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# Specification

## Live Load Deflection

With the increasing trend towards the use of lightweight building materials, Optima recognises the need to cater for the resulting inevitable live load deflection of both structural slabs and perimeter curtain walling.

The Optima Revolution 54 partition system has the capacity to accommodate the following levels of asynchronous live load deflection:

Vertical Deflection: **±25mm** and **±40mm** as standard

Lateral Deflection: **±10mm** as standard, **±25mm** to special order

## Stiffness

**Standards: BS 5234 – Parts 1 & 2  
BS 6399 – Part 1**

All Optima glazed partition systems are designed to withstand the nominal crowd loadings that may be present in a typical office fit-out where there is no change in level greater than 380mm between one side of the partition and the other.

The recognised standard for the design and installation of partitions is BS 5234. However, since this standard was published, the nature of partition design has evolved to the extent that the standard no longer accurately represents the product on the market.

Part 2 of BS 5234 requires a series of tests to demonstrate strength and robustness with the results defined as a 'Duty Rating'. Unlike the partition types covered in the scope of BS 5234, modern 'frameless' glazed partitions are formed predominantly of glass and the testing regime cannot be reasonably applied.

Instead, Optima uses the known physical and structural characteristics of glass and specifies appropriate partition glass based on calculation and with reference to BS 6399 – Part 1. This standard suggests design loads that may act on the surface of a partition in a range of environments. However, neither BS 6399, nor any other UK standard stipulates the maximum degree of acceptable deflection under the design loads.

Every project is different and Optima considers each on its own merits and calculates the type and thickness of glass accordingly. Without a guiding standard the degree of acceptable deflection is extremely subjective. The Optima recommended criteria for maximum deflection are L/120 or 25mm, whichever is the lesser value. This is in line with the International Building Code, a US standard widely applied in many overseas regions, particularly the Middle East. These criteria will ensure a high degree of stiffness in the partition glass.

A more relaxed set of criteria are commonly applied in the UK. These state that the maximum acceptable deflection should be L/65 or 50mm, whichever is the lesser value. This would result in a more flexible partition. Therefore it is important to ensure that the safe stress limit of the glass is taken into account when specifying type and thickness. This is particularly important when considering glazed partitions for projects and locations where there is less incentive for the occupants to exercise care such as Public Sector buildings, particularly schools and hospitals.

Optima will consider both sets of deflection criteria when recommending glass on a project by project basis and in consultation with designers and specifiers. For further information and advice on glass specification, please contact the Optima Technical Sales Team.

## Maximum Height

Taking the above stiffness criteria into account, the Optima Revolution 54 system is available as follows:

Maximum Ceiling Height (12/12.8mm glass): **3000mm** as standard.

Greater ceiling heights may be accommodated subject to special order and correct glass selection – see below.

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# Specification

## Glass Selection

It is important to select glass appropriate to the situation into which it is being installed. All glass used in Optima glazed systems is class A safety glass as defined in BS6206. However, there are a number of glass types that fall into this category, some more appropriate than others in certain scenarios, and these are explained below.

### Annealed Glass

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#### Unprocessed float glass

Annealed glass in its basic, unprocessed form is not categorised as a safety glass and is therefore not suitable for use in partition systems or glass doors.

#### Toughened Glass

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##### Standard: BS EN 12150

This is annealed glass that has been thermally treated to give it much greater impact resistance: typically seven times greater. Toughened glass satisfies BS6206 in that it breaks safely, shattering into equally sized 'dice'. Toughened glass is the only glass recommended for use where drilling or clamping is required, for example, when used for accommodating door furniture.

It is important to note that the toughening process stimulates Nickel Sulphide (NiS), known as 'inclusions', which occurs naturally in float glass. The presence of these inclusions can, over time, although very rare, induce a spontaneous fracture of a toughened glass panel. While all glass processors take all practicable steps to supply inclusion-free glass, it is not possible to guarantee their absence. .

In order to ensure complete customer confidence in the safety of a glass, Optima recommends the use of **Heat Soaked Toughened Glass** for doors and **Laminate Glass** for Partitions. See below for more details.

#### Heat Soaked Toughened Glass

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##### Standard: BS EN 14179

To significantly reduce the risk of NiS induced spontaneous failure, toughened glass panels can be subjected to an additional process known as Heat Soak Testing. Although not providing a

100% guarantee, this process is used to reveal the presence of NiS inclusions. It is a destructive test, designed to break any panel that is at risk.

#### Laminate Glass

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##### Standard: BS EN ISO 12543

Laminate glass is produced by bonding two layers of annealed glass either side of a PolyVinyl Butyral (PVB) Interlayer. In order to be categorised as a class A safety glass the PVB interlayer must be not less than 0.76mm thick and safe breakage is achieved by the interlayer holding the fractured panel together.

#### Acoustic Laminate Glass

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##### Standard: BS EN ISO 12543

Acoustic laminate glass is produced in the same way as the regular laminate described above. However, it utilises a specially formulated acoustic PVB interlayer to achieve significantly better acoustic properties.

#### Toughened Laminate Glass

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##### Standards: BS EN 12150 (Toughened) and BS EN 12543 (Laminate)

This type of glass combines the benefits of both toughened and laminate glass and would typically involve a 1.5mm PVB interlayer. Because it has the additional benefit of lamination, the glass would not normally require the additional process of heat soaking. Toughened laminate glass should typically be specified for glass screens adjacent to a significant change in level (e.g., an atrium) and where there is the potential for significant crowd loading as defined in BS 6180 and BS 6399.

**The Optima Technical Sales Team will be happy to assist in the specification of the appropriate glass for your particular project requirements.**

# Specification

## Acoustic Performance

All Optima systems are subjected to sound insulation tests in accordance with BS EN ISO 10140-1:2010 and BS EN ISO 10140-2:2010 at UKAS accredited laboratories. These are optimised tests of the system only and not aggregate values for screen and door. The result is expressed as an  $R_w$  value.

The Optima Revolution 54 partition system has achieved the following UKAS accredited acoustic values for the stated construct:

<b>33dB (Rw)</b>	Test Ref: 33-133	12mm Toughened Glass in single glazed multi-module screen
<b>36dB (Rw)</b>	Assessed <sup>(1)</sup>	12.8mm Laminated Glass in single glazed multi-module screen
<b>38dB (Rw)</b>	Test Ref: 33-159	12mm Acoustic Laminate Glass in single glazed multi-module screen
<b>38dB (Rw)</b>	Assessed <sup>(1)</sup>	2 x 12mm Toughened Glass in double glazed multi-module screen
<b>39dB (Rw)</b>	Assessed <sup>(1)</sup>	12mm Toughened Glass + 12.8mm Laminated Glass in double glazed multi-module screen
<b>40dB (Rw)</b>	Assessed <sup>(1)</sup>	2 x 12.8mm Laminated Glass in double glazed multi-module screen
<b>41dB (Rw)</b>	Test Ref: 33-142	12mm Toughened Glass + 12.8mm Acoustic Laminate Glass in double glazed multi-module screen
<b>42dB (Rw)</b>	Test Ref: 33-152	12.8mm Laminate Glass + 12.8mm Acoustic Laminate Glass in double glazed multi-module screen
<b>44dB (Rw)</b>	Test Ref: 33-160	12.8mm Acoustic Laminate Glass + 12.8mm Acoustic Laminate Glass in multi-module screen with recessed drywall abutments
<b>45dB (Rw)</b>	Test Ref: AC09/308/01	12.8mm Acoustic Laminate Glass + 12.8mm Acoustic Laminate Glass in enhanced double glazed multi-module screen with recessed drywall abutments
<b>46dB (Rw)</b>	Test Ref: 33-162	12.8mm Acoustic Laminate Glass + 12.8mm Acoustic Laminate Glass in double glazed single-module screen with recessed drywall abutment
<b>33dB (Rw)<sup>2</sup></b>	Test Ref: 16106/02/P001	AXILE Conceal double glazed door
<b>32dB (Rw)<sup>2</sup></b>	Test Ref: 16106/02/P002	AXILE Harmony double glazed door
<small>(1) Independently assessed against representative UKAS accredited test data.</small>		
<small>(2) Performance dependent upon effective sealing at the threshold.</small>		

Acoustic data for combinations with 10/10.8mm glass and aggregated values for screens with door sets is available on request.

It should be noted that in an on-site acoustic test, a partition may demonstrate a 3dB to 8dB lesser performance than under laboratory conditions, depending on the partition type. This can be further affected by ambient noise levels on the receiving side of the test sample and by poorly insulated abutments offering a 'flanking' path for audible sound.

For further information on potential aggregate values for screens with doors, or values for alternative glass types, consult the Optima Technical Sales Team.

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# Specification

## CDM Regulations

In the absence of any specific legislation, Optima recommends that designers adopt the following industry-typical design considerations:

### Panel Size

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- Can the panel be transported to site, loaded out to the workface and installed?
- Is there a suitable access route, particularly if the glass is not located on the ground floor?
- Is it still possible to replace the panel after the building is in service?

### Panel Weight

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- Can the panel be installed manually? Optima generally consider one man should not be expected to lift more than 25kg for a prolonged duration. However, every lift would have to be properly assessed for risk according to the prevailing circumstances. As a guide, the weight of glass should be calculated by 2.5kg x thickness (mm) x area (sq.m).
- If mechanical means to install would be necessary, can this be achieved if the panel needs to be replaced during the lifespan of the building?

### Breakage

---

- What would be the consequence of a panel failure?
- Is the panel in a safety critical location? (e.g. an atrium barrier)
- Should a fail safe condition be built into the design?
- Is there risk to building occupants as a result of the breakage?
- Can the panel be replaced safely?

### Maintenance

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- Can the installation be maintained safely and without undue risk?
- Is there a mechanism to protect the maintenance staff, such as safety harness anchorage points?

Every project will throw up its own unique challenges. The Optima Technical Sales Team should be consulted at the earliest opportunity, if there is any doubt that a scheme can be built and maintained safely.

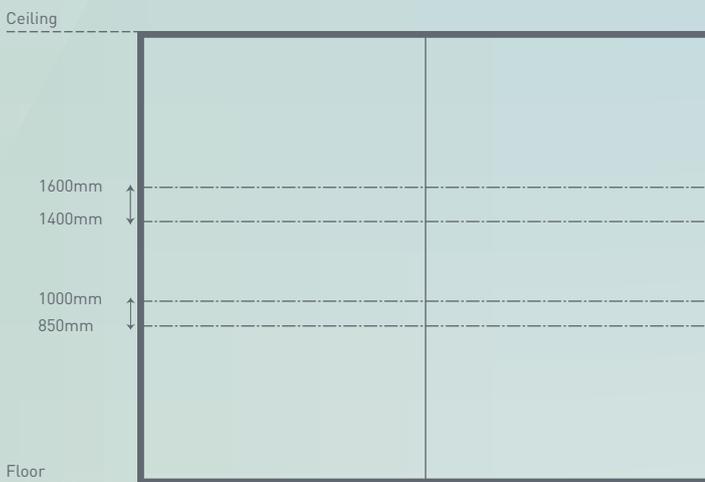
# Specification

## Building Regulations Approved Document K (2013)

### Glass Entrance Doors and Glazed Screens

- The location of glass entrance doors should be easily distinguished, especially when they are within a glazed screen and when the door is both open and shut.
- Manifestation should be clearly contrasting with the background in all weather/lighting conditions.
- Manifestation should be located between 850mm–1000mm and 1400mm–1600mm i.e. in 150mm high bands which could be a solid band, a decorative feature or split bands of 50mm each.
- High contrast strips at the top and on both sides of a glazed door in a glazed screen should be provided.
- If glass doors can remain in the open position, the leading edge should be clearly distinguished and protected by guarding (entrance doors only) to prevent it becoming a collision hazard.

Please refer to Door Sets Designer's Guide for information regarding minimum clear openings in relation to Part M.



Manifestation must contrast visually with the background seen through the glass in both natural and artificial light conditions.



# Component Selector

The following is a complete list of all the aluminium and plastic components that make up the **Revolution 54** system, as annotated in this guide.

	0220	Deflection Head Upper (±25mm)		0227	Glazing Inner Clip - D/G		0228	Glazing Inner Clip - S/G
	0230	Glazing Inner Clip - D/G		0232	Glazing Inner Clip - S/G		0238	Base Channel (50mm)
	0241	Wall Abutment (50mm)		0246	Floor Track Bead (50mm)		0257	Wall Abutment (25mm)
	0270	Deflection Head Upper (±25mm)		0272	Deflection Head Outer (±40mm)		0281	Floor Track Bead (25mm)
	0283	Glazing Inner Clip - C/G		0284	Glazing Inner Clip - C/G		0285	Floor Track Bead - C/G (50mm)
	0287	Floor Track Bead - C/G (25mm)		0288	Base Channel Plinth - C/G		0289	Base Channel (25mm)
	0300	Tapeable Glazing Bar - 70mm Stud Generic		0301	Tapeable Glazing Bar - 48mm Stud Generic		0338	Deflection Head Lower (±25mm)
	0339	Deflection Head Lower (±40mm)		0353	Harmony Door Frame Jamb		0354	Conceal Door Frame Jamb
	0441	Deflection Head Outer (±25mm)		0450	Conceal & Harmony Door Head Track Lining (deflection head)		0451	Conceal & Harmony Door Head Track Lining (non-deflection)
	0459	Abutment Spacer for D350 Door Jamb		0060	Aluminium Glass Joint (12/12.8mm glass)		0075	Aluminium Glass Corner Joint (12/12.8mm glass)
	0076	Aluminium Glass Corner Joint (10/10.8mm glass)		0077	Aluminium Glass Joint (10/10.8mm glass)		0135	Aluminium Glass Edge Protector (12/12.8mm glass)
	0212	Aluminium Glass Edge Protector (10/10.8mm glass)		1001	Glass to Glass Ghost Dry Joint (10mm glass)		1081	Glass to Glass Ghost Dry Joint (10.8mm glass)

# Component Selector

	1201	Glass to Glass Ghost Dry Joint (12mm glass)		1281	Glass to Glass Ghost Dry Joint (12.8mm glass)		1002	90° Corner Ghost Dry Joint (10mm glass)
	1082	90° Corner Ghost Dry Joint (10.8mm glass)		1202	90° Corner Ghost Dry Joint (12mm glass)		1282	90° Corner Ghost Dry Joint (12.8mm glass)
	1004	3-Way Ghost Dry Joint (10mm glass)		1084	3-Way Ghost Dry Joint (10.8mm glass)		1204	3-Way Ghost Dry Joint (12mm glass)
	1284	3-Way Ghost Dry Joint (12.8mm glass)		4465	Nebula™ Joint		2121	Glazing Gasket
	2122	Glazing Gasket		2205	Glazing Gasket		1108	Microflush D450 AXILE Conceal Door Frame Gasket
		Microflush D450 Door Frame Jamb			Microflush D450 Door Frame Head			

No other components may be used to substitute for those described above. For specific advice on component usage, consult the Optima Technical Sales Team.







**Revolution 54**  
Designer's Guide



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