NTB - 43
CASE OPEN-IN
CASEMENT
WINDOW
SYSTEM

BRITAL
ALUMINIUM SYSTEMS DESIGN

BRITAL.CO.UK

ABOUT US

International experience and talent

Brital Ltd was initially established to design and market aluminium curtain wall systems and façade systems in the Gulf region of the Middle East. Brital is a British company which has at its disposal some of the most experienced and well qualified façade engineers and designers, several of whom hold a Masters Degree in façade Engineering. In addition the majority of our staff are members of the Society of Façade Engineering at either Member or Fellow level.

This combination of international experience and talent is behind the design and engineering of all Brital systems making them unique in that they have been designed from the beginning to be suitable for the Gulf climatic conditions and construction methods.

Over the past twenty years the company has grown its product and systems range significantly so that the product range available today from Brital encompasses all types of façade solutions ranging from doors and windows through to structurally glazed and unitised curtain wall systems. The majority of Brital systems are available in both thermally broken and standard versions. As a design company on-going system development ensures that new and innovative solutions and system enhancements are regularly added to the product range.

This is often done in consultation with Brital approved fabricators to ensure that our designs are relevant to the end user and the markets that they are used in. **Brital systems are only available from a network of approved fabricators thus ensuring both on-going quality assurance and local availability.** The aluminium profiles for the systems are extruded in the Gulf region by licensed extruders who meet Brital's exacting standards for the quality, accuracy and consistency of the profiles and sections supplied. Accessories and gaskets are specified in the system designs and again are available locally within the region.

All major Brital systems are designed to meet the CWCT standards and have been independently tested to ensure that they meet the specified performance thus ensuring that they meet or exceed the various standards commonly used in the region such as BS:EN, ASTM, AAMA, etc. Whilst Brital's design offices are located in the United Kingdom we also operate a Dubai branch office where locally resident engineers are available to provide on-going technical and practical support to projects and customers throughout the region, including shop drawing reviews, design proposals and general façade engineering assistance.

BRITAL

ALUMINIUM SYSTEMS DESIGN

BENEFITS

Design team led by Technical Director and Chief Designer who both hold a Masters Degree in Facade Engineering and over 35 years cw design experience on projects around the world.

Systems designed specifically for the regional climates and conditions from a clean sheet of paper, not an adapted European market system.

UK design office with engineers also based at a regional office in Dubai.

All project shop drawings are reviewed for each and every Brital project by Brital designers and engineers, drawings can be stamped if required.

All senior Brital personnel are Fellows of the Society of Facade Engineering.

Brital is a design and engineering company and can respond quickly and efficiently to specific project design requirements.

All systems are integrated so doors, windows, sun shade system, etc., can be incorporated into the overall curtain wall.

20 years track record of hundreds of successful projects completed throughout the Middle East, Africa, Asia, Australia and beyond.

Locally extruded in the region so available in a timely and economical manner.

Locally extruded in the region so available in a timely and economical manner.

Only fabricated and installed by approved fabricators in each territory, so fabricators are familiar with the systems and thus minimise errors.

Systems designed to meet CWCT performance standards so exceed ASTM, AAMA, BS:EN, etc., specifications.

All systems tested at independent test laboratories in either UK or UAE, test reports available as required.

Systems designed to be simple to fabricate and install requiring no special machinery or experience, thus eradicating errors.

The system offers non thermally broken sections to suit the specific project requirements

Introduction

The basic suite has long and equal leg outer frame section to allow the casement windows can be fitted against the internal reveal if required.
Also included in the basic suite of profiles are a range of vent and mullion / transom

Various other profiles can be designed and be incorporated allowing architects to achieve flexible designs. The system is glazed internally to accommodate 6mm or 24mm double glazed units, using standard beads.
As with all Brital systems, the NTB 43 CASE system is manufactured to exacting standards enabling economy to be combined with strength to give many years of aesthetic, trouble-free operation.

Thermal Performance

This system in not thermaly broken, if thermally broken windows are required BRITAL have a range the thermally broken window systems

Scope

This specification defines materials, construction, finishes and size limits for the NTB 43 Casement

Materials

Aluminium profiles are extruded from alloy 6063 T6 complying with the recommendations of BS EN 12020 -2 : 2008 / BS EN 755 -9 : 2008

Finishes

The range of sections can be provided in either of the following range of finishes:
1. Anodised to BS1615 or BS3987 (Natural or Coloured)
2. Powder organic coated to BS6496

Subject to Brital Approval other finishes may also be used.

Construction

Frame members are mitre cut at 45°, corners are reinforced with extruded aluminium crimping cleats and corner braces. A secure joint is formed by pneumatically crimping into the extruded crimping cleat.
Mullion & Transom bars are cut, shaped and fixed securely to the frame by means of stainless steel screws.
All frame joints are sealed during construction against entry of water. Extruded weatherstrips and glazing gaskets are provided to resist the ingress of water.

Glazing

Glass is set against extruded gaskets externally which are fitted into gasket grooves in the frame upstand. Clip in glazing beads with internal gaskets fitted to the bead groove are held secure by means of bead clips internally. For glass support setting blocks and flat packers are provided to locate into the sections.

Installation

Detailed installation instructions are provided in this manual which should be strictly followed.

NTB 43 Casement

The sections are designed to suit Master Hinges and handles. A variety of handle options are available.

Brital should be contacted for any special operating requirements.

Development

Our policy is to continually research the market for new and improved products. We must therefore retain the right to amend specifications without prior notice.
It is recognised by Brital that in some instances special sections may be required for particular projects. When this occurs it may be possible to produce bespoke sections subject to there being sufficient quantity and adequate time.

Max / Min Size Limits

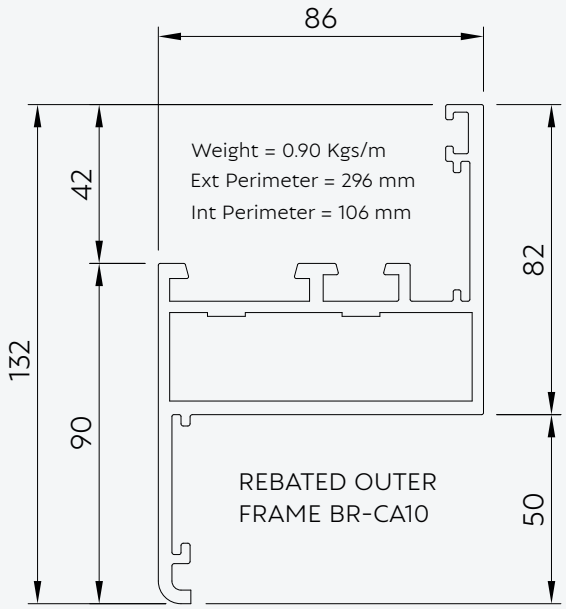
Window Shutter Section	Window Shutter Height	Window Shutter Width
Open In Casement (single shutter size)		
BR-CA13	1200mm (max) 300mm (min)	1200mm (max) 300mm (min)

Where size limits exceed the above BRITAL have heavier duty sections available, please refer to BRITAL's technical department.

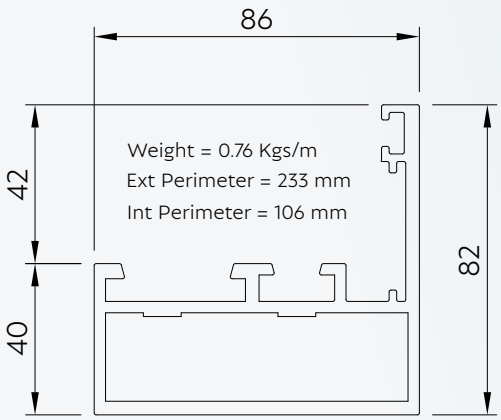
Performance

The Brital NTB43 casement system has been designed to give the following levels of performance (based on single doors with fully rebated frames).
Air permeability - BS 6375 : Pt. 1 : 1983 test pressure 300 Pa
Water tightness - BS 6375 : Pt. 1 : 1983 test pressure 300 Pa
Wind resistance - BS 6375 : Pt. 1 : 1983 test pressure 1600 Pa
These levels of performance should be sufficient for any location within the Middle East, However should higher levels of performance be required for any reason, Brital's advice should be sought.

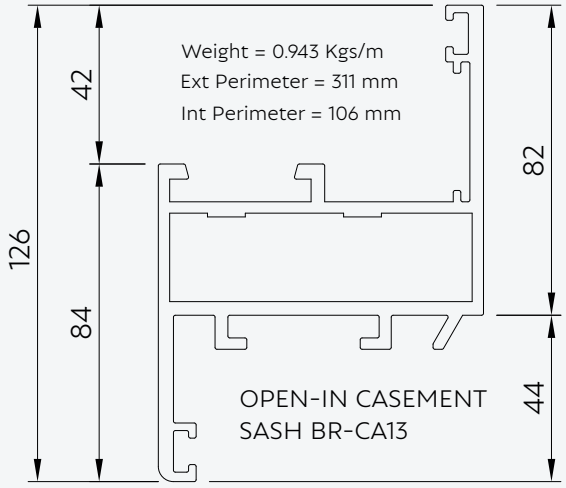
SHEET NTB43/00/01



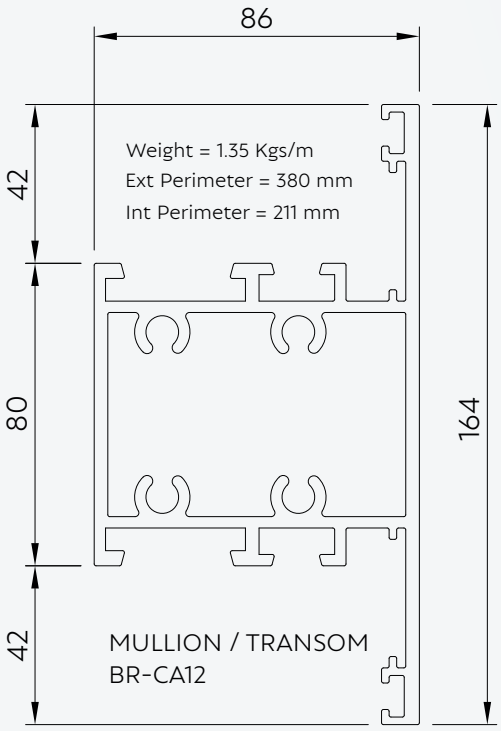
REBATED OUTER
FRAME BR-CA10



STANDARD OUTER
FRAME BR-CA11

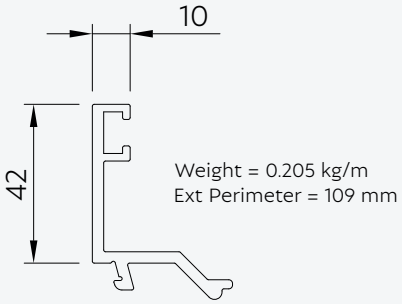


OPEN-IN CASEMENT
SASH BR-CA13

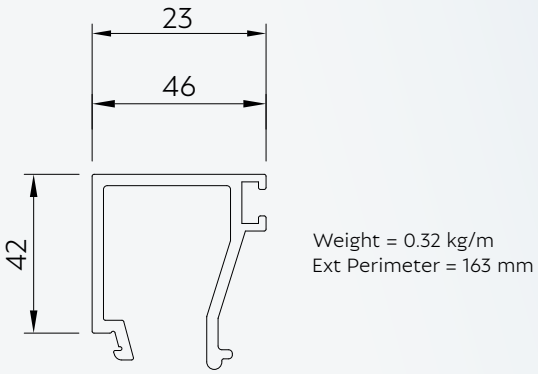


MULLION / TRANSOM
BR-CA12

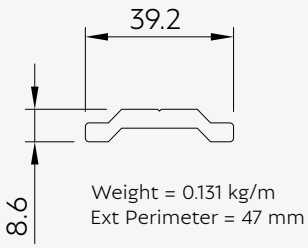
SHEET NTB43/01/01



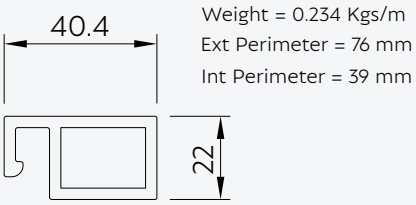
GLAZING BEAD
BR-CA14



GLAZING BEAD
BR-CA15



ROD
BR-TT13



FLY SCREEN
BR-CA16

SHEET NTB43/01/02

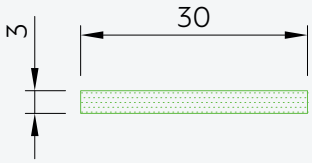
INTERNAL WEATHERSEAL BR-01

RETAINED GLAZING GASKET BR-12

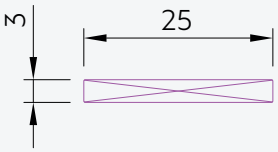
WEDGE GASKET BR-11

RETAINED GLAZING GASKET BR-32

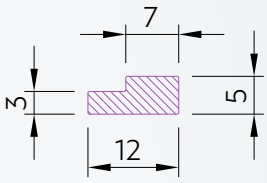
FLIPPER GASKET BR-39



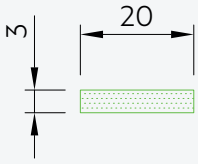
GLAZING PACKERS
30 x 3 x 100 mm long
(Obtained locally by Fabricator)



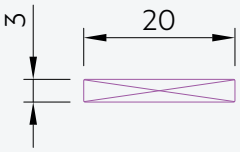
SETTING BLOCK
(25 x 3 x 100 mm long) BR-S2



SETTING BLOCK
(Shaped 12 x 5 x 100 mm long) BR-S8

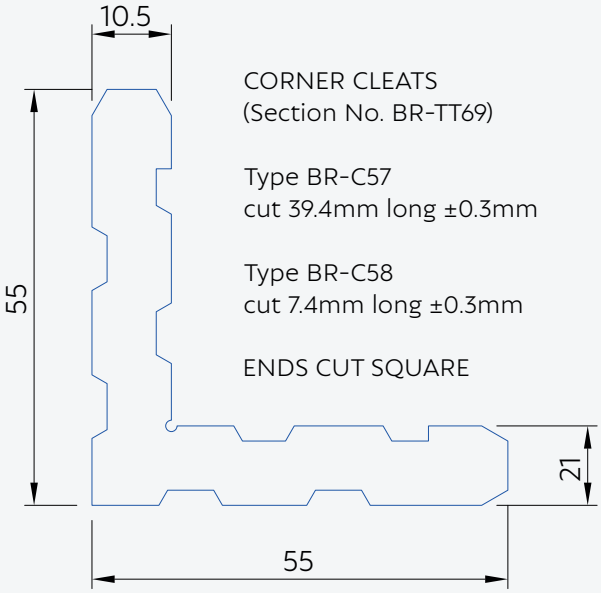


GLAZING PACKERS
20 x 3 x 100 mm long
(Obtained locally by Fabricator)



SETTING BLOCK
(20 x 3 x 100 mm long) BR-S10

DRAIN HOLE COVER BR-2143

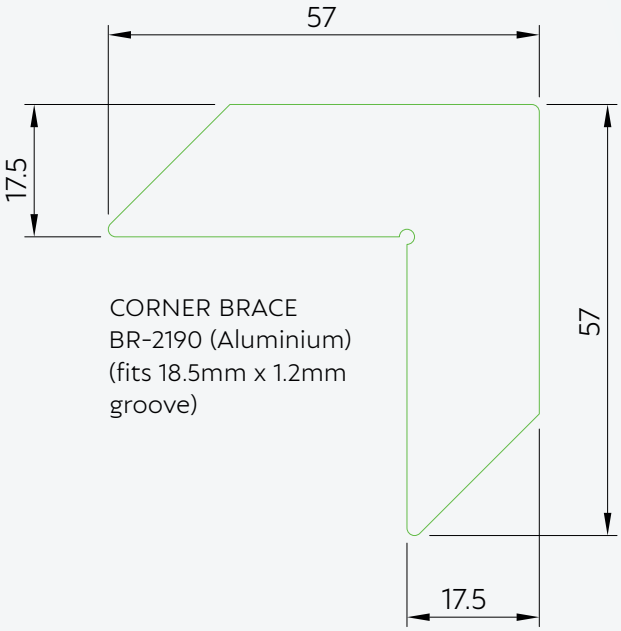


CORNER CLEATS
(Section No. BR-TT69)

Type BR-C57
cut 39.4mm long ±0.3mm

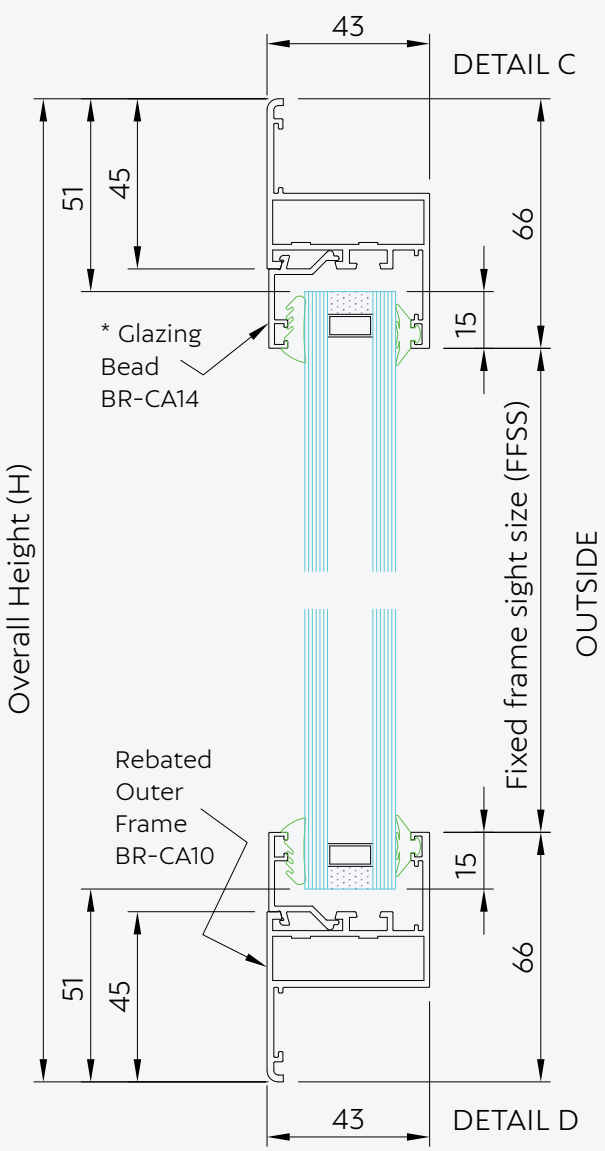
Type BR-C58
cut 7.4mm long ±0.3mm

ENDS CUT SQUARE

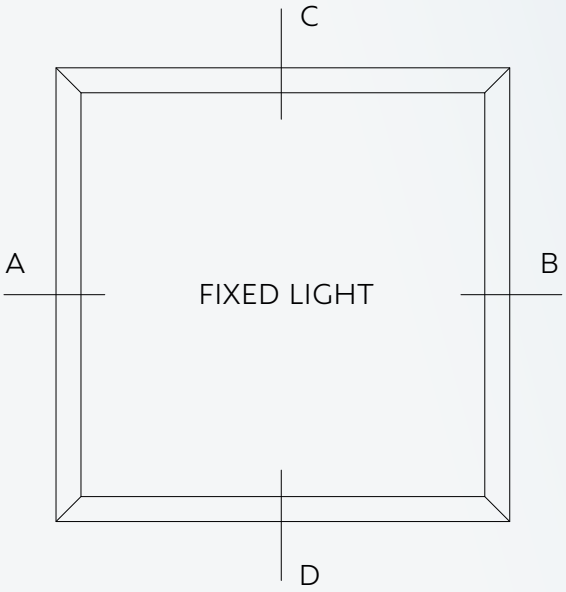


CORNER BRACE
BR-2190 (Aluminium)
(fits 18.5mm x 1.2mm groove)

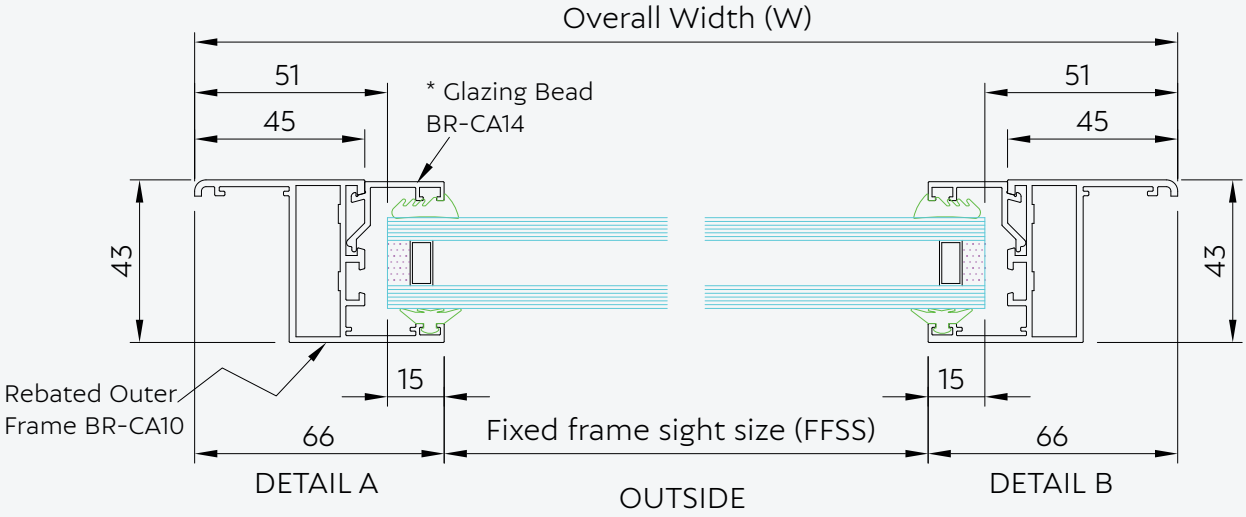
SHEET NTB43/02/01



OUTSIDE ELEVATION
(HORIZONTAL & VERTICAL SECTIONS)



* For glazing options
see section 9 of this manual.



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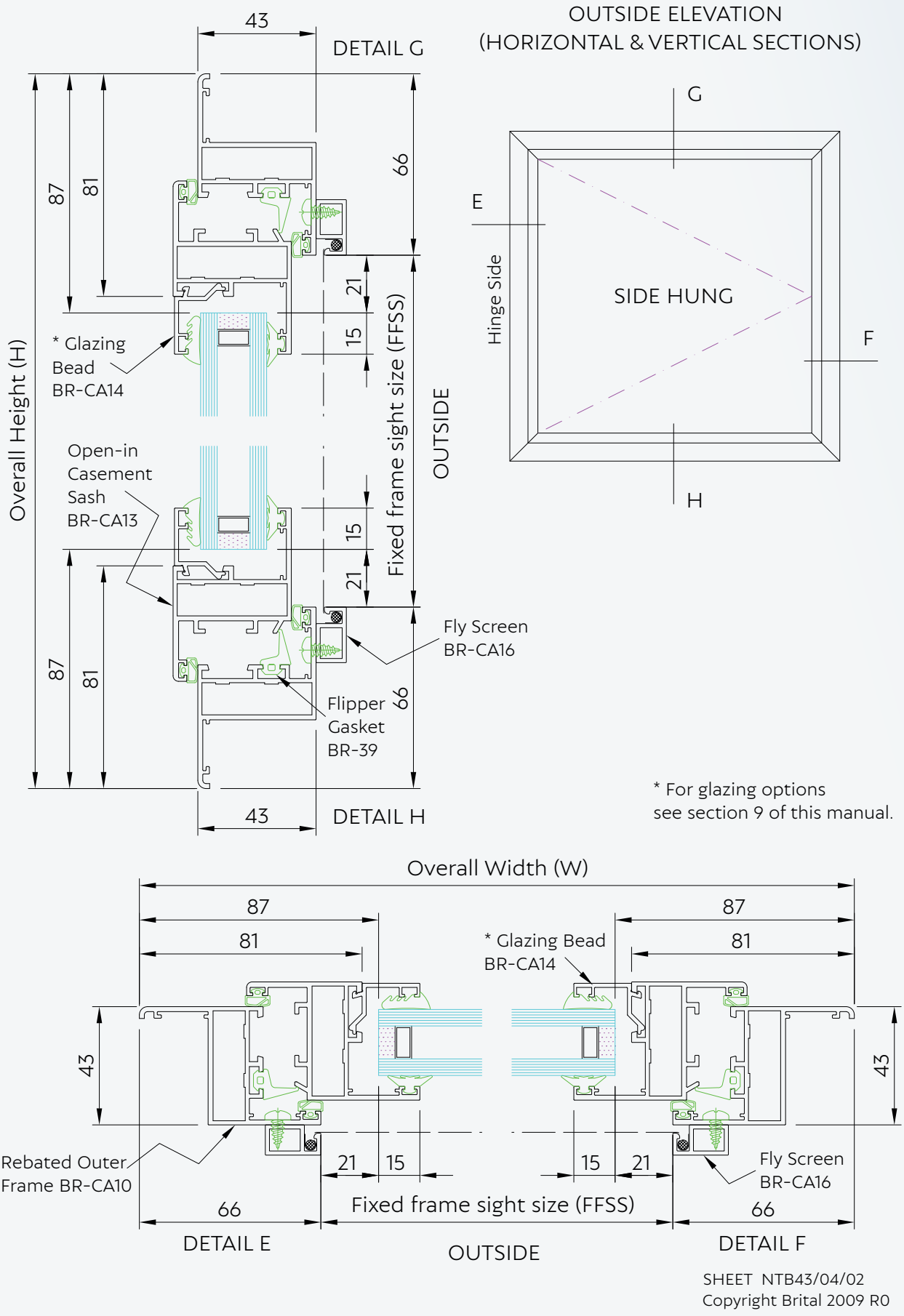

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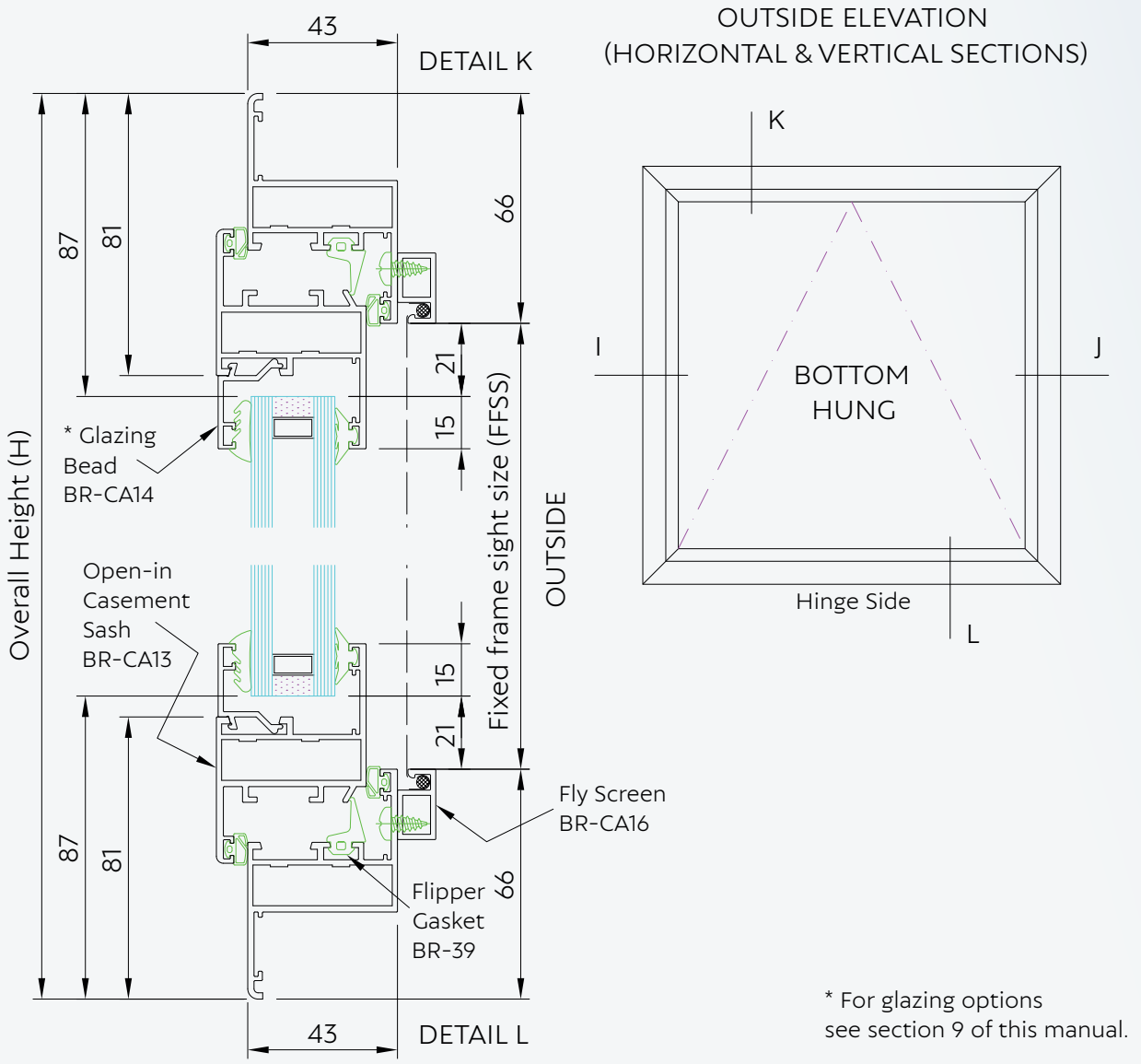

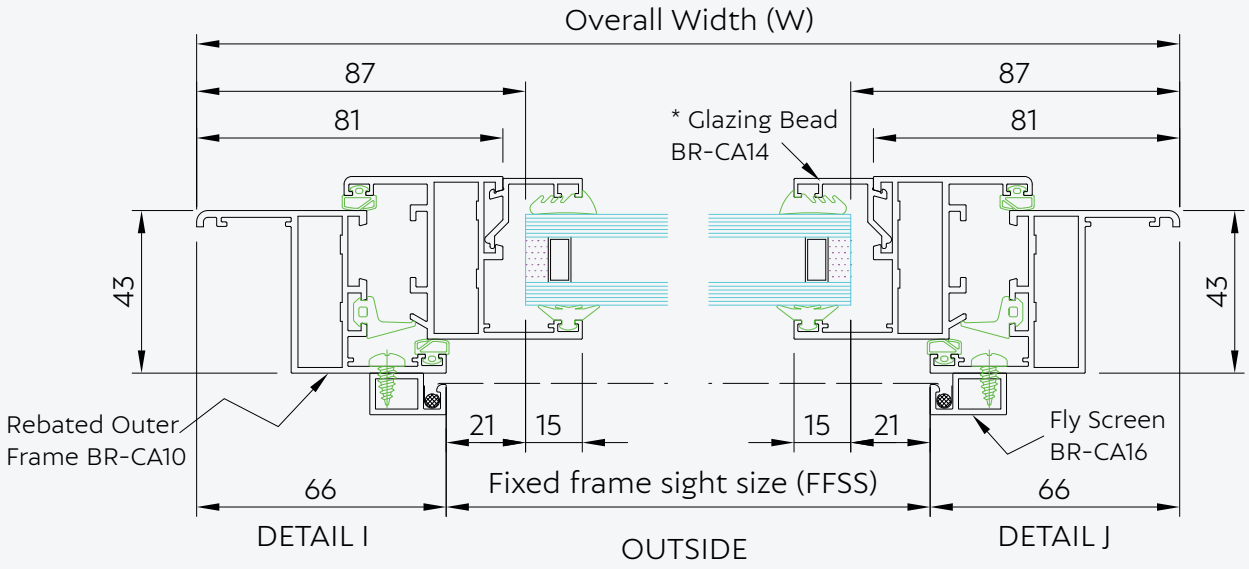

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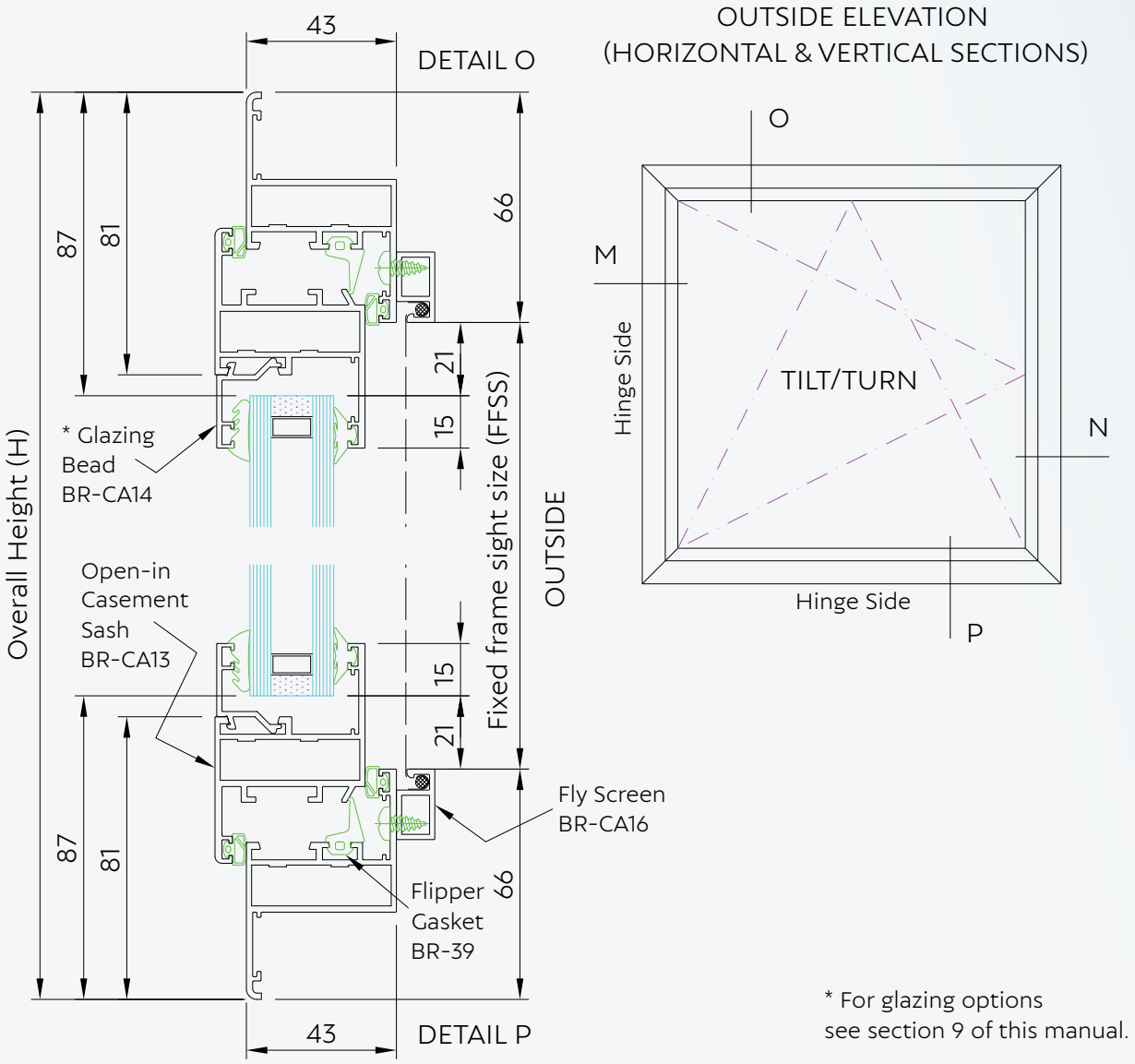

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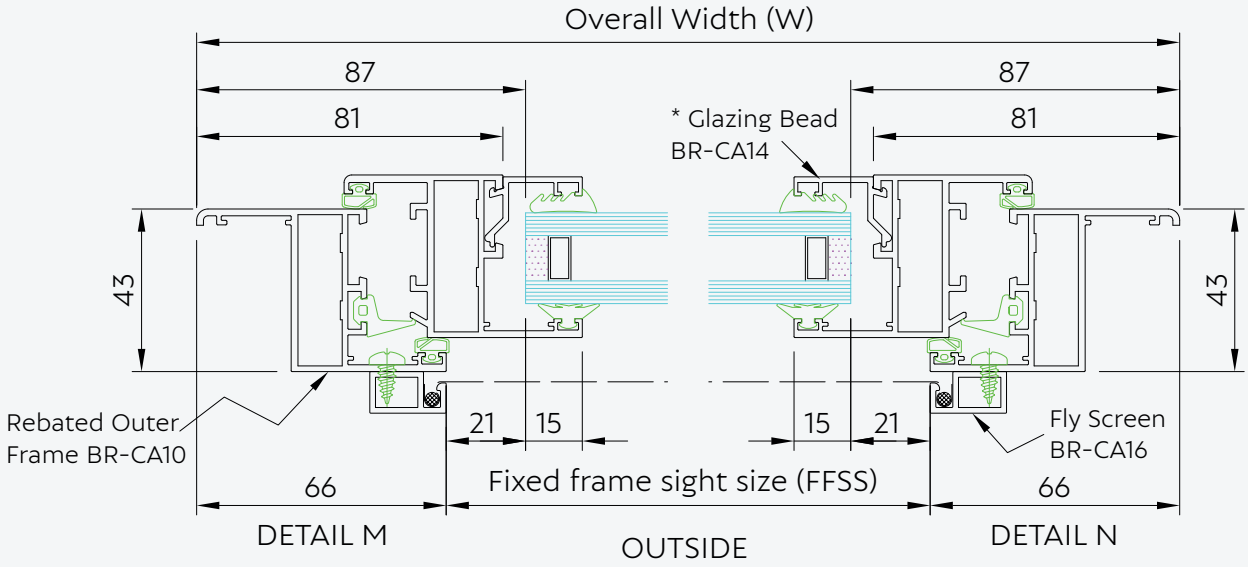
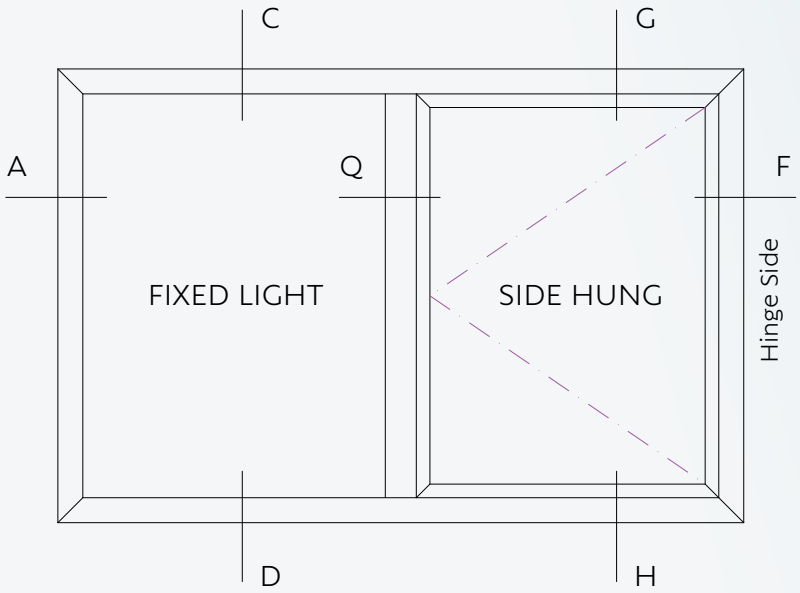


SHEET NTB43/04/04

OUTSIDE ELEVATION
(HORIZONTAL & VERTICAL SECTIONS)



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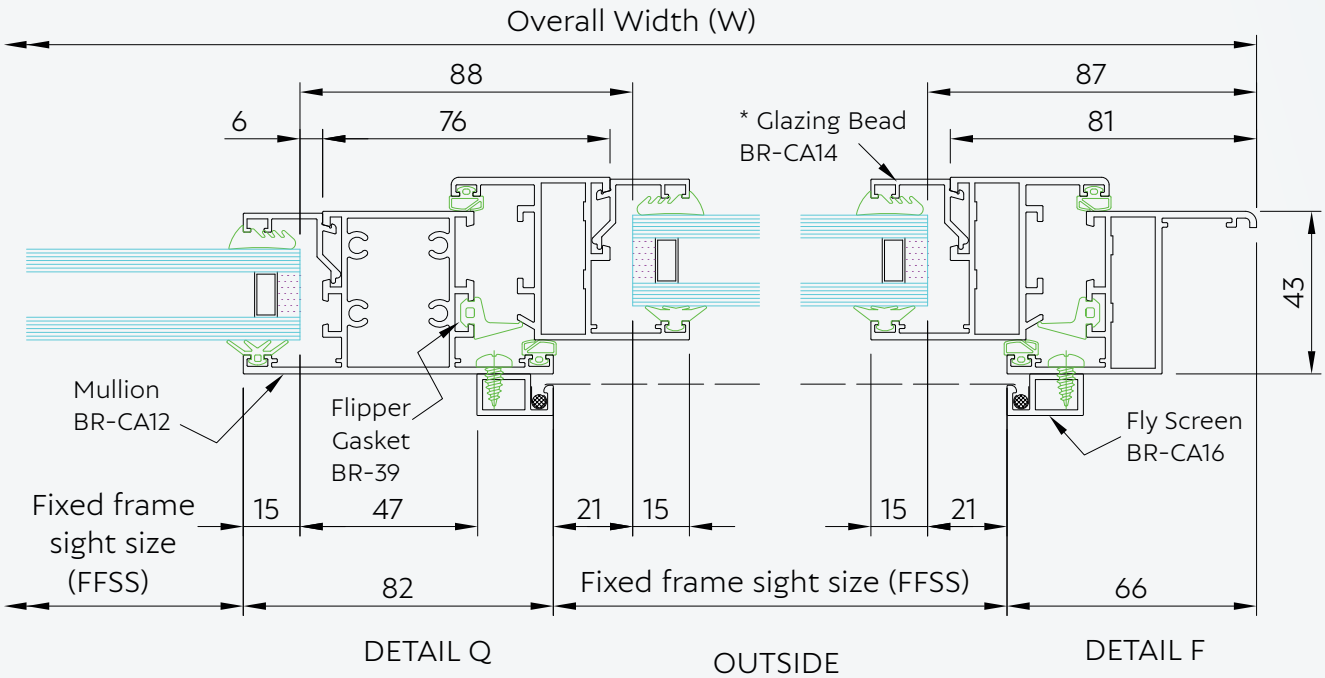

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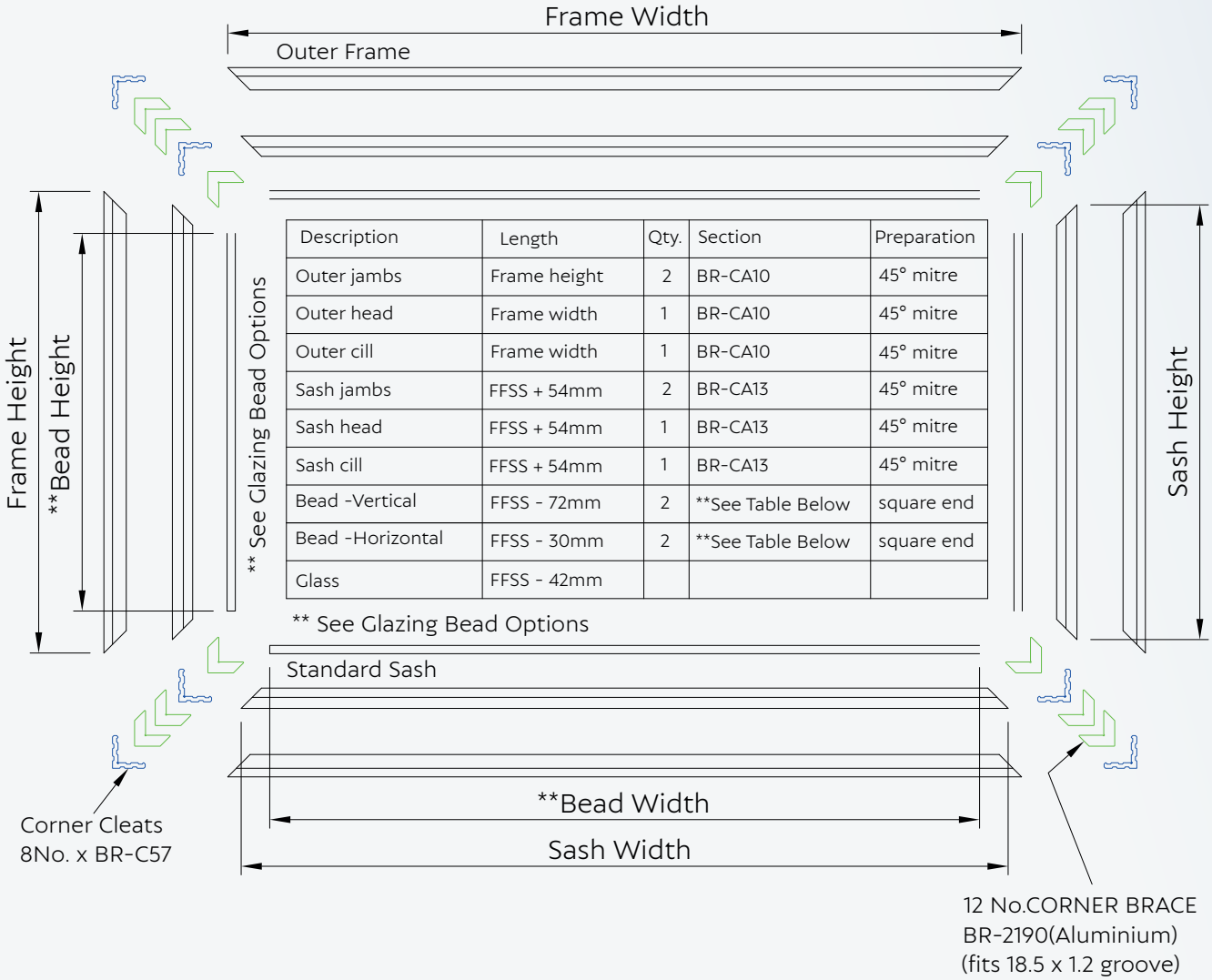
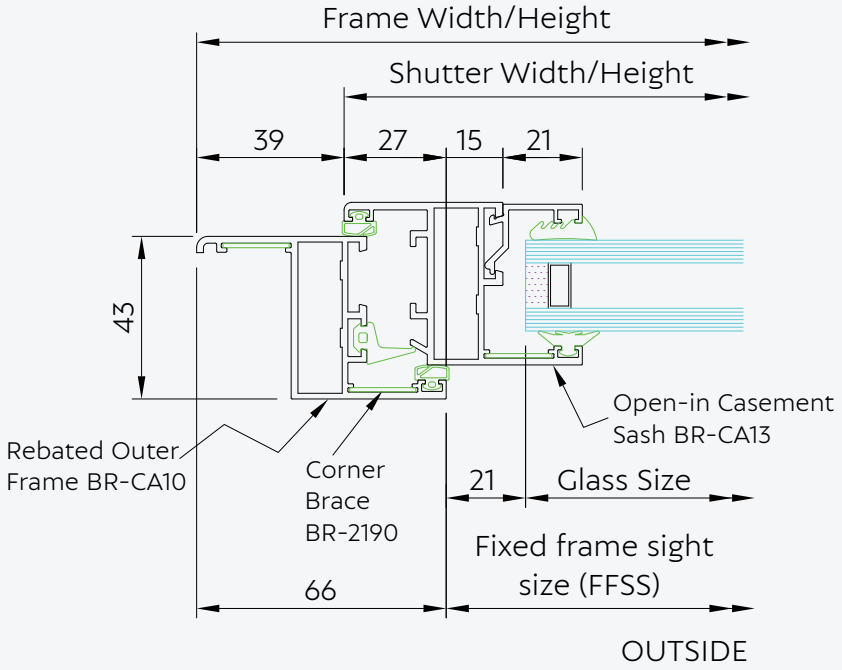


Description	Length	Qty.	Section	Preparation
Outer jambs	Frame height	2	BR-CA10	45° mitre
Outer head	Frame width	1	BR-CA10	45° mitre
Outer cill	Frame width	1	BR-CA10	45° mitre
Sash jambs	FFSS + 54mm	2	BR-CA13	45° mitre
Sash head	FFSS + 54mm	1	BR-CA13	45° mitre
Sash cill	FFSS + 54mm	1	BR-CA13	45° mitre
Bead -Vertical	FFSS - 72mm	2	**See Table Below	square end
Bead -Horizontal	FFSS - 30mm	2	**See Table Below	square end
Glass	FFSS - 42mm			

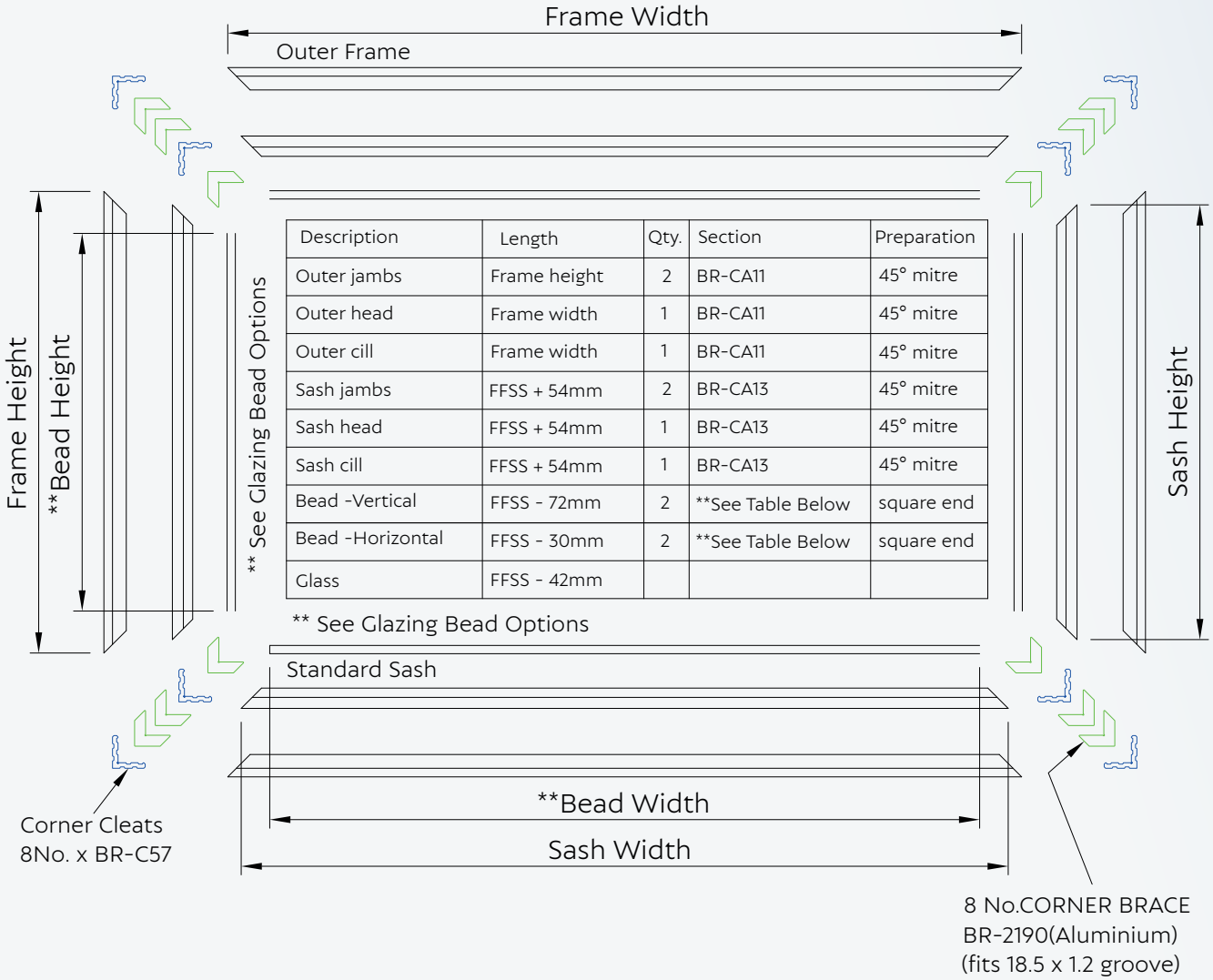


* For glazing options
see sheetNTB43/09/02

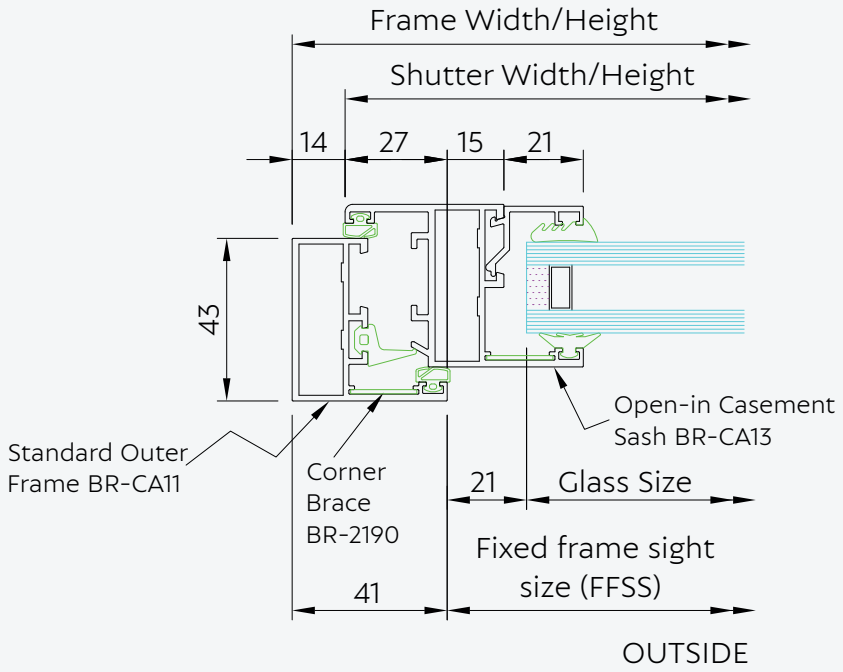
**GLAZING BEAD OPTIONS TABLE	
Glazing Thickness	Bead Ref. No.
24mm	BR-CA14
6mm	BR-CA15

NOTE :-
ALL BEAD LENGTHS ARE TIGHT SIZES.CLEARANCE OF NOT MORE THAN 0.5mm SHOULD BE ALLOWED AT EACH END OF GLAZING BEAD.

SHEET NTB43/05/01



Description	Length	Qty.	Section	Preparation
Outer jambs	Frame height	2	BR-CA11	45° mitre
Outer head	Frame width	1	BR-CA11	45° mitre
Outer cill	Frame width	1	BR-CA11	45° mitre
Sash jambs	FFSS + 54mm	2	BR-CA13	45° mitre
Sash head	FFSS + 54mm	1	BR-CA13	45° mitre
Sash cill	FFSS + 54mm	1	BR-CA13	45° mitre
Bead -Vertical	FFSS - 72mm	2	**See Table Below	square end
Bead -Horizontal	FFSS - 30mm	2	**See Table Below	square end
Glass	FFSS - 42mm			



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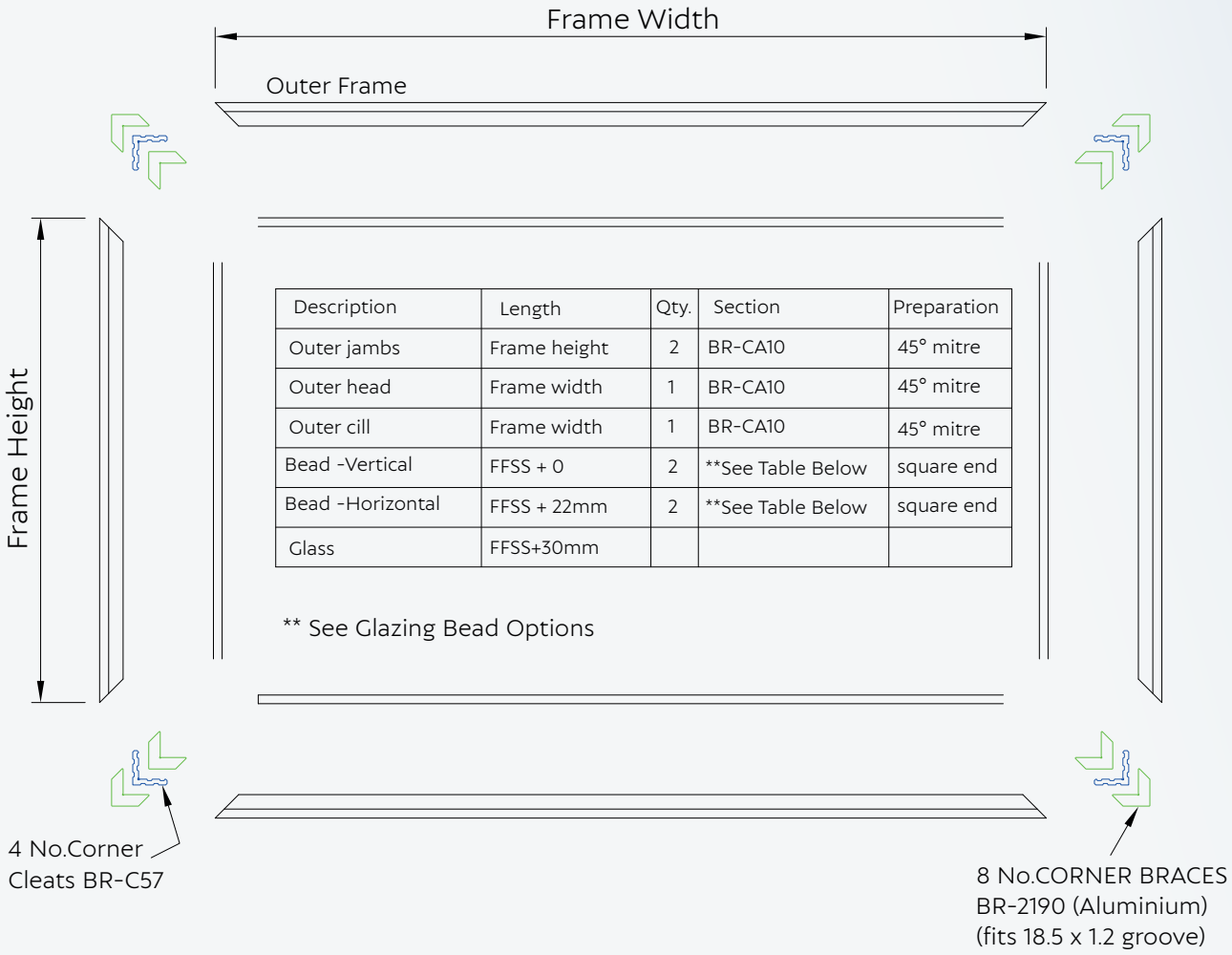
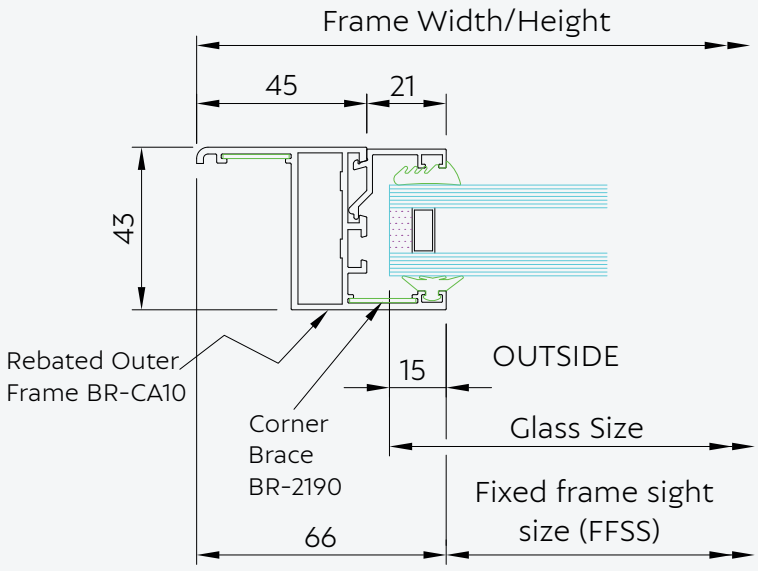
SHEET NTB43/05/02



Description	Length	Qty.	Section	Preparation
Outer jambs	Frame height	2	BR-CA10	45° mitre
Outer head	Frame width	1	BR-CA10	45° mitre
Outer cill	Frame width	1	BR-CA10	45° mitre
Bead -Vertical	FFSS + 0	2	**See Table Below	square end
Bead -Horizontal	FFSS + 22mm	2	**See Table Below	square end
Glass	FFSS+30mm			

** See Glazing Bead Options



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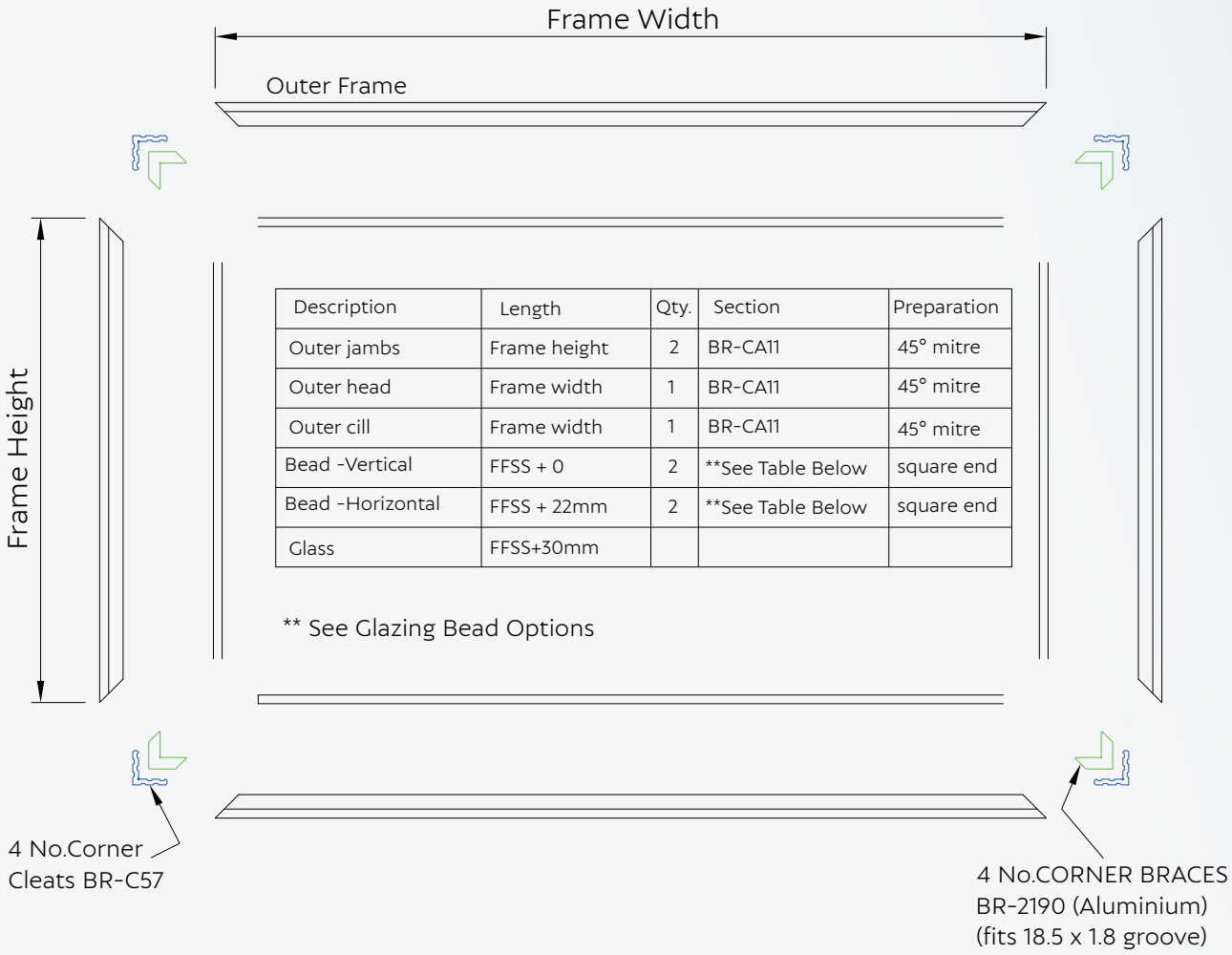
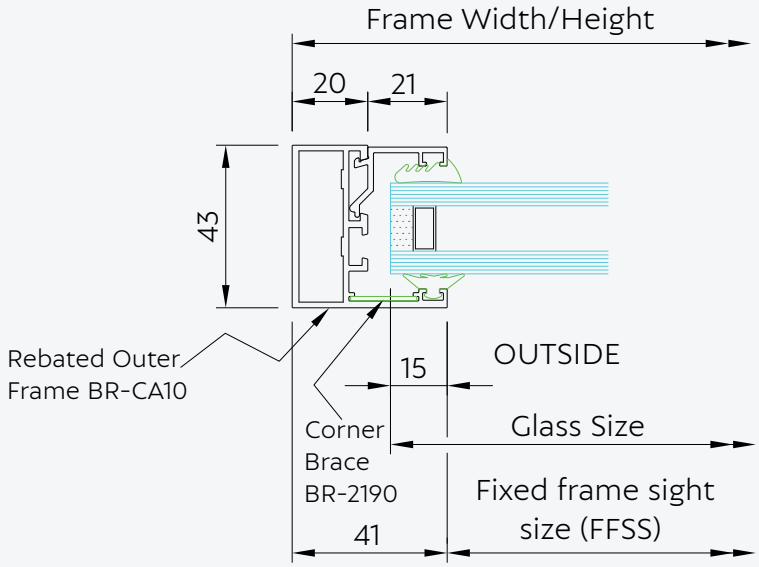
SHEET NTB43/05/03



Description	Length	Qty.	Section	Preparation
Outer jambs	Frame height	2	BR-CA11	45° mitre
Outer head	Frame width	1	BR-CA11	45° mitre
Outer cill	Frame width	1	BR-CA11	45° mitre
Bead -Vertical	FFSS + 0	2	**See Table Below	square end
Bead -Horizontal	FFSS + 22mm	2	**See Table Below	square end
Glass	FFSS+30mm			

** See Glazing Bead Options



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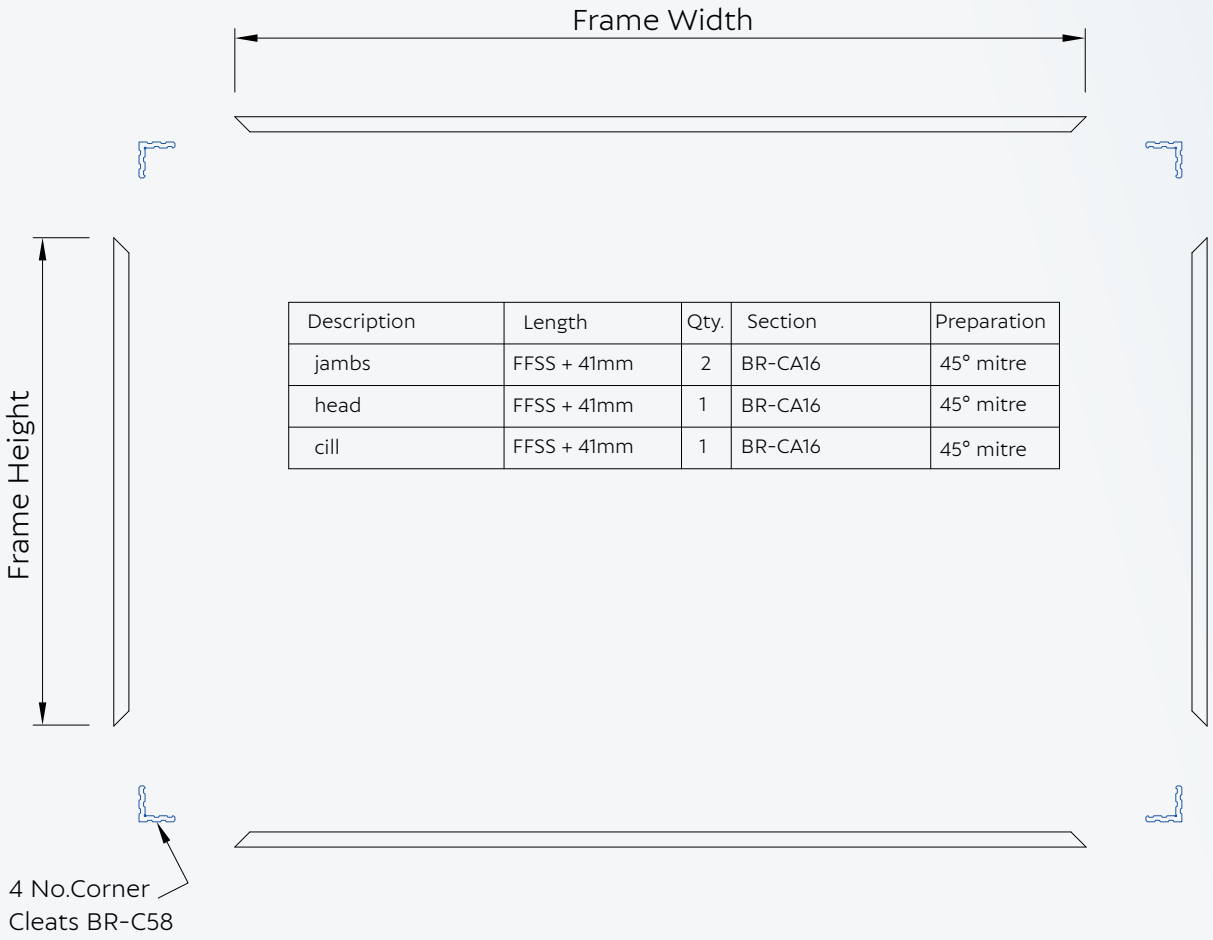
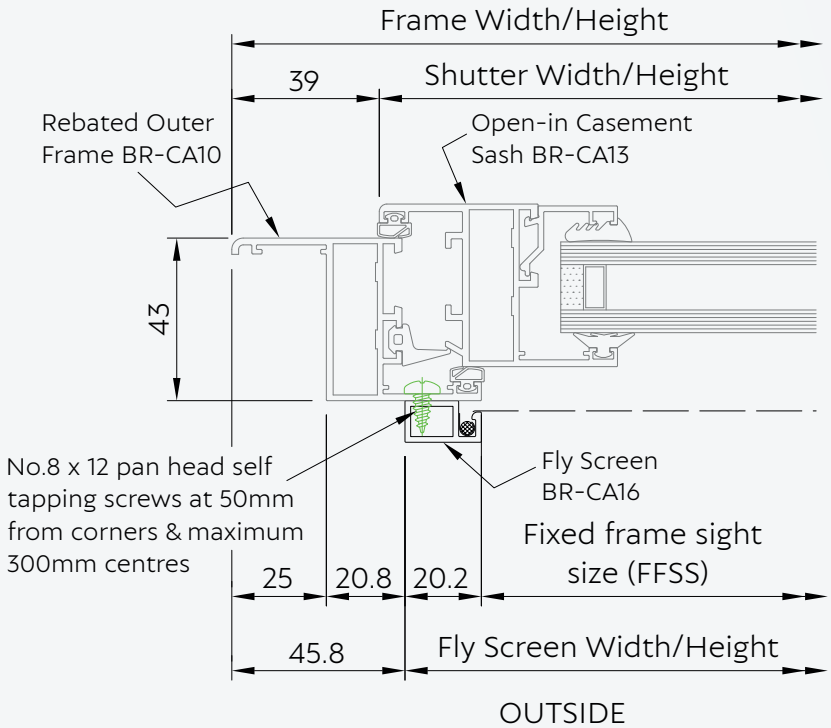
SHEET NTB43/05/04



Description	Length	Qty.	Section	Preparation
jambs	FFSS + 41mm	2	BR-CA16	45° mitre
head	FFSS + 41mm	1	BR-CA16	45° mitre
cill	FFSS + 41mm	1	BR-CA16	45° mitre



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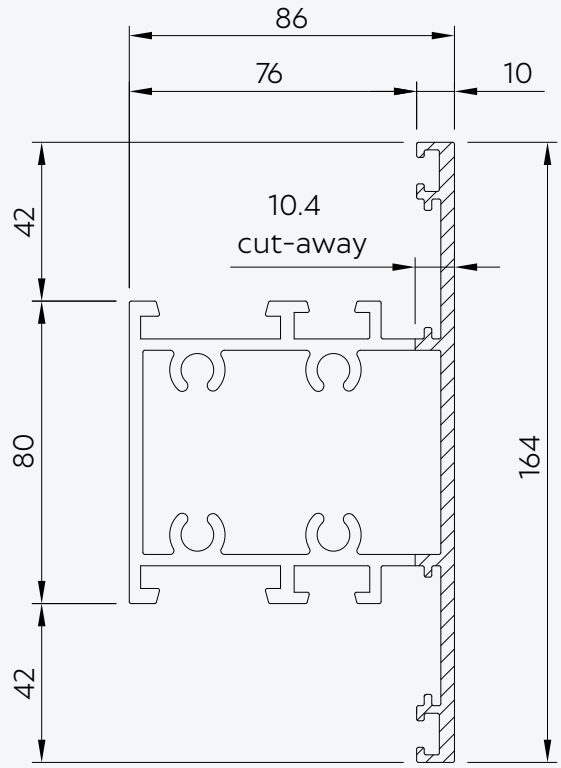
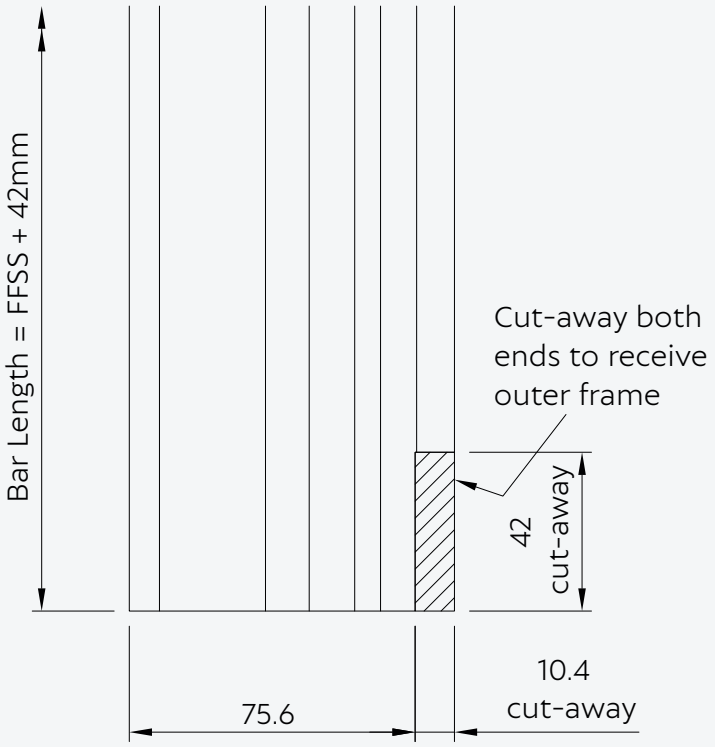
EACH END OF GLAZING BEAD.

SHEET NTB43/05/05



MULLION / TRANSOM
BR-CA12



SHEET NTB43/05/06

IMPORTANT; PLEASE READ THESE NOTES BEFORE CORNER ASSEMBLY. THE USE OF ADHESIVE IS RECOMMENDED TO ENSURE THE STABILITY OF CORNER JOINTS.

1. BEFORE APPLYING ANY ADHESIVE ENSURE ALL SURFACES TO BE GLUED ARE FREE FROM GREASE OR DUST. CLEAN ALL ALUMINIUM MATING SURFACES WITH METAL CLEANING AGENT.

2. ADHESIVE SHOULD BE APPLIED TO THE PERIMETER OF THE CLEAT CHAMBERS IN THE SECTIONS AND TO THE CORNER BRACE GROOVE.

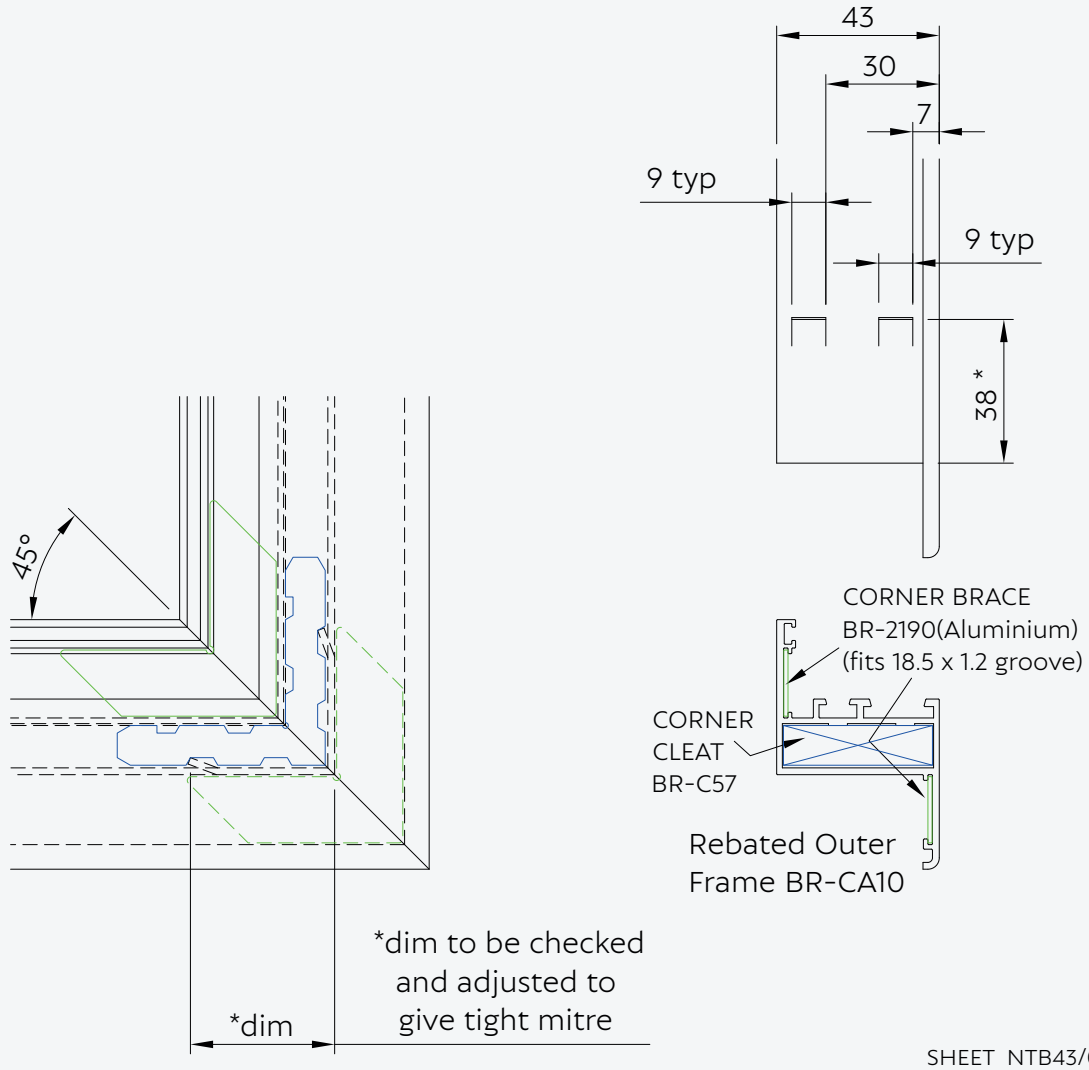
3. APPLY SMALL GAP SEALANT TO THE MATING SURFACES OF THE MITRE CUT ALUMINIUM PROFILES. SEALANT NEED ONLY BE APPLIED TO ONE SIDE OF THE MITRED JOINT.

4. INSERT CORNER CLEAT AND BRACES AND PUSH SECTIONS TOGETHER. ENSURE MITRED JOINT IS ALIGNED AND TRUE. CRIMP FULLY ASSEMBLED MITRED CORNER.

5. WIPE AWAY ANY EXCESS ADHESIVE / SEALANT FROM THE MITRED JOINT USING A SUITABLE CLEANING AGENT. ENSURE ALL BEAD AND GASKET RECESSES ARE CLEAR OF ADHESIVE / SEALANT.

6. SEAL CRIMPS WITH SILICONE.

7. CHECK THE MITRE IS TIGHT ON BOTH SIDES AND THAT THERE IS NO MOVEMENT.



SHEET NTB43/06/01

IMPORTANT; PLEASE READ THESE NOTES BEFORE CORNER ASSEMBLY. THE USE OF ADHESIVE IS RECOMMENDED TO ENSURE THE STABILITY OF CORNER JOINTS.

1. BEFORE APPLYING ANY ADHESIVE ENSURE ALL SURFACES TO BE GLUED ARE FREE FROM GREASE OR DUST. CLEAN ALL ALUMINIUM MATING SURFACES WITH METAL CLEANING AGENT.

2. ADHESIVE SHOULD BE APPLIED TO THE PERIMETER OF THE CLEAT CHAMBERS IN THE SECTIONS AND TO THE CORNER BRACE GROOVE.

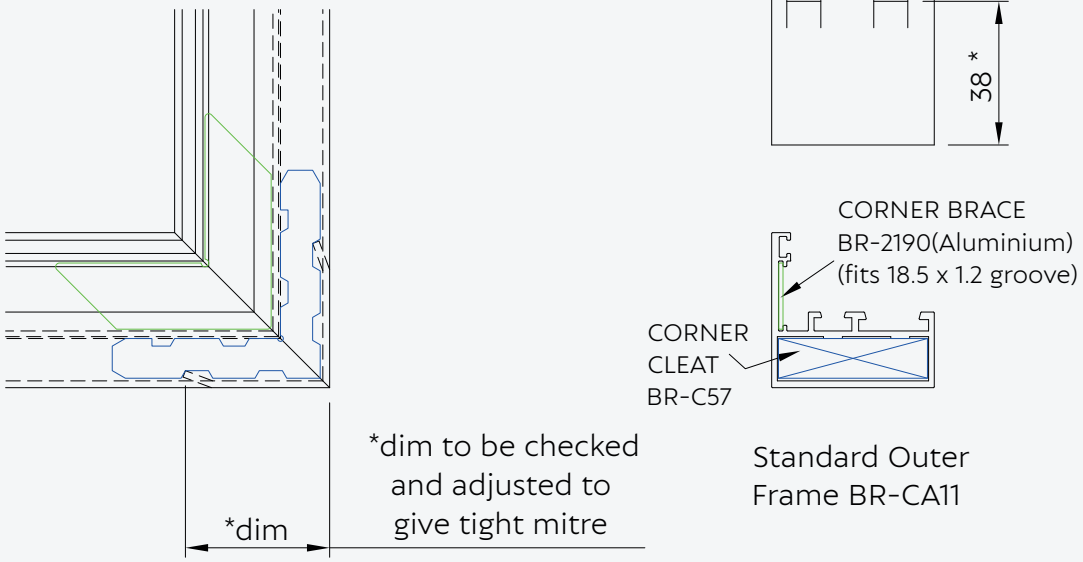
3. APPLY SMALL GAP SEALANT TO THE MATING SURFACES OF THE MITRE CUT ALUMINIUM PROFILES. SEALANT NEED ONLY BE APPLIED TO ONE SIDE OF THE MITRED JOINT.

4. INSERT CORNER CLEAT AND BRACES AND PUSH SECTIONS TOGETHER. ENSURE MITRED JOINT IS ALIGNED AND TRUE. CRIMP FULLY ASSEMBLED MITRED CORNER.

5. WIPE AWAY ANY EXCESS ADHESIVE / SEALANT FROM THE MITRED JOINT USING A SUITABLE CLEANING AGENT. ENSURE ALL BEAD AND GASKET RECESSES ARE CLEAR OF ADHESIVE / SEALANT.

6. SEAL CRIMPS WITH SILICONE.

7. CHECK THE MITRE IS TIGHT ON BOTH SIDES AND THAT THERE IS NO MOVEMENT.



SHEET NTB43/06/02

IMPORTANT; PLEASE READ THESE NOTES BEFORE CORNER ASSEMBLY. THE USE OF ADHESIVE IS RECOMMENDED TO ENSURE THE STABILITY OF CORNER JOINTS.

1. BEFORE APPLYING ANY ADHESIVE ENSURE ALL SURFACES TO BE GLUED ARE FREE FROM GREASE OR DUST. CLEAN ALL ALUMINIUM MATING SURFACES WITH METAL CLEANING AGENT.

2. ADHESIVE SHOULD BE APPLIED TO THE PERIMETER OF THE CLEAT CHAMBERS IN THE SECTIONS AND TO THE CORNER BRACE GROOVE.

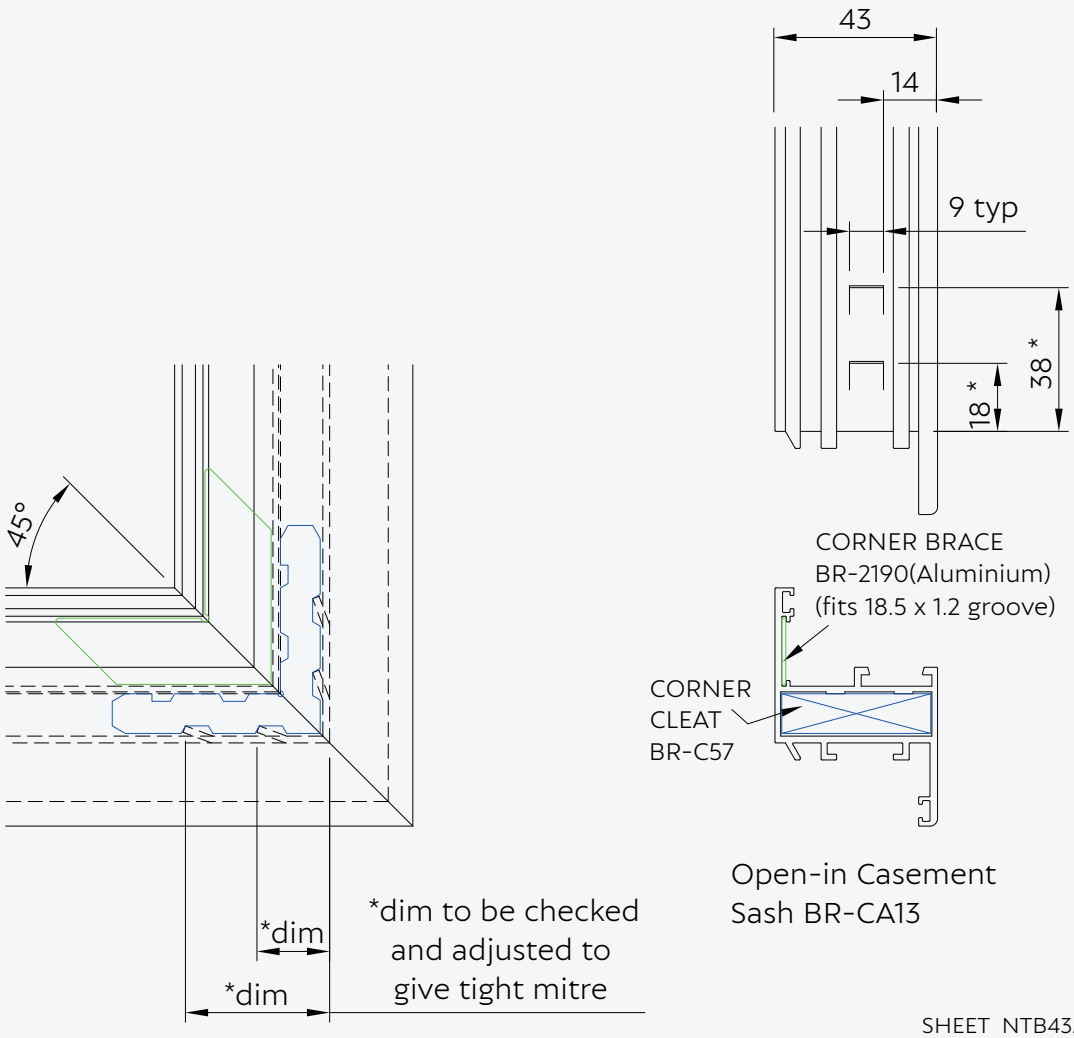
3. APPLY SMALL GAP SEALANT TO THE MATING SURFACES OF THE MITRE CUT ALUMINIUM PROFILES. SEALANT NEED ONLY BE APPLIED TO ONE SIDE OF THE MITRED JOINT.

4. INSERT CORNER CLEAT AND BRACES AND PUSH SECTIONS TOGETHER. ENSURE MITRED JOINT IS ALIGNED AND TRUE. CRIMP FULLY ASSEMBLED MITRED CORNER.

5. WIPE AWAY ANY EXCESS ADHESIVE / SEALANT FROM THE MITRED JOINT USING A SUITABLE CLEANING AGENT. ENSURE ALL BEAD AND GASKET RECESSES ARE CLEAR OF ADHESIVE / SEALANT.

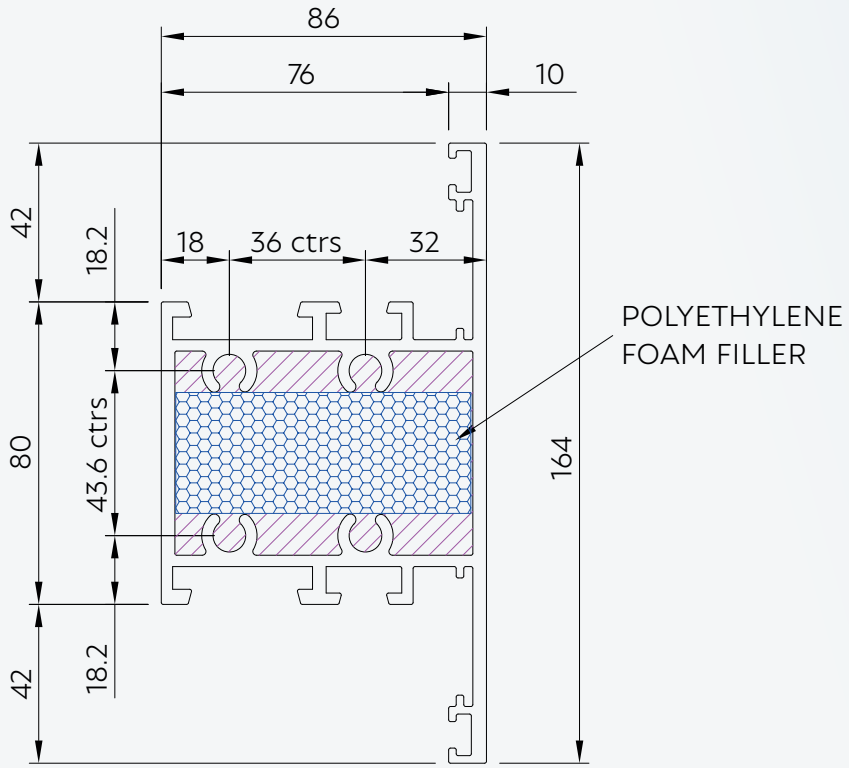
6. SEAL CRIMPS WITH SILICONE.

7. CHECK THE MITRE IS TIGHT ON BOTH SIDES AND THAT THERE IS NO MOVEMENT.

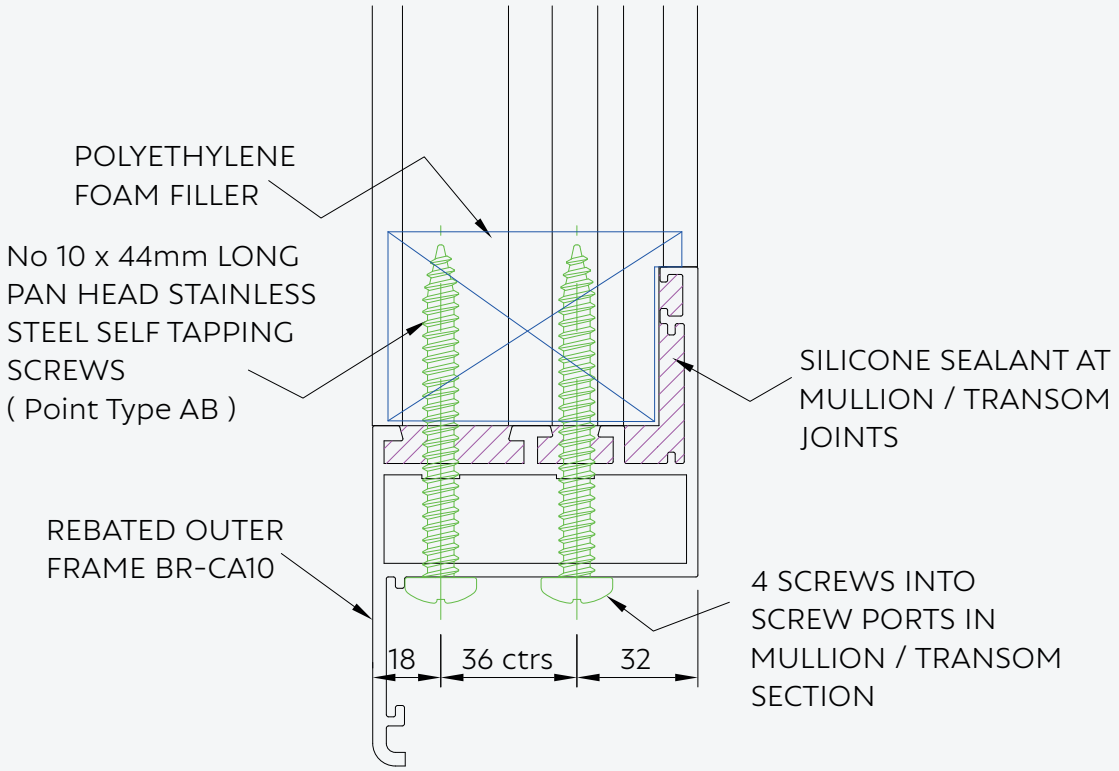


Open-in Casement
Sash BR-CA13

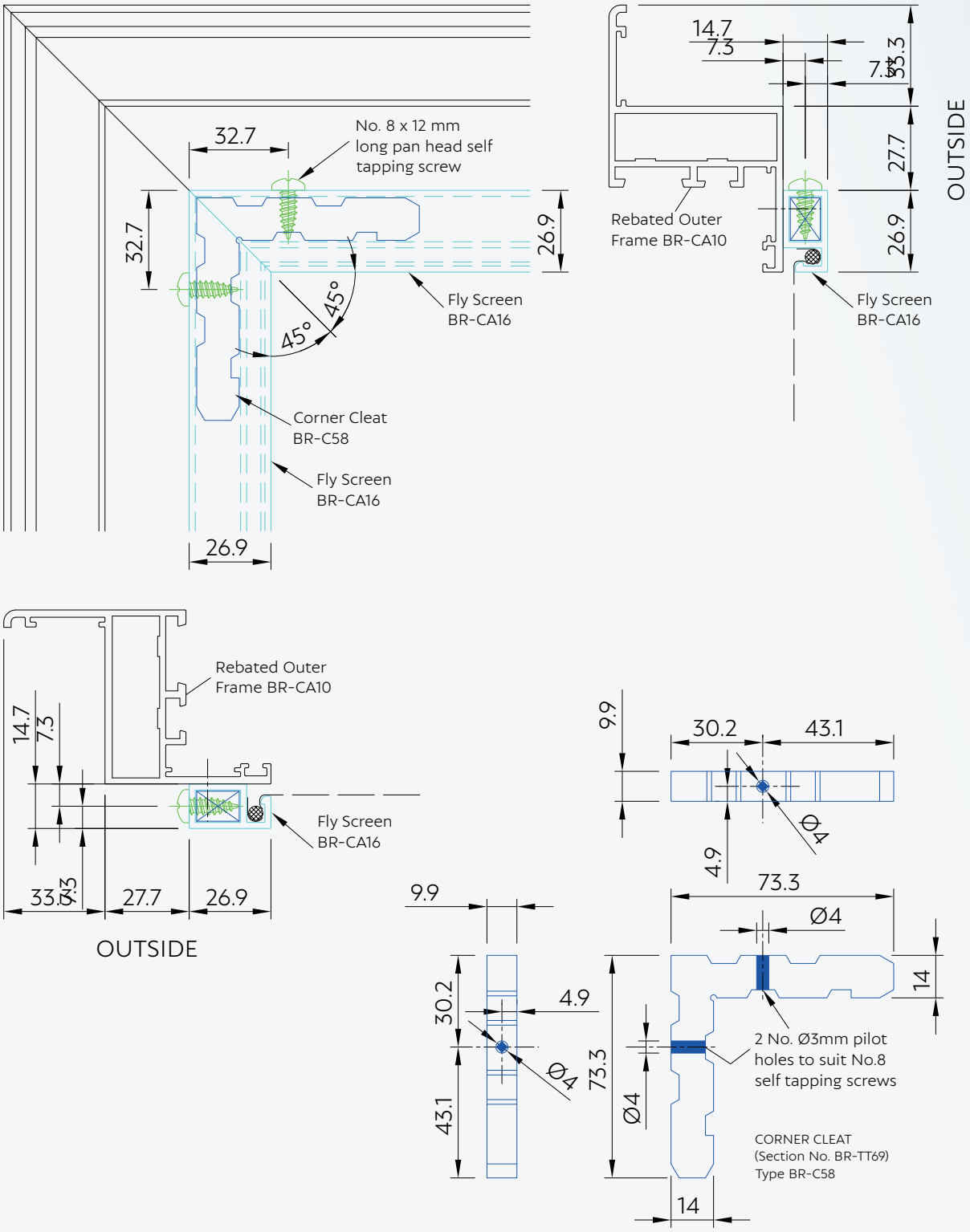
SHEET NTB43/06/03



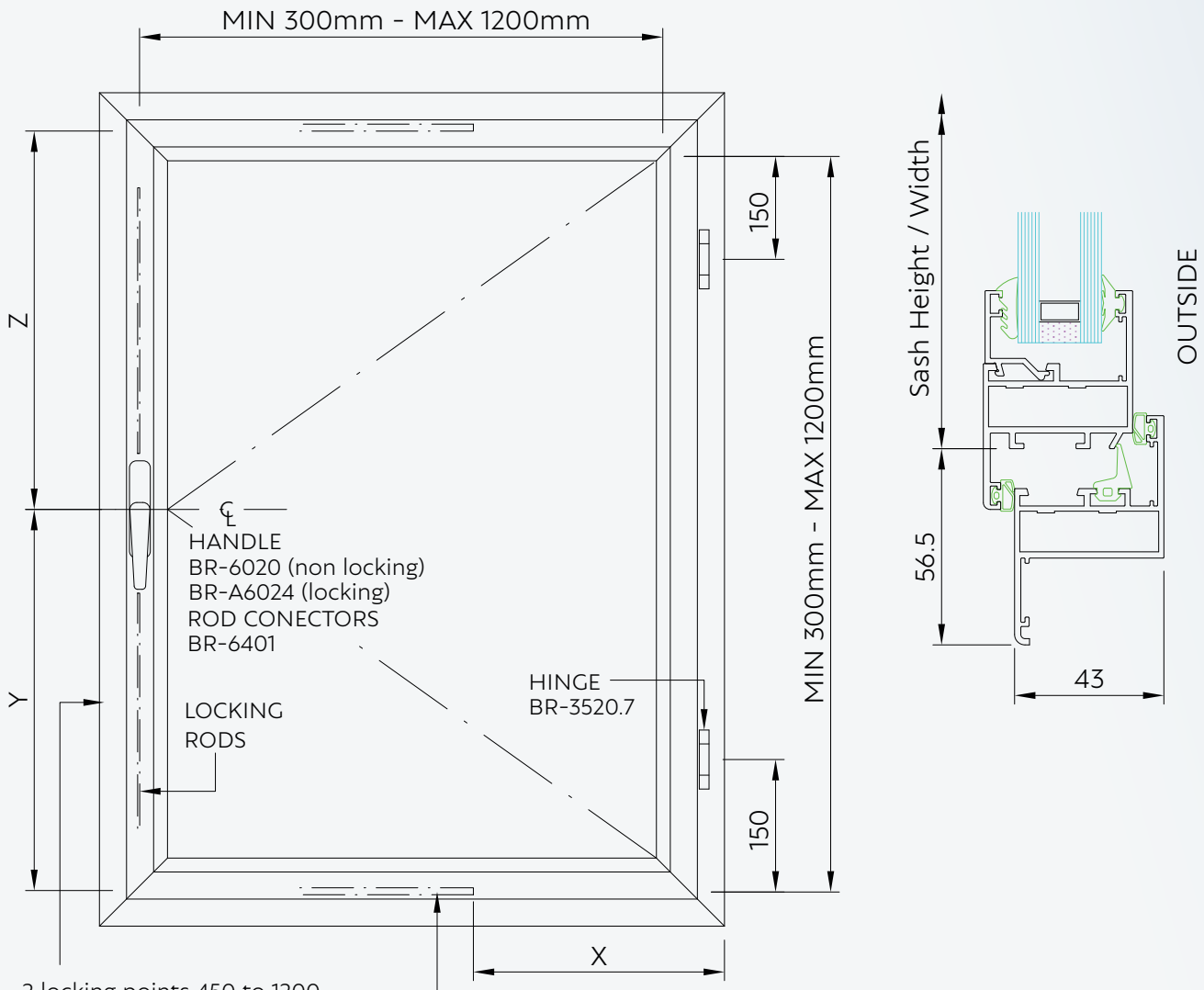
MULLION / TRANSOM
BR-CA12



SHEET NTB43/06/04



SHEET NTB43/06/05



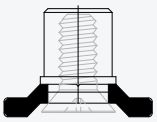
MIN SASH WIDTH 450mm MAX SASH WIDTH 1200mm
MIN SASH HEIGHT 450MM MAX SASH HEIGHT 1200mm

DIM X IS TO SUIT THE REQUIRED OPENING RESTRICTIONS

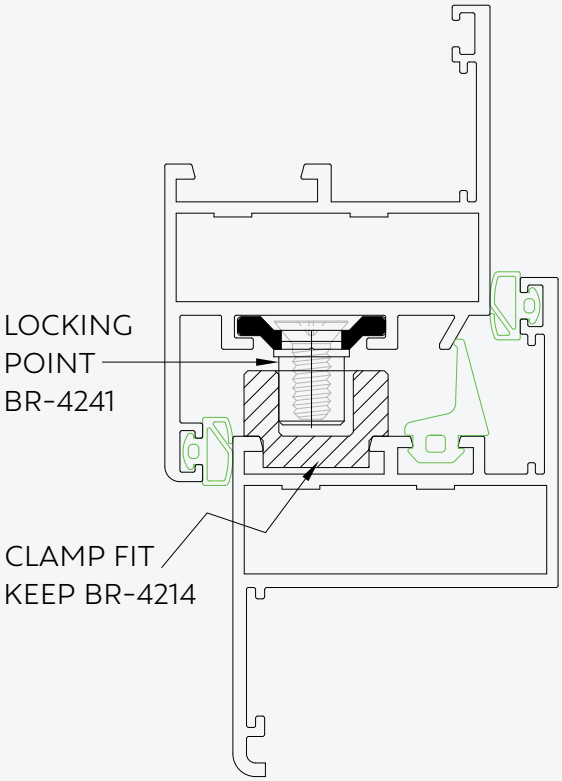
SEE PAGE NTB43/07/03 FOR FITTING OF HANDLE
SEE PAGE NTB43/07/08 FOR FITTING OF SLIDING SIDE RESTRICTOR
SEE PAGE NTB43/07/04 & 05 FOR FITTING OF HINGE
SEE PAGE NTB43/07/02 & 03 FOR LOCKING RODS

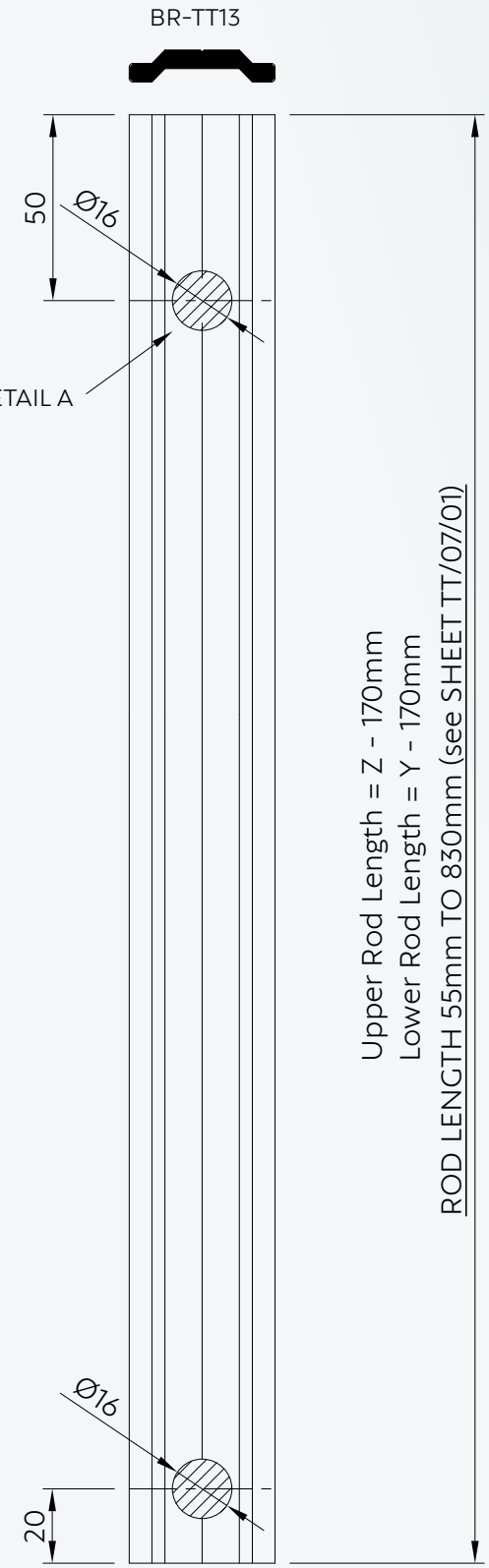
NOTE:
MAX ALLOWABLE SASH WEIGHT IS 60kg

SHEET NTB43/07/01



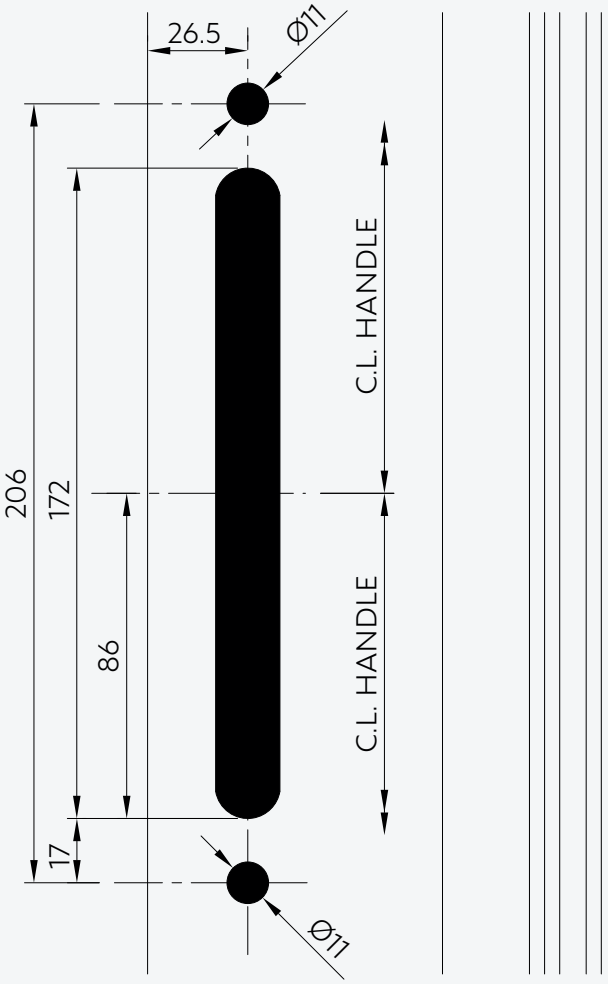
DETAIL A
GALVANISED STEEL
LOCKING POINT
SCREW FIXED WITH
M5 CSK SET SCREW
(BR-4241)

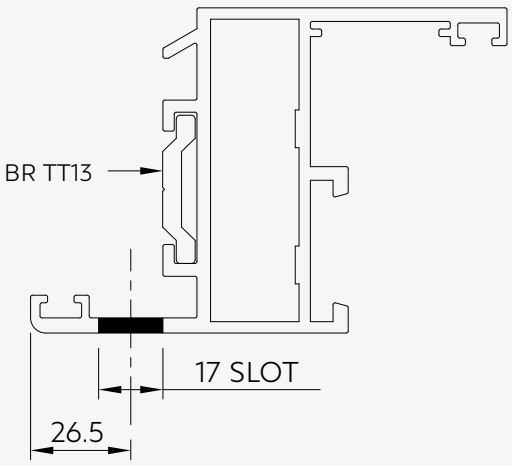


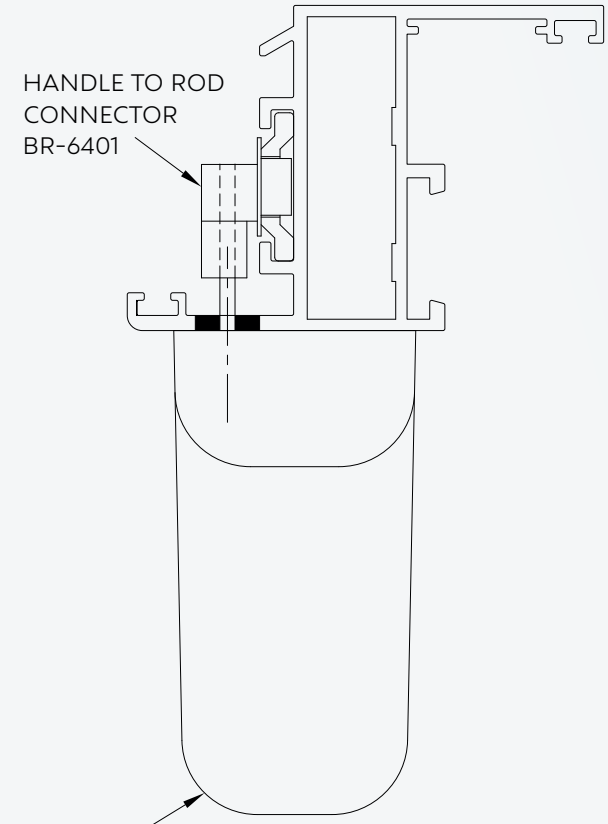


SHEET NTB43/07/02

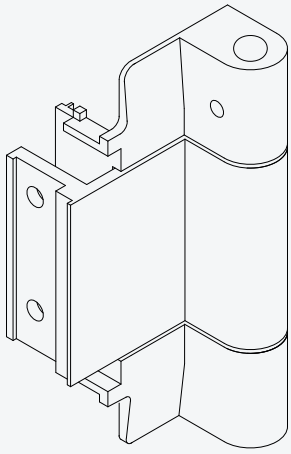
HANDLE PREPARATION



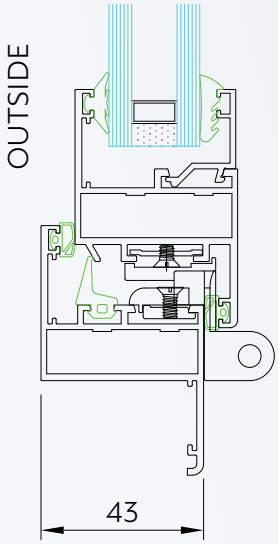


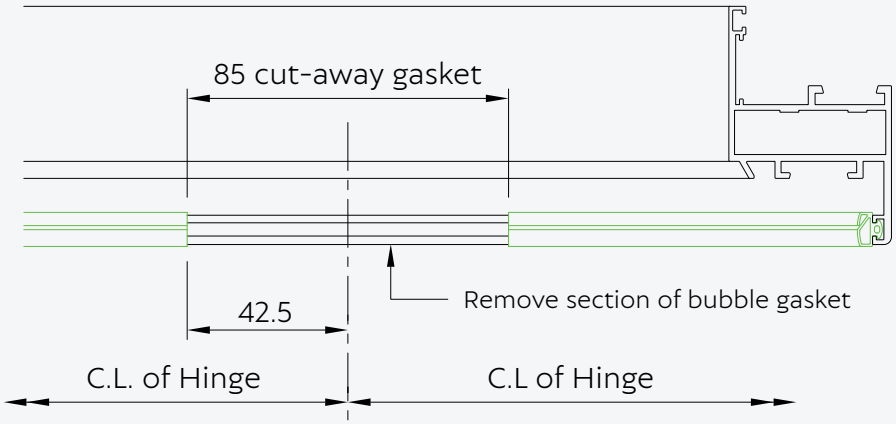


SHEET NTB43/07/03



HINGE BR-3520.7





Fitting of Hinge

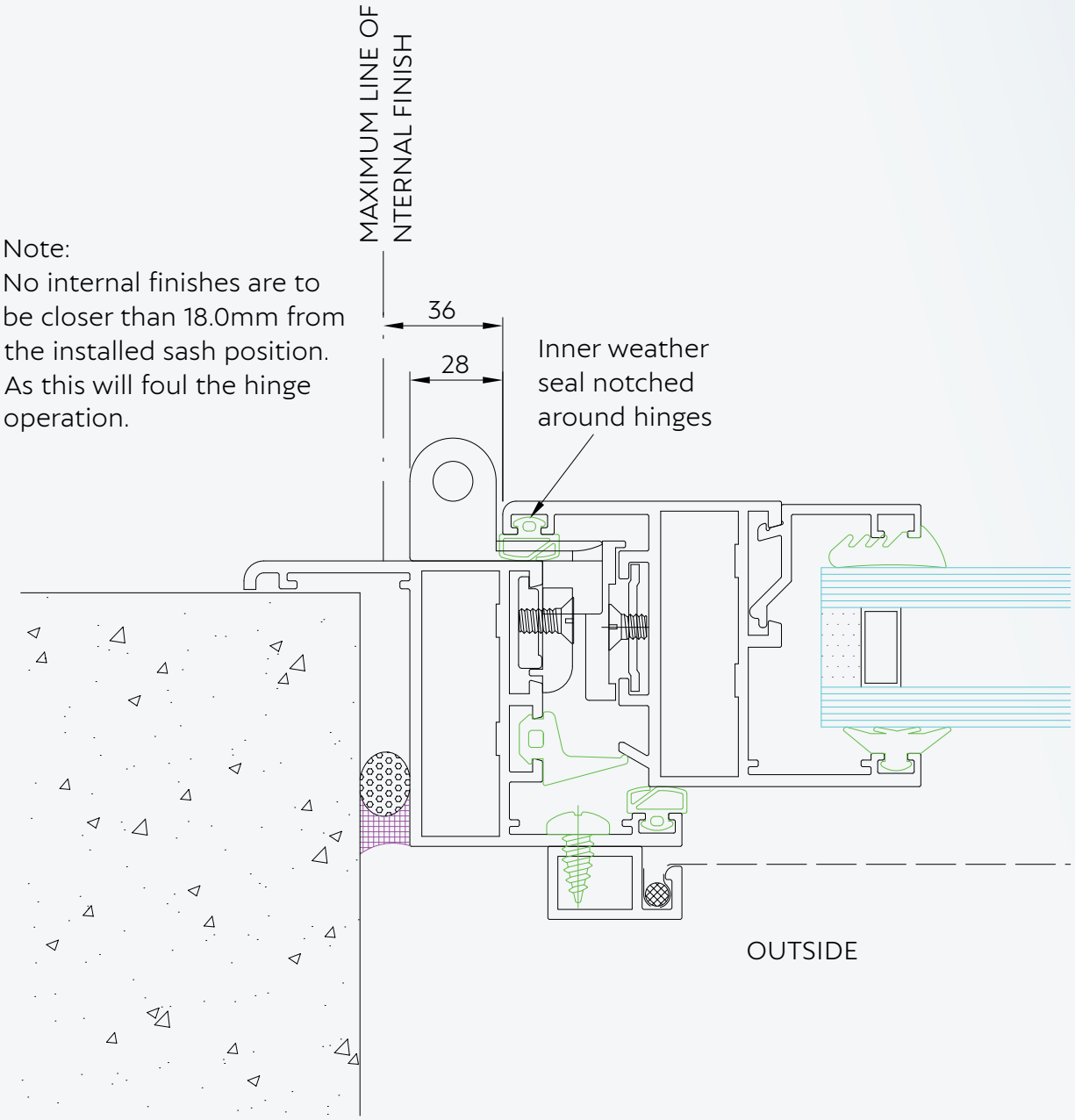
1. Mark the centres at which the hinge is required on the sash and outerframe.
2. Remove a section of bubble gasket 42.5mm either side of the centreline.
3. Fit clamping plates into grooves on sash and outerframes.
4. Fit hinge to both sash frame and outerframe.
5. Assemble Vent and outerframe and insert the hinge pin.
6. Adjust sash to give correct clearance and tighten clamping screws.
7. Open sash and fit hinge pin locking grub screw.

Note:

MAXIMUM ALLOWABLE SASH WEIGHTS

Maximum total sash weight for Side Hung Sash (with 2 Hinges) = 60kg
Maximum total sash weight for Bottom Hung Sash (with 2 Hinges) = 60kg

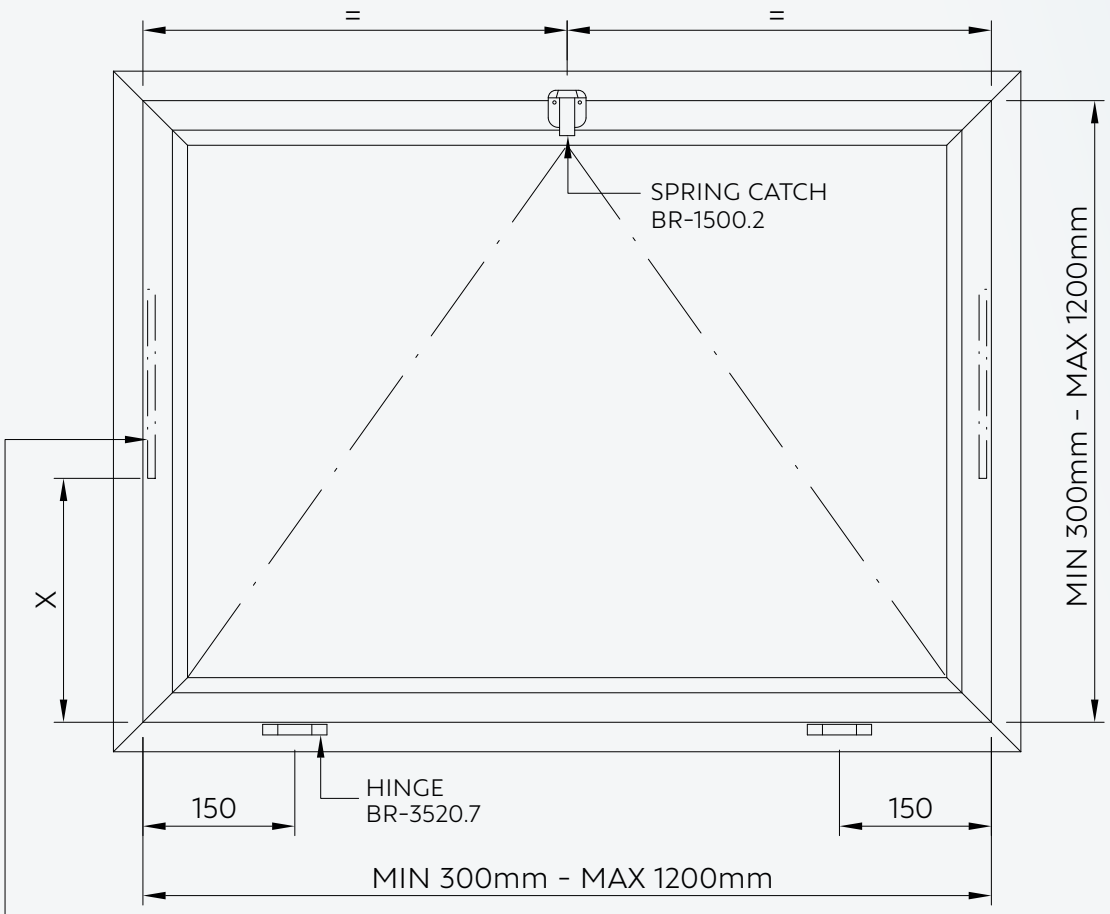
SHEET NTB43/07/04



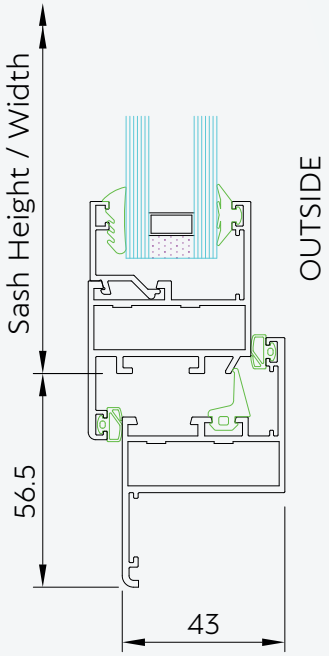
Note:
No internal finishes are to be closer than 18.0mm from the installed sash position. As this will foul the hinge operation.

SHEET NTB43/07/05

VENT 450 TO 800 ONE CENTRAL SPRING CATCH
VENT 801 TO 1200 TWO SPRING CATCHES AT $\frac{1}{4}$ POINTS



SLIDING SIDE RESTRICTOR IF REQUIRED
BR-1115.1 FOR SASHES FROM 701mm UP TO 1200mm AND
BR-1115.2 FOR SASHES FROM 450mm UP TO 700mm
(THE ABOVE DIMENSIONAL PARAMETERS REFER TO THE JAMB ON THE BOTTOM HUNG & HEAD / CILL ON THE SIDE HUNG)



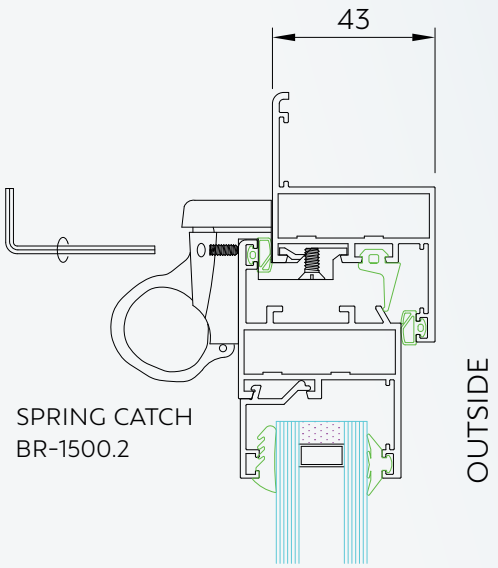
MIN SASH WIDTH 450mm MAX SASH WIDTH 1200mm
MIN SASH HEIGHT 450MM MAX SASH HEIGHT 1200mm

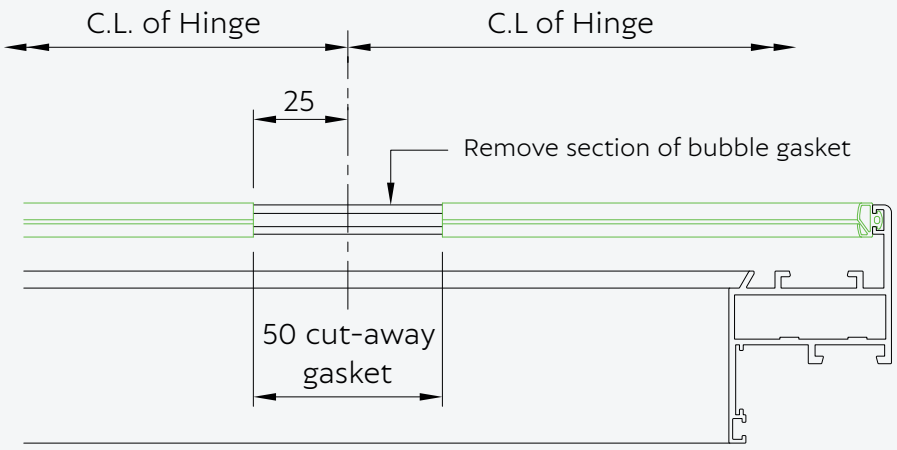
DIM X IS TO SUIT THE REQUIRED OPENING RESTRICTIONS

SEE PAGE NTB43/07/07 FOR FITTING OF SPRING CATCH
SEE PAGE NTB43/07/08 FOR FITTING OF SILDING SIDE RESTRICTOR
SEE PAGE NTB/07/04 & 05 FOR FITTING OF HINGE

NOTE:
MAX ALLOWABLE SASH WEIGHT IS 60kg

SHEET NTB43/07/06

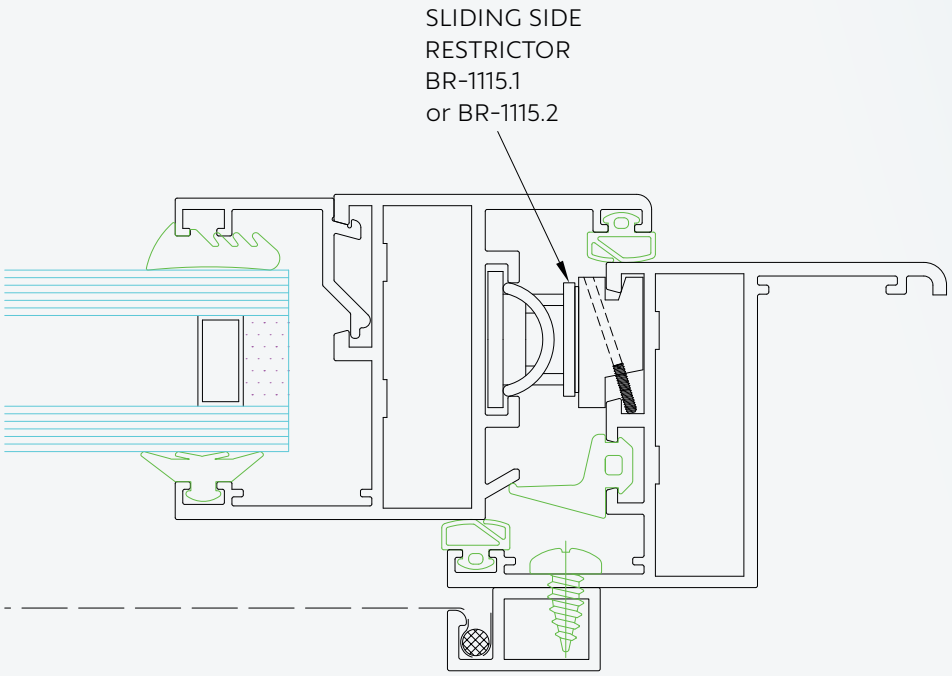




Fitting of Spring Catch

1. Mark the centres at which the catch is required on the sash and outerframe
2. Remove a section of bubble gasket 25mm either side of the centreline.
3. Place the spring catch over the leg of the section and tighten the two clamping grub screws with an allen key
4. Fit the keep at the marked centre on the outerframe and tighten clamping screw with cross head screwdriver.
5. Close the window and check alignment of the catch and keep.

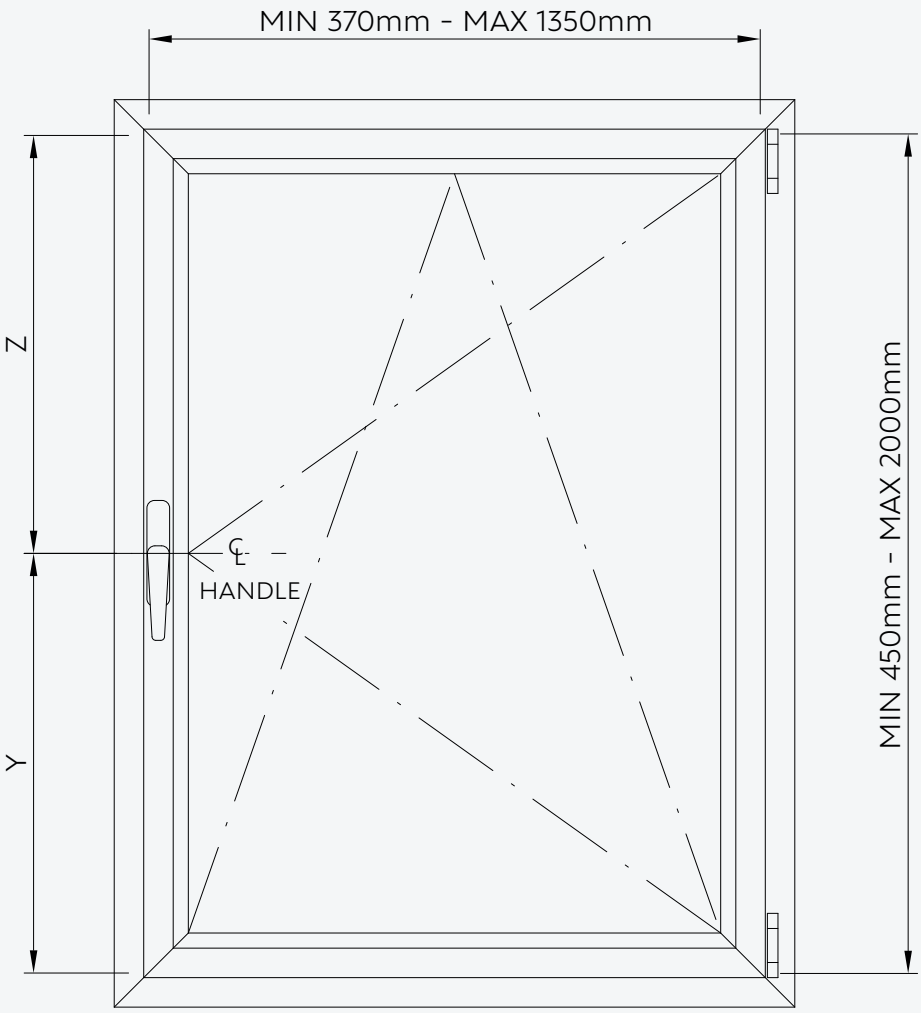
SHEET NTB43/07/07



Fitting of Sliding Restrictor Arm

1. Mark the centres at which the arm is required on the outerframe
2. Place the Restrictor into the rebate of the outer section and tighten the two clamping grub screws with an allen key.
4. Fit the stop keep at the marked centre on the sash frame and tighten clamping screw an allen key.
5. Lift the wire guide and turn it to 90° with the restrictor.
6. Place the head into the rebate of the sash frame and turn the wire through 90°.
7. Push the wire into the sash frame rebate.
8. Operate the sash and check dimension of restricted opening.

SHEET NTB43/07/08

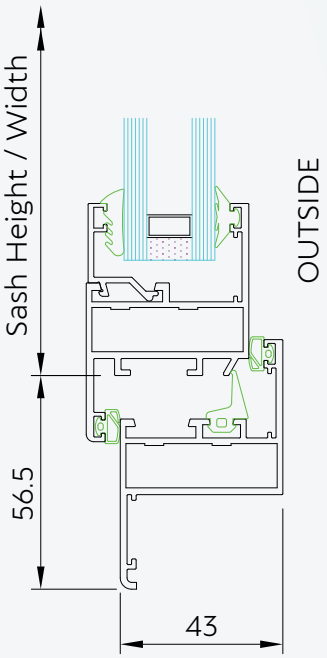


MIN SASH WIDTH 370mm MAX SASH WIDTH 1200mm
MIN SASH HEIGHT 450mm MAX SASH HEIGHT 1200mm

MAX $\frac{\text{HEIGHT}}{\text{WIDTH}}$ RATIO = 1.5

SEE PAGE TT/07/03 FOR PREPARATION FOR HANDLE
SEE PAGE TT/07/02 & 03 FOR LENGTH & PREPARATION OF LINK RODS
SEE PAGE TT/07/08 FOR HINGE INFORMATION
SEE PAGE TT/07/11 FOR FITTING OF TURN LOCK

NOTE:
MAX ALLOWABLE SASH WEIGHT IS 60kg

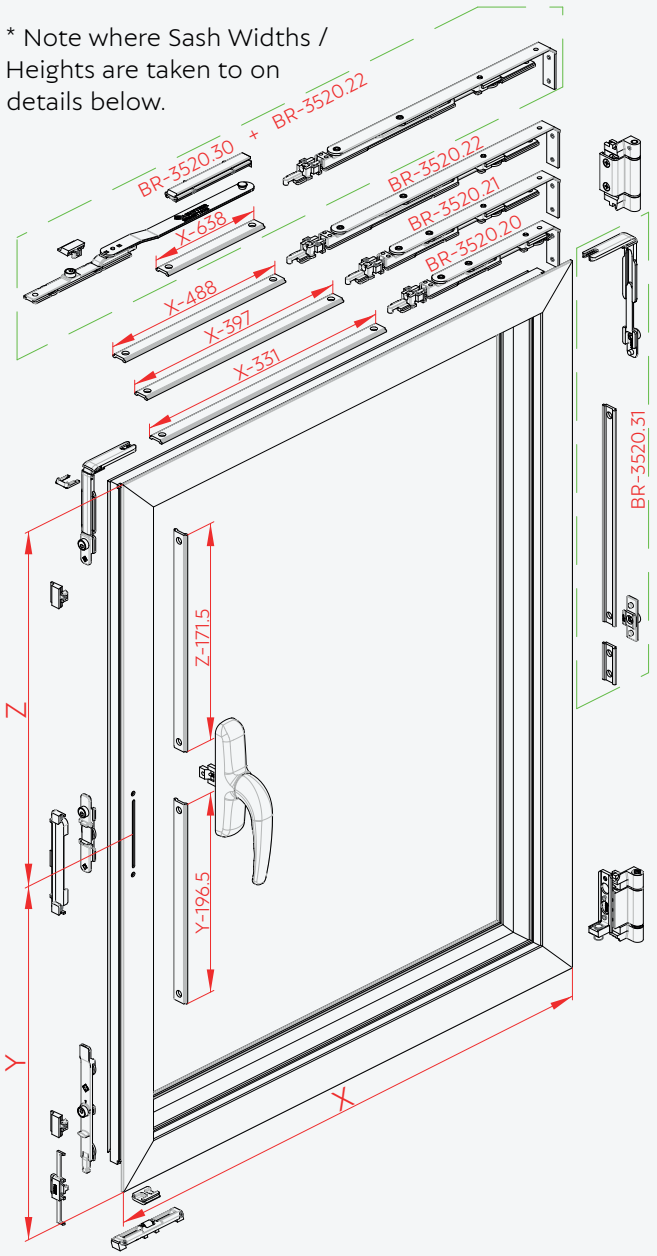


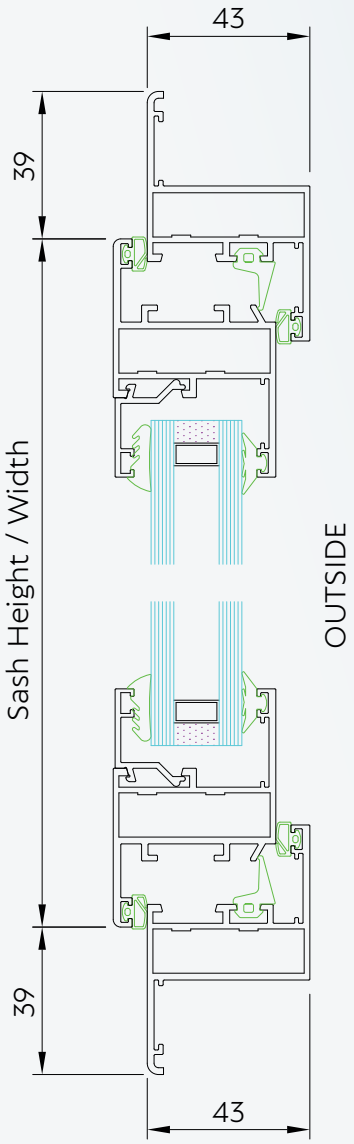
SHEET NTB43/07/09

BASIC TILT AND TURN KIT (MAX 80KG SASH)

Sash Width *	Base Kit	Top Arm	Additional Top Arm	Additional Corner Trans
370 to 430	BR-3520.1	BR-3520.20		
431 to 600	BR-3520.1	BR-3520.21		BR-3520.31
601 to 1000	BR-3520.1	BR-3520.22		BR-3520.31
1001 to 1200	BR-3520.1	BR-3520.22	BR-3520.30	BR-3520.31

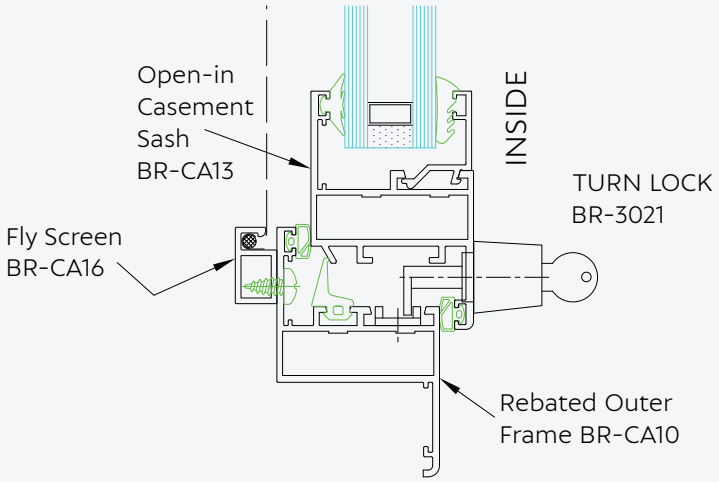
* Note where Sash Widths / Heights are taken to on details below.

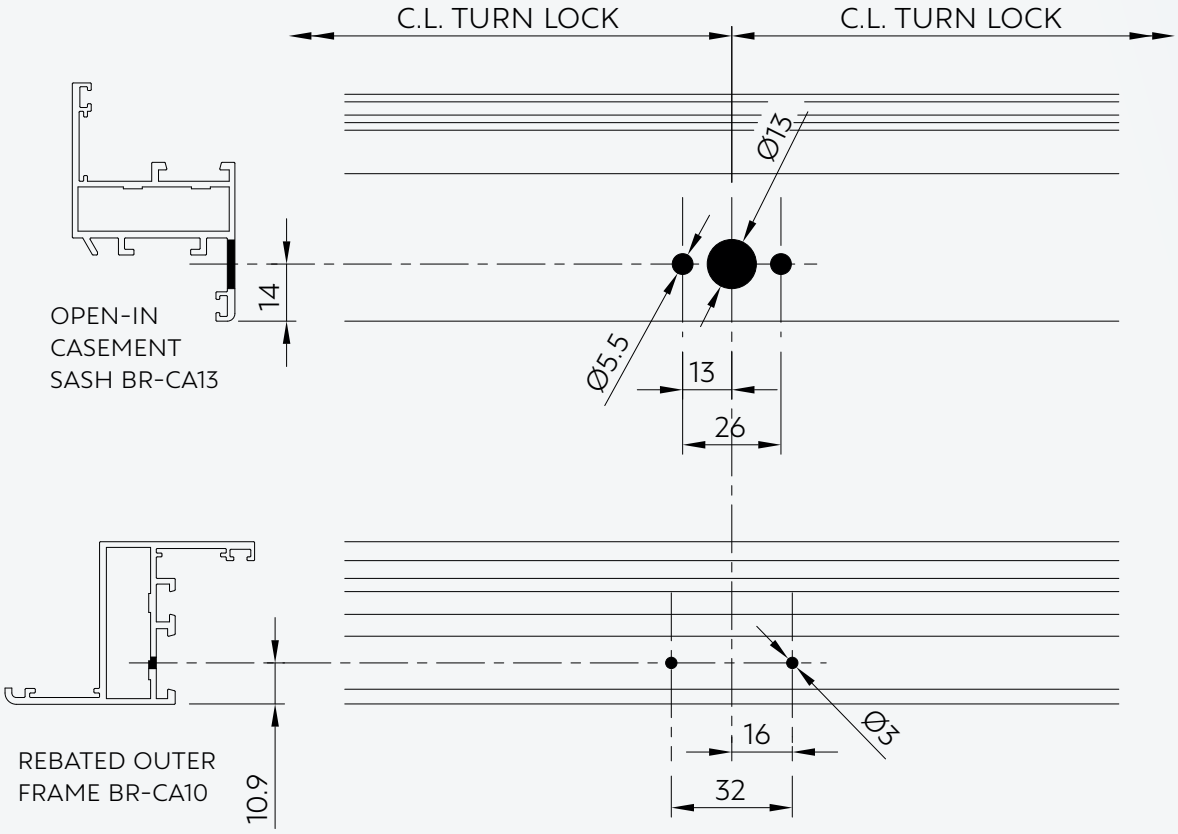




Note:
When assembling fittings onto window frames, please refer to instructions supplied with fittings. (additional copies can be supplied upon request)

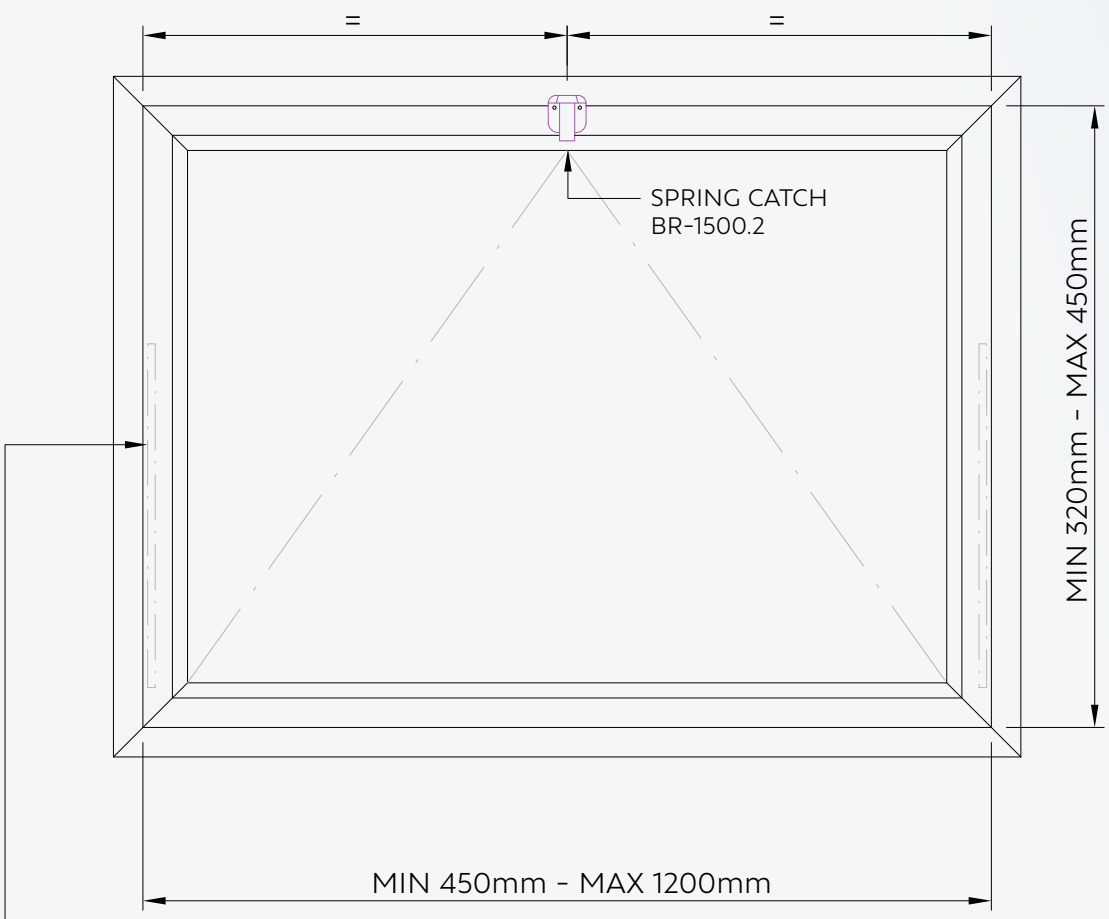
SHEET NTB43/07/10

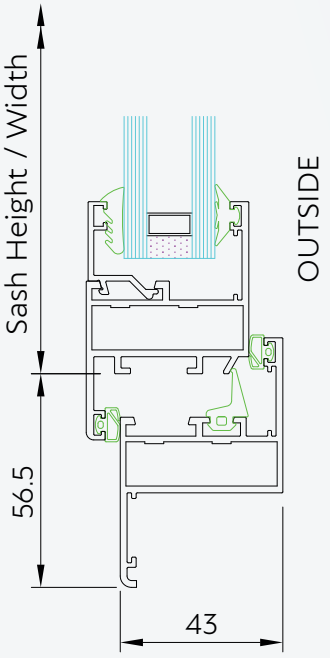




SHEET NTB43/07/11

VENT 450 TO 800 ONE CENTRAL SPRING CATCH
VENT 801 TO 1200 TWO SPRING CATCHES AT $\frac{1}{4}$ POINTS





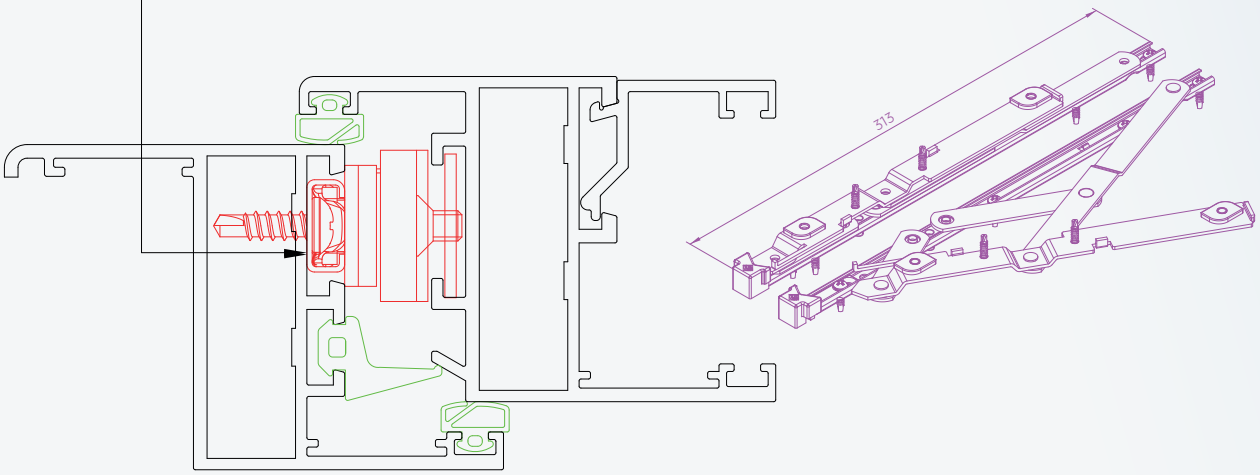
MIN SASH WIDTH 450mm MAX SASH WIDTH 1200mm
MIN SASH HEIGHT 320MM MAX SASH HEIGHT 450mm
DIM X IS TO SUIT THE REQUIRED OPENING RESTRICTIONS

SEE PAGE NTB43/07/07 FOR FITTING OF SPRING CATCH
SEE PAGE TBTT/07/16 FOR FITTING OF HINGE

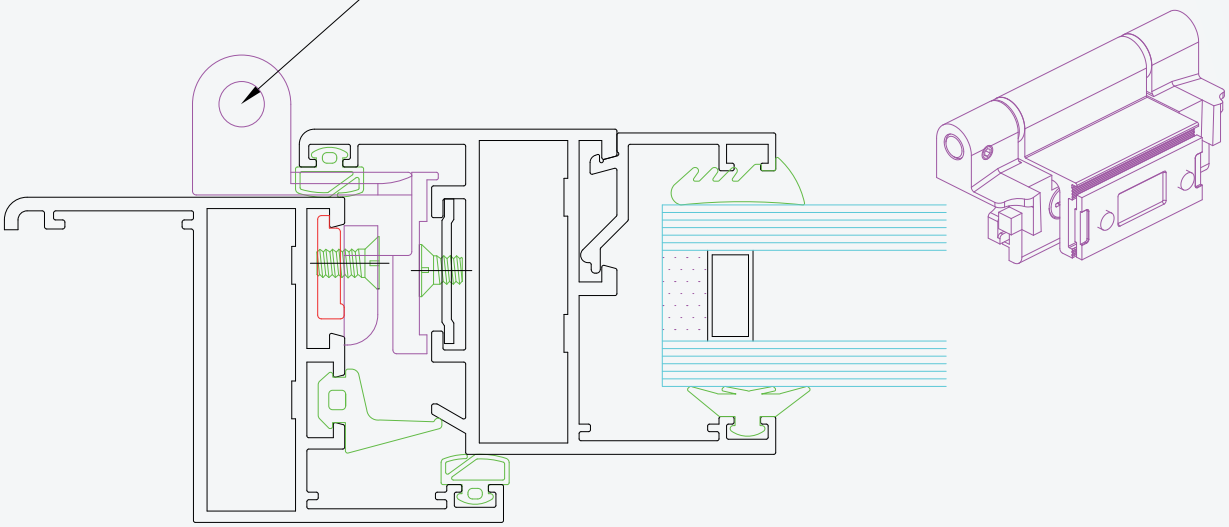
NOTE:
MAX ALLOWABLE SASH WEIGHT IS 30kg

SHEET NTB43/07/12

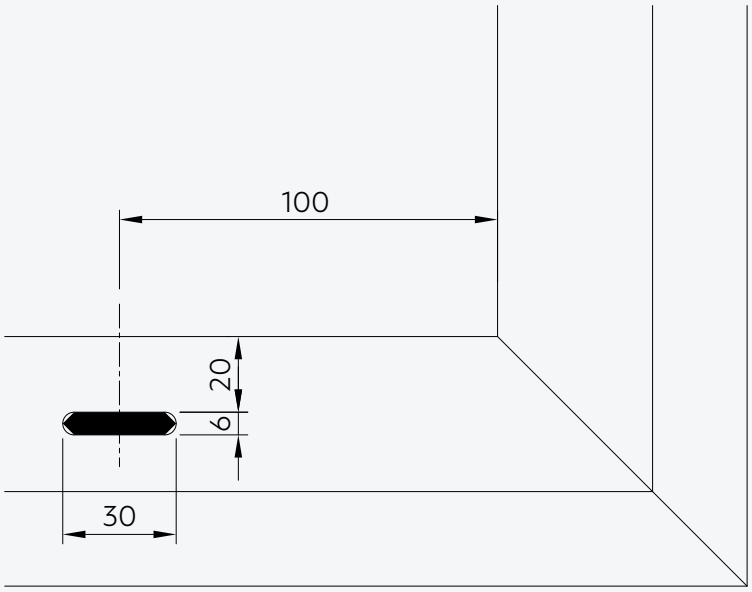
EASY CONCEALED HINGES TO EACH JAMB
BRITAL REF. BR-1231.12
x313mm long.

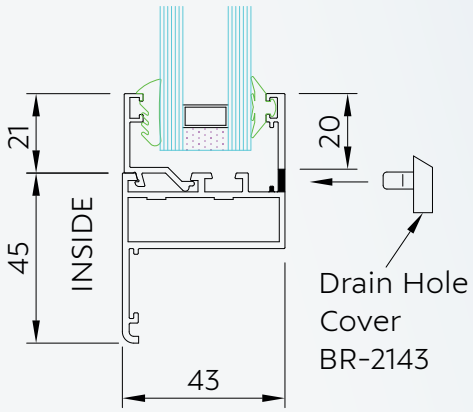


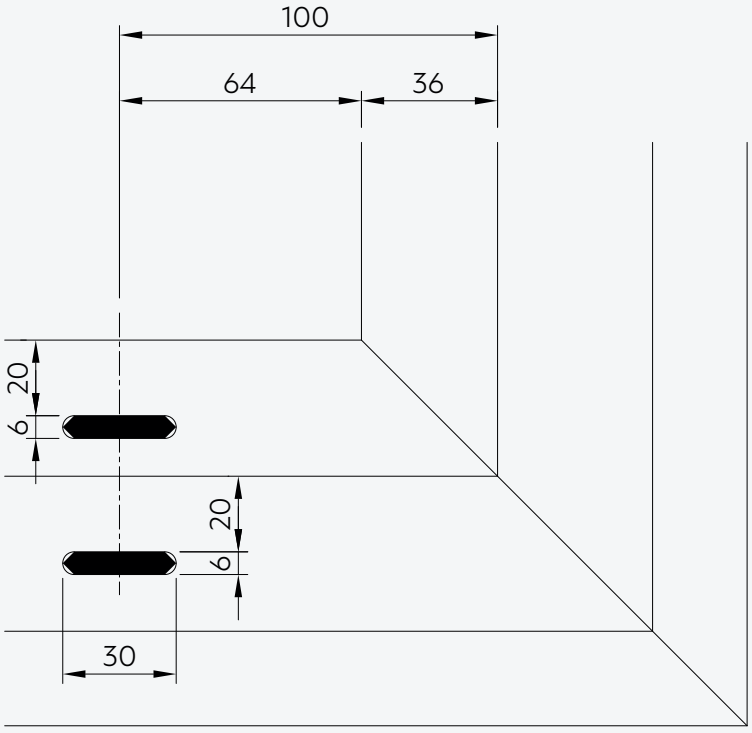
BRITAL REF. BR-3520.71

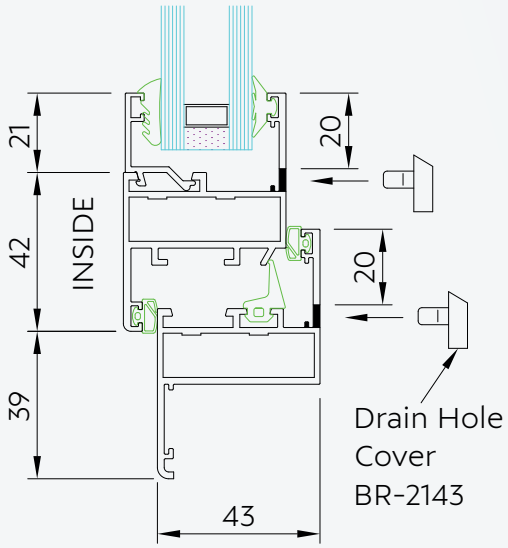


SHEET NTB43/07/13



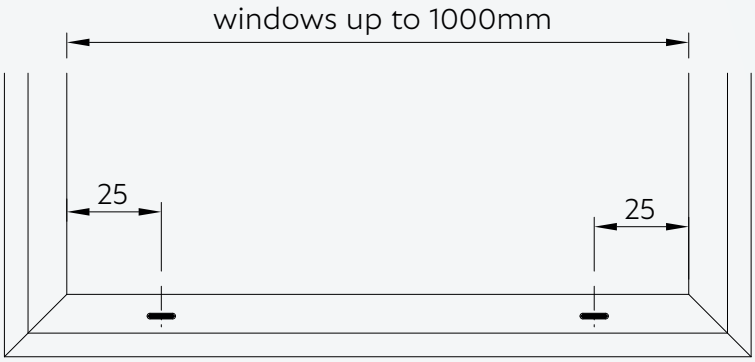


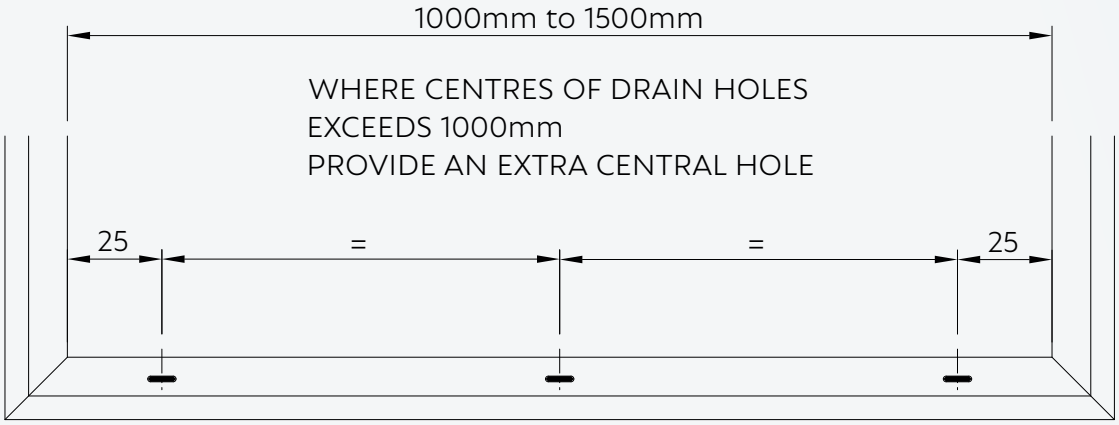


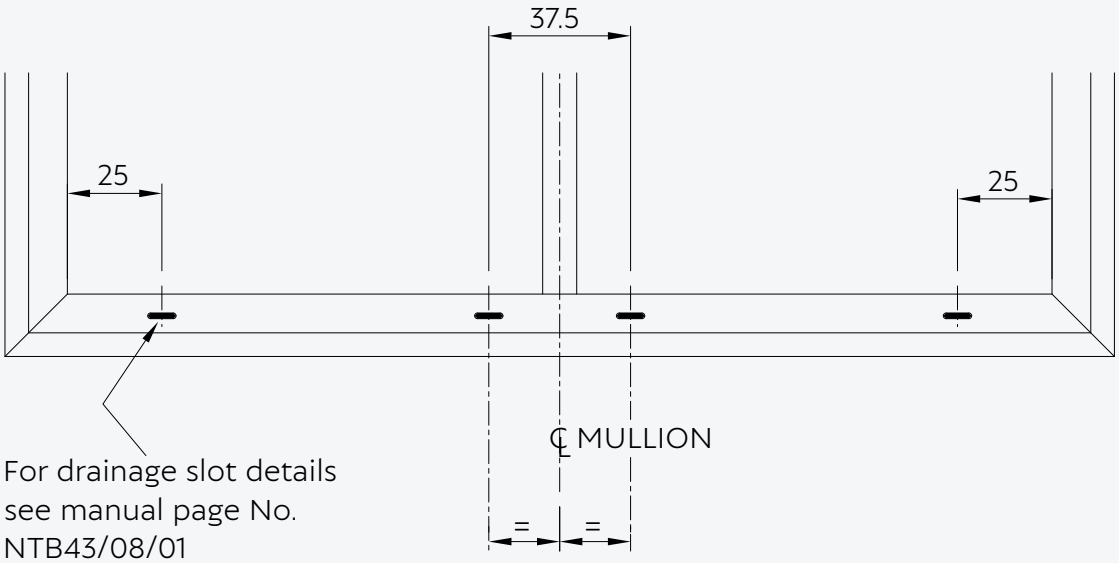


WHERE CENTRES OF DRAIN HOLES
EXCEEDS 1000mm
PROVIDE AN EXTRA CENTRAL HOLE

SHEET NTB43/08/01



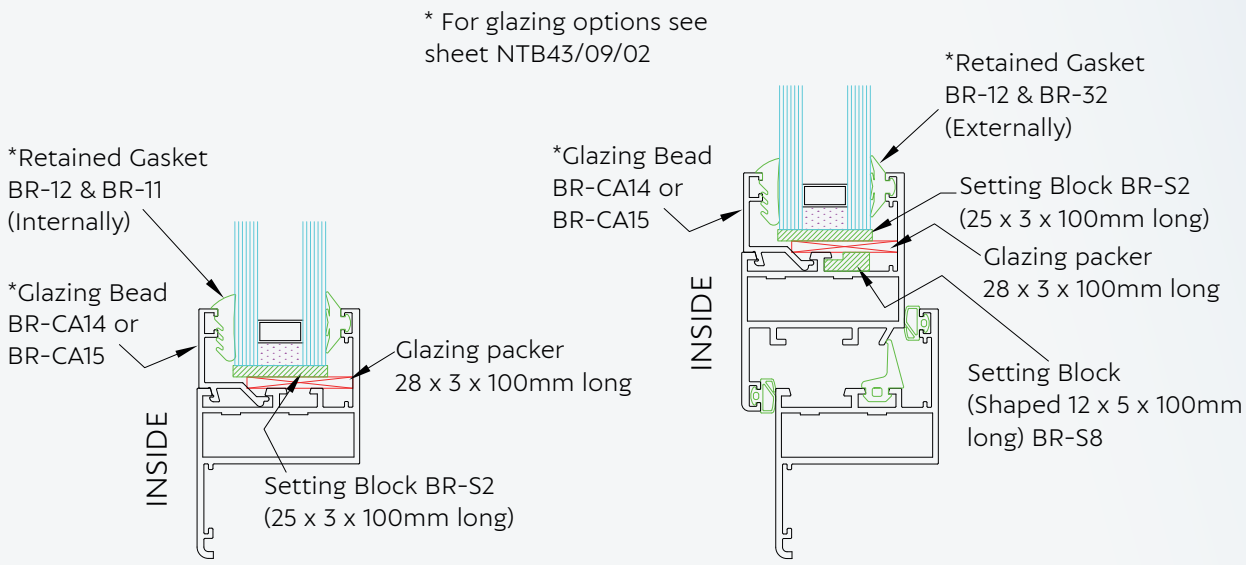


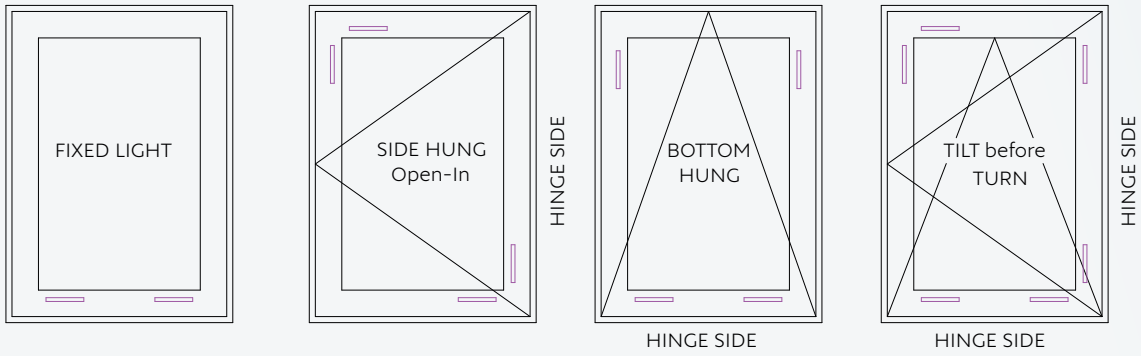


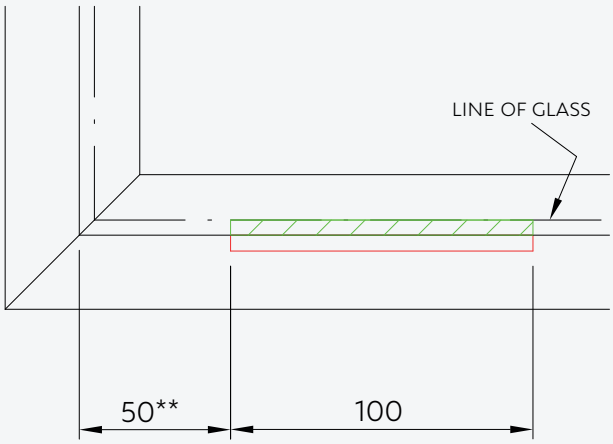
For drainage slot details see manual page No. NTB43/08/01

SHEET NTB43/08/02

* For glazing options see sheet NTB43/09/02







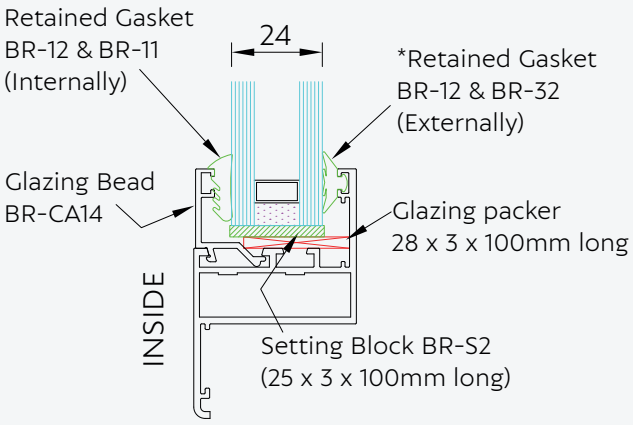
Setting Blocks and Glazing packers to suit glass tolerance.
(Obtained locally by Fabricator)
See also page No.NTB43/02/01 of this manual.

To be fitted in accordance with BS 8000 1990 Pt. 7.

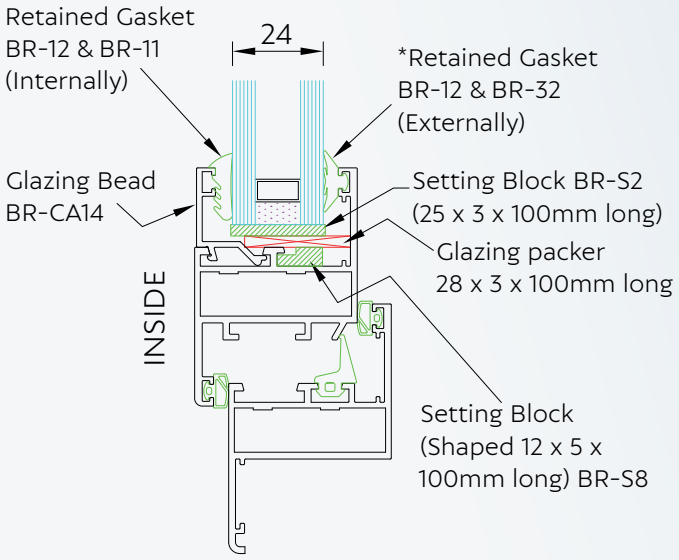
** = minimum dimension. Setting blocks to be positioned to avoid drainage slots.

SHEET NTB43/09/01

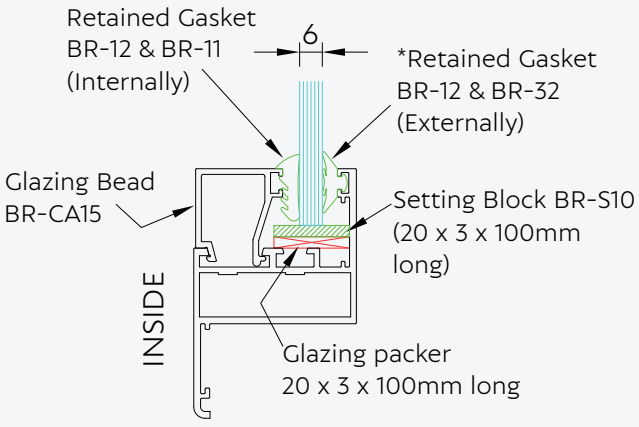
For glazing details see sheet NTB43/09/01



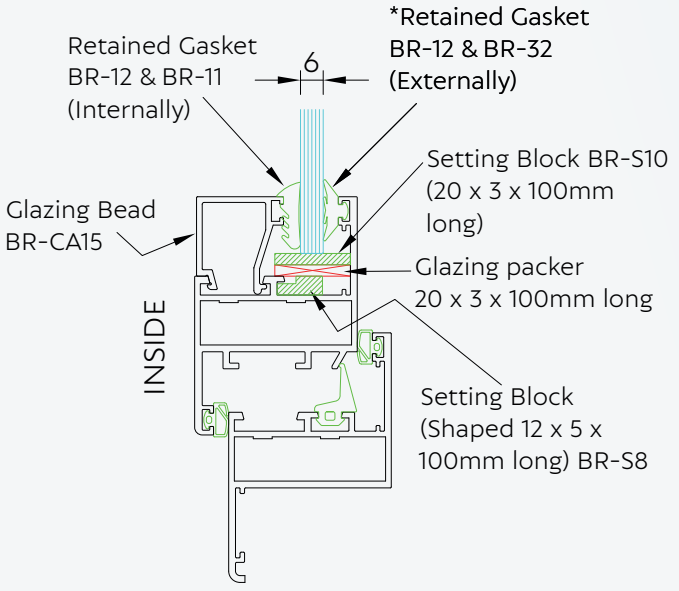
24mm Glass
(Fixed Light)



24mm Glass
(Vent Frame)



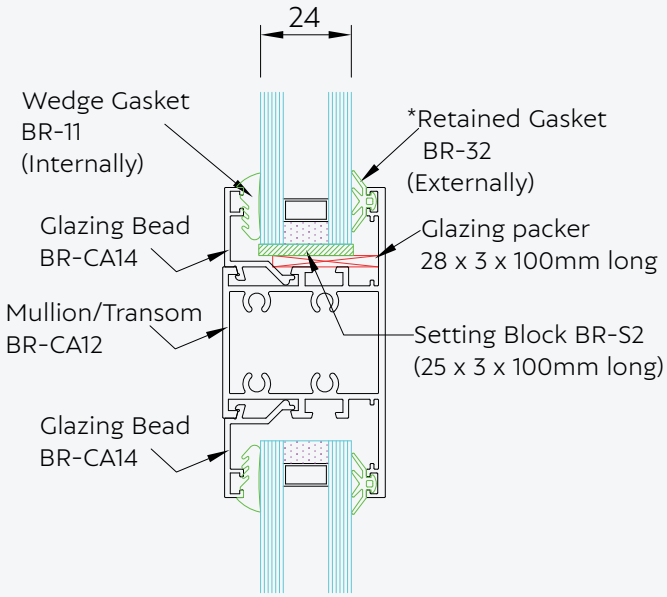
6mm Glass
(Fixed Light)



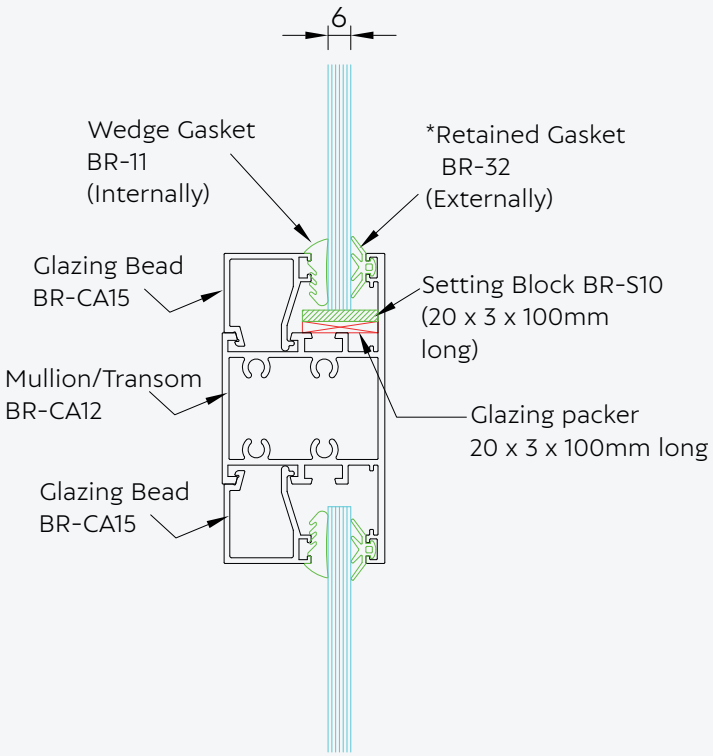
6mm Glass
(Vent Frame)

SHEET NTB43/09/02

For glazing details see sheet NTB43/09/01

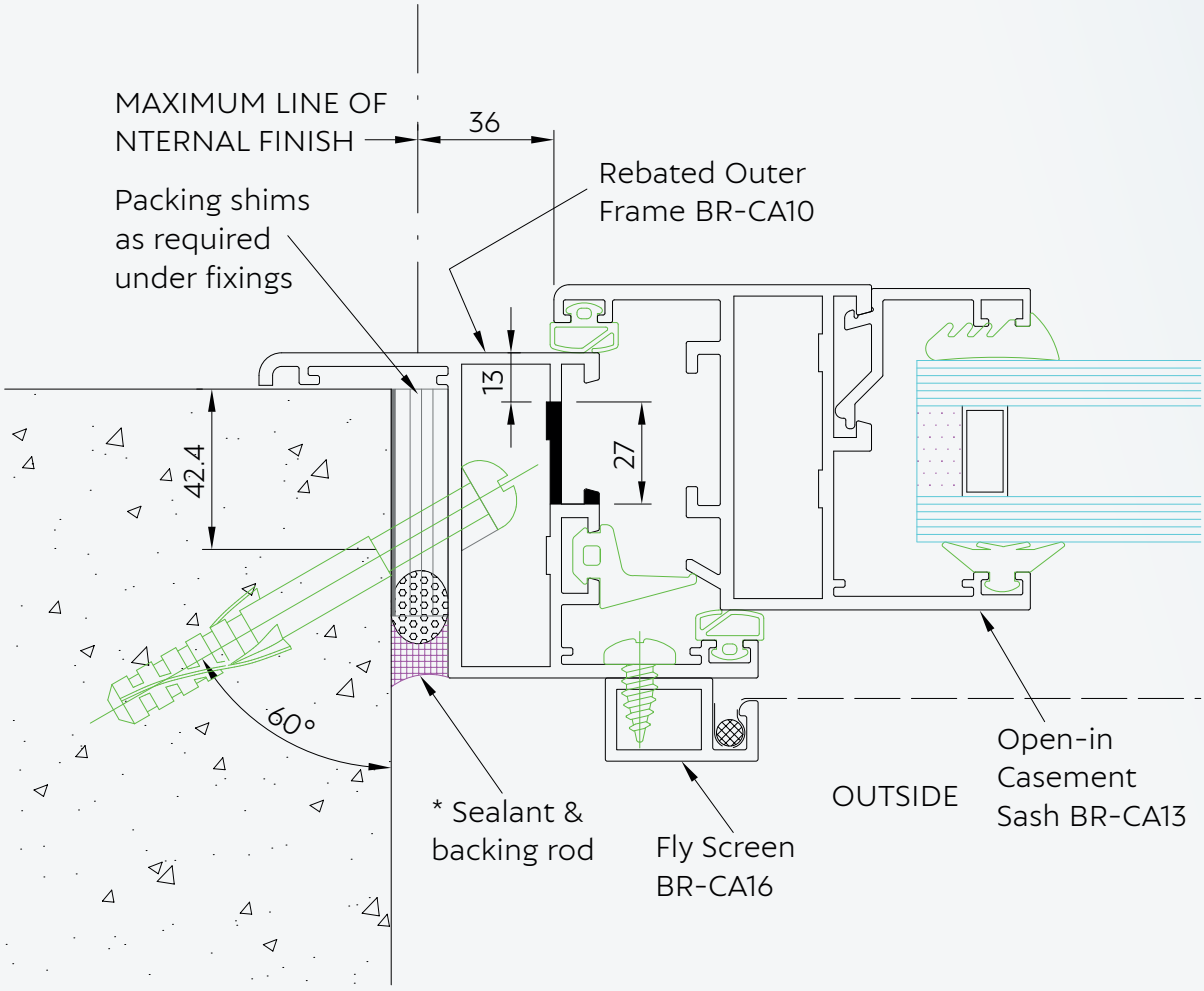


24mm Glass
(Mullion/Transom Frame)



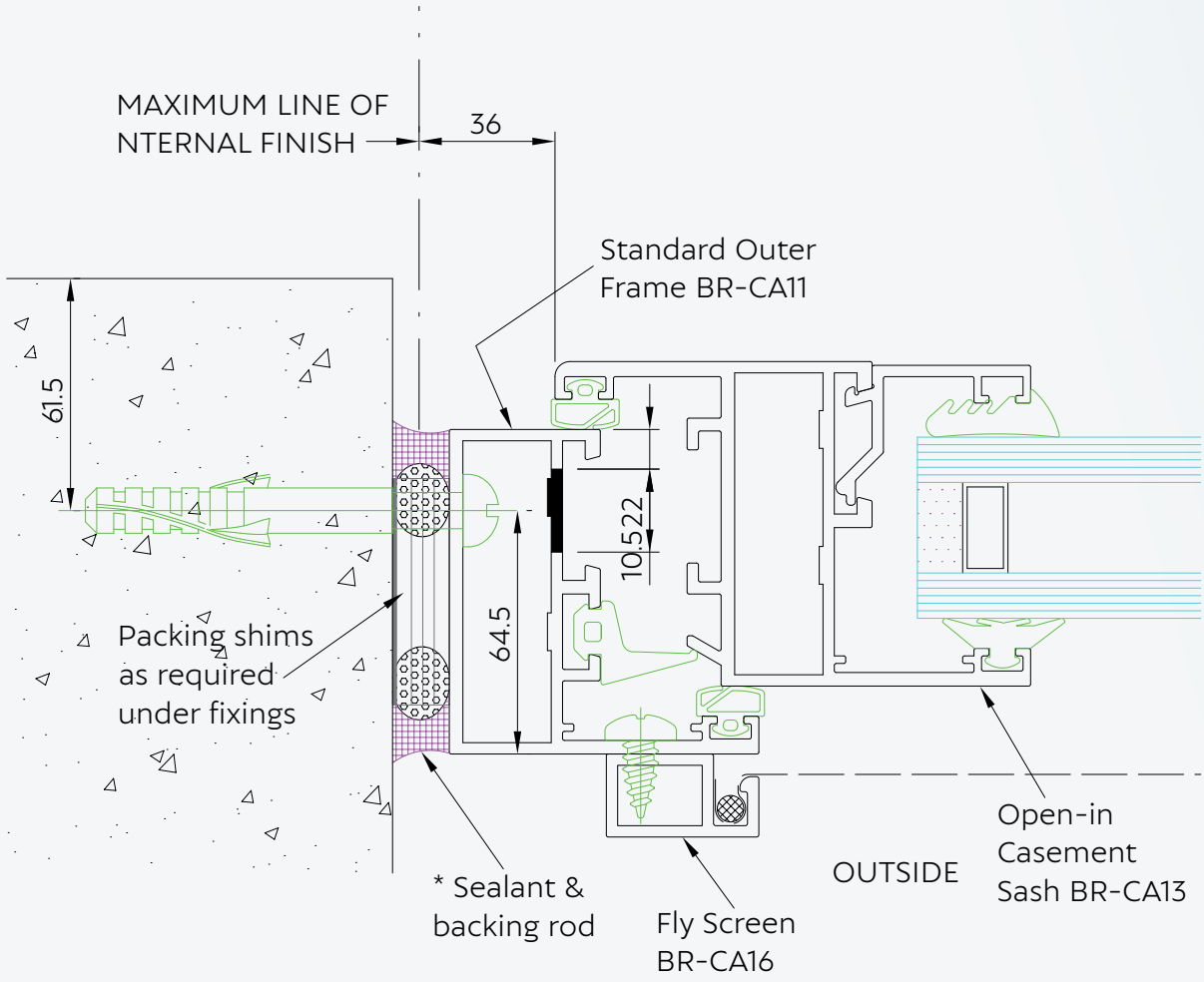
6mm Glass
(Mullion/Transom Frame)

SHEET NTB43/09/03



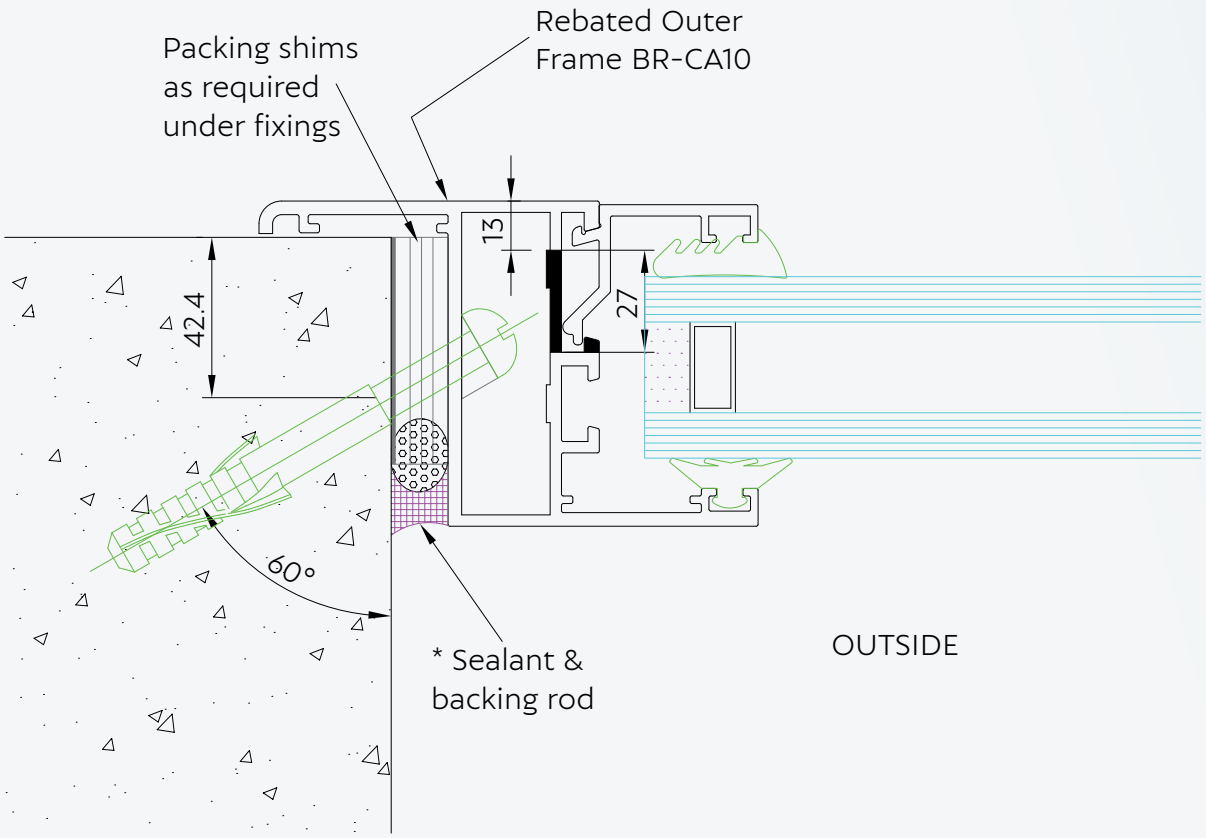
* All sealants to be installed in strict accordance with manufacturers relevant details & BS 6093 to suit site conditions.

SHEET NTB43/10/01



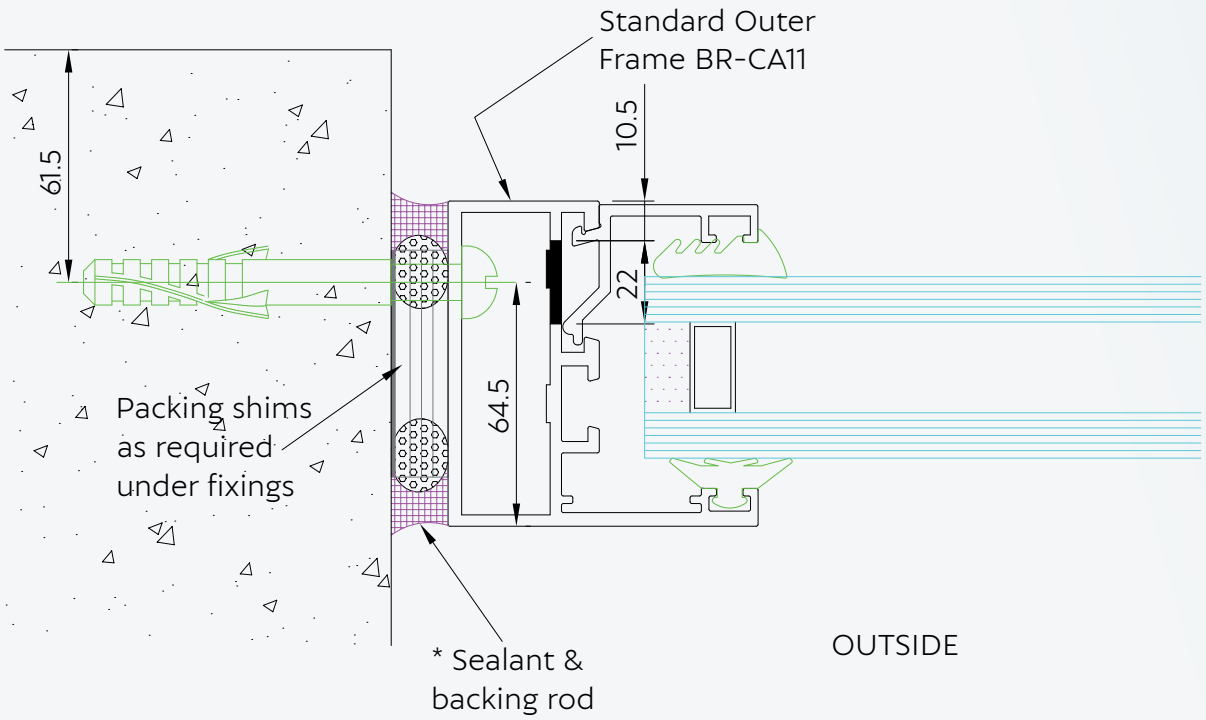
* All sealants to be installed in strict accordance with manufacturers relevant details & BS 6093 to suit site conditions.

SHEET NTB43/10/02



* All sealants to be installed in strict accordance with manufacturers relevant details & BS 6093 to suit site conditions.

SHEET NTB43/10/03



* All sealants to be installed in strict accordance with manufacturers relevant details & BS 6093 to suit site conditions.

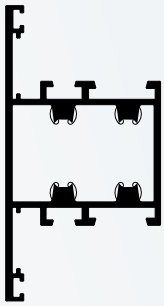
SHEET NTB43/10/04

This chart is for guidance only.
All structural calculations must be checked and confirmed by a structural engineer.

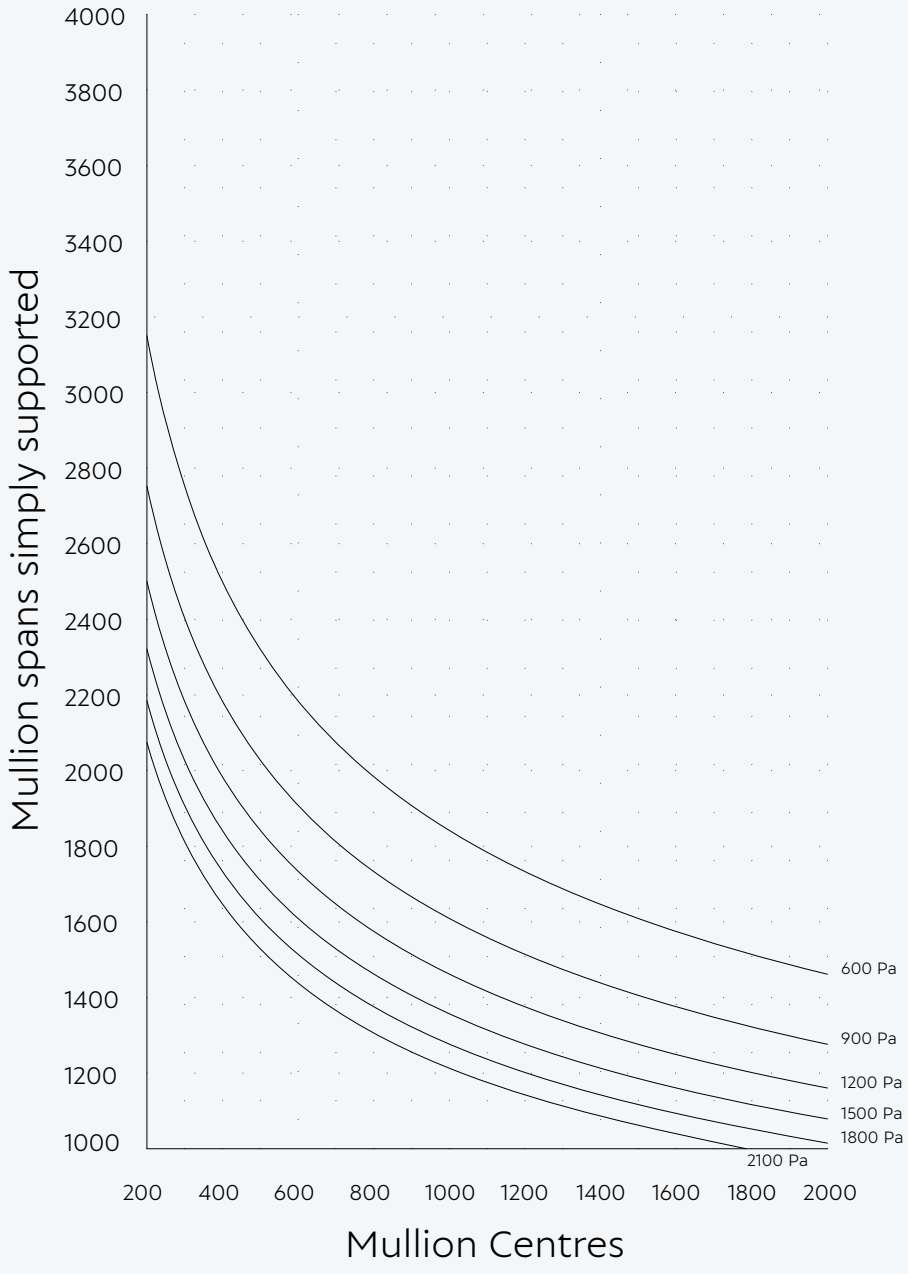
Loading chart for mullion

Based upon single span supported theory.
Def = 1/175 - To Max 20mm.
Maximum 0.2% tensile proof stress = 160 N/mm^2 (6063 T6 alloy)

Direction of load



Ixx = 12.20cm^4
Mullion Number
BR-CA12



Not to Scale

SHEET NTB43/11/01

The following notes are for the guidance of the fabricator to ensure that this range of tilt & turn windows & fixed lights are designed and installed correctly.

Design

1. Brital recommend that detailed working drawings are prepared for all contracts, to ensure that the tilt & turn window is properly designed to suit the individual conditions of the site.

2. All working drawings must be submitted to Brital for approval prior to the fabrication of windows.

3. Fixings shown in this manual are typical of what is likely to be needed. For specific site conditions different fixings may be required - these should be designed taking into account the likely wind loads and dead loads that they are likely to be subjected to.

4. The cutting sizes given in the fabrication manual are typical for regular tilt & turn windows and fixed lights. For non-regular conditions the sizes must be determined from the working drawings.

5. Brital assume that all fabricators using this system will have experience in producing and glazing fixed & tilt & turn windows. If not, Brital will be pleased to arrange assistance for the fabricator.

SHEET NTB43/12/01

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