HomelightPlus™

CRITTALL® WINDOWS LTD NBS SPECIFICATION
FOR HOMELIGHTPLUS™ RANGE

L10 - Windows

318 STEEL WINDOWS

- Manufacturer and Reference: Crittall Windows Ltd, **HomelightPlus™ Residential**.

- Generally manufactured in accordance with BS 6510-2010. 'Steel framed windows and glazed door – specification'.

  Exclusively designed sections formed from hot rolled steel, from a 100% recycled source and conforming to EN10025 Grade S235JR.

  Each HomelightPlus™ frame section is a 'Community Registered Design', Certificates of Registration Numbers are: 002337840-0001, 002337840-0002, 002337840-0003.

  Frame sections are designed for more balanced hot-rolling enabling a consistent metal surface quality to be achieved. Sections have a front-to-back dimension of 32mm.

  Construction: All fixed light and open out frames have welded corners and are flat and square within normal manufacturing dimensional tolerances of ± 1.5mm. Multi-light frames are constructed with hot tenon riveted intermediate bars. Where frame spans exceed multi-light elevation size limits, frame to frame couplings are employed.

  Configurations –

  Extended Leg Out, Open Out Glaze Out -

  Single Side Hung
  Single Top Hung
  Single Fixed Light
  Multi-lights

  Simulated divided lights may include dummy fenestra joints, flush grids, and duplex spacer bars. Cosmetic glazing bars can be used with all glass types.

  Simulated leaded lights which may include soldered joint can be used with all glass types.

  Galvanizing: All components including steel attachments, coupling members and ancillaries; hot dipped after manufacture to BS EN ISO 1461 - 2009 hot dipped galvanized coating on fabricated iron and steel articles = specification and test methods.

  Weatherstripping: Opening lights are drained and pressure equalized, they are fitted with twin gaskets (external rainscreen / internal air seal) which are of dual flipper design and are co-extruded with contact adhesive applied. Gaskets comply with BS 4255.

Weathertightness: To BS 6375 - 1: 2015 Performance of Windows and Doors. Part 1 classification for weathertightness and guidance on selection and specification.

Refer to Table AA for performance data.

Performance Charactistics and Requirements for Windows

To BS 6375-2: 2009 Performance on Windows and Doors Part 2, clarification for operation and strength, characteristics and guidance on selection and specification.

- 5.1: Operating forces - Class 1
- 5.2: Mechanical Strength
- 5.2.1: Resistance to static torsion - Class 3
- 5.2.2: Racking - Class 1
- 5.5: Resistance to repeated opening and closing - Class 2.

Finish: As delivered - Duralife™ (see clause 331) in a range of colours.

Hinges and Hardware: See Clause 328.

Glazing Details: Will accept double glazing up to 24mm. Glazing gaskets and glazing beads present no horizontal ledges on which dust and dirt can gather. The system is drained and ventilated, and utilizes wet glazing; featuring glazing tapes and silicone capping as standard. 16-18mm DG units are retained by a sloped clipped in glazing bead, 19-24mm DG units are retained by a flat clipped in glazing bead.

16mm Clear DG Units (Specified for Part L compliance via Centre Pane U-value ≤1/2W/m^2K

4mm Clear Float | 8mm Krypton, Aluminium spacer, black | 4mm soft coat low-E

18mm Clear DG Units (specified for high G value required to meet Window Energy Rating (WER - 'B')

4mm Low Iron | 10mm Krypton, Edgetech Superspacer, black | 4mm soft coat low-E

Independent WER 'B' rated simulations, calculated in accordance BFRC methodology, GGF Document 2.2, and BS EN 14351-1: 2006 domestic configuration (multi-light side hung / fixed light), achieved via following glass combinations:

a) Pilkington 'Optiwhite' outer pane | Pilkington 'Ks' inner pane.
   (Independent certificate reference: TCL2013-CRIT-001)
b) Saint Gobain 'Diamant' outer pane | Saint Gobain 'Planitherm Total Plus' inner pane.
   (Independent certificate reference: TCL2013-CRIT-002)
c) Guardian Low Iron outer pane | Guardian A+ inner pane.
   (Independently confirmed as equivalent to a) above)

Note: Obscure and opaque units reduce solar G value and will therefore affect WER

22mm Clear DG Units (Specified for Part L compliance via Centre Pane U-value≤1/2W/m^{2}K)

6mm Clear Float | 10mm Krypton, Aluminium spacer, black | 6mm soft coat low-E

Note: in-house simulations indicate that a WER 'B' certification could be achieved via following glass combinations.

22mm Clear DG Units (specified for high G value required to meet Window Energy Rating (WER - 'B')

6mm Low Iron | 10mm Krypton, Edgetech Superspacer, black | 6mm soft coat low-E

d) Pilkington 'Optiwhite' outer pane | Pilkington 'Ks' inner pane.
e) Saint Gobain 'Diamant' outer pane | Saint Gobain 'Planitherm Total Plus' inner pane.
f) Guardian Low Iron outer pane | Guardian A+ inner pane.

Note: Obscure and opaque units reduce solar G value and will therefore affect WER

24mm Clear DG Units (Specified for Part L compliance via Centre Pane U-value≤1/2W/m^{2}K)

4mm Clear Float | 16mm Argon, Aluminium spacer, black | 4mm soft coat low-E

6mm Clear Float | 12mm Krypton, Aluminium spacer, black | 6mm soft coat low-E

Note: Alternative DG unit configurations may be specified to optimise specific requirements, e.g. to maximise acoustic performance. Consult Crittall for technical advice.

325 STEEL WINDOWS AND DOORS:

- Generally all the foregoing:
- Manufacturing undertaken in Crittall Windows own factory.
- Design, testing, manufacture and installation carried out under Quality Management system certified to BS EN ISO 9001.
- Crittall Windows Ltd operate within the constraints of an Environmental Management System certified to BS EN ISO 14001

328 IRONMONGERY/ACCESSORIES

- Standard **HomelightPlus™** Windows (Open Out Glaze Out)

Side Hung - Hung on projecting friction hinges.
(1 Friction/1 Free hinge up to 1067mm in height
Over this height 2 friction hinges fitted)

S.W.F. cockspur handle B158 'Classic Curved' satin chrome plated finish
2 separate handles over 1372mm high

Top Hung - Hung on non-projecting hinges
S.W.F. Peg stay B375 Satin Chrome Plated finish.
(1 Peg stay up to 1240mm in width and 925mm in height or 1220mm in height and 900mm in width, above these limits 2 Peg stays fitted)

Multi-lights - As above

Note: - Other finishes (e.g. Roto Toned – RTD) are available
- Other styles are available, see following

Non-Standard Ironmongery Options

Side Hung - Projecting free hinge
Cosmetic projecting hinge
Non projecting friction hinge
Non projecting free hinge
Concealed friction arms – standard
Concealed friction arms – restricted
SWF B195 Straight Classic Handle
Duplex handle variants
Peg Stays - Allart, S.W.F.
SWF B59 Sliding Stays

Leggott Restrictor – concealed when window is closed

Enhanced Security Option –
Multi-point locking tested to PAS24 Annex C – 2012
(Superseded BS 7950: 1997)
SWF MP158 Key Locking MPL Curved Classic Handle
SWF MP158 Non Key Locking MPL Curved Classic Handle

Note: Concealed frictions arms must be used in multipoint locking applications

Top Hung - Folding opener (Single or Double)
Concealed friction arms – standard
Concealed friction arms – restricted
SWF Cockspur handle B918 'Arched Classic' Handle(s)

Enhanced Security Option –
Multi-point locking tested to PAS24 Annex C – 2012
(Superseded BS 7950: 1997)
SWF MP918 Key Locking MPL Arched Classic Handle
SWF MP918 Non Key Locking MPL Arched Classic Handle

Note: Multi-point locking can only be specified in combination with concealed friction arms

Accessories

Trickle vents – Titon Trimvent SM size determined by airflow required
Applied 'through the frame' in opening casements

Pressed metal sill members, profile to suit section

Tubular corner posts

Coupling members

331 FINISH COATINGS

- Type References Epoxy free Duralife™ polyester powder coating using Interpon D1036 powder for application to steel components to BS 6497 *'Specification for powder organic coatings for application and stoving to hot dip galvanized hot rolled steel sections and preformed sheet for windows and associated external architectural purposes, and for the finish on galvanized steel sections and preformed steel sheet coated with powder organic coatings'* and BS EN 13483-2005 'Paints and Varnishes - Powder Organic Coatings for galvanized or sheradized steel products for construction purposes*'*.

- Type References Epoxy free Duralife™ polyester powder coating using Interpon D1036 powder for application to Aluminium components to BS 6496 *'Specification for powder organic coatings for application and stoving to Aluminium alloy extrusions, sheet and preformed sections for external architectural purposes, and for the finish on Aluminium alloy extrusions, sheet and preformed sections coated with powder organic coatings'*, and BS EN 12206 Part 1 - 2004 *'Paints and Varnishes - Coating of aluminum and Aluminum alloys for Architectural purposes'*.

Preparation: Following galvanizing, windows are chemically cleaned and pre-treated to provide a surface to which powder coating will adhere.

Covering: Minimum 60 microns on all significant surfaces.

Colours: See Crittall Colour Selector.

Process: Coatings will be applied by Crittall, an Akzo Nobel Approved Applicator, at their own manufacturing plant.

Non-Standard Finish Options:

Dual colour frame options are available.

Two coat system option available for use in harsh environments where a high level risk of corrosion can be expected.

Table AA – Classification generally to BS 6375-1: 2015

TYPE OF OPENING LIGHT	EXPOSURE CATEGORY (Pa)	AIR PERMEABILITY: AT (Pa) $m^3/m\ h$	WATER TIGHTNESS: NO LEAKAGE, AT (Pa)	WIND RESISTANCE: NO DAMAGE & ONLY PERMISSABLE DEFLECTION, AT (Pa)
Homelight Plus™ Residential Std				
Side Hung Open Out	1600 - Class A4	600 - Class 3 (<7.43 $m^3/m\ h$)	600 – Class 7A	1600
Top Hung Open Out	1200 - Class A3	300 - Class 2 (<14.04 $m^3/m\ h$)	600 – Class 7A	*1200

* *A higher wind resistance can be achieved.*

Note: Improved performance can be achieved depending on window sizes and with additional hardware applied.
Performance figures apply to both standard and multi-point locking ironmongery
Actual performance achieved may vary depending on specific unit type, configuration and specific hardware fitted.

Multi-lights: combination of the above.

Note: 'Crittall', 'Duralife', and 'Homelight' are registered trademarks of Crittall Windows Ltd

Crittall Windows Ltd, Francis House, Freebournes Road, Witham, Essex, CM8 3UN. Tel: 01376 530 800
Fax: 01376 530 801. E-mail: hq@crittall-windows.co.uk website: http://www.crittall-windows.co.uk

HomelightPlus™ Double Glazing Unit Options - General Guidance

Date: 11.02.15 Rev: 01

Glass Manufacturer	Outer pane (mm) / type	Cavity (mm) / Spacer Type	Cavity Gas Fill Type / %	Inner pane (mm) / Specification	Centre Pane U-value (W/m^2K)	Solar Properties - g Value	Acoustic Properties* Rw (Db)	Building Regulations Part L - Means Of Compliance	CEN / GGF Domstic Window U-value (W/m^2K)
16mm DGU Options									
Guardian	4 Clear Float	8 / Standard Aluminium Black	Krypton (90%)	4 Soft Coat Low-E / Climaguard 1.0	1.1	0.54	33	≤1.2 W/m2K	N/A
Guardian	4 Clear Float	8 / Standard Aluminium Black	Krypton (92%)	4 Soft Coat Low-E / Climaguard A+	1.2	0.73	33	≤1.2 W/m2K	N/A
Guardian	4 Clear Float	6 / Standard Aluminium Black	Xenon (90%)	6.4 SC laminate Soft Coat Low-E / Climaguard	1.0	0.54	37	≤1.2 W/m2K	N/A
18mm DGU Options									
Guardian	4 Clear Float	8 / Standard Aluminium Black	Krypton (90%)	4 Soft Coat Low-E / Climaguard 1.0	1.0	0.54	33	≤1.2 W/m2K	1.8
Pilkington	4 Low Iron / Optiwhite	10 / Edgetech Superspacer Black	Krypton (90%)	4 Soft Coat Low-E / K glass S	1.1	0.75	33	Window Energy Rating WER 'B' (-8)	2.0
Saint Gobain	4 Low Iron / Diamant	10 / Edgetech Superspacer Black	Krypton (90%)	4 Soft Coat Low-E / Planitherm Total Plus	1.1	0.74	33	Window Energy Rating WER 'B' (-10)	1.9
Guardian	4 Low Iron	10 / Edgetech Superspacer Black	Krypton (90%)	4 Soft Coat Low-E / Climaguard A+	1.1	0.75	33	Window Energy Rating WER 'B' (-8)	2.0
Guardian	4 Clear Float	8 / Standard Aluminium Black	Krypton (90%)	6.4 SC laminate Soft Coat Low-E / Climaguard 1.0	1.1	0.53	37	≤1.2 W/m2K	N/A
Guardian	4 Clear Float	6 / Standard Aluminium Black	Xenon (90%)	8.4 SC laminate Soft Coat Low-E / Climaguard 1.0	1.0	0.53	38	≤1.2 W/m2K	N/A
22mm DGU Options									
Guardian	6 Clear Float	10 / Standard Aluminium Black	Krypton (90%)	6 Soft Coat Low-E / Climaguard 1.0	1.0	0.53	33	≤1.2 W/m2K	N/A
Pilkington	6 Low Iron / Optiwhite	10 / Edgetech Superspacer Black	Krypton (90%)	6 Soft Coat Low-E / K glass S	1.1	0.74	33	Window Energy Rating WER 'B' (tbc)	TBC
Saint Gobain	6 Low Iron / Diamant	10 / Edgetech Superspacer Black	Krypton (90%)	6 Soft Coat Low-E / Planitherm Total Plus	1.1	0.73	33	Window Energy Rating WER 'B' (tbc)	TBC
Guardian	6 Low Iron	10 / Edgetech Superspacer Black	Krypton (90%)	6 Soft Coat Low-E / Climaguard A+	1.1	0.74	33	Window Energy Rating WER 'B' (tbc)	TBC
Guardian	4 Clear Float	12 / Standard Aluminium Black	Krypton (90%)	6.4 SC laminate Soft Coat Low-E / Climaguard	1.0	0.54	37	≤1.2 W/m2K	N/A
Guardian	4 Clear Float	10 / Standard Aluminium Black	Krypton (90%)	8.4 SC laminate Soft Coat Low-E / Climaguard	1.0	0.54	38	≤1.2 W/m2K	N/A
24mm DGU Options									
Guardian	4 Clear Float	16 / Standard Aluminium Black	Argon (90%)	4 Soft Coat Low-E / Climaguard 1.0	1.0	0.54	33	≤1.2 W/m2K	N/A
Guardian	6 Clear Float	16 / Standard Aluminium Black	Argon (90%)	6 Soft Coat Low-E / Climaguard 1.0	1.2	0.53	33	≤1.2 W/m2K	N/A
Guardian	6 Clear Float	12 / Standard Aluminium Black	Krypton (90%)	6 Soft Coat Low-E / Climaguard 1.0	1.0	0.53	33	≤1.2 W/m2K	N/A
Pilkington	4 Low Iron / Optiwhite	16 / Edgetech Superspacer Black	Argon (90%)	4 Soft Coat Low-E / K glass S	1.2	0.75	33	Window Energy Rating WER 'C' (tbc)	2.0 (tbc)
Saint Gobain	4 Low Iron / Diamant	16 / Edgetech Superspacer Black	Argon (90%)	4 Soft Coat Low-E / Planitherm Total Plus	1.2	0.74	33	Window Energy Rating WER 'C' (tbc)	2.0 (tbc)
Guardian	4 Low Iron	16 / Edgetech Superspacer Black	Argon (90%)	4 Soft Coat Low-E / Climaguard A+	1.2	0.75	33	Window Energy Rating WER 'C' (tbc)	2.0 (tbc)
Guardian	6 Clear Float	12 / Standard Aluminium Black	Krypton (90%)	6.4 SC laminate Soft Coat Low-E / Climaguard	1.0	0.53	38	≤1.2 W/m2K	N/A
Guardian	6 Clear Float	10 / Standard Aluminium Black	Krypton (90%)	8.4 SC laminate Soft Coat Low-E / Climaguard	1.0	0.53	40	≤1.2 W/m2K	N/A

Notes:

* The acoustic sound reducing properties of Double Glazing Units (DGU) will change when weighted acoustic values and installation into a frame are taken into consideration - consult Crittall for technical advice.

Weighted acoustic values Rw,C (background noise level) and Rw,Ctr (cumalative background noise level and traffic noise) reduce the calculated Rw value.

The table below is indicative and is for the purpose of showing how the human hearing might respond to changes in sound level

Perceived Changes in Sound Level	
Change in Sound Level (dB)	Change in Perceived Volume
≤1	Not Perceived
1-3	Barely Perceived
3-6	Noticeable
≥10	Twice as Loud

Toughened or laminated safety glass does not significantly affect U-value thermal performance

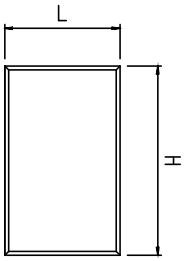
Obsure or opaque glass can affect solar proprties (and therefore any potential energy rating), but not thermal performance.

Solar Control glass will affect solar proprties (and therefore any potential energy rating), but not thermal performance - consult Crittall for technical advice.

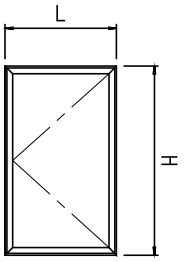
Other coatings such as those specified for self-cleaning or condensation resistance will affect solar and thermal properties, (and therefore any potential energy rating) - consult Crittall for technical advice.

BEWARE: If total glass thickness in a DGU exceeds 12mm the increased weight may affect maximum frame and hardware limits - consult Crittall for technical advice.

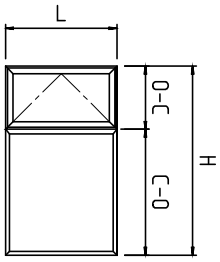
TBC or (tbc) annotations denote performance established by in-house simulation which may require independent confirmaion.



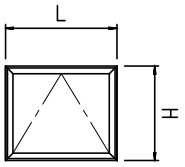
FL



SH (LH)
SH (RH)



TH/FL



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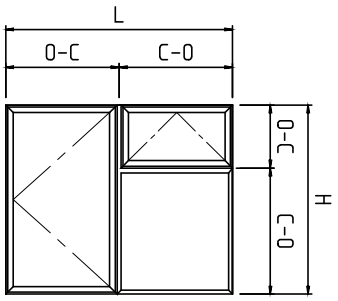
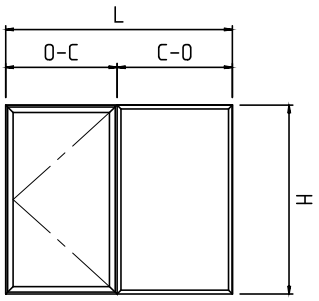
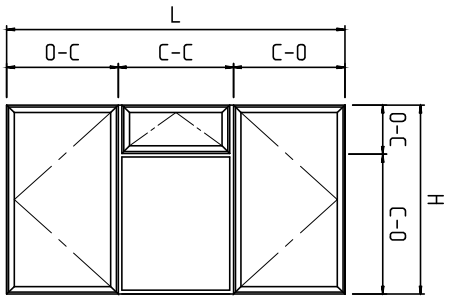


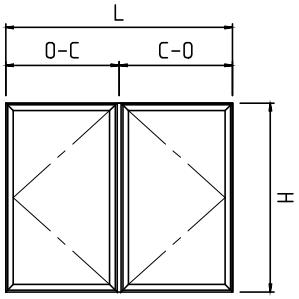
SH-TH/FL (LH)
TH/FL-SH (RH)



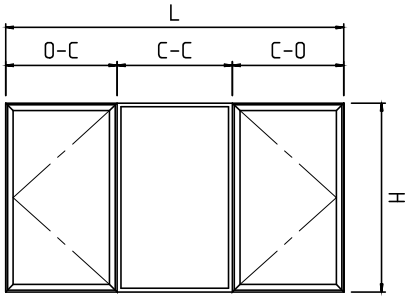
SH-FL (LH)
FL-SH (RH)



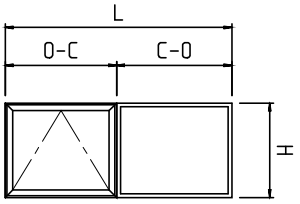
SH-TH/FL-SH



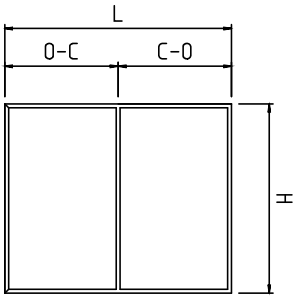
SH-SH



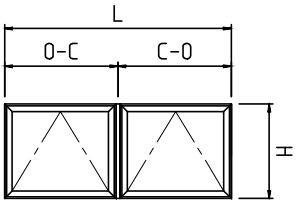
SH-FL-SH



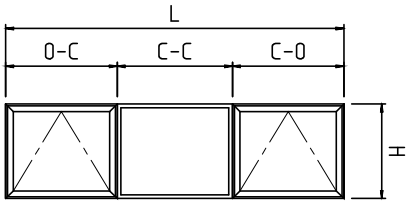
TH-FL (LH)
FL-TH (RH)



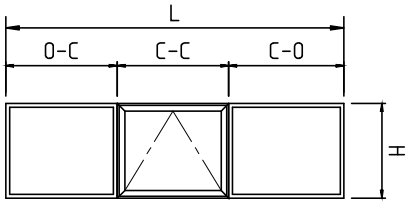
FL-FL



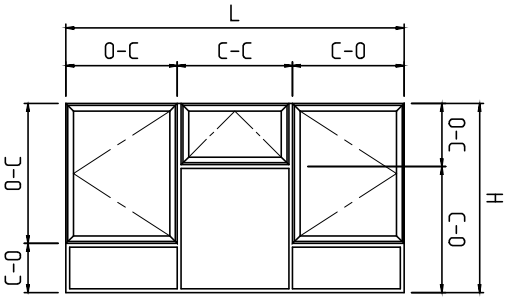
TH-TH



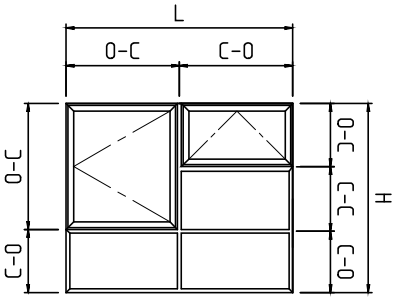
TH-FL-TH



FL-TH-FL



SH/FSL-TH/FL-SH/FSL



SH/FSL-TH/FL/FSL (LH)
TH/FL/FSL-SH/FSL (RH)

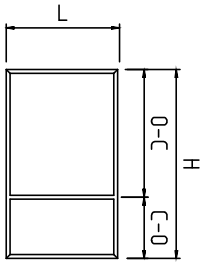
REVISION:			

CRITTALL

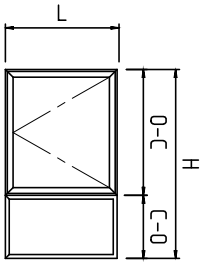
TYPICAL CONFIGURATIONS
PHASE ONE

THE FOLLOWING DESIGN REGISTRATIONS APPLY TO THIS PRODUCT, COMMUNITY REGISTERED DESIGN NOS:
002337840-0001, 002337840-0002, 002337840-0003.

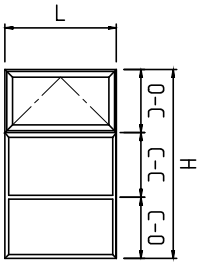
PAGE 1



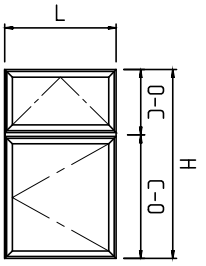
FL/FSL



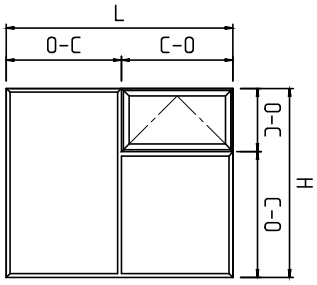
SH/FSL (LH)
SH/FSL (RH)



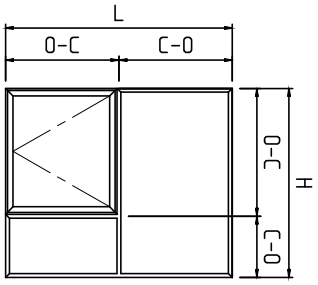
TH/FL
TH/FL/FSL (OPTION)



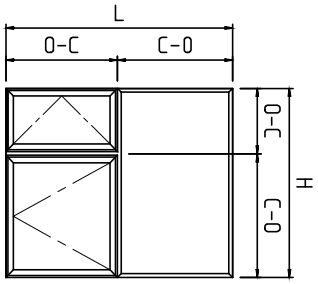
TH/SH (LH)
TH/SH (RH)



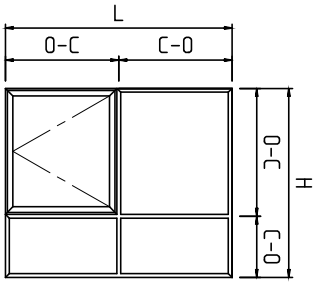
FL-TH/FL (RH)
TH/FL-FL (LH)



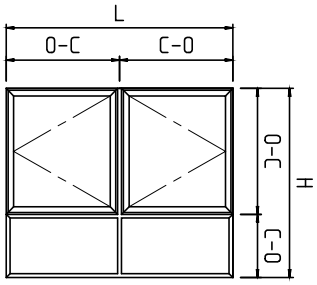
SH/FSL-FL (LH)
FL-SH/FSL (RH)



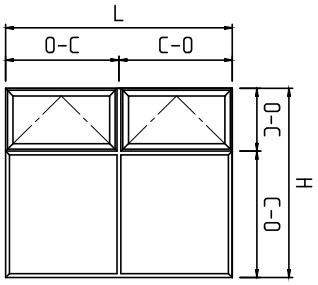
TH/SH-FL (LH)
FL-TH/SH (RH)



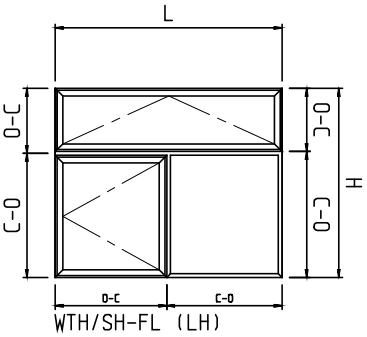
SH/FSL-FL/FSL (LH)
FL/FSL-SH/FSL (RH)



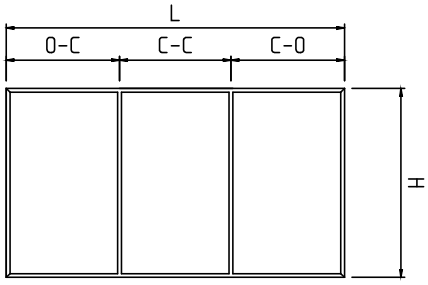
SH/FSL-SH/FSL



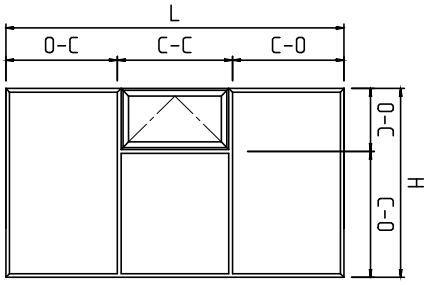
TH/FL-TH/FL



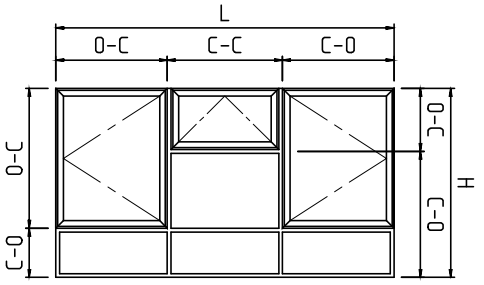
WTH/SH-FL (LH)
WTH/FL-SH (RH)



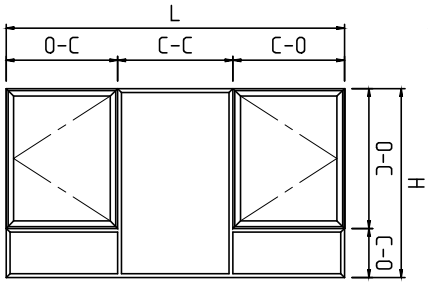
FL-FL-FL



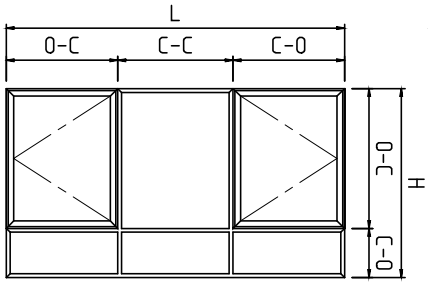
FL-TH/FL-FL



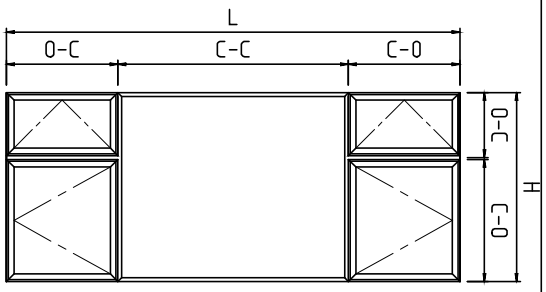
SH/FSL-TH/FL/FSL-SH/FSL



SH/FSL-FL-SH/FSL



SH/FSL-FL/FSL-SH/FSL



TH/SH-FL-TH/SH

REVISION:			

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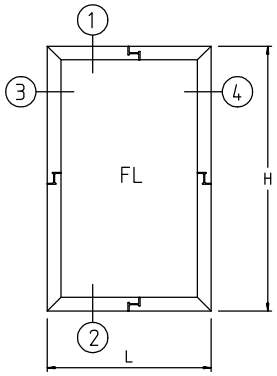
TYPICAL CONFIGURATIONS
PHASE TWO

THE FOLLOWING DESIGN REGISTRATIONS APPLY TO THIS PRODUCT, COMMUNITY REGISTERED DESIGN NOS: 002337840-0001, 002337840-0002, 002337840-0003.

PAGE 2

DRAWN: KIRSTY
DATE: JULY'2015



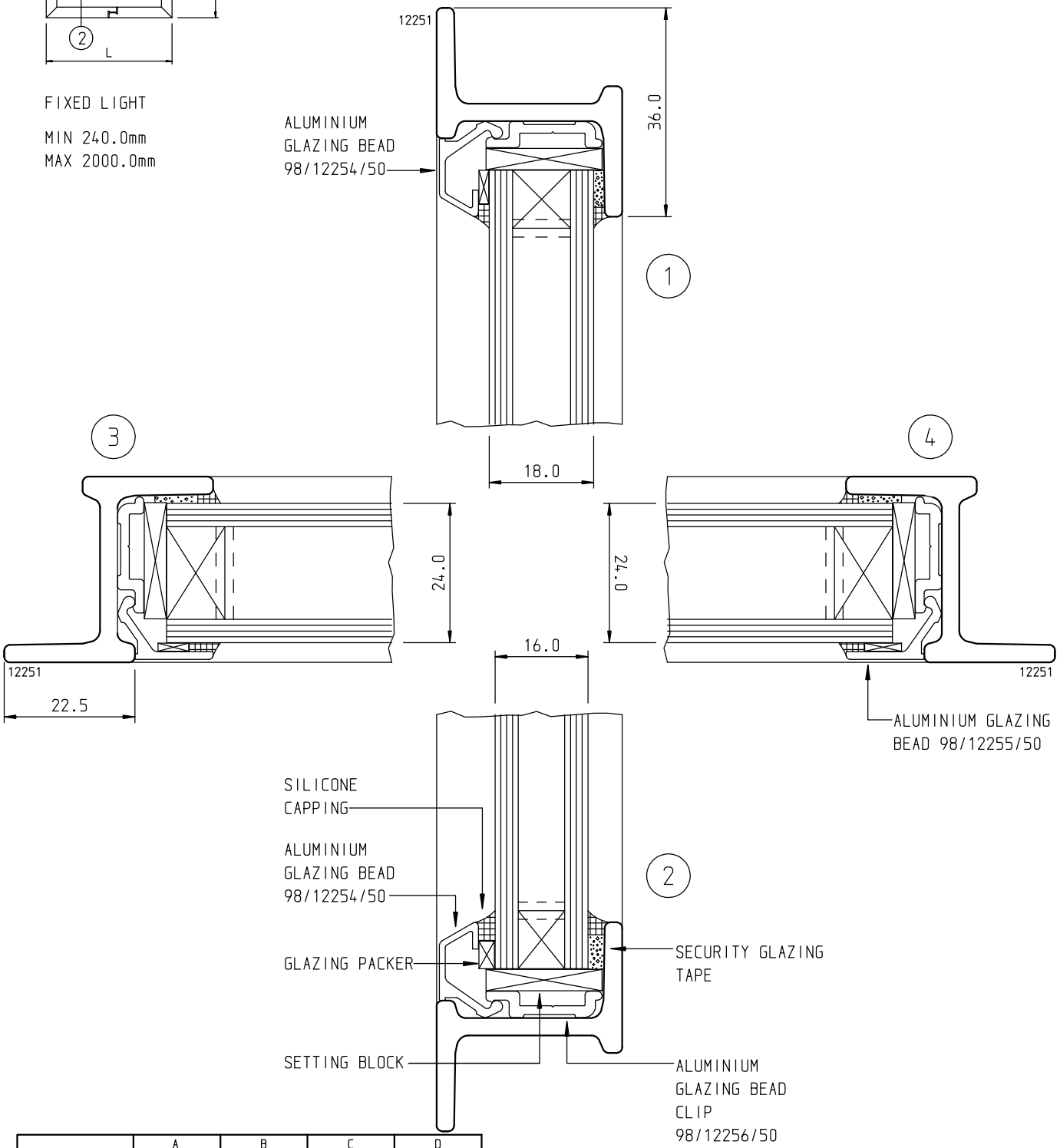
MIN 240.0mm
MAX 2000.0mm

FIXED LIGHT

MIN 240.0mm
MAX 2000.0mm

NOTE:
FOR ANY DOUBLE GLAZING UNITS OF 4/4 GLASS CONSTRUCTION ONLY ONE DIMENSION CAN EXCEED 1300mm, MAXIMUM SQUARE IS 1300 X 1300 (1.69m²)

LENGTH + HEIGHT MAXIMUM = 4000.0mm



REVISION:	A 14/07/2015	B 16/07/2015	C 02/11/2015	D 11/02/2016

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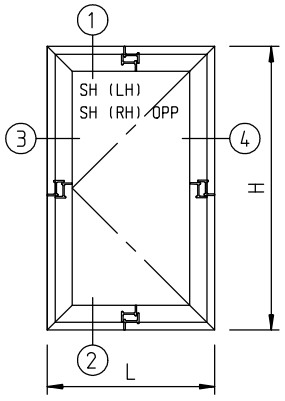
TECHNICAL GUIDE
SIDE HUNG O/OUT G/OUT

THE FOLLOWING DESIGN REGISTRATIONS APPLY TO THIS PRODUCT, COMMUNITY REGISTERED DESIGN NOS: 002337840-0001, 002337840-0002, 002337840-0003.

PAGE 3

DRAWN: KIRSTY
DATE: ULY'2015



SIDE HUNG

MIN FRAME HEIGHT : 483.0mm
MAX FRAME HEIGHT : 1520.0mm

MIN FRAME LENGTH : 356.0mm
MAX FRAME LENGTH : 700.0mm

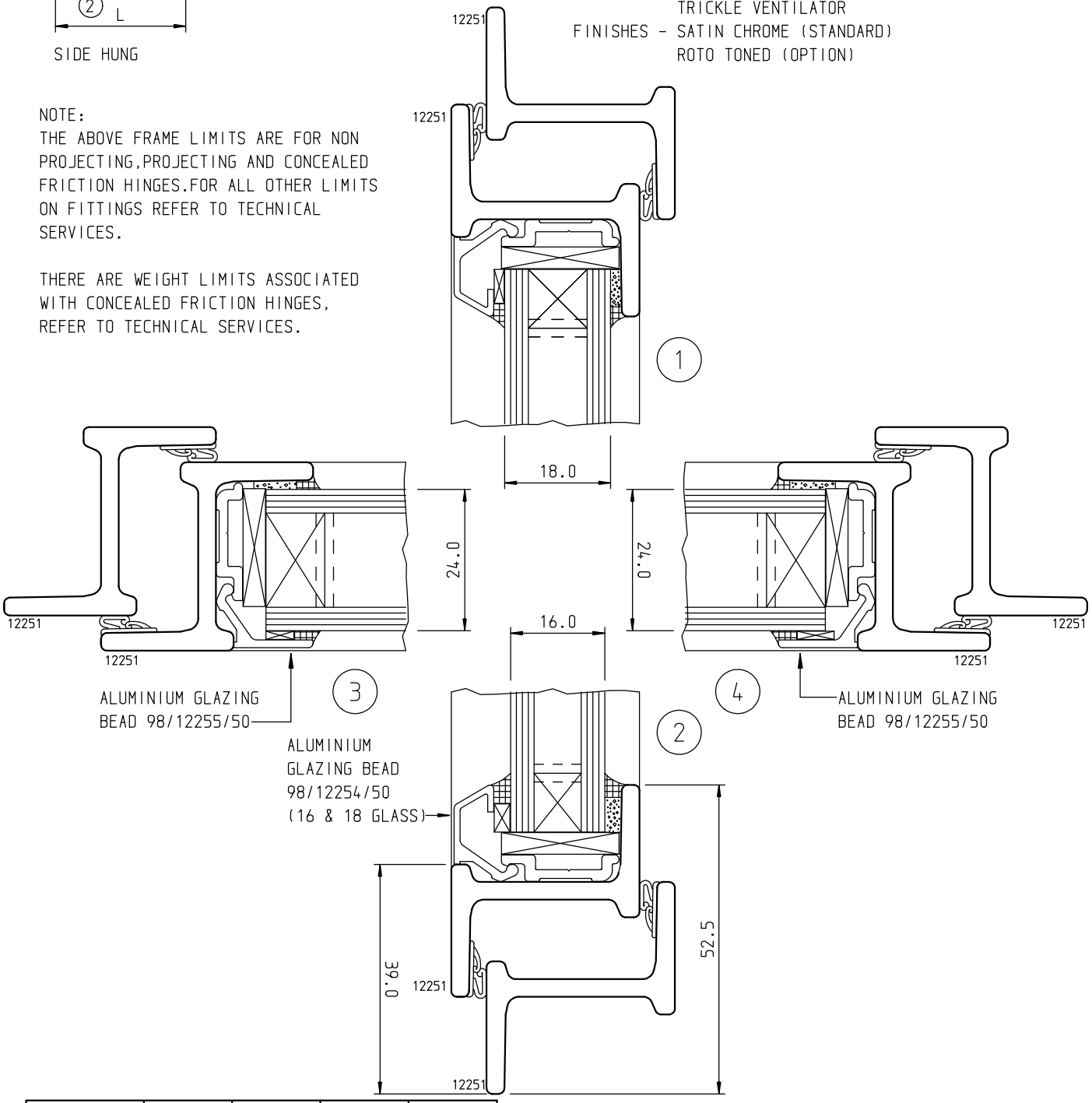
MAX PERIMETERS VARY
SUBJECT TO GLASS WEIGHT
AND FITTINGS LIMITS
REFER TO PAGES 4.2 - 4.3

HARDWARE

STANDARD - LEVER HANDLE (SINGLE, DOUBLE)
PROJECTING FRICTION HINGES
OPTIONS - PEGSTAY
SLIDING STAY
LEVER HANDLE (DUPLEX)
MULTI POINT LOCKING HANDLE (CAN ONLY BE USED WITH CONCEALED FRICTION HINGES)
CONCEALED RESTRICTOR
NON PROJECTING HINGES
CONCEALED FRICTION HINGES (STAINLESS STEEL)
TRICKLE VENTILATOR
FINISHES - SATIN CHROME (STANDARD)
ROTO TONED (OPTION)

NOTE:
THE ABOVE FRAME LIMITS ARE FOR NON PROJECTING,PROJECTING AND CONCEALED FRICTION HINGES.FOR ALL OTHER LIMITS ON FITTINGS REFER TO TECHNICAL SERVICES.

THERE ARE WEIGHT LIMITS ASSOCIATED WITH CONCEALED FRICTION HINGES, REFER TO TECHNICAL SERVICES.



REVISION:	A 14/07/2015	B 16/07/2015	C 02/11/2015	D 10/02/2016

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TECHNICAL GUIDE
SIDE HUNG O/OUT G/OUT

THE FOLLOWING DESIGN REGISTRATIONS APPLY TO THIS PRODUCT, COMMUNITY REGISTERED DESIGN NOS: 002337840-0001, 002337840-0002, 002337840-0003.

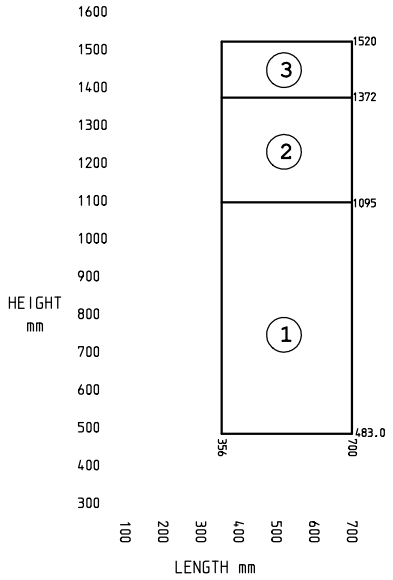
PAGE 4.1

DRAWN: KIRSTY.
DATE: JULY'2015

SIDE HUNG OPEN OUT
LIMITS FOR TRADITIONAL PROJECTING AND NON-PROJECTING HINGES

ALL AREAS OF THE CHART ACHIEVE THE FOLLOWING WEATHERING PERFORMANCE
AIR CLASS : 4 WATER : A9 STRUCTURAL: 4C

WELDED HINGE TYPES



(SIZES GIVEN ARE OVERALL OUTER FRAME)

NON PROJECTING HINGES

AREA (1)
1 - NON PROJ NON FRICTION HINGE
1 - NON PROJ FRICTION HINGE
1 - LEVER HANDLE

AREA (2)
2 - NON PROJ FRICTION HINGES
1 - LEVER HANDLE

AREA (3)
2 - NON PROJ FRICTION HINGES
2 - LEVER HANDLES
OR
2 - NON PROJ FRICTION HINGES
1 - DUPLEX HANDLE

PROJECTING HINGES

AREA (1)
1 - PROJECTING NON FRICTION HINGE
1 - PROJECTING FRICTION HINGE
1 - LEVER HANDLE

AREA (2)
2 - PROJECTING FRICTION HINGES
1 - LEVER HANDLE

AREA (3)
2 - PROJECTING FRICTION HINGES
2 - LEVER HANDLES
OR
2 - PROJECTING FRICTION HINGES
1 - DUPLEX HANDLE

NOTE

WEIGHT LIMITS WILL APPLY TO ALL HINGE TYPES, REFER TO PAGE 4.3

FOR ALL OTHER LIMITS ON FITTINGS REFER TO TECHNICAL SERVICES

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TECHNICAL GUIDE
SIDE HUNG O/OUT G/OUT

THE FOLLOWING DESIGN REGISTRATIONS APPLY TO THIS PRODUCT, COMMUNITY REGISTERED DESIGN NOS: 002337840-0001, 002337840-0002, 002337840-0003.

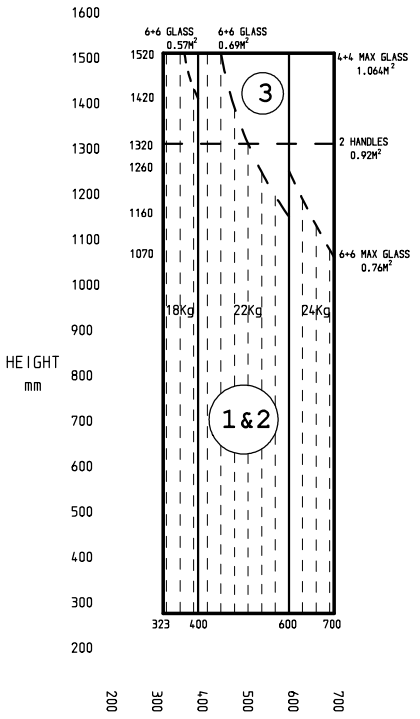
PAGE 4.2

DRAWN: I.A.S.
DATE: FEB'2016

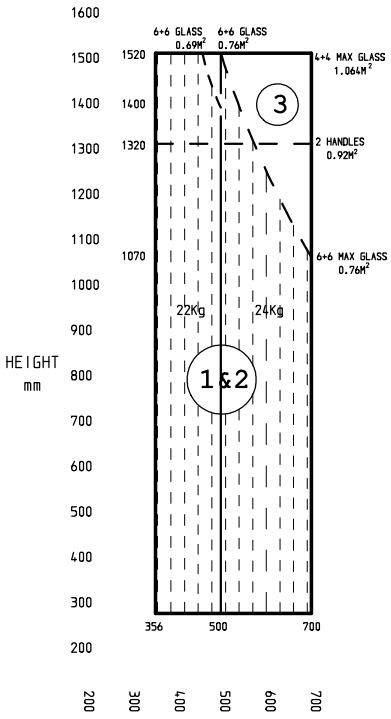
SIDE HUNG OPEN OUT
LIMITS FOR CONCEALED FRICTION HINGES

ALL AREAS OF THE CHART ACHIEVE THE FOLLOWING WEATHERING PERFORMANCE
AIR CLASS : 4 WATER : A9 STRUCTURAL: 4C

CONCEALED FRICTION HINGES PROJECTING



CONCEALED FRICTION HINGES PROJECTING, RESTRICTED



(SIZES GIVEN ARE OVERALL OUTER FRAME)

CONCEALED FRICTION HINGES

AREA (1) 2 - CONCEALED FRICTION HINGES (STANDARD OR RESTRICTED)
(2) 1 - LEVER HANDLE
OR
2 - CONCEALED FRICTION HINGES (STANDARD OR RESTRICTED)
1 - MULTIPOINT LOCKING HANDLE

AREA (3) 2 - CONCEALED FRICTION HINGES (STANDARD OR RESTRICTED)
2 - LEVER HANDLES
OR
2 - CONCEALED FRICTION HINGES (STANDARD OR RESTRICTED)
1 - DUPLEX HANDLE
OR
2 - CONCEALED FRICTION HINGES (STANDARD OR RESTRICTED)
1 - MULTIPOINT LOCKING HANDLE

NOTE **WHERE A RESTRICTED HINGE IS APPLIED AT SILL, THE EQUIVALENT LENGTH STANDARD SIDE HUNG CONCEALED HINGE IS APPLIED AT HEAD**

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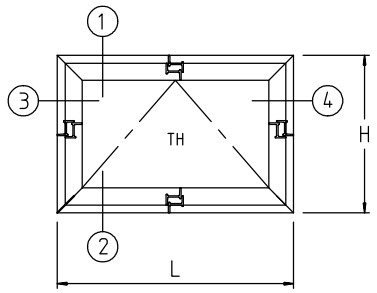
TECHNICAL GUIDE
SIDE HUNG O/OUT G/OUT

THE FOLLOWING DESIGN REGISTRATIONS APPLY TO THIS PRODUCT, COMMUNITY REGISTERED DESIGN NOS: 002337840-0001, 002337840-0002, 002337840-0003.

PAGE 4.3

DRAWN: I.A.S.
DATE: FEB'2016



TOP HUNG

MIN 279.0mm
MAX 1805.0mm

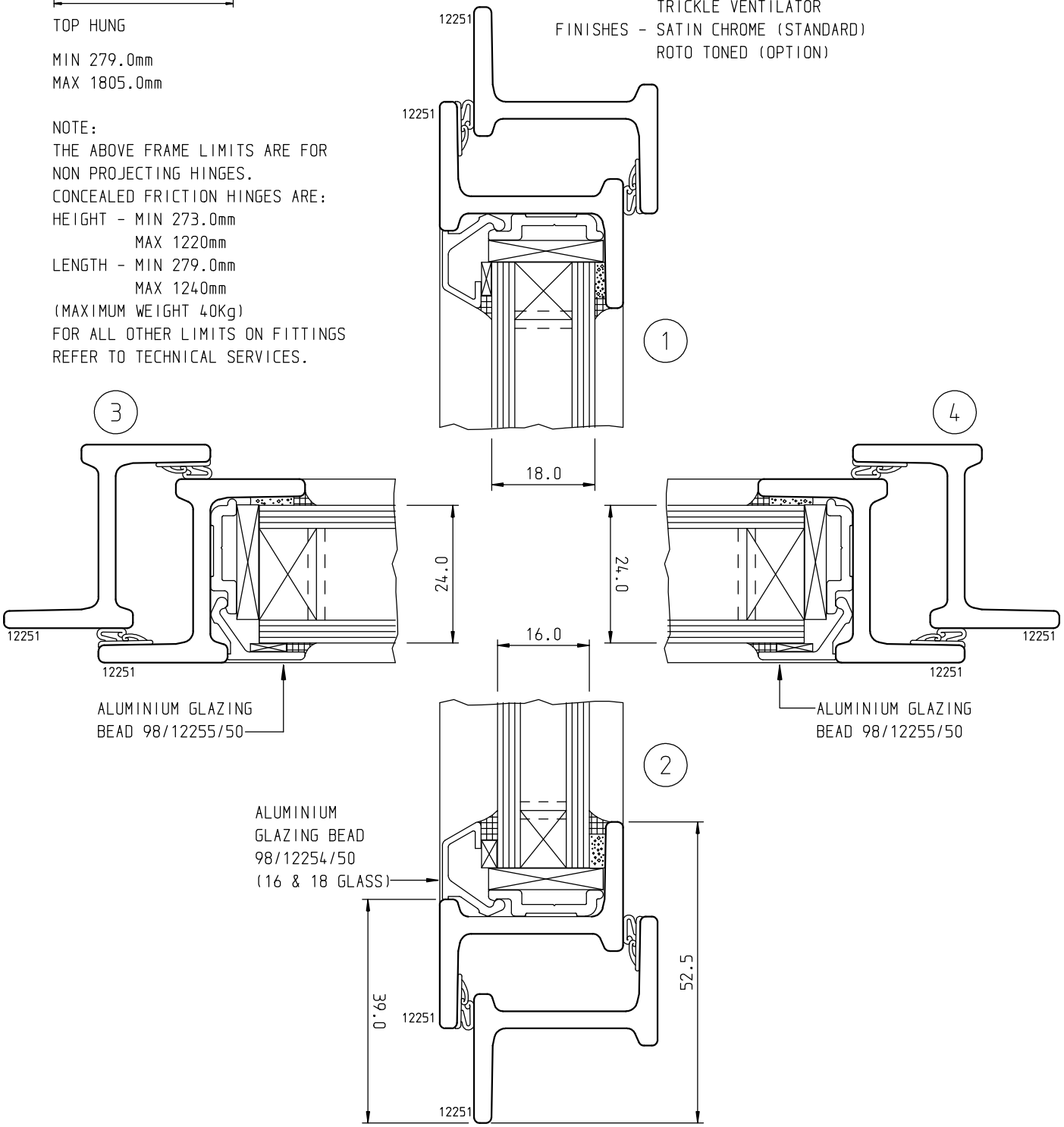
NOTE:
THE ABOVE FRAME LIMITS ARE FOR NON PROJECTING HINGES.
CONCEALED FRICTION HINGES ARE:
HEIGHT - MIN 273.0mm
MAX 1220mm
LENGTH - MIN 279.0mm
MAX 1240mm
(MAXIMUM WEIGHT 40Kg)
FOR ALL OTHER LIMITS ON FITTINGS REFER TO TECHNICAL SERVICES.

MIN 273.0mm
MAX 1220.0mm

MAX PERIMETERS VARY SUBJECT TO GLASS WEIGHT AND FITTINGS LIMITS
REFER TO PAGE 5.2 - 5.3

HARDWARE

STANDARD - PEGSTAY
NON PROJECTING HINGES
OPTIONS - LEVER HANDLE (SINGLE, DOUBLE, DUPLEX)
MULTI POINT LOCKING HANDLE (CAN ONLY BE USED WITH CONCEALED FRICTION HINGES)
FOLDING OPENER
CONCEALED FRICTION HINGES (STAINLESS STEEL)
TRICKLE VENTILATOR
FINISHES - SATIN CHROME (STANDARD)
ROTO TONED (OPTION)



REVISION:	A 14/07/2015	B 16/07/2015	C 02/11/2015	D 09/02/2016

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TECHNICAL GUIDE
TOP HUNG O/OUT G/OUT

THE FOLLOWING DESIGN REGISTRATIONS APPLY TO THIS PRODUCT, COMMUNITY REGISTERED DESIGN NOS: 002337840-0001, 002337840-0002, 002337840-0003.

PAGE 5.1

DRAWN: KIRSTY
DATE: JULY'2015

TOP HUNG OPEN OUT
UNIT SIZE LIMITS FOR PEGSTAYS AND FOLDING OPENERS

CHART INCLUDES WEATHERING PERFORMANCE BY UNIT SIZE AND TRADITIONAL FITTING

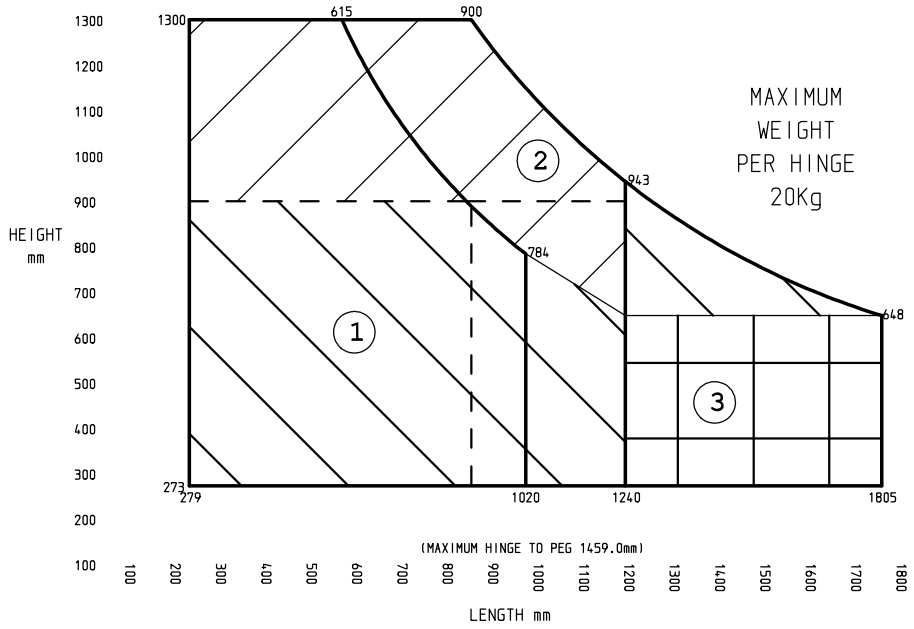
KEY:

AIR CLASS: 2
WATER : A9
STRUCTUAL: 3C

AIR CLASS: 3
WATER : A9
STRUCTUAL: 3C

AIR CLASS: 4
WATER : A9
STRUCTUAL: 4C

MAJORITY OF TRADITIONAL STANDARD HOMELIGHT
TOP HUNG SIZES WILL BE WITHIN THIS CATEGORY



(SIZES GIVEN ARE OVERALL OUTER FRAME)

NON PROJECTING HINGES

AREA (1)
2 - NON PROJECTING HINGES
1 - PEGSTAY
OR
2 - NON PROJCTING HINGE
1 - SINGLE FOLDING OPENER

AREA (2)
3 - NON PROJECTING HINGES
1 - PEGSTAYS
OR
3 - NON PROJECTING HINGE
1 - FOLDING OPENER

AREA (3)
3 - NON PROJECTING HINGES
2 - PEGSTAYS
OR
3 - NON PROJECTING HINGE
1 - DOUBLE FOLDING OPENER

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TECHNICAL GUIDE
TOP HUNG O/OUT G/OUT

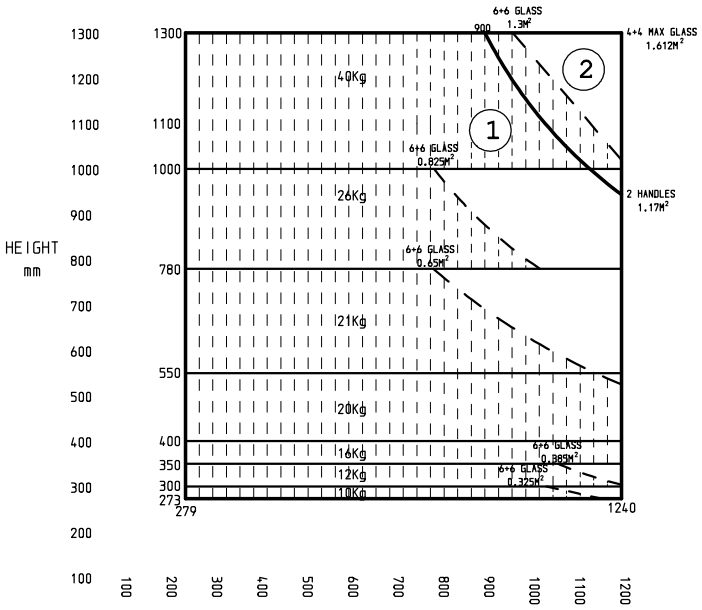
THE FOLLOWING DESIGN REGISTRATIONS APPLY TO THIS PRODUCT, COMMUNITY REGISTERED DESIGN NOS: 002337840-0001, 002337840-0002, 002337840-0003.

PAGE 5.2

DRAWN: I.A.S.
DATE: FEB'2016

TOP HUNG OPEN OUT
LIMITS FOR CONCEALED FRICTION HINGES, PROJECTING

ALL AREAS OF THE CHART ACHIEVE THE FOLLOWING WEATHERING PERFORMANCE
AIR CLASS : 3 WATER : A9 STRUCTURAL: 3C



(SIZES GIVEN ARE OVERALL OUTER FRAME)

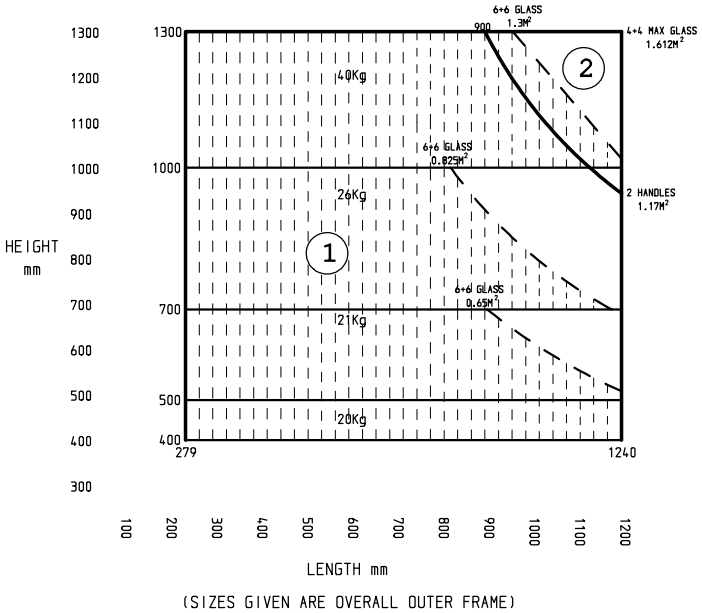
CONCEALED FRICTION HINGES

AREA (1)
2 - CONCEALED FRICTION HINGES (STANDARD)
1 - LEVER HANDLE
OR
2 - CONCEALED FRICTION HINGES (STANDARD)
1 - MULTIPOINT LOCKING HANDLE

AREA (2)
2 - CONCEALED FRICTION HINGES (STANDARD)
2 - LEVER HANDLES
OR
2 - CONCEALED FRICTION HINGES (STANDARD)
1 - DUPLEX HANDLE
OR
2 - CONCEALED FRICTION HINGES (STANDARD)
1 - MULTIPOINT LOCKING HANDLE

TOP HUNG OPEN OUT
LIMITS FOR CONCEALED FRICTION HINGES, PROJECTING, RESTRICTED

ALL AREAS OF THE CHART ACHIEVE THE FOLLOWING WEATHERING PERFORMANCE
AIR CLASS : 3 WATER : A9 STRUCTURAL: 3C



(SIZES GIVEN ARE OVERALL OUTER FRAME)

CONCEALED FRICTION HINGES

AREA (1)
2 - CONCEALED FRICTION HINGES (RESTRICTED)
1 - LEVER HANDLE
OR
2 - CONCEALED FRICTION HINGES (RESTRICTED)
1 - MULTIPOINT LOCKING HANDLE

AREA (2)
2 - CONCEALED FRICTION HINGES (RESTRICTED)
2 - LEVER HANDLES
OR
2 - CONCEALED FRICTION HINGES (RESTRICTED)
1 - DUPLEX HANDLE
OR
2 - CONCEALED FRICTION HINGES (RESTRICTED)
1 - MULTIPOINT LOCKING HANDLE

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TECHNICAL GUIDE
TOP HUNG O/OUT G/OUT

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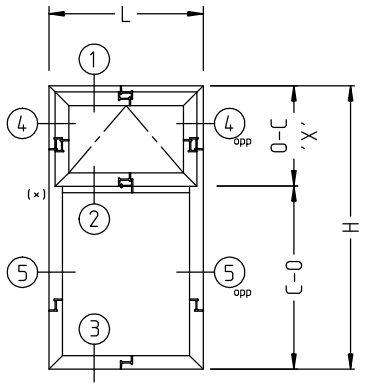
DRAWN: I.A.S.
DATE: FEB'2016



TH/FL

(×) GLAZE UNDER BAR:
STANDARD - SECTION 12252
OPTIONAL - SECTION 12253

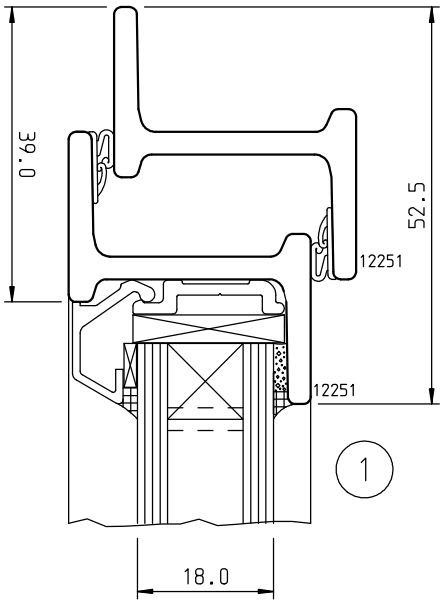
MIN FRAME HEIGHT: 494.0mm
MAX FRAME HEIGHT: 1520.0mm

MIN 'X' : 264.0mm
MAX 'X' : 1210.0mm
RESTRICTION - REFER TO PAGES 5.1-5.3 FOR TOP HUNG LIMITS

MIN FRAME LENGTH: 279.0mm
MAX FRAME LENGTH: 1240.0mm

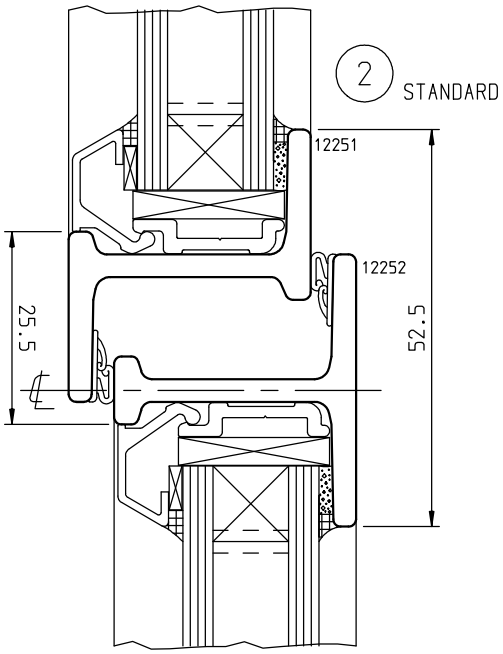
CONCEALED FRICTION HINGE:
MAX FRAME LENGTH: 1240mm

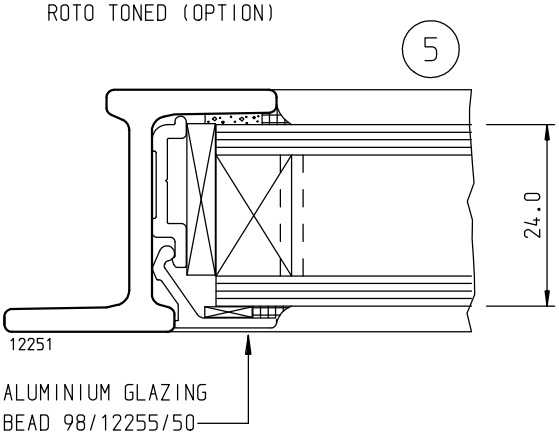
NOTE:
THE ABOVE FRAME LIMITS ARE FOR NON PROJECTING, AND CONCEALED FRICTION HINGES. FOR ALL OTHER LIMITS ON FITTINGS REFER TO TECHNICAL SERVICES.
THERE ARE WEIGHT LIMITS ASSOCIATED WITH CONCEALED FRICTION HINGES, REFER TO TECHNICAL SERVICES.



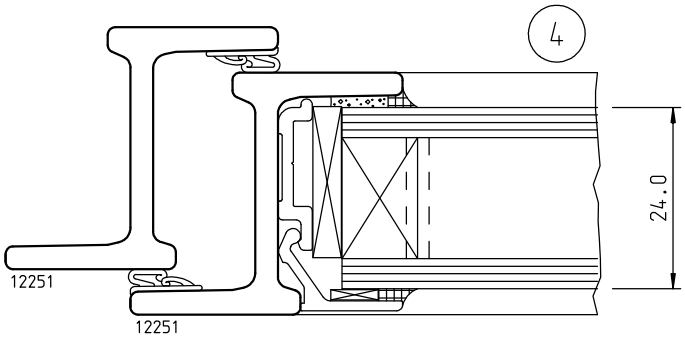
HARDWARE

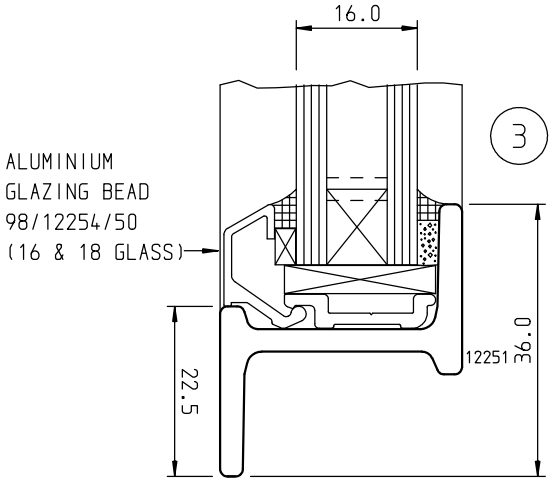
STANDARD - PEGSTAY
NON PROJECTING HINGES
OPTIONS - LEVER HANDLE (SINGLE, DOUBLE, DUPLEX)
MULTI POINT LOCKING HANDLE (CAN ONLY BE USED WITH CONCEALED FRICTION HINGES)
FOLDING OPENER
CONCEALED FRICTION HINGES (STAINLESS STEEL)
TRICKLE VENTILATOR
FINISHES - SATIN CHROME (STANDARD)
ROTO TONED (OPTION)





ALUMINIUM GLAZING BEAD 98/12255/50





REVISION:	A 14/07/2015	B 16/07/2015	C 11/02/2016	

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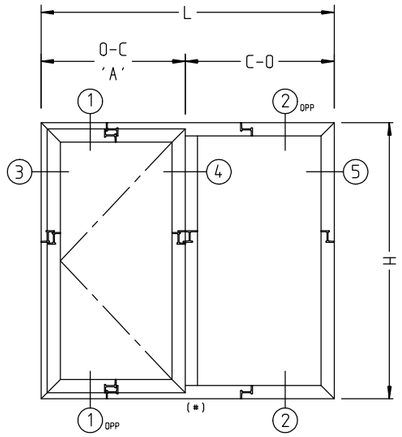
TECHNICAL GUIDE
TOP HUNG OVER A FIXED LIGHT

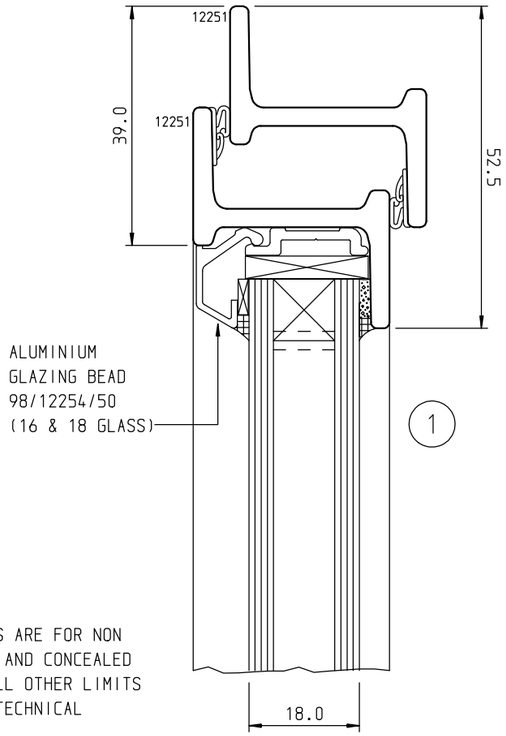
THE FOLLOWING DESIGN REGISTRATIONS APPLY TO THIS PRODUCT, COMMUNITY REGISTERED DESIGN NOS: 002337840-0001, 002337840-0002, 002337840-0003.

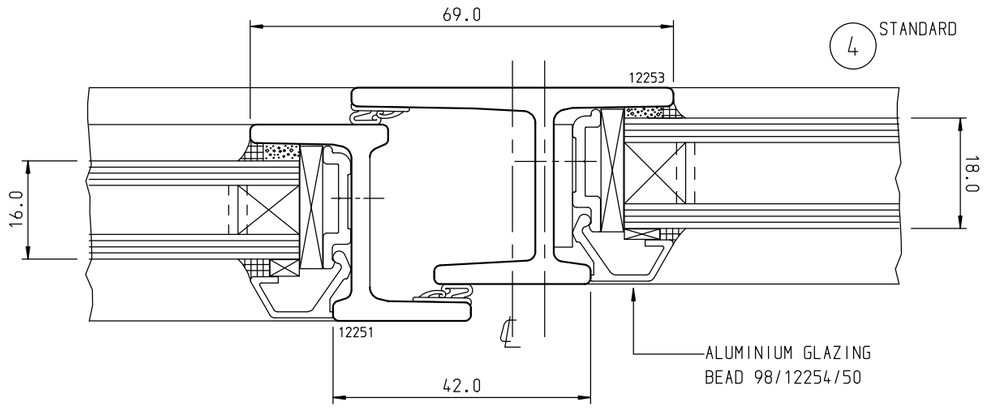
PAGE 6

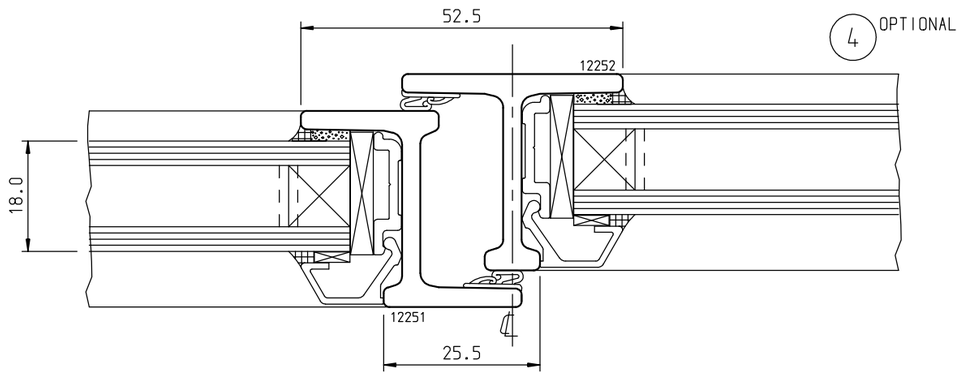
DRAWN: KIRSTY
DATE: ULY'2015



SH-FL (LH)
FL-SH (RH)







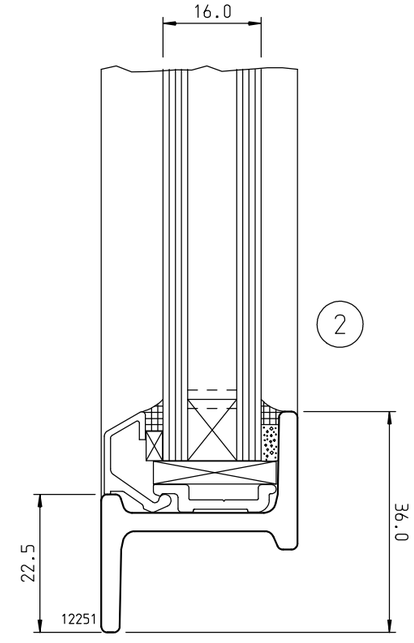
MIN FRAME HEIGHT: 494.0mm
MAX FRAME HEIGHT: 1520.0mm

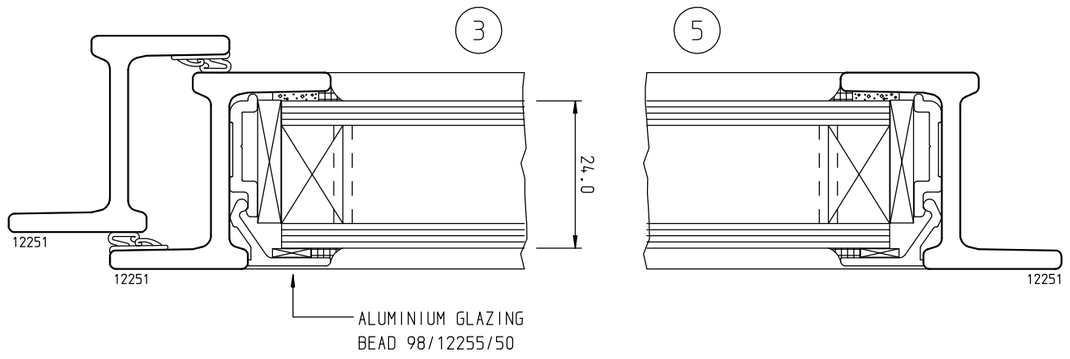
MIN FRAME LENGTH: 693.0mm
MAX FRAME LENGTH: 2080.0mm

MIN 'A' : 347.0mm
MAX 'A' : 691.0mm
RESTRICTION - REFER TO PAGES 4.1-4.3 FOR SIDE HUNG LIMITS

NOTE:
THE ABOVE FRAME LIMITS ARE FOR NON PROJECTING,PROJECTING AND CONCEALED FRICTION HINGES.FOR ALL OTHER LIMITS ON FITTINGS REFER TO TECHNICAL SERVICES.
THERE ARE WEIGHT LIMITS ASSOCIATED WITH CONCEALED FRICTION HINGES, REFER TO TECHNICAL SERVICES.

(*) MEETING RAIL BAR: STANDARD - SECTION 12253
OPTIONAL - SECTION 12252





HARDWARE

STANDARD - LEVER HANDLE (SINGLE, DOUBLE)
PROJECTING FRICTION HINGES
OPTIONS - PEGSTAY
SLIDING STAY
LEVER HANDLE (DUPLEX)
MULTI POINT LOCKING HANDLE (CAN ONLY BE USED WITH CONCEALED FRICTION HINGES)
CONCEALED RESTRICTOR
NON PROJECTING HINGES
CONCEALED FRICTION HINGES (STAINLESS STEEL)
TRICKLE VENTILATOR
FINISHES - SATIN CHROME (STANDARD)
ROTO TONED (OPTION)

REVISION:	A 14/07/2015	B 16/07/2015	C 11/02/2016	

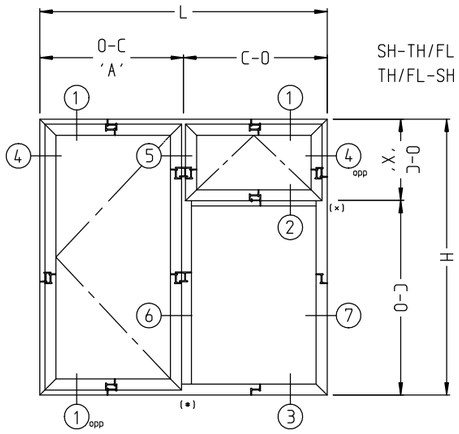
CRITTALL®

TECHNICAL GUIDE
SIDE HUNG NEXT TO A FIXED LIGHT

THE FOLLOWING DESIGN REGISTRATIONS APPLY TO THIS PRODUCT, COMMUNITY REGISTERED DESIGN NOS: 002337840-0001, 002337840-0002, 002337840-0003.

PAGE 7

DRAWN: KIRSTY
DATE: JULY'2015



RESTRICTIONS - REFER TO PAGES 5.1-5.3 FOR TOP HUNG LIMITS AND PAGES 4.1-4.3 FOR SIDE HUNG LIMITS

MIN FRAME HEIGHT: 494.0mm
MAX FRAME HEIGHT: 1520.0mm
MIN 'X' : 264.0mm
MAX 'X' : 1210.0mm

MIN FRAME LENGTH: 693.0mm
MAX FRAME LENGTH: 2080.0mm
MIN 'A' : 347.0mm
MAX 'A' : 691.0mm

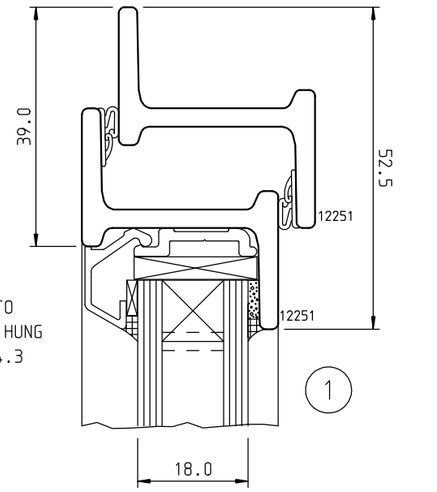
NOTE:
THE ABOVE FRAME LIMITS ARE FOR NON PROJECTING,PROJECTING AND CONCEALED FRICTION HINGES.FOR ALL OTHER LIMITS ON FITTINGS REFER TO TECHNICAL SERVICES.
THERE ARE WEIGHT LIMITS ASSOCIATED WITH CONCEALED FRICTION HINGES, REFER TO TECHNICAL SERVICES.

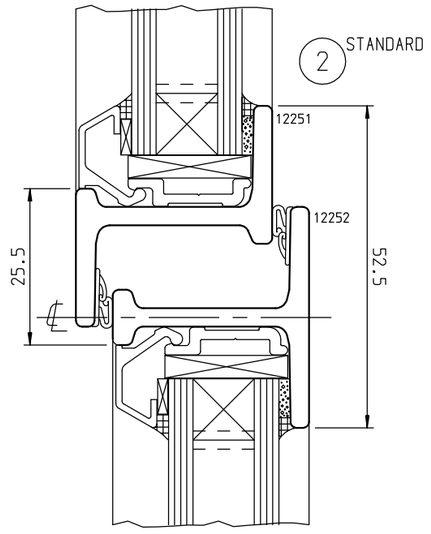
CONCEALED FRICTION HINGE:
MAX INNER FRAME LENGTH : 1240mm (FOR TOP HUNG)

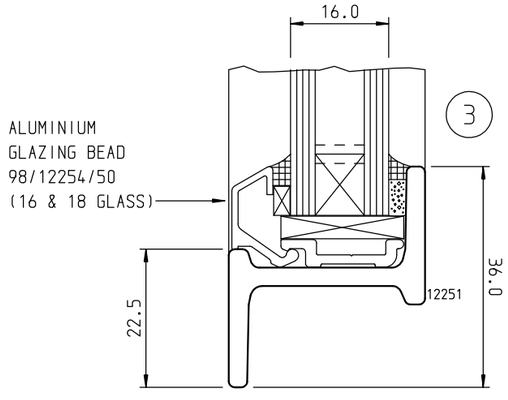
(×) GLAZE UNDER BAR: STANDARD - SECTION 12252
OPTIONAL - SECTION 12253
(*) MEETING RAIL BAR HAS TO BE SECTION 12253 FOR THIS CONFIGURATION

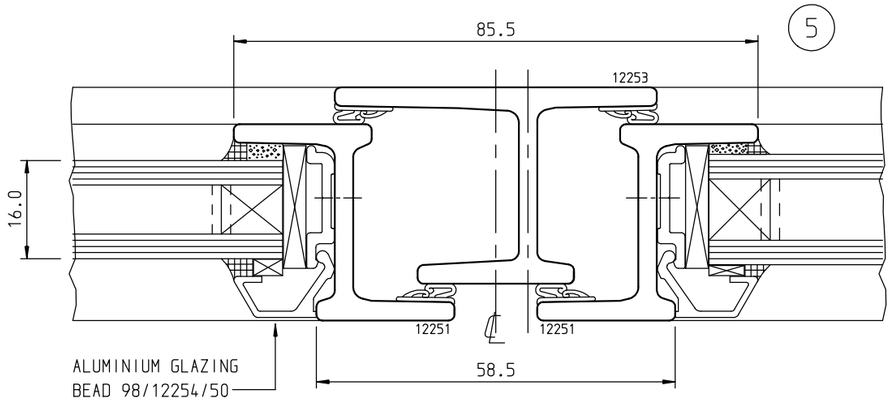
HARDWARE (SH)
STANDARD - LEVER HANDLE (SINGLE, DOUBLE)
PROJECTING FRICTION HINGES
OPTIONS - PEGSTAY
SLIDING STAY
LEVER HANDLE (DUPLEX)
MULTI POINT LOCKING HANDLE (CAN ONLY BE USED WITH CONCEALED FRICTION HINGES)
CONCEALED RESTRICTOR
NON PROJECTING HINGES
CONCEALED FRICTION HINGES (STAINLESS STEEL)
TRICKLE VENTILATOR
FINISHES - SATIN CHROME (STANDARD)
ROTO TONED (OPTION)

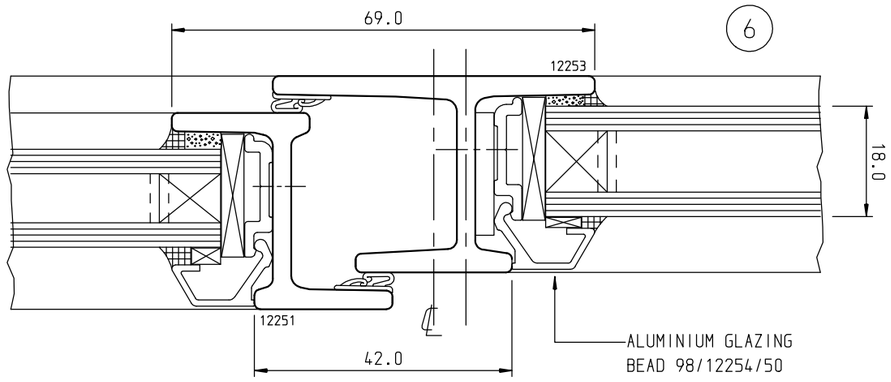
HARDWARE (TH)
STANDARD - PEGSTAY
NON PROJECTING HINGES
OPTIONS - LEVER HANDLE (SINGLE, DOUBLE, DUPLEX)
MULTI POINT LOCKING HANDLE (CAN ONLY BE USED WITH CONCEALED FRICTION HINGES)
FOLDING OPENER
CONCEALED FRICTION HINGES (STAINLESS STEEL)
TRICKLE VENTILATOR
FINISHES - SATIN CHROME (STANDARD)
ROTO TONED (OPTION)

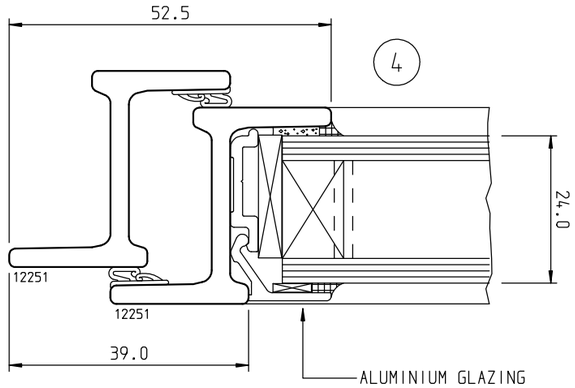


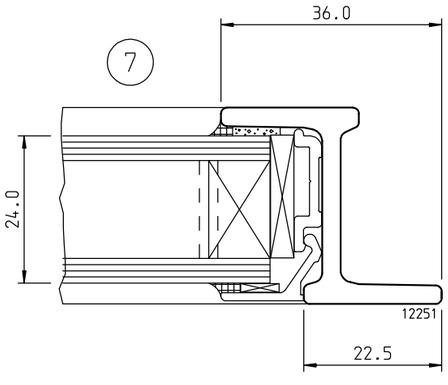












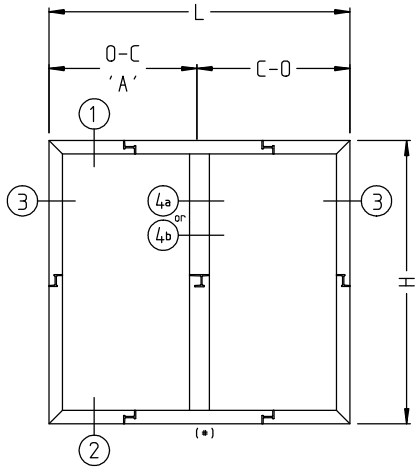
REVISION:	A 14/07/2015	B 16/07/2015	C 11/02/2016	

CRITTALL®

TECHNICAL GUIDE
SIDE HUNG NEXT TO A TOP HUNG OVER A FIXED LIGHT

THE FOLLOWING DESIGN REGISTRATIONS APPLY TO THIS PRODUCT, COMMUNITY REGISTERED DESIGN NOS: 002337840-0001, 002337840-0002, 002337840-0003.

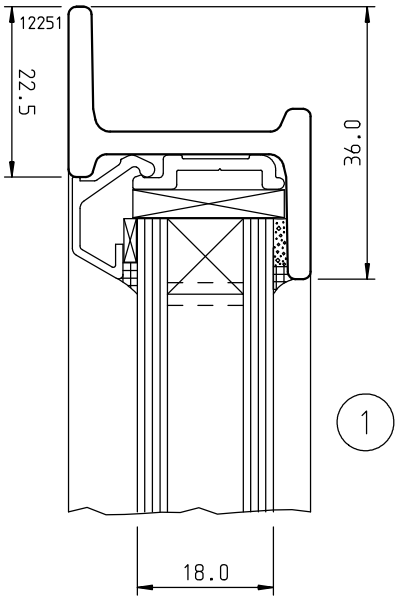
DRAWN: KIRSTY
DATE: JULY'2015



FL-FL

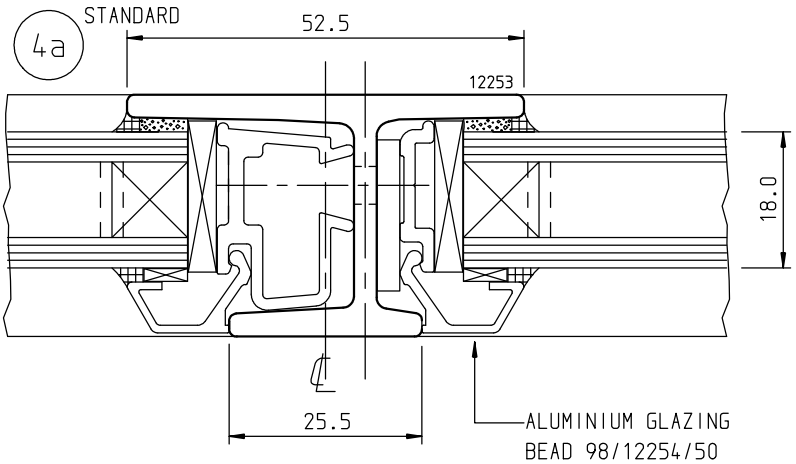
MIN FRAME HEIGHT: 240.0mm
MAX FRAME HEIGHT: 2000.0mm

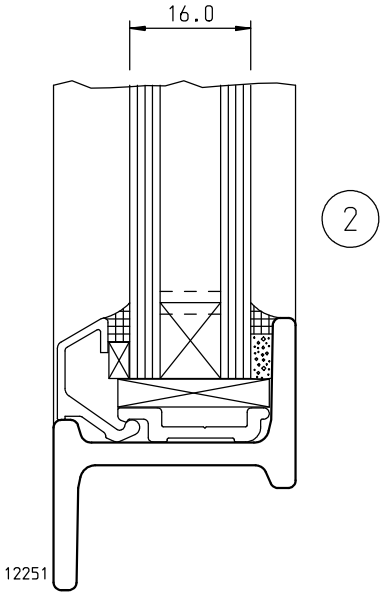
MIN FRAME LENGTH: 554.0mm
MAX FRAME LENGTH: 2624.0mm

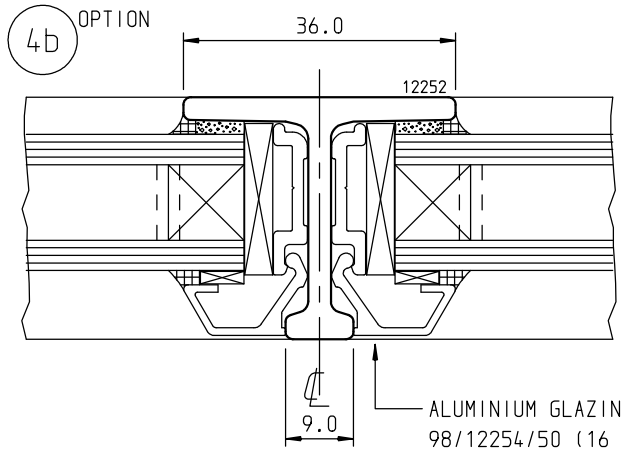


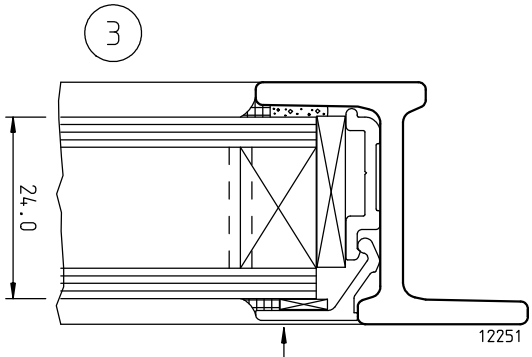
(*) MEETING RAIL BAR: STANDARD - SECTION 12253
OPTIONAL - SECTION 12252

NOTE:
FOR ANY DOUBLE GLAZING UNITS OF 4/4 GLASS CONSTRUCTION ONLY ONE DIMENSION CAN EXCEED 1300mm, MAXIMUM SQUARE IS 1300 X 1300 (1.69m²)









REVISION:	A 14/07/2015	B 16/07/2015	C 11/02/2016	

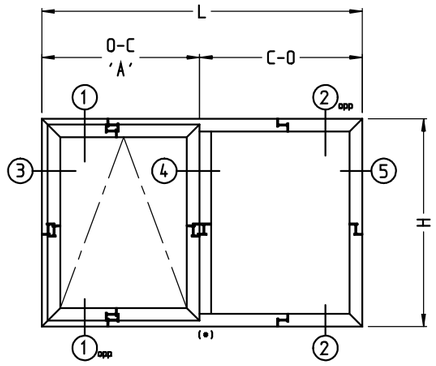
CRITTALL®

TECHNICAL GUIDE
FIXED LIGHT NEXT TO A FIXED LIGHT

THE FOLLOWING DESIGN REGISTRATIONS APPLY TO THIS PRODUCT, COMMUNITY REGISTERED DESIGN NOS: 002337840-0001, 002337840-0002, 002337840-0003.

PAGE 9

DRAWN: KIRSTY
DATE: ULY'2015



TH-FL (LH)
FL-TH (RH)

MIN FRAME HEIGHT: 273.0mm
MAX FRAME HEIGHT: 1220.0mm

MIN FRAME LENGTH: 540.0mm
MAX FRAME LENGTH: 2080.0mm

MIN 'A': 270.0mm
MAX 'A': 1040.0mm

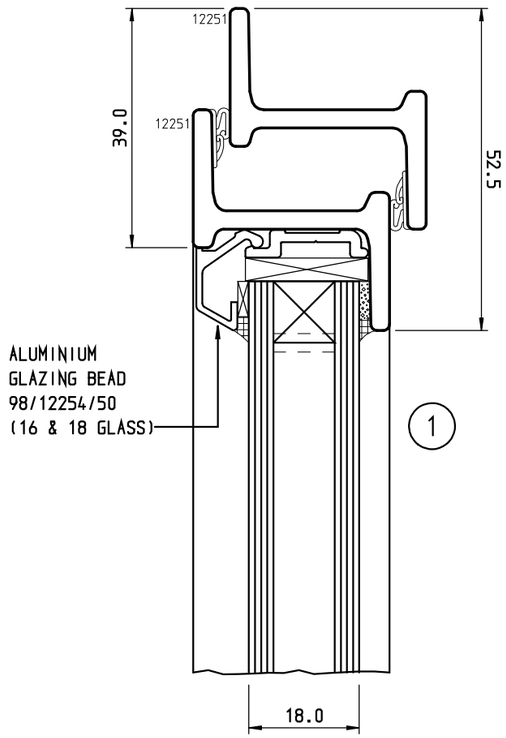
NOTE:
THE ABOVE FRAME LIMITS ARE FOR NON PROJECTING AND CONCEALED FRICTION HINGES.FOR ALL OTHER LIMITS ON FITTINGS REFER TO TECHNICAL SERVICES.

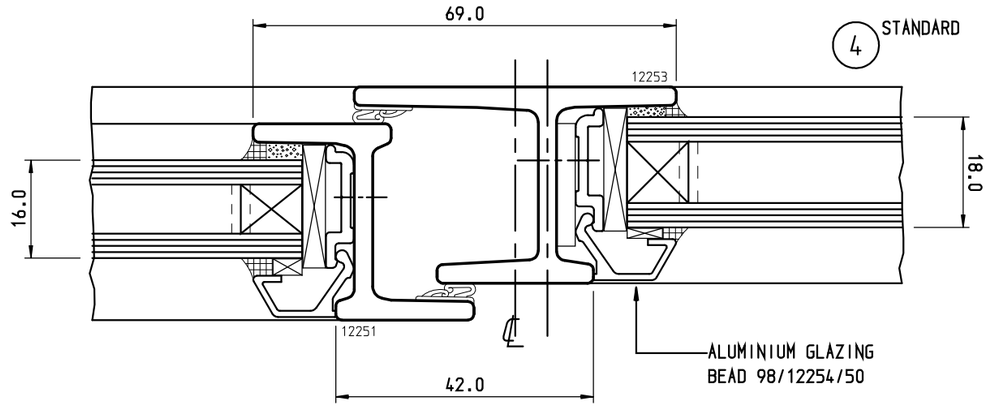
THERE ARE WEIGHT LIMITS ASSOCIATED WITH CONCEALED FRICTION HINGES, REFER TO TECHNICAL SERVICES.

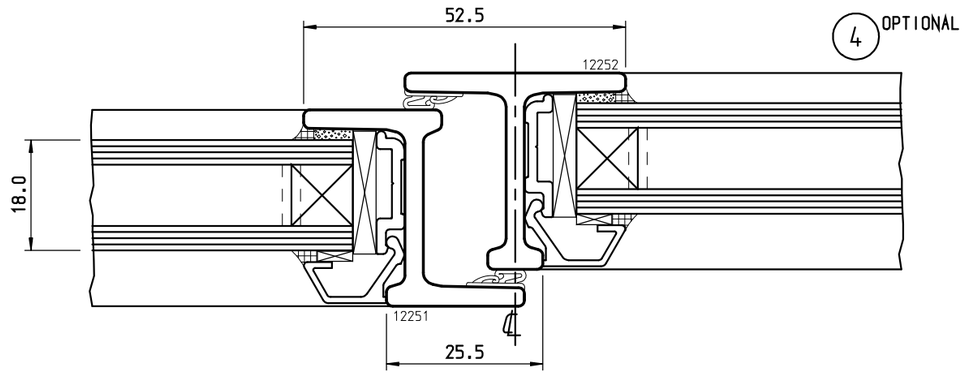
(*) MEETING RAIL BAR: STANDARD - SECTION 12253
OPTIONAL - SECTION 12252

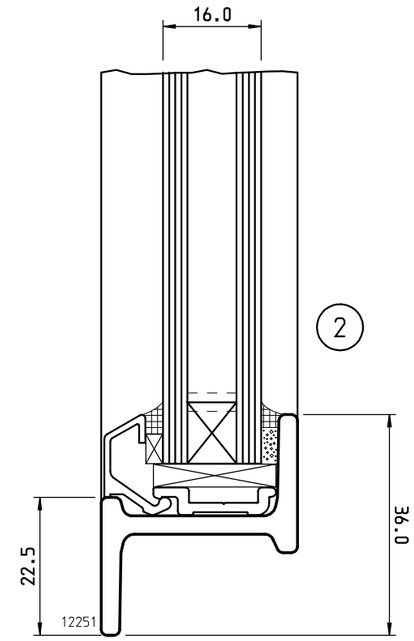
HARDWARE

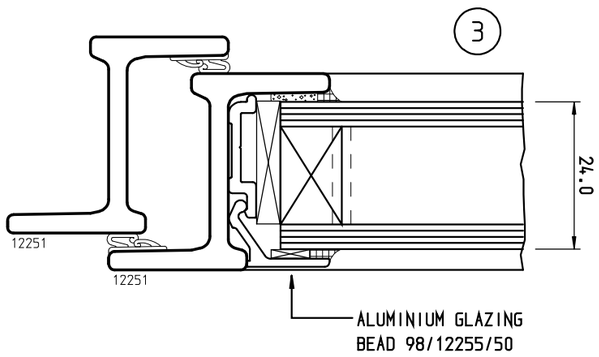
STANDARD - PEGSTAY
NON PROJECTING HINGES
OPTIONS - LEVER HANDLE (SINGLE, DOUBLE, DUPLEX)
MULTI POINT LOCKING HANDLE (CAN ONLY BE USED WITH CONCEALED FRICTION HINGES)
FOLDING OPENER
CONCEALED FRICTION HINGES (STAINLESS STEEL)
TRICKLE VENTILATOR
FINISHES - SATIN CHROME (STANDARD)
ROTO TONED (OPTION)

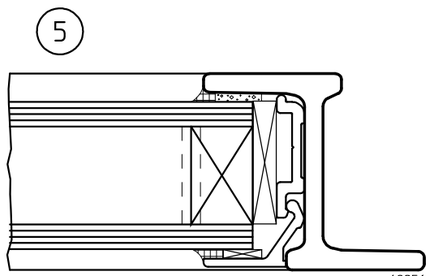












REVISION:	A 14/07/2015	B 16/07/2015	

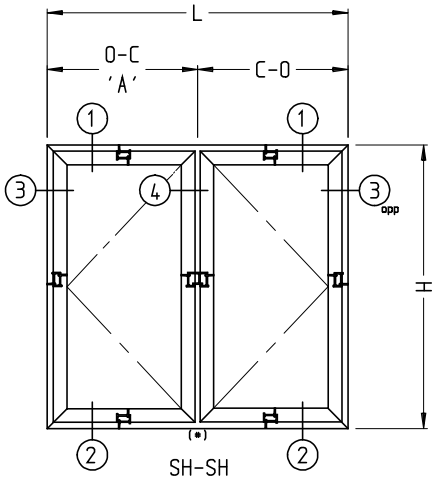
CRITTALL

TECHNICAL GUIDE
TOP HUNG NEXT TO A FIXED LIGHT

THE FOLLOWING DESIGN REGISTRATIONS APPLY TO THIS PRODUCT, COMMUNITY REGISTERED DESIGN NOS:002337840-0001, 002337840-0002, 002337840-0003.

PAGE 10

DRAWN: KIRSTY
DATE: JULY'2015



(*) MEETING RAIL BAR HAS TO BE SECTION 12253 FOR THIS CONFIGURATION

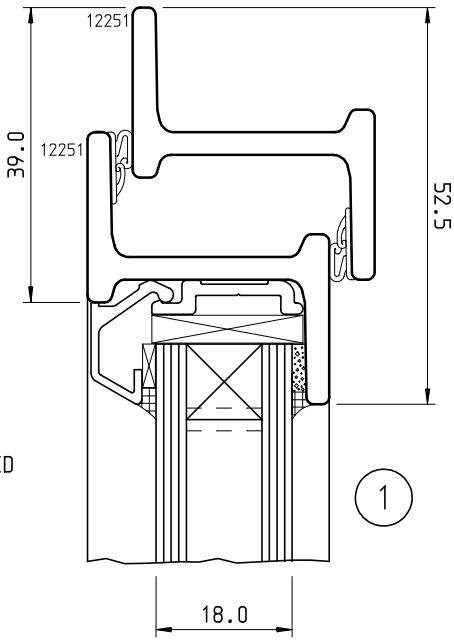
MIN FRAME HEIGHT: 494.0mm
MAX FRAME HEIGHT: 1520.0mm

MIN FRAME LENGTH: 693.0mm
MAX FRAME LENGTH: 1381.0mm

MIN 'A': 347.0mm
MAX 'A': 691.0mm

NOTE:
THE ABOVE FRAME LIMITS ARE FOR NON PROJECTING,PROJECTING AND CONCEALED FRICTION HINGES.FOR ALL OTHER LIMITS ON FITTINGS REFER TO TECHNICAL SERVICES.

THERE ARE WEIGHT LIMITS ASSOCIATED WITH CONCEALED FRICTION HINGES, REFER TO TECHNICAL SERVICES.

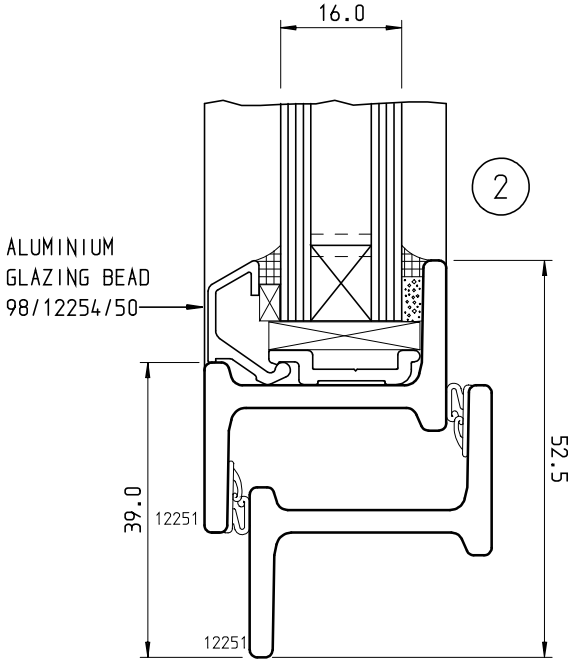


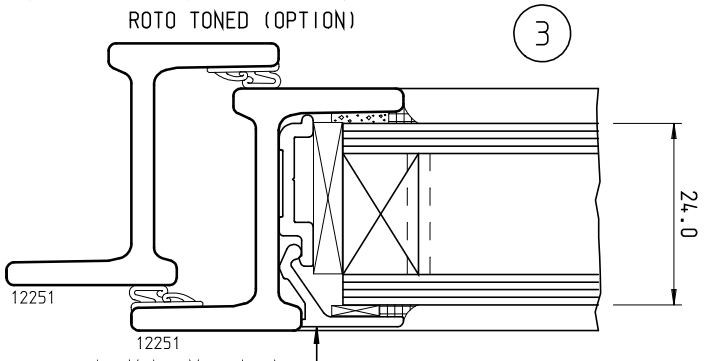
HARDWARE

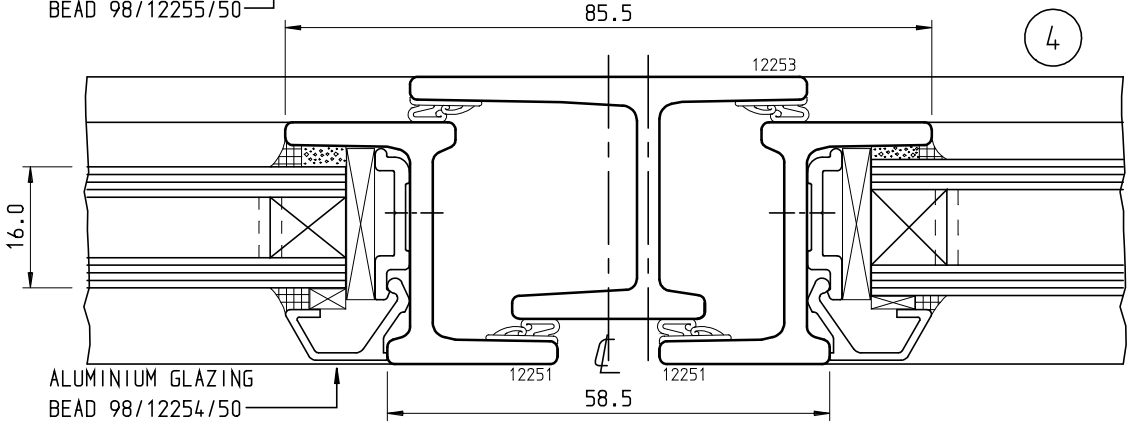
STANDARD - LEVER HANDLE (SINGLE, DOUBLE)
PROJECTING FRICTION HINGES

OPTIONS - PEGSTAY
SLIDING STAY
LEVER HANDLE (DUPLEX)
MULTI POINT LOCKING HANDLE (CAN ONLY BE USED WITH CONCEALED FRICTION HINGES)
CONCEALED RESTRICTOR
NON PROJECTING HINGES
CONCEALED FRICTION HINGES (STAINLESS STEEL)
TRICKLE VENTILATOR

FINISHES - SATIN CHROME (STANDARD)
ROTO TONED (OPTION)







REVISION:	A 14/07/2015	B 16/07/2015	

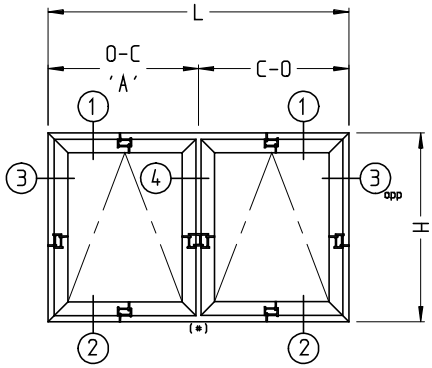
CRITTALL

TECHNICAL GUIDE
SIDE HUNG NEXT TO A SIDE HUNG

THE FOLLOWING DESIGN REGISTRATIONS APPLY TO THIS PRODUCT, COMMUNITY REGISTERED DESIGN NOS: 002337840-0001, 002337840-0002, 002337840-0003.

PAGE 11

DRAWN: KIRSTY
DATE: JULY'2015



TH-TH

(*) MEETING RAIL BAR HAS TO BE SECTION 12253 FOR THIS CONFIGURATION

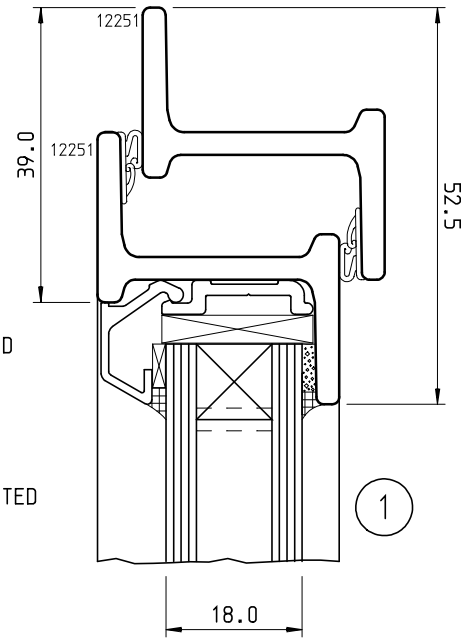
MIN FRAME HEIGHT: 273.0mm
MAX FRAME HEIGHT: 1220.0mm

MIN FRAME LENGTH: 540.0mm
MAX FRAME LENGTH: 2080.0mm

MIN 'A': 270.0mm
MAX 'A': 1040.0mm

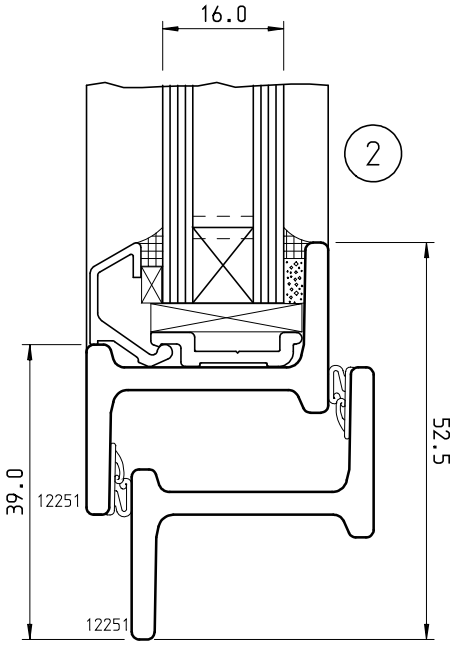
NOTE:
THE ABOVE FRAME LIMITS ARE FOR NON PROJECTING AND CONCEALED FRICTION HINGES.FOR ALL OTHER LIMITS ON FITTINGS REFER TO TECHNICAL SERVICES.

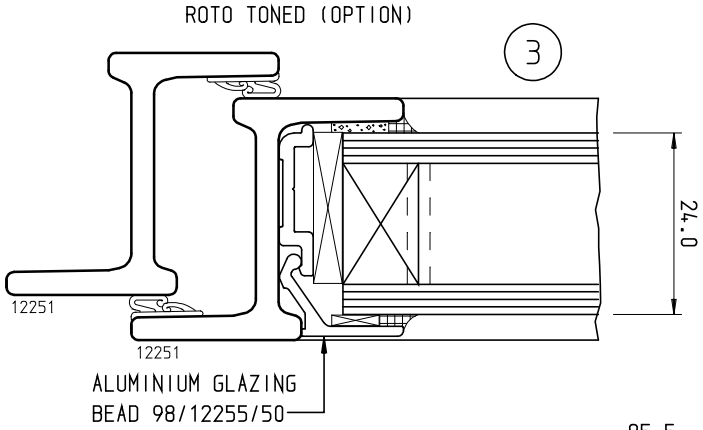
THERE ARE WEIGHT LIMITS ASSOCIATED WITH CONCEALED FRICTION HINGES, REFER TO TECHNICAL SERVICES.



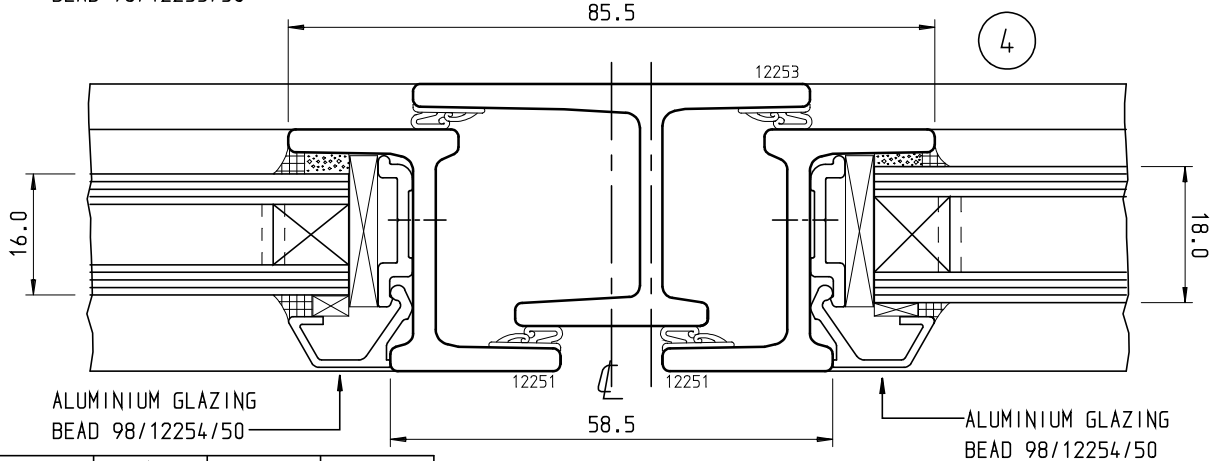
HARDWARE

STANDARD - PEGSTAY
NON PROJECTING HINGES
OPTIONS - LEVER HANDLE (SINGLE, DOUBLE, DUPLEX)
MULTI POINT LOCKING HANDLE (CAN ONLY BE USED WITH CONCEALED FRICTION HINGES)
FOLDING OPENER
CONCEALED FRICTION HINGES (STAINLESS STEEL)
TRICKLE VENTILATOR
FINISHES - SATIN CHROME (STANDARD)
ROTO TONED (OPTION)





ALUMINIUM GLAZING BEAD 98/12255/50



ALUMINIUM GLAZING BEAD 98/12254/50

ALUMINIUM GLAZING BEAD 98/12254/50

REVISION:	A 14/07/015	B 16/07/015	

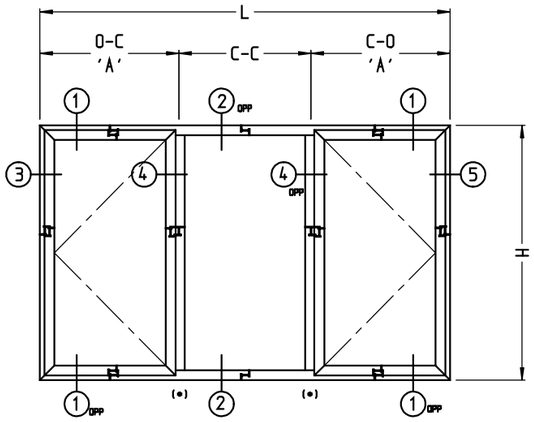
CRITTALL

TECHNICAL GUIDE
TOP HUNG NEXT TO A TOP HUNG

PAGE 12

THE FOLLOWING DESIGN REGISTRATIONS APPLY TO THIS PRODUCT, COMMUNITY REGISTERED DESIGN NOS: 002337840-0001, 002337840-0002, 002337840-0003.

DRAWN: KIRSTY
DATE: JULY'2015



SH-FL-SH

MIN FRAME HEIGHT: 494.0mm
MAX FRAME HEIGHT: 1520.0mm

MIN FRAME LENGTH: 954.0mm
MAX FRAME LENGTH: 2460.0mm

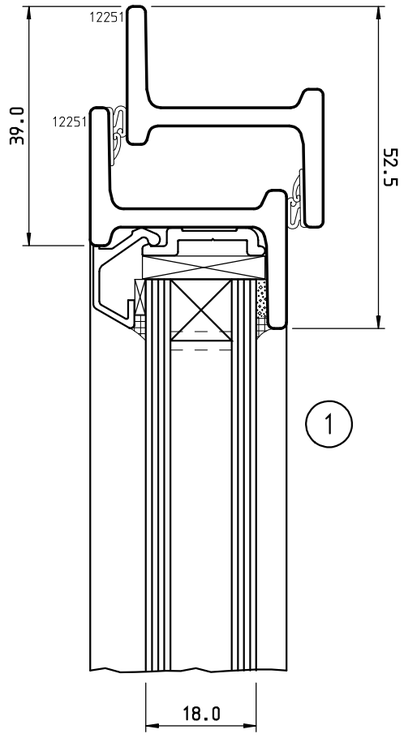
MIN 'A': 347.0mm
MAX 'A': 691.0mm

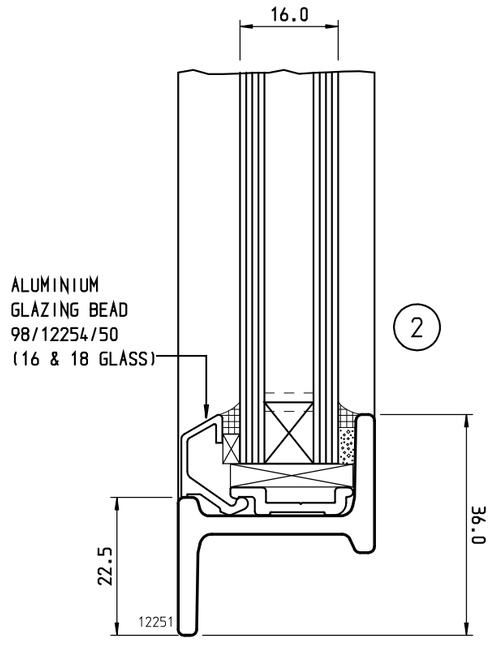
(*) MEETING RAIL BAR: STANDARD - SECTION 12253
OPTIONAL - SECTION 12252

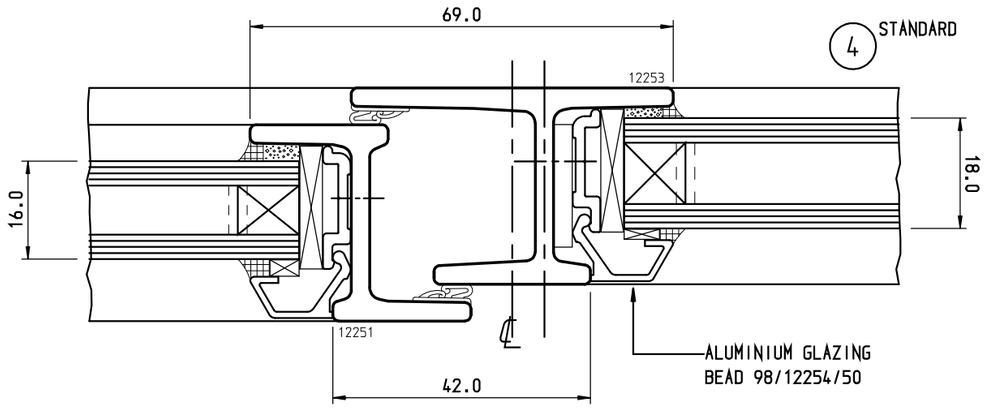
NOTE:
THE ABOVE FRAME LIMITS ARE FOR NON PROJECTING, PROJECTING AND CONCEALED FRICTION HINGES. FOR ALL OTHER LIMITS ON FITTINGS REFER TO TECHNICAL SERVICES.
THERE ARE WEIGHT LIMITS ASSOCIATED WITH CONCEALED FRICTION HINGES. REFER TO TECHNICAL SERVICES.

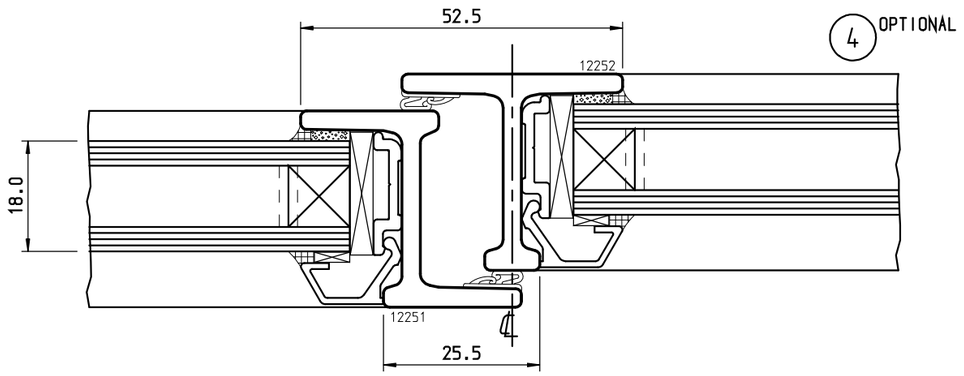
HARDWARE

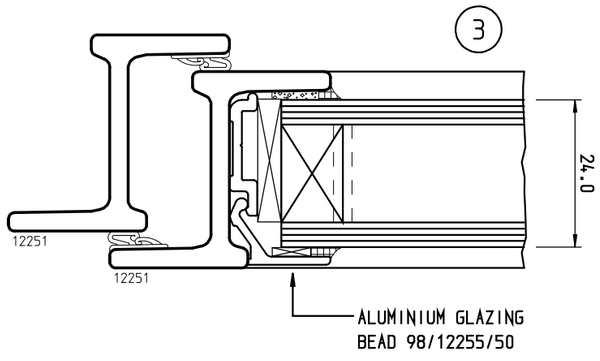
STANDARD - LEVER HANDLE (SINGLE, DOUBLE)
PROJECTING FRICTION HINGES
OPTIONS - PEGSTAY
SLIDING STAY
LEVER HANDLE (DUPLEX)
MULTI POINT LOCKING HANDLE (CAN ONLY BE USED WITH CONCEALED FRICTION HINGES)
CONCEALED RESTRICTOR
NON PROJECTING HINGES
CONCEALED FRICTION HINGES (STAINLESS STEEL)
TRICKLE VENTILATOR
FINISHES - SATIN CHROME (STANDARD)
ROTO TONED (OPTION)

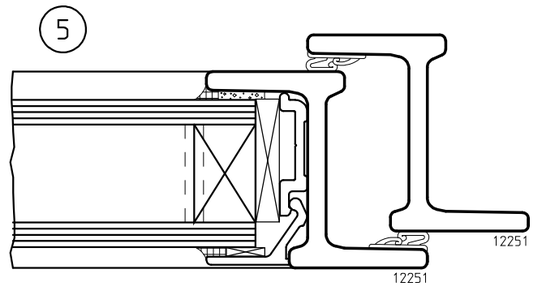












REVISION:	A 14/07/2015	B 16/07/2015	

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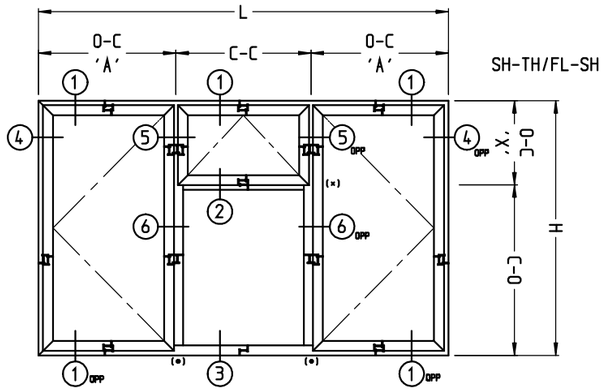
TECHNICAL GUIDE
SIDE HUNG NEXT TO A FIXED LIGHT NEXT TO A SIDE HUNG

PAGE 13

DRAWN: KIRSTY
DATE: JULY'2015



MIN FRAME HEIGHT: 494.0mm
MAX FRAME HEIGHT: 1520.0mm
MIN'X': 264.0mm
MAX'X': 1210.0mm

MIN FRAME LENGTH: 954.0mm
MAX FRAME LENGTH: 2460.0mm
MIN 'A': 347.0mm
MAX 'A': 691.0mm

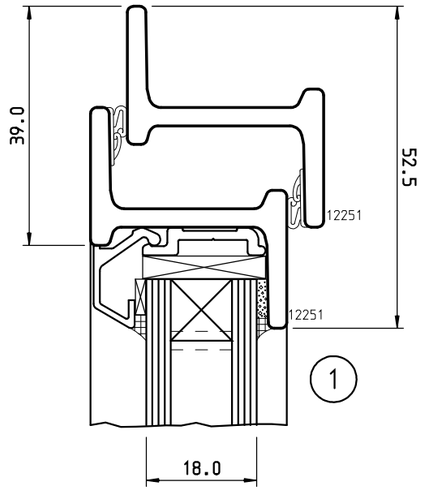
NOTE:
THE ABOVE FRAME LIMITS ARE FOR NON PROJECTING,PROJECTING AND CONCEALED FRICTION HINGES.FOR ALL OTHER LIMITS ON FITTINGS REFER TO TECHNICAL SERVICES.
THERE ARE WEIGHT LIMITS ASSOCIATED WITH CONCEALED FRICTION HINGES, REFER TO TECHNICAL SERVICES.

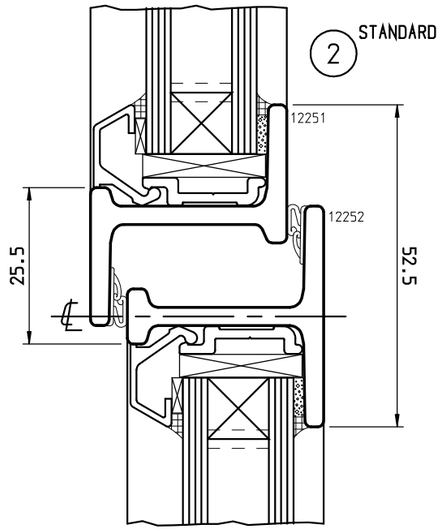
CONCEALED FRICTION HINGE:
INNER FRAME LENGTH : 1240mm (FOR TOP HUNG)

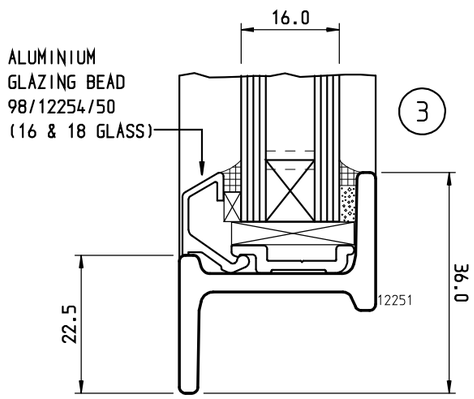
(×) GLAZE UNDER BAR: STANDARD - SECTION 12252
OPTIONAL - SECTION 12253
(*) MEETING RAIL BAR HAS TO BE SECTION 12253 FOR THIS CONFIGURATION

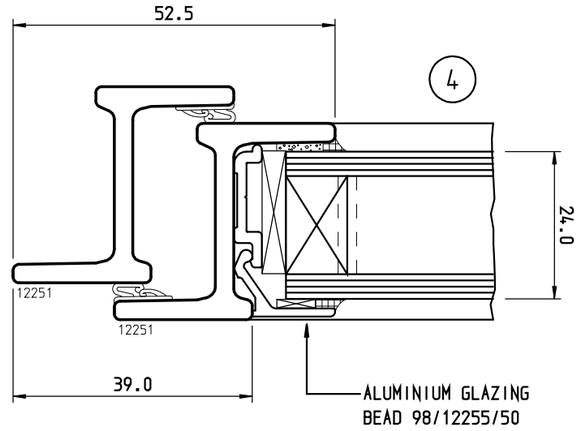
HARDWARE (SH)
STANDARD - LEVER HANDLE (SINGLE, DOUBLE)
PROJECTING FRICTION HINGES
OPTIONS - PEGSTAY
SLIDING STAY
LEVER HANDLE (DUPLEX)
MULTI POINT LOCKING HANDLE (CAN ONLY BE USED WITH CONCEALED FRICTION HINGES)
CONCEALED RESTRICTOR
NON PROJECTING HINGES
CONCEALED FRICTION HINGES (STAINLESS STEEL)
TRICKLE VENTILATOR
FINISHES - SATIN CHROME (STANDARD)
ROTO TONED (OPTION)

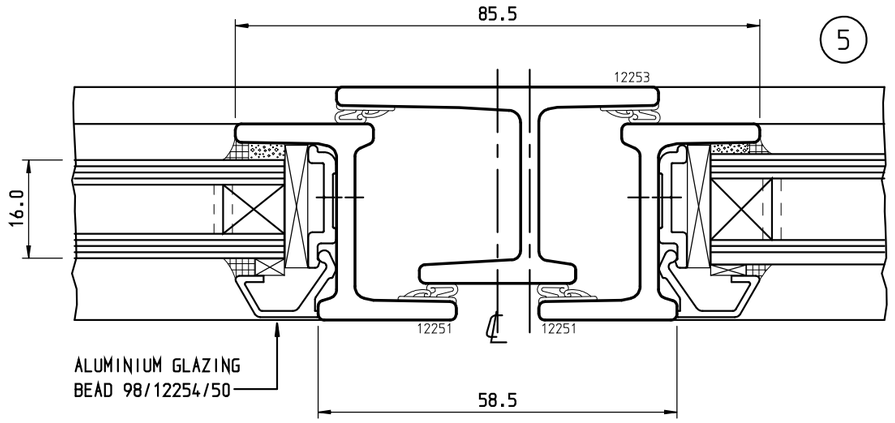
HARDWARE (TH)
STANDARD - PEGSTAY
NON PROJECTING HINGES
OPTIONS - LEVER HANDLE (SINGLE, DOUBLE, DUPLEX)
MULTI POINT LOCKING HANDLE (CAN ONLY BE USED WITH CONCEALED FRICTION HINGES)
FOLDING OPENER
CONCEALED FRICTION HINGES (STAINLESS STEEL)
TRICKLE VENTILATOR
FINISHES - SATIN CHROME (STANDARD)
ROTO TONED (OPTION)

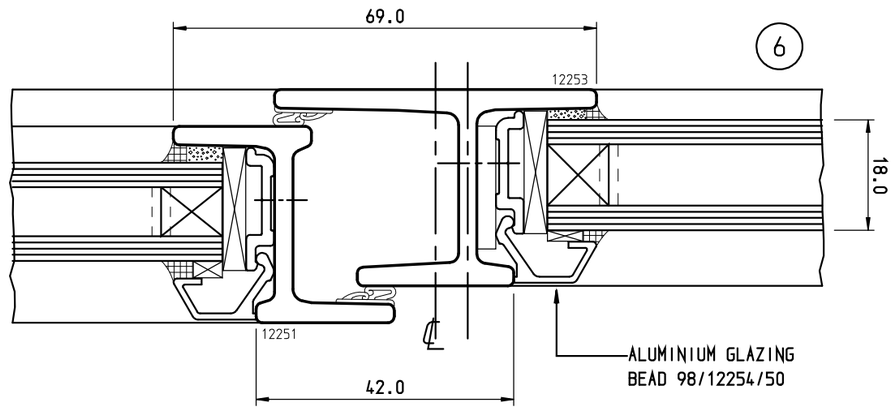












REVISION:	A 14/07/2015	B 16/07/2015	

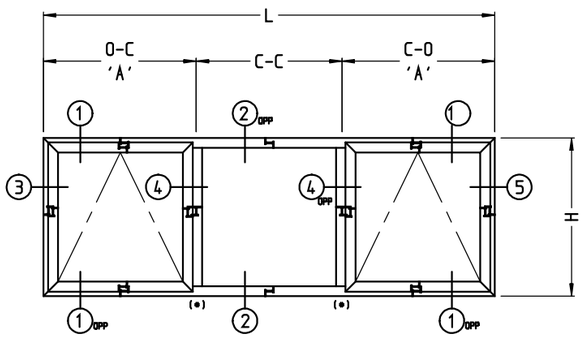
CRITTALL

TECHNICAL GUIDE
SIDE HUNG NEXT TO A TOP HUNG OVER A FIXED LIGHT NEXT TO A SIDE HUNG

THE FOLLOWING DESIGN REGISTRATIONS APPLY TO THIS PRODUCT, COMMUNITY REGISTERED DESIGN NOS: 002337840-0001, 002337840-0002, 002337840-0003.

PAGE 14

DRAWN: KIRSTY
DATE: JULY'2015



TH-FL-TH

MIN FRAME HEIGHT: 273.0mm
MAX FRAME HEIGHT: 1220.0mm

MIN FRAME LENGTH: 728.0mm
MAX FRAME LENGTH: 2460.0mm

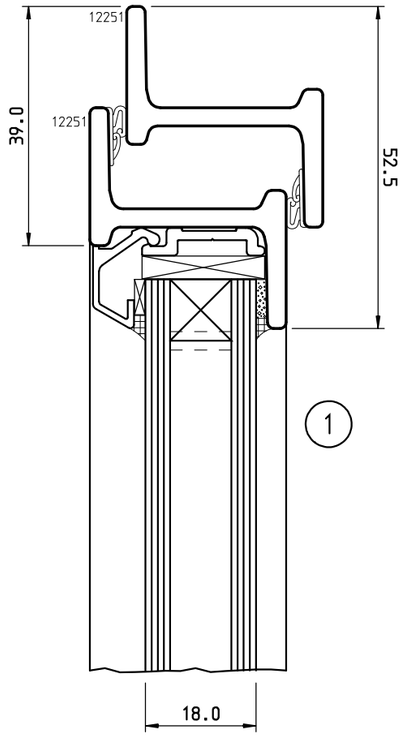
MIN 'A': 270.0mm
MAX 'A': 1040.0mm

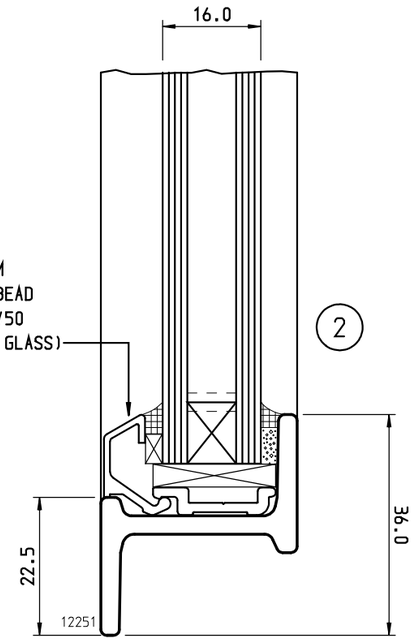
(*) MEETING RAIL BAR: STANDARD - SECTION 12253
OPTIONAL - SECTION 12252

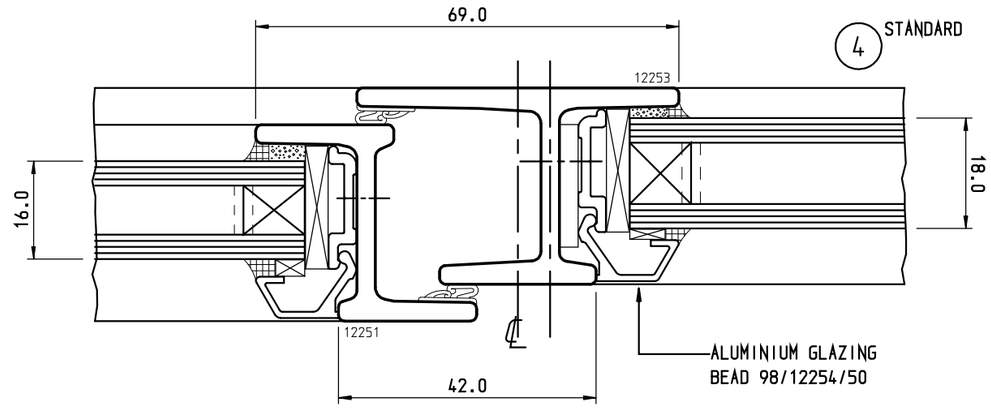
NOTE:
THE ABOVE FRAME LIMITS ARE FOR NON PROJECTING AND CONCEALED FRICTION HINGES. FOR ALL OTHER LIMITS ON FITTINGS REFER TO TECHNICAL SERVICES.
THERE ARE WEIGHT LIMITS ASSOCIATED WITH CONCEALED FRICTION HINGES, REFER TO TECHNICAL SERVICES.

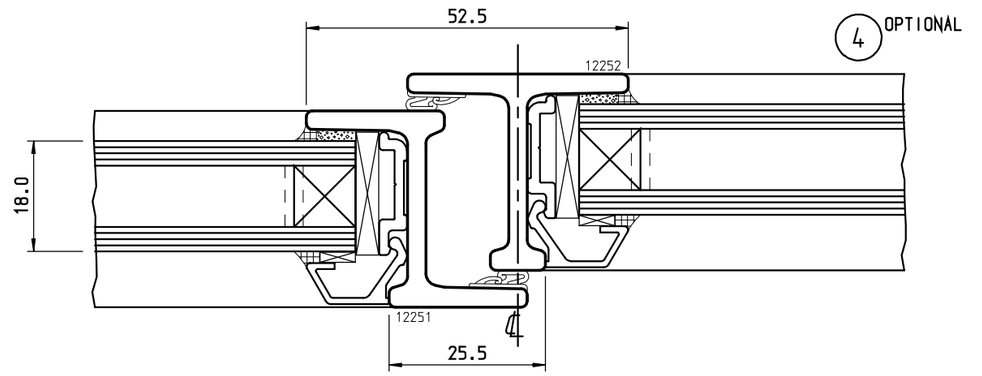
HARDWARE

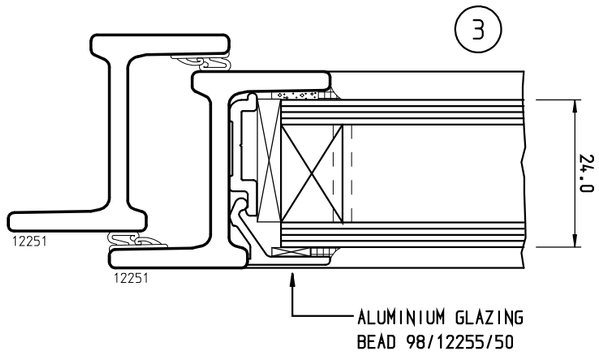
STANDARD - PEGSTAY
NON PROJECTING HINGES
OPTIONS - LEVER HANDLE (SINGLE, DOUBLE, DUPLEX)
MULTI POINT LOCKING HANDLE (CAN ONLY BE USED WITH CONCEALED FRICTION HINGES)
FOLDING OPENER
CONCEALED FRICTION HINGES (STAINLESS STEEL)
TRICKLE VENTILATOR
FINISHES - SATIN CHROME (STANDARD)
ROTO TONED (OPTION)

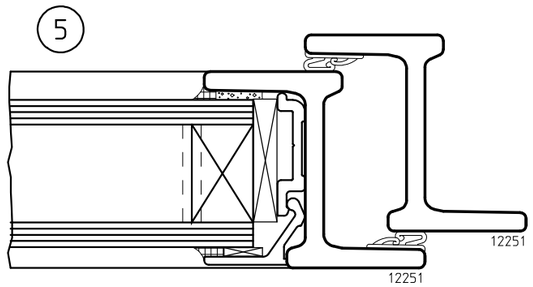












REVISION:	A 14/07/2015	B 16/07/2015	

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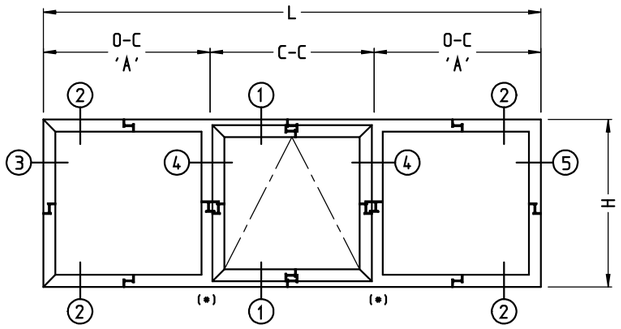
TECHNICAL GUIDE
TOP HUNG NEXT TO A FIXED LIGHT NEXT TO A TOP HUNG

THE FOLLOWING DESIGN REGISTRATIONS APPLY TO THIS PRODUCT, COMMUNITY REGISTERED DESIGN NOS: 002337840-0001, 002337840-0002, 002337840-0003.

PAGE 15

DRAWN: KIRSTY
DATE: JULY'2015



FL-TH-FL

MIN FRAME HEIGHT: 273.0mm
MAX FRAME HEIGHT: 1220.0mm

MIN FRAME LENGTH: 728.0mm
MAX FRAME LENGTH: 2460.0mm

MIN 'A': 270.0mm
MAX 'A': 1040.0mm

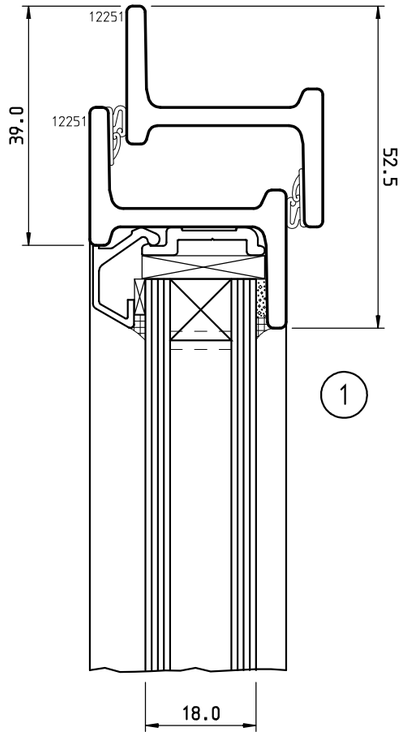
CONCEALED FRICTION HINGE:
MAX INNER FRAME LENGTH : 1240mm

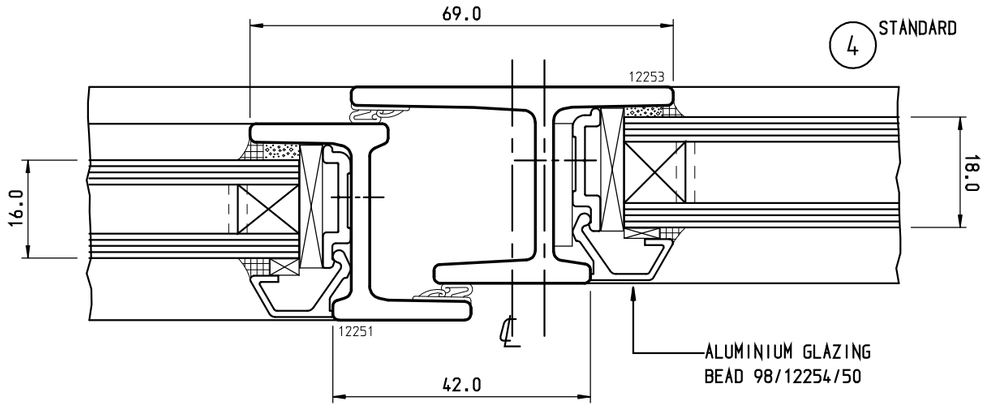
(*) MEETING RAIL BAR: STANDARD - SECTION 12253
OPTIONAL - SECTION 12252

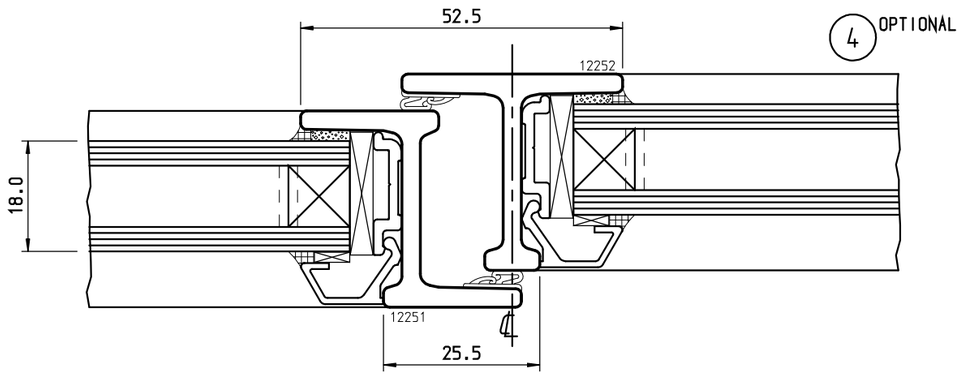
NOTE:
THE ABOVE FRAME LIMITS ARE FOR NON PROJECTING AND CONCEALED FRICTION HINGES. FOR ALL OTHER LIMITS ON FITTINGS REFER TO TECHNICAL SERVICES.
THERE ARE WEIGHT LIMITS ASSOCIATED WITH CONCEALED FRICTION HINGES, REFER TO TECHNICAL SERVICES.

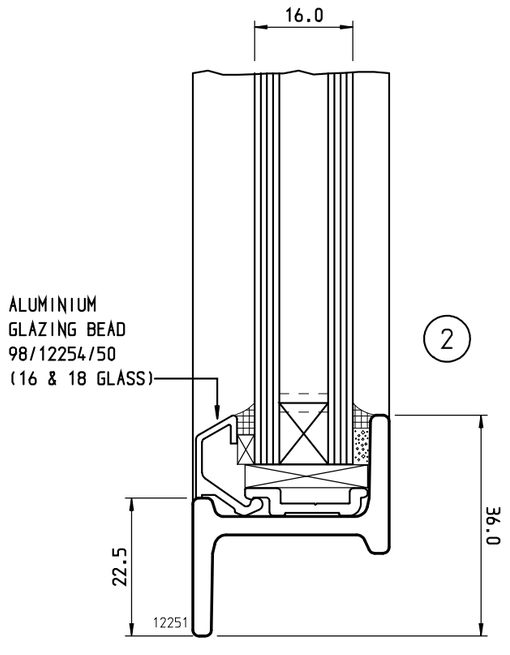
HARDWARE

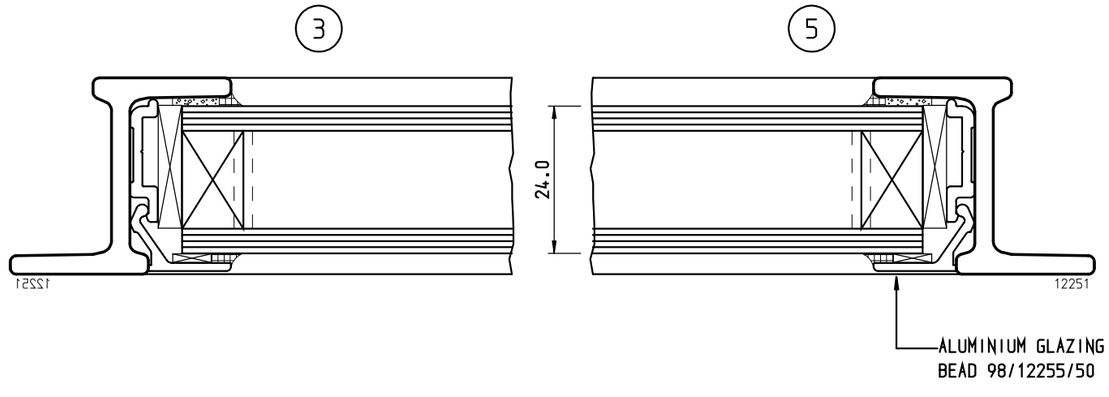
STANDARD - PEGSTAY
NON PROJECTING HINGES
OPTIONS - LEVER HANDLE (SINGLE, DOUBLE, DUPLEX)
MULTI POINT LOCKING HANDLE (CAN ONLY BE USED WITH CONCEALED FRICTION HINGES)
FOLDING OPENER
CONCEALED FRICTION HINGES (STAINLESS STEEL)
TRICKLE VENTILATOR
FINISHES - SATIN CHROME (STANDARD)
ROTO TONED (OPTION)











REVISION:	A 14/07/2015	B 16/07/2015	

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TECHNICAL GUIDE
FIXED LIGHT NEXT TO A TOP HUNG NEXT TO A FIXED LIGHT

THE FOLLOWING DESIGN REGISTRATIONS APPLY TO THIS PRODUCT, COMMUNITY REGISTERED DESIGN NOS: 002337840-0001, 002337840-0002, 002337840-0003.

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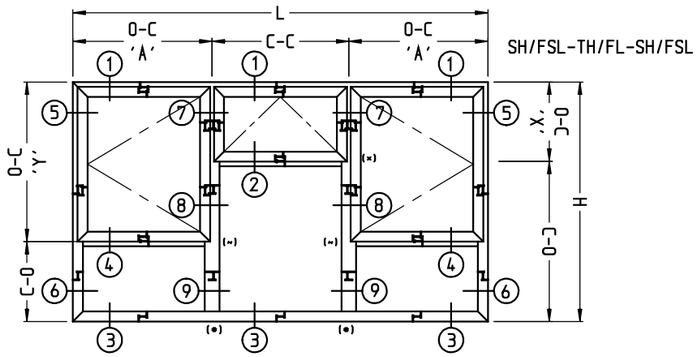
DRAWN: KIRSTY
DATE: JULY'2015



MIN FRAME HEIGHT: 687.0mm
MAX FRAME HEIGHT: 1520.0mm
MIN 'X': 264.0mm MIN 'Y': 464.0mm
MAX 'X': 1210.0mm MAX 'Y': 1210.0mm

MIN FRAME LENGTH: 954.0mm
MAX FRAME LENGTH: 2460.0mm
MIN 'A': 347.0mm
MAX 'A : 691.0mm

NOTE:
THE ABOVE FRAME LIMITS ARE FOR NON PROJECTING, PROJECTING AND CONCEALED FRICTION HINGES. FOR ALL OTHER LIMITS ON FITTINGS REFER TO TECHNICAL SERVICES.

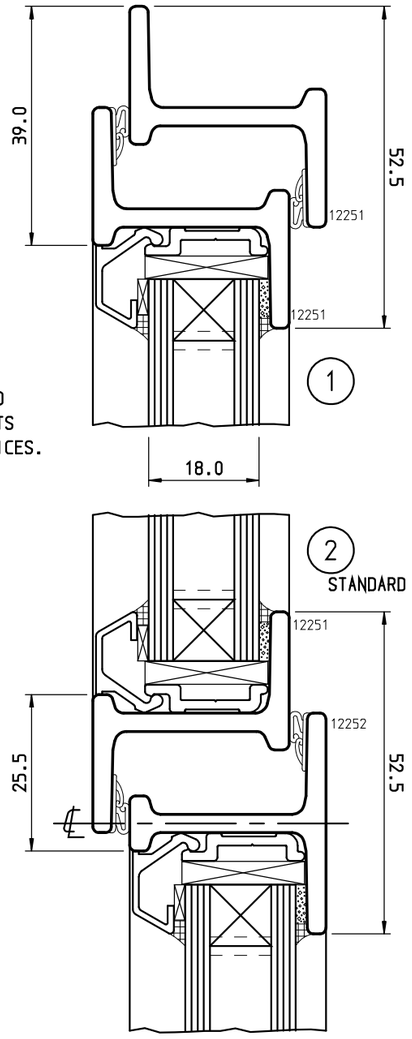
THERE ARE WEIGHT LIMITS ASSOCIATED WITH CONCEALED FRICTION HINGES, REFER TO TECHNICAL SERVICES.

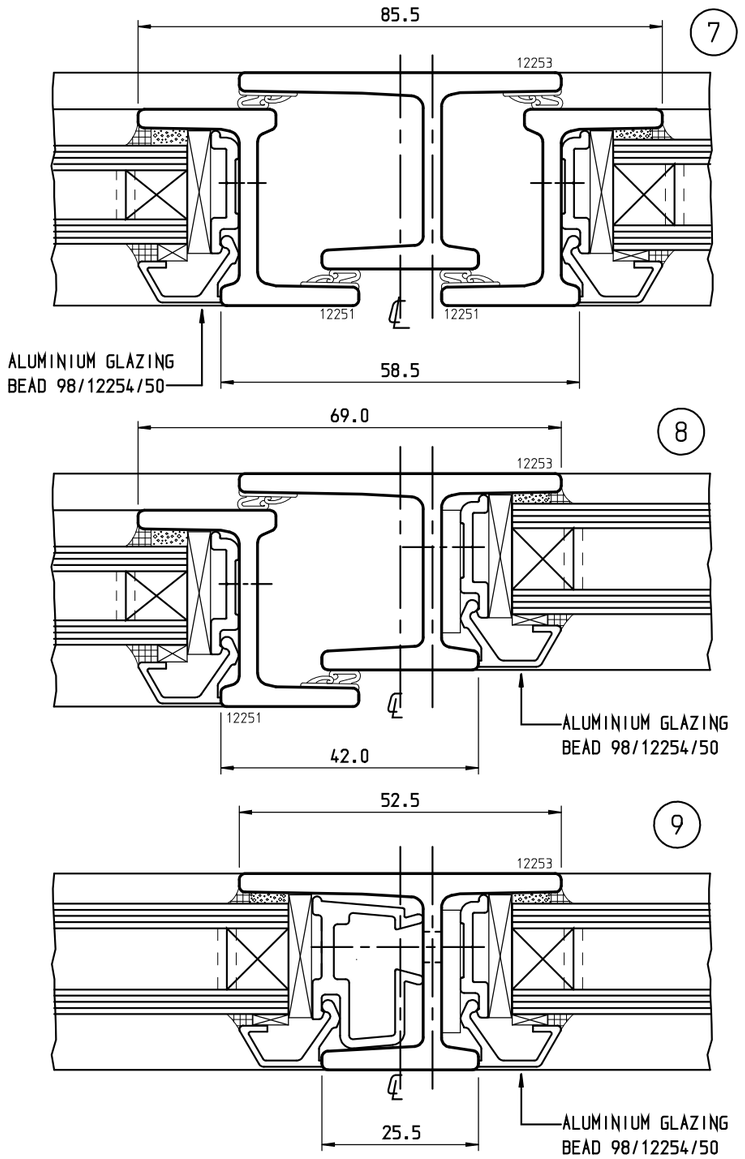
CONCEALED FRICTION HINGE:
MAX INNER FRAME LENGTH : 1240mm (FOR TOP HUNG)

(*) MEETING RAIL BAR HAS TO BE SECTION 12253 FOR THIS CONFIGURATION
(×) GLAZE UNDER BAR: STANDARD - SECTION 12252
OPTIONAL - SECTION 12253
(~) GLAZE UNDER BAR:
WELD ON HINGES HAS TO BE SECTION 12253
CONCEALED FRICTION HINGES; STANDARD - SECTION 12252
OPTIONAL - SECTION 12253

HARDWARE(SH)
STANDARD - LEVER HANDLE (SINGLE, DOUBLE)
PROJECTING FRICTION HINGES
OPTIONS - PEGSTAY
SLIDING STAY
LEVER HANDLE (DUPLEX)
MULTI POINT LOCKING HANDLE (CAN ONLY BE USED WITH CONCEALED FRICTION HINGES)
CONCEALED RESTRICTOR
NON PROJECTING HINGES
CONCEALED FRICTION HINGES (STAINLESS STEEL)
TRICKLE VENTILATOR
FINISHES - SATIN CHROME (STANDARD)
ROTO TONED (OPTION)

HARDWARE (TH)
STANDARD - PEGSTAY
NON PROJECTING HINGES
OPTIONS - LEVER HANDLE (SINGLE, DOUBLE, DUPLEX)
MULTI POINT LOCKING HANDLE (CAN ONLY BE USED WITH CONCEALED FRICTION HINGES)
FOLDING OPENER
CONCEALED FRICTION HINGES (STAINLESS STEEL)
TRICKLE VENTILATOR
FINISHES - SATIN CHROME (STANDARD)
ROTO TONED (OPTION)





REVISION:	A 14/07/2015	B 16/07/2015	

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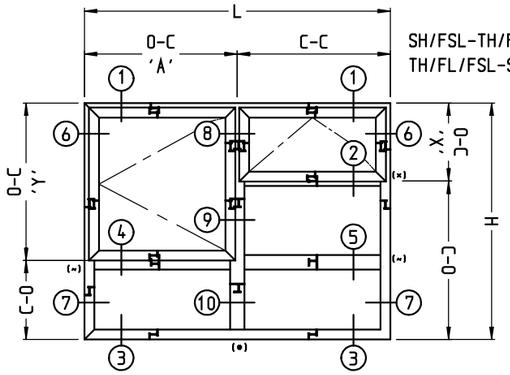
TECHNICAL GUIDE
SIDE HUNG OVER A FIXED SUBLIGHT NEXT TO A TOP HUNG OVER A FIXED LIGHT NEXT TO A SIDE HUNG OVER A FIXED SUBLIGHT

THE FOLLOWING DESIGN REGISTRATIONS APPLY TO THIS PRODUCT, COMMUNITY REGISTERED DESIGN NOS: 002337840-0001, 002337840-0002, 002337840-0003.

DRAWN: KIRSTY
DATE: JULY'2015



MIN FRAME HEIGHT: 687.0mm
MAX FRAME HEIGHT: 1520.0mm
MIN 'X': 264.0mm MIN 'Y': 464.0mm
MAX 'X': 1210.0mm MAX 'Y': 1210.0mm

MIN FRAME LENGTH: 693.0mm
MAX FRAME LENGTH: 2080.0mm
MIN 'A': 347.0mm
MAX 'A : 691.0mm

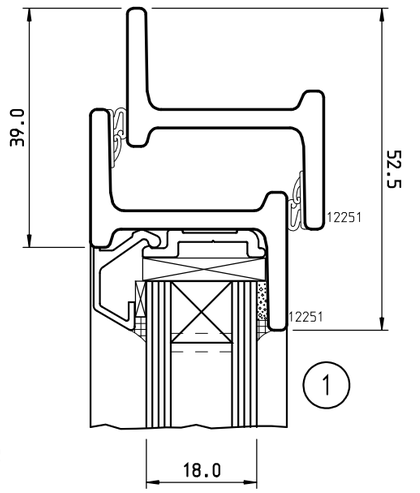
NOTE:
THE ABOVE FRAME LIMITS ARE FOR NON PROJECTING, PROJECTING AND CONCEALED FRICTION HINGES. FOR ALL OTHER LIMITS ON FITTINGS REFER TO TECHNICAL SERVICES.
THERE ARE WEIGHT LIMITS ASSOCIATED WITH CONCEALED FRICTION HINGES, REFER TO TECHNICAL SERVICES.

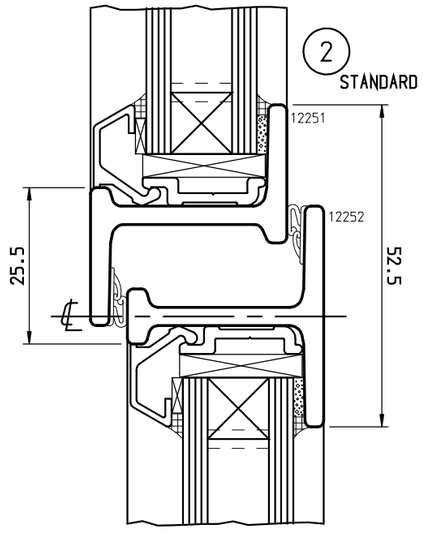
CONCEALED FRICTION HINGE:
MAX INNER FRAME LENGTH : 1240mm (FOR TOP HUNG)

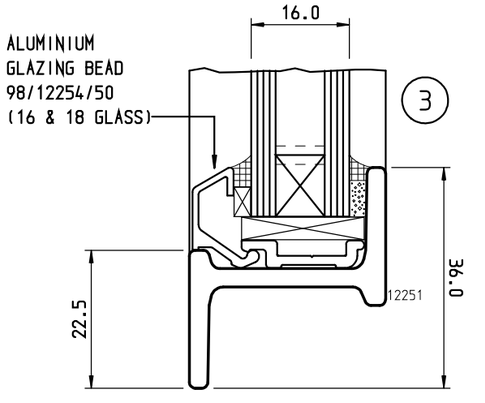
(*) MEETING RAIL BAR HAS TO BE SECTION 12253 FOR THIS CONFIGURATION
(×) GLAZE UNDER BAR: STANDARD - SECTION 12252
OPTIONAL - SECTION 12253
(~) GLAZE UNDER BAR HAS TO BE SECTION 12253 FOR THIS CONFIGURATION, BECAUSE OF THE CONFIGURATION OF THE TENON SLOTS

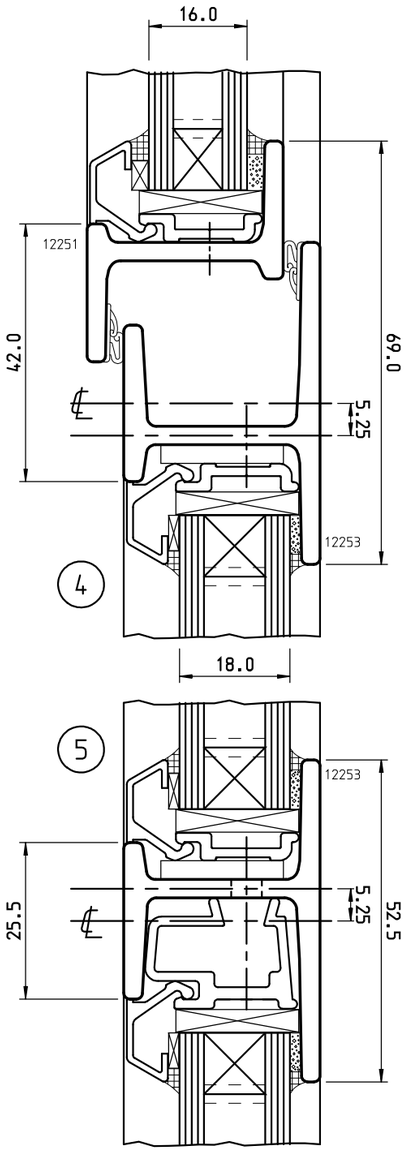
HARDWARE(SH)
STANDARD - LEVER HANDLE (SINGLE, DOUBLE)
PROJECTING FRICTION HINGES
OPTIONS - PEGSTAY
SLIDING STAY
LEVER HANDLE (DUPLEX)
MULTI POINT LOCKING HANDLE (CAN ONLY BE USED WITH CONCEALED FRICTION HINGES)
CONCEALED RESTRICTOR
NON PROJECTING HINGES
CONCEALED FRICTION HINGES (STAINLESS STEEL)
TRICKLE VENTILATOR
FINISHES - SATIN CHROME (STANDARD)
ROTO TONED (OPTION)

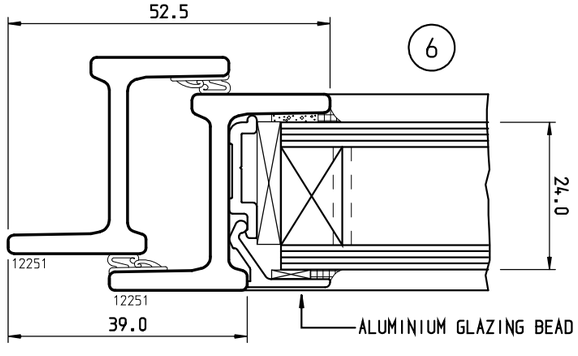
HARDWARE (TH)
STANDARD - PEGSTAY
NON PROJECTING HINGES
OPTIONS - LEVER HANDLE (SINGLE, DOUBLE, DUPLEX)
MULTI POINT LOCKING HANDLE (CAN ONLY BE USED WITH CONCEALED FRICTION HINGES)
FOLDING OPENER
CONCEALED FRICTION HINGES (STAINLESS STEEL)
TRICKLE VENTILATOR
FINISHES - SATIN CHROME (STANDARD)
ROTO TONED (OPTION)

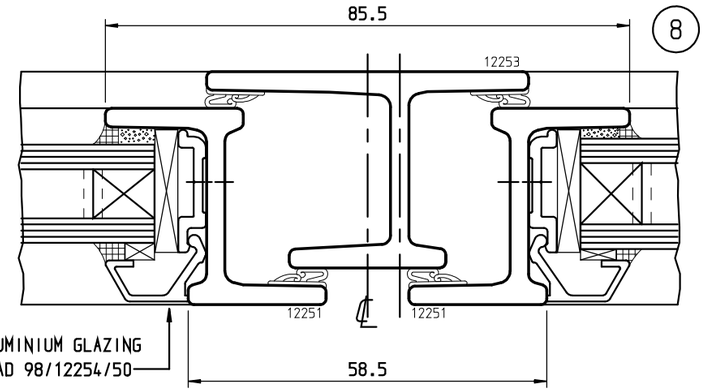


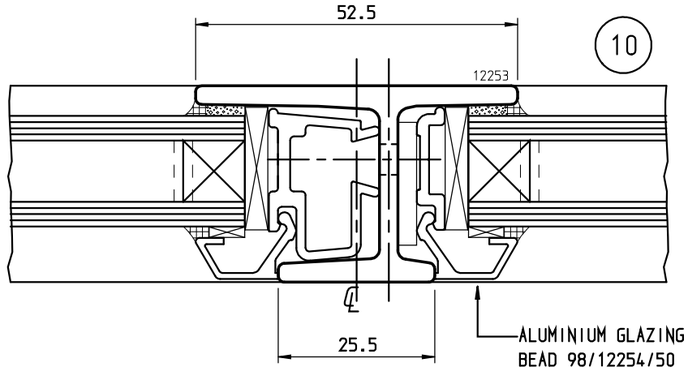


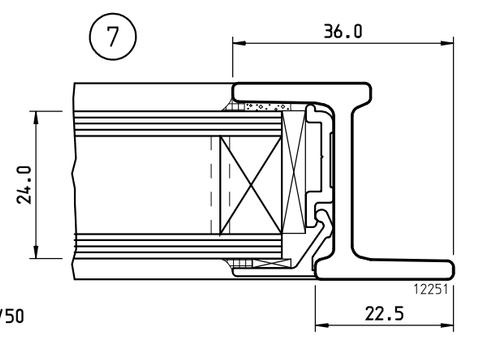












REVISION:	A 14/07/2015	B 16/07/2015	

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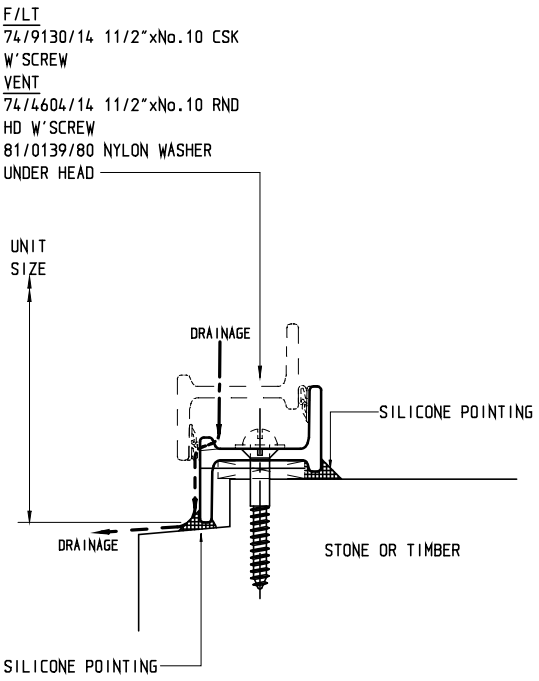
TECHNICAL GUIDE
SIDE HUNG OVER A FIXED SUBLIGHT NEXT TO A TOP HUNG OVER A FIXED LIGHT OVER A FIXED SUBLIGHT

THE FOLLOWING DESIGN REGISTRATIONS APPLY TO THIS PRODUCT, COMMUNITY REGISTERED DESIGN NOS: 002337840-0001, 002337840-0002, 002337840-0003.

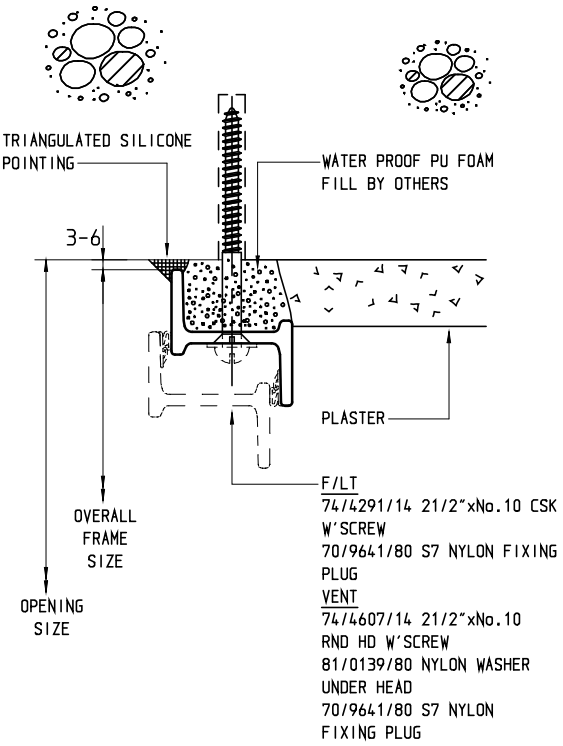
PAGE 18

DRAWN: KIRSTY
DATE: JULY'2015

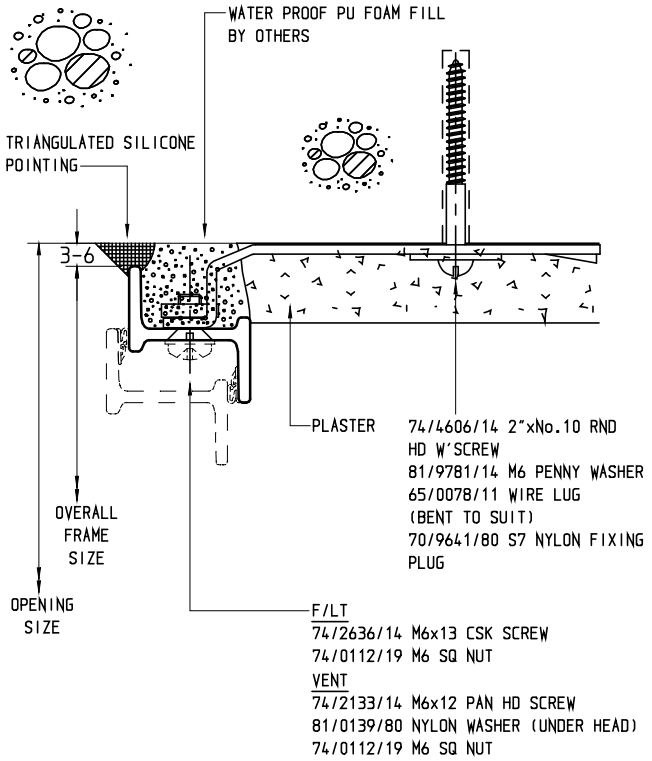
EXTENDED LEG DIRECT FIX



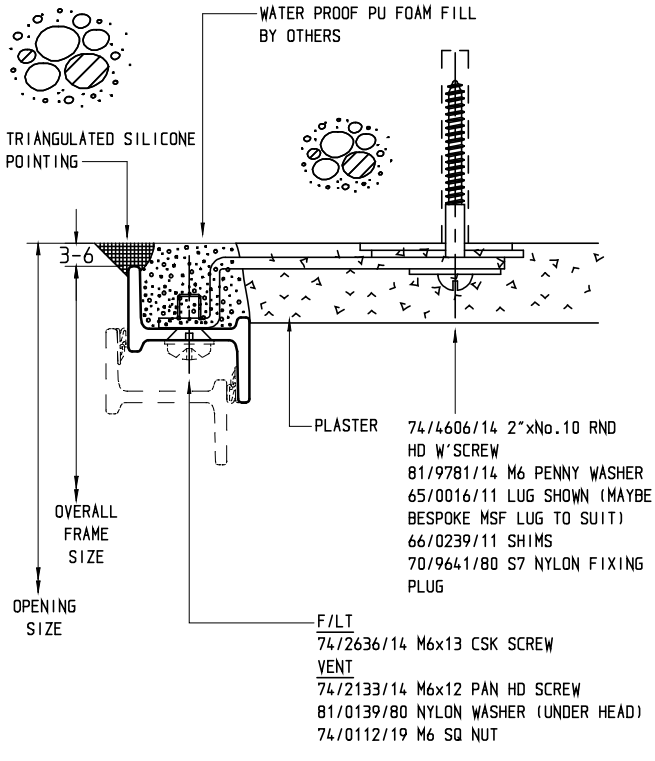
EXTENDED LEG DIRECT FIX



WIRE LUG FIX



MSF LUG FIX



REVISION:			

SCALE: 1:2

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TYPICAL BOUNDARY DETAILS

THE FOLLOWING DESIGN REGISTRATIONS APPLY TO THIS PRODUCT, COMMUNITY REGISTERED DESIGN NOS: 002337840-0001, 002337840-0002, 002337840-0003.

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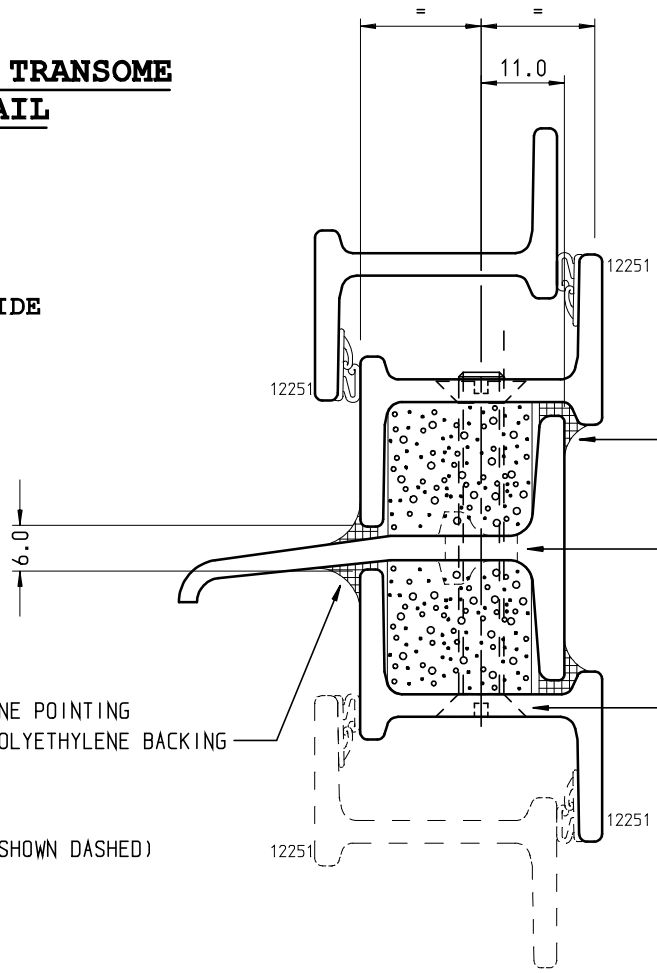
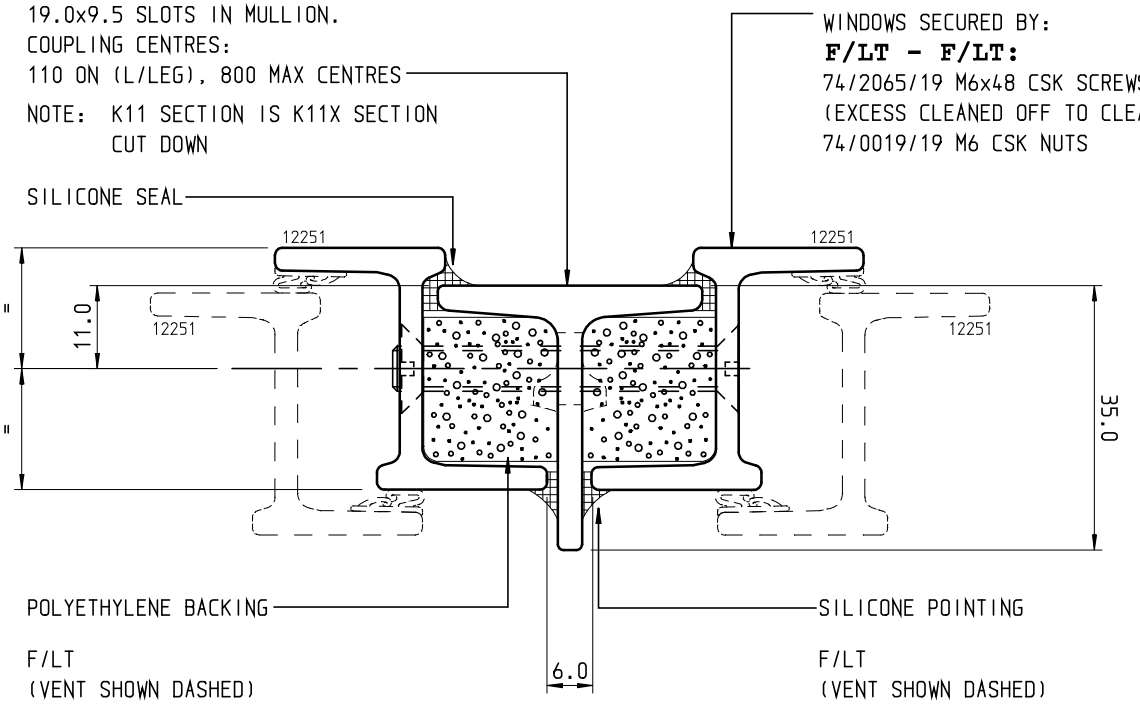
K12 TRANSOME DETAIL





OUTSIDE

K11 MULLION DETAIL

REVISION:			

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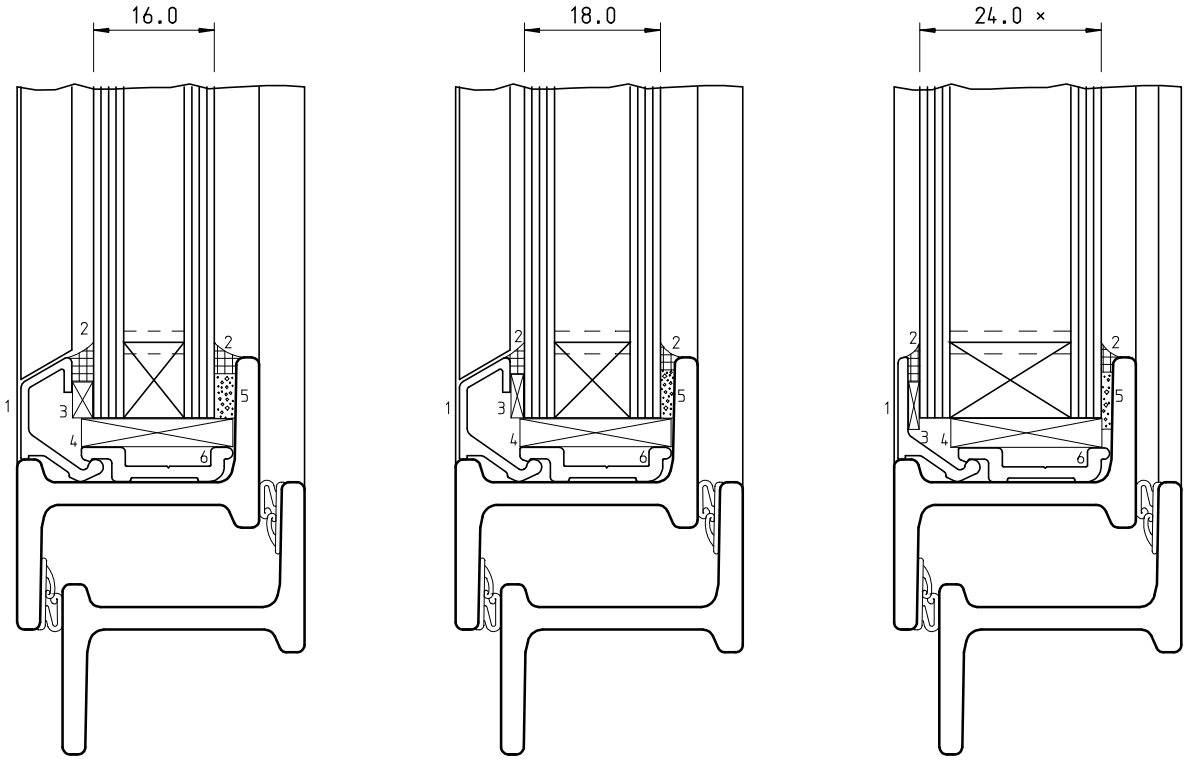
TYPICAL COUPLING DETAILS

THE FOLLOWING DESIGN REGISTRATIONS APPLY TO THIS PRODUCT, COMMUNITY REGISTERED DESIGN NOS: 002337840-0001, 002337840-0002, 002337840-0003.

PAGE 20

DRAWN: KIRSTY
DATE: JULY'2015



GLASS THICKNESS	BEAD	GLAZING BEAD CLIP
16.0	98/12254/50	98/12256/50
18.0	98/12254/50	98/12256/50
24.0	98/12255/50	98/12256/50

NOTE(×): ABLE TO EXCEPT 19.0mm-24.0mm GLASS

KEY CODE:
1 - ALUMINIUM GLAZING BEAD
2 - SILICONE CAPPING
3 - DISTANCE PIECE
4 - SETTING BLOCK
5 - SECURITY GLAZING TAPE
6 - ALUMINIUM GLAZING BEAD CLIP 98/12256/50

GLASS UNIT SIZE	OUTER PANE	LOW-E COATING	INNER PANE	LOW-E COATING	SPACER WIDTH + TYPE	GAS FILL	CPU VALUE	WER	'U' VALUE
16mm	4mm CLEAR FLOAT GLASS	N/A	4mm CLEAR FLOAT	N/A	8mm STANDARD ALUMINIUM	KRYPTON	1.2W/m²K OR BETTER	N/A	**2.0**
18mm	4mm LOW IRON GLASS	N/A	4mm PLANILUX	PLANITHERM TOTAL PLUS	10mm EDGETECH SUPER	KRYPTON	1.086W/m²K	**B** (-10)	**2.0**
18mm	4mm LOW IRON GLASS	N/A	4mm K GLASS	PILKINGTON KS	10mm EDGETECH SUPER	KRYPTON	1.12W/m²K	**B** (-8)	**2.0**
18mm	4mm LOW IRON GLASS	N/A	4mm OPTIFLOAT	OPTITHERM CLIMAGUARD A+	10mm EDGETECH SUPER	KRYPTON	1.122W/m²K	**B** (-8)	**2.0**
18mm	4mm EXTRA CLEAR GLASS	N/A	4mm EXTRA CLEAR GLASS	CLIMAGUARD 1	10mm EDGETECH SUPER	KRYPTON	0.966W/m²K	N/A	**1.8**
24mm	4mm LOW IRON GLASS	N/A	4mm PLANILUX	PLANITHERM TOTAL PLUS	16mm EDGETECH SUPER	ARGON	1.163W/m²K	**C** (-14)×	**2.0**

REVISION:	A 14/07/2015	B 16/07/2015	C 08/10/2015	D 13/10/2015

NOTE: × CWL IN HOUSE SIMULATION

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TYPICAL GLAZING DETAILS

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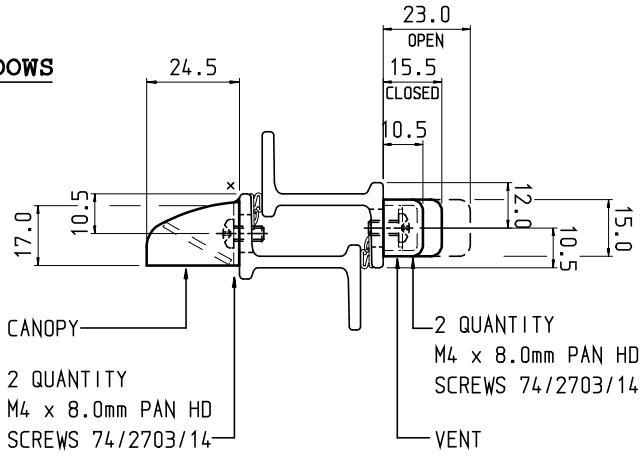
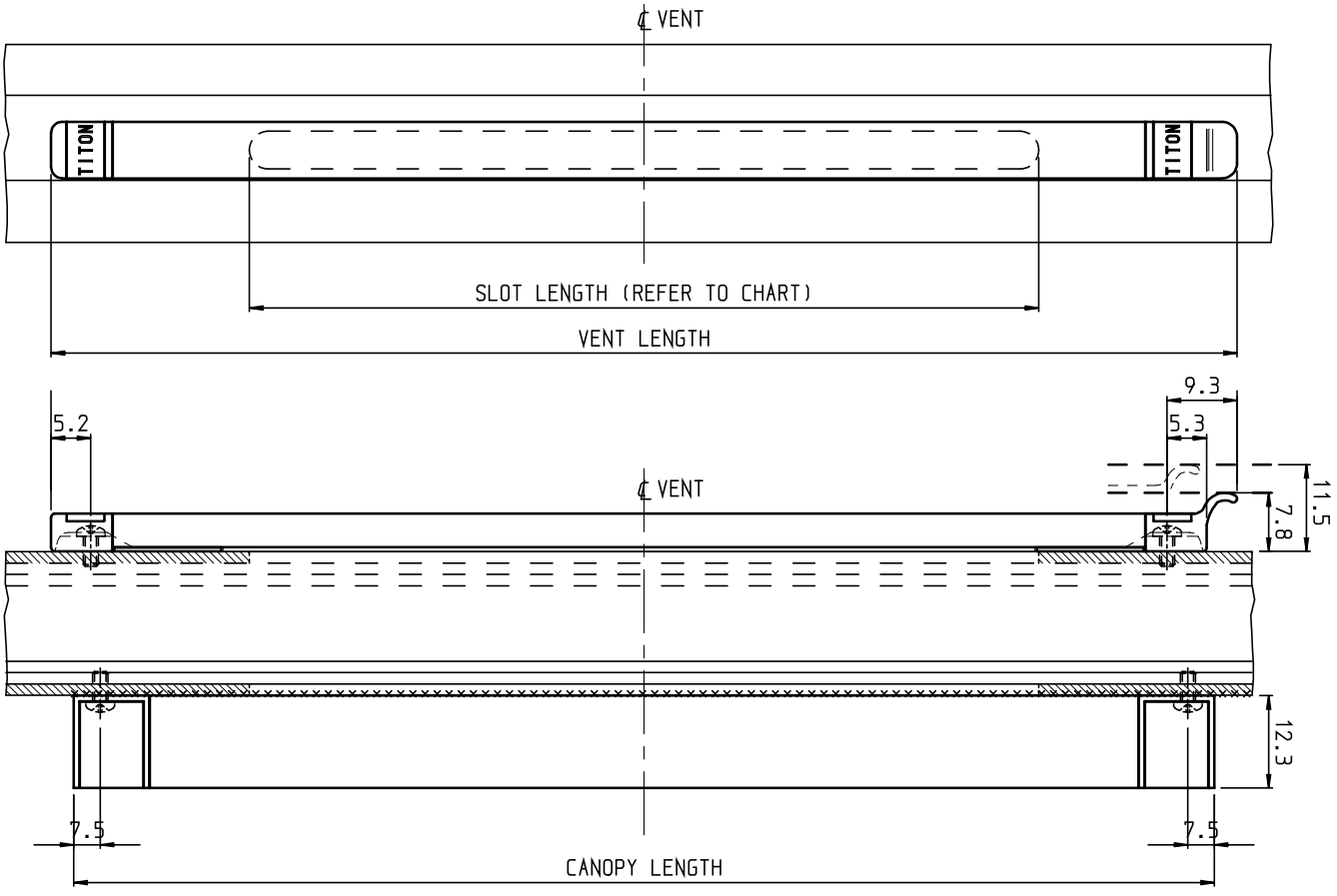
PAGE 21

DRAWN: KIRSTY
DATE: JULY'2015

OPEN OUT WINDOWS





×××× BEAD OF SILICONE

TITON HARDWARE LTD (TRIMVENT SM)						
TITON PRODUCT	LENGTH	WIDTH	TITON CODE	CRITTALL CODE	FREE AIR (mm^2)	SLOT DETAIL
SM 1500EA VENT	314mm	15mm	TA 902	25/0824/50	$1447mm^2$	209 × 10
SM 302 CANOPY	302mm	17mm	TA 906	25/0825/50		
SM 2900EA VENT	457mm	15mm	TA 903	25/0826/50	$2342mm^2$	169.5 + 169.5 × 12, 13
SM 445 CANOPY	445mm	17mm	TA 907	25/0827/50		
SM 3500EA VENT	544mm	15mm	TA 901	25/0828/50	$2937mm^2$	212 + 212 × 10, 15
SM 532 CANOPY	532mm	17mm	TA 905	25/0829/50		
STANDARD FINISH WHITE POLYESTER PAINT CODE - 20, REFER TO TITON CATALOGUE FOR OTHER VARIATIONS						

REVISION:	A 08/10/2015		

SCALE : 1:2

CRITTALL

TITON TRIMVENTS

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DATE: JULY'2015

HomelightPlus™

CLASSIC ⊘ WINDOWS ⊘ FROM ⊘ CRITTALL

FIXING, GLAZING AND FRAME SEALING INSTRUCTIONS FOR HomelightPlus™ WINDOWS

CRITTALL™

Crittall Windows Limited Francis House Freebournes Road Witham Essex CM8 3UN
01376 530800 email: hq@crittall-windows.co.uk

This leaflet illustrates how HomelightPlus™ windows are fixed, sealed and glazed into the most frequently used perimeter details and where the various screws, lugs and other components are used to provide good fixing. It includes the coupling of windows with mullions and transomes.

INDEX:

Site Handling:

All windows should be unloaded, stacked and handled with great care on site, particularly powder coated windows. Stack windows on level battens away from mud and site traffic, and never on ashes because sulphur will attack the metal. Windows need not be stacked undercover, but should never be stacked on other materials nor other materials stacked on windows.

Inspection at the factory ensures that opening lights fit correctly and they should never be opened prior to installation. After installation, windows must remain closed until they have been glazed. Unglazed windows must never be used for access of men or materials.

Bad site handling can cause distortion and damage to window frames and/or fittings, resulting in unnecessary site rectification and cost to the builder.

GENERAL NOTES:

General:

Windows can be fixed direct into prepared openings or into wood, aluminium or plastic subframes. All windows are supplied with fixing holes with sufficient quantities of suitable lugs, screws, plugs etc. Extra holes that appear in the frames; these are incidental to manufacture, need not be used for fixing and are silicone-sealed in the factory. Holes used for fixing must be sealed on site during installation. Pointing and glazing materials are not supplied by Crittall Windows Ltd, but are provided by the installer.

Building in:

Frames must be fixed plumb, square and free from twist, and all vents set square in their openings. Ensure that coupled assemblies are not bent at the coupling position. Polyester powder coated frames should not be built in, as damage to the finish may be incurred.

Prepared openings:

These must always be built square and plumb to sizes which provide a 3-6mm clearance between window and work for perimeter sealant. Extra allowances must be added to window frame sizes for pressed steel sills and mullion/transome couplings. Templates ensure accurate preparation of openings.

Windows fitted into oversized openings can present weathering and fixing problems. Where openings are undersized, never force windows into position, have the openings enlarged instead.

GENERAL NOTES (CONTINUED):

Head details:

Steel windows are not designed to withstand imposed structural loads, which are a function of the lintel. This is especially important when a window is built in, and where a minimum 3mm clearance must be maintained between the window and the work for the perimeter sealant.

Steel lintels can be drilled to suit window fixing centres, to take a No 10 self-tapping screw as supplied by Crittall Windows Limited.

Concrete lintels can be drilled for No. 10 woodscrews & plugs, but if preferred anchor bolts supplied by the builder can be used.

Jamb details:

When building a window into cavity brickwork at the jamb, it is most important to position DPC and window correctly. The face of the window should be positioned 6mm forward of the inside face of the outer brick leaf so that the dpc can be placed immediately behind the outer brick and project approximately 15mm; it can then be tucked behind the long leg of the window but in front of the fixing lug. The window should be held plumb and a minimum 3mm clearance maintained between window and brick for the perimeter sealant.

Sill details:

The required opening height size will not always coincide with an exact number of brick courses, therefore the window may need to be set up at the sill with packers to enable the window head to be fixed at the lintel leaving the required minimum 3mm clearance for the perimeter sealant.

Pressed steel sills should be clamped on to the frame before fixing the window. With other types of sill such as tile, brick on edge or special brick, the details should be designed to lap the DPC as shown on the perimeter details.

After fixing:

When windows have been fixed to a non-rebated surround, an expanding foam fillet should be applied behind the long leg of the window. This serves as a key for the internal plaster and as a backing for the external perimeter pointing, which must always be applied.
Holes formed in the frame during manufacture and not used for fixing are silicone-sealed in the factory. Holes used for fixing must be sealed on site during installation.

Used and unused fixing, coupling and galvanising drainage holes in the window frame must be sealed to prevent water running through them to the inside.

After fixing, but before glazing, it is important to check that all window fittings engage and operate properly. Apart from this testing, the windows should remain closed until they have been glazed.

Also ensure that opening light margins are equal all round. If casements have dropped and become distorted for any reason, adjust them before glazing.

GENERAL NOTES (CONTINUED):

Vents should be checked by glaziers to ensure that they are square prior to glazing. Glazing should be carried out in accordance with BS 6262 & Building Regulation Part K, using setting blocks and distance pieces to prevent glass moving and vents dropping under the weight of the glass. See below for further advice on glazing and page 7 for typical blocking positions.

After glazing, adjust friction hinges to hold side hung windows open in any position up to 90 degrees.

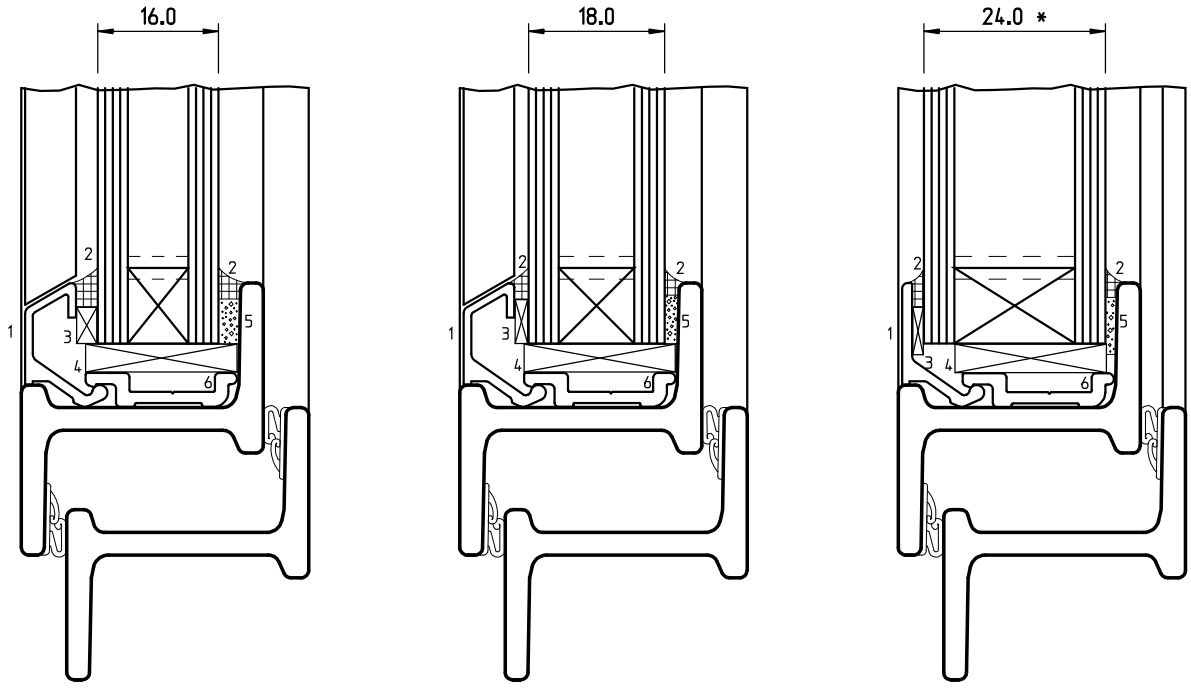
Glazing:

HomelightPlus™ steel windows are supplied unglazed. The glazier supplies the glass, distance pieces, neutral cure low modulus silicone and other glazing materials.

Double glazing:

16mm to 24mm sealed units can be glazed into windows of HomelightPlus™ construction. These are specially designed to receive glass of this thickness. Glazing beads, matching the finish of the windows, are applied to special glazing clips pre-fitted to the frames in the factory, as shown in the following section. In all cases, setting blocks and distance pieces must be used and correct glazing practice followed as laid down in BS 6262, Glazing for Buildings. This British Standard, together with Building Regulation Part K, should also be consulted with regard to the selection of glass, including the use of safety glass where appropriate.

It is important that all fixing holes in fixed lights and in vent outer frames, together with fixed light glazing clip rivets, galvanising drain holes, unused frame holes and fenestra/tenon joints are sealed with silicone in order to prevent water ingress. Extra holes that might appear in the frames are incidental to manufacture and need not be used for fixing and are silicone-sealed in the factory. Holes used for fixing must be sealed with silicone on site during installation.



GLASS THICKNESS	BEAD	GLAZING BEAD CLIP
16.0	98/12254/50	98/12256/50
18.0	98/12254/50	98/12256/50
24.0	98/12255/50	98/12256/50

NOTE(*): ABLE TO ACCEPT 19.0mm-24.0mm GLASS

KEY CODE:
1 - ALUMINIUM GLAZING BEAD
2 - SILICONE CAPPING
3 - DISTANCE PIECE
4 - SETTING BLOCK
5 - SECURITY GLAZING TAPE
6 - ALUMINIUM GLAZING BEAD CLIP 98/12256/50

DOUBLE GLAZED

All redundant holes and slots in inner and outer frames are sealed in the factory, holes used for fixing must be sealed by the installer.

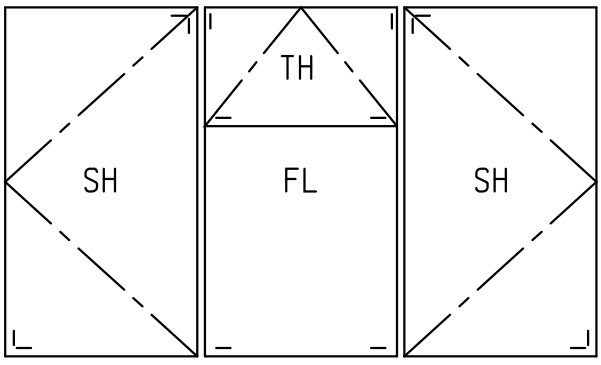
Initially position setting blocks at sill corners only, sitting on glazing clips and ensuring they are pushed to the inside face of the glazing nib. To allow clearance for the bead to engage in clip. The setting blocks should be 100.0mm long attached with silicone if necessary, and need to be as wide as the glass unit.
Setting block positions must be precise.

Note: the glazing materials for 16.0mm and 18.0mm sealed units vary from 19.0mm to 24.0mm sealed units.

Detailed glazing instructions for double glass units are set out on the following pages.

MATERIAL FOR 18mm GLAZING IS SUPLIED UNLESS STATED OTHERWISE AT TIME OF ORDER.

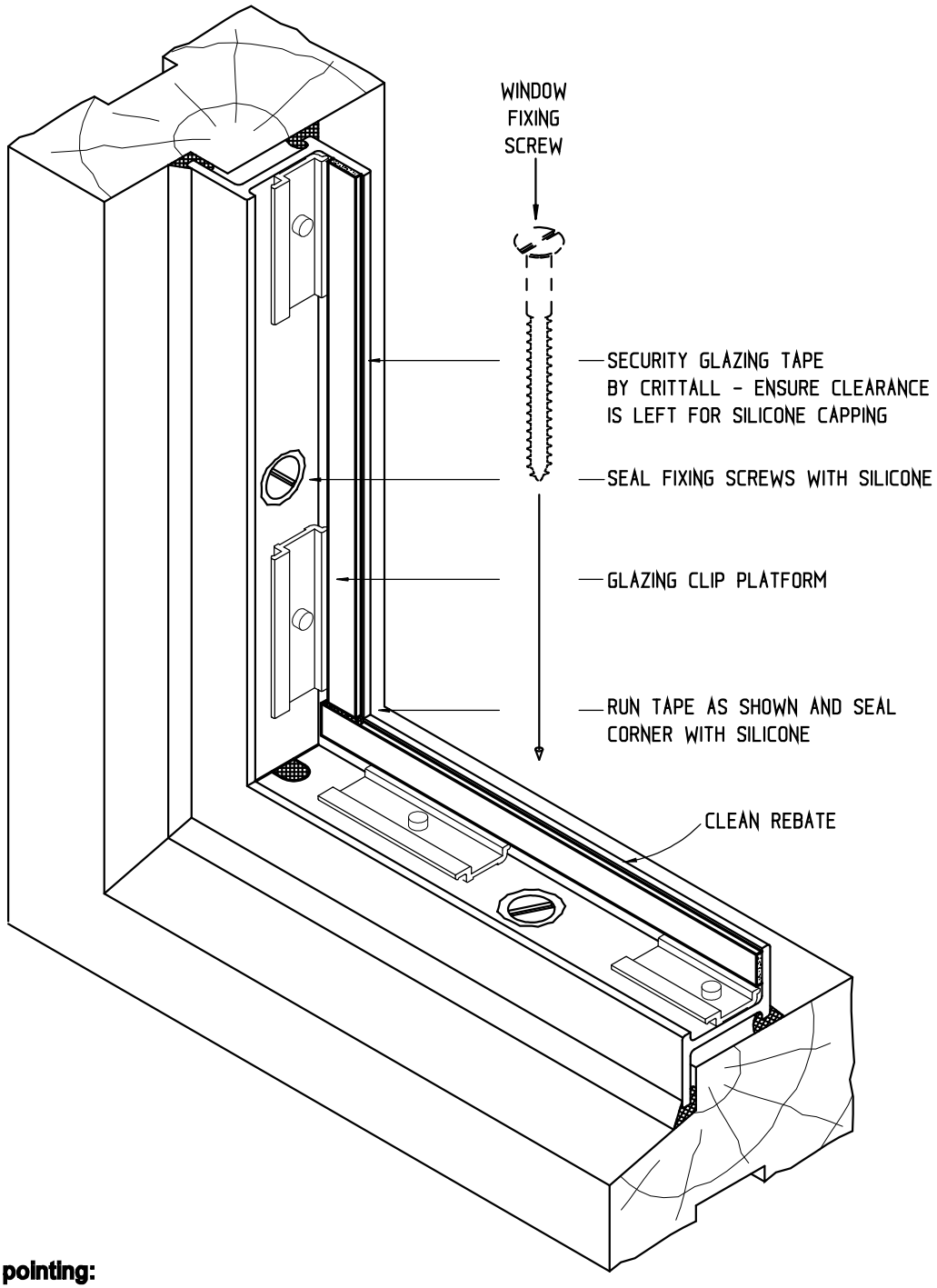
Fully block pane after the glass unit has been positioned. Setting blocks for fixed lights should preperably be 100.0mm - 150.0mm from corners, but can be less on small panes.



SETTING BLOCK POSITIONS FOR VARIOUS WINDOW TYPES

NOTE: GLAZING TO BE GENERALLY IN ACCORDANCE WITH BS 6262 AND BUILDING REGULATIONS, APPROVED DOCUMENT PART K

Before commencing glazing, clean rebate and ensure glazing area is free from debris.



Perimeter pointing:

Sealants are not supplied by Crittall. They are to be provided by the installer, who should be able to obtain them through their local trade merchant. A low modulus, neutral-cure silicone sealant should be used to seal the frame both to the perimeter and to the coupling bars where supplied and should be suitable for both galvanised and polyester powder coated frames, although certain brands may require a primer. when sealing to a timber subframe, ensure that the sealant is compatible with the wood finish, especially where an oil-based stain is used as the silicone sealant may not adhere. Timber and stone surrounds may require sealing to prevent staining - special anti-bleed silicones are available for this situation.

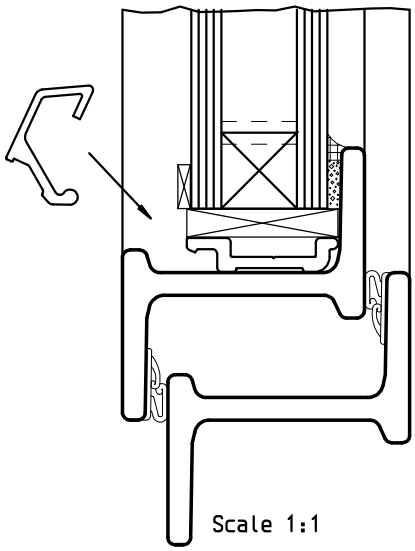
IMPORTANT NOTE REGARDING THE FIXING OF FIXED LIGHT & CASEMENT WINDOWS:

Galvanising drainage holes in the inner frame corners of casement windows are factory-sealed with silicone. The installer should ensure that ALL holes in the outer frame and ALL tenon slots are sealed after fixing.

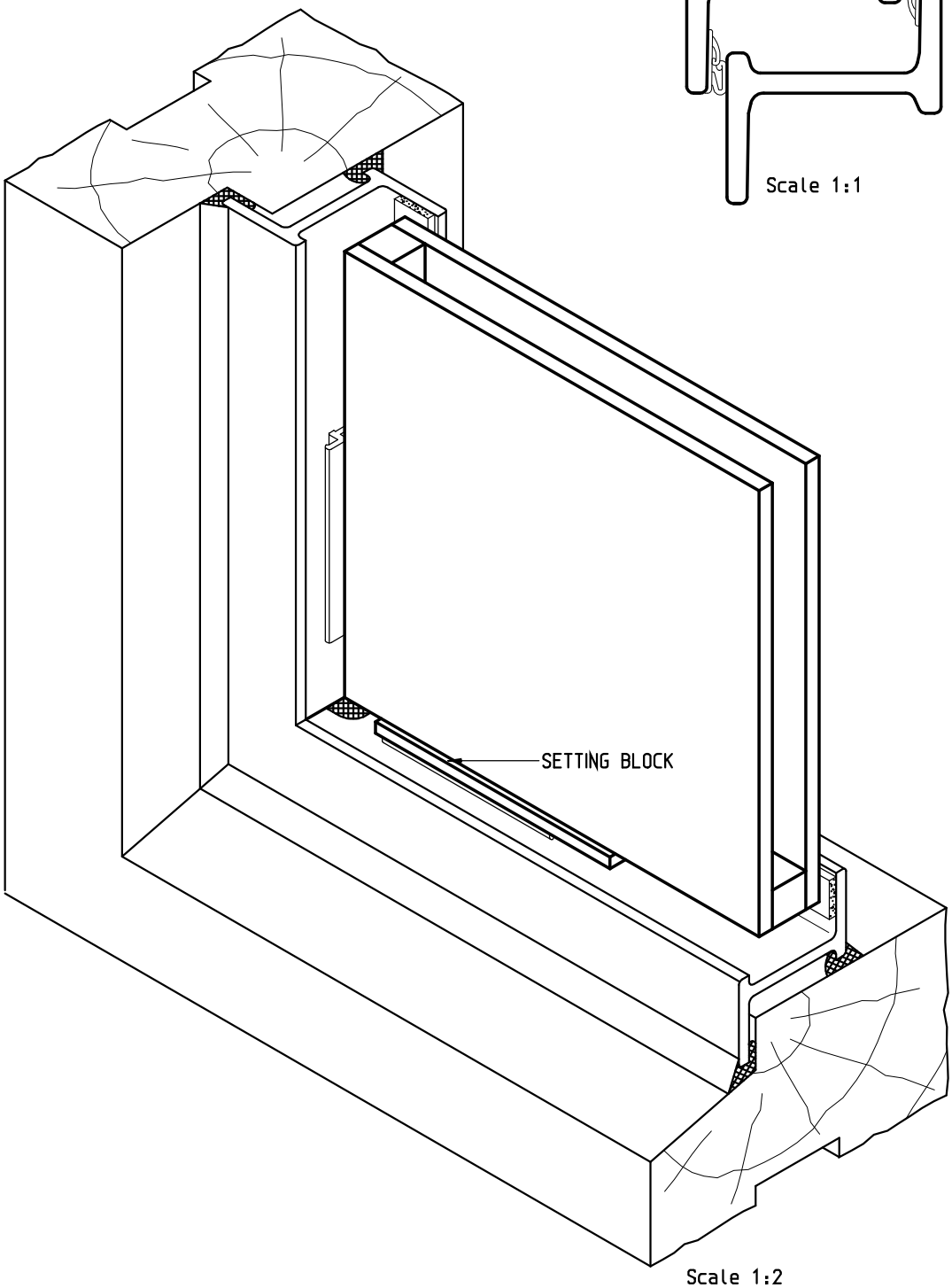
not to scale

Position glass on setting blocks, centralise glass in frame and push firmly onto the tape.

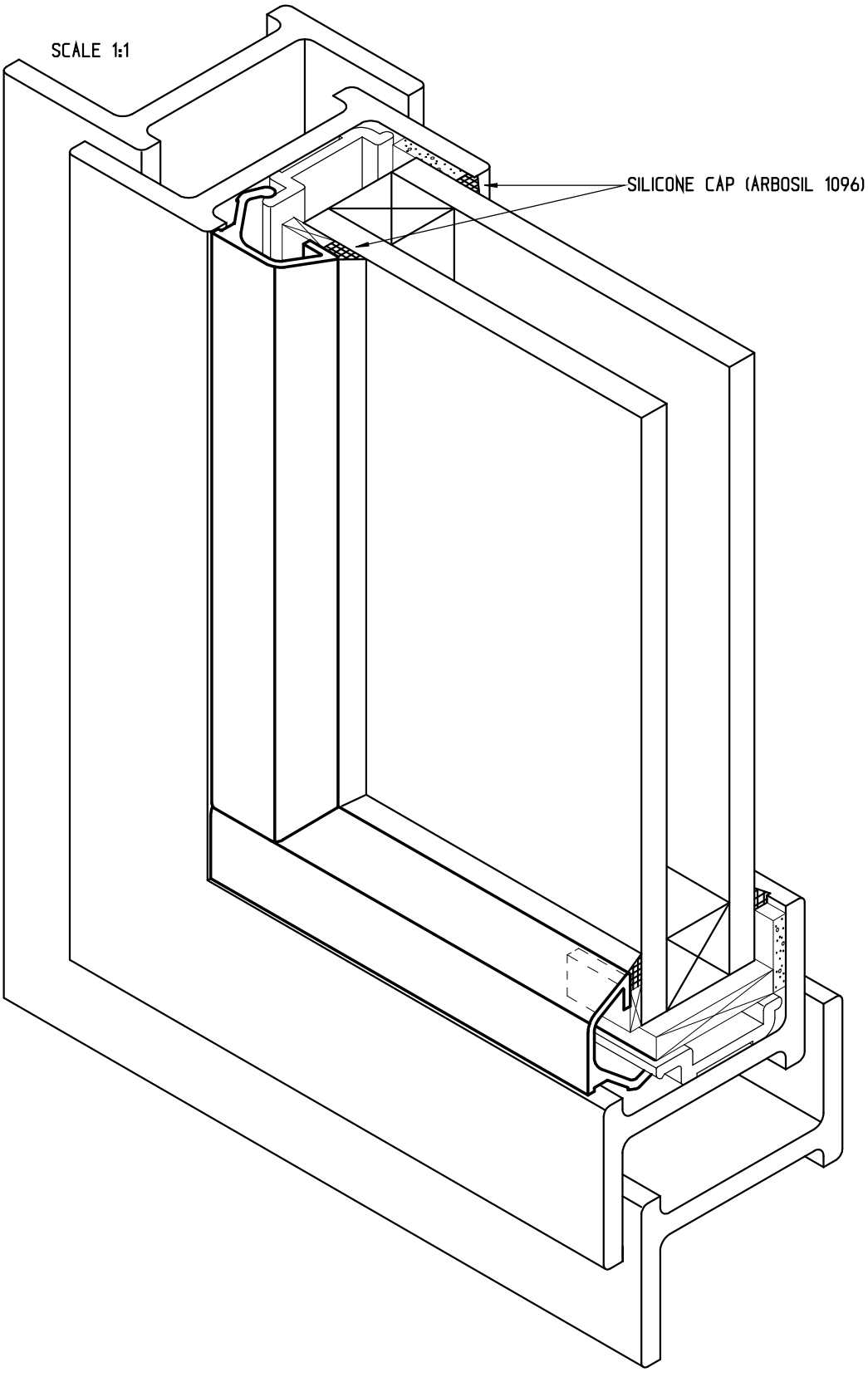
Clip on bead starting with sill, then head and finally jamb lengths.



Scale 1:1



Scale 1:2

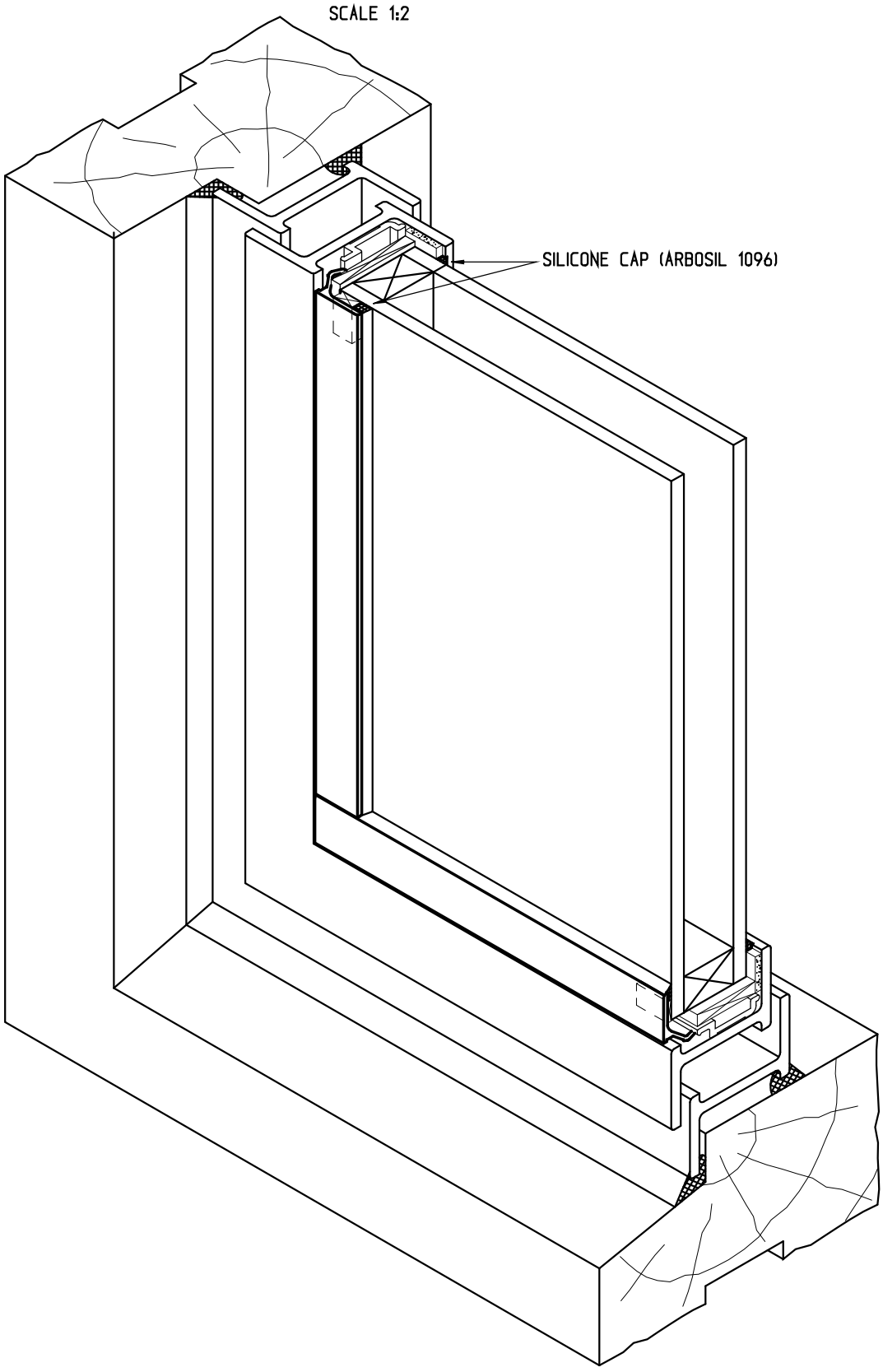


Bead shown is for 16.0mm to 18.0mm glass.

16.0mm to 18.0mm glass - Ensure bead is locked back. Push in the required distance piece at every glazing clip platform location and at bead joints to ensure that the bead edges are flush with each other. Finish off with a silicone cap, using Arbosil 1096.

Distance pieces and setting blocks NOT BY CRITTALL.

SCALE 1:2

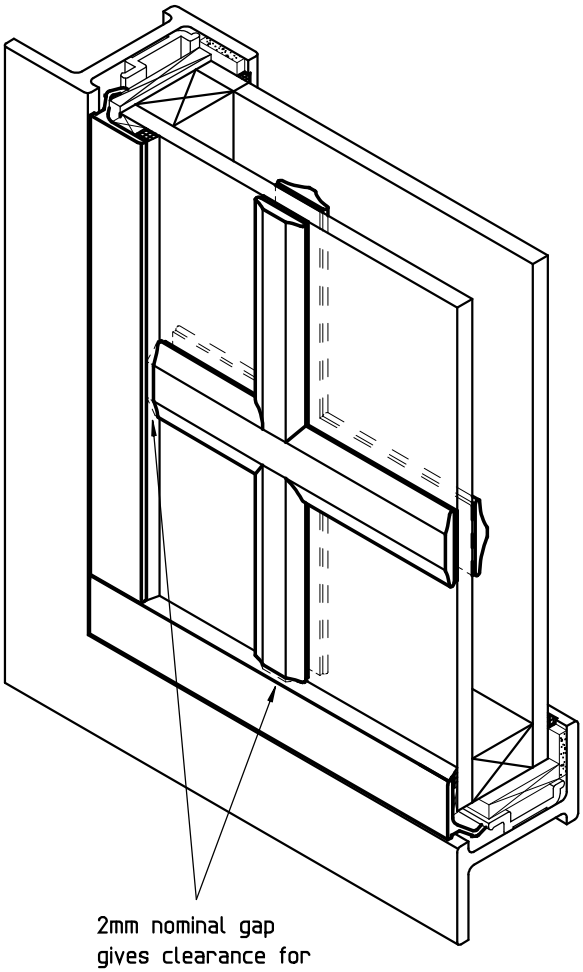


Bead shown is for 19.0mm to 24.0mm glass.

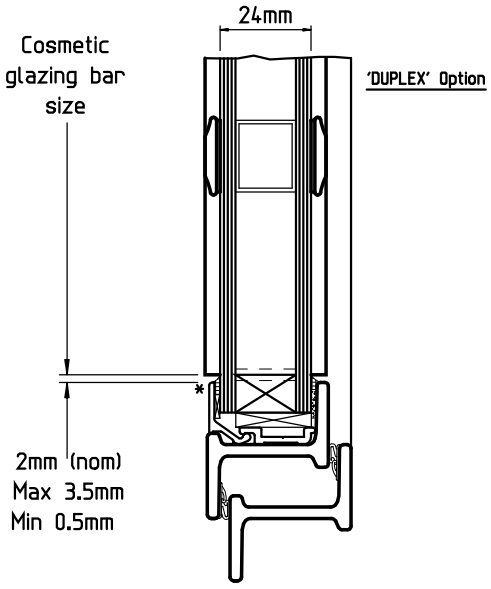
19.0mm to 24.0mm glass - Ensure bead is locked back. Push in the required distance piece at every glazing clip platform location and at bead joints to ensure that the bead edges are flush with each other. Finish off with a silicone cap, using Arbosil 1096.

Distance pieces and setting blocks NOT BY CRITTALL.

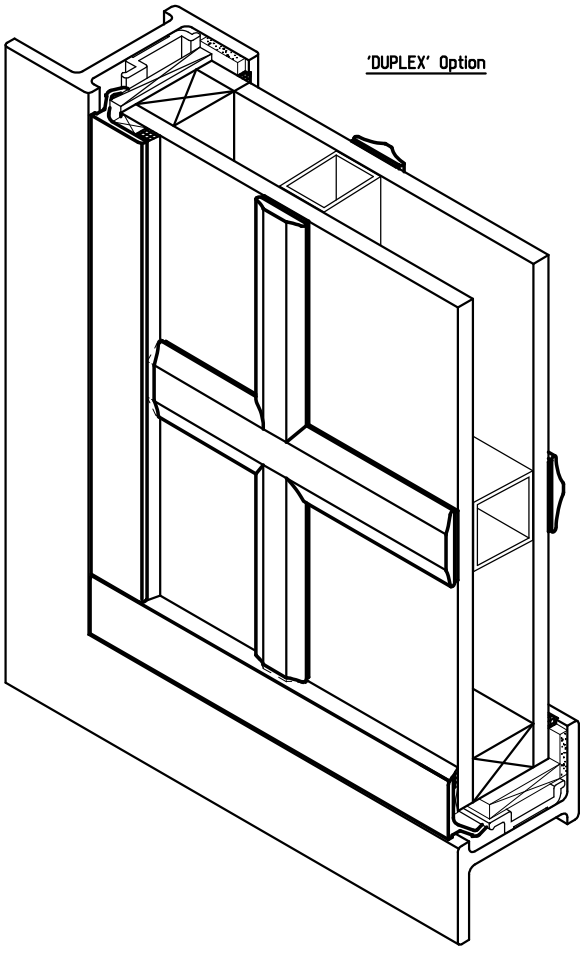
The optional cosmetic glazing bars fitted to Crittall HomelightPlus™ range of windows have a nominal clearance between the end of the bar and the edge of the bead of 2mm, although this can vary depending upon glass and frame tolerances.

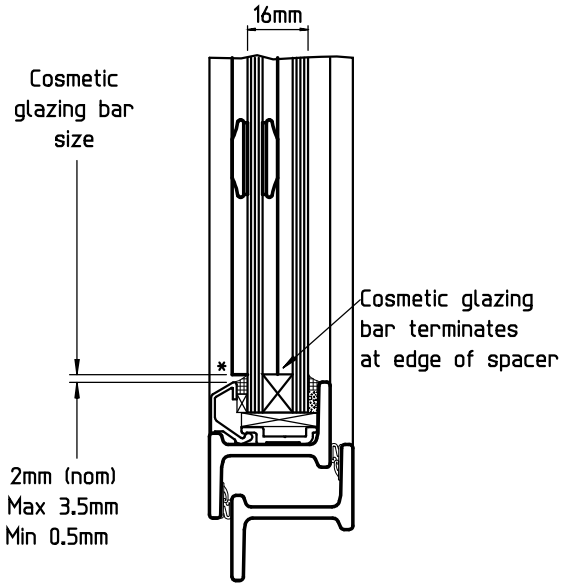


2mm nominal gap gives clearance for the 'SNAPPING-IN' of the glazing bead and silicone sealing of the glass to the bead



Note: (*) infill gap/joint with silicone



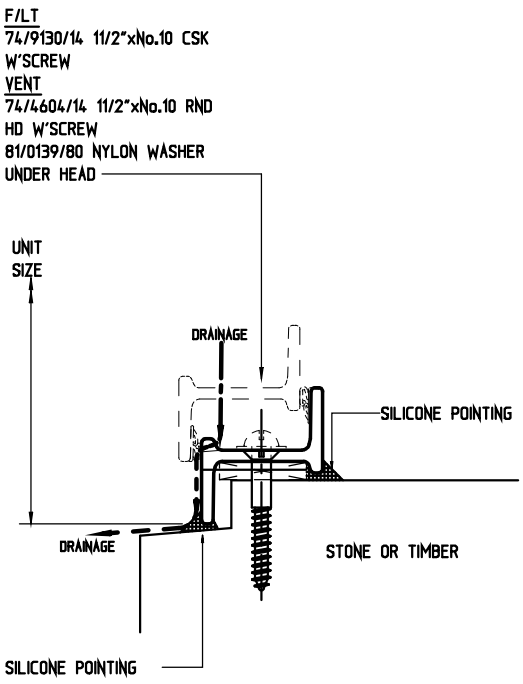


Note: (*) infill gap/joint with silicone

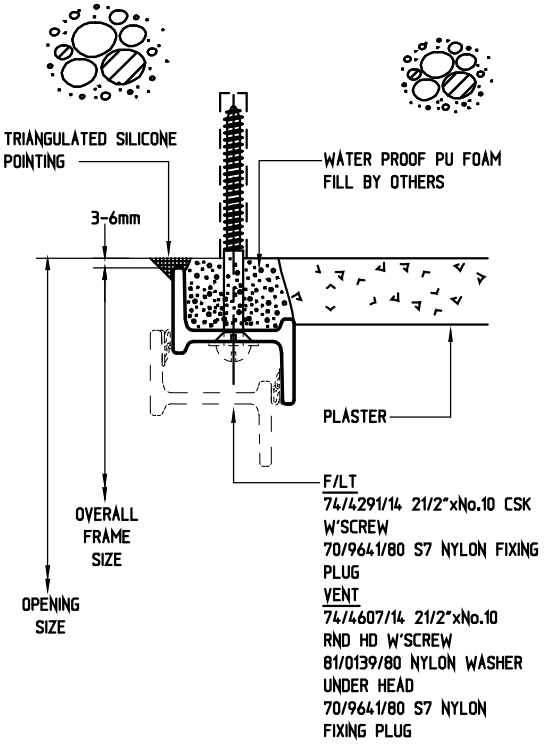
SCALE 1:2

Perimeter details:

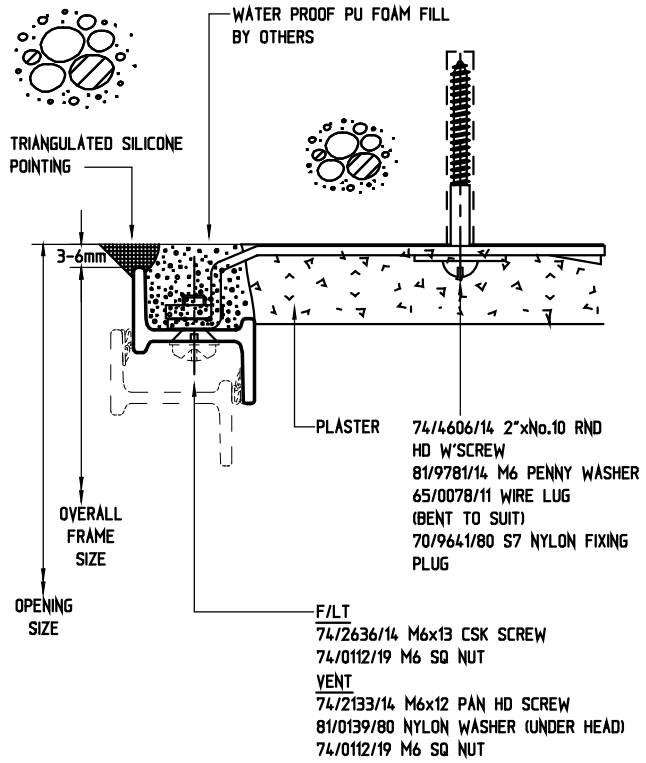
Extended leg direct fix



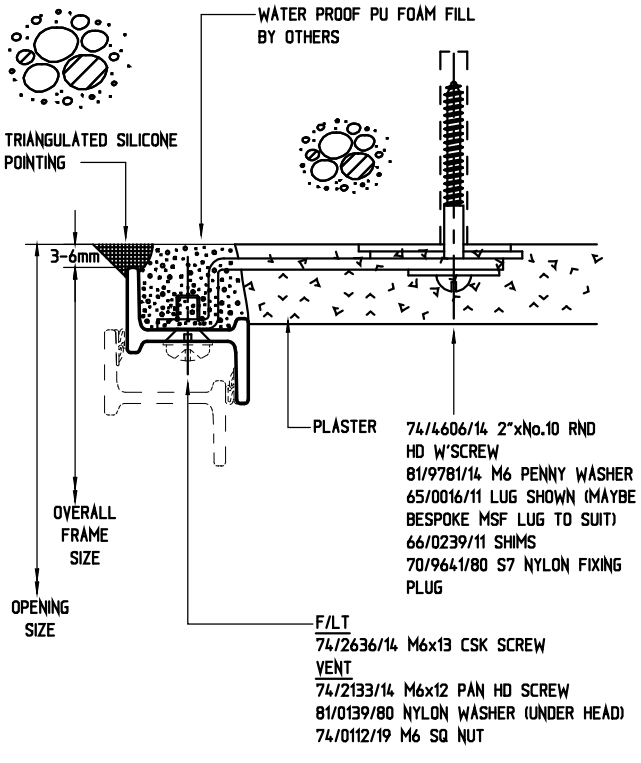
Extended leg direct fix



Wire lug fix

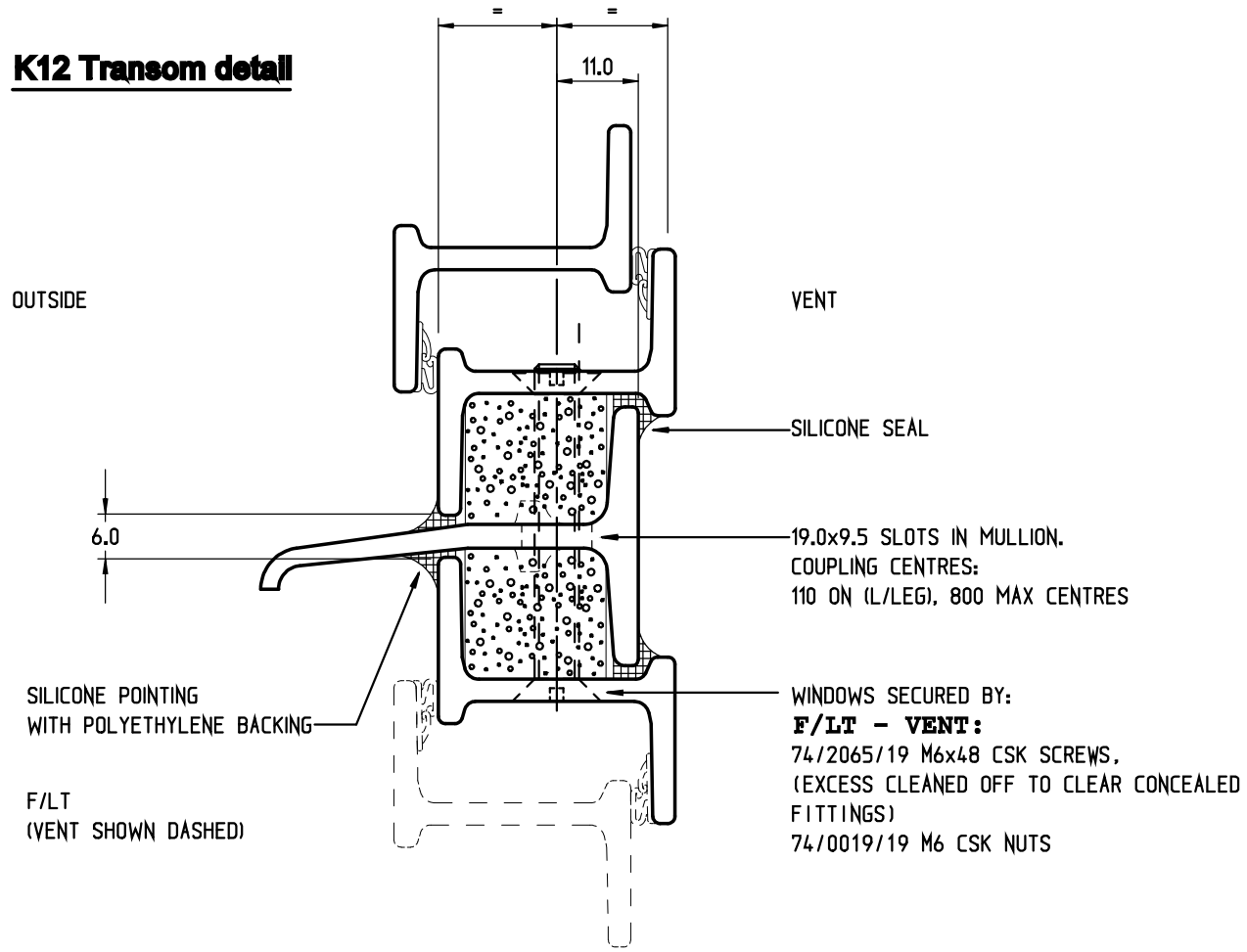


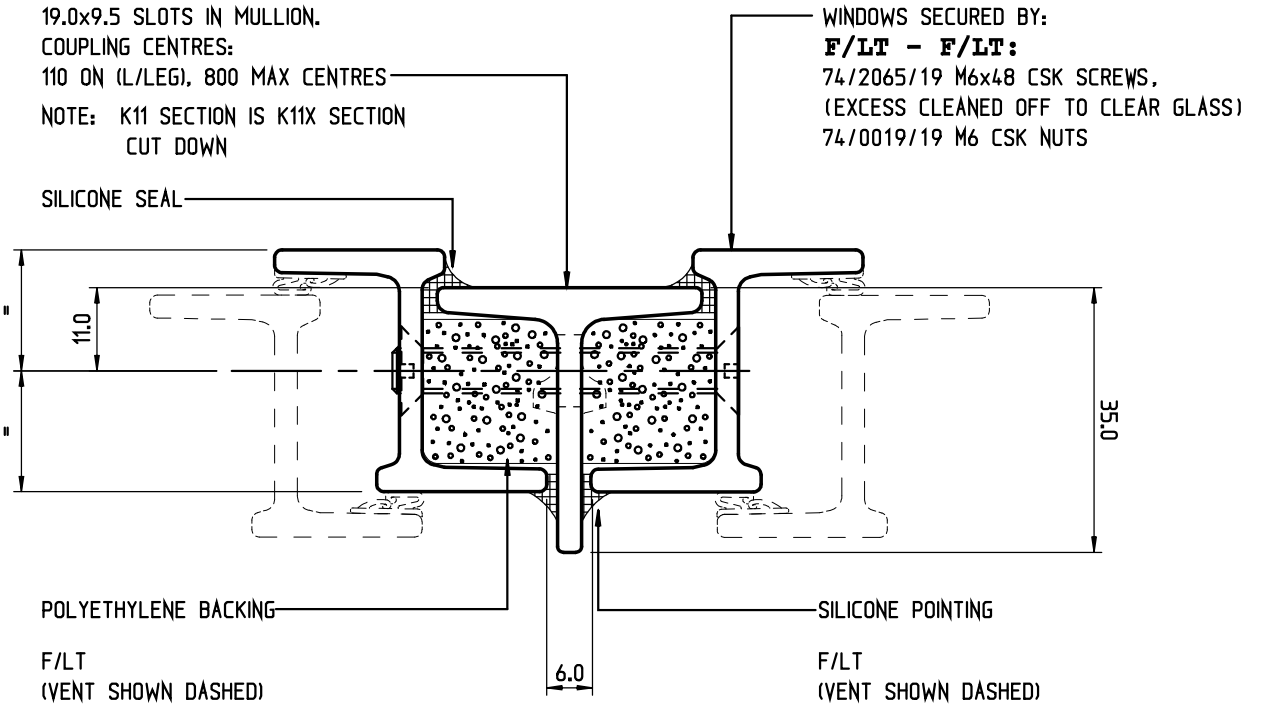
MSF lug fix



Mullion and transom couplings:

K12 Transom detail





K11 Mullion detail

NOTES

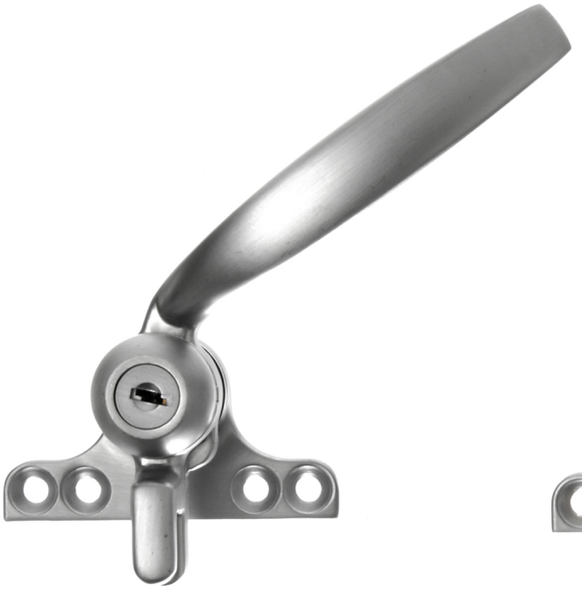
CRITTALL WINDOWS LIMITED
Francis House
Freebournes Road
Witham
Essex
CM8 3UN
Tel. +44 (0) 1376 530800 Fax. +44 (0) 1376 530801

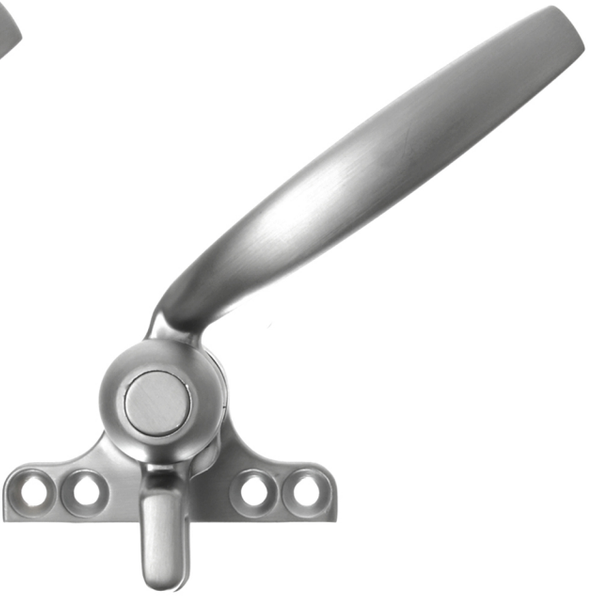
Website: http://www.crittall-windows.co.uk
email: hq@crittall-windows.co.uk

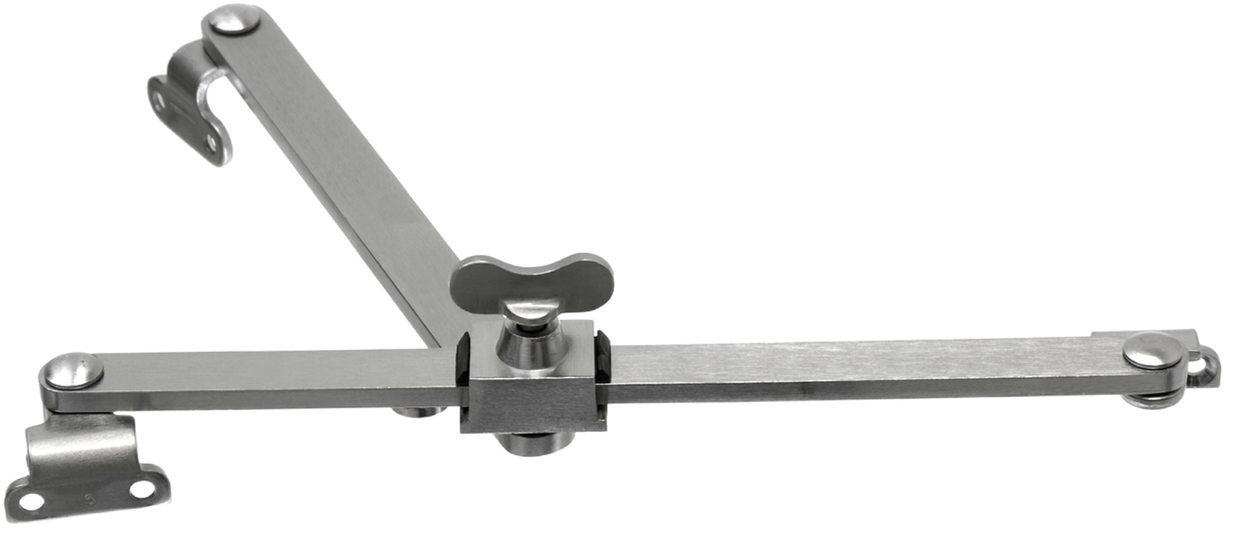
FENSA
Registered Company

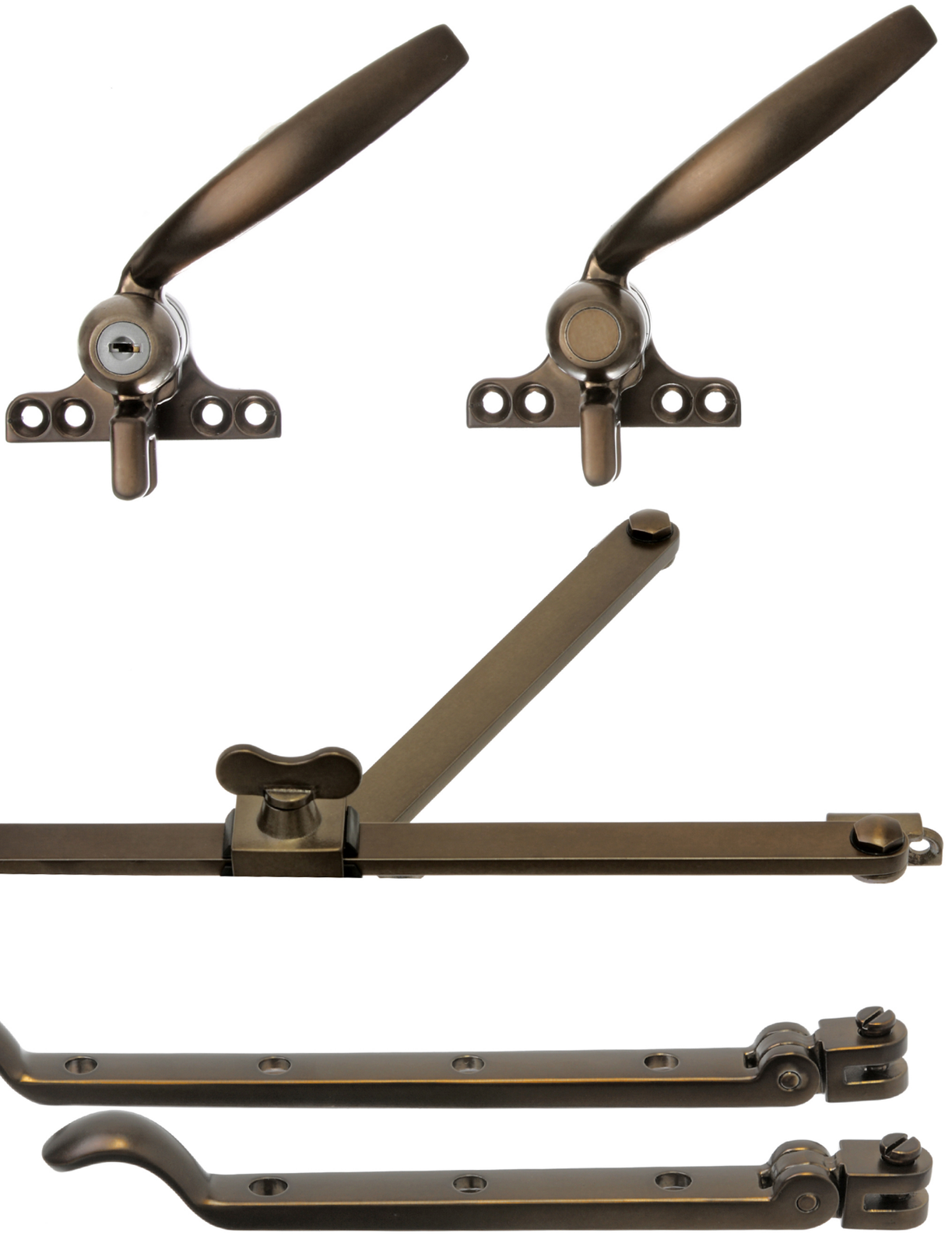
CRITTALL

Leaflet No. 78/A, OCT 2015
Revised:










SECURISTYLE