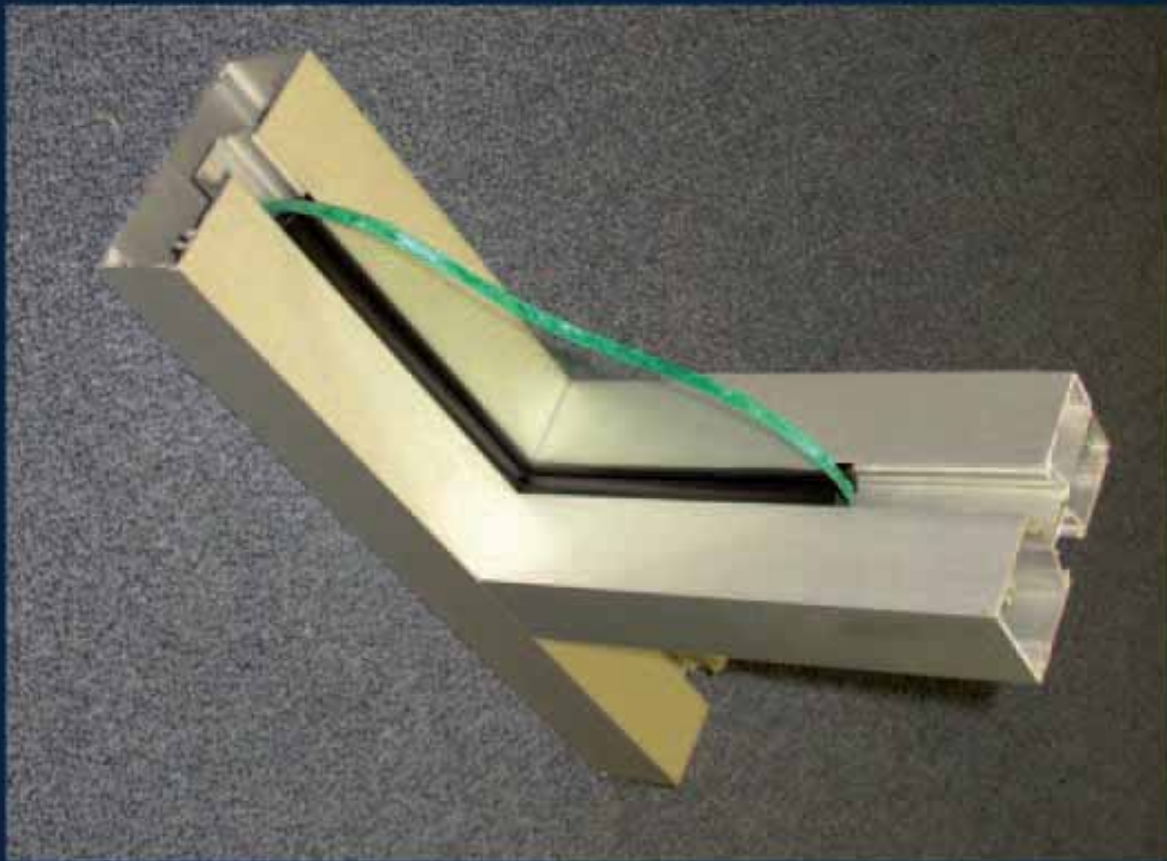




ULLRICH

ALUMINIUM

Product Manual – 2005 EDITION



Commercial Framing Systems



ULLRICH ALUMINIUM PTY. LTD.

ABN 70 001 697 445
185-187 Woodpark Road, Smithfield NSW 2164
PO Box 2182, Smithfield NSW 2164 Australia
Tel: +61 2 9725 2377 Sales 1300 650 075
Fax: Head Office: +61 2 9725 2400
Fax: Fabrication: +61 2 9725 2419
Email: ullrich@ullrichaluminium.com.au

COMMERCIAL FRAMING SYSTEMS PRODUCT MANUAL

Dear Customer,

This revised Product Manual illustrates the vast range of Commercial Framing Products that are available through our network of branches nationally.

This manual replaces our 1997 and 2003 edition with 7000 Door Triple Slider added to Section 9.

As with any revised product we have set out the information into 10 user friendly sections.

For the customer – At the front of the manual you will find a general information section, the location of your closest branch. Please contact them with your enquiry.

For the designer – Section 2 ‘Design’ will enable you to calculate the wind load / mullion transom sections.

For the fabricator – Section 3 ‘Wind load tables’ will enable you to select suitable mullions /transoms.

All the popular framing products: Huntingdale, St.George, St.Kilda, St.Leonards, Pentagon 80 and a scattering of new lightweight sections are located in sections 4 to 8.

Sliding doors have been grouped in section 9. Lightweight glazing channels and adaptors are shown in section 10.

*Ernest Ullrich
Managing Director
28th February 2005*

• ALUMINIUM • BRASS • COPPER

www.ullrichaluminium.com.au

BRANCHES: New South Wales, Australian Capital Territory, Victoria, South Australia, Western Australia, North Territory, Queensland and Tasmania



ULLRICH
ALUMINIUM



TOWNSVILLE



NEWCASTLE



COFFS HARBOUR



MELBOURNE



GOLD COAST



PERTH



SYDNEY



DARWIN



CAIRNS



CANBERRA



ADELAIDE



HOBART



BRISBANE



ROCKHAMPTON



SUNSHINE

ULLRICH ALUMINIUM SALES CENTRES

DARWIN

114 Reichardt Street
Winnellie NT 0820
PO Box 36012 Winnellie
Northern Territory 0821
Tel 08 8947 4157
Fax 08 8947 4167
sales.darwin@ullrich.com.au

BRISBANE

178 Beatty Rd Archerfield
Queensland 4108
PO Box 132 Coopers Plains
Queensland 4108
Tel 07 3274 8000
Fax 07 3274 5862
sales.brisbane@ullrich.com.au

SYDNEY

185-187 Woodpark Road
PO Box 2182 Smithfield
New South Wales 2164
Tel 02 9725 2377
Fax 02 9725 2784
sales.sydney@ullrich.com.au

INDUSTRIAL PRODUCTS

Tel 02 9761 0060
Mob 0411 534 130

CAIRNS

11 Southgate Close
Woree QLD 4868
PO Box 225
Bungalow QLD 4870
Tel 07 4054 6662
Fax 07 4054 7453
sales.cairns@ullrich.com.au

GOLD COAST

24 Township Drive
West Burleigh QLD 4219
PO Box 3645
Burleigh Town QLD 4220
Tel 07 5520 2799
Fax 07 5520 2844
sales.goldcoast@ullrich.com.au

PARRAMATTA

ULLRICH LADDER WORLD
95 Victoria Road
Parramatta NSW 2150
Tel 02 9761 0060
Fax 02 9761 0061
sales.parramatta@ullrich.com.au

TOWNSVILLE

5 Whitehouse Street
Garbutt Townsville 4814
PO Box 8065 Garbutt
Business Centre
Townsville QLD 4814
Tel 07 4728 9833
Fax 07 4728 9109
sales.townsville@ullrich.com.au

COFFS HARBOUR

13 Cook Drive
Coffs Harbour NSW 2450
PO Box 1654
Coffs Harbour NSW 2450
Tel 02 6652 8326
Fax 02 6652 8426
sales.coffsharbour@ullrich.com.au

CANBERRA

10 Arnott Street
Hume ACT 2620
PO Box 1225 Fyshwick
ACT 2609
Tel 02 6260 2011
Fax 02 6260 2133
sales.canberra@ullrich.com.au

CALOUNDRA

1/13 Industrial Avenue
Caloundra QLD 4551
PO Box 3890
Caloundra QLD 4551
Tel 07 5492 8587
Fax 07 5492 8157
sales.caloundra@ullrich.com.au

NEWCASTLE

6 Steel River Blvd
Mayfield West NSW 2304
PO Box Hunter Business Centre
Warabrook NSW 2304
Tel 02 4949 2600
Fax 02 4949 2601
sales.newcastle@ullrich.com.au

MELBOURNE

893 Princes Highway
Springvale VIC 3171
PO Box 1054 Clayton South
Victoria 3169
Tel 03 9567 7200
Fax 03 9540 8511
sales.melbourne@ullrich.com.au

HOBART

123 Albert Road
Moonah TAS 7009
PO Box 217
Moonah TAS 7009
Tel 03 6278 1522
Fax 03 6278 1922
sales.hobart@ullrich.com.au

LAUNCESTON

120 Forster Street
Invermay TAS 7248
PO Box 1494
Launceston TAS 7250
Tel 03 6334 8769
Fax 03 6334 9714
sales.launceston@ullrich.com.au

ADELAIDE

868-872 Main North Rd
Pooraka SA 5095
PO Box 3
Pooraka SA 5095
Tel 08 8300 2500
Fax 08 8300 2510
sales.adelaide@ullrich.com.au

PERTH

17 King Street Bayswater
PO Box 49 Bayswater
Western Australia 6053
Tel 08 4921 4228
Fax 08 9370 3995
sales.perth@ullrich.com.au

ROCKHAMPTON

103 Stanley Street
Rockhampton QLD 4700
Tel 07 4921 4228
Fax 07 4921 4037
sales.rockhampton@ullrich.com.au

SUNSHINE

540 Somerville Rd
Sunshine Victoria 3020
Tel 03 9310 2051
Fax 03 9310 2186
sales.sunshine@ullrich.com.au



Web Direct: www.ullrich.com.au

Sales Direct: 1300 650 075



ULLRICH ALUMINIUM
Head Office: 185-187 Woodpark Road
Smithfield N.S.W. 2164
Tel 02 9725 2377 Fax 02 9725 2400
ullrich@ullrich.com.au

COMMERCIAL FRAMING SYSTEMS PRODUCT MANUAL

CONTENTS

| | SECTION |
|-----------------------------------|---------|
| GENERAL INFORMATION | 1 |
| DESIGN | 2 |
| WINDLOAD/MULLION SELECTION TABLES | 3 |
| HUNTINGDALE FRAMING SYSTEM | 4 |
| ST. GEORGE FRAMING SYSTEM | 5 |
| ST. KILDA FRAMING SYSTEM | 6 |
| ST. LEONARDS FRAMING SYSTEM | 7 |
| PENTAGON 80 FRAMING SYSTEM | 8 |
| SLIDING DOORS | 9 |
| GLAZING CHANNELS AND ADAPTORS | 10 |

MANUAL NUMBER :

PRINT DATE : 1st March 2005



COMMERCIAL FRAMING SYSTEMS PRODUCT MANUAL

SECTION 1.

PAGES – 01 to 02

• GENERAL INFORMATION

- INTRODUCTION P1
- CLEANING OF ALUMINIUM P1
- SURFACE FINISH P2
- HANDLING AND STORAGE P2
- FASTENERS P2
- ISOLATION OF ALUMINIUM P2

GLAZING CHANNELS & ADAPTORS**INTRODUCTION**

This Product Manual has been designed with the aim of providing SHOPFITTEES, DESIGNERS AND ARCHITECTS with a comprehensive guide to the FRAMING SYSTEMS available from Ullrich Aluminium. All systems are manufactured to the highest commercial quality standards in respect of chemical composition, metallurgical properties, dimensional accuracy and surface finish.

These systems are intended for a variety of commercial and industrial applications such as:

- SHOPFRONTS
- CURTAIN WALLS
- SMALL FACTORIES
- OFFICE FRONTS
- DOMESTIC DWELLINGS

CLEANING ALUMINIUM

Grime, which causes deterioration cannot be prevented from settling on exposed surfaces. If cleaned reasonably frequently then the mildest method of washing will produce satisfactory results.

Mildest method should be tried first. The following cleaning materials and procedures are listed in ascending order of harshness:

- PLAIN WATER
- MILD SOAP OR DETERGENT
- KEROSENE, TURPENTINE OR WHITE SPIRIT
- NON-ETCHING CHEMICAL CLEANER
- WAX-BASE POLISH CLEANER

After washing thoroughly, it should be dried with a clean cloth to prevent streakiness.

DO NOT use highly caustic or abrasive cleaners.

DO NOT use solvent cleaners particularly on powder coated finishes.

GENERAL INFORMATION

ANODISING

The depth of anodised coating can be varied to accommodate the application. The following figures when specified are **minimum**.

- 25 Micron is recommended for heavy duty external application.
- 15 Micron is recommended for the majority of ordinary architectural requirements.
- 10 Micron is recommended for internal applications.

POWDER COATING

Polyester thermosetting powder coating is the most common because of its excellent chalk resistance, natural weathering and colour fastness. The range of colours is now enormous.

HANDLING AND STORAGE

In storing aluminium it is desirable to avoid contact between it and other metals, caustic, nitrates, phosphates and some acids.

Paper, cardboard or foam should be used to separate each item during transport or storage. Should an anodised package become wet it should be dismantled immediately and items dried with soft cloth to avoid staining.

FASTENERS

In most protected environments (without moisture) Zinc plated fasteners are adequate.

Outdoors it is recommended to use Hot Dipped Galvanised or Stainless fasteners.

ISOLATION

Aluminium should be isolated from unprotected steel, cement mortar or permanently wet timber. A membrane such as EPDM, neoprene or bituminous felt. Alternative surface coatings of galvanising, zincalume, zinc chromate or bituminous paint may be suitable.



COMMERCIAL FRAMING SYSTEMS PRODUCT MANUAL

2

SECTION 2.

PAGES – 02 to 17

• DESIGN

- RESPONSIBILITY FOR DESIGN P1
- AUSTRALIAN STANDARDS P1
- CALCULATING DESIGN WIND LOADS P2
 - BUILDING CLASSIFICATION P2
 - BUILDING DEFINITIONS P2
 - SELECTING THE WIND RATING P4
 - REGION – A P5
 - REGION – B P6
 - REGION – C P7
 - FACTORS – TERRAIN, SHIELDING, TOPOGRAPHICAL P8
- CALCULATING 'I' SECTION REQUIRED P9
- WINDOW / FRAMING FLOW CHART P10
- LOAD DEFLECTION CRITERIA P11
 - 'I' VALUES – GRAPH 1. P12
 - 'I' VALUES – GRAPH 2. P13
 - 'I' VALUES – GRAPH 3. P14
- TRANSOM DEFLECTION P15
- SAMPLE CALCULATION P16
- PRODUCT STRUCTURAL PROPERTIES P17

DESIGN**RESPONSIBILITY**

There are three prime areas of responsibility identified in the process of specifying, supplying and installing windows. To comply with the requirements the following procedure should be adhered to.

- Firstly, the **designer** must provide the builder with the wind classification or loading applicable to the building
- Secondly, the **window manufacturer** must be able to certify that the windows supplied will meet the specified performance.
- Thirdly, the **builder** must ensure that the windows as supplied are labelled or certified to the specific ratings and installed in accordance with manufacturers installation instructions.

Note: The fabricator **SHOULD NOT** determine the wind pressure, as they are not qualified.

RECOMMENDATION

These tables and graphs in this manual are presented as a quick method of calculating the approximate structural performance of any given system with basic site conditions. For borderline or unusual cases, Ullrich Aluminium recommends that a qualified structural engineer check calculations. Any assistance, information or recommendation supplied by Ullrich Aluminium is given in good faith and believed to be appropriate for the application, however without any liability or responsibility on Ullrich Aluminium's part.

AUSTRALIAN STANDARDS

| | |
|------------------|--|
| AS 2047 – 1999 | Windows in Buildings Selection and Installation |
| AS 1170 . 2-2002 | SAA Loading Code - Wind Loads |
| AS 4055 | Wind loads for housing |

DESIGN

CALCULATING DESIGN WIND LOADS

Framing and window systems should be correctly selected to withstand the structural loads that will be applied to them. AS1170 • 2 2002 sets out the method for calculating design wind load. This is a complex procedure of calculations, knowledge of the building location, height and wall construction will be required.

STEP 1. Building needs to be Classified

Housing, Residential or Commercial. They all have different performance requirement therefore – select classification from TABLE 1 below

TABLE: 1. BUILDING CLASSIFICATION

| Classification | Application | Description |
|----------------|-------------|--|
| Class 1a | Housing | Single, detached or attached residences separated by a fire resistant wall. |
| Class 1b | Housing | Boarding, guest house or hostel where: <ul style="list-style-type: none"> total floor area does not exceed 300m² there are maximum 12 residents it is located above or below a private garage |
| Class 2 | Residential | Building containing 2 or more separate residences |
| Class 3 | Residential | Residential building other than Class 1 or 2, used for long term accommodation of unrelated persons; <ul style="list-style-type: none"> Boarding house, guest house, hostel Residential parts of hotels and motels Residential parts of schools, health care buildings, accommodation for the aged, disabled or children. |
| Class 4 | Residential | A sole residence in Class 5, 6, 7, 8 or 9 building. |
| Class 5 | Commercial | Office building excluding Class 6, 7, 8 or 9. |
| Class 6 | Commercial | Shop or building used for the sale of goods or services to the general public. |
| Class 7 | Commercial | Carpark, storage or display of goods for wholesale. |
| Class 8 | Commercial | Laboratory or building used for production, assembly, packaging, finishing or cleaning of goods for sale. |
| Class 9a | Commercial | Public assembly building including workshops, laboratories and classrooms, but excluding other parts of a different Class. |
| Class 10 | Commercial | Non habitable building such as private garages of sheds. |

Note: The table is provided as guide only. For further details please refer to the appropriate section of the Australian Building Code.

DESIGN

STEP 2: Building needs to be Defined.

A house can be a Class 1 or Class 10 subject to its geometric size. AS4055 defines a building as follows:

TABLE: 2. BUILDING DEFINITIONS

| Reference | Maximum dimension |
|--|-------------------------|
| From ground to the underside of eaves | 6 m |
| From ground to the highest point of roof excluding chimney | 8.5 m |
| External wall height measured between storeys | 2.7 m |
| Building width including roofed verandahs, but excluding eaves | 16 m |
| Building length | Not to exceed 5 x width |
| Roof pitch | No greater than 35° |

STEP: 3. Determine window rating.

The rating is the wind pressure that the window can withstand.

AS1170.2 defines window rating for residential buildings as “LIMITED STATE DESIGN WIND PRESSURE”

AS2047.2 and AS4055 defines window rating for housing as “WIND CLASSIFICATION TERMS”

The Building Window Rating is subject to ‘Individual aspects’ which can change according to the ‘building application’ see table 3 below.

TABLE: 3. WINDOW RATING

| Application | Deflection | Water penetration | Air infiltration L/s m ² at test pressure - all applications |
|-------------|------------|---|---|
| Housing | Span/150 | 150pa - 450pa depending on geographic region. | Non Air Cond. 5.0 @ 75Pa 8.0 @ 150Pa |
| Residential | Span/180 | 30% of Serviceability | Air Cond 1.0 @ 75Pa 1.6 @ 150Pa |
| Commercial | Span/250 | | Louvres 20 @ 75Pa 32 @ 150Pa |

DESIGN

STEP: 4. Who should Specify Rating & Pressure.

AS2047 States that:

1. The Purchaser (designer) should nominate the Design Wind Pressure and Window Rating.
2. The Manufacturer must stipulate that the selected product will meet the specified performance. In addition windows must be certified and labelled.
3. The Builder must ensure that the windows supplied are certified, labelled and fixed in accordance to manufacturers recommendation
4. The Fabricator/Installer should not determine “Wind Pressures” or “Rating” unless they are qualified.

STEP: 5. Selecting the wind rating.

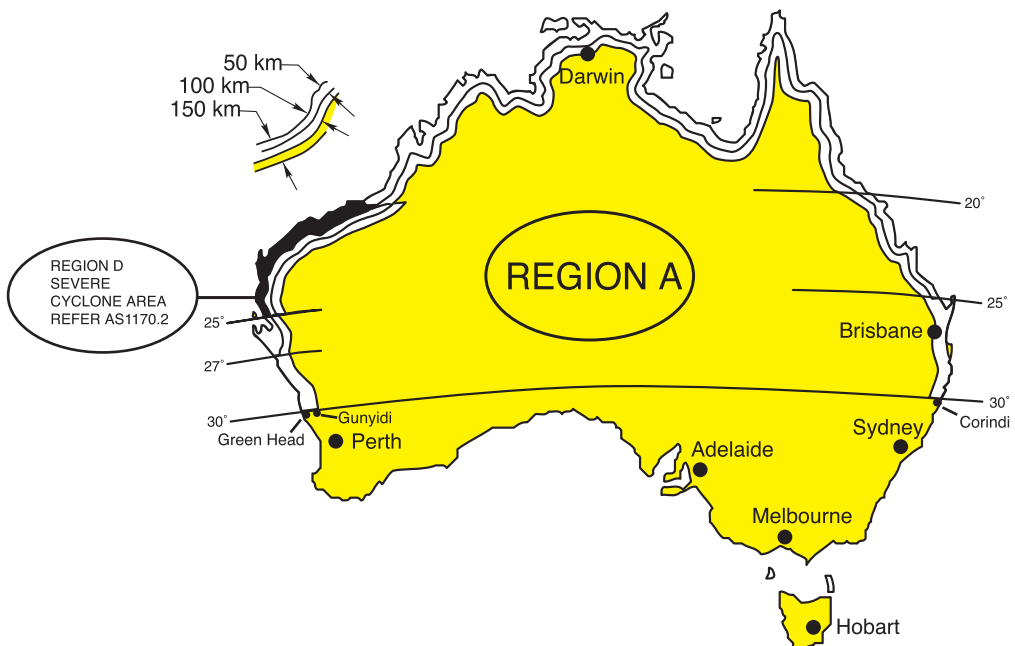
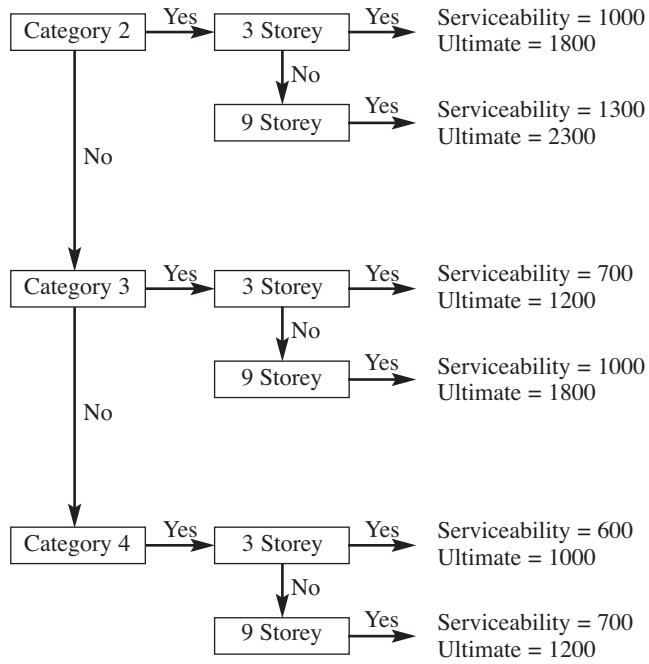
1. First select the Region (see maps on pages 5-7) then select the Terrain Category (see page 8). This will range from 1 to 4 subject to obstructions that will influence the wind intensity on the building. The shielding will also affect the exposure. If structure is located on a hill or steep slope this also will make a difference to the wind intensity. (see page 8)
2. Once the REGION, TERRAIN CATEGORY, BUILDING HEIGHT has been identified the “Wind Rating” can be selected for your particular region. (see pages 5-7)

DESIGN

CHART 1.

WINDOW RATINGS FOR RESIDENTIAL AND COMMERCIAL REGION 'A'

RATING (Pa)

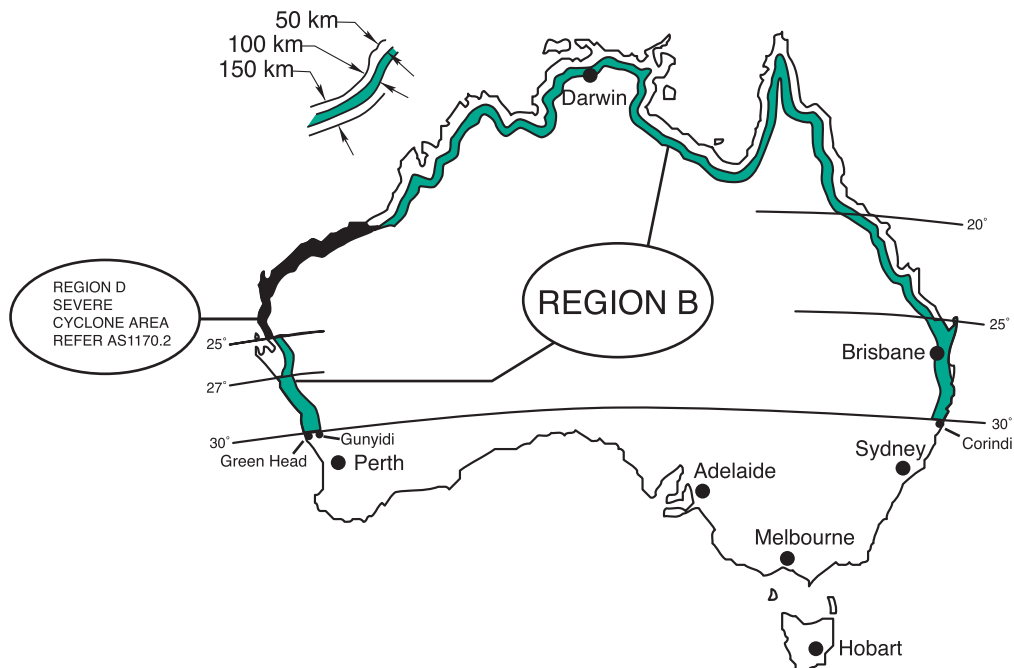
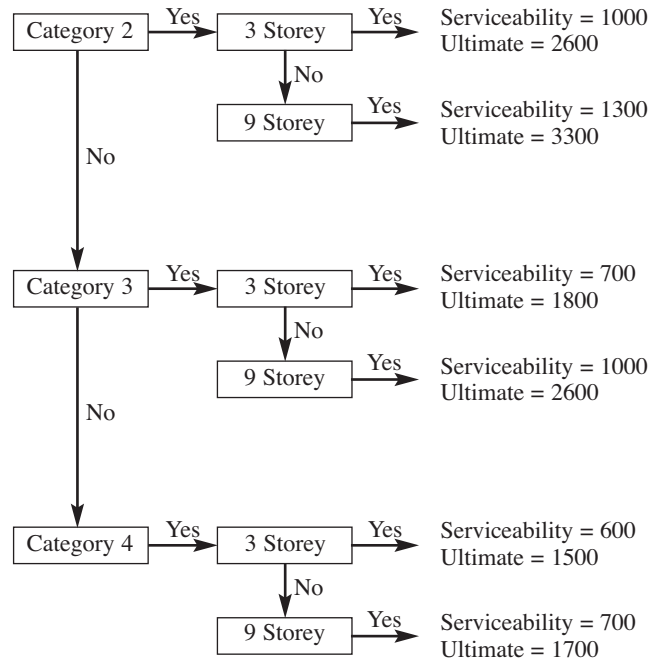


DESIGN

CHART 2.

**WINDOW RATINGS FOR RESIDENTIAL AND COMMERCIAL
REGION 'B'**

RATING (Pa)

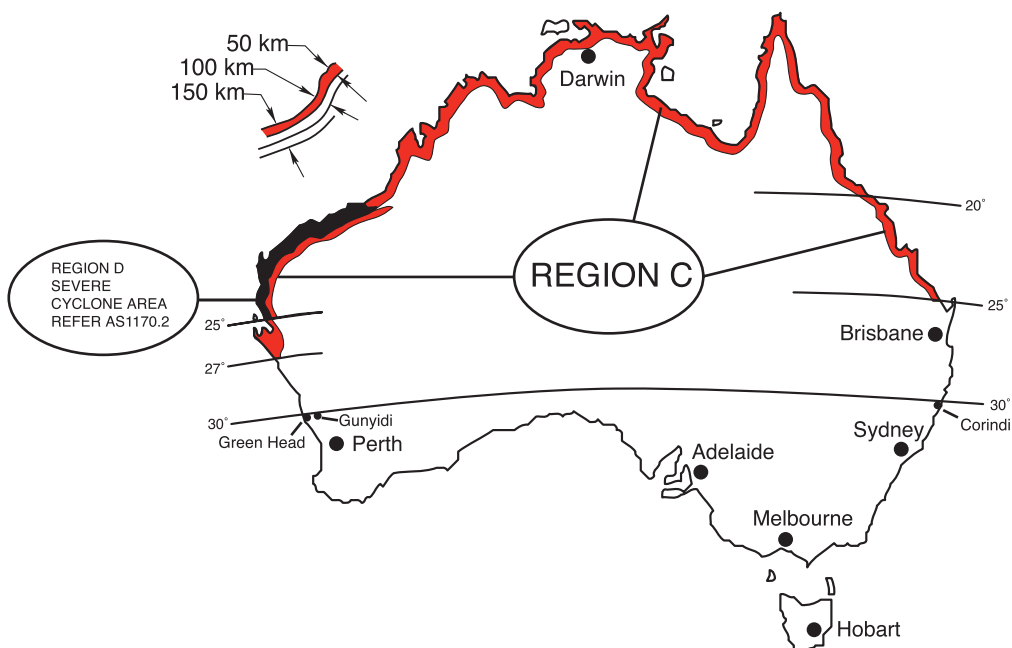
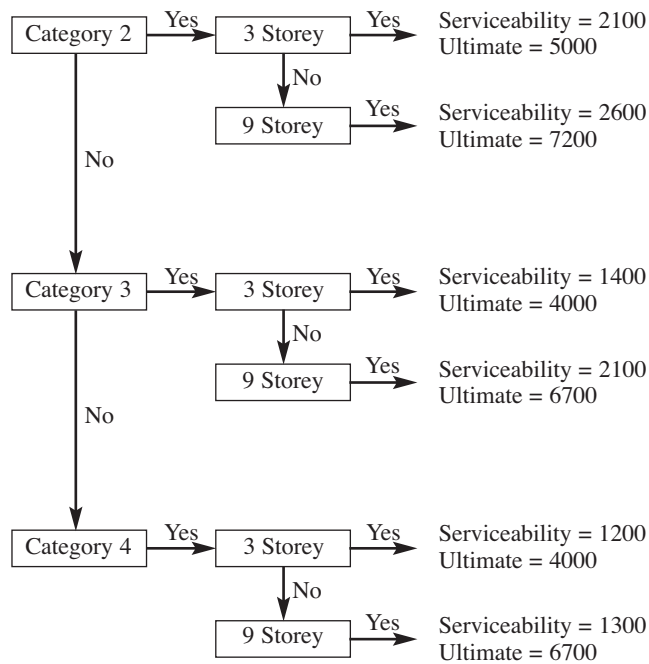


DESIGN

CHART 3.

WINDOW RATINGS FOR RESIDENTIAL AND COMMERCIAL
REGION 'C'

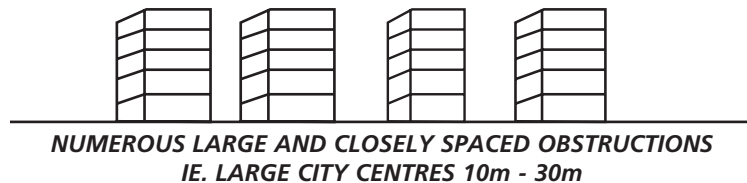
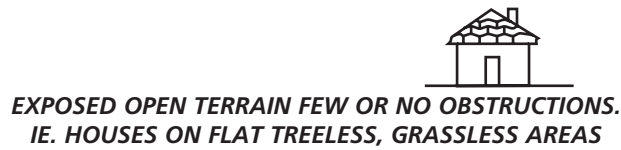
RATING (Pa)



DESIGN

TERRAIN CATEGORY

Terrain category will range from 1 to 4 subject to obstructions that will influence the wind intensity on the building. See AS1170.2 clause 4.2.



SHIELDING FACTOR

The shielding factor will also affect the exposure of the building. See table 4.3 AS1170.2. Usually taken as 1.0.

TOPOGRAPHICAL FACTOR

The wind intensity will increase if the building is located on top of a hill, ridge or steep slope. The hill shape multiplier shall be taken as 1.0 except for specific areas. See AS1170.2 TABLE 4.4

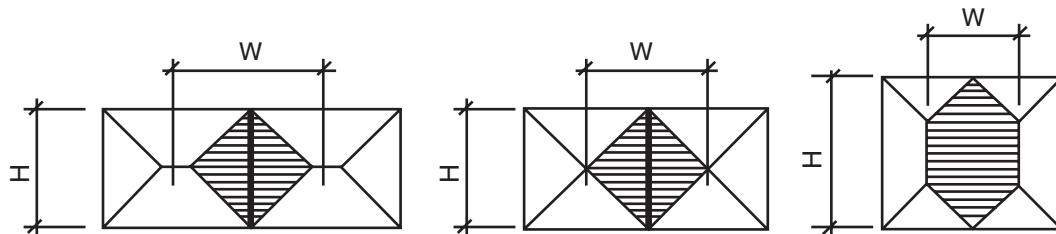
Note:

The above factors are simplified, anyone wishing to calculate the wind load/ratings is advised to refer to the Australian Standard AS1170.2

DESIGN

CALCULATING THE 'I' SECTION REQUIRED (if wind load is known)

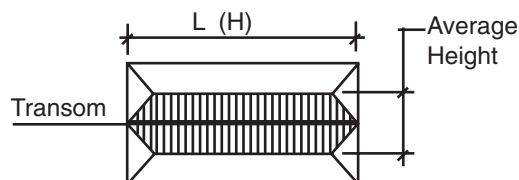
- From TABLE 3. (page 3) select the DEFLECTION CRITERIA.
- From GRAPH 1,(pages 12-14) enter Mullion height (H) and Panel width (W)
- To determine Moment of Inertia 'I' (second moment of area)
- Use TABLE 4 (page 11) to adjust the 'I' in accordance with the deflection criteria.
- From the commercial framing systems product manual select a product with moment of inertia 'I' greater than calculated.
- Horizontal members such as mid-rails and transoms can also be checked using graph 4 and 5 (page 15). In the following case the load distribution is:



Wind load on shaded area transferred to mullion.

Note:

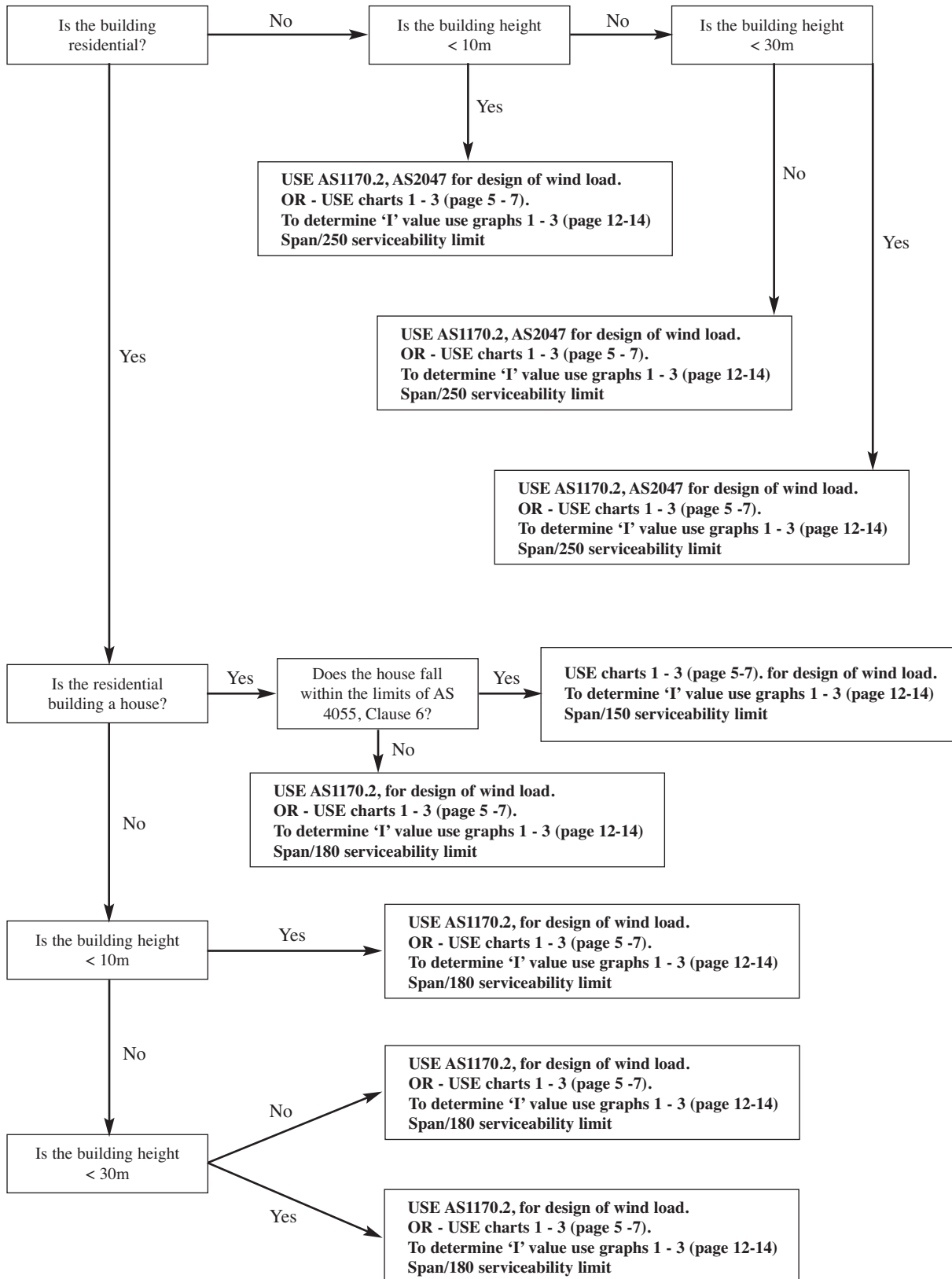
- Horizontal members need to be checked to ensure that the member can support the glass dead load. See graph 4 and 5 (page 15).
- Usually the critical structural member is the vertical mullion or combination of shapes dividing adjacent sheets of glass.
- The wind load on the glass is assumed to be evenly distributed and transferred to mullion. See shaded area in the diagram below.



- The mullion is considered as a simply supported beam. No end restraint.
- Deflection is usually the limiting factor. Stress cannot be discounted.

DESIGN

WINDOW AND FRAMING FLOW CHART



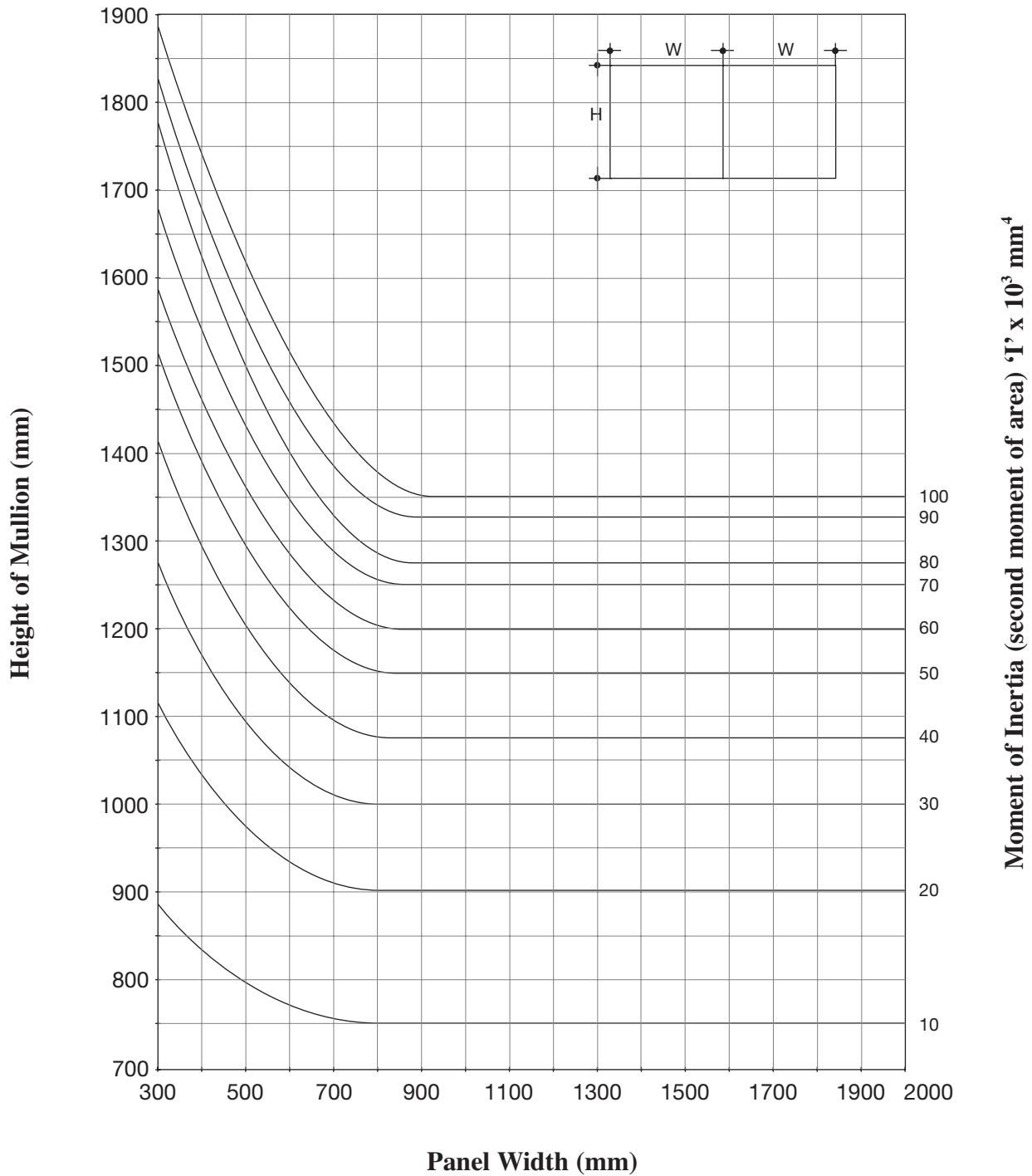
DESIGN

TABLE 4: MULTIPLYING FACTORS FOR ALTERNATIVE LOAD AND DEFLECTION CRITERIA

| Load (pascals) | <u>Span</u> 150 | <u>Span</u> 180 | <u>Span</u> 250 | <u>Span</u> 360 |
|---------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| 500 | 0.3 | 0.36 | 0.50 | 0.72 |
| 600 | 0.36 | 0.43 | 0.60 | 0.86 |
| 700 | 0.42 | 0.50 | 0.70 | 1.01 |
| 800 | 0.48 | 0.58 | 0.80 | 1.15 |
| 1000 | 0.60 | 0.72 | 1.00 | 1.44 |
| 1200 | 0.72 | 0.86 | 1.20 | 1.73 |
| 1500 | 09.0 | 1.08 | 1.50 | 2.16 |
| 2000 | 1.20 | 1.44 | 2.00 | 2.88 |
| 2500 | 1.50 | 1.80 | 2.50 | 3.60 |
| 3000 | 1.80 | 2.16 | 3.00 | 4.32 |
| 3500 | 2.10 | 2.52 | 3.50 | 5.04 |
| 4000 | 2.40 | 2.88 | 4.00 | 5.76 |

DESIGN

GRAPH 1. (determines 'I' values)

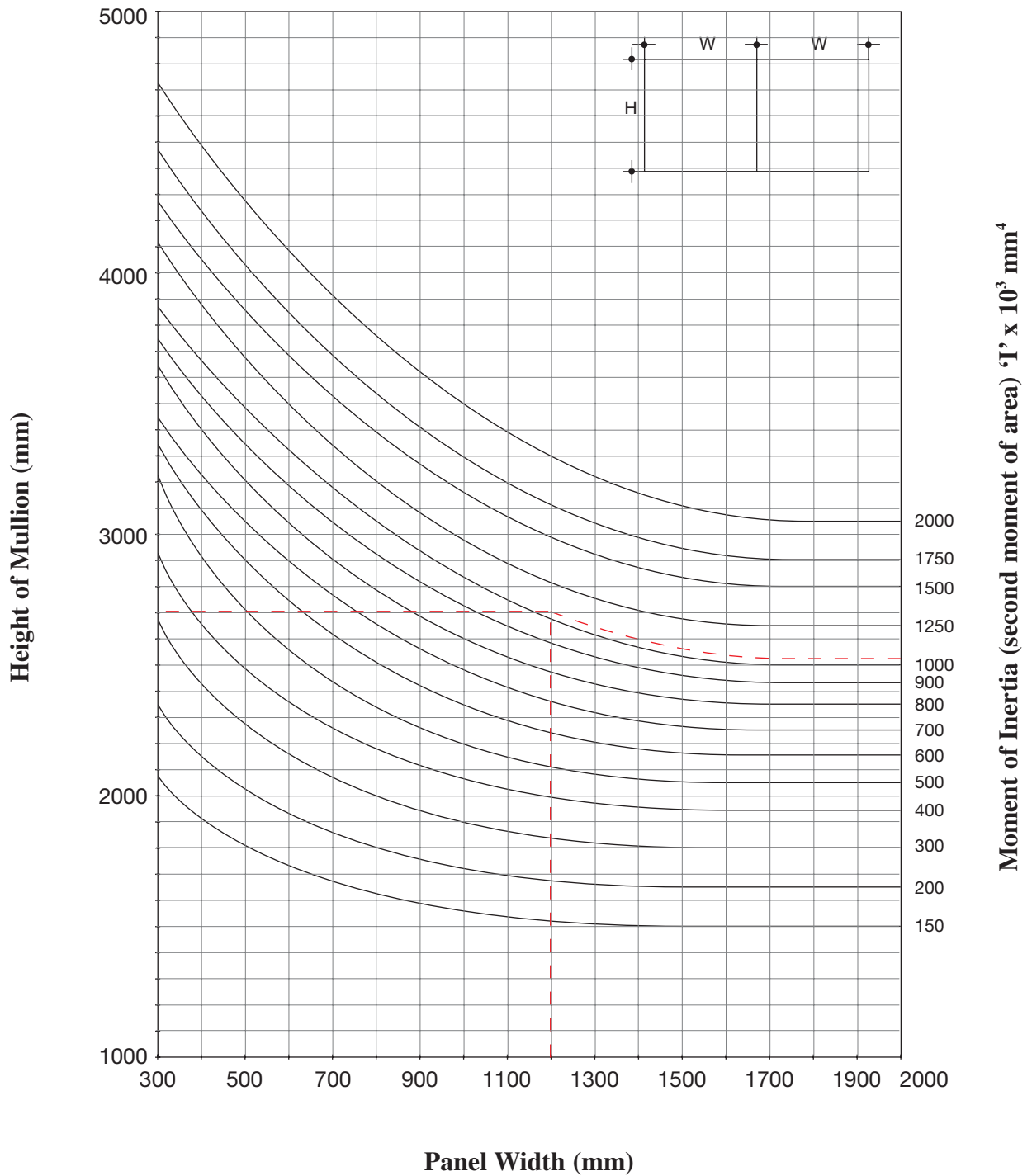


Load: 1000 Pascals
 Deflection $\frac{\text{Span}}{250}$

Note: Use tables 4 (page 11) to adjust 'I' for alternative load and deflection criteria

DESIGN

GRAPH 2. (determines 'I' values)

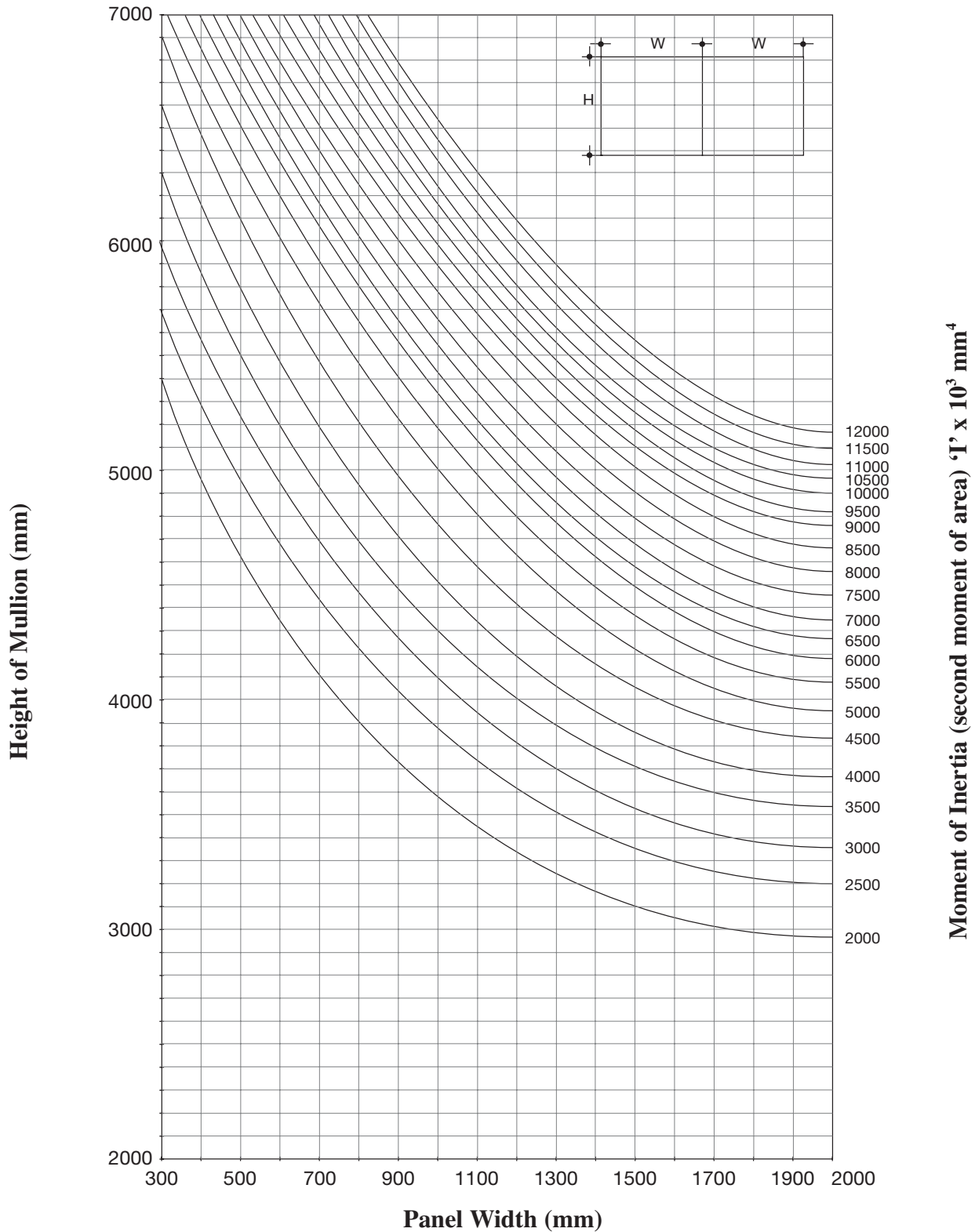


Load: 1000 Pascals
 Deflection $\frac{\text{Span}}{250}$

Note: Use tables 4 (page 11) to adjust 'I' for alternative load and deflection criteria

DESIGN

GRAPH 3. (determines 'I' values)



Load: 1000 Pascals

Deflection $\frac{\text{Span}}{250}$

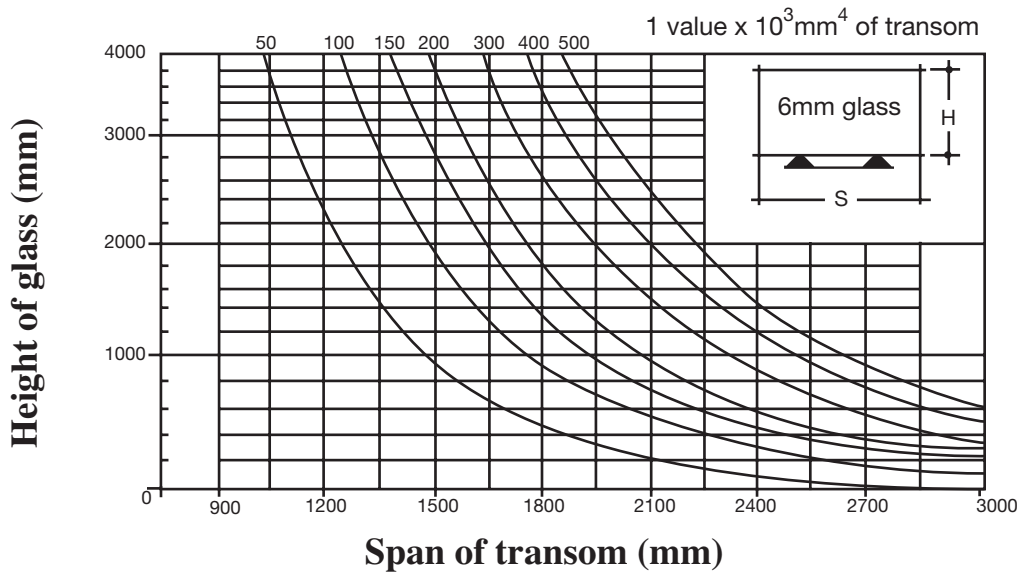
Note: Use tables 4 (page 11) to adjust 'I' for alternative load and deflection criteria

DESIGN

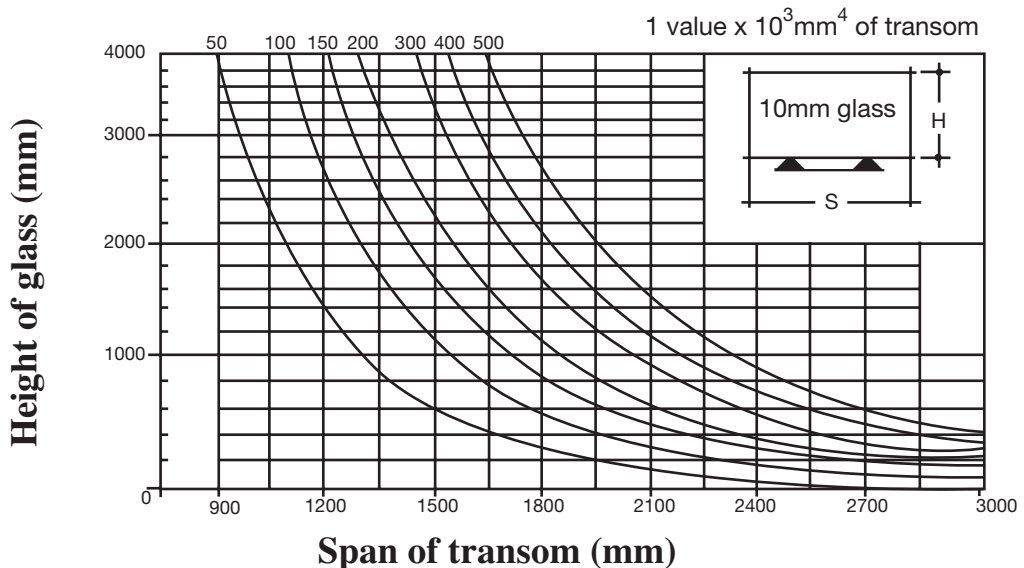
DEFLECTION OF TRANSOM DUE TO DEAD LOAD OF GLASS

The graphs below indicate sizes of 6mm and 10mm glass supported at quarter points produce an arbitrary mid span deflection of 3mm in transom. In certain situations such as over doorways little or no deflection can be tolerated. Mid span deflection can be reduced by supporting the glass closer to the ends, rather than at the quarter points. Remember that the 'I' section obtained from the graphs is about the horizontal axis.

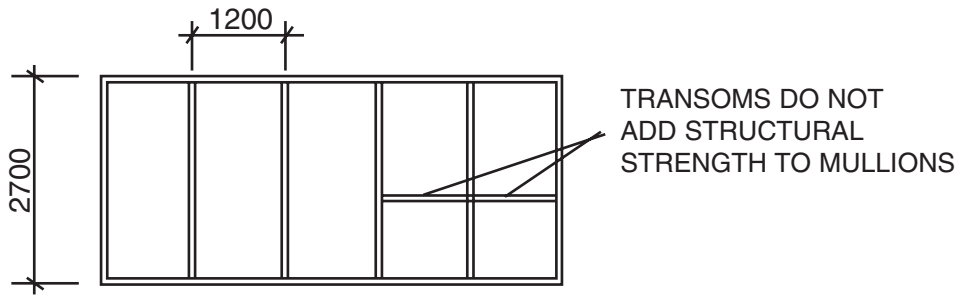
GRAPH: 4. Deflection (with 6mm Glass)



GRAPH: 5. Deflection (with 10mm Glass)



EXAMPLE



DATA: Commercial building, 5 Storey, 15m High, Location Sydney.

STEP: 1. 'Building located in Sydney' - 'Region' = 'A'
(see maps - Page 5-7)

STEP: 2. 'Building is in commercial area' - 'Terrain Category' = '4'
(see page 8)

STEP: 3. 'Building is Commercial and less than 30m high'
(from flow chart page 10) - Serviceability limit = $\frac{\text{SPAN}}{250}$
or table 3

STEP: 4. 'Wind Rating' can now be obtained (from pages 5-7)
Known data: Region = 'A', Category = '4', Building height = greater than 3 storey.
Window Rating = 700 Pa (Serviceability)

STEP: 5. Now need to select a section with a 'Moment of Inertia' that will take the wind pressure. (from graphs pages 12-14)
Known data: Height of Mullion = 2700mm, Panel Width = 1200mm.
Locate point where Mullion Height and Panel Width crosses.
Follow graph (curved lines) to edge of graph read Moment of Inertia = $1050 \times 10^3 \text{ mm}^4$

STEP: 6. Now need to adjust I_{xx} for 'site conditions'. (from table 4 Page 11).
Known data: Wind Load = 700 Pa,
Deflection Criteria = $\frac{\text{SPAN}}{250}$

(From table 4 page 11) - Multiplying factor = 0.7
Revised $I_{xx} = 1050 \times 10^3 \text{ mm}^4 \times 0.7 = 735 \times 10^3 \text{ mm}^4$

STEP: 7. Select mullion with I_{xx} greater than 735. (from table 5 page 17).
IE. USE AS7106 WITH AS 7110
Which has an I_{xx} value of $848 \times 10^3 \text{ mm}^4$

DESIGN
TABLE 5: PRODUCT SELECTION

| I_{xx} x 10³mm⁴ | I_{yy} x 10³mm⁴ | PART Nos |
|--|--|---------------------------|
| 210 | 137 | AS405 |
| 215 | 156 | AS961 |
| 253 | | AS977, AS7891, AS7891 |
| 262 | | AS50313, AS50313, AS10311 |
| 267 | 124 | AS8034, AS8033 |
| 278 | | AS8205, AS8204, AS7891 |
| 284 | 187 | ST850, AS7771 |
| 295 | 201 | ST850, AS10486 |
| 303 | | AS50320, AS50320 |
| 405 | 51 | AS4424, AS4425 |
| 482 | 27 | AS8130 |
| 594 | 75 | AS9969, AS9969 |
| 601 | 84 | AS8131 |
| 621 | 69 | AS8556, AS7109 |
| 650 | 89 | AS7107, AS7109, AS7111 |
| 680 | 220 | AS805, AS7112, AS7125 |
| 682 | 79 | AS8557, AS8558 |
| 782 | | AS878, AS7891, AS7891 |
| 807 | | AS7557, AS7558, AS7891 |
| 820 | 133 | AS7906, AS7110 |
| 848 | 102 | AS7106, AS7110 |
| 869 | 126 | AS10251, AS10252, AS10253 |
| 876 | 115 | AS7106, AS7109 |
| 887 | 85 | AS7115, AS7116 |
| 939 | | AS972, AS7891, AS7891 |
| 950 | | AS7777, AS7778, AS7891 |
| 976 | 154 | AS10250, AS10253 |
| 986 | | AS50320, AS50312 |
| 1000 | 137 | AS7703, AS7110 |
| 1066 | | AS50423, AS50423, AS10311 |
| 1130 | 480 | ST863, AS7771 |
| 1150 | 481 | ST863, AS10486 |
| 1219 | 96 | FU1048, FU1048 |
| 1240 | 149 | AS7704, AS7705 |
| 1398 | 502 | AS7117, AS7110 |
| 1415 | 166 | AS7975, AS7974 |
| 1515 | 242 | AS806, AS7112, AS7125 |
| 1686 | 329 | AS50312, AS50312 |
| 1803 | 196 | AS10370, AS10369 |
| 1900 | 58 | UN00242, UN00242 |
| 2082 | 212 | UN00239, ME7109 |
| 2140 | 214 | AS8278, AS8278 |
| 2290 | 276 | AS30271, AS30271 |
| 2431 | 161 | AS8274, AS8276 |
| 3123 | 645 | AS0969, AS7771 |
| 3140 | 648 | AS0969, AS10486 |
| 3150 | 257 | AS8280, AS7345 |
| 3194 | 190 | AS8273, AS7345 |
| 3230 | 212 | AS8273, AS8275 |
| 3246 | 340 | AS807, AS7112, AS7125 |
| 4020 | 135 | AS8277, AS8277 |
| 4398 | 208 | AS8281, AS8282 |
| 6570 | 811 | 987-358, AS7771 |
| 6590 | 815 | 987-358, AS10486 |



COMMERCIAL FRAMING SYSTEMS PRODUCT MANUAL

SECTION – 3.

PAGES – 01 to 07

3

• WIND LOAD / MULLION SELECTION TABLES

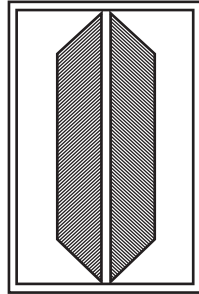
| | |
|---------------------|----|
| • AS7106 / AS7109 | P1 |
| • AS8556 / AS7109 | P1 |
| • AS10253 / AS10251 | P2 |
| • FU1048 / FUI048 | P2 |
| • AS8278 / AS8278 | P3 |
| • AS30271 / AS30271 | P3 |
| • AS8273 / AS8275 | P4 |
| • AS8277 / AS8277 | P4 |
| • UN00242 / UN00242 | P5 |
| • UN00239 / UN00239 | P5 |

‘I’xx for TRANSOM/MIDRAIL

| | |
|---------|----|
| TRANSOM | P6 |
| MIDRAIL | P7 |

MULLION SELECTION

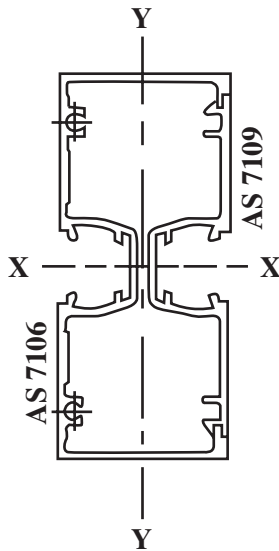
MULLION STRENGTHS



The following wind load tables have been produced as a guide to assist in the selection of a suitable framing section. Values are based on theoretical properties of the extruded sections together with tests performed by a NATA approved testing laboratory as specified in AS2047 1999.

$I_{xx} = 876 \times 10^3 \text{ mm}^4$
 $I_{yy} = 115 \times 10^3 \text{ mm}^4$
 Yield Stress = 110 Mpa

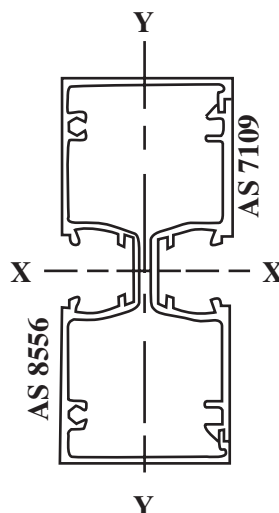
$S = \text{Serviceability - (deflection limited pressure) span/250}$
 $U = \text{Ultimate limit state pressure}$



| Mullion Height (mm) | | Pressure kPa | | | | | | | |
|-----------------------------|---|--------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | | 800 | 1000 | 1200 | 1400 | 1600 | 1800 | 2000 | 2200 |
| 3800 | S | 0.429 | - | - | - | - | - | - | - |
| | U | 1.117 | - | - | - | - | - | - | - |
| 3600 | S | 0.505 | - | - | - | - | - | - | - |
| | U | 1.244 | - | - | - | - | - | - | - |
| 3400 | S | 0.599 | 0.479 | - | - | - | - | - | - |
| | U | 1.395 | 1.116 | - | - | - | - | - | - |
| 3200 | S | 0.719 | 0.575 | 0.479 | 0.411 | - | - | - | - |
| | U | 1.575 | 1.260 | 1.050 | 0.900 | - | - | - | - |
| 3000 | S | 0.872 | 0.698 | 0.581 | 0.498 | 0.436 | - | - | - |
| | U | 1.791 | 1.433 | 1.194 | 1.024 | 0.896 | - | - | - |
| 2800 | S | 1.073 | 0.858 | 0.715 | 0.613 | 0.536 | 0.477 | 0.429 | - |
| | U | 2.057 | 1.645 | 1.371 | 1.175 | 1.028 | 0.914 | 0.823 | - |
| 2600 | S | 1.340 | 1.072 | 0.893 | 0.766 | 0.670 | 0.595 | 0.536 | 0.487 |
| | U | 2.385 | 1.908 | 1.590 | 1.363 | 1.193 | 1.060 | 0.954 | 0.867 |
| 2400 | S | 1.703 | 1.363 | 1.136 | 0.973 | 0.852 | 0.757 | 0.681 | 0.619 |
| | U | 2.799 | 2.239 | 1.866 | 1.600 | 1.400 | 1.244 | 1.120 | 1.018 |
| 2200 | S | 2.211 | 1.769 | 1.474 | 1.264 | 1.106 | 0.983 | 0.885 | 0.804 |
| | U | 3.331 | 2.665 | 2.221 | 1.904 | 1.666 | 1.481 | 1.332 | 1.211 |
| 2000 | S | 2.943 | 2.355 | 1.962 | 1.682 | 1.472 | 1.308 | 1.177 | 1.070 |
| | U | 4.031 | 3.225 | 2.687 | 2.303 | 2.015 | 1.791 | 1.612 | 1.466 |
| Mullion spacing (mm) | | 800 | 1000 | 1200 | 1400 | 1600 | 1800 | 2000 | 2200 |

$I_{xx} = 621 \times 10^3 \text{ mm}^4$
 $I_{yy} = 70 \times 10^3 \text{ mm}^4$
 Yield Stress = 110 Mpa

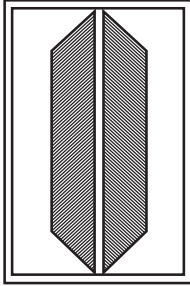
$S = \text{Serviceability- (deflection limited pressure) span/250}$
 $U = \text{Ultimate limit state pressure}$



| Mullion Height (mm) | | Pressure kPa | | | | | | | |
|-----------------------------|---|--------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | | 800 | 1000 | 1200 | 1400 | 1600 | 1800 | 2000 | 2200 |
| 3400 | S | 0.425 | - | - | - | - | - | - | - |
| | U | 0.989 | - | - | - | - | - | - | - |
| 3200 | S | 0.509 | - | - | - | - | - | - | - |
| | U | 1.116 | - | - | - | - | - | - | - |
| 3000 | S | 0.618 | 0.495 | 0.412 | - | - | - | - | - |
| | U | 1.270 | 1.016 | 0.847 | - | - | - | - | - |
| 2800 | S | 0.760 | 0.608 | 0.507 | 0.435 | - | - | - | - |
| | U | 1.458 | 1.166 | 0.972 | 0.833 | - | - | - | - |
| 2600 | S | 0.950 | 0.760 | 0.633 | 0.543 | 0.475 | 0.422 | - | - |
| | U | 1.691 | 1.353 | 1.127 | 0.966 | 0.845 | 0.751 | - | - |
| 2400 | S | 1.208 | 0.966 | 0.805 | 0.690 | 0.604 | 0.537 | 0.483 | 0.439 |
| | U | 1.984 | 1.587 | 1.323 | 1.134 | 0.992 | 0.882 | 0.794 | 0.722 |
| 2200 | S | 1.568 | 1.254 | 1.045 | 0.896 | 0.784 | 0.697 | 0.627 | 0.570 |
| | U | 2.362 | 1.889 | 1.574 | 1.349 | 1.181 | 1.050 | 0.945 | 0.859 |
| 2000 | S | 2.087 | 1.669 | 1.391 | 1.192 | 1.043 | 0.927 | 0.835 | 0.759 |
| | U | 2.857 | 2.286 | 1.905 | 1.633 | 1.429 | 1.270 | 1.143 | 1.039 |
| Mullion spacing (mm) | | 800 | 1000 | 1200 | 1400 | 1600 | 1800 | 2000 | 2200 |

MULLION SELECTION

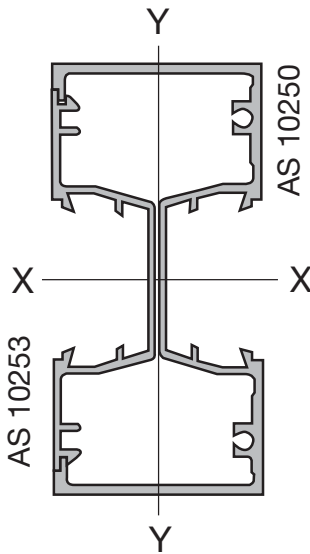
MULLION STRENGTHS



$I_{xx} = 976 \times 10^3 \text{mm}^4$
 $I_{yy} = 154 \times 10^3 \text{mm}^4$
 Yield Stress = 110 Mpa

S = Serviceability - (deflection limited pressure) span/250
U = Ultimate limit state pressure

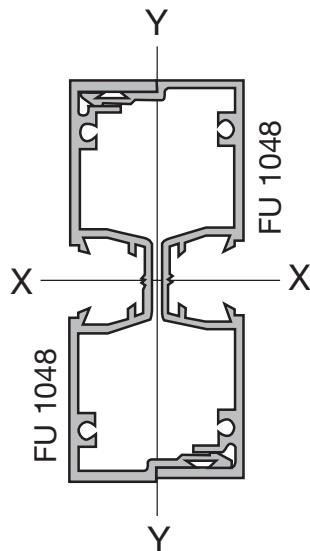
The following wind load tables have been produced as a guide to assist in the selection of a suitable framing section. Values are based on theoretical properties of the extruded sections together with tests performed by a NATA approved testing laboratory as specified in AS2047 1999.



| Mullion Height (mm) | | Pressure kPa | | | | | | | |
|-----------------------------|---|--------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | | 800 | 1000 | 1200 | 1400 | 1600 | 1800 | 2000 | 2200 |
| 4000 | S | 0.410 | - | - | - | - | - | - | - |
| | U | 1.123 | - | - | - | - | - | - | - |
| 3800 | S | 0.478 | - | - | - | - | - | - | - |
| | U | 1.244 | - | - | - | - | - | - | - |
| 3600 | S | 0.562 | 0.450 | - | - | - | - | - | - |
| | U | 1.386 | 1.109 | - | - | - | - | - | - |
| 3400 | S | 0.667 | 0.534 | 0.445 | - | - | - | - | - |
| | U | 1.554 | 1.243 | 1.036 | - | - | - | - | - |
| 3200 | S | 0.801 | 0.641 | 0.534 | 0.458 | - | - | - | - |
| | U | 1.754 | 1.403 | 1.170 | 1.002 | - | - | - | - |
| 3000 | S | 0.972 | 0.777 | 0.648 | 0.555 | 0.486 | 0.432 | - | - |
| | U | 1.996 | 1.597 | 1.331 | 1.141 | 0.998 | 0.887 | - | - |
| 2800 | S | 1.195 | 0.956 | 0.797 | 0.683 | 0.598 | 0.531 | 0.478 | 0.435 |
| | U | 2.291 | 1.833 | 1.528 | 1.309 | 1.146 | 1.018 | 0.917 | 0.833 |
| 2600 | S | 1.493 | 1.194 | 0.995 | 0.853 | 0.746 | 0.663 | 0.597 | 0.543 |
| | U | 2.657 | 2.126 | 1.772 | 1.518 | 1.329 | 1.181 | 1.063 | 0.966 |
| 2400 | S | 1.898 | 1.518 | 1.265 | 1.084 | 0.949 | 0.843 | 0.759 | 0.690 |
| | U | 3.119 | 2.495 | 2.079 | 1.782 | 1.559 | 1.386 | 1.247 | 1.134 |
| 2200 | S | 2.464 | 1.971 | 1.643 | 1.408 | 1.232 | 1.095 | 0.986 | 0.896 |
| | U | 3.712 | 2.969 | 2.474 | 2.121 | 1.856 | 1.650 | 1.485 | 1.350 |
| 2000 | S | 3.279 | 2.623 | 2.186 | 1.874 | 1.640 | 1.457 | 1.312 | 1.192 |
| | U | 4.491 | 3.593 | 2.994 | 2.566 | 2.245 | 1.996 | 1.796 | 1.633 |
| Mullion spacing (mm) | | 800 | 1000 | 1200 | 1400 | 1600 | 1800 | 2000 | 2200 |

$I_{xx} = 1220 \times 10^3 \text{mm}^4$
 $I_{yy} = 96 \times 10^3 \text{mm}^4$
 Yield Stress = 110 Mpa

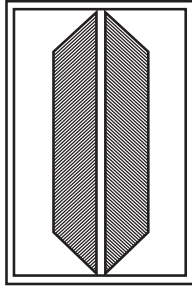
S = Serviceability- (deflection limited pressure) span/250
U = Ultimate limit state pressure



| Mullion Height (mm) | | Pressure kPa | | | | | | | |
|-----------------------------|---|--------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | | 800 | 1000 | 1200 | 1400 | 1600 | 1800 | 2000 | 2200 |
| 4200 | S | 0.442 | - | - | - | - | - | - | - |
| | U | 1.272 | - | - | - | - | - | - | - |
| 4000 | S | 0.512 | 0.410 | - | - | - | - | - | - |
| | U | 1.402 | 1.122 | - | - | - | - | - | - |
| 3800 | S | 0.597 | 0.478 | - | - | - | - | - | - |
| | U | 1.554 | 1.243 | - | - | - | - | - | - |
| 3600 | S | 0.702 | 0.562 | 0.468 | - | - | - | - | - |
| | U | 1.731 | 1.385 | 1.154 | - | - | - | - | - |
| 3400 | S | 0.834 | 0.667 | 0.556 | 0.476 | 0.417 | - | - | - |
| | U | 1.941 | 1.553 | 1.294 | 1.109 | 0.970 | - | - | - |
| 3200 | S | 1.000 | 0.800 | 0.667 | 0.571 | 0.500 | 0.444 | - | - |
| | U | 2.191 | 1.753 | 1.461 | 1.252 | 1.096 | 0.974 | - | - |
| 3000 | S | 1.214 | 0.971 | 0.809 | 0.693 | 0.607 | 0.539 | 0.485 | 0.441 |
| | U | 2.493 | 1.994 | 1.662 | 1.425 | 1.246 | 1.108 | 0.997 | 0.907 |
| 2800 | S | 1.493 | 1.194 | 0.995 | 0.853 | 0.746 | 0.663 | 0.597 | 0.543 |
| | U | 2.862 | 2.289 | 1.908 | 1.635 | 1.431 | 1.272 | 1.145 | 1.041 |
| 2600 | S | 1.864 | 1.491 | 1.243 | 1.065 | 0.932 | 0.829 | 0.746 | 0.678 |
| | U | 3.319 | 2.655 | 2.213 | 1.897 | 1.659 | 1.475 | 1.328 | 1.207 |
| 2400 | S | 2.370 | 1.896 | 1.580 | 1.354 | 1.185 | 1.053 | 0.948 | 0.862 |
| | U | 3.895 | 3.116 | 2.597 | 2.226 | 1.948 | 1.731 | 1.558 | 1.416 |
| 2200 | S | 3.077 | 2.462 | 2.052 | 1.758 | 1.539 | 1.368 | 1.231 | 1.119 |
| | U | 4.636 | 3.708 | 3.090 | 2.649 | 2.318 | 2.060 | 1.854 | 1.686 |
| 2000 | S | 4.096 | 3.277 | 2.731 | 2.340 | 2.048 | 1.820 | 1.638 | 1.489 |
| | U | 5.609 | 4.487 | 3.739 | 3.205 | 2.805 | 2.493 | 2.244 | 2.040 |
| Mullion spacing (mm) | | 800 | 1000 | 1200 | 1400 | 1600 | 1800 | 2000 | 2200 |

MULLION SELECTION

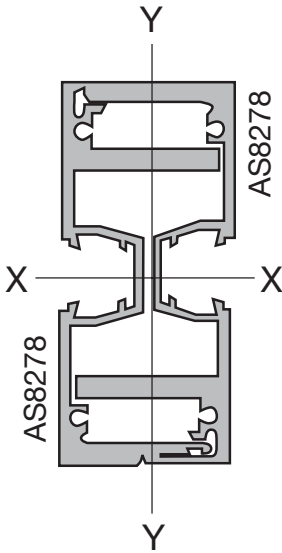
MULLION STRENGTHS



$I_{xx} = 2140 \times 10^3 \text{mm}^4$
 $I_{yy} = 214 \times 10^3 \text{mm}^4$
 Yield Stress = 110 Mpa

S = Serviceability - (deflection limited pressure) span/250
U = Ultimate limit state pressure

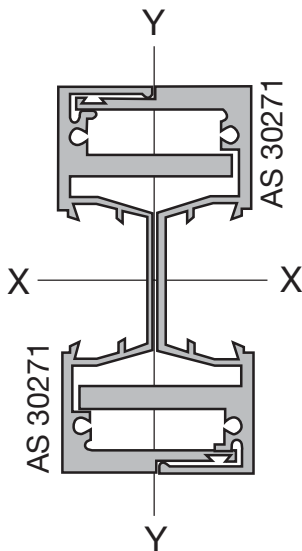
The following wind load tables have been produced as a guide to assist in the selection of a suitable framing section. Values are based on theoretical properties of the extruded sections together with tests performed by a NATA approved testing laboratory as specified in AS2047 1999.



| Mullion Height (mm) | | Pressure kPa | | | | | | | |
|-----------------------------|---|--------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | | 800 | 1000 | 1200 | 1400 | 1600 | 1800 | 2000 | 2200 |
| 4200 | S | 0.775 | 0.620 | 0.517 | 0.443 | - | - | - | - |
| | U | 2.229 | 1.783 | 1.486 | 1.274 | - | - | - | - |
| 4000 | S | 0.897 | 0.718 | 0.598 | 0.513 | 0.449 | - | - | - |
| | U | 2.457 | 1.966 | 1.638 | 1.404 | 1.229 | - | - | - |
| 3800 | S | 1.046 | 0.837 | 0.698 | 0.598 | 0.523 | 0.465 | 0.419 | - |
| | U | 2.723 | 2.178 | 1.815 | 1.556 | 1.361 | 1.210 | 1.089 | - |
| 3600 | S | 1.231 | 0.984 | 0.820 | 0.703 | 0.615 | 0.547 | 0.492 | 0.447 |
| | U | 3.034 | 2.427 | 2.022 | 1.733 | 1.517 | 1.348 | 1.213 | 1.103 |
| 3400 | S | 1.461 | 1.169 | 0.974 | 0.835 | 0.730 | 0.649 | 0.584 | 0.531 |
| | U | 3.401 | 2.721 | 2.267 | 1.943 | 1.700 | 1.512 | 1.360 | 1.237 |
| 3200 | S | 1.752 | 1.402 | 1.168 | 1.001 | 0.876 | 0.779 | 0.701 | 0.637 |
| | U | 3.839 | 3.071 | 2.560 | 2.194 | 1.920 | 1.706 | 1.536 | 1.396 |
| 3000 | S | 2.127 | 1.701 | 1.418 | 1.215 | 1.063 | 0.945 | 0.851 | 0.773 |
| | U | 4.368 | 3.495 | 2.912 | 2.496 | 2.184 | 1.941 | 1.747 | 1.588 |
| 2800 | S | 2.618 | 2.092 | 1.744 | 1.495 | 1.308 | 1.162 | 1.046 | 0.951 |
| | U | 5.015 | 4.012 | 3.343 | 2.865 | 2.507 | 2.229 | 2.006 | 1.823 |
| 2600 | S | 3.267 | 2.613 | 2.178 | 1.867 | 1.633 | 1.452 | 1.307 | 1.188 |
| | U | 5.816 | 4.653 | 3.877 | 3.323 | 2.908 | 2.585 | 2.326 | 2.115 |
| 2400 | S | 4.153 | 3.323 | 2.769 | 2.373 | 2.077 | 1.846 | 1.661 | 1.510 |
| | U | 6.825 | 5.460 | 4.550 | 3.900 | 3.413 | 3.034 | 2.730 | 2.482 |
| 2200 | S | 5.392 | 4.314 | 3.595 | 3.081 | 2.696 | 2.397 | 2.157 | 1.961 |
| | U | 8.123 | 6.498 | 5.415 | 4.642 | 4.061 | 3.610 | 3.249 | 2.954 |
| 2000 | S | 7.177 | 5.742 | 4.785 | 4.101 | 3.588 | 3.190 | 2.871 | 2.610 |
| | U | 9.829 | 7.863 | 6.552 | 5.616 | 4.914 | 4.368 | 3.931 | 3.574 |
| Mullion spacing (mm) | | 800 | 1000 | 1200 | 1400 | 1600 | 1800 | 2000 | 2200 |

$I_{xx} = 2290 \times 10^3 \text{mm}^4$
 $I_{yy} = 276 \times 10^3 \text{mm}^4$
 Yield Stress = 110 Mpa

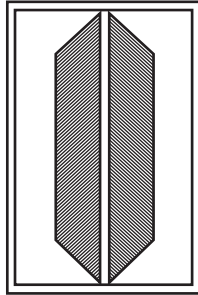
S = Serviceability- (deflection limited pressure) span/250
U = Ultimate limit state pressure



| Mullion Height (mm) | | Pressure kPa | | | | | | | |
|-----------------------------|---|--------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | | 800 | 1000 | 1200 | 1400 | 1600 | 1800 | 2000 | 2200 |
| 4200 | S | 0.830 | 0.664 | 0.553 | 0.474 | 0.415 | - | - | - |
| | U | 2.386 | 1.909 | 1.591 | 1.364 | 1.193 | - | - | - |
| 4000 | S | 0.961 | 0.768 | 0.640 | 0.549 | 0.480 | 0.427 | - | - |
| | U | 2.631 | 2.105 | 1.754 | 1.503 | 1.315 | 1.169 | - | - |
| 3800 | S | 1.120 | 0.896 | 0.747 | 0.640 | 0.560 | 0.498 | 0.448 | - |
| | U | 2.915 | 2.332 | 1.943 | 1.666 | 1.458 | 1.296 | 1.166 | - |
| 3600 | S | 1.318 | 1.054 | 0.878 | 0.753 | 0.659 | 0.586 | 0.527 | 0.479 |
| | U | 3.248 | 2.598 | 2.165 | 1.856 | 1.624 | 1.444 | 1.299 | 1.181 |
| 3400 | S | 1.564 | 1.251 | 1.043 | 0.894 | 0.782 | 0.695 | 0.626 | 0.569 |
| | U | 3.641 | 2.913 | 2.428 | 2.081 | 1.821 | 1.618 | 1.457 | 1.324 |
| 3200 | S | 1.876 | 1.501 | 1.251 | 1.072 | 0.938 | 0.834 | 0.750 | 0.682 |
| | U | 4.111 | 3.289 | 2.740 | 2.349 | 2.055 | 1.827 | 1.644 | 1.495 |
| 3000 | S | 2.277 | 1.821 | 1.518 | 1.301 | 1.138 | 1.012 | 0.911 | 0.828 |
| | U | 4.677 | 3.742 | 3.118 | 2.673 | 2.339 | 2.079 | 1.871 | 1.701 |
| 2800 | S | 2.800 | 2.240 | 1.867 | 1.600 | 1.400 | 1.245 | 1.120 | 1.018 |
| | U | 5.369 | 4.295 | 3.579 | 3.068 | 2.685 | 2.386 | 2.148 | 1.952 |
| 2600 | S | 3.498 | 2.798 | 2.332 | 1.999 | 1.749 | 1.555 | 1.399 | 1.272 |
| | U | 6.227 | 4.981 | 4.151 | 3.558 | 3.113 | 2.767 | 2.491 | 2.264 |
| 2400 | S | 4.447 | 3.558 | 2.965 | 2.541 | 2.223 | 1.976 | 1.779 | 1.617 |
| | U | 7.308 | 5.846 | 4.872 | 4.176 | 3.654 | 3.248 | 2.923 | 2.657 |
| 2200 | S | 5.773 | 4.619 | 3.849 | 3.299 | 2.887 | 2.566 | 2.309 | 2.099 |
| | U | 8.697 | 6.958 | 5.798 | 4.970 | 4.348 | 3.865 | 3.479 | 3.163 |
| 2000 | S | 7.684 | 6.147 | 5.123 | 4.391 | 3.842 | 3.415 | 3.074 | 2.794 |
| | U | 10.523 | 8.419 | 7.016 | 6.013 | 5.262 | 4.677 | 4.209 | 3.827 |
| Mullion spacing (mm) | | 800 | 1000 | 1200 | 1400 | 1600 | 1800 | 2000 | 2200 |

MULLION SELECTION

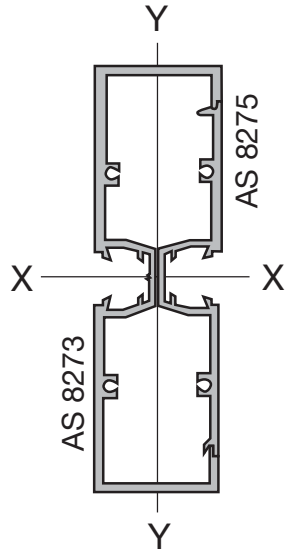
MULLION STRENGTHS



The following wind load tables have been produced as a guide to assist in the selection of a suitable framing section. Values are based on theoretical properties of the extruded sections together with tests performed by a NATA approved testing laboratory as specified in AS2047 1999.

$I_{xx} = 3230 \times 10^3 \text{ mm}^4$
 $I_{yy} = 212 \times 10^3 \text{ mm}^4$
 Yield Stress = 110 Mpa

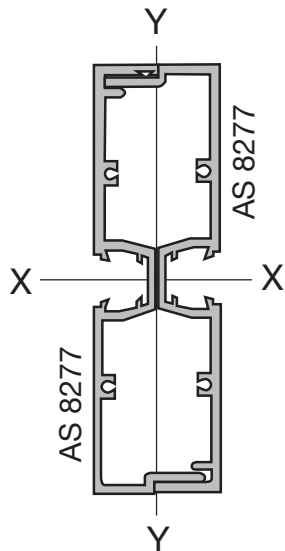
S = Serviceability - (deflection limited pressure) span/250
U = Ultimate limit state pressure



| Mullion Height (mm) | | Pressure kPa | | | | | | | |
|-----------------------------|---|--------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | | 800 | 1000 | 1200 | 1400 | 1600 | 1800 | 2000 | 2200 |
| 4200 | S | 1.172 | 0.937 | 0.781 | 0.669 | 0.586 | 0.521 | 0.469 | 0.426 |
| | U | 2.245 | 1.796 | 1.496 | 1.283 | 1.122 | 0.998 | 0.898 | 0.816 |
| 4000 | S | 1.356 | 1.085 | 0.904 | 0.775 | 0.678 | 0.603 | 0.542 | 0.493 |
| | U | 2.475 | 1.980 | 1.650 | 1.414 | 1.237 | 1.100 | 0.990 | 0.900 |
| 3800 | S | 1.582 | 1.265 | 1.055 | 0.904 | 0.791 | 0.703 | 0.633 | 0.575 |
| | U | 2.742 | 2.194 | 1.828 | 1.567 | 1.371 | 1.219 | 1.097 | 0.997 |
| 3600 | S | 1.860 | 1.488 | 1.240 | 1.063 | 0.930 | 0.827 | 0.744 | 0.676 |
| | U | 3.055 | 2.444 | 2.037 | 1.746 | 1.528 | 1.358 | 1.222 | 1.111 |
| 3400 | S | 2.208 | 1.767 | 1.472 | 1.262 | 1.104 | 0.981 | 0.883 | 0.803 |
| | U | 3.425 | 2.740 | 2.283 | 1.957 | 1.713 | 1.522 | 1.370 | 1.246 |
| 3200 | S | 2.649 | 2.119 | 1.766 | 1.514 | 1.324 | 1.177 | 1.060 | 0.963 |
| | U | 3.867 | 3.093 | 2.578 | 2.210 | 1.933 | 1.719 | 1.547 | 1.406 |
| 3000 | S | 3.215 | 2.572 | 2.143 | 1.837 | 1.607 | 1.429 | 1.286 | 1.169 |
| | U | 4.399 | 3.520 | 2.933 | 2.514 | 2.200 | 1.955 | 1.760 | 1.600 |
| 2800 | S | 3.954 | 3.163 | 2.636 | 2.259 | 1.977 | 1.757 | 1.582 | 1.438 |
| | U | 5.050 | 4.040 | 3.367 | 2.886 | 2.525 | 2.245 | 2.020 | 1.837 |
| 2600 | S | 4.938 | 3.951 | 3.292 | 2.822 | 2.469 | 2.195 | 1.975 | 1.796 |
| | U | 5.857 | 4.686 | 3.905 | 3.347 | 2.929 | 2.603 | 2.343 | 2.130 |
| 2400 | S | 6.279 | 5.023 | 4.186 | 3.588 | 3.139 | 2.790 | 2.511 | 2.283 |
| | U | 6.874 | 5.499 | 4.583 | 3.928 | 3.437 | 3.055 | 2.750 | 2.500 |
| 2200 | S | 8.151 | 6.521 | 5.434 | 4.658 | 4.076 | 3.623 | 3.261 | 2.964 |
| | U | 8.181 | 6.545 | 5.454 | 4.675 | 4.090 | 3.636 | 3.272 | 2.975 |
| 2000 | S | 9.899 | 7.919 | 6.599 | 5.656 | 4.949 | 4.399 | 3.959 | 3.600 |
| | U | 9.899 | 7.919 | 6.599 | 5.656 | 4.949 | 4.399 | 3.959 | 3.600 |
| Mullion spacing (mm) | | 800 | 1000 | 1200 | 1400 | 1600 | 1800 | 2000 | 2200 |

$I_{xx} = 4020 \times 10^3 \text{ mm}^4$
 $I_{yy} = 135 \times 10^3 \text{ mm}^4$
 Yield Stress = 110 Mpa

S = Serviceability- (deflection limited pressure) span/250
U = Ultimate limit state pressure

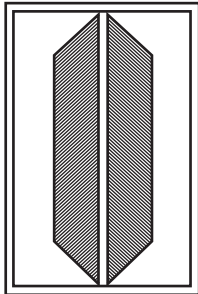


| Mullion Height (mm) | | Pressure kPa | | | | | | | |
|-----------------------------|---|--------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | | 800 | 1000 | 1200 | 1400 | 1600 | 1800 | 2000 | 2200 |
| 4200 | S | 1.457 | 1.166 | 0.971 | 0.833 | 0.729 | 0.648 | 0.583 | 0.530 |
| | U | 2.790 | 2.232 | 1.860 | 1.594 | 1.395 | 1.240 | 1.116 | 1.014 |
| 4000 | S | 1.687 | 1.349 | 1.124 | 0.964 | 0.843 | 0.750 | 0.675 | 0.613 |
| | U | 3.076 | 2.461 | 2.051 | 1.758 | 1.538 | 1.367 | 1.230 | 1.118 |
| 3800 | S | 1.967 | 1.574 | 1.312 | 1.124 | 0.984 | 0.874 | 0.787 | 0.715 |
| | U | 3.408 | 2.726 | 2.272 | 1.947 | 1.704 | 1.515 | 1.363 | 1.239 |
| 3600 | S | 2.314 | 1.851 | 1.542 | 1.322 | 1.157 | 1.028 | 0.925 | 0.841 |
| | U | 3.797 | 3.038 | 2.532 | 2.170 | 1.899 | 1.688 | 1.519 | 1.381 |
| 3400 | S | 2.747 | 2.197 | 1.831 | 1.569 | 1.373 | 1.221 | 1.099 | 0.999 |
| | U | 4.257 | 3.406 | 2.838 | 2.433 | 2.129 | 1.892 | 1.703 | 1.548 |
| 3200 | S | 3.294 | 2.636 | 2.196 | 1.883 | 1.647 | 1.464 | 1.318 | 1.198 |
| | U | 4.806 | 3.845 | 3.204 | 2.746 | 2.403 | 2.136 | 1.922 | 1.748 |
| 3000 | S | 3.998 | 3.199 | 2.665 | 2.285 | 1.999 | 1.777 | 1.599 | 1.454 |
| | U | 5.468 | 4.374 | 3.645 | 3.125 | 2.734 | 2.430 | 2.187 | 1.988 |
| 2800 | S | 4.918 | 3.934 | 3.278 | 2.810 | 2.459 | 2.186 | 1.967 | 1.788 |
| | U | 6.277 | 5.022 | 4.185 | 3.587 | 3.139 | 2.790 | 2.511 | 2.283 |
| 2600 | S | 6.142 | 4.914 | 4.095 | 3.510 | 3.071 | 2.730 | 2.457 | 2.233 |
| | U | 7.280 | 5.824 | 4.853 | 4.160 | 3.640 | 3.236 | 2.912 | 2.647 |
| 2400 | S | 7.809 | 6.247 | 5.206 | 4.462 | 3.904 | 3.471 | 3.124 | 2.840 |
| | U | 8.544 | 6.835 | 5.696 | 4.882 | 4.272 | 3.797 | 3.418 | 3.107 |
| 2200 | S | 10.138 | 8.110 | 6.759 | 5.793 | 5.069 | 4.506 | 4.055 | 3.687 |
| | U | 10.168 | 8.134 | 6.779 | 5.810 | 5.084 | 4.519 | 4.067 | 3.697 |
| 2000 | S | 12.303 | 9.843 | 8.202 | 7.030 | 6.152 | 5.468 | 4.921 | 4.474 |
| | U | 12.303 | 9.843 | 8.202 | 7.030 | 6.152 | 5.468 | 4.921 | 4.474 |
| Mullion spacing (mm) | | 800 | 1000 | 1200 | 1400 | 1600 | 1800 | 2000 | 2200 |

Note: Italics represents limit state pressure governs over deflection limited pressure

MULLION SELECTION

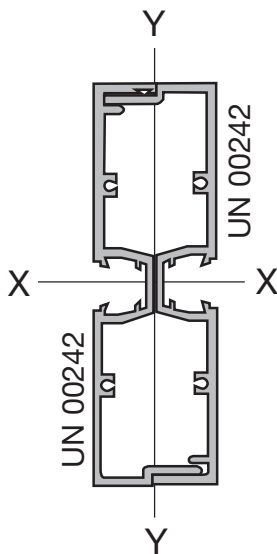
MULLION STRENGTHS



$I_{xx} = 1900 \times 10^3 \text{mm}^4$
 $I_{yy} = 58 \times 10^3 \text{mm}^4$
 Yield Stress = 110 Mpa

S = Serviceability - (deflection limited pressure) span/250
U = Ultimate limit state pressure

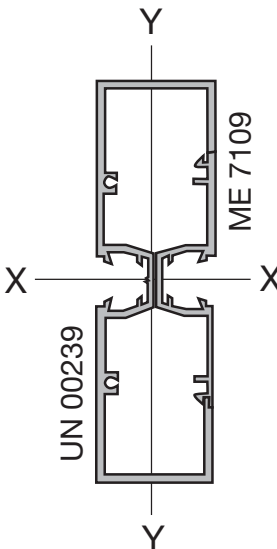
The following wind load tables have been produced as a guide to assist in the selection of a suitable framing section. Values are based on theoretical properties of the extruded sections together with tests performed by a NATA approved testing laboratory as specified in AS2047 1999.



| Mullion Height (mm) | | Pressure kPa | | | | | | | |
|-----------------------------|---|--------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | | 800 | 1000 | 1200 | 1400 | 1600 | 1800 | 2000 | 2200 |
| 4200 | S | 0.688 | 0.550 | 0.458 | - | - | - | - | - |
| | U | 1.339 | 1.071 | 0.893 | - | - | - | - | - |
| 4000 | S | 0.796 | 0.637 | 0.531 | 0.455 | - | - | - | - |
| | U | 1.477 | 1.181 | 0.984 | 0.844 | - | - | - | - |
| 3800 | S | 0.928 | 0.743 | 0.619 | 0.530 | 0.464 | 0.413 | - | - |
| | U | 1.636 | 1.309 | 1.091 | 0.935 | 0.818 | 0.727 | - | - |
| 3600 | S | 1.092 | 0.873 | 0.728 | 0.624 | 0.546 | 0.485 | 0.437 | - |
| | U | 1.823 | 1.458 | 1.215 | 1.042 | 0.911 | 0.810 | 0.729 | - |
| 3400 | S | 1.296 | 1.037 | 0.864 | 0.741 | 0.648 | 0.576 | 0.518 | 0.471 |
| | U | 2.044 | 1.635 | 1.362 | 1.168 | 1.022 | 0.908 | 0.817 | 0.743 |
| 3200 | S | 1.554 | 1.244 | 1.036 | 0.888 | 0.777 | 0.691 | 0.622 | 0.565 |
| | U | 2.307 | 1.846 | 1.538 | 1.318 | 1.154 | 1.025 | 0.923 | 0.839 |
| 3000 | S | 1.887 | 1.509 | 1.258 | 1.078 | 0.943 | 0.838 | 0.755 | 0.686 |
| | U | 2.625 | 2.100 | 1.750 | 1.500 | 1.312 | 1.167 | 1.050 | 0.955 |
| 2800 | S | 2.320 | 1.856 | 1.547 | 1.326 | 1.160 | 1.031 | 0.928 | 0.844 |
| | U | 3.013 | 2.411 | 2.009 | 1.722 | 1.507 | 1.339 | 1.205 | 1.096 |
| 2600 | S | 2.898 | 2.319 | 1.932 | 1.656 | 1.449 | 1.288 | 1.159 | 1.054 |
| | U | 3.495 | 2.796 | 2.330 | 1.997 | 1.747 | 1.553 | 1.398 | 1.271 |
| 2400 | S | 3.685 | 2.948 | 2.456 | 2.106 | 1.842 | 1.638 | 1.474 | 1.340 |
| | U | 4.101 | 3.281 | 2.734 | 2.344 | 2.051 | 1.823 | 1.641 | 1.491 |
| 2200 | S | 4.784 | 3.827 | 3.189 | 2.734 | 2.392 | 2.126 | 1.914 | 1.740 |
| | U | 4.881 | 3.905 | 3.254 | 2.789 | 2.441 | 2.169 | 1.952 | 1.775 |
| 2000 | S | 5.906 | 4.725 | 3.937 | 3.375 | 2.953 | 2.625 | 2.362 | 2.148 |
| | U | 5.906 | 4.725 | 3.937 | 3.375 | 2.953 | 2.625 | 2.362 | 2.148 |
| Mullion spacing (mm) | | 800 | 1000 | 1200 | 1400 | 1600 | 1800 | 2000 | 2200 |

Note: Italics represents limit state pressure governs over deflection limited pressure

$I_{xx} = 2082 \times 10^3 \text{mm}^4$
 $I_{yy} = 212 \times 10^3 \text{mm}^4$
 Yield Stress = 110 Mpa



| Mullion Height (mm) | | Pressure kPa | | | | | | | |
|-----------------------------|---|--------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | | 800 | 1000 | 1200 | 1400 | 1600 | 1800 | 2000 | 2200 |
| 4200 | S | 0.755 | 0.604 | 0.504 | 0.432 | | | | |
| | U | 1.837 | 1.469 | 1.224 | 1.050 | | | | |
| 4000 | S | 0.874 | 0.700 | 0.583 | 0.500 | 0.437 | | | |
| | U | 2.025 | 1.620 | 1.350 | 1.157 | 1.013 | | | |
| 3800 | S | 1.020 | 0.816 | 0.680 | 0.583 | 0.510 | 0.453 | | |
| | U | 2.244 | 1.795 | 1.496 | 1.282 | 1.122 | 0.997 | | |
| 3600 | S | 1.200 | 0.960 | 0.800 | 0.685 | 0.600 | 0.533 | 0.480 | 0.436 |
| | U | 2.500 | 2.000 | 1.667 | 1.429 | 1.250 | 1.111 | 1.000 | 0.909 |
| 3400 | S | 1.424 | 1.139 | 0.949 | 0.814 | 0.712 | 0.633 | 0.570 | 0.518 |
| | U | 2.803 | 2.242 | 1.869 | 1.602 | 1.401 | 1.246 | 1.121 | 1.019 |
| 3200 | S | 1.708 | 1.366 | 1.139 | 0.976 | 0.854 | 0.759 | 0.683 | 0.621 |
| | U | 3.164 | 2.531 | 2.109 | 1.808 | 1.582 | 1.406 | 1.266 | 1.151 |
| 3000 | S | 2.073 | 1.658 | 1.382 | 1.184 | 1.036 | 0.921 | 0.829 | 0.754 |
| | U | 3.600 | 2.880 | 2.400 | 2.057 | 1.800 | 1.600 | 1.440 | 1.309 |
| 2800 | S | 2.549 | 2.040 | 1.700 | 1.457 | 1.275 | 1.133 | 1.020 | 0.927 |
| | U | 4.133 | 3.306 | 2.755 | 2.362 | 2.066 | 1.837 | 1.653 | 1.503 |
| 2600 | S | 3.184 | 2.547 | 2.123 | 1.819 | 1.592 | 1.415 | 1.274 | 1.158 |
| | U | 4.793 | 3.834 | 3.195 | 2.739 | 2.396 | 2.130 | 1.917 | 1.743 |
| 2400 | S | 4.048 | 3.239 | 2.699 | 2.313 | 2.024 | 1.799 | 1.619 | 1.472 |
| | U | 5.625 | 4.500 | 3.750 | 3.214 | 2.813 | 2.500 | 2.250 | 2.045 |
| 2200 | S | 5.256 | 4.205 | 3.504 | 3.003 | 2628 | 2.336 | 2.102 | 1.911 |
| | U | 6.694 | 5.355 | 4.463 | 3.825 | 3.347 | 2.975 | 2.678 | 2.434 |
| 2000 | S | 6.996 | 5.596 | 4.664 | 3.997 | 3.498 | 3.109 | 2.798 | 2.544 |
| | U | 8.100 | 6.480 | 5.400 | 4.629 | 4.050 | 3.600 | 3.240 | 2.945 |
| Mullion spacing (mm) | | 800 | 1000 | 1200 | 1400 | 1600 | 1800 | 2000 | 2200 |

S = Serviceability- (deflection limited pressure) span/250
U = Ultimate limit state pressure

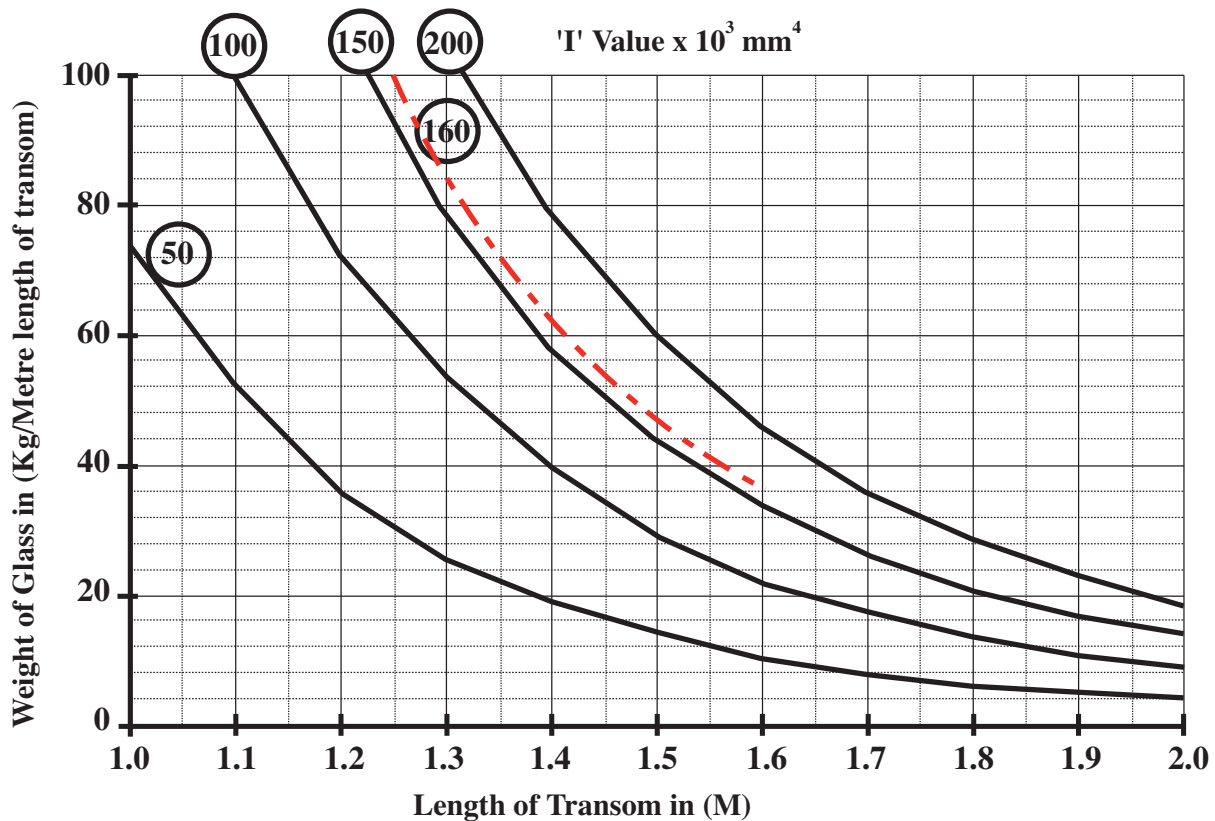
TRANSOM SELECTION

GRAPH 6: GLASS 'DEAD LOAD' ON TRANSOM

This graph can be used to select the 'I' (moment of inertia) required by a transom to support the weight of glass.

(Based on a deflection of 3mm and glass supported at quarter points). Note: By increasing the 'I' value by 2 will reduce the deflection to half. IE. 1.5mm

NOTE: Loads due to wind will need to be calculated separately.



HOW TO USE THE GRAPH

- To calculate Weight of Glass / Metre length of transom
Multiply Glass Weight / m² x Glass panel Height.
- Knowing the Weight of Glass and Transom Width from graph plot the intersection point. Follow the curved lines to the top of the graph and read 'I' value required. select a transom with 'I' greater than required.

| GLASS DETAIL | |
|--------------|-----------------------|
| Thickness | Weight/M ² |
| 4mm | 10.0Kg |
| 5mm | 12.5Kg |
| 6mm | 15.0Kg |
| 8mm | 20.0Kg |
| 10mm | 25.0Kg |

EXAMPLE:

- A fixed unit using 6mm glass, 1.6m wide x 2.4m high.
- Glass Weight x Height = (15 x 2.4) = 36 Kg/ m length of transom
- From graph plot intersection of 1.6m and 36 Kg = 160 x 10³mm⁴
- Select AS8278/AS8278 which has an 'I_{yy}' of 214 x 10³mm⁴

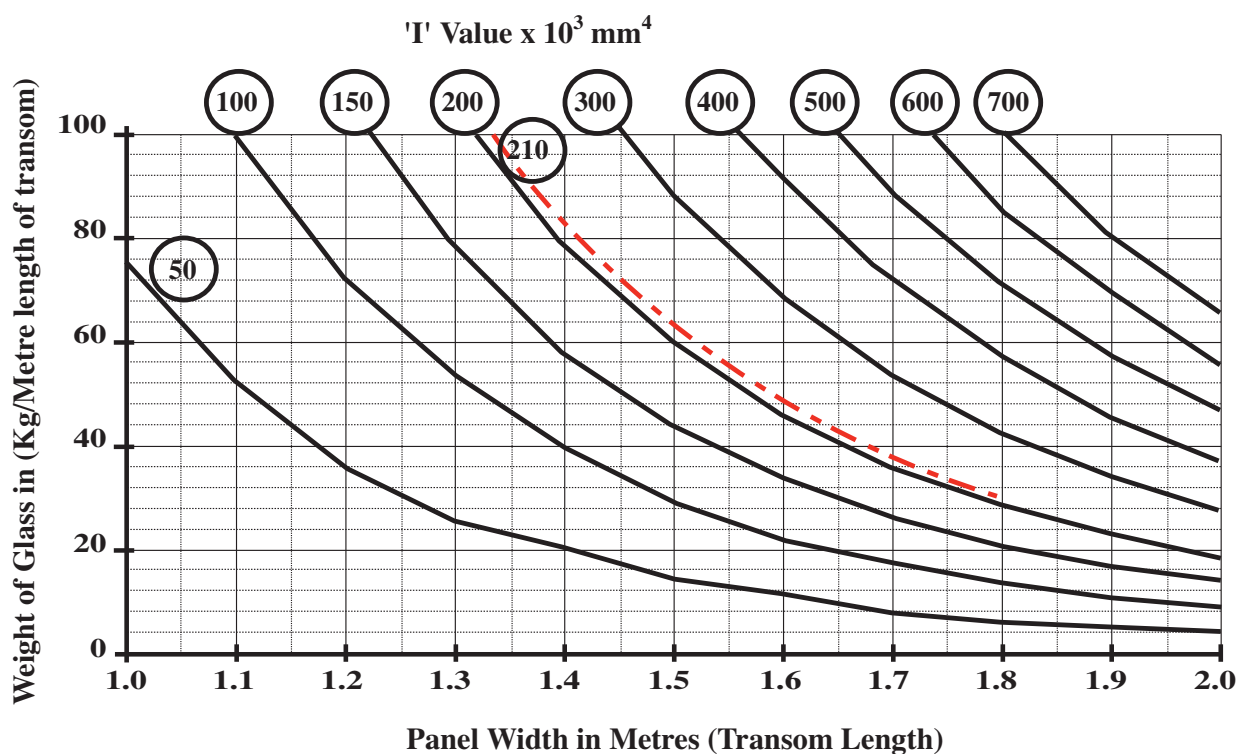
MIDRAIL SELECTION

GRAPH 7: GLASS 'DEAD LOAD' ON MIDRAIL

This graph can be used to select the 'I' required by a midrail to support the weight of glass.

(Based on a deflection of 3mm and glass supported at quarter points). Note: By increasing the 'I' value by 2 will reduce the deflection to half. IE. 1.5mm

NOTE: Loads due to wind will need to be calculated separately.



HOW TO USE THE GRAPH

- To calculate Weight of Glass / Metre length of transom

Multiply Glass Weight / m² x Glass panel Height.

- Knowing the Weight of Glass and Transom Width from graph plot the intersection point. Follow the curved lines to the top of the graph and read 'I' value required. select a transom with 'Ixx' greater than required.

| GLASS DETAIL | |
|--------------|-----------------------|
| Thickness | Weight/M ² |
| 4mm | 10.0Kg |
| 5mm | 12.5Kg |
| 6mm | 15.0Kg |
| 8mm | 20.0Kg |
| 10mm | 25.0Kg |

EXAMPLE:

- A fixed unit using 6mm glass, 1.8m wide x 2.0 high.
- Glass Weight x Height = (15 x 2.0) = 30 Kg/ m length of transom
- From graph plot intersection of 1.8m and 30 Kg = 210 x 10³mm⁴
- Select AS805/AS7112/AS7125 which has an 'Ixx' of 680 x 10³mm⁴ OR AS8278/AS8278 (on side) which has an 'Iyy' of 214 x 10³mm⁴



COMMERCIAL FRAMING SYSTEMS PRODUCT MANUAL

SECTION 4.

PAGES – 01 to 27

• HUNTINGDALE FRAMING SYSTEM

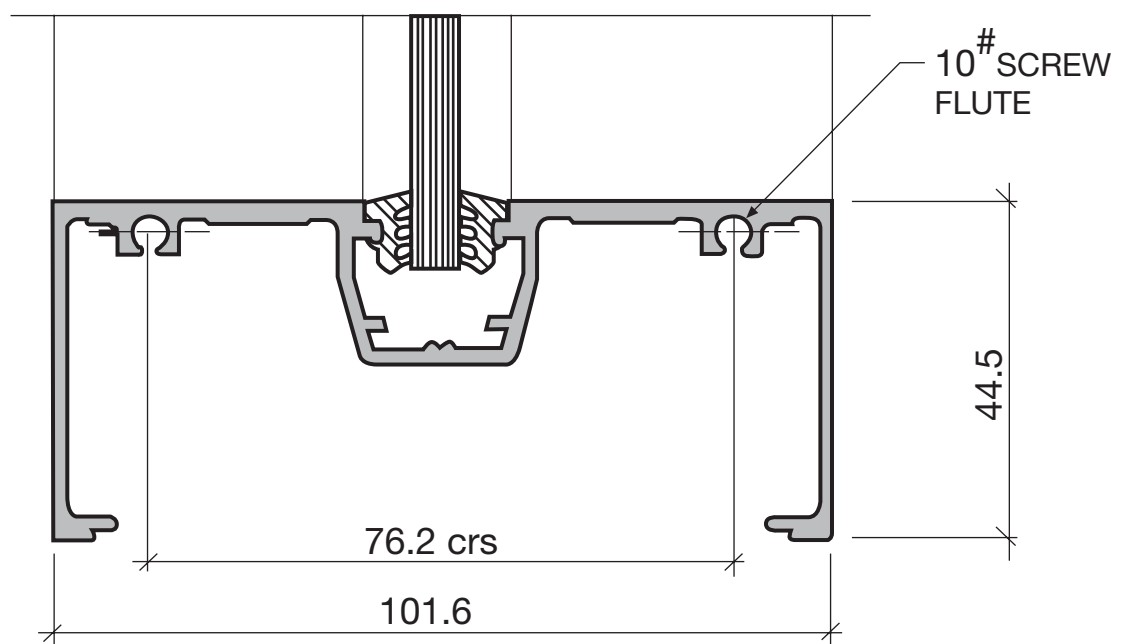
4

- 401, 402 SERIES FEATURES P1
- 401,402 SERIES GLAZING NOTES P2
- 401,402 SERIES COMPONENTS P3 - 9
- 401,402 SERIES ASSEMBLY DRAWINGS P10 - 11
- 403 SERIES FEATURES P12
- 403 SERIES GLAZING NOTES P13
- 403 SERIES COMPONENTS P14
- 403 SERIES ASSEMBLY DRAWINGS P15 - 16
- 601 SERIES FEATURES P17
- 601 SERIES COMPONENTS P18 - 20
- 601 SERIES ASSEMBLY DRAWINGS P21
- SOLARIUM COMPONENTS P22
- SOLARIUM ASSEMBLY DRAWINGS P23 – 24
- STRUCTURAL PROPERTIES OF SECTIONS P25 - 27

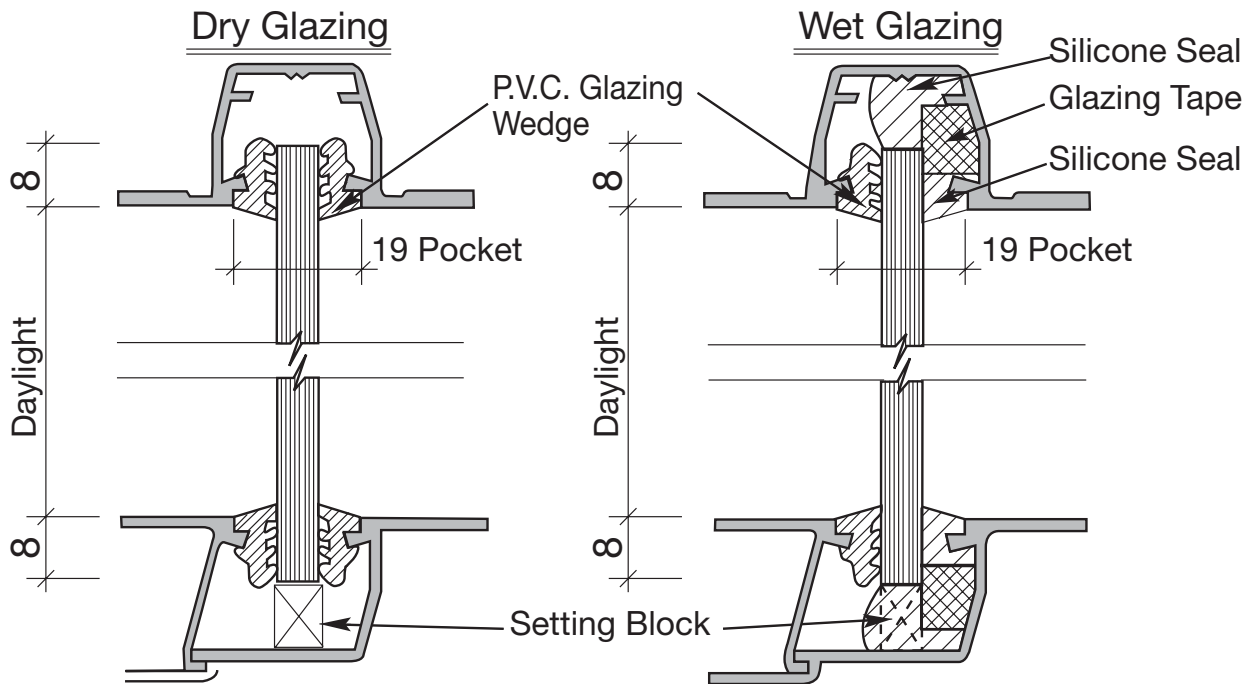
HUNTINGDALE FRAMING SYSTEM**FEATURES: (series 401, 402)**

- Simple to install
- Centre glazing
- Accepts glass thickness from 5mm to 10mm
- Ranges of Sizes - 101.6 x 44.5, 101.6 x 101.6 x 152.5 x 44.5 mullions to 200 mm door mid-rails.
- Built-in drainage minimising potential water leaks
- All screw flutes are standard 10 gauge
- Designed for both wet and dry weather glazing
- Pocket grooves allows for flush glazing and contains the P.V.C. wedges

- NOTES:**
1. Sub-sills should be used in extreme weather conditions. Remember to fix stop ends
 2. Dry glazing is not recommended for shopfronts in extreme weather conditions
 3. Allow for mullion expansion or contraction in areas that are subject to thermal movement



HUNTINGDALE FRAMING SYSTEM



| Glass | Dry Glazing | | Wet Glazing | |
|---------|--------------|---------------|-----------------|---------------|
| | Inside Wedge | Outside Wedge | Inside | Outside Wedge |
| 5 mm | 343-5 | 343-5 | Silicone & Tape | 343-5 |
| 6 mm | 343-6 | 343-6 | Silicone & Tape | 343-6 |
| 6.38 mm | Y113 | Y113 | Silicone & Tape | Y113 |
| 8 mm | 343-8 | 343-8 | Silicone & Tape | 343-8 |
| 10 mm | 114-10 | 114-10 | Silicone & Tape | 114-10 |

GLASS CUTTING SIZE; Height & Width = Daylight + 16 mm

Because of tolerances in P.V.C. wedges and extrusion the above recommendations should be used as a guide only.

GLAZING NOTES:

DRY GLAZING: One side must have a removable bead. Position setting blocks (2) approx $\frac{1}{4}$ width in from the edge. Use silicone to eliminate them from moving. Place glass panel into the pocket resting on the setting blocks. Position the glass and install temporary wedges on both sides of glass.

Cut wedges approx. 5% oversize and place in warm soapy water.

Insert wedge starting from ends. Remove temporary ones as you go.

Fit wedges to both sides before proceeding to either the sill or head.

Seal all corners with black silicone.

Glazing from one side is possible using captive wedges. These are inserted into one side of the pocket, the glass is then inserted and wedge fitted to the other side.



343-5
(5mm Glass)



343-6
(6mm Glass)



Y113
(6.38mm Glass)

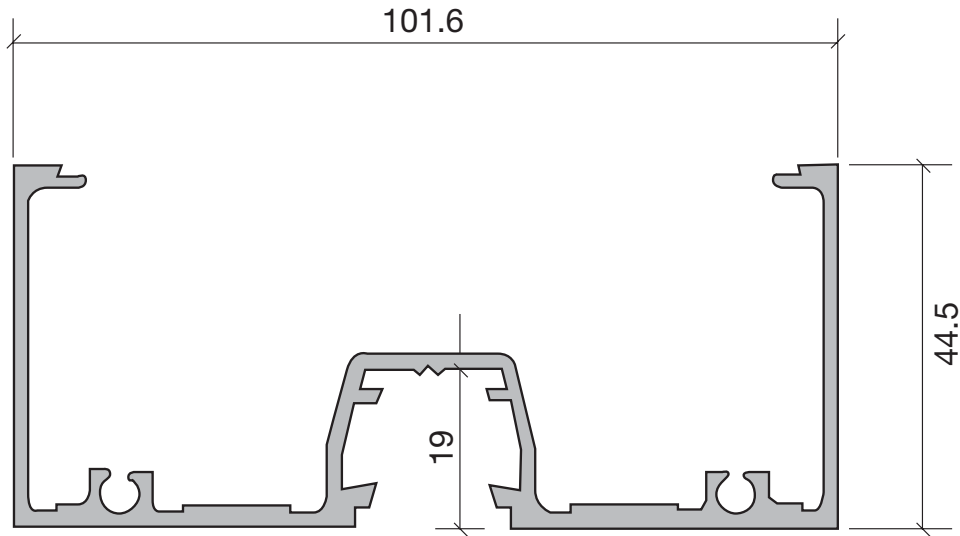


343-8
(8mm Glass)

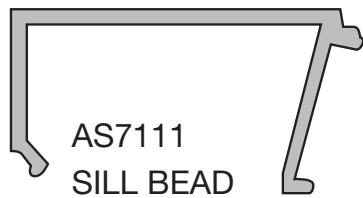


114-10
(10mm Glass)

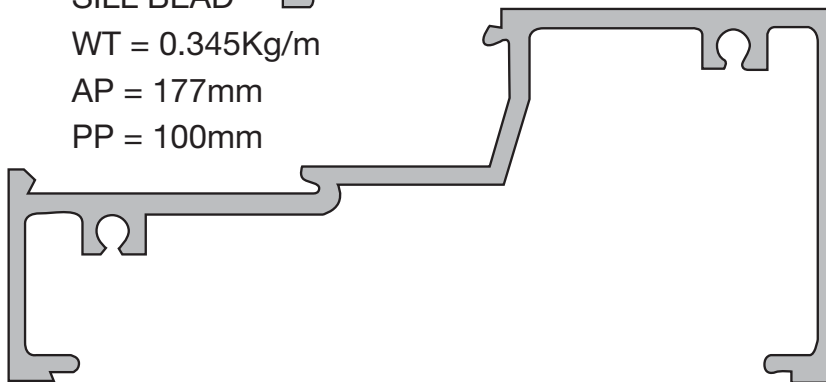
HUNTINGDALE FRAMING SYSTEM



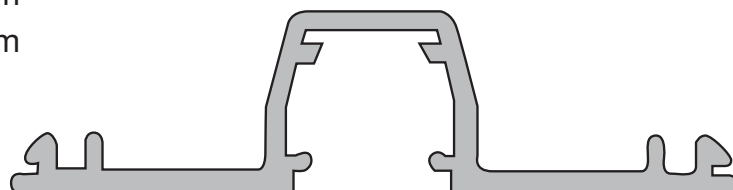
AS7106
 HEAD / MULLION
 WT = 1.426Kg/m
 AP = 527mm
 PP = 187mm



AS7111
 SILL BEAD
 WT = 0.345Kg/m
 AP = 177mm
 PP = 100mm



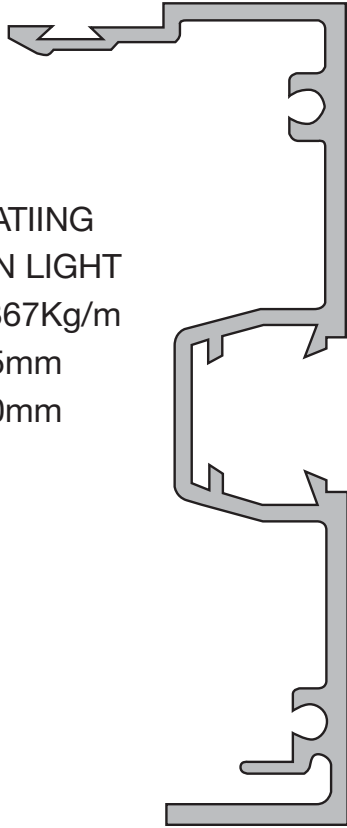
AS7107
 SILL
 WT = 1.233Kg/m
 AP = 445mm
 PP = 125mm



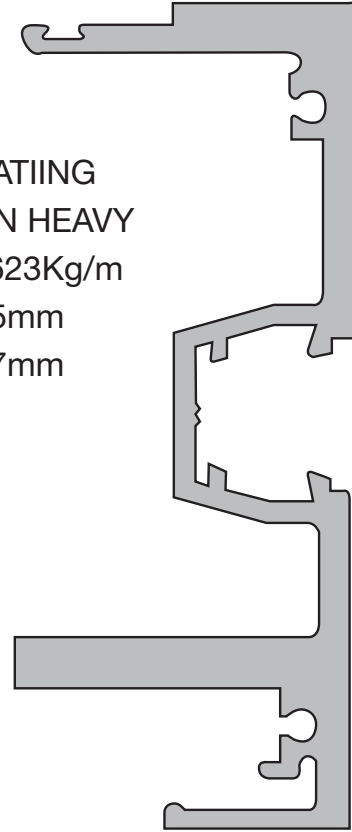
AS7109
 POCKETED FILLER
 WT = 0.777Kg/m
 AP = 312mm
 PP = 100mm

HUNTINGDALE FRAMING SYSTEM

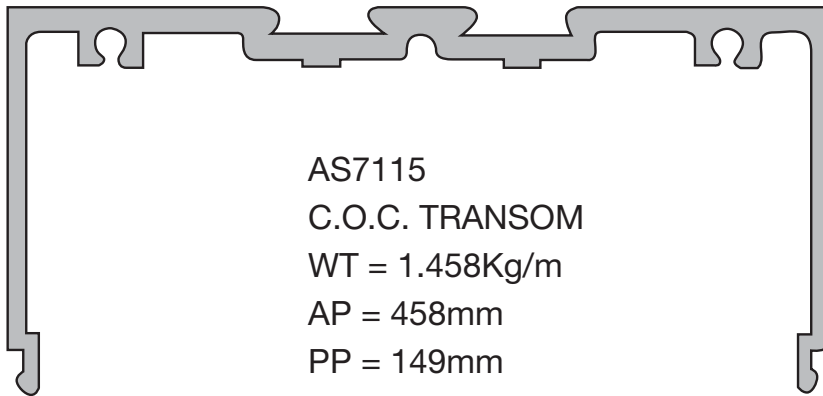
FU1048
SELF-MATING
MULLION LIGHT
WT = 1.367Kg/m
AP = 475mm
PP = 210mm



AS8278
SELF-MATING
MULLION HEAVY
WT = 2.623Kg/m
AP = 515mm
PP = 127mm



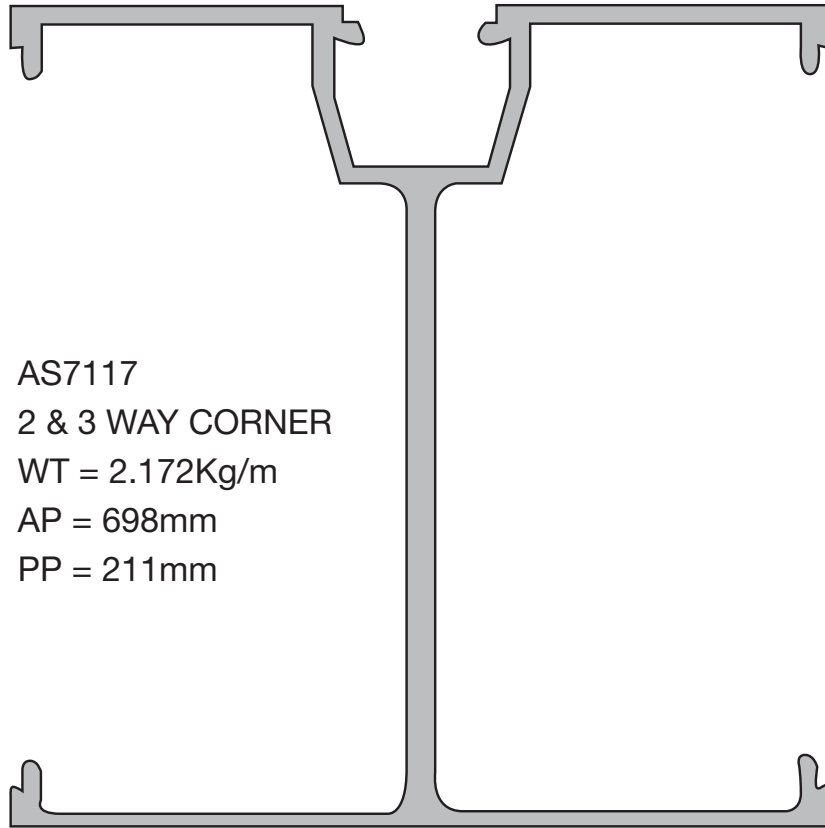
AS7115
C.O.C. TRANSOM
WT = 1.458Kg/m
AP = 458mm
PP = 149mm



AS7116
C.O.C. TRANSOM
WT = 0.479Kg/m
AP = 229mm
PP = 116mm



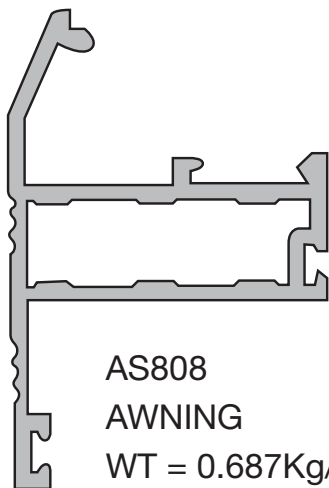
HUNTINGDALE FRAMING SYSTEM



AS7117
2 & 3 WAY CORNER
WT = 2.172Kg/m
AP = 698mm
PP = 211mm



AS7110
FLAT FILLER
WT = 0.492Kg/m
AP = 206mm
PP = 100mm

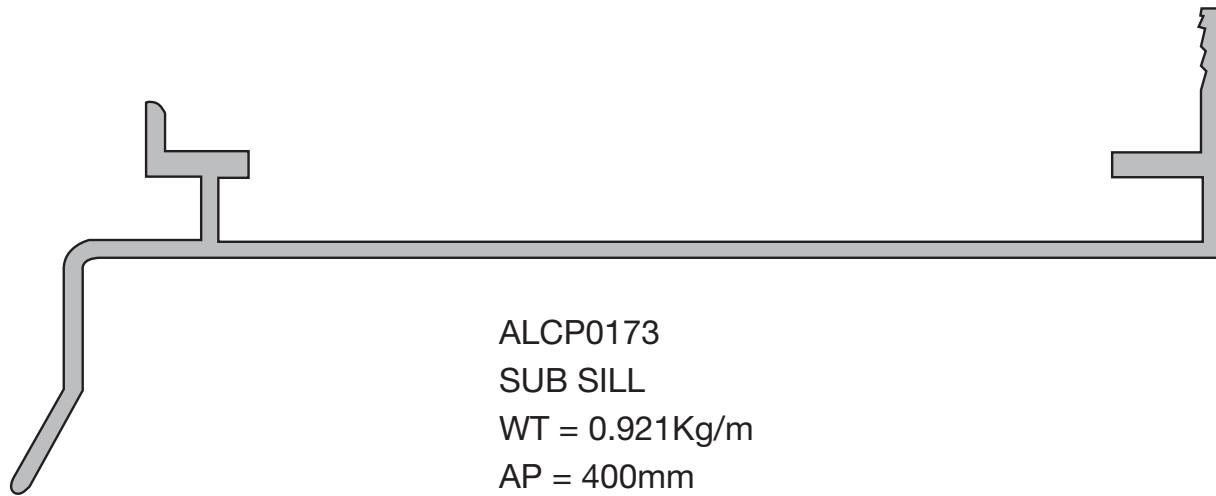


AS808
AWNING
WT = 0.687Kg/m
AP = 340mm
PP = 150mm

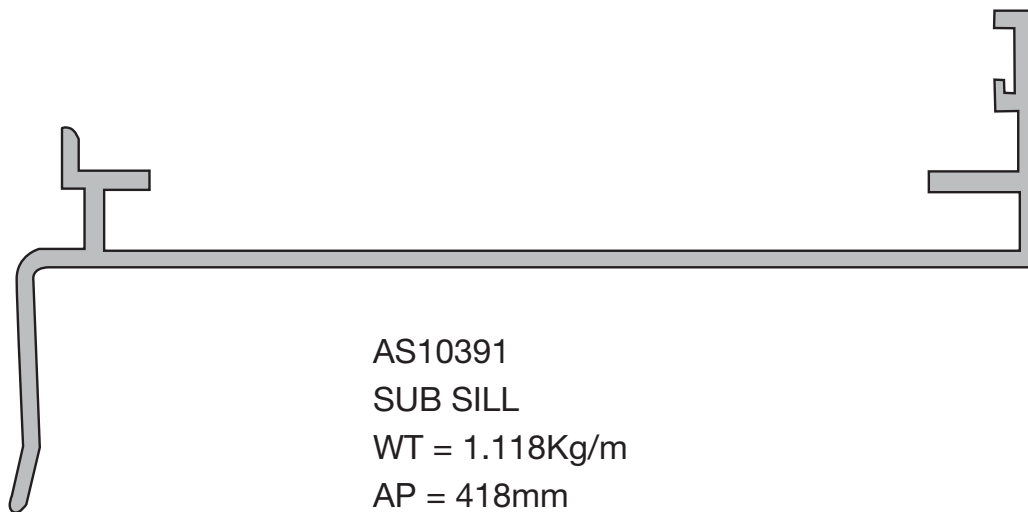


AS7112
GLAZING BEAD
WT = 0.207Kg/m
AP = 122mm
PP = 60mm

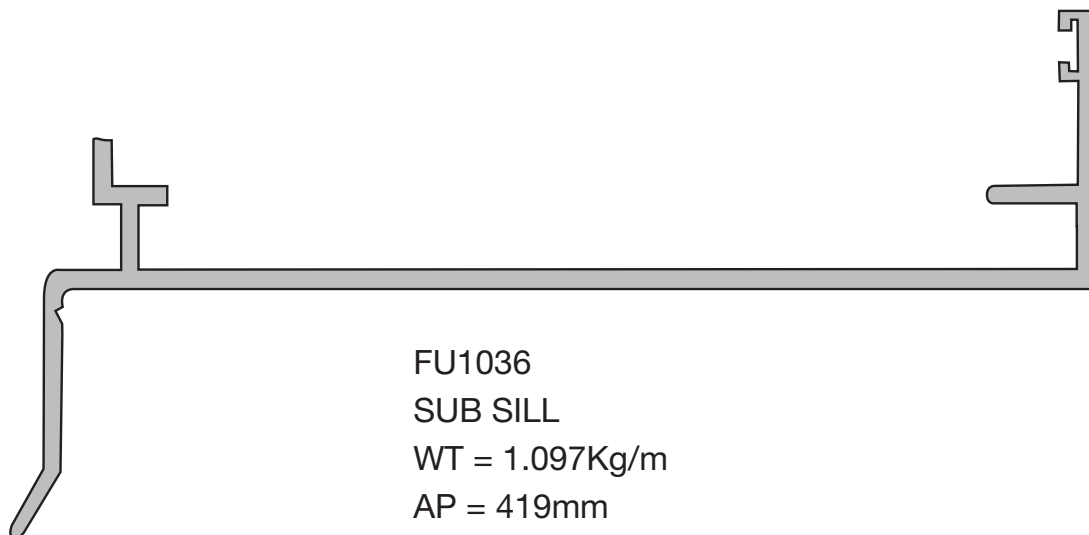
HUNTINGDALE FRAMING SYSTEM



ALCP0173
SUB SILL
WT = 0.921Kg/m
AP = 400mm
PP = 115mm

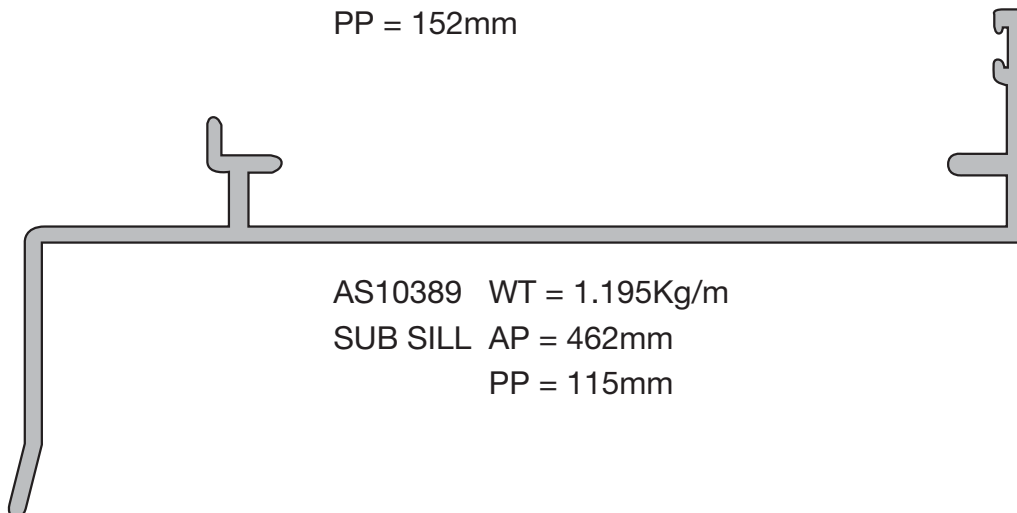
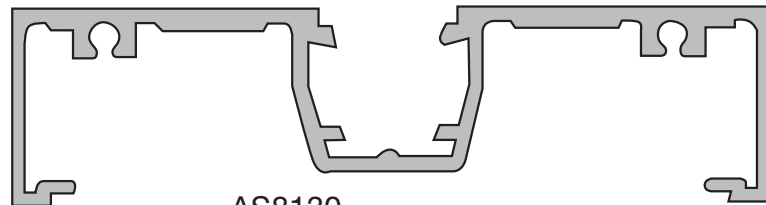
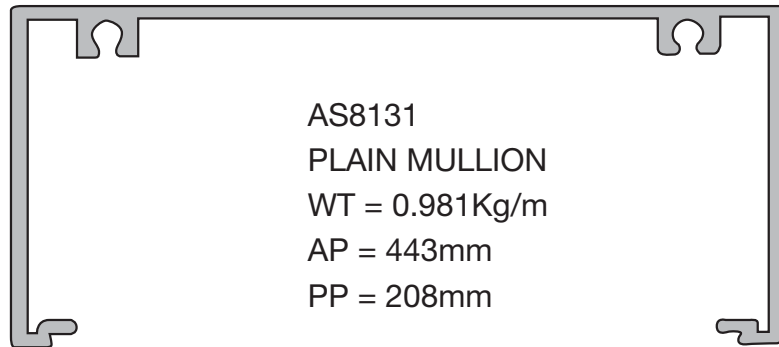
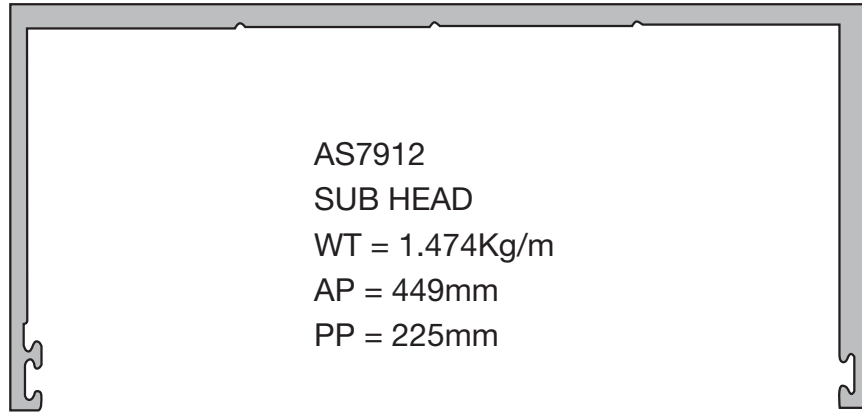


AS10391
SUB SILL
WT = 1.118Kg/m
AP = 418mm
PP = 100mm

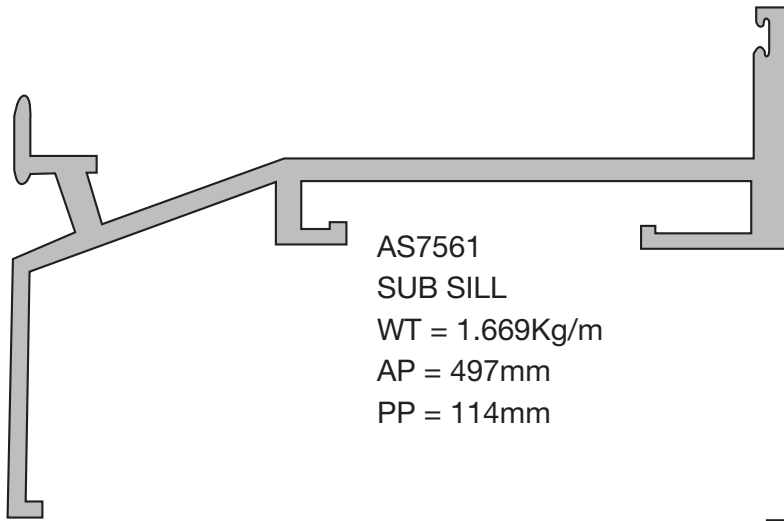


FU1036
SUB SILL
WT = 1.097Kg/m
AP = 419mm
PP = 100mm

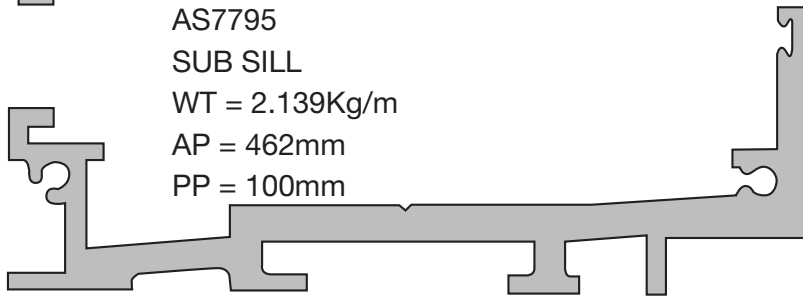
HUNTINGDALE FRAMING SYSTEM



HUNTINGDALE FRAMING SYSTEM

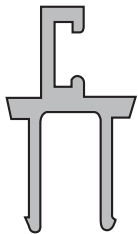


AS7561
SUB SILL
WT = 1.669Kg/m
AP = 497mm
PP = 114mm

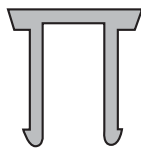


AS7795
SUB SILL
WT = 2.139Kg/m
AP = 462mm
PP = 100mm

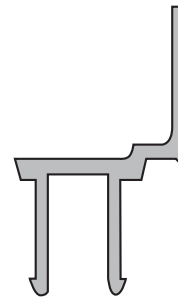
ADAPTORS



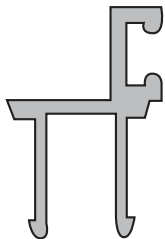
AS7114
DOOR STOP
WT = 0.291Kg/m
AP = 147mm
PP = 147mm



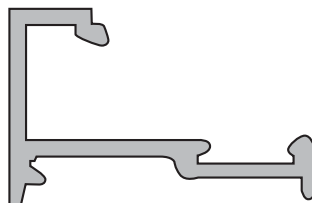
AS7113
POCKET FILLER
WT = 0.184Kg/m
AP = 108mm
PP = 100mm



AS7124
AWNING SASH ADAPTOR
WT = 0.30Kg/m
AP = 163mm
PP = 100mm



AS8279
DOOR STOP
WT = 0.297Kg/m
AP = 151mm
PP = 100mm

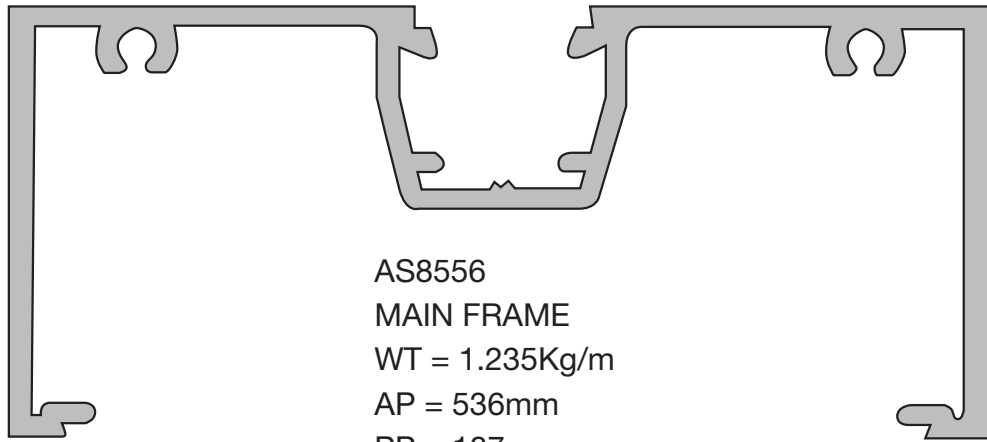


AS7118
GLAZING ADAPTOR
WT = 0.499Kg/m
AP = 187mm
PP = 100mm

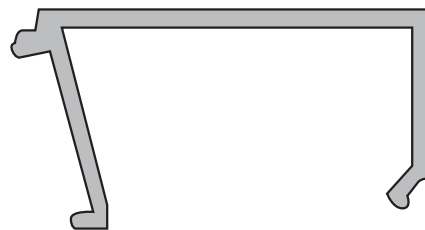


AS7112
GLAZING BEAD
WT = 0.207Kg/m
AP = 122mm
PP = 100mm

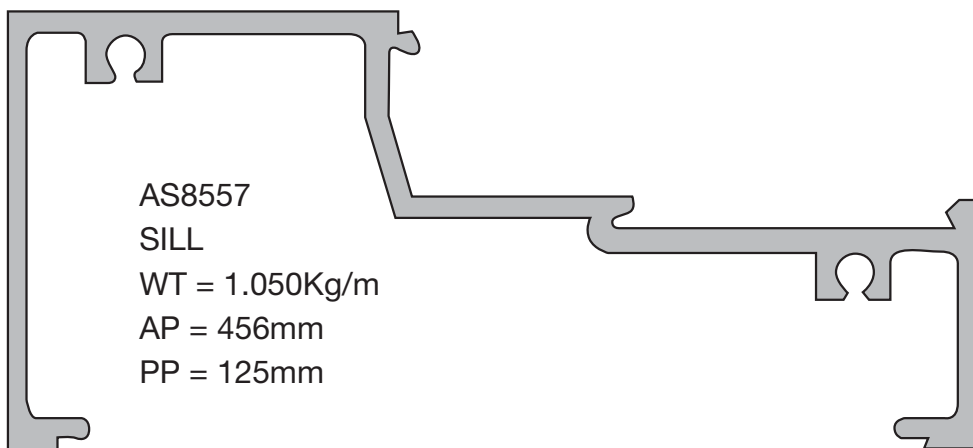
HUNTINGDALE FRAMING SYSTEM



AS8556
MAIN FRAME
WT = 1.235Kg/m
AP = 536mm
PP = 187mm

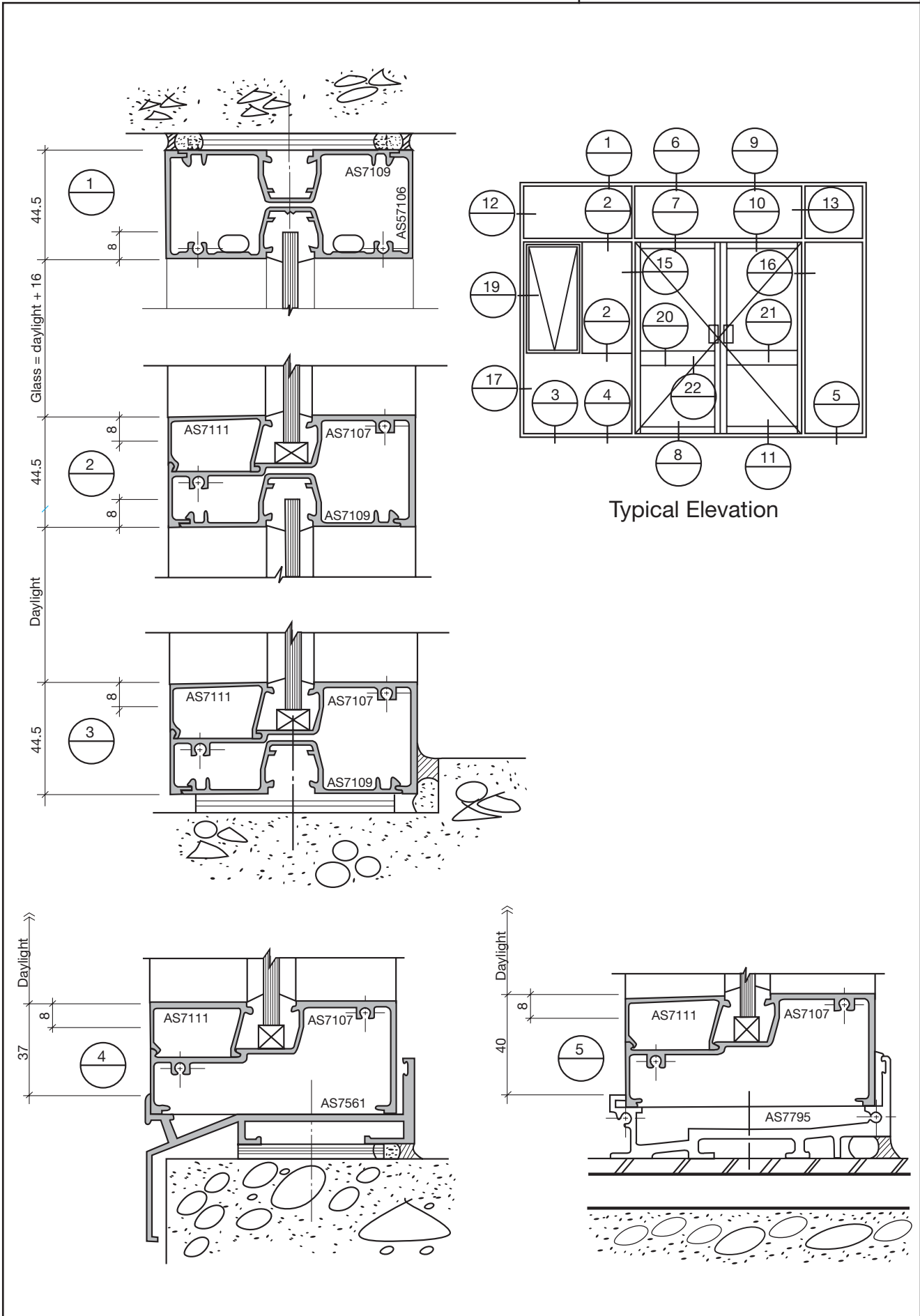


AS8558
GLAZING BEAD
WT = 0.277Kg/m
AP = 180mm
PP = 100mm

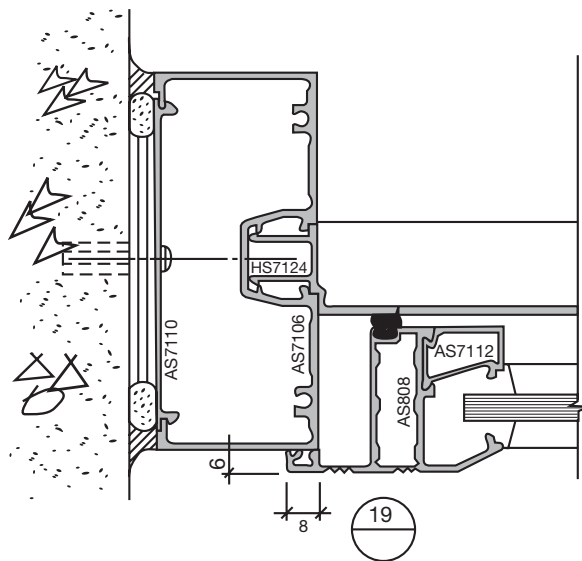
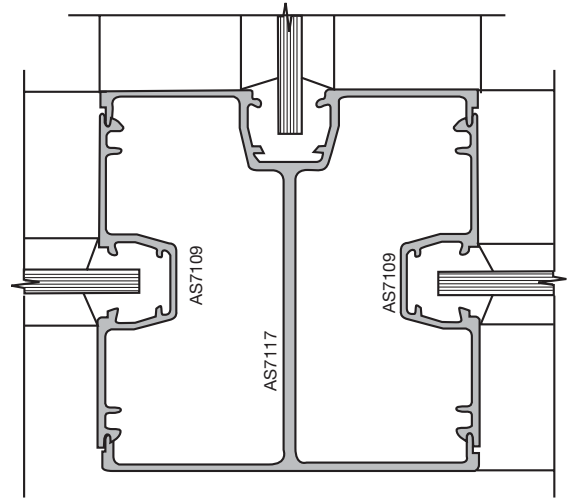
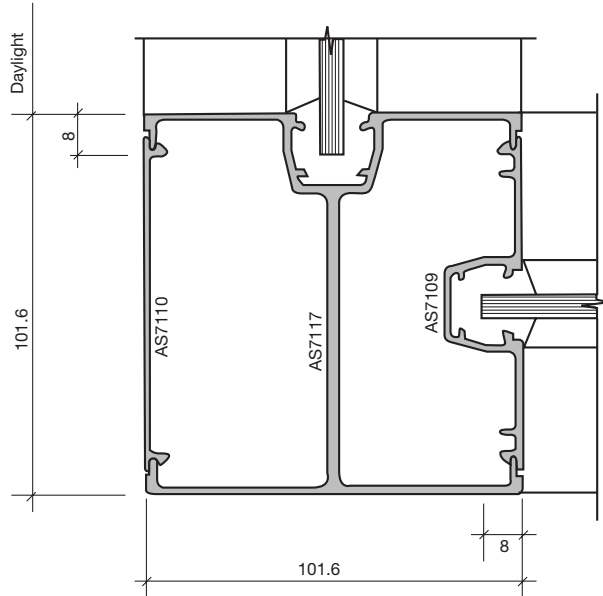


AS8557
SILL
WT = 1.050Kg/m
AP = 456mm
PP = 125mm

HUNTINGDALE FRAMING SYSTEM



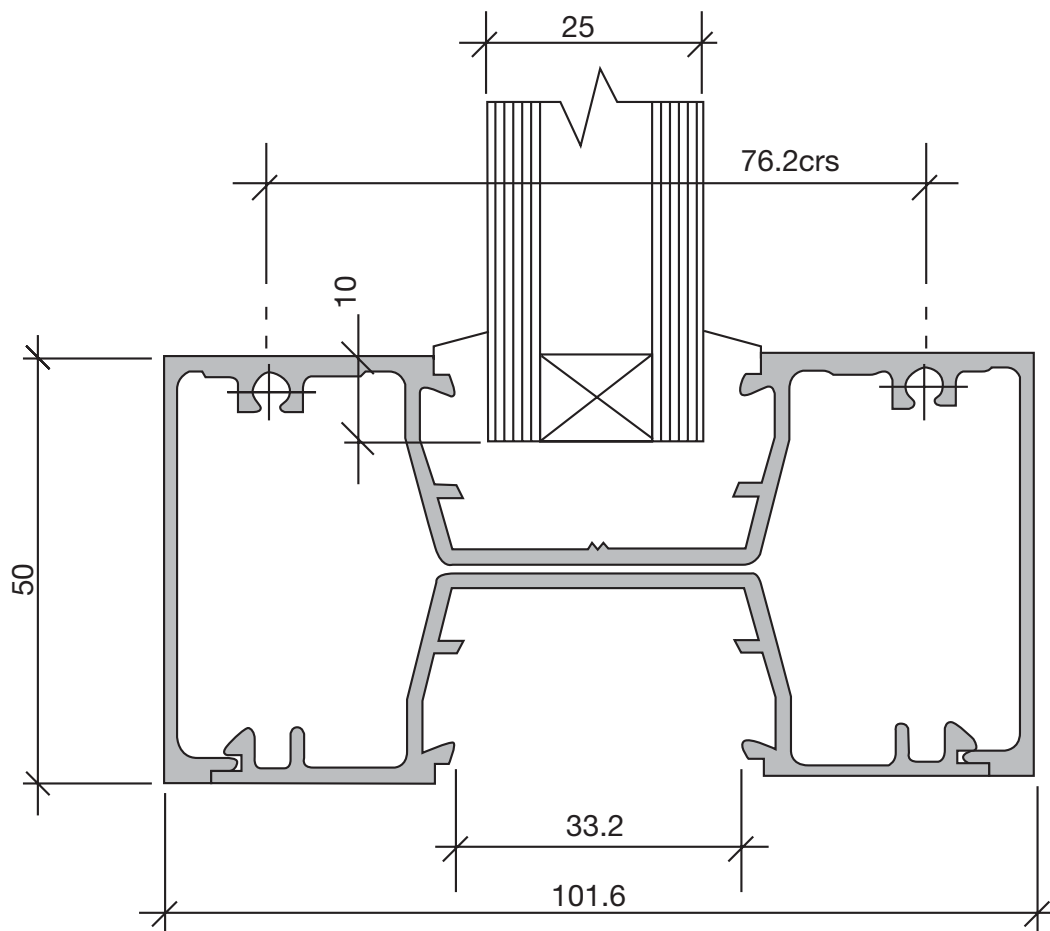
HUNTINGDALE FRAMING SYSTEM



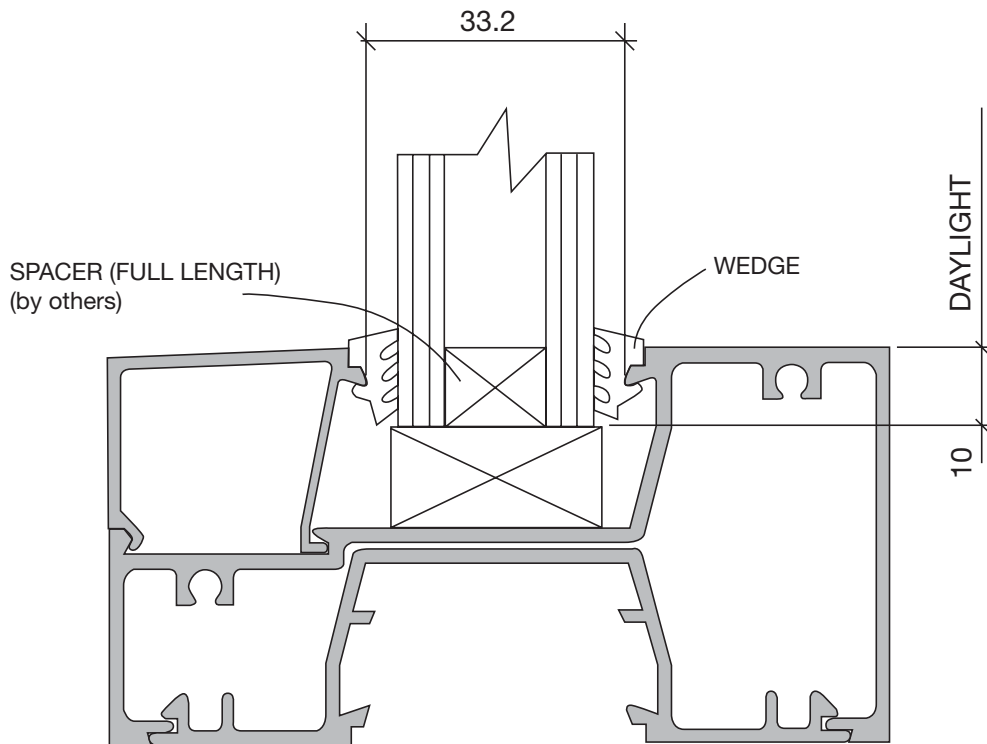
HUNTINGDALE FRAMING SYSTEM**FEATURES: (Series 403)**

- Simple to install
- Centre glazing
- Accepts 25mm double glazed units
- Heavier than 44.5mm for greater spans
- Built-in drainage minimising potential water leaks
- Flexibility of design-different mullion sections can be used
- All screw flutes are standard 10 gauge
- Designed for both wet and dry weather glazing
- Pocket grooves allows for flush glazing and contains the P.V.C. wedges

- NOTES:**
1. Sub-sills should be used in extreme weather conditions. Remember to fix stop ends.
 2. Dry glazing is not recommended for shopfronts in extreme weather conditions.
 3. Allow for mullion expansion or contraction in areas that are subject to thermal movement.



HUNTINGDALE FRAMING SYSTEM



GLASS

25 mm

DRY GLAZING

343-6 WEDGE Inside and outside

GLAZING NOTES:

DRY GLAZING: One side must have a removable bead. Position setting blocks (2) approx $\frac{1}{4}$ width in from the edge. Use silicone to eliminate them from moving. Place glass panel into the pocket resting on the setting blocks. Position the glass and install temporary wedges on both sides of glass.

Cut wedges approx. 5% oversize and place in warm soapy water.

Insert wedge starting from ends. Remove temporary ones as you go.

Fit wedges to both sides before proceeding to either the sill or head.

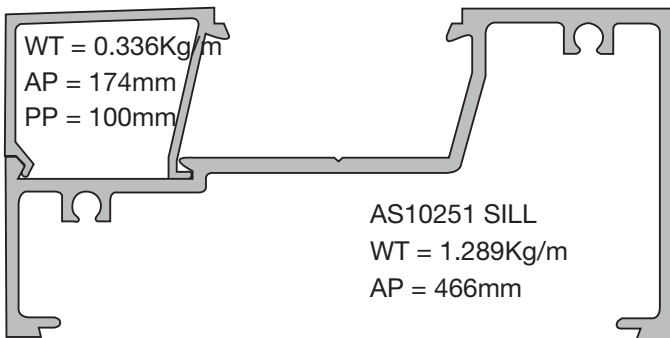
Seal all corners with black silicone.

Glazing from one side is possible using captive wedges. These are inserted into one side of the pocket, the glass is then inserted and wedge fitted to the other side.

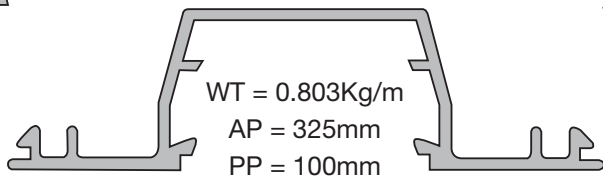
HUNTINGDALE FRAMING SYSTEM



AS10252 BEAD



AS10251 SILL
 WT = 1.289Kg/m
 AP = 466mm

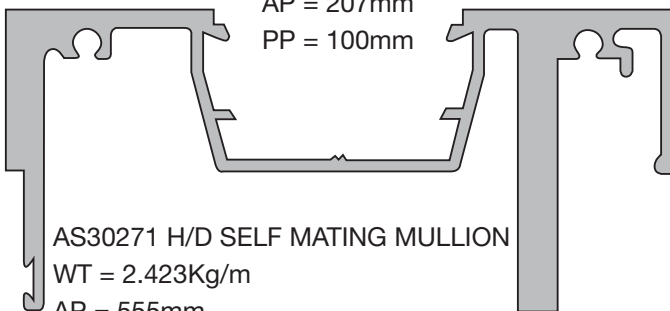


AS10253 GLAZING ADAPTOR

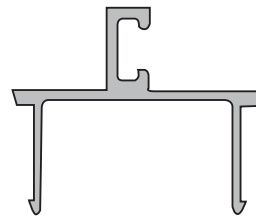


AS7110 FLUSH FILLER

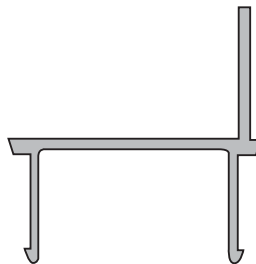
WT = 0.492Kg/m
 AP = 207mm
 PP = 100mm



AS30271 H/D SELF MATING MULLION
 WT = 2.423Kg/m
 AP = 555mm
 PP = 112mm



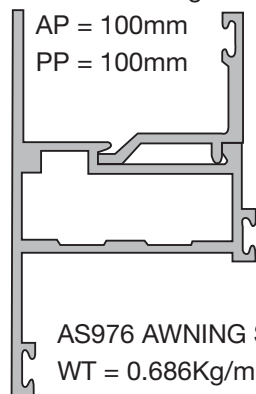
AS10254 DOOR STOP
 WT = 0.370Kg/m
 AP = 186mm
 PP = 100mm



AS30104 AWNING SASH STOP
 WT = 0.340Kg/m
 AP = 187mm
 PP = 100mm

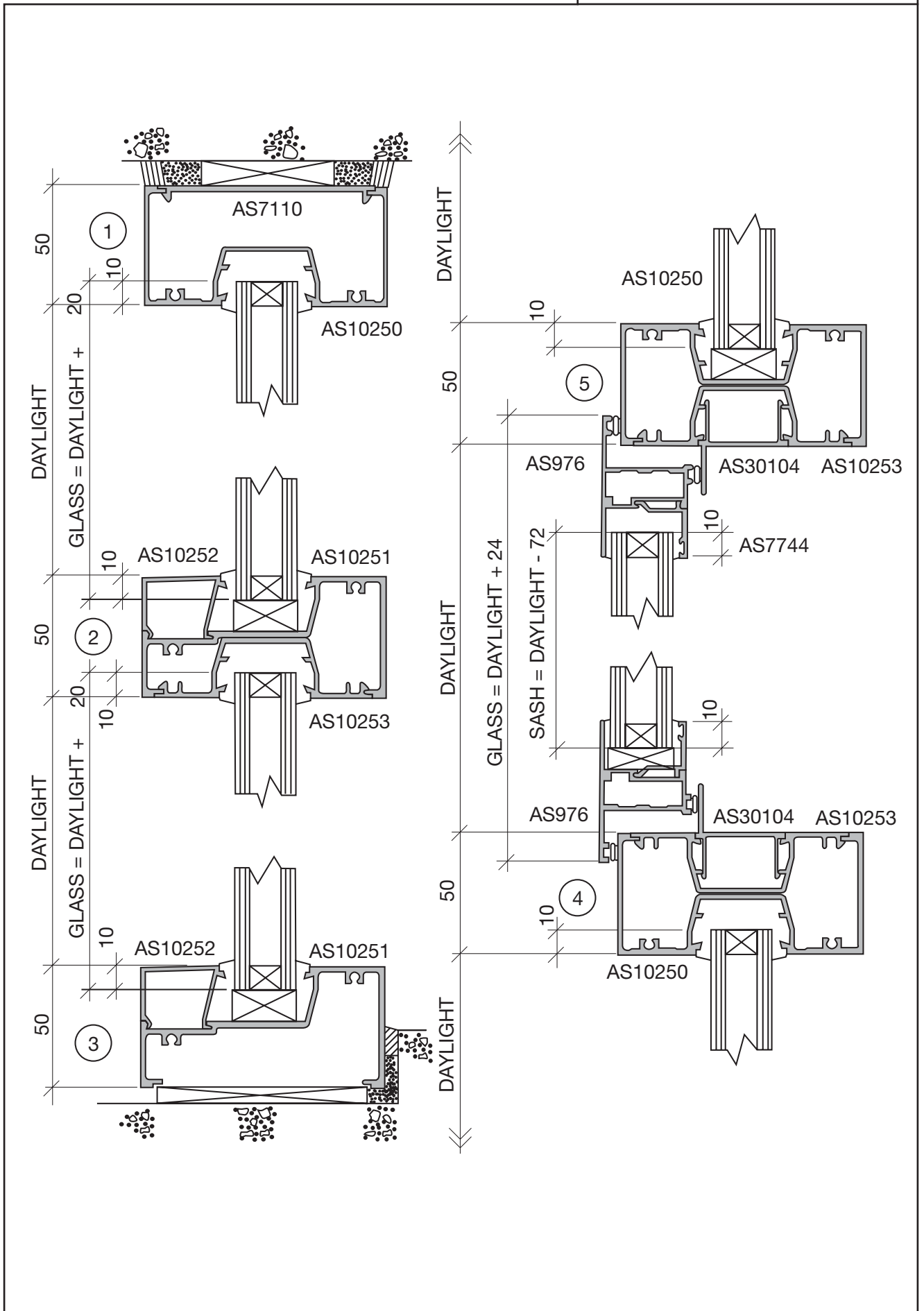
AS7744 25mm BEAD

WT = 0.184Kg/m
 AP = 100mm
 PP = 100mm

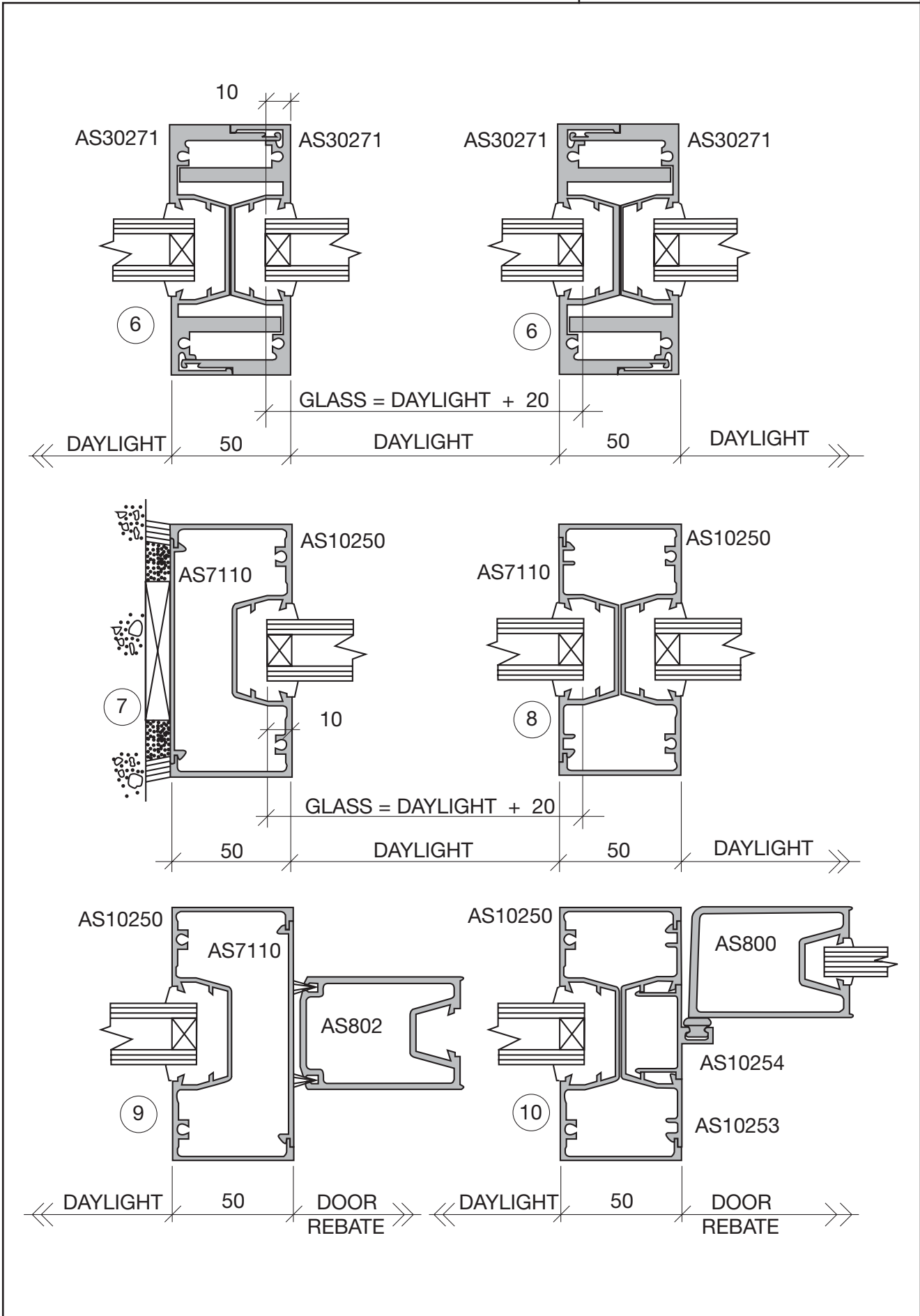


AS976 AWNING SASH
 WT = 0.686Kg/m
 AP = 220mm
 PP = 154mm

HUNTINGDALE FRAMING SYSTEM



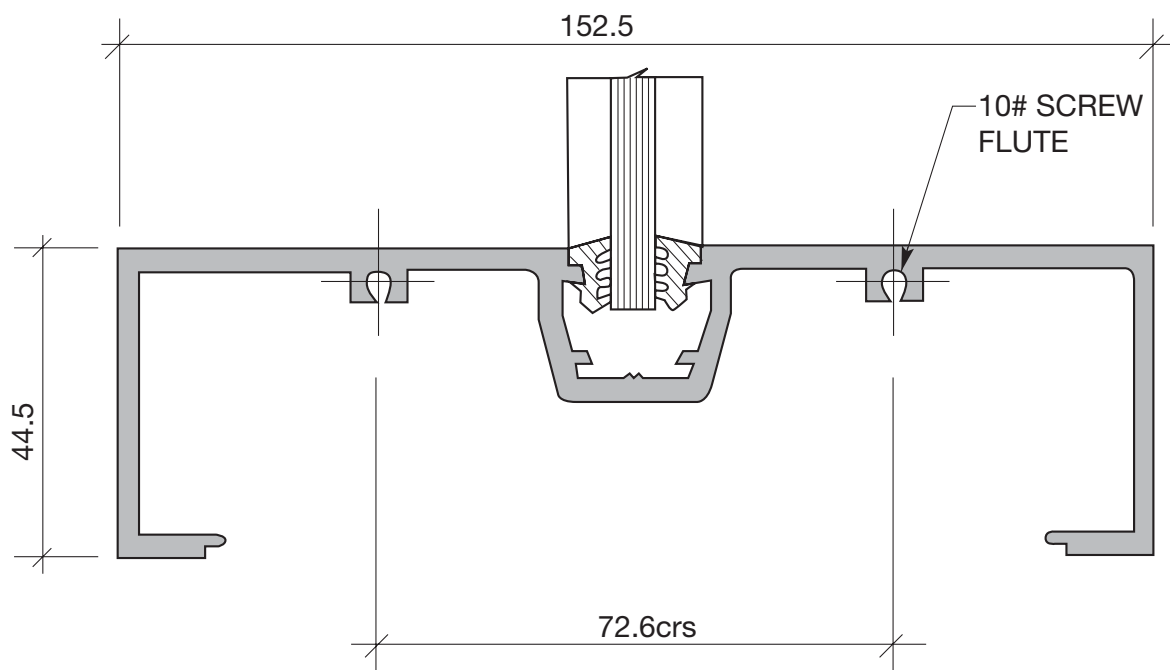
HUNTINGDALE FRAMING SYSTEM



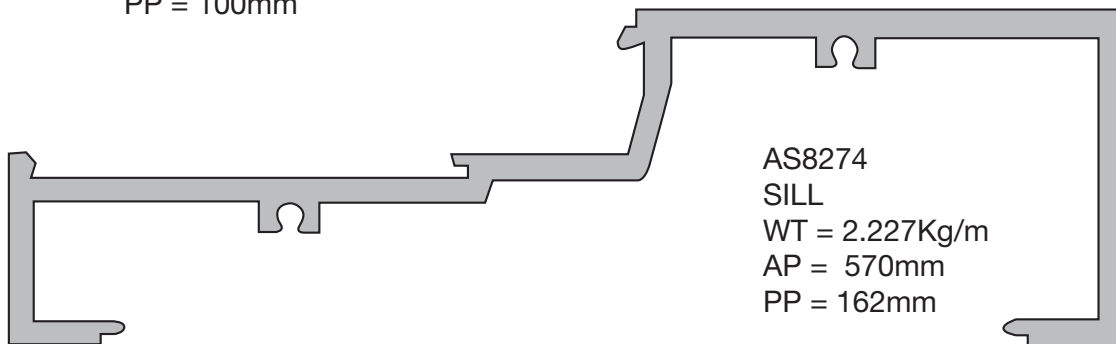
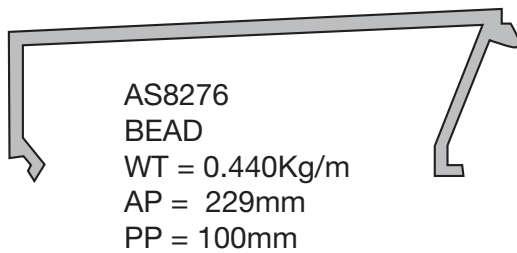
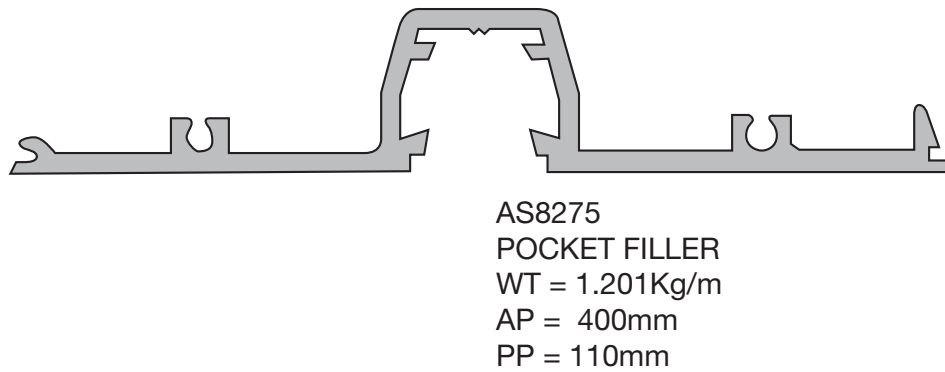
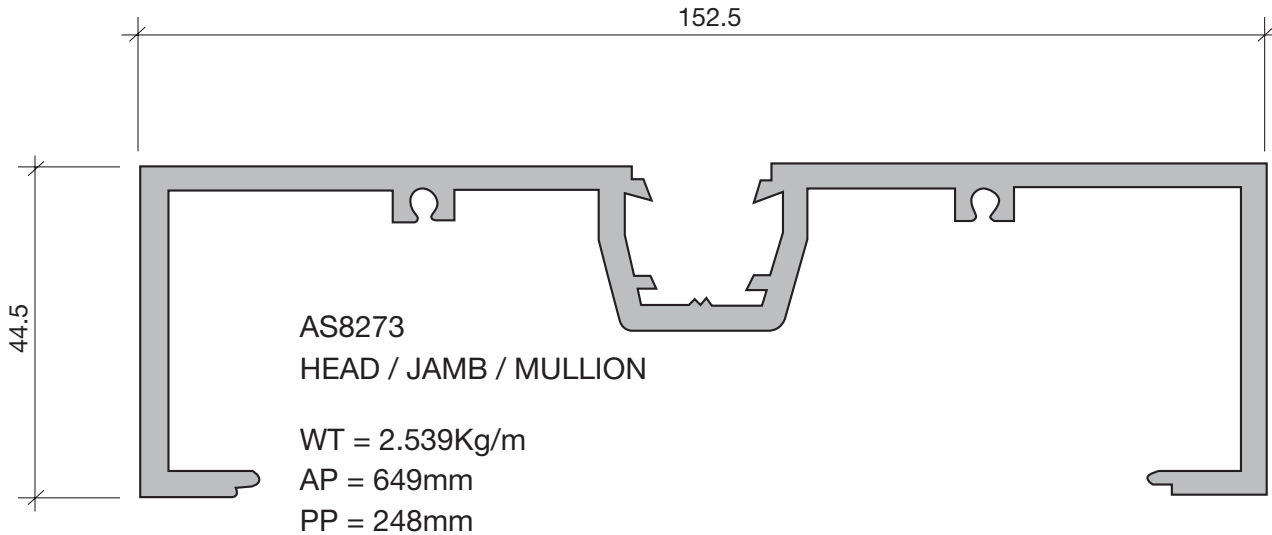
HUNTINGDALE FRAMING SYSTEM**FEATURES: (Series 601)**

- Simple to install
- Centre glazing
- Accepts glass thickness from 5mm to 10mm
- Frame size 152mm x 44.5mm designed for greater spans
- Built-in drainage minimising potential water leaks
- All screw flutes are standard 10 gauge
- Designed for both wet and dry weather glazing
- Pocket grooves allows for flush glazing and contains the P.V.C. wedges

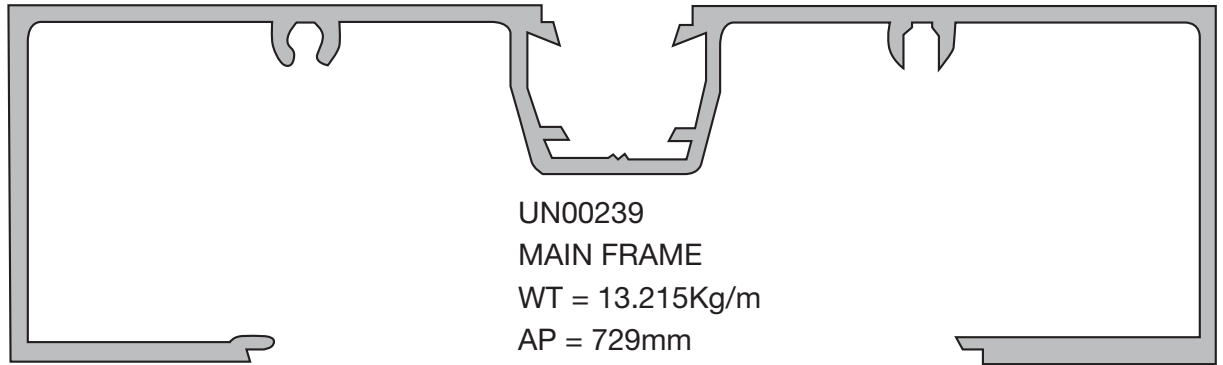
- NOTES:**
1. Sub-sills should be used in extreme weather conditions. Remember to fix stop ends
 2. Dry glazing is not recommended for shopfronts in extreme weather conditions
 3. Allow for mullion expansion or contraction in areas that are subject to thermal movement



HUNTINGDALE FRAMING SYSTEM



HUNTINGDALE FRAMING SYSTEM



UN00239
MAIN FRAME
WT = 13.215Kg/m
AP = 729mm
PP = 310mm



UN00242
SELF MATING MULLION
WT = 12.149Kg/m
AP = 577mm
PP = 225mm

HUNTINGDALE FRAMING SYSTEM

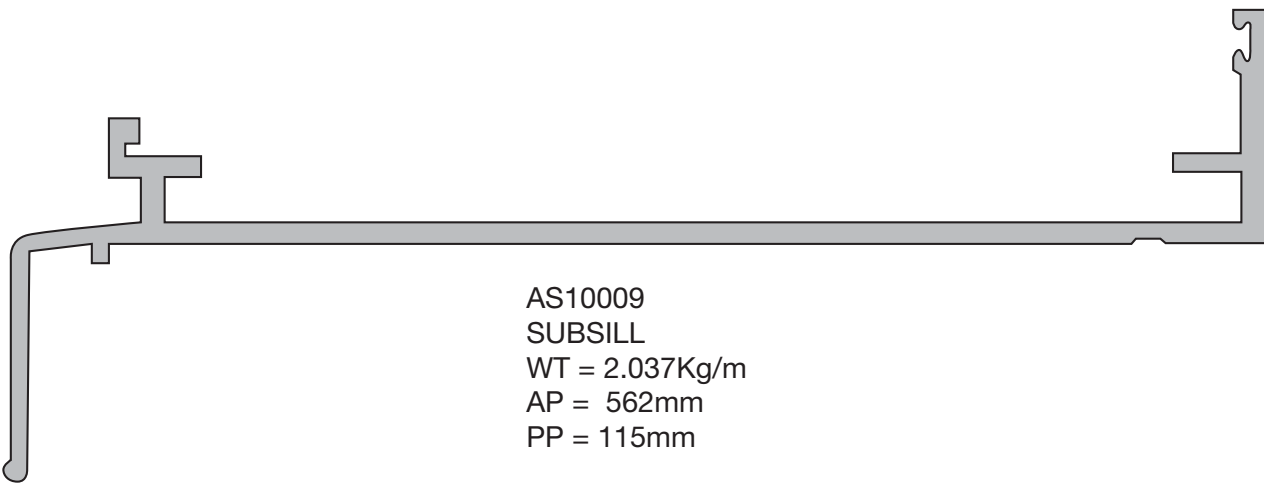


AS8277
SELF MATING MULLION
WT = 2.198Kg/m
AP = 572mm
PP = 111mm



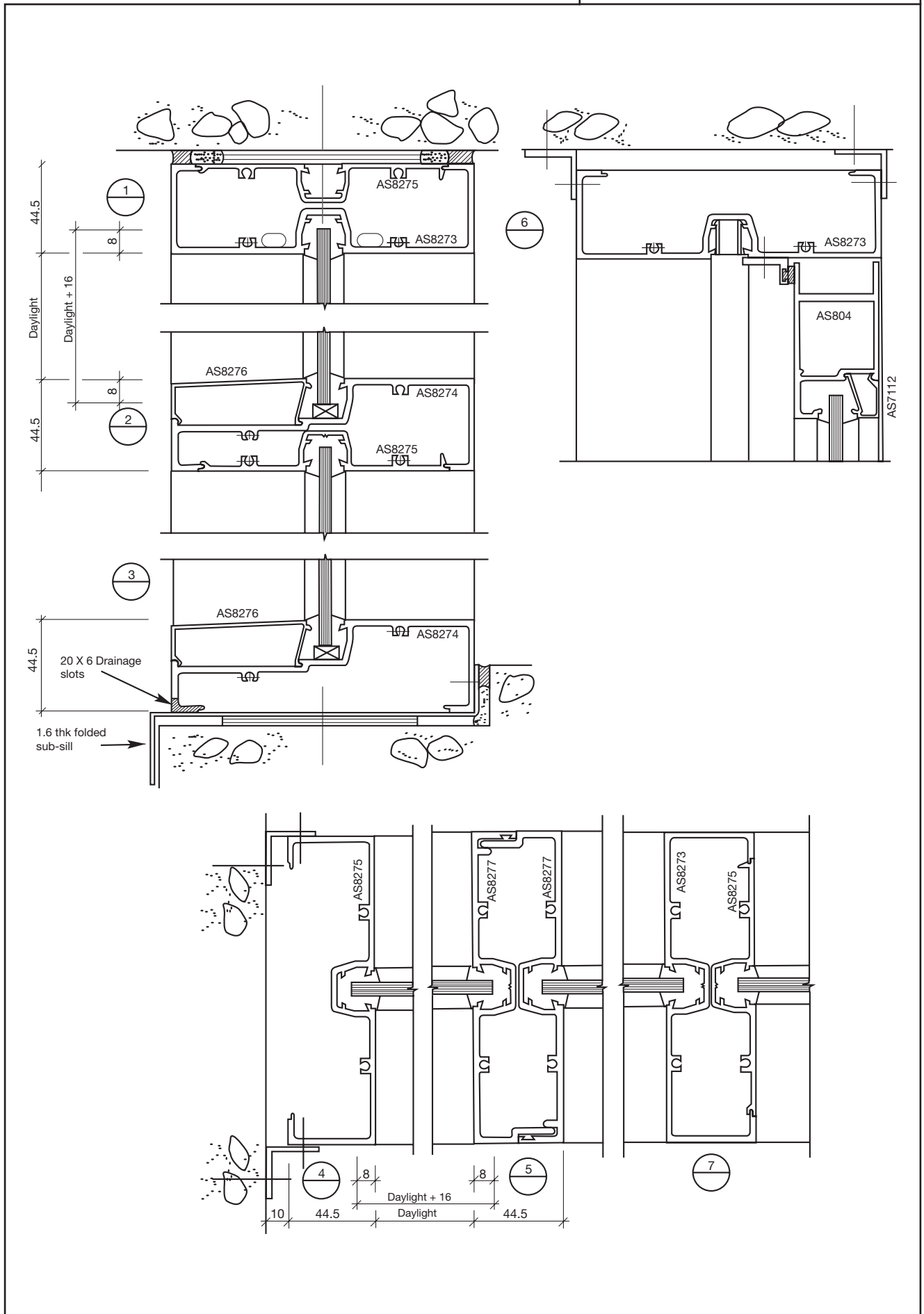
AS7345
FLAT FILLER

WT = 0.930Kg/m
AP = 310mm
PP = 127mm

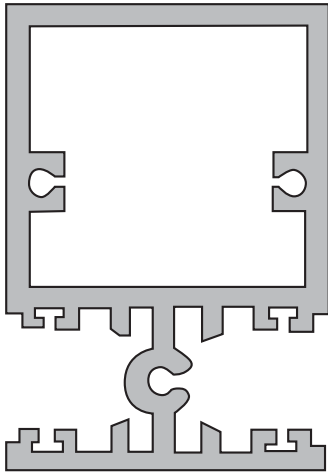


AS10009
SUBSILL
WT = 2.037Kg/m
AP = 562mm
PP = 115mm

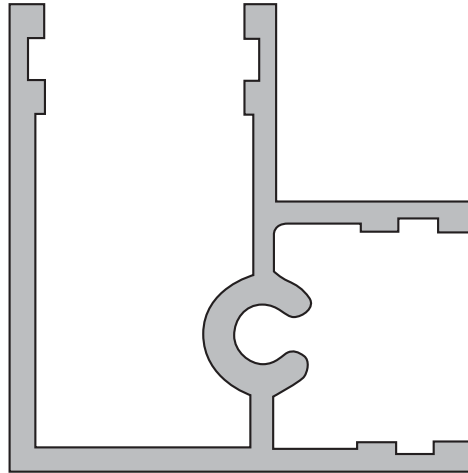
HUNTINGDALE FRAMING SYSTEM



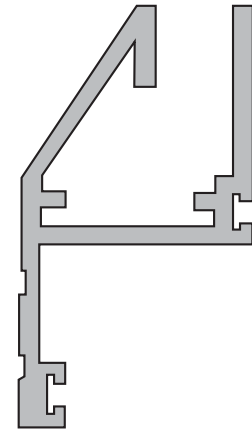
HUNTINGDALE FRAMING SYSTEM



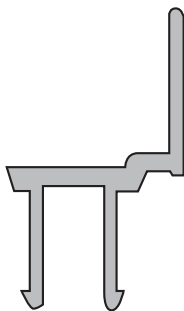
AS405
GLAZING BAR MULLION
WT = 1.732Kg/m
AP = 393mm
PP = 200mm



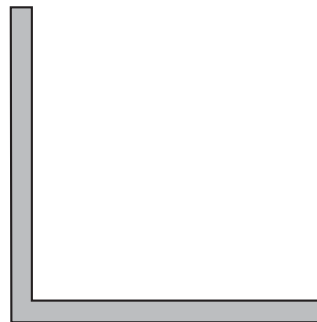
AS4274
2 WAY CORNER
WT = 0.472Kg/m
AP = 237mm
PP = 100mm



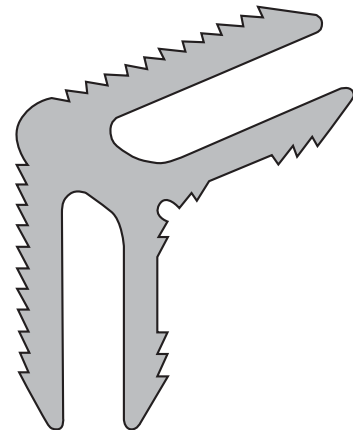
AS6355
AWNING SASH
WT = 0.865Kg/m
AP = 307mm
PP = 166mm



AS7124
GLAZING BAR MULLION
WT = 0.300Kg/m
AP = 164mm
PP = 100mm



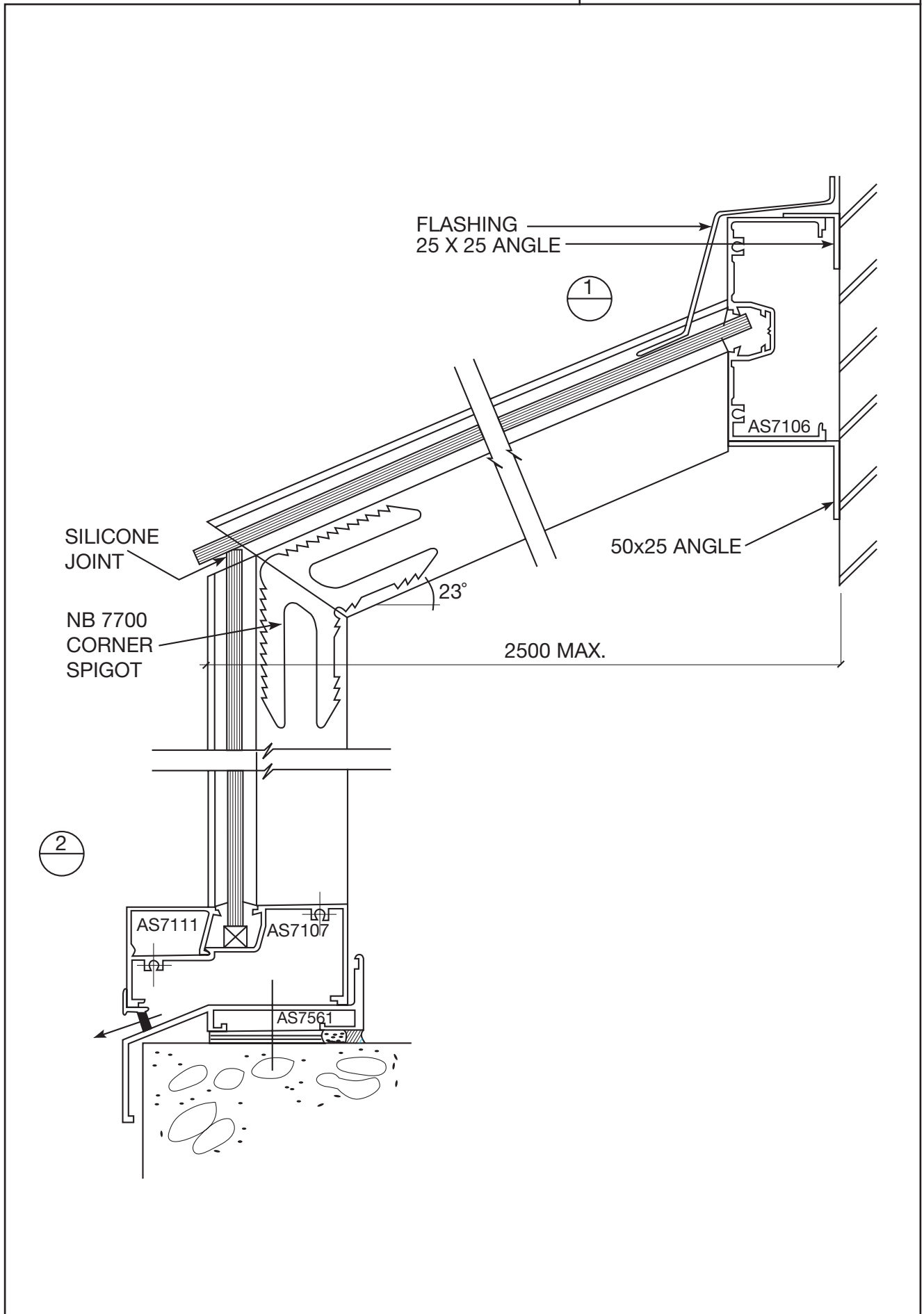
NB 1104
AWNING SASH
CORNER STAKE
WT = 0.851Kg/m
AP = 204mm
PP = N/A



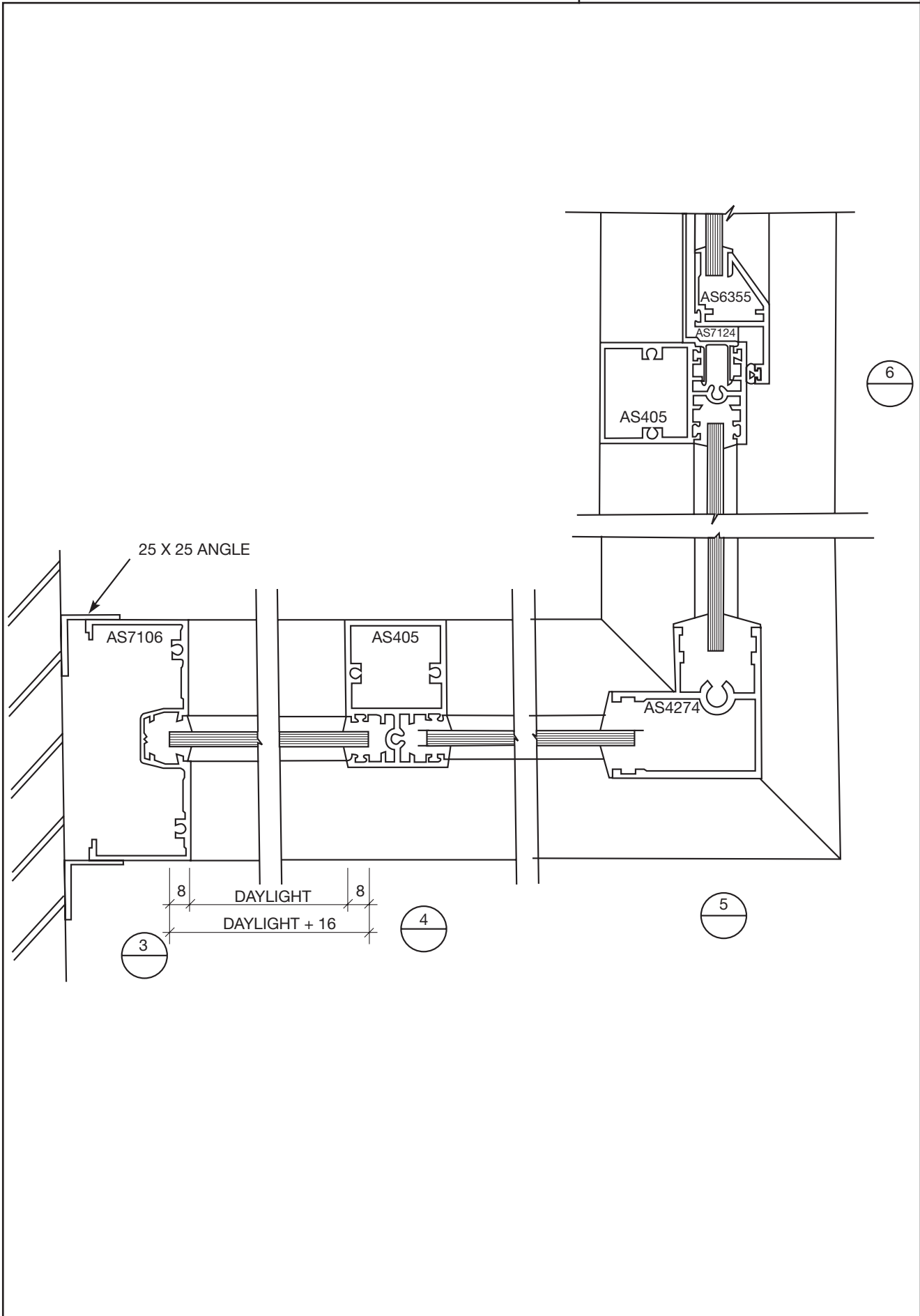
NB 7700
GLAZING BAR
CORNER STAKE
WT = 6.156Kg/m
AP = 551mm
PP = N/A

| | |
|-------------|--------------|
| Section No: | 4 |
| Page No: | 23 |
| Date: | 01.05.05 |
| Replaces: | 2003 EDITION |

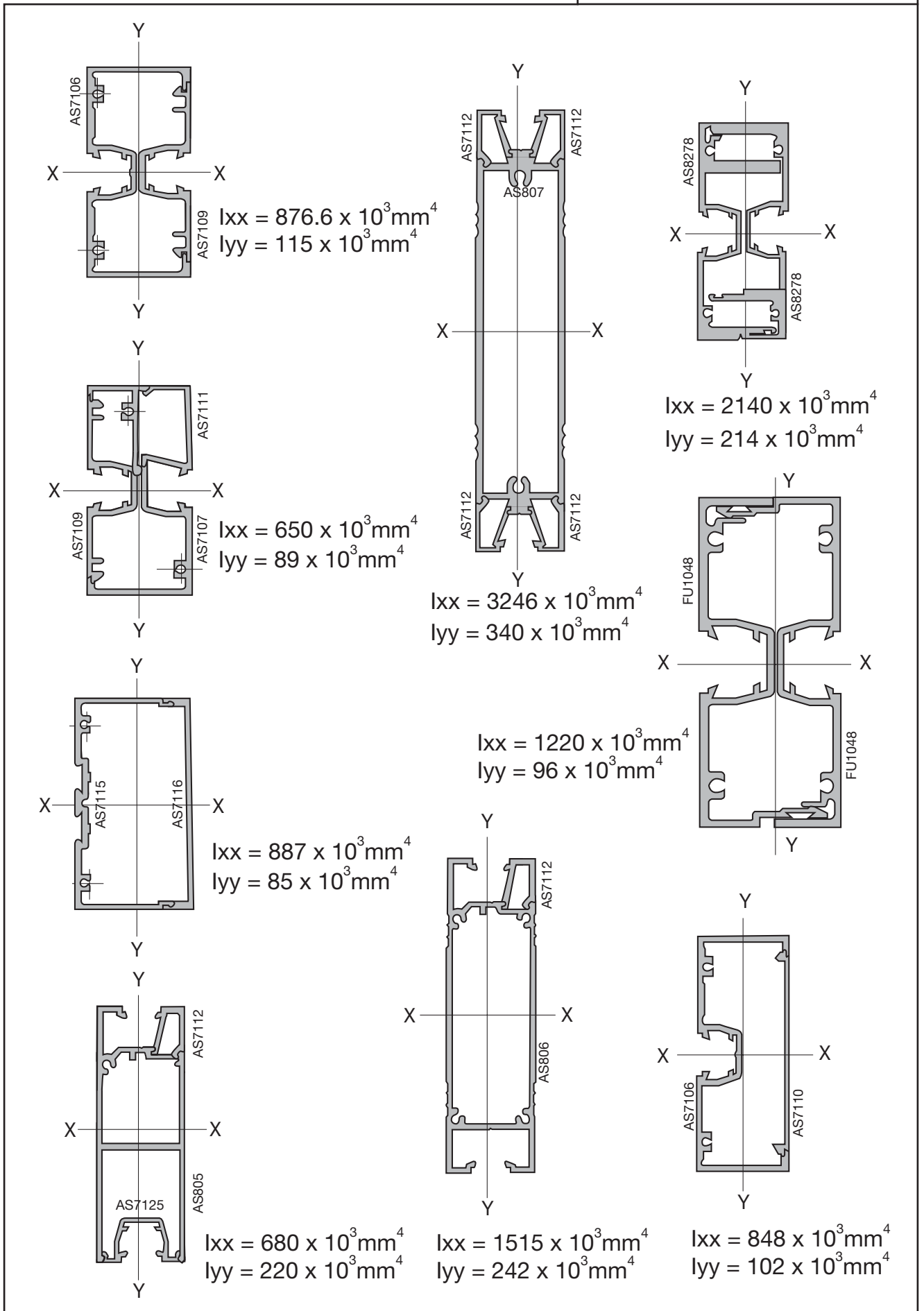
HUNTINGDALE FRAMING SYSTEM



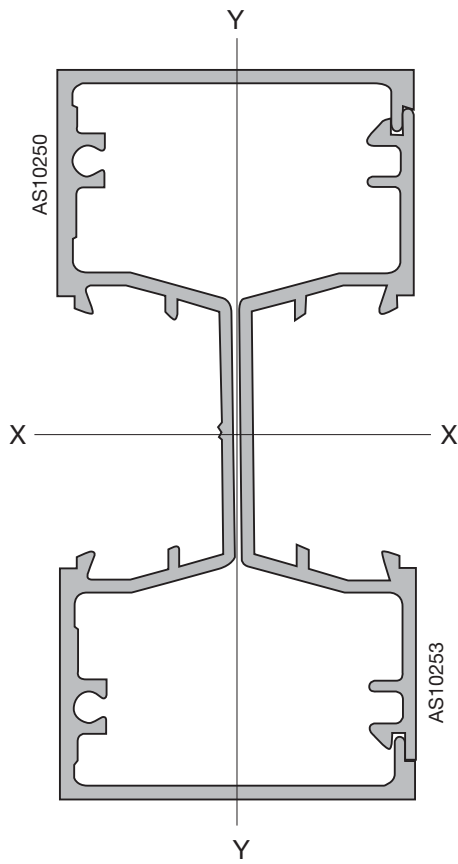
HUNTINGDALE FRAMING SYSTEM



HUNTINGDALE FRAMING SYSTEM

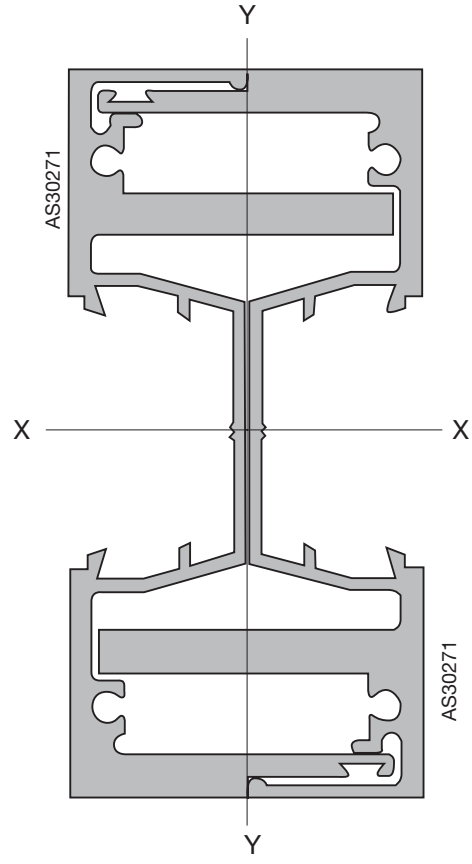


HUNTINGDALE FRAMING SYSTEM



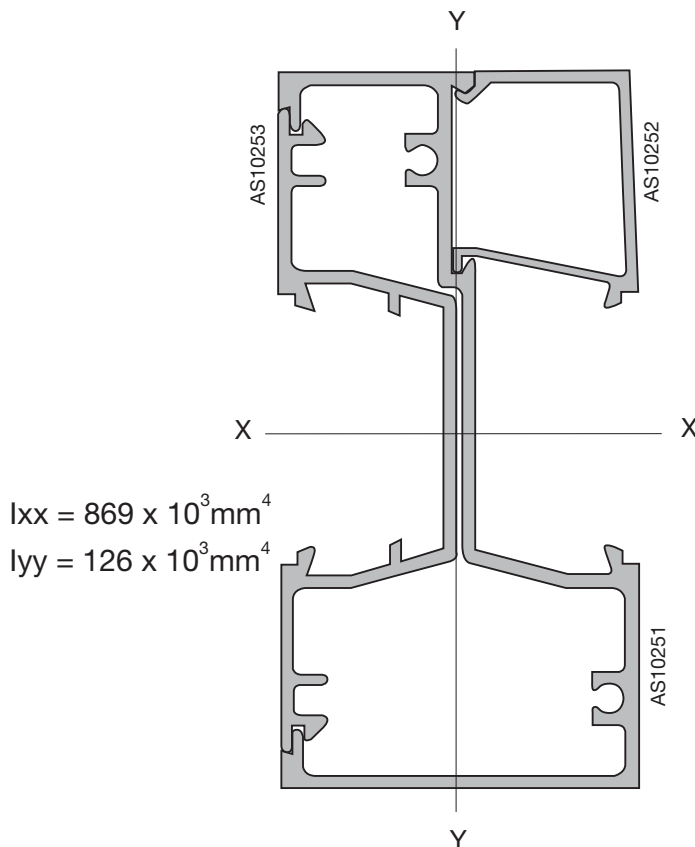
$$I_{xx} = 976 \times 10^3 \text{ mm}^4$$

$$I_{yy} = 154 \times 10^3 \text{ mm}^4$$



$$I_{xx} = 2290 \times 10^3 \text{ mm}^4$$

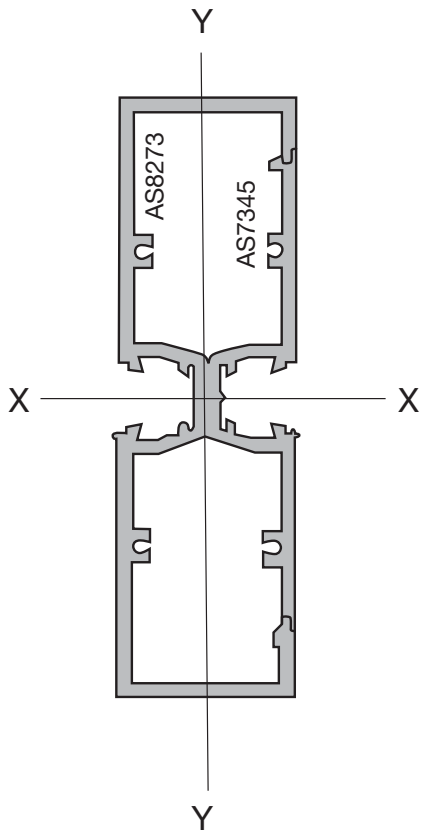
$$I_{yy} = 276 \times 10^3 \text{ mm}^4$$



$$I_{xx} = 869 \times 10^3 \text{ mm}^4$$

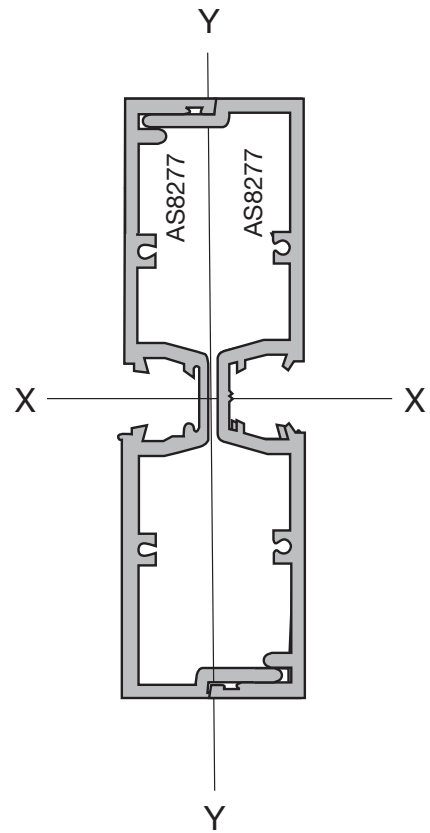
$$I_{yy} = 126 \times 10^3 \text{ mm}^4$$

HUNTINGDALE FRAMING SYSTEM



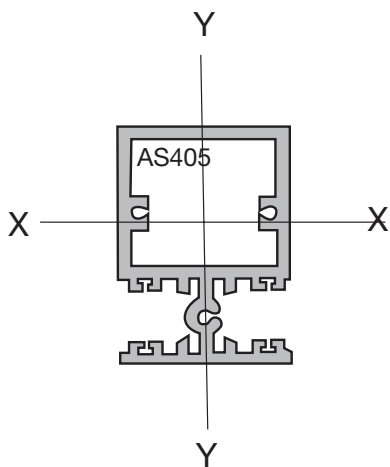
$$I_{xx} = 3194 \times 10^3 \text{ mm}^4$$

$$I_{yy} = 190 \times 10^3 \text{ mm}^4$$



$$I_{xx} = 4020 \times 10^3 \text{ mm}^4$$

$$I_{yy} = 135 \times 10^3 \text{ mm}^4$$



$$I_{xx} = 210 \times 10^3 \text{ mm}^4$$

$$I_{yy} = 137 \times 10^3 \text{ mm}^4$$



COMMERCIAL FRAMING SYSTEMS PRODUCT MANUAL

SECTION 5.

PAGES – 01 to 16

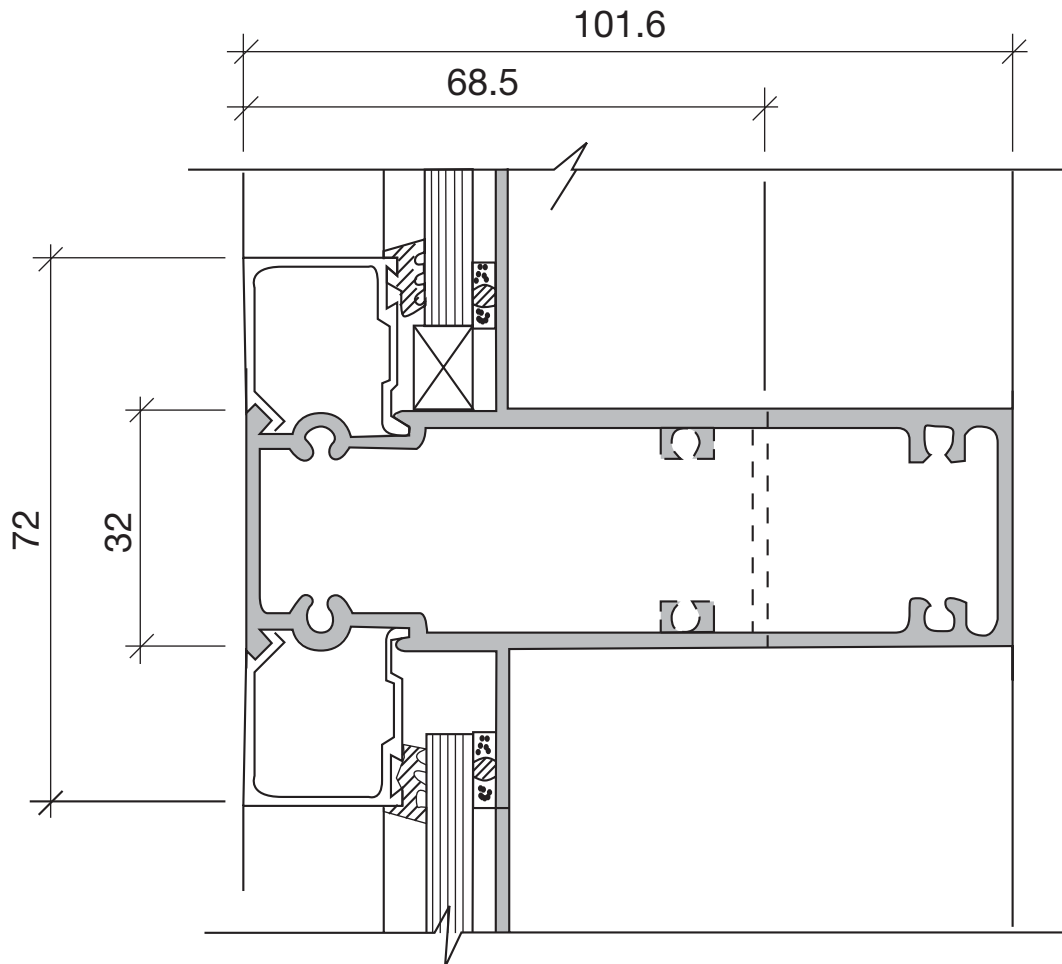
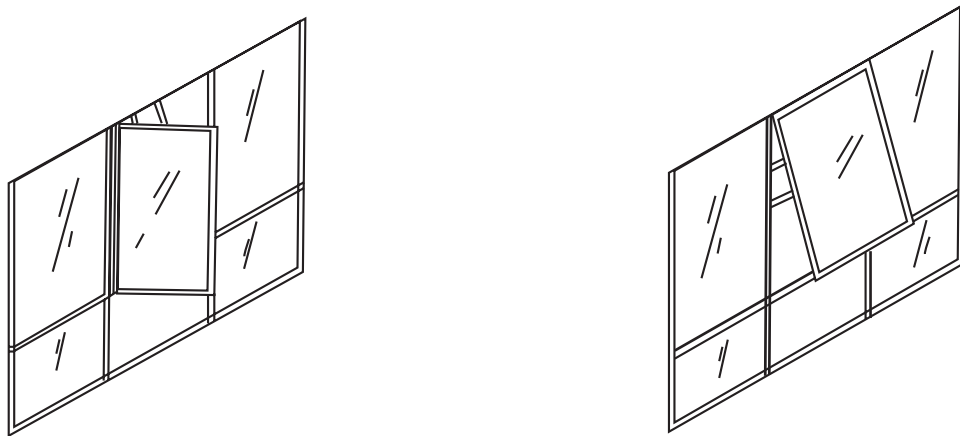
• ST. GEORGE FRAMING SYSTEM

| | |
|---|----------|
| • FEATURES – EXTERNALLY GLAZED | P1 |
| • NOTES – EXTERNALLY GLAZED | P2 |
| • COMPONENTS – EXTERNALLY GLAZED | P3 - 6 |
| • SIZE LIMITATIONS – WINDOW/STAYS | P7 |
| • STAY SELECTION CHARTS | P8 |
| • ASSEMBLY DRAWINGS – EXTERNALLY GLAZED | P9 - 10 |
| • FEATURES – INTERNALLY GLAZED | P11 |
| • NOTES – INTERNALLY GLAZED | P12 |
| • COMPONENTS – INTERNALLY GLAZED | P13 |
| • ASSEMBLY DRAWINGS – INTERNALLY GLAZED | P14 - 15 |
| • STRUCTURAL PROPERTIES OF SECTIONS | P16 |

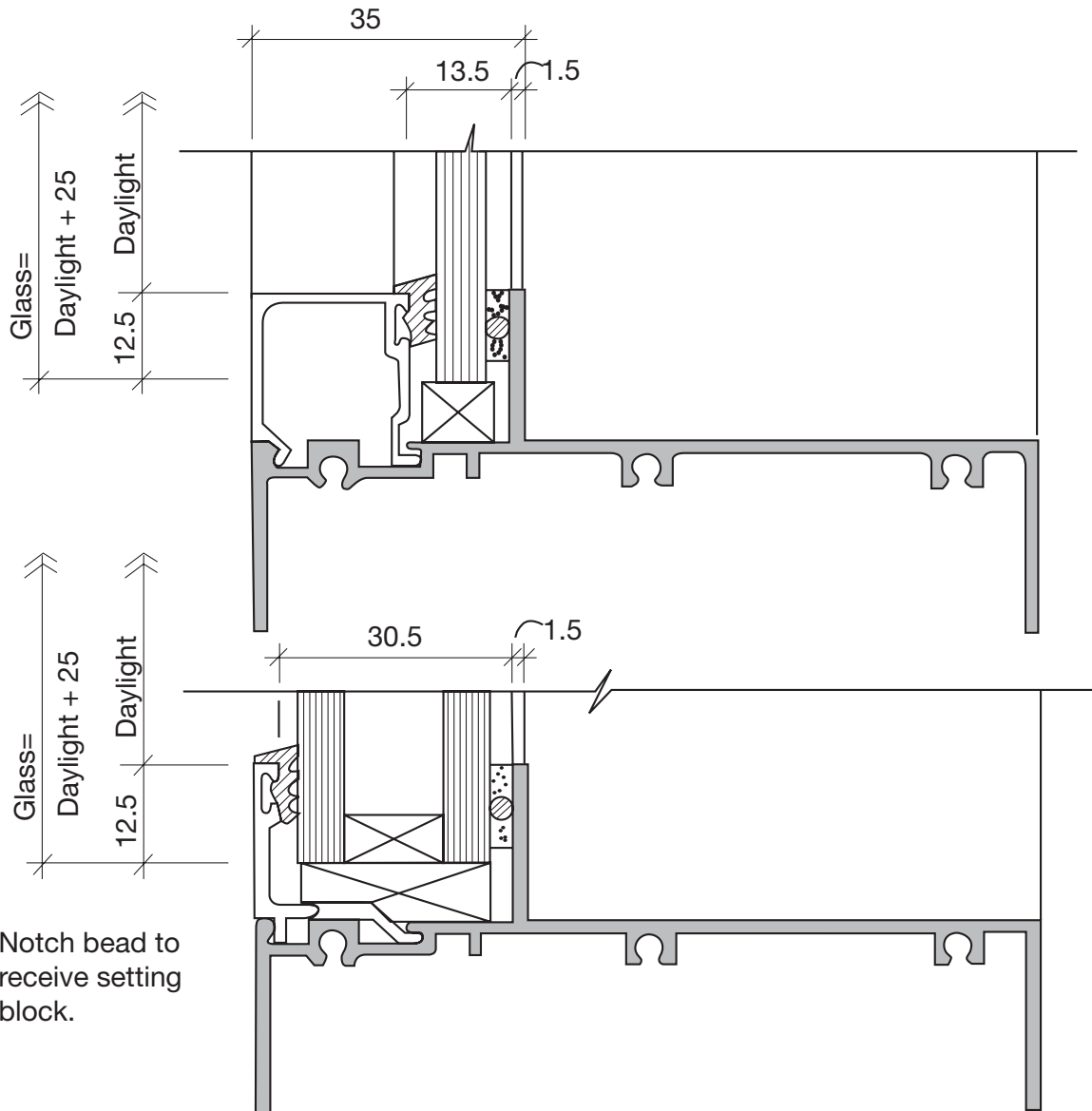
ST. GEORGE FRAMING SYSTEM

FEATURES:

- **Highly versatile – permitting a wide range of design freedom**
- **High performance commercial class window and framing system**
- **Accepts glass thickness from 4 to 14mm and 25mm**
- **Corner stakes with double seal sash**
- **Aesthetics completely changed by using square or bevelled beads**



ST. GEORGE FRAMING SYSTEM



GLAZING POCKET DESCRIPTION

Glass 4 to 14mm and 25mm thick

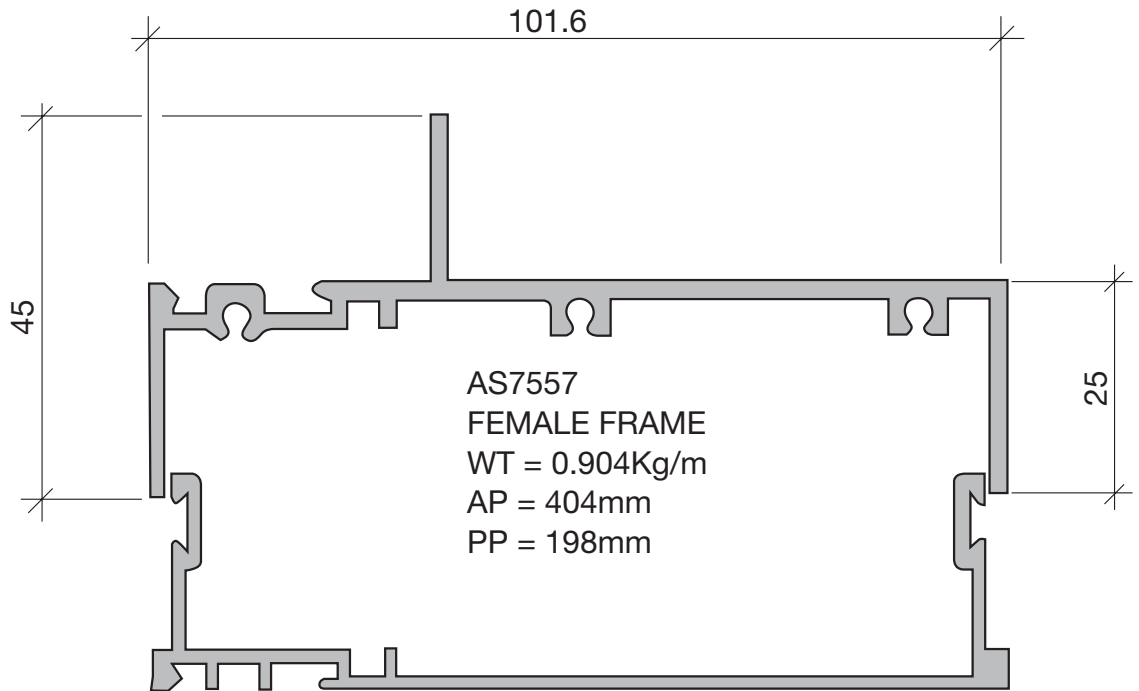
Glass cutting size... Daylight + 25mm

| MATERIAL | BEADS | GLASS THICKNESS | TAPE SIZE | SHIM DIA. | WEDGE No |
|---------------------|-------------------|-----------------|-----------|-----------|----------|
| All framing members | AE7891 | 4mm | 8 x 5 | 3mm | 343-6 |
| | | 5mm | 8 x 5 | 3mm | 343-8 |
| | | 6mm | 8 x 5 | 3mm | 114-10 |
| | | 8mm | 8 x 5 | 3mm | Y113 |
| | NB10172 NB7744 | 12mm | 8 x 5 | 3mm | 114-10 |
| | | 25mm | 8 x 5 | 3mm | Y113 |

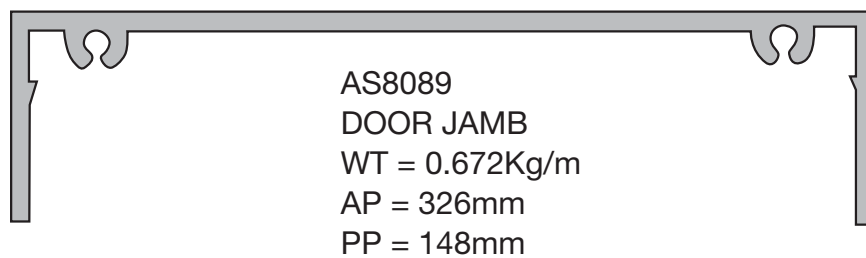
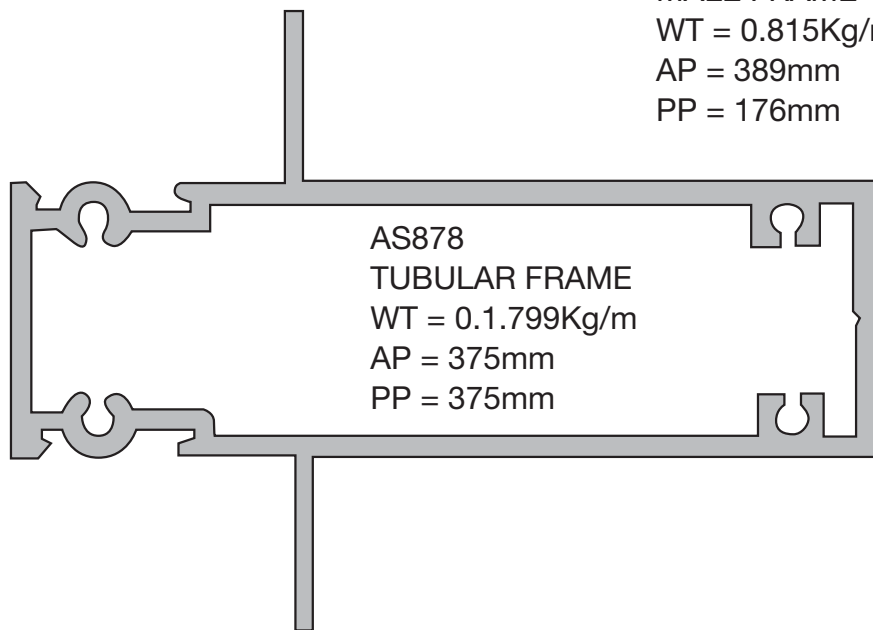
NOTES:

because of tolerances on metal, glass and glazing materials, these recommendations should be taken as a guide only and should be verified and modified if required to suit actual job materials

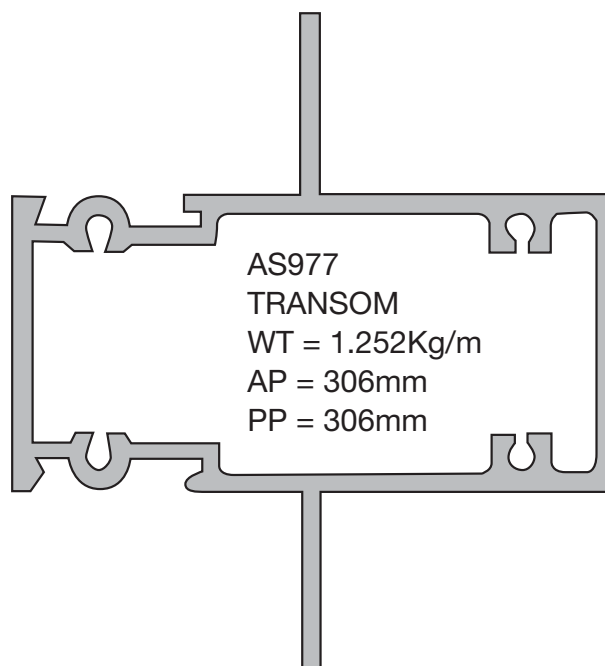
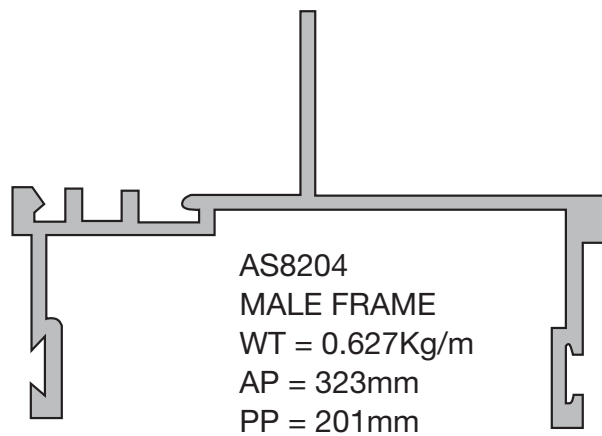
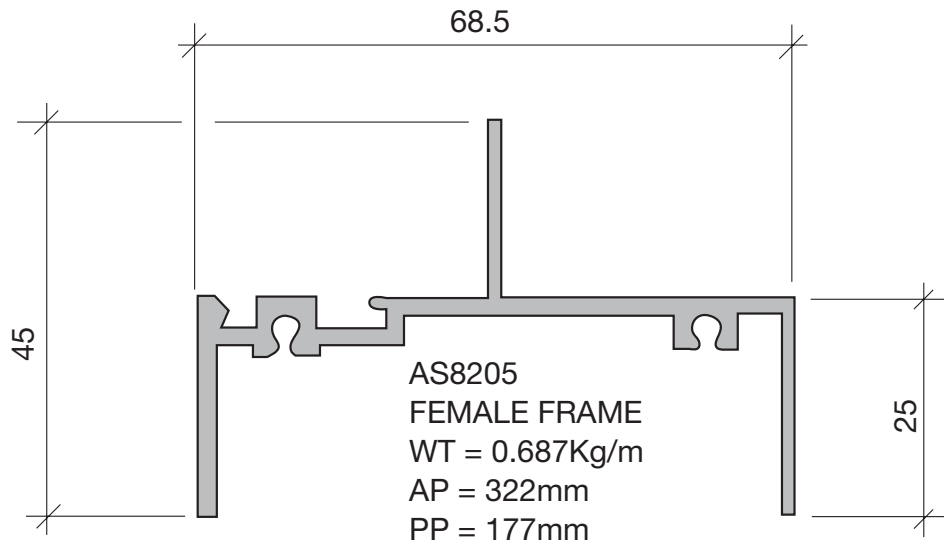
ST. GEORGE FRAMING SYSTEM



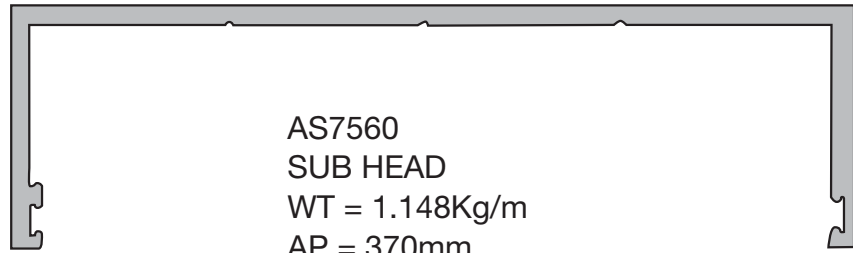
AS7558
MALE FRAME
WT = 0.815Kg/m
AP = 389mm
PP = 176mm



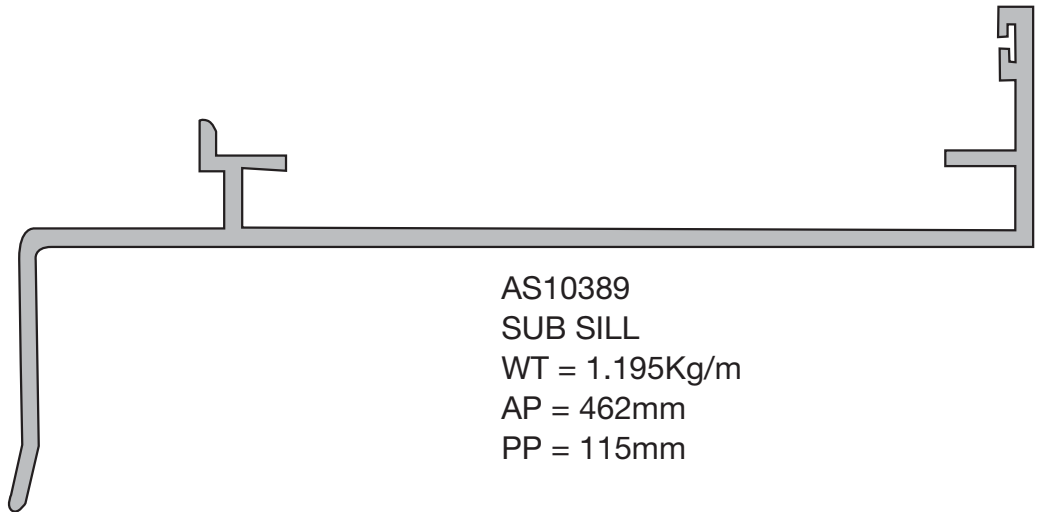
ST. GEORGE FRAMING SYSTEM



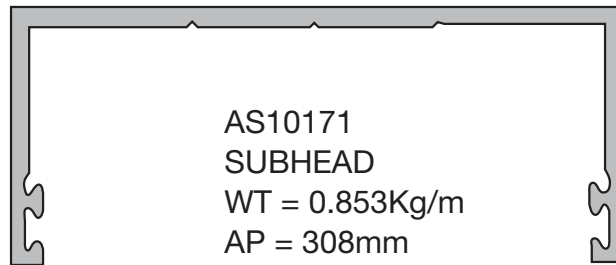
ST. GEORGE FRAMING SYSTEM



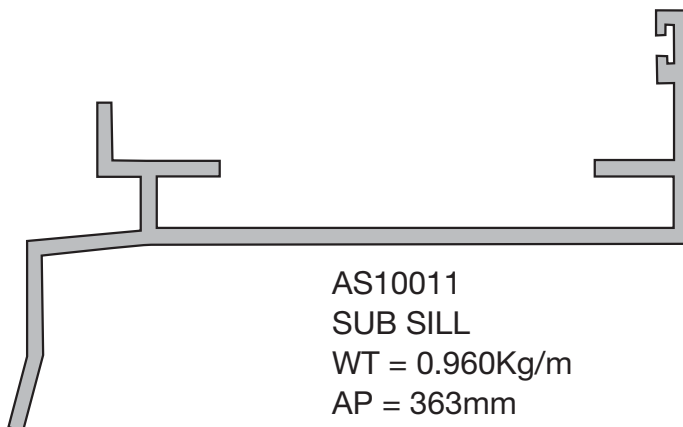
AS7560
SUB HEAD
WT = 1.148Kg/m
AP = 370mm
PP = 187mm



AS10389
SUB SILL
WT = 1.195Kg/m
AP = 462mm
PP = 115mm



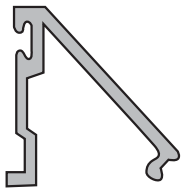
AS10171
SUBHEAD
WT = 0.853Kg/m
AP = 308mm
PP = 152mm



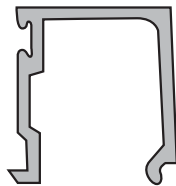
AS10011
SUB SILL
WT = 0.960Kg/m
AP = 363mm
PP = 100mm

ST. GEORGE FRAMING SYSTEM

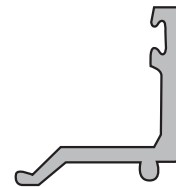
Adaptors, Sash and Beads



AS7559
BEVEL BEAD
WT = 0.177Kg/m
AP = 124mm
PP = 100mm



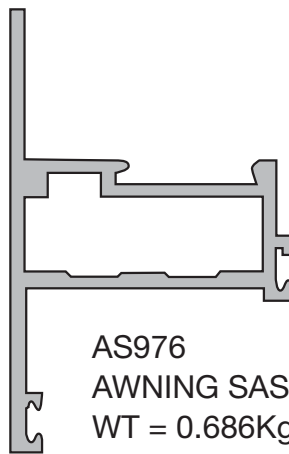
AS7891
SQUARE BEAD
WT = 0.206Kg/m
AP = 144mm
PP = 100mm



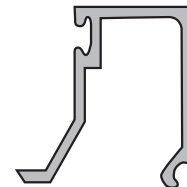
AS7744
25mm BEAD
WT = 0.184Kg/m
AP = 100mm
PP = 100mm



138-040
DOOR STOP

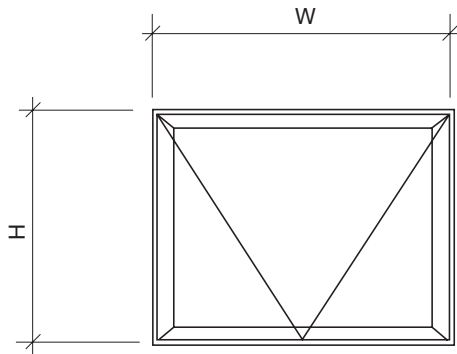


AS976
AWNING SASH
WT = 0.686Kg/m
AP = 220mm
PP = 154mm



AS10172
12mm BEAD
WT = 0.190Kg/m
AP = 134mm
PP = 100mm

ST. GEORGE FRAMING SYSTEM

**AWNING WINDOW**

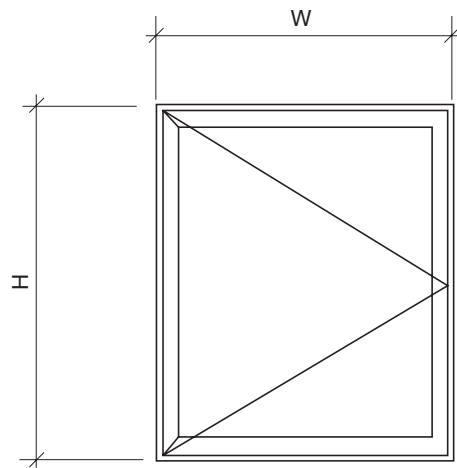
H = Max 1200mm, Min 350mm

W = Max 1300mm

Max Area = 1.80m²**NOTE:**

Sashes up to 1000mm wide - 1 cam handle

Sashes over 1000mm wide - 2 cam handles

**CASEMENT WINDOW**

H = Max 1200mm

W = Max 650mm, Min 350mm

Max Area = 0.78m²**NOTE:**

Sashes up to 1000mm high - 1 cam handle

Sashes over 1000mm high - 2 cam handles

Reference to Standard Publication:

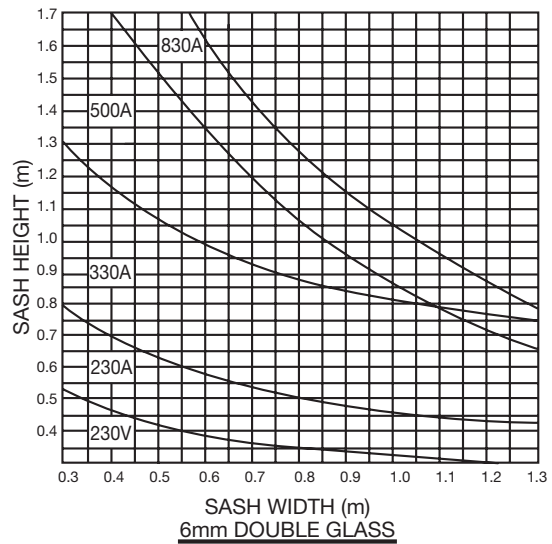
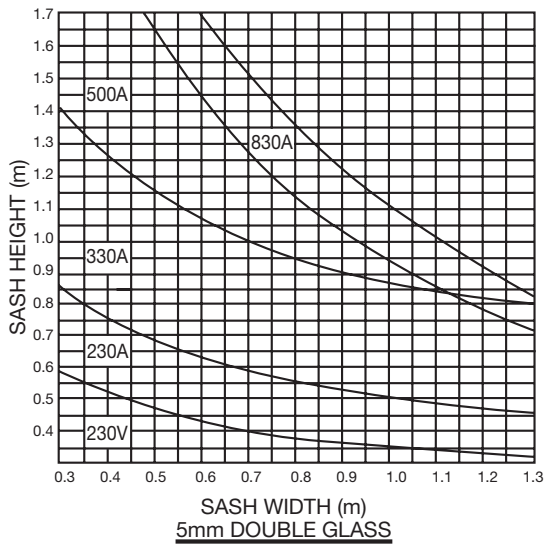
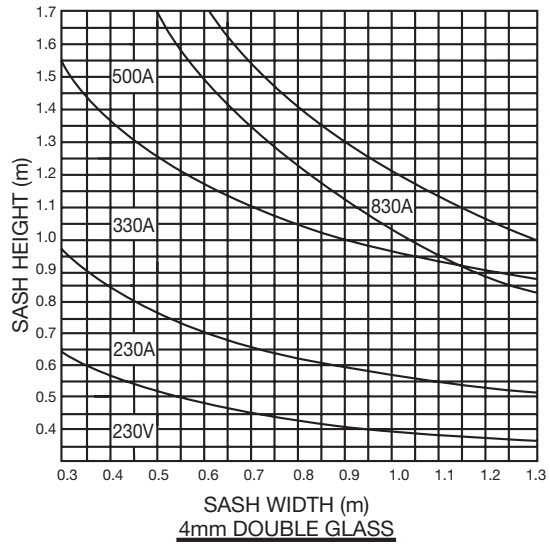
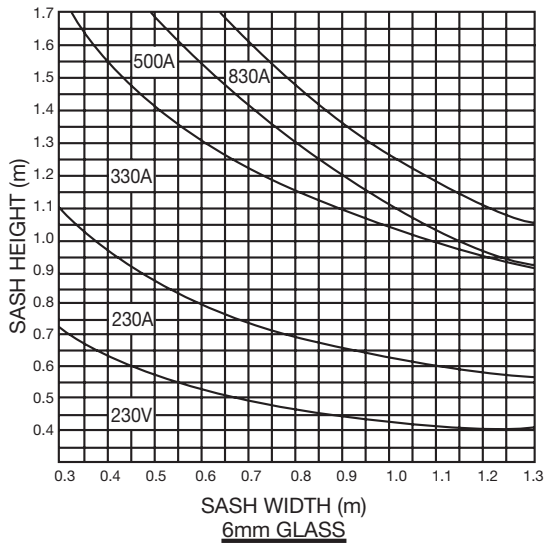
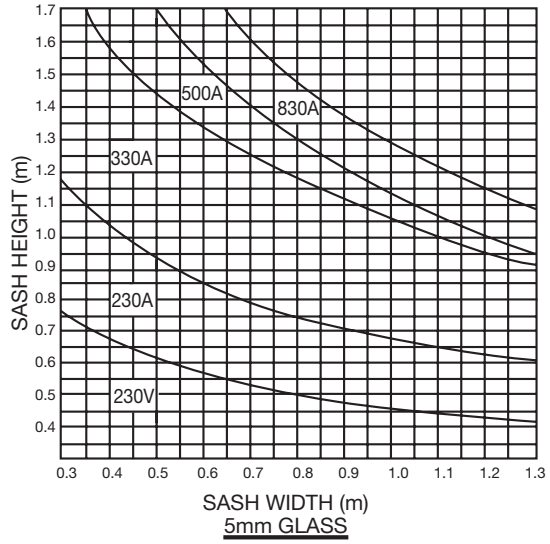
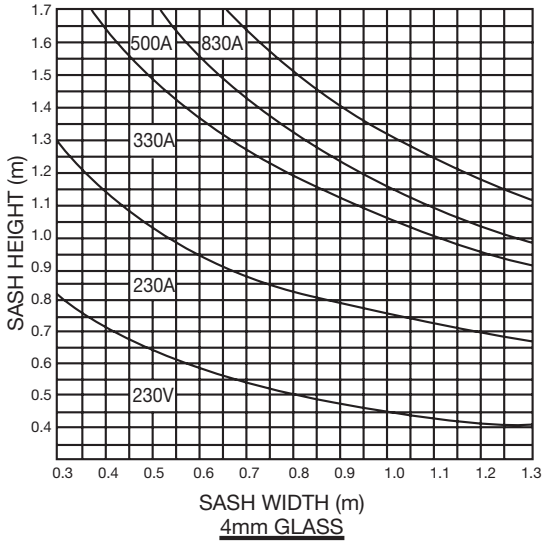
AS1170.2 - 2002 - SAA Loading Code - wind loads

AS2047 - 1999 - Windows in Building (Selection and installation)

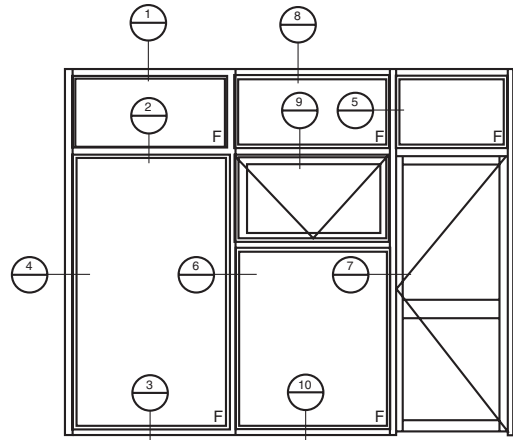
NOTES:

Stays should be selected in accordance with manufacturers load recommendations and fitted to provide slight compression to bulb seals when sash is in closed position. Cam Handles or Chain Winders can be used and should be fitted securely to sash frame or bead. If fitted to the bead sensible care should be exercised in pulling the sash closed to avoid twisting the bead off.

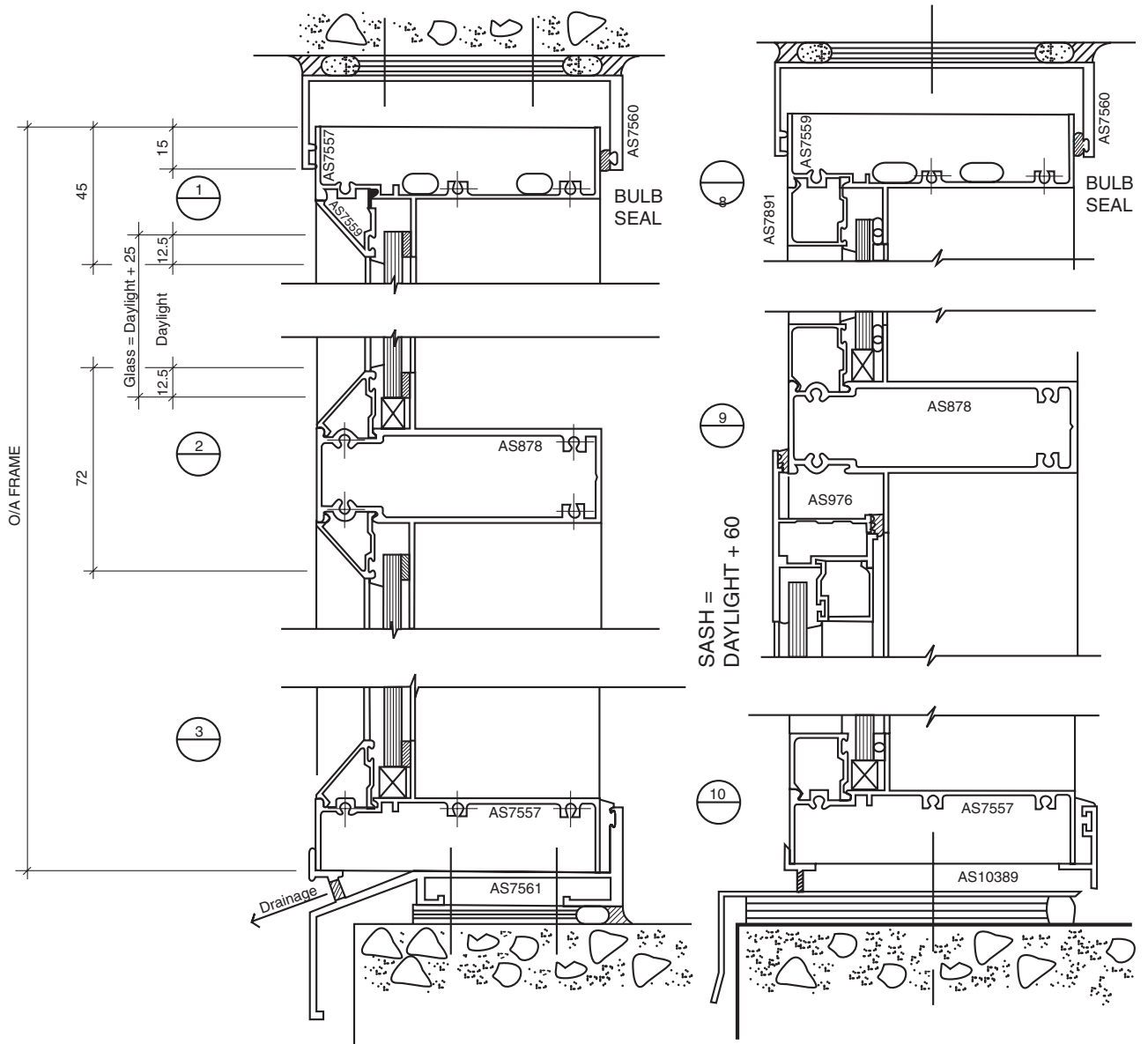
ST. GEORGE FRAMING SYSTEM



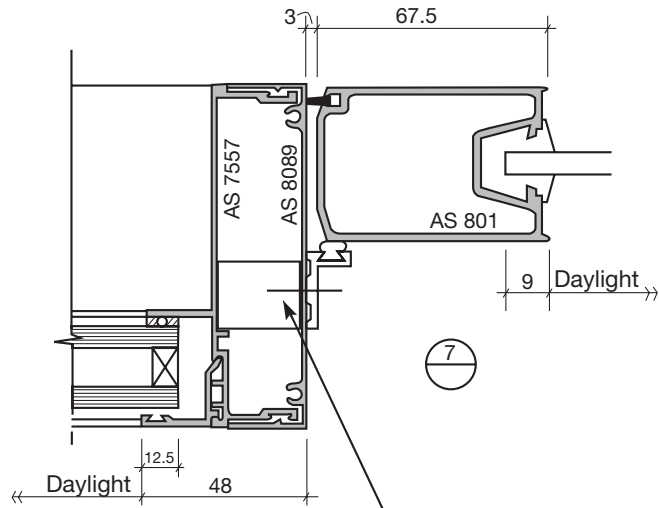
ST. GEORGE FRAMING SYSTEM



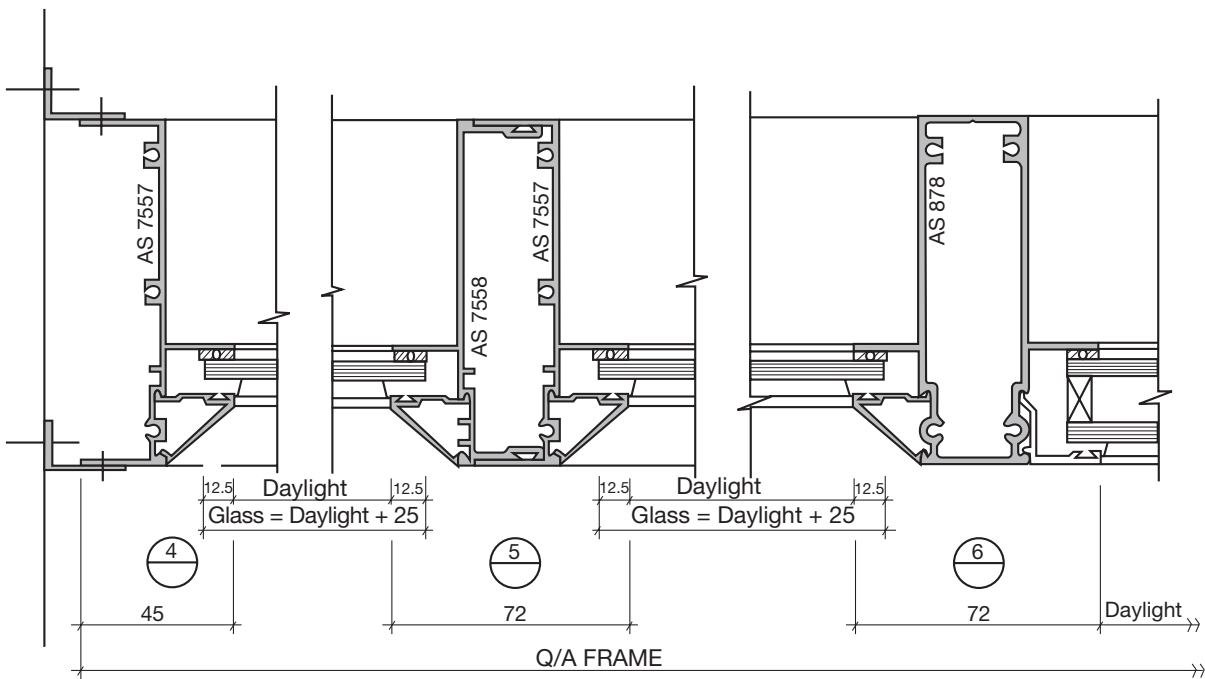
TYPICAL ELEVATION



ST. GEORGE FRAMING SYSTEM



Spacer support (by others)



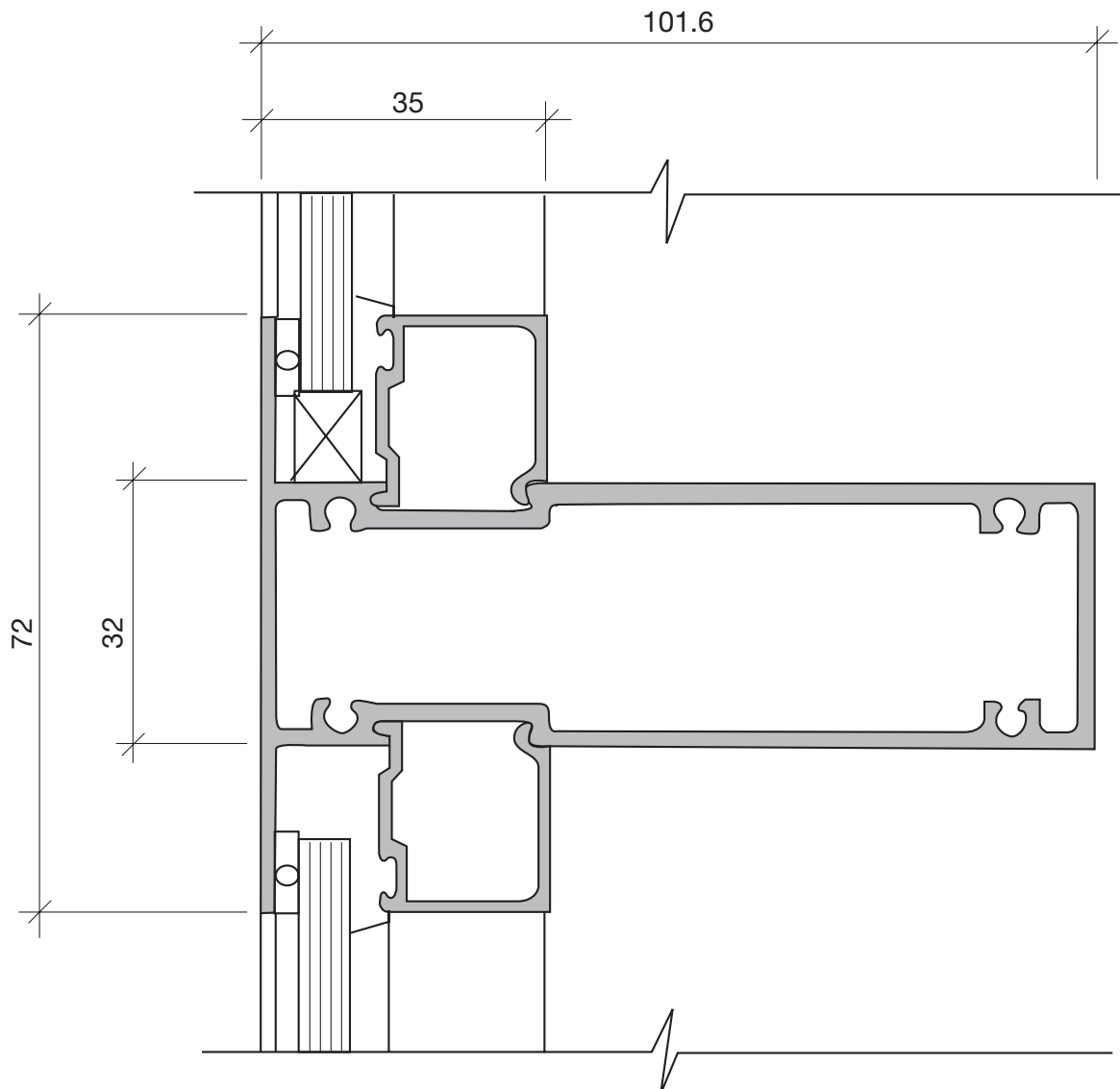
ST. GEORGE FRAMING SYSTEM

FEATURES:

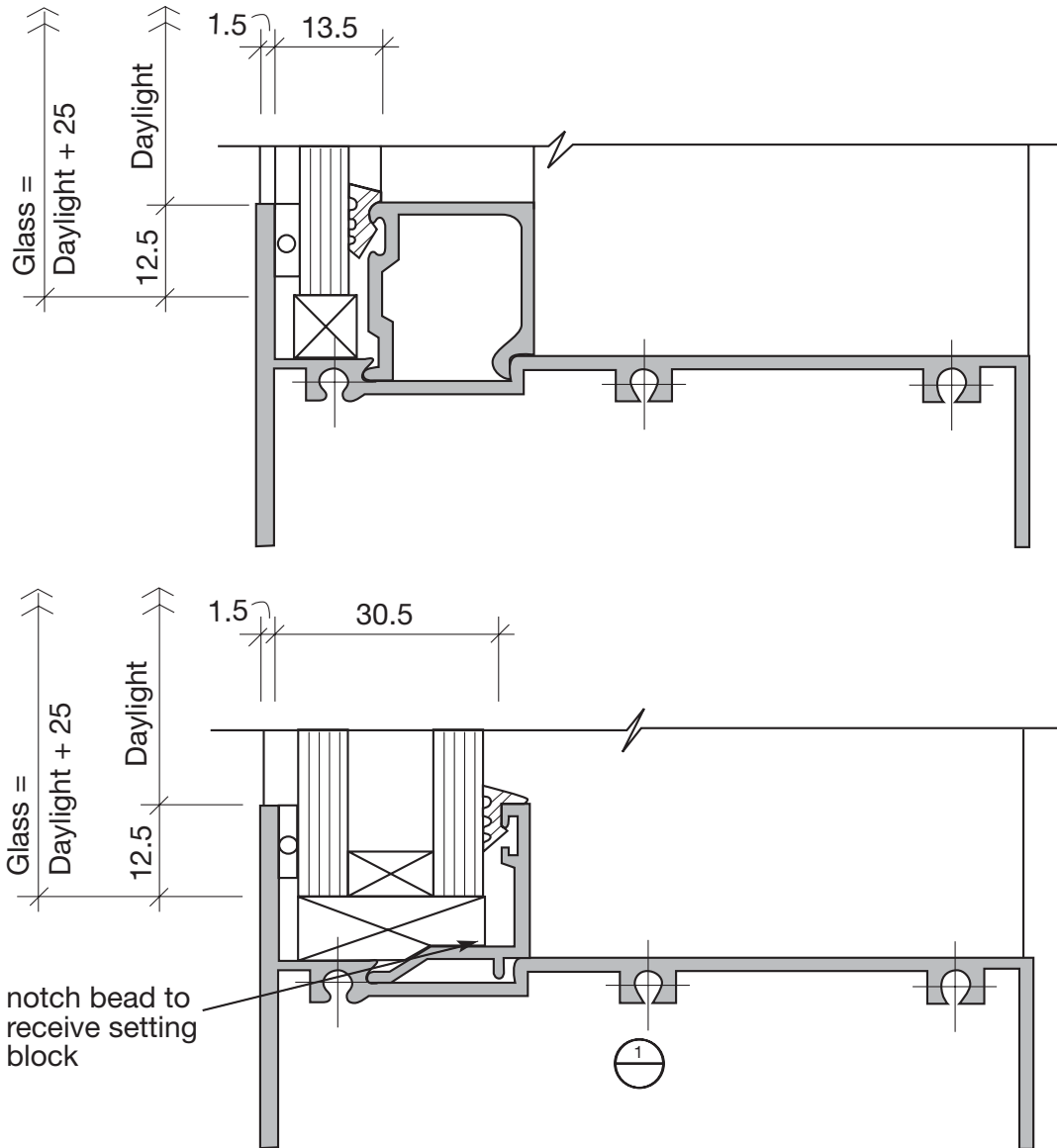
- High performance commercial class window and framing system
- Accepts glass thickness from 4 to 14mm and 25mm
- External fin provides:
 1. external glass face
 2. internal glazing
 3. greater rentable area

NOTE:

This is a fixed light system and does not readily adapt to Awning/Casement windows sashes



ST. GEORGE FRAMING SYSTEM



GLAZING POCKET DESCRIPTION

Glass 4 to 8mm and 25mm thick

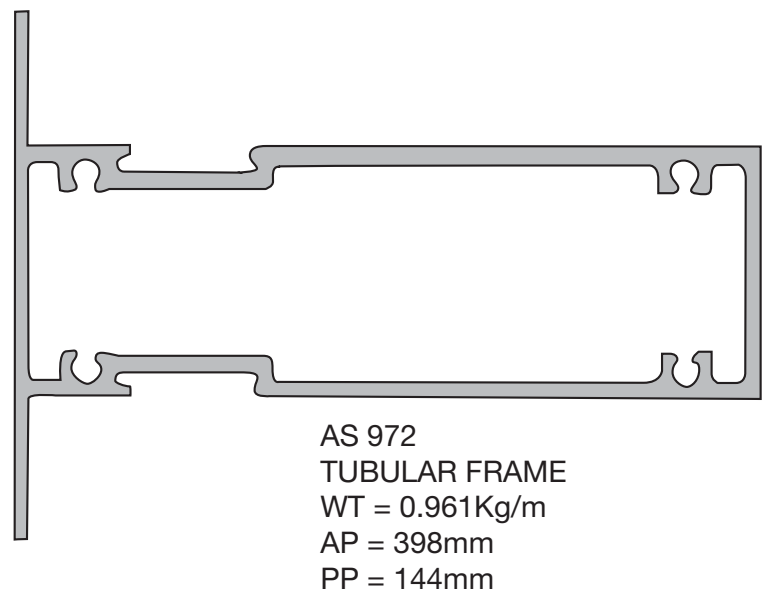
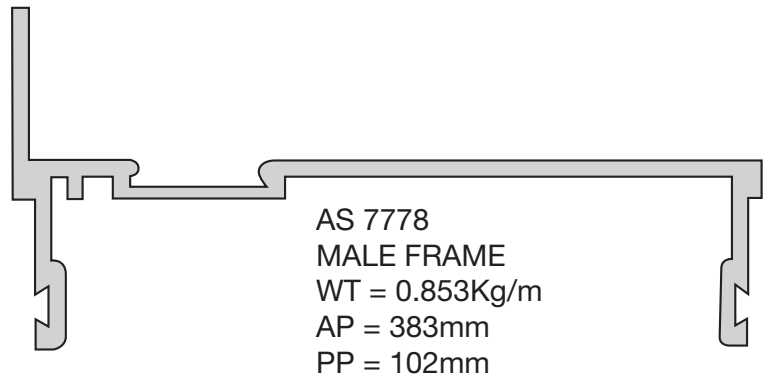
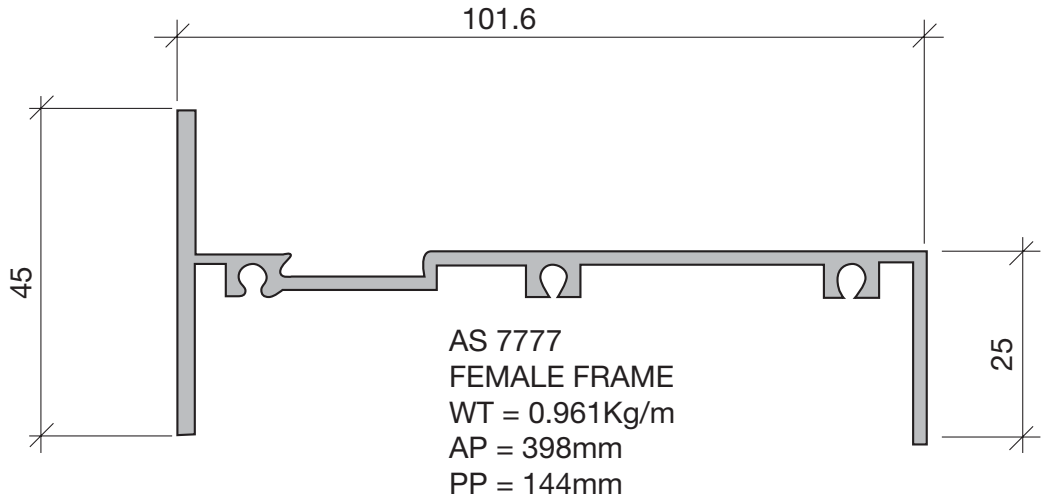
Glass cutting size... Daylight + 25mm

| MATERIAL | BEADS | GLASS THICKNESS | TAPE SIZE | SHIM DIA. | WEDGE No |
|---------------------|-------------------|-----------------|-----------|-----------|----------|
| All framing members | AE7891 | 4mm | 8 x 5 | 3mm | 343-6 |
| | | 5mm | 8 x 5 | 3mm | 343-8 |
| | | 6mm | 8 x 5 | 3mm | 114-10 |
| | | 8mm | 8 x 5 | 3mm | Y113 |
| | NB10172 NB7744 | 12mm | 8 x 5 | 3mm | 114-10 |
| | | 25mm | 8 x 5 | 3mm | Y113 |

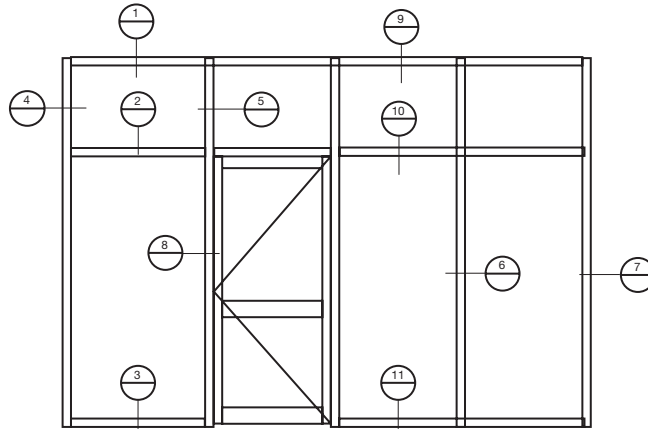
NOTES:

because of tolerances on metal, glass and glazing materials, these recommendations should be taken as a guide and should be verified or modified as required to suit actual job materials.

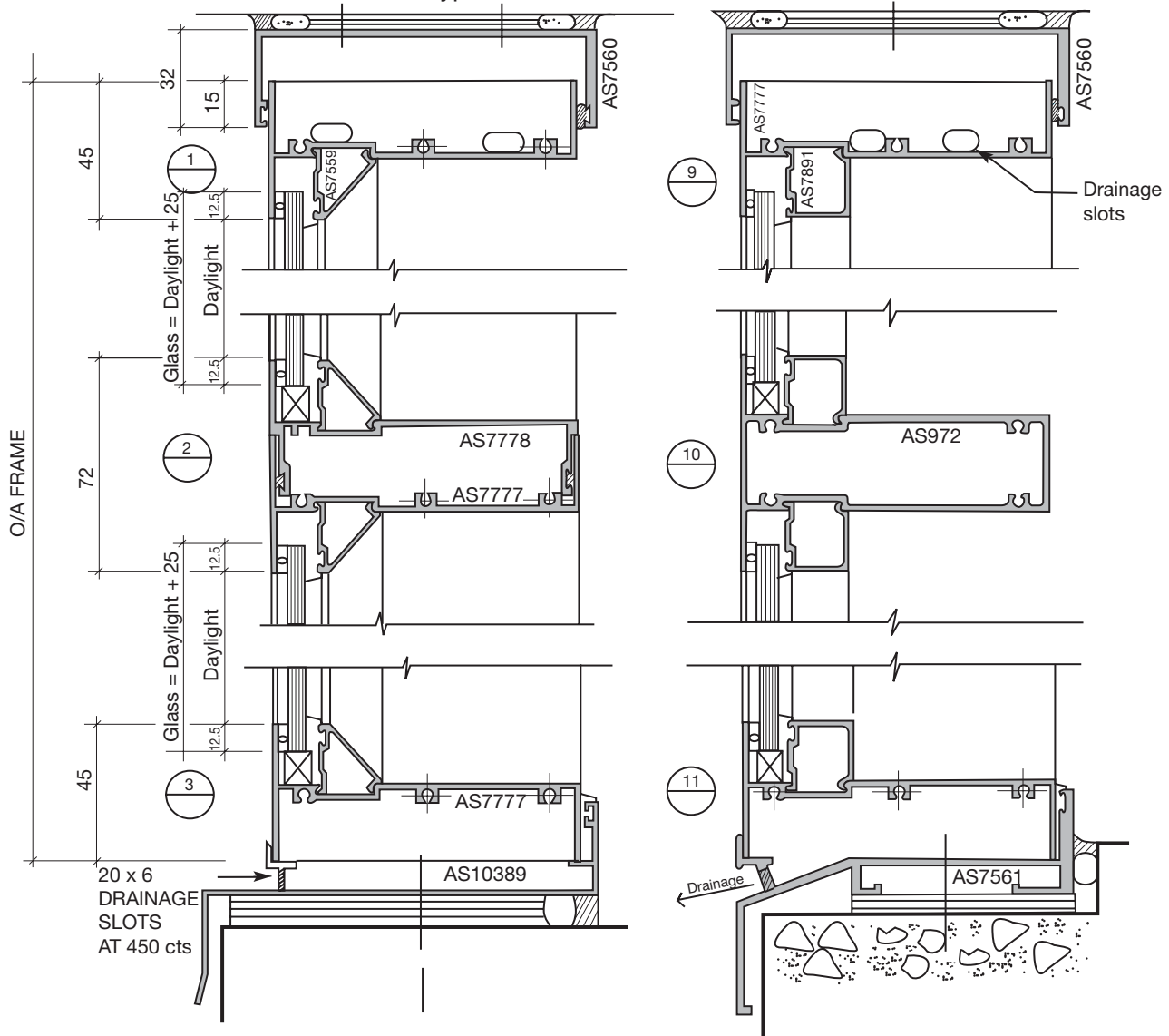
ST. GEORGE FRAMING SYSTEM



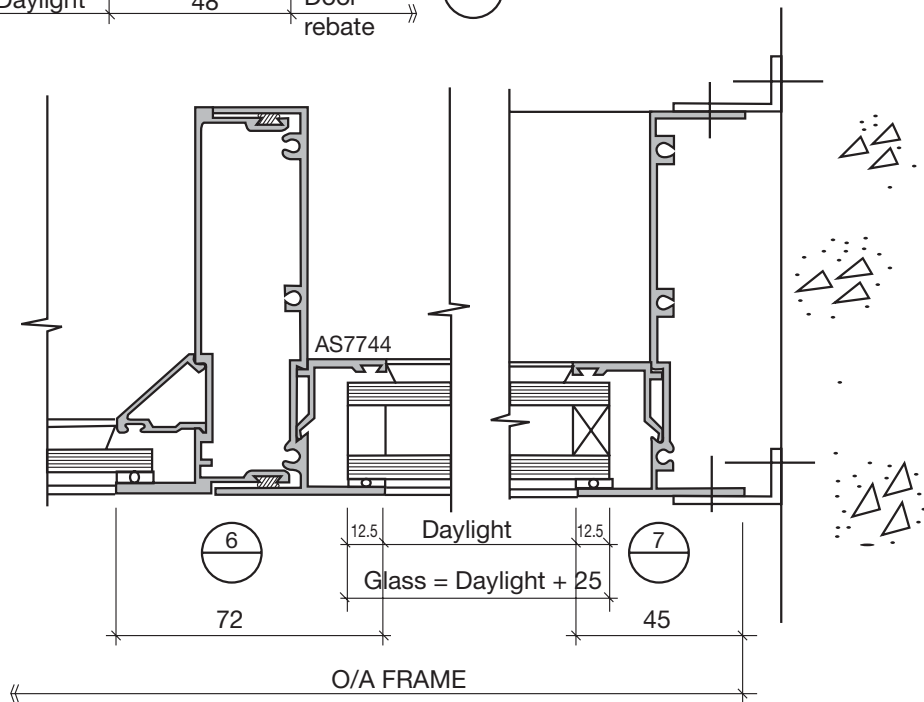
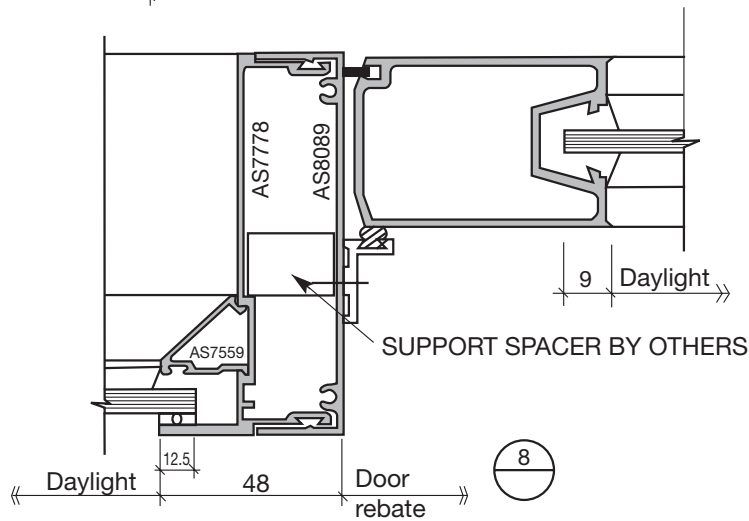
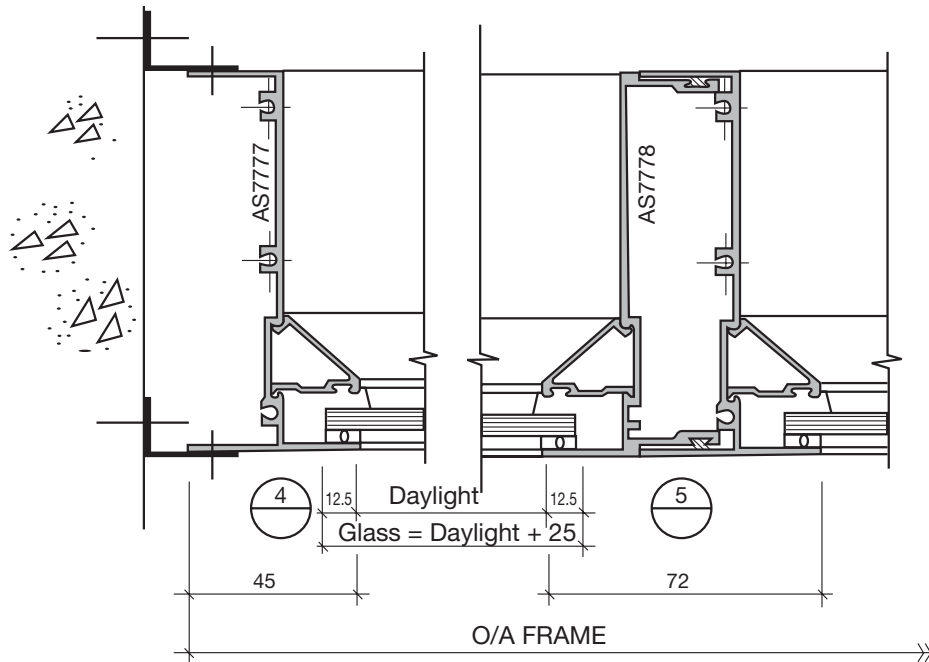
ST. GEORGE FRAMING SYSTEM



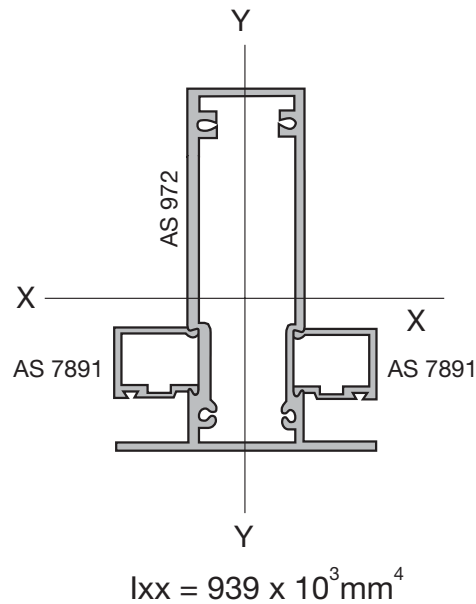
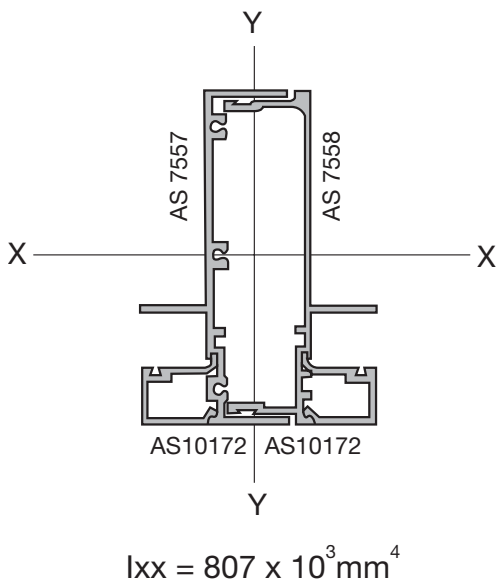
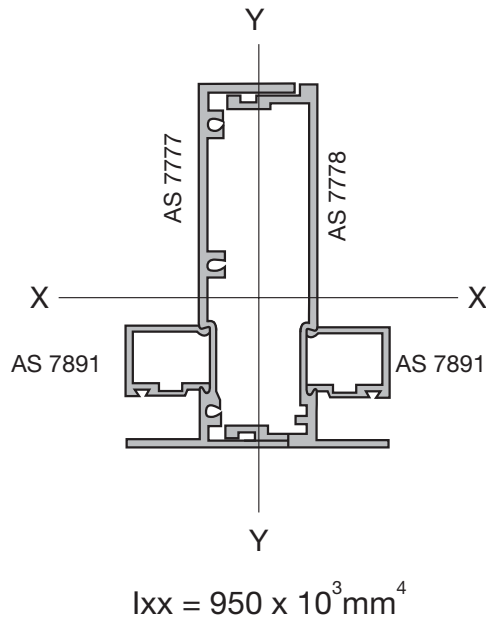
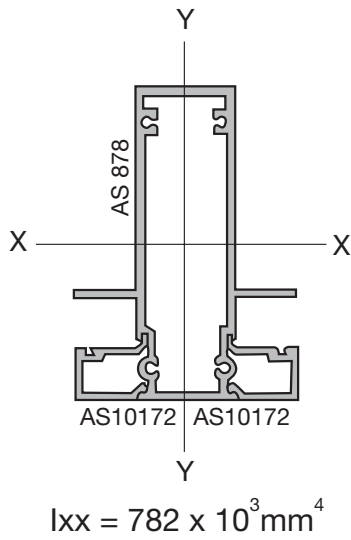
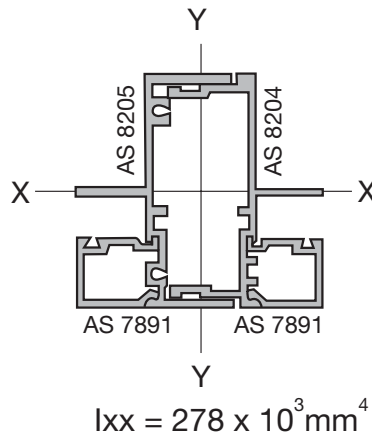
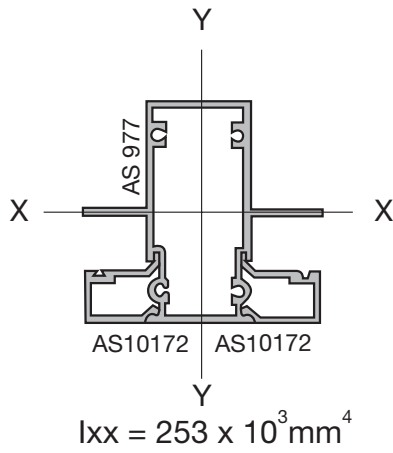
Typical Elevation



ST. GEORGE FRAMING SYSTEM



ST. GEORGE FRAMING SYSTEM





COMMERCIAL FRAMING SYSTEMS PRODUCT MANUAL

SECTION 6

PAGES – 01 to 07

• ST. KILDA FRAMING SYSTEM

| | |
|-------------------------------------|--------|
| • FEATURES | P1 |
| • GLAZING NOTES | P2 |
| • COMPONENTS | P3 - 4 |
| • ASSEMBLY DRAWINGS | P5 - 6 |
| • STRUCTURAL PROPERTIES OF SECTIONS | P7 |

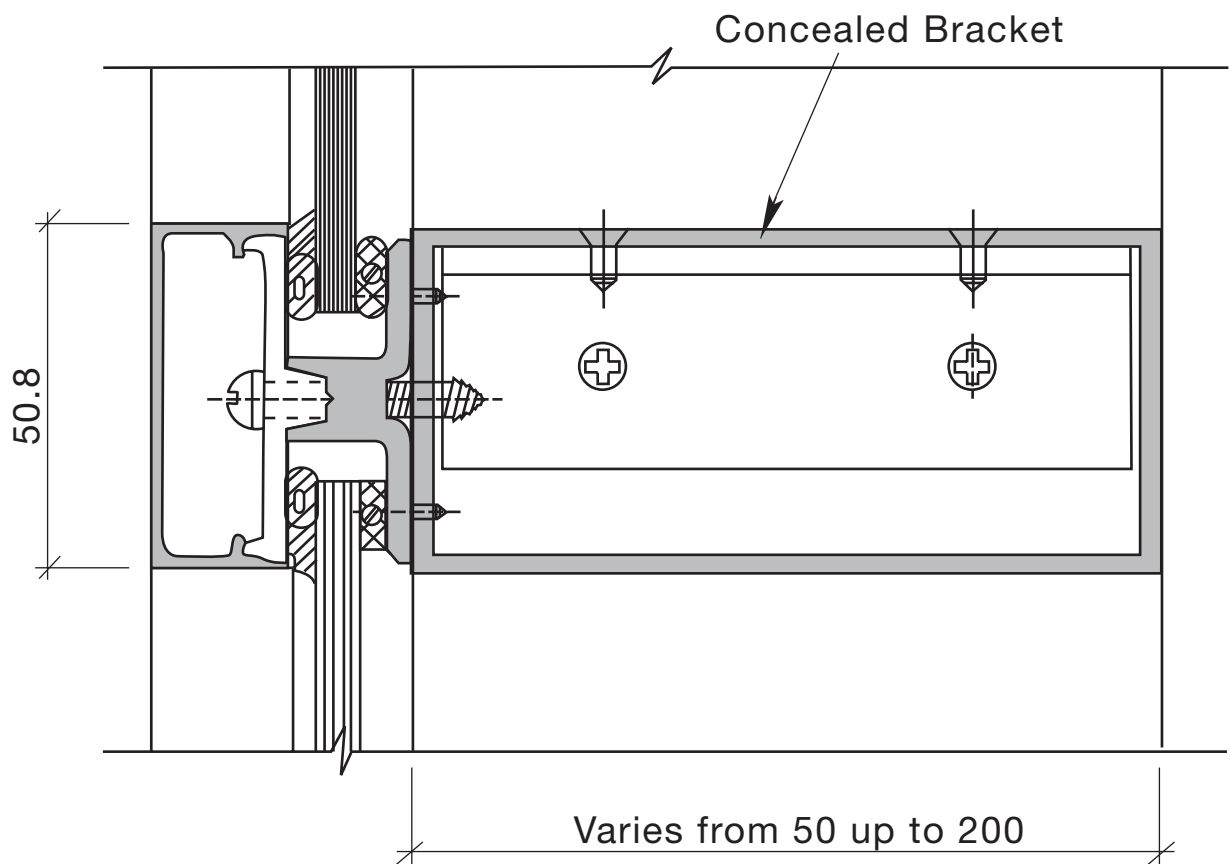
ST. KILDA FRAMING SYSTEM

FEATURES: (ST. KILDA SUITE)

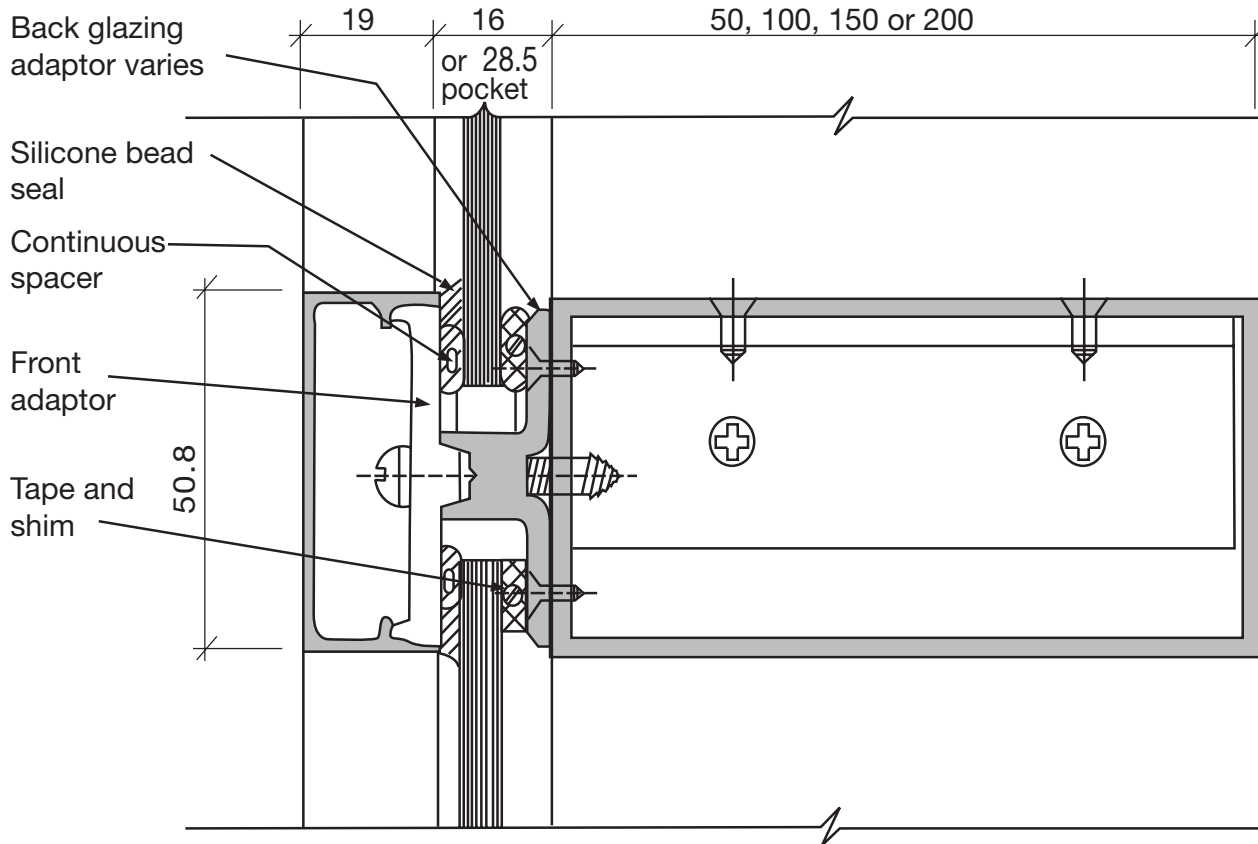
- Accepts glass thickness from 6mm to 16mm
- Concealed bracket fixing
- Glass is located on external edge
- Range of sizes from 50, 100, 150, and 200mm
- Flush smooth faces inside and out
- Accepts the Huntingdale door system
- ‘Snap - on’ external covers, sealed with sealant

NOTES:

- Sub sills should be used in extreme weather conditions. Remember to fix stop ends
- Dry glazing is not recommended for shopfronts in extreme weather conditions
- Not recommended on a building higher than 3 storeys



ST. KILDA FRAMING SYSTEM



Glazing pocket description

MethodTape, continuous spacer with silicone bead seal.

Glass6 mm to 16 mm, depending on back adaptor used.

Glass cutting sizeDaylight + 25 mm or frame centre - 25 mm.

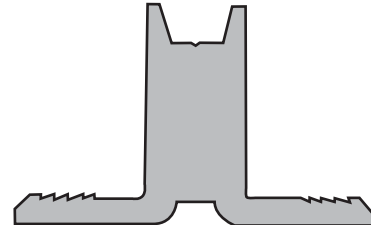
MATERIAL SPECIFICATION:

| BACK ADAPTOR | GLASS THICKNESS | TAPE SIZE | SHIM DIA. | SPACER DIA. |
|--------------|-----------------|-----------|-----------|-------------|
| AS7771 | 6mm | 10 x 5 | 3mm | 8mm |
| | 8mm | 10 x 5 | 3mm | 6mm |
| AS10486 | 12mm | 12 x 8 | 5mm | 12mm |
| | 16mm | 12 x 8 | 5mm | 10mm |

ST. KILDA FRAMING SYSTEM



AS 7770
Snap Adaptor
WT = 0.366 kg/m
AP = 188mm
PP = 100mm



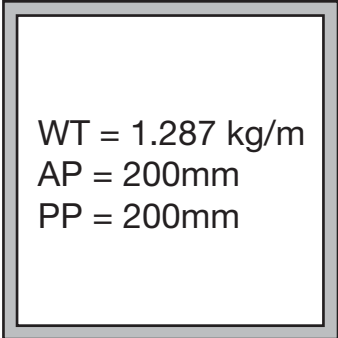
AS 10486
13mm Back Adaptor
WT = 0.915 kg/m
AP = 167mm
PP = 167mm



AS 7769
Front Adaptor
WT = 0.505 kg/m
AP = 125mm
PP = 125mm

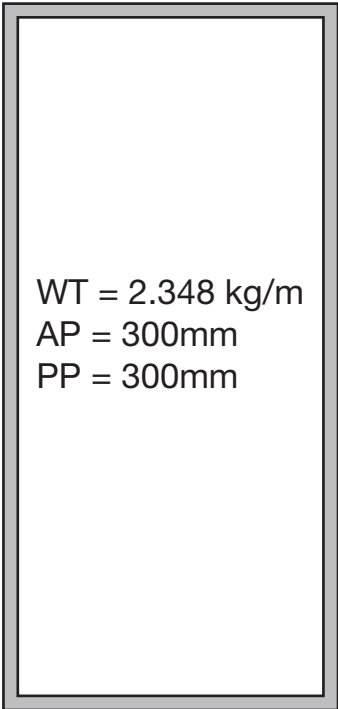


AS 7771
6mm Back Adaptor
WT = 0.667 kg/m
AP = 140mm
PP = 140mm

ST. KILDA FRAMING SYSTEM

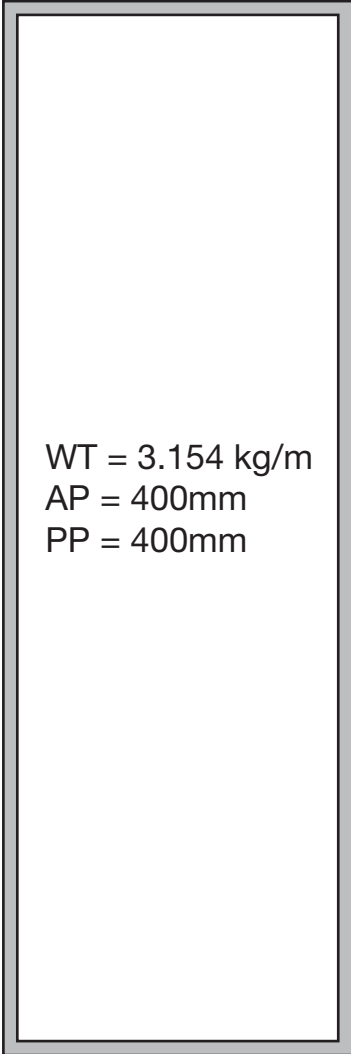
WT = 1.287 kg/m
AP = 200mm
PP = 200mm

ST850
(SH502·5MI6·5L)



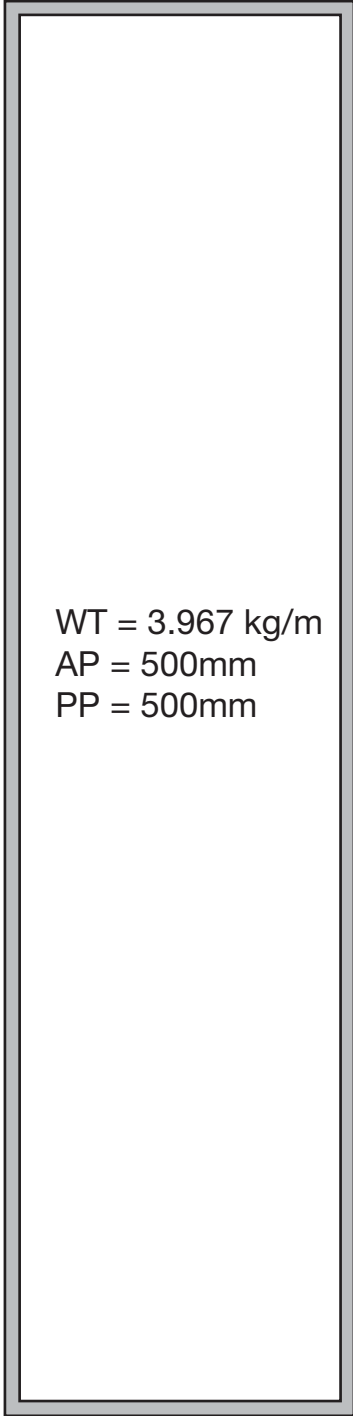
WT = 2.348 kg/m
AP = 300mm
PP = 300mm

ST863
(RH100503MI6·5L)



WT = 3.154 kg/m
AP = 400mm
PP = 400mm

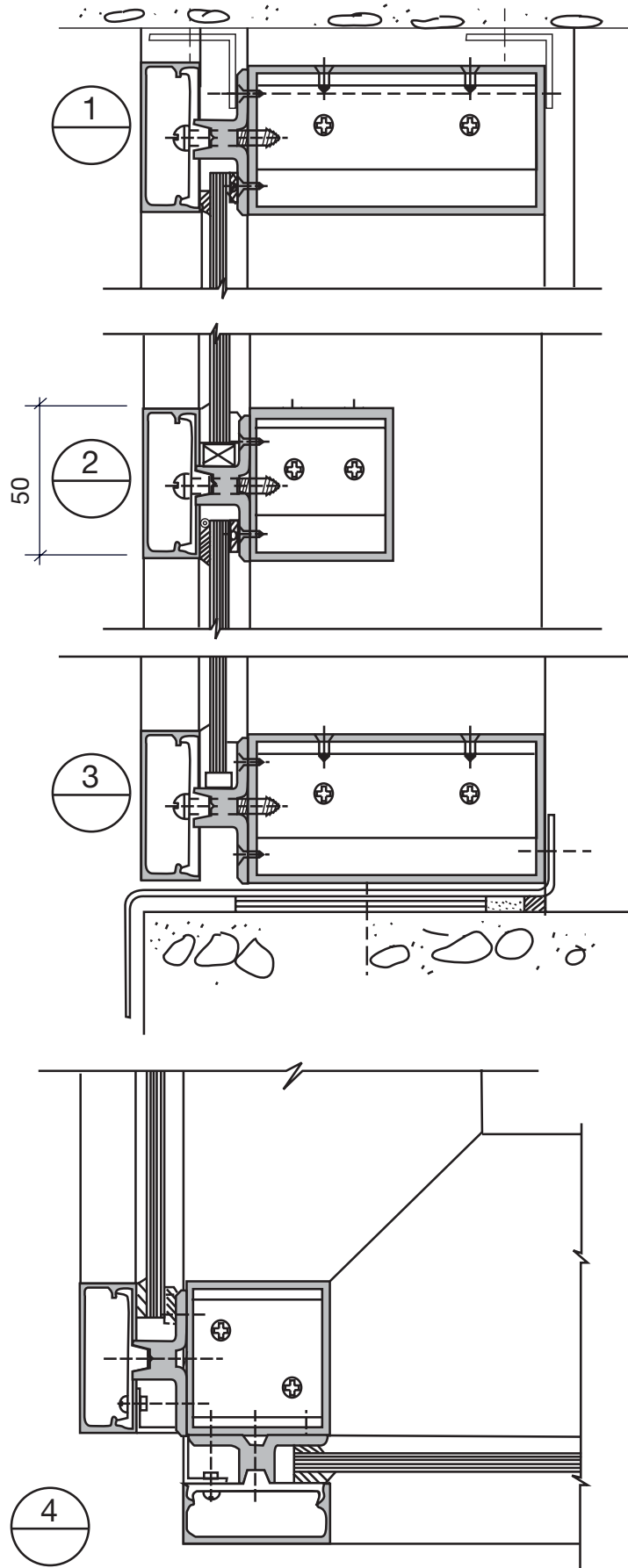
AS0969
(RH150503MI6·5L)



WT = 3.967 kg/m
AP = 500mm
PP = 500mm

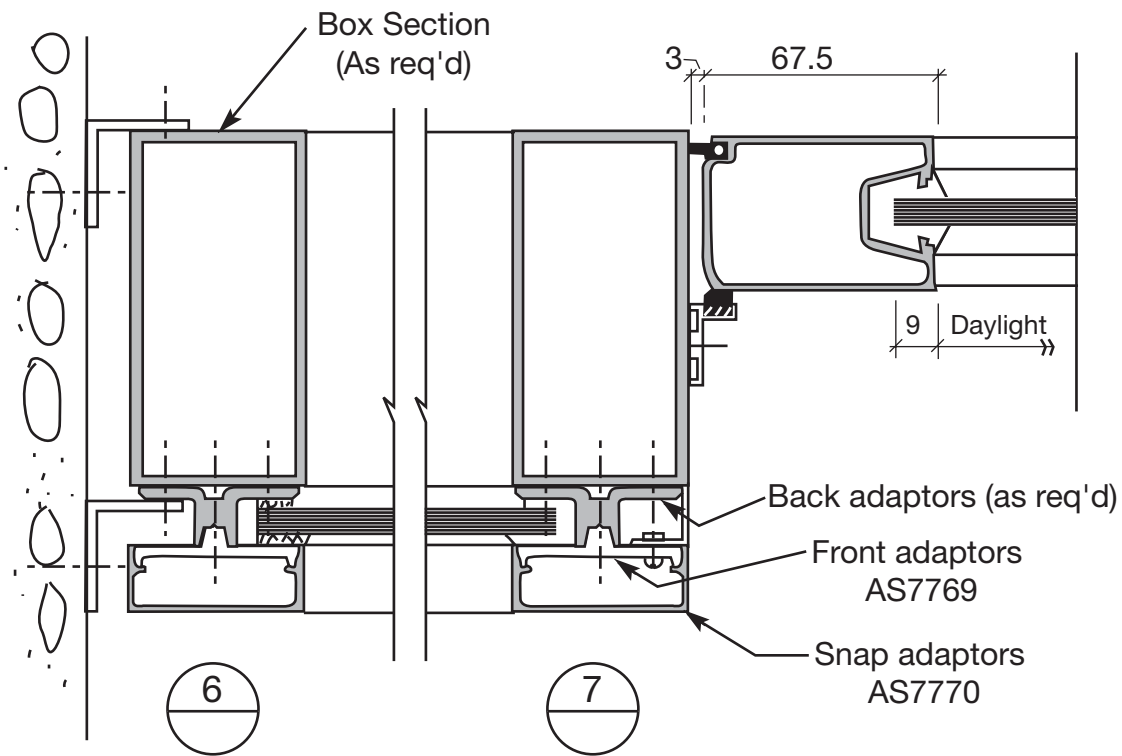
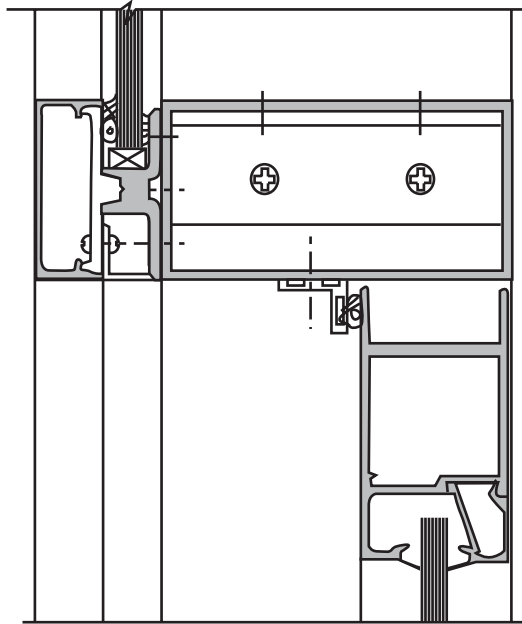
987 - 358
(RH200503MI6·5L)

ST. KILDA FRAMING SYSTEM

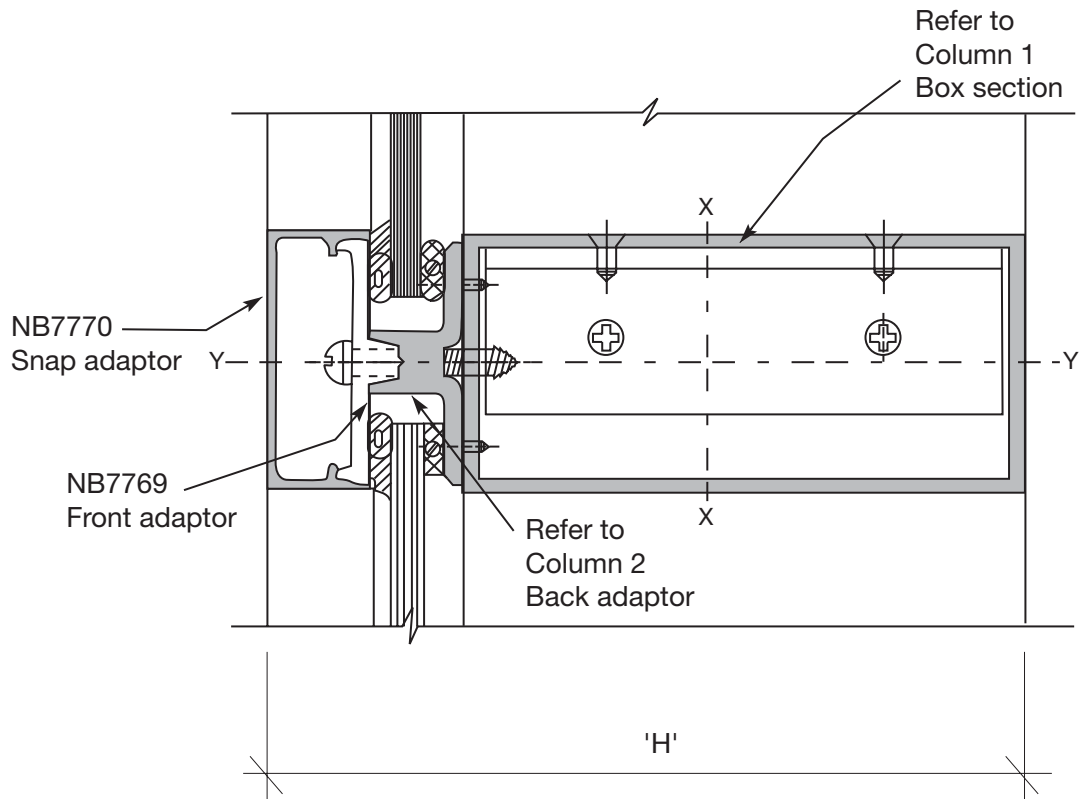


ST. KILDA FRAMING SYSTEM

5



ST. KILDA FRAMING SYSTEM



EXTRUSION

STRUCTURAL PROPERTIES

| COLUMN 1 | COLUMN 2 | DIMENSION H mm | MOMENT OF INERTIA. (x 10 ³ mm ⁴) | |
|-------------|-------------|-------------------|---|-----|
| | | | Ixx | Iyy |
| ST850 | AS7771 | 85 | 284 | 187 |
| ST850 | D1830 | 97 | 295 | 201 |
| ST863 | AS7771 | 135 | 1130 | 480 |
| ST863 | D1830 | 149 | 1150 | 481 |
| AS0969 | AS7771 | 185 | 3123 | 645 |
| AS0969 | D1830 | 197 | 3140 | 648 |
| 987-358 | AS7771 | 235 | 6570 | 811 |
| 987-358 | D1830 | 247 | 6590 | 815 |



COMMERCIAL FRAMING SYSTEMS PRODUCT MANUAL

SECTION – 7.

PAGES – 01 to 12

• ST. LEONARDS FRAMING SYSTEM

| | |
|-------------------------------------|---------|
| • FEATURES | P1 |
| • GLAZING DETAILS | P2 |
| • COMPONENTS | P3 - 8 |
| • ASSEMBLY DRAWINGS | P9 - 11 |
| • STRUCTURAL PROPERTIES OF SECTIONS | P12 |

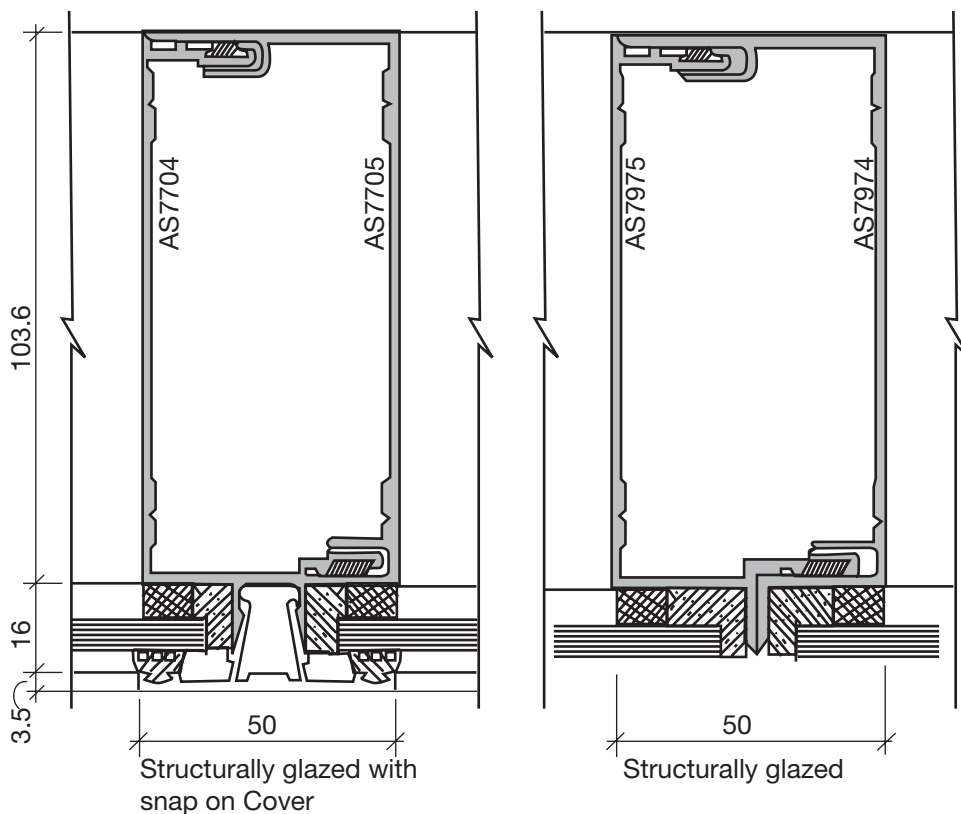
ST LEONARDS FRAMING SYSTEM

FEATURES: (ST LEONARDS SUITE)

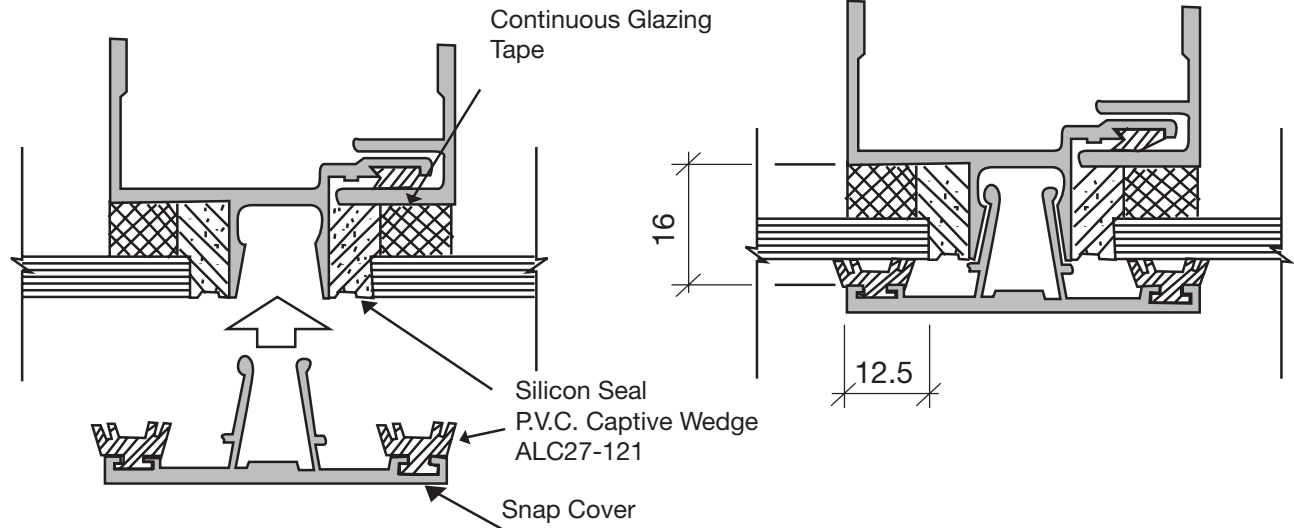
- Screw spline construction
- 50mm wide mullions and perimeter frames
- Glass is located on external edge
- Range of sizes from 53.5mm, 103.5mm to 150.0mm
- Mullions are split to accommodate expansion/contraction
- Accepts glass thickness 6mm to 10mm using snap cover NB7707 and up to 14mm thickness using snap cover NB8315
- Accepts the Huntingdale door system
- Range of structural glazed mullions or mullions with snap on covers
- Designed for both wet and dry glazing

NOTES:

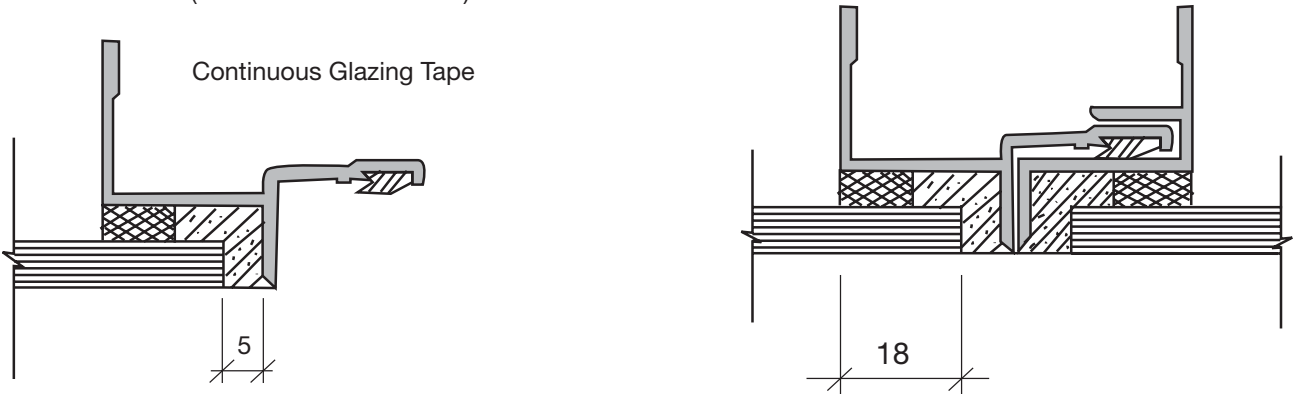
- Sub sills should be used in extreme weather conditions. Remember to fix stop ends
- Dry glazing is not recommended for shopfronts in extreme weather conditions
- Not recommended on a building higher than 2 storeys
- Ullrich Metals does not support 4 sided structural glazing, but will allow 2 sided with snap covers on the remaining 2 sides



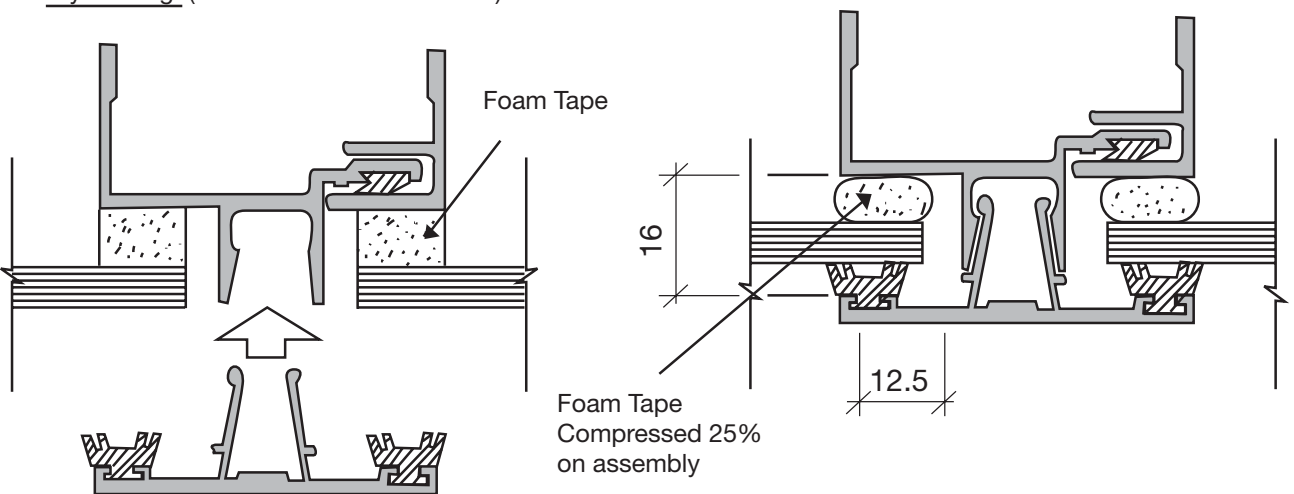
ST LEONARDS FRAMING SYSTEM



Wet Glazing: Without Snap covers
(STRUCURAL GLAZING)

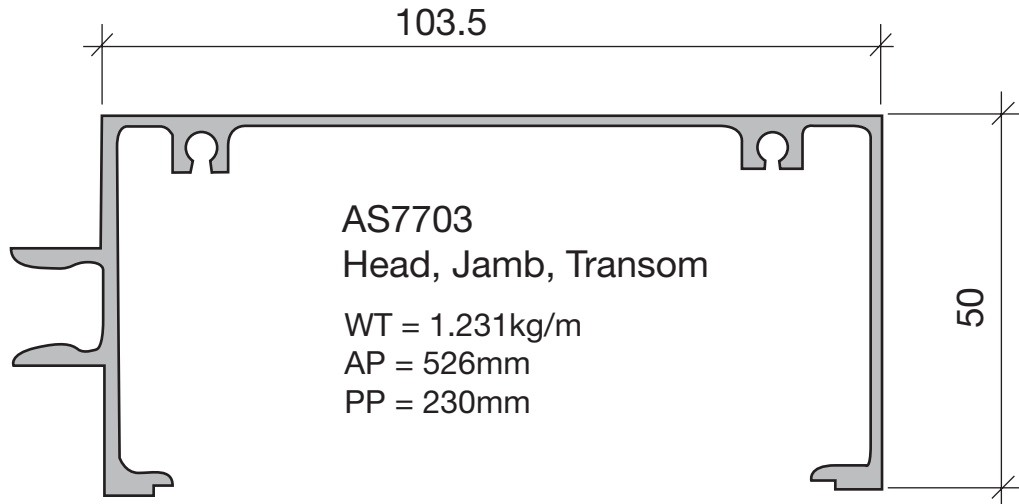


Dry Glazing: (NOT FOR EXTERNAL USE)



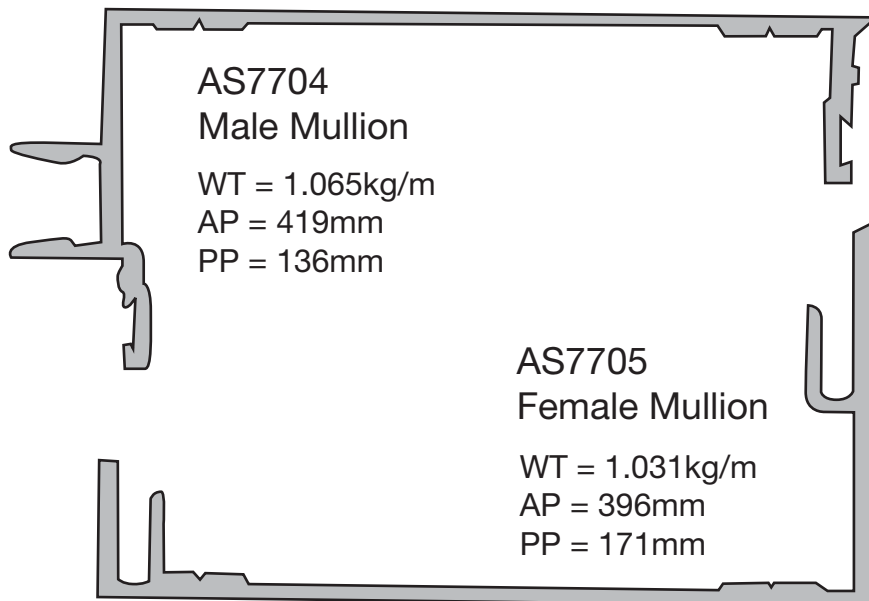
AS8034 & AS961 with AS7707 provide an 18mm pocket, & with AS 8315 a 22mm pocket.
AS30250 provides, with 4" and 150 St Leonards and AS 7707, a 35mm pocket.

ST LEONARDS FRAMING SYSTEM

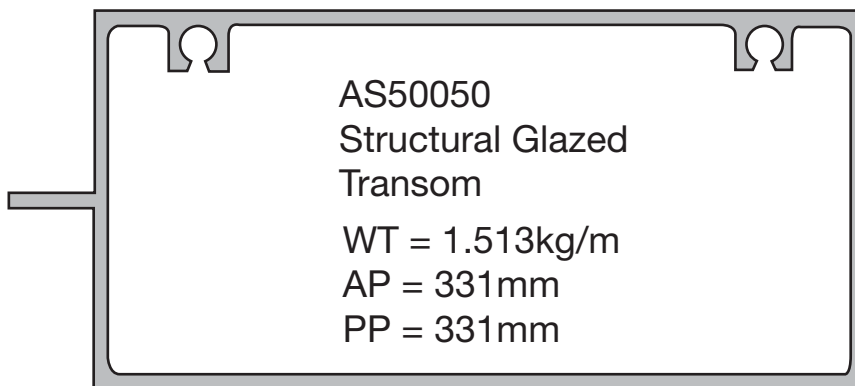
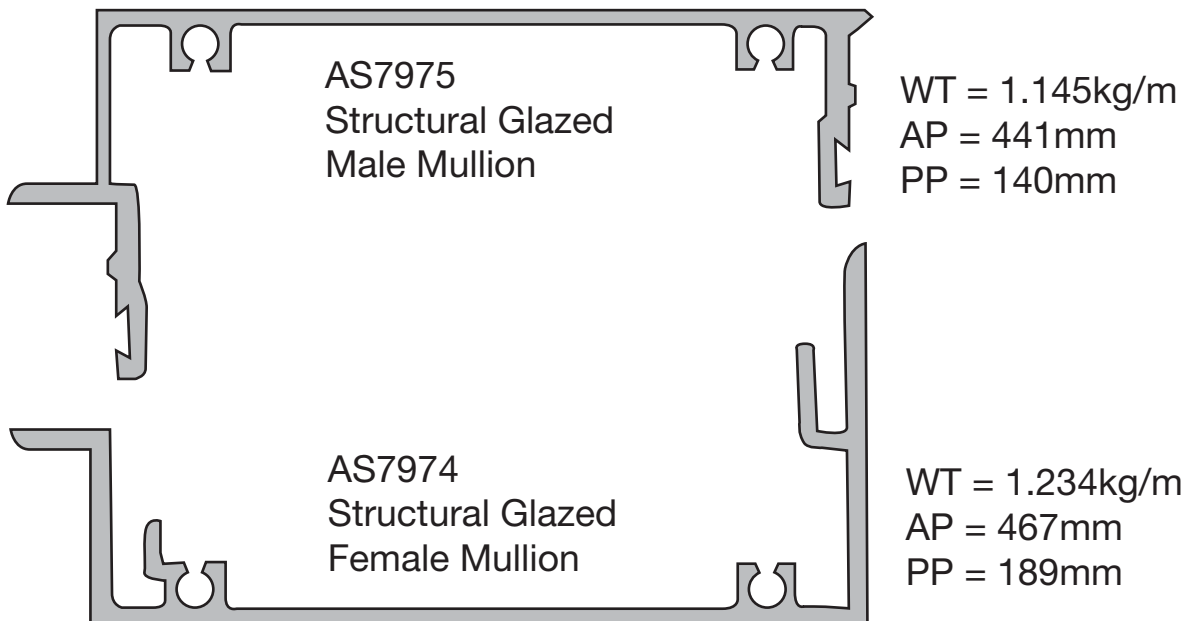
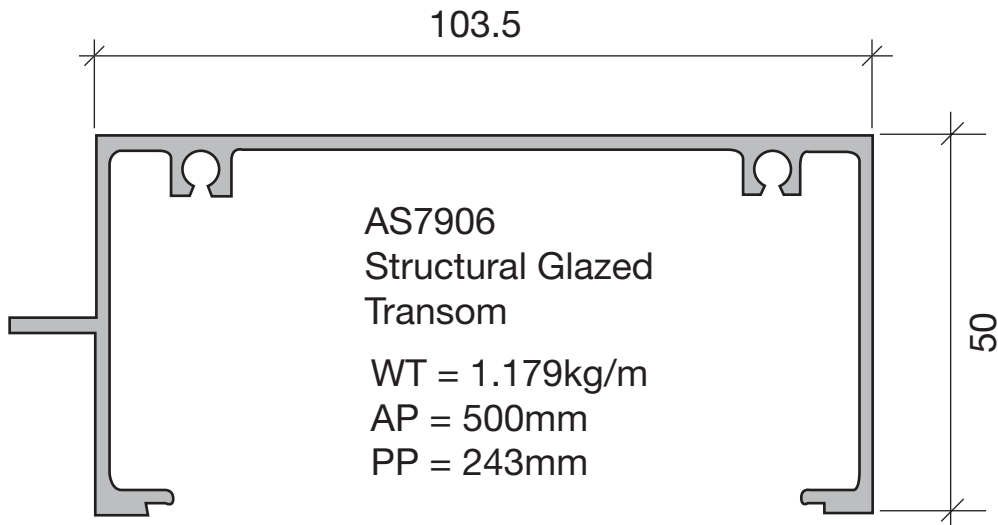


AS7110
Flush filler

WT = 0.492kg/m
AP = 207mm
PP = 100mm

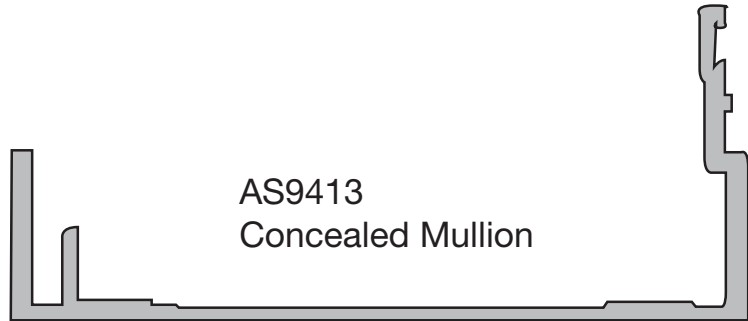


ST LEONARDS FRAMING SYSTEM

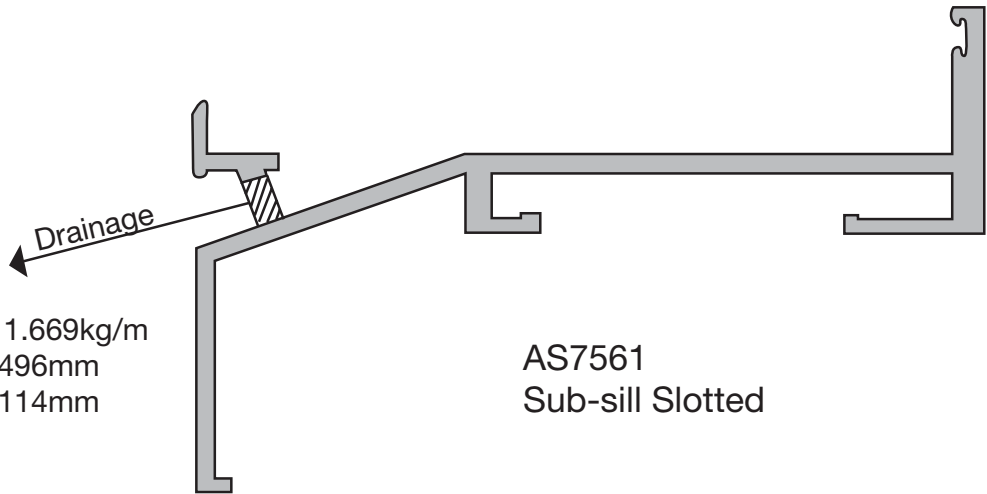


ST LEONARDS FRAMING SYSTEM

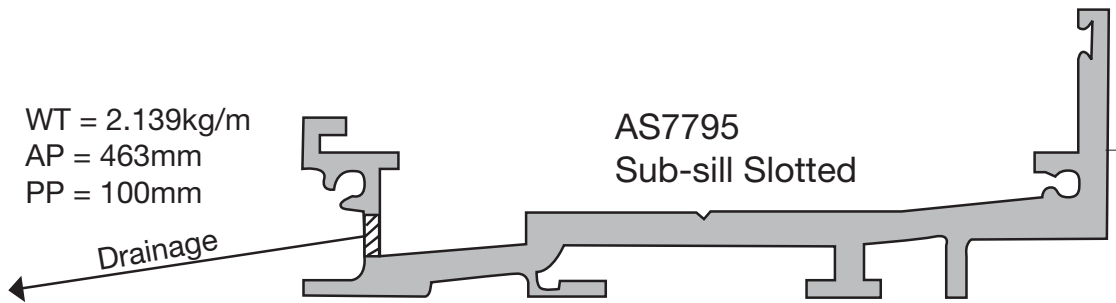
WT = 1.017kg/m
 AP = 387mm
 PP = 154mm



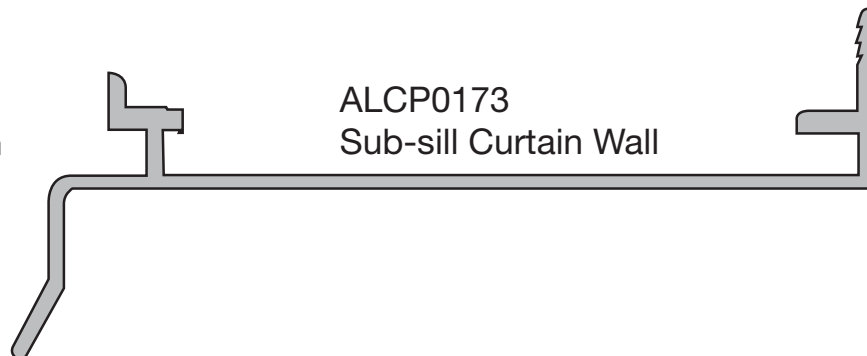
WT = 1.669kg/m
 AP = 496mm
 PP = 114mm



WT = 2.139kg/m
 AP = 463mm
 PP = 100mm



WT = 0.921kg/m
 AP = 400mm
 PP = 115mm



ST LEONARDS FRAMING SYSTEM

150

50

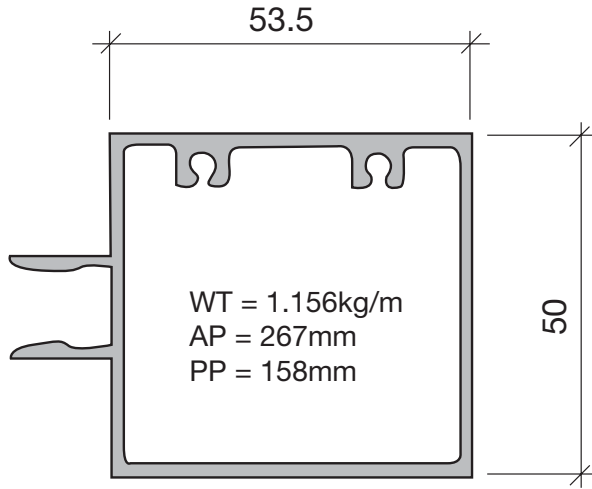
AS8280
Head, Jamb, Transom
WT = 2.555kg/m
AP = 676mm
PP = 284mm

AS8281
Male Mullion Heavy
WT = 2.130kg/m
AP = 500mm
PP = 181mm

AS8282
Female Mullion Heavy
WT = 2.096kg/m
AP = 472mm
PP = 217mm

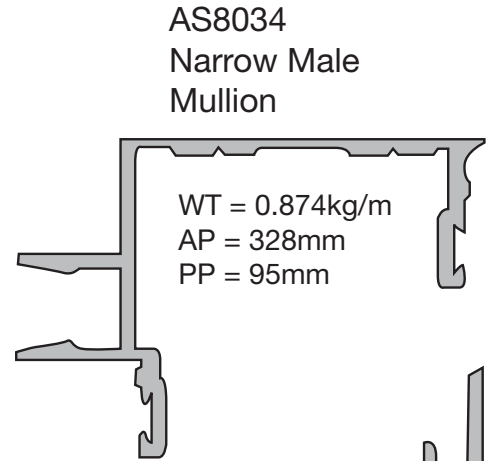
AS10009
Subsill
WT = 2.037kg/m
AP = 562mm
PP = 115mm

ST LEONARDS FRAMING SYSTEM



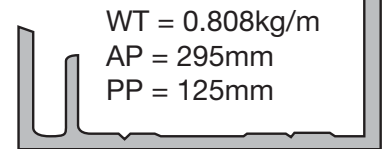
WT = 1.156kg/m
 AP = 267mm
 PP = 158mm

AS961
 Narrow Transom



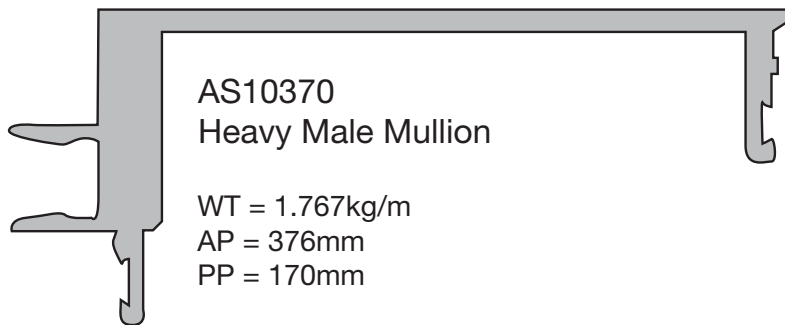
AS8034
 Narrow Male
 Mullion

WT = 0.874kg/m
 AP = 328mm
 PP = 95mm



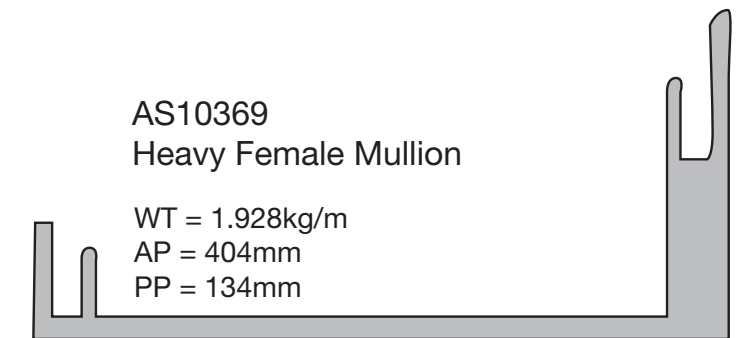
WT = 0.808kg/m
 AP = 295mm
 PP = 125mm

AS8033
 Narrow Female
 Mullion



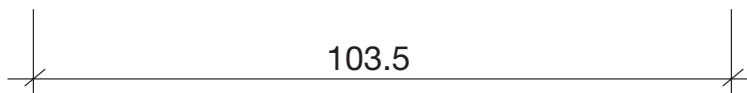
AS10370
 Heavy Male Mullion

WT = 1.767kg/m
 AP = 376mm
 PP = 170mm



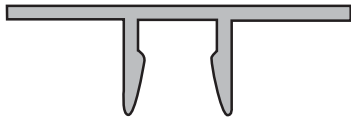
AS10369
 Heavy Female Mullion

WT = 1.928kg/m
 AP = 404mm
 PP = 134mm

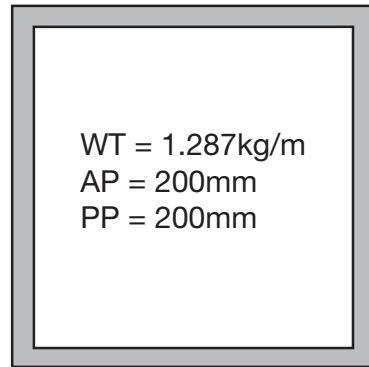


103.5

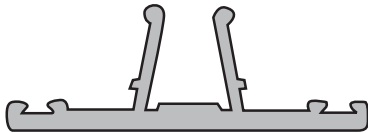
ST LEONARDS FRAMING SYSTEM



AS7706
Adaptor
WT = 0.394kg/m
AP = 156mm
PP = 100mm



WT = 1.287kg/m
AP = 200mm
PP = 200mm

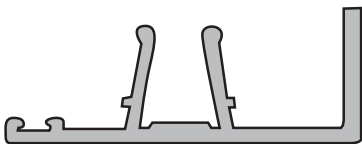


AS7707
Snap cover
Max. Glass thk.=10mm
WT = 2.665kg/m
AP = 190mm
PP = 100mm

ST850 (SH502•5MI6•5L)
50x50x2.5 Box



25x10# Pan.Hd
s/s screw.

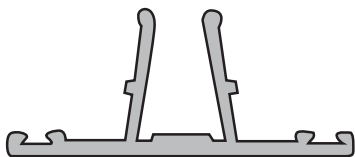


AS7708
Snap infill cover
WT = 0.490kg/m
AP = 214mm
PP = 100mm



ALC27-121

Snap cover
P.V.C. Wedge



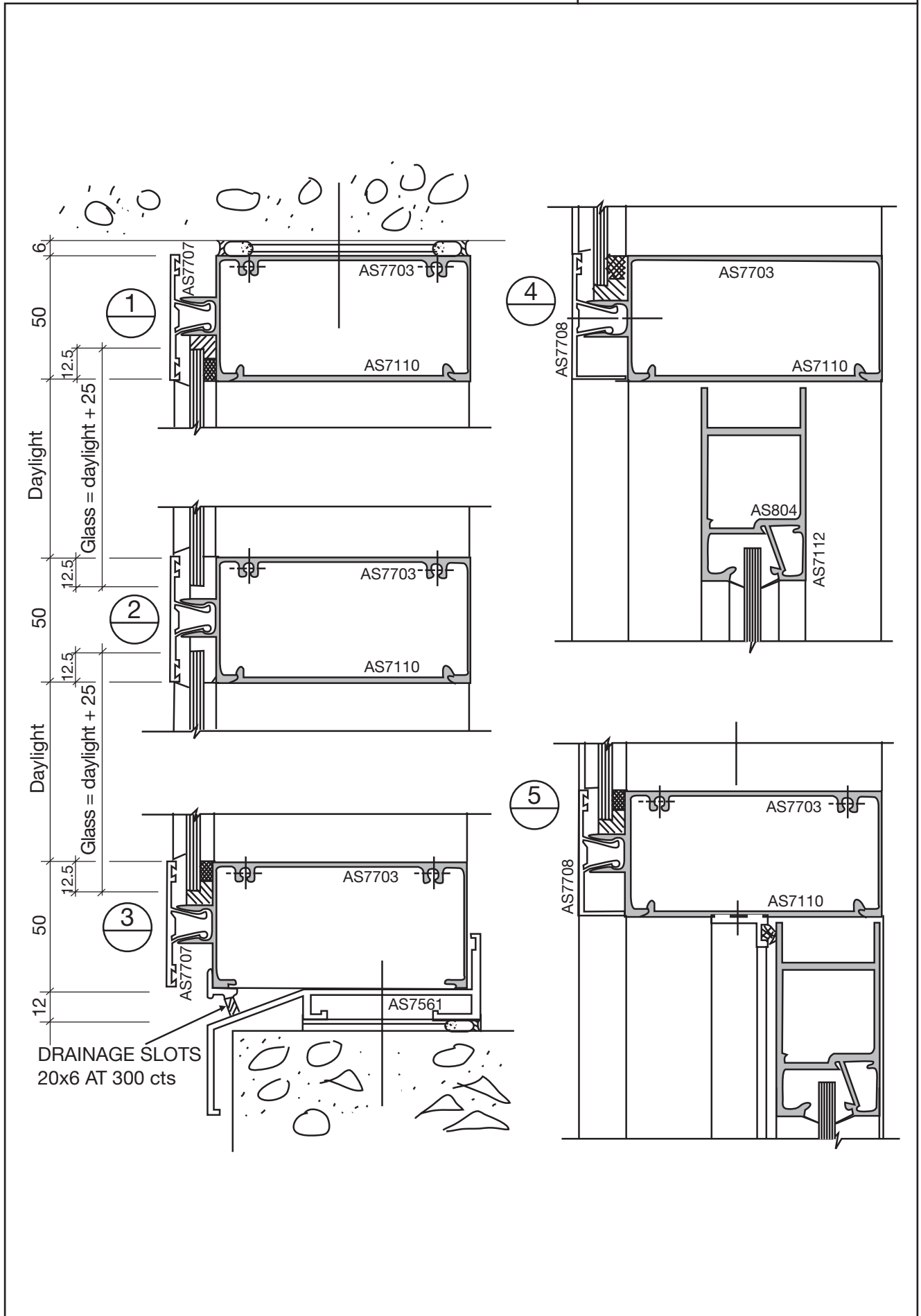
AS8315
Snap cover
Max. Glass thk.=14mm
WT = 0.431kg/m
AP = 206mm
PP = 100mm



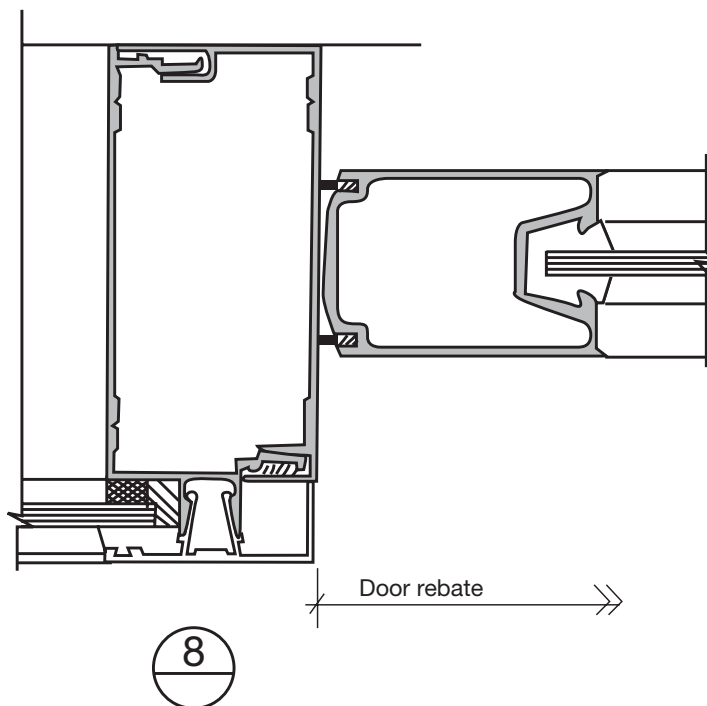
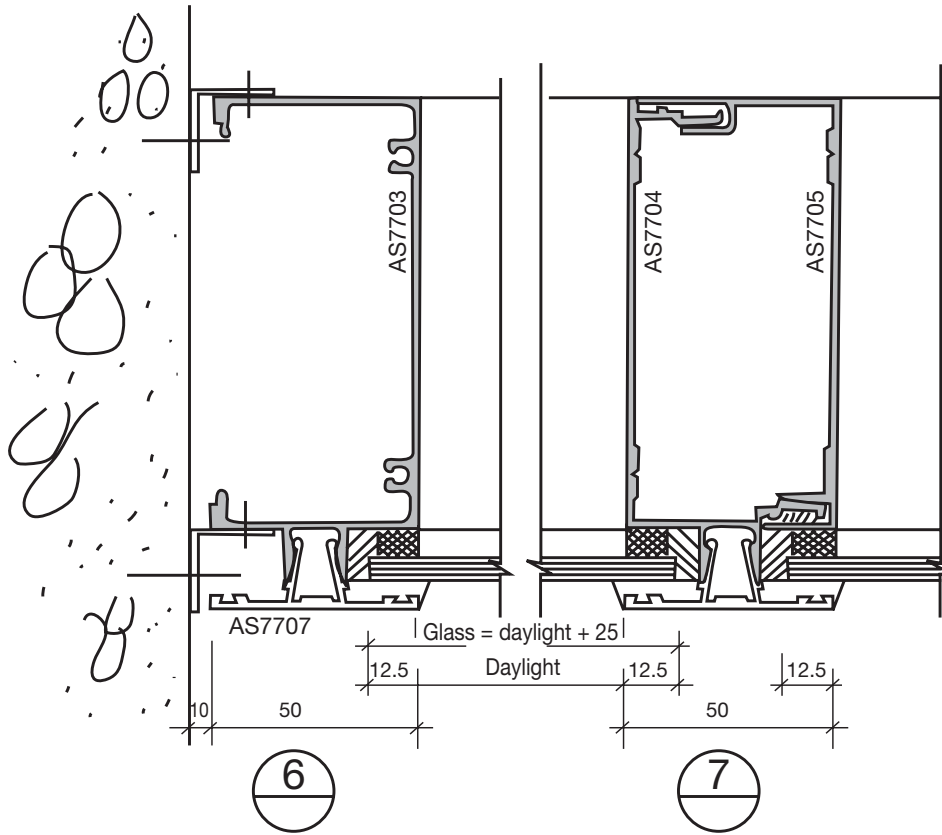
AS30250
25mm
Glass Adaptor

WT = 0.295kg/m
AP = 148mm
PP = 100mm

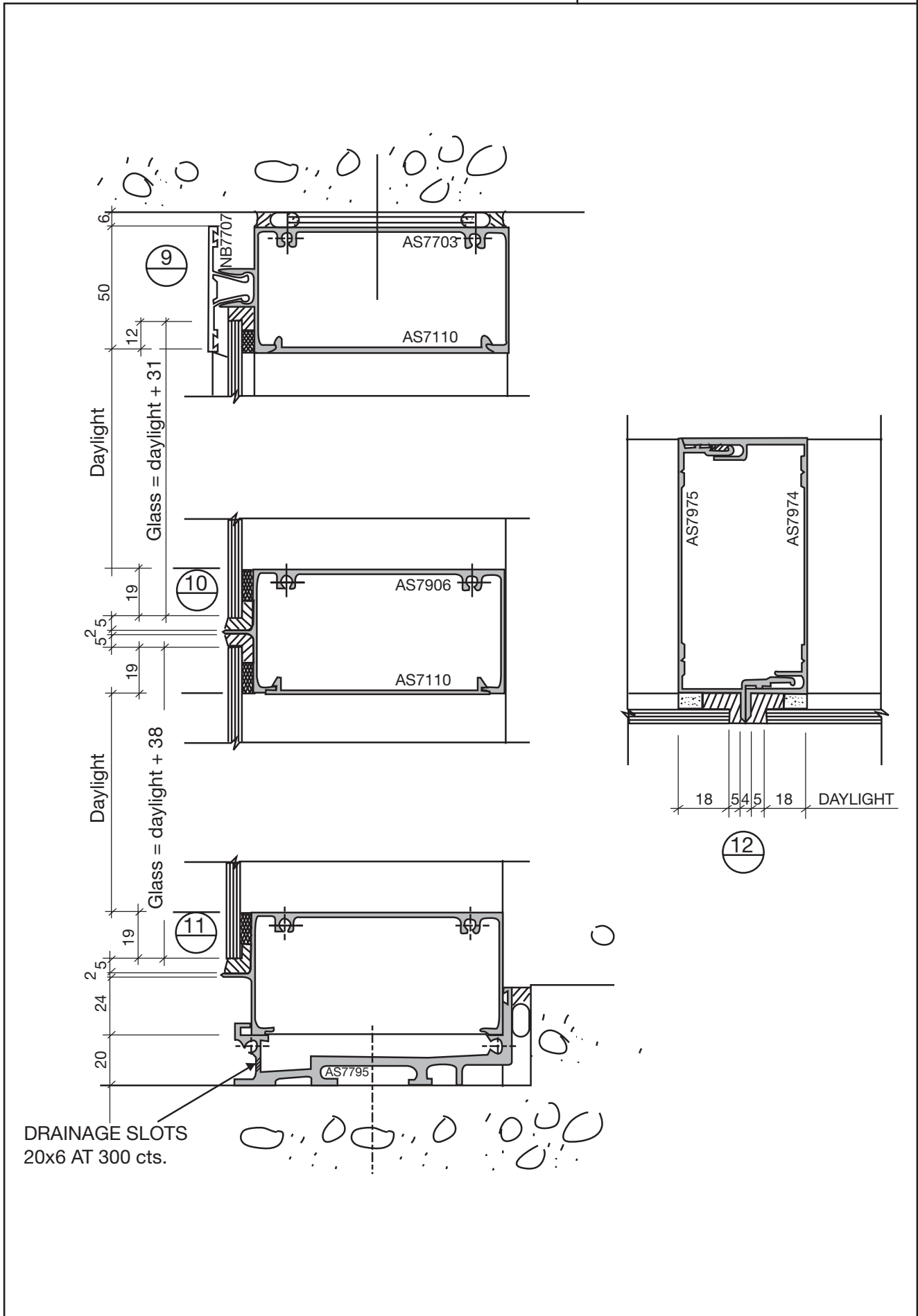
ST LEONARDS FRAMING SYSTEM



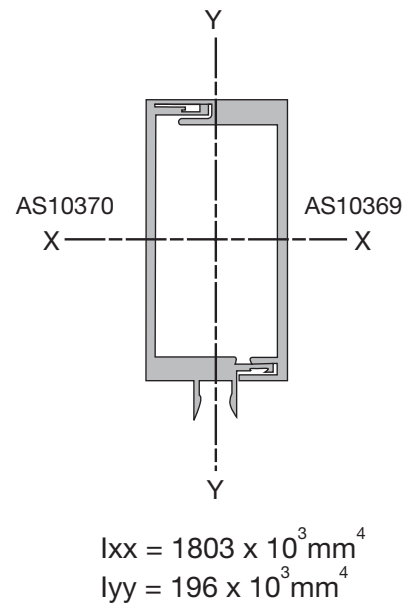
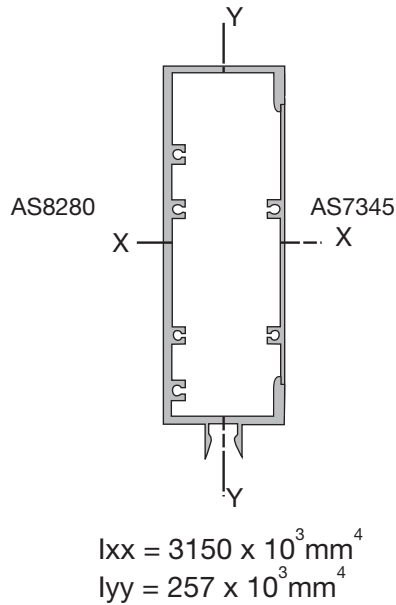
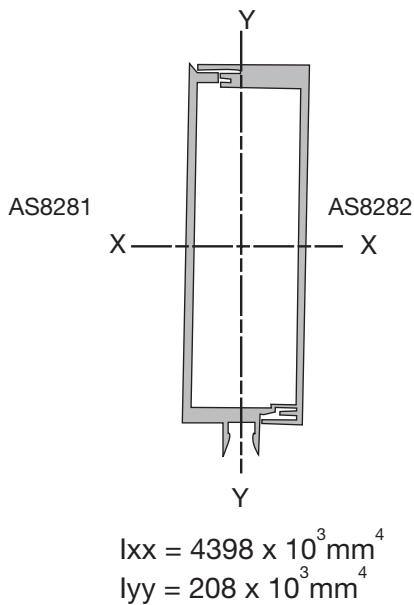
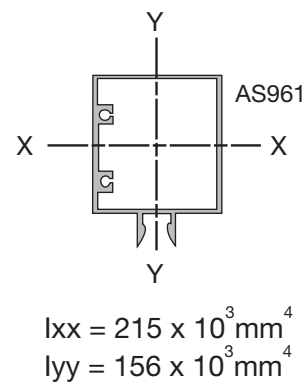
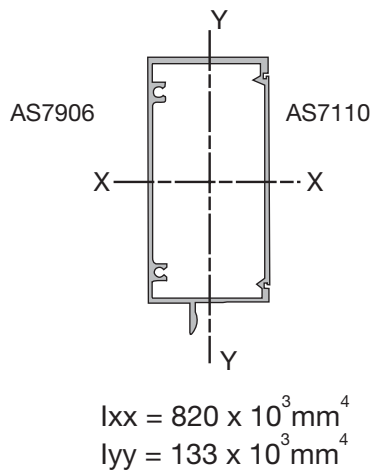
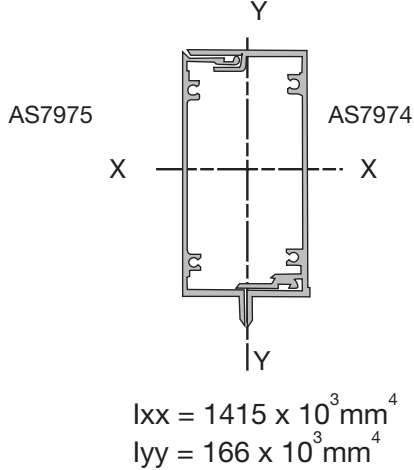
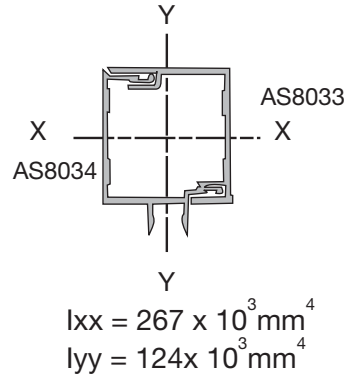
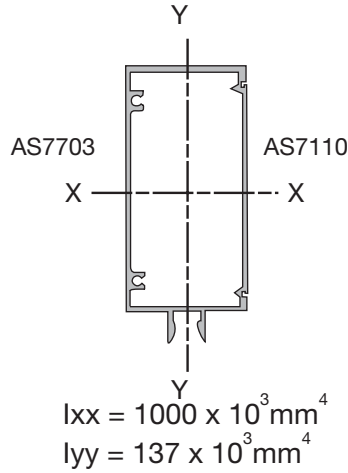
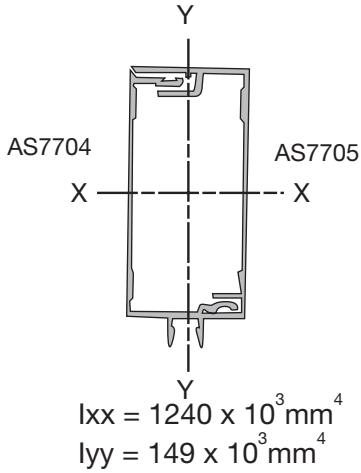
ST LEONARDS FRAMING SYSTEM



ST LEONARDS FRAMING SYSTEM



ST LEONARDS FRAMING SYSTEM





COMMERCIAL FRAMING SYSTEMS PRODUCT MANUAL

SECTION – 8.

PAGES – 01 to 05

• PENTAGON 80 FRAMING SYSTEM

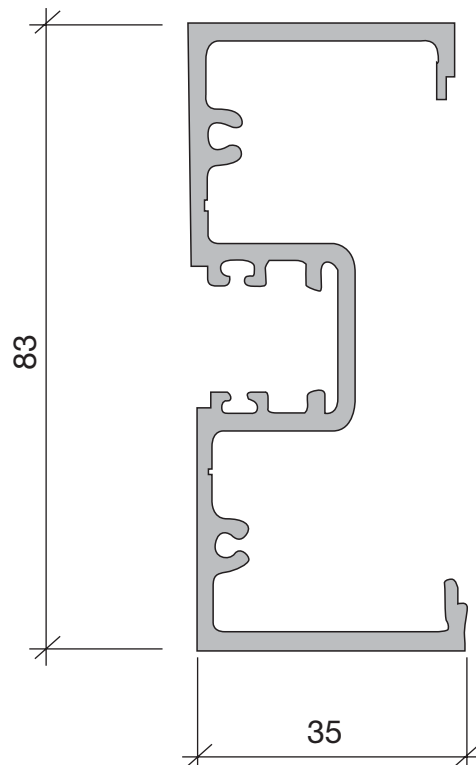
- **FEATURES** **P1**
- **GLAZING NOTES** **P2**
- **COMPONENTS** **P3 - 4**
- **ASSEMBLY DRAWINGS AND STRUCTURAL
PROPERTIES OF SECTIONS** **P5**

PENTAGON 80 FRAMING SYSTEM**FEATURES: (PENTAGON 80)**

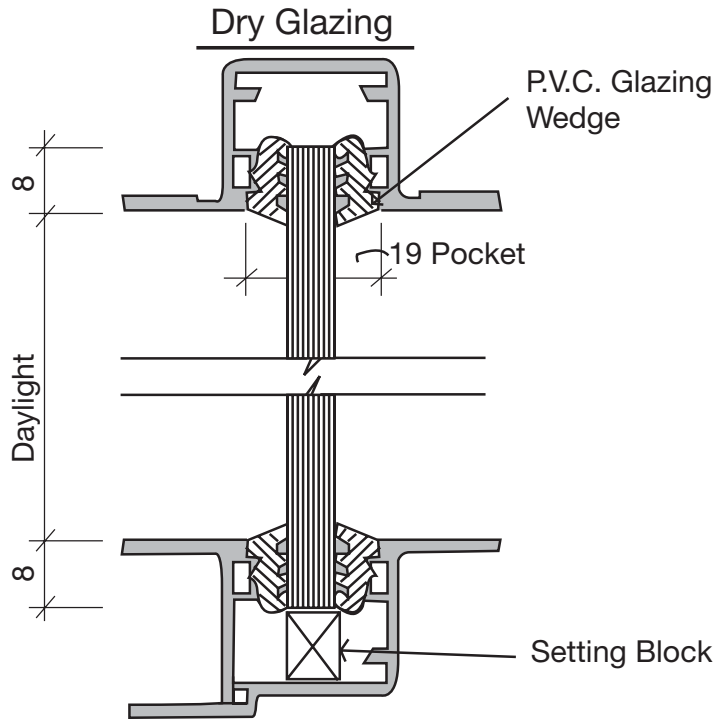
- Accepts glass thickness from 4mm to 10mm
- Lightest and slimmest of the framing systems
- Centre glazing
- Adaptors available to facilitate the use of hinged doors
- Has a fin adaptor for fixing to brickwork, timber reveals or studs
- Suitable for internal partitions, residential entrances, picture windows and shop fronts with minimal wind load
- Designed for both wet and dry glazing

NOTES:

- Sub sills should be used in wet weather conditions. Remember to fix stop ends
- Dry glazing is not recommended for shopfronts in extreme weather conditions
- Not recommended on a building higher than 1 storey



PENTAGON 80 FRAMING SYSTEM



| <u>Glass</u> | <u>Dry Glazing</u> | | <u>Wet Glazing</u> | |
|--------------|---------------------|----------------------|---------------------|----------------------|
| | <u>Inside Wedge</u> | <u>Outside Wedge</u> | <u>Inside Wedge</u> | <u>Outside Wedge</u> |
| 5 mm | 343-5 | 343-5 | Silicone & Tape | 343-5 |
| 6 mm | 343-5 | 343-6 | Silicone & Tape | 343-6 |
| 6.38 mm | Y113 | Y113 | Silicone & Tape | Y113 |
| 8 mm | 343-8 | 343-8 | Silicone & Tape | 343-8 |
| 10 mm | 114-10 | 114-10 | Silicone & Tape | 114-10 |

GLASS CUTTING SIZE: Height & Width = Daylight + 16mm

Because of tolerance in P.V.C. wedges and extrusions, the above recommendations should be used as a guide only.

P.V.C. Glazing Wedges



343-5
(5mm Glass)



343-6
(6mm Glass)



Y113
(6.3mm Glass)



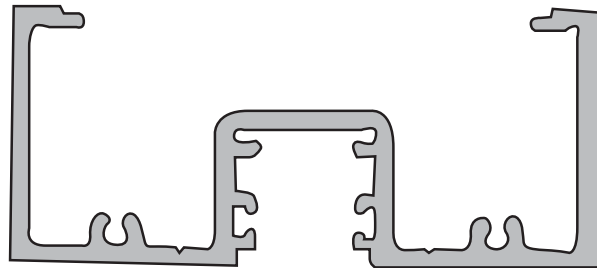
343-8
(8mm Glass)



114-10
(10mm Glass)

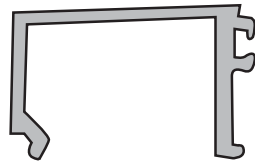
PENTAGON 80 FRAMING SYSTEM

WT = 1.093kg/m
 AP = 486mm
 PP = 144mm



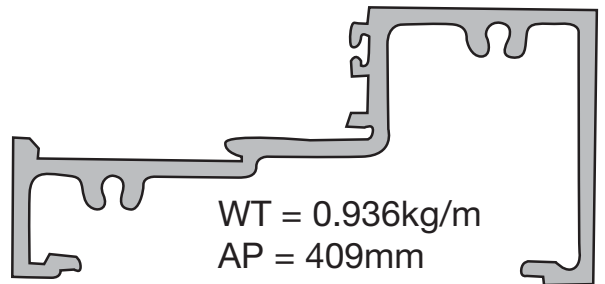
AS4424
 Head, jamb, mullion

WT = 0.313kg/m
 AP = 168mm
 PP = 100mm

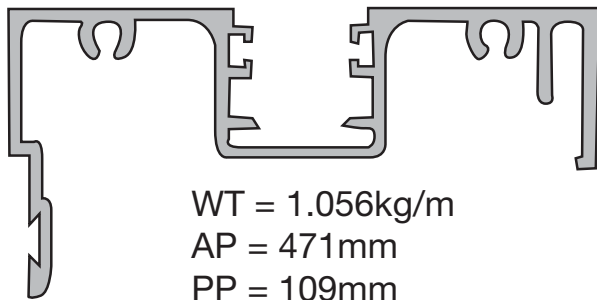


AS5012
 Sill bead

AS6479
 Sill



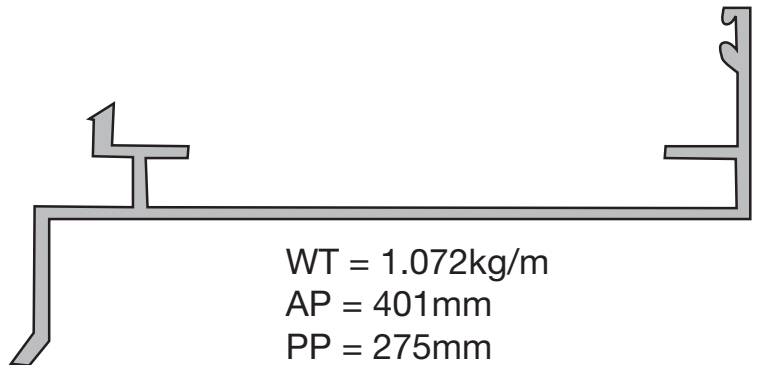
WT = 0.936kg/m
 AP = 409mm
 PP = 105mm



AS9969
 Self Mating Mullion

WT = 1.056kg/m
 AP = 471mm
 PP = 109mm

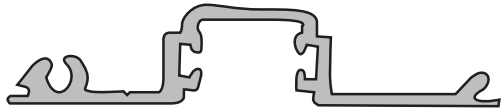
SP2786
 Subsill



WT = 1.072kg/m
 AP = 401mm
 PP = 275mm

PENTAGON 80 FRAMING SYSTEM

ADAPTORS



AS4425
Pocket filler
WT = 0.482kg/m
AP = 233mm
PP = 100mm

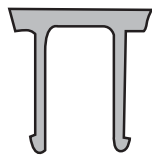


AS4144
Flat filler
WT = 0.461kg/m
AP = 159mm
PP = 100mm

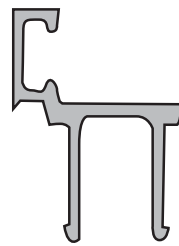
WT = 0.291kg/m
AP = 147mm
PP = 147mm



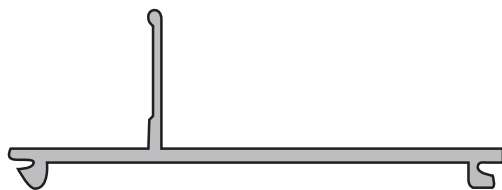
AS7114
Door stop
For 35mm doors
with this suite
(needs 4424 at
Head & Jambs)



AS7113
Pocket filler
WT = 0.184kg/m
AP = 109mm
PP = 100mm



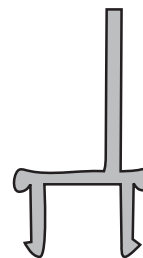
AS9628
Door stop
For 45mm doors
WT = 0.291kg/m
AP = 159mm
PP = 100mm



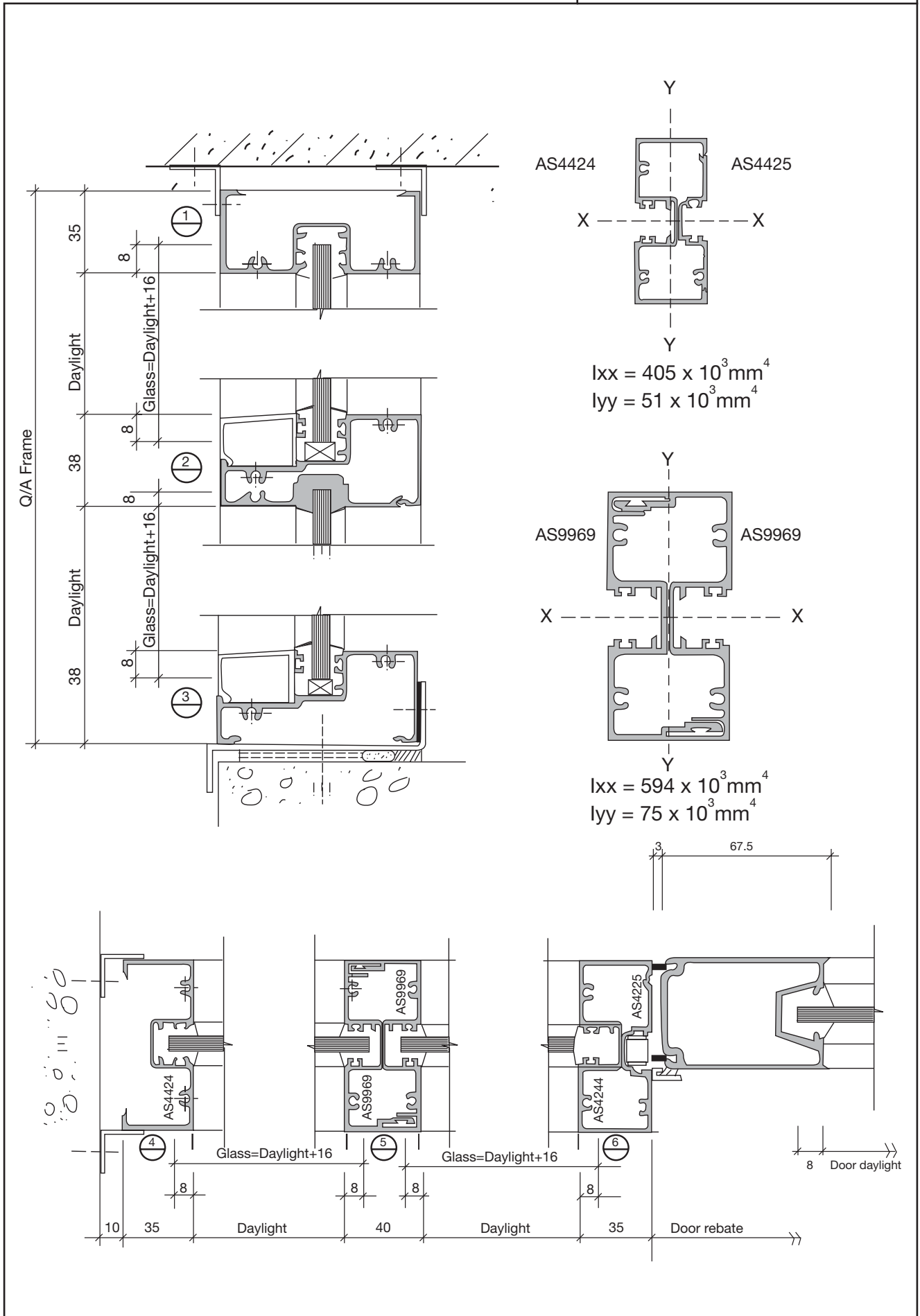
AS10557
Built-in adaptor
WT = 0.284kg/m
AP = 195mm
PP = 110mm

AS4937
Door or Awning
sash adaptor

WT = 0.245kg/m
AP = 133mm
PP = 100mm



PENTAGON 80 FRAMING SYSTEM





COMMERCIAL FRAMING SYSTEMS PRODUCT MANUAL

SECTION – 9.

PAGES – 01 to 22

• SLIDING DOORS

| | |
|-------------------------------------|----------|
| • FEATURES 7000 DOOR | P1 |
| • COMPONENTS - HUNTINGDALE SUITE | P2 - 5 |
| • COMPONENTS - O'CONNOR SUITE | P6 – 7 |
| • COMPONENTS - 7000 DOOR | P8 - 11 |
| • ASSEMBLY DRAWINGS – HUNTINGDALE | P12 – 16 |
| • ASSEMBLY DRAWINGS - 7000 DOOR | P17 – 21 |
| • STRUCTURAL PROPERTIES OF SECTIONS | P22 |

SLIDING DOORS

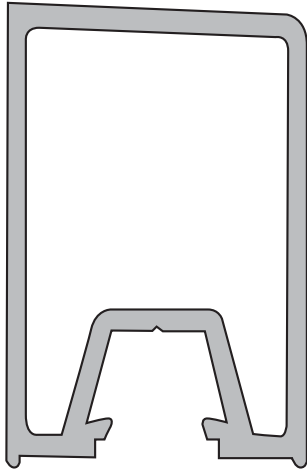
NOTE: Australian Standard AS2047 states that all doors be rated for design wind load pressure. The rating required will depend on its location, height of building, terrain category. (see design section of this manual) the 7000 series sliding door has been tested in accordance with AS2047- 1999

FEATURES:(7000 DOOR)

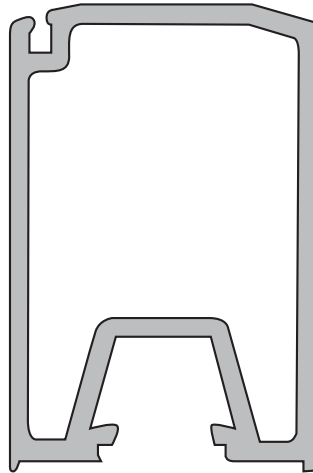
- Panel configuration of 2, 3, and 4
- Passed water penetration test up to 1000Pa with sub sill
- Accepts midrail (optional)
- Accepts commercial and domestic locks
- Accepts glass thickness from 5mm, 6mm toughened and 6.38mm laminated
- Adjustable height rollers of various load capacity
- Frame width of 101.6mm enables coupling to Huntingdale suite
- Interlock adaptor allows panel to be installed to outside of pre-existing glazed windows
- Plant on jamb/head allows door units to be installed into windows of greater frame depth

- NOTES:**
1. Sub-sills should be used in extreme weather conditions. Remember to fix stop ends
 2. Dry glazing is not recommended for shopfronts in extreme weather conditions
 3. Allow for mullion expansion or contraction in areas that are subject to thermal movement

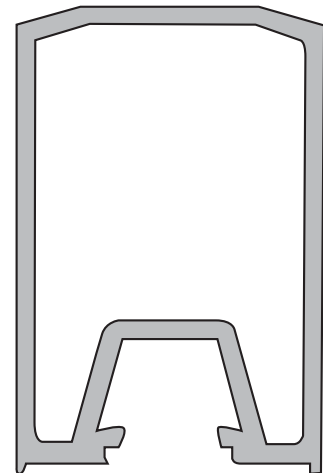
HUNTINGDALE DOOR FRAMING



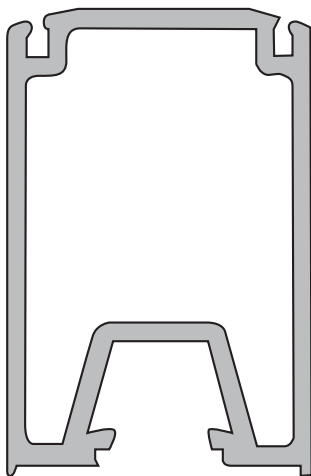
AS800
HINGE STILE
WT = 1.626Kg/m
AP = 269mm
PP = 206mm



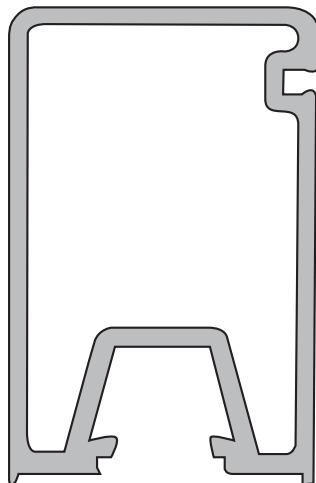
AS801
LOCK STILE
WT = 1.599Kg/m
AP = 279mm
PP = 209mm



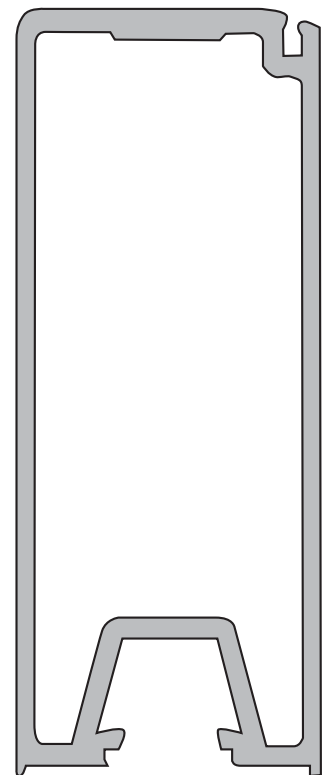
AS50029
SWEEP LOCK STILE
WT = 1.566Kg/m
AP = 269mm
PP = 203mm



AS802
DOUBLE WEATHER STILE
WT = 1.621Kg/m
AP = 291mm
PP = 204mm

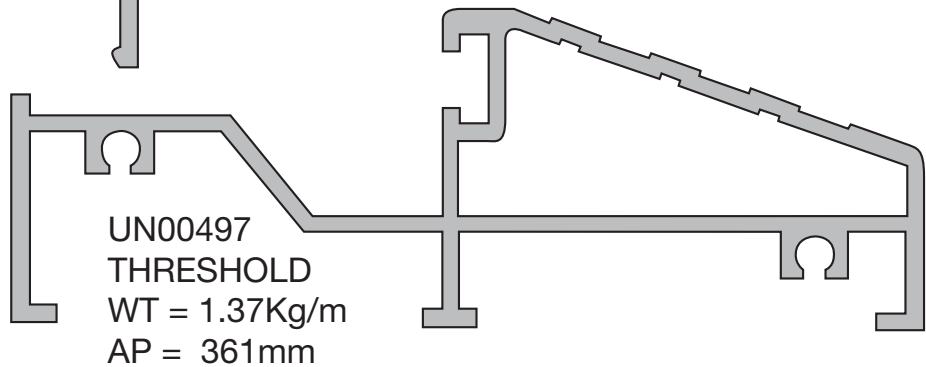
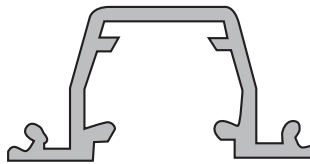
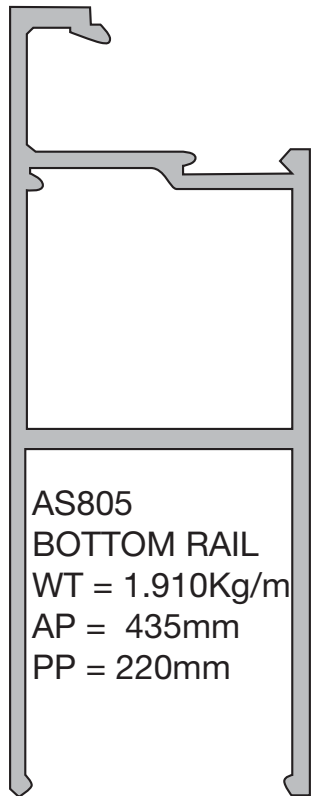
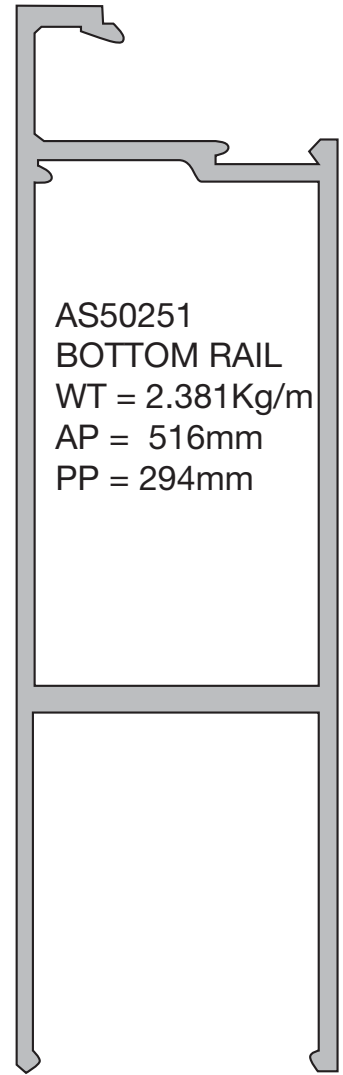
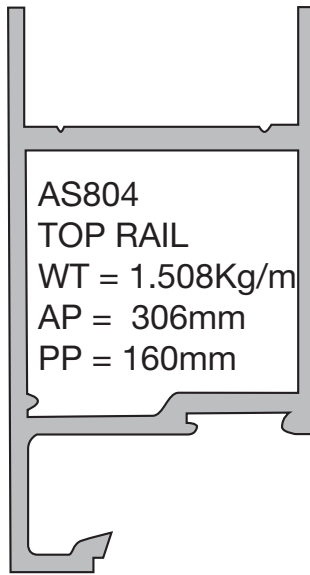
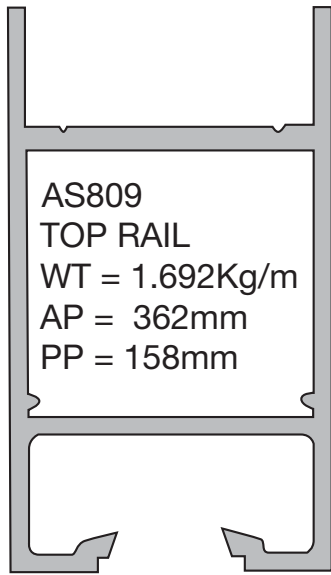


AS803
SLIDING DOOR STILE
WT = 1.648Kg/m
AP = 279mm
PP = 205mm

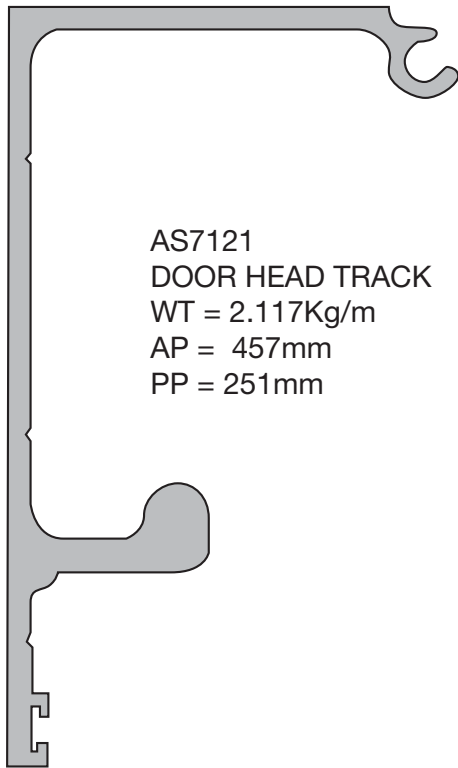


AS50070
WIDE STILE
WT = 2.227Kg/m
AP = 372mm
PP = 266mm

HUNTINGDALE DOOR FRAMING



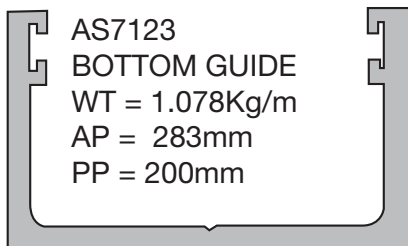
HUNTINGDALE DOOR FRAMING



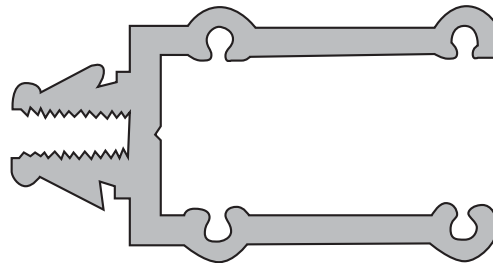
AS7121
DOOR HEAD TRACK
WT = 2.117Kg/m
AP = 457mm
PP = 251mm



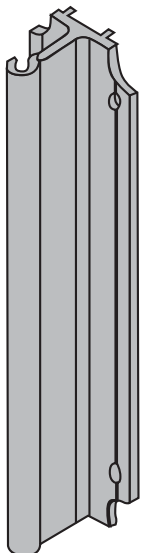
AS7122
DOOR PELMET
WT = 0.864Kg/m
AP = 322mm
PP = 130mm



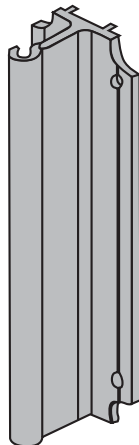
AS7123
BOTTOM GUIDE
WT = 1.078Kg/m
AP = 283mm
PP = 200mm



AS7120
JOINING SPIGOT
WT = 1.858Kg/m
AP = 399mm
PP = N/A

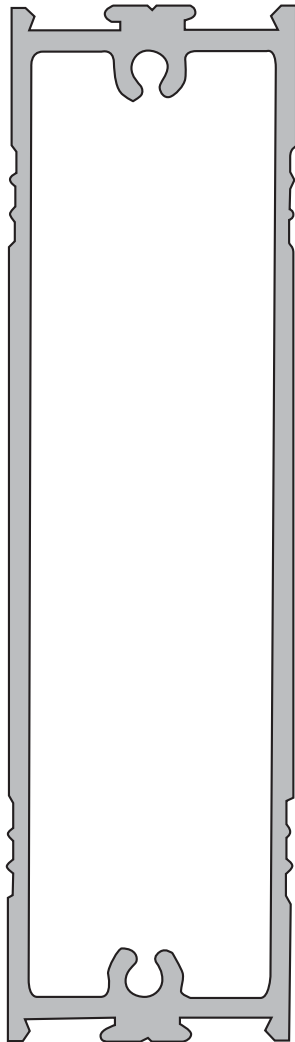


HSSPIGOT 807 = 126LG
AS9737MIGL

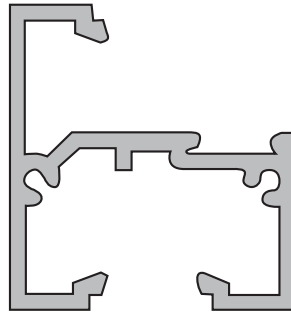


HSSPIGOT 806 = 91LG
AS9737MIGL

HUNTINGDALE DOOR FRAMING



AS807
MID RAIL 190mm
WT = 3.059Kg/m
AP = 432mm
PP = 309mm



AS9022
DOOR MIDRAIL 44mm
WT = 0.781Kg/m
AP = 336mm
PP = 106mm



AS806
MID RAIL 136mm
WT = 2.122Kg/m
AP = 490mm
PP = 300mm

MISCELLANEOUS ACCESSORIES



NOY 414
FIN SEAL



SCHPS 13B
WOOLPILE

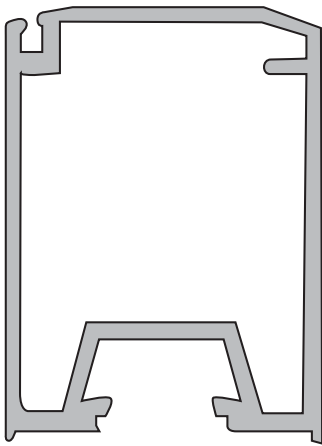


DOOR STOP
BULB. PRO71BBK

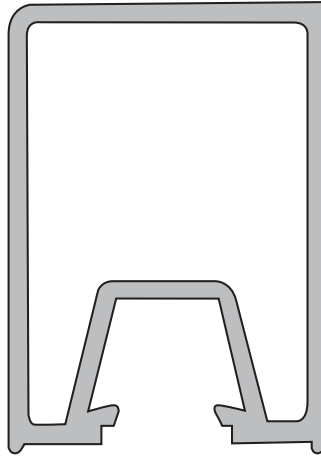


JACKING SCREW

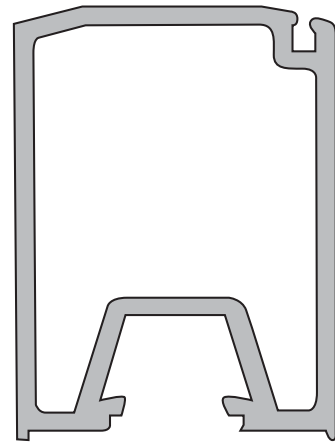
O'CONNOR DOOR FRAMING



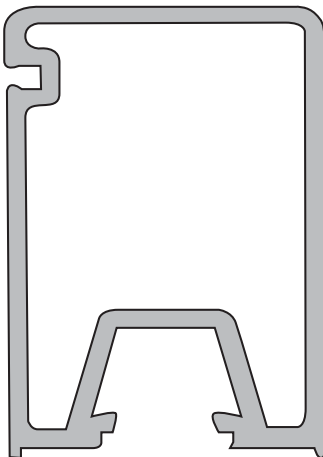
ALCN4272
LOCK STILE
WT = 1.344Kg/m
AP = 260mm
PP = 190mm



ALCN4273
HINGE STILE
WT = 1.428Kg/m
AP = 268mm
PP = 196mm

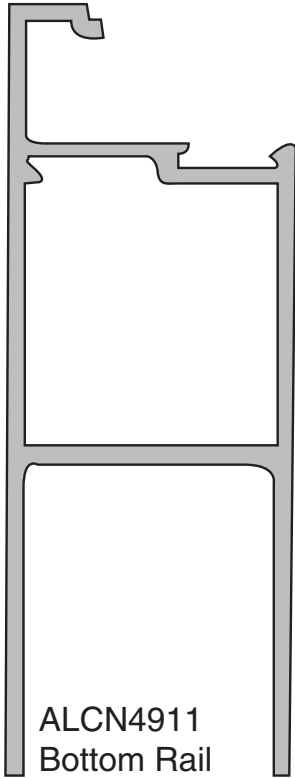


ALCN4274
PIVOT STILE
WT = 1.344Kg/m
AP = 269mm
PP = 189mm

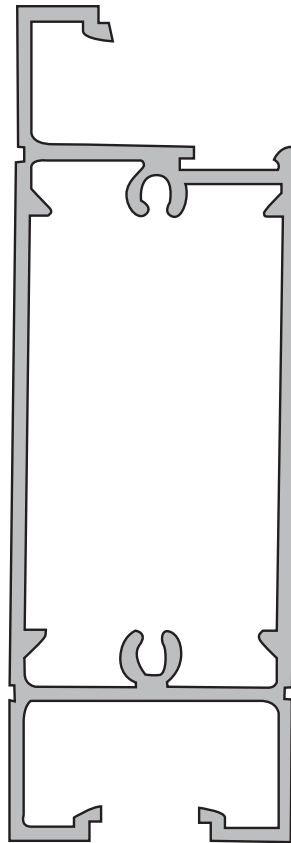


ALCN4275
SLIDER STILE
WT = 1.3900Kg/m
AP = 275mm
PP = 195mm

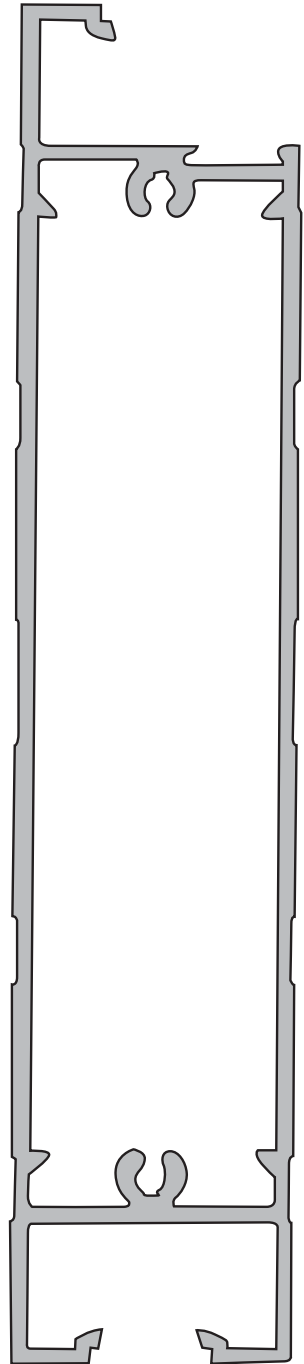
O'CONNOR DOOR FRAMING



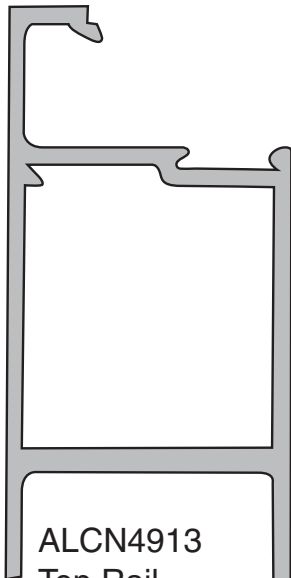
ALCN4911
Bottom Rail
WT = 1.753kg/m
AP = 439mm
PP = 175mm



ALCN4912
123mm Mid Rail
WT = 1.988kb/m
AP = 389mm
PP = 284mm



ALCN4914
200mm Mid Rail
WT = 3.106kb/m
AP = 623mm
PP = 424mm

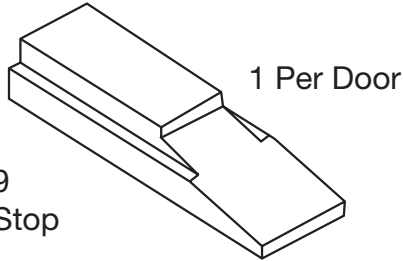


ALCN4913
Top Rail
WT = 1.418kb/m
AP = 321mm
PP = 158mm

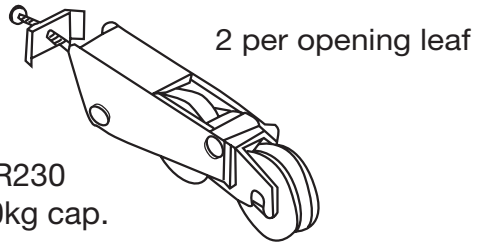


ALCN4910
Glazing Bead
WT = 0.194kb/m
AP = 133mm
PP = 100mm

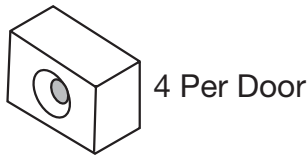
7000 DOOR FRAMING



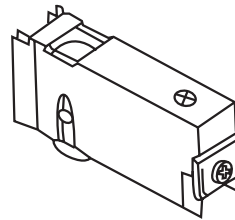
DS299
Door Stop
Buffer



DR230
50kg cap.




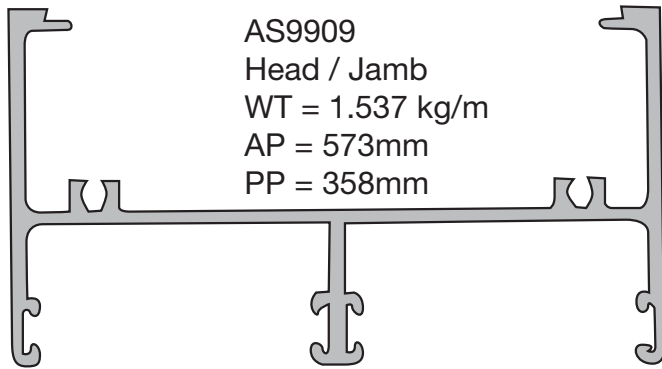
DS378
Spacer



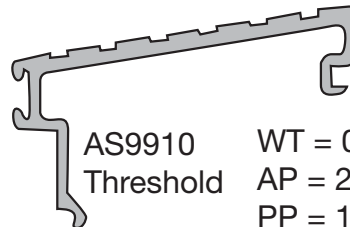
DR211
DR352-Stainless steel

Plug 
8mm - HPLUG2613BK
11mm - HPLUH2633BK

SCHPBS48525-4B 
5.25



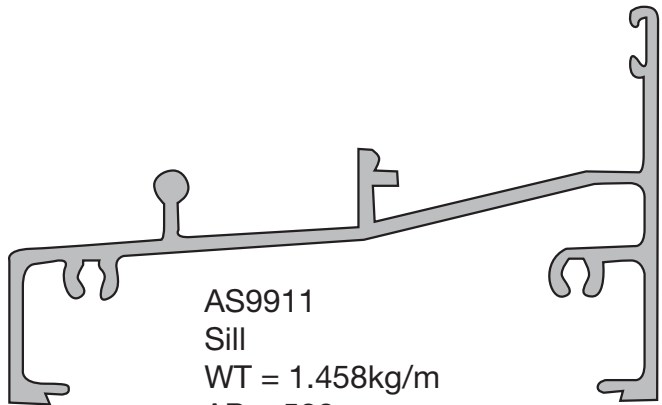
AS9909
Head / Jamb
WT = 1.537 kg/m
AP = 573mm
PP = 358mm



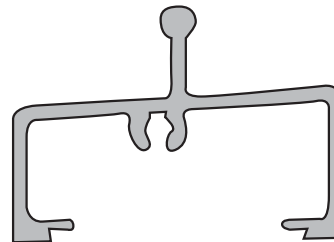
AS9910 WT = 0.528kg/m
Threshold AP = 216mm
PP = 100mm



AS9958 WT = 0.197kg/m
Filler AP = 102mm
PP = 50mm

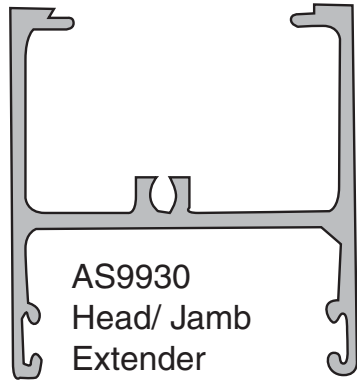


AS9911
Sill
WT = 1.458kg/m
AP = 522mm

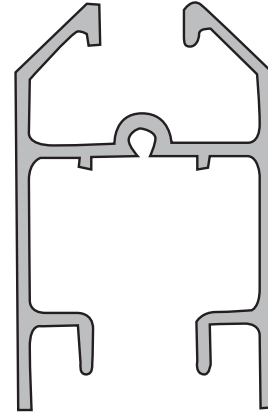


AS9931 WT = 0.741kg/m
Sill Extender AP = 255mm
PP = 121mm

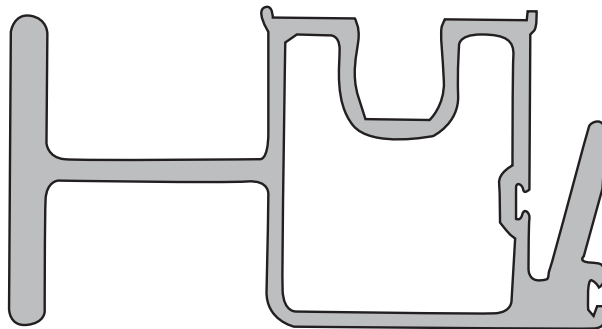
7000 DOOR FRAMING



AS9930
Head/ Jamb
Extender
WT = 1.025kg/m
AP = 380mm
PP = 236mm



AS9912
Horizontal Rail
WT = 1.007kg/m
AP = 421mm
PP = 132mm

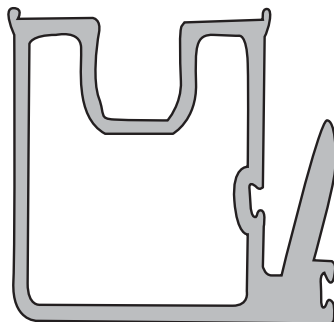


AS50312
Heavy Interlock
WT = 2.352kg/m
AP = 434mm
PP = 389mm



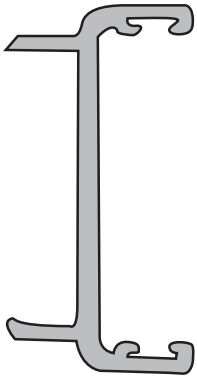
AS50313
Stile
WT = 1.151kg/m
AP = 228mm
PP = 183mm

AS50320
Interlock
WT = 1.478kg/m
AP = 281mm
PP = 150mm

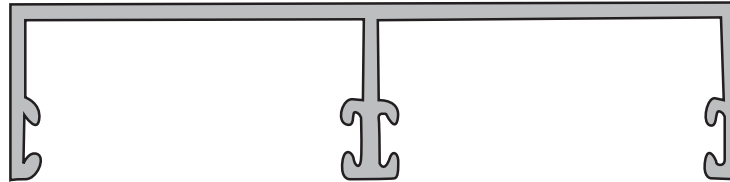


AS9940
Interlock
Adaptor
WT = 0.690kg/m
AP = 176mm
PP = 127mm

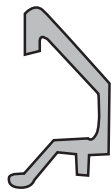
7000 DOOR FRAMING



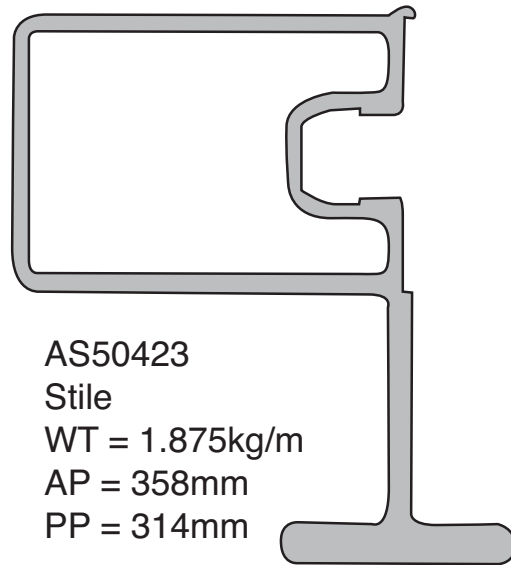
AS10311
Adaptor
WT = 0.665kg/m
AP = 216mm
PP = 157mm



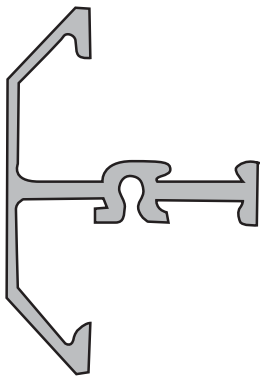
AS10484
Plant-on-Jamb
WT = 0.995kg/m
AP = 386mm
PP = 284mm



AS10485
Midrail Bead
WT = 0.207kg/m
AP = 100mm
PP = 100mm

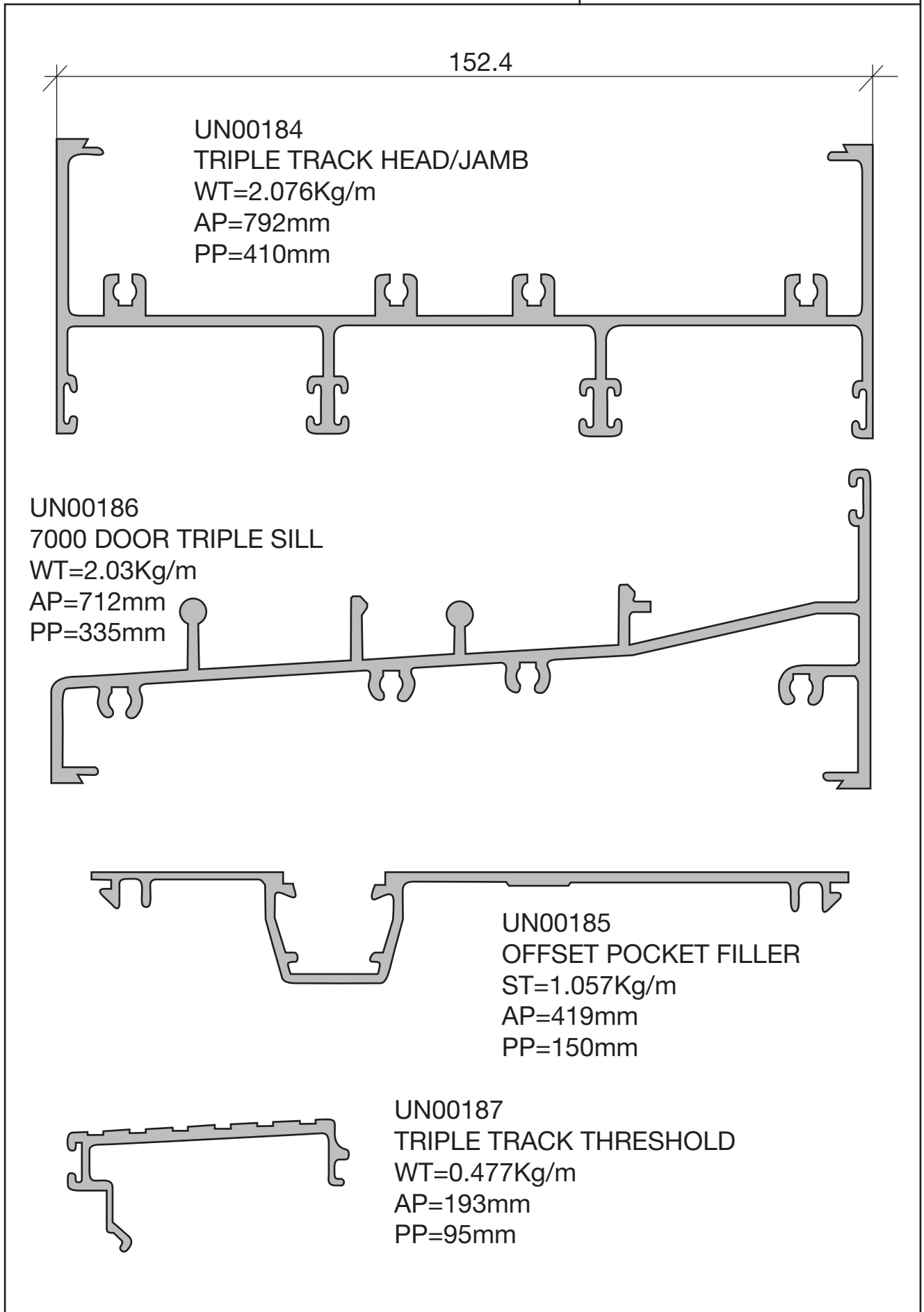


AS50423
Stile
WT = 1.875kg/m
AP = 358mm
PP = 314mm

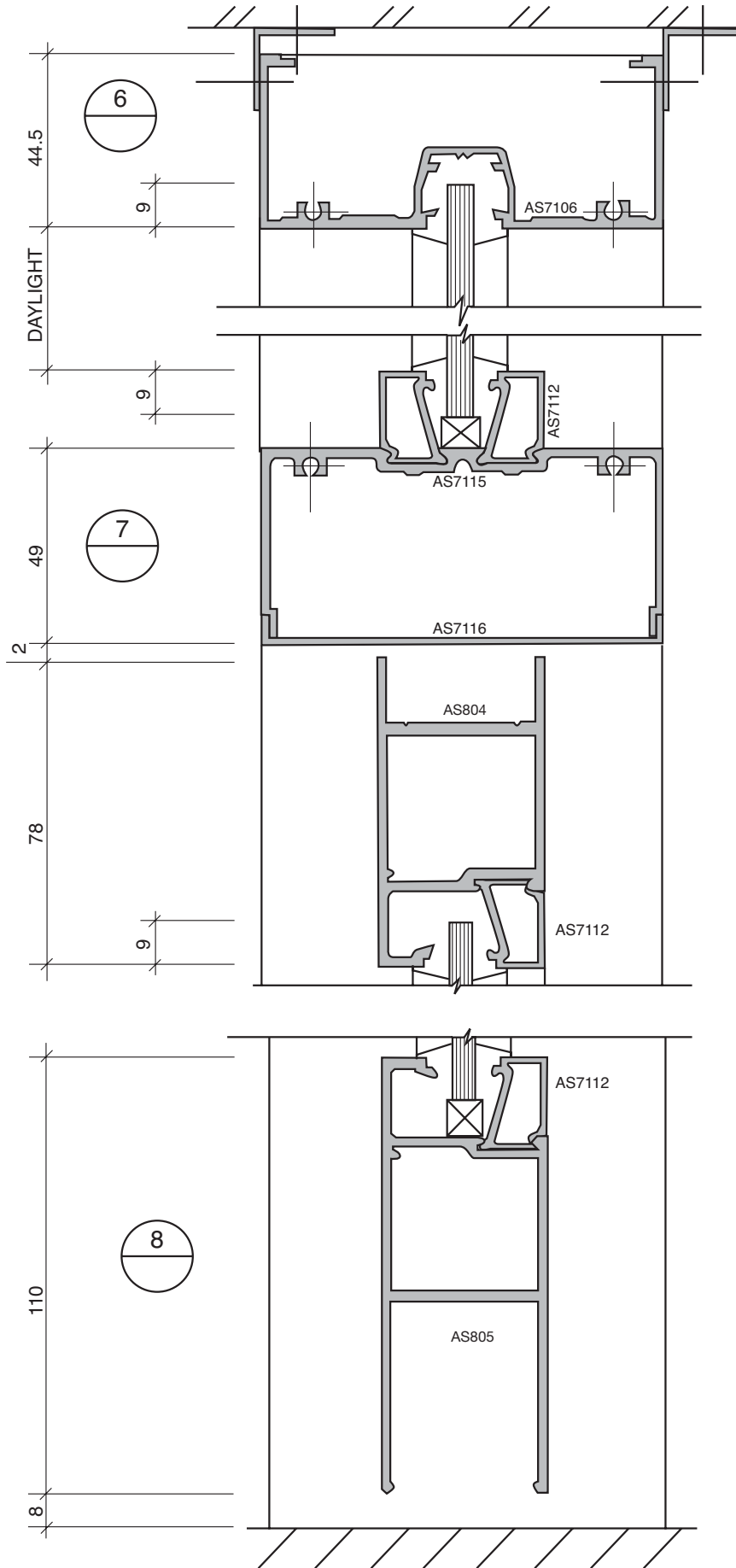


AS10483
50mm Midrail
WT = 0.636kg/m
AP = 251mm
PP = 100mm

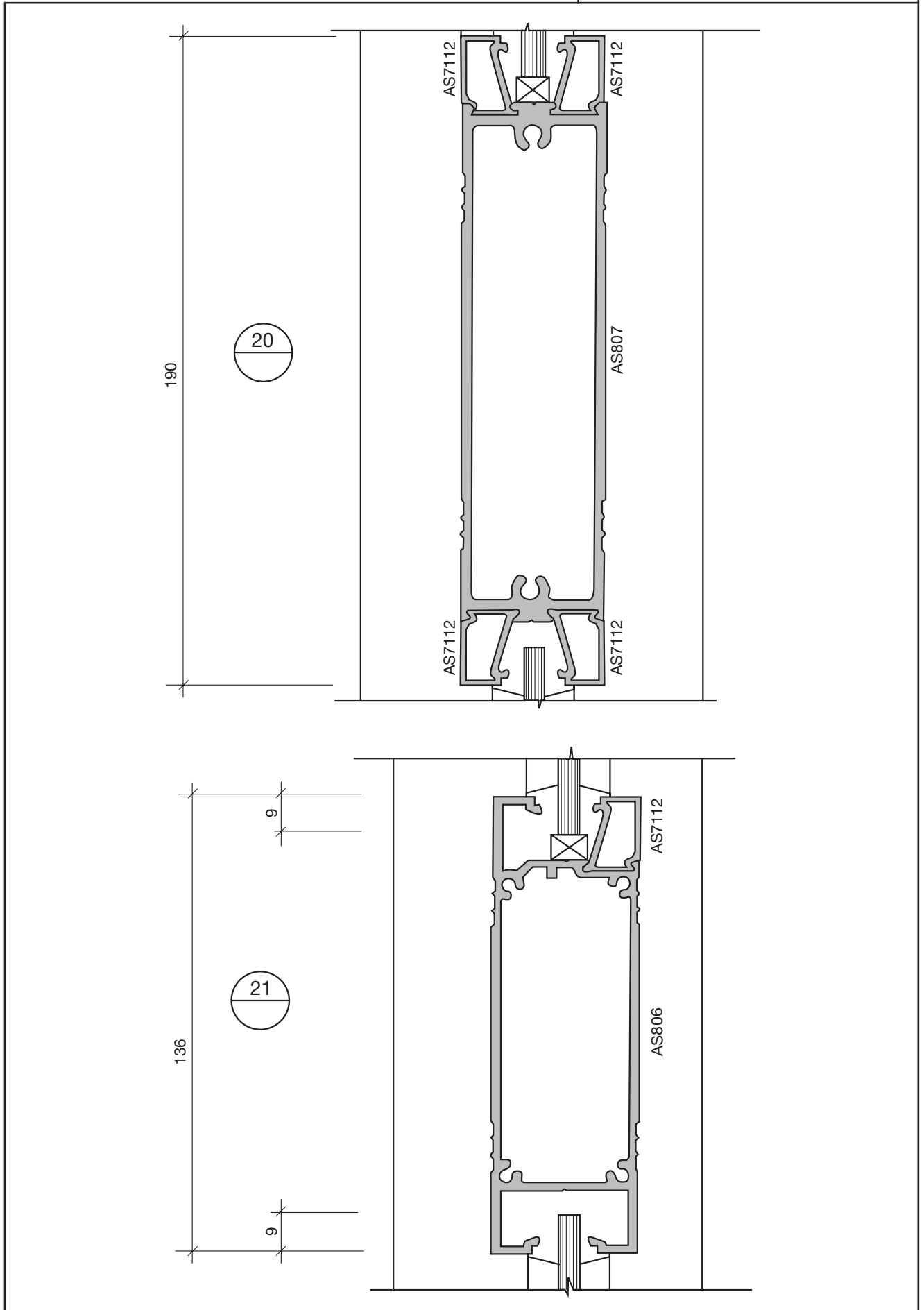
7000 DOOR FRAMING TRIPLE SLIDER



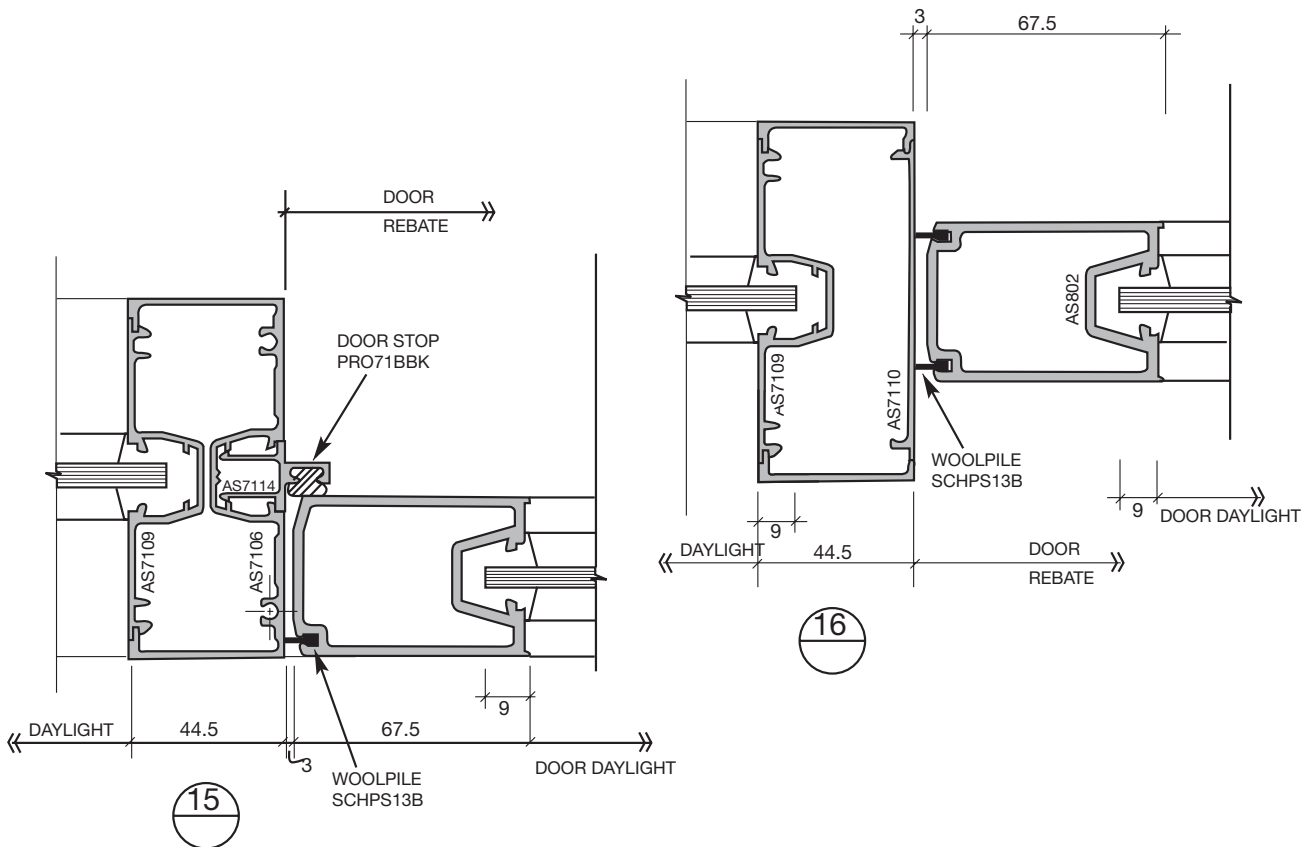
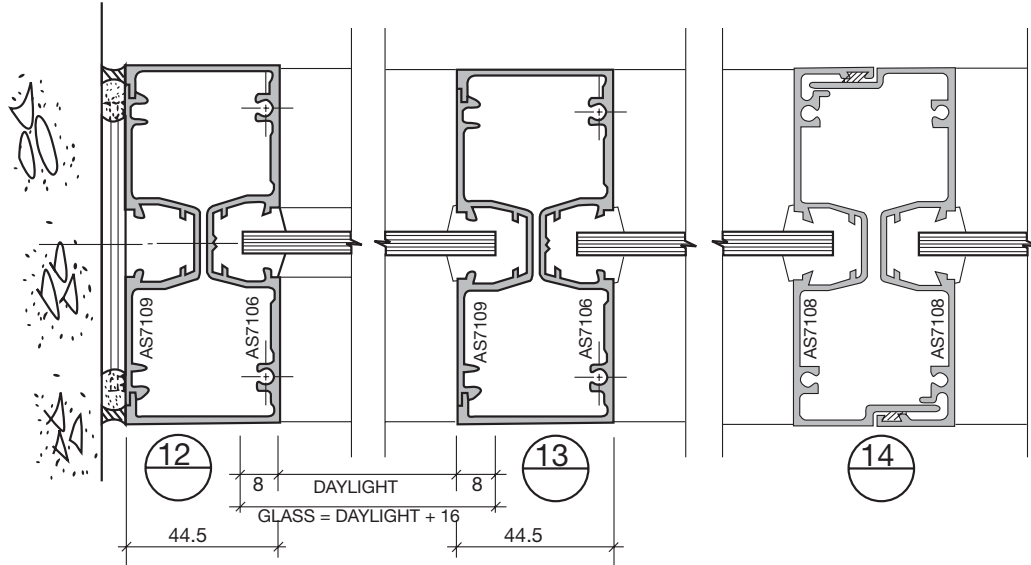
HUNTINGDALE DOOR SECTION



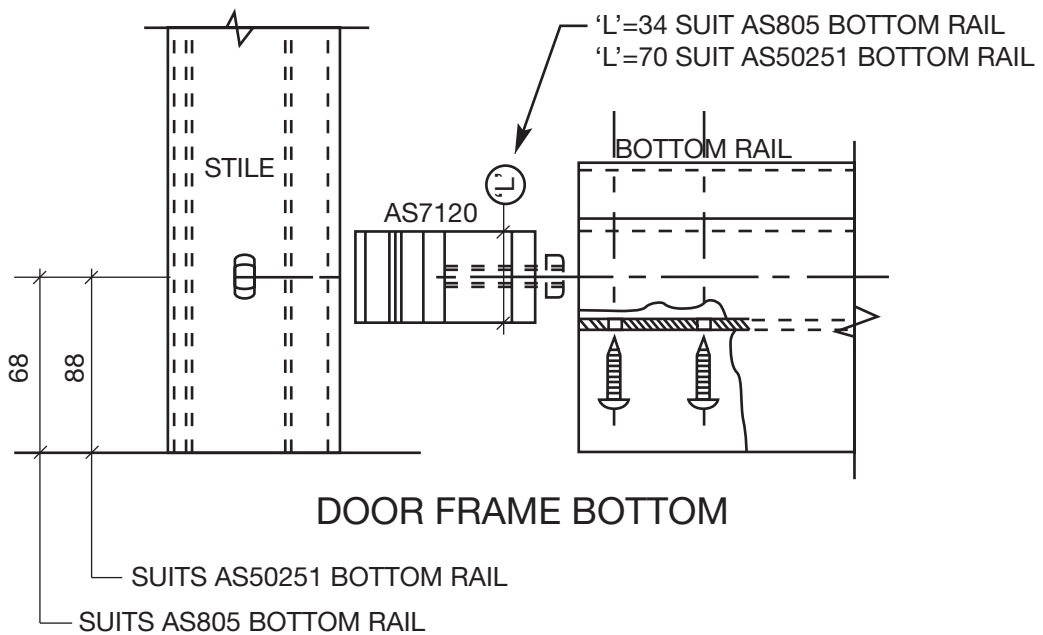
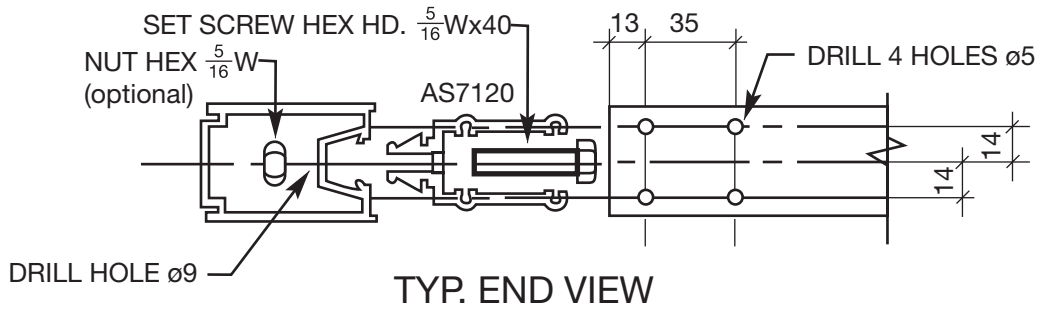
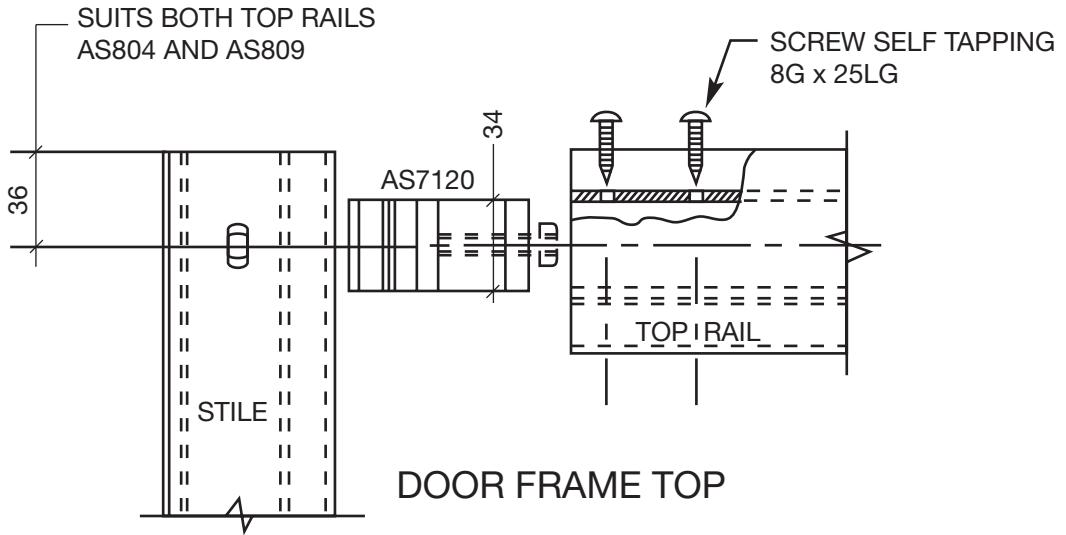
HUNTINGDALE DOOR SECTION



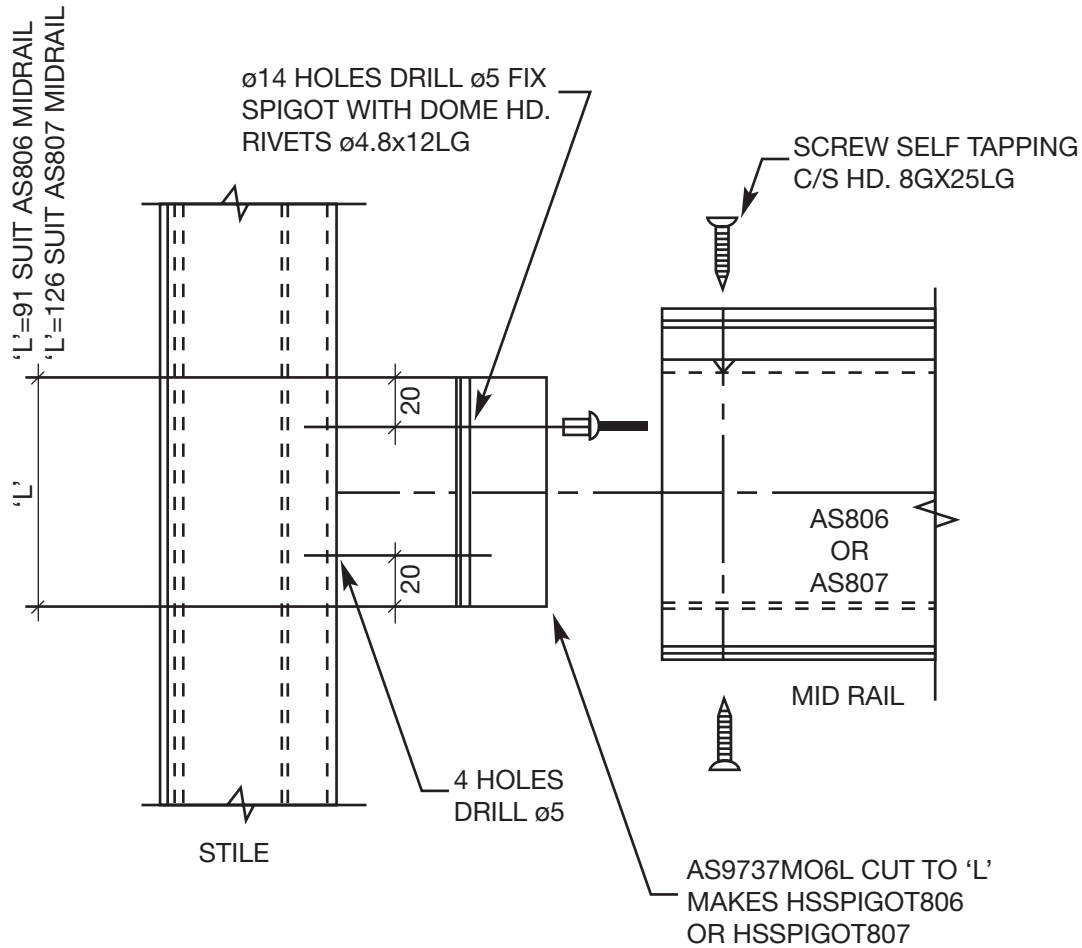
HUNTINGDALE DOOR SECTION



HUNTINGDALE DOOR - TOP/BOTTOM RAIL ASSY

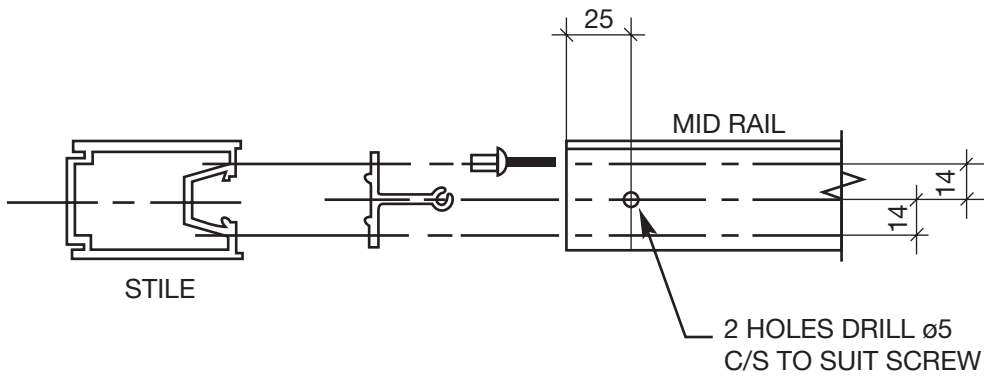


HUNTINGDALE DOOR - MIDRAIL ASSY



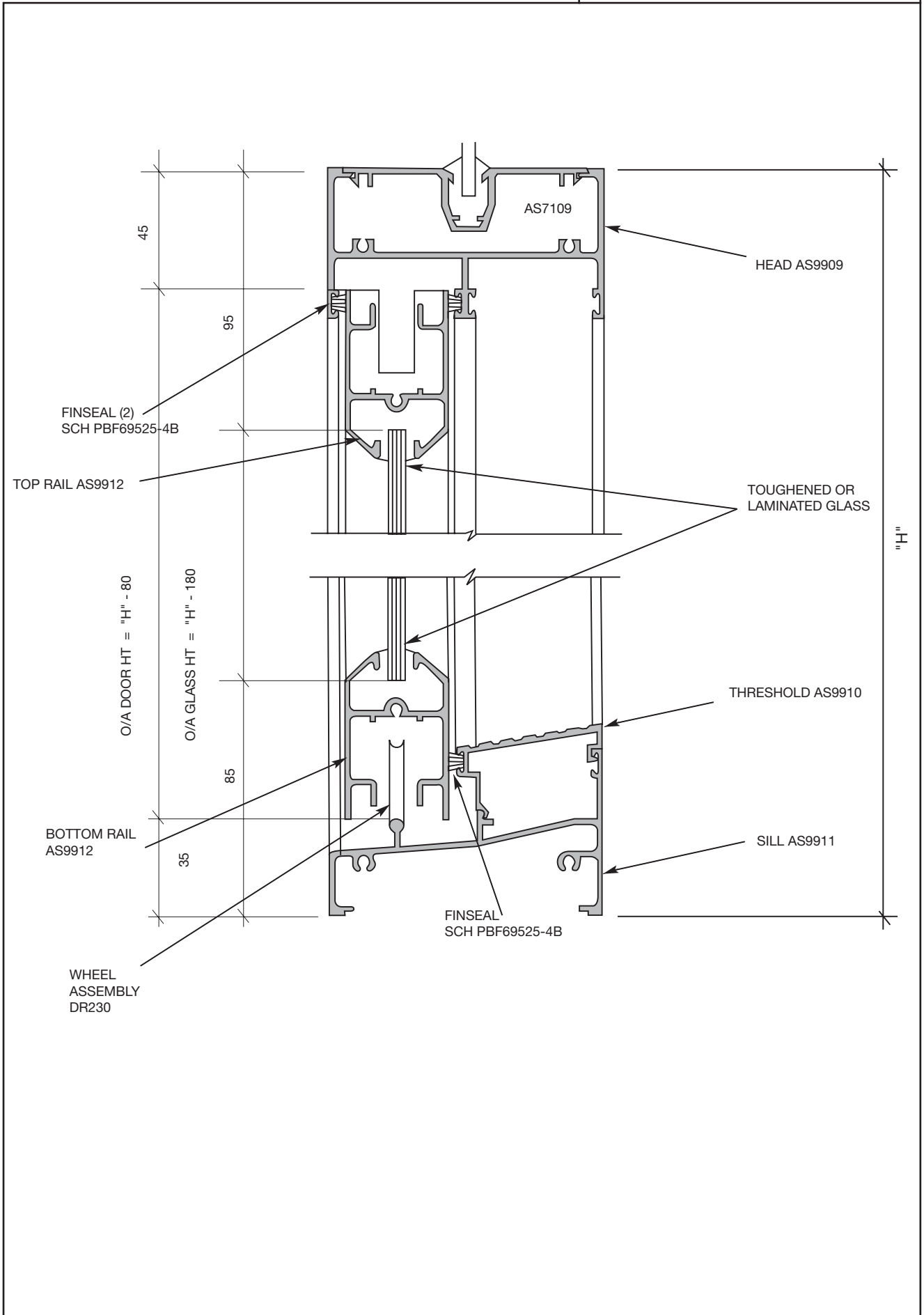
DOOR MIDRAIL ASSY

DRILL 4 HOLES $\phi 5$



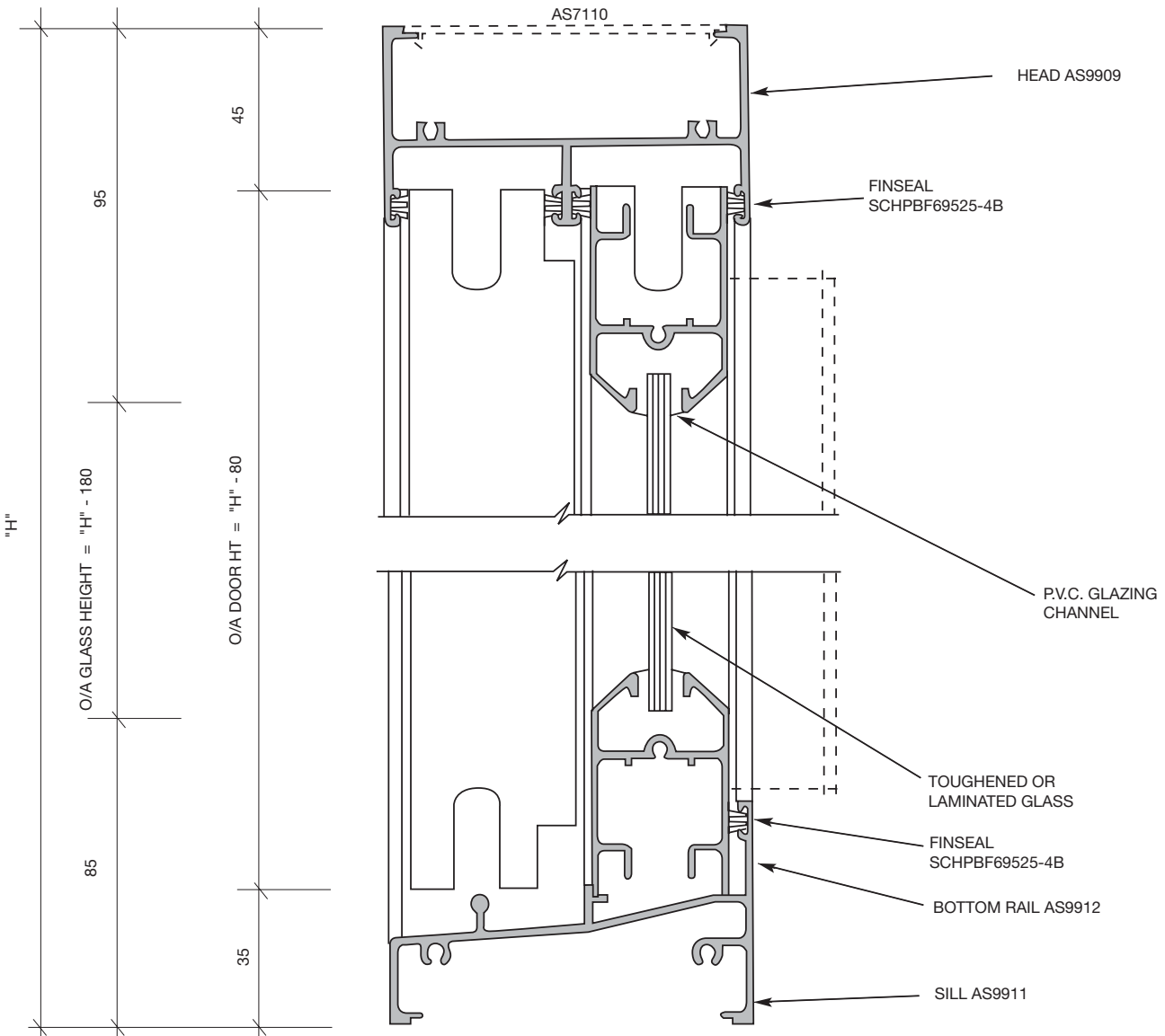
TYP. END VIEW

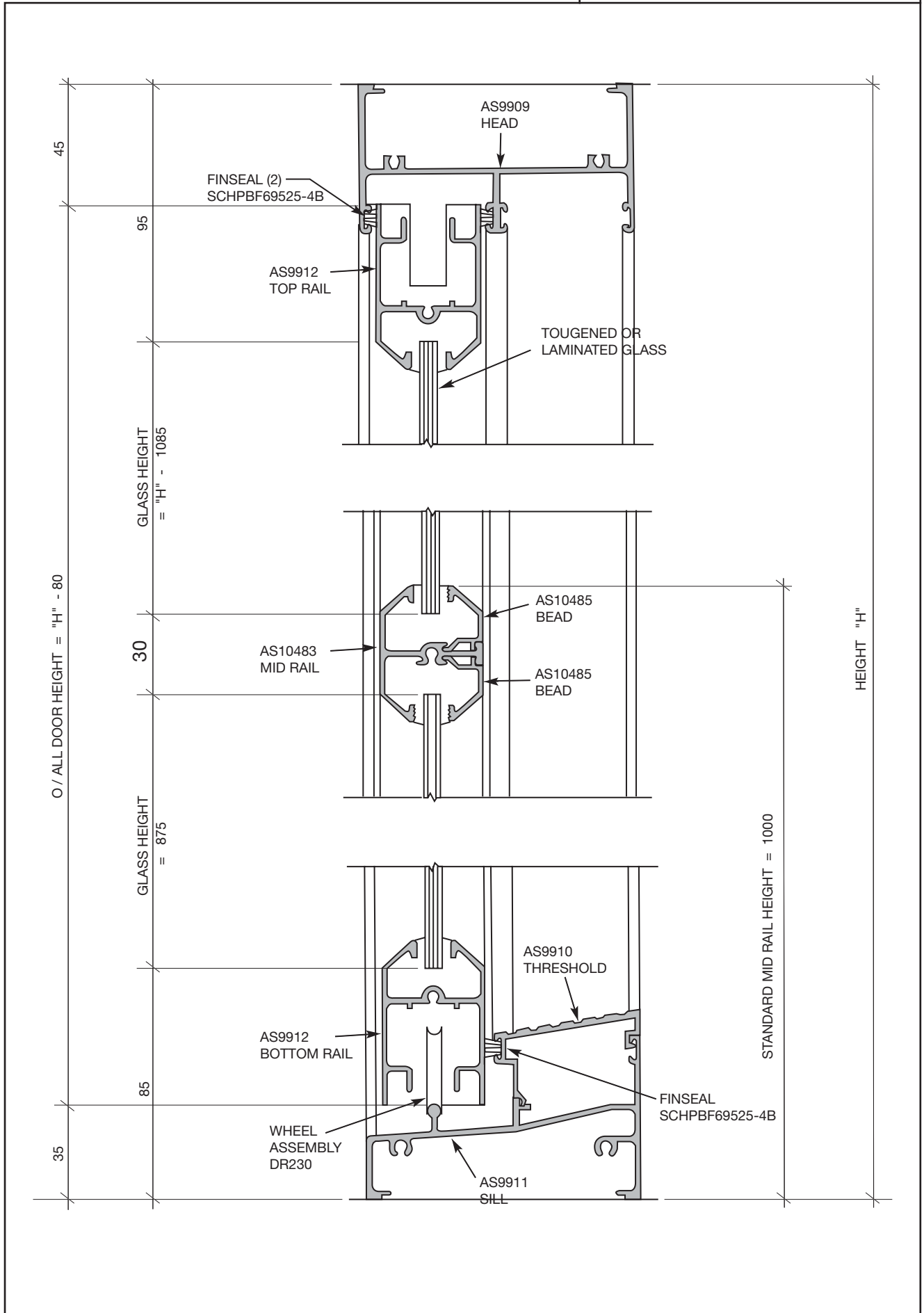
7000 DOOR SECTION



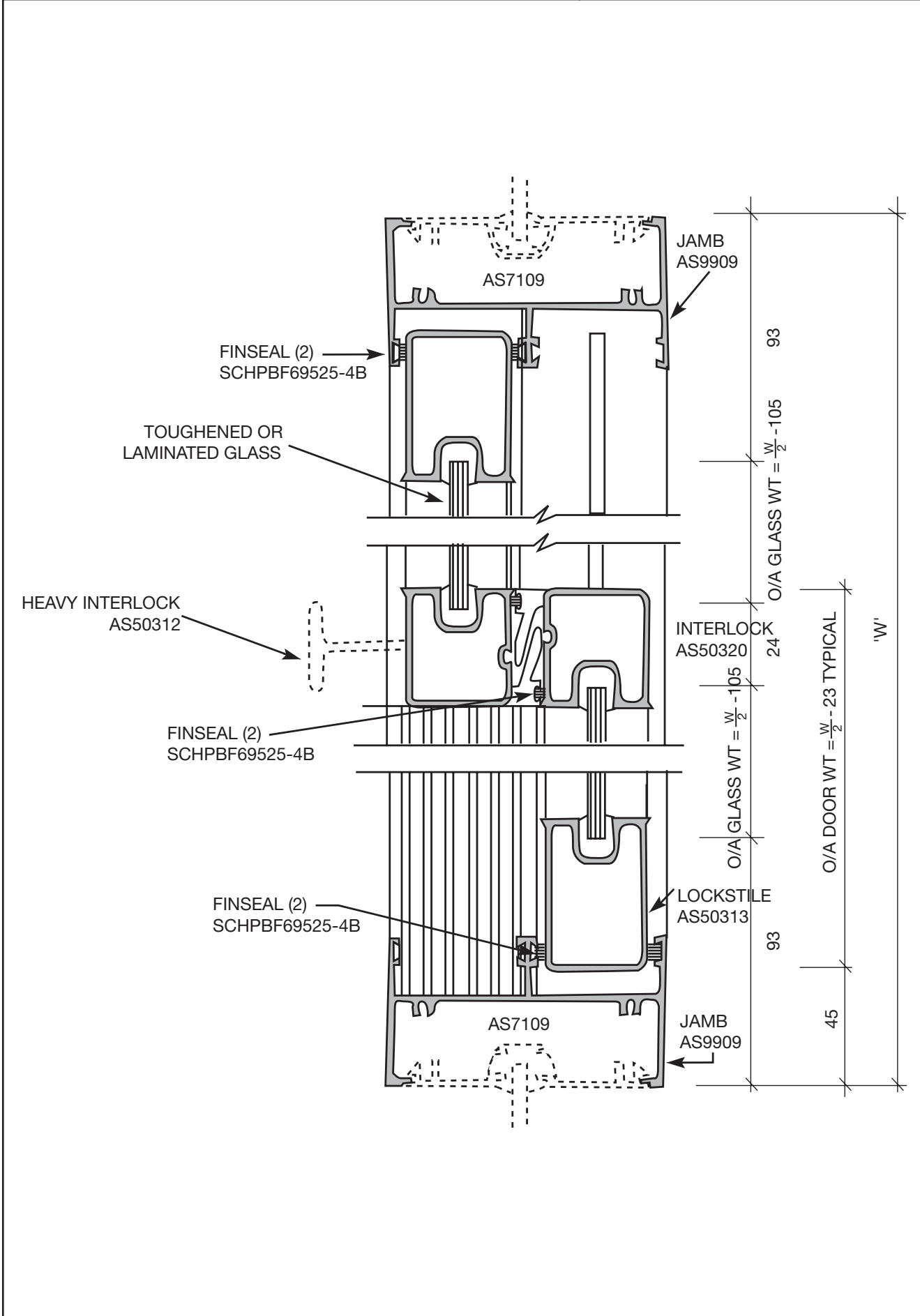
| | |
|-------------|--------------|
| Section No: | 9 |
| Page No: | 18 |
| Date: | 01.05.05 |
| Replaces: | 2003 EDITION |

7000 DOOR SECTION

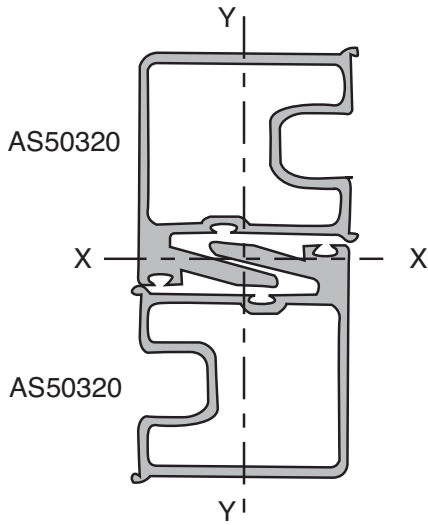


7000 DOOR SECTION


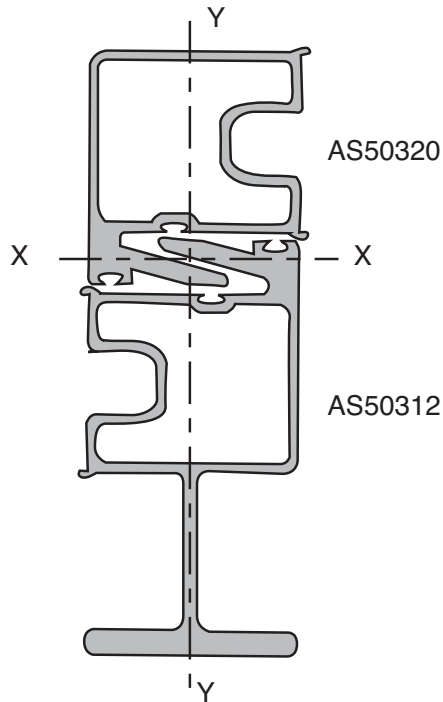
| | |
|-------------|--------------|
| Section No: | 9 |
| Page No: | 20 |
| Date: | 01.05.05 |
| Replaces: | 2003 EDITION |



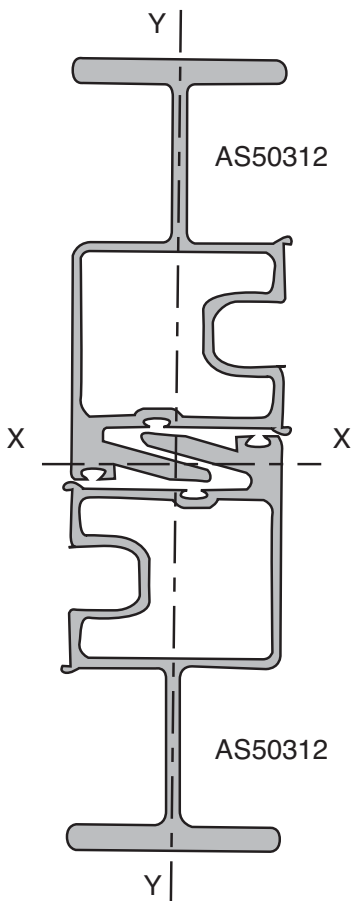
7000 DOOR STRUCTURAL PROPERTIES



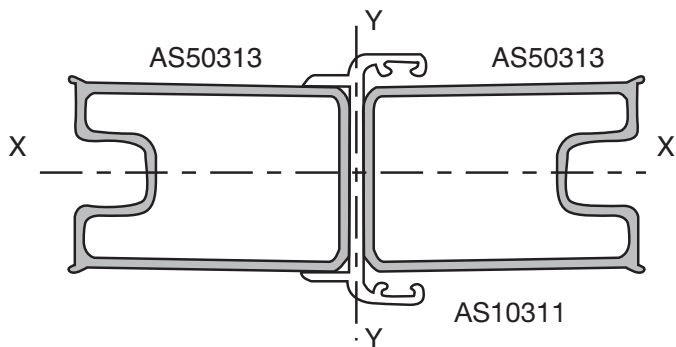
$I_{xx} = 303 \times 10^3 \text{mm}^4$



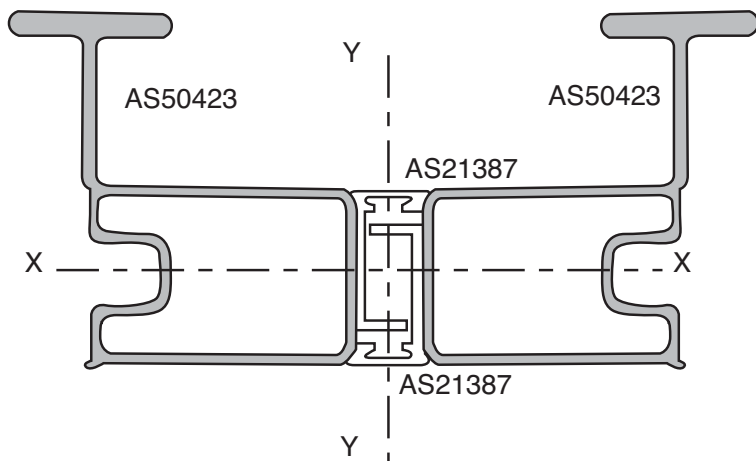
$I_{xx} = 986 \times 10^3 \text{mm}^4$



$I_{xx} = 1686 \times 10^3 \text{mm}^4$
 $I_{yy} = 329 \times 10^3 \text{mm}^4$



$I_{xx} = 210 \times 10^3 \text{mm}^4$ (as shown)
 $I_{yy} = 262 \times 10^3 \text{mm}^4$ (replacing AS10311 by 2 x AS21387)



$I_{xx} = 1015 \times 10^3 \text{mm}^4$ (as shown)
 $I_{yy} = 1066 \times 10^3 \text{mm}^4$ (replacing AS21387 by AS10311)



COMMERCIAL FRAMING SYSTEMS PRODUCT MANUAL

SECTION – 10.

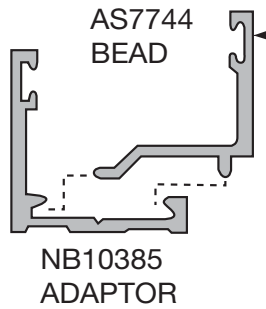
PAGES – 01 to 02

• **GLAZING CHANNELS AND ADAPTORS**

- **CHANNELS AND ADAPTORS FOR FRAMELESS
GLAZING**

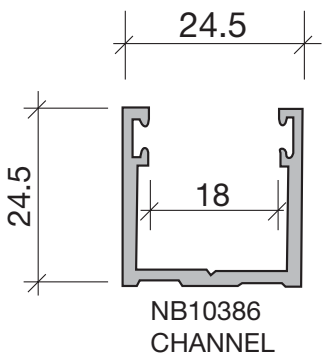
P1 - 2

GLAZING CHANNELS & ADAPTORS



REMOVABLE BEAD

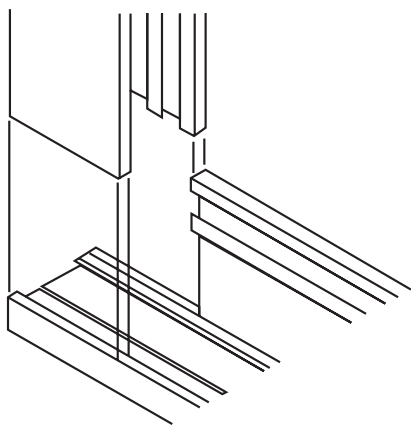
- BEAD CAN BE USED ON ALL 4 SIDES AROUND PERIMETER OF GLAZING



- 18mm GLAZING POCKET ACCEPTS UP TO 12mm GLASS

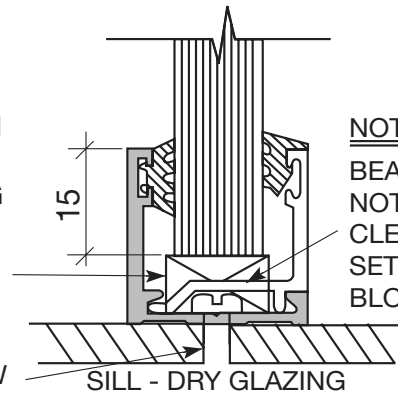
TYPICAL APPLICATIONS

- NOTICE BOARD FRAMES (FIXED TO WALL)
- GLAZED BALUSTRADES
- FIXED LIGHT PANEL SURROUNDS
- MIRROR FRAMING (FIXED TO WALL)
- RENOVATION OF TIMBER REBATED GLAZING.

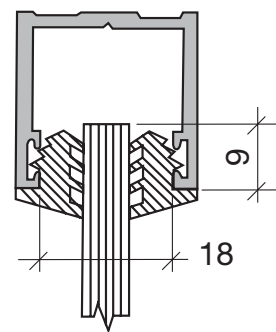


PREFERRED CORNER JOINERY

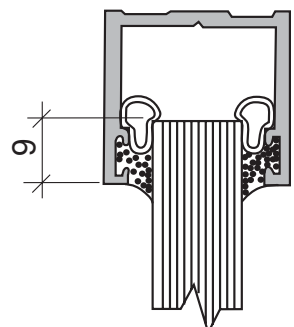
- INSTALL REMOVABLE BEAD ON AT LEAST 1 SIDE OF FRAME



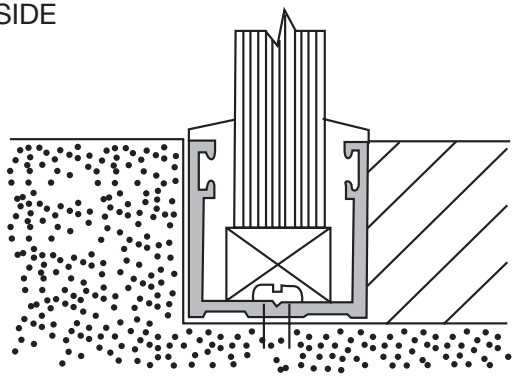
NOTE:
BEAD IS TO BE NOTCHED TO CLEAR SETTING BLOCK



JAMB/HEAD DRY GLAZING



JAMB/HEAD WET GLAZING



TYPICAL RECESSED APPLICATION

GLAZING CHANNELS & ADAPTORS

