

Uniclass L3811	
CI/SfB	(31) Xh4

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sapa:

buildingsystem

ARCHITECTURAL ALUMINIUM SOLUTIONS



Dualframe 75mm Reversible Window

Technical Data Sheet

Sapa Building System

Dualframe

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- **Contemporary Design:** Dualframe signifies a new era in aluminium fenestration, with products that have been specifically designed to comply with the ever increasing complexity of Building Regulations, British Standards and other regulatory demands.
 - **Superior thermal performance:** Dualframe comfortably exceeds the requirements of Part L 2006 of the Building Regulations (2006) for both thermal insulation and air permeability, and has been designed to be compliant with future anticipated changes. Where required, Dualframe 75 casement can achieve an 'A' Window Energy Rating.
 - **Dual colour capability:** All Dualframe products can have differing finishes internally and externally.
 - **Integrated design:** The Dualframe suite consists of casement, pivot, tilt/turn, sliding and reversible windows, single and double leaf doors and glazed roofing, all of which can be combined to form composite units.
 - **Unique polyamide thermal barrier:** With integral bead retention leg to minimise projection of opening lights (patent applied for).
 - **Accreditation:** Dualframe casement and tilt/turn windows have been awarded BSI Kitemarks to BS4873 'Specification for aluminium alloy windows' and BS7950 'Specification for enhanced security performance of casement and tilt/turn windows for domestic applications'.
- Dualframe doors have been awarded BSI PAS023-1 : 1999, 'General performance requirements for door assemblies; Part 1 - single leaf door assemblies to dwellings' and PAS024-1 : 1999 'enhanced security performance requirements for door assemblies; Part 1 - single leaf external door assemblies to dwellings'.
- Dualframe casement, tilt/turn windows and Dualframe doors meet the Secured by Design specification.
- Dualframe 75 casement can achieve an 'A' Window Energy Rating (WER) where required.
- **Choice of appearance:** Chamfered and Softline profiles are available to many products within the Dualframe suite, options of internal or external beading (including BS7950 compliant security) are also available.
 - **Ease of maintenance:** The integration of a 'Eurogroove' features enables use of industry standard hardware, available from a variety of sources so that the product is competitive and easily maintained.

■ Product

Dualframe 55mm reversible window.

■ Design Variants

Can be constructed to form fixed and opening lights either as combination frames or as separate coupled lights.

■ Compatibility

Can also be integrated with other products from the Dualframe range and with Sapa Elegance 52 curtain walling.

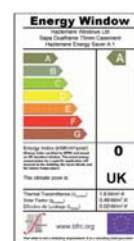
■ Application

Suitable for installation in new build or replacement projects in residential, commercial or public buildings.

■ Finishes

A wide range of polyester powder coat finishes is available to BS EN 12206:1 2004. Anodised finishes are to BS 3987 Grade AA25 etch silver with a range of special anodised finishes on application.

For more details, or to talk to a Project Consultant, contact the Marketing Department on 01684 853500.



Composition and Manufacture

Aluminium profiles are extruded from aluminium alloy 6063 or 6060 T6 complying with the recommendations of BS EN 755-9:2001.

Weatherstripping is polypropylene backed woven pile, polyurethane foam enclosed in a polythene sheath and a neoprene flipper seal set in undercut grooves in the sash and frame.

The thermal barrier is achieved using two separate aluminium extrusions and two polyamide extrusions mechanically joined together to form a single compound profile. On some coupling mullions a 'pour and cut' polyurethane resin thermal break is used.

Frame members are mitre cut at 45°. Corners are reinforced with stainless steel corner ties and extruded aluminium corner cleats. All joints are sealed against water entry during fabrication.

Weather Performance

When tested in accordance with BS6375:Part 1:1989 all products listed in this data sheet, when manufactured, installed and glazed strictly Sapa Building Systems specifications, will achieve the following exposure categories "2000 Special":

Opening Lights

Water tightness	600 Pascals
Air Permeability	600 Pascals
Wind Resistance	2000 Pascals*
Fixed Lights	
Water tightness	600 Pascals
Air Permeability	600 Pascals
Wind Resistance	2000 Pascals*

* Exposure category varies with width/height of window and mullion/transom used, as these are the only unsupported members. Maximum fixed light area = 5m². An accurate calculated figure as well as intermediate integral mullion/transom coupling mullion strength requirements should be obtained using BS6399:Part 2 calculations and inertia values given on page 6.

Authority

BS 4873: Aluminium Alloy Windows

BS6375-1: Performance of windows: Classification for weathertightness and guidance on selection and specification.

BS6375-2: Performance of windows. Specification for operation and strength characteristics.

BS6262: Code of practice for glazing for buildings

BS EN 755-9: Aluminium and aluminium alloys. Extruded rod/bar, tube and profiles. Profiles, tolerances on dimensions and form.

BS 3987: Specification for anodic oxide coatings on wrought aluminium for external architectural applications

BS EN 12206:1 2004: Specification for powder organic coatings for application and stoving to aluminium alloy extrusions, sheet and perforated sections for external architectural purposes.

BS EN 10077-2: Thermal performance of windows, doors and shutters – calculation of thermal transmittance – Part 2: Numerical method for frames

Size Limitations

Fixed light - maximum area 5 sq.m

Reversible Window

Maximum vent height	1592mm
Minimum vent height	493mm
Maximum vent width	1356mm
Minimum vent width *(cockspur)	314mm
Minimum vent width *(espag)	386mm
Maximum vent weight	60 kg

Note: All sizes given are in millimetres.

Windows fitted with cockspur handles that have a vent size of over 900mm in width, must be fitted with two handles.

Where windows are produced in non-modular sizes, the bottom rail of the opening light will in some cases reverse above the frame head and may hit the soffit or lintel.

To prevent the bottom rail hitting the outer frame head or soffit, in the reverse mode for cleaning, stop blocks are an optional item and can be fitted in the aluminium slide track.

Hardware/Security

Vents are hung on zinc plated mild steel variable geometry top overswing hinges, with integral restrictors which engage at initial opening stops and fully reversed position for safe cleaning. Cockspur and Espagnolette handles are mazak pressure die castings and can be colour matched.

Bi-parting mushroom-headed espagnolette bolts provide a multipoint locking option where required.

Glazing

Drainage in accordance with details listed in this manual meets the requirements of "Ventilated and Drained Glazing System", as specified in BS6262. Glass must conform to BS6262 for thickness and type. Insulating glass or panel units of 24mm and 28mm can be accommodated.

Fixed/opening lights: Glass is set against extruded synthetic rubber gaskets retained in undercut grooves with the aluminium profile. Final retention of the glass is achieved by the application of a co-extruded PVCu/synthetic rubber wedge gasket between the inner face of the glass and the frame.

Thermal Performance

Dualframe 75mm complies to the 'whole window' requirements of Part L of the Building Regulations. Lower U-values can be achieved using double glazing units with low thermal transmission, such as 'soft coat' low emissivity glass, argon gas filling and thermally broken spacer bars.

Site Work

A fabrication, installation and glazing service is available through a nationwide network of fabricators and installers. For details of suitable fabricators and installers, please contact our Marketing Department on 01684 853500.

- Our field based Project Consultants, working with our in-house Contracts Design and Administration team, provide UK specifiers with specialist advice concerning the correct application of products, giving guidance on Building Regulations, British Standards and other issues such as product specifications, usage, maintenance and safety. Complementary to this, our Product Support Department has an invaluable reservoir of experience on every aspect of our product range.
- We also appreciate that the specification process is influenced by client demands to obtain best value, and to that end, we can participate in site visits, design meetings and budgetary planning. Design stages can be formalised through written specification documents (which can be supplied in either an NBS format, or your own specification layout) and supported by samples, literature and drawings for consultation or planning issues.
- Taking this partnership approach through the whole project allows on-site monitoring of manufacturing and installation ensuring the specifier always has professional support from a worldwide group. Drawing on one of the largest fabricator and installer networks in the UK, we can provide details of specialist contractors who will quote or tender competitively for any type of contract.
- For specification assistance or details of fabricators & installers, please call our Marketing Department on 01684 853500.


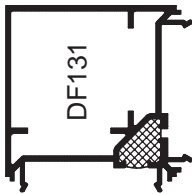
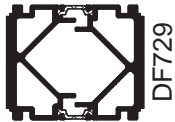

■ Sapa Group

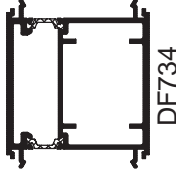
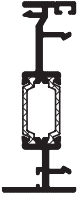
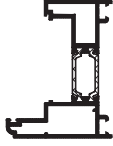
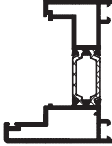
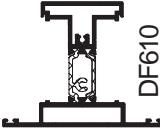
Sapa Building Systems Limited is a member of the worldwide Sapa Group. We develop and market high value-added profiles in aluminium and are the leading independent producer of aluminium profiles in the world, with customers in Europe, North America and Asia. In the UK, the Sapa Group has extensive multi-site extruding, re-melt, anodising and polyester powder coating facilities, offering total control and a fast and co-operative response.

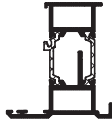



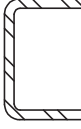
Backed by the resources of the Group, Sapa Building Systems Limited offers architects and specifiers a wide range of innovative aluminium systems for curtain walling, doors, windows and specialist applications. With a wealth of European knowledge and experience our company incorporates the highly respected Glostal, Monarch and RC System brands that have satisfied the demands of specifiers for over four decades. Our company systems have been approved under BS EN ISO 9001:2000 and we have been recognised as an Investor in People for over three years.

Profile Inertia Values

The following information on this page shows the inertia values of the integral mullions, transoms, coupling mullions & outerframes. BS6399 Part 2 must be used to calculate the inertia required.

Profile	Inertia mm ⁴
 DF122	↩ 161,075
	↪ 2,930
 DF131	↩ 639,861
	↪ 659,240
 DF729	↩ 412,253
	↪ 738,637
 DF730	↩ 69,661
	↪ 411,283

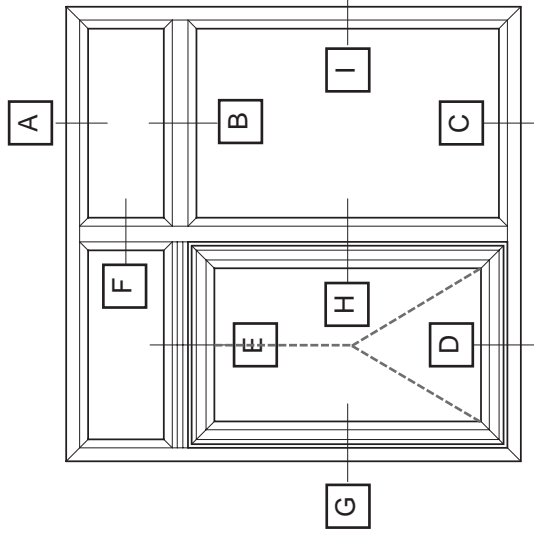
Profile	Inertia mm ⁴
 DF734	↩ 608,189
	↪ 651,786
 DF711	↩ 217,068
	↪ 9,200
 DF600	↩ 223,742
	↪ 90,269
 DF601	↩ 224,225
	↪ 92,690
 DF610	↩ 237,158
	↪ 160,628

Profile	Inertia mm ⁴
 DF620	↩ 131,027
	↪ 64,045
 16021	↩ 53,629
	↪ 9,051
 16022	↩ 378,702
	↪ 49,252
 16023	↩ 154,527
	↪ 27,187
Steel Box  Not by Sapa	↩ 947,200 (50x50x5) 333,435 (40x40x3.2) (Aluminium basis)
	↪ 947,200 (50x50x5) 333,435 (40x40x3.2) (Aluminium basis)

GENERAL ARRANGEMENTS

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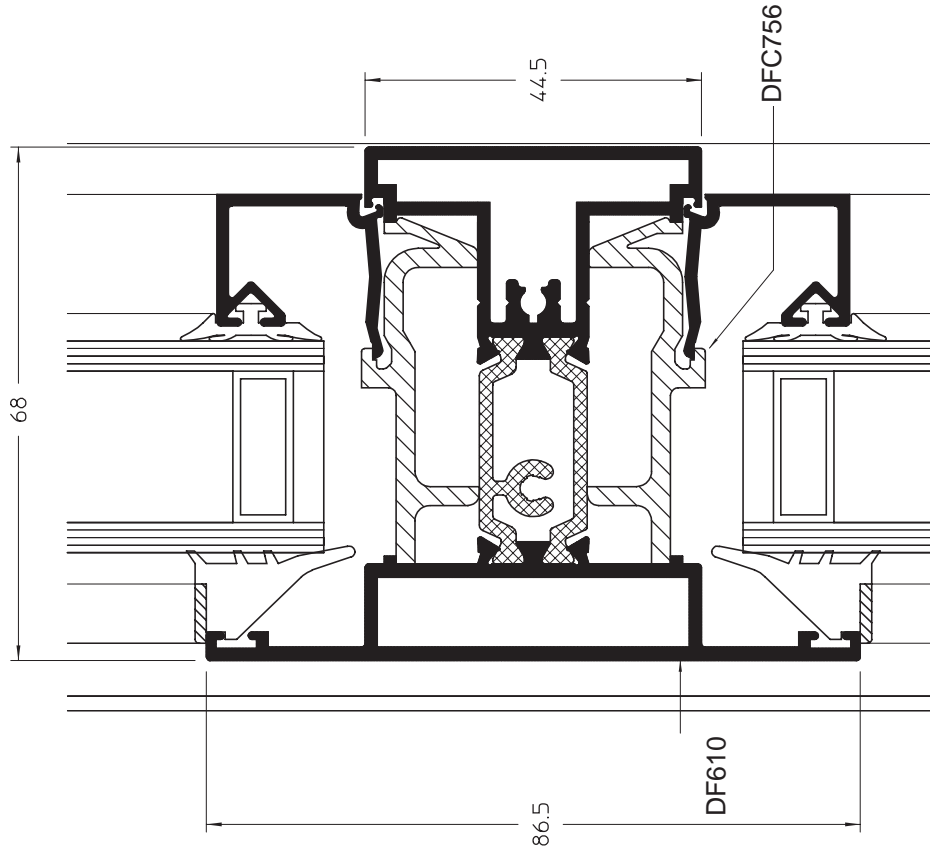
The following drawings illustrate a number of the available profile combinations. Other combinations are available please consult Sapa Building Systems for further details.



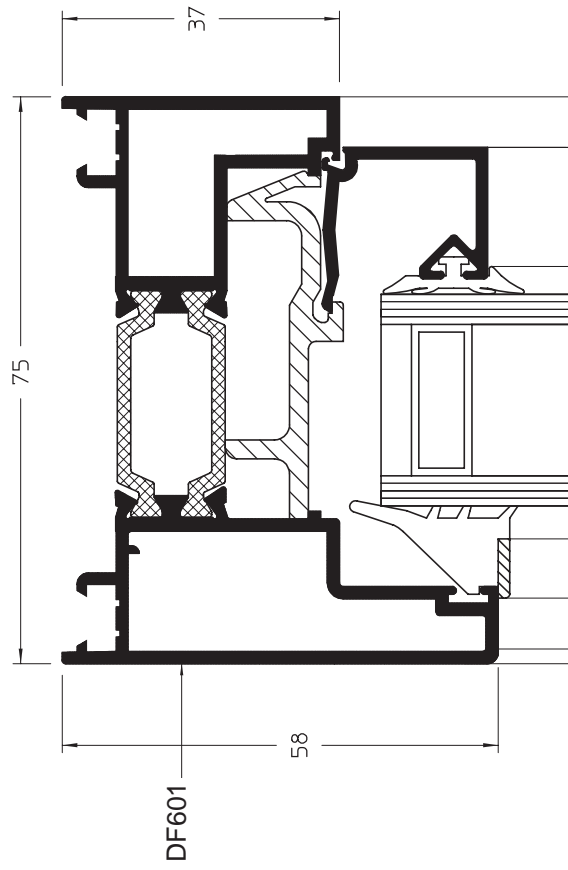
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Subcill with Glaze In Fixed Light	26
Curtain Wall Outerframe Coupler	27

GENERAL ARRANGEMENTS

B Fixed Transom



A Fixed Head

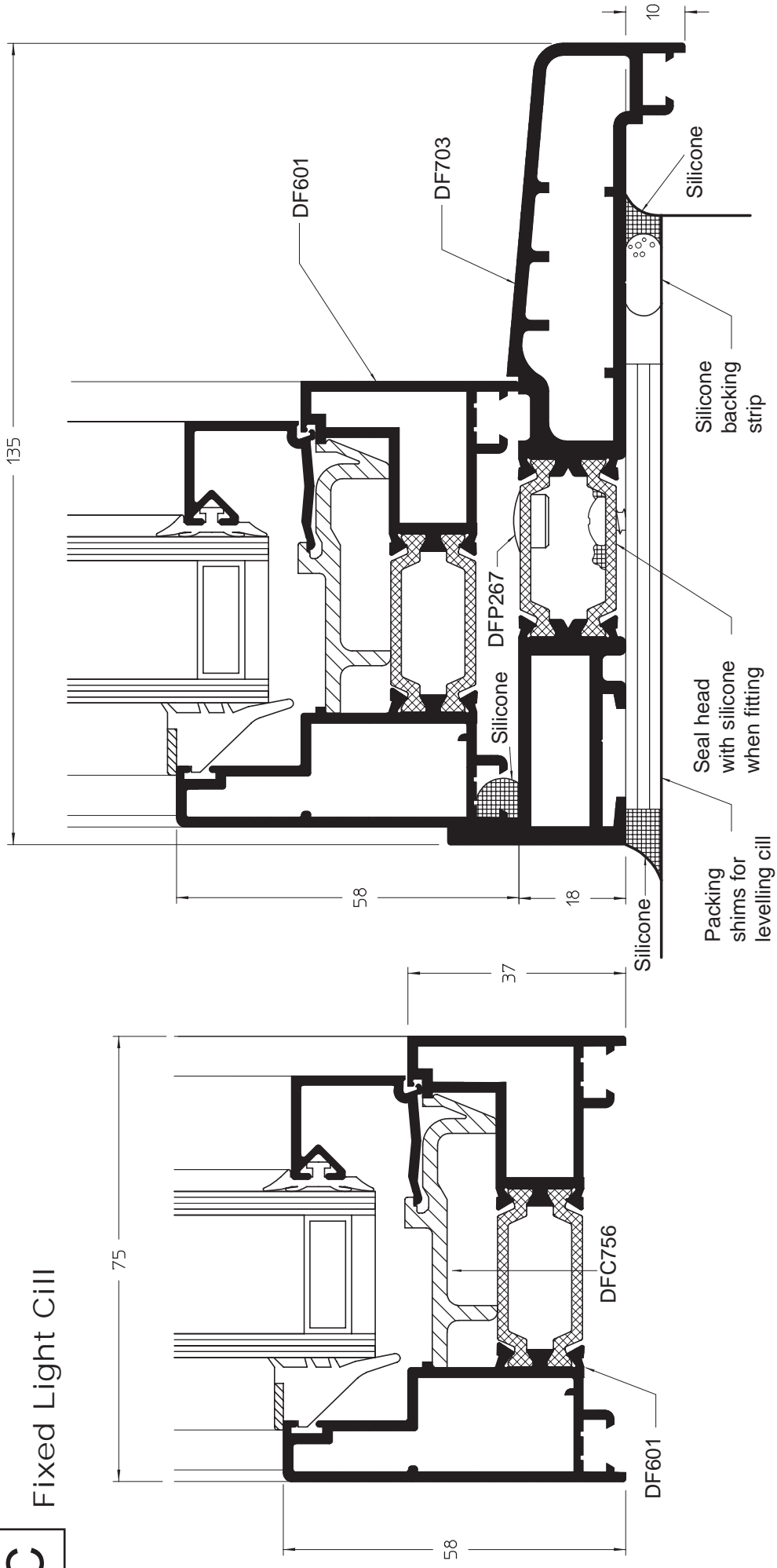


C

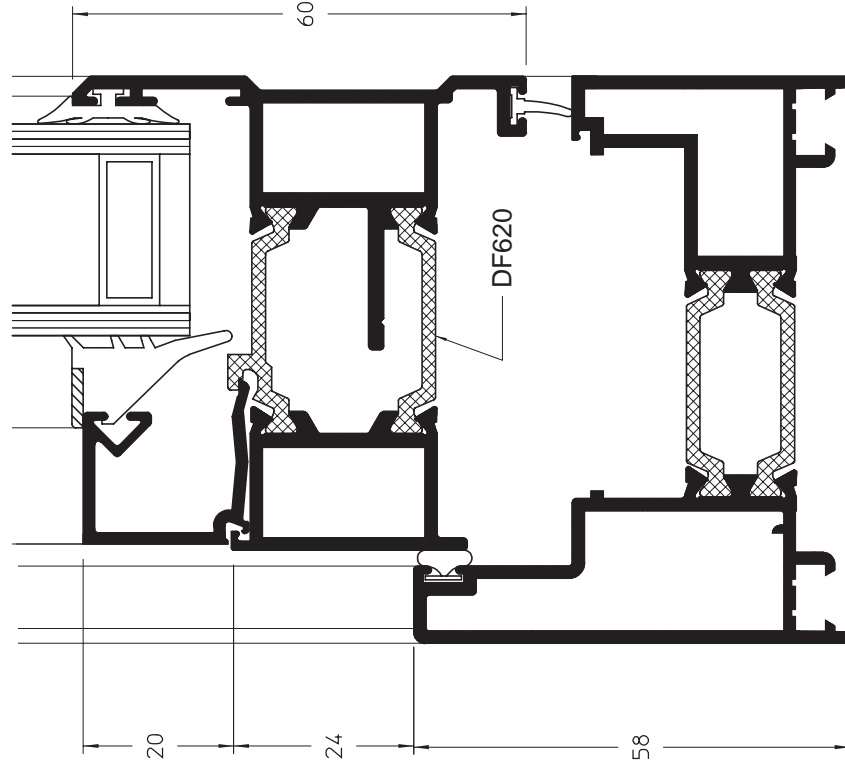
Fixed Light Cill with Subcill

C

Fixed Light Cill

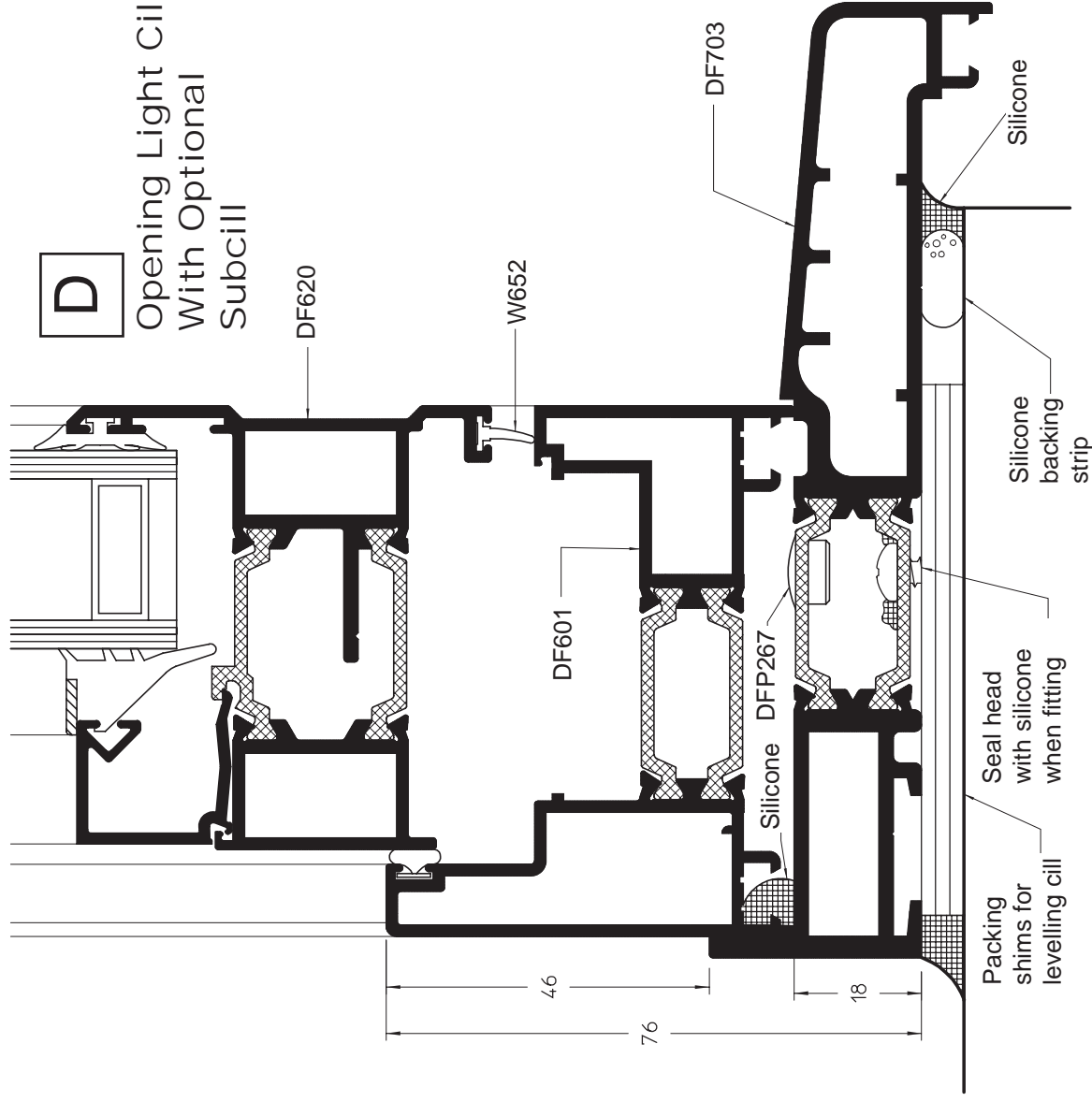


D Opening
Light cill



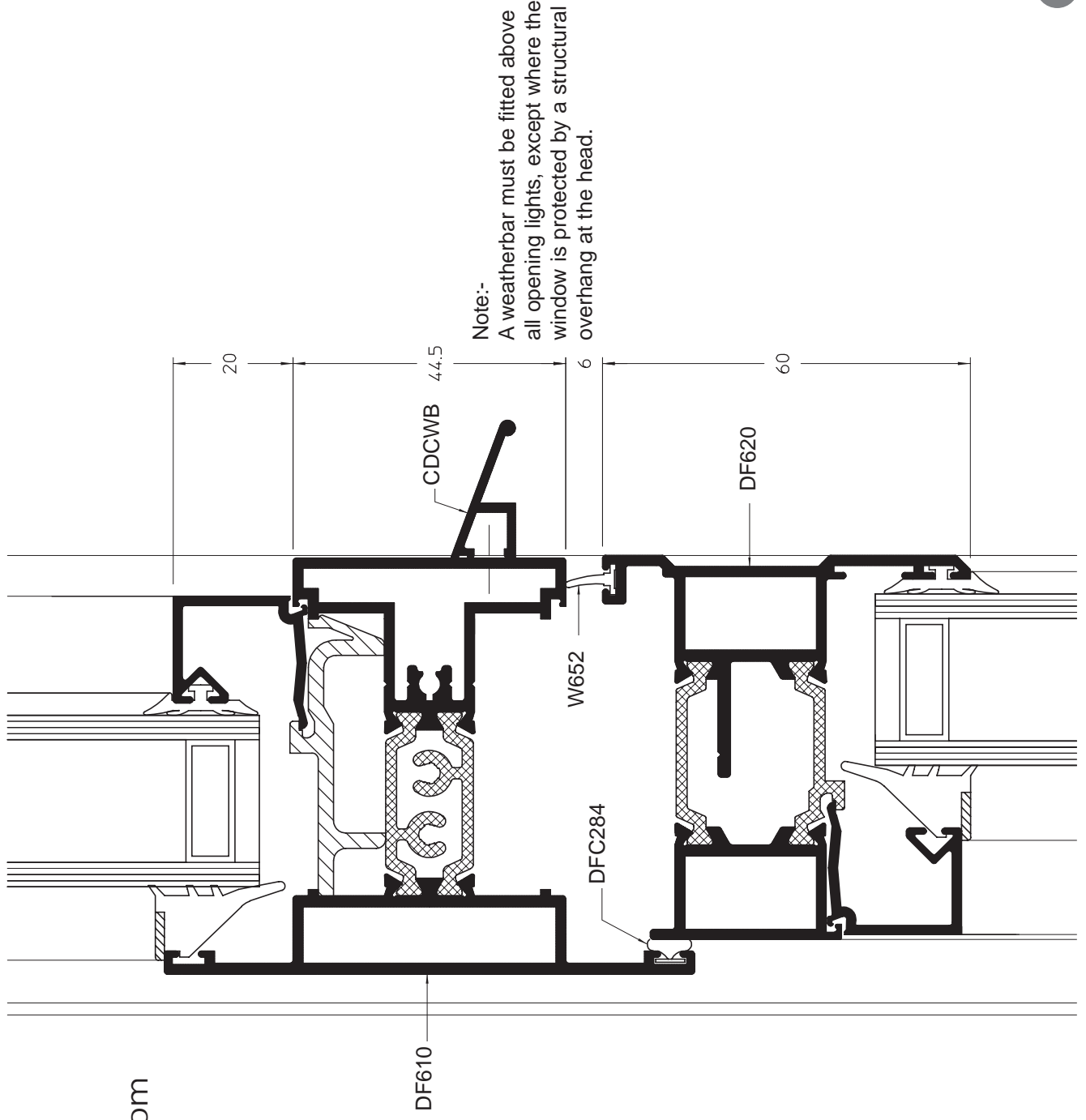
D

Opening Light Cill
With Optional
Subcill

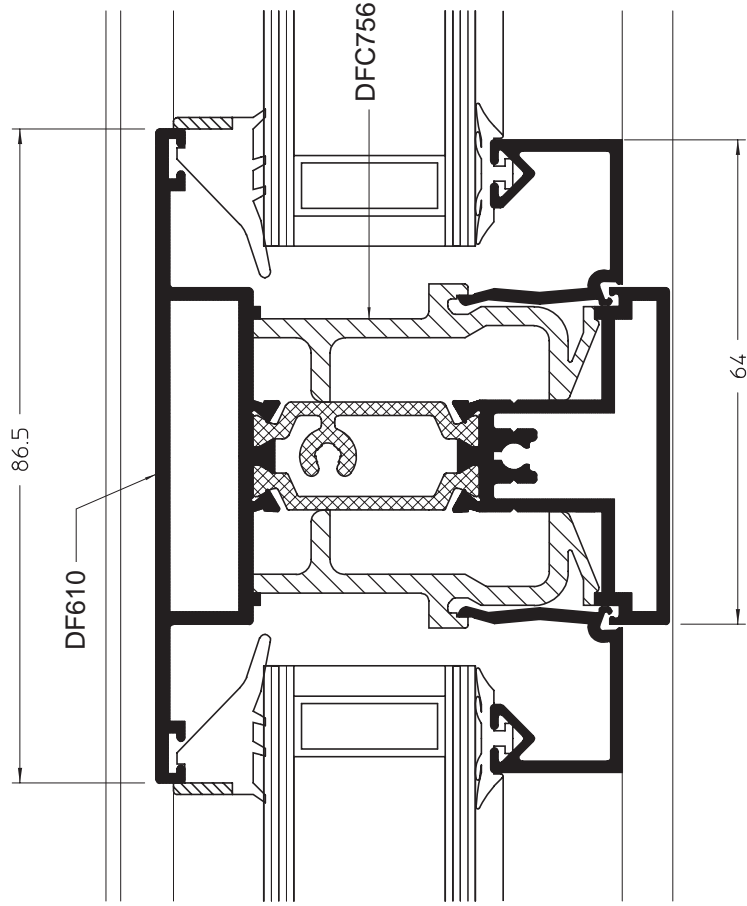


E Opening Light Transom

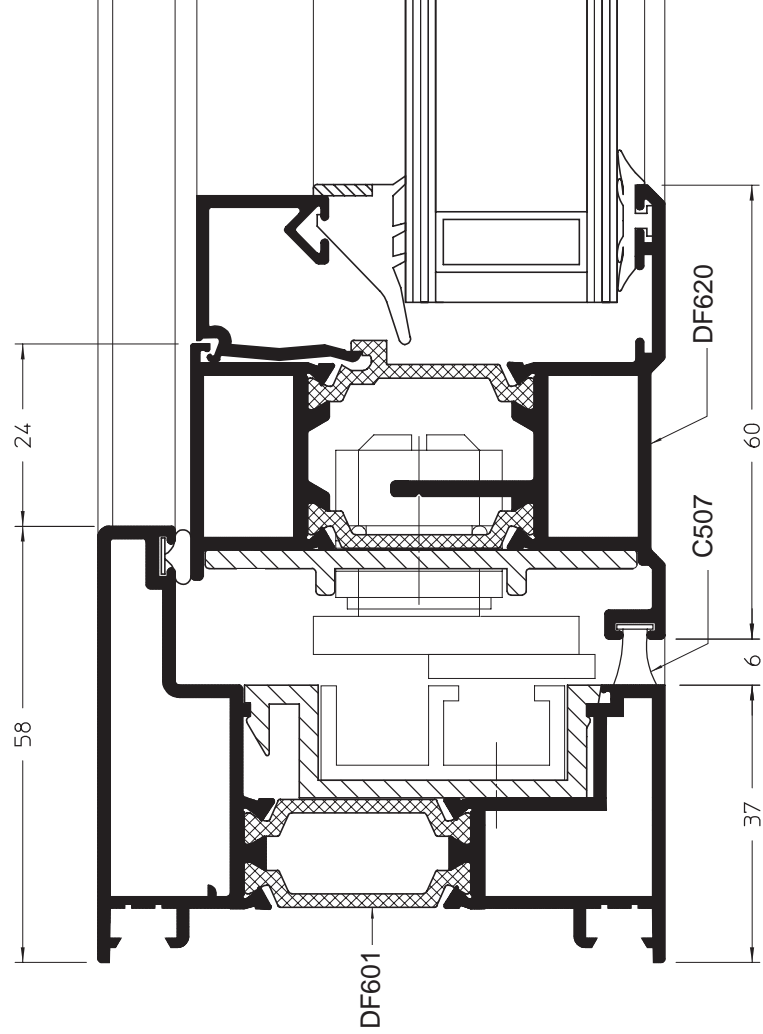
sapa:



F Fixed Mullion



G Opening Light Jamb

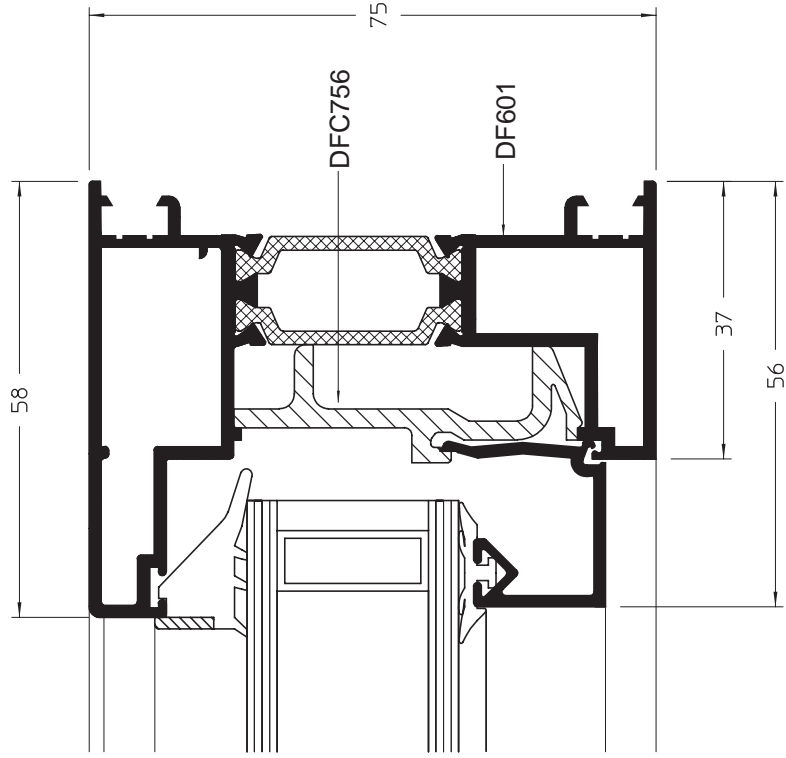
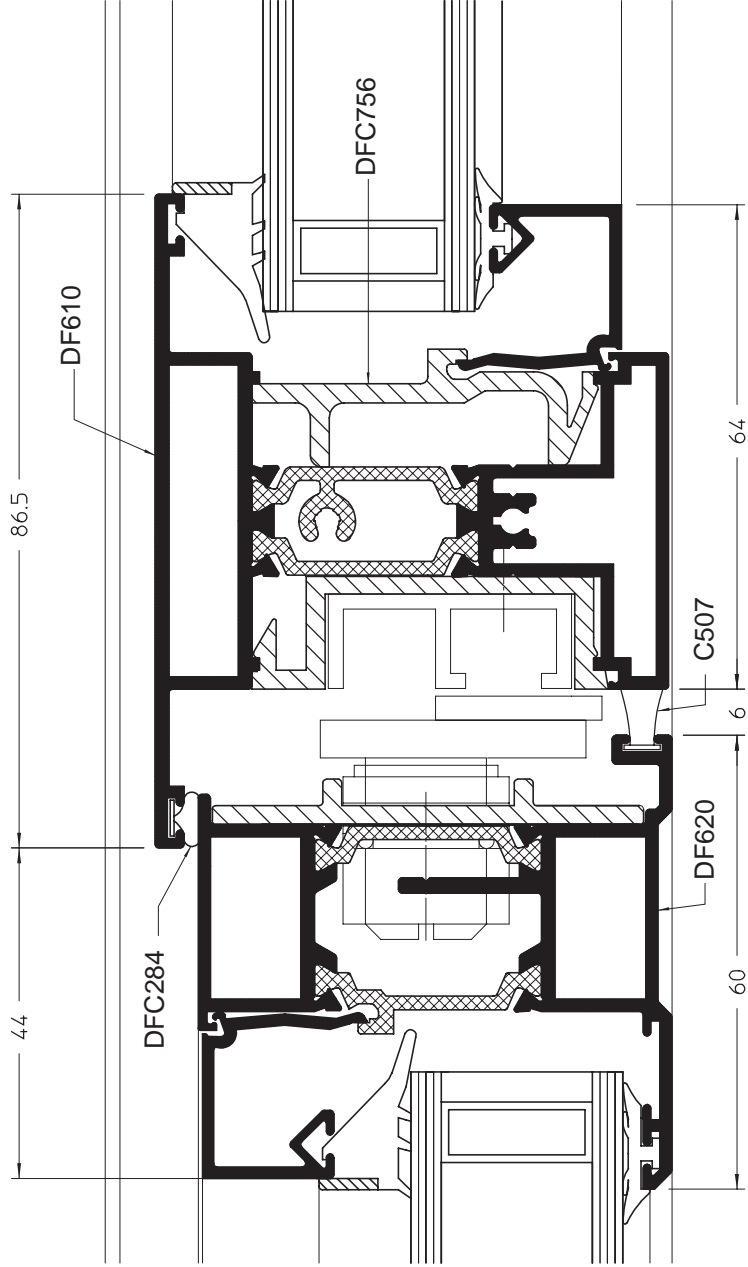


H

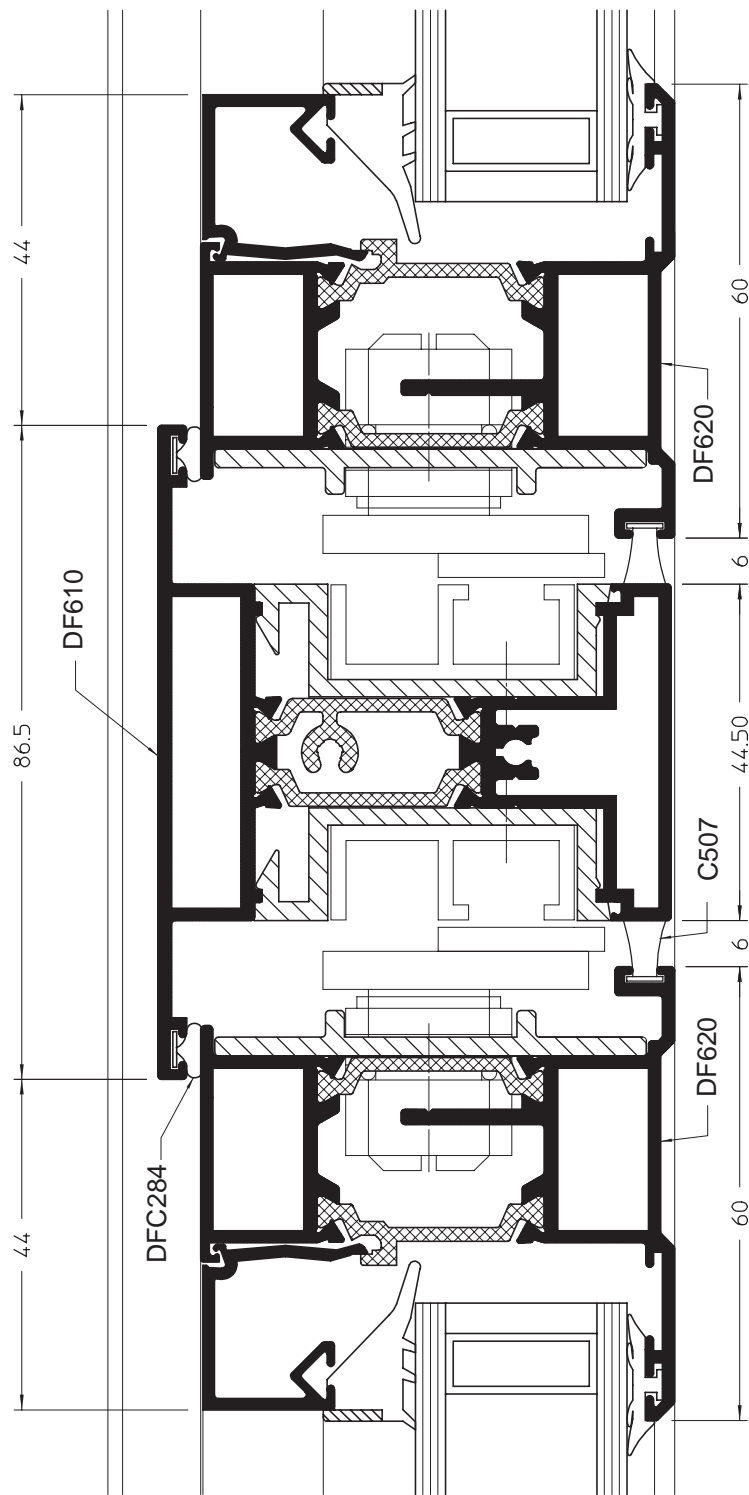
Opening Light Mullion

I

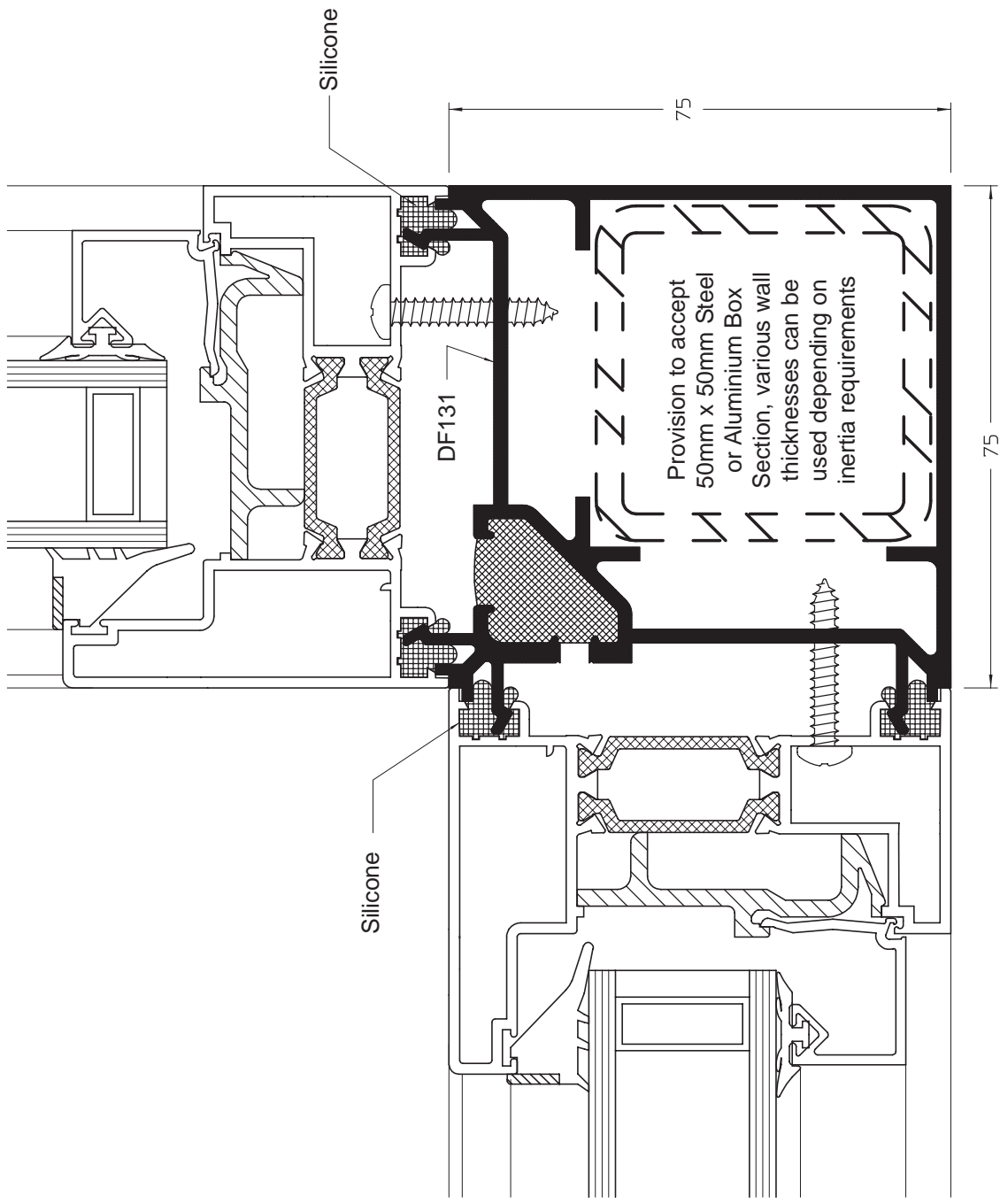
Fixed Jamb



Back to Back Mullion

sapa:

90° Corner Post

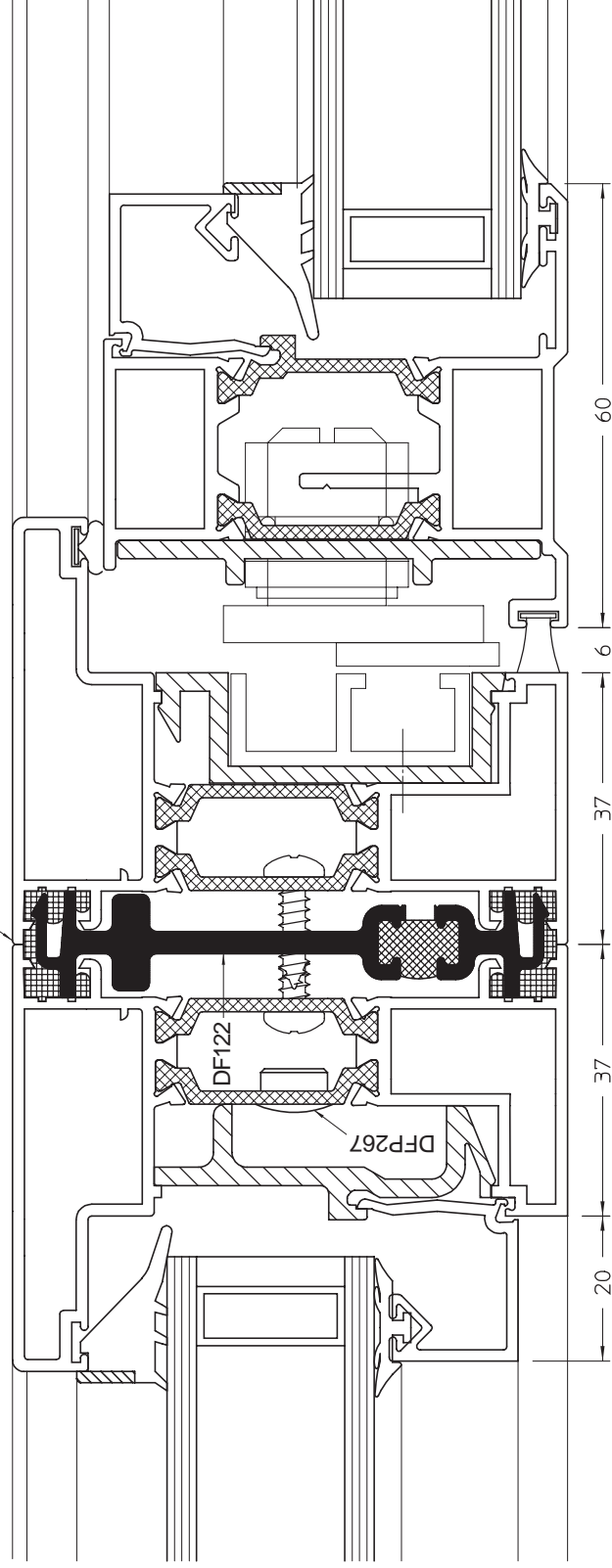


DUALFRAME 75mm Reversible Window

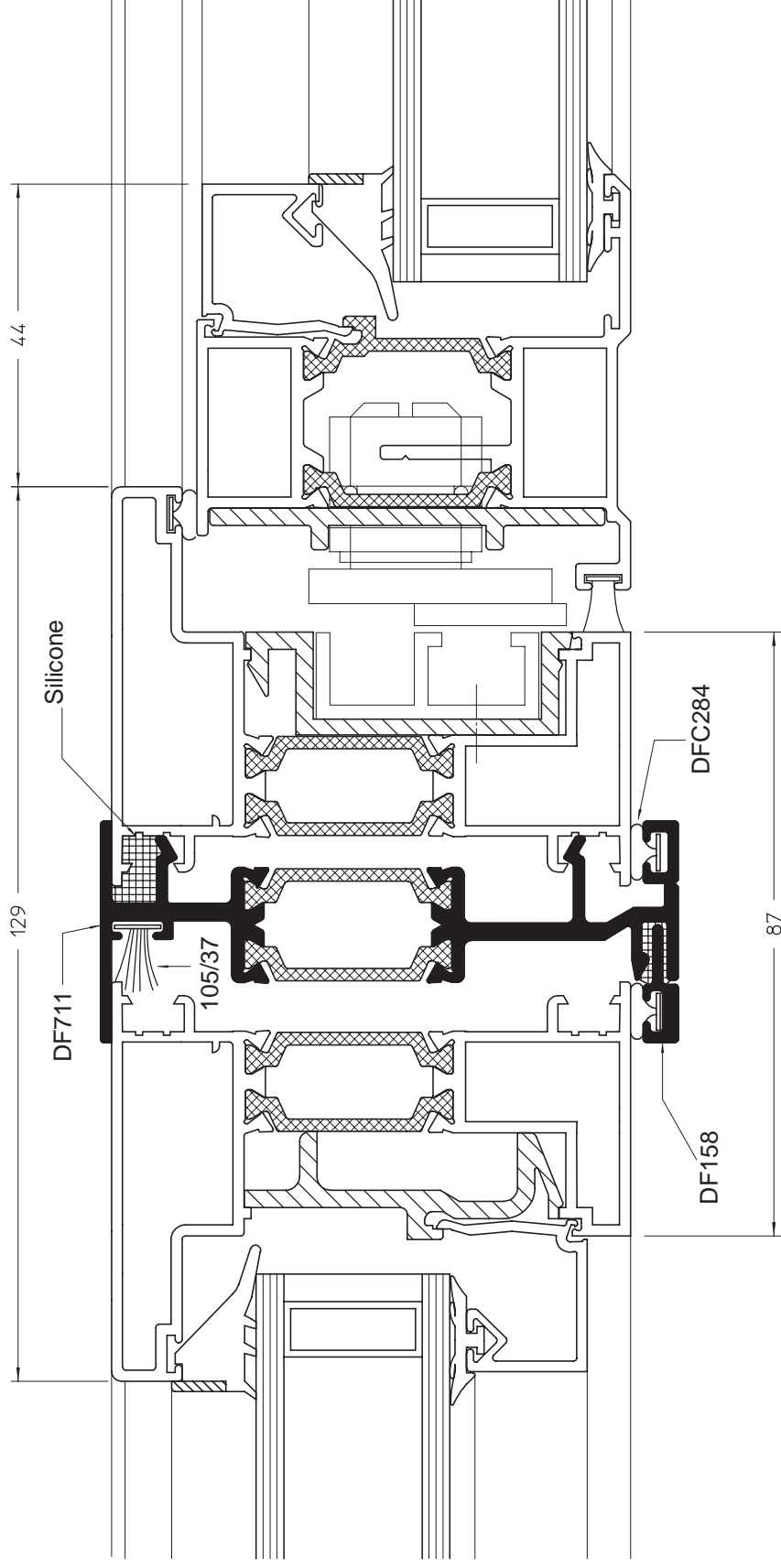
GENERAL ARRANGEMENTS

Concealed Coupler

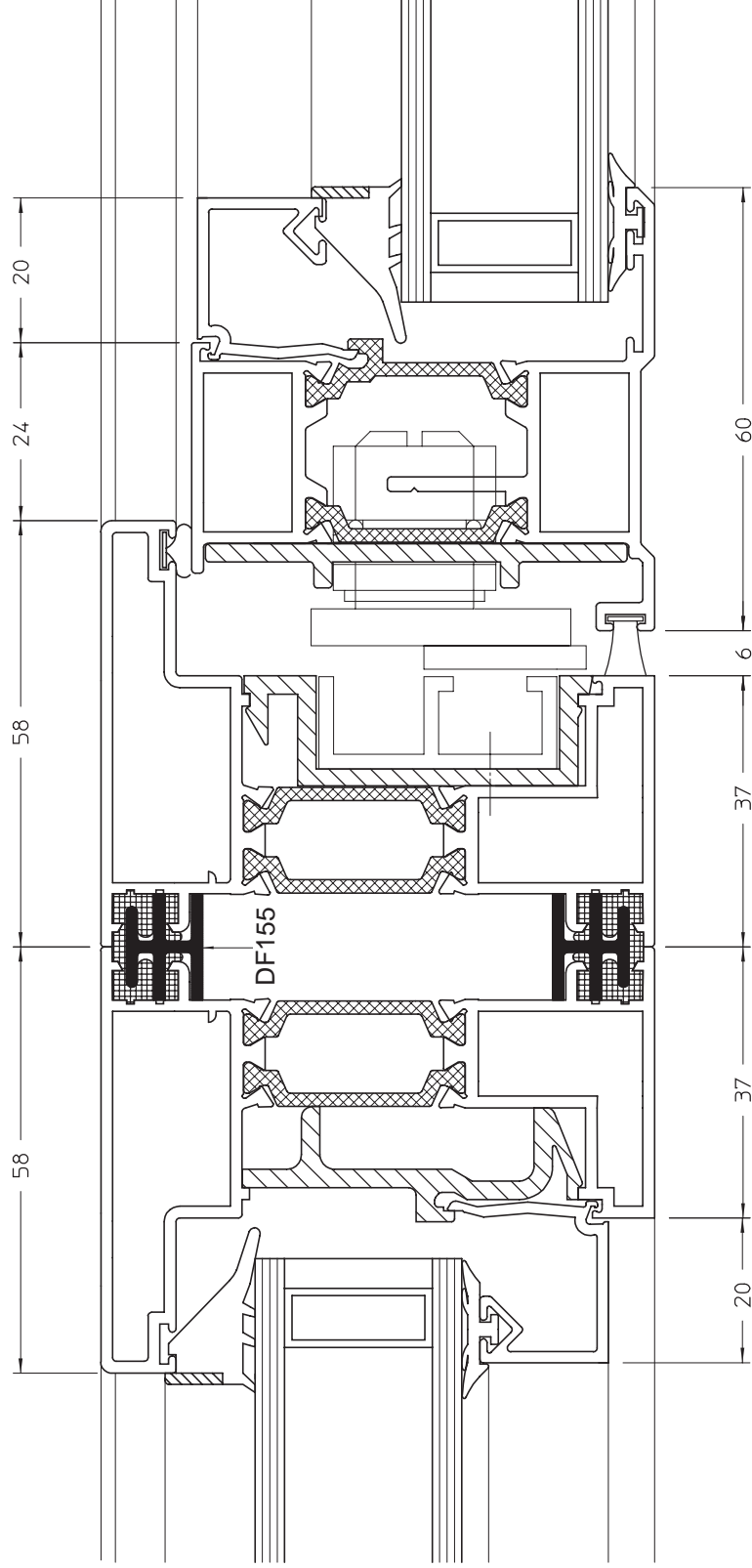
Ensure inside and outside joints are effectively sealed with silicone to prevent moisture penetration



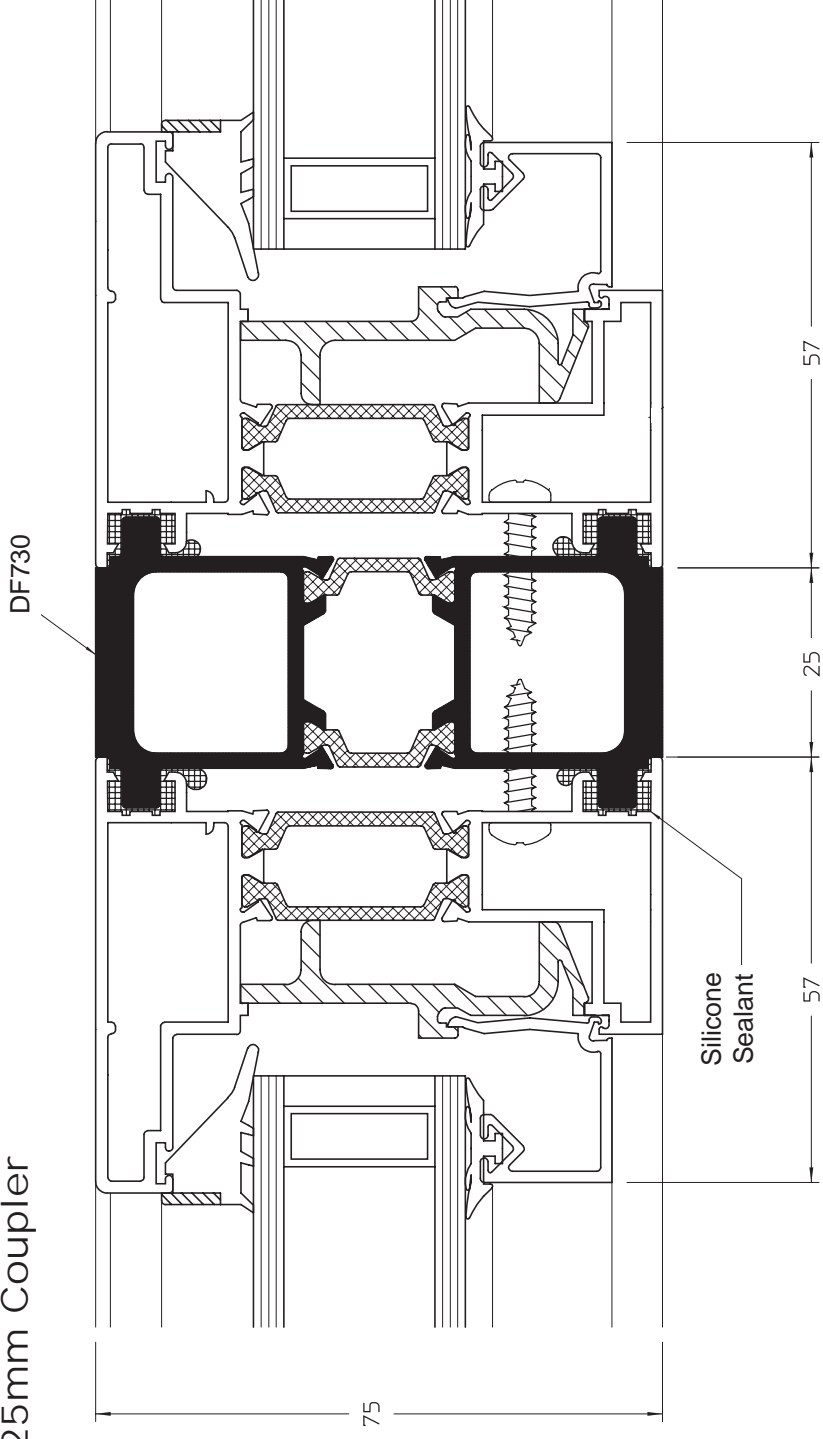
Expansion Coupler



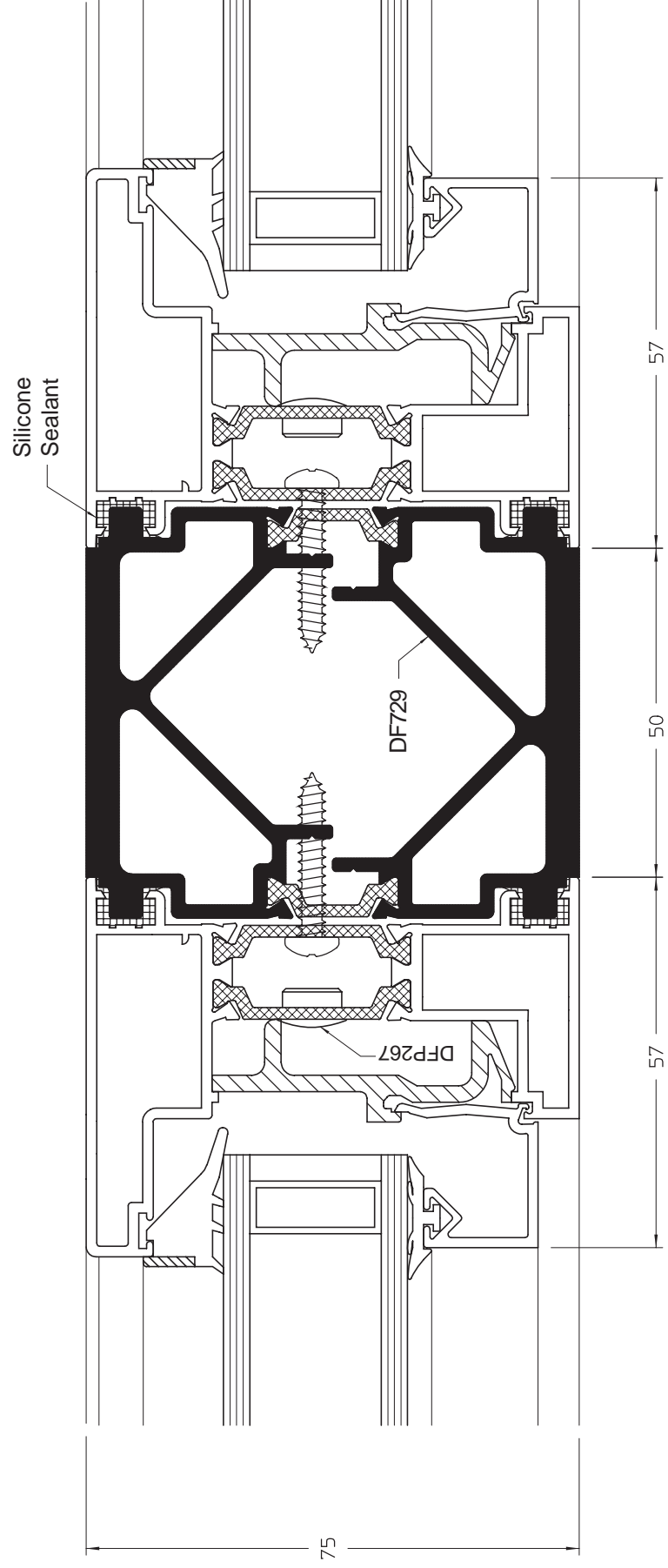
Light Weight Concealed Coupler

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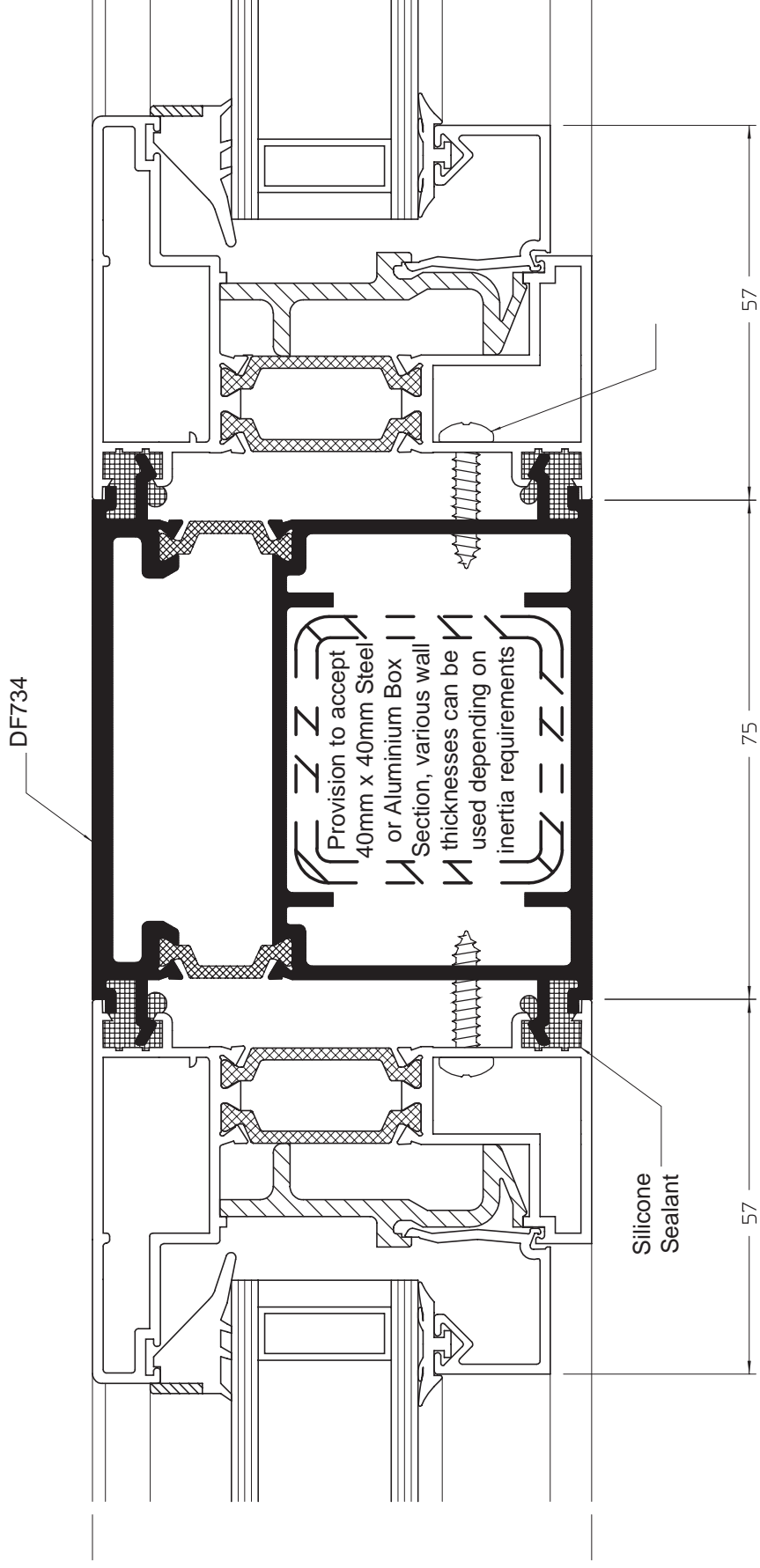
Inline 25mm Coupler



Inline 50mm Coupler

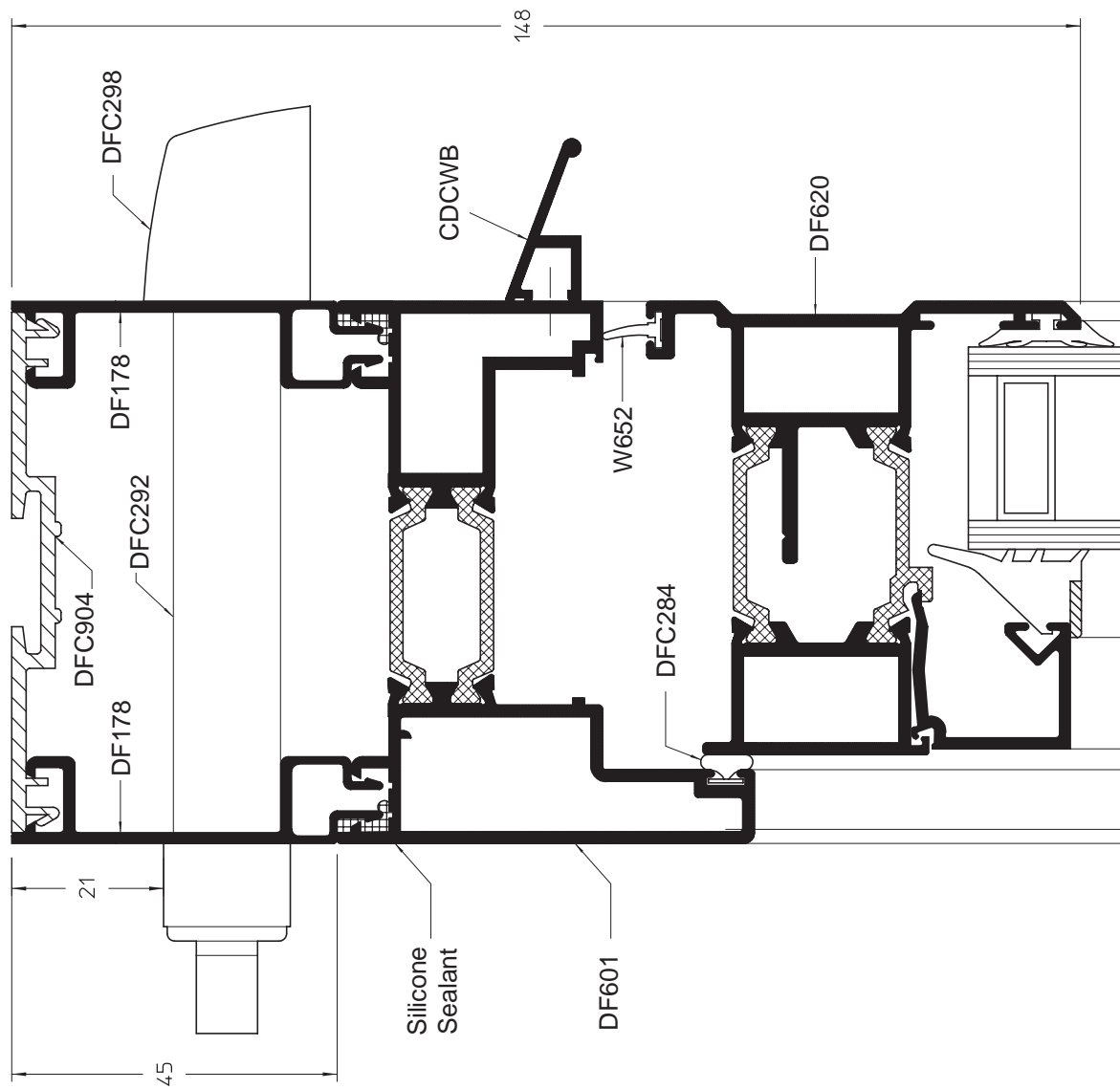


Inline 75mm Coupler

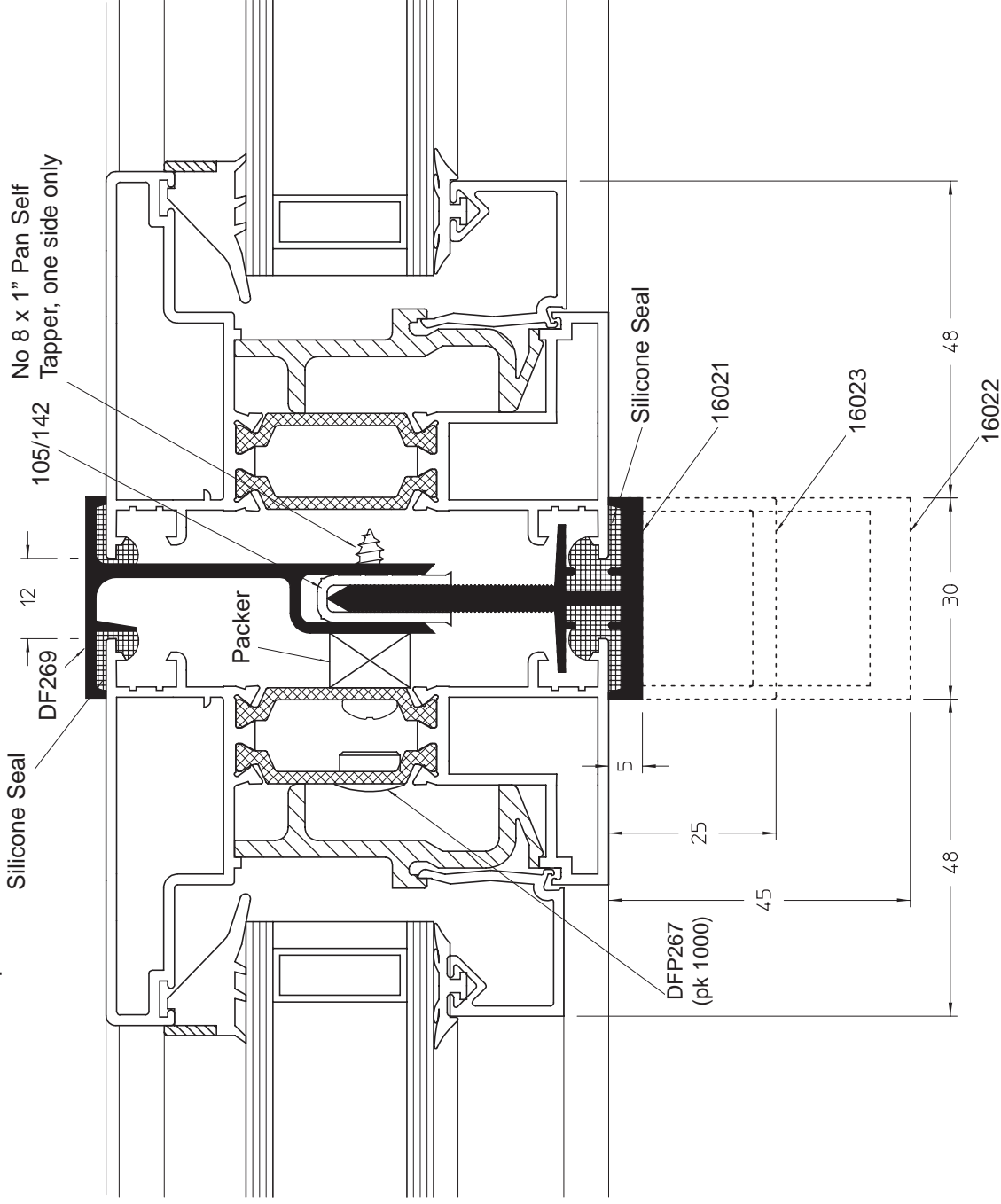


Frame Extender / Head Ventilator

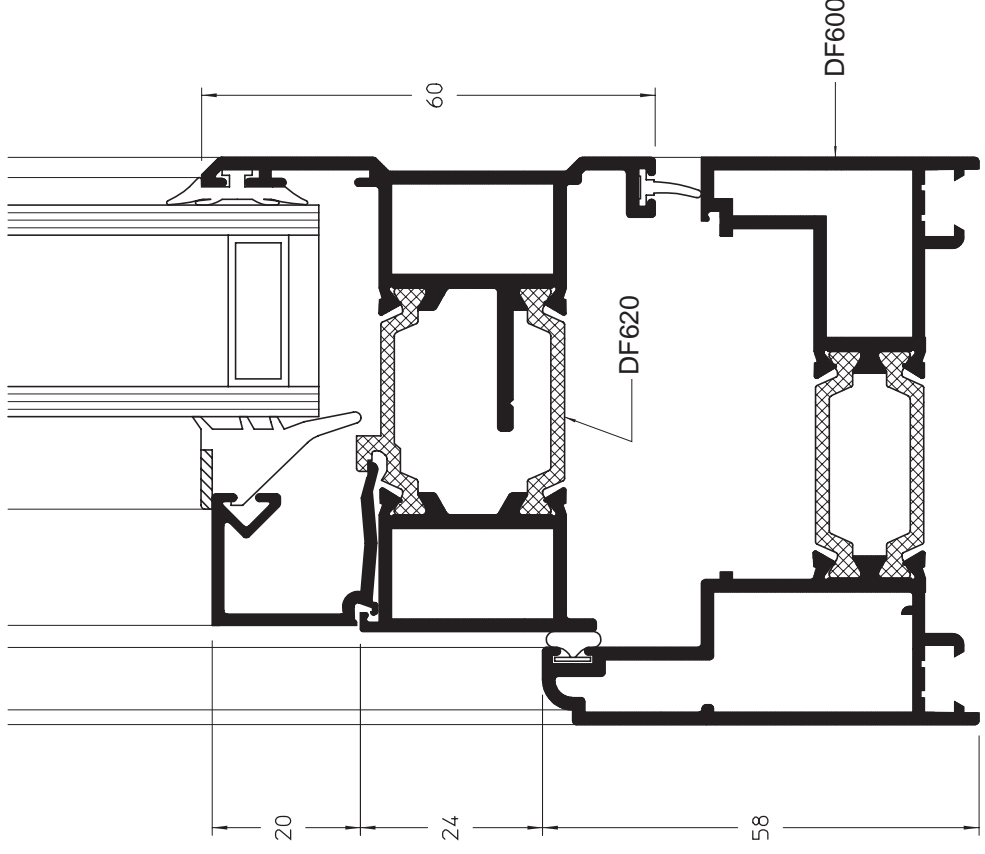
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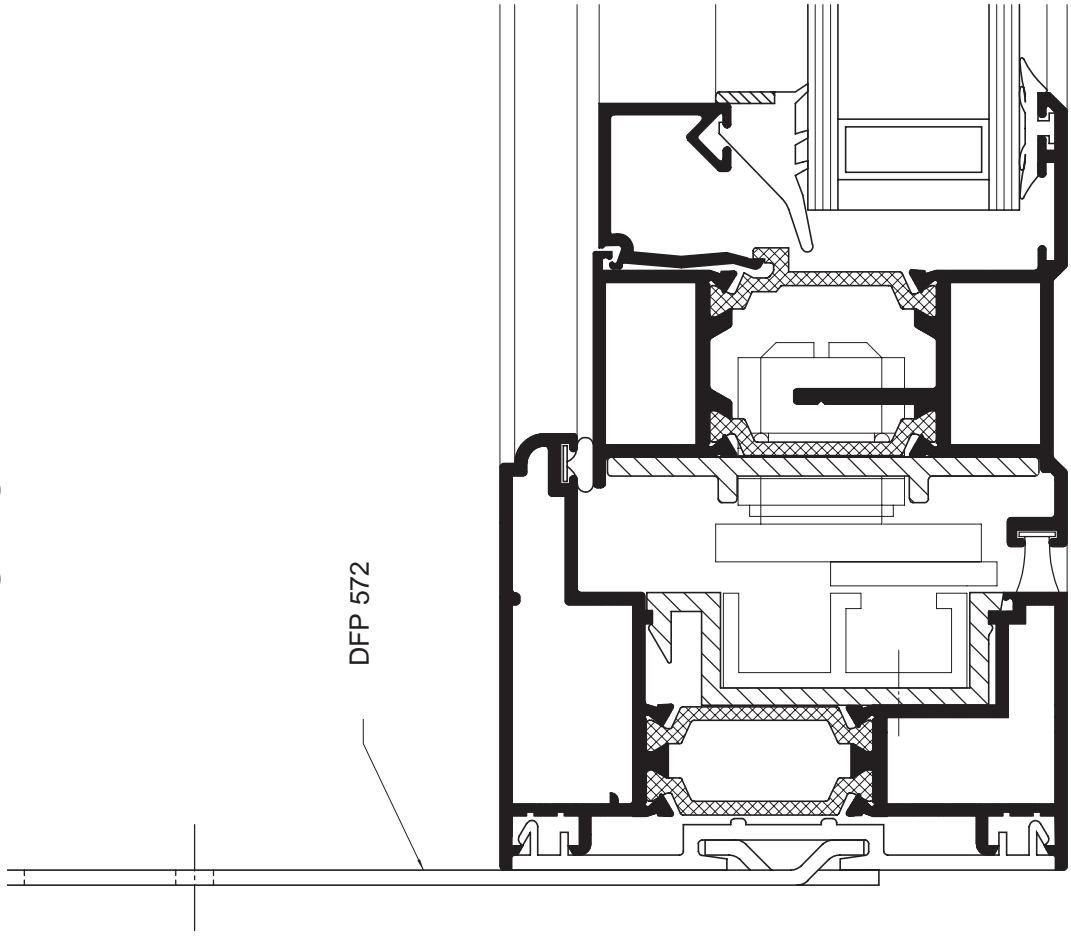
Heavy Duty Frame To Frame Couplers



Alternative Featured Outerframe

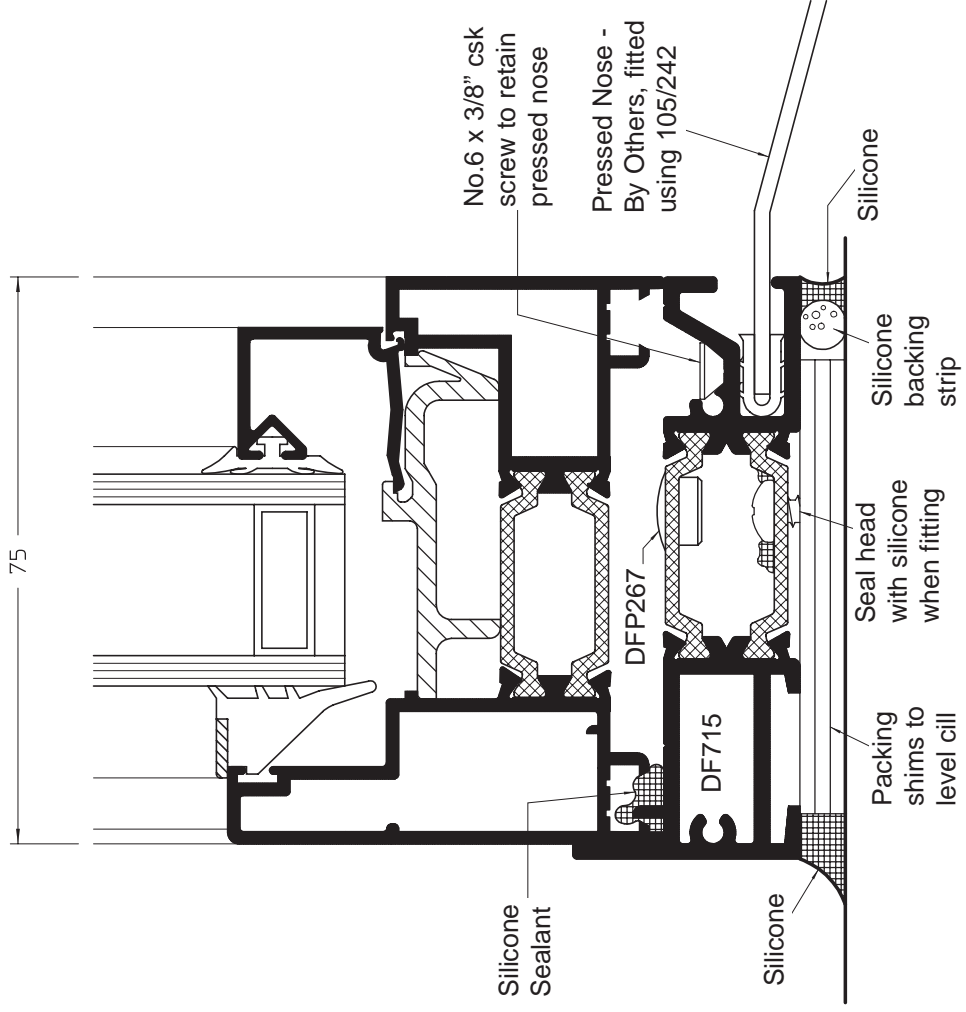
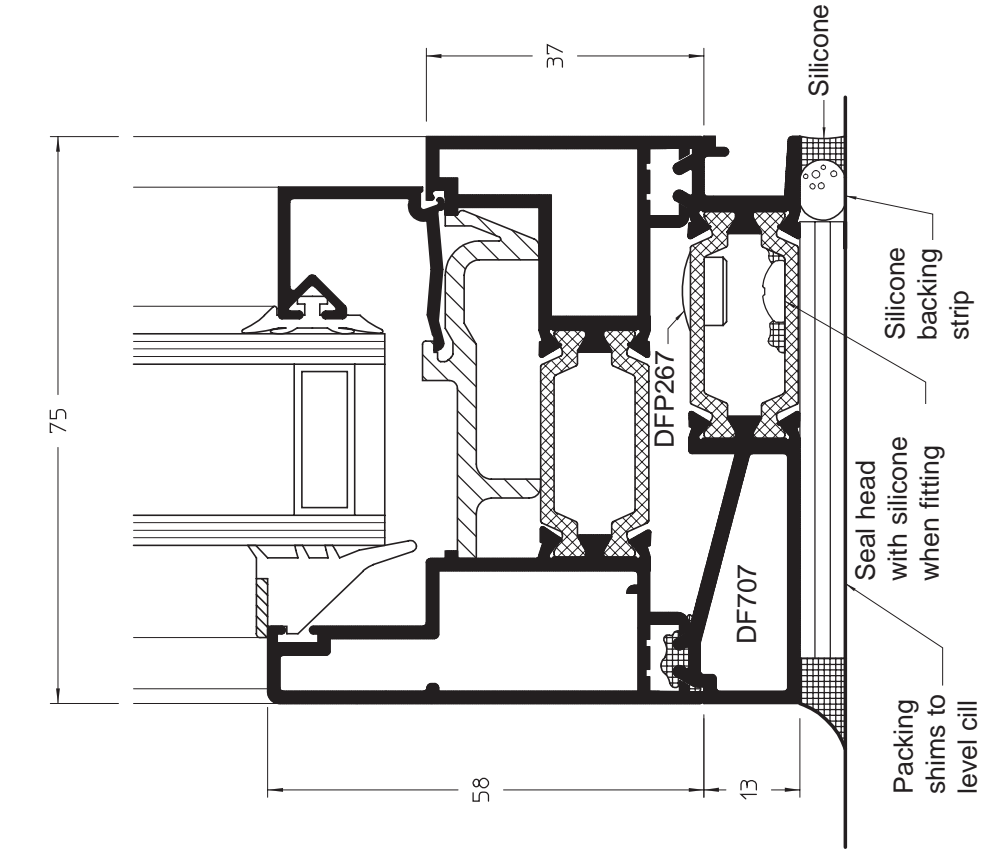


Outerframe Fixing Lug



Drainage Tray

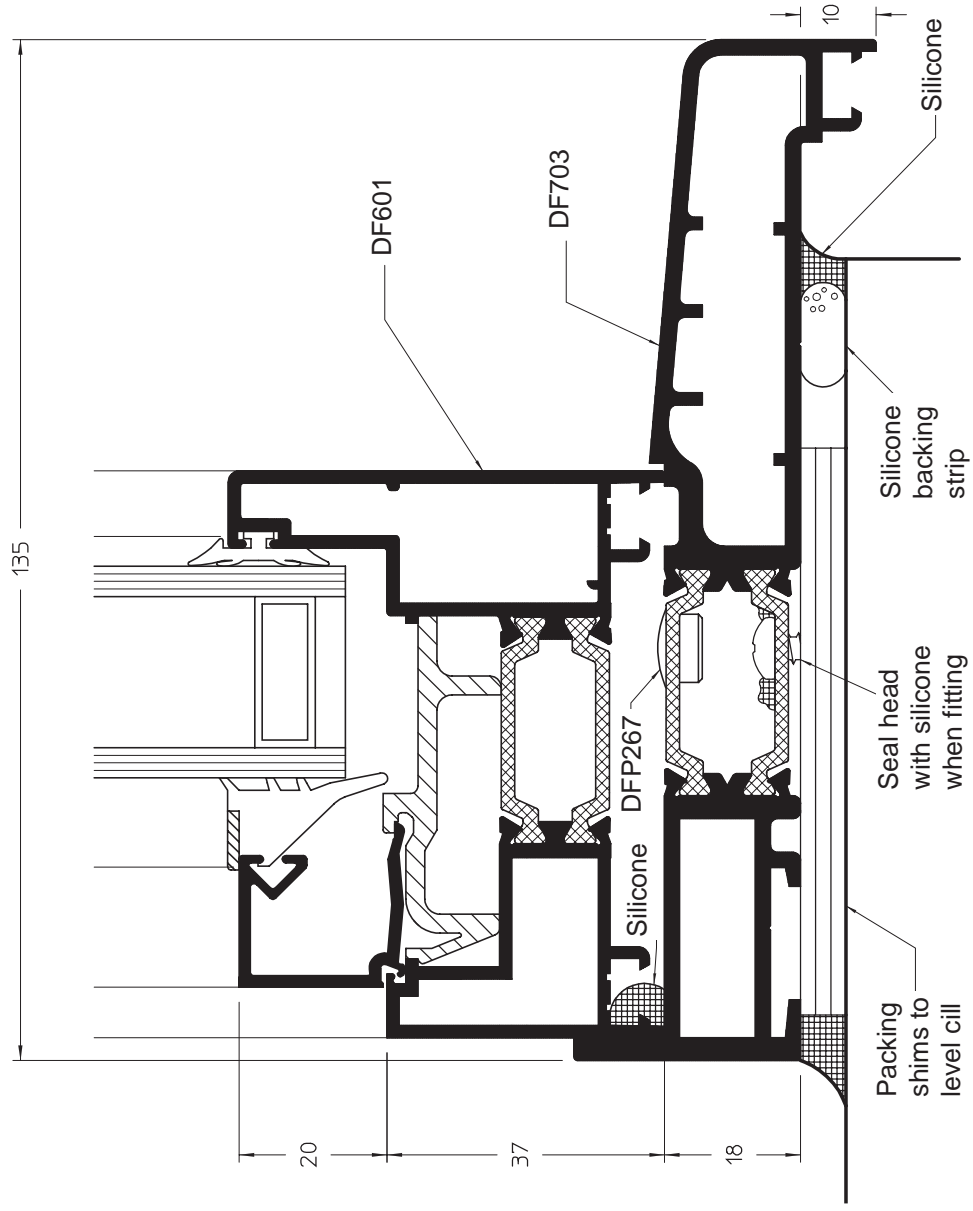
Subcill With Applied Nose



DUALFRAME 75mm Reversible Window

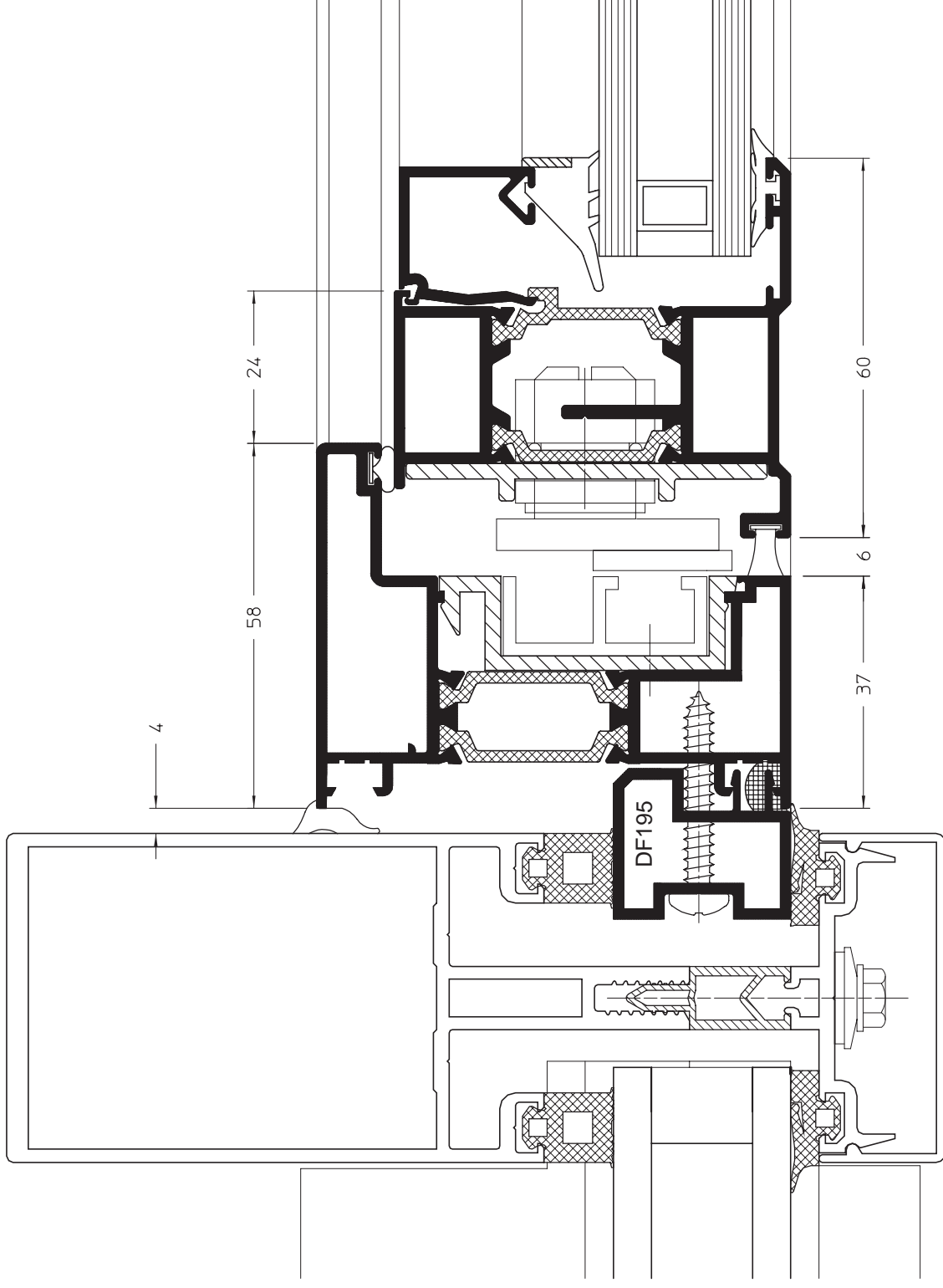
GENERAL ARRANGEMENTS

Subcill With Glaze In Fixed Light



GENERAL ARRANGEMENTS

Curtain Wall
Outerframe Adaptor



Our policy is one of continuous development and consequently we reserve the right to vary the products and their performance specification shown in this literature without notice.

All products and systems which Sapa supply are supplied subject to Sapa's standard Terms and Conditions of Sale which may vary from time to time.

This Technical Data Sheet is for specification guidance only. It should not be relied on for manufacturing or installation details which must instead be obtained from Sapa Building Systems' Fabrication Manuals. For further assistance please contact one of our Project Consultants by calling the Marketing Department on the number below.

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ARCHITECTURAL ALUMINIUM SOLUTIONS