

Uniclass L3811	
CI/SfB (31)	Xh4

November 2007

sapa:

buildingsystem

ARCHITECTURAL ALUMINIUM SOLUTIONS

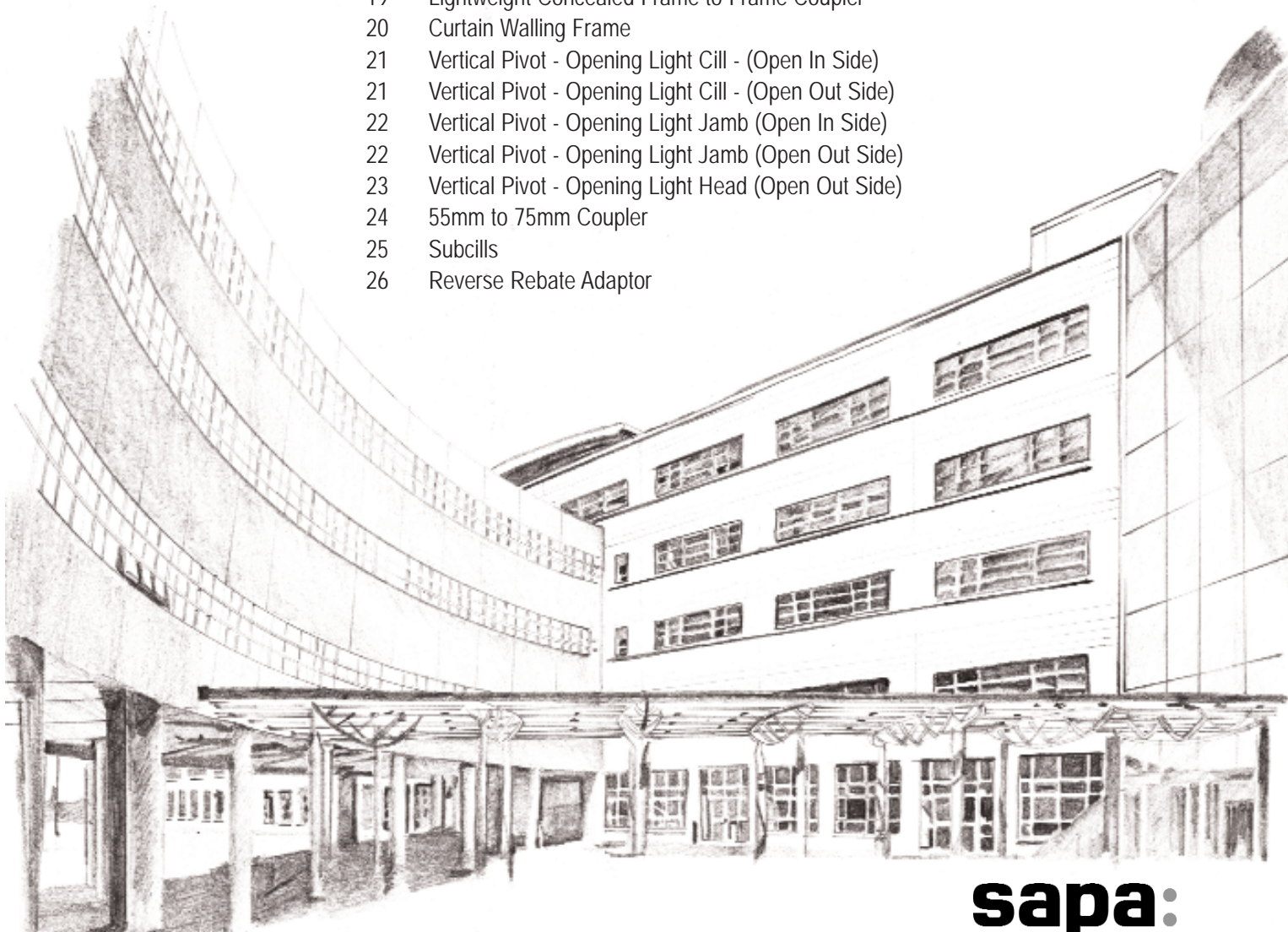


Dualframe 55mm Pivot Windows

Technical Data Sheet

Sapa Building System

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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 foam enclosed in a polythene sheath internally and EPDM flipper seal externally, both 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, manufactured, installed and glazed strictly in accordance with Sapa Building Systems' specifications, will achieve the following exposure categories "2400 Special":

Opening Lights

Water tightness	600 Pascals
Air Permeability	600 Pascals
Wind Resistance	2400 Pascals*

Fixed Lights

Water tightness	600 Pascals
Air Permeability	600 Pascals
Wind Resistance	2400 Pascals*

* Exposure category varies with width/height of window and mullion/transom used, as these are the only unsupported members. An accurate figure can be obtained using BS6399:Part 2 calculations and inertia values given on pages 6 and 7.

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

Pivot Opening Light

Maximum width 1477mm

Maximum height 1477mm

Maximum weight 90 kg (horizontal pivot)
60 kg (vertical pivot)

Minimum width (HP)/height (VP) 587mm

Minimum height (HP)/height (VP) 587mm

Note: All sizes given are in millimetres, all opening light max/min sizes relate to the overall size of the opening light frame and not the outerframe.

Hardware Security

Opening lights are hung on die cast zinc alloy pivot hinges which can be powder coated to match the framing. Optional built-in restrictors give a maximum 100mm clear opening at maximum size opening light (7° +/- 3.2°) and also engage in the fully reversed position for safe cleaning. A lockable option is available to restrictors. Multipoint locking gear is zinc plated steel with die cast mazak strikes, operated by a single die cast mazak handle which can be powder coated to match framing.

Glazing

Drainage in accordance with details listed in the Product 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, 28mm and 32mm can be accommodated.

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 bead.

Thermal Performance

Dualframe 55mm Pivot Windows can meet and surpass the area weighted average U values stipulated in Part L of the Building Regulations. Lower U-values can be achieved using double glazed units with enhanced thermal insulation, such as 'soft coat' low emissivity glass, argon gas filling and thermally broken spacer bars.

Site Work

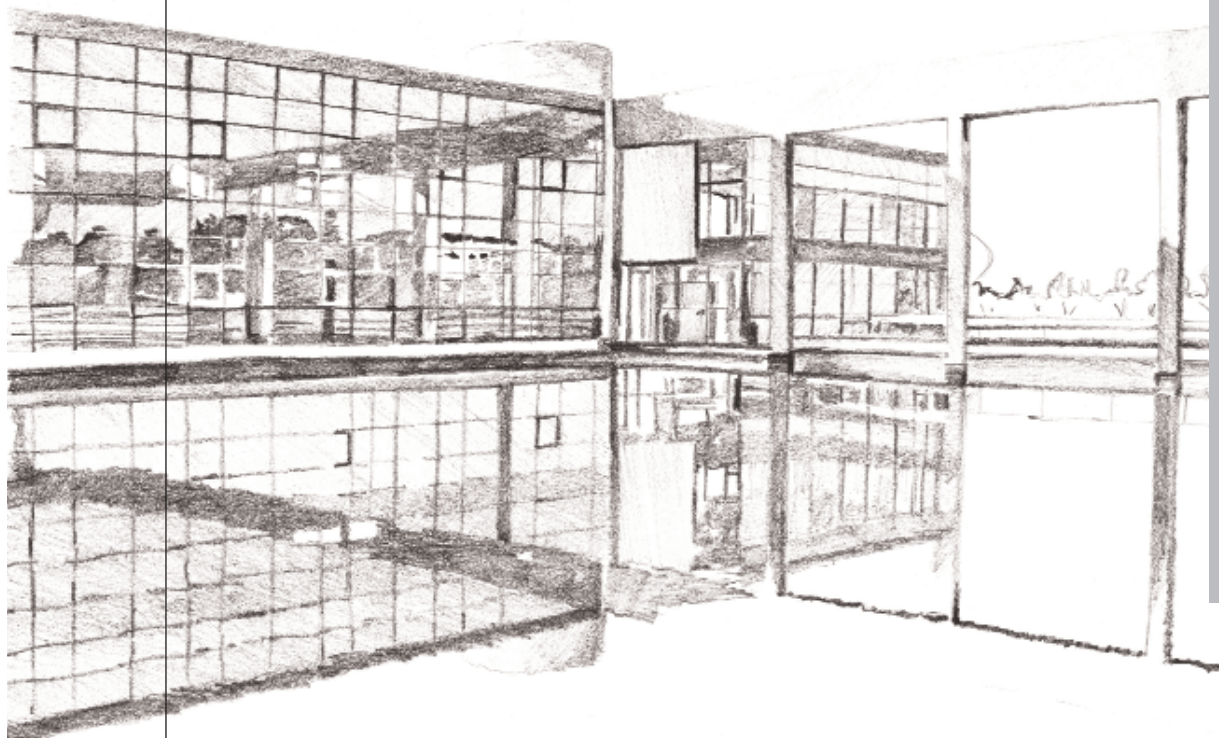
A fabrication, installation and glazing service is available through a nationwide network of fabricators and installers. For details of suitable fabricators and installers, please contact our Marketing Department on 01684 853500.

- 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

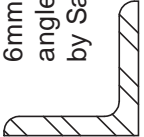
Sapa Building Systems Limited is a member of the worldwide Sapa Group. We develop and market high value-added profiles in aluminium and are the leading independent producer of aluminium profiles in the world, with customers in Europe, North America and Asia. In the UK, the Sapa Group has extensive multi-site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

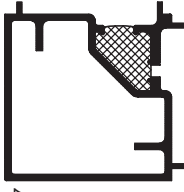

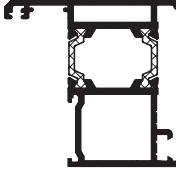
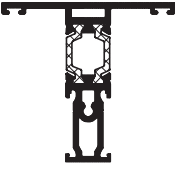
Backed by the resources of the Group, Sapa Building Systems Limited offers architects and specifiers a wide range of innovative aluminium systems for curtain walling, doors, windows and specialist applications. With a wealth of European knowledge and experience our company incorporates the highly respected 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

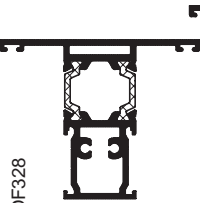
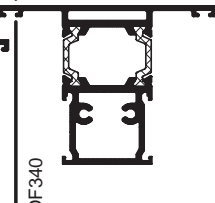
This page and the following page gives information on the inertia values of framing and coupling profiles. BS6399 Part 2 must be used to calculate the inertia required.

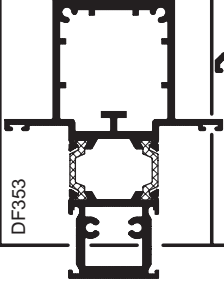
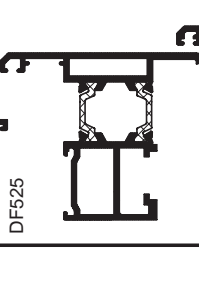
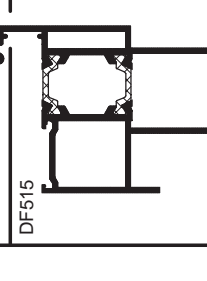
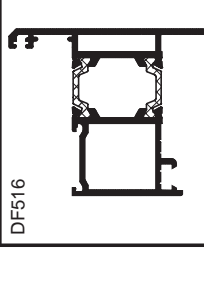
Profile	Inertia (mm ⁴)	
45 x 45 x 6mm Steel angle (not by Sapa) 	↓	293,000 (aluminium basis)
	↑	293,000 (aluminium basis)
16021	↓	53,629
	↑	9,051
16022	↓	378,702
	↑	49,252
16023	↓	154,527
	↑	27,187



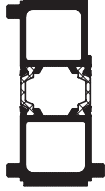
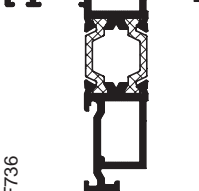
Profile	Inertia (mm ⁴)	
DF187 	↓	231,768
	↑	243,324
DF268 	↓	18,460
	↑	6,156
DF301 	↓	129,455
	↑	61,772
DF320 	↓	85,995
	↑	22,691

PROFILE INERTIA VALUES

This page and the previous page gives information on the inertia values of framing and coupling profiles. BS6399 Part 2 must be used to calculate the inertia required.

Profile	Inertia (mm ⁴)
DF328 	← 107,515
	→ 44,548
DF340 	← 120,641
	→ 65,961

Profile	Inertia (mm ⁴)
DF353 	← 598,719
	→ 166,866
DF525 	← 138,445
	→ 60,460
DF515 	← 129,334
	→ 124,972
DF516 	← 138,073
	→ 72,834

Profile	Inertia (mm ⁴)
DF708 	← 54,319
	→ 2,150
DF709 	← 134,415
	→ 10,267
DF714 	← 384,692
	→ 63,578
DF736 	← 78,107
	→ 19,683

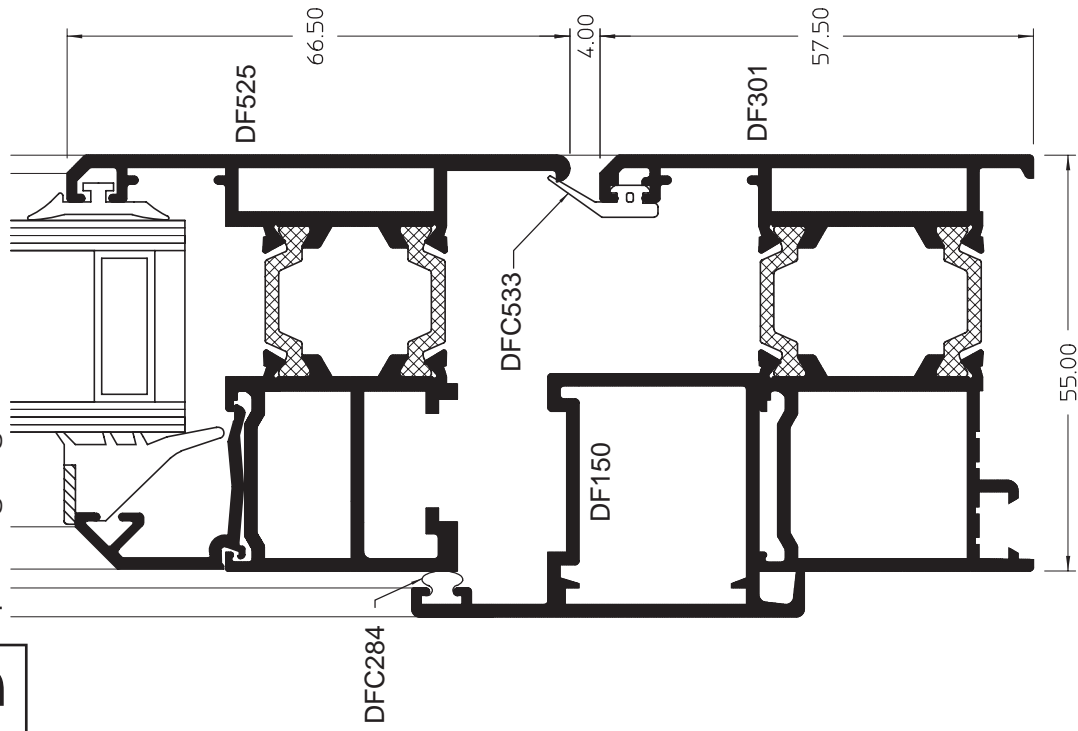
DUALFRAME 55mm Pivot Window

GENERAL ARRANGEMENTS

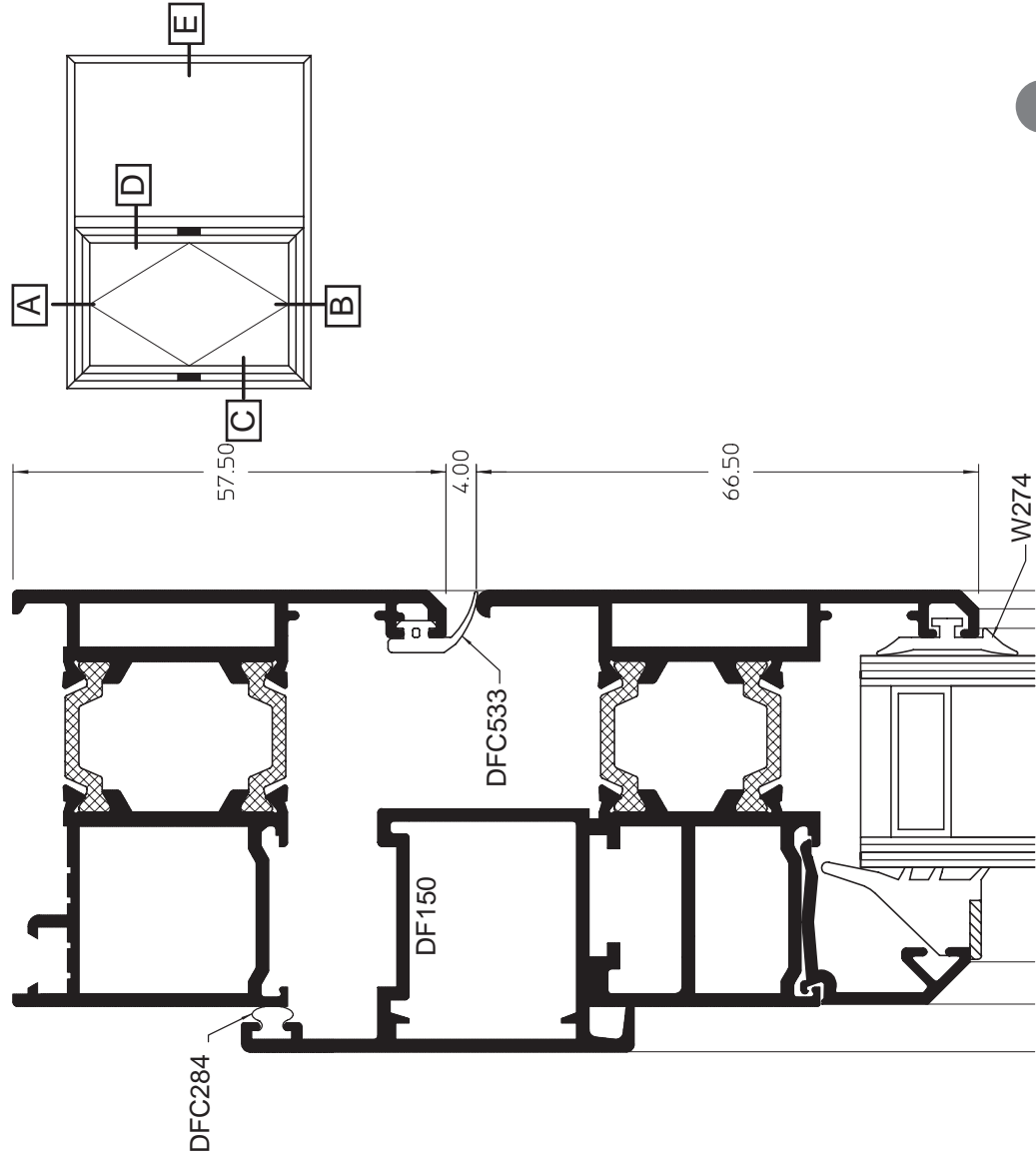
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55mm to 75mm Coupler	24
Subcills	25
Reverse Rebate Adaptor	26

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

B Opening Light Cill



A Opening Light Head



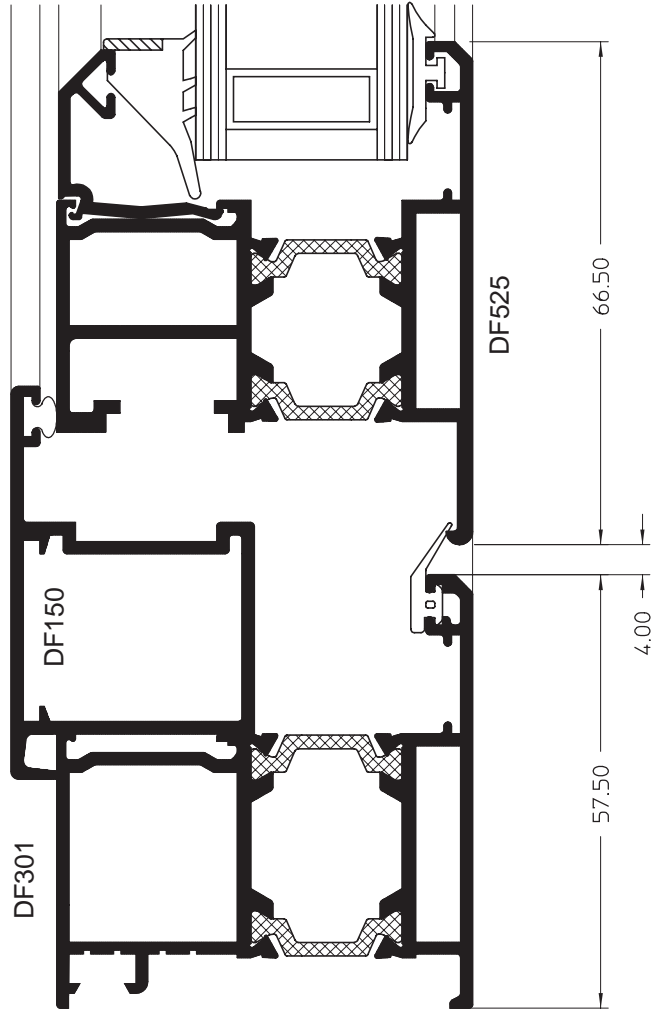
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55mm Pivot Window - Horizontal

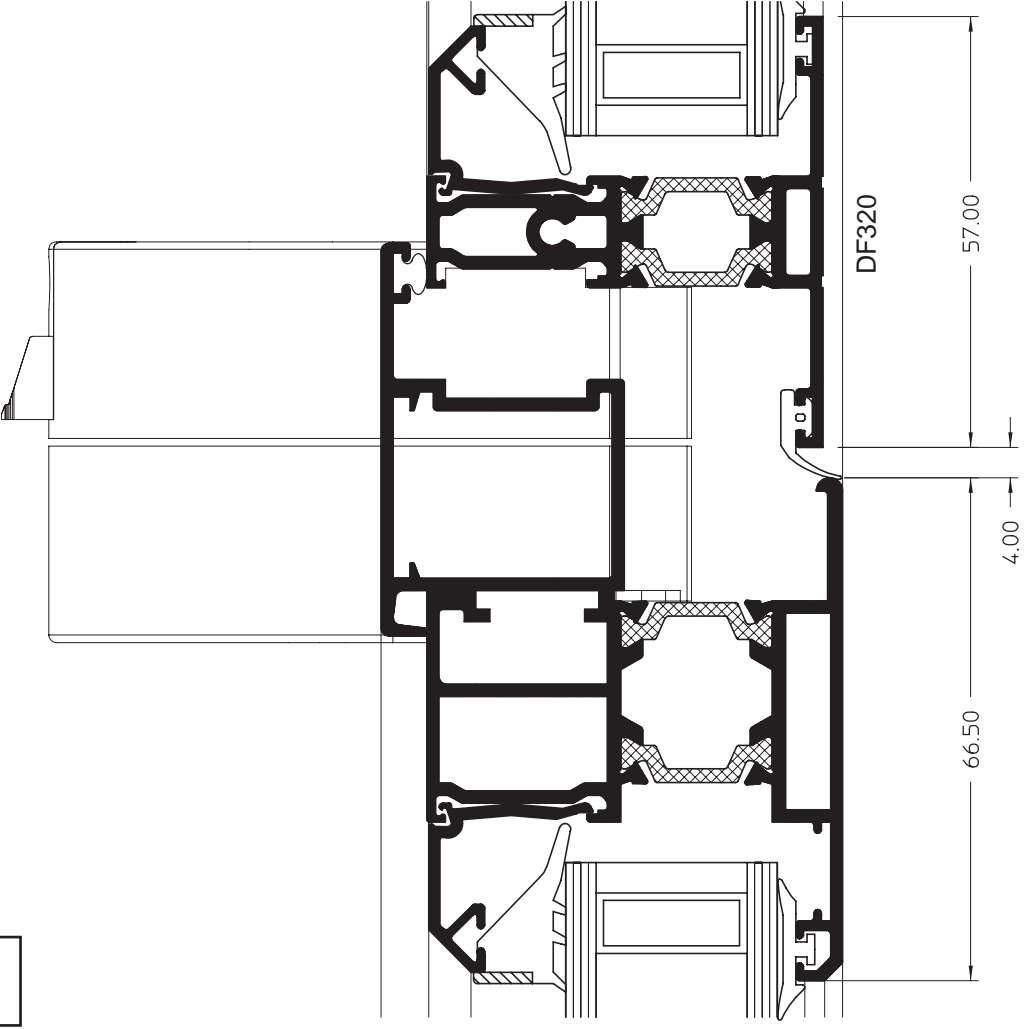
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GENERAL ARRANGEMENTS

C Opening Light Jamb (Below Pivot)



D 57mm Mullion / Transom (Above Pivot)



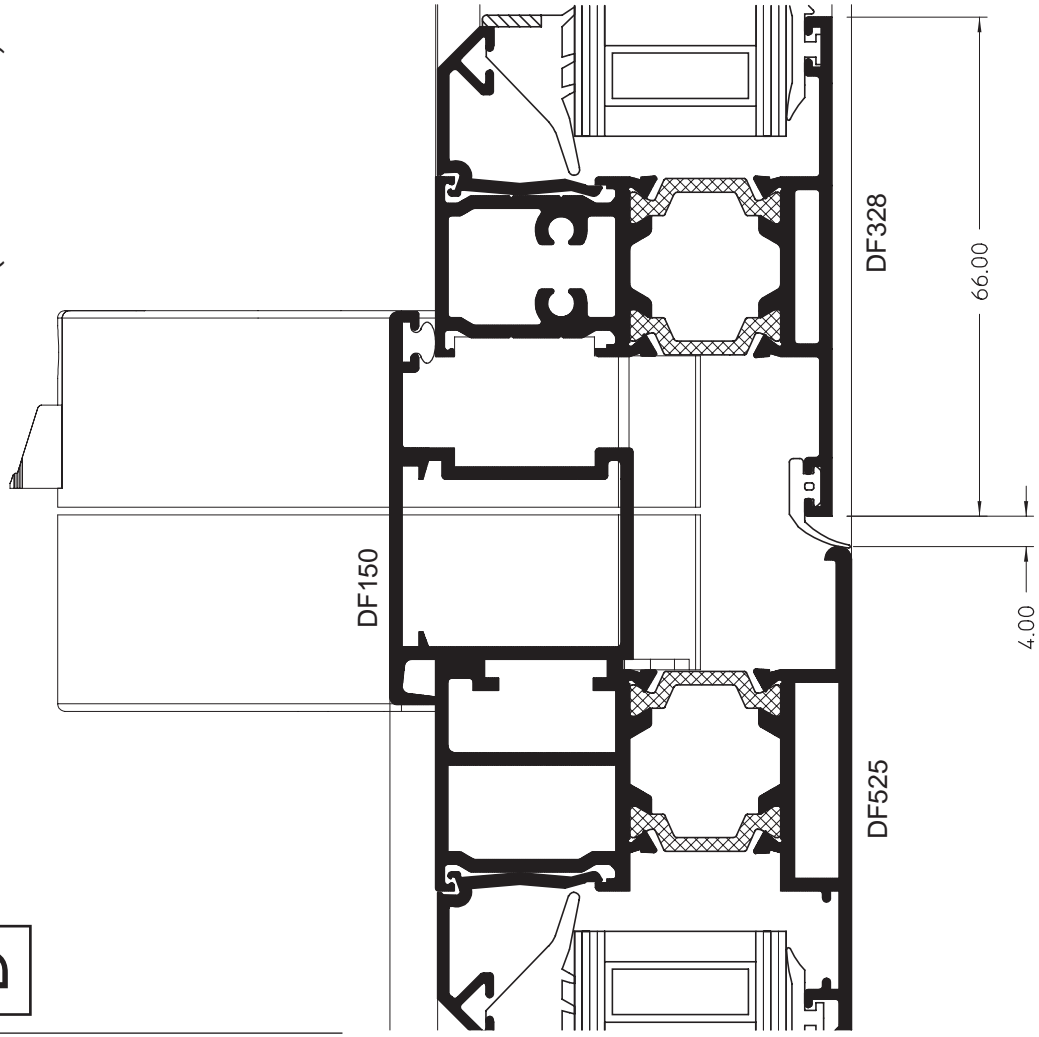
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55mm Pivot Window - Horizontal

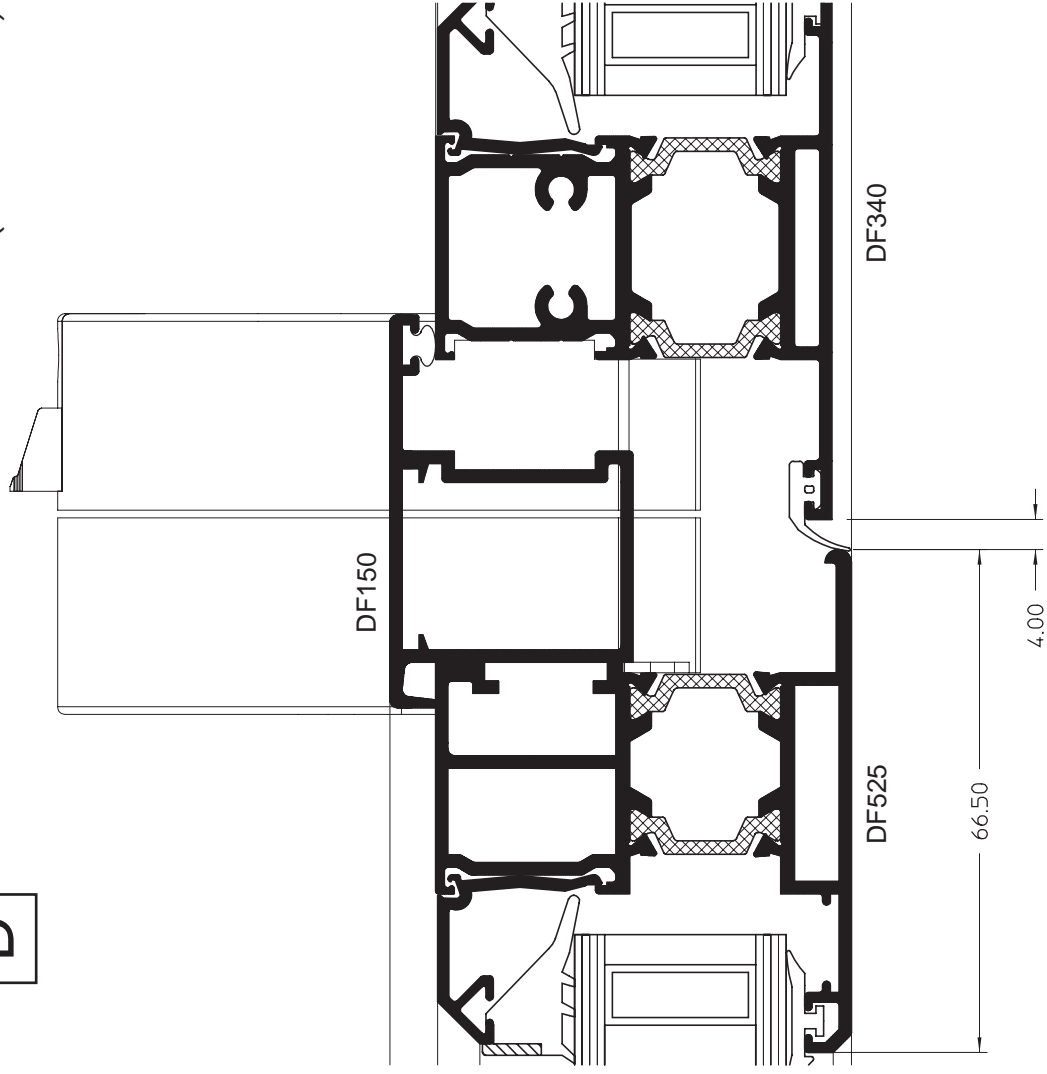
GENERAL ARRANGEMENTS

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D Alternative 66mm Mullion / Transom (Above Pivot)



D Alternative 72mm Mullion / Transom (Above Pivot)

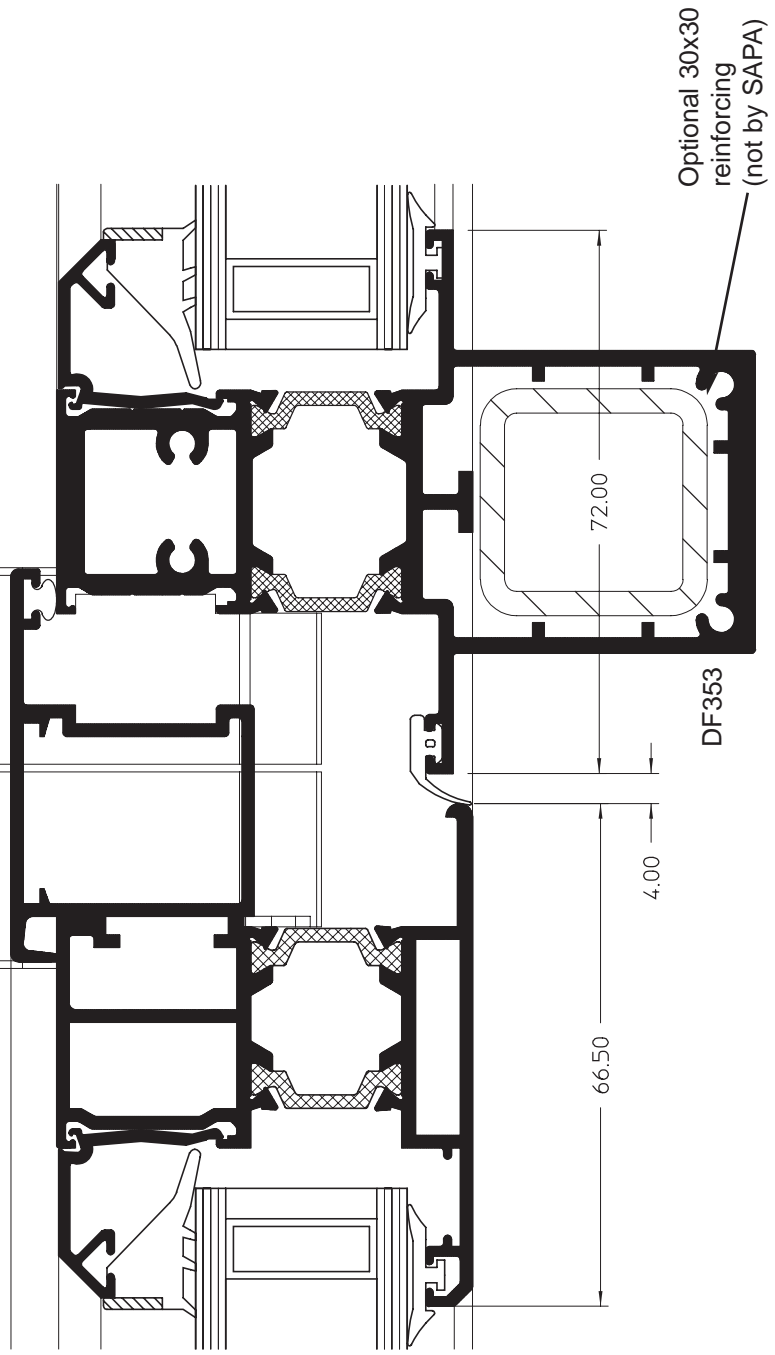


DUALFRAME 55mm Pivot Window - Horizontal

GENERAL ARRANGEMENTS

D Alternative 72mm Heavy Duty Mullion (Above Pivot)

Note:-
DF353 is to be used as a
mullion only, and is not
intended for transom use.



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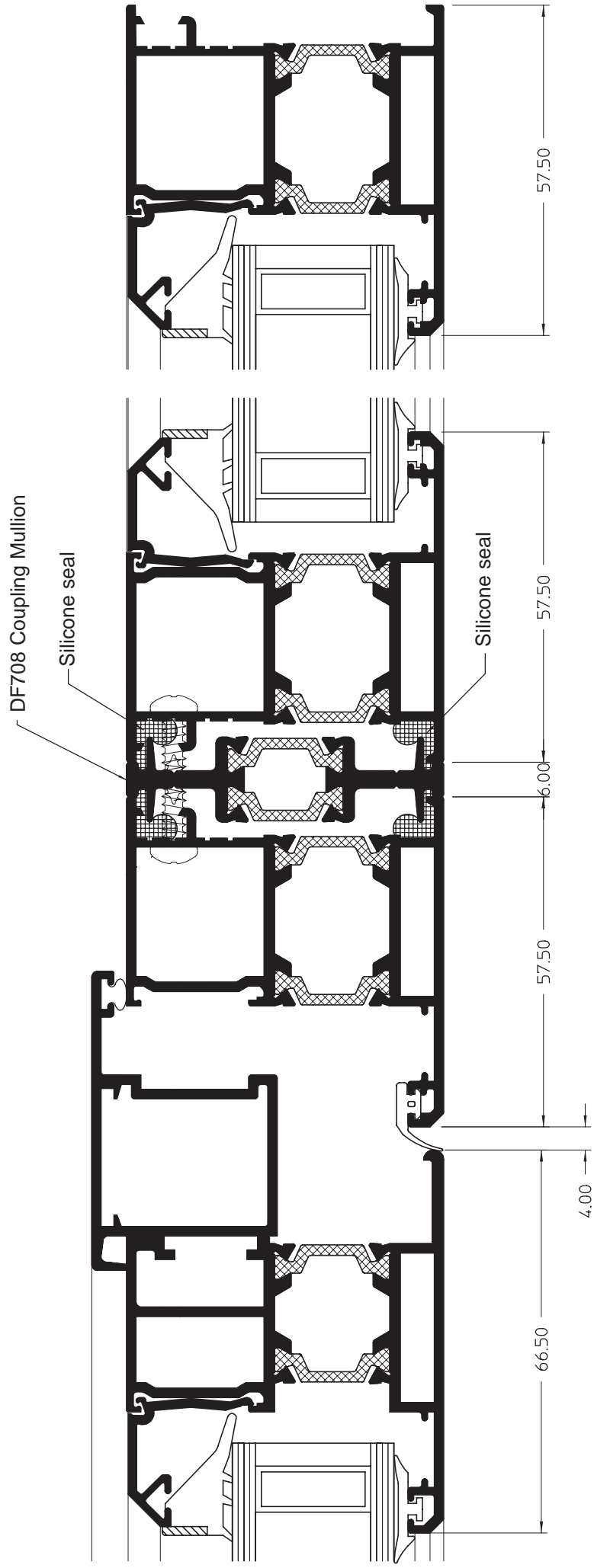
55mm Pivot Window - Horizontal

GENERAL ARRANGEMENTS

sapa:

D Coupling Mullion (Above Pivot)

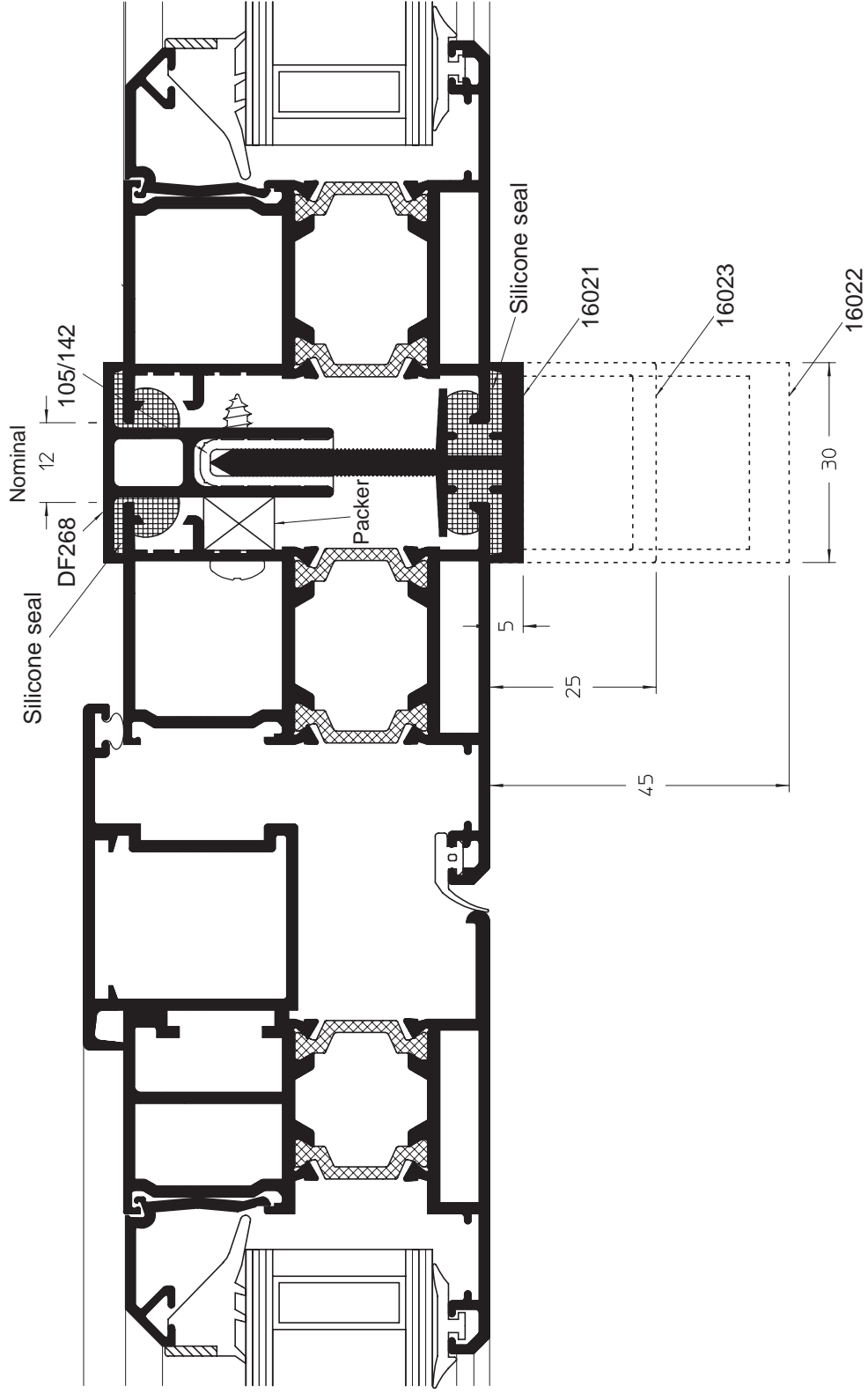
E Fixed Light Jamb



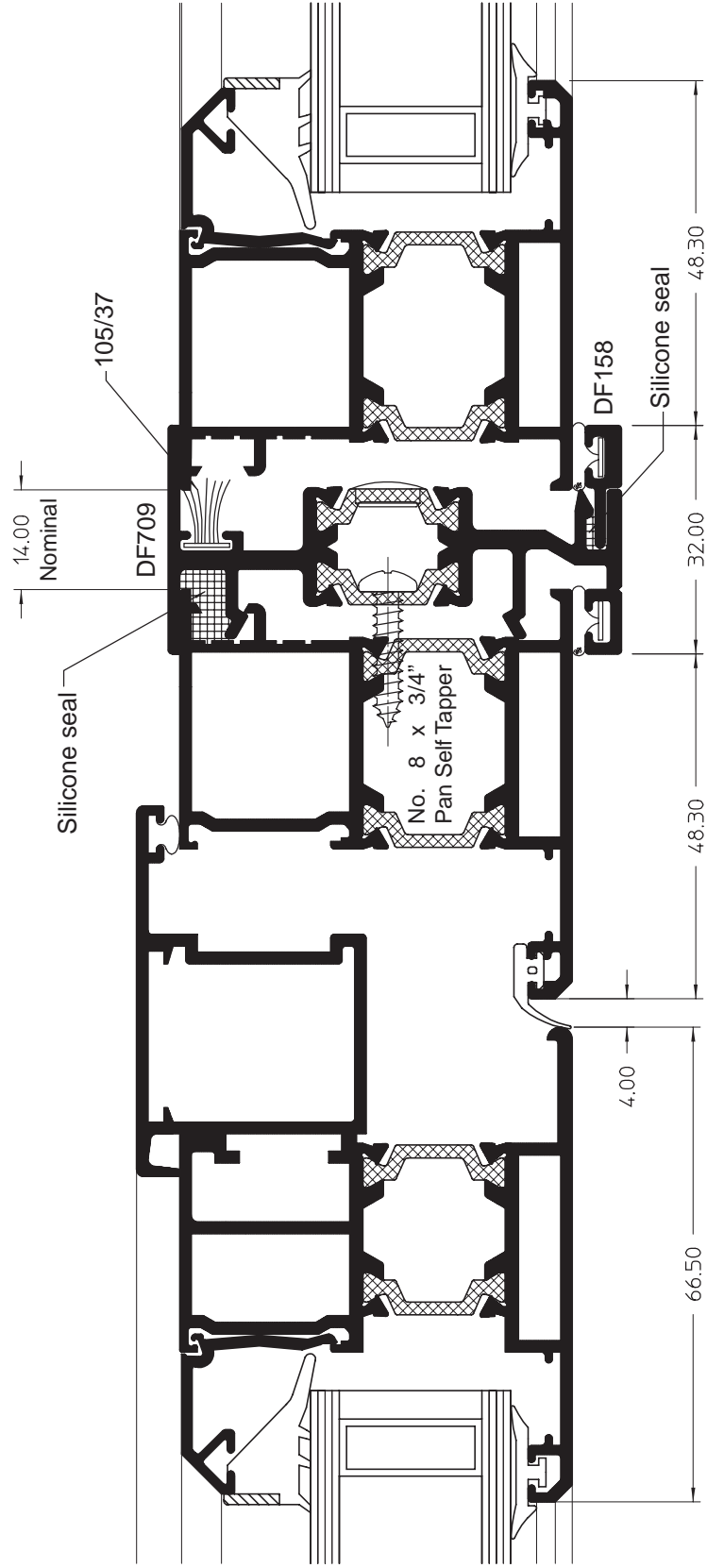
DUALFRAME 55mm Pivot Window - Horizontal

GENERAL ARRANGEMENTS

D Heavy Duty Couplers (Above Pivot)



D Expansion Coupler (Above Pivot)



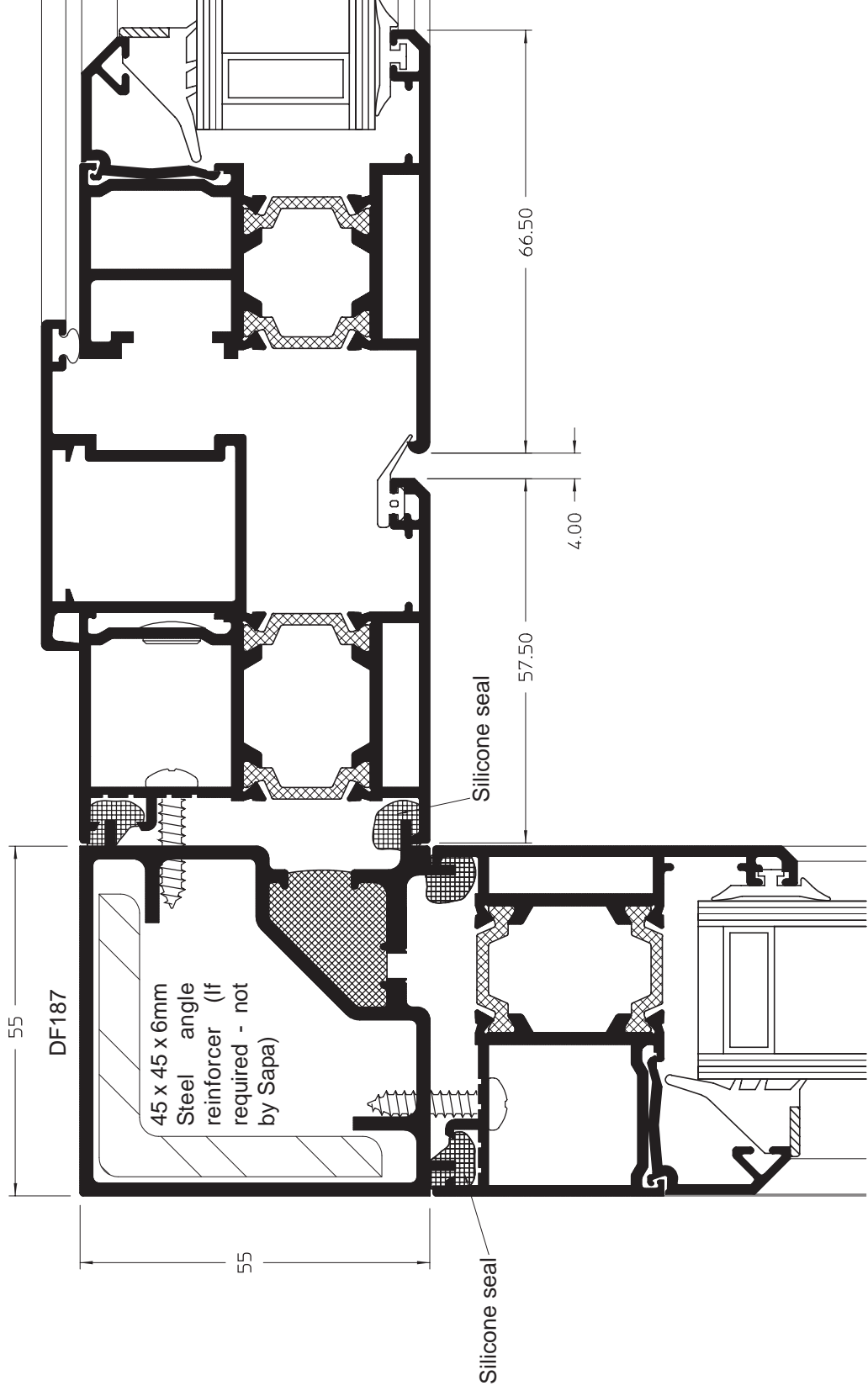
55mm Pivot Window

DUALFRAME

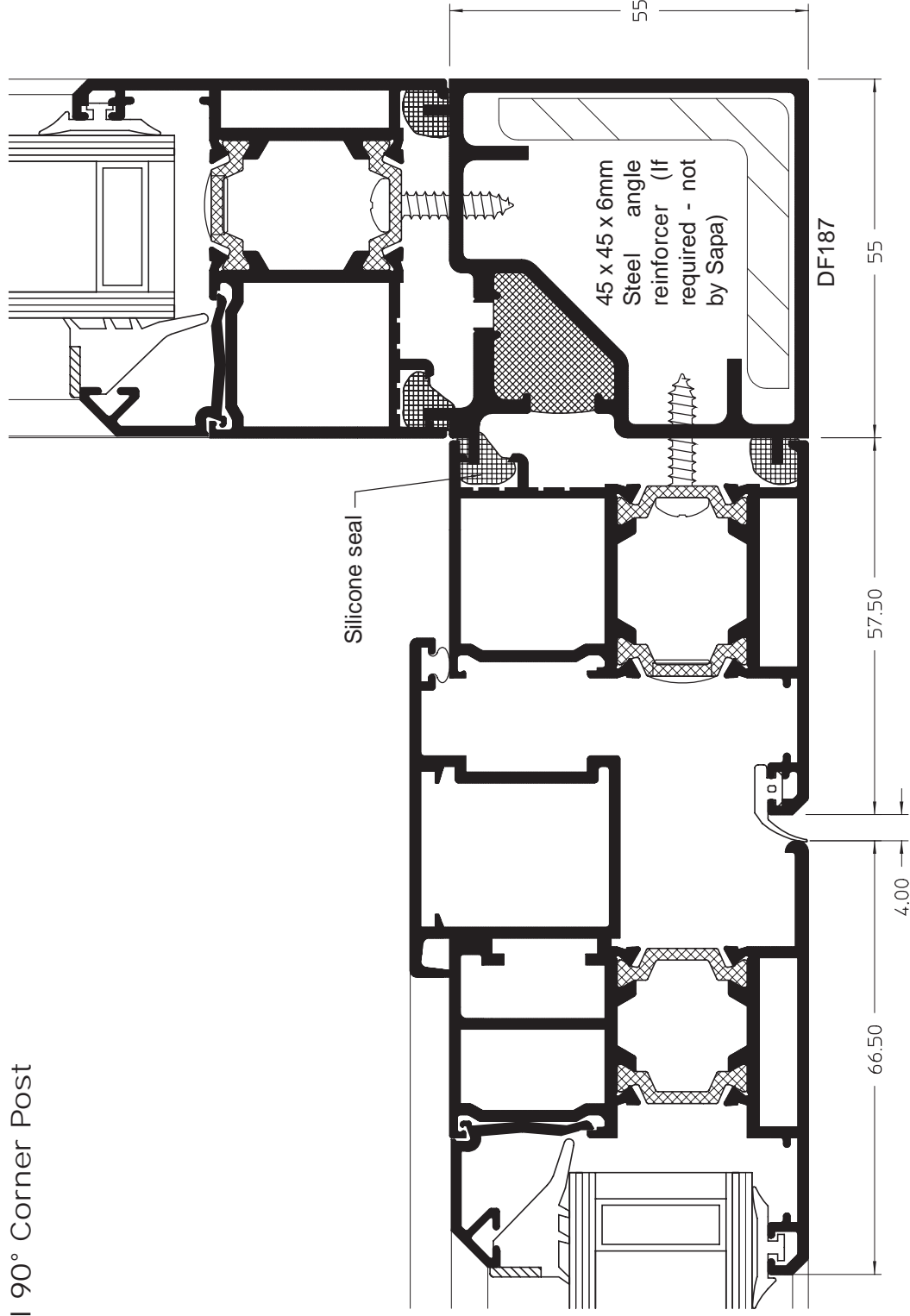
GENERAL ARRANGEMENTS

Internal 90° Corner Post

sapa:



External 90° Corner Post



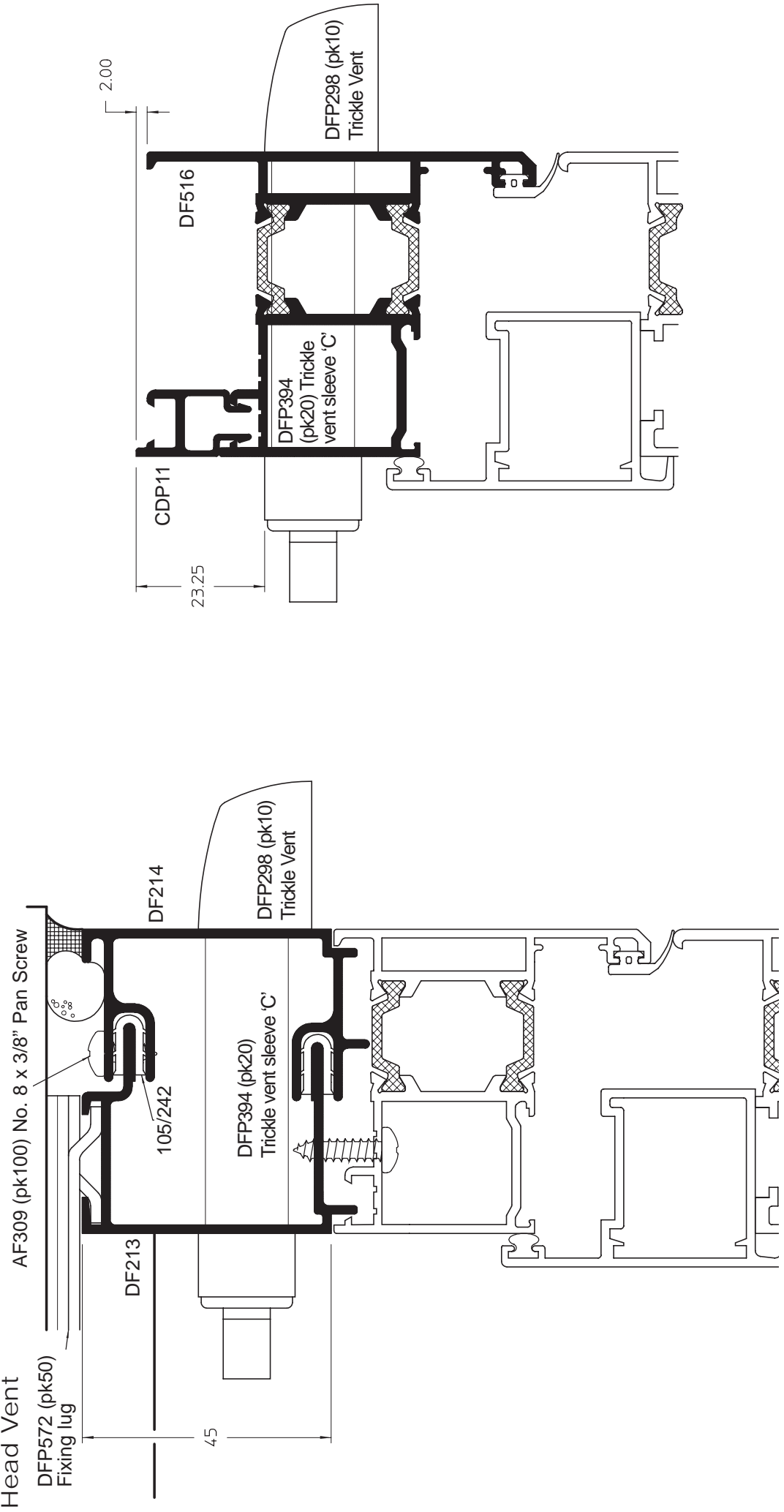
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55mm Pivot Window

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GENERAL ARRANGEMENTS

Head Vent



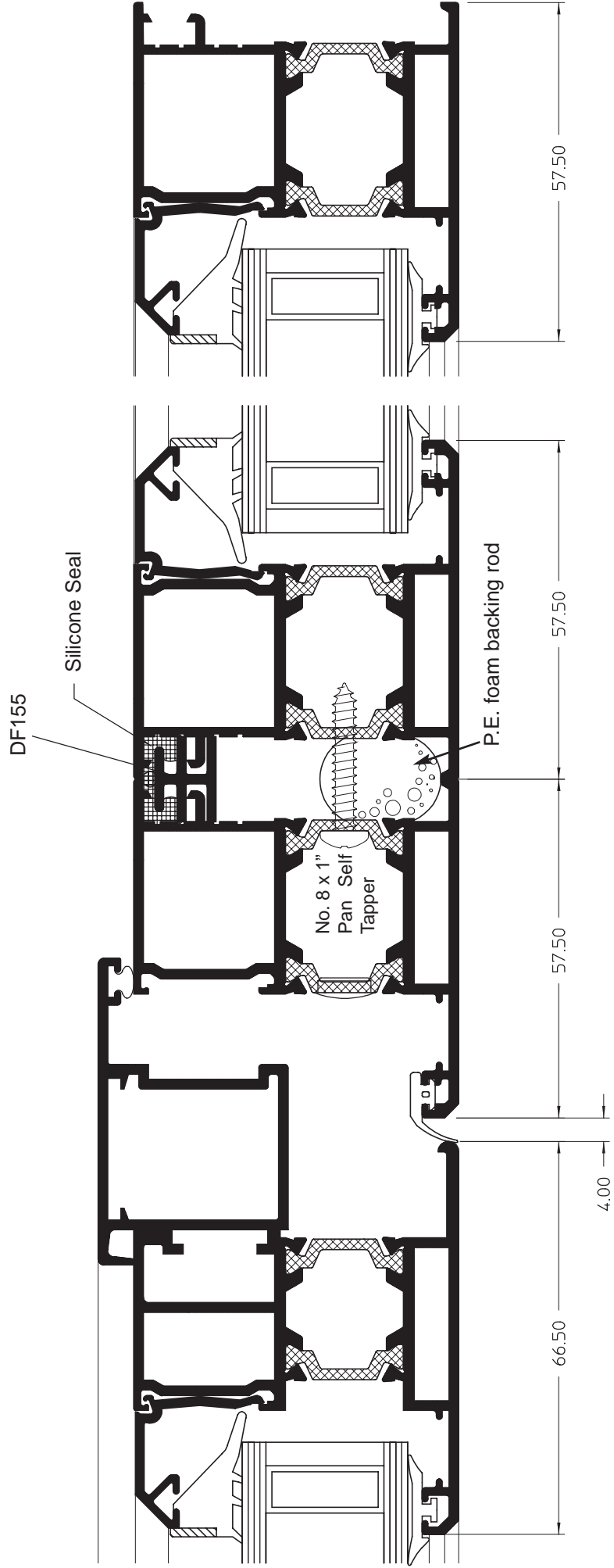
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55mm Pivot Window

GENERAL ARRANGEMENTS

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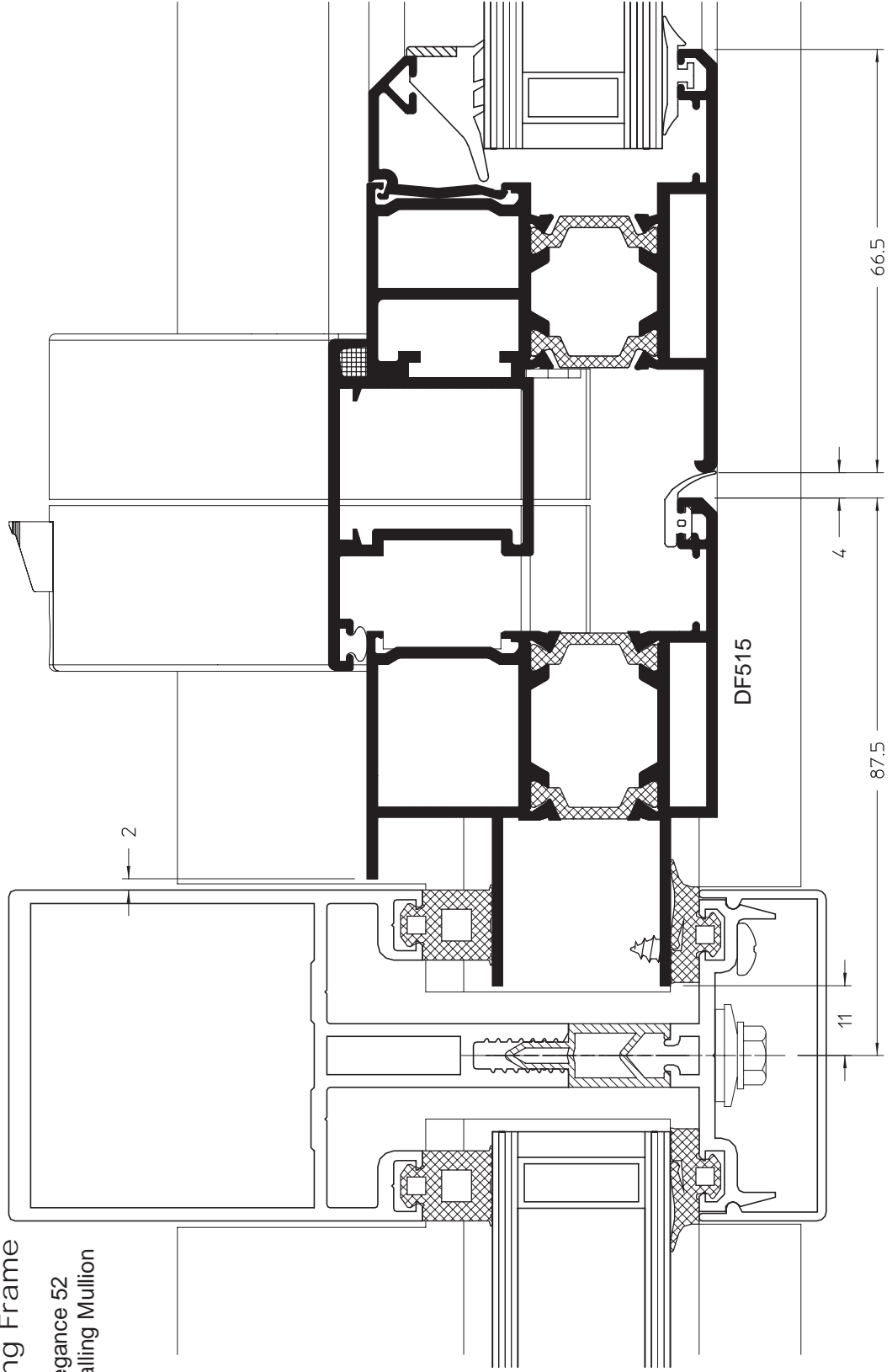
Lightweight Concealed Frame to Frame Coupler



DUALFRAME 55mm Pivot Window

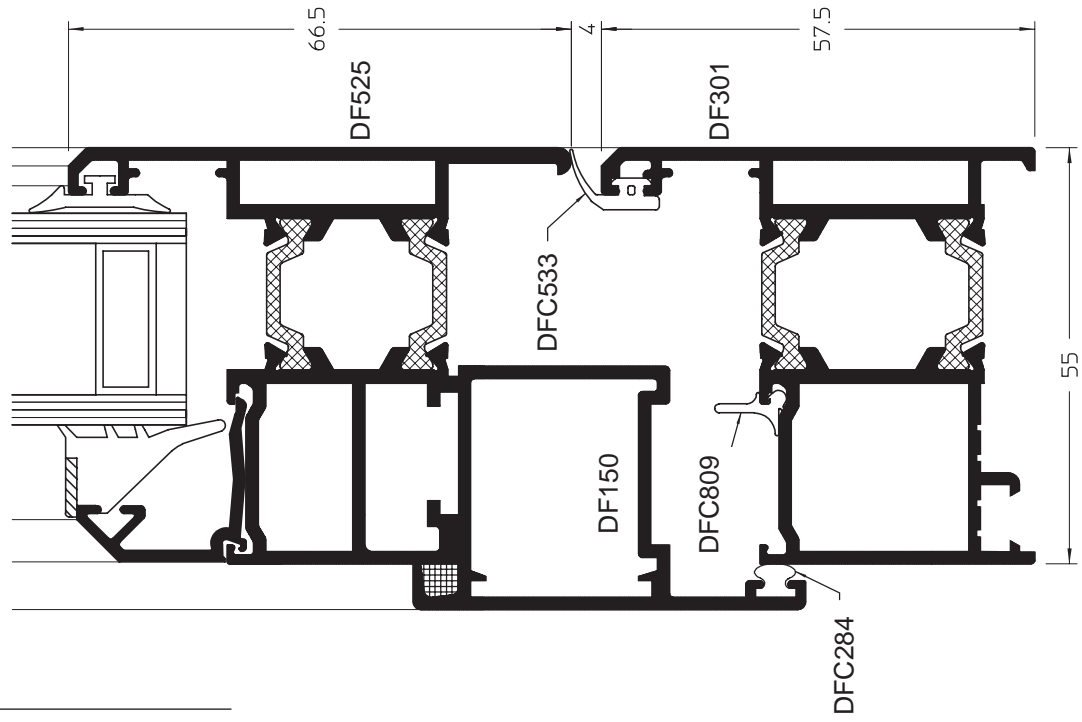
GENERAL ARRANGEMENTS

Curtain Walling Frame
Typical Elegance 52
Curtain Walling Mullion



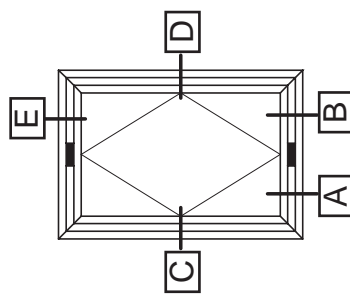
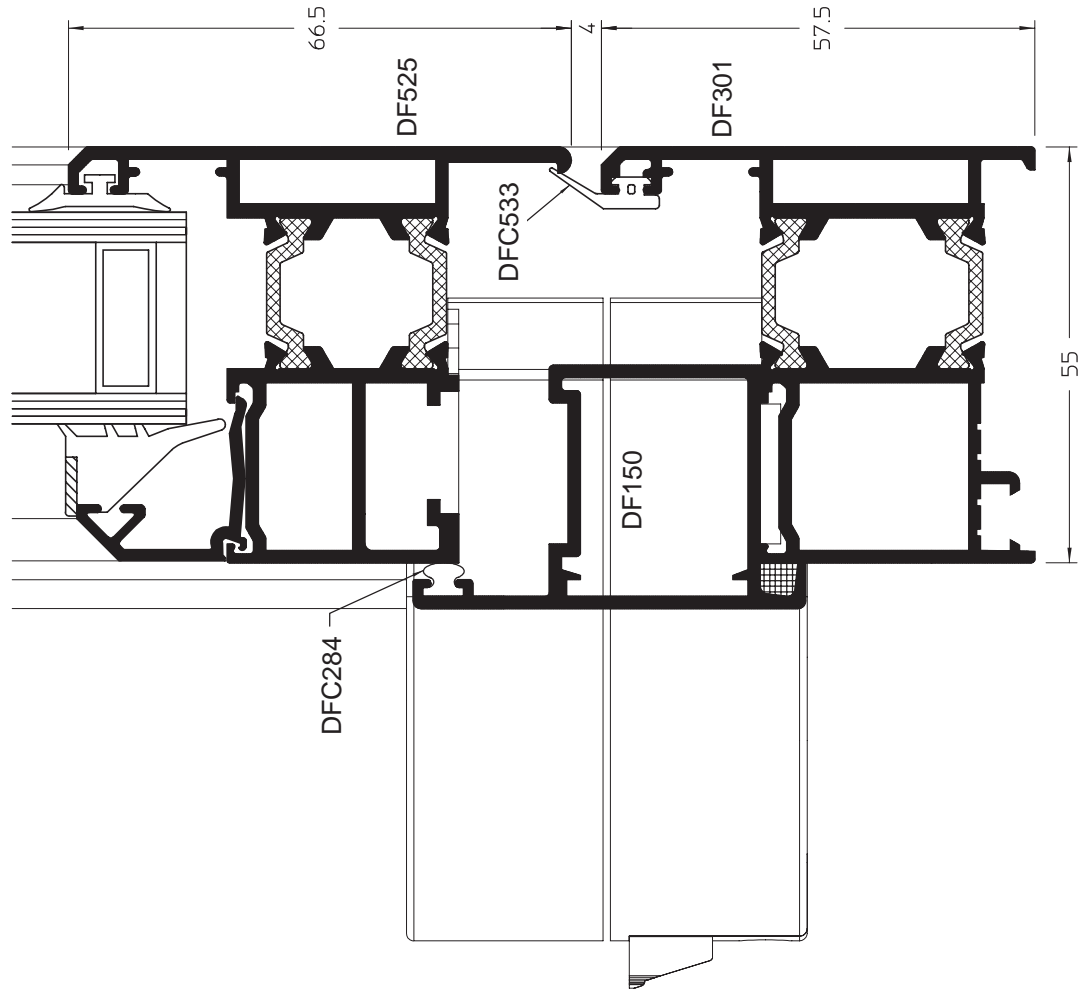
A

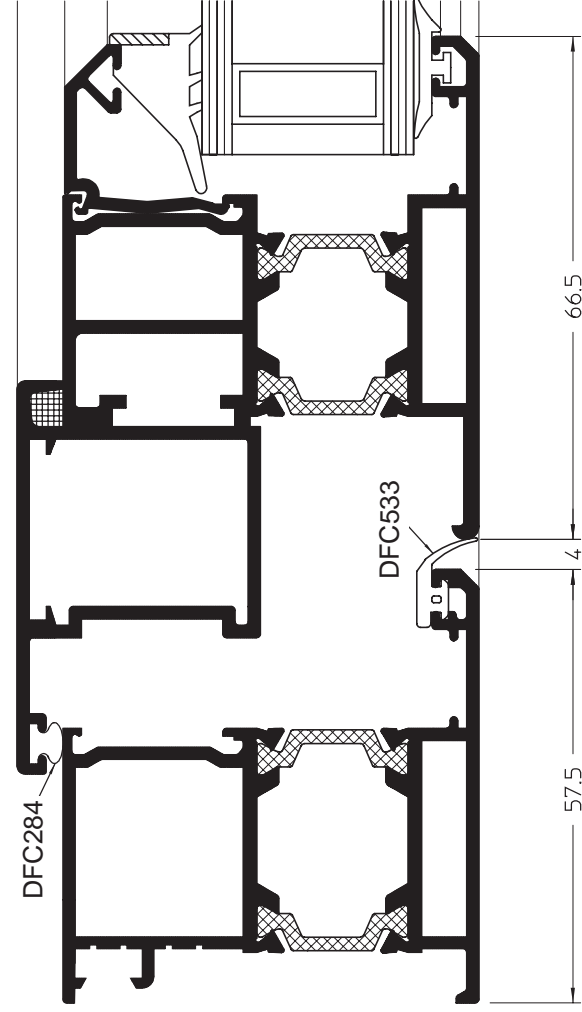
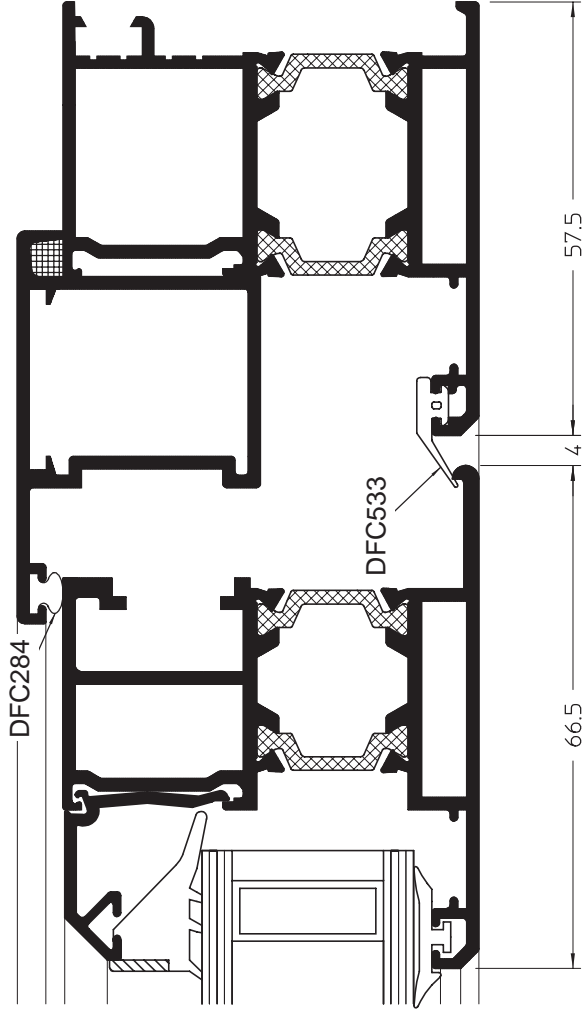
Opening Light Cill (Open in side)

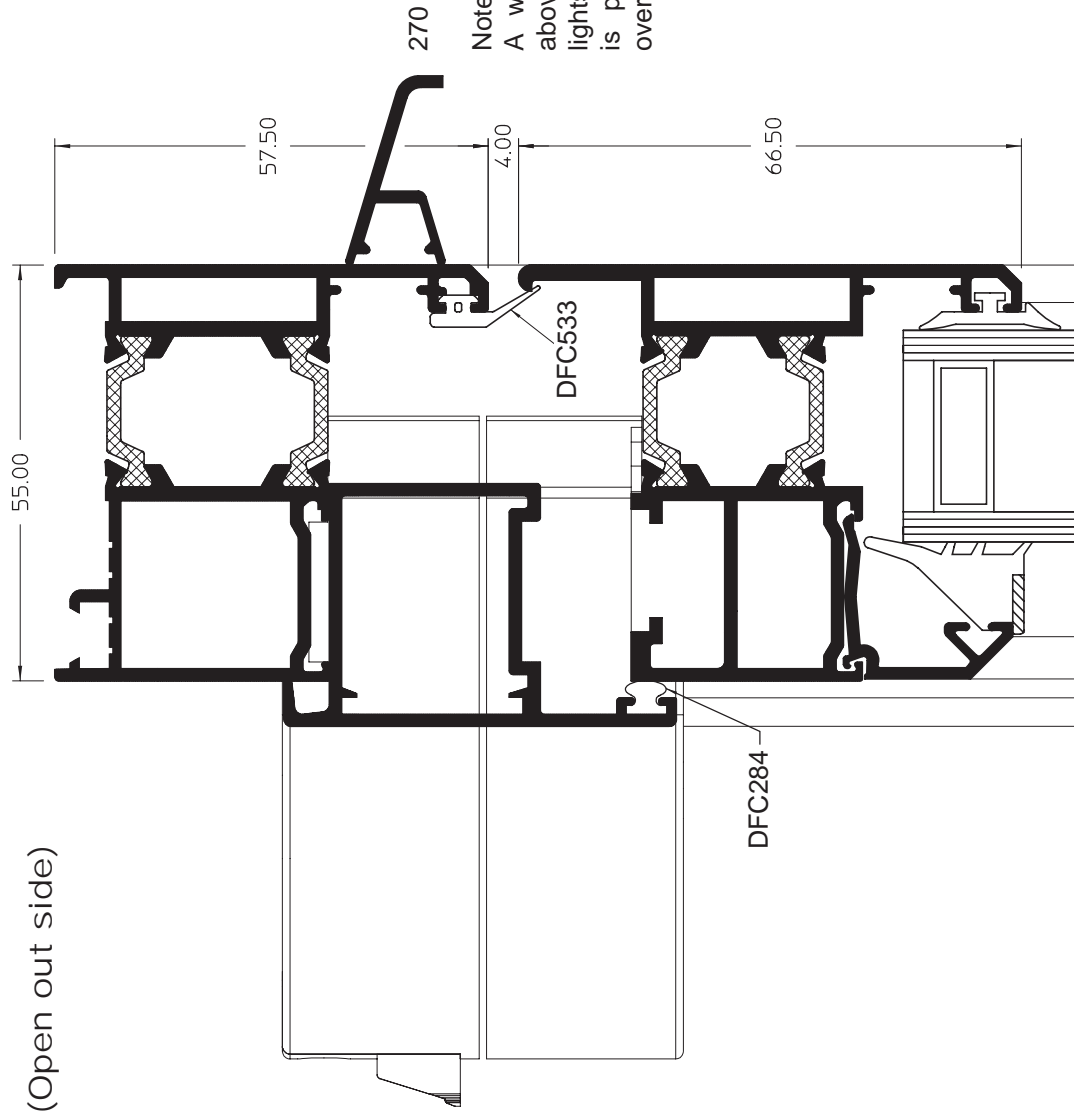


B

Opening Light Cill (Open out side)



C Opening Light Jamb (Open in side)**D** Opening Light Jamb (Open out side)

E Opening Light Head (Open out side)

Note:-

A weatherbar must be fitted above all vertical pivot opening lights, except where the window is protected by a structural overhang at the head.

sapa:

55mm Pivot Window

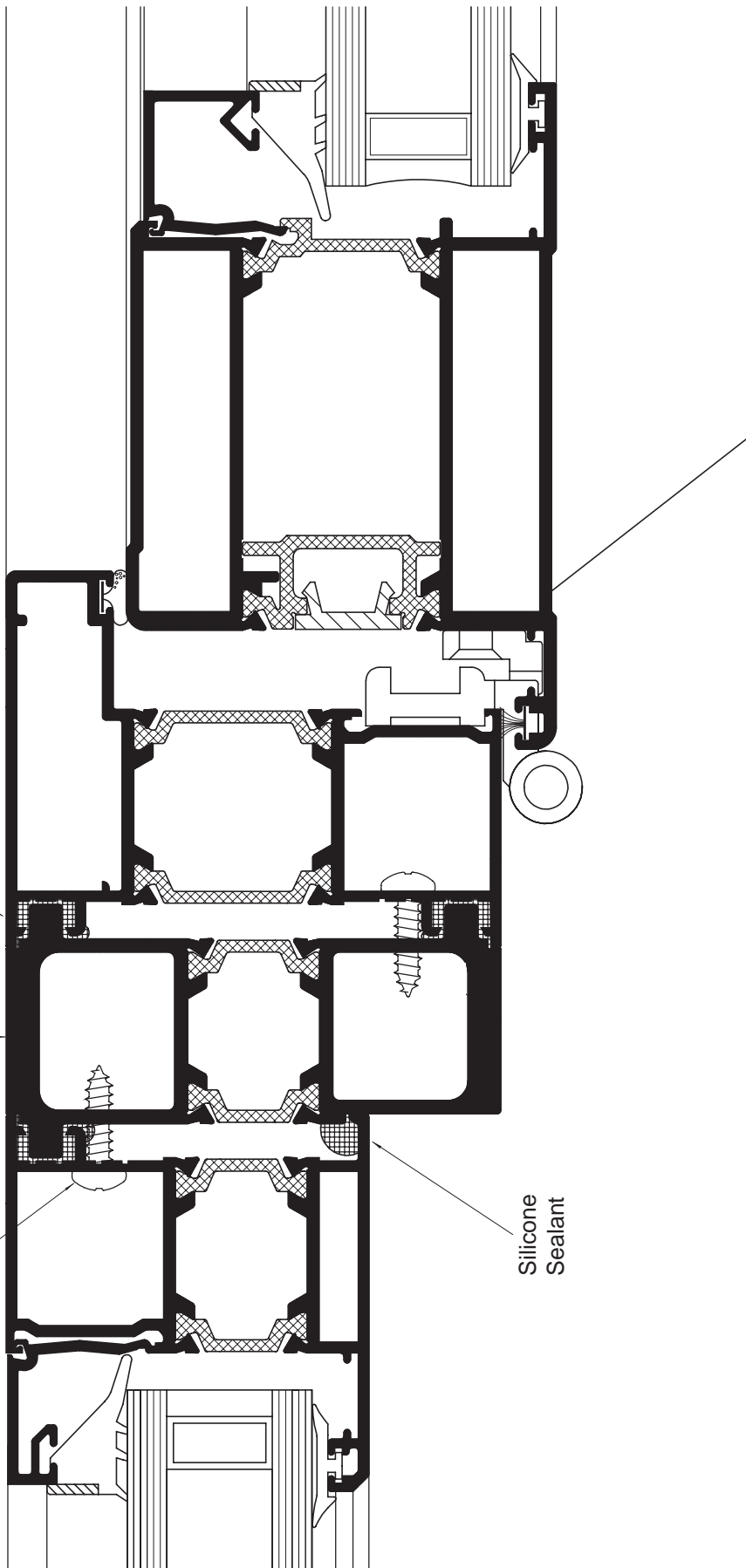
DUALFRAME

GENERAL ARRANGEMENTS
55mm To 75mm Coupler

25
DF714
Silicone Sealant

ST858PPSS

Silicone Sealant



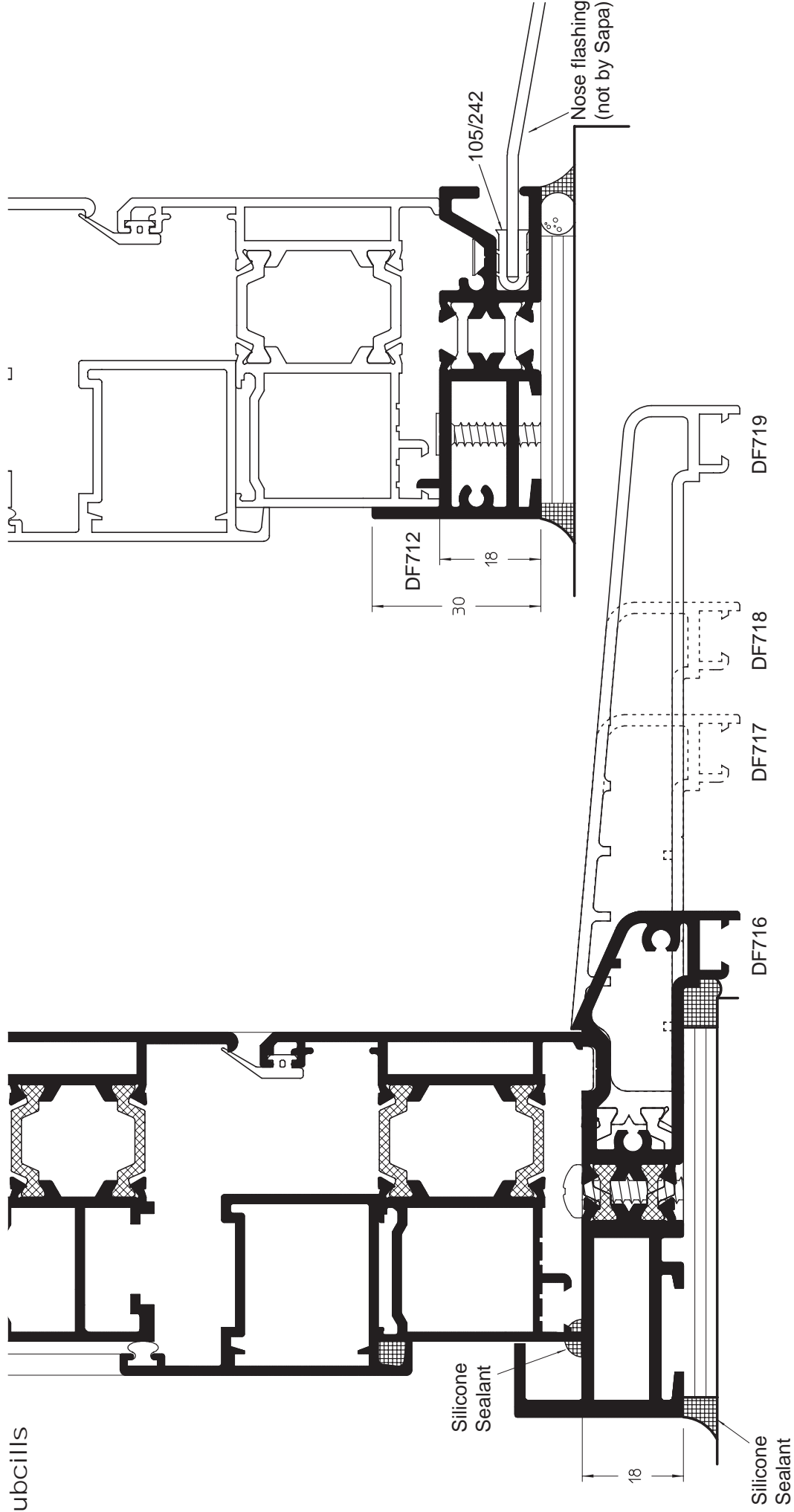
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55mm Pivot Window

GENERAL ARRANGEMENTS

Subcills

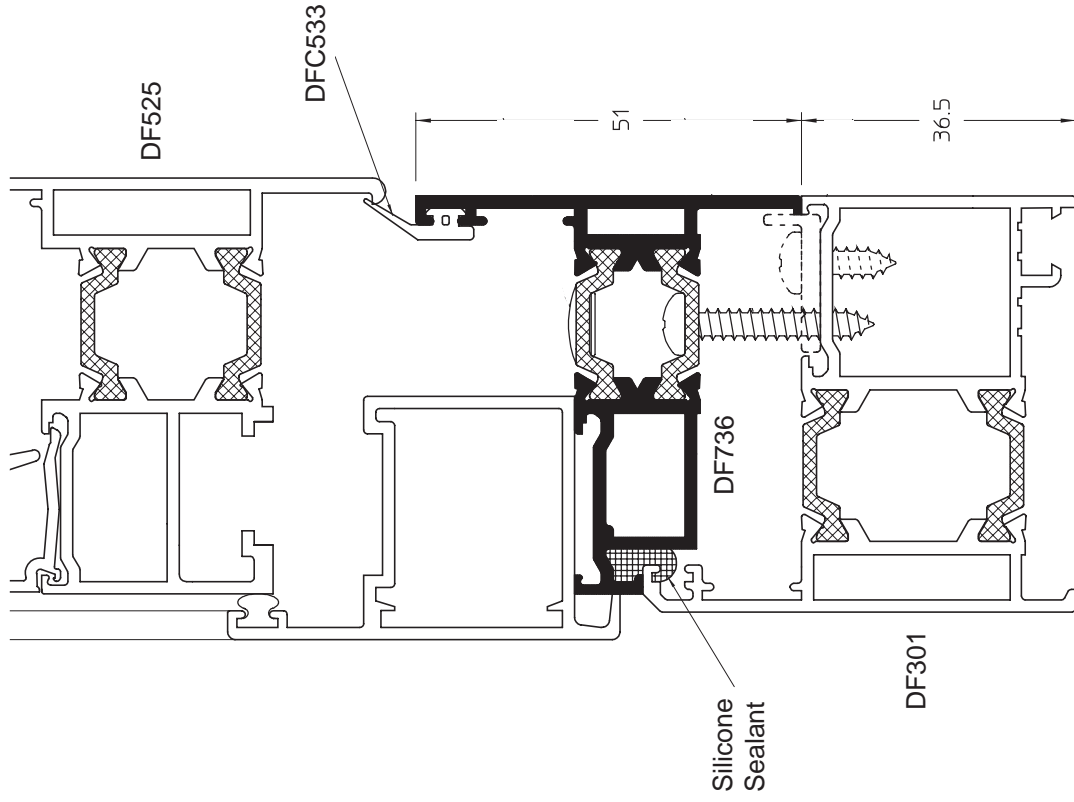
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DUALFRAME 55mm Pivot Window

GENERAL ARRANGEMENTS

Reverse Rebate Adaptor



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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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Brochure reference DFC61 1107

Sapa Building Systems Limited

Postal address Alexandra Way, Ashchurch, Tewkesbury, Gloucestershire GL20 8NB
Telephone 01684 853500 Fax 01684 851850
E-mail info@sapabuildingsystems.co.uk Website www.sapabuildingsystems.co.uk

sapa:

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ARCHITECTURAL ALUMINIUM SOLUTIONS