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December 2007

sapa:
buildingsystem
ARCHITECTURAL ALUMINIUM SOLUTIONS



Dualframe 75mm HP Entrance Door

Technical Data Sheet

Sapa Building System

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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 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, Dualfold sliding folding doors, glazed roofing and facades, 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 75mm HP Entrance Door

■ Design Variants

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

Note that Dualfold sliding folding doors are also available, which suite directly with the rest of the Dualframe range. See the Dualfold Technical Data Sheet for more information.

■ Compatibility

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

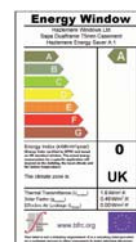
■ Application

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 eth 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 and polyurethane foam enclosed in a polythene sheath, set in undercut grooves in the sash.

The thermal barrier section is achieved using two separate aluminium extrusions and two polyamide extrusions mechanically jointed to form a single compound profile. (Except on some coupling mullions where a 'pour and cut' polyurethane resin thermal break is used).

Frame members are mitre cut at 45 degrees. 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 to the enclosed details, will achieve the following exposure categories:

Single Doors	Air	Water	Wind Resistance*	Exposure Category
Open In (HD)	300pa	300pa	2000pa	2000
Open In (STD)	300pa	300pa	2400pa	2400
Open Out (HD)	600pa	300pa	2000pa	2000 Special
Open Out (STD)	600pa	600pa	2400pa	2400 Special

Double Doors	Air	Water	Wind Resistance*	Exposure Category
Open In (STD & HD)	300pa	200pa	1200pa	1200
Open Out (STD & HD)	600pa	600pa	1200pa	1200 Special

Low threshold

Single Doors	Air	Water	Wind Resistance*	Exposure Category
Open In (HD)	300pa	200pa	2000pa	2000
Open In (STD)	300pa	150pa	2400pa	1200
Open Out (HD)	600pa	200pa	2000pa	2000 Special
Open Out	600pa	300pa	2400pa	2400 Special

Low threshold

Double Doors	Air	Water	Wind Resistance*	Exposure Category
Open In (HD)	300pa	50pa	1200pa	1200X
Open In (STD)	200pa	200pa	1200pa	1200
Open Out (HD)	600pa	150pa	1200pa	1200 Special
Open Out	600pa	300pa	1200pa	1200 Special

*Exposure category varies with width/height of door and mullion/transom used, as these are the only unsupported members.

Authority

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.

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

BS: PAS 23-1: 1999 General performance requirements for door assemblies

BS: PAS 24-1: 1999 Enhanced security performance requirements for door assemblies

Note: To conform to the requirements of PAS 023 and 024, doors must be to an identical specification to those tested, and fabricated in accordance with the Product Manual.

Size Limitations

Fixed Light Maximum area 5 sq.m

Single Doors	(O/A Frame size)
Minimum Width	650mm
Maximum Width	1260mm
Minimum Height	1850mm (STD) 1840mm (L/T)
Maximum Height	2400mm (STD) 2390mm (L/T)

Double Doors	(O/A Frame size)
Minimum Width	1246mm
Maximum Width	2466mm
Minimum Height	1850mm (STD) 1840mm (L/T)
Maximum Height	2400mm 2390mm (L/T)

Unequal Split - Double Doors (Sizes shown are outerframe to centre of split)

Minimum Slave Leaf	320mm (STD & H/D) 354mm (AFT)
Minimum Master Leaf	623mm
Maximum Leaf	1023mm (STD) 1223mm (H/D) 1233mm (AFT)

Maximum Leaf Weight Using Standard Hinges is 75kg.

Maximum Leaf Weight Using Heavy Duty & A.F.T Hinges is 100kg.

STD	= Standard
AFT	= Anti Finger Trap
H/D	= Heavy Duty
L/T	= Low Threshold

Please see pages 6 - 7 for door size to hardware relationships.

Hardware

Doors are hung on extruded aluminium hinges with stainless steel pins and nylon bushes. Powder coated to match the door. Locks are of Eurogroove construction with three hooks and central latch. A full length stainless steel faceplate is fitted. Optional top and bottom shoot-bolts are also available. On double doors, the slave leaf is secured by means of a slave lock having only top and bottom shoot bolts or by means

of a shootbolt, with central finger operated mechanism throwing two opposing 10mm dia zinc plated steel bolts. Cylinders are of 5-pin anti-drill construction. All keeps are adjustable and are made from pressed stainless steel. Hardware enhancements are available to achieve compliance with PAS 024.

Glazing

Drainage in accordance with details listed in this manual meets the requirements of 'ventilated and drained glazing systems', as specified in BS6262. Glass must conform to BS6262 for thickness and type. Insulating glass units of 24mm and 28mm can be accommodated.

Door leaves: Glass set against extruded synthetic rubber gaskets retained in undercut grooves within an aluminium bead 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 Part L of the Building Regulations 2002, using only hard coat low emissivity glass and standard spacers to the double glazed units. 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 design, 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.



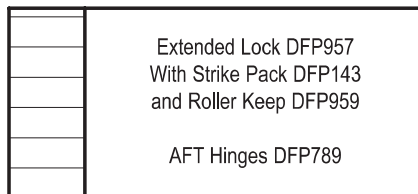
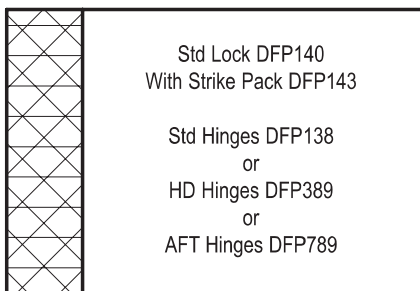
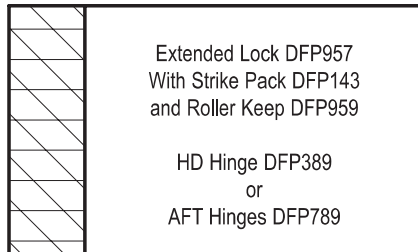
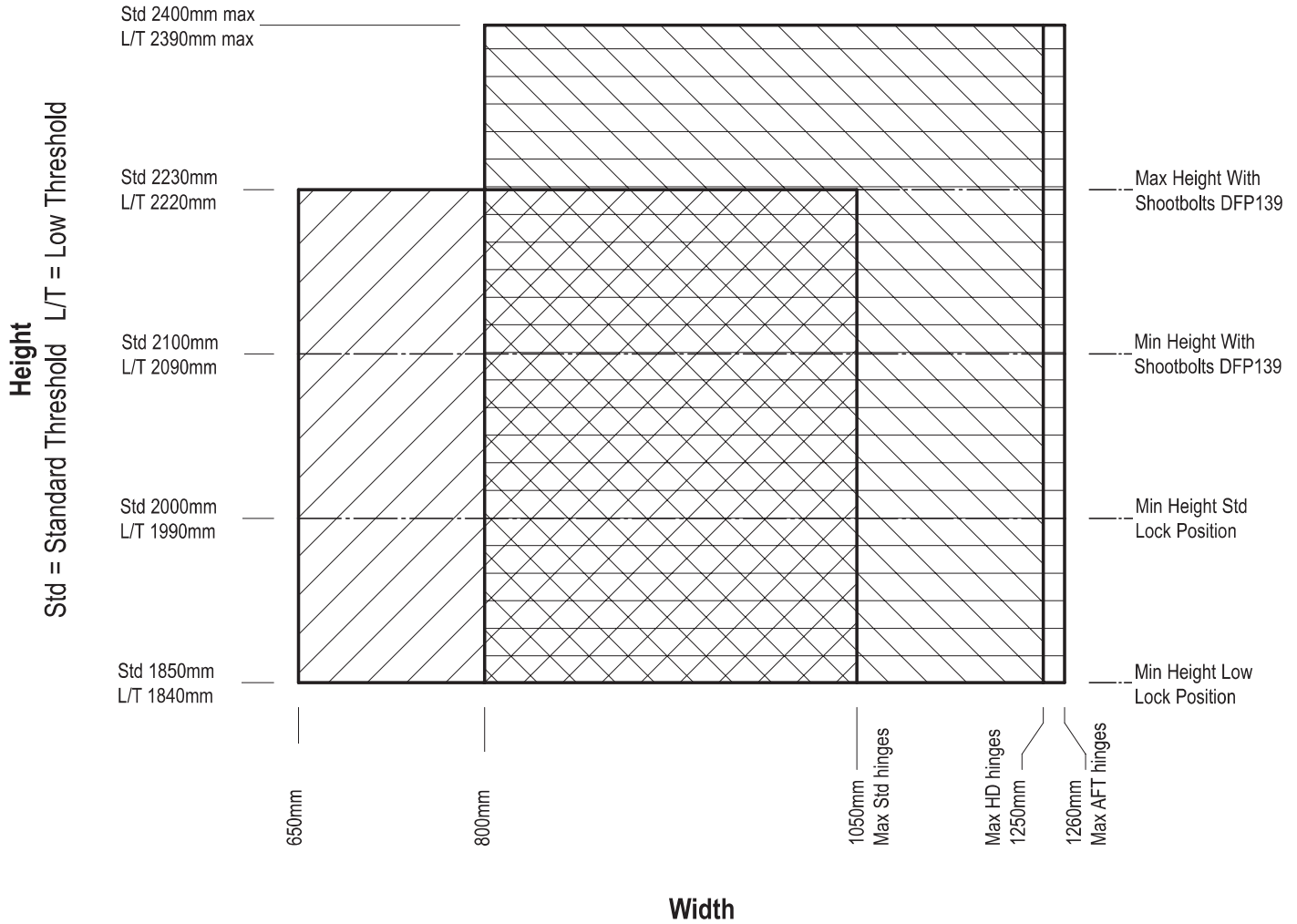
Official Police Security Initiative



PAS 23-1 and
PAS 24-1
Licence No. KM90215

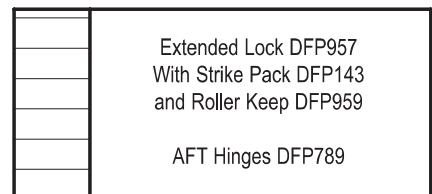
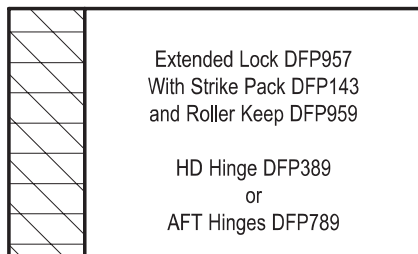
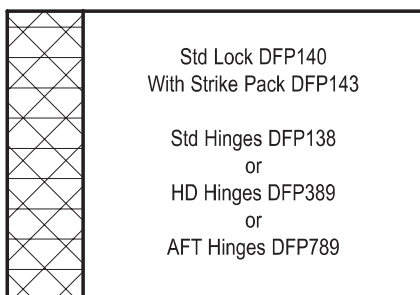
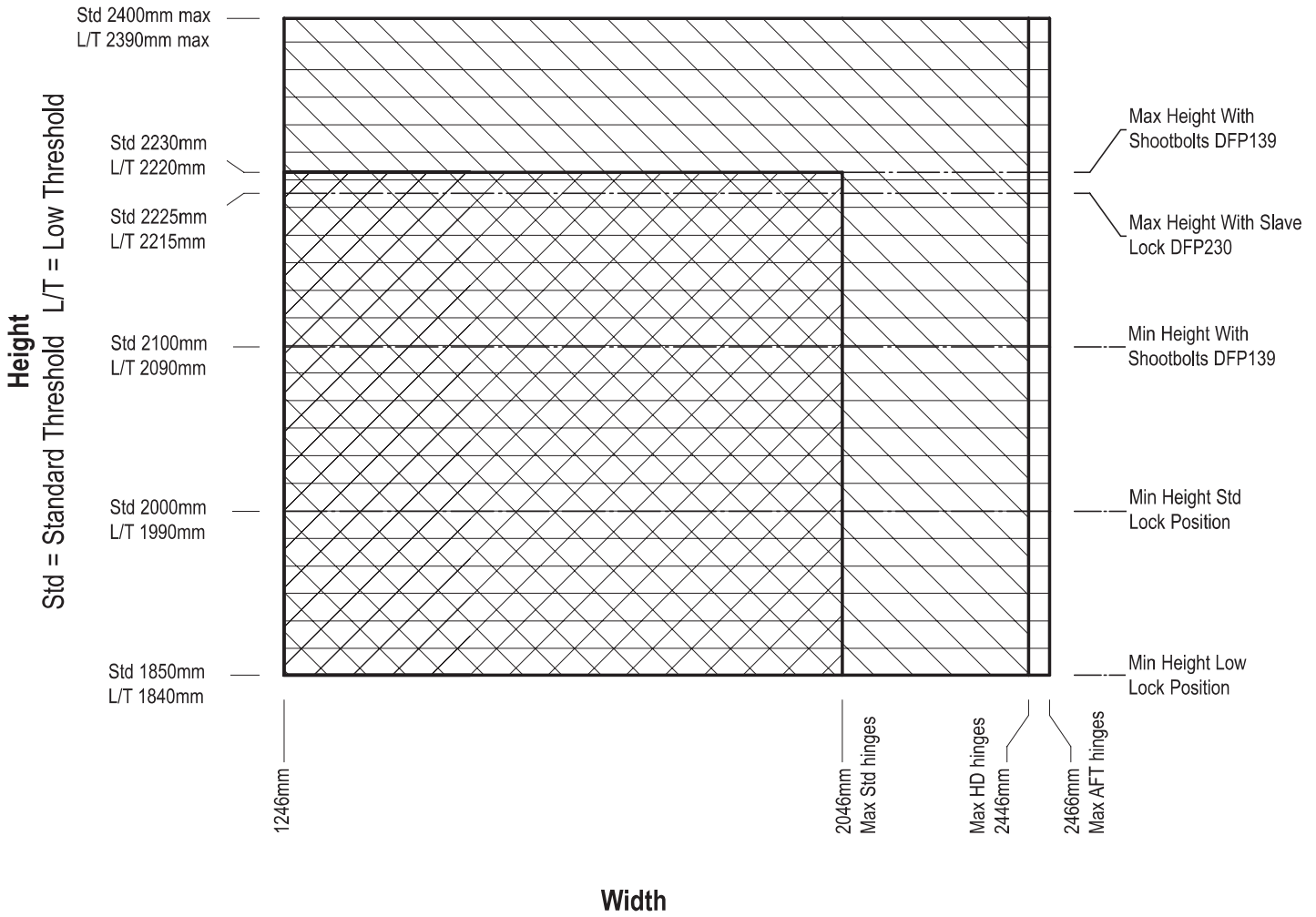
Dualframe Single Door Size to Hardware Relationships

Note: Sizes shown are overall frame



Dualframe Double Door Size to Hardware Relationships

Note: Sizes shown are overall frame

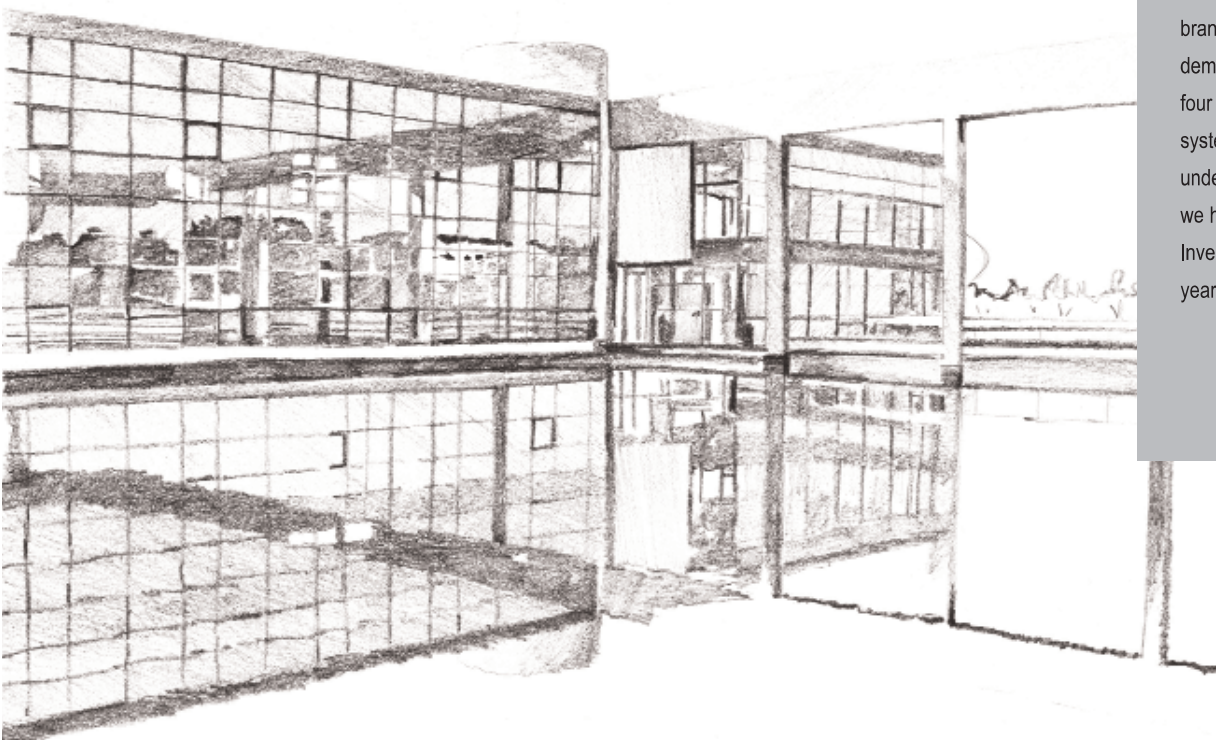


- Our field based Project Consultants, working with our in-house Contracts Design and Administration team, provide UK specifiers with specialist advice concerning the correct application of products, giving guidance on Building Regulations, British Standards and other issues such as product specifications, 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.

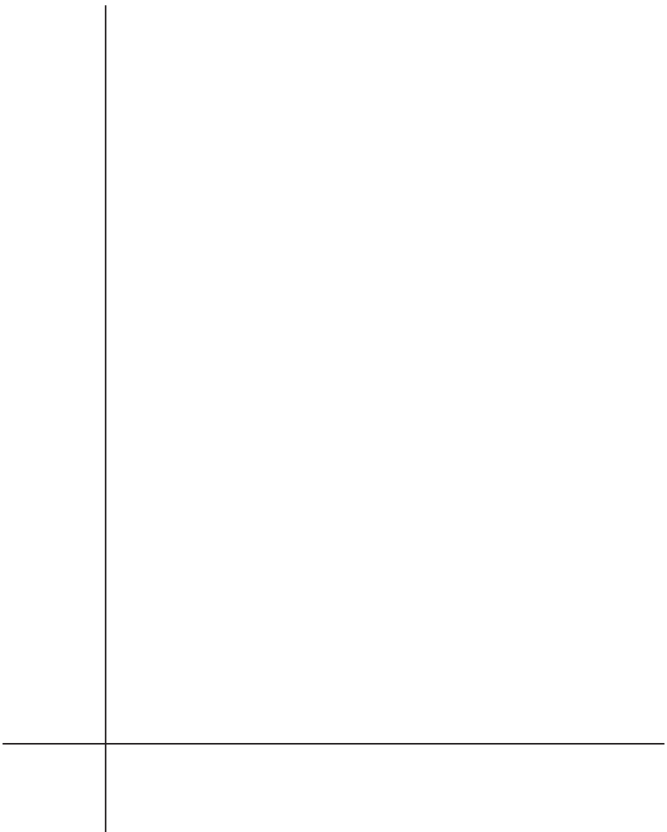
■ Sapa Group

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.



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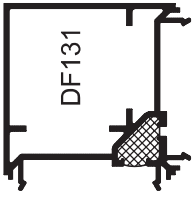










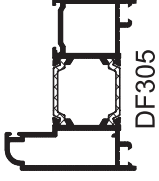


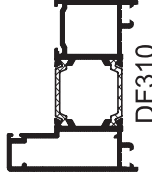


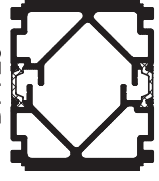


DUALFRAME 75mm HP Entrance Door




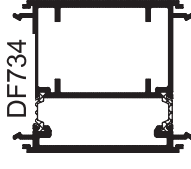


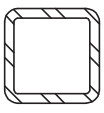





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PROFILE INERTIA VALUES

The information on this page shows the inertia values of baypoles and the coupling mullion. BS6399 Part 2 must be used to calculate the inertia required.

Profile	Inertia
 DF122	 161,075
	 2,930
 DF131	 659,240
	 639,861
 DF138	 338,423
	 115,967

Profile	Inertia
 DF139	 283,774
	 55,080
 DF305	 222,833
	 67,130
 DF310	 227,945
	 70,307
 DF729	 738,637
	 412,253

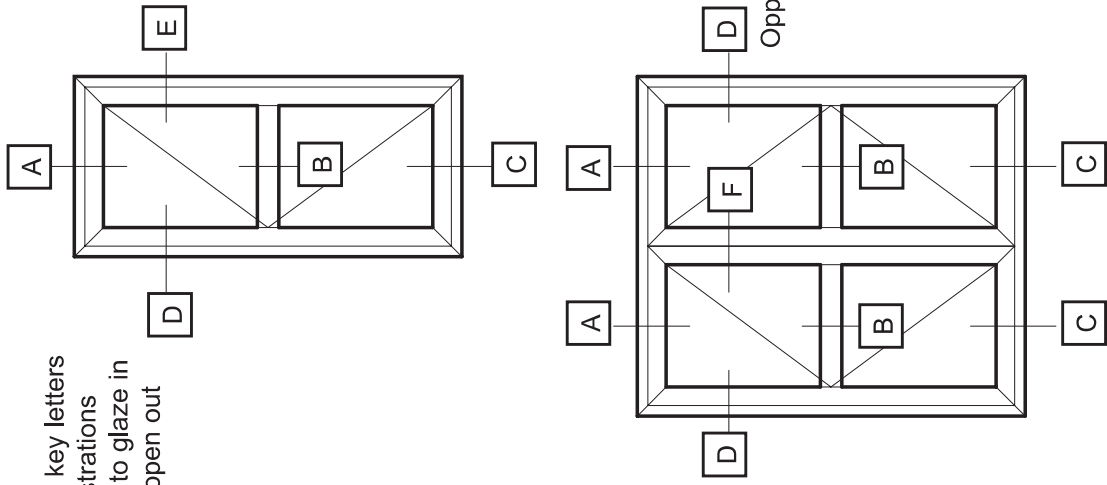
Profile	Inertia
 DF730	 411,283
	 69,661
 DF734	 651,786
	 608,189
50 x 50 x 5 Steel  Not by Sapa	 947,200 (Aluminium basis)
	 947,200 (Aluminium basis)
40 x 40 x 3.2 Steel  Not by Sapa	 333,435 (Aluminium basis)
	 333,435 (Aluminium basis)

Detail	Page	Detail	Page
A	13	J	35
B	14	K	36
C	15	L	37
C	16	M	38
C	17	G	39
C	18	H	40
D	19	J	41
E	20	J	42
F	21	K	43
A	22	L	44
B	23	M	45
C	24		46
C	25		47
D	26		48
E	27		49
F	28		50
G	29		51
H	30		52
J	31		53
J	32		54
J	33		55
J	34		
		Open Out Glaze Out Door Drainage Tray	
		Open Out Glaze Out Door Hinge Jamb	
		Open Out Glaze Out Door Lock Jamb	
		Open Out Glaze Out Door Meeting Stile	
		Open In Glaze Out Door Head	
		Open In Glaze Out Door Midrail	
		Open In Glaze Out Door Cill	
		Open In Glaze Out Low Threshold	
		Open In Glaze Out Door Hinge Jamb	
		Open In Glaze Out Door Lock Jamb	
		Open In Glaze Out Door Meeting Stile	
		90° External Corner Post	
		90° Internal Corner Post	
		135° Baypole	
		150° Baypole	
		24mm Glazing Bead Options	
		28mm Glazing Bead Options	
		Trickle Vent With Open In & Open Out Door	
		50mm In-Line Heavy Duty Post	
		25mm Heavy Duty Coupler	
		75mm In-Line Post	

DUALFRAME 75mm HP Entrance Door

GENERAL ARRANGEMENTS

Note that the key letters on these illustrations are common to glaze in open in and open out doors

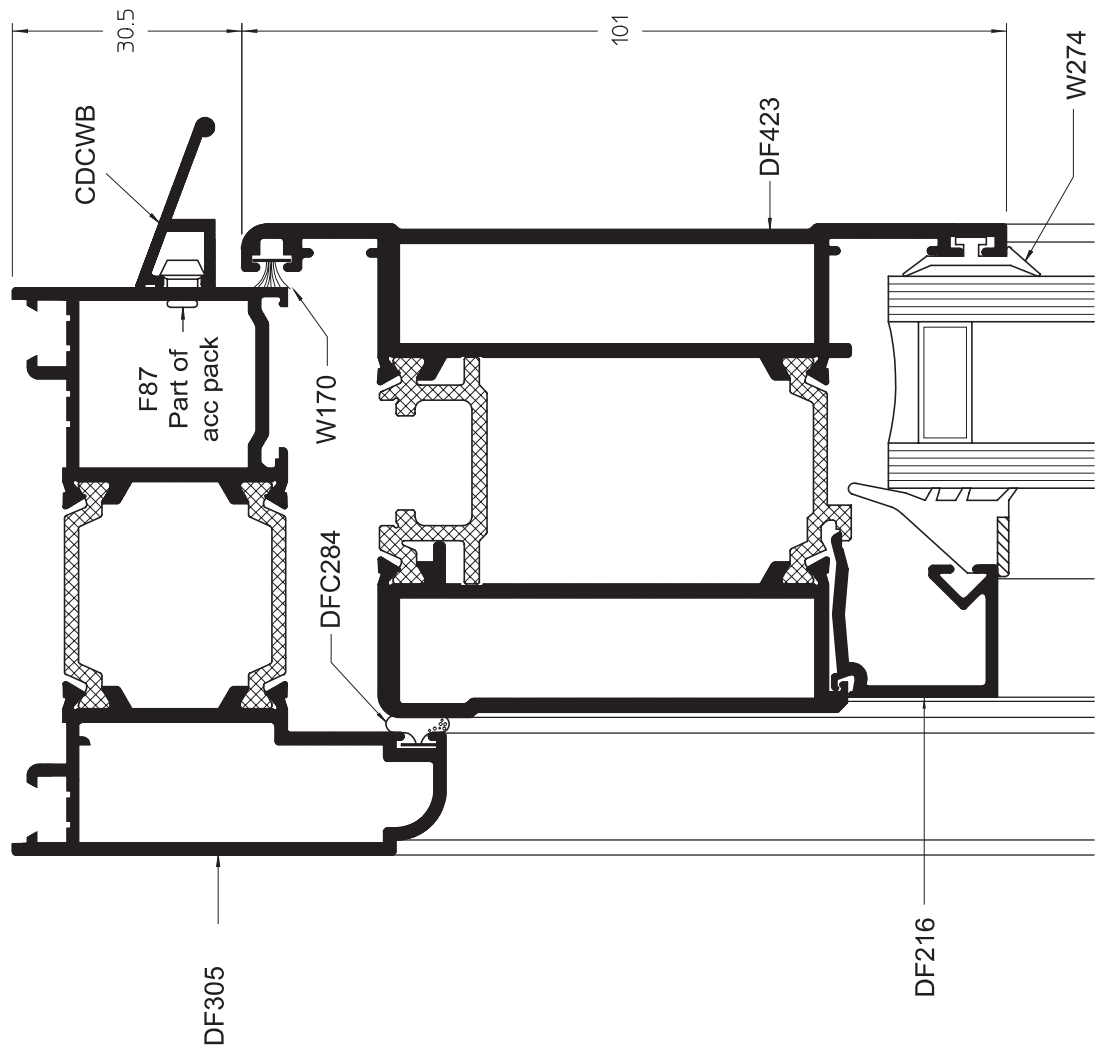


These drawings illustrate a number of the available profile combinations. Other combinations are available please consult Sapa Building Systems for further details.

GENERAL ARRANGEMENT

A **Open Out
Glaze In
Door Head**

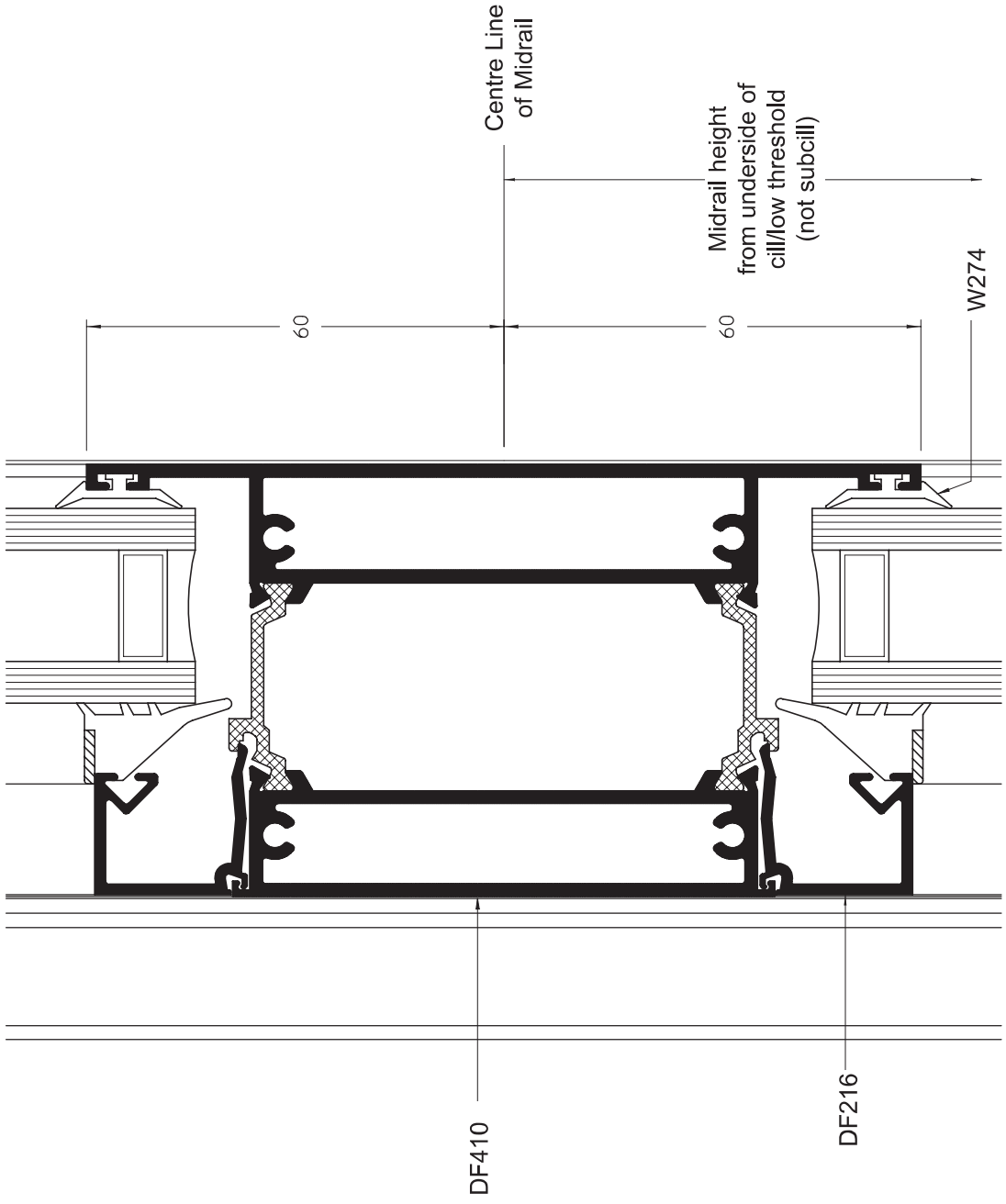
Outerframe Options:-
DF305 Softline (shown)
or DF310 Square



DUALFRAME 75mm HP Entrance Door

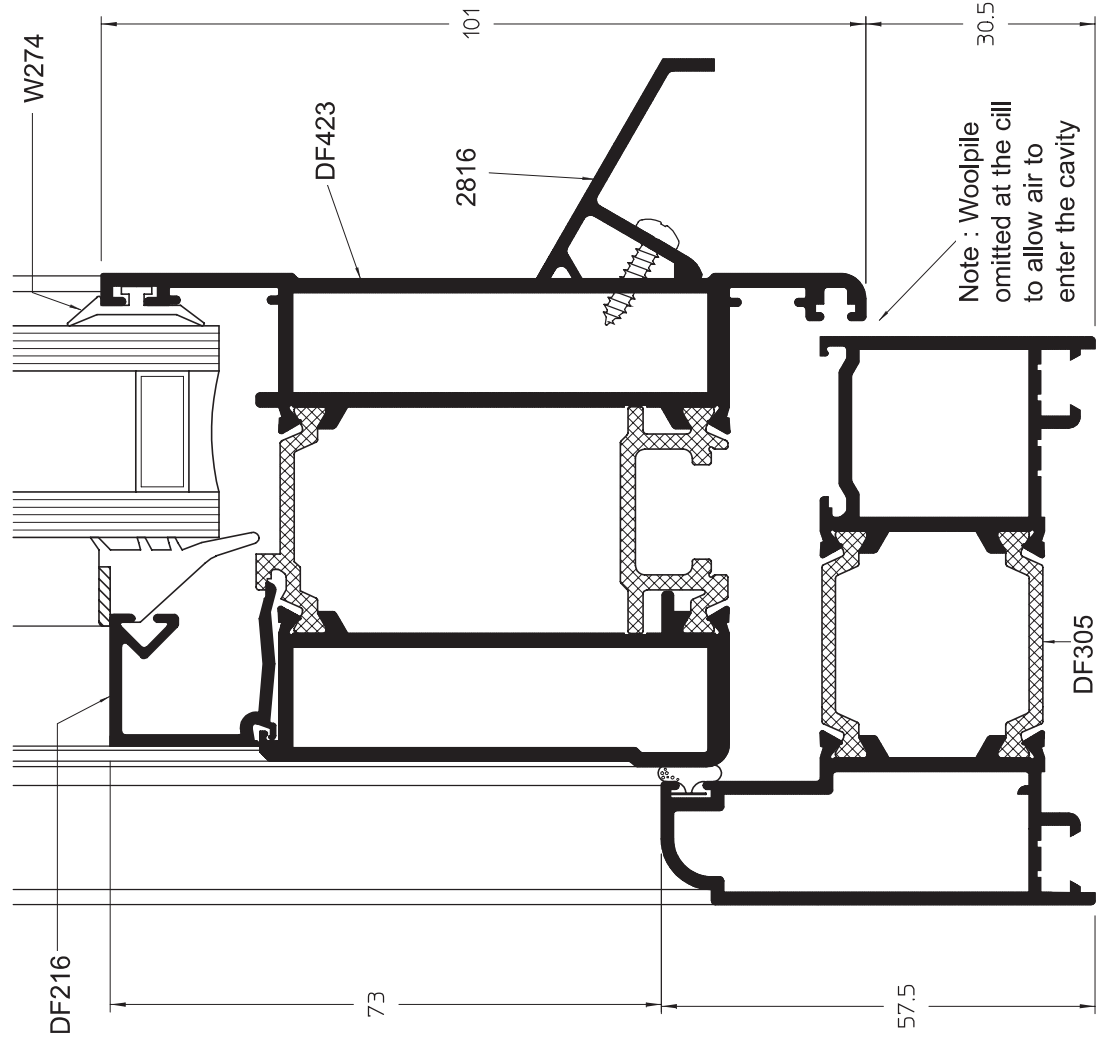
GENERAL ARRANGEMENTS

B Open Out
Glaze In
Door Midrail



C **Open Out
Glaze In
Door Cill**

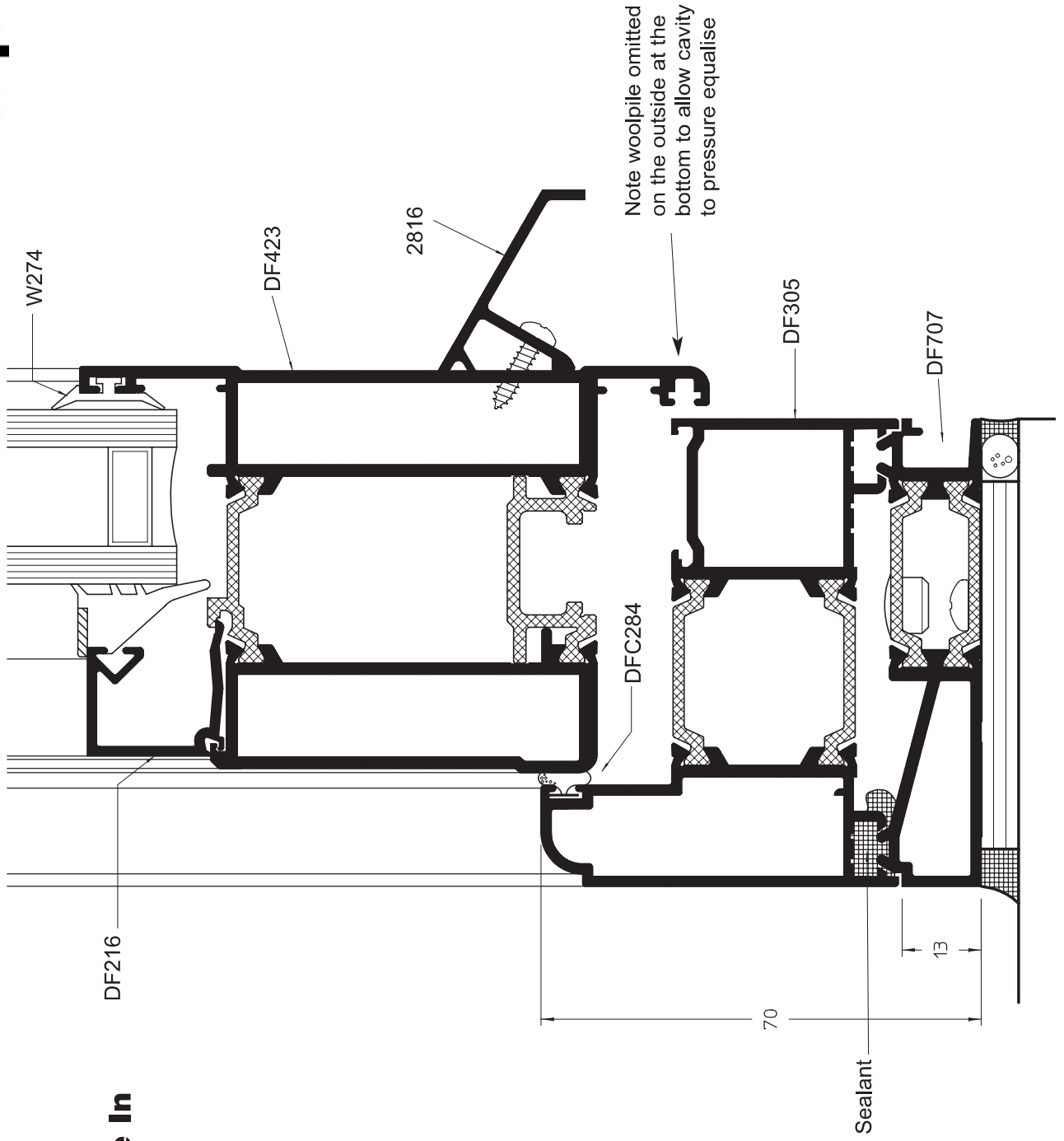
Outerframe Options:-
DF305 Softline (shown)
or DF310 Square



DUALFRAME 75mm HP Entrance Door

GENERAL ARRANGEMENTS

C **Open Out Glaze In**
Low Threshold



Note drainage tray can be used in the same orientation with open in doors

DUALFRAME

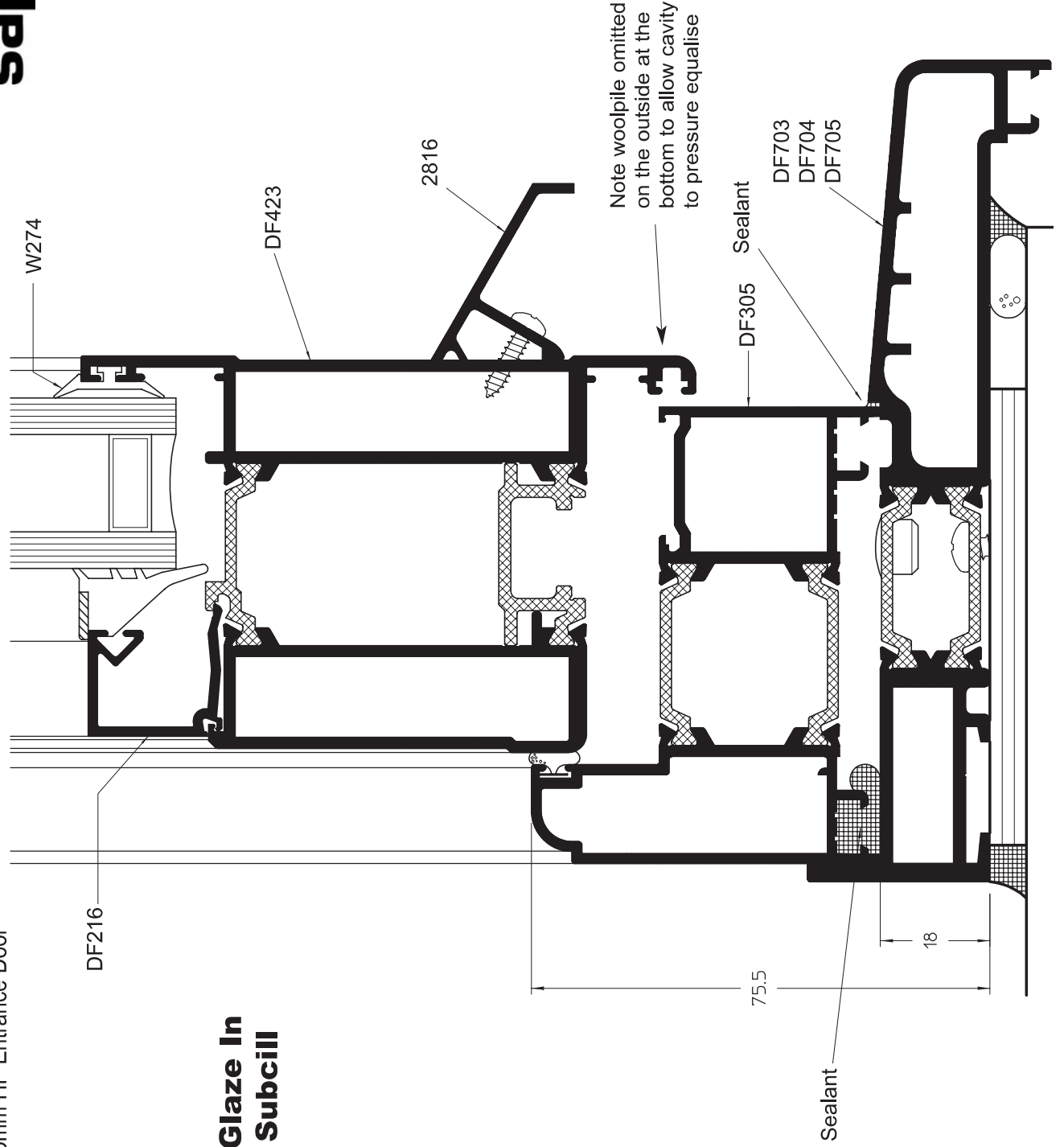
75mm HP Entrance Door

GENERAL ARRANGEMENT

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C **Open Out Glaze In Door With Subcill**

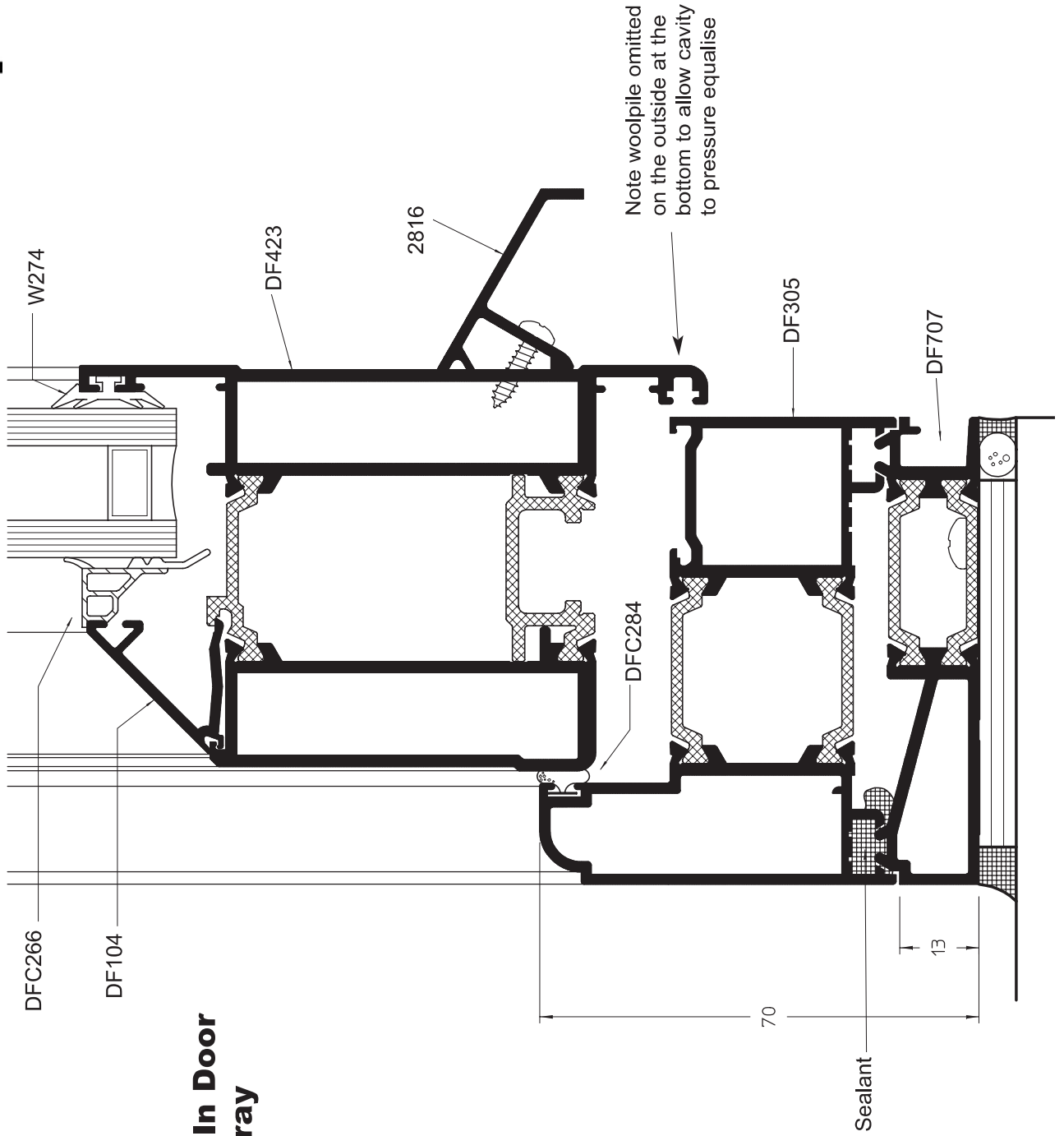
Outerframe Options:-
DF305 Softline (shown)
or DF310 Square



DUALFRAME 75mm HP Entrance Door

GENERAL ARRANGEMENTS

C **Open Out Glaze In Door With Drainage Tray**



Outerframe Options:-
DF305 Softline (shown)
or DF310 Square

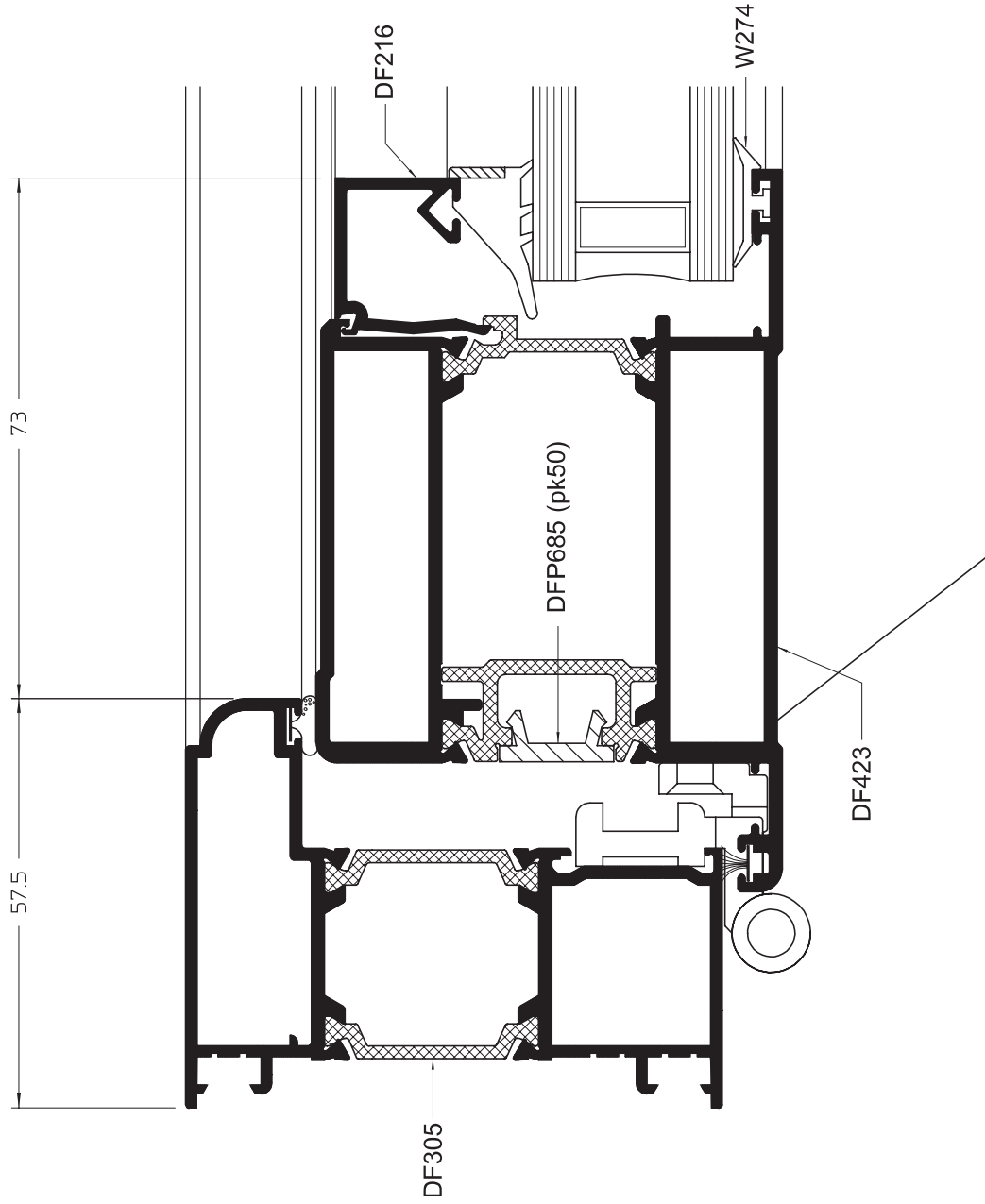
Note drainage tray can be used in the same orientation with open in doors

GENERAL ARRANGEMENT



Open Out Glaze In Hinge Jamb

Outerframe Options:-
DF305 Softline (shown)
or DF310 Square

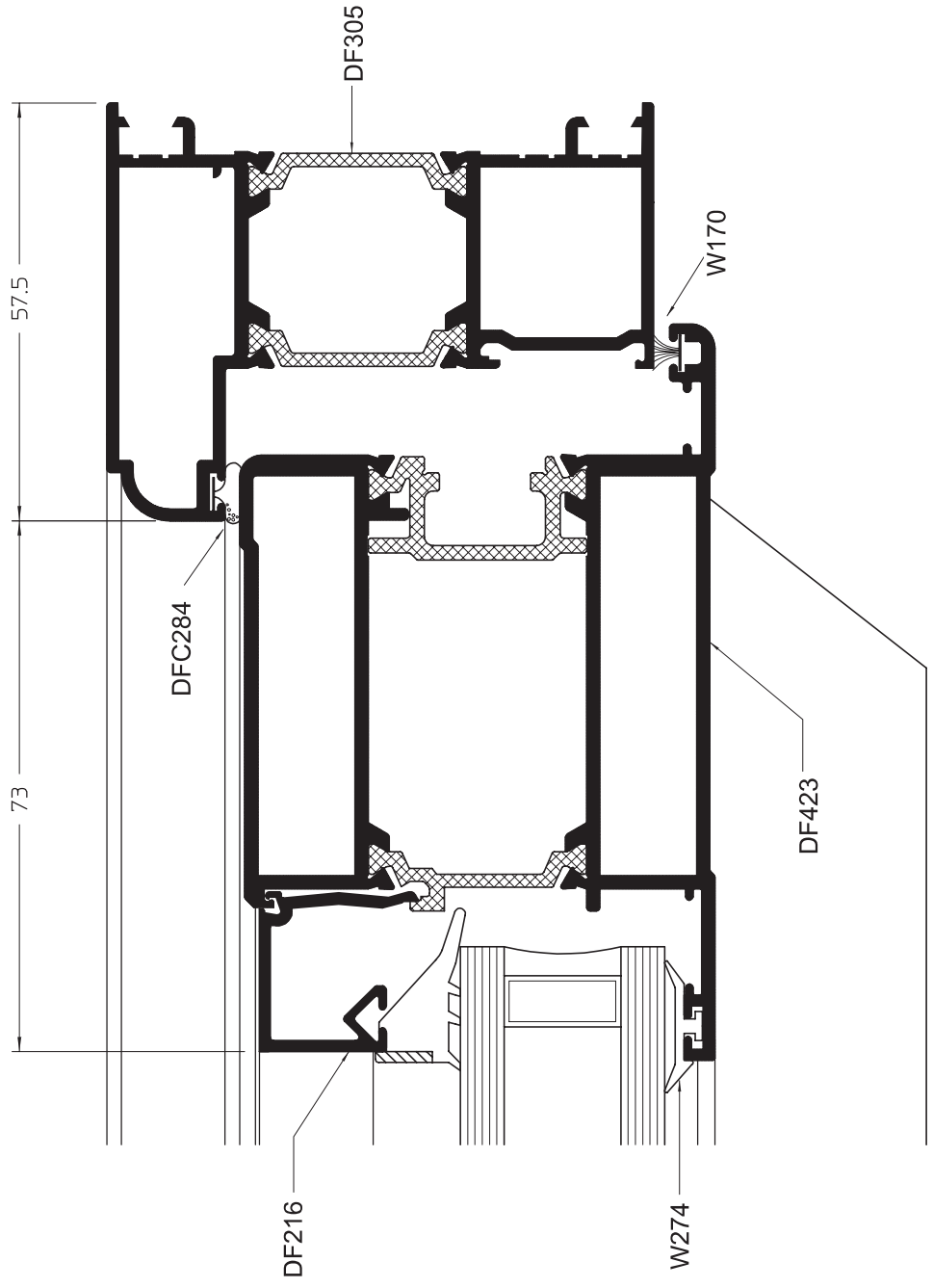


DUALFRAME 75mm HP Entrance Door

GENERAL ARRANGEMENTS

E Open Out Glaze In
Lock Jamb

Outerframe Options:-
DF305 Softline (shown)
or DF310 Square


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DUALFRAME

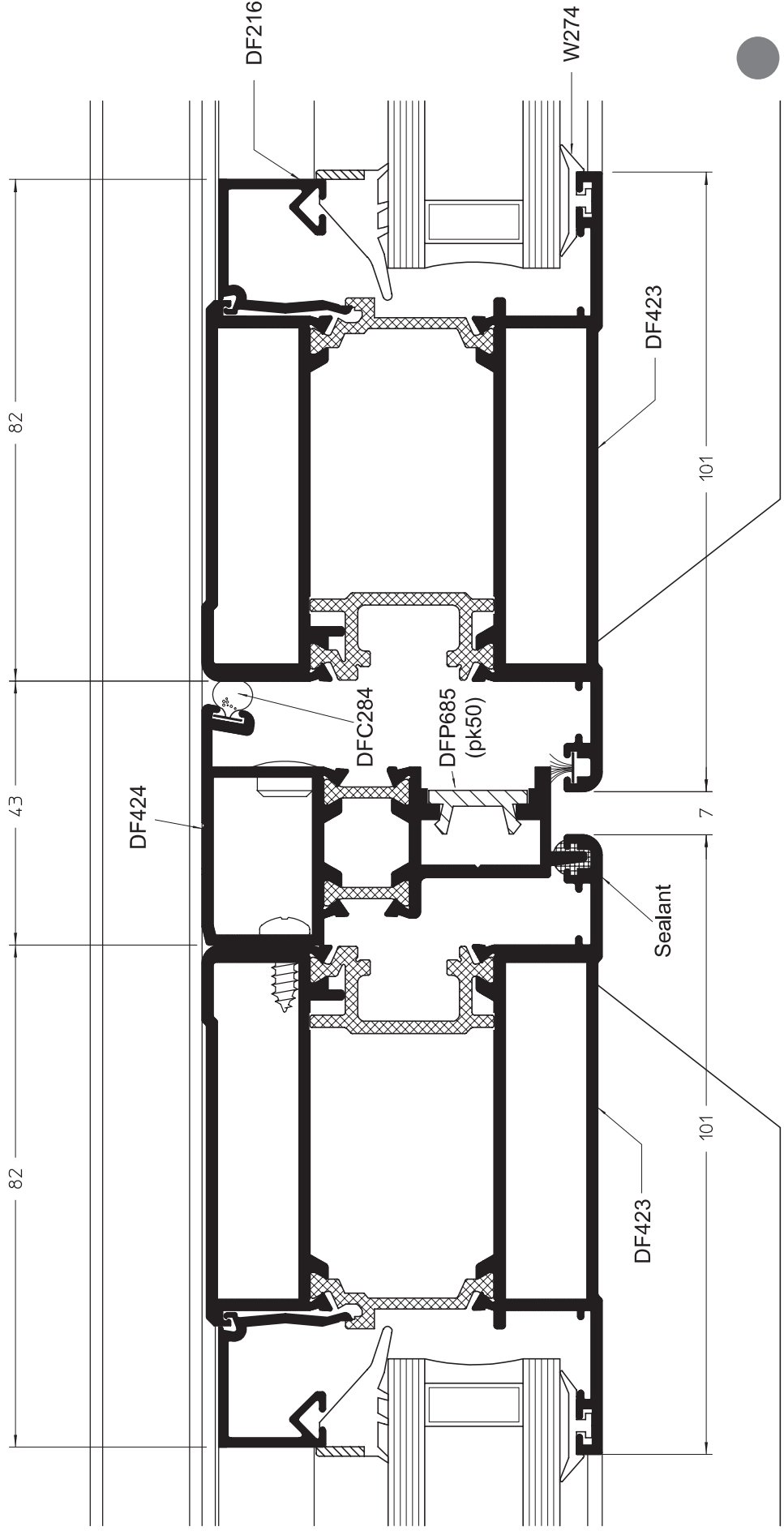
75mm HP Entrance Door

GENERAL ARRANGEMENT

F

Open Out Glaze In Door Meeting Stiles (RH Master)

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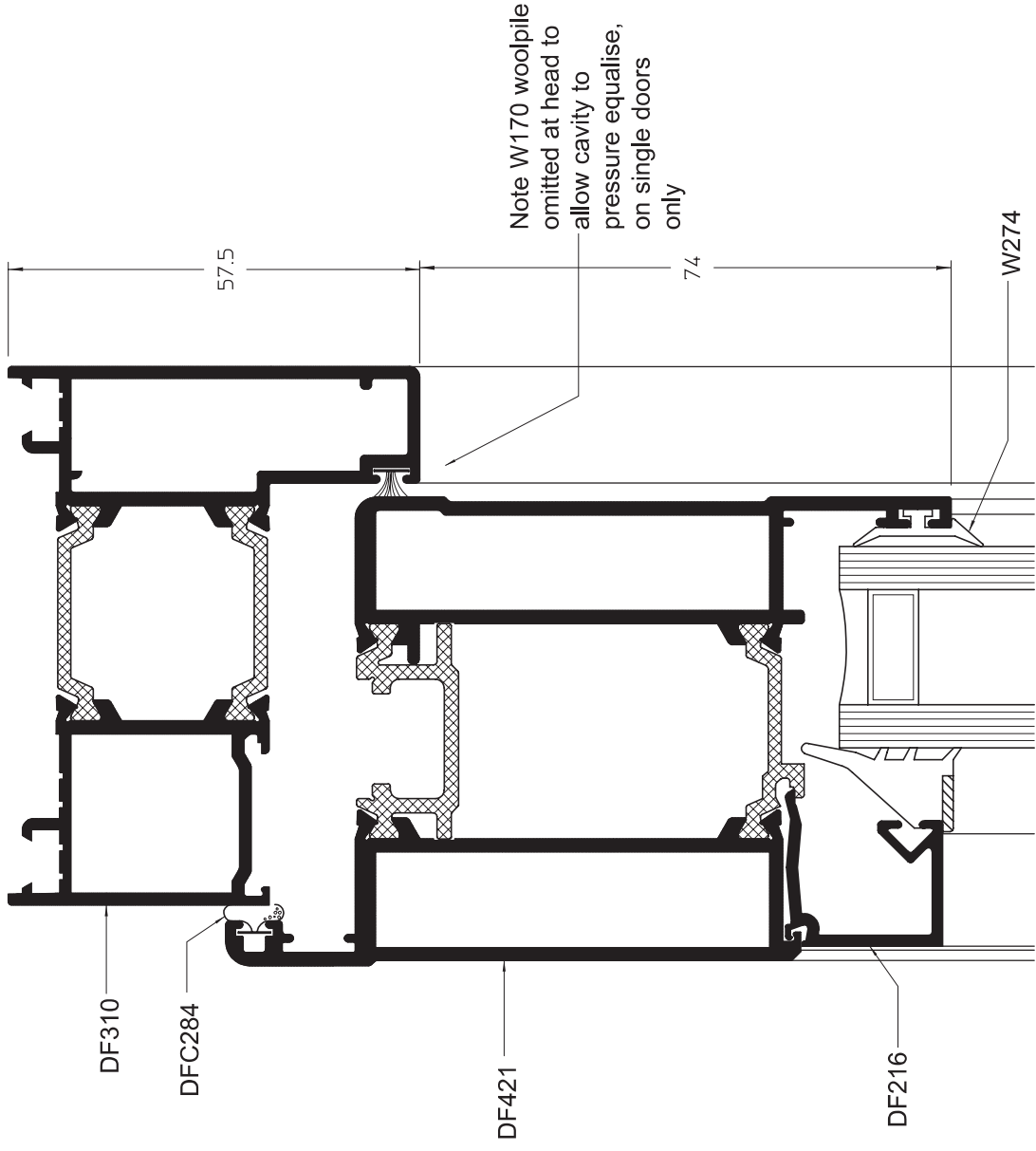


DUALFRAME 75mm HP Entrance Door

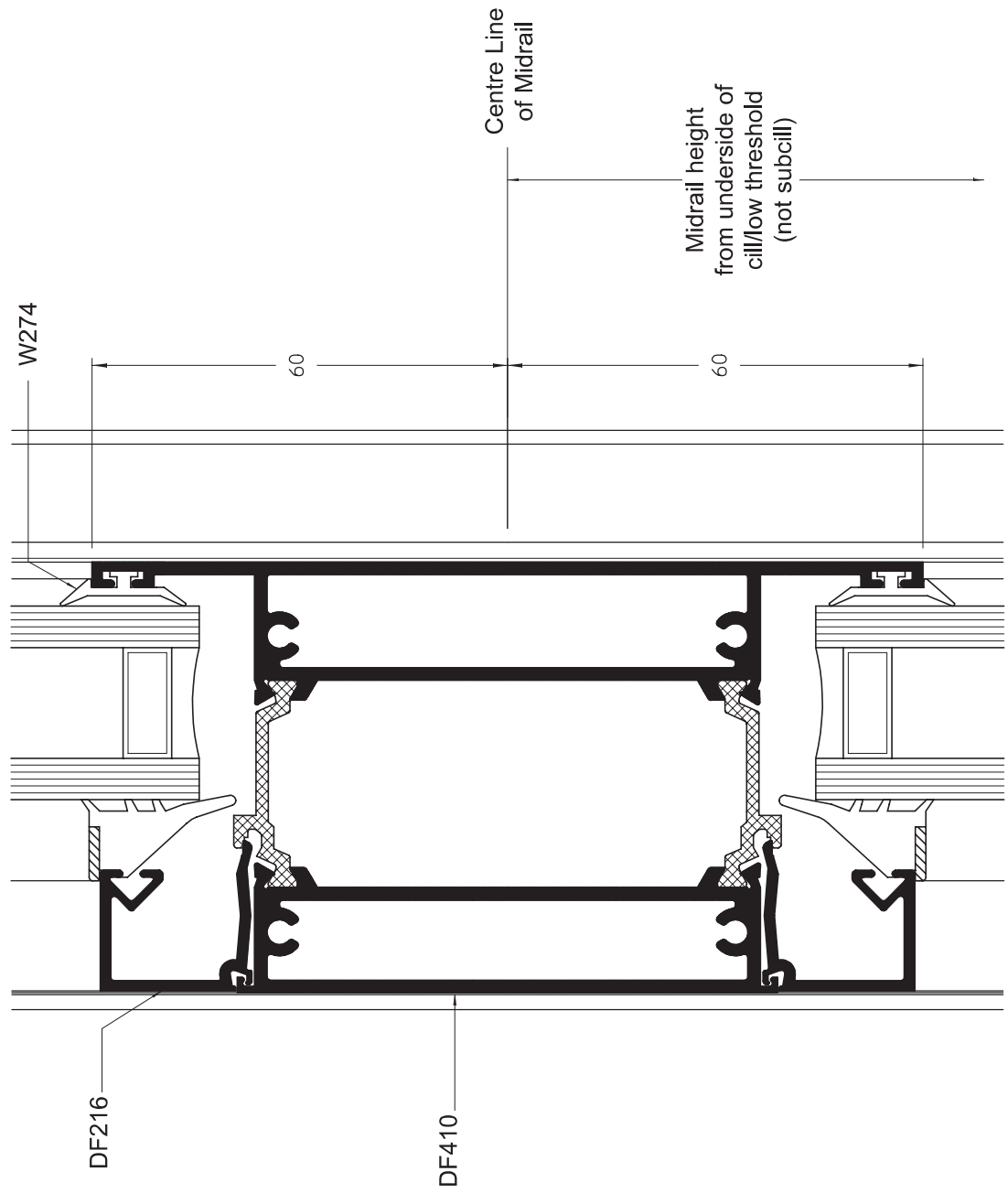
GENERAL ARRANGEMENTS

A **Open In Glaze In Door Head**

Outerframe Options:-
DF305 Softline (shown)
or DF310 Square



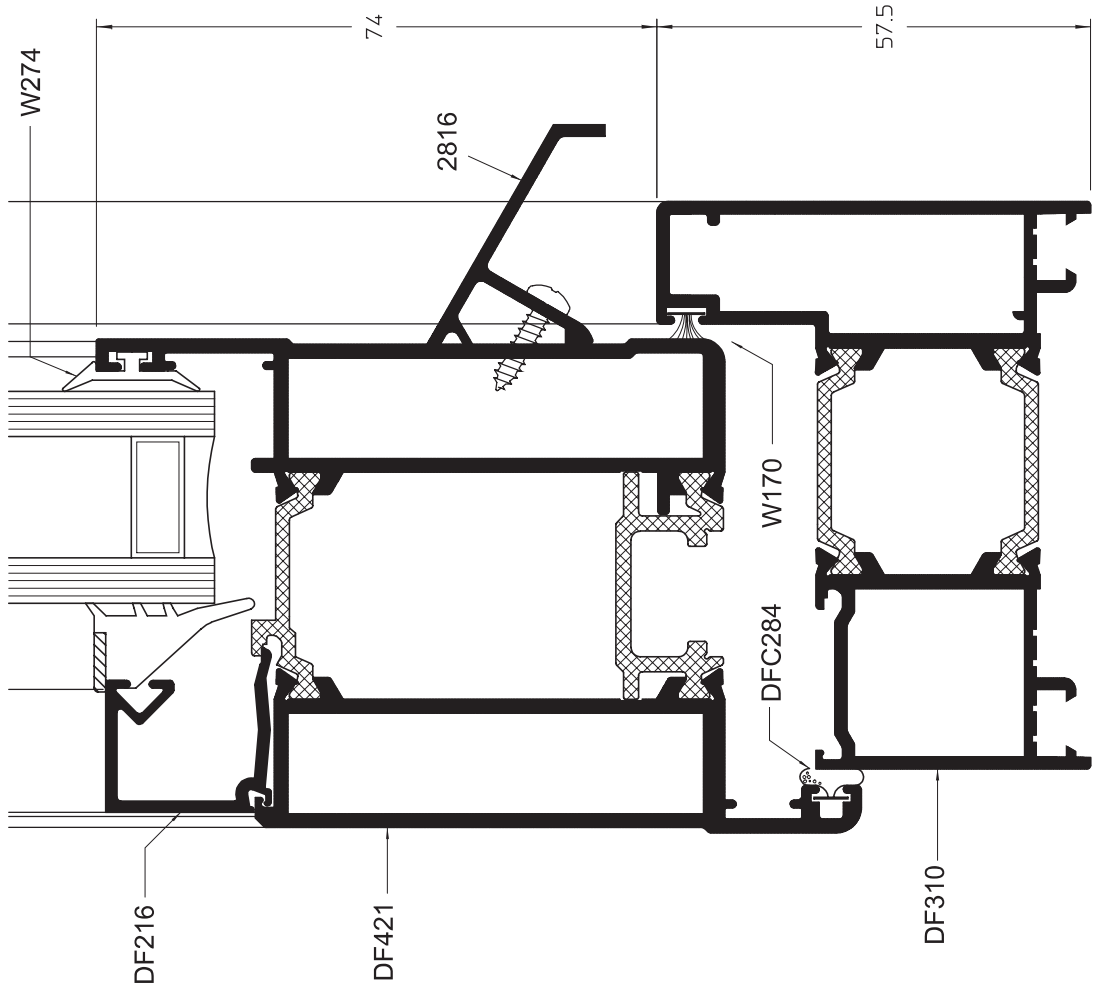
B **Open In Glaze In Door Midrail**



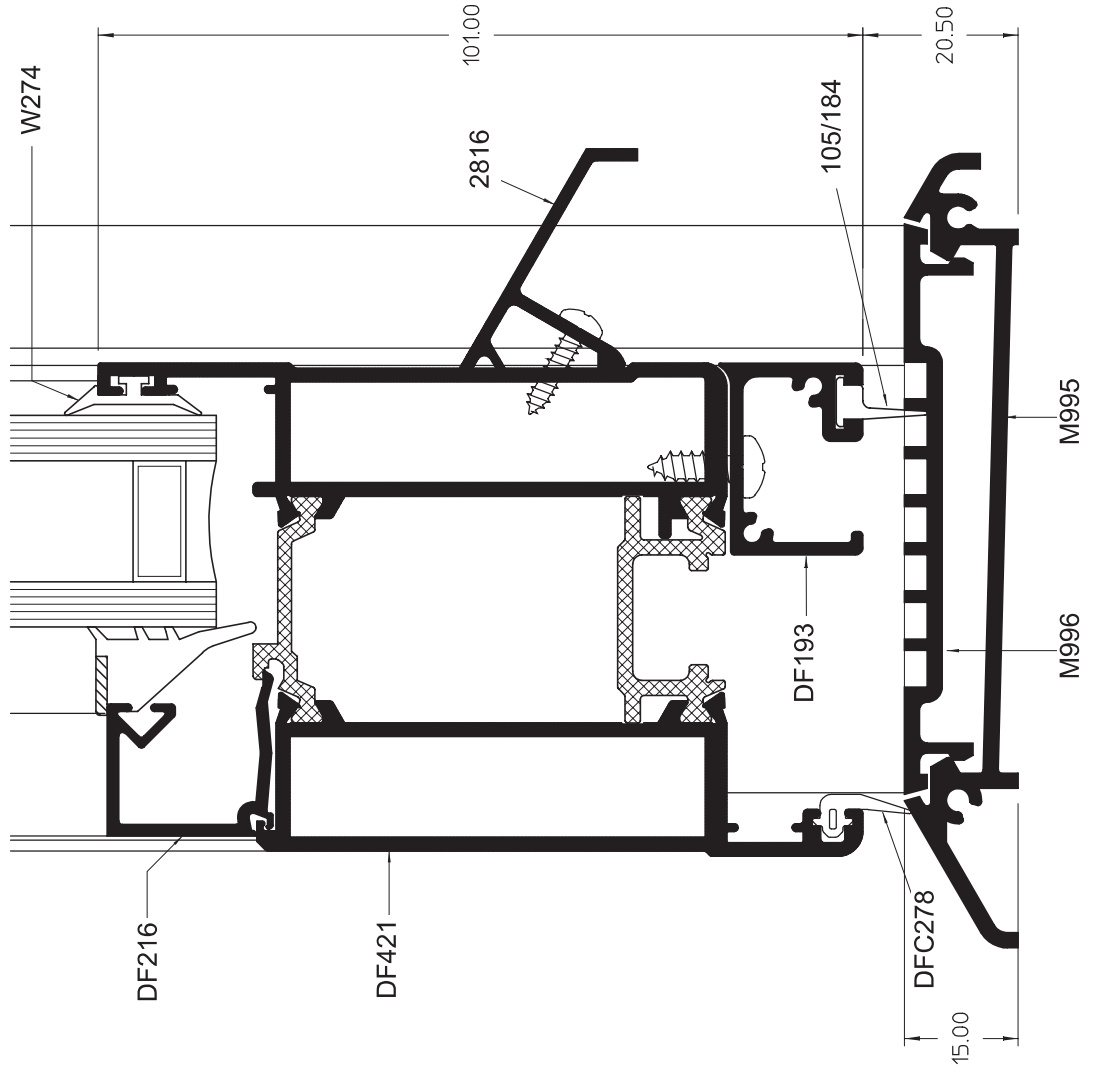
GENERAL ARRANGEMENTS

C Open In Glaze In Door Cill

Outerframe Options:-
DF305 Softline (shown)
or DF310 Square



C Open In Glaze In Low Threshold

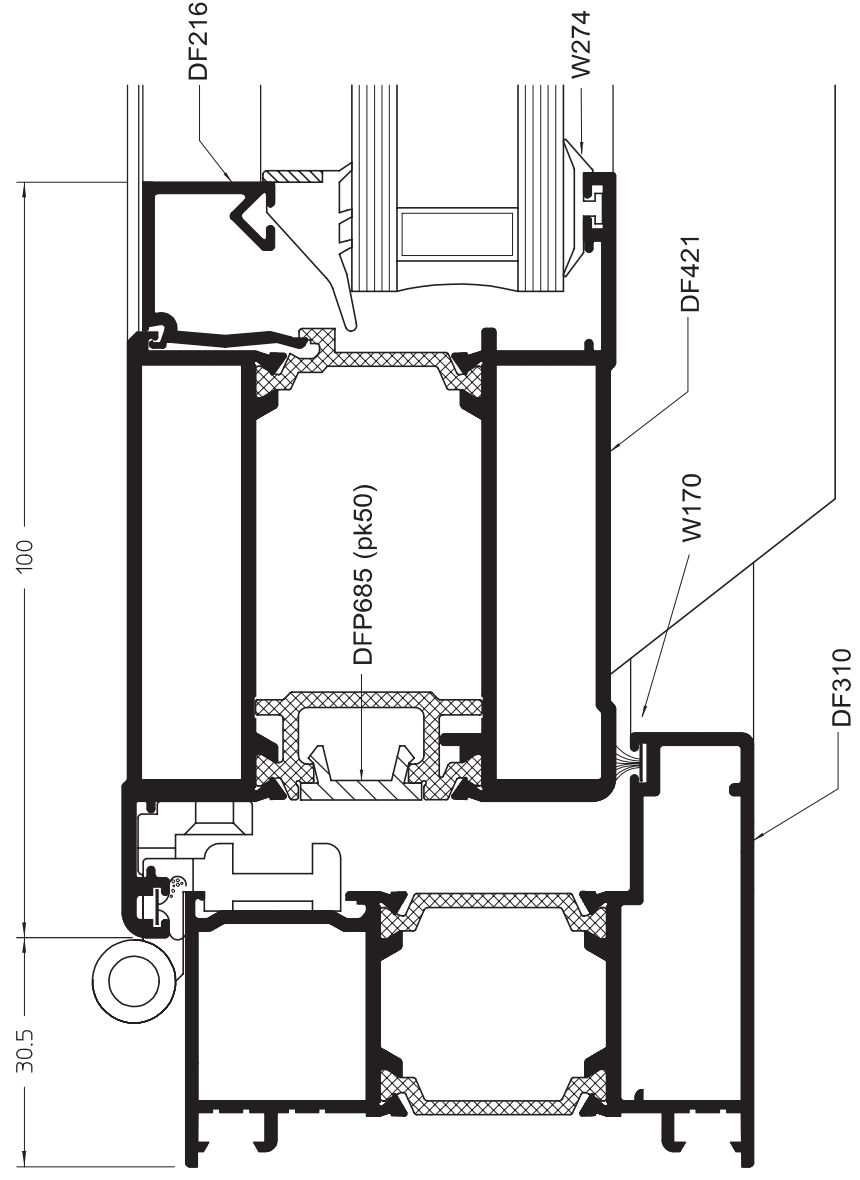


DUALFRAME 75mm HP Entrance Door

GENERAL ARRANGEMENTS

D **Open In Glaze In
Door Hinge Jamb**

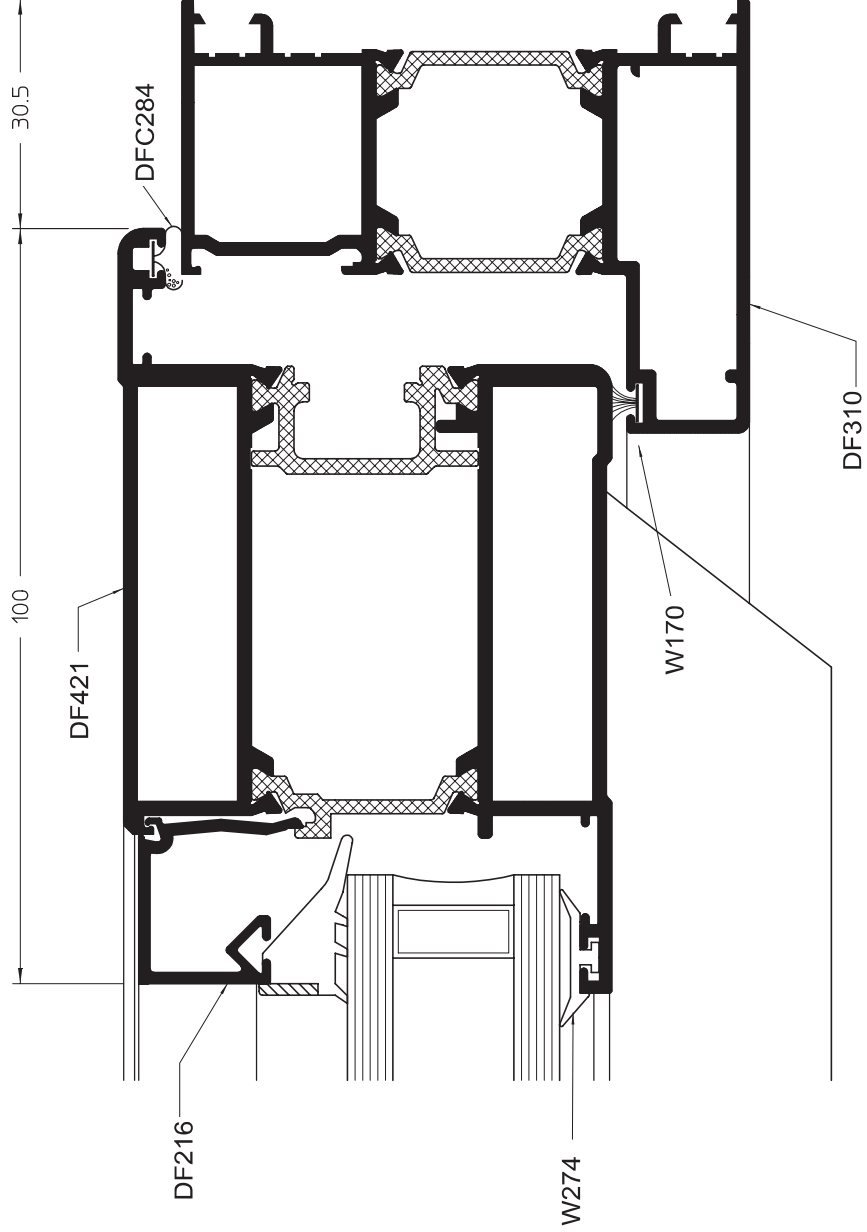
Outerframe Options:-
DF305 Softline (shown)
or DF310 Square



GENERAL ARRANGEMENT

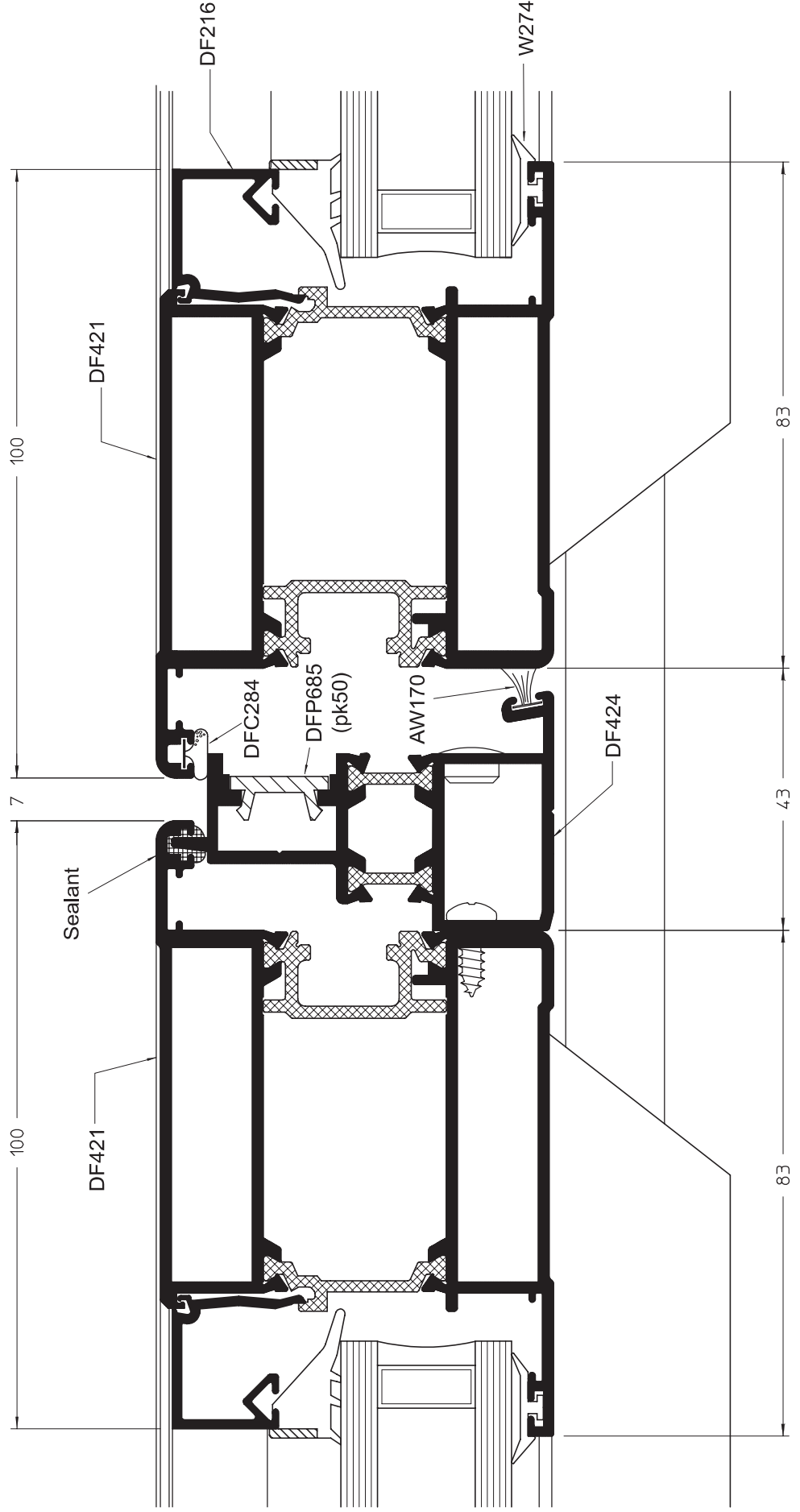
E Open In Glaze In Door Lock Jamb

Outerframe Options:-
DF305 Softline (shown)
or DF310 Square



GENERAL ARRANGEMENTS

F **Open In Glaze In Door Meeting Stile (RH Master)**



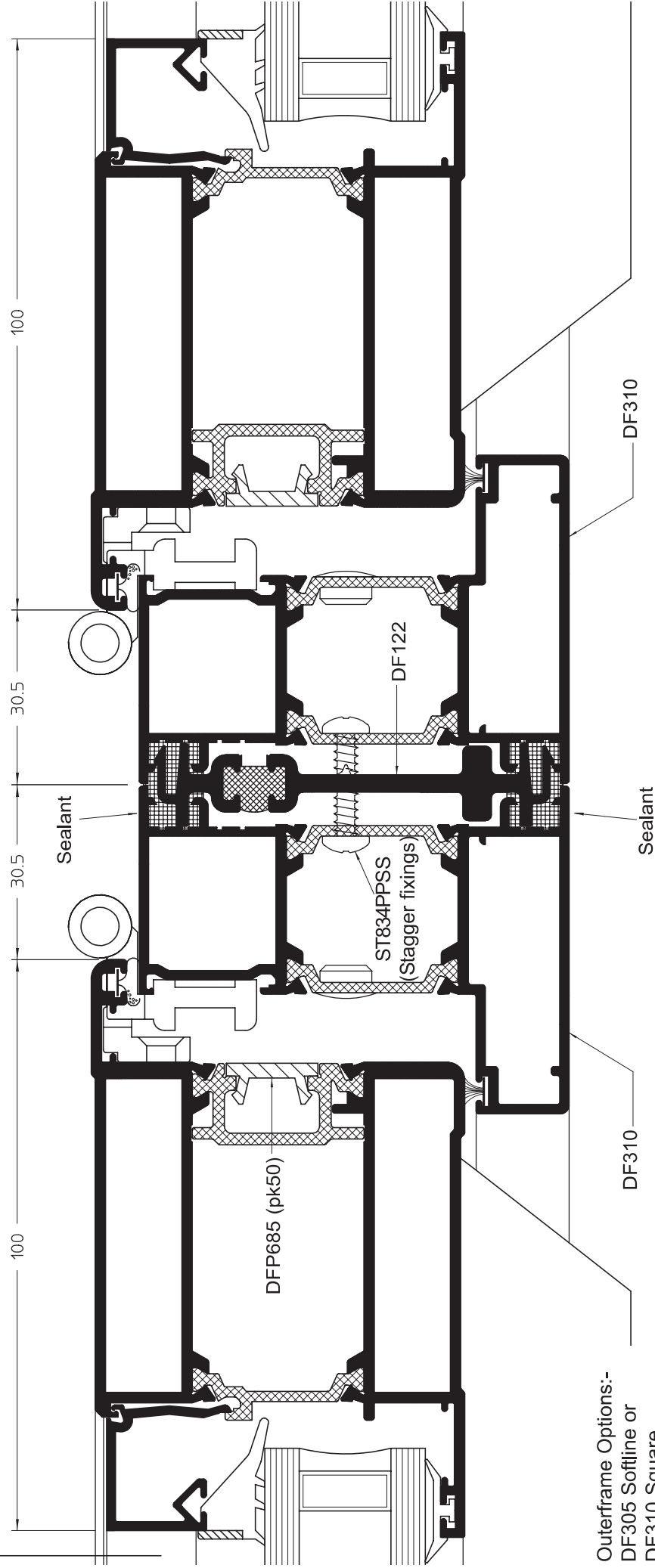
DUALFRAME

75mm HP Entrance Door

sapa:

GENERAL ARRANGEMENT

**Concealed Coupling
Open In Glaze In**

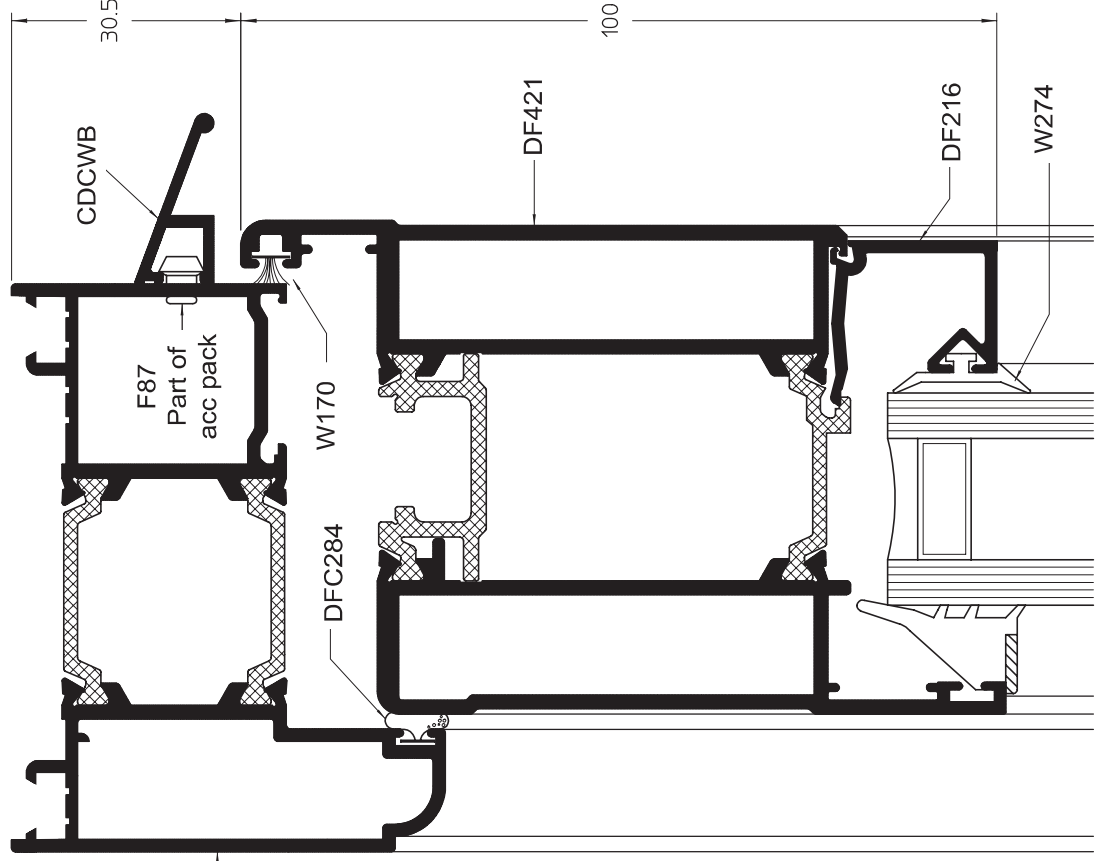


Outerframe Options:-
DF305 Softline or
DF310 Square

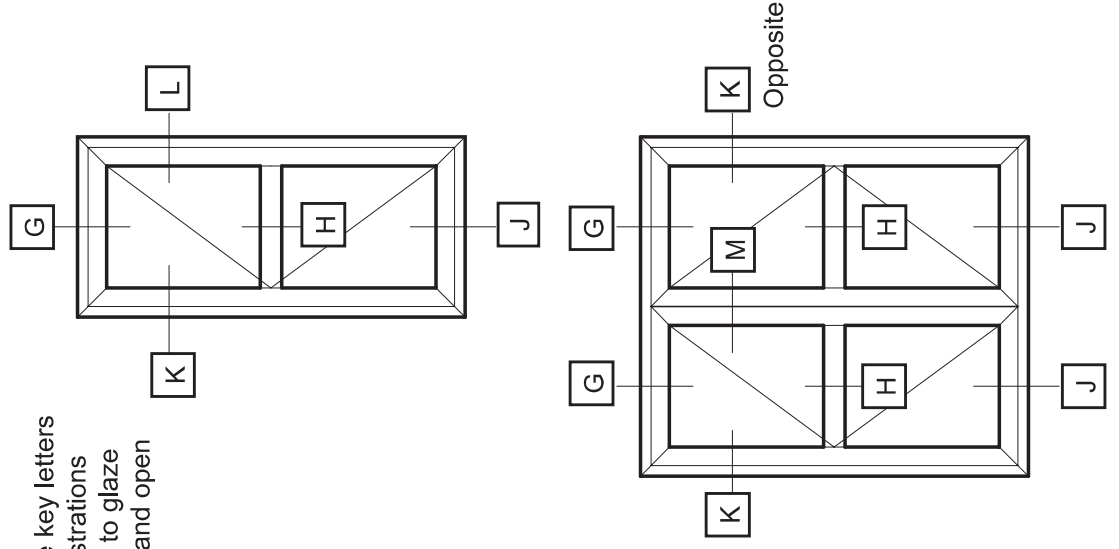
GENERAL ARRANGEMENTS

G **Open Out Glaze Out Door Head**

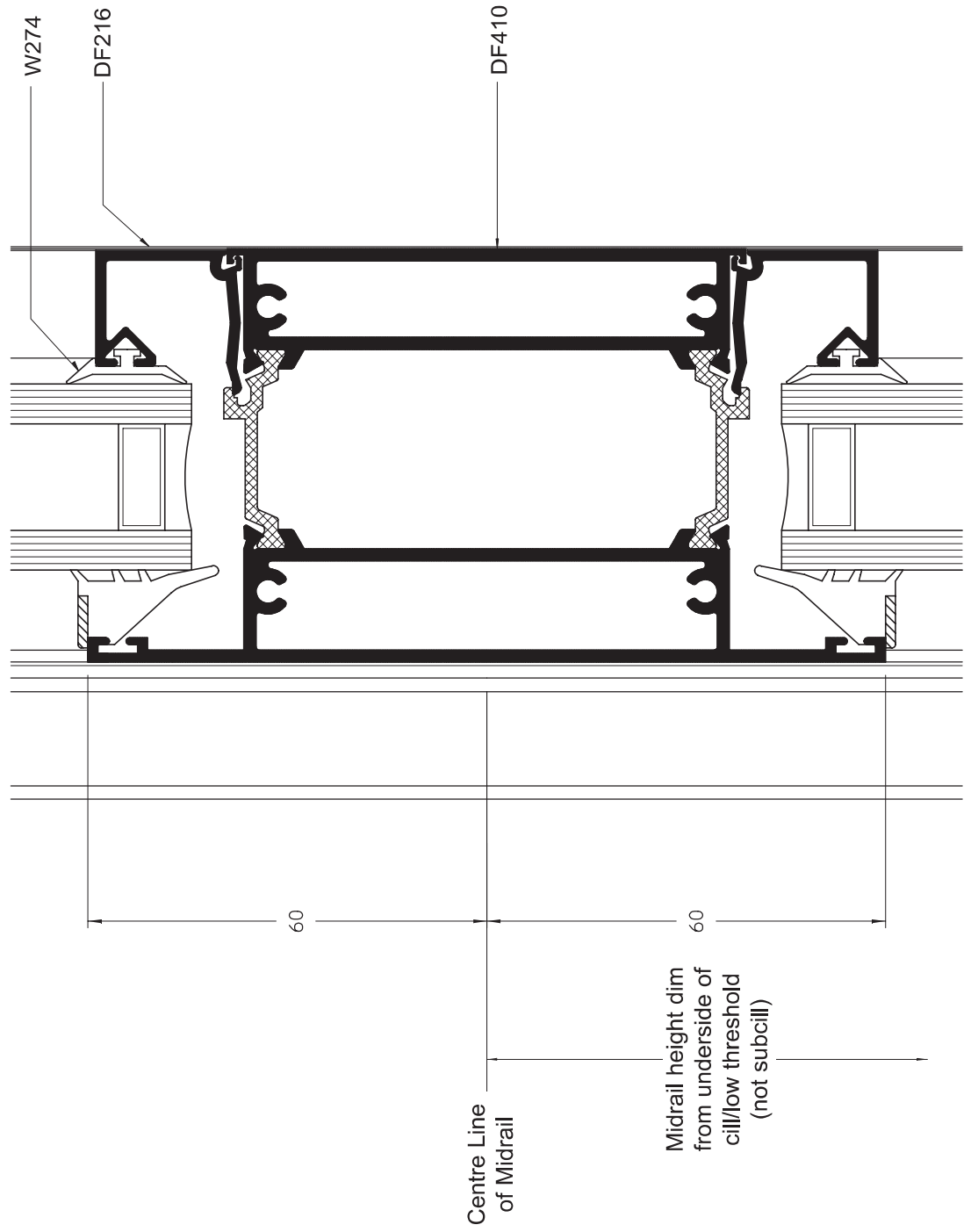
Outerframe Options:-
DF305 Softline (shown)
or DF310 Square



Note that the key letters on these illustrations are common to glaze out, open in and open out doors



H Open Out Glaze Out Door Midrail

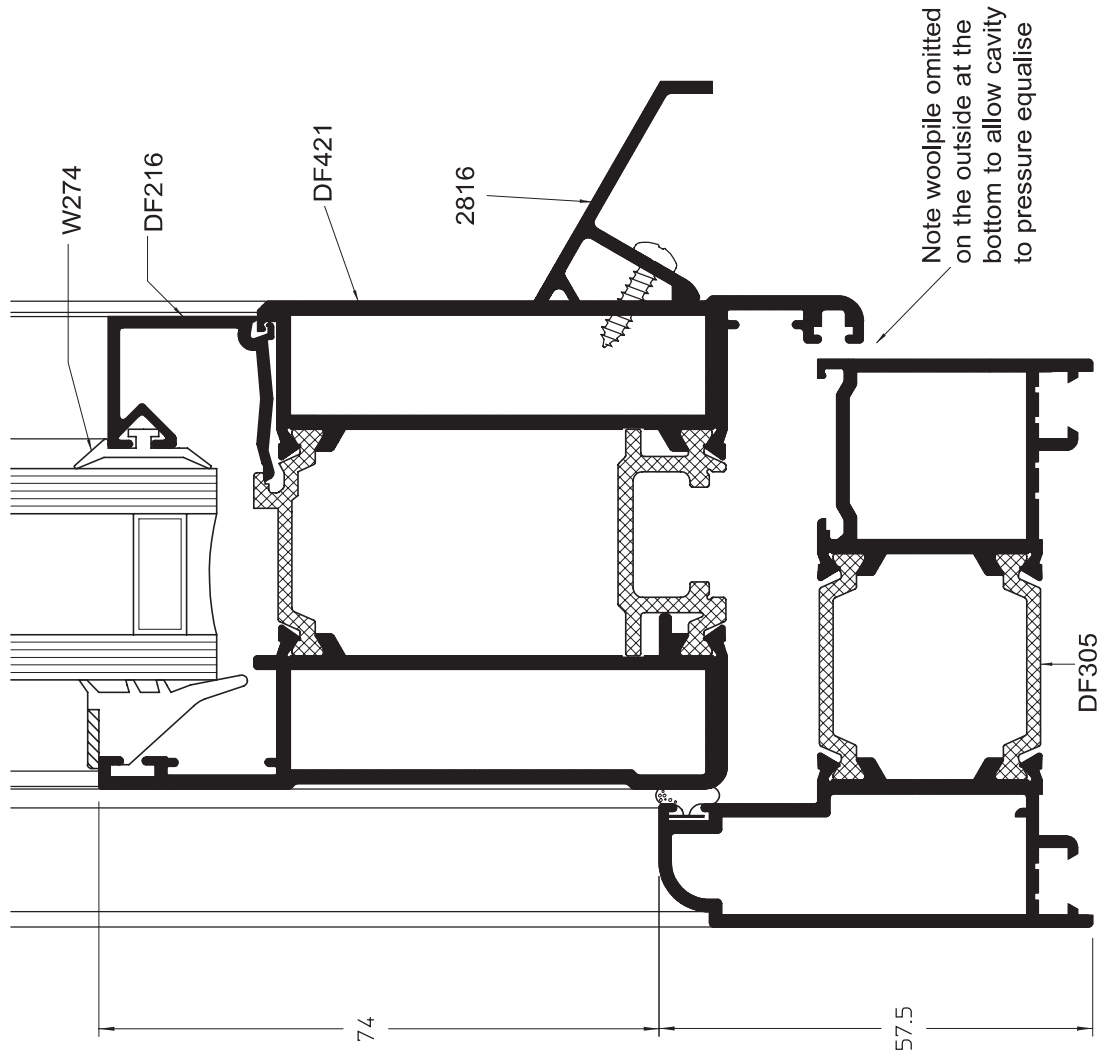


DUALFRAME 75mm HP Entrance Door

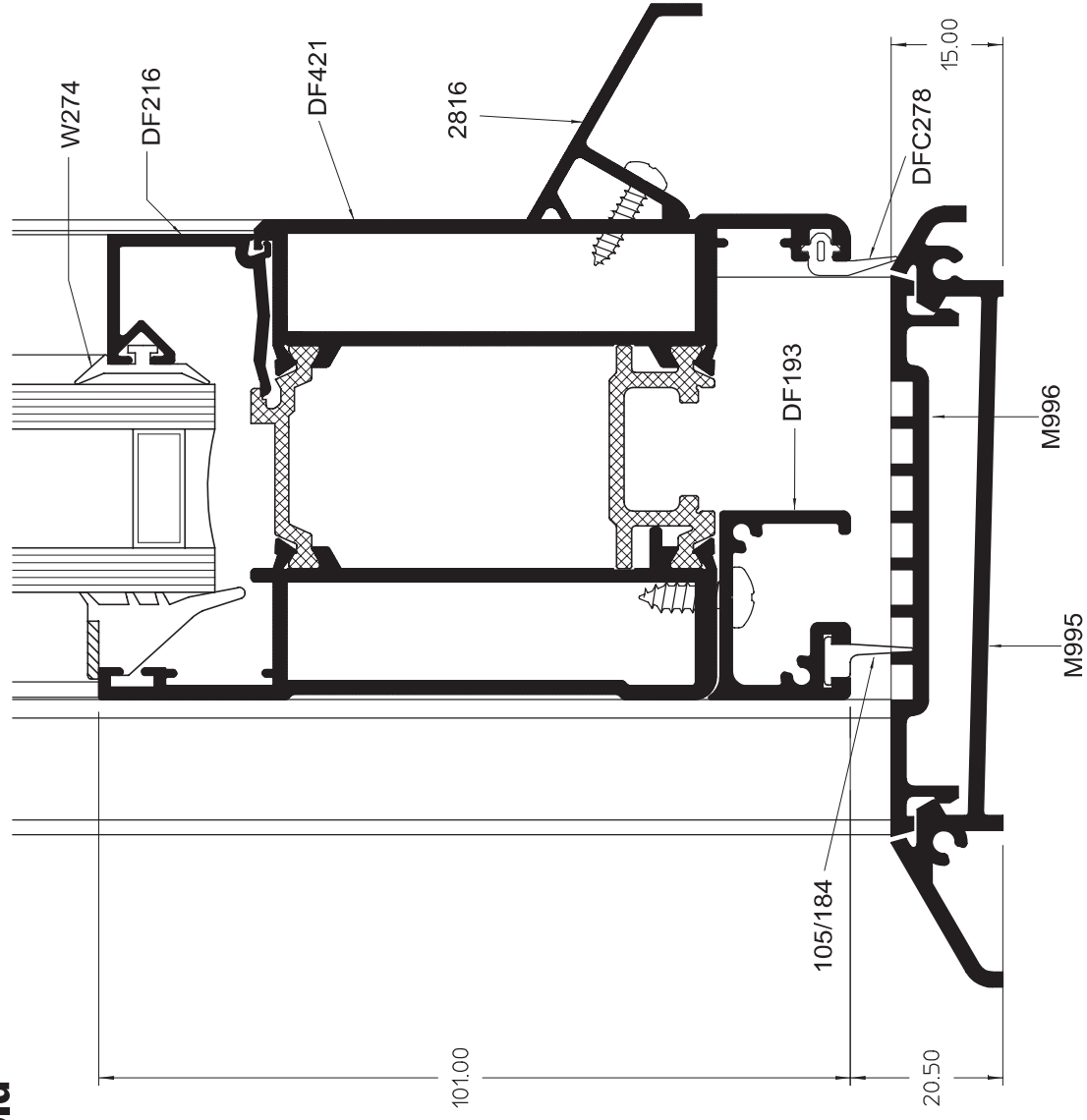
GENERAL ARRANGEMENTS

J **Open Out Glaze
Out Door Cill**

Outerframe Options:-
DF305 Softline (shown)
or DF310 Square



J **Open Out Glaze Out
Low Threshold**

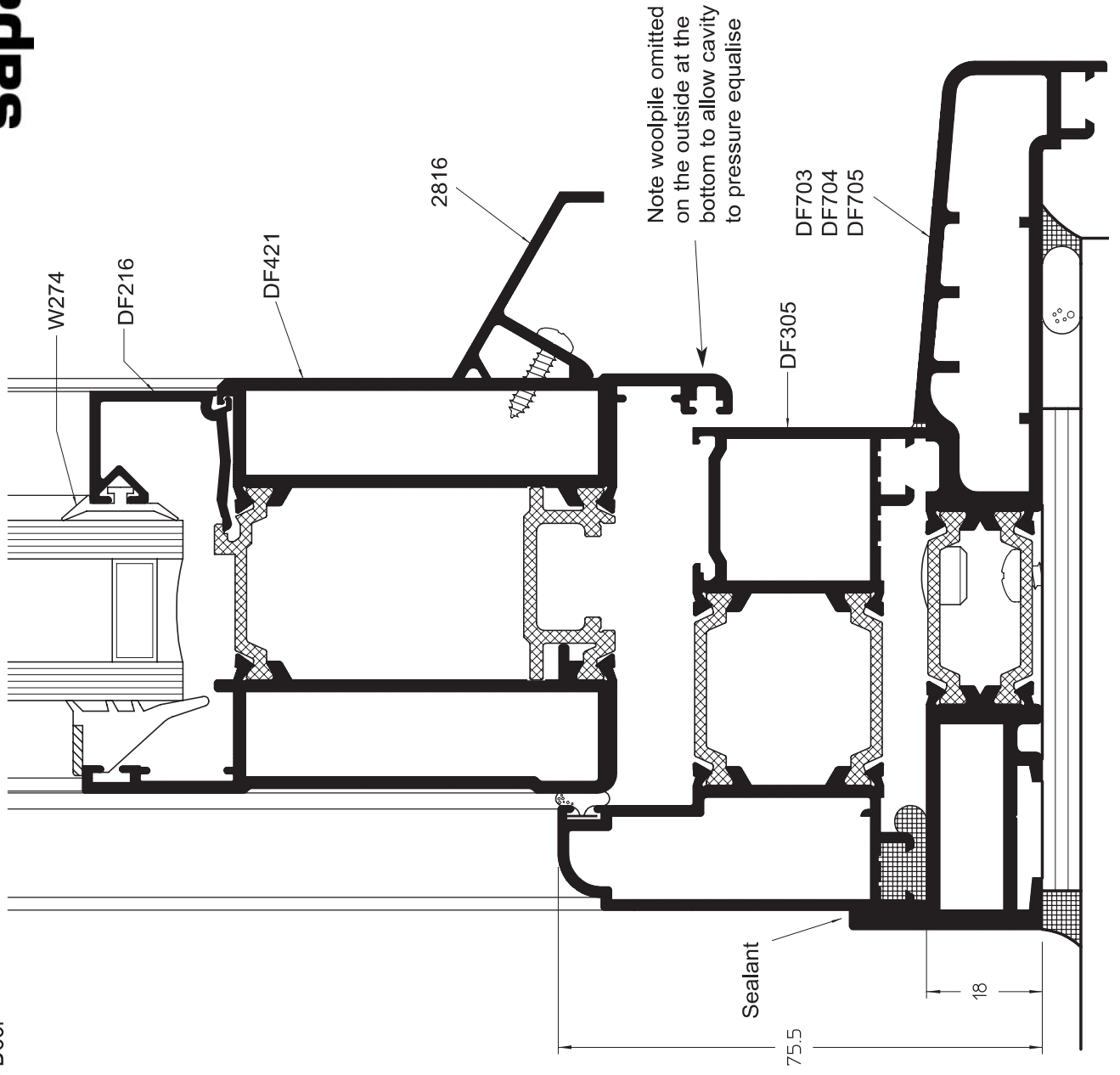


DUALFRAME 75mm HP Entrance Door

GENERAL ARRANGEMENTS

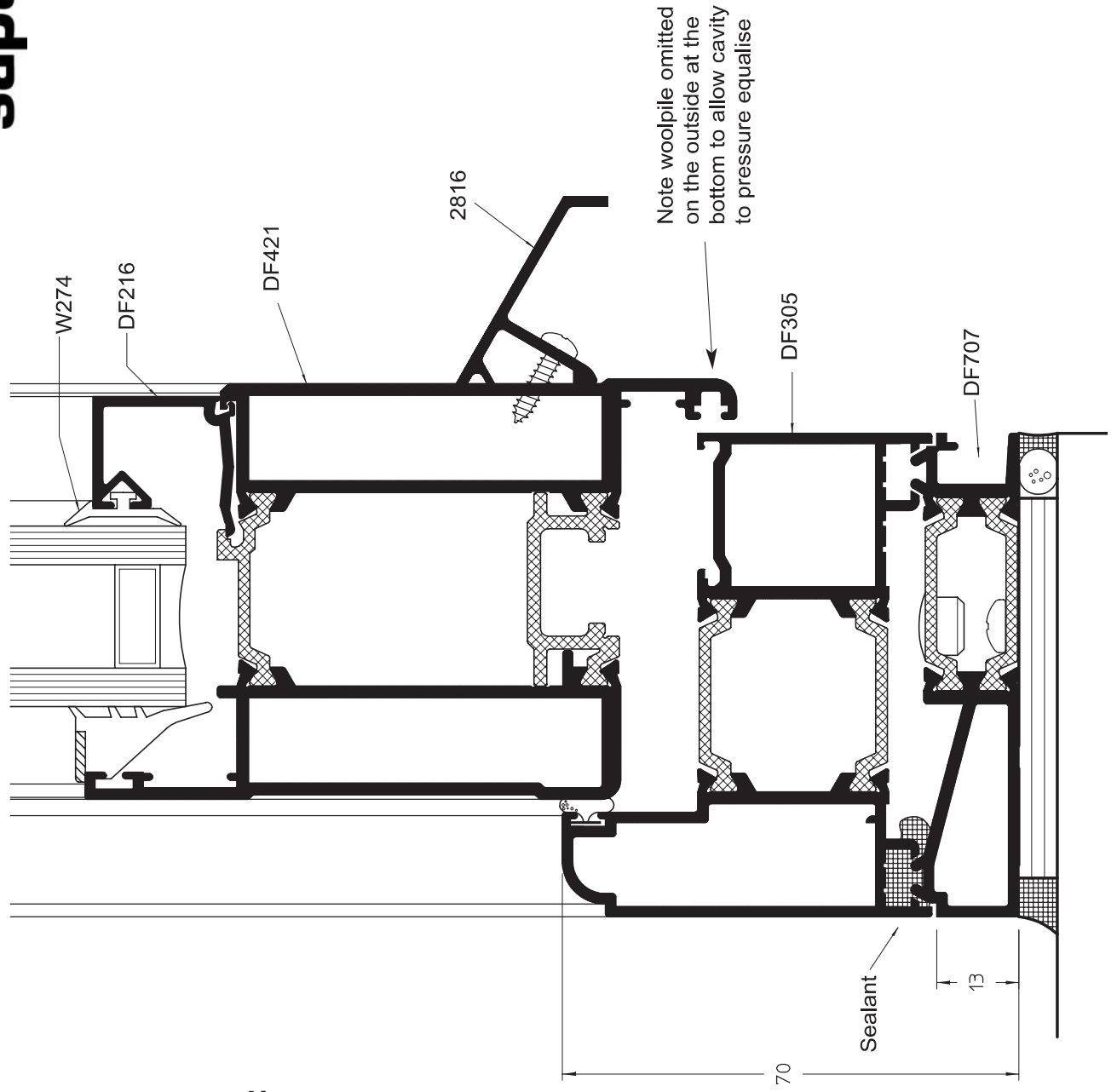
J Open Out Glaze
Out Door Subcill

Outerframe Options:-
DF305 Softline (shown)
or DF310 Square



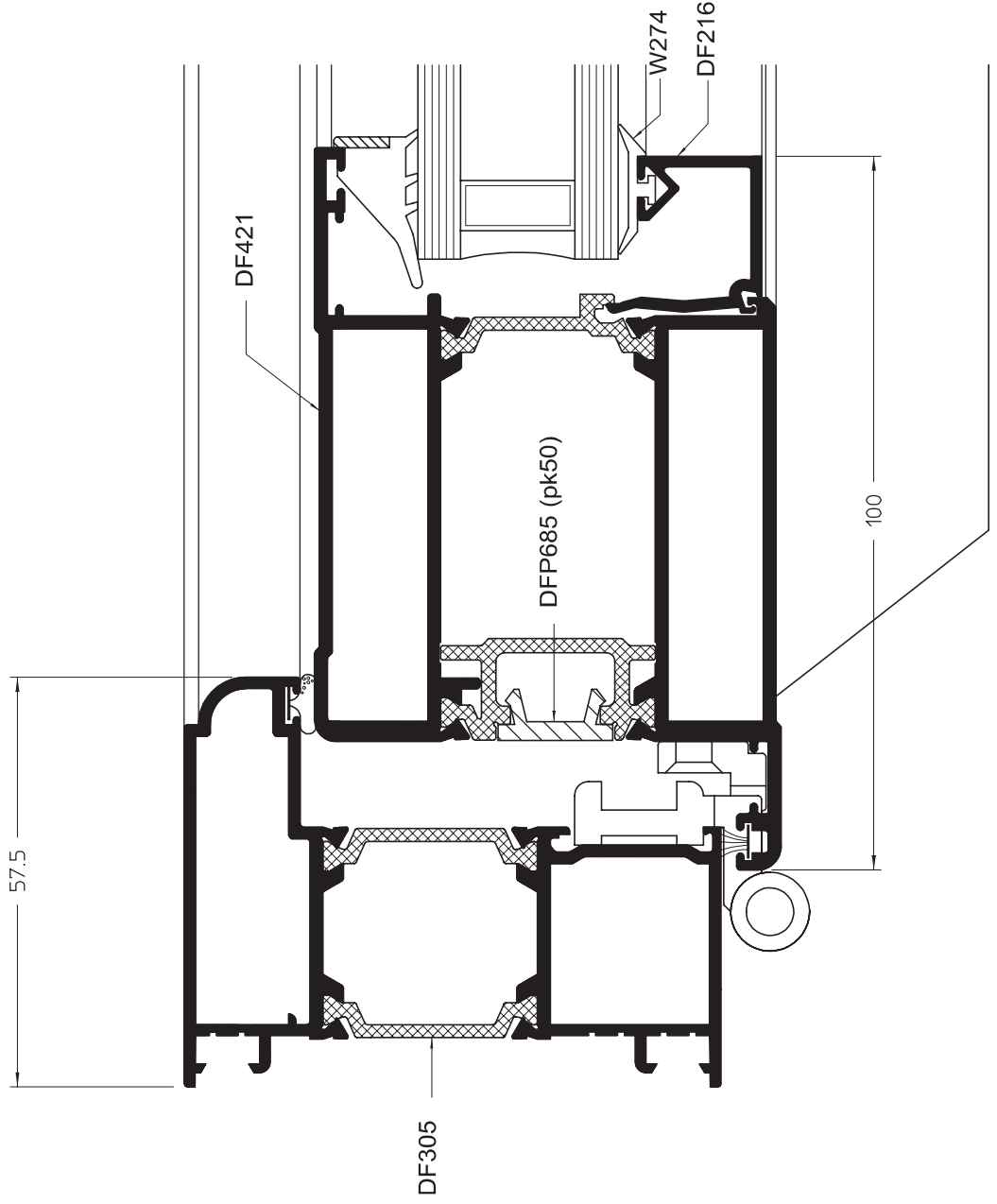
J **Open Out Glaze Out Door Drainage Tray**

Outerframe Options:-
DF305 Sofline (shown)
or DF310 Square



K **Open Out Glaze Out Door Hinge Jamb**

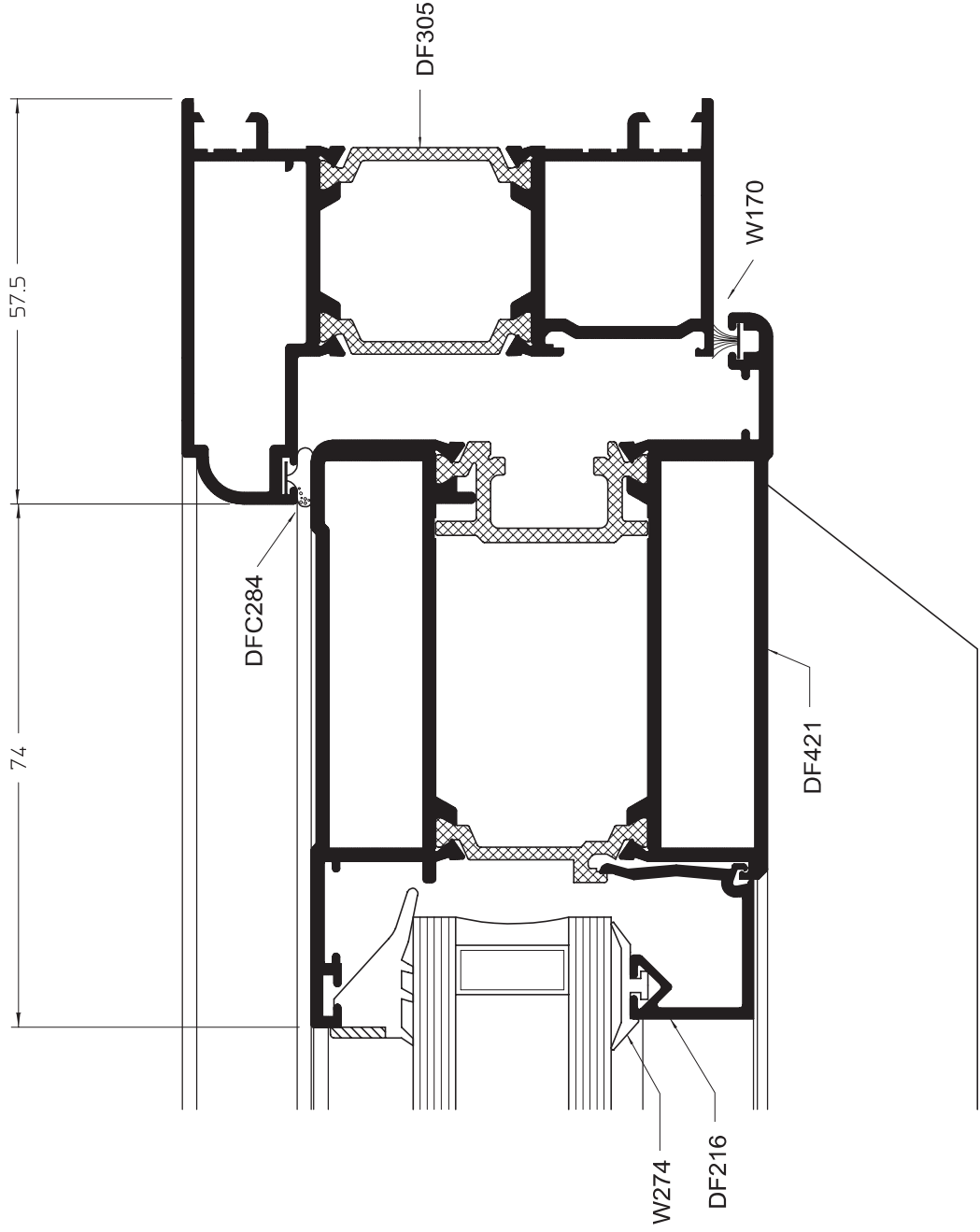
sapa:



Outerframe Options:-
DF305 Softline (shown)
or DF310 Square

GENERAL ARRANGEMENT

Open Out Glaze Out Door Lock Jamb



Outerframe Options:-
DF305 Softline (shown)
or DF310 Square

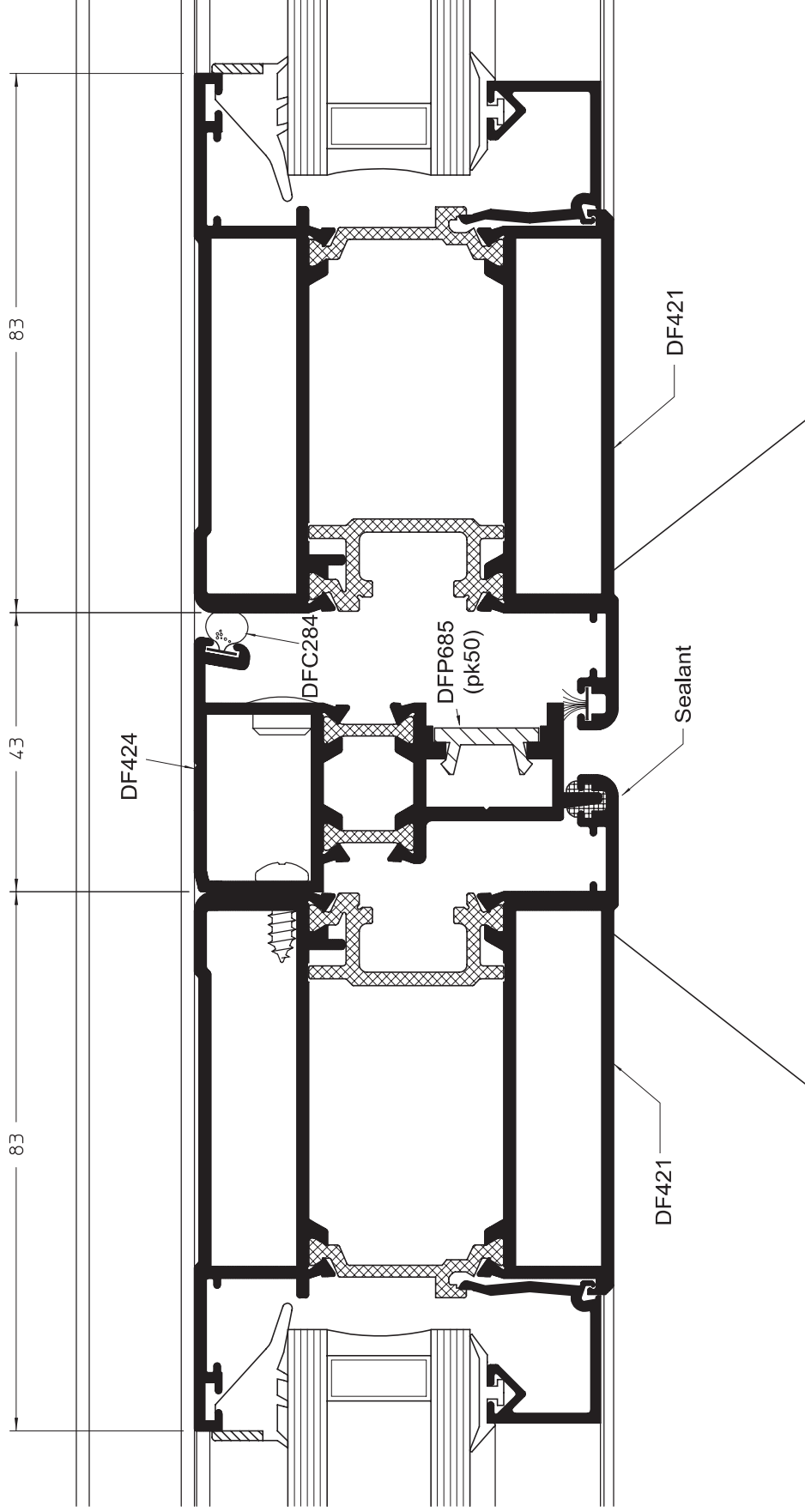
75mm HP Entrance Door

DUALFRAME

GENERAL ARRANGEMENTS

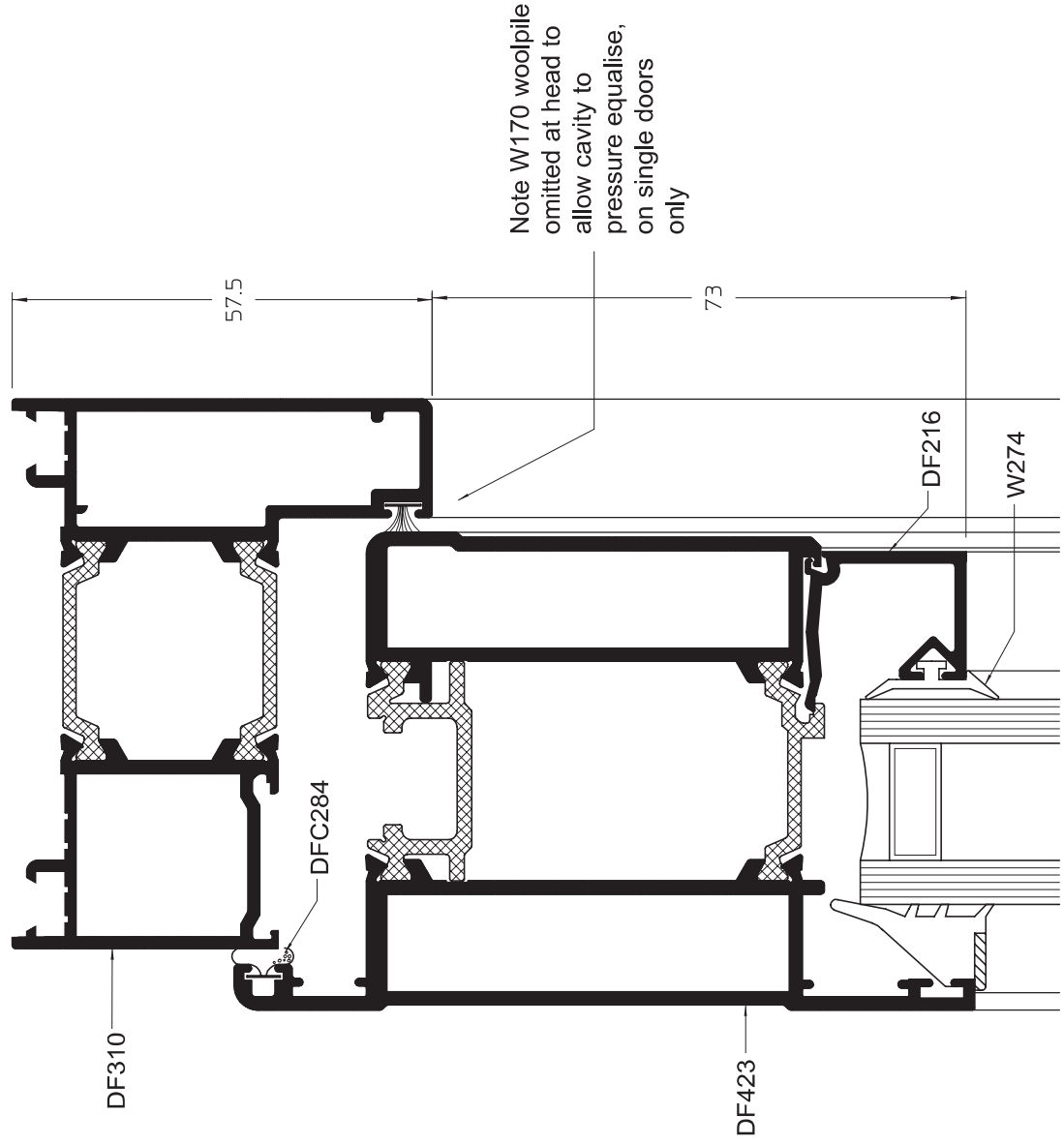
M **Open Out Glaze Out Door Meeting Stiles (RH Master)**

sapa:



G Open In Glaze Out Door Head

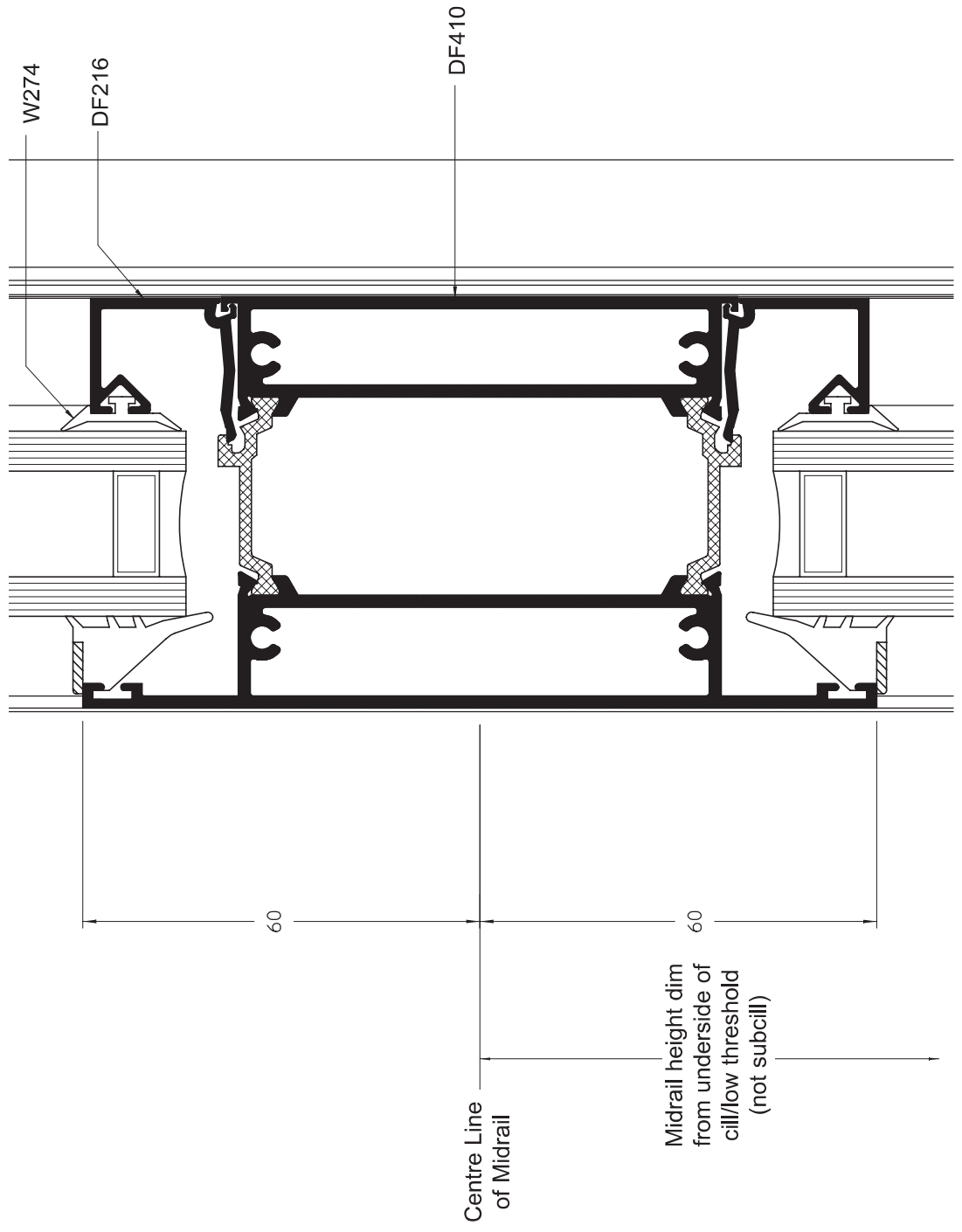
Outerframe Options:-
DF305 Soffline or
DF310 Square (shown)



DUALFRAME 75mm HP Entrance Door

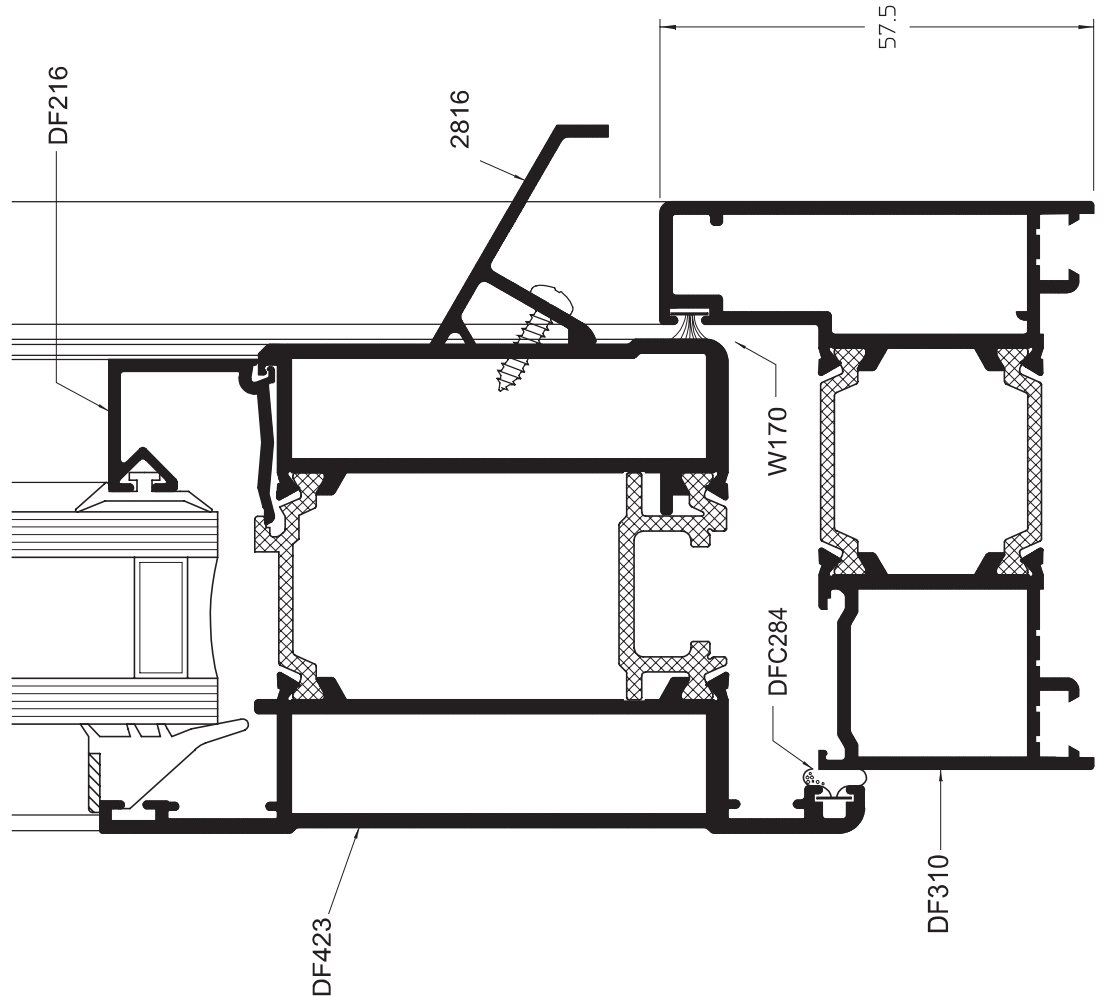
GENERAL ARRANGEMENTS

H **Open In Glaze Out**
Door Midrail



J **Open In Glaze Out**
Door Cill

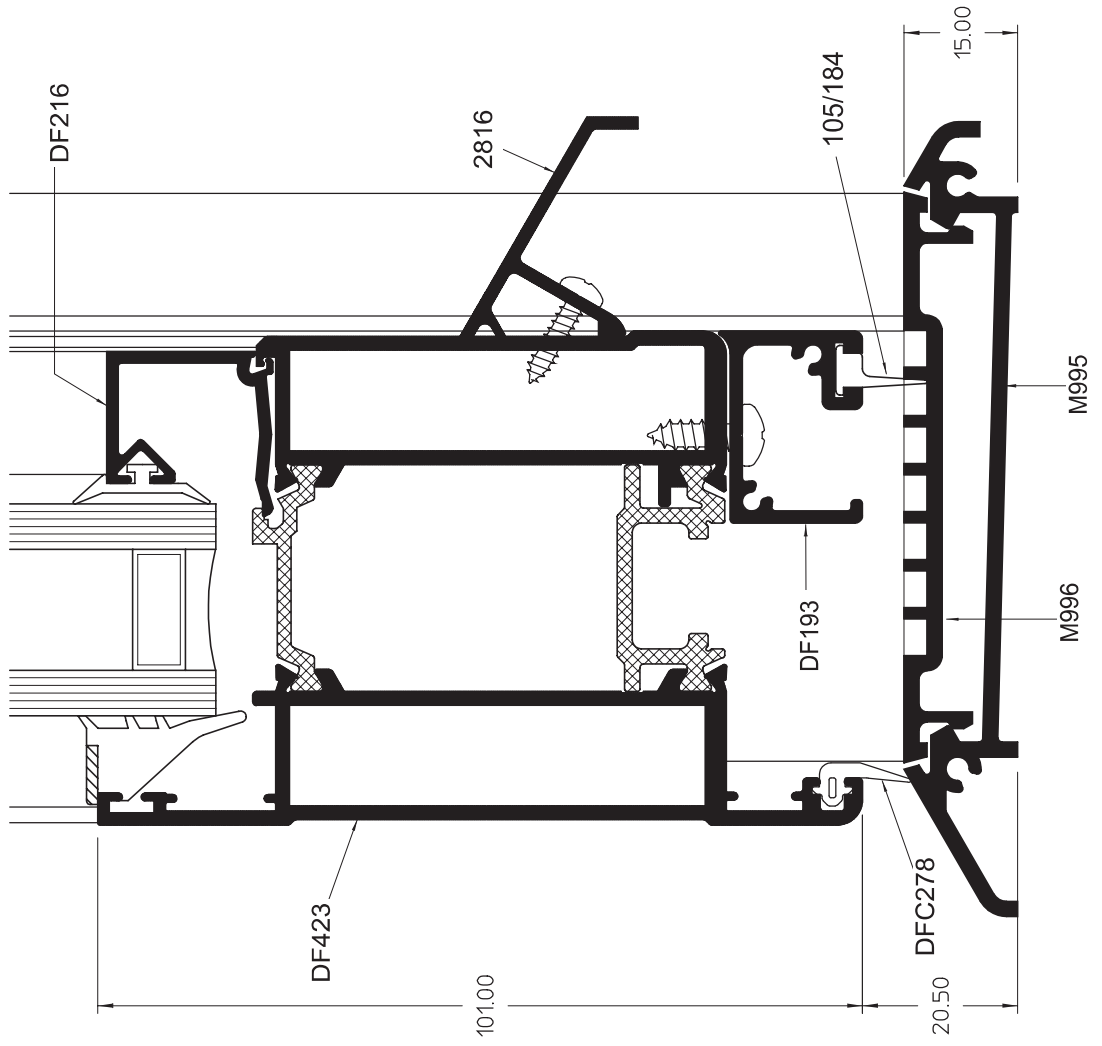
Outerframe Options:-
DF305 Softline or
DF310 Square (shown)



DUALFRAME 75mm HP Entrance Door

GENERAL ARRANGEMENTS

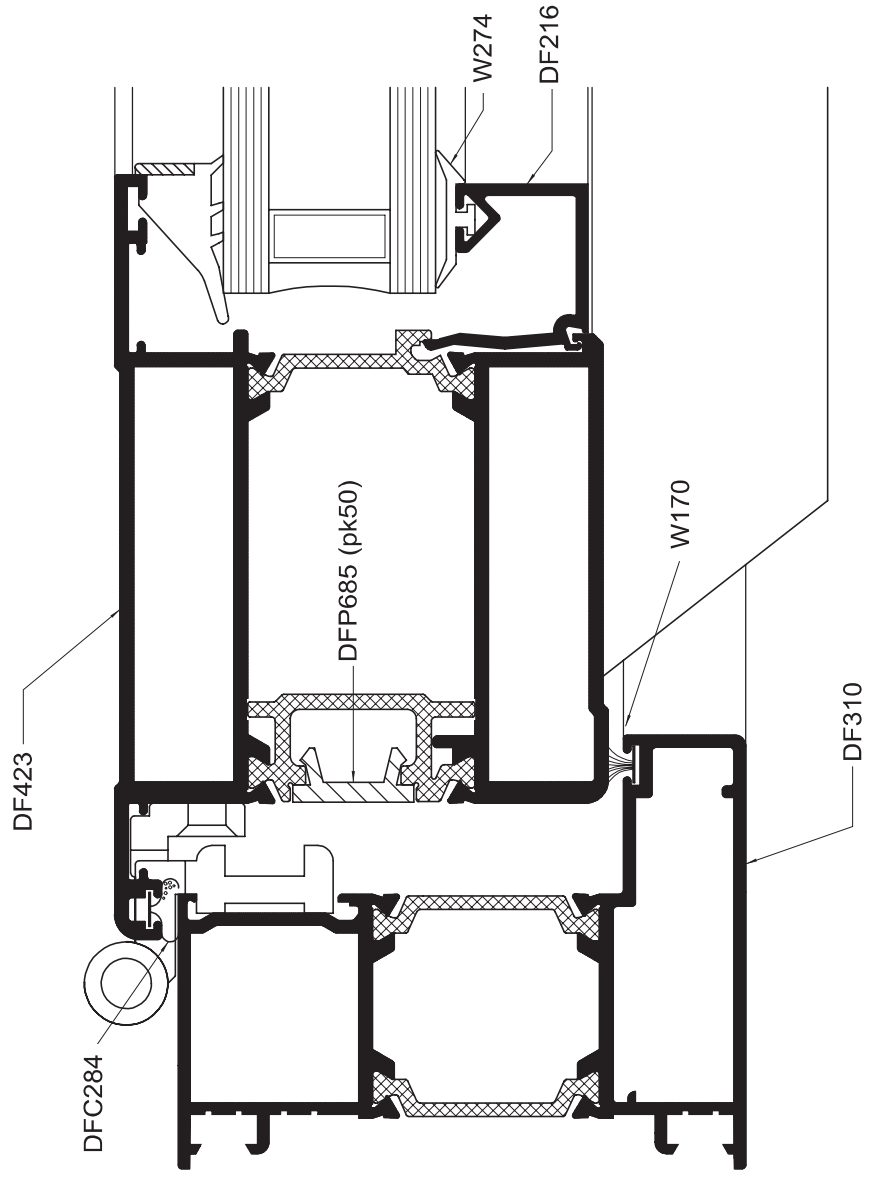
J Open In Glaze Out
Low Threshold



GENERAL ARRANGEMENT

K Open In Glaze Out Door Hinge Jamb

Outerframe Options:-
DF305 Softline or
DF310 Square (shown)

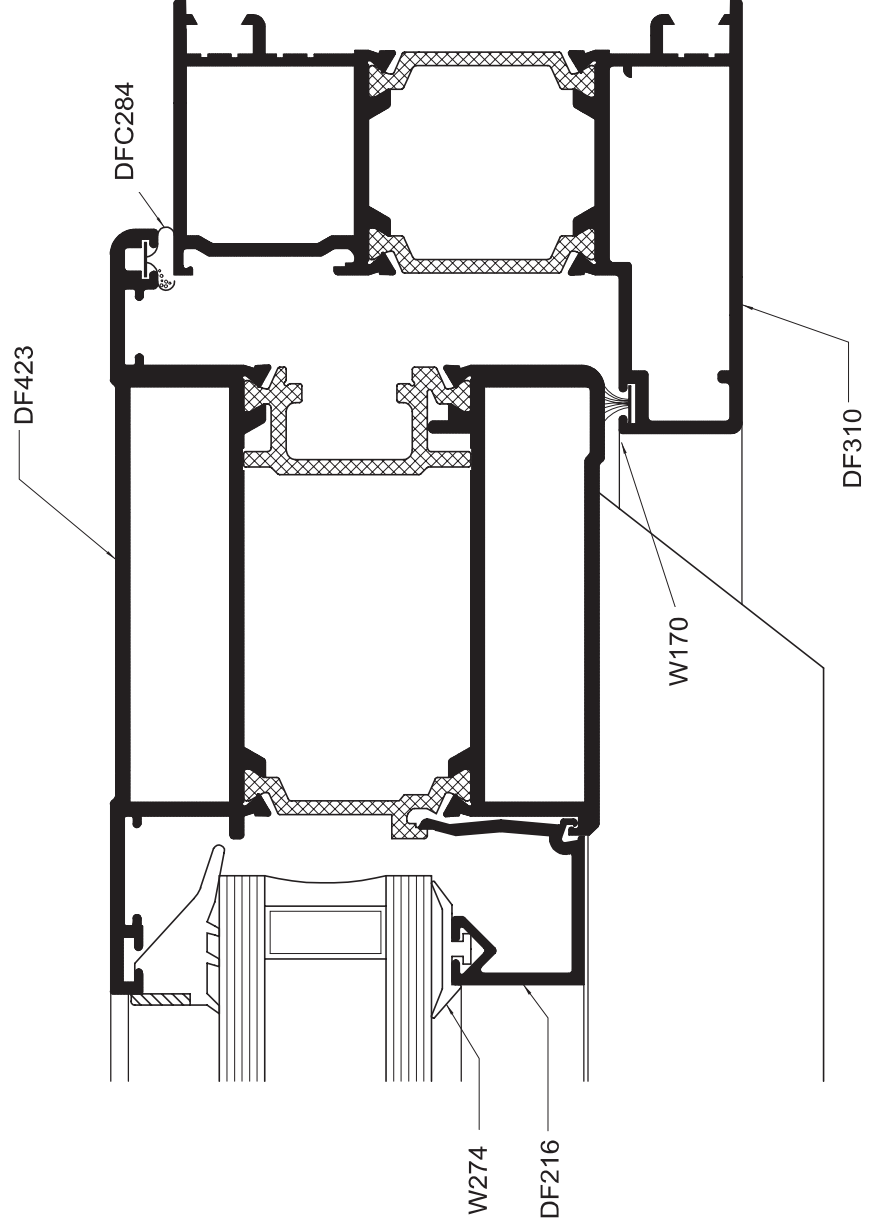


DUALFRAME 75mm HP Entrance Door

GENERAL ARRANGEMENTS


**Open In Glaze Out
Door Lock Jamb**

Outerframe Options:-
DF305 Softline or
DF310 Square (shown)



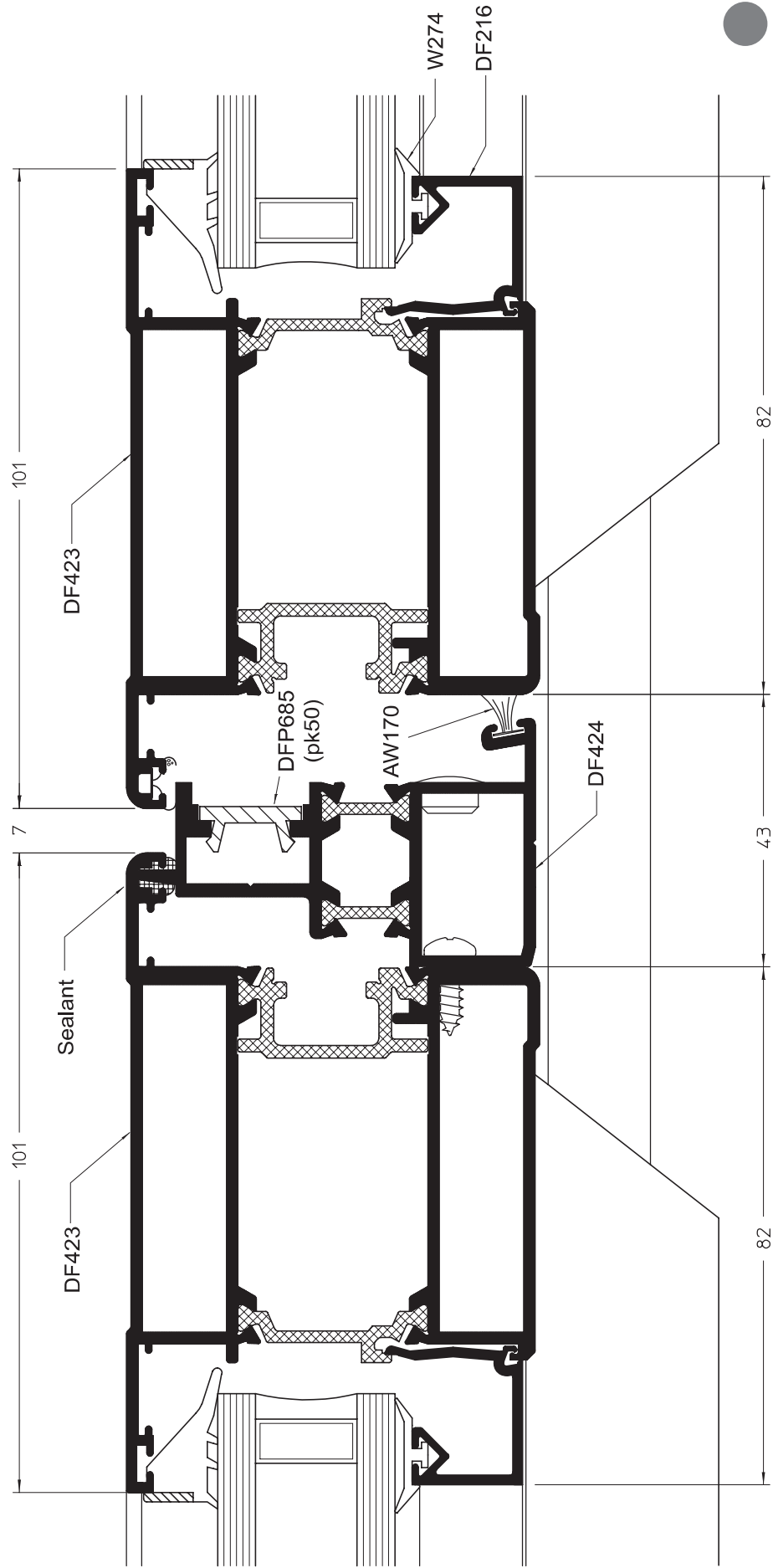
DUALFRAME

75mm HP Entrance Door

GENERAL ARRANGEMENT

sapa:

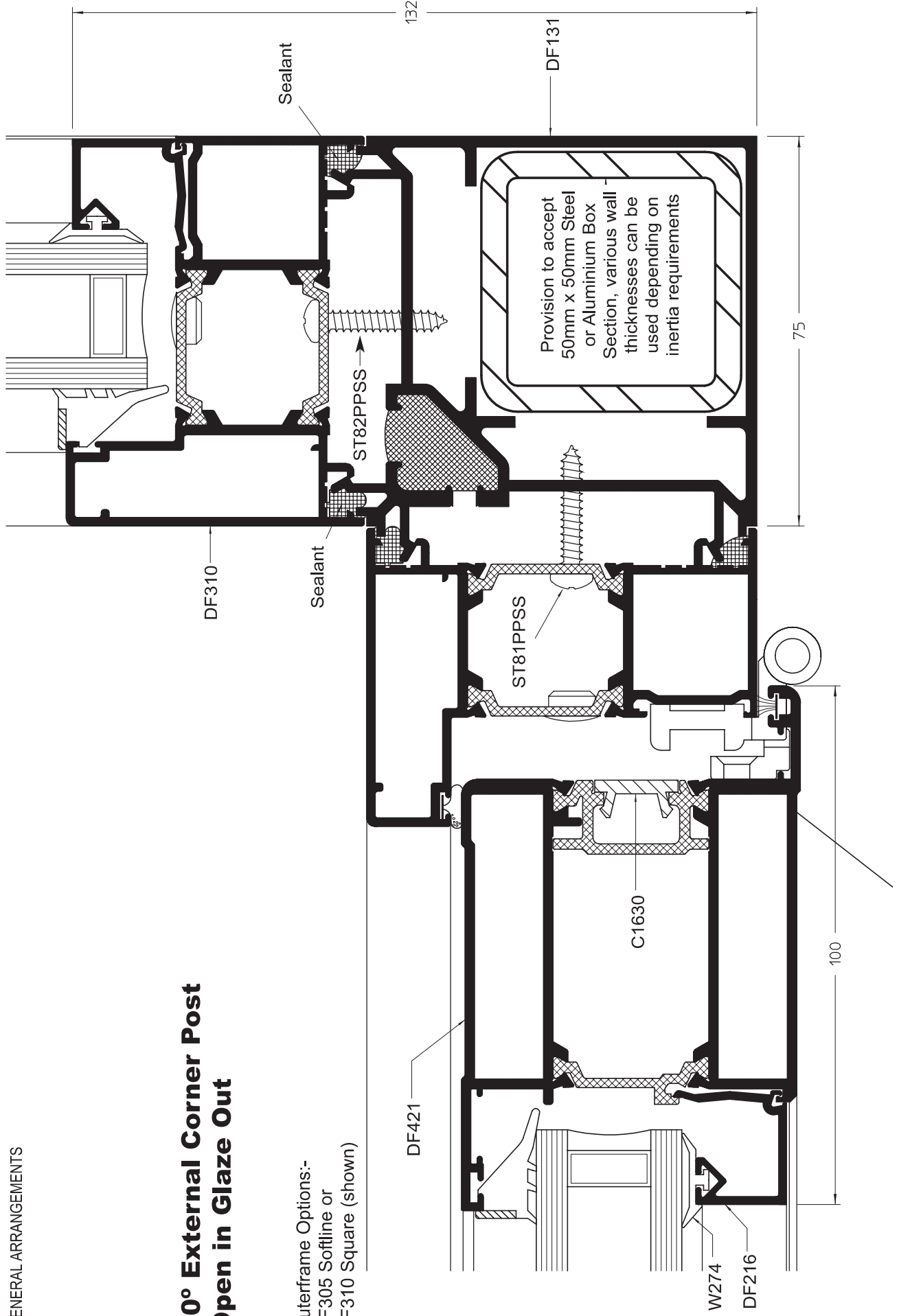
M **Open In Glaze Out Door Meeting Stiles (RH Master)**



GENERAL ARRANGEMENTS

**90° External Corner Post
Open in Glaze Out**

Outerframe Options:-
DF305 Sofline or
DF310 Square (shown)



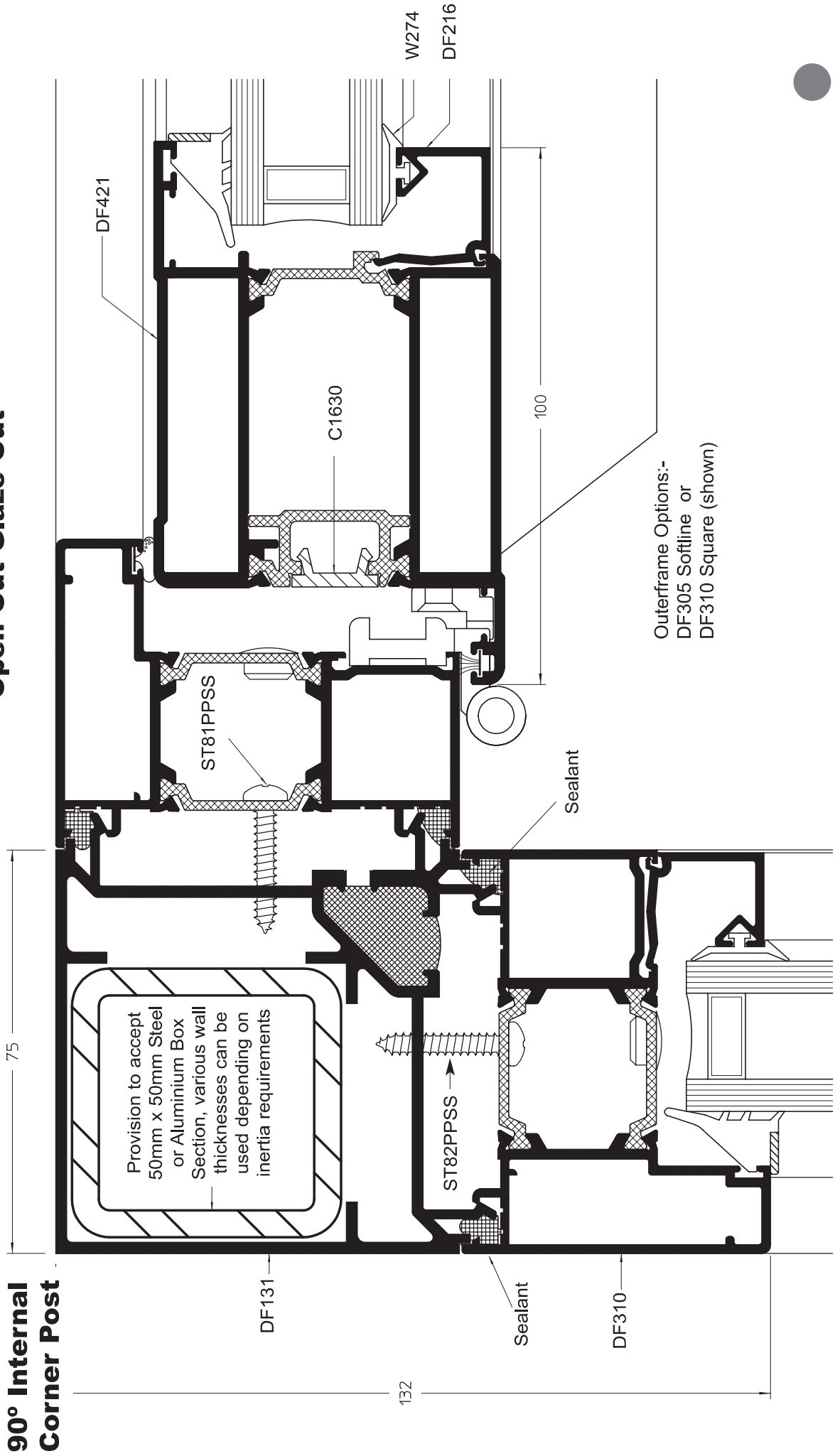
DUALFRAME

GENERAL ARRANGEMENT

75mm HP Entrance Door

sapa:

Open Out Glaze Out

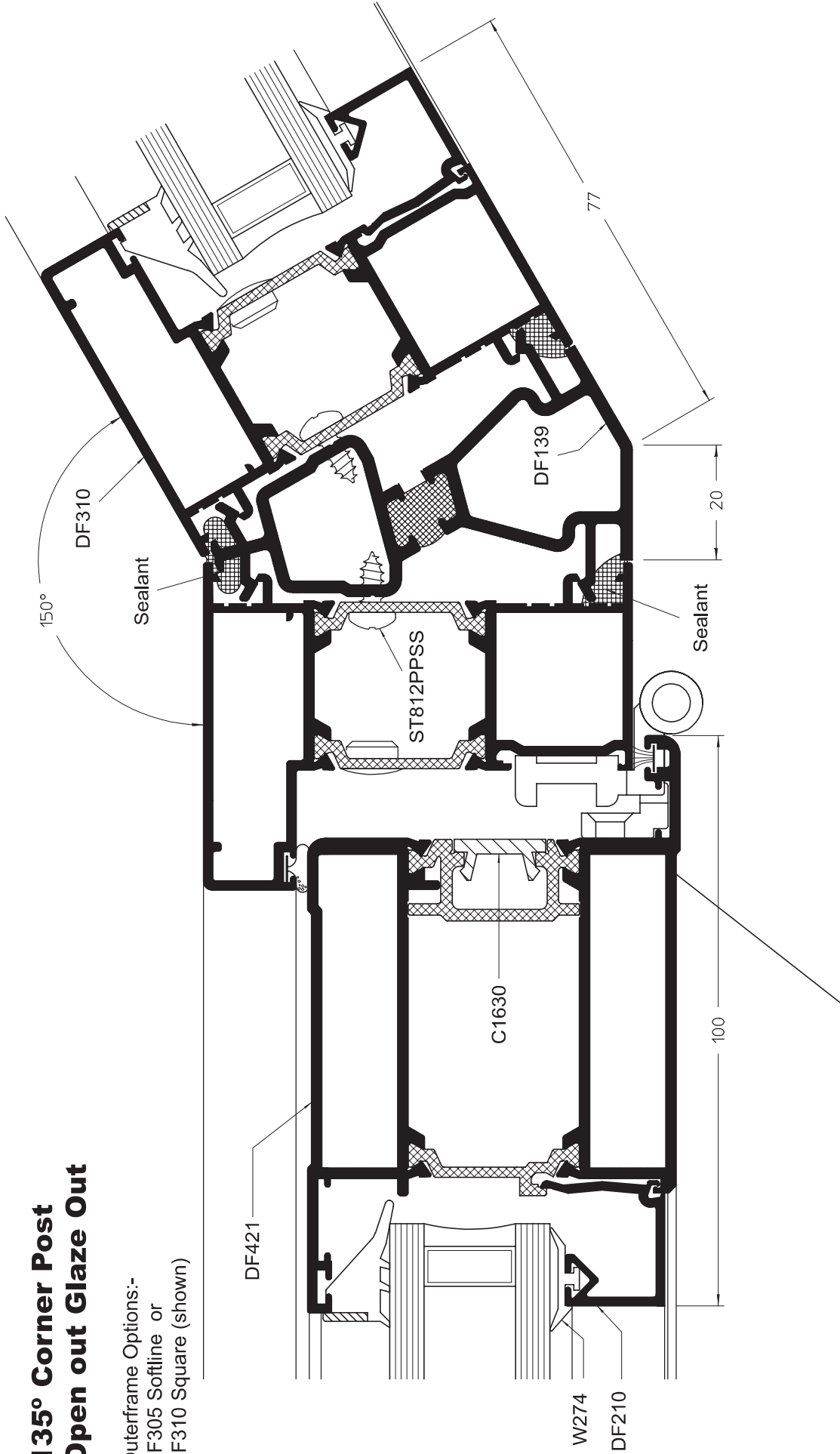


DUALFRAME 75mm HP Entrance Door

GENERAL ARRANGEMENTS

**135° Corner Post
Open out Glaze Out**

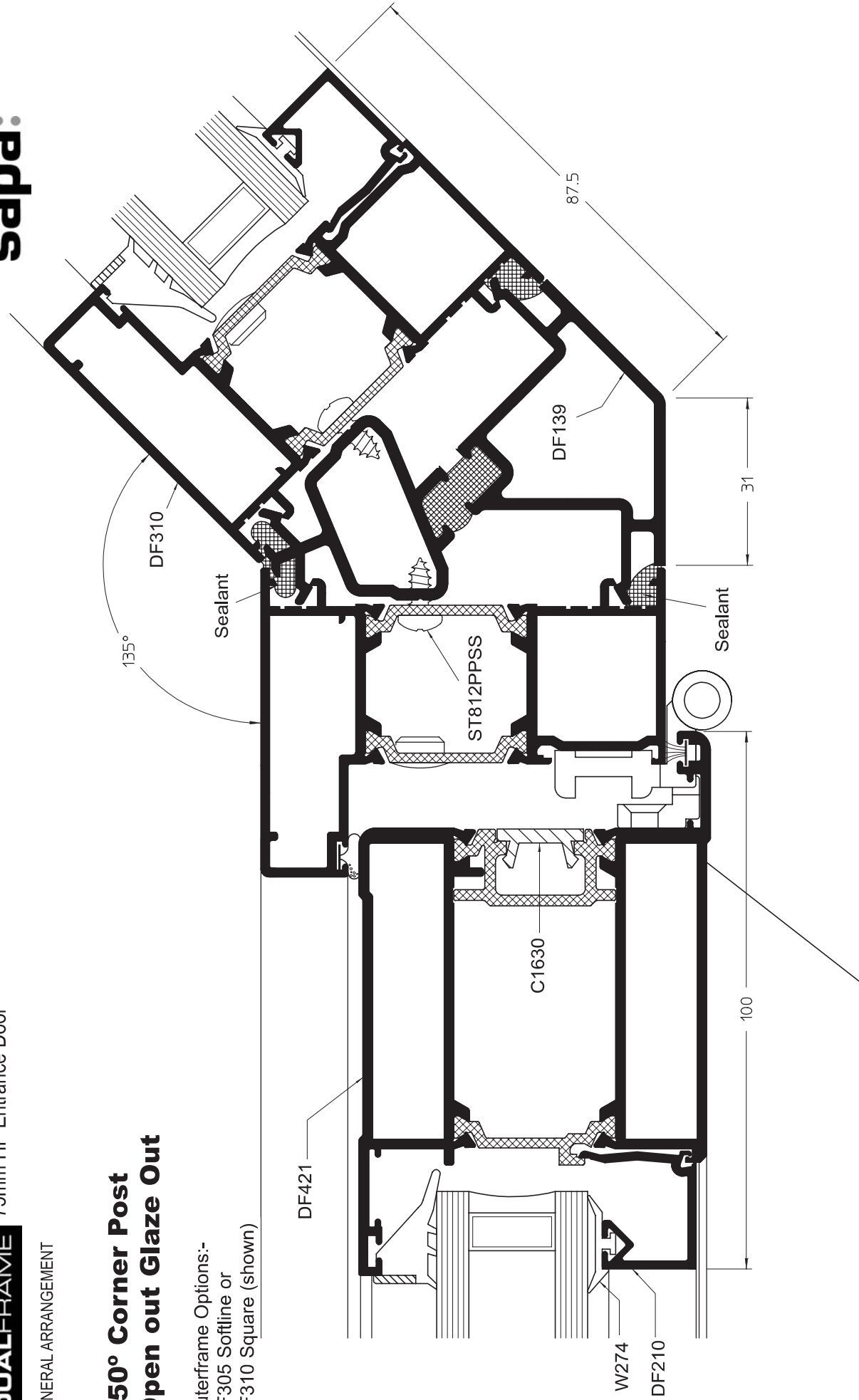
Outerframe Options:-
DF305 Soffline or
DF310 Square (shown)



150° Corner Post Open out Glaze Out

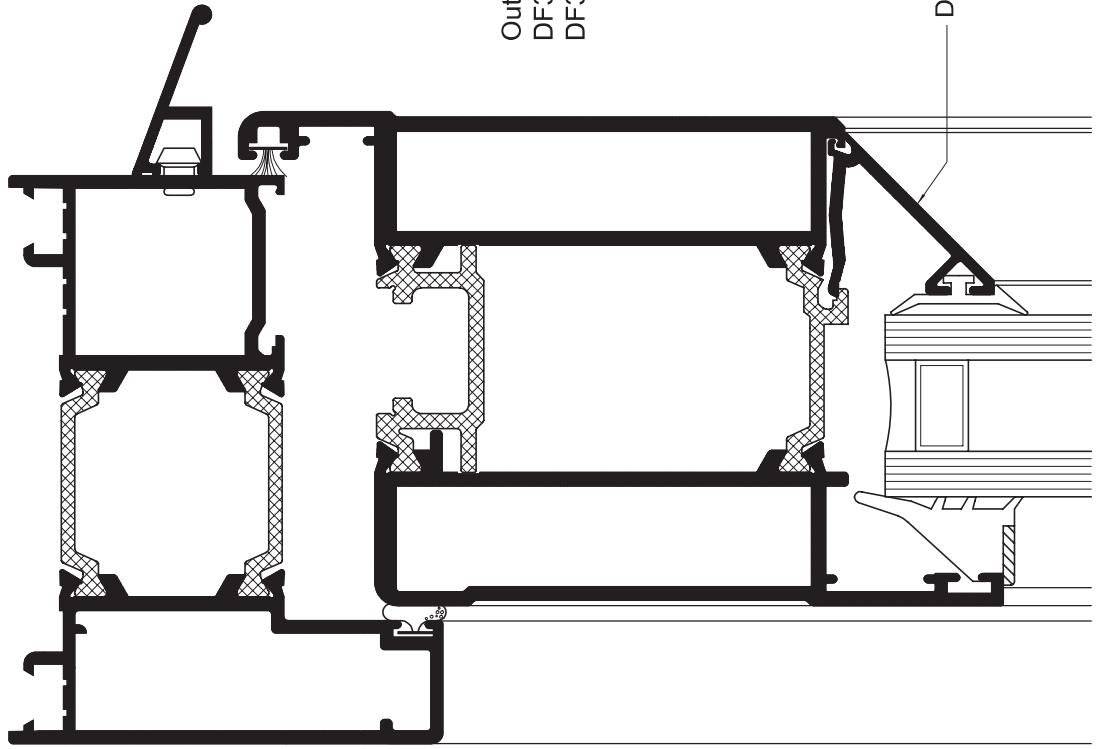
Outerframe Options:-
DF305 Softline or
DF310 Square (shown)

sapa:



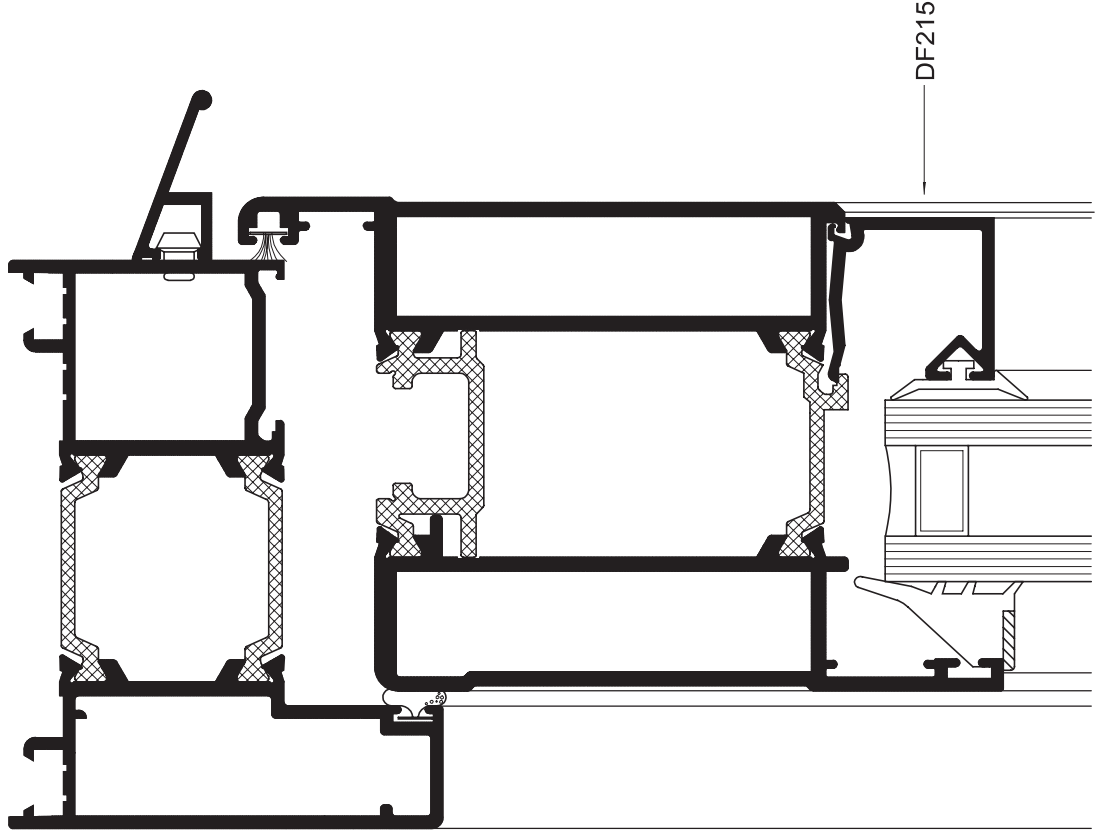
sapa:

24mm Glazing Bevelled Bead Option



Outerframe Options:-
DF305 Softline or
DF310 Square (shown)

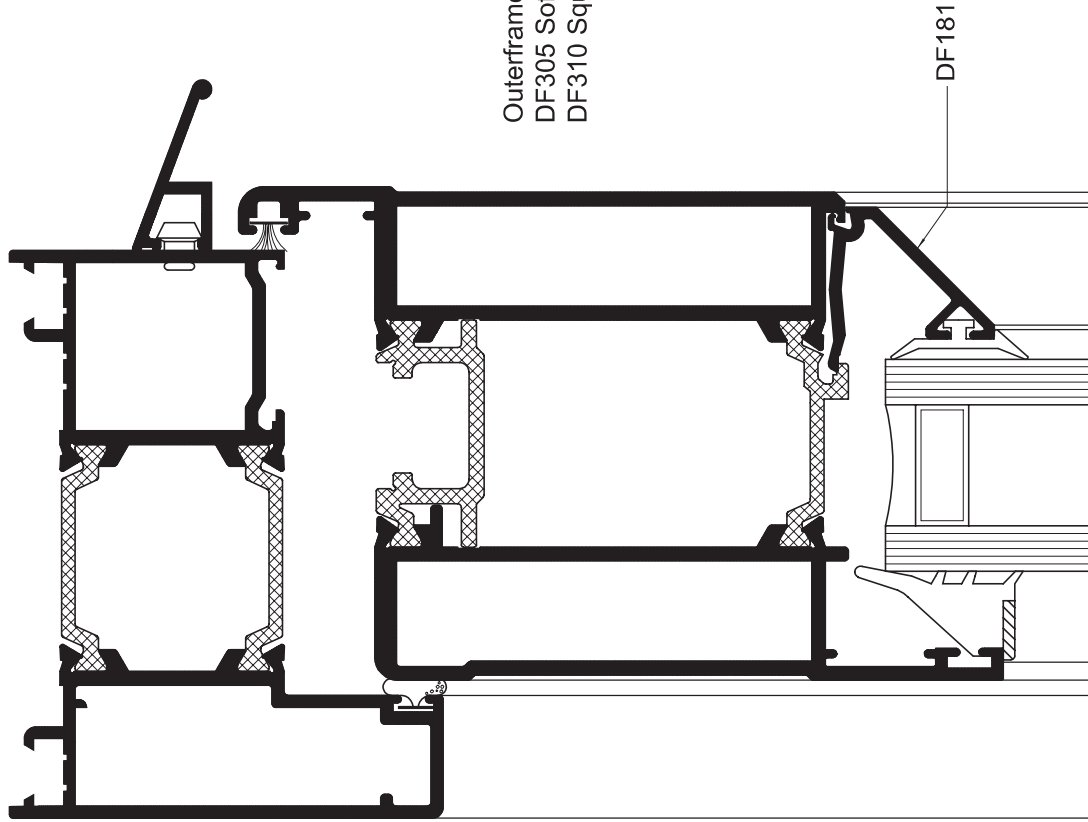
24mm Glazing Square Bead Option



DF215

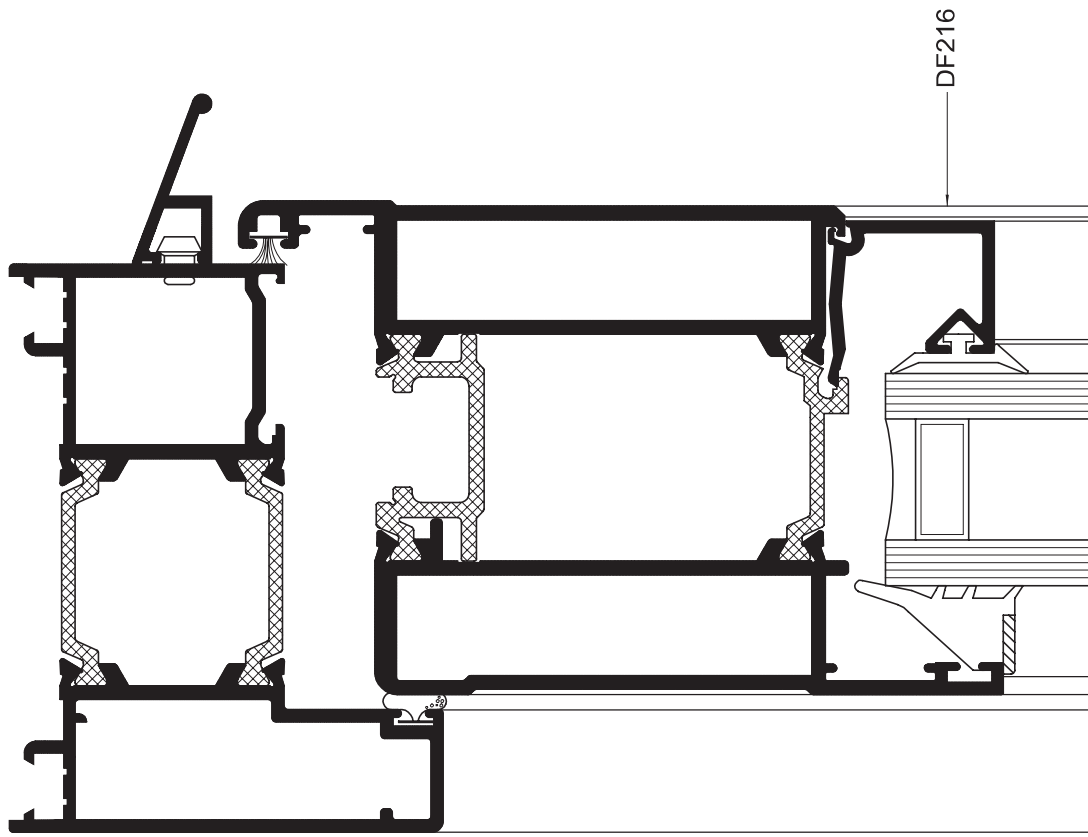
DF104

28mm Glazing Bevelled Bead Option



Outerframe Options:-
DF305 Softline or
DF310 Square(shown)

28mm Glazing Square Bead Option

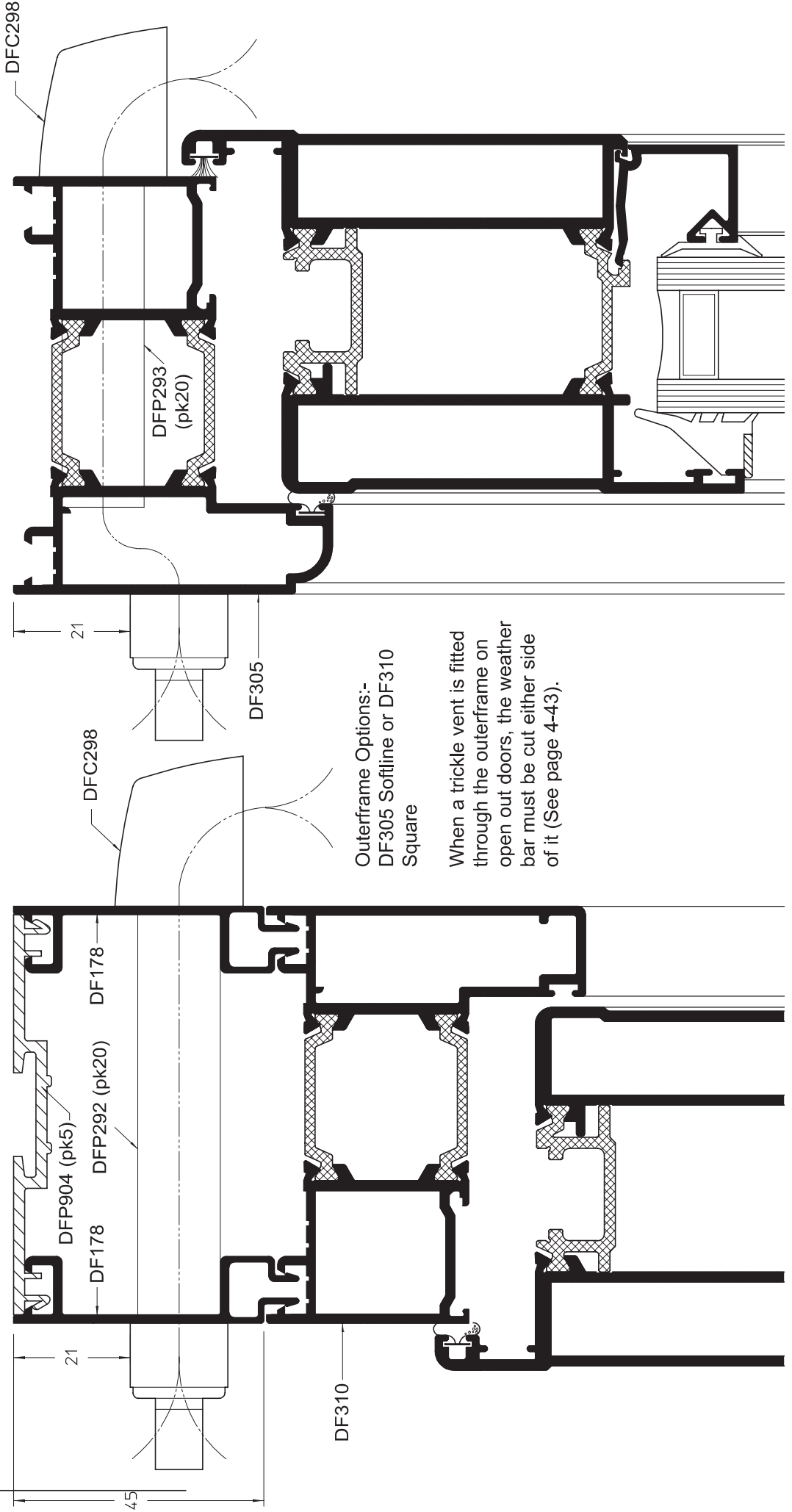


DUALFRAME

GENERAL ARRANGEMENTS

Trickle Vent Through 45mm Extender (Open In/Out)

Trickle Vent Through Head (Open Out Only)



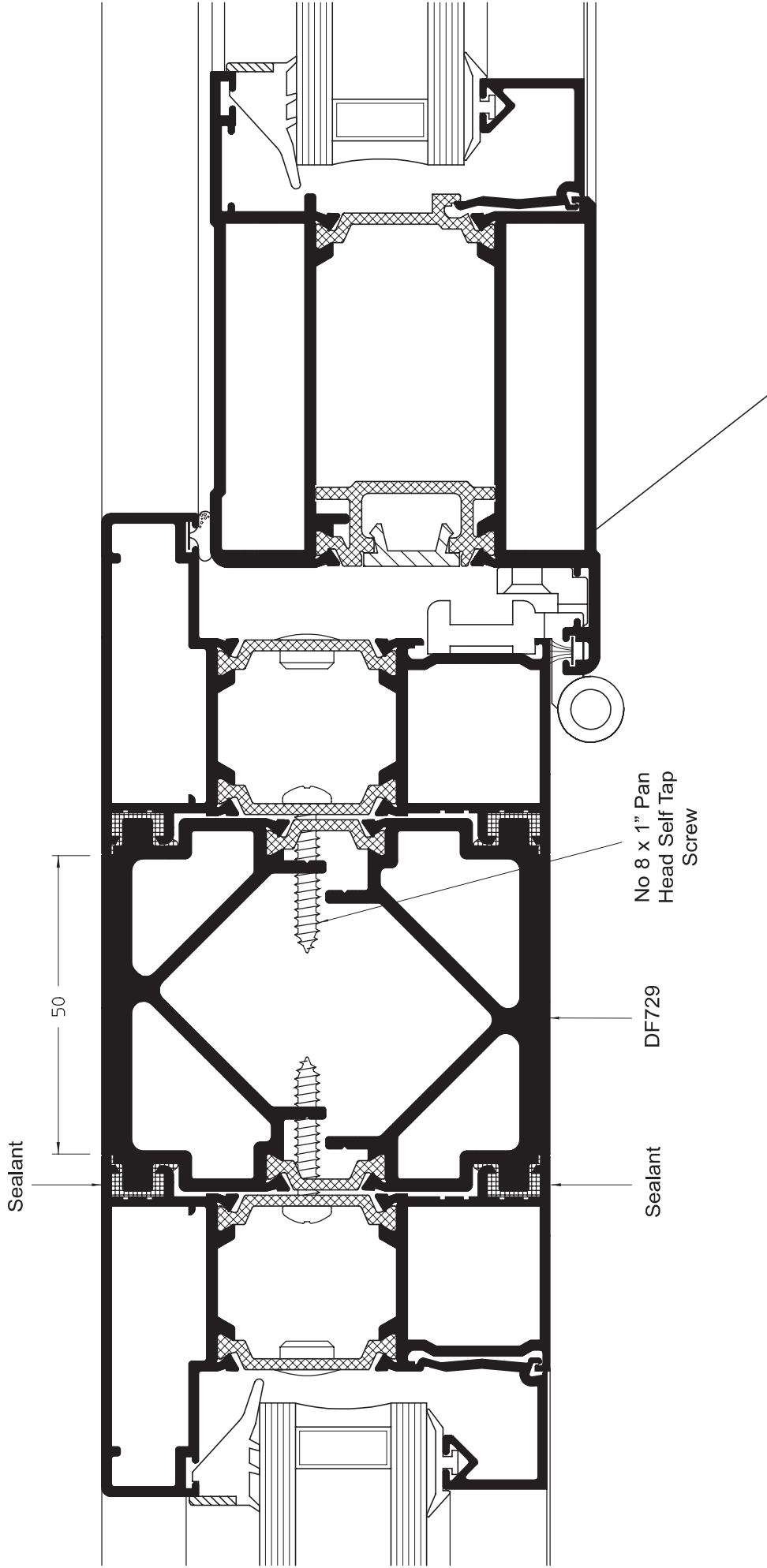
DUALFRAME

75mm HP Entrance Door

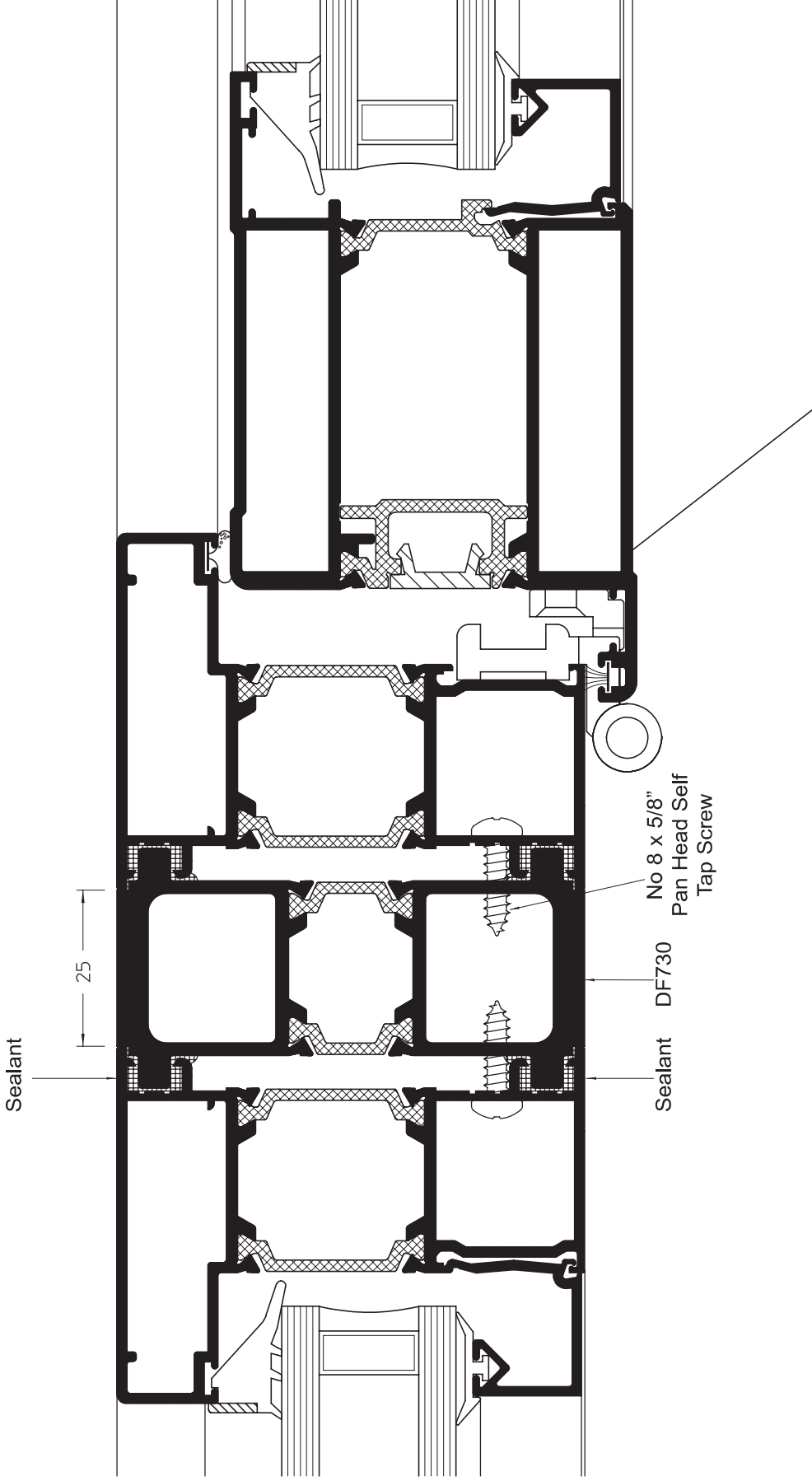
GENERAL ARRANGEMENT

sapa:

50mm In-Line Heavy Duty Post



25mm Heavy Duty Coupler



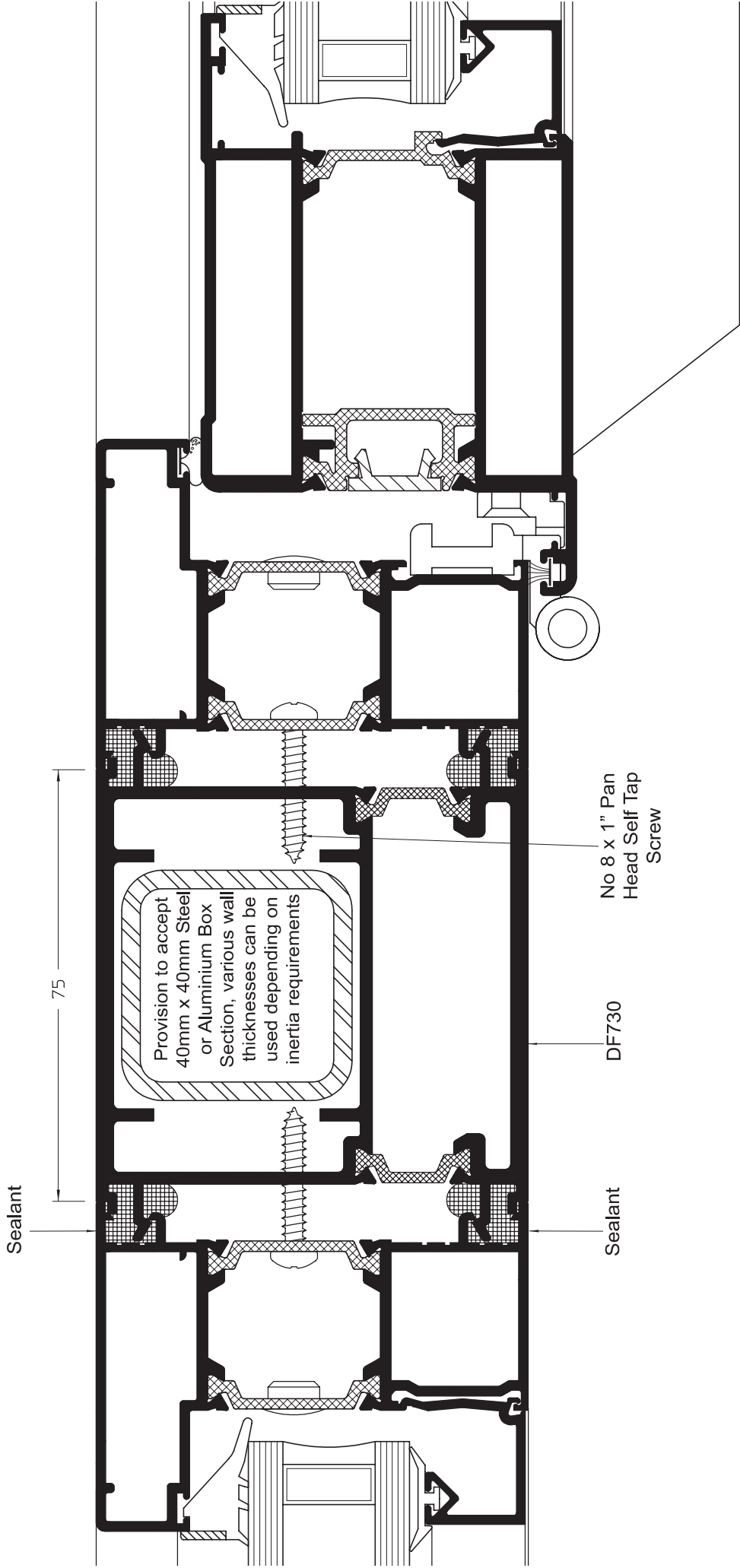
DUALFRAME

75mm HP Entrance Door

GENERAL ARRANGEMENT

sapa:

75mm In-Line Post



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