

**sapa:**

**buildingsystem**

ARCHITECTURAL ALUMINIUM SOLUTIONS

# CROWN SLIDING DOORS

Technical Data



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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 Team on the number below.

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ISO 14001  
Cert No. EMS 562855



003

# CROWN SLIDING DOORS

## Contemporary Design:

Crown 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:

Crown comfortably exceeds the current requirements of Part L 2013 of the Building Regulations for both thermal insulation and air permeability and has been designed to be compliant with future anticipated changes. Crown 98 achieves an A+ rating with a 1.4 W/m<sup>2</sup>K U value.

## Dual colour capability:

All Crown products can have differing finishes internally and externally

## Integrated Design:

The Crown suite consists of a Sliding Folding Door, Sliding Door, Residential door and Casement Window

## Crown 120mm

- Ideal for new build projects
- Meets and surpass the area weighted average U values stipulated in Part L of the Building Regulations. Even lower U-values can be achieved by using 'soft coat' low emissivity glass, argon gas filling and thermally enhanced spacer bar.
- Overall total width possible 6400mm
- Glazing - 24mm and 28mm

## Crown 98mm

- Ideal for refurbishment projects by reducing the need for plaster and internal finishes to be cut back for installation
- The only aluminium sliding patio door to achieve an 'A+' Doorset Energy Rating. Can also achieve 1.4 U-value - easily surpassing Building Regulations Part L 2013
- Overall total width possible 6353mm
- Glazing - 28mm

## Product

Crown 98 and 120 Sliding Doors

## Design Variants

2, 3, and 4 pane

## Compatibility

Can be integrated with other products from the Crown and Dualframe ranges.

## 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 BS3987 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 Team on 01684 853500.

# PERFORMANCE DATA

## Crown 98 Sliding Door

### Composition and Manufacture

Aluminium profiles are extruded from aluminium alloy 6063 or 6060 T6 complying with the recommendations of BS EN 755-9:2001. Polyester powder coat finishes are available to BS EN 12206-1:2004 in a wide range of colours. Anodised finish is to BS 3987 Grade AA25 etch silver.

Weatherstripping is a woven pile internally and externally, set in undercut grooves in the frame.

The thermal barrier is achieved using two polyamide extrusions separating the internal and external faces.

### Construction

Frame members are square cut and shouldered (where necessary). Joints are secured using stainless self tapping screws into screw ports extruded into the profile. All joints shall be sealed during fabrication against water entry.

The thermal barrier section is achieved using two separate aluminium extrusions and polyamide extrusions mechanically jointed to form a single compound profile.

### Hardware and Security

Panels slide on adjustable stainless steel tandem rollers with anti jemmy plates. Panels are locked using a multipoint lock with 6 hooks into a full length keep. Both lock and keep are mild steel zinc plated to give corrosion resistance of Grade 4 in accordance with BS EN 1670.

Handles and panel stops are zinc die castings.

### Authority

BS4873: Aluminium Alloy Windows.

BS6375-1: Performance of windows: Classification for weather tightness 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.

BS3987: 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.

### Weather Performance

When tested in accordance with BS6375:Part 1:2009, the products listed in this technical data sheet, when manufactured installed and glazed strictly to the enclosed details, will meet UK exposure category 800.

Water Tightness	Class 7A	(300 Pascals)
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Air Permeability	Class 2	(300 Pascals)
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Wind Resistance	Class A2	(800 Pascals)**
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\*\* Exposure category varies with Width/Height of door. An accurate figure can be obtained using BS6399:Part 2 calculations and inertia values given on page 11.

### 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 units of 28mm can be accommodated.

Glass is set against extruded nitrile rubber gaskets retained in undercut grooves in the aluminium sash profile for security. Final retention of the glass is achieved by the application of a co-extruded PVCu / nitrile wedge gasket between the inner face of the glass and the bead or frame.

## Sizes

Note - All sizes given are in millimetres, and relate to the overall size of the outerframe of doors with equal split panes.

Maximum height = 2500

Minimum height = 1830

2 Pane

Maximum width = 3205

Minimum width = 1505

3 Pane (OXO)

Maximum width = 4761

Minimum width = 2208

3 Pane (XOX)

Maximum width = 4823

Minimum width = 2272

4 Pane

Maximum width = 6353

Minimum width = 2949

Max weight per sliding panel = 120Kg.

## Thermal Performance

Crown 98mm Patio Doors 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 enhanced spacer bar.

## Site Work

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

# PERFORMANCE DATA

## Crown 120 Sliding Door

### Composition and Manufacture

Aluminium profiles are extruded from aluminium alloy 6063 or 6060 T6 complying with the recommendations of BS EN 755-9:2001. Polyester powder coat finishes are available to BS EN 12206-1:2004 in a wide range of colours. Anodised finish is to BS 3987 Grade AA25 etch silver.

Weatherstripping is a woven pile internally and externally, set in undercut grooves in the frame.

The thermal barrier is achieved using two polyamide extrusions separating the internal and external faces.

### Construction

Frame members are square cut and shouldered (where necessary). Joints are secured using stainless self tapping screws into screw ports extruded into the profile. All joints shall be sealed during fabrication against water entry.

The thermal barrier section is achieved using two separate aluminium extrusions and polyamide extrusions mechanically jointed to form a single compound profile.

### Hardware and Security

Panels slide on adjustable stainless steel tandem rollers with anti jemmy plates. Panels are locked using a multipoint lock with 6 hooks into a full length keep. Both lock and keep are mild steel zinc plated to give corrosion resistance of Grade 4 in accordance with BS EN 1670.

Handles and panel stops are zinc die castings

### Authority

PAS24:2012: Aluminium Alloy Windows and doors.

BS4873: Aluminium Alloy Windows.

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

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

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### Weather Performance

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Water Tightness	Class 9A	(600 Pascals)
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Air Permeability	Class 2	(300 Pascals)
------------------	---------	---------------

Wind Resistance	Class A2	(800 Pascals)**
-----------------	----------	-----------------

\*\* Exposure category varies with Width/Height of door. An accurate figure can be obtained using BS6399:Part 2 calculations and inertia values given on page 12.

### 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 units of 24mm and 28mm can be accommodated.

Glass is set against extruded Nitrile rubber gaskets retained in the aluminium sash profile for security. Final retention of the glass is achieved by the application of a co-extruded PVCu / Nitrile wedge gasket between the inner face of the glass and the bead.

## Sizes

Note - All sizes given are in millimetres, and relate to the overall size of the outerframe of doors with equal split panes.

Maximum height = 2500

Minimum height = 1830

2 Pane

Maximum width = 3230

Minimum width = 1530

3 Pane (OXO)

Maximum width = 4810

Minimum width = 2260

3 Pane (XOX)

Maximum width = 4823

Minimum width = 2272

4 Pane

Maximum width = 6400

Minimum width = 3000

Max weight per sliding panel = 120Kg.

## Thermal Performance

Crown 120mm Patio Doors 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 enhanced spacer bar.

## Site Work

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

# SUPPORT SERVICES

## Project Consultancy

Our field based Project Consultants, working with our in-house technical services department, provide UK specifiers with guidance 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.

## Specification Process

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.

## Partnership Approach

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.

## Sapa Group

Sapa Building System is a member of the worldwide Sapa AS 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, Sapa Group has extensive multisite 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 we have the product range and service that incorporates the highly respected 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 are recognised as an Investor in People. Sapa Building Systems is committed to the environment and has a strong CSR agenda. To this the company has now been awarded BS EN ISO 14001.

For specification assistance or details of fabricators & installers, please call our Marketing Team on 01684 853500.

# PROFILES

## Crown 98 Sliding Door

Illustration	Part No.	Description
	CP060	Outerframe Closer (on fixed jamb)
	CP061	Lock Jamb Adaptor
	CP062	3-Pane Mullion
	CP063	Bottom Rail Liner (PVC)
	CP064	4-Pane Meeting Stile Adaptor (PVC)
	CP069	Jamb Trim
	CP070	Stile Trim
	CP103	Fixed Interlock
	CP104	Fixed Interlock Bead (PVCu)
	CP107	Interlock Capping
	CP160	Outerframe Closer (on lock jamb & head)
	CP167	Threshold Closer

Illustration	Part No.	Description
	CP210	Cill
	CP211	Head
	CP212	Rail
	CP218	Jamb
	CP219	Trickle Vent Body
	CP223	Lock Stile
	CP234	Standard Outer Interlock
	CP235	Heavy Duty Outer Interlock
	DF1117	Outer Interlock Insulator
	DF1118	Bead
	C1193	Stainless Steel Track

# PROFILES

## Crown 120 Sliding Door



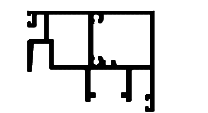
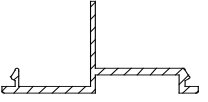
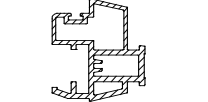
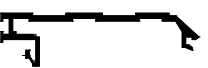
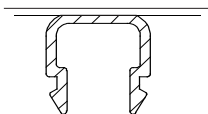
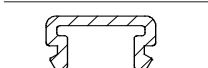

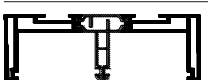
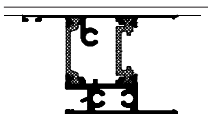
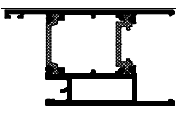
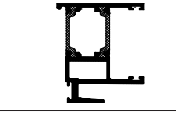
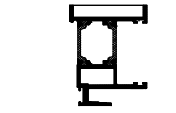
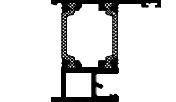
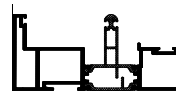


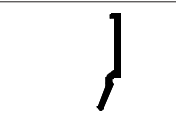
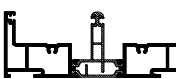


Illustration	Part No.	Description
	CP060	Outerframe Closer
	CP061	Lock Jamb Adaptor
	CP062	3-Pane Mullion
	CP063	Bottom Rail Liner (PVC)
	CP064	4-Pane Meeting Stile Adaptor (PVC)
	CP067	Threshold Closer
	CP069	Jamb Trim
	CP070	Stile Trim
	CP200	175mm Cill
	CP201	Head
	CP212	Rail

Illustration	Part No.	Description
	CP223	Lock Stile
	CP224	Standard Interlock
	CP225	Heavy Duty Outer Interlock
	CP216	Fixed Stile
	CP208	120mm Cill
	DF1107	Interlock Capping
	DF1117	Outer Interlock Insulator
	DF1118	Bead
	DF1308	Jamb (Straight VS / HS)
	C1193	Stainless Steel Track
	UF512	Trickle Vent Body


# PROFILE INERTIA VALUES

## Crown 98 Sliding Door

This page gives information on the inertia values of the framing profiles calculated in accordance with :- BS EN 14024 : 2004. BS6399 Part 2 must be used to calculate the inertia value required.

The table gives inertia values for varying spans of profile.

lxx  
Windload  lyy  
Sag 

	CP062	CP103	CP223	CP234	CP235
					
	Inertia lxx	Inertia lxx	Inertia lxx	Inertia lxx	Inertia lxx
Span 1850mm			94,075	99,124	158,930
Span 1900mm			95,379	100,270	161,481
Span 1950mm			96,629	101,318	163,861
Span 2000mm			97,913	102,324	166,050
Span 2050mm			99,040	103,286	168,299
Span 2100mm			100,194	104,200	170,335
Span 2150mm			101,176	105,064	172,420
Span 2200mm	180,182	90,111	102,177	105,874	174,269
Span 2250mm			103,199	106,627	176,158
Span 2300mm			104,031	107,391	177,789
Span 2350mm			104,984	108,096	179,450
Span 2400mm			105,736	108,737	181,143
Span 2450mm			106,610	109,387	182,709
Span 2500mm			107,387	110,044	184,143
Inertia lyy	99,054	55,611	127,100	45,700	74,800

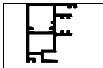





# PROFILE INERTIA VALUES

## Crown 120 Sliding Door

This page gives information on the inertia values of the framing profiles calculated in accordance with :- BS EN 14024 : 2004. BS6399 Part 2 must be used to calculate the inertia value required.

The table gives inertia values for varying spans of profile.

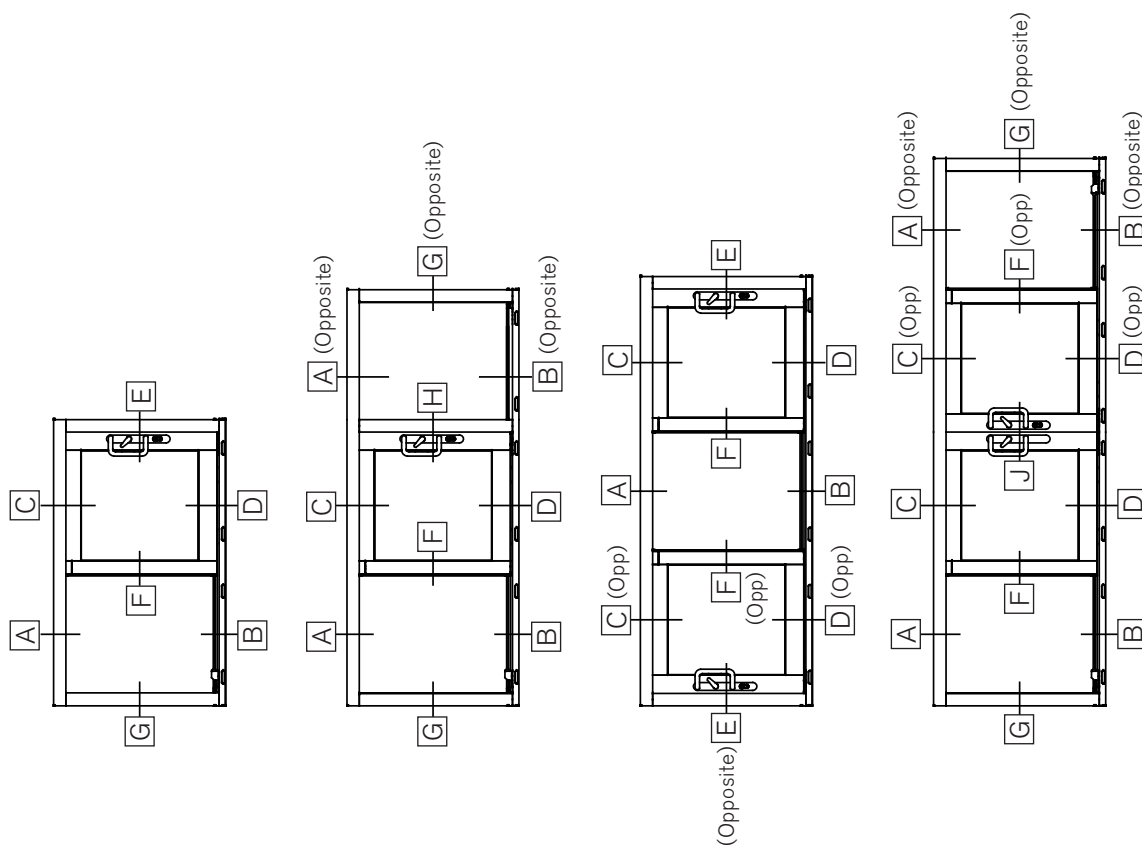
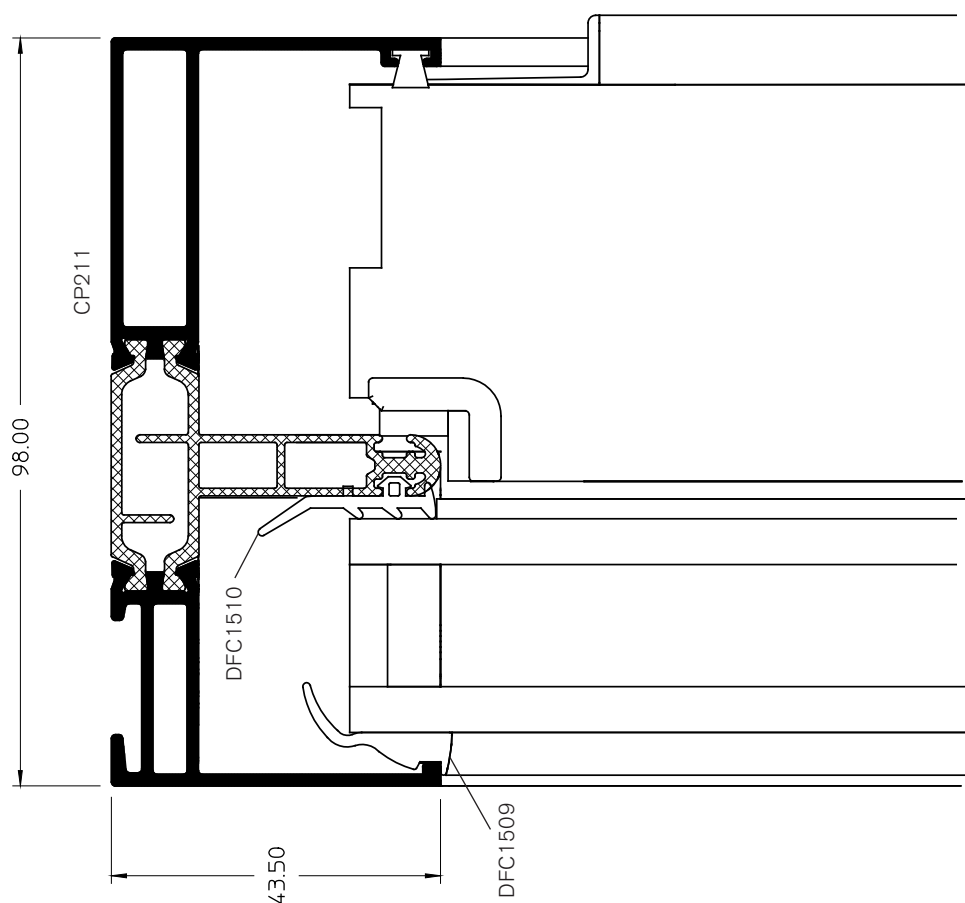
lxx  
Windload  lyy  
Sag 

	CP062	CP201	CP223	CP224	CP225	DF1308
						
	Inertia lxx	Inertia lxx	Inertia lxx	Inertia lxx	Inertia lxx	Inertia lxx
Span 1850mm	180,182	833,195	94,075	105,182	166,213	779,482
Span 1900mm		847,905	95,379	106,379	168,775	793,039
Span 1950mm		861,815	96,629	107,486	171,295	806,362
Span 2000mm		875,277	97,913	108,556	173,640	819,036
Span 2050mm		888,227	99,040	109,586	175,922	831,356
Span 2100mm		900,599	100,194	110,512	178,002	842,881
Span 2150mm		912,330	101,176	111,390	180,131	854,331
Span 2200mm		923,862	102,177	112,282	182,037	865,274
Span 2250mm		935,169	103,199	113,123	183,983	875,660
Span 2300mm		945,691	104,031	113,845	185,828	885,867
Span 2350mm		955,909	104,984	114,643	187,564	895,435
Span 2400mm		965,795	105,736	115,316	189,184	904,763
Span 2450mm		975,321	106,610	115,998	190,832	913,829
Span 2500mm		984,460	107,387	116,618	192,356	922,612
Inertia lyy		99,054	100,900	49,600	77,000	98,100

# GENERAL ARRANGEMENTS

## Crown 98 Sliding Door

### A FIXED HEAD

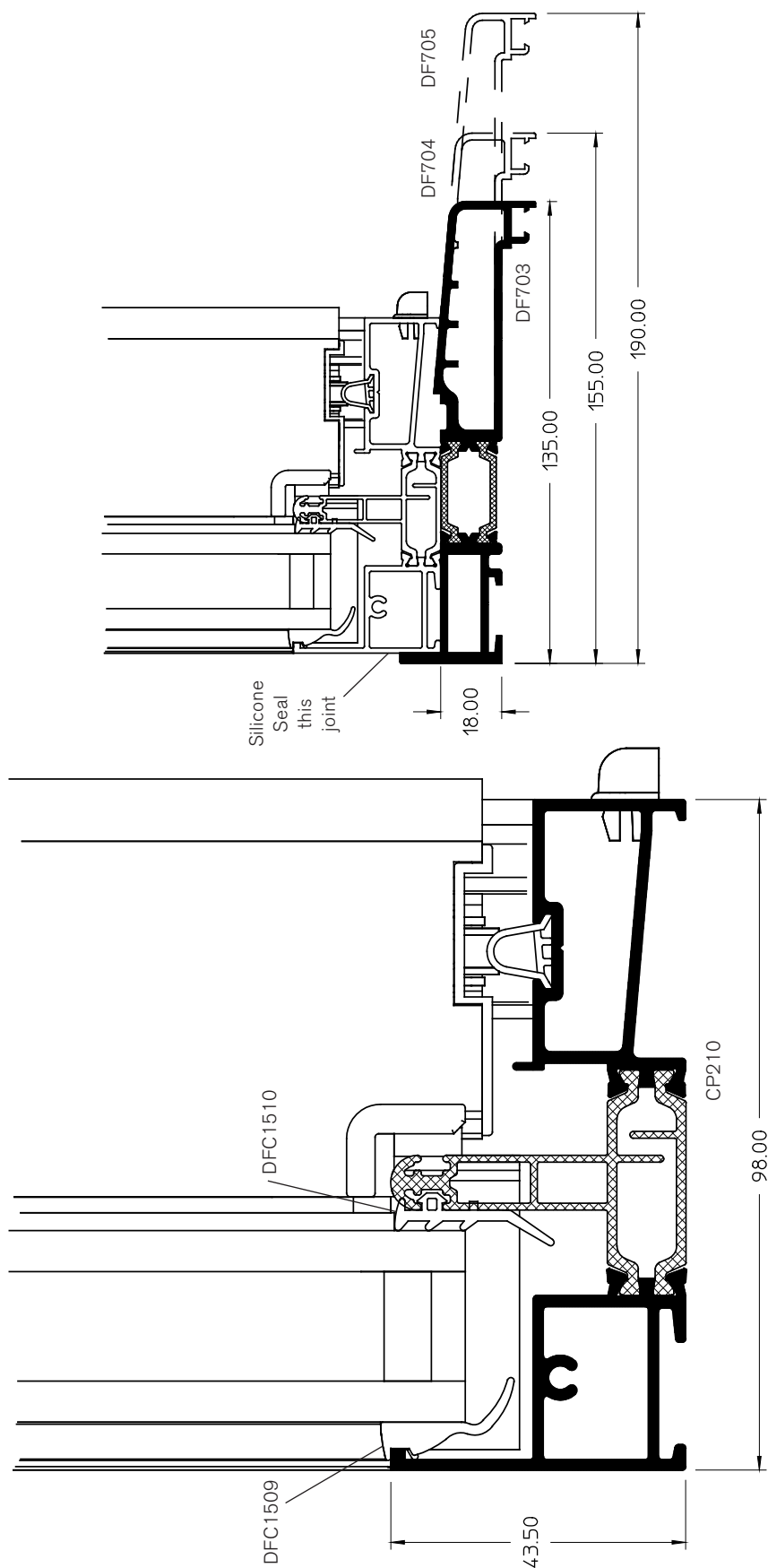


# GENERAL ARRANGEMENTS

## Crown 98 Sliding Door

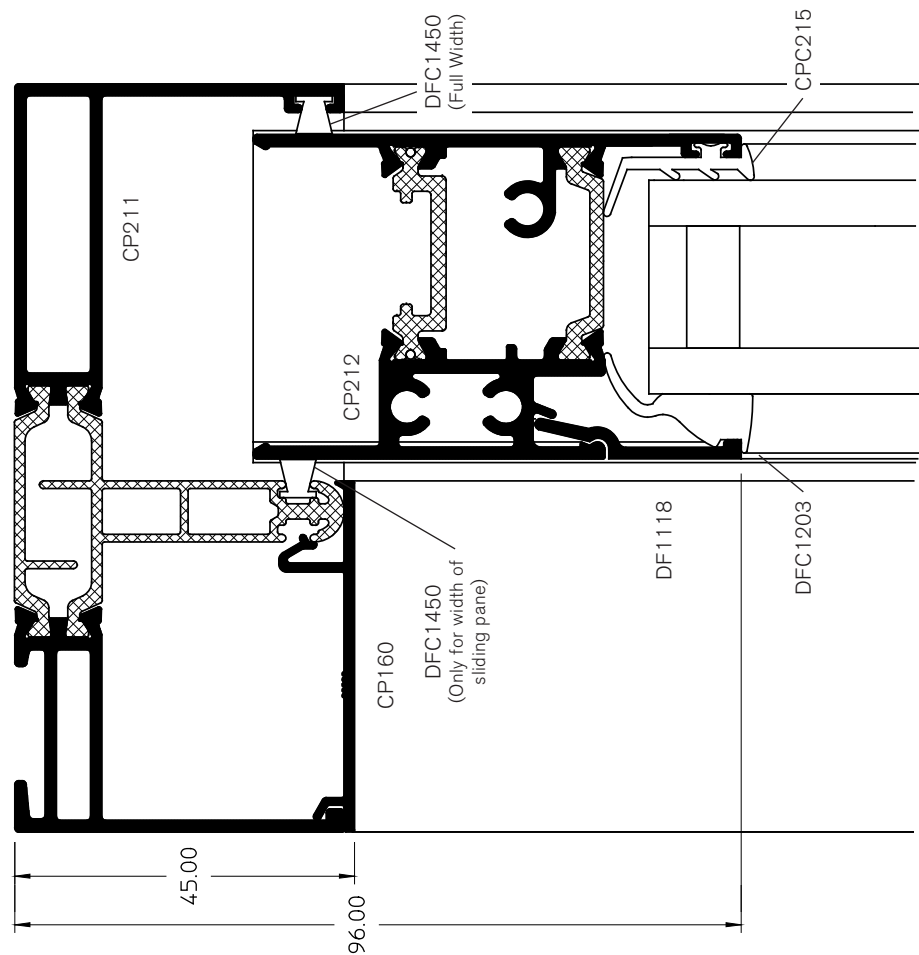
**B** FIXED CILL

ADD ON SUB CILL



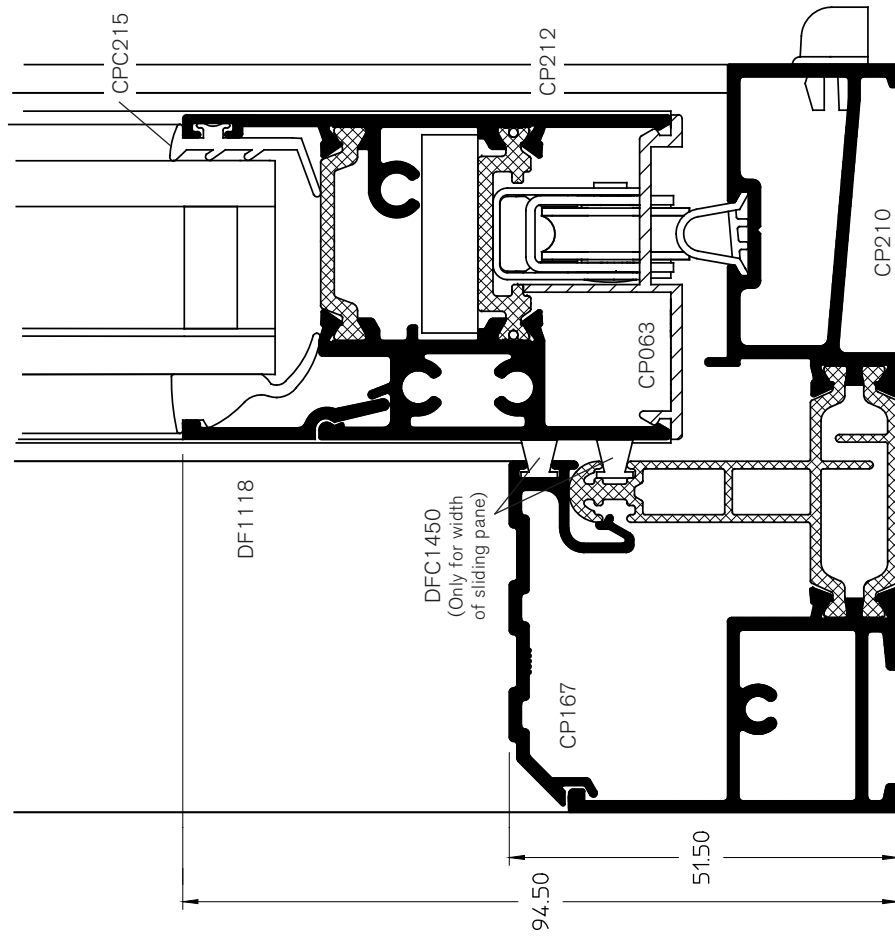
C

SLIDING HEAD



D

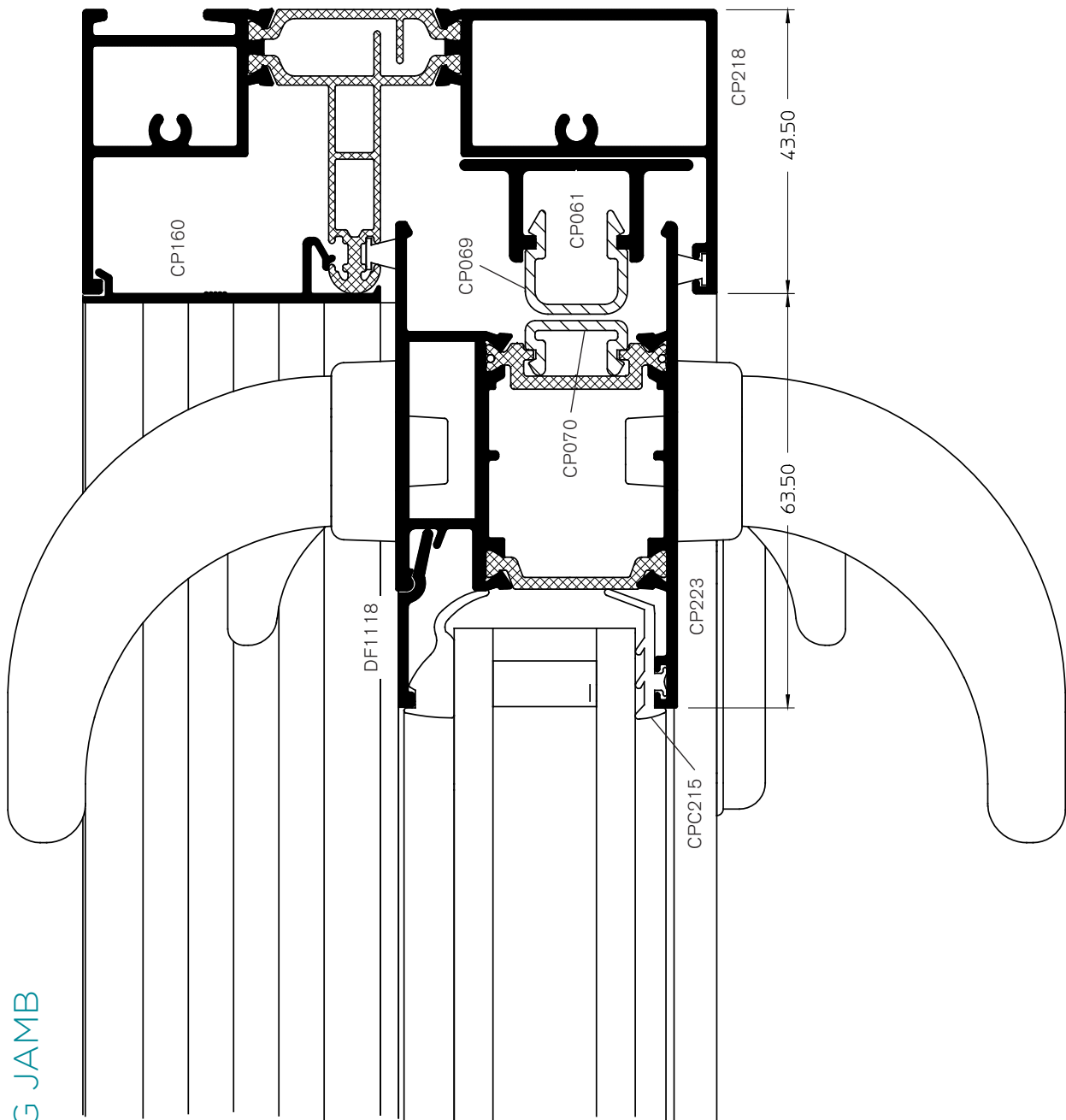
SLIDING CILL



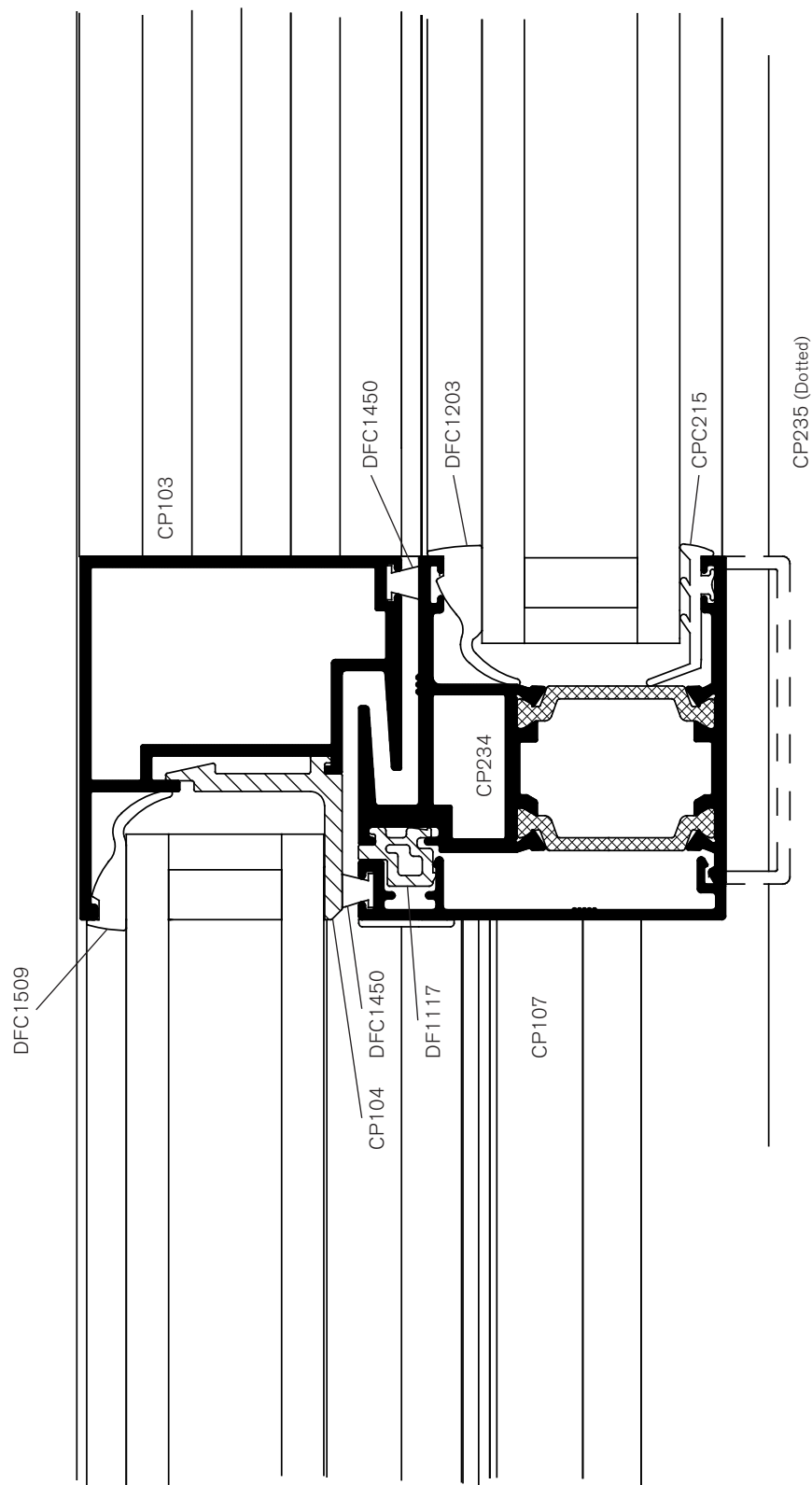
# GENERAL ARRANGEMENTS

## Crown 98 Sliding Door

### E LOCKING JAMB

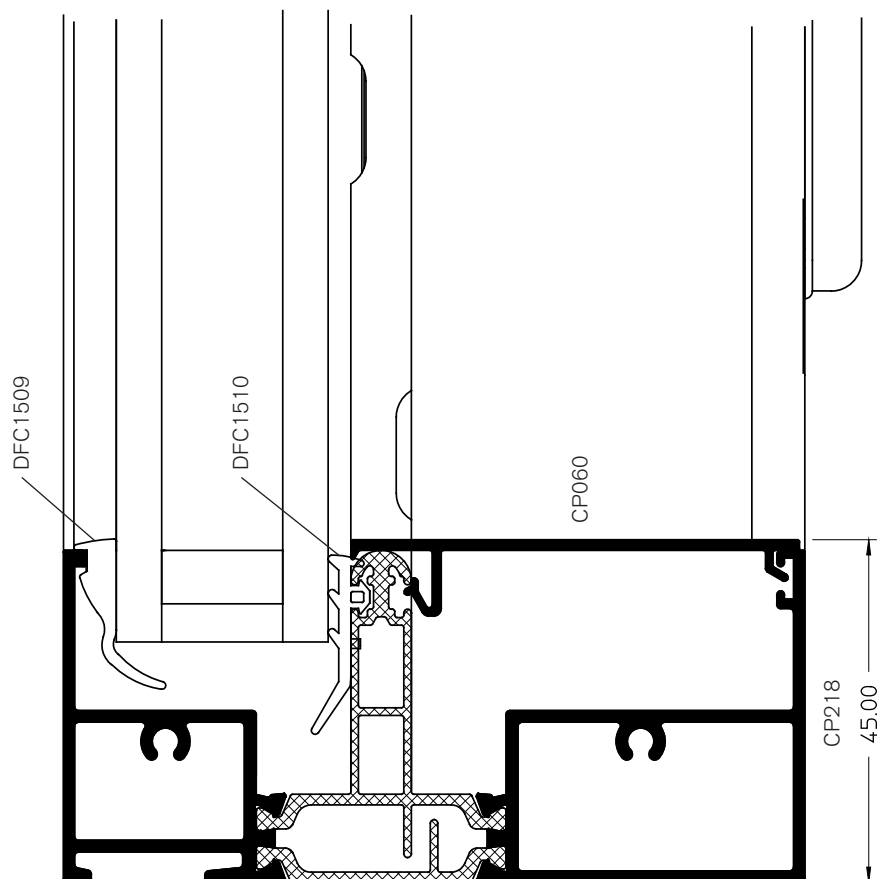


# F INTERLOCKS



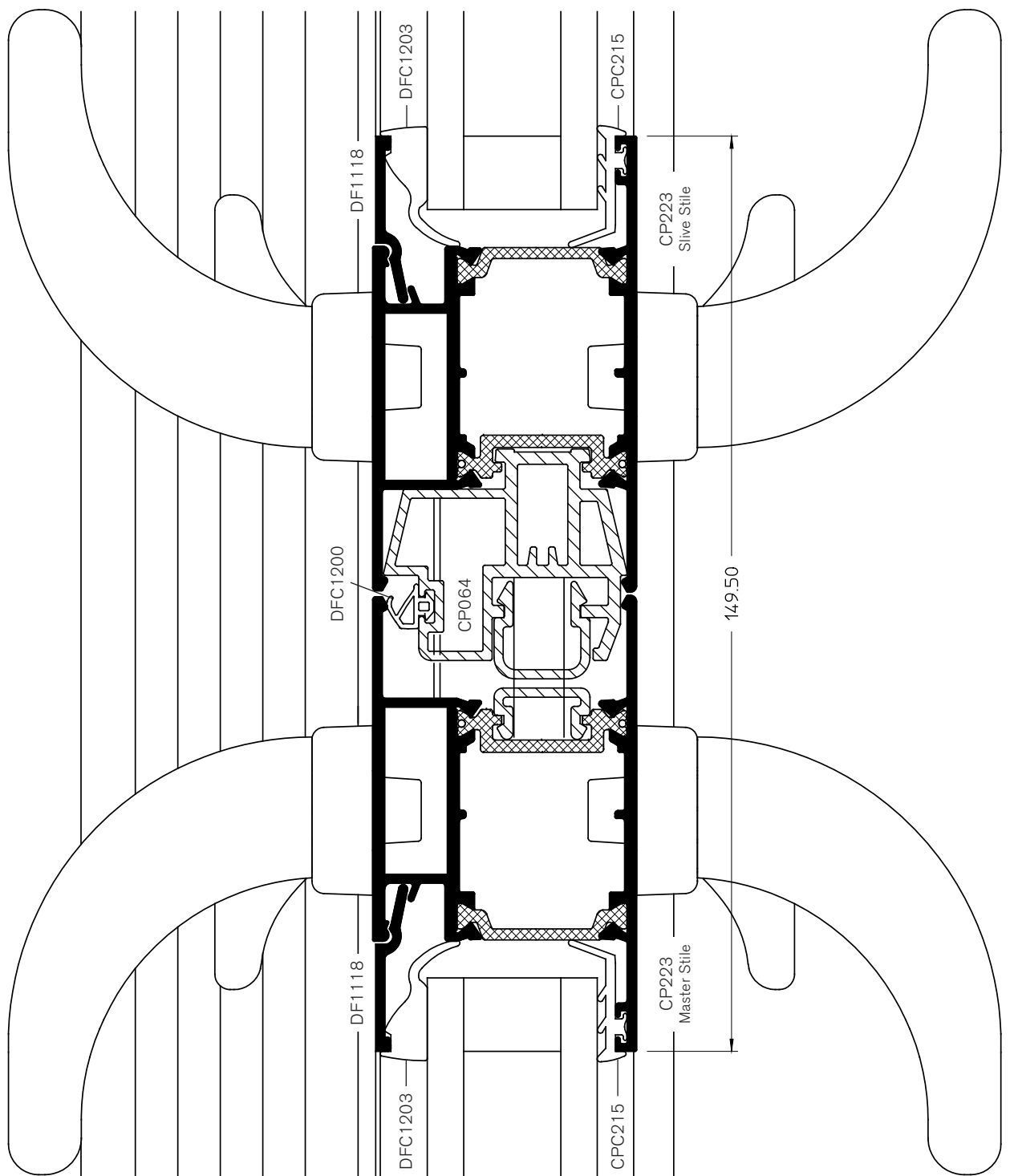
## Crown 98 Sliding Door

**G** **FIXED JAMB**





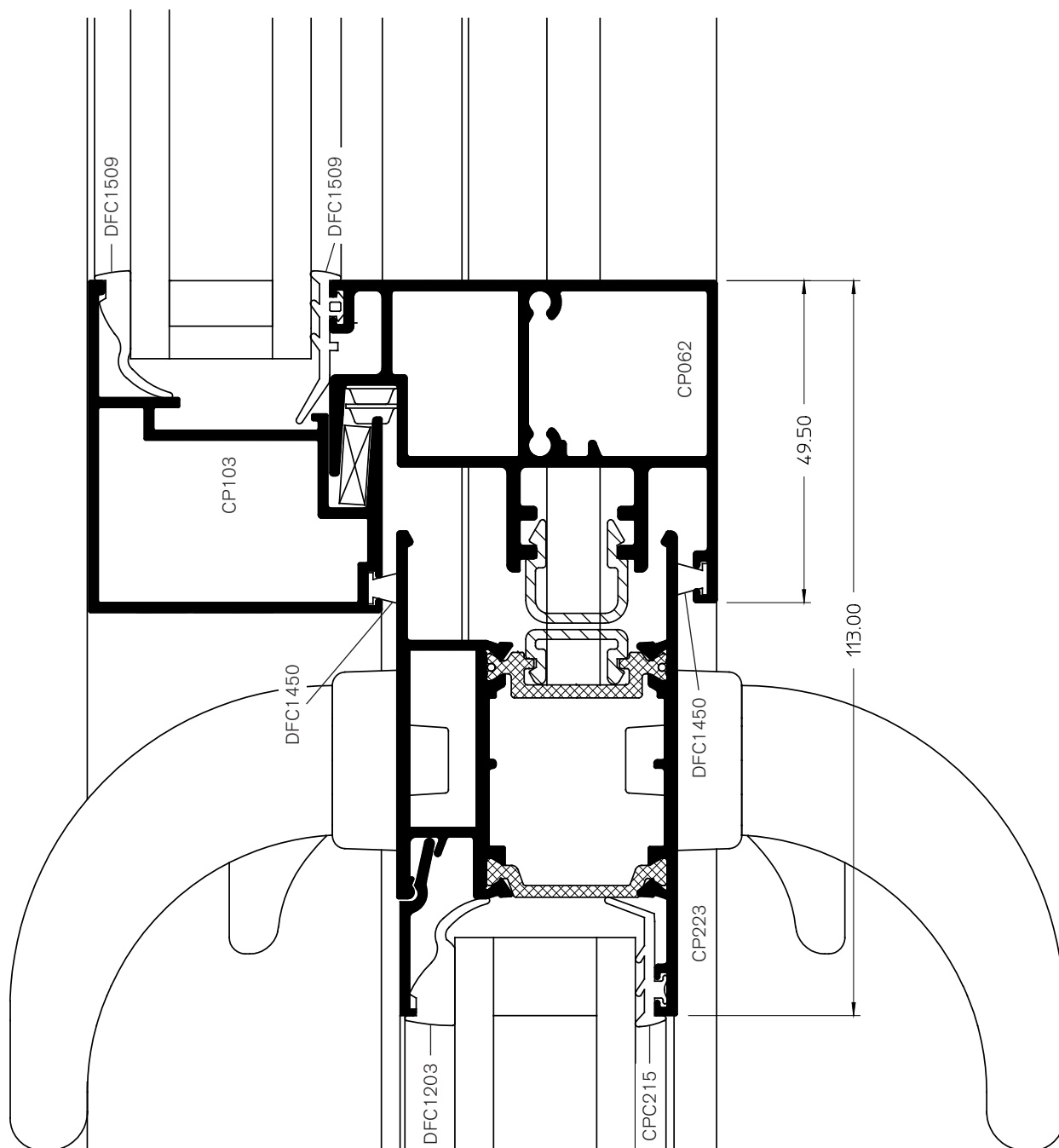
## MEETING STILES



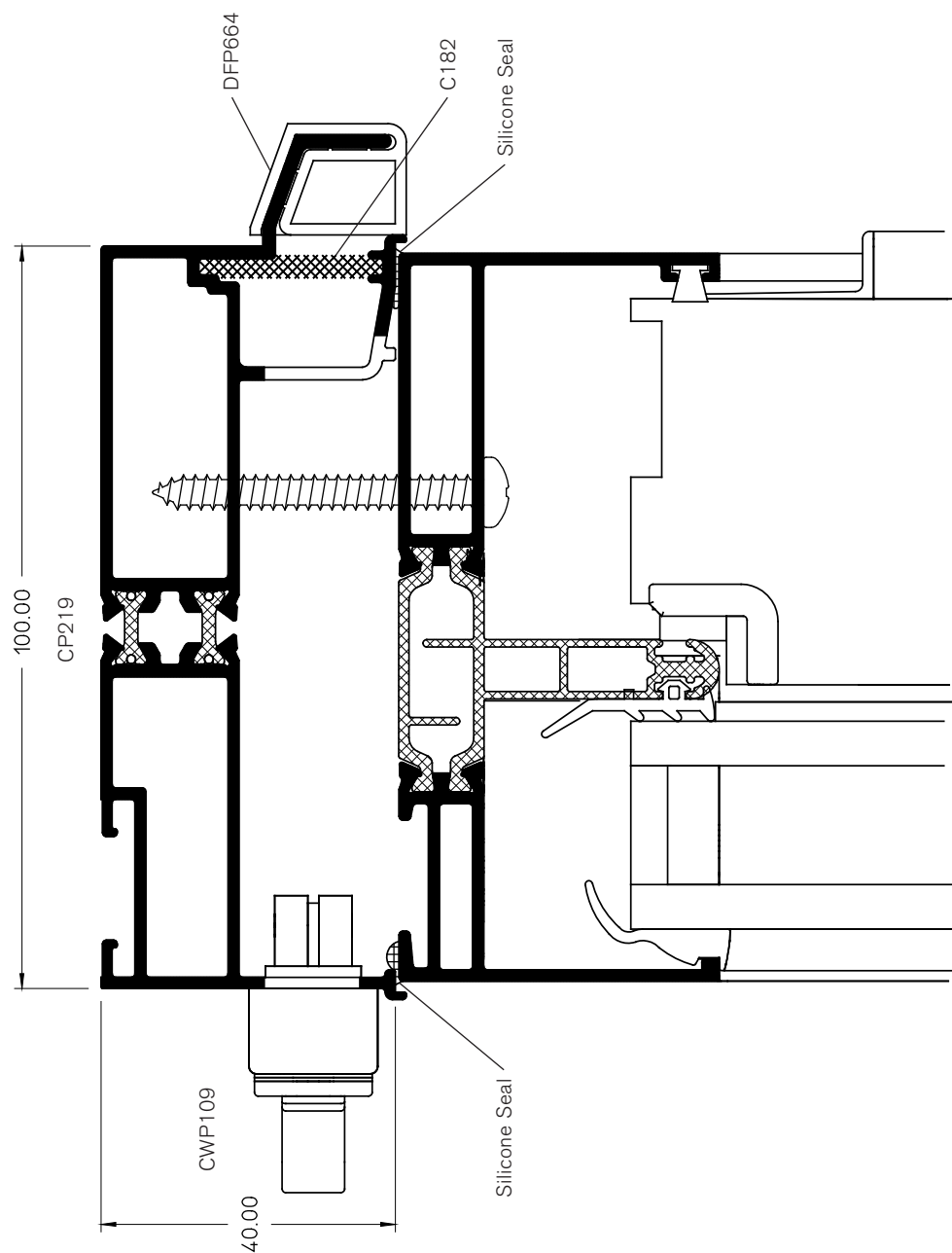
# GENERAL ARRANGEMENTS

## Crown 98 Sliding Door

### H 3-PANE MULLION



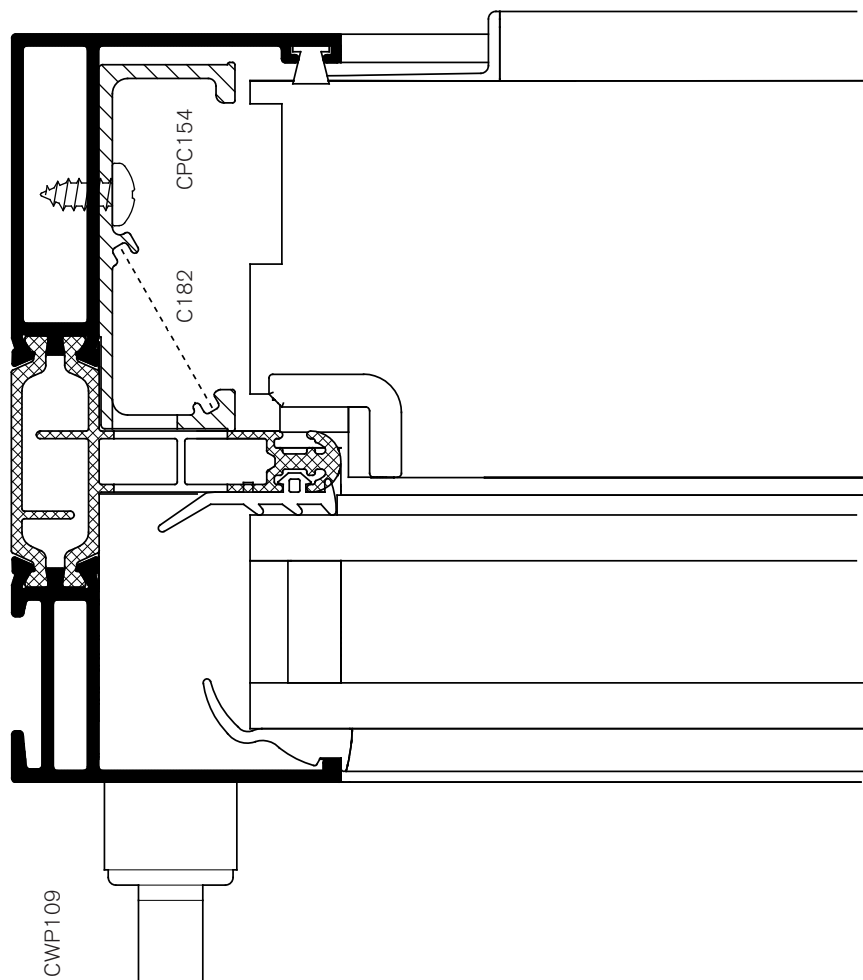
# TRICKLE VENT



# GENERAL ARRANGEMENTS

## Crown 98 Sliding Door

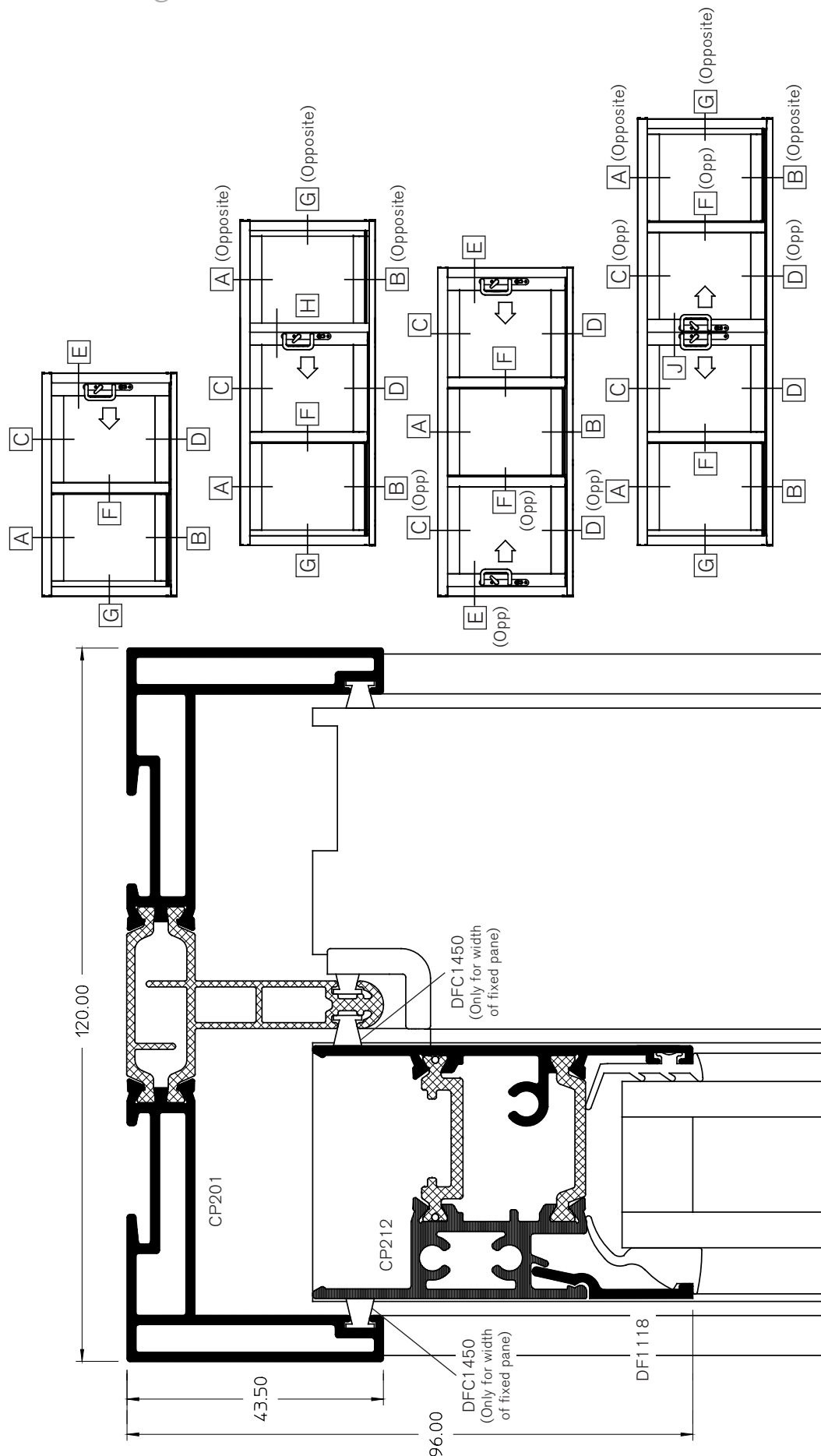
### CONCEALED TRICKLE VENT



# GENERAL ARRANGEMENTS

## Crown 120 Sliding Door

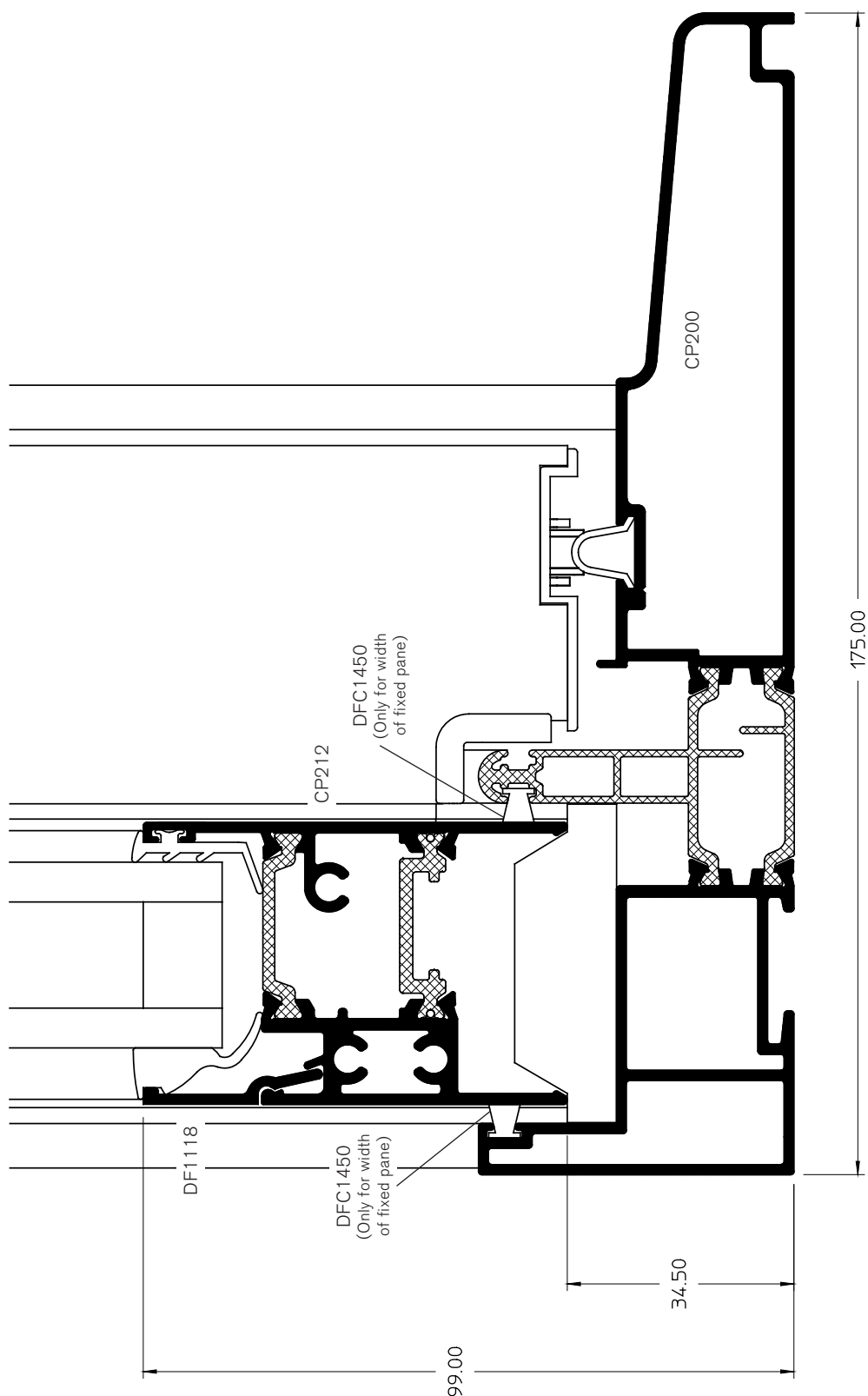
**A** FIXED HEAD



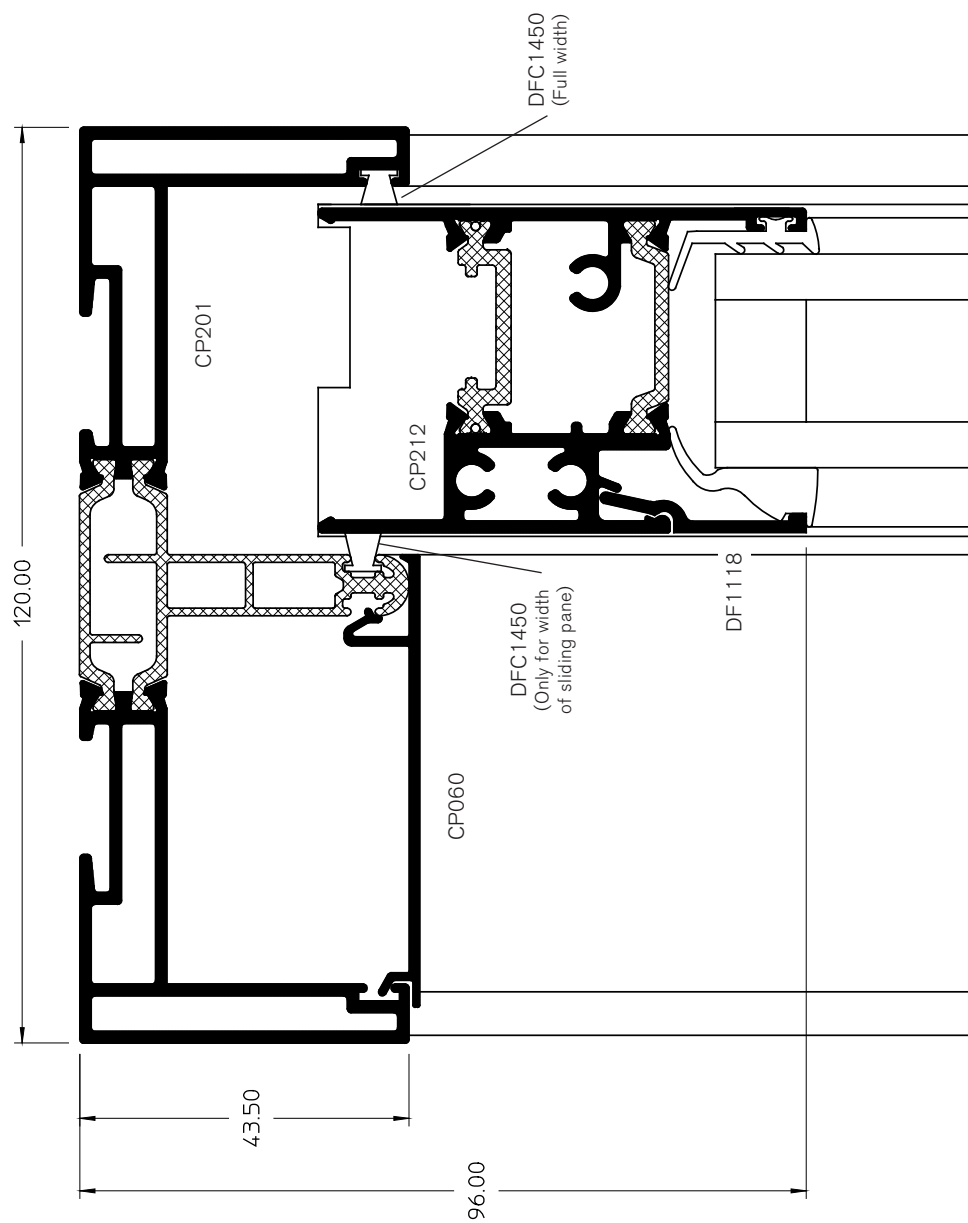
# GENERAL ARRANGEMENTS

## Crown 120 Sliding Door

### B FIXED CILL



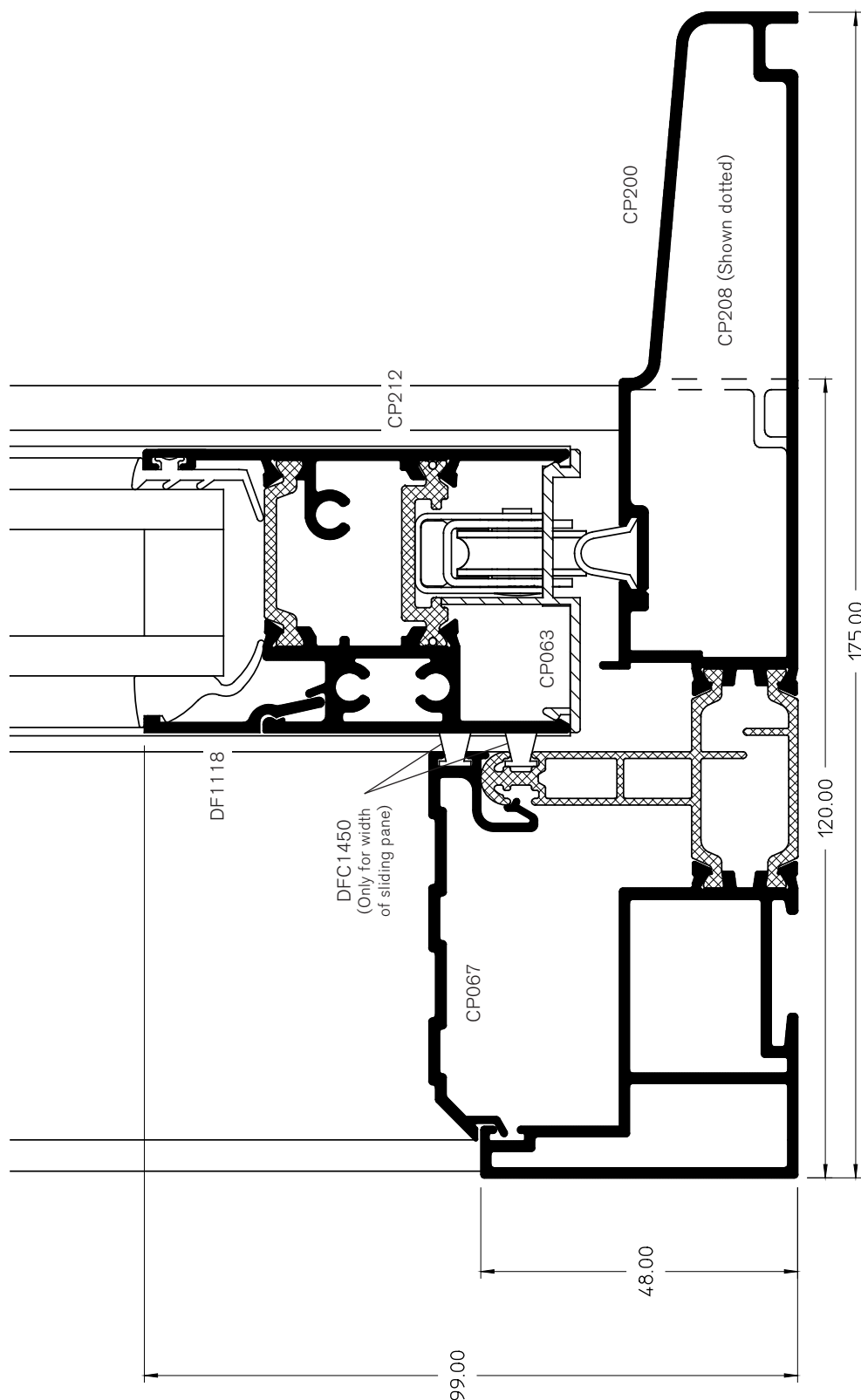
# C SLIDING HEAD



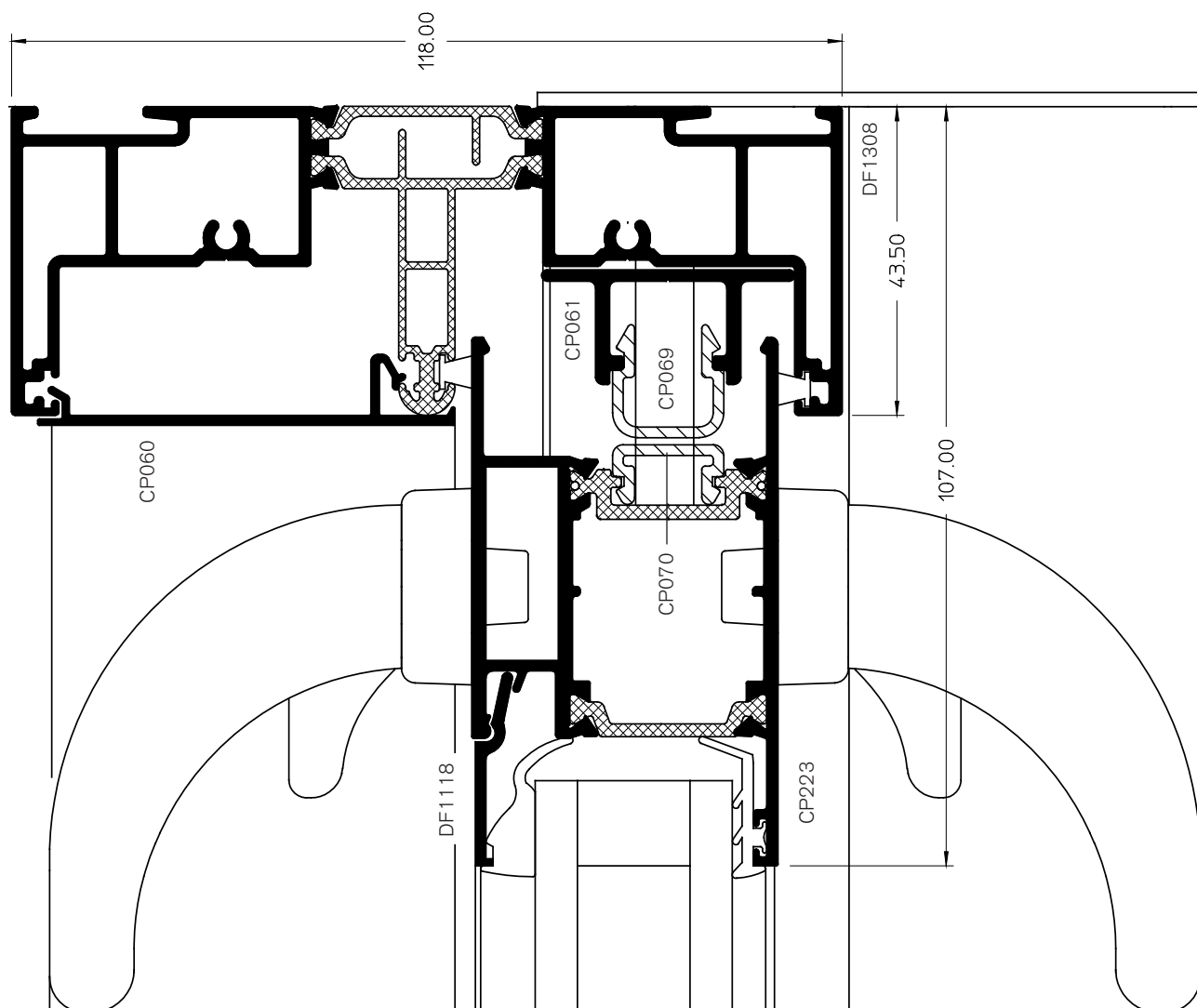
# GENERAL ARRANGEMENTS

## Crown 120 Sliding Door

### D SLIDING CILL

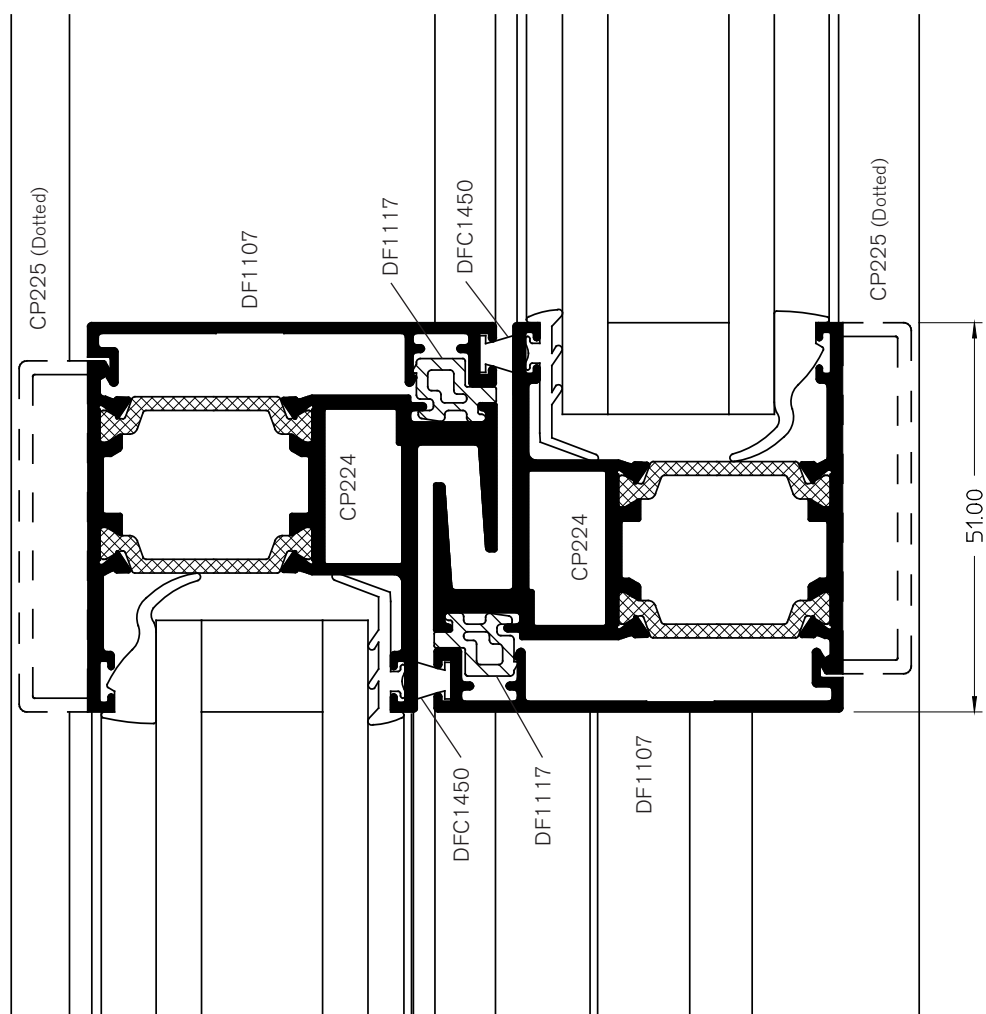


# E LOCKING JAMB



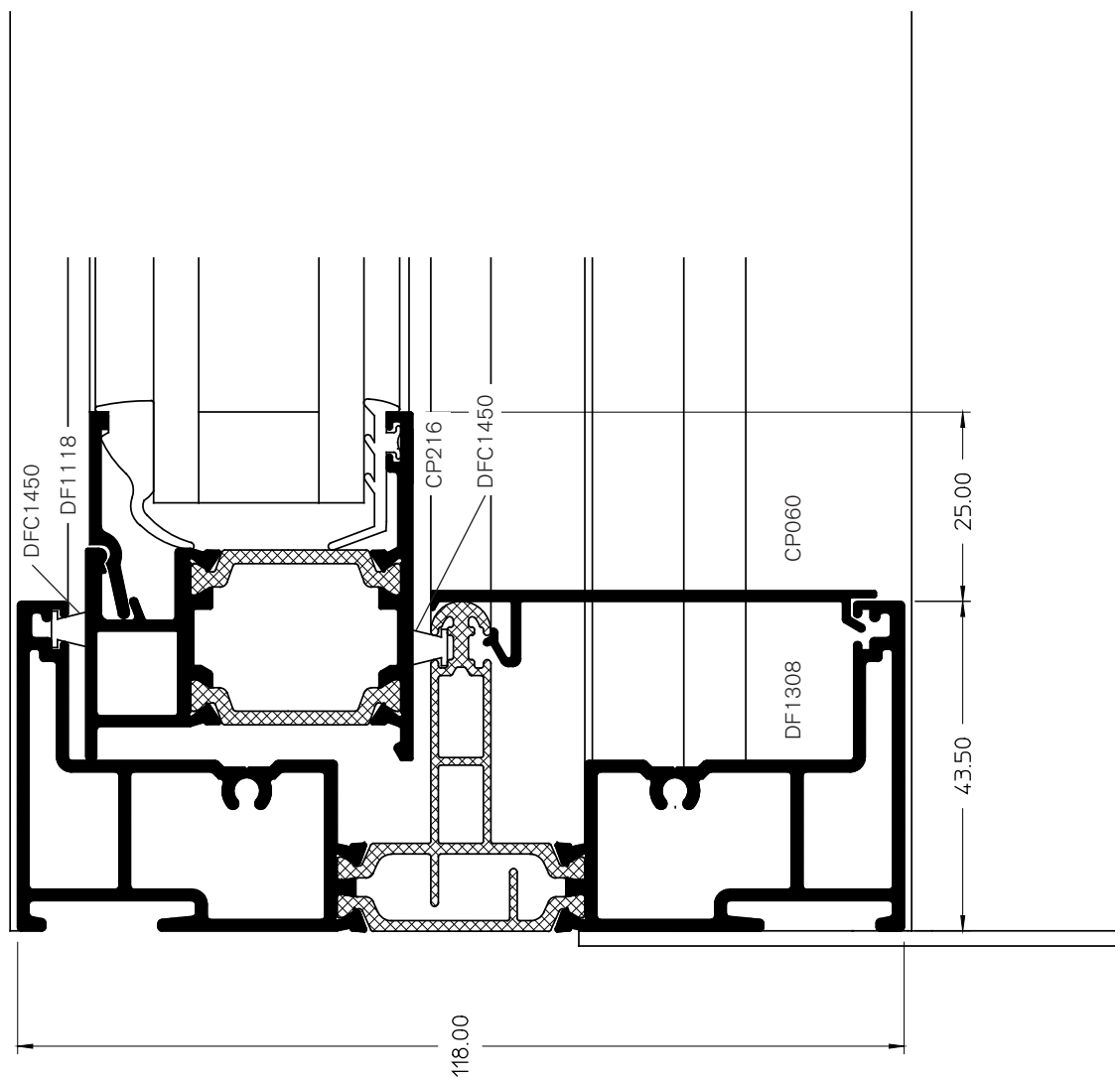
# GENERAL ARRANGEMENTS

## Crown 120 Sliding Door



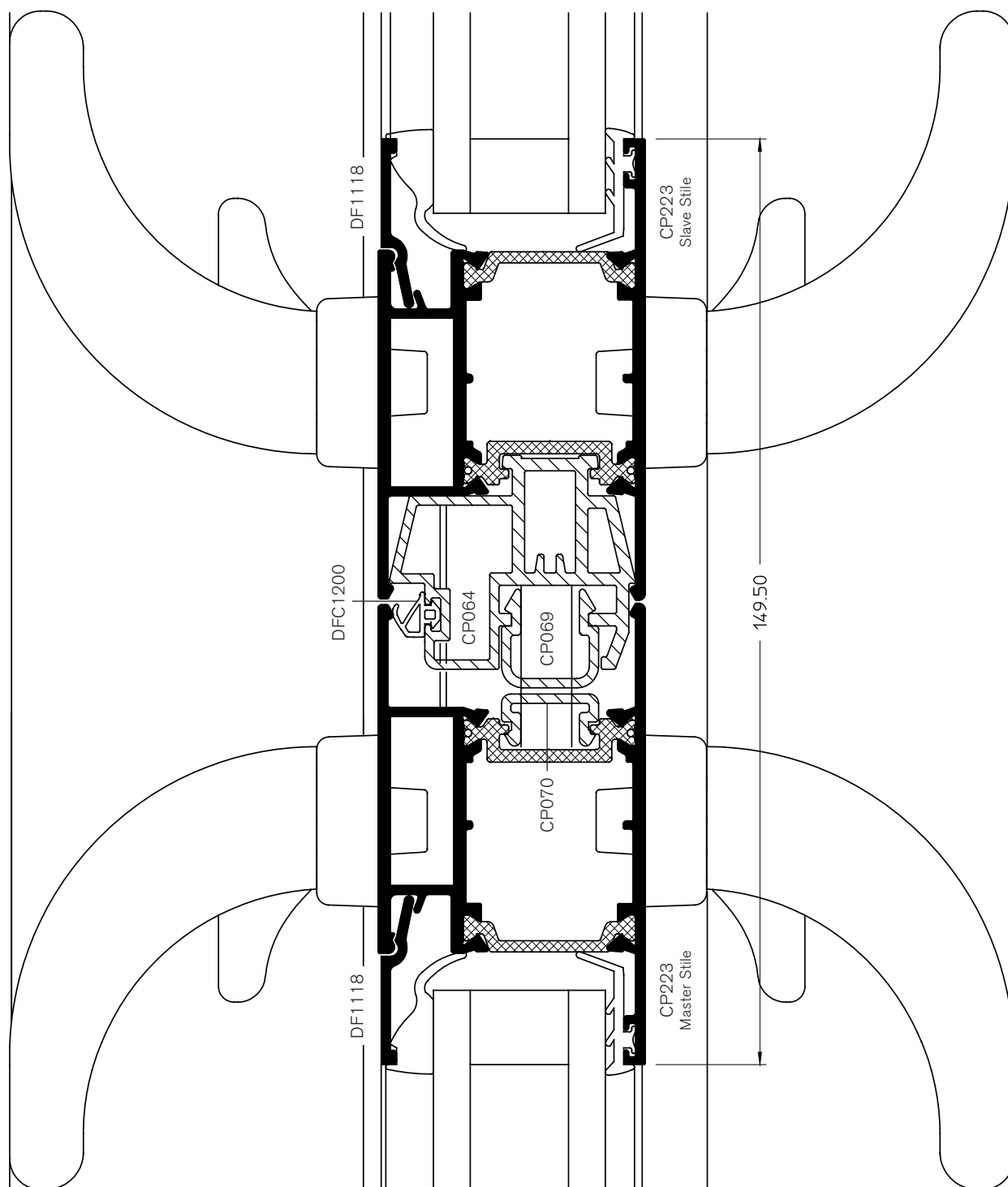
F INTERLOCKS

# G FIXED JAMB

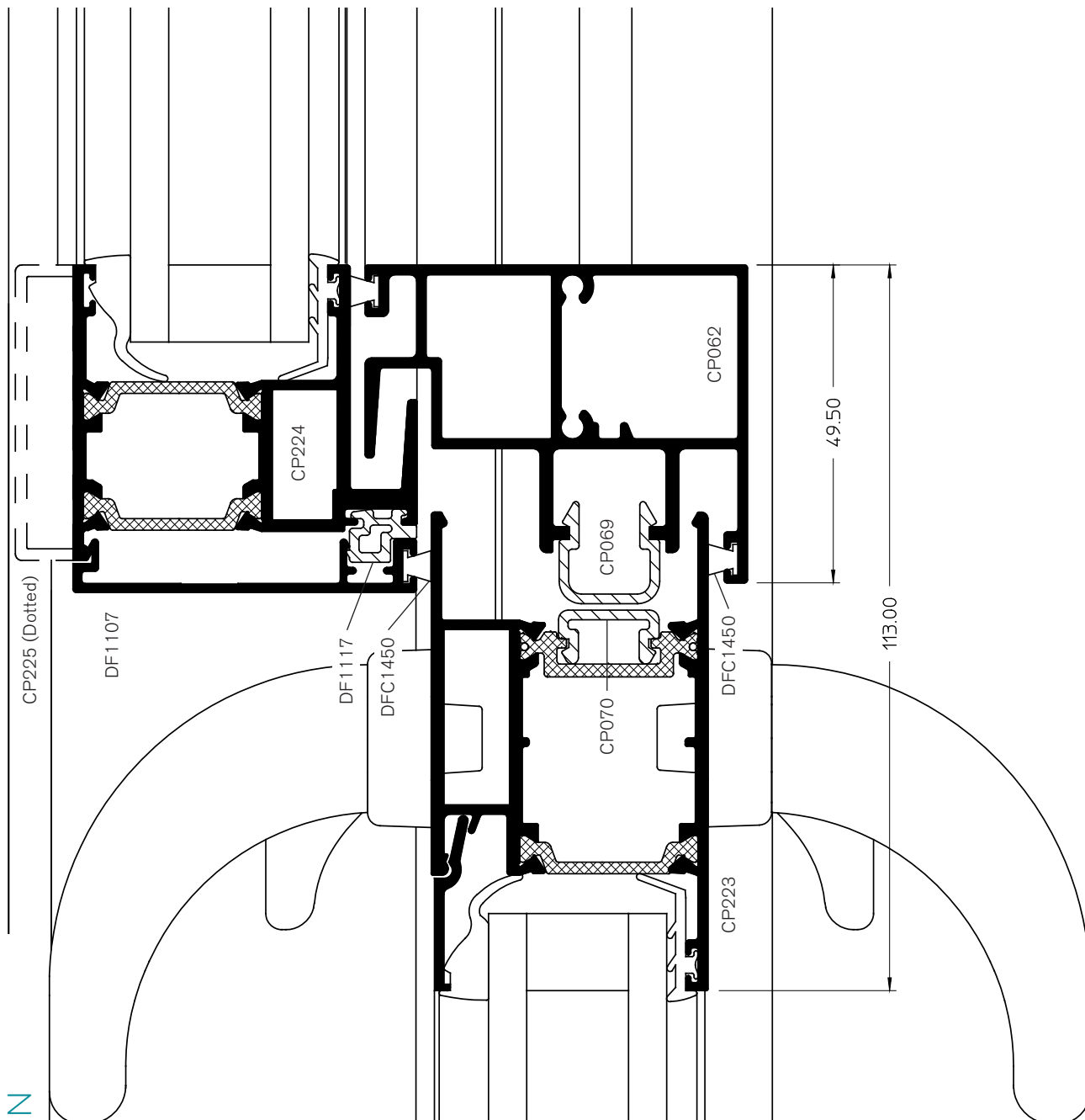


# GENERAL ARRANGEMENTS

## Crown 120 Sliding Door



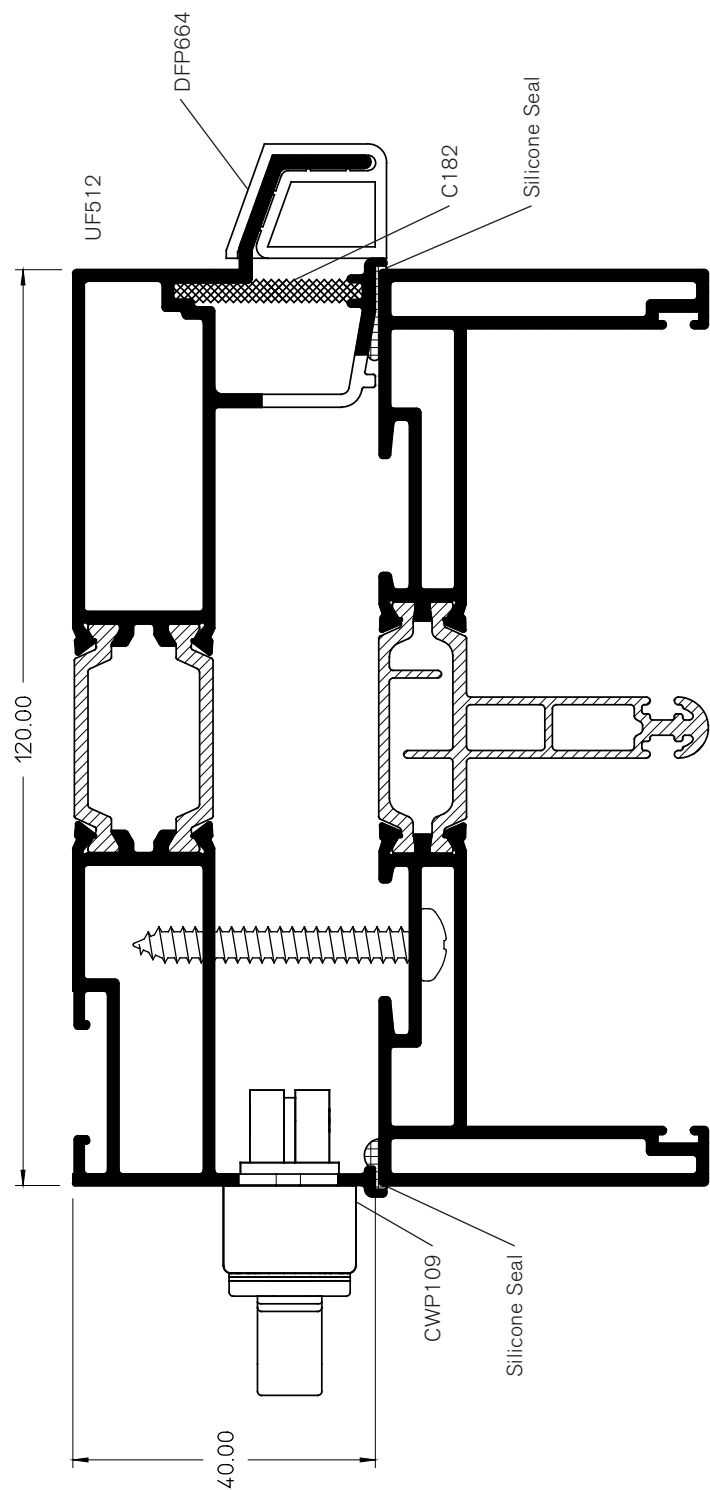
# H 3-PANE MULLION



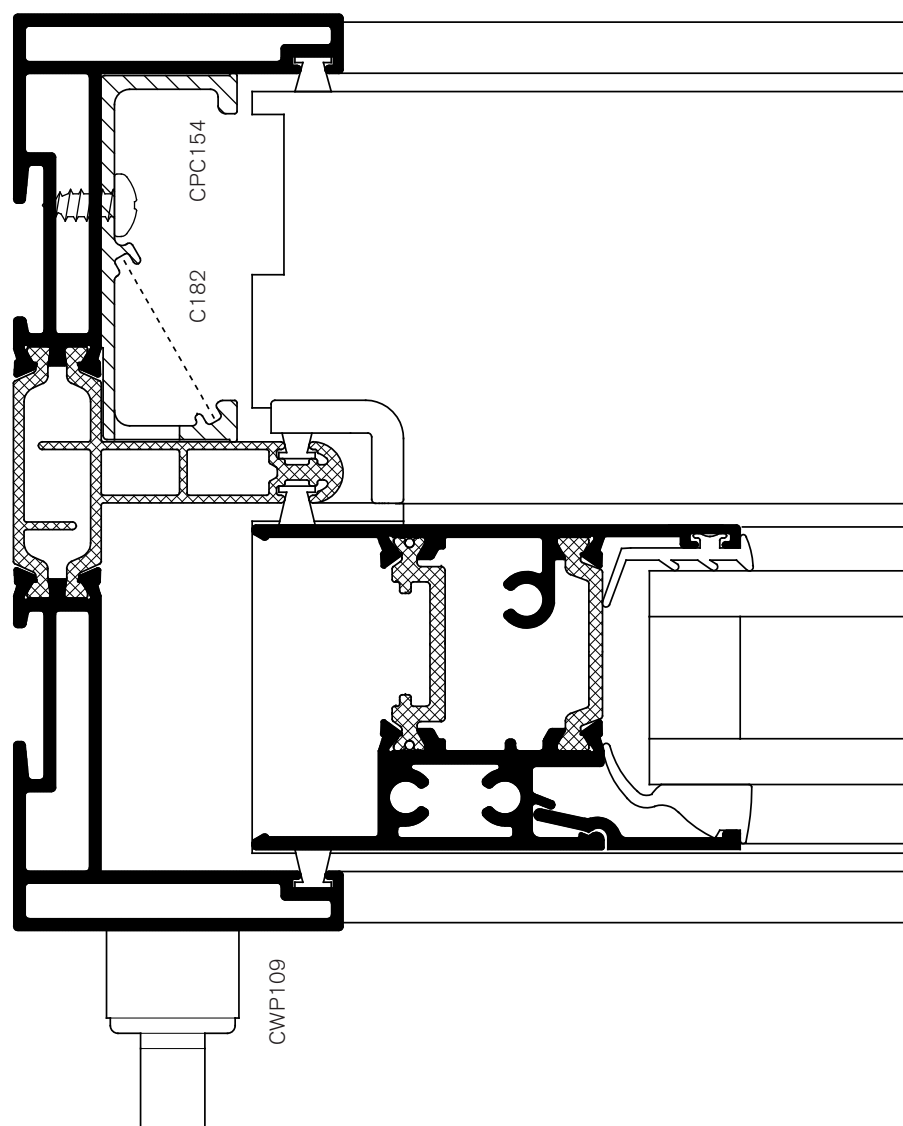
# GENERAL ARRANGEMENTS

## Crown 120 Sliding Door

### OPTIONAL OVER-HEAD TRICKLE VENT



## OPTIONAL CONCEALED TRICKLE VENT



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Contact Details

## SAPA BUILDING SYSTEM

Sapa Building Systems Ltd is a member of the worldwide Sapa Group, which has over 23,500 employees, in more than 40 countries across the globe. The group develops and market high value-added profiles in aluminium and are the leading independent producer of aluminium profiles in the world.

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