

# SEF-Thermal WINDOW & DOOR Product Manual

Contents:

SECTION A:

Tilt/Turn & Casement Window Typical Sections

SECTION B:

Door Typical Sections

SECTION C:

Additional Details

SECTION D:

Statics

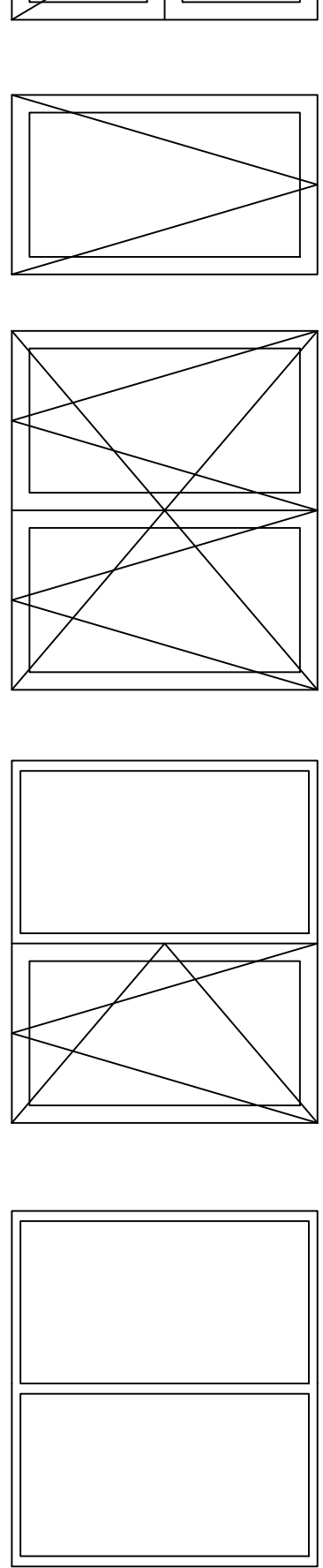
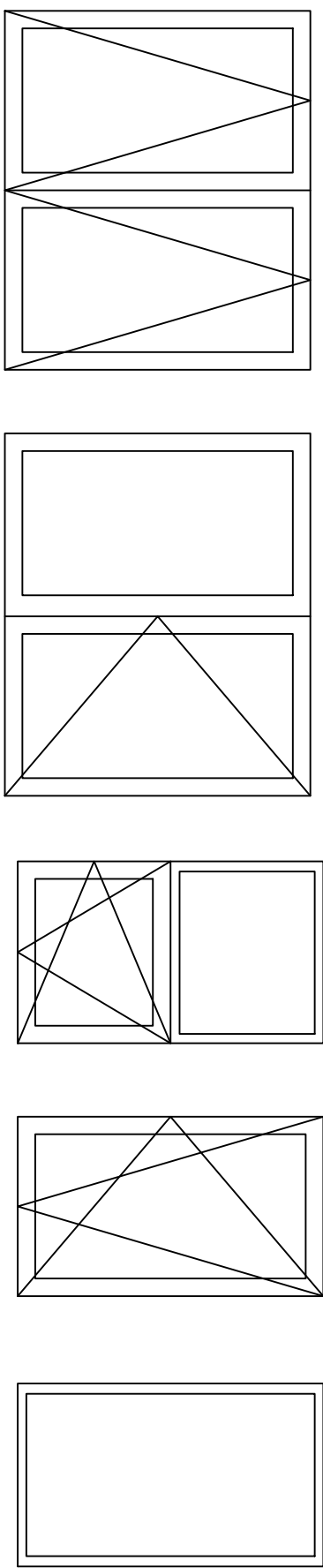
# SEF-Thermal WINDOW PROFILES

Description Profiles For Fixed/Tilt & Turn/Casement Windows

Detail Section A

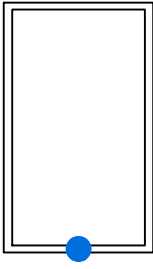
No.  
System:

A

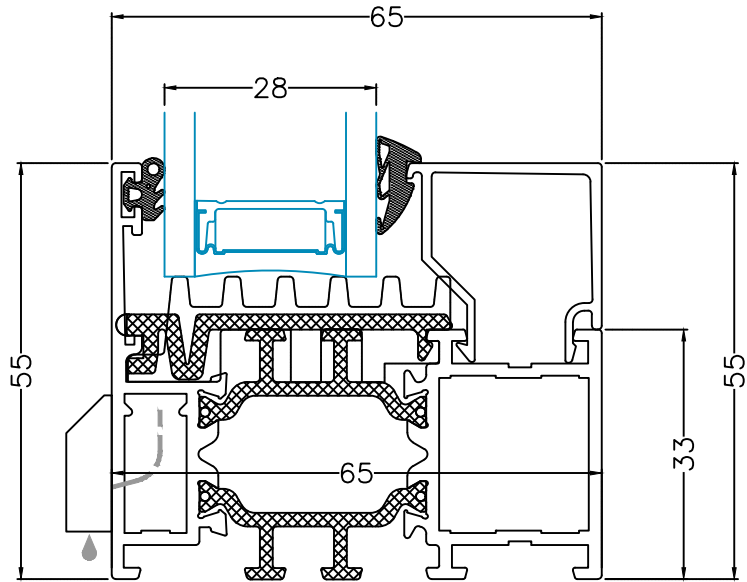


Please Note  
The Above is a Selection of the Most Popular Configurations.

Description: SEF - Thermal Tilt & Turn/Casement Window System Configuration Options	
Detail No.:	SEF - A - 00
System:	A



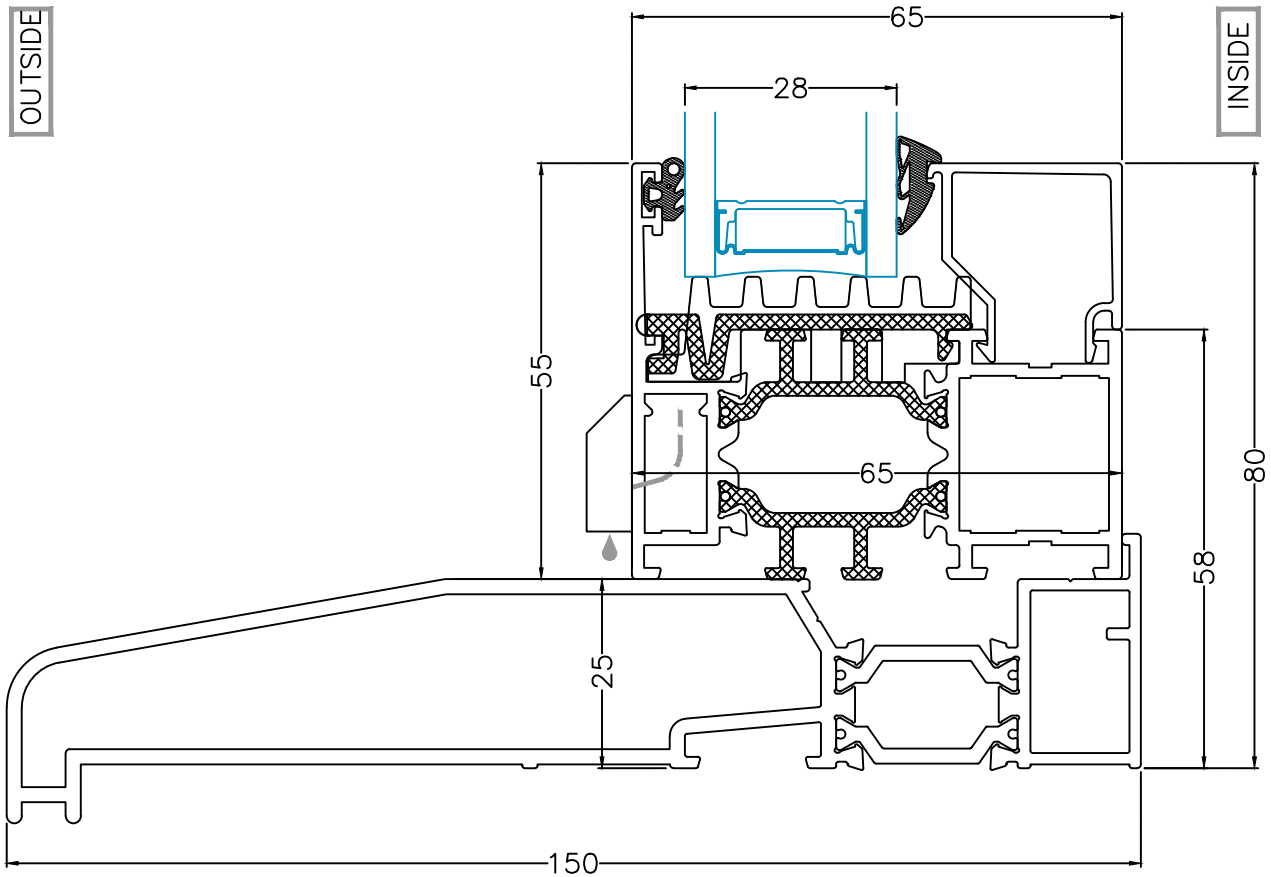
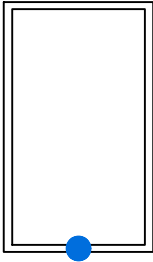
OUTSIDE



INSIDE

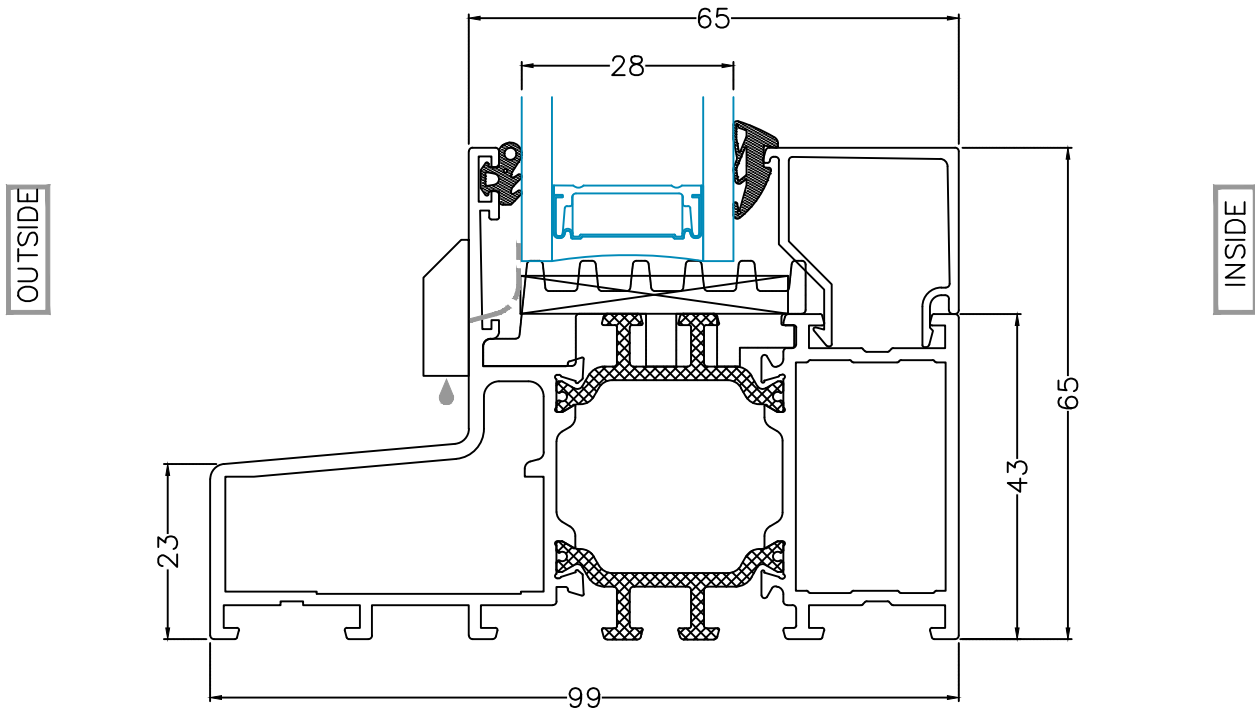
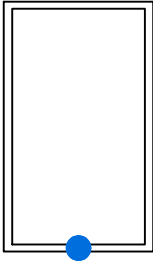
Description  
Vertical Section  
65mm Outer Frame (Bottom Rail) – Fixed Frame

Detail No.	SEF65-A-01A
System:	A



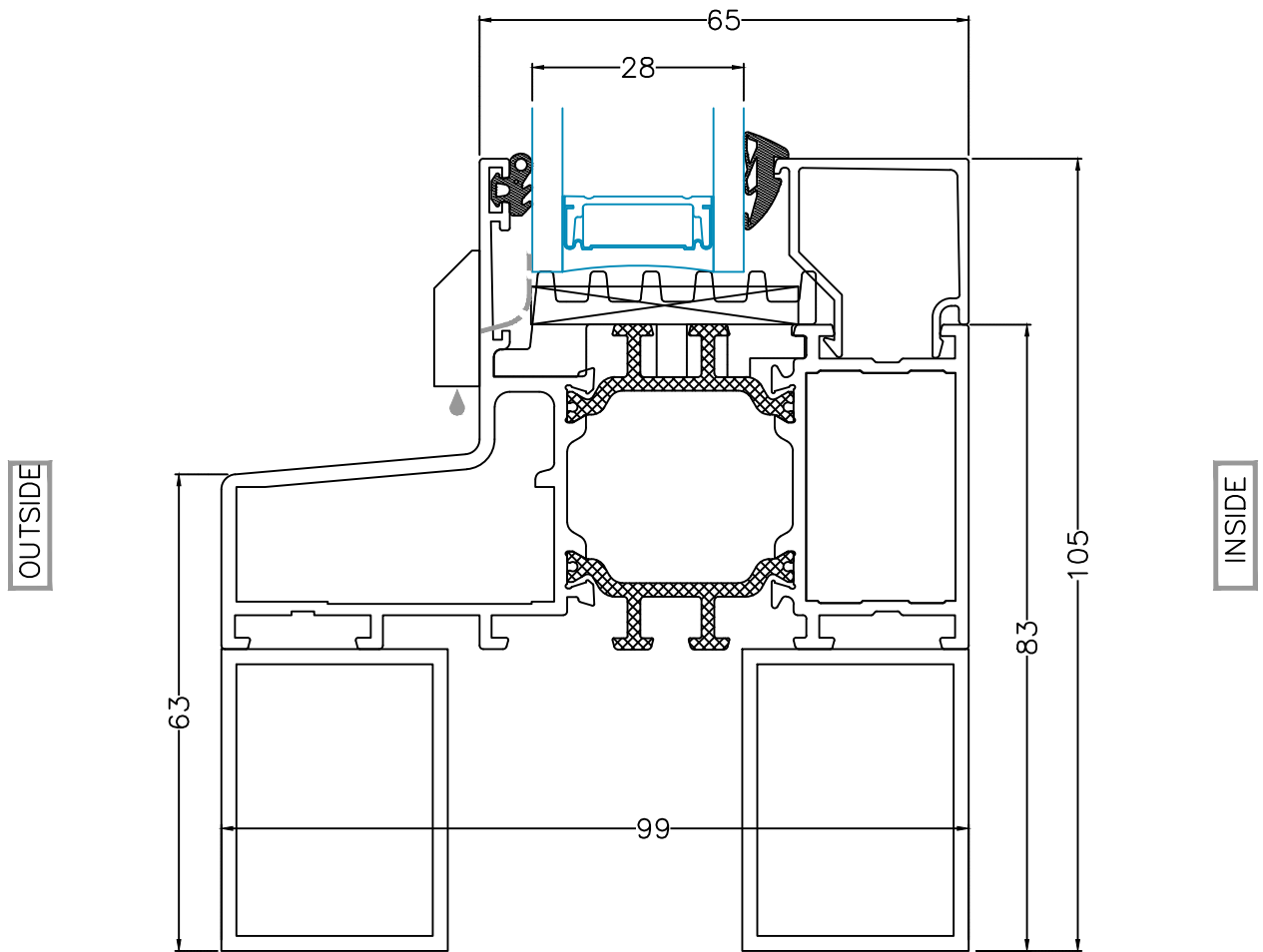
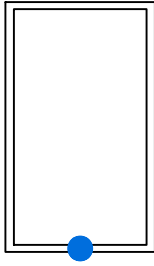
Description  
Vertical Section  
65mm Outer Frame (Bottom Rail) – Fixed Frame With  
Sill

Detail No. SEF65-A-01E  
System: A



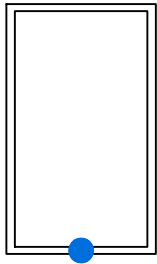
Description  
Vertical Section  
99mm Outer Frame (Bottom Rail) – Fixed Frame

Detail No.	SEF99-A-010
System:	A



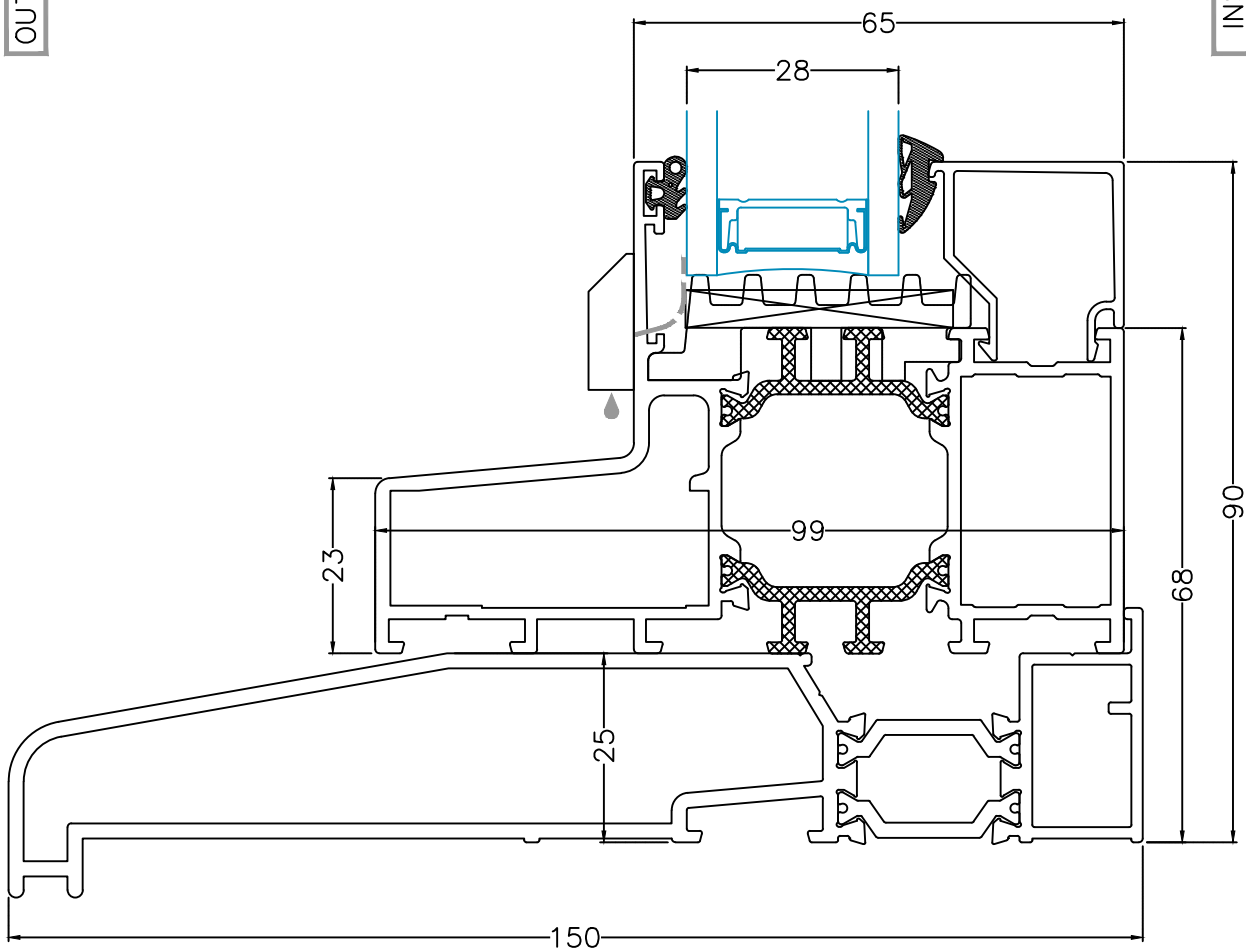
Vertical Section  
 Description  
 99mm Outer Frame (Bottom Rail) – Fixed Frame With  
 Extension

Detail SEF99-A-01D  
 No.  
 System: A



OUTSIDE

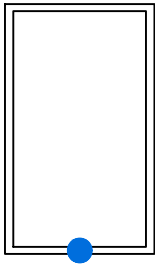
INSIDE



Description  
Vertical Section  
99mm Outer Frame (Bottom Rail) – Fixed Frame On  
Sill

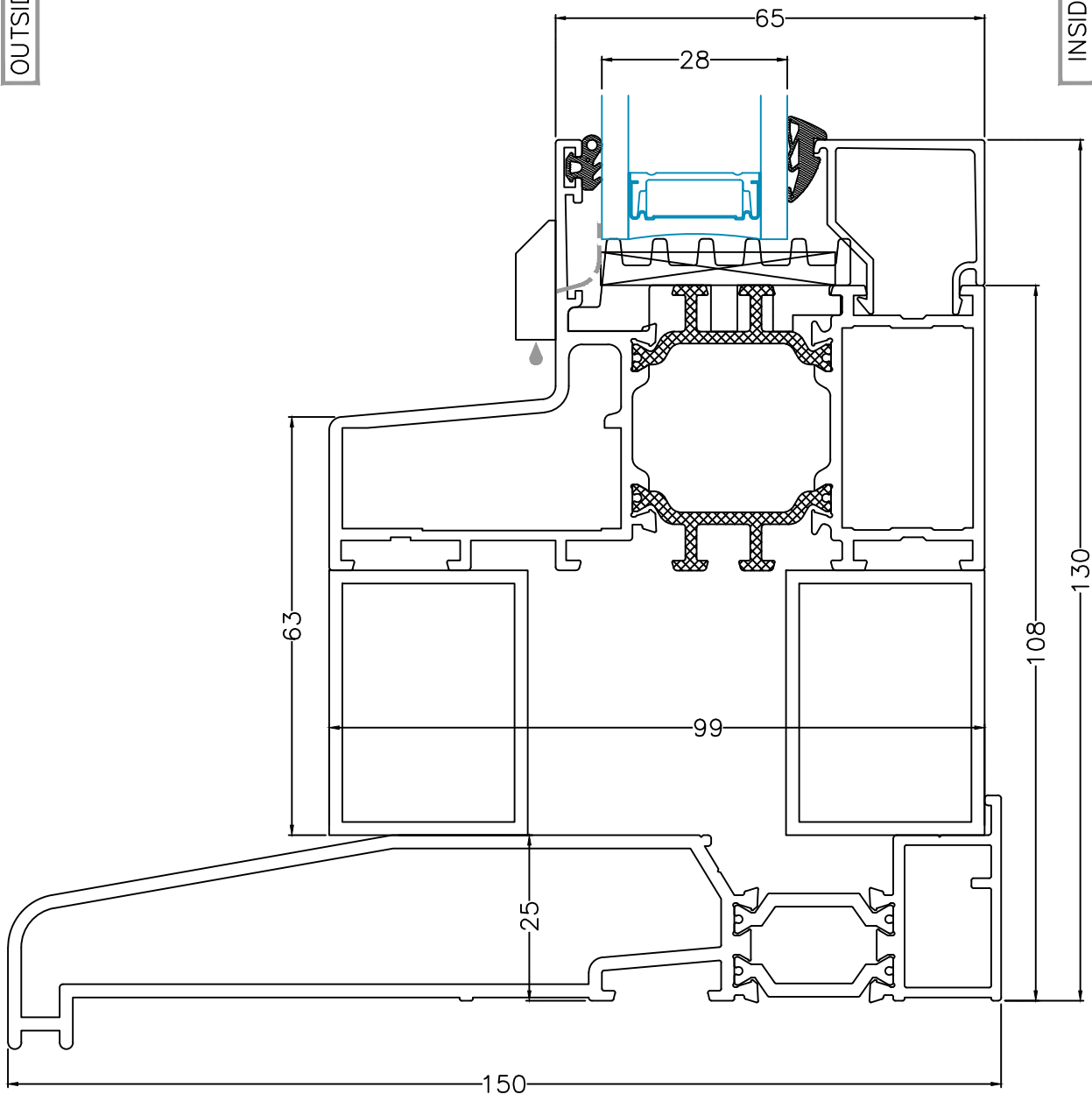
Detail SEF99-A-01E  
No.  
System: A





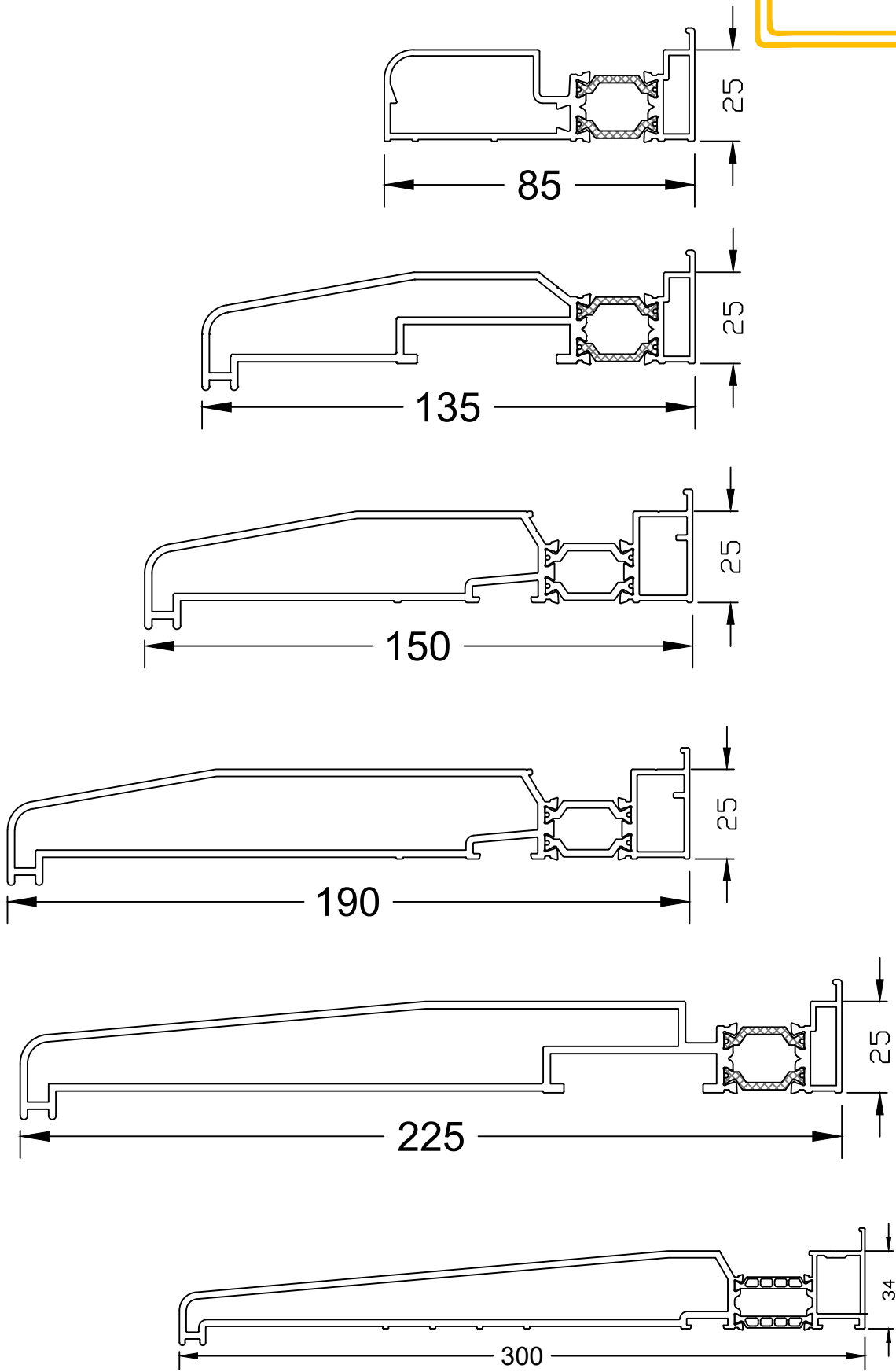
OUTSIDE

INSIDE



Description Vertical Section  
99mm Outer Frame (Bottom Rail) Fixed Frame With  
Sill And Frame Extension

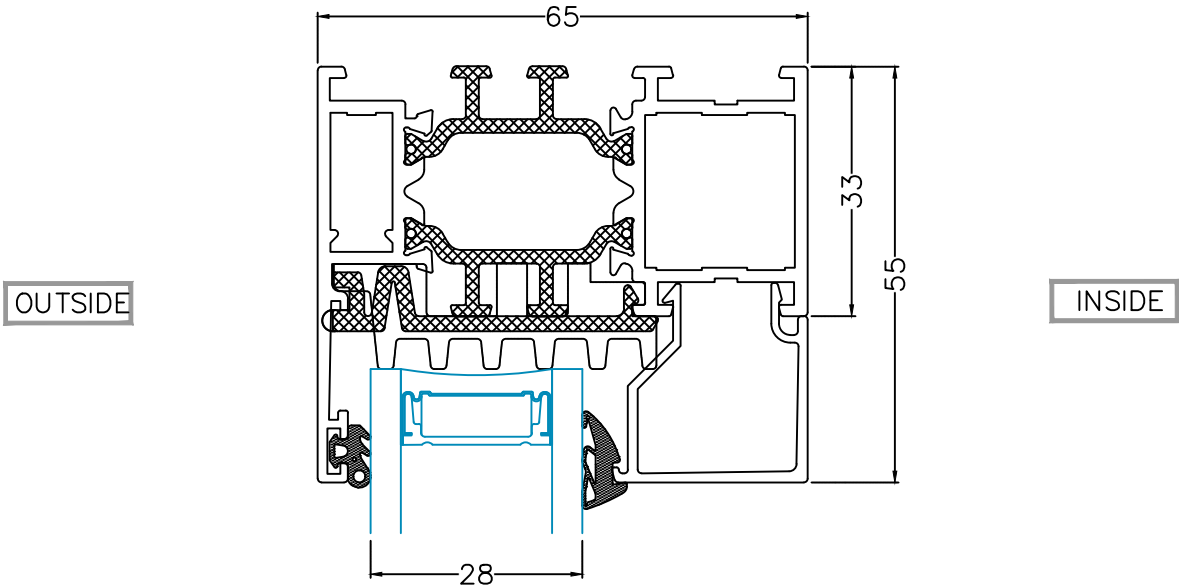
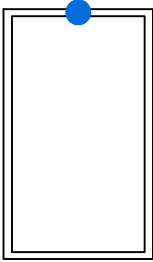
Detail SEF99-A-01F  
No. System: A



**Sill Options**

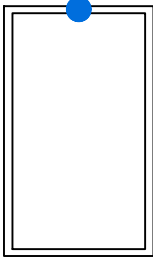
Note: 300mm and 85mm Sill not Suitable for 99mm Outer Frame

Detail SEF99-A-01F	
No.	
System:	A

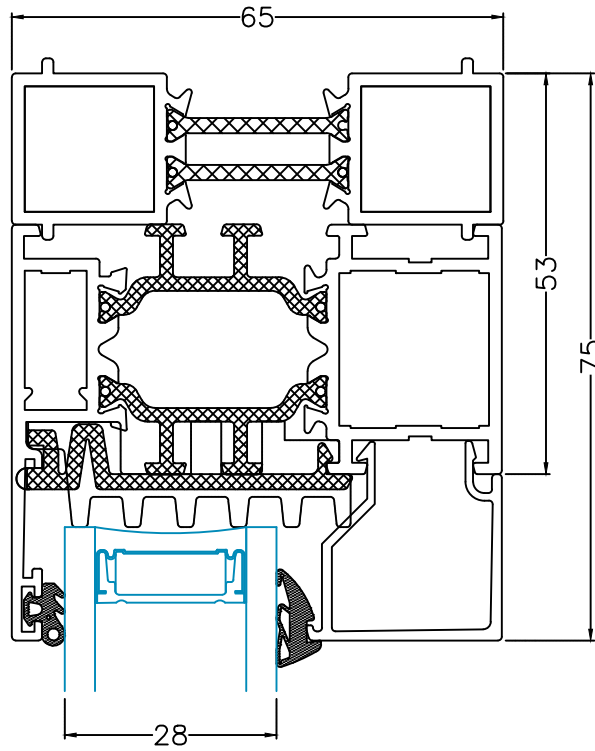


Description  
Horizontal Section  
65mm Outer Frame (Top Rail) – Fixed Frame

Detail SEF65-A-02A  
No.  
System: A



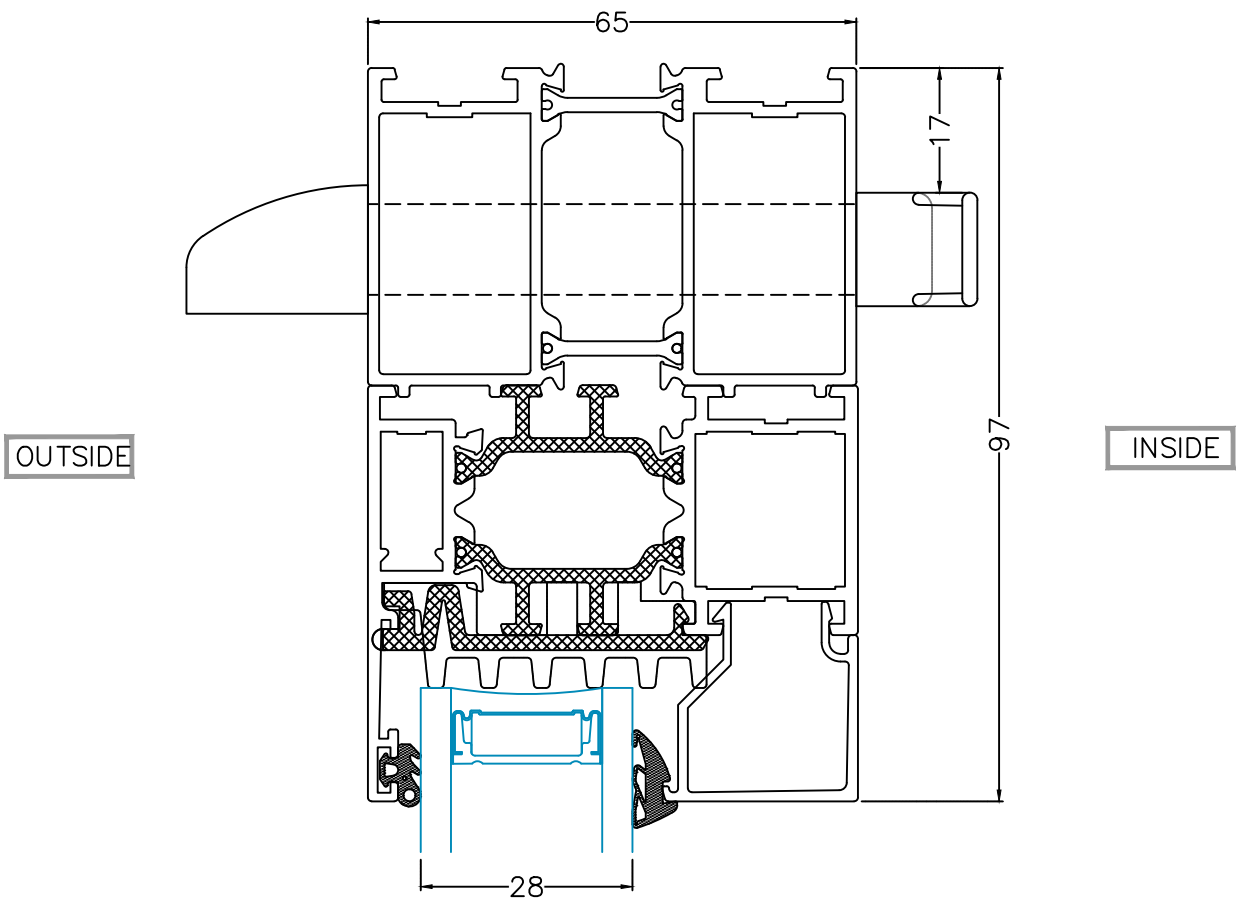
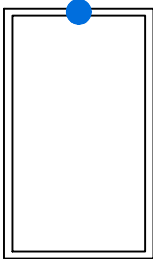
OUTSIDE



INSIDE

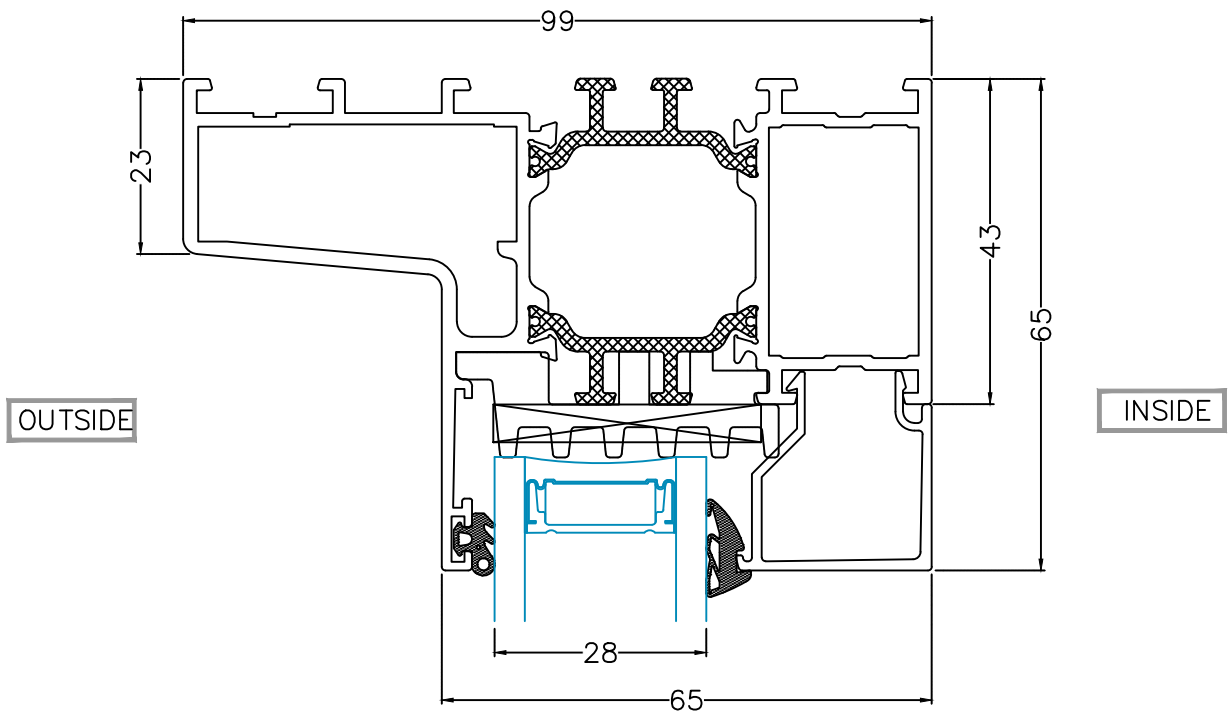
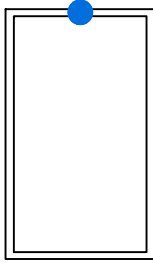
Description  
 Horizontal Section  
 65mm Outer Frame (Top Rail) – Fixed Frame With  
 Extension

Detail No.	SEF65-A-02B
System:	A



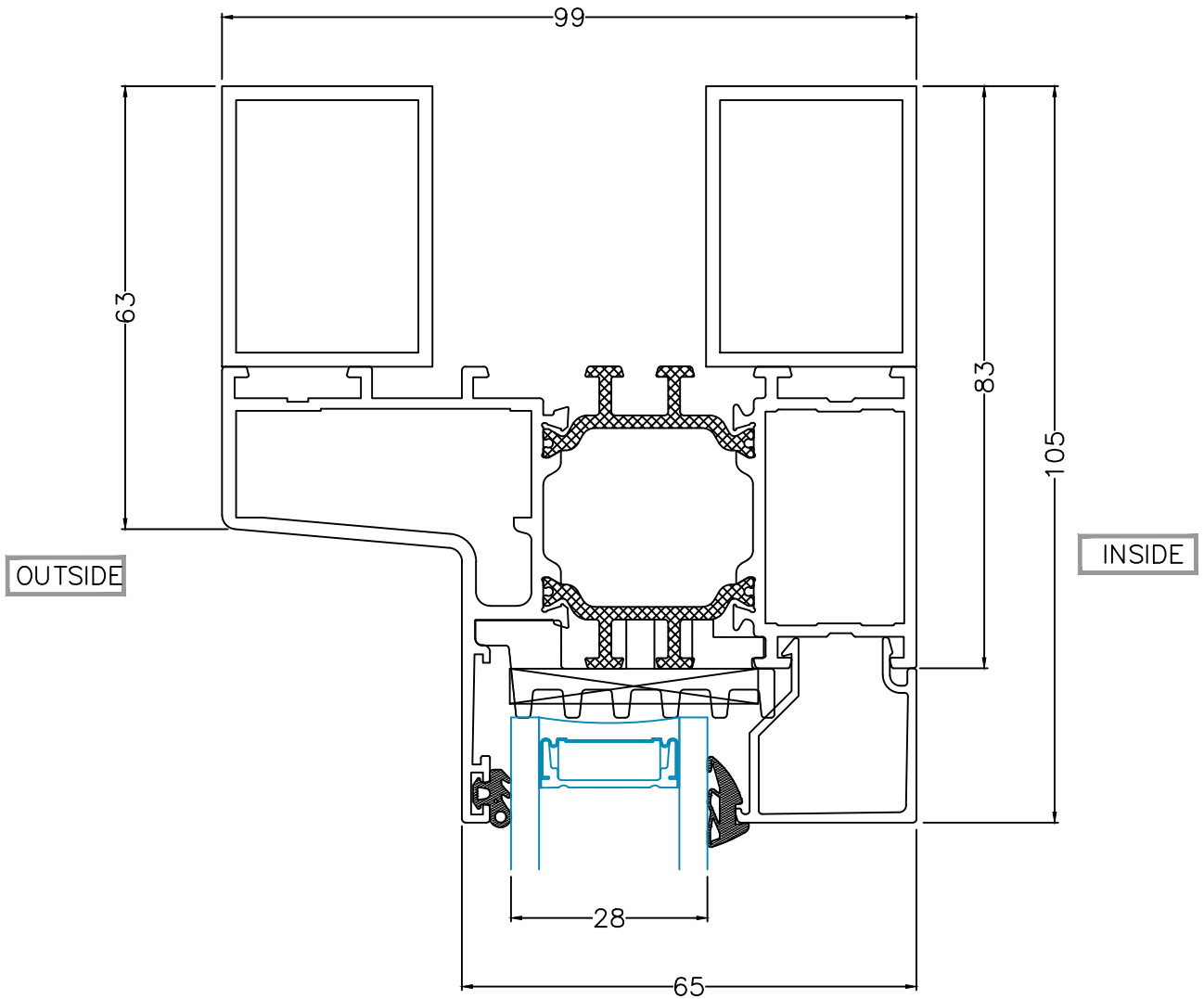
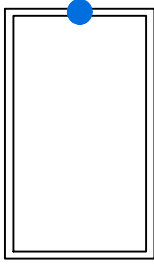
Description Horizontal Section  
65mm Outer Frame (Top Rail) – Fixed Frame With  
Extension & Trickle Vent

Detail No.	SEF65-A-02C
System:	A



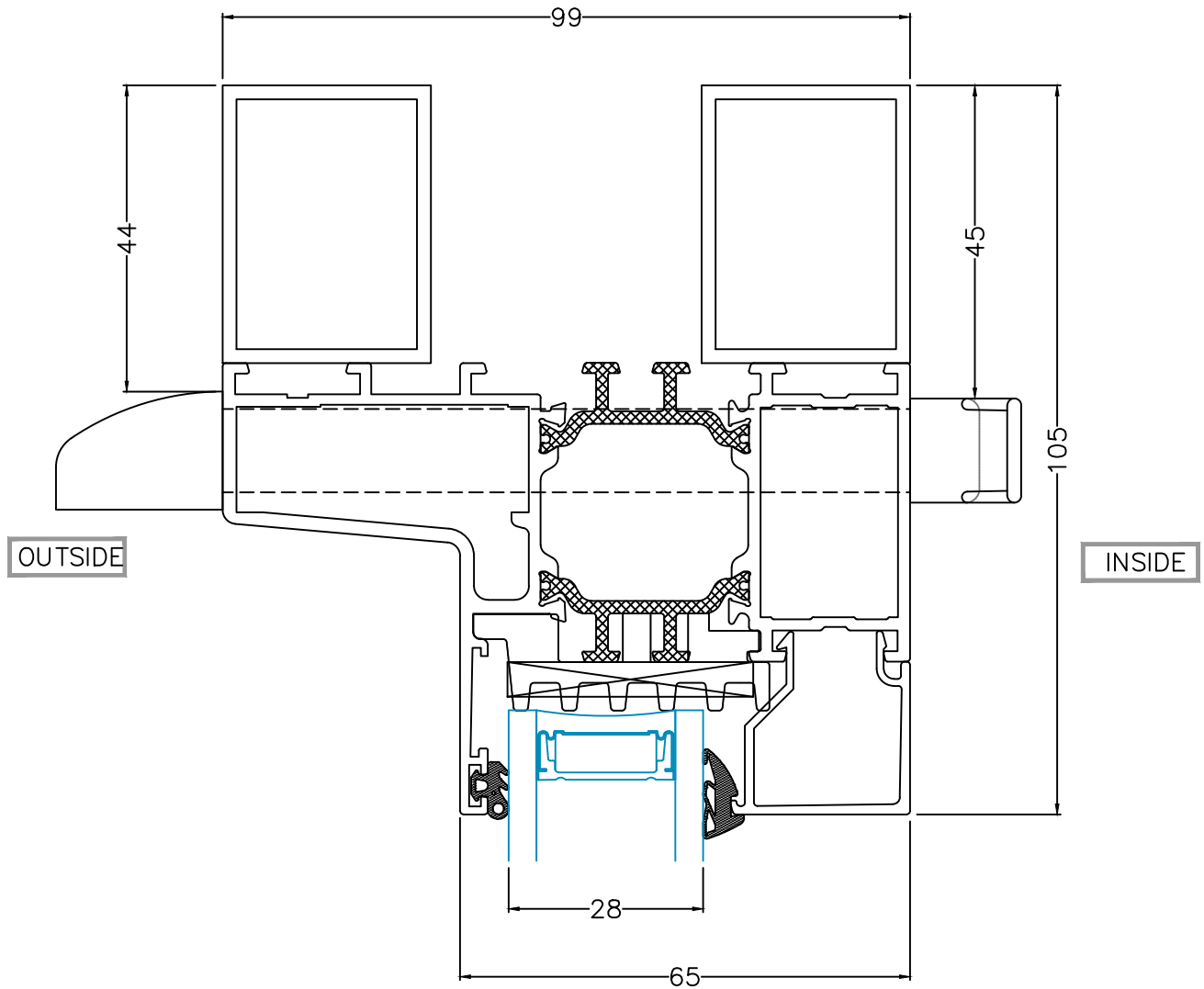
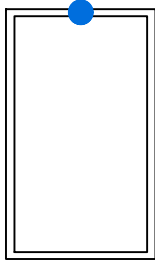
Description Horizontal Section  
99mm Outer Frame (Top Rail) – Fixed Frame

Detail No.	SEF65-A-02D
System:	A



Description  
Horizontal Section  
99mm Outer Frame (Top Rail) – Fixed Frame With  
Extension

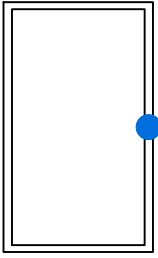
Detail SEF99-A-02E  
No.  
System: A



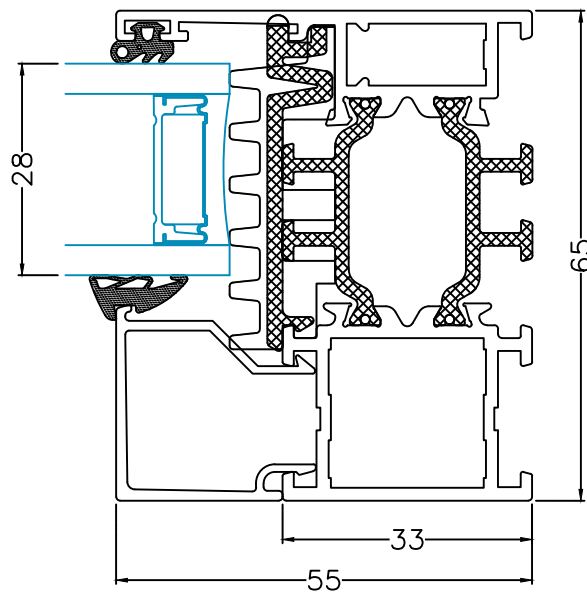
Description  
 Horizontal Section  
 99mm Outer Frame (Top Rail) – Fixed Frame With  
 Frame & Trickle Vent

Detail No.	SEF99-A-02F
System:	A





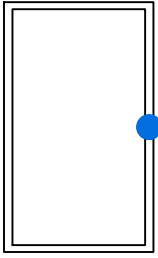
OUTSIDE



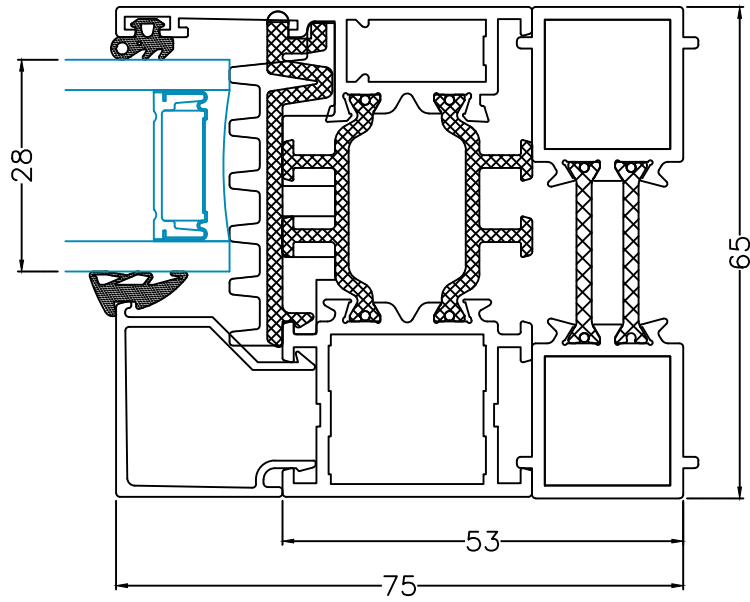
INSIDE

Description Horizontal Section  
65mm Outer Frame (Side Rail) – Fixed Frame

Detail No.	SEF65-A-03A
System:	A



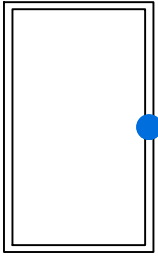
OUTSIDE



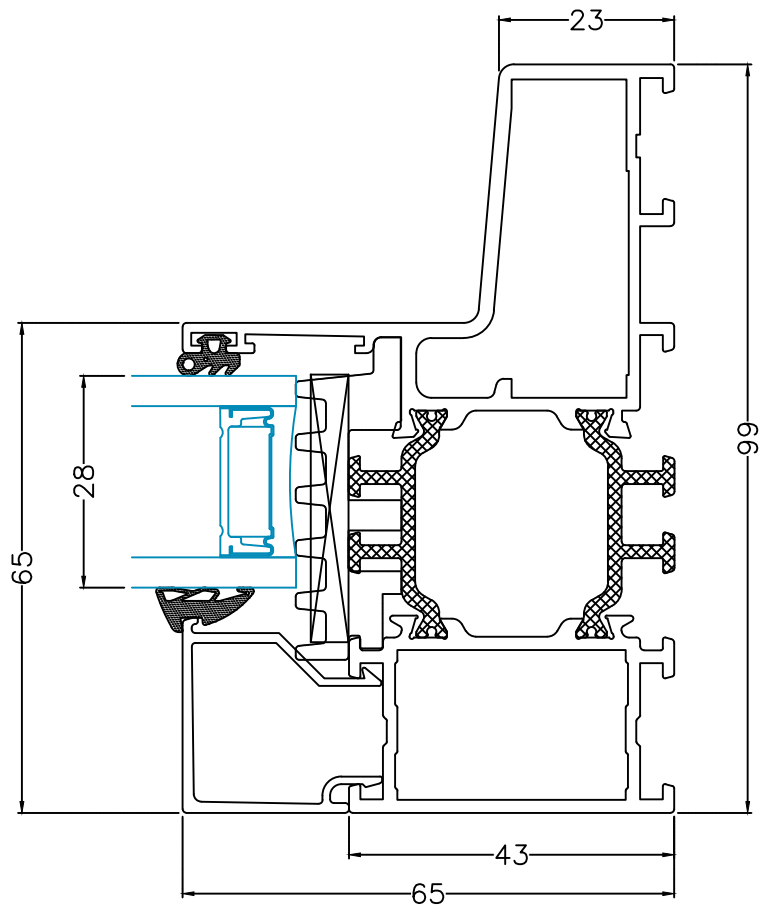
INSIDE

Description Horizontal Section  
65mm Outer Frame (Side Rail) – Fixed Frame With  
Extension

Detail	SEF65-A-03B
No.	IDS65 Eco A



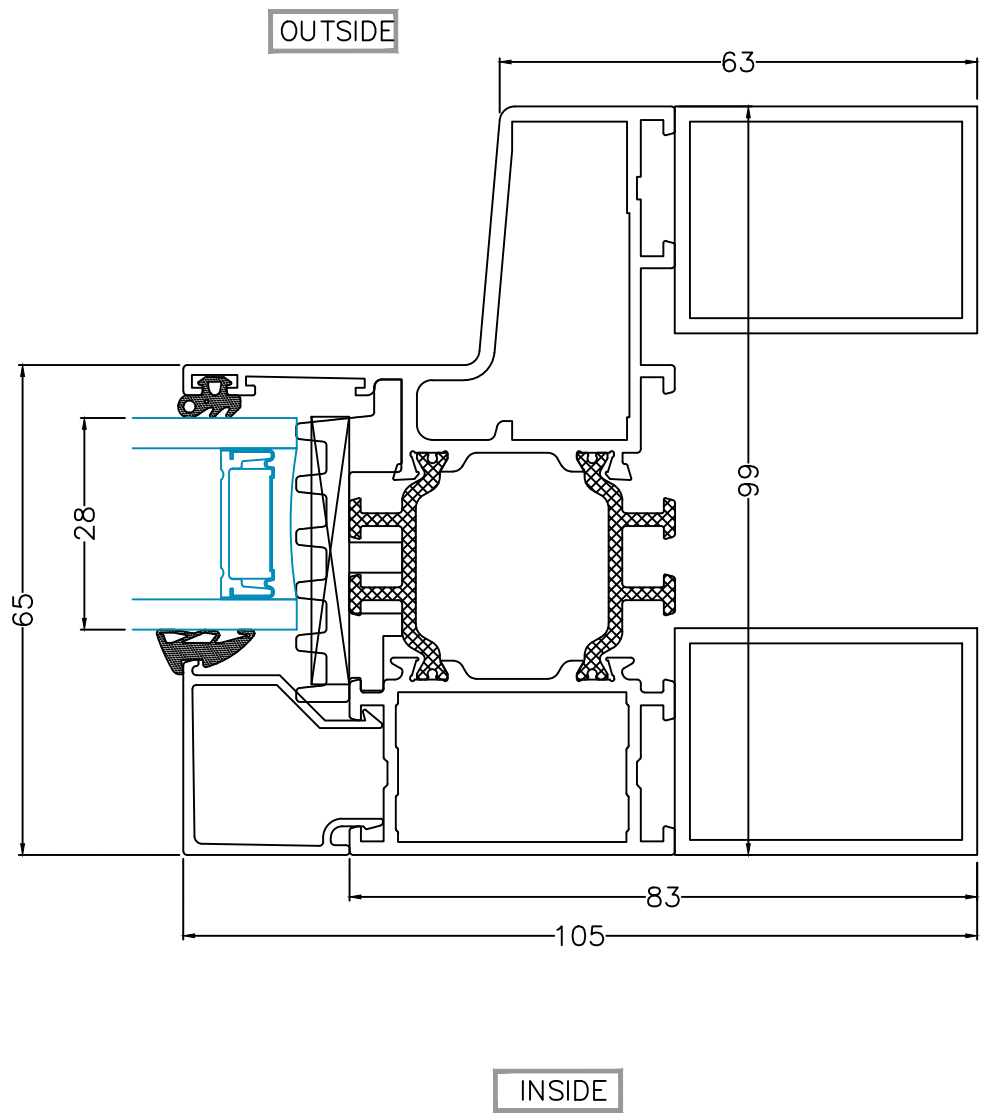
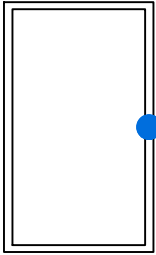
OUTSIDE



INSIDE

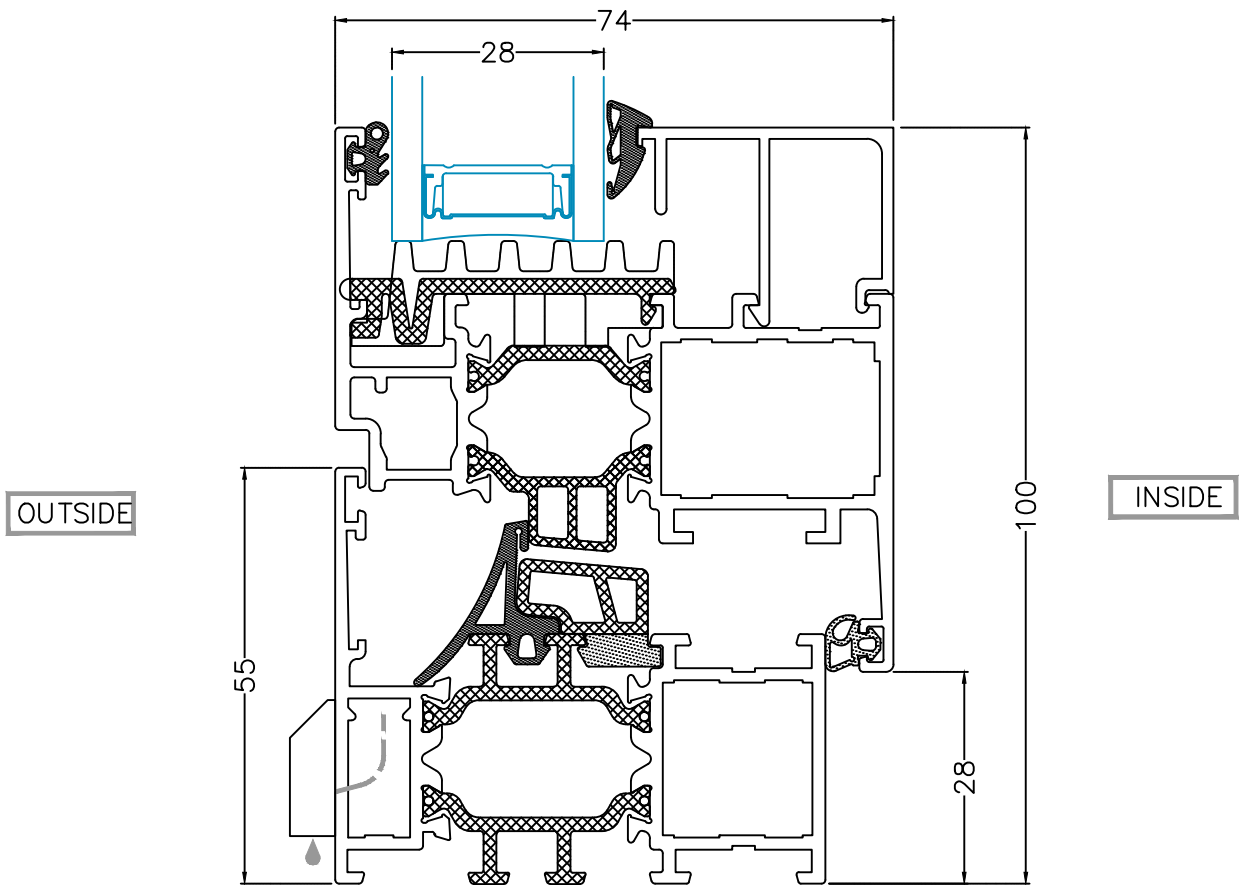
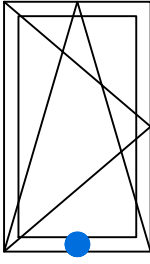
Description Horizontal Section  
99mm Outer Frame (Side Rail) – Fixed Frame

Detail SEF99-A-03C  
No.  
System IDS65 Eco A



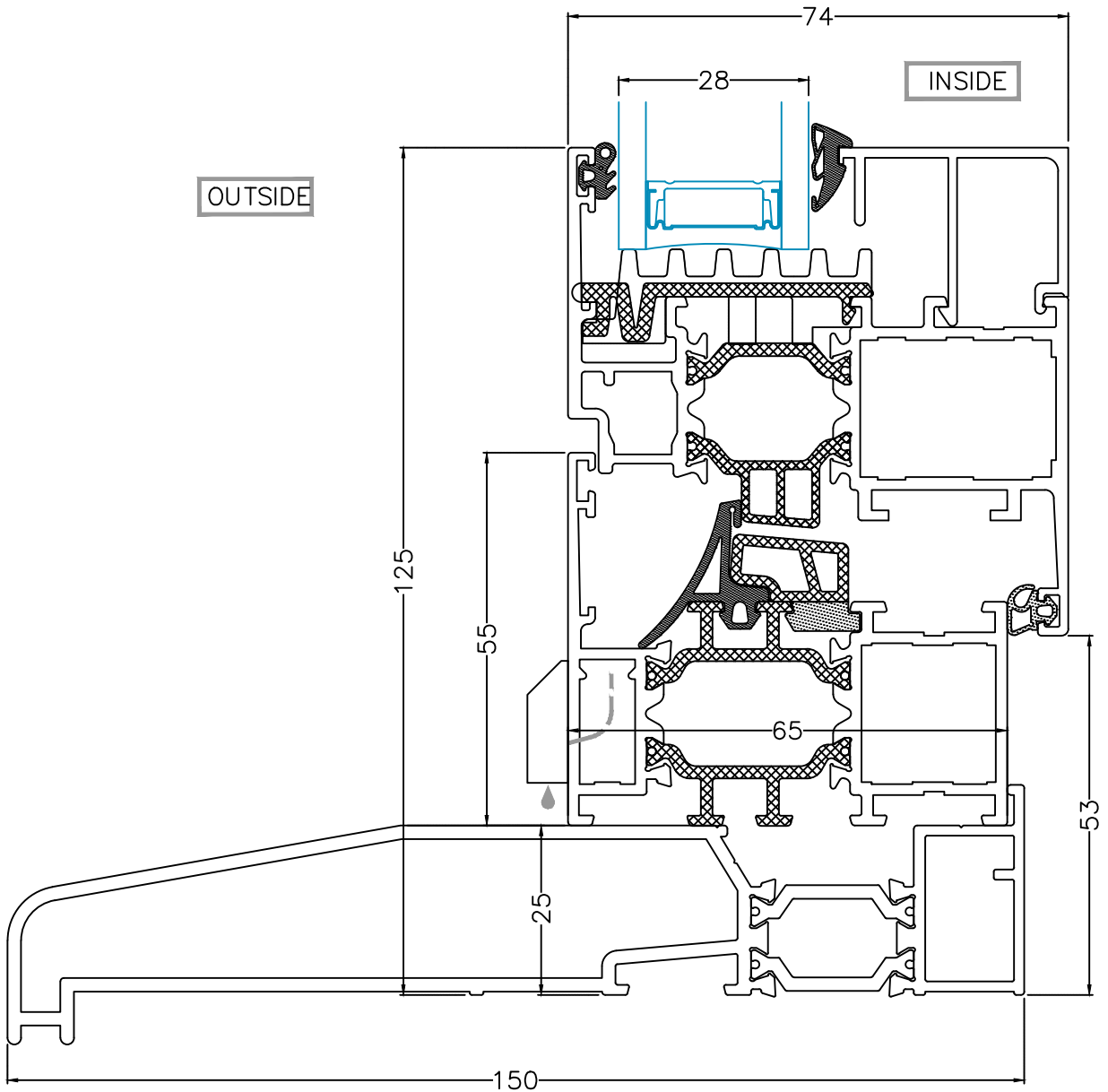
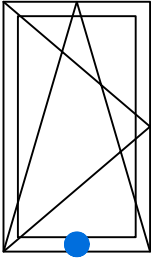
Description Horizontal Section  
99mm Outer Frame (Side Rail) – Fixed Frame With  
Extension

Detail SEF99-A-03D  
No.  
System: A



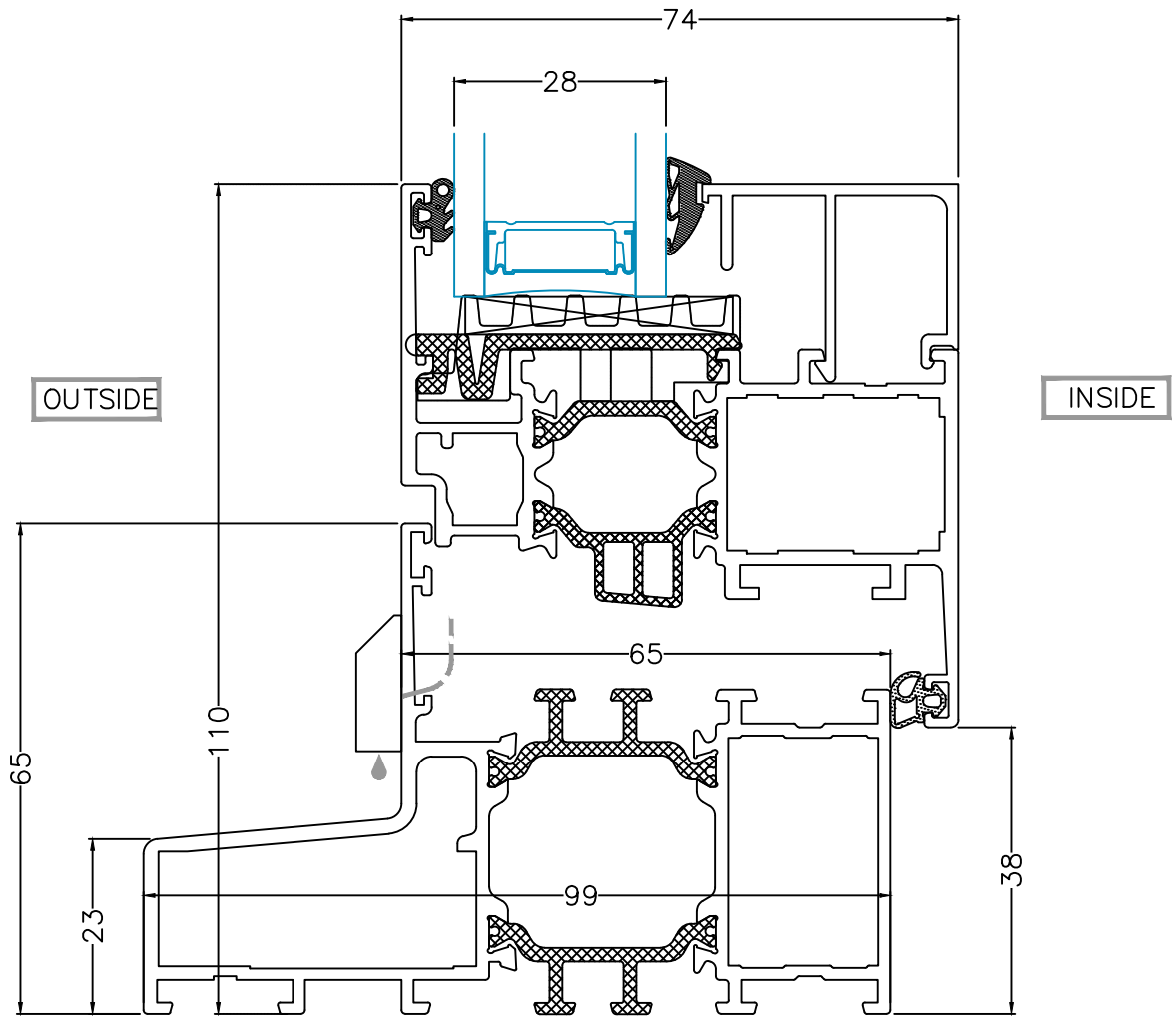
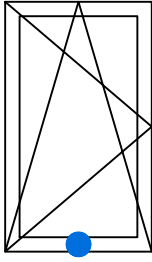
Description  
 Vertical Section  
 65mm Outer Frame (Bottom Rail) – Tilt & Turn Vent  
 Sash

Detail No.	SEF65-A-04A
System:	A



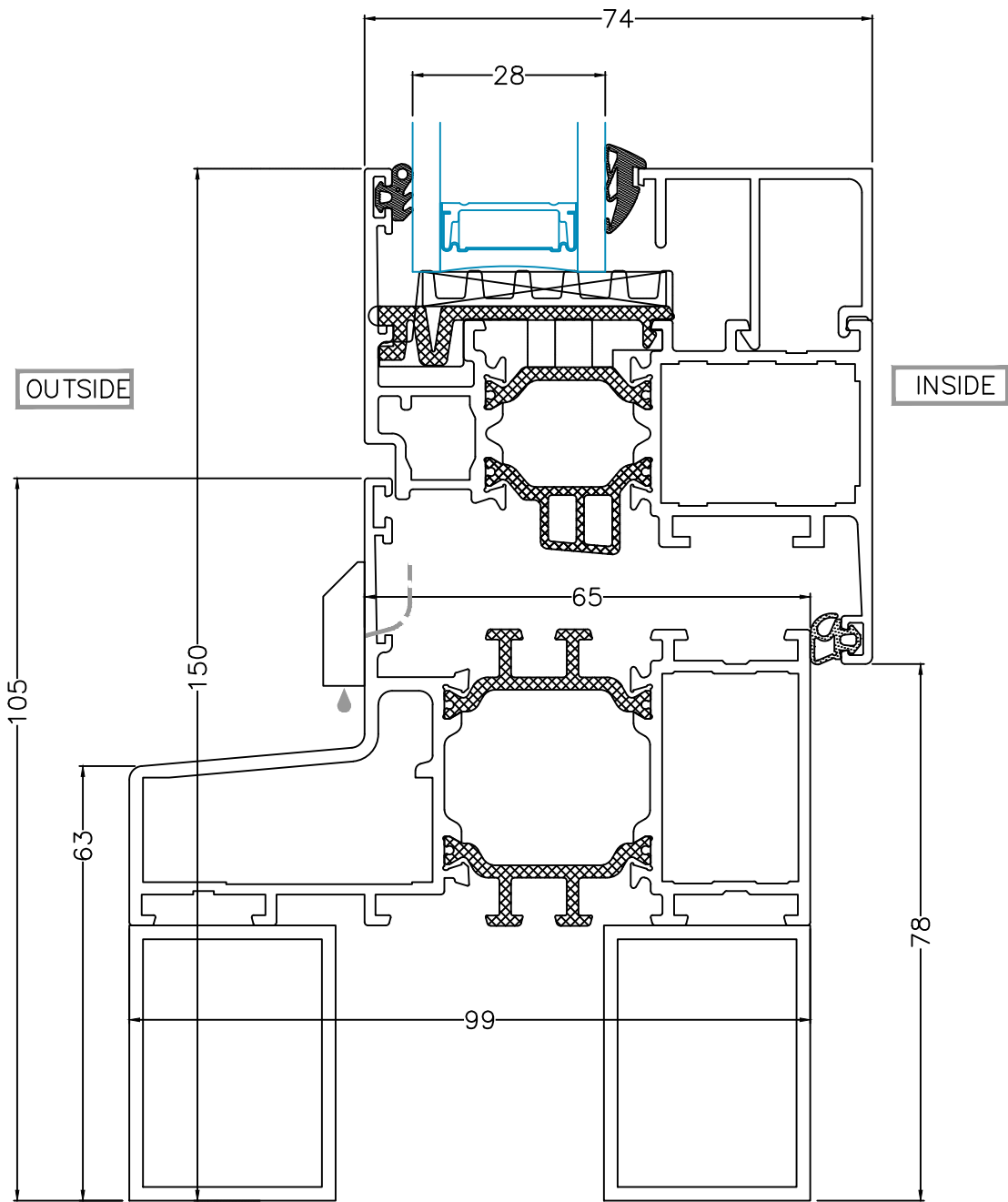
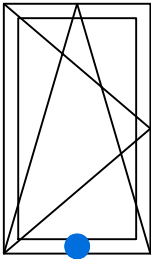
Vertical Section  
 Description  
 65mm Outer Frame (Bottom Rail) – Tilt & Turn Vent  
 Sash With Sill

Detail No.	SEF65-A-04B
System:	A



Vertical Section  
 99mm Outer Frame (Bottom Rail) – Tilt & Turn Vent  
 Sash

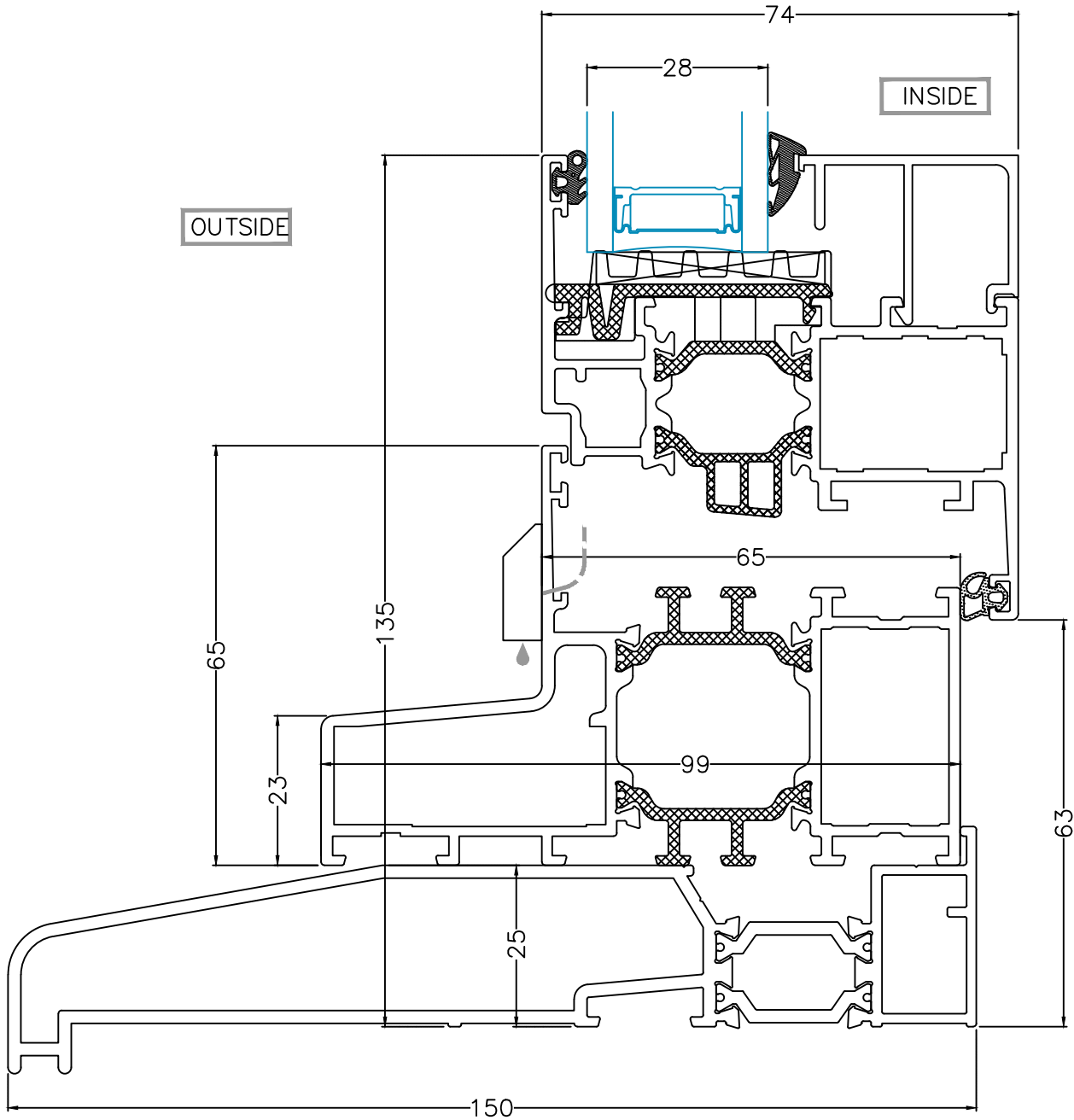
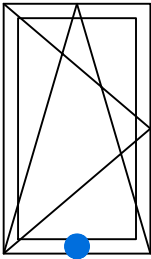
Detail No.	SEF99-A-04C
System:	A



Vertical Section  
 99mm Outer Frame (Bottom Rail) – Tilt & Turn Vent  
 Sash With Frame Extension

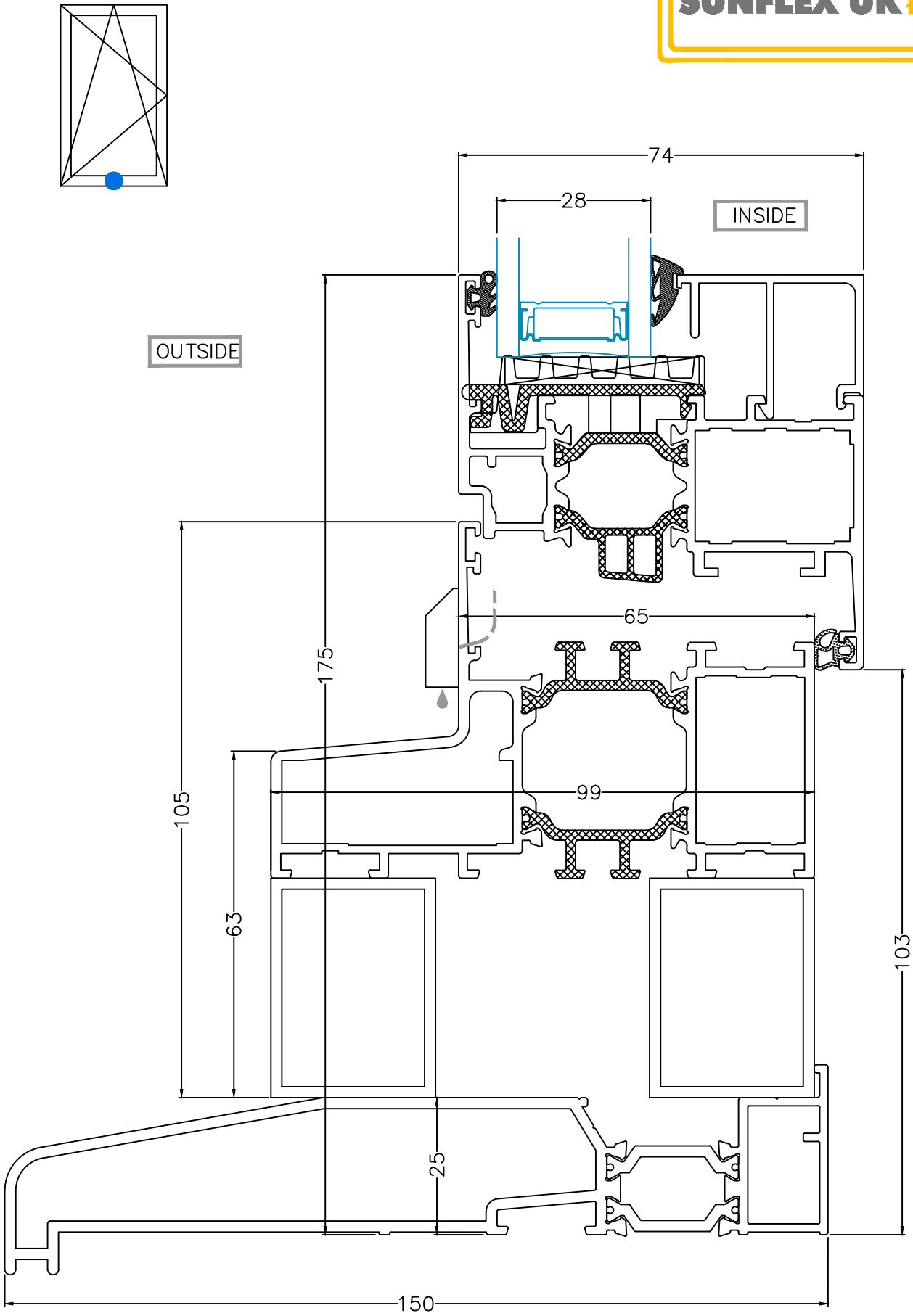
Detail	SEF99-A-04D
No.	
System:	A





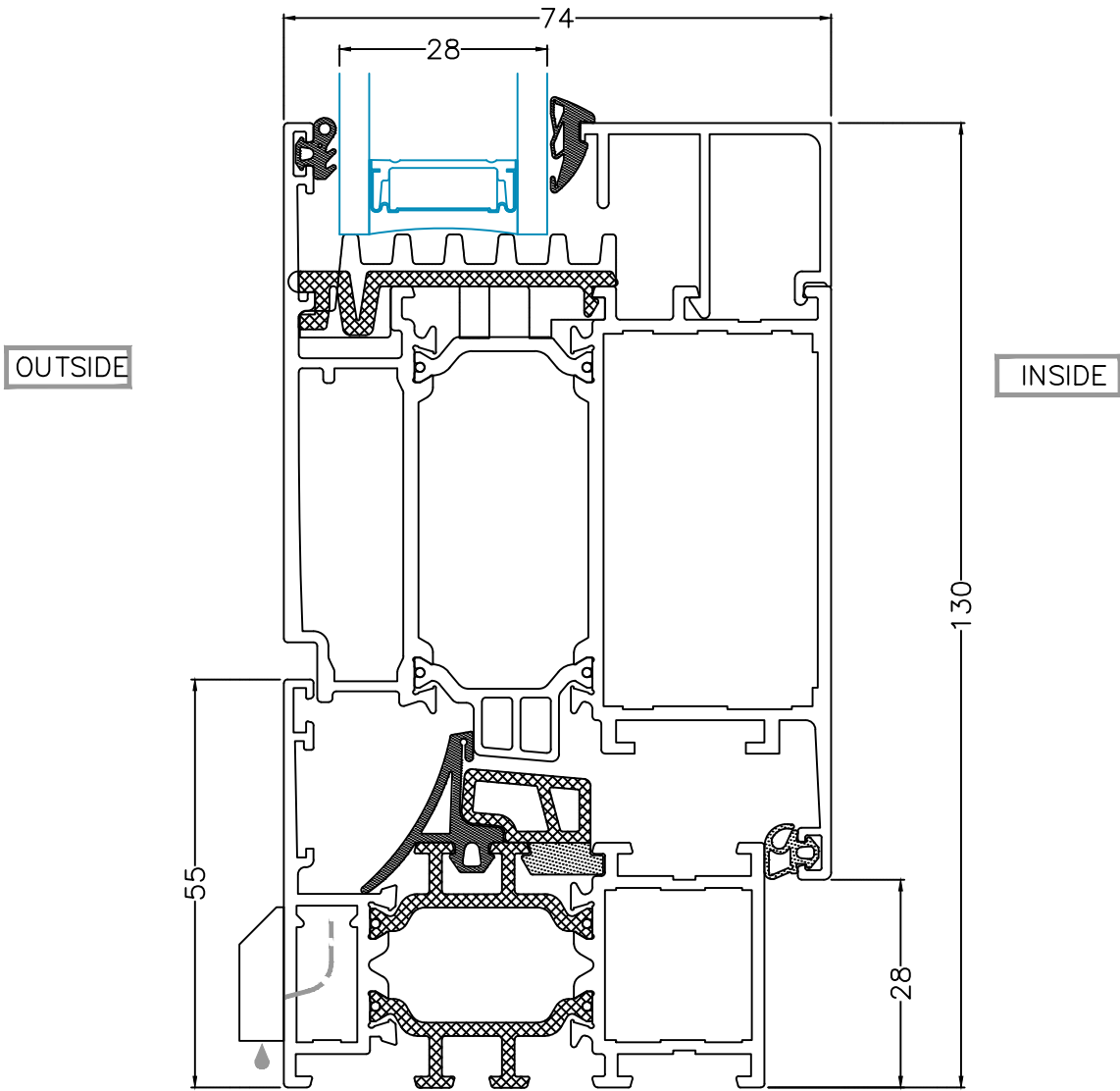
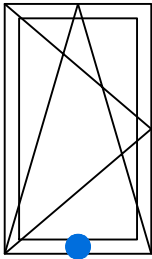
Description  
Vertical Section  
99mm Outer Frame (Bottom Rail) – Tilt & Turn Vent  
Sash With Sill

Detail SEF99-A-04E  
No.  
System: A



Description  
Vertical Section  
99mm Outer Frame (Bottom Rail) – Tilt & Turn Vent  
Sash With Sill & Frame Extension

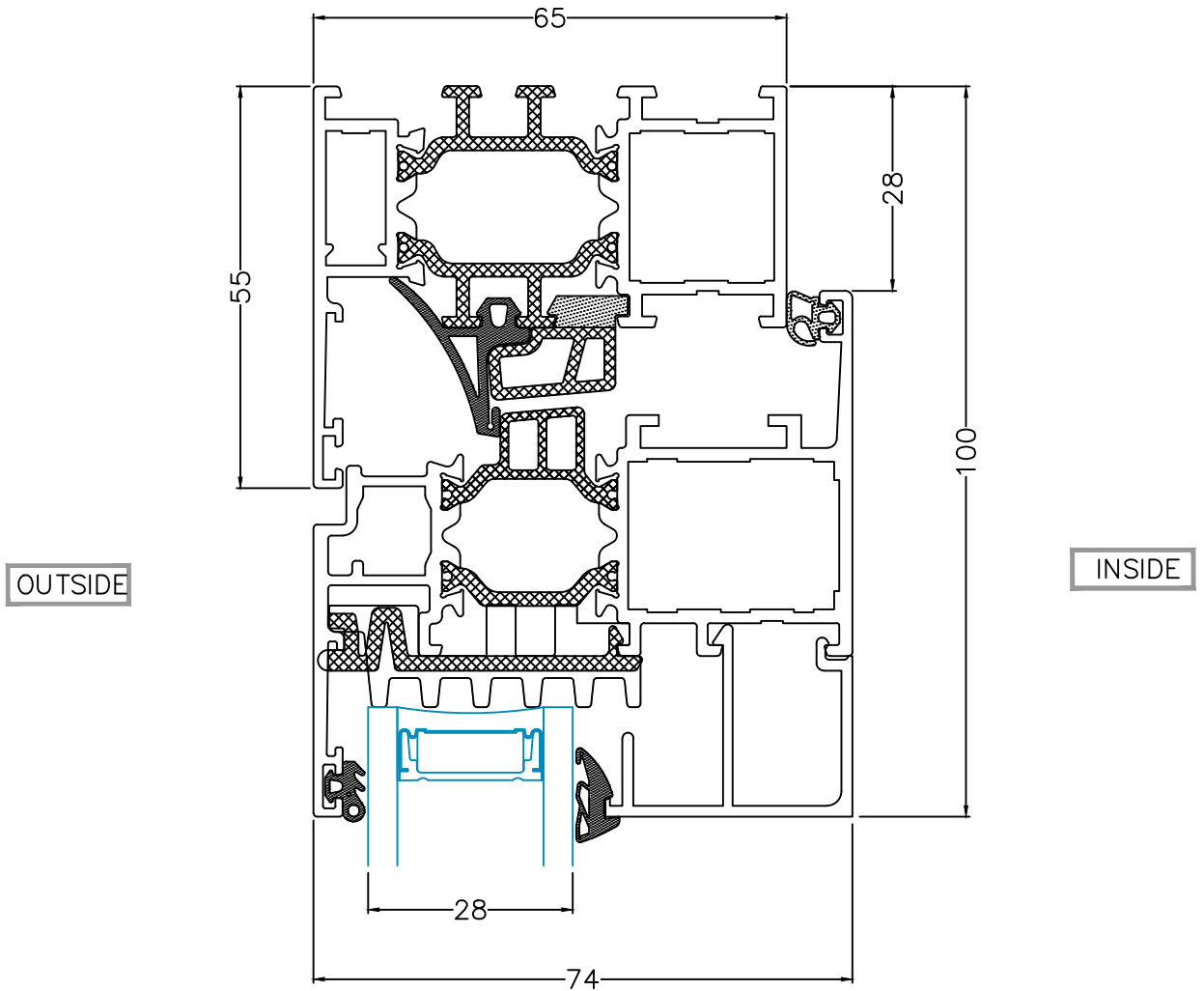
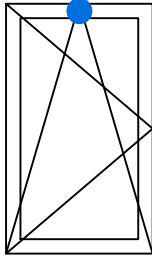
Detail SEF99-A-04F  
No.  
System: A



For Profile Application Please Refer To Statics Section

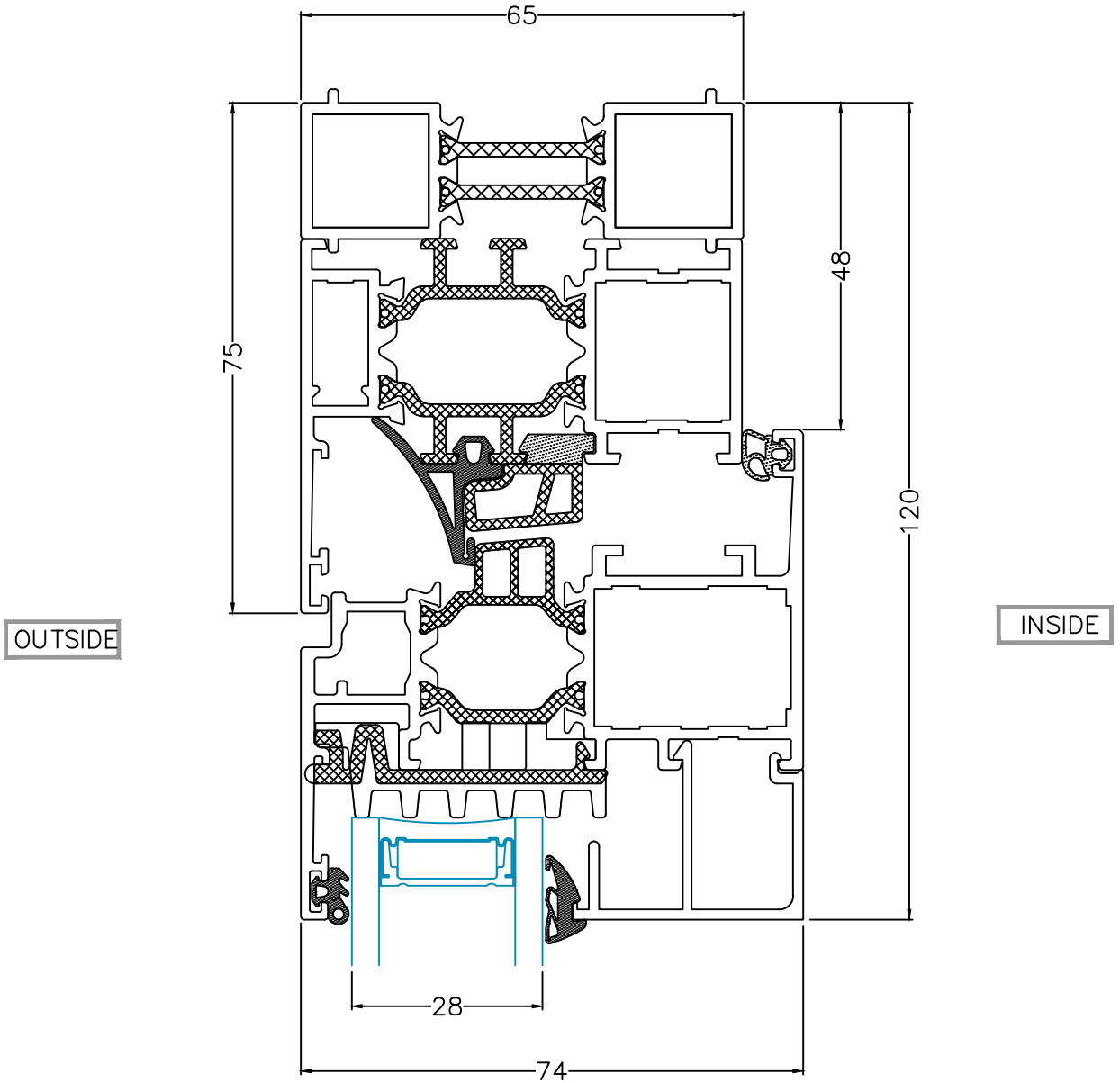
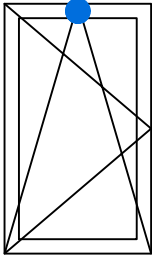
Description Vertical Section  
65mm Outer Frame (Bottom Rail) – Alternative Heavy  
Duty Tilt & Turn Vent Sash

Detail SEF65-A-04C  
No.  
System: A



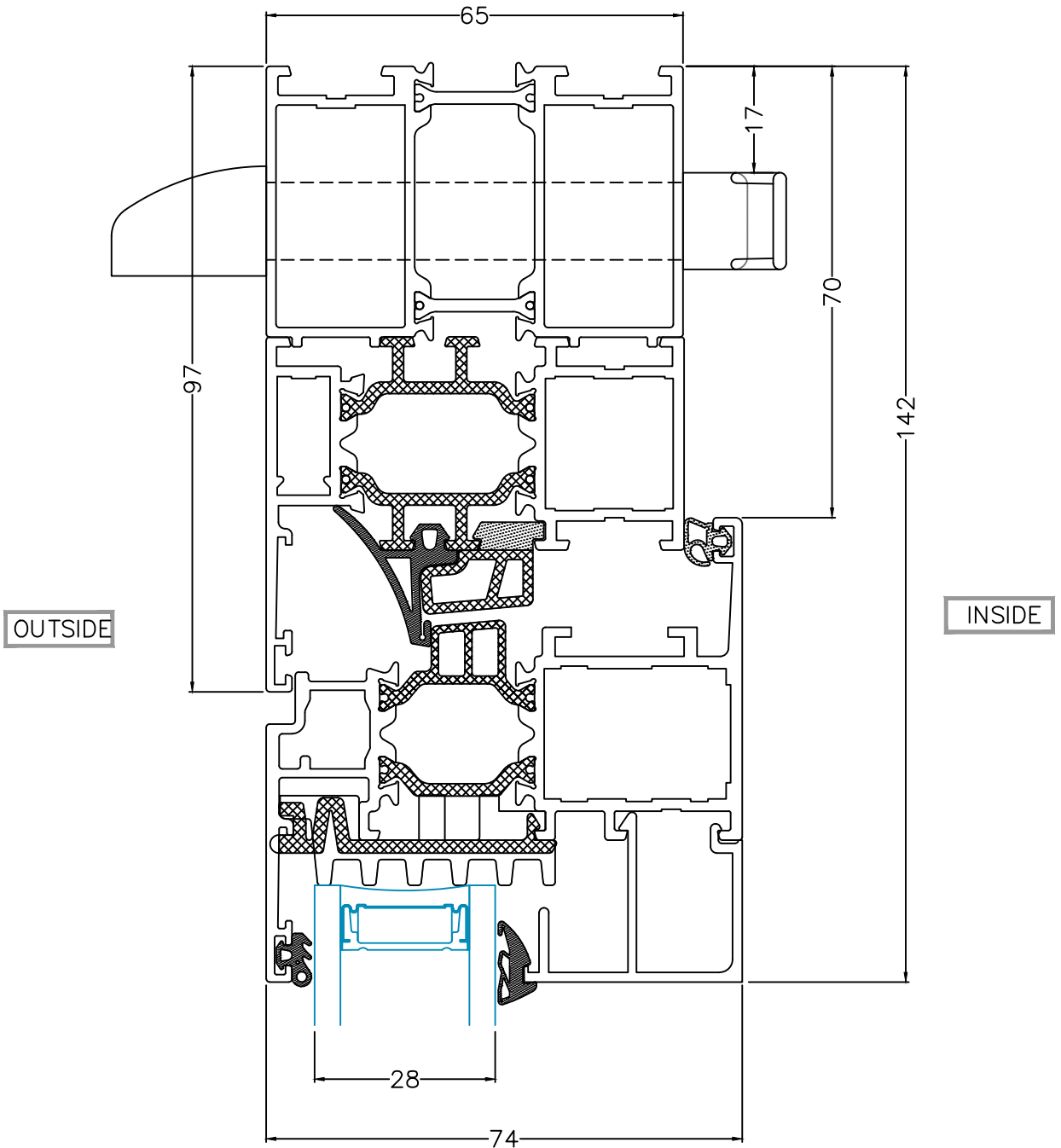
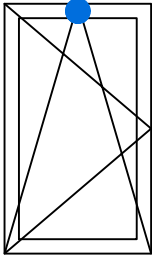
Vertical Section  
 Description  
 65mm Outer Frame (Top Rail) – Tilt & Turn Vent  
 Sash

Detail SEF65-A-05A  
 No.  
 System: A



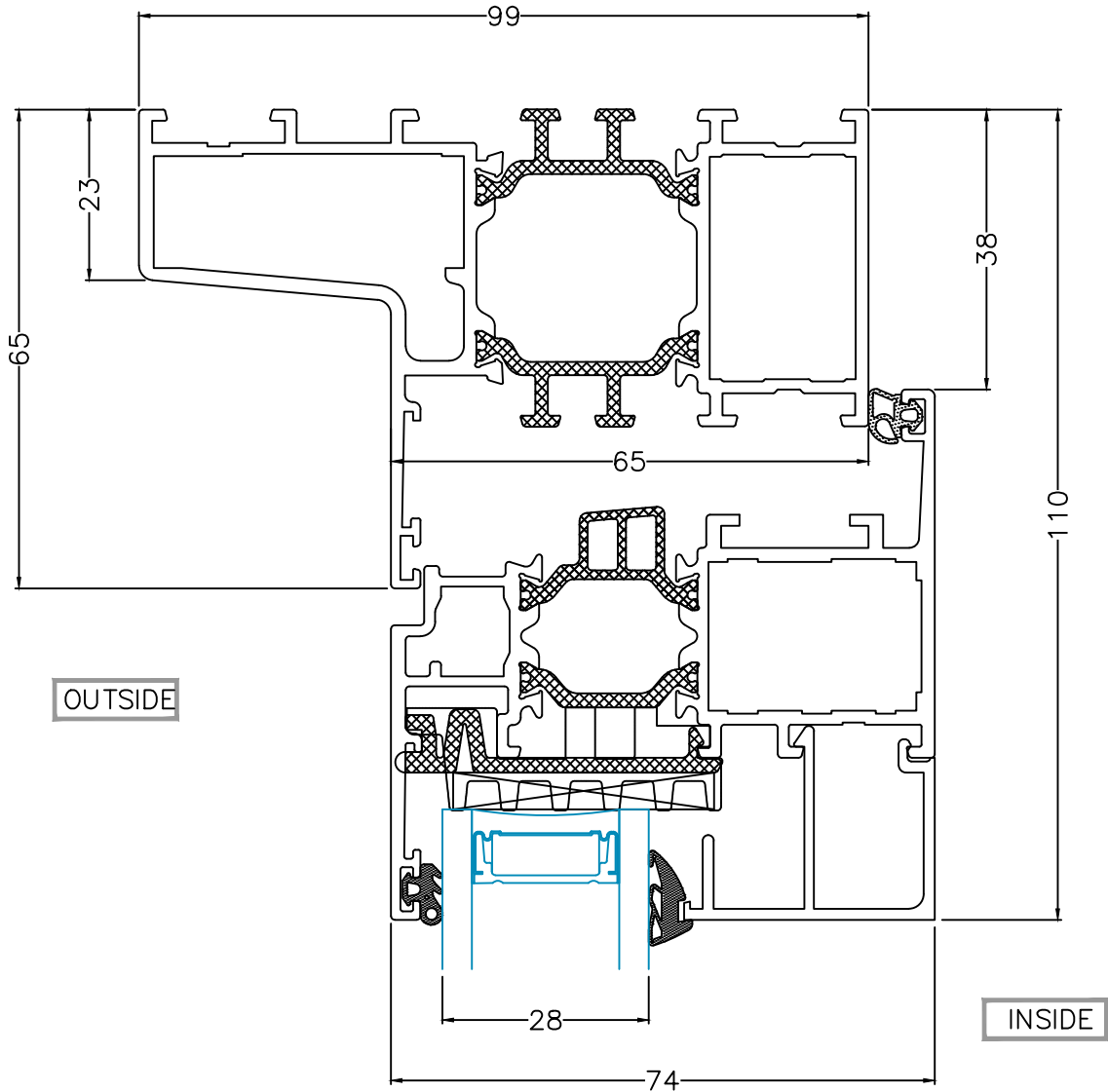
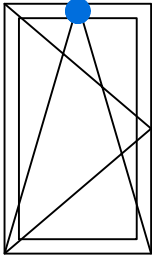
Description  
 Vertical Section  
 65mm Outer Frame (Top Rail) – Tilt & Turn Vent  
 Sash With Frame Extension

Detail No.	SEF65-A-05B
System:	A



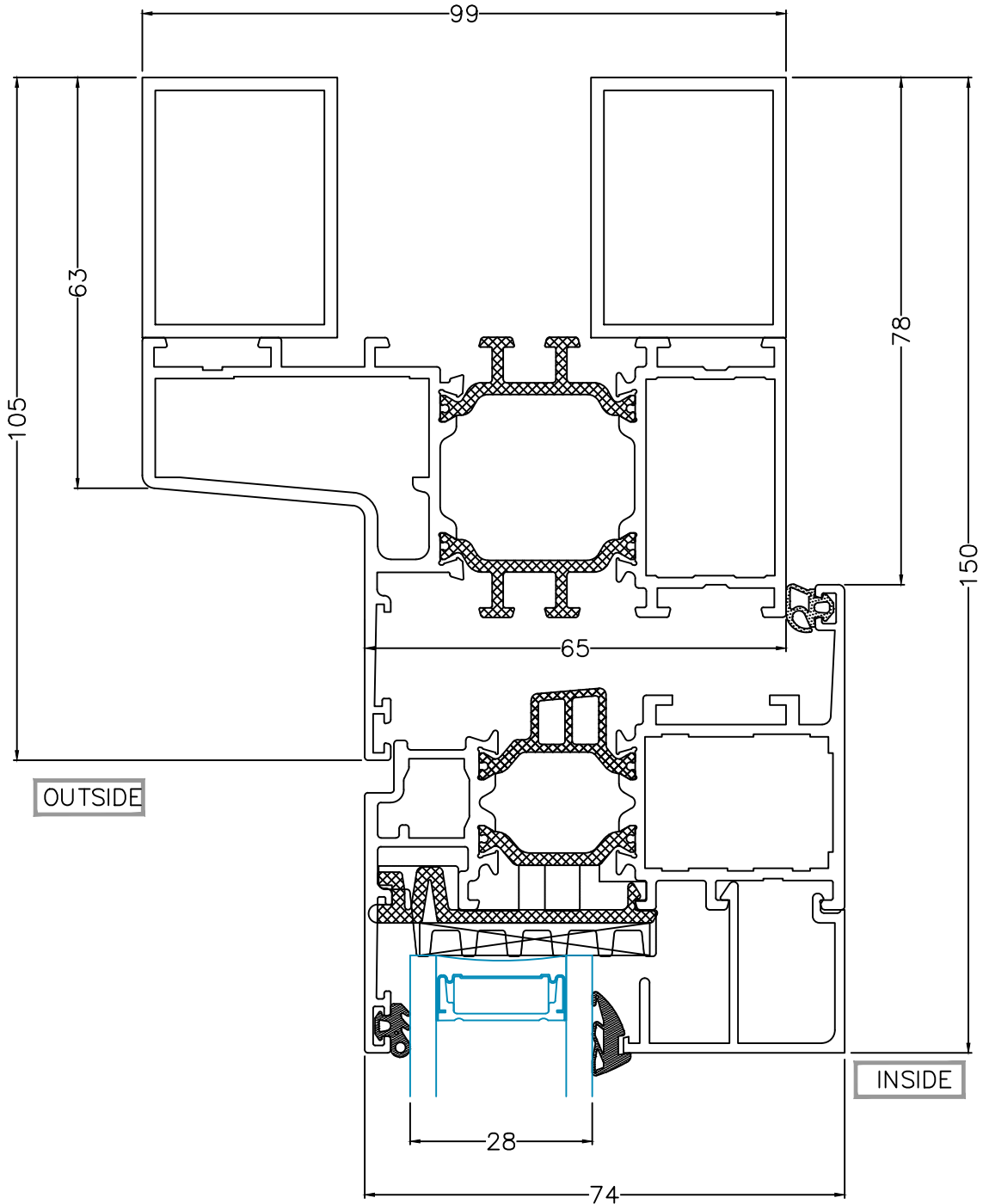
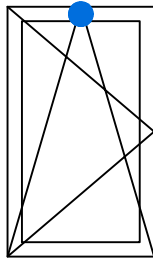
Vertical Section  
 65mm Outer Frame (Top Rail) – Tilt & Turn Vent  
 Sash With Trickle Vent

Detail No.	SEF65-A-05C
System:	A



Description  
 Vertical Section  
 99mm Outer Frame (Top Rail) – Tilt & Turn Vent  
 Sash

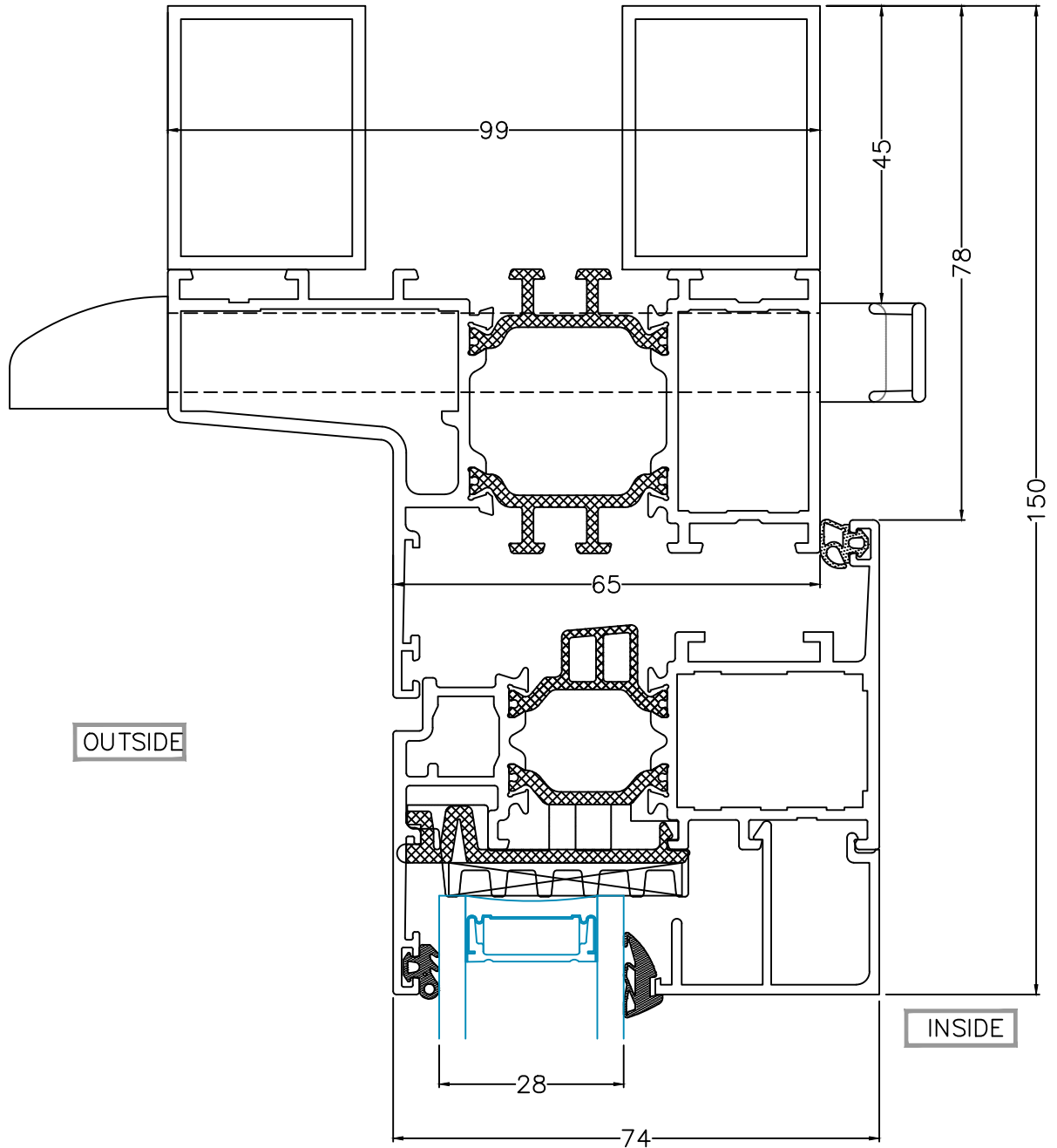
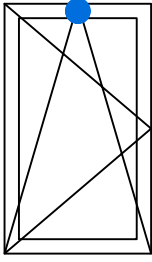
Detail No.	SEF99-A-05D
System:	A



Vertical Section  
 99mm Outer Frame (Top Rail) – Tilt & Turn Vent  
 Sash With Frame Extension

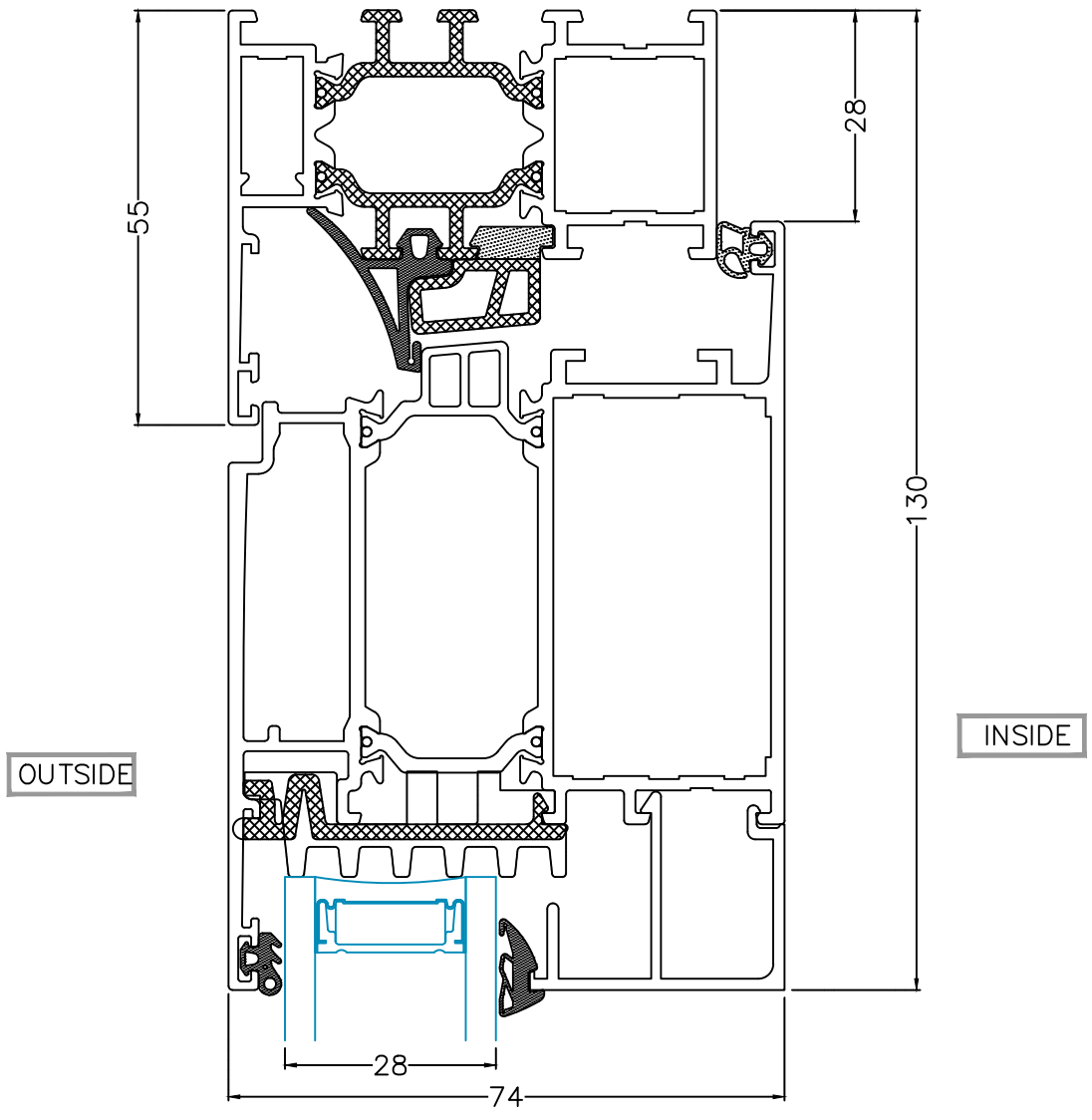
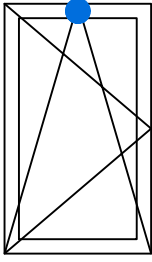
Detail No.	SEF99-A-05E
System:	A





Vertical Section  
 99mm Outer Frame (Top Rail) – Tilt & Turn Vent  
 Sash With Trickle Vent

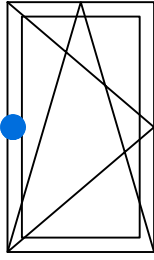
Detail No.	SEF99-A-05F
System:	A



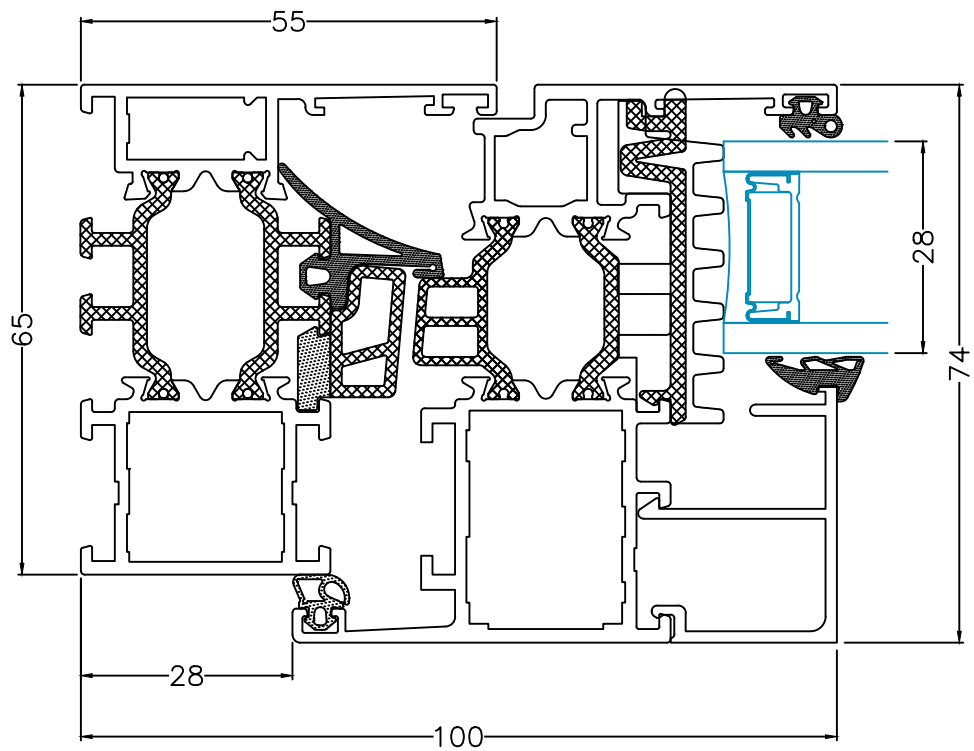
For Profile Application Please Refer To Statics Section

Description  
 Vertical Section  
 65mm Outer Frame (Top Rail) – Alternative Heavy  
 Duty Tilt & Turn Vent Sash

Detail No.	SEF65-A-05C
System:	A



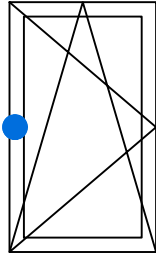
OUTSIDE



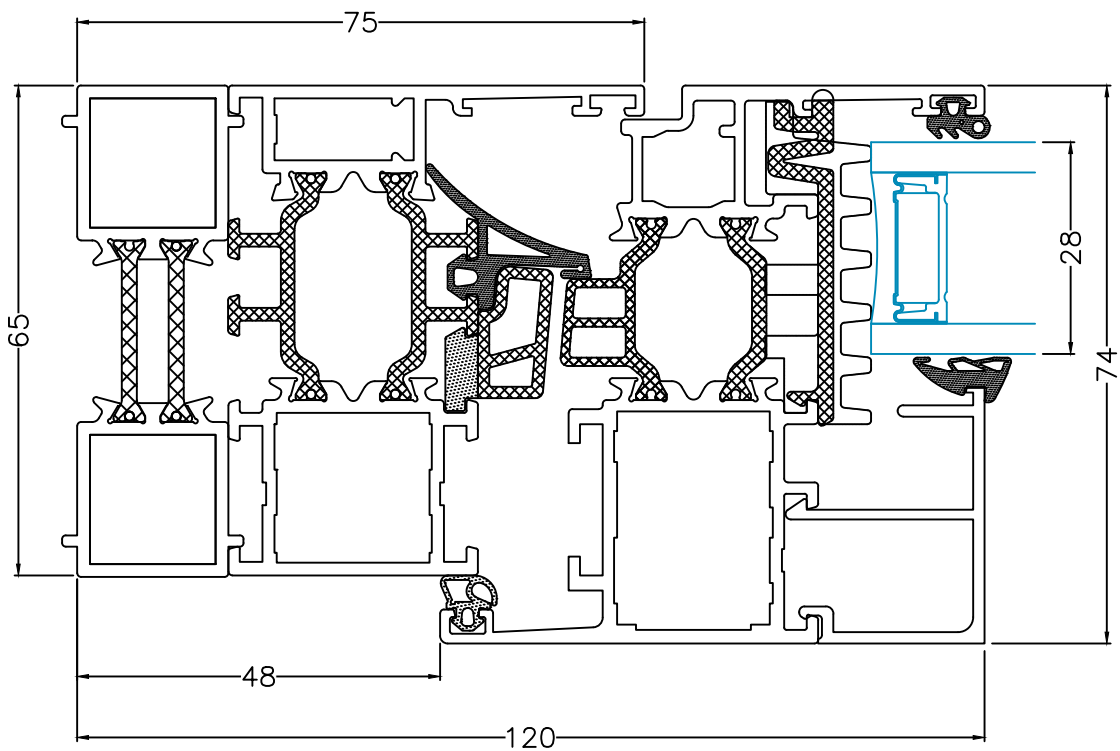
INSIDE

Description  
Horizontal Section  
65mm Outer Frame (Hinge Side Rail) – Tilt & Turn  
Vent Sash

Detail No.	SEF65-A-06A
System:	A



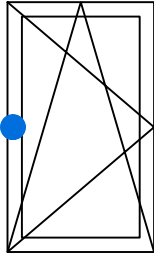
OUTSIDE



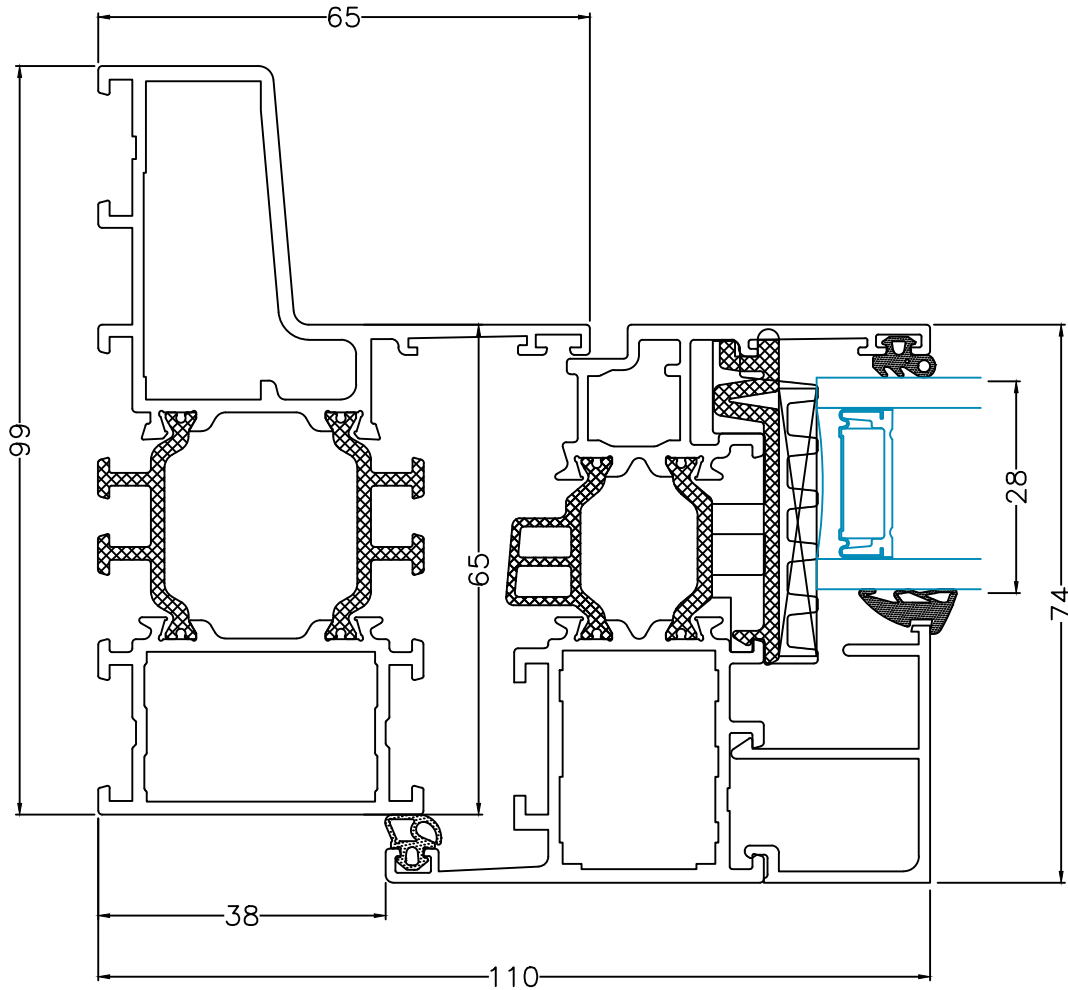
INSIDE

Description Horizontal Section  
65mm Outer Frame (Hinge Side Rail) – Tilt & Turn  
Vent Sash With Frame Extension

Detail SEF65-A-06B  
No.  
System IDS65 Eco A



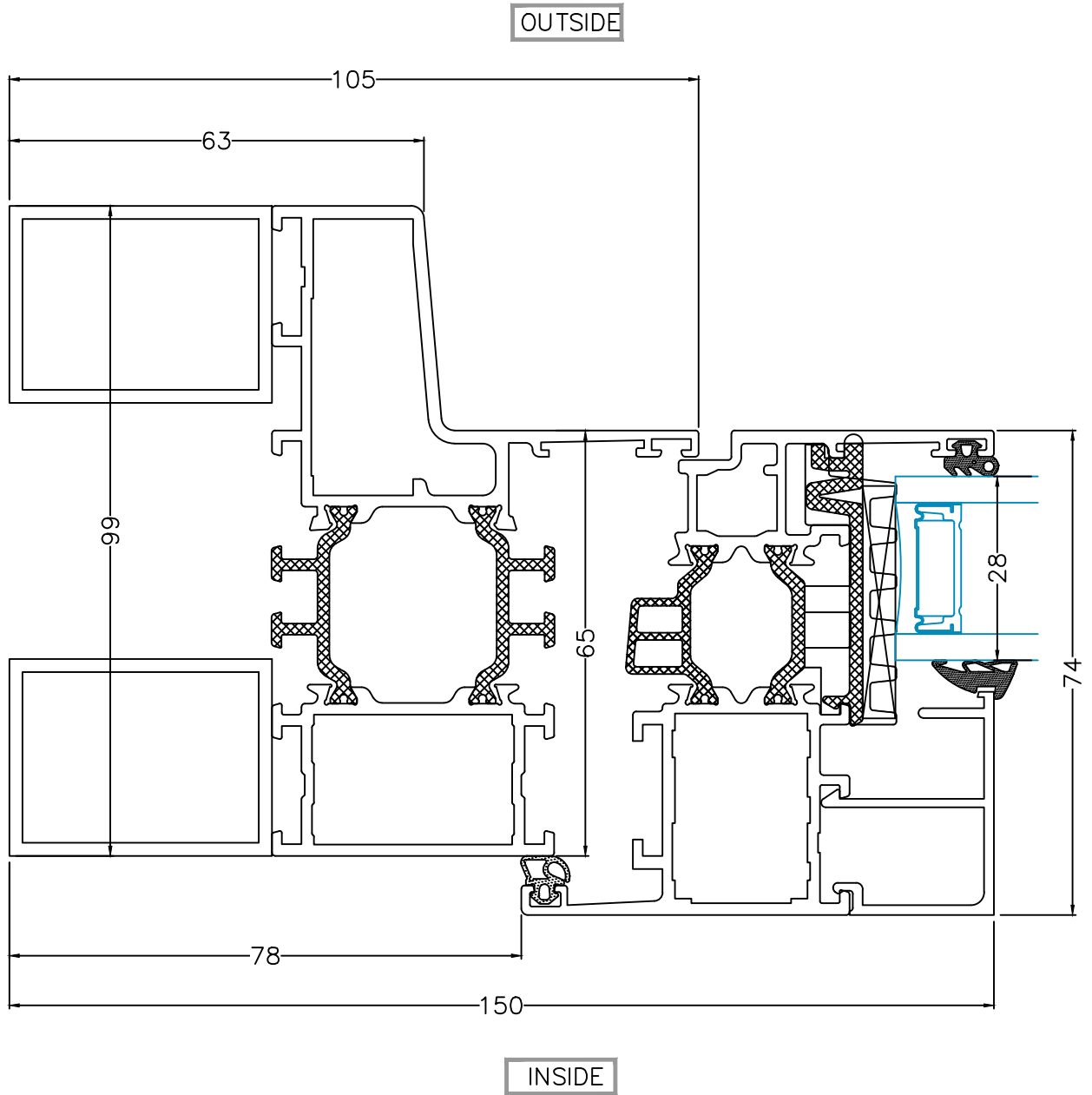
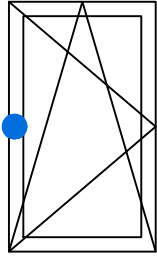
OUTSIDE



INSIDE

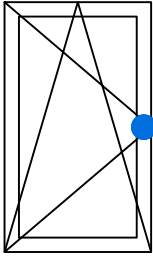
Description Horizontal Section  
99mm Outer Frame (Hinge Side Rail) – Tilt & Turn  
Vent Sash

Detail SEF99-A-06C  
No.  
System IDS65 Eco A

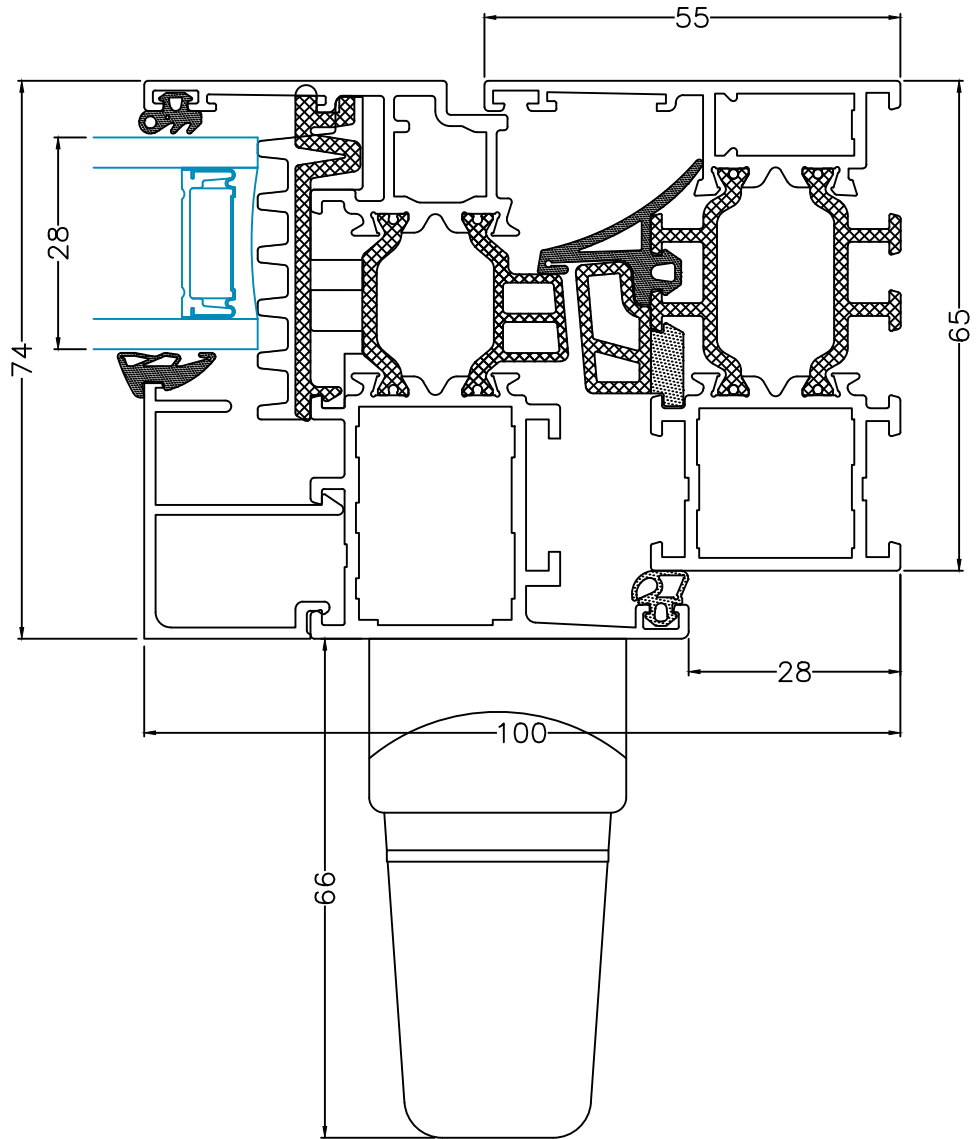


Description Horizontal Section  
 99mm Outer Frame (Hinge Side Rail) – Tilt & Turn  
 Vent Sash With Frame Extension

Detail No.	SEF99-A-06D
System:	A



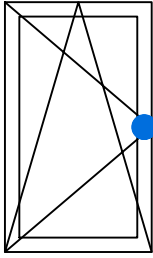
OUTSIDE



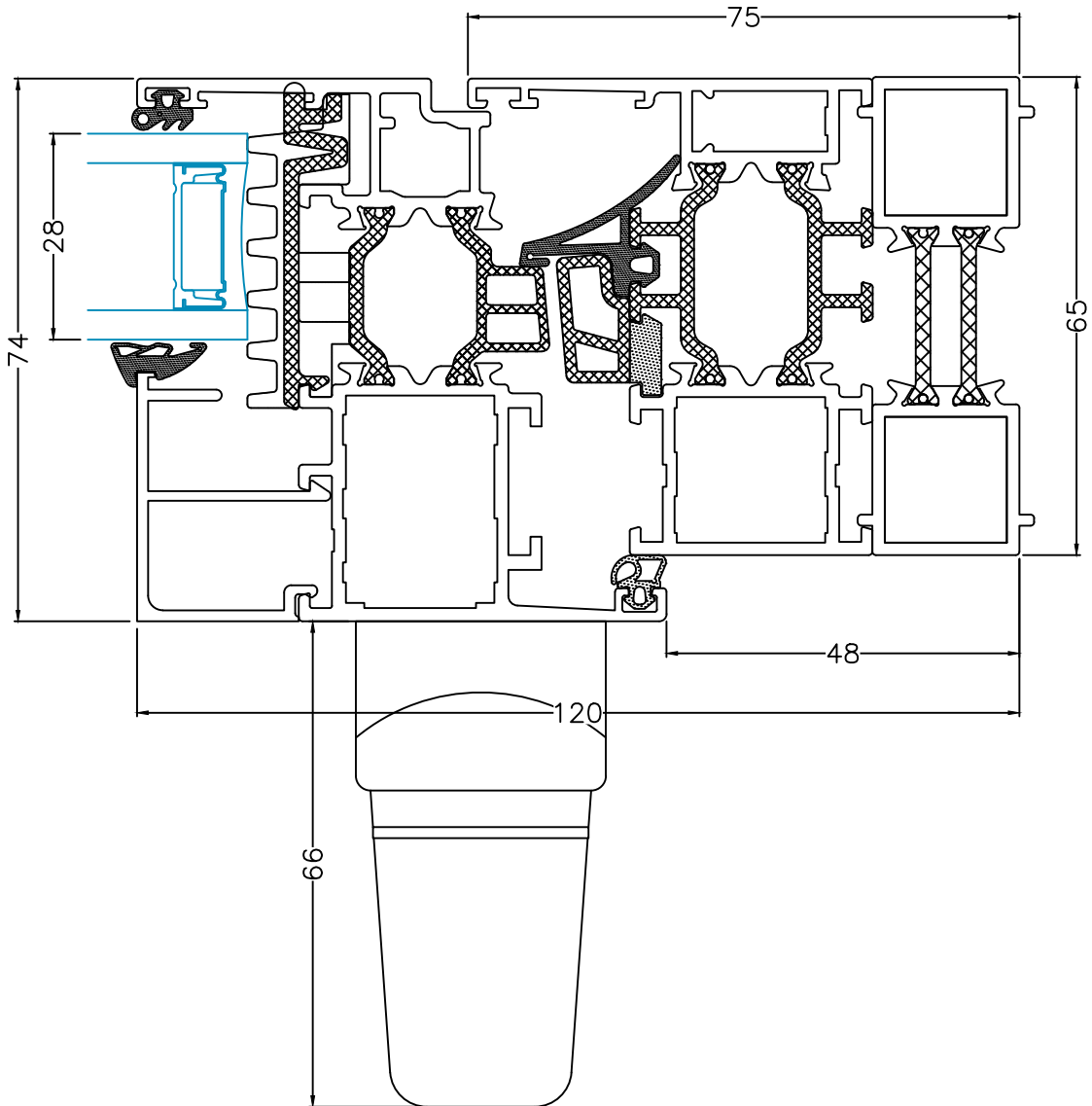
INSIDE

Description Horizontal Section  
65mm Outer Frame (Handle Side Rail) – Tilt & Turn  
Vent Sash

Detail No.	SEF65-A-06E
System:	A



OUTSIDE

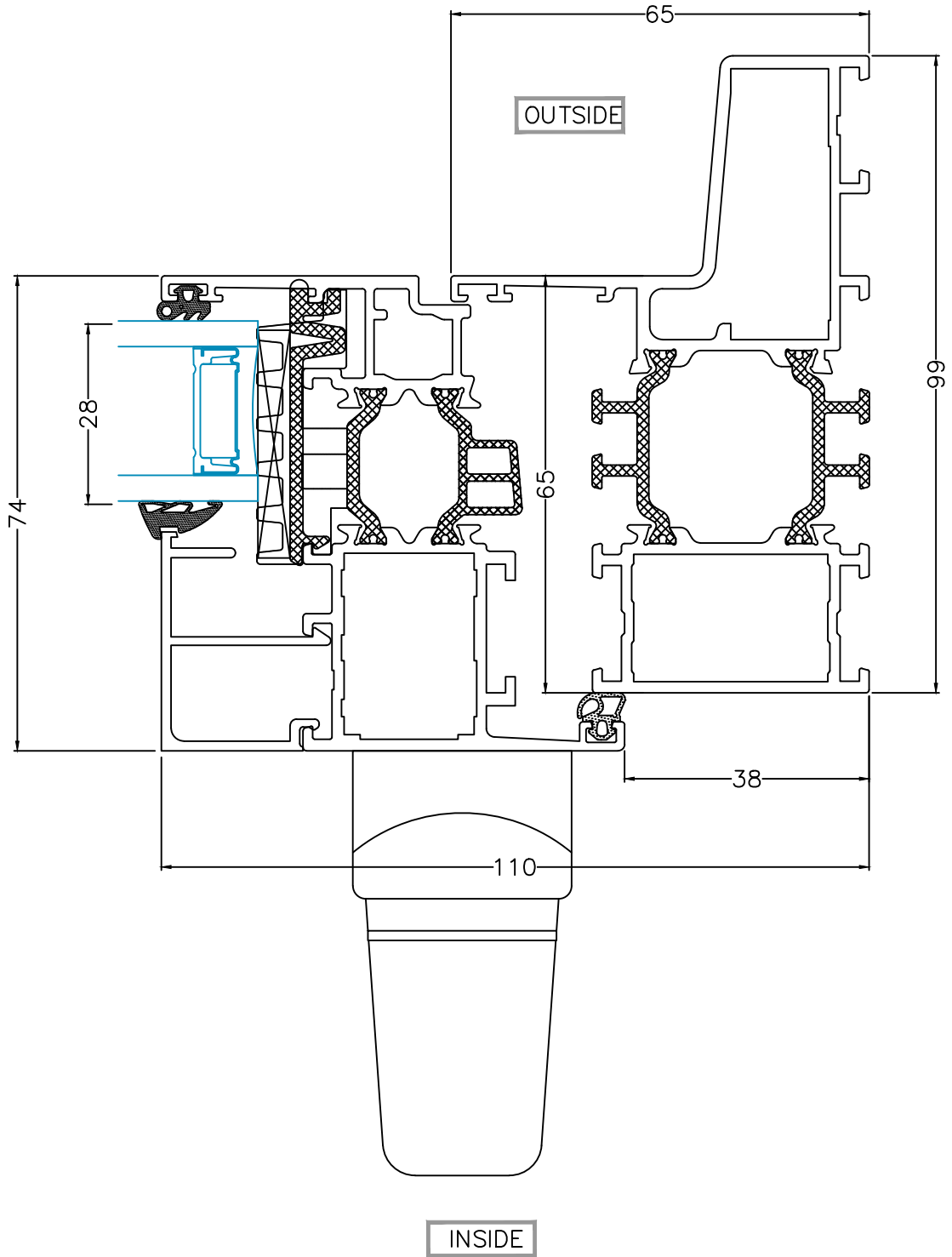
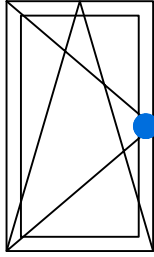


INSIDE

Description Horizontal Section  
65mm Outer Frame (Handle Side Rail) – Tilt & Turn  
Vent Sash With Frame Extension

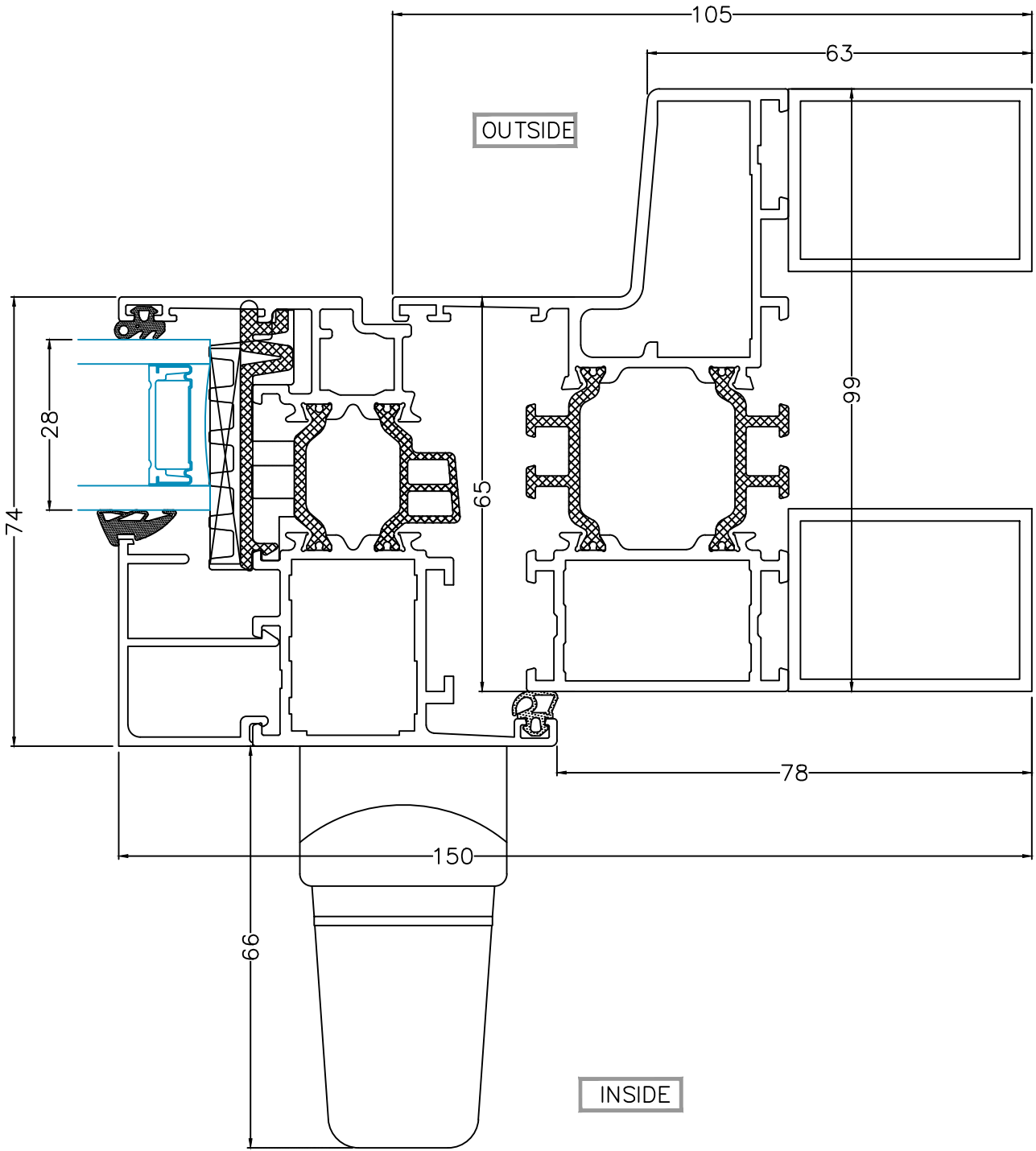
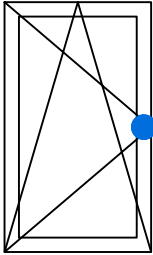
Detail SEF65-A-06F  
No.  
System IDS65 Eco A





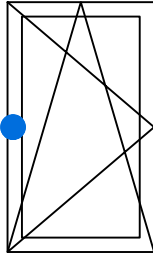
Description Horizontal Section  
 99mm Outer Frame (Handle Side Rail) – Tilt & Turn  
 Vent Sash

Detail No.	SEF99-A-06C
System:	A

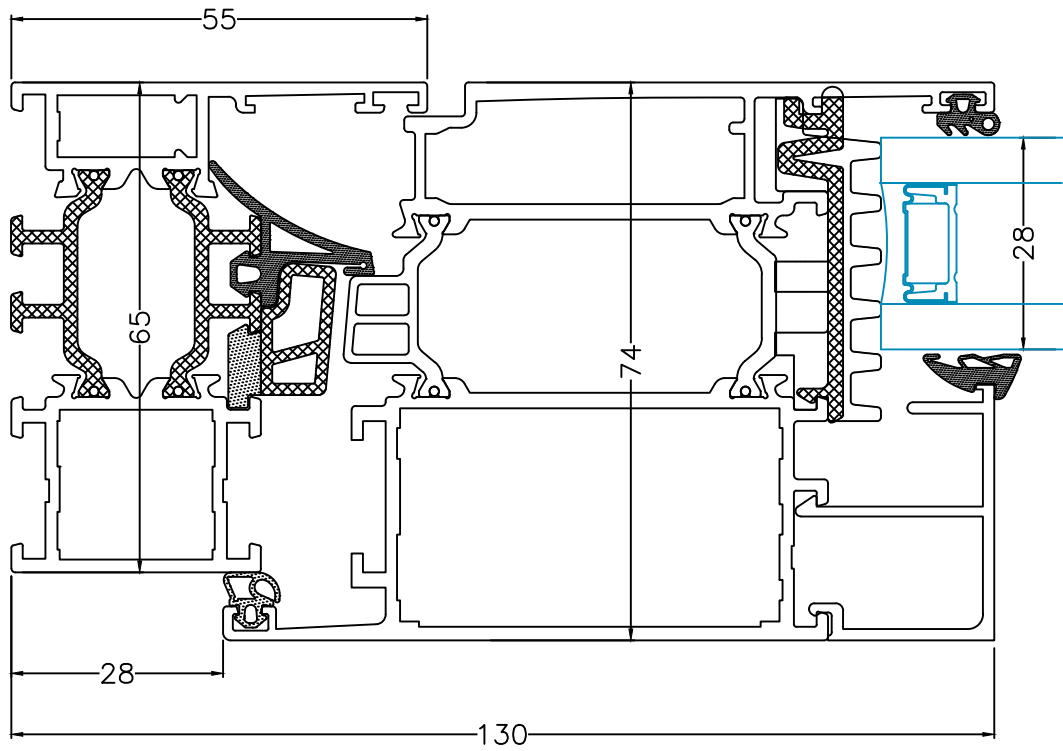


Description Horizontal Section  
 99mm Outer Frame (Handle Side Rail) – Tilt & Turn  
 Vent Sash With Frame Extension

Detail No.	SEF99-A-06H
System:	A



OUTSIDE

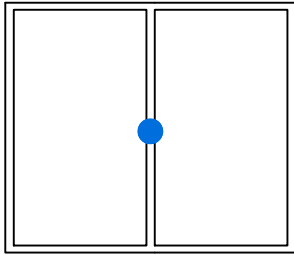


For Profile Application Please Refer To Statics Section

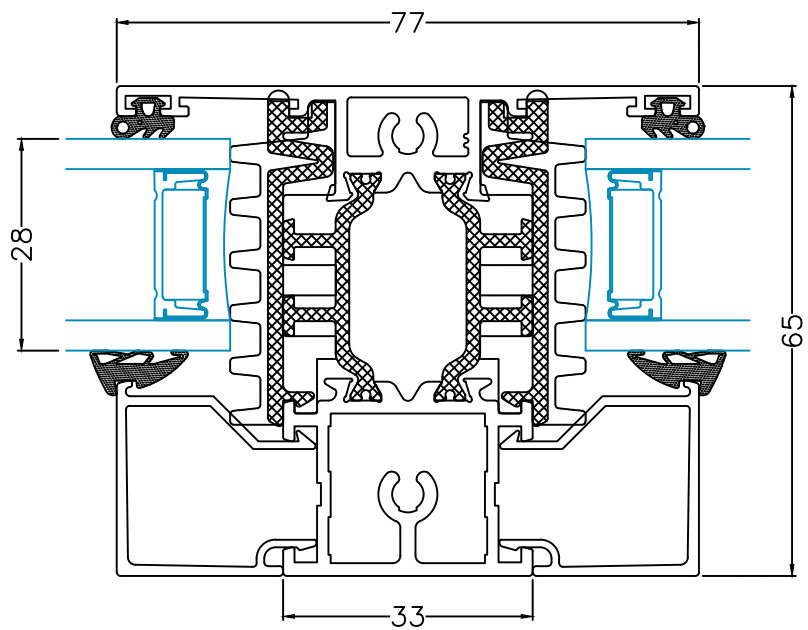
INSIDE

Description  
Horizontal Section  
65mm Outer Frame (Side Rail) – Alternative Heavy  
Duty Tilt & Turn Vent Sash

Detail No.	SEF65-A-061
System:	A



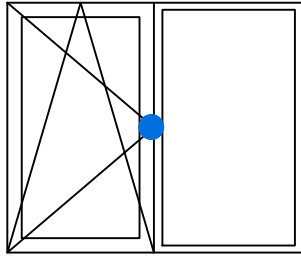
OUTSIDE



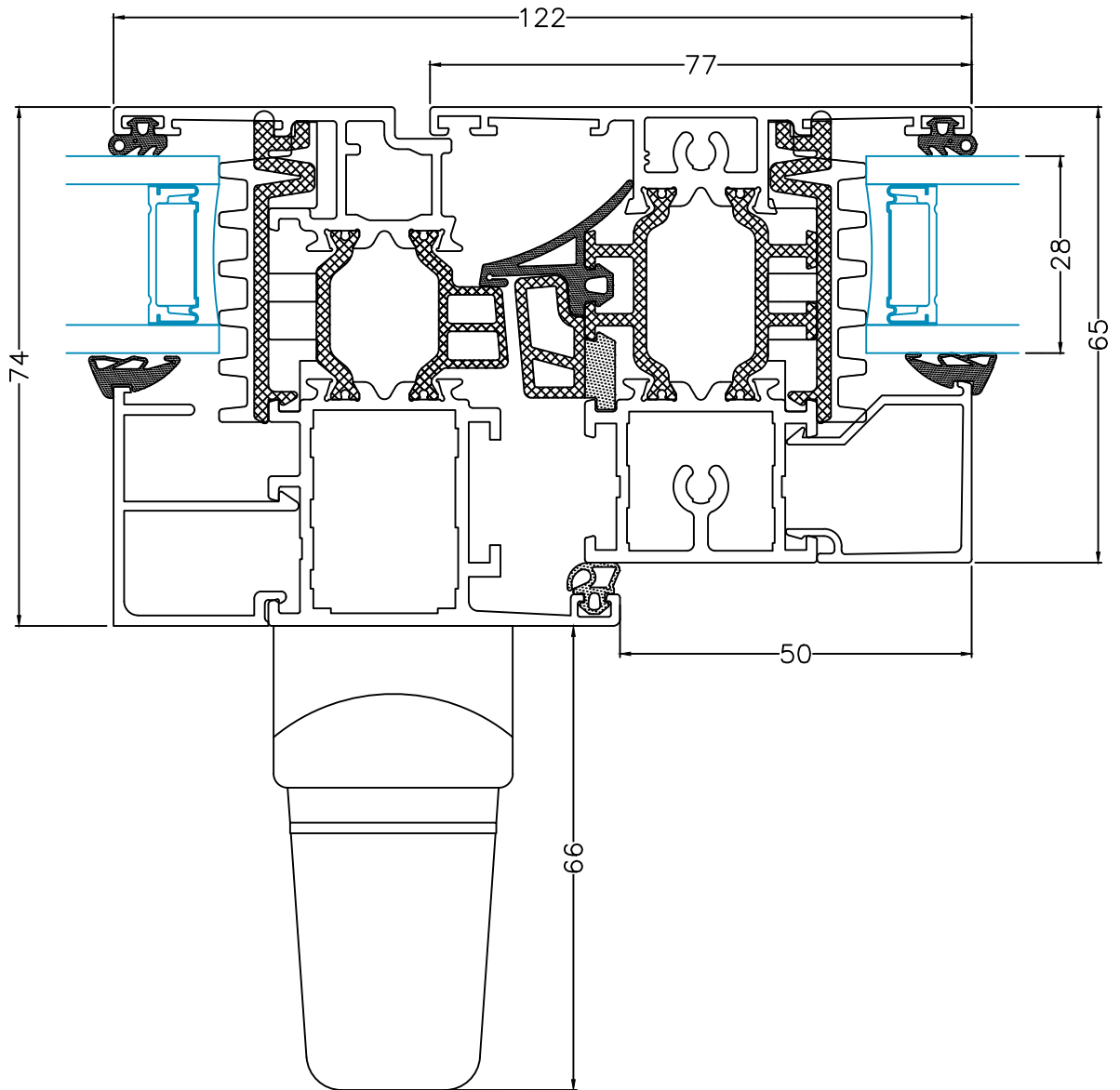
INSIDE

Vertical/Horizontal Section  
 65/99mm Outer Frame (Intermediate  
 Mullion/Transom) – Fixed Frame To Fixed Frame

Detail No.	SEF65-A-07A
System:	A



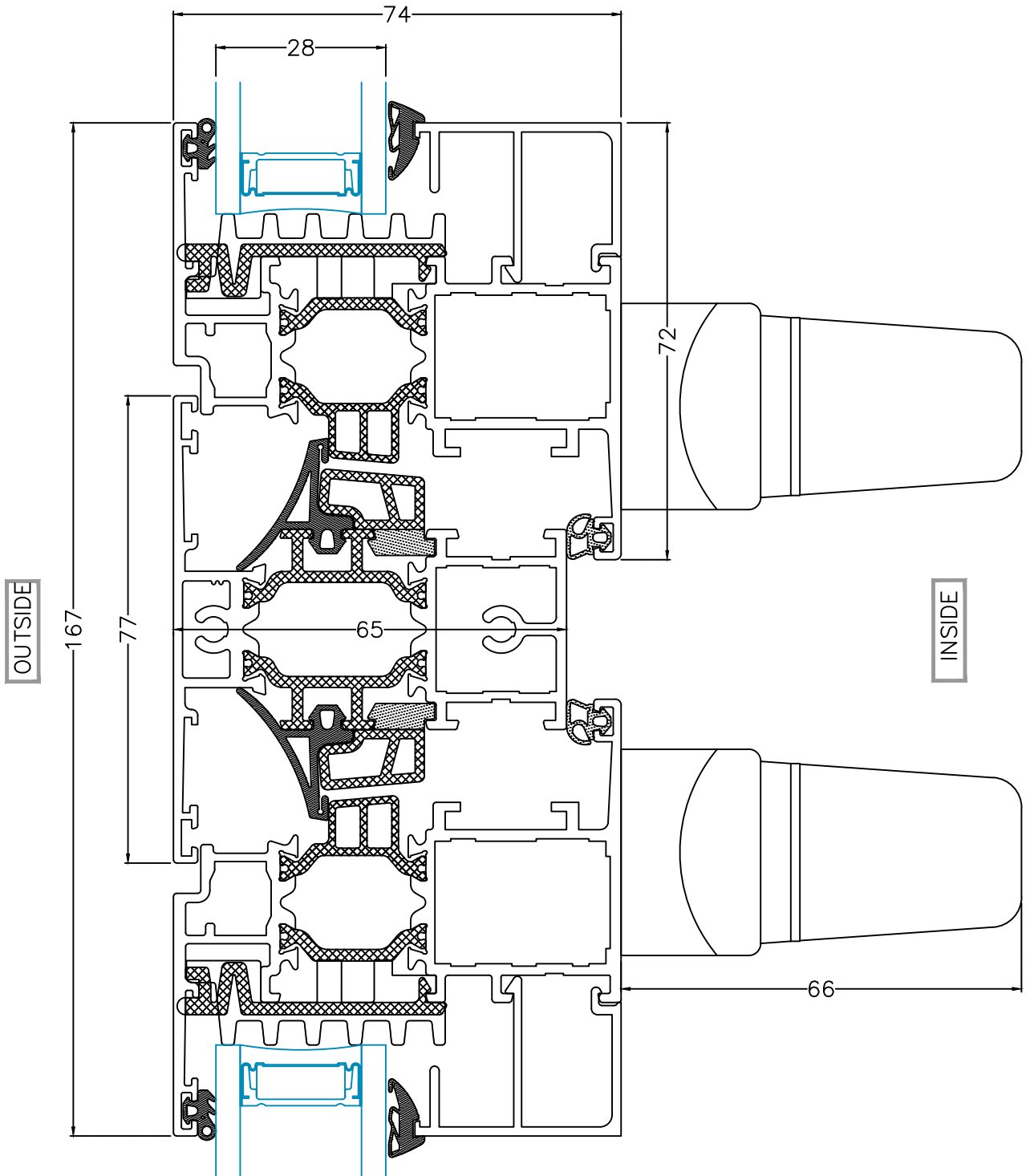
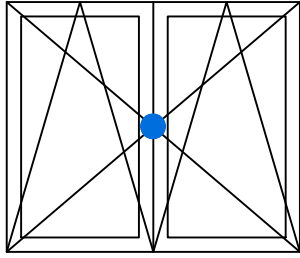
OUTSIDE



INSIDE

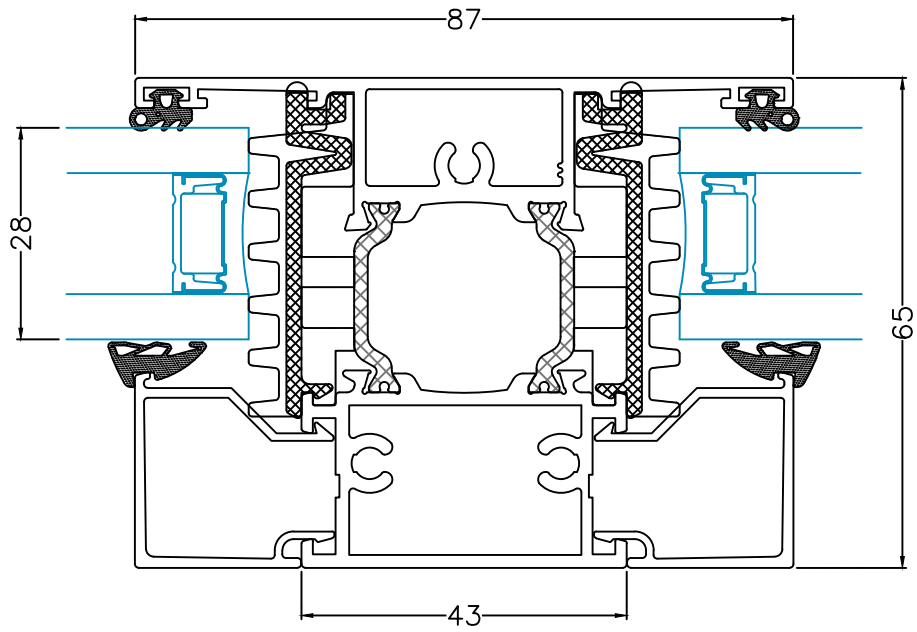
Vertical/Horizontal Section  
 65/99mm Outer Frame (Intermediate  
 Mullion/Transom) – Tilt & Turn Vent To Fixed Frame

Detail SEF65-A-07B  
 No. System: A

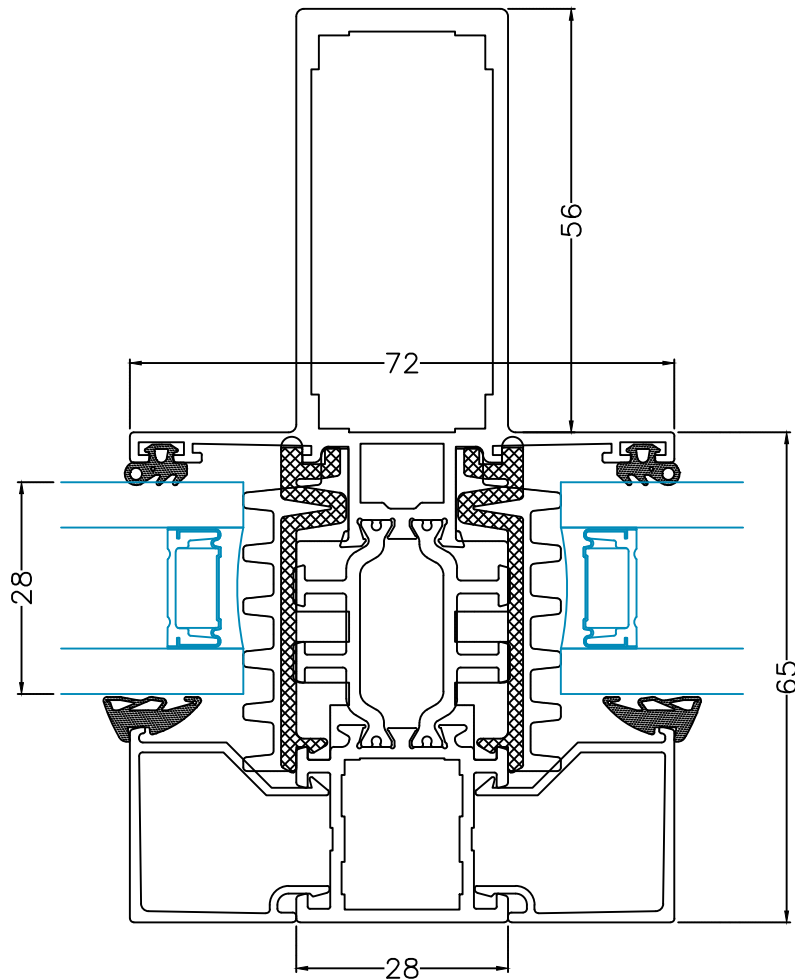


Description Vertical/Horizontal Section  
 65/99mm Outer Frame (Intermediate  
 Mullion/Transom) – Tilt & Turn Vent To Tilt & Turn  
 Vent

Detail No.	SEF65-A-07C
System:	A

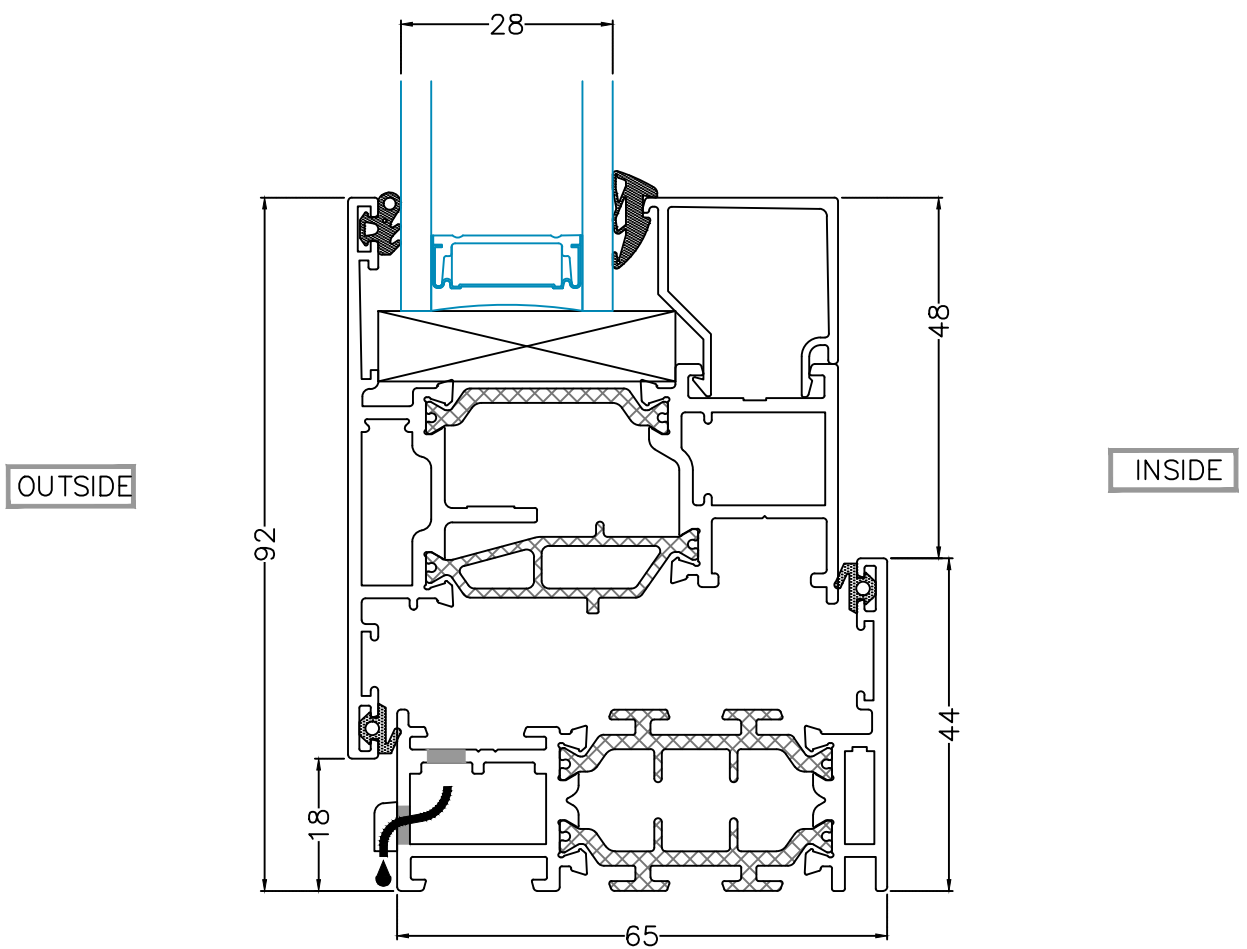
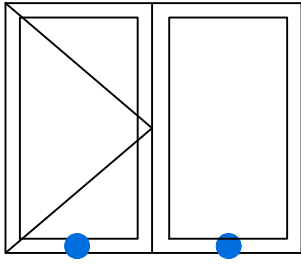


For Profile Application Please Refer To Statics Section



Description Vertical/Horizontal Section  
65/99mm Outer Frame (Intermediate Mullion/Transom) – Alternative Heavy Duty Profiles

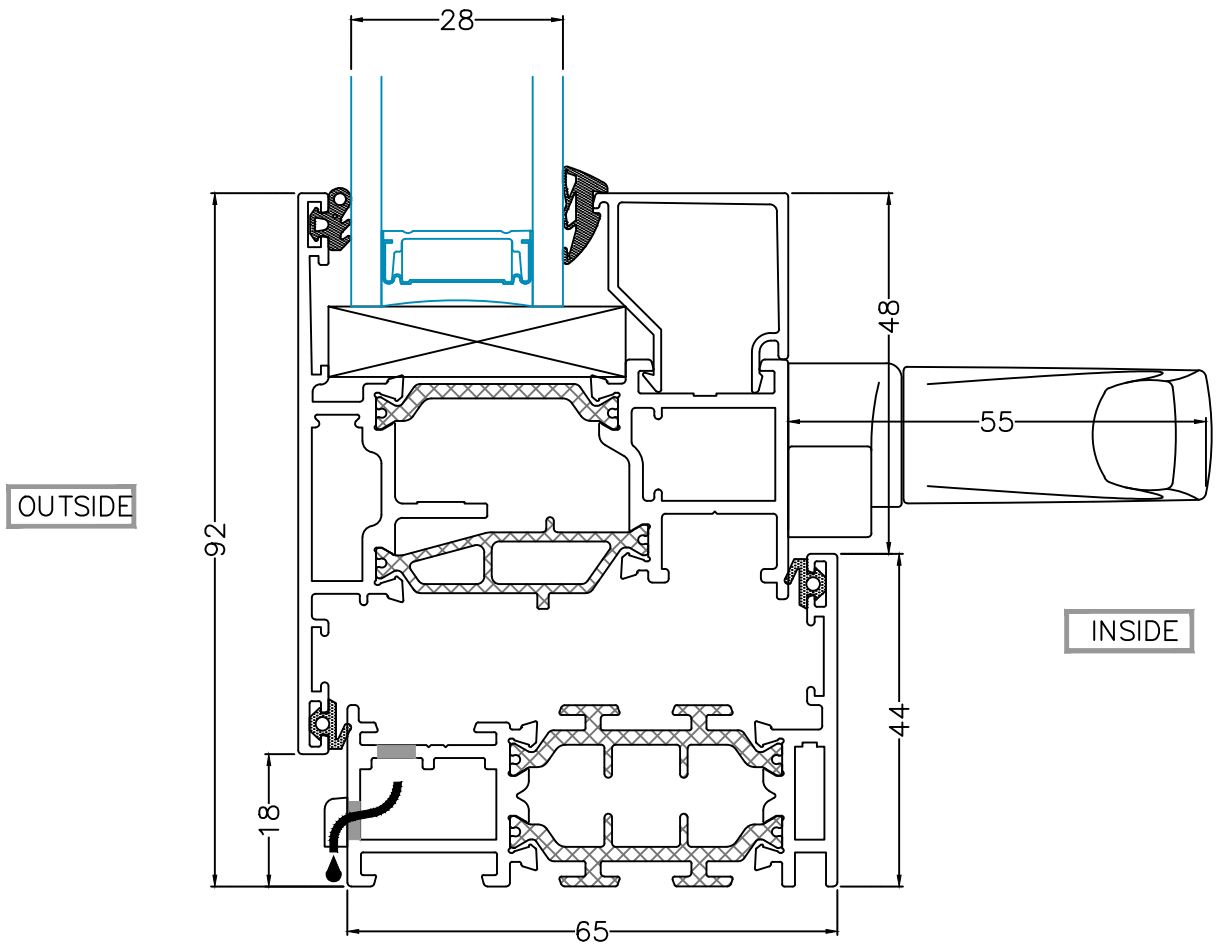
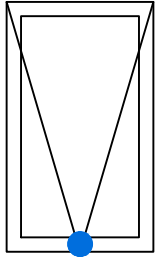
Detail No.	SEF65-A-07D
System:	A



Description  
 Vertical Section  
 65mm Outer Frame (Bottom Rail) – Side Hung  
 Casement/Dummy Vent Sash

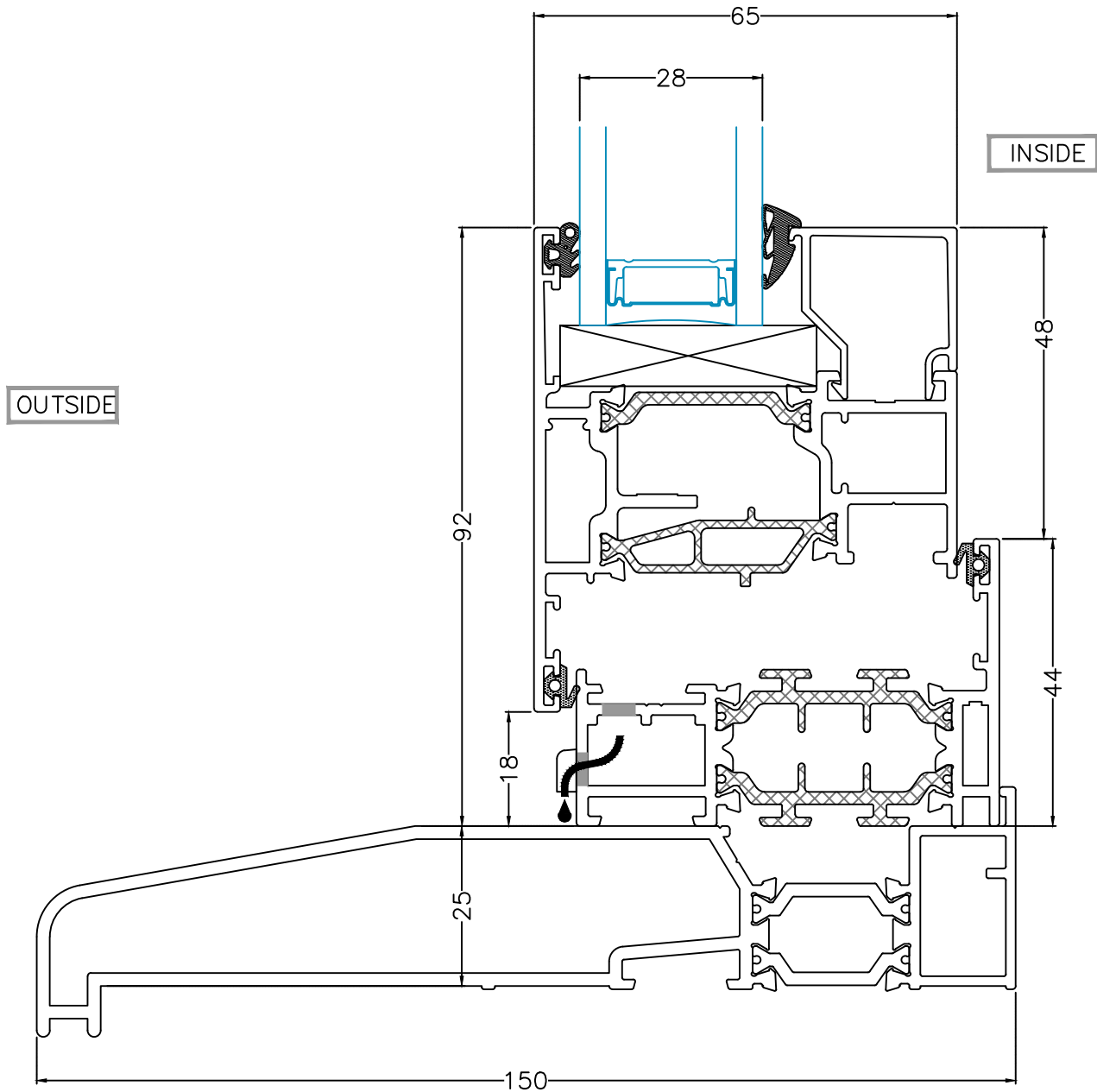
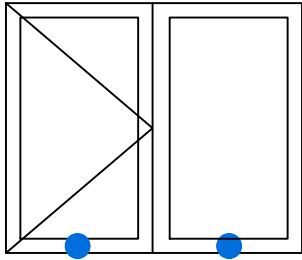
Detail No.	SEF65-A-08A
System:	A





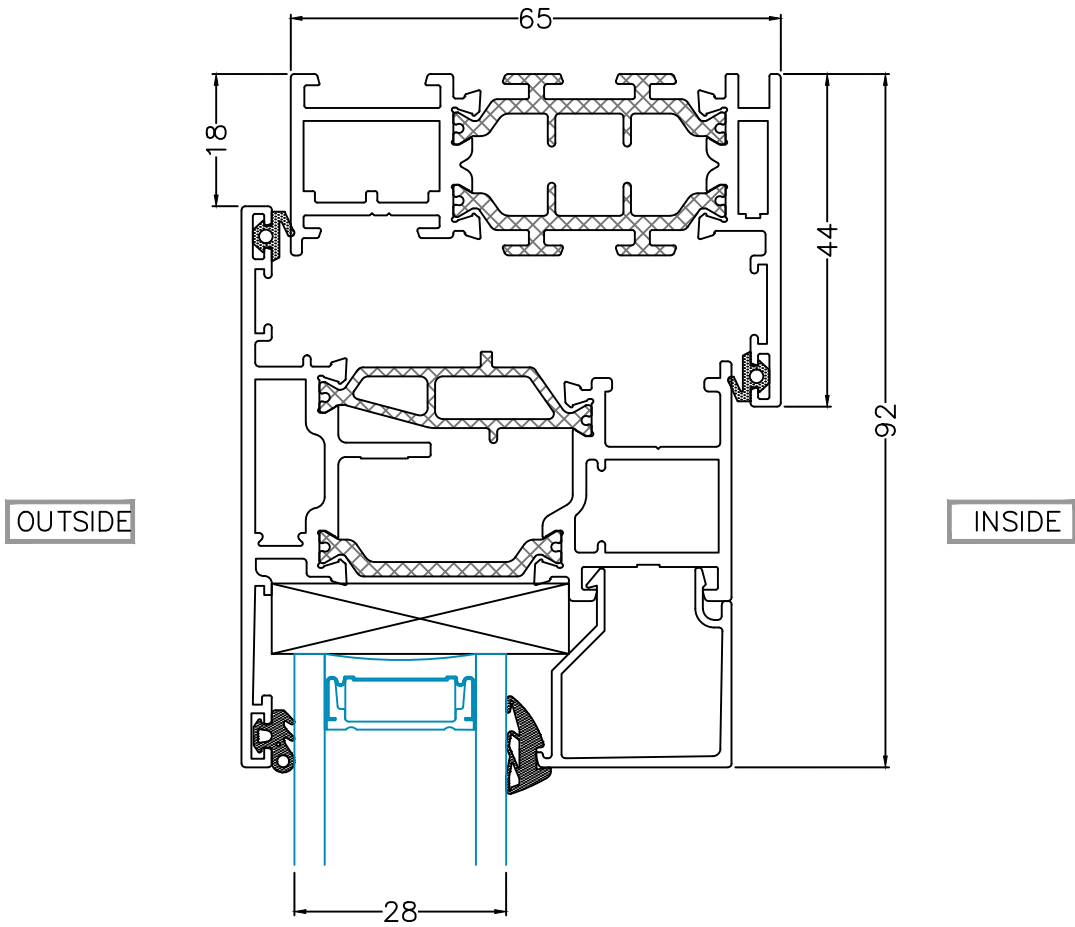
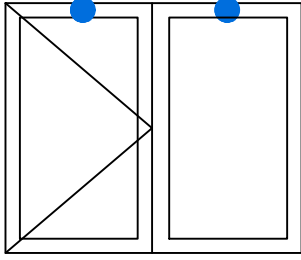
Vertical Section  
 Description  
 65mm Outer Frame (Bottom Rail) – Top Hung  
 Casement Vent Sash

Detail No.	SEF65-A-08B
System:	A



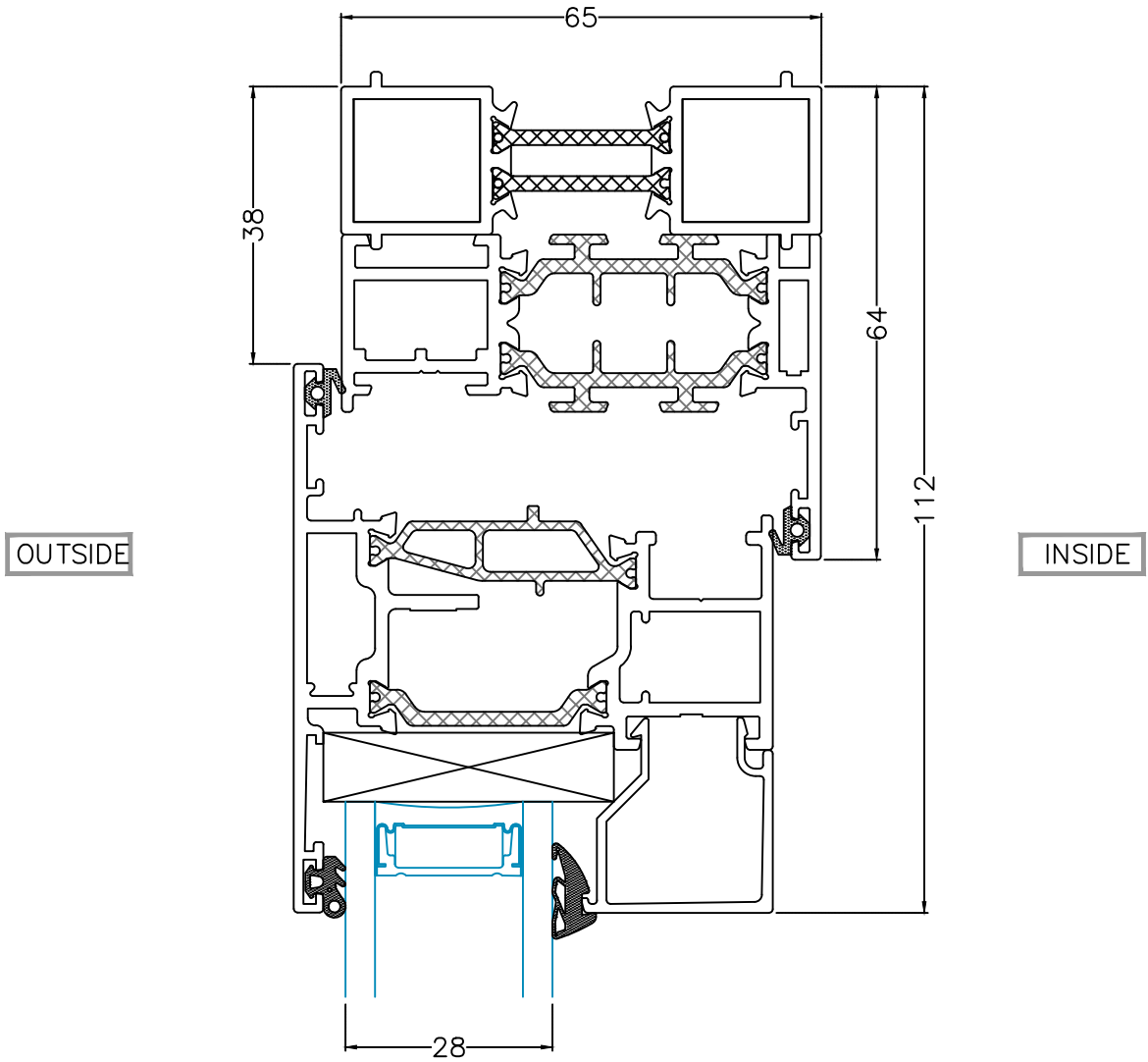
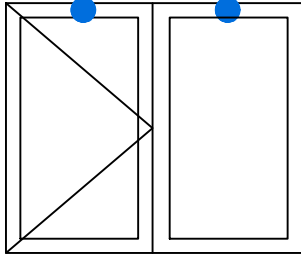
Description  
Vertical Section  
65mm Outer Frame (Bottom Rail) –  
Casement/Dummy Vent Sash With Sill

Detail SEF65-A-08C  
No.  
System: A



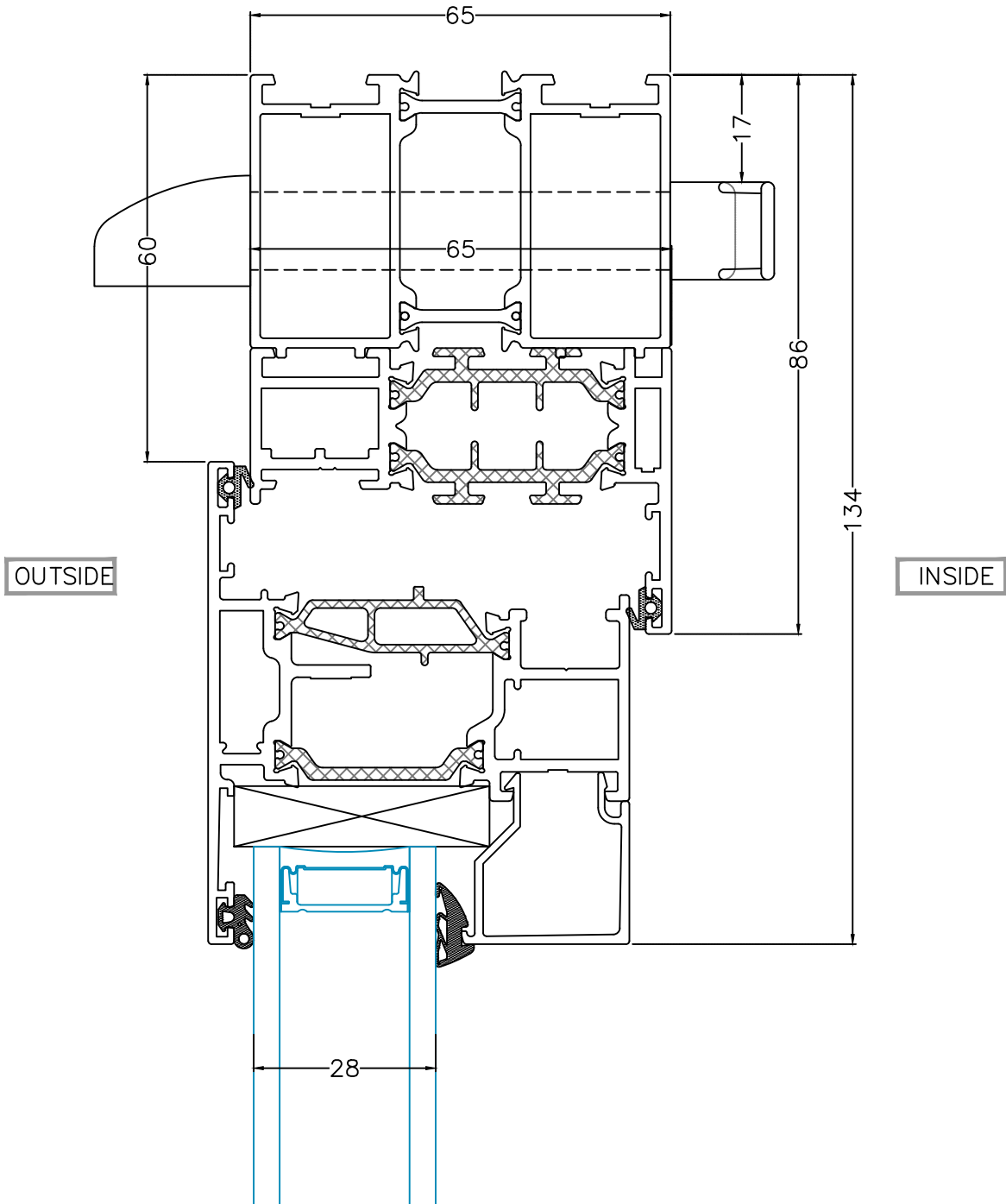
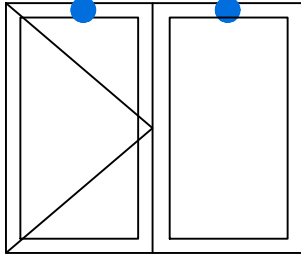
Vertical Section  
 65mm Outer Frame (Top Rail) – Casement/Dummy  
 Vent Sash

Detail No.	SEF65-A-09A
System:	A



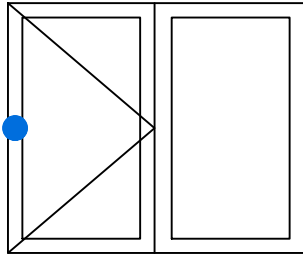
Vertical Section  
 Description  
 65mm Outer Frame (Top Rail) – Casement/Dummy  
 Vent Sash With Frame Extension

Detail SEF65-A-09B  
 No.  
 System: A

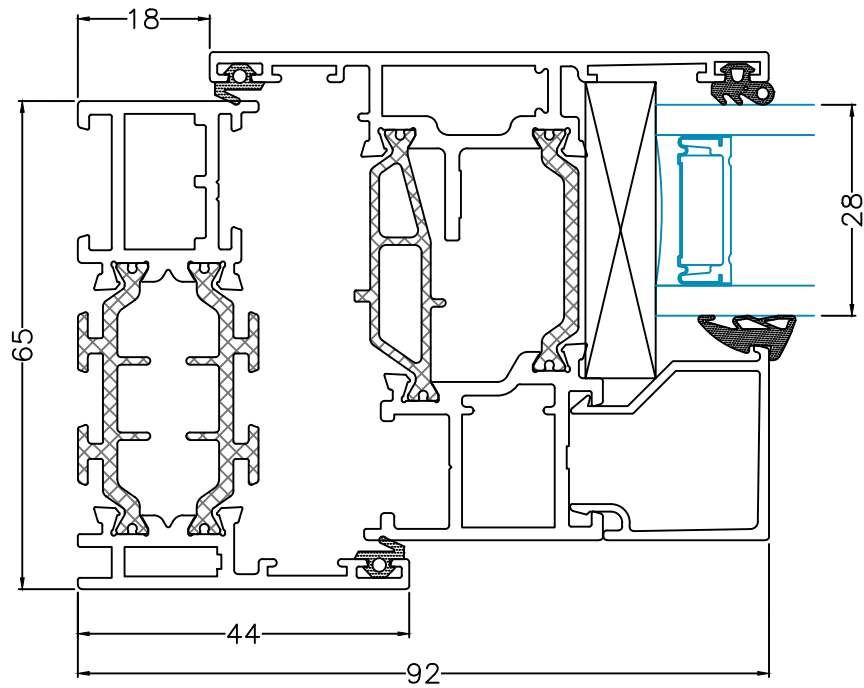


Description Vertical Section  
65mm Outer Frame (Top Rail) – Casement/Dummy  
Vent Sash With Trickle Vent

Detail No.	SEF65-A-09C
System:	A



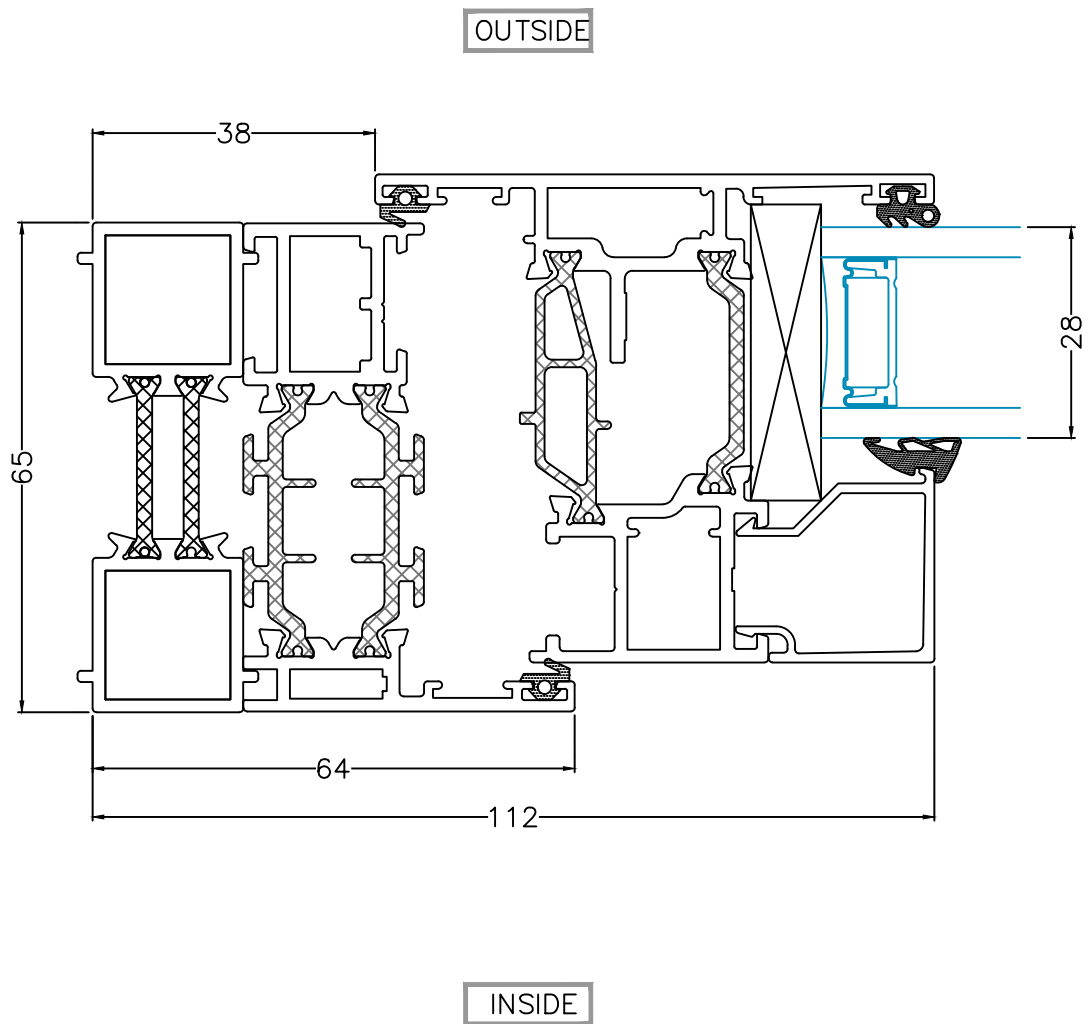
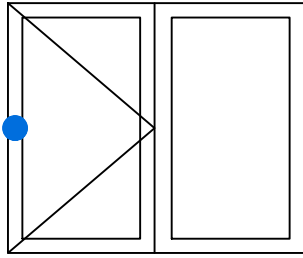
OUTSIDE



INSIDE

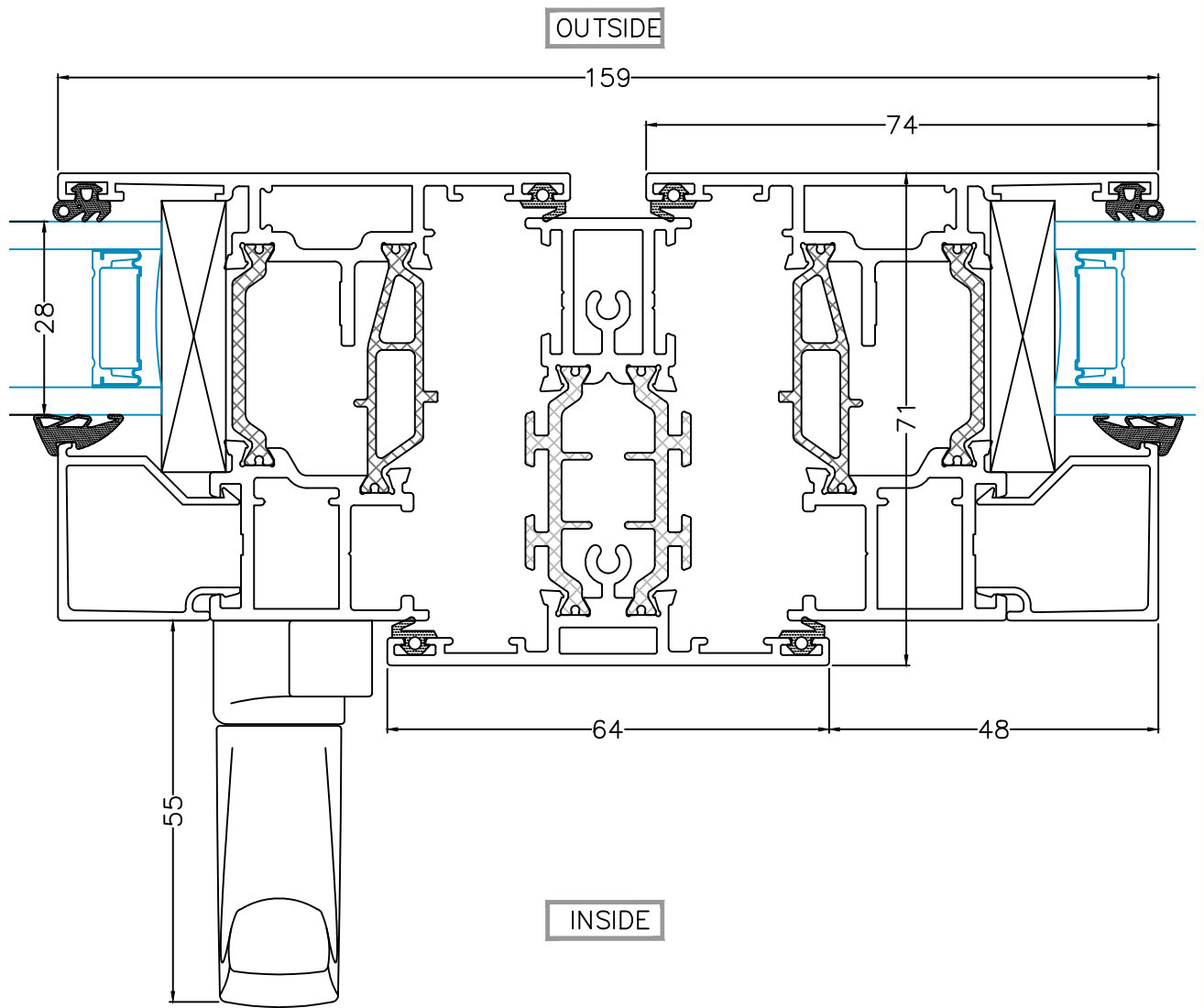
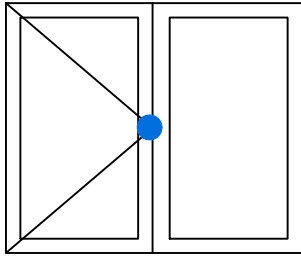
Description Horizontal Section  
65mm Outer Frame (Side Rail) – Casement/Dummy  
Vent Sash

Detail No.	SEF65-A-10A
System:	A



Description  
 Horizontal Section  
 65mm Outer Frame (Side Rail) – Casement/Dummy  
 Vent Sash With Frame Extension

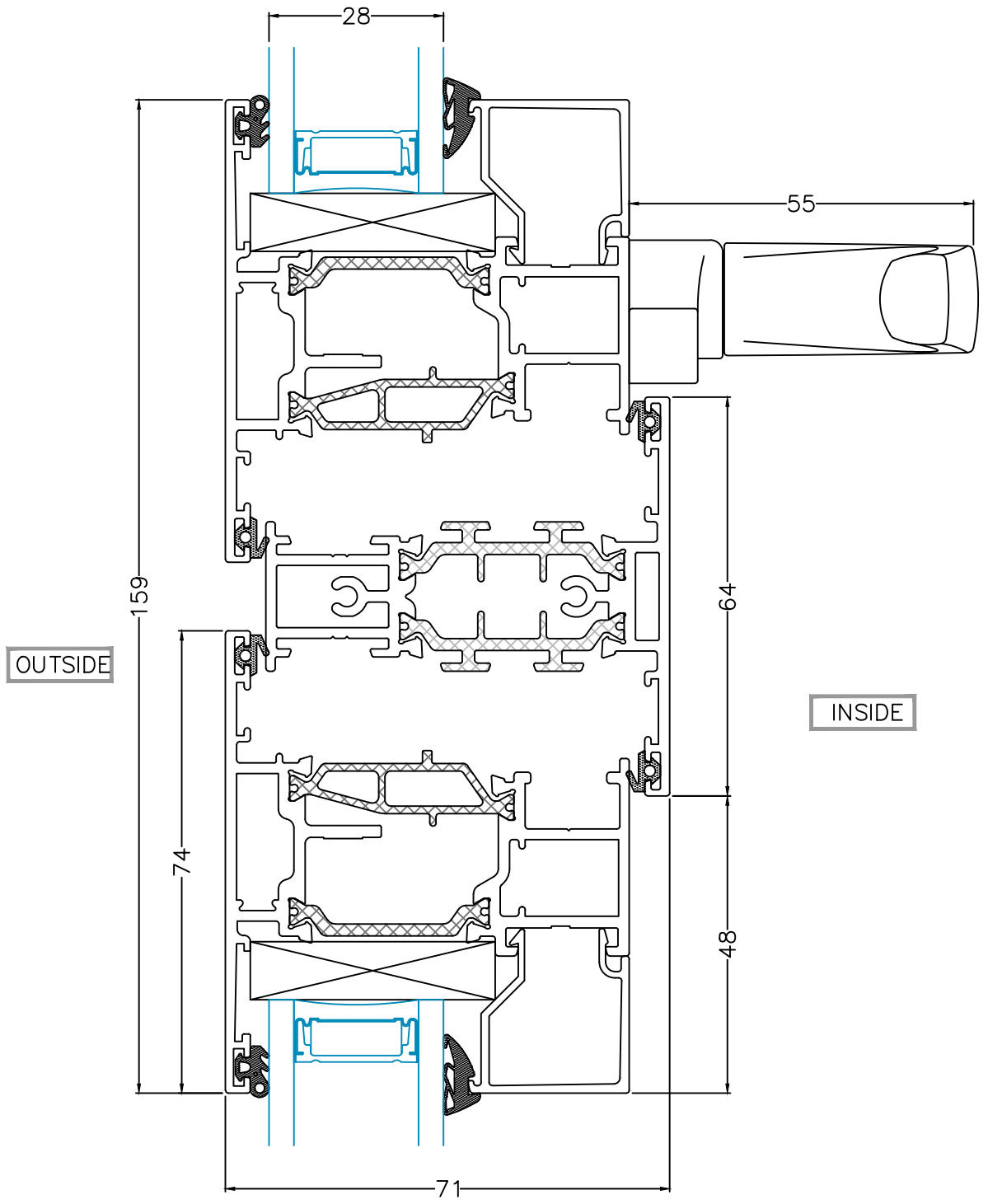
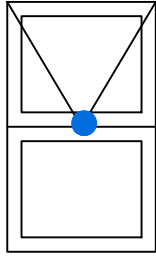
Detail No.	SEF65-A-10E
System:	A



Description Vertical Section  
65mm Outer Frame (Intermediate Mullion) – Side  
Hung Casement To Dummy Vent

Detail No.	SEF65-A-11A
System:	A





Description  
 Horizontal Section  
 65mm Outer Frame (Intermediate Transom) – Top  
 Hung Casement To Dummy Vent

Detail No.	SEF65-A-11B
System:	A

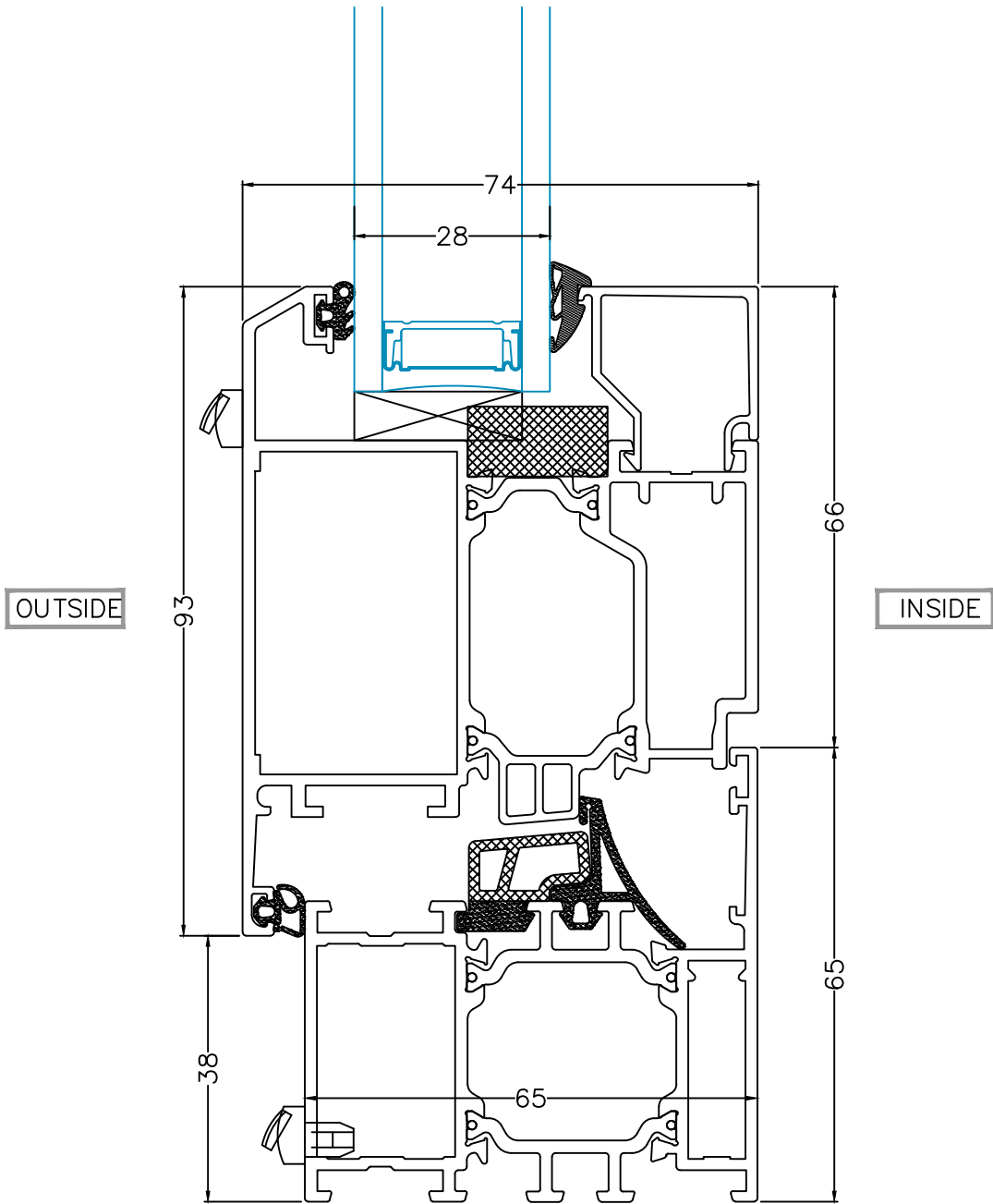
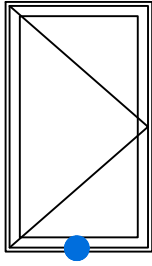
# SEF65 Eco DOOR PROFILES

Description Profiles For Inward And Outward Opening Single And French Doors

Detail Section B

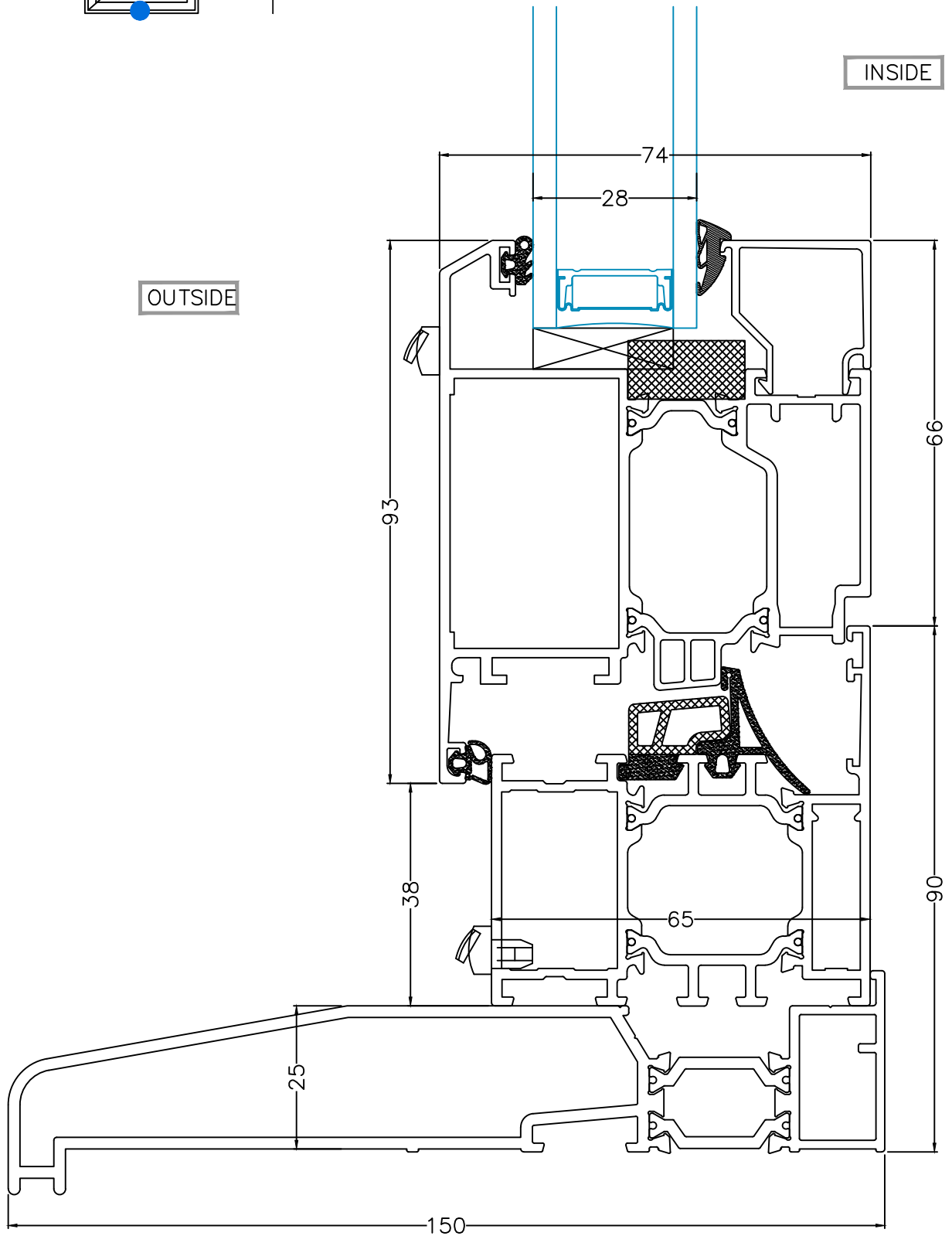
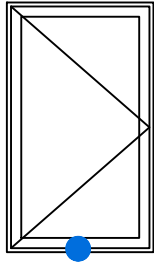
No.  
System:

A



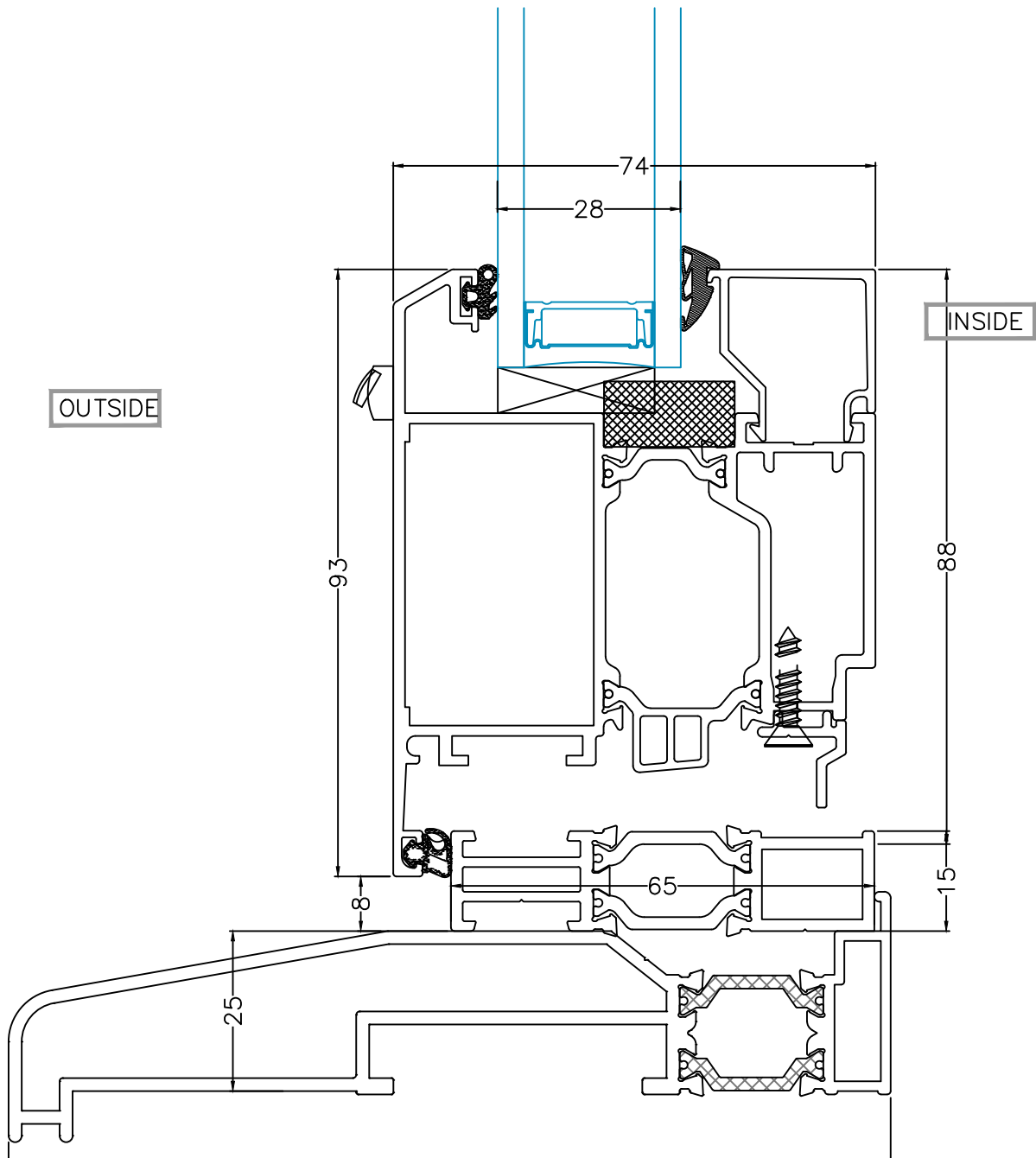
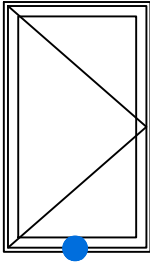
Description Horizontal Section  
 65mm Outer Frame (Bottom Rail) – Outward Opening  
 Door Weathered Threshold

Detail No.	SEF65-B-01A
System:	A



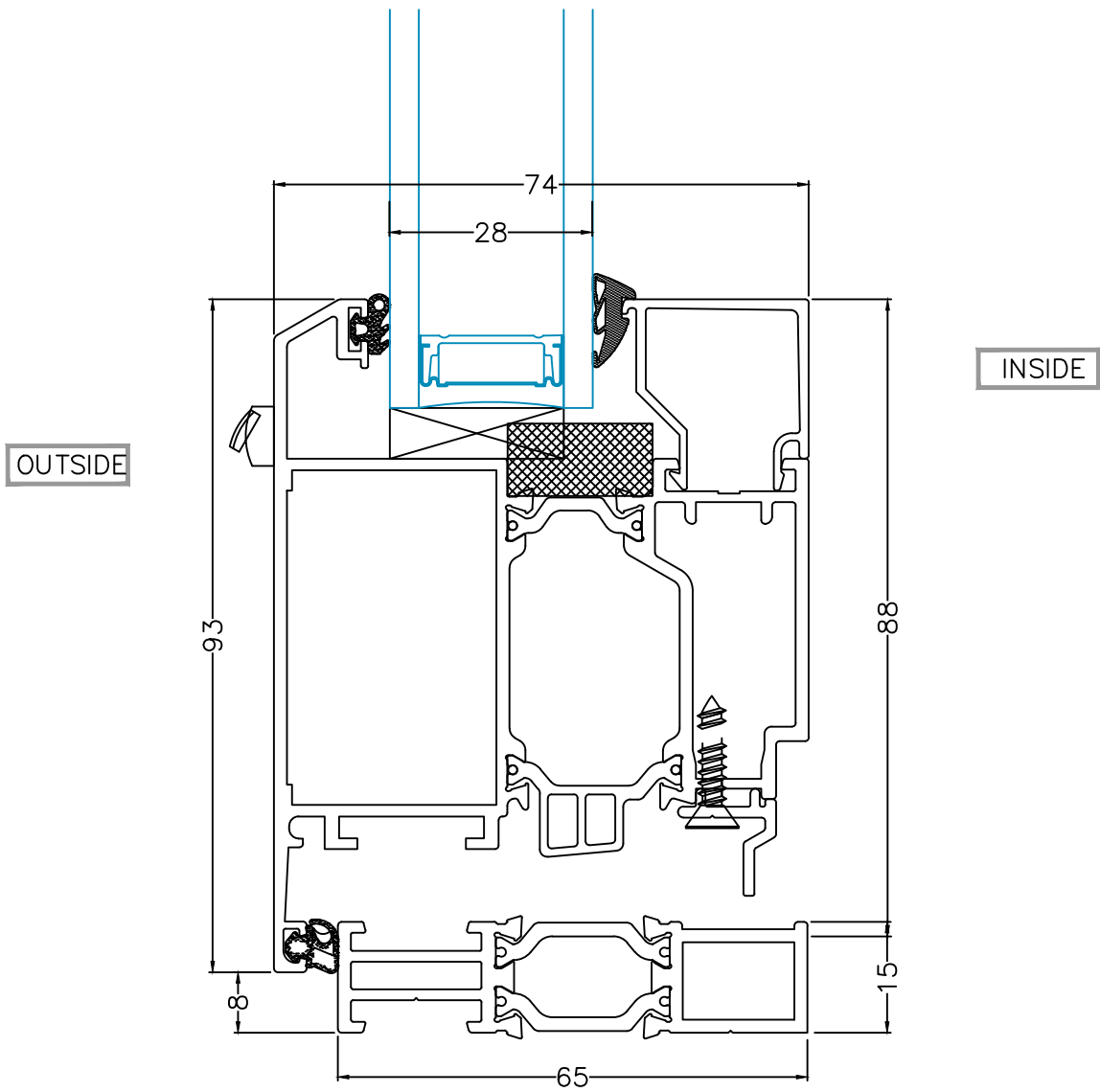
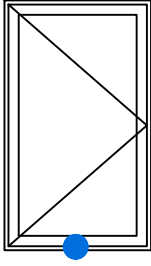
Description  
 Horizontal Section  
 65mm Outer Frame (Bottom Rail) – Outward Opening  
 Door Weathered Threshold On Cill

Detail No.	SEF65-B-01B
System:	A



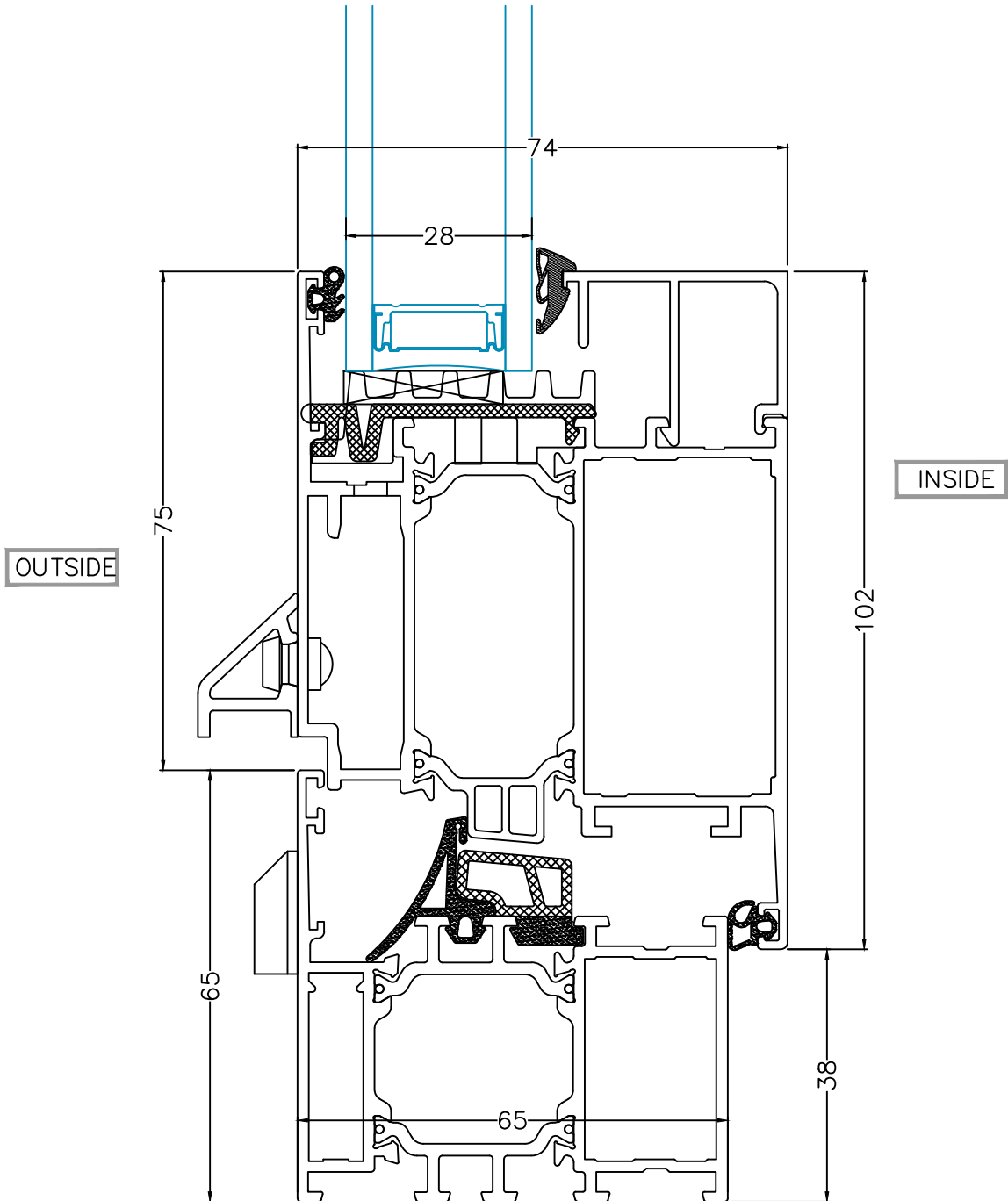
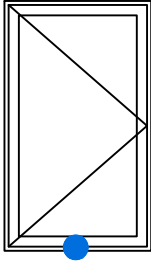
Description  
 Horizontal Section  
 65mm Outer Frame (Bottom Rail) – Outward Opening  
 Door Weathered Low Profile Threshold

Detail No. SEF65-B-010  
 System: A



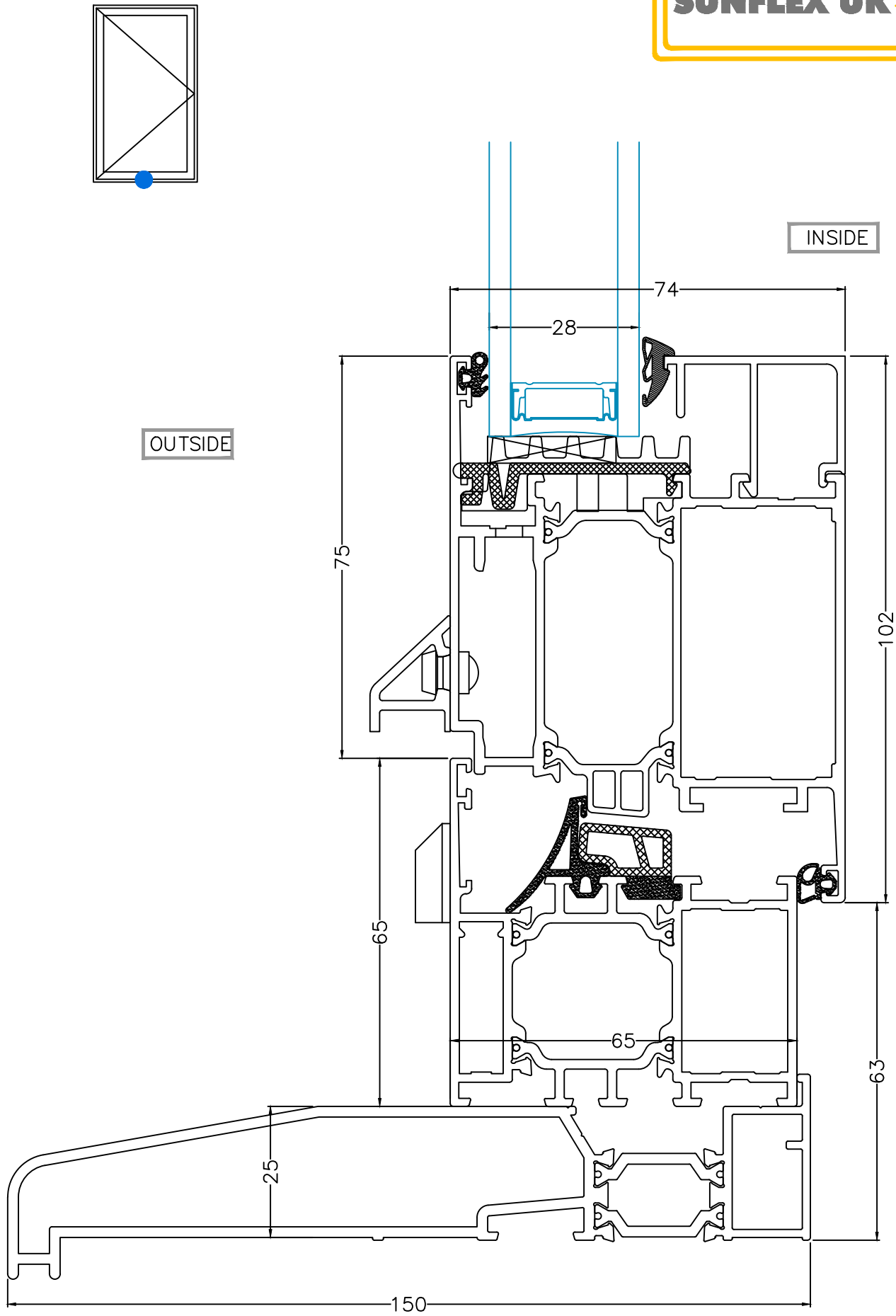
Description  
 Horizontal Section  
 65mm Outer Frame (Bottom Rail) – Outward Opening  
 Door Doc 'M' Compliant Low Profile Threshold

Detail No.	SEF65-B-01D
System:	A



Description  
 Horizontal Section  
 65mm Outer Frame (Bottom Rail) – Inward Opening  
 Door Weathered Threshold

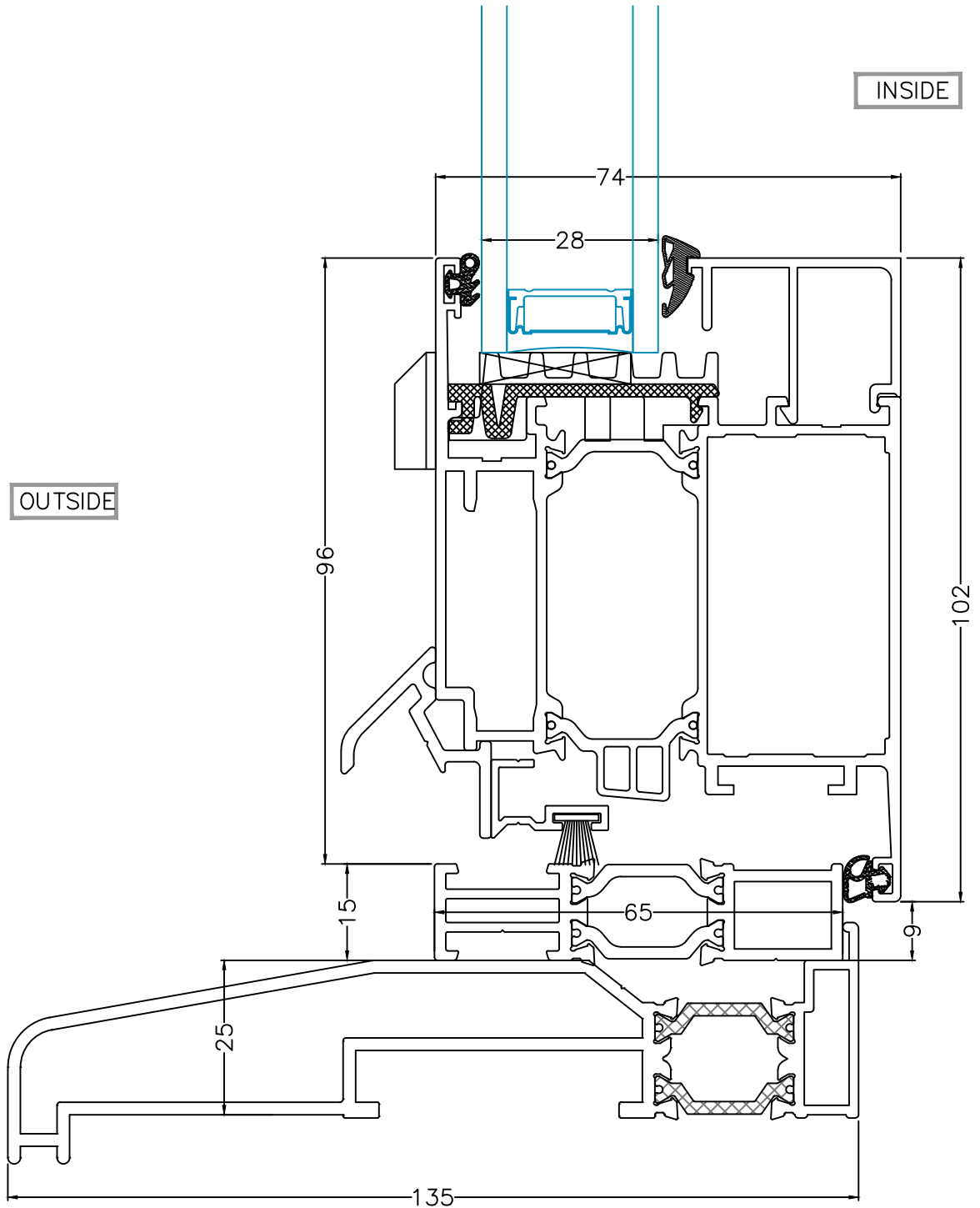
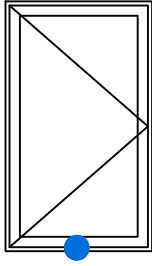
Detail SEF65-B-01E  
 No.  
 System: A



Description Horizontal Section  
65mm Outer Frame (Bottom Rail) – Inward Opening  
Door Weathered Threshold On Cill

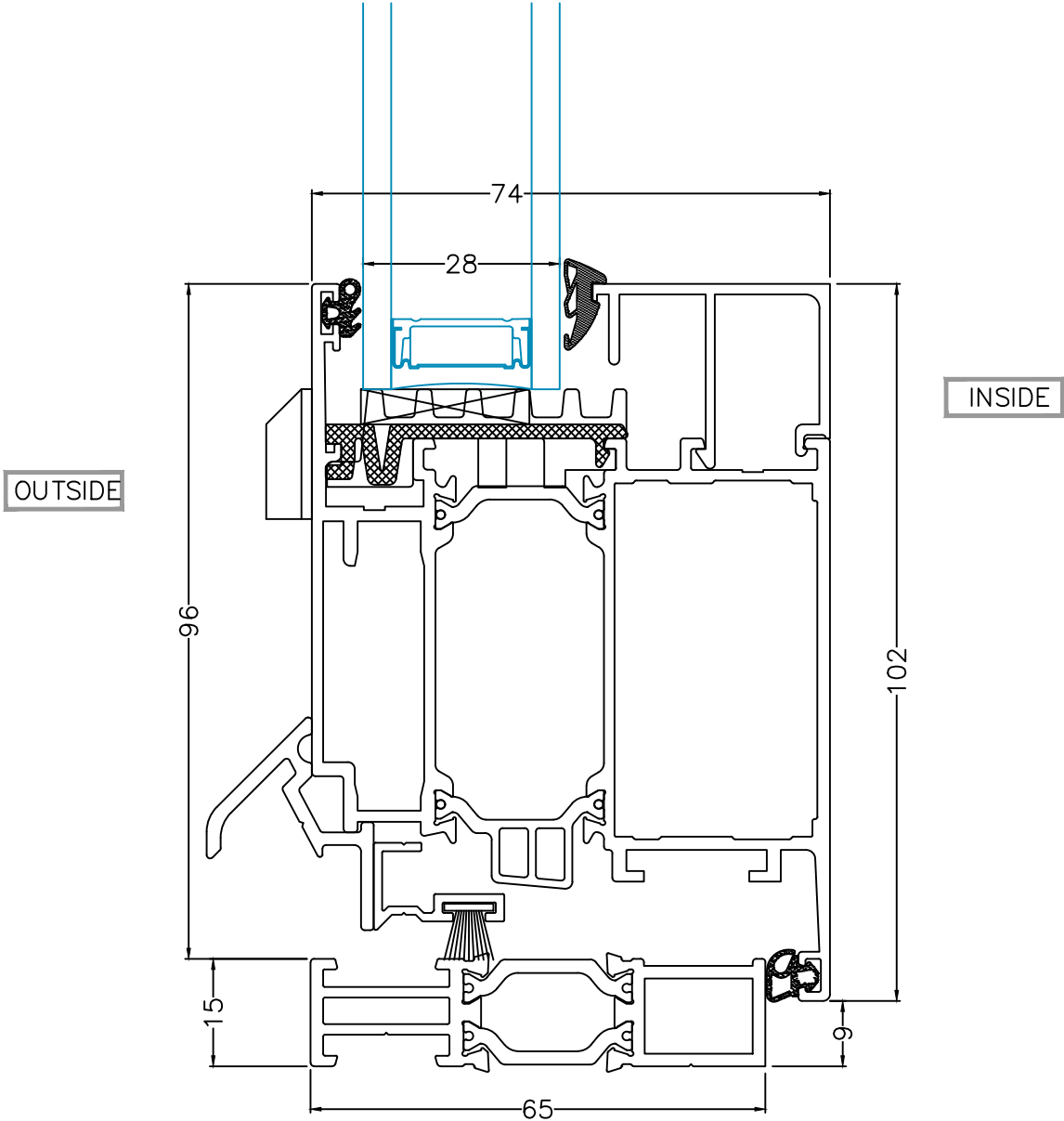
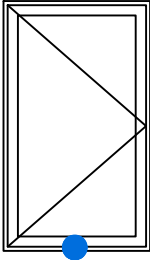
Detail No.	SEF65-B-01F
System:	A





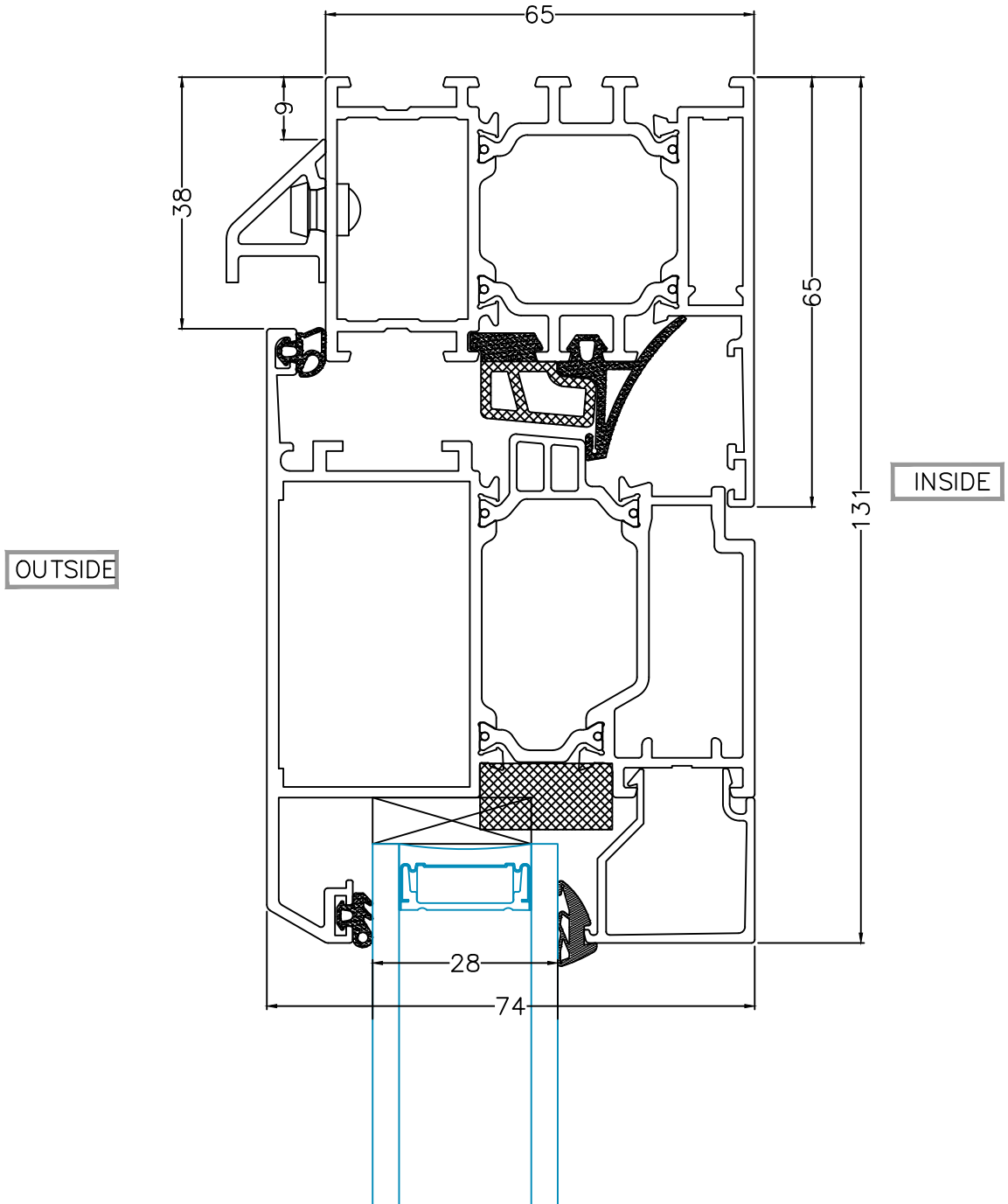
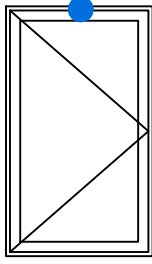
Description  
 Horizontal Section  
 65mm Outer Frame (Bottom Rail) – Inward Opening  
 Door Low Profile Threshold On Cill

Detail No.	SEF65-B-01C
System:	A



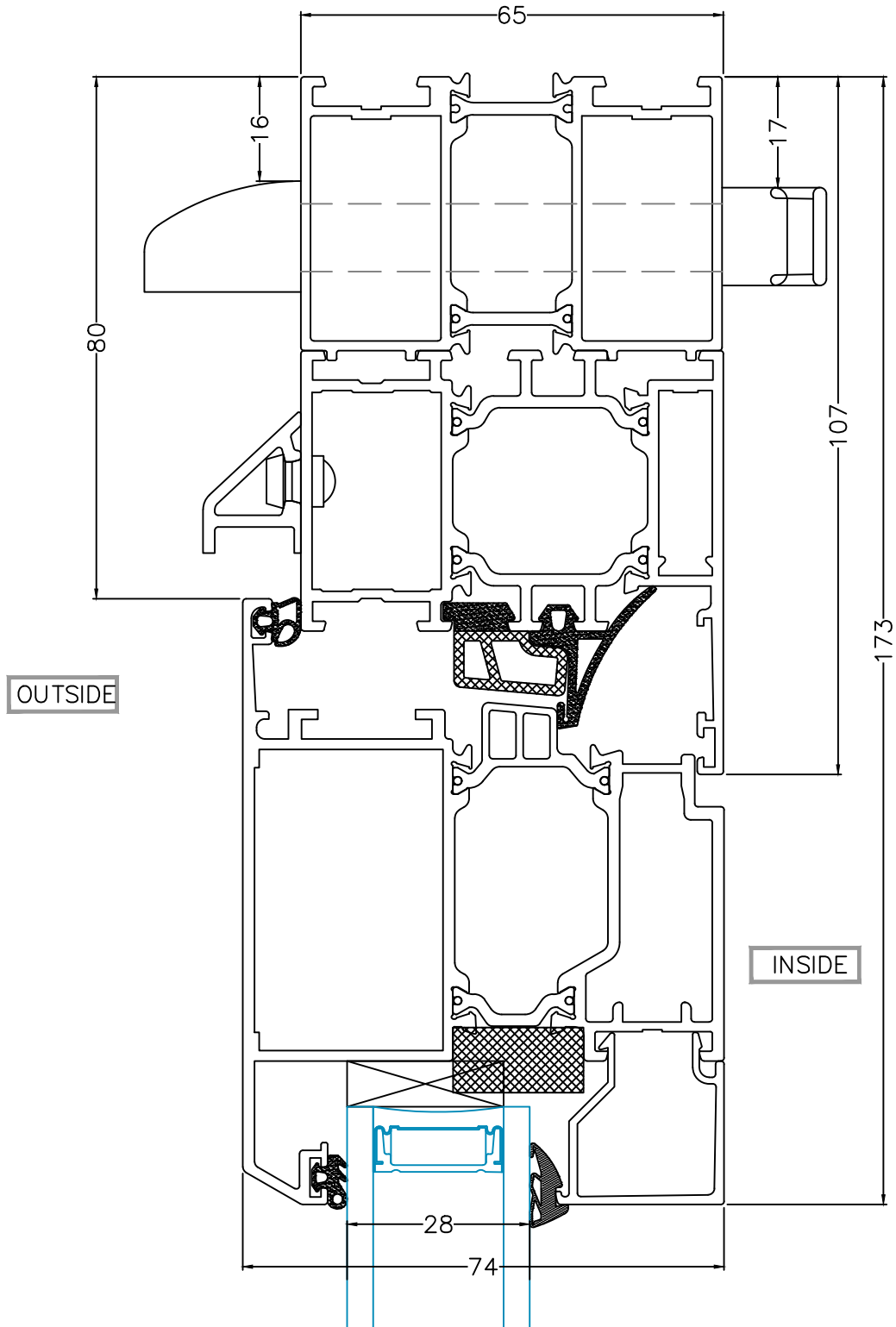
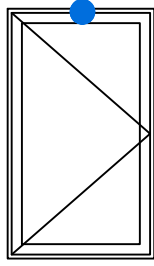
Description Horizontal Section  
65mm Outer Frame (Bottom Rail) – Inward Opening  
Door Doc 'M' Compliant Low Profile Threshold

Detail No.	SEF65-B-01H
System:	A



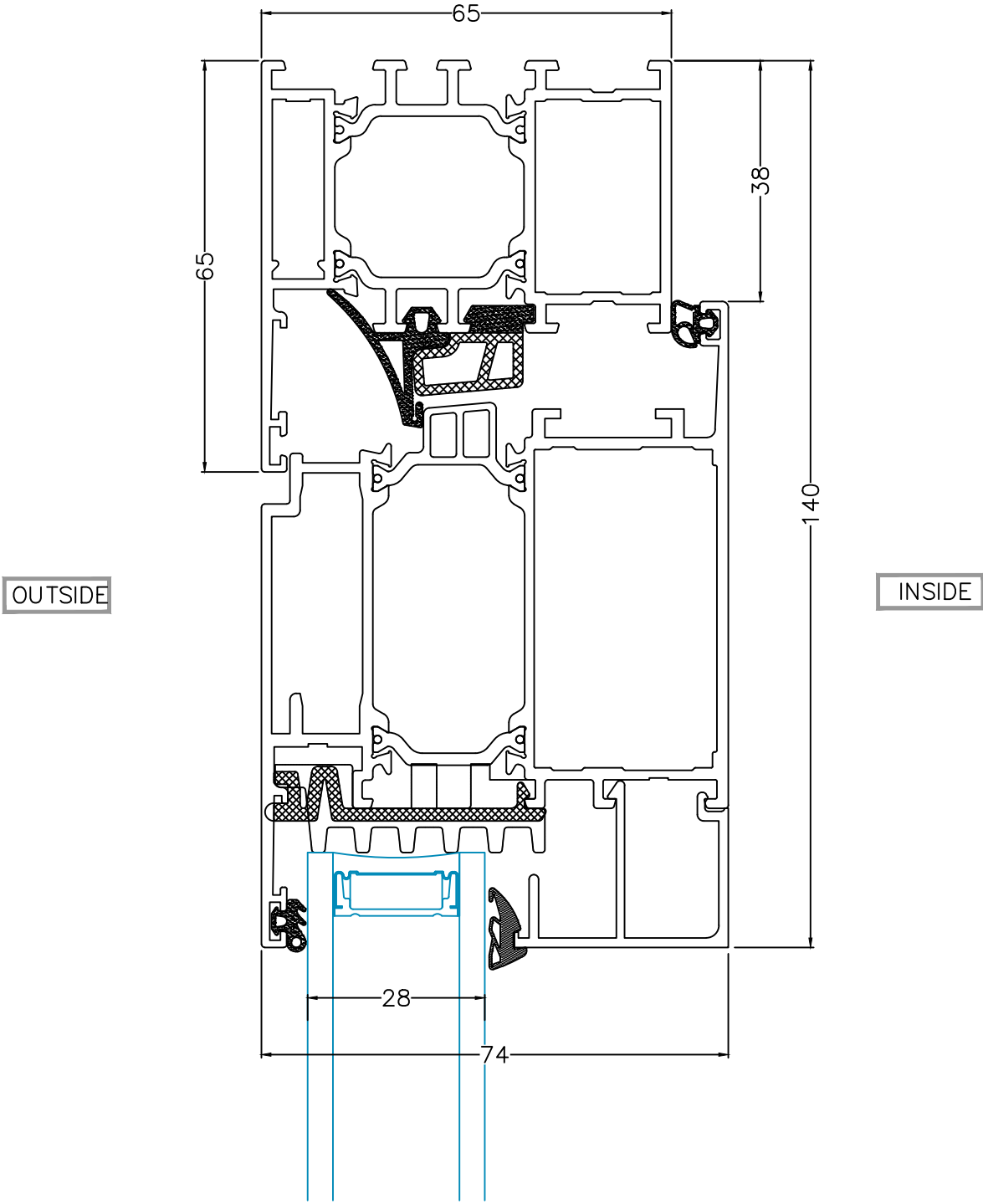
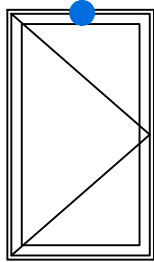
Description  
 Horizontal Section  
 65mm Outer Frame (Top Rail) – Outward Opening  
 Door

Detail No.	SEF65-B-02A
System:	A



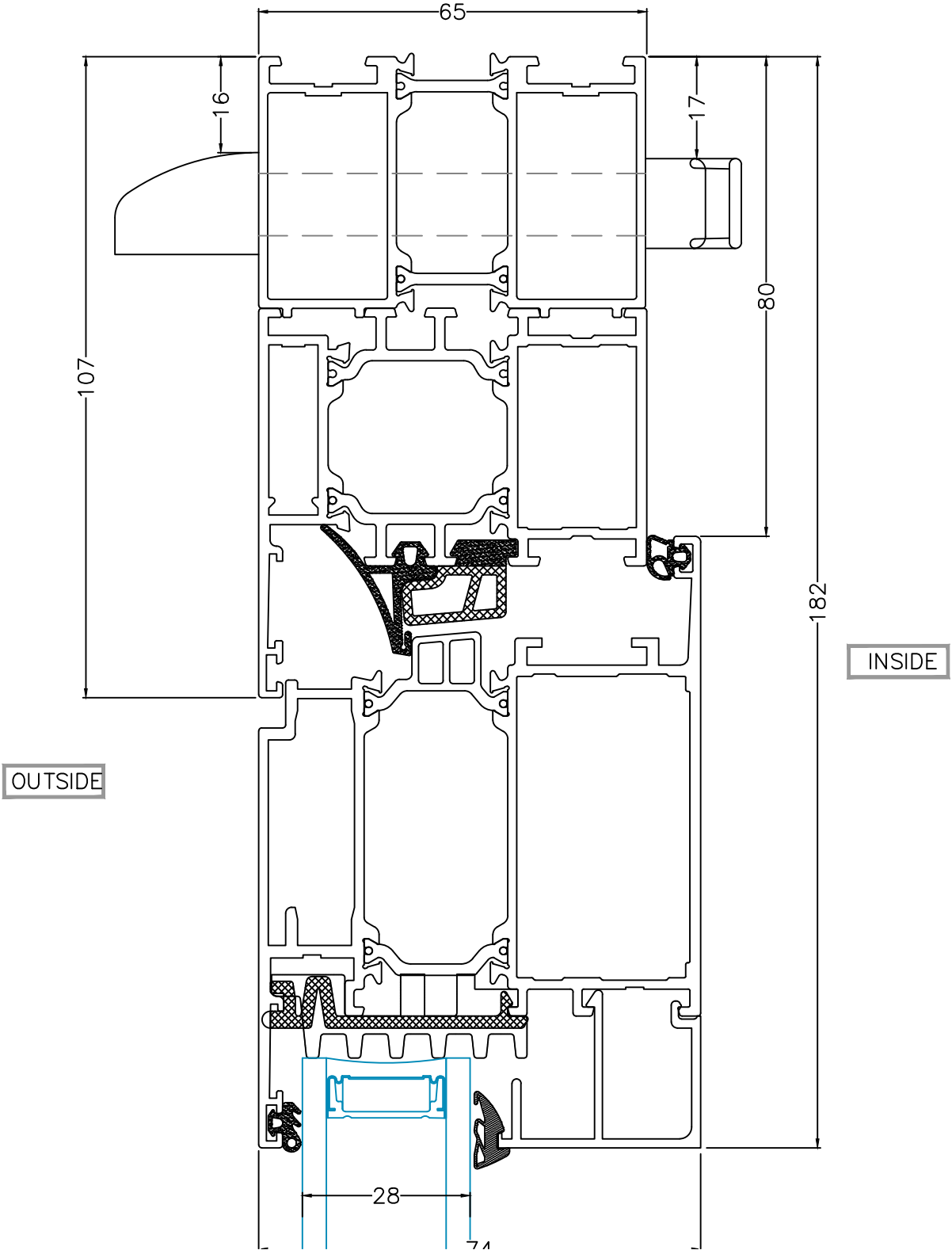
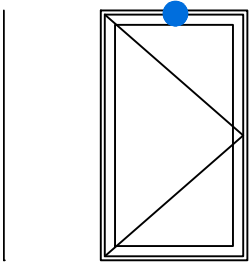
Description Horizontal Section  
65mm Outer Frame (Top Rail) – Outward Opening  
Door With Frame Extension And Trickle Vent

Detail No.	SEF65-B-02B
System:	A



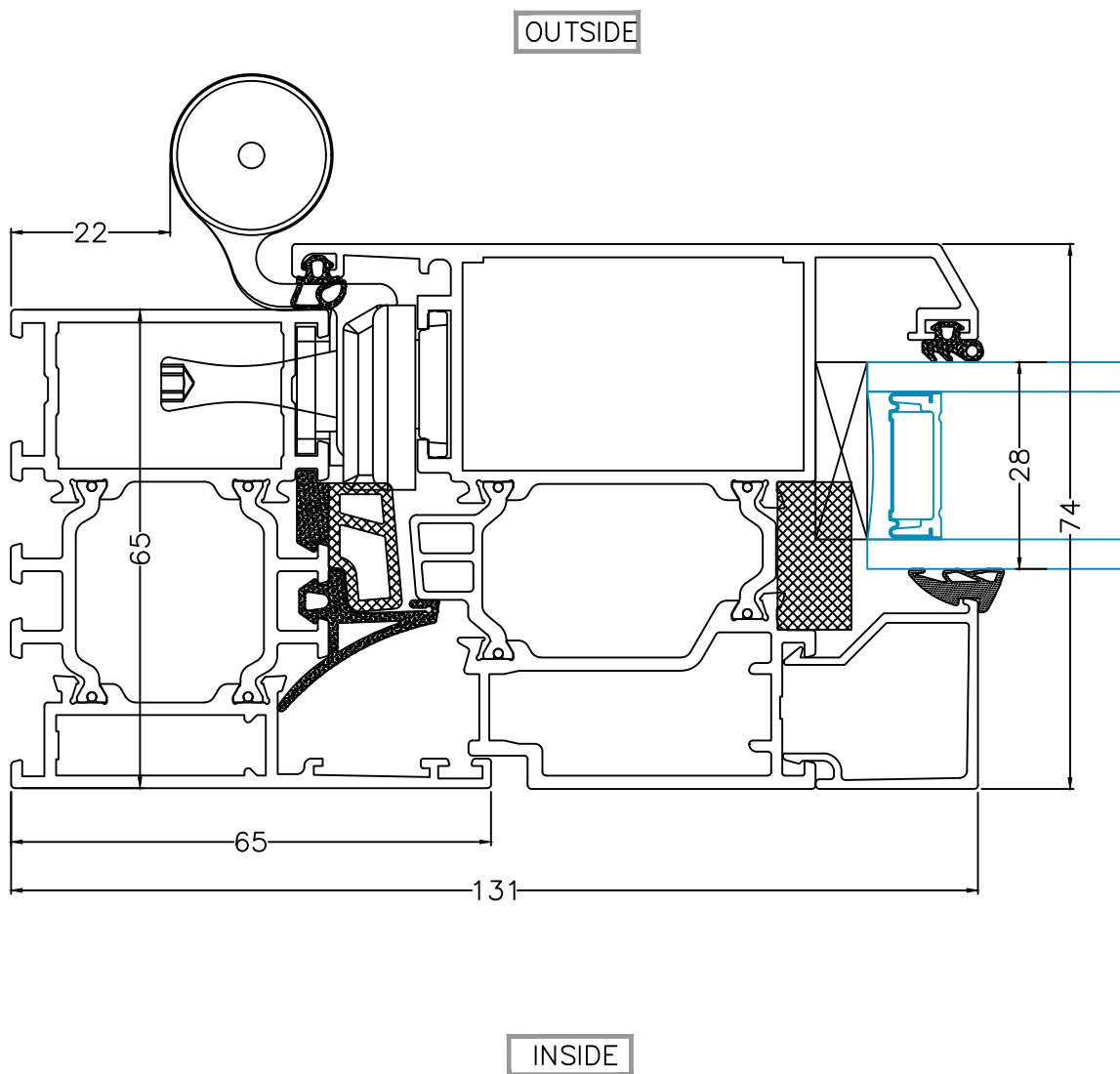
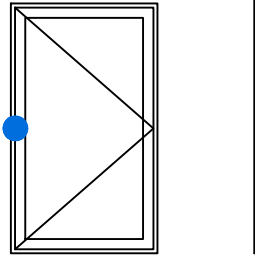
Description Horizontal Section  
65mm Outer Frame (Top Rail) – Inward Opening Door

Detail No.	SEF65-B-02C
System:	A



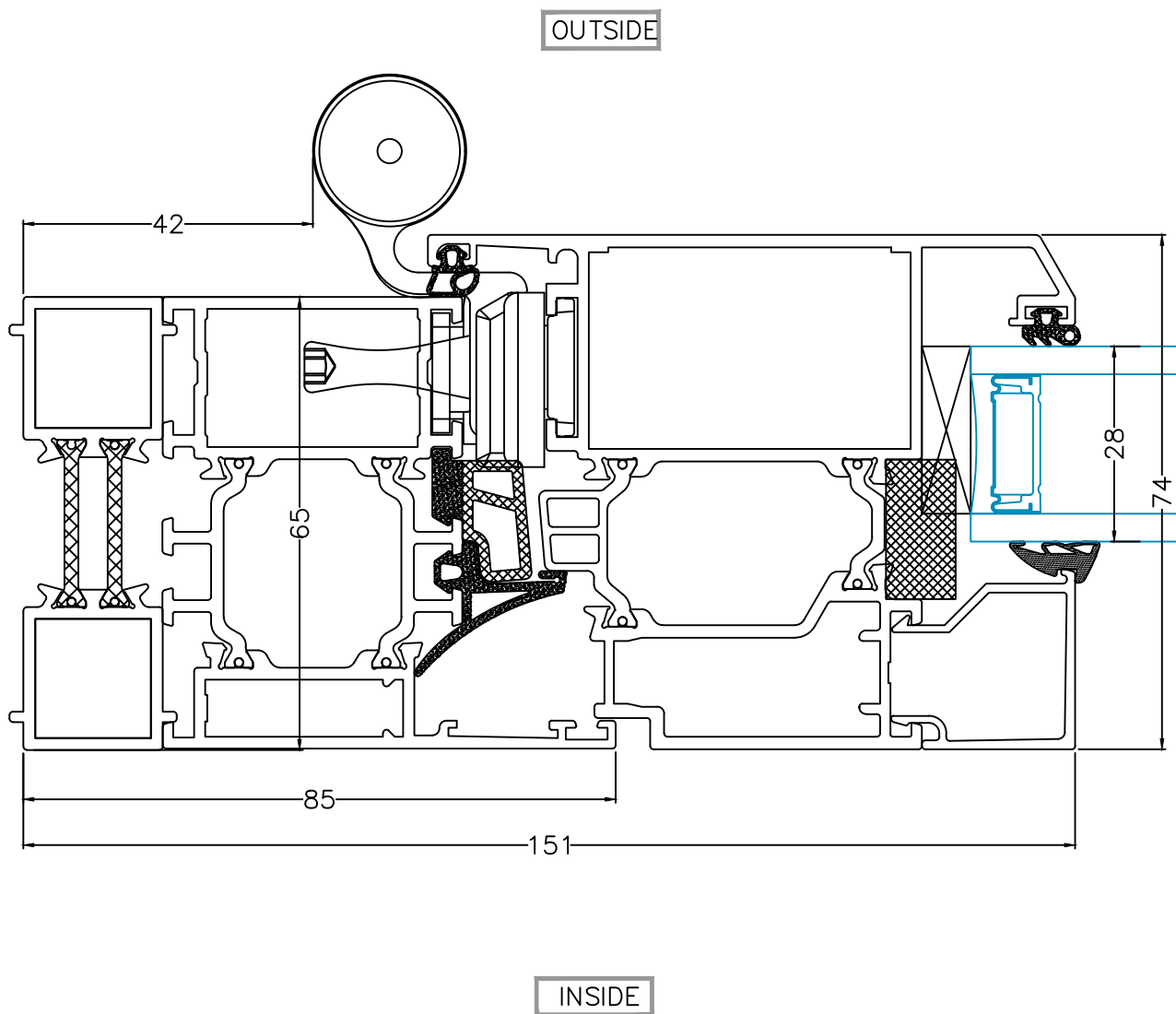
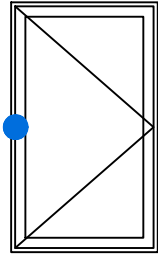
Description Horizontal Section  
65mm Outer Frame (Top Rail) – Inward Opening Door  
With Frame Extension And Trickle Vent

Detail SEF65-B-02D  
No.  
System: A



Vertical Section  
 65mm Outer Frame (Side Jamb) – Outward Opening  
 Door Hinge Side

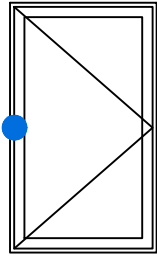
Detail No.	SEF65-B-03A
System:	A



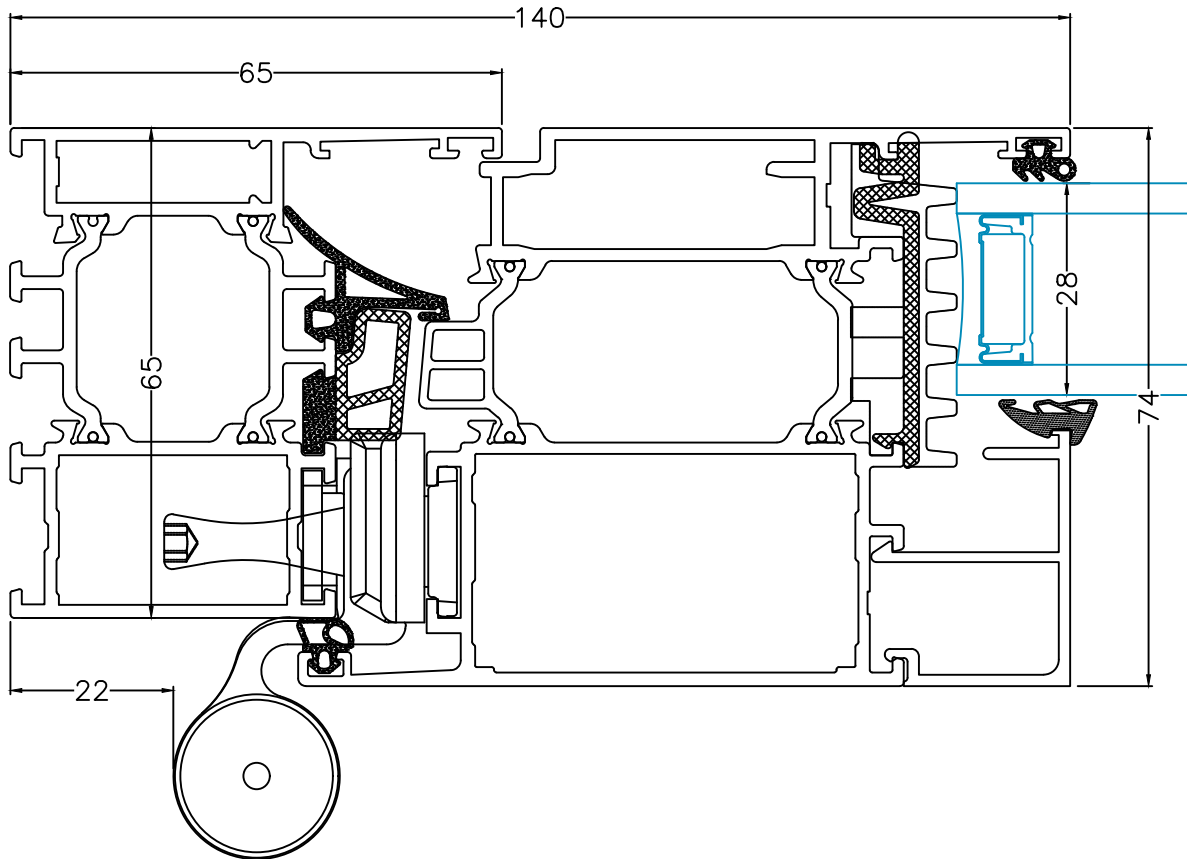
Vertical Section  
65mm Outer Frame (Side Jamb) – Outward Opening  
Door With Frame Extension Hinge Side

Detail SEF65-B-03B  
No.  
System: A





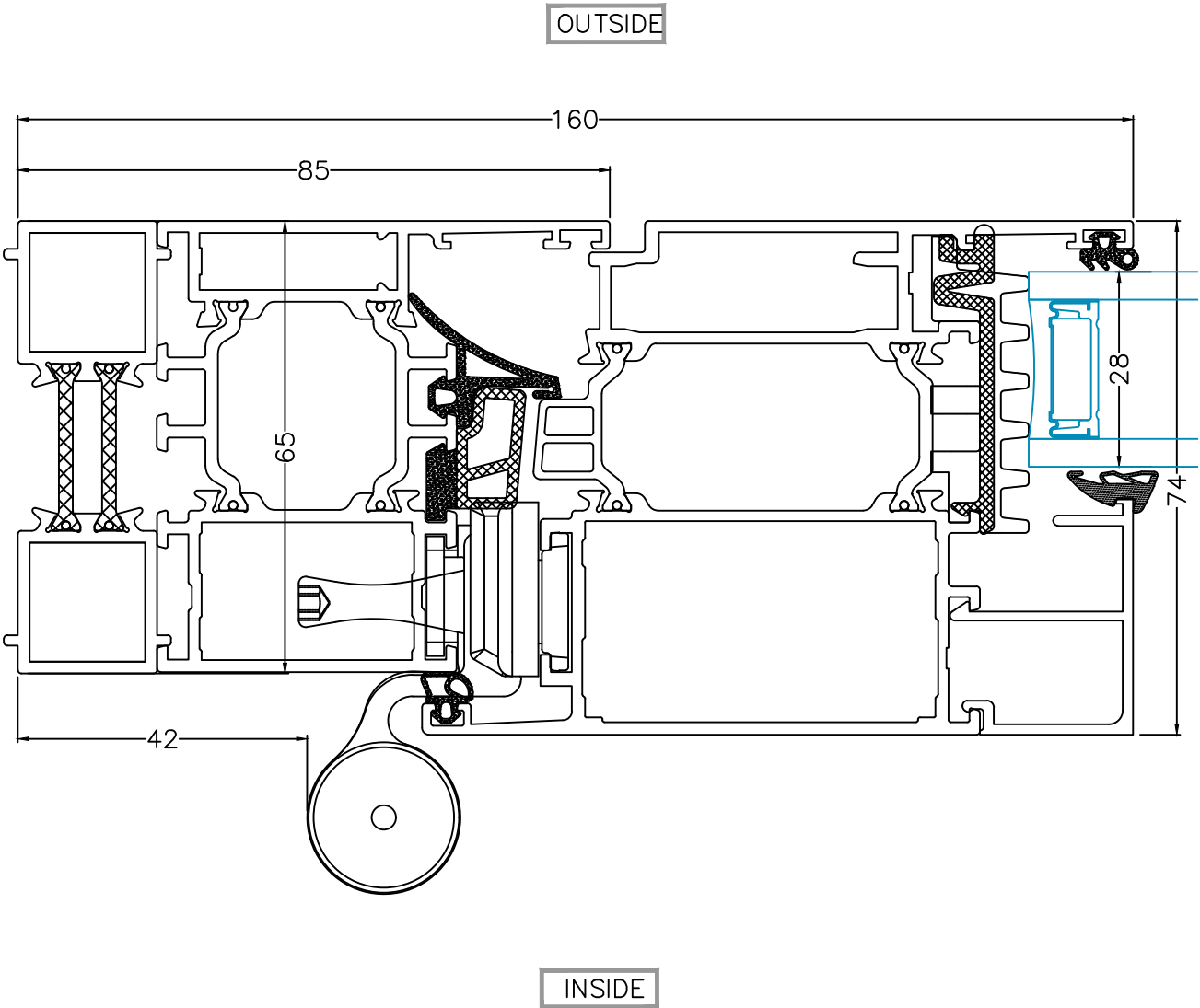
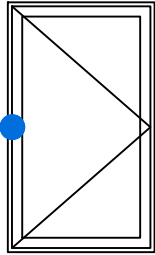
OUTSIDE



INSIDE

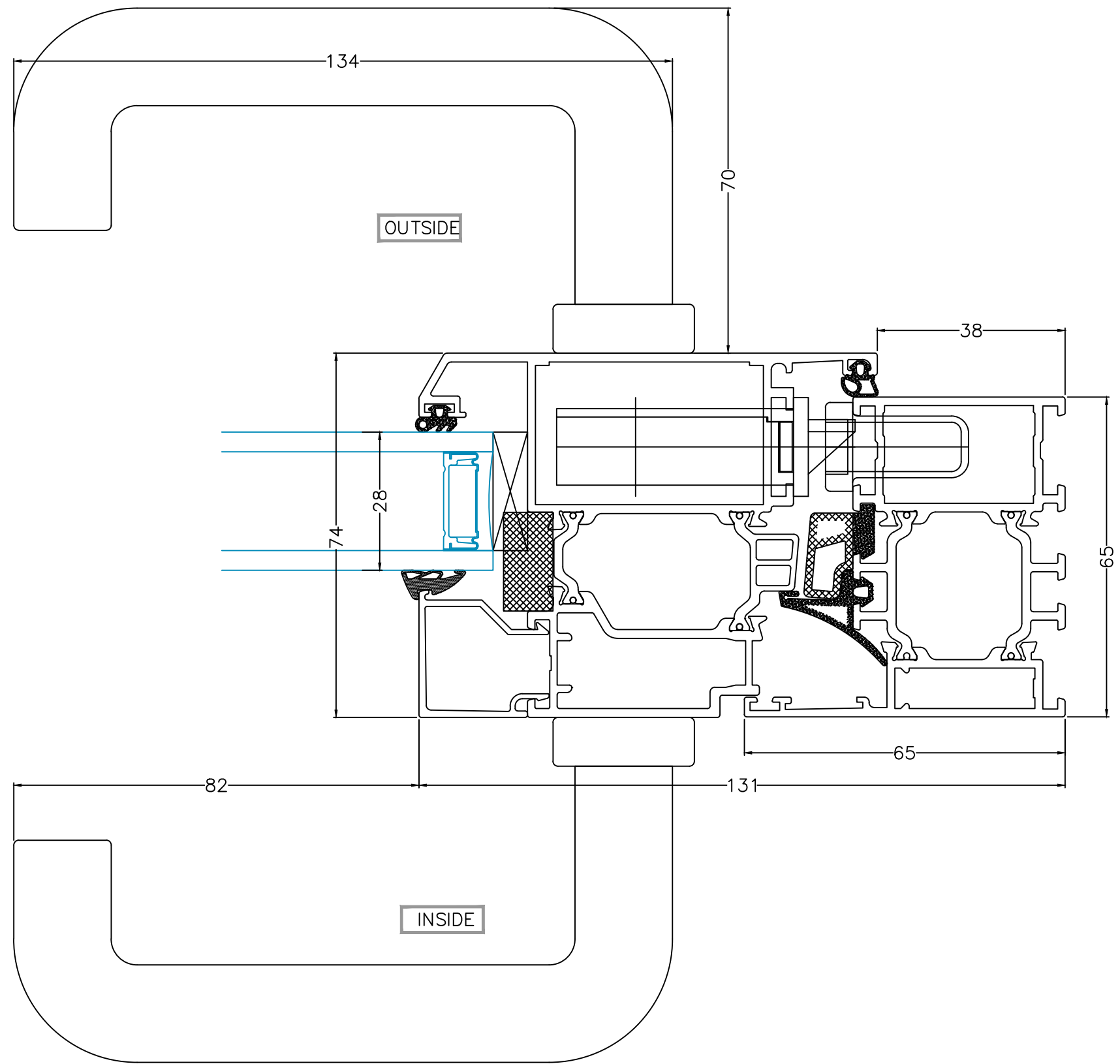
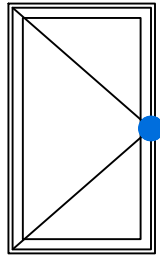
Description  
Vertical Section  
65mm Outer Frame (Side Jamb) – Inward Opening  
Door Hinge Side

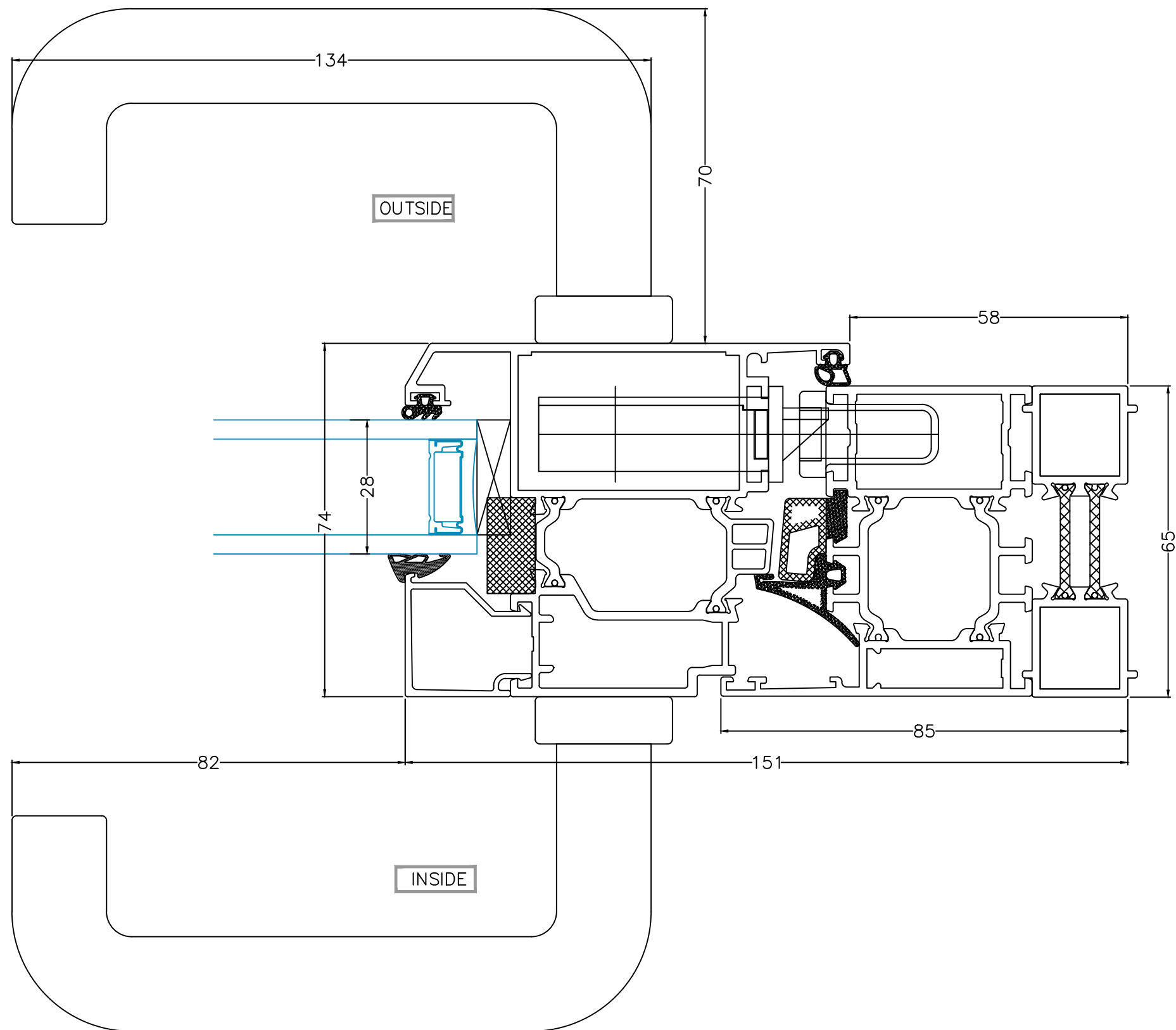
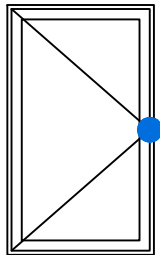
Detail No.	SEF65-B-03C
System:	A

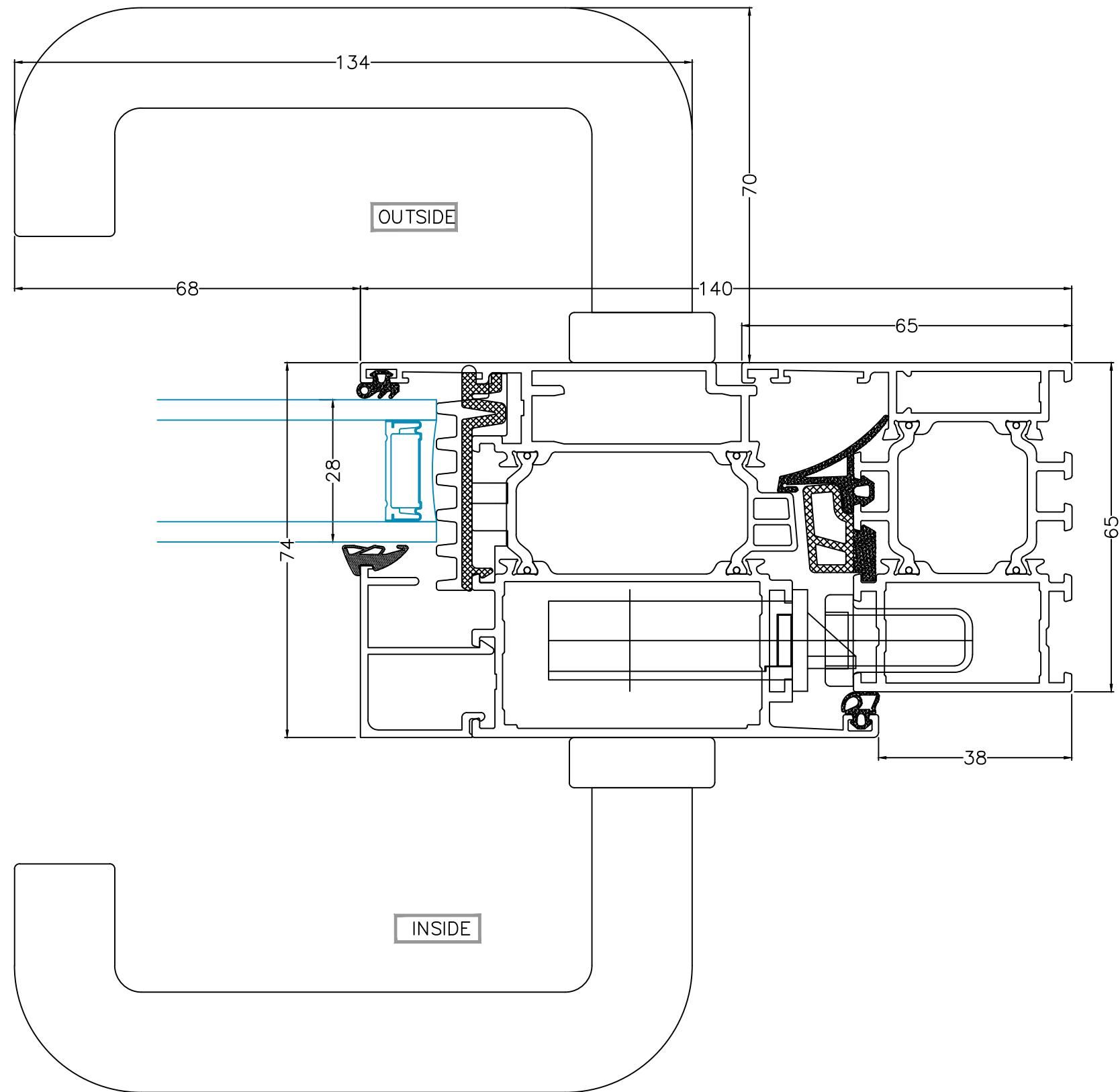
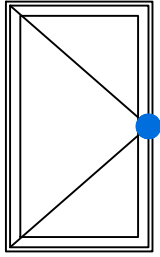


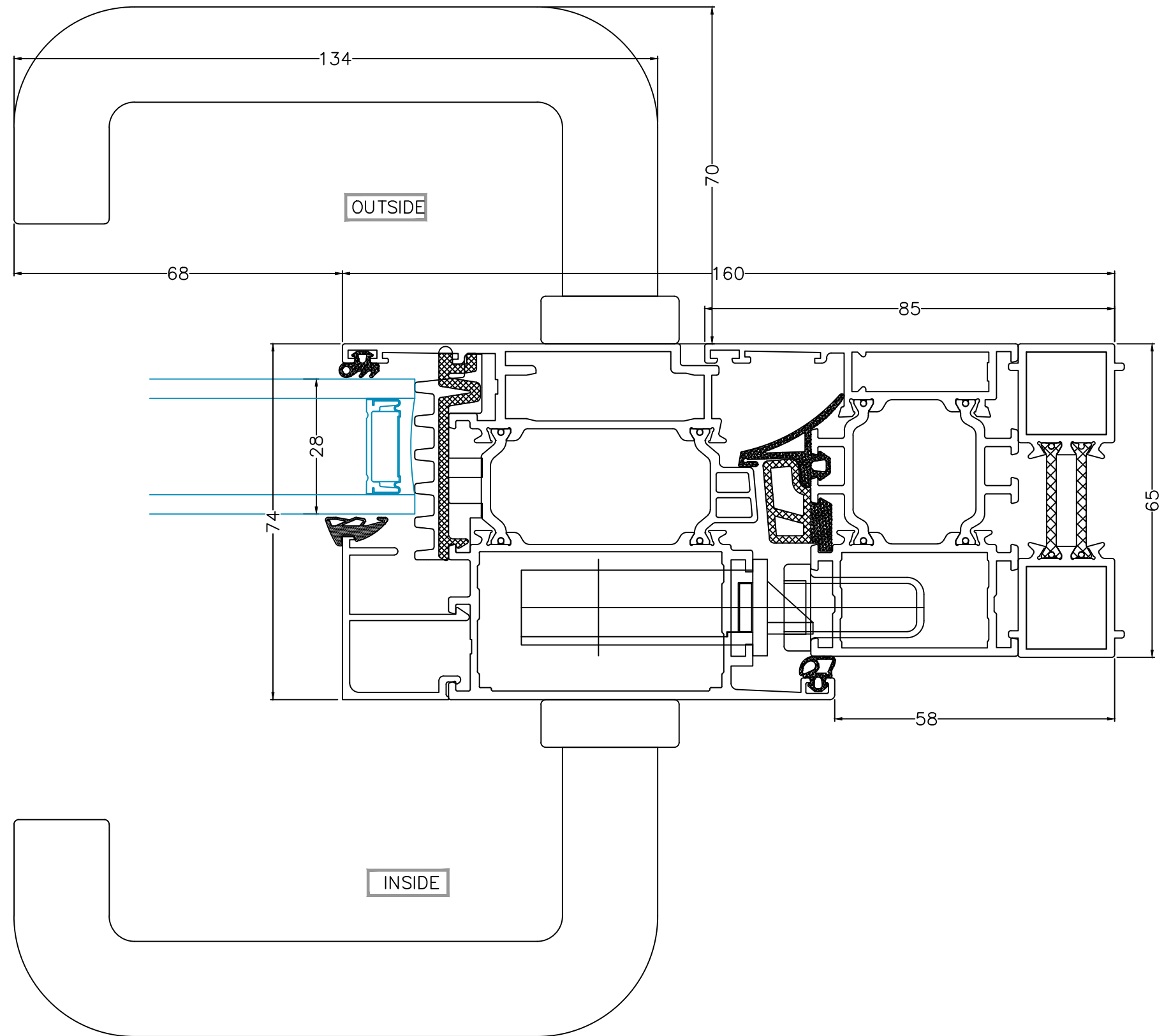
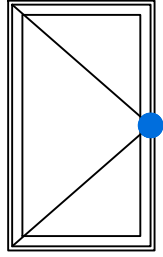
Vertical Section  
65mm Outer Frame (Side Jamb) – Inward Opening  
Door With Frame Extension Hinge Side

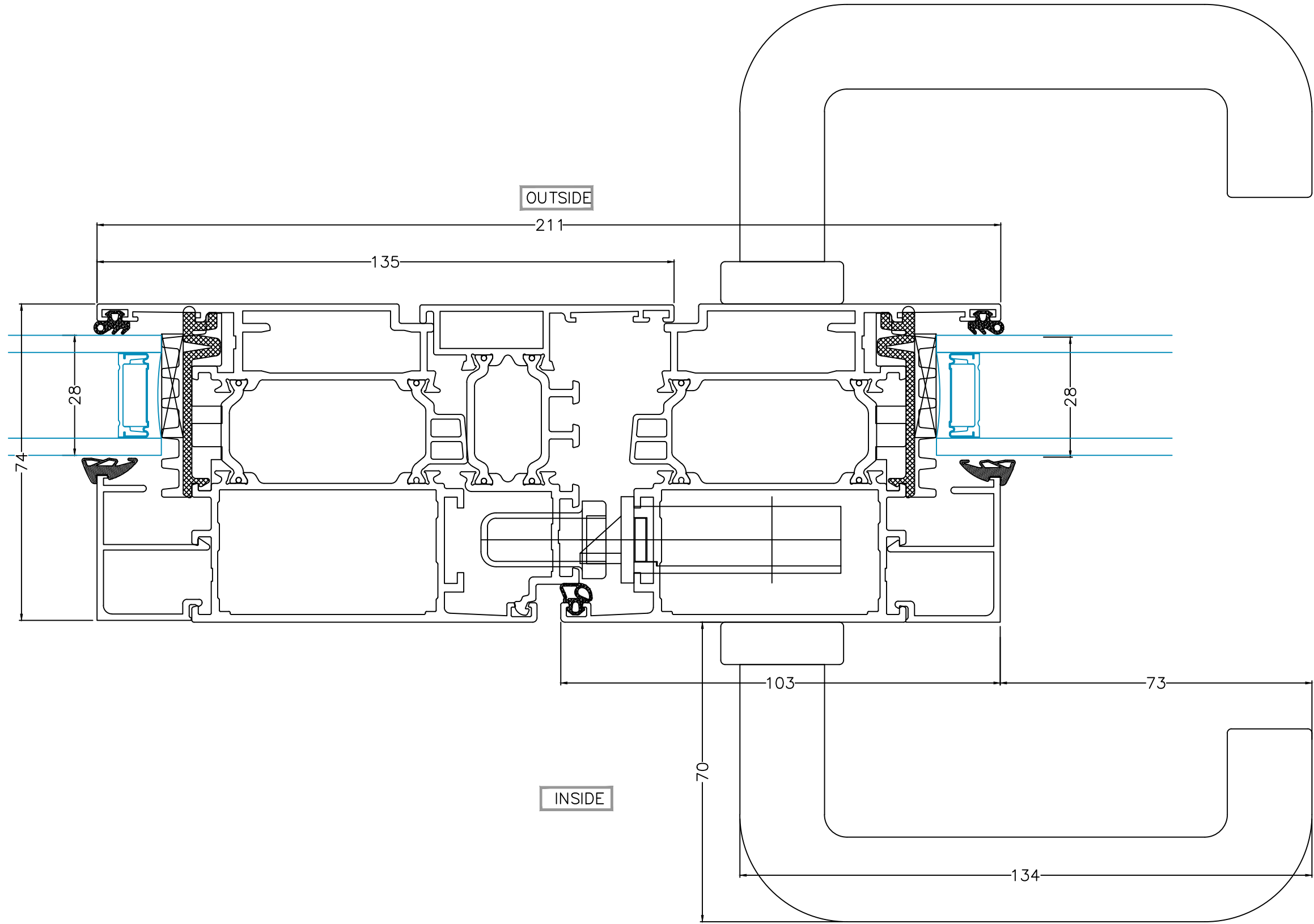
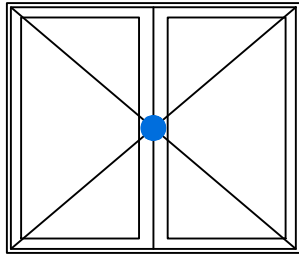
Detail SEF65-B-03C  
No.  
System: A

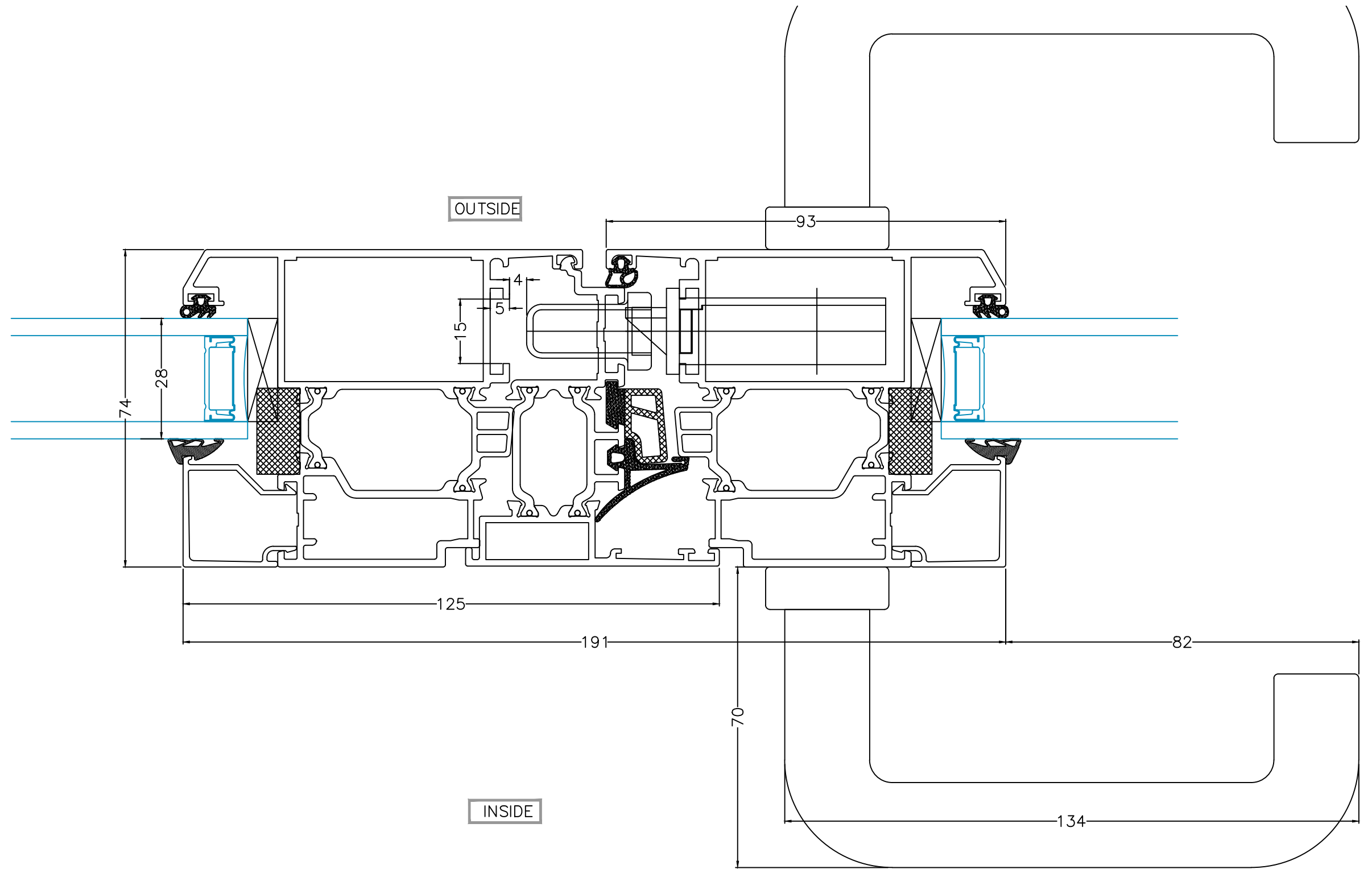
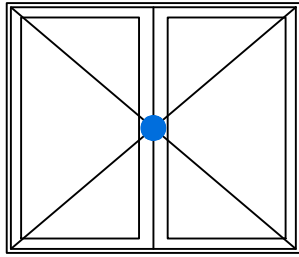




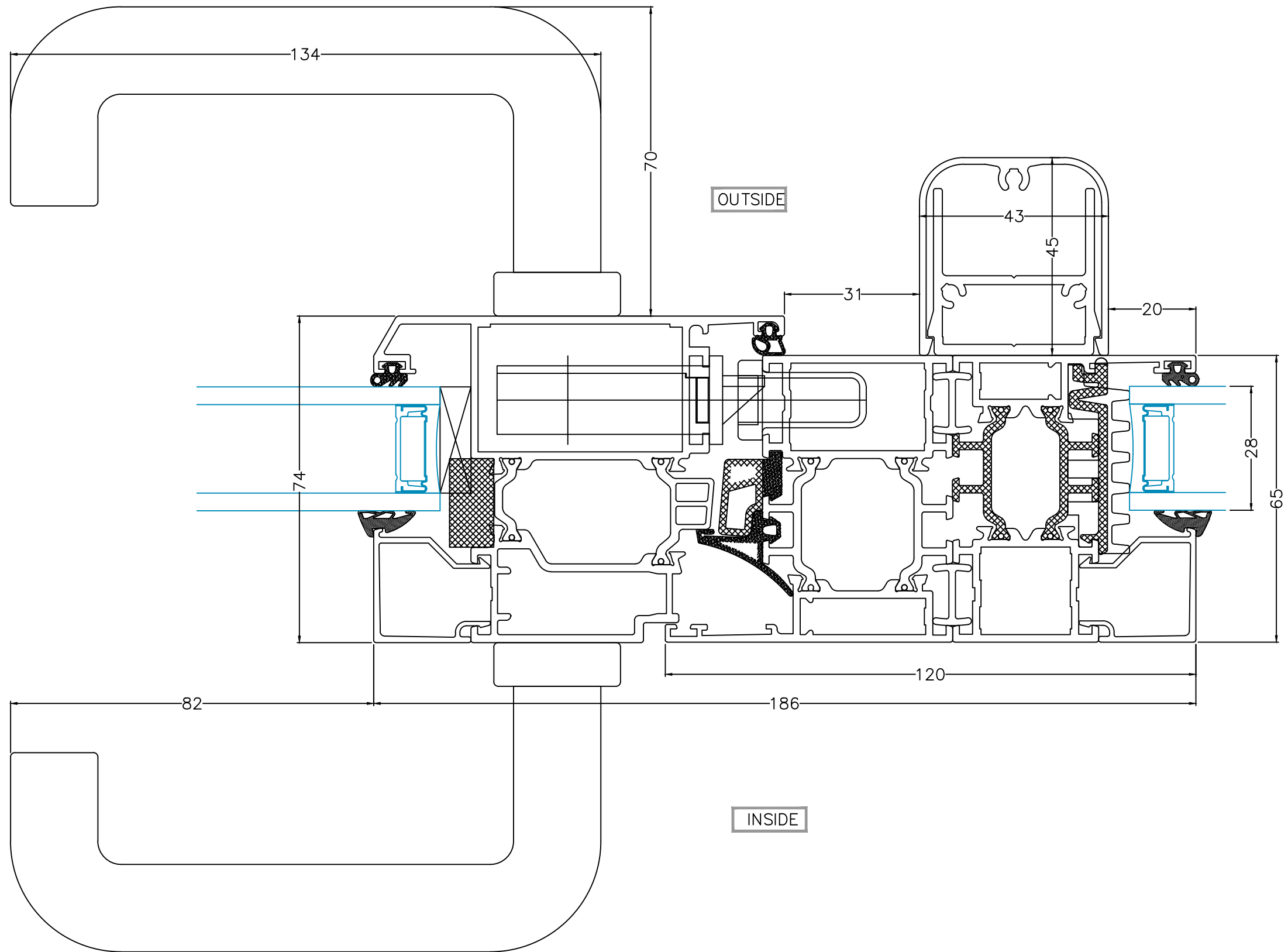
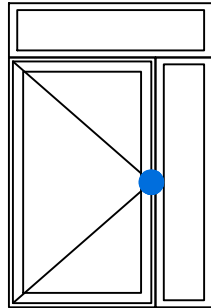


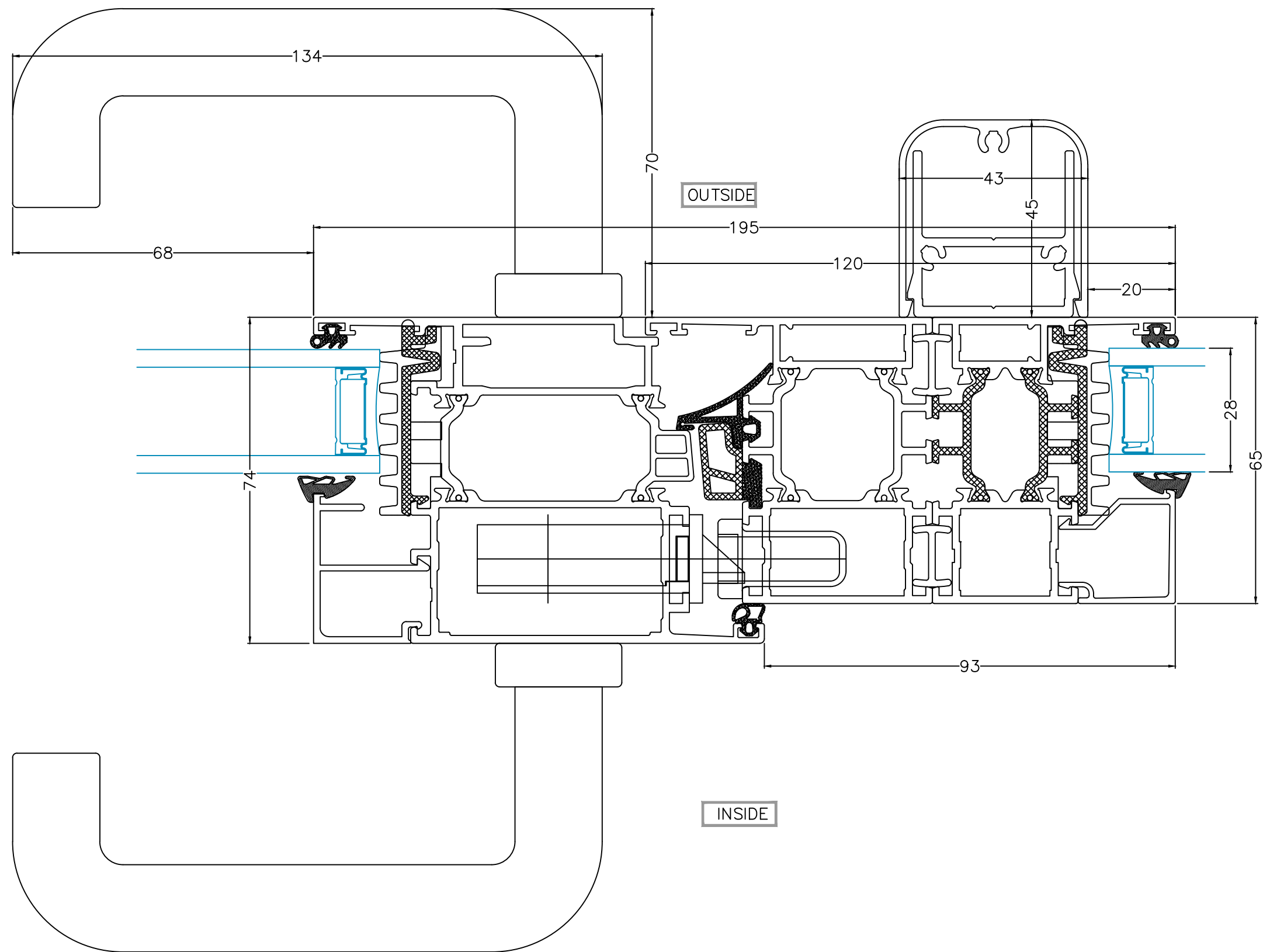
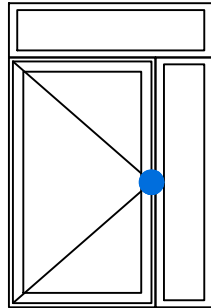


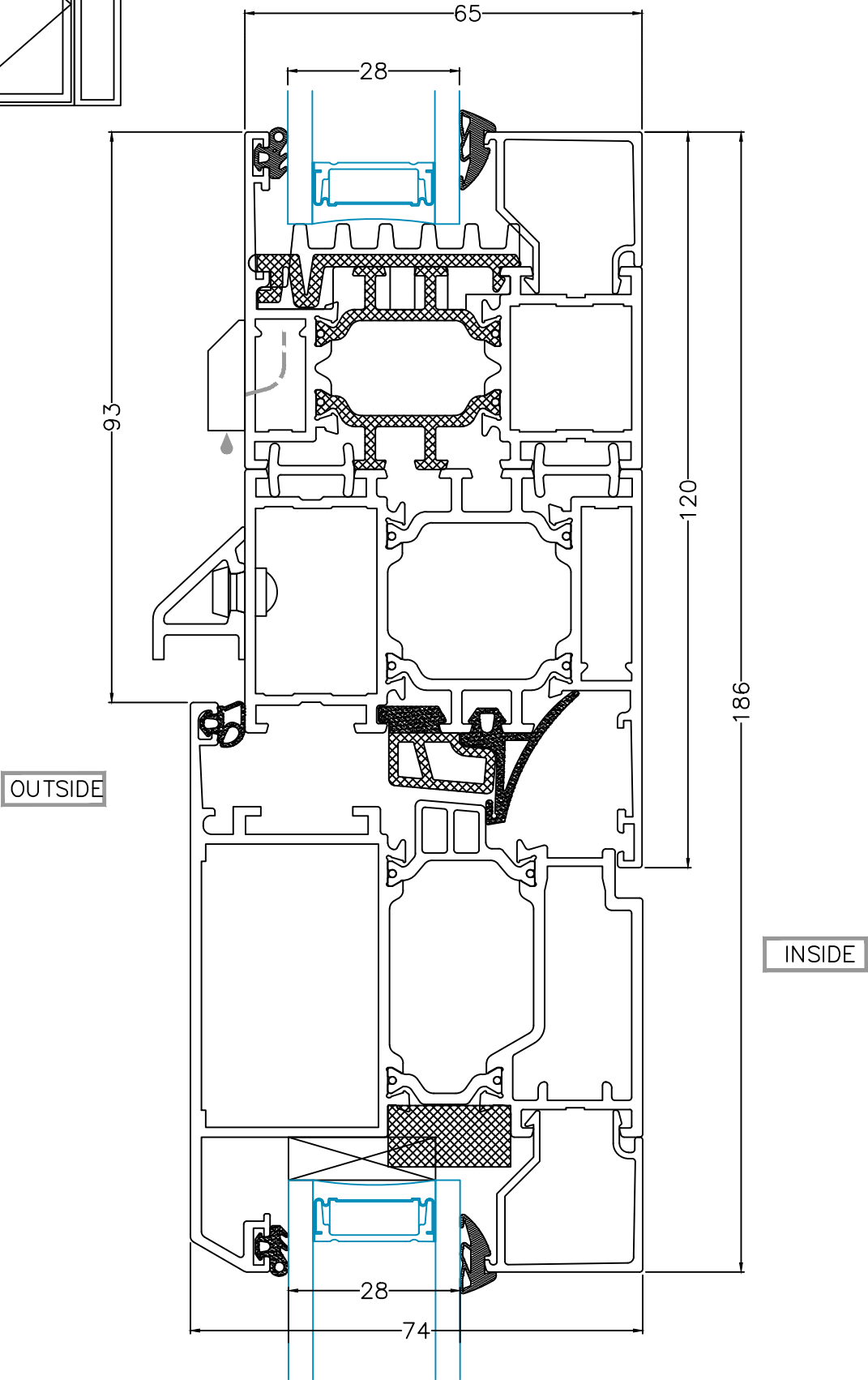
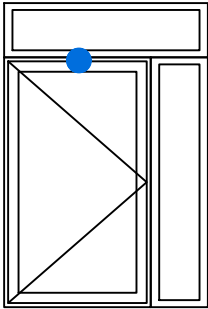






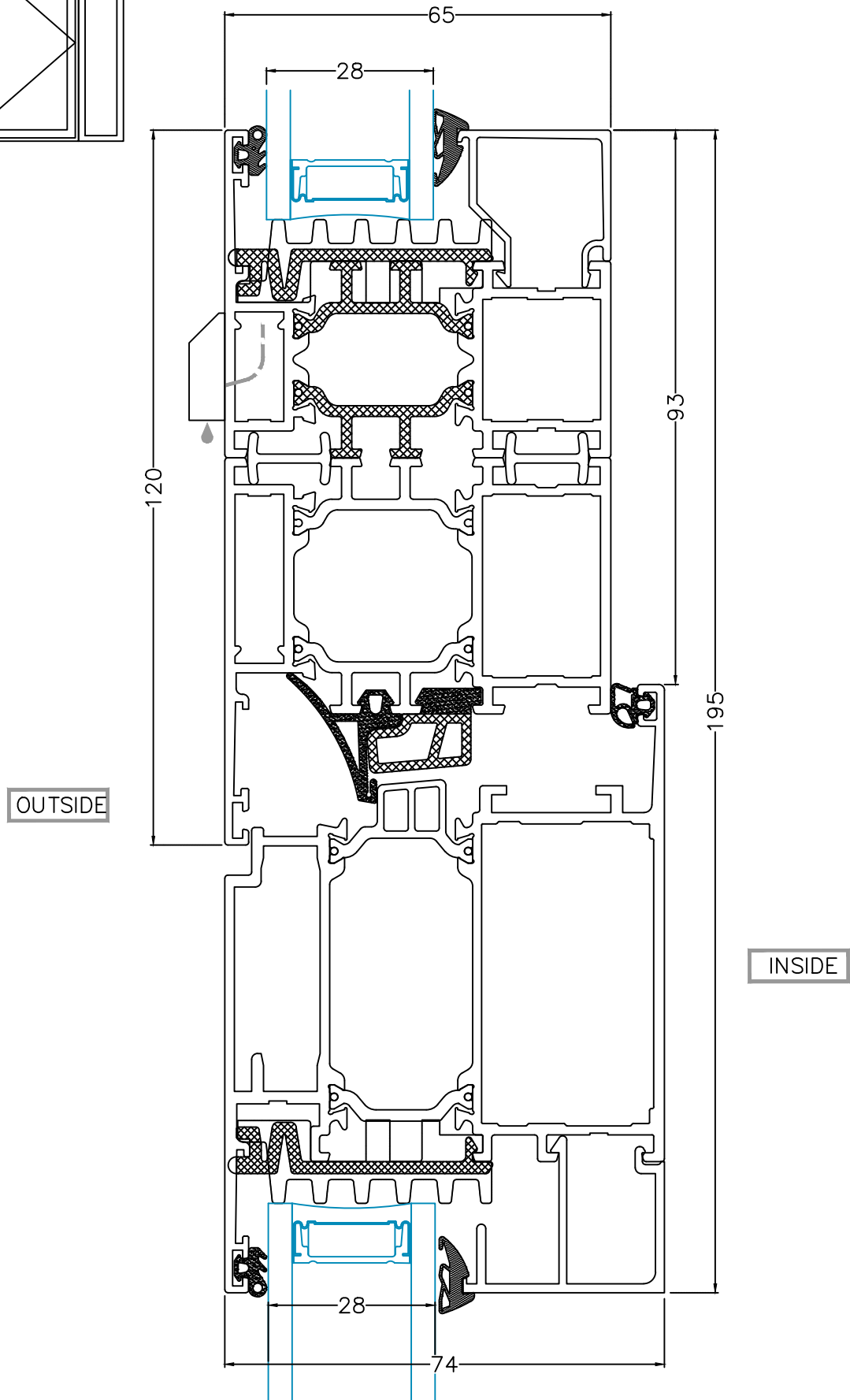
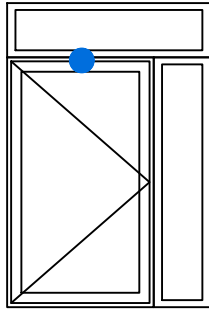






Description Horizontal Section  
65mm Outer Frame (Transom Coupling) – Outward  
Opening Door With 65mm Fixed Overlight

Detail	SEF65-B-06C
No.	
System	SEF65
	A



Description Horizontal Section  
 65mm Outer Frame (Transom Coupling) – Inward  
 Opening Door With 65mm Fixed Overlight

Detail No.	SEF65-B-06D
System:	SEF65
	A

# SEF65/99 Eco

## ADDITIONAL DETAILS

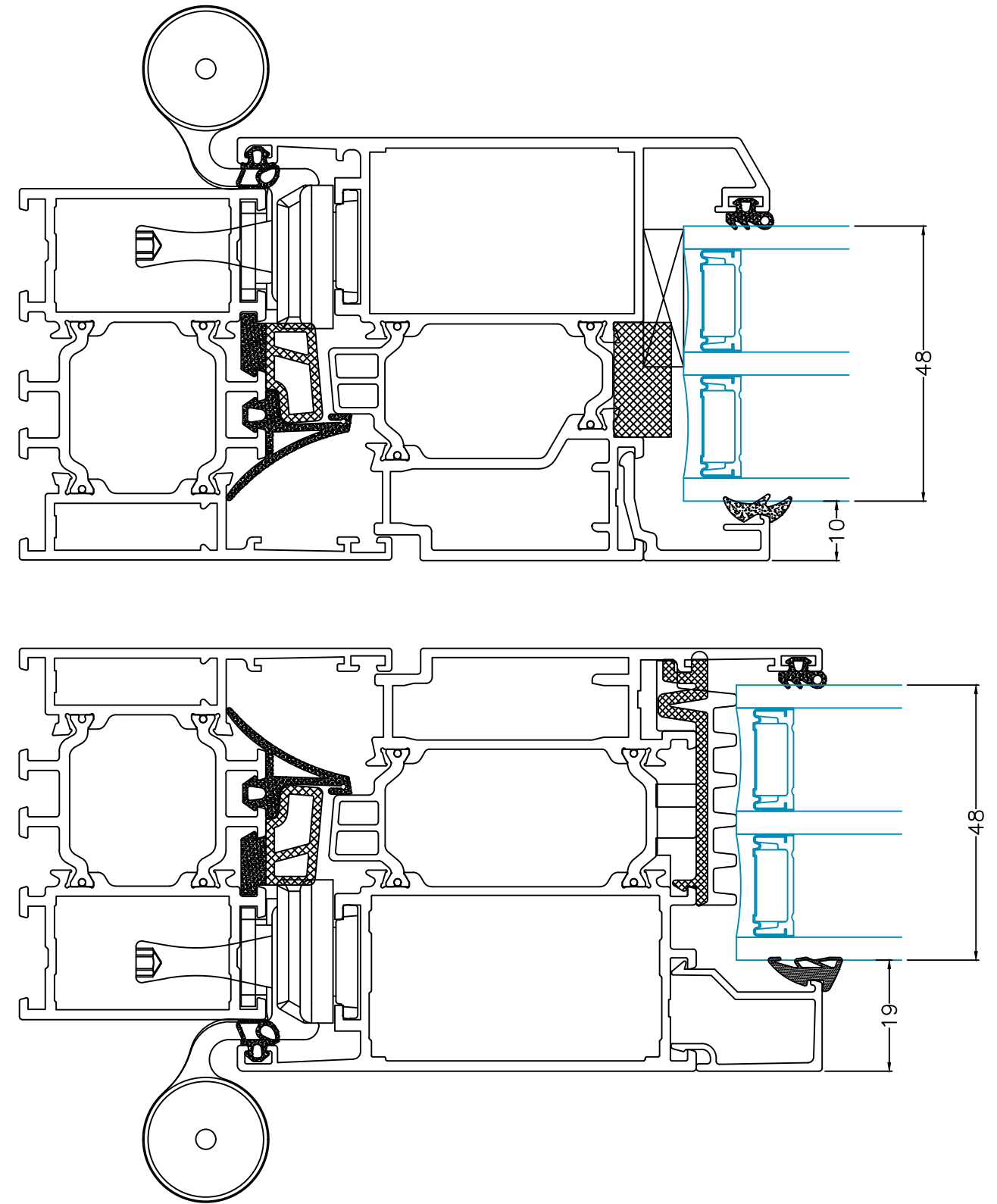
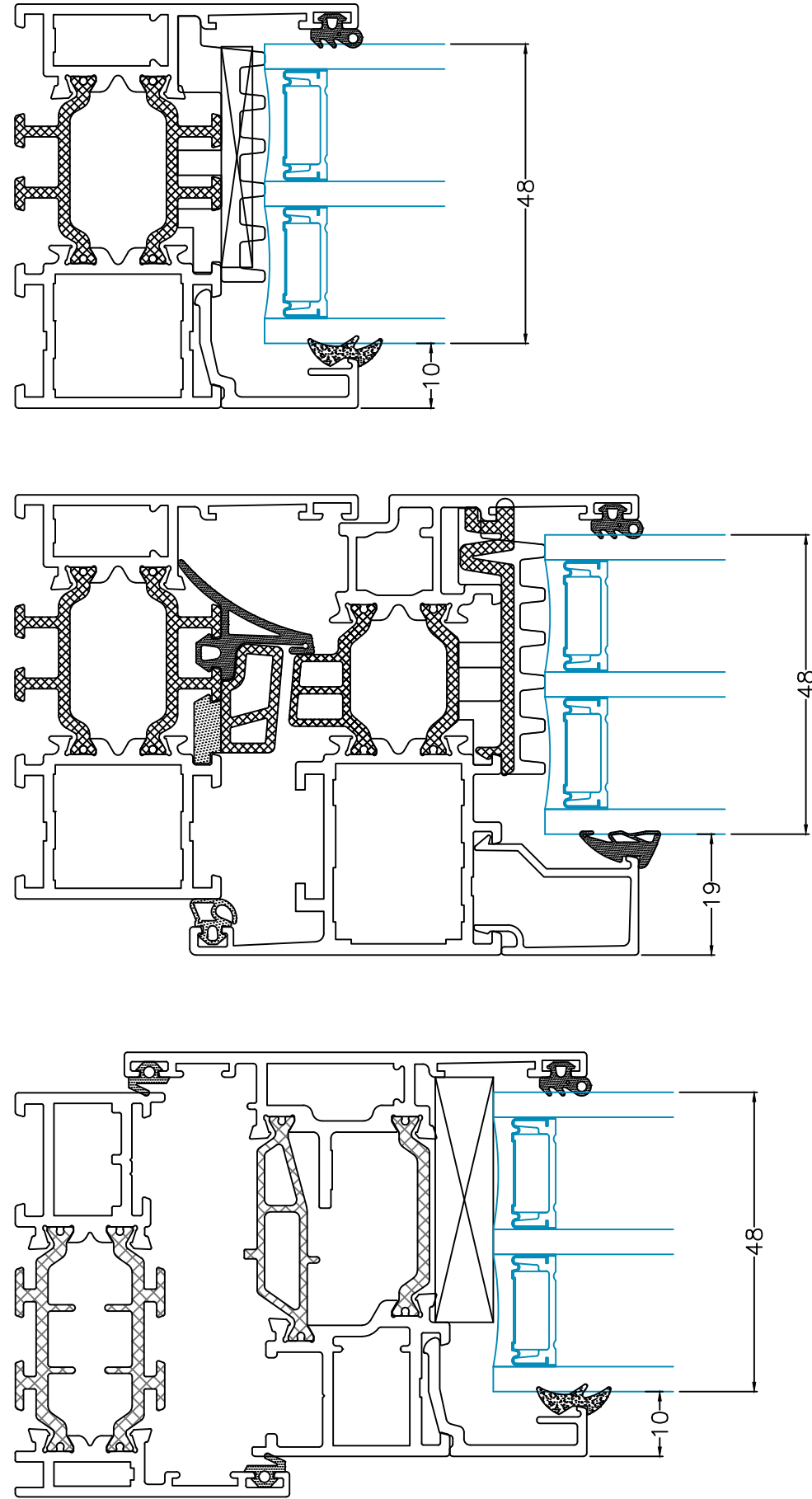
Description Additional Details

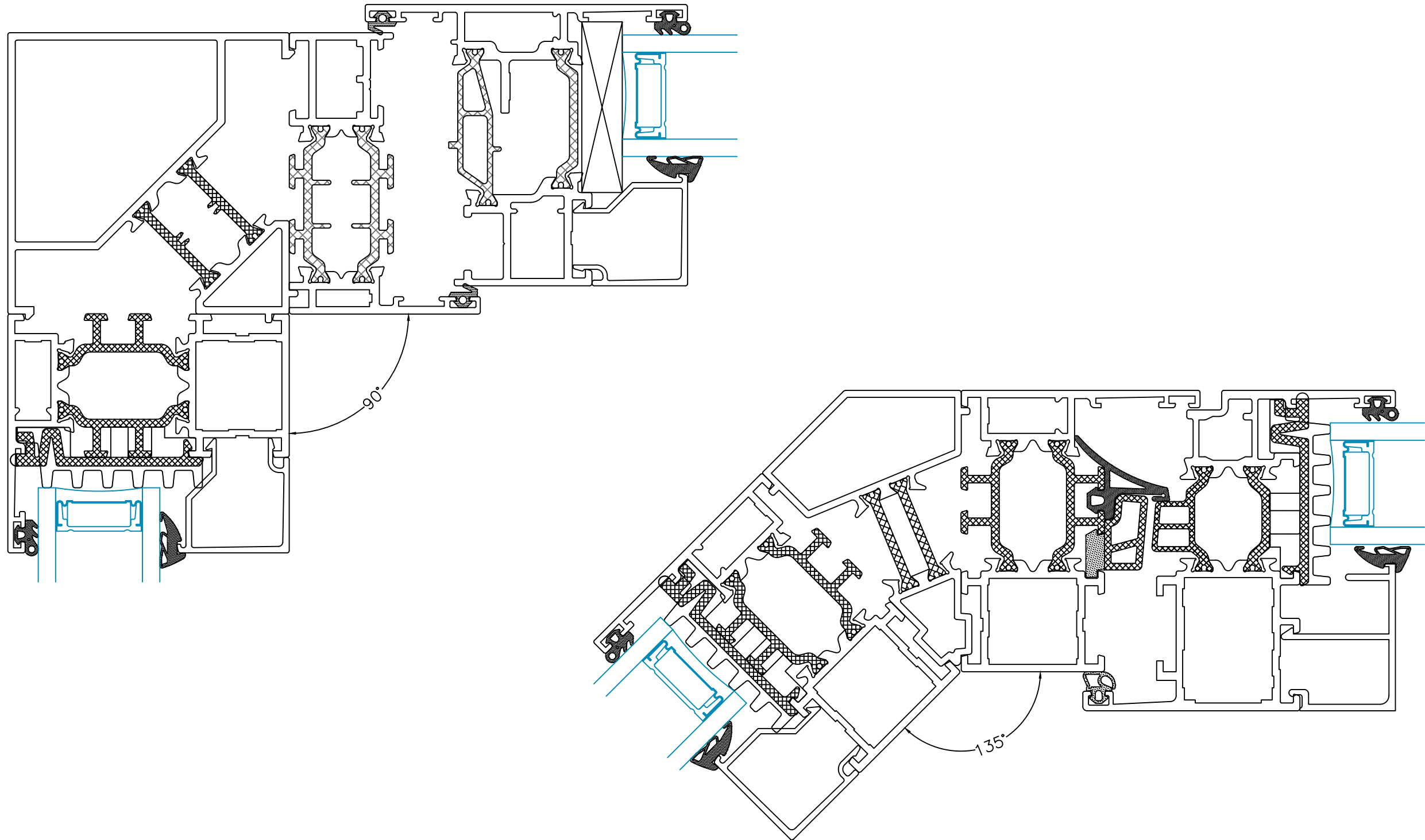
Detail Section C

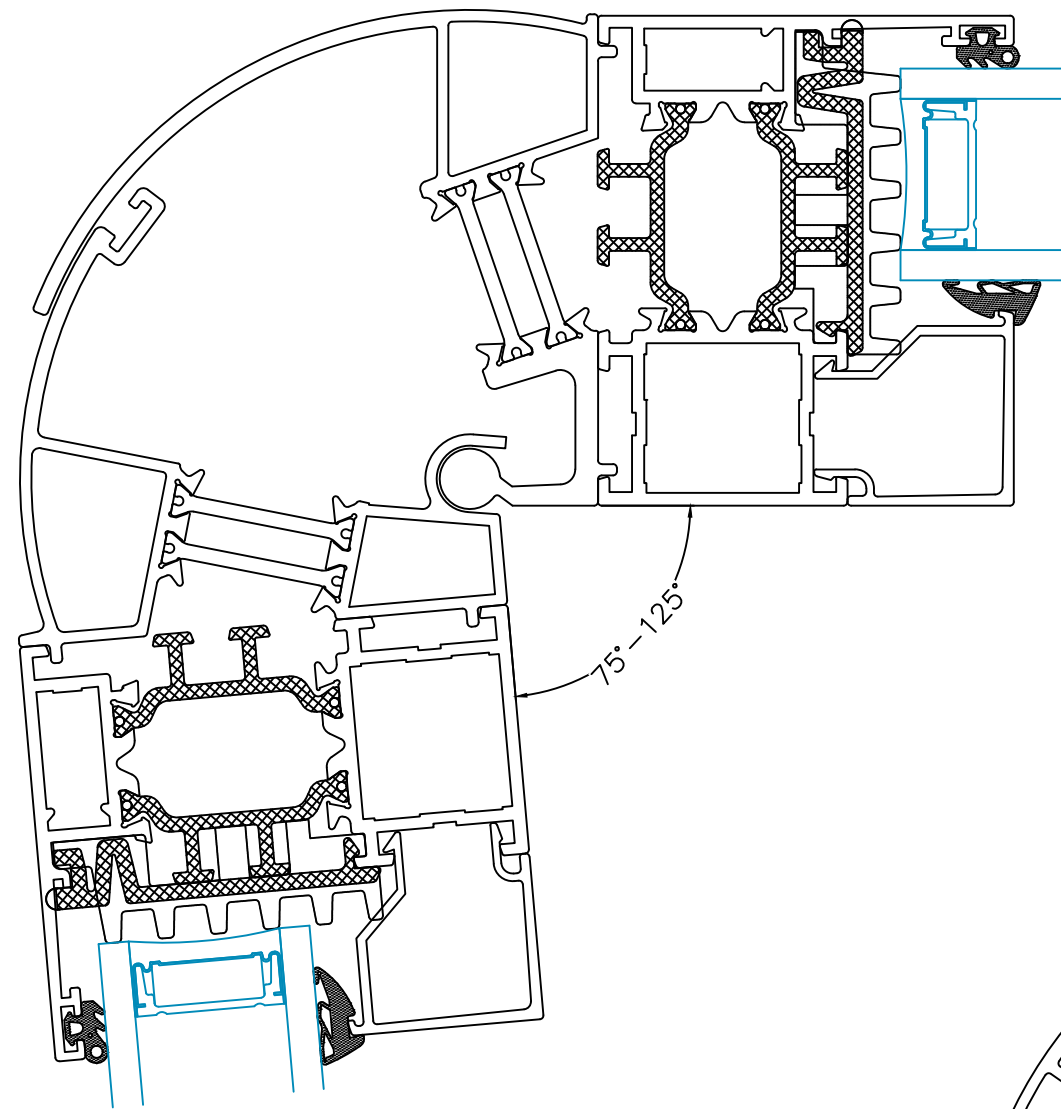
No.

System: SEF65

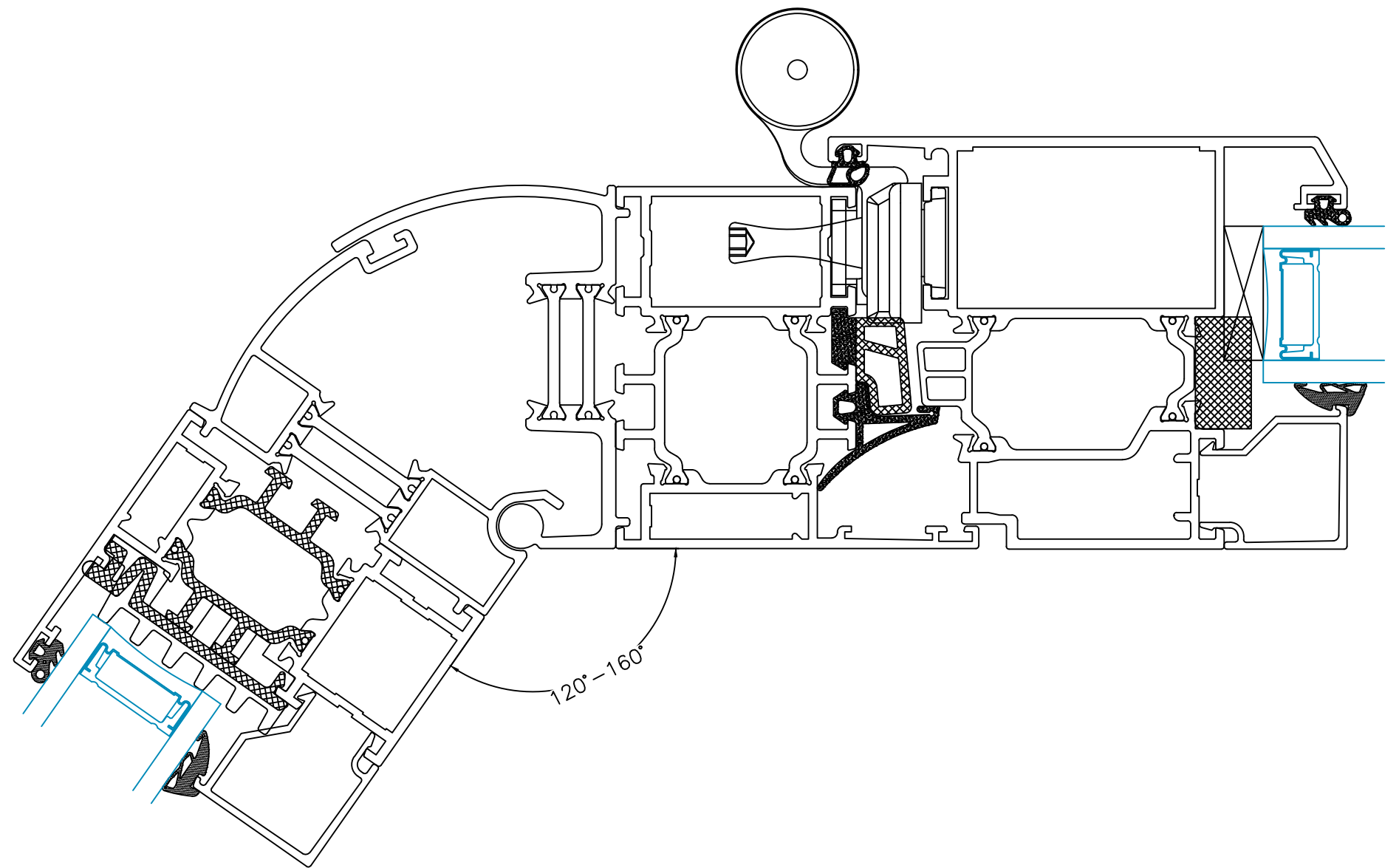
A





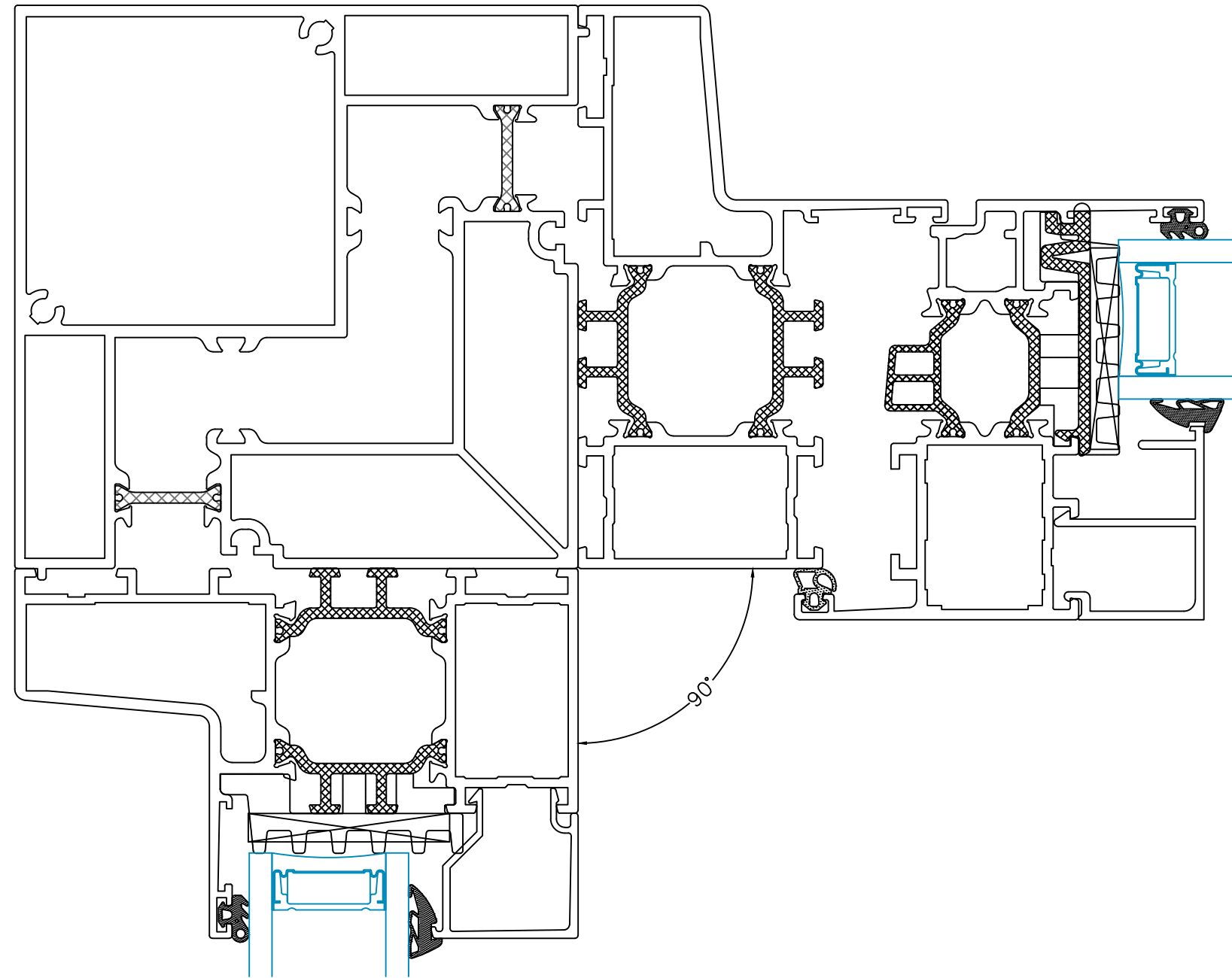


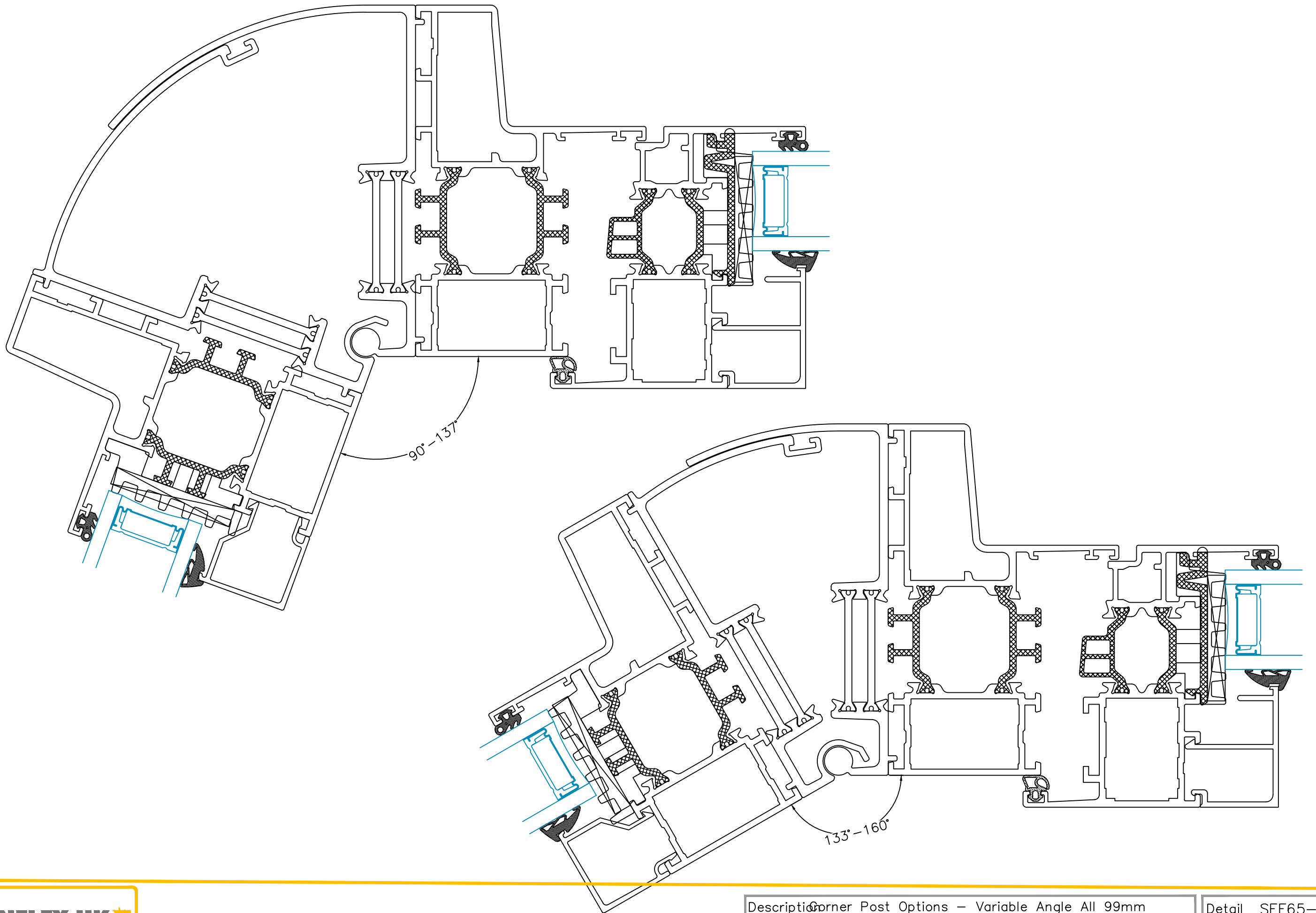
75°-125°

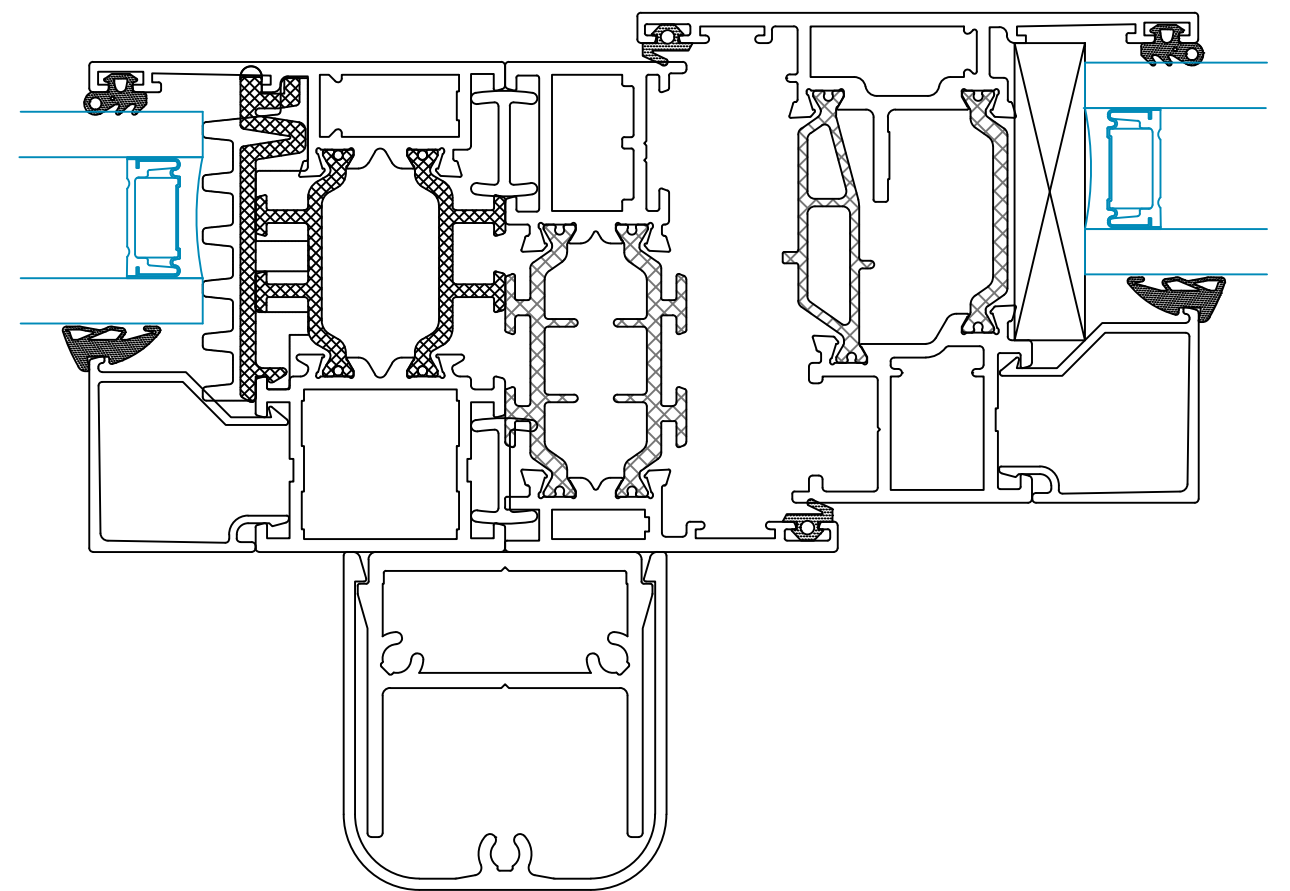
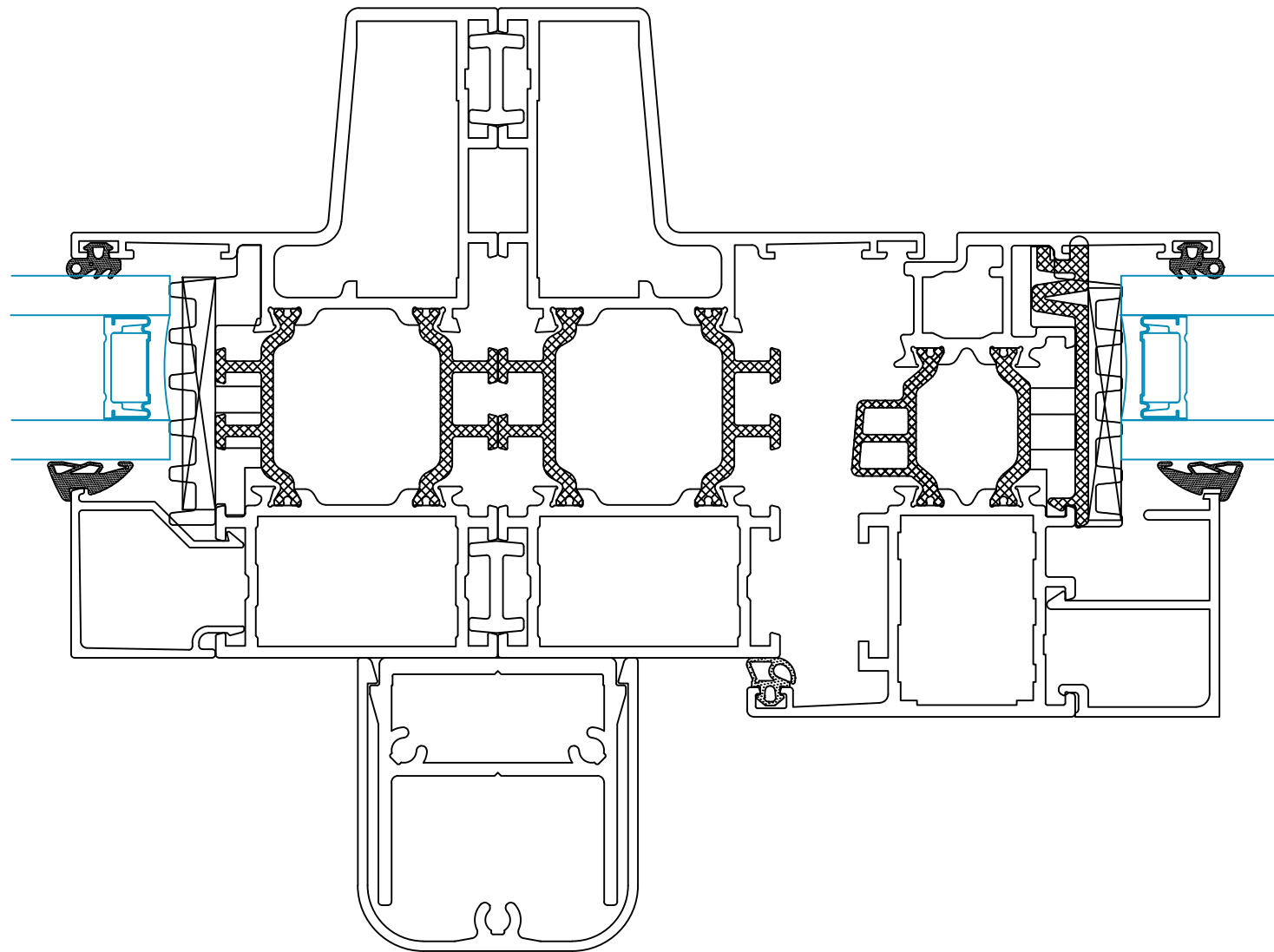


120°-160°









# SEF65/99 Eco STATICS

Description Statics

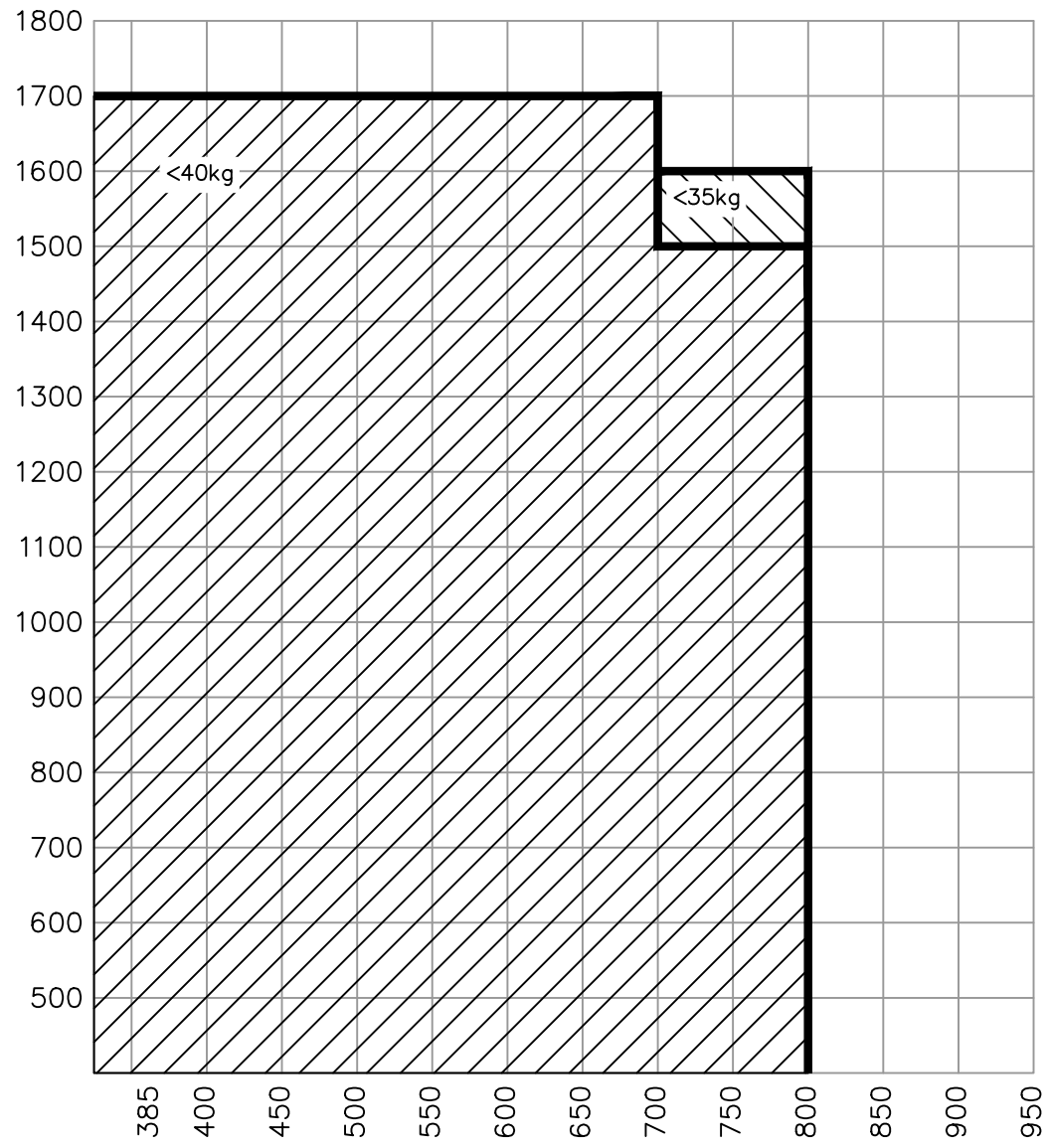
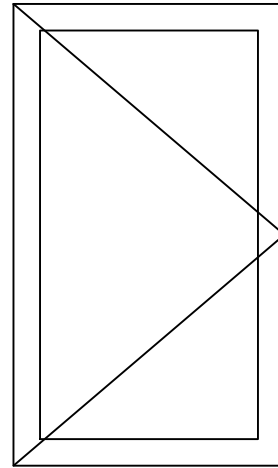
Detail Section D
No.
System: SEF65
A

RECOMMENDED DESIGN LIMITATIONS					
WINDOWS	Maximum Width	Minimum Width	Maximum Height	Minimum Height	Maximum Weight (kg)
SIDE HUNG	700	385	1700	500	40
TOP HUNG	1700	500	1600	300	40
TILT & TURN (c,d)	1700 (a)	500	2400 (b)	500	90
DOORS					
SINGLE DOOR	1200	500	2700		160 (e)
FRENCH DOOR	2400	1000	2700		160 (Leaf)(e)
EGRESS WINDOWS	Minimum Width 1 (f)	Minimum Height 1 (f*)	Minimum Width 2 (g*)	Minimum Height 2 (g)	Maximum Weight
SIDE HUNG	610	830	NA	NA	40
TOP HUNG	545	1055	830	770	40
TILT & TURN	580	805	865	520	90

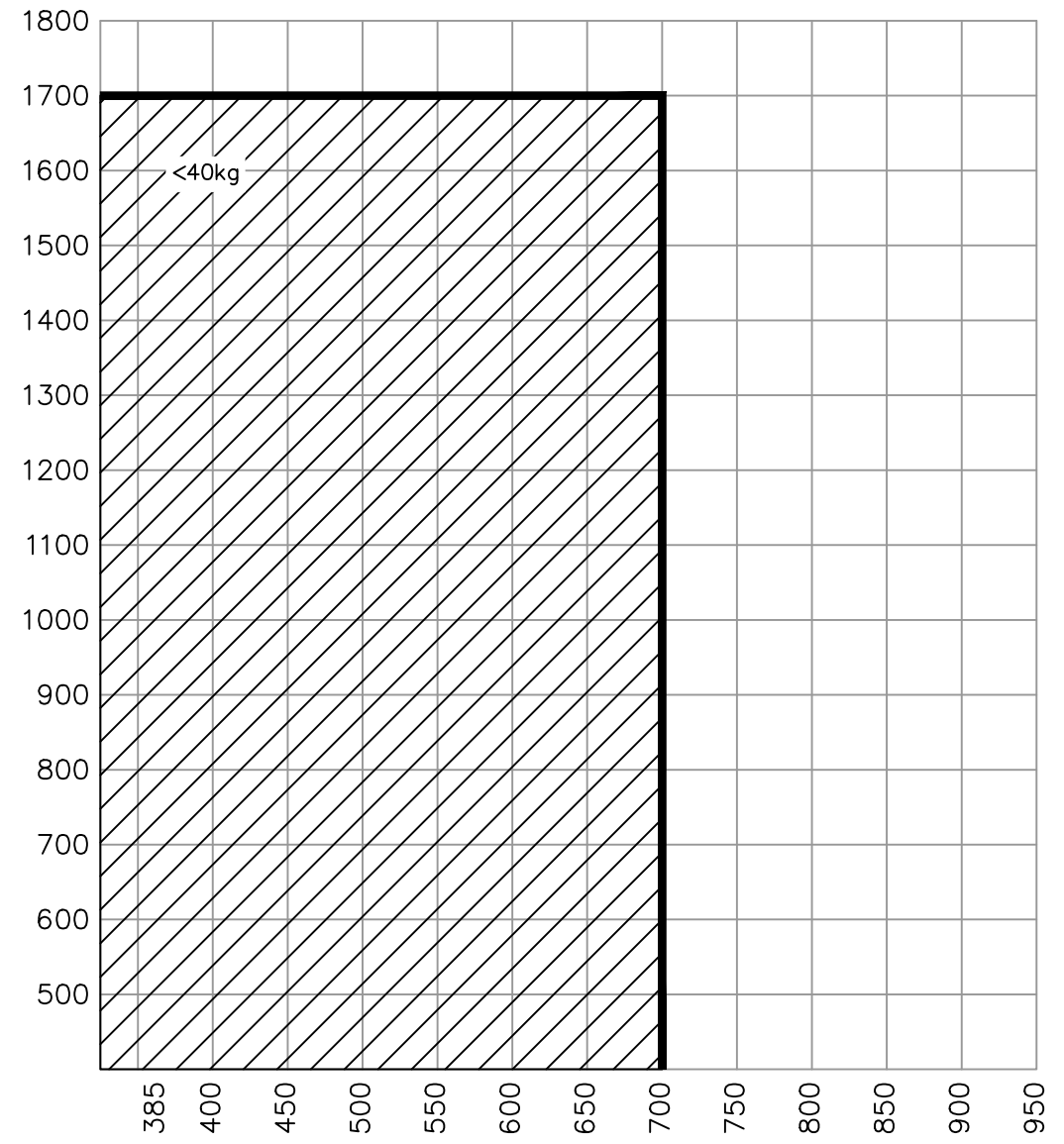
NOTES:

- (a) At 1700mm wide max height is 2100mm
  - (b) At 2400mm high max width is 1400mm
  - (c) See page D-05 for sash profile selection guide
  - (d) For tilt & turn sashes, width must not exceed 1.5x the height
  - (e) Maximum weight may be reduced to when using door closer. Check manufacturers specs.
- Egress windows must comply with Approved document B. Minimum clear opening must be 450mm on short side with a minimum unobstructed area of 0.33m<sup>2</sup>.
- (f) Frame manufacturing size to give clear opening width of minimum of 450mm. \*Height can decrease if width is greater than minimum. For more info, speak to technical.
  - (g) Frame manufacturing size to give clear opening height of minimum of 450mm. \*Width can decrease if height is greater than minimum. For more info, speak to technical.

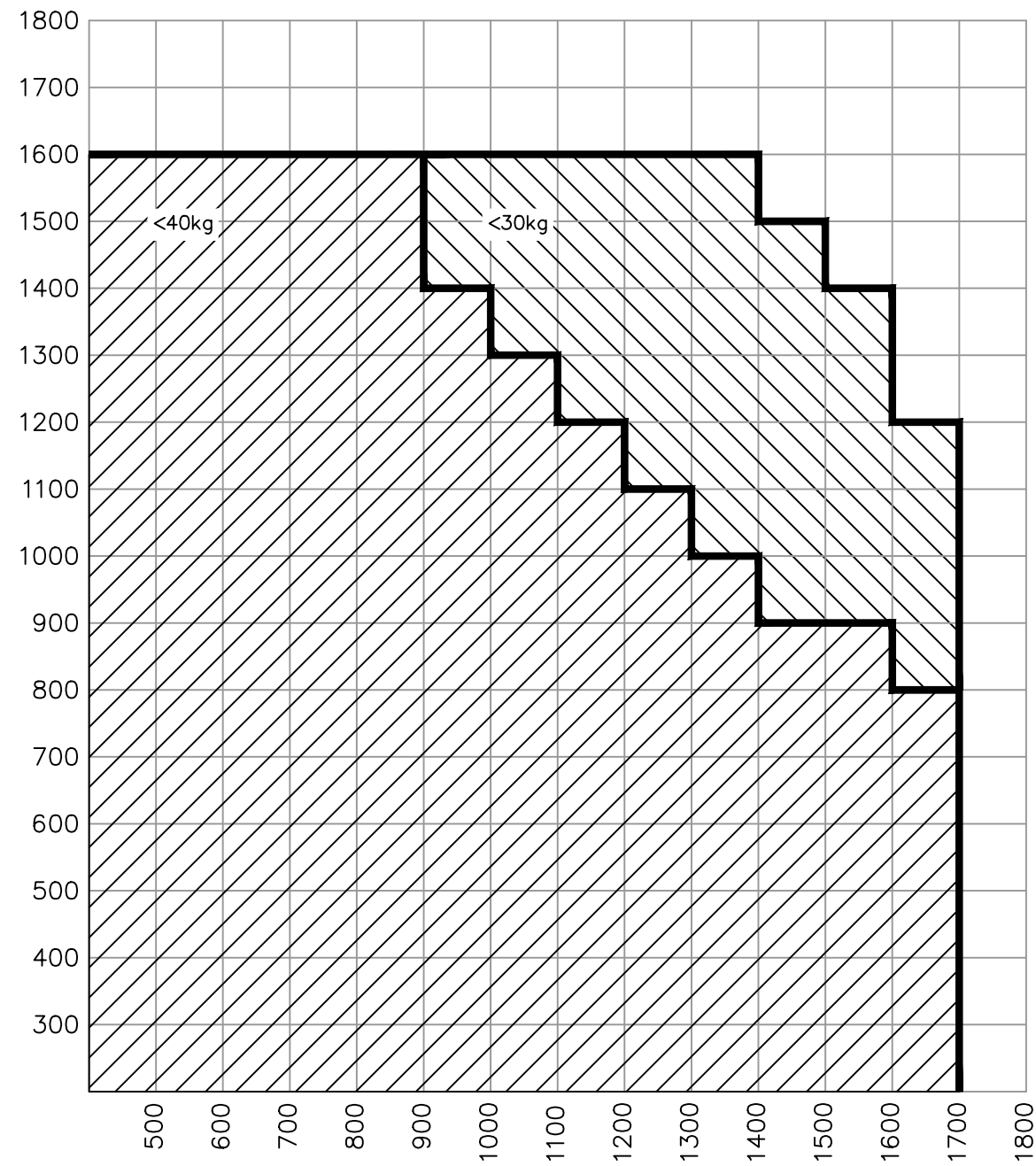
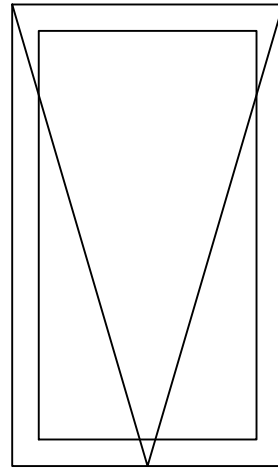
For advice on sizes outside the recommended design limitations please contact our technical department.



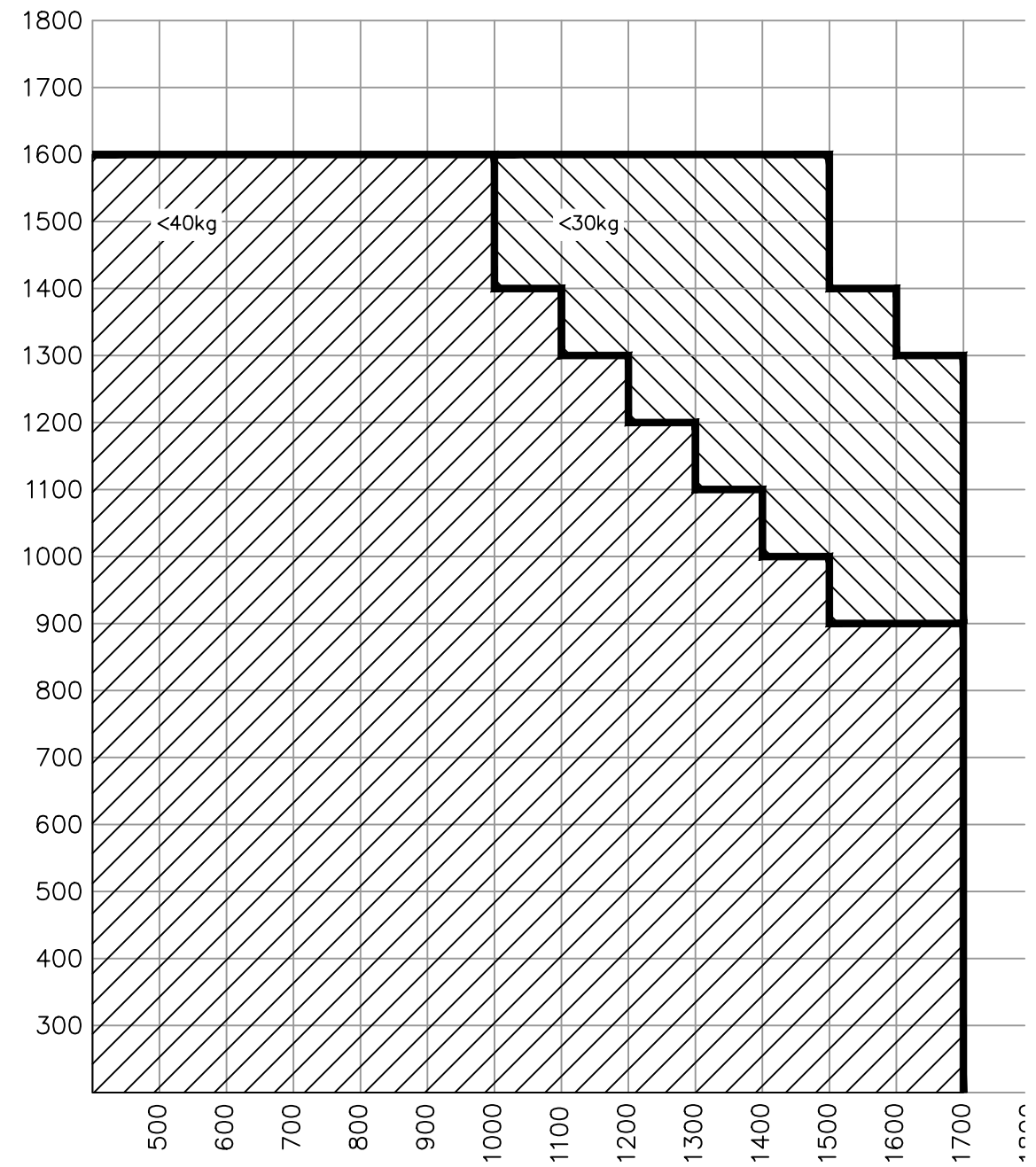
STANDARD/RESTRICTED HINGE



EGRESS (FIRE ESCAPE) HINGE



STANDARD HINGE



RESTRICTED HINGE

