

Fencing & Screens

Index

TECHNICAL MANUAL HISTORY	History
Manual History	1
FEATURES & BENEFITS	Section 1
Features & Benefits	1
PRODUCT LIMITATIONS	Section 2
Size Limitations	1
Span Tables & Open Air Graphs	2 - 4
Structural Test Report Summary C016-024, 025 & 026	5
EXTRUSIONS	Section 3
Extrusions	1
Extrusion Data	2
COMPONENTS	Section 4
Components	1 - 2
CONFIGURATIONS	Section 5
Configurations	1 - 2
ARRANGEMENT DETAILS	Section 6
Vertical Arrangement – Slats Between Posts	1
Vertical Arrangement – Slats within Surround	2
Vertical Arrangement – 65mm Angled Slat	3
Vertical Arrangement – 100mm Angled Slat	4
Vertical Arrangement – Elliptical Blade	5
Horizontal Arrangement – Slats	6
Horizontal Arrangement – Elliptical Blade	7
GLAZING DETAILS	Section 7
Not Applicable	
CUTTING FORMULAS & BOMs	Section 8
Refer to Section 6 Dimensions	
ASSEMBLY DETAILS	Section 9
Assembly – Slats	1
Assembly – Surround Corner & Horizontal Joint	2
Assembly – Surround Vertical Joints & Post Foot	3
Assembly – Centre Brace	4
Assembly – Slat & Blade Adaptors	5
MACHINING DETAILS	Section 10
Not Applicable	

Index

IMPORTANT CONDITIONS

By using this manual you agree to the following:

DISCLAIMER

Whilst best efforts have been made to ensure the details contained herein are accurate and correct, Capral is not responsible for any loss or damage whatsoever arising as a result of any errors contained in this manual. Interpretation of standards or codes within this manual is Capral's interpretation of such codes. Responsibility for code compliance remains with the user of this manual. In some cases product specifications may vary without notice. Users should not act or rely upon any information contained in this manual without obtaining appropriate professional advice relating to their particular circumstances. To the maximum extent permitted by law Capral disclaims all liability for loss or damage suffered by anyone who acts or fails to act in reliance of this manual.

COPYRIGHT

This manual remains the property of Capral and contains information which is the subject of copyright. The manual or any part of it may not be reproduced, copied or loaned in any form without the prior written permission of Capral. The manual is to be returned to Capral on request.

CAPRAL SUPPLY TERMS

Refer to www.capral.com.au/Terms-of-Trade for Capral's Terms and Conditions of Sale for terms of supply by Capral of its products.

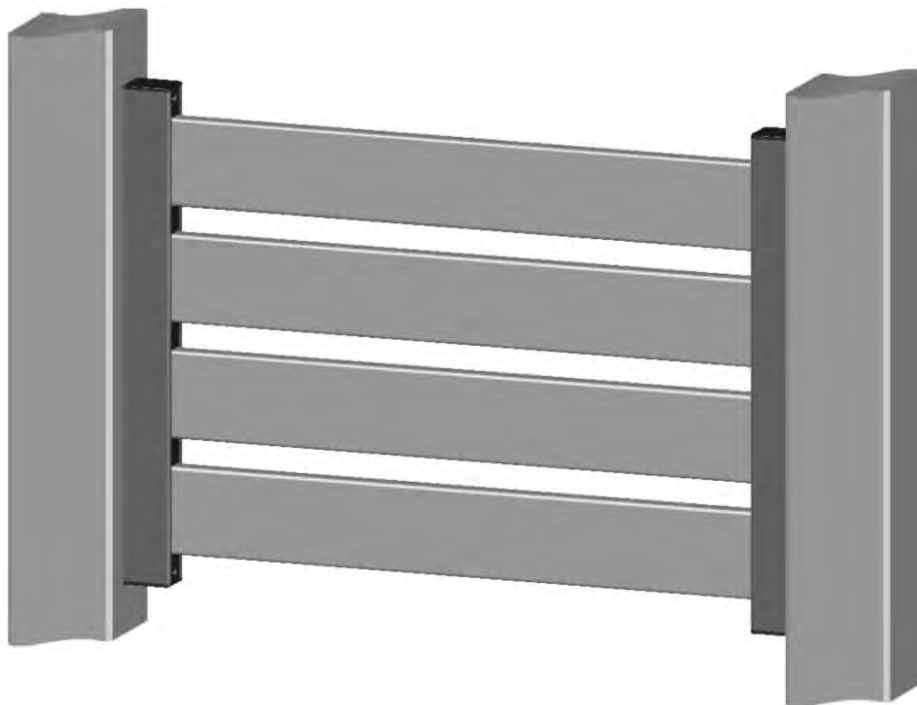
Fencing & Screens

Technical Manual History

The table below is a record of this manual's history. Any changes or additions to this manual are listed below.

DATE	DESCRIPTION	DESTROY PAGES	INSERT PAGES
01-09-2016	First Issue	-	-
01-08-2017	Elliptical Blade Adaptor replaced. Slat Adaptors added. Disclaimer Updated.	All	All
01-10-2017	Additional Span tables. Open Air Graphs Added	Index Manual History Section 2	Index Manual History Section 2
01-03-2025	306668 Post End Cap replaced with 321921	4.1 6.1, 3, 4, 5 9.3 & 5	4.1 6.1, 3, 4, 5 9.3 & 5

Features & Benefits



- A unique slat stacking system with concealed fixings provides a neat and aesthetically pleasing assembled product.
- Various slat sizes are available including 38, 65 and 100mm heights.
- 67mm elliptical blade option with a dedicated End Cap Adaptor. Blades overlap at a 140° angle with a 50mm pitch providing privacy and ventilation.
- Dedicated 10 and 20mm Spacer components to achieve the desired slat spacing. Ability to self-engage the 'Spacer' components providing endless spacing height capabilities.
- Dedicated Post Adaptor End Caps function to capture the stacked slats and neaten the final appearance of the assembly.
- Spacer Support Tool to assist with the manufacture of the system.
- Universal Post Adaptor enables the slat system to be attached to any structure where a screen is required.
- The Post Adaptor can also be utilised within an aluminium surround frame to create custom, panel modules and gates.
- Screens can be assembled using multiple slat heights and multiple slat spacings in a single assembly. Endless combinations can be constructed to achieve any screen appearance.
- Dedicated components to achieve square and mitre cut joints for surround framing.
- Dedicated End Caps to terminate the 50 x 50mm post and the 65 x 16mm slat creating a professionally finished product.
- Self drilling fixings specified for slat assembly so that no pre-drilling is required.
- Plastic components are produced in a durable UV Stabilised material.

Please read in conjunction with Important Conditions – Index (also available on Capral website)

Product Limitations

SIZE LIMITATIONS

Maximum Recommended Slat Length: 1800mm

Maximum Recommended Slat Length with Centre Slat Brace: 2400mm

Note:

The performance indicated above and in the following data is applicable to the Slat and Supporting Channel sections only and does not take into consideration the performance of the supporting structures such as posts, feet or other building structures. Independent engineering advice should be sought on the design and use of these elements.

Due to the variability of applications, installation methods and performance requirements, manufacturers and installers of the Capral Slat Fencing System shall always consult a building design professional to check whether the slat fencing system is suitable for the purpose intended.

Span Tables and Open Air Graphs

100mm x 16mm SLAT - EP12022

Maximum Design Pressure (Pa)										
S (L/100)	2159	1779	1483	1249	1062	911	787	684	599	527
U	6500	5882	5210	4648	4171	3764	3414	3111	2846	2614
Span	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400

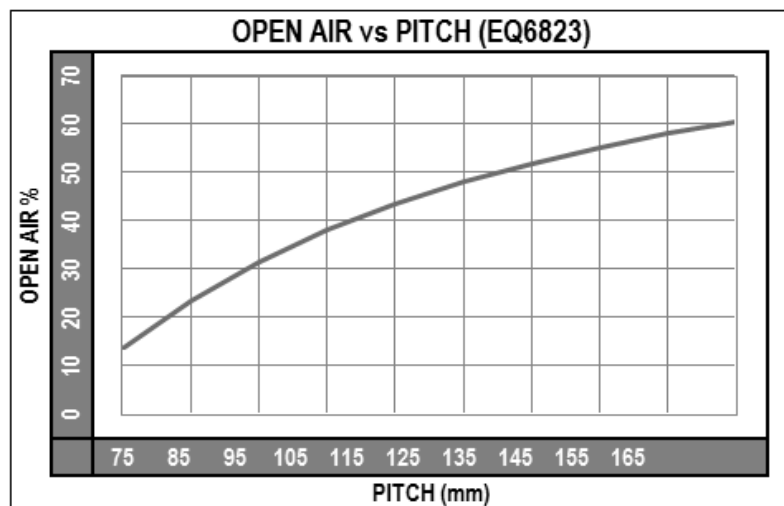
LEGEND: S = Serviceability Pressure, U = Ultimate Pressure

NOTE: This table is based on a combination of theoretical section properties and physical testing.



Maximum Pitch = 200mm (100mm Gap)

Minimum Pitch = 110mm (10mm Gap)

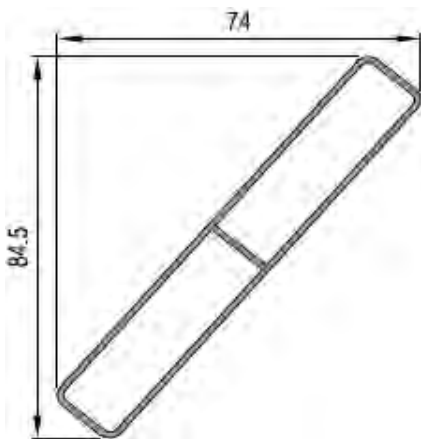


100mm x 16mm SLAT - EP12022 Angled

Maximum Design Pressure (Pa)										
S (L/100)	1575	1287	1065	890	751	639	548	473	411	-
U	4883	4258	3743	3313	2951	2644	2380	2153	1955	-
Span	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400

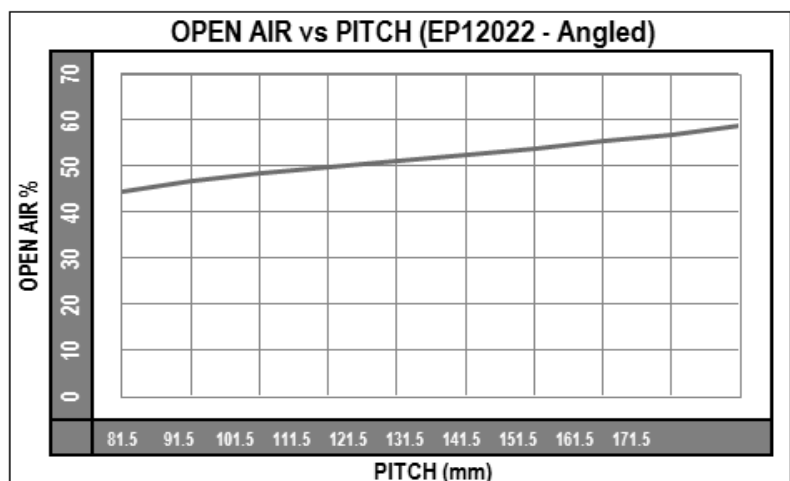
LEGEND: S = Serviceability Pressure, U = Ultimate Pressure

NOTE: This table is based on theoretical section properties only.



Maximum Pitch = 171.5mm (87mm Gap)

Minimum Pitch = 81.5mm (3mm Coverage)



Fencing & Screens

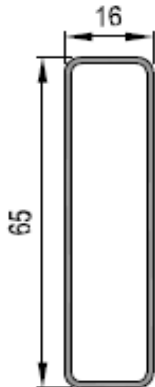
Span Tables and Open Air Graphs

65mm x 16mm SLAT - EQ6823

Maximum Design Pressure (Pa)										
S (L/100)	2125	1751	1460	1230	1046	897	775	674	590	519
U	6500	5792	5130	4576	4107	3707	3362	3063	2803	2574
Span	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400

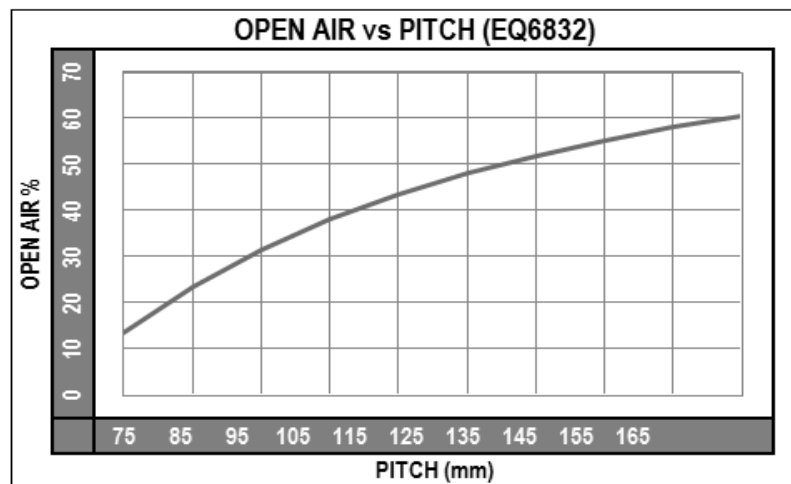
LEGEND: S = Serviceability Pressure, U = Ultimate Pressure

NOTE: This table is based on a combination of theoretical section properties and physical testing.



Maximum Pitch = 165mm (100mm Gap)

Minimum Pitch = 75mm (10mm Gap)

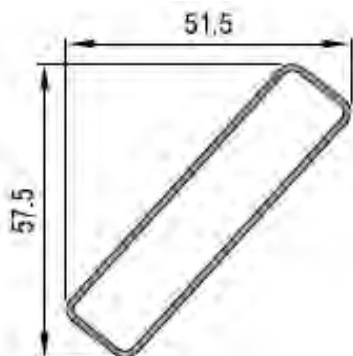


65mm x 16mm SLAT - EQ6823 Angled

Maximum Design Pressure (Pa)										
S (L/100)	1460	1194	981	821	688	586	495	426	-	-
U	4526	3949	3448	3054	2703	2422	2149	1937	-	-
Span	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400

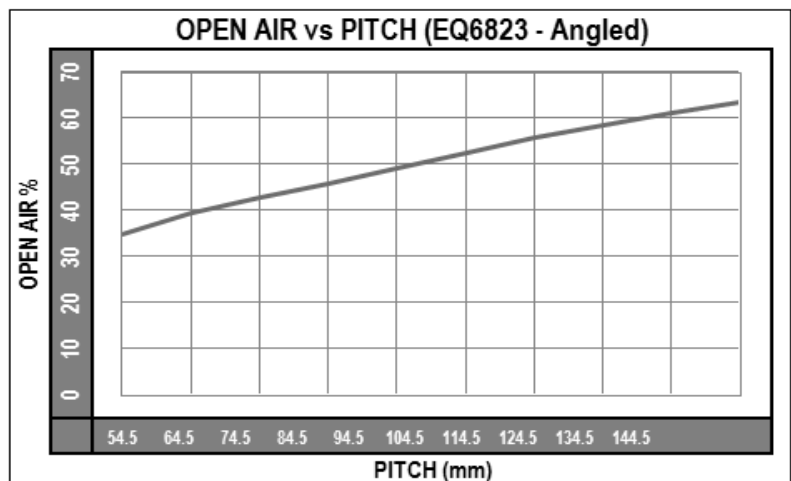
LEGEND: S = Serviceability Pressure, U = Ultimate Pressure

NOTE: This table is based on theoretical section properties only.



Maximum Pitch = 144.5mm (87mm Gap)

Minimum Pitch = 54.5mm (3mm Coverage)



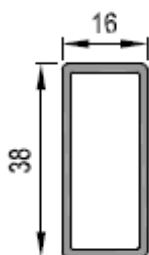
Span Tables and Open Air Graphs

38mm x 16mm SLAT - EP7822

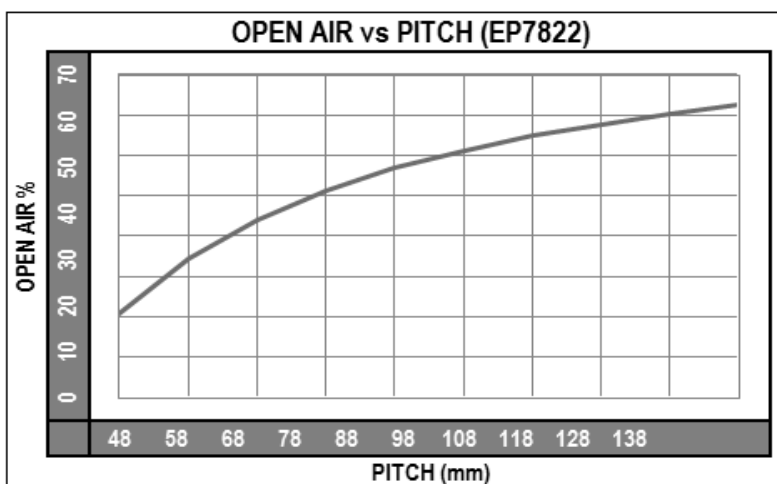
Maximum Design Pressure (Pa)										
S (L/100)	2840	2340	1951	1643	1397	1198	1035	900	788	693
U	6500	6500	6500	6113	5487	4952	4491	4092	3744	3439
Span	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400

LEGEND: S = Serviceability Pressure, U = Ultimate Pressure

NOTE: This table is based on a combination of theoretical section properties and physical testing.



Maximum Pitch = 138mm (100mm Gap)
Minimum Pitch = 48mm (10mm Gap)

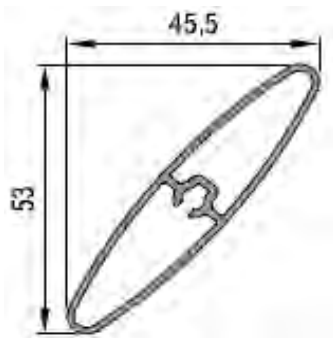


67mm Elliptical Blade - EPD0262

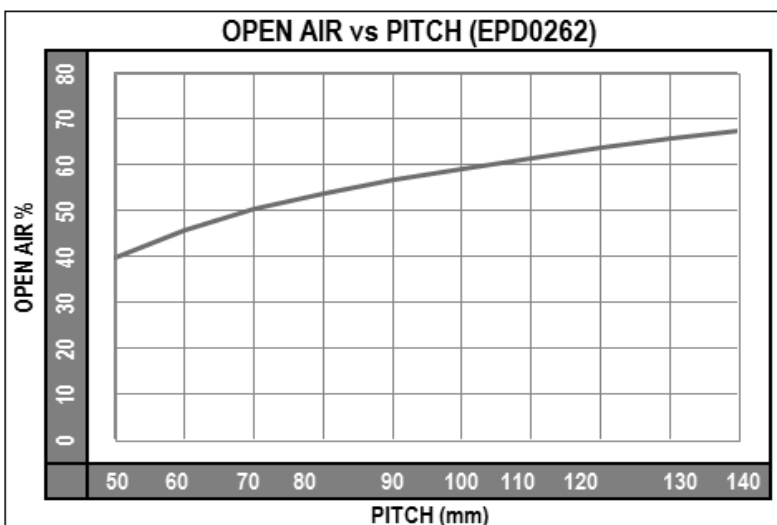
Maximum Design Pressure (kPa)										
S (L/100)	2263	1729	1340	1065	853	697	573	479	402	-
U	5488	4576	3840	3286	2821	2461	2148	1903	1684	-
Span	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000

LEGEND: S = Serviceability Pressure, U = Ultimate Pressure

NOTE: This table is based on theoretical section properties only.



Maximum Pitch = 140mm (87mm Gap)
Minimum Pitch = 50mm (3mm Coverage)

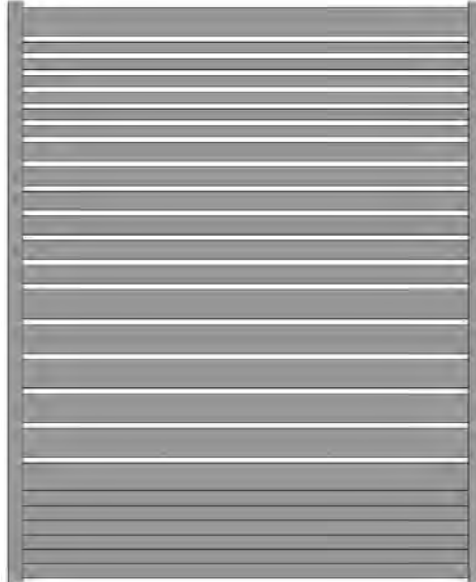


Test Report Summary

STRUCTURAL - TEST REPORT NUMBER: C016-024a, C016-025a & C016-026a

Performed by: Capral Mechanical Test Laboratory, Victoria – May, 2016

Test Drawing Number: 31-912A



Infill: Elliptical Louvre (EPD0262), 100mm Slat (EP12022), 65mm Slat (EQ6823), 38mm Slat (EP7822)

In general accordance with Australian Standard: AS4420.2 & AS4420.6 - 1996

DEFLECTION TEST RESULTS – No Slat Ends Fixed:

	+ Test Pressure
100mm Slat : EP12022 – 1534mm Span	1397Pa
65mm Slat : EQ6823 – 1534mm Span	1549Pa
38mm Slat : EP7822 – 1534mm Span	1549Pa

DEFLECTION TEST RESULTS – One Slat End Fixed:

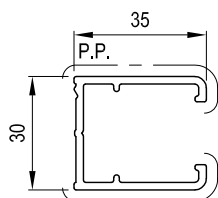
	+ Test Pressure
100mm Slat : EP12022 – 1534mm Span	1554Pa
65mm Slat : EQ6823 – 1534mm Span	1622Pa
38mm Slat : EP7822 – 1534mm Span	1622Pa

DEFLECTION TEST RESULTS – Both Slat Ends Fixed:

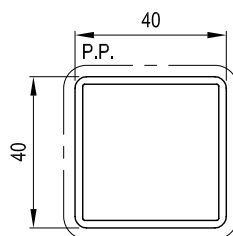
	+ Test Pressure
100mm Slat : EP12022 – 1534mm Span	1448Pa
65mm Slat : EQ6823 – 1534mm Span	1616Pa
38mm Slat : EP7822 – 1534mm Span	1616Pa

ULTIMATE STRENGTH RESULTS:

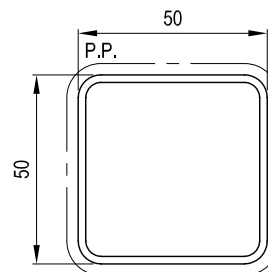
+ Test Pressure
6500Pa



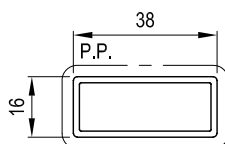
EP15692
POST ADAPTOR
Paint Perimeter: 147mm
Anodised Perimeter: 220mm



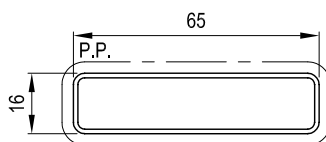
EQ6818
40 x 40 x 2mm SQ. HOLLOW
Paint Perimeter: 154mm
Anodised Perimeter: 154mm



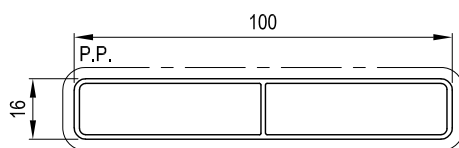
EP12031
50 x 50 x 2mm SQ. HOLLOW
Paint Perimeter: 190mm
Anodised Perimeter: 190mm



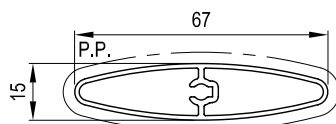
EP7822
38 x 16 x 1.6mm SLAT
Paint Perimeter: 106mm
Anodised Perimeter: 106mm



EQ6823
65 x 16 x 1.20mm SLAT
Paint Perimeter: 157mm
Anodised Perimeter: 157mm



EP12022
100 x 16 x 1.20mm SLAT
Paint Perimeter: 227mm
Anodised Perimeter: 227mm



EPD0262
ELLIPTICAL BLADE
Paint Perimeter: 144mm
Anodised Perimeter: 144mm

Extrusion Data

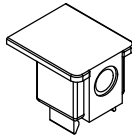
Extrusion	Description	Structural Properties *			
		Ixx (10 ³ mm ⁴)	Iyy (10 ³ mm ⁴)	Zxx (10 ³ mm ³)	Zyy (10 ³ mm ³)
EP12022	100 x 16 x 1.2mm Slat	13.690	278.870	1.711	5.577
EP12031	50 x 50 x 2mm Square Hollow	137.090	137.090	5.484	5.484
EP15692	Post Adaptor	32.930	31.070	2.194	1.541
EP7822	38 x 16 x 1.6mm Slat	6.840	27.950	0.855	1.471
EPD0262	Elliptical Blade	5.240	66.660	0.699	1.990
EQ6818	40 x 40 x 2mm Square Hollow	70.540	70.540	3.527	3.527
EQ6823	65 x 16 x 1.2mm Slat	8.760	82.970	1.095	2.553

* NOTE: The structural properties listed above are using the orientations as listed within the extrusion pages.

Components

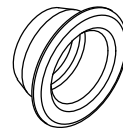
Scale 1:2

317673 - BLACK
ADAPTOR END CAP
50 PACK
(SPD04167)



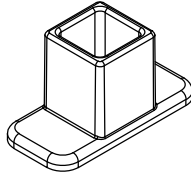
ACCEPTS 309327 HOLE PLUG

309327 - BLACK
HOLE PLUG
EACH
(H036)



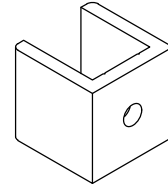
SUITS 317673 ADAPTOR END CAP

301405
50mm POST FOOT
EACH
(M649525)



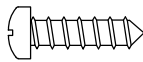
SUITS EP12031

301620
50mm POST CONNECTION
BRACKET
EACH
(M649522)



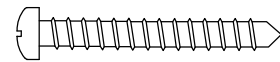
SUITS EP12031

301086
8g x 15mm PAN SCREW
EACH - S/STEEL
(M028259)



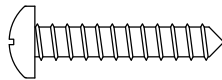
CENTRE BRACE

309153
8g x 32mm PAN SCREW
EACH - S/STEEL
(FSC105)



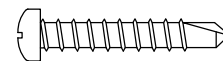
ADAPTOR END CAP

300059
10g x 25mm PAN SCREW
EACH - S/STEEL
(M028598)



ELLIPTICAL BLADE

317676
8g x 25mm PAN SCREW
S/DRILLING
1000 PACK - ZP

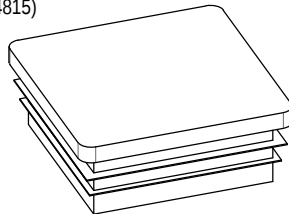


SPACERS

317077
3M VHB RP62 DOUBLE SIDED TAPE
ROLL 13mm x 33m

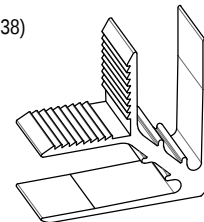


321921
50mm POST END CAP
EACH
(SPD04815)



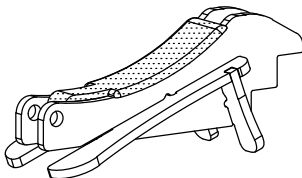
SUITS EP12031

726324
50mm POST CORNER STAKE
EACH
(MF6050038)

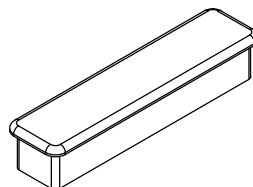


SUITS EP12031 (EP10174 TOLL CUT 38mm)

317675
SPACER SUPPORT TOOL
EACH
(SPD04267)



308945 - BLACK
PLASTIC END CAP
EACH

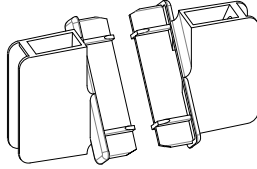


FITS 65 x 16mm SLATS (SINGLE HOLLOW)

Components

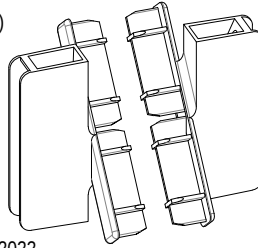
Scale 1:2

320001 - BLACK
65mm LH & RH SLAT ADAPTOR
50 PACK
(SPD004347)



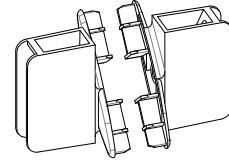
SUITS EQ6823

320002 - BLACK
100mm LH & RH SLAT ADAPTOR
50 PACK
(SPD04349)



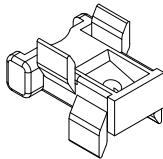
SUITS EP12022

320003 - BLACK
ELLIPTICAL LH & RH ADAPTORS
50 PAIRS
(SPD04338)

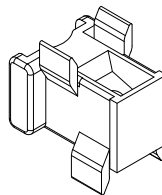


SUITS EPD0262

317671 - BLACK
10mm SPACER
100 PACK
(SPD04165)

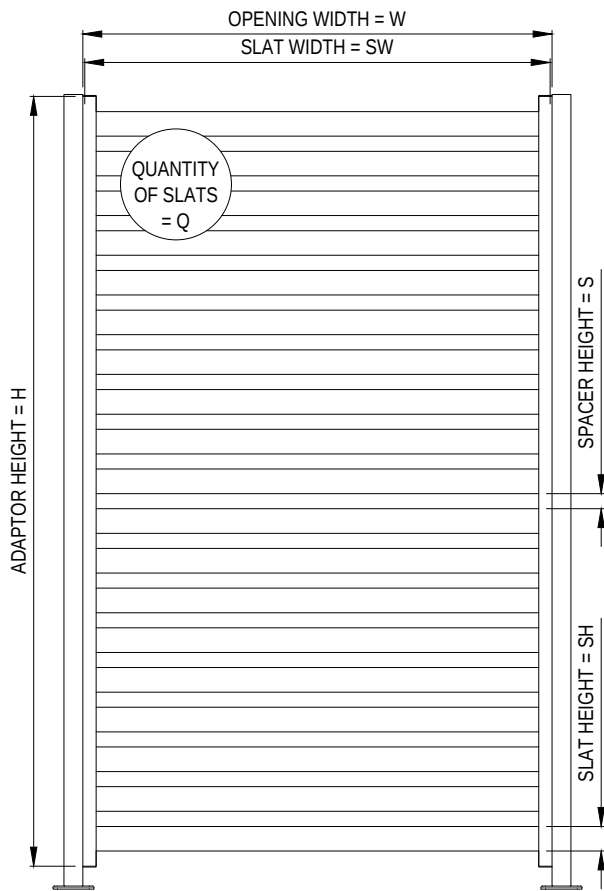


317672 - BLACK
20mm SPACER
100 PACK
(SPD04166)

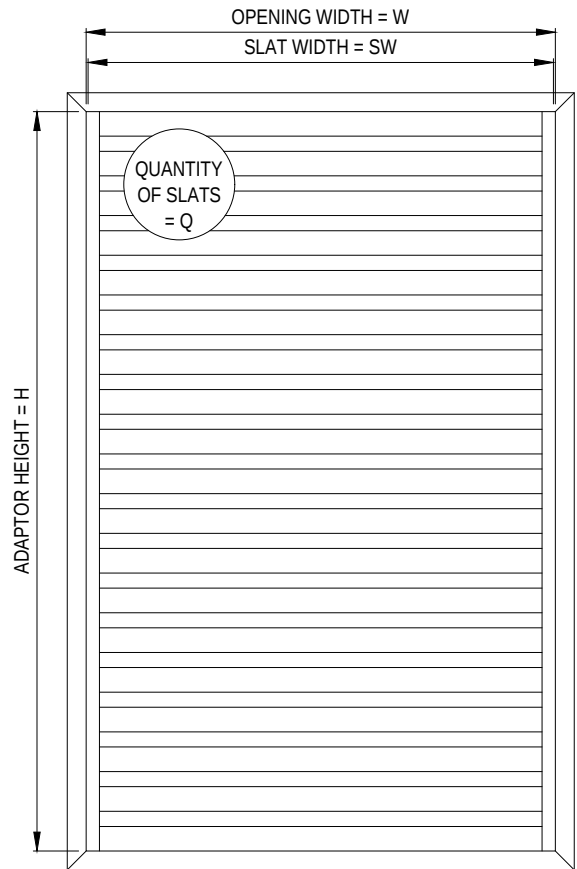


Configurations

Scale 1:2



BETWEEN STRUCTURE/POST

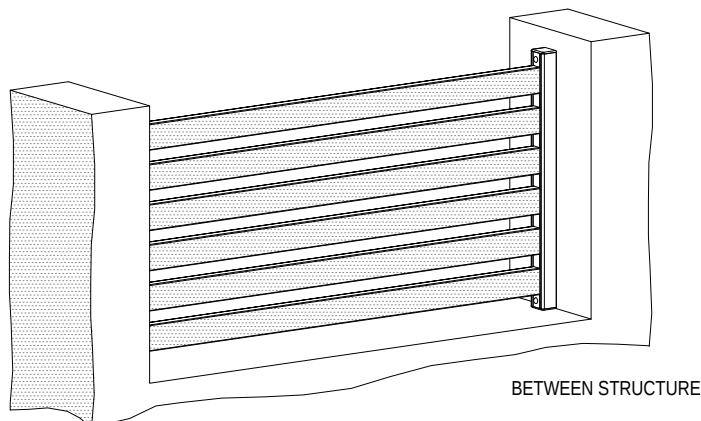
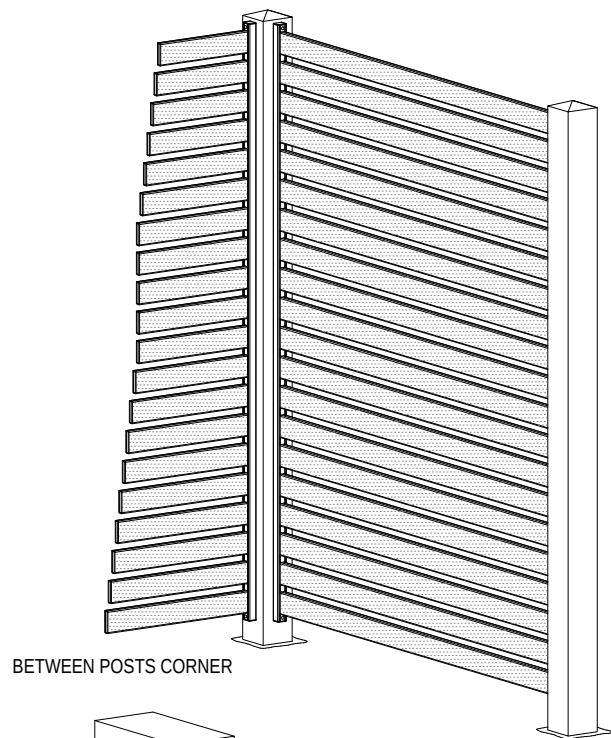
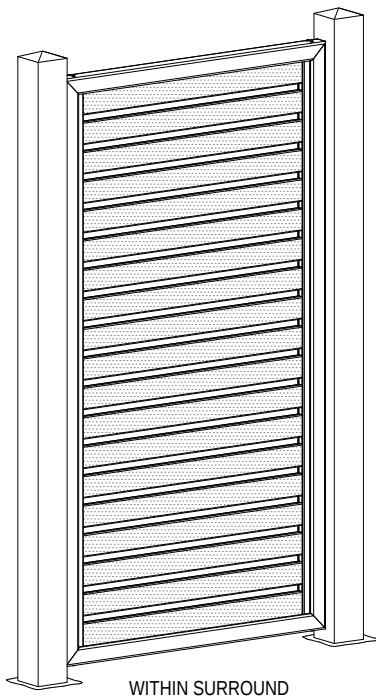
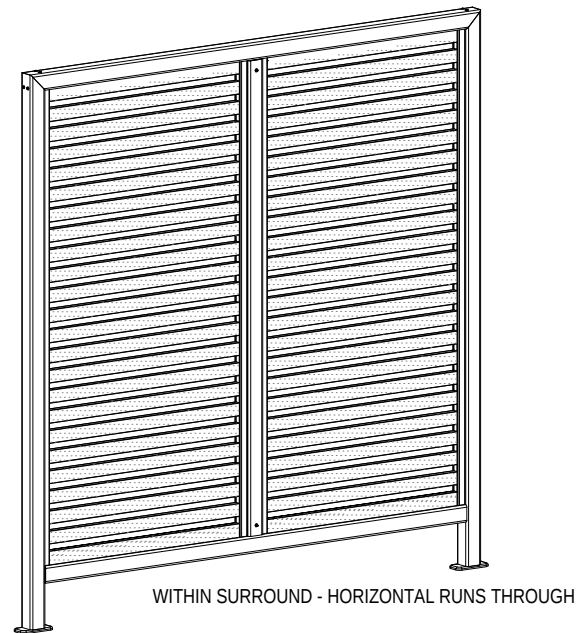
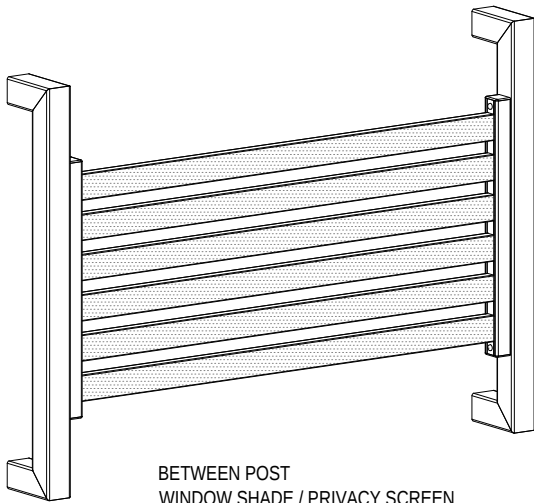


WITHIN SURROUND FRAME

Please read in conjunction with Important Conditions - Index (also available on Capral website)

Configurations

Scale 1:2

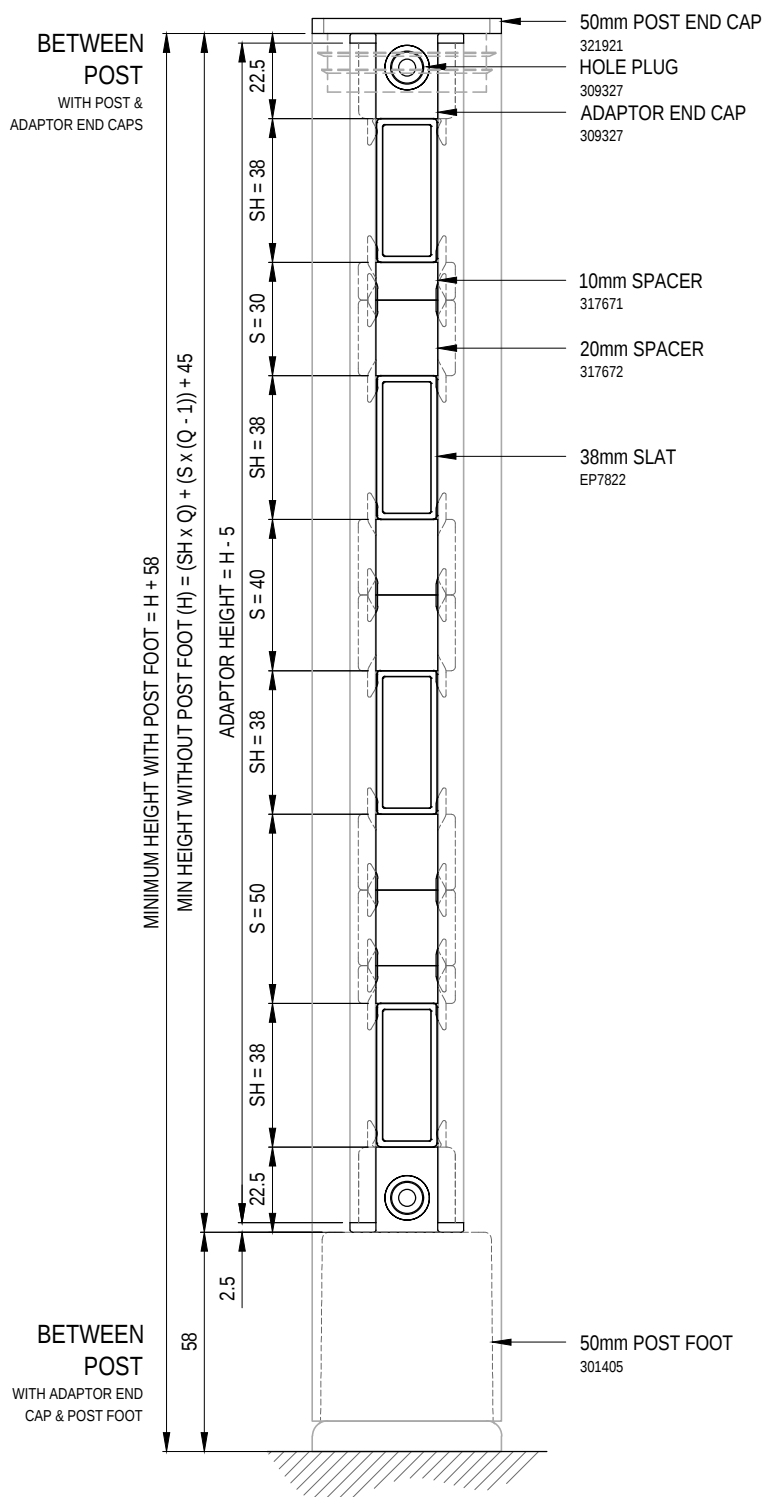


Please read in conjunction with Important Conditions - Index (also available on Capral website)

Vertical Arrangement - Slats Between Posts

Scale 1:2

NOTE: SPACER AND SLAT VARIANTS SHOWN AS EXAMPLE

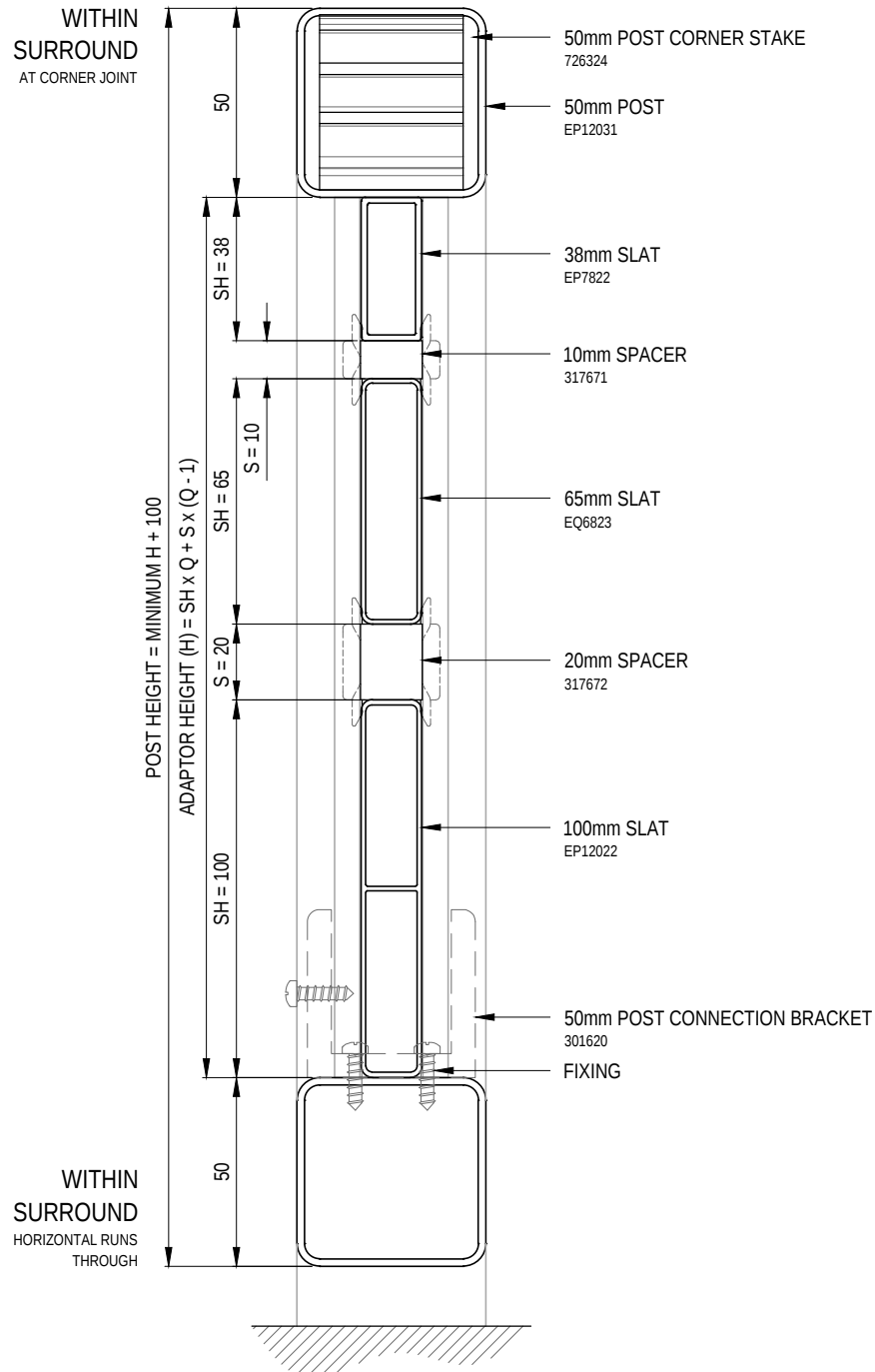


Please read in conjunction with Important Conditions - Index (also available on Capral website)

Vertical Arrangement - Slats within Surround

Scale 1:2

NOTE: SPACER AND SLAT VARIANTS SHOWN AS EXAMPLE

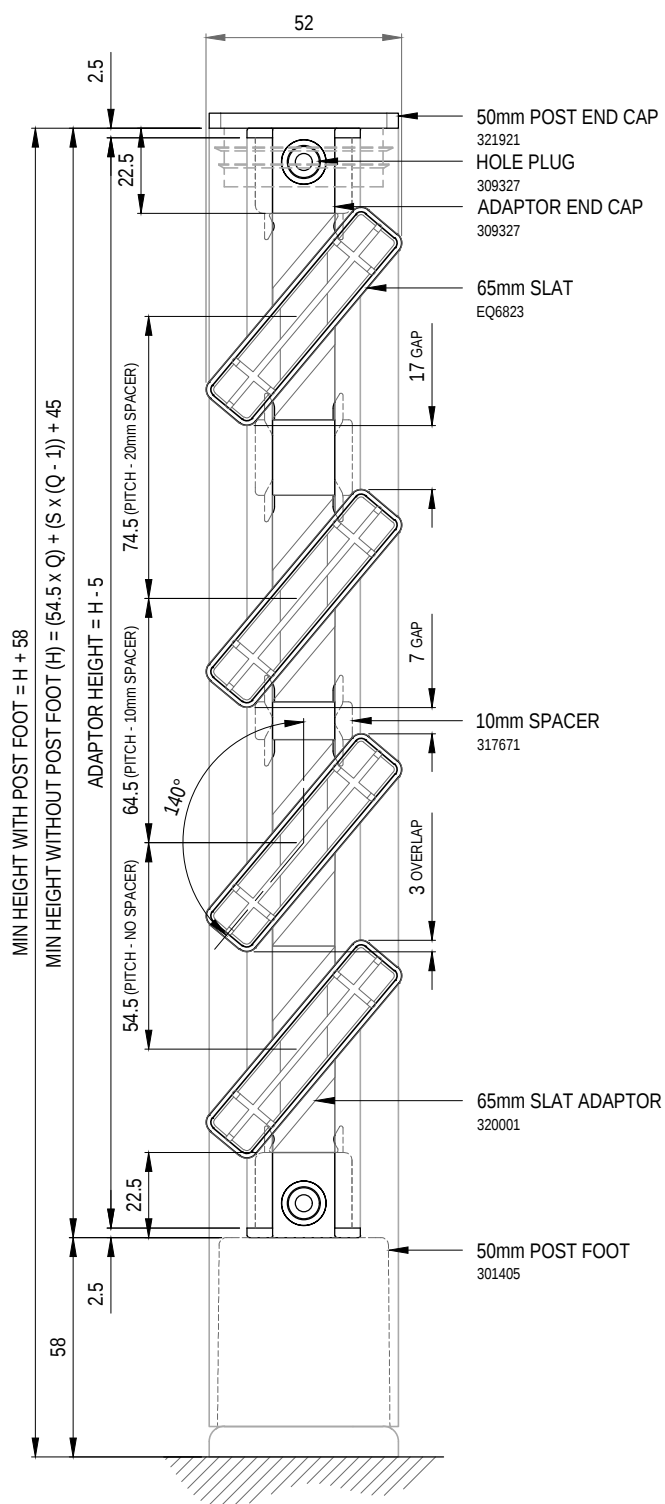


Please read in conjunction with Important Conditions - Index (also available on Capral website)

Vertical Arrangement - 65mm Angled Blade

Scale 1:2

NOTE: SPACER VARIANTS SHOWN AS EXAMPLE

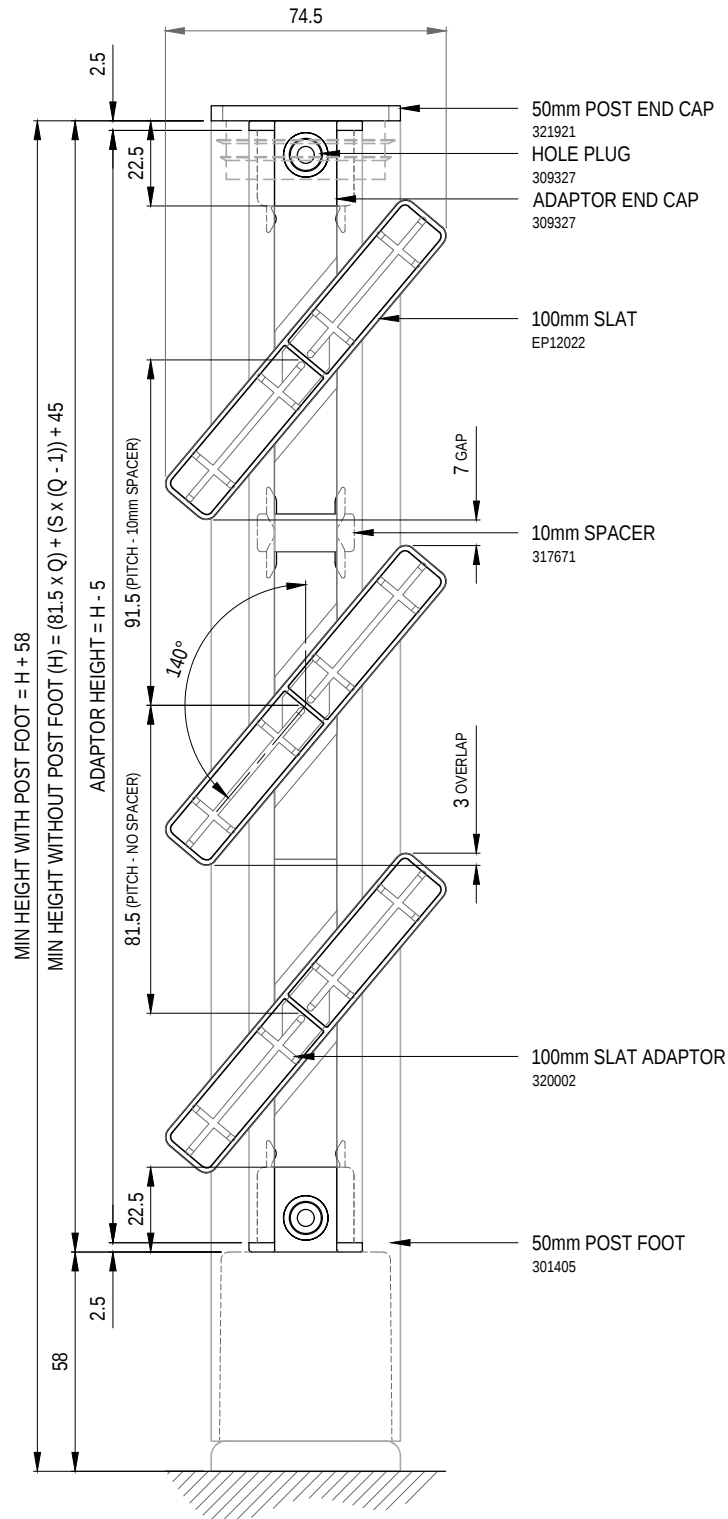


Please read in conjunction with Important Conditions - Index (also available on Capral website)

Vertical Arrangement - 100mm Angled Balde

Scale 1:2

NOTE: SPACER VARIANTS SHOWN AS EXAMPLE

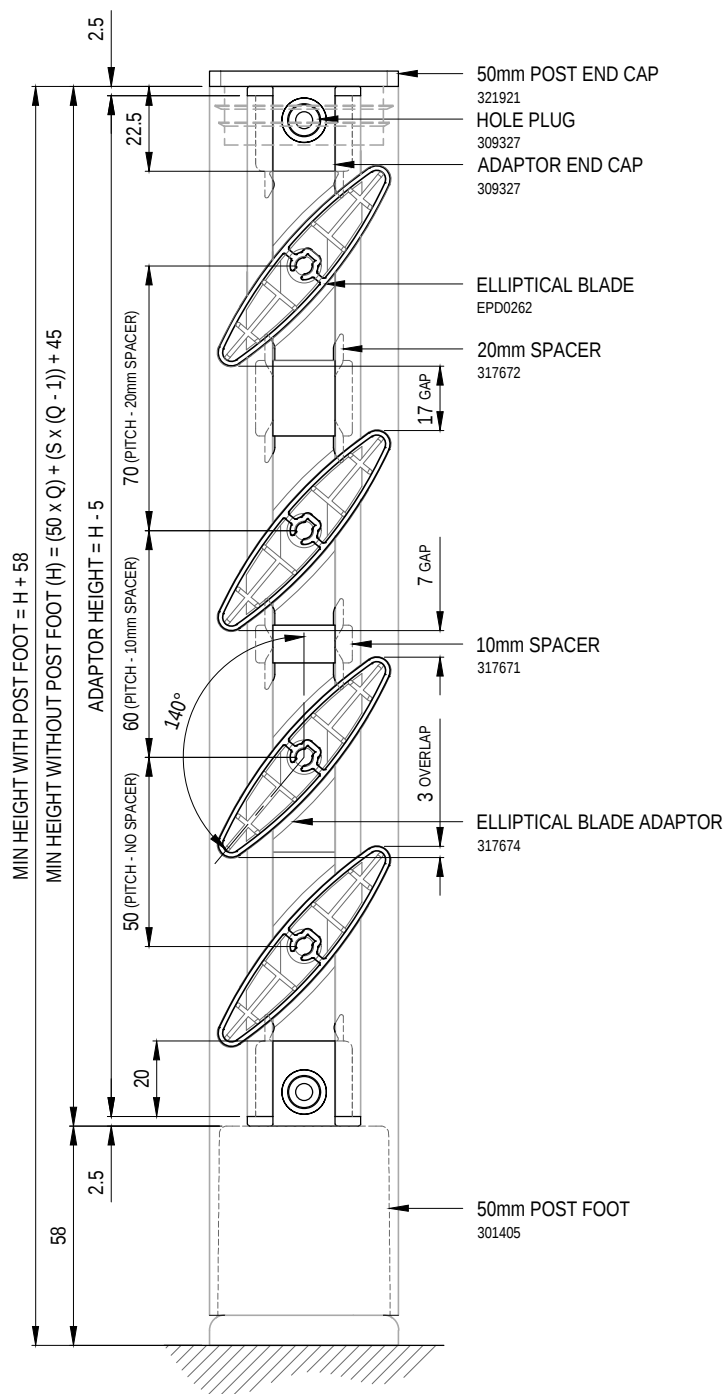


Please read in conjunction with Important Conditions - Index (also available on Capral website)

Vertical Arrangement - Elliptical Blade

Scale 1:2

NOTE: SPACER VARIANTS SHOWN AS EXAMPLE



Please read in conjunction with Important Conditions - Index (also available on Capral website)

Horizontal Arrangements - Slats

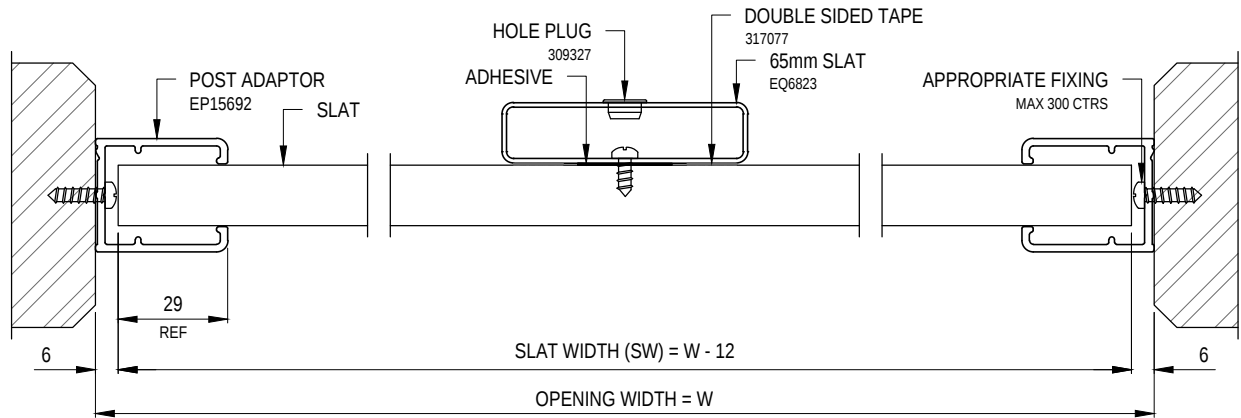
Scale 1:2

BETWEEN
STRUCTURE / POSTS

OPTIONAL
SLAT BRACE

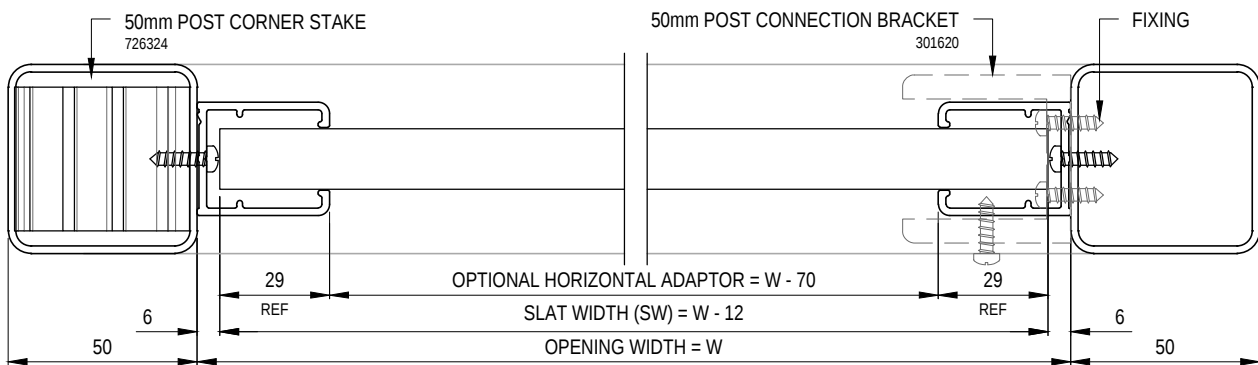
BETWEEN
STRUCTURE / POSTS

RECOMMENDED WHEN SLAT LENGTH EXCEEDS 1800mm

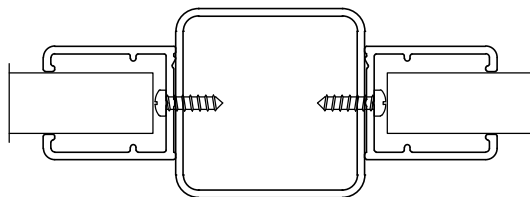


WITHIN SURROUND
AT CORNER

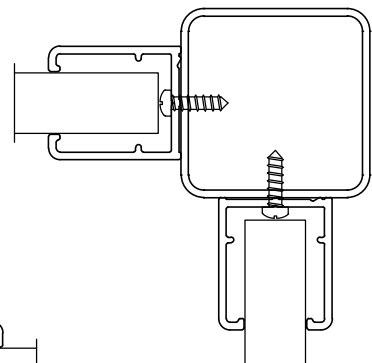
WITHIN SURROUND
VERTICAL RUNS THROUGH



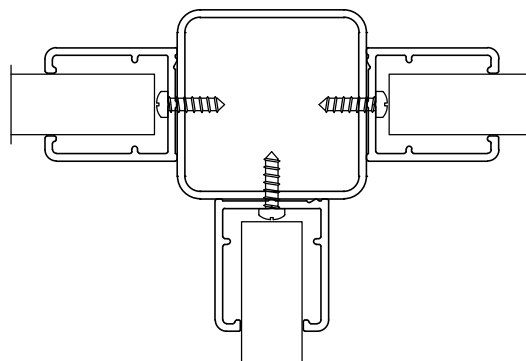
180° TWO WAY POST



90° TWO WAY POST



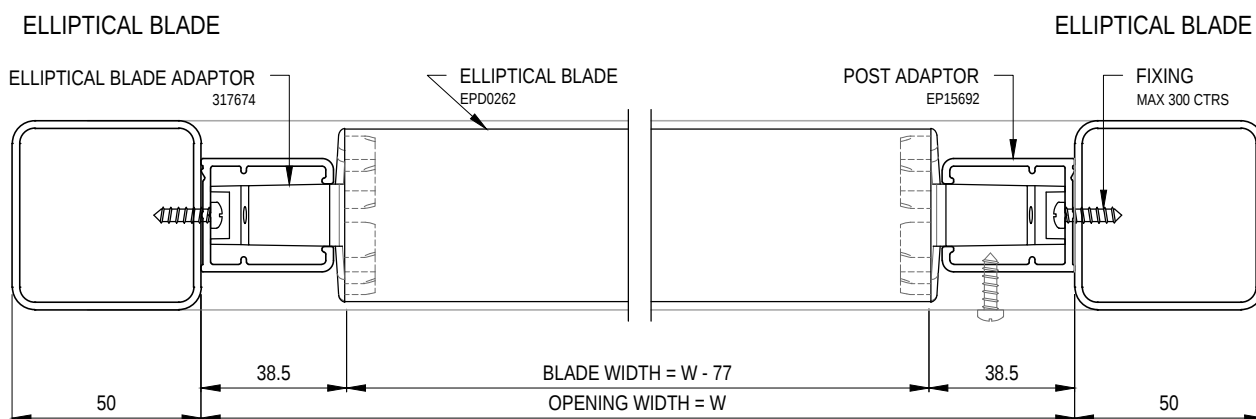
THREE WAY POST



Please read in conjunction with Important Conditions - Index (also available on Capral website)

Horizontal Arrangement - Elliptical Blade

Scale 1:2



Please read in conjunction with Important Conditions - Index (also available on Capral website)

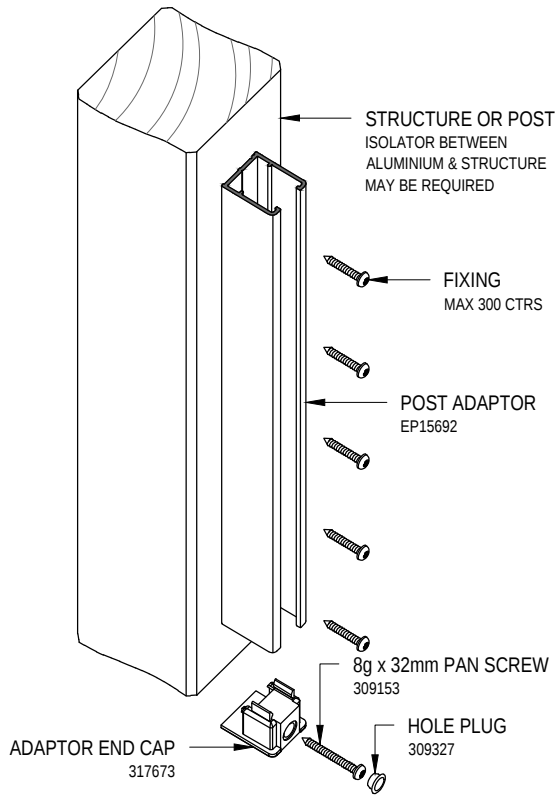
Fencing & Screens

Assembly - Slats

Not To Scale

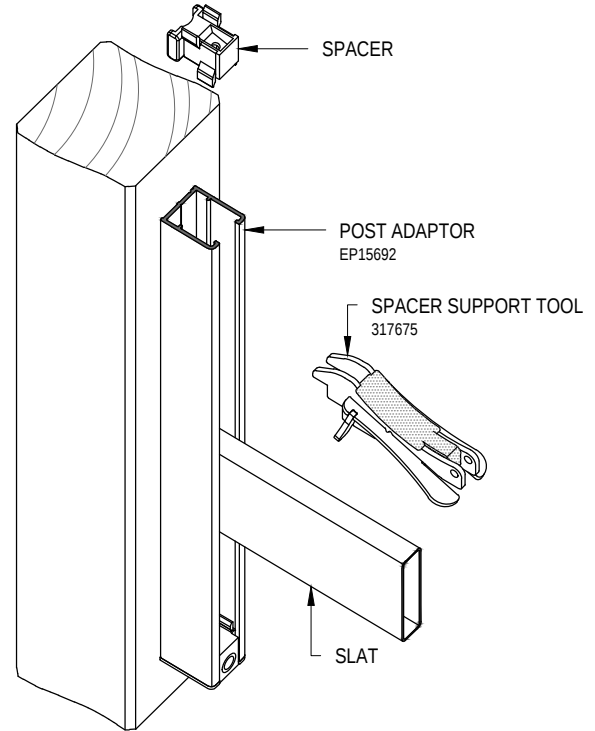
STEP 1

SECURE ADAPTOR PROFILE TO STRUCTURE. INSERT END CAP INTO BOTTOM OF ADAPTOR AND SECURE. APPLY HOLE PLUG TO END CAP



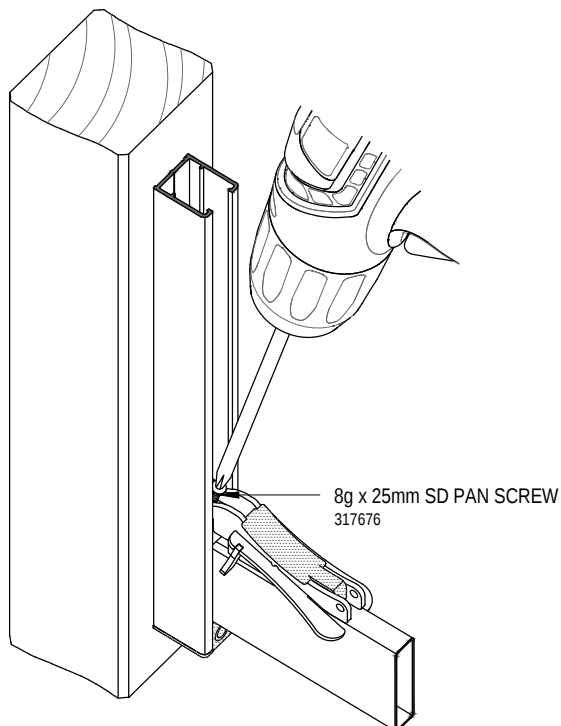
STEP 2

LOCATE SLAT INTO ADAPTOR & ENGAGE DOWN ONTO END CAP. SLIDE A SPACER INTO THE ADAPTOR TO ENGAGE ON TOP OF SLAT.



STEP 3

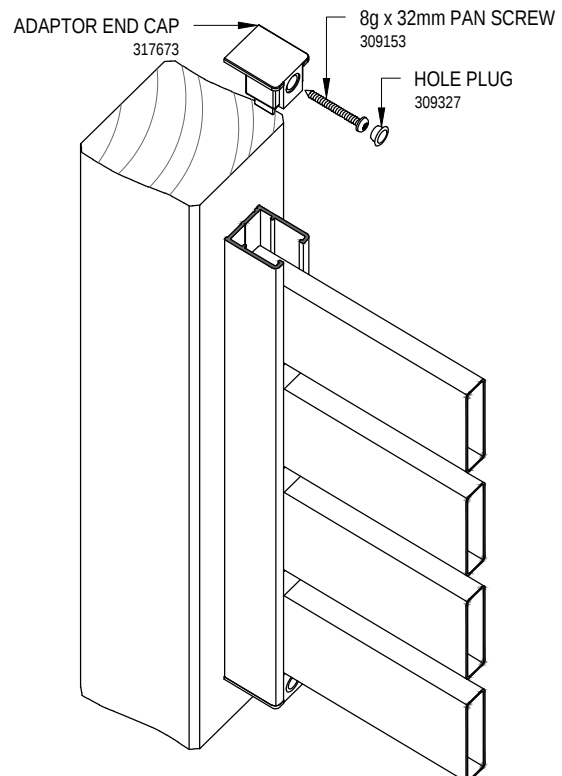
LOCATE SPACER SUPPORT TOOL ONTO SLAT TO HOLD SPACER IN POSITION. USING A SELF DRILLING SCREW, SECURE SPACER TO SLAT. INSERT ADDITIONAL SPACERS AS REQUIRED TO ACHIEVE THE DESIRED GAP



DEPENDING ON THE SIZE AND TYPE OF SCREEN BEING FABRICATED IT MAY NOT BE NECESSARY TO SCREW FIX EACH SLAT. THIS IS DETERMINED BY THE FABRICATOR.

STEP 4

REPEAT STEPS 2 & 3 UNTIL ALL SLATS ARE INSTALLED AND SECURED. INSERT END CAP INTO TOP OF ADAPTOR, SECURE & APPLY HOLE PLUG

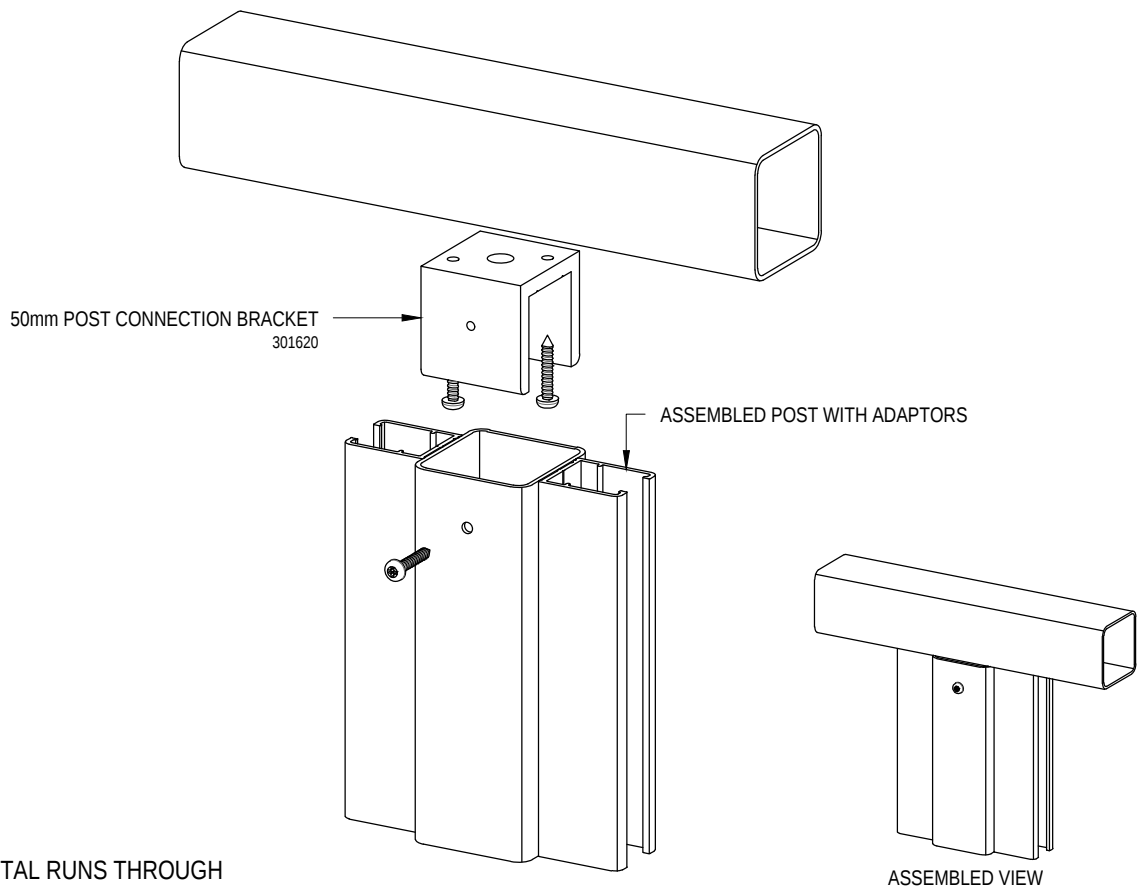
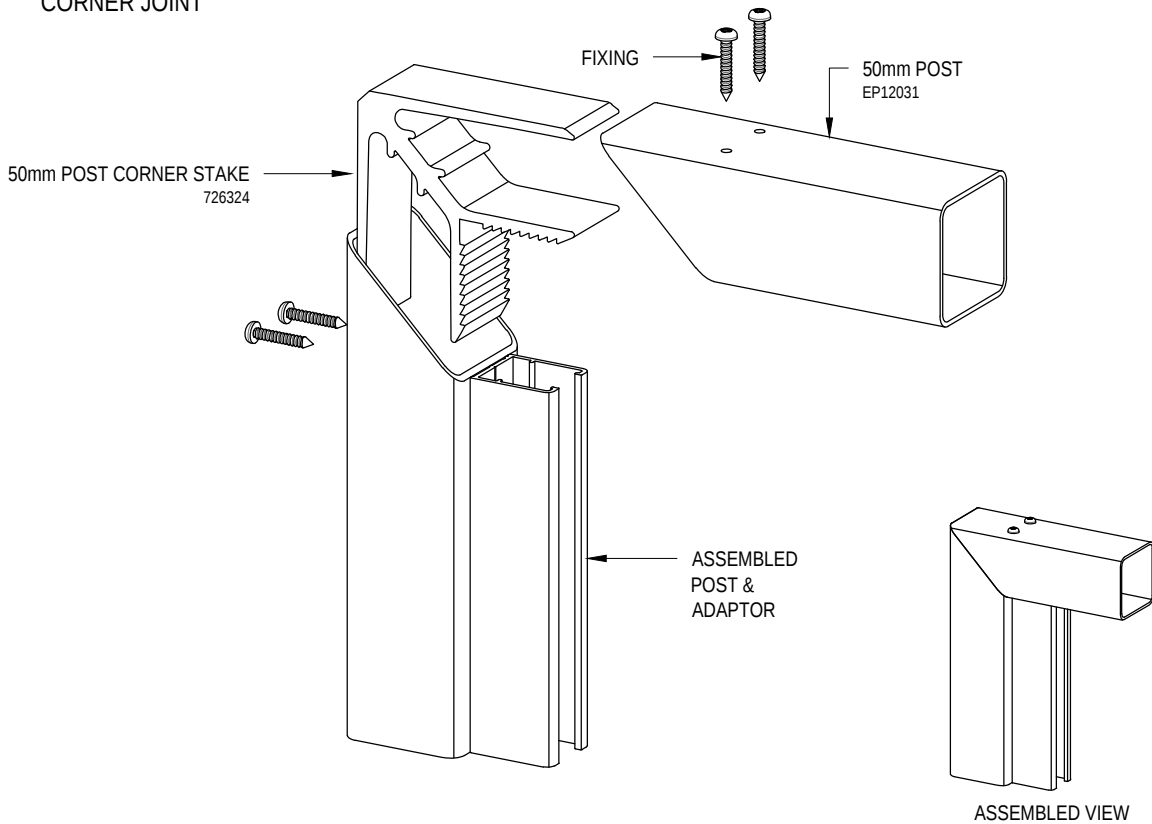


Please read in conjunction with Important Conditions - Index (also available on Capral website)

Assembly - Surround Corner & Horizontal Joint

Not To Scale

CORNER JOINT

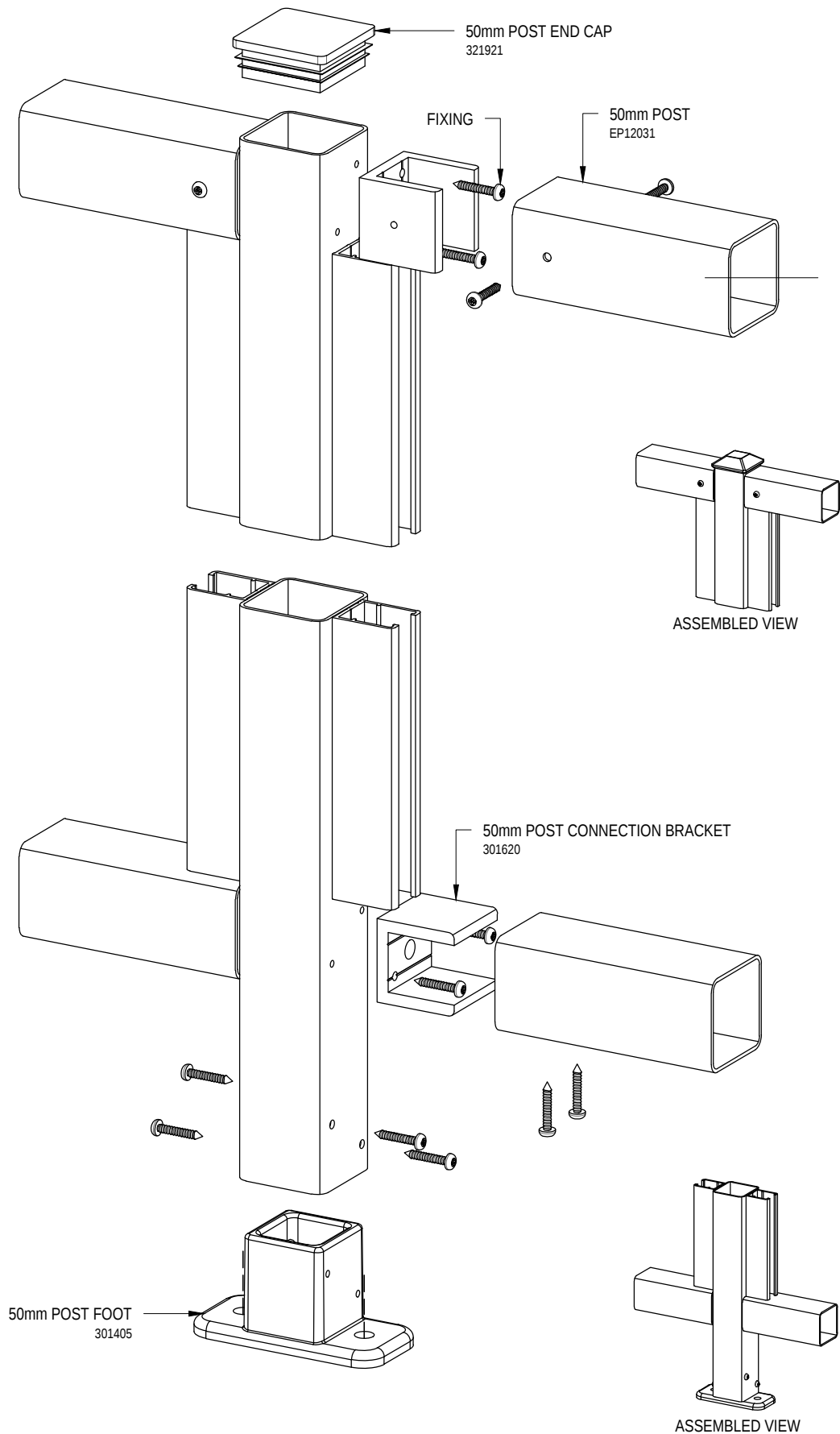


HORIZONTAL RUNS THROUGH

Please read in conjunction with Important Conditions - Index (also available on Capral website)

Assembly - Surround Vertical Joints & Post Foot

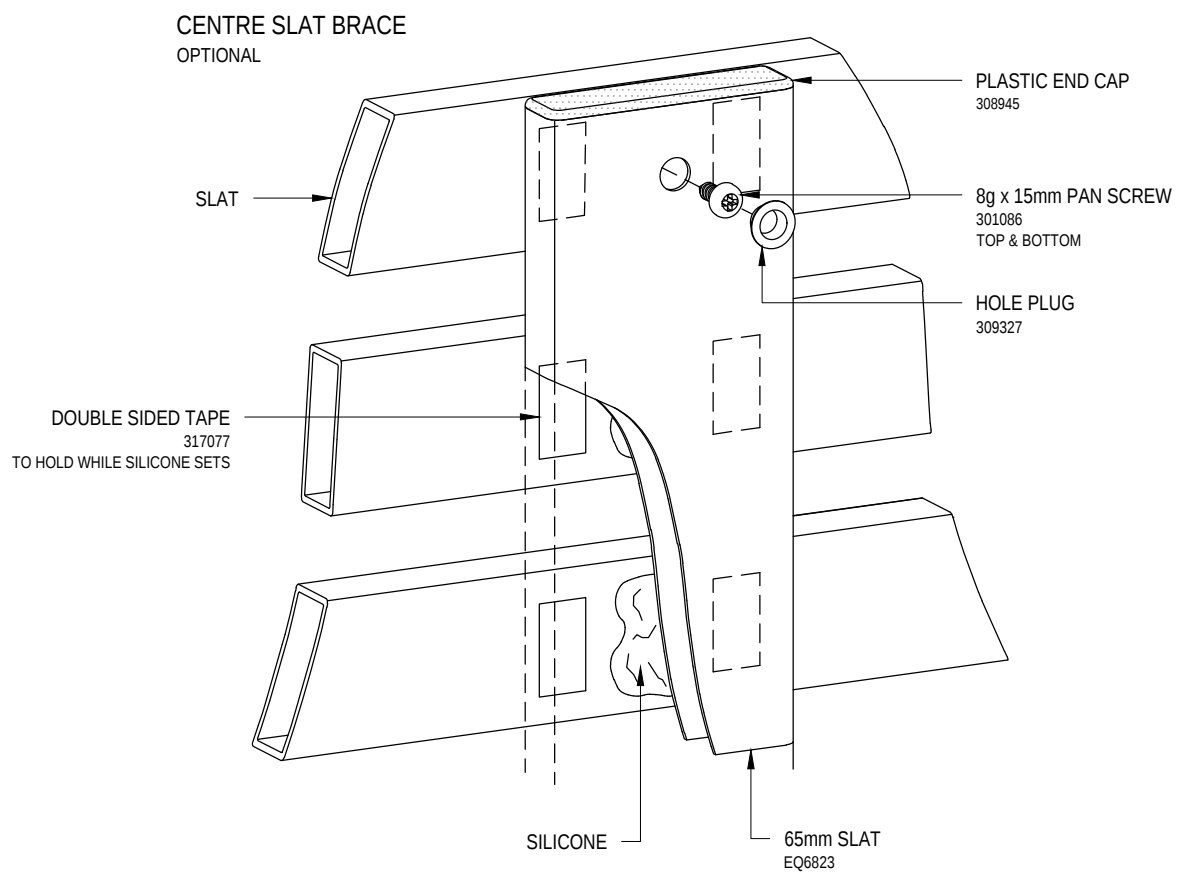
Not To Scale



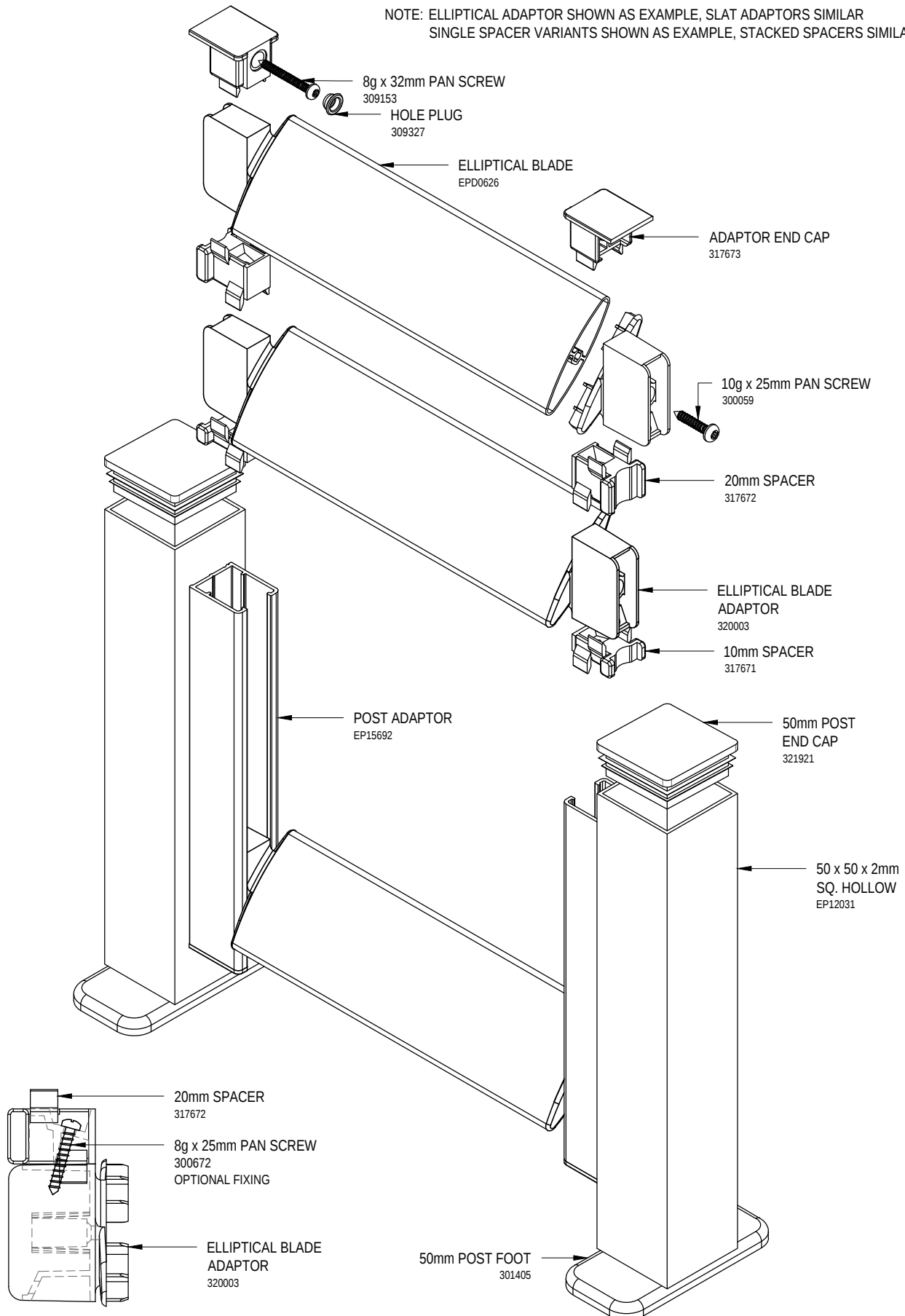
Please read in conjunction with Important Conditions - Index (also available on Capral website)

Assembly - Centre Brace

Not To Scale



Please read in conjunction with Important Conditions - Index (also available on Capral website)



Please read in conjunction with Important Conditions - Index (also available on Capral website)