



DESIGNER RANGE 413 SYSTEM

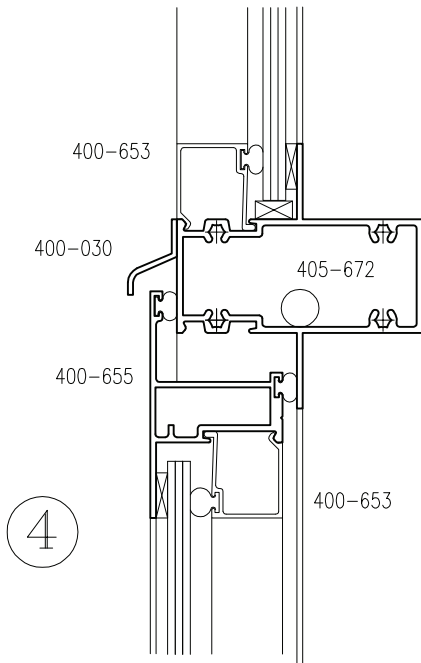
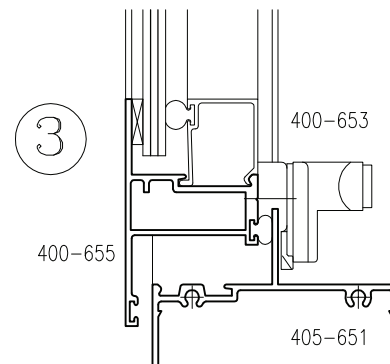
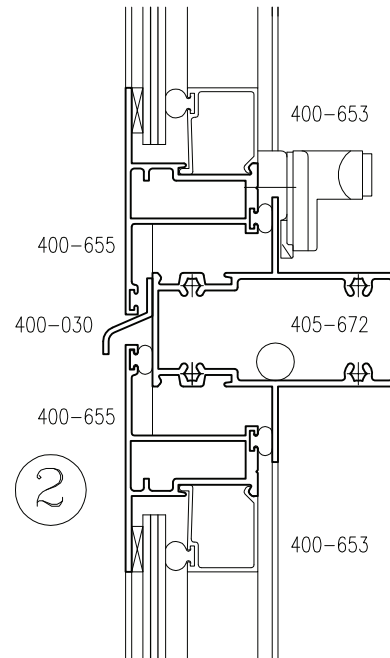
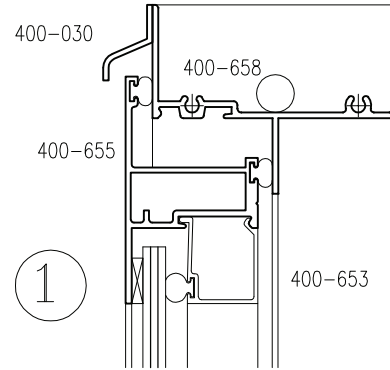
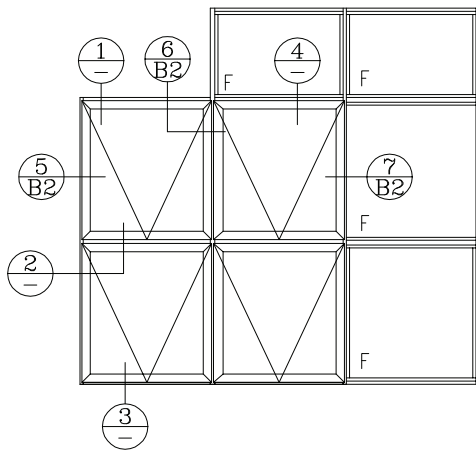
Thermaview™ Awning/Casement/Fixed Lite Window

Specifier Guide

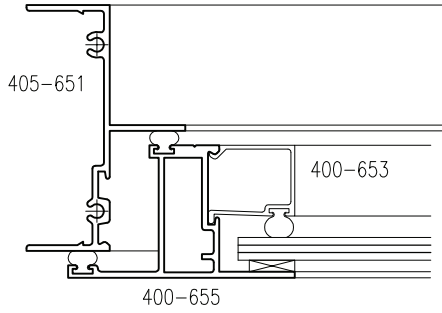
The Lidco Specifier's Guide contains technical information, maximum permissible sizes, typical configurations, energy ratings and key design features and benefits.



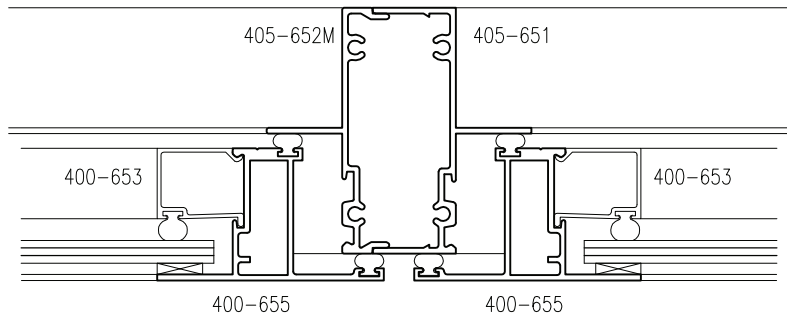
Awning - Friction Stay Option



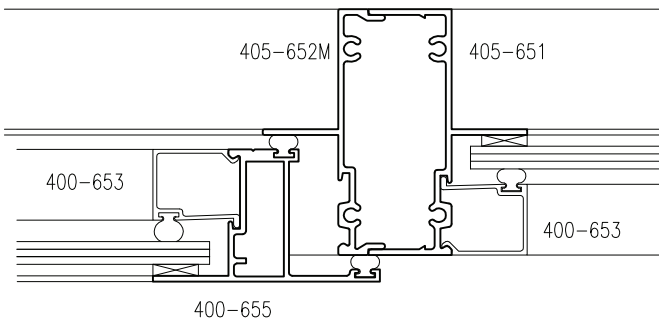
Typical Configurations



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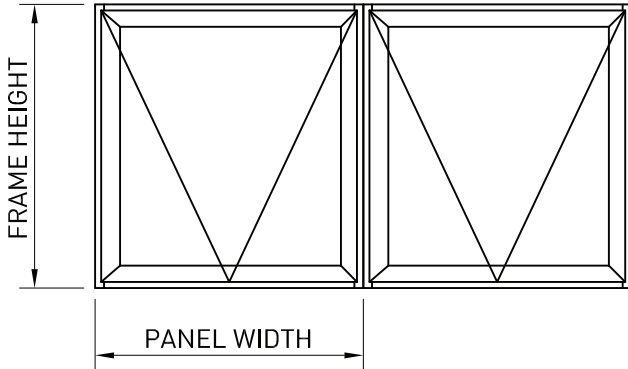
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Loading Tables

AWNING WINDOW



The following calculations are based on theoretical section properties, not on approved tests as specified by AS2047. The Design Wind Pressure is used to calculate the theoretical maximum panel size and does not account for Water Penetration. For more detailed information on suitability please contact Lidco directly.

Residential Deflection ratio, K = 180
Commercial Deflection ratio, K = 250

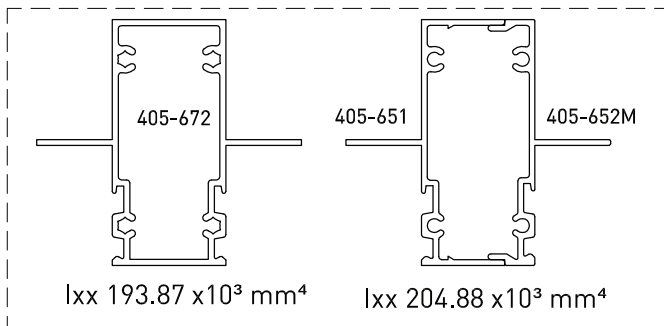
MULLION TYPE 1 OR TYPE 2 - RESIDENTIAL (AWNING WINDOW)

Panel Width	400	500	600	700	800	900	1000	1100	1200
Frame Height									
500	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa
600	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa
700	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa
800	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa
900	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa
1000	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa
1100	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa
1200	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa

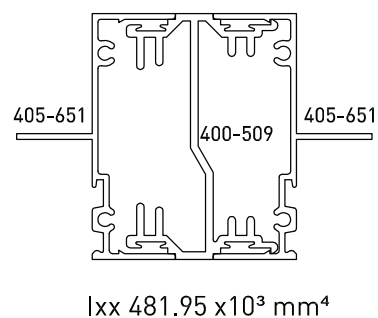
MULLION TYPE 1 OR TYPE 2 - COMMERCIAL (AWNING WINDOW)

Panel Width	400	500	600	700	800	900	1000	1100	1200
Frame Height									
500	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa
600	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa
700	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa
800	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa
900	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa
1000	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa
1100	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa
1200	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa

MULLION TYPE 1



MULLION TYPE 2



Loading Tables

MULLION TYPE 1 - RESIDENTIAL (AWNING WINDOW)**

Panel Width	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500
Frame Height												
1200	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa
1300	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa
1400	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	2.2kPa	2.2kPa	2.2kPa	2.2kPa
1500	3.0kPa	3.0kPa	3.0kPa	3.0kPa	2.2kPa	2.2kPa	2.2kPa	2.2kPa	2.2kPa	2.2kPa	1.5kPa	1.5kPa
1600	3.0kPa	3.0kPa	2.2kPa	2.2kPa	2.2kPa	1.5kPa	1.5kPa	1.5kPa	1.5kPa	1.5kPa	-	-
1700	3.0kPa	2.2kPa	2.2kPa	1.5kPa	1.5kPa	1.5kPa	1.5kPa	1.0kPa	1.0kPa	-	-	-
1800	2.2kPa	2.2kPa	1.5kPa	1.5kPa	1.5kPa	1.0kPa	1.0kPa	1.0kPa	1.0kPa	-	-	-

MULLION TYPE 1 - COMMERCIAL (AWNING WINDOW)**

Panel Width	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500
Frame Height												
1200	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	2.2kPa
1300	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	2.2kPa	2.2kPa	2.2kPa	2.2kPa	2.2kPa	2.2kPa
1400	3.0kPa	3.0kPa	3.0kPa	2.2kPa	2.2kPa	2.2kPa	2.2kPa	1.5kPa	1.5kPa	1.5kPa	1.5kPa	1.5kPa
1500	3.0kPa	2.2kPa	2.2kPa	2.2kPa	1.5kPa	1.5kPa	1.5kPa	1.5kPa	1.5kPa	1.5kPa	1.5kPa	-
1600	2.2kPa	2.2kPa	1.5kPa	1.5kPa	1.5kPa	1.0kPa	1.0kPa	1.0kPa	1.0kPa	1.0kPa	-	-
1700	2.2kPa	1.5kPa	1.5kPa	1.0kPa	1.0kPa	1.0kPa	1.0kPa	1.0kPa	1.0kPa	-	-	-
1800	1.5kPa	1.5kPa	1.0kPa	1.0kPa	1.0kPa	1.0kPa	0.7kPa	0.7kPa	0.7kPa	-	-	-

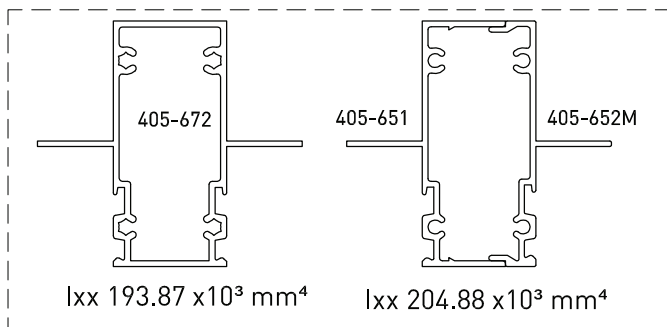
MULLION TYPE 2 - RESIDENTIAL (AWNING WINDOW)**

Panel Width	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500
Frame Height												
1200	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa
1300	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa
1400	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa
1500	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	-
1600	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	-	-
1700	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	-	-	-
1800	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	2.2kPa	2.2kPa	-	-	-

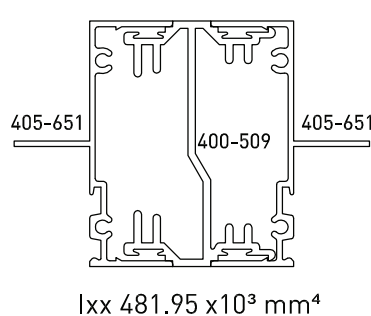
MULLION TYPE 2 - COMMERCIAL (AWNING WINDOW)**

Panel Width	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500
Frame Height												
1200	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa
1300	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa
1400	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa
1500	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	-
1600	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	2.2kPa	2.2kPa	-
1700	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	2.2kPa	2.2kPa	2.2kPa	2.2kPa	-	-	-
1800	3.0kPa	3.0kPa	3.0kPa	2.2kPa	2.2kPa	2.2kPa	1.5kPa	1.5kPa	1.5kPa	-	-	-

MULLION TYPE 1



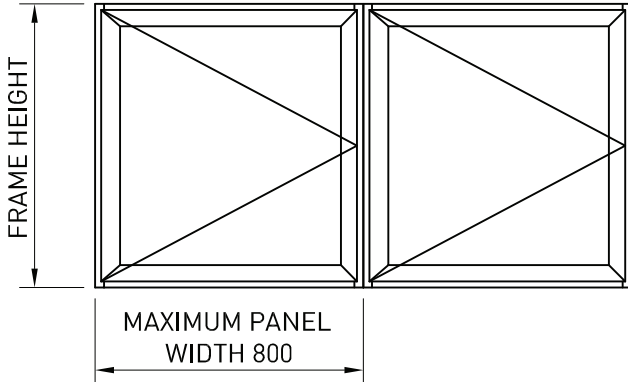
MULLION TYPE 2



Note:
 **Two cam locks are required at the both ends.
 Safety stay is required - particularly in multi-storey situations (Please check Australian Standard for detail).

Loading Tables

CASEMENT WINDOW



MULLION TYPE 1 - RESIDENTIAL (CASEMENT WINDOW)

Panel Width	400	500	600	700	800
Frame Height					
1200	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa
1300	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa
1400	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa
1500	3.0kPa	3.0kPa	3.0kPa	3.0kPa	2.2kPa

MULLION TYPE 1 - COMMERCIAL (CASEMENT WINDOW)

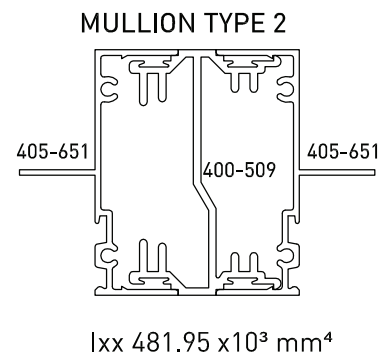
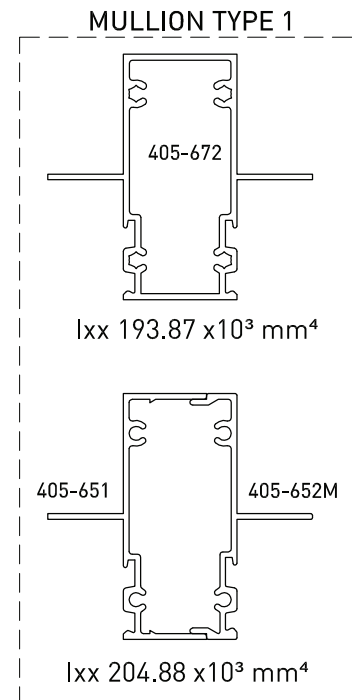
Panel Width	400	500	600	700	800
Frame Height					
1200	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa
1300	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa
1400	3.0kPa	3.0kPa	3.0kPa	2.2kPa	2.2kPa
1500	3.0kPa	2.2kPa	2.2kPa	2.2kPa	1.5kPa

MULLION TYPE 2 - RESIDENTIAL (CASEMENT WINDOW)

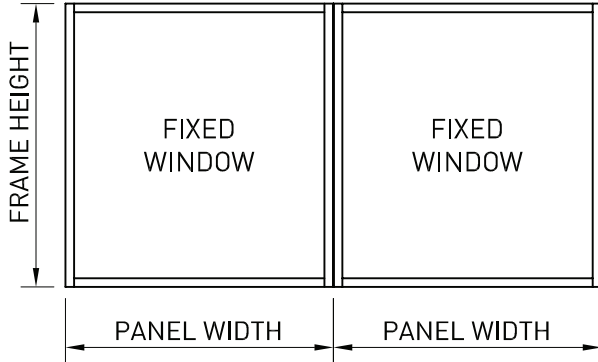
Panel Width	400	500	600	700	800
Frame Height					
1200	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa
1300	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa
1400	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa
1500	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa

MULLION TYPE 2 - COMMERCIAL (CASEMENT WINDOW)

Panel Width	400	500	600	700	800
Frame Height					
1200	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa
1300	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa
1400	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa
1500	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa



Loading Tables

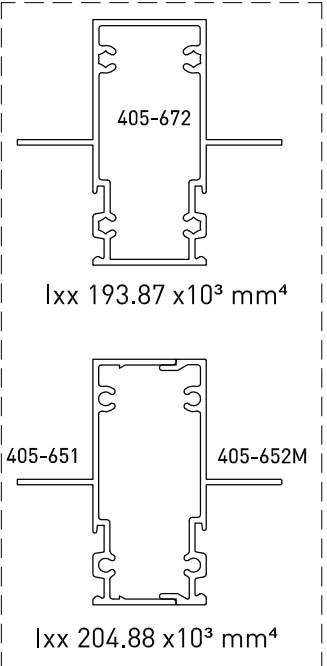


Note:
The following figure is calculated based on fixed window only.

MULLION TYPE 1 - RESIDENTIAL (FIXED WINDOW)

Panel Width	500	600	700	800	900	1000	1100	1200	1300	1400	1500
Frame Height											
1200	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa
1300	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	2.2kPa
1400	3.0kPa	3.0kPa	3.0kPa	3.0kPa	2.2kPa	2.2kPa	2.2kPa	2.2kPa	2.2kPa	2.2kPa	2.2kPa
1500	3.0kPa	3.0kPa	2.2kPa	2.2kPa	2.2kPa	1.5kPa	1.5kPa	1.5kPa	1.5kPa	1.5kPa	1.5kPa
1600	3.0kPa	2.2kPa	2.2kPa	1.5kPa	1.5kPa	1.5kPa	1.5kPa	1.5kPa	1.5kPa	1.0kPa	1.0kPa
1700	2.2kPa	1.5kPa	1.5kPa	1.5kPa	1.5kPa	1.0kPa	1.0kPa	1.0kPa	1.0kPa	1.0kPa	1.0kPa
1800	1.5kPa	1.5kPa	1.5kPa	1.0kPa	1.0kPa	1.0kPa	1.0kPa	1.0kPa	0.7kPa	0.7kPa	0.7kPa
1900	1.5kPa	1.5kPa	1.0kPa	1.0kPa	1.0kPa	0.7kPa	0.7kPa	0.7kPa	0.7kPa	0.7kPa	0.7kPa
2000	1.5kPa	1.0kPa	1.0kPa	1.0kPa	0.7kPa	0.7kPa	0.7kPa	0.7kPa	0.5kPa	0.5kPa	0.5kPa
2100	1.0kPa	1.0kPa	0.7kPa	0.7kPa	0.7kPa	0.7kPa	0.5kPa	0.5kPa	0.5kPa	0.5kPa	0.5kPa
2200	1.0kPa	0.7kPa	0.7kPa	0.7kPa	0.5kPa	0.5kPa	0.5kPa	0.5kPa	0.5kPa	-	-
2300	1.0kPa	0.7kPa	0.7kPa	0.5kPa	0.5kPa	0.5kPa	-	-	-	-	-
2400	0.7kPa	0.7kPa	0.5kPa	0.5kPa	0.5kPa	-	-	-	-	-	-

MULLION TYPE 1



MULLION TYPE 1 - COMMERCIAL (FIXED WINDOW)

Panel Width	500	600	700	800	900	1000	1100	1200	1300	1400	1500
Frame Height											
1200	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	2.2kPa	2.2kPa
1300	3.0kPa	3.0kPa	3.0kPa	2.2kPa	2.2kPa	2.2kPa	2.2kPa	2.2kPa	2.2kPa	2.2kPa	1.5kPa
1400	3.0kPa	2.2kPa	2.2kPa	2.2kPa	1.5kPa	1.5kPa	1.5kPa	1.5kPa	1.5kPa	1.5kPa	1.5kPa
1500	2.2kPa	2.2kPa	1.5kPa	1.5kPa	1.5kPa	1.5kPa	1.0kPa	1.0kPa	1.0kPa	1.0kPa	1.0kPa
1600	2.2kPa	1.5kPa	1.5kPa	1.0kPa	1.0kPa	1.0kPa	1.0kPa	1.0kPa	1.0kPa	1.0kPa	1.0kPa
1700	1.5kPa	1.5kPa	1.0kPa	1.0kPa	1.0kPa	1.0kPa	0.7kPa	0.7kPa	0.7kPa	0.7kPa	0.7kPa
1800	1.5kPa	1.0kPa	1.0kPa	1.0kPa	0.7kPa	0.7kPa	0.7kPa	0.7kPa	0.7kPa	0.5kPa	0.5kPa
1900	1.0kPa	1.0kPa	0.7kPa	0.7kPa	0.7kPa	0.7kPa	0.5kPa	0.5kPa	0.5kPa	0.5kPa	0.5kPa
2000	1.0kPa	0.7kPa	0.7kPa	0.7kPa	0.5kPa	0.5kPa	0.5kPa	0.5kPa	-	-	-
2100	0.7kPa	0.7kPa	0.7kPa	0.5kPa	0.5kPa	0.5kPa	-	-	-	-	-
2200	0.7kPa	0.7kPa	0.5kPa	0.5kPa	-	-	-	-	-	-	-
2300	0.7kPa	0.5kPa	0.5kPa	-	-	-	-	-	-	-	-
2400	0.5kPa	0.5kPa	-	-	-	-	-	-	-	-	-

Loading Tables

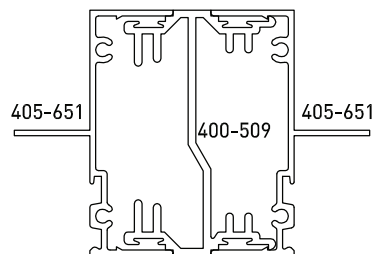
MULLION TYPE 2 - RESIDENTIAL (FIXED WINDOW)

Panel Width	500	600	700	800	900	1000	1100	1200	1300	1400	1500
Frame Height											
1200	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa
1300	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa
1400	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa
1500	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa
1600	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa
1700	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	2.2kPa	2.2kPa	2.2kPa	2.2kPa
1800	3.0kPa	3.0kPa	3.0kPa	3.0kPa	2.2kPa	2.2kPa	2.2kPa	2.2kPa	2.2kPa	2.2kPa	1.5kPa
1900	3.0kPa	3.0kPa	3.0kPa	2.2kPa	2.2kPa	2.2kPa	1.5kPa	1.5kPa	1.5kPa	1.5kPa	1.5kPa
2000	3.0kPa	3.0kPa	2.2kPa	2.2kPa	1.5kPa	1.5kPa	1.5kPa	1.5kPa	1.5kPa	1.5kPa	1.5kPa
2100	3.0kPa	2.2kPa	2.2kPa	1.5kPa	1.5kPa	1.5kPa	1.5kPa	1.0kPa	1.0kPa	1.0kPa	1.0kPa
2200	2.2kPa	2.2kPa	1.5kPa	1.5kPa	1.5kPa	1.0kPa	1.0kPa	1.0kPa	1.0kPa	1.0kPa	1.0kPa
2300	2.2kPa	1.5kPa	1.5kPa	1.5kPa	1.0kPa	1.0kPa	1.0kPa	1.0kPa	1.0kPa	0.7kPa	0.7kPa
2400	1.5kPa	1.5kPa	1.5kPa	1.0kPa	1.0kPa	1.0kPa	1.0kPa	0.7kPa	0.7kPa	0.7kPa	0.7kPa

MULLION TYPE 2 - COMMERCIAL (FIXED WINDOW)

Panel Width	500	600	700	800	900	1000	1100	1200	1300	1400	1500
Frame Height											
1200	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa
1300	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa
1400	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa
1500	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa
1600	3.0kPa	3.0kPa	3.0kPa	3.0kPa	3.0kPa	2.2kPa	2.2kPa	2.2kPa	2.2kPa	2.2kPa	2.2kPa
1700	3.0kPa	3.0kPa	3.0kPa	2.2kPa	2.2kPa	2.2kPa	2.2kPa	1.5kPa	1.5kPa	1.5kPa	1.5kPa
1800	3.0kPa	3.0kPa	2.2kPa	2.2kPa	1.5kPa	1.5kPa	1.5kPa	1.5kPa	1.5kPa	1.5kPa	1.5kPa
1900	3.0kPa	2.2kPa	2.2kPa	1.5kPa	1.5kPa	1.5kPa	1.5kPa	1.0kPa	1.0kPa	1.0kPa	1.0kPa
2000	2.2kPa	2.2kPa	1.5kPa	1.5kPa	1.5kPa	1.0kPa	1.0kPa	1.0kPa	1.0kPa	1.0kPa	1.0kPa
2100	2.2kPa	1.5kPa	1.5kPa	1.0kPa	1.0kPa	1.0kPa	1.0kPa	1.0kPa	0.7kPa	0.7kPa	0.7kPa
2200	1.5kPa	1.5kPa	1.0kPa	1.0kPa	1.0kPa	1.0kPa	0.7kPa	0.7kPa	0.7kPa	0.7kPa	0.7kPa
2300	1.5kPa	1.0kPa	1.0kPa	1.0kPa	0.7kPa	0.7kPa	0.7kPa	0.7kPa	0.7kPa	0.5kPa	0.5kPa
2400	1.5kPa	1.0kPa	1.0kPa	0.7kPa	0.7kPa	0.7kPa	0.7kPa	0.5kPa	0.5kPa	0.5kPa	0.5kPa

MULLION TYPE 2



$I_{xx} 481.95 \times 10^3 \text{ mm}^4$

Test Results

413 THERMAVIEW awning - 5mm float - inner + outer bulb seal perimeter - welded mitre joints

Serviceability load +/-3.3 kPa

Ultimate load +/-4.5 kPa

Water penetration 1200 Pa

Air infiltration

@75Pa + 0.95 l/s/m²
- 0.61 l/s/m²

Test sample size 1.150m high x 0.61m wide

Test report number NSW 816-901380