

# Top Hat & Cladding Sections



**Heavy Gauge Top Hats**  
Available in a range of sizes for fixing cladding to interior and exterior building structures.

## Top Hat & Cladding Sections

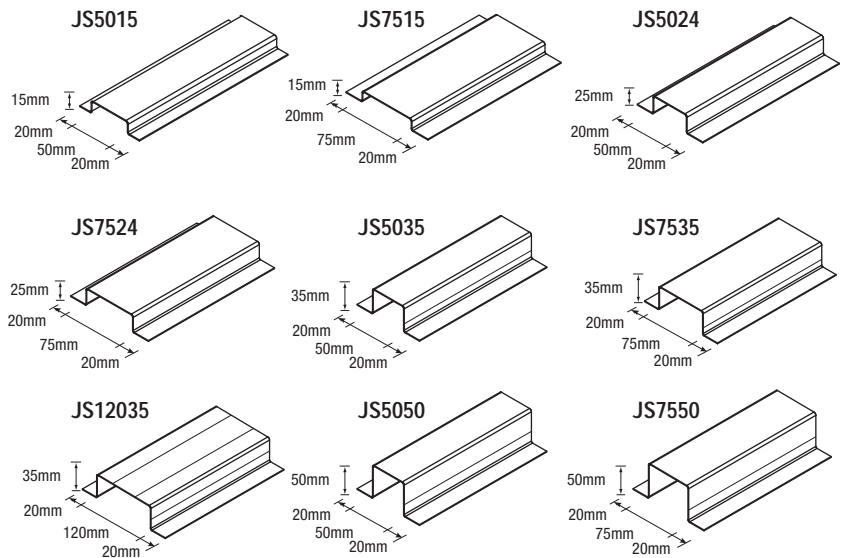
Top Hats are used for fixing support for lining material where the structural framework is not suitable for fixing directly to. A range of Junction Studs, Battens and Top Hats in various sizes and thicknesses are available to suit any cladding requirements for interior or exterior use. Refer to page 69-71 for Top Hat span tables. Top Hat sections can be custom rolled to suit your project specific requirements.

## Components

### Top Hats

**Table 91**

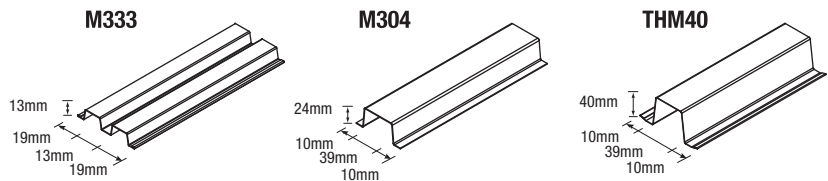
| PART No | DESCRIPTION                |
|---------|----------------------------|
| JS5015  | Top Hat 50 x 15 x 1.15BMT  |
| JS7515  | Top Hat 75 x 15 x 1.15BMT  |
| JS5024  | Top Hat 50 x 25 x 1.15BMT  |
| JS7524  | Top Hat 75 x 25 x 1.15BMT  |
| JS5035  | Top Hat 50 x 35 x 1.15BMT  |
| JS7535  | Top Hat 75 x 35 x 1.15BMT  |
| JS12035 | Top Hat 120 x 35 x 1.15BMT |
| JS5050  | Top Hat 50 x 50 x 1.15BMT  |
| JS7550  | Top Hat 75 x 50 x 1.15BMT  |



### Battens

**Table 92**

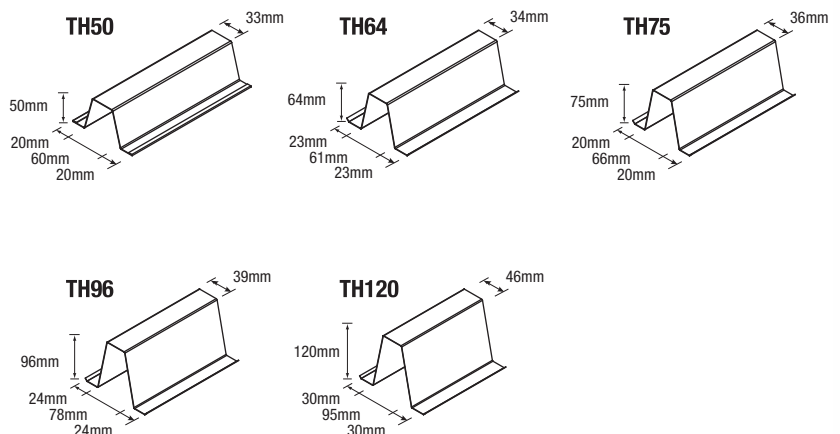
| PART No | DESCRIPTION                      |
|---------|----------------------------------|
| M333S   | Recessed Batten 13mm Smooth Face |
| M304    | Batten 24mm x 0.75BMT            |
| THM40   | Batten 40mm x 40mm x 0.48BMT     |



### Top Hat - Angled legs

**Table 93**

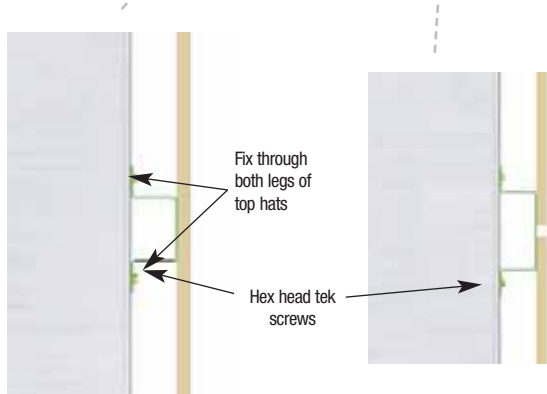
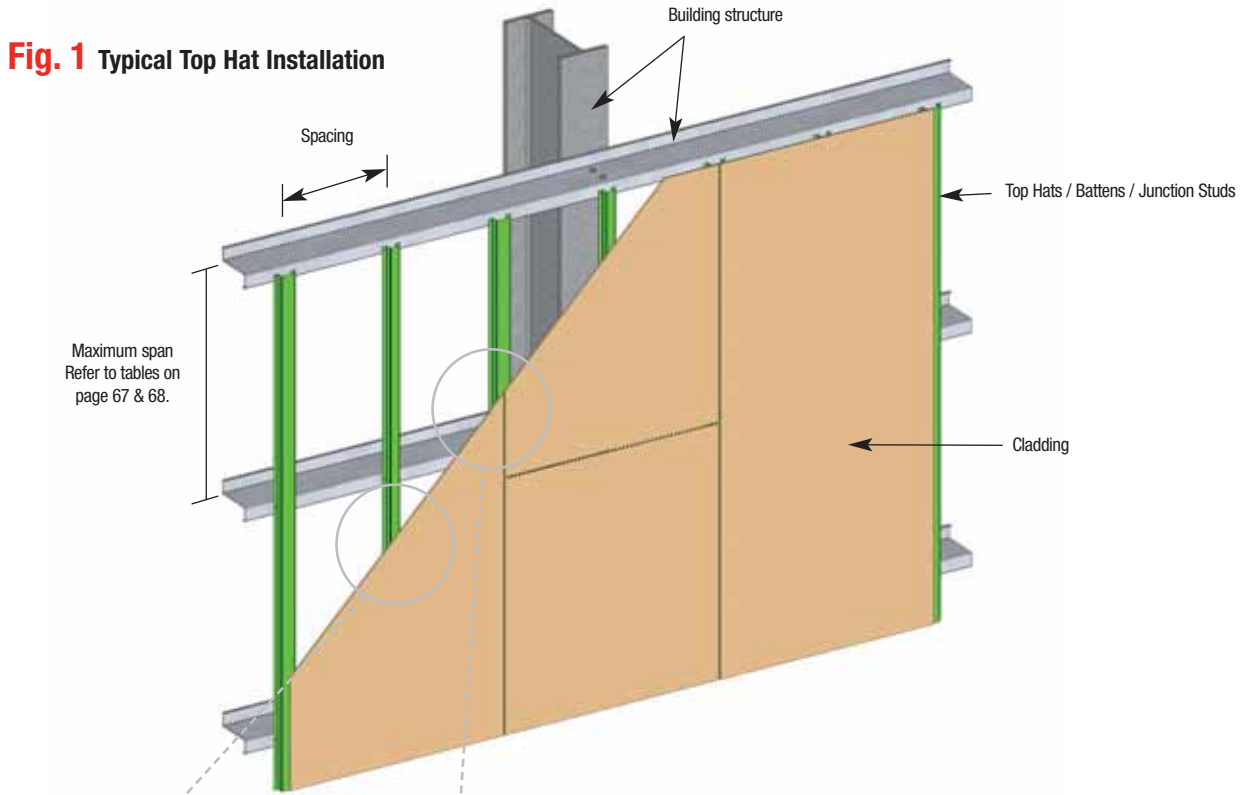
| PART No | DESCRIPTION             |
|---------|-------------------------|
| TH5075  | Top Hat 50mm x 0.75BMT  |
| TH6475  | Top Hat 64mm x 0.75BMT  |
| TH6495  | Top Hat 64mm x 0.95BMT  |
| TH7575  | Top Hat 75mm x 0.75BMT  |
| TH7595  | Top Hat 75mm x 0.95BMT  |
| TH9675  | Top Hat 96mm x 0.75BMT  |
| TH9695  | Top Hat 96mm x 0.95BMT  |
| TH12075 | Top Hat 120mm x 0.75BMT |
| TH12095 | Top Hat 120mm x 0.95BMT |



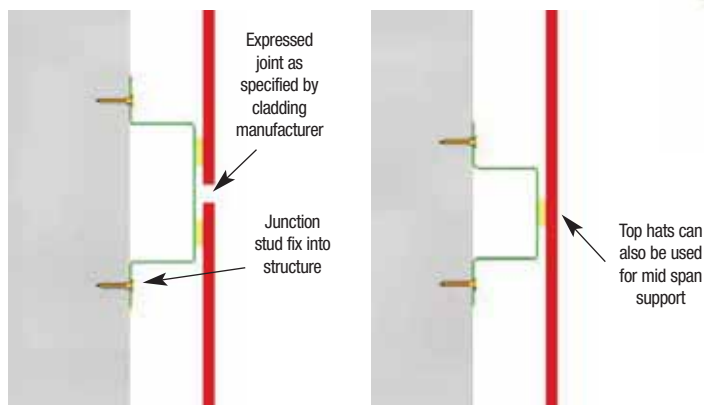
Top Hat & Cladding Sections

**Installation Guide - Top Hats and Junction Studs**

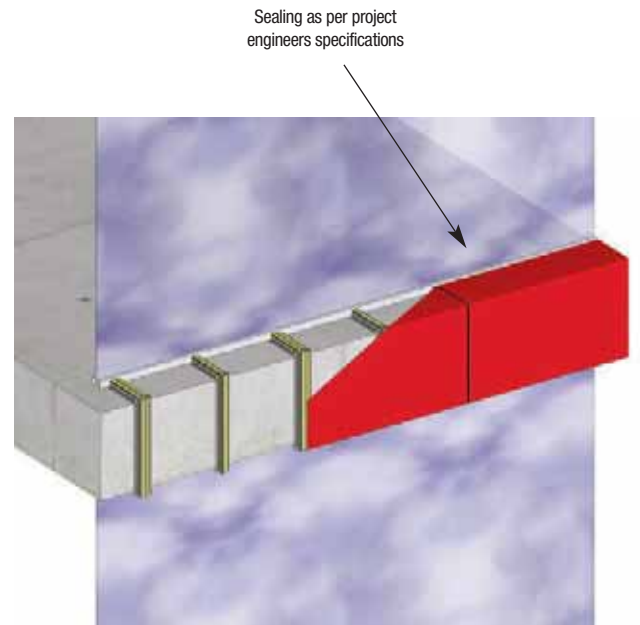
**Top Hat & Cladding Sections**



**Fig. 2 Top Hat Sections to Support CFC Sheeting**



**Fig. 3 Top Hat Sections to Support Aluminium Composite Panel**



**Fig. 4 Junction stud fixed to primary structure to support composite panel**

## Span Tables - Top Hats

### Design Notes:

1. Cladding deflection limit = Span / 360
2. Seismic was not specified or considered in this design.
3. Framing design complies with AS/NZ1170 (Part 0, 1, 2)
4. Cladding weight = 30 kg/m<sup>2</sup> Max
5. G2 Steel, Fy = 300MPa and Fu = 350MPa

**Table 94**

| <b>JS5050115 (SPAN/360)</b> |      |                                      |      |                    |      |                    |      |
|-----------------------------|------|--------------------------------------|------|--------------------|------|--------------------|------|
| Design Wind Pressure kPa    |      | Single Span                          |      | Double Span        |      | Three Spans        |      |
|                             |      | Top Hat Spacing mm                   |      | Top Hat Spacing mm |      | Top Hat Spacing mm |      |
|                             |      | 450                                  | 600  | 450                | 600  | 450                | 600  |
| SER                         | ULT  | MAXIMUM SPAN OF TOP HAT PROFILE (mm) |      |                    |      |                    |      |
| 0.53                        | 0.75 | 2450                                 | 2200 | 3200               | 2950 | 3000               | 2750 |
| 0.7                         | 1.0  | 2200                                 | 2000 | 2900               | 2700 | 2700               | 2500 |
| 1.05                        | 1.5  | 1900                                 | 1750 | 2600               | 2350 | 2400               | 2100 |
| 1.4                         | 2.0  | 1750                                 | 1600 | 2300               | 2050 | 2150               | 1950 |
| 1.75                        | 2.5  | 1600                                 | 1450 | 2100               | 1900 | 2000               | 1800 |
| 2.1                         | 3.0  | 1500                                 | 1400 | 1950               | 1750 | 1900               | 1700 |
| 2.8                         | 4.0  | 1400                                 | 1250 | 1750               | 1550 | 1700               | 1550 |

**Table 95**

| <b>JS12035115 (SPAN/360)</b> |      |                                      |      |                    |      |                    |      |
|------------------------------|------|--------------------------------------|------|--------------------|------|--------------------|------|
| Design Wind Pressure kPa     |      | Single Span                          |      | Double Span        |      | Three Spans        |      |
|                              |      | Top Hat Spacing mm                   |      | Top Hat Spacing mm |      | Top Hat Spacing mm |      |
|                              |      | 450                                  | 600  | 450                | 600  | 450                | 600  |
| SER                          | ULT  | MAXIMUM SPAN OF TOP HAT PROFILE (mm) |      |                    |      |                    |      |
| 0.53                         | 0.75 | 2050                                 | 1800 | 2700               | 2500 | 2500               | 2300 |
| 0.7                          | 1.0  | 1850                                 | 1700 | 2500               | 2250 | 2300               | 2100 |
| 1.05                         | 1.5  | 1600                                 | 1450 | 2200               | 2000 | 2000               | 1800 |
| 1.4                          | 2.0  | 1450                                 | 1350 | 2000               | 1800 | 1800               | 1650 |
| 1.75                         | 2.5  | 1350                                 | 1250 | 1850               | 1650 | 1700               | 1550 |
| 2.1                          | 3.0  | 1300                                 | 1150 | 1700               | 1550 | 1600               | 1450 |
| 2.8                          | 4.0  | 1150                                 | 1050 | 1550               | 1400 | 1450               | 1300 |

**Table 96**

| <b>JS5015115 (SPAN/360)</b> |      |                                      |     |                    |      |                    |     |
|-----------------------------|------|--------------------------------------|-----|--------------------|------|--------------------|-----|
| Design Wind Pressure kPa    |      | Single Span                          |     | Double Span        |      | Three Spans        |     |
|                             |      | Top Hat Spacing mm                   |     | Top Hat Spacing mm |      | Top Hat Spacing mm |     |
|                             |      | 450                                  | 600 | 450                | 600  | 450                | 600 |
| SER                         | ULT  | MAXIMUM SPAN OF TOP HAT PROFILE (mm) |     |                    |      |                    |     |
| 0.53                        | 0.75 | 950                                  | 850 | 1300               | 1150 | NA                 |     |
| 0.7                         | 1.0  | 850                                  | 800 | 1150               | 1050 |                    |     |
| 1.05                        | 1.5  | 750                                  | 700 | 1000               | 900  |                    |     |
| 1.4                         | 2.0  | 700                                  | 630 | 900                | 850  |                    |     |
| 1.75                        | 2.5  | 650                                  | 600 | 850                | 800  |                    |     |
| 2.1                         | 3.0  | 600                                  | 550 | 800                | 750  |                    |     |
| 2.8                         | 4.0  | 550                                  | 500 | 750                | 650  |                    |     |

**Table 97**

| <b>JS5025115 (SPAN/360)</b> |      |                                      |      |                    |      |                    |     |
|-----------------------------|------|--------------------------------------|------|--------------------|------|--------------------|-----|
| Design Wind Pressure kPa    |      | Single Span                          |      | Double Span        |      | Three Spans        |     |
|                             |      | Top Hat Spacing mm                   |      | Top Hat Spacing mm |      | Top Hat Spacing mm |     |
|                             |      | 450                                  | 600  | 450                | 600  | 450                | 600 |
| SER                         | ULT  | MAXIMUM SPAN OF TOP HAT PROFILE (mm) |      |                    |      |                    |     |
| 0.53                        | 0.75 | 1400                                 | 1250 | 1900               | 1750 | NA                 |     |
| 0.7                         | 1.0  | 1250                                 | 1150 | 1750               | 1600 |                    |     |
| 1.05                        | 1.5  | 1100                                 | 1000 | 1500               | 1400 |                    |     |
| 1.4                         | 2.0  | 1000                                 | 900  | 1400               | 1250 |                    |     |
| 1.75                        | 2.5  | 950                                  | 850  | 1300               | 1150 |                    |     |
| 2.1                         | 3.0  | 900                                  | 800  | 1200               | 1100 |                    |     |
| 2.8                         | 4.0  | 800                                  | 700  | 1100               | 1000 |                    |     |

**Table 98**

| <b>JS5035115 (SPAN/360)</b> |      |                                      |      |                    |      |                    |     |
|-----------------------------|------|--------------------------------------|------|--------------------|------|--------------------|-----|
| Design Wind Pressure kPa    |      | Single Span                          |      | Double Span        |      | Three Spans        |     |
|                             |      | Top Hat Spacing mm                   |      | Top Hat Spacing mm |      | Top Hat Spacing mm |     |
|                             |      | 450                                  | 600  | 450                | 600  | 450                | 600 |
| SER                         | ULT  | MAXIMUM SPAN OF TOP HAT PROFILE (mm) |      |                    |      |                    |     |
| 0.53                        | 0.75 | 1850                                 | 1650 | 2300               | 2100 | NA                 |     |
| 0.7                         | 1.0  | 1650                                 | 1500 | 2150               | 1950 |                    |     |
| 1.05                        | 1.5  | 1450                                 | 1300 | 1900               | 1750 |                    |     |
| 1.4                         | 2.0  | 1300                                 | 1200 | 1750               | 1600 |                    |     |
| 1.75                        | 2.5  | 1200                                 | 1100 | 1600               | 1450 |                    |     |
| 2.1                         | 3.0  | 1100                                 | 1000 | 1500               | 1400 |                    |     |
| 2.8                         | 4.0  | 1050                                 | 950  | 1400               | 1200 |                    |     |

### Notes:

1. Ultimate limit state load capacity to be calculated in accordance with AS/NZS 1170.0 as applicable
2. Connections to be independently checked

## Span Tables - Junction Studs

**Design Notes:**

1. Cladding deflection limit = Span / 240
2. Seismic was not specified or considered in this design.
3. Framing design complies with AS/NZ1170 (Part 0, 1, 2)
4. Cladding weight = 30 kg/m<sup>2</sup> Max
5. G2 Steel, Fy = 300MPa and Fu = 350MPa

**Table 99**

| <b>JS5050115 (SPAN/240)</b> |      |                                      |       |                    |      |                    |      |
|-----------------------------|------|--------------------------------------|-------|--------------------|------|--------------------|------|
| Design Wind Pressure kPa    |      | Single Span                          |       | Double Span        |      | Three Spans        |      |
|                             |      | Top Hat Spacing mm                   |       | Top Hat Spacing mm |      | Top Hat Spacing mm |      |
|                             |      | 450                                  | 600   | 450                | 600  | 450                | 600  |
| SER                         | ULT  | MAXIMUM SPAN OF TOP HAT PROFILE (mm) |       |                    |      |                    |      |
| 0.53                        | 0.75 | 280.0                                | 2550  | 3750               | 3300 | 3450               | 3150 |
| 0.7                         | 1.0  | 255.0                                | 2300  | 3300               | 2850 | 3150               | 2850 |
| 1.05                        | 1.5  | 2200                                 | 200.0 | 2700               | 2350 | 2750               | 2450 |
| 1.4                         | 2.0  | 2000                                 | 1800  | 2300               | 2050 | 2500               | 2250 |
| 1.75                        | 2.5  | 1850                                 | 1700  | 2100               | 1900 | 2300               | 2050 |
| 2.1                         | 3.0  | 1750                                 | 1500  | 1950               | 1750 | 2150               | 1900 |
| 2.8                         | 4.0  | 1600                                 | 1450  | 1750               | 1550 | 1900               | 1650 |

**Table 100**

| <b>JS12035115 (SPAN/240)</b> |      |                                      |      |                    |      |                    |      |
|------------------------------|------|--------------------------------------|------|--------------------|------|--------------------|------|
| Design Wind Pressure kPa     |      | Single Span                          |      | Double Span        |      | Three Spans        |      |
|                              |      | Top Hat Spacing mm                   |      | Top Hat Spacing mm |      | Top Hat Spacing mm |      |
|                              |      | 450                                  | 600  | 450                | 600  | 450                | 600  |
| SER                          | ULT  | MAXIMUM SPAN OF TOP HAT PROFILE (mm) |      |                    |      |                    |      |
| 0.53                         | 0.75 | 2350                                 | 2100 | 3150               | 2850 | 2900               | 2650 |
| 0.7                          | 1.0  | 2150                                 | 1950 | 2850               | 2550 | 2650               | 2400 |
| 1.05                         | 1.5  | 1850                                 | 1700 | 2500               | 2250 | 2300               | 2100 |
| 1.4                          | 2.0  | 1700                                 | 1550 | 2250               | 1950 | 2100               | 1900 |
| 1.75                         | 2.5  | 1550                                 | 1400 | 2000               | 1650 | 1950               | 1750 |
| 2.1                          | 3.0  | 1450                                 | 1350 | 1800               | 1550 | 1800               | 1650 |
| 2.8                          | 4.0  | 1350                                 | 1100 | 1550               | 1350 | 1650               | 1500 |

**Table 101**

| <b>JS5015115 (SPAN/240)</b> |      |                                      |      |                    |      |                    |     |
|-----------------------------|------|--------------------------------------|------|--------------------|------|--------------------|-----|
| Design Wind Pressure kPa    |      | Single Span                          |      | Double Span        |      | Three Spans        |     |
|                             |      | Top Hat Spacing mm                   |      | Top Hat Spacing mm |      | Top Hat Spacing mm |     |
|                             |      | 450                                  | 600  | 450                | 600  | 450                | 600 |
| SER                         | ULT  | MAXIMUM SPAN OF TOP HAT PROFILE (mm) |      |                    |      |                    |     |
| 0.53                        | 0.75 | 1100                                 | 1000 | 1500               | 1350 | NA                 |     |
| 0.7                         | 1.0  | 1000                                 | 900  | 1350               | 1200 |                    |     |
| 1.05                        | 1.5  | 850                                  | 800  | 1200               | 1050 |                    |     |
| 1.4                         | 2.0  | 800                                  | 700  | 1050               | 950  |                    |     |
| 1.75                        | 2.5  | 750                                  | 680  | 1000               | 900  |                    |     |
| 2.1                         | 3.0  | 700                                  | 640  | 950                | 800  |                    |     |
| 2.8                         | 4.0  | 640                                  | 580  | 800                | 700  |                    |     |

**Table 102**

| <b>JS5025115 (SPAN/240)</b> |      |                                      |      |                    |      |                    |     |
|-----------------------------|------|--------------------------------------|------|--------------------|------|--------------------|-----|
| Design Wind Pressure kPa    |      | Single Span                          |      | Double Span        |      | Three Spans        |     |
|                             |      | Top Hat Spacing mm                   |      | Top Hat Spacing mm |      | Top Hat Spacing mm |     |
|                             |      | 450                                  | 600  | 450                | 600  | 450                | 600 |
| SER                         | ULT  | MAXIMUM SPAN OF TOP HAT PROFILE (mm) |      |                    |      |                    |     |
| 0.53                        | 0.75 | 1650                                 | 1500 | 2200               | 2000 | NA                 |     |
| 0.7                         | 1.0  | 1500                                 | 1350 | 2000               | 1800 |                    |     |
| 1.05                        | 1.5  | 1300                                 | 1150 | 1750               | 1600 |                    |     |
| 1.4                         | 2.0  | 1150                                 | 1050 | 1600               | 1450 |                    |     |
| 1.75                        | 2.5  | 1110                                 | 1000 | 1450               | 1350 |                    |     |
| 2.1                         | 3.0  | 1000                                 | 950  | 1400               | 1250 |                    |     |
| 2.8                         | 4.0  | 950                                  | 850  | 1250               | 1100 |                    |     |

**Table 103**

| <b>JS5035115 (SPAN/240)</b> |      |                                      |      |                    |      |                    |     |
|-----------------------------|------|--------------------------------------|------|--------------------|------|--------------------|-----|
| Design Wind Pressure kPa    |      | Single Span                          |      | Double Span        |      | Three Spans        |     |
|                             |      | Top Hat Spacing mm                   |      | Top Hat Spacing mm |      | Top Hat Spacing mm |     |
|                             |      | 450                                  | 600  | 450                | 600  | 450                | 600 |
| SER                         | ULT  | MAXIMUM SPAN OF TOP HAT PROFILE (mm) |      |                    |      |                    |     |
| 0.53                        | 0.75 | 2100                                 | 1900 | 2850               | 2550 | NA                 |     |
| 0.7                         | 1.0  | 1900                                 | 1750 | 2600               | 2350 |                    |     |
| 1.05                        | 1.5  | 1650                                 | 1500 | 2250               | 2050 |                    |     |
| 1.4                         | 2.0  | 1500                                 | 1400 | 2050               | 1850 |                    |     |
| 1.75                        | 2.5  | 1400                                 | 1300 | 1900               | 1700 |                    |     |
| 2.1                         | 3.0  | 1300                                 | 1200 | 1800               | 1600 |                    |     |
| 2.8                         | 4.0  | 1200                                 | 1050 | 1600               | 1450 |                    |     |

## Span Tables - Top Hats

**Table 104**

| <b>TOP HAT SECTION TH50 X 0.75BMT</b> |            |                       |        |        |        |        |        |        |        |        |        |        |        |
|---------------------------------------|------------|-----------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|                                       |            | <b>PURLIN SPACING</b> |        |        |        |        |        |        |        |        |        |        |        |
| Loading                               | Wind Class | 600                   |        |        | 900    |        |        | 1200   |        |        | 1500   |        |        |
|                                       |            | Single                | Double | Lapped | Single | Double | Lapped | Single | Double | Lapped | Single | Double | Lapped |
| <b>MAXIMUM ALLOWABLE SPAN (mm)</b>    |            |                       |        |        |        |        |        |        |        |        |        |        |        |
| <b>INWARD LOADS</b>                   |            | 1600                  | 2439   | 2661   | 1578   | 2389   | 2603   | 1556   | 2344   | 2551   | 1537   | 2303   | 2477   |
| <b>OUTWARD LOADS</b>                  | TC3        | 2777                  | 3715   | 3959   | 2426   | 3246   | 3458   | 2204   | 2949   | 3142   | 2046   | 2737   | 2917   |
|                                       | TC2.5      | 2691                  | 3600   | 3837   | 2351   | 3145   | 3352   | 2136   | 2858   | 3045   | 1983   | 2653   | 2827   |
|                                       | TC2.0      | 2611                  | 3494   | 3723   | 2281   | 3052   | 3253   | 2073   | 2773   | 2955   | 1924   | 2575   | 2743   |

**Table 105**

| <b>TOP HAT SECTION TH64 X 0.75BMT</b> |            |                       |        |        |        |        |        |        |        |        |        |        |        |
|---------------------------------------|------------|-----------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|                                       |            | <b>PURLIN SPACING</b> |        |        |        |        |        |        |        |        |        |        |        |
| Loading                               | Wind Class | 600                   |        |        | 900    |        |        | 1200   |        |        | 1500   |        |        |
|                                       |            | Single                | Double | Lapped | Single | Double | Lapped | Single | Double | Lapped | Single | Double | Lapped |
| <b>MAXIMUM ALLOWABLE SPAN (mm)</b>    |            |                       |        |        |        |        |        |        |        |        |        |        |        |
| <b>INWARD LOADS</b>                   |            | 2128                  | 3229   | 3519   | 2090   | 3147   | 3424   | 2054   | 3074   | 3335   | 2022   | 3008   | 3202   |
| <b>OUTWARD LOADS</b>                  | TC3        | 3380                  | 4522   | 4819   | 2953   | 3951   | 4210   | 2683   | 3589   | 3825   | 2490   | 3332   | 3551   |
|                                       | TC2.5      | 3275                  | 4383   | 4670   | 2861   | 3829   | 4080   | 2600   | 3479   | 3707   | 2413   | 3229   | 3441   |
|                                       | TC2.0      | 3179                  | 4253   | 4532   | 2777   | 3716   | 3959   | 2523   | 3376   | 3597   | 2342   | 3134   | 3340   |

**Table 106**

| <b>TOP HAT SECTION TH64 X 0.95BMT</b> |            |                       |        |        |        |        |        |        |        |        |        |        |        |
|---------------------------------------|------------|-----------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|                                       |            | <b>PURLIN SPACING</b> |        |        |        |        |        |        |        |        |        |        |        |
| Loading                               | Wind Class | 600                   |        |        | 900    |        |        | 1200   |        |        | 1500   |        |        |
|                                       |            | Single                | Double | Lapped | Single | Double | Lapped | Single | Double | Lapped | Single | Double | Lapped |
| <b>MAXIMUM ALLOWABLE SPAN (mm)</b>    |            |                       |        |        |        |        |        |        |        |        |        |        |        |
| <b>INWARD LOADS</b>                   |            | 2384                  | 3610   | 3932   | 2337   | 3510   | 3816   | 2293   | 3422   | 3714   | 2254   | 3343   | 3624   |
| <b>OUTWARD LOADS</b>                  | TC3        | 3657                  | 4893   | 5214   | 3195   | 4275   | 4555   | 2903   | 3884   | 4138   | 2694   | 3605   | 3842   |
|                                       | TC2.5      | 3544                  | 4742   | 5053   | 3096   | 4143   | 4414   | 2813   | 3764   | 4011   | 2611   | 3494   | 3723   |
|                                       | TC2.0      | 3439                  | 4602   | 4904   | 3005   | 4020   | 4284   | 2730   | 3653   | 3892   | 2534   | 3391   | 3613   |

**Notes:**

- Definition of Wind Class as per AS 1170.2
- The maximum spans stated in all cases are based on either strength or serviceability requirements for the following load cases  

|                           |                       |
|---------------------------|-----------------------|
| Serviceability Load Cases | Strength              |
| 1. Dead Load Only         | G                     |
| 2. Live Load Only         | 0.7Q                  |
| 4. Wind Load              | W <sub>s</sub>        |
|                           | Dead Load + Live Load |
|                           | Dead Load + Wind Load |
- Deflection Limits - Span/150

**Top Hat & Gladding Sections**

### Span Tables - Top Hats

**Table 106**

| <b>TOP HAT SECTION TH75 X 0.75BMT</b> |            |                       |        |        |        |        |        |        |        |        |        |        |        |
|---------------------------------------|------------|-----------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|                                       |            | <b>PURLIN SPACING</b> |        |        |        |        |        |        |        |        |        |        |        |
| Loading                               | Wind Class | 600                   |        |        | 900    |        |        | 1200   |        |        | 1500   |        |        |
|                                       |            | Single                | Double | Lapped | Single | Double | Lapped | Single | Double | Lapped | Single | Double | Lapped |
| <b>MAXIMUM ALLOWABLE SPAN (mm)</b>    |            |                       |        |        |        |        |        |        |        |        |        |        |        |
| <b>INWARD LOADS</b>                   |            | 2649                  | 4003   | 4358   | 2591   | 3883   | 4217   | 2539   | 3778   | 4005   | 2492   | 3686   | 3824   |
| <b>OUTWARD LOADS</b>                  | TC3        | 3936                  | 5266   | 5611   | 3438   | 4600   | 4902   | 3124   | 4180   | 4454   | 2900   | 3880   | 4135   |
|                                       | TC2.5      | 3814                  | 5103   | 5438   | 3332   | 4458   | 4751   | 3027   | 4051   | 4316   | 2810   | 3760   | 4007   |
|                                       | TC2.0      | 3701                  | 4953   | 5277   | 3233   | 4327   | 4610   | 2938   | 3931   | 4189   | 2727   | 3649   | 3889   |

**Table 107**

| <b>TOP HAT SECTION TH75 X 0.95BMT</b> |            |                       |        |        |        |        |        |        |        |        |        |        |        |
|---------------------------------------|------------|-----------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|                                       |            | <b>PURLIN SPACING</b> |        |        |        |        |        |        |        |        |        |        |        |
| Loading                               | Wind Class | 600                   |        |        | 900    |        |        | 1200   |        |        | 1500   |        |        |
|                                       |            | Single                | Double | Lapped | Single | Double | Lapped | Single | Double | Lapped | Single | Double | Lapped |
| <b>MAXIMUM ALLOWABLE SPAN (mm)</b>    |            |                       |        |        |        |        |        |        |        |        |        |        |        |
| <b>INWARD LOADS</b>                   |            | 2964                  | 4469   | 4864   | 2894   | 4324   | 4695   | 2831   | 4198   | 4551   | 2774   | 4088   | 4426   |
| <b>OUTWARD LOADS</b>                  | TC3        | 4258                  | 5698   | 6071   | 3720   | 4977   | 5304   | 3380   | 4522   | 4819   | 3138   | 4198   | 4474   |
|                                       | TC2.5      | 4127                  | 5522   | 5884   | 3605   | 4824   | 5140   | 3275   | 4383   | 4670   | 3041   | 4068   | 4335   |
|                                       | TC2.0      | 4005                  | 5359   | 5710   | 3499   | 4681   | 4988   | 3179   | 4253   | 4532   | 2951   | 3948   | 4207   |

**Table 108**

| <b>TOP HAT SECTION TH96 X 0.75BMT</b> |            |                       |        |        |        |        |        |        |        |        |        |        |        |
|---------------------------------------|------------|-----------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|                                       |            | <b>PURLIN SPACING</b> |        |        |        |        |        |        |        |        |        |        |        |
| Loading                               | Wind Class | 600                   |        |        | 900    |        |        | 1200   |        |        | 1500   |        |        |
|                                       |            | Single                | Double | Lapped | Single | Double | Lapped | Single | Double | Lapped | Single | Double | Lapped |
| <b>MAXIMUM ALLOWABLE SPAN (mm)</b>    |            |                       |        |        |        |        |        |        |        |        |        |        |        |
| <b>INWARD LOADS</b>                   |            | 3521                  | 5289   | 5750   | 3426   | 5095   | 5527   | 3341   | 4930   | 5233   | 3266   | 4787   | 4960   |
| <b>OUTWARD LOADS</b>                  | TC3        | 4808                  | 6433   | 6855   | 4200   | 5620   | 5988   | 3816   | 5106   | 5441   | 3542   | 4740   | 5051   |
|                                       | TC2.5      | 4659                  | 6234   | 6643   | 4070   | 5446   | 5803   | 3698   | 4948   | 5273   | 3433   | 4594   | 4895   |
|                                       | TC2.0      | 4522                  | 6050   | 6447   | 3950   | 5285   | 5632   | 3589   | 4802   | 5117   | 3332   | 4421   | 4750   |

**Notes:**

- Definition of Wind Class as per AS 1170.2
- The maximum spans stated in all cases are based on either strength or serviceability requirements for the following load cases  

|                           |          |   |
|---------------------------|----------|---|
| Serviceability Load Cases | Strength |   |
| 1. Dead Load Only         | G        | Dead Load + Live Load      1.2 G + 1.5Q |
| 2. Live Load Only         | 0.7Q     | Dead Load + Wind Load      0.9 G + Wu   |
| 4. Wind Load              | Ws       |   |
- Deflection Limits - Span/150

## Span Tables - Top Hats

**Table 109**

| <b>TOP HAT SECTION TH96 X 0.95BMT</b> |                   |                                    |               |               |               |               |               |               |               |               |               |               |               |
|---------------------------------------|-------------------|------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
|                                       |                   | <b>PURLIN SPACING</b>              |               |               |               |               |               |               |               |               |               |               |               |
| <b>Loading</b>                        | <b>Wind Class</b> | <b>600</b>                         |               |               | <b>900</b>    |               |               | <b>1200</b>   |               |               | <b>1500</b>   |               |               |
|                                       |                   | <b>Single</b>                      | <b>Double</b> | <b>Lapped</b> | <b>Single</b> | <b>Double</b> | <b>Lapped</b> | <b>Single</b> | <b>Double</b> | <b>Lapped</b> | <b>Single</b> | <b>Double</b> | <b>Lapped</b> |
|                                       |                   | <b>MAXIMUM ALLOWABLE SPAN (mm)</b> |               |               |               |               |               |               |               |               |               |               |               |
| <b>INWARD LOADS</b>                   |                   | 3935                               | 5894          | 6404          | 3818          | 5661          | 6136          | 3716          | 5465          | 5914          | 3626          | 5297          | 5724          |
| <b>OUTWARD LOADS</b>                  | TC3               | 5202                               | 6960          | 7417          | 4544          | 6080          | 6479          | 4129          | 5525          | 5887          | 3833          | 5129          | 5465          |
|                                       | TC2.5             | 5041                               | 6745          | 7188          | 4404          | 5893          | 6279          | 4001          | 5354          | 5705          | 3714          | 4970          | 5296          |
|                                       | TC2.0             | 4892                               | 6546          | 6976          | 4274          | 5719          | 6094          | 3883          | 5196          | 5537          | 3605          | 4823          | 5140          |

**Table 110**

| <b>TOP HAT SECTION TH120 X 0.75BMT</b> |                   |                                    |               |               |               |               |               |               |               |               |               |               |               |
|--|-------------------|------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
|  |                   | <b>PURLIN SPACING</b>              |               |               |               |               |               |               |               |               |               |               |               |
| <b>Loading</b>                         | <b>Wind Class</b> | <b>600</b>                         |               |               | <b>900</b>    |               |               | <b>1200</b>   |               |               | <b>1500</b>   |               |               |
|  |                   | <b>Single</b>                      | <b>Double</b> | <b>Lapped</b> | <b>Single</b> | <b>Double</b> | <b>Lapped</b> | <b>Single</b> | <b>Double</b> | <b>Lapped</b> | <b>Single</b> | <b>Double</b> | <b>Lapped</b> |
|  |                   | <b>MAXIMUM ALLOWABLE SPAN (mm)</b> |               |               |               |               |               |               |               |               |               |               |               |
| <b>INWARD LOADS</b>                    |                   | 4997                               | 7438          | 8070          | 4821          | 7096          | 7679          | 4670          | 6816          | 7363          | 4539          | 6580          | 7098          |
| <b>OUTWARD LOADS</b>                   | TC3               | 6174                               | 8261          | 8803          | 5394          | 7217          | 7690          | 4900          | 6557          | 6987          | 4549          | 6087          | 6486          |
|  | TC2.5             | 5983                               | 8006          | 8531          | 5227          | 6994          | 7453          | 4749          | 6354          | 6771          | 4409          | 5899          | 6286          |
|  | TC2.0             | 5807                               | 7770          | 8279          | 5073          | 6787          | 7233          | 4609          | 6167          | 6571          | 4279          | 5725          | 6100          |

**Table 111**

| <b>TOP HAT SECTION TH120 X 0.95BMT</b> |                   |                                    |               |               |               |               |               |               |               |               |               |               |               |
|--|-------------------|------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
|  |                   | <b>PURLIN SPACING</b>              |               |               |               |               |               |               |               |               |               |               |               |
| <b>Loading</b>                         | <b>Wind Class</b> | <b>600</b>                         |               |               | <b>900</b>    |               |               | <b>1200</b>   |               |               | <b>1500</b>   |               |               |
|  |                   | <b>Single</b>                      | <b>Double</b> | <b>Lapped</b> | <b>Single</b> | <b>Double</b> | <b>Lapped</b> | <b>Single</b> | <b>Double</b> | <b>Lapped</b> | <b>Single</b> | <b>Double</b> | <b>Lapped</b> |
|  |                   | <b>MAXIMUM ALLOWABLE SPAN (mm)</b> |               |               |               |               |               |               |               |               |               |               |               |
| <b>INWARD LOADS</b>                    |                   | 5571                               | 8266          | 8962          | 5359          | 7860          | 8500          | 5180          | 7532          | 8131          | 5026          | 7258          | 7824          |
| <b>OUTWARD LOADS</b>                   | TC3               | 6680                               | 8938          | 9525          | 5836          | 7808          | 8321          | 5302          | 7095          | 7560          | 4922          | 6586          | 7018          |
|  | TC2.5             | 6474                               | 8662          | 9230          | 5655          | 7567          | 8064          | 5138          | 6875          | 7326          | 4770          | 6383          | 6801          |
|  | TC2.0             | 6283                               | 8407          | 8958          | 5488          | 7344          | 7826          | 4987          | 6672          | 7110          | 4629          | 6194          | 6600          |

**Notes:**

- Definition of Wind Class as per AS 1170.2
- The maximum spans stated in all cases are based on either strength or serviceability requirements for the following load cases
 

|                           |                |   |
|---------------------------|----------------|---|
| Serviceability Load Cases | Strength       |   |
| 1. Dead Load Only         | G              | Dead Load + Live Load      1.2 G + 1.5Q           |
| 2. Live Load Only         | 0.7Q           | Dead Load + Wind Load      0.9 G + W <sub>u</sub> |
| 4. Wind Load              | W <sub>s</sub> |   |
- Deflection Limits - Span/150