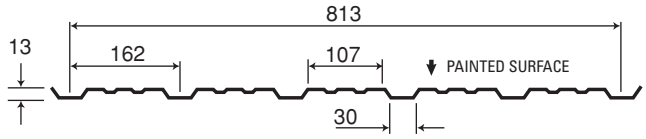
METRIC

# CH5-32

## Light Weight Cladding




ALL DIMENSIONS ARE IN MILLIMETERS

## Section Properties

(Per Metre of Width)

| Base Steel Thickness (mm) | Mass Z275 (kg/m²) | Yield Stress MPa | Section Modulus Mid Span (x 10³ mm³) | Section Modulus Support (x 10³ mm³) | Deflection Moment of Inertia Mid Span (x 10⁶ mm⁴) | Specified Web Crippling Data (kN) End $P_{e1}$ | End $P_{e2}$ | Interior $P_{i1}$ | Interior $P_{i2}$ |
|---|---|---|---|---|---|---|---|---|---|
| **0.305** | 2.97 | 230 | 0.590 | 0.621 | 0.0051 | 0.368 | 0.092 | 0.697 | 0.118 |
| **0.381** | 3.30 | 230 | 0.600 | 0.643 | 0.0053 | 0.869 | 0.217 | 1.65 | 0.280 |
| **0.457** | 4.31 | 230 | 1.11 | 1.12 | 0.0093 | 0.878 | 0.219 | 1.66 | 0.283 |
| **0.610** | 5.66 | 230 | 1.63 | 1.67 | 0.0146 | 1.62 | 0.404 | 3.06 | 0.519 |
| **0.762** | 7.00 | 230 | 2.07 | 2.22 | 0.0196 | 2.58 | 0.645 | 4.88 | 0.830 |

## Load Table

Live Load Factor = 1.5; Importance Factor ($I_{W\text{-}SLS}$) = 0.90; Importance Factor ($I_{W\text{-}ULS}$) = 0.80

Maximum Specified Uniformly Distributed Loads in kPa

| Span (mm) | | 1-Span Base Steel Thickness (mm) | | | | | 2-Span Base Steel Thickness (mm) | | | | | 3-Span Base Steel Thickness (mm) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 0.305 | 0.381 | 0.457 | 0.610 | 0.762 | 0.305 | 0.381 | 0.457 | 0.610 | 0.762 | 0.305 | 0.381 | 0.457 | 0.610 | 0.762 |
| **300** | S | 9.04 | 16.9 | 17.0 | 25.0 | 31.8 | 9.53 | 18.1 | 17.1 | 25.6 | 34.0 | 11.9 | 22.6 | 21.4 | 32.1 | 42.5 |
| | D | 18.2 | 19.1 | 33.1 | 52.1 | 69.9 | 43.6 | 45.8 | 79.5 | 125 | 168 | 34.4 | 36.0 | 62.6 | 98.5 | 132 |
| **400** | S | 5.09 | 9.49 | 9.58 | 14.1 | 17.9 | 5.36 | 10.2 | 9.61 | 14.4 | 19.1 | 6.70 | 12.7 | 12.0 | 18.0 | 23.9 |
| | D | 7.67 | 8.04 | 14.0 | 22.0 | 29.5 | 18.4 | 19.3 | 33.5 | 52.7 | 70.7 | 14.5 | 15.2 | 26.4 | 41.5 | 55.7 |
| **500** | S | 3.26 | 6.07 | 6.13 | 9.01 | 11.5 | 3.43 | 6.51 | 6.15 | 9.23 | 12.3 | 4.29 | 8.13 | 7.69 | 11.5 | 15.3 |
| | D | 3.93 | 4.12 | 7.15 | 11.3 | 15.1 | 9.42 | 9.9 | 17.2 | 27.0 | 36.2 | 7.42 | 7.78 | 13.5 | 21.3 | 28.5 |
| **600** | S | 2.26 | 4.22 | 4.26 | 6.25 | 7.95 | 2.38 | 4.52 | 4.27 | 6.41 | 8.51 | 2.98 | 5.65 | 5.34 | 8.01 | 10.6 |
| | D | 2.27 | 2.38 | 4.14 | 6.51 | 8.73 | 5.45 | 5.72 | 9.94 | 15.6 | 21.0 | 4.29 | 4.50 | 7.82 | 12.3 | 16.5 |
| **800** | S | 1.27 | 2.37 | 2.39 | 3.52 | 4.47 | 1.34 | 2.54 | 2.40 | 3.61 | 4.78 | 1.67 | 3.18 | 3.00 | 4.51 | 5.98 |
| | D | 0.96 | 1.01 | 1.75 | 2.75 | 3.68 | 2.30 | 2.41 | 4.19 | 6.59 | 8.84 | 1.81 | 1.90 | 3.30 | 5.19 | 6.96 |
| **1000** | S | | 1.52 | 1.53 | 2.25 | 2.86 | 0.86 | 1.63 | 1.54 | 2.31 | 3.06 | 1.07 | 2.03 | 1.92 | 2.89 | 3.83 |
| | D | | 0.51 | 0.89 | 1.41 | 1.89 | 1.18 | 1.24 | 2.15 | 3.38 | 4.53 | 0.93 | 0.97 | 1.69 | 2.66 | 3.57 |
| **1200** | S | | | 1.06 | 1.56 | 1.99 | 0.60 | 1.13 | 1.07 | 1.60 | 2.13 | 0.74 | 1.41 | 1.34 | 2.00 | 2.66 |
| | D | | | 0.52 | 0.81 | 1.09 | 0.68 | 0.71 | 1.24 | 1.95 | 2.62 | 0.54 | 0.56 | 0.98 | 1.54 | 2.06 |
| **1400** | S | | | | 1.15 | 1.46 | | | 0.78 | 1.18 | 1.56 | | | 0.98 | 1.47 | 1.95 |
| | D | | | | 0.51 | 0.69 | | | 0.78 | 1.23 | 1.65 | | | 0.62 | 0.97 | 1.30 |
| **1500** | S | | | | | 1.27 | | | 0.68 | 1.03 | 1.36 | | | 0.85 | 1.28 | 1.70 |
| | D | | | | | 0.56 | | | 0.64 | 1.00 | 1.34 | | | 0.50 | 0.79 | 1.06 |
| **1600** | S | | | | | | | | 0.60 | 0.90 | 1.20 | | | | 1.13 | 1.50 |
| | D | | | | | | | | 0.52 | 0.82 | 1.11 | | | | 0.65 | 0.87 |
| **1800** | S | | | | | | | | | 0.71 | 0.95 | | | | | 1.18 |
| | D | | | | | | | | | 0.58 | 0.78 | | | | | 0.61 |

## Notes:

1. Steel conforms to ASTM A653M.
2. Section properties are in accordance with CSA-S136-07.
3. Values in row "S" are based on strength.
4. Values in row "D" are based on a deflection limit of 1/180 of the span.
5. Web crippling not included in strength values. See example calculation in notes to designer.
6. Contact the sales department for stocked colours and gauges.
7. The load table contained on this data sheet was prepared by Dr. R.M. Schuster P.Eng. Professor Emeritus of Structural Engineering, University of Waterloo, Ontario, Canada.