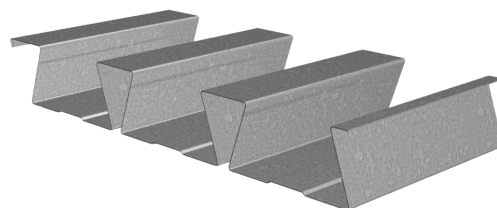


3.5D DOVETAIL ROOF DECK GRADE 40 STEEL

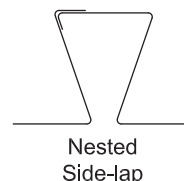
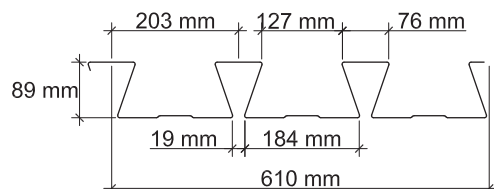
Metric
LSD

3.5D DOVETAIL ROOF DECK

- Enhanced 2-Coat Polyester Paint
- White Factory Primer Paint
- Galvanized Finish



Nominal Dimensions



Section Properties

| Deck Gage | Deck Weight w_{dd} (kg/m ²) | Base Metal Thickness t (mm) | Yield Strength F_y (MPa) | Effective Moment of Inertia at Service Load* $I_d = (2I_e + I_g)/3$ | | Effective Section Modulus* at $F_y = 276$ MPa | | Factored Moment* | | Vertical Web Shear* ϕV_n (kN) |
|-----------|---|-------------------------------------|----------------------------------|---|---|--|---|------------------------|------------------------|---|
| | | | | I_{d+} (mm ⁴ x10 ³) | I_{d-} (mm ⁴ x10 ³) | S_{e+} (mm ³ x10 ³) | S_{e-} (mm ³ x10 ³) | ϕM_{n+} (N-m) | ϕM_{n-} (N-m) | |
| 20 | 16.10 | 0.91 | 276 | 2406.2 | 2247.8 | 36.34 | 41.99 | 9020 | 10421 | 64 |
| 18 | 20.98 | 1.20 | 276 | 3297.9 | 3102.6 | 52.69 | 57.53 | 13079 | 14280 | 112 |
| 16 | 26.35 | 1.52 | 276 | 4278.4 | 4053.1 | 70.81 | 74.03 | 17575 | 18376 | 155 |

*Physical Properties per meter (m) of width

Factored Reactions at Supports Based on Web Crippling, ϕR_n (kN/m)

| Deck Gage | Bearing Length of Webs (mm) | | | | | | | | | | | |
|-----------|-----------------------------|------|------|------|------------------|--------------------|-------------|------|------|------|------------------|------|
| | One-Flange Loading | | | | | Two-Flange Loading | | | | | | |
| | End Bearing | | | | Interior Bearing | | End Bearing | | | | Interior Bearing | |
| | 50 | 75 | 100 | 125 | 100 | 150 | 50 | 75 | 100 | 125 | 100 | 150 |
| 20 | 13.7 | 15.7 | 17.4 | 18.8 | 27.8 | 33.6 | 13.1 | 14.6 | 15.8 | 16.9 | 32.8 | 37.9 |
| 18 | 23.1 | 26.3 | 29.0 | 31.3 | 46.2 | 52.5 | 24.0 | 26.6 | 28.7 | 30.6 | 55.8 | 64.0 |
| 16 | 35.4 | 40.1 | 44.1 | 47.6 | 70.2 | 83.3 | 39.2 | 43.1 | 46.4 | 49.3 | 86.1 | 98.2 |

Standard Features

- ASTM A653/A653M SS GR40 Min., with Z275/G90 galvanized
- Standard lengths – 1.83 m to 12.8 m
- UL and FM Listed
- Cold-formed steel deck conforms to CAN/CSA S136-16 and meets the guidelines of CSSBI 10M-2018.

Optional Features

- Inquire regarding cost and lead times for:
 - Short cuts < 1.83 m
 - Sheet Lengths > 12.8 m
 - Alternative metallic and painted finishes
- Perforated Acoustical Versions

3.5D DOVETAIL ROOF DECK GRADE 40 STEEL

Metric
LSD

Inward Uniform Factored Loads, LSD (kPa)

| Deck Gage | Spans | Criteria | Span (mm) | | | | | | | | | | |
|-----------|--------|------------|-----------|------|------|------|------|------|------|------|------|------|------|
| | | | 3300 | 3600 | 3900 | 4200 | 4500 | 4800 | 5100 | 5400 | 5700 | 6000 | 6300 |
| 20 | Single | ϕW_n | 6.6 | 5.6 | 4.8 | 4.1 | 3.6 | 3.1 | 2.8 | 2.5 | 2.2 | 2.0 | 1.8 |
| | | L/240 | 4.4 | 3.4 | 2.6 | 2.1 | 1.7 | 1.4 | 1.2 | 1.0 | 0.8 | 0.7 | 0.6 |
| | Double | ϕW_n | 7.5 | 6.3 | 5.4 | 4.7 | 4.1 | 3.6 | 3.2 | 2.8 | 2.5 | 2.3 | 2.1 |
| | | L/240 | 9.8 | 7.6 | 6.0 | 4.8 | 3.9 | 3.2 | 2.7 | 2.2 | 1.9 | 1.6 | 1.4 |
| | Triple | ϕW_n | 9.2 | 7.8 | 6.7 | 5.8 | | | | | | | |
| | | L/240 | 7.7 | 5.9 | 4.7 | 3.7 | | | | | | | |
| 18 | Single | ϕW_n | 9.6 | 8.1 | 6.9 | 5.9 | 5.2 | 4.6 | 4.0 | 3.6 | 3.2 | 2.9 | 2.6 |
| | | L/240 | 6.0 | 4.6 | 3.6 | 2.9 | 2.4 | 1.9 | 1.6 | 1.4 | 1.2 | 1.0 | 0.9 |
| | Double | ϕW_n | 10.3 | 8.7 | 7.4 | 6.4 | 5.6 | 4.9 | 4.4 | 3.9 | 3.5 | 3.2 | 2.9 |
| | | L/240 | 13.6 | 10.5 | 8.2 | 6.6 | 5.4 | 4.4 | 3.7 | 3.1 | 2.6 | 2.3 | 2.0 |
| | Triple | ϕW_n | 12.8 | 10.8 | 9.2 | 8.0 | | | | | | | |
| | | L/240 | 10.6 | 8.2 | 6.4 | 5.2 | | | | | | | |
| 16 | Single | ϕW_n | 12.9 | 10.9 | 9.3 | 8.0 | 7.0 | 6.1 | 5.4 | 4.8 | 4.3 | 3.9 | 3.6 |
| | | L/240 | 7.8 | 6.0 | 4.7 | 3.8 | 3.1 | 2.5 | 2.1 | 1.8 | 1.5 | 1.3 | 1.1 |
| | Double | ϕW_n | 13.3 | 11.2 | 9.6 | 8.3 | 7.2 | 6.3 | 5.6 | 5.0 | 4.5 | 4.1 | 3.7 |
| | | L/240 | 17.7 | 13.7 | 10.7 | 8.6 | 7.0 | 5.8 | 4.8 | 4.0 | 3.4 | 2.9 | 2.5 |
| | Triple | ϕW_n | 16.5 | 13.9 | 11.9 | 10.3 | | | | | | | |
| | | L/240 | 13.9 | 10.7 | 8.4 | 6.7 | | | | | | | |

Note:

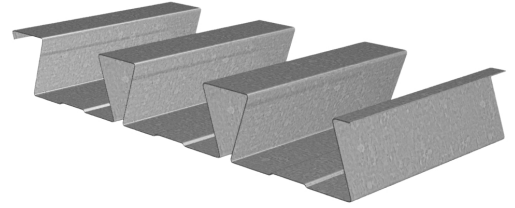
1. Table does not account for web crippling. Required bearing should be determined based on specific span conditions.

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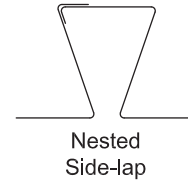
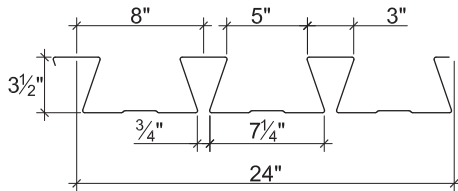
3.5D DOVETAIL ROOF DECK GRADE 40 STEEL

3.5D DOVETAIL ROOF DECK

- Enhanced 2-Coat Polyester Paint
- White Factory Primer Paint
- Galvanized Finish



Nominal Dimensions



Section Properties

| Deck Gage | Deck Weight w_{dd} (psf) | Base Metal Thickness t (in.) | Yield Strength F_y (ksi) | Effective Moment of Inertia at Service Load $I_d = (2I_e + I_g)/3$ | | Effective Section Modulus at $F_y = 40$ ksi | | Factored Moment | | Vertical Web Shear ϕV_n (lb/ft) |
|-----------|----------------------------------|--------------------------------------|----------------------------------|--|-----------------------------------|--|-----------------------------------|-----------------------------|-----------------------------|---|
| | | | | I_{d+} (in ⁴ /ft) | I_{d-} (in ⁴ /ft) | S_{e+} (in ³ /ft) | S_{e-} (in ³ /ft) | ϕM_{n+} (lb-ft/ft) | ϕM_{n-} (lb-ft/ft) | |
| 20 | 3.3 | 0.0358 | 40 | 1.762 | 1.646 | 0.676 | 0.781 | 2028 | 2343 | 4397 |
| 18 | 4.3 | 0.0474 | 40 | 2.415 | 2.272 | 0.980 | 1.070 | 2940 | 3210 | 7695 |
| 16 | 5.4 | 0.0598 | 40 | 3.133 | 2.968 | 1.317 | 1.377 | 3951 | 4131 | 10640 |

Factored Reactions at Supports Based on Web Crippling, ϕR_n (lb/ft)

| Deck Gage | Bearing Length of Webs | | | | | | | | | | | |
|-----------|------------------------|------|------|------|------------------|------|--------------------|------|------|------|------------------|------|
| | One-Flange Loading | | | | | | Two-Flange Loading | | | | | |
| | End Bearing | | | | Interior Bearing | | End Bearing | | | | Interior Bearing | |
| | 2" | 3" | 4" | 5" | 4" | 6" | 2" | 3" | 4" | 5" | 4" | 6" |
| 20 | 942 | 1080 | 1197 | 1299 | 1915 | 2192 | 900 | 1003 | 1090 | 1167 | 2263 | 2613 |
| 18 | 1588 | 1809 | 1995 | 2159 | 3178 | 3614 | 1650 | 1827 | 1976 | 2107 | 3841 | 4410 |
| 16 | 2439 | 2763 | 3036 | 3277 | 4831 | 5462 | 2693 | 2964 | 3192 | 3393 | 5926 | 6768 |

Standard Features

- ASTM A653/A653M SS GR40 Min., with Z275/G90 galvanized
- Standard lengths – 6'-0" to 42'-0"
- UL and FM Listed
- Cold-formed steel deck conforms to CAN/CSA S136-16 and meets the guidelines of CSSBI 10M-2018.

Optional Features

- Inquire regarding cost and lead times for:
 - Short cuts < 6'-0"
 - Sheet Lengths > 42'-0"
 - Alternative metallic and painted finishes
- Perforated Acoustical Versions

3.5D DOVETAIL ROOF DECK GRADE 40 STEEL

Inward Uniform Factored Loads, LSD (psf)

| Deck Gage | Spans | Criteria | Span (ft-in.) | | | | | | | | | | |
|-----------|--------|------------|---------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| | | | 11'-0" | 12'-0" | 13'-0" | 14'-0" | 15'-0" | 16'-0" | 17'-0" | 18'-0" | 19'-0" | 20'-0" | 21'-0" |
| 20 | Single | ϕW_n | 134 | 113 | 96 | 83 | 72 | 63 | 56 | 50 | 45 | 41 | 37 |
| | | L/240 | 87 | 67 | 53 | 42 | 34 | 28 | 24 | 20 | 17 | 14 | 12 |
| | Double | ϕW_n | 151 | 127 | 109 | 94 | 82 | 72 | 64 | 57 | 51 | 46 | 42 |
| | | L/240 | 195 | 150 | 118 | 95 | 77 | 63 | 53 | 45 | 38 | 32 | 28 |
| | Triple | ϕW_n | 186 | 157 | 135 | 117 | | | | | | | |
| | | L/240 | 153 | 118 | 93 | 74 | | | | | | | |
| 18 | Single | ϕW_n | 194 | 163 | 139 | 120 | 105 | 92 | 81 | 73 | 65 | 59 | 53 |
| | | L/240 | 119 | 92 | 72 | 58 | 47 | 39 | 32 | 27 | 23 | 20 | 17 |
| | Double | ϕW_n | 209 | 176 | 150 | 130 | 113 | 99 | 88 | 79 | 71 | 64 | 58 |
| | | L/240 | 270 | 208 | 163 | 131 | 106 | 88 | 73 | 62 | 52 | 45 | 39 |
| | Triple | ϕW_n | 259 | 218 | 187 | 161 | | | | | | | |
| | | L/240 | 211 | 163 | 128 | 102 | | | | | | | |
| 16 | Single | ϕW_n | 261 | 220 | 187 | 161 | 140 | 123 | 109 | 98 | 88 | 79 | 72 |
| | | L/240 | 154 | 119 | 93 | 75 | 61 | 50 | 42 | 35 | 30 | 26 | 22 |
| | Double | ϕW_n | 269 | 227 | 193 | 167 | 146 | 128 | 114 | 101 | 91 | 82 | 75 |
| | | L/240 | 352 | 271 | 213 | 171 | 139 | 114 | 95 | 80 | 68 | 59 | 51 |
| | Triple | ϕW_n | 334 | 282 | 241 | 208 | | | | | | | |
| | | L/240 | 276 | 213 | 167 | 134 | | | | | | | |

Note:

1. Table does not account for web crippling. Required bearing should be determined based on specific span conditions.

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