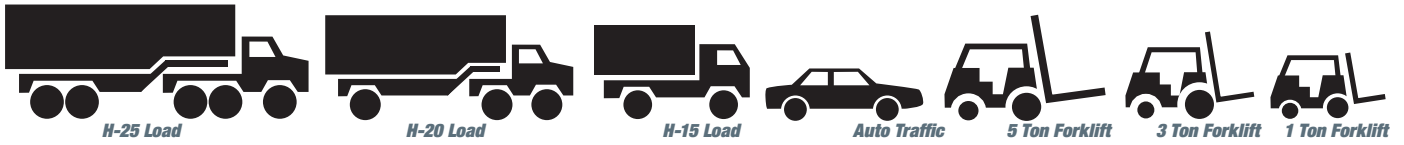


# Heavy Duty Grating

## 19 Space Load Table

Use this table when evaluating spans & loads for the following types of Heavy Duty steel grating:  
**19-W-4 and 19-W-2**



| Bearing Bar Size | Section Modulus psf | Moment of Inertia psf | Approx. Weight psf | Maximum Safe Span |           |           |              |                |                |                |
|------------------|---------------------|-----------------------|--------------------|-------------------|-----------|-----------|--------------|----------------|----------------|----------------|
|                  |                     |                       |                    | H-25 Load         | H-20 Load | H-15 Load | Auto Traffic | 5 Ton Forklift | 3 Ton Forklift | 1 Ton Forklift |
| 1 x 1/4          | 0.421               | 0.211                 | 9.7                | 1'-0"             | 0'-10"    | 0'-9"     | 1'-0"        | 0'-7"          | 0'-6"          | 0'-7"          |
| 1 x 5/16         | 0.526               | 0.263                 | 11.9               | 1'-1"             | 1'-0"     | 0'-10"    | 1'-2"        | 0'-8"          | 0'-7"          | 0'-8"          |
| 1 x 3/8          | 0.632               | 0.316                 | 14.0               | 1'-2"             | 1'-1"     | 0'-11"    | 1'-4"        | 0'-9"          | 0'-8"          | 0'-9"          |
| 1-1/4 x 1/4      | 0.658               | 0.411                 | 11.9               | 1'-3"             | 1'-1"     | 1'-0"     | 1'-5"        | 0'-9"          | 0'-8"          | 0'-10"         |
| 1-1/4 x 5/16     | 0.822               | 0.514                 | 14.5               | 1'-4"             | 1'-3"     | 1'-1"     | 1'-8"        | 0'-10"         | 0'-9"          | 1'-0"          |
| 1-1/4 x 3/8      | 0.987               | 0.617                 | 17.2               | 1'-6"             | 1'-4"     | 1'-2"     | 1'-11"       | 1'-0"          | 0'-10"         | 1'-2"          |
| 1-1/2 x 1/4      | 0.947               | 0.711                 | 14.0               | 1'-6"             | 1'-4"     | 1'-2"     | 1'-11"       | 0'-11"         | 0'-10"         | 1'-1"          |
| 1-1/2 x 5/16     | 1.184               | 0.888                 | 17.2               | 1'-8"             | 1'-6"     | 1'-4"     | 2'-3"        | 1'-1"          | 0'-11"         | 1'-4"          |
| 1-1/2 x 3/8      | 1.421               | 1.066                 | 20.4               | 1'-10"            | 1'-8"     | 1'-6"     | 2'-6"        | 1'-2"          | 1'-1"          | 1'-7"          |
| 1-3/4 x 1/4      | 1.289               | 1.128                 | 16.2               | 1'-9"             | 1'-7"     | 1'-5"     | 2'-5"        | 1'-2"          | 1'-0"          | 1'-5"          |
| 1-3/4 x 5/16     | 1.612               | 1.410                 | 19.9               | 1'-11"            | 1'-9"     | 1'-7"     | 2'-11"       | 1'-4"          | 1'-3"          | 1'-9"          |
| 1-3/4 x 3/8      | 1.934               | 1.692                 | 23.7               | 2'-2"             | 1'-11"    | 1'-9"     | 3'-2"        | 1'-6"          | 1'-5"          | 2'-1"          |
| 2 x 1/4          | 1.684               | 1.684                 | 18.3               | 2'-0"             | 1'-10"    | 1'-8"     | 3'-1"        | 1'-4"          | 1'-3"          | 1'-10"         |
| 2 x 5/16         | 2.105               | 2.105                 | 22.6               | 2'-3"             | 2'-1"     | 1'-11"    | 3'-6"        | 1'-7"          | 1'-6"          | 2'-4"          |
| 2 x 3/8          | 2.526               | 2.526                 | 26.9               | 2'-6"             | 2'-4"     | 2'-2"     | 3'-10"       | 1'-10"         | 1'-9"          | 2'-9"          |
| 2-1/4 x 1/4      | 2.132               | 2.398                 | 20.4               | 2'-3"             | 2'-1"     | 1'-11"    | 3'-9"        | 1'-7"          | 1'-6"          | 2'-4"          |
| 2-1/4 x 5/16     | 2.664               | 2.998                 | 25.3               | 2'-7"             | 2'-5"     | 2'-3"     | 4'-2"        | 1'-11"         | 1'-10"         | 2'-11"         |
| 2-1/4 x 3/8      | 3.197               | 3.597                 | 30.1               | 2'-10"            | 2'-8"     | 2'-7"     | 4'-5"        | 2'-2"          | 2'-2"          | 3'-5"          |
| 2-1/2 x 1/4      | 2.632               | 3.289                 | 22.6               | 2'-6"             | 2'-4"     | 2'-3"     | 4'-4"        | 1'-10"         | 1'-10"         | 2'-10"         |
| 2-1/2 x 5/16     | 3.289               | 4.112                 | 28.0               | 2'-11"            | 2'-9"     | 2'-7"     | 4'-8"        | 2'-3"          | 2'-3"          | 3'-6"          |
| 2-1/2 x 3/8      | 3.947               | 4.934                 | 33.3               | 3'-4"             | 3'-2"     | 3'-0"     | 4'-11"       | 2'-7"          | 2'-7"          | 4'-2"          |
| 3 x 1/4          | 3.789               | 5.684                 | 26.9               | 3'-3"             | 3'-1"     | 2'-11"    | 5'-2"        | 2'-6"          | 2'-6"          | 4'-1"          |
| 3 x 5/16         | 4.737               | 7.105                 | 33.3               | 3'-9"             | 3'-7"     | 3'-6"     | 5'-7"        | 3'-0"          | 3'-1"          | 4'-9"          |
| 3 x 3/8          | 5.684               | 8.526                 | 39.8               | 4'-4"             | 4'-2"     | 4'-1"     | 5'-11"       | 3'-7"          | 3'-8"          | 5'-1"          |
| 3-1/2 x 1/4      | 5.158               | 9.026                 | 31.2               | 4'-0"             | 3'-10"    | 3'-9"     | 6'-0"        | 3'-3"          | 3'-4"          | 5'-2"          |
| 3-1/2 x 5/16     | 6.447               | 11.283                | 38.7               | 4'-9"             | 4'-8"     | 4'-7"     | 6'-6"        | 4'-0"          | 4'-1"          | 5'-7"          |
| 3-1/2 x 3/8      | 7.737               | 13.539                | 46.2               | 5'-0"             | 5'-0"     | 5'-0"     | 6'-11"       | 4'-8"          | 4'-10"         | 5'-11"         |
| 4 x 1/4          | 6.737               | 13.474                | 35.5               | 4'-11"            | 4'-10"    | 4'-9"     | 6'-11"       | 4'-2"          | 4'-3"          | 5'-11"         |
| 4 x 5/16         | 8.421               | 16.842                | 44.1               | 5'-5"             | 5'-5"     | 5'-5"     | 7'-5"        | 5'-1"          | 5'-3"          | 6'-4"          |
| 4 x 3/8          | 10.105              | 20.211                | 52.7               | 5'-8"             | 5'-8"     | 5'-9"     | 7'-11"       | 5'-6"          | 5'-8"          | 6'-9"          |
| 4-1/2 x 1/4      | 8.526               | 19.184                | 39.8               | 5'-7"             | 5'-7"     | 5'-8"     | 7'-9"        | 5'-1"          | 5'-4"          | 6'-8"          |
| 4-1/2 x 5/16     | 10.658              | 23.980                | 49.4               | 6'-0"             | 6'-0"     | 6'-1"     | 8'-4"        | 5'-10"         | 6'-0"          | 7'-2"          |
| 4-1/2 x 3/8      | 12.789              | 28.776                | 59.1               | 6'-5"             | 6'-5"     | 6'-5"     | 8'-11"       | 6'-2"          | 6'-4"          | 7'-7"          |
| 5 x 1/4          | 10.526              | 26.316                | 44.1               | 6'-3"             | 6'-3"     | 6'-3"     | 8'-8"        | 6'-0"          | 6'-2"          | 7'-5"          |
| 5 x 3/8          | 15.789              | 39.474                | 65.5               | 7'-1"             | 7'-1"     | 7'-2"     | 9'-11"       | 6'-11"         | 7'-1"          | 8'-6"          |
| 5 x 1/2          | 21.053              | 52.632                | 87.0               | 7'-10"            | 7'-10"    | 7'-11"    | 10'-11"      | 7'-7"          | 7'-9"          | 9'-4"          |
| 6 x 1/4          | 15.158              | 45.474                | 52.7               | 7'-5"             | 7'-5"     | 7'-6"     | 10'-4"       | 7'-3"          | 7'-5"          | 8'-11"         |
| 6 x 3/8          | 22.737              | 68.211                | 78.4               | 8'-6"             | 8'-6"     | 8'-7"     | 11'-10"      | 8'-3"          | 8'-6"          | 10'-2"         |
| 6 x 1/2          | 30.316              | 90.947                | 104.2              | 9'-4"             | 9'-4"     | 9'-5"     | 13'-1"       | 9'-1"          | 9'-4"          | 11'-2"         |
| 7 x 1/4          | 20.632              | 72.211                | 61.2               | 8'-8"             | 8'-8"     | 8'-9"     | 12'-1"       | 8'-5"          | 8'-8"          | 10'-4"         |
| 7 x 3/8          | 30.947              | 108.316               | 91.3               | 9'-11"            | 9'-11"    | 10'-0"    | 13'-10"      | 9'-8"          | 9'-11"         | 11'-10"        |
| 7 x 1/2          | 41.263              | 144.421               | 121.4              | 10'-10"           | 10'-11"   | 11'-0"    | 15'-3"       | 10'-7"         | 10'-11"        | 13'-1"         |