

APPLICATION:

For selection of floor and roof joists subjected to uniform live and dead loads.

USE:

The TOTAL LOAD values denote the total safe uniformly distributed load carrying capacity of the section expressed in pounds per square foot (PSF), which will not generate deflections in excess of L/240 of the span length. The LIVE LOAD values denote the live load in pounds per square foot (PSF), which will produce a deflection of L/360 of the span.

To determine live load deflection limits of L/480, multiply the LIVE LOAD values shown by a factor of 0.75.

To determine live load deflection limits of L/240, multiply the LIVE LOAD values shown by a factor of 1.5. In this case, ensure that the adjusted value does not exceed the TOTAL LOAD capacity of the joist.

The uses of these tables are limited to simply supported conditions installed to a maximum slope of 1/2" per foot.

Notes:

1. Applications involving multiple spans, cantilevers, concentrated loads, impact loading, etc. should be investigated separately.
2. Web crippling should be investigated in accordance with AISI Section C3.4. Web stiffeners are recommended at all support and concentrated load locations. Please reference page 28 for web crippling capacities.
3. Joists shall be restrained against rotation at each end. Joists shall be attached to track components or restrained by the installation of continuous solid blocking.
4. Minimum end bearing shall be 1-1/2".
5. Deflections and stresses were calculated without regard to the composite contribution of facing materials.
6. The compression flange of the section should be braced by the attachment of continuous diaphragm rated sheathing or decking. Additionally, mechanical bridging shall be installed at intervals not to exceed 7'-0" on center. Please reference page 25 for bridging methods. The installation of bridging shall be completed before loading the floor/roof system.
7. Calculations were based on the use of the effective structural properties shown on pages 4 through 7.
8. Contact Marino\WARE for uniform load capacities of framing components not shown in these tables.
9. Load values for 16 gauge products are based on steel with F_y (min) = 50 KSI.

TRUSS APPLICATIONS

KEY COMPONENT REFERENCE NOTES

| | | |
|----------------|----------------------------------|-----------|
| TC | Top Chord | 2, 3, & 4 |
| BC | Bottom Chord | 2, 3, & 4 |
| IW | Internal Web | 2 & 4 |
| CB | Continuous Bridging | 5 |
| BFC | Brake Formed Closure | |
| GP | Gusset Plate | 6 |
| LBSW | Load Bearing Stud Wall | 7 |

Notes:

1. Size, spacing, and anchorage of truss frames shall be qualified by design.
2. Install continuous components (avoid splicing). The use of components with unpunched webs is recommended.
3. Chords subjected to uniform loading shall satisfy the interaction equations of AISI Section C5, Combined Axial and Bending.
4. Installation of intermediate bridging will reduce the member's unbraced length, thus increasing its axial capacity yet adding to the installation costs.
5. Use 1-1/2" CR 16 gauge channel if trusses spaced 24" o.c. or less. Use 2-1/2" T 20 gauge track if trusses spaced between 24" and 48" o.c.
6. Use flat plate or section of heavy gauge C stud or track.
7. Align webs of bottom chord and stud or install continuous distribution header at top of wall below. Installation of a web stiffener at support locations may be required.
8. Reference page 31, Specification Section 3.5, Installation: Joist for additional information.

