AXIAL APPLICATIONS

For selection of studs, braced by mechanical bridging spaced not to exceed 4 feet on center, which are subjected to axial load in the presence or absence of uniform lateral wind loads.

USE:

Select a stud, in terms of spacing(inches o.c.), lateral load (psf), and height(ft) which provides an allowable axial load, in kips per stud, equal to or greater than the applied axial load.

Deflections due to lateral loads do not exceed L/720 unless the following subscripted values are shown:

a. Values followed by the subscript (6) do not exceed L/600
b. Values followed by the subscript (3) do not exceed L/360
c. Values followed by the subscript (2) do not exceed L/240
d. L/240 is exceeded where load values have been omitted.

Notes:

1. *Allowable axial load values for 16 gauge studs are based on steel with Fy (min) = 50 ksi.*
2. *The values represent the least allowable axial load of the stud in the presence or absence of lateral load. A minimum live load to dead load ratio of 2:1 has been assumed in the preparation of these tables. A stress increase 33-1/3% has been incorporated on live and wind loads only. For conditions where live loads do not exist or where live load to dead load ratios is less than 2:1, or where stress increase is not permissible, contact Marino\WARE's Technical Services Department.*
3. *Values assume axial loads are applied concentrically to the stud.*
4. *Studs shall be braced against rotation before loading. Install bridging spaced at intervals not exceeding 4'-0" on center. Refer to page 25 for bridging types and installation methods.*
5. *Stud ends shall be attached to each side of continuous track by welds or screws before loading. Refer to page 20 for attachment alternatives. Stud ends shall be installed seated squarely against the web (within 1/16") of the tracks to assure transfer of axial load. See reference page 31, Specification Section 3.5, for additional information.*
6. *Deflections and allowable stresses were calculated without regard to the composite contribution of sheathing products.*
7. *Contact Marino\WARE for allowable capacities of framing components not shown in these tables.*
8. *Minimum order requirements may apply to some sections shown in these tables.*

DIAGONAL RACKING BRACING

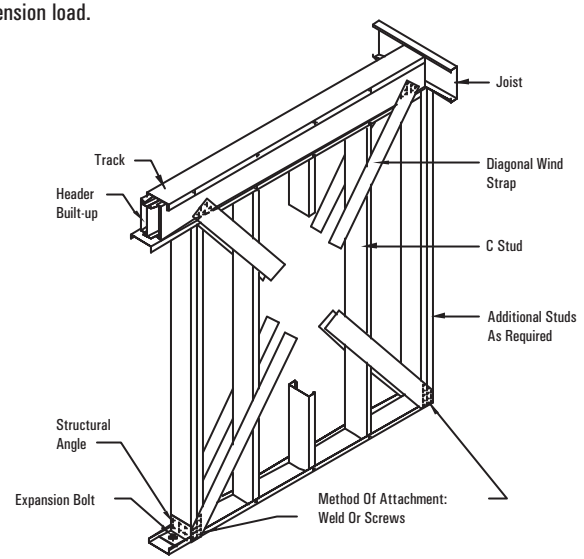
Diagonal bracing and connections must be designed for the specific conditions of a building. For allowable load capacities of Marino\WARE members and assistance in developing connections, please contact Marino\WARE's Technical Services Department. Buildings must be properly braced to resist racking under wind and seismic loads. In steel-framed construction, diagonal strap bracing offers an economical and effective means to provide this resistance. Straps are sloped to resist racking forces in tension. They are installed over framing members and easily covered with facing materials. Diagonal strap ends are secured by screws or welded to transfer the tension loads to the wall framing and floor assembly. End connections must be designed to transfer accumulated design loads. At the foundation, floor anchors must be adequate to prevent uplift and horizontal shear. Splicing of strapping is not recommended.

DIAGONAL CROSS-BRACING

For selection of Flat Strap (FS) subjected to tension loads in shear wall assemblies or miscellaneous applications.

USE:

Select a flat stap which provides an allowable tensile capacity equal to or greater than the applied tension load.



CROSS-BRACING: ALLOWABLE TENSION CAPACITY

Flat strap bracing (thickness)	Area ($in.^2$)	Pa with 1/3 increase (kip)	Pa without 1/3 increase (kip)
2" X 20ga (33mil)	0.0692	1.82	1.37
2" X 18ga (43mil)	0.0902	2.38	1.78
4" X 18ga (43mil)	0.1804	4.76	3.57
2" X 16ga (54mil)	0.1132	4.52	3.39
4" X 16ga (54mil)	0.2264	9.05	6.79
2" X 14ga (68mil)	0.1426	5.70	4.28
4" X 14ga (68mil)	0.2852	11.41	8.56

Notes:

1. *Strap end connections shall be designed to transfer the tensile load.*
2. *20 and 18 gauge strap: Fy (min) = 33 KSI*
   16 and 14 gauge strap: Fy (min) = 50 KSI