MRI STEEL FRAMING LLC

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Product Category: 09.22.16 - Non-Structural Metal Framing **Product Name:** 362PWS134-19 PrimeWall Stud 20 EQ

Available Finish: G40
(G60/G90 coatings available upon request)
*Other standard coatings referenced in ASTM A1003
Web Depth: 3-5/8 in
Flange Width: 1-11/32 in
Return Lip: 0.406 in
Design Thickness: 0.0200 in
Gauge: 19 mils or 20 EQ
Yield stress, Fy: 55 ksi
Weight: 0.47 lb/ft

- Calculated properties are based on AISI S100-16/S2-20, North American Specification for Design of Cold-Formed Steel Structural Members and meets the requirements of the IBC 2021 Building Code.
- The centerline bend radius is based on inside corner radii shown in thickness chart.
- Effective properties incorporate the strength increase from the cold work of forming as applicable per AISI A7.2.
- Tabulated gross properties are based on full-unreduced cross section of the studs, away from punchouts.
- For deflection calculations, use the effective moment of inertia.
- Allowable moment includes cold-work of forming.

Gross Section Properties

Cross sectional area (A)	0.138 in^2
Moment of inertia (Ixx)	0.280 in^4
Section Modulus (Sxx)	0.155 in^3
Radius of gyration (Rx)	1.427 in
Gross moment of inertia (Iyy)	0.035 in^4
Gross Radius of gyration (Ry)	0.502 in

Effective Section Properties

Moment of inertia for deflection (Ixx)	0.269 in^4
Section modulus (Sxx)	0.097 in^3
Allowable bending moment (Ma-L)	3.200 In-k
Allowable bending moment from distortional buckling (Ma-D)	3.02 In-k
Allowable strong axis shear away from punch-out (Vag)	208 lb
Allowable strong axis shear at punch out (VaNet)	185 lb

Torsional Properties

St. Venant torsion constant (J x 1000)	0.018 in^4
Warping constant (Cw)	0.100 in^6
Distance from shear center to neutral axis (Xo)	-1.013 in
Distance from shear center to mid-plane of web (m)	0.622 in
Radii of gyration (Ro)	1.821 in
Torsional flexural constant (β)	0.690
Unbraced Length (Lu)	26.9 in

Interior Non-Structural, Non-Composite Wall Height Table Notes

- Calculations are based on AISI Standard, North American Specification for the Design of Cold-Formed Steel Structural Members, 2016 edition (AISI S100-2016). All calculations are based on allowable strength design (ASD).
- When provided, factory punchouts will be located along the centerline of the webs of the members and will have a minimum center-to-center spacing of 24 inches. Punchouts for members > 2.5 inches deep are a maximum of 1.5 inches wide x 4 inches long. Members with depths 2.5" and smaller are maximum 3/4" wide x 4 inches long.
- For deflection determination, use the effective moment of inertia.
- The effective moment of inertia for deflection is calculated at a stress which results in a section modulus such that the stress times the section modulus at that stress is equal to the allowable local buckling moment, Ma-L.
- Tabulated gross and torsional properties are based on the full, unreduced section away from punchouts
- Effective X-X Axis properties of all stud and joist sections based on punched sections.
- Where section designations include a superscript '1', web height-to-thickness exceeds 200. Web stiffeners are required at all supports and concentrated loads.
- Where effective properties are not listed for a section, web depth-to-thickness or flange width-to-thickness limits from the AISI S100 are exceeded. Only gross properties are available.
- Allowable bending moment and moment of inertia for 6" studs based on the direct strength method (DSM).

Additional Information

MRI Steel Framing, LLC is an SFIA member. MRI acts in accordance with the product and quality standards required by the SFIA program.

MRI meets or exceeds ASTM C645, C754, A653, and A1003.

Current LEED credits available upon request

PrimeWall is a licensed product of The Steel Network.

Non-Composite Limiting Heights – Fully Braced

Spacing (inches)	5psf L/120	5psf L/240	5psf L/360	7.5psf L/120	7.5psf L/240	7.5psf L/360	10psf L/120	10psf L/240	10psf L/360
12	19' 3"	15' 5"	13' 6"	16' 4"	13' 6"	11' 9"	14' 2"	12' 3"	10' 8"
16	17' 4"	14' 0"	12' 3"	14' 2"	12' 3"	10' 8"	12' 3"	11' 1"	9' 9"
24	14' 2"	12' 3"	10' 8"	11' 7"	10' 8"	9' 4"	10' 0" e	9' 8" e	8' 6"

Composite Limiting Heights with 5/8" Type X Gypsum Board

Spacing (inches)	5psf L/120	5psf L/240	5psf L/360	7.5psf L/120	7.5psf L/240	7.5psf L/360	10psf L/120	10psf L/240	10psf L/360
12	22'7"	18'7"	16'4"	19'8"	16'3"	14'3"	17'11"	14'9"	12'11"
16	20'6"	16'11"	14'10"	17'11"	14'9"	12'11"	16'2"f	13'5"	11'9"
24	17'11"	14'9"	12'11"	15'3"f	12'11"	11'2"	13'3"f	11'9"	9'11"