Code Compliance Research Report
CCRR-0509

Issue Date: 12-21-2023
Renewal Date: 12-31-2024

DIVISION: 09 00 00 – FINISHES
Section: 09 22 00 – Supports for Plaster and Gypsum Board
Section: 09 22 16.13 – Non-Structural Metal Stud Framing

REPORT HOLDER:
PANEL REY S.A.
SERAFÍN PEÑA SUR 938, CENTRO
MONTERREY, NUEVO LEÓN, MÉXICO 66560
+81-8305-3800
www.panelrey.com

REPORT SUBJECT:
SUPRA Interior, Non-Loadbearing, Cold-Formed Steel Studs and Tracks

1.0 SCOPE OF EVALUATION

1.1 This Research Report addresses compliance with the following Codes:

- 2021 *International Building Code®* (IBC)
- 2021 *International Residential Code®* (IRC)

NOTE: This report references the most recent Code editions noted. Section numbers in earlier editions may differ.

1.2 SUPRA Studs and Tracks have been evaluated for the following properties (see Table 1):

- Structural
- Corrosion Protection

1.3 SUPRA Studs and Track have been evaluated for the following uses:

- Interior non-load bearing, gypsum board sheathed walls

2.0 STATEMENT OF COMPLIANCE

SUPRA Studs and Tracks complies with the Codes listed in Section 1.1, for the properties stated in Section 1.2 and uses stated in Section 1.3, when installed as described in this report, including the Conditions of Use stated in Section 6.

3.0 DESCRIPTION

3.1 Panel Rey SUPRA Studs are interior, non-load bearing, cold-formed steel studs. They are "C" shaped members with a return lip. They can be produced with or without knurling on the flanges. Panel Rey SUPRA Tracks are interior, non-load bearing, cold-formed steel tracks. They are "U" shaped members. Panel Rey framing members that are recognized in this report are limited to the products whose designations are found in Table 2.

3.2 Panel Rey SUPRA Studs and Tracks framing members are cold-formed from steel coils conforming to properties of ASTM A1003. Steel grades for SUPRA Studs and Tracks are found in Table 2. The SUPRA Studs and Tracks have a minimum protective galvanizations coating conforming to ASTM A653 – G40.

3.3 Panel Rey SUPRA Studs and Tracks are available in design thicknesses of 0.0163" (16-mil) and 0.0203" (19-mil). They are available in depths of 2 1/2", 3 5/8", and 6". See Figure 1.

3.4 Panek Rey SUPRA Studs can be pre-punched with punchouts. Punchouts vary depending on stud size. Punchouts are per AISI S100.

4.0 PERFORMANCE CHARACTERISTICS

4.1 General product information and Section Properties are determined in accordance with AISI S100 and found in Table 2.

4.2 Composite wall height tables for interior, non-loadbearing, non-structural wall is determined in accordance with AISI S916 and found in Table 3. Values found in table 3 are limited to assemblies with Panel Rey, Rey X 5/8" Type X gypsum complying with ASTM C1396. The interior non-loadbearing wall assemblies shall be limited to interior installations where the superimposed axial load is zero pounds.

4.3 Non-Composite wall height tables for interior, non-loadbearing, non-structural walls are determined in accordance with AISI S100 and found in Table 4 for full braced studs, and Table 5 for studs braced at 48" o/c. The heights are determined by the lesser of the limiting conditions which include wall deflection, shear strength, web crippling strength, or flexural strength of the stud.

4.4 Ceiling Span tables determined in accordance with AISI S100 and found in Table 6.

4.5 Connection Strength values determined in accordance with AISI S100 and found in Table 7.

5.0 INSTALLATION

5.1 SUPRA Studs and Tracks must be installed in accordance with the manufacturer's published installation instructions, the applicable Code, and this Research Report. A copy of the manufacturer's instructions must be available on the jobsite during installation.

5.2 Installation shall be in accordance with the code requirements, AISI standards therein for cold-formed steel, light-frame construction, including IBC Section 2211 and IRC Section R603 for One- and Two-Family Dwellings regulated by the IRC.

6.0 CONDITIONS OF USE

6.1 Installation must comply with this Research Report, the manufacturer's published installation instructions, and the applicable Code. In the event of a conflict, this report governs.

6.2 All designs and calculations shall be prepared by a licensed design professional according to the requirements in the jurisdiction where the project is located.

6.3 Jobsite manufacture of studs or tracks is outside the scope of this report.

6.4 The minim base steel thickness of the section delivered to the jobsite must be a minimum of 95% of the design thickness.

6.5 The SUPRA Studs and Tracks are manufactured under a quality control program with inspections by Intertek Testing Services NA, Inc.

7.0 SUPPORTING EVIDENCE

7.1 Manufacturer's drawings and installation instructions.

7.2 Reports of evaluation and engineering analysis demonstrating compliance with AISI S100-16(2020) w/S2-20, North American Specification for the Design of Cold-Formed Steel Structural Members and AISI S220-20, North American Standard for Cold-Formed Steel Framing – Nonstructural Members.

7.3 Reports of testing, evaluation and engineering analysis demonstrating compliance with AISI S916-20, Test Standard for Determining the Strength and Stiffness of Cold-Formed Steel-Framed Nonstructural Interior Partition Walls Sheathed with Gypsum Board.

7.4 Documentation of an Intertek approved quality control system for the manufacturing of products recognized in this report.

8.0 IDENTIFICATION

8.1 The Panel Rey SUPRA non-structural Studs and Track produced in accordance with this report shall be identified

8.2 Bundles of Panel Rey SUPRA non-structural Studs shall be marked with a label or tag that includes:

- The manufactures' name;
- Length of product;
- Quantity of product;
- The product name (including depth and flange size);
- Minimum base steel thickness (uncoated) in decimals or mils;
- Yield Strength;
- Galvanization coating designation: G40; and
- The Intertek identification mark and Code Compliance Research Report CCRR-0509

9.0 OTHER CODES

This section is not applicable.

10.0 CODE COMPLIANCE RESEARCH REPORT USE

10.1 Approval of building products and/or materials can only be granted by a building official having legal authority in the specific jurisdiction where approval is sought.

10.2 Code Compliance Research Reports shall not be used in any manner that implies an endorsement of the product by Intertek.

10.3 Reference to the https://bpdirectory.intertek.com is recommended to ascertain the current version and status of this report.

TABLE 1 – CODE REFERENCED STANDARDS

Property	2021 IBC and IRC
Structural Design	AISI S100-16/S2-20 AISI S220-20

FIGURE 1

250S125-16 Dimensions

Dimensions (in)											
WIDTH A	THICKNESS* Fy=50 ksi	STRIP LENGTH	FLANGE B	FLANGE C	EDGING D	EDGING E	WIDTH F	LIP G	LIP H	KNURLED M	LENGTH Nom. L
±1/32		± 0.005	-1/16 / +1/8				± 1/32	-1/32 / +1/8			
Nom. 2.500 2.468 – 2.532	mt = 0.0155 dt = 0.0163	5.200	Nom. 1.250" 1.1875 - 1.375		Nom. 0.490" 0.420 – 0.560		Nom. 2.500 2.468 – 2.532	Nom. 0.1875 0.1562 - 0.3125		Nom. 0.042 0.022 – 0.063	± 1/8

*mt=minimum thickness. dt= design thickness. Fy= steel minimum yield strength.

250T125-16 Dimensions

Dimensions (in)									
WIDTH A	THICKNESS* Fy=50 ksi	STRIP LENGTH	FLANGE B	FLANGE C	EDGING D	EDGING E	WIDTH F	KNURLED M	LENGTH Nom. L
+1/8		± 0.005	-1/16 / +1/2				+1/8		
Nom. 2.500 2.500 – 2.625	mt = 0.0155 dt = 0.0163	5.000	Nom. 1.25" 1.1875 – 1.750		Nom. 0.490" 0.420 – 0.560		Nom. 2.500 2.500 – 2.625	Nom. 0.042 0.022 – 0.063	± 1/8

*mt=minimum thickness. dt= design thickness. Fy= steel minimum yield strength.

362S125-16 Dimensions

Dimensions (in)											
WIDTH A	THICKNESS* Fy=70 ksi	STRIP LENGHT	FLANGE B	FLANGE C	EDGING D	EDGING E	WIDTH F	LIP G	LIP H	KNURLED M	LENGHT Nom. L
±1/32		± 0.005	-1/16 / +1/8				± 1/32	-1/32 / +1/8			
Nom. 3.625 3.594 – 3.657	mt = 0.0155 dt = 0.0163	6.280	Nom. 1.250" 1.1875 - 1.375		Nom. 0.490 0.420 – 0.560		Nom. 3.625 3.593 – 3.657	Nom. 0.1875 0.1562 - 0.3125		Nom. 0.042 0.022 – 0.063	± 1/8

*mt=minimum thickness. dt= design thickness

362T125-16 Dimensions

Dimensions (in)									
WIDTH A	THICKNESS* Fy=70 ksi	STRIP LENGHT	FLANGE B	FLANGE C	EDGING D	EDGING E	WIDTH F	KNURLED M	LENGHT Nom. L
+1/8		± 0.005	-1/16 / +1/2				+1/8		
Nom. 3.625 3.625 – 3.750	mt = 0.0155 dt = 0.0163	6.150	Nom. 1.25" 1.1875 – 1.750		Nom. 0.475" 0.400 – 0.550		Nom. 3.625 3.625 – 3.750	Nom. 0.042 0.022 – 0.063	± 1/8

*mt=minimum thickness. dt= design thickness

FIGURE 1 (Continued)

600S125-16 Dimensions

Dimensions (in)											
WIDTH A	THICKNESS* Fy=50 ksi	STRIP LENGTH	FLANGE B	FLANGE C	EDGING D	EDGING E	WIDTH F	LIP G	LIP H	KNURLED M	LENGTH Nom. L
±1/32		± 0.005	-1/16 / +1/8				± 1/32	-1/32 / +1/8			
Nom. 6.000 5.968 – 6.032	mt = 0.0155 dt = 0.0163	8.725	Nom. 1.250" 1.1875 - 1.375		Nom. 0.800" 0.730 – 0.870		Nom. 6.000 5.968 – 6.032	Nom. 0.1875 0.1562 - 0.3125		Nom. 0.042 0.022 – 0.063	± 1/8

*mt=minimum thickness. dt= design thickness. Fy= steel minimum yield strength.

600T125-16 Dimensions

Dimensions (in)									
WIDTH A	THICKNESS* Fy=50 ksi	STRIP LENGTH	FLANGE B	FLANGE C	EDGING D	EDGING E	WIDTH F	KNURLED M	LENGTH Nom. L
+1/8		± 0.005	-1/16 / +1/2				+1/8		
Nom. 6.000 6.000 – 6.125	mt = 0.0155 dt = 0.0163	8.550	Nom. 1.25" 1.1875 – 1.750		Nom. 0.800" 0.730 – 0.870		Nom. 6.000 6.000 – 6.125	Nom. 0.042 0.022 – 0.063	± 1/8

*mt=minimum thickness. dt= design thickness. Fy= steel minimum yield strength.

250S125-19 Dimensions

Dimensions (in)											
WIDTH A	THICKNESS* Fy=60 ksi	STRIP LENGTH	FLANGE B	FLANGE C	EDGING D	EDGING E	WIDTH F	LIP G	LIP H	KNURLED M	LENGTH Nom. L
± 1/32		± 0.005	-1/16 / +1/8				± 1/32	-1/32 / +1/8			
Nom. 2.500 2.468 – 2.532	mt = 0.0193 dt = 0.0203	5.200	Nom. 1.250" 1.1875 - 1.375		Nom. 0.490" 0.420 – 0.560		Nom. 2.500 2.468 – 2.532	Nom. 0.1875 0.1562 - 0.3125		Nom. 0.042 0.022 – 0.063	± 1/8

*mt=minimum thickness. dt= design thickness. Fy= steel minimum yield strength.

250T125-19 Dimensions

Dimensions (in)									
WIDTH A	THICKNESS* Fy=50 ksi	STRIP LENGTH	FLANGE B	FLANGE C	EDGING D	EDGING E	WIDTH F	KNURLED M	LENGTH Nom. L
+1/8		± 0.005	-1/16 / +1/2				+1/8		
Nom. 2.500 2.500 – 2.625	mt = 0.0193 dt = 0.0203	5.000	Nom. 1.25" 1.1875 – 1.750		Nom. 0.490" 0.420 – 0.560		Nom. 2.500 2.500 – 2.625	Nom. 0.042 0.022 – 0.063	± 1/8

*mt=minimum thickness. dt= design thickness. Fy= steel minimum yield strength.

363S125-19 Dimensions

Dimensions (in)											
WIDTH A	THICKNESS* Fy=70 ksi	STRIP LENGHT	FLANGE B	FLANGE C	EDGING D	EDGING E	WIDTH F	LIP G	LIP H	KNURLED M	LENGHT Nom. L
± 1/32		± 0.005	-1/16 / +1/8				± 1/32	-1/32 / +1/8			
Nom. 3.625 3.594 – 3.657	mt = 0.0193 dt = 0.0203	6.280	Nom. 1.250" 1.1875 - 1.375		Nom. 0.490 0.420 – 0.560		Nom. 3.625 3.593 – 3.657	Nom. 0.1875 0.1562 - 0.3125		Nom. 0.042 0.022 – 0.063	± 1/8

*mt=minimum thickness. dt= design thickness

362T125-19 Dimensions

Dimensions (in)									
WIDTH A	THICKNESS* Fy=70 ksi	STRIP LENGHT	FLANGE B	FLANGE C	EDGING D	EDGING E	WIDTH F	KNURLED M	LENGHT Nom. L
+1/8		± 0.005	-1/16 / +1/2				+1/8		
Nom. 3.625 3.625 – 3.750	mt = 0.0193 dt = 0.0203	6.150	Nom. 1.25" 1.1875 – 1.750		Nom. 0.475" 0.400 – 0.550		Nom. 3.625 3.625 – 3.750	Nom. 0.042 0.022 – 0.063	± 1/8

*mt=minimum thickness. dt= design thickness

FIGURE 1 (Continued)

600S125-19 Dimensions

Dimensions (in)											
WIDTH A	THICKNESS* Fy=60 ksi	STRIP LENGTH	FLANGE B	FLANGE C	EDGING D	EDGING E	WIDTH F	LIP G	LIP H	KNURLED M	LENGTH Nom. L
± 1/32		± 0.005	-1/16 / +1/8				± 1/32	-1/32 / +1/8			
Nom. 6.000 5.968 – 6.032	mt = 0.0193 dt = 0.0203	8.725	Nom. 1.250" 1.1875 - 1.375		Nom. 0.800" 0.730 – 0.870		Nom. 6.000 5.968 – 6.032	Nom. 0.1875 0.1562 - 0.3125		Nom. 0.042 0.022 – 0.063	± 1/8

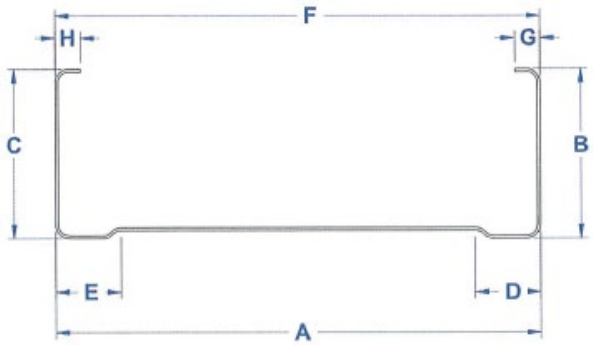
*mt=minimum thickness. dt= design thickness. Fy= steel minimum yield strength.

600T125-19 Dimensions

Dimensions (in)									
WIDTH A	THICKNESS* Fy=50 ksi	STRIP LENGTH	FLANGE B	FLANGE C	EDGING D	EDGING E	WIDTH F	KNURLED M	LENGTH Nom. L
+1/8		± 0.005	-1/16 / +1/2				+1/8		
Nom. 6.000 6.000 – 6.125	mt = 0.0193 dt = 0.0203	8.550	Nom. 1.25" 1.1875 – 1.750		Nom. 0.800" 0.730 – 0.870		Nom. 6.000 6.000 – 6.125	Nom. 0.042 0.022 – 0.063	± 1/8

*mt=minimum thickness. dt= design thickness. Fy= steel minimum yield strength.

Stud:



Track:

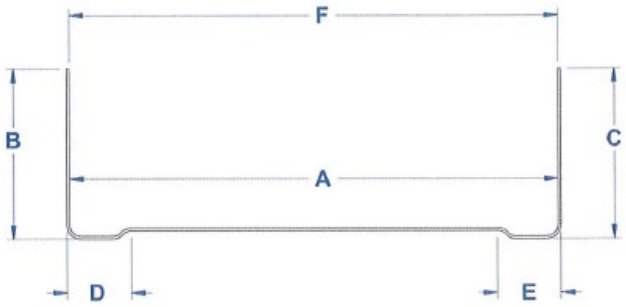


TABLE 2 – SECTION PROPERTIES

Member	Design Thickness (in)	F_y (ksi)	Gross Properties							Effective Properties						Torsional Properties						
			Area (in^2)	Weight (lb/ft)	I_x (in^4)	S_x (in^3)	R_x (in)	I_y (in^4)	R_y (in)	I_{xe} (in^4)	S_{xe} (in^3)	M_a (in-k)	M_{ad} (in-k)	$V_{a,g}$ (lb)	$V_{a,net}$ (lb)	Jx1000 (in^4)	C_w (in^6)	X_o (in)	m (in)	R_o (in)	β	L_u (in)
250S125-16	0.0163	50	0.840	0.29	0.087	0.069	1.014	0.015	0.427	0.073	0.053	1.350	1.46	493	307	0.006	0.019	-0.902	0.544	1.483	0.630	22.7
250T125-16	0.0163	50	0.080	0.27	0.081	0.065	1.008	0.012	0.389	0.055	0.036	0.920	-	493	-	0.007	0.014	-0.736	0.462	1.307	0.683	-
362S125-16	0.0163	60	0.103	0.35	0.204	0.113	1.141	0.017	0.406	0.170	0.084	2.460	2.18	413	342	0.007	0.043	0.043	0.492	1.844	0.999	20.4
362T125-16	0.0163	60	0.099	0.34	0.192	0.106	1.397	0.013	0.367	0.130	0.058	1.700	-	400	-	0.009	0.033	-0.624	0.415	1.573	0.843	-
600S125-16	0.0163	50	0.142	0.48	0.679	0.226	2.191	0.019	0.368	0.576	0.171	4.140	2.70	476	476	0.013	0.139	-0.563	0.409	2.292	0.940	21.9
600T125-16	0.0163	50	0.138	0.47	0.653	0.216	2.177	0.015	0.328	0.418	0.110	2.580	-	476	-	0.012	0.108	-0.479	0.341	2.253	0.955	-
250S125-19	0.0203	60	0.105	0.36	0.107	0.086	1.012	0.019	0.425	0.091	0.066	2.040	2.19	788	440	0.012	0.023	-0.898	0.542	1.479	0.632	20.7
250T125-19	0.0203	60	0.100	0.34	0.101	0.081	1.006	0.015	0.388	0.072	0.049	1.280	-	694	-	0.014	0.017	-0.735	0.460	1.306	0.683	-
362S125-19	0.0203	60	0.128	0.43	0.253	0.139	1.407	0.021	0.404	0.219	0.111	3.250	3.10	615	445	0.013	0.052	-0.810	0.489	1.840	0.806	20.3
362T125-19	0.0203	60	0.122	0.42	0.238	0.132	1.395	0.016	0.366	0.174	0.082	2.410	-	597	-	0.017	0.040	-0.624	0.413	1.571	0.843	-
600S125-19	0.0203	60	0.176	0.60	0.842	0.281	2.188	0.024	0.366	0.656	0.185	5.550	4.16	737	737	0.020	0.170	-0.601	0.407	2.503	0.942	19.8
600T125-19	0.0203	60	0.172	0.58	0.813	0.269	2.177	0.018	0.328	0.575	0.159	3.720	-	636	-	0.024	0.134	-0.479	0.340	2.253	0.955	-

1. Calculated properties are based on AISI S100-16, North American Specification for Design of Cold-Formed Steel Structural Members.
2. The centerline bend radius is based on inside corner radii shown in thickness chart.
3. For deflection calculations, use the effective moment of inertia.
4. Allowable moment includes cold-work of forming.

TABLE 3 – COMPOSITE LIMITED WALL HEIGHTS

Stud Member	F_y (ksi) (ksi)	Stud Spacing (in, o.c.)	Deflection Span Ratio	Load (psf)							
				5		7.5		10		15	
250S125-16	60	24	120	11'-5"	D	10'-0"	D	9'-0"	D	-	-
			180	10'-7"	D	9'-2"	D	8'-1"	D	-	-
			240	9'-10"	D	8'-4"	D	7'-5"	D	-	-
			360	8'-7"	D	7'-0"	D	6'-2"	D	-	-
250S125-16	60	16	120	13'-5"	D	11'-9"	D	10'-8"	D	7'-2"	S
			180	12'-2"	D	10'-7"	D	9'-7"	D	7'-2"	S
			240	11'-2"	D	9'-9"	D	8'-9"	D	7'-2"	S
			360	9'-10"	D	8'-5"	D	7'-5"	D	7'-0"	D
250S125-16	60	12	120	14'-10"	D	13'-0"	D	11'-5"	S	-	-
			180	13'-4"	D	11'-8"	D	11'-5"	S	-	-
			240	12'-3"	D	10'-8"	D	11'-5"	S	-	-
			360	10'-9"	D	9'-5"	D	11'-5"	S	-	-
362S125-16	60	24	120	14'-0"	S	11'-5"	S	9'-11"	S	-	-
			180	14'-0"	S	11'-5"	S	9'-11"	S	-	-
			240	14'-0"	S	11'-5"	S	9'-11"	S	-	-
			360	13'-0"	D	11'-4"	D	9'-6"	D	-	-
362S125-16	60	16	120	17'-6"	S	14'-3"	S	12'-4"	S	7'-5"	R
			180	16'-6"	D	14'-3"	S	12'-4"	S	7'-5"	R
			240	15'-0"	D	13'-1"	D	11'-11"	D	7'-5"	R
			360	13'-3"	D	11'-7"	D	10'-1"	D	7'-5"	R
362S125-16	60	12	120	18'-6"	S	15'-1"	S	13'-1"	S	8'-3"	R
			180	17'-3"	D	15'-1"	D	13'-1"	S	8'-3"	R
			240	15'-8"	D	13'-8"	D	12'-5"	D	8'-3"	R
			360	13'-11"	D	12'-2"	D	10'-10"	D	8'-3"	R
600S125-16	60	24	120	18'-6"	S	14'-9"	R	11'-1"	R	-	-
			180	18'-6"	S	14'-9"	R	11'-1"	R	-	-
			240	18'-0"	D	14'-9"	R	11'-1"	R	-	-
			360	16'-1"	D	13'-9"	D	11'-1"	R	-	-
600S125-16	60	16	120	23'-8"	S	17'-11"	R	13'-5"	R	-	-
			180	23'-1"	D	17'-11"	R	13'-5"	R	-	-
			240	21'-1"	D	17'-11"	R	13'-5"	R	-	-
			360	18'-6"	D	16'-2"	D	13'-5"	R	-	-
600S125-16	60	12	120	25'-6"	S	18'-10"	R	14'-1"	R	-	-
			180	25'-6"	D	18'-10"	R	14'-1"	R	-	-
			240	23'-4"	D	18'-10"	R	14'-1"	R	-	-
			360	20'-5"	D	17'-10"	D	14'-1"	R	-	-

TABLE 3 – COMPOSITE LIMITED WALL HEIGHTS (CONTINUED)

Stud Member	F_y (ksi) (ksi)	Stud Spacing (in, o.c.)	Deflection Span Ratio	Load (psf)							
				5		7.5		10		15	
250S125-19	60	24	120	12'-4"	D	10'-9"	D	9'-10"	S	-	-
			180	10'-11"	D	9'-7"	D	9'-10"	S	-	-
			240	10'-1"	D	8'-8"	D	9'-10"	S	-	-
			360	8'-10"	D	7'-4"	D	9'-10"	S	-	-
250S125-19	60	16	120	14'-2"	D	12'-4"	D	12'-2"	S	7'-11"	S
			180	12'-5"	D	10'-10"	D	12'-2"	S	7'-11"	S
			240	11'-4"	D	9'-10"	D	12'-2"	S	7'-11"	S
			360	9'-11"	D	8'-6"	D	12'-2"	S	7'-11"	S
250S125-19	60	12	120	15'-7"	D	13'-7"	D	12'-8"	S	8'-3"	S
			180	13'-7"	D	11'-10"	D	12'-8"	S	8'-3"	S
			240	12'-4"	D	10'-9"	D	12'-8"	S	8'-3"	S
			360	10'-9"	D	9'-5"	D	12'-8"	S	8'-3"	S
362S125-19	60	24	120	16'-2"	S	13'-2"	S	11'-5"	S	7'-1"	R
			180	16'-2"	S	13'-2"	S	11'-5"	S	7'-1"	R
			240	15'-0"	D	13'-1"	D	11'-5"	S	7'-1"	R
			360	13'-2"	D	11'-6"	D	9'-9"	D	7'-1"	R
362S125-19	60	16	120	19'-8"	D	16'-1"	S	13'-11"	S	9'-2"	S
			180	17'-2"	D	15'-0"	D	13'-7"	D	9'-2"	S
			240	15'-9"	D	13'-9"	D	12'-6"	D	9'-2"	S
			360	13'-9"	D	12'-0"	D	10'-9"	D	9'-1"	D
362S125-19	60	12	120	20'-9"	D	17'-2"	S	14'-10"	S	9'-9"	S
			180	18'-2"	D	15'-10"	D	14'-5"	D	9'-9"	S
			240	16'-8"	D	14'-6"	D	13'-2"	D	9'-9"	S
			360	14'-7"	D	12'-9"	D	11'-7"	D	9'-9"	S
600S125-19	60	24	120	20'-9"	S	16'-11"	S	13'-0"	R	-	-
			180	20'-9"	S	16'-11"	S	13'-0"	R	-	-
			240	19'-2"	D	16'-9"	D	13'-0"	R	-	-
			360	16'-9"	D	14'-5"	D	13'-0"	R	-	-
600S125-19	60	16	120	27'-2"	S	21'-11"	R	16'-5"	R	7'-1"	R
			180	23'-10"	D	20'-10"	D	16'-5	R	7'-1"	R
			240	21'-8"	D	18'-11"	D	16'-5	R	7'-1"	R
			360	18'-11"	D	16'-6"	D	16'-5	R	7'-1"	R
600S125-19	60	12	120	28'-9"	S	23'-6"	S	17'-8"	R	7'-7"	R
			180	26'-2"	D	22'-10"	D	17'-8"	R	7'-7"	R
			240	23'-9"	D	20'-9"	D	17'-8"	R	7'-7"	R
			360	20'-9"	D	18'-1"	D	17'-8"	R	7'-7"	R

TABLE 3 – COMPOSITE LIMITED WALL HEIGHTS (CONTINUED)

Notes for Table 3:

1. Limiting heights are based on a single layer of 5/8" thick TE Fire Rey Type X gypsum wallboard (GWB) installed full height on both faces of the wall with the panel length vertically oriented. #6 x 3/4" Type S drywall screws compliant to ASTM C1002 shall be located 1-1/2" from all stud and track ends. Screw spacing for assemblies with stud spacing at 12” o/c and 16” o/c shall have screw spacing minimum of 16” o/c. Screw spacing for assemblies with stud spacing at 24” o/c shall have screw spacing minimum of 12” o/c.

2. Limiting heights are governed by the lesser of the Assembly Strength (S), End Reaction Strength (R), flexural strength, or the deflection (D) limit indicated in the table.

3. Limiting heights based on deflection of composite wall panels are achieved by testing with successive incremental loadings applied at L/360, L/240, L/180 and L/120 deflection limits in accordance with AISI S916.

4. If a calculated allowable wall heigh is 7’-0” or less, the table entry is a dash, “-“.

TABLE 4 – NON-COMPOSITE LIMITED WALL HEIGHTS FULLY BRACED

Stud Member	Spacing (in, oc)	F_y (ksi)	5 psf			7.5 psf			10 psf		
			L/120	L/240	L/360	L/120	L/240	L/360	L/120	L/240	L/360
250S125-16	12	50	12'-5"	9'-10"	8'-7"	10'-10"	8'-7"	7'-6"	9'-5" f	7'-9"	6'-10"
	16		11'-3"	8'-11"	7'-9"	9'-5" f	7'-9"	6'-10"	8'-2" f	7'-1"	6'-2"
	24		9'-5" f	7'-9"	6'-10"	7'-8" f	6'-10"	5'-11"	6'-8" f	6'-2"	5'-5"
362S125-16	12	60	16'-5"	13'-0"	11'-4"	13'-10" f	11'-4"	9'-11"	12'-0" f	10'-4"	9'-0"
	16		14'-9" f	11'-10"	10'-4"	12'-0" f	10'-4"	9'-0"	10'-5" f	9'-5"	8'-2"
	24		12'-0" f	10'-4"	9'-0"	9'-10" f	9'-0"	7'-10"	8'-6" f	8'-2"	7'-2"
600S125-16	12	50	18'-11" f	18'-11" f	17'-1"	15'-5" f	15'-5" f	14'-11"	13'-5" f	13'-5" f	13'-5" f
	16		16'-5" f	16'-5" f	15'-6"	13'-5" f	13'-5" f	13'-5" f	11'-7" f	11'-7" f	11'-7" f
	24		13'-5" f	13'-5" f	13'-5" f	10'-11" f	10'-11" f	10'-11" f	9'-5" f	9'-5" f	9'-5" f
250S125-19	12	60	13'-4"	10'-7"	9'-3"	11'-8"	9'-3"	8'-1"	10'-7"	8'-5"	7'-4"
	16		12"-1"	9'-7"	8'-5"	10'-7"	8'-5"	7'-4"	9'-7" f	7'-7"	6'-8"
	24		10'-7"	8'-5"	7'-4"	9'-3"	7'-4"	6'-5"	8'-2" f	6'-8"	5'-10"
362S125-19	12	60	17'-10"	14'-2"	12'-5"	15'-7"	12'-5"	10'-10"	14'-2"	11'-3"	9'-10"
	16		16'-3"	12'-11"	9'-10"	14'-2"	11'-3"	9'-0"	12'-5" f	10'-3"	8'-11"
	24		14'-2"	11'-3"	9'-0"	11'-8" f	9'-10"	8'-7"	10'-2" f	8'-11"	7'-9"
600S125-19	12	60	23'-6" f	20'-5"	17'-10"	19'-2" f	17'-10"	15'-7"	16'-7" f	16'-3" f	14'-2"
	16		20'-4" f	18'-7"	16'-3"	16'-7" f	16'-3" f	14'-2"	14'-4" f	14'-4" f	12'-10"
	24		16'-7" f	16'-3" f	14'-2"	13'-7" f	13'-7" f	12'-4"	11'-9" f	11'-9" f	11'-3"

1. 5 psf, 7.5 psf, and 10 psf loads have NOT been reduced for strength or deflection checks. Full lateral load is applied.
2. Calculated properties are based on AISI S100-16, North American Specification for Cold-Formed Steel Structural Members.
3. Limiting heights are based on continuous support of each flange over the full length of the stud.
4. Limiting heights are based on steel properties only (non-composite).
5. Web crippling checks are based on end-one flange loading condition using 1-inch end bearing.
6. 'f' adjacent to the height value indicates that flexural stress controls the allowable wall height.

TABLE 5 – NON-COMPOSITE LIMITED WALL HEIGHTS BRACED 48" O.C.

Stud Member	Spacing (in, oc)	F_y (ksi)	5 psf			7.5 psf			10 psf		
			L/120	L/240	L/360	L/120	L/240	L/360	L/120	L/240	L/360
250S125-16	12	60	12'-2" f	9'-10"	8'-7"	9'-11"	8'-7"	7'-6"	8'-7" f	7'-9"	6'-10"
	16		10"-7" f	8'-11"	7'-9"	8'-7"	7'-9"	6'-10"	7'-5" f	7'-1"	6'-2"
	24		8'-7" f	7'-9"	6'-10"	7'-0"	6'-10"	5'-11"	6'-1" f	6'-1" f	5'-5"
362S125-16	12	60	12'-7" f	12'-7" f	11'-4"	10'-3" f	10'-3" f	9'-11"	8'-10" f	8'-10" f	8'-10" f
	16		10'-11" f	10'-11" f	10'-4"	8'-10" f	8'-10" f	8'-10" f	7'-8" f	7'-8" f	7'-8" f
	24		8'-10" f	8'-10" f	8'-10" f	7'-3" f	7'-3" f	7'-3" f	6'-3" f	6'-3" f	6'-3" f
600S125-16	12	50	18'-11" f	18'-11" f	17'-1"	15'-5" f	15'-5" f	14'-11"	13'-5" f	13'-5" f	13'-5" f
	16		16'-5" f	16'-5" f	15'-6"	13'-5" f	13'-5" f	13'-5" f	11'-7" f	11'-7" f	11'-7" f
	24		13'-5" f	13'-5" f	13'-5" f	10'-11" f	10'-11" f	10'-11" f	9'-5" f	9'-5" f	9'-5" f
250S125-19	12	60	13'-4"	10'-7"	9'-3"	11'-8"	9'-3"	8'-1"	10'-7"	8'-5"	7'-4"
	16		12"-1"	9'-7"	8'-5"	10'-7"	8'-5"	7'-4"	9'-7" f	7'-7"	6'-8"
	24		10'-7"	8'-5"	7'-4"	9'-3"	7'-4"	6'-5"	8'-2" f	6'-8"	5'-10"
362S125-19	12	60	15'-10" f	14'-2"	12'-5"	12'-11" f	12'-5"	10'-10"	11'-2" f	11'-2" f	9'-10"
	16		13'-8" f	12'-11"	11'-3"	11'-2" f	11'-2" f	9'-10"	9'-8" f	9'-8" f	8'-11"
	24		11'-2" f	11'-2" f	9'-10"	9'-1" f	9'-1" f	8'-7"	7'-11" f	7'-11" f	7'-9"
600S125-19	12	60	23'-6" f	20'-5"	17'-10"	19'-2" f	17'-10"	15'-7"	16'-7" f	16'-3" f	14'-2"
	16		20'-4" f	18'-7"	16'-3"	16'-7" f	16'-3" f	14'-2"	14'-4" f	14'-4" f	12'-10"
	24		16'-7" f	16'-3" f	14'-2"	13'-7" f	13'-7" f	12'-4"	11'-9" f	11'-9" f	11'-3"

1. 5 psf, 7.5 psf, and 10 psf loads have NOT been reduced for strength or deflection checks. Full lateral load is applied.
2. Calculated properties are based on AISI S100-16, North American Specification for Cold-Formed Steel Structural Members.
3. Limiting heights are based on continuous support of each flange over the full length of the stud.
4. Limiting heights are based on steel properties only (non-composite).
5. Web crippling checks are based on end-one flange loading condition using 1-inch end bearing.
6. 'f' adjacent to the height value indicates that flexural stress controls the allowable wall height

TABLE 6 – CEILING SPANS

Stud Member	Spacing (in, oc)	F_y (ksi)	4 psf Lateral Support of Compression Flange						6 psf Lateral Support of Compression Flange						10 psf Lateral Support of Compression Flange					
			Unsupported			Midspan			Unsupported			Midspan			Unsupported			Midspan		
			L/120	L/240	L/360	L/120	L/240	L/360	L/120	L/240	L/360	L/120	L/240	L/360	L/120	L/240	L/360	L/120	L/240	L/360
250S125-16	12	50	7'-3"	7'-3"	7'-3"	9'-8"	9'-8"	9'-8"	6'-5"	6'-5"	6'-5"	8'-8"	6'-5"	6'-5"	5'-6"	5'-6"	5'-6"	7'-5"	5'-6"	5'-6"
	16		6'-8"	6'-8"	6'-8"	9'-0"	9'-0"	9'-0"	5'-11"	5'-11"	5'-11"	7'-11"	5'-11"	5'-11"	5'-1"	5'-1"	5'-1"	6'-8"	5'-1"	5'-1"
	24		5'-11"	5'-11"	5'-11"	7'-11"	7'-11"	7'-11"	5'-3"	5'-3"	5'-3"	6'-11"	5'-3"	5'-3"	4'-7"	4'-7"	4'-7"	5'-8"	4'-7"	4'-7"
362S125-16	12	60	8'-2"	8'-2"	8'-2"	10'-11"	11'-10"	11'-0"	7'-3"	7'-3"	7'-3"	9'-9"	9'-9"	9'-9"	6'-4"	6'-4"	6'-4"	8'-5"	8'-5"	8'-5"
	16		7'-6"	7'-6"	7'-6"	10'-1"	10'-1"	10'-1"	6'-8"	6'-8"	6'-8"	9'-0"	9'-0"	9'-0"	5'-10"	5'-10"	5'-10"	7'-10"	7'-10"	7'-10"
	24		6'-8"	6'-8"	6'-8"	9'-0"	9'-0"	9'-0"	6'-0"	6'-0"	6'-0"	8'-0"	8'-0"	8'-0"	5'-2"	5'-2"	5'-2"	6'-11"	6'-11"	6'-11"
600S125-16	12	50	9'-7"	9'-7"	9'-7"	13'-2"	13'-2"	13'-2"	8'-8"	8'-8"	8'-8"	11'-10"	11'-10"	11'-10"	7'-7"	7'-7"	7'-7"	10'-4"	10'-4"	10'-4"
	16		8'-11"	8'-11"	8'-11"	12'-3"	12'-3"	12'-3"	8'-0"	8'-0"	8'-0"	11'-0"	11'-0"	11'-0"	7'-0"	7'-0"	7'-0"	9'-6"	9'-6"	9'-6"
	24		8'-0"	8'-0"	8'-0"	11'-0"	11'-0"	11'-0"	7'-3"	7'-3"	7'-3"	9'-9"	9'-9"	9'-9"	6'-2"	6'-2"	6'-2"	8'-4"	8'-4"	8'-4"
250S125-19	12	60	8'-1"	8'-1"	8'-1"	11'-1"	8'-1"	8'-1"	7'-3"	7'-3"	7'-3"	9'-11"	7'-3"	7'-3"	6'-3"	6'-3"	6'-3"	8'-7"	6'-3"	6'-3"
	16		7'-6"	7'-6"	7'-6"	10'-3"	7'-6"	7'-6"	6'-8"	6'-8"	6'-8"	9'-2"	6'-8"	6'-8"	5'-9"	5'-9"	5'-9"	7'-11"	5'-9"	5'-9"
	24		6'-8"	6'-8"	6'-8"	9'-2"	6'-8"	6'-8"	5'-11"	5'-11"	5'-11"	8'-2"	5'-11"	5'-11"	5'-2"	5'-2"	5'-2"	6'-11"	5'-2"	5'-2"
362S125-19	12	60	9'-1"	9'-1"	9'-1"	12'-6"	12'-6"	12'-6"	8'-1"	8'-1"	8'-1"	11'-3"	11'-3"	11'-3"	7'-1"	7'-1"	7'-1"	9'-8"	9'-8"	9'-8"
	16		8'-4"	8'-4"	8'-4"	11'-7"	11'-7"	11'-7"	7'-6"	7'-6"	7'-6"	10'-3"	10'-3"	10'-3"	6'-6"	6'-6"	6'-6"	8'-11"	8'-11"	8'-11"
	24		7'-6"	7'-6"	7'-6"	10'-3"	10'-3"	10'-3"	6'-9"	6'-9"	6'-9"	9'-2"	9'-2"	9'-2"	5'-10"	5'-10"	5'-10"	7'-11"	7'-11"	7'-11"
600S125-19	12	60	10'-2"	10'-2"	10'-2"	14'-4"	14'-4"	14'-4"	9'-2"	9'-2"	9'-2"	12'-9"	12'-9"	12'-9"	8'-0"	8'-0"	8'-0"	11'-1"	11'-1"	11'-1"
	16		9'-5"	9'-5"	9'-5"	13'-2"	13'-2"	13'-2"	8'-6"	8'-6"	8'-6"	11'-9"	11'-9"	11'-9"	7'-5"	7'-5"	7'-5"	10'-3"	10'-3"	10'-3"
	24		8'-6"	8'-6"	8'-6"	11'-9"	11'-9"	11'-9"	7'-8"	7'-8"	7'-8"	10'-6"	10'-6"	10'-6"	6'-8"	6'-8"	6'-8"	9'-2"	9'-2"	9'-2"

1. For unbraced sections, allowable moment is based on AISI S100-16, section F2 with weak axis and torsional unbraced length assumed to be the listed span (completely unbraced). For mid-span braced sections, allowable moment based on AISI S100-16 section F2 with weak axis and torsional unbraced length assumed to be one-half of the listed span (bracing at midspan).
2. Web crippling calculation based on bearing length = 1 inch.
3. Web crippling and shear capacity have not been reduced for punchouts. If web punchouts occur near support members must be checked for reduced shear and web crippling in accordance with the AISI S100-16.
4. Values are for simple span conditions.

TABLE 7 – ALLOWABLE SCREW CAPACITIES

Design Thickness (in)	Yield Strength F_y (ksi)	Tensile Strength F_u (ksi)	Allowable Screw Capacities (lbs per screw)									
			#6 Screw (0.138" Dia, 1/4" Head)		#8 Screw (0.164" Dia, 5/16" Head)		#10 Screw (0.190" Dia, 0.340" Head)		#12 Screw (0.216" Dia, 0.340" Head)		1/4" Screw (0.250" Dia, 0.409" Head)	
			Shear	Tension	Shear	Tension	Shear	Tension	Shear	Tension	Shear	Tension
0.0163	50	65	70	41	77	49	83	57	88	65	95	75
0.0163	60	70	76	45	83	53	89	61	95	70	102	81
0.0203	50	65	98	52	107	61	115	71	122	81	132	93
0.0203	60	70	105	56	115	66	124	76	132	87	142	101

1. Calculated properties are based on AISI S100-16, North American Specification for Design of Cold-Formed Steel Structural Members.
2. When connecting materials of different steel thicknesses or tensile strengths, use the lowest values. Tabulated values assume two sheets of equal thickness are connected.
3. Screw shear and tension capacities was developed using published screw manufacturer data and evaluation reports available at the time of publications.
4. A nominal shear stress of 42.85ksi and a nominal tension stress of 40.84ksi was used for calculations based on screw manufacturer data.
5. Screw capacities are based on Allowable Strength Design (ASD) and include safety factor of 3.0.
6. When multiple fasteners are used, screws are assumed to have a center-to-center spacing of at least 3 times the nominal diameter (d).
7. Screws are assumed to have a center-of-screw to edge-of-steel dimension of at least 1.5 times the nominal diameter (d) of the screw.
8. Tension capacity is based on the lesser of pullout capacity in sheet closest to screw tip, or pullover capacity for sheet closest to screw head (using head diameter).
9. Note that for all tension values calculated in screw table, pullover values have been reduced by 50% assuming eccentrically loaded connections that produce a non-uniform pullover force of the fastener.
10. Screw capacities are governed by a conservative estimate of screw capacity, not by sheet steel failure.
11. For higher screw capacities, especially for screw strength, use specific screws from specific manufacturer. See manufacturer's data for specific allowable values and installation instructions.