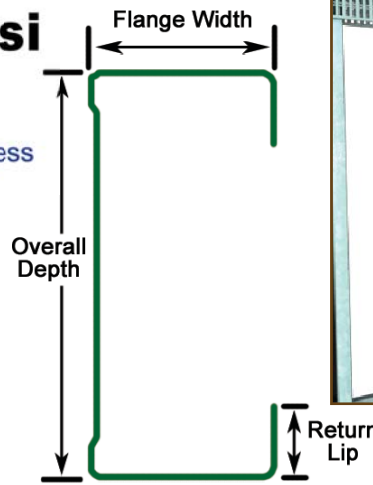


362PWS134-21NS, 55 ksi

Overall Depth | PWS PrimeWall® (EQ) Stud | Flange Width | Material Thickness



Material Composition

ASTM A653/A 653M Structural Steel Grade 55 (380), with 55ksi (380MPa) minimum yield strength and 70ksi (480MPa) minimum tensile strength. Coating is G40 (Z120) hot-dipped galvanized, or equivalent conforming to ASTM C 645. Steel material with G60 and G90 coating are available upon request.

Physical Properties of Non-Standard Non-Structural CFS Framing Members															
Section	Similar To SFIA	Mil Thickness (mils)	Design Thickness (in)	Gross Properties						Effective Properties		Moments			
				Area (in ²)	Weight (lbs/ft)	I _x (in ⁴)	R _x (in)	I _y (in ⁴)	R _y (in)	I _{xd} (in ⁴)	S _x (in ³)	Allowable M _n (in-k)	Nominal M _n (in-k)	Dist. Buck. M _{nd} (in-k)	Unbraced Length L _u (in)
362PWS134-19NS, 55ksi	362S125-30	19	0.0200	0.138	0.471	0.283	1.430	0.035	0.504	0.254	0.094	3.09	5.17	5.34	26.6
600PWS134-21NS, 55ksi ¹	600S125-30	21	0.0221	0.205	0.699	1.027	2.237	0.045	0.466	0.851	0.169	5.57	9.29	10.59	25.7

Table Notes

1. Section properties and nominal moments are based on AISI S100-07.
2. Superscript "1" denotes that the web height-to-thickness ratio exceeds 260.
3. Strength increase due to cold-work of forming is not considered in the analysis.
4. Standard punchouts are considered in the calculation of nominal moments.

Table Notes cont'd

5. Rotational stiffness (k_r) is taken equals to zero for calculation of the distortional buckling moment.
6. PWS stud is considered fully braced when the unbraced length is less than the listed L_u.

Composite Limiting Heights with 5/8" Type X Gypsum Board											
Section	Similar to SFIA	Spacing (in. o.c.)	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
362PWS134-19NS, 55ksi	362S125-30	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"
600PWS134-21NS, 55ksi	600S125-30	12	30' 3"	26' 9"	23' 5"	26' 10"	23' 4"	20' 5"	24' 2" f	21' 2"	18' 7"
		16	27' 9"	24' 3"	21' 3"	24' 2" f	21' 2"	18' 7"	20' 11" f	19' 3"	16' 10"
		24	24' 2" f	21' 2"	18' 7"	19' 9" f	18' 6"	16' 3"	17' 1" f	16' 10"	14' 7"

Table Notes

1. Composite limiting heights are based on testing according to ICC-ES AC86-2010.
2. Composite limiting heights are based on gypsum board applied full height to each stud flange and installed using minimum No. 6 Type S Drywall screws.
3. No fasteners are required for attaching the stud to the track, except as required by ASTM C754.
4. 'f' adjacent to the height value indicates that flexural stress controls the allowable wall height.

Allowable Loads for Screw Connections (pounds per screw)														
Member Style (Thickness designator)	Design Thickness (in.)	Minimum Thickness (in)	Yield	Tensile	#6 Screw (0.138" dia.; 1/4" head)			#8 Screw (0.164" dia.; 5/16" head)			#10 Screw (0.190" dia.; 3/8" head)			C645 Screw Test (P, F)
			F _y (ksi)	F _u (ksi)	Shear (lbs)	Pullout (lbs)	Pullover (lbs)	Shear (lbs)	Pullout (lbs)	Pullover (lbs)	Shear (lbs)	Pullout (lbs)	Pullover (lbs)	
19	0.0200	0.0190	55	70	97	55	175	112	65	219	121	75	238	Pass
21	0.0221	0.0210	55	70	107	60	193	127	72	242	140	83	263	Pass

Table Notes

1. Data is based on calculated values in accordance with AISI S100-07 Section E4 for equal thicknesses joined together.
2. Pullover capacities are based on concentrically loaded connections that produce a uniform pull-over force on the fastener.
3. The edge distance, e, is taken as 1.5 times the screw shank diameter.
4. The design thickness, t, is used in the calculation of the allowable pullout strength.
5. The effective pullover resistance diameter, d'w, is taken as the screw head diameter.
6. C645 screw penetration test is based on 3rd party independent testing.



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Allowable Ceiling Spans														
Section	Similar to SFIA	F _y (ksi)	4 psf						6 psf					
			Lateral Support of Compression Flange						Lateral Support of Compression Flange					
			Unsupported			Midspan			Unsupported			Midspan		
			Joist Spacing (in.) o.c.			Joist Spacing (in.) o.c.			Joist Spacing (in.) o.c.			Joist Spacing (in.) o.c.		
			12	16	24	12	16	24	12	16	24	12	16	24
L/240														
362PWS134-19NS, 55ksi	362S125-30	55	10' 4" f	9' 7" f	8' 7" f	14' 3" f	13' 1" f	11' 8" f	9' 3" f	8' 7" f	7' 8" f	12' 8" f	11' 8" f	10' 4" f
600PWS134-21NS, 55ksi	600S125-30	55	12' 6" f	11' 7" f	10' 5" f	17' 4" f	16' 0" f	14' 4" f	11' 3" f	10' 5" f	9' 4" f	15' 6" f	14' 4" f	12' 10" f
L/360														
362PWS134-19NS, 55ksi	362S125-30	55	10' 4" f	9' 7" f	8' 7" f	14' 0"	12' 9"	11' 1"	9' 3" f	8' 7" f	7' 8" f	12' 3"	11' 1"	9' 8"
600PWS134-21NS, 55ksi	600S125-30	55	12' 6" f	11' 7" f	10' 5" f	17' 4" f	16' 0" f	14' 4" f	11' 3" f	10' 5" f	9' 4" f	15' 6" f	14' 4" f	12' 10" f

Table Notes

- "f": flexure controls, "s": shear controls. No letter next to the allowable span means deflection controls.
- All values are based on total load of assembly, not including storage or accessible ceilings.
- All values are for simple spans, with compression flange either unbraced or braced at midspan.

Non-Composite Fully Braced Walls												
Section	Similar to SFIA	L _u (in)	Spacing (in o.c.)	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
362PWS134-19NS, 55ksi	362S125-30	26.6	12	18' 9"	14' 11"	13' 0"	16' 5"	13' 0"	11' 4"	14' 4" f	11' 10"	10' 4"
		26.6	16	17' 1"	13' 6"	11' 10"	14' 4" f	11' 10"	10' 4"	12' 5" f	10' 9"	9' 4"
		26.6	24	14' 4" f	11' 10"	10' 4"	11' 8" f	10' 4"	9' 0"	10' 1" f	9' 4"	8' 2"
600PWS134-21NS, 55ksi	600S125-30	25.7	12	27' 2" f	22' 4"	19' 6"	22' 2" f	19' 6"	17' 0"	19' 3" f	17' 8"	15' 5"
		25.7	16	23' 7" f	20' 3"	17' 8"	19' 3" f	17' 8"	15' 5"	16' 8" f	16' 1"	14' 0"
		25.7	24	19' 3" f	17' 8"	15' 5"	15' 8" f	15' 5"	13' 6"	13' 7" f	13' 7" f	12' 3"

Table Notes

- "f": flexure controls, "s": shear controls. No letter next to the allowable height means deflection controls.
- All values are calculated based on AISI S100-07: steel properties only.
- Web crippling is not considered.

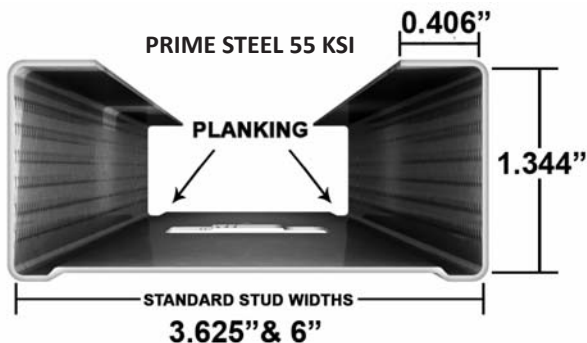
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- Based on bracing of the stud not to exceed L_u.
- The factory punchouts are in accordance with AISI S201-07 Section C5. The distance from the center of the last punchout to the end of the stud is 12".

Non-Composite Walls Braced at 4' on Center											
Section	Similar to SFIA	Spacing (in. o.c.)	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
362PWS134-19NS, 55ksi	362S125-30	12	18' 5" f	14' 11"	13' 0"	15' 0" f	13' 0"	11' 4"	13' 0" f	11' 10"	10' 4"
		16	15' 11" f	13' 6"	11' 10"	13' 0" f	11' 10"	10' 4"	11' 3" f	10' 9"	9' 4"
		24	13' 0" f	11' 10"	10' 4"	10' 7" f	10' 4"	9' 0"	9' 2" f	9' 2" f	8' 2"
600PWS134-21NS, 55ksi	600S125-30	12	27' 0" f	22' 4"	19' 6"	22' 1" f	19' 6"	17' 0"	19' 1" f	17' 8"	15' 5"
		16	23' 5" f	20' 3"	17' 8"	19' 1" f	17' 8"	15' 5"	16' 6" f	16' 1"	14' 0"
		24	19' 1" f	17' 8"	15' 5"	15' 7" f	15' 5"	13' 6"	13' 6" f	13' 6" f	12' 3"

Table Notes

- "f": flexure controls, "s": shear controls. No letter next to the allowable height means deflection controls.
- All values are calculated based on AISI S100-07: steel properties only.
- Web crippling is not considered.
- Values based on discrete bracing of 48" o.c. restraining lateral and lateral/torsional buckling.
- The factory punchouts are in accordance with AISI S201-07 Section C5. The distance from the center of the last punchout to the end of the stud is 12".



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