



KNEE WALL SUPPORT BRACKET ASSEMBLY



Patent Pending

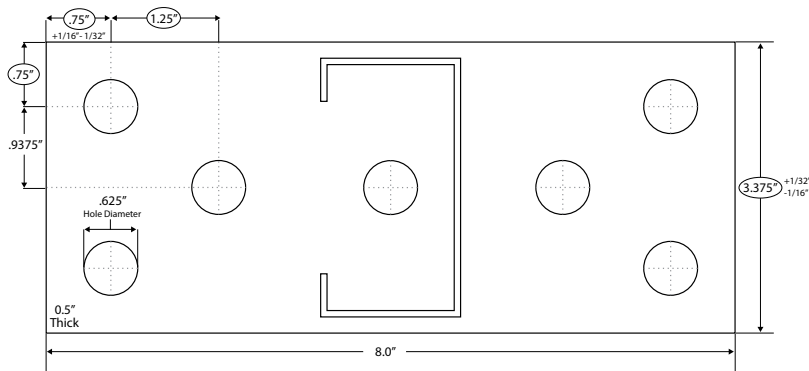
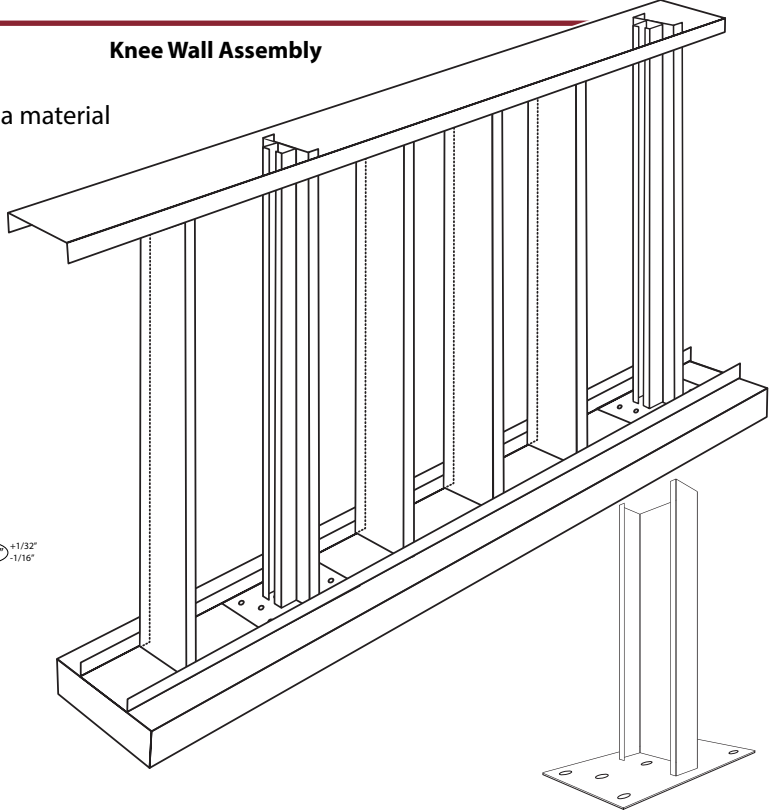
Knee Wall Support Bracket Assembly: What is it? An engineered system comprised of a 1/2" steel base plate welded to a 14ga structural stud.

In the construction industry, a "knee wall" is a term used to describe a short wall that is typically half the height of a full-sized wall. Also known as a "pony wall" or "cripple wall," knee walls are used for various purposes in building design, including providing structural support, dividing spaces, and enhancing aesthetic appeal.

TELLING'S KNEE WALL STUD & BASE PLATE:

- Knee Wall Stud & Base Plate are loaded perpendicular to the leg
- Knee Wall Stud is 300S162-68 14 ga. Competing products utilize 12ga material
- Base Plate is 8" x 3-3/8" and 1/2" thick with groove for Stud
- 1 Knee Wall Stud per Support Stud & Base Plate. Competitive products utilize 2 studs per support bracket
- Higher Allowable Loads than competing products

Knee Wall Assembly



Base plate thickness = 1/2" (36ksi)
 Bolt size = 1/2" Hole size = 5/8"
 Knee wall stud = 300S162-68

Allowable Bending Capacity (kip-in)				Knee Wall Support Stud: 300S162-68 (50 ksi) Anchor quantity: 4 at each corner Anchor Type: Hilti Kwik-TZ2 Anchor Size: 1/2 inch Concrete Thickness: 5.5 inches Concrete Strength (cracked) 3000 psi Embedment: 3.25 inches I_{eff}	Anchor Layout			
Height (in)	Pony Wall Section	Stud to Baseplate Weld	Anchor to concrete		Anchor Layout			
24	14.04	12.66	12.57		Anchor Layout			
36	13.69	12.66	12.57		Anchor Layout			
48	12.50	12.66	12.57	Anchor Layout				

Allowable Point Load Applied at the Top (lbf)								
Height (in)	Strength Limit State	Combined Strength and Deflection						
		L/90	L/120	L/180	L/240	L/360	L/480	L/600
24	524	524	524	524	524	524	430	344
36	349	349	349	349	349	255	191	153
48	260	260	260	260	215	143	108	86

Allowable Distributed Load Applied along the Wall (plf)								
Height (in)	Strength Limit State	Combined Strength and Deflection						
		L/90	L/120	L/180	L/240	L/360	L/480	L/600
24	524	524	524	524	524	524	524	459
36	233	233	233	233	233	227	170	136
48	130	130	130	130	130	96	72	57

Representative loads based on specific quantity, type of anchors and concrete thickness. For additional anchor type and concrete thickness refer to detailed knee-wall technical catalog.



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