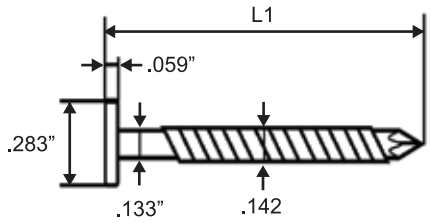
PowerLite® CAP##W4-H .133" Pins for Cold Formed Steel

MAX

Product data

Dimensions



Item name	L1	Shank	Pins/Coil	Case Qty.
CAP32W4-H	1-1/4"	Knurl	50	2,000 Pins
CAP38W4-H	1-1/2"	Knurl	50	2,000 Pins
CAP50W4-H	2"	Knurl	50	2,000 Pins
CAP65W4-H	2-1/2"	Knurl	50	2,000 Pins

General Inf

Material : Carbon Steel

Hardness : ≥ HRC55

Electrogalvanized with a zinc cromate : ≥ 2μm

Tool

PowerLite® HN120

Concrete/ Steel Pinn

Applications

Plywood to Cold Formed Steel

Wood to Cold Formed Steel

Pin Selector

Top Member	Item name
Plywood ≤ 1/2"	CAP32W4-H
Plywood ≤ 1"	CAP38W4-H
Wood ≤ 1-1/2"	CAP50W4-H CAP65W4-H

Fastening to Cold Formed Steel

Maximum Loads

- 1/2" OSB to Cold Formed Steel -

Maximum Loads (lbf)						
SPECIMEN #	18 Ga.		16 Ga.		14 Ga.	
	Tension	Shear	Tension	Shear	Tension	Shear
1	164	364	340	471	727	539
2	154	322	343	465	558	478
3	220	242	351	436	528	472
4	158	323	146	503	600	543
5	122	357	384	462	722	501
AVG.	**164**	**322**	**313**	**467**	**627**	**506**
MAX.	**220**	**364**	**384**	**503**	**727**	**543**
MIN.	**122**	**242**	**146**	**436**	**528**	**472**

- CAP32W4-H is used for the test.
- Operating pressure: 333 psi (Pullout)
  217 psi (Shear)
- See Appendix.1 for testing equipment
- Fastener Minimum Embedment to Steel is 0.39"

- 3/4" OSB to Cold Formed Steel -

Maximum Loads (lbf)			
SPECIMEN #	Shear		
	18 Ga.	16 Ga.	14 Ga.
1	397	572	651
2	383	534	599
3	411	558	646
4	389	531	622
5	404	621	646
AVG.	**397**	**563**	**633**
MAX.	**411**	**621**	**651**
MIN.	**383**	**531**	**599**

- CAP32W4-H is used for the test.
- Operating pressure: 246 psi (Shear)
- See Appendix.1 for testing equipment
- Fastener Minimum Embedment to Steel is 0.39"

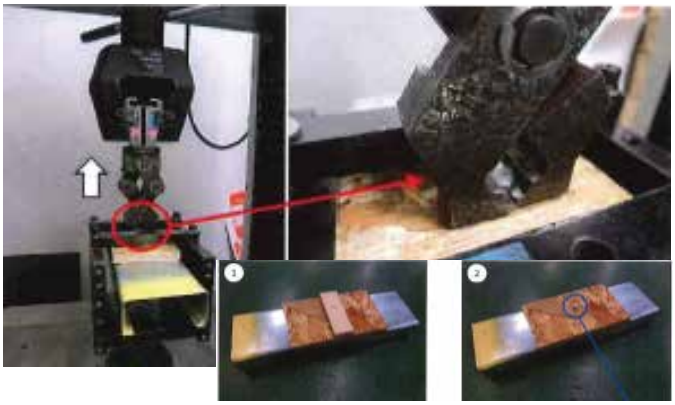
- 2x Wood (1-1/2") to Cold Formed Steel -

Maximum Loads (lbf)			
SPECIMEN #	Shear		
	18 Ga.	16 Ga.	14 Ga.
1	429	455	797
2	457	619	834
3	431	528	578
4	455	596	662
5	404	587	606
AVG.	**435**	**557**	**695**
MAX.	**457**	**619**	**834**
MIN.	**404**	**455**	**578**

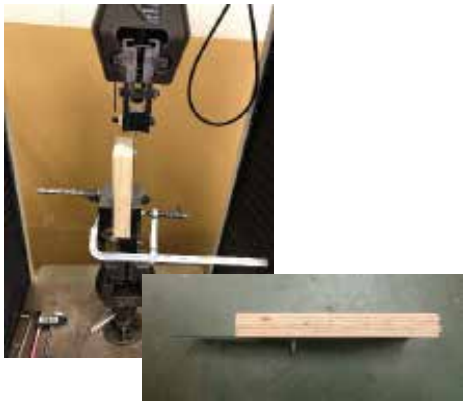
- CAP50W4-H is used for the test.
- Operating pressure: 333 psi (Shear)
- See Appendix.1 for testing equipment

Appendix.1 Testing Equipment

Tension Test



Shear Test



Pullout test method
1) Shoot CAP pins into 18Ga./ 16Ga./ 14Ga. CFS through t3/16" MDF and wood material. (Picture1)
2) Take out t3/16" MDF (Picture2)
3) Grab the head of the pin with Universal Tester AG-50kNG (Shimadzu) and pullout the pin to measure the strength.
Shear test method
1) Shoot CAP pins into 18Ga./ 16Ga./ 14Ga. CFS through wood material.
2) Grab the edge of CFS plate with Universal Tester AG-50kNG (Shimadzu) and pullout the plate to measure the strength.