



Jax Apex Technology, Inc.
4745 Sutton Park Court, Suite 402
Jacksonville, FL 32224

Evaluation reports are the opinion of the engineer who prepared the report, based on the findings, and in no way constitute or imply approval by a local building authority. The engineer, in review of the data submitted, finds that, in his opinion, the product, material, system, or method of construction specifically identified in this report conforms with or is a suitable alternate to that specified in the Florida Building Code, SUBJECT TO THE LIMITATIONS IN THIS REPORT

Jeffrey P. Arneson, P.E., a licensed Florida professional engineer and employee of Jax Apex Technology, Inc. (Apex Technology) has reviewed the data submitted for compliance with the Florida Building Code. Neither Jeffrey P. Arneson, nor Apex Technology, are responsible for any errors or omissions to any documents, calculations, drawings, specifications, tests, or summaries prepared and submitted by the design professional or preparer of record who are listed in the Substantiating Data section of this report.

REPORT NO: SIM201704

CATEGORY: Structural Components

SUBCATEGORY: Metal Connectors

SUBMITTED BY:

SIMPSON STRONG-TIE COMPANY, INC.
5956 W. LAS POSITAS BOULEVARD
PLEASANTON, CA 94588

1. CERTIFICATION OF INDEPENDENCE:

Jeffrey P. Arneson, the Florida engineer who prepared this report, and Apex Technology have no financial interest in the manufacturing, sales, or distribution of the products included in this report. Jeffrey P. Arneson and Apex Technology comply with all criteria as stated in Florida Administrative Code Chapter 61G20-3.

2. PRODUCT NAME:

Joist/Beam Hangers

HGUS26, HGUS28, HGUS7.37/10, HGUS7.37/12, HGUS7.37/14

HHUS210-3, HHUS210-4

LUS310

HGUQ26-2, HGUQ26-3, HGUQ26-4, HGUQ28-2, HGUQ28-3, HGUQ28-4,
HGUQ210-2, HGUQ210-3, HGUQ210-4, HGUQ46, HGUQ48, HGUQ410

HUCQ210-2-SDS, HUCQ210-3-SDS, HUCQ310-SDS

Truss/Girder Hangers

THGQ2-SDS3, THGQH2-SDS3, THGQ3-SDS4.5, THGQH3-SDS4.5,
THGQH4-SDS6, THGB2, THGBH2, THGB3, THGBH3, THGBH4, THGW3-3,
THGW3-4, THGW4-3, THGW4-4

Adjustable Truss Hangers

THA426, THA422-2, THA426-2

3. SCOPE OF EVALUATION:

Load evaluation as a structural component using the requirements of the *6th Edition (2017) Florida Building Code, Building* and *6th Edition (2017) Florida Building Code, Residential*.

4. DESCRIPTION:

- 4.1 HGUS Joist Hanger.** HGUS hangers are high-capacity face mount joist or truss hangers. The hangers use a double shear nail configuration, in which the joist nails are driven at an angle through the joist and into the header. HGUS hangers are manufactured from 12 gauge ASTM A653 SS Grade 40 steel with a G90 galvanized coating. Allowable loads are shown in Table 1.
- 4.2 HHUS Joist Hanger.** HHUS hangers are high-capacity face mount joist or truss hangers. The hangers use a double shear nail configuration, in which the joist nails are driven at an angle through the joist and into the header. HHUS hangers are manufactured from 14 gauge galvanized ASTM A653 SS Grade 33 steel with a G90 galvanized coating. Allowable loads are shown in Table 2.
- 4.3 LUS Joist Hanger.** LUS series joist hangers are low-to-medium capacity face mount joist or truss hangers. The hangers use a double shear nail configuration, in which the joist nails are driven at an angle through the joist and into the header. The LUS joist hangers are manufactured from 18 gauge ASTM A653 SS Grade 33 steel with a G90 galvanized coating. Allowable loads are shown in Table 3.
- 4.4 HGUQ Joist Hanger.** HGUQ hangers are high-capacity face mount joist or truss hangers that utilize the Simpson Strong-Tie Strong-Drive® SDS Heavy Duty Connector Screws. HGUQ hangers are manufactured from 12 gauge ASTM A653 SS Grade 40 steel with a G90 galvanized coating. Allowable loads are shown in Table 4.
- 4.5 HUCQ Joist Hanger.** HUCQ series hangers are heavy duty U-shaped hangers that have concealed flanges and that utilize the Simpson Strong-Tie Strong-Drive® SDS Heavy Duty Connector Screws. The HUCQ series hangers are formed from 14 gauge ASTM A653 Grade 33 steel with a G90 galvanized finish. Table 5 specifies hanger dimensions, fastener schedules and allowable loads. See Figure 5 for additional details.
- 4.6 THGQ and THGQH Truss/Girder Hangers.** THGQ and THGQH hangers are designed for multi-ply girder trusses and use Simpson Strong-Tie Strong-Drive® SDS Heavy Duty Connector Screws to provide high load capacities. Both models offer minimum and optional maximum fastener quantities to accommodate varying design needs. The THGQ series hangers are formed from 7 gauge ASTM A653 Grade 33 galvanized steel with a G90 galvanized finish. The THGQH series hangers are formed from 3 gauge steel meeting ASTM A1011, Grade 33, with a powder coat painted finish. Allowable loads for various girder web member sizes provide

additional installation options. Table 6 specifies hanger dimensions, fastener schedules and allowable loads. See Figure 6 for additional details.

- 4.7 THGB, THGBH, and THGW Truss/Girder Hangers.** THGB, THGBH, and THGW hangers are heavy duty multi-ply girder trusses that use through bolts or Simpson Strong-Tie Strong-Drive® SDS Heavy Duty Connector Screws to provide high load capacities. The THGB and THGBH models offer multiple fastener types and/or quantities to accommodate varying design needs. Allowable loads for various girder web member sizes provide additional installation options. The THGB, THGBH, and THGW series hangers are manufactured from 3 gauge steel meeting ASTM A1011, Grade 33, with a powder coat painted finish. Table 7 specifies hanger dimensions, fastener schedules and allowable loads. See Figure 7 for additional details. Minimum vertical web member of carrying member must be as illustrated in Figure 7.
- 4.8 THA426, THA422-2, and THA426-2 Truss Hangers.** The THA426, THA422-2, and THA426-2 are adjustable hangers typically used to support trusses. THA hangers have two installation configurations. In the Top Flange Installation, the straps are field bent over the supporting member, and nails are installed into the top and sides of the supporting member. In the Face Mount Installation, the straps are not required to wrap over the supporting member, and all nails are installed into the face of the supporting member. The THA426, THA422-2, and THA426-2 are manufactured from 14 gauge galvanized steel complying with ASTM A653 SS Grade 33, with a G90 galvanized coating. Table 8 specifies hanger dimensions, fastener schedules and allowable loads. See Figure 8 for additional details.

5. MATERIALS:

- 5.1 Steel.** Steel specifications for each product listed in this evaluation report shall be as indicated in the previous section. In addition to the standard G90 coating, some models (designated with a model number ending with Z) are available with a G185 zinc coating specification in accordance with ASTM A653. Some models (designated with a model number ending with HDG) are available with a hot-dip galvanization, also known as “batch” galvanization, in accordance with ASTM A123, with a minimum specified coating weight of 2.0 ounces of zinc per square foot of surface area, total for both sides. Some models (designated with a model number ending with SS) are available in type 316L Stainless material manufactured in accordance with ASTM A240 sheet, strip or plate and ASTM A480 (General Requirements) in the following designation: UNS designation S31603, AISI Type 316L. Model numbers in this report may not include the Z, HDG, or SS ending, but the information shown applies.
- 5.2 Wood.** Wood members to which these connectors are fastened shall be solid sawn lumber, glued-laminated lumber, or structural composite lumber having dimensions consistent with the connector dimensions shown in Tables 1 through 8. Unless otherwise noted, lumber shall be Southern Pine (SP) or Douglas Fir-Larch (DF) having a minimum specific gravity of 0.55 or 0.50, respectively. Where indicated by SPF, lumber shall be Spruce-Pine-Fir having a minimum specific gravity of 0.42.
- 5.3 Nails and Bolts.** Unless noted otherwise, nails shall be common nails. Nails shall comply with ASTM F1667 and shall have the minimum bending yield strengths F_{yb} :

Common Nail Pennyweight	Nail Shank Diameter (inch)	Nail Length (inch)	F_{yb} (psi)
10d	0.148	3.00	90,000
16d	0.162	3.50	90,000

All references to bolts or machine bolts (MBs) are for structural quality through bolts (*not lag screws or carriage bolts*) equal to or better than ASTM Standard A307, Grade A.

Fasteners for galvanized connectors in pressure-preservative treated wood shall be hot-dipped zinc coated galvanized steel with coating weights in accordance with ASTM A153 or steel mechanically galvanized in accordance with ASTM B695, Class 55. Fasteners for stainless steel connectors shall be stainless steel except where otherwise permitted by the treatment manufacturer.

The allowable loads of stainless-steel connectors match those of carbon-steel connectors when installed with Simpson Strong-Tie stainless-steel, SCNR ring-shank nails.

- 5.4 Strong-Drive® SDS Heavy-Duty Connector Screws.** Fasteners used with the connectors described in Tables 4, 5, 6, and 7 of this report must be Simpson Strong-Tie Strong-Drive SDS Heavy-Duty Connector wood screws as recognized in FL9589. Model numbers shown in this report may not include the full SDS model number after the connector model number (e.g. HGUQ26-2-SDS3), but the information shown applies. SDS screws used in contact with preservative-treated or fire-retardant-treated lumber must, as a minimum, comply with FL9589. The lumber treater or Simpson Strong-Tie Company should be contacted for recommendations on minimum corrosion resistance and connection capacities of fasteners used with the specific proprietary preservative-treated or fire retardant-treated lumber.

6. INSTALLATION:

Installation shall be in accordance with this report and the most recent edition of the Simpson Strong-Tie *Wood Construction Connectors* catalog. Information in this report supersedes any conflicting information between information provided in this report and the catalog.

7. SUBSTANTIATING DATA:

Test data submitted by Testing Engineers Inc. and Simpson Strong-Tie, and signed and sealed calculations performed by Bryan Wert, P.E., performed in accordance with the 6th Edition (2017) Florida Building Code, Building and Residential codes.

Model No.	Test Lab	Test Number
HGUS26	Testing Engineers, Inc.	M372, M373
HGUS28	Testing Engineers, Inc.	P457, R456
HGUS7.37/10	Testing Engineers, Inc.	I485, I488
HGUS7.37/12	Testing Engineers, Inc.	I486, I489
HGUS7.37/14	Testing Engineers, Inc.	I487, I490
HHUS210-3, HHUS210-4	Testing Engineers, Inc.	B602, E014, E025
HGUQ26-2, HGUQ26-3, HGUQ46	Testing Engineers, Inc.	I303, I304, I307
HGUQ28-2, HGUQ48	Testing Engineers, Inc.	I352, I354
HGUQ210-2, HGUQ410	Testing Engineers, Inc.	I309, I310
HGUQ28-3	Testing Engineers, Inc.	I351, I354
HGUQ210-3	Testing Engineers, Inc.	I310, I350
HGUQ26-4	Testing Engineers, Inc.	I303, I308
HGUQ28-4	Testing Engineers, Inc.	I322, I323
HGUQ210-4	Testing Engineers, Inc.	I305, I306
LUS310	Testing Engineers, Inc.	B158, F984
HUCQ210-2-SDS, HUCQ210-3-SDS	Testing Engineers, Inc.	K364, K762
HUCQ310-SDS	Testing Engineers, Inc.	L458, L459
THGQ2-SDS3	Testing Engineers, Inc.	L878, L879, L880, L881

THGQ3-SDS4.5	Testing Engineers, Inc.	L878, L880, L881, L882
THGQH2-SDS3	Testing Engineers, Inc.	L883, L884, L885, L887, M004
THGQH3-SDS4.5	Testing Engineers, Inc.	L885, L887, M006
THGQH4-SDS6	Testing Engineers, Inc.	L885, L887, M007
THGB2, THGB3	Testing Engineers, Inc.	G490, G491, G670
THGBH2, THGBH3	Testing Engineers, Inc.	G494, G496, G672
THGBH4	Testing Engineers, Inc.	F980, G497
THGW3-3, THGW3-4	Testing Engineers, Inc.	G668, G669, G670
THGW4-3, THGW4-4	Testing Engineers, Inc.	G668, G669, G670
THA426	Testing Engineers, Inc.	O988, O992, P342
THA422-2, THA426-2	Testing Engineers, Inc.	O469, O988, P106

8. FINDINGS:

The connectors listed in this evaluation report comply with the 6th Edition (2017) Florida Building Code, Building, and 6th Edition (2017) Florida Building Code, Residential when installed in accordance with this report.

9. LIMITATIONS:

1. Maximum allowable loads shall not exceed the allowable loads listed in this report. Allowable loads listed in this report are based on allowable stress design. The loads in this report are not applicable to Load and Resistance Factor Design.
2. Capacity of wood members is not covered by this report. Capacity of wood members must be checked by the building designer.
3. Connectors in this report having a galvanized coating thickness less than G185 shall not be installed in contact with preservative-treated wood products that are exposed to rainfall or ground moisture.

10. ALLOWABLE LOADS AND INSTALLATION ILLUSTRATIONS:

The tables that follow reference the allowable loads for the aforementioned products.

Model No.	Dimensions (in.)			Fasteners		SP Allowable Loads (lb.)				
	W	H	B	Carrying Member	Carried Member	Uplift (160)	Floor (100)	Snow (115)	Roof (125)	Wind (160) ²
HGUS26	1 5/8	5 3/8	5	(20) 16d	(8) 16d	1,050	4,725	5,275	5,390	5,390
HGUS28	1 5/8	7 1/8	5	(36) 16d	(12) 16d	1,725	6,460	6,700	6,865	7,275
HGUS7.37/10	7 3/8	8 9/16	4	(46) 16d	(16) 16d	3,430	9,095	9,095	9,095	9,095
HGUS7.37/12	7 3/8	10 9/16	4	(56) 16d	(20) 16d	3,835	9,295	9,295	9,295	9,295
HGUS7.37/14	7 3/8	12 9/16	4	(66) 16d	(22) 16d	5,080	10,500	10,500	10,500	10,500

Notes:

1. Uplift loads have been increased 60% for wind loading as permitted by the code. No further increase permitted. Reduce where other loads govern.
2. Wind (160) is a download rating.

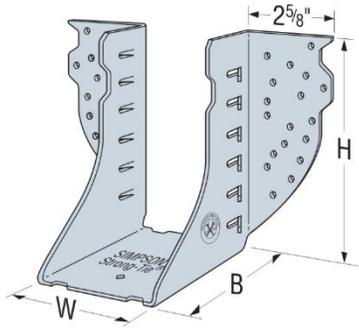


FIGURE 1: Typical HGUS Hanger

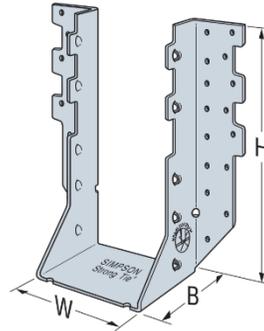


FIGURE 2: Typical HHUS Hanger

TABLE 2: HHUS Dimensions, Fasteners, and Allowable Loads										
Model No.	Dimensions (in.)			Fasteners		DF/SP Allowable Loads (lb.)				
	W	H	B	Carrying Member	Carried Member	Uplift (160)	Floor (100)	Snow (115)	Roof (125)	Wind (160) ²
HHUS210-3	4 11/16	8 7/8	3	(30) 16d	(10) 16d	3,405	5,630	6,375	6,485	6,485
HHUS210-4	6 1/8	8 7/8	3	(30) 16d	(10) 16d	3,405	5,630	6,375	6,485	6,485

Notes:

1. Uplift loads have been increased 60% for wind loading as permitted by the code. No further increase permitted. Reduce where other loads govern.
2. Wind (160) is a download rating.

TABLE 3: LUS Dimensions, Fasteners, and Allowable Loads										
Model No.	Dimensions (in.)			Fasteners		DF/SP Allowable Loads (lb.)				
	W	H	B	Carrying Member	Carried Member	Uplift (160)	Floor (100)	Snow (115)	Roof (125)	Wind (160) ²
LUS310	2 9/16	7 1/4	2	(6) 16d	(4) 16d	1,045	1,315	1,500	1,625	2,060

Notes:

1. Uplift loads have been increased 60% for wind loading as permitted by the code. No further increase permitted. Reduce where other loads govern.
2. Wind (160) is a download rating.

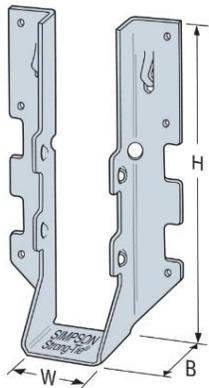


FIGURE 3: Typical LUS Hanger

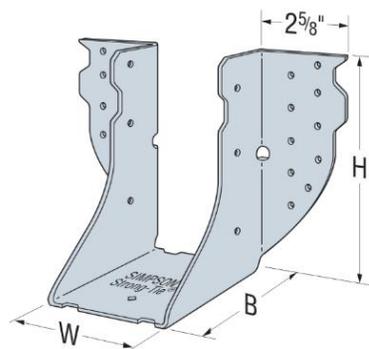


FIGURE 4: Typical HGUQ Hanger

TABLE 4: HGUQ Dimensions, Fasteners, and Allowable Loads										
Model No.	Dimensions (in.)			SDS Screw Qty & Size		DF/SP Allowable Loads (lb.)				
	W	H	B	Carrying Member ²	Carried Member	Uplift (160)	Floor (100)	Snow (115)	Roof (125)	Wind (160) ³
Double 2x Sizes										
HGUQ26-2-SDS3	3 7/16	5	4	(12) 1/4"x3"	(4) 1/4"x3"	1,545	5,040	5,255	5,255	5,255
HGUQ28-2-SDS3	3 7/16	7	4	(20) 1/4"x3"	(6) 1/4"x3"	2,425	6,930	6,930	6,930	6,930
HGUQ210-2-SDS3	3 7/16	9	4	(28) 1/4"x3"	(8) 1/4"x3"	3,255	7,010	7,010	7,010	7,010
Triple 2x Sizes										
HGUQ26-3-SDS4.5	4 15/16	5 1/2	4	(12) 1/4"x4 1/2"	(4) 1/4"x4 1/2"	1,545	4,880	4,880	4,880	4,880
HGUQ28-3-SDS4.5	4 15/16	7 1/4	4	(20) 1/4"x4 1/2"	(6) 1/4"x4 1/2"	2,425	8,400	9,175	9,175	9,175
HGUQ210-3-SDS4.5	4 15/16	9 1/4	4	(28) 1/4"x4 1/2"	(8) 1/4"x4 1/2"	3,255	9,205	9,205	9,205	9,205
Quadruple 2x Sizes										
HGUQ26-4-SDS6	6 9/16	5 5/16	4	(12) 1/4"x6"	(4) 1/4"x6"	2,240	4,880	4,880	4,880	4,880
HGUQ28-4-SDS6	6 9/16	7 5/16	4	(20) 1/4"x6"	(6) 1/4"x6"	4,020	8,370	8,370	8,370	8,370
HGUQ210-4-SDS6	6 9/16	9 5/16	4	(28) 1/4"x6"	(8) 1/4"x6"	3,940	9,695	9,695	9,695	9,695
4x Sizes										
HGUQ46-SDS3	3 5/8	4 7/8	4	(12) 1/4"x3"	(4) 1/4"x3"	1,545	4,880	4,880	4,880	4,880
HGUQ48-SDS3	3 5/8	6 7/8	4	(20) 1/4"x3"	(6) 1/4"x3"	2,425	6,930	6,930	6,930	6,930
HGUQ410-SDS3	3 5/8	8 7/8	4	(28) 1/4"x3"	(8) 1/4"x3"	3,255	7,010	7,010	7,010	7,010

Notes:

1. Uplift loads have been increased by 60% for wind loading as permitted by the code. No further increase permitted. Reduce where other loads govern.
2. The supporting girder truss must have adequate thickness to accommodate the screw length, so that the screw does not protrude out the back of the girder. 3"- or 4 1/2"-long Strong-Drive SDS Heavy-Duty Connector screws may be substituted for the longer Strong-Drive SDS Heavy-Duty Connector screws with no load reduction.
3. Wind (160) is a download rating.

TABLE 5: HUCQ Dimensions, Fasteners, and Allowable Loads									
Model No.	Dimensions (in.)			SDS Screw Qty & Size		DF/SP Allowable Loads (lb.)			
	W	H	B	Carrying Member	Carried Member	Uplift (160)	Floor (100)	Snow (115)	Roof (125)
HUCQ310-SDS	2 9/16	9	3	(8) 1/4"x2 1/2"	(4) 1/4"x2 1/2"	1,350	3,120	3,590	3,860
HUCQ210-2-SDS	3 1/4	9	3	(12) 1/4"x2 1/2"	(6) 1/4"x2 1/2"	2,345	4,315	4,315	4,315
HUCQ210-3-SDS	4 5/8	9	3	(12) 1/4"x2 1/2"	(6) 1/4"x2 1/2"	2,345	4,315	4,315	4,315

Notes:

1. Uplift loads have been increased 60% for wind loading as permitted by the Florida Building Code. No further increase permitted. Reduce where other loads govern.

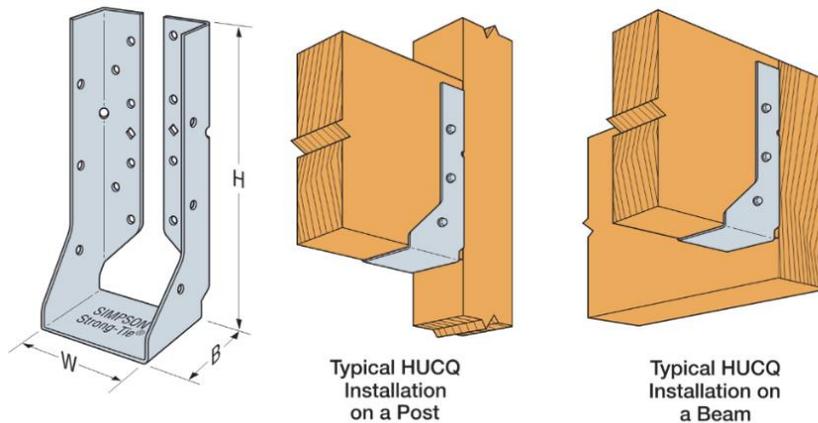


FIGURE 5: Typical HUCQ Hanger and Installations

TABLE 6: THGQ / THGQH Dimensions, Fasteners, and Allowable Loads

Model No.	Dimensions (in.)		Max. B.C. Depth	Min. Vert. Web Size	SDS Screw Qty & Size		DF/SP Allowable Loads (lb.)				
	W	H			Carrying Member ²	Carried Member	Uplift (160)	Floor (100)	Snow (115)	Roof (125)	Wind (160) ⁵
THGQ2-SDS3 (Min)	3 5/16	16	2X8	2X6	(22) 1/4"x3"	(10) 1/4"x3"	3,600	7,920	7,920	7,920	7,920
				2X8	(28) 1/4"x3"		3,600	10,080	10,080	10,080	10,080
THGQ2-SDS3 (Max)	3 5/16	16	2X8	2X6	(22) 1/4"x3"	(14) 1/4"x3"	4,535	9,240	9,770	9,770	9,770
				2X8	(28) 1/4"x3"		4,535	11,760	12,435	12,435	12,435
THGQH2-SDS3 (Min)	3 5/16	25	2X10	2X6	(18) 1/4"x3"	(12) 1/4"x3"	3,875	7,560	7,685	7,685	7,685
				2X8	(28) 1/4"x3"		3,875	11,760	11,950	11,950	11,950
THGQH2-SDS3 (Max)	3 5/16	25	2X10	2X6	(18) 1/4"x3"	(26) 1/4"x3"	7,635	7,560	7,940	7,940	7,940
				2X8	(28) 1/4"x3"		9,900	11,760	12,350	12,350	12,350
THGQ3-SDS4.5 (Min)	4 15/16	16	2X8	2X6	(22) 1/4"x4 1/2"	(10) 1/4"x4 1/2"	3,600	7,920	7,920	7,920	7,920
				2X8	(28) 1/4"x4 1/2"		3,600	10,080	10,080	10,080	10,080
THGQ3-SDS4.5 (Max)	4 15/16	16	2X8	2X6	(22) 1/4"x4 1/2"	(14) 1/4"x4 1/2"	4,535	9,140	9,140	9,140	9,140
				2X8	(28) 1/4"x4 1/2"		4,535	11,635	11,635	11,635	11,635
THGQH3-SDS4.5 (Min)	4 15/16	25	2X10	2X8	(32) 1/4"x4 1/2"	(12) 1/4"x4 1/2"	3,875	12,565	12,565	12,565	12,565
				2X10	(38) 1/4"x4 1/2"		3,875	14,920	14,920	14,920	14,920
THGQH3-SDS4.5 (Max)	4 15/16	25	2X10	2X8	(32) 1/4"x4 1/2"	(26) 1/4"x4 1/2"	9,900	12,980	12,980	12,980	12,980
				2X10	(38) 1/4"x4 1/2"		9,900	15,415	15,415	15,415	15,415
THGQH4-SDS6 (Min)	6 9/16	25	2X12	2X8	(34) 1/4"x6"	(12) 1/4"x6"	3,875	13,875	13,875	13,875	13,875
				2X10	(40) 1/4"x6"		3,875	16,320	16,320	16,320	16,320
THGQH4-SDS6 (Max)	6 9/16	25	2X12	2X8	(34) 1/4"x6"	(26) 1/4"x6"	9,900	14,280	14,335	14,335	14,335
				2X10	(40) 1/4"x6"		9,900	16,800	16,865	16,865	16,865

Notes:

- Uplift loads have been increased 60% for wind loading as permitted by the code. No further increase permitted. Reduce where other loads govern.
- The supporting girder truss must have adequate thickness to accommodate the screw length, so that the screw does not protrude out the back of the girder. 3"- or 4 1/2"-long Strong-Drive SDS Heavy-Duty Connector screws may be substituted for the longer Strong-Drive SDS Heavy-Duty Connector screws with no load reduction.
 - Connector must be installed centered on girder vertical webs.
 - Strong-Drive SDS Heavy-Duty Connector screws are permitted to be installed through metal truss plates as approved by the Truss Designer, provided the requirements of ANSI/TPI 1-2014 Sections 7.5.3.4 and 8.9.2 are met (pre-drilling required through the plate using a maximum of 5/32" bit).
- Wind (160) is a download rating.

TABLE 7: THGB / THGBH / THGW Dimensions, Fasteners, and Allowable Loads									
Model No.	Width, W (in.)	Fasteners		Length of Bolt in Carrying Member (in.)	DF/SP Allowable Loads (lb.)				
		Carried Members	Carrying Member ²		Uplift ³ (160)	Floor (100)	Snow (115)	Roof (125)	Wind (160) ⁴
THGB2	3 5/16	(10) 10d and (2) 3/4" MB	(4) 3/4" MB	3	9,250	6,030	6,840	7,375	9,250
				4 1/2	9,700	6,915	7,780	8,350	9,350
				6	9,700	6,915	7,780	8,350	9,350
THGB2	3 5/16	(10) 10d and (2) 3/4" MB	(19) SDS 1/4" x 3"	—	9,510	7,980	9,175	9,510	9,510
THGBH2	3 5/16	(10) 10d and (2) 3/4" MB	(8) 3/4" MB	3	9,700	10,105	10,345	10,505	10,915
				4 1/2		10,915	10,915	10,915	10,915
				6		10,915	10,915	10,915	10,915
THGB3	4 15/16	(10) 10d and (2) 3/4" MB	(4) 3/4" MB	3	9,250	6,030	6,840	7,375	9,250
				4 1/2	9,700	6,915	7,780	8,350	9,485
				6	9,700	6,915	7,780	8,350	9,485
THGB3	4 15/16	(10) 10d and (2) 3/4" MB	(19) SDS 1/4" x 3"	—	9,510	7,980	9,175	9,510	9,510
THGBH3	4 15/16	(10) 10d and (2) 3/4" MB	(8) 3/4" MB	3	9,700	10,915	10,915	10,915	10,915
				4 1/2		12,665	12,665	12,665	12,665
				6		12,815	12,815	12,815	12,815
THGBH4	6 9/16	(10) 10d and (2) 3/4" MB	(4) 3/4" MB ⁵	3	9,700	6,040	6,850	7,390	9,270
				4 1/2		6,910	7,780	8,350	9,350
				6		6,910	7,780	8,350	9,350
THGBH4	6 9/16	(10) 10d and (2) 3/4" MB	(6) 3/4" MB ⁵	3	9,700	9,065	10,010	10,010	10,010
				4 1/2		10,010	10,010	10,010	10,010
				6		10,010	10,010	10,010	10,010
THGBH4	6 9/16	(10) 10d and (2) 3/4" MB	(8) 3/4" MB	3	9,700	10,915	10,915	10,915	10,915
				4 1/2		13,830	15,060	15,060	15,060
				6		13,830	15,060	15,060	15,060
THGW3-3	4 15/16	(10) 10d and (2) 3/4" MB	(8) 3/4" MB	4 1/2	9,700	20,630	20,630	20,630	20,630
THGW3-4				6					
THGW4-3	6 9/16	(10) 10d and (2) 3/4" MB	(8) 3/4" MB	4 1/2	9,700	22,840	22,840	22,840	22,840
THGW4-4				6					

Notes:

- Uplift loads have been increased 60% for wind loading as permitted by the code. No further increase permitted. Reduce where other loads govern.
- A 3-ply carrying member is required for the THGW3-3 and THGW4-3; a 4-ply carrying member is required for the THGW3-4 and THGW4-4; For all other models, a minimum 2-ply carrying member is required.
- To achieve maximum uplift, install nails and bolts as listed in the table. If only nails are installed to the carried member, the allowable uplift is 2,570 lb. for DF/SP and the downloads will be as listed in the table.
- Wind (160) is a download rating.
- Bolts must be installed symmetrically when using less than 8 bolts on the 8-bolt back plate.
- Loads for THGW models require that the carried member have minimum 2x6 end verticals to ensure end-grain bearing.
- Bolts and Strong-Drive SDS Heavy-Duty Connector screws are permitted to be installed through metal truss plates as approved by the Truss Designer, provided the requirements of ANSI/TPI 1-2014 Sections 7.5.3.4 and 8.9.2 are met.

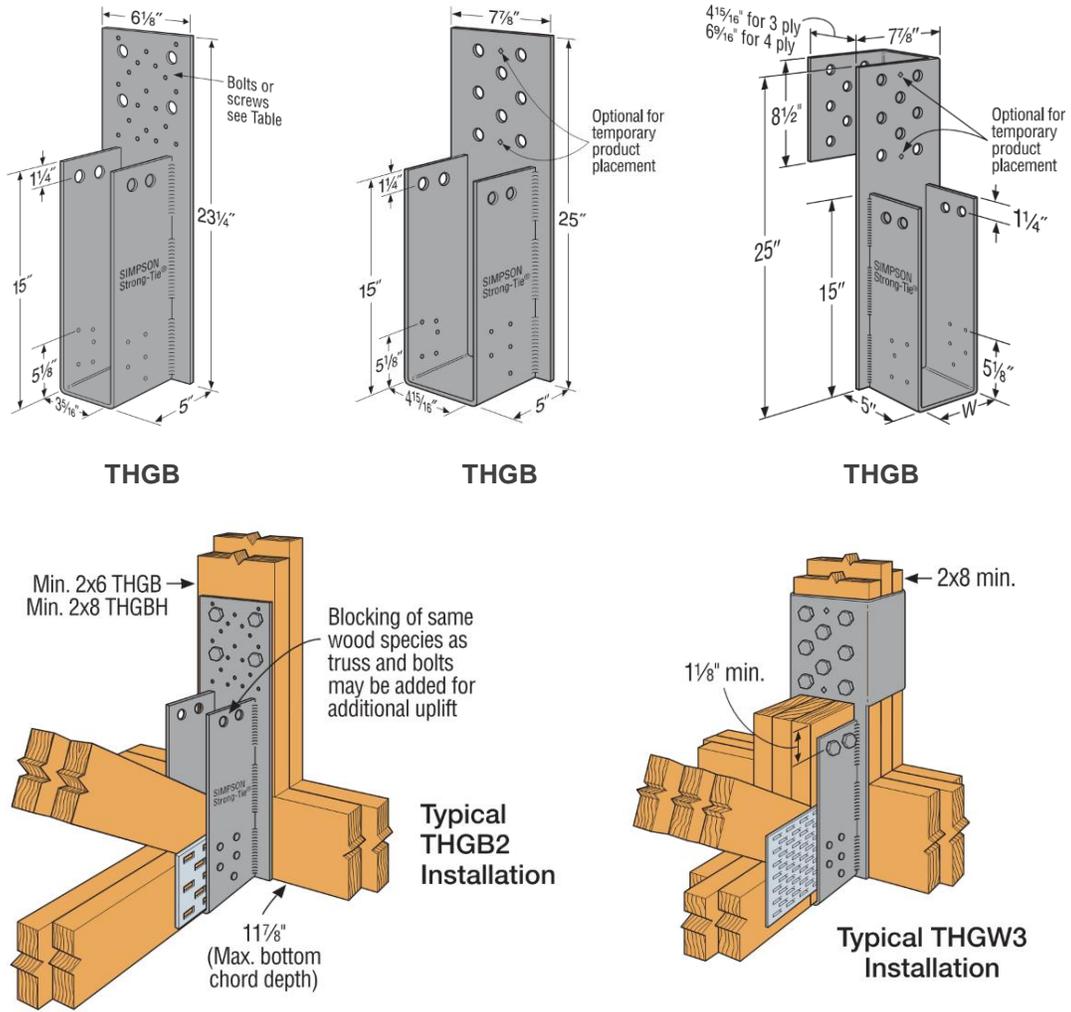


FIGURE 7: THGB / THGBH / THGW Hangers and Installations

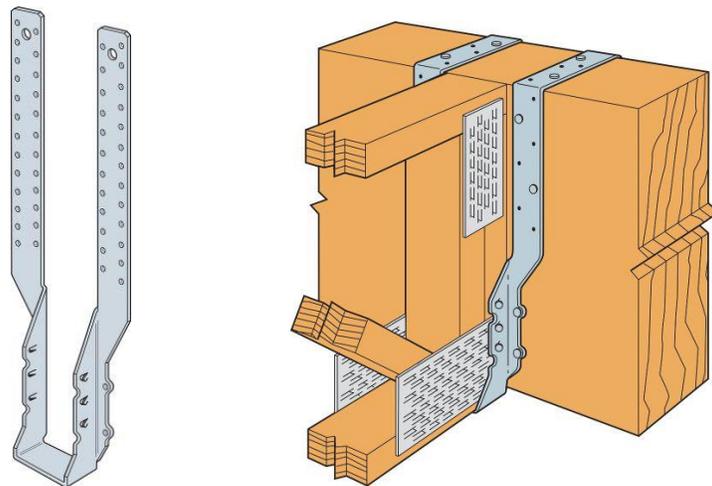


FIGURE 8: THA426 and Typical Top Flange Installation

TABLE 8: THA Dimensions, Fasteners, and Allowable Loads																	
Model No.	Min. Top Flange (in.)	Min. Header Depth (in.)	Dimensions (in.)			Fasteners				DF/SP Allowable Loads (lb.)			SPF/HF Allowable Loads (lb.)				
			W	H	C	Carrying Member		Carried Member		Uplift (160)	Download			Uplift (160)	Download		
						Top	Face	Straight	Slant		Floor (100)	Roof (125)	Wind (160) ²		Floor (100)	Roof (125)	Wind (160) ²
			TOP FLANGE INSTALLATION														
THA426	2	—	3 3/8	26	7 7/8	(4) 16d	(4) 16d	(6) 16d	—	—	2,435	2,435	2,435	—	2,095	2,095	2,095
THA422-2	2	—	7 1/4	22 11/16	9 3/4	(4) 16d	(4) 16d	(6) 16d	—	—	3,330	3,330	3,330	—	2,865	2,865	2,865
THA426-2	2	—	7 1/4	26 1/16	9 3/4	(4) 16d	(4) 16d	(6) 16d	—	—	3,330	3,330	3,330	—	2,865	2,865	2,865
FACE MOUNT INSTALLATION																	
THA426	—	16 1/16	3 3/8	26	7 7/8	—	(30) 16d	—	(6) 16d	1,855	4,415	4,480	4,480	1,595	3,795	3,855	3,855
THA422-2	—	16 3/16	7 1/4	22 11/16	9 3/4	—	(30) 16d	—	(6) 16d	1,855	5,170	5,520	5,520	1,595	4,445	4,745	4,745
THA426-2	—	18	7 1/4	26 1/16	9 3/4	—	(38) 16d	—	(6) 16d	1,855	5,520	5,520	5,520	1,595	4,745	4,745	4,745

Notes:

1. Uplift loads have been increased 60% for wind loading as permitted by the code. No further increase permitted. Reduce where other loads govern.
2. Wind (160) is a download rating.
3. Face mount installation loads are based on minimum of 2-ply 2x carrying member. For single 2x carrying members, use 10dx1 1/2" nails into the carrying member and tabulated fasteners into the carried member, and use 0.68 of the table value.
4. Min. Top Flange refers to the minimum length of the strap that must be field formed over the header.

11. REFERENCES:

Florida Building Code, Building, 6th Edition (2017)

Section 104.11 Alternative materials, design, and methods of construction and equipment
 Chapter 22 Steel
 Chapter 23 Wood

Florida Building Code, Residential, 6th Edition (2017)

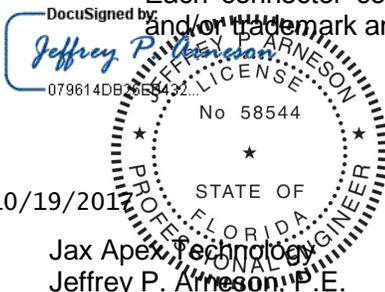
R101.2.1 Scope
 R4407 HVHZ Masonry
 R4408 HVHZ Steel
 R4409 HVHZ Wood

Standards

AISI S100 2012
 ANSI/AWC NDS 2015
 ASTM D7147 2005

12. IDENTIFICATION:

Each connector covered by this report shall be stamped with the manufacturer's name and/or trademark and the product name.



Jax Apex Technology
 Jeffrey P. Arneson, P.E.
 P.E. No. 58544
 October 19, 2017