



Listing and Technical Evaluation Report™

A Duly Authenticated Report from an Approved Agency

Report No: 1811-03



Issue Date: June 14, 2019

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Subject to Renewal: July 1, 2026

QuickTie™ U-Hanger Series Face Mount and Top Flange Mount Joist Hangers Trade Secret Report Holder:

QuickTie™ Products, Inc.

Phone: 904-281-0525 Website: quicktieproducts.com

CSI Designations:

DIVISION: 06 00 00 - WOOD, PLASTICS AND COMPOSITES

Section: 06 05 23 - Wood, Plastic, and Composite Fastenings

1 Innovative Products Evaluated¹

- 1.1 QuickTie U-Hanger Series:
 - 1.1.1 UL Series 20-gauge
 - 1.1.2 ULU Series 20-gauge
 - 1.1.3 ULP and ULP-IF (Inverted Flange) Series 18-gauge
 - 1.1.4 ULPSSH Series (Slopeable and Skewable) 18-gauge
 - 1.1.5 UM Series 16-gauge
 - 1.1.6 UMH Series 16-gauge
 - 1.1.7 UMSR-L 16-gauge
 - 1.1.8 UHSR-L 14-gauge
 - 1.1.9 UH and UH-IF (Inverted Flange) Series 14-gauge
 - 1.1.10 UHH Series 14-gauge
 - 1.1.11 UHD Series 12-gauge
 - 1.1.12 THJH Series 12-gauge
 - 1.1.13 TSH Series 18-gauge, 16-gauge, and 14-gauge
 - 1.1.14 TFLP (Top Flange) Series 18-gauge
 - 1.1.15 TFH (Top Flange) Series 14-gauge





2 Product Description and Materials

2.1 The innovative products evaluated in this report are shown in **Figure 1** through **Figure 6**.

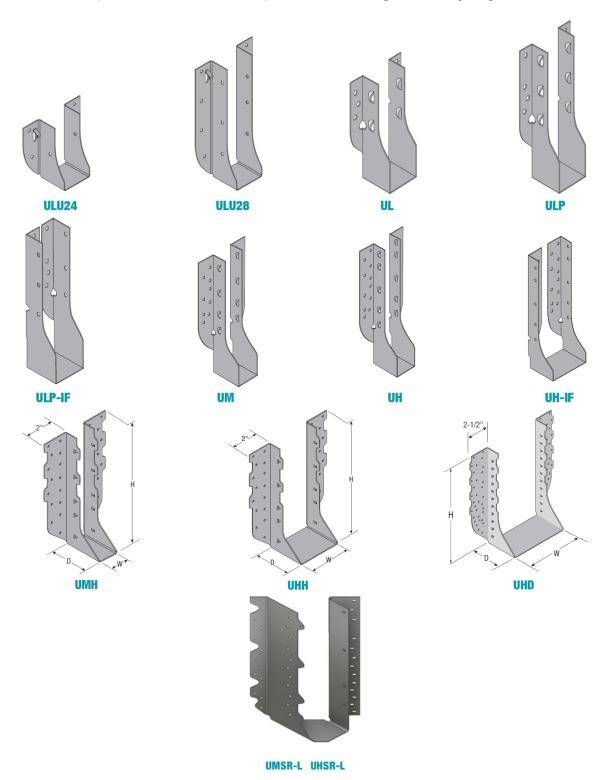


Figure 1. QuickTie U-Hanger Series









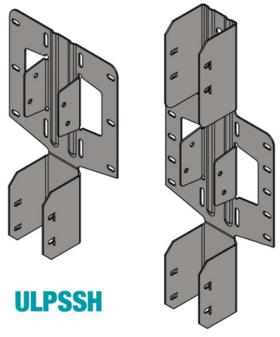


Figure 2. QuickTie U-Hanger Series - Continued

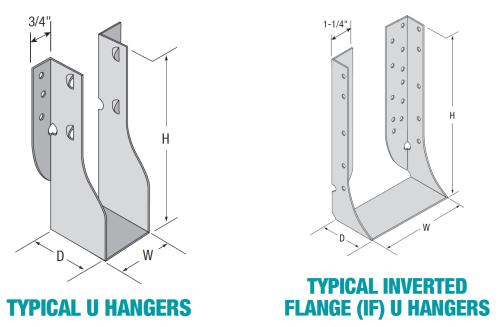


Figure 3. Typical Hanger Configuration









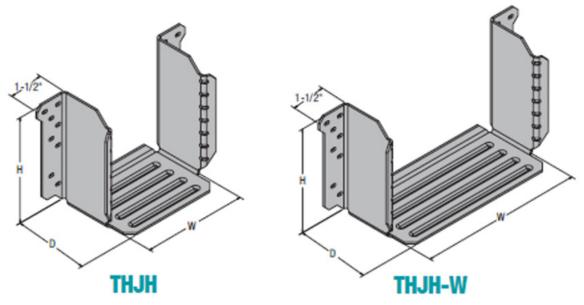


Figure 4. THJH26 and THJH26-W Hangers

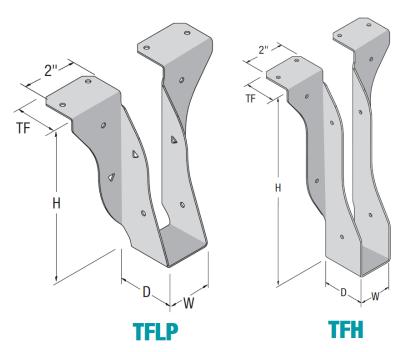


Figure 5. Top Flange TFLP and TFH Hangers





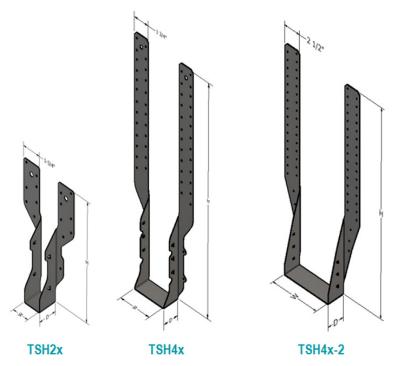


Figure 6. TSH Hangers

- 2.1.1 QuickTie U-Hanger Series Face Mount and Top Flange Mount Joist Hangers are manufactured from minimum ASTM A653, Structural Steel (SS), Grade 40 (F_u = 55 ksi, F_y = 40 ksi) steel galvanized with a G90 or better zinc coating, with the exception of the following:
 - 2.1.1.1 ULP24, ULP24-2, ULPSSH Series, ULU Series, UMH Series, UMSR-L, UHSR-L, UHH Series, UHD Series, THJH Series, TSH Series, and TFH Series hangers are manufactured from minimum ASTM A653, SS Grade 50 (F_u = 70 ksi, F_y = 50 ksi) steel galvanized with a G90 or better zinc coating.
- 2.1.2 The QuickTie U-Hanger Series are designated as follows:
 - 2.1.2.1 UL Series 20-gauge (minimum coated thickness = 0.0356")
 - 2.1.2.2 ULU Series 20-gauge (minimum coated thickness = 0.0356")
 - 2.1.2.3 ULP and ULP-IF Series 18-gauge (minimum coated thickness = 0.0466")
 - 2.1.2.4 ULPSSH Series 18-gauge (minimum coated thickness = 0.0466")
 - 2.1.2.5 UM Series 16-gauge (minimum coated thickness = 0.0575")
 - 2.1.2.6 UMH Series 16-gauge (minimum coated thickness = 0.0575")
 - 2.1.2.7 UMSR-L Series 16-gauge (minimum coated thickness = 0.0575")
 - 2.1.2.8 UHSR-L Series 14-gauge (minimum coated thickness = 0.0705")
 - 2.1.2.9 UH and UH-IF Series 14-gauge (minimum coated thickness = 0.0705")
 - 2.1.2.10 UHH Series 14-gauge (minimum coated thickness = 0.0705")
 - 2.1.2.11 UHD Series 12-gauge (minimum coated thickness = 0.0994")
 - 2.1.2.12 THJH26 and THJH26-W 12-gauge (minimum coated thickness = 0.0994")
 - 2.1.2.13 TSH29, TSH213, TSH218, and TSH413 18-gauge (minimum coated thickness = 0.0466")
 - 2.1.2.14 TSH218-2, TSH222-2, TSH418, and TSH422–16-gauge (minimum coated thickness = 0.0575")
 - 2.1.2.15 TSH426, TSH422-2, and TSH426-2– 14-gauge (minimum coated thickness = 0.0705")





- 2.1.2.16 TFLP26 and TFLP28 18-gauge (minimum coated thickness = 0.0466")
- 2.1.2.17 TFH210 and TFH214 14-gauge (minimum coated thickness = 0.0705")
- 2.2 As needed, review material properties for design in **Section 6** and the regulatory evaluation in **Section 8**.

3 Definitions²

- 3.1 New Materials³ are defined as building materials, equipment, appliances, systems, or methods of construction, not provided for by prescriptive and/or legislatively adopted regulations, known as alternative materials.⁴ The design strength and permissible stresses shall be established by tests⁵ and/or engineering analysis.⁶
- 3.2 <u>Duly authenticated reports</u>⁷ and <u>research reports</u>⁸ are test reports and related engineering evaluations that are written by an <u>approved agency</u>⁹ and/or an <u>approved source</u>. ¹⁰
 - 3.2.1 These reports utilize intellectual property and/or trade secrets to create public domain material properties for commercial end-use.
 - 3.2.1.1 This report protects confidential Intellectual Property and trade secretes under the regulation, 18.US.Code.90, also known as Defend Trade Secrets Act of 2016 (DTSA).11
- 3.3 An approved agency is "approved" when it is ANAB ISO/IEC 17065 accredited. DrJ Engineering, LLC (DrJ) is accredited and listed in the ANAB directory.
- 3.4 An <u>approved source</u> is "approved" when a professional engineer (i.e., <u>Registered Design Professional</u>, hereinafter <u>RDP</u>) is properly licensed to transact engineering commerce. The regulatory authority governing approved sources is the state legislature via its professional engineering regulations.¹²
- 3.5 Testing and/or inspections conducted for this <u>duly authenticated report</u> were performed by an <u>ISO/IEC 17025</u> accredited testing laboratory, an ISO/IEC 17020 accredited inspection body, and/or a licensed RDP.
 - 3.5.1 The Center for Building Innovation (CBI) is ANAB 13 ISO/IEC 17025 and ISO/IEC 17020 accredited.
- 3.6 The regulatory authority shall <u>enforce</u>¹⁴ the specific provisions of each legislatively adopted regulation. If there is a non-conformance, the specific regulatory section and language of the non-conformance shall be provided in <u>writing</u>¹⁵ stating the nonconformance and the path to its cure.
- 3.7 The regulatory authority shall accept <u>duly authenticated reports</u> from an <u>approved agency</u> and/or an <u>approved source</u> with respect to the quality and manner of use of new materials or assemblies as provided for in regulations regarding the use of alternative materials, designs, or methods of construction.¹⁶
- 3.8 ANAB is an International Accreditation Forum (IAF) Multilateral Recognition Arrangement (MLA) signatory. Therefore, recognition of certificates and validation statements issued by conformity assessment bodies accredited by all other signatories of the IAF MLA with the appropriate scope shall be approved. Thus, all ANAB ISO/IEC 17065 duly authenticated reports are approval equivalent, and can be used in any country that is an MLA signatory found at this link: https://iaf.nu/en/recognised-abs/
- 3.9 Approval equity is a fundamental commercial and legal principle. 19





4 Applicable Local, State, and Federal Approvals; Standards; Regulations²⁰

- 4.1 Local, State, and Federal
 - 4.1.1 Approved in all local jurisdictions pursuant to ISO/IEC 17065 <u>duly authenticated report</u> use, which includes, but is not limited to, the following featured local jurisdictions: Austin, Baltimore, Broward County, Chicago, Clark County, Dade County, Dallas, Detroit, Denver, DuPage County, Fort Worth, Houston, Kansas City, King County, Knoxville, Las Vegas, Los Angeles City, Los Angeles County, Miami, Nashville, New York City, Omaha, Philadelphia, Phoenix, Portland, San Antonio, San Diego, San Jose, San Francisco, Seattle, Sioux Falls, South Holland, Texas Department of Insurance, and Wichita.²¹
 - 4.1.2 Approved in all state jurisdictions pursuant to ISO/IEC 17065 <u>duly authenticated report</u> use, which includes, but is not limited to, the following featured states: California, Florida, New Jersey, Oregon, New York, Texas, Washington, and Wisconsin.²²
 - 4.1.3 Approved by the Code of Federal Regulations Manufactured Home Construction: Pursuant to Title 24, Subtitle B, Chapter XX, Part 3282.14²³ and Part 3280²⁴ pursuant to the use of ISO/IEC 17065 duly authenticated reports.
 - 4.1.4 Approved means complying with the requirements of local, state, or federal legislation.

4.2 Standards

- 4.2.1 AISI S100: North American Specification for the Design of Cold-formed Steel Structural Members
- 4.2.2 ANSI/AISC 360: Specification for Structural Steel Buildings
- 4.2.3 ANSI/AWC NDS: National Design Specification (NDS) for Wood Construction
- 4.2.4 ASTM A370: Standard Test Methods and Definitions for Mechanical Testing of Steel Products
- 4.2.5 ASTM A653: Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process
- 4.2.6 ASTM D7147: Standard Specification for Testing and Establishing Allowable Loads of Joist Hangers
- 4.2.7 ASTM F1575: Standard Test Method for Determining Bending Yield Moment of Nails

4.3 Regulations

- 4.3.1 IBC 18, 21, 24: International Building Code®
- 4.3.2 IRC 18, 21, 24: International Residential Code®
- 4.3.3 FBC-B 20, 23: Florida Building Code²⁵ Building (FL Product Approval 3557)
- 4.3.4 FBC-R 20, 23: Florida Building Code²⁵ Residential (FL Product Approval 3557)
- 4.3.5 NCBC 12, 18: North Caroline Building Code

5 Listed²⁶

5.1 Equipment, materials, products, or services included in a List published by a <u>nationally recognized testing laboratory</u> (i.e., CBI), an <u>approved agency</u> (i.e., CBI and DrJ), and/or and <u>approved source</u> (i.e., DrJ), or other organization(s) concerned with product evaluation (i.e., DrJ), that maintains periodic inspection (i.e., CBI) of production of listed equipment or materials, and whose listing states either that the equipment or material meets nationally recognized standards or has been tested and found suitable for use in a specified manner.





6 Tabulated Properties Generated from Nationally Recognized Standards

6.1 General

- 6.1.1 QuickTie U-Hanger Series Face Mount and Top Flange Mount Joist Hangers are used to resist gravity loads and uplift loads due to wind in one-ply, two-ply, and three-ply joist assemblies in light-frame wood construction.
- 6.1.2 QuickTie U-Hanger Series Face Mount and Top Flange Mount Joist Hangers are used as wood framing connectors in accordance with <u>IBC Section 2304.10.4</u>²⁷ and <u>IRC Section R301.1.3</u>.

6.2 Hanger Design Values

- 6.2.1 **Table 2** through **Table 15** give the allowable gravity and uplift loads for U-Hanger connectors with single-ply and multi-ply nominal lumber joists.
- 6.2.2 **Table 16** through **Table 18** give the allowable gravity and uplift loads for top and face mounted joist hangers with single-ply and multi-ply lumber trusses/rafters/joists.
- 6.2.3 The design values in **Table 2** through **Table 18** were derived using the applicable adjustment factors in ASTM D7147 per IBC Section 2303.5.
- The responsible design professional for the project shall determine which type of U-Hanger is appropriate using **Table 2** through **Table 18**.
- 6.2.5 Allowable Load Adjustment Factors for Nail Substitution:
 - 6.2.5.1 For situations where a different nail size is used for the installation of the face-mount hangers than what is stated in their respective tables in this section, adjustment factors are provided in **Table 1**.
 - 6.2.5.1.1 These reduction factors shall be applied to the allowable loads listed for the product.

Table 1. Allowable Load Adjustment Factors for Optional Nails^{1,2,3,4,5,6,7}

		I	Load Adjustment Factor	
Connector Table Fastener	Replacement Fastener	Single Shear Connection	Double Shea	r Connection
		Gravity/Uplift	Gravity	Uplift
	0.131" x 2 ¹ / ₂ "	1.00	N/A	N/A
	0.148" x 1 ¹ / ₄ "	1.00	N/A	N/A
	0.148" x 1 ¹ / ₂ "	1.00	N/A	N/A
0.131" x 1 ¹ / ₂ "	0.148" x 2 ¹ / ₂ "	1.00	N/A	N/A
	0.148" x 3 ¹ / ₄ "	1.00	N/A	N/A
	0.162" x 2 ¹ / ₂ "	1.00	N/A	N/A
	0.162" x 3 ¹ / ₂ "	1.00	N/A	N/A
	0.131" x 1 ¹ / ₂ "	0.97	N/A	N/A
	0.148" x 1 ¹ / ₄ "	1.00	N/A	N/A
	0.148" x 1 ¹ / ₂ "	1.00	N/A	N/A
0.131" x 2 ¹ / ₂ "	0.148" x 2 ¹ / ₂ "	1.00	1.00	1.00
	0.148" x 3 ¹ / ₄ "	1.00	1.00	1.00
	0.162" x 2 ¹ / ₂ "	1.00	1.00	1.00
	0.162" x 3 ¹ / ₂ "	1.00	1.00	1.00





 Table 1. Allowable Load Adjustment Factors for Optional Nails1,2,3,4,5,6,7

		L	oad Adjustment Factor	
Connector Table Fastener	Replacement Fastener	Single Shear Connection	Double Shear	Connection
rubic rubiciici	i dotonoi	Gravity/Uplift	Gravity	Uplift
	0.131" x 1 ¹ / ₂ "	0.82	N/A	N/A
	0.131" x 2 ¹ / ₂ "	0.85	N/A	N/A
	0.148" x 1 ¹ / ₄ "	0.90	N/A	N/A
0.148" x 1 ¹ / ₂ "	0.148" x 2 ¹ / ₂ "	1.00	N/A	N/A
	0.148" x 3 ¹ / ₄ "	1.00	N/A	N/A
	0.162" x 2 ¹ / ₂ "	1.00	N/A	N/A
	0.162" x 3 ¹ / ₂ "	1.00	N/A	N/A
	0.131" x 1 ¹ / ₂ "	0.82	N/A	N/A
	0.131" x 2 ¹ / ₂ "	0.85	0.87	0.87
	0.148" x 1 ¹ / ₄ "	0.90	N/A	N/A
0148" x 2 ¹ / ₂ "	0.148" x 1 ¹ / ₂ "	1.00	N/A	N/A
	0.148" x 3 ¹ / ₄ "	1.00	1.00	1.00
	0.162" x 2 ¹ / ₂ "	1.00	1.00	1.00
	0.162" x 3 ¹ / ₂ "	1.00	1.00	1.00
	0.131" x 1 ¹ / ₂ "	0.82	N/A	N/A
	0.131" x 2 ¹ / ₂ "	0.85	0.70	0.70
	0.148" x 1 ¹ / ₄ "	0.90	N/A	N/A
0.148" x 3 ¹ / ₄ "	0.148" x 1 ¹ / ₂ "	1.00	N/A	N/A
	0.148" x 2 ¹ / ₂ "	1.00	0.81	0.81
	0.162" x 2 ¹ / ₂ "	1.00	0.92	0.92
	0.162" x 3 ¹ / ₂ "	1.00	1.00	1.00
	0.131" x 1 ¹ / ₂ "	0.71	N/A	N/A
	0.131" x 2 ¹ / ₂ "	0.73	0.76	0.76
	0.148" x 1 ¹ / ₄ "	0.77	N/A	N/A
0.162" x 2 ¹ / ₂ "	0.148" x 1 ¹ / ₂ "	0.86	N/A	N/A
	0.148" x 2 ¹ / ₂ "	0.86	0.87	0.87
	0.148" x 3 ¹ / ₄ "	0.86	0.99	1.00
	0.162" x 3 ¹ / ₂ "	1.00	1.00	1.00





Table 1. Allowable Load Adjustment Factors for Optional Nails^{1,2,3,4,5,6,7}

			Load Adjustment Factor	
Connector Table Fastener	Replacement Fastener	Single Shear Connection	Double Shea	r Connection
		Gravity/Uplift	Gravity	Uplift
	0.131" x 1 ¹ / ₂ "	0.71	N/A	N/A
	0.131" x 2 ¹ / ₂ "	0.73	0.58	0.58
	0.148" x 1 ¹ / ₄ "	0.77	N/A	N/A
0.162" x 3 ¹ / ₂ "	0.148" x 1 ¹ / ₂ "	0.86	N/A	N/A
	0.148" x 2 ¹ / ₂ "	0.86	0.67	0.67
	0.148" x 3 ¹ / ₄ "	0.86	0.83	0.83
	0.162" x 2 ¹ / ₂ "	1.00	0.77	0.77

SI: 1 in = 25.4 mm

- 1. Allowable load adjustment factors shown in the table are applicable to all products specified in this table, except as noted in the footnotes below.
- 2. Some products have been tested specifically with alternative fasteners and have allowable load adjustment factors or reduced capacities published in Report Number 1811-03 or guicktieproducts.com. Values published therein may be used in lieu of using this table.
- 3. This table does not apply to skewed hangers or to hangers modified per allowed options, or to connectors made from steel thicker than 10-gauge.
- Screws shall not be substituted for nails.
- 5. Nails and screws may not be combined in the same connection.
- For straps installed over 5/8" maximum wood structural panel sheathing, use a 21/2" long fastener minimum.
- 7. Nails that are 11/2" long fasteners may be substituted for the specified fastener into the header only; double-shear fasteners shall be minimum 21/2" long.

6.3 Table Notes

- 6.3.1 The following notes apply to **Table 2** through **Table 18**:
 - 6.3.1.1 All U-Hangers have slant nailing. All nails must be driven at an angle (approximately 41°) in the joist and into the header to achieve published load values.
 - 6.3.1.2 Nails designated as 16d shall be 16d common nails (0.162" x 3.5", F_{yb} = 90,000 psi) and 10d shall be 10d common nails (0.148" x 3", F_{yb} = 90,000 psi), unless otherwise noted in these tables.
 - 6.3.1.3 Allowable loads are provided for load duration factors (C_D) of 1.0, 1.15, 1.25, and 1.6.
 - 6.3.1.3.1 Uplift loads have been increased for wind/earthquake load duration (C_D = 1.6). No further increases permitted. Allowable uplift loads shall be reduced where other load conditions govern.
 - 6.3.1.4 Allowable loads labeled "Floor" and "Roof" represent gravity loads.
 - 6.3.1.5 **Figure 7** and **Figure 8** show the example of installation of typical U-Hangers and Inverted Flange (IF) U-Hangers.
 - 6.3.1.6 **Figure 9** and **Figure 10** show the example of installation of sloped or sloped and skewed ULPSSH Hangers.
 - 6.3.1.7 **Figure 11** shows the example of installation of THJH26 and THJH26-W Hangers.
 - 6.3.1.8 **Figure 12** shows the example of installation of Top Flange Hangers.
 - 6.3.1.9 **Figure 13** shows the examples of installation of TSH Hangers.





Table 2. UL Series Hangers – Allowable Gravity and Uplift Loads (lbf)¹

Part No. UL	la:m#	Hanger	Dimensi	ons (in)			Faste	eners				OF-L 0.50)				SPF 0.42)	
Series (1, 2,	Joint Size				Steel Thick.	Hea	ader	J	oist	Floor	Roof	Roof	Uplift	Floor	Roof	Roof	Uplift
and 3-Ply Joists)	(in)	Width	Height	Depth		Qty	Size	Qty	Size	1.0	1.15	1.25	1.6	1.0	1.15	1.25	1.6
UL26		1 ⁵ / ₈	5 ³ / ₈														
UL26-2	2 x 6	31/8	4 ⁵ / ₈	13/4	20- gauge	6	16d	4	16d		1,215		510		965		440
UL26-3		4 ⁵ / ₈	37/8														
UL28		1 ⁵ /8	71/8														
UL28-2	2 x 8	31/8	6 ³ / ₈	13/4	20- gauge	8	16d	6	16d	1,695	1,8	355	910	1,400	1,455	1,490	785
UL28-3		45/8	5 ⁵ / ₈														
UL210		15/8	91/8														
UL210-2	2 x 10	31/8	83/8	1 ³ / ₄	20- gauge	10	16d	8	16d	2,175	2,495	2,575	1,315	1,835	1,940	2,010	1,130
UL210-3		45/8	7 ⁵ / ₈		3 3												
UL212		15/8	10 ³ / ₁₆														
UL212-2	2 x 12	31/8	97/16	1 ³ / ₄	20- gauge	10	16d	10	16d		1,570		1,715		1,265		1,475
UL212-3		45/8	811/16														

SI: 1 in. = 25.4 mm, 1 lbf = 4.45 N

1. See notes in **Section 6.3**.

Table 3. ULU Series Hangers – Allowable Gravity and Uplift Loads (lbf)¹

	Joist	Hang	er Dimen (in)	nsions			Faste	eners			SP (G	=0.55)			DF-L (0	G=0.50)		Н	F/SPF	(G=0.42	2)
Part No. ULU	Size (in)	Width	Height		Steel Thick.	Hea	ader	Jo	ist²	Floor	Roof	Roof	Uplift	Floor	Roof	Roof	Uplift	Floor	Roof	Roof	Uplift
		Widdi	rieigiit	Бери		Qty	Size	Qty	Size	1.0	1.15	1.25	1.6	1.0	1.15	1.25	1.6	1.0	1.15	1.25	1.6
ULU24	2 x 4	15/8	31/4	15/8		4	16d	2	10d	705	815	885	320	650	750	815	295	560	645	670	255
ULU26	2 x 6	15/8	43/4	15/8	20-gauge	6	16d	4	10d	1,115	1,280	1,395	670	1,025	1,180	1,285	620	885	1,015	1,090	530
ULU28	2 x 8	15/8	63/8	15/8	20-ga	8	16d	6	10d	1,520	1,745	1,900	1.005	1,400	1,610	1,750	925	1,205	1,385	1,505	795
ULU210	2 x 10	15/8	73/4	15/8		10	16d	6	10d	1,900	2,180	2,375		1,750	2,015	2,190	920	1,505	1,730	1,880	

SI: 1 in, = 25.4 mm, 1 lbf = 4.45 N

^{1.} See notes in Section 6.3.

Length of the 10d nails used for the connection between the hanger and the joist shall be 1½".





Table 4. ULP Series Hangers – Allowable Gravity and Uplift Loads (lbf)¹

Part No. ULP	Joist	Hang	jer Dimens (in)	sions	Steel		Faste	eners		S	SP/DF-L	(G=0.50))	ŀ	HF/SPF	(G=0.42)
(1, 2, and 3-ply	Size (in)				Thick.	Hea	der	Jo	ist	Floor	Roof	Roof	Uplift	Floor	Roof	Roof	Uplift
Joists)		Width	Height	Depth		Qty	Size	Qty	Size	1.0	1.15	1.25	1.6	1.0	1.15	1.25	1.6
ULP24		1 ⁵ / ₈					10d		10d		500				430		
ULP24-2	2 x 4	31/8	3 ¹ / ₈	1 ³ / ₄	18-gauge	6	100	2	or 10d		300		380		430		325
ULP24	2 X 4	1 ⁵ / ₈	3.18	1-74	18-0	U	16d	2	x 1 ¹ / ₂		805		300		580		323
ULP24-2		31/8					100		1 '/2		000				300		
ULP26		1 ⁵ / ₈	5 ³ / ₈														
ULP26R	2 x 6	2	5 ¹ / ₈														
ULP26-2	2 * 0	31/8	4 ⁵ / ₈	1 ³ / ₄	18-gauge	6	16d	4	16d	1,230	1,415	1,435	670	1,065	1,1	10	580
ULP26-3		45/8	37/8	1.74	18-g	0	100	7	100	1,200	1,410	1,400	070	1,000	1,1	10	300
ULP36	3 x 6	2 ⁹ / ₁₆	47/8														
ULP46	4 x 6	3 ⁹ / ₁₆	43/8														
ULP28		15/8	71/8														
ULP28R	2 x 8	2	67/8														
ULP28-2	2 × 0	31/8	63/8	1 ³ / ₄	18-gauge	8	16d	6	16d	1,710	1,955	2,005	1,025	1,450	1,525	1,560	890
ULP28-3		45/8	5 ⁵ / ₈	1-74	18-9	0	100	U	100	1,710	1,900	2,003	1,023	1,430	1,020	1,500	090
ULP38	3 x 8	2 ⁹ / ₁₆	65/8														
ULP48	4 x 8	3 ⁹ / ₁₆	61/8														
ULP210		1 ⁵ / ₈	91/8														
ULP210R	2 x 10	2	87/8	13/4	18-gauge	10	16d	8	16d								
ULP210-2	2 X 10	31/8	83/8	1~14	18-g	10	100	0	100	2,190	2,495	2,575	1,375	1,835	1,940	2,010	1,200
ULP210-3		45/8	7 ⁵ / ₈							2,100	2,433	2,010	1,010	1,000	1,340	2,010	1,200
ULP310	3 x 10	2 ⁹ / ₁₆	85/8	13/4	18-gauge	10	16d	8	16d								
ULP410	4 x 10	39/16	81/8	1 74	18-g	10	100	J	100								





Table 4. ULP Series Hangers – Allowable Gravity and Uplift Loads (lbf)¹

Part No. ULP	Joist	Hang	ger Dimens	sions	Steel		Faste	eners		S	P/DF-L	(G=0.50))	ŀ	HF/SPF	(G=0.42)
(1, 2, and 3-ply	Size (in)	Width	Height	Depth	Thick.	Hea	ader	Jo	ist	Floor	Roof	Roof	Uplift	Floor	Roof	Roof	Uplift
Joists)		wiuli	neight	Deptil		Qty	Size	Qty	Size	1.0	1.15	1.25	1.6	1.0	1.15	1.25	1.6
ULP212		1 ⁵ / ₈	10 ³ / ₁₆														
ULP212-2	2 x 12	31/8	97/16		e e												
ULP212-3		45/8	811/16	1 ³ / ₄	18-gauge	10	16d	10	16d		2,265		1,730		1,825		1,510
ULP312	3 x 12	29/16	911/16		1												
ULP412	4 x 12	3 ⁹ / ₁₆	93/16														

SI: 1 in. = 25.4 mm, 1 lbf = 4.45 N

Table 5. ULP-IF Series Hangers – Allowable Gravity and Uplift Loads (lbf)¹

Part No. ULP-IF	Joist	Hange	er Dimen (in)	sions			Faste	eners		SI	P/DF-L	(G=0.5	0)		HF/SPI	F (G=0.	42)
(1, 2, and 3-ply	Size (in)	Width	Height	Depth	Steel Thick.	Hea	der	Jo	ist	Floor	Roof	Roof	Uplift	Floor	Roof	Roof	Uplift
Joists)	,	wiutii	neight	Deptil		Qty	Size	Qty	Size	1.0	1.15	1.25	1.6	1.0	1.15	1.25	1.6
ULP-IF26		15/8	53/8		Эe												
ULP-IF26-2	2 x 6	31/8	4 ⁵ / ₈	13/4	18-gauge	6	16d	4	10d	830	955	1,040	745	715	825	895	640
ULP-IF26-3		4 ⁵ / ₈	37/8		18												
ULP-IF28		15/8	71/8		Эf												
ULP-IF28-2	2 x 8	31/8	63/8	13/4	18-gauge	8	16d	6	10d	1,110	1,275	1,385	930	955	1,100	1,195	805
ULP-IF28-3		4 ⁵ / ₈	5 ⁵ / ₈		18												
ULP-IF210		15/8	91/8		Эf												
ULP-IF210-2	2 x 10	31/8	83/8	13/4	18-gauge	10	16d	6	10d	1,385	1,590	1,730	1,115	1,195	1,375	1,490	965
ULP-IF210-3		45/8	7 5/8		18												

SI: 1 in. = 25.4 mm, 1 lbf = 4.45 N

^{1.} See notes in **Section 6.3**.

^{1.} See notes in **Section 6.3**.





Table 6. ULPSSH Series Hangers – Allowable Gravity and Uplift Loads (lbf)¹

Part	Joist	Hange	er Dimen (in)	sions	011		Faste	eners		S	P/DF-L	(G=0.5	0)	Н	IF/SPF	(G=0.42	<u>!</u>)
No. ULPSSH	Size (in)	VAC: -141-	II a la da la f	Donath	Steel Thick.	Hea	der	Jo	ist	Floor	Roof	Roof	Uplift	Floor	Roof	Roof	Uplift
52 , 55 , .	(,	Width	Height	Depth		Qty	Size	Qty	Size	1.0	1.15	1.25	1.6	1.0	1.15	1.25	1.6
						Slop	ed Or	ıly Ha	ngers								
ULPSSH26	2 x 6	19/16	5 ⁷ / ₁₆	3	е	6		9	10d	680	780	850	855	585	675	730	740
ULPSSH1.81	1 ³ / ₄ x 10	113/16	83/16	3	egr	10	10d	13	X 11/ ₂	1,185	1,365	1,480	1,270	1,020	1,175	1,280	1,095
ULPSSH210	2 x 10	19/16	83/16	3	\$	10		13	1 1/2								
					SI	oped	and SI	kewed	Hang	ers							
ULPSSH26	2 x 6	1 9/ ₁₆	5 ⁷ / ₁₆	3	eßi	6		9	10d		690		530		595		455
ULPSSH1.81	1 ³ / ₄ x 10	113/16	83/16	3	18-gauge	10	10d	13	x 1 ¹ / ₂		635		625		545		540
ULPSSH210	2 x 10	1 9/ ₁₆	83/16	3		10		13									

SI: 1 in. = 25.4 mm, 1 lbf = 4.45 N

^{1.} See notes in **Section 6.3**.





Table 7. UM Series Hangers – Allowable Gravity and Uplift Loads (lbf)¹

Part No. UM	Joist	Hange	er Dimen (in)	sions	Steel		Faste	eners		Si	P/DF-L	(G=0.5	0)	Н	F/SPF	(G=0.42	2)
(1, 2, and 3-ply	Size (in)	Width	Height	Depth	Thick.	Hea	der	Jo	ist	Floor	Roof	Roof	Uplift	Floor	Roof	Roof	Uplift
Joists)	()	widii	neight	Deptil		Qty	Size	Qty	Size	1.0	1.15	1.25	1.6	1.0	1.15	1.25	1.6
UM26		15/8	53/8														
UM26R	2 x 6	2	5 ³ / ₁₆														
UM26-2	2 7 0	31/8	4 ⁵ / ₈		eße												
UM26-3		4 ⁵ / ₈	37/8	21/4	16-gauge	6	16d	6	16d	1,445	1,5	40			1,245		
UM36	3 x 6	2 ⁹ / ₁₆	47/8		16												
UM46	4 x 6	3 ⁹ / ₁₆	43/8														
UM46R	4 x 6	4	43/16										600				525
UM28		15/8	71/8										000				323
UM28R	2 x 8	2	615/16														
UM28-2	2 X O	31/8	63/8		Эе												
UM28-3		45/8	55/8	21/4	16-gauge	12	16d	6	16d	1,885	1,9	30			1,625		
UM38	3 x 8	29/16	65/8		16												
UM48	4 x 8	39/16	61/8														
UM48R	4 x 8	4	5 ¹⁵ / ₁₆														
UM210		15/8	91/8														
UM210R	0 v 10	2	815/16														
UM210-2	2 x 10	31/8	83/8		Эе												
UM210-3		45/8	7 ⁵ / ₈	21/4	16-gauge	18	16d	8	16d		2,320		1,065		2,005		925
UM310	3 x 10	29/16	85/8		16												
UM410	4 x 10	39/16	81/8														
UM410R	4 x 10	4	7 ¹⁵ / ₁₆														
UM212		15/8	103/16														
UM212-2	2 x 12	31/8	97/16	21/4		22	16d	10	16d								
UM212-3		45/8	811/16	∠ 14	16-gauge	~~	100	10	100		1,930		1,530		1,535		1,325
UM312	3 x 12	29/16	911/16		16-g						1,330		1,330		1,000		1,020
UM412	4 x 12	39/16	93/16	01/		00	40.1	40	40.1								
UM412R	4 x 12	4	9	21/4		22	16d	10	16d								

SI: 1 in, = 25.4 mm, 1 lbf = 4.45 N

^{1.} See notes in **Section 6.3**.





Table 8. UMSR-L Series Hangers – Allowable Gravity and Uplift Loads (lbf)¹

	Hanger	Dimensi	ons (in)			Fas	teners		S	P/DF-L	(G=0.50))	H	IF/SPF	(G=0.42	2)
Part No. UMSR-L	Width	Height	Donth	Steel Thick.	Hea	der	J	oist	Floor	Roof	Roof	Uplift	Floor	Roof	Roof	Uplift
	width	neight	Depth		Qty	Size	Qty	Size	1.0	1.15	1.25	1.6	1.0	1.15	1.25	1.6
UMSR-L24	19/16	31/2	2		4	16d	4	10d x ¹ / ₂	575	66	60	395	495	52	20	340
UMSR-L26	19/16	5	2		6	16d	6	10d x ¹ / ₂	865	995	1,080	700	745	82	20	605
UMSR-L210	1 9/ ₁₆	83/16	2		10	16d	10	10d x ¹ / ₂	1,440	1,660	1,795	990	1,240	1,415	1,420	850
UMSR-L214	1 9/ ₁₆	10	2		12	16d	12	16d	1,730	1,990	2,160	2,340	1,490	1,715	1,865	2,020
UMSR-L26-2	31/8	415/16	25/8	Эе	8	16d	4	16d	1,190	1,370	1,490	955	1,030	1,185	1,285	825
UMSR-L210-2	31/8	91/4	25/8	16-gauge	14	16d	6	16d	1,935	2,225	2,420	1,430	1,675	1,925	2,085	1,235
UMSR-L46	39/16	41/4	25/8	16	8	16d	4	16d	1,190	1,370	1,490	955	1,030	1,185	1,285	825
UMSR-L410	39/16	81/2	25/8		14	16d	6	16d	1,935	2,225	2,420	1,430	1,675	1,925	2,085	1,235
UMSR-L414 ²	39/16	121/2	25/8		18	16d	8	16d	2,680	3,080	3,350	1,905	2,315	2,660	2,880	1,645
UMSR-L2.56-9	29/16	813/16	33/16		14	16d	2	10d	1,935	2,225	2,420	475	1,675	1,925	2,085	410
UMSR-L2.56-11	29/16	113/16	33/16		16	16d	2	10d	2,310	2,655	2,885	4/5	1,995	2,295	2,485	410

SI: 1 in, = 25.4 mm, 1 lbf = 4.45 N

Table 9. UHSR-L Series Hangers – Allowable Gravity and Uplift Loads (lbf)¹

	Hange	r Dimens	ions (in)			Faste	eners		S	P/DF-L	(G=0.50	0)	ŀ	IF/SPF	(G=0.42	2)
Part No. UHSR-L	\A/: al4la	Halashi	Danth	Steel Thick.	Hea	der	Jo	ist	Floor	Roof	Roof	Uplift	Floor	Roof	Roof	Uplift
OHOR E	Width	Height	Depth		Qty	Size	Qty	Size	1.0	1.15	1.25	1.6	1.0	1.15	1.25	1.6
UHSR-L26-2	31/8	4 ¹⁵ / ₁₆	27/16		12	16d	4	16d	1,785	1,9	965	955	1,545	1,5	550	825
UHSR-L210-2	31/8	811/16	27/16		20	16d	6	16d	2,905	3,340	3,625	1,430	2,510	2,885	2,965	1,235
UHSR-L214-2 ²	31/8	1211/16	27/16	14-gauge	26	16d	8	16d	3,870	4,450	4,835	1,905	3,345	3,845	3,955	1,645
UHSR-L46	39/16	43/4	27/16	14-g	12	16d	4	16d	1,785	1,965	1,965	955	1,545	1,5	550	825
UHSR-L410	39/16	81/2	27/16		20	16d	6	16d	2,905	3,340	3,625	1,430	2,510	2,885	2,965	1,235
UHSR-L414 ²	39/16	121/2	27/16		26	16d	8	16d	3,870	4,450	4,835	1,905	3,345	3,845	3,955	1,645

SI: 1 in, = 25.4 mm, 1 lbf = 4.45 N

^{1.} See notes in Section 6.3.

^{2.} Install the joist with a miter-cut end and double shear nails.

^{1.} See notes in **Section 6.3**.

^{2.} Install the joist with a miter-cut end and double shear nails.





Table 10. UH Series Hangers – Allowable Gravity and Uplift Loads (lbf)¹

Part No.	Joist	Hang	er Dimen (in)	sions			Faste	eners		S	P/DF-L	(G=0.5	0)	Н	F/SPF	(G=0.42	2)
(1, 2, and 3-ply	Size (in)	VAC: -141-	11 a laula 4	Davida	Steel Thick.	Hea	ıder	Jo	ist	Floor	Roof	Roof	Uplift	Floor	Roof	Roof	Uplift
Joists)	()	Width	Height	Depth		Qty	Size	Qty	Size	1.0	1.15	1.25	1.6	1.0	1.15	1.25	1.6
UH26		15/8	53/8														
UH26-2	2 x 6	31/8	4 5/ ₈		Ð												
UH26-3		4 ⁵ / ₈	37/8	21/4	14-gauge	6	16d	6	16d	1,465	1,5	540	1,170		1,205		1,015
UH36	3 x 6	2 ⁹ / ₁₆	4 ⁷ / ₈		1												
UH46	4 x 6	39/16	43/8														
UH28		15/8	71/8														
UH28-2	2 x 8	31/8	63/8		Ð												
UH28-3		4 ⁵ / ₈	5 ⁵ / ₈	21/4	14-gauge	12	16d	6	16d	1,900	1,960	1,985	1,380	1,495	1,525	1,550	1,195
UH38	3 x 8	2 ⁹ / ₁₆	6 ⁵ / ₈		1												
UH48	4 x 8	3 ⁹ / ₁₆	6 ¹ / ₈														
UH210		1 ⁵ / ₈	91/8														
UH210-2	2 x 10	31/8	83/8		Θ												
UH210-3		4 ⁵ / ₈	7 ⁵ / ₈	21/4	14-gauge	18	16d	8	16d	2,265	2,375	2,425	1,565	1,780	1,850	1,890	1,365
UH310	3 x 10	2 ⁹ / ₁₆	8 ⁵ / ₈		1												
UH410	4 x 10	39/16	81/8														
UH212			103/16														
UH212-2	2 x 12	31/8	97/16		<u>e</u>												
UH212-3		45/8	811/16	21/4	14-gauge	22	16d	10	16d	3,060	3,210	3,310	1,975	2,355	2,490	2,575	1,720
UH312	3 x 12	2 ⁹ / ₁₆	911/16		1												
UH412	4 x 12	39/16	93/16														

SI: 1 in. = 25.4 mm, 1 lbf = 4.45 N

^{1.} See notes in **Section 6.3**.





Table 11. UH-IF Series Hangers – Allowable Gravity and Uplift Loads (lbf)¹

			0 11. 0							Jiavicy		-		(,			
Part No. UH-IF	Joist	Hange	r Dimens (in)	sions	Ctool		Faste	eners		s	P/DF-L	(G=0.5	0)	F	IF/SPF	(G=0.42	2)
(1, 2, and 3-ply	Size (in)				Steel Thick.	Hea	ader	Jo	ist	Floor	Roof	Roof	Uplift	Floor	Roof	Roof	Uplift
Joists)	(111)	Width	Height	Depth		Qty	Size	Qty	Size	1.0	1.15	1.25	1.6	1.0	1.15	1.25	1.6
UH-IF26-2	2 x 6	31/8	4 ⁵ / ₈														
UH-IF26-3	2 X O	4 ⁵ / ₈	37/8	21/4		6	16d	6	10d	865	995	1,080	1,170	750	860	935	1,015
UH-IF36	3 x 6	2 ⁹ / ₁₆	4 ⁷ / ₈	Z'/4		0	100	0	100	000	990	1,000	1,170	750	000	933	1,015
UH-IF46	4 x 6	39/16	43/8														
UH-IF28-2	2 x 8	31/8	63/8														
UH-IF28-3	2 X O	4 ⁵ / ₈	5 ⁵ / ₈	21/4		12	16d	6	104	1 625	1 775	1 020	1 170	1 245	1 470	1 555	1 015
UH-IF38	3 x 8	29/16	6 ⁵ / ₈	Z'/4		12	100	0	10d	1,635	1,775	1,030	1,170	1,345	1,470	1,555	1,015
UH-IF48	4 x 8	39/16	61/8		14-gauge												
UH-IF210-2	2 x 10	31/8	83/8		14-g												
UH-IF210-3	2 X 10	45/8	7 5/8	21/4		18	16d	8	10d	2 400	2,555	0.505	1 500	1 045	2.005	2,180	1 255
UH-IF310	3 x 10	29/16	85/8	Z'/4		10	100	0	100	2,400	2,333	2,303	1,560	1,945	2,085	2,100	1,355
UH-IF410	4 x 10	39/16	81/8														
UH-IF212-2	2 x 12	31/8	97/16														
UH-IF212-3	2 X 12	45/8	811/16	21/4		20	16d	10	104	2 170	2.0	25	1 050	2 540	2 605	2 000	1 600
UH-IF312	3 x 12	29/16	911/16	Z'/4		22	100	10	10d	3,170	3,3	335	1,950	2,540	2,695	2,800	1,690
UH-IF412	4 x 12	39/16	93/16														
SI: 1 in = 25.4	mm 1 lhf	- 1 15 N					•										

SI: 1 in. = 25.4 mm, 1 lbf = 4.45 N

1. See notes in Section 6.3.

Table 12. UMH Series Hangers – Allowable Gravity and Uplift Loads (lbf)¹

	Joist	Hang	er Dimer (in)	sions			Faste	eners			SP (G	=0.55)			DF-L (C	G=0.50)		Н	IF/SPF	(G=0.42	2)
Part No. UMH	Size (in)	Width	Height	Depth	Steel Thick.	Hea	der	Jo	ist	Floor	Roof	Roof	Uplift	Floor	Roof	Roof	Uplift	Floor	Roof	Roof	Uplift
						Qty	Size	Qty	Size	1.0	1.15	1.25	1.6	1.0	1.15	1.25	1.6	1.0	1.15	1.25	1.6
UMH26	2 x 6	15/8	53/8	3	је	14	16d	8	16d	3,050	3,505	3,610	1,440	2,820	3,245	3,525	1,395	2,440	2,805	3,050	1,215
UMH28	2 x 8	15/8	7	3	-gauge	22	16d	10	16d	4,895	5,125	5,175	2,075	4,780	4,995	5,135	1,950	3,315	3,770	3,895	1,690
UMH210	2 x 10	15/8	9	3	16	30			16d		6,740		2,710		6,740		2,505	4,190	4,7	35	2,160

SI: 1 in, = 25.4 mm, 1 lbf = 4.45 N

See notes in Section 6.3.





Table 13. UHH Series Hangers – Allowable Gravity and Uplift Loads (lbf)¹

Part No.		Hanger I	Dimensi	ons (in)			Faste	eners			SP (G	=0.55)			DF-L (C	G=0.50)		н	F/SPF	(G=0.4	2)
UHH (1, 2, 3, and	Joist Size (in)	Width	Haimbi	Douth	Steel Thick.	He	ader	Jo	ist	Floor	Roof	Roof	Uplift	Floor	Roof	Roof	Uplift	Floor	Roof	Roof	Uplift
4-ply Joists)	(111)	vviatn	Height	рерии		Qty	Size	Qty	Size	1.0	1.15	1.25	1.6	1.0	1.15	1.25	1.6	1.0	1.15	1.25	1.6
UHH26-2	2 x 6	35/16	53/8	3		14	16d	6	16d	2,905	3,340	3,630	1,745	2,685	3,090	3,360	1,615	2,325	2,675	2,905	1,395
UHH28-2	2 x 8	35/16	71/4	3		22	16d	8	16d	4,950	5,170	5,315	2,535	4,840	5,045	5,180	2,345	3,185	3,360	3,475	2,025
UHH210-2		35/16	93/16			30	16d	10	16d		6,995		3,320		6,995		3,070		4,040		2,655
UHH210-3	2 x 10	415/16	87/8	3		30	16d	10	16d	5 010	6 900	6 005	3,460	E 470	6 200	6 175	2 215	1 005	E /	20	2,800
UHH210-4		61/8	87/8		14-gauge	30	16d	10	16d	3,910	0,000	0,900	3,400	5,470	0,290	0,475	3,213	4,025	5,4	120	2,000
UHH46	4 x 6	35/8	51/8	3	14-g	14	16d	6	16d	2,905	3,340	3,630	1,745	2,685	3,090	3,360	1,615	2,325	2,675	2,905	1,395
UHH48	4 x 8	35/8	71/8	3		22	16d	8	16d	4,950	5,170	5,315	2,535	4,840	5,045	5,180	2,345	3,185	3,360	3,475	2,025
UHH410	4 x 10	35/8	9	3		30	16d	10	16d		6,995		3,320		6,995		3,070		4,040		2,655
UHH610	6 x 10	51/2	9	3		30	16d	10	16d	F 040	C 000	C 075	2.400	F 470	C 200	C C20	2 045	4 000	F F	·25	0.050
UHH7210	2 x 10	71/4	9	35/16		30	16d	10	16d	5,910	0,000	0,975	3,460	5,470	0,290	0,030	3,213	4,020	5,5	35	2,850

SI: 1 in, = 25.4 mm, 1 lbf = 4.45 N

^{1.} See notes in See notes in **Section 6.3**.





Table 14. UHD Series Hangers – Allowable Gravity and Uplift Loads (lbf)¹

Dord No.	Hang	er Dime	nsions			Faste	eners			S	P 1,2			DF-	_ 1,2	\		HF/S	PF 1,2	
Part No. UHD Series			5 #	Steel Thick	Hea	der	Jo	ist	Floor	Roof	Roof	Uplift	Floor	Roof	Roof	Uplift	Floor	Roof	Roof	Uplift
OCITICS	Width	Height	Depth		Qty	Size	Qty	Size	1.0	1.15	1.25	1.6	1.0	1.15	1.25	1.6	1.0	1.15	1.25	1.6
UHD26-4	69/16	57/16																		
UHD46	35/8	47/16	4	ө																
UHD26-2	35/16	57/16	4	12-gauge	20	16d	8	16d	5,010	5,765	6,265	2,595	4,460	5,130	5,575	2,475	4,060	4,670	5,075	2,170
UHD26-3	415/16	5 ¹ / ₂		1;																
UHD26	1 ⁵ / ₈	5 ³ / ₈	5																	
UHD28	1 ⁵ / ₈	71/8	5																	
UHD28-2	35/16	73/16																		
UHD28-3	415/16	71/4		12-gauge	36	16d	12	164	9,375	0.665	9,855	3 550	8,180	9 440	9 610	3 330	6 950	7,505	7,660	2,905
UHD28-4	69/16	73/16	4	12-g	30	100	12	100	9,373	9,000	9,000	3,330	0,100	0,440	0,010	3,330	0,000	7,505	7,000	2,900
UHD48	35/8	71/16																		
UHD558	51/2	615/16																		
UHD210	15/8	91/8	5																	
UHD210-2	35/16	93/16																		
UHD210-3	415/16	91/4																		
UHD210-4	69/16	93/16																		
UHD3210	31/4	85/8		ө																
UHD410	35/8	91/16	4	12-gauge	46	16d	16	16d		12,100)	4,500		10,505		4,180	8,590	9,2	275	3,640
UHD7310	73/8	89/16	4	12																
UHD5510	51/2	815/16																		
UHD5210	51/4	91/16																		
UHD6810	67/8	813/16																		
UHD7210	71/4	85/8																		





Table 14. UHD Series Hangers – Allowable Gravity and Uplift Loads (lbf)¹

	Series Width Height Depth					Faste				S	P 1,2			DF-			,	HF/S	PF 1,2	
UHD				Steel Thick	Hea	ader	Jo	ist	Floor	Roof	Roof	Uplift	Floor	Roof	Roof	Uplift	Floor	Roof	Roof	Uplift
Jeries	Width	Height	Depth		Qty	Size	Qty	Size	1.0	1.15	1.25	1.6	1.0	1.15	1.25	1.6	1.0	1.15	1.25	1.6
UHD212-3	415/16	103/4																		
UHD212-4	69/16	105/8																		
UHD7312	73/8	109/16																		
UHD5512	51/2	101/2	4	12-gauge	56	16d	20	16d		13,000	1	5,090		11,570		1 655	9,730	10.0	070	3,955
UHD5212	51/4	109/16	4	12-g	50	100	20	100		13,000	,	5,090		11,570		4,000	9,730	10,	010	3,933
UHD6812	67/8	1013/16																		
UHD7212	71/4	105/8																		
UHD3212	31/4	105/8																		
UHD414-2	73/8	129/16																•		
UHD214-3	415/16	123/4																		
UHD214-4	69/16	125/8																		
UHD414	35/8	127/16	4	12-gauge	66	164	22	164		12 00	.	5,385		12,635		4 005		10,865		4 110
UHD7314	73/8	129/16	4	12-g	00	16d	22	100	6d 13,895					12,035		4,895		10,000		4,110
UHD5514	51/2	121/2																		
UHD6814	67/8	1213/16																		
UHD7214	71/4	125/8																		

SI: 1 in. = 25.4 mm, 1 lbf = 4.45 N

1. See notes in **Section 6.3**.





Table 15. THJH26 and THJH26-W Series Hangers – Allowable Gravity and Uplift Loads (lbf)^{1,2,3}

Part No.	Joist	Hanger	Dimension	ons (in)			Fast	eners		S	SP/DF-L	(G=0.50))	ŀ	HF/SPF	(G=0.42	:)
THJH (1 and 2 ply	Size	Width	Height	Depth	Steel Thick.	He	ader	J	oist	Floor	Roof	Roof	Uplift	Floor	Roof	Roof	Uplift
Joists)	(in)	widti	neight	Deptil		Qty	Size	Qty	Size	1.0	1.15	1.25	1.6	1.0	1.15	1.25	1.6
THJH26	2 x 6	5 ¹ / ₈	5 ³ / ₈	31/2	12-	16	10d	14	10d x 1 ¹ / ₂	2 255	2,4	35	1,425	1,960	2,1	20	1,235
THJH26-W	(2) 2 x 6	8 ¹ / ₈	5 ³ / ₈	31/2	gauge	10	Common	14	10d Common	2,255	2,590	2,710	1,675		1,950		1,455

SI: 1 in. = 25.4 mm, 1 lbf = 4.45 N

- 1. See notes in Section 6.3.
- 2. Allowable loads are the combined allowable loads of the hip and jack members: sixty-five percent (65%) of the load shall be distributed by the hip member and thirty-five percent (35%) of the load shall be distributed to the jack.
- 3. Allowable loads applicable for hip skews up to 45°.

Table 16. TSH Series Hangers (Top Mounted) – Allowable Gravity and Uplift Loads (lbf)¹

Part No.	Hanger	Dimensi	ons (in)			Fa	stener	s			SP (G	=0.55)			DF-L (G=0.50))	Н	F/SPF	(G=0.4	2)
TSH (1, 2, and				Steel		Heade	r	Jo	ist	Floor	Roof	Roof	Unlift	Floor	Roof	Roof	Unlift	Floor	Roof	Roof	Unlift
3-ply	Width	Height	Depth	Thick.	Q	ty		30	ist	1 1001	Rooi	Rooi	Opilit	1 1001	Rooi	Kooi	Opilit	1 1001	Rooi	Kooi	Opini
Joists)					Face	Тор	Size	Qty	Size	1.0	1.15	1.25	1.6	1.0	1.15	1.25	1.6	1.0	1.15	1.25	1.6
TSH29	15/8	911/16	13/4		6	4	10d	4	10d	2,345	2,695	2,875	1,155	2,025	2,325	2,530	1,070	1,505	1,735	1,885	925
TSH213	15/8	135/16	13/4	18- gauge	6	4	10d	4	10d	2,435	2,800	2,985	1,000	2,110	2,420	2,635	930	1,580	1,820	1,975	805
TSH218	15/8	173/16	13/4		6	4	10d	6	10d	2,520	2,900	3,090	840	2,190	2,515	2,735	785	1,650	1,900	2,065	680
TSH218-2	3-1/8	1711/16	13/4	16-	6	4	16d	6	16d	4.625	4.7	715	2 925	3 000	1 505	1 665	2 600	2,965	2 /10	2 705	2 225
TSH222-2	3-1/8	223/16	13/4	gauge	6	4	16d	6	16d	4,025	4,1	40	2,000	3,390	4,565	4,000	2,090	2,905	3,410	3,703	2,323
TSH413	35/8	135/16	13/4	18- gauge	18- 6 4 16		16d	4	16d		3,115		1,140		2,875		1,060	1,315	1,510	1,640	920
TSH418	3 ⁵ /8	171/2	13/4		6	4	10d	6	10d		3,800		1,785		3,525		1,650	2,345	2,555	2,620	1,430
13/14/10	3 %	17 72	19/4	16- gauge	6	4	16d	6	16d		4,490		2,445		3,970		2,260	3,000	3,5	95	1,950
TSH422	35/8	22	13/4		6	4	16d	6	16d										3,5	95	1,950
TSH422-2	71/4	2211/16	21/2		8	4	16d	6	16d		4,055		2,390		3,830		2,210		3,315		1,910
TSH426	35/8	26	13/4	14- gauge	8	4	16d	6	16d		4,645		2,420		4,350		2,245	3,375	3,7	'65	1,955
TSH426-2	71/4	261/16	21/2		8	4	16d	6	16d		4,055		2,390		3,830		2,210		3,315		1,910

SI: 1 in. = 25.4 mm, 1 lbf = 4.45 N

See notes in Section 6.3.





Table 17. TSH Series Hangers (Face Mounted) – Allowable Gravity and Uplift Loads (lbf)¹

Part No.	Hanger	Dimensi	ons (in)			Faste	ners			SP (G	=0.55)			DF-L (0	G=0.50)	1	Н	F/SPF	(G=0.4	2)
TSH (1, 2, and				Steel	Hea	der	J	oist	Floor	Roof	Roof	Uplift	Floor	Roof	Roof	Uplift	Floor	Roof	Roof	Uplift
3-ply Joists)	Width	Height	Depth	Thick.	Qty	Size	Qty	Size	1.0	1.15	1.25	1.6	1.0	1.15	1.25	1.6	1.0	1.15	1.25	1.6
TSH29	15/8	911/16	13/4		16	10d	4	10d				1,155		1,910		1,070		1,455		925
TSH213	15/8	135/16	13/4	18-gauge	14	10d	4	10d		2,115		1,005		1,930		930	1,480	1,5	570	805
TSH218	15/8	173/16	13/4		18	10d	4	10d				850		1,950		790	1,505	1,6	80	685
TSH218-2	3-1/8	1711/16	13/4	16	22	16d	6	16d	4 400	A 71E	5,120	2 025	2 700	4 2FF	4 725	0.740	0.005	2 440	2 705	0.225
TSH222-2	3-1/8	223/16	13/4	16-gauge	22	16d	6	16d	4,100	4,7 13	5,120	2,033	3,790	4,333	4,733	2,710	2,900	3,410	3,703	2,333
TSH413	35/8	135/16	13/4	18-gauge	14	16d	4	16d	2,160	2,485	2,700	1,145	1,995	2,295	2,495	1,065	1,720	1,980	2,150	925
TSH418	3 ⁵ / ₈	171/2	13/4		22	10d	6	10d	3,275	3,770	4,095	1,950	3,030	3,480	3,785	1,800	2,620	3,010	3,275	1,555
130410	39/8	17'/2	19/4	16-gauge	22	16d	6	16d	4 400	A 71E	5.120	2 440	2 700	4 2FF	4 725	0.055	2 220	2.765	4 005	1 045
TSH422	35/8	22	13/4		22	16d	6	16d	4,100	4,7 15	5,120	2,440	3,790	4,300	4,730	2,200	3,330	3,765	4,095	1,945
TSH422-2	71/4	2211/16	21/2		30	16d	6	16d		5,190		2,400		4,800		2,220		4,150		1,920
TSH426	35/8	26	13/4	14-gauge	30	16d	6	16d	4,99	4,990		2,435	4,555	4,6	315	2,260	3,375	3,880	3,990	1,970
TSH426-2	71/4	261/16	21/2		38	16d	6	16d		5,190		2,400		4,800		2,220		4,150		1,920

SI: 1 in. = 25.4 mm, 1 lbf = 4.45 N

Table 18. TFLP and TFH Series Hangers – Allowable Gravity and Uplift Loads (lbf)¹

	laist	На	anger Din	nensions	s (in)			Faste	eners		8	SP/DF-L	(G=0.50))	H	HF/SPF	(G=0.42	2)
Part No. TFLP	Joist Size	\A/: -141 ₂	lla:aht	Danish	Тор	Steel Thick.	Hea	ader	Jo	ist	Floor	Roof	Roof	Uplift	Floor	Roof	Roof	Uplift
	(in)	Width	Height	Depth	Flange, TF		Qty	Size	Qty	Size	1.0	1.15	1.25	1.6	1.0	1.15	1.25	1.6
TFLP26	2 x 6		5 ³ / ₈	11/2	1 ⁵ / ₁₆	18-gauge	6		2			1 0/15		230		945		165
TFLP28	2 x 8		71/4	11/2	1 ⁵ / ₁₆	18-g	0		2			1,245		230		940		225
TFH210	2 x 10	1 ⁹ / ₁₆	93/16			40		16d		10d x 1 ¹ / ₂								
TFH212	2 x 12		111/8	2	1 ⁷ / ₁₆	14-gauge	8		4	1 12		1,535		380		1,165		285
TFH214	2 x 14		131/8			14-g												

SI: 1 in. = 25.4 mm, 1 lbf = 4.45 N

6.4 Where the application falls outside of the performance evaluation, conditions of use, and/or installation requirements set forth herein, alternative techniques shall be permitted in accordance with accepted engineering practice and experience. This includes but is not limited to the following areas of engineering: mechanics or materials, structural, building science, and fire science.

See notes in Section 6.3.

^{1.} See notes in Section 6.3.





Certified Performance²⁸

- 7.1 All construction methods shall conform to accepted engineering practices to ensure durable, livable, and safe construction and shall demonstrate acceptable workmanship reflecting journeyman quality of work of the various trades.29
- 7.2 The strength and rigidity of the component parts and/or the integrated structure shall be determined by engineering analysis or by suitable load tests to simulate the actual loads and conditions of application that occur.30

Regulatory Evaluation and Accepted Engineering Practice

- QuickTie U-Hanger Series complies with the following legislatively adopted regulations and/or accepted engineering practice for the following reasons:
 - 8.1.1 QuickTie U-Hanger Series Face Mount and Top Flange Mount Joist Hangers were evaluated for the following:
 - 8.1.1.1 Structural performance of connectors under uplift and gravity load conditions.
 - 8.1.1.2 Performance for use in buildings of light-frame construction in accordance with the codes listed in Section 4.
- 8.2 Any building code, regulation and/or accepted engineering evaluations (i.e., research reports, duly authenticated reports, etc.) that are conducted for this Listing were performed by DrJ, which is an ISO/IEC 17065 accredited certification body and a professional engineering company operated by RDP or approved sources. DrJ is qualified³¹ to practice product and regulatory compliance services within its scope of accreditation and engineering expertise, 32 respectively.
- 8.3 Engineering evaluations are conducted with DrJ's ANAB accredited ICS code scope of expertise, which is also its areas of professional engineering competence.
- 8.4 Any regulation specific issues not addressed in this section are outside the scope of this report.

Installation

- 9.1 Installation shall comply with the approved construction documents, the manufacturer installation instructions, this report, and the applicable building code.
- 9.2 In the event of a conflict between the manufacturer installation instructions and this report, contact the manufacturer for counsel on the proper installation method.
- 9.3 Installation Procedure
 - Hangers shall be attached to wood members with the appropriate quantity and size of fasteners, as shown 9.3.1 in Table 2 through Table 18.
 - 9.3.2 A copy of the manufacturer published installation instructions shall be available at all times on the jobsite during installation.
 - 9.3.3 Installation examples are shown in Figure 7 through Figure 13.







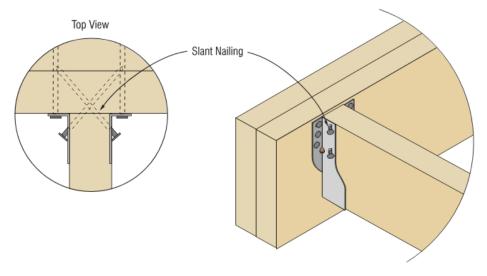


Figure 7. Installation View of U-Hangers

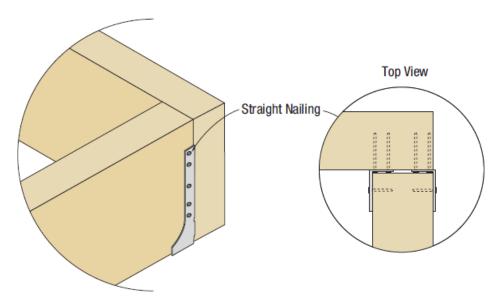


Figure 8. Installation Views of Inverted Flange (IF) U-Hangers





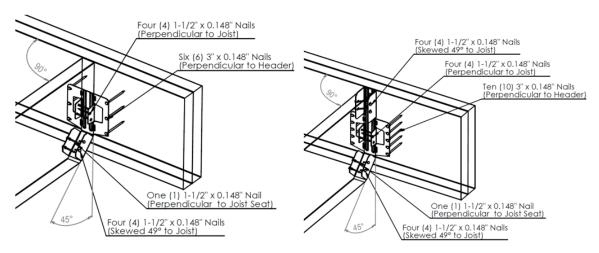


Figure 9. Installation Views of ULPSSH26 (left) and ULPSSH210 (right) - Sloped Only

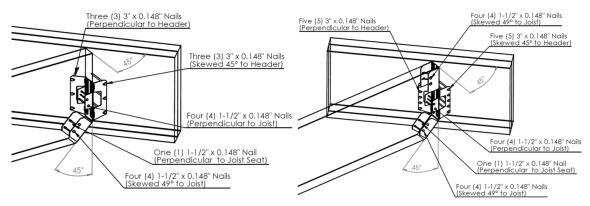


Figure 10. Installation Views of ULPSSH26 (top) and ULPSSH210 (bottom) - Sloped and Skewed

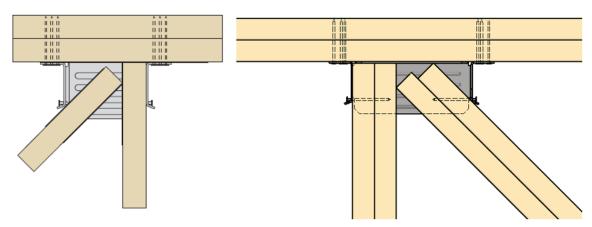


Figure 11. Installation Views of THJH26 and THJH26-W Hangers









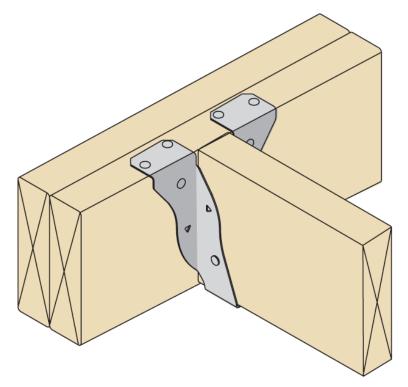


Figure 12. Installation View of Top Flange (TFLP & TFH) Hangers



Figure 13. Installation View of Top and Face Mounted Flange (TSH) Hangers





10 Substantiating Data

- 10.1 Testing has been performed under the supervision of a professional engineer and/or under the requirements of ISO/IEC 17025 as follows:
 - 10.1.1 Bending yield testing in accordance with ASTM F1575
 - 10.1.2 Tensile strength testing in accordance with ASTM A370
 - 10.1.3 Gravity and uplift load testing in accordance with ASTM D7147
- 10.2 Information contained herein may include the result of testing and/or data analysis by sources that are approved agencies, approved sources, and/or an RDP. Accuracy of external test data and resulting analysis is relied upon.
- 10.3 Where applicable, testing and/or engineering analysis are based upon provisions that have been codified into law through state or local adoption of regulations and standards. The developers of these regulations and standards are responsible for the reliability of published content. DrJ's engineering practice may use a regulation-adopted provision as the control. A regulation-endorsed control versus a simulation of the conditions of application to occur establishes a new material as being equivalent to the regulatory provision in terms of quality, strength, effectiveness, fire resistance, durability, and safety.
- 10.4 The accuracy of the provisions provided herein may be reliant upon the published properties of raw materials, which are defined by the grade mark, grade stamp, mill certificate, or <u>duly authenticated reports</u> from <u>approved agencies</u> and/or <u>approved sources</u> provided by the supplier. These are presumed to be minimum properties and relied upon to be accurate. The reliability of DrJ's engineering practice, as contained in this <u>duly</u> authenticated report, may be dependent upon published design properties by others.
- 10.5 Testing and Engineering Analysis:
 - 10.5.1 The strength, rigidity, and/or general performance of component parts and/or the integrated structure are determined by suitable tests that simulate the actual conditions of application that occur and/or by accepted engineering practice and experience.³³
- 10.6 Where additional condition of use and/or regulatory compliance information is required, please search for any of the QuickTie U-Hanger Series on the <u>DrJ Certification website</u>.

11 Findings

- 11.1 As outlined in **Section 6**, the QuickTie U-Hanger Series have performance characteristics that were tested and/or meet applicable regulations. In addition, they are suitable for use pursuant to its specified purpose.
- 11.2 When used and installed in accordance with this <u>duly authenticated report</u> and the manufacturer installation instructions, QuickTie U-Hanger Series shall be approved for the following applications:
 - 11.2.1 Use as described in this report in conformance to the codes listed in **Section 4**.
 - 11.2.2 Where the design values listed in **Table 2** through **Table 18** meet the requirements of the building design.
- 11.3 Unless exempt by state statute, when the QuickTie U-Hanger Series is to be used as a structural and/or building envelope component in the design of a specific building, the design shall be performed by an RDP.
- 11.4 Any application specific issues not addressed herein can be engineered by an RDP. Assistance with engineering is available from QuickTie Products, Inc.
- 11.5 IBC Section 104.2.3³⁴ (IRC Section R104.2.2³⁵ and IFC Section 104.2.3³⁶ are similar) in pertinent part state:

104.2.3 Alternative Materials, Design and Methods of Construction and Equipment. The provisions of this code are not intended to prevent the installation of any material or to prohibit any design or method of construction not specifically prescribed by this code, provided that any such alternative is not specifically prohibited by this code and has been approved.





- 11.6 Approved: 37 Building regulations require that the building official shall accept duly authenticated reports. 38
 - 11.6.1 An approved agency is "approved" when it is ANAB ISO/IEC 17065 accredited.
 - 11.6.2 An <u>approved source</u> is "approved" when an <u>RDP</u> is properly licensed to transact engineering commerce.
 - 11.6.3 Federal law, <u>Title 18 US Code Section 242</u>, requires that, where the alternative product, material, service, design, assembly, and/or method of construction is not approved, the building official shall respond in writing, stating the reasons why the alternative was not approved. Denial without written reason deprives a protected right to free and fair competition in the marketplace.
- 11.7 DrJ is a licensed engineering company, employs licensed <u>RDP</u>s and is an <u>ANAB Accredited Product Certification Body Accreditation #1131</u>.
- 11.8 Through the <u>IAF Multilateral Arrangement</u> (MLA), this <u>duly authenticated report</u> can be used to obtain product approval in any <u>jurisdiction</u> or <u>country</u> because all ANAB ISO/IEC 17065 <u>duly authenticated reports</u> are equivalent.³⁹

12 Conditions of Use

- 12.1 Material properties shall not fall outside the boundaries defined in Section 6.
- 12.2 As defined in **Section 6**, where material and/or engineering mechanics properties are created for load resisting design purposes, the resistance to the applied load shall not exceed the ability of the defined properties to resist those loads using the principles of accepted engineering practice.
- 12.3 Calculations showing compliance with this report must be submitted to the code official. The calculations must be prepared by an RDP.
- 12.4 When required by adopted legislation and enforced by the <u>building official</u>, also known as the Authority Having Jurisdiction (AHJ) in which the project is to be constructed:
 - 12.4.1 Any calculations incorporated into the construction documents shall conform to accepted engineering practice and, when prepared by an approved source, shall be approved when signed and sealed.
 - 12.4.2 This report and the installation instructions shall be submitted at the time of permit application.
 - 12.4.3 These innovative products have an internal quality control program and a third-party quality assurance program.
 - 12.4.4 At a minimum, these innovative products shall be installed per **Section 9**.
 - 12.4.5 The review of this report by the AHJ shall comply with IBC Section 104.2.3.2 and IBC Section 105.3.1.
 - 12.4.6 These innovative products have an internal quality control program and a third party quality assurance program in accordance with <u>IBC Section 104.7.2</u>, <u>IBC Section 110.4</u>, <u>IBC Section 1703</u>, <u>IRC Section R104.7.2</u>, and IRC Section R109.2.
 - 12.4.7 The application of these innovative products in the context of this report is dependent upon the accuracy of the construction documents, implementation of installation instructions, inspection as required by IBC Section 110.3, IRC Section R109.2, and any other regulatory requirements that may apply.
- 12.5 The approval of this report by the AHJ shall comply with <u>IBC Section 1707.1</u>, where legislation states in part, "the <u>building official</u> shall make, or cause to be made, the necessary tests and investigations; or the <u>building official</u> shall accept duly authenticated reports from <u>approved agencies</u> in respect to the quality and manner of use of new materials or assemblies as provided for in <u>Section 104.2.3</u>", all of <u>IBC Section 104</u>, and <u>IBC Section 105.3</u>.
- 12.6 <u>Design loads</u> shall be determined in accordance with the regulations adopted by the <u>jurisdiction</u> in which the project is to be constructed and/or by the building designer (i.e., owner or RDP).
- 12.7 The actual design, suitability, and use of this report for any particular building, is the responsibility of the owner or the authorized agent of the owner.





13 Identification

- 13.1 QuickTie U-Hanger Series, as listed in **Section 1.1**, are identified by a label on the board or packaging material bearing the manufacturer name, product name, this report number, and other information to confirm code compliance.
- 13.2 Additional technical information can be found at quicktieproducts.com.

14 Review Schedule

- 14.1 This report is subject to periodic review and revision. For the latest version, visit www.drjcertification.org.
- 14.2 For information on the status of this report, please contact <u>DrJ Certification</u>.





Issue Date: July 1, 2021

Subject to Renewal: July 1, 2026

FBC Supplement to Report Number 1811-03

REPORT HOLDER: QuickTie™ Products, Inc.

1 Evaluation Subject

- 1.1 QuickTie U-Hanger Series:
 - 1.1.1 UL Series 20-gauge
 - 1.1.2 ULU Series 20-gauge
 - 1.1.3 ULP and ULP-IF (Inverted Flange) Series 18-gauge
 - 1.1.4 ULPSSH Series (Slopeable and Skewable) 18-gauge
 - 1.1.5 UM Series 16-gauge
 - 1.1.6 UMH Series 16-gauge
 - 1.1.7 UMSR-L 16-gauge
 - 1.1.8 UHSR-L 14-gauge
 - 1.1.9 UH and UH-IF (Inverted Flange) Series 14-gauge
 - 1.1.10 UHH Series 14-gauge
 - 1.1.11 UHD Series 12-gauge
 - 1.1.12 THJH Series 12-gauge
 - 1.1.13 TSH Series 18-gauge, 16-gauge, and 14-gauge
 - 1.1.14 TFLP (Top Flange) Series 18-gauge
 - 1.1.15 TFH (Top Flange) Series 14-gauge

2 Purpose and Scope

2.1 Purpose

- 2.1.1 The purpose of this Report Supplement is to show QuickTie U-Hanger Series, recognized in Report Number 1811-03, has also been evaluated for compliance with the codes listed below as adopted by the Florida Building Commission.
- 2.2 Applicable Code Editions
 - 2.2.1 FBC-B—20, 23: Florida Building Code Building (FL 3557)
 - 2.2.2 FBC-R—20, 23: Florida Building Code Residential (FL 3557)





3 Conclusions

- 3.1 The QuickTie U-Hanger Series, described in Report Number 1811-03, complies with the FBC-B and FBC-R and is subject to the conditions of use described in this supplement.
- 3.2 Where there are variations between the IBC and IRC and the FBC-B and FBC-R applicable to this report, they are listed here:
 - 3.2.1 FBC-B Section 104 is reserved.
 - 3.2.2 FBC-B Section 110.4 is reserved and replaces IBC Section 110.4.
 - 3.2.3 FBC-B Section 104.6 is reserved and replaces IBC Section 104.4.
 - 3.2.4 FBC-B Section 104.11 replaces IBC Section 104.2.3 and Section 104.2.3.2.
 - 3.2.5 FBC-B Section 105.3 replaces IBC Section 105.3.
 - 3.2.6 FBC-B Section 105.3.1 replaces IBC Section 105.3.1.
 - 3.2.7 FBC-B Section 110.3 replaces IBC Section 110.3.
 - 3.2.8 FBC-B Section 1707.1 replaces IBC Section 1707.1.
 - 3.2.9 FBC-B Section 2304.10.3 replaces IBC Section 2304.10.4.
 - 3.2.10 FBC-B Section 2303.5 replaces IBC Section 2303.5.
 - 3.2.11 FBC-B Section 2306.1 replaces IBC Section 2306.1.
 - 3.2.12 FBC-B Section 2306.3 replaces IBC Section 2306.3.
 - 3.2.13 FBC-R Section R104 and Section R109 are reserved.
 - 3.2.14 FBC-R Section R301.1.3 replaces IBC Section R301.1.3.

4 Conditions of Use

- 4.1 QuickTie U-Hanger Series, described in Report Number 1811-03, must comply with all of the following conditions:
 - 4.1.1 All applicable sections in Report Number 1811-03.
 - 4.1.2 The design, installation, and inspections are in accordance with additional requirements of FBC-B Chapter 16 and Chapter 17, as applicable.





Notes

- For more information, visit <u>dricertification.org</u> or call us at 608-310-6748.
- ² Capitalized terms and responsibilities are defined pursuant to the applicable building code, applicable reference standards, the latest edition of <u>TPI1</u>, the <u>NDS</u>, <u>AISI S202</u>, <u>US</u> professional engineering law, <u>Canadian building code</u>, <u>Canada professional engineering law</u>, <u>Qualtim External Appendix A</u>: <u>Definitions/Commentary</u>, <u>Qualtim External Appendix B</u>: <u>Project/Deliverables</u>, <u>Qualtim External Appendix C</u>: <u>Intellectual Property and Trade Secrets</u>, definitions created within Design Drawings and/or definitions within Reference Sheets. Beyond this, terms not defined shall have ordinarily accepted meanings as the context implies. Words used in the present tense include the future; words stated in the masculine gender include the feminine and neuter; the singular number includes the plural and the plural, the singular.
- https://up.codes/viewer/mississippi/ibc-2024/chapter/17/special-inspections-and-tests#1702
- Alternative Materials, Design and Methods of Construction and Equipment: The provisions of any regulation code are not intended to prevent the installation of any material or to prohibit any design or method of construction not specifically prescribed by a regulation. Please review https://www.justice.gov/atr/mission and http
- https://up.codes/viewer/mississippi/ibc-2024/chapter/17/special-inspections-and-tests#1706.2:~:text=the%20design%20strengths%20and%20permissible%20stresses%20shall%20be%20established%20by%20tests
- The design strengths and permissible stresses of any structural material shall conform to the specifications and methods of design of accepted engineering practice. https://up.codes/viewer/mississippi/ibc-2024/chapter/17/special-inspections-and-tests#1706.1:~:text=Conformance%20to%20Standards-,The%20design%20strengths%20and%20permissible%20stresses,-of%20any%20structural
- https://up.codes/viewer/mississippi/ibc-2024/chapter/17/special-inspections-and-tests#1707.1:~:text=the%20building%20official%20shall%20make%2C%20or%20cause%20to%20be%20made%2C%20the%20necessary%20tests%20and%20investigations%3B%20or%20the%20building%20official%20shall%20accept%20duly%20authenticated%20reports%20from%20approved%20agencies%20in%20respect%20to%20the%20quality%20and%20manner%20of%20use%20or%20mav20materials%20or%20assemblies%20as%20provided%20for%20in%20Section%20104.2.3.
- 8 https://up.codes/viewer/mississippi/ibc-2024/chapter/17/special-inspections-and-tests#1703.4.2
- https://up.codes/viewer/mississippi/ibc-2024/chapter/2/definitions#approved_agency
- https://up.codes/viewer/mississippi/ibc-2024/chapter/2/definitions#approved_source
- https://www.law.cornell.edu/uscode/text/18/1832 (b) Any organization that commits any offense described in subsection (a) shall be fined not more than the greater of \$5,000,000 or 3 times the value of the stolen trade secret to the organization, including expenses for research and design and other costs of reproducing the trade secret that the organization has thereby avoided. The federal government and each state have a public records act. To follow DTSA and comply state public records and trade secret legislation requires approval through ANAB ISO/IEC 17065 accredited certification bodies or approved sources. For more information, please review this website: Intellectual Property and Trade Secrets.
- https://www.nspe.org/resources/issues-and-advocacy/professional-policies-and-position-statements/regulation-professional AND https://apassociation.org/list-of-engineering-boards-in-each-state-archive/
- 13 https://www.cbitest.com/accreditation/
- 14 https://up.codes/viewer/mississippi/ibc-2024/chapter/1/scope-and-administration#104.1:~:text=directed%20to%20enforce%20the%20provisions%20of%20this%20code
- https://up.codes/viewer/mississippi/ibc-2024/chapter/1/scope-and-administration#104.2.3 AND https://up.codes/viewer/mississippi/ibc-2024/chapter/1/scope-and-administration#105.3.1
- https://up.codes/viewer/mississippi/ibc-2024/chapter/17/special-inspections-and-tests#1707.1
- 17 <u>https://iaf.nu/en/about-iaf-</u>
 - mla/#:~:text=Once%20an%20accreditation%20body%20is%20a%20signatory%20of%20the%20IAF%20MLA%2C%20it%20is%20required%20to%20recognise%20certificates%20 and%20validation%20and%20verification%20statements%20issued%20by%20conformity%20assessment%20bodies%20accredited%20by%20all%20other%20signatories%20of%20the%20IAF%20MLA%2C%20with%20the%20appropriate%20scope
- 18 True for all ANAB accredited product evaluation agencies and all International Trade Agreements.
- https://www.justice.gov/crt/deprivation-rights-under-color-law AND https://www.justice.gov/atr/mission
- Unless otherwise noted, the links referenced herein use un-amended versions of the 2024 International Code Council (ICC) 2024 International Code Council (ICC) model codes as foundation references. Mississippi versions of the IBC 2024 and the IRC 2024 are un-amended. This material, product, design, service and/or method of construction also complies with the 2000-2012 versions of the referenced codes and the standards referenced therein. As pertinent to this technical and code compliance evaluation, CBI and/or DrJ staff have reviewed any state or local regulatory amendments to assure this report is in compliance.
- 21 See Adoptions by Publisher for the latest adoption of a non-amended or amended model code by the local jurisdiction. https://up.codes/codes/general
- 22 See Adoptions by Publisher for the latest adoption of a non-amended or amended model code by state. https://up.codes/codes/general
- https://www.ecfr.gov/current/title-24/subtitle-B/chapter-XX/part-3282/subpart-A/section-3282.14
- https://www.ecfr.gov/current/title-24/subtitle-B/chapter-XX/part-3280
- All references to the FBC-B and FBC-R are the same as the 2024 IBC and 2024 IRC unless otherwise noted in the Florida Supplement at the end of this report.
- https://www.ecfr.gov/current/title-24/subtitle-B/chapter-XX/part-3280#p-3280.2(Listed%20or%20certified); https://up.codes/viewer/mississippi/ibc-2024/chapter/2/definitions#listed AND https://up.codes/viewer/mississippi/ibc-2024/chapter/2/definitions#labeled
- 27 <u>2018 IBC Section 2304.10.3</u>
- https://up.codes/viewer/mississippi/ibc-2024/chapter/17/special-inspections-and-tests#1703.4
- 29 https://www.ecfr.gov/current/title-24/subtitle-B/chapter-XX/part-
 - 3280#:~:text=All%20construction%20methods%20shall%20be%20in%20conformance%20with%20accepted%20engineering%20practices%20to%20insure%20durable%2C%20liv able%2C%20and%20safe%20housing%20and%20shall%20demonstrate%20acceptable%20workmanship%20reflecting%20journeyman%20quality%20of%20work%20of%20the%20various%20trades









- https://www.ecfr.gov/current/title-24/subtitle-B/chapter-XX/part-3280#:~:text=The%20strength%20and%20rigidity%20of%20the%20component%20parts%20and/or%20the%20integrated%20structure%20shall%20be%20determined%20by%20engineering%20analysis%20or%20by%20suitable%20load%20tests%20to%20simulate%20the%20actual%20loads%20and%20conditions%20of%20application%20that%20occur
- 31 Qualification is performed by a legislatively defined <u>Accreditation Body</u>. <u>ANSI National Accreditation Board (ANAB)</u> is the largest independent accreditation body in North America and provides services in more than 75 countries. <u>DrJ</u> is an ANAB accredited <u>product certification body</u>.
- https://anabpd.ansi.org/Accreditation/product-certification/AllDirectoryDetails?prgID=1&orgID=2125&statusID=4#:~:text=Bill%20Payment%20Date-,Accredited%20Scopes,-13%20ENVIRONMENT.%20HEALTH
- 33 See Code of Federal Regulations (CFR) Title 24 Subtitle B Chapter XX Part 3280 for definition: https://www.ecfr.gov/current/title-24/subtitle-B/chapter-XX/part-3280
- 34 <u>2021 IBC Section 104.11</u>
- 35 <u>2021 IRC Section R104.11</u>
- 36 2018: https://up.codes/viewer/wyoming/ifc-2018/chapter/1/scope-and-administration#104.9 AND 2021: https://up.codes/viewer/wyoming/ibc-2021/chapter/1/scope-and-administration#104.11
- Approved is an adjective that modifies the noun after it. For example, Approved Agency means that the Agency is accepted officially as being suitable in a particular situation. This example conforms to IBC/IRC/IFC Section 201.4 (https://up.codes/viewer/mississippi/ibc-2024/chapter/2/definitions#201.4) where the building code authorizes sentences to have an ordinarily accepted meaning such as the context implies.
- https://up.codes/viewer/mississippi/ibc-2024/chapter/17/special-inspections-and-tests#1707.1
- 39 Multilateral approval is true for all ANAB accredited product evaluation agencies and all International Trade Agreements.