

LTT/MTT/HTT Tension Ties

Holdowns & Tension Ties

Tension ties offer a solution for resisting tension loads that is fastened with nails. The entire line of tension ties has been tested and evaluated to the requirements of AC155.

NEW! The HTT4 and HTT5 are the latest generation of tension ties. They feature an optimized nailing pattern which results in better performance with less deflection. Designed to meet new code standards, the HTT4 and HTT5 offer higher loads than their predecessors the HTT16 and HTT22. For an added benefit, the HTT5 installs with 6 fewer nails than the HTT22.

The LTT19 Light Tension Tie is designed for 2x joists or purlins and the LTT20B is for nail- or bolt-on applications. The 3" nail spacing makes the LTT20B suitable for wood I-joists with 10dx1½. The LTT131 is designed for wood chord open web truss attachments to concrete or masonry walls and may also be installed vertically on a minimum 2x6 stud.

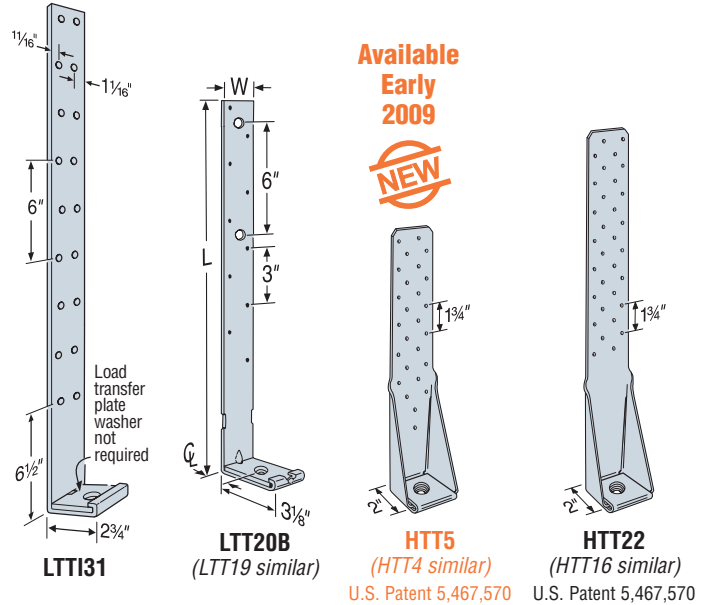
MATERIAL: See table

FINISH: Galvanized. May be ordered HDG; contact Simpson Strong-Tie.

INSTALLATION: • Use all specified fasteners. See General Notes.

- For use in vertical and horizontal applications.
- To tie multiple 2x members together, the designer must determine the fasteners required to join members to act as one unit without splitting the wood. See page 20 for SDS values.
- Refer to technical bulletin T-ANCHORSPEC for post-installed anchorage solutions (see page 191 for details).

CODES: See page 12 for Code Reference Key Chart.



These products are available with additional corrosion protection. Additional products on this page may also be available with this option, check with Simpson Strong-Tie for details.

Model No.	Material (Ga)		Dimensions			Seat Thickness	Fasteners		Allowable Tension Loads (160)		Deflection at Highest Allowable Load	Code Ref.
	Strap	Plate	W	L	ϕ		Anchor Bolts	Fasteners	DF/SP	SPF/HF		
LTT19 ⁴	16	3	1 3/4	19 1/2	1 3/8	5/16	1/2, 5/8 or 3/4	8-10dx1 1/2 8-10d	1310 1340	1125 1150	0.180 0.157	IP2, F4
LTT20B ⁴	12	3	2	19 3/4	1 1/2	5/16	1/2, 5/8 or 3/4	10-10dx1 1/2 10-10d 2-1/2" Bolt	1355 1500 1625	1165 1290 1400	0.195 0.185 0.183	
LTT131 ⁵	18	3	3 3/4	31	1 3/8	1/4	5/8	18-10dx1 1/2	1350	1160	0.193	
MTT28B	Deleted — See HTT5 or HTT22											
NEW HTT4	11	—	2 1/2	12 3/8	1 3/8	7/16	5/8	18-10dx1 1/2 18-16dx2 1/2	3610 4235	3105 3640	0.086 0.123	IP2, F4
HTT16	11	—	2 1/2	16	1 3/8	7/16	5/8	18-16dx2 1/2	3955	3400	0.124	
NEW HTT5	11	—	2 1/2	16	1 3/8	7/16	5/8	26-10dx1 1/2 26-10d 26-16dx2 1/2	4350 4670 5090 ⁷	3740 4275 4375	0.120 0.116 0.135	
HTT22	11	—	2 1/2	22	1 3/8	7/16	5/8	32-10d	4165 ⁷	3580	0.152	

- The Designer must specify anchor bolt type, length and embedment. See SB Anchor Bolts (page 27). Refer to technical bulletin T-ANCHORSPEC for retrofit anchor solutions (see page 191 for details).
- Allowable loads have been increased for wind or earthquake load durations with no further increase allowed; reduce where other load durations govern.
- Allowable loads are based on a minimum lumber thickness of 3".
- If a 1/2" or 5/8" anchor bolt is used for the LTT19 or LTT20B, add a standard cut washer to the seat. No additional washer is required for a 3/4" anchor bolt. See table for appropriate anchor bolt sizes.
- If the base of the LTT131 is installed flush with a concrete or masonry wall, then the allowable load is 2285 lbs.
- Tension values are valid for holdowns flush or raised off of sill plate.
- Allowable tension load with a bearing plate washer BP%-2 (sold separately) is 5395 lbs. for HTT5 and 4265 lbs. for HTT22.
- Deflection at Highest Allowable Tension Load includes fastener slip, holdown elongation, and anchor bolt elongation (L = 6"). Additional elongation of anchor bolts shall be accounted for by the Designer when holdowns are raised higher than 6".
- Structural composite lumber columns have sides that show either the wide face or the edges of the lumber strands/veneers. Values in the tables reflect installation into the wide face. See technical bulletin T-SCLCOLUMN for values on the narrow face (edge) (see page 191 for details).
- NAILS:** 16dx2 1/2 = 0.162" dia. x 2 1/2" long, 10d = 0.148" dia. x 3" long, 10dx1 1/2 = 0.148" dia. x 1 1/2" long. See page 16-17 for other nail sizes and information.

For tension ties, per ASTM test standards, anchor bolt nut should be finger-tight plus 1/3 to 1/2 turn with a hand wrench, with consideration given to possible future wood shrinkage. Care should be taken to not over-torque the nut. Impact wrenches should not be used.

