

TOP FLANGE HANGERS ITS/ITT/MIT/HIT Engineered Wood Products Hangers



This product is preferable to similar connectors because of a) easier installation, b) higher loads, c) lower installed cost, or a combination of these features.

A dedicated range of Top Flange I-joint hangers meeting the unique needs of I-joists while offering superior performance and ease of installation.

ITS

The innovative ITS sets a new standard for engineered wood top flange hangers. The ITS installs faster and uses fewer nails than any other EWP top flange hanger. The new Strong-Grip™ seat and Funnel Flange™ features allow standard joist installation without requiring joist nails resulting in the lowest installed cost. The Strong-Grip seat firmly secures I-joists with flange thicknesses from 1 1/8" to 1 1/2". The ITS design maintains superior allowable download capacities equal to or greater than the ITT for Douglas Fir and all SCL headers.

ITT

The ITT's special bend-tabs constrains the I-joist, helping to reduce squeaks resulting from joist movement. I-joist flange thickness for bend-tab application is 1 1/8" to 1 1/2".

MIT/HIT - Patented Positive Angle Nailing (PAN)

PAN is specifically designed for I-joists when used with the MIT or HIT. With PAN, the nail hole material is not removed, but is formed to channel and confine the path of the nail at approximately 45°. PAN minimizes splitting of the flanges while permitting time-saving nailing from a better angle. See Top Flange tables on pages 96 to 105.

Refer to Joist Manufacturer's literature or appropriate Simpson Strong-Tie® Connector Selection Guide for actual joist sizes.

MATERIAL: ITS, ITT—18 gauge; MIT, HIT—16 gauge

FINISH: Galvanized

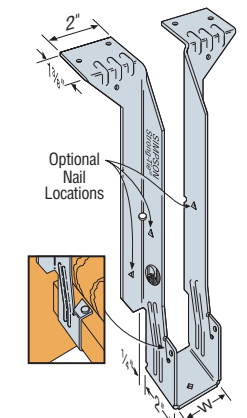
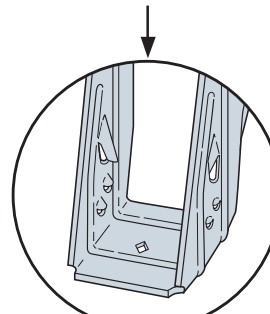
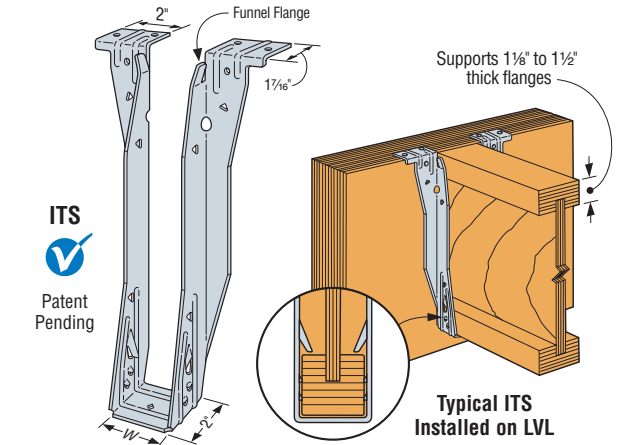
INSTALLATION: • Use all specified fasteners. Verify that the header can take the required fasteners specified in the table.

- See product specific installation drawings pages 90-91.
- ITS—no joist nailing required for standard I-joist installation without web stiffeners. When supporting I-joists with web stiffeners or rectangular SCL member 2-10dx1 1/2" must be installed into optional triangle joist nail holes for standard installation values.
- ITS and ITT—optional triangle nail holes may be used for additional load. See allowable load tables. Refer to technical bulletin T-OPTUPLIFT for additional options (see page 191 for details).
- ITT—bend tabs may be installed unbent into web stiffeners.
- MIT—optional triangle nail holes may be used for increased uplift capacity. See Optional Nailing For Increased Uplift table.
- HIT—closed PAN nail holes may be used for increased uplift capacity. See Optional Nailing For Increased Uplift table.
- For sloped joists up to 1/4:12 there is no reduction, between 1/4:12 and up to 1/2:12, tests show a 10% reduction in ultimate hanger strength. Local crushing of the bottom flange or excessive deflection may be limiting; check with joist manufacturer for specific limitations on bearing of this type.

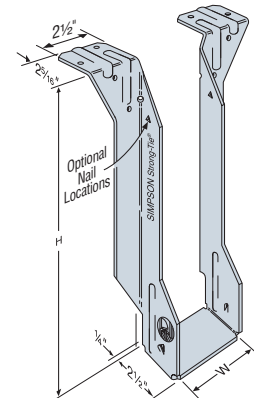
ALLOWABLE LOADS: • The ITS, ITT, MIT and HIT hangers have locations for optional nails if additional uplift is needed. Optional uplift nailing requires the addition of properly-secured web stiffeners. See the load tables for minimum required fasteners and allowable uplift loads.

OPTIONS: • Because these hangers are fully die-formed, they cannot be modified. However these models will normally accommodate a skew of up to 5°.

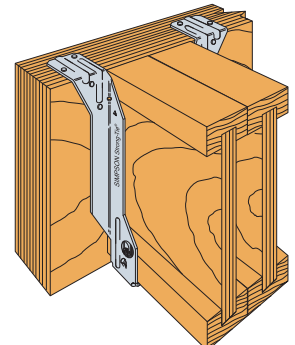
CODES: See page 12 for Code Reference Key Chart.



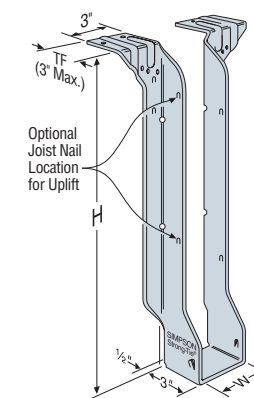
ITT
U.S. Patent 5,555,694



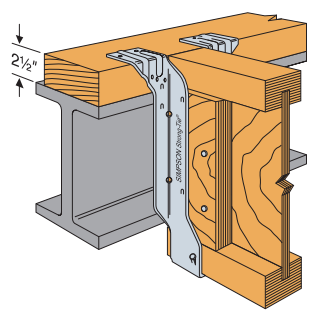
MIT



Typical MIT Installed on a Double LVL

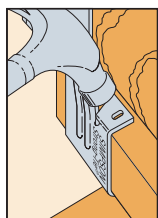


HIT

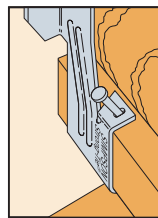


HIT Installation on a 3x Nailer mounted on a Steel Beam

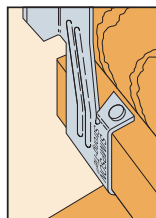
IUT & ITT INSTALLATION (VPA SIMILAR)



Bend the tab with a hammer.



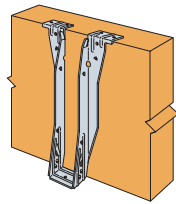
Hammer 10dx1 1/2 nail at approximately 45°.



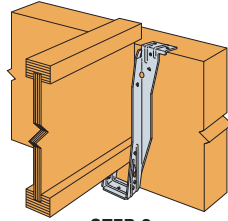
The tab is now correctly installed.

TOP FLANGE HANGERS ITS/ITT/MIT/HIT Engineered Wood Products Hangers

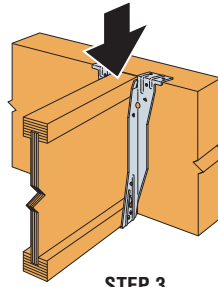
ITS INSTALLATION SEQUENCE



STEP 1
Attach the ITS to the header

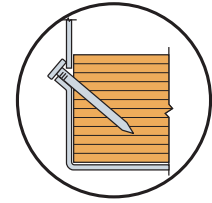


STEP 2
Slide the I-joint downward into the ITS until it rests above the Strong-Grip™ seat.



STEP 3
Firmly push or snap I-joint fully into the seat of the ITS.

POSITIVE ANGLE NAILING



Correct Nailing
Approx. 45° angle

IT SERIES WITH VARIOUS HEADER APPLICATIONS

Model	Fasteners			Allowable Loads Header Type								Code Ref.
	Top	Face	Joist	Uplift ¹ (160)	LVL ²	PSL	LSL	DF/SP	SPF/HF	DF/SCL ³ I-Joist	SPF/HF I-Joist	
ITS Series ⁵ (Standard Installation)	4-10dx1½	2-10dx1½	—	105	1395	1245	1625	1440	1140	1085	940	I19, L12, F18
	4-10d	2-10d	—	105	1550	1365	1780	1520	1150	—	—	
	4-16d	2-16d	—	105	1785	1735	1905	1635	1225	—	—	
ITS Series ^{5,8} (Alternate Installation)	4-10d	4-10d	—	105	1735	1595	1885	1955	1230	—	—	170
	4-16d	4-16d	—	105	1785	1735	1905	1955	1490	—	—	
	4-10d	4-10d	4-10dx1½	630	1735	1595	1885	1955	1230	—	—	
ITT Series ⁹	4-10dx1½	2-10dx1½	2-10dx1½	235	1235	1225	1435	1275	1065	1050	755	I19, L12, F18
	4-10d	2-10d	2-10dx1½	235	1450	1300	1435	1465	1200	—	—	
	4-16d	2-16d	2-10dx1½	235	1500	1535	1500	1635	1315	—	—	
ITTM Series	See page 142 for concrete and masonry installations.											
MIT Series ⁹	4-10dx1½	4-10dx1½	2-10dx1½	215	2035	1500	1605	2035	1115	1230	885	I19, L12, F18
	4-10d	4-10d	2-10dx1½	215	2335	2000	1605	2245	1665	—	—	
	4-16d	4-16d	2-10dx1½	215	2550	2140	2115	2305	1665	—	—	
HIT Series	4-16d	6-16d	2-10dx1½	315	2550	2050	2500	2875	1950	—	—	

- Uplift loads are based on DF/SP lumber and have been increased 60% for wind or earthquake loading with no further increase allowed. For normal loading applications such as cantilever construction refer to Simpson Strong-Tie® Connector Selector™ software or conservatively divide the uplift load by 1.6. For SPF/HF use 0.86 x DF/SP uplift load.
- Applies to LVL headers made primarily from Douglas Fir or Southern Pine. For LVL made primarily from Spruce Pine Fir or similar less dense veneers, use the values found in the SPF/HF column.
- DF I-joists include flanges made from solid sawn Douglas Fir, LVL made primarily of Douglas Fir/Southern Pine, or LSL. For flanges with thicknesses from 1½ to 1¾, use 0.85 of the I-joint header load. For flanges with thicknesses from 1¾ to 1⅞, use 0.75 of the I-joint header load.
- SCL (structural composite lumber) is LVL, LSL, and Parallam® PSL.
- Web stiffeners required for the ITS Alternate Installation when installing optional joist nails for additional uplift load.
- Code Values are based on DF/SP header species.
- I-joists with flanges less than 1½" thick used in combination with hangers thinner than 14 gauge may deflect an additional ½" beyond the standard ½" limit.
- For 2½" and 2⅞" wide joists, see tables on pages 96-105 for allowable loads.

Parallam® is a registered trademark of iLevel by Weyerhaeuser.

NAILS: 16d = 0.162" dia. x 3½" long, 16dx2½ = 0.162" dia. x 2½" long, 10d = 0.148" dia. x 3" long, 10dx1½ = 0.148" dia. x 1½" long. See page 16-17 for other nail sizes and information.

NAILER TABLE

This table indicates various allowable loads for ITS/ITT/MIT/HIT hangers used on wood nailers. The header nail type must be substituted for those listed in other tables. See technical bulletin T-NAILERUPLFT for other uplift values and options (see page 191 for details).

Model	Nailer	Top Flange Nailing	Joist Nailing	Uplift ² (160)	Allowable Loads	
					DF/SP	SPF/HF
ITS Series	2x	6-10dx1½	—	105	1260	1260
	2x	6-10dx1½	2-10dx1½	310	1260	1260
	2-2x	6-10d	—	105	1220 ¹	1220 ¹
	2-2x	8-10d	4-10dx1½	615	1745	1530
	3x	6-16dx2½	—	105	1500 ¹	—
	3x	8-16dx2½	4-10dx1½	615	1540	—
	4x	6-16d	—	105	1525 ¹	—
ITT Series	4x	8-16d	4-10dx1½	615	1905	—
	2x	6-10dx1½	2-10dx1½	190	1215	1215
	2-2x	6-10d	2-10dx1½	190	1215	1150
	3x	6-16dx2½	2-10dx1½	190	1500	—
MIT Series	4x	6-16d	2-10dx1½	190	1525	—
	2x	6-10dx1½	2-10dx1½	215	1570 ¹	1440
	2-2x	8-10d	2-10dx1½	215	1570	1255
	3x	8-16dx2½	2-10dx1½	215	1975 ¹	—
HIT Series	4x	8-16d	2-10dx1½	215	2250 ¹	—
	2-2x	10-10d	2-10dx1½	255	2525	—
	3x	10-16dx2½	2-10dx1½	255	2835	—
	4x	10-16d	2-10dx1½	255	3050 ¹	—

- These hangers may deflect an additional ½" at design load.
- Uplift loads are based on DF/SP members only.

OPTIONAL NAILING FOR INCREASED UPLIFT

Model	Fasteners			Allowable Uplift Loads (160)
	Top	Face	Joist	
ITS	4-10d	4-10d	4-10dx1½	630
	4-16d	4-16d	4-10dx1½	630
ITT	4-10dx1½	4-10dx1½	4-10dx1½	575
	4-10d	4-10d	4-10dx1½	575
MIT	4-16d	4-16d	4-10dx1½	575
	4-10dx1½	4-10dx1½	4-10dx1½	575
HIT	4-16d	6-16d	4-10dx1½	575
	4-16dx2½	6-16dx2½	4-10dx1½	575
	4-16d	6-16d	6-10dx1½	850

- Loads are based on Doug Fir, and have been increased 60% for wind or earthquake loading with no further increase allowed. Reduce according to the code for normal loading criteria such as in cantilever construction.
- Web stiffeners are required on I-joint for additional nailing.