LSTHD/STHD *Strap Tie Holdown*

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.

The STHD is an embedded strap tie holdown with high load capacity and a staggered nail pattern to help minimize splitting. The latest version of the STHD strap tie holdown incorporates many new features that improve installation and function. When used in conjunction with the StrapMate® you have a system that helps prevent both parallel and perpendicular movement during installation relative to the form. Allows for accurate location of the STHD's and reduces the possibility of spalling!

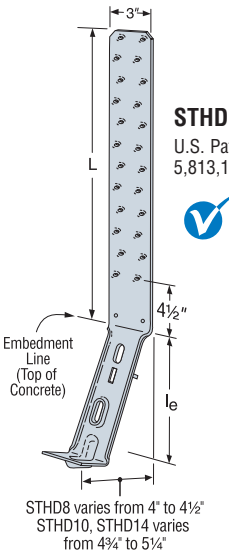
FEATURES: • The strap nailing pattern allows for nailing to the edges of double 2x's.
- A slot below the embedment line allows for increased front to back concrete bond and reduced spalling.
- Strap nail slots are countersunk to provide a lower nail head profile.
- Rim joist models fit up to 17" clearspan without losing strap nailing.
- Coined edges enhance safe handling.

MATERIAL: LSTHD8, LSTHD8RJ—14 gauge, all others—12 gauge.

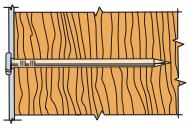
FINISH: Galvanized

INSTALLATION: • Use all specified fasteners. See General Notes.
- Install before concrete pour.
- Nail strap from the bottom up. Strap may be bent one full cycle.
- Bending the strap 90° to aid wall placement may cause spalling behind the strap. If the spall is 1" or less, measured from the embedment line to the bottom of the spall, full loads apply. For spalls between 1" and 4" *(see illustration)*, the factored resistance is 0.90 of the table loads.
- For two pour installations spalling is measured from the first pour.
- Where fewer fasteners are used in the structural wood member, reduce resistances according to the code.
- Unless otherwise noted, do NOT install where: (a) a horizontal cold joint exists within the embedment depth between the slab and foundation wall or footing beneath, unless provisions are made to transfer the load, or the slab is designed to resist the load imposed by the anchor; or (b) slabs are poured over concrete block foundation walls.
- To get the full tabulated resistance, the minimum centre-to-centre spacing is twice the embedment depth when resisting tension loads at the same time.
- There is an increase in the amount of deflection if the strap is installed on the outside of the shear panel instead of directly to the framing. Ask for Form T-PLYWOOD for complete details.
- 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.
- Additional studs attached to the shearwall studs or post may be required by the designer for wall sheathing nailing.

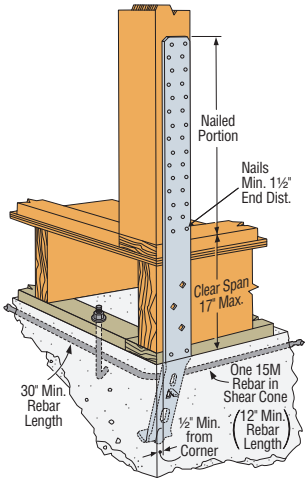
FOUNDATION CORNERS: Nail quantities may be reduced for less than l_e corner distance design loads—use the code factored lateral resistances for fasteners in shear.



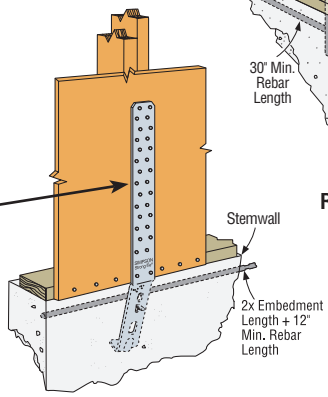
STHD
U.S. Patent 5,813,182



Nails are countersunk for a low profile strap surface.



Typical STHD14RJ Rim Joist Application



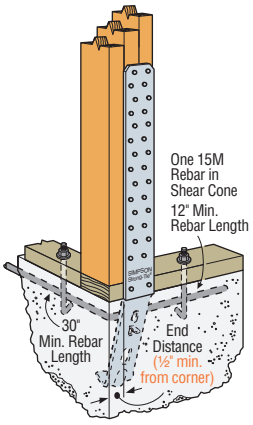
Typical STHD Applications
(for two pour, see footnote 4.)

Tension Loads for STHD Installations

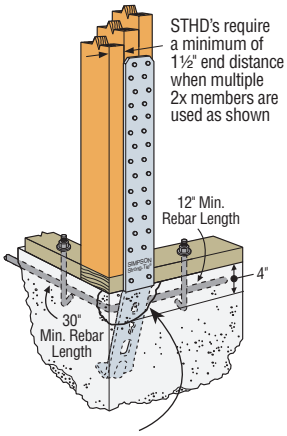
Model No. Standard / Rim Joist	Min. Stem Wall (in)	Strap Length (L) Std. Model (in)	Strap Length (L) Rim Joist Model (in)	l_e (in)	Nails	Factored Tensile Resistance (K_D=1.15) End Distance ½"[5]	1½"	l_e	½"	1½"	l_e	½"	1½"	l_e
						2000 psi (13.8 MPa) Concrete			2500 psi (17.2 MPa) Concrete			3000 psi (20.7 MPa) Concrete		
						lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs
						kN	kN	kN	kN	kN	kN	kN	kN	kN
LSTHD8 / LSTHD8RJ	6	21⅝	35⅛	8	24-10d	2780	2780	2780	2945	2945	2945	3115	3115	3115
						12.38	12.38	12.38	13.12	13.12	13.12	13.88	13.88	13.88
STHD8 / STHD8RJ	6	21⅝	35⅛	8	24-10d	2790	3250	3845	3145	3520	3910	3500	3785	3975
						12.43	14.48	17.13	14.01	15.68	17.42	15.59	16.86	17.71
STHD10 / STHD10RJ	6	23⅛	36⅝	10	28-10d	3225	4080	4955	4090	4515	4955	4955	4955	4955
						14.37	18.17	22.07	18.22	20.11	22.07	22.07	22.07	22.07
STHD14 / STHD14RJ	6	31⅝	39⅝	14	38-10d	5260	6725	6725	5990	6725	6725	6725	6725	6725
						23.43	29.96	29.96	26.68	29.96	29.96	29.96	29.96	29.96
LSTHD8 / LSTHD8RJ	8	21⅝	35⅛	8	24-10d	2780	2780	2780	2945	2945	2945	3115	3115	3115
						12.38	12.38	12.38	13.12	13.12	13.12	13.88	13.88	13.88
STHD8 / STHD8RJ	8	21⅝	35⅛	8	24-10d	3880	3880	4250	3880	3880	4250	3880	3880	4250
						17.28	17.28	18.93	17.28	17.28	18.93	17.28	17.28	18.93
STHD10 / STHD10RJ	8	23⅛	36⅝	10	28-10d	4495	4495	4955	4725	4725	4955	4955	4955	4955
						20.02	20.02	22.07	21.05	21.05	22.07	22.07	22.07	22.07
STHD14 / STHD14RJ	8	31⅝	39⅝	14	38-10d	6315	6725	6725	6520	6725	6725	6725	6725	6725
						28.13	29.96	29.96	29.04	29.96	29.96	29.96	29.96	29.96

1. Resistances shown are for D.Fir-L and S-P-F.
2. STHD14RJ requires 30-10d nails for a factored tensile resistance of 5310 lbs (27.39 kN) for all applications.
3. RJ after the model indicates STHDs for rim joist applications, e.g. STHD8RJ.
4. For two pour with 4" slab or less, the STHD14 resistance at ½" end distance and 2000 psi concrete is 5260 lbs (23.43 kN) and 6705 lbs (29.88kN) at 14" end distance. The STHD10 at the same condition is 3225 lbs (14.37 kN) for ½" end distance and 4940 lbs (22.00 kN) at 10" end distance.
5. Factored resistances have been increased 15% for short term load duration with no further increase allowed. Reduce for other load durations according to code.
6. Strap may be bent one full cycle.
7. Calculate resistances using straight line interpolation for corner distances between ½" and l_e.
8. **Where fewer fasteners are used in the structural wood member, reduce loads according to the code.**
9. **To get the full table load, the minimum center-to-center spacing is twice the embedment depth when resisting tension loads at the same time.**
10. **There is an increase in the amount of deflection if the strap is installed on the outside of the shear panel instead of directly to the framing. Refer to technical bulletin T-PLYWOOD.**
11. **NAILS:** 10d = 0.148" dia. x 3" long. See page 16-17 for other nail sizes and information.

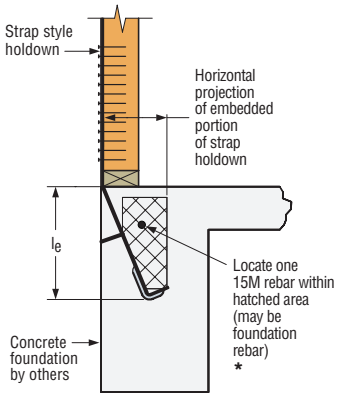
LSTHD/STHD *Strap Tie Holdown*



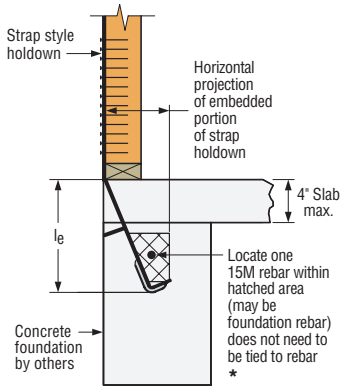
Typical STHD Corner Installations on 3-2x Studs
(for two pour, see footnote 4.)



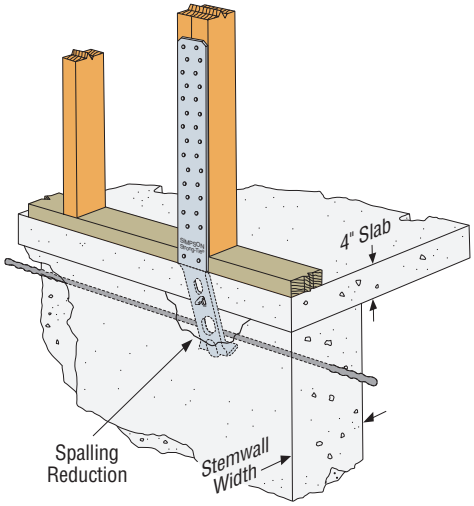
SPALLING LOAD REDUCTION!
If strap is bent horizontal 90° during installation, and then bent vertical *(bent one full cycle)* for nailing to the stud, concrete spalling could result. Load reductions may apply, see installation note.



Single Pour Rebar Installation
**Maintain minimum rebar cover, per CSA A23.3.*



Two Pour Rebar Installation
**Maintain minimum rebar cover, per CSA A23.3.*



Typical STHD14 Two Pour Installation

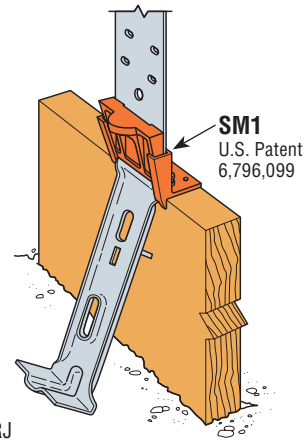
SPALL REDUCTION SYSTEM FOR STHD STRAP TIE HOLDOWN

FEATURES
- Built-in tab.
- StrapMate® locator line.
- Additional diamond hole in RJ versions.

BENEFITS
Built-in Tab:
- Reduces spalling and costly retrofits.
- No additional labor to install.
- Holds STHD away from form board.

StrapMate Locator Line:
- Easy inspection to ensure proper location.
- Allows adjustment without removing STHD.

Additional Diamond Hole:
- One more fastener to help prevent the STHD RJ models from bowing out at the rim joist section.



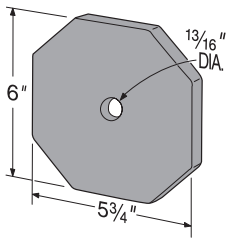
RP6 *Retro Plate*

The RP6 retrofit plate fits on the outside of masonry buildings, and helps tie the walls to the roof or floor structure with a ¾" diameter rod.

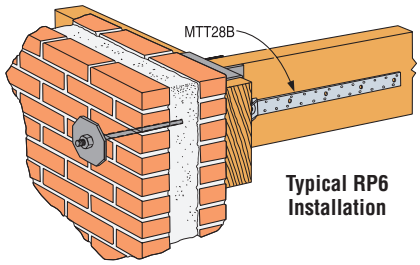
FINISH: Simpson gray paint. Optional hot-dip galvanized coating; see Corrosion Information, page 10-11, and specify HDG.

MATERIAL: ⅜" Steel
Available with additional corrosion protection. Check with Simpson Strong-Tie.

INSTALLATION: Use a ¾" diameter rod.



RP6



Typical RP6 Installation