HRS/ST/HTP/LSTA/LSTI/MST/MSTA/MSTC/MSTI

Strap Ties

Straps are designed to transfer tension loads in a wide variety of applications.

HRS — Heavy strap designed for installation on the edge of 2x members. The HRS416Z installs with Strong-Drive® SDS Heavy-Duty Connector screws.

HTP — Heavy tie plate designed for installation on the side of 2x4 or larger members.

LSTA and MSTA — Designed for use on the edge of 2x members, with a nailing pattern that reduces the potential for splitting.

LSTI and MSTI — Light and medium straps that are suitable where pneumatic-nailing is necessary through diaphragm decking and wood chord open-web trusses.

MST — High-capacity strap that can be installed with either nails or bolts. Suitable for double 2x member connections or greater.

MSTC — High-capacity strap that utilizes a staggered nail pattern to help minimize wood splitting. Nail slots have been countersunk to provide a lower nail head profile.

Finish: Galvanized. Some products are available in stainless steel, ZMAX® coating or black powder coat (add PC to sku); contact Simpson Strong-Tie. See Corrosion Information, pp. 13–15.

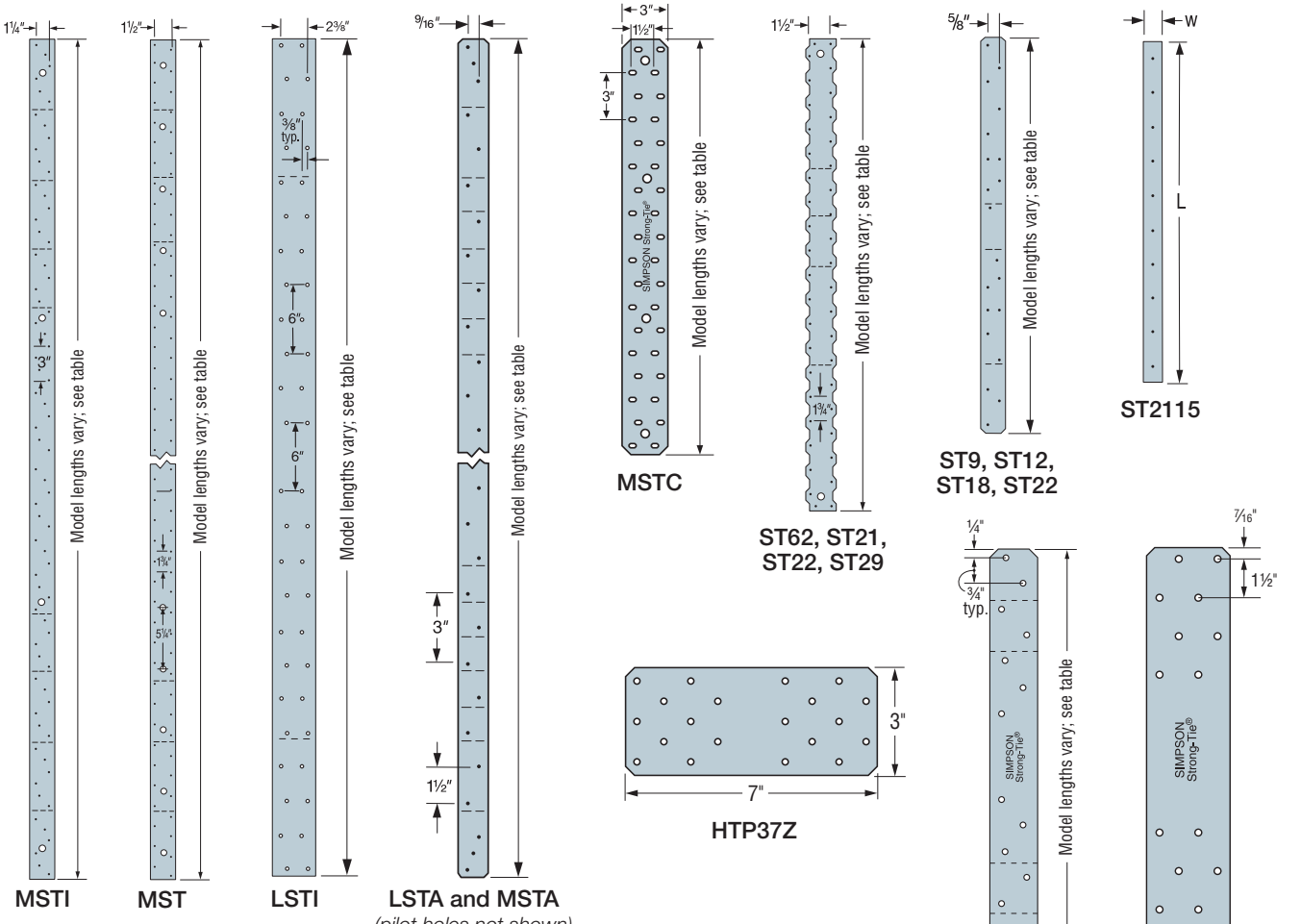
Installation: Use all specified fasteners; see General Notes

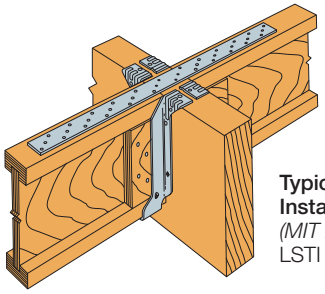
Options: Special sizes can be made to order; contact Simpson Strong-Tie

Codes: See p. 12 for Code Reference Key Chart

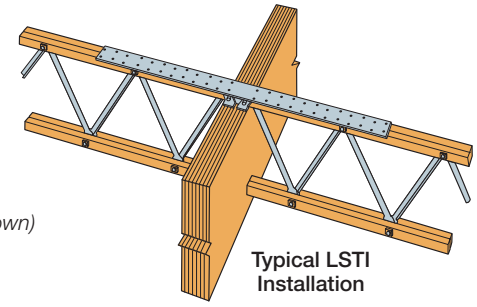
MSTC and RPS meet code requirements for reinforcing cut members (16 gauge) at top plate and RPS at sill plate. International Residential Code® — 2012/2015/2018 R602.6.1 International Building Code® — 2012/2015/2018 2308.9.8

(For RPS, refer to p. 303.)

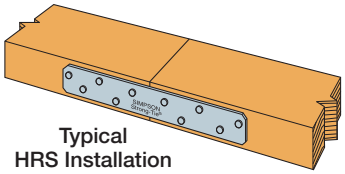




Typical MSTI Installation
(MIT hanger shown)
LSTI similar



Typical LSTI Installation



Typical HRS Installation

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HRS/ST/HTP/LSTA/LSTI/MST/MSTA/MSTC/MSTI

Strap Ties (cont.)

Codes: See p. 12 for Code Reference Key Chart

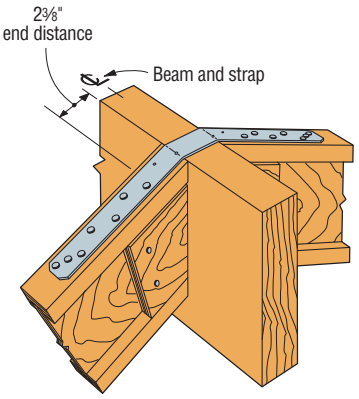
These products are available with additional corrosion protection. For more information, see p. 15.

SS For stainless-steel fasteners, see p. 21.

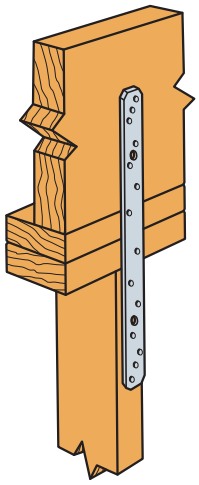
SD Many of these products are approved for installation with Strong-Drive® SD Connector screws. See pp. 335–337 for more information.

Model No.	Ga.	Dimensions (in.)		Fasteners (Total) (in.)	Allowable Tension Loads (DF/SP)	Allowable Tension Loads (SPF/HF)	Code Ref.
		W	L		(160)	(160)	
ST2115	20	¾	16⅝	(10) 0.162 x 2½	660	660	IBC, FL, LA
LSTA9		1¼	9	(8) 0.148 x 2½	740	635	
LSTA12		1¼	12	(10) 0.148 x 2½	925	795	
LSTA15		1¼	15	(12) 0.148 x 2½	1,110	955	
LSTA18		1¼	18	(14) 0.148 x 2½	1,235	1,115	
LSTA21		1¼	21	(16) 0.148 x 2½	1,235	1,235	
LSTA24		1¼	24	(18) 0.148 x 2½	1,235	1,235	
LSTA30	18	1¼	30	(22) 0.148 x 2½	1,640	1,640	
LSTA36		1¼	36	(24) 0.148 x 2½	1,640	1,640	
MSTA9		1¼	9	(8) 0.148 x 2½	750	650	
SS MSTA12		1¼	12	(10) 0.148 x 2½	940	810	
MSTA15		1¼	15	(12) 0.148 x 2½	1,130	970	
SS MSTA18		1¼	18	(14) 0.148 x 2½	1,315	1,135	
MSTA21		1¼	21	(16) 0.148 x 2½	1,505	1,295	
SS MSTA24		1¼	24	(18) 0.148 x 2½	1,640	1,460	
MSTA30	16	1¼	30	(22) 0.148 x 2½	2,050	1,825	
MSTA36		1¼	36	(26) 0.148 x 2½	2,050	2,050	
SS MSTA49		1¼	49	(26) 0.148 x 2½	2,020	2,020	FL, LA
ST9		1¼	9	(8) 0.162 x 2½	885	765	IBC, FL, LA
ST12		1¼	11⅝	(10) 0.162 x 2½	1,105	955	
ST18		1¼	17¾	(14) 0.162 x 2½	1,420	1,335	
ST22		1¼	21⅝	(18) 0.162 x 2½	1,420	1,420	
HRS6	12	1⅜	6	(6) 0.148 x 2½	605	530	FL, LA
HRS8		1⅜	8	(10) 0.148 x 2½	1,010	880	
HRS12		1⅜	12	(14) 0.148 x 2½	1,415	1,230	
ST292	20	2⅛	9⅝	(12) 0.162 x 2½	1,260	1,120	IBC, FL, LA
ST2122		2⅛	12⅜	(16) 0.162 x 2½	1,530	1,510	
ST2215		2⅛	16⅝	(20) 0.162 x 2½	1,875	1,875	
ST6215	16	2⅛	16⅝	(20) 0.162 x 2½	2,090	1,910	
ST6224		2⅛	23⅝	(28) 0.162 x 2½	2,535	2,535	
ST6236	14	2⅛	33⅜	(40) 0.162 x 2½	3,845	3,845	
MSTI26	12	2⅛	26	(26) 0.148 x 1½	2,745	2,380	
MSTI36		2⅛	36	(36) 0.148 x 1½	3,800	3,295	
MSTI48		2⅛	48	(48) 0.148 x 1½	5,070	4,390	
MSTI60		2⅛	60	(60) 0.148 x 1½	5,070	5,070	
MSTI72		2⅛	72	(72) 0.148 x 1½	5,070	5,070	
HTP37Z	16	3	7	(20) 0.148 x 1½	1,850	1,600	LA
MSTC28		3	28¼	(36) 0.148 x 3¼	3,460	2,990	IBC, FL, LA
MSTC40		3	40¼	(52) 0.148 x 3¼	4,735	4,315	
MSTC52		3	52¼	(62) 0.148 x 3¼	4,735	4,735	
MSTC66	14	3	65¾	(76) 0.148 x 3¼	5,850	5,850	
MSTC78		3	77¾	(76) 0.148 x 3¼	5,850	5,850	
HRS416Z	12	3¼	16	(16) ¼ x 1½ SDS	2,835	2,305	—
LSTI49	18	3¾	49	(32) 0.148 x 1½	2,970	2,560	IBC, FL, LA
LSTI73		3¾	73	(48) 0.148 x 1½	4,205	3,840	

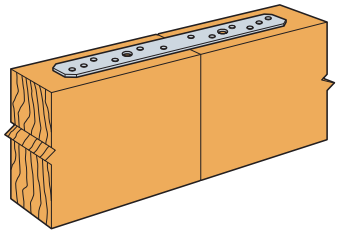
1. See pp. 260–261 for Straps and Ties General Notes.
2. **Fasteners:** Nail dimensions in the table are listed diameter by length. See pp. 21–22 for fastener information.



Typical LSTA Installation
(hanger not shown)
Bend strap one time only, max. 12/12 joist pitch.



Typical LSTA18 Installation



Typical MSTA15 Installation

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MST/MSTA/MSTC

Strap Ties (cont.)

Codes: See p. 12 for Code Reference Key Chart

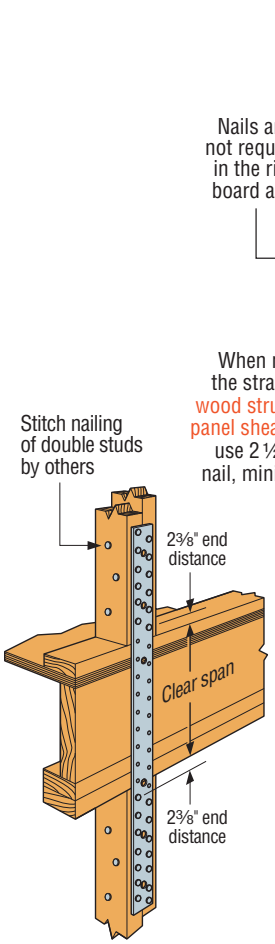
These products are available with additional corrosion protection. For more information, see p. 15.

SD Many of these products are approved for installation with Strong-Drive® SD Connector screws. See pp. 335–337 for more information.

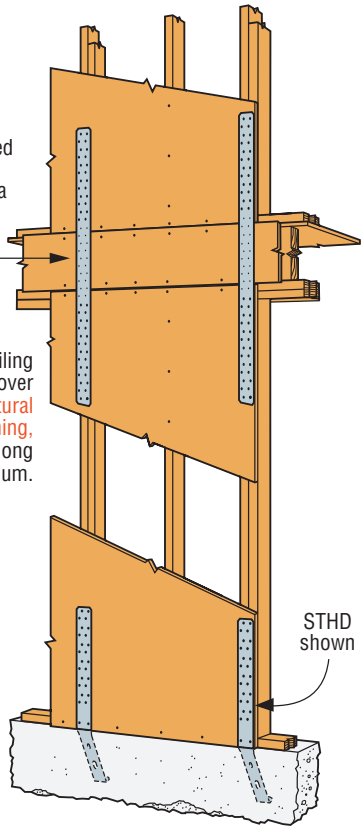
Floor to Floor Span Table

Model No.	Clear Span (in.)	Fasteners (Total) (in.)	Allowable Tension Loads (DF/SP) (160)	Allowable Tension Loads (SPF/HF) (160)
MSTA49	18	(26) 0.148 x 2½	2,020	2,020
	16	(26) 0.148 x 2½	2,020	2,020
MSTC28	18	(12) 0.148 x 3¼	1,150	995
	16	(16) 0.148 x 3¼	1,535	1,330
MSTC40	24	(20) 0.148 x 3¼	1,920	1,660
	18	(28) 0.148 x 3¼	2,690	2,325
	16	(32) 0.148 x 3¼	3,070	2,655
MSTC52	24	(36) 0.148 x 3¼	3,455	2,990
	18	(44) 0.148 x 3¼	4,225	3,650
	16	(48) 0.148 x 3¼	4,610	3,985
MSTC66	30	(48) 0.148 x 3¼	4,775	4,130
	24	(54) 0.148 x 3¼	5,375	4,645
	18	(64) 0.148 x 3¼	5,850	5,505
	16	(68) 0.148 x 3¼	5,850	5,850
MSTC78	30	(64) 0.148 x 3¼	5,850	5,505
	24	(72) 0.148 x 3¼	5,850	5,850
	18	(76) 0.148 x 3¼	5,850	5,850
MST37	24	(14) 0.162 x 2½	1,720	1,500
	18	(20) 0.162 x 2½	2,460	2,140
	16	(22) 0.162 x 2½	2,705	2,355
MST48	24	(26) 0.162 x 2½	3,210	2,780
	18	(32) 0.162 x 2½	3,950	3,425
	16	(34) 0.162 x 2½	4,200	3,640
MST60	30	(34) 0.162 x 2½	4,605	3,995
	24	(40) 0.162 x 2½	5,240	4,700
	18	(46) 0.162 x 2½	6,235	5,405
MST72	30	(48) 0.162 x 2½	6,505	5,640
	24	(54) 0.162 x 2½	6,730	6,345
	18	(62) 0.162 x 2½	6,730	6,475

See footnotes below.



Floor-to-Floor Tie Installation Showing a Clear Span



Typical Detail with Strap Installed over Wood Structural Panel Sheathing

Model No.	Ga.	Dimensions (in.) W	Dimensions (in.) L	Fasteners (Total) Nails (in.)	Fasteners (Total) Bolts Qty.	Fasteners (Total) Bolts Dia.	Allowable Tension Loads (DF/SP) Nails (160)	Allowable Tension Loads (DF/SP) Bolts (160)	Allowable Tension Loads (SPF/HF) Nails (160)	Allowable Tension Loads (SPF/HF) Bolts (160)	Code Ref.
MST27	12	2⅛6	27	(30) 0.162 x 2½	4	½	3,700	2,165	3,210	2,000	IBC, FL, LA
MST37		2⅛6	37½	(42) 0.162 x 2½	6	½	5,070	3,030	4,495	2,800	
MST48		2⅛6	48	(50) 0.162 x 2½	8	½	5,310	3,675	5,190	3,395	
MST60	10	2⅛6	60	(68) 0.162 x 2½	10	½	6,730	4,490	6,475	4,150	
MST72		2⅛6	72	(68) 0.162 x 2½	10	½	6,730	4,490	6,475	4,150	

1. See pp. 260–261 for Straps and Ties General Notes.
2. Install bolts or nails as specified by Designer. Bolt and nail values may not be combined.
3. Allowable bolt loads are based on parallel-to-grain loading and minimum member thickness: MST – 2½".
4. Splitting may be a problem with installations on lumber smaller than 3½"; either fill every nail hole with 0.148" x 1½" nails or fill every other hole with 0.162" x 2½" nails. Reduce the allowable load based on the size and quantity of fasteners used.
5. **Fasteners:** Nail dimensions in the table are listed diameter by length. See pp. 21–22 for fastener information.

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