

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

## 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.

**ST** — Light and medium precut straps for quick installation.

**Finish:** Galvanized. Some products are available in stainless steel, ZMAX® coating or black powder coat (add PC to SKU).

**Installation:** Use all specified fasteners; see General Notes.

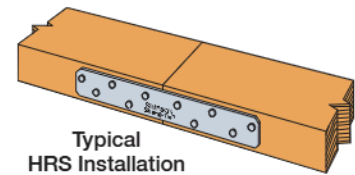
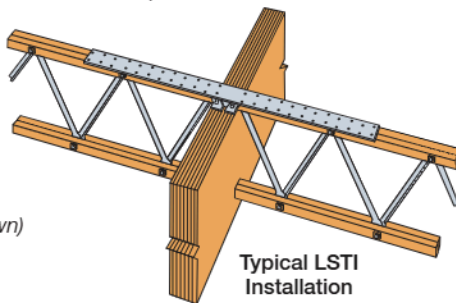
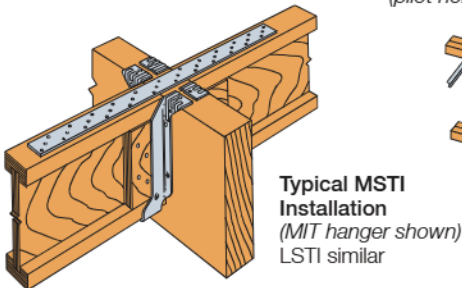
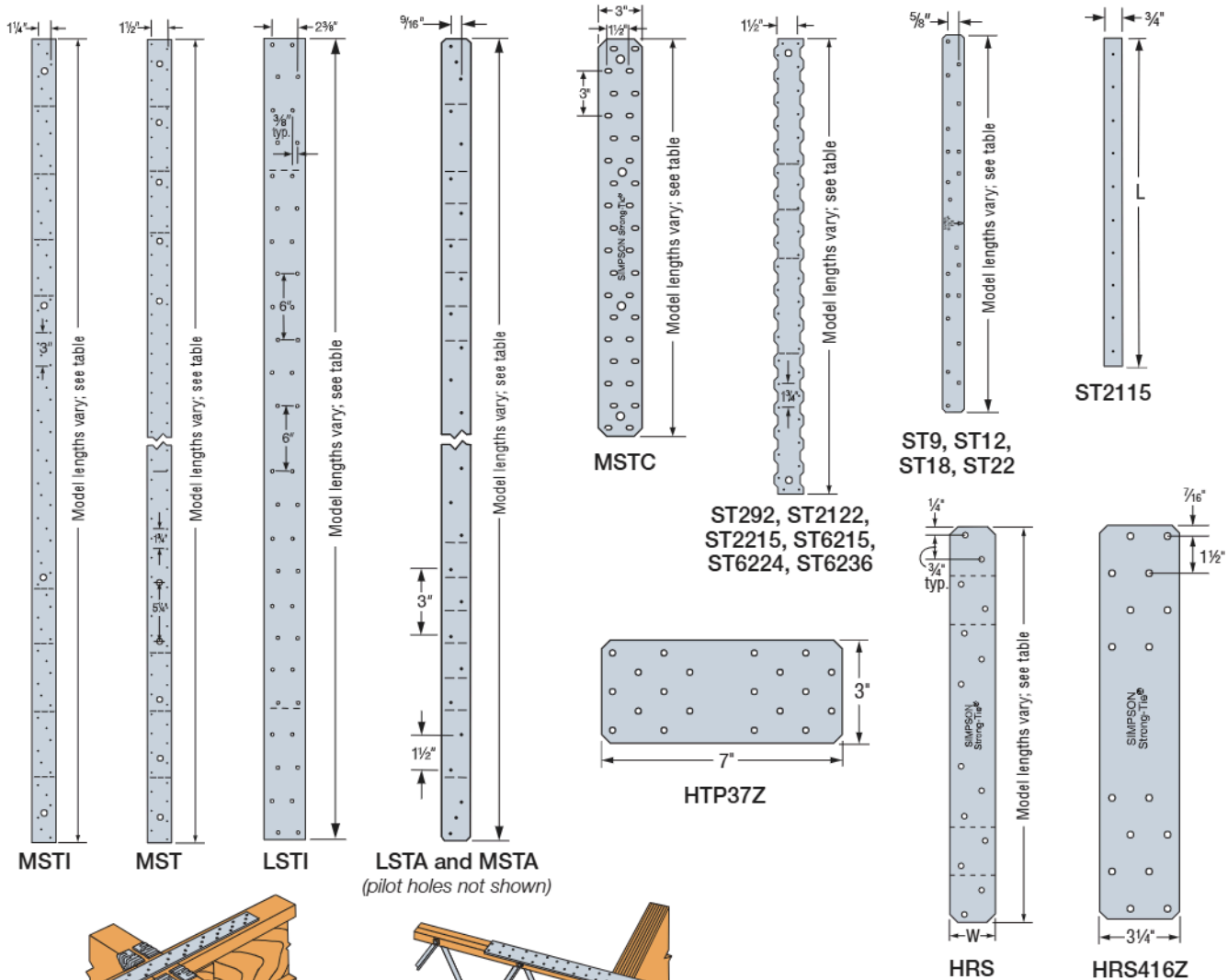
**Options:** Special sizes can be made to order; contact Simpson Strong-Tie

**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 — 2012/2015/2018/2021/  
 2024 R602.6.1

International Building Code — 2012 2308.9.8;  
 2015/2018/2021/2024 2308.5.8

(For RPS, refer to p. 333. For CTS218 compression and tension strap, see p. 331.)



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

## Strap Ties (cont.)

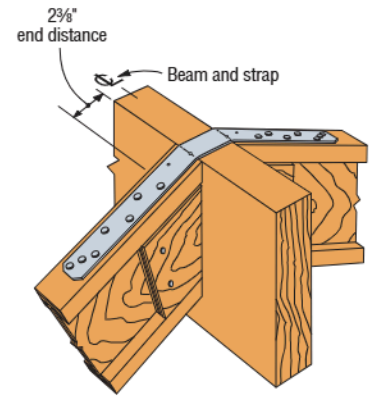
Codes: See p. 12 for Code Reference Key Chart

These products are available with additional corrosion protection. For more information, see pp. 13–19.

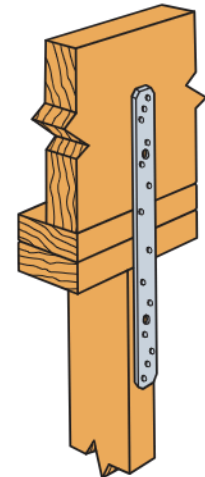
**SS** For stainless-steel fasteners, see p. 25.

**SD** Many of these products are approved for installation with Strong-Drive® SD Connector screws. See pp. 380–382 for more information.

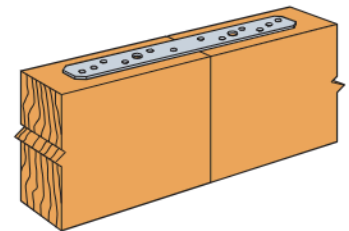
| Model No. | Ga. | Dimensions (in.) |                 | Fasteners (Total) (in.) | DF/SP Allowable Tension Loads | SPF/HF Allowable Tension Loads | Code Ref.   |
|-----------|-----|------------------|-----------------|-------------------------|-------------------------------|--------------------------------|-------------|
|           |     | W                | L               |                         | (160)                         | (160)                          |             |
| ST2115    | 20  | ¾                | 16½             | (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    |     | 1¼               | 30              | (22) 0.148 x 2½         | 1,640                         | 1,640                          |             |
| LSTA36    | 1¼  | 36               | (24) 0.148 x 2½ | 1,640                   | 1,640                         |                                |             |
| MSTA9     | 18  | 1¼               | 9               | (8) 0.148 x 2½          | 750                           | 650                            |             |
| MSTA12    |     | 1¼               | 12              | (10) 0.148 x 2½         | 940                           | 810                            |             |
| MSTA15    |     | 1¼               | 15              | (12) 0.148 x 2½         | 1,130                         | 970                            |             |
| MSTA18    |     | 1¼               | 18              | (14) 0.148 x 2½         | 1,315                         | 1,135                          |             |
| MSTA21    |     | 1¼               | 21              | (16) 0.148 x 2½         | 1,505                         | 1,295                          |             |
| MSTA24    |     | 1¼               | 24              | (18) 0.148 x 2½         | 1,640                         | 1,460                          |             |
| MSTA30    |     | 1¼               | 30              | (22) 0.148 x 2½         | 2,050                         | 1,825                          |             |
| MSTA36    |     | 1¼               | 36              | (26) 0.148 x 2½         | 2,050                         | 2,050                          |             |
| MSTA49    | 16  | 1¼               | 49              | (26) 0.148 x 2½         | 2,020                         | 2,020                          |             |
| ST9       |     | 1¼               | 9               | (8) 0.162 x 2½          | 885                           | 765                            |             |
| ST12      |     | 1¼               | 11½             | (10) 0.162 x 2½         | 1,105                         | 955                            |             |
| ST18      |     | 1¼               | 17¾             | (14) 0.162 x 2½         | 1,420                         | 1,335                          |             |
| ST22      |     | 1¼               | 21½             | (18) 0.162 x 2½         | 1,420                         | 1,420                          |             |
| HRS6      | 12  | 1½               | 6               | (6) 0.148 x 2½          | 605                           | 530                            |             |
| HRS8      |     | 1½               | 8               | (10) 0.148 x 2½         | 1,010                         | 880                            |             |
| HRS12     |     | 1½               | 12              | (14) 0.148 x 2½         | 1,415                         | 1,230                          |             |
| ST292     | 20  | 2½               | 9½              | (12) 0.162 x 2½         | 1,260                         | 1,120                          |             |
| ST2122    |     | 2½               | 12¾             | (16) 0.162 x 2½         | 1,530                         | 1,510                          |             |
| ST2215    |     | 2½               | 16½             | (20) 0.162 x 2½         | 1,875                         | 1,875                          |             |
| ST6215    |     | 2½               | 16½             | (20) 0.162 x 2½         | 2,090                         | 1,910                          |             |
| ST6224    | 16  | 2½               | 23¾             | (28) 0.162 x 2½         | 2,535                         | 2,535                          |             |
| ST6236    |     | 14               | 2½              | 33¾                     | (40) 0.162 x 2½               | 3,845                          | 3,845       |
| MSTI26    | 12  | 2½               | 26              | (26) 0.148 x 1½         | 2,745                         | 2,380                          |             |
| MSTI36    |     | 2½               | 36              | (36) 0.148 x 1½         | 3,800                         | 3,295                          |             |
| MSTI48    |     | 2½               | 48              | (48) 0.148 x 1½         | 5,070                         | 4,390                          |             |
| MSTI60    |     | 2½               | 60              | (60) 0.148 x 1½         | 5,070                         | 5,070                          |             |
| MSTI72    |     | 2½               | 72              | (72) 0.148 x 1½         | 5,070                         | 5,070                          |             |
| HTP37Z    | 16  | 3                | 7               | (20) 0.148 x 1½         | 900                           | 690                            |             |
| MSTC28    |     | 3                | 28¼             | (36) 0.148 x 3¼         | 3,460                         | 2,990                          |             |
| 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                     | (68) 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  | 3¼               | 49              | (32) 0.148 x 1½         | 2,970                         | 2,560                          | IBC, FL, LA |
| LSTI73    |     | 3¼               | 73              | (48) 0.148 x 1½         | 4,205                         | 3,840                          |             |



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



**Typical LSTA18 Installation**



**Typical MSTA15 Installation**

1. See pp. 288–289 for Straps and Ties General Notes.  
2. **Fasteners:** Nail dimensions are listed diameter by length. SDS screws are Simpson Strong-Tie Strong-Drive SDS Heavy-Duty Connector screws. See pp. 25–26 for fastener information.

# HRS/ST/FHA/PS/LSTA/LSTI/MST/MSTA/MSTC/MSTI Strap Ties

Straps are load rated and provide the correct thickness and number of fasteners the specifier is looking for compared with field fabricated straps.

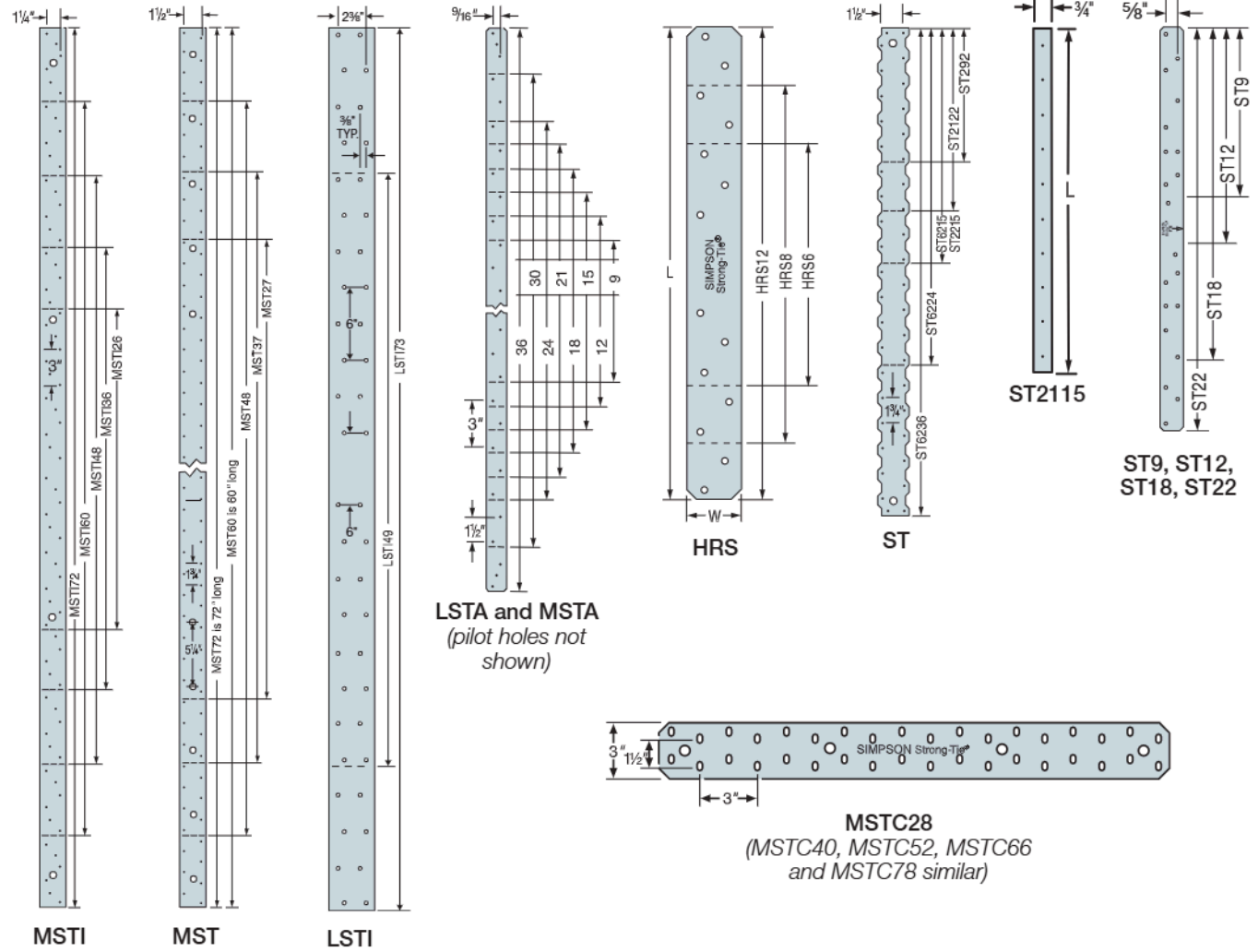
Install strap ties where top or bottom plates are cut, at wall intersections, and as ridge ties. Reduce the allowable load based on the size and quantity of fasteners used.

Refer to applicable code for minimum edge and end distances.

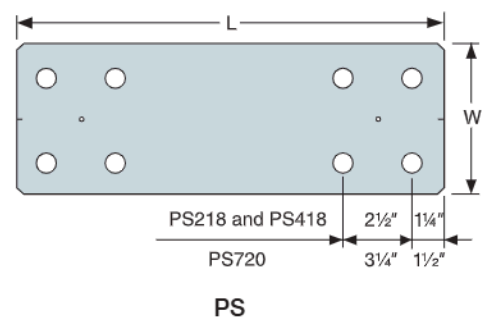
**Finish:** PS — hot-dip galvanized (HDG); all others — galvanized. Some products are available in stainless steel or ZMAX®; see Corrosion Information, pp. 21–25.

**Installation:** Use all specified fasteners; see General Notes

**Codes:** See p. 15 for Code Reference Key Chart



| Model No. | Connector Material Thickness mil (ga.) | Dimensions (in.) |    | Bolts    |                | Code Ref. |
|-----------|--|------------------|----|----------|----------------|-----------|
|           |  | W                | L  | Quantity | Diameter (in.) |           |
| PS218     | 171 (7)                                | 2                | 18 | 4        | 3/4            | —         |
| PS418     |  | 4                | 18 | 4        | 3/4            |           |
| PS720     |  | 6 3/4            | 20 | 8        | 1/2            |           |



PS strap design loads must be determined by the designer for each illustration. Hole diameter in the part may be oversized to accommodate the HDG. Designer must determine if the oversize creates an unacceptable installation.

## HRS/ST/FHA/PS/LSTA/LSTI/MST/MSTA/MSTC/MSTI Strap Ties

Codes: See p. 15 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. | Connector Material Thick. mil (ga.) | Dimensions (in.) |      | Fasteners <sup>4</sup> (Total) |          |                 | Allowable ASD Tension Load (lb.) |                 |                 | Code Ref.   |
|-----------|-------------------------------------|------------------|------|--------------------------------|----------|-----------------|----------------------------------|-----------------|-----------------|-------------|
|           |                                     |                  |      | Rafter/Stud/Joist Thickness    |          |                 | 33 mil (20 ga.)                  | 43 mil (18 ga.) | 54 mil (16 ga.) |             |
|           |                                     |                  |      | W                              | L        | 33 mil (20 ga.) |                                  |                 |                 |             |
| LSTA9     | 33 (20)                             | 1 ¼              | 9    | (8) #10                        | (8) #10  | (8) #10         | 705                              | 1,120           | 1,190           | IBC, FL, LA |
| LSTA12    |                                     | 1 ¼              | 12   | (10) #10                       | (10) #10 | (8) #10         | 885                              | 1,190           | 1,190           |             |
| LSTA15    |                                     | 1 ¼              | 15   | (12) #10                       | (12) #10 | (10) #10        | 1,060                            | 1,190           | 1,190           |             |
| LSTA18    |                                     | 1 ¼              | 18   | (14) #10                       | (12) #10 | (10) #10        | 1,190                            | 1,190           | 1,190           |             |
| LSTA21    |                                     | 1 ¼              | 21   | (14) #10                       | (12) #10 | (10) #10        | 1,190                            | 1,190           | 1,190           |             |
| LSTA24    |                                     | 1 ¼              | 24   | (14) #10                       | (12) #10 | (10) #10        | 1,190                            | 1,190           | 1,190           |             |
| ST292     |                                     | 2 ⅝              | 9 ⅝  | (12) #10                       | (10) #10 | (10) #10        | 1,060                            | 1,240           | 1,240           |             |
| ST2122    |                                     | 2 ⅝              | 12 ⅜ | (16) #10                       | (12) #10 | (10) #10        | 1,415                            | 1,502           | 1,502           |             |
| ST2115    |                                     | ¾                | 16 ⅝ | (8) #10                        | (6) #10  | (4) #10         | 630                              | 630             | 630             |             |
| ST2215    |                                     | 2 ⅝              | 16 ⅝ | (20) #10                       | (14) #10 | (10) #10        | 1,765                            | 1,825           | 1,825           |             |
| LSTA30    | 43 (18)                             | 1 ¼              | 30   | (18) #10                       | (12) #10 | (10) #10        | 1,555                            | 1,555           | 1,555           |             |
| LSTA36    |                                     | 1 ¼              | 36   | (18) #10                       | (16) #10 | (14) #10        | 1,555                            | 1,555           | 1,555           |             |
| LSTI49    |                                     | 3 ¾              | 49   | (32) #10                       | (32) #10 | (20) #10        | 2,830                            | 4,050           | 4,050           |             |
| LSTI73    |                                     | 3 ¾              | 73   | (46) #10                       | (32) #10 | (20) #10        | 4,050                            | 4,050           | 4,050           |             |
| MSTA9     |                                     | 1 ¼              | 9    | (8) #10                        | (8) #10  | (8) #10         | 705                              | 1,050           | 1,555           |             |
| MSTA12    |                                     | 1 ¼              | 12   | (10) #10                       | (10) #10 | (8) #10         | 885                              | 1,315           | 1,555           |             |
| MSTA15    |                                     | 1 ¼              | 15   | (12) #10                       | (12) #10 | (10) #10        | 1,060                            | 1,555           | 1,555           |             |
| MSTA18    |                                     | 1 ¼              | 18   | (14) #10                       | (12) #10 | (10) #10        | 1,235                            | 1,555           | 1,555           |             |
| MSTA21    |                                     | 1 ¼              | 21   | (16) #10                       | (12) #10 | (10) #10        | 1,415                            | 1,555           | 1,555           |             |
| MSTA24    |                                     | 1 ¼              | 24   | (18) #10                       | (12) #10 | (10) #10        | 1,555                            | 1,555           | 1,555           |             |

Table continued on the next page.

## HRS/ST/FHA/PS/LSTA/LSTI/MST/MSTA/MSTC/MSTI Strap Ties

Codes: See p. 15 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. | Connector Material Thick. mil (ga.) | Dimensions (in.) |      | Fasteners <sup>4</sup> (Total) |                 |                 | Allowable ASD Tension Load (lb.) |                 |                 | Code Ref.   |
|-----------|-------------------------------------|------------------|------|--------------------------------|-----------------|-----------------|----------------------------------|-----------------|-----------------|-------------|
|           |                                     |                  |      | Rafter/Stud/Joist Thickness    |                 |                 | 33 mil (20 ga.)                  | 43 mil (18 ga.) | 54 mil (16 ga.) |             |
|           |                                     | W                | L    | 33 mil (20 ga.)                | 43 mil (18 ga.) | 54 mil (16 ga.) |                                  |                 |                 |             |
| MSTA30    | 54 (16)                             | 1 ¼              | 30   | (22) #10                       | (16) #10        | (12) #10        | 1,945                            | 1,950           | 1,950           | IBC, FL, LA |
| MSTA36    |                                     | 1 ¼              | 36   | (24) #10                       | (18) #10        | (16) #10        | 1,950                            | 1,950           | 1,950           |             |
| ST6215    |                                     | 2 ½              | 16 ¾ | (20) #10                       | (16) #10        | (10) #10        | 1,765                            | 2,025           | 2,025           |             |
| ST6224    |                                     | 2 ½              | 23 ¾ | (28) #10                       | (20) #10        | (12) #10        | 2,455                            | 2,455           | 2,455           |             |
| ST9       |                                     | 1 ¼              | 9    | (8) #10                        | (8) #10         | (8) #10         | 705                              | 1,050           | 1,350           |             |
| ST12      |                                     | 1 ¼              | 11 ¾ | (10) #10                       | (10) #10        | (8) #10         | 885                              | 1,315           | 1,350           |             |
| ST18      |                                     | 1 ¼              | 17 ¾ | (14) #10                       | (12) #10        | (12) #10        | 1,235                            | 1,350           | 1,350           |             |
| ST22      |                                     | 1 ¼              | 21 ¾ | (20) #10                       | (20) #10        | (20) #10        | 1,350                            | 1,350           | 1,350           |             |
| MSTC28    |                                     | 3                | 28 ¼ | (36) #10                       | (36) #10        | (30) #10        | 3,180                            | 4,600           | 4,600           |             |
| MSTC40    |                                     | 3                | 40 ¼ | (52) #10                       | (46) #10        | (46) #10        | 4,595                            | 4,600           | 4,600           |             |
| MSTC52    |                                     | 3                | 52 ¼ | (54) #10                       | (42) #10        | (42) #10        | 4,600                            | 4,600           | 4,600           |             |
| MSTC66    |                                     | 68 (14)          | 3    | 65 ¾                           | (66) #10        | (46) #10        | (30) #10                         | 5,795           | 5,795           |             |
| MSTC78    | 3                                   |                  | 77 ¾ | (66) #10                       | (46) #10        | (30) #10        | 5,795                            | 5,795           | 5,795           |             |
| ST6236    | 2 ½                                 |                  | 33 ¾ | (40) #10                       | (30) #10        | (18) #10        | 3,535                            | 3,760           | 3,760           |             |
| HRS6      | 97 (12)                             | 1 ¾              | 6    | (6) #10                        | (6) #10         | (6) #10         | 530                              | 790             | 1,600           | —           |
| HRS8      |                                     | 1 ¾              | 8    | (10) #10                       | (10) #10        | (10) #10        | 885                              | 1,315           | 2,670           |             |
| HRS12     |                                     | 1 ¾              | 12   | (14) #10                       | (14) #10        | (12) #10        | 1,235                            | 1,840           | 2,710           |             |
| MSTI26    |                                     | 2 ½              | 26   | (26) #10                       | (26) #10        | (22) #10        | 2,300                            | 3,420           | 5,025           |             |
| MSTI36    |                                     | 2 ½              | 36   | (36) #10                       | (36) #10        | (22) #10        | 3,180                            | 4,735           | 5,025           |             |
| MSTI48    |                                     | 2 ½              | 48   | (48) #10                       | (40) #10        | (22) #10        | 4,240                            | 5,025           | 5,025           |             |
| MSTI60    |                                     | 2 ½              | 60   | (58) #10                       | (40) #10        | (22) #10        | 5,025                            | 5,025           | 5,025           |             |
| MST27     |                                     | 2 ½              | 27   | (30) #10                       | (30) #10        | (22) #10        | 2,650                            | 3,945           | 5,025           |             |
| MST37     |                                     | 2 ½              | 37   | (42) #10                       | (40) #10        | (34) #10        | 3,710                            | 5,025           | 5,025           |             |
| MST48     |                                     | 2 ½              | 48   | (54) #10                       | (54) #10        | (46) #10        | 4,770                            | 5,155           | 5,155           |             |
| MST60     | 118 (10)                            | 2 ½              | 60   | (68) #10                       | (68) #10        | (62) #10        | 5,820                            | 6,420           | 6,650           |             |
| MST72     |                                     | 2 ½              | 72   | (80) #10                       | (72) #10        | (64) #10        | 6,650                            | 6,650           | 6,650           |             |

1. Use half of the fasteners in each member being connected to achieve the listed loads.

2. Loads are based on lesser of steel capacity or fastener calculation.

3. Not all fastener holes need to be filled, as additional fastener holes are provided. Install fasteners symmetrically.

4. See the current *Fastening Systems* catalog on [strongtie.com](http://strongtie.com) for more information on Simpson Strong-Tie® fasteners.