

## Deck Tension Ties

DTT tension ties are safe, cost-effective connectors designed to meet or exceed code requirements for deck construction. These versatile DTT connectors are also load-rated as a holdown for light-duty shearwalls and braced-wall panel applications.

For new construction or to make an existing deck code-compliant, the DTT1Z can be used as a tension-tie to satisfy the 2015, 2018, 2021 and **2024** IRC provision for a 750 lb. lateral load connection to the house at four locations per deck. This code detail permits the lateral connection from the deck joists to be made to top plates, studs or headers within the supporting structure, which eliminates the need to access to the floor joists inside the home. The DTT1Z is available in a kit (DTT1Z-KT) that includes four DTT1Z connectors, four Strong-Drive® SDWH™ Timber-Hex HDG screws (SDWH27800G) and (26) #9 x 1 1/2" Strong-Drive SD Connector screws.

The DTT1Z® fastens to the narrow or wide face of a single 2x with Strong-Drive SD Connector screws or nails and accepts a 3/8" bolt, anchor bolt or lag screw (washer required) or can be installed with the Strong-Drive SDWH Timber-Hex HDG screw with an integral washer.

The DTT2 can be used to satisfy the IRC provision for a 1,500 lb. lateral load connection at two locations per deck. Additionally, the DTT2 has been tested and evaluated in deck guardrail post applications to resist the code-specified lateral forces at the top of railing assemblies. The DTT2 is also available with longer 2 1/2" Strong-Drive SDS Heavy-Duty Connector screws (model DTT2Z-SDS2.5) to achieve higher loads when needed. The DTT2 fastens easily to the wide face of a single or double 2x using Strong-Drive SDS Heavy-Duty Connector screws (included) and accepts a 1/2"-diameter bolt or anchor bolt.

For guard post installations using Strong-Drive SDWS™ Timber screws, see technical bulletin T-F-GRDPSTR at [strongtie.com](http://strongtie.com).

**Material:** 14 gauge

**Finish:** DTT1Z/DTT2Z – ZMAX® coating;

**DTT1SS-KT** and **DTT2SS** – stainless steel

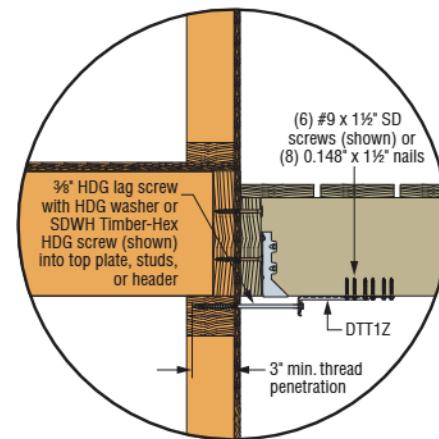
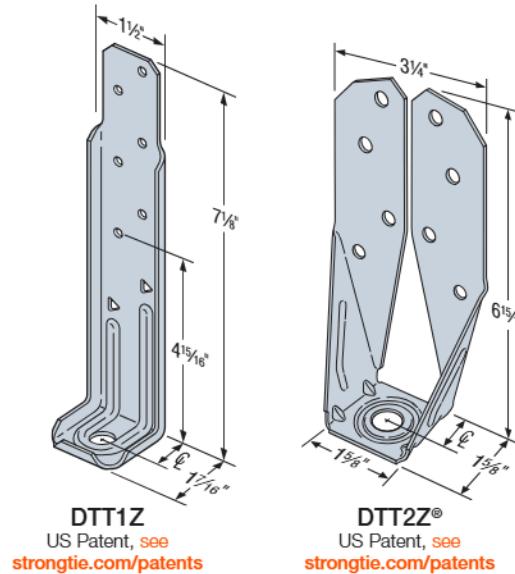
### Installation:

- Use all specified fasteners; see General Notes.
- A standard-cut washer (included for DTT2) must be installed between the nut and the seat.
- Both typical details are shown with a wood wall below the interior floor system. Details would be similar with a foundation wall below the interior floor system.
- Strong-Drive SDS Heavy-Duty Connector screws (SDS) install best with a low-speed high-torque drill with a 3/8" hex-head driver (Model BITHEXR38-R1).
- Strong-Drive SD Connector screws (SD) install with a 1/4" hex-head driver.
- Strong-Drive SDWH Timber-Hex HDG screws install with a 3/8" hex-head driver (Model BITHEXR38-R1).

**Codes:** See p. 12 for Code Reference Key Chart

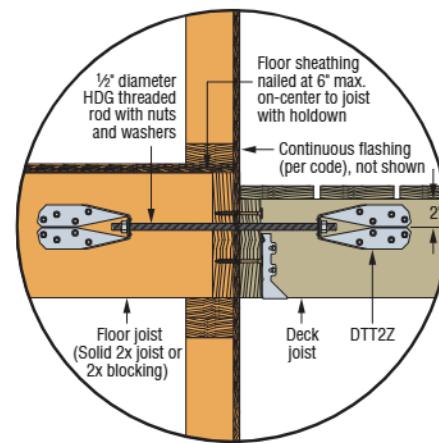
### Web Applications:

- Visit [app.strongtie.com/dps](http://app.strongtie.com/dps) to access our Deck Planner Software™.
- Visit [app.strongtie.com/pfd](http://app.strongtie.com/pfd) to access our Post-to-Foundation Designer web application.



**Typical DTT1Z Deck-to-House Lateral Load Connection**

For more information on lateral load connections, see technical bulletin T-C-DECKLAT at [strongtie.com](http://strongtie.com)



**Typical DTT2Z Deck-to-House Lateral Load Connection**

For more information on lateral load connections, see technical bulletin T-C-DECKLAT at [strongtie.com](http://strongtie.com)

## Deck Tension Ties (cont.)

► 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.        | CL (in.) | Anchor Diameter (in.)                   | Fasteners (in.)         | Minimum Wood Member Thickness (in.) | Allowable Tension Loads |                  | Code Ref.   |
|------------------|----------|---|-------------------------|-------------------------------------|-------------------------|------------------|-------------|
|                  |          |   |                         |                                     | DF/SP                   | SPF/HF           |             |
|                  |          |   |                         |                                     | (160)                   | (160)            |             |
| DTT1Z®           | 3/4      | 3/8 <sup>6</sup> or SDWH <sup>3</sup>   | (6) #9 x 1 1/2" SD      | 1 1/2                               | 840                     | 840              | IBC, FL, LA |
|                  |          |   | (6) 0.148 x 1 1/2       |                                     | 910                     | 640 <sup>2</sup> |             |
|                  |          |   | (8) 0.148 x 1 1/2       |                                     | 910                     | 850              |             |
| SS DTT1SS-KT     | 3/4      | 3/8 <sup>6</sup> or SDWHSS <sup>6</sup> | (6) #9 x 1 1/2" SDSS    | 1 1/2                               | 840                     | 840              | IBC, FL, LA |
|                  |          |   | (6) 0.148 x 1 1/2 SCNR™ |                                     | 755                     | 650              |             |
|                  |          |   | (8) 0.148 x 1 1/2 SCNR  |                                     | 755                     | 755              |             |
| SS DTT2Z®/DTT2SS | 1 3/16   | 1/2                                     | (8) 1/4 x 1 1/2 SDS     | 1 1/2                               | 1,825                   | 1,800            | IBC, FL, LA |
|                  |          |   |                         | 3                                   | 2,145                   | 1,835            |             |
| SS DTT2Z-SDS2.5  | 1 3/16   | 1/2                                     | (8) 1/4 x 2 1/2 SDS     | 3                                   | 2,145                   | 2,105            |             |

1. Allowable loads have been increased for wind or earthquake loading with no further increase allowed.

Reduce where other loads govern.

2. DTT1Z installations with allowable loads below 750 lb. do not satisfy the 2015/2018/2021 IRC requirements for deck-to-house lateral load connections.

3. The Strong-Drive SDWH™ Timber-Hex HDG screw with a minimum of 3" thread penetration into dry lumber has an allowable withdrawal load (160) of 1,380 lb. into SP, 1225 lb. into DF, and 1,020 lb. into SPF/HF.

4. Load values are valid if the product is flush with the end of the framing member or installed away from the end.

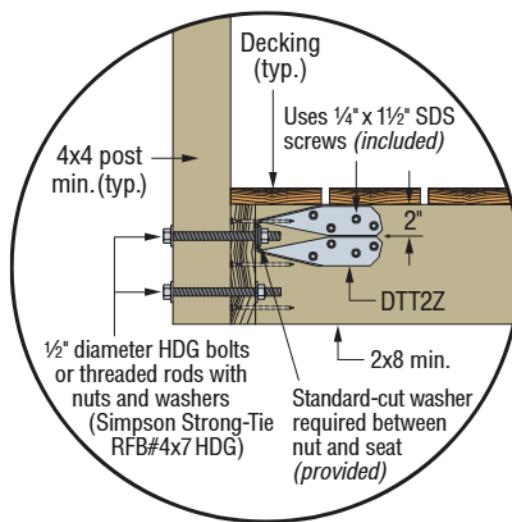
5. The guardrail post illustration above addresses an outward force on the guardrail. An additional DTT2 can be added at the lower bolt to address an inward force.

6. A 3/8"-diameter round washer is required when using a 3/8"-diameter machine bolt, anchor bolt, SDWHSS or lag screw.

7. **Fasteners:** Nail dimensions are listed diameter by length. SD and SDS screws are Simpson Strong-Tie Strong-Drive SD Connector and SDS Heavy-Duty Connector screws. SCNR are Simpson Strong-Tie Strong-Drive Ring-Shank Connector stainless-steel nails.

Use stainless-steel fasteners with stainless-steel connectors. Use galvanized fasteners with galvanized connectors.

See pp. 25–26 for fastener information.



DTT2Z Installed  
for a Deck Guardrail Post

For more information on guardrail post connections,  
see technical bulletin T-C-GRDRLPST at [strongtie.com](http://strongtie.com)