

DTT

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 and 2018 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 (4) DTT1Z connectors, (4) 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-SDWSGRD.

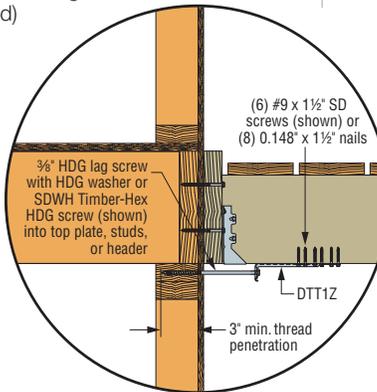
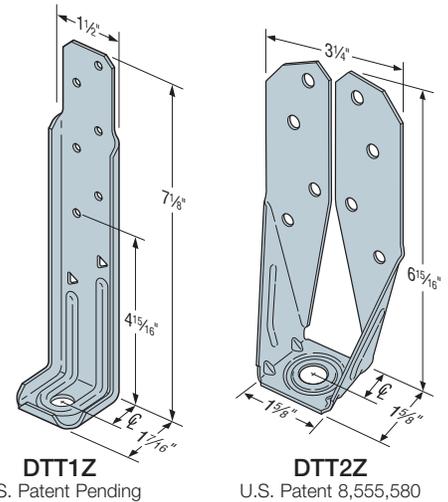
Material: 14 gauge

Finish: DTT1Z/DTT2Z — ZMAX® coating; DTT2SS — stainless steel; see Corrosion Information, pp. 13–15

Installation:

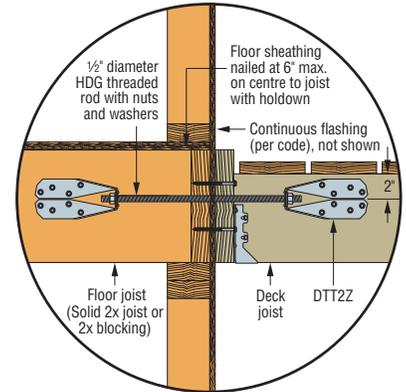
- Use all specified fasteners; see General Notes
- A standard cut washer (included for DTT2) must be installed between the nut and the seat
- Strong-Drive SDS Heavy-Duty Connector screws install best with a low-speed high-torque drill with a 3/8" hex head driver (Model DB6H1.75)
- Strong-Drive SD Connector screws install with a 1/4" hex head driver (Model DBHEX)
- Strong-Drive SDWH Timber-Hex HDG screws install with a 3/8" hex head driver (Model DB6H1.75)

Codes: See p. 12 for Code Reference Key Chart



Typical DTT1Z Deck-to-House Lateral Load Connection

For more information on lateral load connections, see technical bulletin T-C-DECKLAT at 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

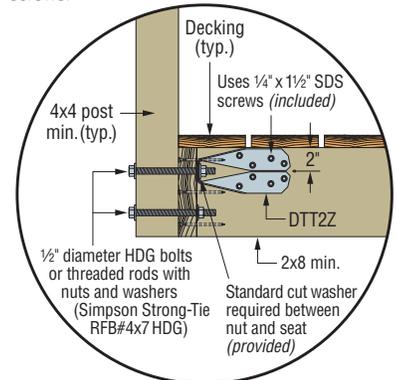
These products are available with additional corrosion protection. For more information, see p. 15.

For stainless-steel fasteners, see p. 21.

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

Model No.	CL	Anchor Diameter	Fasteners	Min. Wood Member Thickness (in.)	Allowable Tension Loads		Code Ref.
					DF/SP	SPF/HF	
DTT1Z	3/4	3/8" or SDWH ³	(6) SD #9 x 1 1/2"	1 1/2	840	840	IBC, FL, LA
			(6) 0.148 x 1 1/2"		910	640 ²	
			(8) 0.148 x 1 1/2"		910	850	
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	
DTT2Z-SDS2.5	1 3/16	1/2	(8) 1/4" x 2 1/2" SDS	3	2,145	2,105	IBC, FL, LA

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 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 DTT2Z can be added at the lower bolt to address an inward force.
6. A 3/8" HDG round washer is required with the use of a lag screw.
7. **Fasteners:** Nail dimensions in the table are diameter by length. SD and SDS screws are Simpson Strong-Tie® Strong-Drive® screws. See pp. 21–22 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