## TABLE 2: ALLOWABLE LOADS FOR THE DTT1 HOLD-DOWN [1,2,3,12]

| MODEL NO. | FASTENERS | | MIN WOOD MEMBER THK. (in.) | ALLOWABLE TENSION LOADS, $P_{all}$ (lbs.) | | | | DISPLACEMENT, Δ, AT MAXIMUM LOAD [7,8,9] (in.) | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | DRY [5], $C_M$ = 1.0 | | WET [6], $C_M$ = 0.7 | | | |
| | ANCHOR DIAMETER & TYPE [4] | FASTENER QUANTITY | | $C_D$ = 1.0 | $C_D$ = 1.6 | $C_D$ = 1.0 | $C_D$ = 1.6 | $\Delta_{all}$ | $\Delta_s$ |
| DTT1Z | ⅜ [10] or SDWH [11] | 6-SD9112 | 1½ | 840 | 840 | 720 | 840 | 0.170 | 0.250 |
| | | 6-10dx1½ | 1½ | 755 | 910 [11] | 530 | 795 | 0.167 | 0.250 |
| | | 8-10dx1½ | 1½ | 910 [11] | 910 [11] | 705 | 910 [11] | 0.167 | 0.250 |

For **SI**: 1 inch = 25.4 mm, 1 lb. = 4.45 N.

1. Tabulated allowable loads are for a hold-down assembly consisting of the hold-down device attached to 1½-inch thick wood structural member with the fasteners noted in Table 2.
2. The allowable loads for the hold-down assemblies are based on allowable stress design (ASD) and include the load duration factors, $C_D$, corresponding with a normal duration of load ($C_D$ = 1.0) and wind/earthquake loading ($C_D$ = 1.6) in accordance with the NDS. No further increase is allowed. Where other load durations govern, the values under $C_D$ =1.0 shall be adjusted accordingly.
3. When using the basic load combinations in accordance with 2015 (2012) (2009) (2006) IBC Section 1605.3.1, the tabulated allowable loads for the hold-down assembly shall not be increased for wind of earthquake loading. When using the alternate basic load combinations in 2015 (2012) (2009) (2006) IBC Section 1605.3.2 that includes wind or earthquake loads, the tabulated allowable loads for the hold-down assembly shall not be increased by 33⅓ percent, nor can the alternative basic load combinations be reduced by a factor of 0.75.
4. Anchorage to concrete or masonry shall be determined in accordance with Section 4.1.2 of this report.
5. Dry values are applicable to installations into wood with a moisture content that does not exceed 19 percent.
6. Wet values are applicable to installations into wood with a moisture content greater than 19 percent at the time of installation or in service. Values include a NDS wet service factor for the fasteners ($C_M$ = 0.7).
7. The tabulated allowable (ASD) tension loads shall be multiplied by 1.4 to obtain the strength-level resistance loads associated with the tabulated $\Delta_s$ deformations.
8. Tabulated displacement values, $\Delta_{all}$ and $\Delta_s$, for hold-down assemblies include all sources of hold-down assembly elongation, such as fastener slip, hold-down device extension and rotation, and anchor rod elongation, at ASD-level and strength level forces respectively.
9. Elongation of the hold-down anchor rod shall be calculated when the actual unbraced length is greater than 2.5 inches, or ASTM steel specification of the anchor rod differs from that described in the Section 3.2.4 of this report.
10. A 3/8 inch diameter round washer is required when using a 3/8 inch diameter machine bolt, anchor bolt or lag screw.
11. The DTT1 installed with the Strong-Drive SDWH Timber-Hex HDG screw achieves the lesser of the table load or 855 lbs. The SDWH Timber-Hex HDG screw with a 3 inch minimum thread penetration into a supporting wood member with a minimum specific gravity of 0.50 has an allowable withdrawal load of 1225 pounds, which includes a load duration factor of 1.6.
12. Tabulated values are for connectors installed flush with the end of the framing member or installed away from the end.

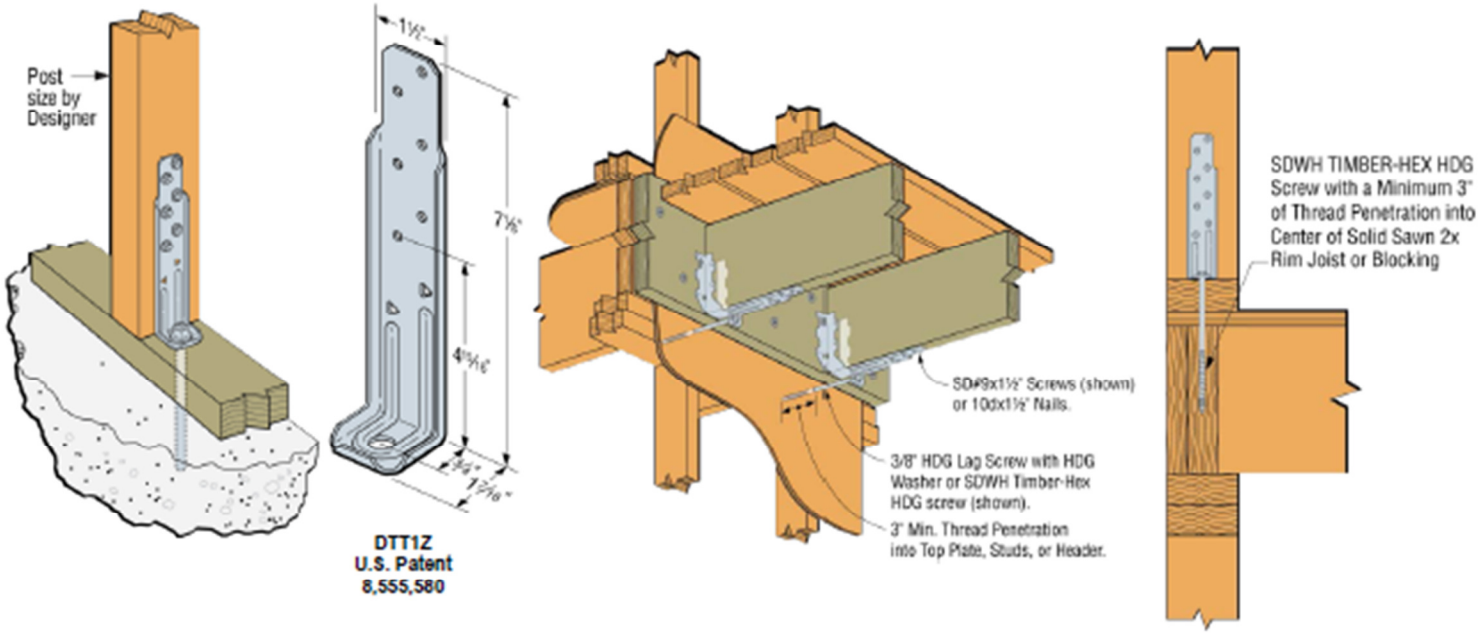


Figure 3 – DTT1 Nail Hold-Downs