

Concrete and Masonry Anchors

SPArta[®] SILL PLATE ANCHOR (U.S. PATENT NO. 11,236,775)

PRODUCT FEATURES:

SPArta[®] Sill Plate Anchors are post-installed anchors used to attach the sill plate of a wood framed wall to a concrete foundation/curb and rim boards to concrete/CMU walls. SPArta[®] anchors are made from carbon steel wire and have a smooth shank shoulder (5/8" diameter x 1-1/2" long) at the top for sill plate and rim board attachments. This transitions into a threaded shank (3/8" diameter x 6" long) for concrete foundation/curb and concrete/CMU wall attachments. The head is comprised of a 1-1/4" diameter flange and a 3/8" square recess for easy anchor installation. SPArta[®] anchors are designed to resist shear and tension loads due to wind and seismic forces in cracked and uncracked concrete.

MATERIAL:

Hardened Carbon steel

COATING:

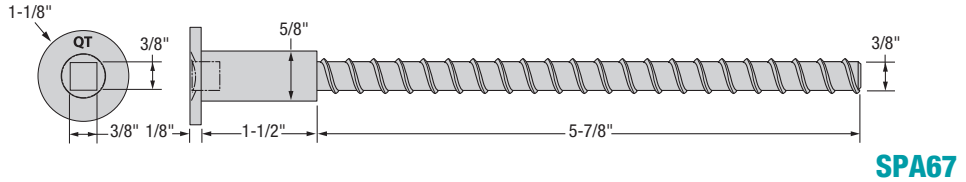
GEOMET[®], Superior to HDG

INSTALLATION:

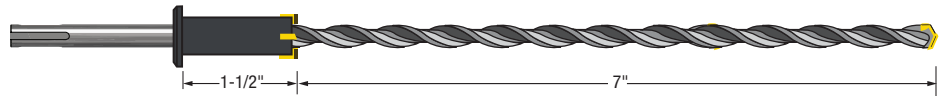
See below

CODE COMPLIANCE:

TER 0910-01, FL 3557



SPA67



DBMSPA67

| PART NO. | CARTON QTY. |
|-------------|---|
| SPA67-100DB | 100 SPArta [®] , 1 SPArta [®] Drill Bit |
| SPA67-100 | 100 SPArta [®] |
| SPA67-50 | 50 SPArta [®] |
| DBMSPA67 | 1 SPArta [®] Drill Bit |

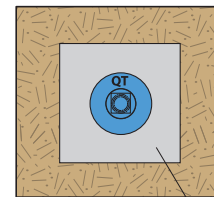
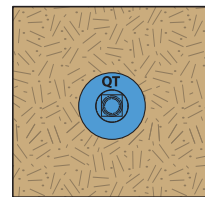
CAUTION: Use of the SPArta[®] Drill Bit is recommended. Oversizing of holes drilled in either the wood sill plate or concrete will reduce the load capacity of the anchor. The SPArta[®] Drill bit is a proprietary, carbide-tipped step bit, custom designed for the installation of the SPArta[®] anchors.

SPArta[®] ANCHOR ALLOWABLE SHEAR VALUES (ASD)

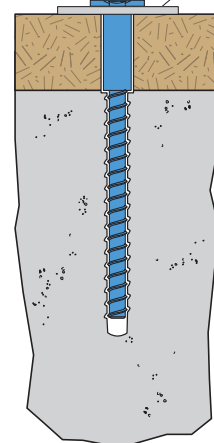
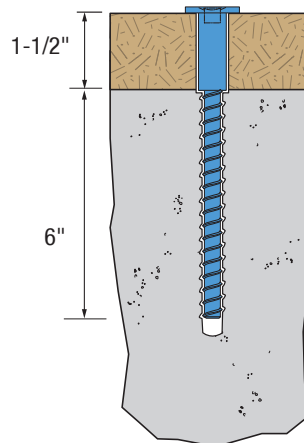
| Applied Load | Allowable Loads (LB) ¹⁻⁶ | |
|--------------|---|------------------------|
| | Load Direction | Slab/Curb ⁷ |
| Shear | Parallel to Wood Grain (F ₁) | 1,395 |
| | Perpendicular to Wood Grain (F ₂) | 665 |
| Tension | Uplift (U) | 1,155 |
| | Uplift (U) with Washer ⁸ | 1,705 |

NOTES:

- Tabulated values are applicable to uncracked concrete and pressure treated Southern Pine #2 lumber.
- Allowable load values are determined using a conversion factor (ASD) of 1.6. The conversion factor is based on the controlling load case: $(0.9D + W) / (0.6D + 0.6W)$, where Dead Load (D) = 30% and Wind Load (W) = 70%. Adjustments shall be made where other load combinations control.
- Anchor design conforms to ACI 318 with no supplementary reinforcement considered.
- Anchor bending yield strength, $F_{yb} = 100,000$ psi and concrete dowel bearing strength, $F_d = 7,500$ psi.
- Allowable loads are provided for a 1.6 load duration (C_D). No further increases are permitted.
- Allowable loads use a wet service factor $C_M = 0.7$ (M.C. > 19%). No further reduction required.
- Minimum Requirements: Edge distance = 2.25 inches, End distance = 6 inches, Spacing = 6.75 inches, Embedment depth = 6 inches, Curb width = 6 inches, Slab/Curb depth = 9 inches and Concrete compressive strength = 2,500 psi.
- Washer size is 2 inch x 2 inch x 1/8 inch.



2" x 2" x 1/8" Washer

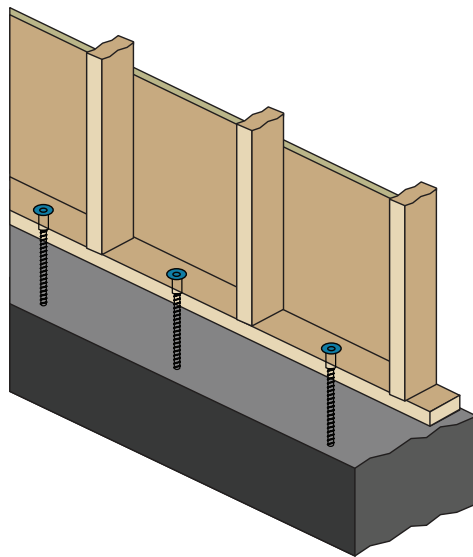


SPArtan® ANCHOR SPACING EQUIVALENTS FOR EPOXY ANCHOR

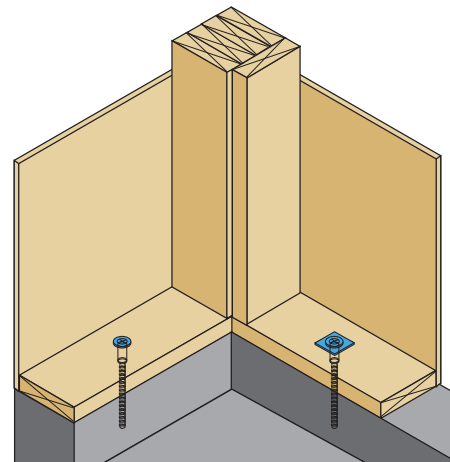
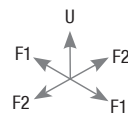
| Epoxy Anchor Size | Epoxy Anchor Spacing | | | | | |
|-------------------|--|-----|-----|-----|-----|-----|
| | 16" | 24" | 32" | 36" | 40" | 48" |
| | Equivalent SPArtan® Anchor Spacing (in.) | | | | | |
| 1/2" | 30 | 45 | 61 | 68 | 76 | 91 |
| 5/8" | 21 | 32 | 42 | 48 | 53 | 64 |

NOTES:

1. Tabulated values are based on the lateral resistance of sill plate (SP #2, PT) connection when loaded parallel to grain.
2. Minimum requirements: Threaded rod length = 6"; Embedment depth = 3.5"; Edge distance = 2.25"; End distance = 6"; Concrete compressive strength = 2,500 psi and Sill plate thickness = 1.5".
3. Engineer-of-Record (EOR) to check anchor spacing limits for out-of-plane bending and deflection of sill plate.



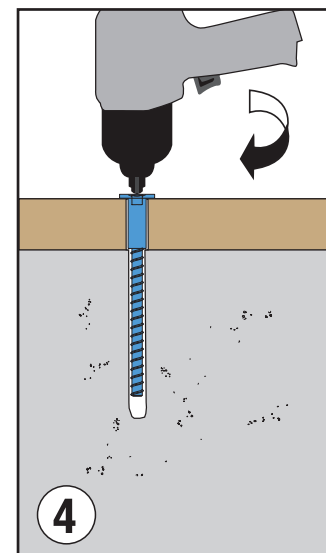
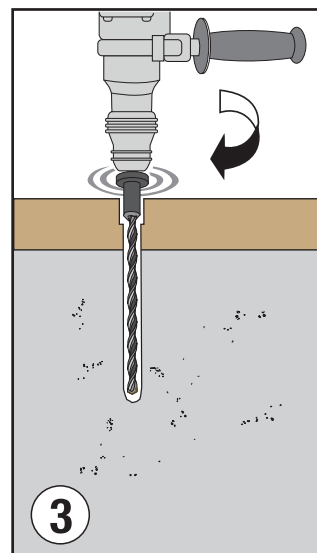
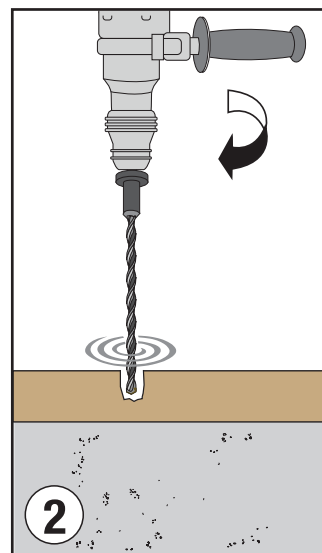
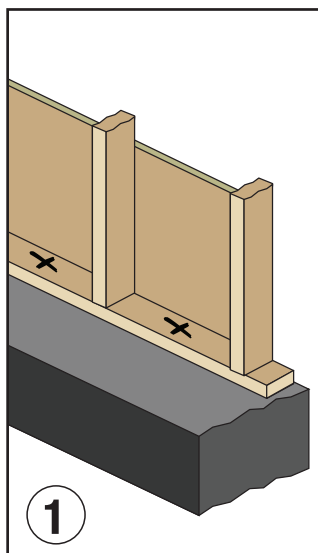
SLAB



CURB

INSTALLATION INSTRUCTIONS

1. Clean the top surface of sill plate and mark the SPArtan® anchor location(s).
2. Use a rotary hammer drill and SPArtan® stepped drill bit (sold by Quick Tie Products, Inc.) to drill a hole in the sill plate. Stop and remove wood dust as necessary.
3. Once the drill bit hits concrete, take precaution not to overwork the drill and/or drill bit. Intermittently, stop and clean concrete dust from the hole. If necessary, use compressed air (or other means) to remove debris around hole. Stop drilling when the wood bit stopper hits the top surface of sill plate. Over drilling may damage the carbide tips of wood bit.
4. Install SPArtan® anchor using an impact drill with 3/8" square drive bit. Stop once the anchor flange hits the top surface of sill plate.



CAUTION: APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT (PPE) MUST ALWAYS BE WORN