

CP288B Bracket Specifications & Capacities when used with the CP288 Push Pier System

Bracket:

Weldment manufactured from 1/4", 3/8", 1/2" and 3/4" ASTM A572 Grade 50 plate and HSS 3.00" x 2.00" x 0.25" wall tube x 22" long ASTM A500 Grade C tube

Pier Tube:

Ø2.875" x 0.165" wall x 18" long
Triple-coated in-line galvanized
ASTM A500 Grade C
Yield strength = 50 ksi (min)
Tensile strength = 55 ksi (min)

Pier Tube Coupler:

Ø2.500" x 0.125" wall x 6" long
ASTM A500 Grade B
Yield strength = 50 ksi (min)
Tensile strength = 58 ksi (min)

Pier Starter Tube:

Pier tube section with machined
Ø3.375" friction reduction collar
pressed around leading end

Cap Plate:

1" x 4.50" x 8.00" ASTM A572 Grade 50
with confining ring on one side

Bracket Hardware⁽³⁾:

(2) - Ø3/4" x 20" long contour (coil) thread rod
AISI 1045
Tensile strength = 120 ksi (min)
Electrozinc plated per ASTM B633

Bracket Finish:

Available plain or hot-dip galvanized⁽²⁾

SmartJack/Concentric Pier Base Plate⁽⁷⁾:

Ø3.38" x 0.188" wall x 4.00" long ASTM
A53 Grade B pipe
1/8" x 1.38" x 7.34" ASTM A36
bent plate
1/4" x 4.00 x 4.00 and 5/16" x 4.50 x 4.50
ASTM A36 plate

Allowable Bracket Capacity ^(3,4,5,6) R_n/Ω	
	(kips)
Plain	36.7
Plain Corroded ⁽¹⁾	28.5
Grout Filled Corroded ⁽¹⁾	32.1
Maximum Drive Stand Force During Installation⁽⁹⁾	60.0

- (1) Corroded capacities include a 50-year scheduled sacrificial loss in thickness per ICC-ES AC406. Grout filled piers consider a loss in thickness at the outside diameter only.
- (2) Hot-dip galvanized coating in accordance with ASTM A123.
- (3) Brackets shall be used for support of structures that are considered to be fixed from translation. Structures that are not fixed from translation shall be braced in some manner prior to installing retrofit bracket systems.
- (4) Allowable capacities consider continuous lateral soil confinement of fully embedded piers. Piers with exposed unbraced lengths or piers placed in fluid soils should be evaluated on a case-by-case basis by the project engineer.
- (5) Concrete bearing assumes a minimum compressive strength (f_c) of 2,500 psi. Local concrete bending and other local design checks should be evaluated on a case-by-case basis by the project engineer.
- (6) Push Piers shall be installed with a driving force exceeding the required allowable service load by a sufficient factor of safety (FOS). FOS is most commonly between 1.5 and 2.0, although a higher or lower FOS may be considered at the discretion of the pier designer or as dictated by local code or project requirements.
- (7) Refer to *Appendix 4A* for material properties and specifications.

