FS288BL2 Bracket Specifications & Capacities when used with the PP288 Push Pier System

Bracket:
Weldment manufactured from ¼", 5⁄16", and ⅜" ASTM A572 Grade 50 plate

Pier Tube:
Ø2.875" x 0.165" wall x 36" 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

External Sleeve:
Ø3.500" x 0.216" wall x 30" or 48" long with trumpet flare at one end
ASTM A500 Grade B or C
Yield strength = 50 ksi (min)
Tensile strength = 62 ksi (min)

Cap Plate:
1" x 4.00" x 8.25" ASTM A572 Grade 65

Bracket Hardware[3]:
(2) - Ø¾" x 16" long all-thread rod Grade B7
Tensile strength = 125 ksi (min)
Electrozinc plated per ASTM B633

Bracket Finish:
Available plain or hot-dip galvanized[2]

Allowable Bracket Capacity[4,5,6,7] R_n/Ω		
	with 30" Sleeve (kips)	**with 48" Sleeve (kips)**
Plain	20.3	31.2
Plain Corroded[1]	15.7	24.1
Grout Filled Corroded[1]	17.7	27.3
Maximum Drive Force During Installation[7]	**48.1**	**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.

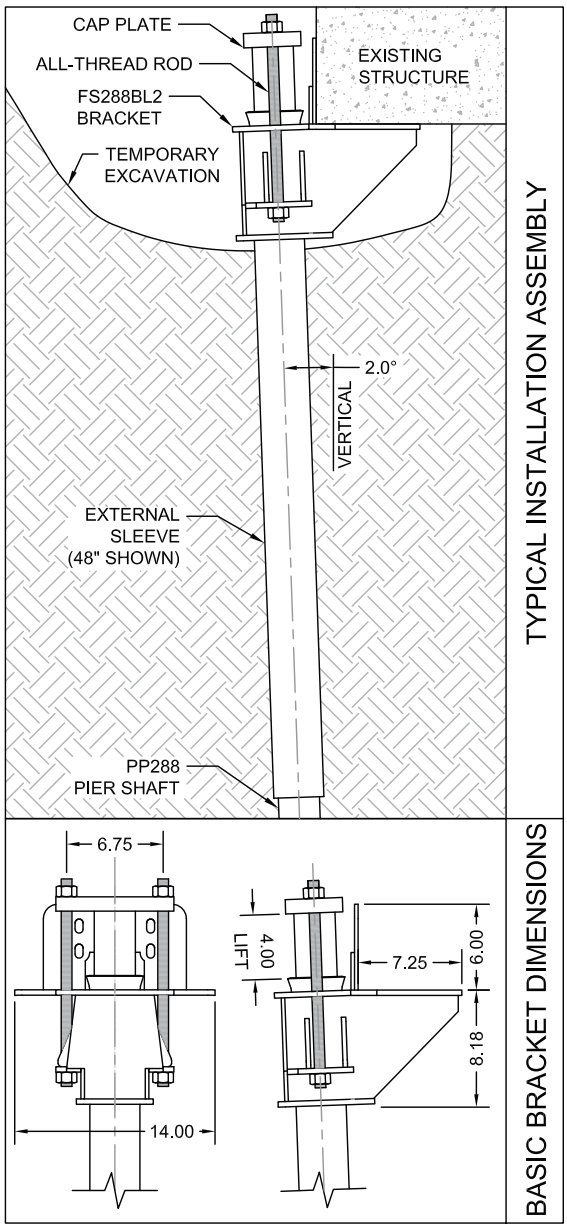
(3) Optional hardware utilizes similar sized contour (coil) thread made from AISI 1045, tensile strength = 120 ksi. Slightly lower tensile strength material does not govern the listed capacities.

(4) 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.

(5) 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.

(6) 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.

(7) 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.



FS288BL2V Bracket Specifications & Capacities when used with the PP288 Push Pier System

Bracket:
Weldment manufactured from ¼", 5⁄16", and ⅜" ASTM A572 Grade 50 plate

Pier Tube:
Ø2.875" x 0.165" wall x 36" 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

External Sleeve:
Ø3.500" x 0.216" wall x 30" or 48" long with trumpet flare at one end
ASTM A500 Grade B or C
Yield strength = 50 ksi (min)
Tensile strength = 62 ksi (min)

Cap Plate:
1" x 4.00" x 8.25" ASTM A572 Grade 65

Bracket Hardware[3]:
(2) - Ø¾" x 16" long all-thread rod Grade B7
Tensile strength = 125 ksi (min)
Electrozinc plated per ASTM B633

Bracket Finish:
Available plain or hot-dip galvanized[2]

Allowable Bracket Capacity[4,5,6,7] R_n/Ω		
	with 30" Sleeve (kips)	**with 48" Sleeve (kips)**
Plain	20.3	31.2
Plain Corroded[1]	15.7	24.1
Grout Filled Corroded[1]	17.7	27.3
Maximum Drive Force During Installation[7]	**48.1**	**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.

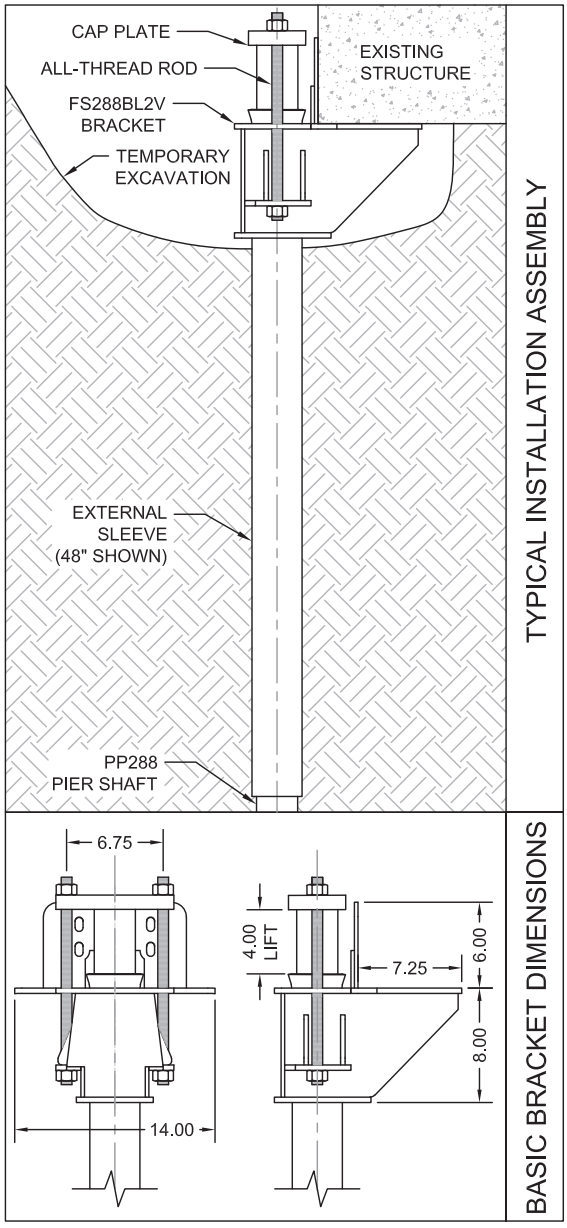
(3) Optional hardware utilizes similar sized contour (coil) thread made from AISI 1045, tensile strength = 120 ksi. Slightly lower tensile strength material does not govern the listed capacities.

(4) 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.

(5) 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.

(6) 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.

(7) 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.



FS288BFM Bracket Specifications & Capacities when used with the PP288 Push Pier System

Bracket:
Weldment manufactured from ¼", ⅜", and ½" ASTM A36 plate

Pier Tube:
Ø2.875" x 0.165" wall x 36" 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 Ø3.375" friction reduction collar pressed around leading end

External Sleeve:
Ø3.500" x 0.216" wall x 30" or 48" long with trumpet flare at one end
ASTM A500 Grade B or C
Yield strength = 50 ksi (min)
Tensile strength = 62 ksi (min)

Cap Plate:
1" x 4.00" x 8.25" ASTM A572 Grade 65

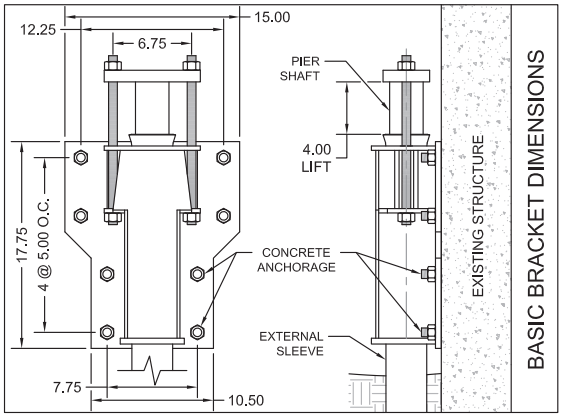
Bracket Hardware[3]:
(2) - Ø¾" x 16" long all-thread rod Grade B7
Tensile strength = 125 ksi (min)
Electrozinc plated per ASTM B633

Bracket Finish:
Available plain or hot-dip galvanized[2]

Concrete Anchorage[7] (Option 1):
(8) - Ø¾" x 7" Simpson Wedge-All
Mechanically galvanized per ASTM B695

Concrete Anchorage[8] (Option 2):
Adhesive = Simpson AT-XP
Quantity = approximately 1.25 oz per hole
(8) - Ø¾" x 7" long all-thread rod Grade B7
Tensile strength = 125 ksi (min)
Electrozinc plated per ASTM B633

Allowable Bracket Capacity[4,5,6,9] R_n/Ω		
	with Wedge Anchors[7] (kips)	**with Adhesive Anchors[8] (kips)**
Plain	22.0	31.0
Plain Corroded[1]	17.0	24.0
Grout Filled Corroded[1]	19.3	27.1
Maximum Drive Force During Installation[9]	**44.2**	**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) Optional hardware utilizes similar sized contour (coil) thread made from AISI 1045, tensile strength = 120 ksi. Slightly lower tensile strength material does not govern the listed capacities.

(4) 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.

(5) 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.

(6) Bracket is strictly intended to be mounted to poured concrete structures. Bracket should never be mounted to CMU concrete block. Anchorage assumes a minimum concrete compressive strength (f'_c) of 2,500 psi and a minimum concrete thickness of 8". Local concrete bending and other local design checks should be evaluated on a case-by-case basis by the project engineer.

(7) When the bracket is mounted with wedge anchors, the bracket shall be located with a minimum distance of 6" from the edge of the bracket to any concrete edge. Wedge anchors require the use of a Ø¾" drill bit and a minimum embedment depth of 5". Wedge anchors shall be installed to a torque of 150 ft-lb.

(8) When the bracket is mounted with adhesive anchors, the bracket shall be located with a minimum distance of 9" from the edge of the bracket to any concrete edge. Adhesive anchors require the use of a Ø13⁄16" drill bit and a minimum embedment depth of 5.50". Adhesive anchors shall be tightened to a snug tight condition after sufficient curing time.

(9) 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.