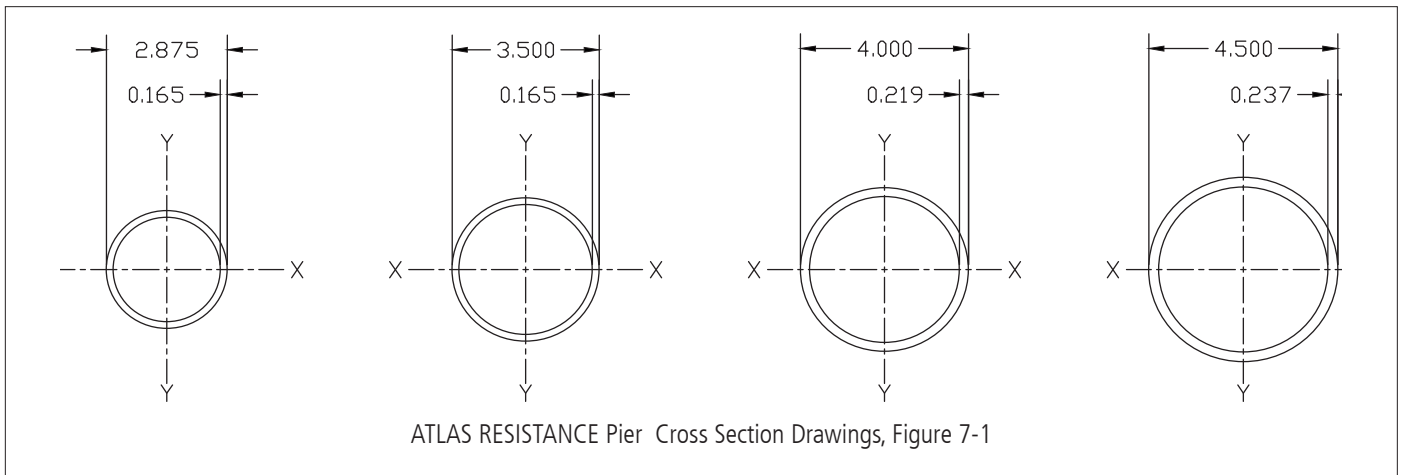


ATLAS RESISTANCE® PIERS

The ATLAS RESISTANCE® Pier is an assembly of structural steel components that includes a steel bracket attached to the foundation or slab, which is then mounted on a steel pier that is installed to bedrock or firm bearing stratum. The lead pier starter section includes a unique friction reduction collar that reduces skin friction on the pier pipe during installation. Hubbell Power Systems, Inc. offers a broad range of pier pipe sizes and remedial repair brackets for both foundation and slab underpinning applications. This section will discuss those products in detail along with their capacity ratings.

PIER PIPE SHAFTS

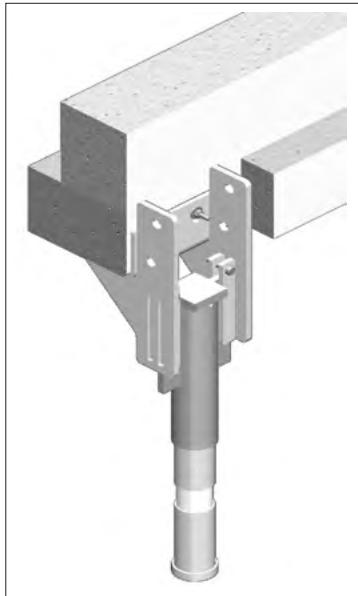


DRAWINGS & RATINGS

ATLAS RESISTANCE® Pier Section Properties, Table 7-1

PRODUCT SERIES	SHAFT SIZE in (mm)	WALL THICKNESS in (mm)	METAL AREA in ² (cm ²)	PERIMETER in (cm)	MOMENT OF INERTIA in ⁴ (cm ⁴) <i>I_{x-x}, I_{y-y}, I_{x-y}</i>	SECTION MODULUS in ³ (cm ³)	
						<i>S_{x-x}</i> <i>S_{y-y}</i>	<i>S_{x-y}</i>
RS2875.165	2.875 (73)	0.165 (4.2)	1.4 (9.0)	9.0 (22.9)	1.29 (53.7)	0.90 (14.7)	0.90 (14.7)
RS3500.165	3.5 (89)	0.165 (4.2)	1.7 (11.0)	11.0 (27.9)	2.41 (100.3)	1.38 (22.6)	1.38 (22.6)
RS4000.219	4.0 (101)	0.219 (5.6)	2.6 (16.8)	12.6 (32.0)	4.66 (194.0)	2.33 (38.2)	2.33 (38.2)
RS4500.237	4.5 (114)	0.237 (6.0)	3.2 (20.6)	14.1 (35.9)	7.23 (301.0)	3.21 (52.6)	3.21 (52.6)

REMEDIAL REPAIR BRACKETS for ATLAS RESISTANCE® PIERS



ATLAS RESISTANCE® Standard and Modified 2-Piece Systems

- Use for lifts up to 4"
- All 2-piece pier systems include:
 - Pier bracket
 - Top pier platform
 - Pier Starter with Friction Reduction Collar
 - Pier Section
 - "M" designates one modified sleeve included

Order Separately: Two pier pins (two Grade 8 bolts for 4-1/2" pier) and pier shims. Each pier requires a minimum of four anchor bolts. NOTE: Anchor bolts not supplied by Hubbell Power Systems, Inc.

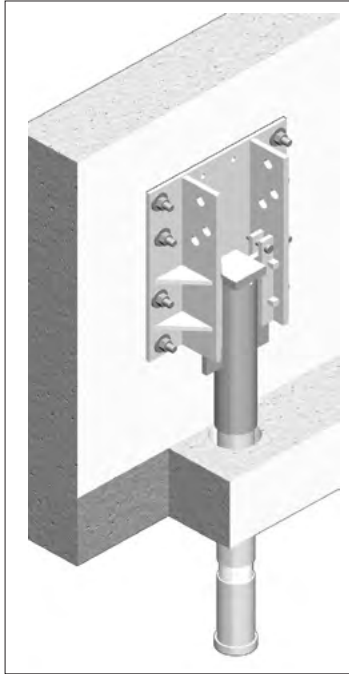
See Note 3 at bottom of table for available finishes.

DRAWINGS & RATINGS

ATLAS RESISTANCE® STANDARD AND MODIFIED 2-PIECE PIER DESIGNATORS				
Pier Designation	Ultimate Capacity ¹	Max Working Capacity ¹	Pier Dia	Features
AP-2-UF-2875.165	60,000#	30,000#	2-7/8"	Lowest cost
AP-2-UF-2875.165M	70,000#	35,000#	2-7/8"	Lowest cost, Increased rotational stiffness, Recommended for weak surface soils
AP-2-UF-3500.165	85,000#	42,500#	3-1/2"	"Flow Coat" pier pipe standard (NER579) ²
AP-2-UFVL-3500.165	86,000#	43,000#	3-1/2"	Has additional mounting plate for two additional anchor bolts
AP-2-UF-3500.165M	91,000#	45,500#	3-1/2"	"Flow Coat" pier pipe standard (NER579) ² , Increased rotational stiffness. Recommended for weak surface soils
AP-2-UFVL-3500.165M	91,000#	45,500#	3-1/2"	Has additional mounting plate for two additional anchor bolts, Increased rotational stiffness
AP-2-UF-4000.219	98,000#	49,000#	4"	Higher capacity, Easier installation than AP2-3500M
AP-2-UFVL-4000.219	110,000#	55,000#	4"	Has additional mounting plate for two additional anchor bolts
AP-2-UF-4500.237	141,000#	70,500#	4-1/2"	Highest capacity

Notes:

1. Capacities based upon maximum pipe exposure of 2 feet and soil strength having a minimum Standard Penetration Test (SPT) Blow Count "N" of 4. The capacities are based on a pier depth to fixity of 5'-6.
2. Complies with the structural provisions of the most recent editions of BOCA National Code, ICBO Uniform Code, SBCCI Standard Code and 2000 International Building and Residential Code (2002 Accumulative Supplement).
3. Available finishes: P = Entire product supplied mill finish steel. G = Entire product supplied galvanized. PA = Plain steel bracket assy; "Flow Coat" corrosion protection on pier pipe. GA = HDG bracket assy; "Flow Coat" corrosion protection on pier pipe.



ATLAS RESISTANCE® 2-Piece Plate Pier Systems

- Easy surface mount installation.
- May be used for round columns (custom manufactured - see information below).
- Use for lifts up to 4"
- All plate pier systems include:
 - Pier bracket
 - Top pier platform
 - Pier Starter with Friction Reduction Collar
 - Pier Section

Order separately: Two pier pins (two Grade 8 bolts for 4-1/2" pier) and pier shims. Six or eight anchor bolts per pier are required (consult specification drawings on abchance.com for anchor bolt specifications). NOTE: Anchor bolts not supplied by Hubbell Power Systems, Inc.

See Note 3 at bottom of table for available finishes.

DRAWINGS & RATINGS

ATLAS RESISTANCE® 2-PIECE PIER PLATE PIER DESIGNATORS

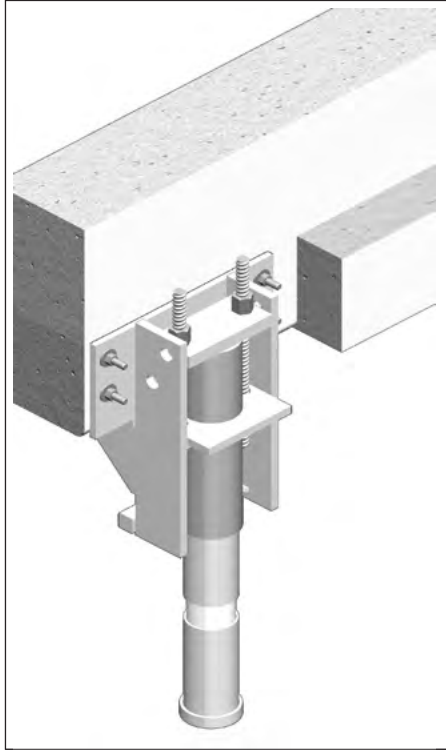
Pier Designation	Ultimate Capacity ¹	Max Working Capacity ¹	Pier Dia	Features
AP-2-PP-2875.165	60,000#	30,000#	2-7/8"	Lowest cost
AP-2-PP-2875.165M	70,000#	35,000#	2-7/8"	Lowest cost, Increased rotational stiffness, Recommended for weak surface soils
AP-2-PP-3500.165	86,000#	43,000#	3-1/2"	Standard pier for most applications, "Flow Coat" pier pipe standard
AP-2-PP-3500.165M	90,000#	45,000#	3-1/2"	"Flow Coat" pier pipe standard, Increased rotational stiffness, Recommended for weak surface soils
AP-2-PP-4000.219	103,000#	51,500#	4"	Larger pier pipe, Higher capacity
AP-2-PP-4500.237	112,000#	56,000#	4-1/2"	Commercial and Industrial applications, Greater pier pipe diameter, Highest capacity

Notes:

1. Capacities based upon maximum pipe exposure of 2 feet and soil strength having a minimum Standard Penetration Test (SPT) Blow Count "N" of 4. The capacities are based on a pier depth to fixity of 5'-6".
2. Mounting distance from bottom of stem wall to bottom of plate pier bracket must be greater than 5".
3. Available Finishes: P = Entire product supplied mill finish steel. G = Entire product supplied galvanized. PA = Plain steel bracket assy; "Flow Coat" corrosion protection on pier pipe. GA = HDG bracket assy; "Flow Coat" corrosion protection on pier pipe.

ROUND COLUMN APPLICATIONS

Where a plate pier must be attached to a round column, the pier bracket can be custom manufactured at extra cost to match the radius of the column and the side rail width will be extended for clearance. Please provide diameter of column when ordering. Specify: AP-2-PPRC-2875.165, AP-2-PPRC-3500.165M or AP-2-PPRC-4000.219.



ATLAS RESISTANCE® Continuous Lift Pier Systems

- Use for lifts exceeding 4"
- Exceptional, extended lift capabilities
- All Continuous Lift Pier Systems include:
 - Continuous lift pier bracket assembly
 - Cap plate assembly
 - Top pier sleeve (Not applicable on AP-CL-UF-4000.219)
 - Pier Starter with Friction Reduction Collar
 - Pier Section

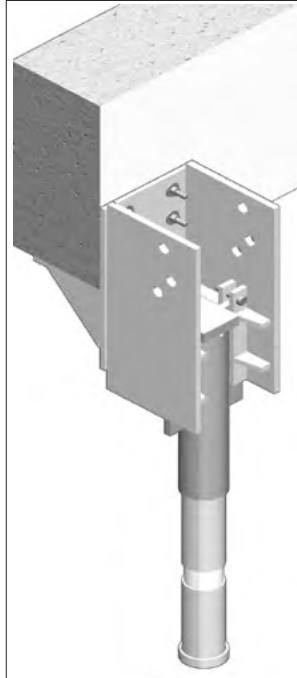
Order separately: Re-useable lift head, continuous thread rebar, nuts, and 6 anchor bolts.

See Note 2 at bottom of table for available finishes.

ATLAS RESISTANCE® Continuous Lift Pier Designators				
Pier Designation	Ultimate Capacity ¹	Max Working Capacity ¹	Pier Dia	Features
AP-CL-UF-2875.165	40,000#	20,000#	2-7/8"	Lowest cost
AP-CL-UF-3500.165	61,000#	30,500#	3-1/2"	"Flow Coat" pier pipe standard
AP-CL-UF-4000.219 (Similar to illustration)	100,000#	50,000#	4"	Higher capacity

Notes:

- Capacities based upon maximum pipe exposure of 2 feet and soil strength having a minimum Standard Penetration Test (SPT) Blow Count "N" of 4. The capacities are based on a pier depth to fixity of 5'-6.
- Available Finishes: P = Entire product supplied mill finish steel. G = Entire product supplied galvanized. PA = Plain steel bracket assy; "Flow Coat" corrosion protection on pier pipe. GA = HDG bracket assy; "Flow Coat" corrosion protection on pier pipe.



ATLAS RESISTANCE® 2-Piece Predrilled Pier Systems

- Use for lifts up to 4"
- Drilled pier access hole required where unsuitable rock is near surface
- Use where designer requires penetration into bearing rock
- Eccentricity from wall to C-L pipe is 6-3/4"
 - All pre-drilled piers include:
 - Pier bracket
 - Top pier platform
 - Pier Starter with Friction Reduction Collar
 - Pier Section

Order separately: Two pier pins and four anchor bolts per pier, and shims as required.

See Note 2 at bottom of table for available finishes.

DRAWINGS & RATINGS

ATLAS RESISTANCE® 2-Piece Predrilled Pier Designators

Pier Designation	Ultimate Capacity ¹	Max Working Capacity ¹	Pier Dia	Features
AP-2-UFPDVL-2875.165M	58,000#	29,000#	2-7/8"	Lowest cost
AP-2-UFPDVL-3500.165M	62,000#	31,000#	3-1/2"	Low cost, Corrosion resistant, "Flow Coat" pier pipe standard
AP-2-UFPDVL-4000.219	76,000#	38,000#	4"	Higher capacity
AP-2-UFPD-4500.237	92,000#	46,000#	4-1/2"	Highest capacity, Commercial and Industrial applications

Notes:

1. Capacities based upon maximum pipe exposure of 2 feet and soil strength having a minimum Standard Penetration Blow Count (SPT) of 4. The capacities are based on a pier depth to fixity of 5'-6.
2. Available Finishes: P = Entire product supplied mill finish steel. G = Entire product supplied galvanized. PA = Plain steel bracket assy; "Flow Coat" corrosion protection on pier pipe. GA = HDG bracket assy; "Flow Coat" corrosion protection on pier pipe.

ATLAS RESISTANCE® 2-Piece Predrilled Plate Pier Designators (Special Order-Not Shown)

Note: Mounting distance from bottom of stem wall to bottom of plate pier bracket must be greater than 5".

AP-2-PPPD-3500.165	76,000#	38,000#	3-1/2"	Lowest cost, Corrosion resistant, "Flow Coat" pier pipe standard
AP-2-PPPD-3500.165M	80,000#	40,000#	3-1/2"	Low cost, Corrosion resistant, "Flow Coat" pier pipe standard
AP-2-PPPD-4000.219	83,000#	41,500#	4"	Higher capacity
AP-2-PPPD-4500.237	95,000#	47,500#	4-1/2"	Highest capacity, Commercial and Industrial applications