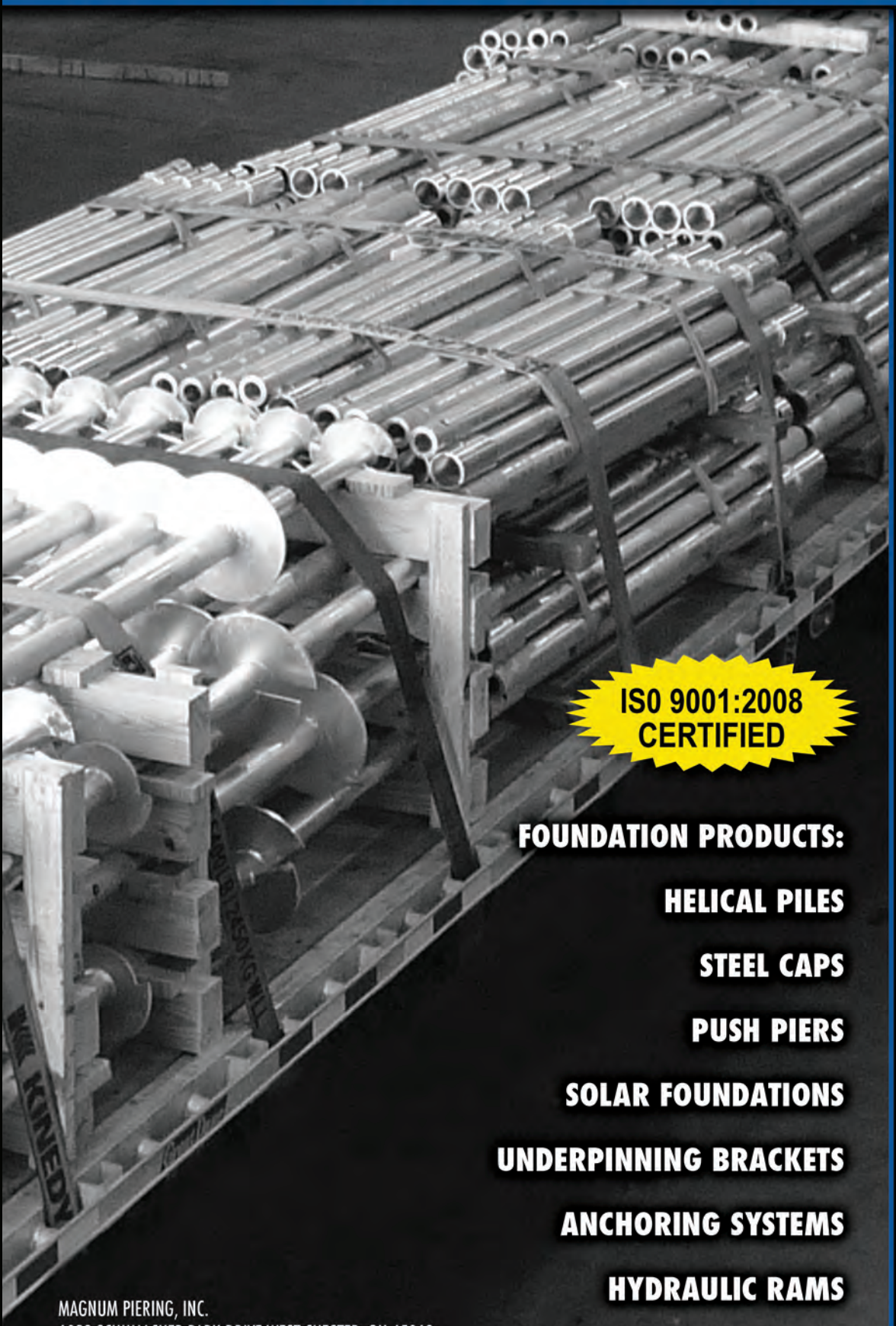
MAGNUM PIERING, INC.

PRODUCT CATALOG

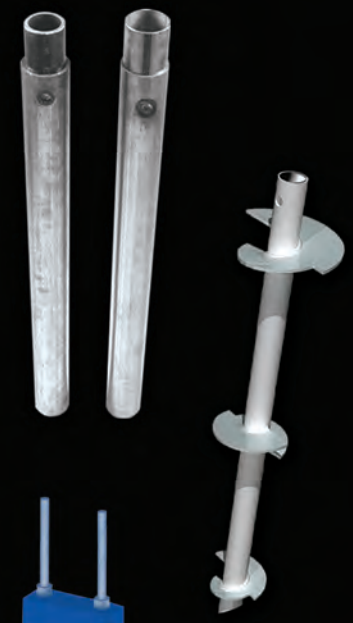
2012



MAGNUM PIERING®

ROCK SOLID

For Over 30 Years



ISO 9001:2008 CERTIFIED

FOUNDATION PRODUCTS:

HELICAL PILES

STEEL CAPS

PUSH PIERS

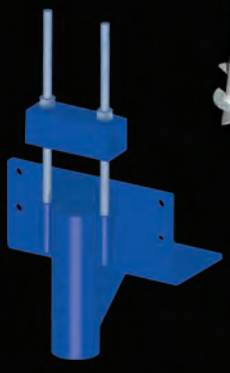
SOLAR FOUNDATIONS

UNDERPINNING BRACKETS

ANCHORING SYSTEMS

HYDRAULIC RAMS

TOOLS AND ACCESSORIES



MAGNUM PIERING, INC.
6082 SCHUMACHER PARK DRIVE WEST CHESTER, OH 45069
800.822.PIER (7437) WWW.MAGNUMPIERING.COM

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section 1

INTRODUCTION

MAGNUM PIERING, INC.

MAGNUM PIERING® ROCK SOLID

MAGNUM® HELICAL PILES

ABOUT MAGNUM PIERING

Magnum Piering was founded in 1981 as one of the very first foundation repair systems manufacturers in the United States. The Magnum Hydraulic Push Piering System was the company's flagship product line. Now, after 30 years of unparalleled performance and tens of thousands of successful projects, this system is recognized by contractors across the country as the most efficient and reliable foundation underpinning system on the market.

Building on this success, the Magnum product development team designed and introduced the Magnum Helical Pile product line in 2001. The initial 3 inch diameter round shaft product line has now been expanded to include 4.5 and 5.5 inch products with bearing capacities as high as 100 tons. Magnum Helical Piles are now specified by engineers for a multitude of different applications including pedestrian boardwalks, houses, solar panels, wind turbines, gas compressors, and multi-story buildings.

The Magnum success story reached a new and important threshold in 2008 with the opening of its new manufacturing plant and world headquarters located in West Chester, Ohio. This facility provides the company with the ability to produce more foundation products, larger and longer pile sections, and expand to meet the rapidly increasing demands for Magnum Helical Pile and Magnum Push Pier products for years to come.

In addition, Magnum has made significant investments in product testing and quality assurance programs designed to improve and extend the company's commitment to supplying the very finest products in the industry. Two of the most notable programs are:

o ISO 9001:2008 Certification
o ICC-ES Evaluation Report

These important accreditations position Magnum Piering as one of the leading companies in our industry and insure continued growth and success for our customers and employees for many years to come.

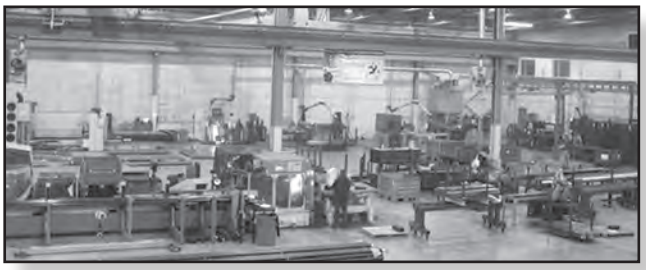
QUALITY MANUFACTURING

Magnum operates a state-of-the-art 30,000 sf manufacturing facility boasting overhead cranes, robotic welding, a CNC laser cutting system, CNC drilling, and a myriad of other equipment. We have the capability to produce large orders with quick turnaround times.

ICC-ES Evaluation

Magnum Piering, Inc. attests that all of its helical pile products have been designed to meet or exceed ICC-ES AC358 criteria. Magnum uses both an internal quality assurance testing program and an outside, independent IAS accredited laboratory to conduct product testing in accordance with AC358. ICC-ES evaluation under the new AC358 criteria means that Magnum's products meet or exceed the most up-to-date industry standards, which gives you a high level of assurance that the product will perform as designed.

Magnum Piering, Inc. representatives served as the lead consultant and chair of the Ad Hoc Committee of Helical Foundation Manufacturers that drafted AC358. Magnum Piering, Inc. was one of the first companies to apply to ICC-Evaluation Services, Inc. for a report number under the new AC358 criteria. A copy of our draft ICC-ES ER report, a letter acknowledging receipt of our application by ICC-ES, and a copy of the IAS laboratory testing report may be obtained by contacting Magnum Piering, Inc. If you would like to review any particular load test data or any part of our quality manual, please feel free to contact us for more information.



ISO 9001:2008 Accreditation

ISO 9001:2008 was developed as an international standard to confirm that companies have established and maintained a uniform quality management system to better meet the needs of their customers. The standard covers design, development, production and service, and can be used by any business in any industry.

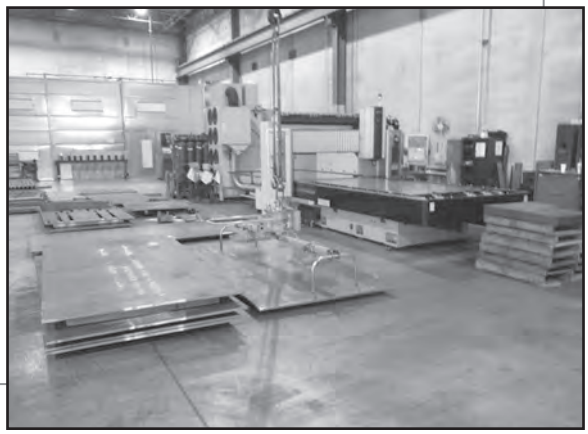
Magnum Piering, Inc. operates a manufacturing quality control system that is ISO 9001:2008 accredited. Due to the high level of quality control, our customers frequently comment that Magnum's products meet or exceed manufacturer ratings more often than other brands.

ISO 9001:2008 – The Global Standard for Quality Assurance Benefits & Assurance for Magnum Piering, Inc. Customers

- Continual improvement and striving for complete customer satisfaction
- Efficiency and productivity (minimizing defect costs and optimizing process sequences)
- Minimization of risks in product liability
- Reduced inspection and testing costs
- Reduced costs through the minimization of communication and manufacturing errors
- Consistency of service or product performance
- Increased motivation due to fewer errors and complaints
- Transparency through clearly defined processes
- Continuous process and structural improvements
- Identification and minimization of weaknesses
- The securing of a competitive edge with an internationally recognized certificate

Quality Policy

Magnum Piering, Inc. is the recognized leader in providing high quality, competitively priced foundation systems and services. We are committed to exceeding our customers' needs through focused efforts on continuous improvement and customer service.



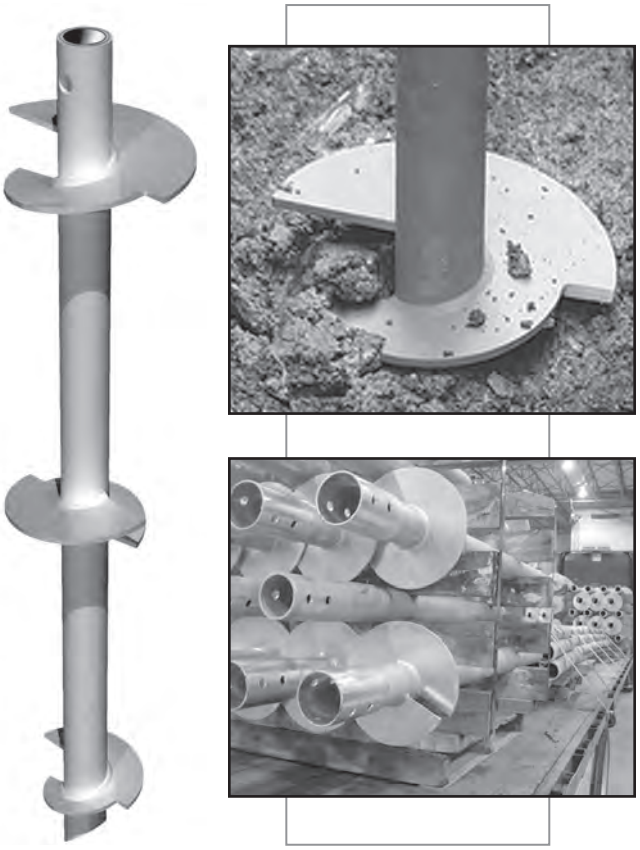
QUALITY MATERIALS

Magnum Piering, Inc. manufactures its helical pile and steel push pier products from new, high quality steel. Mill certificates are available for shaft and plate materials.

Better Steel - Better Piles

All Magnum 3.00″ diameter helical pile and push pier products and many of our other products are manufactured from ASTM A513 steel tubing. This premium steel tubing has higher carbon and alloy content, which means greater strength. ASTM A513 is the common designation for mechanical tubing, which is used in applications that require closer tolerances and when strength to weight ratios are important. This type of tubing is used in applications where dimensions and quality are critical for products like hydraulic cylinders and shock absorbers. Statistical process control is used to reduce variations in tube dimensions and the welding process. Other helical and resistance pile manufacturers produce products made from uncertified, used, or rejected materials.

At Magnum - Better Steel Equals Better Piles.



Patented Dual Cutting Edge Helix

Magnum's patented dual-cutting-edge (DCE) helix out performs standard circular helical bearing plates in difficult soil and bedrock conditions. The DCE helix offers a truer installation, tracks better, cuts through difficult soils such as gravel, construction debris, or trash, and will penetrate medium hard bedrock formations with an SPT blow count up to 100 to 150 blows per foot, or 50/6 to 50/4. The DCE helix gives you a better chance of getting through tough soil and bedrock situations without the need for pre-drilling. Here is what some customers are saying about Magnum's DCE.

Mr. Joe Loudermilk
Partner – Extreme Technology's, Atlanta, GA
"Magnum's Helical Piles with the DCE Blade are the best helical piles I've ever installed. The blade design virtually eliminates any side-to-side (wobble) motion and the piers advance in our dense clay soils just like a screw into wood."

Mr. Ross Kirk
Owner – Marco Concrete Lifting, Charleston, WV
"Hands down the best blade design for penetrating our dense West Virginia clay soils. The Magnum DCE blade even allows us to penetrate our shale formations without deflection or failure. The DCE blades are great!"

Mr. Jerry Lipe
Owner – Lipe Brothers Construction, Duluth, MN
"Our crews specify the Magnum DCE blades for our helical piles because the blade is able to penetrate the Laurentian Shield formations in our region. Often times we encounter these layers at very shallow depths, and the DCE blades will cut through it so we can get below frost depths and into good tight clays."

High Strength Round Shafts

Magnum offers round high-strength, structural steel tube shafts with rigid couplings because round shafts generally have greater torsional capacity, greater buckling capacity, and greater lateral capacity than square or rectangular shafts. This means that helical piles and push piers can be used in new construction for structures with lateral wind and seismic loads. It also means that you can compute buckling conventionally and you can use Magnum helical piles and push piers in soft soils without the need for grout around the shaft.

TECHNICAL SUPPORT

Magnum Piering, Inc. understands the importance of providing excellent technical support. Magnum strives to provide the best, most accessible, most responsive, and most knowledgeable technical support and engineering team in the industry.

Experience

Since its founding in 1981, Magnum Piering, Inc. has gained the expertise that newer companies just don't have. We have provided engineering support, foundation products, installation observation and load testing for a variety of diverse projects. Our projects range from residential tract homes to high-rise commercial developments, industrial gas compressors, deep excavation shoring, membrane tension structures and NASA launch pads. Our experience has resulted in an extensive and encompassing product line to meet the diverse needs of our clients.

Expertise

Our director of engineering, Dr. Howard Perko, authored the only book currently available on helical pile installation and design, issued by a world-renowned publisher, John Wiley & Sons. Dr. Perko also authored helical pile additions to the 2009 IBC, and he was an expert consultant on writing of the NYC DOB code on helical piles. Having Magnum's experts on your team will give you piece of mind.

Engineering Services

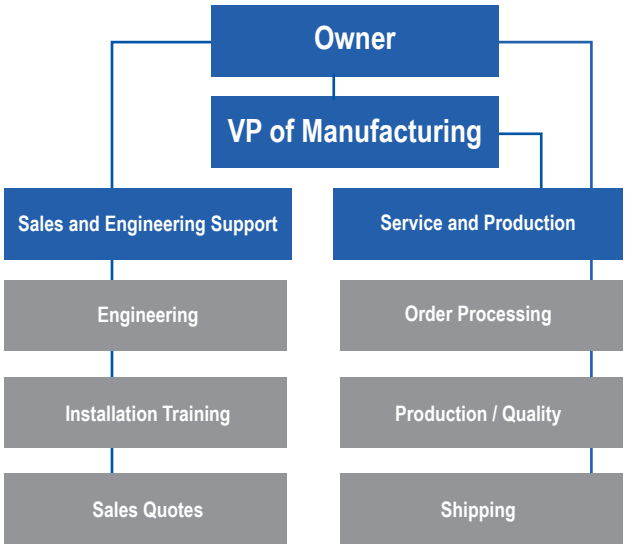
Magnum Piering has partnered with Magnum Geo-Solutions, LLC to provide assistance in engineering projects involving Magnum Piering, Inc. products. Magnum Geo-Solutions, LLC currently operates an engineering office in Fort Collins, Colorado. Here a team of engineers is standing by ready and willing to help with project submittals and design-build support for foundation, shoring, underpinning, repair, and earth retention projects. Magnum Geo-Solutions, LLC's engineers are licensed in 25 states within the U.S. and frequently provide support and advice under a peer review system throughout the World. Customers receive a separate contract and are charged by Magnum Geo-Solutions, LLC for engineering services provided.

CAD Design Services

Our in-house CAD design department and engineers have the talent to design specialty foundation products to suit specific project requirements and the needs of our customers. Simply put in a request for quote for a specific foundation product, custom cap, or drive tool, and Magnum's CAD department in conjunction with manufacturing and sales will turn-around a drawing and quote for your approval in typically 24 to 48 hrs.

ORDER PROCESSING

In 2010, Magnum Piering, Inc. announced the consolidation of sales and engineering support and the expansion of its customer service department. A team of support specialists has been assembled to better serve your needs. Each member of the support team is equipped and authorized to answer questions, suggest product sizes, and prepare material quotes upon your request. Below is an organizational chart for the new company structure. The support team is standing by to help answer questions and meet your needs. Simply call or email a team member for help today!



Company Contact Information

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800.822.PIER (7437)
WWW.MAGNUMPIERING.COM

Limitations and Conditions of Sale

A downpayment is typically required with all orders; invoice balances are due upon receipt of material shipments and are past due thirty (30) days from invoice date. A finance charge of two percent (2%) per month is assessed on all past due accounts. Delinquent accounts are subject to liens and may be sent to collections. Customers are responsible for all fees associated with collection of past due accounts. The availability of products may change with time; Magnum reserves the right to substitute different products of equal or better capacity. Quotes are typically valid for 30 days from the issue date. The law of the State of Ohio shall govern all customer and purchase agreements, their interpretation and performance.

Product sizes, if provided by Magnum Piering, Inc. or its agents and affiliates, are conceptual for bid purposed only. Customer should verify quantity, required design loads, product sizing and other project details themselves. Magnum Piering, Inc. warrants that its materials are free of defects only. Product performance is a function of installation, which Magnum cannot control, and ground conditions, which can vary with location and depth; as such, no warrantee is made, express or implied, regarding product capacity in ground. Magnum recommends bidders include provisions for additional pile length and/or obstructions in their bid documents. Magnum's complimentary technical support is limited to standard stock drawings of Magnum products, example calculations, and assistance with preliminary pile sizing. Engineering fees will apply for stamped drawings, project specific calculations, and final designs. All engineering services are provided by Magnum Geo-Solutions, LLC.

Customers are advised to perform test installations whenever possible to verify pile depths, pressure, and torque at various locations around project sites prior to ordering material. When test piles are not possible due to schedule, cost, site access, or other reasons, customers are advised to maintain an inventory of helical pile extensions in case pile lengths are greater than anticipated from project boring logs. In order to provide the best price advantage, Magnum custom manufactures piles to specific project requirements when ordered. This allows us the ability to offer a wide variety of lengths, sizes, and configurations. Customers are encouraged to check with Magnum's support representatives regarding specific product lead times and plan accordingly.

MANUFACTURER WARRANTEE

533201v1
MAGNUM PIERING, INC.
WARRANTY PROVISIONS
LIMITATION ON DAMAGES

Magnum Piering, Inc. warrants its products and their parts and components to be free from defects in materials and workmanship for a period of thirty (30) years from the date of sale. Purchaser's exclusive remedy under this warranty shall be the correction of any verified defect in workmanship and materials or the replacement of any nonconforming goods, components, or parts, and this warranty shall expire thirty (30) years after the date of sale. EXCEPT AS SPECIFICALLY SET FORTH HEREIN, MAGNUM PIERING, INC., MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, WITH RESPECT TO ITS PRODUCTS AND THEIR PARTS AND COMPONENTS, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE. NOTWITHSTANDING THE FOREGOING WARRANTY, MAGNUM PIERING, INC., SHALL NOT IN ANY EVENT BE LIABLE TO PURCHASER FOR ANY INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES OR LOST PROFITS ARISING OUT OF OR RELATED IN ANY WAY TO THE PURCHASE, INSTALLATION, OR USE OF THE PRODUCTS OF MAGNUM PIERING, INC., AND THE PARTS AND COMPONENTS OF THOSE PRODUCTS. THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF.

This warranty shall be interpreted and enforced in accordance with the laws of the State of Ohio without regard to the conflicts of law rules of such state, and, further, the laws of the State of Ohio shall exclusively govern any claims, demands, or controversies arising from the sale of the products of Magnum Piering, Inc.

section 2

HELICAL PILES

MAGNUM PIERING, INC.

MAGNUM PIERING ROCK SOLID

MAGNUM HELICAL PILES

Magnum® Helical Pile
Product Number Specification Legend

Magnum Piering, Inc.
ISO 9001:2008
Certified

	Magnum Round-Shaft **H**elical (**MH**) or Magnum Square-**S**haft Helical (**MS**)	(**L**)ead or (**E**)xtension	Shaft Diameter **(2)**=2.88″, **(3)**=3.0″, **(35)**=3.5″, **(4)**=4.5″, **(5)**=5.5″, **(6)**=5.72″, **(8)**=8.63″, or Shaft Dimension **(150)**=1.50″ SQR, **(175)**=1.75″ SQR	Design Wall Thickness (**0.13″, 0.2″, 0.25″, 0.30″, 0.31″, 0.32″, 0.36″, 0.37″, 0.46″, 0.50″**), Not Used for Square Shaft	Connection Type (**B**)olted, (**BR**) **B**olted **R**einforced, (**W**)elded, or (**WR**) **W**elded **R**einforced	Length (**3′, 5′, 6′, 10′, 15′, 20′, 30′**) - Custom Sizes Available	Helix Thickness (**J**) - .250″, (**K**) - .375″, (**M**) - .625″, (**O**) - .875″	Helix Diameter (**8″, 10″, 12″, 14″, 16″, 20″, 24″**) & Cutting Edge (**S**ingle or **D**ual)	Helix Diameter (**8″, 10″, 12″, 14″, 16″, 20″, 24″**) & Cutting Edge (**S**ingle or **D**ual)	Helix Diameter (**8″, 10″, 12″, 14″, 16″, 20″, 24″**) & Cutting Edge (**S**ingle or **D**ual)	(**G**) **G**alvanized, (**NG**) **N**on-**G**alvanized, or (**EP**) Epoxy Powder Coated
Part No.	**MH**	**L**	**4**	**25**	**B**	**10**	**M**	**12S**	**14S**	**16S**	**G**

Explanation:

The Magnum Helical Pile product number above **MHL425B10M12S14S16SG** is for a Lead with 4.5″ diameter shaft, a .25″ wall thickness, a Bolted connection, 10 ft. long with (3) .625″ Single Edge Helices 12,14,16 inches in diameter, and the surface preparation is Galvanized.

Note: See “Magnum Piering Helical Pile Specifications” table on next page for detailed information. Specification information is also available at ***www.magnumpiering.com***

Magnum® Piering
Helical Pile Specifications

Magnum® Helical Pile Products	System Ratings & Specifications														
	Shaft Specifications					Structural Capacity (Tension & Comp)		Maximum Torque (ft-lbs)	Capacity to Torque Ratio (ft^{-1})	Geotechnical Capacity (Tension & Comp)		Helix Specifications		Surface Coating	Standard Section Lengths *(custom sizes available)* (ft)
	Design Wall Gauge (in)	Outside Diameter (in)	Approx Weight (plf)	Min. Yield Strength (ksi)	Min. Tensile Strength (ksi)	Ultimate (tons)	Allowable (tons)			Ultimate (tons)	Allowable (tons)	Diameters *(available in standard & dual cutting edge)* (in)	Design Gauge (in)		
MS150B	1.5" SQR		7.7	90	110	35	17.5	7,000	10.0	35	17.5	8, 10, 12, 14	0.375	G, NG, EP	3, 5, 7
MS175B	*1.5" SQR*		*10.4*	*90*	*110*	*55*	*27.5*	*11,000*	*10.0*	*55*	*27.5*	*8, 10, 12, 14*	*0.5*	*G, NG, EP*	*3, 5, 7*
MH220B	*0.20*	*2.88*	*5.7*	*46*	*62*	*30*	*15*	*5,000*	*9.0*	*23*	*11*	*8, 10, 12, 14*	*0.375*	*G, NG, EP*	*3, 6, 10*
MH313B	0.13	3.00	4.0	65	80	22	11	4,000	8.0	16	8	8, 10, 12, 14	0.375	G, NG, EP	3, 6, 10
MH313BR	0.13	3.00	4.0	65	80	22	11	6,000	8.0	24	12	8, 10, 12, 14	0.375	G, NG, EP	3, 6, 10
MH325B	0.25	3.00	7.4	65	80	55	28	8,000	8.0	32	16	8, 10, 12, 14	0.375	G, NG, EP	3, 6, 10
MH325BR	0.25	3.00	7.4	65	80	55	28	12,500	8.0	50	25	8, 10, 12, 14	0.375	G, NG, EP	3, 6, 10
MH3521B	*0.21*	*3.50*	*7.4*	*65*	*80*	*45*	*23*	*10,000*	*7.0*	*35*	*18*	*8, 10, 12, 14*	*0.375*	*G, NG, EP*	*3, 6, 10*
MH3521BR	*0.21*	*3.50*	*7.4*	*65*	*80*	*45*	*23*	*13,000*	*7.0*	*46*	*23*	*8, 10, 12, 14*	*0.375*	*G, NG, EP*	*3, 6, 10*
MH425B	0.25	4.50	11.4	65	80	96	48	22,000	5.7	63	31	10, 12 14, 16	0.625	G, NG, EP	6, 10, 15
MH425BR	*0.25*	*4.50*	*11.4*	*65*	*80*	*96*	*48*	*27,000*	*5.7*	*77*	*38*	*10, 12, 14, 16*	*0.625*	*G, NG, EP*	*6, 10, 15*
MH431B	0.31	4.50	13.9	65	80	122	61	28,000	5.7	80	40	10, 12 14, 16	0.625	G, NG, EP	6, 10, 15
MH431BR	*0.31*	*4.50*	*13.9*	*65*	*80*	*122*	*61*	*32,000*	*5.7*	*91*	*46*	*10, 12, 14, 16*	*0.625*	*G, NG, EP*	*6, 10, 15*

Magnum® Piering Helical Pile Specifications Continued on Next Page....

Magnum® Piering
Helical Pile Specifications Cont.

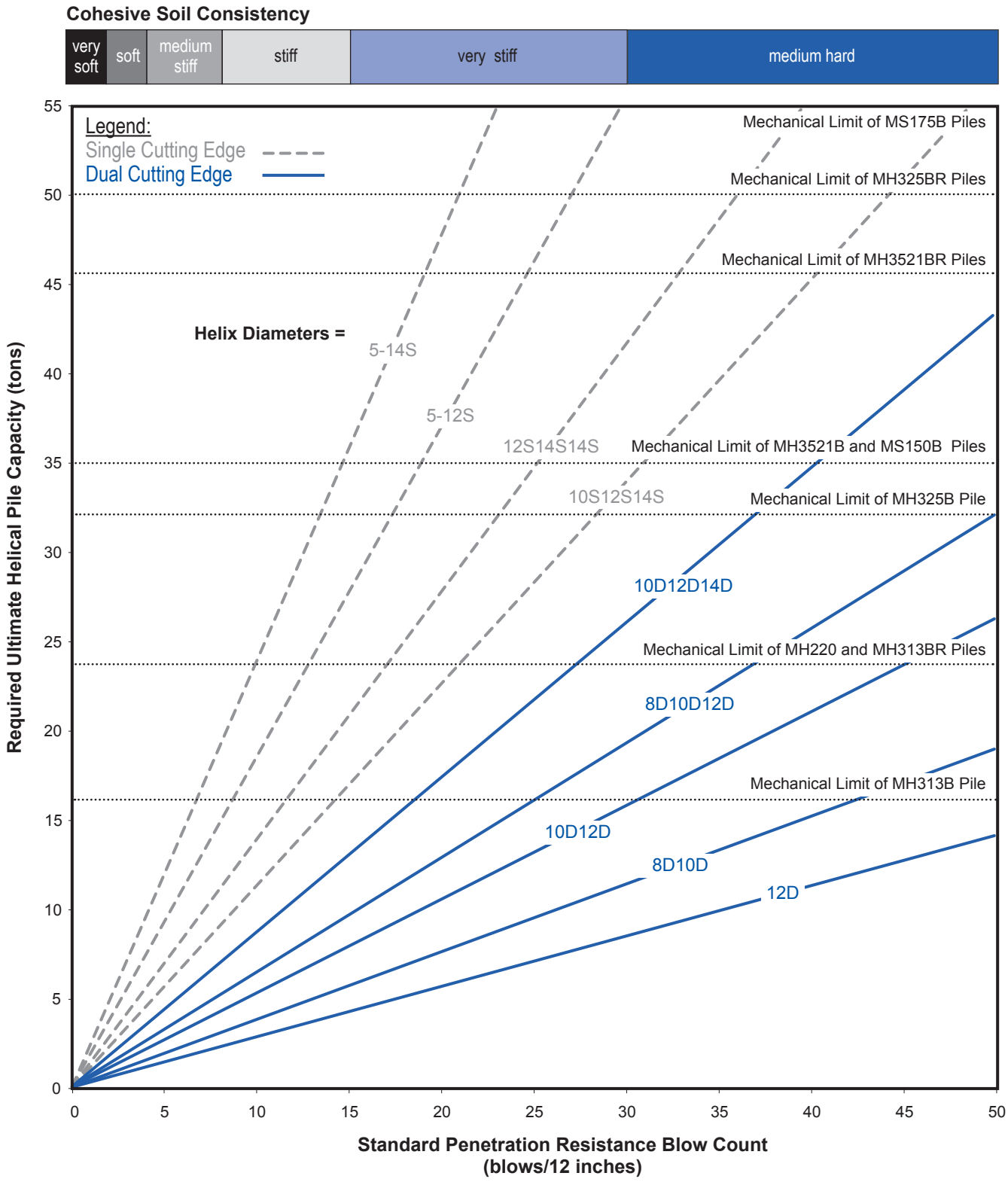
Magnum® Helical Pile Products	System Ratings & Specifications														
	Shaft Specifications					Structural Capacity (Tension & Comp)		Maximum Torque (ft-lbs)	Capacity to Torque Ratio (ft^{-1})	Geotechnical Capacity (Tension & Comp)		Helix Specifications		Surface Coating	Standard Section Lengths *(custom sizes available)* (ft)
	Design Wall Gauge (in)	Outside Diameter (in)	Approx Weight (plf)	Min. Yield Strength (ksi)	Min. Tensile Strength (ksi)	Ultimate (tons)	Allowable (tons)			Ultimate (tons)	Allowable (tons)	Diameters *(available in standard & dual cutting edge)* (in)	Design Gauge (in)		
MH530B	0.30	5.50	16.7	125	135	273	137	53,000	4.7	125	62	12, 16, 20, 24	0.875	G, NG, EP	10, 15, 30
MH536B	0.36	5.50	19.8	100	150	270	135	83,000	4.7	195	98	12, 16, 20, 24	0.875	G, NG, EP	10, 15, 30
MH625B	0.25	5.72	14.6	65	80	128	64	40,000	4.6	92	46	12, 16, 20, 24	0.875	G, NG, EP	10, 15, 30
MH625BR	*0.25*	*5.72*	*14.6*	*65*	*80*	*128*	*64*	*45,000*	*4.6*	*104*	*52*	*12, 16, 20, 24*	*0.875*	*G, NG, EP*	*10, 15, 30*
MH637B	0.37	5.72	21.2	65	80	199	100	54,000	4.6	124	62	12, 16, 20, 24	0.875	G, NG, EP	10, 15, 30
MH637BR	*0.46*	*5.72*	*21.2*	*65*	*80*	*199*	*100*	*65,000*	*4.6*	*150*	*75*	*12, 16, 20, 24*	*0.875*	*G, NG, EP*	*10, 15, 30*
MH646B	*0.46*	*5.72*	*25.9*	*65*	*80*	*250*	*125*	*66,000*	*4.6*	*152*	*76*	*12, 16, 20, 24*	*0.875*	*G, NG, EP*	*10, 15, 30*
MH646BR	*0.46*	*5.72*	*25.9*	*65*	*80*	*250*	*125*	*80,000*	*4.6*	*184*	*92*	*12, 16, 20, 24*	*0.875*	*G, NG, EP*	*10, 15, 30*
MH832B	*0.32*	*8.63*	*28.5*	*42*	*58*	*175*	*88*	*85,000*	*3.1*	*132*	*66*	*16, 20, 24*	*0.875*	*G, NG, EP*	*10, 15, 30*
MH850B	*0.5*	*8.63*	*43.5*	*65*	*80*	*438*	*219*	*170,000*	*3.1*	*264*	*132*	*16, 20, 24*	*0.875*	*G, NG, EP*	*10, 15, 30*
Magnum Patented Dual-Cutting Edge Helix Available on All Products	Improved Penetration into Dense Soils, Cuts Through Many Fills/Trash, Eliminates Wobble, Maintains Plumbness, Less Soil Disturbance														

MHxxxX	Gray shadding and italic font indicates limited-production helical pile size. Check with Magnum Piering, Inc. regarding availability.
R = Reinforced	Reinforced shaft couplings practically eliminate bolt hole elongation and provide increased torsional capacity and, therefore, increased pile capacity.
Surface Coatings	G = Hot-Dip Zinc Galvanized per ASTM A123/A153, NG = Bare Steel, EP = Epoxy Powder Coated per ICC-ES AC228, P = Magnum Blue Paint

Notes As Magnum is committed to testing and improving products, these specifications are subject to change. Additional product specifications are available at **www.magnumpiering.com** and in the **Magnum Helical Pile Engineering Reference Manual**. Structural capacity is the buckling strength of the shaft and couplings in firm soils. Structural capacity takes into account corrosion over 75 yr design life for bare steel in non-severe corrosive soils based on ICC-ES AC358. Consult a Magnum corrosion engineer for severe corrosive soils. Geotechnical capacity is the theoretical bearing and pullout capacity in uniform ground when installed at maximum torque. Pullout capacity requires installation to minimum depth of 5 to 12 helix diameters below ground surface depending on soil.

Magnum® Helical Pile Sizing Guide

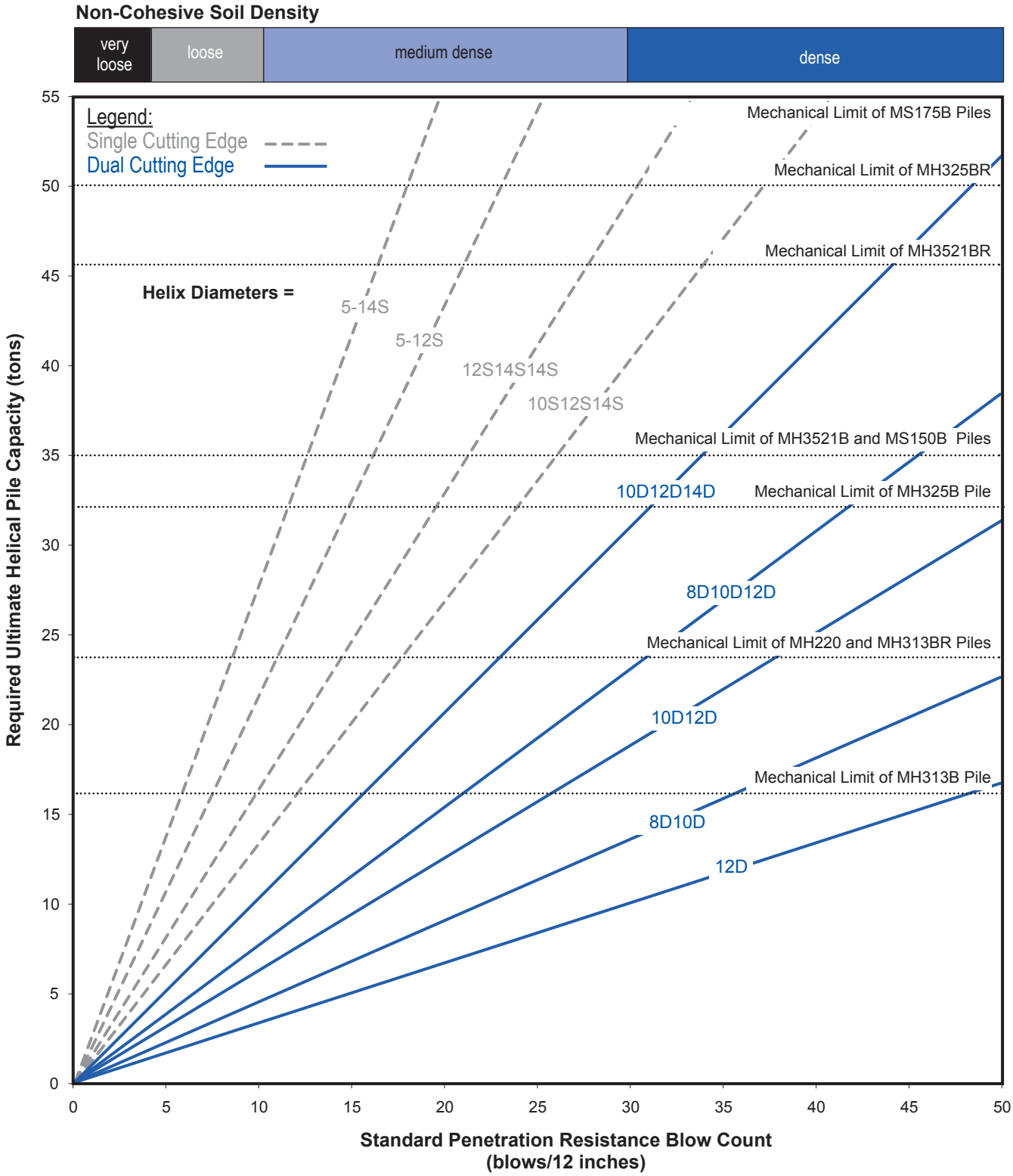
MS150, MS175, MH220, MH313, MH325, & MH3521 Series Helical Piles in Cohesive Soils



Limitations: Helical pile sizing charts represent an estimate of the theoretical ultimate capacity of helical piles in ground. Installation torque and load tests, where applicable, should be used to verify capacity. Helical pile performance is a function of installation, which Magnum cannot control, and ground conditions, which can vary with location and depth; as such, no warrantee is made, express or implied, regarding foundation product capacity in ground. Magnum recommends bidders include provisions for additional pile length and/or obstructions in their bid documents.

Magnum® Helical Pile Sizing Guide

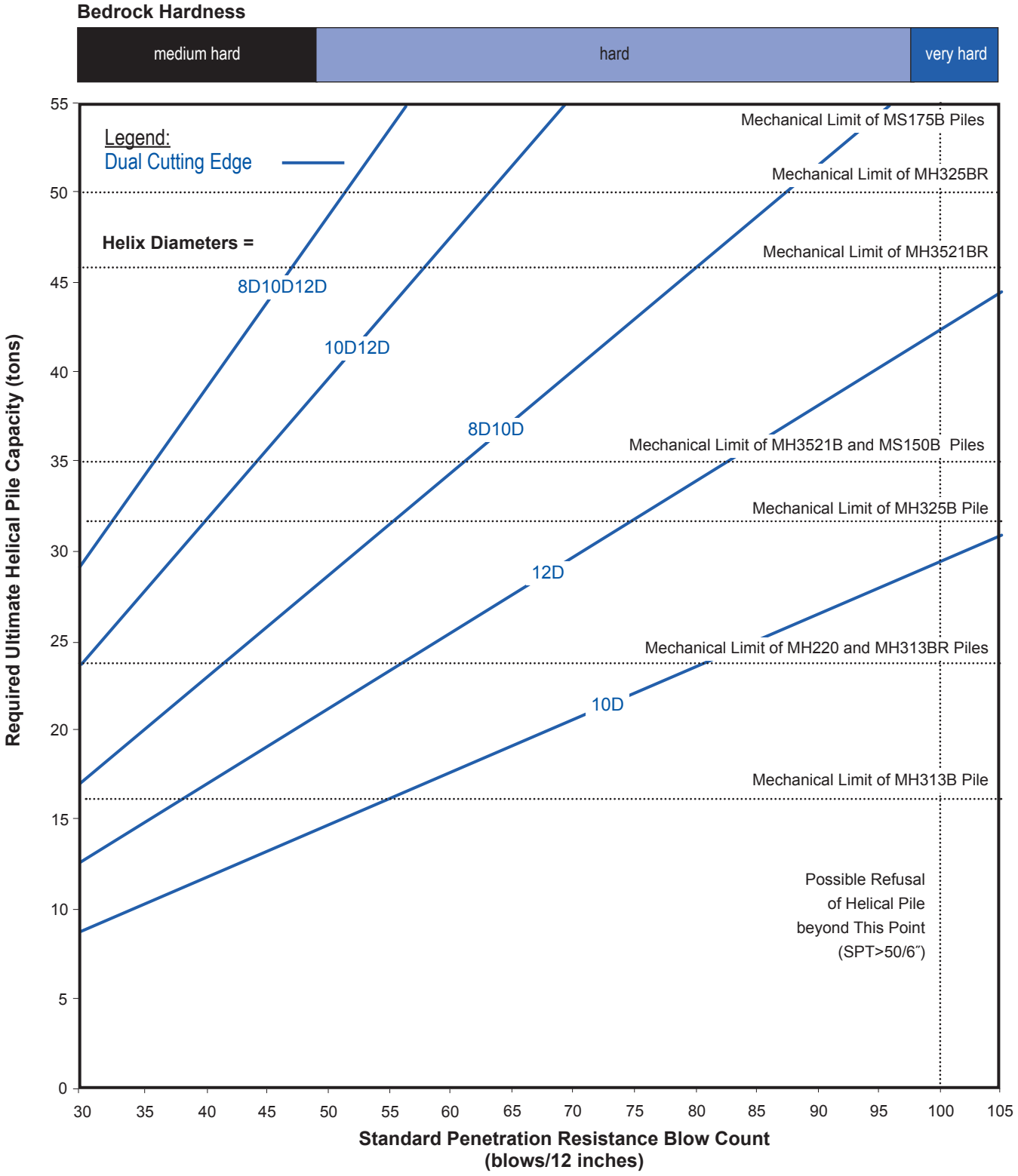
MS150, MS175, MH220, MH313, MH325, & MH3521 Series Helical Piles in Non-Cohesive Soils



Limitations: Helical pile sizing charts represent an estimate of the theoretical ultimate capacity of helical piles in ground. Installation torque and load tests, where applicable, should be used to verify capacity. Helical pile performance is a function of installation, which Magnum cannot control, and ground conditions, which can vary with location and depth; as such, no warrantee is made, express or implied, regarding foundation product capacity in ground. Magnum recommends bidders include provisions for additional pile length and/or obstructions in their bid documents.

Magnum® Helical Pile Sizing Guide

MS150, MS175, MH220, MH313, MH325, & MH3521 Series Helical Piles in Sedimentary Rock



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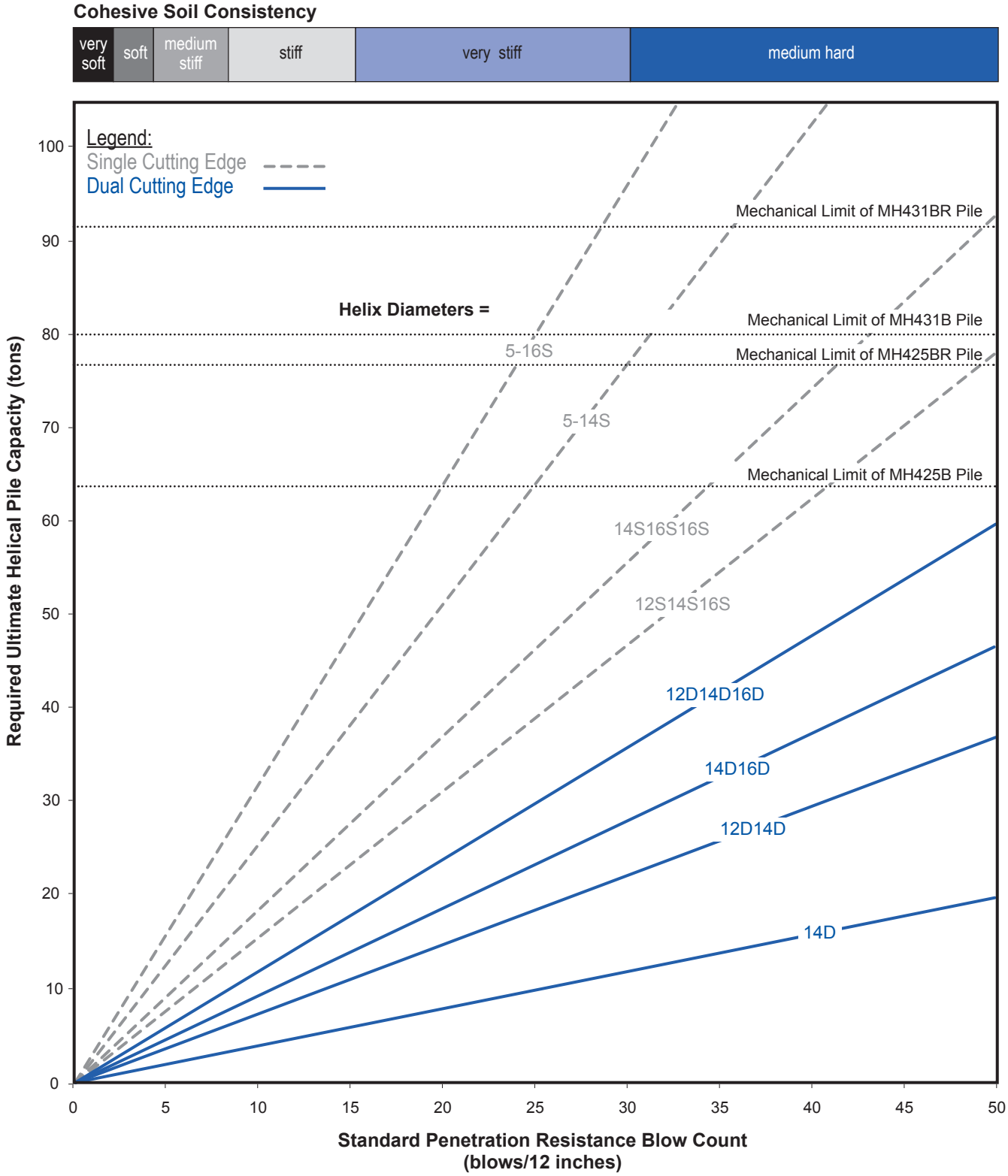
Magnum® Helical Pile Sizing Guide

MH425 & MH431 Series Helical Piles in Cohesive Soils



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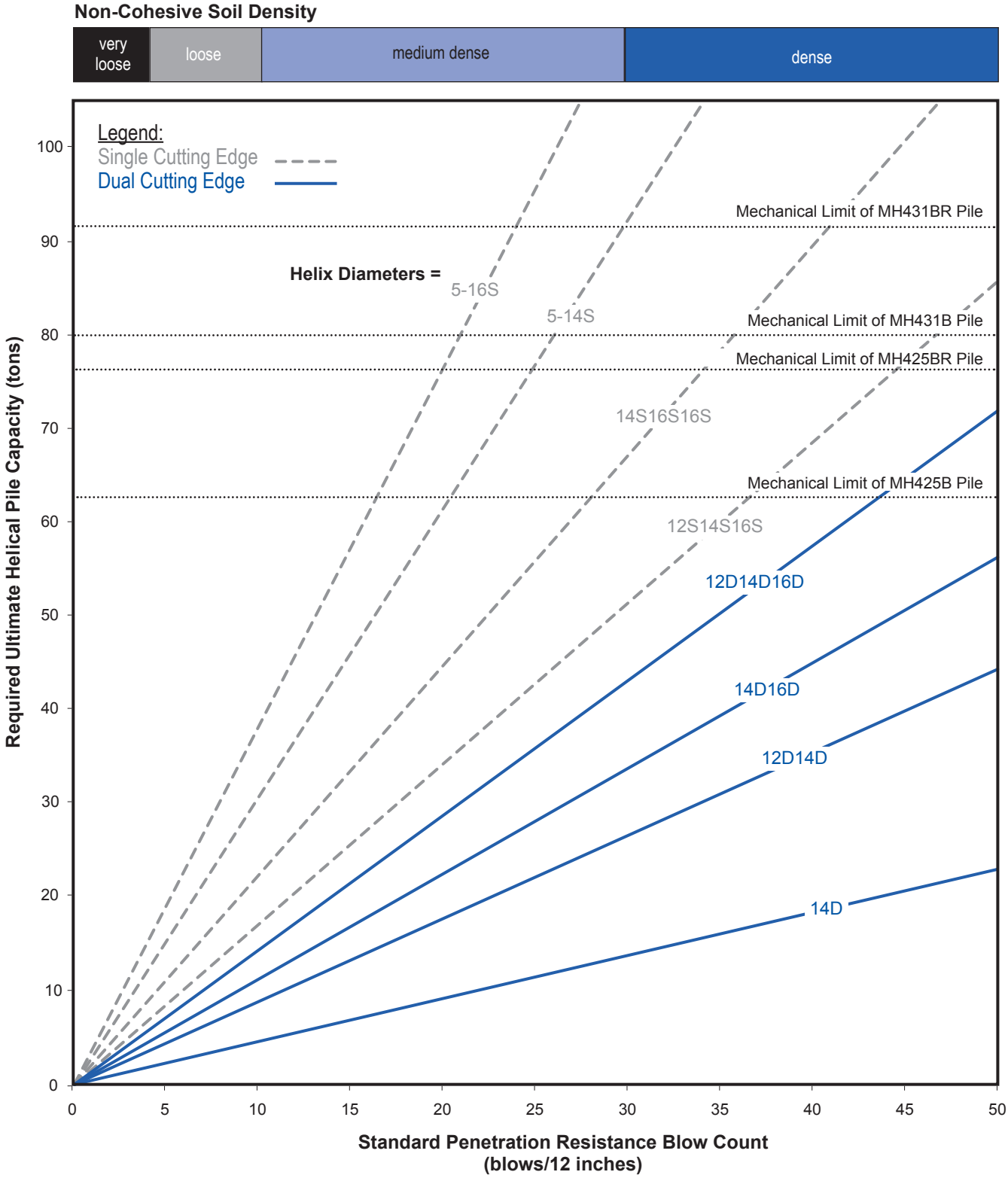
Magnum® Helical Pile Sizing Guide

MH425 & MH431 Series Helical Piles in Non-Cohesive Soils



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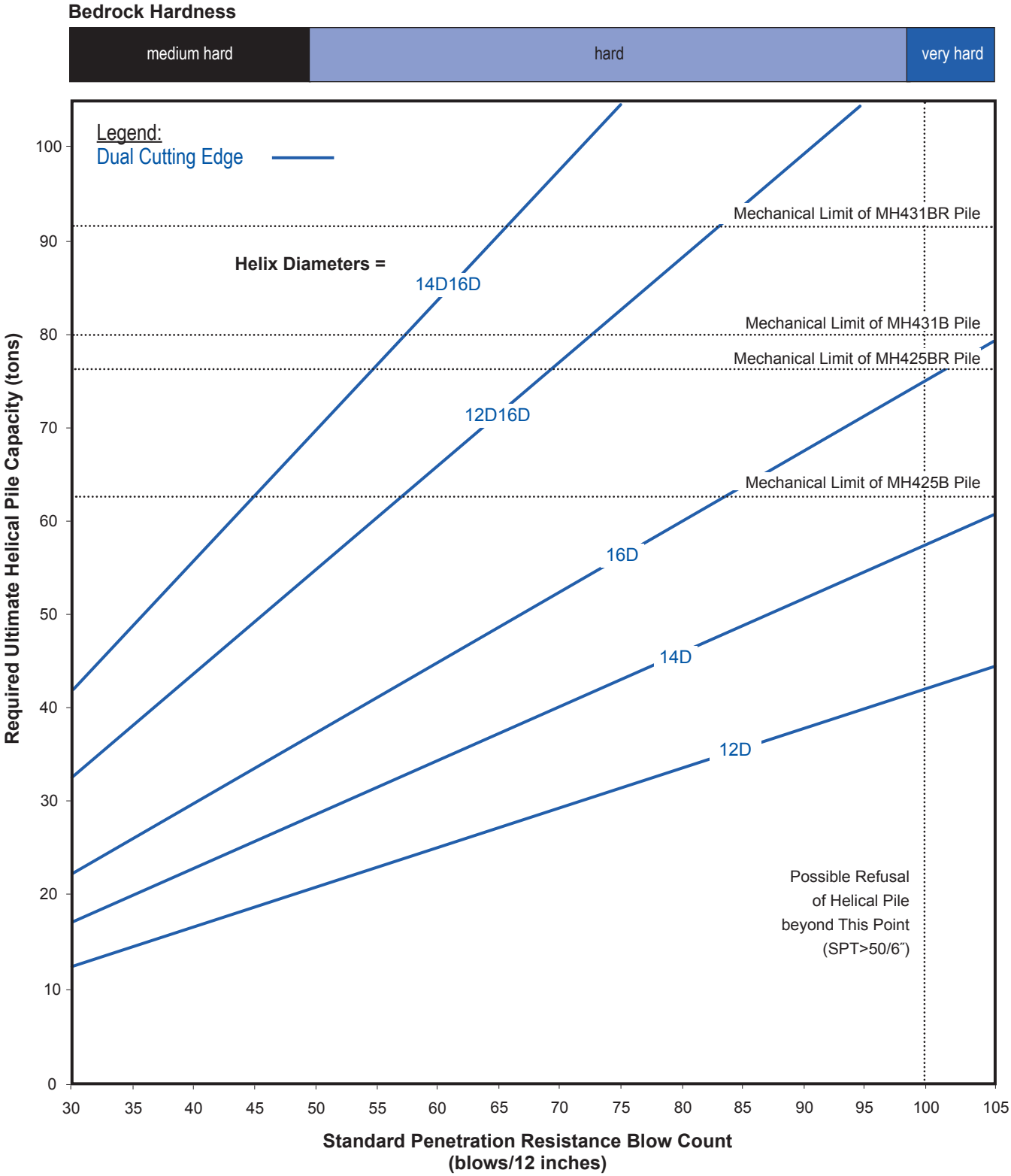
Magnum® Helical Pile Sizing Guide

MH425 & MH431 Series Helical Piles in Sedimentary Rock



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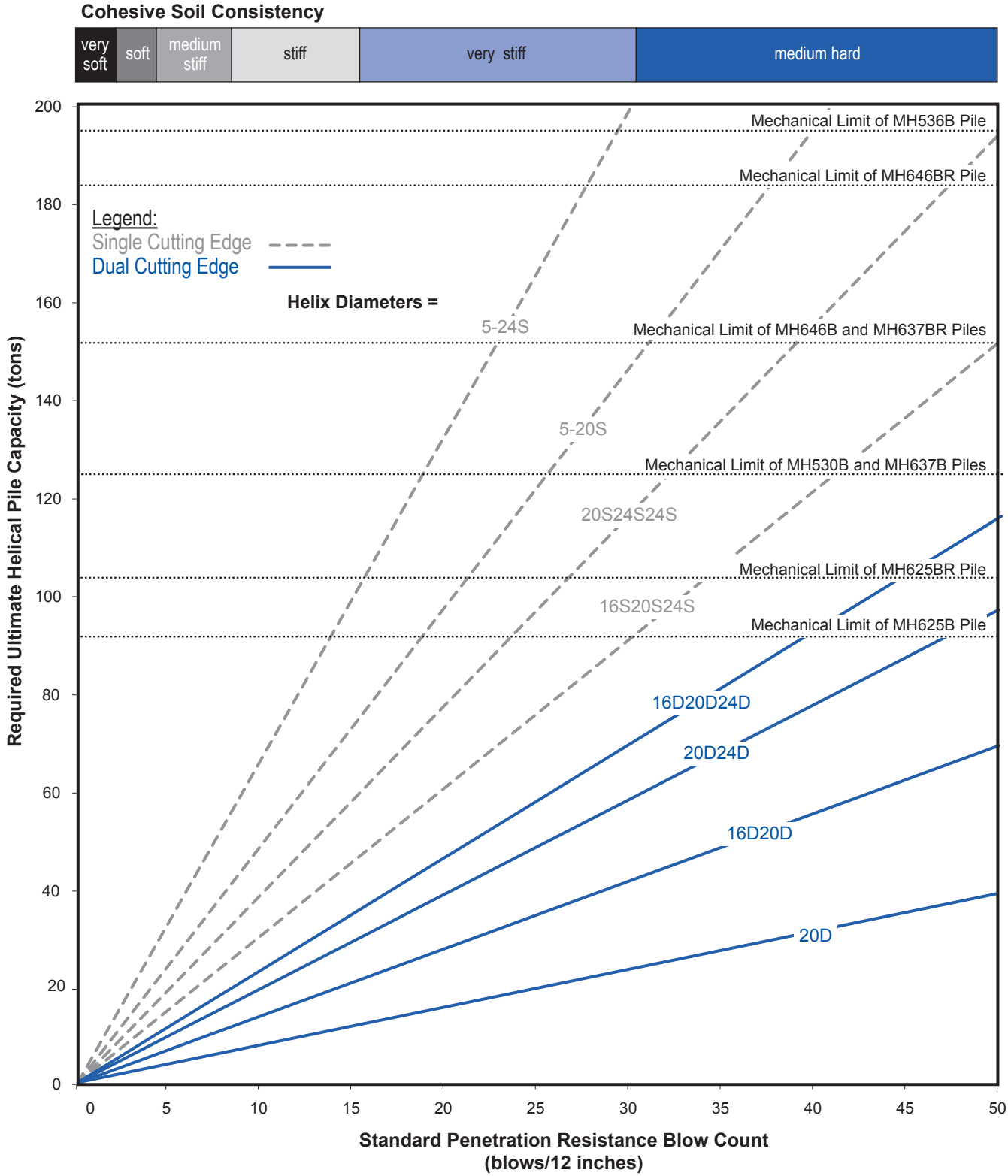
Magnum® Helical Pile Sizing Guide

MH530, MH536, MH625, MH637 & MH646 Helical Piles in Cohesive Soils



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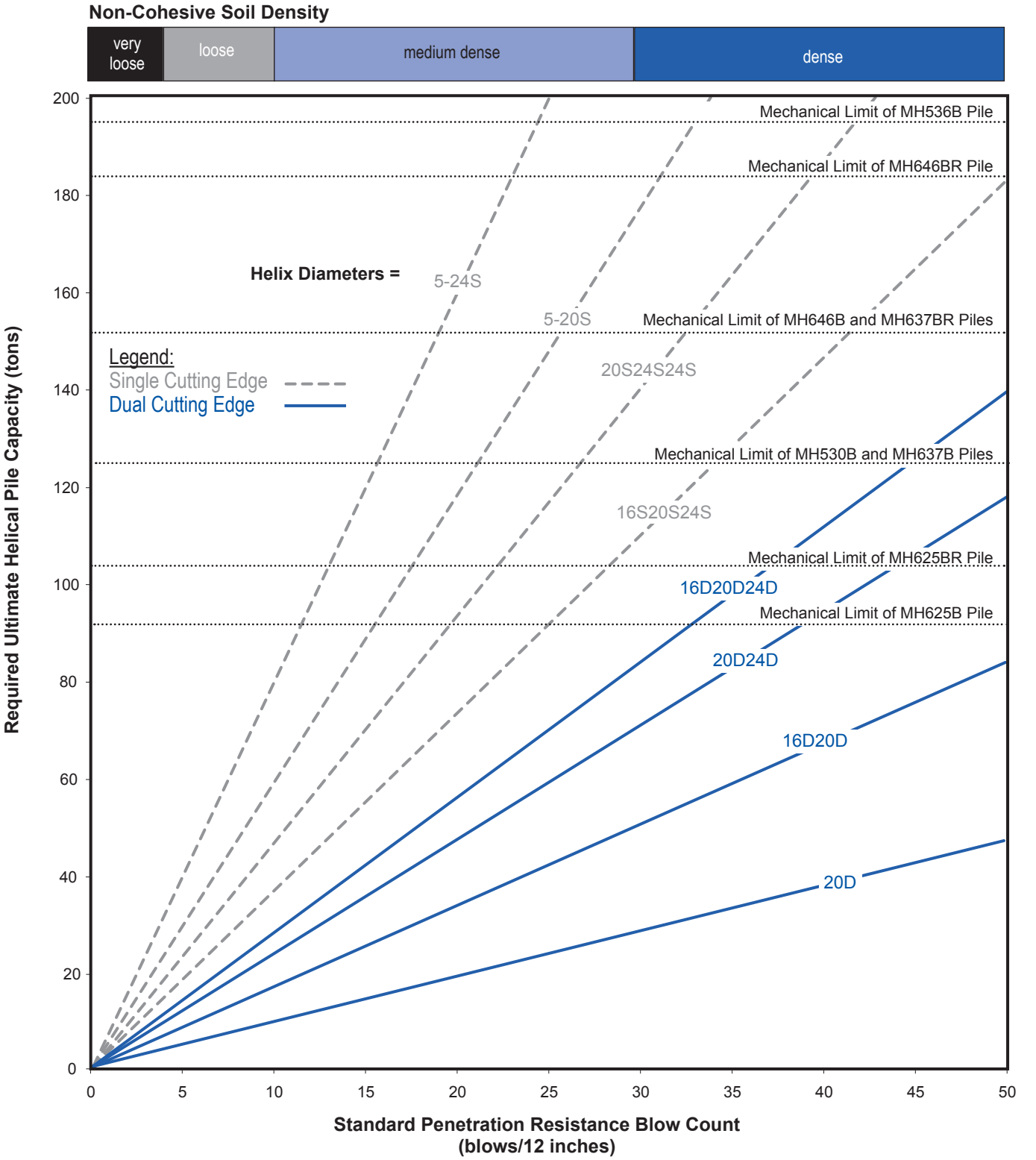
Magnum® Helical Pile Sizing Guide

MH530, MH536, MH625, MH637 & MH646 Helical Piles in Non-Cohesive Soils



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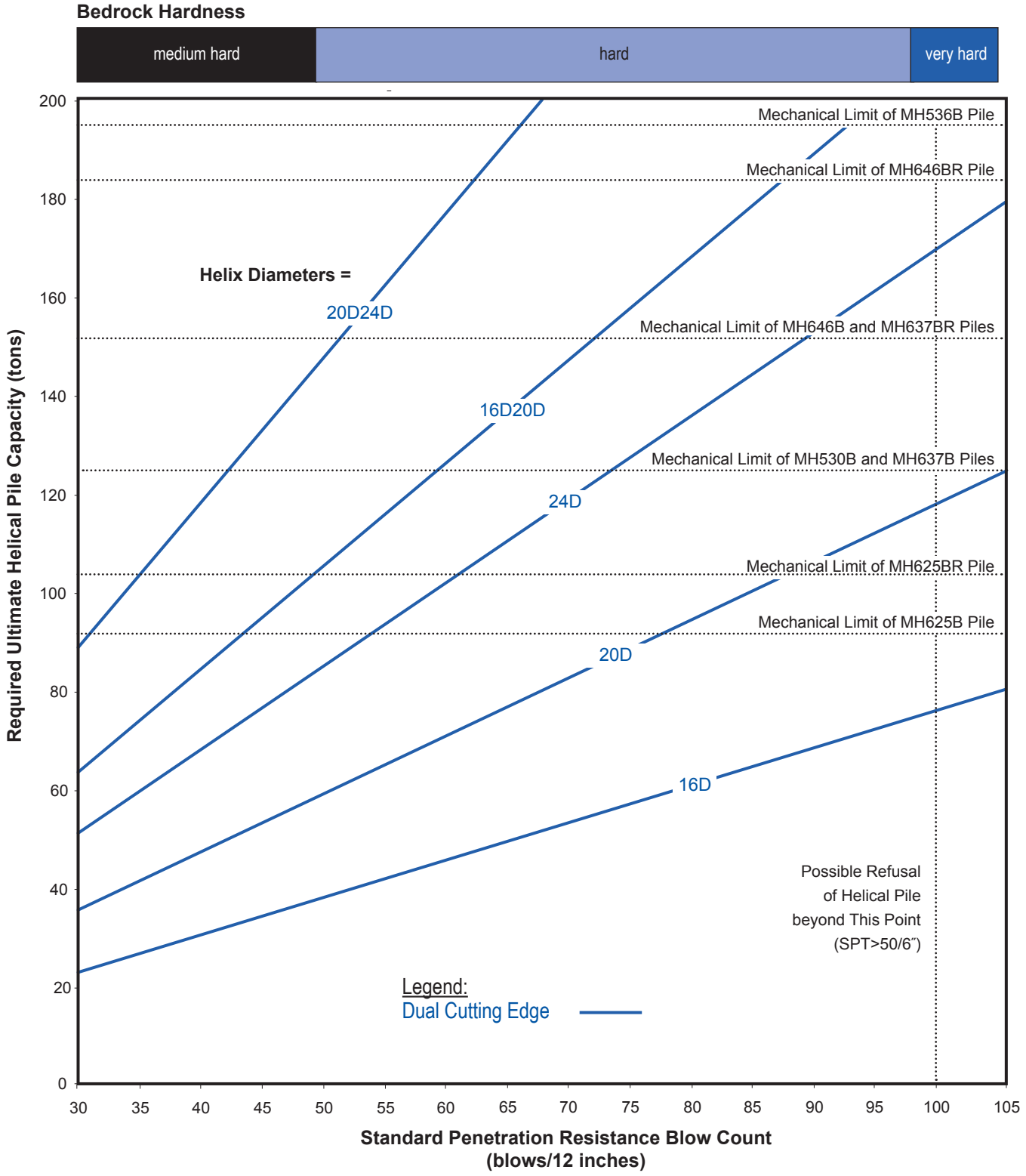
Magnum® Helical Pile Sizing Guide

MH530, MH536, MH625, MH637 & MH646 Helical Piles in Sedimentary Rock



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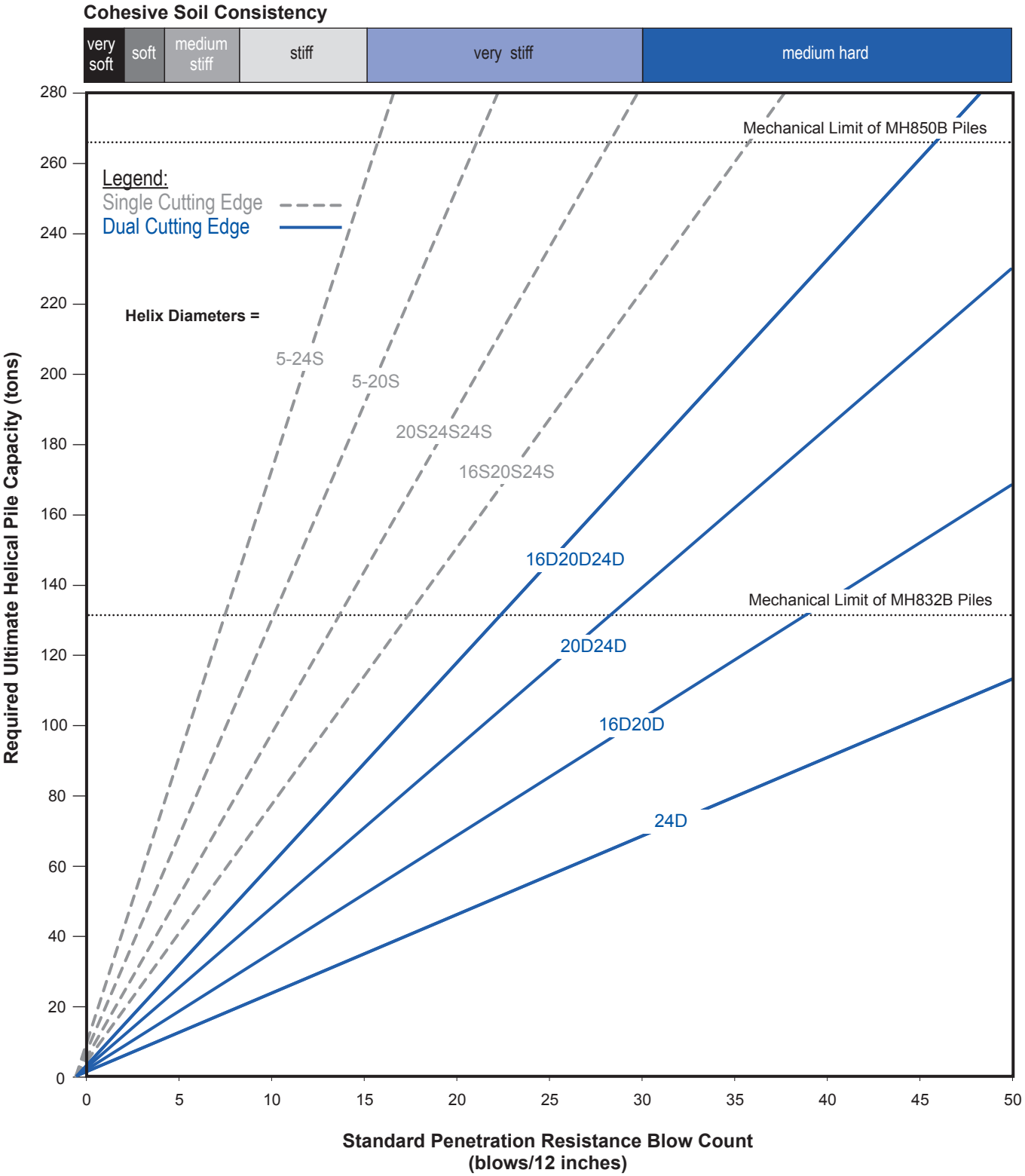
Magnum® Helical Pile Sizing Guide

MH832 & MH850 Helical Piles in Cohesive Soils



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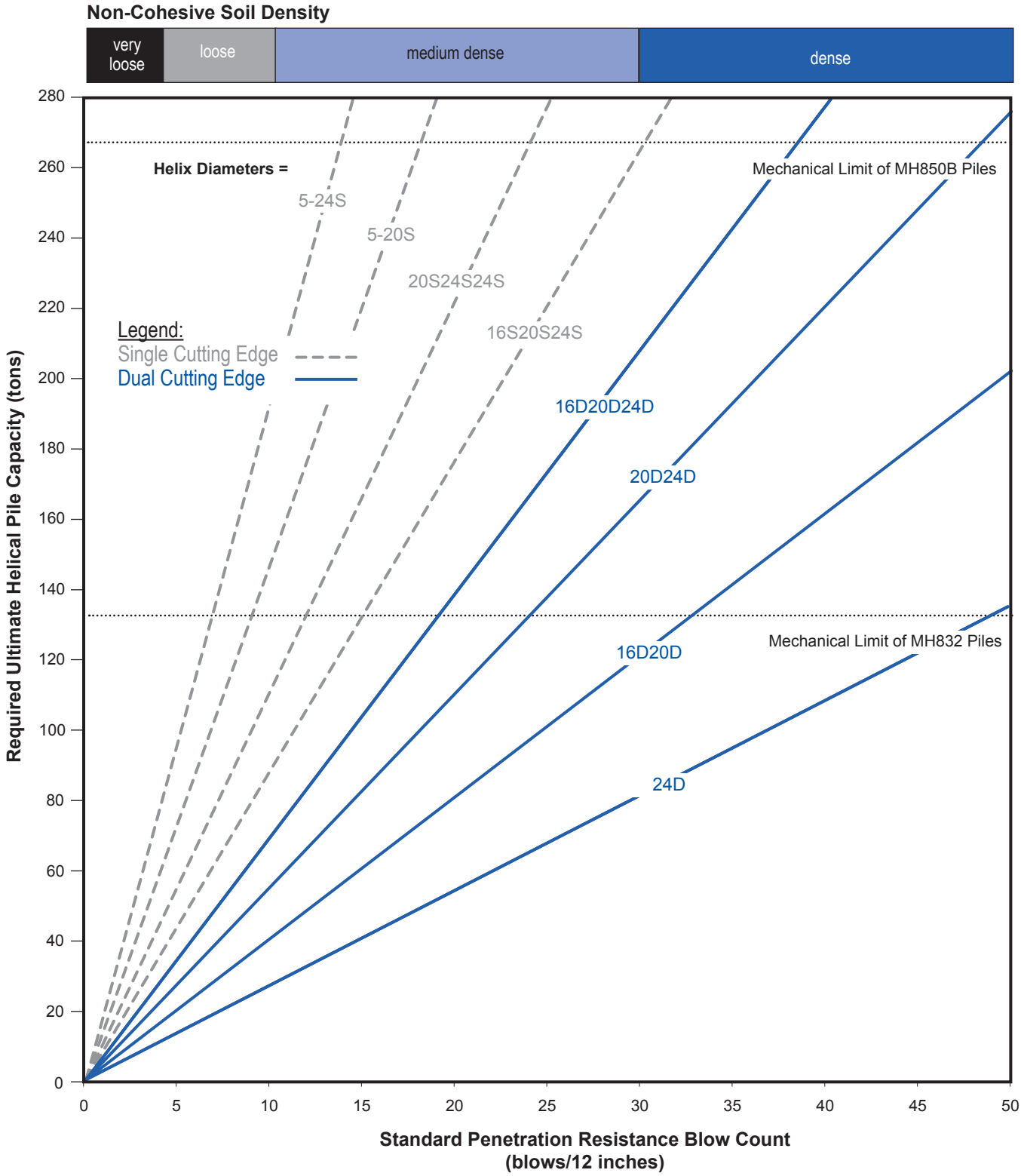
Magnum® Helical Pile Sizing Guide

MH832, MH850 Helical Piles in Non-Cohesive Soils



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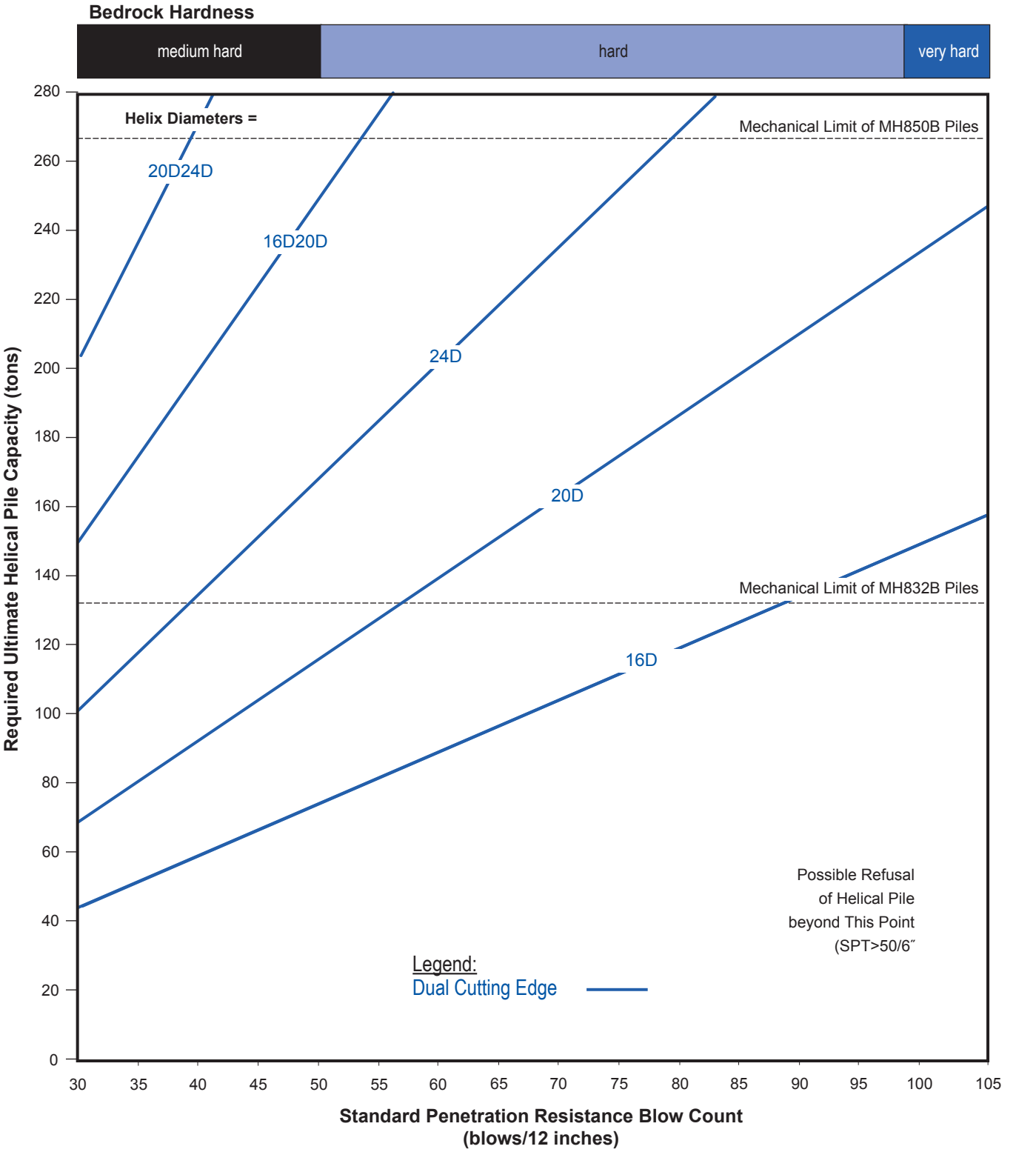
Magnum® Helical Pile Sizing Guide

MH832 & MH850 Helical Piles in Sedementary Rock



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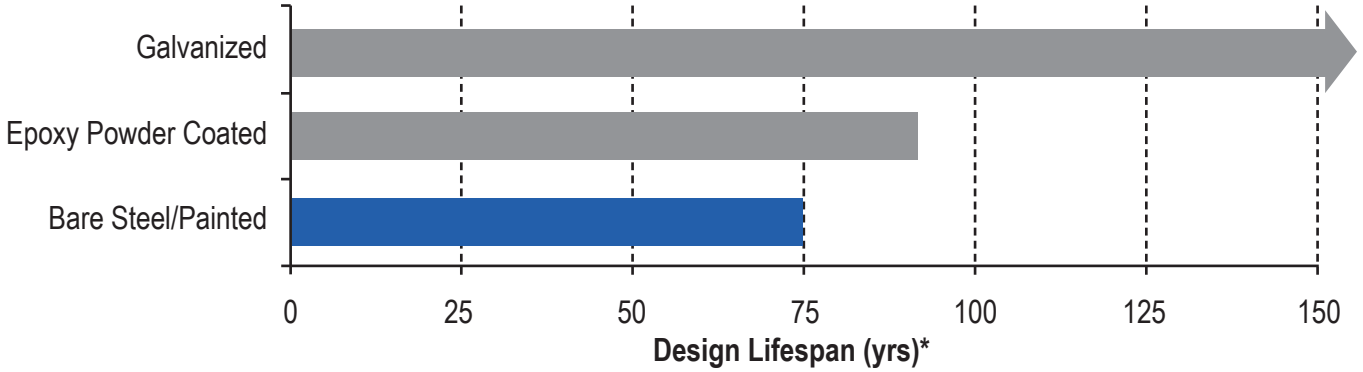
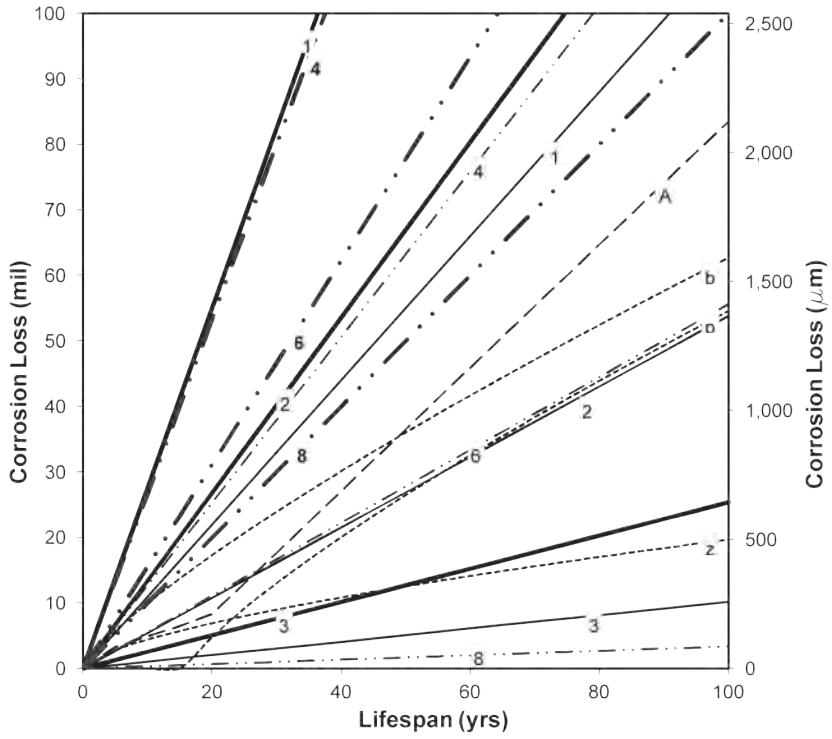
Magnum® Foundation Products

Corrosion and Life Expectancy



Structural capacities and section properties shown in this catalog are based on a design lifespan of 75 years in most soil conditions for bare steel or painted surfaces unless noted otherwise. Design lifespan can be extended 16 years by epoxy powder coating or more than doubled by hot-dip zinc galvanizing to ASTM A123/A153.

*Design lifespan is determined by backcalculating the time required for a corrosion loss thickness of 50 mils using the rates of corrosion per ICC-ES Document AC358 *Guidelines for Design of Helical Foundation Systems and Devices* for moderate to highly corrosive soil conditions. Design lifespan is considerably shorter in conditions indicative of severe pile corrosion. Severe pile corrosion conditions are defined by soil resistivity less than 1,000 ohm-cm, soil pH less than 5.5, soils with high organic content, soil sulfate concentrations greater than 1,000 ppm, soils located in landfills, or soil containing mine waste. Design life also may be shortened for piles, anchors, caps and brackets exposed to atmosphere or in direct electrical contact with reinforcing steel or structural steel.



Perko (2004a), Bare Steel
Perko (2004a), Galvanized Steel
ICC-ES (2007)
AASHTO (2004)
King (1977), 4,000 ohm-cm

1 Severe
1 Severe
z Zinc
A Zinc+Bare
4 pH4
4 pH4

2 Mod-High
2 Mod-High
b Bare
6 pH6
6 pH6

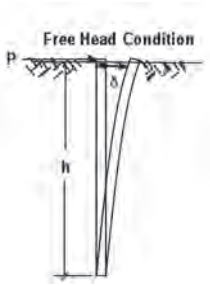
3 Low
3 Low
p Powder
8 pH8
8 pH8

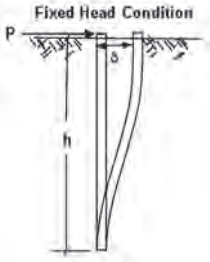
Alternative methods of corrosion loss calculation are available for varying soil conditions and with different building code authorities as shown in the table below from Perko (2009) *Helical Piles: A Practical Guide to Design and Installation*. Florida DOT and Canadian Building Codes provide other useful references.

MAGNUM technical support personnel can provide assistance with regard to alternative corrosion loss calculation methods. MAGNUM corrosion engineers should be consulted for severe corrosion conditions, for products exposed to atmosphere, and when product applications require direct contact with reinforcing bars or structural steel.

Magnum® Helical Pile

Allowable Lateral Shaft Capacity (lbs)*

Head Fixity	Helical Pile	Shaft Diam., d (in)	Non-Cohesive Soils				Cohesive Soils			
			V. Loose	Loose	Medium	Dense	V. Soft	Soft	Medium	Stiff
	MH220B	2.88	400	800	1,150	1,600	400	800	1,500	2,600
	MH313B and MH313BR	3.00	400	700	1,000	1,400	400	800	1,400	2,400
	MH325B and MH325BR	3.00	500	1,000	1,300	1,800	400	900	1,700	2,900
	MH3521B	3.50	650	1,150	1,600	2,200	500	1,100	2,000	3,400
	MH425B and MH425BR	4.50	1,000	1,850	2,500	3,500	800	1,600	2,900	5,000
	MH431B and MH431BR	4.50	1,100	2,000	2,800	3,800	800	1,700	3,000	5,200
	MH530B	5.50	1,500	2,700	3,700	5,000	1,000	2,100	3,900	6,800
	MH536B	5.50	1,600	2,900	4,000	5,450	1,100	2,200	4,100	7,100
	MH625B and MH625BR	5.72	1,500	2,600	3,700	5,000	1,000	2,100	3,700	5,000
	MH637B and MH637BR	5.72	1,700	3,100	4,300	5,800	1,100	2,400	4,200	7,100
	MH646B	5.72	1,800	3,400	4,600	6,300	1,200	2,500	4,500	7,700
Minimum Pile Depth, h =			28d	28d	28d	34d	34d	34d	34d	34d

Head Fixity	Helical Pile	Shaft Diam., d (in)	Non-Cohesive Soils				Cohesive Soils			
			V. Loose	Loose	Medium	Dense	V. Soft	Soft	Medium	Stiff
	MH220B	2.88	1,300	1,800	2,000	2,400	800	1,800	2,300	3,100
	MH313B and MH313BR	3.00	1,100	1,800	2,100	2,400	800	1,600	2,400	3,200
	MH325B and MH325BR	3.00	1,500	2,500	3,400	4,000	900	2,000	3,500	4,900
	MH3521B	3.50	1,700	3,000	4,100	4,800	1,100	2,300	4,000	5,800
	MH425B and MH425BR	4.50	2,700	4,800	6,600	7,500	1,600	3,300	5,800	8,500
	MH431B and MH431BR	4.50	2,900	5,200	7,100	8,500	1,700	3,500	6,200	9,900
	MH530B	5.50	3,800	7,000	9,600	13,000	2,100	4,400	8,000	13,500
	MH536B	5.50	4,100	7,500	10,400	14,000	2,200	4,700	8,400	14,000
	MH625B and MH625BR	5.72	3,800	7,000	9,500	11,000	2,200	4,400	7,400	12,400
	MH637B and MH637BR	5.72	4,400	8,000	11,000	14,300	2,400	4,900	8,800	14,800
	MH646B	5.72	4,700	8,900	12,000	16,200	2,400	5,200	9,400	16,000
Minimum Pile Depth, h =			40d	40d	40d	40d	40d	40d	40d	40d

Index Soil Properties:

	Non-Cohesive Soils				Cohesive Soils			
	V. Loose	Loose	Medium	Dense	V. Soft	Soft	Medium	Stiff
SPTB Low Count (bpf)	1-4	4-10	10-30	30-50	1-2	2-4	4-8	8-15
Strain ε_{50}	N/A	N/A	N/A	N/A	0.06	0.02	0.01	0.005
p-y Modulus (pci)	5	25	90	225	30	100	500	1000
Cohesion (psf)	0	0	0	0	200	400	800	1500
Friction Angle (deg)	25	29	33	39	0	0	0	0
Unit Wt. (pcf)	70	90	110	120	70	90	110	120

*Allowable lateral capacity for round-shaft helical piles. Square shaft helical piles (MS150B and MS175B) have negligeable lateral capacity

***Limitations:** IBC2006 states that the allowable lateral capacity of a pile shall be half the load causing 1-inch of deflection. Many professionals use the lateral capacity at a deflection of 0.5 inches as the allowable lateral capacity. The allowable lateral capacities shown in these tables are based on a predicted deflection of 0.5 inches at the ground surface. Refer to Magnum® Technical Reference Manual for theoretical load displacement curves and for allowable capacities at other deflection limits. These capacity tables are based on lateral load applied at ground surface and galvanized shafts with 50 years corrosion in non-severe corrosive conditions. Contact Magnum® technical support professionals for lateral capacity when loads are applied above ground, for other corrosion conditions, or for resistance to bending moments. Occasionally, annular space can develop around upper portions of the shaft when helical piles have multiple bolted couplings (all Magnum® helical piles larger than 3.5″ diameter) or when installation methods cause excessive wobbling. It is recommended that any annular space be grouted from the surface using fast-setting, non-shrink, neat cement grout when lateral capacity is required.

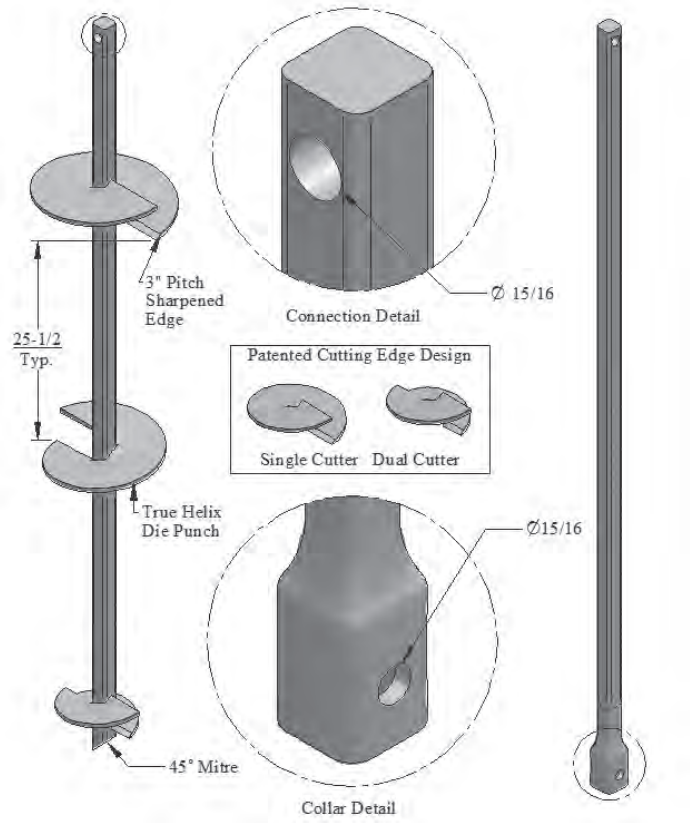
MAGNUM® MS150B Helical Piles

35 Ton Ultimate - 17.5 Ton Allowable Capacity

High Strength 1.5″ X 1.5″, Round-Corner Square Shaft with
Forged upset Coupler & (1) 7/8″ Bolt

Description

Magnum MS150B Helical Piles have 35 tons ultimate capacity and 17.5 tons working capacity in tension and compression (fully-braced conditions only). Square shaft helical piles are ideally suited for anchoring/tension applications. Lead sections and extensions couple together to extend helical bearing plates to the desired bearing stratum. Structural capacity calculations are based on average life expectancy of over 75 years for most soil conditions. Patented Magnum Dual-Cutting Edge helical bearing plates (DCE) enhance penetration through dense soils with occasional cobbles and debris. Custom lengths and helix configurations are available upon request. See Magnum Technical Reference Manual for additional information including design tools, prescriptive specifications and example plans.



Drawing above shows an example pile lead and extension section. Section lengths and number of helices vary with project requirements and soil conditions.

STEEL SPECIFICATIONS	
SHAFT	RCSS 1.5″ x 1.5″ ASTM A29 Grade 90 KSI, or Equivalent
I	New= 0.42 in^4, Corroded= 0.37 in^4
Ag	New= 2.25 in^2, Corroded= 2.10 in^2
S	New= 0.56 in^3, Corroded= 0.51 in^3
COUPLING	0.35″ Min. Wall Forged Upset Collar
BOLTS	(1) 7/8″ Diameter SAE J429 Grade 8 Zinc Coated to ASTM B695/F1941
BLADES	0.375″ Thick, Helix Die-Pressed ASTM A36 Grade 50 ksi or Better
COATING OPTIONS	Galvanized (G), Bare Steel (NG), Epoxy Powder Coated (EP)
PROPERTIES	
10 ft^{-1}	Ultimate Capacity-to-Torque Ratio
7,000 ft-lbs	Maximum Installation Torque
STRUCTURAL CAPACITY	
35 Tons	Ultimate Capacity
17.5 Tons	Allowable Capacity
GEOTECHNICAL CAPACITY BY TORQUE	
35 Tons	Ultimate Compression & Tension
17.5 Tons	Allowable Compression & Tension

*Structural capacity of square-shaft helical piles equals gross area times steel strength. For compression applications, pile shafts must be fully-braced to prevent buckling in order to achieve this capacity.

Note: Helical piles shall be installed to appropriate depth into suitable bearing stratum as determined by geotechnical engineer or local practice. Capacity by torque is based on advancing pile to maximum installation torque. Deflections of 0.5″ are common at allowable capacity. A higher factor of safety may be required for smaller deflections. For tension capacity, helical bearing plates must be deeply embedded. Load tests are recommended when practical.

1.5″ Square-Shaft Product Line Helical Bearing Plate Specifications & Available Configurations

0.375″ Thick; ASTM A36, Grade 50 ksi or Higher
3.00″ Blade Pitch
8″, 10″, 12″, & 14″ Diameter
Standard Circular Helix, or
Patented Dual Cutting Edge Helix
Sharpened Edges - All Helix
*3 ft. Lead or Extension - up to 2 helical bearing plates
*5 ft. Lead or Extension - up to 2 helical bearing plates
*7 ft. Lead or Extension - up to 3 helical bearing plates
**** Standard Stocking Length***

All Magnum Products Made in U.S.A.
U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

Magnum Piering, Inc.
6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

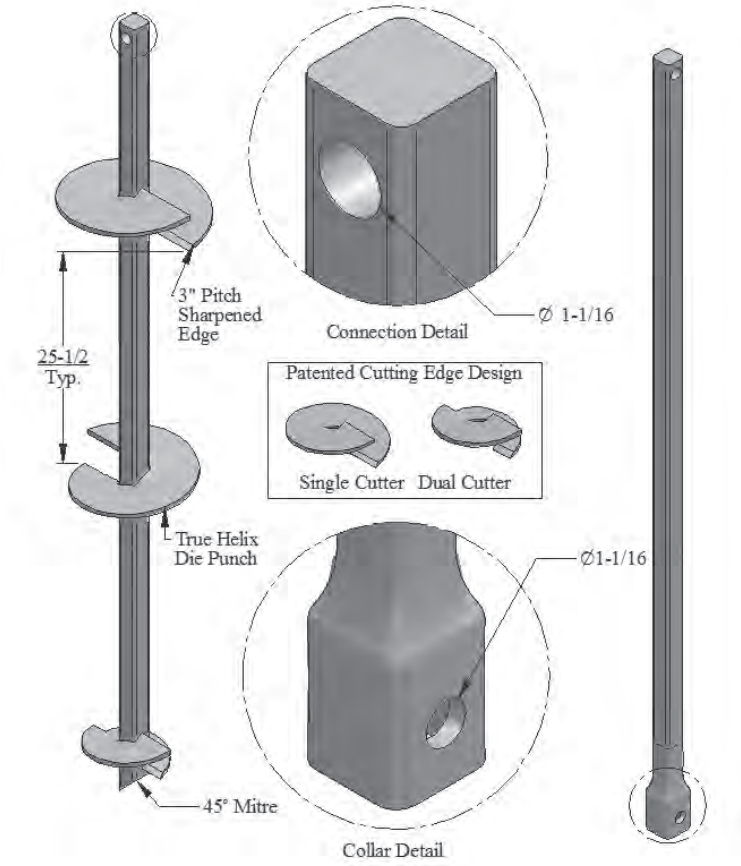
MAGNUM® MS175B Helical Piles

55 Ton Ultimate - 27.5 Ton Allowable Capacity

High Strength 1.75″ X 1.75″, Round-Corner Square Shaft with
Forged upset Coupler & (1) 1″ Bolt

Description

Magnum MS175B Helical Piles have 55 tons ultimate capacity and 27.5 tons working capacity in compression (fully braced conditions only) and in tension. Square shaft helical piles are ideally suited for anchoring/tension applications. Lead sections and extensions couple together to extend helical bearing plates to the desired bearing stratum. Structural capacity calculations are based on average life expectancy of over 75 years for most soil conditions. Patented Magnum Dual-Cutting Edge helical bearing plates (DCE) enhance penetration through dense soils with occasional cobbles and debris. Custom lengths and helix configurations are available upon request. See Magnum Technical Reference Manual for additional information including design tools, prescriptive specifications and example plans.



Drawing above shows an example pile lead and extension section. Section lengths and number of helices vary with project requirements and soil conditions.

STEEL SPECIFICATIONS	
SHAFT	RCSS 1.75″ x 1.75″ ASTM A29 Grade 90 KSI, or Equivalent
I	New= 0.78 in^4, Corroded= 0.70 in^4
Ag	New= 3.06 in^2, Corroded= 2.89 in^2
S	New= 0.89 in^3, Corroded= 0.82 in^3
COUPLING	0.25″ Min. Wall Forged Upset Collar
BOLTS	(1) 1″ Diameter SAE J429 Grade 8 Zinc Coated to ASTM B695/F1941
BLADES	0.5″ Thick, Helix Die-Pressed ASTM A36 Grade 50 ksi or Better
COATING OPTIONS	Galvanized (G), Bare Steel (NG), Epoxy Powder Coated (EP)
PROPERTIES	
10 ft^{-1}	Ultimate Capacity-to-Torque Ratio
11,000 ft-lbs	Maximum Installation Torque
STRUCTURAL CAPACITY	
55 Tons	Ultimate Capacity
27.5 Tons	Allowable Capacity
GEOTECHNICAL CAPACITY BY TORQUE	
55 Tons	Ultimate Compression & Tension
27.5 Tons	Allowable Compression & Tension

*Structural capacity of square-shaft helical piles equals gross area times steel strength. For compression applications, pile shafts must be fully-braced to prevent buckling in order to achieve this capacity.

Note: Helical piles shall be installed to appropriate depth into suitable bearing stratum as determined by geotechnical engineer or local practice. Capacity by torque is based on advancing pile to maximum installation torque. Deflections of 0.5″ are common at allowable capacity. A higher factor of safety may be required for smaller deflections. For tension capacity, helical bearing plates must be deeply embedded. Load tests are recommended when practical.

1.75″ Square-Shaft Product Line Helical Bearing Plate Specifications & Available Configurations

0.375″ Thick; ASTM A36, Grade 50 ksi or Higher
3.00″ Blade Pitch
8″, 10″, 12″, & 14″ Diameter
Standard Circular Helix, or
Patented Dual Cutting Edge Helix

Sharpened Edges - All Helix
*3 ft. Lead or Extension - up to 2 helical bearing plates
*5 ft. Lead or Extension - up to 2 helical bearing plates
*7 ft. Lead or Extension - up to 3 helical bearing plates
**** Standard Stocking Length***

All Magnum Products Made in U.S.A.
U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

Magnum Piering, Inc.
6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

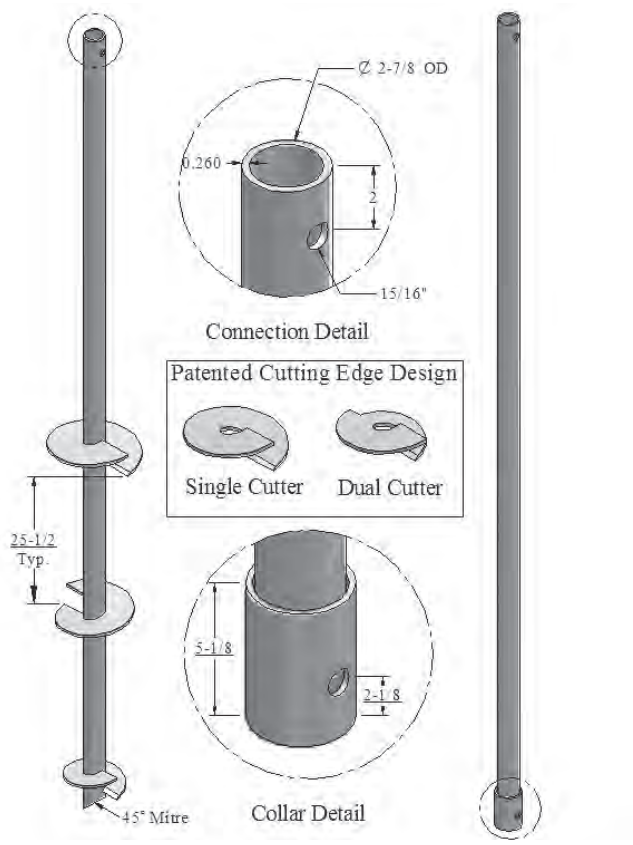
MAGNUM® MH220B Helical Piles

23 Ton Ultimate - 11 Ton Allowable Capacity

Standard 2.875″ Diameter, 0.20″ Wall, Round-Shaft with
Rigid Coupler & (1) 7/8″ Bolt

Description

Magnum MH220B Helical Piles have 23 tons ultimate capacity and 11 tons working capacity in compression and tension. Lead sections and extensions couple together to extend helical bearing plates to the desired bearing stratum. Round shafts offer increased lateral and buckling resistance compared to solid square shafts. Capacity calculations are based on average life expectancy of over 75 years for most soil conditions. Patented Magnum Dual-Cutting Edge helical bearing plates (DCE) enhance penetration through dense soils with occasional cobbles and debris. Custom lengths and helix configurations are available upon request. See Magnum Technical Reference Manual for additional information including design tools, prescriptive specifications and example plans.



Drawing above shows an example pile lead and extension section. Section lengths and number of helices vary with project requirements and soil conditions.

STEEL SPECIFICATIONS	
SHAFT	2.5" Nominal Sched. 40 Pipe ASTM A500 Grade C, or Equivalent
I	New= 1.51 in^4, Corroded= 1.13 in^4
Ag	New= 1.68 in^2, Corroded= 1.26 in^2
S	New= 1.05 in^3, Corroded= 0.80 in^3
COUPLING	Outer 1/4″ Sleeve
BOLTS	(1) 7/8″ Diam. SAE J429 Grade 5 Zinc Coated to ASTM B695/F1941
BLADES	3/8″ Thick, Helix Die-Pressed ASTM A36, or Better
COATING OPTIONS	Galvanized (G), Bare Steel (NG), Epoxy Powder Coated (EP)
PROPERTIES	
9 ft^{-1}	Ultimate Capacity-to-Torque Ratio
5,000 ft-lbs	Maximum Installation Torque
STRUCTURAL CAPACITY	
30 Tons	Ultimate Capacity
15 Tons	Allowable Capacity
CAPACITY BY TORQUE	
23 Tons	Ultimate Compression & Tension
11 Tons	Allowable Compression & Tension

Note: Helical piles shall be installed to appropriate depth into suitable bearing stratum as determined by geotechnical engineer or local practice. Capacity by torque is based on advancing pile to maximum installation torque. A minimum factor of safety of 2.0 is recommended for determining allowable capacity from correlations with final installation torque. Deflections of 0.5″ are typical at allowable capacity. A higher factor of safety may be required for smaller deflections. For tension capacity, helical bearing plates must be deeply embedded. Load tests are recommended when practical.

2 7/8″ Product Line Helical Bearing Plate Specifications & Available Configurations

0.375″ Thick; ASTM A36 or Higher
3.00″ Helix Pitch
8″, 10″, 12″, 14″ Diameter
Standard Circular Helix, or
Patented Dual Cutting Edge Helix
Sharpened Edges - All Helix
*3 ft. Lead or Extension - up to 2 helical bearing plates
*6 ft. Lead or Extension - up to 3 helical bearing plates
*10 ft. Lead or Extension - up to 6 helical bearing plates
*15 ft. Lead or Extension - up to 10 helical bearing plates
*** Standard Stocking Length***

All Magnum Products Made in U.S.A.
U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

Magnum Piering, Inc.
6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

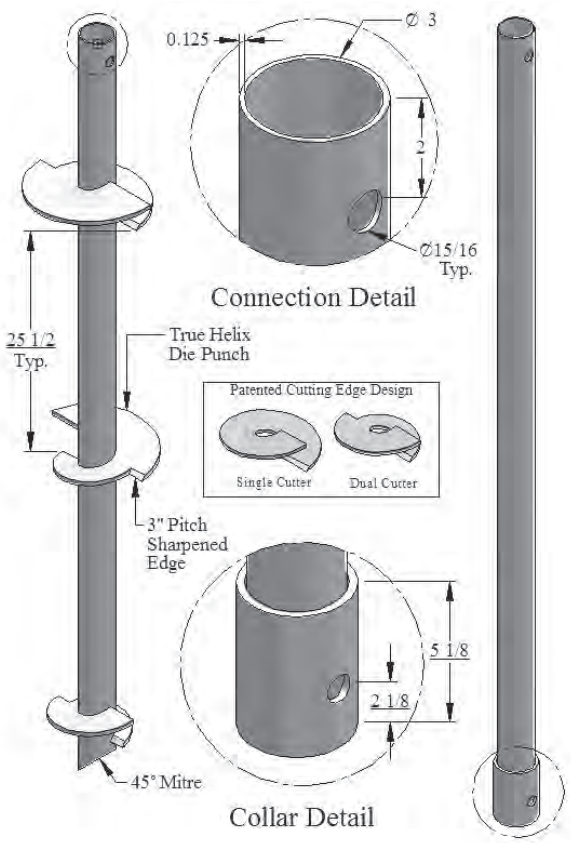
MAGNUM® MH313B Helical Piles

16 Ton Ultimate - 8 Ton Allowable Capacity

High-Strength 3.00″ Diameter, 0.125″ Wall, Round-Shaft with Rigid Coupler & (1) 7/8″ Bolt

Description

Magnum MH313B Helical Piles have 16 tons ultimate capacity and 8 tons working capacity in compression and tension. Lead sections and extensions couple together to extend helical bearing plates to the desired bearing stratum. Round shafts offer increased lateral and buckling resistance compared to solid square shafts. Capacity calculations are based on average life expectancy of over 75 years for most soil conditions. Patented Magnum Dual-Cutting Edge helical bearing plates (DCE) enhance penetration through dense soils with occasional cobbles and debris. Custom lengths and helix configurations are available upon request. See Magnum Technical Reference Manual for additional information including design tools, prescriptive specifications and example plans.



Drawing above shows an example pile lead and extension section. Section lengths and number of helices vary with project requirements and soil conditions.

STEEL SPECIFICATIONS	
SHAFT	HSS 3.00″ x 0.125″ Wall ASTM A513 65 KSI, or Equivalent
I	New= 1.17 in^4, Corroded= 0.70 in^4
Ag	New= 1.13 in^2, Corroded= 0.68 in^2
S	New= 0.78 in^3, Corroded= 0.48 in^3
COUPLING	Outer 0.25″ Sleeve
BOLTS	(1) 7/8″ Diam. SAE J429 Grade 5 Zinc Coated to ASTM B695/F1941
BLADES	0.375″ Thick, Helix Die-Pressed ASTM A36, or Better
COATING OPTIONS	Galvanized (G), Bare Steel (NG), Epoxy Powder Coated (EP)
PROPERTIES	
8 ft^{-1}	Ultimate Capacity-to-Torque Ratio
4,000 ft-lbs	Maximum Installation Torque
STRUCTURAL CAPACITY	
22 Tons	Ultimate Capacity
11 Tons	Allowable Capacity
CAPACITY BY TORQUE	
16 Tons	Ultimate Compression & Tension
8 Tons	Allowable Compression & Tension

Note: Helical piles shall be installed to appropriate depth into suitable bearing stratum as determined by geotechnical engineer or local practice. Capacity by torque is based on advancing pile to maximum installation torque. A minimum factor of safety of 2.0 is recommended for determining allowable capacity from correlations with final installation torque. Deflections of 0.5″ are typical at allowable capacity. A higher factor of safety may be required for smaller deflections. For tension capacity, helical bearing plates must be deeply embedded. Load tests are recommended when practical.

3.0″ Product Line Helical Bearing Plate Specifications & Available Configurations

0.375″ Thick; ASTM A36 or Higher
3.00″ Helix Pitch
8″, 10″, 12″, 14″ Diameter
Standard Circular Helix, or
Patented Dual Cutting Edge Helix

Sharpened Edges - All Helix

*3 ft. Lead or Extension - up to 2 helical bearing plates
*6 ft. Lead or Extension - up to 3 helical bearing plates
*10 ft. Lead or Extension - up to 6 helical bearing plates
*15 ft. Lead or Extension - up to 10 helical bearing plates

**** Standard Stocking Length***

All Magnum Products Made in U.S.A.

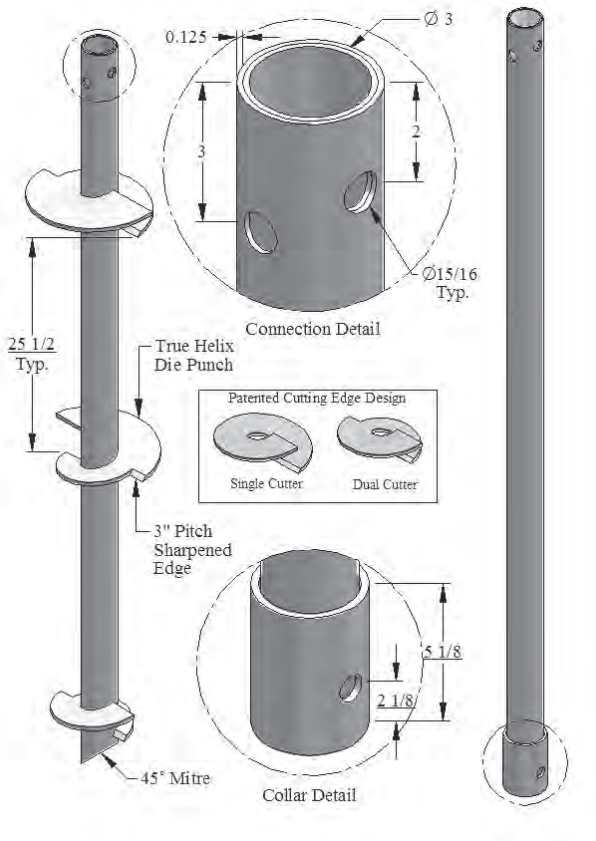
U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

Magnum Piering, Inc.
6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

MAGNUM® MH313BR Helical Piles
24 Ton Ultimate - 12 Ton Allowable Capacity
High-Strength 3.0″ Diameter, 0.125″ Wall, Round-Shaft with
Reinforced (R) Dual Sleeve Rigid Coupler & (1) 7/8″ Bolt

Description

Magnum MH313BR Helical Piles have 24 tons ultimate capacity and 12 tons working capacity in compression and tension. Lead sections and extensions couple together to extend helical bearing plates to the desired bearing stratum. Round shafts offer increased lateral and buckling resistance compared to solid square shafts. Capacity calculations are based on average life expectancy of over 75 years for most soil conditions. Patented Magnum Dual-Cutting Edge helical bearing plates (DCE) enhance penetration through dense soils with occasional cobbles and debris. Custom lengths and helix configurations are available upon request. See Magnum Technical Reference Manual for additional information including design tools, prescriptive specifications and example plans.



Drawing above shows an example pile lead and extension section. Section lengths and number of helices vary with project requirements and soil conditions.

STEEL SPECIFICATIONS	
SHAFT	HSS 3.00″ x 0.125″ Wall ASTM A513 65 KSI, or Equivalent
I	New= 1.17 in^4, Corroded= 0.70 in^4
Ag	New= 1.13 in^2, Corroded= 0.68 in^2
S	New= 0.78 in^3, Corroded= 0.48 in^3
COUPLING	Outer 0.25″ Sleeve with 0.125″ Insert
BOLTS	(1) 7/8″ Diam. SAE J429 Grade 5 Zinc Coated to ASTM B695/F1941
BLADES	0.375″ Thick, Helix Die-Pressed ASTM A36, or Better
COATING OPTIONS	Galvanized (G), Bare Steel (NG), Epoxy Powder Coated (EP)
PROPERTIES	
8 ft^{-1}	Ultimate Capacity-to-Torque Ratio
6,000 ft-lbs	Maximum Installation Torque
STRUCTURAL CAPACITY	
22 Tons	Ultimate Capacity
11 Tons	Allowable Capacity
CAPACITY BY TORQUE	
24 Tons	Ultimate Compression & Tension
12 Tons	Allowable Compression & Tension

Note: Helical piles shall be installed to appropriate depth into suitable bearing stratum as determined by geotechnical engineer or local practice. Capacity by torque is based on advancing pile to maximum installation torque. A minimum factor of safety of 2.0 is recommended for determining allowable capacity from correlations with final installation torque. Deflections of 0.5″ are typical at allowable capacity. A higher factor of safety may be required for smaller deflections. For tension capacity, helical bearing plates must be deeply embedded. Load tests are recommended when practical.

3.0″ Product Line Helical Bearing Plate Specifications & Available Configurations

0.375″ Thick; ASTM A36 or Higher
3.00″ Helix Pitch
8″, 10″, 12″, 14″ Diameter
Standard Circular Helix, or
Patented Dual Cutting Edge Helix
Sharpened Edges - All Helix
*3 ft. Lead or Extension - up to 2 helical bearing plates
*6 ft. Lead or Extension - up to 3 helical bearing plates
*10 ft. Lead or Extension - up to 6 helical bearing plates
*15 ft. Lead or Extension - up to 10 helical bearing plates
**** Standard Stocking Length***

All Magnum Products Made in U.S.A.
U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

Magnum Piering, Inc.
6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

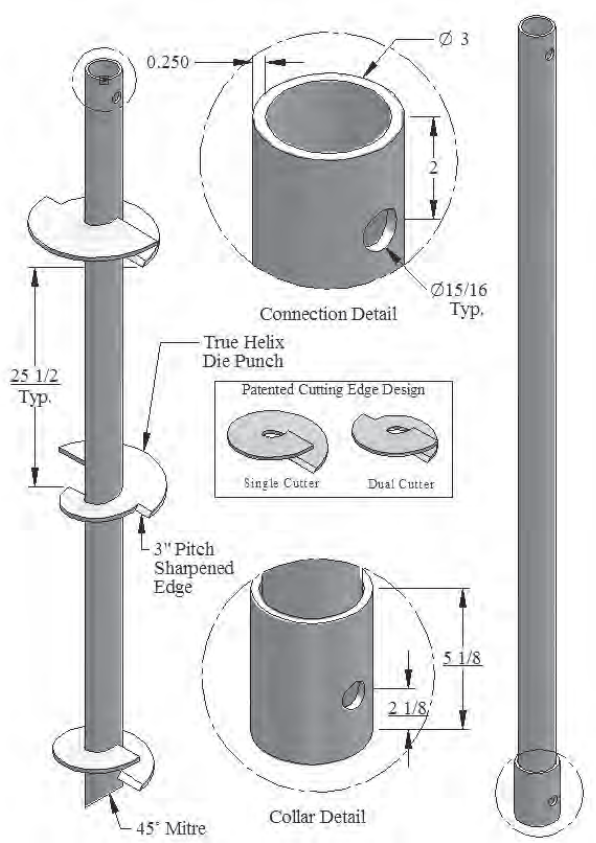
MAGNUM® MH325B Helical Piles

32 Ton Ultimate - 16 Ton Allowable Capacity

High-Strength 3.0″ Diameter, 0.25″ Wall, Round-Shaft with
Rigid Coupler & (1) 7/8″ Bolt

Description

Magnum MH325B Helical Piles have 32 tons ultimate capacity and 16 tons working capacity in compression and tension. Lead sections and extensions couple together to extend helical bearing plates to the desired bearing stratum. Round shafts offer increased lateral and buckling resistance compared to solid square shafts. Capacity calculations are based on average life expectancy of over 75 years for most soil conditions. Patented Magnum Dual-Cutting Edge helical bearing plates (DCE) enhance penetration through dense soils with occasional cobbles and debris. Custom lengths and helix configurations are available upon request. See Magnum Technical Reference Manual for additional information including design tools, prescriptive specifications and example plans.



Drawing above shows an example pile lead and extension section. Section lengths and number of helices vary with project requirements and soil conditions.

STEEL SPECIFICATIONS	
SHAFT	HSS 3.00″ x 0.25″ Wall ASTM A513 65 KSI, or Equivalent
I	New= 2.06 in^4, Corroded= 1.64 in^4
Ag	New= 2.16 in^2, Corroded= 1.73 in^2
S	New= 1.37 in^3, Corroded= 1.11 in^3
COUPLING	Outer 0.25″ Sleeve
BOLTS	(1) 7/8″ Diam. SAE J429 Grade 5 Zinc Coated to ASTM B695/F1941
BLADES	0.375″ Thick, Helix Die-Pressed ASTM A36, or Better
COATING OPTIONS	Galvanized (G), Bare Steel (NG), Epoxy Powder Coated (EP)
PROPERTIES	
8 ft^{-1}	Ultimate Capacity-to-Torque Ratio
8,000 ft-lbs	Maximum Installation Torque
STRUCTURAL CAPACITY	
40 Tons	Ultimate Capacity
20 Tons	Allowable Capacity
CAPACITY BY TORQUE	
32 Tons	Ultimate Compression & Tension
16 Tons	Allowable Compression & Tension

Note: Helical piles shall be installed to appropriate depth into suitable bearing stratum as determined by geotechnical engineer or local practice. Capacity by torque is based on advancing pile to maximum installation torque. A minimum factor of safety of 2.0 is recommended for determining allowable capacity from correlations with final installation torque. Deflections of 0.5″ are typical at allowable capacity. A higher factor of safety may be required for smaller deflections. For tension capacity, helical bearing plates must be deeply embedded. Load tests are recommended when practical.

3.0″ Product Line Helical Bearing Plate Specifications & Available Configurations

0.375″ Thick; ASTM A36 or Higher
3.00″ Helix Pitch
8″, 10″, 12″, 14″ Diameter
Standard Circular Helix, or
Patented Dual Cutting Edge Helix

Sharpened Edges - All Helix

*3 ft. Lead or Extension - up to 2 helical bearing plates
*6 ft. Lead or Extension - up to 3 helical bearing plates
*10 ft. Lead or Extension - up to 6 helical bearing plates
*15 ft. Lead or Extension - up to 8 helical bearing plates

**** Standard Stocking Length***

All Magnum Products Made in U.S.A.

U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

Magnum Piering, Inc.
6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

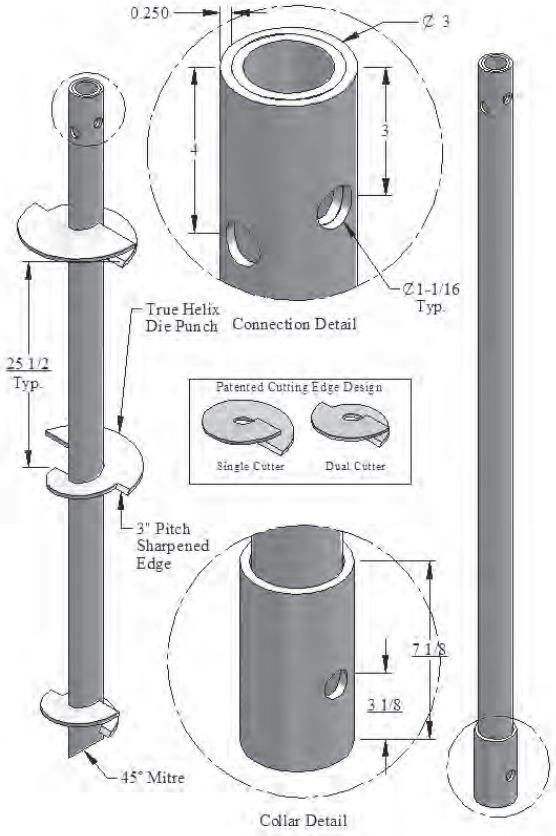
MAGNUM® MH325BR Helical Piles

50 Ton Ultimate - 25 Ton Allowable Capacity

High-Strength 3.0″ Diameter, 0.25″ Wall, Round-Shaft with
Reinforced (R) Dual Sleeve Coupler & (1) 1″ Bolt

Description

Magnum MH325BR Helical Piles have 50 tons ultimate capacity and 25 tons working capacity in compression and tension. Lead sections and extensions couple together to extend helical bearing plates to the desired bearing stratum. Round shafts offer increased lateral and buckling resistance compared to solid square shafts. Capacity calculations are based on average life expectancy of over 75 years for most soil conditions. Patented Magnum Dual-Cutting Edge helical bearing plates (DCE) enhance penetration through dense soils with occasional cobbles and debris. Custom lengths and helix configurations are available upon request. See Magnum Technical Reference Manual for additional information including design tools, prescriptive specifications and example plans.



Drawing above shows an example pile lead and extension section. Section lengths and number of helices vary with project requirements and soil conditions.

STEEL SPECIFICATIONS	
SHAFT	HSS 3.00″ x 0.25″ Wall ASTM A513 65 KSI, or Equivalent
I	New= 2.06 in^4, Corroded= 1.64 in^4
Ag	New= 2.16 in^2, Corroded= 1.73 in^2
S	New= 1.37 in^3, Corroded= 1.11 in^3
COUPLING	Outer 0.31″ Sleeve with 0.25″ Insert
BOLTS	(1) 1″ Diam. SAE J429 Grade 8 Zinc Coated to ASTM B695/F1941
BLADES	0.375″ Thick, Helix Die-Pressed ASTM A36, or Better
COATING OPTIONS	Galvanized (G), Bare Steel (NG), Epoxy Powder Coated (EP)
PROPERTIES	
8 ft^{-1}	Ultimate Capacity-to-Torque Ratio
12,500 ft-lbs	Maximum Installation Torque
STRUCTURAL CAPACITY	
55 Tons	Ultimate Capacity
28 Tons	Allowable Capacity
CAPACITY BY TORQUE	
50 Tons	Ultimate Compression & Tension
25 Tons	Allowable Compression & Tension

Note: Helical piles shall be installed to appropriate depth into suitable bearing stratum as determined by geotechnical engineer or local practice. Capacity by torque is based on advancing pile to maximum installation torque. A minimum factor of safety of 2.0 is recommended for determining allowable capacity from correlations with final installation torque. Deflections of 0.5″ are typical at allowable capacity. A higher factor of safety may be required for smaller deflections. For tension capacity, helical bearing plates must be deeply embedded. Load tests are recommended when practical.

3.0″ Product Line Helical Bearing Plate Specifications & Available Configurations

0.375″ Thick; ASTM A36 or Higher
3.00″ Helix Pitch
8″, 10″, 12″, 14″ Diameter
Standard Circular Helix, or
Patented Dual Cutting Edge Helix
Sharpened Edges - All Helix
*3 ft. Lead or Extension - up to 2 helical bearing plates
*6 ft. Lead or Extension - up to 3 helical bearing plates
*10 ft. Lead or Extension - up to 6 helical bearing plates
*15 ft. Lead or Extension - up to 8 helical bearing plates
**** Standard Stocking Length***

All Magnum Products Made in U.S.A.
U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

Magnum Piering, Inc.
6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

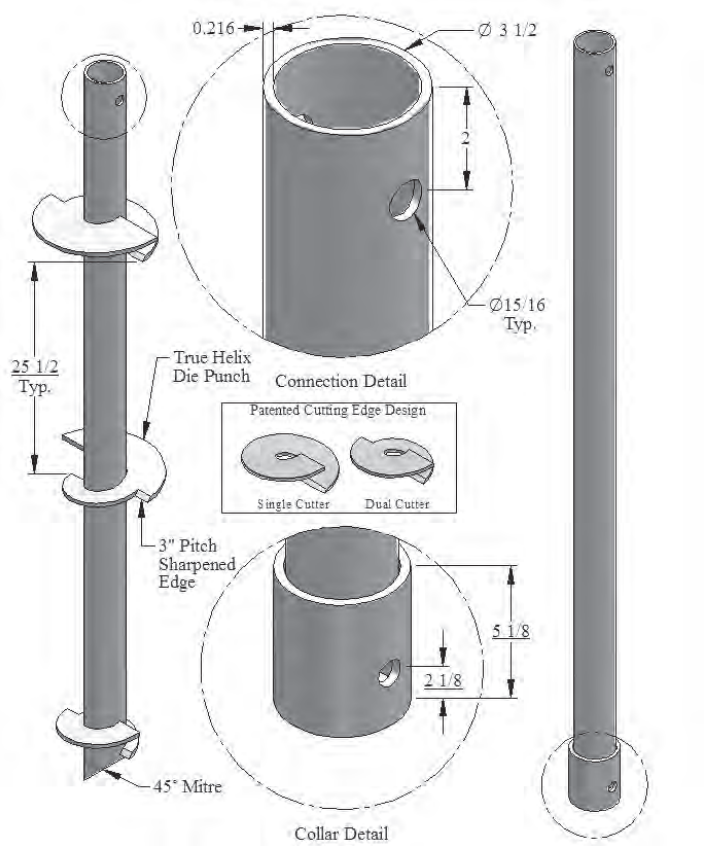
MAGNUM® MH3521B Helical Piles

35 Ton Ultimate - 18 Ton Allowable Capacity

High-Strength 3.5″ Diameter, 0.21″ Wall, Round-Shaft with
Standard Coupler & (1) 1″ Bolt

Description

Magnum MH3521B Helical Piles have 35 tons ultimate capacity and 18 tons working capacity in compression and tension. Lead sections and extensions couple together to extend helical bearing plates to the desired bearing stratum. Round shafts offer increased lateral and buckling resistance compared to solid square shafts. Capacity calculations are based on average life expectancy of over 75 years for most soil conditions. Patented Magnum Dual-Cutting Edge helical bearing plates (DCE) enhance penetration through dense soils with occasional cobbles and debris. Custom lengths and helix configurations are available upon request. See Magnum Technical Reference Manual for additional information including design tools, prescriptive specifications and example plans.



Drawing above shows an example pile lead and extension section. Section lengths and number of helices vary with project requirements and soil conditions.

STEEL SPECIFICATIONS	
SHAFT	HSS 3.50″ x 0.21″ Wall ASTM A513 65 KSI, or Equivalent
I	New= 2.95 in^4, Corroded= 2.25 in^4
Ag	New= 2.17 in^2, Corroded= 1.66 in^2
S	New= 1.68 in^3, Corroded= 1.30 in^3
COUPLING	Outer 0.31″ Sleeve
BOLTS	(1) 1″ Diam. Diam. SAE J429 Grade 8 Zinc Coated to ASTM B695/F1941
BLADES	0.375″ Thick, Helix Die-Pressed ASTM A36, or Better
COATING OPTIONS	Galvanized (G), Bare Steel (NG), Epoxy Powder Coated (EP)
PROPERTIES	
7 ft^{-1}	Ultimate Capacity-to-Torque Ratio
10,000 ft-lbs	Maximum Installation Torque
STRUCTURAL CAPACITY	
45 Tons	Ultimate Capacity
23 Tons	Allowable Capacity
CAPACITY BY TORQUE	
35 Tons	Ultimate Compression & Tension
18 Tons	Allowable Compression & Tension

Note: Helical piles shall be installed to appropriate depth into suitable bearing stratum as determined by geotechnical engineer or local practice. Capacity by torque is based on advancing pile to maximum installation torque. A minimum factor of safety of 2.0 is recommended for determining allowable capacity from correlations with final installation torque. Deflections of 0.5″ are typical at allowable capacity. A higher factor of safety may be required for smaller deflections. For tension capacity, helical bearing plates must be deeply embedded. Load tests are recommended when practical.

3.5″ Product Line Helical Bearing Plate Specifications & Available Configurations

0.375″ Thick; ASTM A36 or Higher
3.00″ Helix Pitch
8″, 10″, 12″, 14″ Diameter
Standard Circular Helix, or
Patented Dual Cutting Edge Helix

Sharpened Edges - All Helix

*3 ft. Lead or Extension - up to 2 helical bearing plates
*6 ft. Lead or Extension - up to 3 helical bearing plates
*10 ft. Lead or Extension - up to 6 helical bearing plates
*15 ft. Lead or Extension - up to 8 helical bearing plates

**** Standard Stocking Length***

All Magnum Products Made in U.S.A.

U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

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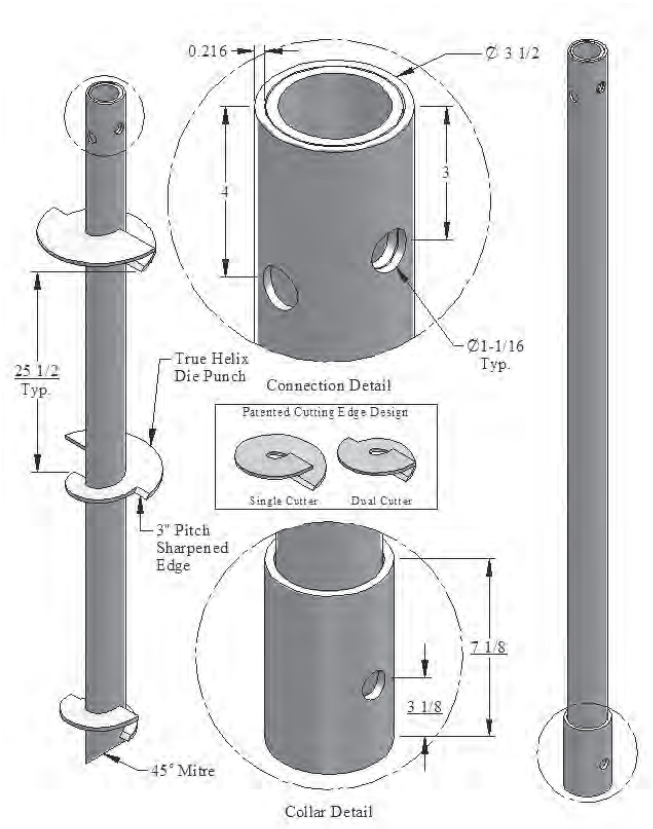
6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

MAGNUM® MH3521BR Helical Piles
46 Ton Ultimate - 23 Ton Allowable Capacity
High-Strength 3.5″ Diameter, 0.21″ Wall, Round-Shaft with Reinforced(R) Coupler & (1) 1″ Bolt

Description

Magnum MH3521BR Helical Piles have 46 tons ultimate capacity and 23 tons working capacity in compression and tension. Lead sections and extensions couple together to extend helical bearing plates to the desired bearing stratum. Round shafts offer increased lateral and buckling resistance compared to solid square shafts. Capacity calculations are based on average life expectancy of over 75 years for most soil conditions. Patented Magnum Dual-Cutting Edge helical bearing plates (DCE) enhance penetration through dense soils with occasional cobbles and debris. Custom lengths and helix configurations are available upon request. See Magnum Technical Reference Manual for additional information including design tools, prescriptive specifications and example plans.



Drawing above shows an example pile lead and extension section. Section lengths and number of helices vary with project requirements and soil conditions.

STEEL SPECIFICATIONS	
SHAFT	HSS 3.50″ x 0.21″ Wall ASTM A513 65 KSI, or Equivalent
I	New= 2.95 in^4, Corroded= 2.25 in^4
Ag	New= 2.17 in^2, Corroded= 1.66 in^2
S	New= 1.68 in^3, Corroded= 1.30 in^3
COUPLING	Outer 0.31″ Sleeve with 0.25″ Insert
BOLTS	(1) 1″ Diam. SAE J429 Grade 8 Zinc Coated to ASTM B695/F1941
BLADES	0.375″ Thick, Helix Die-Pressed ASTM A36, or Better
COATING OPTIONS	Galvanized (G), Bare Steel (NG), Epoxy Powder Coated (EP)
PROPERTIES	
7 ft^{-1}	Ultimate Capacity-to-Torque Ratio
13,000 ft-lbs	Maximum Installation Torque
STRUCTURAL CAPACITY	
45 Tons	Ultimate Capacity
23 Tons	Allowable Capacity
CAPACITY BY TORQUE	
46 Tons	Ultimate Compression & Tension
23 Tons	Allowable Compression & Tension

Note: Helical piles shall be installed to appropriate depth into suitable bearing stratum as determined by geotechnical engineer or local practice. Capacity by torque is based on advancing pile to maximum installation torque. A minimum factor of safety of 2.0 is recommended for determining allowable capacity from correlations with final installation torque. Deflections of 0.5″ are typical at allowable capacity. A higher factor of safety may be required for smaller deflections. For tension capacity, helical bearing plates must be deeply embedded. Load tests are recommended when practical.

3.5″ Product Line Helical Bearing Plate Specifications & Available Configurations

0.375″ Thick; ASTM A36 or Higher
3.00″ Helix Pitch
8″, 10″, 12″, 14″ Diameter
Standard Circular Helix, or
Patented Dual Cutting Edge Helix
Sharpened Edges - All Helix
*3 ft. Lead or Extension - up to 2 helical bearing plates
*6 ft. Lead or Extension - up to 3 helical bearing plates
*10 ft. Lead or Extension - up to 6 helical bearing plates
*15 ft. Lead or Extension - up to 8 helical bearing plates
**** Standard Stocking Length***

All Magnum Products Made in U.S.A.
U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

Magnum Piering, Inc.
6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

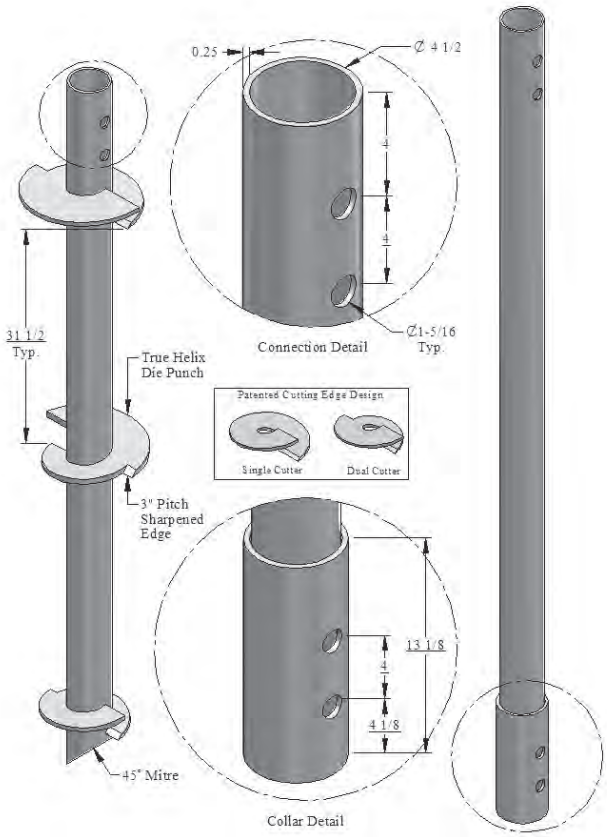
MAGNUM® MH425B Helical Piles

63 Ton Ultimate - 31 Ton Allowable Capacity

High-Strength 4.5″ Diameter, 0.25″ Wall, Round-Shaft with
Rigid Coupler & (2) 1-1/4″ Bolts

Description

Magnum MH425B Helical Piles have 63 tons ultimate capacity and 31 tons working capacity in compression and tension. Lead sections and extensions couple together to extend helical bearing plates to the desired bearing stratum. Round shafts offer increased lateral and buckling resistance compared to solid square shafts. Capacity calculations are based on average life expectancy of over 75 years for most soil conditions. Patented Magnum Dual-Cutting Edge helical bearing plates (DCE) enhance penetration through dense soils with occasional cobbles and debris. Custom lengths and helix configurations are available upon request. See Magnum Technical Reference Manual for additional information including design tools, prescriptive specifications and example plans.



Drawing above shows an example pile lead and extension section. Section lengths and number of helices vary with project requirements and soil conditions.

STEEL SPECIFICATIONS	
SHAFT	HSS 4.50″ x 0.25″ Wall ASTM A513 65 KSI, or Equivalent
I	New= 7.56 in^4, Corroded= 6.05 in^4
Ag	New= 3.34 in^2, Corroded= 2.67 in^2
S	New= 3.36 in^3, Corroded= 2.72 in^3
COUPLING	0.31″ Wall Collar
BOLTS	(2) 1 1/4″ Diam. Diam. SAE J429 Grade 5 Zinc Coated to ASTM B695/F1941
BLADES	0.625″ Thick, Helix Die-Pressed ASTM A36, or Better
COATING OPTIONS	Galvanized (G), Bare Steel (NG), Epoxy Powder Coated (EP)
PROPERTIES	
5.7 ft^{-1}	Ultimate Capacity-to-Torque Ratio
22,000 ft-lbs	Maximum Installation Torque
STRUCTURAL CAPACITY	
96 Tons	Ultimate Capacity
48 Tons	Allowable Capacity
BY TORQUE - COMPRESSION & TENSION	
63 Tons	Ultimate Compression & Tension
31 Tons	Allowable Compression & Tension

Note: Helical piles shall be installed to appropriate depth into suitable bearing stratum as determined by geotechnical engineer or local practice. Capacity by torque is based on advancing pile to maximum installation torque. A minimum factor of safety of 2.0 is recommended for determining allowable capacity from correlations with final installation torque. Deflections of 0.5″ are typical at allowable capacity. A higher factor of safety may be required for smaller deflections. For tension capacity, helical bearing plates must be deeply embedded. Load tests are recommended when practical.

4.5″ Product Line Helical Bearing Plate Specifications & Available Configurations

0.625″ Thick; ASTM A36 or Higher
3.63″ Helix Pitch
10″, 12″, 14″, 16″ Diameter
Standard Circular Helix, or
Patented Dual Cutting Edge Helix

Sharpened Edges - All Helix

*5 ft. Lead or Extension - up to 2 helical bearing plates
*7 ft. Lead or Extension - up to 3 helical bearing plates
*10 ft. Lead or Extension - up to 4 helical bearing plates
*15 ft. Lead or Extension - up to 6 helical bearing plates

**** Standard Stocking Length***

All Magnum Products Made in U.S.A.

U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

Magnum Piering, Inc.
6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

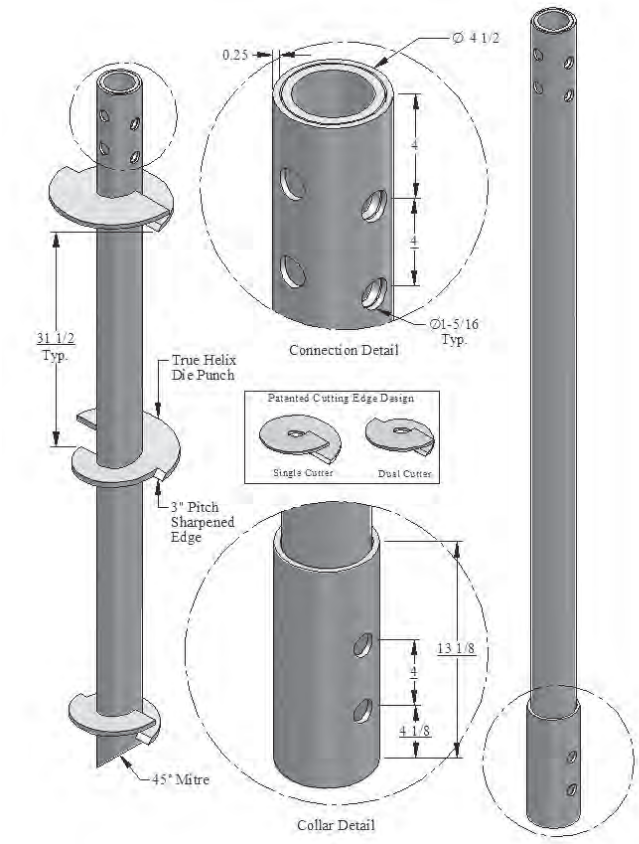
MAGNUM® MH425BR Helical Piles

77 Ton Ultimate - 38 Ton Allowable Capacity

High-Strength 4.50″ Diameter, 0.25″ Wall, Round-Shaft with Reinforced (R) Dual Sleeve Coupler & (2) 1-1/4″ Bolts

Description

Magnum MH425BR Helical Piles have 77 tons ultimate capacity and 38 tons working capacity in compression and tension. Lead sections and extensions couple together to extend helical bearing plates to the desired bearing stratum. Round shafts offer increased lateral and buckling resistance compared to solid square shafts. Capacity calculations are based on average life expectancy of over 75 years for most soil conditions. Patented Magnum Dual-Cutting Edge helical bearing plates (DCE) enhance penetration through dense soils with occasional cobbles and debris. Custom lengths and helix configurations are available upon request. See Magnum Technical Reference Manual for additional information including design tools, prescriptive specifications and example plans.



Drawing above shows an example pile lead and extension section. Section lengths and number of helices vary with project requirements and soil conditions.

STEEL SPECIFICATIONS	
SHAFT	HSS 4.50″ x 0.25″ Wall ASTM A513 65 KSI, or Equivalent
I	New= 7.56 in^4, Corroded= 6.05 in^4
Ag	New= 3.34 in^2, Corroded= 2.67 in^2
S	New= 3.36 in^3, Corroded= 2.72 in^3
COUPLING	Outer 0.31″ Sleeve with 0.375″ Insert
BOLTS	(2) 1-1/4″ Diam. Diam. SAE J429 Grade 5 Zinc Coated to ASTM B695/F1941
BLADES	0.625″ Thick, Helix Die-Pressed ASTM A36, or Better
COATING OPTIONS	Galvanized (G), Bare Steel (NG), Epoxy Powder Coated (EP)
PROPERTIES	
5.7 ft^{-1}	Ultimate Capacity-to-Torque Ratio
27,000 ft-lbs	Maximum Installation Torque
STRUCTURAL CAPACITY	
96 Tons	Ultimate Capacity
48 Tons	Allowable Capacity
BY TORQUE - COMPRESSION & TENSION	
77 Tons	Ultimate Compression & Tension
38 Tons	Allowable Compression & Tension

Note: Helical piles shall be installed to appropriate depth into suitable bearing stratum as determined by geotechnical engineer or local practice. Capacity by torque is based on advancing pile to maximum installation torque. A minimum factor of safety of 2.0 is recommended for determining allowable capacity from correlations with final installation torque. Deflections of 0.5″ are typical at allowable capacity. A higher factor of safety may be required for smaller deflections. For tension capacity, helical bearing plates must be deeply embedded. Load tests are recommended when practical.

4.5″ Product Line Helical Bearing Plate Specifications & Available Configurations

0.625″ Thick; ASTM A36 or Higher
3.63″ Helix Pitch
10″, 12″, 14″, 16″ Diameter
Standard Circular Helix, or
Patented Dual Cutting Edge Helix

Sharpened Edges - All Helix

*5 ft. Lead or Extension - up to 2 helical bearing plates
*7 ft. Lead or Extension - up to 3 helical bearing plates
*10 ft. Lead or Extension - up to 4 helical bearing plates
*15 ft. Lead or Extension - up to 6 helical bearing plates

**** Standard Stocking Length***

All Magnum Products Made in U.S.A.
U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

Magnum Piering, Inc.
6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

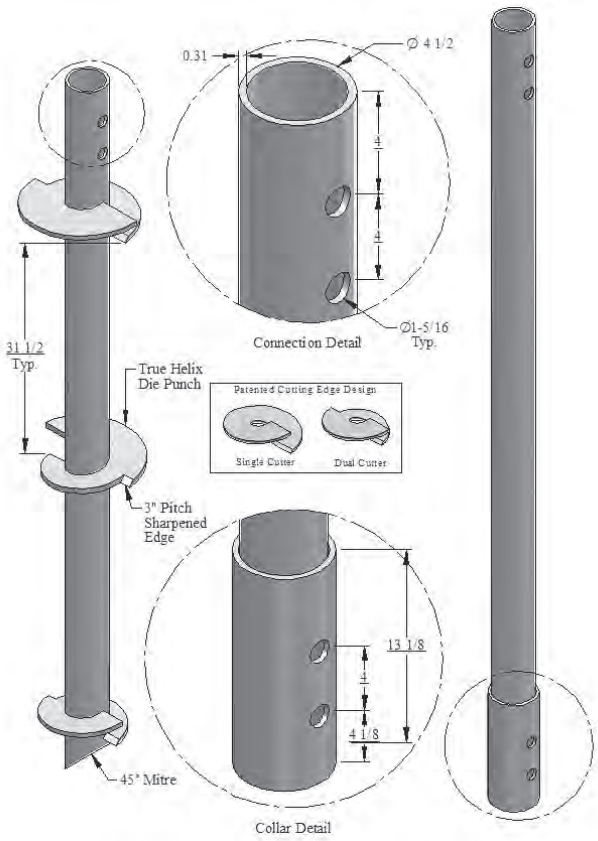
MAGNUM® MH431B Helical Piles

80 Ton Ultimate - 40 Ton Allowable Capacity

High-Strength 4.50″ Diameter, 0.31″ Wall, Round-Shaft with
Rigid Coupler & (2) 1-1/4″ Bolts

Description

Magnum MH431B Helical Piles have 80 tons ultimate capacity and 40 tons working capacity in compression and tension. Lead sections and extensions couple together to extend helical bearing plates to the desired bearing stratum. Round shafts offer increased lateral and buckling resistance compared to solid square shafts. Capacity calculations are based on average life expectancy of over 75 years for most soil conditions. Patented Magnum Dual-Cutting Edge helical bearing plates (DCE) enhance penetration through dense soils with occasional cobbles and debris. Custom lengths and helix configurations are available upon request. See Magnum Technical Reference Manual for additional information including design tools, prescriptive specifications and example plans.



Drawing above shows an example pile lead and extension section. Section lengths and number of helices vary with project requirements and soil conditions.

STEEL SPECIFICATIONS	
SHAFT	HSS 4.50″ x 0.31″ Wall ASTM A513 65 KSI, or Equivalent
I	New= 9.00 in^4, Corroded= 8.69 in^4
Ag	New= 4.08 in^2, Corroded= 4.03 in^2
S	New= 4.00 in^3, Corroded= 3.90 in^3
COUPLING	0.31″ Wall Collar
BOLTS	(2) 1-1/4″ Diam. SAE J429 Grade 5 Zinc Coated to ASTM B695/F1941
BLADES	0.625″ Thick, Helix Die-Pressed ASTM A36, or Better
COATING OPTIONS	Galvanized (G), Bare Steel (NG), Epoxy Powder Coated (EP)
PROPERTIES	
5.7 ft^{-1}	Ultimate Capacity-to-Torque Ratio
28,000 ft-lbs	Maximum Installation Torque
STRUCTURAL CAPACITY	
122 Tons	Ultimate Capacity
61 Tons	Allowable Capacity
BY TORQUE - COMPRESSION & TENSION	
80 Tons	Ultimate Compression & Tension
40 Tons	Allowable Compression & Tension

Note: Helical piles shall be installed to appropriate depth into suitable bearing stratum as determined by geotechnical engineer or local practice. Capacity by torque is based on advancing pile to maximum installation torque. A minimum factor of safety of 2.0 is recommended for determining allowable capacity from correlations with final installation torque. Deflections of 0.5″ are typical at allowable capacity. A higher factor of safety may be required for smaller deflections. For tension capacity, helical bearing plates must be deeply embedded. Load tests are recommended when practical.

4.5″ Product Line Helical Bearing Plate Specifications & Available Configurations

0.625″ Thick; ASTM A36 or Higher
3.63″ Helix Pitch
10″, 12″, 14″, 16″ Diameter
Standard Circular Helix, or
Patented Dual Cutting Edge Helix

Sharpened Edges - All Helix

*5 ft. Lead or Extension - up to 2 helical bearing plates
*7 ft. Lead or Extension - up to 3 helical bearing plates
*10 ft. Lead or Extension - up to 4 helical bearing plates
*15 ft. Lead or Extension - up to 6 helical bearing plates

**** Standard Stocking Length***

All Magnum Products Made in U.S.A.

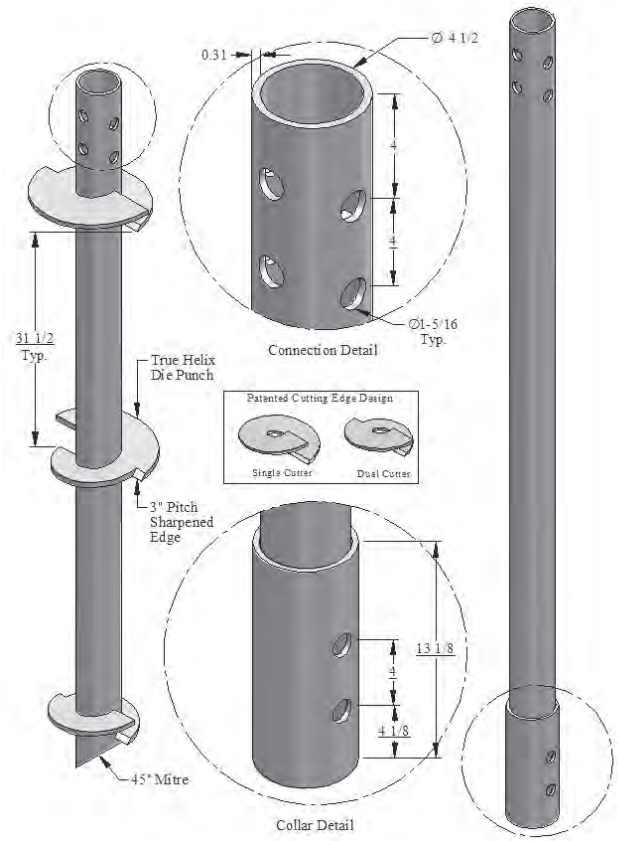
U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

Magnum Piering, Inc.
6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

MAGNUM® H431BR Helical Piles
91 Ton Ultimate - 46 Ton Allowable Capacity
High-Strength 4.50″ Diameter, 0.31″ Wall, Round-Shaft with
Reinforced (R) Dual Sleeve Coupler & (2) 1-1/4″ Bolts

Description

Magnum MH431BR Helical Piles have 91 tons ultimate capacity and 46 tons working capacity in compression and tension. Lead sections and extensions couple together to extend helical bearing plates to the desired bearing stratum. Round shafts offer increased lateral and buckling resistance compared to solid square shafts. Capacity calculations are based on average life expectancy of over 75 years for most soil conditions. Patented Magnum Dual-Cutting Edge helical bearing plates (DCE) enhance penetration through dense soils with occasional cobbles and debris. Custom lengths and helix configurations are available upon request. See Magnum Technical Reference Manual for additional information including design tools, prescriptive specifications and example plans.



Drawing above shows an example pile lead and extension section. Section lengths and number of helices vary with project requirements and soil conditions.

STEEL SPECIFICATIONS	
SHAFT	HSS 4.50″ x 0.31″ Wall ASTM A513 65 KSI, or Equivalent
I	New= 9.00 in^4, Corroded= 7.55 in^4
Ag	New= 4.08 in^2, Corroded= 3.43 in^2
S	New= 4.00 in^3, Corroded= 3.39 in^3
COUPLING	0.31″ Wall Collar with 0.25″ Insert
BOLTS	(2) 1-1/4″ Diam. SAE J429 Grade 5 Zinc Coated to ASTM B695/F1941
BLADES	0.625″ Thick, Helix Die-Pressed ASTM A36, or Better
COATING OPTIONS	Galvanized (G), Bare Steel (NG), Epoxy Powder Coated (EP)
PROPERTIES	
5.7 ft^{-1}	Ultimate Capacity-to-Torque Ratio
32,000 ft-lbs	Maximum Installation Torque
STRUCTURAL CAPACITY	
122 Tons	Ultimate Capacity
61 Tons	Allowable Capacity
BY TORQUE - COMPRESSION & TENSION	
91 Tons	Ultimate Compression & Tension
46 Tons	Allowable Compression & Tension

Note: Helical piles shall be installed to appropriate depth into suitable bearing stratum as determined by geotechnical engineer or local practice. Capacity by torque is based on advancing pile to maximum installation torque. A minimum factor of safety of 2.0 is recommended for determining allowable capacity from correlations with final installation torque. Deflections of 0.5″ are typical at allowable capacity. A higher factor of safety may be required for smaller deflections. For tension capacity, helical bearing plates must be deeply embedded. Load tests are recommended when practical.

4.5″ Product Line Helical Bearing Plate Specifications & Available Configurations

0.625″ Thick; ASTM A36 or Higher
3.63″ Helix Pitch
10″, 12″, 14″, 16″ Diameter
Standard Circular Helix, or
Patented Dual Cutting Edge Helix
Sharpened Edges - All Helix
*5 ft. Lead or Extension - up to 2 helical bearing plates
*7 ft. Lead or Extension - up to 3 helical bearing plates
*10 ft. Lead or Extension - up to 4 helical bearing plates
*15 ft. Lead or Extension - up to 6 helical bearing plates
**** Standard Stocking Length***

All Magnum Products Made in U.S.A.
U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

Magnum Piering, Inc.
6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

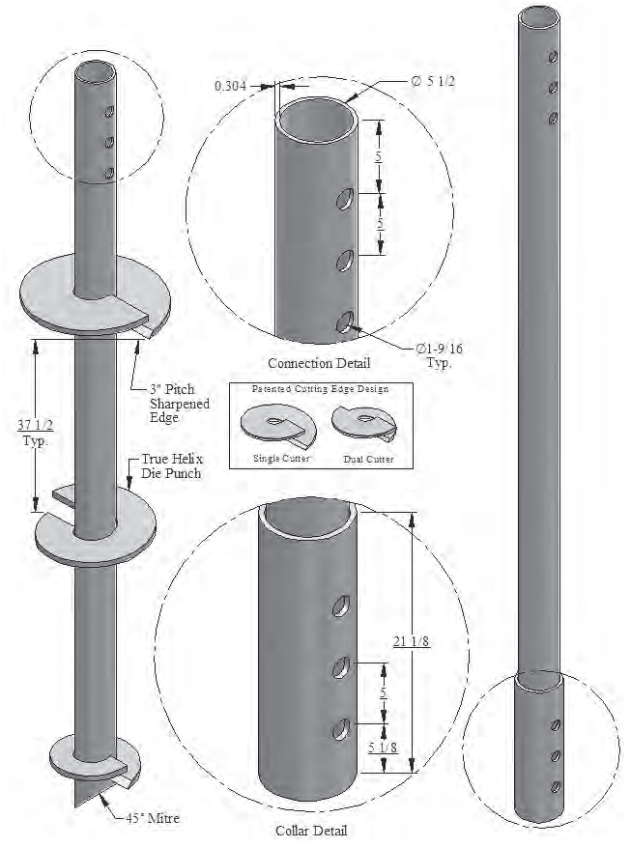
MAGNUM® MH530B Helical Piles

125 Ton Ultimate - 62 Ton Allowable

High-Strength 5.50″ Diameter, 0.30″ Wall, Round-Shaft with Rigid Coupler & (3)1-1/2″ Bolts

Description

Magnum MH530B Helical Piles have 125 tons ultimate capacity and 62 tons working capacity in compression and tension. Lead sections and extensions couple together to extend helical bearing plates to the desired bearing stratum. Round shafts offer increased lateral and buckling resistance compared to solid square shafts. Capacity calculations are based on average life expectancy of over 75 years for most soil conditions. Patented Magnum Dual-Cutting Edge helical bearing plates (DCE) enhance penetration through dense soils with occasional cobbles and debris. Custom lengths and helix configurations are available upon request. See Magnum Technical Reference Manual for additional information including design tools, prescriptive specifications and example plans.



Drawing above shows an example pile lead and extension section. Section lengths and number of helices vary with project requirements and soil conditions.

STEEL SPECIFICATIONS	
SHAFT	HSS 5.50" x 0.30" wall API Grade P-110, 125 KSI Yield or Equivalent
I	New= 16.62 in^4, Corroded= 13.85 in^4
Ag	New= 4.90 in^2, Corroded= 4.09 in^2
S	New= 6.04 in^3, Corroded= 5.08 in^3
COUPLING	0.325″ Wall Collar
BOLTS	(3) 1-1/2″ Diam. SAE J429 Grade 5 Zinc Coated to ASTM B695/F1941
BLADES	0.875″ Thick, Helix Die-Pressed True Helix ASTM A36, or Better
COATING OPTIONS	Galvanized (G), Bare Steel (NG), Epoxy Powder Coated (EP)
PROPERTIES	
4.7 ft^{-1}	Ultimate Capacity-to-Torque Ratio
53,000 ft-lbs	Maximum Installation Torque
STRUCTURAL CAPACITY	
273 Tons	Ultimate Capacity
137 Tons	Allowable Capacity
BY TORQUE - COMPRESSION & TENSION	
125 Tons	Ultimate Compression & Tension
62 Tons	Allowable Compression & Tension

Note: Helical piles shall be installed to appropriate depth into suitable bearing stratum as determined by geotechnical engineer or local practice. Capacity by torque is based on advancing pile to maximum installation torque. A minimum factor of safety of 2.0 is recommended for determining allowable capacity from correlations with final installation torque. Deflections of 0.50″ are typical at allowable capacity. A higher factor of safety may be required for smaller deflections. For tension capacity, helical bearing plates must be deeply embedded. Load tests are recommended when practical.

5.5″ Product Line Helical Bearing Plate Specifications & Available Configurations

0.875″ Thick; ASTM A36 or Higher
3.88″ Helix Pitch
12″, 16″, 20″, 24″ Diameter
Standard Circular Helix, or
Patented Dual Cutting Edge Helix

Sharpened Edges - All Helix

*6 ft. Lead or Extension - up to 2 helical bearing plates
*10 ft. Lead or Extension - up to 3 helical bearing plates
*15 ft. Lead or Extension - up to 5 helical bearing plates

**** Standard Stocking Length***

All Magnum Products Made in U.S.A.

U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

Magnum Piering, Inc.
6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

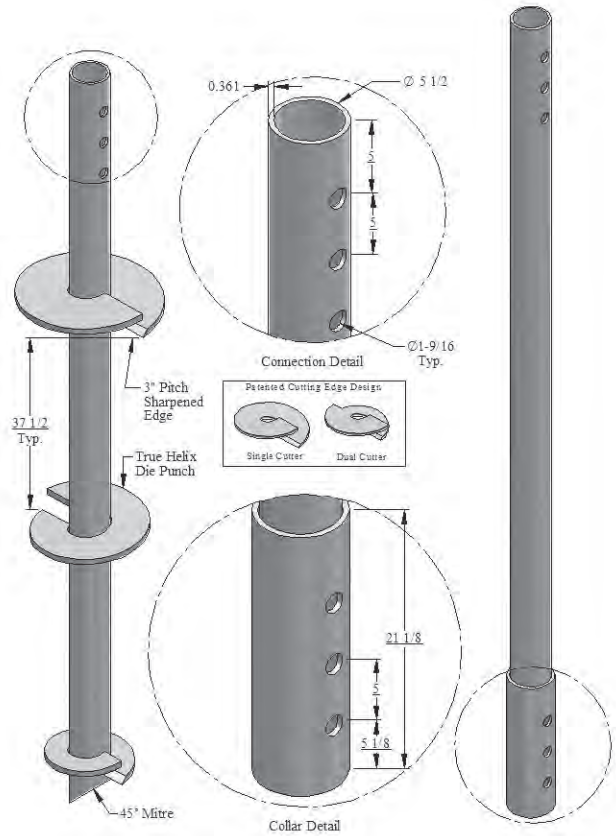
MAGNUM® MH536B Helical Piles

195 Ton Ultimate - 98 Ton Allowable

High-Strength 5.50″ Diameter, 0.36″ Wall, Round-Shaft with Rigid Coupler & (3)1-1/2″ Bolts

Description

Magnum MH536B Helical Piles have 195 tons ultimate capacity and 98 tons working capacity in compression and tension. Lead sections and extensions couple together to extend helical bearing plates to the desired bearing stratum. Round shafts offer increased lateral and buckling resistance compared to solid square shafts. Capacity calculations are based on average life expectancy of over 75 years for most soil conditions. Patented Magnum Dual-Cutting Edge helical bearing plates (DCE) enhance penetration through dense soils with occasional cobbles and debris. Custom lengths and helix configurations are available upon request. See Magnum Technical Reference Manual for additional information including design tools, prescriptive specifications and example plans.



Drawing above shows an example pile lead and extension section. Section lengths and number of helices vary with project requirements and soil conditions.

STEEL SPECIFICATIONS	
SHAFT	HSS 5.50″ x 0.36″ wall API Grade C-95, 100 KSI Min. Yield, or Equivalent
I	New= 19.29 in^4, Corroded= 16.60 in^4
Ag	New= 5.81 in^2, Corroded= 5.01 in^2
S	New= 7.02 in^3, Corroded= 6.09 in^3
COUPLING	0.36″ Wall Collar
BOLTS	(3) 1-1/2″ Diam. SAE J429 Grade 5 Zinc Coated to ASTM B695/F1941
BLADES	0.875″ Thick, Helix Die-Pressed True Helix ASTM A36, or Better
COATING OPTIONS	Galvanized (G), Bare Steel (NG), Epoxy Powder Coated (EP)
PROPERTIES	
4.7 ft^{-1}	Ultimate Capacity-to-Torque Ratio
83,000 ft-lbs	Maximum Installation Torque
STRUCTURAL CAPACITY	
270 Tons	Ultimate Capacity
135 Tons	Allowable Capacity
BY TORQUE - COMPRESSION & TENSION	
195 Tons	Ultimate Compression & Tension
98 Tons	Allowable Compression & Tension

Note: Helical piles shall be installed to appropriate depth into suitable bearing stratum as determined by geotechnical engineer or local practice. Capacity by torque is based on advancing pile to maximum installation torque. A minimum factor of safety of 2.0 is recommended for determining allowable capacity from correlations with final installation torque. Deflections of 0.50″ are typical at allowable capacity. A higher factor of safety may be required for smaller deflections. For tension capacity, helical bearing plates must be deeply embedded. Load tests are recommended when practical.

5.5″ Product Line Helical Bearing Plate Specifications & Available Configurations

0.875″ Thick; ASTM A36 or Higher
3.88″ Helix Pitch
12″, 16″, 20″, 24″ Diameter
Standard Circular Helix, or
Patented Dual Cutting Edge Helix
Sharpened Edges - All Helix
*6 ft. Lead or Extension - up to 2 helical bearing plates
*10 ft. Lead or Extension - up to 3 helical bearing plates
*15 ft. Lead or Extension - up to 5 helical bearing plates
**** Standard Stocking Length***

All Magnum Products Made in U.S.A.
U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

Magnum Piering, Inc.
6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

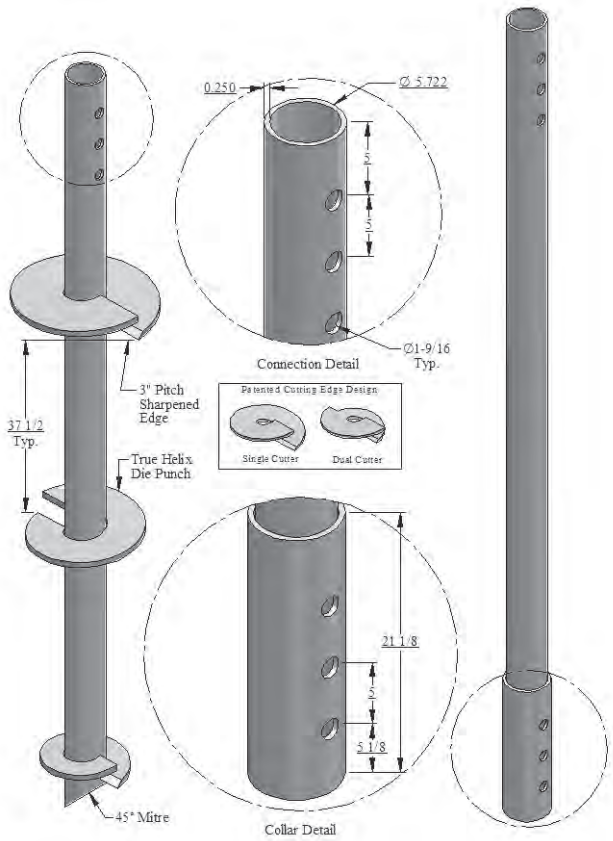
MAGNUM® MH625B Helical Piles

92 Ton Ultimate - 46 Ton Allowable

High-Strength 5.72″ Diameter, 0.25″ Wall, Round-Shaft with Rigid Coupler & (3)1-1/2″ Bolts

Description

Magnum MH625B Helical Piles have 92 tons ultimate capacity and 46 tons working capacity in compression and tension. Lead sections and extensions couple together to extend helical bearing plates to the desired bearing stratum. Round shafts offer increased lateral and buckling resistance compared to solid square shafts. Capacity calculations are based on average life expectancy of over 75 years for most soil conditions. Patented Magnum Dual-Cutting Edge helical bearing plates (DCE) enhance penetration through dense soils with occasional cobbles and debris. Custom lengths and helix configurations are available upon request. See Magnum Technical Reference Manual for additional information including design tools, prescriptive specifications and example plans.



Drawing above shows an example pile lead and extension section. Section lengths and number of helices vary with project requirements and soil conditions.

STEEL SPECIFICATIONS	
SHAFT	HSS 5.72″ x 0.25″ wall ASTM A513 65 KSI, or Equivalent
I	New= 16.12 in^4, Corroded= 12.90 in^4
Ag	New= 4.30 in^2, Corroded= 3.44 in^2
S	New= 5.63 in^3, Corroded= 4.55 in^3
COUPLING	0.46″ Wall Collar
BOLTS	(3) 1-1/2″ Diam. SAE J429 Grade 5 Zinc Coated to ASTM B695/F1941
BLADES	0.875” Thick, Helix Die-Pressed ASTM A36, or Better
COATING OPTIONS	Galvanized (G), Bare Steel (NG), Epoxy Powder Coated (EP)
PROPERTIES	
4.6 ft^{-1}	Ultimate Capacity-to-Torque Ratio
40,000 ft-lbs	Maximum Installation Torque
STRUCTURAL CAPACITY	
128 Tons	Ultimate Capacity
64 Tons	Allowable Capacity
BY TORQUE - COMPRESSION & TENSION	
92 Tons	Ultimate Compression & Tension
46 Tons	Allowable Compression & Tension

Note: Helical piles shall be installed to appropriate depth into suitable bearing stratum as determined by geotechnical engineer or local practice. Capacity by torque is based on advancing pile to maximum installation torque. A minimum factor of safety of 2.0 is recommended for determining allowable capacity from correlations with final installation torque. Deflections of 0.5″ are typical at allowable capacity. A higher factor of safety may be required for smaller deflections. For tension capacity, helical bearing plates must be deeply embedded. Load tests are recommended when practical.

6″ Product Line Helical Bearing Plate Specifications & Available Configurations

0.875″ Thick; ASTM A36 or Higher
3.88″ Blade Pitch
12″, 16″, 20″, 24″ Diameter
Standard Circular Helix, or
Patented Dual Cutting Edge Helix

Sharpened Edges - All Helix

*6 ft. Lead or Extension - up to 2 helical bearing plates
*10 ft. Lead or Extension - up to 3 helical bearing plates
*15 ft. Lead or Extension - up to 5 helical bearing plates

**** Standard Stocking Length***

All Magnum Products Made in U.S.A.

U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

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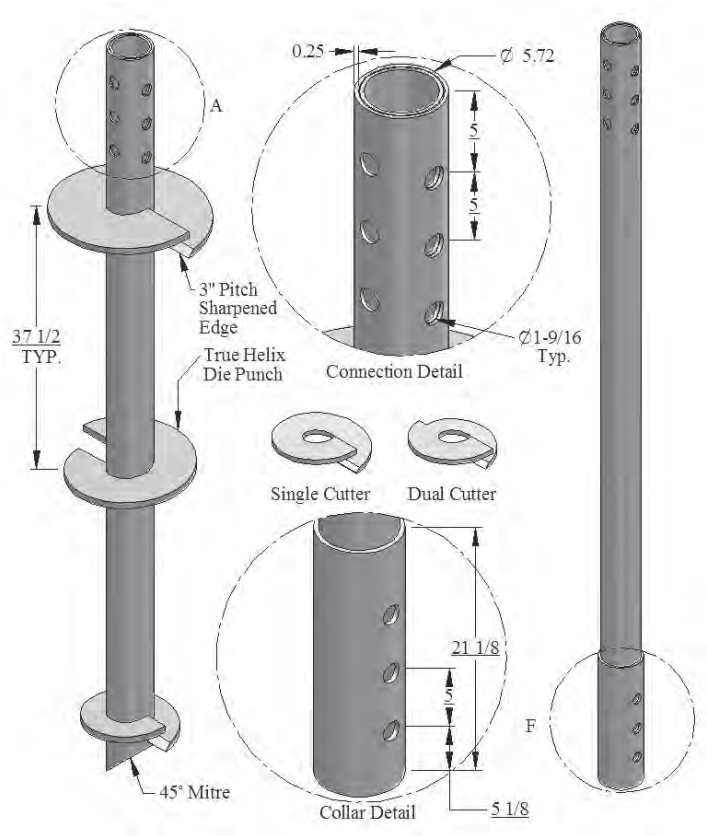
6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

MAGNUM® MH625BR Helical Piles
104 Ultimate - 52 Ton Allowable Capacity
High-Strength 5.72″ Diameter, 0.25″ Wall, Round-Shaft with Reinforced (R) Dual Sleeve Coupler & (3) 1-1/2″ Bolts

Description

Magnum MH625BR Helical Piles have 104 tons ultimate capacity and 52 tons working capacity in compression and tension. Lead sections and extensions couple together to extend helical bearing plates to the desired bearing stratum. Round shafts offer increased lateral and buckling resistance compared to solid square shafts. Capacity calculations are based on average life expectancy of over 75 years for most soil conditions. Patented Magnum Dual-Cutting Edge helical bearing plates (DCE) enhance penetration through dense soils with occasional cobbles and debris. Custom lengths and helix configurations are available upon request. See Magnum Technical Reference Manual for additional information including design tools, prescriptive specifications and example plans.



Drawing above shows an example pile lead and extension section. Section lengths and number of helices vary with project requirements and soil conditions.

STEEL SPECIFICATIONS	
SHAFT	HSS 5.72″ x 0.25″ wall ASTM A513 65 KSI, or Equivalent
I	New= 16.12 in^4, Corroded= 12.90 in^4
Ag	New= 4.30 in^2, Corroded= 3.44 in^2
S	New= 5.63 in^3, Corroded= 4.55 in^3
COUPLING	0.46″ Wall Collar with 0.25″ Wall Insert
BOLTS	(3) 1-1/2″ Diam. SAE J429 Grade 5 Zinc Coated to ASTM B695/F1941
BLADES	0.875″ Thick, Helix Die-Pressed ASTM A36, or Better
COATING OPTIONS	Galvanized (G), Bare Steel (NG), Epoxy Powder Coated (EP)
PROPERTIES	
4.6 ft^{-1}	Ultimate Capacity-to-Torque Ratio
45,000 ft-lbs	Maximum Installation Torque
STRUCTURAL CAPACITY	
128 Tons	Ultimate Capacity
64 Tons	Allowable Capacity
BY TORQUE - COMPRESSION & TENSION	
104 Tons	Ultimate Compression & Tension
52 Tons	Allowable Compression & Tension

Note: Helical piles shall be installed to appropriate depth into suitable bearing stratum as determined by geotechnical engineer or local practice. Capacity by torque is based on advancing pile to maximum installation torque. A minimum factor of safety of 2.0 is recommended for determining allowable capacity from correlations with final installation torque. Deflections of 0.5″ are typical at allowable capacity. A higher factor of safety may be required for smaller deflections. For tension capacity, helical bearing plates must be deeply embedded. Load tests are recommended when practical.

6″ Product Line Helical Bearing Plate Specifications & Available Configurations

0.875″ Thick; ASTM A36 or Higher
3.88″ Blade Pitch
12″, 16″, 20″, 24″ Diameter
Standard Circular Helix, or
Patented Dual Cutting Edge Helix
Sharpened Edges - All Helix
*6 ft. Lead or Extension - up to 2 helical bearing plates
*10 ft. Lead or Extension - up to 3 helical bearing plates
*15 ft. Lead or Extension - up to 5 helical bearing plates
**** Standard Stocking Length***

All Magnum Products Made in U.S.A.
U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

Magnum Piering, Inc.
6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

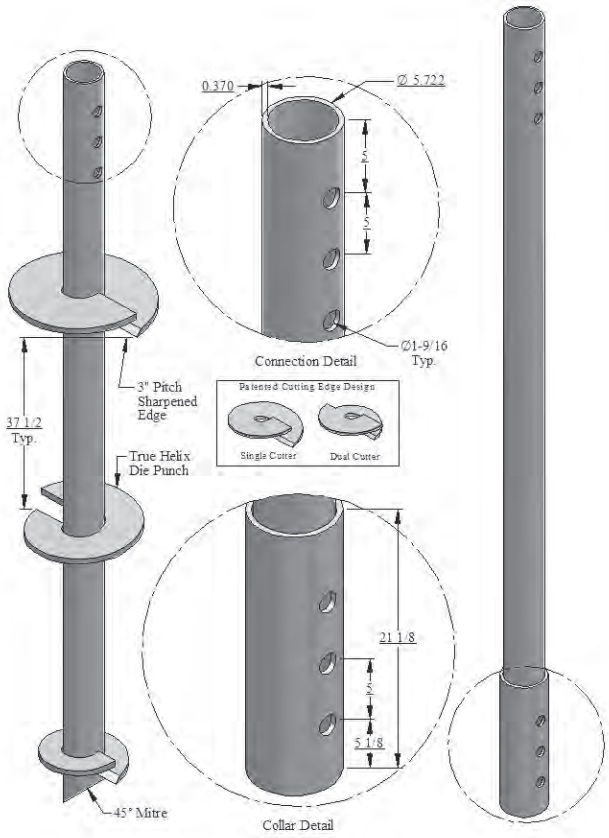
MAGNUM® MH637B Helical Piles

124 Ton Ultimate - 62 Ton Allowable Capacity

High-Strength 5.72″ Diameter, 0.37″ Wall, Round-Shaft with
Rigid Coupler & (3) 1-1/2″ Bolts

Description

Magnum MH637B Helical Piles have 124 tons ultimate capacity and 62 tons working capacity in compression and tension. Lead sections and extensions couple together to extend helical bearing plates to the desired bearing stratum. Round shafts offer increased lateral and buckling resistance compared to solid square shafts. Capacity calculations are based on average life expectancy of over 75 years for most soil conditions. Patented Magnum Dual-Cutting Edge helical bearing plates (DCE) enhance penetration through dense soils with occasional cobbles and debris. Custom lengths and helix configurations are available upon request. See Magnum Technical Reference Manual for additional information including design tools, prescriptive specifications and example plans.



Drawing above shows an example pile lead and extension section. Section lengths and number of helices vary with project requirements and soil conditions.

STEEL SPECIFICATIONS	
SHAFT	HSS 5.72″ x 0.37″ wall ASTM A513 65 KSI, or Equivalent
I	New= 22.38 in^4, Corroded= 19.35 in^4
Ag	New= 6.22 in^2, Corroded= 5.38 in^2
S	New= 7.82 in^3, Corroded= 6.82 in^3
COUPLING	0.46″ Wall Collar
BOLTS	(3) 1-1/2″ Diam. SAE J429 Grade 5 Zinc Coated to ASTM B695/F1941
BLADES	0.875″ Thick, Helix Die-Pressed ASTM A36, or Better
COATING OPTIONS	Galvanized (G), Bare Steel (NG), Epoxy Powder Coated (EP)
PROPERTIES	
4.6 ft^{-1}	Ultimate Capacity-to-Torque Ratio
54,000 ft-lbs	Maximum Installation Torque
STRUCTURAL CAPACITY	
199 Tons	Ultimate Capacity
100 Tons	Allowable Capacity
BY TORQUE - COMPRESSION & TENSION	
124 Tons	Ultimate Compression & Tension
62 Tons	Allowable Compression & Tension

Note: Helical piles shall be installed to appropriate depth into suitable bearing stratum as determined by geotechnical engineer or local practice. Capacity by torque is based on advancing pile to maximum installation torque. A minimum factor of safety of 2.0 is recommended for determining allowable capacity from correlations with final installation torque. Deflections of 0.5″ are typical at allowable capacity. A higher factor of safety may be required for tolerable deflections. For tension capacity, helical bearing plates must be deeply embedded. Loadtests are recommended when practical.

6″ Product Line Helical Bearing Plate Specifications & Available Configurations

0.875″ Thick; ASTM A36 or Higher
3.00″ Blade Pitch
12″, 16″, 20″, 24″ Diameter
Standard Circular Helix, or
Patented Dual Cutting Edge Helix

Sharpened Edges - All Helix

*6 ft. Lead or Extension - up to 2 helical bearing plates
*10 ft. Lead or Extension - up to 3 helical bearing plates
*15 ft. Lead or Extension - up to 5 helical bearing plates

**** Standard Stocking Length***

All Magnum Products Made in U.S.A.

U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

Magnum Piering, Inc.
6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

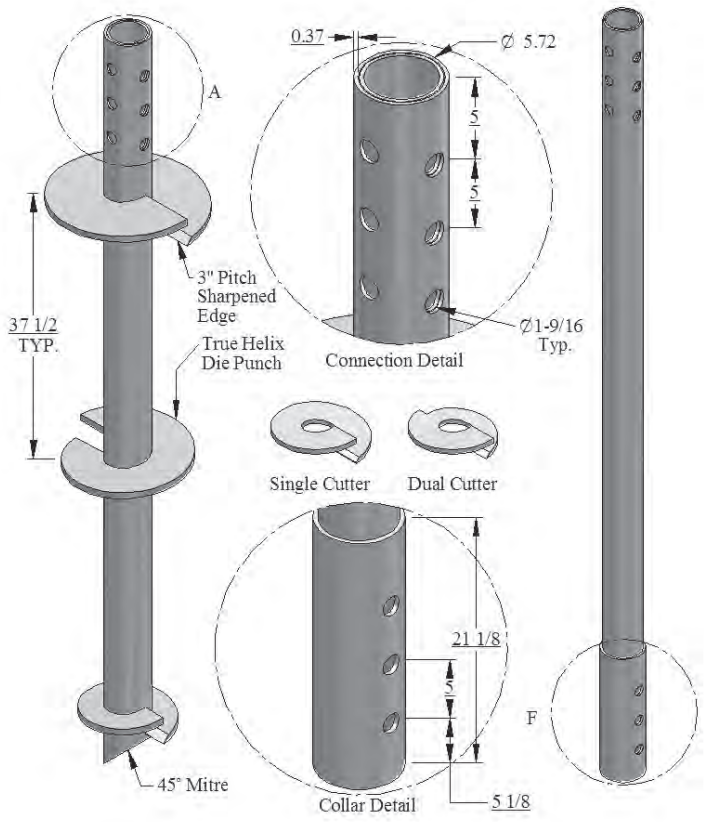
MAGNUM® MH637BR Helical Piles

150 Ton Ultimate - 75 Ton Allowable

High-Strength 5.72″ Diameter, 0.37″ Wall, Round-Shaft with
Dual-Sleeve Reinforced (R) Coupler & (3) 1-1/2″ Bolts

Description

Magnum MH637BR Helical Piles have 150 tons ultimate capacity and 75 tons working capacity in compression and tension. Lead sections and extensions couple together to extend helical bearing plates to the desired bearing stratum. Round shafts offer increased lateral and buckling resistance compared to solid square shafts. Capacity calculations are based on average life expectancy of over 75 years for most soil conditions. Patented Magnum Dual-Cutting Edge helical bearing plates (DCE) enhance penetration through dense soils with occasional cobbles and debris. Custom lengths and helix configurations are available upon request. See Magnum Technical Reference Manual for additional information including design tools, prescriptive specifications and example plans.



Drawing above shows an example pile lead and extension section. Section lengths and number of helices vary with project requirements and soil conditions.

STEEL SPECIFICATIONS	
SHAFT	HSS 5.72″ x 0.37″ wall ASTM A513 65 KSI, or Equivalent
I	New= 22.38 in^4, Corroded= 19.35 in^4
Ag	New= 6.22 in^2, Corroded= 5.38 in^2
S	New= 7.82 in^3, Corroded= 6.82 in^3
COUPLING	0.46″ Wall Collar
BOLTS	(3) 1-1/2″ Diam. SAE J429 Grade 5 Zinc Coated to ASTM B695/F1941
BLADES	0.875″ Thick, Helix Die-Pressed ASTM A36, or Better
COATING OPTIONS	Galvanized (G), Bare Steel (NG), Epoxy Powder Coated (EP)
PROPERTIES	
4.6 ft^{-1}	Ultimate Capacity-to-Torque Ratio
65,000 ft-lbs	Maximum Installation Torque
STRUCTURAL CAPACITY	
199 Tons	Ultimate Capacity
100 Tons	Allowable Capacity
BY TORQUE - COMPRESSION & TENSION	
150 Tons	Ultimate Compression & Tension
75 Tons	Allowable Compression & Tension

Note: Helical piles shall be installed to appropriate depth into suitable bearing stratum as determined by geotechnical engineer or local practice. Capacity by torque is based on advancing pile to maximum installation torque. A minimum factor of safety of 2.0 is recommended for determining allowable capacity from correlations with final installation torque. Deflections of 0.5″ are typical at allowable capacity. A higher factor of safety may be required for smaller deflections. For tension capacity, helical bearing plates must be deeply embedded. Load tests are recommended when practical.

6″ Product Line Helical Bearing Plate Specifications & Available Configurations

0.875″ Thick; ASTM A36 or Higher
3.00″ Blade Pitch
12″, 16″, 20″, 24″ Diameter
Standard Circular Helix, or
Patented Dual Cutting Edge Helix
Sharpened Edges - All Helix
*6 ft. Lead or Extension - up to 2 helical bearing plates
*10 ft. Lead or Extension - up to 3 helical bearing plates
*15 ft. Lead or Extension - up to 5 helical bearing plates
**** Standard Stocking Length***

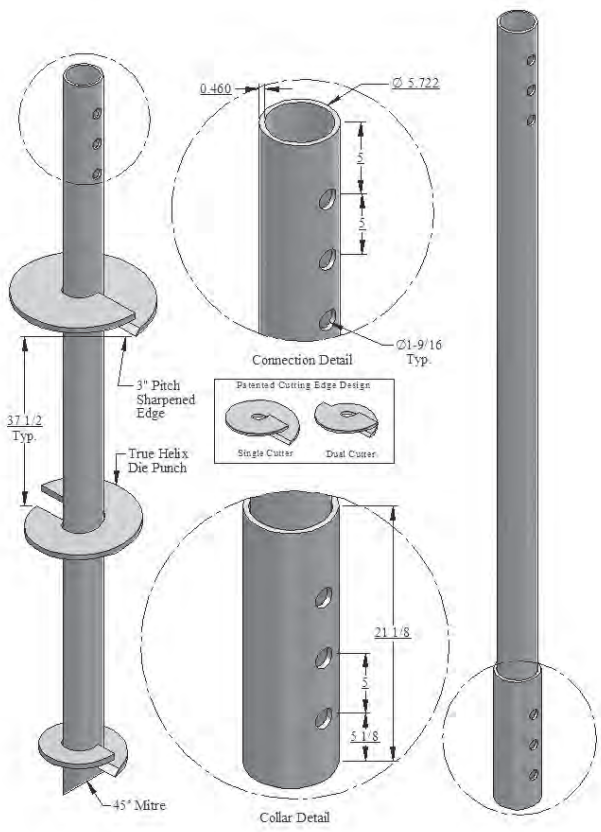
All Magnum Products Made in U.S.A.
U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

Magnum Piering, Inc.
6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

MAGNUM® MH646B Helical Piles
152 Ton Ultimate - 76 Ton Allowable Capacity
High-Strength 5.72″ Diameter, 0.46″ Wall, Round-Shaft with
Rigid Coupler & (3) 1-1/2″ Bolts

Description

Magnum MH646B Helical Piles have 152 tons ultimate capacity and 76 tons working capacity in compression and tension. Lead sections and extensions couple together to extend helical bearing plates to the desired bearing stratum. Round shafts offer increased lateral and buckling resistance compared to solid square shafts. Capacity calculations are based on average life expectancy of over 75 years for most soil conditions. Patented Magnum Dual-Cutting Edge helical bearing plates (DCE) enhance penetration through dense soils with occasional cobbles and debris. Custom lengths and helix configurations are available upon request. See Magnum Technical Reference Manual for additional information including design tools, prescriptive specifications and example plans.



Drawing above shows an example pile lead and extension section. Section lengths and number of helices vary with project requirements and soil conditions.

STEEL SPECIFICATIONS	
SHAFT	HSS 5.72″ x 0.46″ wall ASTM A513 65 KSI, or Equivalent
I	New= 26.52 in^4, Corroded= 23.61 in^4
Ag	New= 7.60 in^2, Corroded= 6.78 in^2
S	New= 9.27 in^3, Corroded= 8.33 in^3
COUPLING	0.46″ Wall Collar
BOLTS	(3) 1-1/2″ Diam. SAE J429 Grade 5 Zinc Coated to ASTM B695/F1941
BLADES	0.875” Thick, Helix Die-Pressed ASTM A36, or Better
COATING OPTIONS	Galvanized (G), Bare Steel (NG), Epoxy Powder Coated (EP)
PROPERTIES	
4.6 ft^{-1}	Ultimate Capacity-to-Torque Ratio
66,000 ft-lbs	Maximum Installation Torque
STRUCTURAL CAPACITY	
250 Tons	Ultimate Capacity
125 Tons	Allowable Capacity
BY TORQUE - COMPRESSION & TENSION	
152 Tons	Ultimate Compression & Tension
76 Tons	Allowable Compression & Tension

Note: Helical piles shall be installed to appropriate depth into suitable bearing stratum as determined by geotechnical engineer or local practice. Capacity by torque is based on advancing pile to maximum installation torque. A minimum factor of safety of 2.0 is recommended for determining allowable capacity from correlations with final installation torque. Deflections of 0.5″ are typical at allowable capacity. A higher factor of safety may be required for smaller deflections. For tension capacity, helical bearing plates must be deeply embedded. Load tests are recommended when practical.

6″ Product Line Helical Bearing Plate Specifications & Available Configurations

0.875″ Thick; ASTM A36 or Higher
3.00″ Blade Pitch
12″, 16″, 20″, 24″ Diameter
Standard Circular Helix, or
Patented Dual Cutting Edge Helix
Sharpened Edges - All Helix
*6 ft. Lead or Extension - up to 2 helical bearing plates
*10 ft. Lead or Extension - up to 3 helical bearing plates
*15 ft. Lead or Extension - up to 5 helical bearing plates
**** Standard Stocking Length***

All Magnum Products Made in U.S.A.
U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

Magnum Piering, Inc.
6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

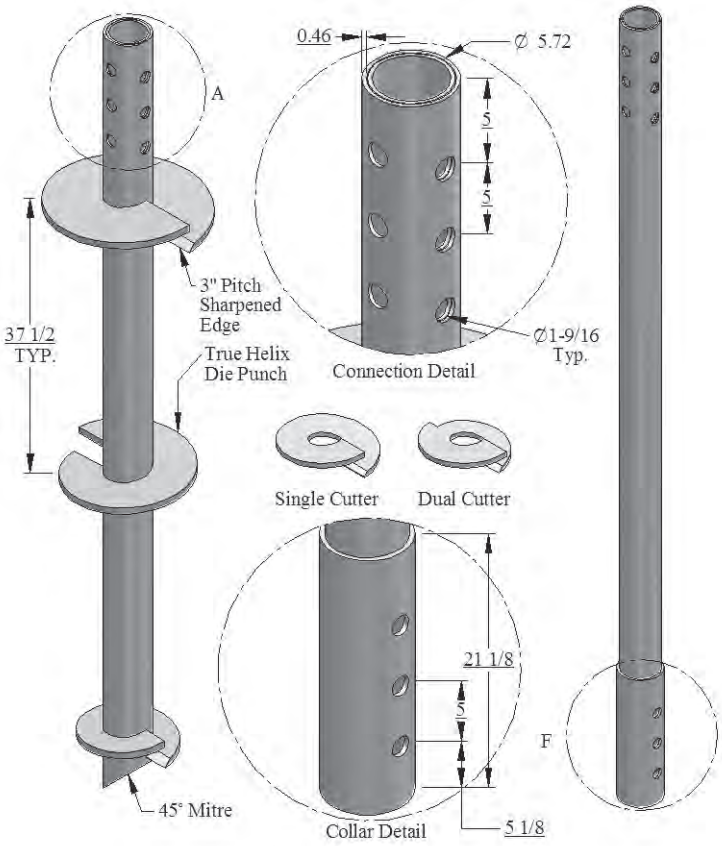
MAGNUM® MH646BR Helical Piles

184 Ton Ultimate - 92 Ton Allowable Capacity

High-Strength 5.72″ Diameter, 0.46″ Wall, Round-Shaft with
Dual-Sleeve Reinforced (R) Coupler & (3) 1-1/2″ Bolts

Description

Magnum MH646BR Helical Piles have 184 tons ultimate capacity and 92 tons working capacity in compression and tension. Lead sections and extensions couple together to extend helical bearing plates to the desired bearing stratum. Round shafts offer increased lateral and buckling resistance compared to solid square shafts. Capacity calculations are based on average life expectancy of over 75 years for most soil conditions. Patented Magnum Dual-Cutting Edge helical bearing plates (DCE) enhance penetration through dense soils with occasional cobbles and debris. Custom lengths and helix configurations are available upon request. See Magnum Technical Reference Manual for additional information including design tools, prescriptive specifications and example plans.



Drawing above shows an example pile lead and extension section. Section lengths and number of helices vary with project requirements and soil conditions.

STEEL SPECIFICATIONS	
SHAFT	HSS 5.72″ x 0.46″ wall ASTM A513 65 KSI, or Equivalent
I	New= 26.52 in^4, Corroded= 23.61 in^4
Ag	New= 7.60 in^2, Corroded= 6.78 in^2
S	New= 9.27 in^3, Corroded= 8.33 in^3
COUPLING	0.46″ Wall Collar with 0.46″ Insert
BOLTS	(3) 1-1/2″ Diam. SAE J429 Grade 5 Zinc Coated to ASTM B695/F1941
BLADES	0.875″ Thick, Helix Die-Pressed ASTM A36, or Better
COATING OPTIONS	Galvanized (G), Bare Steel (NG), Epoxy Powder Coated (EP)
PROPERTIES	
4.6 ft^{-1}	Ultimate Capacity-to-Torque Ratio
80,000 ft-lbs	Maximum Installation Torque
STRUCTURAL CAPACITY	
250 Tons	Ultimate Capacity
125 Tons	Allowable Capacity
BY TORQUE - COMPRESSION & TENSION	
184 Tons	Ultimate Compression & Tension
92 Tons	Allowable Compression & Tension

Note: Helical piles shall be installed to appropriate depth into suitable bearing stratum as determined by geotechnical engineer or local practice. Capacity by torque is based on advancing pile to maximum installation torque. A minimum factor of safety of 2.0 is recommended for determining allowable capacity from correlations with final installation torque. Deflections of 0.5″ are typical at allowable capacity. A higher factor of safety may be required for smaller deflections. For tension capacity, helical bearing plates must be deeply embedded. Load tests are recommended when practical.

6″ Product Line Helical Bearing Plate Specifications & Available Configurations

0.875″ Thick; ASTM A36 or Higher
3.00″ Blade Pitch
12″, 16″, 20″, 24″ Diameter
Standard Circular Helix, or
Patented Dual Cutting Edge Helix

Sharpened Edges - All Helix

*6 ft. Lead or Extension - up to 2 helical bearing plates
*10 ft. Lead or Extension - up to 3 helical bearing plates
*15 ft. Lead or Extension - up to 5 helical bearing plates

**** Standard Stocking Length***

All Magnum Products Made in U.S.A.
U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

Magnum Piering, Inc.
6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

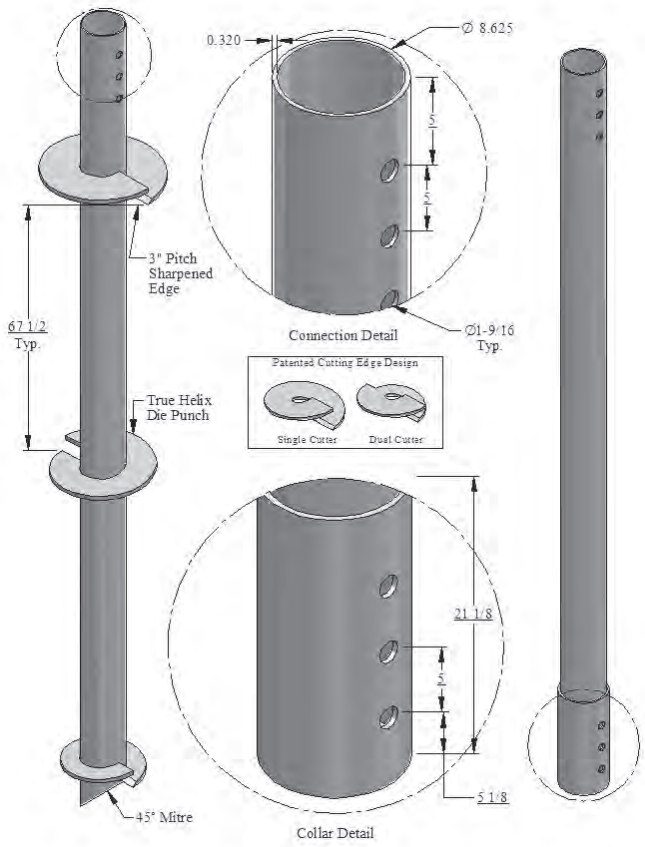
MAGNUM® MH832B Helical Piles

132 Ton Ultimate - 66 Ton Allowable

High-Strength 8.63″ Diameter, 0.32″ Wall, Round-Shaft with Rigid Coupler & (3)1-1/2″ Bolts

Description

Magnum MH832B Helical Piles have 132 tons ultimate capacity and 66 tons working capacity in compression and tension. Lead sections and extensions couple together to extend helical bearing plates to the desired bearing stratum. Round shafts offer increased lateral and buckling resistance compared to solid square shafts. Capacity calculations are based on average life expectancy of over 75 years for most soil conditions. Patented Magnum Dual-Cutting Edge helical bearing plates (DCE) enhance penetration through dense soils with occasional cobbles and debris. Custom lengths and helix configurations are available upon request. See Magnum Technical Reference Manual for additional information including design tools, prescriptive specifications and example plans.



Drawing above shows an example pile lead and extension section. Section lengths and number of helices vary with project requirements and soil conditions.

STEEL SPECIFICATIONS	
SHAFT	HSS 8.63″ x 0.32″ wall ASTM A513 65 KSI, or Equivalent
I	New= 72.09 in^4, Corroded= 60.84 in^4
Ag	New= 8.35 in^2, Corroded= 7.05 in^2
S	New= 16.72 in^3, Corroded= 14.19 in^3
COUPLING	0.375″ Wall Collar
BOLTS	(3) 1-1/2″ Diam. SAE J429 Grade 5 Zinc Coated to ASTM B695/F1941
BLADES	0.875” Thick, Helix Die-Pressed ASTM A36, or Better
COATING OPTIONS	Galvanized (G), Bare Steel (NG), Epoxy Powder Coated (EP)
PROPERTIES	
3.1 ft^{-1}	Ultimate Capacity-to-Torque Ratio
85,000 ft-lbs	Maximum Installation Torque
STRUCTURAL CAPACITY	
175 Tons	Ultimate Capacity
88 Tons	Allowable Capacity
GEOTECHNICAL CAPACITY BY TORQUE	
132 Tons	Ultimate Compression & Tension
66 Tons	Allowable Compression & Tension

Note: Helical piles shall be installed to appropriate depth into suitable bearing stratum as determined by geotechnical engineer or local practice. Capacity by torque is based on advancing pile to maximum installation torque. A minimum factor of safety of 2.0 is recommended for determining allowable capacity from correlations with final installation torque. Deflections of 0.5″ are typical at allowable capacity. A higher factor of safety may be required for smaller deflections. For tension capacity, helical bearing plates must be deeply embedded. Load tests are recommended when practical.

8″ Product Line Helical Bearing Plate Specifications & Available Configurations

0.875″ Thick; ASTM A36 or Higher
3.00″ Blade Pitch
16″, 20″, 24″ Diameter
Standard Circular Helix, or
Patented Dual Cutting Edge Helix

Sharpened Edges - All Helix

*6 ft. Lead or Extension - up to 1 helical bearing plates
*10 ft. Lead or Extension - up to 2 helical bearing plates
*15 ft. Lead or Extension - up to 3 helical bearing plates

**** Standard Stocking Length***

All Magnum Products Made in U.S.A.

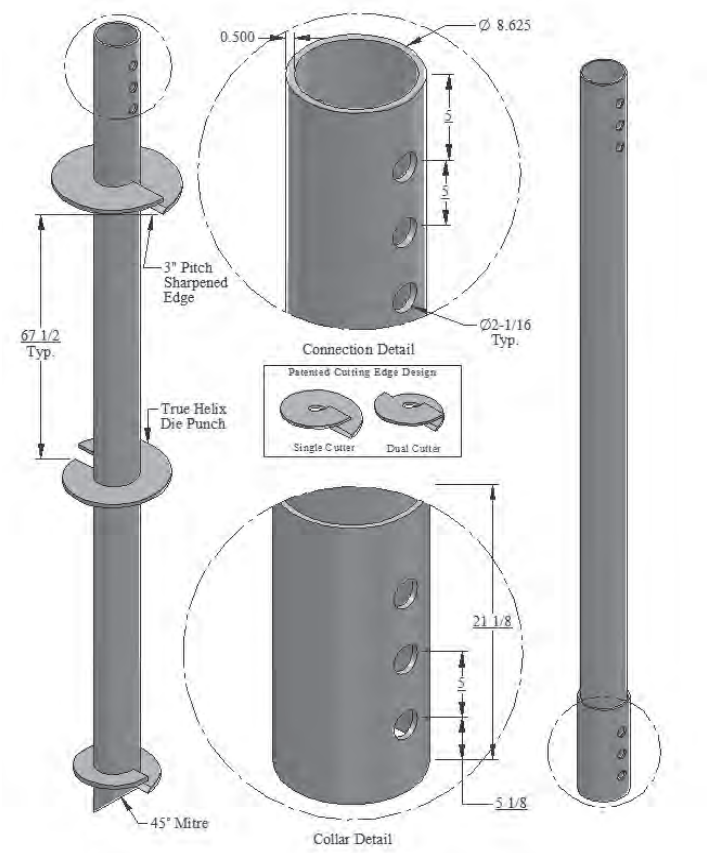
U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

Magnum Piering, Inc.
6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

MAGNUM® MH850B Helical Piles
266 Ton Ultimate - 133 Ton Allowable
High-Strength 8.63″ Diameter, 0.50″ Wall, Round-Shaft with Rigid Coupler & (3) 2″ Bolts

Description

Magnum MH850B Helical Piles have 266 tons ultimate capacity and 133 tons working capacity in compression and tension. Lead sections and extensions couple together to extend helical bearing plates to the desired bearing stratum. Round shafts offer increased lateral and buckling resistance compared to solid square shafts. Capacity calculations are based on average life expectancy of over 75 years for most soil conditions. Patented Magnum Dual-Cutting Edge helical bearing plates (DCE) enhance penetration through dense soils with occasional cobbles and debris. Custom lengths and helix configurations are available upon request. See Magnum Technical Reference Manual for additional information including design tools, prescriptive specifications and example plans.



Drawing above shows an example pile lead and extension section. Section lengths and number of helices vary with project requirements and soil conditions.

STEEL SPECIFICATIONS	
SHAFT	HSS 8.63″ x 0.5″ wall ASTM A513 65 KSI, or Equivalent
I	New= 105 in^4, Corroded= 95 in^4
Ag	New= 12.8 in^2, Corroded= 11.5 in^2
S	New= 24.5 in^3, Corroded= 22.2 in^3
COUPLING	0.5″ Min. Wall Collar
BOLTS	(3) 2″ Diameter SAE J429 Grade 5 Zinc Coated to ASTM B695/F1941
BLADES	0.875″ Thick, Helix Die-Pressed ASTM A36 or Better
COATING OPTIONS	Galvanized (G), Bare Steel (NG), Epoxy Powder Coated (EP)
PROPERTIES	
3.1 ft^{-1}	Ultimate Capacity-to-Torque Ratio
170,000 ft-lbs	Maximum Installation Torque
STRUCTURAL CAPACITY	
438 Tons	Ultimate Capacity
219 Tons	Allowable Capacity
GEOTECHNICAL CAPACITY BY TORQUE	
264 Tons	Ultimate Compression & Tension
132 Tons	Allowable Compression & Tension

Note: Helical piles shall be installed to appropriate depth into suitable bearing stratum as determined by geotechnical engineer or local practice. Capacity by torque is based on advancing pile to maximum installation torque. A minimum factor of safety of 2.0 is recommended for determining allowable capacity from correlations with final installation torque. Deflections of 0.5″ are typical at allowable capacity. A higher factor of safety may be required for smaller deflections. For tension capacity, helical bearing plates must be deeply embedded. Load tests are recommended when practical.

8″ Product Line Helical Bearing Plate Specifications & Available Configurations

0.875″ Thick; ASTM A36 or Higher
3.00″ Blade Pitch
16″, 20″, & 24″ Diameter
Standard Circular Helix, or
Patented Dual Cutting Edge Helix
Sharpened Edges - All Helix

*10 ft. Lead or Extension - up to 2 helical bearing plates
*15 ft. Lead or Extension - up to 3 helical bearing plates
**** Standard Stocking Length***

All Magnum Products Made in U.S.A.
U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

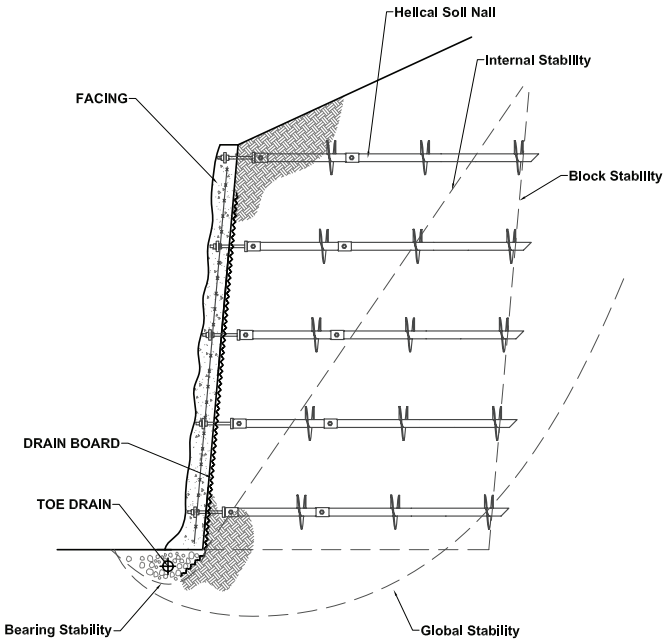
Magnum Piering, Inc.
6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

MAGNUM PIERING® Helical Soil Nails

Continuous Bonded Helical Anchors for Soil Reinforcement
Used in Earth Retention and Slope Stabilization

Description

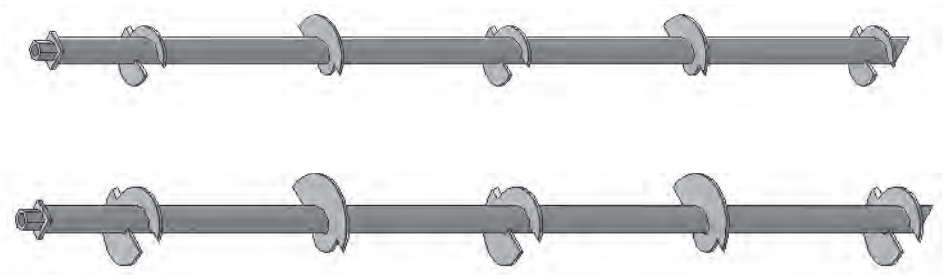
As can be seen in the figure to the right, soil nailing is the process of using helical shafts to reinforce slopes and blocks of soil for earth retention and stabilization. Helical soil nails have helical bearing plates spaced along the entire length of the shaft for continuous bonding with the soil. As opposed to grouted anchors which are generally 4 to 6 inches in diameter, helical soil nails mobilize a bonded diameter that is 8 or 10 inches in diameter for a greater reinforcing effect. Soil nailing permits the use of relatively thin shotcrete facing or steel mesh to prevent raveling between nails as opposed to the heavy reinforced facing required for soil anchor walls. Since helical soil nails are intended for earth reinforcement, the termination criteria for the anchors is based on length as opposed to minimum installation torque. Soil nail lengths then are fixed length (typically 0.7 to 0.8 times the slope/wall height). Fixed length allows for the shafts to be manufactured with an integrated thread bar adapter. There is no need to cut-off and re-drill the shaft. Helical soil nails have many advantages over traditional grouted soil nails. Installation is very rapid. There are no issues with caving soils and/or ground water, and there is no waiting for grout to set.



from Perko (2009)
Helical Piles: A Practical Guide to Design and Installation

SPECIFICATIONS					
DESIGNATION	SHAFT DIAMETER	HELIX DIAMETER	CORRODED GROSS AREA OF SHAFT	MAX. ALLOWABLE TENSILE STRENGTH	MAX. ALLOWABLE SHEAR STRENGTH
MHL313BN12K8D8D8D8D8DG	3″	8″	1.1 IN^2	11 TONS	5 TONS
MHL313BN12K10D10D10D10D10DG	3″	10″	1.1 IN^2	11 TONS	5 TONS

Note: Specification table provides two examples of helical soil nail sizes. Other lengths and sizes available.



All Magnum Products Made in U.S.A.
U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

Magnum Piering, Inc.
6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

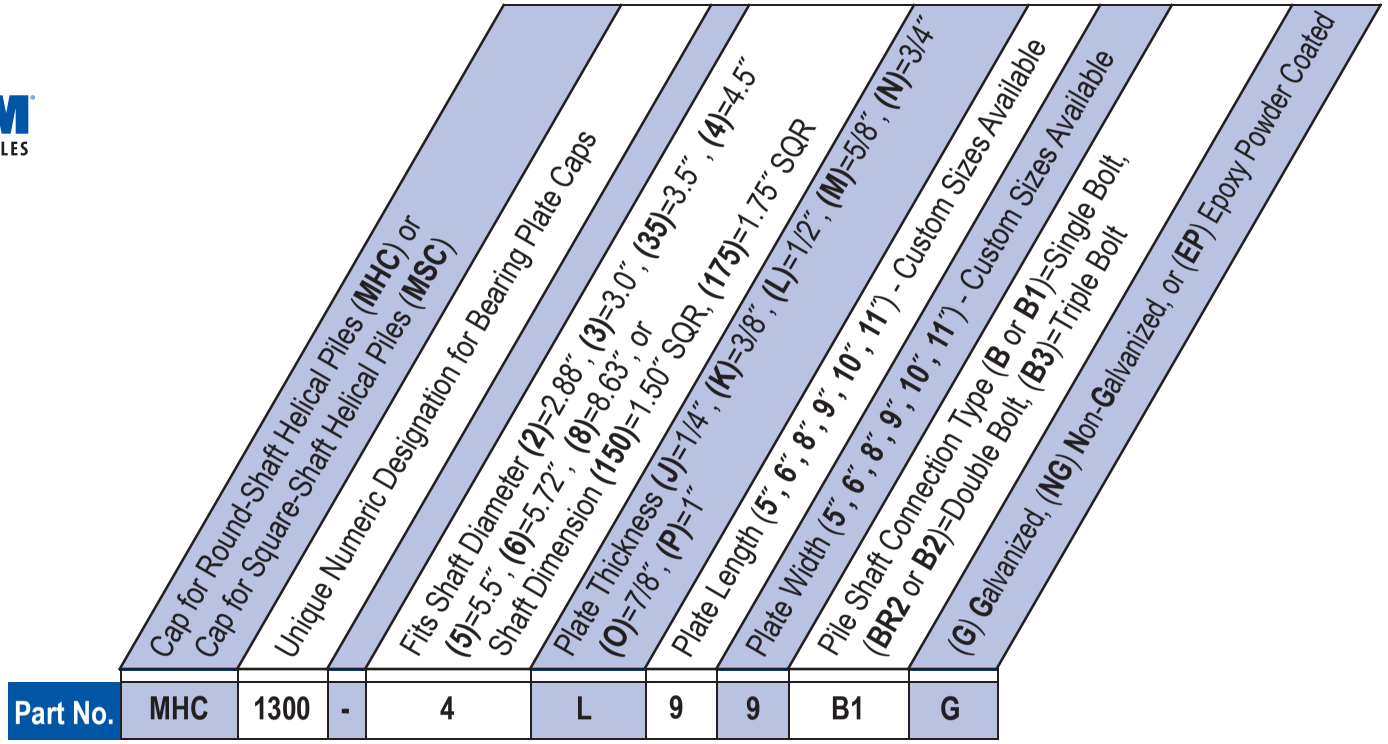
section 3

STEEL PILE CAPS

MAGNUM PIERING, INC.

Magnum® Bearing Plate Cap
Product Number Specification Legend

Magnum Piering, Inc.
ISO 9001:2008
Certified



Part No.	MHC	1300	-	4	L	9	9	B1	G

Explanation:

The Magnum Bearing Plate Cap product number above **MHC1300-4L99B1G** is for a Cap with 4.6″ inside diameter collar tube with a 9″ long by 9″ wide plate with 0.5″ thickness, a Bolted connection, and the surface preparation is Galvanized.

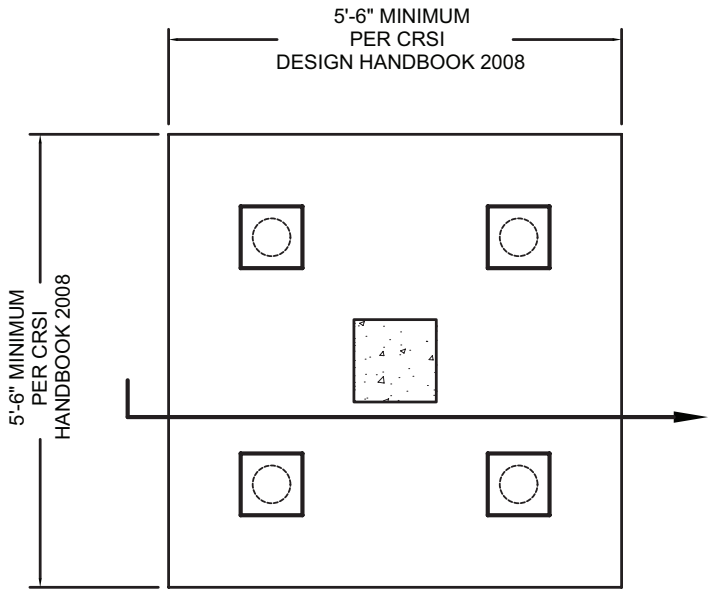
Note: See "Magnum Piering Bearing Plate Cap Specifications" table on next page for detailed information. Specification information is also available at ***www.magnumpiering.com***

MAGNUM® Bearing Plate Cap Application Guide for Punching Shear

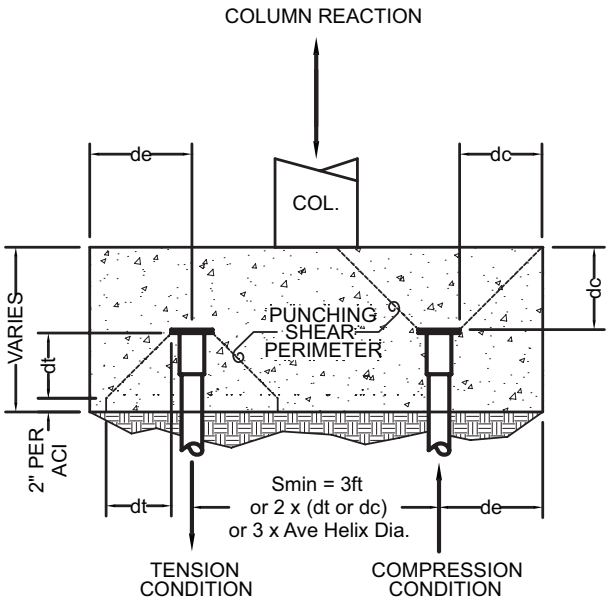
Structural Plain Concrete

Minimum Concrete Cover to Obtain Rated Capacities for MAGNUM® Bearing Plate Caps[2]				
Bearing Plate Cap	2500 psi Conc.		4000 psi Conc.	
	dc (in)	dt (in)	dc (in)	dt (in)
MHC1300-2J55B	16	16	12	12
MHC1300-3J55B	26	22	19	16
MHC1300-3K66BR1	36	26	28	17
MHC1300-3L6565BR2	32	32	24	24
MHC1300-35K66BR	36	26	28	17
MHC1300-4L88B1	49	18	37	12
MHC1300-4L88B2	49	36	37	27
MHC1300-6N99B1	78	15	60	13
MHC1300-5N99B3	78	45	60	40

Notes:
[1] Code minimum per IBC chapter 18.
[2] Design all concrete pile caps in accordance to ACI 318 Chapter 22 and IBC Chapter 18. Punching shear area is based upon dimensions (dc and dt) on all four sides of the steel cap edges. Assumes uncracked concrete per ACI Chapter 22.



TYPICAL PILE CAP
4-PILE ARRANGEMENT SHOWN



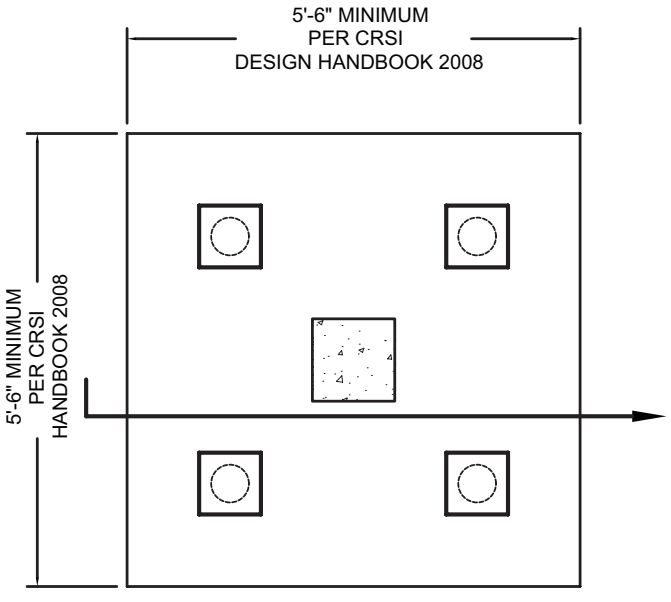
TYPICAL SECTION
4-PILE ARRANGEMENT SHOWN

MAGNUM® Bearing Plate Cap Application Guide for Punching Shear

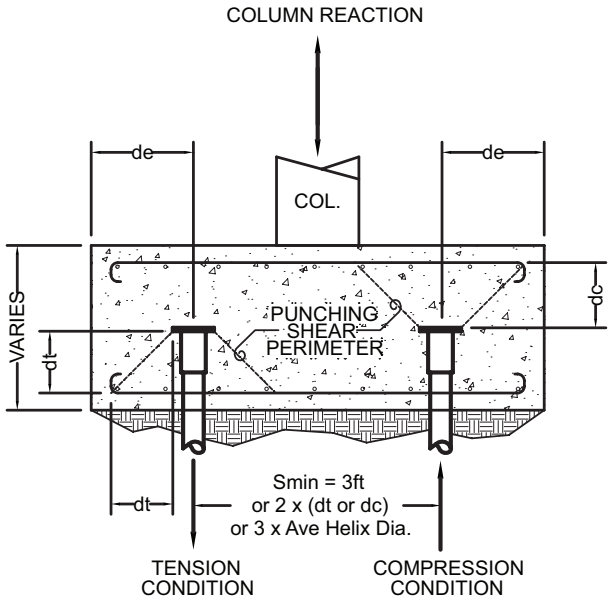
Reinforced Concrete

Minimum Concrete Cover to Obtain Rated Capacities for MAGNUM® Bearing Plate Caps[2]				
Bearing Plate Cap	2500 psi Conc.		4000 psi Conc.	
	dc (in)	dt (in)	dc (in)	dt (in)
MHC1300-2J55B	8	8	4[1]	4[1]
MHC1300-3J55B	13	11	8	6
MHC1300-3K66BR1	16	9	12	6
MHC1300-3L6565BR2	14	14	10	10
MHC1300-35K66BR	16	9	12	6
MHC1300-4L88B1	22	6	16	4[1]
MHC1300-4L88B2	22	16	16	11
MHC1300-6N99B1	32	4[1]	23	4[1]
MHC1300-5N99B3	32	20	23	14

Notes:
[1] Code minimum per IBC chapter 18.
[2] Design all concrete pile caps and reinforcing in accordance to the CRSI Design Handbook, 2008. Per CRSI, minimum edge distance (de) is 15 inches up to 60 ton piles and 21 inches up to 120 ton piles. Punching shear area is based upon dimensions (dc and dt) on all four sides of pile caps.



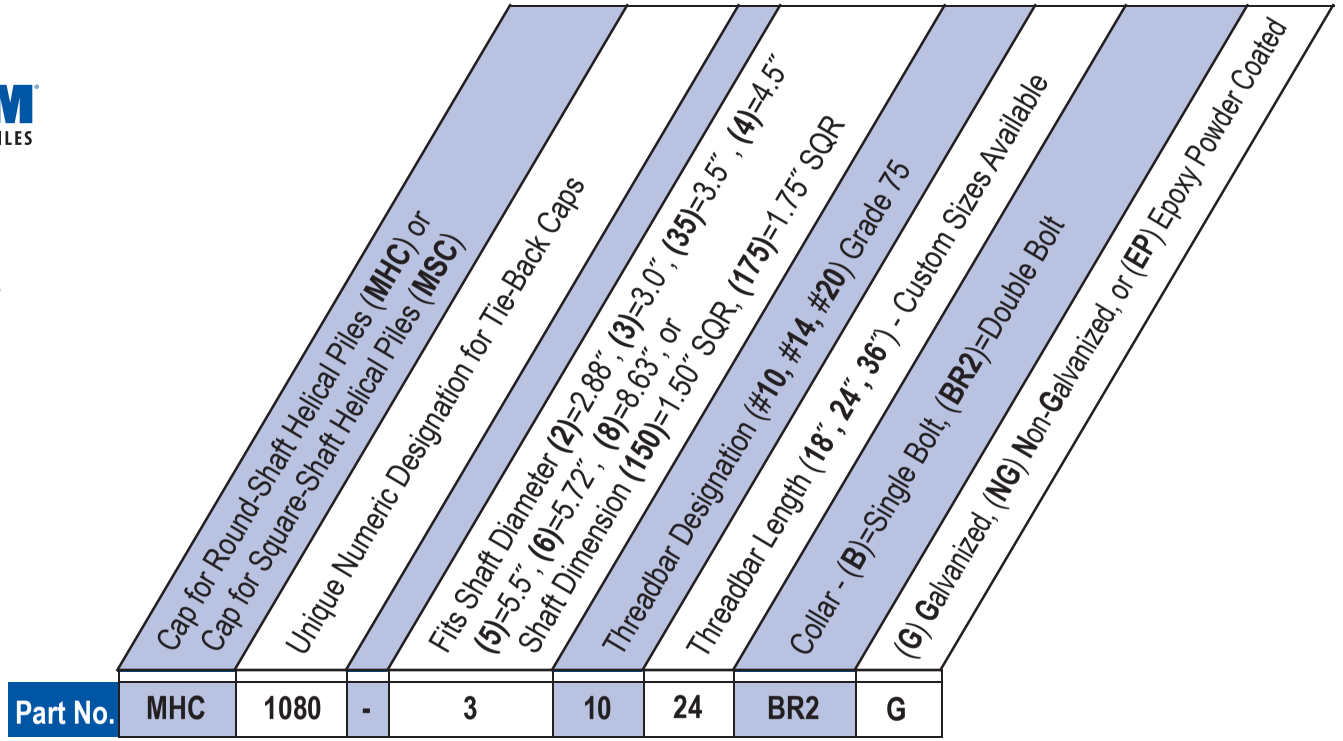
TYPICAL PILE CAP
4-PILE ARRANGEMENT SHOWN



TYPICAL SECTION
4-PILE ARRANGEMENT SHOWN

Magnum® Tie-Back Cap
Product Number Specification Legend

Magnum Piering, Inc.
ISO 9001:2008
Certified

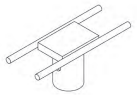
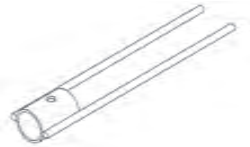


Explanation:

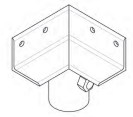
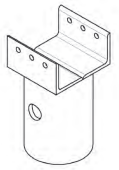
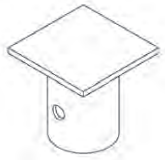
The Magnum Piering Tie-Back Cap product number above **MHC1080-31024BR2G** is for a threaded tie-back cap with 24″ long, #10 GR75 thread bar. The collar tube fits a 3.0″ diameter shaft with reinforced double bolted connection. The surface preparation is Galvanized.

Note: See "Magnum Tie-Back Specifications" table on next page for detailed information. Specification information is also available at ***www.magnumpiering.com***

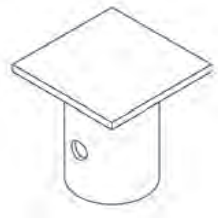
Magnum® Piering
Helical Pile Cap Specifications

Magnum® Helical Pile Caps	System Ratings & Specifications								
	Name	Fits Helical Pile Diam. (in)	No. Bolts / Thru Holes	Bolt Hole Diam. (In)	Structural Capacity*		Description	Surface Coating**	Schematic
					Ultimate (tons) Comp / Tens	Allowable (tons) Comp / Tens			
MHC1000-3B	Grade Beam Cap	3.00	1	7/8	50 / 32	25 / 16	4″x6″x1″ Plate and 2#7 Bars Horiz.	G, NG, EP	
MHC1000-3BR2	Grade Beam Cap	3.00	2	1	50 / 50	25 / 25	4″x6″x1″ Plate w/ 2#7 Bars Horiz.	G, NG, EP	
MSC1040-150B	Bond Bar Cap	1.50x1.50	1	7/8	33 / 33	16 / 16	Square Socket Tube with (2) #7 Bars Vertical	G, NG, EP	
MSC1040-175B	Bond Bar Cap	1.75x1.75	1	1	55 / 55	28 / 28	Square Socket Tube with (3) #7 Bars Vertical	G, NG, EP	
MHC1040-3B	Bond Bar Cap	3.00	1	7/8	32 / 32	16 / 16	Standard Collar Tube with (2) #7 Bars Vertical	G, NG, EP	
MHC1040-3BR2	Bond Bar Cap	3.00	2	1	50 / 50	25 / 25	Standard Collar Tube with (3) #7 Bars Vertical	G, NG, EP	
MHC1040-4B	Bond Bar Cap	4.50	2	1.25	72 / 72	36 / 36	Standard Collar Tube with (4) #7 Bars Vertical	G, NG, EP	
MSC1080-150824B	Tie-Back Cap	1.50x1.50	1	7/8	33 / 33	16 / 16	Threaded Cap w/ 0.875” Thru Bolt, #8 Thread Bar x 24.00” with (1) #8 Nut	G, NG, EP	
MSC1080-1751024B	Tie-Back Cap	1.75x1.75	1	7/8	55 / 55	28 / 28	Threaded Cap w/ 1.00” Thru Bolt, #10 Thread Bar x 24.00” with (1) #10 Nut	G, NG, EP	
MHC1080-3824B	Tie-Back Cap	3.00	1	1	32 / 32	16 / 16	Threaded Cap w/ 0.875” Thru Bolt, #8 Thread Bar x 24.00” with (1) #8 Nut	G, NG, EP	
MHC1080-31024BR2	Tie-Back Cap	3.00	1	7/8	50 / 50	25 / 25	Threaded Cap w/ 1.00” Thru Bolt, #10 Thread Bar x 24.00” with (1) #10 Nut	G, NG, EP	
MHC1080-35824B	Tie-Back Cap	3.50	2	1	32 / 32	16 / 16	Threaded Cap w/ 1.00” Thru Bolt, #8 Thread Bar x 24.00” with (1) #8 Nut	G, NG, EP	
MHC1080-41024B	Tie-Back Cap	4.50	1	1	63 / 63	31 / 31	Threaded Cap w/ (2) 1.25” Thru Bolts, #10 Thread Bar x 24.00” with (1) #10 Nut	G, NG, EP	
MHC1080-41424B	Tie-Back Cap	4.50	2	1.25	97 / 97	48 / 48	Threaded Cap w/ (2) 1.25” Thru Bolts, #14 Thread Bar x 24.00” with (1) #14 Nut	G, NG, EP	
MHC1080-52024B	Tie-Back Cap	5.50	2	1.25	196 / 196	98 / 98	Threaded Cap w/ (3) 1.50” Thru Bolts, #20 Thread Bar x 24.00” with (1) #20 Nut	G, NG, EP	
MHC1080-62024B	Tie-Back Cap	5.72	3	1.5	191 / 191	95 / 95	Threaded Cap w/ (3) 1.50” Thru Bolts, #20 Thread Bar x 24.00” with (1) #20 Nut	G, NG, EP	

Magnum® Piering
Helical Pile Cap Specifications (Cont.)

Magnum® Helical Pile Caps	System Ratings & Specifications								
	Name	Fits Helical Pile Diam. (in)	No. Bolts / Thru Holes	Bolt Hole Diam. (In)	Structural Capacity*		Description	Surface Coating**	Schematic
					Ultimate (tons) Comp / Tens	Allowable (tons) Comp / Tens			
MHC1100-316	Slab Lift Cap	3.00	0	n/a	28 / 0	14 / 0	6.00″ x 3.50″ x .375″ x 16.00″ Long Channel with (1) 1.125″ Lifting Bolt	G, NG, EP	
MHC1100-336	Slab Lift Cap	3.00	0	n/a	28 / 0	14 / 0	6.00″ x 3.50″ x .375″ x 36.00″ Long Channel with (1) 1.125″ Lifting Bolt	G, NG, EP	
MHC1120-3B	Wood Beam Cap	3.00	1	7/8	16 / 16	8 / 8	L3.5"x3.5"x0.25" x 11" Long Angle	G, NG, EP	
MHC1121-3B	Wood Beam Cap	3.00	1	7/8	32 / 32	16 / 16	L4"x4"x3/8" x 21" Long Angle	G, NG, EP	
MHC1122-3B	Boardwalk Cap	3.00	(4)Hilti EDS PAF		12 / 12	6 / 6	L8"x4"x1/8" x 8" Long Formed Angle w/ 4-1/2" Lags	G, NG, EP	
MHC1123-3B	Boardwalk Cap	3.00	1	7/8	16 / 16	8 / 8	L8"x3.75"x1/8" x 6" Long Formed Angle	G, NG, EP	
MHC1130-3B	Wood Corner Cap	3.00	1	7/8	16 / 16	8 / 8	(2) L3.5″x3.5″x0.25″ - 7.25″ Long Angles Oriented 90 deg	G, NG, EP	
MHC1130-35B	Wood Corner Cap	3.50	1	7/8	16 / 16	8 / 8	(2) L3.5″x3.5″x0.25″ - 7.25″ Long Angles Oriented 90 deg	G, NG, EP	
MHC1160-3B	4x4 Post Cap	3.00	1	7/8	17 / 17	8 / 8	2" tall 3.625 x 3.625 x 3/16" Post Base	G, NG, EP	
MHC1160-35B	4x4 Post Cap	3.50	1	1	17 / 17	8 / 8	2" tall 3.625 x 3.625 x 3/16" Post Base	G, NG, EP	
MHC1161-3B	6x6 Post Cap	3.00	1	7/8	32 / 32	16 / 16	3" tall 5.625 x 5.625 x 3/16" Post Base	G, NG, EP	
MHC1206-3B	ID Plate Cap	3.00	1	7/8	32 / 32	16 / 16	6"x6"x3/8" Plate w/ 1/2" Threaded Hole	G, NG, EP	
MHC1207-3B	OD Plate Cap	3.00	1	7/8	32 / 32	16 / 16	6"x6"x3/8" Plate w/ 1/2" Threaded Hole	G, NG, EP	
MSC1300-150L55B	Bearing Plate Cap	1.50x1.50	1	7/8	35 / 25	17.5 / 12.5	5"x5"x1/2" Plate	G, NG, EP	
MSC1300-175M6565B	Bearing Plate Cap	1.75x1.75	1	1	55 / 40	27.5 / 20	6.5"x6.5"x5/8" Plate	G, NG, EP	
MHC1300-2J55B	Bearing Plate Cap	2.88	1	7/8	23 / 16	12 / 8	5"x5"x1/4" Plate	G, NG, EP	

Magnum® Piering
Helical Pile Cap Specifications (Cont.)

Magnum® Helical Pile Caps	System Ratings & Specifications								
	Name	Fits Helical Pile Diam. (in)	No. Bolts / Thru Holes	Bolt Hole Diam. (In)	Structural Capacity*		Description	Surface Coating**	Schematic
					Ultimate (tons) Comp / Tens	Allowable (tons) Comp / Tens			
MHC1300-3J55B	Bearing Plate Cap	3.00	1	7/8	35 / 25	17 / 12	5"x5"x1/4" Plate	G, NG, EP	
MHC1300-3K66BR1	Bearing Plate Cap	3.00	1	1	50 / 35	25 / 17	6"x6"x3/8" Plate	G, NG, EP	
MHC1300-3L6565BR2	Bearing Plate Cap	3.00	2	1	50 / 50	25 / 25	6.5"x6.5"x1/2" Plate	G, NG, EP	
MHC1300-35K66BR1	Bearing Plate Cap	3.00	1	1	50 / 35	25 / 17	6"x6"x3/8" Plate	G, NG, EP	
MHC1300-4L88B1	Bearing Plate Cap	4.50	1	1.25	90 / 40	45 / 20	8"x8"x1/2" Plate	G, NG, EP	
MHC1300-4L88B2	Bearing Plate Cap	4.50	2	1.25	90 / 66	45 / 33	8"x8"x1/2" Plate	G, NG, EP	
MHC1300-5N99B1	Bearing Plate Cap	5.50	1	1.5	137 / 42	68 / 21	9"x9"x3/4" Plate	G, NG, EP	
MHC1300-5N99B3	Bearing Plate Cap	5.50	3	1.5	137 / 88	68 / 44	9"x9"x3/4" Plate	G, NG, EP	
MHC1300-5O1111B1	Bearing Plate Cap	5.50	1	1.5	195 / 65	98 / 33	11"x11"x7/8" Plate	G, NG, EP	
MHC1300-5O1111B3	Bearing Plate Cap	5.50	3	1.5	195 / 148	98 / 74	11"x11"x7/8" Plate	G, NG, EP	
MHC1300-6L8585B1	Bearing Plate Cap	5.72	1	1.5	104 / 35	52 / 17	8.5"x8.5"x1/2" Plate	G, NG, EP	
MHC1300-6L8585B3	Bearing Plate Cap	5.72	3	1.5	104 / 64	52 / 32	8.5"x8.5"x1/2" Plate	G, NG, EP	
MHC1300-6M1010B1	Bearing Plate Cap	5.72	1	1.5	150 / 50	75 / 25	10"x10"x5/8" Plate	G, NG, EP	
MHC1300-6M1010B3	Bearing Plate Cap	5.72	3	1.5	150 / 106	75 / 53	10"x10"x5/8" Plate	G, NG, EP	
MHC1300-6N1111B1	Bearing Plate Cap	5.72	1	1.5	191 / 64	95 / 32	11"x11"x3/4" Plate	G, NG, EP	

Magnum® Piering
Helical Pile Cap Specifications (Cont.)

Magnum® Helical Pile Caps	System Ratings & Specifications								
	Name	Fits Helical Pile Diam. (in)	No. Bolts / Thru Holes	Bolt Hole Diam. (In)	Structural Capacity*		Description	Surface Coating**	Schematic
					Ultimate (tons) Comp / Tens	Allowable (tons) Comp / Tens			
MHC1300-6N1111B3	Bearing Plate Cap	5.72	3	1.5	191 / 144	95 / 72	11"x11"x3/4" Plate	G, NG, EP	
MHC1300-8N1212B1	Bearing Plate Cap	8.63	1	2	266 / 88	133 / 44	12"x12"x3/4" Plate	G, NG, EP	
MHC1350-5N6135B1	Gusset Plate Cap	5.50	1	1.5	195 / 65	98 / 33	6"x13.5"x3/4" Gusseted Plate	G, NG, EP	
MHC1350-5N6135B3	Gusset Plate Cap	5.50	3	1.5	195 / 165	98 / 83	6"x13.5"x3/4" Gusseted Plate	G, NG, EP	
MHC1415-3O1010B	Titled Plate Cap	3.00	1	7/8	32 / 32	16 / 16	10"x10"x7/8" Plate Tilted 20 Degrees	G, NG, EP	
MHC1420-3N1212R	Titled Plate Cap	3.00	2	1	50 / 50	25 / 25	12"x12"x3/4" Plate Tilted 20 Degrees	G, NG, EP	
MHC1420-6N1616	Tilted Plate Cap	5.72	3	1.5	191 / 146	95 / 73	16"x16"x7/8" Plate Tilted 20 Degrees	G, NG, EP	
MHC1530-3N68	Panel Brace Cap	3.00	1	7/8	32 / 32	16 / 16	6"x8" Plate with 3/4" Stud Titled 30 deg to Receive Brace	G, NG, EP	
MHC1545-3N68	Panel Brace Cap	3.00	1	7/8	32 / 32	16 / 16	6"x8" Plate with 3/4" Stud Titled 45 deg to Receive Brace	G, NG, EP	

Magnum® Piering
Helical Anchor Clevis Caps

Magnum® Helical Pile Caps	System Ratings & Specifications							
	Name	Fits Helical Pile Diam. (in)	Threadbar Diam.	Structural Capacity*		Description	Surface Coating**	Schematic
				Ultimate (tons) Comp / Tens	Allowable (tons) Comp / Tens			
MHC3001-150	Clevis Cap	1.50x1.50	#8	50 / 50	25 / 25	U-Shaped Plate with 2.5" Diam. Hole for Cable Attachment	G, NG, EP	
MHC3001-175	Clevis Cap	1.75x1.75	#10	55 / 55	27.5 / 27.5	U-Shaped Plate with 2.5" Diam. Hole for Cable Attachment	G, NG, EP	
MHC3001-3	Clevis Cap	3.00 or 4.50	#10	50 / 50	25 / 25	U-Shaped Plate with 2.5" Diam. Hole for Cable Attachment	G, NG, EP	
MHC3001-4	Clevis Cap	4.50	#14	97 / 97	48 / 48	U-Shaped Plate with 2.9" Diam. Hole for Cable Attachment	G, NG, EP	

Custom clevis can be designed and manufactured to suit particular applications upon request.

NOTES: *Structural capacity of cap and pile system may be limited by the capacity of the pile and the structure to which the cap is connected. See Magnum® Helical Pile Specifications for more information. Capacity of the structure shall be determined by an engineer. **G = Hot-Dip Zinc Galvanized per ASTM A123/A153, NG = Bare Steel, EP = Epoxy Powder Coated per ICC-ES AC228, P = Magnum Blue Paint. As Magnum is committed to testing and improving products, these specifications are subject to change. Additional product specifications available at **www.magnumpiering.com** and in the **Magnum Helical Pile Engineering Manual** available upon request.

MAGNUM® MHC1000-3 Grade Beam Cap

Allowable Capacity - 25 Tons Compression / 16 Tons Tension

(2) No. 7, Gr. A706 Reinforcing Steel Bars Horizontal & 3.13-Inch I.D. Collar
Fits MH313, MH313R, MH325 Magnum® Helical Piles

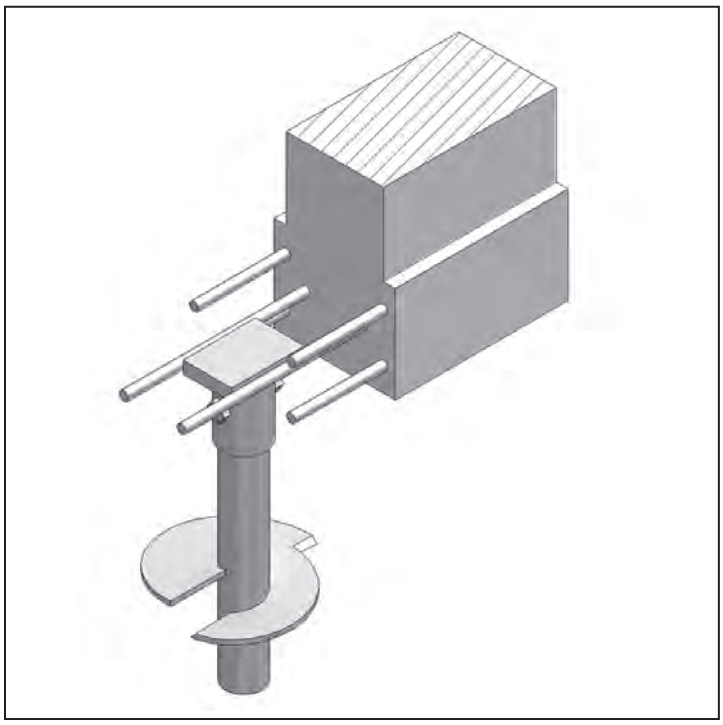
Description

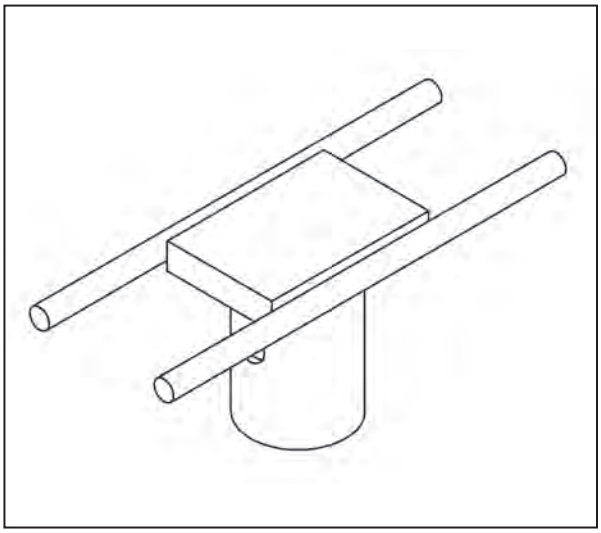
Magnum MHC1000-3 grade beam cap has 50 tons ultimate capacity, 25 tons working capacity in compression and 32 tons ultimate capacity, 16 tons working capacity in tension. The grade beam cap consists of a collar tube with bolt hole for connection to Magnum helical piles and horizontal reinforcing steel bars for attachment to cast-in-place concrete for new construction and foundation augmentation. The grade beam cap is designed in accordance with ICC-ES document AC358 as well as IBC, ACI, and AISC codes. Design and detailing of the structure to which the helical pile cap is attached varies by project and is the responsibility of registered design professional including minimum concrete cover for one-way shear, two-way punching shear, and bearing.

SPECIFICATIONS	
Collar Tube	0.25 in. x 3.13 in. I.D. ASTM A513 GR65+
End Effecter	(2) #7 GR-A706 Bars Horizontal
Pile Connection	(1) 7/8″ SAE J429 Grade 5 Zinc Coated to ASTM B695/F1941
Surface Coating	Galvanized per ASTM A153/A123 (G), Bare Steel (NG), or Epoxy Coated per ICC-ES AC228 (EP)
Compatibility	MH313, MH313R, MH325

CAP CAPACITY	
Ultimate Compression / Tension	50 Tons / 32 Tons
Allowable Compression / Tension	25 Tons / 16 Tons

Note: Cap capacity takes into account strength of collar, end effecter, and pile connection. Capacity may be limited by the helical pile itself, bearing/pullout capacity of soil, or strength of the structure to which the cap is attached, whichever is less.





Installation Notes:

After installation of a Magnum Helical Pile to the correct depth, torque, and capacity, begin by cutting-off the pile shaft at the proper elevation. For Bolted “B” applications, drill connection holes thru the pile shaft using a Magnum drill template. Install the pile cap, pile connection bolt, and snug-tighten nut. For Welded “W” applications, plug weld cap in-place using the manufactured holes in the cap collar tube. Remove coatings from surfaces prior to welding. In either application, ensure direct bearing of plate cap on pile shaft.

All Magnum Products Made in U.S.A.
U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

Magnum Piering, Inc.
6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

MAGNUM® MHC1000-3R Grade Beam Cap

Allowable Capacity - 25 Tons Compression / 25 Tons Tension

(2) No. 7, Gr. A706 Reinforcing Steel Bars Horizontal & 3.13-Inch I.D. Collar
Fits MH325R Magnum® Helical Piles

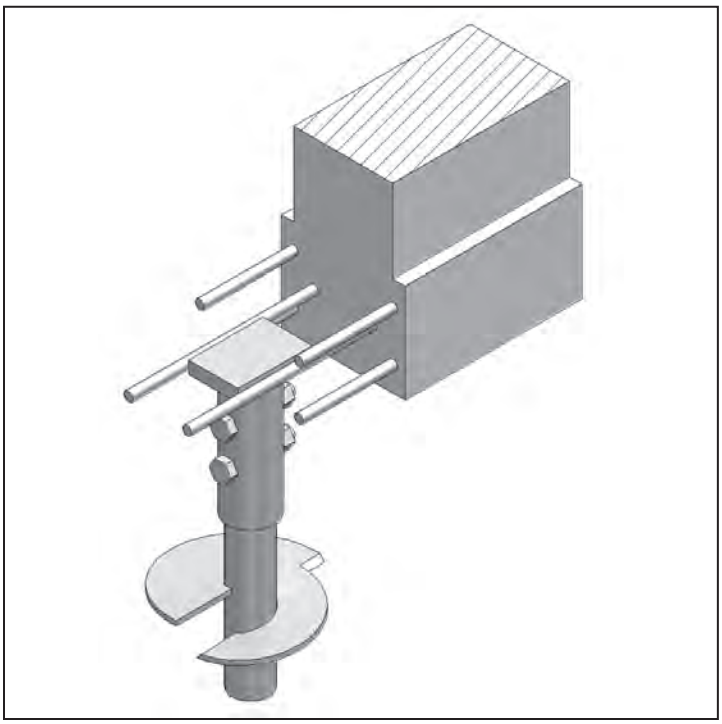
Description

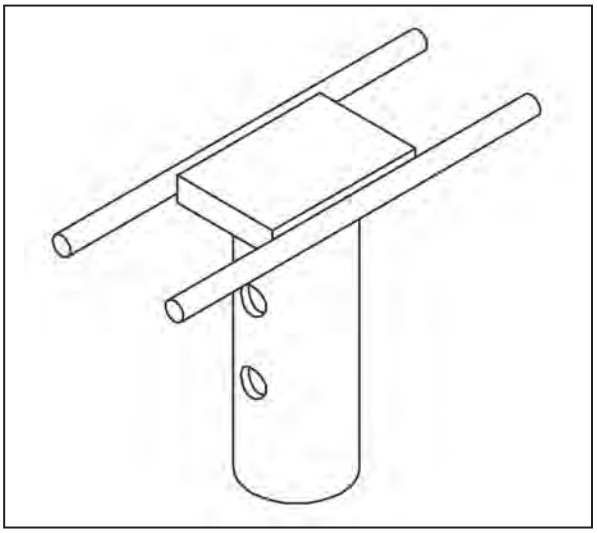
Magnum MHC1000-3R grade beam cap has 50 tons ultimate capacity, 25 tons working capacity in compression and tension. The grade beam cap consists of a collar tube with bolt hole for connection to Magnum helical piles and horizontal reinforcing steel bars for attachment to cast-in-place concrete for new construction and foundation augmentation. The grade beam cap is designed in accordance with ICC-ES document AC358 as well as IBC, ACI, and AISC codes. Design and detailing of the structure to which the helical pile cap is attached varies by project and is the responsibility of registered design professional including minimum concrete cover for one-way shear, two-way punching shear, and bearing.

SPECIFICATIONS	
Collar Tube	0.31 in. x 3.13 in. I.D. ASTM A513 GR65+
End Effecter	(2) #7 GR-A706 Bars Horizontal
Pile Connection	(2) 1″ SAE J429 Grade 5 Zinc Coated to ASTM B695/F1941
Surface Coating	Galvanized per ASTM A153/A123 (G), Bare Steel (NG), or Epoxy Coated per ICC-ES AC228 (EP)
Compatibility	MH325R

CAP CAPACITY	
Ultimate Compression / Tension	50 Tons / 50 Tons
Allowable Compression / Tension	25 Tons / 25 Tons

Note: Cap capacity takes into account strength of collar, end effecter, and pile connection. Capacity may be limited by the helical pile itself, bearing/pullout capacity of soil, or strength of the structure to which the cap is attached, whichever is less.





Installation Notes:

After installation of a Magnum Helical Pile to the correct depth, torque, and capacity, begin by cutting-off the pile shaft at the proper elevation. For Bolted “B” applications, drill connection holes thru the pile shaft using a Magnum drill template. Install the pile cap, pile connection bolts, and snug-tighten nuts. For Welded “W” applications, plug weld cap in-place using the manufactured holes in the cap collar tube. Remove coatings from surfaces prior to welding.

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Magnum Piering, Inc.
6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

MAGNUM® MSC1040-150B Bond Bar Cap

Allowable Capacity - 17.5 Tons Compression & Tension

(2) No. 7, Gr. A706 Reinforcing Steel Bars Vertical & 1.6-Inch Square Socket
Fits MS150B Magnum® Helical Piles

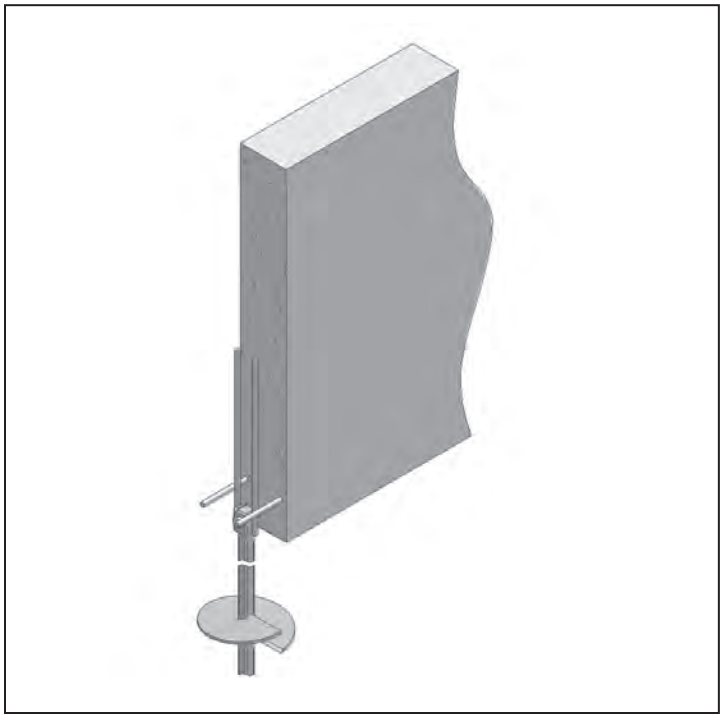
Description

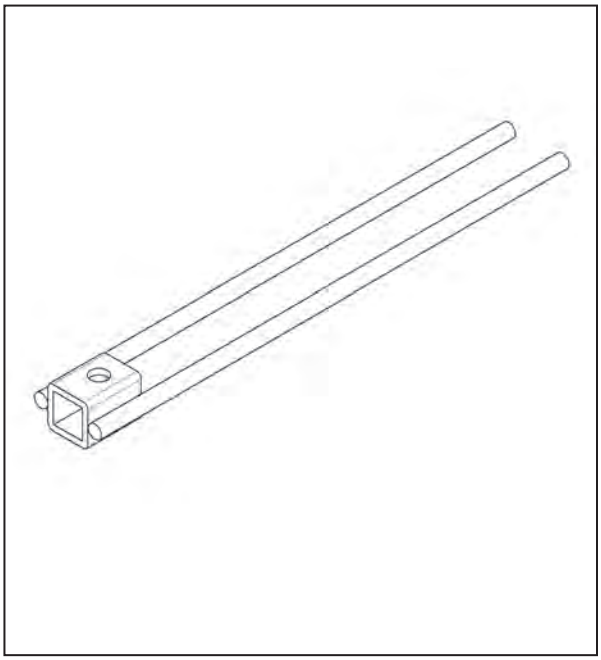
Magnum MSC1040-150B bond bar cap has 35 tons ultimate capacity, 17.5 tons working capacity in compression and tension. The bond bar cap consists of a square socket tube with bolt hole for connection to Magnum helical piles and vertical reinforcing steel bars for attachment to cast-in-place concrete for new construction and foundation augmentation. The bond bar cap is designed in accordance with ICC-ES document AC358 as well as IBC, ACI, and AISC codes. Design and detailing of the structure to which the helical pile cap is attached varies by project and is the responsibility of registered design professional including minimum concrete cover for one-way shear, two-way punching shear, and bearing.

SPECIFICATIONS	
Collar Tube	0.31″ x 2.25″ x 2.25″ Square ASTM A513 GR65+
End Effecter	(2) #7 GR-A706 Bars Vertical
Pile Connection	(1) 7/8″ SAE J429 Grade 8 Zinc Coated to ASTM B695/F1941
Surface Coating	Galvanized per ASTM A153/A123 (G), Bare Steel (NG), or Epoxy Coated per ICC-ES AC228 (EP)
Compatibility	MS150B

CAP CAPACITY	
Ultimate Compression / Tension	35 Tons / 35 Tons
Allowable Compression / Tension	17.5 Tons / 17.5 Tons

Note: Cap capacity takes into account strength of collar, end effecter, and pile connection. Capacity may be limited by the helical pile itself, bearing/pullout capacity of soil, or strength of the structure to which the cap is attached, whichever is less.





Installation Notes:

After installation of a Magnum Helical Pile to the correct depth, torque, and capacity, begin by cutting-off the pile shaft at the proper elevation. For Bolted “B” applications, drill connection holes thru the pile shaft using a Magnum drill template. Install the pile cap, pile connection bolts, and snug-tighten nuts. For Welded “W” applications, plug weld cap in-place using the manufactured holes in the cap collar tube. Remove coatings from surfaces prior to welding.

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U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

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www.magnumpiering.com

MAGNUM® MSC1040-175B Bond Bar Cap

Allowable Capacity - 27.5 Tons Compression & Tension

(3) No. 7, Gr. A706 Reinforcing Steel Bars Vertical & 1.9-Inch Square Socket
Fits MS175B Magnum® Helical Piles

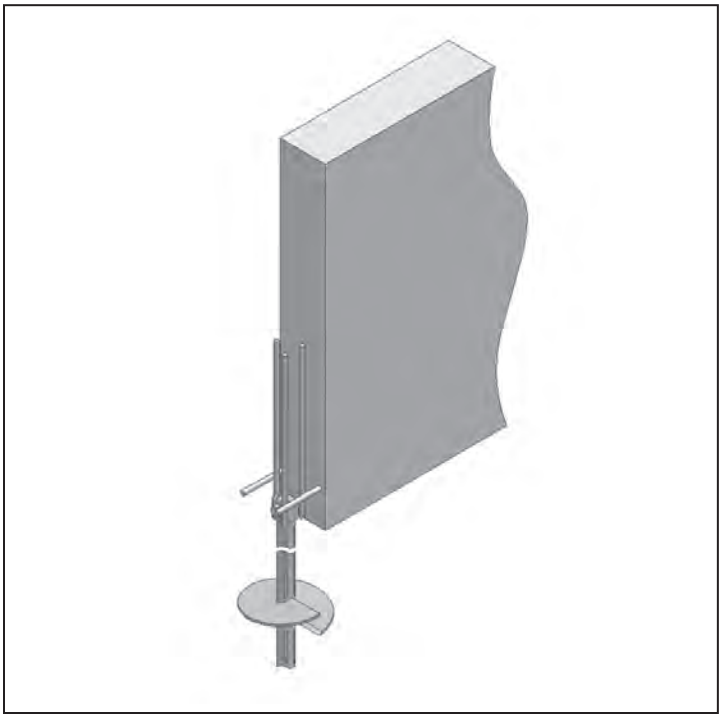
Description

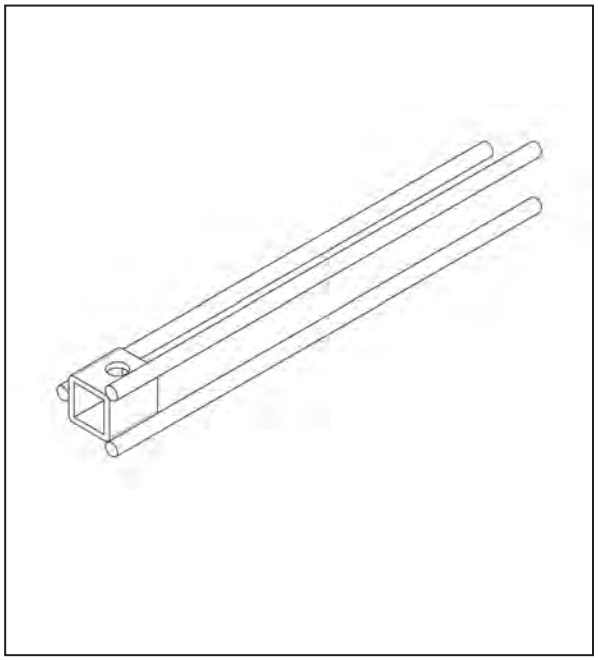
Magnum MSC1040-175B bond bar cap has 55 tons ultimate capacity, 27.5 tons working capacity in compression and tension. The bond bar cap consists of a square socket tube with bolt hole for connection to Magnum helical piles and vertical reinforcing steel bars for attachment to cast-in-place concrete for new construction and foundation augmentation. The bond bar cap is designed in accordance with ICC-ES document AC358 as well as IBC, ACI, and AISC codes. Design and detailing of the structure to which the helical pile cap is attached varies by project and is the responsibility of registered design professional including minimum concrete cover for one-way shear, two-way punching shear, and bearing.

SPECIFICATIONS	
Collar Tube	0.31″ x 2.5″ x 2.5″ Square ASTM A513 GR65+
End Effecter	(3) #7 GR-A706 Bars Vertical
Pile Connection	(1) 1″ SAE J429 Grade 5 Zinc Coated to ASTM B695/F1941
Surface Coating	Galvanized per ASTM A153/A123 (G), Bare Steel (NG), or Epoxy Coated per ICC-ES AC228 (EP)
Compatibility	MS175B

CAP CAPACITY	
Ultimate Compression / Tension	55 Tons / 55 Tons
Allowable Compression / Tension	27.5 Tons / 27.5 Tons

Note: Cap capacity takes into account strength of collar, end effecter, and pile connection. Capacity may be limited by the helical pile itself, bearing/pullout capacity of soil, or strength of the structure to which the cap is attached, whichever is less.





Installation Notes:

After installation of a Magnum Helical Pile to the correct depth, torque, and capacity, begin by cutting-off the pile shaft at the proper elevation. For Bolted “B” applications, drill connection holes thru the pile shaft using a Magnum drill template. Install the pile cap, pile connection bolts, and snug-tighten nuts. For Welded “W” applications, plug weld cap in-place using the manufactured holes in the cap collar tube. Remove coatings from surfaces prior to welding.

All Magnum Products Made in U.S.A.
U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

Magnum Piering, Inc.
6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

MAGNUM® MHC1040-3 Bond Bar Cap

Allowable Capacity - 16 Tons Compression / 16 Tons Tension

(2) No. 7, Gr. A706 Reinforcing Steel Bars Vertical & 3.13-Inch I.D. Collar
Fits MH313, MH313R, MH325 Magnum® Helical Piles

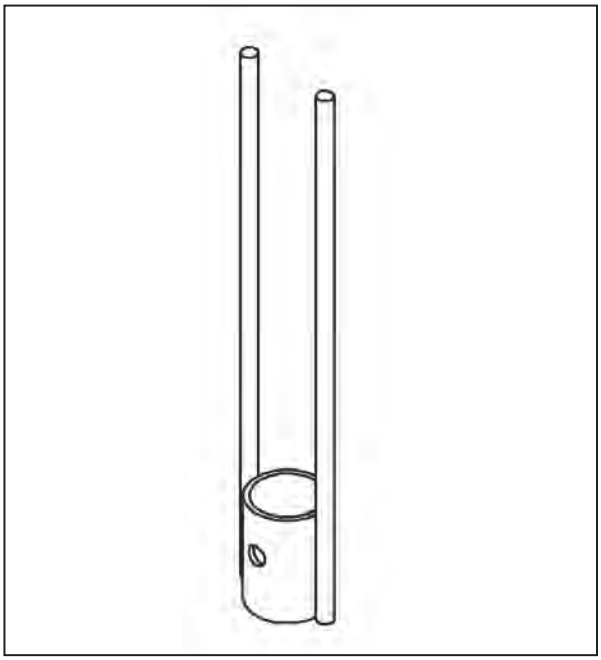
Description

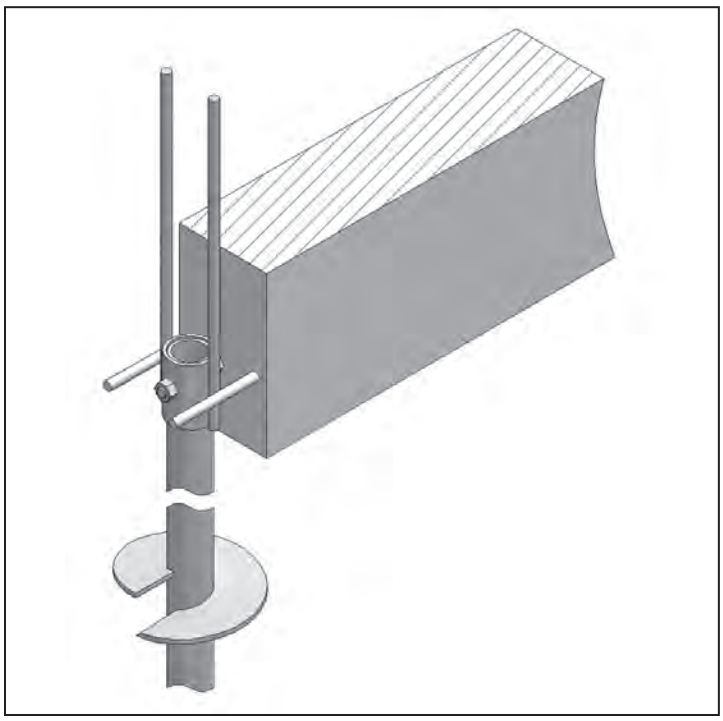
Magnum MHC1040-3 bond bar cap has 32 tons ultimate capacity, 16 tons working capacity in compression and tension. The bond bar cap consists of a collar tube with bolt hole for connection to Magnum helical piles and vertical reinforcing steel bars for attachment to cast-in-place concrete for new construction and foundation augmentation. The bond bar cap is designed in accordance with ICC-ES document AC358 as well as IBC, ACI,and AISC codes. Design and detailing of the structure to which the helical pile cap is attached varies by project and is the responsibility of registered design professional including minimum concrete cover for one-way shear, two-way punching shear, and bearing.

SPECIFICATIONS	
Collar Tube	0.25 in. x 3.13 in. I.D. ASTM A513 GR65+
End Effecter	(2) #7 GR-A706 Bars Vertical
Pile Connection	(1) 7/8″ SAE J429 Grade 5 Zinc Coated to ASTM B695/F1941
Surface Coating	Galvanized per ASTM A153/A123 (G), Bare Steel (NG), or Epoxy Coated per ICC-ES AC228 (EP)
Compatibility	MH313, MH313R, MH325

CAP CAPACITY	
Ultimate Compression / Tension	32 Tons / 32 Tons
Allowable Compression / Tension	16 Tons / 16 Tons

Note: Cap capacity takes into account strength of collar, end effecter, and pile connection. Capacity may be limited by the helical pile itself, bearing/pullout capacity of soil, or strength of the structure to which the cap is attached, whichever is less.





Installation Notes:

After installation of a Magnum Helical Pile to the correct depth, torque, and capacity, begin by cutting-off the pile shaft at the proper elevation. For Bolted “B” applications, drill connection holes thru the pile shaft using a Magnum drill template. Install the pile cap, pile connection bolts, and snug-tighten nuts. For Welded “W” applications, plug weld cap in-place using the manufactured holes in the cap collar tube. Remove coatings from surfaces prior to welding.

All Magnum Products Made in U.S.A.
U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

Magnum Piering, Inc.
6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

MAGNUM® MHC1040-3R Bond Bar Cap

Allowable Capacity - 25 Tons Compression / 25 Tons Tension

(3) No. 7, Gr. A706 Reinforcing Steel Bars Vertical & 3.13-Inch I.D. Collar
Fits MH325R Magnum® Helical Piles

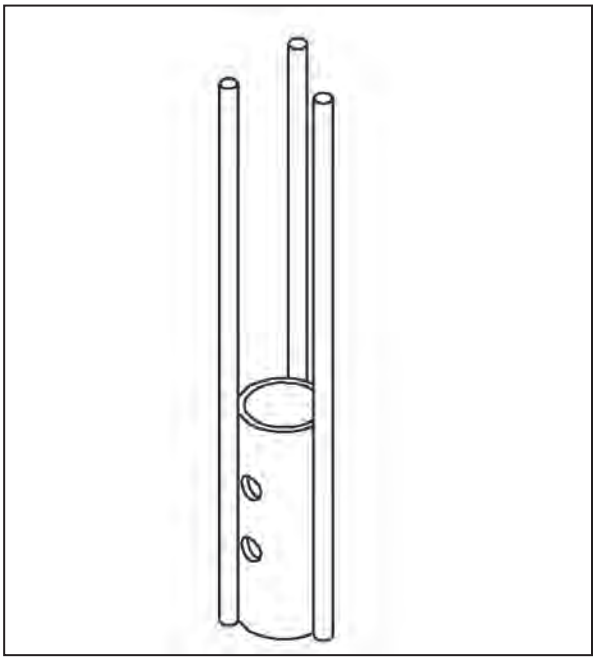
Description

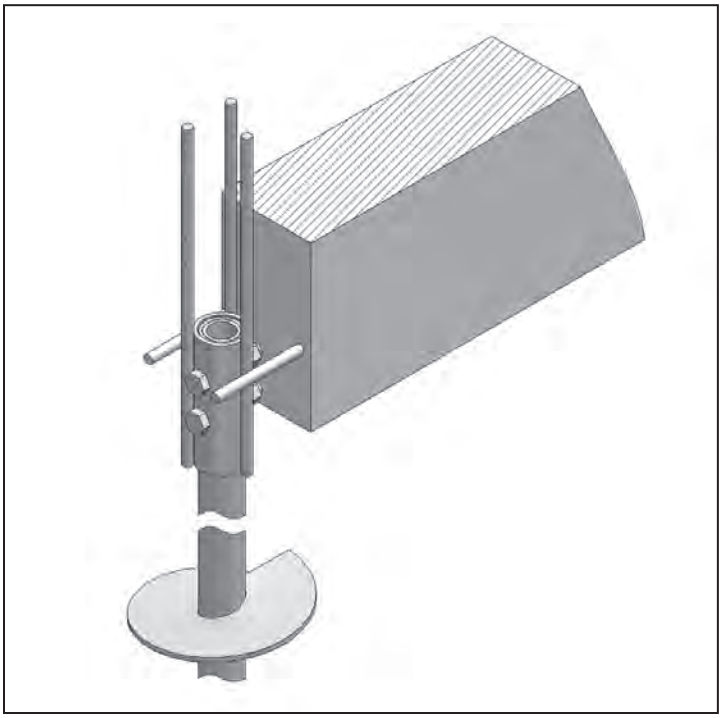
Magnum MHC1040-3R bond bar cap has 50 tons ultimate capacity, 25 tons working capacity in compression and tension. The bond bar cap consists of a collar tube with bolt hole for connection to Magnum helical piles and vertical reinforcing steel bars for attachment to cast-in-place concrete for new construction and foundation augmentation. The bond bar cap is designed in accordance with ICC-ES document AC358 as well as IBC, ACI, and AISC codes. Design and detailing of the structure to which the helical pile cap is attached varies by project and is the responsibility of registered design professional including minimum concrete cover for one-way shear, two-way punching shear, and bearing.

SPECIFICATIONS	
Collar Tube	0.31 in. x 3.13 in. I.D. ASTM A513 GR65+
End Effecter	(3) #7 GR-A706 Bars Vertical
Pile Connection	(2) 1″ SAE J429 Grade 5 Zinc Coated to ASTM B695/F1941
Surface Coating	Galvanized per ASTM A153/A123 (G), Bare Steel (NG), or Epoxy Coated per ICC-ES AC228 (EP)
Compatibility	MH325R

CAP CAPACITY	
Ultimate Compression / Tension	50 Tons / 50 Tons
Allowable Compression / Tension	25 Tons / 25 Tons

Note: Cap capacity takes into account strength of collar, end effecter, and pile connection. Capacity may be limited by the helical pile itself, bearing/pullout capacity of soil, or strength of the structure to which the cap is attached, whichever is less.





Installation Notes:

After installation of a Magnum Helical Pile to the correct depth, torque, and capacity, begin by cutting-off the pile shaft at the proper elevation. For Bolted “B” applications, drill connection holes thru the pile shaft using a Magnum drill template. Install the pile cap, pile connection bolts, and snug-tighten nuts. For Welded “W” applications, plug weld cap in-place using the manufactured holes in the cap collar tube. Remove coatings from surfaces prior to welding.

All Magnum Products Made in U.S.A.
U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

Magnum Piering, Inc.
6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

MAGNUM® MHC1040-4 Bond Bar Cap

Allowable Capacity - 36 Tons Compression / 36 Tons Tension

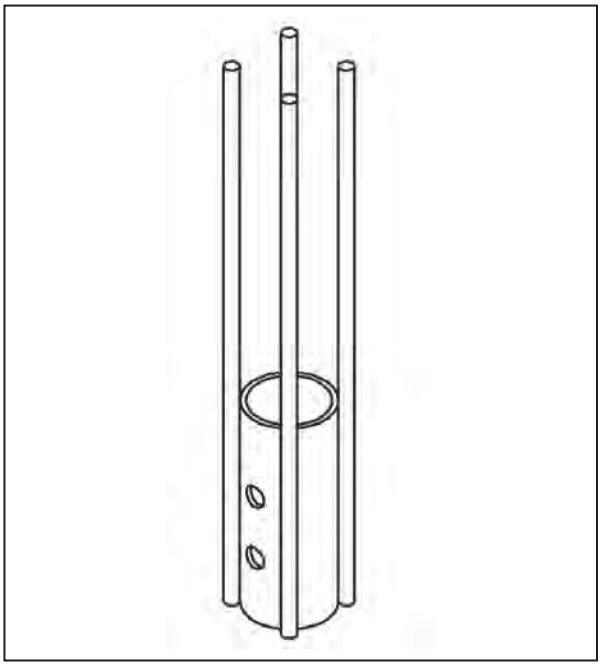
(4) No. 7, Gr. A706 Reinforcing Steel Bars Vertical & 4.63-Inch I.D. Collar
Fits MH425, MH425R, MH431, MH431R Magnum® Helical Piles

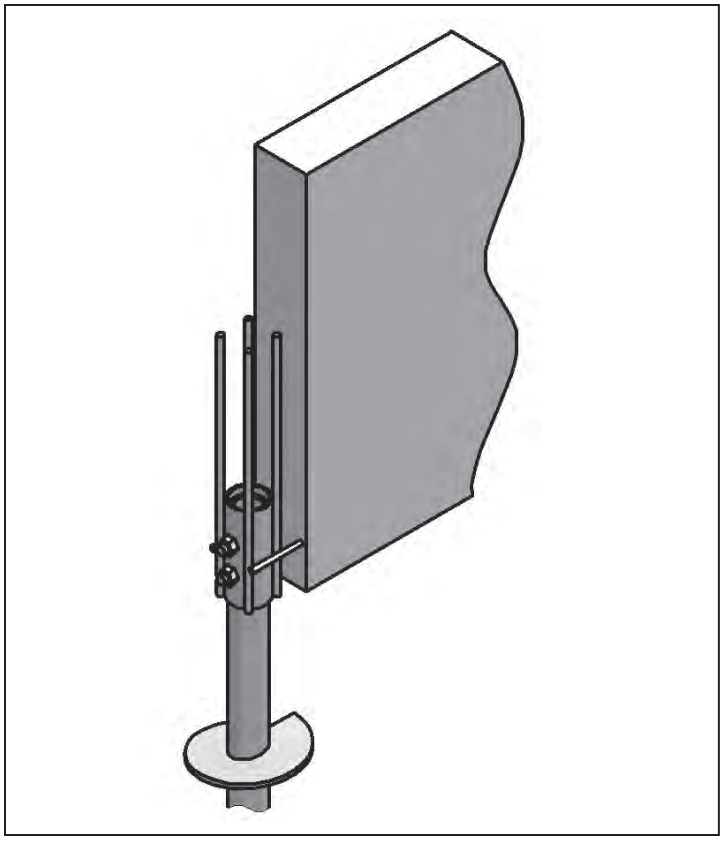
Description

Magnum MHC1040-4 bond bar cap has 72 tons ultimate capacity, 36 tons working capacity in compression and tension. The bond bar cap consists of a collar tube with bolt hole for connection to Magnum helical piles and vertical reinforcing steel bars for attachment to cast-in-place concrete for new construction and foundation augmentation. The bond bar cap is designed in accordance with ICC-ES document AC358 as well as IBC, ACI, and AISC codes. Design and detailing of the structure to which the helical pile cap is attached varies by project and is the responsibility of registered design professional including minimum concrete cover for one-way shear, two-way punching shear, and bearing.

SPECIFICATIONS	
Collar Tube	0.31 in. x 4.63 in. I.D. ASTM A513 GR65+
End Effecter	(4) #7 GR A-706 Bars Vertical
Pile Connection	(2) 1-1/4″ SAE J429 Grade 5 Zinc Coated to ASTM B695/F1941
Surface Coating	Galvanized per ASTM A153/A123 (G), Bare Steel (NG), or Epoxy Coated per ICC-ES AC228 (EP)
Compatibility	MH425, MH425R, MH431, MH431R

CAP CAPACITY	
Ultimate Compression / Tension	72 Tons / 72 Tons
Allowable Compression / Tension	36 Tons / 36 Tons





Installation Notes:

After installation of a Magnum Helical Pile to the correct depth, torque, and capacity, begin by cutting-off the pile shaft at the proper elevation. For Bolted “B” applications, drill connection holes thru the pile shaft using a Magnum drill template. Install the pile cap, pile connection bolts, and snug-tighten nuts. For Welded “W” applications, plug weld cap in-place using the manufactured holes in the cap collar tube. Remove coatings from surfaces prior to welding.

All Magnum Products Made in U.S.A.
U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

Magnum Piering, Inc.
6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

MAGNUM® MSC1080-150824B Tie-Back Cap

Allowable Capacity - 17.5 Tons Compression* / 17.5 Tons Tension

1.6-Inch Square Socket with (1) 24” #8, Gr. 75 Thread Bar & (1) #8 Nut Fits MS150B Magnum® Helical Piles

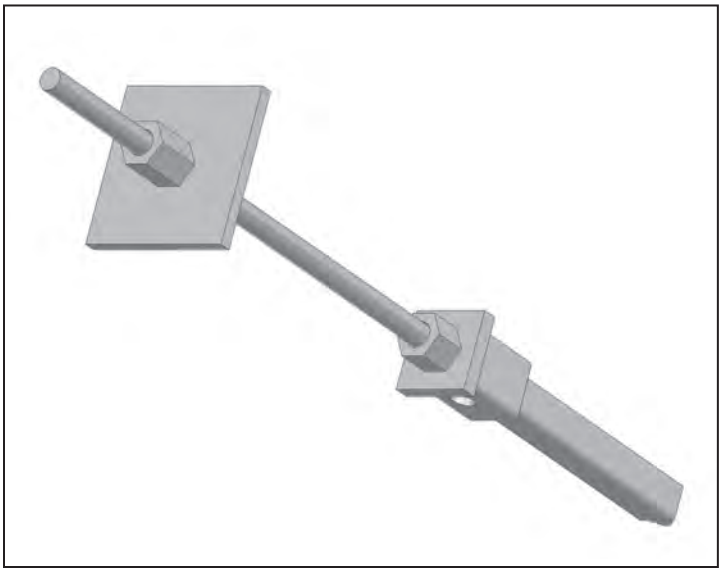
Description

Magnum MSC1080-150824B tie-back cap has 35 tons ultimate capacity, 17.5 tons working capacity in compression* and tension. The tie-back cap consists of a square socket tube with bolt hole for connection to Magnum helical piles and a 24.00" #8 thread bar & nut for attachment to various earth retention structures. The tie-back cap is designed in accordance with ICC-ES document AC358 as well as IBC, ACI, and AISC codes. Design and detailing of the structure to which the helical pile cap is attached varies by project and is the responsibility of registered design professional including waler size (if any), bearing plate, wall facing (if any), and concrete cover as applicable.

SPECIFICATIONS	
Collar Tube	0.31″ x 2.25″ x 2.25″ Sqr. ASTM A513 GR65+
End Effecter	(1) #8 x 24″ GR75 Thread Bar & (1) #8 Nut - Plates & Washers Sold Separately
Pile Connection	(1) 7/8″ SAE J429 Grade 5 Zinc Coated to ASTM B695/F1941
Surface Coating	Galvanized per ASTM A153/A123 (G), Bare Steel (NG), or Epoxy Coated per ICC-ES AC228 (EP)
Compatibility	MS150B

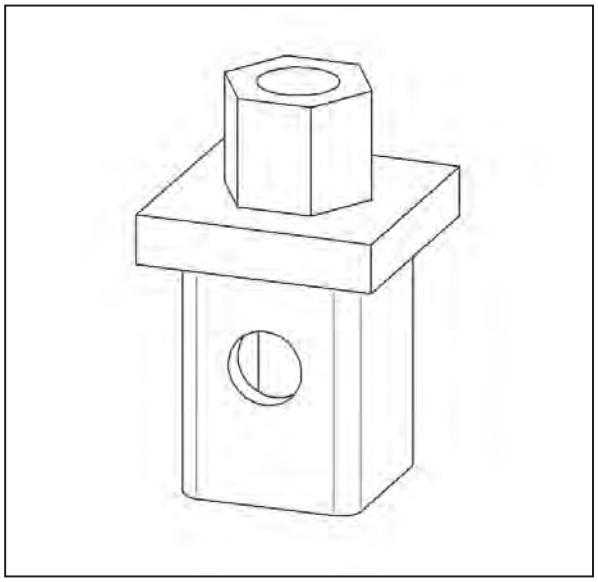
CAP CAPACITY	
Ultimate Compression / Tension	35 Tons / 35 Tons
Allowable Compression / Tension	17.5 Tons / 17.5 Tons

Note: Cap capacity takes into account strength of collar, end effector, and pile connection. Capacity may be limited by the helical pile itself, bearing/pullout capacity of soil, or strength of the structure to which the cap is attached, whichever is less.



Bearing Plate & Washers Sold Separately

***Compression application requires appropriate sized bearing plate be secured with double hex nut similar to a micropile connection.**



Installation Notes:

After installation of a Magnum Helical Anchor or Pile to the correct depth, torque, and capacity, begin by cutting-off the pile shaft at the proper elevation. For Bolted "B" applications, drill connection holes thru the pile shaft using a Magnum drill template. Install the pile cap, pile connection bolts, and snug-tighten nuts. For Welded "W" applications, plug weld cap in-place using the manufactured holes in the cap collar tube. Remove coatings from surfaces prior to welding. Snug tighten or post-tension thread bar nut against bearing plate as required for the project.

All Magnum Products Made in U.S.A.
U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

Magnum Piering, Inc.
6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

MAGNUM® MSC1080-1751024B Tie-Back Cap

Allowable Capacity - 27.5 Tons Compression* / 27.5 Tons Tension

1.6-Inch Square Socket with (1) 24” #8, Gr. 75 Thread Bar & (1) #8 Nut Fits MS175B Magnum® Helical Piles

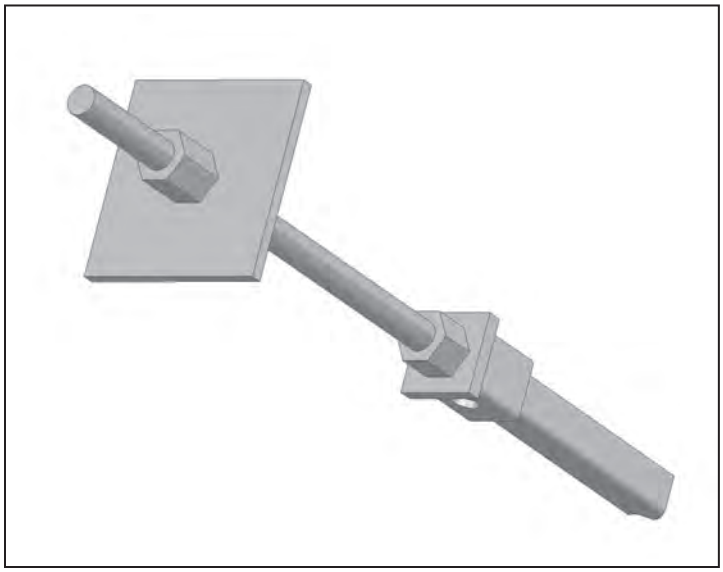
Description

The Magnum MSC1080-1751024B tie-back cap has 55 tons ultimate capacity, 27.5 tons working capacity in compression* and tension. The tie-back cap consists of a square socket tube with bolt hole for connection to Magnum helical piles and a 24" #10 thread bar & nut for attachment to various earth retention structures. The tie-back cap is designed in accordance with ICC-ES document AC358 as well as IBC, ACI, and AISC codes. Design and detailing of the structure to which the helical pile cap is attached varies by project and is the responsibility of registered design professional including waler size (if any), bearing plate, wall facing (if any), and concrete cover as applicable.

SPECIFICATIONS	
Collar Tube	0.31″ x 2.5″ x 2.5″ Sqr. ASTM A513 GR65+
End Effecter	(1) #10 x 24″ GR75 Thread Bar & (1) #10 Nut [Bearing Plate & Washers Sold Separately]
Pile Connection	(1) 1″ SAE J429 Grade 8 Zinc Coated to ASTM B695/F1941
Surface Coating	Galvanized per ASTM A153/A123 (G), Bare Steel (NG), or Epoxy Coated per ICC-ES AC228 (EP)
Compatibility	MS175B

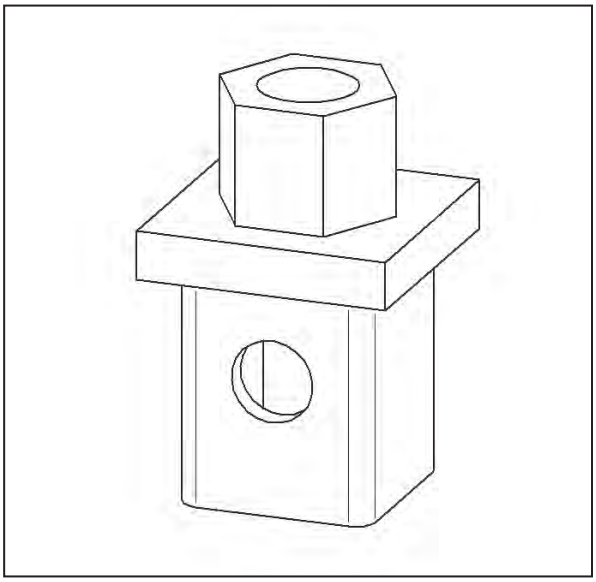
CAP CAPACITY	
Ultimate Compression / Tension	55 Tons / 55 Tons
Allowable Compression / Tension	27.5 Tons / 27.5 Tons

Note: Cap capacity takes into account strength of collar, end effector, and pile connection. Capacity may be limited by the helical pile itself, bearing/pullout capacity of soil, or strength of the structure to which the cap is attached, whichever is less.



Bearing Plate & Washers Sold Separately

***Compression application requires appropriate sized bearing plate be secured with double hex nut similar to a micropile connection.**



Installation Notes:

After installation of a Magnum Helical Anchor or Pile to the correct depth, torque, and capacity, begin by cutting-off the pile shaft at the proper elevation. For Bolted "B" applications, drill connection holes thru the pile shaft using a Magnum drill template. Install the pile cap, pile connection bolts, and snug-tighten nuts. For Welded "W" applications, plug weld cap in-place using the manufactured holes in the cap collar tube. Remove coatings from surfaces prior to welding. Snug tighten or post-tension thread bar nut against bearing plate as required for the project.

All Magnum Products Made in U.S.A.
U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

Magnum Piering, Inc.
6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

MAGNUM® MHC1080-3824 Tie-Back Cap

Allowable Capacity - 16 Tons Compression / 16 Tons Tension

3.13-Inch I.D. Collar with (1) 24" #8, Gr. 75 Thread Bar & (1) #10 Nut
Fits MH313, MH313R, MH325 Magnum® Helical Piles

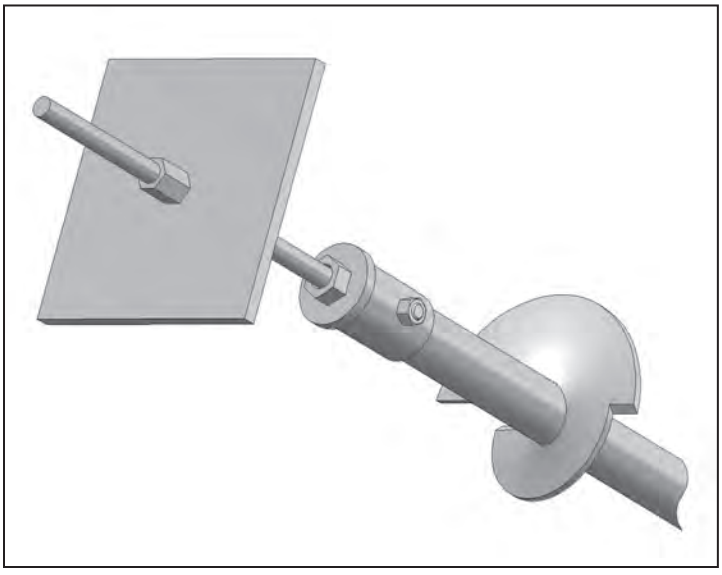
Description

Magnum MHC1080-3824 tie-back cap has 32 tons ultimate capacity, 16 tons working capacity in compression and tension. The tie-back cap consists of a collar tube with bolt hole for connection to Magnum helical piles and a 24.00″ #8 thread bar & nut for attachment to various earth retention structures. The tie-back cap is designed in accordance with ICC-ES document AC358 as well as IBC, ACI, and AISC codes. Design and detailing of the structure to which the helical pile cap is attached varies by project and is the responsibility of registered design professional including waler size (if any), bearing plate, wall facing (if any), and concrete cover as applicable.

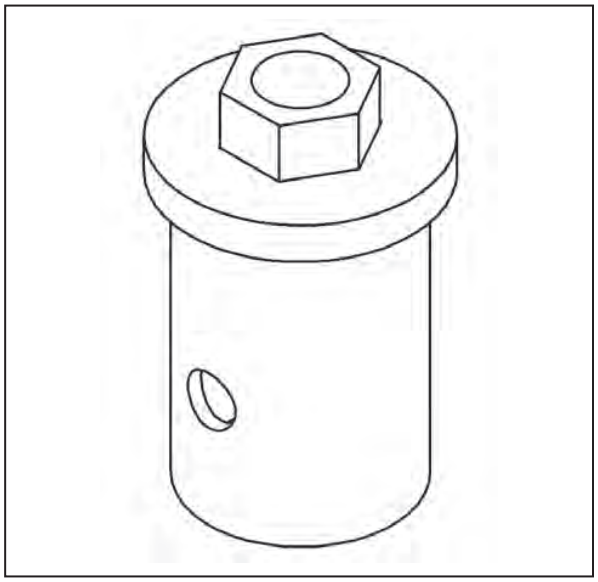
SPECIFICATIONS	
Collar Tube	0.25″ x 3.13″ I.D. ASTM A513 GR65+
End Effecter	(1) #8 x 24″ GR75 Thread Bar & (1) #8 Nut - Plates & Washers Sold Separately
Pile Connection	(1) 7/8″ SAE J429 Grade 5 Zinc Coated to ASTM B695/F1941
Surface Coating	Galvanized per ASTM A153/A123 (G), Bare Steel (NG), or Epoxy Coated per ICC-ES AC228 (EP)
Compatibility	MH313, MH313R, MH325

CAP CAPACITY	
Ultimate Compression / Tension	32 Tons / 32 Tons
Allowable Compression / Tension	16 Tons / 16 Tons

Note: Cap capacity takes into account strength of collar, end effecter, and pile connection. Capacity may be limited by the helical pile itself, bearing/pullout capacity of soil, or strength of the structure to which the cap is attached, whichever is less.



Bearing Plate & Washers Sold Separately



Installation Notes:

After installation of a Magnum Helical Anchor or Pile to the correct depth, torque, and capacity, begin by cutting-off the pile shaft at the proper elevation. For Bolted "B" applications, drill connection holes thru the pile shaft using a Magnum drill template. Install the pile cap, pile connection bolts, and snug-tighten nuts. For Welded "W" applications, plug weld cap in-place using the manufactured holes in the cap collar tube. Remove coatings from surfaces prior to welding. Snug tighten or post-tension thread bar nut against bearing plate as required for the project.

All Magnum Products Made in U.S.A.
U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

Magnum Piering, Inc.
6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

MAGNUM® MHC1080-31024BR2 Tie-Back Cap

Allowable Capacity - 25 Tons Compression / 25 Tons Tension

3.13-Inch I.D. Collar with (1) 24″ #10, Gr. 75 Thread Bar & (1) #10 Nut
Fits MH325R Magnum® Helical Piles

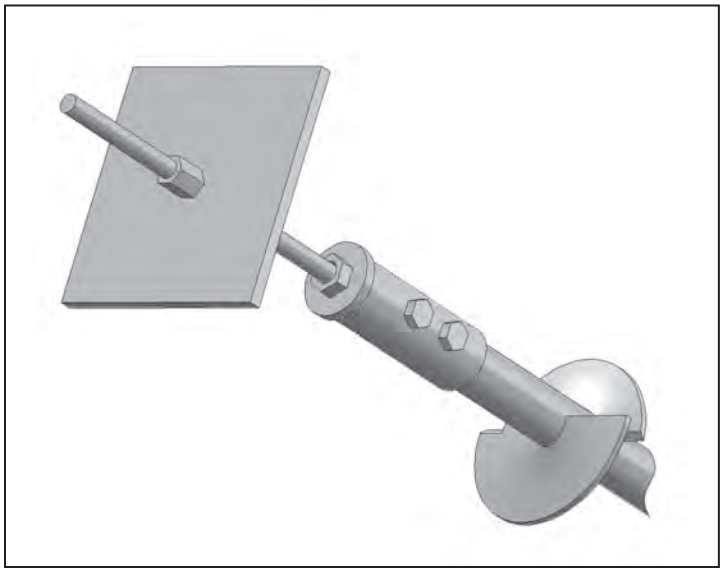
Description

Magnum MHC1080-31024BR2 tie-back cap has 50 tons ultimate capacity, 25 tons working capacity in compression and tension. The tie-back cap consists of a collar tube with bolt holes for connection to Magnum helical piles and a 24.00" #10 thread bar and nut for attachment to various earth retention structures. The tie-back cap is designed in accordance with ICC-ES document AC358 as well as IBC, ACI, and AISC codes. Design and detailing of the structure to which the helical pile cap is attached varies by project and is the responsibility of registered design professional including waler size (if any), bearing plate, wall facing (if any), and concrete cover as applicable.

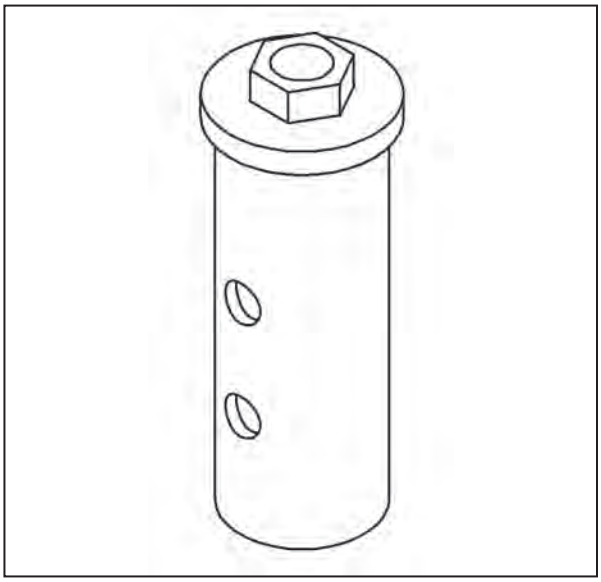
SPECIFICATIONS	
Collar Tube	0.31 in. x 3.13 in. I.D. ASTM A513 GR65+
End Effecter	(1) #10 GR75 x 24″ Thread Bar & (1) #10 Nut - Plate & Washer Sold Separately
Pile Connection	(2) 1″ SAE J429 Grade 5 Zinc Coated to ASTM B695/F1941
Surface Coating	Galvanized per ASTM A153/A123 (G), Bare Steel (NG), or Epoxy Coated per ICC-ES AC228 (EP)
Compatibility	MH325R

CAP CAPACITY	
Ultimate Compression / Tension	50 Tons / 50 Tons
Allowable Compression / Tension	25 Tons / 25 Tons

Note: Cap capacity takes into account strength of collar, end effecter, and pile connection. Capacity may be limited by the helical pile itself, bearing/pullout capacity of soil, or strength of the structure to which the cap is attached, whichever is less.



Bearing Plate & Washer Sold Separately



Installation Notes:

After installation of a Magnum Helical Anchor or Pile to the correct depth, torque, and capacity, begin by cutting-off the pile shaft at the proper elevation. For Bolted "B" applications, drill connection holes thru the pile shaft using a Magnum drill template. Install the pile cap, pile connection bolts, and snug-tighten nuts. For Welded "W" applications, plug weld cap in-place using the manufactured holes in the cap collar tube. Remove coatings from surfaces prior to welding. Snug tighten or post- tension thread bar nut against bearing plate as required for the project.

All Magnum Products Made in U.S.A.
U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

Magnum Piering, Inc.
6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

MAGNUM® MHC1080-35824 Tie-Back Cap

Allowable Capacity - 17 Tons Compression / 17 Tons Tension

3.63-Inch I.D. Collar with (1) 24″ #8, Gr. 75 Thread Bar & (1) #8 Nut
Fits MH3521 and MH3521R Magnum® Helical Piles

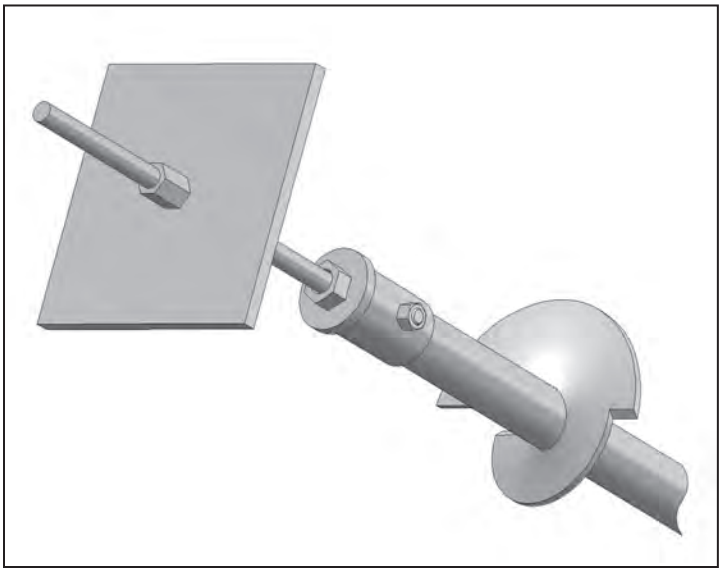
Description

Magnum MHC1080-35824 tie-back cap has 34 tons ultimate capacity, 17 tons working capacity in compression and tension. The tie-back cap consists of a collar tube with bolt hole for connection to Magnum helical piles and a 24" #8 thread bar & nut for attachment to various earth retention structures. The tie-back cap is designed in accordance with ICC-ES document AC358 as well as IBC, ACI, and AISC codes. Design and detailing of the structure to which the helical pile cap is attached varies by project and is the responsibility of registered design professional including waler size (if any), bearing plate, wall facing (if any), and concrete cover as applicable.

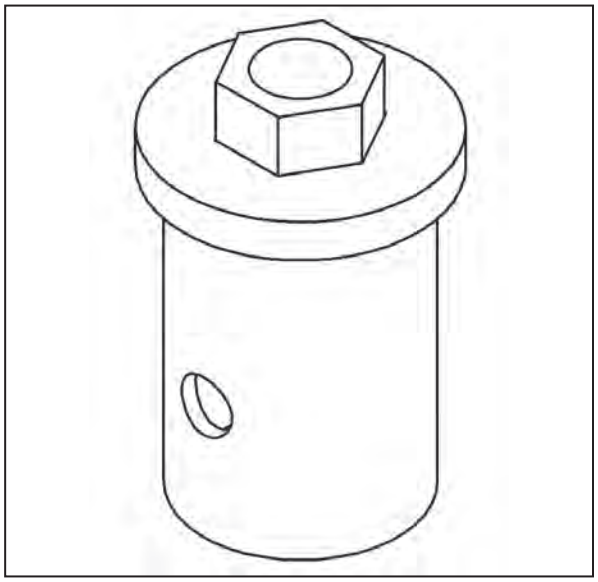
SPECIFICATIONS	
Collar Tube	0.31″ x 3.63" I.D. ASTM A513 GR65+
End Effecter	(1) #8 x 24″ GR75 Thread Bar & (1) #8 Nut - Plates & Washers Sold Separately
Pile Connection	(1) 1″ SAE J429 Grade 8 Zinc Coated to ASTM B695/F1941
Surface Coating	Galvanized per ASTM A153/A123 (G), Bare Steel (NG), or Epoxy Coated per ICC-ES AC228 (EP)
Compatibility	MH3521, MH3521R

CAP CAPACITY	
Ultimate Compression / Tension	34 Tons / 34 Tons
Allowable Compression / Tension	17 Tons / 17 Tons

Note: Cap capacity takes into account strength of collar, end effecter, and pile connection. Capacity may be limited by the helical pile itself, bearing/pullout capacity of soil, or strength of the structure to which the cap is attached, whichever is less.



Bearing Plate & Washer Sold Separately



Installation Notes:

After installation of a Magnum Helical Anchor or Pile to the correct depth, torque, and capacity, begin by cutting-off the pile shaft at the proper elevation. For Bolted "B" applications, drill connection holes thru the pile shaft using a Magnum drill template. Install the pile cap, pile connection bolts, and snug-tighten nuts. For Welded "W" applications, plug weld cap in-place using the manufactured holes in the cap collar tube. Remove coatings from surfaces prior to welding. Snug tighten or post- tension thread bar nut against bearing plate as required for the project.

All Magnum Products Made in U.S.A.
U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

Magnum Piering, Inc.
6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

MAGNUM® MHC1080-41024B Tie-Back Cap

Allowable Capacity 31 Tons Compression* / 31 Tons Tension

4.63-Inch I.D. Collar with (1) 24″ No. 10, Gr. 75 Thread Bar & (1) #10 Nut
Fits MH425B and MH425BR Magnum® Helical Piles

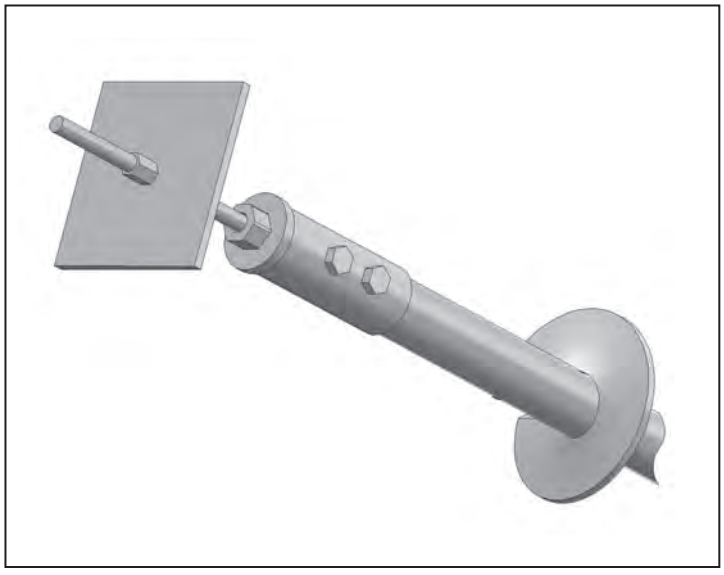
Description

Magnum MHC1080-41024B tie-back cap has 63 tons ultimate capacity, 31 tons working capacity in compression* and tension. The tie-back cap consists of a collar tube with bolt holes for connection to Magnum helical piles and a 24.00" #10 thread bar and nut for attachment to various earth retention structures. The tie-back cap is designed in accordance with ICC-ES document AC358 as well as IBC, ACI, and AISC codes. Design and detailing of the structure to which the helical pile cap is attached varies by project and is the responsibility of registered design professional including waler size (if any), bearing plate, wall facing (if any), and concrete cover as applicable.

SPECIFICATIONS	
Collar Tube	0.31 in. x 4.63 in. I.D. ASTM A513 GR65+
End Effecter	1) #10 x 24″ GR75 Thread Bar & (1) #10 Nut - Plate & Washer Sold Separately
Pile Connection	(2) 1-1/4″ SAE J429 Grade 5 Zinc Coated to ASTM B695/F1941
Surface Coating	Galvanized per ASTM A153/A123 (G), Bare Steel (NG), or Epoxy Coated per ICC-ES AC228 (EP)
Compatibility	MH425B and MH425BR

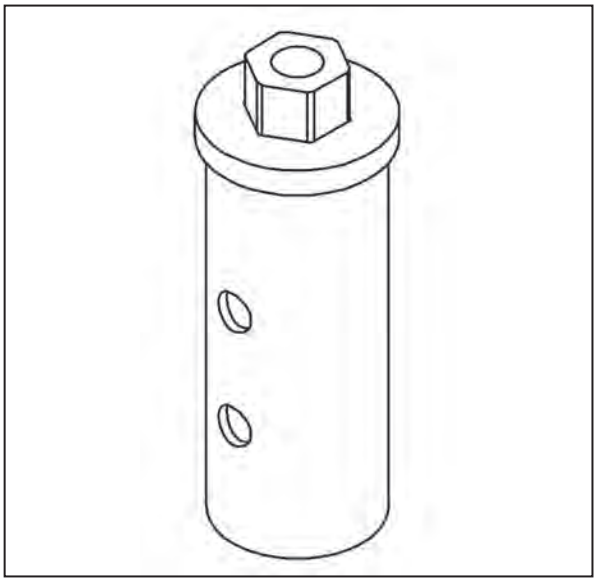
CAP CAPACITY	
Ultimate Compression / Tension	63 Tons / 63 Tons
Allowable Compression / Tension	31 Tons / 31 Tons

Note: Cap capacity takes into account strength of collar, end effecter, and pile connection. Capacity may be limited by the helical pile itself, bearing/pullout capacity of soil, or strength of the structure to which the cap is attached, whichever is less.



Bearing Plate & Washer Sold Separately

***Compression application requires appropriate sized bearing plate be secured with double hex nut similar to a micropile connection.**



Installation Notes:

After installation of a Magnum Helical Anchor or Pile to the correct depth, torque, and capacity, begin by cutting-off the pile shaft at the proper elevation. For Bolted "B" applications, drill connection holes thru the pile shaft using a Magnum drill template. Install the pile cap, pile connection bolts, and snug-tighten nuts. For Welded "W" applications, plug weld cap in-place using the manufactured holes in the cap collar tube. Remove coatings from surfaces prior to welding. Snug tighten or post- tension thread bar nut against bearing plate as required for the project.

All Magnum Products Made in U.S.A.
U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

Magnum Piering, Inc.
6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

MAGNUM® MHC1080-41424 Tie-Back Cap

Allowable Capacity 48 Tons Compression / 48 Tons Tension

4.63-Inch I.D. Collar with (1) 24″ No. 14, Gr. 75 Thread Bar & (1) #14 Nut
Fits MH425, MH425R, MH431, MH431R Magnum® Helical Piles

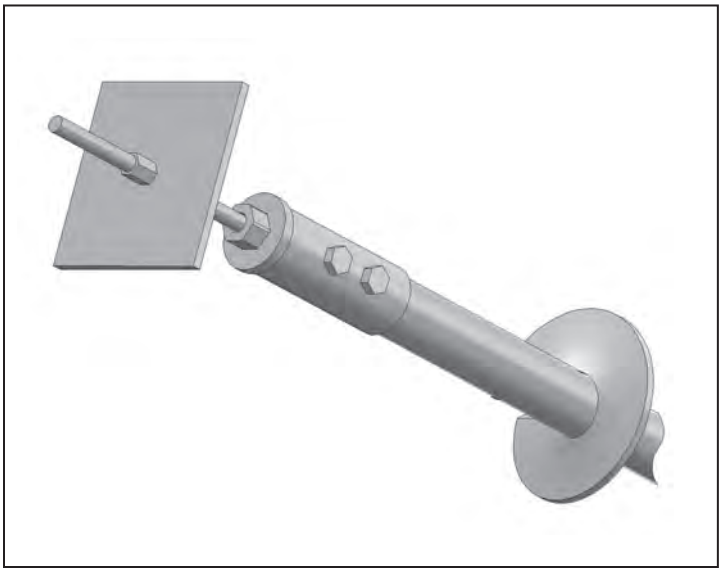
Description

Magnum MHC1080-41424 tie-back cap has 97 tons ultimate capacity, 48 tons working capacity in compression and tension. The tie-back cap consists of a collar tube with bolt holes for connection to Magnum helical piles and a 24.00" #14 thread bar and nut for attachment to various earth retention structures. The tie-back cap is designed in accordance with ICC-ES document AC358 as well as IBC, ACI, and AISC codes. Design and detailing of the structure to which the helical pile cap is attached varies by project and is the responsibility of registered design professional including waler size (if any), bearing plate, wall facing (if any), and concrete cover as applicable.

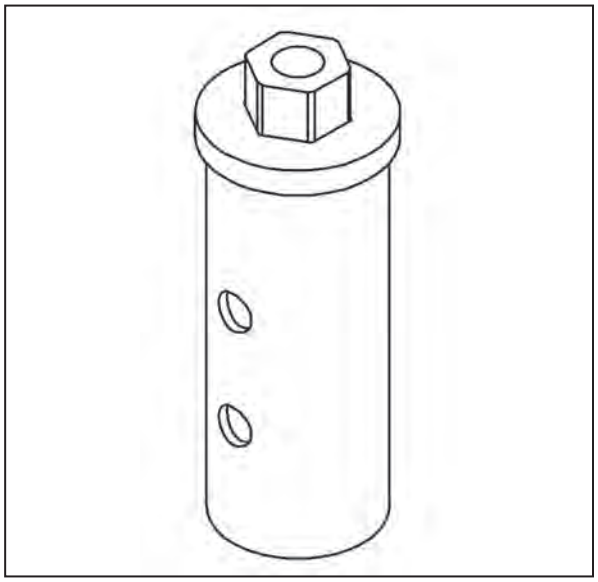
SPECIFICATIONS	
Collar Tube	0.31 in. x 4.63 in. I.D. ASTM A513 GR65+
End Effecter	(1) #14 x 24″ GR75 Thread Bar & (1) #14 Nut - Plate & Washer Sold Separately
Pile Connection	(2) 1-1/4″ SAE J429 Grade 5 Zinc Coated to ASTM B695/F1941
Surface Coating	Galvanized per ASTM A153/A123 (G), Bare Steel (NG), or Epoxy Coated per ICC-ES AC228 (EP)
Compatibility	MH425, MH425R, MH431, MH431R

CAP CAPACITY	
Ultimate Compression / Tension	97 Tons / 97 Tons
Allowable Compression / Tension	48 Tons / 48 Tons

Note: Cap capacity takes into account strength of collar, end effecter, and pile connection. Capacity may be limited by the helical pile itself, bearing/pullout capacity of soil, or strength of the structure to which the cap is attached, whichever is less.



Bearing Plate & Washer Sold Separately



Installation Notes:

After installation of a Magnum Helical Anchor or Pile to the correct depth, torque, and capacity, begin by cutting-off the pile shaft at the proper elevation. For Bolted "B" applications, drill connection holes thru the pile shaft using a Magnum drill template. Install the pile cap, pile connection bolts, and snug-tighten nuts. For Welded "W" applications, plug weld cap in-place using the manufactured holes in the cap collar tube. Remove coatings from surfaces prior to welding. Snug tighten or post- tension thread bar nut against bearing plate as required for the project.

All Magnum Products Made in U.S.A.
U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

Magnum Piering, Inc.
6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

MAGNUM® MHC1080-52024B Tie-Back Cap

Allowable Capacity 98 Tons Compression* / 98 Tons Tension

5.62-Inch I.D. Collar with (1) 24″ #20, Gr. 75 Thread Bar & #20 Nut

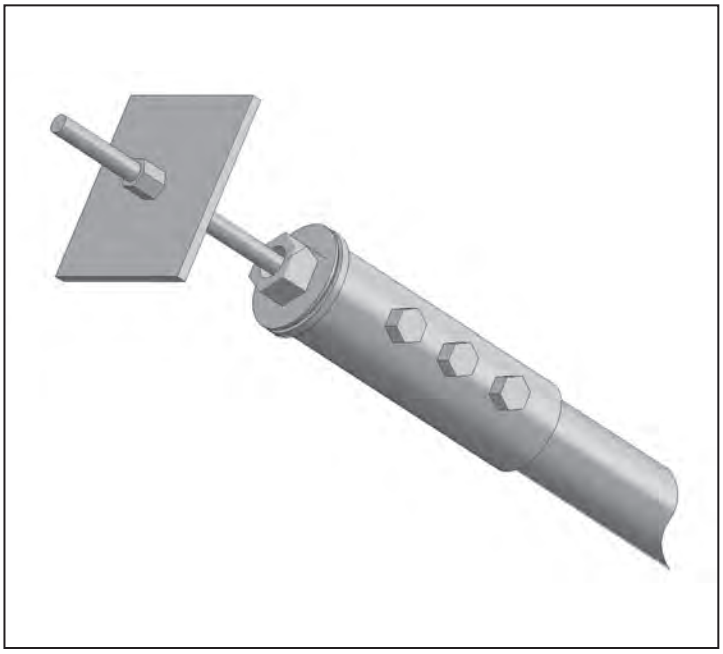
Fits MH530B, and MH536B Magnum® Helical Piles

Description

Magnum MHC1080-52024B tie-back cap has 196 tons ultimate capacity, 98 tons working capacity in compression* and tension. The tie-back cap consists of a collar tube with bolt holes for connection to Magnum helical piles and thread bar for attachment to various earth retention structures. The tie-back cap is designed in accordance with ICC-ES document AC358 as well as IBC, ACI, and AISC codes. Design and detailing of the structure to which the helical pile cap is attached varies by project and is the responsibility of registered design professional including waler size (if any), bearing plate, wall facing (if any), and concrete cover as applicable.

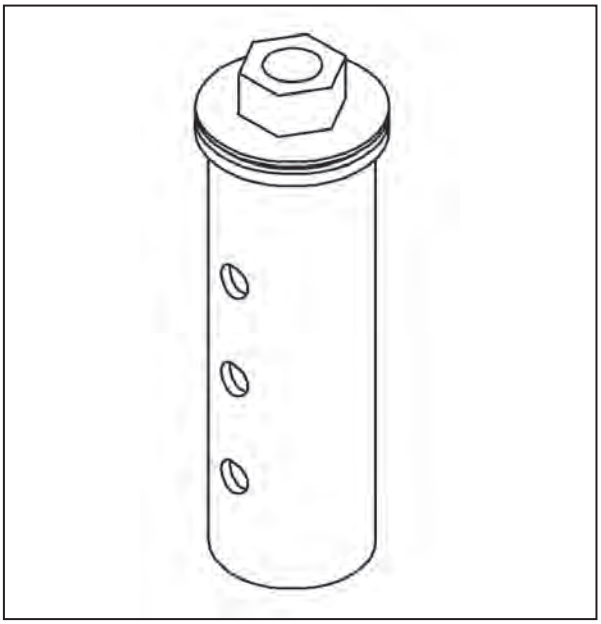
SPECIFICATIONS	
Collar Tube	0.38 in. x 5.62 in. I.D. ASTM A513 GR65+
End Effecter	(1) #20 x 24″ GR75 Thread Bar & #20 Nut - Plate & Washer Sold Separately
Pile Connection	(3) 1-1/2″ SAE J429 Grade 5 Zinc Coated to ASTM B695/F1941
Surface Coating	Galvanized per ASTM A153/A123 (G), Bare Steel (NG), or Epoxy Coated per ICC-ES AC228 (EP)
Compatibility	MH530B and MH536B

CAP CAPACITY	
Ultimate Compression / Tension	196 Tons / 196 Tons
Allowable Compression / Tension	98 Tons / 98 Tons



Bearing Plate & Washer Sold Separately

***Compression application requires appropriate sized bearing plate be secured with double hex nut similar to a micropile connection.**



Installation Notes:

After installation of a Magnum Helical Anchor or Pile to the correct depth, torque, and capacity, begin by cutting-off the pile shaft at the proper elevation. For Bolted “B” applications, drill connection holes thru the pile shaft using a Magnum drill template. Install the pile cap, pile connection bolts, and snug-tighten nuts. For Welded “W” applications, plug weld cap in-place using the manufactured holes in the cap collar tube. Remove coatings from surfaces prior to welding. Snug tighten or post- tension thread bar nut against bearing plate as required for the project.

All Magnum Products Made in U.S.A.

U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

Magnum Piering, Inc.
6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

MAGNUM® MHC1080-62024 Tie-Back Cap

Allowable Capacity 95 Tons Compression / 95 Tons Tension

5.85-Inch I.D. Collar with (1) 24″ #20, Gr. 75 Thread Bar & #20 Nut

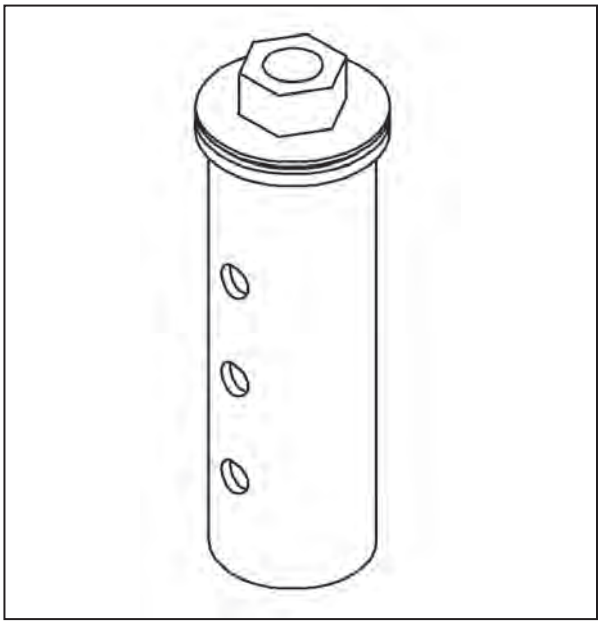
Fits MH625, MH625R, MH637, MH637R, MH646, MH646R Magnum® Helical Piles

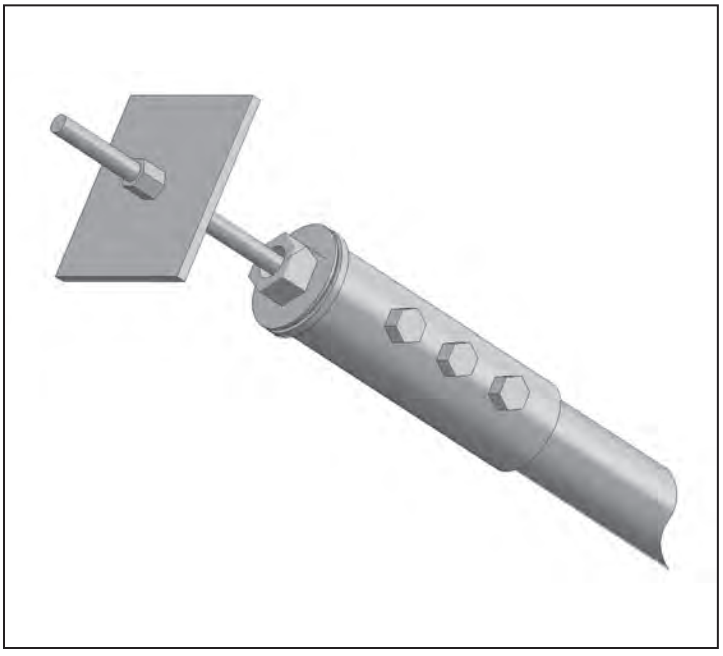
Description

Magnum MHC108-62024 tie-back cap has 191 tons ultimate capacity, 95 tons working capacity in compression and tension. The tie-back cap consists of a collar tube with bolt holes for connection to Magnum helical piles and thread bar for attachment to various earth retention structures. The tie-back cap is designed in accordance with ICC-ES document AC358 as well as IBC, ACI, and AISC codes. Design and detailing of the structure to which the helical pile cap is attached varies by project and is the responsibility of registered design professional including waler size (if any), bearing plate, wall facing (if any), and concrete cover as applicable.

SPECIFICATIONS	
Collar Tube	0.38 in. x 5.85 in. I.D. ASTM A513 GR65+
End Effecter	(1) #20 x 24″ GR75 Thread Bar & #20 Nut - Plate & Washer Sold Separately
Pile Connection	(3) 1-1/2″ SAE J429 Grade 5 Zinc Coated to ASTM B695/F1941
Surface Coating	Galvanized per ASTM A153/A123 (G), Bare Steel (NG), or Epoxy Coated per ICC-ES AC228 (EP)
Compatibility	MH625, MH625R, MH637, MH637R, MH646, MH646R

CAP CAPACITY	
Ultimate Compression / Tension	191 Tons / 191 Tons
Allowable Compression / Tension	95 Tons / 95 Tons





Bearing Plate & Washer Sold Separately

Installation Notes:

After installation of a Magnum Helical Anchor or Pile to the correct depth, torque, and capacity, begin by cutting-off the pile shaft at the proper elevation. For Bolted “B” applications, drill connection holes thru the pile shaft using a Magnum drill template. Install the pile cap, pile connection bolts, and snug-tighten nuts. For Welded “W” applications, plug weld cap in-place using the manufactured holes in the cap collar tube. Remove coatings from surfaces prior to welding. Snug tighten or post- tension thread bar nut against bearing plate as required for the project.

All Magnum Products Made in U.S.A.

U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

Magnum Piering, Inc.
6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

MAGNUM® MHC1100-316 Slab Lift Cap

Allowable Capacity - 14 Tons Compression

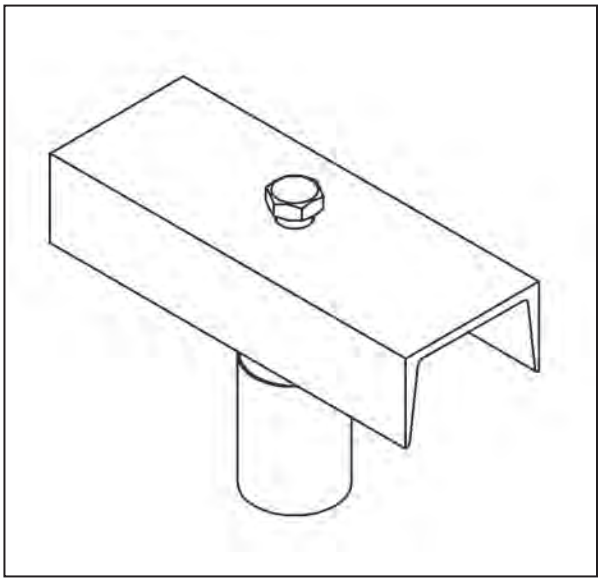
3.13-Inch I.D. Collar with 16″ Channel and Lifting Bolt Assembly
Fits MH313, MH313R, MH325, MH325R Magnum® Helical Piles

Description

Magnum MHC1100-3 slab lift cap as 28 tons ultimate capacity, 14 tons working capacity in compression. The slab lift cap consists of a collar tube with bolt hole for connection to Magnum helical piles and a channel and lifting bolt for insertion under existing slabs. The slab lift cap is designed in accordance with ICC-ES document AC358 as well as IBC, ACI, and AISC codes. Spacing and placement of the lifting caps under the existing slab varies by project and is the responsibility of registered design professional including maximum span of slab.

SPECIFICATIONS	
Collar Tube	0.25 in. x 3.13 in. I.D. ASTM A513 GR65+
End Effecter	6″ x 3.5″ x 3/8″ – 16″ Long Channel and a 1.13″ Lifting Bolt
Pile Connection	Direct Bearing on Pile Shaft Zinc Coated to ASTM B695/F1941
Surface Coating	Galvanized per ASTM A153/A123 (G), Bare Steel (NG), or Epoxy Coated per ICC-ES AC228 (EP)
Compatibility	MH313, MH313R, MH325, and MH325R

CAP CAPACITY	
Ultimate Compression	28 Tons
Allowable Compression	14 Tons



Installation Notes:

Core a hole through the slab slightly larger than the largest helix. Excavate a void large enough to facilitate channel installation. Install a Magnum Helical Pile to the correct depth, torque, and capacity. Cut-off the pile shaft at the proper elevation. Place the pile cap over the shaft. Place the channel under the slab with lifting bolt in place. Tighten the lifting bolt to raise the slab elevation as needed. Fill the void under the slab and core hole with fast-setting, high-strength, non-shrink grout.

All Magnum Products Made in U.S.A.
U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

Magnum Piering, Inc.
6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

MAGNUM® MHC1100-336 Slab Lift Cap

Allowable Capacity - 14 Tons Compression

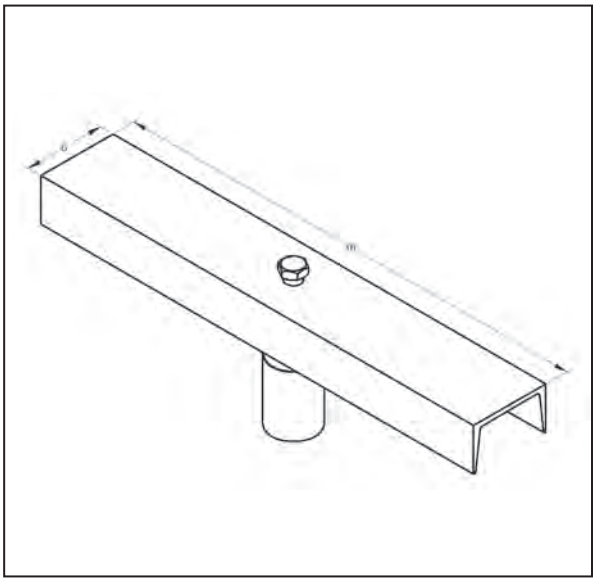
3.13-Inch I.D. Collar with 36″ Channel and Lifting Bolt Assembly
Fits MH313, MH313R, MH325, MH325R Magnum® Helical Piles

Description

Magnum MHC1100-336 slab lift cap has 28 tons ultimate capacity, 14 tons working capacity in compression. The slab lift cap consists of a collar tube with bolt hole for connection to Magnum helical piles and a channel and lifting bolt for insertion under existing slabs. The slab lift cap is designed in accordance with ICC-ES document AC358 as well as IBC, ACI, and AISC codes. Spacing and placement of the lifting caps under the existing slab varies by project and is the responsibility of registered design professional including maximum span of slab.

SPECIFICATIONS	
Collar Tube	0.25 in. x 3.13 in. I.D. ASTM A513 GR65+
End Effecter	6″ x 3.5″ x 3/8″ – 36″ Long Channel and a 1.13″ Lifting Bolt
Pile Connection	Direct Bearing on Pile Shaft Zinc Coated to ASTM B695/F1941
Surface Coating	Galvanized per ASTM A153/A123 (G), Bare Steel (NG), or Epoxy Coated per ICC-ES AC228 (EP)
Compatibility	MH313, MH313R, MH325, and MH325R

CAP CAPACITY	
Ultimate Compression	28 Tons
Allowable Compression	14 Tons



Installation Notes:

Core a hole through the slab slightly larger than the largest helix. Excavate a void large enough to facilitate channel installation. Install a Magnum Helical Pile to the correct depth, torque, and capacity. Cut-off the pile shaft at the proper elevation. Place the pile cap over the shaft. Place the channel under the slab with lifting bolt in place. Tighten the lifting bolt to raise the slab elevation as needed. Fill the void under the slab and core hole with fast-setting, high-strength, non-shrink grout.

All Magnum Products Made in U.S.A.
U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

Magnum Piering, Inc.
6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

MAGNUM® MHC1120-3 Wood Beam Cap

Allowable Capacity - 8 Tons Compression / 8 Tons Tension

3.13-Inch I.D. Collar with 11″ Long 3.5″ x 3.5″ x 0.25″ Angle

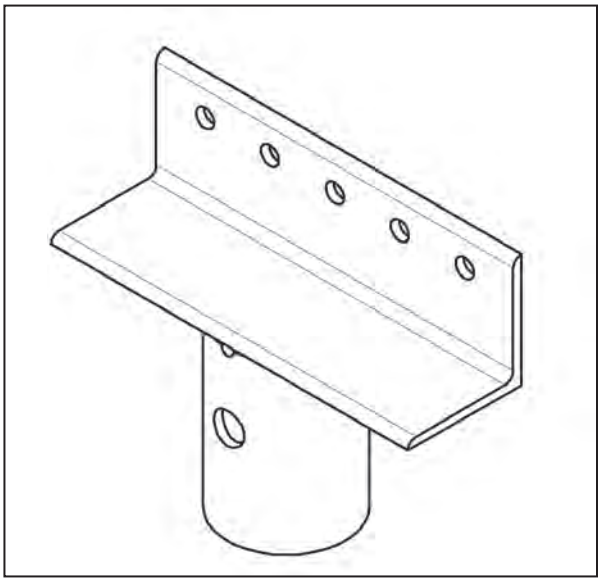
Fits MH313, MH313R, MH325 Magnum® Helical Piles

Description

Magnum MHC1120-3 wood beam cap has 16 tons ultimate capacity, 8 tons working capacity in compression and tension. The wood beam cap consists of a collar tube with bolt hole for connection to Magnum helical piles and an angle for attachment to a wood beam. The wood beam cap is designed in accordance with ICC-ES document AC358 as well as IBC, ACI, and AISC codes. Application of the cap varies by project and is the responsibility of registered design professional including crushing strength and span of wood beam.

SPECIFICATIONS	
Collar Tube	0.25 in. x 3.13 in. I.D. ASTM A513 GR65+
End Effecter	3.5″ x 3.5″ x 0.25″ – 11″ Long Angle with holes for (5) 1/2″ Lag Bolts
Pile Connection	(1) 7/8″ Diam. SAE J429 Grade 5 Zinc Coated to ASTM B695/F1941
Surface Coating	Galvanized per ASTM A153/A123 (G), Bare Steel (NG), or Epoxy Coated per ICC-ES AC228 (EP)
Compatibility	MH313, MH313R, MH325

CAP CAPACITY	
Ultimate Compression / Tension	16 Tons / 16 Tons
Allowable Compression / Tension	8 Tons / 8 Tons



Installation Notes:

After installation of a Magnum Helical Pile to the correct depth, torque, and capacity, cut-off the pile shaft at the proper elevation. Drill .938″ diameter hole through the shaft using a Magnum drill template. Place the pile cap over the shaft and secure with 0.88″ bolt. Snug tighten nut. Place wood beam on cap angle and secure with 0.50″ lag bolts as required for the project.

All Magnum Products Made in U.S.A.

U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

Magnum Piering, Inc.
6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

MAGNUM® MHC1121-3 Wood Beam Cap

Allowable Capacity 16 Tons Compression / 16 Tons Tension

3.13-Inch I.D. Collar with 4″ x 4″ x 0.38″ – 21″ Angle

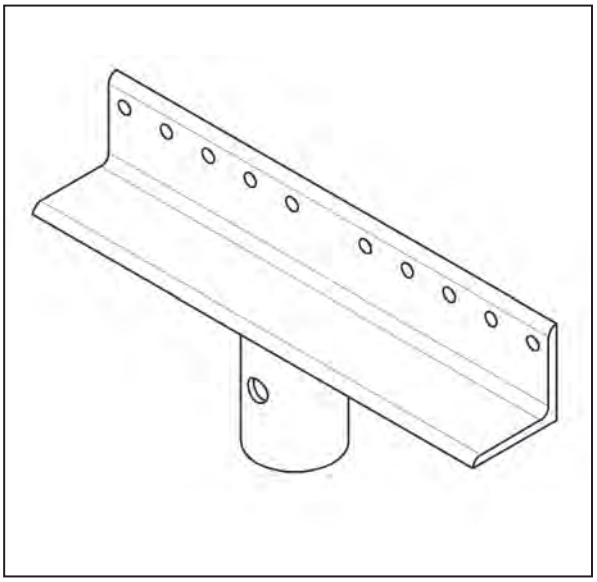
Fits MH313, MH313R, MH325 Magnum® Helical Piles

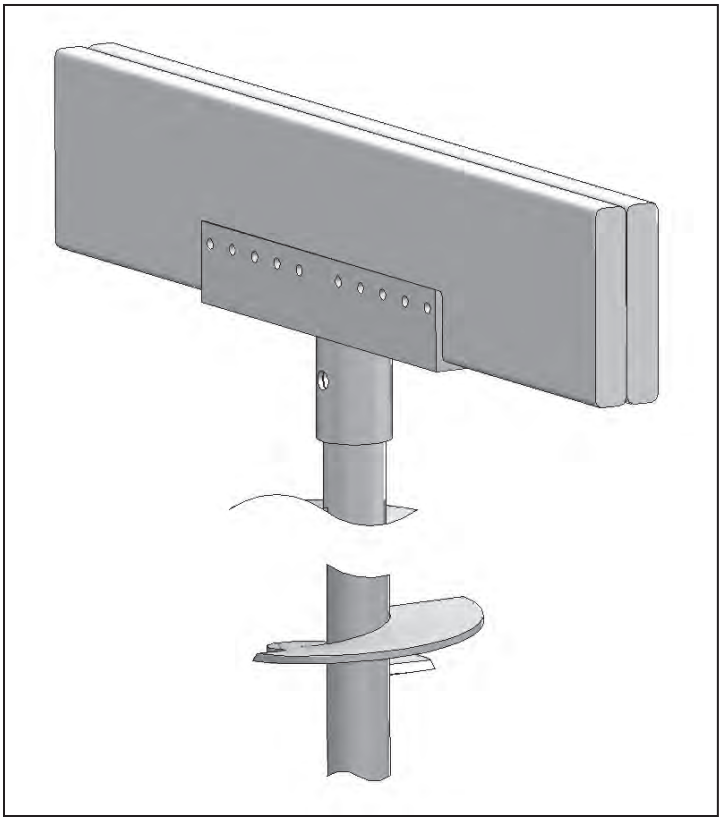
Description

Magnum MHC1121-3 wood beam cap has 32 tons ultimate capacity, 16 tons working capacity in compression and tension. The wood beam cap consists of a collar tube with bolt hole for connection to Magnum helical piles and an angle for attachment to a wood beam. The wood beam cap is designed in accordance with ICC-ES document AC358 as well as IBC, ACI, and AISC codes. Application of the cap varies by project and is the responsibility of registered design professional including crushing strength and span of wood beam.

SPECIFICATIONS	
Collar Tube	0.25 in. x 3.13 in. I.D. ASTM A513 GR65+
End Effecter	4″ x 4″ x 0.38″ – 21″ Long Angle with Holes for (10) 1/2″ Lag Bolts
Pile Connection	(1) 7/8″ Diam. SAE J429 Grade 5 Zinc Coated to ASTM B695/F1941
Surface Coating	Galvanized per ASTM A153/A123 (G), Bare Steel (NG), or Epoxy Coated per ICC-ES AC228 (EP)
Compatibility	MH313, MH313R, MH325

CAP CAPACITY	
Ultimate Compression / Tension	32 Tons / 32 Tons
Allowable Compression / Tension	16 Tons / 16 Tons





Installation Notes:

After installation of a Magnum Helical Pile to the correct depth, torque, and capacity, cut-off the pile shaft at the proper elevation. Drill 0.94” diameter hole through the shaft using a Magnum drill template. Place the pile cap over the shaft and secure with 0.88” bolt. Snug tighten nut. Place wood beam on cap angle and secure with 0.50” lag screws as required for the project.

All Magnum Products Made in U.S.A.

U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

Magnum Piering, Inc.
6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

MAGNUM® MHC1122-3 Wood Beam Cap

Allowable Capacity 6 Tons Compression / 6 Tons Tension

3.13-Inch I.D. Collar with 8″ x 4″ x 0.13″ – 8″ Long Angle

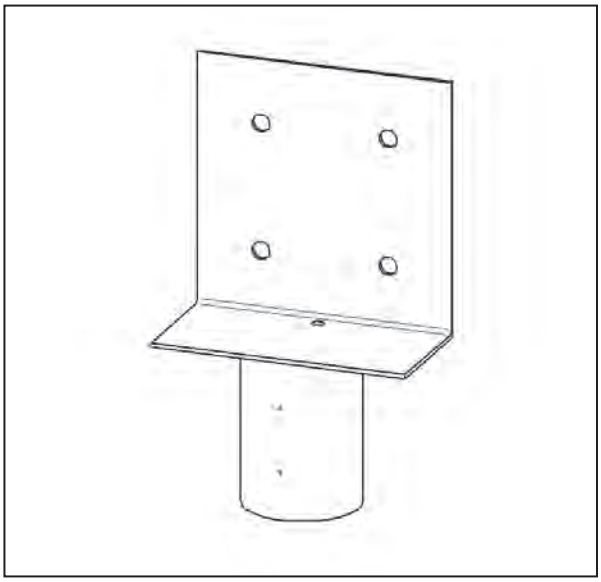
Fits MH313, MH313R, MH325, MH325R Magnum® Helical Piles

Description

Magnum MHC1122-3 wood beam cap has 12 tons ultimate capacity, 6 tons working capacity in compression and tension. The wood beam cap consists of a collar tube with bolt hole for connection to Magnum helical piles and an angle for attachment to a wood beam. This cap was designed to be used with the Magnum K-brace system for boardwalks but can be used with other wood structures. The wood beam cap is designed in accordance with ICC-ES document AC358 as well as IBC, ACI, and AISC codes. Application of the cap varies by project and is the responsibility of registered design professional including crushing strength, lateral bracing, and span of wood beam.

SPECIFICATIONS	
Collar Tube	0.25 in. x 3.13 in. I.D. ASTM A513 GR65+
End Effecter	8″ x 4″ x 0.13″ – 8″ Long Angle with holes for (4) 1/2″ Lag Bolts
Pile Connection	(4) Hilti EDS PAF Zinc Coated to ASTM B695/F1941
Surface Coating	Galvanized per ASTM A153/A123 (G), Bare Steel (NG), or Epoxy Coated per ICC-ES AC228 (EP)
Compatibility	MH313, MH313R, MH325, and MH325R

CAP CAPACITY	
Ultimate Compression / Tension	12 Tons / 12 Tons
Allowable Compression / Tension	6 Tons / 6 Tons



K-Brace Assembly Sold Separately

Installation Notes:

After installation of a Magnum Helical Pile to the correct depth, torque, and capacity, cut-off the pile shaft at the proper elevation. Place the pile cap over the shaft and secure with 4 Hilti EDS PAF. Place wood beam on cap angle and secure with ½″ lag screws as required for the project. If required, install Magnum K-brace system in accordance with installation instructions for that product.

All Magnum Products Made in U.S.A.

U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

Magnum Piering, Inc.
6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

MAGNUM® MHC1123-3 Wood Beam Cap

Allowable Capacity 8 Tons Compression / 8 Tons Tension

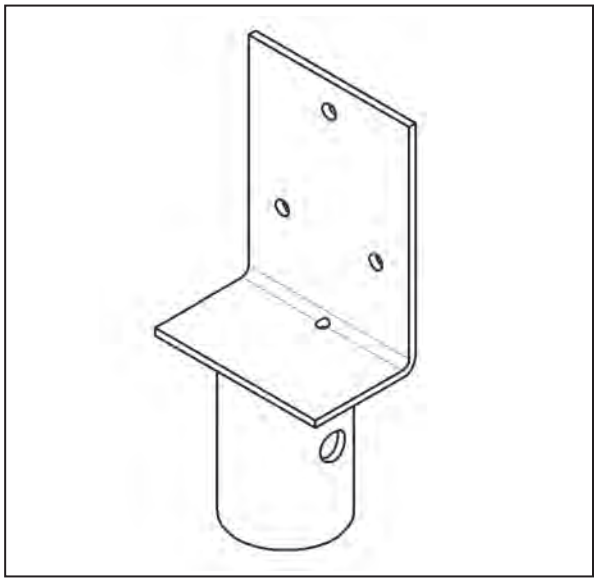
3.13-Inch I.D. Collar with 8″ x 3.75″ x 0.13″ – 6″ Long Angle
Fits MH313, MH313R, MH325 Magnum® Helical Piles

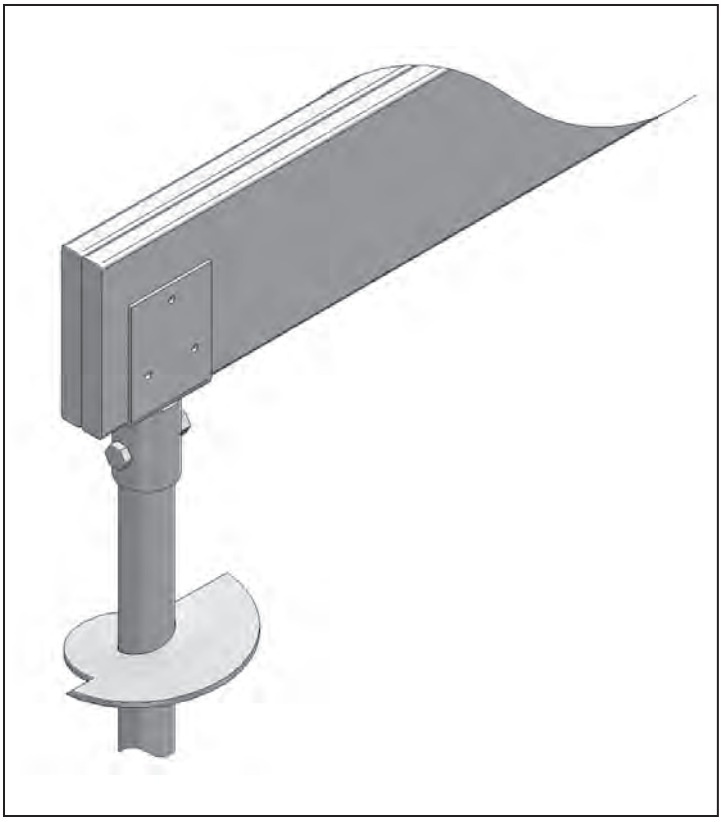
Description

Magnum MHC1123-3 wood beam cap has 16 tons ultimate capacity, 8 tons working capacity in compression and tension. The wood beam cap consists of a collar tube with bolt hole for connection to Magnum helical piles and an angle for attachment to a wood beam. The wood beam cap is designed in accordance with ICC-ES document AC358 as well as IBC, ACI, and AISC codes. Application of the cap varies by project and is the responsibility of registered design professional including crushing strength, lateral bracing, and span of wood beam.

SPECIFICATIONS	
Collar Tube	0.25 in. x 3.13 in. I.D. ASTM A513 GR65+
End Effecter	8″ x 3.75″ x 0.13″ – 6″ Long Angle with Holes for (3) 1/2″ Lag Bolts
Pile Connection	(1) 7/8″ Diam. SAE J429 Grade 5 Zinc Coated to ASTM B695/F1941
Surface Coating	Galvanized per ASTM A153/A123 (G), Bare Steel (NG), or Epoxy Coated per ICC-ES AC228 (EP)
Compatibility	MH313, MH313R, MH325

CAP CAPACITY	
Ultimate Compression / Tension	16 Tons / 16 Tons
Allowable Compression / Tension	8 Tons / 8 Tons





Installation Notes:

After installation of a Magnum Helical Pile to the correct depth, torque, and capacity, cut-off the pile shaft at the proper elevation. Drill 0.94″ diameter hole through the shaft using a Magnum drill template. Place the pile cap over the shaft and secure with 0.88″ bolt. Snug tighten nut. Place wood beam on cap angle and secure with 0.50″ lag screws as required for the project.

All Magnum Products Made in U.S.A.
U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

Magnum Piering, Inc.
6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

MAGNUM® MHC1130-3 Wood Corner Cap

Allowable Capacity 8 Tons Compression / 8 Tons Tension

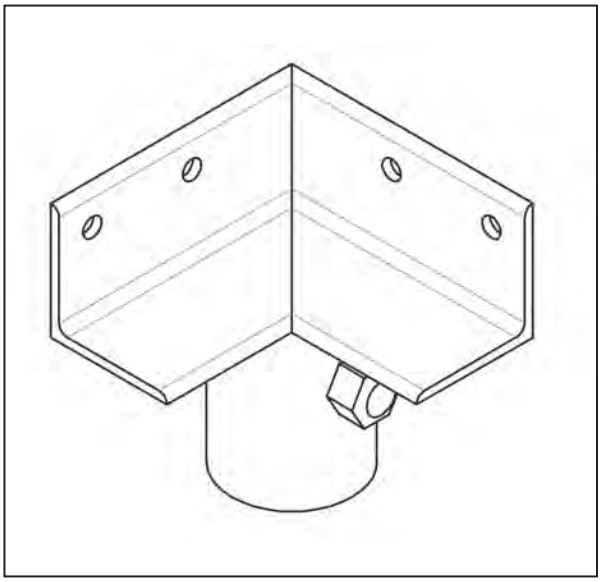
3.13-Inch I.D. Collar w/ (2) Intersecting 3.5″ x 3.5″ x 0.25″ – 7.25″ Long Angles
Fits MH313, MH313R, MH325 Magnum® Helical Piles

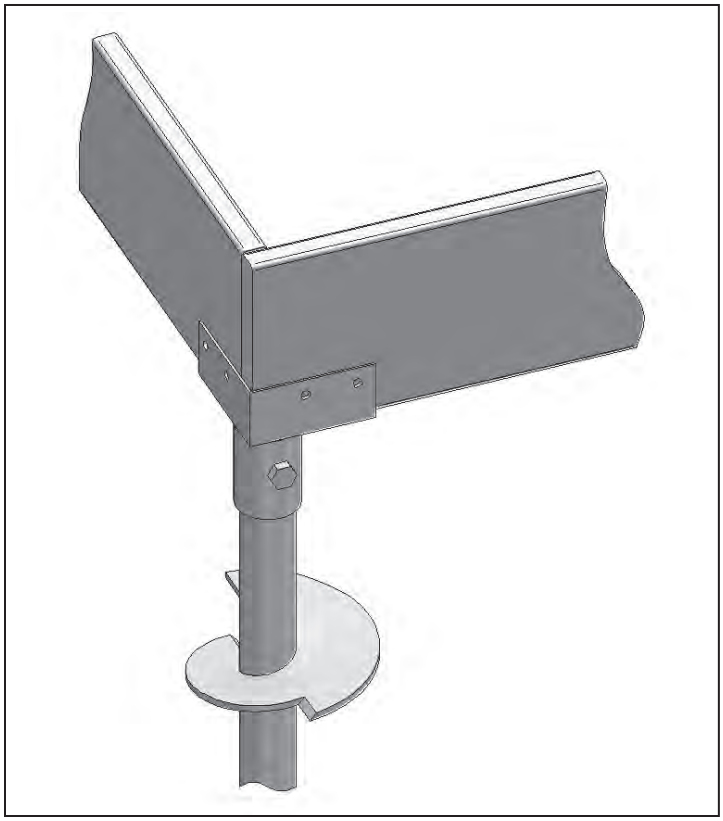
Description

Magnum MHC1130-3 wood corner cap has 16 tons ultimate capacity, 8 tons working capacity in compression and tension. The wood corner cap consists of a collar tube with bolt hole for connection to Magnum helical piles and two angles oriented at 90 deg for attachment to two intersecting wood beams. The wood corner cap is designed in accordance with ICC-ES document AC358 as well as IBC, ACI, and AISC codes. Application of the cap varies by project and is the responsibility of registered design professional including crushing strength, lateral bracing, and span of wood beams.

SPECIFICATIONS	
Collar Tube	0.25 in. x 3.13 in. I.D. ASTM A513 GR65+
End Effecter	3.50″ x 3.50″ x 0.25″ – 7.25″ Long Angle at 90 deg with holes for (4) 1/2″ Lag Bolts
Pile Connection	(1) 7/8″ SAE J429 Grade 5 Zinc Coated to ASTM B695/F1941
Surface Coating	Galvanized per ASTM A153/A123 (G), Bare Steel (NG), or Epoxy Coated per ICC-ES AC228 (EP)
Compatibility	MH313, MH313R, MH325

CAP CAPACITY	
Ultimate Compression / Tension	16 Tons / 16 Tons
Allowable Compression / Tension	8 Tons / 8 Tons





Installation Notes:

After installation of a Magnum Helical Pile to the correct depth, torque, and capacity, cut-off the pile shaft at the proper elevation. Drill 0.94″ hole using Magnum drill template. Place the pile cap over the shaft and secure with 0.88" bolt. Snug tighten nut. Place wood beams on cap angle and secure with 0.50″ lag screws as required for the project.

All Magnum Products Made in U.S.A.
U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

Magnum Piering, Inc.
6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

MAGNUM® MHC1130-35 Wood Corner Cap

Allowable Capacity 8 Tons Compression / 8 Tons Tension

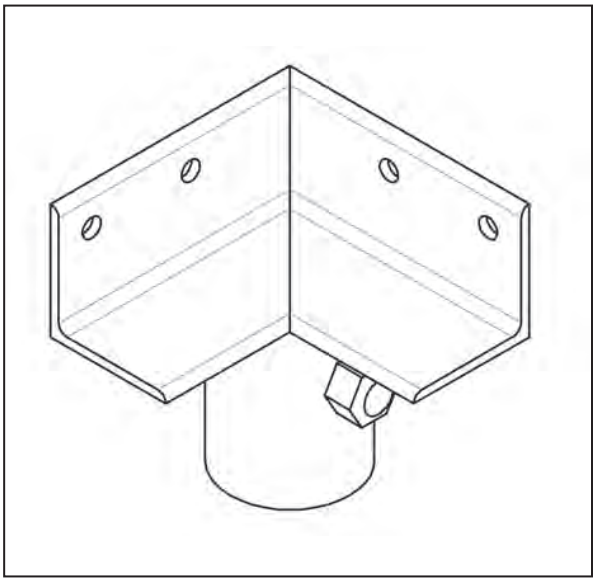
3.63-Inch I.D. Collar w/ (2) Intersecting L3.5″ x 3.5″ x 1/4” – 7.25″ Long Angles
Fits MH3521 and MH3521R Magnum® Helical Piles

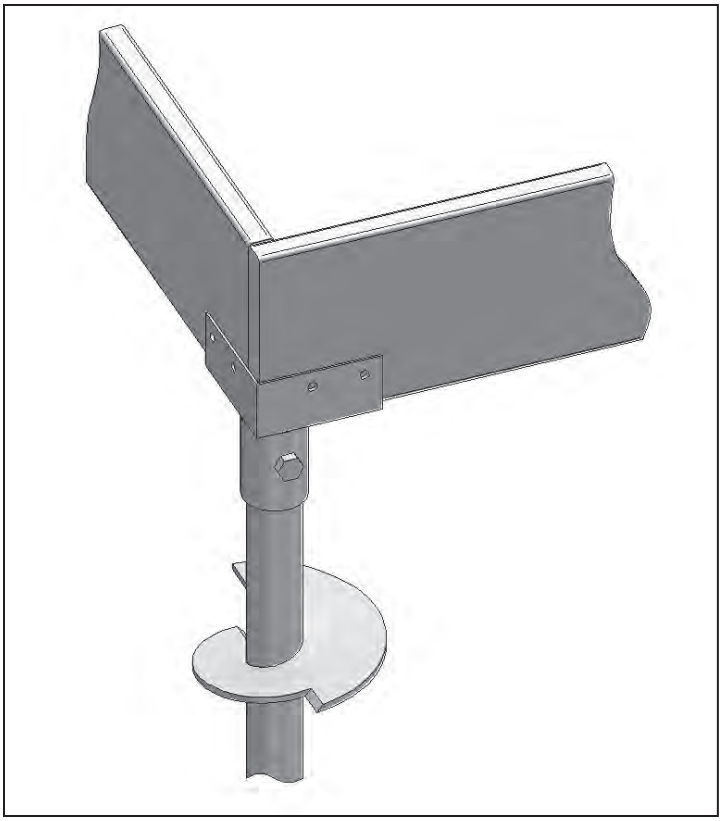
Description

Magnum MHC1130-35 wood corner cap has 16 tons ultimate capacity, 8 tons working capacity in compression and tension. The wood corner cap consists of a collar tube with bolt hole for connection to Magnum helical piles and two angles oriented at 90 deg for attachment to two intersecting wood beams. The wood corner cap is designed in accordance with ICC-ES document AC358 as well as IBC, ACI, and AISC codes. Application of the cap varies by project and is the responsibility of registered design professional including crushing strength, lateral bracing, and span of wood beams.

SPECIFICATIONS	
Collar Tube	0.25 in. x 3.63 in. I.D. ASTM A513 GR65+
End Effecter	3.5″ x 3.5″ x 1/4″ – 7.25″ Long Angles at 90 deg with holes for (4) 1/2″ Lag Bolts
Pile Connection	(1) 1″ SAE J429 Grade 8 Zinc Coated to ASTM B695/F1941
Surface Coating	Galvanized per ASTM A153/A123 (G), Bare Steel (NG), or Epoxy Coated per ICC-ES AC228 (EP)
Compatibility	MH3521 and MH3521R

CAP CAPACITY	
Ultimate Compression / Tension	16 Tons / 16 Tons
Allowable Compression / Tension	8 Tons / 8 Tons





Installation Notes:

After installation of a Magnum Helical Pile to the correct depth, torque, and capacity, cut-off the pile shaft at the proper elevation. Drill 17/16″ holes using Magnum drill template. Place the pile cap over the shaft and secure with 1″ bolt. Snug tighten nut. Place wood beams on cap angle and secure with 1/2″ lag screws as required for the project.

All Magnum Products Made in U.S.A.
U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

Magnum Piering, Inc.
6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

MAGNUM® MHC1160-3 4x4 Post Cap

Allowable Capacity 8 Tons Compression / 8 Tons Tension

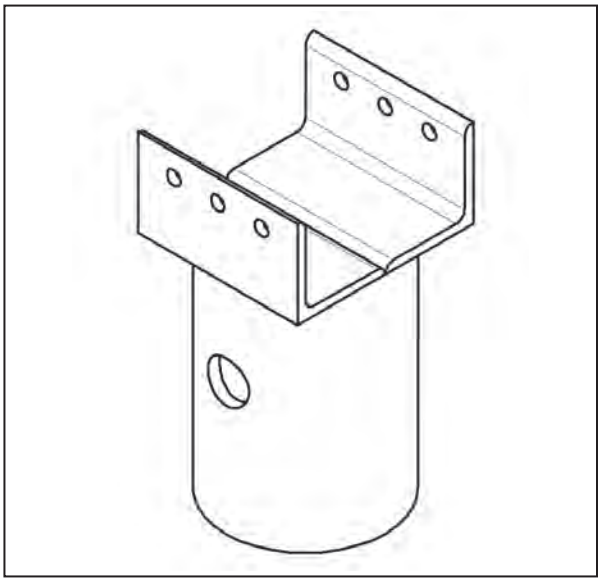
3.13-Inch I.D. Collar with 2″ Tall 3.625″ x 3.625″ x 0.188″ Post Base
Fits MH313, MH313R, MH325 Magnum® Helical Piles

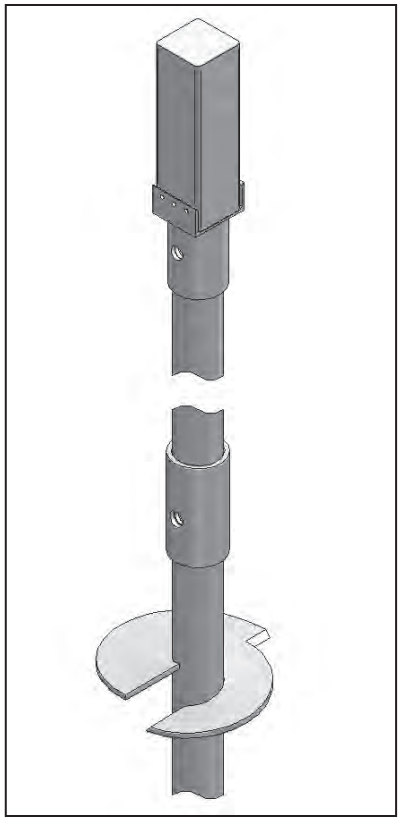
Description

Magnum MHC1160-3 4x4 post cap has 17 tons ultimate capacity, 8 tons working capacity in compression and tension. The 4x4 post cap consists of a collar tube with bolt hole for connection to Magnum helical piles and 3.625″ x 3.625″ post base for attachment to a 4.00″ x 4.00″ dimensioned wood post. The 4x4 post cap is designed in accordance with ICC-ES document AC358 as well as IBC, ACI, and AISC codes. Application of the cap varies by project and is the responsibility of registered design professional including crushing strength, lateral bracing, and buckling of wood post.

SPECIFICATIONS	
Collar Tube	0.25 in. x 3.13 in. I.D. ASTM A513 GR65+
End Effecter	2″ tall 3.625″ x 3.625″ x 0.188″ Post Base with Holes for (6) 1/4″ Lag Bolts
Pile Connection	(1) 7/8″ SAE J429 Grade 5 Zinc Coated to ASTM B695/F1941
Surface Coating	Galvanized per ASTM A153/A123 (G), Bare Steel (NG), or Epoxy Coated per ICC-ES AC228 (EP)
Compatibility	MH313, MH313R, MH325

CAP CAPACITY	
Ultimate Compression / Tension	17 Tons / 17 Tons
Allowable Compression / Tension	8 Tons / 8 Tons





Installation Notes:

After installation of a Magnum Helical Pile to the correct depth, torque, and capacity, cut-off the pile shaft at the proper elevation. Drill .94″ hole using Magnum drill template. Place the pile cap over the shaft and secure with 7/8″ bolt. Snug tighten nut. Place wood post on post base and secure with 1/4″ lag screws as required for the project.

All Magnum Products Made in U.S.A.
U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

Magnum Piering, Inc.
6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

MAGNUM® MHC1160-35 4x4 Post Cap

Allowable Capacity 8 Tons Compression / 8 Tons Tension

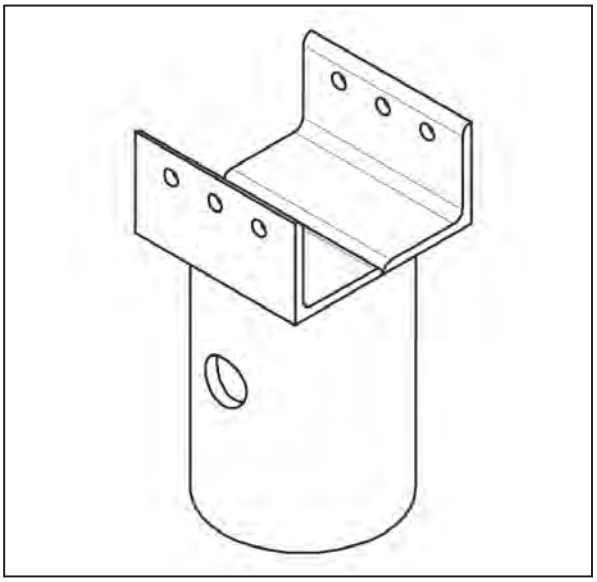
3.63-Inch I.D. Collar with 2″ Tall 3.625″ x 3.625″ x 0.188″ Post Base
Fits MH3521 and MH3521R Magnum® Helical Piles

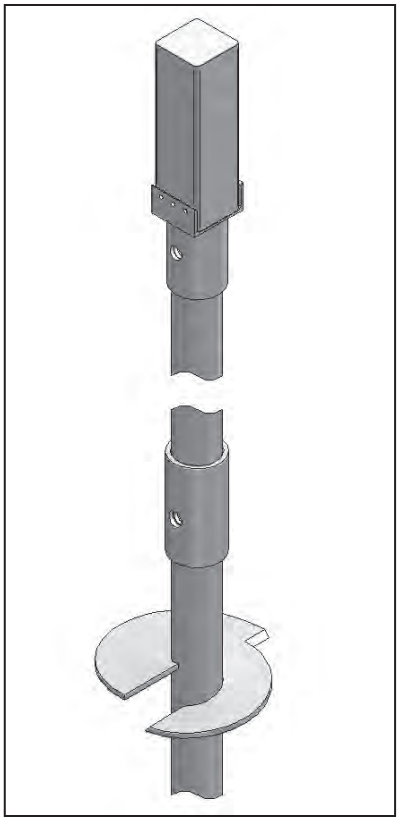
Description

Magnum MHC1160-3R 4x4 post cap has 17 tons ultimate capacity, 8 tons working capacity in compression and tension. The 4x4 post cap consists of a collar tube with bolt hole for connection to Magnum helical piles and 3.625″ x 3.625″ post base for attachment to a 4x4 dimensioned wood post. The 4x4 post cap is designed in accordance with ICC-ES document AC358 as well as IBC, ACI, and AISC codes. Application of the cap varies by project and is the responsibility of registered design professional including crushing strength, lateral bracing, and buckling of wood post.

SPECIFICATIONS	
Collar Tube	0.25 in. x 3.63 in. I.D. ASTM A513 GR65+
End Effecter	2″ tall 3.625″ x 3.625″ x 0.188″ Post Base with Holes for (6) 1/4″ Lag Bolts
Pile Connection	(1) 1″ SAE J429 Grade 8 Zinc Coated to ASTM B695/F1941
Surface Coating	Galvanized per ASTM A153/A123 (G), Bare Steel (NG), or Epoxy Coated per ICC-ES AC228 (EP)
Compatibility	MH3521 and MH3521R

CAP CAPACITY	
Ultimate Compression / Tension	17 Tons / 17 Tons
Allowable Compression / Tension	8 Tons / 8 Tons





Installation Notes:

After installation of a Magnum Helical Pile to the correct depth, torque, and capacity, cut-off the pile shaft at the proper elevation. Drill 17/16″ hole using Magnum drill template. Place the pile cap over the shaft and secure with 1″ bolt. Snug tighten nut. Place wood post on post base and secure with 1/4″ lag screws as required for the project.

All Magnum Products Made in U.S.A.
U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

Magnum Piering, Inc.
6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

MAGNUM® MHC1161-3 6x6 Post Cap

Allowable Capacity 16 Tons Compression / 16 Tons Tension

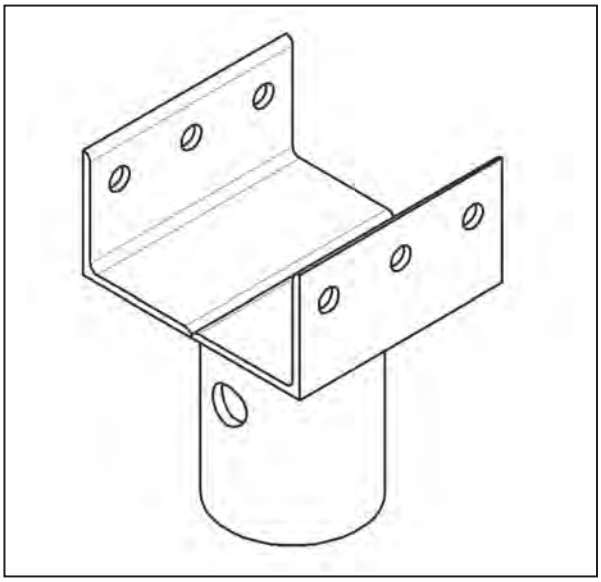
3.13-Inch I.D. Collar with 3″ Tall 5.625″ x 5.625″ x 0.25″ Post Base
Fits MH313, MH313R, MH325 Magnum® Helical Piles

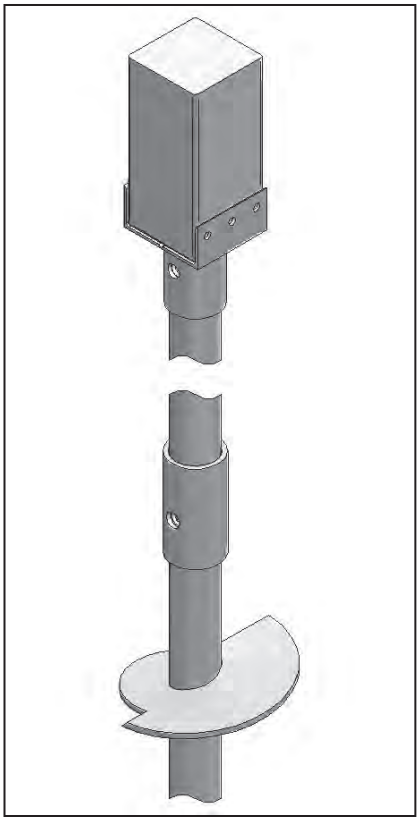
Description

Magnum MHC1161-3 6x6 post cap has 32 tons ultimate capacity, 16 tons working capacity in compression and tension. The 6x6 post cap consists of a collar tube with bolt hole for connection to Magnum helical piles and 5.625″ x 5.625″ post base for attachment to a 6x6 dimensioned wood post. The 6x6 post cap is designed in accordance with ICC-ES document AC358 as well as IBC, ACI, and AISC codes. Application of the cap varies by project and is the responsibility of registered design professional including crushing strength, lateral bracing, and buckling of wood post.

SPECIFICATIONS	
Collar Tube	0.25 in. x 3.13 in. I.D. ASTM A513 GR65+
End Effecter	3″ tall 5.625″ x 5.625″ x 0.25″ Post Base with Holes for (6) 1/2″ Lag Bolts
Pile Connection	(1) 7/8″ SAE J429 Grade 5 Zinc Coated to ASTM B695/F1941
Surface Coating	Galvanized per ASTM A153/A123 (G), Bare Steel (NG), or Epoxy Coated per ICC-ES AC228 (EP)
Compatibility	MH313, MH313R, MH325

CAP CAPACITY	
Ultimate Compression / Tension	32 Tons / 32 Tons
Allowable Compression / Tension	16 Tons / 16 Tons





Installation Notes:

After installation of a Magnum Helical Pile to the correct depth, torque, and capacity, cut-off the pile shaft at the proper elevation. Drill 0.94″ hole using Magnum drill template. Place the pile cap over the shaft and secure with 7/8″ bolt. Snug tighten nut. Place wood post on post base and secure with 1/2″ lag screws as required for the project.

All Magnum Products Made in U.S.A.
U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

Magnum Piering, Inc.
6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

MAGNUM® MHC1206-3 ID Plate Cap

Allowable Capacity 16 Tons Compression / 16 Tons Tension

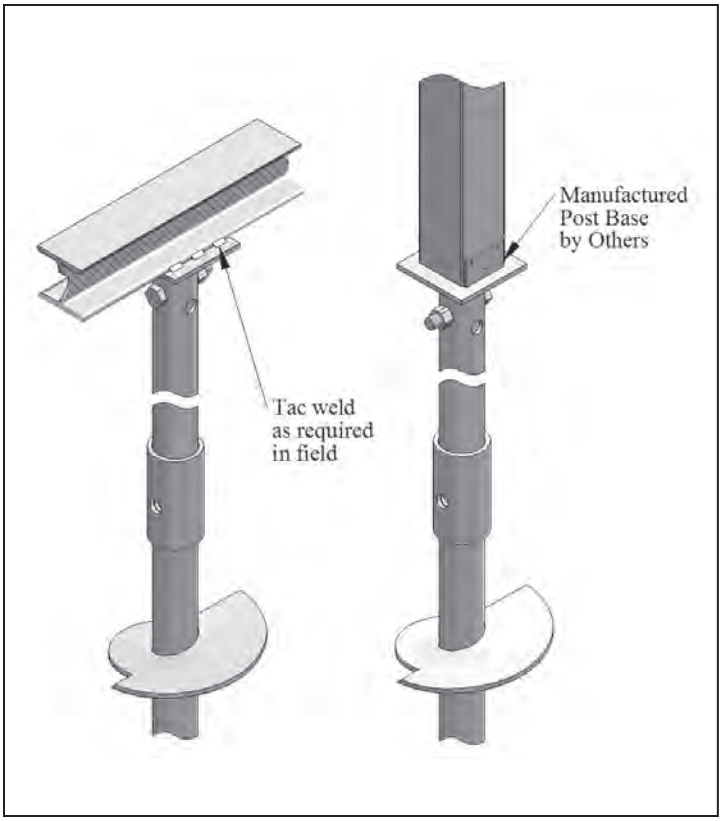
2.5-Inch O.D. Collar with 6″ x 6″ x 0.375″ Plate w/ 1/2″ Threaded Hole
Fits MH313, MH313R, MH325 Magnum® Helical Piles

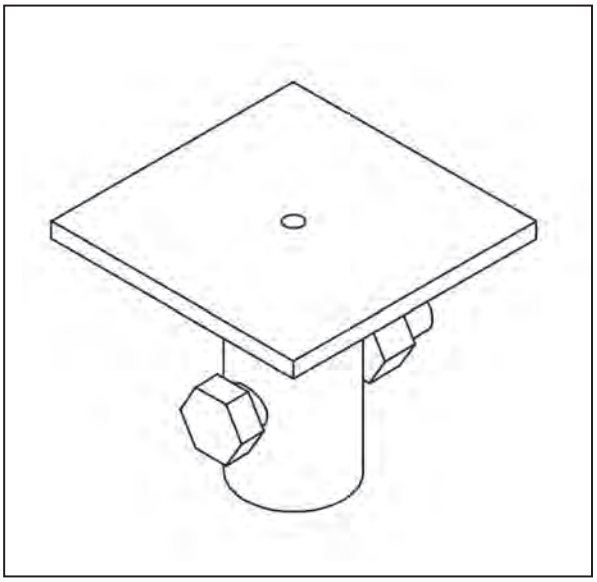
Description

Magnum MHC1206-3 ID plate cap has 32 tons ultimate capacity, 16 tons working capacity in compression and tension. The ID plate cap consists of a collar tube with bolt hole for connection to Magnum helical piles and 6″ x 6″ x 0.375″ plate with 1/2″ hole for attachment to various wood and steel beams and posts. The ID plate cap is designed in accordance with ICC-ES document AC358 as well as IBC, ACI, and AISC codes. Application of the cap varies by project and is the responsibility of registered design professional including beam bearing, beam span, beam attachment, post attachment, and buckling of post.

SPECIFICATIONS	
Collar Tube	0.25 in. x 2.5 in. O.D. ASTM A513 GR65+
End Effecter	6″ x 6″ x 0.375″ Steel Plate with 1/2″ Threaded Hole
Pile Connection	(1) 7/8″ SAE J429 Grade 5 Zinc Coated to ASTM B695/F1941
Surface Coating	Galvanized per ASTM A153/A123 (G), Bare Steel (NG), or Epoxy Coated per ICC-ES AC228 (EP)
Compatibility	MH313, MH313R, MH325

CAP CAPACITY	
Ultimate Compression / Tension	32 Tons / 32 Tons
Allowable Compression / Tension	16 Tons / 16 Tons





Installation Notes:

After installation of a Magnum Helical Pile to the correct depth, torque, and capacity, cut-off the pile shaft at the proper elevation. Drill 0.94″ hole using Magnum drill template. Place the pile cap inside the shaft and secure with 7/8″ bolt. Snug tighten nut. Place wood or steel beam/post on cap and secure as required for the project.

All Magnum Products Made in U.S.A.
U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

Magnum Piering, Inc.
6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

MAGNUM® MHC1207-3 OD Plate Cap

Allowable Capacity 16 Tons Compression / 16 Tons Tension

3.13-Inch I.D. Collar with 6″ x 6″ x 0.375″ Plate w/ 1/2″ Threaded Hole

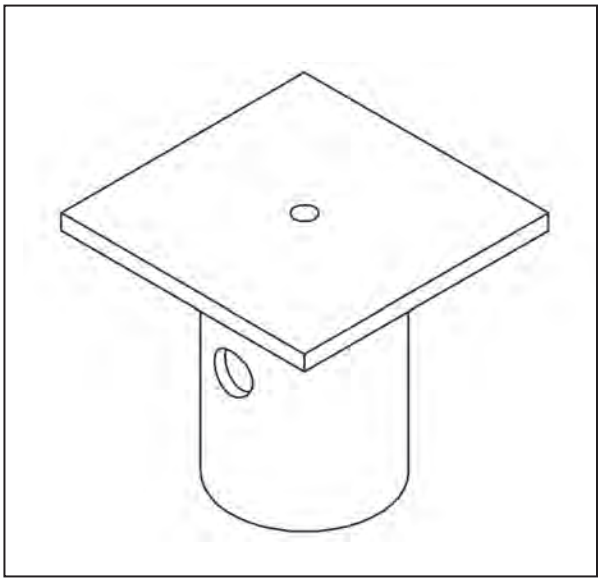
Fits MH313, MH313R, MH325 Magnum® Helical Piles

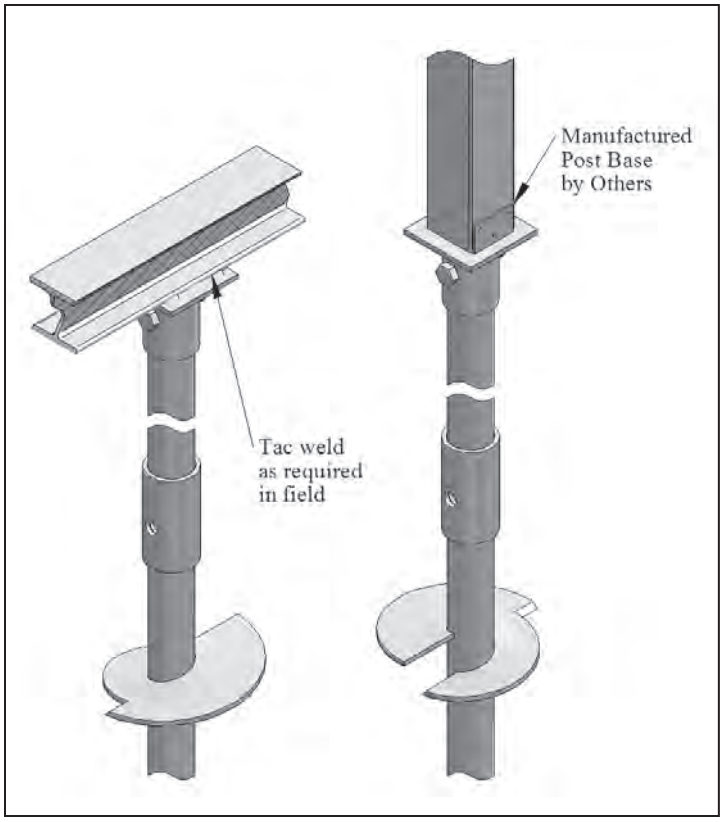
Description

Magnum MHC1207-3 OD plate cap has 32 tons ultimate capacity, 16 tons working capacity in compression and tension. The OD plate cap consists of a collar tube with bolt hole for connection to Magnum helical piles and 6″ x 6″ x 0.38″ plate with 1/2″ hole for attachment to various wood and steel beams and posts. The OD plate cap is designed in accordance with ICC-ES document AC358 as well as IBC, ACI, and AISC codes. Application of the cap varies by project and is the responsibility of registered design professional including beam bearing, beam span, beam attachment, post attachment, and buckling of post.

SPECIFICATIONS	
Collar Tube	0.25 in. x 3.13 in. I.D. ASTM A513 GR65+
End Effecter	6″ x 6″ x 0.38″ Steel Plate with 1/2” Threaded Hole
Pile Connection	(1) 7/8″ SAE J429 Grade 5 Zinc Coated to ASTM B695/F1941
Surface Coating	Galvanized per ASTM A153/A123 (G), Bare Steel (NG), or Epoxy Coated per ICC-ES AC228 (EP)
Compatibility	MH313, MH313R, MH325

CAP CAPACITY	
Ultimate Compression / Tension	32 Tons / 32 Tons
Allowable Compression / Tension	16 Tons / 16 Tons





Installation Notes:

After installation of a Magnum Helical Pile to the correct depth, orque, and capacity, cut-off the pile shaft at the proper elevation. Drill 0.94″ hole using Magnum drill template. Place the pile cap over the shaft and secure with 7/8″ bolt. Snug tighten nut. Place wood or steel beam/post on cap and secure as required for the project.

All Magnum Products Made in U.S.A.

U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

Magnum Piering, Inc.
6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

MAGNUM® MSC1300-150L55B Bearing Plate Cap

Allowable Capacity 17.5 Tons Compression / 12.5 Tons Tension

1.6-Inch Square Socket with 5″ x 5″ x 1/2″ Bearing Plate

Fits MS150B Magnum® Helical Piles

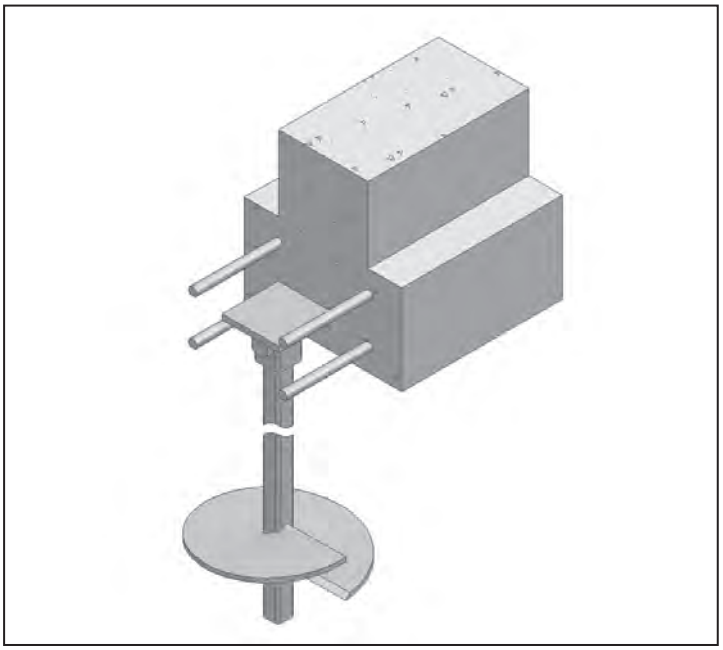
Description

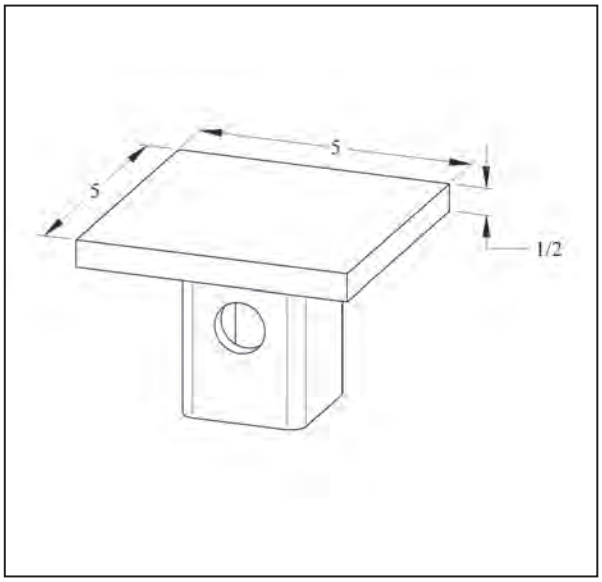
The Magnum MSC1300-150L55B bearing plate cap has 35 tons ultimate capacity, 17.5 tons working capacity in compression and 25 tons ultimate capacity, 12.5 tons working capacity in tension. The bearing plate cap consists of a square socket tube with bolt hole for connection to Magnum helical piles and 5″ x 5″ x 1/2″ plate for embedment in cast-in-place reinforced concrete. The bearing plate cap is designed in accordance with ICC-ES document AC358 as well as IBC, ACI, and AISC codes. Application of the cap varies by project and is the responsibility of registered design professional including minimum embedment for two-way and one-way punching shear, reinforcement of concrete, and pile spacing.

SPECIFICATIONS	
Collar Tube	0.31″ x 2.25″ x 2.25″ Sqr. ASTM A513 GR-65+
End Effecter	5″ x 5″ x 0.25″ Steel Bearing Plate
Pile Connection	(1) 7/8″ SAE J429 Grade 5 Zinc Coated to ASTM B695/F1941
Surface Coating	Galvanized per ASTM A153/A123 (G), Bare Steel (NG), or Epoxy Coated per ICC-ES AC228 (EP)
Compatibility	MS150B

CAP CAPACITY	
Ultimate Compression / Tension	35 Tons / 25 Tons
Allowable Compression / Tension	17.5 Tons / 12.5 Tons

Note: Cap capacity takes into account strength of collar, end effecter, and pile connection. Capacity may be limited by the helical pile itself, bearing/pullout capacity of soil, or strength of the structure to which the cap is attached, whichever is less.





Installation Notes:

After installation of a Magnum Helical Pile to the correct depth, torque, and capacity, cut-off the pile shaft at the proper elevation. Drill 15/16″ hole using Magnum drill template. Place the pile cap over the shaft and secure with 7/8″ bolt. Ensure direct bearing of cap on shaft. Snug tighten nut. Place reinforcing steel as required for the project and cast concrete over and around the pile cap. Cap capacity is based on embedment in concrete pile cap at least 4x larger than plate size and minimum 2,500 psi concrete.

All Magnum Products Made in U.S.A.

U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

Magnum Piering, Inc.
6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

MAGNUM® MSC1300-175M6565B Bearing Plate Cap

Allowable Capacity 27.5 Tons Compression / 20 Tons Tension

1.9-Inch Square Socket with 6.5″ x 6.5″ x 5/8″ Bearing Plate

Fits MS175B Magnum® Helical Piles

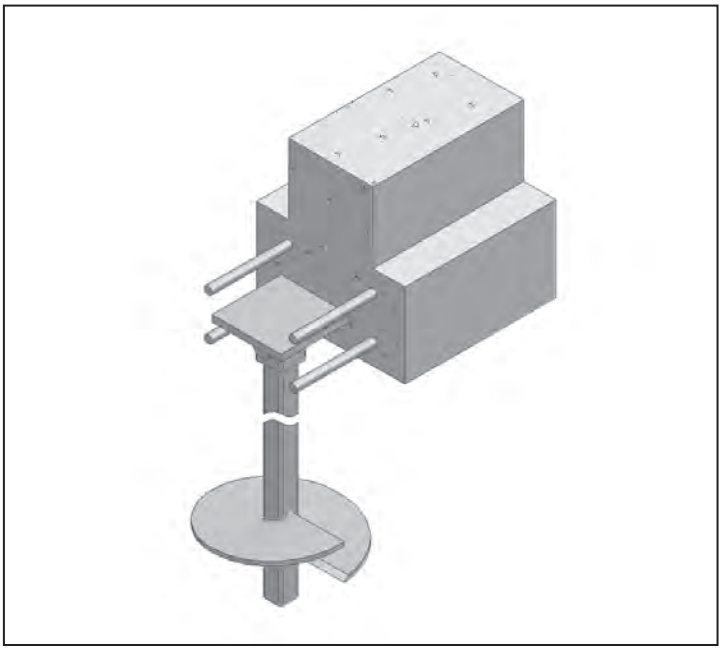
Description

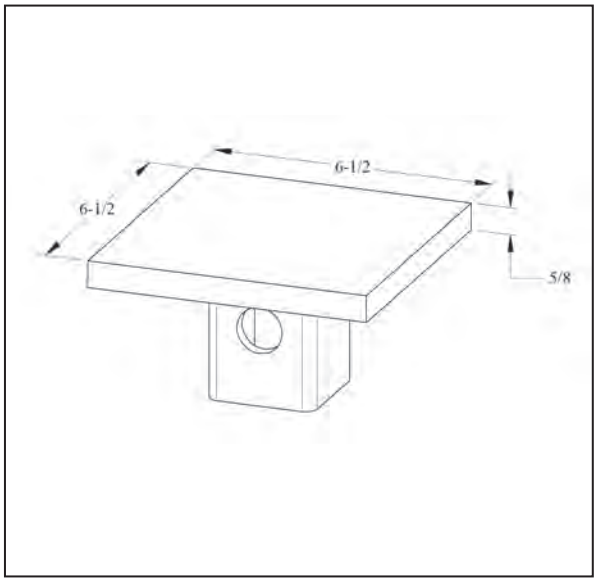
The Magnum MHC1300-175M6565S bearing plate cap has 55 tons ultimate capacity, 27.5 tons working capacity in compression and 40 tons ultimate capacity, 20 tons working capacity in tension. The bearing plate cap consists of a square socket tube with bolt hole for connection to Magnum helical piles and 6.5" x 6.5" x 5/8" plate for embedment in cast-in-place reinforced concrete. The bearing plate cap is designed in accordance with ICC-ES document AC358 as well as IBC, ACI, and AISC codes. Application of the cap varies by project and is the responsibility of registered design professional including minimum embedment for two-way and one-way punching shear, reinforcement of concrete, and pile spacing.

SPECIFICATIONS	
Collar Tube	0.31″ x 2.5″ x 2.5″ Sqr. ASTM A513 GR-65+
End Effecter	5″ x 5″ x 0.25″ Steel Bearing Plate
Pile Connection	(1) 1″ SAE J429 Grade 8 Zinc Coated to ASTM B695/F1941
Surface Coating	Galvanized per ASTM A153/A123 (G), Bare Steel (NG), or Epoxy Coated per ICC-ES AC228 (EP)
Compatibility	MS175B

CAP CAPACITY	
Ultimate Compression / Tension	55 Tons / 40 Tons
Allowable Compression / Tension	27.5 Tons / 20 Tons

Note: Cap capacity takes into account strength of collar, end effecter, and pile connection. Capacity may be limited by the helical pile itself, bearing/pullout capacity of soil, or strength of the structure to which the cap is attached, whichever is less.





Installation Notes:

After installation of a Magnum Helical Pile to the correct depth, torque, and capacity, cut-off the pile shaft at the proper elevation. Drill 17/16″ hole using Magnum drill template. Place the pile cap over the shaft and secure with 1″ bolt. Ensure direct bearing of cap on shaft. Snug tighten nut. Place reinforcing steel as required for the project and cast concrete over and around the pile cap. Cap capacity is based on embedment in concrete pile cap at least 4x larger than plate size and minimum 2,500 psi concrete.

All Magnum Products Made in U.S.A.

U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

Magnum Piering, Inc.
6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

MAGNUM® MHC1300-2J55B Bearing Plate Cap

Allowable Capacity 12 Tons Compression / 8 Tons Tension

3.0-Inch I.D. Collar with 5″ x 5″ x 1/4″ Bearing Plate

Fits MH220 Magnum® Helical Piles

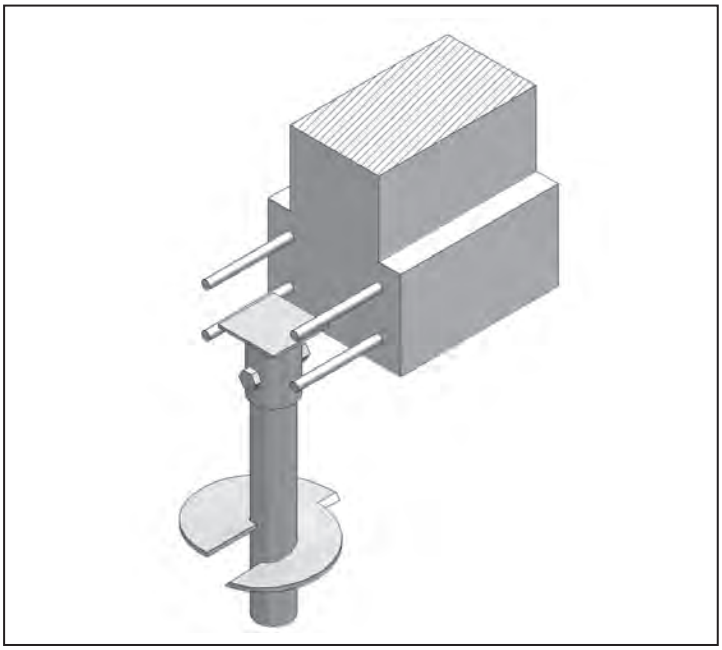
Description

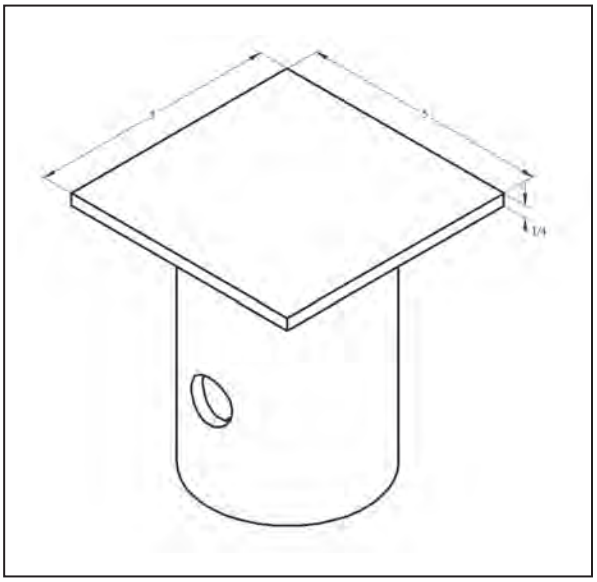
Magnum MHC1300-2J55B bearing plate cap has 23 tons ultimate capacity, 12 tons working capacity in compression and 16 tons ultimate capacity, 8 tons working capacity in tension. The bearing plate cap consists of a collar tube with bolt hole for connection to Magnum helical piles and 5″ x 5″ x 1/4″ plate for embedment in cast-in-place reinforced concrete. The bearing plate cap is designed in accordance with ICC-ES document AC358 as well as IBC, ACI, and AISC codes. Application of the cap varies by project and is the responsibility of registered design professional including minimum embedment for two-way and one-way punching shear, reinforcement of concrete, and pile spacing.

SPECIFICATIONS	
Collar Tube	0.20 in. x 3.0 in. I.D. ASTM A500 GR-C
End Effecter	5″ x 5″ x 0.25″ Steel Bearing Plate
Pile Connection	(1) 7/8″ SAE J429 Grade 5 Zinc Coated to ASTM B695/F1941
Surface Coating	Galvanized per ASTM A153/A123 (G), Bare Steel (NG), or Epoxy Coated per ICC-ES AC228 (EP)
Compatibility	MH220

CAP CAPACITY	
Ultimate Compression / Tension	23 Tons / 16 Tons
Allowable Compression / Tension	12 Tons / 8 Tons

Note: Cap capacity takes into account strength of collar, end effecter, and pile connection. Capacity may be limited by the helical pile itself, bearing/pullout capacity of soil, or strength of the structure to which the cap is attached, whichever is less.





Installation Notes:

After installation of a Magnum Helical Pile to the correct depth, torque, and capacity, cut-off the pile shaft at the proper elevation. Drill 15/16″ hole using Magnum drill template. Place the pile cap over the shaft and secure with 7/8″ bolt. Ensure direct bearing of cap on shaft. Snug tighten nut. Place reinforcing steel as required for the project and cast concrete over and around the pile cap. Cap capacity is based on embedment in concrete pile cap at least 4x larger than plate size and minimum 2,500 psi concrete.

All Magnum Products Made in U.S.A.

U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

Magnum Piering, Inc.
6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

MAGNUM® MHC1300-3J55B Bearing Plate Cap

Allowable Capacity 17 Tons Compression / 12 Tons Tension

3.13-Inch I.D. Collar with 5″ x 5″ x 0.25″ Bearing Plate

Fits MH313, MH313R, MH325 Magnum® Helical Piles

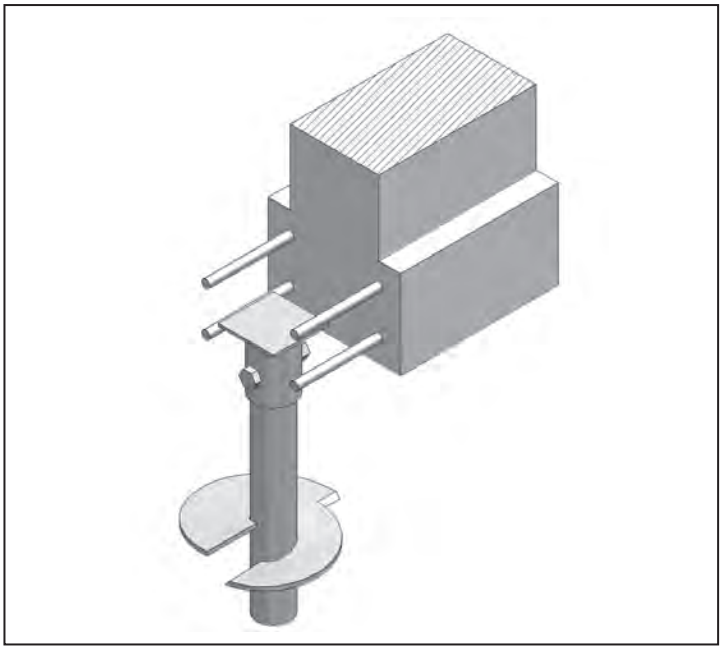
Description

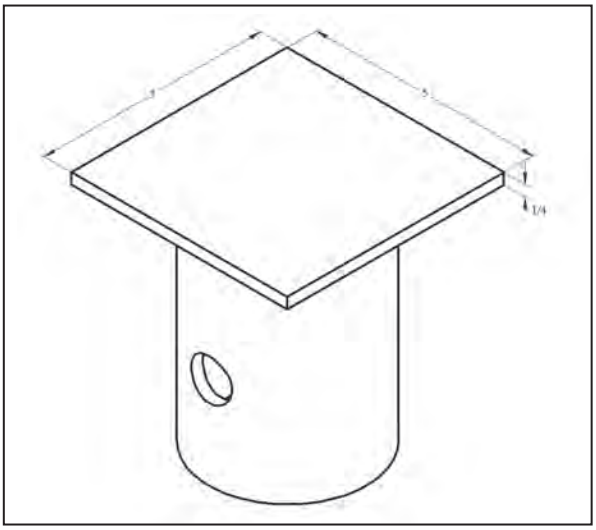
Magnum MHC1300-3J55B bearing plate cap has 35 tons ultimate capacity, 17 tons working capacity in compression and 25 tons ultimate capacity, 12 tons working capacity in tension. The bearing plate cap consists of a collar tube with bolt hole for connection to Magnum helical piles and 5″ x 5″ x 1/4″ plate for embedment in cast-in-place reinforced concrete. The bearing plate cap is designed in accordance with ICC-ES document AC358 as well as IBC, ACI, and AISC codes. Application of the cap varies by project and is the responsibility of registered design professional including minimum embedment for two-way and one-way punching shear, reinforcement of concrete, and pile spacing.

SPECIFICATIONS	
Collar Tube	0.25 in. x 3.13 in. I.D. ASTM A513 GR65+
End Effecter	5″ x 5″ x 0.25″ Steel Bearing Plate
Pile Connection	(1) 7/8″ SAE J429 Grade 5 Zinc Coated to ASTM B695/F1941
Surface Coating	Galvanized per ASTM A153/A123 (G), Bare Steel (NG), or Epoxy Coated per ICC-ES AC228 (EP)
Compatibility	MH313, MH313R, MH325

CAP CAPACITY	
Ultimate Compression / Tension	35 Tons / 25 Tons
Allowable Compression / Tension	17 Tons / 12 Tons

Note: Cap capacity takes into account strength of collar, end effecter, and pile connection. Capacity may be limited by the helical pile itself, bearing/pullout capacity of soil, or strength of the structure to which the cap is attached, whichever is less.





Installation Notes:

After installation of a Magnum Helical Pile to the correct depth, torque, and capacity, cut-off the pile shaft at the proper elevation Drill 15/16″ hole using Magnum drill template. Place the pile cap over the shaft and secure with 7/8″ bolt. Ensure direct bearing of plate on shaft. Snug tighten nut. Place reinforcing steel as required for the project and cast concrete over and around the pile cap. Cap capacity is based on embedment in concrete pile cap at least 4x larger than plate size and minimum 2,500 psi concrete.

All Magnum Products Made in U.S.A.

U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

Magnum Piering, Inc.
6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

MAGNUM® MHC1300-3K66BR1 Bearing Plate Cap

Allowable Capacity 25 Tons Compression / 17 Tons Tension

3.13-Inch I.D. Collar with 6″ x 6″ x 3/8″ Bearing Plate

Fits MH325R Magnum® Helical Piles

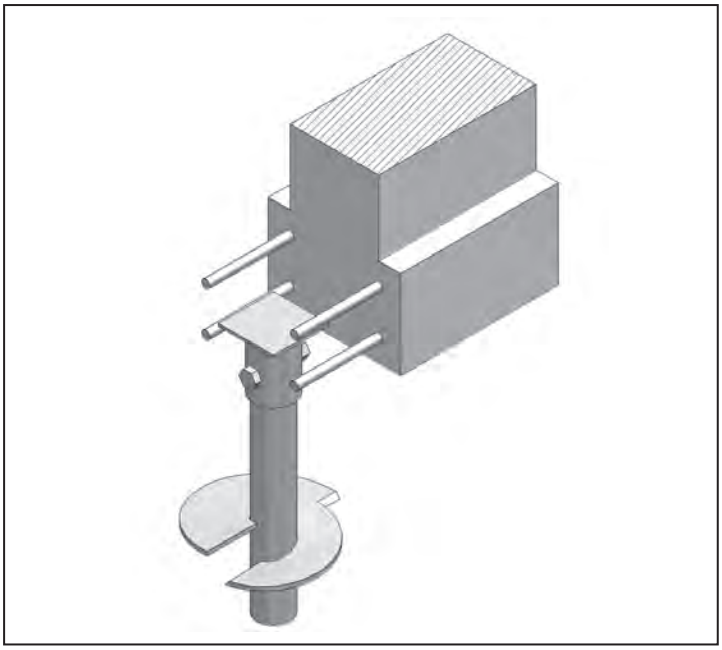
Description

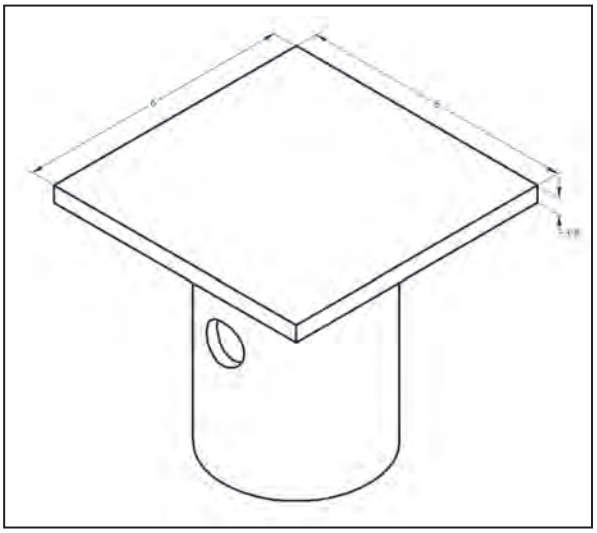
Magnum MHC1300-3K66BR1 bearing plate cap has 50 tons ultimate capacity, 25 tons working capacity in compression and 35 tons ultimate capacity, 17 tons working capacity in tension. The bearing plate cap consists of a collar tube with bolt hole for connection to Magnum helical piles and 6″ x 6″ x 3/8″ plate for embedment in cast-in-place reinforced concrete. The bearing plate cap is designed in accordance with ICC-ES document AC358 as well as IBC, ACI, and AISC codes. Application of the cap varies by project and is the responsibility of registered design professional including minimum embedment for two-way and one-way punching shear, reinforcement of concrete, and pile spacing.

SPECIFICATIONS	
Collar Tube	0.31 in. x 3.13 in. I.D. ASTM A513 GR65+
End Effecter	6″ x 6″ x 3/8″ Steel Bearing Plate
Pile Connection	(1) 1″ SAE J429 Grade 5 Zinc Coated to ASTM B695/F1941
Surface Coating	Galvanized per ASTM A153/A123 (G), Bare Steel (NG), or Epoxy Coated per ICC-ES AC228 (EP)
Compatibility	MH325R

CAP CAPACITY	
Ultimate Compression / Tension	50 Tons / 35 Tons
Allowable Compression / Tension	25 Tons / 17 Tons

Note: Cap capacity takes into account strength of collar, end effecter, and pile connection. Capacity may be limited by the helical pile itself, bearing/pullout capacity of soil, or strength of the structure to which the cap is attached, whichever is less.





Installation Notes:

After installation of a Magnum Helical Pile to the correct depth, torque, and capacity, cut-off the pile shaft at the proper elevation. Drill 17/16″ hole using Magnum drill template. Place the pile cap over the shaft and secure with two 1.00″ bolt. Ensure direct bearing of plate on shaft. Snug tighten nuts. Place reinforcing steel as required for the project and cast concrete over and around the pile cap.

All Magnum Products Made in U.S.A.

U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

Magnum Piering, Inc.
6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

MAGNUM® MHC1300-3L6565BR2 Bearing Plate Cap

Allowable Capacity 25 Tons Compression / 25 Tons Tension

3.13-Inch I.D. Collar with 6.5″ x 6.5″ x 1/2″ Bearing Plate

Fits MH325R Magnum® Helical Piles

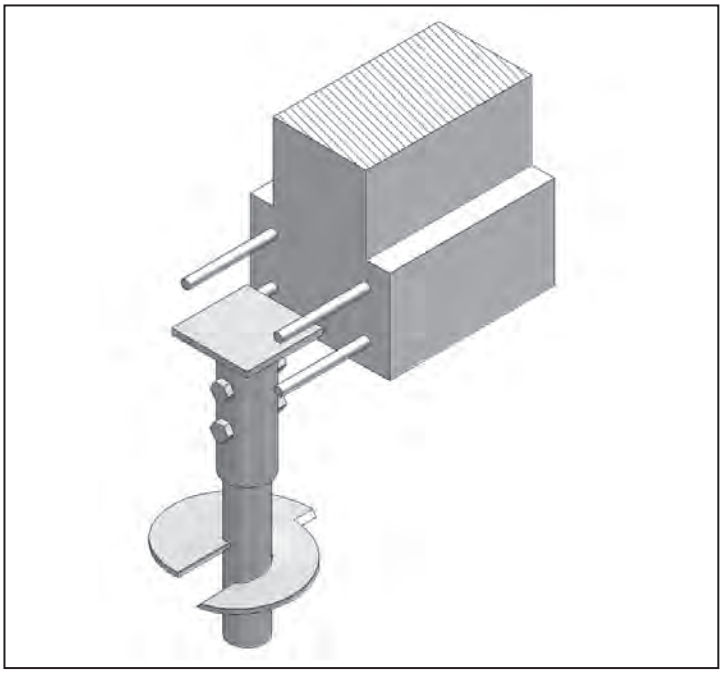
Description

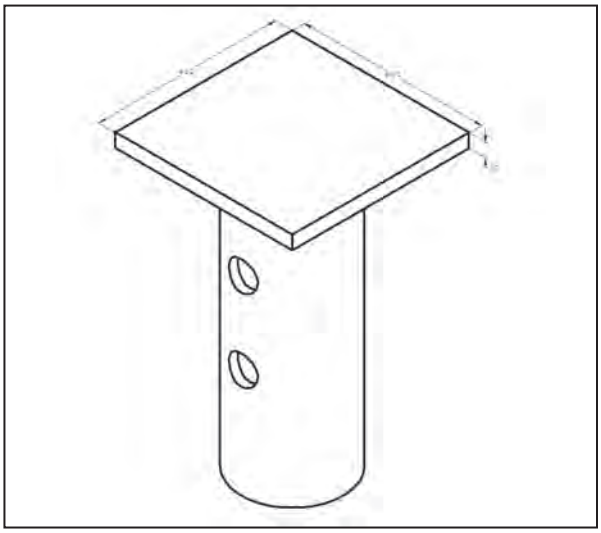
Magnum MHC1300-3L6565BR2 bearing plate cap has 50 tons ultimate capacity, 25 tons working capacity in compression and 50 tons ultimate capacity, 25 tons working capacity in tension. The bearing plate cap consists of a collar tube with bolt hole for connection to Magnum helical piles and 6.50″ x 6.50″ x 0.50″ plate for embedment in cast-in-place reinforced concrete. The bearing plate cap is designed in accordance with ICC-ES document AC358 as well as IBC, ACI, and AISC codes. Application of the cap varies by project and is the responsibility of registered design professional including minimum embedment for two-way and one-way punching shear, reinforcement of concrete, and pile spacing.

SPECIFICATIONS	
Collar Tube	0.31 in. x 3.13 in. I.D. ASTM A513 GR65+
End Effecter	6.5″ x 6.5″ x 1/2″ Steel Bearing Plate
Pile Connection	(2) 1″ SAE J429 Grade 5 Zinc Coated to ASTM B695/F1941
Surface Coating	Galvanized per ASTM A153/A123 (G), Bare Steel (NG), or Epoxy Coated per ICC-ES AC228 (EP)
Compatibility	MH325R

CAP CAPACITY	
Ultimate Compression / Tension	50 Tons
Allowable Compression / Tension	25 Tons

Note: Cap capacity takes into account strength of collar, end effecter, and pile connection. Capacity may be limited by the helical pile itself, bearing/pullout capacity of soil, or strength of the structure to which the cap is attached, whichever is less.





Installation Notes:

After installation of a Magnum Helical Pile to the correct depth, torque, and capacity, cut-off the pile shaft at the proper elevation. Drill 17/16″ holes using Magnum drill template. Place the pile cap over the shaft and secure with two 1″ bolts. Snug tighten nuts. Place reinforcing steel as required for the project and cast concrete over and around the pile cap. Cap capacity is based on embedment in concrete pile cap at least 4x larger than plate size and minimum 2,500 psi concrete.

All Magnum Products Made in U.S.A.

U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

Magnum Piering, Inc.
6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

MAGNUM® MHC1300-35K66BR Bearing Plate Cap

Allowable Capacity 25 Tons Compression / 17 Tons Tension

3.63-Inch I.D. Collar with 6″ x 6″ x 3/8″ Bearing Plate

Fits MH3521B and MH3521BR Magnum® Helical Piles

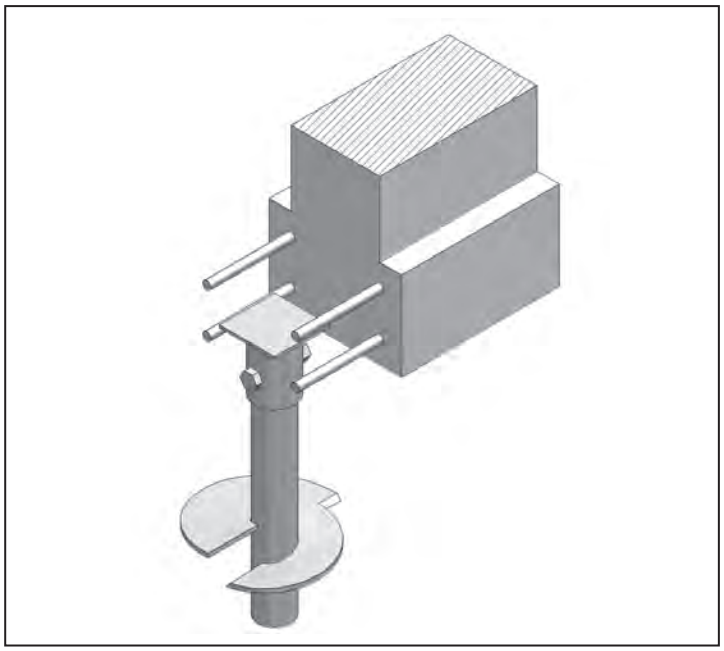
Description

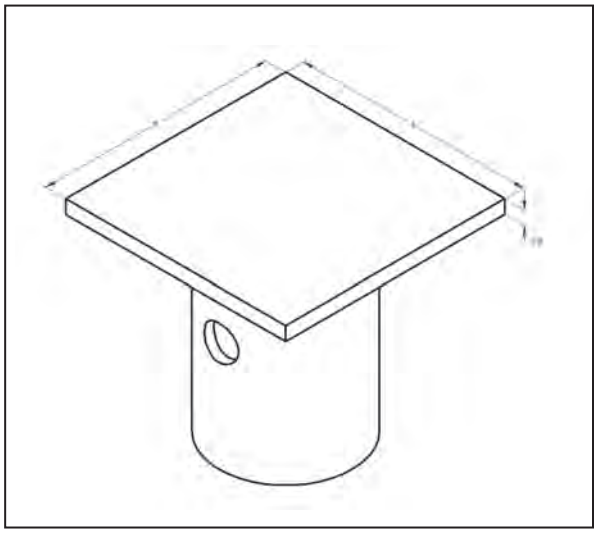
Magnum MHC1300-35K66BR bearing plate cap has 50 tons ultimate capacity, 25 tons working capacity in compression and 35 tons ultimate capacity, 17 tons working capacity in tension. The bearing plate cap consists of a collar tube with bolt hole for connection to Magnum helical piles and 6″ x 6″ x 3/8″ plate for embedment in cast-in-place reinforced concrete. The bearing plate cap is designed in accordance with ICC-ES document AC358 as well as IBC, ACI, and AISC codes. Application of the cap varies by project and is the responsibility of registered design professional including minimum embedment for two-way and one-way punching shear, reinforcement of concrete, and pile spacing.

SPECIFICATIONS	
Collar Tube	0.31 in. x 3.63 in. I.D. ASTM A513 GR65+
End Effecter	6″ x 6″ x 3/8″ Steel Bearing Plate
Pile Connection	(1) 1″ SAE J429 Grade 8 Zinc Coated to ASTM B695/F1941
Surface Coating	Galvanized per ASTM A153/A123 (G), Bare Steel (NG), or Epoxy Coated per ICC-ES AC228 (EP)
Compatibility	MH3521 and MH3521R

CAP CAPACITY	
Ultimate Compression / Tension	50 Tons / 35 Tons
Allowable Compression / Tension	25 Tons / 17 Tons

Note: Cap capacity takes into account strength of collar, end effecter, and pile connection. Capacity may be limited by the helical pile itself, bearing/pullout capacity of soil, or strength of the structure to which the cap is attached, whichever is less.





Installation Notes:

After installation of a Magnum Helical Pile to the correct depth, torque, and capacity, cut-off the pile shaft at the proper elevation Drill 17/16″ hole using Magnum drill template. Place the pile cap over the shaft and secure with 1.00″ bolt. Ensure direct bearing of plate on shaft. Snug tighten nuts. Place reinforcing steel as required for the project and cast concrete over and around the pile cap. Cap capacity is based on embedment in concrete pile cap at least 4x larger than plate size and minimum 2,500 psi concrete.

All Magnum Products Made in U.S.A.

U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

Magnum Piering, Inc.
6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

MAGNUM® MHC1300-4L88B1 Bearing Plate Cap

Allowable Capacity 45 Tons Compression / 20 Tons Tension

4.63-Inch I.D. Collar with 8″ x 8″ x 1/2″ Bearing Plate

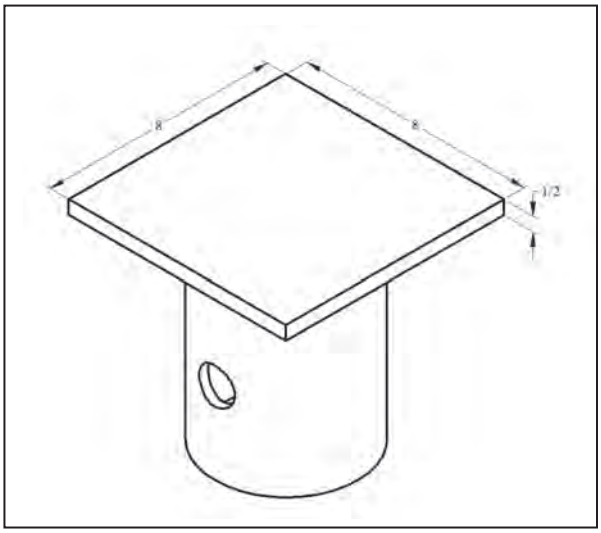
Fits MH425, MH425R, MH431, MH431R Magnum® Helical Piles

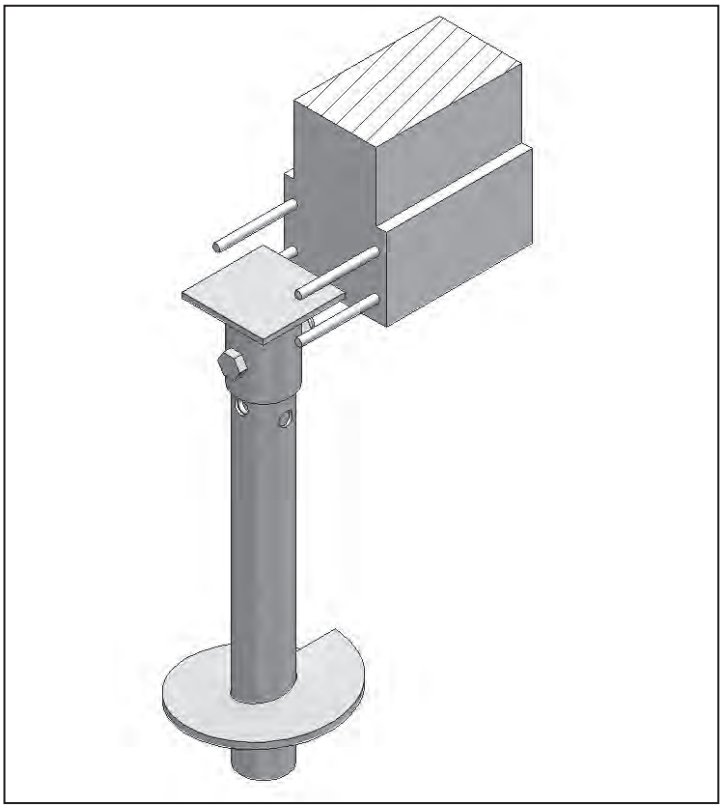
Description

Magnum MHC1300-4L88B1 bearing plate cap has 90 tons ultimate capacity, 45 tons working capacity in compression and 40 tons ultimate capacity, 20 tons working capacity in tension. The bearing plate cap consists of a collar tube with bolt hole for connection to Magnum helical piles and 8″ x 8″ x 1/2″ plate for embedment in cast-in-place reinforced concrete. The bearing plate cap is designed in accordance with ICC-ES document AC358 as well as IBC, ACI, and AISC codes. Application of the cap varies by project and is the responsibility of registered design professional including minimum embedment for two-way and one-way punching shear, reinforcement of concrete, and pile spacing.

SPECIFICATIONS	
Collar Tube	0.31 in. x 4.63 in. I.D. ASTM A513 GR65+
End Effecter	8″ x 8″ x 1/2″ Steel Bearing Plate
Pile Connection	(1) 1-1/4″ SAE J429 Grade 5 Zinc Coated to ASTM B695/F1941
Surface Coating	Galvanized per ASTM A153/A123 (G), Bare Steel (NG), or Epoxy Coated per ICC-ES AC228 (EP)
Compatibility	MH425, MH425R, MH431, and MH431R

CAP CAPACITY	
Ultimate Compression / Tension	90 Tons / 40 Tons
Allowable Compression / Tension	45 Tons / 20 Tons





Installation Notes:

After installation of a Magnum Helical Pile to the correct depth, torque, and capacity, cut-off the pile shaft at the proper elevation. Drill 1-5/16″ hole using Magnum drill template. Place the pile cap over the shaft and secure with one 1-1/4″ bolt. Ensure direct bearing of plate on pile shaft. Snug tighten nut. Place reinforcing steel as required for the project and cast concrete over and around the pile cap. Cap capacity is based on embedment in concrete pile cap at least 4x larger than plate size and minimum 2,500 psi concrete.

All Magnum Products Made in U.S.A.

U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

Magnum Piering, Inc.
6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

MAGNUM® MHC1300-4L88B2 Bearing Plate Cap

Allowable Capacity 45 Tons Compression / 33 Tons Tension

4.63-Inch I.D. Collar with 8″ x 8″ x 1/2″ Bearing Plate

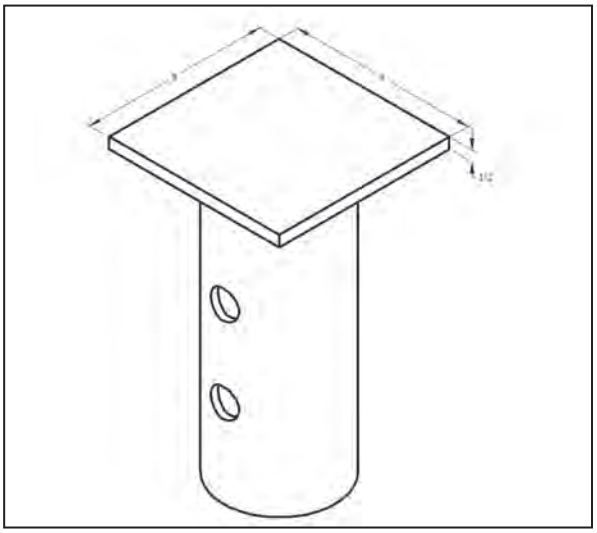
Fits MH425, MH425R, MH431, MH431R Magnum® Helical Piles

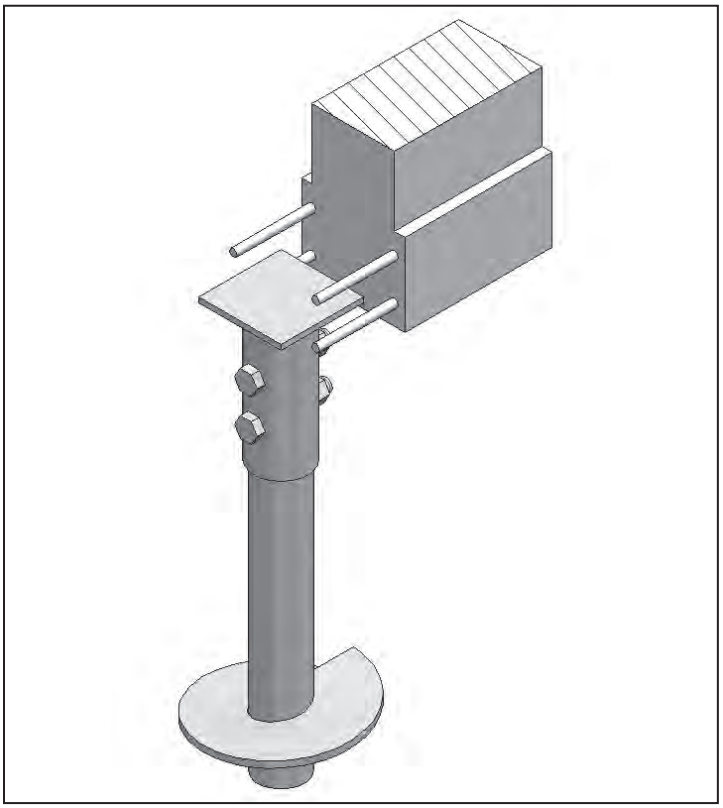
Description

Magnum MHC1300-4L88B2 bearing plate cap has 90 tons ultimate capacity, 45 tons working capacity in compression and 66 tons ultimate capacity, 33 tons working capacity in tension. The bearing plate cap consists of a collar tube with bolt hole for connection to Magnum helical piles and 8″ x 8″ x 1/2″ plate for embedment in cast-in-place reinforced concrete. The bearing plate cap is designed in accordance with ICC-ES document AC358 as well as IBC, ACI, and AISC codes. Application of the cap varies by project and is the responsibility of registered design professional including minimum embedment for two-way and one-way punching shear, reinforcement of concrete, and pile spacing.

SPECIFICATIONS	
Collar Tube	0.31 in. x 4.63 in. I.D. ASTM A513 GR65+
End Effecter	8″ x 8″ x 1/2″ Steel Bearing Plate
Pile Connection	(2) 1-1/4″ SAE J429 Grade 5 Zinc Coated to ASTM B695/F1941
Surface Coating	Galvanized per ASTM A153/A123 (G), Bare Steel (NG), or Epoxy Coated per ICC-ES AC228 (EP)
Compatibility	MH425, MH425R, MH431, and MH431R

CAP CAPACITY	
Ultimate Compression / Tension	90 Tons / 66 Tons
Allowable Compression / Tension	45 Tons / 33 Tons





Installation Notes:

After installation of a Magnum Helical Pile to the correct depth, torque, and capacity, cut-off the pile shaft at the proper elevation. Drill 1-5/16″ holes using Magnum drill template. Place the pile cap over the shaft and secure with two 1-1/4″ bolts. Snug tighten nuts. Place reinforcing steel as required for the project and cast concrete over and around the pile cap. Cap capacity is based on embedment in concrete pile cap at least 4x larger than plate size and minimum 2,500 psi concrete.

All Magnum Products Made in U.S.A.

U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

Magnum Piering, Inc.
6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

MAGNUM® MHC1300-5N99B1 Bearing Plate Cap

Allowable Capacity 68 Tons Compression / 21 Tons Tension

5.63-Inch I.D. Collar with 9″ x 9″ x 3/4″ Bearing Plate

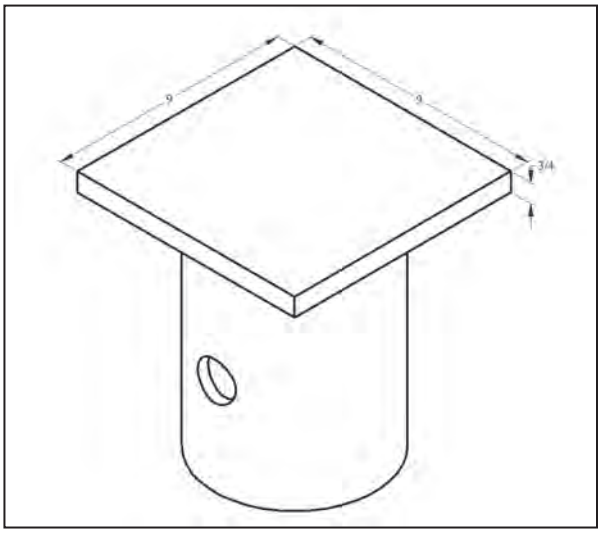
Fits MH530 and MH536 Magnum® Helical Piles

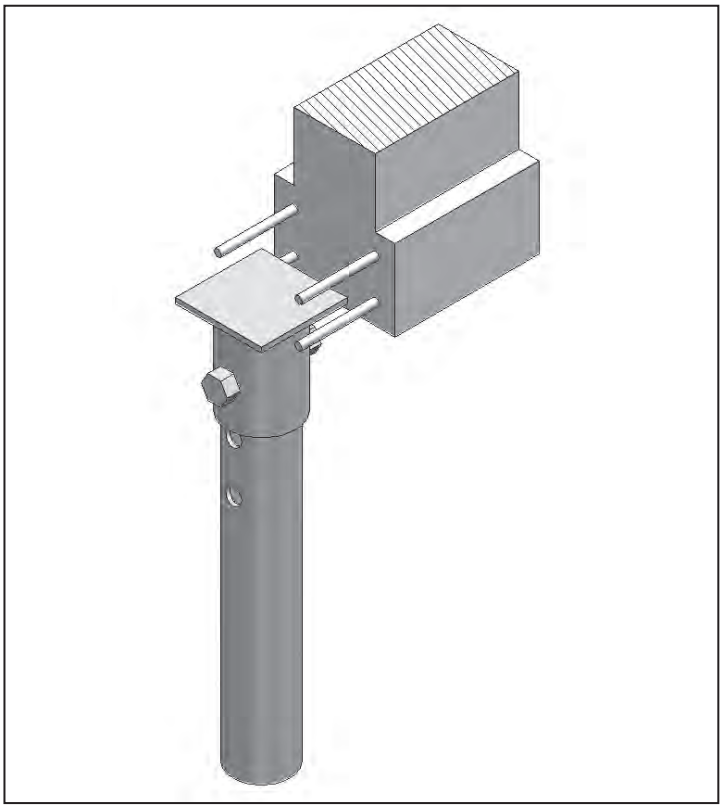
Description

Magnum MHC1300-5N99B1 bearing plate cap has 137 tons ultimate capacity, 68 tons working capacity in compression and 42 tons ultimate capacity, 21 tons working capacity in tension. The bearing plate cap consists of a collar tube with bolt holes for connection to Magnum helical piles and 9″ x 9″ x 3/4″ plate for embedment in cast-in-place reinforced concrete. The bearing plate cap is designed in accordance with ICC-ES document AC358 as well as IBC, ACI, and AISC codes. Application of the cap varies by project and is the responsibility of registered design professional including minimum embedment for two-way and one-way punching shear, reinforcement of concrete, and pile spacing.

SPECIFICATIONS	
Collar Tube	0.30 in. x 5.63 in. I.D. ASTM A370-08 100KSI
End Effecter	9″ x 9″ x 3/4″ Steel Bearing Plate
Pile Connection	(1) 1-1/2″ SAE J429 Grade 5 Zinc Coated to ASTM B695/F1941
Surface Coating	Galvanized per ASTM A153/A123 (G), Bare Steel (NG), or Epoxy Coated per ICC-ES AC228 (EP)
Compatibility	MH530 and MH536

CAP CAPACITY	
Ultimate Compression / Tension	137 Tons / 42 Tons
Allowable Compression / Tension	68 Tons / 21 Tons





Installation Notes:

After installation of a Magnum Helical Pile to the correct depth, torque, and capacity, cut-off the pile shaft at the proper elevation. Drill 1-9/16″ holes using Magnum drill template. Place the pile cap over the shaft and secure with one 1-1/2″ bolt. Snug tighten nut. Alternatively, drilling through pile may be omitted and (2) 1-1/2″ diameter E70 plug welds may be used to secure cap to pile in place of bolt. Ensure direct bearing of plate on pile shaft. Place reinforcing steel as required for the project and cast concrete over and around the pile cap. Cap capacity is based on embedment in concrete pile cap at least 4x larger than plate size and minimum 2,500 psi concrete.

All Magnum Products Made in U.S.A.

U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

Magnum Piering, Inc.
6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

MAGNUM® MHC1300-5N99B3 Bearing Plate Cap

Allowable Capacity 68 Tons Compression / 44 Tons Tension

5.63-Inch I.D. Collar with 9″ x 9″ x 3/4″ Bearing Plate

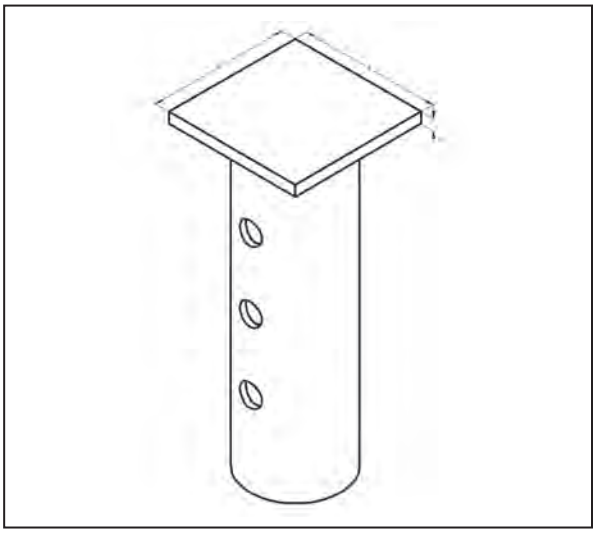
Fits MH530 and MH536 Magnum® Helical Piles

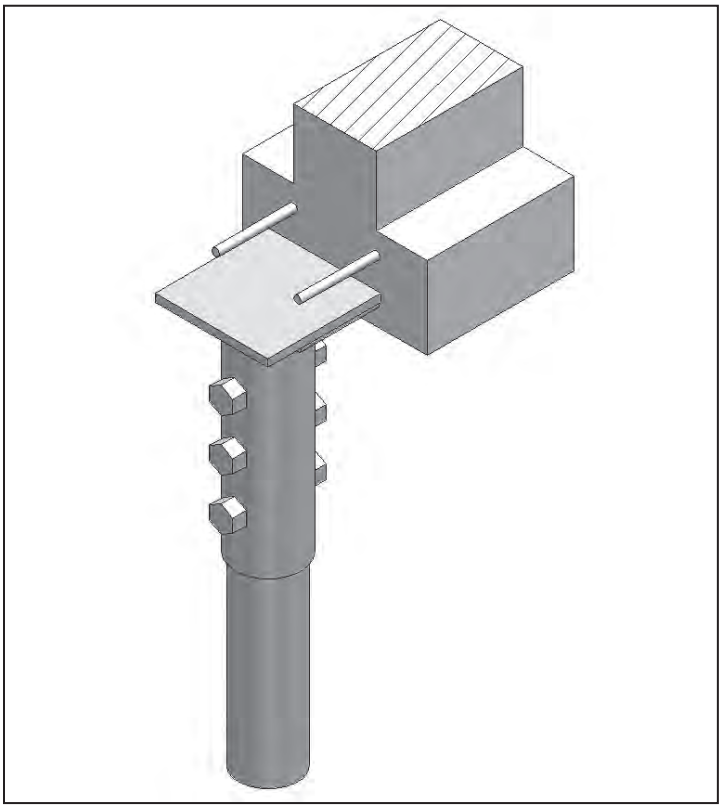
Description

Magnum MHC1300-5N99B3 bearing plate cap has 137 tons ultimate capacity, 68 tons working capacity in compression and 88 tons ultimate capacity, 44 tons working capacity in tension. The bearing plate cap consists of a collar tube with bolt holes for connection to Magnum helical piles and 9″ x 9″ x 3/4″ plate for embedment in cast-in-place reinforced concrete. The bearing plate cap is designed in accordance with ICC-ES document AC358 as well as IBC, ACI, and AISC codes. Application of the cap varies by project and is the responsibility of registered design professional including minimum embedment for two-way and one-way punching shear, reinforcement of concrete, and pile spacing.

SPECIFICATIONS	
Collar Tube	0.30 in. x 5.63 in. I.D. ASTM A370-08 100KSI
End Effecter	9″ x 9″ x 3/4″ Steel Bearing Plate
Pile Connection	(3) 1-1/2″ SAE J429 Grade 5 Zinc Coated to ASTM B695/F1941
Surface Coating	Galvanized per ASTM A153/A123 (G), Bare Steel (NG), or Epoxy Coated per ICC-ES AC228 (EP)
Compatibility	MH530 and MH536

CAP CAPACITY	
Ultimate Compression / Tension	137 Tons / 88 Tons
Allowable Compression / Tension	68 Tons / 44 Tons





Installation Notes:

After installation of a Magnum Helical Pile to the correct depth, torque, and capacity, cut-off the pile shaft at the proper elevation. Drill 1-9/16″ holes using Magnum drill template. Place the pile cap over the shaft and secure with three 1-1/2″ bolts. Snug tighten nuts. Alternatively, drilling through pile may be omitted and (6) 1-1/2″ diameter E70 plug welds may be used to secure cap to pile in place of bolts. Place reinforcing steel as required for the project and cast concrete over and around the pile cap. Cap capacity is based on embedment in concrete pile cap at least 4x larger than plate size and minimum 2,500 psi concrete.

All Magnum Products Made in U.S.A.

U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

Magnum Piering, Inc.
6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

MAGNUM® MHC1300-5O1111B1 Bearing Plate Cap

Allowable Capacity 98 Tons Compression / 33 Tons Tension

5.63-Inch I.D. Collar with 11″ x 11″ x 7/8″ Bearing Plate

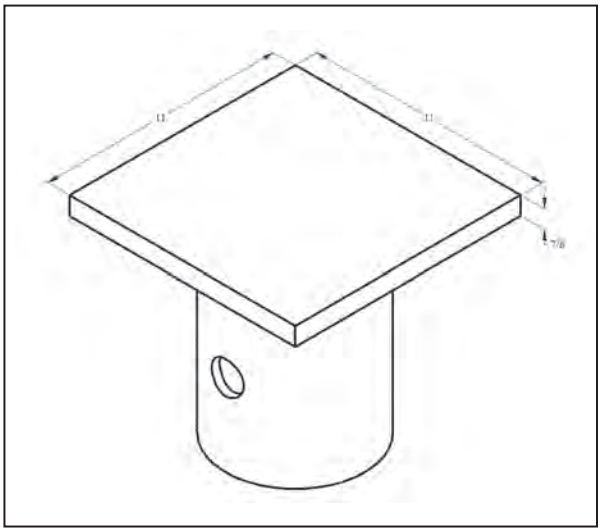
Fits MH530 and MH536 Magnum® Helical Piles

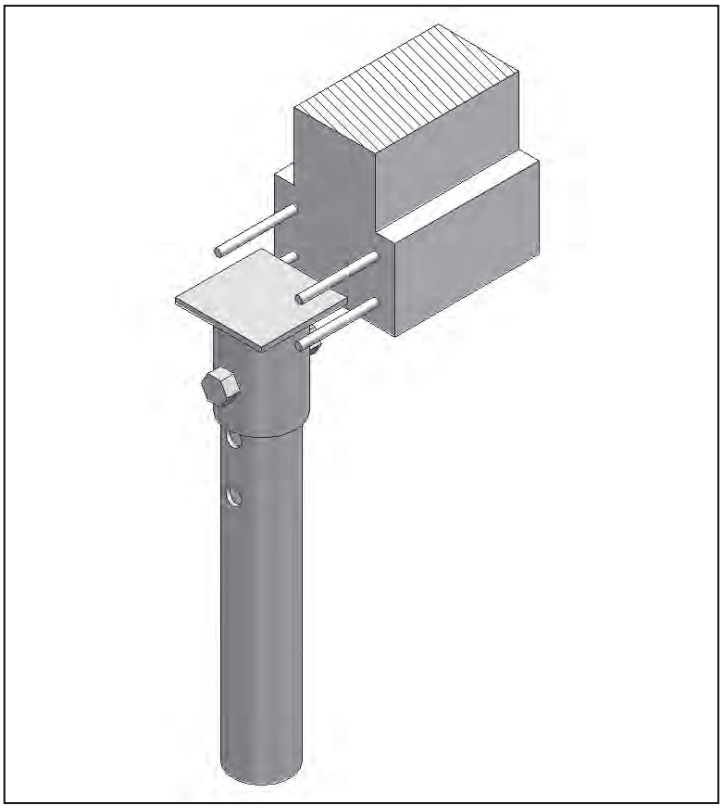
Description

Magnum MHC1300-5O1111B1 bearing plate cap has 195 tons ultimate capacity, 98 tons working capacity in compression and 65 tons ultimate capacity, 33 tons working capacity in tension. The bearing plate cap consists of a collar tube with bolt holes for connection to Magnum helical piles and 11″ x 11″ x 7/8″ plate for embedment in cast-in-place reinforced concrete. The bearing plate cap is designed in accordance with ICC-ES document AC358 as well as IBC, ACI, and AISC codes. Application of the cap varies by project and is the responsibility of registered design professional including minimum embedment for two-way and one-way punching shear, reinforcement of concrete, and pile spacing.

SPECIFICATIONS	
Collar Tube	0.36 in. x 5.63 in. I.D. ASTM A370-08 100 KSI
End Effecter	11″ x 11″ x 7/8″ ASTM A36 Bearing Plate
Pile Connection	(1) 1-1/2″ SAE J429 Grade 5 Zinc Coated to ASTM B695/F1941
Surface Coating	Galvanized per ASTM A153/A123 (G), Bare Steel (NG), or Epoxy Coated per ICC-ES AC228 (EP)
Compatibility	MH530 and MH536

CAP CAPACITY	
Ultimate Compression / Tension	195 Tons / 65 Tons
Allowable Compression / Tension	98 Tons / 33 Tons





Installation Notes:

After installation of a Magnum Helical Pile to the correct depth, torque, and capacity, cut-off the pile shaft at the proper elevation Drill 1-9/16″ holes using Magnum drill template. Place the pile cap over the shaft and secure with three 1-1/2″ bolts. Snug tighten nuts. Alternatively, drilling through pile may be omitted and (6) 1-1/2″ diameter E70 plug welds may be used to secure cap to pile in place of bolts. Place reinforcing steel as required for the project and cast concrete over and around the pile cap. Cap capacity is based on embedment in concrete pile cap at least 4x larger than plate size and minimum 2,500 psi.

All Magnum Products Made in U.S.A.

U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

Magnum Piering, Inc.
6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

MAGNUM® MHC1300-5O1111B3 Bearing Plate Cap

Allowable Capacity 98 Tons Compression / 74 Tons Tension

5.63-Inch I.D. Collar with 11″ x 11″ x 7/8″ Bearing Plate

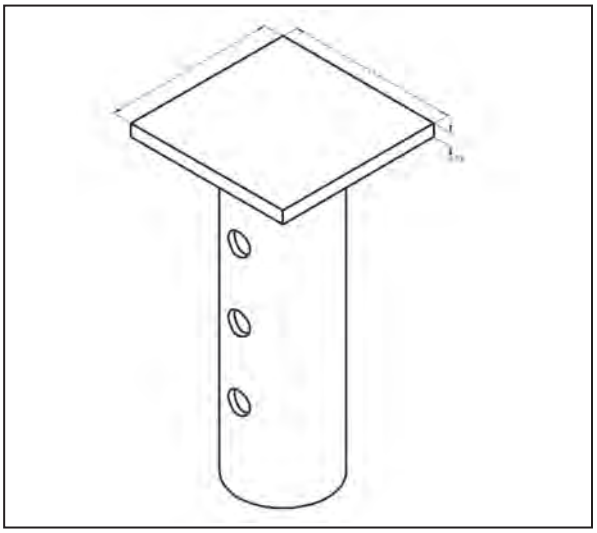
Fits MH530 and MH536 Magnum® Helical Piles

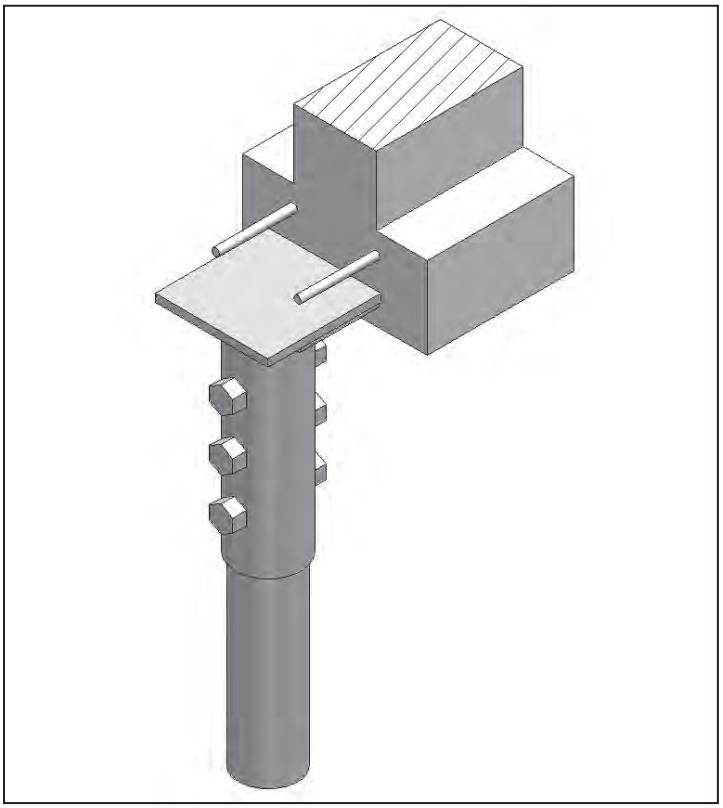
Description

Magnum MHC1300-5O1111B3 bearing plate cap has 195 tons ultimate capacity, 98 tons working capacity in compression and 148 tons ultimate capacity, 74 tons working capacity in tension. The bearing plate cap consists of a collar tube with bolt holes for connection to Magnum helical piles and 11″ x 11″ x 7/8″ plate for embedment in cast-in-place reinforced concrete. The bearing plate cap is designed in accordance with ICC-ES document AC358 as well as IBC, ACI, and AISC codes. Application of the cap varies by project and is the responsibility of registered design professional including minimum embedment for two-way and one-way punching shear, reinforcement of concrete, and pile spacing.

SPECIFICATIONS	
Collar Tube	0.36 in. x 5.63 in. I.D. ASTM A370-08 100 KSI
End Effecter	11″ x 11″ x 7/8″ ASTM A36 Bearing Plate
Pile Connection	(3) 1-1/2″ SAE J429 Grade 5 Zinc Coated to ASTM B695/F1941
Surface Coating	Galvanized per ASTM A153/A123 (G), Bare Steel (NG), or Epoxy Coated per ICC-ES AC228 (EP)
Compatibility	MH530 and MH536

CAP CAPACITY	
Ultimate Compression / Tension	195 Tons / 148 Tons
Allowable Compression / Tension	98 Tons / 74 Tons





Installation Notes:

After installation of a Magnum Helical Pile to the correct depth, torque, and capacity, cut-off the pile shaft at the proper elevation Drill 1-9/16″ holes using Magnum drill template. Place the pile cap over the shaft and secure with three 1-1/2″ bolts. Snug tighten nuts Alternatively, drilling through pile may be omitted and (6) 1-1/2″ diameter E70 plug welds may be used to secure cap to pile in place of bolts. Place reinforcing steel as required for the project and cast concrete over and around the pile cap. Cap capacity is based on embedment in concrete pile cap at least 4x larger than plate size and minimum 2,500 psi.

All Magnum Products Made in U.S.A.

U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

Magnum Piering, Inc.
6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

MAGNUM® MHC1300-6L8585B1 Bearing Plate Cap

Allowable Capacity 52 Tons Compression / 17 Tons Tension

5.85-Inch I.D. Collar with 8.5″ x 8.5″ x 1/2″ Bearing Plate

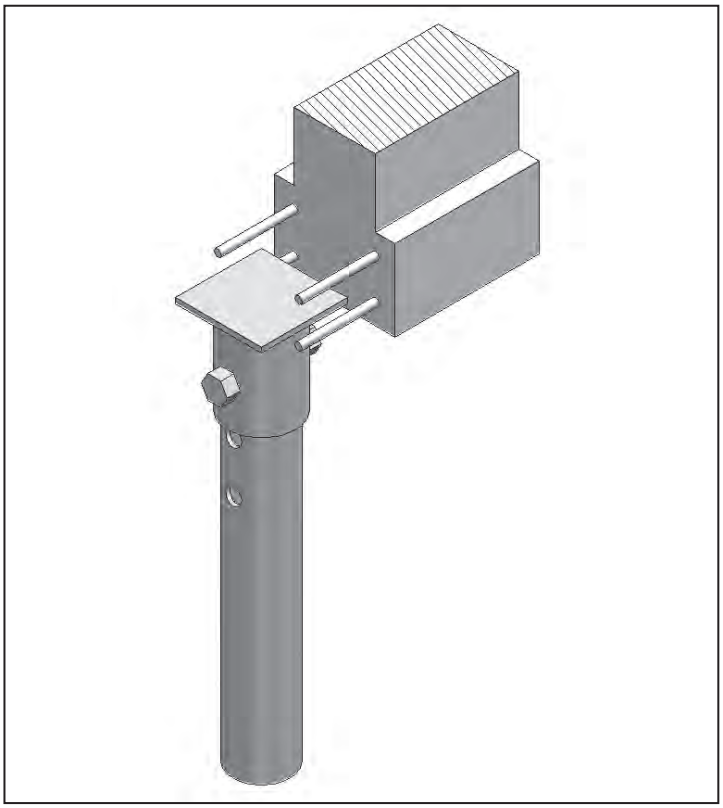
Fits MH625 Through MH646R Magnum® Helical Piles

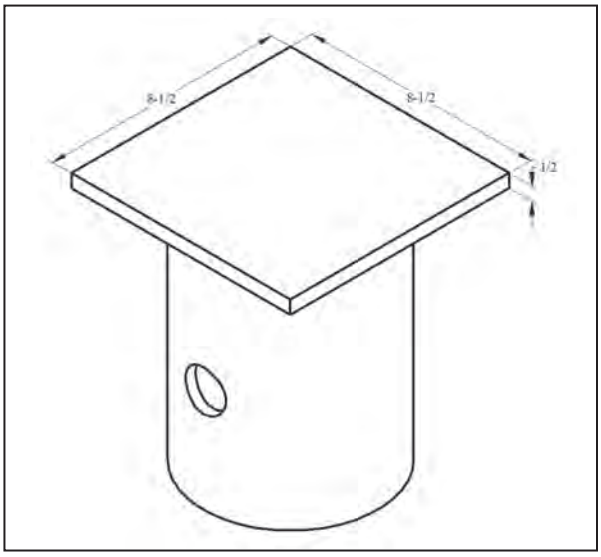
Description

Magnum MHC1300-6L8585B1 bearing plate cap has 104 tons ultimate capacity, 52 tons working capacity in compression and 35 tons ultimate capacity, 17 tons working capacity in tension. The bearing plate cap consists of a collar tube with bolt hole for connection to Magnum helical piles and 8.50″ x 8.5″ x 1/2″ plate for embedment in cast-in-place reinforced concrete. The bearing plate cap is designed in accordance with ICC-ES document AC358 as well as IBC, ACI, and AISC codes. Application of the cap varies by project and is the responsibility of registered design professional including minimum embedment for two-way and one-way punching shear, reinforcement of concrete, and pile spacing.

SPECIFICATIONS	
Collar Tube	0.38 in. x 5.85 in. I.D. ASTM A513 GR65+
End Effecter	8.5″ x 8.5″ x 1/2″ Steel Bearing Plate
Pile Connection	(1) 1-1/2″ SAE J429 Grade 5 Zinc Coated to ASTM B695/F1941
Surface Coating	Galvanized per ASTM A153/A123 (G), Bare Steel (NG), or Epoxy Coated per ICC-ES AC228 (EP)
Compatibility	MH625, MH625R, MH637, MH637R, MH646, and MH646R

CAP CAPACITY	
Ultimate Compression / Tension	104 Tons / 63 Tons
Allowable Compression / Tension	52 Tons / 32 Tons





Installation Notes:

After installation of a Magnum Helical Pile to the correct depth, torque, and capacity, cut-off the pile shaft at the proper elevation. Drill 1-9/16″ hole using Magnum drill template. Place the pile cap over the shaft and secure with one 1-1/2″ bolt. Snug tighten nut. Alternatively, drilling through pile may be omitted and (2) 1-1/2″ diameter E70 plug welds may be used to secure cap to pile in place of bolts. Ensure direct bearing of plate on pile shaft. Place reinforcing steel as required for the project and cast concrete over and around the pile cap. Cap capacity is based on embedment in concrete pile cap at least 4x larger than plate size and minimum 2,500 psi.

All Magnum Products Made in U.S.A.

U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

Magnum Piering, Inc.
6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

MAGNUM® MHC1300-6L8585B3 Bearing Plate Cap

Allowable Capacity 52 Tons Compression / 32 Tons Tension

5.85-Inch I.D. Collar with 8.5″ x 8.5″ x 1/2″ Bearing Plate

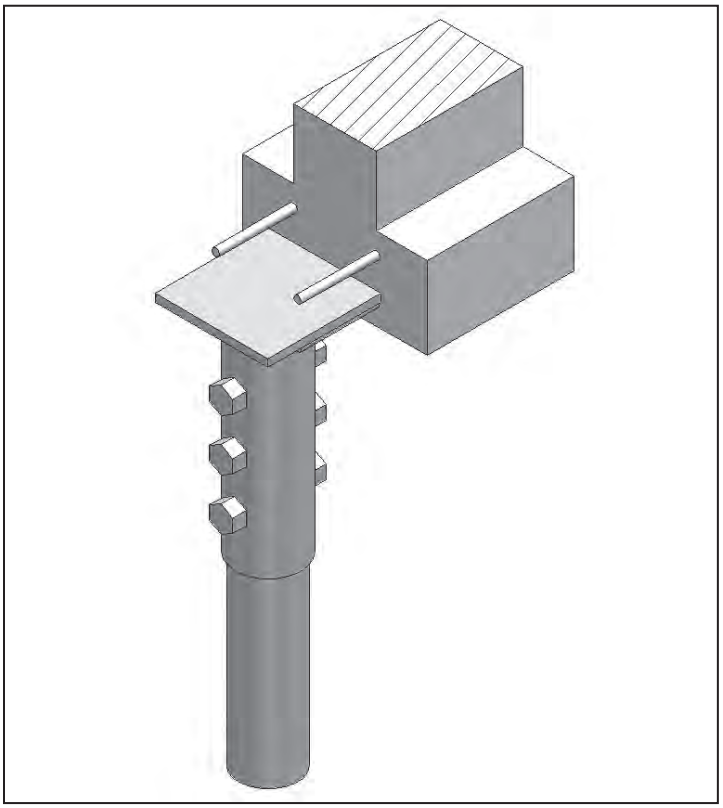
Fits MH625 Through MH646R Magnum® Helical Piles

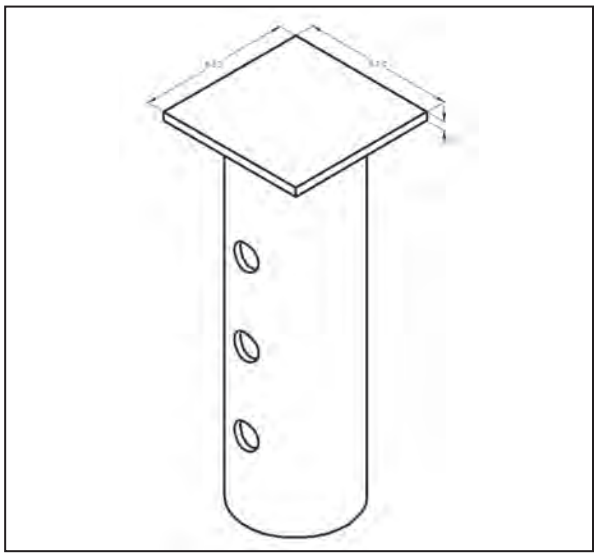
Description

Magnum MHC1300-6L8585B3 bearing plate cap has 104 tons ultimate capacity, 52 tons working capacity in compression and 64 tons ultimate capacity, 32 tons working capacity in tension. The bearing plate cap consists of a collar tube with bolt hole for connection to Magnum helical piles and 8.5″ x 8.5″ x 1/2″ plate for embedment in cast-in-place reinforced concrete. The bearing plate cap is designed in accordance with ICC-ES document AC358 as well as IBC, ACI, and AISC codes. Application of the cap varies by project and is the responsibility of registered design professional including minimum embedment for two-way and one-way punching shear, reinforcement of concrete, and pile spacing.

SPECIFICATIONS	
Collar Tube	0.38 in. x 5.85 in. I.D. ASTM A513 GR65+
End Effecter	8.5″ x 8.5″ x 1/2″ Steel Bearing Plate
Pile Connection	(3) 1-1/2″ SAE J429 Grade 5 Zinc Coated to ASTM B695/F1941
Surface Coating	Galvanized per ASTM A153/A123 (G), Bare Steel (NG), or Epoxy Coated per ICC-ES AC228 (EP)
Compatibility	MH625, MH625R, MH637, MH637R, MH646, and MH646R

CAP CAPACITY	
Ultimate Compression / Tension	104 Tons / 63 Tons
Allowable Compression / Tension	52 Tons / 32 Tons





Installation Notes:

After installation of a Magnum Helical Pile to the correct depth, torque, and capacity, cut-off the pile shaft at the proper elevation. Drill 1-9/16” holes using Magnum drill template. Place the pile cap over the shaft and secure with three 1-1/2″ bolts. Snug tighten nuts. Alternatively, drilling through pile may be omitted and (6) 1-1/2″ diameter E70 plug welds may be used to secure cap to pile in place of bolts. Place reinforcing steel as required for the project and cast concrete over and around the pile cap. Cap capacity is based on embedment in concrete pile cap at least 4x larger than plate size and minimum 2,500 psi.

All Magnum Products Made in U.S.A.

U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

Magnum Piering, Inc.
6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

MAGNUM® MHC1300-6M1010B1 Bearing Plate Cap

Allowable Capacity 75 Tons Compression / 25 Tons Tension

5.85-Inch I.D. Collar with 10″ x 10″ x 5/8″ Bearing Plate

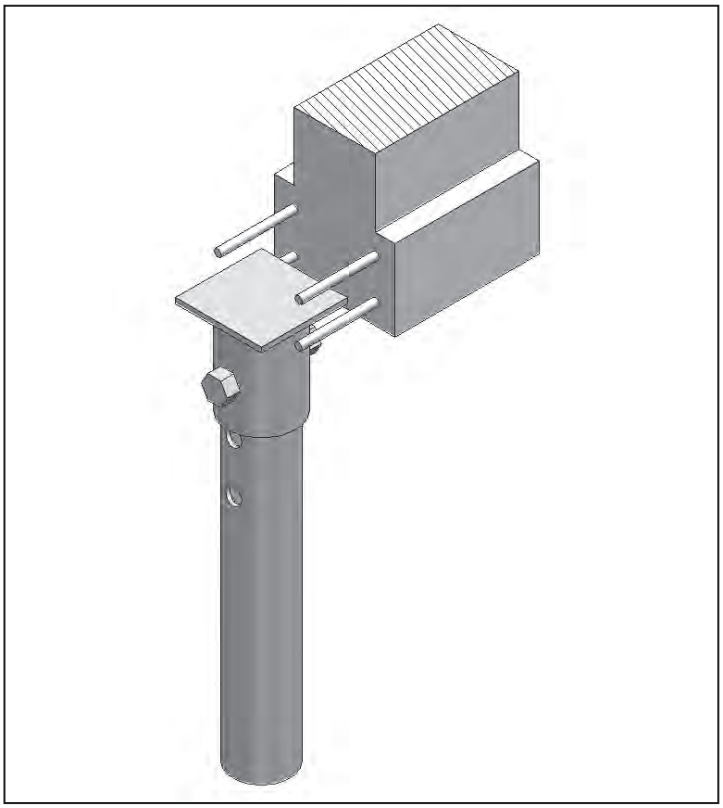
Fits MH625 Through MH646R Magnum® Helical Piles

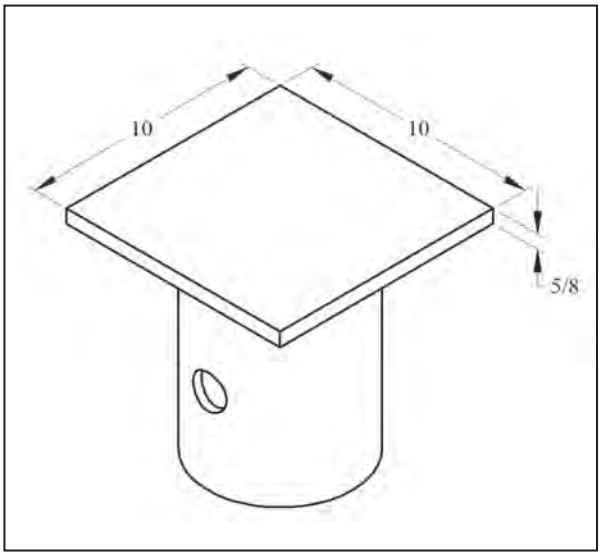
Description

Magnum MHC1300-6M1010B1 bearing plate cap has 150 tons ultimate capacity, 75 tons working capacity in compression and 50 tons ultimate capacity, 25 tons working capacity in tension. The bearing plate cap consists of a collar tube with bolt hole for connection to Magnum helical piles and 10″ x 10″ x 5/8″ plate for embedment in cast-in-place reinforced concrete. The bearing plate cap is designed in accordance with ICC-ES document AC358 as well as IBC, ACI, and AISC codes. Application of the cap varies by project and is the responsibility of registered design professional including minimum embedment for two-way and one-way punching shear, reinforcement of concrete, and pile spacing.

SPECIFICATIONS	
Collar Tube	0.38 in. x 5.85 in. I.D. ASTM A513 GR65+
End Effecter	10″ x 10″ x 5/8″ Steel Bearing Plate
Pile Connection	(1) 1-1/2″ SAE J429 Grade 5 Zinc Coated to ASTM B695/F1941
Surface Coating	Galvanized per ASTM A153/A123 (G), Bare Steel (NG), or Epoxy Coated per ICC-ES AC228 (EP)
Compatibility	MH625, MH625R, MH637, MH637R, MH646, and MH646R

CAP CAPACITY	
Ultimate Compression / Tension	150 Tons / 108 Tons
Allowable Compression / Tension	75 Tons / 54 Tons





Installation Notes:

After installation of a Magnum Helical Pile to the correct depth, torque, and capacity, cut-off the pile shaft at the proper elevation. Drill 1-9/16" hole using Magnum drill template. Place the pile cap over the shaft and secure with one 1-1/2" bolt. Snug tighten nut. Alternatively, drilling through pile may be omitted and (2) 1-1/2" diameter E70 plug welds may be used to secure cap to pile in place of bolts. Ensure direct bearing of plate on pile shaft. Place reinforcing steel as required for the project and cast concrete over and around the pile cap. Cap capacity is based on embedment in concrete pile cap at least 4x larger than plate size and minimum 2,500 psi.

All Magnum Products Made in U.S.A.

U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

Magnum Piering, Inc.
6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

MAGNUM® MHC1300-6M1010B3 Bearing Plate Cap

Allowable Capacity 75 Tons Compression / 53 Tons Tension

5.85-Inch I.D. Collar with 10″ x 10″ x 5/8″ Bearing Plate

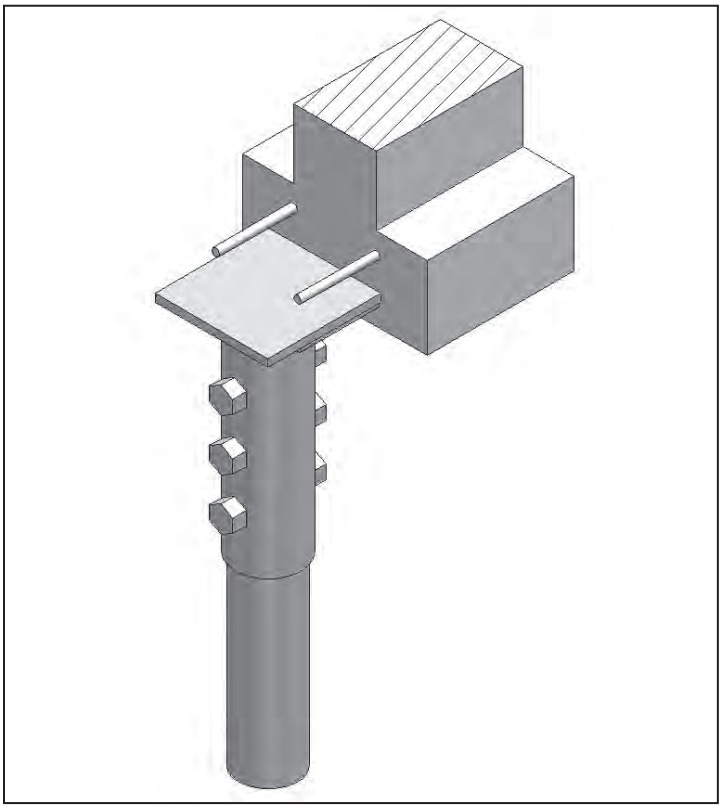
Fits MH625 Through MH646R Magnum® Helical Piles

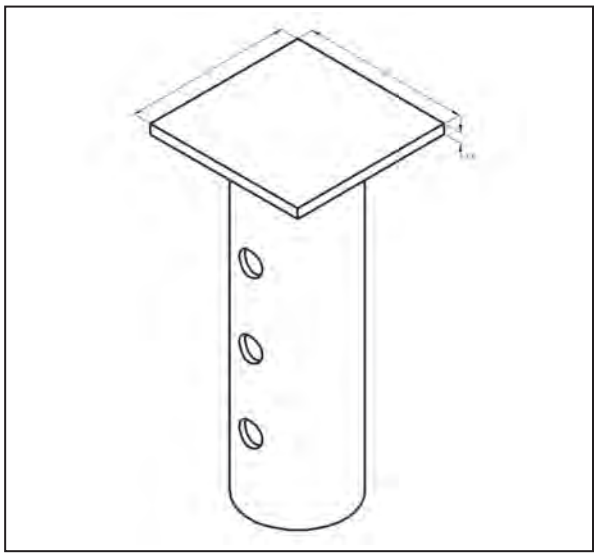
Description

Magnum MHC1300-6M1010B3 bearing plate cap has 150 tons ultimate capacity, 75 tons working capacity in compression and 106 tons ultimate capacity, 53 tons working capacity in tension. The bearing plate cap consists of a collar tube with bolt hole for connection to Magnum helical piles and 10″ x 10″ x 5/8″ plate for embedment in cast-in-place reinforced concrete. The bearing plate cap is designed in accordance with ICC-ES document AC358 as well as IBC, ACI, and AISC codes. Application of the cap varies by project and is the responsibility of registered design professional including minimum embedment for two-way and one-way punching shear, reinforcement of concrete, and pile spacing.

SPECIFICATIONS	
Collar Tube	0.38 in. x 5.85 in. I.D. ASTM A513 GR65+
End Effecter	10″ x 10″ x 5/8″ Steel Bearing Plate
Pile Connection	(3) 1-1/2″ SAE J429 Grade 5 Zinc Coated to ASTM B695/F1941
Surface Coating	Galvanized per ASTM A153/A123 (G), Bare Steel (NG), or Epoxy Coated per ICC-ES AC228 (EP)
Compatibility	MH625, MH625R, MH637, MH637R, MH646, and MH646R

CAP CAPACITY	
Ultimate Compression / Tension	150 Tons / 106 Tons
Allowable Compression / Tension	75 Tons / 53 Tons





Installation Notes:

After installation of a Magnum Helical Pile to the correct depth, torque, and capacity, cut-off the pile shaft at the proper elevation. Drill 1-9/16″ holes using Magnum drill template. Place the pile cap over the shaft and secure with three 1-1/2″ bolts. Snug tighten nuts. Alternatively, drilling through pile may be omitted and (6) 1-1/2″ diameter E70 plug welds may be used to secure cap to pile in place of bolts. Place reinforcing steel as required for the project and cast concrete over and around the pile cap. Cap capacity is based on embedment in concrete pile cap at least 4x larger than plate size and minimum 2,500 psi.

All Magnum Products Made in U.S.A.

U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

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6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

MAGNUM® MHC1300-6N1111B1 Bearing Plate Cap

Allowable Capacity 95 Tons Compression / 32 Tons Tension

5.85-Inch I.D. Collar with 11″ x 11″ x 3/4″ Bearing Plate

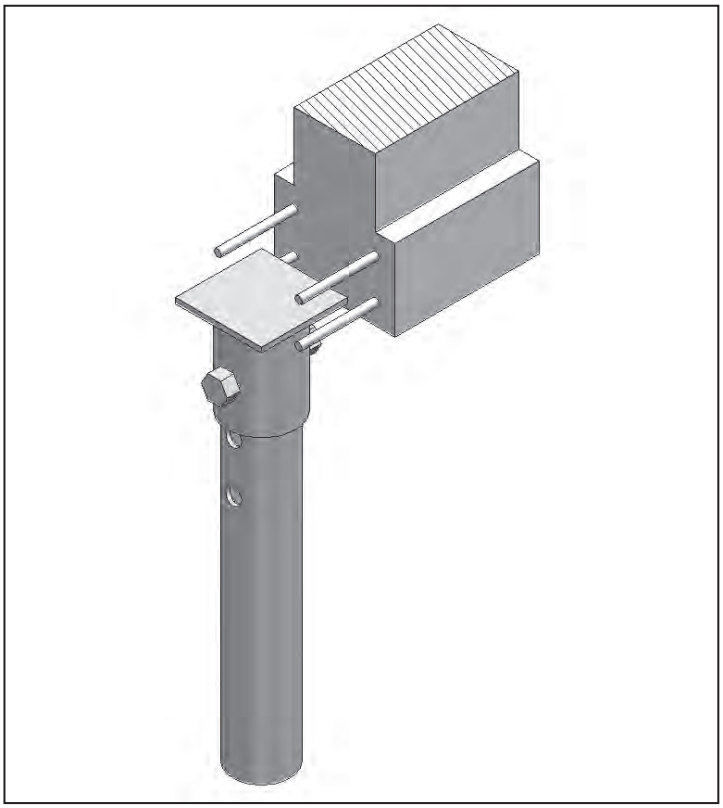
Fits MH625 Through MH646R Magnum® Helical Piles

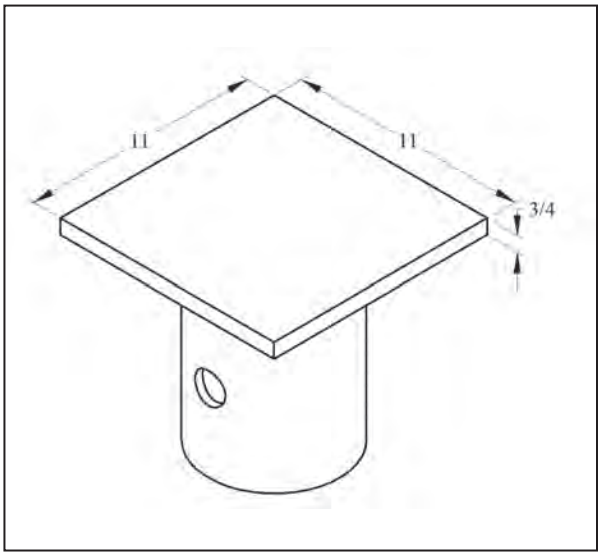
Description

Magnum MHC1300-NE1111B1 bearing plate cap has 191 tons ultimate capacity, 95 tons working capacity in compression and 64 tons ultimate capacity, 32 tons working capacity in tension. The bearing plate cap consists of a collar tube with bolt hole for connection to Magnum helical piles and 11″ x 11″ x 3/4″ plate for embedment in cast-in-place reinforced concrete. The bearing plate cap is designed in accordance with ICC-ES document AC358 as well as IBC, ACI, and AISC codes. Application of the cap varies by project and is the responsibility of registered design professional including minimum embedment for two-way and one-way punching shear, reinforcement of concrete, and pile spacing.

SPECIFICATIONS	
Collar Tube	0.38 in. x 5.85 in. I.D. ASTM A513 GR65+
End Effecter	11″ x 11″ x 3/4″ Steel Bearing Plate
Pile Connection	(1) 1-1/2″ SAE J429 Grade 5 Zinc Coated to ASTM B695/F1941
Surface Coating	Galvanized per ASTM A153/A123 (G), Bare Steel (NG), or Epoxy Coated per ICC-ES AC228 (EP)
Compatibility	MH625, MH625R, MH637, MH637R, MH646, and MH646R

CAP CAPACITY	
Ultimate Compression / Tension	191 Tons / 146 Tons
Allowable Compression / Tension	95 Tons / 73 Tons





Installation Notes:

After installation of a Magnum Helical Pile to the correct depth, torque, and capacity, cut-off the pile shaft at the proper elevation. Drill 1-9/16″ hole using Magnum drill template. Place the pile cap over the shaft and secure with one 1-1/2″ bolt. Snug tighten nut. Alternatively, drilling through pile may be omitted and (2) 1-1/2″ diameter E70 plug welds may be used to secure cap to pile in place of bolts. Ensure direct bearing of plate on pile shaft. Place reinforcing steel as required for the project and cast concrete over and around the pile cap. Cap capacity is based on embedment in concrete pile cap at least 4x larger than plate size and minimum 2,500 psi.

All Magnum Products Made in U.S.A.

U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

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6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

MAGNUM® MHC1300-6N1111B3 Bearing Plate Cap

Allowable Capacity 95 Tons Compression / 72 Tons Tension

5.85-Inch I.D. Collar with 11″ x 11″ x 3/4″ Bearing Plate

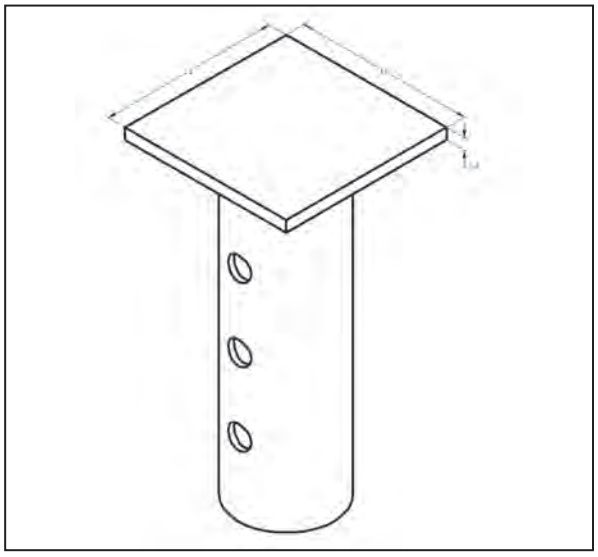
Fits MH625 Through MH646R Magnum® Helical Piles

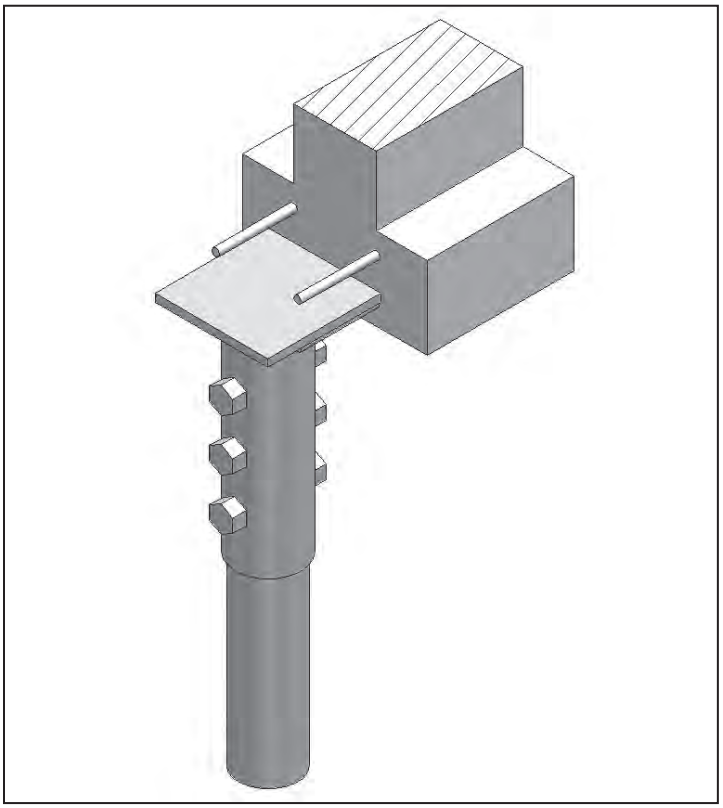
Description

Magnum MHC1300-NE1111B3 bearing plate cap has 191 tons ultimate capacity, 95 tons working capacity in compression and 144 tons ultimate capacity, 72 tons working capacity in tension. The bearing plate cap consists of a collar tube with bolt hole for connection to Magnum helical piles and 11″ x 11″ x 3/4″ plate for embedment in cast-in-place reinforced concrete. The bearing plate cap is designed in accordance with ICC-ES document AC358 as well as IBC, ACI, and AISC codes. Application of the cap varies by project and is the responsibility of registered design professional including minimum embedment for two-way and one-way punching shear, reinforcement of concrete, and pile spacing.

SPECIFICATIONS	
Collar Tube	0.38 in. x 5.85 in. I.D. ASTM A513 GR65+
End Effecter	11″ x 11″ x 3/4″ Steel Bearing Plate
Pile Connection	(3) 1-1/2″ SAE J429 Grade 5 Zinc Coated to ASTM B695/F1941
Surface Coating	Galvanized per ASTM A153/A123 (G), Bare Steel (NG), or Epoxy Coated per ICC-ES AC228 (EP)
Compatibility	MH625, MH625R, MH637, MH637R, MH646, and MH646R

CAP CAPACITY	
Ultimate Compression / Tension	191 Tons / 144 Tons
Allowable Compression / Tension	95 Tons / 72 Tons





Installation Notes:

After installation of a Magnum Helical Pile to the correct depth, torque, and capacity, cut-off the pile shaft at the proper elevation. Drill 1-9/16″ holes using Magnum drill template. Place the pile cap over the shaft and secure with three 1-1/2″ bolts. Snug tighten nuts. Alternatively, drilling through pile may be omitted and (6) 1-1/2″ diameter E70 plug welds may be used to secure cap to pile in place of bolts. Place reinforcing steel as required for the project and cast concrete over and around the pile cap. Cap capacity is based on embedment in concrete pile cap at least 4x larger than plate size and minimum 2,500 psi.

All Magnum Products Made in U.S.A.

U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

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6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

MAGNUM® MHC1300-8N1212B1 Bearing Plate Cap

Allowable Capacity 133 Tons Compression / 44 Tons Tension

8.75-Inch I.D. Collar with 12″ x 12″ x 3/4″ Bearing Plate

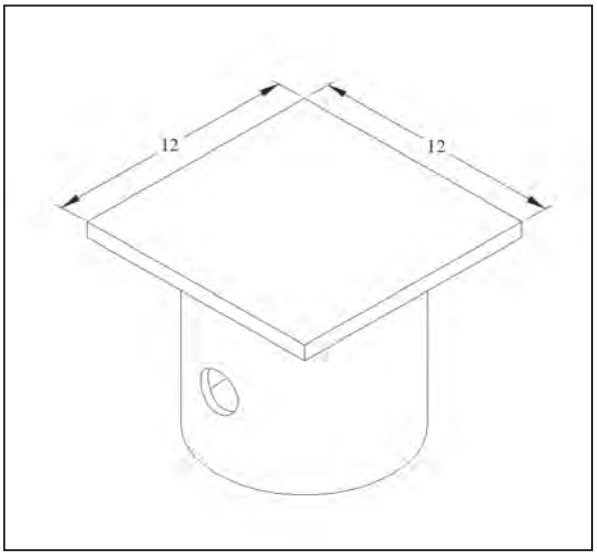
Fits MH832B and MH850B Magnum® Helical Piles

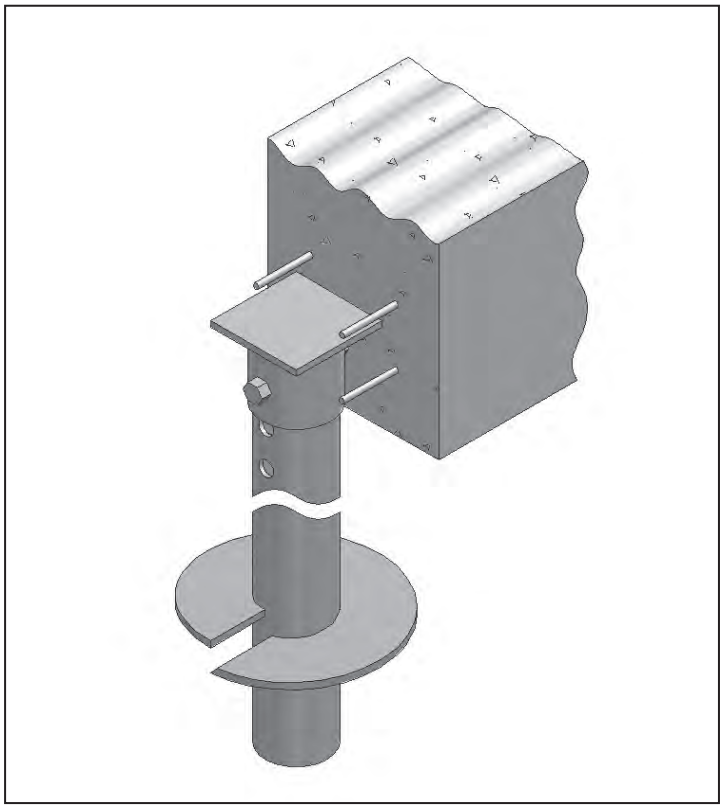
Description

Magnum MHC1300-8N1212B1 bearing plate cap has 266 tons ultimate capacity, 133 tons working capacity in compression and 88 tons ultimate capacity, 44 tons working capacity in tension. The bearing plate cap consists of a collar tube with bolt hole for connection to Magnum helical piles and 12″ x 12″ x 3/4″ plate for embedment in cast-in-place reinforced concrete. The bearing plate cap is designed in accordance with ICC-ES document AC358 as well as IBC, ACI, and AISC codes. Application of the cap varies by project and is the responsibility of registered design professional including minimum embedment for two-way and one-way punching shear, reinforcement of concrete, and pile spacing.

SPECIFICATIONS	
Collar Tube	0.5 in. x 8.75 in. I.D. ASTM A513 GR65+
End Effecter	12″ x 12″ x 3/4″ Steel Bearing Plate
Pile Connection	(1) 2″ SAE J429 Grade 5 Zinc Coated to ASTM B695/F194
Surface Coating	Galvanized per ASTM A153/A123 (G), Bare Steel (NG), or Epoxy Coated per ICC-ES AC228 (EP)
Compatibility	MH832B and MH850B

CAP CAPACITY	
Ultimate Compression / Tension	266 Tons / 88 Tons
Allowable Compression / Tension	133 Tons / 44 Tons





Installation Notes:

After installation of a Magnum Helical Pile to the correct depth, torque, and capacity, cut-off the pile shaft at the proper elevation. Drill 1-9/16″ holes using Magnum drill template. Place the pile cap over the shaft and secure with three 1-1/2″ bolts. Snug tighten nuts. Alternatively, drilling through pile may be omitted and (6) 1-1/2″ diameter E70 plug welds may be used to secure cap to pile in place of bolts. Place reinforcing steel as required for the project and cast concrete over and around the pile cap. Cap capacity is based on embedment in concrete pile cap at least 4x larger than plate size and minimum 2,500 psi. .

All Magnum Products Made in U.S.A.

U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

Magnum Piering, Inc.
6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

MAGNUM® MHC1350-5N6135B1 Gusseted Cap

Allowable Capacity 98 Tons Compression / 33 Tons Tension

5.63-Inch I.D. Collar with 6″ x 13.5″ x 3/4″ Bearing Plate

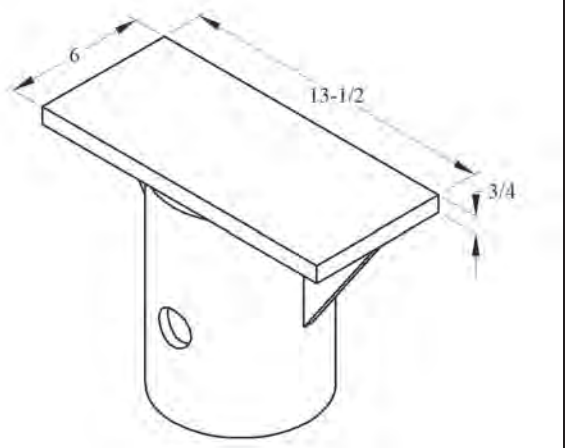
Fits MH530 and MH536 Magnum® Helical Piles

Description

Magnum MHC1350-5N6135B1 gusseted cap has 195 tons ultimate capacity, 98 tons working capacity in compression and 65 tons ultimate capacity, 33 tons working capacity in tension. The gusseted cap consists of a collar tube with bolt holes for connection to Magnum helical piles and 6″ x 13.5″ x 3/4″ plate for embedment in cast-in-place reinforced concrete. The gusseted cap is designed in accordance with ICC-ES document AC358 as well as IBC, ACI, and AISC codes. Application of the cap varies by project and is the responsibility of registered design professional including minimum embedment for two-way and one-way punching shear, reinforcement of concrete, and pile spacing.

SPECIFICATIONS	
Collar Tube	0.30 in. x 5.63 in. I.D. ASTM A370-08 100KSI
End Effecter	6″ x 13.5″ x 3/4″ Steel Bearing Plate with Support Gussets
Pile Connection	(1) 1-1/2″ SAE J429 Grade 5 Zinc Coated to ASTM B695/F1941
Surface Coating	Galvanized per ASTM A153/A123 (G), Bare Steel (NG), or Epoxy Coated per ICC-ES AC228 (EP)
Compatibility	MH530 and MH536

CAP CAPACITY	
Ultimate Compression / Tension	195 Tons / 65 Tons
Allowable Compression / Tension	98 Tons / 33 Tons



Installation Notes:

After installation of a Magnum Helical Pile to the correct depth, torque, and capacity, cut-off the pile shaft at the proper elevation. Drill 1-9/16″ holes using Magnum drill template. Place the pile cap over the shaft and secure with one 1-1/2″ bolt. Snug tighten nut. Alternatively, drilling through pile may be omitted and (2) 1-1/2″ diameter E70 plug welds may be used to secure cap to pile in place of bolts. Ensure direct bearing of plate on pile shaft. Place reinforcing steel as required for the project and cast concrete over and around the pile cap. Cap capacity is based on embedment in concrete pile cap at least 4x larger than plate size and minimum 2,500 psi concrete.

All Magnum Products Made in U.S.A.

U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

Magnum Piering, Inc.
6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

MAGNUM® MHC1350-5N6135B3 Gusseted Cap

Allowable Capacity 98 Tons Compression / 83 Tons Tension

5.63-Inch I.D. Collar with 6″ x 13.5″ x 3/4″ Bearing Plate

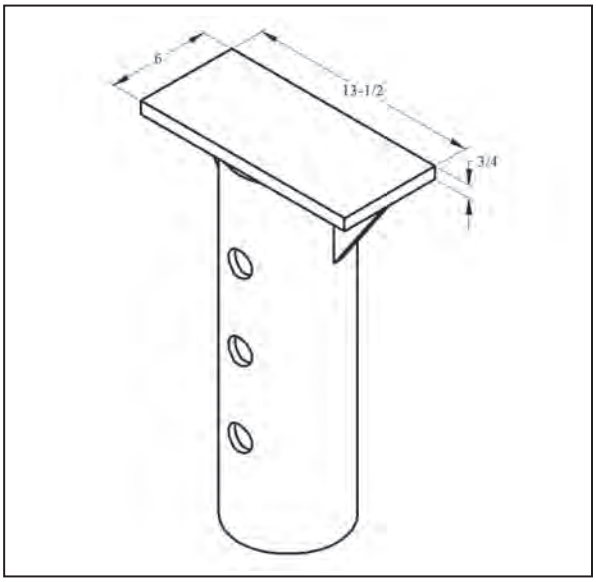
Fits MH530 and MH536 Magnum® Helical Piles

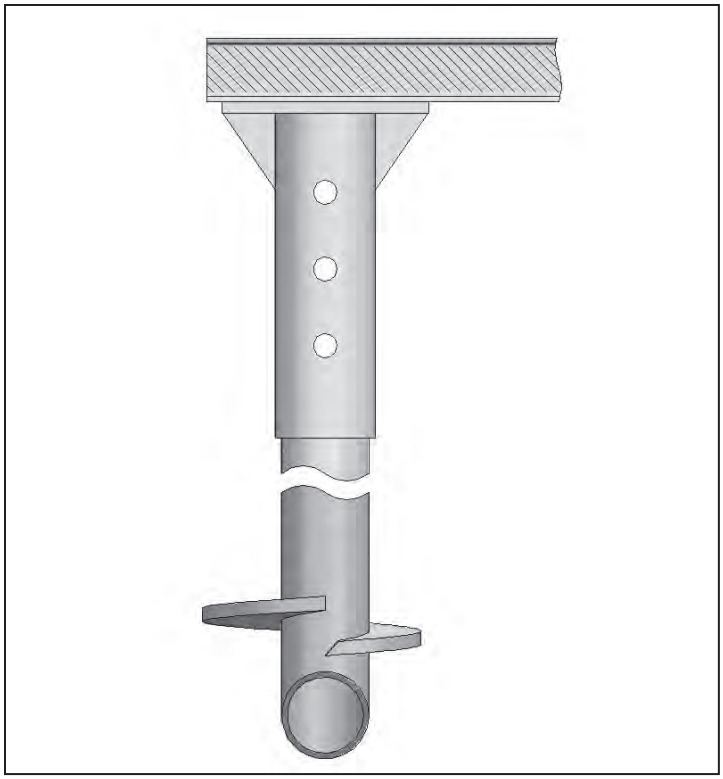
Description

Magnum MHC1350-5N6135B1 gusseted cap has 195 tons ultimate capacity, 98 tons working capacity in compression and 165 tons ultimate capacity, 83 tons working capacity in tension. The gusseted cap consists of a collar tube with bolt holes for connection to Magnum helical piles and 6″ x 13.5″ x 3/4″ plate for embedment in cast-in-place reinforced concrete. The gusseted cap is designed in accordance with ICC-ES document AC358 as well as IBC, ACI, and AISC codes. Application of the cap varies by project and is the responsibility of registered design professional including minimum embedment for two-way and one-way punching shear, reinforcement of concrete, and pile spacing.

SPECIFICATIONS	
Collar Tube	0.30 in. x 5.63 in. I.D. ASTM A370-08 100KSI
End Effecter	6″ x 13.5″ x 3/4″ Steel Bearing Plate with Support Gussets
Pile Connection	(3) 1-1/2″ SAE J429 Grade 5 Zinc Coated to ASTM B695/F1941
Surface Coating	Galvanized per ASTM A153/A123 (G), Bare Steel (NG), or Epoxy Coated per ICC-ES AC228 (EP)
Compatibility	MH530 and MH536

CAP CAPACITY	
Ultimate Compression / Tension	195 Tons / 165 Tons
Allowable Compression / Tension	98 Tons / 83 Tons





Installation Notes:

After installation of a Magnum Helical Pile to the correct depth, torque, and capacity, cut-off the pile shaft at the proper elevation. Drill 1-9/16″ holes using Magnum drill template. Place the pile cap over the shaft and secure with three 1-1/2″ bolts. Snug tighten nuts. Alternatively, drilling through pile may be omitted and (6) 1-1/2″ diameter E70 plug welds may be used to secure cap to pile in place of bolts. Place reinforcing steel as required for the project and cast concrete over and around the pile cap. Cap capacity is based on embedment in concrete pile cap at least 4x larger than plate size and minimum 2,500 psi concrete.

All Magnum Products Made in U.S.A.

U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

Magnum Piering, Inc.
6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

MAGNUM® MHC1420-3N1212BR Tilted Plate Cap

Allowable Capacity 25 Tons Compression / 25 Tons Tension

3.13-Inch I.D. Collar with 12″ x 12″ x 3/4″ Bearing Plate Tilted 20 Degrees
Fits MH325R Magnum® Helical Piles

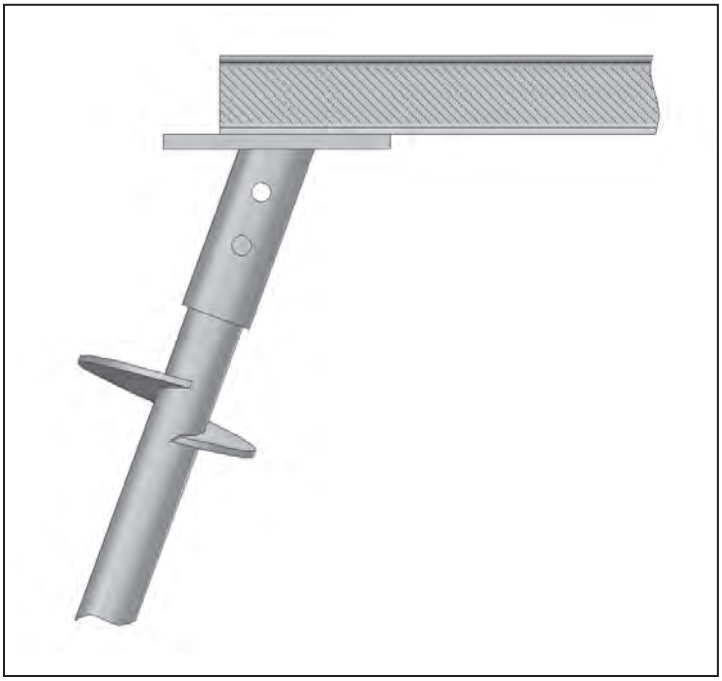
Description

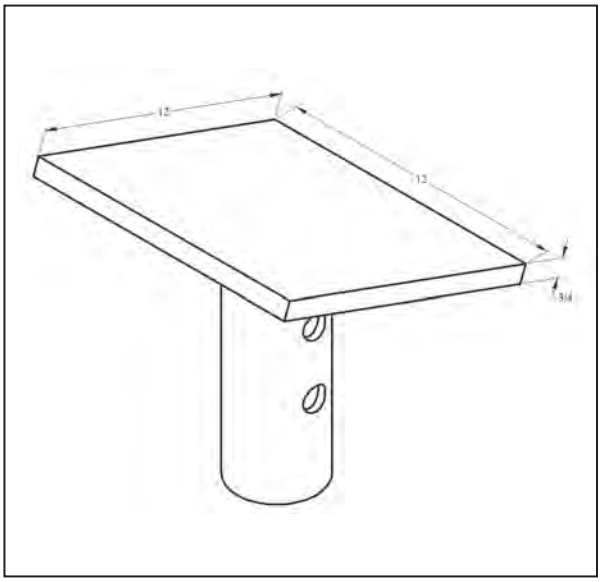
Magnum MHC1420-3N1212BR bearing plate cap has 50 tons ultimate capacity, 25 tons working capacity in compression and tension. The bearing plate cap consists of a collar tube with bolt holes for connection to Magnum helical piles and 12″ x 12″ x 3/4″ plate battered 20 degrees for attachment to a steel beam. The bearing plate cap is designed in accordance with ICC-ES document AC358 as well as IBC, ACI, and AISC codes. Application of the cap varies by project and is the responsibility of registered design professional including beam attachment, beam shear, beam span, web stiffening, bracing, and pile spacing as applicable.

SPECIFICATIONS	
Collar Tube	0.31 in. x 3.13 in. I.D. ASTM A513 GR65+
End Effecter	12″ x 12″ x 3/4″ Steel Bearing Plate Tilted 20 Degrees
Pile Connection	(2) 1″ SAE J429 Grade 5 Zinc Coated to ASTM B695/F1941
Surface Coating	Galvanized per ASTM A153/A123 (G), Bare Steel (NG), or Epoxy Coated per ICC-ES AC228 (EP)
Compatibility	MH325R

CAP CAPACITY	
Ultimate Compression / Tension	50 Tons / 50 Tons
Allowable Compression / Tension	25 Tons / 25 Tons

Note: Cap capacity takes into account strength of collar, end effecter, and pile connection. Capacity may be limited by the helical pile itself, bearing/pullout capacity of soil, or strength of the structure to which the cap is attached, whichever is less.





Installation Notes:

After installation of a Magnum Helical Pile to the correct depth, torque, and capacity, cut-off the pile shaft at the proper elevation. For Bolted “B” application, drill two 1.06″ holes using Magnum drill template. Place the pile cap over the shaft and secure with two 1″ bolts. Snug tighten nuts. For Welded “W” application, plug weld cap in place through manufactured drill holes. Remove surface coating from plug weld areas. Place steel beam on cap and weld per project specifications.

All Magnum Products Made in U.S.A.
U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

Magnum Piering, Inc.
6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

MAGNUM® MHC1420-6N1616 Tilted Plate Cap

Allowable Capacity 95 Tons Compression / 73 Tons Tension

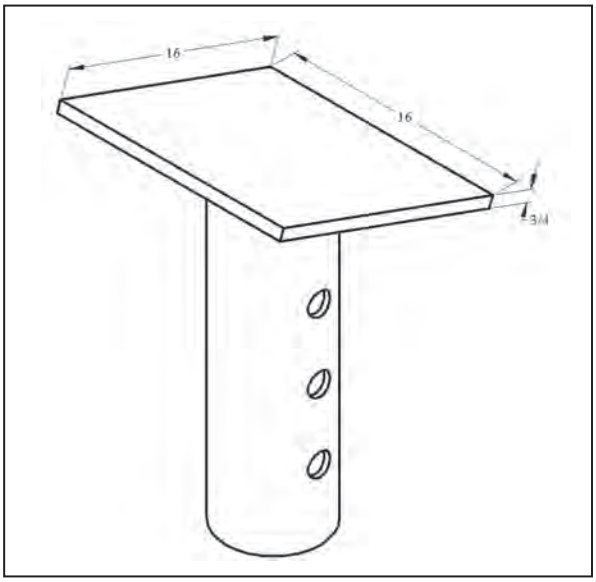
5.85-Inch I.D. Collar with 16″ x16″ x 7/8″ Bearing Plate Tilted 20 Degrees
Fits MH625 Through MH646R Magnum® Helical Piles

Description

Magnum MHC1420-6N1616B bearing plate cap has 191 tons ultimate capacity, 95 tons working capacity in compression and 146 tons ultimate capacity, 73 tons working capacity in tension. The bearing plate cap consists of a collar tube with bolt holes for connection to Magnum helical piles and 16″ x 16″ x 7/8″ plate tilted 20 degrees for attachment to a steel beam. The bearing plate cap is designed in accordance with ICC-ES document AC358 as well as IBC, ACI, and AISC codes. Application of the cap varies by project and is the responsibility of registered design professional including beam attachment, beam shear, beam span, web stiffening, bracing, and pile spacing as applicable.

SPECIFICATIONS	
Collar Tube	0.38 in. x 5.85 in. I.D. ASTM A513 GR65+
End Effecter	16″ x 16″ x 7/8″ Steel Bearing Plate Tilted 20 Degrees
Pile Connection	(3) 1-1/2″ SAE J429 Grade 5 Zinc Coated to ASTM B695/F1941
Surface Coating	Galvanized per ASTM A153/A123 (G), Bare Steel (NG), or Epoxy Coated per ICC-ES AC228 (EP)
Compatibility	MH625, MH625R, MH637, MH637R, MH646, and MH646R

CAP CAPACITY	
Ultimate Compression / Tension	191 Tons / 146 Tons
Allowable Compression / Tension	95 Tons / 73 Tons



Installation Notes:

After installation of a Magnum Helical Pile to the correct depth, torque, and capacity, cut-off the pile shaft at the proper elevation. For Bolted “B” application, drill three 1-9/16″ holes using Magnum drill template. Place the pile cap over the shaft and secure with three 1-1/2″ bolts. Snug tighten nuts. For Welded “W” application, plug weld cap in place through manufactured drill holes. Remove surface coating from plug weld areas. Place steel beam on cap and weld per project specifications.

All Magnum Products Made in U.S.A.
U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

Magnum Piering, Inc.
6082 Schumacher Park Dr.
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800-822-7437
www.magnumpiering.com

MAGNUM® MHC1530-3N68 Panel Brace Cap

Allowable Capacity 16 Tons Compression / 16 Tons Tension

3.13-Inch I.D. Collar with 6″ x 8″ x 3/4″ Plate Tilted 30 Degrees with ¾″ Stud
Fits MH313B, MH313BR, and MH325B Magnum® Helical Piles

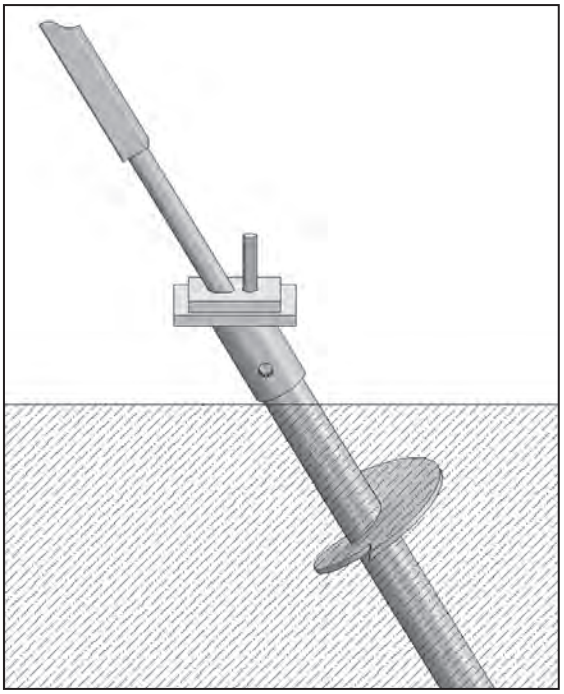
Description

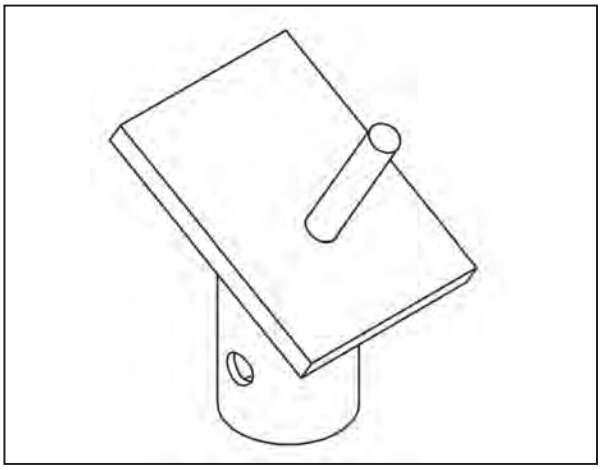
Magnum MHC1530-3N68 panel brace cap has 32 tons ultimate capacity, 16 tons working capacity in compression and tension. The bearing plate cap consists of a collar tube with bolt holes for connection to Magnum helical piles and 6″ x 8″ x 3/4″ plate tilted 30 degrees with a ¾″ stud for attachment to common pre-cast concrete or tilt-up panel braces. The bearing plate cap is designed in accordance with ICC-ES document AC358 as well as IBC, ACI, and AISC codes. Application of the cap varies by project and is the responsibility of registered design professional including brace attachment, brace spacing, and brace height on the wall, as applicable.

SPECIFICATIONS	
Collar Tube	0.25 in. x 3.13 in. I.D. ASTM A513 GR65+
End Effecter	6″ x 8″ x 3/4″ Steel Bearing Plate Tilted 30 Degrees with Threaded Attachment Stud
Pile Connection	(1) 7/8″ SAE J429 Grade 5 Zinc Coated to ASTM B695/F1941
Surface Coating	Galvanized per ASTM A153/A123 (G), Bare Steel (NG), or Epoxy Coated per ICC-ES AC228 (EP)
Compatibility	MH325B

CAP CAPACITY	
Ultimate Compression / Tension	32 Tons / 32 Tons
Allowable Compression / Tension	16 Tons / 16 Tons

Note: Cap capacity takes into account strength of collar, end effecter, and pile connection. Capacity may be limited by the helical pile itself, bearing/pullout capacity of soil, or strength of the structure to which the cap is attached, whichever is less.





Total Horizontal Thrust Resistance = 8 Tons

Installation Notes:

After installation of a Magnum Helical Pile to the correct depth, torque, and capacity, stop the shaft at the correct elevation or cut-off the pile shaft at the proper elevation. If necessary, drill one 15/16″ hole using Magnum drill template. Place the pile cap over the shaft and secure with one 7/8″ bolt. Snug tighten nut. Connect wall brace per brace manufacturer specifications.

All Magnum Products Made in U.S.A.
U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

Magnum Piering, Inc.
6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

MAGNUM® MHC1545-3N68 Panel Brace Cap

Allowable Capacity 16 Tons Compression / 16 Tons Tension

3.13-Inch I.D. Collar with 6″ x 8″ x 3/4″ Plate Tilted 45 Degrees with ¾″ Stud
Fits MH313B, MH313BR, and MH325B Magnum® Helical Piles

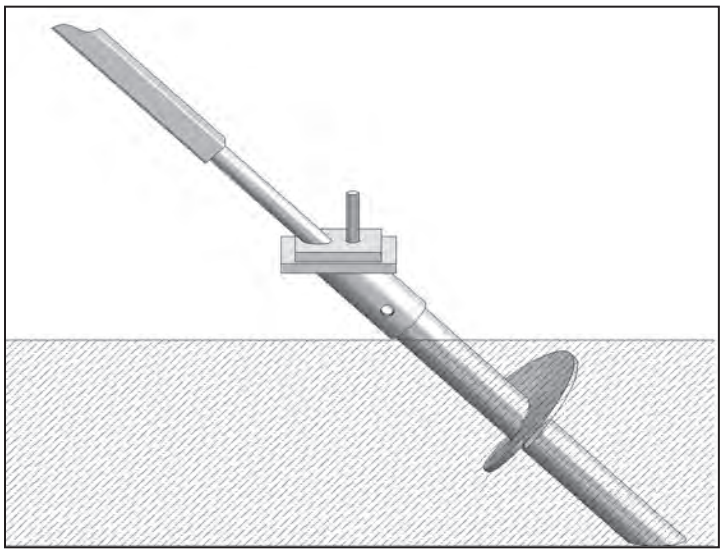
Description

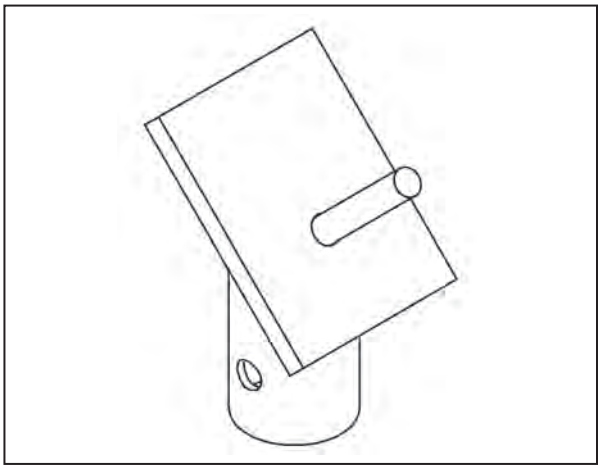
Magnum MHC1545-3N68 panel brace cap has 32 tons ultimate capacity, 16 tons working capacity in compression and tension. The bearing plate cap consists of a collar tube with bolt holes for connection to Magnum helical piles and 6″ x 8″ x 3/4″ plate tilted 45 degrees with a ¾″ stud for attachment to common pre-cast concrete or tilt-up panel braces. The bearing plate cap is designed in accordance with ICC-ES document AC358 as well as IBC, ACI, and AISC codes. Application of the cap varies by project and is the responsibility of registered design professional including brace attachment, brace spacing, and brace height on the wall, as applicable.

SPECIFICATIONS	
Collar Tube	0.25 in. x 3.13 in. I.D. ASTM A513 GR65+
End Effecter	6″ x 8″ x 3/4″ Steel Bearing Plate Tilted 45 Degrees with Threaded Attachment Stud
Pile Connection	(1) 7/8″ SAE J429 Grade 5 Zinc Coated to ASTM B695/F1941
Surface Coating	Galvanized per ASTM A153/A123 (G), Bare Steel (NG), or Epoxy Coated per ICC-ES AC228 (EP)
Compatibility	MH325B

CAP CAPACITY	
Ultimate Compression / Tension	32 Tons / 32 Tons
Allowable Compression / Tension	16 Tons / 16 Tons

Note: Cap capacity takes into account strength of collar, end effecter, and pile connection. Capacity may be limited by the helical pile itself, bearing/pullout capacity of soil, or strength of the structure to which the cap is attached, whichever is less.





Total Horizontal Thrust Resistance = 11 Tons

Installation Notes:

After installation of a Magnum Helical Pile to the correct depth, torque, and capacity, stop the shaft at the correct elevation or cut-off the pile shaft at the proper elevation. If necessary, drill one 15/16″hole using Magnum drill template. Place the pile cap over the shaft and secure with one 7/8″ bolt. Snug tighten nut. Connect wall brace per brace manufacturer specifications.

All Magnum Products Made in U.S.A.
U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

Magnum Piering, Inc.
6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
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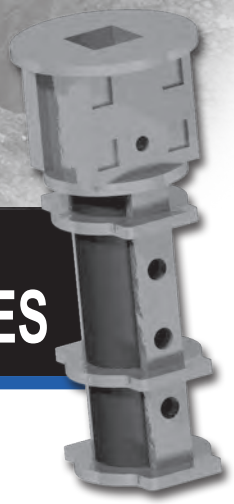
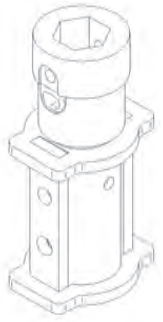
section 4

DRIVE TOOLS & HOLE TEMPLATES

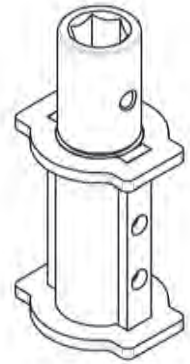
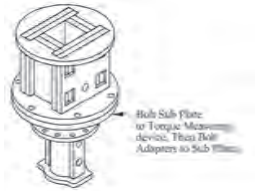


MAGNUM PIERING, INC.

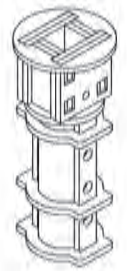
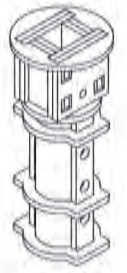
Magnum® Piering Drive Tools

Magnum® Drive Tools	System Ratings & Specifications							
	Description	Fits Helical Pile Diam. (in)	Fits Drive Shaft Size* (in)	Drive Pins	Connection Bolts	Maximum Torque (ft-lbs)	Surface Coating**	Schematic
MSA150-2000	Drive Tool for 1.5" Square-Shaft	MS150B	2" Hex	(1) 7/8" or (1) 1"	(1)	9,000	P	
MSA175-2000	Drive Tool for 1.75" Square Shaft	MS175B	2" Hex	(1) 7/8" or (1) 1"	(1)	9,000	P	
MHA2000	Low-Torque Drive Tool	MH313B, MH-313BR, MH325B, MH325BR	2" Hex	(1) 7/8" or (1) 1"	(1)	9,000	P	
MHA2100	High-Torque Drive Tool	MH313, MH313R, MH325 MH325R	2.5″ Hex	(1) 7/8″ or (1) 1″	(1)	13,000	P	
MHA2135	High-Torque Drive Tool	MH3521, MH3521R	2.5″ Hex	(1) 1″	(1)	13,000	P	
MHA2200	High-Torque Drive Tool	MH313, MH313R, MH325 MH325R	2-5/8″ Hex	(1) 7/8″ or (1) 1″	(1)	13,000	P	
MHA2300	High-Torque Drive Tool	MH313, MH313R, MH325 MH325R	3″ Hex	(1) 7/8″ or (1) 1″	(1)	13,000	P	

Magnum® Piering Drive Tools (Cont.)

Magnum® Drive Tools	System Ratings & Specifications							
	Description	Fits Helical Pile Diam. (in)	Fits Drive Shaft Size* (in)	Drive Pins	Connection Bolts	Maximum Torque (ft-lbs)	Surface Coating**	Schematic
MHA2242	Low-Torque Drive Tool	MH425, MH425R, MH431, MH431R	2-5/8″ Hex	(2) 1.25″	(1)	13,000	P	
MHA2145	Medium-Torque Drive Tool	MH425, MH425R, MH431, MH431R	3″ Hex	(2) 1.25″	(1) 1″	25,000	P	
MHA2270	Torque Transducer Adapters	Various	3″ to 4″ Square	Varies	(1) 1-1/8″	up to 83,000	P	
MHA2245	High-Torque Drive Tool	MH425, MH425R, MH431, MH431R	4″ Square	(2) 1.25″	(1) 1-1/8″	35,000	P	

Magnum® Piering Drive Tools (Cont.)

Magnum® Drive Tools	System Ratings & Specifications							
	Description	Fits Helical Pile Diam. (in)	Fits Drive Shaft Size* (in)	Drive Pins	Connection Bolts	Maximum Torque (ft-lbs)	Surface Coating**	Schematic
MHA2460	Drive Tool for MH530/ MH536	MH530, MH536	5″ Square	(3) 1.5″	(1) 1-1/8″	83,000	P	
MHA2345	Drive Tool for MH6 / MH6R	MH625, MH625R, MH637, MH637R, MH646, MH646R	5″ Square	(3) 1.5″	(1) 1-1/8″	83,000	P	

***Note 1** Hex drive size is measured across flats. All Magnum drive tools are case hardened for maximum durability after fabrication.

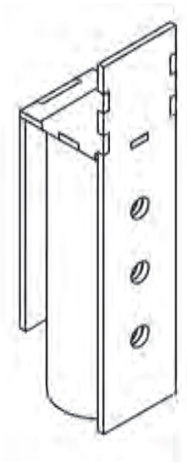
****Note 2** P=Magnum blue paint

Notes and Specifications As Magnum is committed to testing and improving products, these specifications are subject to change. Additional product specifications available at **wwwmagnumpiering.com**, in the **Magnum Product Catalog**, and in the **Magnum Helical Pile Engineering Manual**.

Magnum® Piering Drill Templates

Magnum® Drill Templates	System Ratings & Specifications				
	Description	Fits Helical Pile Diam. (in)	Bolt Hole Pattern	Surface Coating**	Schematic
MHA5010	MH3 Bolt Hole Template	3.00	(1) 7/8″	NG, P	
MHA5020	MH3R Bolt Hole Template	3.00	(2) 1″	NG, P	
MHA5040	MH3521R Bolt Hole Template	3.50	(2) 1″	NG, P	
MHA5000	MH4 Bolt Hole Template	4.50	(2) 1.25″	NG, P	

Magnum® Piering Drill Templates (Cont.)

Magnum® Drill Templates	System Ratings & Specifications				
	Description	Fits Helical Pile Diam. (in)	Bolt Hole Pattern	Surface Coating**	Schematic
MHA5050	MH6 Bolt Hole Template	5.72	(3) 1.5″	NG, P	
MHA5030	MH6 Bolt Hole Template	5.72	(3) 1.5″	NG, P	

****Note** NG=bare steel, P=Magnum blue paint

Notes and Specifications As Magnum is committed to testing and improving products, these specifications are subject to change. Additional product specifications available at **www.magnumpiering.com**, in the **Magnum Product Catalog**, and in the **Magnum Helical Pile Engineering Manual** available upon request.

MAGNUM® MHA4010-2

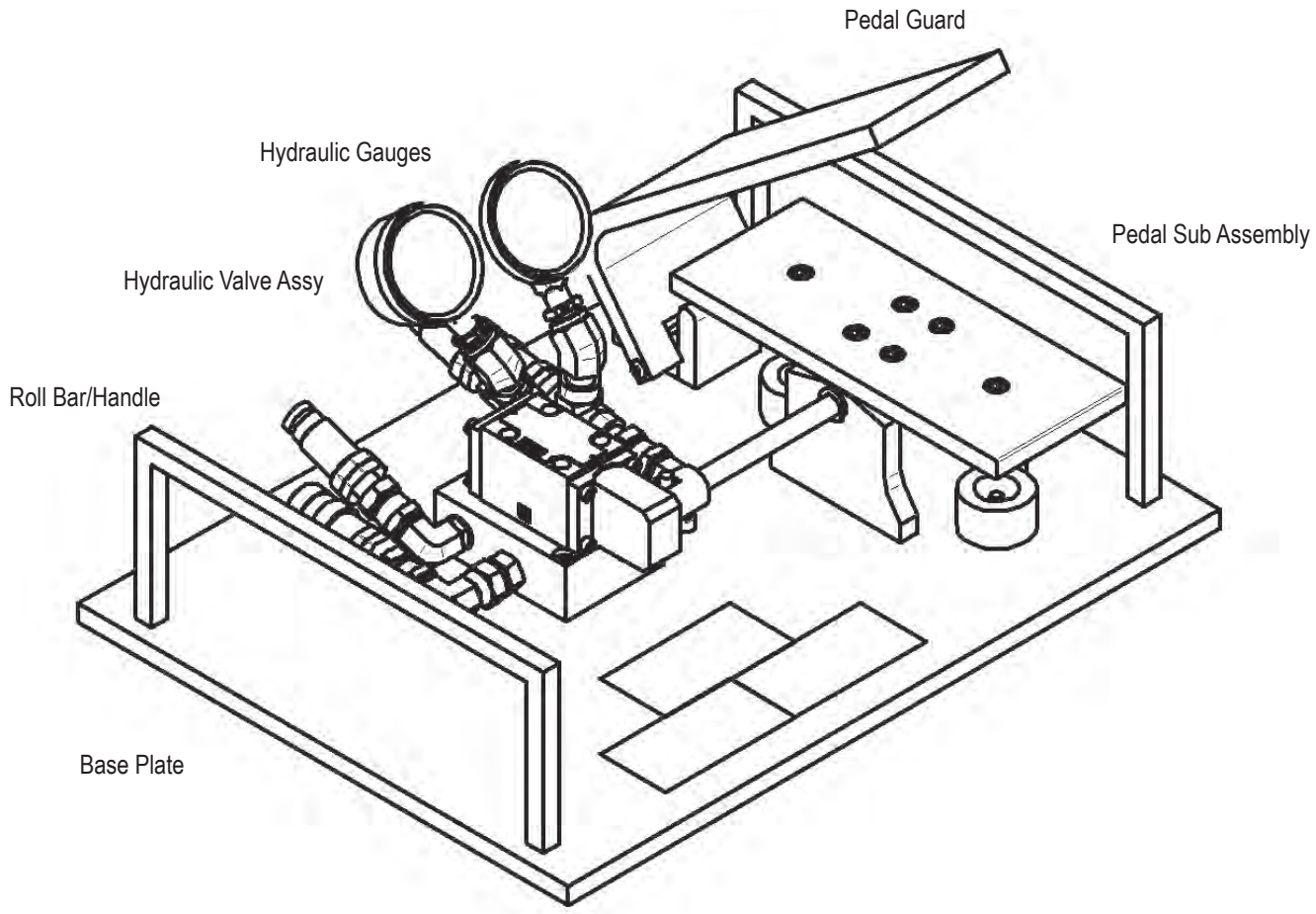
Foot Operated Hydraulic Control

3,500 psi Maximum Pressure

Control Assembly for Torque Motors

Description

The MAGNUM MHA4010-2 is a foot operated hydraulic control for operation of a variety of torque motors. The device enables hands free operation and has applications for foundation repair and augmentation using helical piles. It is beneficial in the operation of torque motors inside existing structures using an external hydraulic power pack and portable torque motors without heavy equipment. The pedal is bi-directional for control of forward and reverse rotation. Twin hydraulic gauges measure input pressure and back pressure for determination of motor torque.



Note: Torque motors have differing hydraulic pressure and flow requirements. Consult a MAGNUM technical support representative for assistance in determining compatibility of the MHA4010-2 with specific torque motors.

Magnum Piering, Inc.
6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

All Magnum Steel & Products Made in U.S.A.
U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

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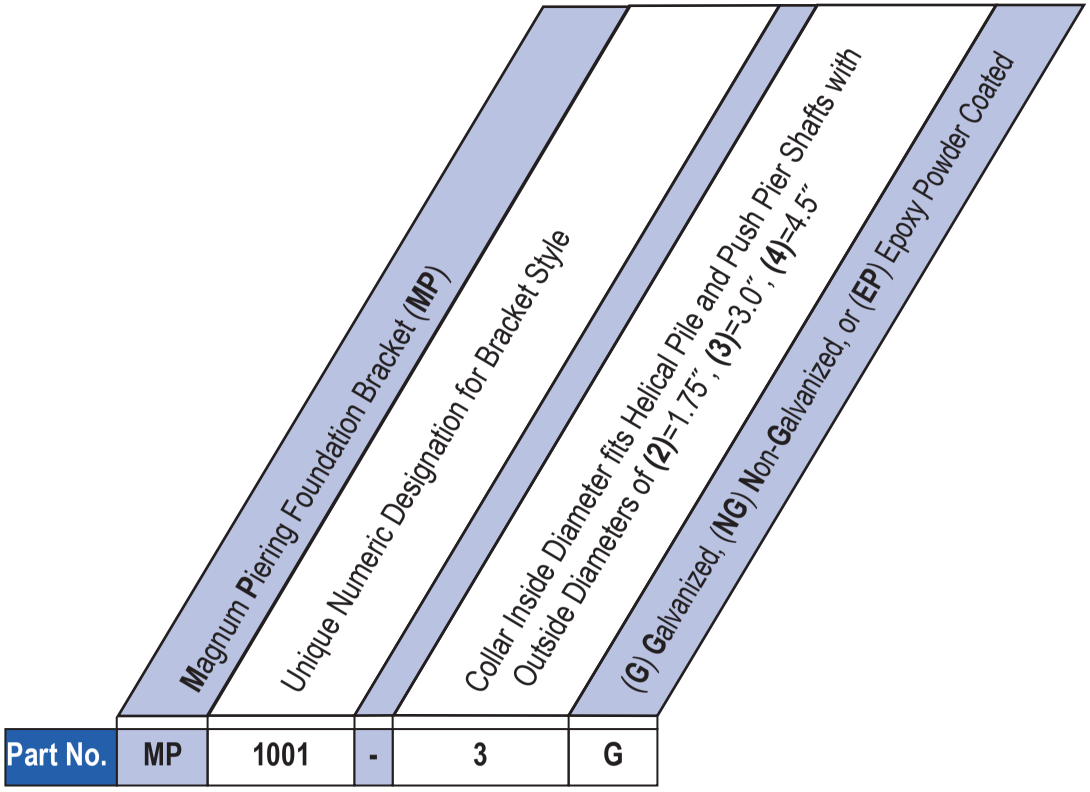
section 5

FOUNDATION BRACKETS

MAGNUM PIERING, INC.

Magnum® Foundation Bracket
Product Number Specification Legend

Magnum Piering, Inc.
ISO 9001:2008
Certified

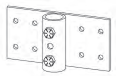
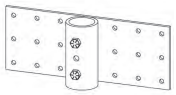
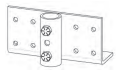
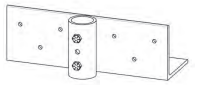
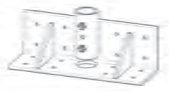


Explanation:

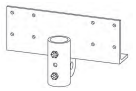
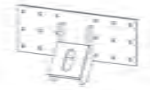
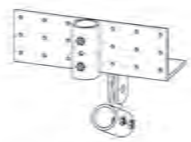
The Magnum Piering Foundation Bracket product number above **MP1001-3G** is for a Plate Bracket with 3.00″ inside diameter collar tube, and the surface preparation is Galvanized.

Note: See "Magnum Piering Foundation Bracket Specifications" table on next page for detailed information. Specification information is also available at ***www.magnumpiering.com***

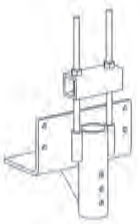
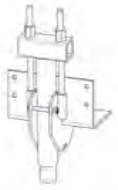
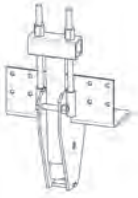
Magnum® Piering Bracket Specifications

Magnum® Brackets	System Ratings & Specifications								
	Name	Fits Pile Diam. (in)	No. Bolts / Thru Holes	Bolt hole Diam. (in)	Structural Capacity*		Description	Surface Coating**	Schematic
					Ultimate (tons) Comp / Tens	Allowable (tons) Comp / Tens			
MP1001-2	Light Duty Plate	1.75	3	3/4	16 / 16	8 / 8	6" x 12" Plate w/ 8 bolt holes	G, P	
MP1001-3	Plate Bracket	3.00	3	3/4	50 / 50	25 / 25	8" x 21" Plate w/ 18 bolt holes	G, P	
MP1001-4	Plate Bracket	4.50	3	3/4	50 / 50	25 / 25	8" x 22.4" Plate w/ 18 bolt holes	G, P	
MP1002-2	Light Duty Angle	1.75	3	3/4	16 / 16	8 / 8	6" x 4" x 12" Angle w/ 6 bolt holes	G, P	
MP1002-3	Angle Bracket	3.00	3	3/4	50 / 16	25 / 8	8" x 8" x 24" Angle w/ 6 bolt holes	G, P	
MP1005-3	Gusseted Angle	3.00	3	3/4	50 / 16	25 / 8	8" x 8" x 12" Angle w/ 6 bolt holes and 1 gusset	G, P	
MP1006-3	Reverse Angle	3.00	3	3/4	50 / 50	25 / 25	8" x 8" x 24" Angle w/ 16 bolt holes and 2 gussets	G, P	

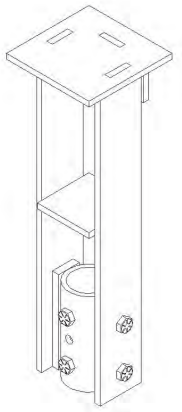
Magnum® Piering
Bracket Specifications (Cont.)

Magnum® Brackets	System Ratings & Specifications								
	Name	Fits Pile Diam. (in)	No. Bolts / Thru Holes	Bolt hole Diam. (in)	Structural Capacity*		Description	Surface Coating**	Schematic
					Ultimate (tons) Comp / Tens	Allowable (tons) Comp / Tens			
MP1007-3	Pivot Bracket	3.00	3	3/4	50 / 32	25 / 16	8" x 4" x 21" Angle w/ 18 bolt holes and pivot collar	G, P	
MP1013-3	Pin Bracket	3.00	3	4-Mar	50 / 50	25 / 25	bracket tube with weld flange for attachment to structural steel	P	
MP1017	Angled Tie-Back	3.00	1	1.25	0 / 32	0 / 16	8" x 21" Plate w/ 18 bolt holes, 2 gussets, and plate	G, P	
MP1015-3	Light Angle	3.00	2	3/4	24 / 24	12 / 12	4" x 4" x 9" Angle w/ 2 bolts	G, P	
MP1016-3	Angle Bracket with Tie-Back	3.00	3	3/4	50 / 50	25 / 25	8" x 8" x 24" Angle w/ 18 bolt holes	G, P	
MP1008-3-6	Lifting Kit	3.00	na	na	40 / 35	20 / 18	#6 Thread Bars w/ Tube Steel Cross Members	G, P	
MP1008-3-7	Lifting Kit	3.00	na	na	50 / 35	25 / 18	#7 Thread Bars w/ Tube Steel Cross Members	G, P	

Magnum® Piering Bracket Specifications (Cont.)

Magnum® Brackets	System Ratings & Specifications							
	Name	Fits Pile Diam. (in) or Dim (in)	Pile Connection	Structural Capacity*		Description	Surface Coating**	Schematic
				Ultimate (tons) Comp / Tens	Allowable (tons) Comp / Tens			
MP1027-3	Lifting Bracket	3.00	3.5" x 3.5" x 3/8" Cross Beam	50 / 10	25 / 5	8" x 8" x 15" Angle w/ 6 Bolt Holes and All-Thread Bars for Lifting and Lock-Off	G, P	
MP1030-150	Standard Duty Lifting Bracket	1.50x1.50	3.5" x 3.5" x 3/8" Cross Beam	20 / 0	10 / 0	8" x 8" x 14" Angle w/ 4 Bolt Holes and All-Thread Bars for Lifting and Lock-Off	G, P	
MP1030-175	Standard Duty Lifting Bracket	1.75x1.75	3.5" x 3.5" x 3/8" Cross Beam	40 / 0	20 / 0	8" x 8" x 14" Angle w/ 4 Bolt Holes and All-Thread Bars for Lifting and Lock-Off	G, P	
MP1032-175	Heavy Duty Lifting Bracket	1.75x1.75	3.5" x 3.5" x 3/8" Cross Beam	44 / 0	22 / 0	8" x 8" x 18" Angle w/ 8 Bolt Holes and All-Thread Bars for Lifting and Lock-Off	G, P	

Magnum® Piering Bracket Specifications (Cont.)

Magnum® Brackets	System Ratings & Specifications								
	Name	Fits Pile Diam. (in)	No. Bolts / Thru Holes	Bolt hole Diam. (in)	Structural Capacity*		Description	Surface Coating**	Schematic
					Ultimate (tons) Comp / Tens	Allowable (tons) Comp / Tens			
MP1600-3	Concentric Lift Bracket	3.00	3	3/4	50 / 0	25 / 0	8" x 8" x 15" Angle w/ 6 Bolt Holes and All-Thread Bars for Lifting and Lock-Off	G, P	

***Note 1** All Magnum products are manufactured using minimum 65 ksi minimum yield strength structural tubing, or better, for the collar and ASTM A36 plate steel, or better, for the plates. As Magnum is committed to testing and improving products, these specifications are subject to change. Additional product specifications available at **www.magnumpiering.com** and in the **Magnum Helical Pile Engineering Manual** available upon request. Structural capacity of cap and pile system may be limited by the capacity of the pile and the structure to which the cap is connected. See Magnum® Helical Pile Specifications for more information. Capacity of the structure shall be determined by an engineer.

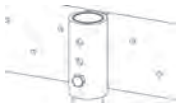
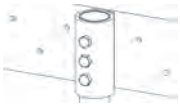
****Note 2** G=hot dip galvanized per ASTM A153/A123 as appropriate, P=Magnum blue paint

MAGNUM® MP1001-2 Plate Bracket

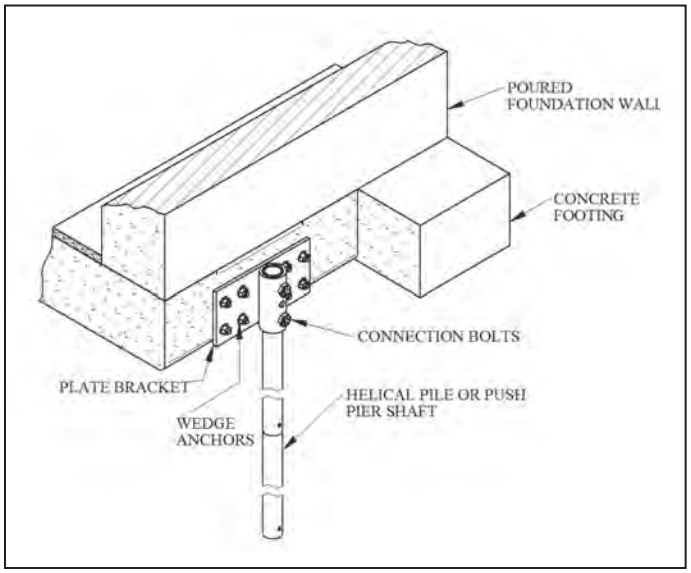
Allowable Capacity 3.5 Tons

6″ x 12″ x 3/8″ Plate with (8) 9/16″ Thru Holes & 1.88″ I.D. Collar
Fits MP212 Magnum® Steel Push Piers

SPECIFICATIONS	
Collar Tube	0.37 in. x 1.88 in. I.D. ASTM A513 GR65+
Configuration	6″ x 12″ x 3/8″ Plate with (8) 9/16″ Thru Holes for 1/2″ Expansion Anchors
Pile Connection	(1, 2 or 3) 3/4″ SAE J429 GR 8 Zinc Coated to ASTM B695/F1941
Surface Coating	Galvanized per ASTM A153/A123 (G) or Bare Metal (B)
Compatibility	MP212

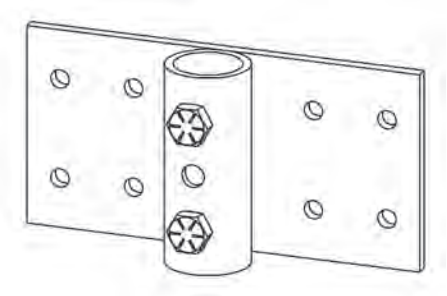
CONNECTION TYPE	ULTIMATE CAPACITY*	ALLOWABLE CAPACITY*
 SINGLE BOLTED	5 Tons	2.5 Tons
 DOUBLE BOLTED	7 Tons	3.5 Tons
 TRIPLE BOLTED	7 Tons	3.5 Tons

*Bracket connection to pile consists of field threaded blind bolts as described in Section 7-13 of AISC Code. Capacities shown are based on IAS accredited laboratory testing of Magnum products.



Description

The Magnum MP1001-2 plate bracket has 7 tons maximum ultimate capacity, 3.5 tons working capacity in compression and tension. The bracket consists of a collar tube with three 3/4″ threaded bolt holes for connection to Magnum push piers and (8) thru holes for attachment to existing concrete using expansion anchors. The bracket is designed in accordance with ICC-ES document AC358 as well as IBC, ACI, and AISC codes. Design and detailing of the connection to the structure varies by project and is the responsibility of registered design professional including maximum concrete span, pier spacing, concrete shear, and concrete bearing.



All Magnum Products Made in U.S.A.
U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

Installation Notes:
Prepare the existing foundation. Attach the bracket and Magnum ram. Install the push pier to the required pressure and load test. Lift the structure as needed using either a Magnum ram or lifting fixture. Drill holes and bolt the bracket to the pile.

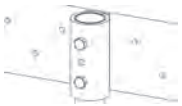
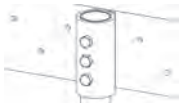
Magnum Piering, Inc.
6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

MAGNUM® MP1001-3 Plate Bracket

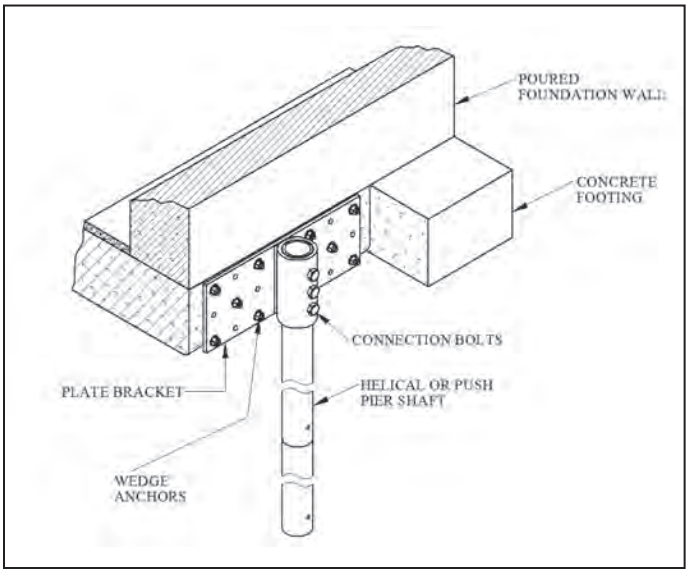
Allowable Capacity 25 Tons

8″ x 21″ x 3/8″ Plate with 18 – 9/16″ Thru Holes & 3.13″ I.D. Collar
Fits MH313, MH313R, MH325, and MH325R Magnum® Helical Piles
and MP313 and MP325 Magnum® Steel Push Piers

SPECIFICATIONS	
Collar Tube	0.37 in. x 3.13 in. I.D. ASTM A513 GR65+
Configuration	8″ x 21″ x 3/8″ Plate with 18 – 9/16″ Thru Holes for 1/2" Expansion Anchors
Pile Connection	(1, 2, or 3) 3/4″ SAE J429 GR 8 Zinc Coated to ASTM B695/F1941
Surface Coating	Galvanized per ASTM A153/A123 (G) or Standard Magnum Blue Paint (P)
Compatibility	MH313, MH313R, MH325, MH325R, MP313, and MP325

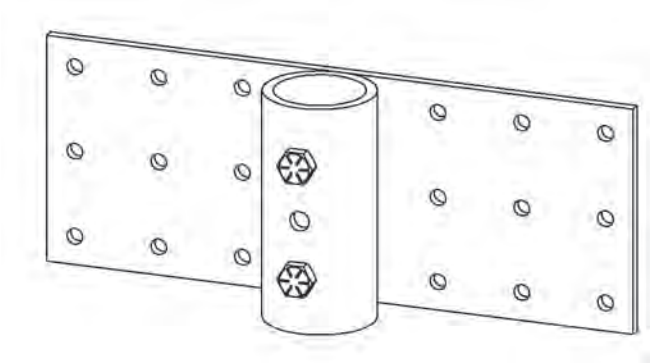
CONNECTION TYPE	ULTIMATE CAPACITY* 0.13 / 0.25 Wall Pile	ALLOWABLE CAPACITY* 0.13 / 0.25 Wall Pile
 SINGLE BOLTED	10 Tons / 18 Tons	5 Tons / 9 Tons
 DOUBLE BOLTED	17 Tons / 35 Tons	8 Tons / 18 Tons
 TRIPLE BOLTED	28 Tons / 50 Tons	14 Tons / 25 Tons

*Bracket connection to pile consists of field threaded blind bolts as described in Section 7-13 of AISC Code. Capacities shown are based on IAS accredited laboratory testing of Magnum products.



Description

The Magnum MP1001-3 plate bracket has 50 tons maximum ultimate capacity, 25 tons working capacity in compression and tension. The bracket consists of a collar tube with (3) 3/4″ threaded bolt holes for connection to Magnum helical piles and Magnum push piers and 18 thru holes for attachment to existing concrete using concrete expansion anchors. The bracket is designed in accordance with ICC-ES document AC358 as well as IBC, ACI, and AISC codes. Design and detailing of the connection to the structure varies by project and is the responsibility of registered design professional including maximum concrete span, pier spacing, concrete shear, and concrete bearing.



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U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

Installation Notes:
Prepare the existing foundation. For steel push pier applications, attach the bracket and Magnum ram. Install the push pier to the required pressure and load test. For helical pile applications, excavate the pier location so the helix bearing plates fit below the existing foundation and the shaft is as close as possible to the face of the foundation. Install the helical pile to the correct depth and torque. Mount the bracket by sliding down the shaft rotating into position. In both cases, lift the structure as needed using either a Magnum ram or lifting fixture. Drill holes and bolt the bracket to the pile.

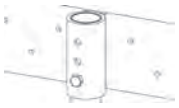
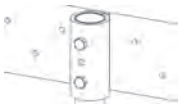
Magnum Piering, Inc.
6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

MAGNUM® MP1001-4 Plate Bracket

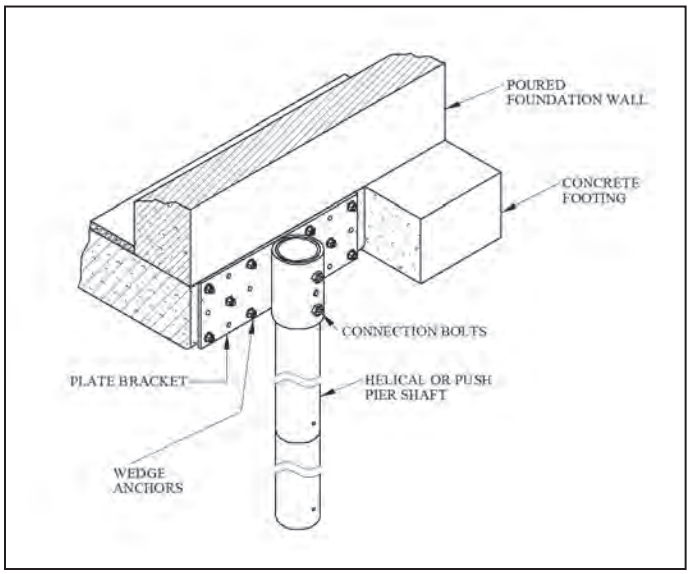
Allowable Capacity 25 Tons

8″ x 22.4″ x 3/8″ Plate with 18 – 9/16″ Thru Holes & 4.63″ I.D. Collar
Fits MH425B, MH425BR, MH431B, and MH431BR Magnum® Helical Piles
and MP413, MP419, MP425, and MP431 Magnum® Steel Push Piers

SPECIFICATIONS	
Collar Tube	0.37 in. x 4.63 in. I.D. ASTM A513 GR65+
Configuration	8″ x 22.4″ x 3/8″ Plate with 18 – 9/16″ Thru Holes for 1/2″ Expansion Anchors
Pile Connection	(1, 2, or 3) 3/4″ SAE J429 GR 8 Zinc Coated to ASTM B695/F1941
Surface Coating	Galvanized per ASTM A153/A123 (G) or Standard Magnum Blue Paint (P)
Compatibility	MH425B, MH425BR, MH431B, MH431BR, MP413, MP419, MP425, and MP431

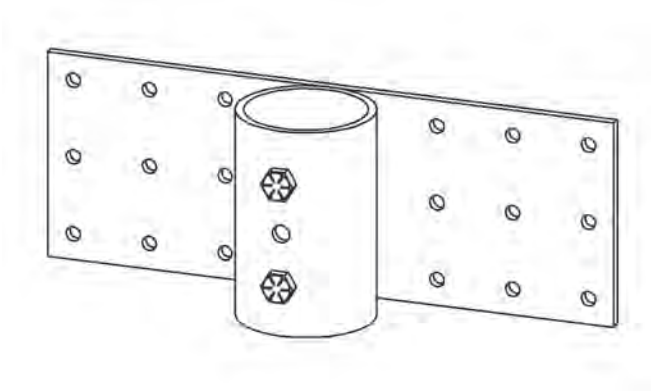
CONNECTION TYPE	ULTIMATE CAPACITY* 0.13 / 0.25 Wall Pile	ALLOWABLE CAPACITY* 0.13 / 0.25 Wall Pile
 SINGLE BOLTED	10 Tons / 18 Tons	5 Tons / 9 Tons
 DOUBLE BOLTED	17 Tons / 35 Tons	8 Tons / 18 Tons
 TRIPLE BOLTED	28 Tons / 50 Tons	14 Tons / 25 Tons

*Bracket connection to pile consists of field threaded blind bolts as described in Section 7-13 of AISC Code. Capacities shown are based on IAS accredited laboratory testing of Magnum products.



Description

The Magnum MP1001-4 plate bracket has 50 tons maximum ultimate capacity, 25 tons working capacity in compression and tension. The bracket consists of a collar tube with (3) 3/4" threaded bolt holes for connection to Magnum helical piles and Magnum push piers and 18 thru holes for attachment to existing concrete using concrete expansion anchors. The bracket is designed in accordance with ICC-ES document AC358 as well as IBC, ACI, and AISC codes. Design and detailing of the connection to the structure varies by project and is the responsibility of registered design professional including maximum concrete span, pier spacing, concrete shear, and concrete bearing.



All Magnum Products Made in U.S.A.
U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

Installation Notes:
Prepare the existing foundation. For steel push pier applications, attach the bracket and Magnum ram. Install the push pier to the required pressure and load test. For helical pile applications, excavate the pier location so the helix bearing plates fit below the existing foundation and the shaft is as close as possible to the face of the foundation. Install the helical pile to the correct depth and torque. Mount the bracket by sliding down the shaft rotating into position. In both cases, lift the structure as needed using either a Magnum ram or lifting fixture. Drill holes and bolt the bracket to the pile.

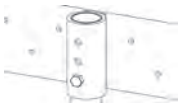
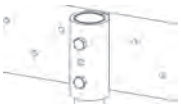
Magnum Piering, Inc.
6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

MAGNUM® MP1002-2 Angle Bracket

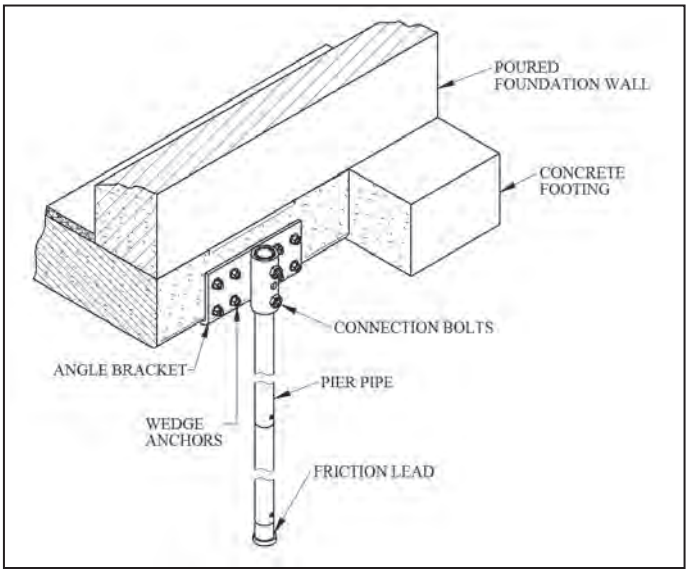
Allowable Capacity 3.5 Tons

6″ x 4″ x 12″ x 3/8″ Angle with 8 – 9/16″ Thru Holes & 1.83″ I.D. Collar
Fits MP212 Magnum® Steel Push Piers

SPECIFICATIONS	
Collar Tube	0.37 in. x 1.83 in. I.D. ASTM A513 GR65+
Configuration	6″ x 4″ x 12″ x 3/8″ Angle with (8) 9/16″ Thru Holes for 1/2″ Expansion Anchors
Pile Connection	(1 or 2) 3/4″ SAE J429 GR 8 Zinc Coated to ASTM B695/F1941
Surface Coating	Galvanized per ASTM A153/A123 (G) or Standard Magnum Blue Paint (P)
Compatibility	MP212

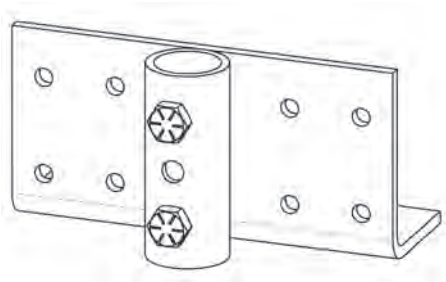
CONNECTION TYPE	ULTIMATE CAPACITY*	ALLOWABLE CAPACITY*
 SINGLE BOLTED	5 Tons	2.5 Tons
 DOUBLE BOLTED	7 Tons	3.5 Tons
 TRIPLE BOLTED	7 Tons	3.5 Tons

*Bracket connection to pile consists of field threaded blind bolts as described in Section 7-13 of AISC Code. Capacities shown are based on IAS accredited laboratory testing of Magnum products.



Description

The Magnum MP1002-2 angle bracket has 7 tons maximum ultimate capacity, 3.5 tons working capacity in compression and tension. The bracket consists of a collar tube with (3) 3/4″ threaded bolt holes for connection to Magnum push piers and (8) thru holes for attachment to existing concrete using expansion anchors. The bracket is designed in accordance with ICC-ES document AC358 as well as IBC, ACI, and AISC codes. Design and detailing of the connection to the structure varies by project and is the responsibility of registered design professional including maximum concrete span, pier spacing, concrete shear, and concrete bearing.



All Magnum Products Made in U.S.A.
U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

Installation Notes:
Prepare the existing foundation. Attach the bracket and Magnum ram. Install the push pier to the required pressure and load test. Lift the structure as needed using either a Magnum ram or lifting fixture. Drill holes and bolt the bracket to the pile.

Magnum Piering, Inc.
6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

MAGNUM® MP1002-3 Angle Bracket

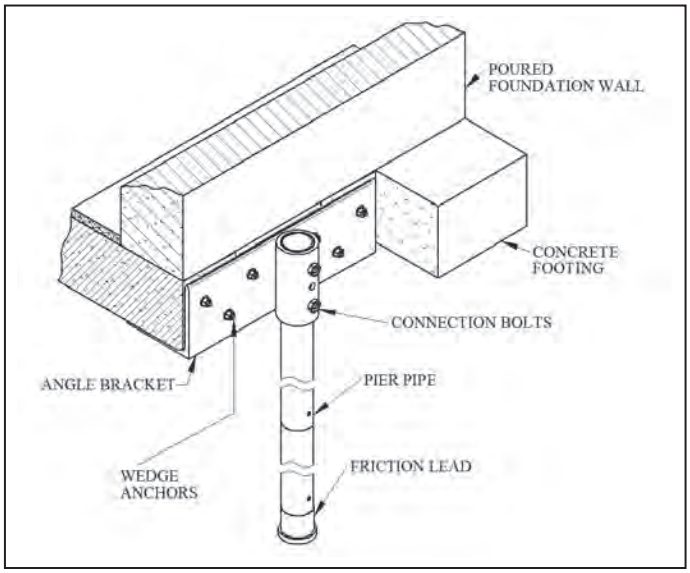
Allowable Capacity 25 Tons

8″ x 8″ x 24″ x 1/2″ Angle with (6) 9/16″ Thru Holes & 3.13″ I.D. Collar
Fits MH313, MH313R, MH325, & MH325R Magnum® Helical Piles &
MP313 & MP325 Magnum® Steel Push Piers

SPECIFICATIONS	
Collar Tube	0.37 in. x 3.13 in. I.D. ASTM A513 GR65+
Configuration	8″ x 8″ x 24″ x 1/2″ Angle with (6) 9/16″ Thru Holes for 1/2″ Expansion Anchors
Pile Connection	(1, 2, or 3) 3/4″ SAE J429 GR 8 Zinc Coated to ASTM B695/F1941
Surface Coating	Galvanized per ASTM A153/A123 (G) or Standard Magnum Blue Paint (P)
Compatibility	MH313, MH313R, MH325, MH325R, MP313, & MP325

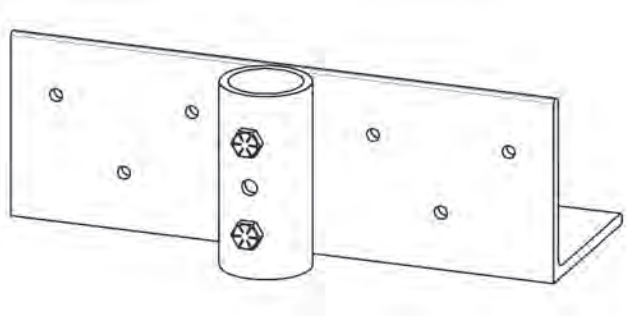
CONNECTION TYPE	ULTIMATE CAPACITY* 0.13 / 0.25 Wall Pile	ALLOWABLE CAPACITY* 0.13 / 0.25 Wall Pile
 SINGLE BOLTED	10 Tons / 18 Tons	5 Tons / 9 Tons
 DOUBLE BOLTED	17 Tons / 35 Tons	8 Tons / 18 Tons
 TRIPLE BOLTED	28 Tons / 50 Tons	14 Tons / 25 Tons

*Bracket connection to pile consists of field threaded blind bolts as described in Section 7-13 of AISC Code. Capacities shown are based on IAS accredited laboratory testing of Magnum products.



Description

The Magnum MP1002-3 angle bracket has 50 tons maximum ultimate capacity, 25 tons working capacity in compression and 16 tons maximum capacity, 8 tons working capacity in tension. The bracket consists of a collar tube with (3) 3/4″ threaded bolt holes for connection to Magnum helical piles and Magnum push piers and (6) thru holes for attachment to existing concrete using expansion anchors. The bracket is designed in accordance with ICC-ES document AC358 as well as IBC, ACI, and AISC codes. Design and detailing of the connection to the structure varies by project and is the responsibility of registered design professional including maximum concrete span, pier spacing, concrete shear, and concrete bearing.



All Magnum Products Made in U.S.A.
U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

Installation Notes::
Prepare the existing foundation. For steel push pier applications, attach the bracket and Magnum ram. Install the push pier to the required pressure and load test. For helical pile applications, excavate the pier location so the helix bearing plates fit below the existing foundation and the shaft is as close as possible to the face of the foundation. Install the helical pile to the correct depth and torque. Mount the bracket by sliding down the shaft rotating into position. In both cases, lift the structure as needed using either a Magnum ram or lifting fixture. Drill holes and bolt the bracket to the pile.

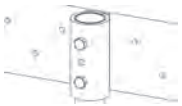
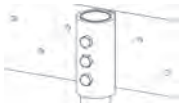
Magnum Piering, Inc.
6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

MAGNUM® MP1005-3 Gusseted Angle

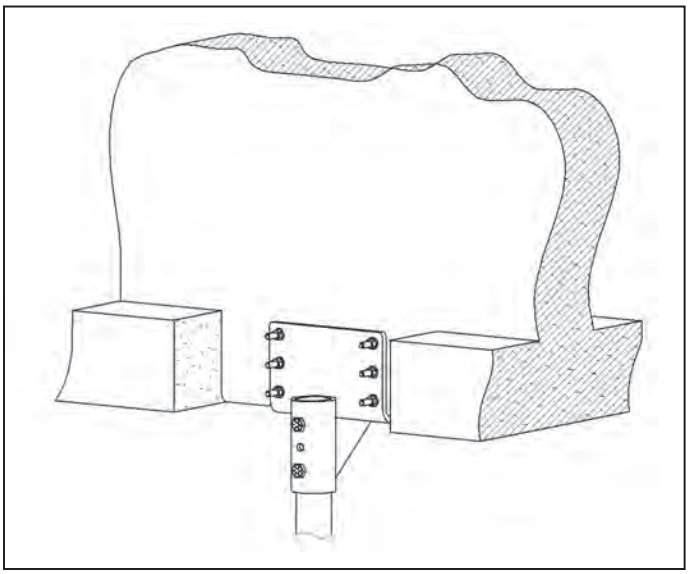
Allowable Capacity 25 Tons

8″ x 8″ x 12″ x 1/2″ Angle with (6) 9/16″ Thru Holes & 3.13″ I.D. Collar
Fits MH313, MH313R, MH325, & MH325R Magnum® Helical Piles
MP313 and MP325 Magnum® Steel Push Piers

SPECIFICATIONS	
Collar Tube	0.37 in. x 3.13 in. I.D. ASTM A513 GR65+
Configuration	8″ x 8″ x 12″ x 1/2″ Angle with (6) 9/16" Thru Holes for 1/2″ Expansion Anchors
Pile Connection	(1, 2, or 3) 3/4″ SAE J429 GR8 Zinc Coated to ASTM B695/F1941
Surface Coating	Galvanized per ASTM A153/A123 (G) or Standard Magnum Blue Paint (P)
Compatibility	MH313, MH313R, MH325, MH325R, MP313 & MP325

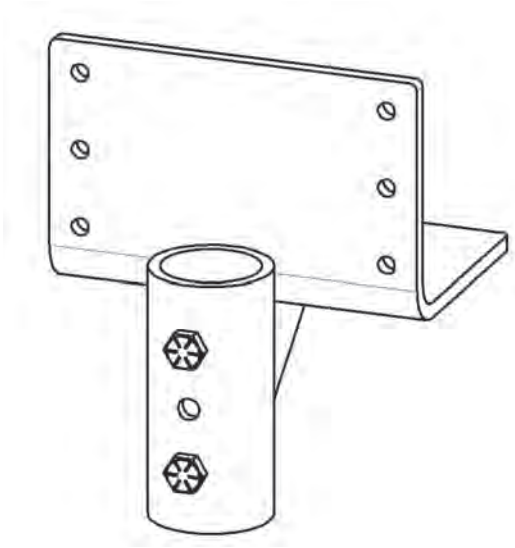
CONNECTION TYPE	ULTIMATE CAPACITY* 0.13 / 0.25 Wall Pile	ALLOWABLE CAPACITY* 0.13 / 0.25 Wall Pile
 SINGLE BOLTED	10 Tons / 18 Tons	5 Tons / 9 Tons
 DOUBLE BOLTED	17 Tons / 35 Tons	8 Tons / 18 Tons
 TRIPLE BOLTED	28 Tons / 50 Tons	14 Tons / 25 Tons

*Bracket connection to pile consists of field threaded blind bolts as described in Section 7-13 of AISC Code. Capacities shown are based on IAS accredited laboratory testing of Magnum products.



Description

The Magnum MP1005-3 plate bracket has 50 tons maximum ultimate capacity, 25 tons working capacity in compression and 16 tons maximum capacity, 8 tons working capacity in tension. The bracket consists of a collar tube with (3) 3/4″ threaded bolt holes for connection to Magnum helical piles and Magnum push piers and (6) thru holes for attachment to existing concrete using expansion anchors. The bracket is designed in accordance with ICC-ES document AC358 as well as IBC, ACI, and AISC codes. Design and detailing of the connection to the structure varies by project and is the responsibility of registered design professional including maximum concrete span, pier spacing, concrete shear, and concrete bearing.



All Magnum Products Made in U.S.A.
U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

Installation Notes:
Prepare the existing foundation. For steel push pier applications, attach the bracket and Magnum ram. Install the push pier to the required pressure and load test. For helical pile applications, excavate the pier location so the helix bearing plates fit below the existing foundation and the shaft is as close as possible to the face of the foundation. Install the helical pile to the correct depth and torque. Mount the bracket by sliding down the shaft rotating into position. In both cases, lift the structure as needed using either a Magnum ram or lifting fixture. Drill holes and bolt the bracket to the pile.

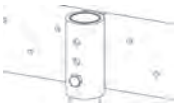
Magnum Piering, Inc.
6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

MAGNUM® MP1006-3 Reverse Angle

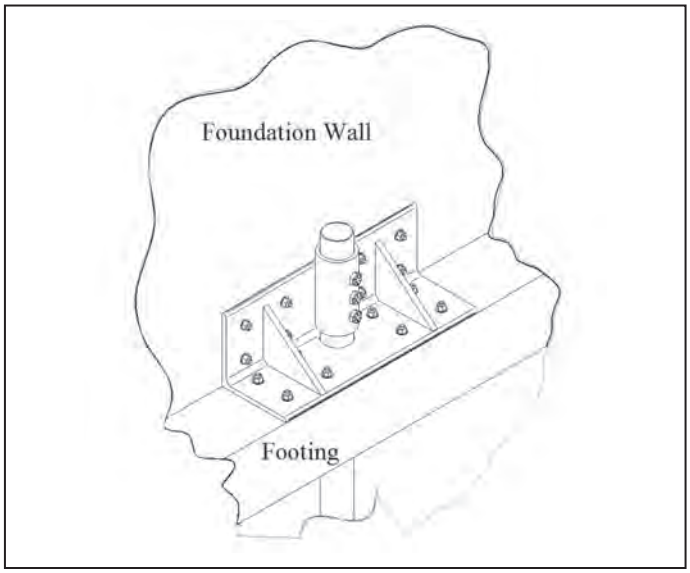
Allowable Capacity 25 Tons

8″ x 8″ x 24″ x 1/2″ Angle with (16) 11/16″ Thru Holes & 3.13″ I.D. Collar
Fits MP313 & MP325 Magnum® Steel Push Piers

SPECIFICATIONS	
Collar Tube	0.37 in. x 3.13 in. I.D. ASTM A513 GR65+
Configuration	8″ x 8″ x 24″ x 1/2″ Angle with (16) 11/16″ Thru Holes for 5/8″ Expansion Anchors
Pile Connection	(1, 2, or 3) 3/4″ SAE J429 GR8 Zinc Coated to ASTM B695/F1941
Surface Coating	Galvanized per ASTM A153/A123 (G) or Standard Magnum Blue Paint (P)
Compatibility	MP313 & MP325

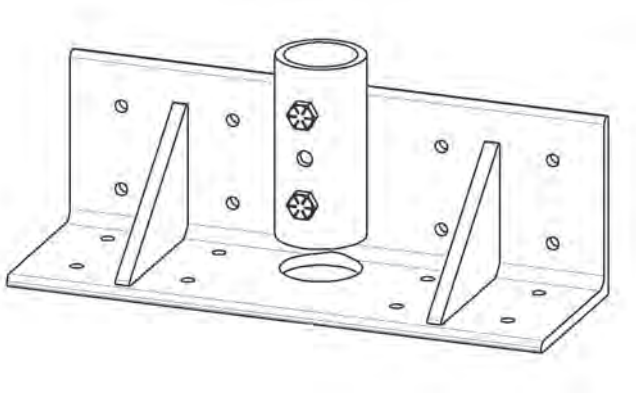
CONNECTION TYPE	ULTIMATE CAPACITY* 0.13 / 0.25 Wall Pile	ALLOWABLE CAPACITY* 0.13 / 0.25 Wall Pile
 SINGLE BOLTED	10 Tons / 18 Tons	5 Tons / 9 Tons
 DOUBLE BOLTED	17 Tons / 35 Tons	8 Tons / 18 Tons
 TRIPLE BOLTED	28 Tons / 50 Tons	14 Tons / 25 Tons

*Bracket connection to pile consists of field threaded blind bolts as described in Section 7-13 of AISC Code. Capacities shown are based on IAS accredited laboratory testing of Magnum products.



Description

The Magnum MP1006-3 reverse angle bracket has 50 tons maximum ultimate capacity, 25 tons working capacity in compression and tension. The bracket consists of a collar tube with (3) 3/4″ threaded bolt holes for connection to Magnum push piers and (16) thru holes for attachment to existing concrete using expansion anchors. The bracket is designed in accordance with IBC, ACI, and AISC codes. Design and detailing of the connection to the structure varies by project and is the responsibility of registered design professional including maximum concrete span, pier spacing, concrete shear, and concrete bearing.



All Magnum Products Made in U.S.A.
U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

Installation Notes:
Prepare the existing foundation. Core a 3.50″ diameter or larger hole through the footing or slab where the push pier is located. Attach the bracket and Magnum ram. Install the push pier through the core hole to the required pressure and load test. Lift the structure as needed using either a Magnum ram or lifting fixture. Drill holes and bolt the bracket to the pile.

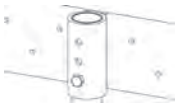
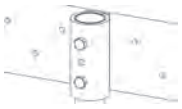
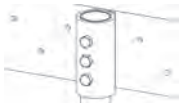
Magnum Piering, Inc.
6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

MAGNUM® MP1007-3 Pivot Angle

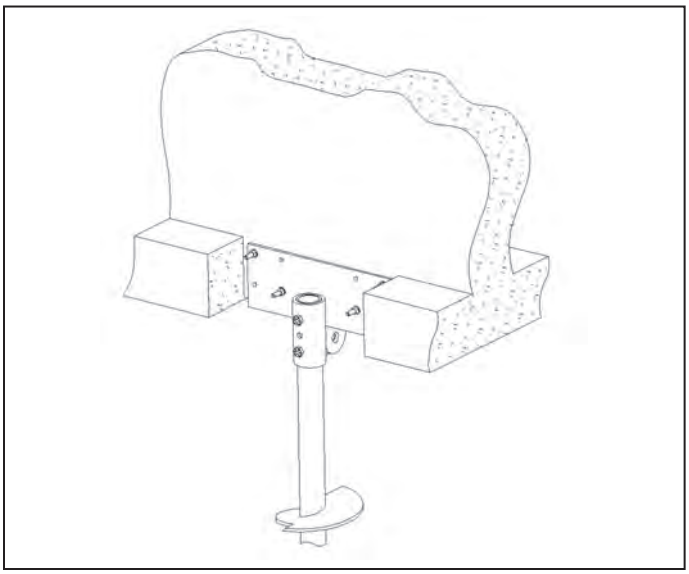
Allowable Capacity 25 Tons

8″ x 4″ x 21″ x 1/2″ Angle with (12) 9/16″ Thru Holes & 3.13″ I.D. Collar Fits MH313, MH313R, MH325, & MH325R Magnum® Helical Piles & MP313 & MP325 Magnum® Steel Push Piers

SPECIFICATIONS	
Collar Tube	0.37 in. x 3.13 in. I.D. ASTM A513 GR65+
Configuration	8″ x 4″ x 21″ x 1/2″ Angle with (12) 9/16” Thru Holes for 1/2″ Expansion Anchors
Pile Connection	(1, 2, or 3) 3/4″ SAE J429 GR8 Zinc Coated to ASTM B695/F1941
Surface Coating	Galvanized per ASTM A153/A123 (G) or Standard Magnum Blue Paint (P)
Compatibility	MH313, MH313R, MH325, MH325R, MP313 & MP325

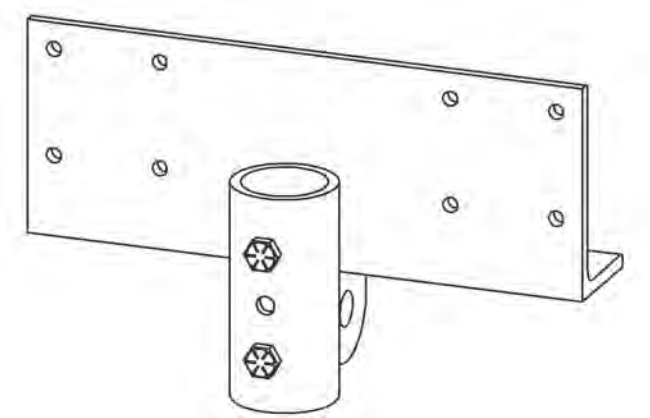
CONNECTION TYPE	ULTIMATE CAPACITY* 0.13 / 0.25 Wall Pile	ALLOWABLE CAPACITY* 0.13 / 0.25 Wall Pile
 SINGLE BOLTED	10 Tons / 18 Tons	5 Tons / 9 Tons
 DOUBLE BOLTED	17 Tons / 35 Tons	8 Tons / 18 Tons
 TRIPLE BOLTED	28 Tons / 50 Tons	14 Tons / 25 Tons

*Bracket connection to pile consists of field threaded blind bolts as described in Section 7-13 of AISC Code. Capacities shown are based on IAS accredited laboratory testing of Magnum products.



Description

The Magnum MP1007-3 pivot angle bracket has 50 tons maximum ultimate capacity, 25 tons working capacity in compression and 32 tons maximum capacity, 16 tons working capacity in tension. The bracket consists of a collar tube with (3) 3/4″ threaded bolt holes for connection to Magnum helical piles and Magnum push piers and (12) holes for attachment to existing concrete using expansion anchors. The bracket is designed in accordance with ICC-ES document AC358 as well as IBC, ACI, and AISC codes. Design and detailing of the connection to the structure varies by project and is the responsibility of registered design professional including maximum concrete span, pier spacing, concrete shear, and concrete bearing.



All Magnum Products Made in U.S.A.

U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

Installation Notes:

Prepare the existing foundation. For steel push pier applications, attach the bracket and Magnum ram. Install the push pier to the required pressure and load test. For helical pile applications, excavate the pier location so the helix bearing plates fit below the existing foundation and the shaft is as close as possible to the face of the foundation. Install the helical pile to the correct depth and torque. Mount the bracket and install the sleeve. In both cases, lift the structure as needed using either a Magnum ram or lifting fixture. Drill holes and bolt the bracket to the pile.

Magnum Piering, Inc.

6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

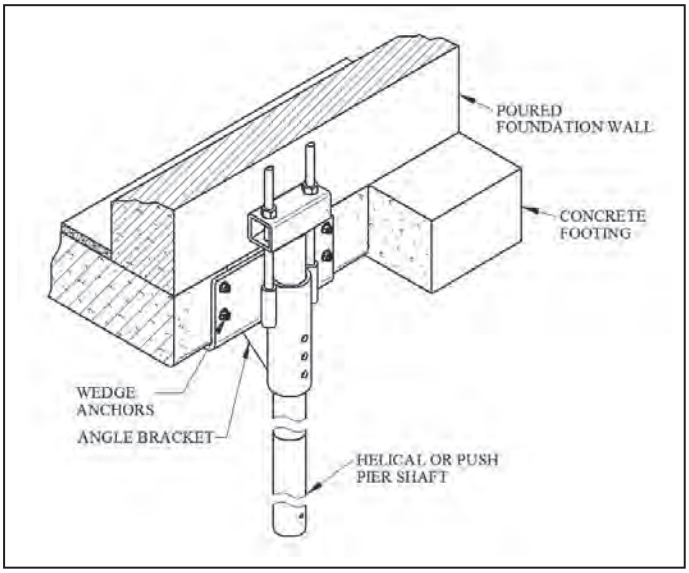
MAGNUM® MP1027-3 Lifting Bracket

Allowable Capacity 25 Tons

8″ x 8″ x 15″ x 1/2″ Plate with 4 – 9/16″ Thru Holes & 3.13″ I.D. Collar
Fits MH313, MH313R, MH325, and MH325RMagnum® Helical Piles
and MP313, MP322 and MP325 Magnum® Steel Push Piers

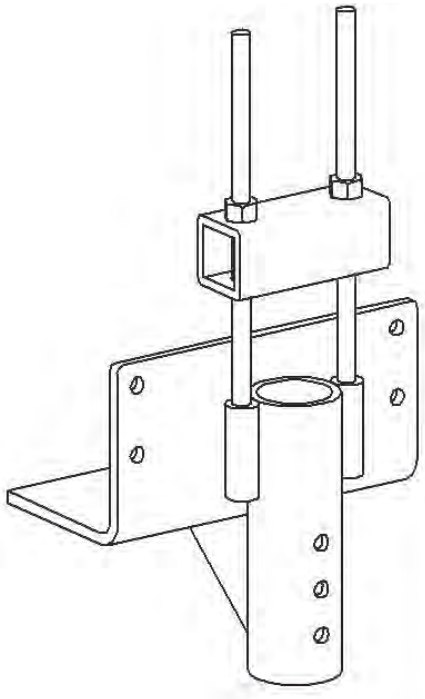
SPECIFICATIONS	
Collar Tube	0.37 in. x 3.13 in. I.D. ASTM A513 GR65+
Configuration	8″ x 8″ x 15″ x 1/2″ Plate with 6 – 9/16″ Thru Holes for 1/2″ Expansion Anchors
Pile Connection	3.5″ x 3.5″ x 3/8″ Cross Beam, Plus Optional 3/4″ Thru Bolt (for Tension)
Surface Coating	Galvanized per ASTM A153/A123 (G) or Standard Magnum Blue Paint (P)
Compatibility	MH313, MH313R, MH325, MH325R, MP313, MP322, and MP325

Installation Notes:
Prepare the existing foundation. For steel push pier applications, attach the bracket and Magnum ram. Install the push pier to the required pressure and load test. For helical pile applications, excavate the pier location so the helix bearing plates fit below the existing foundation and the shaft is as close as possible to the face of the foundation. Install the helical pile to the correct depth and torque. Mount the bracket by sliding down the shaft rotating into position. In both cases, lift the structure as needed using either a "wide" Magnum ram or hydraulic jack with top lifting fixture. After lift, tighten hex nuts against cross beam. Release pressure and remove ram or jack. If desired, trim thread bars flush with top of nuts.



Description

The Magnum MP1027-3 lifting bracket has 50 tons maximum ultimate capacity, 25 tons working capacity in compression and 10 tons maximum ultimate capacity, 5 tons working capacity in tension. For tension applications, one 3/4" bolt must be tapped and blind threaded into pile shaft. The bracket consists of a collar tube with (1) 3/4" threaded bolt holes for connection to Magnum hydraulic rams and 6 thru holes for attachment to existing concrete using concrete expansion anchors. The bracket is designed in accordance with ICC-ES document AC358 as well as IBC, ACI, and AISC codes. Design and detailing of the connection to the structure varies by project and is the responsibility of registered design professional including maximum concrete span, pier spacing, concrete shear, and concrete bearing.



All Magnum Products Made in U.S.A.
U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

Magnum Piering, Inc.
6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

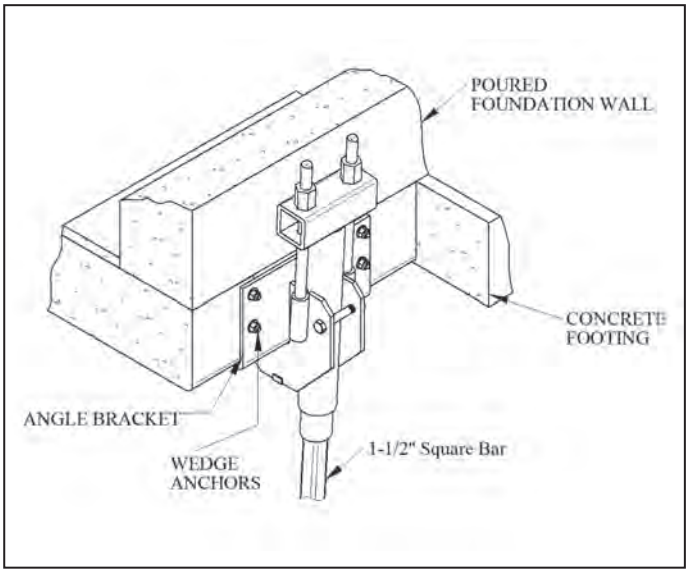
MAGNUM® MP1030-150 Lifting Bracket

Allowable Capacity 10 Tons

8″ x 8″ x 14″ x 3/8″ Plate with 4 – 11/16″ Thru Holes & 3" O.D. T-Pipe
Specifically Manufactured for MS150B Magnum® Helical Piles

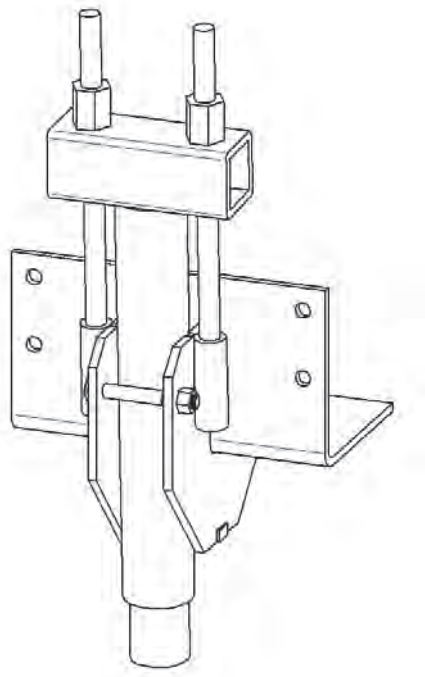
SPECIFICATIONS	
Collar Tube	0.25″ x 3″ O.D. x 20.25″ ASTM A513 GR65+
Configuration	8″ x 8″ x 14″ x 3/8″ Plate with 4 – 11/16″ Thru Holes for 5/8″ Expansion Anchors
Pile Connection	3.5″ x 3.5″ x 3/8″ Cross Beam, Plus 5/8″ Diam. Cross Bolt
Surface Coating	Galvanized per ASTM A153/A123 (G) or Standard Magnum Blue Paint (P)
Compatibility	MS150B

Installation Notes:
Prepare the existing foundation by chipping the footing (if applicable) flush with the foundation wall. Attach the bracket with four 5/8″ Hilti Kwik Bolt 3's (or equivalent). Excavate under the bracket at the pier location so the helix bearing plates fit below the existing foundation and the shaft is as close as possible to the face of the bracket. Install the helical pile at 3 deg from vertical to the correct depth and torque. Cut-off the helical pile shaft at 1" to 6" above the bracket gusset plates (as required for lifting). Connect the helical pile to the bracket by sliding the T-Pipe down the shaft; force the T-Pipe toward the bracket face and lock into position with the 5/8″ hex bolt and nut provided. To lock-off the pile, simply tighten the two hex nuts located above the T-Pipe. Otherwise, use Magnum® MP1031 Lifting Accessory to pre-load the pile to specific pressure and/or to lift the foundation.



Description

The Magnum MP1030-150 lifting bracket has 20 tons maximum ultimate capacity, 10 tons working capacity in compression. The bracket consists of a 14″ wide gusseted angle with 4 thru holes for attachment to existing concrete using 5/8″ concrete expansion anchors. The bracket is designed in accordance with ICC-ES document AC358 as well as IBC, ACI, and AISC codes. Pile layout and connection to concrete varies by project and is the responsibility of registered design professional including maximum concrete span between piles, concrete shear, concrete punching, and concrete bearing. Note that square-shaft helical piles offer little to no bending resistance; thus, structure to which bracket is attached must be laterally and rotationally stable.



All Magnum Products Made in U.S.A.
U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

Magnum Piering, Inc.
6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

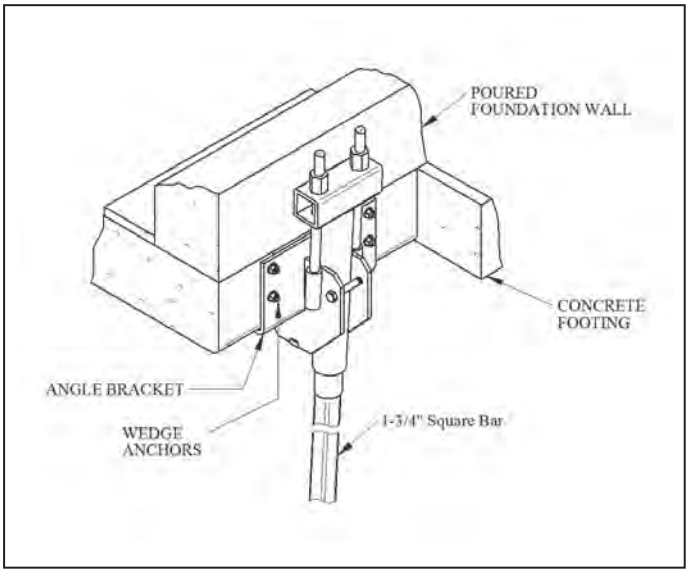
MAGNUM® MP1030-175 Lifting Bracket

Allowable Capacity 20 Tons

8″ x 8″ x 14″ x 3/8″ Plate with 4 – 11/16″ Thru Holes & 3″ O.D. T-Pipe
Specifically Manufactured for MS175B Magnum® Helical Piles

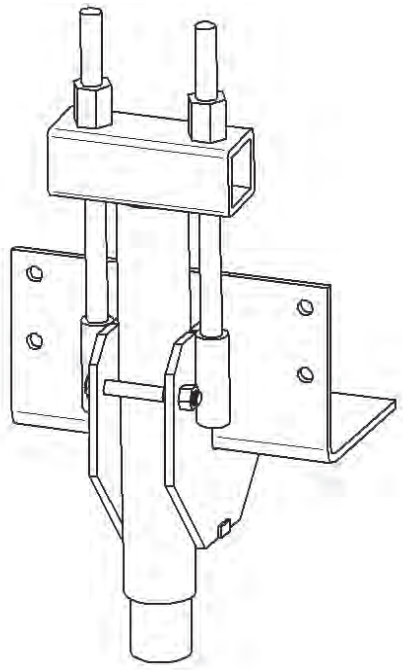
SPECIFICATIONS	
Collar Tube	0.313″ x 3″ O.D. x 24″ ASTM A513 GR65+
Configuration	8″ x 8″ x 14″ x 3/8″ Plate with 4 – 11/16″ Thru Holes for 5/8″ Expansion Anchors
Pile Connection	3.5″ x 3.5″ x 3/8″ Cross Beam, Plus 7/8″ Diam. Cross Bolt
Surface Coating	Galvanized per ASTM A153/A123 (G) or Standard Magnum Blue Paint (P)
Compatibility	MS175B

Installation Notes:
Prepare the existing foundation by chipping the footing (if applicable) flush with the foundation wall. Attach the bracket with four 5/8" Hilti Kwik Bolt 3's (or equivalent). Excavate under the bracket at the pier location so the helix bearing plates fit below the existing foundation and the shaft is as close as possible to the face of the bracket. Install the helical pile at 3 deg from vertical to the correct depth and torque. Cut-off the helical pile shaft at 1″ to 6″ above the bracket gusset plates (as required for lifting). Connect the helical pile to the bracket by sliding the T-Pipe down the shaft; force the T-Pipe toward the bracket face and lock into position with the 5/8″ hex bolt and nut provided. To lock-off the pile, simply tighten the two hex nuts located above the T-Pipe. Otherwise, use Magnum® MP1031 Lifting Accessory to pre-load the pile to specific pressure and/or to lift the foundation.



Description

The Magnum MP1030-175 lifting bracket has 40 tons maximum ultimate capacity, 20 tons working capacity in compression. The bracket consists of a 14″ wide gusseted angle with 4 thru holes for attachment to existing concrete using 5/8″ concrete expansion anchors. The bracket is designed in accordance with ICC-ES document AC358 as well as IBC, ACI, and AISC codes. Pile layout and connection to concrete varies by project and is the responsibility of registered design professional including maximum concrete span between piles, concrete shear, concrete punching, and concrete bearing. Note that square-shaft helical piles offer little to no bending resistance; thus, structure to which bracket is attached must be laterally and rotationally stable.



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U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

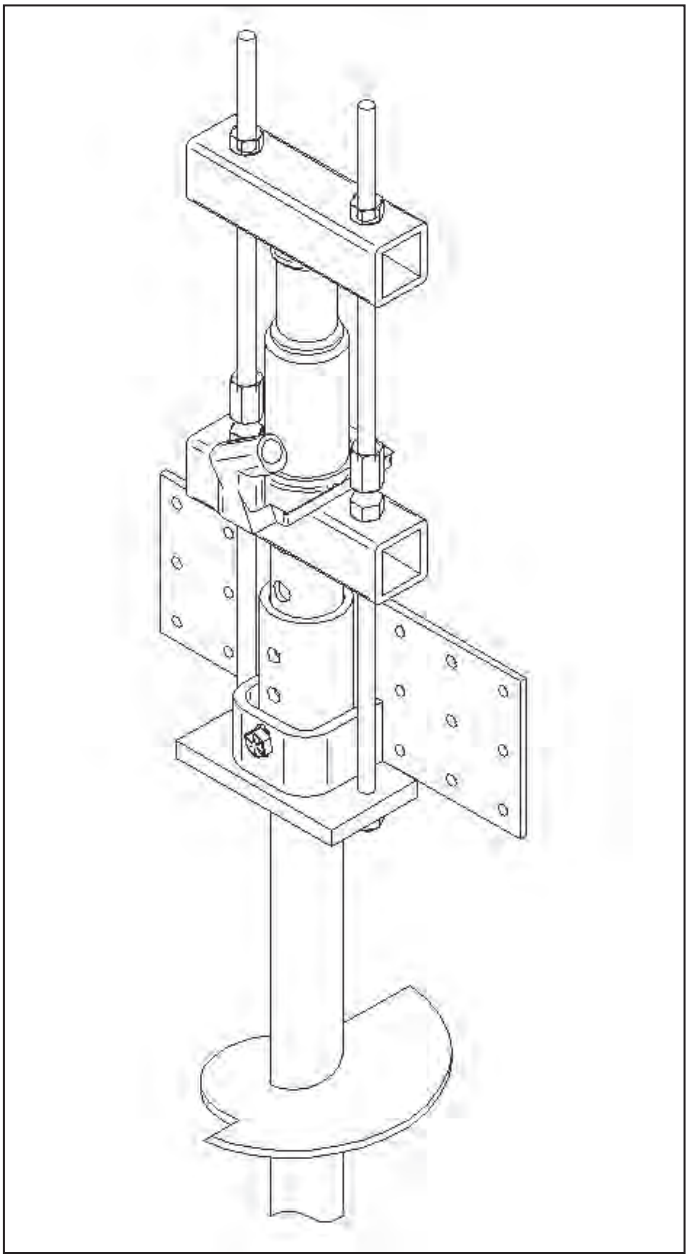
Magnum Piering, Inc.
6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

MAGNUM® MP1008-3-6 Lifting Assembly

Allowable Capacity 20 Tons

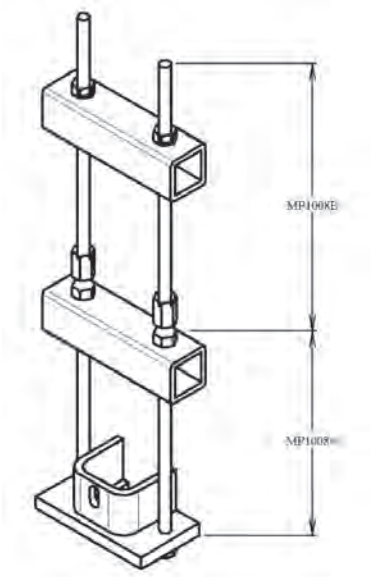
(2) #6 GR75 Thread Bars with Top Fixture and Base Fixture
Fits Magnum® MP1001-3, MP1002-3, MP1005-3, MP1006-3, MP1007-3 & MP1017-3 Brackets

SPECIFICATIONS	
Top Fixture	3.5″ x 3.5″ Tube Steel
Configuration	(2) #6 GR75 Thread Bars with Top Fixture and Base Fixture
Pile Connection	Direct Bearing
Surface Coating	Galvanized per ASTM A153/A123 (G) or Bare Steel (NG)
Compatibility	MP1001-3, MP1002-3, MP1005-3, MP1006-3, MP1007-3 & MP1016-3



Description

The Magnum MP1008-3-6 lifting assembly has 40 tons ultimate capacity, 20 tons working capacity in compression and 35 tons ultimate capacity, 18 tons working capacity in tension (with 0.25″ wall pile shafts) or 17 tons ultimate capacity, 8 tons working capacity in tension (with 0.125″ wall pile shafts). (2) 3/4″ bolts must be placed through the bracket collar to secure in tension. The assembly consists of two thread bars, a top fixture, and base fixture for connection to most Magnum MPxxxx-3 brackets. The bracket is designed in accordance with ICC-ES document AC358 as well as IBC, ACI, and AISC codes.



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U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

Installation Notes:

After installation of pier and bracket, attach lifting assembly (MP1008A-3) to the bracket underside using the bolt provided. Snug tighten nuts on top fixture. Attach second top fixture (MP1008B-3). Place a hydraulic power pack or bottle jack between the top fixtures and lift as required. Re-tighten nuts to secure pile and bracket position. Remove upper fixture (MP1008B-3) and re-use on other piles.

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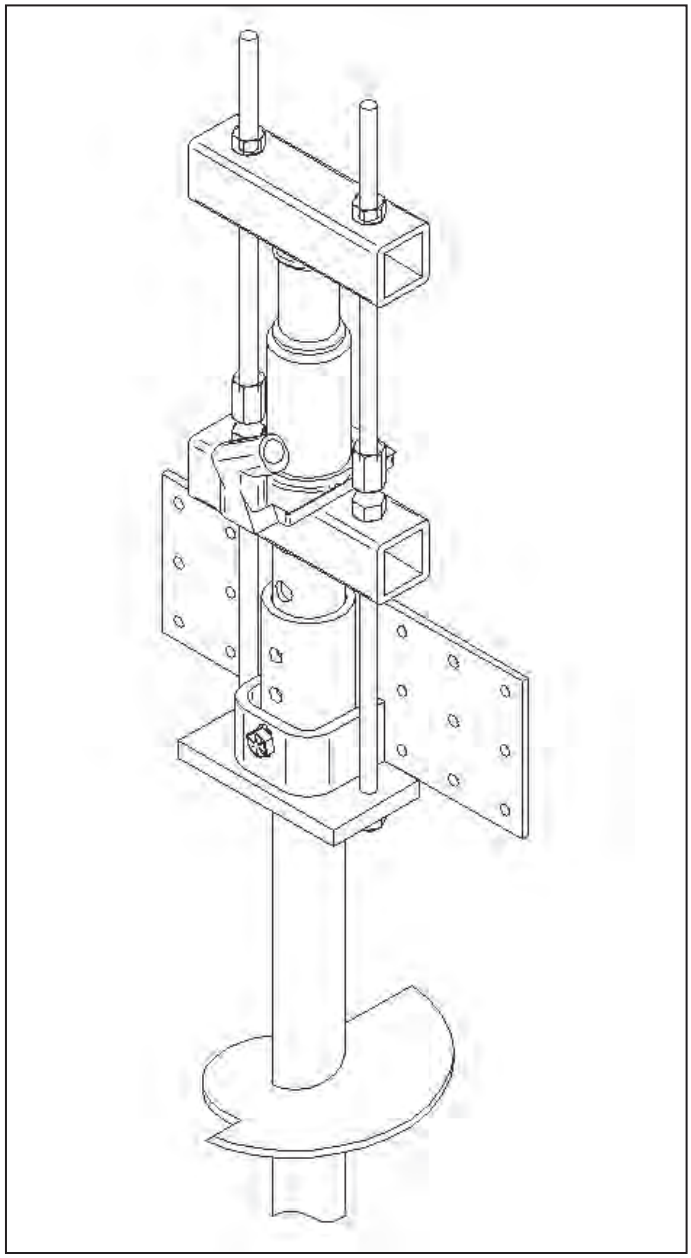
MAGNUM® MP1008-3-7 Lifting Assembly

Allowable Capacity 25 Tons

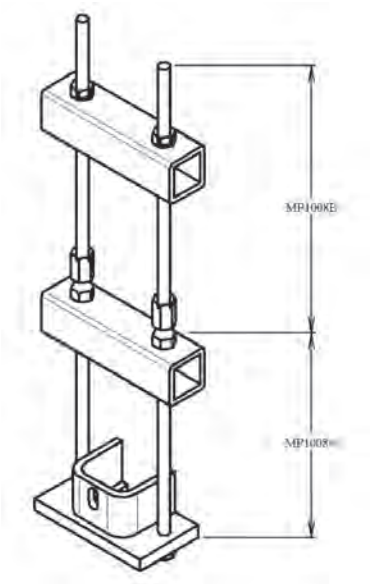
(2) #7 GR75 Thread Bars with Top Fixture and Base Fixture
Fits Magnum® MP1001-3, MP1002-3, MP1005-3, MP1006-3, MP1007-3 & MP1017-3 Brackets

SPECIFICATIONS	
Top Fixture	3.5″ x 3.5″ Tube Steel
Configuration	(2) #7 GR75 Thread Bars with Top Fixture and Base Fixture
Pile Connection	Direct Bearing
Surface Coating	Galvanized per ASTM A153/A123 (G) or Bare Steel (NG)
Compatibility	MP1001-3, MP1002-3, MP1005-3, MP1006-3, MP1007-3 & MP1016-3



Description

The Magnum MP1008-3-7 lifting assembly has 50 tons ultimate capacity, 25 tons working capacity in compression and 35 tons ultimate capacity, 18 tons working capacity in tension (with 0.25″ wall pile shafts) or 17 tons ultimate capacity, 8 tons working capacity in tension (with 0.125″ wall pile shafts). (2) 3/4″ bolts must be placed through the bracket collar to secure in tension. The assembly consists of two thread bars, a top fixture, and base fixture for connection to most Magnum MPxxxx-3 brackets. The bracket is designed in accordance with ICC-ES document AC358 as well as IBC, ACI, and AISC codes.



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Installation Notes:

After installation of pier and bracket, attach lifting assembly (MP1008A-3) to the bracket underside using the bolt provided. Snug tighten nuts on top fixture. Attach second top fixture (MP1008B-3). Place a hydraulic power pack or bottle jack between the top fixtures and lift as required. Re-tighten nuts to secure pile and bracket position. Remove upper fixture (MP1008B-3) and re-use on other piles

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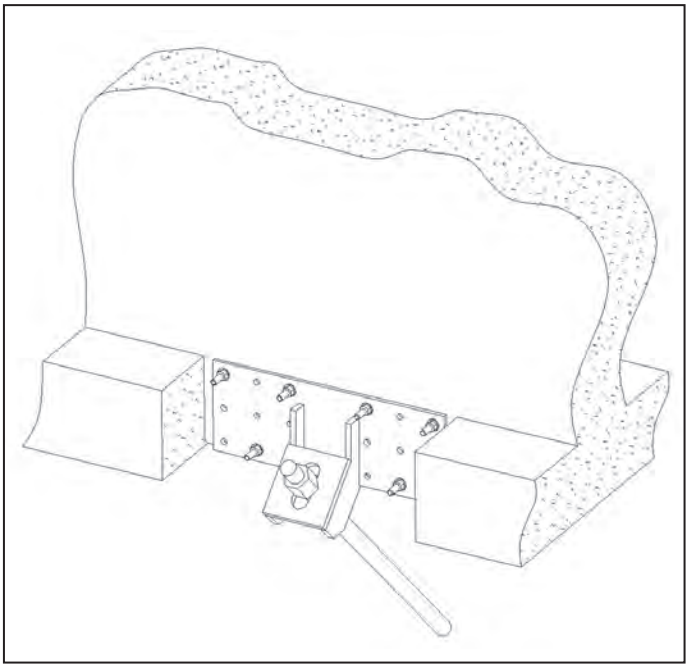
MAGNUM® MP1017-3 Tie-Back Bracket

Allowable Capacity 16 Tons Tension

8″ x 21″ x 3/8″ Plate with (18) 9/16″ Thru Holes & Gusseted Bearing Plate
Fits MH313, MH313R, MH325, MH3521, MH3521R and MH325R
Magnum® Helical Anchors

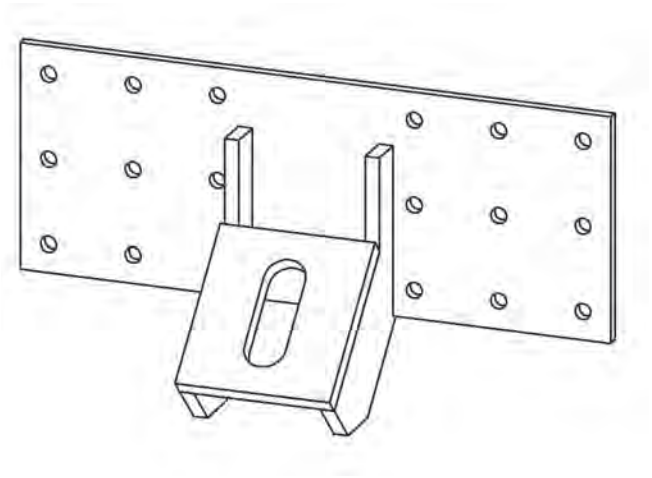
SPECIFICATIONS	
Bearing Plate	ASTM A36 w/ 1-1/2″ Slotted Hole
Configuration	8″ x 21″ x 3/8″ Plate with (18) 9/16″ Thru Holes for 1/2″ Expansion Anchors
Pile Connection	MHC1080-3B, MHC1080-3BR or MHC1080-35B Anchor Caps (not shown)
Surface Coating	Galvanized per ASTM A153/A123 (G) or Standard Magnum Blue Paint (P)
Compatibility	MH313, MH313R, MH3521, MH3521R, MH325 & MH325R

BRACKET CAPACITY IN TENSION	
Ultimate	32 Tons
Allowable	16 Tons



Description

The Magnum MP1017-3 tie-back bracket has 32 tons maximum ultimate capacity, 16 tons working capacity in tension. The bracket consists of a plate and two gussets for connection to Magnum helical piles and (18) thru holes for attachment to existing concrete using expansion anchors. The bracket is designed in accordance with ICC-ES document AC358 as well as IBC, ACI, and AISC codes. Design and detailing of the connection to the structure varies by project and is the responsibility of registered design professional including maximum concrete span, anchor spacing, concrete shear, and concrete bearing.



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Installation Notes:
Prepare the existing foundation. Install the helical anchor to the correct depth and torque. Install a Magnum MHC1080-3 pile cap on the anchor. Mount the bracket by sliding down over the thread bar into position. Secure to the anchor and post-tension as required for the project. Use spherical or wedge washer if anchor is not exactly perpendicular to bearing plate.

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www.magnumpiering.com

MAGNUM® MP1600-3 Concentric Lift Bracket

Allowable Capacity 25 Tons

3.13-Inch I.D. Collar with 8″ x 8″ Bearing Plate and Jack Housing Assembly
Fits MP313 and MP325 Magnum® Steel Push Piers

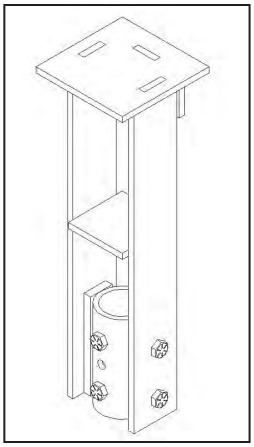
Description

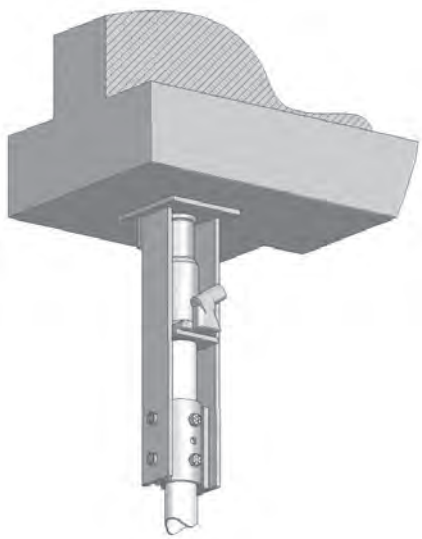
The MAGNUM MP1600-3 Concentric Lift Cap is designed for use with steel push piers jacked directly below the footing or load bearing wall for all types of foundation repairs. The cap has an 8″ x 8″ x 1/2″ bearing plate for a total of 64 in2 of bearing area. Rather than costly and less stable multiple threadbars, the MHC1600-3 cap uses the same 3-1/8″ collar lock-off technology as other Magnum push piering systems. Lock-off using one, two or three 3/4″ ASTM A490 high strength bolts. The advantage of this system over others is in its simplicity and strength. More stable and easier to use, the MP1600-3 will provide long lasting support at an economic price.

SPECIFICATIONS	
Collar Tube	0.25 in. x 3.13 in. I.D. ASTM A513 GR65+
End Effector	8″ x 8″ x 1/2″ ASTM A36 Plate
Pile Connection	(1), (2), or (3) 3/4″ J429 Grade 8 Zinc Coated to ASTM B695/F1941
Surface Coating	Galvanized per ASTM A153/A123 (G), Bare Steel (NG), Painted (P), or Epoxy Coated per ICC-ES AC228 (EP)
Compatibility	MP313 and MP325

CONNECTION TYPE	ULTIMATE CAPACITY* 0.13 / 0.25 Wall Pile	ALLOWABLE CAPACITY* 0.13 / 0.25 Wall Pile
 SINGLE BOLTED	10 Tons / 18 Tons	5 Tons / 9 Tons
 DOUBLE BOLTED	17 Tons / 35 Tons	8 Tons / 18 Tons
 TRIPLE BOLTED	28 Tons / 50 Tons	14 Tons / 25 Tons

*Bracket connection to pile consists of field threaded blind bolts as described in Section 7-13 of AISC Code. Capacities shown are based on IAS accredited laboratory testing of Magnum products.





Installation Notes:
Excavate minimum 30 inch deep narrow OSHA safe trench under foundation at designated pile location. Install steel push pier under center of footing pad or grade beam using hydraulic jack with minimum 6″ stroke, two 6″ shim pipes, and 18″ push pier sections. Perform a pile load test upon pile completion using the installation ram. Hold pressure for a minimum 15 minutes with less than 1/32″ movement. Cut-off pile at least 13.5 inches from bottom of footing/grade beam. Slide collar tube over pile. Position concentric lifting frame over pile and bolt to collar tube. Place thin layer of high strength, fast-setting, non-shrink grout over top plate. Using ram, force top plate upward against bottom of foundation and apply small setting pressure (typically 500 psi). Allow grout to set a minimum of 30 minutes. Lift and re-level structure as desired. Drill and lock-off collar tube by installing one, two, or three 3/4″ bolts as required for design load. Remove jack.

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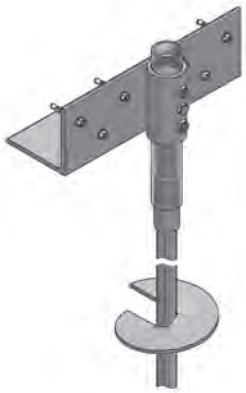
MAGNUM® MSA50-MP325 Adapter

Allowable Capacity 17.5 Tons

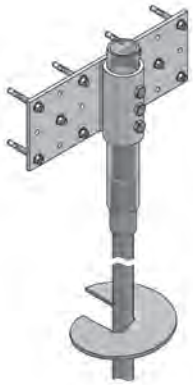
3″ x 1/4″ Wall Adapter Collar Converts Square Shaft to Round
Fits MS150 Magnum® Helical Piles
and Converts to MP325 Magnum® Steel Push Piers

SPECIFICATIONS	
Collar Tube	0.25 in. x 3.00 in. O.D. ASTM A513 GR65+
Pile Connection	Slip Connection with Internal Welded Block
Capacity	35 kips Ultimate, 17.5 kips Allowable (Compression Only)
Surface Coating	Galvanized per ASTM A153/A123 (G) or Standard Magnum Blue Paint (P)
Compatibility	MS150B and MP325

Installation Notes:
Install the MS150B helical pile to the correct depth and torque. If necessary, cut-off the pile to an elevation several inches above the planned bracket location as needed for lifting. Slide the MSA150-MP325 Adapter over the MS150B shaft until it rests firmly on the internal welded block. Mount the appropriate Magnum foundation bracket. If necessary add additional push pier extensions for large lifts.

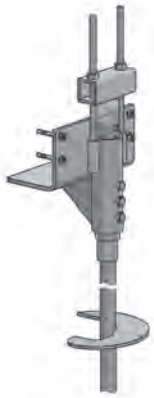


Example with MP1002



Example with MP1001

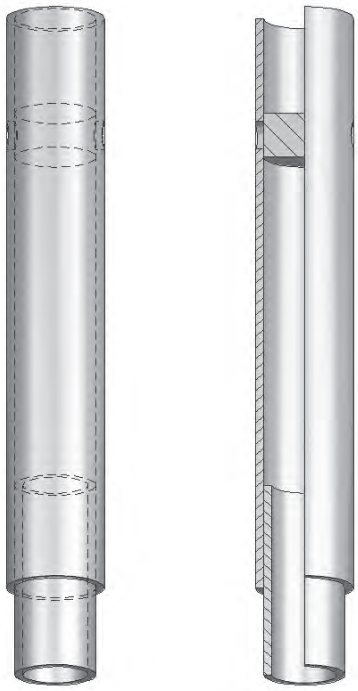
Example with MP1005



Example with MP1027

Description

The Magnum MSA150-MP325 Adapter slides over the MS150B helical pile shaft and adapts to the MP325 push pier. The adapter allows MS150B helical piles to be used with Magnum's line of standard 3" collar tube brackets such as the MP1001-3, MP1002-3, MP1005-3, and MP1027-3. Use of this adapter with these brackets also enables the use of Magnum push pier rams for lifting, pre-loading, and lock-off. The bracket is designed in accordance with ICC-ES document AC358 as well as IBC, ACI, and AISC codes.



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Magnum Piering, Inc.
6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
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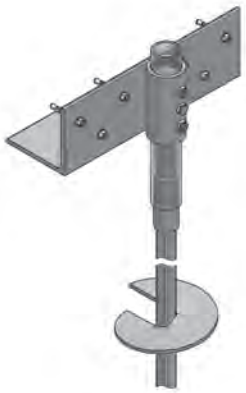
MAGNUM® MSA175-MP325 Adapter

Allowable Capacity 27.5 Tons

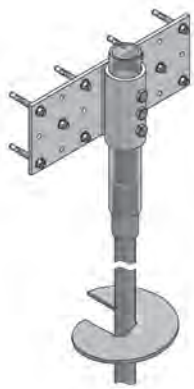
3″ x 1/4″ Wall Adapter Collar Converts Square Shaft to Round
Fits MS175B Magnum® Helical Piles
and Converts to MP325 Magnum® Steel Push Piers

SPECIFICATIONS	
Collar Tube	0.25 in. x 3.00 in. O.D. ASTM A513 GR65+
Pile Connection	Slip Connection with Internal Welded Block
Capacity	55 kips Ultimate, 27.5 kips Allowable (Compression Only)
Surface Coating	Galvanized per ASTM A153/A123 (G) or Standard Magnum Blue Paint (P)
Compatibility	MS175B and MP325

Installation Notes:
Install the MS175B helical pile to the correct depth and torque. If necessary, cut-off the pile to an elevation several inches above the planned bracket location as needed for lifting. Slide the MSA175-MP325 Adapter over the MS175B shaft until it rests firmly on the internal welded block. Mount the appropriate Magnum foundation bracket. If necessary add additional push pier extensions for large lifts.

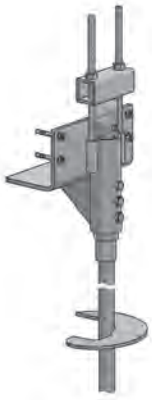


Example with MP1002



Example with MP1001

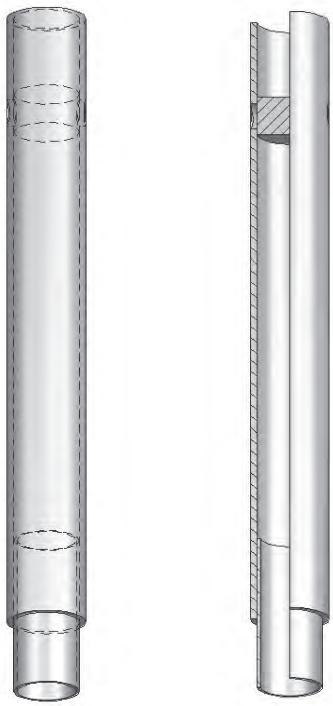
Example with MP1005



Example with MP1027

Description

The Magnum MSA175-MP325 Adapter slides over the MS175B helical pile shaft and adapts to the MP325 push pier. The adapter allows MS175B helical piles to be used with Magnum's line of standard 3" collar tube brackets such as the MP1001-3, MP1002-3, MP1005-3, and MP1027-3. Use of this adapter with these brackets also enables the use of Magnum push pier rams for lifting, pre-loading, and lock-off. The bracket is designed in accordance with ICC-ES document AC358 as well as IBC, ACI, and AISC codes.



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section 6

PUSH PIERS & JACKED PILES

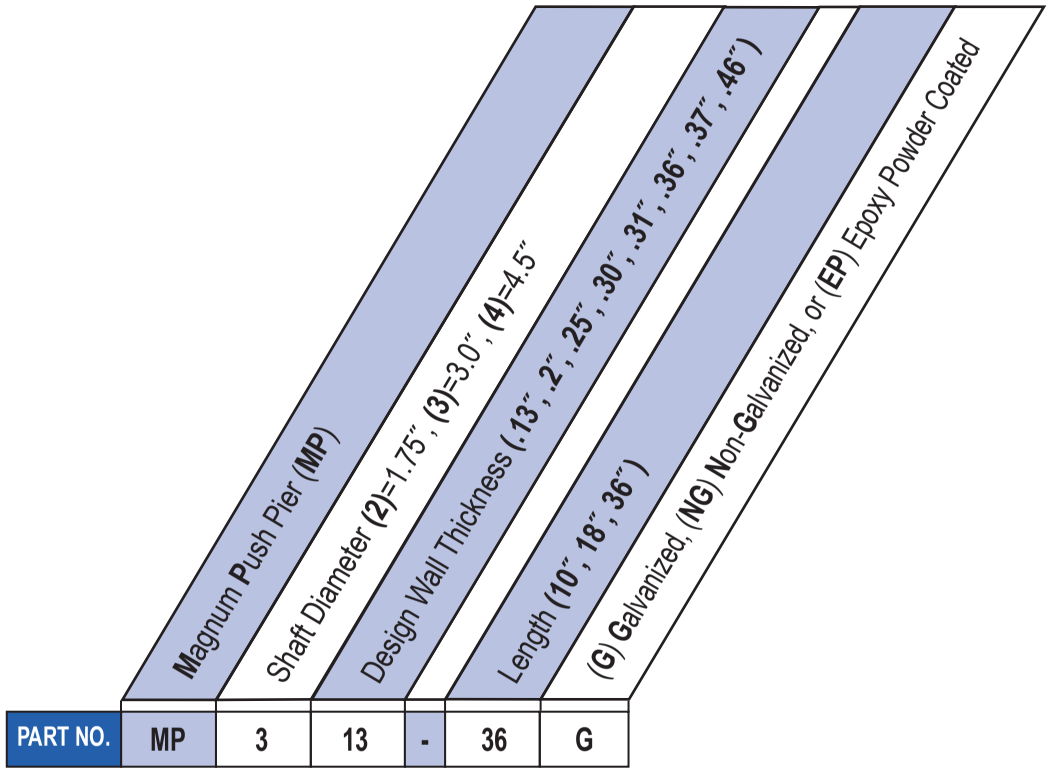
MAGNUM PIERING, INC.

MAGNUM PIERING ROCK SOLID

MAGNUM HELICAL PILES

Magnum® Steel Push Pier
Product Number Specification Legend

Magnum Piering, Inc.
ISO 9001:2008
Certified



Explanation:

The Magnum Push Pier product number above **MP313-36G** is for a Push Pier section with 3.00″ diameter shaft by 36″ long, and the surface preparation is Galvanized.

Note: See "Magnum Piering Push Pier Specifications" table on next page for detailed information. Specification information is also available at ***www.magnumpiering.com***

Magnum® Piering
Push Pier Specifications

Magnum® Push Piers	System Ratings & Specifications											
	Description	Shaft Design Wall Gauge (in)	Shaft O.D. (in)	Structural Capacity* (Compression)		Ram Specifications		Maximum Test Load** (tons)	Maximum Allowable Load from Test w/ F.S. = 1.5 (tons)	Surface Coating	Standard Section Lengths (in.)
				Ultimate (tons)	Allowable (tons)	Piston Area (in^2)	Maximum Test Pressure (psi)				
MP212	1.75″ Diam. x 0.12″ Wall Push Pier	0.12	1.75	8	4	3.14	4,000	6	4	G, NG, EP	18, 36
MP313	3.00″ Diam. x 0.13″ Wall Push Pier	0.125	3.00	22	11	8.30	4,000	17	11	G, NG, EP	18, 36
MP325	3.00″ Diam. x 0.25″ Wall Push Pier	0.25	3.00	55	28	8.30	7,500	31	21	G, NG, EP	18, 36
MP413	4.50″ Diam. x 0.13″ Wall Push Pier	0.13	4.50	40	20	8.30	7,500	31	21	G, NG, EP	18, 36
MP419	4.50″ Diam. x 0.19″ Wall Push Pier	0.188	4.50	68	34	8.30	7,500	31	21	G, NG, EP	18, 36
MP425	4.50″ Diam. x 0.25″ Wall Push Pier	0.25	4.50	96	48	15.90	7,500	60	40	G, NG, EP	18, 36
MP431	4.50″ Diam. x 0.31″ Wall Push Pier	0.31	4.50	122	61	15.90	7,500	60	40	G, NG, EP	18, 36
MP213-S	1.75″ Diam. x 0.12″ Wall Starter	0.12	1.75	8	4	3.00	4,000	6	7	G, NG, EP	9, 18
MP313-S	3.00″ Diam. x 0.13″ Wall Starter	0.125	3.00	22	11	8.30	4,000	17	11	G, NG, EP	10, 18
MP325-S	3.00″ Diam. x 0.25″ Wall Starter	0.25	3.00	55	28	8.30	7,500	31	21	G, NG, EP	10, 18
MP413-S	4.50″ Diam. x 0.13″ Wall Starter	0.13	4.50	40	20	8.30	7,500	31	21	G, NG, EP	10, 18
MP419-S	4.50″ Diam. x 0.19″ Wall Starter	0.188	4.50	68	34	8.30	7,500	31	21	G, NG, EP	10, 18
MP425-S	4.50″ Diam. x 0.25″ Wall Starter	0.31	4.50	96	48	15.90	7,500	60	40	G, NG, EP	10, 18
MP431-S	4.50″ Diam. x 0.31″ Wall Starter	0.31	4.50	122	61	15.90	7,500	60	40	G, NG, EP	10, 18

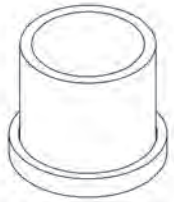
***Note 1** Structural capacity is the theoretical buckling strength of the shaft in firm soils with fixed head conditions (60 in unbraced length, K=0.65). The calculation takes into account corrosion per ICC-ES AC358 and represents the capacity after corrosion has occurred. Buckling capacity will be less in soft soils, when any part of the shaft is standing unsupported in air, water or fluid soils, or if head conditions differ.

****Note 2** Maximum test load is based on maximum ram pressure times piston area. Ram pressure is limited to that which would buckle the pile or the maximum safe operating pressure of the system, whichever is less. The strength of the push pier system may be governed by the bracket, connection of the bracket to the pier, or connection of the bracket to the structure. All push piers should be load tested to 1.5 times the desired design/working load.

Surface Coatings G = Hot-Dip Zinc Galvanized per ASTM A123/A153, NG = Bare Steel, EP = Epoxy Powder Coated per ICC-ES AC228

Notes and Specifications All Magnum products are manufactured using ASTM A513 Grade 65 ksi minimum yield strength structural tubing. As Magnum is committed to testing and improving products, these specifications are subject to change. Additional product specifications are available at **www.magnumpiering.com** and upon request.

Magnum® Piering
Push Pier Friction Lead Specifications

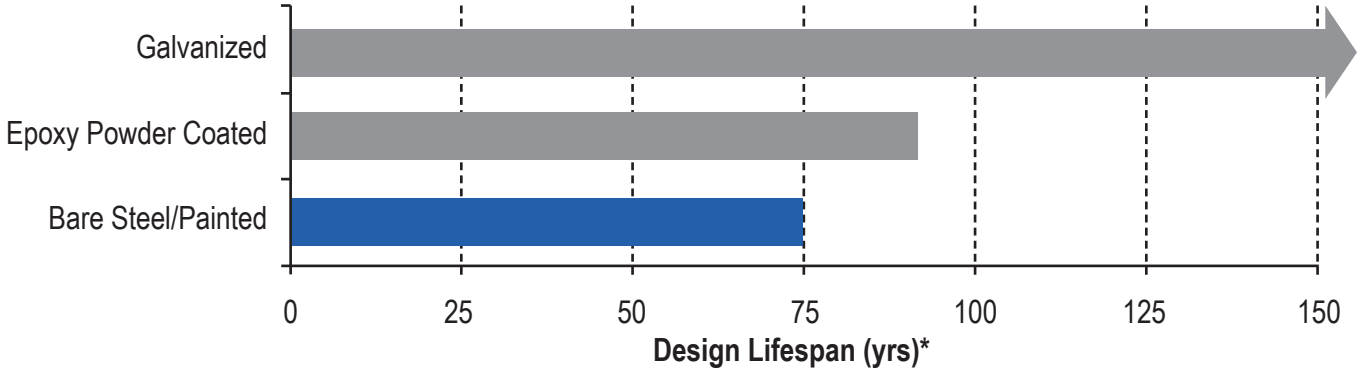
Magnum® Friction Leads	System Ratings & Specifications						
	Description	Shaft Design Wall Gauge (in)	Bearing Ring O.D. (in)	Maximum Allowable Load from Test w / F.S. =1.5 (tons)	Surface Coating	Length (in)	Schematic
MP212-FL	2″ Friction Lead for MP212 Push Pier	0.12	2.00	4	G, NG, EP	3	
MP313-FL	3.5″ Friction Lead for MP313 Push Pier	0.125	3.50	11	G, NG, EP	3	
MP325-FL	3.5″ Friction Lead for MP325 Push Pier	0.25	3.50	21	G, NG, EP	3	
MP313-FL5	5″ Friction Lead for MP313 Push Pier	0.125	5.00	11	G, NG, EP	3	
MP325-FL5	5″ Friction Lead for MP325 Push Pier	0.25	5.00	21	G, NG, EP	3	
MP419-FL	5″ Friction Lead for MP419 Push Pier	0.188	5.00	21	G, NG, EP	3	
MP425-FL	5″ Friction Lead for MP425 Push Pier	0.25	5.00	40	G, NG, EP	3	
MP431-FL	5″ Friction Lead for MP431 Push Pier	0.31	5.00	40	G, NG, EP	3	

Surface Coatings G = Hot-Dip Zinc Galvanized per ASTM A123/A153, NG = Bare Steel, EP = Epoxy Powder Coated per ICC-ES AC228

Notes and Specifications All Magnum products are manufactured using ASTM A513 Grade 65 ksi minimum yield strength structural tubing. As Magnum is committed to testing and improving products, these specifications are subject to change. Additional product specifications are available at **www.magnumpiering.com** and upon request.

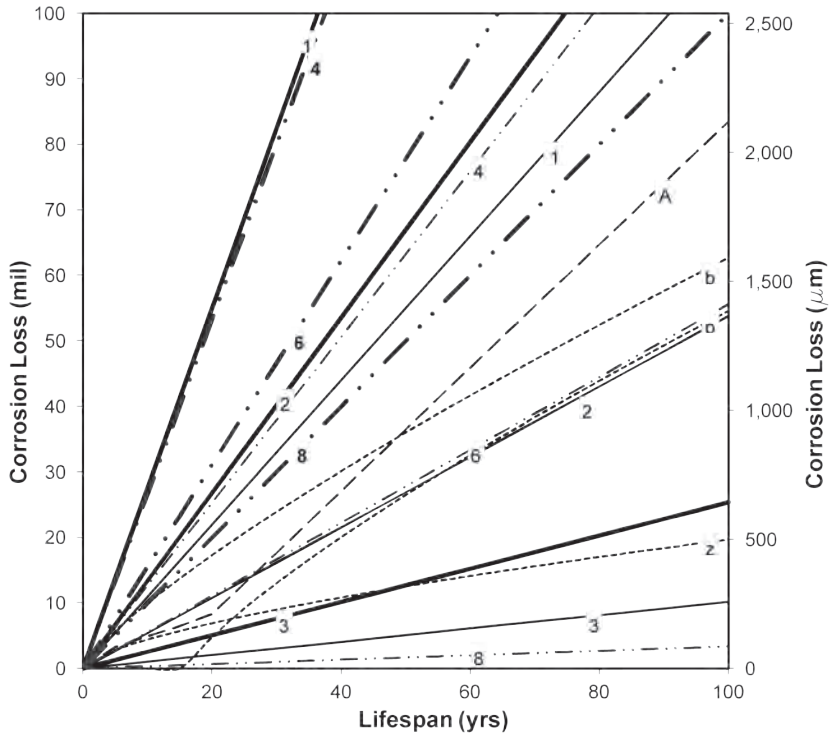
Magnum® Foundation Products

Corrosion and Life Expectancy



Structural capacities and section properties shown in this catalog are based on a design lifespan of 75 years in most soil conditions for bare steel or painted surfaces unless noted otherwise. Design lifespan can be extended 16 years by epoxy powder coating or more than doubled by hot-dip zinc galvanizing to ASTM A123/A153.

*Design lifespan is determined by backcalculating the time required for a corrosion loss thickness of 50 mils using the rates of corrosion per ICC-ES Document AC358 *Guidelines for Design of Helical Foundation Systems and Devices* for moderate to highly corrosive soil conditions. Design lifespan is considerably shorter in conditions indicative of severe pile corrosion. Severe pile corrosion conditions are defined by soil resistivity less than 1,000 ohm-cm, soil pH less than 5.5, soils with high organic content, soil sulfate concentrations greater than 1,000 ppm, soils located in landfills, or soil containing mine waste. Design life also may be shortened for piles, anchors, caps and brackets exposed to atmosphere or in direct electrical contact with reinforcing steel or structural steel.



Perko (2004a), Bare Steel
Perko (2004a), Galvanized Steel
ICC-ES (2007)
AASHTO (2004)
King (1977), 4,000 ohm-cm

1 Severe
1 Severe
z Zinc
A Zinc+Bare
4 pH4
4 pH4

2 Mod-High
2 Mod-High
b Bare
6 pH6
6 pH6

3 Low
3 Low
p Powder
8 pH8
8 pH8

Alternative methods of corrosion loss calculation are available for varying soil conditions and with different building code authorities as shown in the table below from Perko (2009) *Helical Piles: A Practical Guide to Design and Installation*. Florida DOT and Canadian Building Codes provide other useful references.

MAGNUM technical support personnel can provide assistance with regard to alternative corrosion loss calculation methods. MAGNUM corrosion engineers should be consulted for severe corrosion conditions, for products exposed to atmosphere, and when product applications require direct contact with reinforcing bars or structural steel.

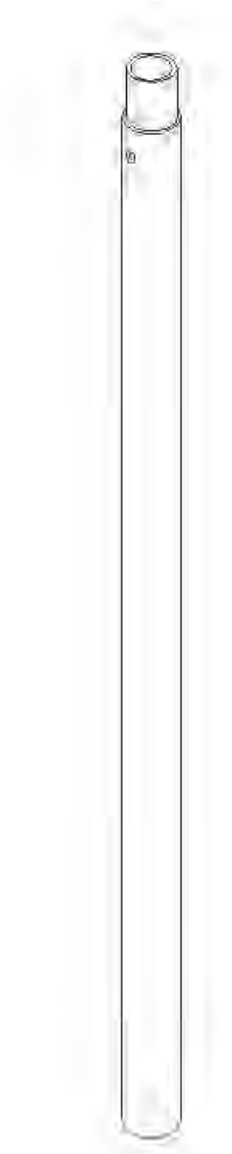
MAGNUM® MP212 Push Pier

4 Tons Allowable Capacity in Compression

High-Strength 1.75″ Diameter, 0.12″ Wall, Round-Shaft Push Piers with Male-Female Slip Connectors

Description

Magnum® MP212 push piers have a structural capacity in compression of 8 tons ultimate and 4 tons working. Push piers do not have tensile capacity unless the sections are welded together or a reinforcing steel bar and grout is placed in the pile casing. Sections couple together with male-female slip connectors. High strength steel offers increased buckling resistance compared to others. A friction reduction collar can be added to the pile to increase penetration depth. Sections are available in bare steel, epoxy powder coated, and galvanized. Galvanized coating extends average life expectancy to over 100 years even in highly corrosive environments. Custom lengths are available upon request. See Magnum® Technical Manual for additional information.



SPECIFICATIONS	
SHAFT	HSS 1.75″ x 0.12″ wall ASTM A513 Grade 65 KSI, or Equiv.
I	New= 0.21 in^4, Corroded= 0.12 in^4
Ag	New= 0.61 in^2, Corroded= 0.36 in^2
S	New= 0.23 in^3, Corroded= 0.14 in^3
COUPLING	Inner 0.12″ Sleeve
COATING	Hot-Dip Galvanized (G), Bare Steel (NG), or Epoxy Powder Coated (EP)
STANDARD RAM	3.14 in^2 Piston Area, 7,500 Maximum P.S.I. (4,000 Max. P.S.I. Installation Pressure)
STRUCTURAL CAPACITY IN COMPRESSION*	
8 Tons	Ultimate
4 Tons	Allowable
CAPACITY FROM LOAD TEST**	
6 Tons	Maximum Test Load
4 Tons	Allowable from Test (F.S.=1.5)

***Note 1:** Structural capacity is based on buckling strength of shaft in firm soils with pinned head conditions after 75 years corrosion for bare steel per ICC-ES AC358. Push piers shall be installed to appropriate depth into suitable bearing stratum as determined by geotechnical engineer or local practice. For tension capacity, push pier sections must be welded together or a reinforcing steel bar and grout must be placed in the pile.

****Note 2:** Push pier capacity is determined by load test using Magnum installation rams or lifting kit. All push piers shall be load tested to 1.5 times the desired working load. Test load is limited by maximum safe operating ram pressure or buckling capacity of shaft, whichever is less.

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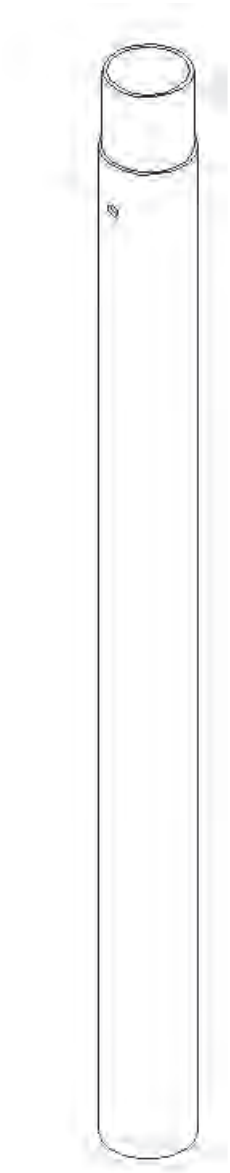
MAGNUM® MP313 Push Pier

11 Tons Allowable Capacity in Compression

High-Strength 3.00″ Diameter, 0.13″ Wall, Round-Shaft Push Piers with Male-Female Slip Connectors

Description

Magnum® MP313 push piers have a structural capacity in compression of 22 tons ultimate and 11 tons working. Push piers do not have tensile capacity unless the sections are welded together or a reinforcing steel bar and grout is placed in the pile casing. Sections couple together with male-female slip connectors. High strength steel offers increased buckling resistance compared to others. A friction reduction collar can be added to the pile to increase penetration depth. Sections are available in bare steel, epoxy powder coated, and galvanized. Galvanized coating extends average life expectancy to over 100 years even in highly corrosive environments. Custom lengths are available upon request. See Magnum® Technical Manual for additional information.



SPECIFICATIONS	
SHAFT	HSS 3.00″ x 0.13″ Wall ASTM A513 Grade 65 KSI, or Equiv.
I	New= 1.17 in^4, Corroded= 0.70 in^4
Ag	New= 1.13 in^2, Corroded= 0.68 in^2
S	New= 0.78 in^3, Corroded= 0.48 in^3
COUPLING	Inner 0.125″ Sleeve
COATING	Hot-Dip Galvanized (G), Bare Steel (NG), or Epoxy Powder Coated (EP)
STANDARD RAM	8.30 in^2 Piston Area, 7,500 Maximum P.S.I. (4,000 Max. P.S.I. Installation Pressure)
STRUCTURAL CAPACITY IN COMPRESSION*	
22 Tons	Ultimate
11 Tons	Allowable
CAPACITY FROM LOAD TEST**	
17 Tons	Maximum Test Load
11 Tons	Allowable from Test (F.S.=1.5)

***Note 1:** Structural capacity is based on buckling strength of shaft in firm soils with pinned head conditions after 75 years corrosion for bare steel per ICC-ES AC358. Push piers shall be installed to appropriate depth into suitable bearing stratum as determined by geotechnical engineer or local practice. For tension capacity, push pier sections must be welded together or a reinforcing steel bar and grout must be placed in the pile.

****Note 2:** Push pier capacity is determined by load test using Magnum installation rams or lifting kit. All push piers shall be load tested to 1.5 times the desired working load. Test load is limited by maximum safe operating ram pressure or buckling capacity of shaft, whichever is less.

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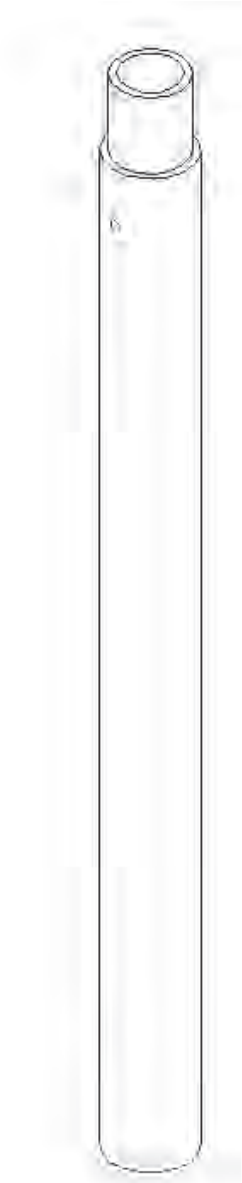
MAGNUM® MP325 Push Pier

21 Tons Allowable Capacity in Compression

High-Strength 3.00″ Diameter, 0.25″ Wall, Round-Shaft
Push Piers with Male-Female Slip Connectors

Description

Magnum® MP325 push piers have a structural capacity in compression of 55 tons ultimate and 28 tons working. Push piers do not have tensile capacity unless the sections are welded together or a reinforcing steel bar and grout is placed in the pile casing. Sections couple together with male-female slip connectors. High strength steel offers increased buckling resistance compared to others. A friction reduction collar can be added to the pile to increase penetration depth. Sections are available in bare steel, epoxy powder coated, and galvanized. Galvanized coating extends average life expectancy to over 100 years even in highly corrosive environments. Custom lengths are available upon request. See Magnum® Technical Manual for additional information.



SPECIFICATIONS	
SHAFT	HSS 3.00″ x 0.25″ Wall ASTM A513 Grade 65 KSI, or Equiv.
I	New= 2.06 in^4, Corroded= 1.64 in^4
Ag	New= 2.16 in^2, Corroded= 1.73 in^2
S	New= 1.37 in^3, Corroded= 1.11 in^3
COUPLING	Inner 0.25″ Sleeve
COATING	Hot-Dip Galvanized (G), Bare Steel (NG), or Epoxy Powder Coated (EP)
STANDARD RAM	8.30 in^2 Piston Area, 7,500 Maximum P.S.I.
STRUCTURAL CAPACITY IN COMPRESSION*	
55 Tons	Ultimate
28 Tons	Allowable
CAPACITY FROM LOAD TEST**	
31 Tons	Maximum Test Load
21 Tons	Allowable from Test (F.S.=1.5)

***Note 1:** Structural capacity is based on buckling strength of shaft in firm soils with pinned head conditions after 75 years corrosion for bare steel per ICC-ES AC358. Push piers shall be installed to appropriate depth into suitable bearing stratum as determined by geotechnical engineer or local practice. For tension capacity, push pier sections must be welded together or a reinforcing steel bar and grout must be placed in the pile.

****Note 2:** Push pier capacity is determined by load test using Magnum installation rams or lifting kit. All push piers shall be load tested to 1.5 times the desired working load. Test load is limited by maximum safe operating ram pressure or buckling capacity of shaft, whichever is less.

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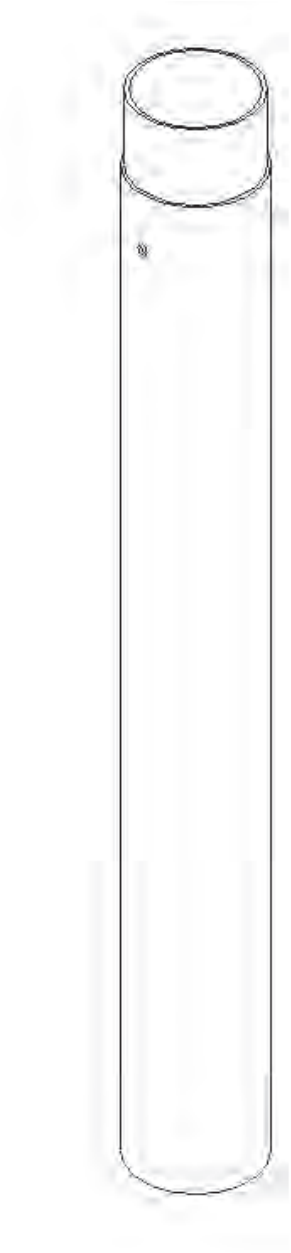
MAGNUM® MP413 Push Pier

21 Ton Allowable Capacity in Compression

High-Strength 4.50″ Diameter, 0.13″ Wall, Round-Shaft Push Piers with Male-Female Slip Connectors

Description

Magnum® MP413 push piers have 40 tons ultimate capacity and 20 tons working capacity in compression. Push piers do not have tensile capacity unless the sections are welded together or a reinforcing steel bar and grout is placed in the pile casing. Sections couple together with male-female slip connectors. Round shafts offer increased lateral and buckling resistance compared to solid square shafts. Galvanized coating extends average life expectancy to over 100 years for most soil conditions. Custom lengths and blade configurations are available upon request. See Magnum® Technical Manual for additional information.



SPECIFICATIONS	
SHAFT	HSS 4.50″ x 0.13″ Wall ASTM A450 65 KSI, or Equiv.
I	New= 4.26 in^4, Corroded= 2.63 in^4
Ag	New= 1.78 in^2, Corroded= 1.10 in^2
S	New= 1.90 in^3, Corroded= 1.18 in^3
COUPLING	Inner 0.125″ Sleeve
COATING	Hot-Dip Galvanized (G), Bare Steel (NG), or Epoxy Powder Coated (EP)
STANDARD RAM	8.30 in^2 Piston Area, 7,500 Maximum P.S.I.
STRUCTURAL CAPACITY IN COMPRESSION*	
40 Tons	Ultimate Capacity
20 Tons	Allowable Capacity
CAPACITY FROM LOAD TEST**	
31 Tons	Maximum Test Load
21 Tons	Allowable from Test (F.S.=1.5)

***Note 1:** Structural capacity is based on buckling strength of shaft in firm soils with pinned head conditions after 75 years corrosion for bare steel per ICC-ES AC358. Push piers shall be installed to appropriate depth into suitable bearing stratum as determined by geotechnical engineer or local practice. For tension capacity, push pier sections must be welded together or a reinforcing steel bar and grout must be placed in the pile.

****Note 2:** Push pier capacity is determined by load test using Magnum installation rams or lifting kit. All push piers shall be load tested to 1.5 times the desired working load. Test load is limited by maximum safe operating ram pressure or buckling capacity of shaft, whichever is less.

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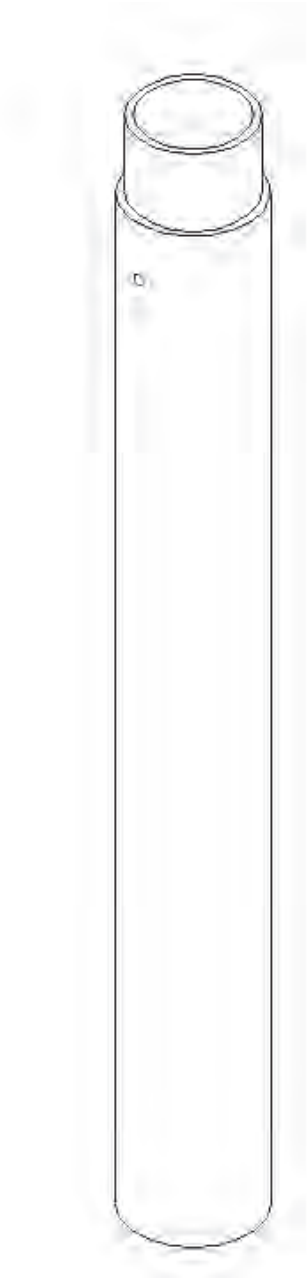
MAGNUM® MP419 Push Pier

21 Tons Allowable Capacity in Compression

High-Strength 4.50″ Diameter, 0.19″ Wall, Round-Shaft
Push Piers with Male-Female Slip Connectors

Description

Magnum® MP419 push piers have a structural capacity in compression of 68 tons ultimate and 34 tons working. Push piers do not have tensile capacity unless the sections are welded together or a reinforcing steel bar and grout is placed in the pile casing. Sections couple together with male-female slip connectors. High strength steel offers increased buckling resistance compared to others. A friction reduction collar can be added to the pile to increase penetration depth. Sections are available in bare steel, epoxy powder coated, and galvanized. Galvanized coating extends average life expectancy to over 100 years even in highly corrosive environments. Custom lengths are available upon request. See Magnum® Technical Manual for additional information.



SPECIFICATIONS	
SHAFT	HSS 4.50″ x 0.19″ Wall ASTM A513 Grade 65 KSI, or Equiv.
I	New= 5.99 in^4, Corroded= 4.41 in^4
Ag	New= 2.57 in^4, Corroded= 1.90 in^2
S	New= 2.66 in^3, Corroded= 1.98 in^3
COUPLING	Inner 0.19″ Sleeve
COATING	Hot-Dip Galvanized (G), Bare Steel (NG), or Epoxy Powder Coated (EP)
STANDARD RAM	8.30 in^2 Piston Area, 7,500 Maximum P.S.I.
STRUCTURAL CAPACITY IN COMPRESSION*	
68 Tons	Ultimate
34 Tons	Allowable
CAPACITY FROM LOAD TEST**	
31 Tons	Maximum Test Load
21 Tons	Allowable from Test (F.S.=1.5)

***Note 1:** Structural capacity is based on buckling strength of shaft in firm soils with pinned head conditions after 75 years corrosion for bare steel per ICC-ES AC358. Push piers shall be installed to appropriate depth into suitable bearing stratum as determined by geotechnical engineer or local practice. For tension capacity, push pier sections must be welded together or a reinforcing steel bar and grout must be placed in the pile.

****Note 2:** Push pier capacity is determined by load test using Magnum installation rams or lifting kit. All push piers shall be load tested to 1.5 times the desired working load. Test load is limited by maximum safe operating ram pressure or buckling capacity of shaft, whichever is less.

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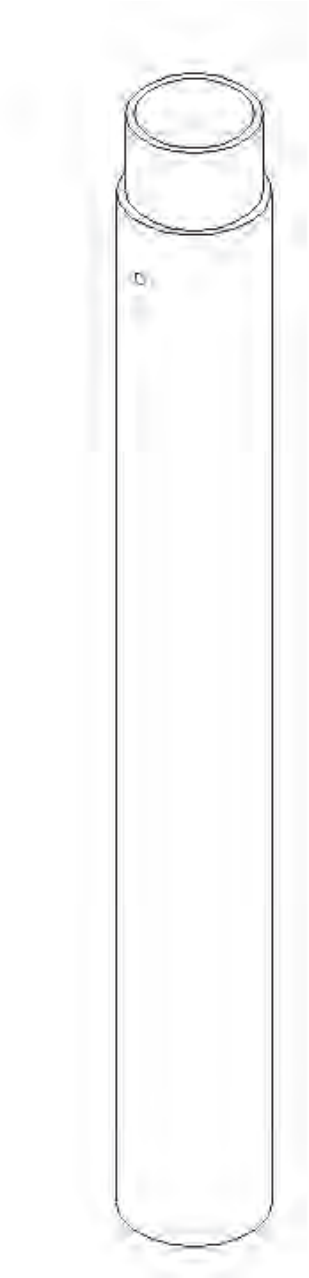
MAGNUM® MP425 Push Pier

40 Tons Allowable Capacity in Compression

High-Strength 4.50″ Diameter, 0.25″ Wall, Round-Shaft Push Piers with Male-Female Slip Connectors

Description

Magnum® MP425 push piers have a structural capacity in compression of 96 tons ultimate and 48 tons working. Push piers do not have tensile capacity unless the sections are welded together or a reinforcing steel bar and grout is placed in the pile casing. Sections couple together with male-female slip connectors. High strength steel offers increased buckling resistance compared to others. A friction reduction collar can be added to the pile to increase penetration depth. Sections are available in bare steel, epoxy powder coated, and galvanized. Galvanized coating extends average life expectancy to over 100 years even in highly corrosive environments. Custom lengths are available upon request. See Magnum® Technical Manual for additional information.



SPECIFICATIONS	
SHAFT	HSS 4.50″ x 0.25″ Wall ASTM A513 Grade 65 KSI, or Equiv.
I	New= 7.56 in^4, Corroded= 6.05 in^4
Ag	New= 3.34 in^2, Corroded= 2.67 in^2
S	New= 3.36 in^3, Corroded= 2.72 in^3
COUPLING	Inner 0.25″ Sleeve
COATING	Hot-Dip Galvanized (G), Bare Steel (NG), or Epoxy Powder Coated (EP)
STANDARD RAM	15.9 in^2 Piston Area, 7,500 Maximum P.S.I.
STRUCTURAL CAPACITY IN COMPRESSION*	
96 Tons	Ultimate
48 Tons	Allowable
CAPACITY FROM LOAD TEST**	
60 Tons	Maximum Test Load
40 Tons	Allowable from Test (F.S.=1.5)

***Note 1:** Structural capacity is based on buckling strength of shaft in firm soils with pinned head conditions after 75 years corrosion for bare steel per ICC-ES AC358. Structural capacity is based on buckling strength of shaft in firm soils with fixed head conditions. Push piers shall be installed to appropriate depth into suitable bearing stratum as determined by geotechnical engineer or local practice. For tension capacity, push pier sections must be welded together or a reinforcing steel bar and grout must be placed in the pile.

****Note 2:** Push pier capacity is determined by load test using Magnum installation rams or lifting kit. All push piers shall be load tested to 1.5 times the desired working load. Test load is limited by maximum safe operating ram pressure or buckling capacity of shaft, whichever is less.

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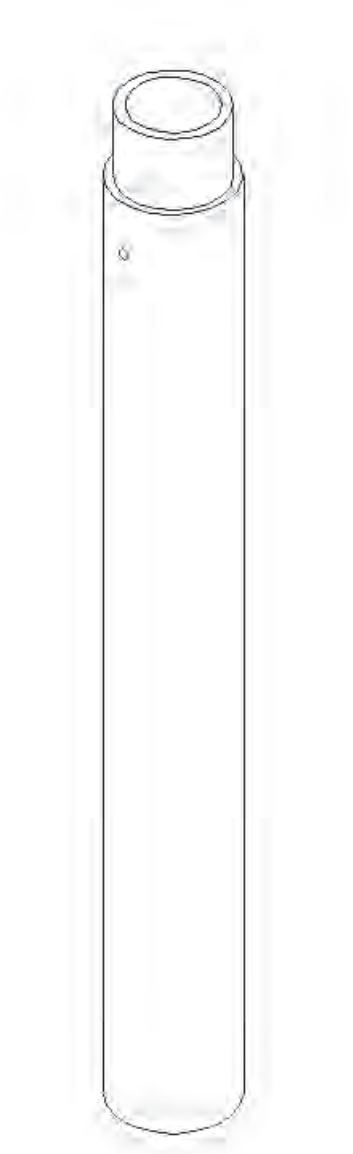
MAGNUM® MP431 Push Pier

40 Tons Allowable Capacity in Compression

High-Strength 4.50″ Diameter, 0.31″ Wall, Round-Shaft
Push Piers with Male-Female Slip Connectors

Description

Magnum® MP431 push piers have a structural capacity in compression of 122 tons ultimate and 61 tons working. Push piers do not have tensile capacity unless the sections are welded together or a reinforcing steel bar and grout is placed in the pile casing. Sections couple together with male-female slip connectors. High strength steel offers increased buckling resistance compared to others. A friction reduction collar can be added to the pile to increase penetration depth. Sections are available in bare steel, epoxy powder coated, and galvanized. Galvanized coating extends average life expectancy to over 100 years even in highly corrosive environments. Custom lengths are available upon request. See Magnum® Technical Manual for additional information.



SPECIFICATIONS	
SHAFT	HSS 4.50″ x 0.31″ Wall ASTM A513 Grade 65 KSI, or Equiv.
I	New= 9.00 in^4, Corroded= 7.55 in^4
Ag	New= 4.08 in^2, Corroded= 3.43 in^2
S	New= 4.00 in^3, Corroded= 3.39 in^3
COUPLING	Inner 0.25″ Sleeve
COATING	Hot-Dip Galvanized (G), Bare Steel (NG), or Epoxy Powder Coated (EP)
STANDARD RAM	15.9 in^2 Piston Area 7,500 Maximum P.S.I.
STRUCTURAL CAPACITY IN COMPRESSION*	
122 Tons	Ultimate
61 Tons	Allowable
CAPACITY FROM LOAD TEST**	
60 Tons	Maximum Test Load
40 Tons	Allowable from Test (F.S.=1.5)

***Note 1:** Structural capacity is based on buckling strength of shaft in firm soils with pinned head conditions after 75 years corrosion for bare steel per ICC-ES AC358. Push piers shall be installed to appropriate depth into suitable bearing stratum as determined by geotechnical engineer or local practice. For tension capacity, push pier sections must be welded together or a reinforcing steel bar and grout must be placed in the pile.

****Note 2:** Push pier capacity is determined by load test using Magnum installation rams or lifting kit. All push piers shall be load tested to 1.5 times the desired working load. Test load is limited by maximum safe operating ram pressure or buckling capacity of shaft, whichever is less.

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MAGNUM® MJP55C Jacked Pile Coupling

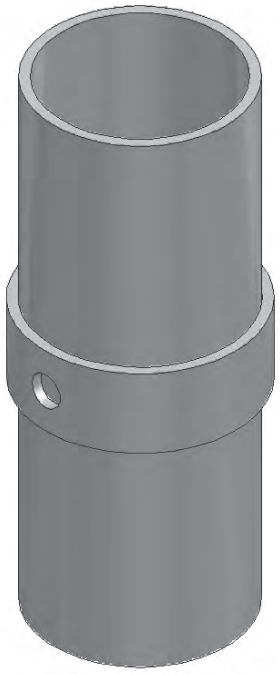
50 Tons Allowable Capacity in Compression

High-Strength Inner-Sleeve Coupling

Fits 5.50″ Diameter x 0.25″ Wall Steel Jacked Piles

Description

Push piers and jacked piles are essentially the same type of foundation. In this catalog, the term push piers is used for more slender piles that are generally installed from the side of an existing foundation. Whereas, the term jacked piles is used for larger diameter piles that are installed from jacking pits excavated directly below the center of an existing foundation. Push piers generally do not require special excavation shoring; they promote improved worker safety, and the installation is generally faster. Jacked piles do require special excavation shoring and are slower to install. However, jacked piles exert less rotational stresses on an existing foundation and sometimes can be installed to higher capacity. Special precautions are required for excavation shoring and worker safety.



SPECIFICATIONS	
SHAFT	HSS 4.98″ x 11″ Long ASTM A513 Grade 65 KSI, or Equiv.
I	New= 10.42 in^4, Corroded= 8.33 in^4
Ag	New= 3.71 in^2, Corroded= 2.97 in^2
S	New= 4.18 in^3, Corroded= 3.38 in^3
COATING	Hot-Dip Galvanized (G), Bare Steel (NG), or Epoxy Powder Coated (EP)
JACKED PILE SHAFT	5.5″ O.D. x 0.25″ Wall (Sold Separately)

STRUCTURAL CAPACITY IN COMPRESSION*	
100 Tons	Ultimate
50 Tons	Allowable

***Note 1:** Structural capacity is based on capacity of welded center ring after 75 years corrosion for bare steel. Jacked piles shall be installed to appropriate depth into suitable bearing stratum as determined by geotechnical engineer or local practice. For tension capacity, push pier sections must be welded together or a reinforcing steel bar and grout must be placed in the pile.

Note 2: Jacked pile capacity is determined by load test using a hydraulic ram centered on the foundation. All jacked piles shall be load tested to 1.5 times the desired working load. Test load is limited by maximum safe operating ram pressure of the ram, available dead load of the existing foundation, or structural capacity of the foundation, whichever is less.

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MAGNUM® MJP70C Jacked Pile Coupling

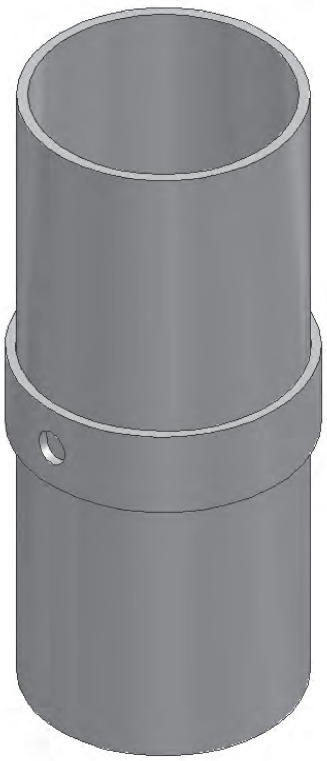
50 Tons Allowable Capacity in Compression

High-Strength Inner-Sleeve Coupling

Fits 7.0″ Diameter x 0.23″ Wall Steel Jacked Piles

Description

Push piers and jacked piles are essentially the same type of foundation. In this catalog, the term push piers is used for more slender piles that are generally installed from the side of an existing foundation. Whereas, the term jacked piles is used for larger diameter piles that are installed from jacking pits excavated directly below the center of an existing foundation. Push piers generally do not require special excavation shoring; they promote improved worker safety, and the installation is generally faster. Jacked piles do require special excavation shoring and are slower to install. However, jacked piles exert less rotational stresses on an existing foundation and sometimes can be installed to higher capacity. Special precautions are required for excavation shoring and worker safety.



SPECIFICATIONS	
SHAFT	HSS 6.5″ O.D. x 13″ Long ASTM A513 Grade 65 KSI, or Equiv.
I	New= 24.01 in^4, Corroded= 19.21 in^4
Ag	New= 4.91 in^2, Corroded= 3.93 in^2
S	New= 7.39 in^3, Corroded= 5.96 in^3
COATING	Hot-Dip Galvanized (G), Bare Steel (NG), or Epoxy Powder Coated (EP)
JACKED PILE SHAFT	7.0″ O.D. x 0.23″ Wall (Sold Separately)

STRUCTURAL CAPACITY IN COMPRESSION*	
100 Tons	Ultimate
50 Tons	Allowable

***Note 1:** Structural capacity is based on capacity of welded center ring after 75 years corrosion for bare steel. Jacked piles shall be installed to appropriate depth into suitable bearing stratum as determined by geotechnical engineer or local practice. For tension capacity, push pier sections must be welded together or a reinforcing steel bar and grout must be placed in the pile.

Note 2: Jacked pile capacity is determined by load test using a hydraulic ram centered on the foundation. All jacked piles shall be load tested to 1.5 times the desired working load. Test load is limited by maximum safe operating ram pressure of the ram, available dead load of the existing foundation, or structural capacity of the foundation, whichever is less.

Magnum Piering, Inc.
6082 Schumacher Park Dr.
West Chester, OH 45069
800-822-7437
www.magnumpiering.com

All Magnum Products Made in U.S.A.

U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending.

MAGNUM® MJP86C Jacked Pile Coupling

75 Tons Allowable Capacity in Compression

High-Strength Inner-Sleeve Coupling

Fits 8.63″ Diameter x 0.22″ Wall Steel Jacked Piles

Description

Push piers and jacked piles are essentially the same type of foundation. In this catalog, the term push piers is used for more slender piles that are generally installed from the side of an existing foundation. Whereas, the term jacked piles is used for larger diameter piles that are installed from jacking pits excavated directly below the center of an existing foundation. Push piers generally do not require special excavation shoring; they promote improved worker safety, and the installation is generally faster. Jacked piles do require special excavation shoring and are slower to install. However, jacked piles exert less rotational stresses on an existing foundation and sometimes can be installed to higher capacity. Special precautions are required for excavation shoring and worker safety.

SPECIFICATIONS	
SHAFT	HSS 8.0″ O.D. x 19.25″ Long ASTM A513 Grade 65 KSI, or Equiv.
I	New= 45.75 in^4, Corroded= 36.62 in^4
Ag	New= 6.09 in^2, Corroded= 4.87 in^2
S	New= 11.44 in^3, Corroded= 9.21 in^3
COATING	Hot-Dip Galvanized (G), Bare Steel (NG), or Epoxy Powder Coated (EP)
JACKED PILE SHAFT	8.63″ O.D. x 0.22″ Wall (Sold Separately)

STRUCTURAL CAPACITY IN COMPRESSION*	
100 Tons	Ultimate
75 Tons	Allowable

***Note 1:** Structural capacity is based on capacity of welded center ring after 75 years corrosion for bare steel. Jacked piles shall be installed to appropriate depth into suitable bearing stratum as determined by geotechnical engineer or local practice. For tension capacity, push pier sections must be welded together or a reinforcing steel bar and grout must be placed in the pile.

Note 2: Jacked pile capacity is determined by load test using a hydraulic ram centered on the foundation. All jacked piles shall be load tested to 1.5 times the desired working load. Test load is limited by maximum safe operating ram pressure of the ram, available dead load of the existing foundation, or structural capacity of the foundation, whichever is less.

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MAGNUM® MJP100C Jacked Pile Coupling

75 Tons Allowable Capacity in Compression

High-Strength Inner-Sleeve Coupling

Fits 10.75″ Diameter x 0.31″ Wall Steel Jacked Piles

Description

Push piers and jacked piles are essentially the same type of foundation. In this catalog, the term push piers is used for more slender piles that are generally installed from the side of an existing foundation. Whereas, the term jacked piles is used for larger diameter piles that are installed from jacking pits excavated directly below the center of an existing foundation. Push piers generally do not require special excavation shoring; they promote improved worker safety, and the installation is generally faster. Jacked piles do require special excavation shoring and are slower to install. However, jacked piles exert less rotational stresses on an existing foundation and sometimes can be installed to higher capacity. Special precautions are required for excavation shoring and worker safety.

SPECIFICATIONS	
SHAFT	HSS 10.0″ O.D. x 23.5″ Long ASTM A513 Grade 65 KSI, or Equiv.
I	New= 91.05 in^4, Corroded= 72.90 in^4
Ag	New= 7.66 in^2, Corroded= 6.13 in^2
S	New= 18.21 in^3, Corroded= 14.65 in^3
COATING	Hot-Dip Galvanized (G), Bare Steel (NG), or Epoxy Powder Coated (EP)
JACKED PILE SHAFT	10.75″ O.D. x 0.31″ Wall (Sold Separately)

STRUCTURAL CAPACITY IN COMPRESSION*	
150 Tons	Ultimate
75 Tons	Allowable

***Note 1:** Structural capacity is based on capacity of welded center ring after 75 years corrosion for bare steel. Jacked piles shall be installed to appropriate depth into suitable bearing stratum as determined by geotechnical engineer or local practice. For tension capacity, push pier sections must be welded together or a reinforcing steel bar and grout must be placed in the pile.

Note 2: Jacked pile capacity is determined by load test using a hydraulic ram centered on the foundation. All jacked piles shall be load tested to 1.5 times the desired working load. Test load is limited by maximum safe operating ram pressure of the ram, available dead load of the existing foundation, or structural capacity of the foundation, whichever is less.

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MAGNUM® MJP55C Jacked Pile Coupling

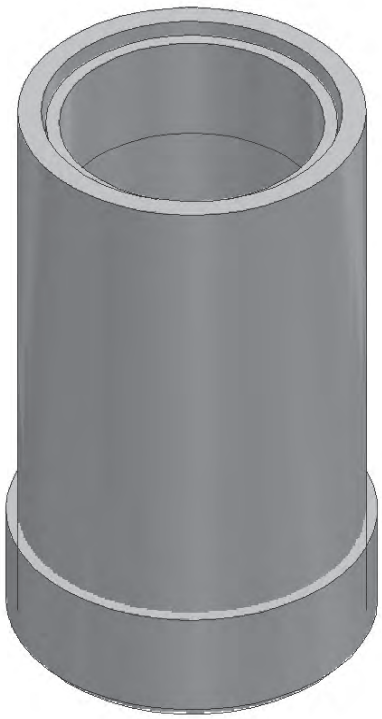
50 Tons Allowable Capacity in Compression

High-Strength Transition Coupling

Transitions 7″ Diam. x 0.23″ Wall and 5.5″ Diam. x 0.26″ Wall Steel Jacked Piles

Description

Push piers and jacked piles are essentially the same type of foundation. In this catalog, the term push piers is used for more slender piles that are generally installed from the side of an existing foundation. Whereas, the term jacked piles is used for larger diameter piles that are installed from jacking pits excavated directly below the center of an existing foundation. Push piers generally do not require special excavation shoring; they promote improved worker safety, and the installation is generally faster. Jacked piles do require special excavation shoring and are slower to install. However, jacked piles exert less rotational stresses on an existing foundation and sometimes can be installed to higher capacity. Special precautions are required for excavation shoring and worker safety.



SPECIFICATIONS	
SHAFT	HSS 6.5″ O.D. x 11.1″ Long ASTM A513 Grade 65 KSI, or Equiv.
I	New= 24.01 in^4, Corroded= 19.21 in^4
Ag	New= 4.91 in^2, Corroded= 3.93 in^2
S	New= 7.39 in^3, Corroded= 5.96 in^3
COATING	Hot-Dip Galvanized (G), Bare Steel (NG), or Epoxy Powder Coated (EP)
JACKED PILE SHAFT	7.0″ O.D. x 0.23″ Wall to 5.5″ O.D. x 0.26″ Wall (Sold Separately)

STRUCTURAL CAPACITY IN COMPRESSION*	
100 Tons	Ultimate
50 Tons	Allowable

***Note 1:** Structural capacity is based on capacity of welded center ring after 75 years corrosion for bare steel. Jacked piles shall be installed to appropriate depth into suitable bearing stratum as determined by geotechnical engineer or local practice. For tension capacity, push pier sections must be welded together or a reinforcing steel bar and grout must be placed in the pile.

Note 2: Jacked pile capacity is determined by load test using a hydraulic ram centered on the foundation. All jacked piles shall be load tested to 1.5 times the desired working load. Test load is limited by maximum safe operating ram pressure of the ram, available dead load of the existing foundation, or structural capacity of the foundation, whichever is less.

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section 7

PUSH PIERS RAMS & ACCESSORIES

MAGNUM PIERING, INC.

MAGNUM® MP6000K Ram Kit

31 Ton Maximum Capacity

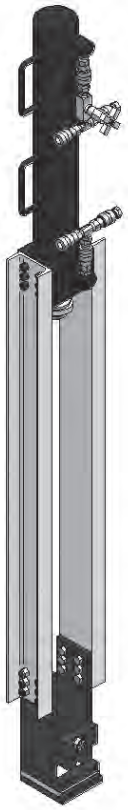
3.25″ Bore, 22″ Stroke, 7,500 psi Maximum Pressure

Hydraulic Ram Assembly for MP313 and MP325 Push Pier Shafts

Description

Magnum MP6000 Push Pier Rams are used for installation and load testing Magnum MP313 and MP325 push piers. The ram has an ultimate capacity of 31 tons at maximum pressure. It is used for repair, lifting, and permanent support of existing foundations. Ram height with channels is 82.5 inches. The assembly can accommodate push pier columns up to 36″ long that are coupled together by male-female slip connections. Additional push pier column sections can be added until the pier reaches adequate bearing material and a successful load test is achieved. Ram shoe fits various Magnum foundation brackets. Permanent pier to bracket connection is made with up to three (3) ¾″ Grade 8 bolts.

Hydraulic Ram



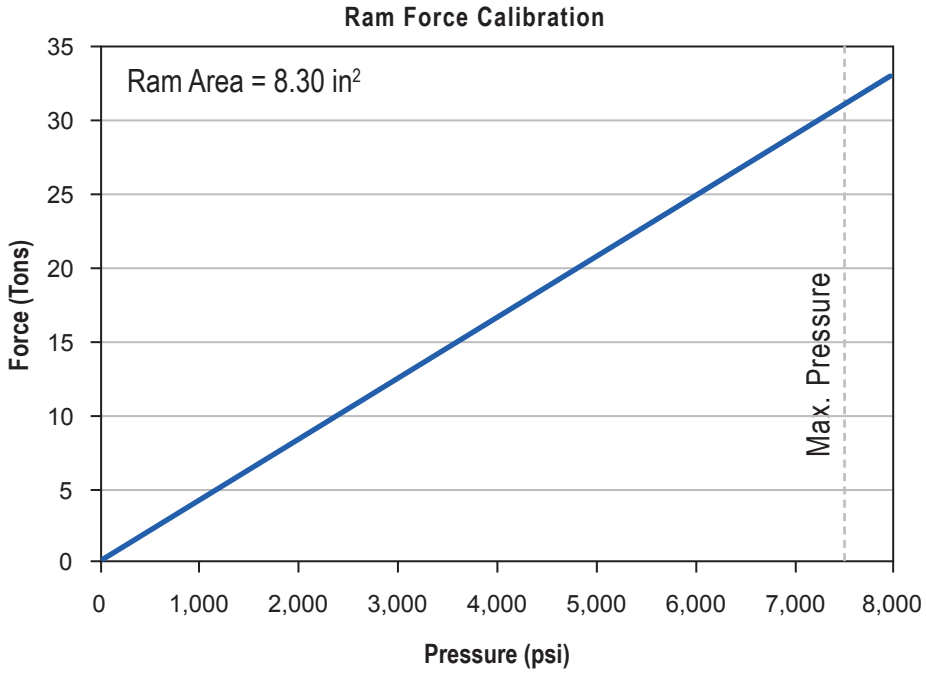
Quick Connectors

Nose Adapter

Aluminum Channels

Ram Shoe

SPECIFICATIONS	
Bore	3.25″ Diam.
Piston Rod	2.0″ Diam.
Stroke	22″
Max. Pressure	7,500 psi
Burst Pressure	15,00 psi
Bolts	(1) 3/4″
Nose Adapter	2.5″ Diam. (Fits MP313 & MP325 Shafts)
Hydraulic Hose	3/8″ Diam.



Note: Magnum's push piering system is used for stabilization and lifting. Bracket connection to structure, required pier capacity, and pier spacing should be designed by a professional engineer taking into account the thickness, weight, live loads, and punching shear strength of the existing foundation.

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MAGNUM® MP6100K Ram Kit

31 Ton Maximum Capacity

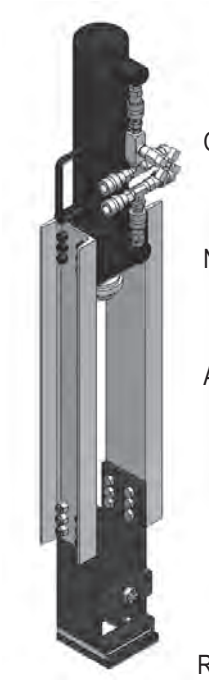
3.25″ Bore, 12″ Stroke, 7,500 psi Maximum Pressure

Hydraulic Ram Assembly for MP313 and MP325 Push Pier Shafts

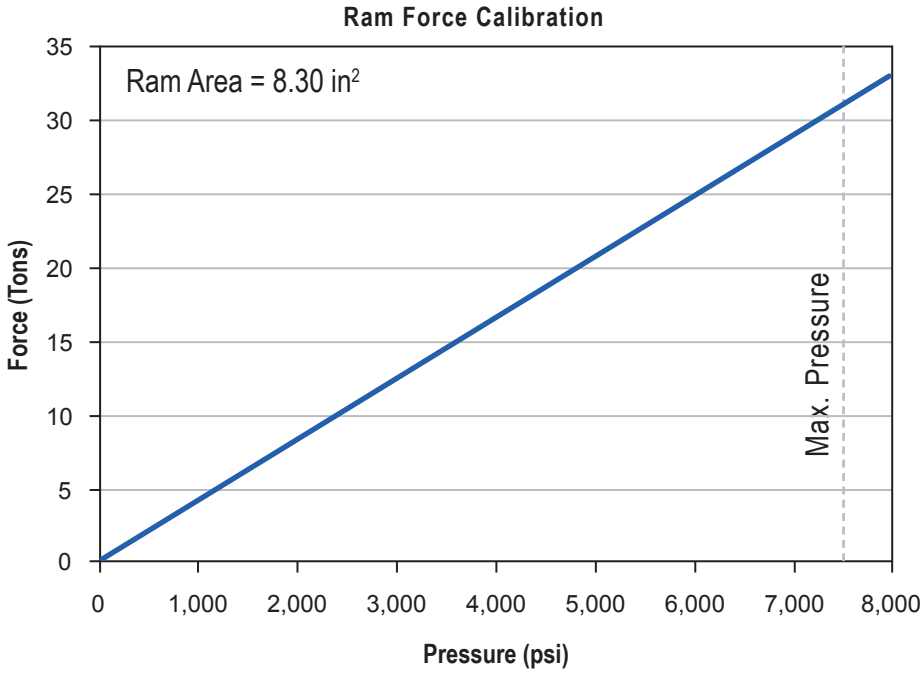
Description

Magnum MP6100 Push Pier Rams are used for installation and load testing Magnum MP313 and MP325 push piers. The ram has an ultimate capacity of 31 tons at maximum pressure. It is used for repair, lifting, and permanent support of existing foundations. Ram height with channels is 52-7/8 inches. The assembly can accommodate push pier columns up to 18″ long that are coupled together by male-female slip connections. A ditional push pier column sections can be added until the pier reaches adequate bearing material and a successful load test is achieved. Ram shoe fits various Magnum foundation brackets. Permanent pier to bracket connection is made with up to three (3) ¾″ Grade 8 bolts.

Hydraulic Ram



SPECIFICATIONS	
Bore	3.25″ Diam.
Piston Rod	2.0″ Diam.
Stroke	12″
Max. Pressure	7,500 psi
Burst Pressure	15,00 psi
Bolts	(1) 3/4″
Nose Adapter	2.5″ Diam. (Fits MP313 & MP325 Shafts)
Hydraulic Hose	3/8″ Diam.



Note: Magnum's push piering system is used for stabilization and lifting. Bracket connection to structure, required pier capacity, and pier spacing should be designed by a professional engineer taking into account the thickness, weight, live loads, and punching shear strength of the existing foundation.

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MAGNUM® MP7000K Ram Kit

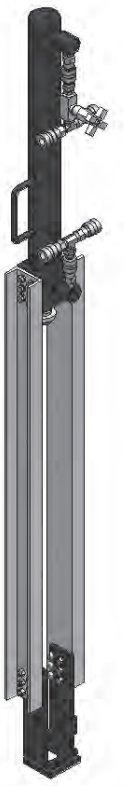
12 Ton Maximum Capacity

2.00″ Bore, 22″ Stroke, 7,500 psi Maximum Pressure
Hydraulic Ram Assembly for MP212 Push Pier Shaft

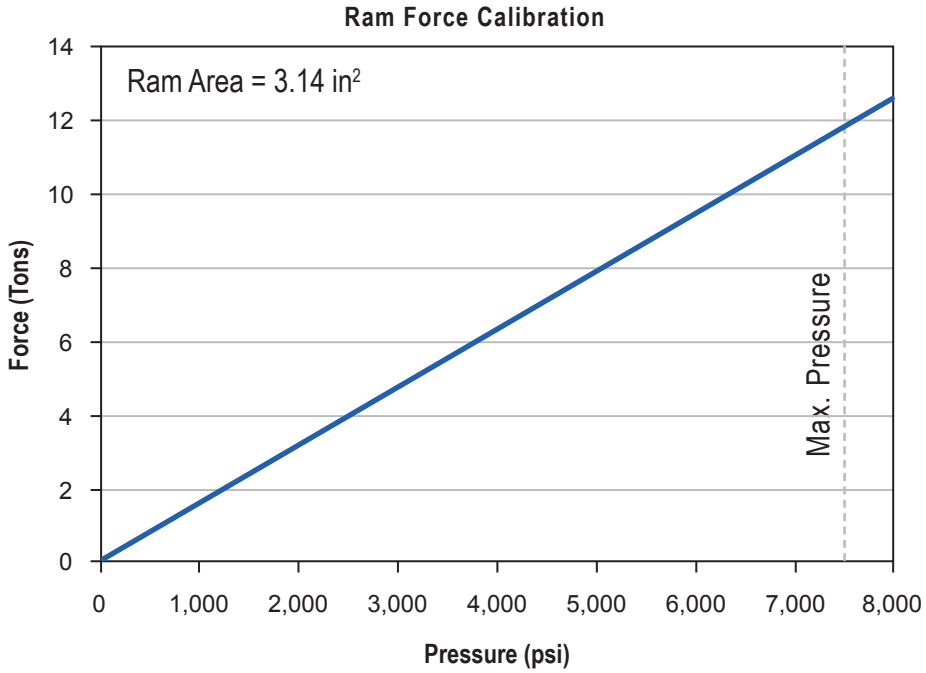
Description

Magnum MP7000 Push Pier Rams are used for installation and load testing Magnum MP212 push piers. The ram has an ultimate capacity of 12 tons at maximum pressure. It is used for repair, lifting, and permanent support of existing foundations. Ram height with channels is 76-9/16 inches. The assembly can accommodate push pier columns up to 36″ long that are coupled together by male-female slip connections. Additional push pier column sections can be added until the pier reaches adequate bearing material and a successful load test is achieved. Ram shoe fits various Magnum foundation brackets. Permanent pier to bracket connection is made with up to three (3) ¾″ Grade 8 bolts.

Hydraulic Ram



SPECIFICATIONS	
Bore	2.00″ Diam.
Piston Rod	1.25″ Diam.
Stroke	22″
Max. Pressure	7,500 psi
Burst Pressure	15,00 psi
Bolts	(1) 3/4″
Nose Adapter	1.75″ Diam. (Fits MP212 Push Pier Shaft)
Hydraulic Hose	3/8″ Diam.



Note: Magnum's push piering system is used for stabilization and lifting. Bracket connection to structure, required pier capacity, and pier spacing should be designed by a professional engineer taking into account the thickness, weight, live loads, and punching shear strength of the existing foundation.

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MAGNUM® MP7100K Ram Kit

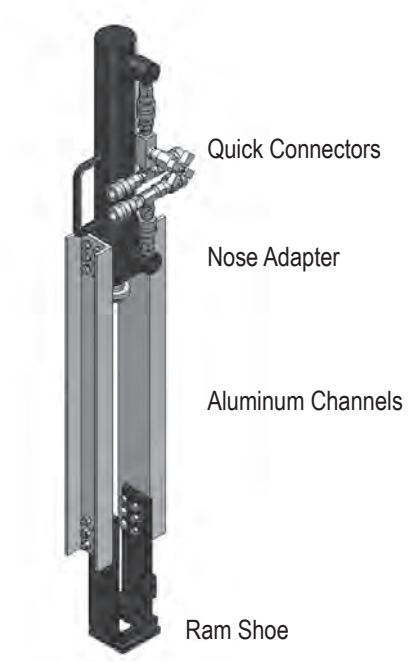
12 Ton Maximum Capacity

2.00″ Bore, 12″ Stroke, 7,500 psi Maximum Pressure
Hydraulic Ram Assembly for MP212 Push Pier Shaft

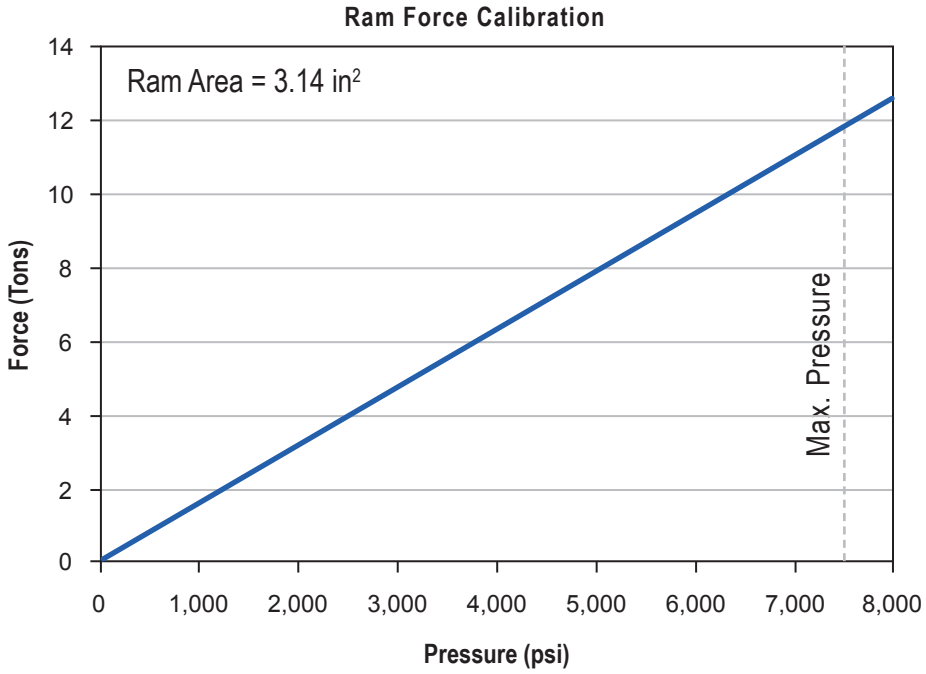
Description

Magnum MP7100 Push Pier Rams are used for installation and load testing Magnum MP212 push piers. The ram has an ultimate capacity of 12 tons at maximum pressure. It is used for repair, lifting, and permanent support of existing foundations. Ram height with channels is 52-7/8 inches. The assembly can accommodate push pier columns up to 18″ long that are coupled together by male-female slip connections. Additional push pier column sections can be added until the pier reaches adequate bearing material and a successful load test is achieved. Ram shoe fits various Magnum foundation brackets. Permanent pier to bracket connection is made with up to three (3) ¾″ Grade 8 bolts.

Hydraulic Ram



SPECIFICATIONS	
Bore	2.00″ Diam.
Piston Rod	1.25″ Diam.
Stroke	12″
Max. Pressure	7,500 psi
Burst Pressure	15,00 psi
Bolts	(1) 3/4″
Nose Adapter	1.75″ Diam. (Fits MP212 Push Pier Shaft)
Hydraulic Hose	3/8″ Diam.



Note: Magnum's push piering system is used for stabilization and lifting. Bracket connection to structure, required pier capacity, and pier spacing should be designed by a professional engineer taking into account the thickness, weight, live loads, and punching shear strength of the existing foundation.

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section 8

SLABJACK PIERING SYSTEM

MAGNUM PIERING, INC.

MAGNUM PIERING ROCK SOLID

MAGNUM HELICAL PILES

Magnum® Piering
Slabjack Pier Specifications

Magnum® Slabjack Pier	System Ratings & Specifications										
	Description	Shaft Design Wall Gauge (in)	Shaft O.D. (in)	Structural Capacity* (Compression)		Ram Specifications		Maximum Test Load** (tons)	Maximum Allowable Load from Test w/ F.S. = 1.5 (tons)	Surface Coating	Standard Section Lengths (in.)
				Ultimate (tons)	Allowable (tons)	Piston Area (in^2)	Maximum Test Pressure (psi)				
MP113	1.31″ Diam. x 0.12″ Wall Slabjack Pier	0.12	1.31	5.1	2.6	3.14	2,500	3.9	2.6	G, NG, EP	18, 36
MP113-S	1.31″ Diam. x 0.12″ Wall Starter	0.12	1.31	5.1	2.6	3.14	2,500	3.9	2.6	G, NG, EP	18
MP113-FL	Friction Lead for MP113 Slabjack Pier	0.2	1.75	5.1	2.6	3.14	2,500	3.9	2.6	G, NG, EP	2
MP212	1.75″ Diam. x 0.12″ Wall Slabjack Pier	0.12	1.75	8	4.0	3.14	3,822	6.0	4.0	G, NG, EP	18, 36
MP212-S	1.75″ Diam. x 0.12″ Wall Starter	0.12	1.75	8	4.0	3.14	3,822	6.0	4.0	G, NG, EP	18
MP212-FL	Friction Lead for MP212 Slabjack Pier	0.2	2.00	8	4.0	3.14	3,822	6.0	4.0	G, NG, EP	2

***Note 1** Structural capacity is the theoretical buckling strength of the shaft in firm soils with pinned head conditions without accounting for corrosion (temporary short-term applications). Buckling capacity will be less in soft soils, when any part of the shaft is standing unsupported in air, water or fluid soils, or if head conditions differ.

****Note 2** Maximum test load is based on maximum ram pressure times piston area. Ram pressure is limited to that which would buckle the pile or the maximum safe operating pressure of the system, whichever is less. The strength of the push pier system may be governed by the bracket, connection of the bracket to the pier, or connection of the bracket to the structure. All slabjack piers should be load tested to 1.5 times the desired design/working load. Slabjack piers are for temporary support only unless connection to slab is designed by a registered professional.

Surface Coatings G = Hot-Dip Zinc Galvanized per ASTM A123/A153, NG = Bare Steel, EP = Epoxy Powder Coated per ICC-ES AC228

Notes and Specifications All Magnum products are manufactured using ASTM A513 Grade 65 ksi minimum yield strength structural tubing. As Magnum is committed to testing and improving products, these specifications are subject to change. Additional product specifications are available at **www.magnumpiering.com** and upon request.

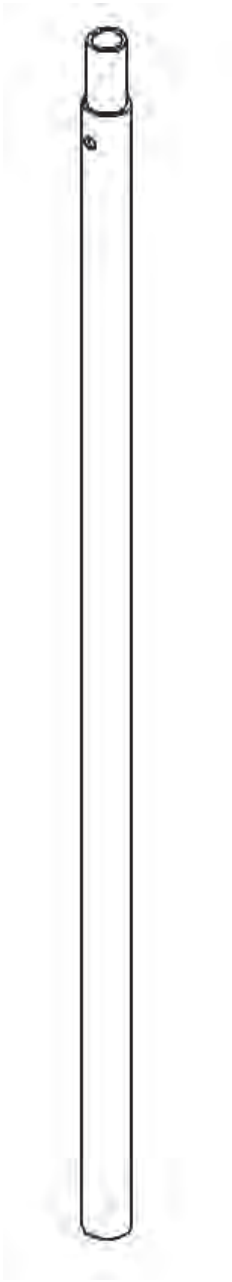
MAGNUM® MP113 Slabjack Pier

2.6 Tons Allowable Capacity in Compression

High-Strength 1.31″ Diameter, 0.12″ Wall, Round-Shaft Slabjack Pier with Male-Female Slip Connectors

Description

Magnum® MP113 slabjack piers have a structural capacity in compression of 5.1 tons ultimate and 2.6 tons working. Slabjack piers do not have tensile capacity unless the sections are welded together or a reinforcing steel bar and grout is placed in the pile casing. Sections couple together with male-female slip connectors. High strength steel offers increased buckling resistance compared to others. A friction reduction collar can be added to the pile to increase penetration depth. Sections are available in bare steel, epoxy powder coated, and galvanized. Galvanized coating extends average life expectancy to over 100 years even in highly corrosive environments. Custom lengths are available upon request. See Magnum® Technical Manual for additional information.



SPECIFICATIONS	
SHAFT	HSS 1.31″ x 0.12″ wall ASTM A513 Grade 65 KSI, or Equiv.
I	New= 0.08 in^4
Ag	New= 0.45 in^2
S	New= 0.12 in^3
COUPLING	Inner 0.12″ Sleeve
COATING	Hot-Dip Galvanized (G), Bare Steel (NG), or Epoxy Powder Coated (EP)
STANDARD RAM	3.14 in^2 Piston Area, 5,000 Maximum P.S.I. (2,500 Max. P.S.I. Installation Pressure)
STRUCTURAL CAPACITY IN COMPRESSION*	
5.1 Tons	Ultimate
2.6 Tons	Allowable
CAPACITY FROM LOAD TEST**	
3.9 Tons	Maximum Test Load
2.6 Tons	Allowable from Test (F.S.=1.5)

***Note 1:** Structural capacity is based on buckling strength of shaft in firm soils with pinned head conditions without corrosion (temporary short-term applications). Push piers shall be installed to appropriate depth into suitable bearing stratum as determined by geotechnical engineer or local practice. For tension capacity, push pier sections must be welded together or a reinforcing steel bar and grout must be placed in the pile.

****Note 2:** Push pier capacity is determined by load test using Magnum installation rams or lifting kit. All push piers shall be load tested to 1.5 times the desired working load. Test load is limited by maximum safe operating ram pressure or buckling capacity of shaft, whichever is less.

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MAGNUM® MP6500K Slabjack Ram Kit

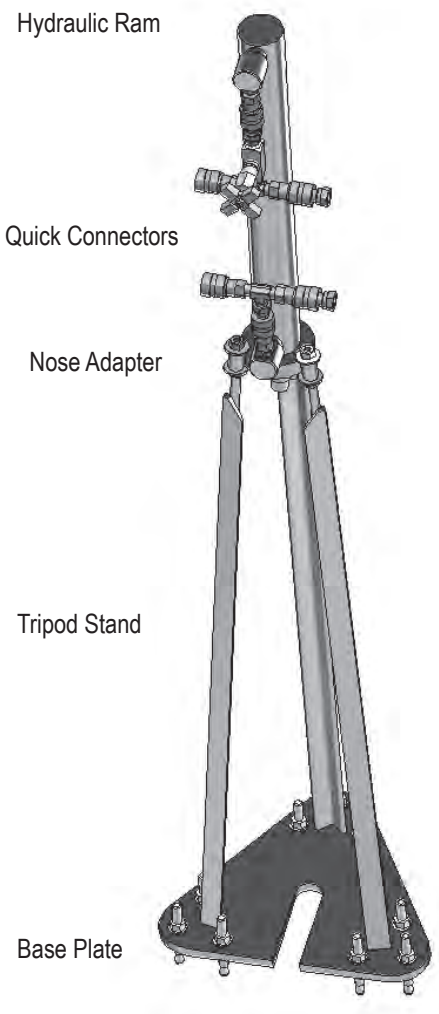
8 Ton Maximum Capacity

2.00″ Bore, 20″ Stroke, 5,000 psi Maximum Pressure

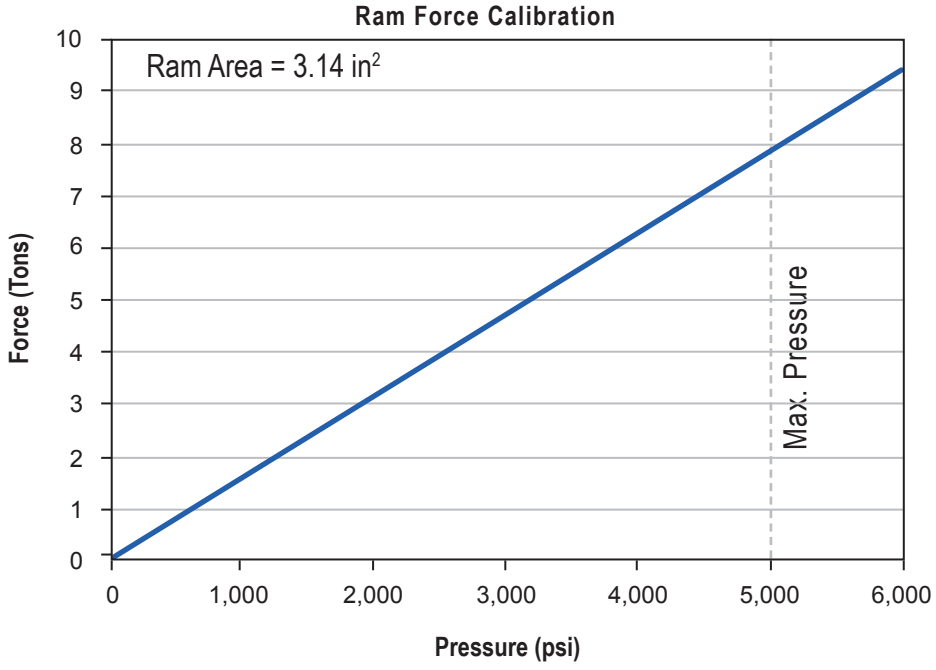
Hydraulic Ram Assembly for MP113 Slabjack Pier Shaft

Description

Magnum MP6500 Slabjack Rams are used for lifting and temporary support of slabs-on-grade and other light structures. The ram has an ultimate lifting capacity of 8 tons at maximum pressure. It is used for precision lifting applications in combination with grout injection for longer term support. Ram and tripod height is 66.16″. The assembly can accommodate push pier columns up to 36″ long that are coupled together by male female slip connections. Additional push pier column sections can be added until the pier reaches adequate bearing material and a successful load test is achieved. Base plate is 15″ equilateral triangle with (9) bolt hole pattern. Temporary pier to slab connection is made with roll pin.



SPECIFICATIONS	
Bore	2.00″ Diam.
Piston Rod	1.25″ Diam.
Stroke	20″
Max. Pressure	5,000 psi
Burst Pressure	12,00 psi
Bolts	(9) ½″ x 4.5″ Titen HD or Equiv.
Nose Adapter	1.0″ Diam. (Fits MP113 Push Pier Shaft)
Hydraulic Hose	3/8″ Diam.



Note: Magnum's slabjack piering system is rated for temporary lifting only. Permanent slab support, pier to slab connection, required pier capacity, and pier spacing should be designed by a professional engineer taking into account the thickness, weight, live loads, and punching shear strength of the slab.

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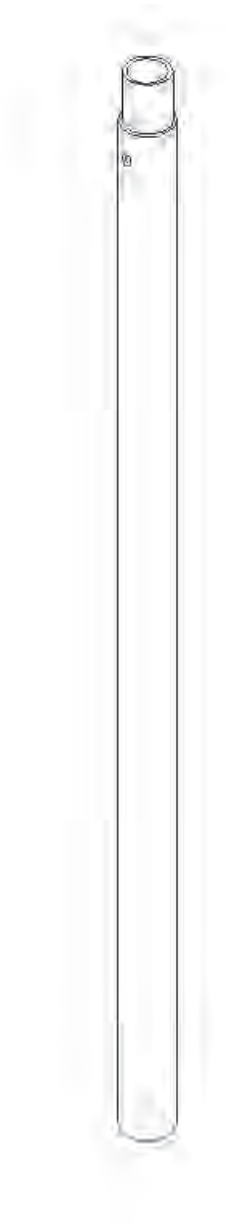
MAGNUM® MP212 Slabjack Pier

4 Tons Allowable Capacity in Compression

High-Strength 1.75″ Diameter, 0.12″ Wall, Round-Shaft Slabjack Pier with Male-Female Slip Connectors

Description

Magnum® MP212 slabjack piers have a structural capacity in compression of 8 tons ultimate and 4 tons working. Slabjack piers do not have tensile capacity unless the sections are welded together or a reinforcing steel bar and grout is placed in the pile casing. Sections couple together with male-female slip connectors. High strength steel offers increased buckling resistance compared to others. A friction reduction collar can be added to the pile to increase penetration depth. Sections are available in bare steel, epoxy powder coated, and galvanized. Galvanized coating extends average life expectancy to over 100 years even in highly corrosive environments. Custom lengths are available upon request. See Magnum® Technical Manual for additional information.



SPECIFICATIONS	
SHAFT	HSS 1.75″ x 0.12″ wall ASTM A513 Grade 65 KSI, or Equiv.
I	New= 0.21 in^4
Ag	New= 0.61 in^2
S	New= 0.23 in^3
COUPLING	Inner 0.12″ Sleeve
COATING	Hot-Dip Galvanized (G), Bare Steel (NG), or Epoxy Powder Coated (EP)
STANDARD RAM	RAM 3.14 in^2 Piston Area, 7,500 Maximum P.S.I. (4,000 Max. P.S.I. Installation Pressure)
STRUCTURAL CAPACITY IN COMPRESSION*	
8 Tons	Ultimate
4 Tons	Allowable
CAPACITY FROM LOAD TEST**	
6 Tons	Maximum Test Load
4 Tons	Allowable from Test (F.S.=1.5)

***Note 1:** Structural capacity is based on buckling strength of shaft in firm soils with pinned head conditions without corrosion (temporary short-term applications). Push piers shall be installed to appropriate depth into suitable bearing stratum as determined by geotechnical engineer or local practice. For tension capacity, push pier sections must be welded together or a reinforcing steel bar and grout must be placed in the pile.

****Note 2:** Push pier capacity is determined by load test using Magnum installation rams or lifting kit. All push piers shall be load tested to 1.5 times the desired working load. Test load is limited by maximum safe operating ram pressure or buckling capacity of shaft, whichever is less.

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West Chester, OH 45069
800-822-7437
www.magnumpiering.com

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MAGNUM® MP7500K Slabjack Ram Kit

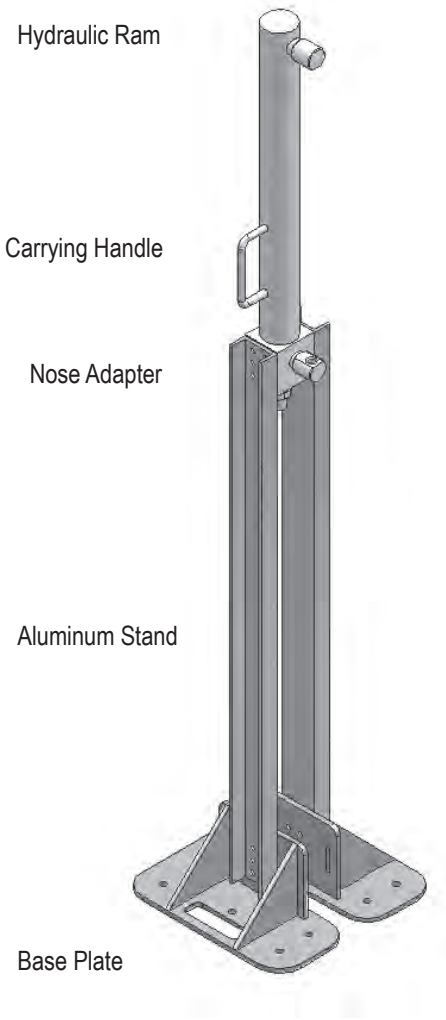
8 Ton Maximum Capacity

2.00″ Bore, 20″ Stroke, 5,000 psi Maximum Pressure

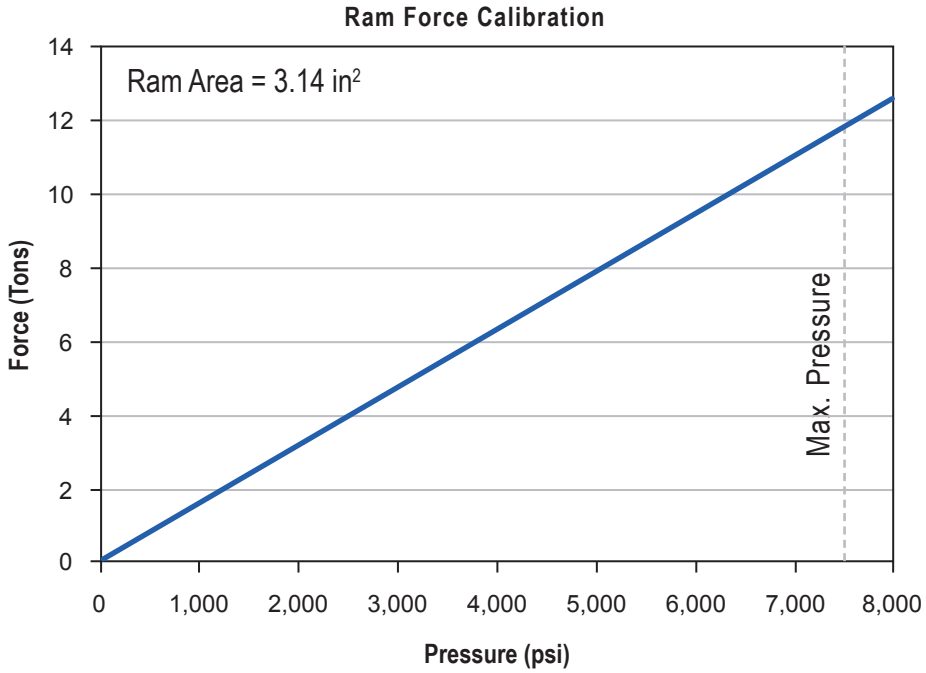
Hydraulic Ram Assembly for MP212 Slabjack Pier Shaft

Description

Magnum MP7500 Slabjack Rams are used for lifting and temporary support of slabs-on-grade and other light structures. The ram has an ultimate lifting capacity of 8 tons at maximum pressure. It is used for precision lifting applications in combination with grout injection for longer term support. Ram and stand height is 66.16″. The assembly can accommodate push pier columns up to 36″ long that are coupled together by male-female slip connections. Additional push pier column sections can be added until the pier reaches adequate bearing material and a successful load test is achieved. Base plate consists of two 6″ x 12″ rectangles with (10) bolt hole pattern. Pier to slab connection, if needed, is by non-shrink grout.



SPECIFICATIONS	
Bore	2.00″ Diam.
Piston Rod	1.25″ Diam.
Stroke	22″
Max. Pressure	7,500 psi
Burst Pressure	15,000 psi
Bolts	(10) ½″ x 4.5″ Titen HD or Equiv.
Nose Adapter	1.75″ Diam. (Fits MP212 Push Pier Shaft)
Hydraulic Hose	3/8″ Diam.



Note: Magnum's slabjack piering system is rated for temporary lifting only. Permanent slab support, pier to slab connection, required pier capacity, and pier spacing should be designed by a professional engineer taking into account the thickness, weight, live loads, and punching shear strength of the slab.

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section 9

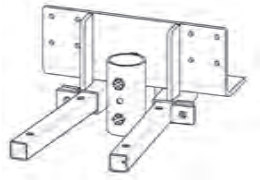
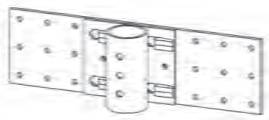
MICROPILE & THREADBAR BRACKETS

MAGNUM PIERING, INC.

MAGNUM PIERING® ROCK SOLID

MAGNUM® HELICAL PILES

Magnum® Piering
Micropile Bracket Specifications

Magnum® Micropile Brackets	System Ratings & Specifications								
	Name	Fits Pile Diam. (in)	No. Bolts / Thru Holes	Bolt Hole Diam. (in)	Structural Capacity*		Description	Surface Coating**	Schematic
					Ultimate (tons) Comp / Tens	Allowable (tons) Comp / Tens			
MP1009-30	Micropile Angle Bracket	3.00	3	3/4	50 / 22	25 / 11	8″ x 6″ x 21″ Gusseted Angle w/ 8 bolt holes	G, P	 Shown here with MP1010 drill arms (sold separately)
MP1009-35	Micropile Angle Bracket	3.50	3	3/4	50 / 22	25 / 11	8″ x 6″ x 21″ Gusseted Angle w/ 8 bolt holes	G, P	
MP1009-40	Micropile Angle Bracket	4.00	3	3/4	50 / 22	25 / 11	8″ x 6″ x 21″ Gusseted Angle w/ 8 bolt holes	G, P	
MP1009-45	Micropile Angle Bracket	4.50	3	3/4	50 / 22	25 / 11	8″ x 6″ x 21″ Gusseted Angle w/ 8 bolt holes	G, P	
MP1018-30	Micropile Plate Bracket	3.00	3	3/4	50 / 50	25 / 25	8″ x 27″ x 3/8″ Plate w/ 18 bolt holes	G, P	 Available with MP1020 drill arms (sold separately)
MP1018-35	Micropile Plate Bracket	3.50	3	3/4	50 / 50	25 / 25	8″ x 27″ x 3/8″ Plate w/ 18 bolt holes	G, P	
MP1018-40	Micropile Plate Bracket	4.00	3	3/4	50 / 50	25 / 25	8″ x 27″ x 3/8″ Plate w/ 18 bolt holes	G, P	
MP1018-45	Micropile Plate Bracket	4.50	3	3/4	50 / 50	25 / 25	8″ x 27″ x 3/8″ Plate w/ 18 bolt holes	G, P	

***Note 1** All Magnum products are manufactured using minimum A513 65 ksi minimum yield strength structural tubing, or better, for the collar and ASTM A36 plate steel, or better, for the bearing plates. As Magnum is committed to testing and improving products, these specifications are subject to change. Additional product specifications may be available at **www.magnumpiering.com** from Magnum's technical support professionals upon request. Structural capacity of bracket and micropile system may be limited by the capacity of the micropile and the structure to which the bracket is connected. Capacity of the micropile and structure shall be determined by an engineer.

****Note 2** G=hot dip galvanized per ASTM A153/A123 as appropriate, P=Magnum blue paint

Magnum Piering® MP1009 Micropile Bracket

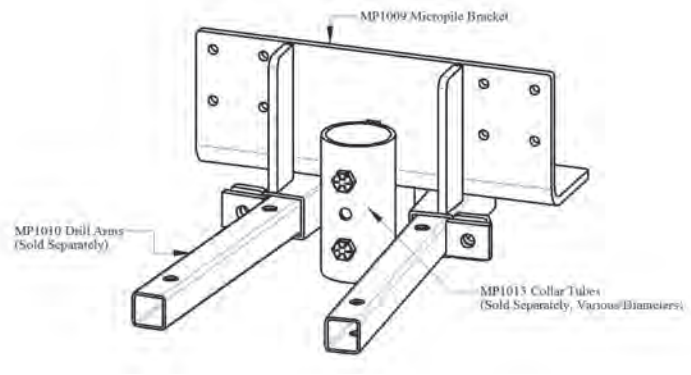
26 Tons Maximum Allowable Capacity

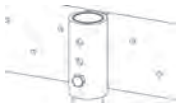
8″ x 6″ x 21″ x 3/8″ Angle with 8 – 9/16″ Bolt Holes
Fits 3″, 3.5″, 4″, & 4.5″ O.D. Steel Micropile Casings

SPECIFICATIONS	
Collar Tube	0.37 in. x 3″, 3.5″, 4″, or 4.5″ I.D. ASTM A513 GR65+
Configuration	8″x6″x21″x3/8″ Angle with 8 – 9/16″ Bolt Holes
Pile Connection	(1, 2, or 3) 3/4″ SAE GR8 / ASTM A480
Surface Coating	Galvanized per ASTM A153/A123 (G), Standard Magnum Blue Paint (P), or Epoxy Coated per ICC-ES AC228 (EP)
Compatibility	3″, 3.5″, 4″, and 4.5″ O.D. Steel Micropile Casings

Description

The Magnum MP1009 micropile bracket has 54 tons maximum ultimate capacity, 26 tons working capacity in compression and tension. The bracket consists of any one of 4 different sized collar tube with three ¾″ threaded bolt holes for connection to steel micropile casings. The bracket has 8 holes for attachment to existing concrete using concrete anchors. The bracket is designed in accordance with IBC, ACI, and AISC codes. Design and detailing of the connection to the structure varies by project and is the responsibility of registered design professional including maximum concrete span, pier spacing, concrete shear, and concrete bearing.



CONNECTION TYPE	ULTIMATE CAPACITY 0.13 / 0.25 Casing Wall Thickness	ALLOWABLE CAPACITY 0.13 / 0.25 Casing Wall Thickness
 SINGLE BOLTED	10 Tons / 18 Tons	5 Tons / 9 Tons
 DOUBLE BOLTED	17 Tons / 35 Tons	8 Tons / 18 Tons
 TRIPLE BOLTED	28 Tons / 53 Tons	14 Tons / 26 Tons

*Bracket connection to pile consists of field threaded blind bolts as described in Section 7-13 of AISC Code. Capacities shown are based on IAS accredited laboratory testing of Magnum products.

Installation Note:
Apply a layer of quick-set chemical grout to the angle and attach to the foundation using (8) 1/2″ concrete anchors. After grout sets, attach drill support arms and mount drill. Drill the micropile to the specified depth. Install desired reinforcing steel bar, grout, and a 6' minimum section of casing at the top of the pile. Slip appropriate collar tube over micropile casing and secure to bracket with 1-1/4″ bolt supplied. Remove the drill and the drill arms for use on the next micropile. Once the micropile grout has cured, a Magnum ram, or Magnum lifting kit, with the appropriate size drive shoe can be used to lift and re-level the structure if necessary. Lock-off the pile to the bracket with one, two, or three 3/4″ Grade 8 bolts, or weld.

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Magnum Piering® MP1018 Micropile Bracket

26 Tons Maximum Allowable Capacity

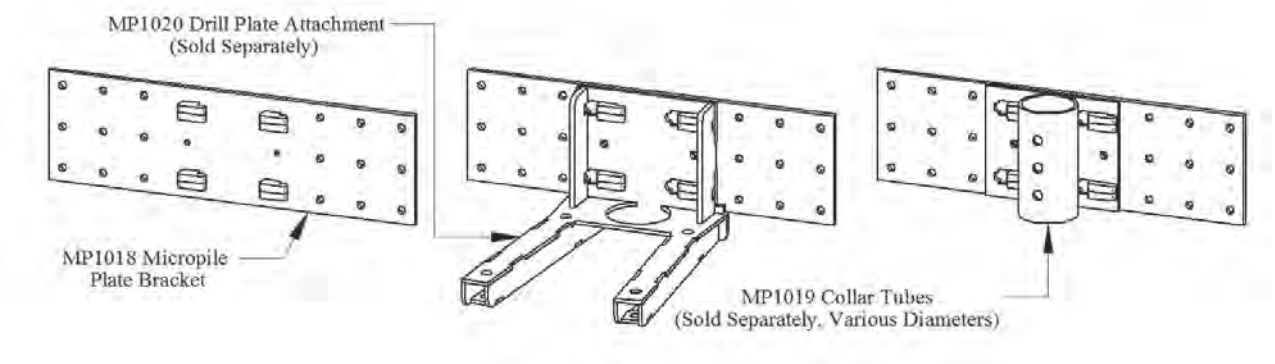
8″ x 27″ x 3/8″ Plate with 18 – 1/2″ Bolt Holes

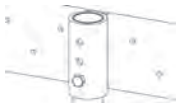
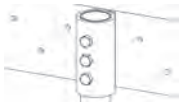
Fits 3″, 3.5″, 4″, & 4.5″ O.D. Steel Micropile Casings

SPECIFICATIONS	
Collar Tube	0.37 in. x 3″, 3.5″, 4″, or 4.5″ I.D. ASTM A513 GR65+
Configuration	8″x27″x3/8″ Plate with 16 – 1/2″ Bolt Holes
Pile Connection	(1, 2, or 3) 3/4″ SAE GR8 / ASTM A480
Surface Coating	Galvanized per ASTM A153/A123 (G), Standard Magnum Blue Paint (P), or Epoxy Coated per ICC-ES AC228 (EP)
Compatibility	3″, 3.5″, 4″, and 4.5″ O.D. Steel Micropile Casings

Description

The Magnum MP1018 micropile bracket has 54 tons maximum ultimate capacity, 26 tons working capacity in compression and tension. The bracket consists of any one of 4 different sized collar tube with three ¾″ threaded bolt holes for connection to steel micropile casings. The bracket has 16 holes for attachment to existing concrete using concrete anchors. The bracket is designed in accordance with IBC, ACI, and AISC codes. Design and detailing of the connection to the structure varies by project and is the responsibility of registered design professional including maximum concrete span, pier spacing, concrete shear, and concrete bearing.



CONNECTION TYPE	ULTIMATE CAPACITY 0.13 / 0.25 Casing Wall Thickness	ALLOWABLE CAPACITY 0.13 / 0.25 Casing Wall Thickness
 SINGLE BOLTED	10 Tons / 18 Tons	5 Tons / 9 Tons
 DOUBLE BOLTED	17 Tons / 35 Tons	8 Tons / 18 Tons
 TRIPLE BOLTED	28 Tons / 53 Tons	14 Tons / 26 Tons

*Bracket connection to pile consists of field threaded blind bolts as described in Section 7-13 of AISC Code. Capacities shown are based on IAS accredited laboratory testing of Magnum products.

Installation Note:
Attach bracket plate to the side of foundation using up to (18) 1/2″ concrete anchors. Red Head, Strong Bolt, or Titan anchors may be used as well as epoxy dowels. Most concrete anchors typically offer 3 kips working load each (see anchor manufacturer for strength information, specific bolt patterns should be checked by an engineer or load tested to at least F.S. = 1.5). Attach drill support arms and mount drill. Drill the micropile to the specified depth. Install desired reinforcing steel bar, grout, and a 6´ minimum section of casing at the top of the pile. Remove drill support arms and slip appropriate collar tube over micropile casing and secure to bracket with pins supplied. Once the micropile grout has cured, a Magnum ram, or Magnum lifting kit, with the appropriate size drive shoe can be used to lift and re-level the structure if necessary. Lock-off the pile to the bracket with one, two, or three 3/4″ Grade 8 bolts, or weld.

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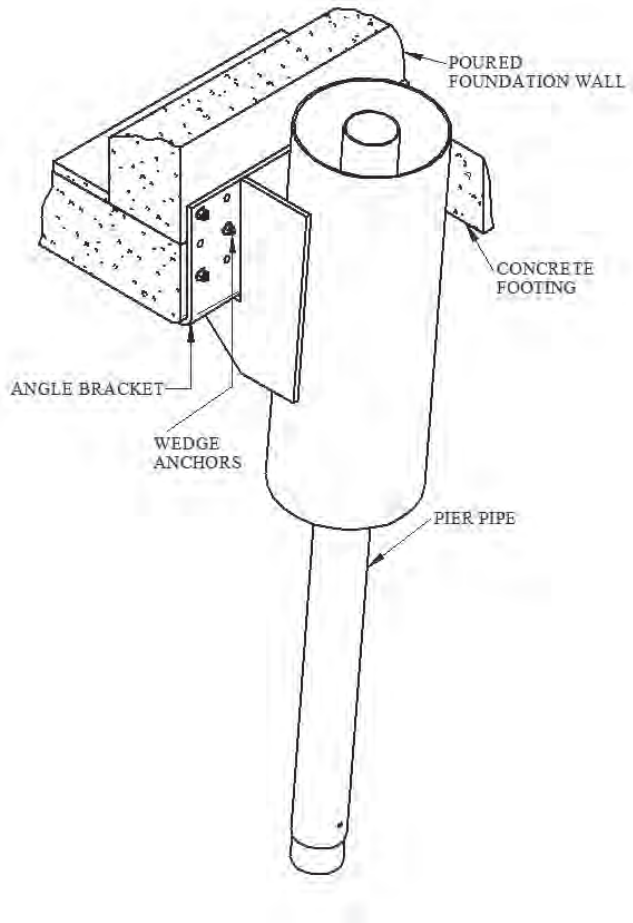
Magnum Piering® MP1029
Grout-Guide Micropile Bracket

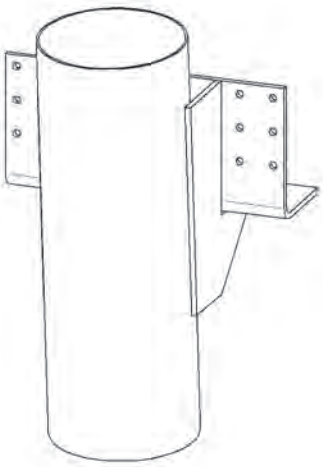
38 Tons Maximum Allowable Capacity

8″ x 12 ″ x 24″ x 1/2″ Angle with 12 – 11/16″ Bolt Holes
Fits 6″, 6.5″, 7″, & 8.6″ O.D. Steel Micropile Casings

SPECIFICATIONS	
Grout-Guide	12.75″ Diam. x 0.13″ Wall (or better) x 36″ Long ASTM A513 GR65+
Configuration	8″ x 12″ x 24″ x 1/2″ Angle with 12 – 11/16″ Bolt Holes
Pile Connection	Fill Annular Space with High-Strength, Non-Shrink Grout
Surface Coating	Galvanized per ASTM A153/A123 (G), Standard Magnum Blue Paint (P), or Epoxy Coated per ICC-ES AC228 (EP)
Compatibility	6″, 6.5″, 7″, and 8.6″ O.D. Steel Micropile Casings

The Magnum MP1029 micropile bracket has 76 tons maximum ultimate capacity, 38 tons working capacity in compression and 3 tons maximum ultimate capacity, 1.5 tons working capacity in tension. Tension capacity is governed by concrete break-out, the amount of reinforcing in the existing foundation, and the strength of the concrete. The bracket consists of a 12.75″ diameter guide tube for connection to steel micropile casings. The bracket has 16 holes for attachment to existing concrete using concrete anchors. The bracket is designed in accordance with IBC, ACI, and AISC codes. Design and detailing of the connection to the structure varies by project and is the responsibility of registered design professional including maximum concrete span, pier spacing, concrete shear, and concrete bearing.





Installation Note:
Excavate soil in area of bracket. Notch footing (if any) flush with foundation wall. Apply a thin layer of quick-set non-shrink grout to the angle and attach to the foundation using a minimum of (6) 5/8″ concrete anchors. After grout sets, drill micropile through the center of the guide sleeve. Install desired reinforcing steel bar, grout, and a 6' minimum section of casing at the top of the micropile. Fill annular space between guide sleeve and micropile casing with high-strength, non-shrink grout.

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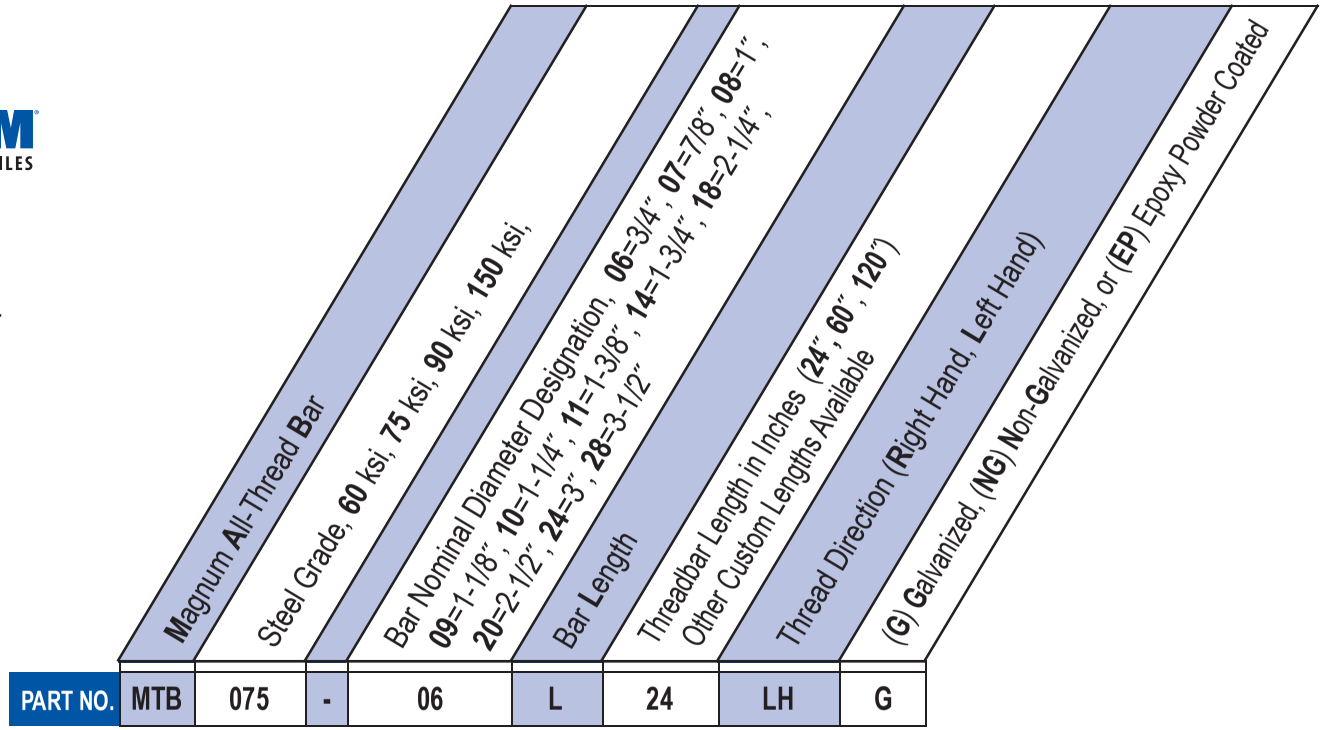
Magnum® All-Thread Bar
Product Number Specification Legend

Magnum Piering, Inc.
ISO 9001:2008
Certified



Explanation:

The Magnum All-Thread Bar Accessory product number above **MTB075-06L24LHG** is for a grade 75, all-thread bar with nominal diameter of 3/4″.
The bar is 24″ long with left-hand thread. The surface reparation is Galvanized.

Note: See “Magnum All-Thread Bar Accessory Specifications” table on next page for detailed information. Specification information is also available at ***www.magnumpiering.com***

Magnum Piering® MTB075
Grade 75 All-Threadbar

22 ton to 480 ton Ultimate Capacity

75 ksi Yield, 100 ksi Ultimate Strength Continuous Threaded Bar

Description

Grade 75 All-Thread bars have an ultimate capacity from 22 to 480 tons in tension and compression (fully braced conditions only). All-Thread bars can be used in a variety of applications including micropiles, rock anchors, soil nails, and soil anchors for permanent and temporary structures. All-threadbars are typically installed in ground using a fixed or articulated mast microdrill with down-hole or top vibratory hammer. These systems can have advantages over helical piles and push piers in soils with excessive rock, cobble, or debris. They also are useful when penetration into hard to very hard bedrock is required. Ultimate and yield strength shown in specifications below is indicative of the steel structural strength without corrosion. The strength of micropiles, rock anchors, soil nails, and soil anchors in ground may be limited by the soil-grout bond or grout-steel bond. Magnum recommends that all threadbar applications be designed by a licensed professional engineer or architect experienced in the design of these systems. Magnum technical support representatives are available to assist with design of grouted threadbar systems for a multitude of applications.

SPECIFICATIONS						
DESIGNATION	NOMINAL DIAMETER	GROSS AREA	ULTIMATE STRENGTH	YIELD STRENGTH	NOMINAL WEIGHT	PART NUMBER
06	3/4″	0.44 IN^2	22 TONS	17 TONS	1.5 PLF	MTB075-06LH
07	7/8″	0.60 IN^2	30 TONS	23 TONS	2.0 PLF	MTB075-07LH
08	1″	0.79 IN^2	40 TONS	30 TONS	2.7 PLF	MTB075-08LH
09	1-1/8″	1.00 IN^2	50 TONS	38 TONS	3.4 PLF	MTB075-09LH
10	1-1/4″	1.27 IN^2	64 TONS	48 TONS	4.3 PLF	MTB075-10LH
11	1-3/8″	1.56 IN^2	78 TONS	59 TONS	5.3 PLF	MTB075-11LH
14	1-3/4″	2.25 IN^2	113 TONS	84 TONS	7.7 PLF	MTB075-14RH
18	2-1/4″	4.00 IN^2	200 TONS	150 TONS	13.6 PLF	MTB075-18RH
20	2-1/2″	4.91 IN^2	246 TONS	184 TONS	16.7 PLF	MTB075-20RH
28	3-1/2″	9.61 IN^2	480 TONS	360 TONS	32.7 PLF	MTB075-28RH

LH = Left Hand Thread
RH = Right Hand Thread

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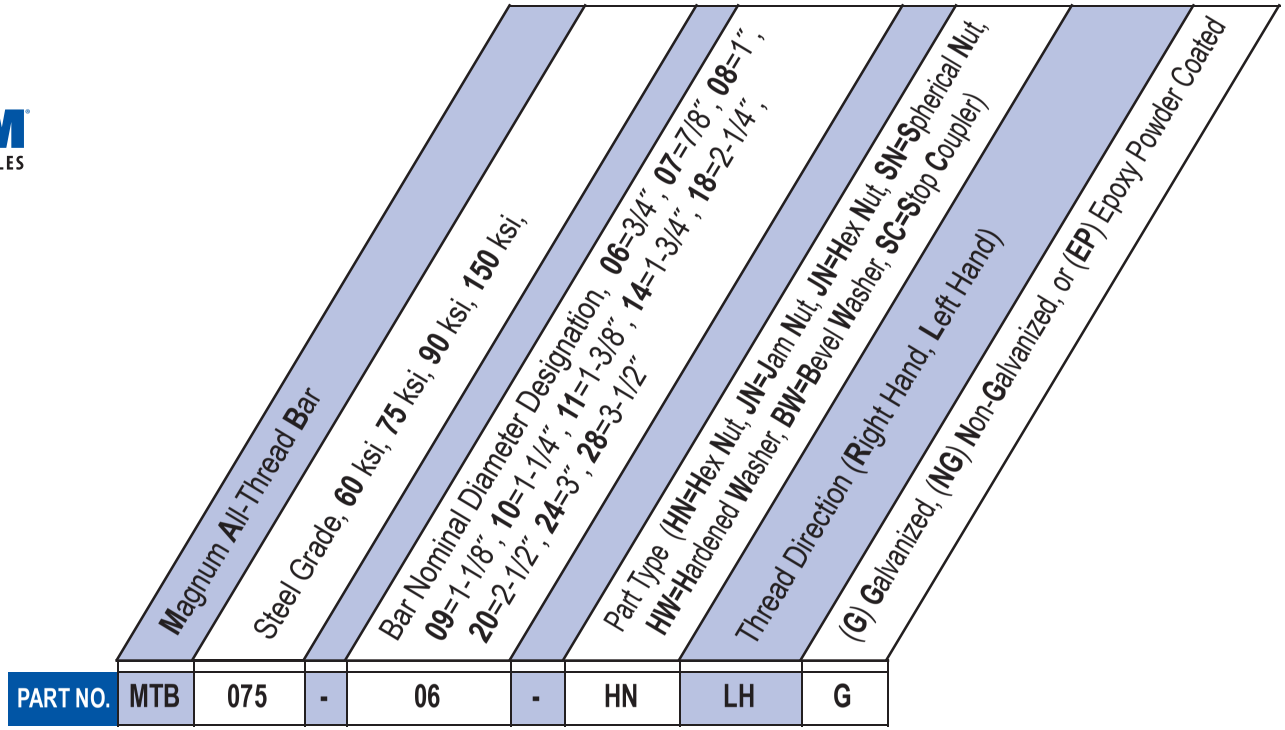
Magnum® All-Thread Bar Accessory
Product Number Specification Legend

Magnum Piering, Inc.
ISO 9001:2008
Certified

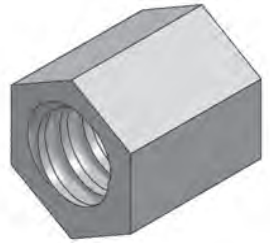


Explanation:

The Magnum All-Thread Bar Accessory product number above **MTB075-06-HNLHG** is for a grade 75, hex nut that fits an all-thread bar with nominal diameter of 3/4″. The nut has left-hand thread. The surface reparation is Galvanized.

Note: See “Magnum Piering All-Thread Bar Accessory” table on next page for detailed information. Specification information is also available at ***www.magnumpiering.com***

Magnum® Piering Threadbar Accessories

Magnum® Accessories	System Ratings & Specifications				
	Description	Fits Product Designation	Notes	Surface Coating**	Schematic
MTB075-06HNLH	#6 GR75 Hex Nut	MDM6IS1224G	Hex nuts are typically sold with MHC1080 Caps. Nuts shown here are for surplus or replacement parts.	G, NG, EP	
MTB075-08HNLH	#8 GR75 Hex Nut	MSC1080-150824, MHC1080-3824, MHC1080-35824		G, NG, EP	
MTB075-10HNLH	#10 GR75 Hex Nut	MSC1080-1751024, MHC1080-31024, MHC1080-41024		G, NG, EP	
MTB075-14HNRH	#14 GR75 Hex Nut	MHC1080-41424		G, NG, EP	
MTB075-20HNRH	#20 GR75 Hex Nut	MHC1080-52024, MHC1080-62024		G, NG, EP	
MTB075-06JNLH	#6 GR75 Jam Nut	MDM6IS1224G	Hex nuts are typically sold with MHC1080 Caps. Nuts shown here are for surplus or r eplacement parts.	G, NG, EP	
MTB075-08JNLH	#8 GR75 Jam Nut	MSC1080-150824, MHC1080-3824, MHC1080-35824		G, NG, EP	
MTB075-10JNLH	#10 GR75 Jam Nut	MSC1080-1751024, MHC1080-31024, MHC1080-41024		G, NG, EP	
MTB075-14JNRH	#14 GR75 Jam Nut	MHC1080-41424		G, NG, EP	
MTB075-20JNRH	#20 GR75 Jam Nut	MHC1080-52024, MHC1080-62024		G, NG, EP	
MTB075-06ENLH	#6 Eye Nut	MDM6IS1224G	Eye nuts can be used with MHC1080 Cap to create an effective guy anchor.	G, NG	
MTB075-08ENLH	#8 Eye Nut	MSC1080-150824, MHC1080-3824, MHC1080-35824		G, NG	
MTB075-10ENLH	#10 Eye Nut	MSC1080-1751024, MHC1080-31024, MHC1080-41024		G, NG	
MTB075-20ENRH	#20 Eye Nut	MHC1080-52024, MHC1080-62024		G, NG	

Magnum® Piering Threadbar Accessories Cont.

Magnum® Accessories	System Ratings & Specifications				
	Description	Fits Product Designation	Notes	Surface Coating**	Schematic
MTB075-06HW	#6 Hardened Washer	MDM6IS1224G	Wedge washers, if required, are sold separately. Wedge washers are available in 5, 10, and 15 deg angles depending on threadbar sizes.	G, NG	
MTB075-08HW	#8 Hardened Washer	MSC1080-150824, MHC1080-3824, MHC1080-35824		G, NG	
MTB075-10HW	#10 Hardened Washer	MSC1080-1751024, MHC1080-31024, MHC1080-41024		G, NG	
MTB075-14HW	#14 Hardened Washer	MHC1080-41424		G, NG	
MTB075-20HW	#20 Hardened Washer	MHC1080-52024, MHC1080-62024		G, NG	
MTB075-10BW	#10 15 Deg Bevel Washer	MSC1080-1751024, MHC1080-31024, MHC1080-41024	Wedge washers, if required, are sold separately. Wedge washers are available in 5, 10, and 15 deg angles depending on threadbar sizes.	G, NG	
MTB075-14BW	#14 5 Deg Bevel Washer	MHC1080-41424		G, NG	
MTB075-20BW	#20 10 Deg Bevel Washer	MHC1080-52024, MHC1080-62024		G, NG	

***Note 1** G=zinc coated per ASTM A153/A123 or ASTM B633 as appropriate, NG=bare steel, EP=epoxy powder coated per ICC-ES AC228, P=Magnum blue paint

Notes and Specifications As Magnum is committed to testing and improving products, these specifications are subject to change. Additional product specifications available at **www.magnumpiering.com**, in the **Magnum Product Catalog**, and in the **Magnum Helical Pile Engineering Manual** available upon request.

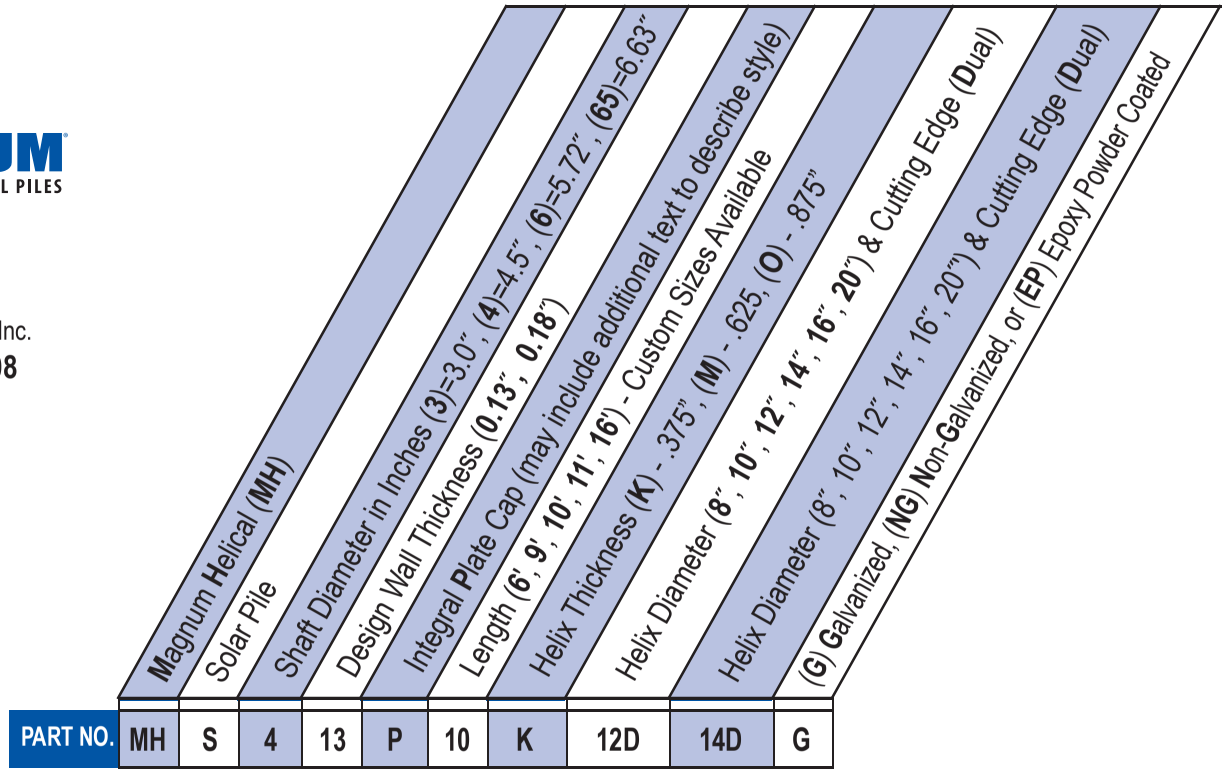
section 10

SOLAR PANEL FOUNDATIONS

MAGNUM PIERING, INC.

Magnum® Helical Solar Pile
Product Number Specification Legend

Magnum Piering, Inc.
ISO 9001:2008
Certified



Explanation:

The Magnum Helical Solar Pile product number above **MHS413P10K12D14DG** is for a Pile with 4.5″ diameter shaft, a 0.13″ wall thickness, an integral plate cap, 10 ft. long with (2) 0.375″ Duall Cutting Edge Helices, 12 and 14 inches in diameter, and the surface reparation is Galvanized.

Note: See "Magnum Piering Helical Solar Pile Specifications" table on next page for detailed information. Specification information is also available at ***www.magnumpiering.com***

Magnum® Piering Solar Pile Specifications

Magnum® Solar Pile Products	System Ratings & Specifications													
	Shaft Specifications			Maximum Installation Torque (ft-lbs)	Capacity to Torque Ratio (ft^{-1})	Maximum Capacity (Tension & Comp)		Lateral Capacity* (lbs)		Helix Sizes *(dual cutting edge)* (in)	Helix Gauge	Surface Coating	Standard Lengths *(custom sizes available)* (ft)	Schematic
	Design Wall Gauge (in)	Outside Diameter (in)	Approx Weight (plf)			Ultimate (tons)	Allowable (tons)	@18″ a.g.s.	@60″ a.g.s.					
MHS313	0.125	3.00	4.0	6,000	8.0	24	12	1600	550	8, 10, 12, 14	0.375	G, NG, EP	6, 8	
MHS3521	0.21	3.50	7.9	12,000	7.0	42	21	3000	1300	8, 10, 12, 14	0.375	G, NG, EP	6, 8	
MHS413	0.125	4.50	6.0	14,000	5.7	40	20	3300	1400	10, 12, 14	0.375	G, NG, EP	6, 8, 10	
MHS419	0.188	4.50	9.1	21,000	5.7	60	30	4500	1850	10, 12, 14, 16	0.375	G, NG, EP	6, 8, 10	
MHS425	0.25	4.50	12.0	28,000	5.7	80	40	5200	2300	10, 12, 14, 16	0.375	G, NG, EP	6, 8, 10	
MHS613	0.125	5.72	7.7	23,000	4.6	53	26	5000	2250	12, 16	0.375	G, NG, EP	8, 11, 16	
MHS619	0.188	5.72	11.5	34,000	4.6	78	39	6800	3100	12, 16, 20	0.375	G, NG, EP	8, 11, 16	
MHS6513	0.125	6.63	8.9	25,000	4.0	50	25	6200	3200	12, 16, 20	0.375	G, NG, EP	8, 11, 16	
MHS6519	0.188	6.63	13.3	35,000	4.0	70	35	7500	4000	12, 16, 20	0.375	G, NG, EP	8, 11, 16	
Magnum Patented Dual-Cutting Edge Blades Recommended on All Solar Products	Improved Penetration into Dense & Cobble Soils, Cuts Through Many Fills/Trash, Eliminates Wobble, Maintains Plumbness, Less Soil Disturbance													

***Note 1** Lateral capacity is approximate and based on stiff clay (SPT N>10) or better soils with deep embedment (flexible pile design). Theoretical defletion is limited to 3″ or less at the pile head. Lateral load is applied at distance shown above ground surface (a.g.s.). Contact Magnum's technical support and engineering team for site specific solar pile designs.

Surface Coatings G = Hot-Dip Zinc Galvanized per ASTM A123/A153, NG = Bare Steel, EP = Epoxy Powder Coated per ICC-ES AC228, P = Magnum Blue Paint

General Notes All Magnum helical pile products are manufactured using minimum 65 ksi minimum yield strength structural tubing, or better, for the shaft and ASTM A36 plate steel, or better, for the helical bearing plates. As Magnum is committed to testing and improving products, these specifications are subject to change. Additional product specifications available at **www.magnumpiering.com** and in the **Magnum Helical Pile Engineering Reference Manual** available upon request. Structural capacity is for piles in firm soil with fully braced pile cap. Structural capacity takes into account corrosion over IBC design life in moderate to high corrosive soils based on ICC-ES AC358. Consult a Magnum corrosion engineer for severe corrosive soils.

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section 11

EARTH ANCHOR SYSTEMS

MAGNUM PIERING, INC.

Magnum® Deadman Plate Anchor
Product Number Specification Legend

Magnum Piering, Inc.
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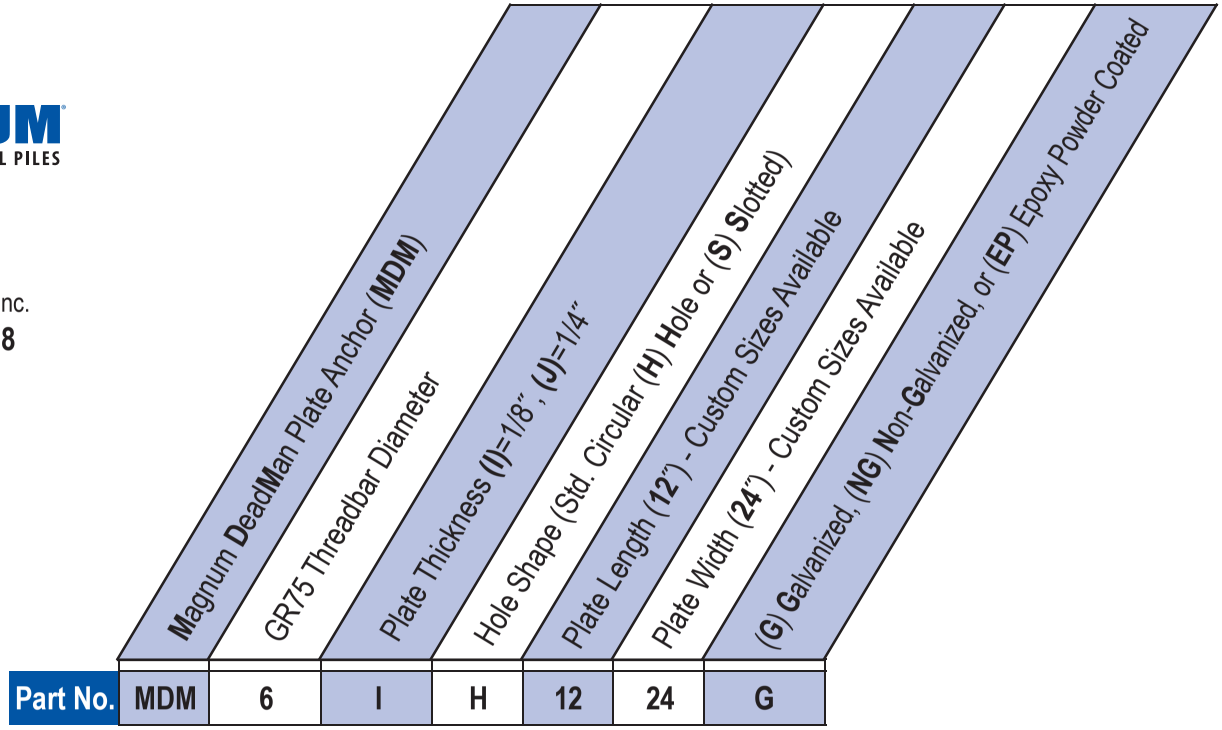
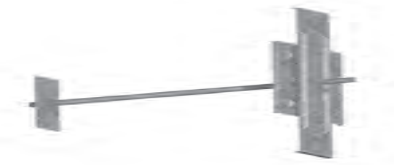


Explanation:

The Magnum Deadman Plate product number above **MDM6IS1224G** is for a 12″ by 24″ by 1/8″ thick Steel Plate with standard circular hole sized for a #6 GR75 thread bar, and the surface reparation is Galvanized.

Note: Specification information available from your Magnum technical support representative. More information may be available at ***www.magnumpiering.com***

Magnum® Piering
Earth Anchor Specifications

Magnum® Earth Anchor Products	System Ratings & Specifications						
	Name	GR75 Threadbar Diam. (in)	Structural Capacity*		Description	Surface Coating**	Schematic
			Ultimate (tons)	Allowable (tons)			
MDM6IS1224G	Deadman Plate Anchor	3/4	16	8	12″ x 24″ x 1/8″ Reinforced Plate	G, NG, P, EP	

Notes: *Capacity of product in ground may be limited by available passive soil pressure. Application should be designed by a registered professional.

**G = Hot-Dip Zinc Galvanized per ASTM A123/A153, NG = Bare Steel, EP = Epoxy Powder Coated per ICC-ES AC228, P = Magnum Blue Paint.

As Magnum is committed to testing and improving products, these specifications are subject to change. Additional product specifications available may be found at **www.magnumpiering.com** or contact a Magnum technical support representative for assistance.

Magnum Piering® MDM6IS1224 Deadman Plate Anchor

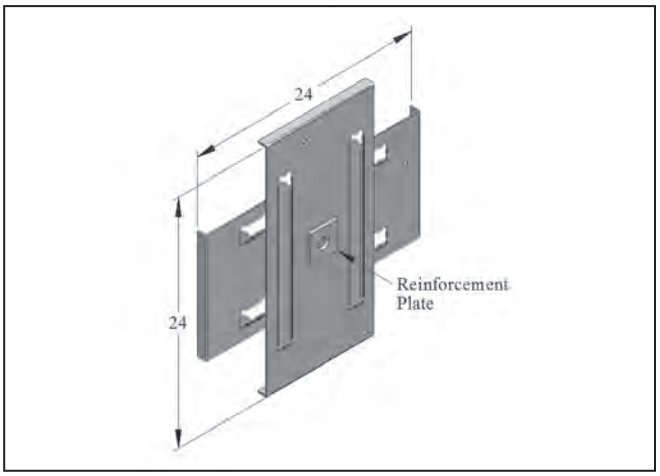
16 Tons Ultimate, 8 Tons Allowable Capacity

12″ x 24″ x 0.125″ Galvanized Plate Anchor
w/ #6 GR75 Threadbar Anchor Rod

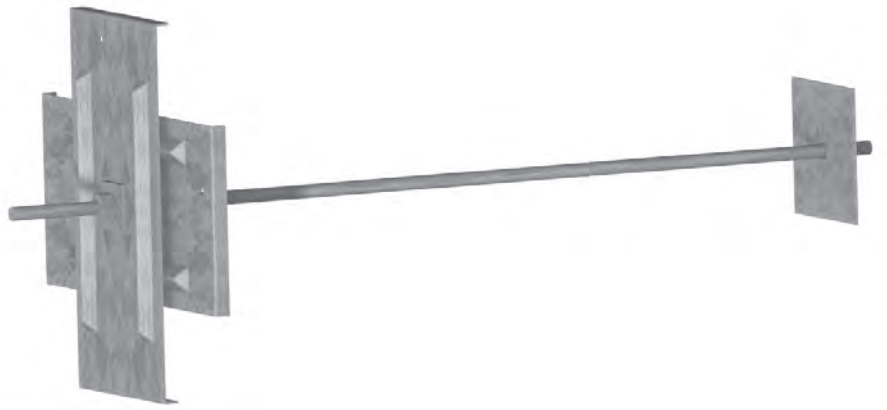
Description

The Magnum MDM6IS1224 Deadman Plate Anchor consists of a 12″ x 24″ by 0.125″ thick formed and reinforced steel plate with #6 GR75 threadbar and can support working loads up to 8 tons in tension. The post is designed in accordance with IBC, ACI, and AISC codes. Design and detailing of the anchor varies by project and is the responsibility of registered design professional including minimum length of threadbar, anchor spacing, and working load in ground.

SPECIFICATIONS	
Deadman Plate	12″ x 24″ x 1/8″ Steel Plate ASTM A36 GR36+
Threadbar	#6 Grade 75
Surface Coating	Galvanized per ASTM A153/A123 (G), Standard Magnum Blue Paint (P), or Epoxy Coated per ICC-ES AC228 (EP)



Installation Note:
Layout required anchor locations. Excavate pit on exterior of basement to accommodate plate anchor. Drill 1 inch diameter hole through basement wall or other retaining wall. Drive #6 thread bar horizontally through wall until it daylights in excavated pit. Driving can be done by hand using sledge hammer in soft or loose soils or using a small jackhammer in more dense materials. Attach deadman plate anchor to threadbar using appropriate hex nut. Backfill excavated pit using soil, structural fill, or lean concrete (flow fill) as specified by design professional. Post-tension plate anchor and load test, if required. Lock off to basement wall using Magnum bearing plate and hex nut.



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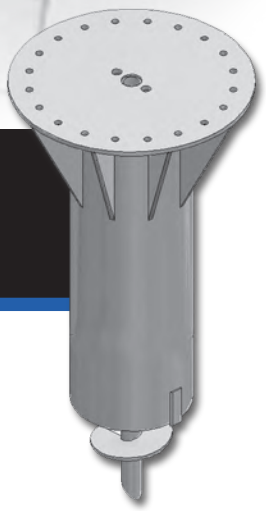
section 12

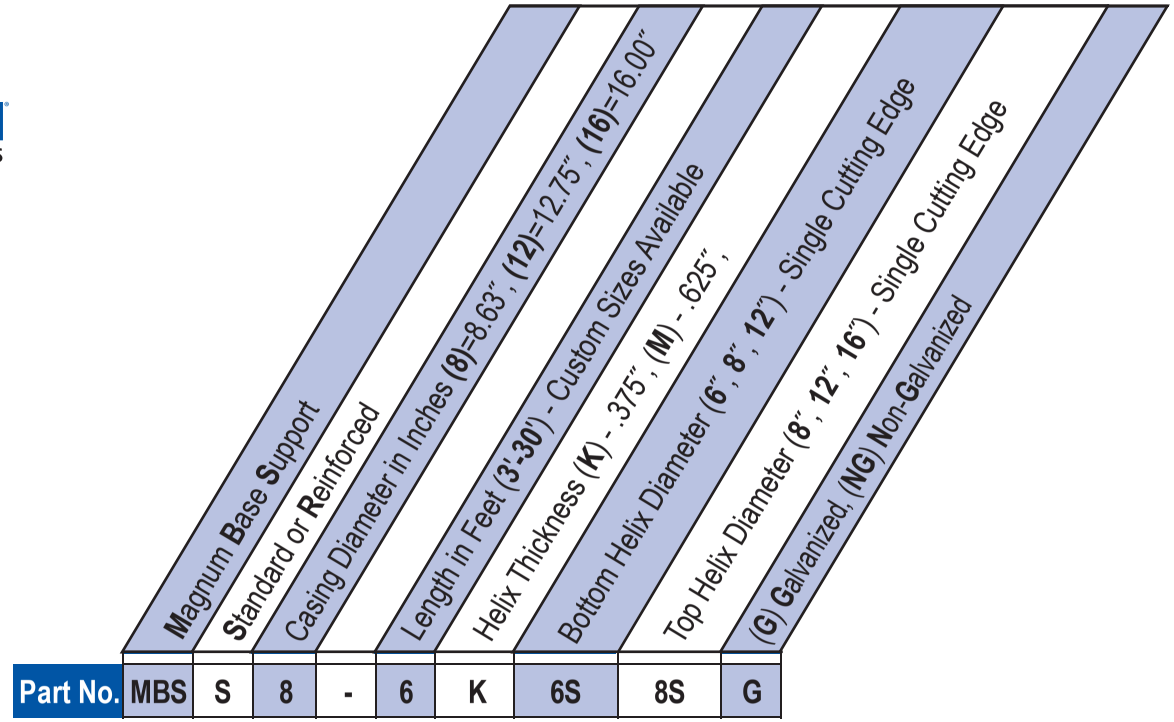
HELICAL POST BASES



MAGNUM PIERING, INC.

Magnum® Helical Post Base
Product Number Specification Legend

Magnum Piering, Inc.
ISO 9001:2008
Certified

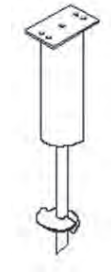


Explanation:

The Magnum Helical Post Base product number above **MBSS8-6K6S8SG** is for a Helical Post Base, Standard Capacity, 6 feet Long, with 6″ diameter bottom helix and 8″ diameter top helix, Single Cutting Edge, with integral top mounting plate, and the surface reparation is Galvanized.

Note: See "Magnum Piering Helical Post Base Specifications" table on next page for detailed information. Specific information is also available at ***www.magnumpiering.com***

Magnum® Piering
Helical Post Base Specifications

Magnum® Post Base Products	System Ratings & Specifications													
	Shaft Design Wall Gauge (in)	Shaft O.D. (in)	Casing Design Wall Gauge (in)	Casing O.D. (in)	Allowable Torque (ft-lbs)	Flexural Strength				Helix Sizes *(single edge helix)* (in)	Helix Gauge (in)	Surface Coating	Standard Lengths *(custom sizes available)* (ft)	Schematic
						Standard		With Slot						
						Ultimate (kip-ft)	Allowable (kip-ft)	Ultimate (kip-ft)	Allowable (kip-ft)					
MBSS8	0.125	3.00	0.109	8.63	14,000	27	16	22	13	8S, 6S	0.375	G, NG	3-10	
MBSS12	0.25	3.00	0.109	12.75	30,000	57	34	50	30	12S, 8S	0.375	G, NG	6-20	
MBSS16	0.25	4.50	0.109	16.00	53,000	87	52	78	47	16S, 12S	0.625	G, NG	10-30	
MBSR8	0.125	3.00	0.250	8.63	16,000	70	42	57	34	8S, 6S	0.375	G, NG	3-10	
MBSR12	0.25	3.00	0.250	12.75	30,000	138	83	130	78	12S, 8S	0.375	G, NG	6-20	
MBSR16	0.25	4.50	0.250	16.00	68,000	227	136	205	123	16S, 12S	0.625	G, NG	10-30	

***Note 1** Lateral capacity is approximate and based on stiff clay or medium sand (SPT N>10) or better soils. Theoretical defletion is limited to 3" or less at the pile head. Lateral load is applied at distance shown above ground surface (a.g.s.). Contact Magnum's technical support and engineering team for site specific solar pile designs.

Surface Coatings G = Hot-Dip Zinc Galvanized per ASTM A123/A153, NG = Bare Steel

General Notes All Magnum helical pile products are manufactured using minimum 65 ksi minimum yield strength structural tubing, or better, for the shaft and ASTM A36 plate steel, or better, for the helical bearing plates. As Magnum is committed to testing and improving products, these specifications are subject to change. Additional product specifications available at **www.magnumpiering com** and in the **Magnum Helical Pile Engineering Reference Manual** available upon request. Structural capacity is for piles in firm soil with fully braced pile cap. Structural capacity takes into account corrosion over IBC design life in moderate to high corrosive soils based on ICC-ES AC358. Consult a Magnum corrosion engineer for severe corrosive soils.

MAGNUM® MBS Helical Post Bases

Introduction

8″ to 16″ Diam. x 3 to 30 ft Long Steel Casing
for Support of Soundwalls, Luminaries, Signs, and Wind Towers

Description

The Magnum MBS Helical Post Base foundation consists of a variable length, large diameter steel casing encircling a smaller diameter tube shaft with two helical bearing plates. The central shaft extends beyond the bottom of the casing a distance of several feet as a guide to maintain plumbness during installation. The casing is welded to a top plate with slotted bolt-hole pattern. The entire foundation is screwed into the ground to a depth at which the top plate is positioned slightly below the ground surface. The tp plate accommodates attachment of various structures.

Helical foundations can significantly reduce construction cost and schedule time, because they can be installed in a fraction of the time required for drilled shafts. The use of helical foundations also improves traffic safety, because they eliminate the need for concrete curing and redundant traffic control. Helical foundations can be installed in areas with limited access, install easily through ground water, and do not produce drill spoil. These features make them particularly attractive alternatives for congested metropolitan areas and environmentally contaminated sites. Helical post foundations are installed using a hydraulic torque motor mounted to an excavator or derrick truck. Installation can generally be completed in minutes. The helices displace the soil with minimal disturbance much like a screw. The casing fills with soil during installation so as to resist crushing under external earth pressures. Several sizes are offered at 1 foot increments. Custom sizes are available for special cases.

The MBS Helical Post Base is capable of penetrating very stiff clays, dense sands and gravels, and even medium hard, highly weathered, sedimentary bedrock formations. MBS foundations are not applicable in soils characterized by a SPT blow count of more than 50 for 6 inches, hard bedrock, or soils with cobble and boulders. The size of helical post bases are typically governed by the overturning moment. Below is a table with preliminary sizing. Magnum's technical support professionals can assist with sizing recommendations and for a small fee can provide a complete engineering report for specific job sites. Bearing and pullout capacity can be checked using helical sizing charts or by traditional geotechnical calculations.

		Cohesive Soils				Non-Cohesive Soils			
		SOFT	MED	STIFF	V STIFF	LOOSE	MED	DENSE	V DENS
		Standard Penetration Test Blow Count (bpf)							
		2 - 4	4 - 8	8 - 15	>15	4 - 10	10 - 30	30 - 50	>50
		Cohesive (psf)				Angle of Internal Friction (deg)			
		400	800	1500	3000	29	33	39	45
		PRELIMINARY MBS SIZING							
Overturning Moment (kip-ft)	5	MBSS8-7	MBSS8-5	MBSS8-3	MBSS8-3	MBSS8-7	MBSS8-7	MBSS8-5	MBSS8-4
	10	MBSS12-10	MBSS12-6	MBSS8-5	MBSS8-4	MBSR8-10	MBSR8-9	MBSR8-7	MBSR8-6
	15	MBSS12-13	MBSS12-8	MBSR8-7	MBSR8-4	MBSR12-11	MBSR12-9	MBSS12-8	MBSR8-7
	20	MBSR12-16	MBSR12-10	MBSS12-7	MBSR8-5	MBSR12-12	MBSR12-10	MBSR12-9	MBSR12-7
	25	MBSR12-19	MBSR12-12	MBSR12-8	MBSR12-5	MBSR12-13	MBSR12-11	MBSR12-9	MBSR12-8
	30	MBSR16-19	MBSR12-13	MBSR12-9	MBSR12-6	MBSR16-13	MBSR16-11	MBSR12-10	MBSR12-8
	35	MBSR16-21	MBSR16-13	MBSR12-10	MBSR12-6	MBSR16-14	MBSR16-12	MBSR16-10	MBSR12-9
	40	N/A	MBSR16-14	MBSR12-11	MBSR12-7	N/A	MBSR16-13	MBSR16-10	MBSR16-9
	45		MBSR16-16	MBSR16-10	MBSR12-7		N/A	MBSR16-11	MBSR16-9
	50		N/A	MBSR16-11	MBSR16-7			N/A	MBSR16-9
	55			MBSR16-12	MBSR16-7				N/A
	60			N/A	MBSR16-8				
	65				MBSR16-8				
	70				MBSR16-9				
	75				N/A				

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www.magnumpiering.com

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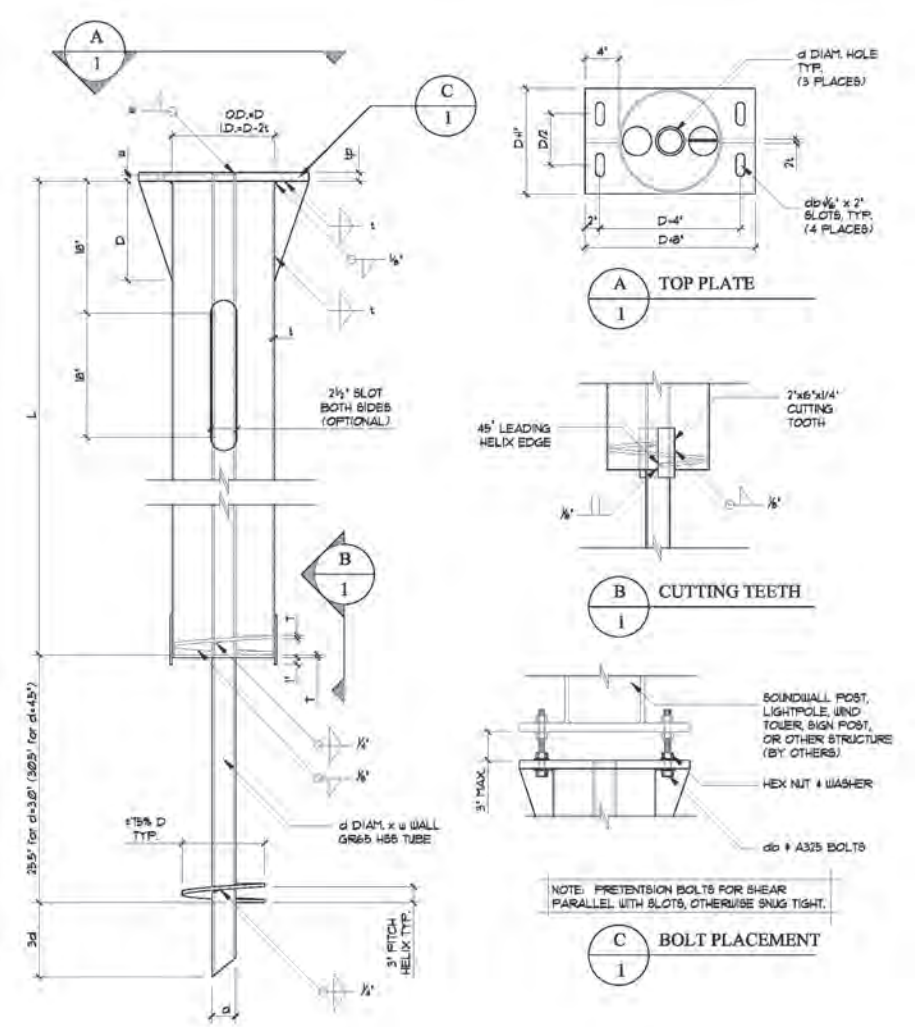
U.S. Patents 6,722,821; Other Patents Pending.

MAGNUM® MBSR Helical Post Base

Standard Capacity

8″ to 16″ Diam. x 3 to 30 ft Long Steel Casing
for Support of Soundwalls, Luminaries, Signs, and Wind Towers



Description

Magnum MBSS Helical Post Base is a full displacement deep foundation for support of sound barriers, luminaries, signs, wind towers and other structures where the primary loading condition is overturning or lateral shear. The standard capacity offers greater economy for many applications.

Helical Post Bases offer all the advantages of a helical foundation in that they do not produce drill spoil or cause vibrations during installation. They do not require concrete and the sign, luminary, or other structure can be mounted to the foundation immediately after installation. They are ideal for rail corridors, rural areas, along highways, and near bridge/overpass approaches.

Slotted top plate and four bolt moment connection allows adjustment in position and inclination. Patented design with novel geometry and side cutting teeth reduces installation torque and improves penetration into tough ground conditions. See accompanying sizing chart or contact a Magnum Technical Support representative for help with sizing and specification.

SPECIFICATIONS

POST BASE SIZE	STEEL CASING			HELIX GUAGE	SHAFT		TOP PLATE	BOLT DIAM.
	LGTH.	O.D.	GAUGE		DIAM.	GUAGE		
	L	D	t	T	d	w	tp	db
MBSS8	3′-10′	8.625″	0.109″	3/8″	3.00″	0.13″	5/8″	5/8″
MBSS12	6′-20′	12.75″	0.109″	3/8″	3.00″	0.25″	3/4″	3/4″
MBSS16	10′-30′	16.00″	0.109″	5/8″	4.50″	0.25″	7/8″	1″

ALLOWABLE CAPACITY

FLEXURE		SHEAR		ALLOW. TORQ.
STD	w/ SLOT	STD	w/ SLOT	
kip-ft	kip-ft	kips	kips	ft-lbs
16	13	24	20	14,000
34	30	35	31	30,000
52	47	44	40	53,000

Note: All plate steel is ASTM A36, central steel shaft is ASTM A513, and outer steel casing is ASTM A500C. Available hot-dip galvanized (G) or bare steel (NG). Capacities shown are based on 75 yr corrosion with galvanization.

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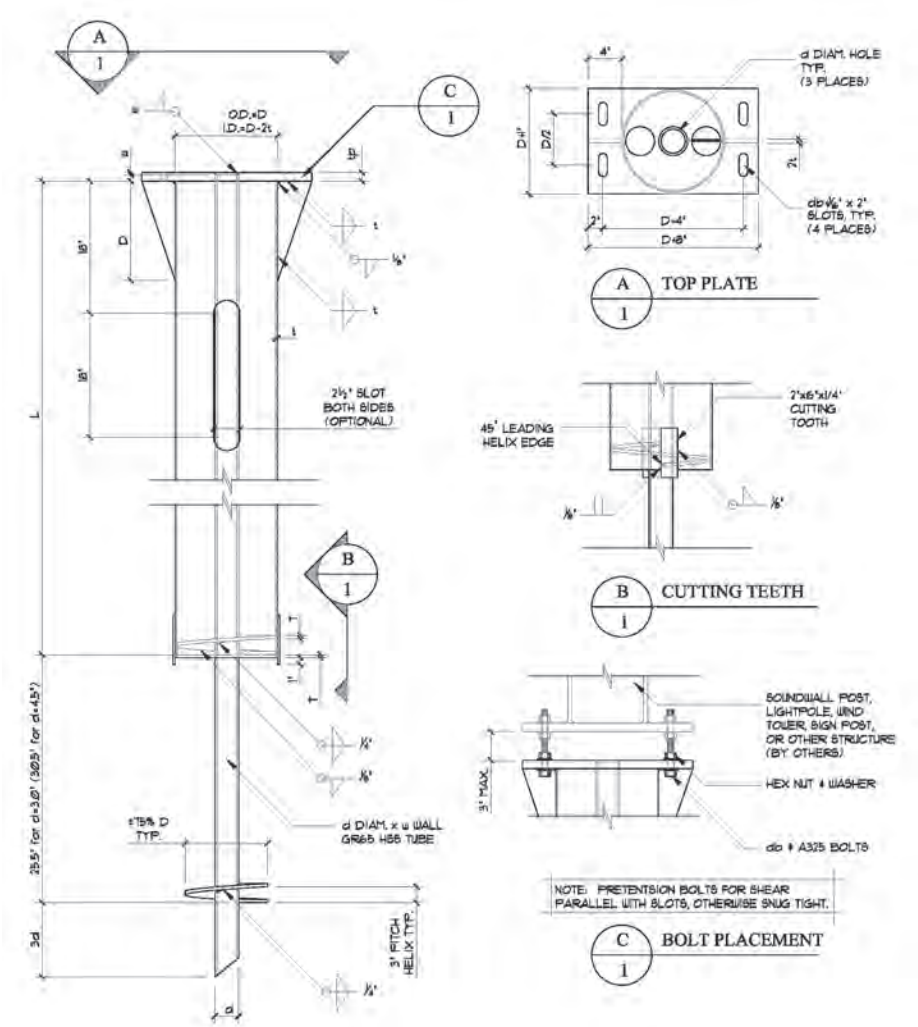
MAGNUM® MBSR Helical Post Base

High Capacity

8″ to 16″ Diam. x 3 to 30 ft Long Steel Casing
for Support of Soundwalls, Luminaries, Signs, and Wind Towers



Description

Magnum MBSR Helical Post Base is a full displacement deep foundation for support of sound barriers, luminaries, signs, wind towers and other structures where the primary loading condition is overturning or lateral shear. The standard capacity offers greater economy for many applications.

Helical Post Bases offer all the advantages of a helical foundation in that they do not produce drill spoil or cause vibrations during installation. They do not require concrete and the sign, luminary, or other structure can be mounted to the foundation immediately after installation. They are ideal for rail corridors, rural areas, along highways, and near bridge/overpass approaches.

Slotted top plate and four bolt moment connection allows adjustment in position and inclination. Patented design with novel geometry and side cutting teeth reduces installation torque and improves penetration into tough ground conditions. See accompanying sizing chart or contact a Magnum Technical Support representative for help with sizing and specification.

SPECIFICATIONS

POST BASE SIZE	STEEL CASING			HELIX GUAGE	SHAFT		TOP PLATE	BOLT DIAM.
	LGTH.	O.D.	GAUGE		DIAM.	GUAGE		
	L	D	t	T	d	w	tp	db
MBSR8	3′-10′	8.625″	0.250″	3/8″	3.00″	0.13″	5/8″	5/8″
MBSR12	6′-20′	12.75″	0.250″	3/8″	3.00″	0.25″	3/4″	3/4″
MBSR16	10′-30′	16.00″	0.250″	5/8″	4.50″	0.25″	7/8″	1″

ALLOWABLE CAPACITY

FLEXURE		SHEAR		ALLOW. TORQ.
STD	w/ SLOT	STD	w/ SLOT	
kip-ft	kip-ft	kips	kips	ft-lbs
42	34	43	43	16,000
83	78	63	63	30,000
136	123	106	96	68,000

Note: All plate steel is ASTM A36, central steel shaft is ASTM A513, and outer steel casing is ASTM A500C. Available hot-dip galvanized (G) or bare steel (NG). Capacities shown are based on 75 yr corrosion with galvanization.

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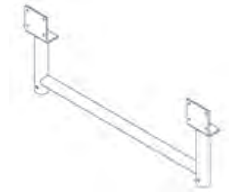
section 13

OTHER FOUNDATION PRODUCTS

MAGNUM PIERING, INC.

Magnum® Piering Foundation Products

Magnum® Foundation Products	System Ratings & Specifications						
	Name	Fits Pile/Pier	Connection	Structural Capacity*	Description	Surface Coating**	Schematic
MCP312	Crawl Space Jack	N/A	(4) 1/8″ x 1″ Tabs	4 tons Ultimate, 2 tons Allowable in Compression	3.00″ diameter x 1/8″ wall painted structural steel tube with adjustable threaded cap and 12” diameter galvanized footing plate	P/G	
BWR413-88	Basement Wall Reinforcing Beam	N/A	(2) 1/2″ Concrete Anchors / Expansion Bolts	To Be Determined by Design Engineer (Varies with Wall Height and Backfill Pressure)	88″ Long W4-13 Beam w/ Base Plate	P	
BWR413-96					96″ Long W4-13 Beam w/ Base Plate	P	
BWR413-120					120″ Long W4-13 Beam w/ Base Plate	P	
BWR413-144					144″ Long W4-13 Beam w/ Base Plate	P	
MHLS-1005	Boardwalk H-Brace System	MH3521	(2) 1″ Thru Bolts, (8) 1/2″ Lags	2 tons Ultimate, 1 ton Allowable Lateral Capacity when used with two MH3521 Helical Piles in Firm Ground	3.5″ I.D. collar tubes with 3.0″ O.D. cross tube and 4″x 8″ angle brackets	G, NG	
MHLS-1000	Boardwalk K-Brace System	MH313 and MH325	(2) PAF, (2) Lags	2 tons Ultimate, 1 ton Allowable Lateral Capacity when used with two MH313 or MH325 Helical Piles in Firm Ground	angle iron K-brace system with 3″ x 3″ angle connectors	G, NG	

* Structural capacity is mechanical capacity of product under ideal conditions. Capacity of product may be limited by application, local ground conditions and service/deflection limits for a specific project. Final capacity should be determined by a registered design professional.

** NG=bare steel, G=Hot Dip Galvanized per ASTM A123/A153, P=Magnum blue paint

Notes All Magnum helical pile products are manufactured using minimum 65 ksi minimum yield strength structural tubing and ASTM A36 plate steel, or better. As Magnum is committed to testing and improving products, these specifications are subject to change. Additional product specifications available at **www.magnumpiering.com** and from Magnum technical support personnel upon request.

Magnum Piering® MCP312

Crawl Space Support Post

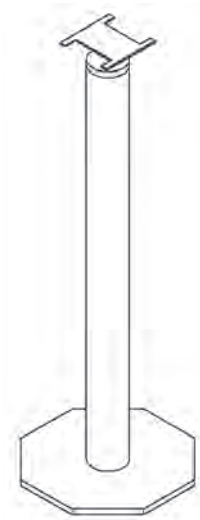
2 Tons Allowable Capacity

3.00″ O.D. x 0.125″ Wall High Strength Tube Post with Galvanized Footing Plate
Adaptable to Crawl Spaces from 1 ft. to 3.5 ft Tall

Description

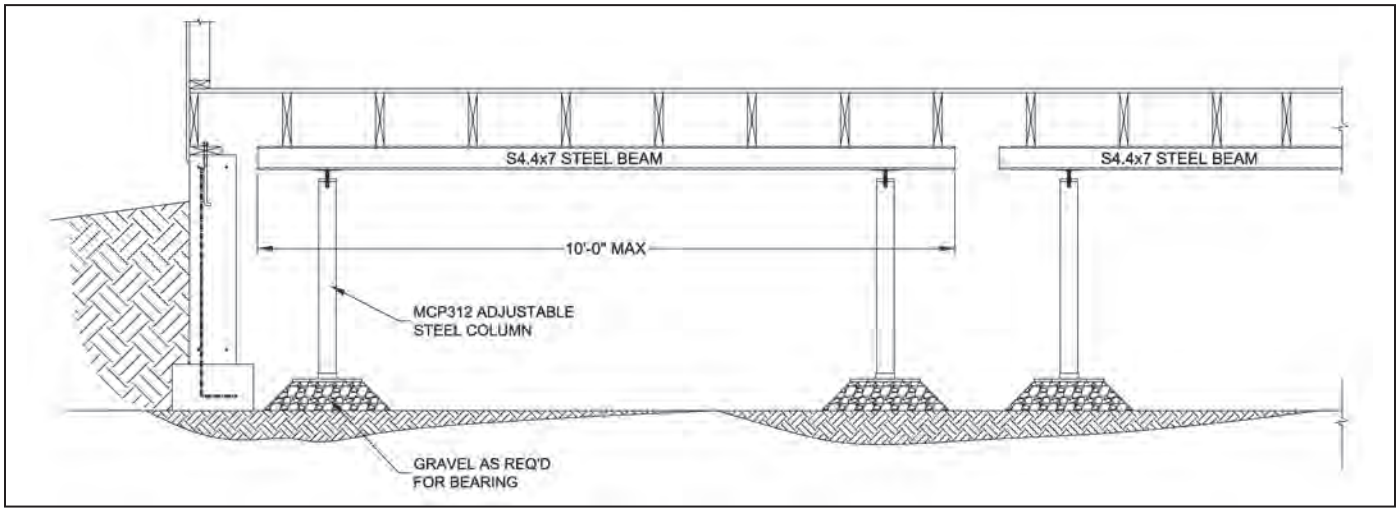
The Magnum MCP312 Crawl Space Support Post consists of a 3.00″ O.D. by 0.125″ thick wall tube with threaded adjustment and can support working loads up to 2 tons. The support post attaches to a 12.00″ octagonal galvanized steel plate footing which when placed on 6″ of gravel will support 2 tons on soils with IBC code minimum bearing pressure. The post has thin steel plate cap with bendable tabs for attachment to a new under floor steel drop beam. The post is designed in accordance with IBC, ACI, and AISC codes. Design and detailing of the floor joist support varies by project and is the responsibility of registered design professional including maximum joist span, support post spacing, and soil bearing capacity.

SPECIFICATIONS	
Post	3.00″ Diam. x 0.13″ Wall x 3.00′ Tall ASTM A513 GR65+
Footing Plate	12.00″ x 0.50″ Octagonal Plate with 3.75″ x 1.00” Collar
Beam	S4 x 7.7 Formed Steel Beam
Beam Connection	4.50″ x 2.75″ x 0.13″ Steel Plate with Tabs
Surface Coating	Galvanized per ASTM A153/A123 (G), Standard Magnum Blue Paint (P), or Epoxy Coated per ICC-ES AC228 (EP)



Installation Note:

Layout required support post locations. Hand tamp required thickness of 0.75″ angular gravel to provide support and good drainage for galvanized steel footings. Gravel should extend at least 6.00 inches beyond footing perimeter. Place footing plates. Measure and cut support post steel tube to fit crawl space height taking into account depth of new steel beam. Place beam over posts and tighten jack screws to seat beam firmly against floor joists. Bend tabs up to lock top of post to bottom flange of beam.



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Magnum Piering® BWR413

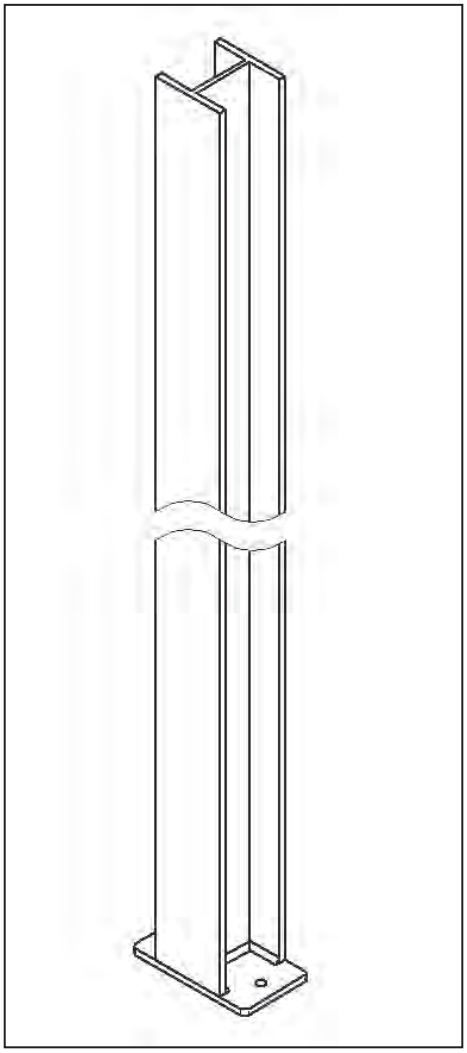
Basement Wall Reinforcing Beam

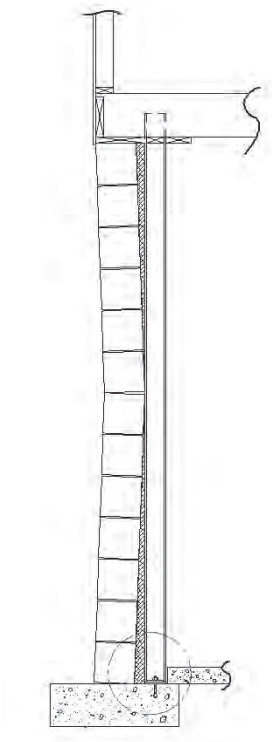
W4x13 – Available 88″, 96″, 100″, and 108″ Tall with Base Plate
Adaptable to Block and Cast-in-Place Basement Walls

Description

The Magnum BWR413 Basement Wall Reinforcing Beam consists of a W4x13 steel beam with steel base plate for attachment to basement floor slabs. Top of the reinforcing beam is blocked, braced, or otherwise fixed to the wood flooring system supported on the basement wall. Spacing and detailing of the reinforcing beams varies by project and is the responsibility of registered design professional including lateral earth pressures, support beam spacing, and connection to floor slab and floor framing system.

SPECIFICATIONS	
Beam	W4x13 ASTM A572 GR50+
Lengths	88″, 96″, 100″, and 108″ Standard (Custom Lengths Available)
Base Plate	4″ x 6″ Rectangular Plate with (2) Holes
Plate Connection	(2) ½″ Expansion Anchors
Surface Coating	Standard Magnum Paint (P)





Installation Note:

Layout required reinforcing beam locations. Attach beams to footing or floor slab using (2) ½″ expansion anchors. If attaching to footing, grout opening through slab after attachment of base plate.

Attach top of beam to wood floor system above by cross bracing as required for shear force. Block wood floor system as required to transfer lateral loads. Grout between beam and wall if necessary for firm contact.

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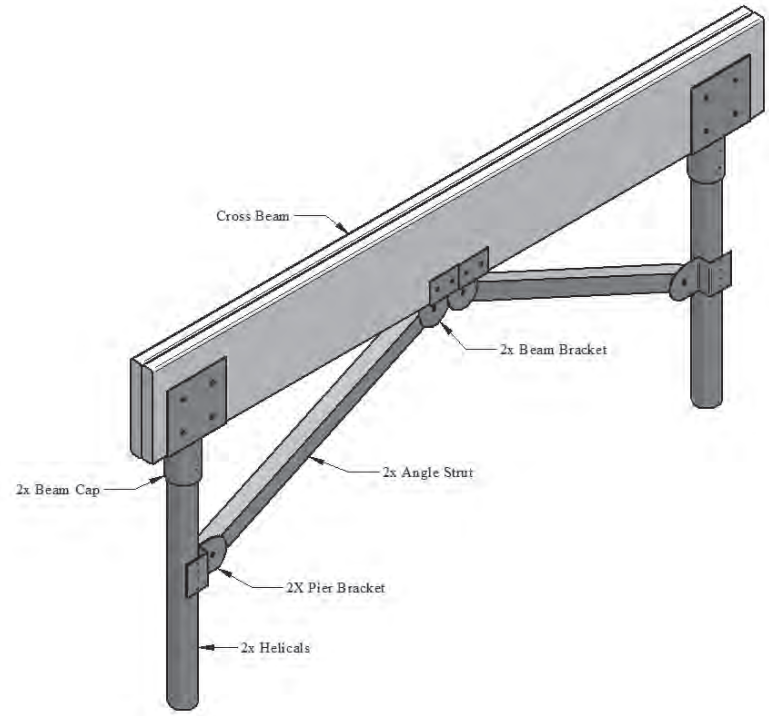
Magnum Piering® MHLS1000
Boardwalk K-Bracing System
4 ton Ultimate, 2 ton Allowable Lateral Capacity*
2″ x 2″ x 1/16″ Angles with Plate Steel Bracket Connections

Description

The Magnum MHLS1000 Boardwalk K-Bracing System consists of 2″ x 2″ x 1/16″ steel angles with 3″ x 3″ steel angle brackets for connection to Magnum MH313 and MH325 helical pile shafts. Sold separately are MHC1122 and MHC1123 steel angle caps that attach top of helical piles to dimension lumber, engineered wood, or rough timber cross beam. The K-brace system is easier to install, more economical, and generally performs better than the H-brace system. It can accommodate 4 ft to 12 ft wide boardwalks with clear heights above ground from 12″ to 48″. K-Braces can be used for boardwalks above this height, but Magnum generally recommends adding Magnum helical anchors as tie-backs at a 45 deg angle at 16 to 24 ft on-center along the length of the boardwalk for improved lateral performance. Custom K-brace sizes are available for wider or narrower boardwalks. K-braces provide lateral resistance and sidesway stabilization. Each brace is fastened to wooden cross beam with (2) lag bolts. Opposite end of angle braces are affixed to pile shafts using Hilti PAF fasteners. The entire assembly can be hot-dip galvanized for increased corrosion resistance.



Features:

*Easier to Install, More Economical, and More Rigid than MHLS1005 H-Brace and Similar Competitors Systems

U.S. Patent Pending

Installation Note:

Layout and install boardwalk pile foundations. Cut-off pile shafts at required elevation. Mount wood beam support brackets to tops of piles (sold separately). Place wood cross beam. Install angle K-braces. Overlap K-braces by placing them on opposite sides of cross beam for shorter spans. Adjust K-brace location so bottom bracket is approximately 6 to 12 inches above grade.

*Lateral capacity is based on maximum structural resistance. Lateral capacity of brace/pile system depends on ground conditions and should be determined by a design professional for the specific job site and subsurface conditions. Contact Magnum technical support for design assistance.

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Magnum Piering® MHLS1005

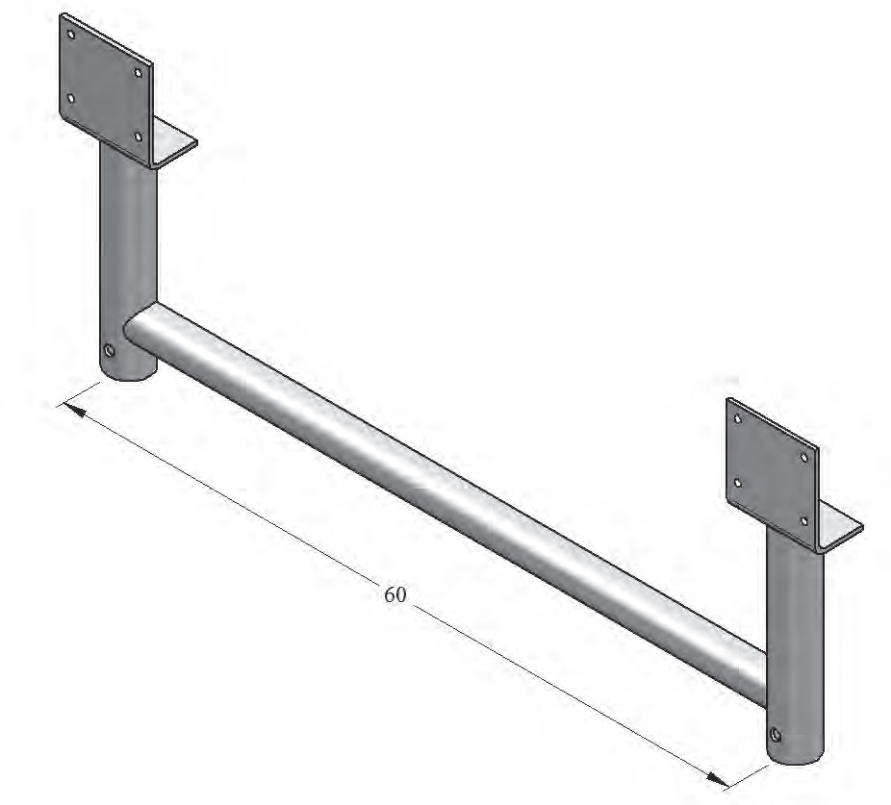
Boardwalk K-Bracing System

4 ton Ultimate, 2 ton Allowable Lateral Capacity*

3″ Diameter Cross Tube with 3.5″ I.D. Collars and Angle Bracket Connections

Description

The Magnum MHLS1005 Boardwalk H-Bracing System consists of a 3.0" O.D. cross tube with 3.5" I.D. collar tubes for connection to Magnum MH3521 helical pile shafts and steel angle brackets got connection to a dimension lumber, engineered wood, or rough timber cross beam. The Hbrace system can accommodate 6 ft and 8 ft wide boardwalks with clear heights above ground from 24″ to 48″. H-Braces can be used for boardwalks above this height, but Magnum generally recommends adding Magnum helical anchors as tie-backs at a 45 deg angle at 16 to 24 ft on center along the length of the boardwalk for improved lateral performance. Custom H-brace sizes are available for narrower or wider boardwalks. H-braces provide lateral resistance and sideway stabilization. Each plate steel bracket is fastened to wooden cross beam with (4) ½″ lag bolts. Collar tubes are fastened to helical pile shaft using (1) 1″ diameter through bolt on each side. The entire assembly can be hot-dip galvanized for increased corrosion resistance.



Installation Note:

Layout and install MH3521 helical pile foundations for boardwalk bents. Cut-off helical pile shafts at required elevation. Drill holes in pile shaft to facilitate attachment to H-brace. Mount H-brace to tops of piles and secure with through bolts. Place wood cross beam and attach with lag bolts.

*Lateral capacity is based on maximum structural resistance. Lateral capacity of brace/pile system depends on ground conditions and should be determined by a design professional for the specific job site and subsurface conditions. Contact Magnum technical support for design assistance..

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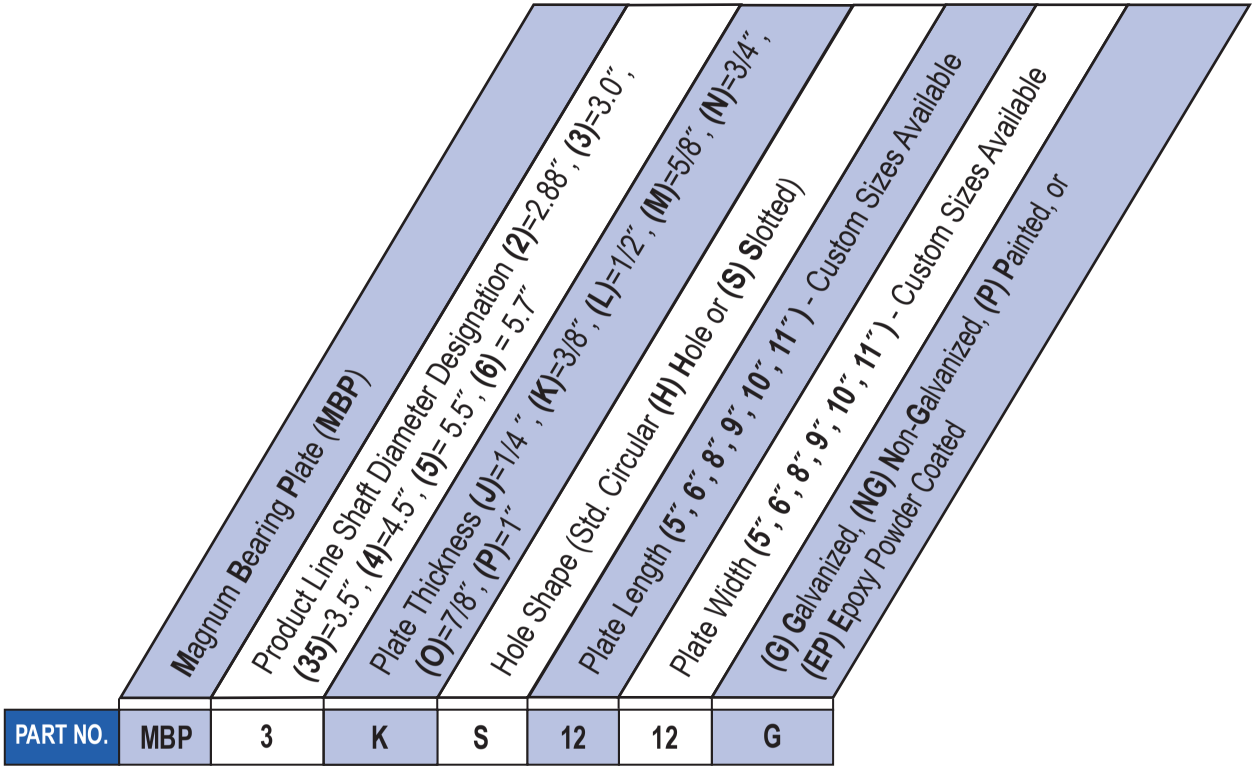
section 14

PIERING HARDWARE

MAGNUM PIERING, INC.

Magnum® Steel Bearing Plate
Product Number Specification Legend

Magnum Piering, Inc.
ISO 9001:2008
Certified



Explanation:

The Magnum Piering Bearing Plate product number above MBP3KS1212G is for a 12″ by 12″ by 3/8″ thick Steel Plate with slotted hole sized for the thread bar used with the 3.00″ diameter helical pile product line tie-back caps, and the surface preparation is Galvanized. Slotted holes are used when the tie-back cap thread bar will be at an angle to the bearing plate. In this instance, a wedge washer is required to prevent bearing on only one side of the nut and combined bending/tension.

Note: See “Magnum Piering Push Pier Specifications” table on next page for detailed information. Specification information is also available at ***www.magnumpiering.com***

Magnum® Piering Miscellaneous Hardware

Magnum® Misc. Hardware	System Ratings & Specifications				
	Description	Fits Product Designation	Notes	Surface Coating**	Schematic
MBP3KH77	Bearing Plate, 3/8″ x 7″ x 7″ w/ #10 Hole	MH313B, MH313BR, MH325B, MH325BR	Sizes shown are examples only. Bearing plate sizes and thicknesses vary from project to project. Custom sizes available to fit all helical pile and earth anchor products.	G, NG, EP	
MBP35KH7575	Bearing Plate, 3.8″ x 7.5″ x 7.5″ w/ #10 Hole	MH32521BR		G, NG, EP	
MBP3LH88	Bearing Plate, 1/2″ x 8″ x 8″ w/ #10 Hole	MH313B, MH313BR, MH325B, MH325BR		G, NG, EP	
MBP4MH88	Bearing Plate, 5/8″ x 8″ x 8″ w/ #14 Hole	MH425, MH431		G, NG, EP	
MBP5NH99	Bearing Plate, 3/4″ x 9″ x 9″ w/ #20 Hole	MH530, MH536		G, NG, EP	
MBP6NH9595	Bearing Plate, 3/4″ x 9.5″ x 9.5″ w/ #20 Hole	MH625, MH637, MH646		G, NG, EP	
MH1601	Hex Bolt, 7/8″ -9 x 4.5″ SAE Grade 5/ASTM A325	MH313B, MH313BR, MH325B	Hex bolts are typically sold with helical pile extensions. Bolts shown here are for surplus or replacement parts.	G, NG	
MH1605	Hex Bolt, 1″ -8 x 5″ SAE Grade 8/ASTM A490	MH325BR		G, NG	
MH1625	Hex Bolt, 1″ -8 x 5.5″ SAE Grade 8/ASTM A490	MH3521BR		G, NG	
MH1609	Hex Bolt, 1.25″ -7 x 7″ SAE Grade 5/ASTM A325	MH425, MH431		G, NG	
MH1615	Hex Bolt, 1.5″ -6 x 8″ SAE Grade 5/ASTM A325	MH530, MH536, MH625, MH637, MH646		G, NG	
MH1602	Hex Nut, 7/8″ -9 SAE Grade 5/ASTM A325	MH313B, MH313BR, MH325B	Hex nuts are typically sold with helical pile extensions. Nuts shown here are for surplus or replacement parts.	G, NG	
MH1606	Hex Nut, 1″ -8 SAE Grade 8/ASTM A490	MH325BR, MH3521BR		G, NG	
MH1610	Hex Nut, 1.25″ -7 SAE Grade 5/ASTM A325	MH425, MH431		G, NG	
MH1616	Hex Nut, 1.5″ -6 SAE Grade 5/ASTM A325	MH530, MH536, MH625, MH637, MH646		G, NG	

Magnum® Piering
Miscellaneous Hardware (Cont.)

Magnum® Misc. Hardware	System Ratings & Specifications				
	Description	Fits Product Designation	Notes	Surface Coating**	Schematic
MH1608	7/8″ x 6.5″ Grade 8 Drive Pin	MH313B, MH313BR, MH325B	Reuseable drive pins connect helical pile shaft to drive tool for installation. Replace when worn or damaged.	G	
MH1613	1″ x 6″ Grade 8 Drive Pin	MH325BR		G	
MH1614	1-1/4″ x 7″ Grade 8 Drive Pin	MH425, MH431		G	
MH1617	1-1/2″ x 8.5″ Grade 8 Drive Pin	MH530, MH536, MH625, MH637, MH646		G	
MHA400	Hydraulic Pressure Gage, 0-3,000 psi	Various Torque Motors	Hydraulic pressure gages are used to measure pressure to and from torque motor for determining pressure drop and correlation with torque.	n/a	
MHA4006	Hydraulic Pressure Gage, 0-1,000 psi	Various Torque Motors		n/a	
MHA4007	Hydraulic Pressure Gage, 0-4,000 psi	Various Torque Motors		n/a	
MHA4150	Dial Indicator, 0-3″	Various	Dial indicators are used to measure pile deflection during load testing. A minimum of two indicators are required for ASTM test.	n/a	
MHA4151	Magnetic Base (for Dial Indicator)	Various		n/a	

**** Note** G=zinc coated per ASTM A153/A123 or ASTM B633 as appropriate, NG=bare steel, EP=epoxy powder coated per ICC-ES AC228, P=Magnum blue paint

Notes and Specifications As Magnum is committed to testing and improving products, these specifications are subject to change. Additional product specifications available at **www.magnumpiering.com**, in the **Magnum Product Catalog**, and in the **Magnum Helical Pile Engineering Manual** available upon request.

MAGNUM CUSTOMER CREDIT APPLICATION, PAGE 1

Full Name of Company: _____

Entity Type: _ *Corporation* _ *LLC* _ *Partnership* _ *Sole Proprietor* Fed. ID# _____

Services Offered: _____

Years in Business: _____ DUNS#: _____ Contractor License:_____

Shipping Address: _____

City, State, Zip: _____

Website:_____ Phone: _____ Fax:_____

Procurement Manager: _____ Office Phone: _____

E-mail Address: _____ Cell Phone: _____

Billing Address (if different):_____

City, State, Zip: _____

Accounts Manager: _____ Office Phone: _____

E-mail Address: _____ Cell Phone: _____

Principal Officers / Directors / Proprietors / Managers

Name	Title	SSN (if proprietor/partner)

Bank References:

(1) Bank Name: _____ Account Type: _____ Account# _____

Contact Name: _____ Phone #: _____

(2) Bank Name: _____ Account Type: _____ Account# _____

Contact Name: _____ Phone #: _____

Trade References:

(1) Name: _____ Address: _____

Contact Name: _____ Phone #: _____

(2) Name: _____ Address: _____

Contact Name: _____ Phone #: _____

(3) Name: _____ Address: _____

Contact Name: _____ Phone #: _____

In this Application for Credit, "MAGNUM" means Magnum Piering, Inc.

1. Consumer credit information (Section 18K(1)(b), Privacy Act 1988)
If MAGNUM considers it relevant to assessing your application for commercial credit, you agree to MAGNUM obtaining a credit report containing personal credit information from a credit reporting agency.

2. Exchanging information with other credit providers (Section 18N(1)(b), Privacy Act 1988)
You agree to MAGNUM obtaining personal information about your company from other credit providers, whose names are provided in this application or that may be named in a credit report, for the purpose of assessing your application for commercial credit.

3. Agreement to a credit provider being given a consumer credit report to collect overdue payments on commercial credit (Section 18K 1(h) Privacy Act 1988)
You agree that MAGNUM may obtain a consumer credit report about your company from a credit reporting agency for the purpose of collecting overdue payments relating to commercial credit owed by your company.

4. Payment
a) Payment shall be made by the Customer immediately upon receipt of material shipment and is considered overdue if payment is not received within 30 days from the Invoice date unless otherwise agreed in writing.
b) Interest may be charged on overdue amounts at the rate of 2% per month
c) Legal costs for recovery of any overdue amounts will be recoverable as a debt due by the Customer

5. Freight & Taxes
a) Customer is responsible for paying for all shipping and applicable sales or use tax.
b) Products will be shipped FOB from MAGNUM warehouse in West Chester, OH
c) Insurance of goods will be the responsibility of the Customer and as such MAGNUM holds no responsibility for goods damaged in transit
d) Goods will be deemed to have been delivered at the time they are loaded for transport

6. Returns
The return of goods for credit will not be accepted. All sales are final.

The undersigned represent agree to the terms and conditions set forth in this application. We hereby certify that all statements in this application are true and complete and are made for the purpose of obtaining credit. If our account is not paid as agreed according to invoice terms, we promise to pay a late payment charge of 2% per month on the unpaid balance, and to reimburse MAGNUM all costs of collections, including legal fees.

Name (please print) _____ Title _____

Signature _____ Date _____

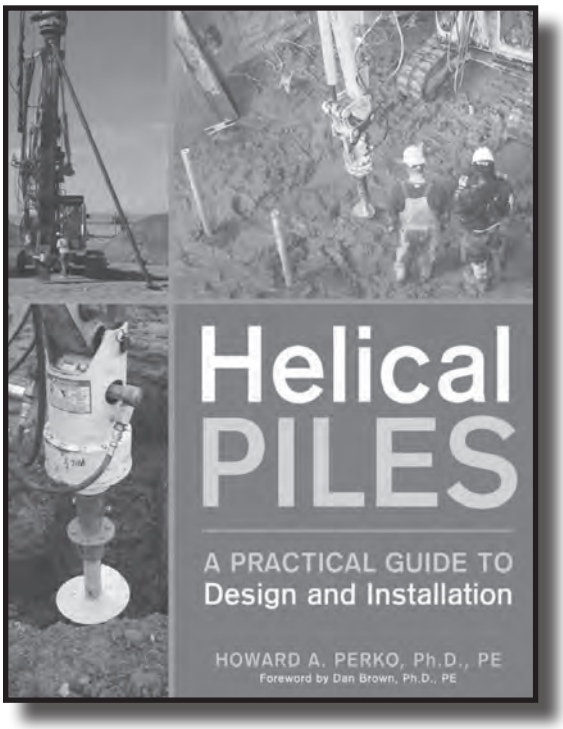
Magnum Piering, Inc. is the recognized leader in providing high quality, competitively priced foundation systems and services. We are committed to exceeding our customers' needs through focused efforts on continuous improvement and customer service.

DATE	NOTES

DATE	NOTES

DATE	NOTES

HELICAL PILE BOOK - ORDER FORM



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Howard A. Perko, Ph.D., P.E., Fort Collins, CD

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- Part-Time Academic Instructor, Colorado State University
- Chairman of Deep Foundation Institute: Helical Pile Committee
- Served on Operating Committee for CTL/Thompson, Inc
- Chair of 2007 DFI Annual Conference
- Founder and President of the Secure Engineering Companies

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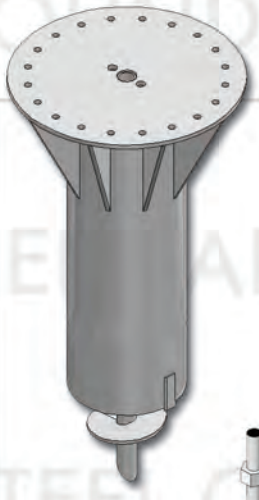



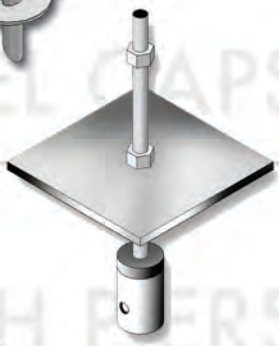







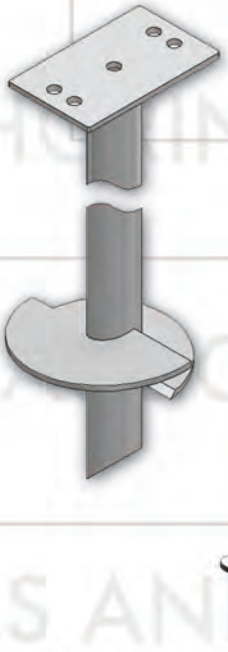


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HELICAL PILES

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