



27650 Groesbeck Hwy. • Roseville, MI 48066-2759
1-800-526-7968 • phone: (586) 775-7211 • fax: (586) 775-4545

MILL SERIES Air and Hydraulic Cylinders

Up to 250 psi air and 5000 psi hydraulic working pressure - Heavy Duty Service

Peninsular Cylinder Company

For over 50 years Peninsular has been manufacturing pneumatic and hydraulic cylinders for OEM and MRO applications that require top performance and extended service in destructive manufacturing environments.



Engineered and Built for Endurance

Peninsular MILL SERIES Cylinders incorporate state-of-the-art design features that are fabricated to very strict tolerance specifications from the highest quality of materials available. The result is reliable and trouble-free operation under the most demanding conditions.

Choose From A Wide Selection

Peninsular MILL SERIES Cylinders are available in 8 mounting styles with bore sizes ranging from 2.00" to 20.00". In addition, MILL SERIES Cylinders may also be custom designed to suit specific customer applications. Viton™ and other type seal materials are available to meet your specific needs. These cylinders are also available with ISO metric dimensions and mounting configurations. When ordering a Metric MILL SERIES Cylinder use the prefix letter "I" for model designation, e.g. (I- MILL-)

ISO 9001-2000 Registered

Peninsular MILL SERIES Cylinders are manufactured to world-class quality standards with a proven track record of superior performance and endurance.

Consult the factory for more information.



27650 Groesbeck Hwy. • Roseville, MI 48066-2759
1-800-526-7968 • phone: (586) 775-7211 • fax: (586) 775-4545

TABLE OF CONTENTS

1. TABLE OF CONTENTS (*THIS PAGE*)
2. PENINSULAR MILL SERIES CYLINDER FEATURES
3. HOW TO USE MILL CYLINDER SIZING CHARTS
4. BASIC MILL CYLINDER TEMPLATE
5. HEAD RECTANGULAR FLANGE – MF1
6. CAP RECTANGULAR FLANGE – MF2
7. HEAD CIRCULAR FLANGE – MF3
8. CAP CIRCULAR FLANGE – MF4
9. CAP FIXED EYE – MP3
10. CAP FIXED EYE WITH SPHERICAL BEARING – MP5
11. INTERMEDIATE TRUNNION – MT4
12. FOOT SIDE LUGS – MS2
13. HOW TO ORDER MILL SERIES CYLINDERS
14. PENINSULAR MILL SERIES CYLINDER MOUNTING STYLES



MEMBER
NFPA



Feature for feature, Peninsular MILL SERIES Cylinders are exceptional!

<i>Feature</i>	<i>Advantage</i>	<i>Benefit</i>
1.	Heads and Caps	Round, precision-machined steel
		Assures concentricity of tube, bearing, cushion and piston rod. Chamfered grooves allow fast and easy positioning of cylinder tube over the tube seals
2.	Cylinder Tube	Heavy wall seamless D.O.M. steel material (1020 to 1026) with welded flanges. Precision honed to 10/15 micro inch finish.
		Reduces wear on piston seals and tube surface.
3.	Piston	One-piece fine-grained ductile iron piston is threaded onto piston rod, torqued with a jam nut and held in place with Loc-Tite. TM . Piston can be pinned onto rod as an option. Holes are drilled in each side of piston face, when U-Cups are used, to allow fluid pressure to increase the positive sealing.
		Wide piston bearing surface reduces bearing loads and assures low wear and low friction to the piston seals and tube ID. An O-Ring with two Teflon backups are used to seal the piston to the rod, which prevents fluid leaks from bypassing the piston.
4.	Fasteners	Socket head cap screws made from 150,000-psi minimum yield alloy steel with rolled threads retain head, cap and cylinder mounts.
		Eliminates tie-rod stretch under high shock loads. Provides maximum strength for connecting cylinder mounts. Lock nuts prevent loosening in service. Accurate torquing prevents leaks at tube seals.
5.	Tube Seals	Buna-N Nitrile O-Rings are seated into grooves in both the head and end caps. O-Rings are backed up with Teflon rings which effectively prevent O-Ring extrusion under pressure
		When combined with accurately torqued pre-stressed cap screws, proper O-Ring placement at the ID of the tube and confinement of the tube OD, seal extrusion and fluid leakage under pressure is prevented.
6.	Rod Seal	The symmetrical loaded rod seal is made from 80 durometer Nitrile with an attached anti-extrusion heel. A Delrin retainer holds the seal in place and is positioned in a groove between the head and bearing cartridge.
		Provides positive static and dynamic sealing at both low and high pressures. Anti-extrusion heel energizes sealing mechanism as pressure increases.
7.	Rod Wiper	80 durometer, sharp double lip, pre-lubricated, carboxylated nitrile seal provides additional sealing beyond rod seal. Additional materials can be used to combat various application demands, such as high heat. Severe external conditions could require the addition of a metallic rod scraper installed ahead of the rod wiper to effectively provide dual protection from the elements.
		Prevents dust, dirt and grit from entering the bearing cartridge and cylinder, which significantly extends the cylinder life.
8.	Piston Rod	100,000-psi minimum yield strength high carbon steel with core hardness of RC 28-34. Case hardened to RC 50-55. Rod is hard chrome-plated (.0003/.0005 thick) and polished to 12/15 micro inch finish. Solid male threads contain radiused undercut.
		Resists wear. All NFPA and metric rod and thread sizes, including female and optional studded male ends, are available with rolled threads. Provides positive connections to existing machine components. Standard one-piece piston rod with male thread and radiused undercut minimize rod end breakage due to fatigue failure.
9.	Bearing Cartridge	Floating, self-aligning bearing cartridge is made from grade 65-45-12 ductile iron or 660 bronze as an option. Peninsular "Slip-Tuff" coated bearing cartridge is available as an option for severe side-load conditions. Cartridge is retained by cap screws and retainer plate providing for strength and shock resistance.
		Float condition minimizes piston rod misalignment by reducing side loading. Easily removed for rod seal and rod wiper maintenance without requiring special tools to disassemble the cylinder.
10.	Ports	NPT or SAE O-Ring ports are to be identified at time of order. Optional port sizes include flange ports, metric ports and oversized ports.
		Universally adaptable to any hose or fitting.
11.	Piston Seals	80 durometer, pre-lubricated, sharp lip, carboxylated nitrile U-Cups with Teflon backup rings are standard. Step cut cast iron piston rings, with a T-Seal centered in between, are also available as an option.
		Teflon backup rings prevent U-Cups from extruding and minimize leakage. The T-Seal centered between the rings helps prevent leakage and the probability of seal failure during high shock operating conditions.
12.	Cushions	Floating ductile iron rod cushion collar on head end. The cap cushion is a 660 bronze floating, check-type seal insert held captive by a retaining ring in the rear end cap. Ball checks are provided at both ends for rapid breakaway out of the cushion and the ball check screws are flush with the end caps.
		Cushions are optional but ultimately help prevent cylinder failure, due to fatigue, resulting from the piston slamming into cylinder end caps. A reliable floating cushion system provides for smooth action and eliminates binding conditions, which can cause sudden failure.
13.	Cushion Adjustment Screw	Steel needle valve with Nitrile O-Ring and Teflon backup ring. The captive adjustment screw is flush with the end cap. An optional lock down mechanism prevents the cushion adjustment screw from loosening due to vibration.
		The Teflon backup ring behind the O-Ring prevents fluid leakage around the adjustment screw and helps ensure accurate fine adjustment of cushioning speed. Captive screw assures user safety.
14.	Optional Air Bleed	Manual air bleed plug is located on the cylinder tube.
		Eliminates trapped air from inside the cylinder.
15.	Optional Rod Cartridge Drain Back System	Drain feature is an additional groove cut into the front end of the bearing cartridge, between the rod wiper and rod seal that drains off any accumulation of fluid between the seals. A cartridge drain port is located on the cartridge housing for a user-installed drain line back to the reservoir.
		Captures hydraulic fluid and drains it back to the reservoir. This minimizes the slow weepage of hydraulic fluid through the rod wiper onto the piston rod.



27650 Groesbeck Hwy. • Roseville, MI 48066-2759
1-800-526-7968 • phone: (586) 775-7211 • fax: (586) 775-4545

HOW TO USE PENINSULAR MILL CYLINDER SIZING CHARTS

Enclosed are Master copies of our Mill Cylinder Sizing Charts

These sizing charts are to be used when a Sales Representative, Customer or a Service Person in the field is in need of interchanging a Mill Type Air or Hydraulic Cylinder built by another cylinder manufacturer. Due to the fact that Mill Type Cylinders are not covered by NFPA standards and various manufacturers build to their own “standards”, Peninsular has designed sizing charts to aid in the interchange process. By submitting the information contained on the enclosed charts, Peninsular will have the necessary information to correctly quote and produce the replacement cylinder.

The steps necessary to accomplish this translation are as follows.

1. Identify the mounting style of the cylinder in question or use the basic cylinder template to design your own mill cylinder.
2. Make a *copy* of the chart containing the mounting style and supply all dimensions and information as requested.
3. Fax completed copied chart to Peninsular Cylinder Company...
Attention: Customer Service at Fax Number (586) 775-4545

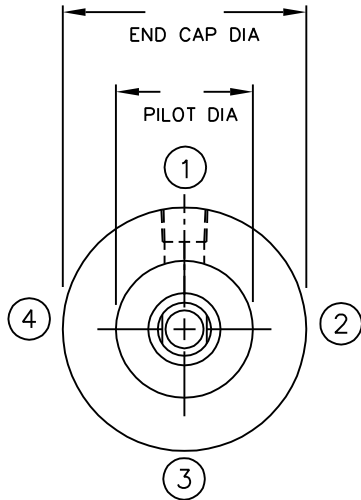
If a page is missing from the set of (9) cylinder sizing charts please call us at (800) 526-7968 or (586) 775-7211 and we will fax you a new copy.



MEMBER
NFPA

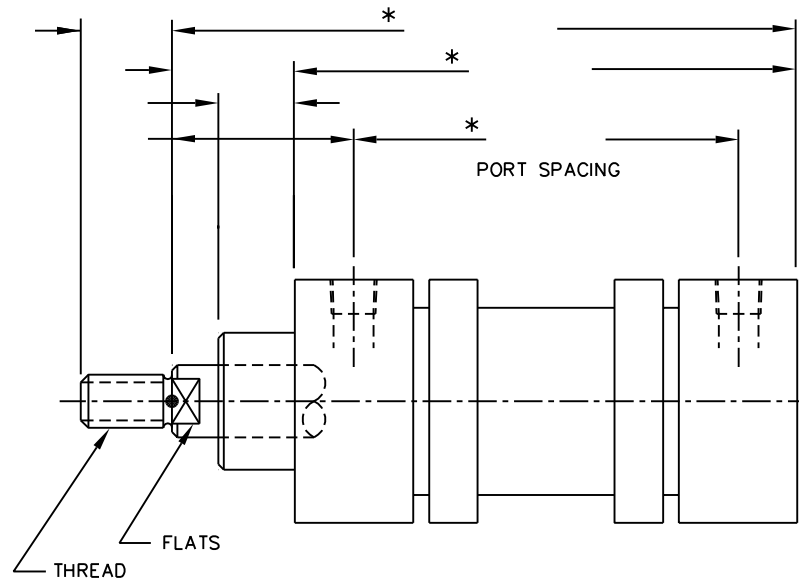


BASIC
MILL CYLINDER
TEMPLATE



**PENINSULAR MILL CYLINDER
SIZING CHART**

— SKETCH YOUR OWN DESIGN —



INCH CYLINDER METRIC CYLINDER AIR CYLINDER LOW PRESSURE HYDRAULIC CYLINDER HIGH PRESSURE HYDRAULIC CYLINDER
 IF HYDRAULIC BOX IS CHECKED, INDICATE WORKING PRESSURE: _____ INDICATE MAXIMUM RATED PRESSURE: _____ SAFETY FACTOR REQUIRED: _____

BORE DIAMETER: _____ STROKE LENGTH: _____ PISTON ROD. DIAMETER: _____

PISTON ROD END THREAD: MALE FEMALE OTHER / SPECIFY THREAD DIA., PITCH & LENGTH (I.E., 3/4"-16 x 1.125) _____

SLEEVE (TUBE) MATERIAL: STEEL OTHER / SPECIFY MATERIAL: _____

CYLINDER HEAD MATERIAL: STEEL OTHER / SPECIFY MATERIAL: _____

CUSHIONS: YES NO IF YES: / SPECIFY ROD END ONLY CAP END ONLY CUSHION AT BOTH ENDS

ROD END CUSHION ADJUSTMENT LOCATION (1,2,3 OR 4): _____ CAP END CUSHION ADJUSTMENT LOCATION (1,2,3 OR 4): _____

INDICATE TYPE OF PORT: NPTF SAE O-RING 4-BOLT FLANGE METRIC OTHER (SPECIFY) _____

INDICATE PORT SIZE: BOTH ENDS _____ ROD END _____ CAP END _____

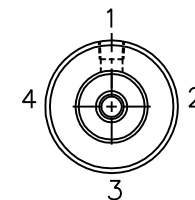
INDICATE LOCATION OF CYLINDER PORTS: ROD END (1,2,3 OR 4) _____ CAP END (1,2,3 OR 4) _____

SUPPLY EXISTING CYLINDER MANUFACTURER & MODEL NUMBER INFORMATION IF KNOWN: _____

SUPPLY ALL PERTINENT INFORMATION ON EXISTING CYLINDER TAG: _____

OPERATING FLUID: _____ OPERATING TEMPERATURE: _____ OPERATING ENVIRONMENT: _____

SPECIAL OR OPTIONAL FEATURES REQUIRED: _____



—FEATURE LOCATION KEY—
(VIEWED FACING ROD END.)

IF NECESSARY, ATTACH DRAWINGS, SKETCHES OR PHOTOGRAPHS TO PROVIDE ADDITIONAL DETAIL REGARDING YOUR CYLINDER AND/OR APPLICATION

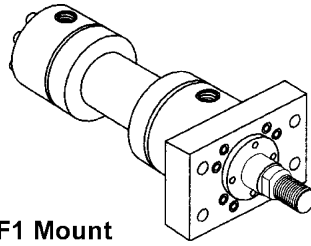
ANY QUESTIONS? CALL PENINSULAR AT 1-800-526-7968 OR (586) 775-7211

*—ADD STROKE TO THESE DIMENSIONS.

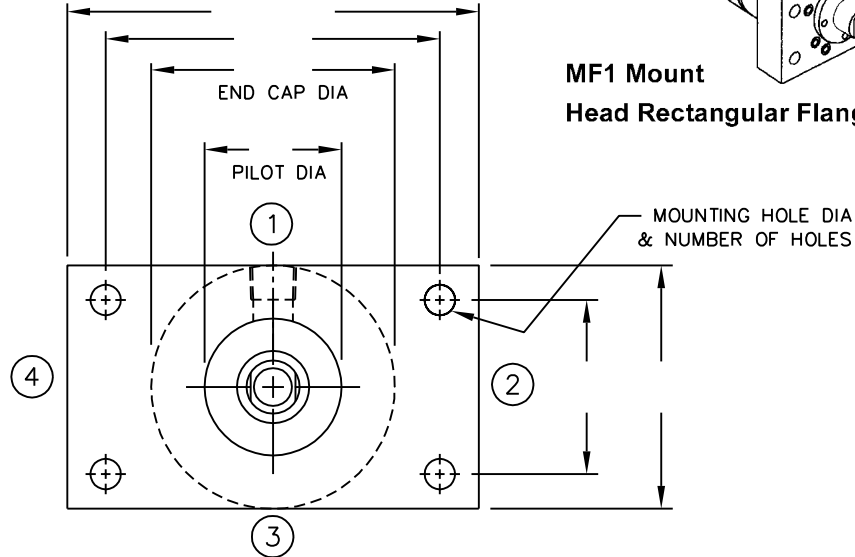
27650 Groesbeck Highway Roseville Michigan 48066-2759 Telephone: 586-775-7211 Fax: 586-775-4545
 Toll Free: 1-800-526-7968 Internet: www.peninsularcylinders.com Email: sales@peninsularcylinders.com
 REL. 10-14-02



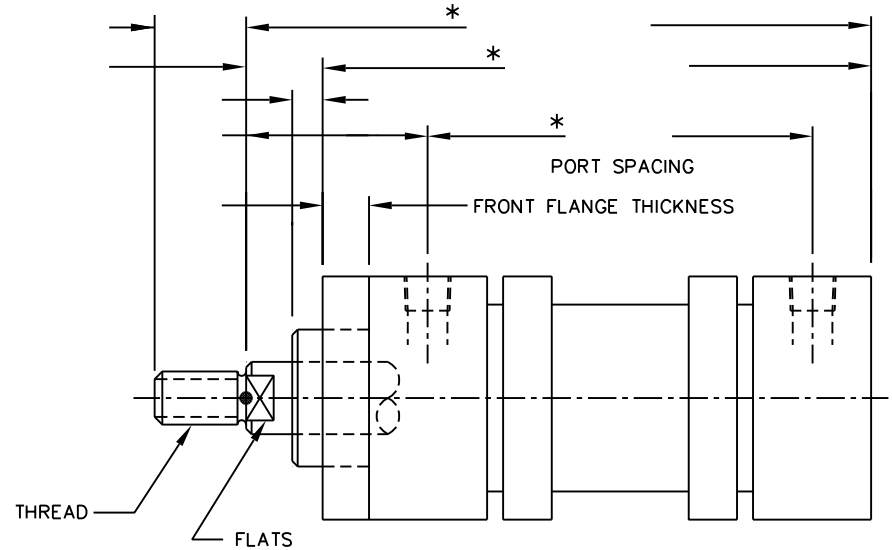
HEAD RECTANGULAR FLANGE (MF1)



**MF1 Mount
Head Rectangular Flange**



PENINSULAR MILL CYLINDER SIZING CHART



INCH CYLINDER METRIC CYLINDER AIR CYLINDER LOW PRESSURE HYDRAULIC CYLINDER HIGH PRESSURE HYDRAULIC CYLINDER
 IF HYDRAULIC BOX IS CHECKED, INDICATE WORKING PRESSURE: _____ INDICATE MAXIMUM RATED PRESSURE: _____ SAFETY FACTOR REQUIRED: _____

BORE DIAMETER: _____ STROKE LENGTH: _____ PISTON ROD. DIAMETER: _____

PISTON ROD END THREAD: MALE FEMALE OTHER / SPECIFY THREAD DIA., PITCH & LENGTH (I.E., 3/4"-16 x 1.125) _____

SLEEVE (TUBE) MATERIAL: STEEL OTHER / SPECIFY MATERIAL: _____

CYLINDER HEAD MATERIAL: STEEL OTHER / SPECIFY MATERIAL: _____

CUSHIONS: YES NO IF YES: / SPECIFY ROD END ONLY CAP END ONLY CUSHION AT BOTH ENDS

ROD END CUSHION ADJUSTMENT LOCATION (1,2,3 OR 4): _____ CAP END CUSHION ADJUSTMENT LOCATION (1,2,3 OR 4): _____

INDICATE TYPE OF PORT: NPTF SAE O-RING 4-BOLT FLANGE METRIC OTHER (SPECIFY) _____

INDICATE PORT SIZE: BOTH ENDS _____ ROD END _____ CAP END _____

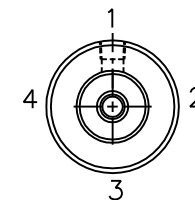
INDICATE LOCATION OF CYLINDER PORTS: ROD END (1,2,3 OR 4) _____ CAP END (1,2,3 OR 4) _____

SUPPLY EXISTING CYLINDER MANUFACTURER & MODEL NUMBER INFORMATION IF KNOWN: _____

SUPPLY ALL PERTINENT INFORMATION ON EXISTING CYLINDER TAG: _____

OPERATING FLUID: _____ OPERATING TEMPERATURE: _____ OPERATING ENVIRONMENT: _____

SPECIAL OR OPTIONAL FEATURES REQUIRED: _____



-FEATURE LOCATION KEY-
(VIEWED FACING ROD END.)

IF NECESSARY, ATTACH DRAWINGS, SKETCHES OR PHOTOGRAPHS TO PROVIDE ADDITIONAL DETAIL REGARDING YOUR CYLINDER AND/OR APPLICATION

ANY QUESTIONS? CALL PENINSULAR AT 1-800-526-7968 OR (586) 775-7211

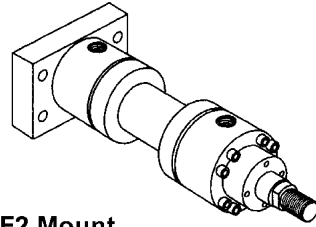
*-ADD STROKE TO THESE DIMENSIONS.

27650 Groesbeck Highway Roseville Michigan 48066-2759 Telephone: 586-775-7211 Fax: 586-775-4545
 Toll Free: 1-800-526-7968 Internet: www.peninsularcylinders.com Email: sales@peninsularcylinders.com
 REL. 10-14-02

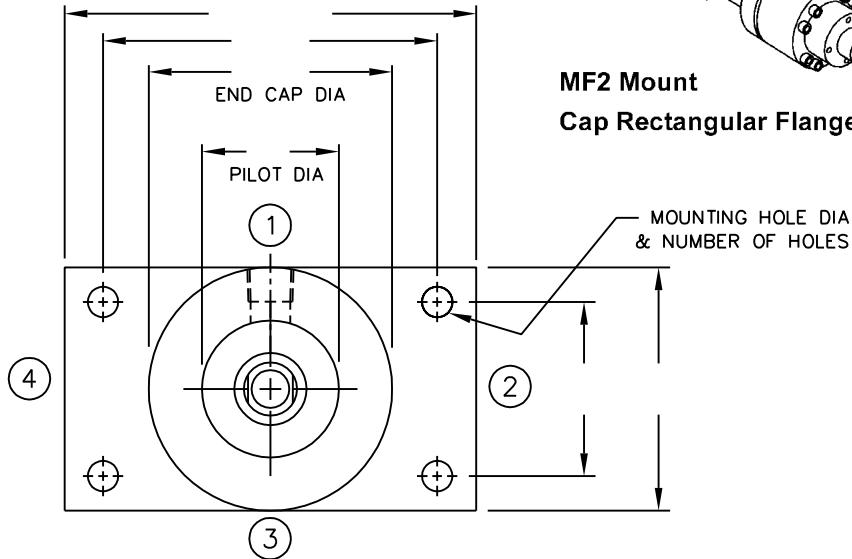
MEMBER
NFPA



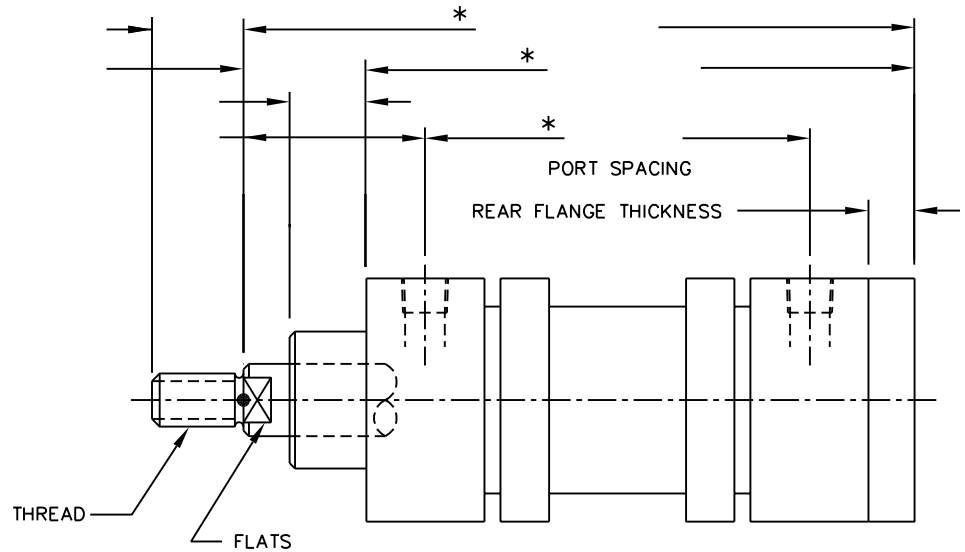
CAP RECTANGULAR FLANGE (MF2)



**MF2 Mount
Cap Rectangular Flange**



PENINSULAR MILL CYLINDER SIZING CHART



INCH CYLINDER METRIC CYLINDER AIR CYLINDER LOW PRESSURE HYDRAULIC CYLINDER HIGH PRESSURE HYDRAULIC CYLINDER
 IF HYDRAULIC BOX IS CHECKED, INDICATE WORKING PRESSURE: _____ INDICATE MAXIMUM RATED PRESSURE: _____ SAFETY FACTOR REQUIRED: _____

BORE DIAMETER: _____ STROKE LENGTH: _____ PISTON ROD. DIAMETER: _____

PISTON ROD END THREAD: MALE FEMALE OTHER / SPECIFY THREAD DIA., PITCH & LENGTH (I.E., 3/4"-16 x 1.125) _____

SLEEVE (TUBE) MATERIAL: STEEL OTHER / SPECIFY MATERIAL: _____

CYLINDER HEAD MATERIAL: STEEL OTHER / SPECIFY MATERIAL: _____

CUSHIONS: YES NO IF YES: / SPECIFY ROD END ONLY CAP END ONLY CUSHION AT BOTH ENDS

ROD END CUSHION ADJUSTMENT LOCATION (1,2,3 OR 4): _____ CAP END CUSHION ADJUSTMENT LOCATION (1,2,3 OR 4): _____

INDICATE TYPE OF PORT: NPTF SAE O-RING 4-BOLT FLANGE METRIC OTHER (SPECIFY) _____

INDICATE PORT SIZE: BOTH ENDS _____ ROD END _____ CAP END _____

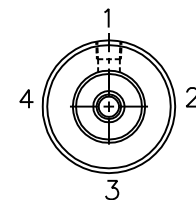
INDICATE LOCATION OF CYLINDER PORTS: ROD END (1,2,3 OR 4) _____ CAP END (1,2,3 OR 4) _____

SUPPLY EXISTING CYLINDER MANUFACTURER & MODEL NUMBER INFORMATION IF KNOWN: _____

SUPPLY ALL PERTINENT INFORMATION ON EXISTING CYLINDER TAG: _____

OPERATING FLUID: _____ OPERATING TEMPERATURE: _____ OPERATING ENVIRONMENT: _____

SPECIAL OR OPTIONAL FEATURES REQUIRED: _____



-FEATURE LOCATION KEY-
(VIEWED FACING ROD END.)

IF NECESSARY, ATTACH DRAWINGS, SKETCHES OR PHOTOGRAPHS TO PROVIDE ADDITIONAL DETAIL REGARDING YOUR CYLINDER AND/OR APPLICATION

ANY QUESTIONS? CALL PENINSULAR AT 1-800-526-7968 OR (586) 775-7211

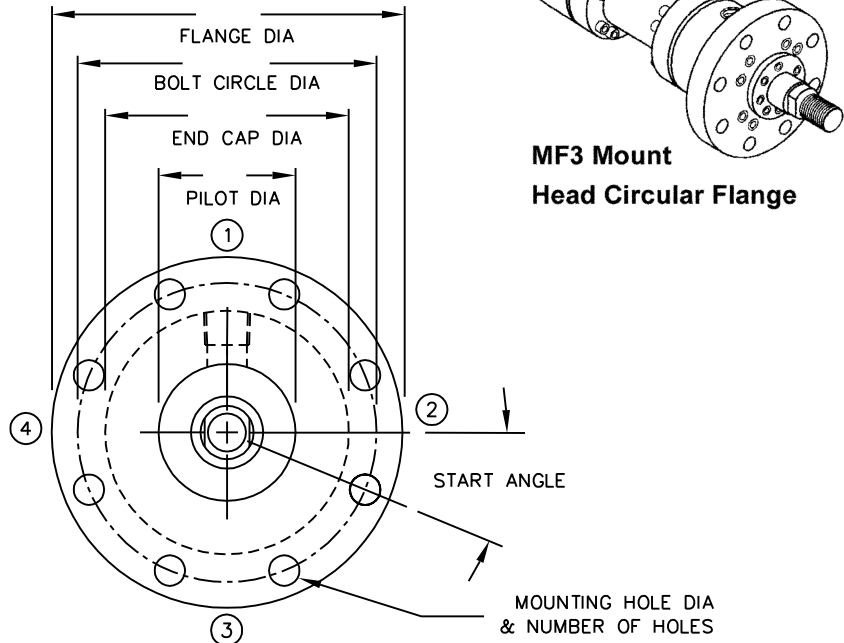
*-ADD STROKE TO THESE DIMENSIONS.

27650 Groesbeck Highway Roseville Michigan 48066-2759 Telephone: 586-775-7211 Fax: 586-775-4545
 Toll Free: 1-800-526-7968 Internet: www.peninsularcylinders.com Email: sales@peninsularcylinders.com



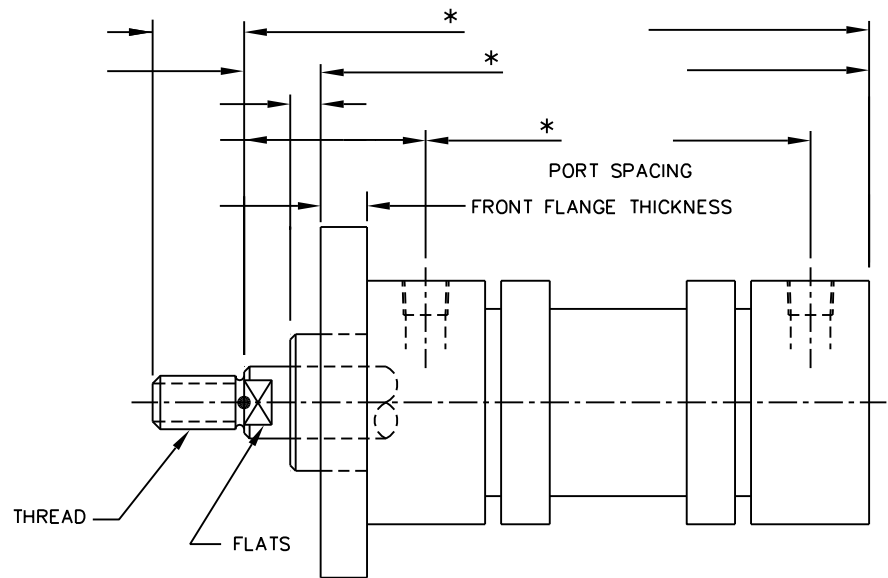
REL. 10-14-02

HEAD CIRCULAR FLANGE (MF3)



**MF3 Mount
Head Circular Flange**

PENINSULAR MILL CYLINDER SIZING CHART



INCH CYLINDER METRIC CYLINDER AIR CYLINDER LOW PRESSURE HYDRAULIC CYLINDER HIGH PRESSURE HYDRAULIC CYLINDER
 IF HYDRAULIC BOX IS CHECKED, INDICATE WORKING PRESSURE: _____ INDICATE MAXIMUM RATED PRESSURE: _____ SAFETY FACTOR REQUIRED: _____

BORE DIAMETER: _____ STROKE LENGTH: _____ PISTON ROD. DIAMETER: _____

PISTON ROD END THREAD: MALE FEMALE OTHER / SPECIFY THREAD DIA., PITCH & LENGTH (I.E., 3/4"-16 x 1.125) _____

SLEEVE (TUBE) MATERIAL: STEEL OTHER / SPECIFY MATERIAL: _____

CYLINDER HEAD MATERIAL: STEEL OTHER / SPECIFY MATERIAL: _____

CUSHIONS: YES NO IF YES: / SPECIFY ROD END ONLY CAP END ONLY CUSHION AT BOTH ENDS

ROD END CUSHION ADJUSTMENT LOCATION (1,2,3 OR 4): _____ CAP END CUSHION ADJUSTMENT LOCATION (1,2,3 OR 4): _____

INDICATE TYPE OF PORT: NPTF SAE O-RING 4-BOLT FLANGE METRIC OTHER (SPECIFY) _____

INDICATE PORT SIZE: BOTH ENDS _____ ROD END _____ CAP END _____

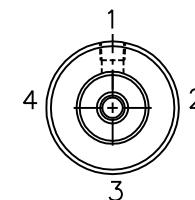
INDICATE LOCATION OF CYLINDER PORTS: ROD END (1,2,3 OR 4) _____ CAP END (1,2,3 OR 4) _____

SUPPLY EXISTING CYLINDER MANUFACTURER & MODEL NUMBER INFORMATION IF KNOWN: _____

SUPPLY ALL PERTINENT INFORMATION ON EXISTING CYLINDER TAG: _____

OPERATING FLUID: _____ OPERATING TEMPERATURE: _____ OPERATING ENVIRONMENT: _____

SPECIAL OR OPTIONAL FEATURES REQUIRED: _____



-FEATURE LOCATION KEY-
(VIEWED FACING ROD END.)



IF NECESSARY, ATTACH DRAWINGS, SKETCHES OR PHOTOGRAPHS TO PROVIDE ADDITIONAL DETAIL REGARDING YOUR CYLINDER AND/OR APPLICATION

ANY QUESTIONS? CALL PENINSULAR AT 1-800-526-7968 OR (586) 775-7211

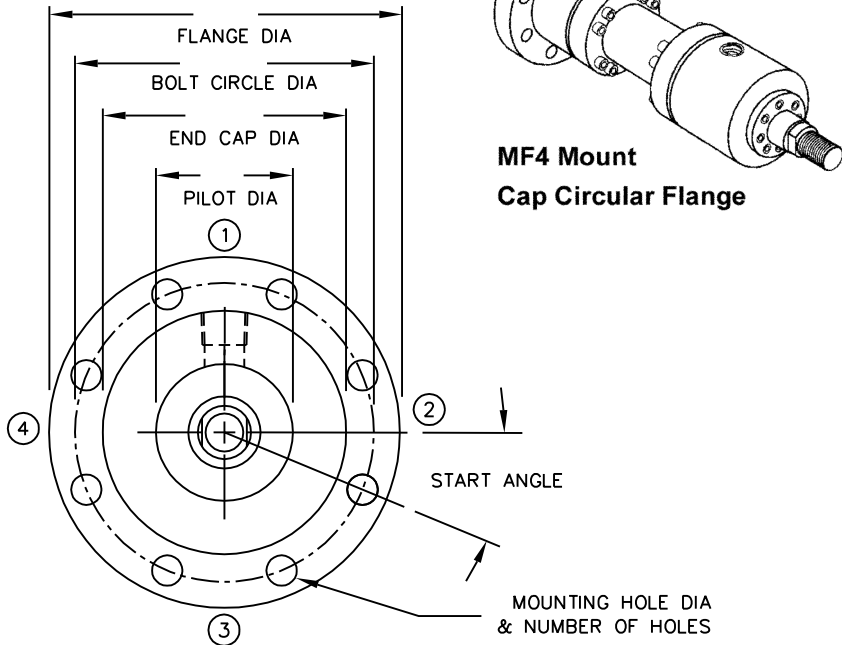
*-ADD STROKE TO THESE DIMENSIONS.

27650 Groesbeck Highway Roseville Michigan 48066-2759 Telephone: 586-775-7211 Fax: 586-775-4545
 Toll Free: 1-800-526-7968 Internet: www.peninsularcylinders.com Email: sales@peninsularcylinders.com
 REL. 10-14-02

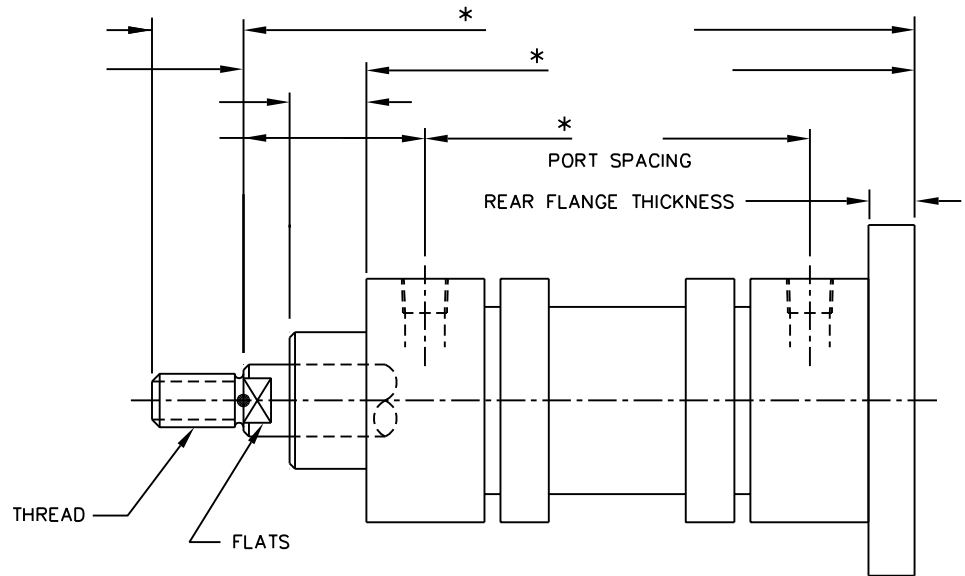
MEMBER
NFPA



CAP CIRCULAR FLANGE (MF4)



PENINSULAR MILL CYLINDER SIZING CHART



INCH CYLINDER METRIC CYLINDER AIR CYLINDER LOW PRESSURE HYDRAULIC CYLINDER HIGH PRESSURE HYDRAULIC CYLINDER
 IF HYDRAULIC BOX IS CHECKED, INDICATE WORKING PRESSURE: _____ INDICATE MAXIMUM RATED PRESSURE: _____ SAFETY FACTOR REQUIRED: _____

BORE DIAMETER: _____ STROKE LENGTH: _____ PISTON ROD. DIAMETER: _____

PISTON ROD END THREAD: MALE FEMALE OTHER / SPECIFY THREAD DIA., PITCH & LENGTH (I.E., 3/4"-16 x 1.125) _____

SLEEVE (TUBE) MATERIAL: STEEL OTHER / SPECIFY MATERIAL: _____

CYLINDER HEAD MATERIAL: STEEL OTHER / SPECIFY MATERIAL: _____

CUSHIONS: YES NO IF YES: / SPECIFY ROD END ONLY CAP END ONLY CUSHION AT BOTH ENDS

ROD END CUSHION ADJUSTMENT LOCATION (1,2,3 OR 4): _____ CAP END CUSHION ADJUSTMENT LOCATION (1,2,3 OR 4): _____

INDICATE TYPE OF PORT: NPTF SAE O-RING 4-BOLT FLANGE METRIC OTHER (SPECIFY) _____

INDICATE PORT SIZE: BOTH ENDS _____ ROD END _____ CAP END _____

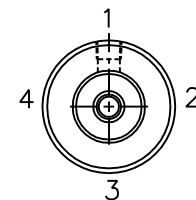
INDICATE LOCATION OF CYLINDER PORTS: ROD END (1,2,3 OR 4) _____ CAP END (1,2,3 OR 4) _____

SUPPLY EXISTING CYLINDER MANUFACTURER & MODEL NUMBER INFORMATION IF KNOWN: _____

SUPPLY ALL PERTINENT INFORMATION ON EXISTING CYLINDER TAG: _____

OPERATING FLUID: _____ OPERATING TEMPERATURE: _____ OPERATING ENVIRONMENT: _____

SPECIAL OR OPTIONAL FEATURES REQUIRED: _____



-FEATURE LOCATION KEY-
(VIEWED FACING ROD END.)

IF NECESSARY, ATTACH DRAWINGS, SKETCHES OR PHOTOGRAPHS TO PROVIDE ADDITIONAL DETAIL REGARDING YOUR CYLINDER AND/OR APPLICATION

ANY QUESTIONS? CALL PENINSULAR AT 1-800-526-7968 OR (586) 775-7211

*-ADD STROKE TO THESE DIMENSIONS.

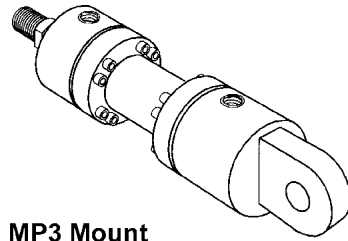
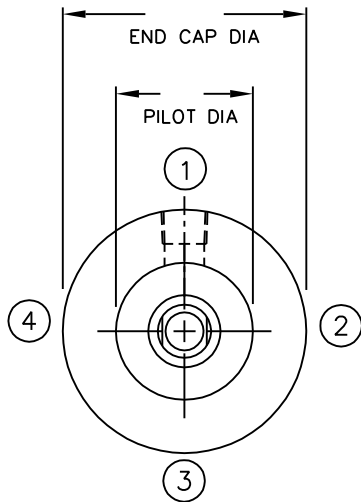
27650 Groesbeck Highway Roseville Michigan 48066-2759 Telephone: 586-775-7211 Fax: 586-775-4545
 Toll Free: 1-800-526-7968 Internet: www.peninsularcylinders.com Email: sales@peninsularcylinders.com

MEMBER
NFPA



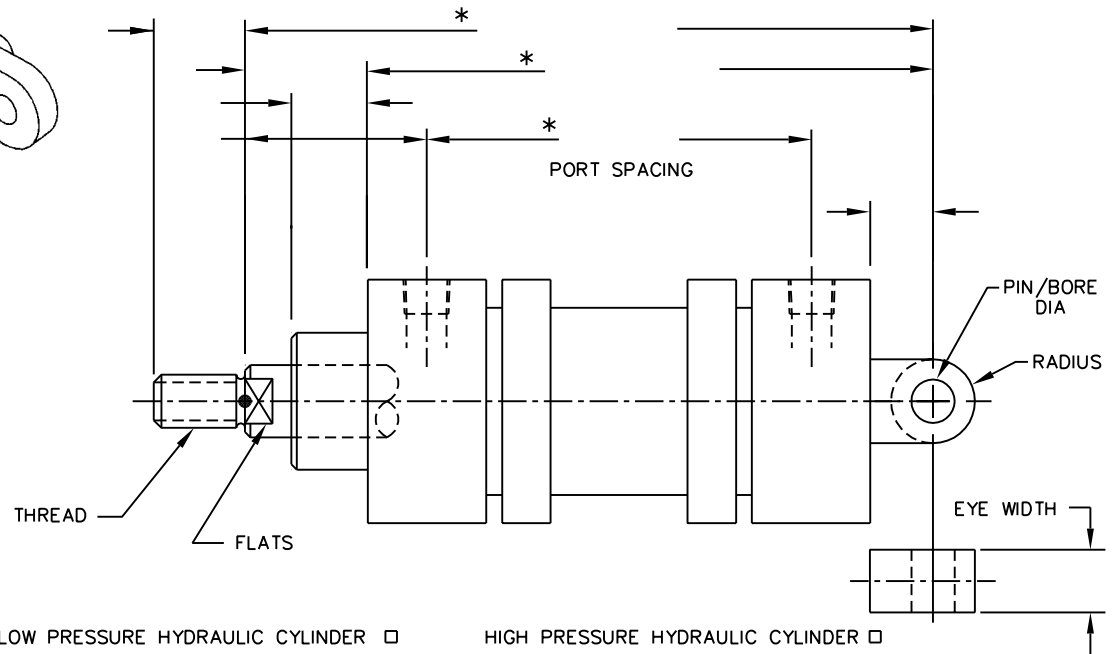
REL. 10-14-02

CAP FIXED EYE (MP3)



**MP3 Mount
Cap Fixed Eye**

PENINSULAR MILL CYLINDER SIZING CHART



INCH CYLINDER METRIC CYLINDER AIR CYLINDER LOW PRESSURE HYDRAULIC CYLINDER HIGH PRESSURE HYDRAULIC CYLINDER
 IF HYDRAULIC BOX IS CHECKED, INDICATE WORKING PRESSURE: _____ INDICATE MAXIMUM RATED PRESSURE: _____ SAFETY FACTOR REQUIRED: _____

BORE DIAMETER: _____ STROKE LENGTH: _____ PISTON ROD. DIAMETER: _____

PISTON ROD END THREAD: MALE FEMALE OTHER / SPECIFY THREAD DIA., PITCH & LENGTH (I.E., 3/4"-16 x 1.125) _____

SLEEVE (TUBE) MATERIAL: STEEL OTHER / SPECIFY MATERIAL: _____

CYLINDER HEAD MATERIAL: STEEL OTHER / SPECIFY MATERIAL: _____

CUSHIONS: YES NO IF YES: / SPECIFY ROD END ONLY CAP END ONLY CUSHION AT BOTH ENDS

ROD END CUSHION ADJUSTMENT LOCATION (1,2,3 OR 4): _____ CAP END CUSHION ADJUSTMENT LOCATION (1,2,3 OR 4): _____

INDICATE TYPE OF PORT: NPTF SAE O-RING 4-BOLT FLANGE METRIC OTHER (SPECIFY) _____

INDICATE PORT SIZE: BOTH ENDS _____ ROD END _____ CAP END _____

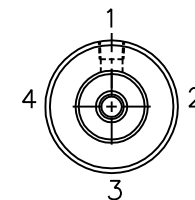
INDICATE LOCATION OF CYLINDER PORTS: ROD END (1,2,3 OR 4) _____ CAP END (1,2,3 OR 4) _____

SUPPLY EXISTING CYLINDER MANUFACTURER & MODEL NUMBER INFORMATION IF KNOWN: _____

SUPPLY ALL PERTINENT INFORMATION ON EXISTING CYLINDER TAG: _____

OPERATING FLUID: _____ OPERATING TEMPERATURE: _____ OPERATING ENVIRONMENT: _____

SPECIAL OR OPTIONAL FEATURES REQUIRED: _____



-FEATURE LOCATION KEY-
(VIEWED FACING ROD END.)

IF NECESSARY, ATTACH DRAWINGS, SKETCHES OR PHOTOGRAPHS TO PROVIDE ADDITIONAL DETAIL REGARDING YOUR CYLINDER AND/OR APPLICATION

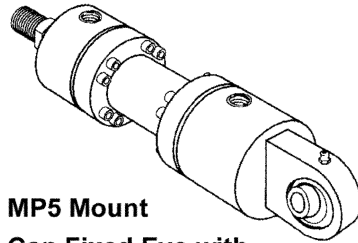
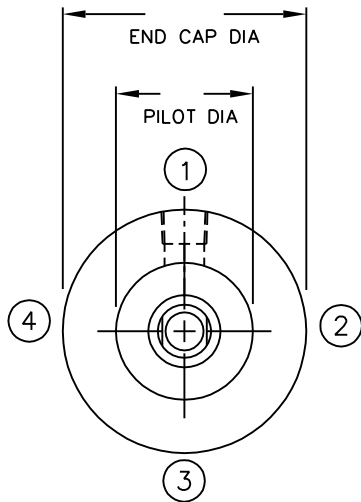
ANY QUESTIONS? CALL PENINSULAR AT 1-800-526-7968 OR (586) 775-7211

*-ADD STROKE TO THESE DIMENSIONS.

27650 Groesbeck Highway Roseville Michigan 48066-2759 Telephone: 586-775-7211 Fax: 586-775-4545
 Toll Free: 1-800-526-7968 Internet: www.peninsularcylinders.com Email: sales@peninsularcylinders.com
 REL. 10-14-02

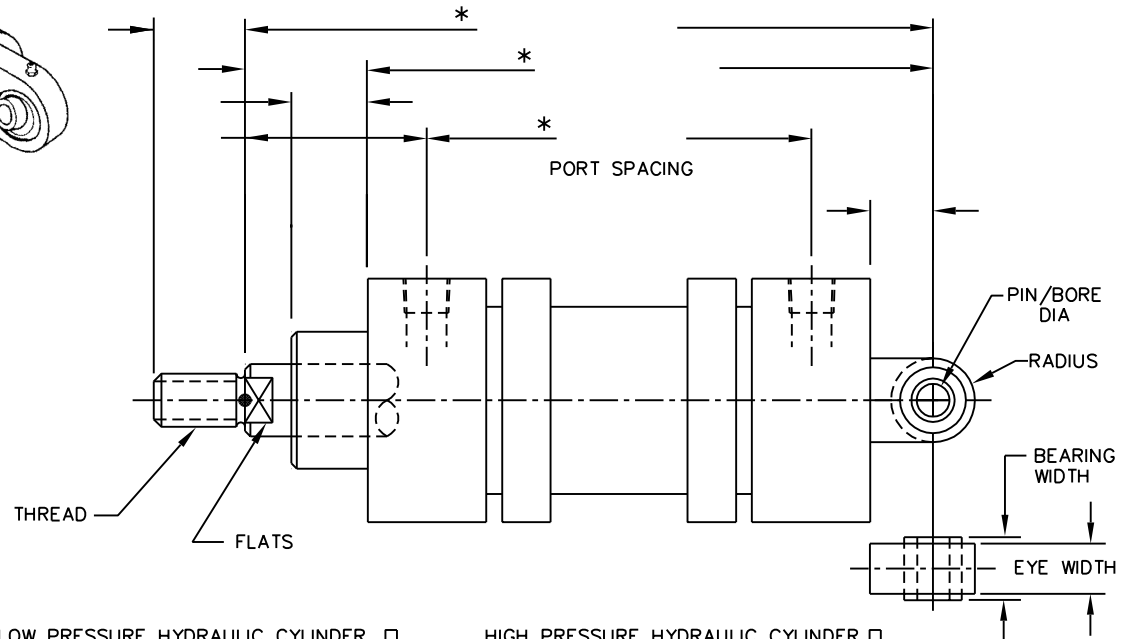


CAP FIXED EYE WITH SPHERICAL BEARING (MP5)



**MP5 Mount
Cap Fixed Eye with
Spherical Bearing**

**PENINSULAR MILL CYLINDER
SIZING CHART**



INCH CYLINDER METRIC CYLINDER AIR CYLINDER LOW PRESSURE HYDRAULIC CYLINDER HIGH PRESSURE HYDRAULIC CYLINDER
 IF HYDRAULIC BOX IS CHECKED, INDICATE WORKING PRESSURE: _____ INDICATE MAXIMUM RATED PRESSURE: _____ SAFETY FACTOR REQUIRED: _____

BORE DIAMETER: _____ STROKE LENGTH: _____ PISTON ROD DIAMETER: _____

PISTON ROD END THREAD: MALE FEMALE OTHER / SPECIFY THREAD DIA., PITCH & LENGTH (I.E., 3/4"-16 x 1.125) _____

SLEEVE (TUBE) MATERIAL: STEEL OTHER / SPECIFY MATERIAL: _____

CYLINDER HEAD MATERIAL: STEEL OTHER / SPECIFY MATERIAL: _____

CUSHIONS: YES NO IF YES: / SPECIFY ROD END ONLY CAP END ONLY CUSHION AT BOTH ENDS

ROD END CUSHION ADJUSTMENT LOCATION (1,2,3 OR 4): _____ CAP END CUSHION ADJUSTMENT LOCATION (1,2,3 OR 4): _____

INDICATE TYPE OF PORT: NPTF SAE O-RING 4-BOLT FLANGE METRIC OTHER (SPECIFY) _____

INDICATE PORT SIZE: BOTH ENDS _____ ROD END _____ CAP END _____

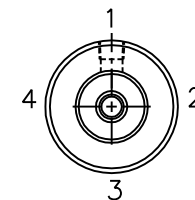
INDICATE LOCATION OF CYLINDER PORTS: ROD END (1,2,3 OR 4) _____ CAP END (1,2,3 OR 4) _____

SUPPLY EXISTING CYLINDER MANUFACTURER & MODEL NUMBER INFORMATION IF KNOWN: _____

SUPPLY ALL PERTINENT INFORMATION ON EXISTING CYLINDER TAG: _____

OPERATING FLUID: _____ OPERATING TEMPERATURE: _____ OPERATING ENVIRONMENT: _____

SPECIAL OR OPTIONAL FEATURES REQUIRED: _____



-FEATURE LOCATION KEY-
(VIEWED FACING ROD END.)

IF NECESSARY, ATTACH DRAWINGS, SKETCHES OR PHOTOGRAPHS TO PROVIDE ADDITIONAL DETAIL REGARDING YOUR CYLINDER AND/OR APPLICATION

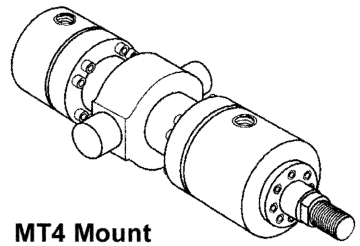
ANY QUESTIONS? CALL PENINSULAR AT 1-800-526-7968 OR (586) 775-7211

*-ADD STROKE TO THESE DIMENSIONS.

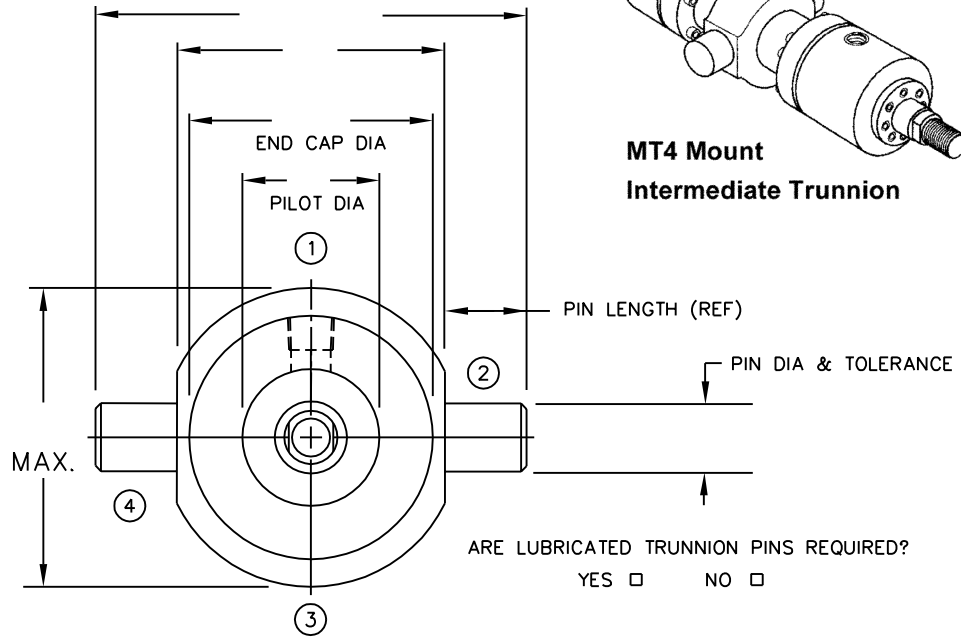
27650 Groesbeck Highway Roseville Michigan 48066-2759 Telephone: 586-775-7211 Fax: 586-775-4545
 Toll Free: 1-800-526-7968 Internet: www.peninsularcylinders.com Email: sales@peninsularcylinders.com
 REL. 10-14-02



INTERMEDIATE TRUNNION (MT4)

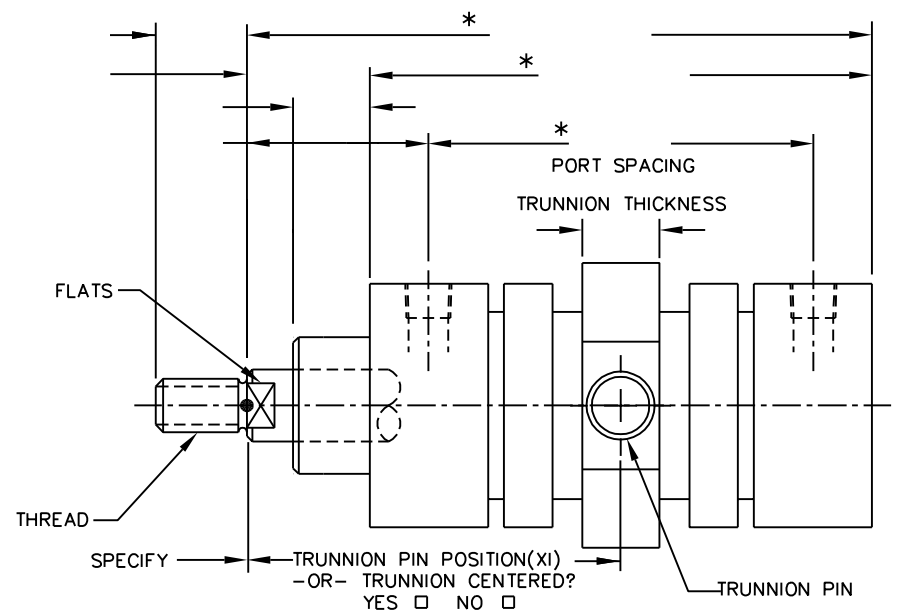


MT4 Mount Intermediate Trunnion

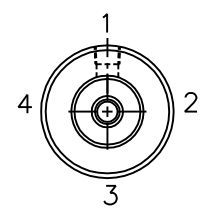


ARE LUBRICATED TRUNNION PINS REQUIRED?
 YES NO

PENINSULAR MILL CYLINDER SIZING CHART



INCH CYLINDER METRIC CYLINDER AIR CYLINDER LOW PRESSURE HYDRAULIC CYLINDER HIGH PRESSURE HYDRAULIC CYLINDER
 IF HYDRAULIC BOX IS CHECKED, INDICATE WORKING PRESSURE: _____ INDICATE MAXIMUM RATED PRESSURE: _____ SAFETY FACTOR REQUIRED: _____
 BORE DIAMETER: _____ STROKE LENGTH: _____ PISTON ROD. DIAMETER: _____
 PISTON ROD END THREAD: MALE FEMALE OTHER / SPECIFY THREAD DIA., PITCH & LENGTH (I.E., 3/4"-16 x 1.125) _____
 SLEEVE (TUBE) MATERIAL: STEEL OTHER / SPECIFY MATERIAL: _____
 CYLINDER HEAD MATERIAL: STEEL OTHER / SPECIFY MATERIAL: _____
 CUSHIONS: YES NO IF YES: / SPECIFY ROD END ONLY CAP END ONLY CUSHION AT BOTH ENDS
 ROD END CUSHION ADJUSTMENT LOCATION (1,2,3 OR 4): _____ CAP END CUSHION ADJUSTMENT LOCATION (1,2,3 OR 4): _____
 INDICATE TYPE OF PORT: NPTF SAE O-RING 4-BOLT FLANGE METRIC OTHER (SPECIFY) _____
 INDICATE PORT SIZE: BOTH ENDS _____ ROD END _____ CAP END _____
 INDICATE LOCATION OF CYLINDER PORTS: ROD END (1,2,3 OR 4) _____ CAP END (1,2,3 OR 4) _____
 SUPPLY EXISTING CYLINDER MANUFACTURER & MODEL NUMBER INFORMATION IF KNOWN: _____
 SUPPLY ALL PERTINENT INFORMATION ON EXISTING CYLINDER TAG: _____
 OPERATING FLUID: _____ OPERATING TEMPERATURE: _____ OPERATING ENVIRONMENT: _____
 SPECIAL OR OPTIONAL FEATURES REQUIRED: _____



-FEATURE LOCATION KEY-
 (VIEWED FACING ROD END.)

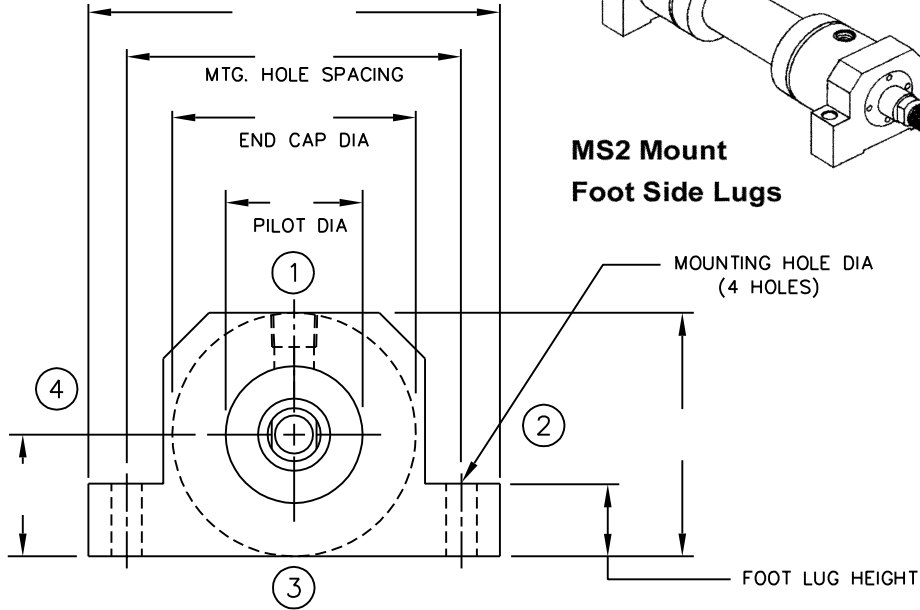


IF NECESSARY, ATTACH DRAWINGS, SKETCHES OR PHOTOGRAPHS TO PROVIDE ADDITIONAL DETAIL REGARDING YOUR CYLINDER AND/OR APPLICATION
 ANY QUESTIONS? CALL PENINSULAR AT 1-800-526-7968 OR (586) 775-7211 * - ADD STROKE TO THESE DIMENSIONS.

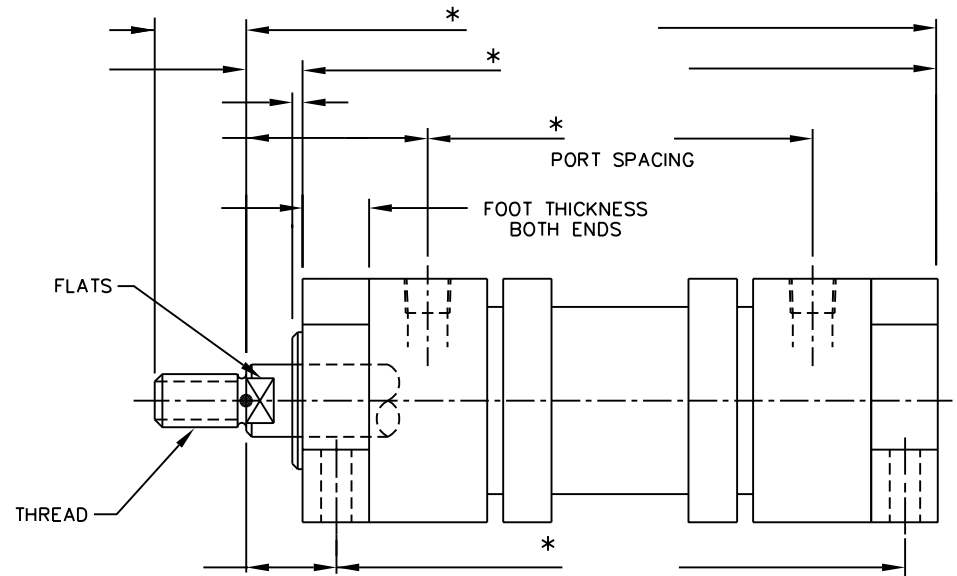
27650 Groesbeck Highway Roseville Michigan 48066-2759 Telephone: 586-775-7211 Fax: 586-775-4545
 Toll Free: 1-800-526-7968 Internet: www.peninsularcylinders.com Email: sales@peninsularcylinders.com



FOOT SIDE LUGS (MS2)



PENINSULAR MILL CYLINDER SIZING CHART



INCH CYLINDER METRIC CYLINDER AIR CYLINDER LOW PRESSURE HYDRAULIC CYLINDER HIGH PRESSURE HYDRAULIC CYLINDER
 IF HYDRAULIC BOX IS CHECKED, INDICATE WORKING PRESSURE: _____ INDICATE MAXIMUM RATED PRESSURE: _____ SAFETY FACTOR REQUIRED: _____

BORE DIAMETER: _____ STROKE LENGTH: _____ PISTON ROD DIAMETER: _____

PISTON ROD END THREAD: MALE FEMALE OTHER / SPECIFY THREAD DIA., PITCH & LENGTH (I.E., 3/4"-16 x 1.125) _____

SLEEVE (TUBE) MATERIAL: STEEL OTHER / SPECIFY MATERIAL: _____

CYLINDER HEAD MATERIAL: STEEL OTHER / SPECIFY MATERIAL: _____

CUSHIONS: YES NO IF YES: / SPECIFY ROD END ONLY CAP END ONLY CUSHION AT BOTH ENDS

ROD END CUSHION ADJUSTMENT LOCATION (1,2,3 OR 4): _____ CAP END CUSHION ADJUSTMENT LOCATION (1,2,3 OR 4): _____

INDICATE TYPE OF PORT: NPTF SAE O-RING 4-BOLT FLANGE METRIC OTHER (SPECIFY) _____

INDICATE PORT SIZE: BOTH ENDS _____ ROD END _____ CAP END _____

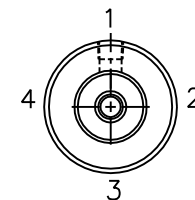
INDICATE LOCATION OF CYLINDER PORTS: ROD END (1,2,3 OR 4) _____ CAP END (1,2,3 OR 4) _____

SUPPLY EXISTING CYLINDER MANUFACTURER & MODEL NUMBER INFORMATION IF KNOWN: _____

SUPPLY ALL PERTINENT INFORMATION ON EXISTING CYLINDER TAG: _____

OPERATING FLUID: _____ OPERATING TEMPERATURE: _____ OPERATING ENVIRONMENT: _____

SPECIAL OR OPTIONAL FEATURES REQUIRED: _____



-FEATURE LOCATION KEY-
(VIEWED FACING ROD END.)

IF NECESSARY, ATTACH DRAWINGS, SKETCHES OR PHOTOGRAPHS TO PROVIDE ADDITIONAL DETAIL REGARDING YOUR CYLINDER AND/OR APPLICATION

ANY QUESTIONS? CALL PENINSULAR AT 1-800-526-7968 OR (586) 775-7211

*-ADD STROKE TO THESE DIMENSIONS.

27650 Groesbeck Highway Roseville Michigan 48066-2759 Telephone: 586-775-7211 Fax: 586-775-4545
 Toll Free: 1-800-526-7968 Internet: www.peninsularcylinders.com Email: sales@peninsularcylinders.com

MEMBER
NFPA

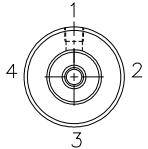


REL. 10-14-02

How to Order and Specify Peninsular Mill Series Cylinders

MILL	A	—	—	x	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Mill = Inch Series	A=Air	Mount	Bore		Stroke	Rod Diameter	Rod End Thread			Rod End Plumbing Configuration		Cap End Plumbing Configuration									Special Features (Describe)
I-Mill = Metric Series	H=Hydraulic	A	B		C	D	E			F		G									H
- Ordering Code Positions -																					

Please submit a copy of this ordering document with the appropriate **completed** Mill Cylinder Design Template

KEY for Position F & G	Specify Plumbing Configuration for Front End Cap (F) and Rear End Cap (G)	 <p style="text-align: center;">—FEATURE LOCATION KEY— (VIEWED FACING ROD END.)</p>
A = Hydraulic Supply Port – NPTF Threads T = Hydraulic Supply Port – SAE Straight ‘O’ Ring Threads F = 4 – Bolt Flange Ports C = Cushion Adjuster Location N = Nothing – No Feature Required at This Location		

Optional Mill Cylinder Features (*Specify Optional Features in Position “H” within Ordering Code*)

- Air Bleed
- Rod Gland Drain Back
- Extended Piston Rod (*Specify Length*)
- Bronze Rod Cartridge
- Chevron Style Seals
- Rod Boot Cover
- Cast Iron Piston Rings
- Lubricated Trunnion Pins
- Stop Tube (*Specify Length*)
- Special or Oversize Ports (*Specify*)
- Threaded Stud Rod End
- Metallic Scraper Ring
- Viton™ Seals (*For High Temperature Applications or Special Fluids*)
- Specify XI Dimension (*Intermediate Trunnion Mount*)
- Double Rod End
- Heavy Chrome on Piston Rod or Cylinder Tube
- Locking Cushion Needle Adjuster

Field Service and Engineering Support

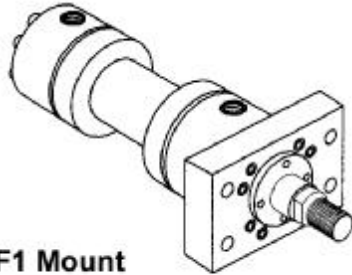
We understand the importance of technical assistance and the availability of products and repair parts. That’s why we have a distributor network and technical representatives throughout the country. You can also reach our Customer Service Department for help ...**1-800-526-7968**

Complete Repair Facility

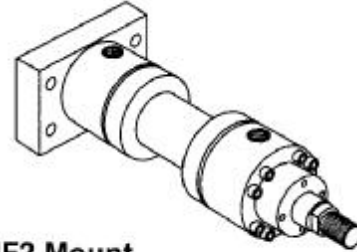
Peninsular repairs all air and hydraulic cylinder makes and models. All cylinders are performance tested before shipment. Estimates are provided prior to repair activity.

PENINSULAR CYLINDER COMPANY MILL SERIES CYLINDERS ARE AVAILABLE IN THE FOLLOWING MOUNTING CONFIGURATIONS:

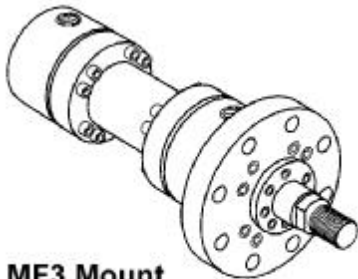
NOTE: NFPA DIMENSIONAL STANDARDS *DO NOT* APPLY TO MOUNTING STYLES SHOWN



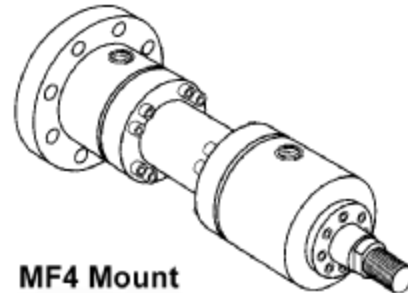
MF1 Mount
Head Rectangular Flange



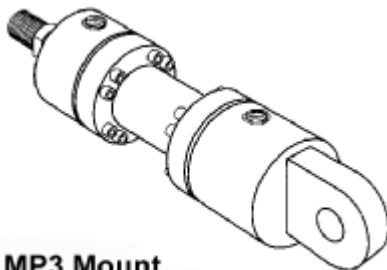
MF2 Mount
Cap Rectangular Flange



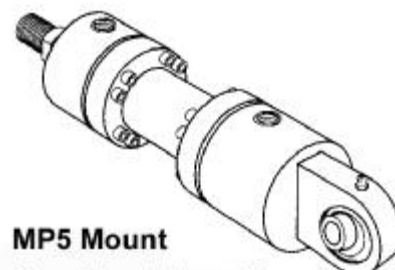
MF3 Mount
Head Circular Flange



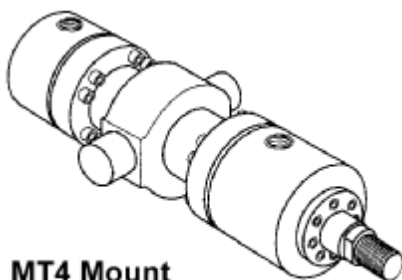
MF4 Mount
Cap Circular Flange



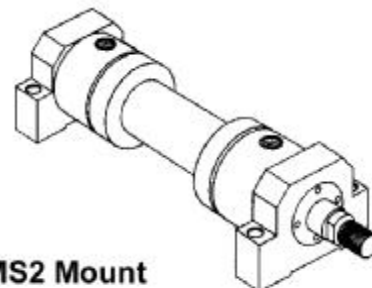
MP3 Mount
Cap Fixed Eye



MP5 Mount
Cap Fixed Eye with Spherical Bearing



MT4 Mount
Intermediate Trunnion



MS2 Mount
Foot Side Lugs