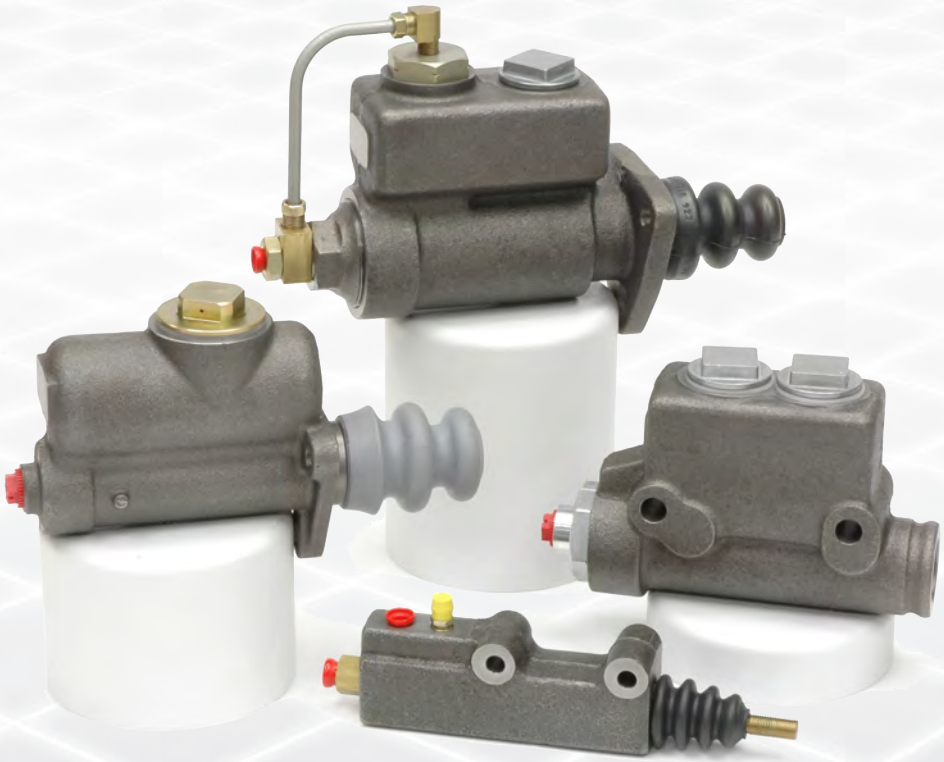
MICO®

Innovative Braking and Controls Worldwide

Hydraulic Master Cylinders

flange mount and side mount,
straight-bore and two-stage cylinders



Hydraulic Cylinders
for Mobile and
Industrial Applications

Why choose MICO?

MICO, Inc. designs, manufactures and markets hydraulic components, controls, and brake systems primarily for off-road markets. We have manufacturing facilities in:

- North Mankato, Minnesota U.S.A.
- Ontario, California U.S.A.
- Empalme, Sonora, Mexico

Many of the world's largest off-highway OEMs value the knowledgeable staff at MICO and work with us to make their products better. Our custom-engineered products are designed with the customer requirements as the primary driver. It is our intent to help customers build their systems with our expertise in hydraulic components, braking systems and controls.

Our goal is to meet or exceed our customers' expectations in every aspect of our business.

Product lines we specialize in include:

- Actuators
- Brake Locks
- Brakes
- Controls
- Cylinders
- Electrohydraulics
- Master Cylinders
- Valves

MICO continuously strives for improvement, while remaining a quality leader in our field. We have been a successful, customer driven business since 1946. We look forward to working with you!

Master Cylinders

MICO® Master Cylinders are designed with the same quality and dependability that goes into every MICO Braking System Product.

A detailed explanation of the straight-bore MICO® Master Cylinders can be found on pages 4 and 5. The two-stage MICO® Master Cylinders, also called MICO® Power Cylinders, are explained briefly in the following paragraphs. For a more detailed explanation refer to pages 6 through 9.

The two-stage MICO® Master Cylinders are integrally designed to incorporate the advantage of a large piston for fluid volume and a small piston for high pressure. Transfer from the volume piston to the pressure piston is accomplished by means of a metered pressure relief valve.

Most master cylinders are available in two mounting styles. For further information regarding MICO® Master Cylinders consult MICO, Inc.

Some master cylinders listed in this catalog include a **Residual Check Valve** (a device that allows free flow of fluid in one direction while maintaining a residual pressure from the opposing direction). **For most disc brake applications a master cylinder without a residual check valve is needed.**

This catalog is designed to assist you in making an initial selection of a MICO® Master Cylinder suited to your requirements. Complete the appropriate Application Data Sheet online, www.mico.com. The MICO Applications Department will analyze your specifications and based on your input recommend a master cylinder suitable for your requirements.

This document is intended to provide general information about MICO Products. MICO, Inc. has attempted to present accurate information about MICO Products in its catalogs, brochures, and other printed materials. MICO, Inc. is not responsible for errors, inaccuracies, or inconsistencies that may exist in any catalog brochure or other printed materials or any damages arising from or related to reliance on information in them. Materials and specifications for MICO Products set forth in catalogs, brochures, and other printed materials are subject to change without notice or obligation. Refer to www.mico.com for the most recent versions of our literature. If you have any questions concerning MICO Products, please contact MICO, Inc. All MICO Products and service are sold and provided subject to the MICO Warranty at www.mico.com in effect on the date of sale or supply.

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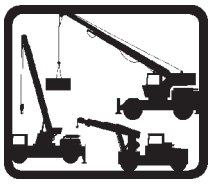
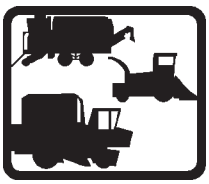


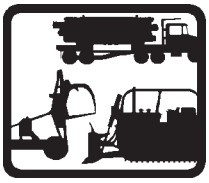
Swing Drive Equipment



Agricultural Equipment

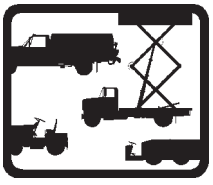
Heavy Construction Equipment

Mining Equipment



Forestry Equipment

In-Plant & Warehouse Equipment



Airport Support Vehicles

Operation of two-stage MICO Master Cylinders

(Low Pressure Relief Valve)

Non-Actuated Position

(Refer to Figure 4)

When the brake pedal is completely released, the master cylinder is in a static position. The low and high pressure bores (11 & 12) and reservoir are equalized at atmospheric pressure because air vent (8) and equalizing port (2) are open. (Models that use a filler cap designed for a remote reservoir must use a vented cap on the remote reservoir.) Residual check valve (5) is closed and sealed against check valve seat (7) causing the vehicle brake system to remain at residual pressure (approximately 8-16 PSI). Residual pressure in the vehicle brake system is retained to flare the lip of the cup seal in the wheel cylinder to prevent leakage and/or air ingestion into the brake system.

Relief valve (1) is closed. High pressure piston (3) is not sealed against seat (4).

Residual check valves are usually used in drum brake systems to maintain slight residual pressure in the hydraulic brake system while the brake pedal is released. Residual pressure may vary depending on the system application.

Residual check valves are not used in master cylinders that connect to disc brakes. Disc brake systems need to be free of residual pressure because residual pressure will hold the brake pads in contact with the disc. This will result in brake drag, over-heating of brake components, unnecessary wear and premature brake replacement.

Forward Movement of the Brake Pedal Until Fully Applied

(Refer to Figure 5)

When the brake pedal is applied, low pressure piston (9) is forced forward. Forward movement of low pressure piston (9) begins to transfer fluid from low pressure bore (11) through equalizing port (2) to reservoir and outlet port (6). Low pressure cup (10) moves past equalizing port (2) preventing any additional fluid from flowing into the reservoir.

Continued forward pedal movement forces high pressure piston (3) against seat (4). Pressurized fluid in low pressure bore (11) is forced past high pressure cup (13) through outlet port (6) into the brake system. At this point, brake system pressure is determined by the area of low pressure piston (9) and the mechanical force applied to it.

Continued forward movement of low pressure piston (9) causes the brake system to reach relief valve (1) pressure setting. Relief valve piston (15) opens and fluid in low pressure bore (11) flows into the reservoir past metering pin (14) and through relief valve ports (18). Fluid pressure in the low pressure bore (11) will remain at relief valve (1) setting. The velocity of discharged fluid through the relief valve (1) is controlled by the metering pin (14).

As forward movement of low pressure piston (9) continues, a pressure differential causes fluid in high pressure bore (12) to flare high pressure cup (13). This closes off fluid flow into high pressure bore (12) from low pressure bore (11). At this point, brake system pressure intensifies due to the smaller size of high pressure piston (3).

Brake Pedal Released

(Refer to Figure 6)

When the brake pedal is released, brake system components under fluid pressure and component springs under compression now cause fluid to return to the master cylinder through outlet port (6). This returning fluid must overcome a resistance of 8-16 PSI to force check valve (5) off of check valve seat (7). When returning fluid can no longer overcome this resistance, residual check valve (5) closes, and brake system pressure remains at 8-16 PSI (residual pressure).

Low pressure piston (9) returns to the point where fluid was displaced into the reservoir through relief valve (1) during forward stroke. Residual check valve (5) is closed and springs continue to retract low pressure piston (9) and high pressure piston (3). This creates a vacuum in the low pressure bore (11). Fluid in the reservoir is forced through replenishing ports (16), opening disc check valve (17), and into low and high pressure bores (11 & 12) until piston (9) is returned to the static condition. Reservoir and bore pressures are equalized.

Key

1. Relief Valve
2. Equalizing Port
3. High Pressure Piston
4. Seat
5. Residual Check Valve
6. Outlet Port
7. Check Valve Seat
8. Air Vent
9. Low Pressure Piston
10. Low Pressure Cup
11. Low Pressure Bore
12. High Pressure Bore
13. High Pressure Cup
14. Metering Pin
15. Relief Valve Piston
16. Replenishing Port
17. Disc Check Valve
18. Relief Valve Port

Hydraulic Fluid

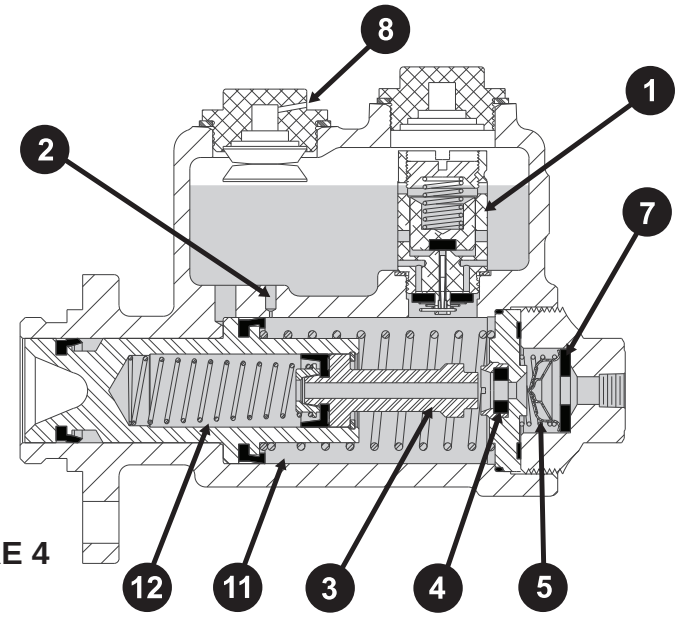


FIGURE 4

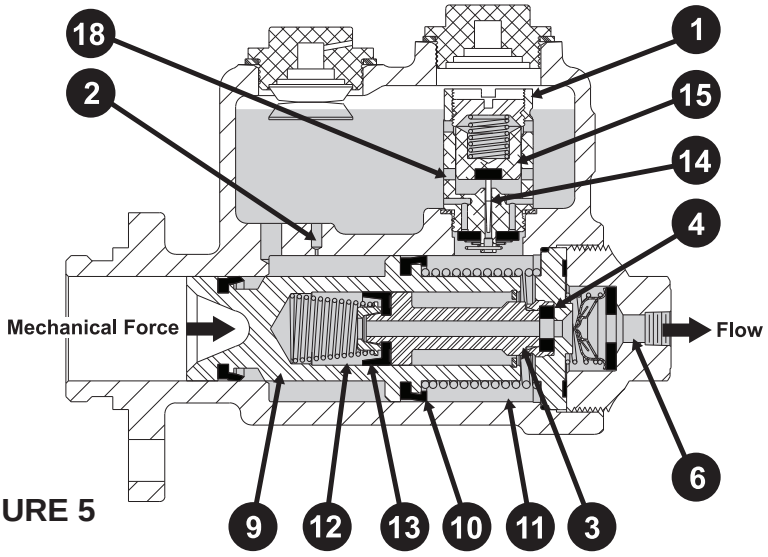


FIGURE 5

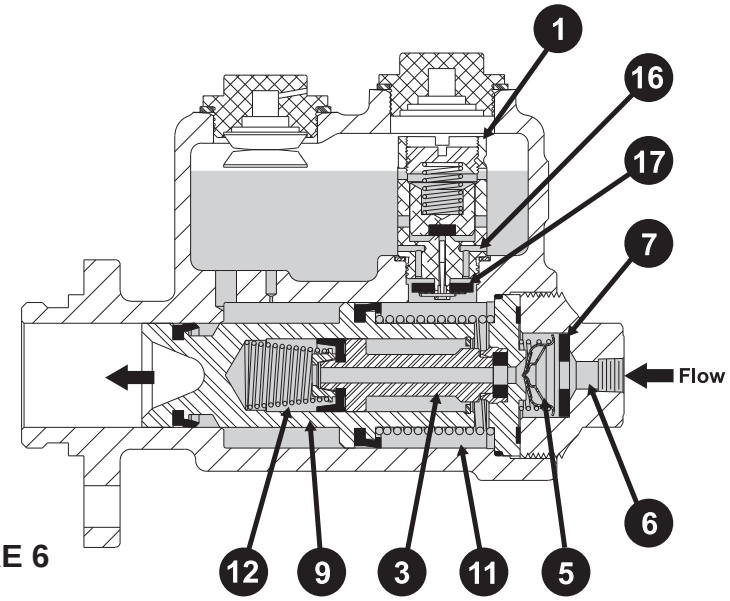


FIGURE 6

Choosing the Proper Cylinder

Straight-bore Master Cylinder Displacement

Fluid displacement from master cylinders can be determined by square inch area of the bore multiplied by stroke.

Two-stage Master Cylinder Displacement

Initial fluid displacement from the two-stage master cylinder is caused by movement of the large diameter piston until the relief valve opens. When the relief valve opens, fluid displacement by the large diameter piston is diverted into the reservoir. At this point further fluid displaced from the two-stage master cylinder is from the high pressure bore (small diameter piston). See Table 1 for displacement ranges.

TABLE 1

Inch Bore Size Diameters	* Inch³ Displacement Range
1 1/4 over 3/4	0.44 to 1.20
1 3/8 over 7/8	0.60 to 1.48
1 1/2 over 3/4	0.55 to 2.20
1 1/2 over 7/8	0.75 to 2.20
1 3/4 over 7/8	0.75 to 3.00
1 3/4 over 1	0.98 to 3.00
1 3/4 over 1 1/8	1.20 to 3.00
2 1/4 over 1	1.57 to 7.00
2 1/4 over 1 1/8	2.00 to 7.00

* Displacements are only an approximation and will vary depending on the relief valve setting and overall system characteristics.

Understanding Pedal Ratio

Pedal ratio is calculated using the formula:

$$\frac{A \times B}{C} = \text{Pedal Ratio}$$

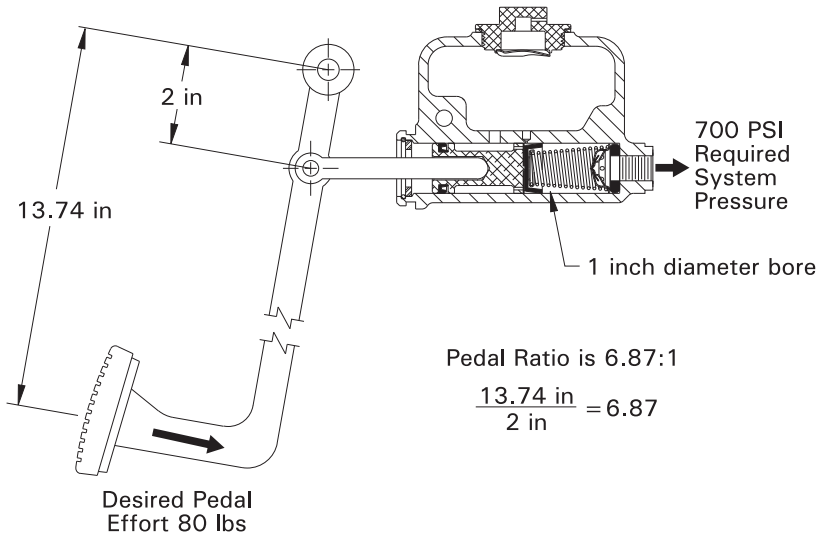
Where:

A = required brake system pressure
B = area of piston
C = desired pedal effort

Example:

A = 700 PSI
B = 0.7854 in² (area of 1 inch piston)
C = 80 lbs

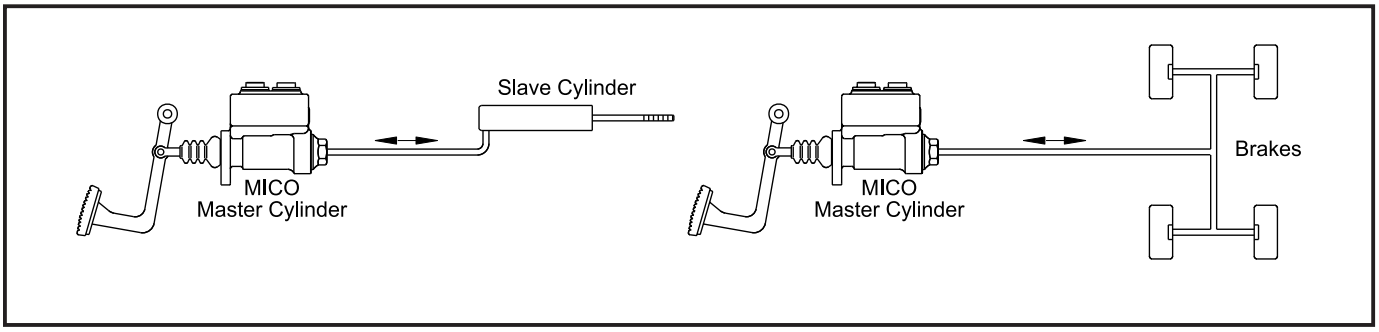
$$\frac{700 \times 0.7854}{80} = 6.87$$



Pedal Ratio is 6.87:1

$$\frac{13.74 \text{ in}}{2 \text{ in}} = 6.87$$

Typical Applications



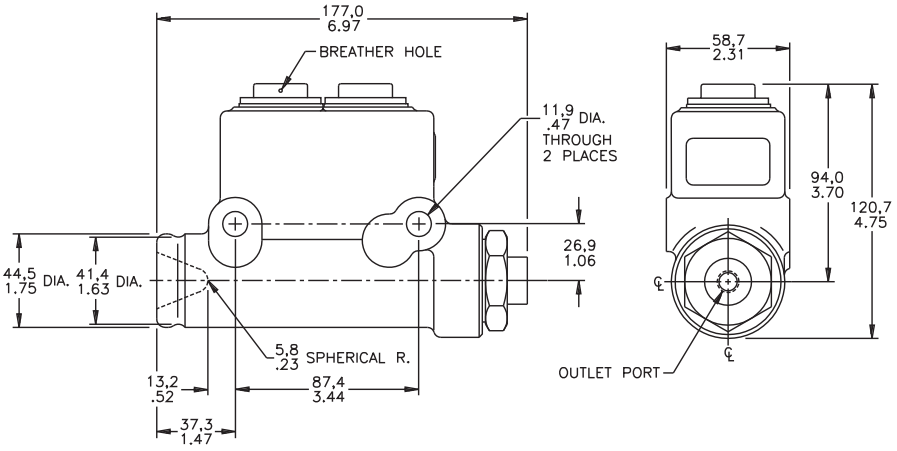
Two-stage Master Cylinders

Low Pressure Relief Valve

Typical model show. Dimensions may vary slightly between units.

Bore Combinations:

- 1 1/4 inch over 3/4 inch
- 1 3/8 inch over 7/8 inch



millimeters
inches

SPECIFICATIONS

Model Number	Large Bore Diameter	Small Bore Diameter	Effective Stroke	Relief Valve Pressure Setting	Fluid Type	Push Rod (refer to page 34)	Boot (refer to page 33)	Residual Check Valve	✷Outlet Port
02-020-231	1.250 in	0.750 in	1.25 in	90 PSI	BF	None	None	Yes	1/8-27NPTF
02-020-257	1.375 in	0.875 in	1.25 in	150 PSI	BF	30-020-020	32-570-005	Yes	7/16-24 inverted flare
02-020-258	1.375 in	0.875 in	1.25 in	160 PSI	HO	30-020-020	32-570-065	Yes	7/16-24 inverted flare
02-020-259	1.375 in	0.875 in	1.25 in	90 PSI	BF	None	None	Yes	1/2-20UNF-2B
+ 02-020-261	1.375 in	0.875 in	1.25 in	175 PSI	BF	30-020-020	32-570-005	No	1/2-20UNF-2B
02-020-266	1.250 in	0.750 in	1.25 in	90 PSI	HO	None	None	Yes	1/2-20UNF-2B
02-020-268	1.375 in	0.875 in	1.25 in	90 PSI	HO	None	None	Yes	1/2-20UNF-2B
02-020-317	1.375 in	0.875 in	1.25 in	125 PSI	BF	None	None	Yes	1/8-27NPTF
02-020-343	1.250 in	0.750 in	1.25 in	150 PSI	BF	30-020-022	32-570-005	Yes	1/8-27NPTF & 7/16-24 inverted flare
02-021-231	1.250 in	0.750 in	1.25 in	90 PSI	BF	None	None	No	1/8-27NPTF
02-021-258	1.375 in	0.875 in	1.25 in	160 PSI	HO	30-020-020	32-570-065	No	7/16-24 inverted flare
02-021-259	1.375 in	0.875 in	1.25 in	90 PSI	BF	None	None	No	1/2-20UNF-2B
02-021-266	1.250 in	0.750 in	1.25 in	90 PSI	HO	None	None	No	1/2-20UNF-2B
02-021-268	1.375 in	0.875 in	1.25 in	90 PSI	HO	None	None	No	1/2-20UNF-2B
02-021-343	1.250 in	0.750 in	1.25 in	150 PSI	BF	30-020-022	32-570-005	No	1/8-27NPTF & 7/16-24 inverted flare
03-020-309	1.250 in	0.750 in	1.25 in	80 PSI	BF	30-020-083	32-570-005	No	1/8-27NPTF
03-020-509	1.250 in	0.750 in	1.25 in	75 PSI	BF	30-020-083	32-570-077	Yes	1/2-20UNF-2B

HO = mineral base hydraulic oil. BF = DOT 3, 4, 5 and 5.1 brake fluid.

\+ Has one filler cap tapped (1/8-27NPTF) for remote reservoir.

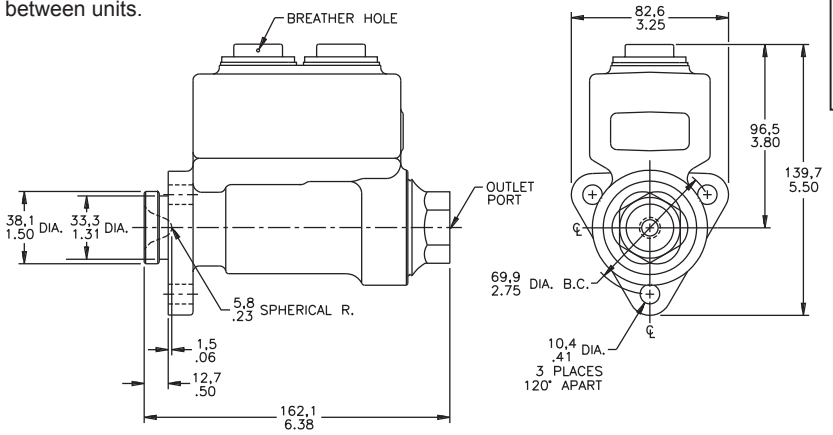
✷ Contact MICO, Inc. for available outlet port adapters.

NOTE: A tool to remove the low pressure relief valve is available from MICO (part number 02-720-001).

Two-stage Master Cylinders

Low Pressure Relief Valve

Typical model show. Dimensions may vary slightly between units.



Bore Combinations:

- 1 1/2 inch over 3/4 inch
- 1 1/2 inch over 7/8 inch

millimeters
inches

SPECIFICATIONS

Model Number	Large Bore Diameter	Small Bore Diameter	Effective Stroke	Relief Valve Pressure Setting	Fluid Type	Push Rod (refer to page 34)	Boot (refer to page 33)	Residual Check Valve	✷Outlet Port
02-020-312	1.500 in	0.875 in	1.44 in	100 PSI	HO	None	32-570-004	Yes	1/2-20UNF-2B
02-020-313	1.500 in	0.875 in	1.44 in	75 PSI	BF	None	32-570-004	Yes	+ 1/2-20UNF-2B
02-020-316	1.500 in	0.875 in	1.44 in	115 PSI	HO	None	None	Yes	1/2-20UNF-2B
02-021-313	1.500 in	0.875 in	1.44 in	75 PSI	BF	None	32-570-004	No	+ 1/2-20UNF-2B
02-021-316	1.500 in	0.875 in	1.44 in	115 PSI	HO	None	None	No	1/2-20UNF-2B
03-020-396	1.500 in	0.875 in	1.44 in	125 PSI	HO	None	32-570-004	Yes	1/2-20UNF-2B
03-020-411	1.500 in	0.750 in	1.44 in	75 PSI	BF	None	32-570-004	Yes	1/2-20UNF-2B
* 03-020-418	1.500 in	0.750 in	1.44 in	160 PSI	HO	None	None	No	9/16-18UNF-2B
03-020-420	1.500 in	0.750 in	1.44 in	115 PSI	HO	None	32-570-004	Yes	1/8-27NPTF
03-020-421	1.500 in	0.750 in	1.44 in	90 PSI	BF	None	32-570-004	Yes	1/8-27NPTF
03-020-461	1.500 in	0.875 in	1.44 in	150 PSI	BF	None	None	Yes	1/2-20UNF-2B
03-020-479	1.500 in	0.875 in	1.44 in	75 PSI	BF	30-020-057	32-570-004	No	■ 1/8-27NPTF
03-020-533	1.500 in	0.875 in	1.44 in	100 PSI	BF	None	32-570-004	Yes	1/8-27NPTF
03-020-535	1.500 in	0.875 in	1.44 in	100 PSI	BF	30-020-089	32-570-005	Yes	1/8-27NPTF
● 03-020-610	1.500 in	0.875 in	1.44 in	90 PSI	HO	None	32-570-004	Yes	1/2-20UNF-2B
03-021-396	1.500 in	0.875 in	1.44 in	125 PSI	HO	None	32-570-004	No	1/2-20UNF-2B
03-021-411	1.500 in	0.750 in	1.44 in	75 PSI	BF	None	32-570-004	No	1/2-20UNF-2B
03-021-420	1.500 in	0.750 in	1.44 in	115 PSI	HO	None	32-570-004	No	1/8-27NPTF
03-021-421	1.500 in	0.750 in	1.44 in	90 PSI	BF	None	32-570-004	No	1/8-27NPTF
03-021-461	1.500 in	0.875 in	1.44 in	150 PSI	BF	None	None	No	1/2-20UNF-2B
03-021-533	1.500 in	0.875 in	1.44 in	100 PSI	BF	None	32-570-004	No	1/8-27NPTF
03-021-535	1.500 in	0.875 in	1.44 in	100 PSI	BF	30-020-089	32-570-005	No	1/8-27NPTF
● 03-021-610	1.500 in	0.875 in	1.44 in	90 PSI	HO	None	32-570-004	No	1/2-20UNF-2B

HO = mineral base hydraulic oil. BF = DOT 3, 4, 5 and 5.1 brake fluid.

* Has a special standpipe filler cap with air filter.

\+ Includes outlet port adapter 7/16-24 inverted flare.

■ Has fitting block with a second outlet port 7/16-24 inverted flare.

● Has one filler cap tapped (1/4-18NPTF) for remote reservoir.

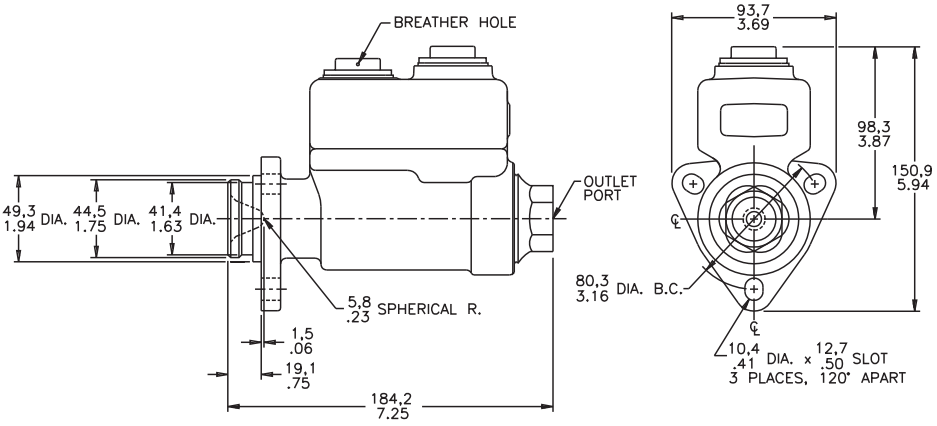
✷ Contact MICO, Inc. for available outlet port adapters.

NOTE: A tool to remove the low pressure relief valve is available from MICO (part number 02-720-001).

Two-stage Master Cylinders

Low Pressure Relief Valve

Typical model show. Dimensions may vary slightly between units.



Bore Combinations:

- 1 3/4 inch over 7/8 inch
- 1 3/4 inch over 1 inch
- 1 3/4 inch over 1 1/8 inch

millimeters
inches

SPECIFICATIONS

Model Number	Large Bore Diameter	Small Bore Diameter	Effective Stroke	Relief Valve Pressure Setting	Fluid Type	Push Rod (refer to page 34)	Boot (refer to page 33)	Residual Check Valve	✷Outlet Port
03-020-419	1.750 in	1.000 in	1. 44 in	100 PSI	BF	None	None	Yes	1/8-27NPTF
03-020-422	1.750 in	1.000 in	1. 44 in	100 PSI	HO	None	None	Yes	1/2-20UNF-2B
03-020-425	1.750 in	1.000 in	1. 44 in	200 PSI	BF	None	32-570-006	Yes	1/2-20UNF-2B
03-020-427	1.750 in	1.125 in	1. 44 in	100 PSI	BF	None	None	Yes	1/2-20UNF-2B
03-020-428	1.750 in	0.875 in	1. 44 in	175 PSI	HO	None	None	Yes	1/8-27NPTF
03-020-429	1.750 in	0.875 in	1. 44 in	175 PSI	BF	None	None	Yes	1/8-27NPTF
03-020-430	1.750 in	0.875 in	1. 44 in	75 PSI	HO	None	None	No	1/8-27NPTF
03-020-466	1.750 in	1.000 in	1. 44 in	190 PSI	HO	30-020-020	32-570-065	Yes	1/2-20UNF-2B
* 03-020-468	1.750 in	1.000 in	1. 44 in	265 PSI	HO	30-020-020	32-570-065	No	1/8-27NPTF
03-020-471	1.750 in	1.000 in	1. 44 in	150 PSI	BF	30-020-020	32-570-005	Yes	1/2-20UNF-2B
03-020-478	1.750 in	1.125 in	1. 44 in	190 PSI	HO	30-020-020	32-570-065	No	1/2-20UNF-2B
03-020-515	1.750 in	1.125 in	1. 44 in	200 PSI	BF	None	32-570-005	Yes	+ 1/8-27NPTF - 3 Places
03-020-557	1.750 in	1.125 in	1. 44 in	75 PSI	BF	30-020-019	32-570-005	Yes	7/16-24 inverted flare
03-021-419	1.750 in	1.000 in	1. 44 in	100 PSI	BF	None	None	No	1/8-27NPTF
03-021-422	1.750 in	1.000 in	1. 44 in	100 PSI	HO	None	None	No	1/2-20UNF-2B
03-021-425	1.750 in	1.000 in	1. 44 in	200 PSI	BF	None	32-570-006	No	1/2-20UNF-2B
03-021-427	1.750 in	1.125 in	1. 44 in	100 PSI	BF	None	None	No	1/2-20UNF-2B
03-021-428	1.750 in	0.875 in	1. 44 in	175 PSI	HO	None	None	No	1/8-27NPTF
03-021-429	1.750 in	0.875 in	1. 44 in	175 PSI	BF	None	None	No	1/8-27NPTF
03-021-466	1.750 in	1.000 in	1. 44 in	190 PSI	HO	30-020-020	32-570-065	No	1/2-20UNF-2B
03-021-557	1.750 in	1.125 in	1. 44 in	75 PSI	BF	30-020-019	32-570-005	No	7/16-24 inverted flare

HO = mineral base hydraulic oil. BF = DOT 3, 4, 5 and 5.1 brake fluid.

* Has a special standpipe filler cap.

\+ End plug has three outlet ports (1/8-27NPFT) equally spaced 120° apart.

✷ Contact MICO, Inc. for available outlet port adapters.

NOTE: A tool to remove the low pressure relief valve is available from MICO (part number 02-720-001).

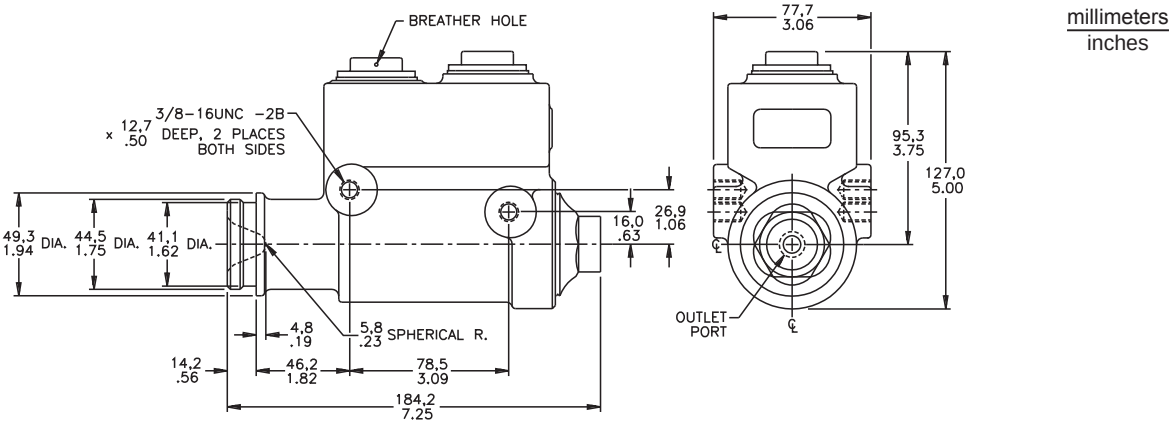
Two-stage Master Cylinders

Low Pressure Relief Valve

Typical model show. Dimensions may vary slightly between units.

Bore Combinations:

- 1 3/4 inch over 1 inch
- 1 3/4 inch over 1 1/8 inch



SPECIFICATIONS

Model Number	Large Bore Diameter	Small Bore Diameter	Effective Stroke	Relief Valve Pressure Setting	Fluid Type	Push Rod (refer to page 33)	Boot (refer to page 33)	Residual Check Valve	✷Outlet Port
02-020-303	1.750 in	1.000 in	1.44 in	100 PSI	BF	None	32-570-005	Yes	1/2-20UNF-2B
03-020-393	1.750 in	1.000 in	1.44 in	100 PSI	BF	None	None	Yes	+ 1/8-27NPTF - 3 Places
03-020-492	1.750 in	1.000 in	1.44 in	100 PSI	HO	None	32-570-065	Yes	1/2-20UNF-2B
03-020-495	1.750 in	1.125 in	1.44 in	100 PSI	BF	None	None	Yes	1/2-20UNF-2B
● 03-020-508	1.750 in	1.000 in	1.44 in	100 PSI	HO	None	32-570-065	Yes	#6 SAE o-ring boss
03-020-598	1.750 in	1.000 in	1.44 in	100 PSI	HO	None	None	Yes	+ 1/8-27NPTF - 3 Places
● 03-021-598	1.750 in	1.000 in	1.44 in	100 PSI	HO	None	None	No	+ 1/8-27NPTF - 3 Places

HO = mineral base hydraulic oil. BF = DOT 3, 4, 5 and 5.1 brake fluid.

● Has one filler cap tapped (#6 SAE o-ring boss) for remote reservoir.

\+ End plug has three outlet ports (1/8-27NPTF) equally spaced 120° apart.

✷ Contact MICO, Inc. for available outlet port adapters.

NOTE: A tool to remove the low pressure relief valve is available from MICO (part number 02-720-001).

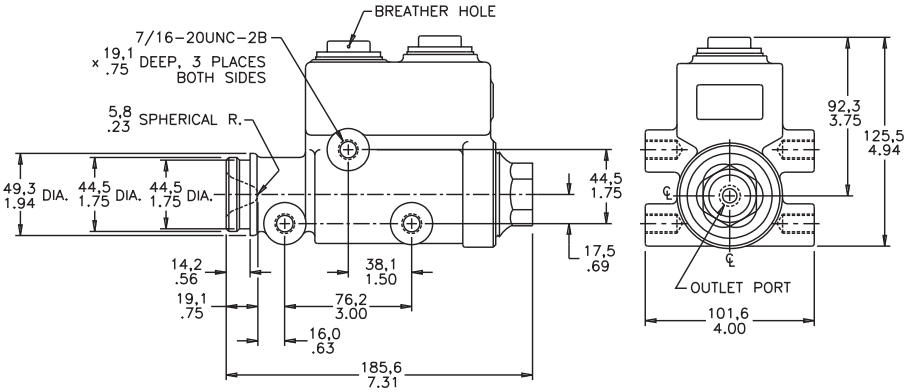
Two-stage Master Cylinders

Low Pressure Relief Valve

Typical model show. Dimensions may vary slightly between units.

Bore Combinations:

- 1 3/4 inch over 1 inch
- 1 3/4 inch over 1 1/8 inch



millimeters
inches

SPECIFICATIONS

Model Number	Large Bore Diameter	Small Bore Diameter	Effective Stroke	Relief Valve Pressure Setting	Fluid Type	Push Rod (refer to page 34)	Boot (refer to page 33)	Residual Check Valve	✷Outlet Port
03-020-363	1.750 in	1.125 in	1.44 in	100 PSI	BF	None	None	Yes	1/8-27NPTF
03-020-367	1.750 in	1.000 in	1.44 in	100 PSI	BF	None	None	Yes	1/2-20UNF-2B
03-020-469	1.750 in	1.125 in	1.44 in	300 PSI	BF	30-020-020	32-570-005	Yes	1/2-20UNF-2B
03-020-569	1.750 in	1.125 in	1.44 in	225 PSI	BF	None	32-570-006	Yes	1/2-20UNF-2B
03-021-367	1.750 in	1.000 in	1.44 in	100 PSI	BF	None	None	No	1/2-20UNF-2B

BF = DOT 3, 4, 5 and 5.1 brake fluid.

✷ Contact MICO, Inc. for available outlet port adapters.

NOTE: A tool to remove the low pressure relief valve is available from MICO (part number 02-720-001).

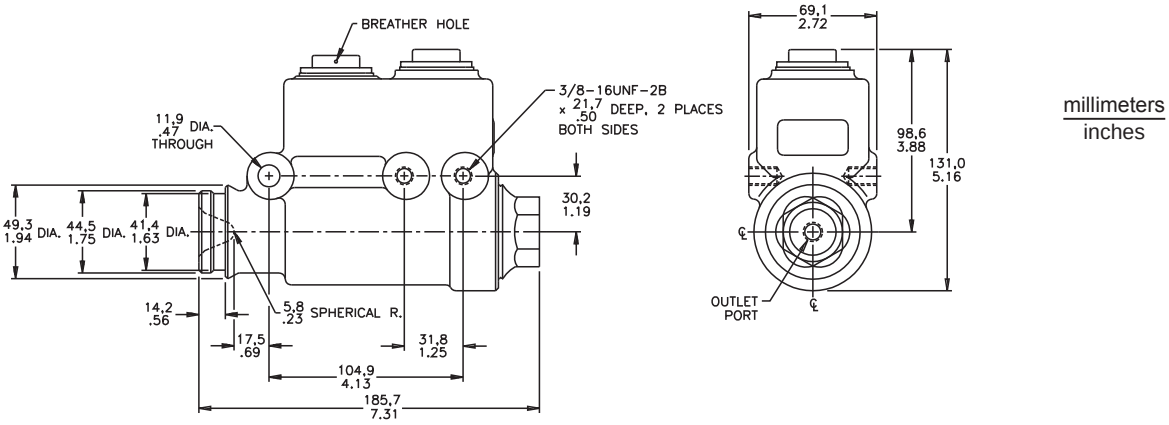
Two-stage Master Cylinders

Low Pressure Relief Valve

Typical model show. Dimensions may vary slightly between units.

Bore Combinations:

- 1 3/4 inch over 1 inch
- 1 3/4 inch over 1 1/8 inch



millimeters
inches

SPECIFICATIONS

Model Number	Large Bore Diameter	Small Bore Diameter	Effective Stroke	Relief Valve Pressure Setting	Fluid Type	Push Rod (refer to page 34)	Boot (refer to page 33)	Residual Check Valve	✷Outlet Port
02-020-321	1.750 in	1.000 in	1.44 in	100 PSI	BF	None	32-570-006	Yes	1/2-20UNF-2B
● 02-020-332	1.750 in	1.000 in	1.44 in	100 PSI	HO	30-020-083	32-570-065	Yes	+ 1/2-20UNF-2B
02-021-321	1.750 in	1.000 in	1.44 in	100 PSI	BF	None	32-570-006	No	1/2-20UNF-2B
● 02-021-332	1.750 in	1.000 in	1.44 in	100 PSI	HO	30-020-083	32-570-065	No	+ 1/2-20UNF-2B
03-020-551	1.750 in	1.125 in	1.44 in	175 PSI	BF	None	None	Yes	1/2-20UNF-2B
03-020-554	1.750 in	1.125 in	1.44 in	175 PSI	HO	None	32-570-006	Yes	+ 1/2-20UNF-2B
03-020-555	1.750 in	1.125 in	1.44 in	100 PSI	BF	None	32-570-006	Yes	+ 1/2-20UNF-2B
03-021-551	1.750 in	1.125 in	1.44 in	175 PSI	BF	None	None	No	1/2-20UNF-2B
03-021-554	1.750 in	1.125 in	1.44 in	175 PSI	HO	None	32-570-006	No	+ 1/2-20UNF-2B
03-021-555	1.750 in	1.125 in	1.44 in	100 PSI	BF	None	32-570-006	No	+ 1/2-20UNF-2B

HO = mineral base hydraulic oil. BF = DOT 3, 4, 5 and 5.1 brake fluid.

● Has one filler cap tapped (#6 SAE o-ring boss) for remote reservoir.

\+ Includes outlet port adapter 7/16-24 inverted flare.

✷ Contact MICO, Inc. for available outlet port adapters.

NOTE: A tool to remove the low pressure relief valve is available from MICO (part number 02-720-001).

Fluid Reservoirs

For Direct or Remote Mounting

POLYALLOMER RESERVOIR

- Translucent for easy view of fluid level
- Diaphragm seals out environmental contaminants
- Adaptable outlet fittings
- Sediment trap inherent to design
- Easy screw on and off filler cap
- 238 cm^3 (14.5 in^3) usable fluid capacity
- For use with hydraulic oil or brake fluid
  (contact MICO regarding phosphate ester fluids)

METAL RESERVOIR

- Rugged anodized aluminum housing
- Easy screw on and off filler cap with baffle and breather
- 54 cm^3 (3.3 in^3) usable fluid capacity
- Compact design for ease of mounting
- Adaptable outlet fittings
- For use with hydraulic oil or brake fluid
  (contact MICO regarding phosphate ester fluids)

SPECIFICATIONS

Poylallomer Reservoirs

Model Number	Fluid Type	Outlet Fitting	Mounting Bracket	Diaphragm Part Number
20-920-500	HO	9/16-18UNF-2A	Yes	32-490-009
20-920-520	HO	9/16-18UNF-2A	No	32-490-009
20-920-512	HO	1/4-18NPTF (internal)	Yes	32-490-009
20-920-514	HO	1/4-18NPTF (internal)	No	32-490-009
20-920-505	BF	9/16-18UNF-2A	Yes	32-490-010
20-920-509	BF	1/4-18NPTF (internal)	Yes	32-490-010
20-920-515	BF	1/4-18NPTF (internal)	No	32-490-010

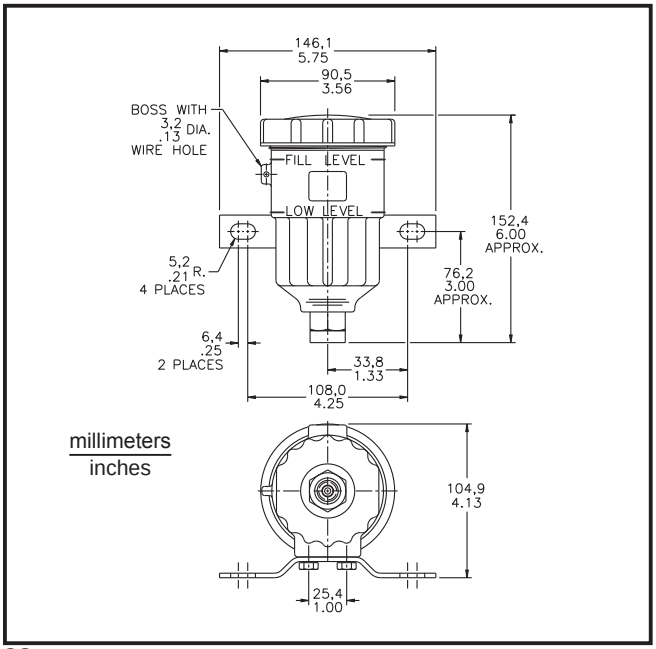
HO = mineral base hydraulic oil.
BF = DOT 3, 4, 5 and 5.1 brake fluid.

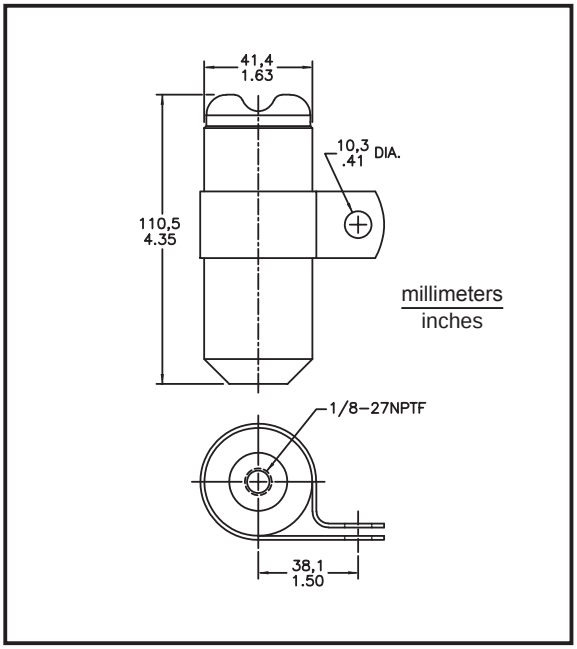
SPECIFICATIONS

Metal Reservoirs

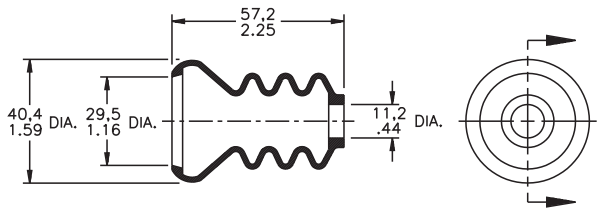
Model Number	Fluid Type	Mounting Bracket
* 20-920-002	BF or HO	No
** 20-920-006	BF or HO	Yes
20-920-009	BF or HO	Yes

* Includes 1/8-27NPTF male 90° elbow fitting.
** Includes two 1/4-27NPTF x 1/4 tube fittings.
HO = mineral base hydraulic oil.
BF = DOT 3, 4, 5 and 5.1 brake fluid.



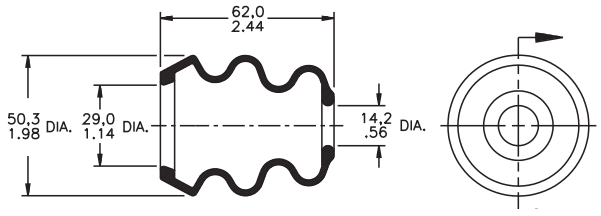


MICO® Boots



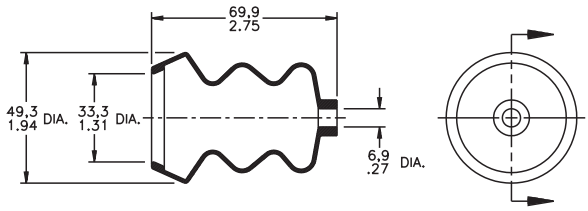
Part Number	Fluid Type	Compound
32-570-004	BF	EPDM

millimeters
inches



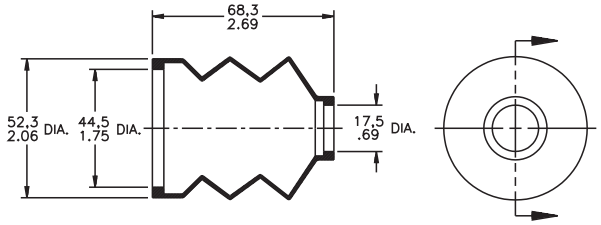
Part Number	Fluid Type	Compound
32-570-005	BF	EPDM
32-570-065	HO	NBR
32-570-077	BF	EPDM

millimeters
inches



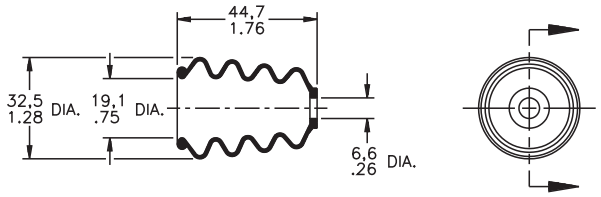
Part Number	Fluid Type	Compound
32-570-006	BF	EPDM

millimeters
inches



Part Number	Fluid Type	Compound
32-570-068	BF	EPDM

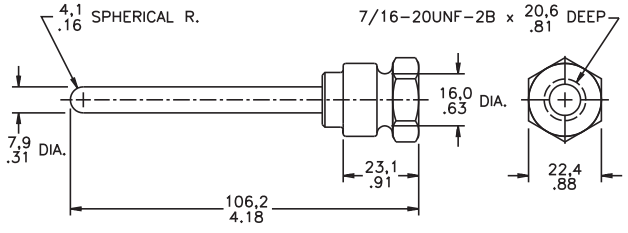
millimeters
inches



Part Number	Fluid Type	Compound
32-570-089	BF	EPDM

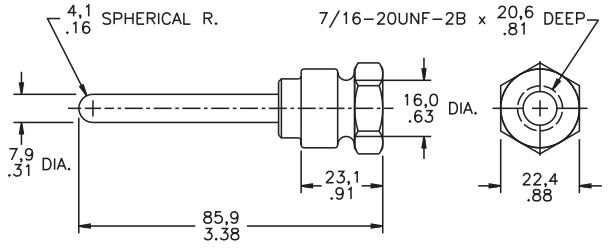
millimeters
inches

MICO® Push Rods



Part Number
29-020-033

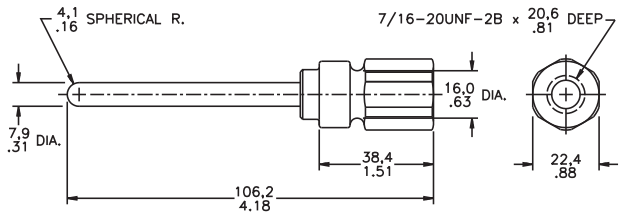
millimeters
inches



Part Number
29-020-035

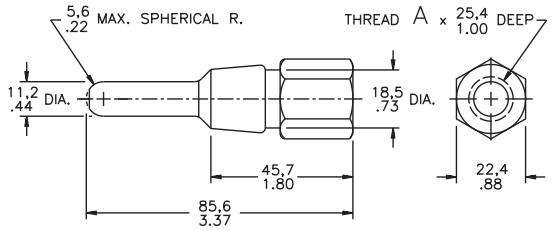
millimeters
inches

MICO® Push Rods



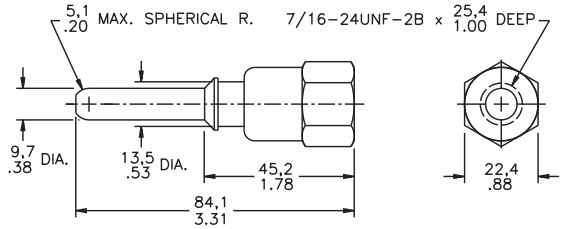
Part Number
29-020-037

millimeters
inches



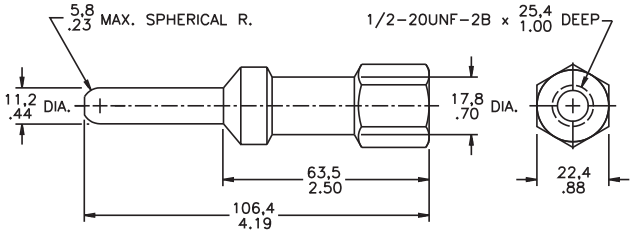
Part Number	"A" Thread
30-020-019	7/16-20UNF-2B
30-020-020	1/2-20UNF-2B

millimeters
inches



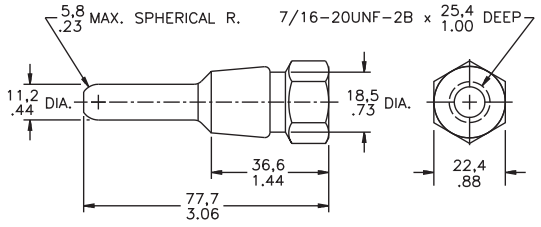
Part Number
30-020-057

millimeters
inches



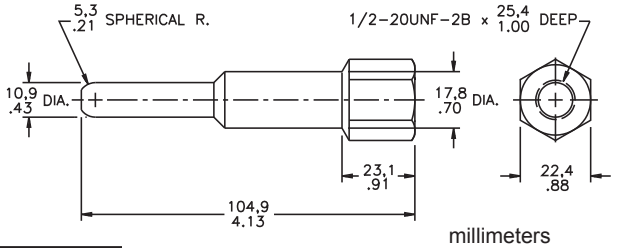
Part Number
30-020-072

millimeters
inches



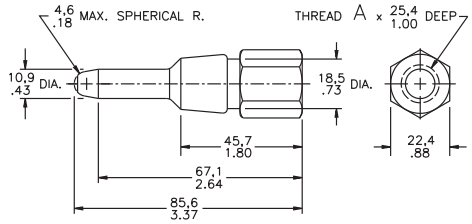
Part Number
30-020-083

millimeters
inches



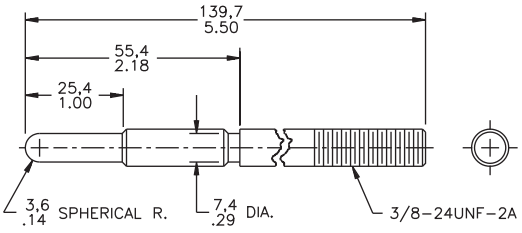
Part Number
30-020-152

millimeters
inches



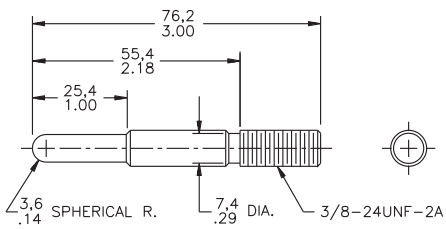
Part Number	"A" Thread
30-020-022	5/8-18UNF-2B
30-020-089	3/8-24UNF-2B

millimeters
inches



Part Number
30-020-184

millimeters
inches



Part Number
30-020-192

millimeters
inches

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PRODUCT LINE:

Brakes
Caliper Disc Brakes
Multiple Disc Brakes

Brake Locks
Electric
Mechanical

Controls
Electronic Controls
Hydraulic Throttle Controls
Pedal Controls
Switches
Transducers/Sensors

Cylinders
Drive Axle Brake Actuators
Slave Cylinders
Wheel Cylinders

Master Cylinders
Boosted Cylinders
Hydraulically and Air Actuated
Straight Bore Cylinders
Two-Stage Cylinders

Valves
Accumulator Charging
Electrohydraulic Brake
Park Brake
Pressure Modulating

Miscellaneous Components
In-line Residual Check Valves
Pump with Integrated Valves
Reservoirs

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