

HYDRAULIC CYLINDERS

MEDIUM PRESSURE HYDRAULIC CYLINDERS



PRESSURE RATED PER
BORE SIZE TO 2,000 PSI

STANDARD BRASS AND
STEEL CONSTRUCTION

ALL-STAINLESS STEEL
CONSTRUCTION

NFPA TIE-ROD DESIGN

CUSTOM DESIGNS

ALSO:

SPRING EXTEND AND RETRACT

POSITION SENSING CYLINDERS

BOOSTERS

FEATURING
TIE-ROD MOUNT LIMIT SWITCHES!



LEHIGH[®]
FLUID POWER, INC.

www.kundinger.com



FLUID POWER . . .

Pneumatic and Hydraulic Power!

You are sure to note some special features on our industrial pneumatic and hydraulic cylinders. Like our exclusive Miracalube® lubricant on our air cylinders. And our unique ability to mount tie-rod limit switches on hydraulic cylinders. And then there's our line of stainless steel cylinders.

Industrial Pneumatic and Hydraulic Cylinders

We have been manufacturing cylinders since the 1940's. Our standard materials include brass tubing for our air and medium duty hydraulics, steel for high pressure, and stainless steel for any application. With our capabilities your engineering application gets focused and expert attention, and your purchasing gets competitive pricing.

We welcome the one-of-a-kind special as well as the OEM quantity. So whether your requirements are frequent or few, standard or custom, we are here to help.

Better By Design

Among our innovations: The Miracalube® self-lubricated air cylinder. Its lubricant is made of FDA approved materials and does not mist into the atmosphere. Over 50 million linear feet of piston travel have been reported in case histories!

Among our features: Limit switches can be tie-rod mounted on our medium duty hydraulic cylinders! This is unique in the industry, allowing sensing to be set anywhere along the stroke without external mechanisms.

And... These cylinders are offered from the catalog in bore sizes from 3/4" to 20" in pressures up to 250 PSI in air and up to 3,000 PSI hydraulic, with custom design for specials!

The information in this catalog should be used as a guide for your consideration, investigation and verification. This information does not constitute a warranty or representation and we assume no legal responsibility or obligation with respect thereto, and the use to which such information may be put.

As product improvement is a continuous process, specifications are subject to change without notice.

SOME OF OUR CUSTOM DESIGNS

Specials are welcome!

We have a long history of producing custom design cylinders that are specific to a customer's application. This includes such special features as:

- Unique mounting requirements
- Composite materials
- High-temperature cylinders
- Alternate media cylinders
- Larger bore cylinders
- Position sensing cylinders
- Engineered spring extend or retract cylinders
- Non-rotating rods
- Tandem force cylinders
- Underwater operation
- Higher pressure cylinders
- Locking cylinders

12" Bore x 2" Stroke
9" Dia. Piston w/8" Bore Thru
with (4) 1" Dia. Ejector Rods



20" Bore Pneumatic Cylinder
Tandem Force Multiplier



14" Bore Air Cylinder
Double Rod End
with Manual Override, Extend & Retract

1" x 6" Electro-Hydraulic
Transducer Cylinder



2" Bore Air Cylinder
Extended Double Rods, Special Nose Mount



6" Bore Stainless Steel
2,500 PSI Hydraulic Cylinder
with Linear Transducer & Cover



10" Bore Air Cylinder
Stand-Off Mount
Indicator Rod
with Valve



10" Bore Air Cylinder
with Air Valve, Manual Rod
Lock, and Limit Switches



Air & Hydraulic Cylinder
Rod-within-Rod

**SERIES JHDH
MEDIUM PRESSURE HYDRAULIC CYLINDER
PRESSURE RATED BY BORE SIZE**

*The Lehigh Medium Pressure Hydraulic Cylinder
Uniquely Qualified for Demanding Work*

BENEFITS!

Based on the material sizes of our air cylinder, this hydraulic-fitted cylinder provides an economical design for hydraulic applications when a full 3,000 PSI working pressure is not required. (See our High Pressure Hydraulic catalog for cylinders of all bore sizes rated to 3,000 PSI.)



This JHDH Series offers pressure ratings starting at 2,000 PSI with the 1" dia. bore. The pressure is then rated per size as the bore increases. (See the chart below.) The construction of this series enables the system designer to select a cylinder more closely matched to a circuit pressure, rather than opting for the bigger, more expensive high pressure cylinder design. Not only are there cost savings, but space and weight savings as well.

A truly unique benefit of our JHDH Series hydraulic cylinder is the ability of the system designer to specify tie-rod mount limit switches in the machine design. As pneumatic system designers already know, this is an economical position sensing technology as compared to end-of-stroke proximity sensors or linear displacement transducers. However, this has not been an option on hydraulic cylinders until our own unique construction design allowed it.

We are able to offer the lower cost tie-rod mount limit switch design on our medium pressure hydraulic series because of our construction materials. Competitors' air cylinders typically use aluminum tubes and can offer limit switches on them; but when they change to steel tubes for their medium pressure designs, they lose the ability to use magnetic switches. The tubing for both our air and medium pressure hydraulic cylinders is hard-tempered brass - has been since the 1940's. This material enables us to feature the same magnetic piston sensing option in hydraulics that is common in pneumatics.

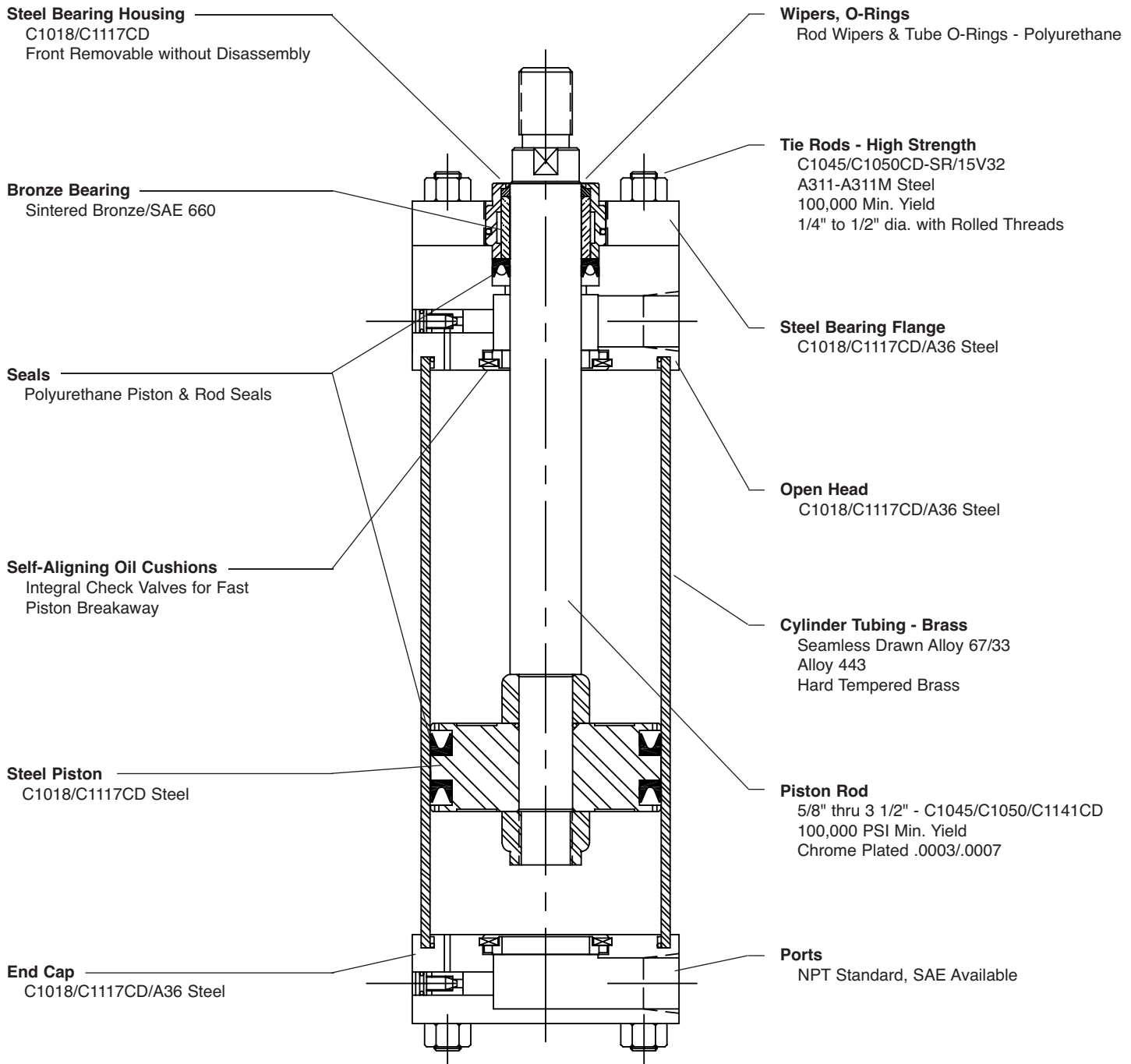
JHDH Medium Pressure Hydraulic Cylinder Series Bore VS. Maximum Working Pressure Rating			
Bore	Pressure	Bore	Pressure
1"	2,000 PSI	3 1/4"	1,000 PSI
1 1/2"	1,500 PSI	4"	700 PSI
2"	1,200 PSI	5"	600 PSI
2 1/2"	1,000 PSI	6"	600 PSI

Note: Pressure ratings are reduced for #06 and #07 mounting styles. See ratings on applicable data pages.

SERIES JHDH MEDIUM DUTY HYDRAULIC CYLINDER

FEATURES!

The Series JHDH Hydraulic Cylinder Comes Standard with the Following Design Features:



Other... Operating Pressure to 2,000 PSI (Rated per Bore Size) ... Operating Temp. from 0° to 165°F (Standard), to 400°F (Optional Seals)

Custom Hydraulic Cylinders

An important part of our business is the custom cylinder design. The Series JHDH hydraulic cylinder is available in virtually any configuration required by your special application. When you contact us with your design challenges, chances are that our engineering will meet the requirements of your special mounting, material, seal, temperature, sensing or other needs.



**SERIES LSSE
ALL-STAINLESS STEEL CYLINDER
MEDIUM PRESSURE HYDRAULIC
PRESSURE RATED BY BORE SIZE**



***The Lehigh LSSE Medium Pressure Hydraulic Cylinder
All Stainless Steel***

BENEFITS!

Look inside our Series LSSE hydraulic stainless steel cylinder and you will see that we build more quality and features in ... to get more productivity out.

The benefits of improved corrosion resistance coupled with the integrity of stainless steel make the Lehigh Series LSSE a truly unique cylinder for standard or special applications.



Lehigh stainless cylinders use broached stainless steel blocks and precision bored and honed stainless tubing. Chrome plated stainless steel rods are used to improve resistance to scratches and dents.

Our Series LSSE hydraulic cylinders are available in bore sizes from 1" to 6", with pressure ratings starting at 1,000 PSI with the 1" dia. bore. The pressure is then rated per size as the bore increases. (See the chart below.) The construction of this series enables the system designer to select a cylinder more closely matched to a circuit pressure, rather than opting for the bigger, more expensive high pressure cylinder design. Not only are there cost savings, but space and weight savings as well.

As with our JHDH Series hydraulic cylinder, the system designer has the option of specifying tie-rod mount limit switches in the machine design. As pneumatic system designers already know, this is an economical position sensing technology as compared to end-of-stroke proximity sensors or linear displacement transducers.

The best feature of a Lehigh stainless steel cylinder is the long term savings in both reduced downtime and maintenance. Let Lehigh's sales and engineering departments help you select the best product for your application needs.

**LSSE Medium Pressure Stainless Steel
Hydraulic Cylinder Series
Bore VS. Maximum Working Pressure Rating**

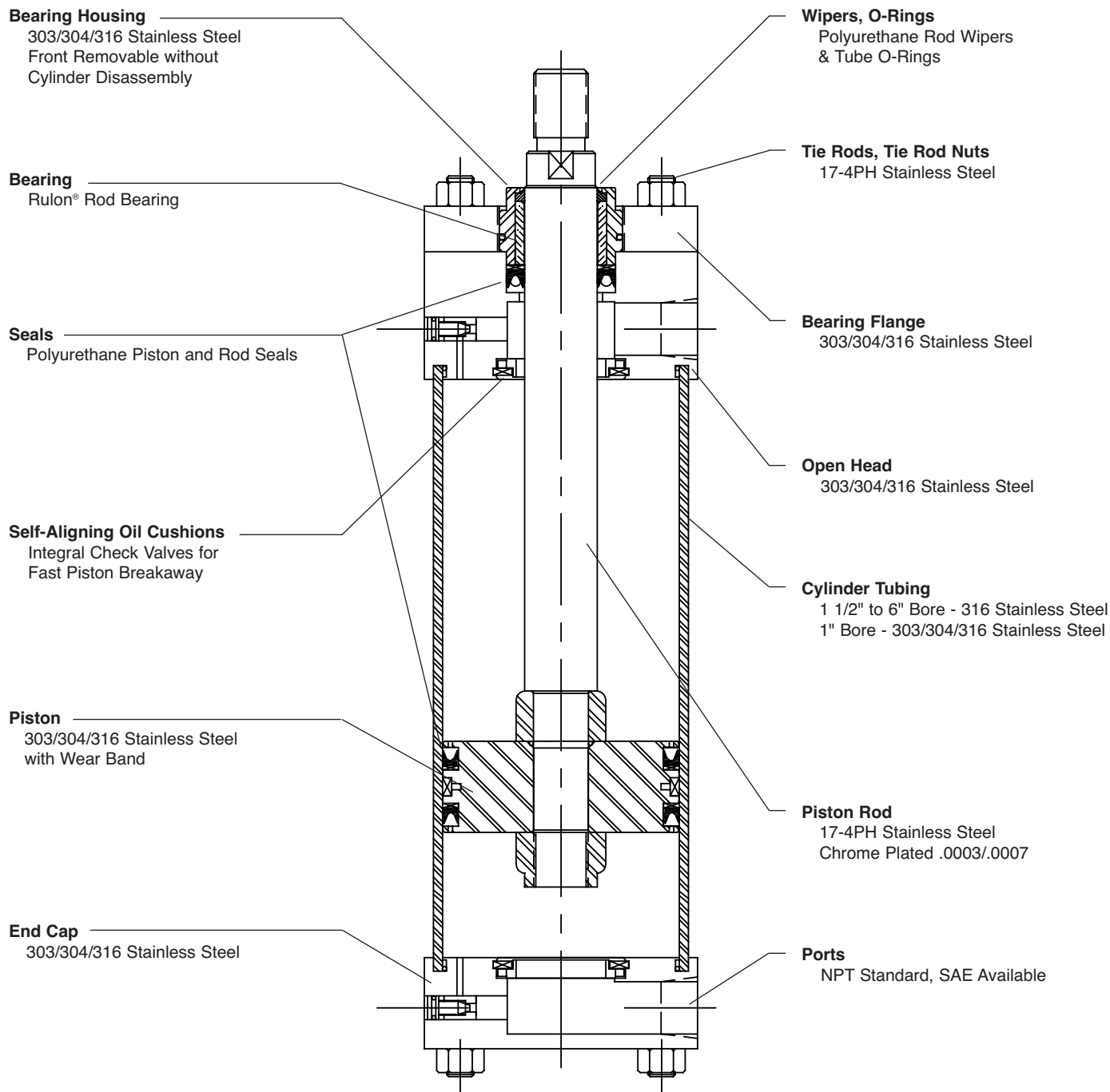
Bore	Pressure	Bore	Pressure
1"	1,500 PSI	3 1/4"	1,000 PSI
1 1/2"	1,500 PSI	4"	700 PSI
2"	1,250 PSI	5"	600 PSI
2 1/2"	1,000 PSI	6"	600 PSI

- Notes: 1) Pressure ratings are reduced for #06 and #07 mounting styles. See ratings on applicable data pages.
2) Consult factory for pressure ratings for cylinders of all-316 stainless steel construction.

THE SERIES LSSE HYDRAULIC CYLINDER ALL-STAINLESS STEEL

FEATURES!

The LSSE Stainless Steel Hydraulic Cylinder Comes Standard with the Following Design Features:



Other... Operating Pressure to 1,500 PSI (Rated per Bore Size) ... Operating Temp. from 0° to 165°F (Standard), to 400°F (Optional Seals)

Custom Stainless Steel Hydraulic Cylinders

An important part of our business is the custom cylinder design. The Series LSSE stainless steel hydraulic cylinder is available in virtually any configuration required by your special application. When you contact us with your design challenges, chances are that our engineering will meet the requirements of your special mounting, material, seal, temperature, sensing or other needs.