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All trademarks mentioned belong to their respective owners. Prices in this catalog supersede those found in the Hercules Sealing Products 2015 Seal, Kit, and 13th Edition Cylinder Catalogs. Prices are subject to change at any time. Go to www.Herculesus.com to view current pricing.



US - INTRODUCTION

The Corporate Office of Hercules Sealing Products is located in Clearwater, Florida. Hercules® is an ISO 9001 registered distributor of hydraulic and pneumatic seals, seal kits, repair parts, engine and transmission gaskets, and replacement cylinders for mobile and industrial applications. Hercules® provides seal products used in hydraulic cylinders to a variety of industries for equipment such as: construction, mining, aerial lift and crane, dump and refuse trucks, material handling, industrial plant applications, paving, agriculture, and logging equipment. Industry-leading technical catalogs provide application, dimensional and material specifications, and product pricing.

Standard hours of operation are 8:00 a.m. to 7:30 p.m. ET for both sales and technical support. Hercules engineering department will provide you with unparalleled technical service. Additional value added services include reduced freight rates, special packaging, wide selection of aftermarket seal kits, largest in-stock inventory in the industry, and same day shipping on orders placed before 7:00 p.m. ET. Cylinder repair parts such as cylinders, (not sure we still offer power units), and cylinder rebuilding accessories are also available.

Hercules® Sealing Products offers products from the leading suppliers in the fluid power industry. Suppliers are continuously evaluated for quality of product and service.. This process enables Hercules® to exceed our goal to deliver the highest quality products and services in the industry.

1016 North Belcher Road
Clearwater, FL 33765
www.HerculesUS.com

Phone:
1-800-777-5617
727-796-1300

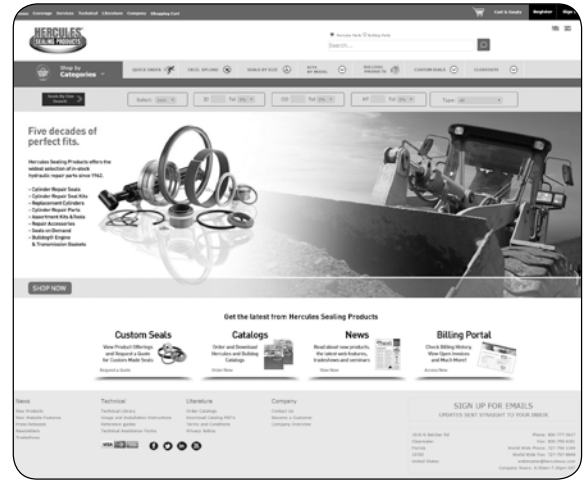
Fax: 1-800-759-6391
Intl Fax: 727-797-8849
Email: Sales@HerculesUS.com

ONLINE ORDERING - WWW.HERCULESUS.COM

Placing orders on the Hercules website is a fast and easy alternative to submitting orders by phone, email or fax. Our new intuitive website has many new features, inspired by the insight of our customers.

Convenience features include –

- Real-time inventory
- Customer-specific pricing
- Part substitution recommendations
- Expected dates on back-order items
- Single page check-out
- Search for by seal size and kits by make or model
- Enhanced search option by OEM or competitor part number, dimensional information or product description
- Multi-platform accessibility - laptops, smart phones and tablets
- Website designed for speed
- Excel upload of order lines
- Optional CSV or Electronic Data Interchange
- Live chat



HERCULES SOCIAL MEDIA

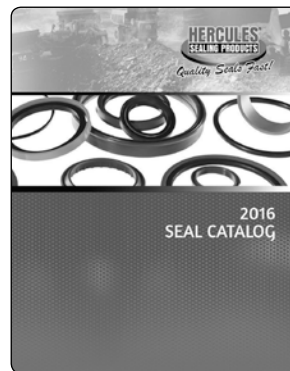
Get connected to Hercules® Sealing Products - Go to the Hercules website at www.HerculesUs.com to link directly to our Facebook, Twitter, Linked In and Hercules YouTube Channel.



CATALOG OFFERINGS

Seal Catalog - The Hercules Seal Catalog contains over 800 pages of seals in the most popular styles and sizes. The easy-to-use format quickly locates u-seals, piston seals, scrapers, o-rings, piston rings, buffer seals, and much more. Each listing includes seal material, temperature and pressure specifications, and cross-sectional drawings to simplify selection.

Kit Catalog - The Hercules Kit Catalog contains hydraulic and pneumatic seal kit information for both in-plant and mobile applications. Complete cylinder repair kits are listed from over 140 different brands of equipment for construction, mining, aerial lift and crane, logging, refuse, agriculture, paving, material handling and industrial plant applications. In addition, a cylinder application reference guide is available to simplify your selection.



FREIGHT INFORMATION

Low cost air and ground shipments available world wide. Guaranteed service available (restrictions apply to select zip codes.) One Call to Hercules® Sealing Products gets you top quality seal and repair products, cost saving freight rates, and a wide variety of delivery services to save you time and money! Hercules® pays the dimensional weight charges for air US shipments on boxes up to 13" cubed (additional accessorail charges may apply).



**MOST ARRIVE
WITHIN 2 DAYS!**

PRIORITY FROM CLEARWATER FL 2 3 DAYS

United States Postal Service Priority Flat-Rate Options

If It Fits, It Ships for One Low Rate - Anywhere in the Continental United States!

The United States Postal Services is available as a delivery option for all domestic locations. Your flat-rate options are as follows: Small padded envelope, medium and large boxes. When placing your order online at www.HerculesUS.com the envelope or box that would best fit your shipment size will appear on the Shipping and Payment screen. Orders placed via phone or fax will be determined by your regional sales representative. **Shipments placed by 1pm EST will ship the same day.**

\$7.15*

Priority Flat-Rate Envelope
12-1/2 x 9-1/2 or
8-5/8 x 5-3/8 x 1-5/8



\$13.45*

Priority Flat-Rate
Medium Box
11" x 8 1/2" x 5 1/2"



\$17.70*

Priority Flat-Rate
Large Box
12" x 12" x 5 1/2"



* Includes a \$1.50 shipping and handling charge.

UPS AND FEDEX SPECIAL DISCOUNTED RATES

These discounted rates offer significant savings on shipments for zones 103 and up (additional accessorial charges may apply).



NEXT DAY AIR

(1-7 lbs.)

Package Weight	Rate
1 LB.	\$ 29.75
2 LBS.	31.50
3 LBS.	33.00
4 LBS.	35.25
5 LBS.	40.25
6 LBS.	42.75
7 LBS.	48.25

8LBS. AND UP - PUBLISHED UPS RATES.



NEXT DAY AIR

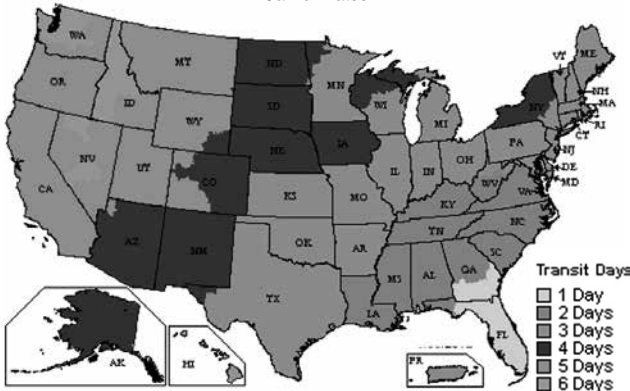
(1-7 lbs.)

Package Weight	Rate
1 LB.	\$ 29.75
2 LBS.	31.50
3 LBS.	33.00
4 LBS.	35.25
5 LBS.	40.25
6 LBS.	42.75
7 LBS.	48.25

8LBS. AND UP - PUBLISHED FEDEX RATES

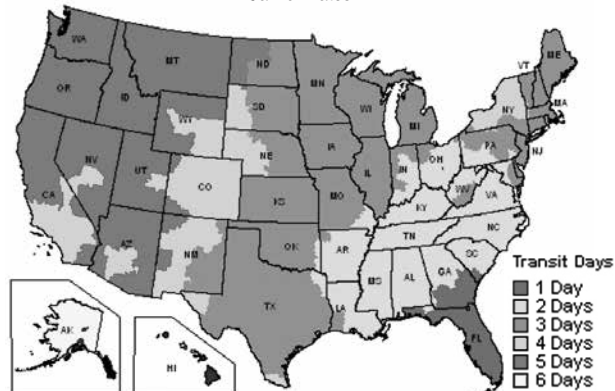
UPS GROUND TRANSIT MAP

Call for Rates.



FEDEX GROUND TRANSIT MAP

Call for Rates.



ORDER CUT-OFF TIMES

At Hercules, we understand the importance of getting your equipment fixed fast! Therefore, it is imperative that you receive your shipments on-time. Orders placed by the following cut-off times will ship the same day. All cut-off times are based on Eastern Time Zone.

Order Cut-Off Times	Freight Carriers
1:00 pm	United States Postal Service
3:30 pm	Ground (UPS and FedEx - excluding FL)
3:30 pm	LTL Truck Carriers
3:30 pm	3-Day Select (UPS and FedEx)
3:30 pm	International (FedEx Intl. and DHL)
5:00 pm	FedEx Next Day Air
5:00 pm	Florida Ground (UPS and FedEx)
5:00 pm	2nd Day Air FedEx
7:00 pm	UPS Next Day Air
7:30 pm	2nd Day Air UPS

HERCULES® ORDERING INFORMATION

DOMESTIC CUSTOMER SERVICE

SATISFACTION

Total customer satisfaction is our goal. Please call with any questions or problems. Your input helps us to improve our service. We want to be your most reliable supplier.

HOW TO OPEN AN ACCOUNT WITH US - SAME DAY CREDIT APPROVAL

1. Copy and fill out the credit application found on page viii of this catalog.
2. Fax completed and signed Credit Application and your sales tax exempt certificate (if applicable) for processing to 1-800-759-6391.
3. We will fax or email an open account letter. — If you need additional information call our Accounting Department at 1-800-244-5617.

HOW TO ORDER FROM US

Hercules® offers Toll Free phone and fax lines to make ordering as easy as possible. We encourage faxing your order to us Toll Free at 1-800-759-6391 to eliminate any possible error. Our technical sales staff is also available TOLL FREE from 8 a.m. to 8 p.m. E.S.T. to take your order, assist you in finding the correct part, or answer any questions you may have. You may also mail your order or use Hercules® Toll Free Fax.

SHIPMENT / DELIVERY

Every order we receive is classified as a RUSH. You tell us how fast you need it. Shipping agreements with UPS and FedEx allow us to offer substantial freight discounts.

PRICE QUOTATIONS/NON-CATALOG ITEMS

Hercules® is constantly adding parts to inventory. If you need a part that is not listed in our catalog, call, fax, or send us a sample of the part you need, roughly how many pieces are required, and we will source, quote, order, and stock the parts for you. Call or fax us anytime for price and delivery on hard-to-find or non-catalog items. Formal quotations for product and freight costs are gladly furnished upon request.

CREDIT CARDS

Hercules® now accepts the following credit cards: Mastercard, Visa, American Express, American Express Corporate Procurement.

INTERNATIONAL CUSTOMER SERVICE

MAILING ADDRESS

HERCULES® SEALING PRODUCTS
1016 North Belcher Road
Clearwater, FL 33765 USA

PHONE / FAX NUMBERS

PHONE: (727) 796-1300
FAX: (727) 797-8849

E-MAIL/WEBSITE

hercules@herculesus.com
<http://www.herculesus.com>

PAYMENT

Payment for all products must be in U.S. dollars.

PLACING ORDERS FOR SHIPMENT

1. Fax, mail, email or telephone order to HB Sealing Products, specifying method of shipment.
2. HB Sealing Products will fax or email order value to you. All prices are in U.S. dollars.
3. Wire transfer funds to: HB Sealing Products, Inc.
Fifth Third Bank
Cincinnati, OH USA
Call For Account, Routing and Swift Numbers
All orders must be paid for in U.S. dollars.
4. Payment will be accepted in the form of a wire transfer (in advance), on a letter of credit, or a U.S.A. credit card (Mastercard, Visa, American Express)



SHIPMENT / DELIVERY

Hercules® will gladly ship by the carrier of your choice. Please specify any special shipping requirements you may have. All shipments are Ex-Works Clearwater, FL, USA, unless otherwise specified or prearranged. Additional charges may be incurred for inbound freight and/or special packaging.

PRICE QUOTATIONS/NON-CATALOG ITEMS

Call, fax, or email us anytime for price and delivery. Formal quotations are gladly furnished upon request.

QUALITY

Hercules® has achieved a worldwide reputation as an organization committed to providing products and services that continually meet or exceed the needs and expectations of our customers. Hercules® is an ISO 9001 registered company.

ANTI-DEFAMATION POLICY

All equipment manufacturer's names, part numbers, and descriptions are used for reference purposes only. We do not imply that any part shown is the product of these manufacturers. We also do not imply that the list price shown is exactly that of the manufacturer.

TERMS AND CONDITIONS

BACKORDERS

Backorders will ship as ordered and additional freight charges will apply. Cancellation of backorders must be requested at the time of order to prevent additional freight charges. All backorders less than \$5.00 will be automatically canceled unless specified otherwise by the customer at the time of order.

CREDITS

Our payment terms for all open accounts are NET 30 days. Accounts outstanding over 30 days are reviewed daily. At 45 days past due (75 days from invoice date) all orders and backorders will automatically be put on credit hold until full payment is received.

RETURNS

Before you return any item, please call our customer service desk to obtain a Return Material Authorization (RMA) Number. Returned shipments without a Returned Material Authorization (RMA) number will be rejected. Our Receiving Department cannot accept a return without an RMA Number. Parts must be returned within 30 days of receipt of goods. Returned items are subject to a 20% restocking charge. All returns are subject to inspection by our Quality Control Department and may be rejected if not in resalable condition. Special order items are non-returnable.

CLAIMS

It is the policy of HB Sealing Products that inquiries for pricing discrepancies, order discrepancies, freight claims and customer returns must be reported to Hercules Sealing Products Customer Service within 30 days of invoice. Claims/discrepancies reported after 30 days of invoice will not be honored.

ORDER CANCELLATIONS

Orders for Standard Cataloged Products will not be canceled once processed. All custom supplied, non-cataloged products cannot be canceled. Additional cancellation charges may apply.

EXCLUSION OF WARRANTIES; LIMITATIONS OF DAMAGES

EXCEPT AS PROVIDED IN THE NEXT SECTION (TITLED HERCULES BRAND PRODUCTS CYLINDER WARRANTY) ANY WARRANTIES ON THE PRODUCTS SOLD BY H B SEALING PRODUCTS ARE THOSE MADE BY THE MANUFACTURER. EXCEPT AS PROVIDED IN THE "HERCULES BRAND PRODUCTS CYLINDER WARRANTY", HB SEALING PRODUCTS HEREBY EXPRESSLY DISCLAIMS ALL WARRANTIES, EITHER EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. HB SEALING PRODUCTS NEITHER ASSUMES NOR AUTHORIZES ANY OTHER PERSON TO ASSUME FOR IT ANY LIABILITY IN CONNECTION WITH THE SALE OF ITS PRODUCTS.

IN NO EVENT SHALL HB SEALING PRODUCTS BE LIABLE TO BUYER FOR ANY INDIRECT, SPECIAL, OR CONSEQUENTIAL DAMAGES, INCLUDING (WITHOUT LIMITATION) LOST PROFITS, COSTS OF DELAY, PERSONAL INJURY, PROPERTY DAMAGE OR LIABILITIES TO BUYER OR THIRD PARTIES ARISING FROM ANY SOURCE. THIS LIMITATION ON DAMAGES SHALL APPLY TO ALL PRODUCTS SOLD BY HB SEALING PRODUCTS, INCLUDING HERCULES BRAND PRODUCTS CYLINDERS. IN THE EVENT, THAT, NOTWITHSTANDING THE TERMS OF THIS SECTION, HB SEALING PRODUCTS IS FOUND LIABLE FOR DAMAGES BASED ON ANY DEFECT OR NONCONFORMITY IN PRODUCTS SOLD BY IT, INCLUDING HERCULES BRAND PRODUCTS CYLINDERS, ITS TOTAL LIABILITY FOR EACH DEFECTIVE OR NONCONFORMING PRODUCT SHALL NOT EXCEED THE PRICE PAID BY BUYER FOR SUCH DEFECTIVE PRODUCT.

HERCULES® BRAND PRODUCTS CYLINDER WARRANTY

HB Sealing Products herein supplies a limited express warranty to its buyers who purchase standard or custom Hercules Brand Products Cylinders ("Cylinders"). HB Sealing Products warrants that such Cylinders are free from defects in material and workmanship for a period of 12 months from the date the Cylinders are shipped from HB Sealing Products' facility. HB Sealing Products will repair or replace, at its sole option, Cylinders that are found to be defective in material or workmanship upon inspection by HB Sealing Products personnel when the Cylinders have been used under conditions for which the Cylinders were designed to operate. No warranty will be in effect for any of the following reasons:

- Chemical attack, corrosion or erosion;
- Non-compatible or dirty hydraulic fluid;
- Seal degradation due to contamination (including hydraulic fluids), excessive heat or misapplication;
- Excessive side loading;
- Maintenance or disassembly of the cylinder if performed by anyone other than HB Sealing Products personnel without HB Sealing Products' permission, prior to the date of warranty expiration;
- Removal of the HB Sealing Products ID tag indicating bore, stroke, and other information concerning traceability; or Instances of improper installation or misapplication of the Cylinders.

Due to the variety of operating conditions and applications for the Cylinders and HB Sealing Products' related products, HB Sealing Products recommends that Buyer analyze all aspects of the application and carefully select the correct cylinder product to fit the buyer's application. Buyer is solely responsible for the cylinder product selection in assessing that all performance, safety and warning requirements of the application are met. **IMPROPER CYLINDER PRODUCT SELECTION, MISAPPLIED ENGINEERING OR IMPROPER USE OF THE CYLINDERS AND RELATED PRODUCTS DESCRIBED HEREIN MAY CAUSE DEATH, PERSONAL INJURY AND /OR PROPERTY DAMAGE.** HB Sealing Products does not imply or represent that the Cylinders will work properly in any customer application. No sales agent of HB Sealing Products shall have the right to determine warranty periods, terms or conditions for Cylinders if such statements by the sales agents are different from those included herein. Buyer understands that HB Sealing Products will not be held liable for any other costs or damages including any charges for removal, installation, assembly or any other charges in connection with the replacement or repair of the Cylinders. All returned products must have, before being returned to HB Sealing Products, an "RMA" (return material authorization) number assigned to it by HB Sealing Products' customer service department.

THE WARRANTY STATED IN THIS SECTION IS HB SEALING PRODUCTS' SOLE AND EXCLUSIVE WARRANTY PERTAINING TO THE CYLINDERS, AND HB SEALING PRODUCTS HEREBY DISCLAIMS ANY OTHER WARRANTY, EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE FOR THE CYLINDERS.

CREDIT APPLICATION



Hercules Sealing Products
1016 North Belcher Road
Clearwater, FL 33765 USA

CREDIT APPLICATION

Toll Free: 1-800-777-5617
International: (727) 796-1300
Fax: (800) 759-6391
Intl Fax: (727) 797-8849
E-Mail: sales@herculesus.com

Please Indicate Type of Request:	
<input type="checkbox"/>	Catalog
<input type="checkbox"/>	COD
<input type="checkbox"/>	Credit Card
<input type="checkbox"/>	Net 30

COMPANY INFORMATION

Company Name: _____

Billing Address: _____ City: _____ State: _____ Zip: _____

Shipping Address: _____ City: _____ State: _____ Zip: _____

Branch Office: _____ DBA: _____

Phone: _____ Fax: _____

Business Structure (Sole Ownership, Partnership, Corporation): _____

Type of Business: _____ Year Business Established: At current Address Since: _____

Federal ID#: _____ President/Owner SSN: _____

Owner/President: _____

Primary Contact Person: _____ Title: _____

Controller: _____ Annual Purchases: _____

Website: _____ E-Mail: _____

Primary Industry: Construction Mining Refuse/Waste Material Handling Aerial Lift/Crane Agriculture Oil and Gas
(Check One) Concrete/Paving Logging/Forestry Industrial Plant Automotive/Marine Rental Equipment

BANK REFERENCES

Bank Name and Address: _____

Account #: _____ Contact Name & Phone: _____

TRADE REFERENCES

Firm Name: _____ City, State: _____ Phone/Fax: _____

1: _____

2: _____

3: _____

CREDIT AGREEMENT

Credit Amount Requested

I understand the following and will abide by your company regulations:

1. Notify Hercules Sealing Products of any changes in ownership of your company.
2. If granted credit, our company agrees to pay all invoices within 30 days of invoice date.
3. It is agreed that our company will pay 1.5% per month which is 18% yearly for all past due balances.
4. It is agreed that our account will become COD if we fail to pay invoices within the above stated terms.
5. Our company financial condition is satisfactory and we can meet all financial obligations.
6. There are no lawsuits or judgements against me at this present time. If our company defaults on payment of any outstanding valid invoices we agree to pay attorney and/or collection expenses.

AGREE TO PAY MY ACCOUNT WITHIN THE TERMS AND AUTHORIZE YOU TO OBTAIN SUCH INFORMATION YOU MAY REQUIRE CONCERNING THIS APPLICATION.

Date _____ Signed _____

X _____ Title _____

PERSONAL GUARANTEE

REFERRAL INFORMATION

How did you learn about Hercules Sealing Products? Please choose one and provide detailed information:

Trade Show: _____ Magazine: _____ Previous Employer: _____

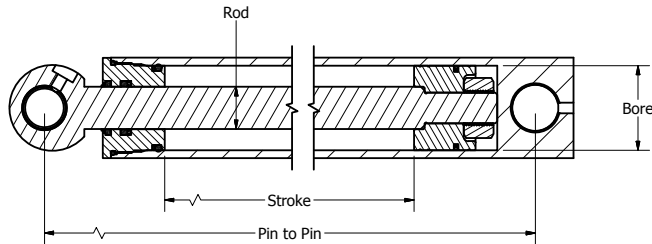
Hercules Customer: _____ Website or Search Engine: _____ Other: _____

Cylinders

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BOBCAT CYLINDERS

BOBCAT CYLINDERS



FEATURES:

- Hard chrome plated rod.
- Cast iron piston.
- Ductile iron gland with buttress threads.
- SAE and JIC flared ports.
- Grease ports on both pin eyes.
- Standard color is charcoal gray

PART NUMBER	APPLICATION	MODELS	ROD	BORE	STROKE	PIN TO PIN	LIST PRICE
BCK-7117174	Bucket Tilt	773, S150, S160, S175, S185, S205, T180, T190	1-3/8	2-3/4	13-1/8	21-1/4	\$ 648.00
BCK-7208419	Bucket Tilt	S220, S250, S300, S330, T250, T300, T320	1-1/2	3	15	24	670.00

KIT NUMBER	ROD	BORE	LIST PRICE
BCK-6806330	1-3/8	2-3/4	\$ 30.46
BCK-7135547	1-1/2	3	33.40

Hercules now offers Bobcat replacement cylinders. Benefits include:

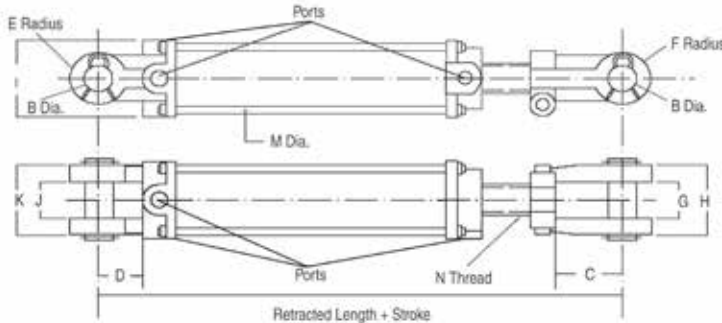
- Hercules list price - 50% Off OEM price!
- Hercules warranty 18 months versus OEM 12 month warranty
- Made in the USA
- In-stock, same day shipment
- Reduce customer downtime by replacing versus repairing cylinders
- Hercules upgrade - High performance Freudenberg-NOK AU30000 Seal handles rated for 250 degrees F and up to 7250 psi; resulting in extended seal life.
- Hercules upgrade - Cast iron steel gland with buttress threads versus aluminum OEM gland means less galled or damage threads
- Hercules upgrade - Hardened chrome rod which is less susceptible to bending
- In-stock Hercules Bobcat seal kits available

HTR TIE-ROD CYLINDERS

Hercules Brand Cylinders

THE HTR LINE

Pressure Ratings: 2" - 4" Bore = 2500 PSI, 5"
Bore = 2000 PSI



FEATURES:

- Ductile iron piston.
- Ductile iron gland, drilled oil passages.
- Honed steel tube, precision finished for extended seal life.
- High tensile, hard chrome plated rod.
- Ductile iron end mounts, female clevises with pins and clips included.
- Tube Seal: O-ring
- Rod Seal: Deep polypak with B lip design; metal canned wiper.
- 2-Piece 93A urethane piston seal, with a 70A nitrile energizer.
- All Seals: Manufactured to US specifications.
- NPT ports.

BORE (INCH)	B	C	D	E	F	G = J
2.0	1.015	2.125	1.625	1.000	1.000	1.142
2.5	1.015	2.125	1.625	1.000	1.000	1.142
3.0	1.015	2.125	1.625	1.125	1.000	1.142
3.5	1.015	2.125	1.625	1.125	1.125	1.142
4.0	1.015	2.125	1.625	1.125	1.125	1.142
5.0	1.015	2.125	2.250	1.250	1.500	1.260

For quantities above 50 pieces, call Hercules for special pricing.

Seal kits for these cylinders are shown at the end of the section.

"A" = Agricultural application w/ rod extension

PART NUMBER	BORE (INCH)	STROKE	ROD DIA (INCH)	H	I	K	M	N	TUBE OD	PORTS (NPT)	PIN CTR RETRACT-ED	WT LBS.	LIST PRICE
HTR-2004	2.0	4	1-1/8	2.520	2.835	2.520	M10	1-1/8-12UNF	2.375	3/8 NPT	14.25	14.30	\$ 100.65
HTR-2006	2.0	6	1-1/8	2.520	2.835	2.520	M10	1-1/8-12UNF	2.375	3/8 NPT	16.25	15.84	100.65
HTR-2008	2.0	8	1-1/8	2.520	2.835	2.520	M10	1-1/8-12UNF	2.375	3/8 NPT	18.25	17.60	101.08
HTR-2008A	2.0	8	1-1/8	2.520	2.835	2.520	M10	1-1/8-12UNF	2.375	3/8 NPT	20.25	17.60	101.08
HTR-2010	2.0	10	1-1/8	2.520	2.835	2.520	M10	1-1/8-12UNF	2.375	3/8 NPT	20.25	18.70	110.80
HTR-2012	2.0	12	1-1/8	2.520	2.835	2.520	M10	1-1/8-12UNF	2.375	3/8 NPT	22.25	20.24	116.00
HTR-2014	2.0	14	1-1/8	2.520	2.835	2.520	M10	1-1/8-12UNF	2.375	3/8 NPT	24.25	22.00	121.24
HTR-2016	2.0	16	1-1/8	2.520	2.835	2.520	M10	1-1/8-12UNF	2.375	3/8 NPT	26.25	23.54	125.61
HTR-2016A	2.0	16	1-1/8	2.520	2.835	2.520	M10	1-1/8-12UNF	2.375	3/8 NPT	31.50	37.20	134.73
HTR-2018	2.0	18	1-1/8	2.520	2.835	2.520	M10	1-1/8-12UNF	2.375	3/8 NPT	28.25	25.08	132.34
HTR-2020	2.0	20	1-1/8	2.520	2.835	2.520	M10	1-1/8-12UNF	2.375	3/8 NPT	30.25	26.62	137.00
HTR-2024	2.0	24	1-1/8	2.520	2.835	2.520	M10	1-1/8-12UNF	2.375	3/8 NPT	34.25	29.70	147.80
HTR-2048	2.0	48	1-1/8	2.520	2.835	2.520	M10	1-1/8-12UNF	2.375	3/8 NPT	58.25	35.00	243.40
HTR-2504	2.5	4	1-1/8	2.520	3.150	2.520	M10	1-1/8-12UNF	2.875	3/8 NPT	14.25	16.28	104.51
HTR-2506	2.5	6	1-1/8	2.520	3.150	2.520	M10	1-1/8-12UNF	2.875	3/8 NPT	16.25	18.04	104.51
HTR-2508	2.5	8	1-1/8	2.520	3.150	2.520	M10	1-1/8-12UNF	2.875	3/8 NPT	18.25	20.24	109.04
HTR-2508A	2.5	8	1-1/4	2.520	3.150	2.520	M10	1-1/8-12UNF	2.875	3/8 NPT	20.25	22.00	113.31
HTR-2510	2.5	10	1-1/8	2.520	3.150	2.520	M10	1-1/8-12UNF	2.875	3/8 NPT	20.25	21.34	120.07
HTR-2512	2.5	12	1-1/8	2.520	3.150	2.520	M10	1-1/8-12UNF	2.875	3/8 NPT	22.25	23.10	133.17
HTR-2514	2.5	14	1-1/8	2.520	3.150	2.520	M10	1-1/8-12UNF	2.875	3/8 NPT	24.25	24.86	139.46
HTR-2516	2.5	16	1-1/8	2.520	3.150	2.520	M10	1-1/8-12UNF	2.875	3/8 NPT	26.25	26.62	144.63
HTR-2518	2.5	18	1-1/8	2.520	3.150	2.520	M10	1-1/8-12UNF	2.875	3/8 NPT	28.25	28.38	150.14
HTR-2520	2.5	20	1-1/8	2.520	3.150	2.520	M10	1-1/8-12UNF	2.875	3/8 NPT	30.25	30.14	156.15
HTR-2524	2.5	24	1-1/8	2.520	3.150	2.520	M10	1-1/8-12UNF	2.875	3/8 NPT	34.25	33.66	167.72
HTR-2536	2.5	36	1-1/4	2.520	3.150	2.520	M10	1-1/4-12UNF	2.875	3/8 NPT	46.25	38.25	225.72



HTR TIE-ROD CYLINDERS

THE HTR LINE

Pressure Ratings: 2" - 4" Bore = 2500 PSI, 5" Bore = 2000 PSI

CYLINDERS

PART NUMBER	BORE (INCH)	STROKE	ROD DIA (INCH)	H	I	K	M	N	TUBE OD	PORTS (NPT)	PIN CTR RETRACT-ED	WT LBS.	LIST PRICE
HTR-3004	3.0	4	1-1/4	2.600	3.740	2.520	M12	1-1/4-12UNF	3.375	1/2 NPT	14.25	21.56	\$ 118.61
HTR-3006	3.0	6	1-1/4	2.600	3.740	2.520	M12	1-1/4-12UNF	3.375	1/2 NPT	16.25	23.76	118.61
HTR-3008	3.0	8	1-1/4	2.600	3.740	2.520	M12	1-1/4-12UNF	3.375	1/2 NPT	18.25	26.62	120.85
HTR-3008A	3.0	8	1-3/8	2.600	3.740	2.520	M12	1-1/4-12UNF	3.375	1/2 NPT	20.25	27.50	130.81
HTR-3010	3.0	10	1-1/4	2.600	3.740	2.520	M12	1-1/4-12UNF	3.375	1/2 NPT	20.25	28.16	134.52
HTR-3012	3.0	12	1-1/4	2.600	3.740	2.520	M12	1-1/4-12UNF	3.375	1/2 NPT	22.25	30.36	145.14
HTR-3014	3.0	14	1-1/4	2.600	3.740	2.520	M12	1-1/4-12UNF	3.375	1/2 NPT	24.25	32.56	150.91
HTR-3016	3.0	16	1-1/4	2.600	3.740	2.520	M12	1-1/4-12UNF	3.375	1/2 NPT	26.25	34.76	156.63
HTR-3016A	3.0	16	1-3/8	2.600	3.740	2.520	M12	1-1/4-12UNF	3.375	1/2 NPT	31.50	42.90	181.46
HTR-3018	3.0	18	1-1/4	2.600	3.740	2.520	M12	1-1/4-12UNF	3.375	1/2 NPT	28.25	36.96	162.28
HTR-3020	3.0	20	1-1/4	2.600	3.740	2.520	M12	1-1/4-12UNF	3.375	1/2 NPT	30.25	39.16	180.35
HTR-3024	3.0	24	1-1/4	2.600	3.740	2.520	M12	1-1/4-12UNF	3.375	1/2 NPT	34.25	43.34	194.32
HTR-3030	3.0	30	1-1/4	2.600	3.740	2.520	M12	1-1/4-12UNF	3.375	1/2 NPT	40.25	48.00	232.94
HTR-3036	3.0	36	1-1/2	2.600	3.740	2.520	M12	1-1/4-12UNF	3.375	1/2 NPT	46.25	54.55	259.20
HTR-3048	3.0	48	1-1/2	2.600	3.740	2.520	M12	1-1/4-12UNF	3.375	1/2 NPT	58.25	74.69	285.58
HTR-3504	3.5	4	1-1/4	2.600	4.134	2.520	M12	1-1/4-12UNF	3.875	1/2 NPT	14.25	23.32	132.84
HTR-3506	3.5	6	1-1/4	2.600	4.134	2.520	M12	1-1/4-12UNF	3.875	1/2 NPT	16.25	25.52	139.09
HTR-3508	3.5	8	1-1/4	2.600	4.134	2.520	M12	1-1/4-12UNF	3.875	1/2 NPT	18.25	28.82	140.29
HTR-3508A	3.5	8	1-3/8	2.600	4.134	2.520	M12	1-1/4-12UNF	3.875	1/2 NPT	20.25	29.70	150.04
HTR-3510	3.5	10	1-1/4	2.600	4.134	2.520	M12	1-1/4-12UNF	3.875	1/2 NPT	20.25	29.92	151.81
HTR-3512	3.5	12	1-1/4	2.600	4.134	2.520	M12	1-1/4-12UNF	3.875	1/2 NPT	22.25	32.34	159.82
HTR-3514	3.5	14	1-1/4	2.600	4.134	2.520	M12	1-1/4-12UNF	3.875	1/2 NPT	24.25	34.76	170.84
HTR-3516	3.5	16	1-1/4	2.600	4.134	2.520	M12	1-1/4-12UNF	3.875	1/2 NPT	26.25	37.18	179.36
HTR-3516A	3.5	16	1-3/8	2.600	4.134	2.520	M12	1-1/4-12UNF	3.875	1/2 NPT	31.50	50.60	203.98
HTR-3518	3.5	18	1-1/4	2.600	4.134	2.520	M12	1-1/4-12UNF	3.875	1/2 NPT	28.25	39.60	188.36
HTR-3520	3.5	20	1-1/4	2.600	4.134	2.520	M12	1-1/4-12UNF	3.875	1/2 NPT	30.25	42.02	197.31
HTR-3524	3.5	24	1-1/2	2.600	4.134	2.520	M12	1-1/4-12UNF	3.875	1/2 NPT	34.25	51.70	226.09
HTR-3530	3.5	30	1-1/2	2.600	4.130	2.520	M12	1-1/4-12UNF	3.875	1/2 NPT	40.25	55.00	261.87
HTR-3532	3.5	32	1-1/2	2.600	4.130	2.520	M12	1-1/4-12UNF	3.875	1/2 NPT	42.25	58.00	289.32
HTR-3536	3.5	36	1-1/2	2.600	4.130	2.520	M12	1-1/4-12UNF	3.875	1/2 NPT	46.25	62.00	284.72
HTR-3548	3.5	48	1-1/2	2.600	4.130	2.600	M12	1-1/4-12UNF	3.875	1/2 NPT	58.25	74.69	345.56
HTR-4004	4.0	4	1-1/4	2.600	4.724	2.600	M12	1-1/4-12UNF	4.375	1/2 NPT	14.25	29.48	177.36
HTR-4006	4.0	6	1-1/4	2.600	4.724	2.600	M12	1-1/4-12UNF	4.375	1/2 NPT	16.25	33.60	181.39
HTR-4008	4.0	8	1-1/4	2.600	4.724	2.600	M12	1-1/4-12UNF	4.375	1/2 NPT	18.25	35.86	178.53
HTR-4008A	4.0	8	1-3/4	2.600	4.724	2.600	M12	1-1/4-12UNF	4.375	1/2NPT	20.25	37.40	199.13
HTR-4010	4.0	10	1-1/4	2.600	4.724	2.600	M12	1-1/4-12UNF	4.375	1/2 NPT	20.25	37.84	203.50
HTR-4012	4.0	12	1-1/4	2.600	4.724	2.600	M12	1-1/4-12UNF	4.375	1/2 NPT	22.25	40.70	214.90
HTR-4014	4.0	14	1-1/4	2.600	4.724	2.600	M12	1-1/4-12UNF	4.375	1/2 NPT	24.25	43.56	230.57
HTR-4016	4.0	16	1-1/4	2.600	4.724	2.600	M12	1-1/4-12UNF	4.375	1/2 NPT	26.25	46.42	238.29
HTR-4016A	4.0	16	1-3/4	2.600	4.724	2.600	M12	1-1/4-12UNF	4.375	1/2 NPT	31.50	57.20	280.95
HTR-4018	4.0	18	1-1/2	2.600	4.724	2.600	M12	1-1/4-12UNF	4.375	1/2 NPT	28.25	50.60	247.18
HTR-4020	4.0	20	1-1/2	2.600	4.724	2.600	M12	1-1/4-12UNF	4.375	1/2 NPT	30.25	53.46	257.10
HTR-4024	4.0	24	1-1/2	2.600	4.724	2.600	M12	1-1/4-12UNF	4.375	1/2 NPT	32.25	59.18	272.24
HTR-4024-2	4.0	24	2	2.600	4.724	2.600	M12	1-1/4-12UNF	4.375	1/2 NPT	34.25	68.00	296.74
HTR-4030	4.0	30	1-3/4	2.600	4.724	2.600	M12	1-1/4-12UNF	4.375	1/2 NPT	40.25	75.00	333.59
HTR-4030-2	4.0	30	2	2.600	4.724	2.600	M12	1-1/4-12UNF	4.375	1/2 NPT	40.25	78.00	344.40
HTR-4036	4.0	36	1-3/4	2.600	4.724	2.600	M12	1-1/4-12UNF	4.375	1/2 NPT	46.25	82.00	382.86
HTR-4048	4.0	48	2	2.600	4.724	2.600	M12	1-1/4-12UNF	4.375	1/2 NPT	58.25	98.00	441.73
HTR-5004	5.0	4	1-1/2	2.677	6.000	3.500	M16	1-1/4-12UNF	5.453	1/2 NPT	16.25	53.46	263.69
HTR-5008	5.0	8	1-1/2	2.677	6.000	3.500	M16	1-1/4-12UNF	5.453	1/2 NPT	20.25	61.16	280.62
HTR-5010	5.0	10	1-1/2	2.677	6.000	3.500	M16	1-1/4-12UNF	5.453	1/2 NPT	22.25	63.36	305.53
HTR-5012	5.0	12	2	2.677	6.000	3.500	M16	1-1/4-12UNF	5.453	1/2 NPT	24.25	73.04	330.49
HTR-5014	5.0	14	2	2.677	6.000	3.500	M16	1-1/4-12UNF	5.453	1/2 NPT	26.25	77.00	\$ 355.70

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FAX 1-727-797-8849



HTR TIE-ROD CYLINDERS

THE HTR LINE

Pressure Ratings: 2" - 4" Bore = 2500 PSI, 5" Bore = 2000 PSI

PART NUMBER	BORE (INCH)	STROKE	ROD DIA (INCH)	H	I	K	M	N	TUBE OD	PORTS (NPT)	PIN CTR RETRACT-ED	WT LBS.	LIST PRICE
HTR-5016	5.0	16	2	2.677	6.000	3.500	M16	1-1/4-12UNF	5.453	1/2 NPT	28.25	81.18	\$ 374.66
HTR-5018	5.0	18	2	2.677	6.000	3.500	M16	1-1/4-12UNF	5.453	1/2 NPT	30.25	85.14	393.44
HTR-5020	5.0	20	2	2.677	6.000	3.500	M16	1-1/4-12UNF	5.453	1/2 NPT	32.25	89.10	412.29
HTR-5024	5.0	24	2	2.677	6.000	3.500	M16	1-1/4-12UNF	5.453	1/2 NPT	36.25	97.24	456.84
HTR-5030	5.0	30	2	2.677	6.000	3.500	M16	1-1/4-12UNF	5.453	1/2 NPT	42.25	109.56	522.94

SEAL KIT NUMBER	Rod x Bore	LIST PRICE
HTR-2.0X1.12K	SK-P-U-10-1.125x2.000	\$ 12.25
HTR-2.5X1.12K	SK-P-U-10-1.125x2.500	12.56
HTR-2.5X1.25K-A	SK-P-U-10-1.250x2.500	9.81
HTR-3.0X1.25K	SK-P-U-10-1.250x3.000	13.15
HTR-3.0X1.37K-A	SK-P-U-10-1.375x3.000	10.08
HTR-3.0X1.50K	SK-P-U-10-1.500x3.000	20.67
HTR-3.5X1.25K	SK-P-U-10-1.250x3.500	13.93
HTR-3.5X1.37K-A	SK-I-U-10-1.375x3.500	10.42
HTR-3.5X1.50K	SK-P-U-10-1.500x3.500	14.83
HTR-4.0X1.25K	SK-P-U-10-1.250x4.000	24.88
HTR-4.0X1.50K	SK-P-U-10-1.500x4.000	25.77
HTR-4.0X1.75K	SK-P-U-10-1.750x4.000	26.96
HTR-4.0X2.00K	SK-P-U-10-2.000x4.000	33.51
HTR-5.0X1.50K	SK-P-UB-10-1.500x5.000	44.90
HTR-5.0X2.00K	SK-P-UB-10-2.000x5.000	55.69

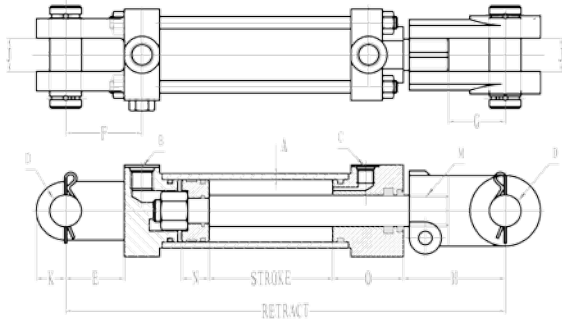
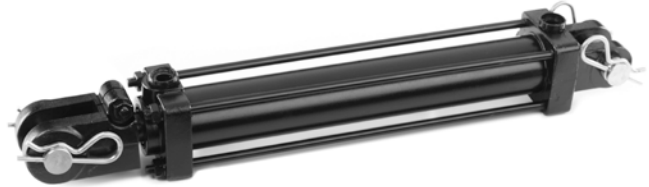
CYLINDERS

HSTR (OLYMPUS) TIE ROD CYLINDERS

Hercules Brand Cylinders

THE HSTR (Olympus) LINE

3000 PSI DOUBLE ACTING TIE ROD CYLINDERS



FEATURES:

- Honed Steel tube, precision finished for extended seal life
- Heavy duty, high strength tie rods
- Chromed, ground and polished piston rod
- Pin and clevis included
- Rod seal: Twin lip heavy duty polyurethane seal
- Rod Wiper: Heavy duty metal canned wiper
- 2-piece 93A urethane piston seal with 70A buna energizer
- All pistons designed to include high strength nylon wear bands
- Painted Black
- SAE O-Ring Ports

For quantities above 50 pieces, call Hercules for special pricing.

Seal kits for these cylinders are shown at the end of the section.

BORE (INCH)	A	D	E	F	G	J	K
2.0	0.188	1.015	1.812	2.375	1.813	1.063	0.938
2.5	0.188	1.015	1.844	2.375	1.813	1.063	0.938
3.0	0.188	1.015	2.125	2.438	1.813	1.063	1.063
3.5	0.188	1.015	2.125	2.438	1.813	1.063	1.250
4.0	0.188	1.015	2.125	2.438	1.875	1.063	1.250
5.0	0.250	1.265	2.500	2.625	2.000	1.063	1.407

PART NUMBER	BORE	STK	ROD DIA.	RETRAC. DIMEN.	SHIP WT	PORTS (SAE)	H	M	N	O	LIST PRICE
HSTR-2004	2	4	1.125	14.25	18	#8 3/4-16	3.250	1.125-12UNF	0.875	2.375	\$ 137.93
HSTR-2006	2	6	1.125	16.25	19	#8 3/4-16	3.250	1.125-12UNF	0.875	2.375	144.02
HSTR-2008	2	8	1.125	18.25	22	#8 3/4-16	3.25	1.125-12UNF	0.875	2.250	140.05
HSTR-2008A	2	8	1.125	20.25	20	#8 3/4-16	3.250	1.125-12UNF	0.875	2.375	152.93
HSTR-2010	2	10	1.125	20.25	21	#8 3/4-16	3.250	1.125-12UNF	0.875	2.375	156.53
HSTR-2012	2	12	1.125	22.25	25	#8 3/4-16	3.250	1.125-12UNF	0.875	2.375	166.36
HSTR-2014	2	14	1.125	24.25	26	#8 3/4-16	3.250	1.125-12UNF	0.875	2.375	174.10
HSTR-2016A	2	16	1.125	31.50	28	#8 3/4-16	8.500	1.125-12UNF	0.875	2.375	182.10
HSTR-2018	2	18	1.125	28.25	29	#8 3/4-16	3.250	1.125-12UNF	0.875	2.375	179.72
HSTR-2020	2	20	1.125	30.25	31	#8 3/4-16	3.250	1.125-12UNF	0.875	2.375	186.73
HSTR-2024	2	24	1.125	34.25	31	#8 3/4-16	3.250	1.125-12UNF	0.875	2.375	202.14
HSTR-2030	2	30	1.125	40.25	39	#8 3/4-16	3.250	1.125-12UNF	0.875	2.375	225.26
HSTR-2506	2.5	6	1.125	16.25	22	#8 3/4-16	3.250	1.125-12UNF	1.000	2.375	155.75
HSTR-2508	2.5	8	1.125	18.25	25	#8 3/4-16	3.25	1.125-12UNF	1.000	2.375	164.01
HSTR-2508A	2.5	8	1.250	20.25	25	#8 3/4-16	3.250	1.125-12UNF	1.000	2.375	170.14
HSTR-2510	2.5	10	1.250	20.25	26	#8 3/4-16	3.250	1.125-12UNF	1.000	2.375	178.33
HSTR-2512	2.5	12	1.250	22.25	27	#8 3/4-16	3.250	1.125-12UNF	1.000	2.375	187.09
HSTR-2514	2.5	14	1.250	24.25	29	#8 3/4-16	3.250	1.125-12UNF	1.000	2.375	192.54
HSTR-2516A	2.5	16	1.250	31.50	33	#8 3/4-16	8.500	1.125-12UNF	1.000	2.375	215.56
HSTR-2518	2.5	18	1.250	28.20	34	#8 3/4-16	3.250	1.125-12UNF	1.000	2.375	209.83
HSTR-2520	2.5	20	1.250	30.25	36	#8 3/4-16	3.250	1.125-12UNF	1.000	2.375	218.17
HSTR-2524	2.5	24	1.250	34.25	39	#8 3/4-16	3.250	1.125-12UNF	1.000	2.375	238.68
HSTR-2530	2.5	30	1.250	40.25	44	#8 3/4-16	3.250	1.125-12UNF	1.000	2.375	268.03
HSTR-3006	3	6	1.125	16.25	24	#8 3/4-16	3.750	1.125-12UNF	1.000	1.938	173.60
HSTR-3008	3	8	1.375	18.25	30	#8 3/4-16	3.25	1.125-12UNF	1.000	1.938	186.19
HSTR-3008A	3	8	1.375	20.25	32	#8 3/4-16	5.750	1.125-12UNF	1.000	1.938	193.17
HSTR-3010	3	10	1.375	20.25	33	#8 3/4-16	3.750	1.125-12UNF	1.000	1.938	198.81

HSTR (OLYMPUS) TIE ROD CYLINDERS

THE HSTR (Olympus) LINE

3000 PSI DOUBLE ACTING TIE ROD CYLINDERS

PART NUMBER	BORE	STK	ROD DIA.	RETRAC. DIMEN.	SHIP WT	PORTS (SAE)	H	M	N	O	LIST PRICE
HSTR-3012	3	12	1.375	22.25	33	#8 3/4-16	3.750	1.125-12UNF	1.000	1.938	\$ 208.82
HSTR-3014	3	14	1.375	24.25	35	#8 3/4-16	3.750	1.125-12UNF	1.000	1.938	218.63
HSTR-3016	3	16	1.375	26.25	38	#8 3/4-16	3.750	1.125-12UNF	1.000	1.938	228.77
HSTR-3016A	3	16	1.375	31.50	39	#8 3/4-16	9.000	1.125-12UNF	1.000	1.938	243.04
HSTR-3018	3	18	1.375	28.25	42	#8 3/4-16	3.750	1.125-12UNF	1.000	1.938	239.84
HSTR-3020	3	20	1.375	30.25	45	#8 3/4-16	3.750	1.125-12UNF	1.000	1.938	249.84
HSTR-3024	3	24	1.375	34.25	41	#8 3/4-16	3.750	1.125-12UNF	1.000	1.938	272.70
HSTR-3030	3	30	1.375	40.25	53	#8 3/4-16	3.750	1.125-12UNF	1.000	1.938	305.73
HSTR-3036	3	36	1.375	46.25	61	#8 3/4-16	3.750	1.125-12UNF	1.000	1.938	342.90
HSTR-3048	3	48	1.375	58.25	66	#8 3/4-16	3.750	1.125-12UNF	1.000	1.938	397.81
HSTR-3508	3.5	8	1.375	18.25	36	#8 3/4-16	3.25	1.125-12UNF	1.000	2.000	224.51
HSTR-3508A	3.5	8	1.375	20.25	35	#8 3/4-16	5.750	1.250-12UNF	1.000	2.000	216.88
HSTR-3510	3.5	10	1.375	20.25	36	#8 3/4-16	3.750	1.250-12UNF	1.000	2.000	223.75
HSTR-3512	3.5	12	1.375	22.25	38	#8 3/4-16	3.750	1.250-12UNF	1.000	2.000	235.04
HSTR-3514	3.5	14	1.375	24.25	41	#8 3/4-16	3.750	1.250-12UNF	1.000	2.000	246.08
HSTR-3516A	3.5	16	1.375	31.50	46	#8 3/4-16	9.000	1.250-12UNF	1.000	2.000	271.99
HSTR-3518	3.5	18	1.375	28.25	47	#8 3/4-16	3.750	1.250-12UNF	1.000	2.000	268.60
HSTR-3520	3.5	20	1.375	30.25	49	#8 3/4-16	3.750	1.250-12UNF	1.000	2.000	279.82
HSTR-3524	3.5	24	1.375	34.25	54	#8 3/4-16	3.750	1.250-12UNF	1.000	2.000	307.05
HSTR-3530	3.5	30	1.375	40.25	64	#8 3/4-16	3.750	1.250-12UNF	1.000	2.000	344.41
HSTR-3536	3.5	36	1.375	46.25	66	#8 3/4-16	3.750	1.250-12UNF	1.000	2.000	379.03
HSTR-3548	3.5	48	1.375	58.25	73	#8 3/4-16	3.750	1.250-12UNF	1.000	2.000	253.83
HSTR-4008	4	8	1.750	18.25	48	#8 3/4-16	3.25	1.125-12UNF	1.250	1.813	267.58
HSTR-4008A	4	8	1.750	20.25	45	#8 3/4-16	5.250	1.500-12UNF	1.250	1.813	277.63
HSTR-4010	4	10	1.750	20.25	48	#8 3/4-16	3.250	1.500-12UNF	1.250	1.813	285.09
HSTR-4012	4	12	1.750	22.25	49	#8 3/4-16	3.250	1.500-12UNF	1.250	1.813	299.61
HSTR-4014	4	14	1.750	24.25	51	#8 3/4-16	3.250	1.500-12UNF	1.250	1.813	313.92
HSTR-4016	4	16	1.750	26.25	58	#8 3/4-16	3.250	1.500-12UNF	1.250	1.813	329.38
HSTR-4016A	4	16	1.750	31.50	61	#8 3/4-16	8.500	1.500-12UNF	1.250	1.813	349.23
HSTR-4018	4	18	1.750	28.25	62	#8 3/4-16	3.250	1.500-12UNF	1.250	1.813	343.81
HSTR-4020	4	20	1.750	30.25	72	#8 3/4-16	3.250	1.500-12UNF	1.250	1.813	358.33
HSTR-4024	4	24	1.750	34.25	74	#8 3/4-16	3.250	1.500-12UNF	1.250	1.813	391.51
HSTR-4030	4	30	1.750	40.25	77	#8 3/4-16	3.250	1.500-12UNF	1.250	1.813	439.91
HSTR-4036	4	36	1.750	46.25	83	#8 3/4-16	3.250	1.500-12UNF	1.250	1.813	485.82
HSTR-4048	4	48	1.750	58.25	109	#8 3/4-16	3.250	1.500-12UNF	1.250	1.813	575.27
HSTR-5008A	5	8	2.000	20.25	67	#10 7/8-14	4.000	1.500-12UNF	1.437	2.500	419.55
HSTR-5012	5	12	2.000	24.25	75	#10 7/8-14	4.000	1.500-12UNF	1.437	2.500	461.55
HSTR-5014	5	14	2.000	26.25	80	#10 7/8-14	4.000	1.500-12UNF	1.437	2.500	273.23
HSTR-5016A	5	16	2.000	31.50	84	#10 7/8-14	4.000	1.500-12UNF	1.437	2.500	518.72
HSTR-5018	5	18	2.000	30.25	90	#10 7/8-14	4.000	1.500-12UNF	1.437	2.500	523.34
HSTR-5020	5	20	2.000	32.25	95	#10 7/8-14	4.000	1.500-12UNF	1.437	2.500	545.29
HSTR-5024	5	24	2.000	36.25	100	#10 7/8-14	4.000	1.500-12UNF	1.437	2.500	592.21
HSTR-5030	5	30	2.000	42.25	108	#10 7/8-14	4.000	1.500-12UNF	1.437	2.500	660.96
HSTR-5036	5	36	2.000	48.25	118	#10 7/8-14	4.000	1.500-12UNF	1.437	2.500	725.41
HSTR-5048	5	48	2.000	60.25	161	#10 7/8-14	4.000	1.500-12UNF	1.437	2.500	853.03

CYLINDERS

SEAL KIT NUMBER	Rod x Bore	LIST PRICE
HSTR-2.0X1.12K	SK-P-U-10-1.125x2.000	\$ 20.88
HSTR-2.5X1.25K	SK-P-U-10-1.250x2.500	21.65
HSTR-3.0X1.37K	SK-P-U-10-1.375x3.000	24.75
HSTR-3.5X1.37K	SK-P-U-10-1.375x3.500	26.79
HSTR-4.0X1.75K	SK-P-U-10-1.750x4.000	37.28
HSTR-5.0X2.0K	SK-P-U-10-2.000x5.000	49.12

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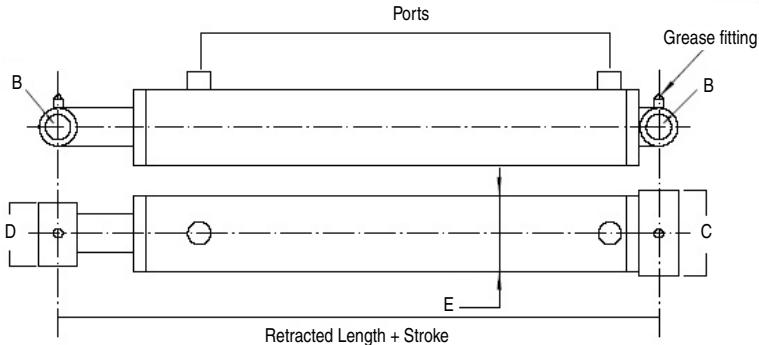
HMW MECHANICAL WELDED CYLINDERS

Hercules Brand Cylinders

THE HMW LINE

2500 and 3000 PSI DOUBLE ACTING CYLINDERS

(4" Bore = 3000 PSI, 5" Bore = 2500 PSI)



FEATURES:

- Honed tubing
- Heavy duty welded construction
- Chromed, ground & polished piston rod
- Cast iron piston & gland
- Pin eye mounting on both ends
- Loaded u-seal & urethane wiper in gland
- O-ring/backup washers & u-seals for piston seals
- Threaded gland retainer
- Standard color is black

For quantities above 50 pieces, call Hercules for special pricing.

Seal kits for these cylinders are shown at the end of the section.

Bore	B	C	D	E	Ports(NPT)
1.50	0.77	2.25	2.00	2.0	1/4 NPT
2.00	1.02	2.75	2.25	2.5	3/8 NPT
2.50	1.02	3.25	2.25	3.0	1/2 NPT
3.00	1.02	3.75	2.25	3.5	1/2 NPT
3.50	1.27	4.25	2.25	4.0	1/2 NPT
4.00	1.52	4.75	2.50	4.5	1/2 NPT
5.00	1.77	5.75	3.25	5.5	1/2 NPT

PART NUMBER	BORE	STROKE (INCH)	ROD DIA (INCH)	PIN CENTERS RE-TRACTED (INCH)	PIN CENTERS EXTENDED (INCH)	WEIGHT LBS	LIST PRICE
HMW-1504	1.50	4	1"	12.00	16.00	9.04	\$ 123.30
HMW-1506	1.50	6	1"	14.00	20.00	10.14	133.71
HMW-1508	1.50	8	1"	16.00	24.00	11.47	143.09
HMW-1510	1.50	10	1"	18.00	28.00	12.79	151.00
HMW-2008	2.00	8	1-1/4"	16.00	24.00	13.45	136.39
HMW-2010	2.00	10	1-1/4"	18.00	28.00	15.21	144.13
HMW-2012	2.00	12	1-1/4"	20.00	32.00	16.98	149.92
HMW-2014	2.00	14	1-1/4"	22.00	36.00	18.74	157.33
HMW-2016	2.00	16	1-1/4"	24.00	40.00	20.51	167.85
HMW-2018	2.00	18	1-1/4"	26.00	44.00	22.27	176.99
HMW-2020	2.00	20	1-1/4"	28.00	48.00	24.03	182.58
HMW-2024	2.00	24	1-1/4"	32.00	56.00	27.56	197.65
HMW-2028	2.00	28	1-1/4"	36.00	64.00	31.09	206.73
HMW-2030	2.00	30	1-1/4"	38.00	68.00	32.85	246.09
HMW-2032	2.00	32	1-1/4"	40.00	72.00	34.84	261.36
HMW-2036	2.00	36	1-1/4"	44.00	80.00	38.37	271.95
HMW-2040	2.00	40	1-1/4"	48.00	88.00	41.90	299.45
HMW-2048	2.00	48	1-1/4"	56.00	104.00	48.95	354.55
HMW-2508	2.50	8	1-1/2"	16.00	24.00	19.85	148.78
HMW-2510	2.50	10	1-1/2"	18.00	28.00	21.83	157.99
HMW-2512	2.50	12	1-1/2"	20.00	32.00	24.03	162.72
HMW-2514	2.50	14	1-1/2"	22.00	36.00	26.24	173.34
HMW-2516	2.50	16	1-1/2"	24.00	40.00	28.44	178.96

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HMW MECHANICAL WELDED CYLINDERS

THE HMW LINE

2500 and 3000 PSI DOUBLE ACTING CYLINDERS (4" Bore = 3000 PSI, 5" Bore = 2500 PSI)

PART NUMBER	BORE	STROKE (INCH)	ROD DIA (INCH)	PIN CENTERS RE-TRACTED (INCH)	PIN CENTERS EXTENDED (INCH)	WEIGHT LBS	LIST PRICE
HMW-2518	2.50	18	1-1/2"	26.00	44.00	30.65	\$ 186.57
HMW-2520	2.50	20	1-1/2"	28.00	48.00	32.85	199.80
HMW-2524	2.50	24	1-1/2"	32.00	56.00	37.26	213.29
HMW-2528	2.50	28	1-1/2"	36.00	64.00	41.45	235.34
HMW-2530	2.50	30	1-1/2"	38.00	68.00	43.66	260.96
HMW-2532	2.50	32	1-1/2"	40.00	72.00	45.86	279.08
HMW-2536	2.50	36	1-1/2"	44.00	80.00	50.27	288.29
HMW-2540	2.50	40	1-1/2"	48.00	88.00	54.68	327.95
HMW-2548	2.50	48	1-1/2"	56.00	104.00	63.28	408.20
HMW-3008	3.00	8	1-1/2"	16.00	24.00	24.70	167.11
HMW-3010	3.00	10	1-1/2"	18.00	28.00	27.12	177.25
HMW-3012	3.00	12	1-1/2"	20.00	32.00	29.55	190.99
HMW-3014	3.00	14	1-1/2"	22.00	36.00	31.97	198.43
HMW-3016	3.00	16	1-1/2"	24.00	40.00	34.40	206.03
HMW-3018	3.00	18	1-1/2"	26.00	44.00	36.82	213.26
HMW-3020	3.00	20	1-1/2"	28.00	48.00	39.25	223.95
HMW-3024	3.00	24	1-1/2"	32.00	56.00	44.10	248.00
HMW-3028	3.00	28	1-1/2"	36.00	64.00	48.95	274.96
HMW-3030	3.00	30	1-1/2"	38.00	68.00	51.38	285.65
HMW-3032	3.00	32	1-1/2"	40.00	72.00	53.58	299.88
HMW-3036	3.00	36	1-1/2"	44.00	80.00	58.43	320.58
HMW-3040	3.00	40	1-1/2"	48.00	88.00	63.28	377.59
HMW-3048	3.00	48	1-1/2"	56.00	104.00	72.99	417.01
HMW-3508	3.50	8	1-3/4"	18.00	26.00	32.63	195.21
HMW-3510	3.50	10	1-3/4"	20.00	30.00	35.72	202.48
HMW-3512	3.50	12	1-3/4"	22.00	34.00	38.81	212.56
HMW-3514	3.50	14	1-3/4"	24.00	38.00	41.67	220.97
HMW-3516	3.50	16	1-3/4"	26.00	42.00	44.76	242.74
HMW-3518	3.50	18	1-3/4"	28.00	46.00	47.63	255.77
HMW-3520	3.50	20	1-3/4"	30.00	50.00	50.72	268.10
HMW-3524	3.50	24	1-3/4"	34.00	58.00	56.67	287.15
HMW-3528	3.50	28	1-3/4"	38.00	66.00	62.62	333.78
HMW-3530	3.50	30	1-3/4"	40.00	70.00	65.71	361.58
HMW-3532	3.50	32	1-3/4"	42.00	74.00	68.80	372.09
HMW-3536	3.50	36	1-3/4"	46.00	82.00	74.75	402.54
HMW-3540	3.50	40	1-3/4"	50.00	90.00	80.70	421.34
HMW-3548	3.50	48	1-3/4"	58.00	106.00	92.61	474.36
HMW-4008	4.00	8	2"	18.00	26.00	40.79	229.41
HMW-4010	4.00	10	2"	20.00	30.00	44.54	251.82
HMW-4012	4.00	12	2"	22.00	34.00	48.29	266.09
HMW-4014	4.00	14	2"	24.00	38.00	51.82	285.85
HMW-4016	4.00	16	2"	26.00	42.00	55.57	295.76
HMW-4018	4.00	18	2"	28.00	46.00	59.09	306.22
HMW-4020	4.00	20	2"	30.00	50.00	62.84	318.60
HMW-4024	4.00	24	2"	34.00	58.00	70.12	333.78
HMW-4028	4.00	28	2"	38.00	66.00	77.40	377.83
HMW-4030	4.00	30	2"	40.00	70.00	81.14	403.25
HMW-4032	4.00	32	2"	42.00	74.00	84.67	422.78
HMW-4036	4.00	36	2"	46.00	82.00	91.95	449.47
HMW-4040	4.00	40	2"	50.00	90.00	99.23	479.05
HMW-4048	4.00	48	2"	58.00	106.00	114.00	555.48
HMW-5008	5.00	8	2-1/2"	20.00	28.00	71.88	378.83
HMW-5010	5.00	10	2-1/2"	22.00	32.00	76.07	394.44

CYLINDERS

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HMW MECHANICAL WELDED CYLINDERS

THE HMW LINE

2500 and 3000 PSI DOUBLE ACTING CYLINDERS (4" Bore = 3000 PSI, 5" Bore = 2500 PSI)

CYLINDERS

PART NUMBER	BORE	STROKE (INCH)	ROD DIA (INCH)	PIN CENTERS RE-TRACTED (INCH)	PIN CENTERS EXTENDED (INCH)	WEIGHT LBS	LIST PRICE
HMW-5012	5.00	12	2-1/2"	24.00	36.00	80.48	\$ 438.89
HMW-5014	5.00	14	2-1/2"	26.00	40.00	84.67	471.71
HMW-5016	5.00	16	2-1/2"	28.00	44.00	89.08	497.70
HMW-5018	5.00	18	2-1/2"	30.00	48.00	93.49	523.79
HMW-5020	5.00	20	2-1/2"	32.00	52.00	97.68	547.01
HMW-5024	5.00	24	2-1/2"	36.00	60.00	106.28	565.23
HMW-5028	5.00	28	2-1/2"	40.00	68.00	115.10	589.22
HMW-5030	5.00	30	2-1/2"	42.00	72.00	119.29	611.69
HMW-5032	5.00	32	2-1/2"	44.00	76.00	123.70	658.75
HMW-5036	5.00	36	2-1/2"	48.00	84.00	132.30	691.98
HMW-5040	5.00	40	2-1/2"	52.00	92.00	140.90	765.57
HMW-5048	5.00	48	2-1/2"	60.00	108.00	158.10	841.20

SEAL KIT NUMBER	Rod x Bore	LIST PRICE
HMW-1.5X1.00K	SK-P-U-5-1.000x1.500	\$ 22.64
HMW-2.0X1.25K	SK-P-U-5-1.250x2.000	35.68
HMW-2.5X1.50K	SK-P-U-5-1.500x2.500	47.27
HMW-3.0X1.50K	SK-P-U-5-1.500x3.000	52.77
HMW-3.5X1.75K	SK-P-U-5-1.750x3.500	63.03
HMW-4.0X2.00K	SK-P-U-5-2.000x4.000	61.14
HMW-5.0X2.50K	SK-P-U-5-2.500x5.000	98.12

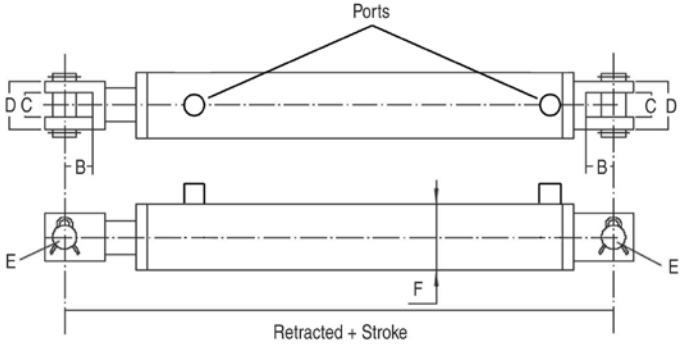
These seal kits are replacements for both the HMW and HCW cylinders.

CLEVIS WELDED CYLINDERS

Hercules Brand Cylinders

THE HCW LINE

2500 and 3000 PSI DOUBLE ACTING CYLINDERS
(4" Bore = 3000 PSI, 5" Bore = 2500 PSI)



FEATURES:

- Skived, honed tubing
- Heavy duty welded construction
- Chromed, ground & polished piston rod will operate at full pressure through 16" stroke
- Cast iron piston, cast steel butt, gland & clevis
- Loaded u-seal & urethane wiper in gland, u-seal on piston
- Threaded gland
- Pins & clips included
- Standard color is black
- Stroke control may be installed on 8" strokes

Bore	B	C	D	E	F	Ports(NPT)
2.00	2.125	1.125	2.07	1.00	2.5	3/8 NPT
2.50	2.125	1.125	2.07	1.00	3.0	1/2 NPT
3.00	2.125	1.125	2.07	1.00	3.5	1/2 NPT
3.50	2.125	1.125	2.07	1.00	4.0	1/2 NPT
4.00	2.000	1.125	2.07	1.00	4.5	1/2 NPT
5.00	2.000	1.500	2.44	1.00	5.5	1/2 NPT

For quantities above 50 pieces, call Hercules for special pricing.

Seal kits for these cylinders are shown at the end of the section.

PART NUMBER	BORE	STROKE (INCH)	ROD DIA (INCH)	PIN CENTERS RE-TRACTED (INCH)	PIN CENTERS EX-TENDED (INCH)	WEIGHT LBS	LIST PRICE
HCW-2004	2.00	4	1-1/4"	14.25	18.25	12.79	\$ 129.59
HCW-2006	2.00	6	1-1/4"	16.25	22.25	14.55	129.59
HCW-2008	2.00	8	1-1/4"	20.25	28.25	16.32	136.50
HCW-2010	2.00	10	1-1/4"	20.25	30.25	17.86	145.50
HCW-2012	2.00	12	1-1/4"	22.25	34.25	19.40	150.10
HCW-2014	2.00	14	1-1/4"	24.25	38.25	21.17	157.33
HCW-2016	2.00	16	1-1/4"	26.25	42.25	22.93	168.01
HCW-2018	2.00	18	1-1/4"	28.25	46.25	24.48	178.36
HCW-2020	2.00	20	1-1/4"	30.25	50.25	26.24	182.75
HCW-2024	2.00	24	1-1/4"	34.25	58.25	29.55	197.76
HCW-2028	2.00	28	1-1/4"	38.25	66.25	32.85	206.94
HCW-2030	2.00	30	1-1/4"	40.25	70.25	34.62	246.09
HCW-2032	2.00	32	1-1/4"	42.25	74.25	36.16	261.49
HCW-2034	2.00	34	1-1/4"	44.25	78.25	37.93	267.12
HCW-2036	2.00	36	1-1/4"	46.25	82.25	39.69	271.95
HCW-2504	2.50	4	1-1/2"	14.25	18.25	16.98	141.11
HCW-2506	2.50	6	1-1/2"	16.25	22.25	19.18	141.11
HCW-2508	2.50	8	1-1/2"	20.25	28.25	21.39	148.96
HCW-2510	2.50	10	1-1/2"	20.25	30.25	23.37	157.99
HCW-2512	2.50	12	1-1/2"	22.25	34.25	25.58	162.89
HCW-2514	2.50	14	1-1/2"	24.25	38.25	27.78	173.34
HCW-2516	2.50	16	1-1/2"	26.25	42.25	29.77	179.10
HCW-2518	2.50	18	1-1/2"	28.25	46.25	31.97	186.57
HCW-2520	2.50	20	1-1/2"	30.25	50.25	34.18	199.96
HCW-2524	2.50	24	1-1/2"	34.25	58.25	38.37	213.43
HCW-2528	2.50	28	1-1/2"	38.25	66.25	42.56	235.58

CYLINDERS



CLEVIS WELDED CYLINDERS

THE HCW LINE

2500 and 3000 PSI DOUBLE ACTING CYLINDERS (4" Bore = 3000 PSI, 5" Bore = 2500 PSI)

PART NUMBER	BORE	STROKE (INCH)	ROD DIA (INCH)	PIN CENTERS RE-TRACTED (INCH)	PIN CENTERS EXTENDED (INCH)	WEIGHT LBS	LIST PRICE
HCW-2530	2.50	30	1-1/2"	40.25	70.25	44.76	\$ 260.96
HCW-2532	2.50	32	1-1/2"	42.25	74.25	46.97	279.18
HCW-2534	2.50	34	1-1/2"	44.25	78.25	48.95	283.90
HCW-2536	2.50	36	1-1/2"	46.25	82.25	51.16	288.29
HCW-3004	3.00	4	1-1/2"	14.25	18.25	21.83	156.55
HCW-3006	3.00	6	1-1/2"	16.25	22.25	24.26	156.55
HCW-3008	3.00	8	1-1/2"	20.25	28.25	26.90	165.60
HCW-3010	3.00	10	1-1/2"	20.25	30.25	29.11	177.25
HCW-3012	3.00	12	1-1/2"	22.25	34.25	31.53	191.12
HCW-3014	3.00	14	1-1/2"	24.25	38.25	33.96	198.43
HCW-3016	3.00	16	1-1/2"	26.25	42.25	36.60	206.23
HCW-3018	3.00	18	1-1/2"	28.25	46.25	39.03	213.26
HCW-3020	3.00	20	1-1/2"	30.25	50.25	41.45	224.08
HCW-3024	3.00	24	1-1/2"	34.25	58.25	46.31	248.20
HCW-3028	3.00	28	1-1/2"	38.25	66.25	51.16	275.30
HCW-3030	3.00	30	1-1/2"	40.25	70.25	53.58	286.35
HCW-3032	3.00	32	1-1/2"	42.25	74.25	56.23	299.98
HCW-3034	3.00	34	1-1/2"	44.25	78.25	58.65	310.47
HCW-3036	3.00	36	1-1/2"	46.25	82.25	61.08	320.58
HCW-3504	3.50	4	1-3/4"	14.25	18.25	26.24	185.19
HCW-3506	3.50	6	1-3/4"	16.25	22.25	29.33	185.19
HCW-3508	3.50	8	1-3/4"	20.25	28.25	32.41	196.38
HCW-3510	3.50	10	1-3/4"	20.25	30.25	35.50	202.48
HCW-3512	3.50	12	1-3/4"	22.25	34.25	38.59	213.77
HCW-3514	3.50	14	1-3/4"	24.25	38.25	41.67	220.97
HCW-3516	3.50	16	1-3/4"	26.25	42.25	44.76	242.74
HCW-3518	3.50	18	1-3/4"	28.25	46.25	48.07	255.77
HCW-3520	3.50	20	1-3/4"	30.25	50.25	51.16	269.30
HCW-3524	3.50	24	1-3/4"	34.25	58.25	57.33	287.15
HCW-3528	3.50	28	1-3/4"	38.25	66.25	63.50	332.61
HCW-3530	3.50	30	1-3/4"	40.25	70.25	66.59	362.76
HCW-3532	3.50	32	1-3/4"	42.25	74.25	69.90	197.49
HCW-3534	3.50	34	1-3/4"	44.25	78.25	72.99	387.50
HCW-3536	3.50	36	1-3/4"	46.25	82.25	76.07	403.75
HCW-4004	4.00	4	2"	14.25	18.25	30.65	222.37
HCW-4006	4.00	6	2"	16.25	22.25	34.40	222.37
HCW-4008	4.00	8	2"	20.25	28.25	39.25	235.04
HCW-4010	4.00	10	2"	20.25	30.25	42.12	251.82
HCW-4012	4.00	12	2"	22.25	34.25	46.08	266.09
HCW-4014	4.00	14	2"	24.25	38.25	50.05	285.85
HCW-4016	4.00	16	2"	26.25	42.25	53.80	295.76
HCW-4018	4.00	18	2"	28.25	46.25	57.77	306.22
HCW-4020	4.00	20	2"	30.25	50.25	61.52	318.60
HCW-4024	4.00	24	2"	34.25	58.25	69.46	333.78
HCW-4028	4.00	28	2"	38.25	66.25	77.18	377.83
HCW-4030	4.00	30	2"	40.25	70.25	81.14	408.85
HCW-4032	4.00	32	2"	42.25	74.25	84.89	422.78
HCW-4034	4.00	34	2"	44.25	78.25	88.86	436.27
HCW-4036	4.00	36	2"	46.25	82.25	92.61	455.07
HCW-5006	5.00	6	2-1/2"	18.25	24.25	68.36	366.10
HCW-5008	5.00	8	2-1/2"	20.25	28.25	72.77	379.10
HCW-5010	5.00	10	2-1/2"	22.25	32.25	77.18	394.44
HCW-5012	5.00	12	2-1/2"	24.25	36.25	81.59	438.89

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CLEVIS WELDED CYLINDERS

THE HCW LINE

2500 and 3000 PSI DOUBLE ACTING CYLINDERS (4" Bore = 3000 PSI, 5" Bore = 2500 PSI)

PART NUMBER	BORE	STROKE (INCH)	ROD DIA (INCH)	PIN CENTERS RE-TRACTED (INCH)	PIN CENTERS EX-TENDED (INCH)	WEIGHT LBS	LIST PRICE
HCW-5014	5.00	14	2-1/2"	26.25	40.25	86.00	\$ 471.71
HCW-5016	5.00	16	2-1/2"	28.25	44.25	90.41	497.70
HCW-5018	5.00	18	2-1/2"	30.25	48.25	94.82	523.79
HCW-5020	5.00	20	2-1/2"	32.25	52.25	99.23	547.01
HCW-5024	5.00	24	2-1/2"	36.25	60.25	108.05	565.23
HCW-5028	5.00	28	2-1/2"	40.25	68.25	116.87	589.22
HCW-5030	5.00	30	2-1/2"	42.25	72.25	121.28	611.69
HCW-5032	5.00	32	2-1/2"	44.25	76.25	125.69	659.02
HCW-5034	5.00	34	2-1/2"	46.25	80.25	130.10	675.53
HCW-5036	5.00	36	2-1/2"	48.25	84.25	134.51	691.98

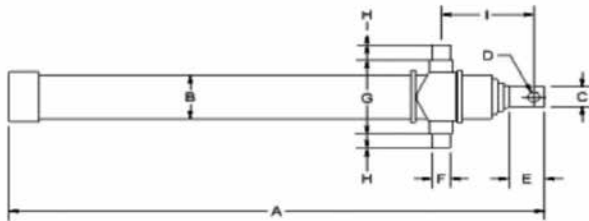
SEAL KIT NUMBER	Rod x Bore	LIST PRICE
HMW-1.5X1.00K	SK-P-U-5-1.000x1.500	\$ 22.64
HMW-2.0X1.25K	SK-P-U-5-1.250x2.000	35.68
HMW-2.5X1.50K	SK-P-U-5-1.500x2.500	47.27
HMW-3.0X1.50K	SK-P-U-5-1.500x3.000	52.77
HMW-3.5X1.75K	SK-P-U-5-1.750x3.500	63.03
HMW-4.0X2.00K	SK-P-U-5-2.000x4.000	61.14
HMW-5.0X2.50K	SK-P-U-5-2.500x5.000	98.12

These seal kits are replacements for both the HMW and HCW cylinders.

THE HTC LINE

3000 PSI SINGLE ACTING CYLINDERS

7 Tons and 12 Tons Inverse



PART NUMBER	CAPACITY	STROKE	CLOSED (A)	B	C	D	E	F	G	H	I	PORT	WEIGHT LBS.	LIST PRICE
HTC-3378	7 TONS	78"	35.5"	4	2	1.0625	2.25	1.25	6.5	1.25	7	1/2" NPT	108 LBS	\$ 683.43
HTC-3390	7 TONS	90"	39.5"	4	2	1.0625	2.5	1.25	6.5	1.25	7	1/2" NPT	100 LBS	723.87
HTC-33108	7 TONS	108"	45"	4	2	1.0625	2.5	1.25	6.5	1.25	7	1/2" NPT	120 LBS	779.52
HTC-4378	12 TONS	78"	34.75"	5	2	1.0625	2.25	1.5	7.5	1.5	7	1/2" NPT	129 LBS	862.99
HTC-4390	12 TONS	90"	38.75"	5	2	1.0625	2.25	1.5	7.5	1.5	7	1/2" NPT	129 LBS	911.30
HTC-43108	12 TONS	108"	44.75"	5	2	1.0625	2.25	1.5	7.5	1.5	7	1/2" NPT	156 LBS	977.88
HTC-43120	12 TONS	120"	48.75"	5	2	1.0625	2.25	1.5	7.5	1.5	7	1/2" NPT	167 LBS	1054.30
SEAL KIT NUMBER	SERIES	LIST PRICE												
HTC-756045K	HTC 33 Series	\$ 74.46												
HTC-927560K	HTC 43 Series	108.26												

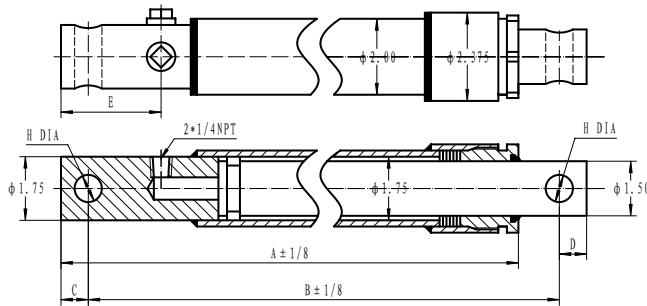
CYLINDERS

SNOW PLOW CYLINDERS

Hercules Snow Plow Cylinders

SNOW PLOW

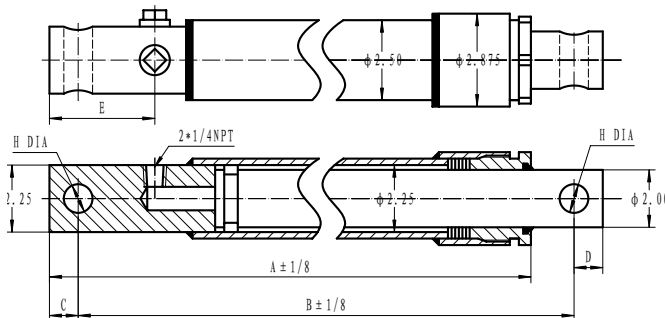
2500 PSI SINGLE ACTING CYLINDERS



FEATURES:

- Ductile iron piston.
- Ductile iron gland, drilled oil passages.
- Honed steel tube, precision finished for extended seal life.
- High tensile, hard chrome plated rod.
- Tube Seal: O-ring
- All Seals: Manufactured to US specifications.

PART NUMBER	DESCRIPTION	A	B	C & D	E	H	WT LBS.	LIST PRICE
HSPM-1506-0625	MYER 1.5" X 6"	11-7/8	12.00	11/16	2.00	5/8	12	\$ 92.33
HSPM-1510-0625	MYER 1.5" X 10"	15-7/8	16-1/4	11/16	2.00	5/8	14	105.07
HSPM-1512-0625	MYER 1.5" X 12"	17-7/8	18.00	11/16	2.00	5/8	15	111.09
HSPW-1506-0750	WESTERN 1.5" X 6"	12-5/8	13.00	11/16	2-3/4	3/4	12	92.33
HSPW-1508-0750	WESTERN 1.5" X 8"	14-5/8	15-1/4	11/16	2-3/4	3/4	13	99.14
HSPW-1510-0750	WESTERN 1.5" X 10" X 3/4"	16-5/8	17-1/4	11/16	2-3/4	3/4	14	105.07
HSPW-1510-1000	WESTERN 1.5" X 10" X 1"	16-5/8	17-1/2	11/16	2-3/4	1.00	14	105.07
HSPA-1510-0750	ARCTIC 1.5" X 10"	16-5/8	17.00	3/4	2-3/4	3/4	14	105.07
HSPA-1512-0750	ARCTIC 1.5" X 12"	18-5/8	19.00	3/4	2-3/4	3/4	15	111.09
HSPF-1512-1000	FISHER 1.5" X 12"	18-7/16	19-3/8	3/4	2-5/8	1.00	15	111.09
HSPF-1510-1000	FISHER & DIAMOND 1.5" X 10"	16-3/8	17-1/4	3/4	2-11/16	1.00	14	105.07
SEAL KIT NUMBER	DESCRIPTION	LIST PRICE						
HSP-SP150K	1-1/2" ROD CYLINDER	\$ 11.11						
HSP-SP200K	2" ROD CYLINDER	13.01						

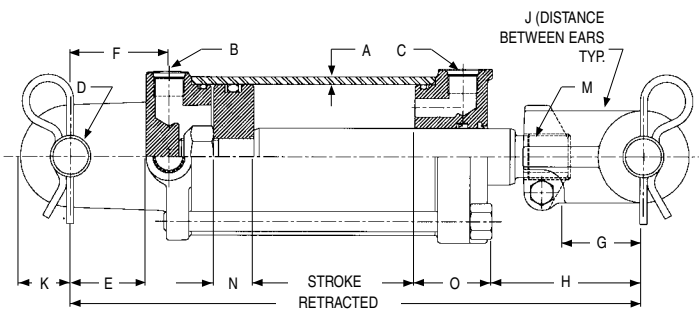


PART NUMBER	DESCRIPTION	A	B	C & D	E	H	WT LBS.	LIST PRICE
HSPM-2012-0625	MYER 2.0" X 12"	17-1/4	18.00	3/4	2-3/16	5/8	18	\$ 140.88
HSPW-2016-1000	WESTERN & DIAMOND 2.0" X 16"	22-5/8	23-5/8	11/16	2-3/4	1.00	21	163.31
HSPW-2006-0750	WESTERN 2.0" X 6"	12-5/8	13-3/16	3/4	2-3/4	3/4	13	119.78
HSPW-2010-1000	WESTERN 2.0" X 10"	16-5/8	17-1/4	11/16	2-3/4	1.00	16	136.81
HSPF-2016-125	FISHER 2.0" X 16"	22-1/2	23-1/4	7/8	2-3/4	1-1/4	20	163.31

TIE-ROD CYLINDERS



THE ROYAL PLATE LINE 3000 PSI DOUBLE ACTING TIE ROD CYLINDERS



- FEATURES:**
- Honed tubing (Royal Plate series have cylinder finish tubing)
 - Heavy duty, high strength tie rods
 - Chromed, ground and polished piston rod will operate at full pressure through 16" stroke
 - Ductile iron piston, butt, gland & clevis
 - Urethane u-cup and metal encased urethane wiper in gland
 - Pins and clips included
 - Standard color is black
 - Stroke control may be installed on 8" strokes
 - Side ports available on request at no additional cost

* For quantities above 50 pieces, call Hercules for special pricing.

Seal kits for these cylinders are shown at the end of the section.
"A" = Agricultural application w/ rod extension.

PART NUMBER	MFGR NO.	BORE	STROKE	ROD DIA.	RE-TRACT. DIMEN.	A	B/C PORT SIZE	D	E	F	G	H	J	K	M	N	O	SHIP WT.	LIST PRICE
PTR-2004	8404	2	4	1 1/8	14 1/4	3/16	3/4-16 SAE	1.015	1 13/16	2 3/8	1 13/16	3 1/2	1.06	15/16	1 1/8-12	7/8	2 3/16	18	\$ 233.00
PTR-2006	8406	2	6	1 1/8	16 1/4	3/16	3/4-16 SAE	1.015	1 13/16	2 3/8	1 13/16	3 1/2	1.06	15/16	1 1/8-12	7/8	2 3/16	19	234.80
PTR-2008	8408	2	8	1 1/8	20 1/4	3/16	3/4-16 SAE	1.015	1 13/16	2 3/8	1 13/16	5 1/2	1.06	15/16	1 1/8-12	7/8	2 3/16	20	238.20
PTR-2010	8410	2	10	1 1/8	20 1/4	3/16	3/4-16 SAE	1.015	1 13/16	2 3/8	1 13/16	3 1/2	1.06	15/16	1 1/8-12	7/8	2 3/16	21	246.10
PTR-2012	9012	2	12	1 1/8	22 1/4	3/16	3/4-16 SAE	1.015	1 13/16	2 3/8	1 13/16	3 1/2	1.06	15/16	1 1/8-12	7/8	2 3/16	25	249.20
PTR-2014	9014	2	14	1 1/8	24 1/4	3/16	3/4-16 SAE	1.015	1 13/16	2 3/8	1 13/16	3 1/2	1.06	15/16	1 1/8-12	7/8	2 3/16	26	254.30
PTR-2016A	9016	2	16	1 1/8	31 1/2	3/16	3/4-16 SAE	1.015	1 13/16	2 3/8	1 13/16	8 3/4	1.06	15/16	1 1/8-12	7/8	2 3/16	28	265.50
PTR-2018	9018	2	18	1 1/8	28 1/4	3/16	3/4-16 SAE	1.015	1 13/16	2 3/8	1 13/16	3 1/2	1.06	15/16	1 1/8-12	7/8	2 3/16	29	272.30
PTR-2020	9020	2	20	1 1/8	30 1/4	3/16	3/4-16 SAE	1.015	1 13/16	2 3/8	1 13/16	3 1/2	1.06	15/16	1 1/8-12	7/8	2 3/16	31	281.50
PTR-2024	9024	2	24	1 1/8	34 1/4	3/16	3/4-16 SAE	1.015	1 13/16	2 3/8	1 13/16	3 1/2	1.06	15/16	1 1/8-12	7/8	2 3/16	35	299.60
PTR-2030	9030	2	30	1 1/8	40 1/4	3/16	3/4-16 SAE	1.015	1 13/16	2 3/8	1 13/16	3 1/2	1.06	15/16	1 1/8-12	7/8	2 3/16	39	326.80
PTR-2506	7006	2 1/2	6	1 1/4	16 1/4	3/16	3/4-16 SAE	1.015	1 7/8	2 13/16	1 13/16	3 5/16	1.06	15/16	1 1/8-12	1	2 3/8	22	254.30
PTR-2508	9108	2 1/2	8	1 1/4	20 1/4	3/16	3/4-16 SAE	1.015	1 7/8	2 13/16	1 13/16	5 5/16	1.06	15/16	1 1/8-12	1	2 3/8	25	259.60
PTR-2510	9110	2 1/2	10	1 1/4	20 1/4	3/16	3/4-16 SAE	1.015	1 7/8	2 13/16	1 13/16	3 5/16	1.06	15/16	1 1/8-12	1	2 3/8	26	269.70
PTR-2512	9112	2 1/2	12	1 1/4	22 1/4	3/16	3/4-16 SAE	1.015	1 7/8	2 13/16	1 13/16	3 5/16	1.06	15/16	1 1/8-12	1	2 3/8	27	281.50
PTR-2514	9114	2 1/2	14	1 1/4	24 1/4	3/16	3/4-16 SAE	1.015	1 7/8	2 13/16	1 13/16	3 5/16	1.06	15/16	1 1/8-12	1	2 3/8	29	293.60
PTR-2516	9116	2 1/2	16	1 1/4	31 1/2	3/16	3/4-16 SAE	1.015	1 7/8	2 13/16	1 13/16	8 9/16	1.06	15/16	1 1/8-12	1	2 3/8	33	307.50
PTR-2518	9118	2 1/2	18	1 1/4	28 1/4	3/16	3/4-16 SAE	1.015	1 7/8	2 13/16	1 13/16	3 5/16	1.06	15/16	1 1/8-12	1	2 3/8	34	317.50
PTR-2520	9120	2 1/2	20	1 1/4	30 1/4	3/16	3/4-16 SAE	1.015	1 7/8	2 13/16	1 13/16	3 5/16	1.06	15/16	1 1/8-12	1	2 3/8	36	329.50
PTR-2524	9124	2 1/2	24	1 1/4	34 1/4	3/16	3/4-16 SAE	1.015	1 7/8	2 13/16	1 13/16	3 5/16	1.06	15/16	1 1/8-12	1	2 3/8	39	353.50
PTR-2530	9130	2 1/2	30	1 1/4	40 1/4	3/16	3/4-16 SAE	1.015	1 7/8	2 13/16	1 13/16	3 5/16	1.06	15/16	1 1/8-12	1	2 3/8	44	389.10
PTR-3006	7106	3	6	1 3/8	16 1/4	3/16	3/4-16 SAE	1.015	1 7/8	2 7/16	1 13/16	3 1/4	1.06	1 1/16	1 1/8-12	1	1 15/16	24	259.30
PTR-3008	9208	3	8	1 3/8	20 1/4	3/16	3/4-16 SAE	1.015	1 7/8	2 7/16	1 13/16	5 3/4	1.06	1 1/16	1 1/8-12	1	1 15/16	32	272.90
PTR-3010	9210	3	10	1 3/8	20 1/4	3/16	3/4-16 SAE	1.015	1 7/8	2 7/16	1 13/16	3 3/4	1.06	1 1/16	1 1/8-12	1	1 15/16	33	284.90
PTR-3012	9212	3	12	1 3/8	22 1/4	3/16	3/4-16 SAE	1.015	1 7/8	2 7/16	1 13/16	3 3/4	1.06	1 1/16	1 1/8-12	1	1 15/16	33	298.70
PTR-3014	9214	3	14	1 3/8	24 1/4	3/16	3/4-16 SAE	1.015	1 7/8	2 7/16	1 13/16	3 3/16	1.06	1 1/16	1 1/8-12	1	1 15/16	35	312.20
PTR-3016	10616	3	16	1 3/8	26 1/4	3/16	3/4-16 SAE	1.015	1 7/8	2 7/16	1 13/16	3 3/4	1.06	1 1/16	1 1/8-12	1	1 15/16	29	328.10
PTR-3016A	9216	3	16	1 3/8	31 1/2	3/16	3/4-16 SAE	1.015	1 7/8	2 7/16	1 13/16	9	1.06	1 1/16	1 1/8-12	1	1 15/16	39	328.10
PTR-3018	9218	3	18	1 3/8	28 1/4	3/16	3/4-16 SAE	1.015	1 7/8	2 7/16	1 13/16	3 3/4	1.06	1 1/16	1 1/8-12	1	1 15/16	42	339.70
PTR-3020	9220	3	20	1 3/8	30 1/4	3/16	3/4-16 SAE	1.015	1 7/8	2 7/16	1 13/16	3 3/4	1.06	1 1/16	1 1/8-12	1	1 15/16	45	353.60

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CYLINDERS



TIE-ROD CYLINDERS



THE ROYAL PLATE LINE 3000 PSI DOUBLE ACTING TIE ROD CYLINDERS

CYLINDERS

PART NUMBER	MFGR NO.	BORE	STROKE	ROD DIA.	RE-TRACT. DIMEN.	A	B/C PORT SIZE	D	E	F	G	H	J	K	M	N	O	SHIP WT.	LIST PRICE
PTR-3024	9224	3	24	1 3/8	34 1/4	3/16	3/4-16 SAE	1.015	1 7/8	2 7/16	1 13/16	3 3/4	1.06	1 1/16	1 1/8-12	1	1 15/16	47	\$ 387.60
PTR-3030	9230	3	30	1 3/8	40 1/4	3/16	3/4-16 SAE	1.015	1 7/8	2 7/16	1 13/16	3 3/4	1.06	1 1/16	1 1/8-12	1	1 15/16	53	441.20
PTR-3036	9236	3	36	1 3/8	46 1/4	3/16	3/4-16 SAE	1.015	1 7/8	2 7/16	1 13/16	3 3/4	1.06	1 1/16	1 1/8-12	1	1 15/16	61	495.00
PTR-3048	9248	3	48	1 3/8	58 1/4	3/16	3/4-16 SAE	1.015	1 7/8	2 7/16	1 13/16	3 7/8	1.06	1 1/16	1 1/8-12	1	1 15/16	66	609.60
PTR-3508A	9308A	3 1/2	8	1 3/8	20 1/4	3/16	3/4-16 SAE	1.015	1 7/8	2 7/16	1 13/16	5 3/4	1.06	1 1/4	1 5/16-12	1	1 15/16	35	296.10
PTR-3510	9310A	3 1/2	10	1 3/8	20 1/4	3/16	3/4-16 SAE	1.015	1 7/8	2 7/16	1 13/16	3 3/4	1.06	1 1/4	1 5/16-12	1	1 15/16	36	310.30
PTR-3512	9312A	3 1/2	12	1 3/8	22 1/4	3/16	3/4-16 SAE	1.015	1 7/8	2 7/16	1 13/16	3 3/4	1.06	1 1/4	1 5/16-12	1	1 15/16	38	328.10
PTR-3514	9314A	3 1/2	14	1 3/8	24 1/4	3/16	3/4-16 SAE	1.015	1 7/8	2 7/16	1 13/16	3 3/4	1.06	1 1/4	1 5/16-12	1	1 15/16	41	345.50
PTR-3516A	9316A	3 1/2	16	1 3/8	31 1/2	3/16	3/4-16 SAE	1.015	1 7/8	2 7/16	1 13/16	9	1.06	1 1/4	1 5/16-12	1	1 15/16	46	366.10
PTR-3518	9318A	3 1/2	18	1 3/8	28 1/4	3/16	3/4-16 SAE	1.015	1 7/8	2 7/16	1 13/16	3 3/4	1.06	1 1/4	1 5/16-12	1	1 15/16	47	380.30
PTR-3520	9320A	3 1/2	20	1 3/8	30 1/4	3/16	3/4-16 SAE	1.015	1 7/8	2 7/16	1 13/16	3 3/4	1.06	1 1/4	1 5/16-12	1	1 15/16	49	397.80
PTR-3524	9324A	3 1/2	24	1 3/8	34 1/4	3/16	3/4-16 SAE	1.015	1 7/8	2 7/16	1 13/16	3 3/4	1.06	1 1/4	1 5/16-12	1	1 15/16	54	432.70
PTR-3530	9330A	3 1/2	30	1 3/8	40 1/4	3/16	3/4-16 SAE	1.015	1 7/8	2 7/16	1 13/16	3 3/4	1.06	1 1/4	1 5/16-12	1	1 15/16	64	497.50
PTR-3536	9336A	3 1/2	36	1 3/8	46 1/4	3/16	3/4-16 SAE	1.015	1 7/8	2 7/16	1 13/16	3 3/4	1.06	1 1/4	1 5/16-12	1	1 15/16	66	562.00
PTR-3548	9348A	3 1/2	48	1 3/8	58 1/4	3/16	3/4-16 SAE	1.015	1 7/8	2 7/16	1 13/16	3 3/4	1.06	1 1/4	1 5/16-12	1	1 15/16	73	691.70
PTR-4008	9408	4	8	1 3/4	20 1/4	3/16	3/4-16 SAE	1.015	1 3/4	2 7/16	1 7/8	5 1/4	1.06	1 1/4	1 1/2-12	1 1/4	1 13/16	45	391.50
PTR-4010	9410	4	10	1 3/4	20 1/4	3/16	3/4-16 SAE	1.015	1 3/4	2 7/16	1 7/8	3 1/4	1.06	1 1/4	1 1/2-12	1 1/4	1 13/16	48	408.60
PTR-4012	9412	4	12	1 3/4	22 1/4	3/16	3/4-16 SAE	1.015	1 3/4	2 7/16	1 7/8	3 1/4	1.06	1 1/4	1 1/2-12	1 1/4	1 13/16	49	429.70
PTR-4014	9414	4	14	1 3/4	24 1/4	3/16	3/4-16 SAE	1.015	1 3/4	2 7/16	1 7/8	3 1/4	1.06	1 1/4	1 1/2-12	1 1/4	1 13/16	51	450.60
PTR-4016	108816	4	16	1 3/4	26 1/4	3/16	3/4-16 SAE	1.015	1 3/4	2 7/16	1 7/8	3 1/4	1.06	1 1/4	1 1/2-12	1 1/4	1 13/16	48	475.30
PTR-4016A	9416	4	16	1 3/4	31 1/2	3/16	3/4-16 SAE	1.015	1 3/4	2 7/16	1 7/8	8 1/2	1.06	1 1/4	1 1/2-12	1 1/4	1 13/16	61	475.30
PTR-4018	9418	4	18	1 3/4	28 1/4	3/16	3/4-16 SAE	1.015	1 3/4	2 7/16	1 7/8	3 1/4	1.06	1 1/4	1 1/2-12	1 1/4	1 13/16	62	492.60
PTR-4020	9420	4	20	1 3/4	30 1/2	3/16	3/4-16 SAE	1.015	1 3/4	2 7/16	1 7/8	3 1/4	1.06	1 1/4	1 1/2-12	1 1/4	1 13/16	72	513.70
PTR-4024	9424	4	24	1 3/4	34 1/4	3/16	3/4-16 SAE	1.015	1 3/4	2 7/16	1 7/8	3 1/4	1.06	1 1/4	1 1/2-12	1 1/4	1 13/16	74	543.10
PTR-4030	9430	4	30	1 3/4	40 1/4	3/16	3/4-16 SAE	1.015	1 3/4	2 7/16	1 7/8	3 1/4	1.06	1 1/4	1 1/2-12	1 1/4	1 13/16	77	605.90
PTR-4036	9436	4	36	1 3/4	46 1/4	3/16	3/4-16 SAE	1.015	1 3/4	2 7/16	1 7/8	3 1/4	1.06	1 1/4	1 1/2-12	1 1/4	1 13/16	83	668.90
PTR-4048	9448	4	48	1 3/4	58 1/4	3/16	3/4-16 SAE	1.015	1 3/4	2 7/16	1 7/8	3 1/4	1.06	1 1/4	1 1/2-12	1 1/4	1 13/16	109	794.70
PTR-5008	9508	5	8	2	20 1/4	1/4	7/8-14 SAE	1.265	1 3/4	2 5/8	2	4	1.13	1 3/8	1 1/2-12	1 7/16	2 1/2	67	542.70
PTR-5012	9512	5	12	2	24 1/4	1/4	7/8-14 SAE	1.265	1 3/4	2 5/8	2	4	1.13	1 3/8	1 1/2-12	1 7/16	2 1/2	75	590.10
PTR-5014	9514	5	14	2	26 1/4	1/4	7/8-14 SAE	1.265	1 3/4	2 5/8	2	4	1.13	1 3/8	1 1/2-12	1 7/16	2 1/2	80	613.80
PTR-5016A	9516	5	16	2	31 1/2	1/4	7/8-14 SAE	1.265	1 3/4	2 5/8	2	7 1/4	1.13	1 3/8	1 1/2-12	1 7/16	2 1/2	84	645.40
PTR-5018	9518	5	18	2	30 1/4	1/4	7/8-14 SAE	1.265	1 3/4	2 5/8	2	4	1.13	1 3/8	1 1/2-12	1 7/16	2 12	90	661.10
PTR-5020	9520	5	20	2	32 1/4	1/4	7/8-14 SAE	1.265	1 3/4	2 5/8	2	4	1.13	1 3/8	1 1/2-12	1 7/16	2 1/2	95	684.80
PTR-5024	9524	5	24	2	36 1/4	1/4	7/8-14 SAE	1.265	1 3/4	2 5/8	2	4	1.13	1 3/8	1 1/2-12	1 7/16	2 1/2	100	717.30
PTR-5030	9530	5	30	2	42 1/4	1/4	7/8-14 SAE	1.265	1 3/4	2 5/8	2	4	1.13	1 3/8	1 1/2-12	1 7/16	2 1/2	108	791.80
PTR-5036	9536	5	36	2	48 1/4	1/4	7/8-14 SAE	1.265	1 3/4	2 5/8	2	4	1.13	1 3/8	1 1/2-12	1 7/16	2 1/2	118	871.00
PTR-5048	9548	5	48	2	60 1/4	1/4	7/8-14 SAE	1.265	1 3/4	2 5/8	2	4	1.13	1 3/8	1 1/2-12	1 7/16	2 1/2	161	1,048.00

SEAL KIT NUMBER	Rod x Bore	LIST PRICE
PMCK-B200000	SK-I-U-10-1-1/8X2 (tie rod kit)	\$ 33.12
PMCK-B250000	SK-P-U-10-1-1/4X2-1/2	46.35
PMCK-B300000	SK-P-U-10-1-3/8X3	39.67
PMCK-B350000	SEAL KIT	32.00
PMCK-B400000	SK-P-U-10-1-3/4X4	65.21
PMCK-B450000	SK-P-U-10-2X4-1/2	66.47
PMCK-B500000	SK-P-U-10-2.000x5.000	59.52

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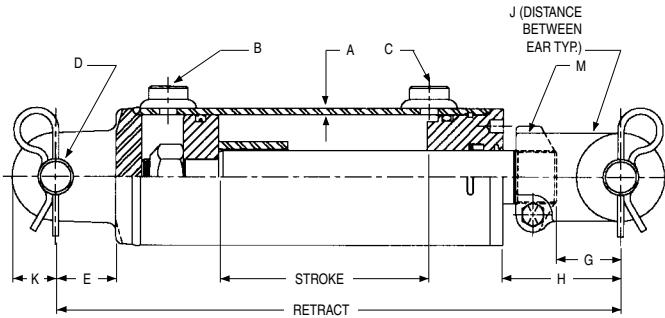
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WELDED CYLINDERS



THE SWORD LINE 3000 PSI DOUBLE ACTING CYLINDERS



FEATURES:

- Skived, honed tubing
- Heavy duty welded construction
- Chromed, ground and polished piston rod will operate at full pressure through 16" stroke
- Ductile iron piston, gland and clevis, cast steel butt
- Urethane u-cup and urethane wiper in gland, crown seal on piston
- Square ring gland retainer provides positive lock
- Pins and clips included
- Standard color is black
- Stroke control may be installed on 8" strokes

CYLINDERS

PART NUMBER	MFGR. NO.	BORE	STROKE	ROD DIA.	RE-TRACT. DIMEN.	A	B/C PORT SIZE SAE	D	E	G	H	J	K	M	SHIP WT.	LIST PRICE
PCWS-1508	19408	1 1/2	8	3/4	20 1/4	3/16	9/16 - 18	.765	2 5/8	2 5/8	5 1/4	5/8	3/4	-	13	\$291.20
PCWS-1510	19410	1 1/2	10	3/4	20 1/4	3/16	9/16 - 18	.765	2 5/8	2 5/8	5 1/4	5/8	3/4	-	14	291.20
PCWS-2008	42008	2	8	1 1/8	20 1/4	3/16	3/4 - 16	1.015	1 3/4	1 13/16	5 9/16	1 1/16	1	1 1/8 12	10	295.70
PCWS-2010	42010	2	10	1 1/8	20 1/4	3/16	3/4 - 16	1.015	1 3/4	1 13/16	5 9/16	1 1/16	1	1 1/8 12	20	304.30
PCWS-2012	42012	2	12	1 1/8	22 1/4	3/16	3/4 - 16	1.015	1 3/4	1 13/16	5 9/16	1 1/16	1	1 1/8 12	22	312.50
PCWS-2016A	42016	2	16	1 1/8	31 1/2	3/16	3/4 - 16	1.015	1 3/4	1 13/16	8 13/16	1 1/16	1	1 1/8 12	25	338.90
PCWS-2020	42020	2	20	1 1/8	30 1/4	3/16	3/4 - 16	1.015	1 3/4	1 13/16	3 9/16	1 1/16	1	1 1/8 12	28	354.20
PCWS-2024	42024	2	24	1 1/8	34 1/4	3/16	3/4 - 16	1.015	1 3/4	1 13/16	3 9/16	1 1/16	1	1 1/8 12	31	371.40
PCWS-2508	42508	2 1/2	8	1 1/4	20 1/4	3/16	3/4 - 16	1.015	1 3/4	1 13/16	5 9/16	1 1/16	1	1 1/8 12	21	311.20
PCWS-2510	42510	2 1/2	10	1 1/4	20 1/4	3/16	3/4 - 16	1.015	1 3/4	1 13/16	3 9/16	1 1/16	1	1 1/8 12	22	319.90
PCWS-2512	42512	2 1/2	12	1 1/4	22 1/4	3/16	3/4 - 16	1.015	1 3/4	1 13/16	3 9/16	1 1/16	1	1 1/8 12	23	329.40
PCWS-2516	42516	2 1/2	16	1 1/4	31 1/2	3/16	3/4 - 16	1.015	1 3/4	1 13/16	8 13/16	1 1/16	1	1 1/8 12	27	356.90
PCWS-2520	42520	2 1/2	20	1 1/4	30 1/4	3/16	3/4 - 16	1.015	1 3/4	1 13/16	3 9/16	1 1/16	1	1 1/8 12	31	375.40
PCWS-2524	42524	2 1/2	24	1 1/4	34 1/4	3/16	3/4 - 16	1.015	1 3/4	1 13/16	3 9/16	1 1/16	1	1 1/8 12	35	394.90
PCWS-3008	43008	3	8	1 3/8	20 1/4	3/16	3/4 - 16	1.015	1 3/4	1 13/16	5 9/16	1 1/16	1 1/8	1 1/8 12	23	344.00
PCWS-3010	43010	3	10	1 3/8	20 1/4	3/16	3/4 - 16	1.015	1 3/4	1 13/16	3 9/16	1 1/16	1 1/8	1 1/8 12	26	362.30
PCWS-3012	43012	3	12	1 3/8	22 1/4	3/16	3/4 - 16	1.015	1 3/4	1 13/16	3 9/16	1 1/16	1 1/8	1 1/8 12	28	373.30
PCWS-3016A	43016	3	16	1 3/8	31 1/2	3/16	3/4 - 16	1.015	1 3/4	1 13/16	8 13/16	1 1/16	1 1/8	1 1/8 12	33	394.20
PCWS-3020	43020	3	20	1 3/8	30 1/4	3/16	3/4 - 16	1.015	1 3/4	1 13/16	3 9/16	1 1/16	1 1/8	1 1/8 12	39	419.80
PCWS-3024	43024	3	24	1 3/8	34 1/4	3/16	3/4 - 16	1.015	1 3/4	1 13/16	3 9/16	1 1/16	1 1/8	1 1/8 12	43	467.40
PCWS-3508	43508	3 1/2	8	1 1/2	20 1/4	3/16	3/4 - 16	1.015	1 3/4	1 13/16	5 3/8	1 1/16	1 1/4	1 1/2 12	29	453.90
PCWS-3510	43510	3 1/2	10	1 1/2	20 1/4	3/16	3/4 - 16	1.015	1 3/4	1 13/16	3 3/8	1 1/16	1 1/4	1 1/2 12	31	473.50
PCWS-3512	43512	3 1/2	12	1 1/2	22 1/4	3/16	3/4 - 16	1.015	1 3/4	1 13/16	3 3/8	1 1/16	1 1/4	1 1/2 12	33	493.00
PCWS-3516A	43516	3 1/2	16	1 1/2	31 1/2	3/16	3/4 - 16	1.015	1 3/4	1 13/16	8 3/8	1 1/16	1 1/4	1 1/2 12	38	547.30
PCWS-3520	43520	3 1/2	20	1 1/2	30 1/4	3/16	3/4 - 16	1.015	1 3/4	1 13/16	3 3/8	1 1/16	1 1/4	1 1/2 12	43	585.50
PCWS-3524	43524	3 1/2	24	1 1/2	34 1/4	3/16	3/4 - 16	1.015	1 3/4	1 13/16	3 3/8	1 1/16	1 1/4	1 1/2 12	48	598.50
PCWS-4008	44008	4	8	1 3/4	20 1/4	3/16	3/4 - 16	1.015	1 3/4	1 13/16	5 3/8	1 1/8	1 1/4	1 1/2 12	40	480.70
PCWS-4010	44010	4	10	1 3/4	20 1/4	3/16	3/4 - 16	1.015	1 3/4	1 13/16	3 3/8	1 1/8	1 1/4	1 1/2 12	43	501.20
PCWS-4012	44012	4	12	1 3/4	22 1/4	3/16	3/4 - 16	1.015	1 3/4	1 13/16	3 3/8	1 1/8	1 1/4	1 1/2 12	45	521.50
PCWS-4016A	44016	4	16	1 3/4	31 1/2	3/16	3/4 - 16	1.015	1 3/4	1 13/16	8 3/8	1 1/8	1 1/4	1 1/2 12	54	577.80
PCWS-4020	44020	4	20	1 3/4	30 1/4	3/16	3/4 - 16	1.015	1 3/4	1 13/16	3 3/8	1 1/8	1 1/4	1 1/2 12	58	619.50
PCWS-4024	44024	4	24	1 3/4	34 1/4	3/16	3/4 - 16	1.015	1 3/4	1 13/16	3 3/8	1 1/8	1 1/4	1 1/2 12	60	661.30
PCWS-4030	44030	4	30	1 3/4	40 1/4	3/16	3/4 - 16	1.015	1 3/4	1 13/16	3 3/8	1 1/8	1 1/4	1 1/2 12	65	724.10

SEAL KIT NUMBER	Rod x Bore	LIST PRICE
PMCK-19400	3/4 X 1-1/2	\$ 44.39
PMCK-42000	1-1/8 X 2	80.39
PMCK-42500	SEAL KIT	20.81
PMCK-43000	1-3/8 X 3	54.63
PMCK-43500	1-1/2 X 3-1/2	61.87
PMCK-44000	1-3/4 X 4	66.13

* For quantities above 50 pieces, call Hercules for special pricing.

"A" = Agricultural application w/ rod extension.

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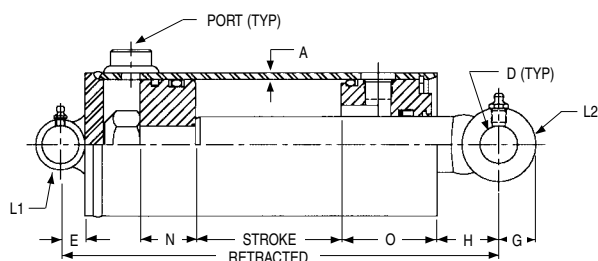
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WELDED CYLINDERS



THE ROYAL LINE 2500 PSI DOUBLE ACTING CYLINDERS



FEATURES:

- Honed tubing
- Heavy duty welded construction
- Chromed, ground and polished piston rod
- Ductile iron piston and gland
- Pin eye mounting on both ends
- Urethane u-cup and urethane wiper in gland
- O-ring/backup washers and cast iron ring for piston seals
- Truarc type gland retainer
- Standard color is black

* For quantities above 50 pieces, call Hercules for special pricing.

Seal kits for these cylinders are shown at the end of the section.

PART NUMBER	MFR. NO.	BORE	STROKE	ROD DIA.	RE-TRACT. DIMEN.	PORT SIZE	A	D	E	G	H	L1	L2	N	O	SHIP WT.	LIST PRICE
PMW-2508	5408	2 1/2	8	1 3/8	16	3/8 NPTF	3/16	.760	9/16	3/4	2 9/16	3	1 3/8	1 1/4	2 1/2	17	\$ 267.90
PMW-2512	5412	2 1/2	12	1 3/8	20	3/8 NPTF	3/16	.760	9/16	3/4	2 9/16	3	1 3/8	1 1/4	2 1/2	20	281.50
PMW-2516	5416	2 1/2	16	1 3/8	24	3/8 NPTF	3/16	.760	9/16	3/4	2 9/16	3	1 3/8	1 1/4	2 1/2	23	296.00
PMW-2520	5420	2 1/2	20	1 3/8	28	3/8 NPTF	3/16	.760	9/16	3/4	2 9/16	3	1 3/8	1 1/4	2 1/2	27	309.70
PMW-2524	5424	2 1/2	24	1 3/8	32	3/8 NPTF	3/16	.760	9/16	3/4	2 9/16	3	1 3/8	1 1/4	2 1/2	30	322.80
PMW-2530	5430	2 1/2	30	1 3/8	38	3/8 NPTF	3/16	.760	9/16	3/4	2 9/16	3	1 3/8	1 1/4	2 1/2	35	342.90
PMW-2532	5432	2 1/2	32	1 3/8	40	3/8 NPTF	3/16	.760	9/16	3/4	2 9/16	3	1 3/8	1 1/4	2 1/2	41	354.60
PMW-2536	5436	2 1/2	36	1 3/8	44	3/8 NPTF	3/16	.760	9/16	3/4	2 9/16	3	1 3/8	1 1/4	2 1/2	44	369.40
PMW-2542	5442	2 1/2	42	1 3/8	50	3/8 NPTF	3/16	.760	9/16	3/4	2 9/16	3	1 3/8	1 1/4	2 1/2	47	426.50
PMW-3008	8308	3	8	1 1/2	16	1/2 NPTF	3/16	1.015	11/16	1	2 5/16	3 1/2	1 1/2	1 1/4	2 5/8	22	298.40
PMW-3012	8312	3	12	1 1/2	20	1/2 NPTF	3/16	1.015	11/16	1	2 5/16	3 1/2	1 1/2	1 1/4	2 5/8	26	323.60
PMW-3016	8316	3	16	1 1/2	24	1/2 NPTF	3/16	1.015	11/16	1	2 5/16	3 1/2	1 1/2	1 1/4	2 5/8	31	351.70
PMW-3020	8320	3	20	1 1/2	28	1/2 NPTF	3/16	1.015	11/16	1	2 5/16	3 1/2	1 1/2	1 1/4	2 5/8	35	376.90
PMW-3024	8324	3	24	1 1/2	32	1/2 NPTF	3/16	1.015	11/16	1	2 5/16	3 1/2	1 1/2	1 1/4	2 5/8	41	401.80
PMW-3030	8330	3	30	1 1/2	38	1/2 NPTF	3/16	1.015	11/16	1	2 5/16	3 1/2	1 1/2	1 1/4	2 5/8	46	438.40
PMW-3032	8332	3	32	1 1/2	40	1/2 NPTF	3/16	1.015	11/16	1	2 5/16	3 1/2	1 1/2	1 1/4	2 5/8	48	450.20
PMW-3036	8336	3	36	1 1/2	44	1/2 NPTF	3/16	1.015	11/16	1	2 5/16	3 1/2	1 1/2	1 1/4	2 5/8	52	474.70
PMW-3040	8340	3	40	1 1/2	48	1/2 NPTF	3/16	1.015	11/16	1	2 5/16	3 1/2	1 1/2	1 1/4	2 5/8	56	487.00
PMW-3042	8342	3	42	1 1/2	50	1/2 NPTF	3/16	1.015	11/16	1	2 5/16	3 1/2	1 1/2	1 1/4	2 5/8	59	499.00
PMW-3048	8348	3	48	1 1/2	56	1/2 NPTF	3/16	1.015	11/16	1	2 5/16	3 1/2	1 1/2	1 1/4	2 5/8	65	545.20
PMW-3508	5508	3 1/2	8	1 1/2	16	1/2 NPTF	3/16	1.015	11/16	1	1 11/16	4	1 1/2	1 1/2	2 5/8	26	371.40
PMW-3512	5512	3 1/2	12	1 1/2	20	1/2 NPTF	3/16	1.015	11/16	1	1 11/16	4	1 1/2	1 1/2	2 5/8	29	398.20
PMW-3516	5516	3 1/2	16	1 1/2	24	1/2 NPTF	3/16	1.015	11/16	1	1 11/16	4	1 1/2	1 1/2	2 5/8	34	425.00
PMW-3520	5520	3 1/2	20	1 1/2	28	1/2 NPTF	3/16	1.015	11/16	1	1 11/16	4	1 1/2	1 1/2	2 5/8	38	451.80
PMW-3524	5524	3 1/2	24	1 1/2	32	1/2 NPTF	3/16	1.015	11/16	1	1 11/16	4	1 1/2	1 1/2	2 5/8	44	462.80
PMW-3530	5530	3 1/2	30	1 1/2	38	1/2 NPTF	3/16	1.015	11/16	1	1 11/16	4	1 1/2	1 1/2	2 5/8	48	501.90
PMW-3532	5532	3 1/2	32	1 1/2	40	1/2 NPTF	3/16	1.015	11/16	1	1 11/16	4	1 1/2	1 1/2	2 5/8	52	514.70
PMW-3536	5536	3 1/2	36	1 1/2	44	1/2 NPTF	3/16	1.015	11/16	1	1 11/16	4	1 1/2	1 1/2	2 5/8	56	540.60
PMW-3540	5540	3 1/2	40	1 1/2	48	1/2 NPTF	3/16	1.015	11/16	1	1 11/16	4	1 1/2	1 1/2	2 5/8	60	566.50
PMW-3542	5542	3 1/2	42	1 1/2	50	1/2 NPTF	3/16	1.015	11/16	1	1 11/16	4	1 1/2	1 1/2	2 5/8	64	579.50
PMW-3548	5548	3 1/2	48	1 1/2	56	1/2 NPTF	3/16	1.015	11/16	1	1 11/16	4	1 1/2	1 1/2	2 5/8	70	700.60
PMW-4008	5608	4	8	2	17	1/2 NPTF	3/16	1.265	15/16	1 1/4	2	4 1/2	2	1 5/16	2 7/8	35	467.70
PMW-4012	5612	4	12	2	21	1/2 NPTF	3/16	1.265	15/16	1 1/4	2	4 1/2	2	1 5/16	2 7/8	41	478.70
PMW-4016	5616	4	16	2	25	1/2 NPTF	3/16	1.265	15/16	1 1/4	2	4 1/2	2	1 5/16	2 7/8	48	492.10
PMW-4020	5620	4	20	2	29	1/2 NPTF	3/16	1.265	15/16	1 1/4	2	4 1/2	2	1 5/16	2 7/8	56	531.60

NORTH AMERICA
 PHONE 1-800-777-5617
 FAX 1-800-759-6391

SALES OFFICE HOURS
 8 A.M. TO 7:30 P.M. EASTERN TIME
 www.HerculesUS.com

WORLDWIDE
 PHONE 1-727-796-1300
 FAX 1-727-797-8849

WELDED CYLINDERS



THE ROYAL LINE

2500 PSI DOUBLE ACTING CYLINDERS

CYLINDERS

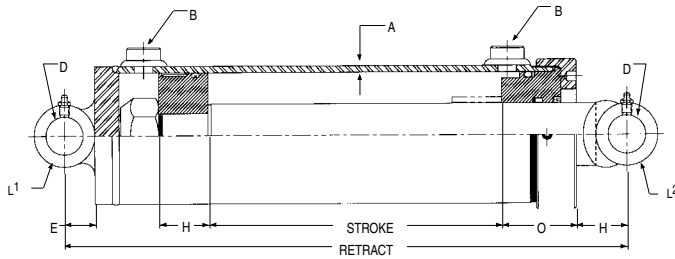
PART NUMBER	MFGR. NO.	BORE	STROKE	ROD DIA.	RE-TRACT. DIMEN.	PORT SIZE	A	D	E	G	H	L1	L2	N	O	SHIP WT.	LIST PRICE
PMW-4024	5624	4	24	2	33	1/2 NPTF	3/16	1.265	15/16	1 1/4	2	4 1/2	2	1 5/16	2 7/8	62	\$ 553.60
PMW-4030	5630	4	30	2	39	1/2 NPTF	3/16	1.265	15/16	1 1/4	2	4 1/2	2	1 5/16	2 7/8	72	595.10
PMW-4032	5632	4	32	2	41	1/2 NPTF	3/16	1.265	15/16	1 1/4	2	4 1/2	2	1 5/16	2 7/8	74	645.60
PMW-4036	5636	4	36	2	45	1/2 NPTF	3/16	1.265	15/16	1 1/4	2	4 1/2	2	1 5/16	2 7/8	80	665.80
PMW-4040	5640	4	40	2	49	1/2 NPTF	3/16	1.265	15/16	1 1/4	2	4 1/2	2	1 5/16	2 7/8	85	712.80
PMW-4042	5642	4	42	2	51	1/2 NPTF	3/16	1.265	15/16	1 1/4	2	4 1/2	2	1 5/16	2 7/8	92	725.30
PMW-4048	5648	4	48	2	57	1/2 NPTF	3/16	1.265	15/16	1 1/4	2	4 1/2	2	1 5/16	2 7/8	100	760.30
PMW-4060	5660	4	60	2	69	1/2 NPTF	3/16	1.265	15/16	1 1/4	2	4 1/2	2	1 5/16	2 7/8	120	887.70

SEAL KIT NUMBER	Rod x Bore	LIST PRICE
PMCK-5400	1-3/8 X 2-1/2	\$ 52.67
PMCK-5500	1-1/2 X 3-1/2	65.21
PMCK-5600	2 X 4	70.15
PMCK-8300	1-1/2 X 3	55.89
PMCK-5500	1-1/2 X 3-1/2	65.21
PMCK-5600	2 X 4	70.15

WELDED CYLINDERS



THE GLADIATOR LINE 3000 PSI DOUBLE ACTING CYLINDERS



FEATURES:

- Heavy duty welded construction
- 3000 PSI (2:1 safety factor for buckling on 36" stroke and less. Longer stroke consult factory)
- Steel gland cap retainer with lock screw
- Standard color is black
- High grade Ductile iron piston and gland
- Precision skived tube for long seal life
- All steel spacer tube for bearing length on 48" or more of stroke
- Ground and polished chrome C-1045 steel piston rod for maximum life
- Heavy duty torqued locknut for piston retainer
- Polyurethane "U" cup and heavy duty wiper in gland. Crown seal with bearing rings on piston

* For quantities above 50 pieces, call Hercules for special pricing.

PART NUMBER	MFGR. NO.	BORE	STROKE	ROD DIA.	RE-TRACT. DIMEN.	A	B PORT SIZE	D	E	H	L1	O	L2	SHIP WT.	LIST PRICE
PMWS-5008	21008	5	8	2 1/2	19	1/4	1 1/16-12 SAE	1.515	1 1/4	1 7/8	5 3/4	2 15/16	4	75	\$ 779.60
PMWS-5012	21012	5	12	2 1/2	23	1/4	1 1/16-12 SAE	1.515	1 1/4	1 7/8	5 3/4	2 15/16	4	85	844.00
PMWS-5016	21016	5	16	2 1/2	27	1/4	1 1/16-12 SAE	1.515	1 1/4	1 7/8	5 3/4	2 15/16	4	90	883.10
PMWS-5020	21020	5	20	2 1/2	31	1/4	1 1/16-12 SAE	1.515	1 1/4	1 7/8	5 3/4	2 15/16	4	105	943.00
PMWS-5024	21024	5	24	2 1/2	35	1/4	1 1/16-12 SAE	1.515	1 1/4	1 7/8	5 3/4	2 15/16	4	115	1,012.60
PMWS-5036	21036	5	36	2 1/2	47	1/4	1 1/16-12 SAE	1.515	1 1/4	1 7/8	5 3/4	2 15/16	4	145	1,184.60
PMWS-5048	21048	5	48	2 1/2	61	1/4	1 1/16-12 SAE	1.515	1 1/4	1 7/8	5 3/4	2 15/16	4	180	1,467.90
PMWS-5054	21054	5	54	2 1/2	68	1/4	1 1/16-12 SAE	1.515	1 1/4	1 7/8	5 3/4	2 15/16	4	195	1,560.80
PMWS-5060	21060	5	60	2 1/2	75	1/4	1 1/16-12 SAE	1.515	1 1/4	1 7/8	5 3/4	2 15/16	4	215	1,667.80
PMWS-6008	22008	6	8	3	19	1/4	1 1/16-12 SAE	1.515	1 1/4	2	6 3/4	3 1/8	4	100	971.40
PMWS-6012	22012	6	12	3	23	1/4	1 1/16-12 SAE	1.515	1 1/4	2	6 3/4	3 1/8	4	110	1,061.30
PMWS-6016	22016	6	16	3	27	1/4	1 1/16-12 SAE	1.515	1 1/4	2	6 3/4	3 1/8	4	125	1,098.30
PMWS-6024	22024	6	24	3	35	1/4	1 1/16-12 SAE	1.515	1 1/4	2	6 3/4	3 1/8	4	150	1,271.60
PMWS-6030	22030	6	30	3	41	1/4	1 1/16-12 SAE	1.515	1 1/4	2	6 3/4	3 1/8	4	170	1,407.70
PMWS-6036	22036	6	36	3	47	1/4	1 1/16-12 SAE	1.515	1 1/4	2	6 3/4	3 1/8	4	190	1,543.90
PMWS-6048	22048	6	48	3	61	1/4	1 1/16-12 SAE	1.515	1 1/4	2	6 3/4	3 1/8	4	240	1,980.40
PMWS-6054	22054	6	54	3	68	1/4	1 1/16-12 SAE	1.515	1 1/4	2	6 3/4	3 1/8	4	265	2,149.10
PMWS-6060	22060	6	60	3	75	1/4	1 1/16-12 SAE	1.515	1 1/4	2	6 3/4	3 1/8	4	290	2,219.30

SEAL KIT NUMBER	Rod x Bore	LIST PRICE
PMCK-21000	2-1/2 X 5	\$ 102.67
PMCK-22000	3 X 6	124.09

SINGLE ACTING TELESCOPIC CYLINDERS



These cylinders are available from Custom Hoists, Commercial®, Hyco and SHC. Request the manufacturer you want.

4,000 Series Single Acting Telescopic Cylinders



- ### FEATURES
- Self-Bleeding design
 - Pre-loaded v-packing with a self-adjusting wave spring energizer to maintain a continuous force on the packing.
 - Threaded headnuts for added strength and field seal adjustment.
 - Longer Bearing Length (overlap) for stability.
 - Stock Models inventoried at 5 warehouse locations throughout the U.S. to meet your immediate requirements.
 - For Front Mount Dump Body Cylinder Force and Stroke Calculations link

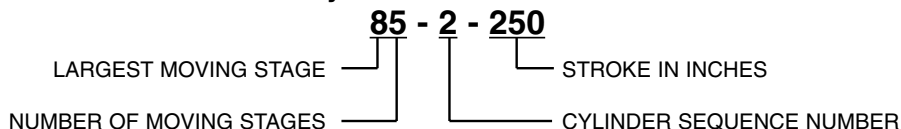
CYLINDERS

MANUFACTURERS SERVICE MANUALS ARE AVAILABLE.
CALL FOR DETAILS.

Individual Plunger Lifting Capacities for Single-Acting Telescopic Cylinders

Plunger Dia. (In.)	Cross Section Area (Sq. In.)	Specific Operating Pressures			
		1500 PSI (LBS)	1800 PSI (LBS)	2000 PSI (LBS)	2500PSI (LBS)
2	3.14	4,710	5,672	6,280	7,850
3	7.06	10,590	12,708	14,120	17,650
4	12.56	18,840	22,608	25,120	31,400
5	19.63	29,445	35,334	39,260	49,075
6	28.27	42,405	50,886	56,540	70,675
7	38.48	57,720	69,264	76,960	96,200
8	50.26	75,390	90,468	100,520	125,650
8-1/4	53.50	80,250	96,300	107,000	133,750
9-1/8	65.40	98,100	117,720	130,800	163,500
9-3/4	74.50	111,750	134,100	149,000	186,250

Cylinder Identification



SINGLE ACTING TELESCOPIC CYLINDERS



These cylinders are available from Custom Hoists, Commercial[®], Hyco and SHC. Request the manufacturer you want.

COMMERCIAL FEATURES

- Longer sleeve overlap for improved stability and higher column loading.
- Heavy walled tubing in the first stage offers up to 27% more cross-sectional area providing up to 76% greater tube burst strength than our competition.
- Beveled mating surfaces of the overlap collar and stop ring for greater impact resistance during dumping operations.
- Snap-on, glass-filled bearings that absorb contaminants without damaging the cylinder walls.
- Threaded stop rings for easier servicing and more reliable stopping action.
- External packing nuts to give added support to the tube and make servicing easier.
- Wave springs and chevron packing for positive, self-compensating seals.
- Hytrel rod wipers resist high temperatures without extruding.
- Cast steel pin-eye and rod-end mountings give dependable strength.

MANUFACTURERS SERVICE MANUALS ARE AVAILABLE. CALL FOR DETAILS.

DOUBLE ACTING CYLINDERS:

- Operating pressure up to 2000 psi.
- Main cylinder outside diameter from 3-3/4" to 10-13/16".
- Lifting capacity to 153,180 lbs.
- Chrome-plated sleeves are available on special order.
- Pin-eye and trunion mountings are standard. If other types are required, dimensions must be specified.

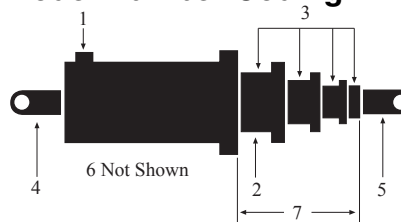
SINGLE ACTING CYLINDERS:

- Operating pressure up to 2000 psi.
- Main cylinder outside diameter from 3-3/4" to 11-1/8".
- All cylinders have NPT ports, unless otherwise specified.
- Lifting capacity to 138,060 lbs.
- Chrome-plated sleeves and plungers are available on special order.
- Pin-eye and trunion mountings are standard. If other types are required, dimensions must be specified.

S.A. Cylinder Information

Sleeve O.D. in inches	Effective Area in sq. inches	Load Capacity lbs. at 2000 p.s.i.	Displacement per in. of stroke in gallons
2.75	5.94	11,880	.026
3.75	11.04	22,080	.048
4.75	17.72	35,440	.077
5.75	25.96	51,920	.112
6.75	35.78	71,560	.155
7.905	48.70	97,400	.210
9.375	69.03	138,060	.299

Model Number Coding



Model Number S84DC-40-161

1. S = Single-acting Type Cylinder
- SD = Double-acting telescopic type
- 8 = 7-7/8" nominal diameter of largest sleeve
- 4 = 4 stages or sleeves
- D = Type of mounting on base end
- C = Type of mounting on rod end
- 40 = Modification or design variation
- 161 = Length of stroke (161")

D.A. Cylinder Information

Sleeve or plunger O.D. (inches)	Bore of Main or Sleeve (inches)	Effective Area extended (sq. inches)	Effective Area retracted (sq. inches)	Load Capacity at 2000 p.s.i. extended (pounds)	Load Capacity at 2000 p.s.i. retracted (pounds)	Displacement per in. of stroke extended (gallons)	Displacement per in. of stroke retracted (gallons)
2.75	3.25	8.295	2.355	16,590	4,710	.036	.010
3.75	4.25	14.186	3.142	28,372	6,284	.061	.014
4.75	5.25	21.648	3.927	43,296	7,854	.094	.017
5.75	6.25	30.680	4.713	61,360	9,426	.133	.020
6.75	7.25	41.282	5.497	82,564	10,994	.179	.024
7.905	8.437	55.680	6.973	111,360	13,946	.242	.030
9.375	9.143	76.590	7.560	153,180	15,120	.331	.038

SINGLE ACTING TELESCOPIC CYLINDERS



These cylinders are available from Custom Hoists, Commercial®, Hyco and SHC. Request the manufacturer you want.



Fluid Capacity: Volume To Fully Extend

Plunger Dia. (Inches)	Effective Area (Sq. Inches)	Load Capacity (Lbs. @ 2000 PSI)	Displacement (Gal./In. of Stroke)
3	7.07	14,140	.031
4	12.56	25,120	.054
5	19.63	39,260	.085
6	28.27	56,540	.122
7	38.48	76,960	.166
8.12	51.78	103,560	.224
8.25	53.46	106,920	.231
9.38	69.10	138,200	.299

Follow example to determine displacement of the complete cylinder **Example:** Model 824-200
 8.12 in. plunger .224
 7 in. plunger .166
 6 in. plunger .122
 5 in. plunger .085
 .597
 $.597 \times 200 = 29.8$ Gallons to fully extend
 4

Features

GENERAL DATA
 Operating pressures to 2000 psi. Plunger diameters range from 2" to 9.375". Lifting capacities to 138,200 lbs. Pin-eye mountings standard—trunion type available. Chrome-plated plungers available.

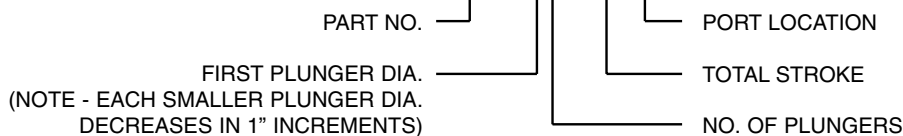
AUTOMATIC AIR BLEEDERS
 Every standard Hycotel single-acting telescopic cylinder comes equipped with an automatic air bleeder. This completely eliminates time-consuming and potentially hazardous manual air bleeding operation.

GUIDE RINGS & RETAINING RINGS
 Hycotel® features replaceable plunger guide rings, designed and balanced to be well lubricated and made of specially compounded material for long wearing performance. The retainer rings work in conjunction with the piston design to be positively locked into stop position grooves when the cylinder is fully extended.

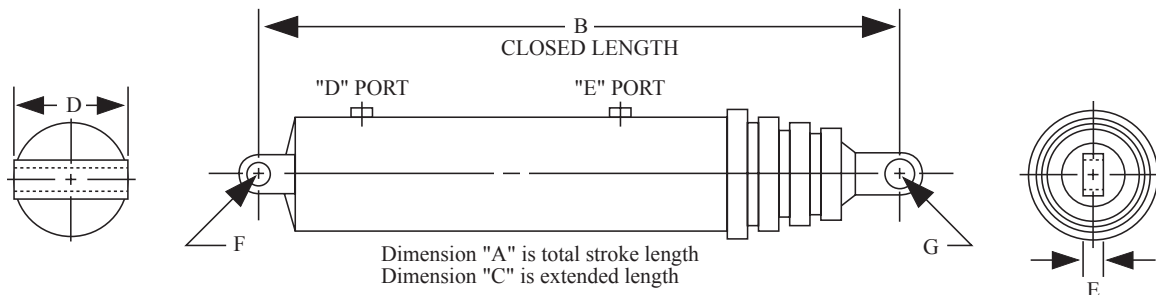
"DUAL-LIP" WIPER
 This dual lip design wiper of Hytrel is a more efficient "dirt wiper." The dual lip provides an improved means of keeping dirt out.

MANUFACTURERS SERVICE MANUALS ARE AVAILABLE. CALL FOR DETAILS.

Cylinder Identification C70000-814-200D



NOTE: "D" and "E" suffix in Part No. represents a specific port location.
 For dimensional data, consult our sales staff.
 A "T" suffix in Part No. represents Trunion Mount.



CYLINDERS

SINGLE ACTING TELESCOPIC CYLINDERS

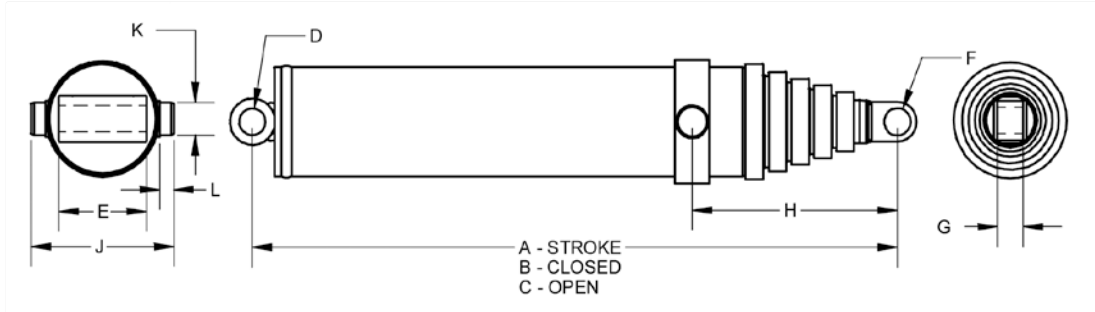
SOUTHERN HYDRAULIC CYLINDER, INC.

These cylinders are available from Custom Hoists, Commercial®, Hyco and SHC. Request the manufacturer you want.

STANDARD SINGLE ACTING TELESCOPIC CYLINDER SPECIFICATIONS

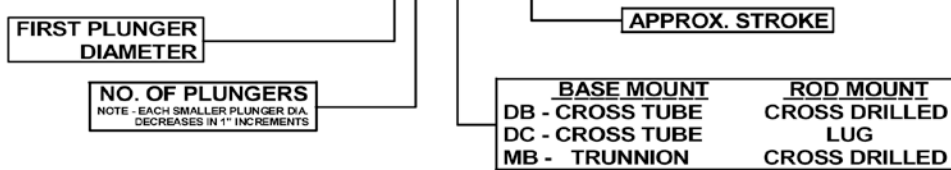
Model Number	Stroke	Closed	Open	Dia. Body	Stage Dia.		(D)	(E)	(F)	(G)	(H)	(J)	(K)	(L)	Ret Vol	Ext Vol	Dry Wt.	
	(A)	(B)	(C)												(Gal)	(Gal)	(Lbs)	
SHC-M32DB-43	40.38	29.69	70.07	4.00	3	2	-	1.50	4.00	1.25	1.88	-	-	-	.58	1.46	60	
SHC-M32DB-50	46.67	32.84	79.51	4.00	3	2	-	1.50	4.00	1.25	1.88	-	-	-	.66	1.68	66	
SHC-M42DB-43	39.50	30.19	69.69	5.00	4	3	-	1.50	5.00	1.50	2.75	-	-	-	1.06	2.72	86	
SHC-M42DB-50	47.25	33.69	80.94	5.00	4	3	-	1.50	5.00	1.50	2.75	-	-	-	1.23	3.23	95	
SHC-M42MB-50	51.25	35.07	86.32	5.00	4	3	-	-	-	1.50	2.75	8.50	8.81	1.75	.88	1.33	3.50	97
SHC-M42DB-60	57.88	39.07	96.95	5.00	4	3	-	1.50	5.00	1.50	2.75	-	-	-	1.48	3.93	109	
SHC-M42MB-65	65.00	42.07	107.07	5.00	4	3	-	-	-	1.50	2.75	8.50	8.81	1.75	.88	1.66	4.41	115
SHC-M43MB-74	73.88	34.63	108.51	5.00	4	3	2	-	-	1.25	1.88	8.50	8.81	1.75	.88	1.07	3.45	106
SHC-M43DB-75	67.34	33.62	100.96	5.00	4	3	2	1.50	5.00	1.25	1.88	-	-	-	.98	3.15	105	
SHC-M43MB-75	68.25	32.75	101.00	5.00	4	3	2	-	-	1.25	1.88	8.50	8.81	1.75	.88	.99	3.19	100
SHC-M43DB-98	89.83	41.13	130.96	5.00	4	3	2	1.50	5.00	1.25	1.88	-	-	-	1.29	4.19	124	
SHC-M43MB-98	96.42	42.19	138.61	5.00	4	3	2	-	-	1.25	2.00	8.69	8.81	1.75	.88	1.37	4.50	128
SHC-M53DB-60	57.11	29.81	86.92	6.00	5	4	3	1.50	6.25	1.50	2.75	-	-	-	1.39	4.56	122	
SHC-M53DC-72	72.00	35.13	107.13	6.00	5	4	3	2.00	7.00	1.69	1.63	-	-	-	1.72	5.73	142	
SHC-M53DB-74	69.14	33.82	102.96	6.00	5	4	3	1.50	6.25	1.50	2.75	-	-	-	1.65	5.51	137	
SHC-M53MB-74	74.00	34.63	108.63	6.00	5	4	3	-	-	1.50	2.75	8.50	8.81	1.75	.88	1.75	5.89	141
SHC-M53DB-90	86.55	39.63	126.18	6.00	5	4	3	1.50	6.25	1.50	2.75	-	-	-	2.02	6.87	159	
SHC-M53MB-90	86.06	38.63	124.69	6.00	5	4	3	-	-	1.50	2.75	8.50	8.81	1.75	.88	2.01	6.83	156

ALL ITEMS LISTED ARE STOCK ITEMS. ALL LISTED ITEMS ARE MARION STYLE CYLINDERS.
 PORTS 1/2"-14 NPT ON SERIES 32, 42, 43, & 53 (SHC-M53DC-72, SHC-M53DC-84, & SHC-M53DC-84A USE 3/4"-14 NPT)
 OTHER SIZES AND OPTIONS ARE AVAILABLE.



CYLINDER IDENTIFICATION

SHC - M 53 DB - 75



SINGLE ACTING EXTEND LOAD CAPACITY

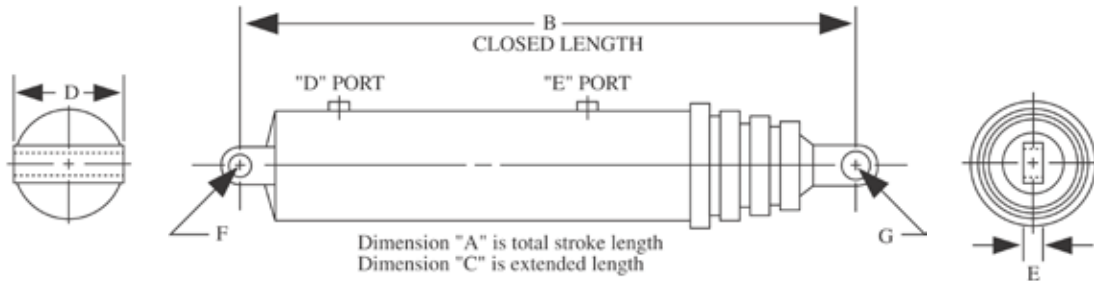
LOAD CAPACITY : LBS @ PSI

*ALL DIMENSIONS AND CALCULATIONS NOMINAL

PLUNGER DIA.	1500 PSI	2000 PSI	2500 PSI
2	4,700	6,280	7,850
3	10,600	14,130	17,670
4	18,850	25,130	31,410
5	29,450	39,270	49,080
6	42,410	56,540	70,680
7	57,720	76,960	96,210
8.25	80,180	106,910	133,640

SINGLE ACTING TELESCOPIC CYLINDER STOCK

These cylinders are available from Custom Hoists, Commercial®, Hyco and SHC. Request the manufacturer you want. See page 21-23 for specifications.



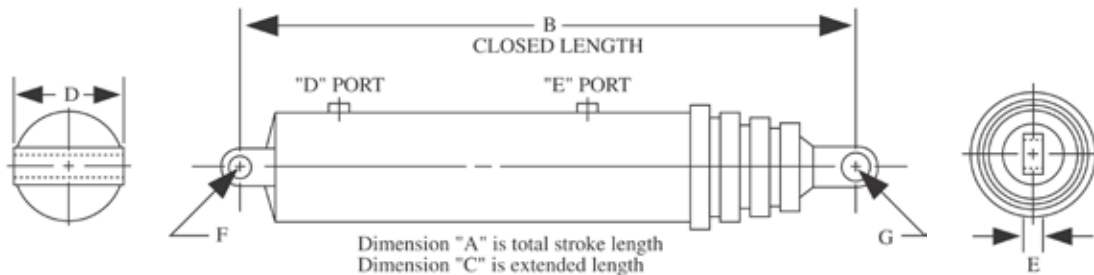
Stroke lengths for Hyco 70,000 series cylinders may be slightly different than those shown in chart. Please call our component group at 1-800-333-5617 for exact 70,000 series stroke lengths.

CYLINDER NO.	A	B	C	D	E	F	G
5372-SA	72.00	37.12	109.12	8.13	1.50	2.00	1.68
5384-SA	84.00	41.12	125.12	8.12	1.50	2.06	1.56
53104-SA	104.00	47.75	151.75	8.13	1.50	2.00	1.68
6384-SA	84.00	41.00	125.00	7.62	2.00	2.12	2.06
63104-SA	103.87	47.62	151.50	7.62	2.00	2.12	2.06
63108-SA	108.00	49.00	157.00	7.625	2.00	2.12	2.06
63111-SA	111.00	50.00	161.00	7.00	2.00	2.00	2.00
63120-SA	120.00	53.00	173.00	7.625	2.00	2.12	2.06
63120-TSA	120.00	53.375	173.375	TRIUNION MOUNT	4.00	N/A	1.56
63126-SA	126.00	55.00	181.00	7.00	2.00	2.12	2.06
D63128-SA	126.50	54.63	181.13	6.75	2.00	2.00	1.63
63140-TSA	139.87	60.00	199.97	TRIUNION MOUNT	4.00	N/A	1.56
64135-SA	134.88	47.13	182.00	8.00	2.69	1.75	1.50
64156-SA	155.87	52.37	208.12	8.00	2.68	1.87	1.56
73110-SA	110.63	50.06	160.69	8.25	2.00	2.00	2.00
73120-SA	120.00	53.12	173.12	8.625	1.50	2.12	2.06
D73126	125.25	55.12	180.37	6.75	2.00	2.00	1.63
73130-SA	130.12	56.50	186.62	8.625	1.50	2.12	2.06
73140-SA	140.00	60.00	200.00	8.25	2.00	2.00	2.00
D73142-SA	142.13	60.75	202.88	6.75	2.00	2.00	1.63
74120-SA	120.00	44.75	164.75	8.625	2.00	2.12	2.06
74135-SA	135.00	48.25	183.25	8.625	2.00	2.12	2.06
74140-SA	140.25	49.25	189.75	8.625	2.00	2.12	2.06
74156-SA	156.00	53.37	209.37	8.625	2.00	2.12	2.06
74161-SA	161.00	54.62	215.62	8.62	2.00	2.12	2.06
74167-SA	167.25	56.25	223.50	8.62	2.00	2.12	2.06
84148-SA	147.75	51.50	199.25	9.50	2.00	2.12	2.06
84156-SA	155.75	53.50	209.25	9.50	2.00	2.12	2.06
84170-SA	169.75	57.00	226.75	9.50	2.00	2.12	2.06
84180-SA	179.75	59.50	239.25	9.50	2.00	2.12	2.06
85170-SA	170.00	49.87	219.87	9.50	2.00	2.12	2.06
85190-SA	190.00	54.00	244.00	9.50	2.00	2.12	2.06
85197-SA	196.13	55.25	251.38	9.50	2.00	2.00	2.00
85220-SA	220.00	60.00	280.00	9.50	2.00	2.12	2.06
85220-TSA	218.25	60.38	278.63	TR	2.00	TR	2.00
85235-SA	235.00	65.00	300.00	9.50	2.00	2.12	2.06
85235-TSA	233.25	63.38	296.33	TR	2.00	TR	2.00
85250-SA	250.00	68.00	318.00	9.50	2.00	2.12	2.06
85250-TSA	248.25	68.38	316.63	TR	2.00	TR	2.00
85265-SA	265.00	71.00	336.00	9.50	2.00	2.12	2.06
85265-TSA	264.25	74.88	339.13	TR	2.00	TR	2.00

CYLINDERS

SINGLE ACTING TELESCOPIC CYLINDER STOCK

These cylinders are available from Custom Hoists, Commercial[®], Hyco and SHC. Request the manufacturer you want. See page 21-23 for specifications.

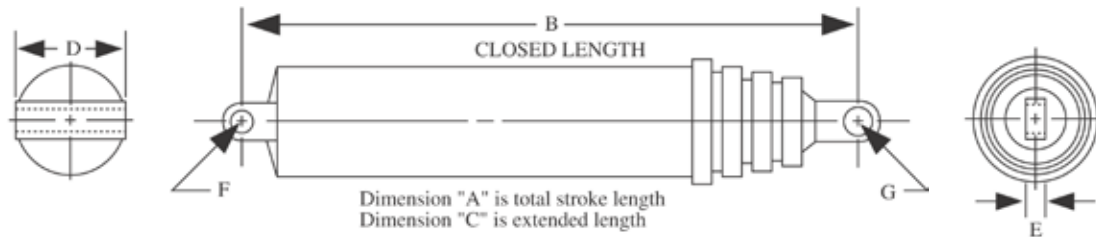


Stroke lengths for Hyco 70,000 series cylinders may be slightly different than those shown in chart. Please call our component group at 1-800-333-5617 for exact 70,000 series stroke lengths.

CYLINDER NO.	A	B	C	D	E	F	G
825190-SA	190.00	54.00	244.00	10.25	2.00	2.12	2.06
825220-SA	220.00	60.00	280.00	10.25	2.00	2.12	2.06
825235-SA	235.00	65.00	300.00	10.25	2.00	2.12	2.06
825250-SA	250.00	68.00	318.00	10.25	2.00	2.12	2.06
825265-SA	264.62	74.50	339.12	10.25	2.00	2.12	2.06
825280-SA	279.62	77.62	357.25	10.25	2.00	2.12	2.06
95220-SA	219.75	60.12	279.87	10.75	2.00	2.12	2.06
95235-SA	234.75	65.00	299.75	10.75	2.00	2.12	2.06
95250-SA	249.75	72.62	322.37	10.75	2.00	2.12	2.06
95265-SA	264.75	75.62	340.37	10.75	2.00	2.12	2.06
975220-SA	219.75	60.00	280.00	12.00	2.00	2.12	2.06
975235-SA	234.75	65.25	300.00	12.00	2.00	2.12	2.06
975250-SA	249.75	72.62	322.37	12.00	2.00	2.12	2.06
HPT53100	99.12	46.25	145.37	7.75	1.50	2.06	1.78
HPT53110	105.12	47.87	153.00	7.75	1.50	2.06	1.78
HPT53120	122.37	54.00	176.37	7.75	1.50	2.06	1.78
HPT53130	127.62	54.50	182.12	7.75	1.50	2.06	1.78
HPT63120	120.75	54.00	174.75	8.00	2.00	2.50	2.25
HPT63130	125.25	55.50	180.75	8.00	2.00	2.50	2.25
HPT63140	138.75	60.00	198.75	8.00	2.00	2.50	2.25
HPT63160	160.12	69.12	229.25	8.00	2.00	2.50	2.25
475	43.12	31.68	74.81	1.50	2.50	3.37	1.81
495	64.75	31.75	96.50	1.50	2.50	3.37	1.81
498	89.50	41.87	131.37	1.50	2.50	3.37	1.81
SHC-M32DB-43	40.38	29.69	70.07	1.50	4.00	1.25	1.88
SHC-M32DB-50	46.67	32.84	79.51	1.50	4.00	1.25	1.88
SHC-M42DB-43	39.50	30.19	69.69	1.50	5.00	1.50	2.75
SHC-M42DB-50	47.25	33.69	80.94	1.50	5.00	1.50	2.75
SHC-M42MB-50	51.25	35.07	86.32	-	-	1.50	2.75
SHC-M42DB-60	57.88	39.07	96.95	1.50	5.00	1.50	2.75
SHC-M42MB-65	65.00	42.07	107.07	-	-	1.50	2.75
SHC-M43MB-74	73.88	34.63	108.51	-	-	1.25	1.88
SHC-M43DB-75	67.34	33.62	100.96	1.50	5.00	1.25	1.88
SHC-M43MB-75	68.25	32.75	101.00	-	-	1.25	1.88
SHC-M43DB-98	89.83	41.13	130.96	1.50	5.00	1.25	1.88
SHC-M43MB-98	96.42	42.19	138.61	-	-	1.25	2.00
SHC-M53DB-60	57.11	29.81	86.92	1.50	6.25	1.50	2.75
SHC-M53DC-72	72.00	35.13	107.13	2.00	7.00	1.69	1.63
SHC-M53DB-74	69.14	33.82	102.96	1.50	6.25	1.50	2.75
SHC-M53MB-74	74.00	34.63	108.63	-	-	1.50	2.75
SHC-M53DB-90	86.55	39.63	126.18	1.50	6.25	1.50	2.75
SHC-M53MB-90	86.06	38.63	124.69	-	-	1.50	2.75

DOUBLE ACTING TELESCOPIC CYLINDERS

These cylinders are available from Custom Hoists, Commercial®, and Hyco. Request the manufacturer you want. See page 21 & 28 for specifications.



CYLINDER NO.	A	B	C	D	E	F	G
52112-DA	111.75	75.50	187.25	2.00	2.00	2.01	2.01
53110-DA	109.62	56.75	166.37	2.00	2.00	3.03	1.56
53155-DA	155.75	75.50	231.25	2.00	2.00	2.00	1.50
53182-DA	182.00	81.00	263.00	3.87	6.50	2.00	2.00
6282-DA	82.00	56.50	138.50	2.25	2.25	3.03	3.03
6397-DA	97.12	52.37	149.50	1.50	1.50	1.28	1.28
63108-DA	107.62	50.75	158.37	7.12	3.87	1.78	1.78
63118-DA	118.00	58.50	176.50	3.00	4.00	2.50	2.50
63124-DA	124.50	76.87	201.48	2.00	2.00	2.031	2.06
63132-DA	131.62	62.37	194.00	7.12	3.87	1.78	1.78
63167-DA	167.00	85.25	252.25	4.00	3.69	2.00	2.00
64118-DA	118.13	49.38	167.50	2.25	2.25	1.50	1.50
64136-DA	135.62	49.37	185.00	2.00	2.25	1.56	1.56
64150-DA	150.00	56.56	206.56	2.25	2.25	1.50	1.50
72156-DA	156.12	96.00	252.12	N/A	2.00	N/A	2.06
74131-DA	131.50	53.37	184.87	1.50	1.50	1.28	1.28
74171-DA	171.12	62.37	233.50	7.00	4.00	1.78	1.78
83126-DA	126.00	72.00	198.00	3.00	3.00	2.51	2.51
84176-TD2	176.25	69.00	245.25	TRIUNION MOUNT	2.00	TRIUNION MOUNT	1.75
84176-TD3	176.25	69.00	245.25	TRIUNION MOUNT	2.00	N/A	1.76
84178-DA	178.25	69.00	247.25	2.00	2.00	1.78	1.78
85125-DA	125.00	49.75	174.75	2.50	2.50	2.00	2.00
85156-DA	155.625	55.50	211.125	2.00	2.00	2.00	2.00
85195-DA	195.00	69.37	264.87	2.00	2.00	2.03	2.03
85220-TD2	220.00	69.25	289.25	TRIUNION MOUNT	2.00	N/A	1.76
85220-TD3	220.25	69.25	289.50	TRIUNION MOUNT	2.00	N/A	1.76
85300-DA	300.25	87.37	387.62	1.75	2.00	2.00	2.18
85348-DA	347.87	100.00	447.87	2.00	2.00	2.06	2.18
85378-DA	378.00	104.75	482.75	2.00	2.00	2.12	2.06
86177-DA	176.75	53.37	230.12	1.50	1.50	1.28	1.28
915125-DA	125.00	49.75	174.75	2.50	2.50	2.00	2.00
95160-DA	159.75	61.00	220.75	2.00	2.00	2.02	2.02
96170-DA	169.75	50.625	220.37	2.50	2.50	2.00	2.00
96199-DA	199.12	57.87	257.00	2.00	2.00	2.03	2.03
96412-DA	412.25	99.62	511.87	TRIUNION MOUNT	2.00	TRIUNION MOUNT	2.06
96456-DA	456.50	107.00	563.50	TRIUNION MOUNT	2.00	TRIUNION MOUNT	2.06
974176-DA	176.12	69.12	245.25	3.00	3.00	2.52	2.52
974190-DA	189.62	71.00	260.62	2.25	2.00	2.25	2.02
976199-DA	199.12	57.87	257.00	2.00	2.00	2.03	2.03

CYLINDERS



TELESCOPIC CYLINDER WEIGHTS

These cylinders weights are average weights for Custom Hoists and Hyco manufactured cylinders. Cylinders manufactured by Commercial® Intertech are usually 50-70 pounds heavier than weights listed.

CYLINDERS

CYLINDER #	WT. (LBS.)	CYLINDER #	WT. (LBS.)	CYLINDER #	WT. (LBS.)	CYLINDER #	WT. (LBS.)
5360-SA	134	825235-SA	725	85220-TD3	764	HL-1-4106	67
5372-SA	160	825250-SA	765	85300-DA	848	HL-1-4108	90
5384-SA	175	825265-SA	795	85348-DA	875	HL-1-4110	105
53104-SA	200	825280-SA	835	85378-DA	952	HL-1-4272	68
6384-SA	215	95220-SA	780	86177-DA	485	HL-1-4305	50
63104-SA	249	95235-SA	825	915125-DA	528	HL-1-4328	185
63108-SA	256	95250-SA	868	95160-DA	740	HL-1-4330	192
63111-SA	260	95265-SA	890	96170-DA	568	HL-1-4339	104
63120-SA	279	975220-SA	858	96199-DA	795	HL-1-4340	175
63120-TSA	279	975235-SA	967	96412-DA	1350	HL-1-4341	85
63126-SA	286	975250-SA	1076	96456-DA	1408	HL-1-4348	170
D63128-SA	278	HPT53100	190	974176-DA	978	HL-1-4884	150
63140-TSA	330	HPT53110	193	974190-DA	995	HL-1-4887	121
64135-SA	260	HPT53120	230	976199-DA	864	LCH-15527	97
64156-SA	310	HPT53130	214	475	102	LCH-2R1006A	168
73110-SA	350	HPT63120	267	495	102	LCH-PO-1166	190
73120-SA	336	HPT63130	270	498	132	LCH-PO-265	102
D73126	355	HPT63140	288	D3021GDA	55	MX-401222	260
73130-SA	358	HPT63160	328	D3526GDA	70	MX-401282	105
73140-SA	404	52112-DA	318	D4021EDA	96	MX-401826	51
D73142-SA	383	53110-DA	246	D4028EDA	105	MX-404614	176
74120-SA	311	53155-DA	307	D4030FDA	96	PG-3128C	67
74135-SA	335	53182-DA	357	D4035HDA	125	PG-6042BDA	239
74140-SA	347	6282-DA	253	D4128EDA	91	PG-7078DA	442
74156-SA	370	6397-DA	275	D4522JDA	84	PKM-1341-LM	61
74161-SA	390	63108-DA	283	D4522EDA	100	PKM-1351-LM	214
74167-SA	390	63118-DA	317	D4526BDA	104	PKM-2162-LM	24
84148-SA	451	63124-DA	383	D4548BDA	165	SHC-M32DB-43	57
84156-SA	455	63132-DA	332	D5532EDA	135	SHC-M32DB-50	63
84170-SA	494	63167-DA	320	DD-BB8133-1	188	SHC-M42DB-43	81
84180-SA	524	64118-DA	280	DD-BB8134-1	150	SHC-M42DB-50	91
85170-SA	450	64136-DA	271	DD-BB8281-1	114	SHC-M42MB-50	100
85190-SA	506	64150-DA	305	DD-BB8374-1	174	SHC-M42DB-60	115
85197-SA	525	72156-DA	630	DD-BB8379-1	110	SHC-M42MB-65	116
85220-SA	567	74131-DA	334	DD-BB8748-1	85	SHC-M43DB-75	98
85220-TSA	585	74171-DA	575	DD-AB19461	368	SHC-M43MB-75	107
85235-SA	619	83126-DA	555	DD-AB19774	110	SHC-M53DB-60	115
85235-TSA	637	84176-TD2	700	DD-AB19775	175	SHC-M53DB-74	137
85250-SA	654	84176-TD3	550	HL-1-4070	83	SHC-M53MB-74	140
85250-TSA	672	84178-DA	560	HL-1-4093	150	SHC-M53MB-90	154
85265-SA	674	85125-DA	510	HL-1-4094	125		
85265-TSA	692	85156-DA	495	HL-1-4100	73		
825190-SA	595	85195-DA	620	HL-1-4101	100		
825220-SA	667	85220-TD2	764	HL-1-4103	119		

POWER UNITS

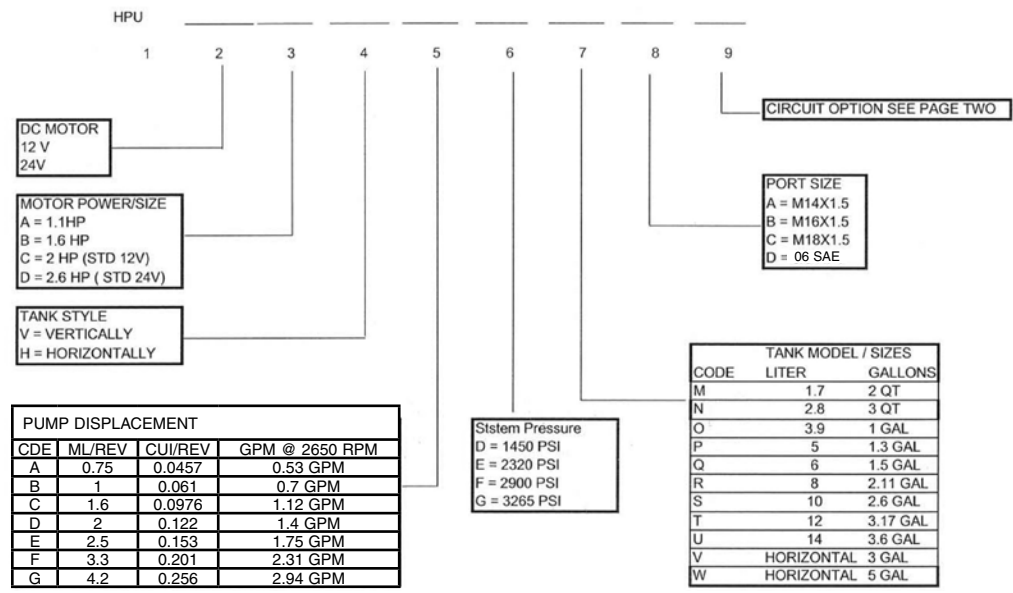
POWER UNITS

<p>Part Number: HPU12VCHEFVD02-RC Net Price: \$399.61 12 VDC 1.75 GPM 3 Gallon Steel Tank Two Button Remote Control 3 Meter Cable Power Up, Gravity Down Adjustable relief valve pre set at 2900 psi</p>	<p>Part Number: HPU12VCHCFVD02-RC Net Price: \$399.61 12 VDC 1.12 GPM 3 Gallon Steel Tank Two Button Control 3 Meter Cable Power Up, Gravity Down Adjustable relief valve pre set at 2900 psi</p>
<p>Reservoir size accommodates HTC 7-Ton Cylinders or equivalent size cylinder</p>	
<p>Part Number: HPU12VCHCFWD02-RC Net Price: \$399.61 12 VDC 1.12 GPM Pump 5 Gallon Steel Tank Two Button Remote Control 3 Meter Cable Power Up, Gravity Down Adjustable relief valve pre set at 2900 psi</p>	<p>Part Number: HPU12VCHEFWD02-RC Net Price: \$396.50 12 VDC 1.75 GPM 5 Gallon Steel Tank Two Button Control 3 Meter Cable Power Up, Gravity Down Adjustable relief valve pre set at 2900 psi</p>
<p>Reservoir size accommodates HTC 12-Ton Cylinders or equivalent size cylinder</p>	
<p>Part Number: HPU12VCHCFSD02-RC Net Price: \$340.33 Circuit 3 way power up gravity down 12 vdc power source required Steel tank 2.6 gallon capacity Two button remote control Flow rate is 1.12 gpm @ 2650 rpm Adjustable relief valve pre set at 2900 psi</p>	<p>Part Number: HPU12VCHCFSD12-RC Net Price: \$414.34 Circuit 4way three position valve power out & power in 12vdc power source required Steel tank 2.6 gallon capacity Two button remote control Flow rate is 1.12 gpm @ 2650 rpm Adjustable relief valve pre set at 2900 psi</p>



CYLINDERS

HOW TO CREATE A POWER UNIT PART



NORTH AMERICA
PHONE 1-800-777-5617
FAX 1-800-759-6391

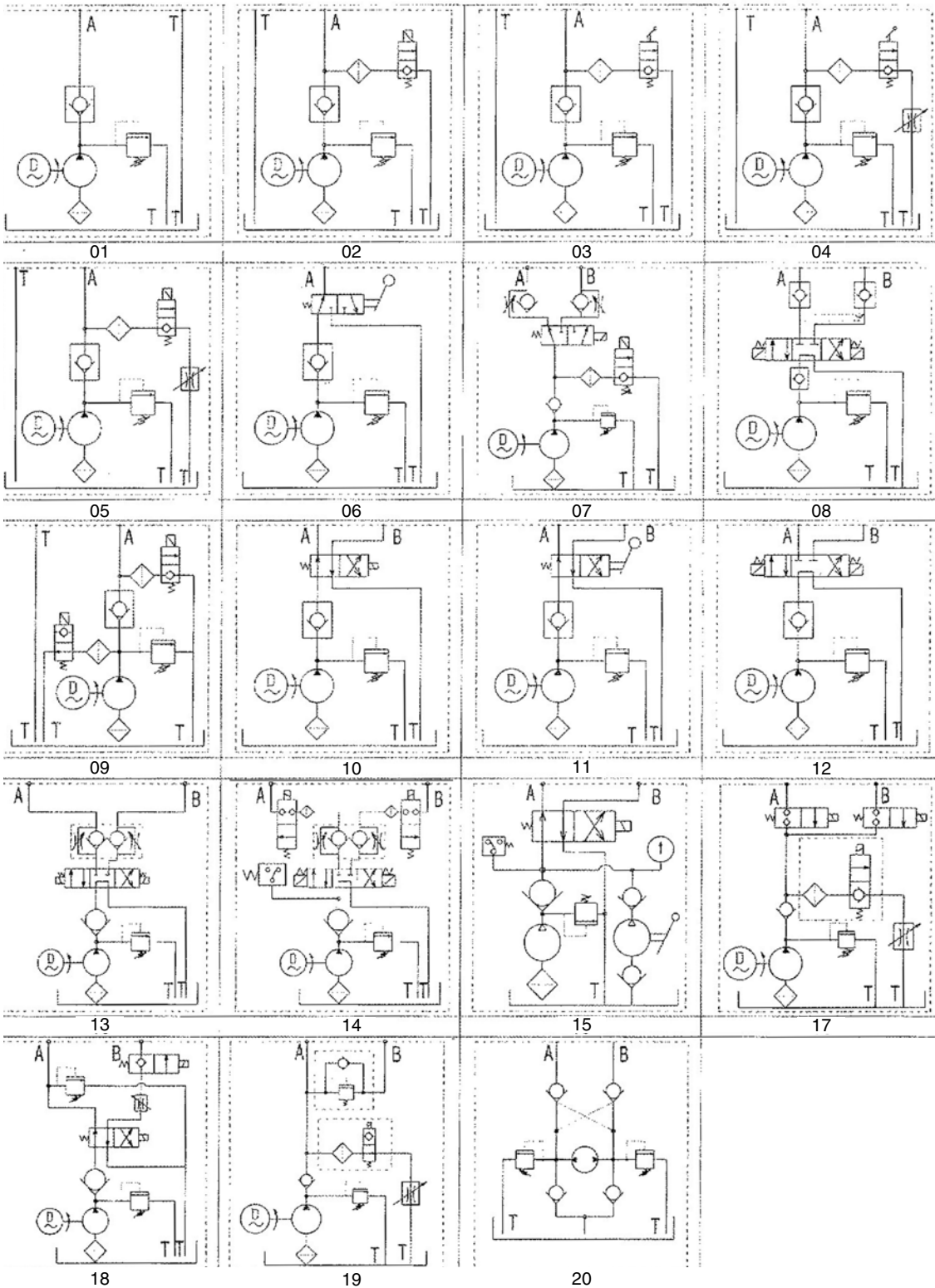
SALES OFFICE HOURS
8 A.M. TO 7:30 P.M. EASTERN TIME
www.HerculesUS.com

WORLDWIDE
PHONE 1-727-796-1300
FAX 1-727-797-8849






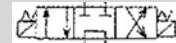





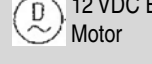
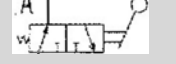

POWER UNITS

Drawing of Circuits - Power Unit Hydraulic Schematic Diagram

CYLINDERS



Key

-  Two Position Manual Valve Spring Centered
-  Check Valve
-  Flow Control Adjustable
-  Two Position Solenoid Valve
-  Pilot Operated Check Valve
-  4 Way 3 Position Solenoid Spring Centered Valve
-  Relief Valve
-  Hydraulic Pump
-  Filter
-  12 VDC Electric Motor
-  Two Position 3 Way Spring Centered Manual Valve
-  Two Position 4 Way Spring Centered Manual Valve
-  Two Position 4 Way Spring Centered Solenoid Valve
-  Pressure Switch

Hercules Brand Repair Parts

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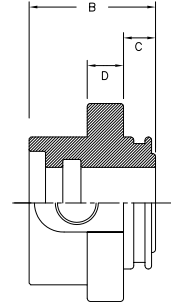
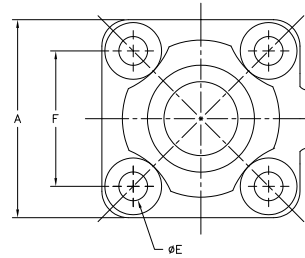
CYLINDER REPAIR PARTS

Hercules Brand Repair Parts

THE HTR LINE



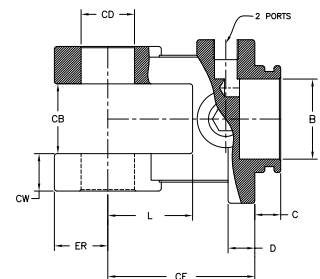
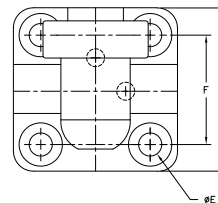
GLANDS



Part Number	Rod	Bore	A	B	C	D	E	F	Port	List Price
HTR-2.0X1.125-GLAND	1.125	2.0	3.07	1.92	0.50	0.52	0.43	2.05	3/8" NPT	\$ 16.97
HTR-2.5X1.125-GLAND	1.125	2.5	3.35	1.92	0.50	0.62	0.43	2.36	3/8" NPT	20.82
HTR-3.0X1.250-GLAND	1.250	3.0	4.05	1.96	0.50	0.73	0.51	2.87	1/2" NPT	25.98
HTR-3.5X1.250-GLAND	1.250	3.5	4.33	1.95	0.50	0.74	0.51	3.19	1/2" NPT	29.62
HTR-3.5X1.500-GLAND	1.500	3.5	4.33	1.95	0.50	0.74	0.51	3.19	1/2" NPT	29.62
HTR-4.0X1.250-GLAND	1.250	4.0	4.72	1.89	0.51	0.98	0.51	3.62	1/2" NPT	39.93
HTR-4.0X1.500-GLAND	1.500	4.0	4.72	1.89	0.51	0.98	0.51	3.62	1/2" NPT	40.01
HTR-4.0X1.750-GLAND	1.750	4.0	4.72	1.89	0.51	0.98	0.51	3.62	1/2" NPT	40.01
HTR-5.0X1.500-GLAND	1.500	5.0	6.30	2.24	0.68	1.18	0.67	4.45	1/2" NPT	64.41
HTR-5.0X2.000-GLAND	2.000	5.0	6.30	2.24	0.68	1.18	0.67	4.45	1/2" NPT	64.41



CAPS



Part Number	Bore	A	B	C	D	E	F	Ports	CB	CD	CE	CW	L	ER	List Price
HTR-2.0 CAP	2.0	3.07	1.50	0.50	0.50	0.43	2.05	3/8" NPT	1.14	1.01	2.84	0.69	1.63	1.00	\$20.87
HTR-2.5 CAP	2.5	3.35	1.77	0.50	0.50	0.43	2.36	3/8" NPT	1.14	1.01	2.84	0.69	1.63	1.00	24.05
HTR-3.0 CAP	3.0	4.05	2.28	0.50	0.50	0.51	2.87	1/2" NPT	1.14	1.01	2.84	0.69	1.63	1.00	26.86
HTR-3.5 CAP	3.5	4.33	2.56	0.50	0.69	0.51	3.19	1/2" NPT	1.14	1.01	2.84	0.69	1.63	1.00	33.57
HTR-4.0 CAP	4.0	4.72	3.00	0.51	0.75	0.51	3.62	1/2" NPT	1.14	1.01	2.88	0.73	1.63	1.13	39.31
HTR-5.0 CAP	5.0	6.30	3.94	0.69	0.75	0.67	4.45	1/2" NPT	1.26	1.01	3.95	1.12	2.25	1.50	81.41

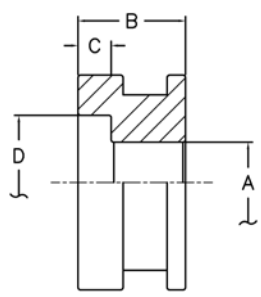
CYLINDER REPAIR PARTS

Hercules Brand Repair Parts

THE HTR LINE



PISTON

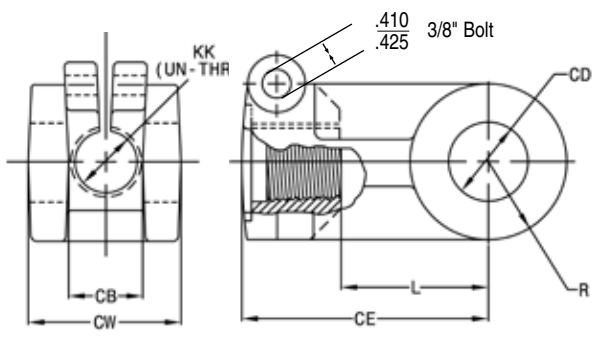


Part Number	Bore	A	B	C	D	List Price
HTR-2.0 PISTON	2.0	0.75	1.00	0.32	1.38	\$ 8.08
HTR-2.5 PISTON	2.5	0.75	1.00	0.32	1.50	9.66
HTR-3.0 PISTON	3.0	1.00	1.00	0.32	2.25	10.93
HTR-3.5 PISTON	3.5	1.00	1.00	0.32	2.76	12.74
HTR-4.0 PISTON	4.0	1.00	1.00	0.32	2.76	15.18
HTR-5.0 PISTON	5.0	1.25	1.89	0.63	3.54	31.71

HERCULES REPAIR PARTS



SPLIT CLEVIS



Part Number	Bore	CB	CD	CE	CW	KK	L	R	List Price
HTR-2.0 CLEVIS	2.0	1.12	1.00	3.25	2.62	1-1/8"-12	2.12	1.00	\$ 33.24
HTR-2.5 CLEVIS	2.5	1.12	1.00	3.25	2.62	1-1/8"-12	2.12	1.00	33.24
HTR-3.0 CLEVIS	3.0	1.12	1.00	3.25	2.62	1-1/4"-12	2.12	1.00	33.24
HTR-3.5 CLEVIS	3.5	1.12	1.00	3.25	2.62	1-1/4"-12	2.12	1.00	33.24
HTR-4.0 CLEVIS	4.0	1.12	1.00	3.25	2.62	1-1/4"-12	2.12	1.00	33.24
HTR-5.0 CLEVIS	5.0	1.25	1.00	3.25	2.62	1-1/4"-12	2.12	1.25	27.37

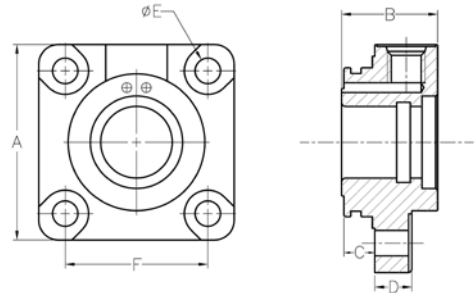
CYLINDER REPAIR PARTS

Hercules Brand Repair Parts

THE HSTR LINE



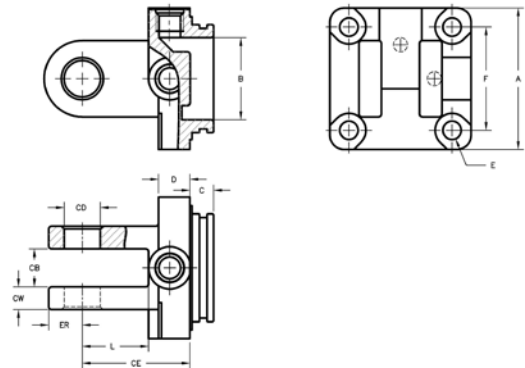
GLANDS



Part Number	Rod	Bore	A	B	C	D	E	F	Port	List Price
HSTR-2.0-GLAND	1.125	2.00	3.23	2.25	0.67	0.99	0.43	2.36	SAE8	\$ 35.32
HSTR-2.5-GLAND	1.250	2.50	3.47	2.38	0.67	0.75	0.51	2.48	SAE8	39.92
HSTR-3.0-GLAND	1.375	3.00	4.02	1.94	0.63	0.75	0.51	2.91	SAE8	45.54
HSTR-3.5-GLAND	1.375	3.50	4.33	2.00	0.63	0.75	0.51	3.19	SAE8	49.52
HSTR-4.0-1.50-GLAND	1.500	4.00	5.12	1.81	0.71	1.06	0.67	3.70	SAE8	63.39
HSTR-4.0-1.75-GLAND	1.750	4.00	5.12	1.81	0.71	1.06	0.67	3.70	SAE8	63.39
HSTR-5.0-GLAND	2.000	5.00	6.61	2.50	0.71	1.13	0.83	4.96	SAE10	110.73



CAPS



Part Number	Bore	A	B	C	D	E	F	Ports	CB	CD	CE	CW	L	ER	List Price
HSTR-2.0-ENDCAP	2.0	3.23	1.42	0.67	1.17	0.39	2.36	SAE8	1.06	1.01	2.98	0.63	1.81	0.93	\$41.52
HSTR-2.5-ENDCAP	2.5	3.47	1.77	0.59	1.10	0.39	2.48	SAE8	1.06	1.01	2.95	0.63	1.84	0.90	42.91
HSTR-3.0-ENDCAP	3.0	4.02	2.28	0.63	0.91	0.51	2.91	SAE8	1.06	1.01	3.04	0.63	2.13	0.94	50.59
HSTR-3.5-ENDCAP	3.5	4.33	2.56	0.63	0.91	0.51	3.19	SAE8	1.06	1.01	3.04	0.81	2.13	0.94	60.73
HSTR-4.0-ENDCAP	4.0	5.12	2.95	0.67	1.04	0.67	3.70	SAE8	1.06	1.01	3.17	0.81	2.13	0.98	76.21
HSTR-5.0-ENDCAP	5.0	6.61	3.94	0.67	1.04	0.83	4.96	SAE10	1.06	1.26	3.54	0.94	2.50	1.40	116.06

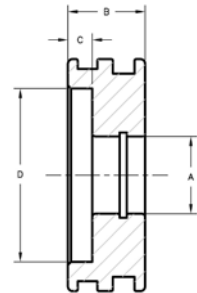
CYLINDER REPAIR PARTS

Hercules Brand Repair Parts

THE HSTR LINE



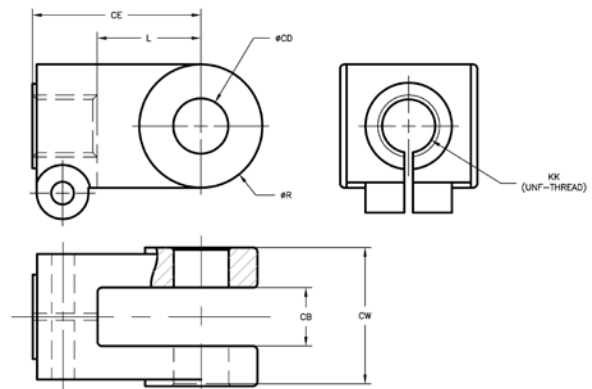
PISTON



Part Number	Bore	A	B	C	D	List Price
HSTR-2.0-PISTON	2.0	0.75	1.0	0.2	1.5	\$ 22.36
HSTR-2.5-PISTON	2.5	0.75	1.0	0.2	1.5	24.77
HSTR-3.0-PISTON	3.0	1.00	1.0	0.3	2.3	28.71
HSTR-3.5-PISTON	3.5	1.00	1.0	0.3	2.3	31.92
HSTR-4.0-PISTON	4.0	1.25	1.3	0.3	2.3	40.99
HSTR-5.0-PISTON	5.0	1.50	1.5	0.3	2.3	58.58



SPLIT CLEVIS



Part Number	Bore	CB	CD	CE	CW	KK	L	R	List Price
HSTR-2.0-2.5-CLEVIS	2.0/2.5	1.06	1.01	3.06	2.50	1-1/8"-12	1.81	2.25	\$ 34.58
HSTR-3.0-CLEVIS	3.0	1.06	1.01	2.98	2.50	1-1/8"-12	1.81	2.55	38.85
HSTR-3.5-CLEVIS	3.5	1.06	1.01	2.98	2.87	1-1/4"-12	1.81	2.55	42.64
HSTR-4.0-CLEVIS	4.0	1.06	1.01	2.98	2.87	1-1/2"-12	1.81	2.55	42.64
HSTR-5.0-CLEVIS	5.0	1.06	1.26	3.19	2.87	1-1/2"-12	2.00	2.55	47.77

HERCULES REPAIR PARTS

CYLINDER REPAIR PARTS

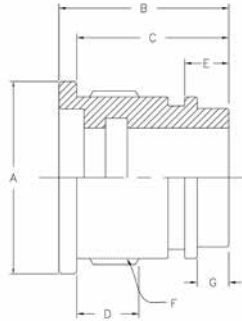
Hercules Brand Repair Parts

THE HMW LINE

HERCULES REPAIR PARTS



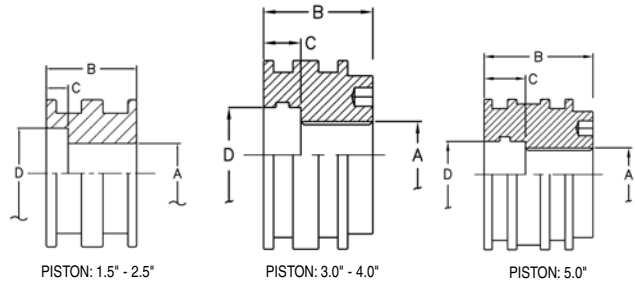
GLANDS



Part Number	Rod	Bore	A	B	C	D	E	F	G	List Price
HMW-1.5-GLAND	1	1.5	1.87	2.40	1.93	0.86	0.54	1-5/8-16UN-2A	0.40	\$ 9.73
HMW-2.0-GLAND	1-1/4	2.0	2.50	2.17	1.93	0.90	0.54	2-3/16-16UNS-2A	0.40	11.85
HMW-2.5-GLAND	1-1/2	2.5	3.00	2.17	1.93	0.90	0.54	2-5/8-16UN-2A	0.40	14.11
HMW-3.0-GLAND	1-1/2	3.0	3.62	2.40	1.93	0.90	0.54	3-1/4-12UN-2A	0.40	20.76
HMW-3.5-GLAND	1-3/4	3.5	4.12	2.17	1.93	0.90	0.54	3-3/4--12UN-2A	0.40	28.69
HMW-4.0-GLAND	2	4.0	4.62	2.44	2.20	1.18	0.54	4-1/4-12UN-2A	0.40	32.26
HMW-5.0-GLAND	2-1/2	5.0	5.62	2.68	2.20	1.18	0.54	5-1/4-16UN-2A	0.40	50.95



PISTONS



Part Number	Bore	A	B	C	D	List Price
HMW-1.5-PISTON	1.5	0.627	1.12	N/A	N/A	\$ 7.14
HMW-2.0-PISTON	2.0	0.752	1.12	0.118	1.37	9.05
HMW-2.5-PISTON	2.5	0.877	1.25	0.157	1.75	11.83
HMW-3.0-PISTON	3.0	1.002	1.37	0.196	2.12	17.76
HMW-3.5-PISTON	3.5	1.252	1.37	0.354	2.62	23.73
HMW-4.0-PISTON	4.0	1.252	1.62	0.590	2.75	28.02
HMW-5.0-PISTON	5.0	1.502	2.00	0.500	3.62	51.16

These replacement parts are for HMW cylinders found on page 8 - 10

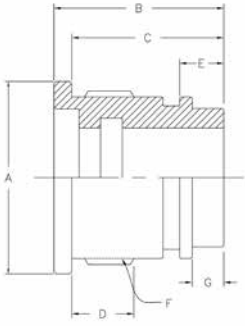
CYLINDER REPAIR PARTS

Hercules Brand Repair Parts

THE HCW LINE



GLANDS

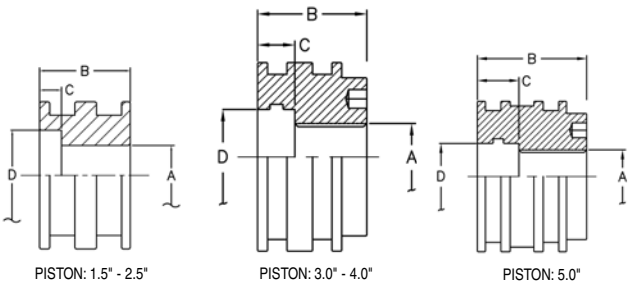


Part Number	Rod	Bore	A	B	C	D	E	F	G	List Price
HCW-1.5-GLAND	1	1.5	1.97	2.40	1.93	0.79	0.54	M43-2	0.40	\$ 9.73
HCW-2.0-GLAND	1-1/4	2.0	2.44	2.17	1.93	0.79	0.54	M55-2	0.40	11.85
HCW-2.5-GLAND	1-1/2	2.5	2.95	2.17	1.93	0.79	0.54	M68-2	0.40	14.11
HCW-3.0-GLAND	1-1/2	3.0	3.45	2.40	1.93	0.83	0.54	M81-2	0.40	20.76
HCW-3.5-GLAND	1-3/4	3.5	3.94	2.17	1.93	0.83	0.54	M94-2	0.40	22.51
HCW-4.0-GLAND	2	4.0	4.45	2.44	2.20	1.10	0.54	M106-2	0.40	32.26
HCW-5.0-GLAND	2-1/2	5.0	5.45	2.68	2.20	1.10	0.54	M132-2	0.40	50.95

HERCULES REPAIR PARTS



PISTONS



Part Number	Bore	A	B	C	D	List Price
HCW-1.5-PISTON	1.5	0.634	1.22	0.16	0.906	\$ 7.14
HCW-2.0-PISTON	2.0	0.807	1.22	0.30	1.220	9.05
HCW-2.5-PISTON	2.5	0.948	1.38	0.38	1.375	11.83
HCW-3.0-PISTON	3.0	M24-2	2.09	0.71	1.504	17.76
HCW-3.5-PISTON	3.5	M30-2	2.28	0.79	1.755	23.73
HCW-4.0 PISTON	4.0	M36-2	2.28	0.79	2.005	28.02
HCW-5.0 PISTON	5.0	M48-2	2.88	0.98	2.505	51.16

These replacement parts are for HCW cylinders found on page 11 - 13

STROKE ADJUSTERS

Hercules Brand Stroke Adjusters



PART NUMBER	DESCRIPTION	LIST PRICE
HB-SA-1250	1-1/4 -12" STROKE ADJUSTER	\$ 32.91

HERCULES REPAIR PARTS

Mobile Repair Parts

Contents

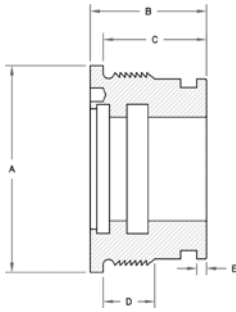
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MOBILE CYLINDER GLANDS



Material: 65-45-12
Ductile Iron



IT Gland

PART NUMBER	BORE +.003" -.003"	ROD +.000" -.003"	A	B	C	D	E	F (BUT-TRESS)	LIST PRICE	SEAL KIT NUMBER	LIST PRICE
CM-H107277	1.500	1.000	2.00	2.00	1.50	0.75	0.28	1-3/4"-12	\$ 19.47	CM-SK-H107277	\$ 43.10
CM-H107597	2.000	1.000	2.50	2.12	1.94	1.00	0.12	2-1/4"-12	18.36	CM-SK-H107597	20.04
CM-H107598	2.000	1.125	2.50	2.00	1.75	0.75	0.19	2-1/4"-12	17.91	CM-SK-H107598	20.04
CM-H107595	2.000	1.250	2.50	2.25	2.00	1.00	0.19	2-1/4"-12	18.89	CM-SK-H107595	20.04
CM-H107193	2.500	1.125	3.00	2.00	1.75	0.75	0.19	2-3/4"-12	24.89	CM-SK-H107193	19.63
CM-H107194	2.500	1.250	3.00	2.00	1.75	0.75	0.19	2-3/4"-12	24.89	CM-SK-H107194	19.63
CM-H107463	2.500	1.500	3.00	2.38	2.00	1.00	0.19	2-3/4"-12	27.29	CM-SK-H107463	27.27
CM-H107673	2.500	1.750	3.00	2.25	1.88	0.88	0.28	2-3/4"-12	26.44	CM-SK-H107673	27.27
CM-H107157	3.000	1.000	3.50	2.25	2.00	1.00	0.19	3-1/4"-12	32.58	CM-SK-H107157	20.25
CM-H107196	3.000	1.250	3.50	2.25	2.00	1.00	0.19	3-1/4"-12	32.58	CM-SK-H107196	19.63
CM-H107131	3.000	1.500	3.50	2.25	2.00	1.00	0.19	3-1/4"-12	32.58	CM-SK-H107131	19.71
CM-H107189	3.000	1.750	3.50	2.25	2.00	1.00	0.19	3-1/4"-12	32.58	CM-SK-H107189	20.98
CM-H107359	3.000	2.000	3.50	2.50	2.00	1.00	0.19	3-1/4"-12	32.58	CM-SK-H107359	21.55
CM-H107591	3.250	1.500	3.75	2.25	2.00	1.00	0.19	3-1/2"-12	38.67	CM-SK-H107591	25.40
CM-H107592	3.250	1.750	3.75	2.25	2.00	1.00	0.19	3-1/2"-12	38.67	CM-SK-H107592	26.68
CM-H107197	3.500	1.250	4.00	2.25	2.00	1.00	0.19	3-3/4"-12	42.22	CM-SK-H107197	20.27
CM-H107198	3.500	1.500	4.00	2.25	2.00	1.00	0.19	3-3/4"-12	42.22	CM-SK-H107198	20.98
CM-H107108	3.500	1.750	4.00	2.25	2.00	1.00	0.19	3-3/4"-12	42.22	CM-SK-H107108	22.25
CM-H107112	3.500	2.000	4.00	2.25	2.00	1.00	0.19	3-3/4"-12	42.22	CM-SK-H107112	24.66
CM-H107462	3.500	2.500	4.00	2.50	2.12	1.00	0.25	3-3/4"-12	45.56	CM-SK-H107462	25.69
CM-H107130	4.000	1.500	4.50	2.25	2.00	1.00	0.19	4-1/4"-12	53.07	CM-SK-H107130	21.89
CM-H107124	4.000	1.750	4.50	2.25	2.00	1.00	0.19	4-1/4"-12	53.07	CM-SK-H107124	23.33
CM-H107311	4.000	2.000	4.50	2.25	2.00	1.00	0.19	4-1/4"-12	53.07	CM-SK-H107311	19.91
CM-H107331	4.000	2.250	4.50	2.25	2.00	1.00	0.19	4-1/4"-12	53.07	CM-SK-H107331	29.11
CM-H107386	4.000	2.500	4.50	2.50	2.12	1.12	0.19	4-1/4"-12	58.09	CM-SK-H107386	30.17
CM-H107525	4.000	3.000	4.50	2.50	2.12	1.00	0.25	4-1/4"-12	58.09	CM-SK-H107525	29.43
CM-H107199	4.500	1.750	5.00	2.25	2.00	1.00	0.19	4-3/4"-12	65.11	CM-SK-H107199	25.76
CM-H107200	4.500	2.000	5.00	2.25	2.00	1.00	0.19	4-3/4"-12	65.11	CM-SK-H107200	27.42
CM-H107201	4.500	2.250	5.00	2.25	2.00	1.00	0.19	4-3/4"-12	65.11	CM-SK-H107201	30.98
CM-H107528	4.500	3.500	5.00	2.38	2.00	1.00	0.19	4-3/4"-12	67.91	CM-SK-H107528	48.93
CM-H107234	5.000	1.750	5.50	2.25	2.00	1.00	0.19	5-1/4"-12	83.29	CM-SK-H107234	26.27
CM-H107212	5.000	2.000	5.50	2.25	2.00	1.00	0.19	5-1/4"-12	83.29	CM-SK-H107212	27.87
CM-H107204	5.000	2.500	5.50	2.50	2.12	1.12	0.19	5-1/4"-12	88.27	CM-SK-H107204	32.44
CM-H107205	5.000	3.000	5.50	2.50	2.12	1.12	0.19	5-1/4"-12	88.27	CM-SK-H107205	36.12
CM-H107345	6.000	2.000	6.50	2.50	2.12	1.12	0.19	6-1/4"-12	126.36	CM-SK-H107345	29.37
CM-H107206	6.000	2.500	6.50	2.50	2.12	1.12	0.19	6-1/4"-12	126.36	CM-SK-H107206	33.92
CM-H107207	6.000	3.000	6.50	2.50	2.12	1.12	0.19	6-1/4"-12	126.36	CM-SK-H107207	37.60
CM-H107178	6.000	3.500	6.50	2.50	2.12	1.12	0.19	6-1/4"-12	126.36	CM-SK-H107178	43.44
CM-H107328	7.000	3.000	7.50	2.88	2.50	1.12	0.59	7-1/4"-10	185.38	CM-SK-H107328	40.70
CM-H107467	7.000	4.000	7.50	2.88	2.50	1.12	0.59	7-1/4"-10	185.38	CM-SK-H107467	54.65
CM-H107466	8.000	4.000	9.00	3.75	3.25	1.50	0.88	8-1/4"-10	275.24	CM-SK-H107466	56.34
CM-H107475	8.000	5.000	9.00	3.75	3.25	1.50	0.88	8-1/4"-10	275.24	CM-SK-H107475	75.91

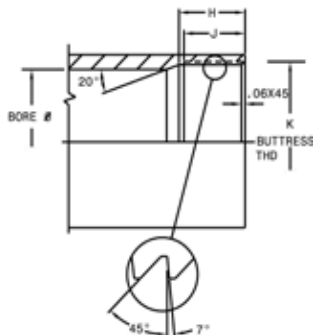
IT & ITW Technical Information

Basic information for Internal Buttress Threads (52 degrees)

H = Length of Thread on Gland plus 1/8"

J = Length of Thread on Gland plus 1/16"

K = Buttress Thread as determined by Gland

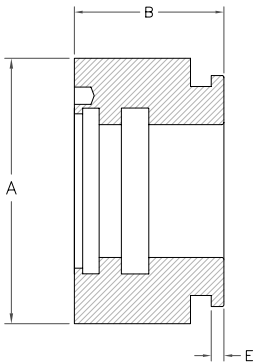


Basic Thread Size	Min. Major Diameter	Pitch Diameter	Minor Diameter
2-1/4"-12	2.2604	2.2000/2.2075	2.1500/2.1575
2-3/4"-12	2.7604	2.7000/2.7080	2.6500/2.6580
3-1/4"-12	3.2604	3.2000/3.2080	3.1500/3.1580
3-1/2"-12	3.5104	3.4500/3.4580	3.4000/3.4080
3-3/4"-12	3.7604	3.7000/3.7080	3.6500/3.6580
4-1/4"-12	4.2604	4.2000/4.2084	4.1500/4.1584
4-3/4"-12	4.7604	4.7000/4.7084	4.6500/4.6584
5-1/4"-12	5.2604	5.2000/5.2084	5.1500/5.1584
5-3/4"-12	5.7604	5.7000/5.7084	5.6500/5.6584
6-1/4"-12	6.2604	6.2000/6.2084	6.1500/6.1584
7-1/4"-10	7.2626	7.1900/7.1995	7.1300/7.1395
8-1/4"-10	8.2626	8.1900/8.1995	8.1300/8.1395
10-1/4"-10	10.2626	10.1900/10.1995	10.1300/10.1395

MOBILE CYLINDER GLANDS



Material: 65-45-12
Ductile Iron



These glands are threadless to allow for a repair or machine shop to customize the threads on the gland as required.

IT Gland - Threadless

PART NUMBER	BORE +.003" -.003"	ROD +.000" -.003"	A	B	E	LIST PRICE	SEAL KIT NUMBER	LIST PRICE
CM-H107597-NTHD	2.000	1.000	2.50	2.12	0.12	\$ 17.40	CM-SK-H107597	\$ 20.04
CM-H107598-NTHD	2.000	1.125	2.50	2.00	0.19	16.98	CM-SK-H107598	20.04
CM-H107595-NTHD	2.000	1.250	2.50	2.25	0.19	18.40	CM-SK-H107595	20.04
CM-H107193-NTHD	2.500	1.125	3.00	2.00	0.19	24.33	CM-SK-H107193	19.63
CM-H107194-NTHD	2.500	1.250	3.00	2.00	0.19	24.33	CM-SK-H107194	19.63
CM-H107463-NTHD	2.500	1.500	3.00	2.38	0.19	26.55	CM-SK-H107463	27.27
CM-H107673-NTHD	2.500	1.750	3.00	2.25	0.28	25.17	CM-SK-H107673	27.27
CM-H107157-NTHD	3.000	1.000	3.50	2.25	0.19	31.15	CM-SK-H107157	20.25
CM-H107196-NTHD	3.000	1.250	3.50	2.25	0.19	31.15	CM-SK-H107196	19.63
CM-H107131-NTHD	3.000	1.500	3.50	2.25	0.19	31.15	CM-SK-H107131	19.71
CM-H107189-NTHD	3.000	1.750	3.50	2.25	0.19	31.15	CM-SK-H107189	20.98
CM-H107359-NTHD	3.000	2.000	3.50	2.50	0.19	31.15	CM-SK-H107359	21.55
CM-H107591-NTHD	3.250	1.500	3.75	2.25	0.19	36.48	CM-SK-H107591	25.40
CM-H107592-NTHD	3.250	1.750	3.75	2.25	0.19	36.48	CM-SK-H107592	26.68
CM-H107197-NTHD	3.500	1.250	4.00	2.25	0.19	40.36	CM-SK-H107197	20.27
CM-H107198-NTHD	3.500	1.500	4.00	2.25	0.19	40.36	CM-SK-H107198	20.98
CM-H107108-NTHD	3.500	1.750	4.00	2.25	0.19	40.36	CM-SK-H107108	22.25
CM-H107112-NTHD	3.500	2.000	4.00	2.25	0.19	40.36	CM-SK-H107112	24.66
CM-H107462-NTHD	3.500	2.500	4.00	2.50	0.25	40.36	CM-SK-H107462	25.69
CM-H107130-NTHD	4.000	1.500	4.50	2.25	0.19	51.60	CM-SK-H107130	21.89
CM-H107124-NTHD	4.000	1.750	4.50	2.25	0.19	51.60	CM-SK-H107124	23.33
CM-H107311-NTHD	4.000	2.000	4.50	2.25	0.19	51.60	CM-SK-H107311	19.91
CM-H107331-NTHD	4.000	2.250	4.50	2.25	0.19	51.60	CM-SK-H107331	29.11
CM-H107386-NTHD	4.000	2.500	4.50	2.50	0.19	51.60	CM-SK-H107386	30.17
CM-H107199-NTHD	4.500	1.750	5.00	2.25	0.19	64.12	CM-SK-H107199	25.76
CM-H107200-NTHD	4.500	2.000	5.00	2.25	0.19	64.12	CM-SK-H107200	27.42
CM-H107201-NTHD	4.500	2.250	5.00	2.25	0.19	64.12	CM-SK-H107201	30.98
CM-H107528-NTHD	4.500	3.500	5.00	2.38	0.19	64.12	CM-SK-H107528	48.93
CM-H107234-NTHD	5.000	1.750	5.50	2.25	0.19	72.76	CM-SK-H107234	26.27
CM-H107212-NTHD	5.000	2.000	5.50	2.25	0.19	72.76	CM-SK-H107212	27.87
CM-H107204-NTHD	5.000	2.500	5.50	2.50	0.19	72.76	CM-SK-H107204	32.44
CM-H107205-NTHD	5.000	3.000	5.50	2.50	0.19	72.76	CM-SK-H107205	36.12
CM-H107345-NTHD	6.000	2.000	6.50	2.50	0.19	112.56	CM-SK-H107345	29.37
CM-H107206-NTHD	6.000	2.500	6.50	2.50	0.19	112.56	CM-SK-H107206	33.92
CM-H107207-NTHD	6.000	3.000	6.50	2.50	0.19	112.56	CM-SK-H107207	37.60
CM-H107178-NTHD	6.000	3.500	6.50	2.50	0.19	112.56	CM-SK-H107178	43.44
CM-H107328-NTHD	7.000	3.000	7.50	2.88	0.59	164.40	CM-SK-H107328	40.70
CM-H107493-NTHD	7.000	3.500	7.50	2.88	0.59	164.40	CM-SK-H107493	46.25
CM-H107467-NTHD	7.000	4.000	7.50	2.88	0.59	164.40	CM-SK-H107467	54.65
CM-H107466-NTHD	8.000	4.000	9.00	3.75	0.88	238.00	CM-SK-H107466	56.34
CM-H107494-NTHD	8.000	4.500	9.00	3.75	0.88	238.00	CM-SK-H107494	68.56
CM-H107475-NTHD	8.000	5.000	9.00	3.75	0.88	238.00	CM-SK-H107475	75.91

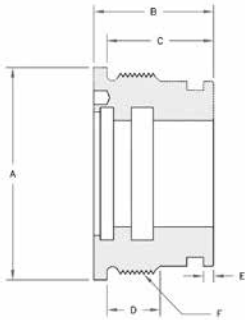
MOBILE REPAIR PARTS

MOBILE CYLINDER GLANDS

IT Gland - Unified Thread



Material: 65-45-12
Ductile Iron

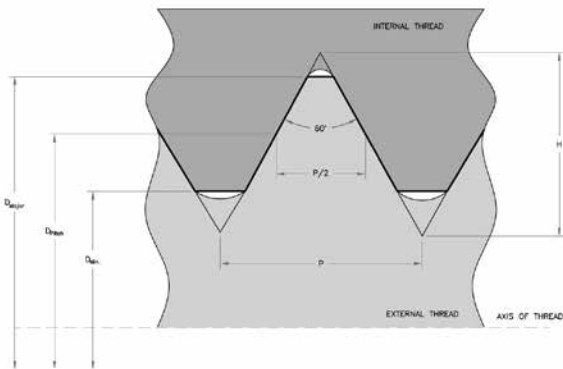


PART NUMBER	BORE +.003" -.003"	ROD +.000" -.003"	A	B	C	D	E	F (UNIFIED)	LIST PRICE
CM-H107277-UTS	1.500	1.000	2.00	2.00	1.50	0.75	0.28	1-3/4"-12	\$ 12.27
CM-H107597-UTS	2.000	1.000	2.50	2.12	1.94	1.00	0.12	2-1/4"-12	18.49
CM-H107595-UTS	2.000	1.250	2.50	2.25	2.00	1.00	0.19	2-1/4"-12	18.89
CM-H107194-UTS	2.500	1.250	3.00	2.00	1.75	0.75	0.19	2-3/4"-12	25.07
CM-H107196-UTS	3.000	1.250	3.50	2.25	2.00	1.00	0.19	3-1/4"-12	34.36
CM-H107463-UTS	2.500	1.500	3.00	2.38	2.00	1.00	0.19	2-3/4"-12	27.56
CM-H107131-UTS	3.000	1.500	3.50	2.25	2.00	1.00	0.19	3-1/4"-12	34.27
CM-H107198-UTS	3.500	1.500	4.00	2.25	2.00	1.00	0.19	3-3/4"-12	42.04
CM-H107189-UTS	3.000	1.750	3.50	2.25	2.00	1.00	0.19	3-1/4"-12	34.18
CM-H107108-UTS	3.500	1.750	4.00	2.25	2.00	1.00	0.19	3-3/4"-12	41.96
CM-H107124-UTS	4.000	1.750	4.50	2.25	2.00	1.00	0.19	4-1/4"-12	52.44
CM-H107311-UTS	4.000	2.000	4.50	2.25	2.00	1.00	0.19	4-1/4"-12	52.31
CM-H107462-UTS	3.500	2.500	4.00	2.50	2.12	1.00	0.25	3-3/4"-12	45.02
CM-H107386-UTS	4.000	2.500	4.50	2.50	2.12	1.12	0.19	4-1/4"-12	57.29
CM-H107206-UTS	6.000	2.500	6.50	2.50	2.12	1.12	0.19	6-1/4"-12	126.22

SEAL KIT NUMBER	LIST PRICE
CM-SK-H107277	\$ 43.10
CM-SK-H107597	20.04
CM-SK-H107595	20.04
CM-SK-H107194	19.63
CM-SK-H107196	19.63
CM-SK-H107463	27.27
CM-SK-H107131	19.71
CM-SK-H107198	20.98
CM-SK-H107189	20.98
CM-SK-H107108	22.25
CM-SK-H107124	23.33
CM-SK-H107311	19.91
CM-SK-H107462	25.69
CM-SK-H107386	30.17
CM-SK-H107206	33.92

MOBILE REPAIR PARTS

IT & ITW Glands with Unified Thread Technical Information



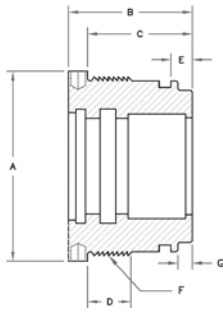
Major Diameter	Threads per Inch	Pitch P	Minor Diameter	Pitch Diameter	Height H
1.75	12	0.0833	1.6598	1.6959	0.0722
2.25	12	0.0833	2.1598	2.1959	0.0722
2.75	12	0.0833	2.6598	2.6959	0.0722
3.25	12	0.0833	3.1598	3.1959	0.0722
3.75	12	0.0833	3.6598	3.6959	0.0722
4.25	12	0.0833	4.1598	4.1959	0.0722
4.75	12	0.0833	4.6598	4.6959	0.0722
5.25	12	0.0833	5.1598	5.1959	0.0722
5.75	12	0.0833	5.6598	5.6959	0.0722
6.25	12	0.0833	6.1598	6.1959	0.0722

MOBILE CYLINDER GLANDS

ITW Gland



Material: 65-45-12
Ductile Iron

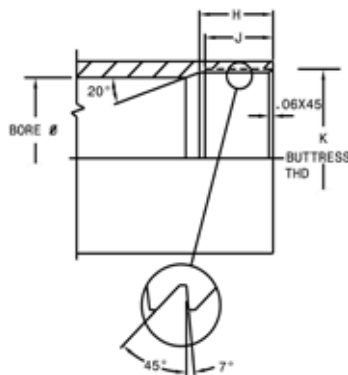


PART NUMBER	BORE +.003" -.003"	ROD +.000" -.003"	A	B	C	D	E	F (BUT-TRESS)	G	LIST PRICE	SEAL KIT NUMBER	LIST PRICE
CM-H107729	3.000	1.750	3.50	2.62	2.25	1.00	0.56	3-1/4"-12	0.38	\$ 38.71	CM-SK-H107729	\$ 35.07
CM-H107548	3.000	2.000	3.50	2.62	2.25	1.00	0.56	3-1/4"-12	0.38	38.71	CM-SK-H107548	39.82
CM-H107791	3.500	1.750	4.00	2.62	2.25	1.00	0.56	3-3/4"-12	0.38	46.44	CM-SK-H107791	35.31
CM-H107549	3.500	2.000	4.00	2.62	2.25	1.00	0.56	3-3/4"-12	0.38	46.44	CM-SK-H107549	41.12
CM-H107550	4.000	2.000	4.50	3.25	2.75	1.25	0.56	4-1/4"-12	0.38	68.44	CM-SK-H107550	45.45
CM-H107551	4.000	2.500	4.50	3.25	2.75	1.25	0.56	4-1/4"-12	0.38	68.44	CM-SK-H107551	52.57
CM-H107640	4.000	3.000	4.50	3.62	3.12	1.38	0.19	4-1/4"-12	N/A	74.62	CM-SK-H107640	74.10
CM-H107716	4.500	2.000	5.00	3.25	2.75	1.25	0.56	4-3/4"-12	0.38	83.11	CM-SK-H107716	57.29
CM-H107552	4.500	2.500	5.00	3.25	2.75	1.25	0.56	4-3/4"-12	0.38	83.11	CM-SK-H107552	47.29
CM-H107553	4.500	3.000	5.00	3.25	2.75	1.25	0.56	4-3/4"-12	0.38	83.11	CM-SK-H107553	57.93
CM-H107630	4.500	3.500	5.00	3.62	3.12	1.38	0.19	4-3/4"-12	N/A	90.36	CM-SK-H107630	61.00
CM-H107679	5.000	2.000	5.50	3.00	2.50	1.12	0.56	5-1/4"-12	0.38	98.93	CM-SK-H107679	31.00
CM-H107554	5.000	2.500	5.50	3.62	3.12	1.38	0.81	5-1/4"-12	0.56	113.42	CM-SK-H107554	62.00
CM-H107555	5.000	3.000	5.50	3.62	3.12	1.38	0.81	5-1/4"-12	0.56	113.42	CM-SK-H107555	87.89
CM-H107651	5.000	3.500	5.50	3.62	3.12	1.38	0.81	5-1/4"-12	0.56	113.42	CM-SK-H107651	68.23
CM-H107606	5.000	4.000	5.50	3.62	3.12	1.38	0.19	5-1/4"-12	N/A	113.42	CM-SK-H107606	80.27
CM-H107611	5.500	2.500	6.00	3.62	3.12	1.38	0.81	5-3/4"-12	0.56	133.69	CM-SK-H107611	64.09
CM-H107612	5.500	3.000	6.00	3.62	3.12	1.38	0.81	5-3/4"-12	0.56	133.69	CM-SK-H107612	89.97
CM-H107706	5.500	3.500	6.00	3.62	3.12	1.38	0.81	5-3/4"-12	0.56	133.69	CM-SK-H107706	106.99
CM-H107556	6.000	2.500	6.50	3.62	3.12	1.38	0.81	6-1/4"-12	0.56	162.22	CM-SK-H107556	63.53
CM-H107557	6.000	3.000	6.50	3.62	3.12	1.38	0.81	6-1/4"-12	0.56	162.22	CM-SK-H107557	89.40
CM-H107558	6.000	3.500	6.50	3.62	3.12	1.38	0.81	6-1/4"-12	0.56	162.22	CM-SK-H107558	62.92
CM-H107570	6.000	4.000	6.50	3.62	3.12	1.38	0.81	6-1/4"-12	0.56	162.22	CM-SK-H107570	98.91
CM-H107584	6.000	4.500	6.50	3.38	2.88	1.25	0.81	6-1/4"-12	0.62	153.60	CM-SK-H107584	92.62
CM-H107721	7.000	2.500	7.50	4.25	3.75	1.50	1.03	7-1/4"-10	0.75	233.69	CM-SK-H107721	107.08
CM-H107559	7.000	3.000	7.50	4.25	3.75	1.50	1.03	7-1/4"-10	0.75	233.69	CM-SK-H107559	107.29
CM-H107560	7.000	3.500	7.50	4.25	3.75	1.50	1.03	7-1/4"-10	0.75	233.69	CM-SK-H107560	69.37
CM-H107561	7.000	4.000	7.50	4.25	3.75	1.50	1.03	7-1/4"-10	0.75	233.69	CM-SK-H107561	112.00
CM-H107607	8.000	3.500	8.50	4.50	3.75	1.50	1.03	8-1/4"-10	0.75	314.49	CM-SK-H107607	71.15
CM-H107562	8.000	4.000	8.50	4.50	3.75	1.50	1.03	8-1/4"-10	0.75	314.49	CM-SK-H107562	113.72
CM-H107563	8.000	4.500	8.50	4.50	3.75	1.50	1.03	8-1/4"-10	0.75	314.49	CM-SK-H107563	135.96
CM-H107722	8.000	5.000	8.50	4.50	3.75	1.50	1.03	8-1/4"-10	0.075	314.49	CM-SK-H107722	136.43
CM-H107605	10.000	4.000	10.50	5.00	4.25	1.50	1.25	10-1/4"-10	1.00	542.76	CM-SK-H107605	127.61
CM-H107604	10.000	5.000	10.50	5.00	4.25	1.50	1.25	10-1/4"-10	1.00	542.76	CM-SK-H107604	146.57

MOBILE REPAIR PARTS

IT & ITW Technical Information

Basic information for Internal Buttress
Threads (52 degrees)
*H = Length of Thread on Gland plus 1/8"
*J = Length of Thread on Gland plus 1/16"
*K = Buttress Thread as determined by Gland



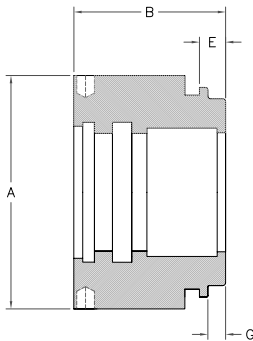
Basic Thread Size	Min. Major Diameter	Pitch Diameter	Minor Diameter
2-1/4"-12	2.2604	2.2000/2.2075	2.1500/2.1575
2-3/4"-12	2.7604	2.7000/2.7080	2.6500/2.6580
3-1/4"-12	3.2604	3.2000/3.2080	3.1500/3.1580
3-1/2"-12	3.5104	3.4500/3.4580	3.4000/3.4080
3-3/4"-12	3.7604	3.7000/3.7080	3.6500/3.6580
4-1/4"-12	4.2604	4.2000/4.2084	4.1500/4.1584
4-3/4"-12	4.7604	4.7000/4.7084	4.6500/4.6584
5-1/4"-12	5.2604	5.2000/5.2084	5.1500/5.1584
5-3/4"-12	5.7604	5.7000/5.7084	5.6500/5.6584
6-1/4"-12	6.2604	6.2000/6.2084	6.1500/6.1584
7-1/4"-10	7.2626	7.1900/7.1995	7.1300/7.1395
8-1/4"-10	8.2626	8.1900/8.1995	8.1300/8.1395
10-1/4"-10	10.2626	10.1900/10.1995	10.1300/10.1395

MOBILE CYLINDER GLANDS

ITW Gland - Threadless



Material: 65-45-12
Ductile Iron



These glands are threadless to allow for a repair or machine shop to customize the threads on the gland as required.

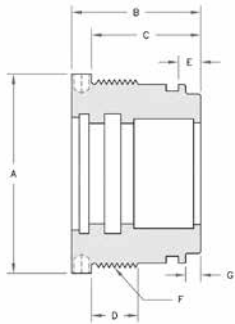
PART NUMBER	BORE +.003" -.003"	ROD +.000" -.003"	A	B	E	G	LIST PRICE	SEAL KIT NUMBER	LIST PRICE
CM-H107729-NTHD	3.000	1.750	3.50	2.62	0.56	0.38	\$ 30.68	CM-SK-H107729	\$ 35.07
CM-H107548-NTHD	3.000	2.000	3.50	2.62	0.56	0.38	30.68	CM-SK-H107548	39.82
CM-H107791-NTHD	3.500	1.750	4.00	2.62	0.56	0.38	32.80	CM-SK-H107791	35.31
CM-H107549-NTHD	3.500	2.000	4.00	2.62	0.56	0.38	32.80	CM-SK-H107549	41.12
CM-H107550-NTHD	4.000	2.000	4.50	3.25	0.56	0.38	54.72	CM-SK-H107550	45.45
CM-H107551-NTHD	4.000	2.500	4.50	3.25	0.56	0.38	54.72	CM-SK-H107551	52.57
CM-H107716-NTHD	4.500	2.000	5.00	3.25	0.56	0.38	67.04	CM-SK-H107716	57.29
CM-H107552-NTHD	4.500	2.500	5.00	3.25	0.56	0.38	67.04	CM-SK-H107552	47.29
CM-H107679-NTHD	5.000	2.000	5.50	3.00	0.56	0.38	77.44	CM-SK-H107679	31.00
CM-H107554-NTHD	5.000	2.500	5.50	3.62	0.81	0.56	83.92	CM-SK-H107554	62.00
CM-H107555-NTHD	5.000	3.000	5.50	3.62	0.81	0.56	77.44	CM-SK-H107555	87.89
CM-H107651-NTHD	5.000	3.500	5.50	3.62	0.81	0.56	77.44	CM-SK-H107651	68.23
CM-H107606-NTHD	5.000	4.000	5.50	3.62	0.19	N/A	77.44	CM-SK-H107606	80.27
CM-H107611-NTHD	5.500	2.500	6.00	3.62	0.81	0.56	99.36	CM-SK-H107611	64.09
CM-H107612-NTHD	5.500	3.000	6.00	3.62	0.81	0.56	99.36	CM-SK-H107612	89.97
CM-H107706-NTHD	5.500	3.500	6.00	3.62	0.81	0.56	99.36	CM-SK-H107706	106.99
CM-H107556-NTHD	6.000	2.500	6.50	3.62	0.81	0.56	118.80	CM-SK-H107556	63.53
CM-H107557-NTHD	6.000	3.000	6.50	3.62	0.81	0.56	118.80	CM-SK-H107557	89.40
CM-H107558-NTHD	6.000	3.500	6.50	3.62	0.81	0.56	118.80	CM-SK-H107558	62.92
CM-H107584-NTHD	6.000	4.500	6.50	3.38	0.81	0.62	118.80	CM-SK-H107584	92.62
CM-H107721-NTHD	7.000	2.500	7.50	4.25	1.03	0.75	186.20	CM-SK-H107721	107.08
CM-H107559-NTHD	7.000	3.000	7.50	4.25	1.03	0.75	186.20	CM-SK-H107559	107.29
CM-H107560-NTHD	7.000	3.500	7.50	4.25	1.03	0.75	186.20	CM-SK-H107560	69.37
CM-H107561-NTHD	7.000	4.000	7.50	4.25	1.03	0.75	186.20	CM-SK-H107561	112.00
CM-H107607-NTHD	8.000	3.500	8.50	4.50	1.03	0.75	236.40	CM-SK-H107607	71.15
CM-H107562-NTHD	8.000	4.000	8.50	4.50	1.03	0.75	236.40	CM-SK-H107562	113.72
CM-H107563-NTHD	8.000	4.500	8.50	4.50	1.03	0.75	236.40	CM-SK-H107563	135.96
CM-H107722-NTHD	8.000	5.000	8.50	4.50	1.03	0.75	236.40	CM-SK-H107722	136.43
CM-H107605-NTHD	10.000	4.000	10.50	5.00	1.25	1.00	401.20	CM-SK-H107605	127.61

MOBILE CYLINDER GLANDS

ITW Gland - Unified Thread

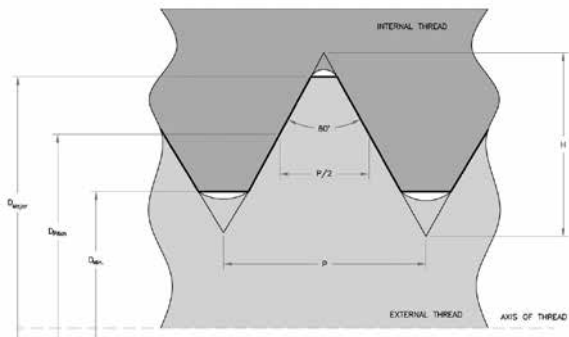


Material: 65-45-12
Ductile Iron



PART NUMBER	BORE +.003" -.003"	ROD +.000" -.003"	A	B	C	D	E	F	G	LIST PRICE	SEAL KIT NUMBER	LIST PRICE
CM-H107729-UTS	3.000	1.750	3.50	2.62	2.25	1.00	0.56	3-1/4"-12	0.38	\$ 38.18	CM-SK-H107729	\$ 35.07
CM-H107791-UTS	3.500	1.750	4.00	2.62	2.25	1.00	0.56	3-3/4"-12	0.38	45.91	CM-SK-H107791	35.31
CM-H107548-UTS	3.000	2.000	3.50	2.62	2.25	1.00	0.56	3-1/4"-12	0.38	38.04	CM-SK-H107548	39.82
CM-H107549-UTS	3.500	2.000	4.00	2.62	2.25	1.00	0.56	3-3/4"-12	0.38	45.78	CM-SK-H107549	41.12
CM-H107550-UTS	4.000	2.000	4.50	3.25	2.75	1.25	0.56	4-1/4"-12	0.38	67.56	CM-SK-H107550	45.45
CM-H107716-UTS	4.500	2.000	5.00	3.25	2.75	1.25	0.56	4-3/4"-12	0.38	82.27	CM-SK-H107716	57.29
CM-H107679-UTS	5.000	2.000	5.50	3.00	2.50	1.12	0.56	5-1/4"-12	0.38	98.71	CM-SK-H107679	31.00
CM-H107554-UTS	5.000	2.500	5.50	3.62	3.12	1.38	0.81	5-1/4"-12	0.56	112.18	CM-SK-H107554	62.00
CM-H107611-UTS	5.500	2.500	6.00	3.62	3.12	1.38	0.81	5-3/4"-12	0.56	132.93	CM-SK-H107611	64.09
CM-H107555-UTS	5.000	3.000	5.50	3.62	3.12	1.38	0.81	5-1/4"-12	0.56	111.69	CM-SK-H107555	87.89
CM-H107612-UTS	5.500	3.000	6.00	3.62	3.12	1.38	0.81	5-3/4"-12	0.56	132.44	CM-SK-H107612	89.97
CM-H107557-UTS	6.000	3.000	6.50	3.62	3.12	1.38	0.81	6-1/4"-12	0.56	161.60	CM-SK-H107557	89.40
CM-H107558-UTS	6.000	3.500	6.50	3.62	3.12	1.38	0.81	6-1/4"-12	0.56	161.02	CM-SK-H107558	62.92
CM-H107570-UTS	6.000	4.000	6.50	3.62	3.12	1.38	0.81	6-1/4"-12	0.56	160.27	CM-SK-H107570	98.91

IT & ITW Glands with Unified Thread Technical Information



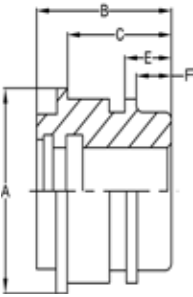
Major Diameter	Threads per Inch	Pitch P	Minor Diameter	Pitch Diameter	Height H
1.75	12	0.0833	1.6598	1.6959	0.0722
2.25	12	0.0833	2.1598	2.1959	0.0722
2.75	12	0.0833	2.6598	2.6959	0.0722
3.25	12	0.0833	3.1598	3.1959	0.0722
3.75	12	0.0833	3.6598	3.6959	0.0722
4.25	12	0.0833	4.1598	4.1959	0.0722
4.75	12	0.0833	4.6598	4.6959	0.0722
5.25	12	0.0833	5.1598	5.1959	0.0722
5.75	12	0.0833	5.6598	5.6959	0.0722
6.25	12	0.0833	6.1598	6.1959	0.0722

MOBILE REPAIR PARTS

MOBILE CYLINDER GLANDS



Material: Ductile Iron



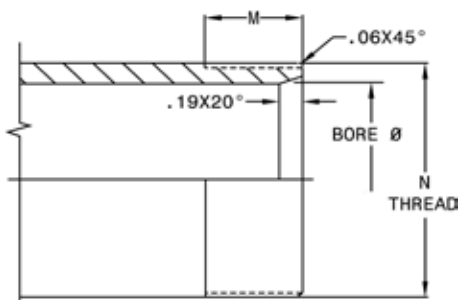
TH Gland

PART NUMBER	BORE +.003" -.003"	ROD +.000" -.003"	A	B	C	E	F	LIST PRICE
CM-H70154	2.000	1.000	2.25	2.38	1.94	0.81	0.62	\$ 24.59
CM-H70155	2.000	1.125	2.25	2.38	1.94	0.81	0.62	24.59
CM-H70156	2.000	1.250	2.25	2.38	1.94	0.81	0.62	25.31
CM-H70157	2.500	1.125	2.75	2.38	1.94	0.81	0.62	32.44
CM-H70076	2.500	1.250	2.75	2.38	1.94	0.81	0.62	32.44
CM-H70158	2.500	1.500	2.75	2.38	1.94	0.81	0.62	32.44
CM-H70462	2.500	1.750	2.75	2.38	2.19	0.81	0.62	32.44
CM-H70029	3.000	1.250	3.25	2.75	2.19	0.94	0.75	41.95
CM-H70011	3.000	1.500	3.25	2.75	2.19	0.94	0.75	41.95
CM-H70814	3.000	1.750	3.25	2.75	2.19	0.94	0.75	41.95
CM-H70012	3.000	2.000	3.25	2.75	2.56	0.94	0.69	41.95
CM-H70013	3.500	1.500	3.75	2.75	2.19	0.94	0.75	51.02
CM-H70504	3.500	1.750	3.75	2.75	2.19	0.94	0.75	51.02
CM-H70030	3.500	2.000	3.75	2.75	2.19	0.94	0.75	51.32
CM-H70031	3.500	2.500	3.75	2.75	2.56	0.94	0.75	51.32
CM-H70014	4.000	1.500	4.25	2.75	2.19	0.94	0.75	63.22
CM-H70488	4.000	1.750	4.25	2.75	2.19	0.94	0.75	63.22
CM-H70015	4.000	2.000	4.25	2.75	2.19	0.94	0.75	63.22
CM-H70032	4.000	2.500	4.25	2.75	2.19	0.94	0.75	63.22
CM-H70033	4.000	3.000	4.25	2.75	2.56	0.94	0.75	63.22
CM-H70276	4.500	2.000	4.75	2.75	2.19	0.94	0.75	73.02
CM-H70310	4.500	2.500	4.75	2.75	2.19	0.94	0.75	73.02
CM-H70377	4.500	3.000	4.75	2.75	2.19	0.94	0.69	73.02
CM-H70037	5.000	2.000	5.38	3.00	2.44	1.13	0.88	96.77
CM-H70038	5.000	2.500	5.38	3.00	2.44	1.13	0.88	97.17
CM-H70039	5.000	3.000	5.38	3.00	2.44	1.13	0.88	97.17
CM-H70153	5.500	2.000	5.88	3.00	2.44	1.13	0.88	116.59
CM-H70142	5.500	2.500	5.88	3.00	2.44	1.13	0.88	116.59
CM-H70143	5.500	3.000	5.88	3.00	2.44	1.13	0.88	116.59
CM-H70041	6.000	2.000	6.38	3.00	2.44	1.13	0.88	135.85
CM-H70042	6.000	2.500	6.38	3.00	2.44	1.13	0.88	135.85
CM-H70043	6.000	3.000	6.38	3.00	2.44	1.13	0.88	135.85
CM-H70180	7.000	2.500	7.50	4.00	3.13	1.75	1.50	229.56
CM-H70176	7.000	3.000	7.50	4.00	3.13	1.75	1.50	229.56
CM-H70186	7.000	3.500	7.50	4.00	3.13	1.75	1.50	229.56
CM-H70133	8.000	3.000	8.50	4.00	3.13	1.75	1.50	285.22
CM-H70195	8.000	3.500	8.50	4.00	3.13	1.75	1.50	285.22
CM-H70217	8.000	4.000	8.50	4.00	3.13	1.75	1.50	285.22

SEAL KIT NUMBER	LIST PRICE
CM-SK-H70154	\$ 20.04
CM-SK-H70155	20.04
CM-SK-H70156	20.04
CM-SK-H70157	20.04
CM-SK-H70076	20.04
CM-SK-H70158	20.04
CM-SK-H70462	20.68
CM-SK-H70029	20.04
CM-SK-H70011	20.04
CM-SK-H70814	21.02
CM-SK-H70012	23.46
CM-SK-H70013	20.04
CM-SK-H70504	20.82
CM-SK-H70030	23.33
CM-SK-H70031	28.31
CM-SK-H70014	22.32
CM-SK-H70488	23.64
CM-SK-H70015	26.10
CM-SK-H70032	30.75
CM-SK-H70033	34.51
CM-SK-H70276	27.97
CM-SK-H70310	32.61
CM-SK-H70377	36.37
CM-SK-H70037	29.58
CM-SK-H70038	34.23
CM-SK-H70039	37.98
CM-SK-H70153	30.29
CM-SK-H70142	34.94
CM-SK-H70143	38.72
CM-SK-H70041	31.65
CM-SK-H70042	36.31
CM-SK-H70043	40.08
CM-SK-H70180	37.63
CM-SK-H70176	41.51
CM-SK-H70186	46.25
CM-SK-H70133	46.01
CM-SK-H70195	47.96
CM-SK-H70217	51.62

MOBILE REPAIR PARTS

TH Gland Technical Information



Bores +.003" -.003"	M	N	Thread Major Diameter	Thread Pitch Diameter
2.000	0.81	2-3/8"-12 UN-2A	2.3731/2.3617	2.3191/2.3128
2.500	0.81	2-7/8"-12 UN-2A	2.8731/2.8617	2.8191/2.8127
3.000	1.00	3-1/2"-12 UN-2A	3.4981/3.4867	3.4440/3.4376
3.500	1.00	4"-12 UN-2A	3.9980/3.9866	3.9439/3.9374
4.000	1.00	4-1/2"-12 UN-2A	4.4980/4.4866	4.4439/4.4374
4.500	1.00	5"-12 UN-2A	4.9980/4.9866	4.9439/4.9372
5.000	1.00	5-1/2"-12 UN-2A	5.4980/5.4866	5.4439/5.4372
5.500	1.00	6"-12 UN-2A	5.9979/5.9865	5.9438/5.9369
6.000	1.00	6-5/8"-12 UN-2A	6.6229/6.6115	6.5688/6.5619
7.000	1.25	7-7/8"-12 UN-2A	7.8729/7.8615	7.8188/7.8119
8.000	1.25	8-7/8"-12 UN-2A	8.8729/8.8615	8.8188/8.8119

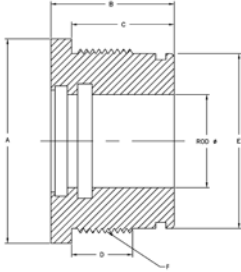
MOBILE CYLINDER GLANDS

Mobile Metric Gland



Material: Cast Iron
Grade G25 Equivalent
to ASTM A48-35

Thread Configuration Call Out
90 X 2
Maj. Diameter Pitch

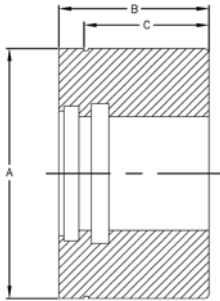


PART NUMBER	BORE	ROD	A	B	C	D	E	F (ISO THREAD)	LIST PRICE	SEAL KIT NUMBER	LIST PRICE
HCC-SG322027	32.00	20.00	42	33	27	15	32.5	36X1.5	\$ 13.12	HCC-GK20-32	\$ 5.55
HCC-SG352032	35.00	20.00	45	40	32	18	35.6	39X1.5	14.18	HCC-GK20-35	4.60
HCC-SG352232	35.00	22.00	45	40	32	19	35.6	39X1.5	18.62	HCC-GK22-35	5.70
HCC-SG402032	40.00	20.00	50	40	32	19	40.6	44X1.5	12.31	HCC-GK20-40	4.67
HCC-SG402232	40.00	22.00	50	40	32	19	40.6	44X1.5	13.93	HCC-GK22-40	5.78
HCC-SG402532	40.00	25.00	50	40	32	19	40.6	44X1.5	15.31	HCC-GK25-40	4.58
HCC-SG402832	40.00	28.00	50	40	32	19	40.6	44X1.5	16.50	HCC-GK28-40	6.28
HCC-SG452232	45.00	22.00	55	40	32	19	45.6	49X1.5	17.06	HCC-GK22-45	5.75
HCC-SG452532	45.00	25.00	55	40	32	19	45.6	49X1.5	18.56	HCC-GK25-45	4.59
HCC-SG502035	50.00	20.00	60	43	35	22	50.6	54X1.5	15.99	HCC-GK20-50	4.80
HCC-SG503535	50.00	35.00	60	43	35	22	50.6	54X1.5	17.18	HCC-GK35-50	4.60
HCC-SG553535	55.00	35.00	65	43	35	20	55.6	60X1.5	19.93	HCC-GK35-55	6.02
HCC-SG603540	60.00	35.00	70	50	40	26	60.6	64X1.5	29.81	HCC-GK35-60	6.22
HCC-SG604040	60.00	40.00	70	50	40	26	60.6	64X1.5	23.87	HCC-GK40-60	10.17
HCC-SG633540	63.00	35.00	73	50	40	26	63.6	68X1.5	24.68	HCC-GK35-63	5.95
HCC-SG653540	65.00	35.00	75	50	40	25	65.6	69X1.5	25.06	HCC-GK35-65	6.18
HCC-SG654040	65.00	40.00	75	50	40	25	65.6	69X1.5	25.49	HCC-GK40-65	10.12
HCC-SG703540	70.00	35.00	80	50	40	26	70.6	74X1.5	27.18	HCC-GK35-70	6.01
HCC-SG704040	70.00	40.00	80	50	40	26	70.6	74X1.5	25.49	HCC-GK40-70	6.42
HCC-SG704540	70.00	45.00	80	50	40	26	70.6	74X1.5	28.68	HCC-GK45-70	10.42
HCC-SG753550	75.00	35.00	90	60	50	33	75.6	80X2	34.05	HCC-GK35-75	6.39
HCC-SG754050	75.00	40.00	90	60	50	33	75.6	80X2	32.49	HCC-GK40-75	6.78
HCC-SG754550	75.00	45.00	90	60	50	33	75.6	80X2	35.06	HCC-GK45-75	10.78
HCC-SG803550	80.00	35.00	95	60	50	32	80.6	85X2	41.30	HCC-GK35-80	6.23
HCC-SG804050	80.00	40.00	95	60	50	32	80.6	85X2	43.30	HCC-GK40-80	6.51
HCC-SG806050	80.00	60.00	95	60	50	32	80.6	85X2	37.67	HCC-GK60-80	9.36
HCC-SG853550	85.00	35.00	100	60	50	30	85.6	90X2	44.61	HCC-GK35-85	6.51
HCC-SG854050	85.00	40.00	100	60	50	30	85.6	90X2	44.48	HCC-GK40-85	6.90
HCC-SG854550	85.00	45.00	100	60	50	30	85.6	90X2	46.86	HCC-GK45-85	10.89
HCC-SG904050	90.00	40.00	105	60	50	32	90.6	95X2	56.17	HCC-GK40-90	11.94
HCC-SG904550	90.00	45.00	105	60	50	32	90.6	95X2	46.42	HCC-GK45-90	11.89
HCC-SG906050	90.00	60.00	105	60	50	32	90.6	95X2	45.99	HCC-GK60-90	10.75
HCC-SG1006050	100.00	60.00	115	60	50	32	100.6	105X2	62.61	HCC-GK60-100	11.16
HCC-SG1004070XL	100.00	40.00	115	82	70	51	100.6	105X2	73.41	HCC-GK40-100XL	11.42
HCC-SG1004570XL	100.00	45.00	115	82	70	51	100.6	105X2	67.42	HCC-GK45-100XL	11.88
HCC-SG1006070XL	100.00	60.00	115	82	70	51	100.6	105X2	67.67	HCC-GK60-100XL	10.74
HCC-SG1007070XL	100.00	70.00	115	82	70	51	100.6	105X2	72.73	HCC-GK70-100XL	12.74
HCC-SG1106070	110.00	60.00	125	82	70	51	110.6	115X2	79.42	HCC-GK60-110	10.06
HCC-SG1107070	110.00	70.00	125	82	70	51	110.6	115X2	79.42	HCC-GK70-110	12.05
HCC-SG1206070	120.00	60.00	140	82	70	49	120.6	125X2	137.27	HCC-GK60-120	12.26
HCC-SG1207070	120.00	70.00	140	82	70	49	120.6	125X2	100.85	HCC-GK70-120	14.63
HCC-SG1208070	120.00	80.00	140	82	70	49	120.6	125X2	97.17	HCC-GK80-120	15.16
HCC-SG1256080	125.00	60.00	145	92	80	59	125.6	130X2	125.52	HCC-GK60-125	10.24
HCC-SG1257080	125.00	70.00	145	92	80	59	125.6	130X2	124.97	HCC-GK70-125	12.61
HCC-SG1258080	125.00	80.00	145	92	80	59	125.6	130X2	111.53	HCC-GK80-125	14.89
HCC-SG1407080	140.00	70.00	160	92	80	59	140.6	145X2	129.78	HCC-GK70-140	12.99
HCC-SG1408080	140.00	80.00	160	92	80	59	140.6	145X2	139.34	HCC-GK80-140	15.46
HCC-SG1507090	150.00	70.00	170	102	90	69	150.6	155X2	159.27	HCC-GK70-150	12.89
HCC-SG1508090	150.00	80.00	170	102	90	69	150.6	155X2	155.64	HCC-GK80-150	15.52
HCC-SG1608090	160.00	80.00	180	102	90	69	160.6	165X2	179.63	HCC-GK80-160	16.83

All dimensions shown in millimeters.

MOBILE CYLINDER GLANDS

Mobile Metric Gland - Unfinished



PART NUMBER	BORE *	ROD	A	B	C	D	E	F (ISO THREAD)	LIST PRICE
HCC-SG542057UF	45.00	20.00	54	65	57	N/A	N/A	N/A	\$ 20.68
HCC-SG542257UF	45.00	22.00	54	65	57	N/A	N/A	N/A	19.87
HCC-SG542557UF	45.00	25.00	54	65	57	N/A	N/A	N/A	18.81
HCC-SG742565UF	65.00	25.00	74	75	65	N/A	N/A	N/A	38.62
HCC-SG743565UF	65.00	35.00	74	75	65	N/A	N/A	N/A	34.11
HCC-SG744065UF	65.00	40.00	74	75	65	N/A	N/A	N/A	28.93
HCC-SG943575UF	80.00	35.00	94	85	75	N/A	N/A	N/A	47.24
HCC-SG944075UF	80.00	40.00	94	85	75	N/A	N/A	N/A	47.67
HCC-SG944575UF	80.00	45.00	94	85	75	N/A	N/A	N/A	47.80
HCC-SG1144095UF	100.00	40.00	114	107	95	N/A	N/A	N/A	60.73
HCC-SG1144595UF	100.00	45.00	114	107	95	N/A	N/A	N/A	77.60
HCC-SF1146095UF	100.00	60.00	114	107	95	N/A	N/A	N/A	77.17

*Denotes Recommended Bore Size.
Unfinished HCC Style Hydraulic Glands Include a Nylon Rod Bearing, Rod Seal and Rod Wiper. All dimensions shown in millimeters.

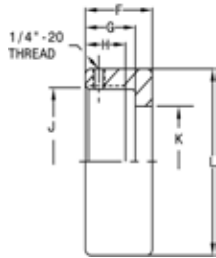
MOBILE REPAIR PARTS

MOBILE CYLINDER CAPS



Material: 1026 CDS Tubing
SAE Threads

TH Cap



PART NUMBER	BORE +.003\"-.003"	F	G	H	J	K	L	LIST PRICE
CM-HC70074	2.000	1.13	0.88	0.69	2-3/8"-12 UN-2B	1.81	3.00	\$ 22.22
CM-HC70075	2.500	1.13	0.88	0.69	2-7/8"-12 UN-2B	2.31	3.50	25.02
CM-HC70008	3.000	1.38	1.00	0.75	3-1/2"-12 UN-2B	2.63	4.00	30.31
CM-HC70009	3.500	1.38	1.00	0.75	4"-12 UN-2B	3.13	4.50	34.67
CM-HC70034	4.000	1.38	1.00	0.75	4-1/2"-12 UN-2B	3.63	5.00	39.91
CM-HC70277	4.500	1.38	1.00	0.75	5"-12 UN-2B	4.13	5.50	44.22
CM-HC70040	5.000	1.38	1.00	0.75	5-1/2"-12 UN-2B	4.63	6.25	53.11
CM-HC70140	5.500	1.38	1.00	0.75	6"-12 UN-2B	5.13	6.75	58.80
CM-HC70044	6.000	1.38	1.00	0.75	6-5/8"-12 UN-2B	5.63	7.50	71.33
CM-HC70174	7.000	2.00	1.38	1.13	7-7/8"-12 UN-2B	6.13	9.00	119.24
CM-HC70132	8.000	2.00	1.38	1.13	8-7/8"-12 UN-2B	7.13	10.00	140.89



Material: A-36 Plate

Base Plate (medium duty)

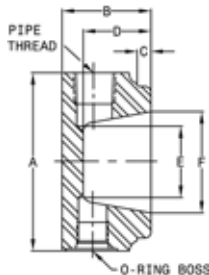


PART NUMBER	BORE +.003\"-.003"	A	B	C	LIST PRICE
CM-BP60056	1.500	1.88	0.50	0.25	\$ 13.33
CM-BP60010	2.000	2.38	0.50	0.25	15.02
CM-BP60011	2.500	2.88	0.50	0.25	18.13
CM-BP60012	3.000	3.38	0.59	0.25	23.69
CM-BP60013	3.500	3.88	0.69	0.38	28.53
CM-BP60014	4.000	4.50	0.75	0.38	36.22
CM-BP60437	4.500	5.00	0.88	0.38	47.02
CM-BP60015	5.000	5.56	0.88	0.38	55.24
CM-BP60124	5.500	6.00	0.88	0.38	64.53
CM-BP60016	6.000	6.75	1.00	0.38	82.80
CM-BP60157	7.000	8.00	1.00	0.38	108.67
CM-BP60107	8.000	9.00	1.00	0.38	133.11



Material: A-36 Plate

Base End (ported)



PART NUMBER	BORE +.003\"-.003"	NPT	SAE	A	B	C	D	E	F	LIST PRICE
CM-BEP112380	2.000	3/8"	#6	2.50	1.56	0.25	1.00	1.25	1.45	\$ 32.36
CM-BEP112381	2.500	3/8"	#6	3.00	1.56	0.25	1.00	1.25	1.75	40.00
CM-BEP112382	3.000	1/2"	#8	3.50	1.69	0.25	1.12	1.75	2.19	52.36
CM-BEP112383	3.500	1/2"	#8	4.00	1.69	0.25	1.12	2.00	2.19	61.38
CM-BEP112384	4.000	1/2"	#8	4.50	1.81	0.25	1.35	2.12	2.62	78.84
CM-BEP112385	4.500	1/2"	#8	5.12	1.81	0.25	1.35	2.12	2.62	95.87
CM-BEP112386	5.000	3/4"	#12	5.62	1.94	0.25	1.35	2.38	3.03	117.69
CM-BEP112398	5.500	3/4"	#12	6.25	2.19	0.25	1.50	3.29	4.06	153.56
CM-BEP112387	6.000	3/4"	#12	6.75	2.19	0.25	1.50	3.29	4.06	175.11



Material: A-36 Plate

Base Plate (heavy duty)



PART NUMBER	BORE +.003\"-.003"	A	B	C	LIST PRICE
CM-BP112527	1.500	2.000	0.50	0.19	\$ 14.80
CM-BP112292	2.000	2.500	0.50	0.12	16.49
CM-BP112209	2.500	3.000	0.62	0.25	20.40
CM-BP112210	3.000	3.500	0.75	0.25	26.71
CM-BP112461	3.250	3.750	0.88	0.25	30.76
CM-BP112211	3.500	4.000	0.88	0.25	33.82
CM-BP112212	4.000	4.500	1.00	0.25	43.07
CM-BP112414	4.000	4.620	1.00	0.25	44.53
CM-BP112213	4.500	5.000	1.12	0.25	53.78
CM-BP112234	5.000	5.500	1.25	0.25	66.58
CM-BP112459	5.000	5.620	1.25	0.25	68.04
CM-BP112214	5.000	5.750	1.25	0.25	70.36
CM-BP112426	5.500	6.120	1.31	0.25	82.62
CM-BP112236	6.000	6.500	1.38	0.25	94.89
CM-BP112512	6.000	6.620	1.38	0.25	96.36
CM-BP112215	6.000	6.750	1.38	0.25	99.42
CM-BP112569	6.500	7.250	1.25	0.25	108.67
CM-BP112364	7.000	8.000	1.44	0.25	135.87
CM-BP112373	8.000	9.000	1.50	0.25	170.84
CM-BP112496	9.000	10.000	1.50	0.38	204.49
CM-BP112467	10.000	11.000	1.50	0.38	241.87

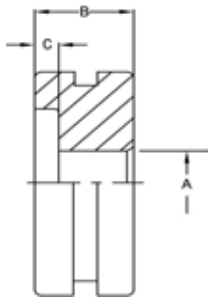
MOBILE CYLINDER PISTONS

MOBILE REPAIR PARTS



Material: Ductile Iron

TM Piston



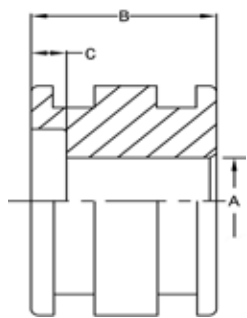
PART NUMBER	BORE +.003" -.003"	A +.002" -.000"	B	C	LIST PRICE
CM-P70079	1.50	0.626	0.88	N/A	\$ 12.98
CM-P70055	2.00	0.751	1.00	N/A	15.11
CM-P70065	2.50	0.751	1.00	N/A	18.76
CM-P70841	3.00	0.751	1.00	0.25	23.11
CM-P70872	3.50	1.001	1.00	0.38	27.02
CM-P70067	4.00	1.001	1.00	N/A	33.16
CM-P70384	4.50	1.251	1.50	N/A	47.87
CM-P70090	5.00	1.251	1.50	N/A	56.89
CM-P70385	5.50	1.501	1.50	N/A	66.76
CM-P70139	6.00	1.501	1.50	N/A	78.53

SEAL KIT NUMBER	LIST PRICE
CM-SK-P70079	\$ 19.63
CM-SK-P70055	19.63
CM-SK-P70065	19.63
CM-SK-P70841	19.63
CM-SK-P70872	19.63
CM-SK-P70067	19.63
CM-SK-P70384	20.27
CM-SK-P70090	19.63
CM-SK-P70385	20.27
CM-SK-P70139	20.27



Material: Ductile Iron

TH Piston



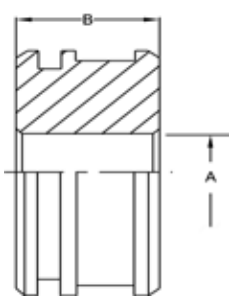
PART NUMBER	BORE +.003" -.003"	A +.002" -.000"	B	C	LIST PRICE
CM-P70020	1.50	0.626	1.13	N/A	\$ 14.44
CM-P70005	2.00	0.751	1.50	N/A	18.04
CM-P70017	2.50	0.751	1.50	N/A	23.11
CM-P70006	3.00	1.001	1.75	N/A	31.07
CM-P70007	3.50	1.126	1.75	N/A	37.11
CM-P70010	4.00	1.251	1.75	N/A	45.42
CM-P70275	4.50	1.251	1.75	N/A	54.40
CM-P70018	5.00	1.251	2.00	N/A	69.16
CM-P70141	5.50	1.501	2.00	N/A	82.62
CM-P70019	6.00	1.501	2.00	N/A	96.58
CM-P70175	7.00	1.751	3.00	0.75	164.67
CM-P70134	8.00	2.001	3.00	0.75	208.76

SEAL KIT NUMBER	LIST PRICE
CM-SK-P70020	\$ 19.63
CM-SK-P70005	20.04
CM-SK-P70017	21.89
CM-SK-P70006	27.49
CM-SK-P70007	32.86
CM-SK-P70010	37.27
CM-SK-P70275	40.94
CM-SK-P70018	70.27
CM-SK-P70141	106.59
CM-SK-P70019	72.72
CM-SK-P70175	148.93
CM-SK-P70134	171.95



Material: 65-45-12
Ductile Iron

IT (narrow) Piston



PART NUMBER	BORE +.003" -.003"	A +.002" -.000"	B	LIST PRICE
CM-P110629	1.500	0.626	1.12	\$ 14.44
CM-P110238	2.000	0.751	1.25	17.33
CM-P110239	2.500	0.751	1.25	21.69
CM-P110240	3.000	0.876	1.25	26.76
CM-P110608	3.250	1.001	1.25	29.20
CM-P110241	3.500	1.001	1.25	31.38
CM-P110242	4.000	1.001	1.25	38.22
CM-P110384	4.500	1.126	1.50	50.09
CM-P110212	5.000	1.126	1.50	58.40

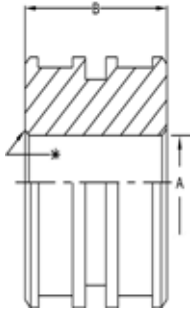
SEAL KIT NUMBER	LIST PRICE
CM-SK-P110629	\$ 19.63
CM-SK-P110238	20.04
CM-SK-P110239	19.63
CM-SK-P110240	20.27
CM-SK-P110608	19.63
CM-SK-P110241	19.63
CM-SK-P110242	19.63
CM-SK-P110384	23.79
CM-SK-P110212	31.59

MOBILE CYLINDER PISTONS



IT (wide) Piston

Material: 65-45-12
Ductile Iron

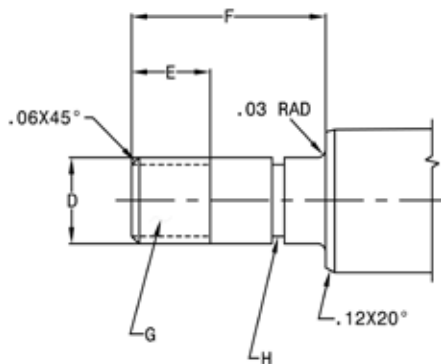


IT (WIDE) PISTON	BORE $+.003''$ $-.003''$	A $+.002''$ $-.000''$	B	LIST PRICE
CM-P110548	2.000	1.001	2.00	\$ 20.93
CM-P110596	2.500	0.751	1.88	26.76
CM-P110121	3.000	1.001	2.00	34.67
CM-P110288	3.500	1.126	2.00	42.22
CM-P110287	4.000	1.126	2.00	51.96
CM-P110537	4.500	1.251	2.00	63.16
CM-P110248	5.000	1.251	2.00	73.60
CM-P110511	5.500	1.251	2.12	91.42
CM-P110249	6.000	1.251	2.12	109.07
CM-P110607	6.000	1.501	2.12	109.07
CM-P110312	7.000	1.751	2.12	154.80
CM-P110479	8.000	2.001	3.12	232.27
CM-P110683	9.000	2.501	4.38	304.57
CM-P110634	10.000	2.500	4.38	372.91

SEAL KIT NUMBER	LIST PRICE
CM-SK-P110548	\$ 26.33
CM-SK-P110596	4.77
CM-SK-P110121	28.29
CM-SK-P110288	27.07
CM-SK-P110287	30.65
CM-SK-P110537	49.26
CM-SK-P110248	39.60
CM-SK-P110511	46.36
CM-SK-P110249	56.66
CM-SK-P110607	58.50
CM-SK-P110312	63.57
CM-SK-P110479	108.87
CM-SK-P110683	388.20
CM-SK-P110634	293.19

*NOTE: P110479 is counter bored for a (-226) Stub O-ring.
P110634 is counter bored for a (-230) Stub O-ring.
P110683 is counter bored for a (-230) Stub O-ring.

Piston Stub Technical Information



"D" = "A" Diameter of Piston, minus 0.001"/0.003"

"E" = Nut Length + 0.25"

"F" = Piston Width "B" minus Counterbore Depth "C" + Nut Length + 0.12"

"G" = Thread Size to be determined by nut used

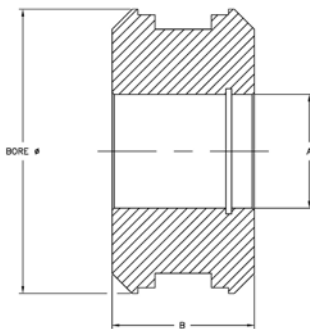
"H" = Located under middle of Piston, 0.098"/0.093" Wide X 0.050"/0.052"
Deep for 1/16 cross section O-ring (000 Series)

Note: Good rule of thumb is to size the stub diameter at least one half the diameter of the rod.

MOBILE CYLINDER PISTONS



Material: 11SMn30-080M46
Equivalent To SAE 1045
And SAE 1215



Mobile Metric Piston

PART NUMBER	BORE	ROD	A	B	LIST PRICE	SEAL KIT NUMBER	LIST PRICE
HCC-MP351540	35.00	20,25	15	40	\$ 10.81	HCC-PK35	\$ 8.18
HCC-MP401540	40.00	20,25	15	40	8.81	HCC-PK40	8.15
HCC-MP451540	45.00	20,25	15	40	11.37	HCC-PK45	8.95
HCC-MP501540	50.00	20,25	15	40	11.56	HCC-PK50	9.31
HCC-MP502050	50.00	30,35	20	50	12.24	HCC-PK50	9.31
HCC-MP552040	55.00	30,35	20	40	12.55	HCC-PK55	12.82
HCC-MP602045	60.00	30,35	20	45	16.56	HCC-PK60	10.39
HCC-MP602445	60.00	40	24	45	17.12	HCC-PK60	10.39
HCC-MP602750	60.00	35,40	27	50	18.18	HCC-PK60	10.39
HCC-MP632050	63.00	30,35	20	50	20.00	HCC-PK63	9.48
HCC-MP632445	63.00	40	24	45	19.62	HCC-PK63	9.48
HCC-MP632750	63.00	35,40	27	50	17.12	HCC-PK63	9.48
HCC-MP633050	63.00	40	30	50	19.44	HCC-PK63	9.48
HCC-MP652050	65.00	30,35	20	50	17.06	HCC-PK65	11.76
HCC-MP652445	65.00	40	24	45	17.94	HCC-PK65	11.76
HCC-MP702050	70.00	30,35	20	50	22.24	HCC-PK70	11.86
HCC-MP702445	70.00	40	24	45	22.06	HCC-PK70	11.86
HCC-MP702750	70.00	35,40,45,50	27	50	21.75	HCC-PK70	11.86
HCC-MP752445	75.00	40	24	45	26.37	HCC-PK75	11.13
HCC-MP752750	75.00	35,40,45,50	27	50	23.00	HCC-PK75	11.13
HCC-MP802445	80.00	40	24	45	27.61	HCC-PK80	12.85
HCC-MP802750	80.00	35,40,45,50	27	50	29.49	HCC-PK80	12.85
HCC-MP803050	80.00	40,50	30	50	26.74	HCC-PK80	12.85
HCC-MP852445	85.00	40	24	45	30.86	HCC-PK85	17.17
HCC-MP852750	85.00	35,40,45,50	27	50	32.30	HCC-PK85	17.17
HCC-MP902750	90.00	35,40,45,50	27	50	32.18	HCC-PK90	17.58
HCC-MP903050	90.00	40,50	30	50	29.81	HCC-PK90	17.58
HCC-MP903350	90.00	50,60	33	50	34.62	HCC-PK90	17.58
HCC-MP1002750	100.00	35,40,45,50	27	50	38.80	HCC-PK100	19.34
HCC-MP1003350	100.00	50,60	33	50	42.80	HCC-PK100	19.34
HCC-MP1004050	100.00	70	40	50	35.92	HCC-PK100	19.34
HCC-MP1103350	110.00	50,60	33	50	48.80	HCC-PK110	20.35
HCC-MP1104050	110.00	70	40	50	48.04	HCC-PK110	20.35
HCC-MP1204050	120.00	70	40	50	65.86	HCC-PK120	23.39
HCC-MP1253350	125.00	50,60	33	50	62.30	HCC-PK125	25.07
HCC-MP1254050	125.00	70	40	50	72.79	HCC-PK125	25.07
HCC-MP1404058	140.00	70	40	58	97.60	HCC-PK140	38.40
HCC-MP1504058	150.00	70	40	58	100.16	HCC-PK150	31.54
HCC-MP1605158	160.00	—	51	58	113.59	HCC-PK160	32.74

All dimensions shown in millimeters.

MOBILE REPAIR PARTS

MOBILE CYLINDER PISTONS

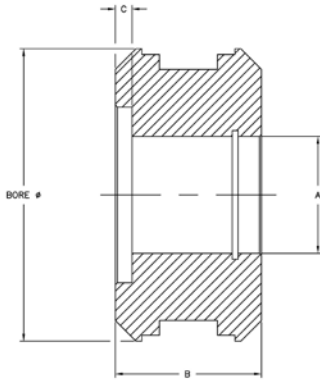
Mobile Metric Piston - Narrow



Material: 11SMn30-080M46
 Equivalent To SAE 1045
 And SAE 1215

PART NUMBER	BORE	ROD	A	B	C	LIST PRICE
HCC-MP401527SP	40.00	N/A	15	27	5	\$ 14.30
HCC-MP502025SP	50.00	N/A	20	25	N/A	17.24
HCC-MP502130SP	50.00	N/A	21	30	5	17.06
HCC-MP602535SP	60.00	N/A	25	35	5	24.81
HCC-MP632535SP	63.00	N/A	25	35	5	26.81
HCC-MP652535SP	65.00	N/A	25	35	5	35.30
HCC-MP702535SP	70.00	N/A	25	35	5	28.74
HCC-MP802840SP	80.00	N/A	28	40	6	36.37
HCC-MP903540SP	90.00	N/A	35	40	6	42.67
HCC-MP1003540SP	100.00	N/A	35	40	6	47.36

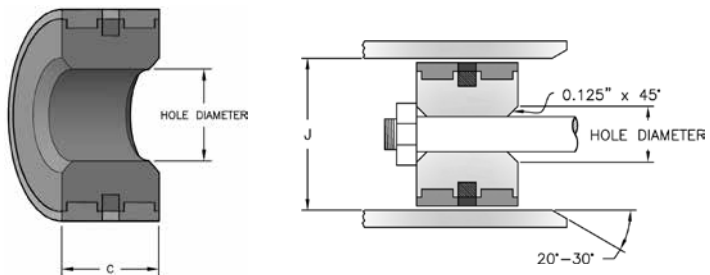
HCC Style Narrow Pistons Include a 5-Piece Piston Seal Assembly, Piston Rod Seal - O-ring, and Threaded Seal - O-ring. All dimensions shown in millimeters.



MOBILE REPAIR PARTS

MOBILE ALL-IN-ONE PISTONS

The John Deere and New Holland All-In-One Pistons are designed to handle a broad range of application parameters. The piston body is machined to exact dimensions and is constructed using four components: a high strength steel body, a non-metallic bearing, a rubber loading ring, and a filled PTFE seal ring. The non-metallic bearing is molded to the piston using a special proprietary process.



SEAL INFORMATION	
MATERIAL	STEEL, NYLON, NBR, PTFE
TEMPERATURE RANGE	-40° TO +230° F
PRESSURE RANGE	0 TO 5,000 PSI
SPEED	3 FT/SEC

Part Number	C Width	I Piston Diameter	J Bore Diameter	Hole Diameter	Counterbore Diameter (mm)	Counterbore Depth (mm)	List Price
JD-AH138200	31.24	49.96	50.00	16.56	25.01 ±0.051	10.01 ±0.25	\$ 106.19
JD-AH174930	31.24	49.96	50.00	20.55	32.02 ±0.051	10.01 ±0.25	108.05
JD-AH233516	31.24	49.96	50.00	16.56	32.02 ±0.051	10.01 ±0.25	106.19
JD-AH135785	31.24	55.88	56.00	16.59	25.01 ±0.051	10.01 ±0.25	139.73
JD-AH137177	31.24	62.97	63.00	22.58	40.01 ±0.051	10.01 ±0.25	134.14
JD-AH142159	31.24	62.97	63.00	20.57	32.02 ±0.051	10.01 ±0.25	104.98
JD-AH160647	31.24	62.97	63.00	22.58	45.02 ±0.051	10.01 ±0.25	134.14
JD-AH166138	31.24	62.97	63.00	22.58	36.00 ±0.051	10.01 ±0.25	130.41
JD-AH228448	31.24	62.97	63.00	24.56	36.00 ±0.051	10.01 ±0.25	79.81
JD-RE29383	31.24	62.97	63.00	22.20	N/A	N/A	136.00
JD-AH158623	36.25	69.85	70.00	24.56	40.01 ±0.051	14.99 ±0.25	108.05
JD-AH165962	36.25	69.85	70.00	27.58	45.01 ±0.051	14.99 ±0.25	195.62
JD-AH172352	36.25	69.85	70.00	22.58	36.00 ±0.051	14.99 ±0.25	137.85
JD-AH227867	36.25	69.85	70.00	27.58	40.01 ±0.051	14.02 ±0.13	108.05
JD-RE34084	36.25	69.85	70.00	24.56	45.01 ±0.051	14.99 ±0.25	195.62
JD-AH139078	29.08	79.86	80.00	24.56	40.01 ±0.051	9.50 ±0.25	173.81
NH-83962807	29.08	79.86	80.00	24.26	40.11 ±0.051	10.01 ±0.25	119.72
NH-87432513	29.08	79.86	80.00	24.26	50.09 ±0.051	14.99 ±0.25	119.72
JD-AH165826	40.74	79.86	80.00	27.58	50.00 ±0.051	14.99 ±0.25	128.59
JD-AH173410	40.74	79.86	80.00	30.58	50.00 ±0.051	14.99 ±0.25	162.07
JD-RE33968	40.74	79.86	80.00	27.58	45.01 ±0.051	19.51 ±0.25	251.49
JD-RE34085	40.74	79.86	80.00	27.58	40.01 ±0.051	19.51 ±0.25	128.59
NH-85800981	29.08	89.87	90.00	24.26	50.09 ±0.051	14.99 ±0.25	133.02
JD-AHC11073	40.13	89.97	90.00	30.58	50.01 ±0.025	14.50 ±0.25	204.88
JD-AH136453	45.75	89.87	90.00	27.58	45.02 ±0.051	19.99 ±0.25	223.56
JD-AH141183	45.75	89.87	90.00	30.58	50.01 ±0.025	19.99 +0.25 - 0.23	198.70
JD-AH169436	45.75	89.87	90.00	30.58	45.02 ±0.051	19.99 ±0.25	288.75
JD-AH169827	45.75	89.87	90.00	26.09	56.02 ±0.051	19.99 ±0.25	214.25
JD-AH205060	45.75	89.87	90.00	30.58	50.01 ±0.025	19.99 +0.25 - 0.23	198.70
JD-AHC10806	40.13	99.97	100.00	30.58	50.01 ±0.025	14.50 ±0.25	258.75
NH-85800982	41.28	99.87	100.00	30.78	56.10 ±0.051	13.97 ±0.25	132.48
JD-AH159034	45.75	99.97	100.00	30.58	50.00 ±0.051	19.99 ±0.25	330.47
JD-AH164620	45.75	99.97	100.00	33.83	50.00 ±0.051	19.99 ±0.25	260.81
JD-AH166637	45.75	99.97	100.00	33.63	56.02 ±0.051	19.99 ±0.25	353.97
JD-AH169826	45.75	99.97	100.00	26.09	50.00 ±0.051	19.99 ±0.25	344.64
JD-AH205062	45.75	99.97	100.00	30.58	50.00 ±0.051	19.99 ±0.25	330.47
NH-81875232	45.09	109.88	110.00	30.25	50.09 ±0.051	9.91 ±0.25	145.30
JD-AHC10777	40.13	114.99	115.00	30.58	50.01 ±0.025	14.50 ±0.25	310.50
NH-85800983	40.31	114.86	115.00	33.76	63.09 ±0.051	10.01 ±0.25	173.67
NH-87611074	40.31	114.86	115.00	33.76	63.09 ±0.051	10.01 ±0.25	173.67
JD-AH168884	45.75	114.96	115.00	36.63	56.02 ±0.051	19.99 ±0.25	288.75
JD-AH167446	55.25	124.97	125.00	36.63	63.00 ±0.051	19.99 ±0.25	419.16
JD-AH173851	63.53	152.32	152.00	42.52	70.00 +0.050 - 0.025	38.00 ±0.25	573.05

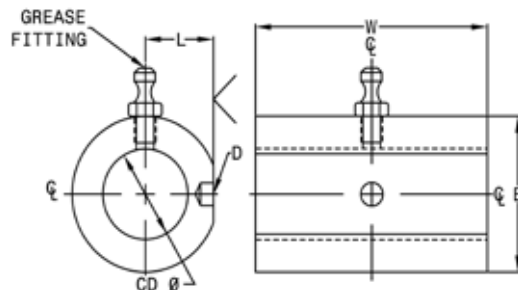
MOBILE REPAIR PARTS

MOBILE MOUNTS



Cross Tube Mount

PART NUMBER	CD	W	B	L	D	LIST PRICE
CM-CT251015	1.00	2.50	1.50	0.69	.250 x .09	\$ 13.25
CM-CT301015	1.00	3.00	1.50	0.69	.250 x .09	13.91
CM-CT351015	1.00	3.50	1.50	0.69	.250 x .09	17.39
CM-CT401015	1.00	4.00	1.50	0.69	.250 x .09	17.64
CM-CT451015	1.00	4.50	1.50	0.69	.250 x .09	20.53
CM-CT271017	1.00	2.75	1.75	0.81	.250 x .15	18.63
CM-CT321017	1.00	3.25	1.75	0.81	.250 x .15	19.54
CM-CT371017	1.00	3.75	1.75	0.81	.250 x .15	20.53
CM-CT421017	1.00	4.25	1.75	0.81	.250 x .15	21.69
CM-CT471017	1.00	4.75	1.75	0.81	.250 x .15	25.09
CM-CT521017	1.00	5.25	1.75	0.81	.250 x .15	26.16
CM-CT271220	1.25	2.75	2.00	0.88	.250 x .15	19.71
CM-CT321220	1.25	3.25	2.00	0.88	.250 x .15	21.11
CM-CT371220	1.25	3.75	2.00	0.88	.250 x .15	24.76
CM-CT421220	1.25	4.25	2.00	0.88	.250 x .15	26.00
CM-CT471220	1.25	4.75	2.00	0.88	.250 x .15	27.49
CM-CT521220	1.25	5.25	2.00	0.88	.250 x .15	28.81
CM-CT601220	1.25	6.00	2.00	0.88	.250 x .15	34.20
CM-CT701220	1.25	7.00	2.00	0.88	.250 x .15	37.09
CM-CT301525	1.50	3.00	2.50	1.13	.250 x .19	23.76
CM-CT421525	1.50	4.25	2.50	1.13	.250 x .19	30.88
CM-CT471525	1.50	4.75	2.50	1.13	.250 x .19	32.79
CM-CT551525	1.50	5.50	2.50	1.13	.250 x .19	39.00
CM-CT601525	1.50	6.00	2.50	1.13	.250 x .19	43.14
CM-CT701525	1.50	7.00	2.50	1.13	.250 x .19	45.71
CM-CT321727	1.75	3.25	2.75	1.25	.250 x .19	31.71
CM-CT471727	1.75	4.75	2.75	1.25	.250 x .19	42.64
CM-CT551727	1.75	5.50	2.75	1.25	.250 x .19	46.37
CM-CT601727	1.75	6.00	2.75	1.25	.250 x .19	52.33
CM-CT701727	1.75	7.00	2.75	1.25	.250 x .19	57.38
CM-CT352030	2.00	3.50	3.00	1.38	.250 x .19	35.77
CM-CT472030	2.00	4.75	3.00	1.38	.250 x .19	47.86
CM-CT552030	2.00	5.50	3.00	1.38	.250 x .19	49.43
CM-CT602030	2.00	6.00	3.00	1.38	.250 x .19	59.95
CM-CT702030	2.00	7.00	3.00	1.38	.250 x .19	66.32



MOBILE MOUNTS

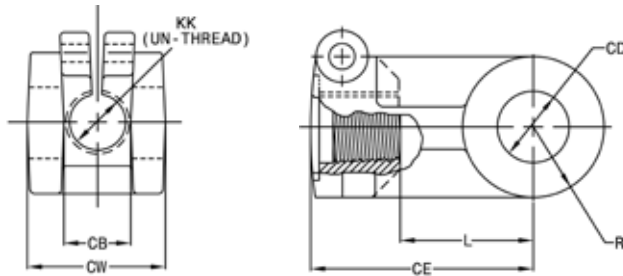


Mobile Split Clevis

PART NUMBER	CB	CD	CE	CW	KK	L	R	LIST PRICE
CM-RC10033	1.12	1.00	3.25	2.62	1-1/16"-12	2.12	1.00	\$ 30.22
CM-RC10034	1.12	1.00	3.25	2.62	1-1/8"-12	2.12	1.00	33.24
CM-RC10035	1.12	1.00	3.25	2.62	1-1/4"-12	2.12	1.00	33.24
CM-RC11312	1.25	1.25	3.25	2.75	1-1/4"-12	2.12	1.25	37.91
CM-RC11412	1.25	1.25	4.00	2.75	1-1/4"-12	2.75	1.25	46.44

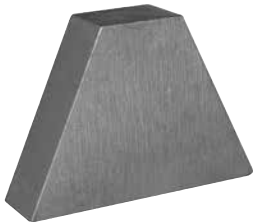
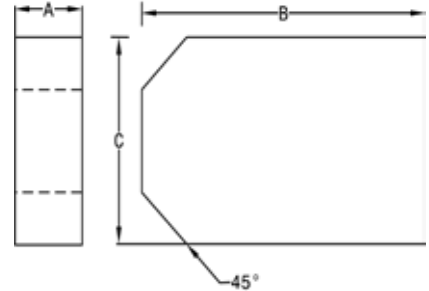
Material: Ductile Iron

Can be used on HTR Cylinders (page 11) or equivalent size cylinders.



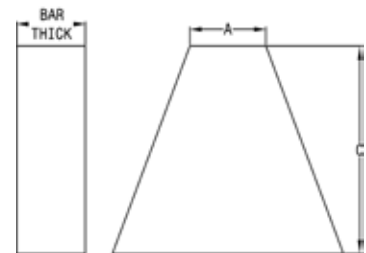
Mounting Ear

PART NUMBER	BAR SIZE	A	B	C	LIST PRICE
CM-ME-100	1/2 x 1-1/4	1/2	1-1/4	1	\$ 4.51
CM-ME-200	5/8 x 2	5/8	2	1-1/2	7.16
CM-ME-300	3/4 x 2-1/2	3/4	2-1/2	2	10.87
CM-ME-400	1 x 3-1/2	1	3-1/2	2-3/4	19.90
CM-ME-500	1-1/4 x 4	1-1/4	4	3-1/2	38.30
CM-ME-600	1-1/4 x 4	1-1/4	4-1/2	4	70.34



Mounting Ear

PART NUMBER	BAR SIZE	A	B	C	LIST PRICE
CM-MEA-100	1/2 x 1-1/4	9/16	1-3/4	1-1/4	\$ 4.78
CM-MEA-200	5/8 x 2	7/8	2-3/4	2	8.65
CM-MEA-300	3/4 x 2-1/2	1-3/8	3-3/4	2-1/2	21.29
CM-MEA-400	1 x 3-1/2	1-3/4	5	3-1/2	30.79
CM-MEA-500	1-1/4 x 4	1-1/4	4	3-1/2	29.43
CM-MEA-600	1-1/4 x 4	1-1/4	6-3/4	4-1/2	87.06



MOBILE REPAIR PARTS

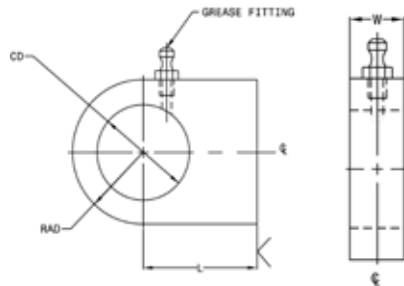
MOBILE WELDED MOUNTS



Welded Base End Spherical Mount

PART NUMBER	CD	L	RAD	W	PIN DIAMETER	DESIGNED SPHERICAL #	MAX PULL AT YIELD	LIST PRICE
CM-WBES-10	1.625	2.00	1.25	0.75	1.00	SB99100	15,000#	\$ 149.11
CM-WBES-12	2.000	2.00	1.50	0.94	1.25	SB99125	20,000#	159.84
CM-WBES-15	2.437	2.50	1.88	1.12	1.50	SB99150	35,000#	209.66
CM-WBES-17	2.812	2.50	2.00	1.31	1.75	SB99175	35,000#	236.88
CM-WBES-20	3.187	2.75	2.38	1.50	2.00	SB99200	55,000#	221.95
CM-WBES-25	3.937	3.25	3.00	1.88	2.50	SB99250	95,000#	295.91

Material: 50K Min. Yield Plate



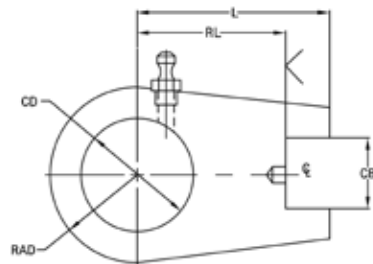
MOBILE REPAIR PARTS



Welded Rod End Spherical Mount

PART NUMBER	CD	L	RAD	W	D	CB	RL	PIN DIAMETER	DESIGNED SPHERICAL #	LIST PRICE
CM-WRES-10	1.625	2.750	1.25	0.75	.250 X .19	1.015	2.12	1.00	SB99100	\$ 138.38
CM-WRES-12	2.000	3.000	1.50	0.94	.250 X .19	1.265	2.25	1.25	SB99125	202.37
CM-WRES-15	2.437	3.250	1.88	1.12	.250 X .19	1.515	2.50	1.50	SB99150	221.95
CM-WRES-17	2.812	3.750	2.00	1.31	.250 X .19	1.515	2.75	1.75	SB99175	226.54
CM-WRES-20	3.187	4.000	2.38	1.50	.250 X .19	2.015	3.00	2.00	SB99200	228.07
CM-WRES-25	3.937	4.750	3.00	1.88	.250 X .19	2.515	3.50	2.50	SB99250	271.76

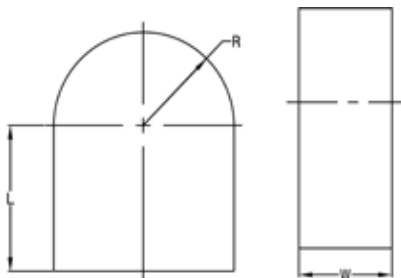
Material: 50K Min. Yield Plate



MOBILE WELDED MOUNTS



Material: A-36 Plate

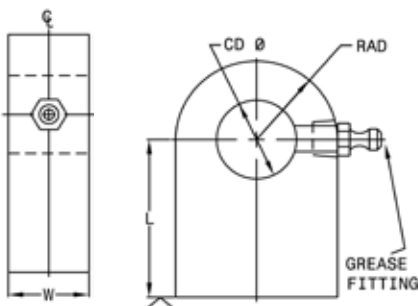


Mounting Lug

PART NUMBER	L	R	W	LIST PRICE
CM-ML296	1.50	1.00	0.50	\$ 9.43
CM-ML297	1.50	1.00	0.62	9.11
CM-ML298	1.50	1.00	0.75	9.99
CM-ML299	1.75	1.25	1.00	13.23
CM-ML301	2.00	1.50	1.00	15.73
CM-ML302	2.50	2.00	1.00	21.27
CM-ML303	1.50	1.00	1.25	14.40
CM-ML304	1.50	1.12	1.50	15.81
CM-ML305	2.00	1.25	1.50	18.46
CM-ML306	1.75	1.50	1.50	19.35
CM-ML307	2.75	1.50	1.50	21.29
CM-ML308	1.75	1.25	2.00	20.43
CM-ML309	2.00	1.50	2.00	24.62
CM-ML310	2.12	1.50	2.00	25.12
CM-ML311	2.25	1.50	2.00	25.78
CM-ML312	3.00	1.50	2.00	30.56
CM-ML313	1.75	1.75	2.00	33.76
CM-ML314	1.88	1.75	2.00	36.57
CM-ML315	2.12	1.75	2.00	35.15
CM-ML316	2.50	1.75	2.00	40.99
CM-ML317	2.75	1.75	2.00	43.28
CM-ML318	3.00	2.00	2.00	51.80
CM-ML319	3.00	2.12	2.00	53.20
CM-ML320	3.12	2.50	2.00	64.00
CM-ML321	2.00	1.12	2.25	25.72
CM-ML322	2.25	1.75	2.25	41.12
CM-ML323	3.00	2.50	2.25	68.24
CM-ML324	3.00	2.50	2.50	71.76
CM-ML325	3.00	2.25	3.00	77.40
CM-ML326	3.00	2.00	3.25	77.40



Material: A-36 Plate



Mounting Lug

PART NUMBER	CD	L	RAD	W	GREASE FITTING	LIST PRICE
CM-ML050100	1.00	2.00	1.00	0.50	N/A	\$ 14.80
CM-ML062100	1.00	2.00	1.00	0.62	N/A	15.87
CM-ML060333	1.00	2.12	1.00	0.75	N/A	16.89
CM-ML100100	1.00	2.00	1.00	1.00	N/A	19.91
CM-ML125100	1.00	2.00	1.00	1.25	1/8" NPT	21.91
CM-ML062125	1.25	2.50	1.25	0.62	N/A	19.91
CM-ML075125	1.25	2.50	1.25	0.75	N/A	23.20
CM-ML100125	1.25	2.50	1.25	1.00	N/A	26.44
CM-ML150125	1.25	2.50	1.25	1.50	1/8" NPT	32.58
CM-ML200125	1.25	2.50	1.25	2.00	1/8" NPT	37.42
CM-ML062150	1.50	2.50	1.50	0.62	N/A	23.20
CM-ML075150	1.50	2.50	1.50	0.75	N/A	26.98
CM-ML150150	1.50	2.50	1.50	1.50	1/8" NPT	39.91
CM-ML200150	1.50	2.50	1.50	2.00	1/8" NPT	47.24
CM-ML250150	1.50	2.50	1.50	2.50	1/8" NPT	56.89
CM-ML200200	2.00	3.00	2.00	2.00	1/8" NPT	69.42
CM-ML250200	2.00	3.00	2.00	2.50	1/8" NPT	79.33

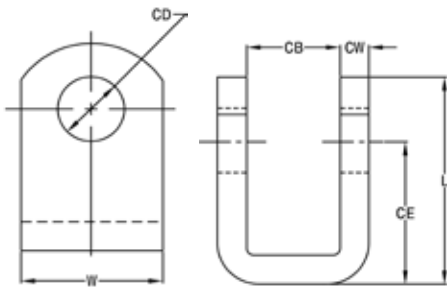
MOBILE REPAIR PARTS

MOBILE WELDED MOUNTS



Formed Clevis

Material: 1040 HF Bar



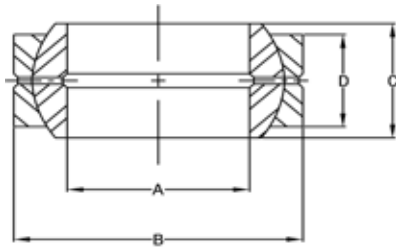
PART NUMBER	CB	CD	CE	CW	L	W	LIST PRICE
CM-CL3011	0.75	0.50	1.50	0.38	2.25	1.25	\$ 28.31
CM-CL7337	1.06	0.75	2.00	0.38	3.12	1.75	31.02
CM-CL6547	1.25	1.00	2.50	0.50	3.62	2.00	43.24
CM-CL8278	0.88	1.00	2.93	0.50	4.06	2.00	43.91
CM-CL323	1.25	1.00	5.06	0.38	6.06	1.75	38.04
CM-B120753	1.50	1.12	2.12	0.50	3.25	2.25	46.27
CM-B120625	1.62	1.25	2.75	0.75	4.00	2.50	56.49
CM-80003	0.50	N/A	N/A	0.38	2.38	1.00	28.31
CM-80010	1.12	N/A	N/A	0.38	3.50	2.00	33.07
CM-B120829	1.50	N/A	N/A	0.50	3.25	2.50	48.31
CM-80001	1.12	N/A	N/A	0.50	4.00	2.00	46.93
CM-B120672	1.50	N/A	N/A	0.50	4.00	3.00	57.33
CM-B120760	1.12	1.00	2.12	0.62	3.38	2.50	48.31
CM-B120756	1.12	N/A	N/A	0.62	4.25	3.00	58.00
CM-80015	1.25	N/A	N/A	0.62	4.62	2.50	39.24
CM-B120613	1.62	N/A	N/A	0.75	4.00	2.50	60.31
CM-B120614	2.12	N/A	N/A	1.00	5.00	3.00	104.49

MOBILE SPHERICAL BEARINGS



Spherical Bearing

PART NUMBER	A	B	C	D	HOUSING DIAMETER	LIST PRICE
CM-SB99062	0.6245/0.6250	1.0625/1.0620	0.547/0.542	0.469/0.464	1.0614/1.0622	\$ 24.53
CM-SB99075	0.7495/0.7500	1.2495/1.2500	0.656/0.651	0.562/0.557	1.2487/1.2497	23.06
CM-SB99100	0.9995/1.0000	1.6250/1.6245	0.875/0.870	0.750/0.745	1.6237/1.6247	20.08
CM-SB99125	1.2495/1.2500	2.0000/1.9995	1.093/1.087	0.937/0.932	1.9985/1.9997	28.98
CM-SB99137	1.3745/1.3750	2.1875/2.1869	1.187/1.182	1.031/1.026	2.1860/2.1872	43.86
CM-SB99150	1.4995/1.5000	2.4375/2.4369	1.312/1.307	1.125/1.120	2.4360/2.4372	37.92
CM-SB99175	1.7495/1.7500	2.8125/2.8119	1.531/1.526	1.312/1.307	2.8110/2.8122	52.05
CM-SB99200	1.9995/2.0000	3.1875/3.1869	1.750/1.745	1.500/1.495	3.1858/3.1871	70.63
CM-SB99225	2.2495/2.2500	3.5625/3.5617	1.969/1.964	1.687/1.682	3.5607/3.5621	96.65
CM-SB99250	2.4994/2.5000	3.9375/3.9367	2.187/2.182	1.875/1.870	3.9357/3.9371	130.87



MOBILE TOP LINK BALL ENDS

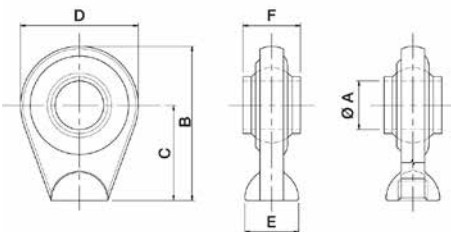


MATERIAL : ST52.3

PLEASE NOTE THAT SIZES ARE EITHER METRIC OR IMPERIAL

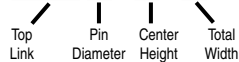
PART NUMBER	CATEGORY	A	B	C	D	E	F	LIST PRICE
HCC-TL19-5030	1	19	77	50	53	25	30	\$ 19.81
HCC-TL19-5044	1	19	75	50	53	25	44	19.08
HCC-TL19-3444*	1	19	67	34	58	30 X 14	44	25.65
HCC-TL19-5551	1	19	82	55	75	35	51	43.33
HCC-TL19-6044	1	19	91	60	62	34	44	21.48
HCC-TL20-5844		20	91	58	62	34	44	28.61
HCC-TL20-6044		20	91	60	62	34	44	14.90
HCC-TL22-5035	1	22	80	50	62	26	35	27.41
HCC-TL22-6551	1	22	103	65	75	38	51	29.53
HCC-TL25-6551-75	2	25.4	103	65	75	38	51	30.83
HCC-TL25-6551-83	2	25.4	107	65	83	50	51	39.43
HCC-TL25-7051	2	25.4	104	70	85	50	51	23.61
HCC-TL35-6535		35	107	65	83	50	35	41.19
HCC-TL40-8575		40	139	85	108	60	75	81.09

* THIS ITEM HAS A RECTANGLE BASE



HERCULES PART NUMBERS

HCC-TL 19 - 50 - 30



MOBILE REPAIR PARTS

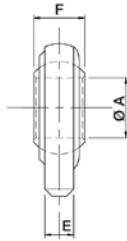
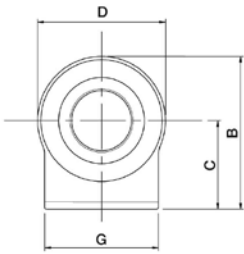
MOBILE LOWER LINK BALL ENDS

Style A

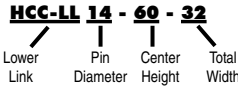


MATERIAL : ST52.3

PART NUMBER	CATEGORY	A	B	C	D	E	F	G	LIST PRICE
HCC-LL14-6032		14.2	83	60	46	11	32	30	\$ 16.94
HCC-LL16-6020		16.2	83	60	46	11	20	30	16.85
HCC-LL19-4535	1	19.2	73	45	65	15	35	50	39.71
HCC-LL22-4535	1	22.1	73	45	65	15	35	50	31.94
HCC-LL25-5035	2	25.4	88	50	76	18	35	70	27.86
HCC-LL28-5535	2	28.2	97	55	83	18	35	70	35.74



HERCULES PART NUMBERS

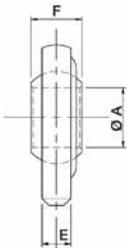
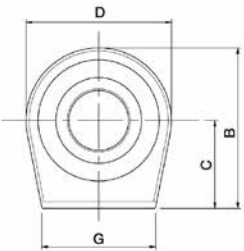


Style B

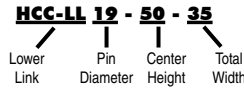


MATERIAL : ST52.3

PART NUMBER	CATEGORY	A	B	C	D	E	F	G	LIST PRICE
HCC-LL19-5035	1	19	84	50	67	18	35	56	\$ 21.94
HCC-LL22-5035	2	22	84	50	67	18	35	56	25.00
HCC-LL22-7535	1	22	109	75	67	18	35	56	25.46
HCC-LL28-8045	2	28.4	120	80	85	18	45	70	55.64
HCC-LL28-8035	2	28.4	120	80	85	18	35	70	35.65



HERCULES PART NUMBERS

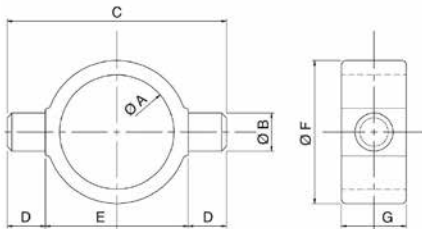


MOBILE REPAIR PARTS

WELDABLE TRUNNIONS

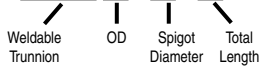


MATERIAL : STEEL- FE 501C / FE 510 - UNI 6659



HERCULES PART NUMBERS

HCC-WT 45 - 20 - 90



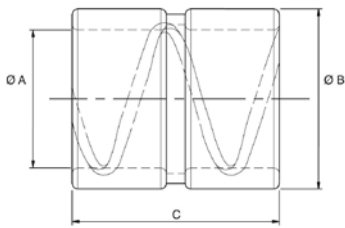
PART NUMBER	A	B	C	D	E	F	G	LIST PRICE
HCC-WT452090	45	20	90	15	60	60	24	\$ 55.55
HCC-WT5020110	50	20	110	20	70	65	30	78.97
HCC-WT502595	50	25	95	15	65	65	29	66.00
HCC-WT5525100	55	25	100	15	70	70	29	62.21
HCC-WT6025130	60	25	130	25	80	75	35	92.02
HCC-WT6030115	60	30	115	20	75	75	34	70.73
HCC-WT6530120	65	30	120	20	80	80	34	75.45
HCC-WT7030130	70	30	130	20	90	90	34	129.05
HCC-WT7030160	70	30	160	30	100	90	45	133.03
HCC-WT7335145	73	35	145	25	95	95	44	145.99
HCC-WT7535150	75	35	150	25	100	100	44	119.15
HCC-WT8035150	80	35	150	25	100	100	44	112.94
HCC-WT8035180	80	35	180	35	110	100	50	158.30
HCC-WT8040165	80	40	165	30	105	105	54	132.01
HCC-WT8540165	85	40	165	30	105	105	54	152.29
HCC-WT9045190	90	45	190	35	120	120	58	193.48
HCC-WT9545190	95	45	190	35	120	120	58	190.06
HCC-WT10045200	100	45	200	35	130	130	58	271.89
HCC-WT10545200	105	45	200	35	130	130	58	271.89
HCC-WT11550225	115	50	225	40	145	145	68	218.48
HCC-WT12050225	120	50	225	40	145	145	68	304.85
HCC-WT12550235	125	50	235	40	155	155	68	367.61
HCC-WT13050235	130	50	235	40	155	155	68	367.61

MOBILE REPAIR PARTS

STEEL BUSHINGS

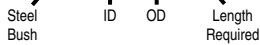


MATERIAL : E410 (EN 10305-1)
HARDNESS: HRC 58-62, 0.8-1 MM DEPTH



HERCULES PART NUMBERS

HCC-SPB 30 - 40 - 30



PART NUMBER	Ø A	Ø B	C	LIST PRICE
HCC-SPB30-40-30	30	40	30	\$ 32.03
HCC-SPB30-40-35	30	40	35	31.57
HCC-SPB30-40-40	30	40	40	35.18
HCC-SPB30-40-50	30	40	50	36.38
HCC-SPB35-45-30	35	45	30	32.58
HCC-SPB35-45-35	35	45	35	43.14
HCC-SPB35-45-40	35	45	40	32.41
HCC-SPB35-45-60	35	45	60	40.46
HCC-SPB40-50-30	40	50	30	35.55
HCC-SPB40-50-35	40	50	35	34.81
HCC-SPB40-50-40	40	50	40	37.22
HCC-SPB40-50-50	40	50	50	41.10
HCC-SPB40-50-60	40	50	60	38.79
HCC-SPB45-55-30	45	55	30	32.50
HCC-SPB45-55-50	45	55	50	39.07
HCC-SPB50-60-40	50	60	40	46.75
HCC-SPB50-60-50	50	60	50	42.22
HCC-SPB50-60-80	50	60	80	58.60
HCC-SPB60-70-50	60	70	50	48.23
HCC-SPB60-70-60	60	70	60	58.79
HCC-SPB60-75-40	60	75	40	99.79
HCC-SPB60-75-50	60	75	50	66.10
HCC-SPB60-75-60	60	75	60	91.00
HCC-SPB60-75-70	60	75	70	96.28
HCC-SPB60-75-80	60	75	80	103.78
HCC-SPB65-80-70	65	80	70	100.82
HCC-SPB70-85-70	70	85	70	107.75
HCC-SPB70-85-80	70	85	80	109.70
HCC-SPB75-90-80	75	90	80	139.51
HCC-SPB75-90-100	75	90	100	154.14

MOBILE REPAIR PARTS

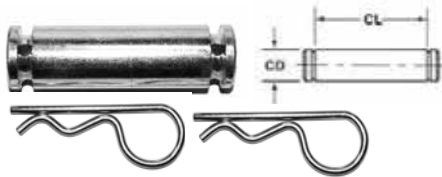
MOBILE WELDED PIVOT PINS AND CLIPS



Material: Steel, Plated Surface
Includes 2 External Hair Pin Clips

Mobile Pivot Pin and Hair Pin Clips

PART NUMBER	DESCRIPTION	CD	CL	LIST PRICE
HCW-1.0X2.83 PIN ASSY	HCW PIN-CLIP ASSEMBLY	1	2.33	\$ 9.54
HCW-1.0X3.23 PIN ASSY	HCW PIN-CLIP ASSEMBLY	1	2.33	9.54
HTR-1.0X3.50 PIN ASSY	HTR PIN-CLIP ASSEMBLY	1	2.86	9.83
HTR-1.0X4.41 PIN ASSY	HTR PIN-CLIP ASSEMBLY	1	3.77	10.18



Material: Steel, Plated Surface
Includes 2 R-Clips

Mobile Pivot Pin and R-Clips

PART NUMBER	DESCRIPTION	CD	CL	LIST PRICE
HSTR-1.0X2.83 PIN ASSY	HSTR PIN-CLIP ASSEMBLY	1	2.83	\$ 12.82
HSTR-1.0X3.25 PIN ASSY	HSTR PIN-CLIP ASSEMBLY	1	3.25	12.82
HSTR-1.25X3.31 PIN ASSY	HSTR PIN-CLIP ASSEMBLY	1.25	3.31	16.85



Does not include Hair Pin Clips

Mobile Pivot Pins

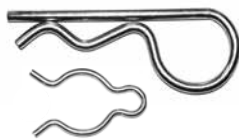
PART NUMBER	DESCRIPTION	CD	CL	LIST PRICE
HCW-1.0X2.83PIN	1.0 X 2.83	1	2.33	\$ 6.67
HCW-1.0X3.23PIN	1.0 X 3.23	1	2.73	6.67
HTR-1.0X3.50PIN	1.0 X 3.50	1	2.86	6.96
HTR-1.0X4.41PIN	1.0 X 4.41	1	3.77	7.31



Does not include R Clips

Mobile Pivot Pins

PART NUMBER	DESCRIPTION	CD	CL	LIST PRICE
HSTR-1.0X2.83 PIN	1.0 X 2.83	1	2.83	\$ 9.95
HSTR-1.0X3.25 PIN	1.0 X 3.25	1	3.25	9.95
HSTR-1.25X3.31 PIN	1.25 X 3.31	1	3.31	13.97
PMC-190400001	1.0 X 2.125 (PRINCE)	1	2.12	16.85
PMC-1904000035	1.0 X 3.25 (PRINCE)	1	3.25	37.66



Mobile Clips

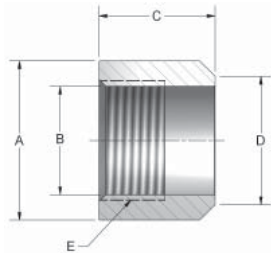
PART NUMBER	DESCRIPTION	LIST PRICE
HCW-CLIP	HCW-HTR HAIR PIN CLIP	\$ 1.44
HTR-CLIP	HCW-HTR HAIR PIN CLIP	1.44
HSTR-CLIP	HSTR R-CLIP	1.44
PMC-190600003	PMC R-CLIP (PRINCE)	1.44

PORTS/LOCK NUTS

MOBILE REPAIR PARTS



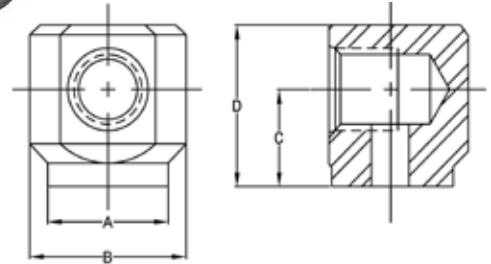
O-ring Boss Half Coupling Port



PART NUMBER	PORT SIZE	A	B	C	D	E	LIST PRICE
CM-PO65304	#4 SAE	0.88	0.389	1.00	0.570	7/16-20	\$ 9.62
CM-PO65305	#5 SAE	0.88	0.453	0.75	0.880	1/2-20	11.15
CM-PO65306	#6 SAE	1.00	0.508	1.00	0.690	9/16-18	9.98
CM-PO65308	#8 SAE	1.25	0.689	1.06	0.870	3/4-16	10.35
CM-PO65310	#10 SAE	1.38	0.806	1.06	0.990	7/8-14	10.22
CM-PO65312	#12 SAE	1.50	0.981	1.28	1.160	1 1/16-12	14.41
CM-PO65314	#14 SAE	1.63	1.106	1.25	1.290	1 3/16-12	16.89
CM-PO65316	#16 SAE	1.75	1.231	1.28	1.410	1 5/16-12	20.77
CM-PO65320	#20 SAE	2.25	1.544	1.28	1.720	1 5/8-12	27.31
CM-PO65324	#24 SAE	2.75	1.794	1.28	1.980	1 7/8-12	42.76

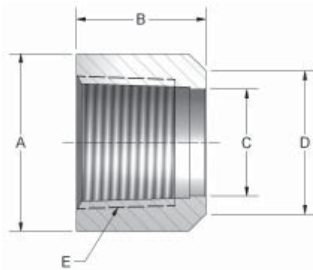


O-ring Boss 90 Degree Port



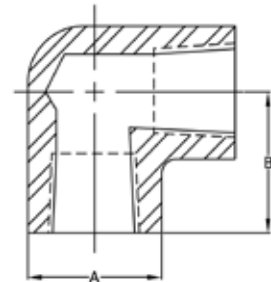
PART NUMBER	BAR SIZE	A	B	C	D	LIST PRICE
CM-PO65604	#4 SAE	0.75	1.12	0.75	1.12	\$ 22.05
CM-PO65606	#6 SAE	0.87	1.25	0.81	1.25	23.90
CM-PO65608	#8 SAE	1.25	1.62	1.00	1.62	26.15
CM-PO65610	#10 SAE	1.25	1.75	1.12	1.88	30.21
CM-PO65612	#12 SAE	1.50	2.12	1.19	2.00	43.65
CM-PO65616	#16 SAE	1.50	2.25	1.25	2.38	58.08

Pipe Thread Half Coupling



PART NUMBER	PORT SIZE	A	B	C	D	E	LIST PRICE
CM-PO65025	1/4" NPT	0.88	1.06	.391	.570	1/4-18	\$ 3.26
CM-PO65037	3/8" NPT	1.00	1.00	.520	.690	3/8-18	3.35
CM-PO65050	1/2" NPT	1.25	1.06	.650	.870	1/2-14	4.50
CM-PO65075	3/4" NPT	1.50	1.28	.850	1.160	3/4-14	4.98
CM-PO65100	1" NPT	1.75	1.28	1.050	1.410	1-11.5	9.98
CM-PO65125	1-1/4" NPT	2.25	1.28	1.420	1.720	1 1/4-11.5	17.82
CM-PO65150	1-1/2" NPT	2.75	1.28	1.560	1.980	1 1/2-11.5	21.39

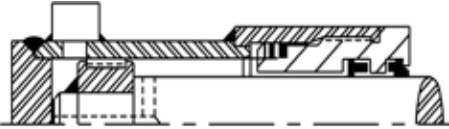
Pipe Thread 90 Degree Port



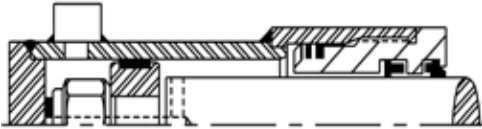
PART NUMBER	PORT SIZE	A	B	LIST PRICE
CM-PO65225	1/4" NPT	0.75	1.00	\$ 13.57
CM-PO65237	3/8" NPT	0.88	1.00	20.22
CM-PO65250	1/2" NPT	1.12	1.25	30.20
CM-PO65275	3/4" NPT	1.38	1.38	34.44
CM-PO652751	1" NPT	1.75	1.62	37.65

DISPLACEMENT CYLINDER COMPONENTS

Displacement Cylinder Components



WELDED STYLE PISTON

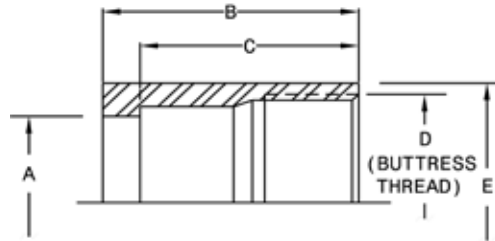


LOCK NUT STYLE PISTON

PISTON DIA.	ROD DIA.	HEAD NUMBER	COLLAR NUMBER	PISTON NUMBER
2.0	1.5	H107463	C132392	P110539
2.5	2.0	H107359	C132463	P110540
3.0	2.5	H107462	C132464	P110541
3.5	3.0	H107525	C132454	P110542
4.0	3.5	H107528	C132465	P110543

NOTE:
SEE IT MOBILE GLANDS, PAGE 40 - 42

Collar

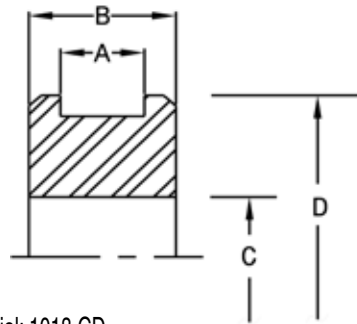


Material: 1026 DOM

PART NUMBER	A	B	C	D	E	LIST PRICE
CM-C132392	2.311	2.44	2.06	2-3/4"-12	3.00	\$ 275.64
CM-C132463	2.940	2.38	2.12	3-1/4"-12	3.50	233.19
CM-C132464	3.436	2.50	2.25	3-3/4"-12	4.00	173.34

* Reference Only

Piston



Material: 1018 CD

PART NUMBER	A	B	C	D	E	LIST PRICE
CM-P110539	0.50	0.75	0.876	1.95	SK-P110539	\$ 66.26
CM-P110540	0.50	0.75	1.126	2.45	SK-P110540	61.92
CM-P110541	0.75	1.12	1.501	2.95	SK-P110541	98.78
CM-P110542	0.75	1.12	1.751	3.45	SK-P110542	*

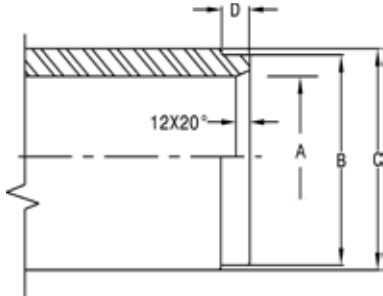
* Reference Only

MOBILE REPAIR PARTS

DISPLACEMENT CYLINDER TECHNICAL INFORMATION

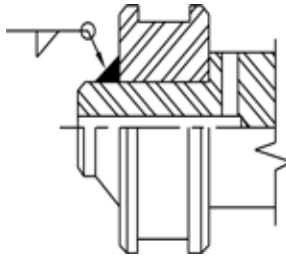
MOBILE REPAIR PARTS

Barrel Machining



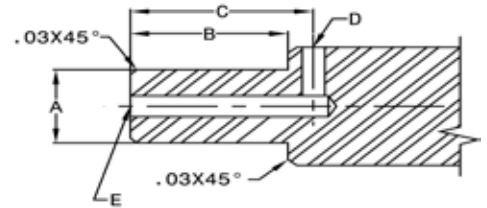
COLLAR NUMBER	A +.003" -.003	B +.001" -.001	C	D	LIST PRICE
CM-C132392	2.000	2.308	2.50	0.38	\$ 275.64
CM-C132463	2.500	2.937	3.00	0.25	233.19
CM-C132464	3.000	3.433	3.50	0.25	173.34

Piston Welding



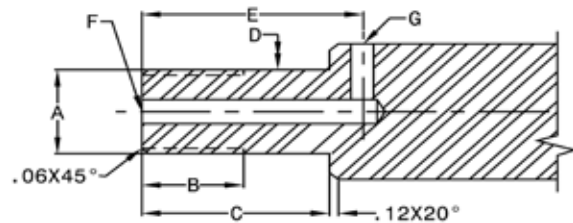
PISTON NUMBER	WELD SIZE	LIST PRICE
CM-P110539	1/4"	\$ 66.26
CM-P110540	1/4"	61.92
CM-P110541	5/16"	98.78
CM-P110542	3/8"	*

Stub (Welded Style)



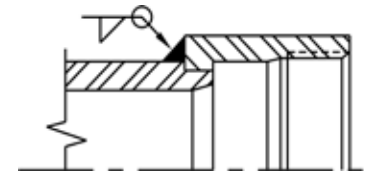
PISTON NUMBER	A +.001" -.001	B	C	D Dia. Drill x Depth	E Dia. Drill x Depth	LIST PRICE
CM-P110539	0.874	1.12	1.31	0.25 x 0.75	0.25 x 1.44	\$ 66.26
CM-P110540	1.124	1.12	1.38	0.31 x 1.00	0.31 x 1.50	61.92
CM-C110541	1.499	1.56	1.81	0.31 x 1.25	0.31 x 2.00	*
CM-C110542	1.749	1.62	1.88	0.38 x 1.50	0.38 x 2.00	*
CM-C110543	2.499	1.62	1.88	0.38 x 1.75	0.38 x 2.00	*

Stub (Lock Nut Style)



PISTON NUMBER	A UN-THD	B	C	D +.001 -.001	E	F Dia. Drill x Depth	G Dia. Drill x Depth	LOCK NUT NUMBER
CM-P110539	7/8"-14	1.25	1.88	0.874	2.12	0.25 x 2.25	0.25 x 0.75	LN45087
CM-P110540	1-1/8"-12	1.44	2.06	1.124	2.38	0.31 x 2.56	0.31 x 1.00	LN45112
CM-P110541	1-1/2"-12	1.88	2.88	1.499	3.19	0.31 x 3.38	0.31 x 1.25	LN45151
CM-P110542	1-3/4"12	1.75	2.75	1.749	3.06	0.38 x 3.31	0.31 x 1.50	LN45175

Collar Welding



COLLAR NUMBER	WELD SIZE	LIST PRICE
CM-C132392	1/4"	\$ 275.64
CM-C132463	1/4"	233.19
CM-C132464	1/4"	173.34

* Reference Only

Industrial Repair Parts

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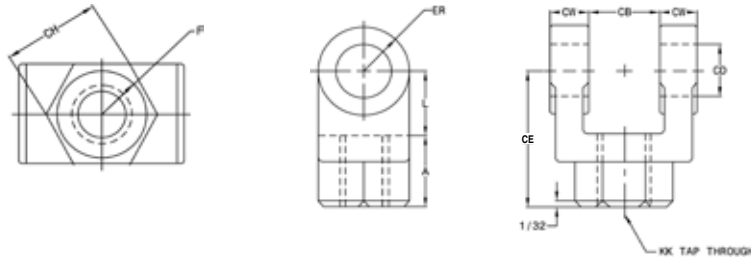
INDUSTRIAL MOUNTS



Rod Clevis

Material: 05, 07, 10
Forging 13 & Up Ductile
Iron Casting

PART NUMBER	CB	CD	CE	CH	CW	F	L	A	KK	ER	LIST PRICE
CM-RC0500	0.765	1/2	1-1/2	1	1/2	1	3/4	3/4	7/16"-20	1/2	\$ 18.99
CM-RC0750	1.265	3/4	2-3/8	1-1/4	5/8	1-1/4	1-1/4	1-1/8	3/4"-16	3/4	40.43
CM-RC1000	1.515	1	3-1/8	1-1/2	3/4	1-1/2	1-1/2	1-5/8	1"-14	1	65.70
CM-RC1375	2.032	1-3/8	4-1/8	2	1	2	2-1/8	2	1-1/4"-12	1-3/8	132.83
CM-RC1750	2.531	1-3/4	4-1/2	2-3/8	1-1/4	2-3/8	2-1/4	2-1/4	1-1/2"-12	1-3/4	162.89
CM-RC2000	2.531	2	5-1/2	2-15/16	1-1/4	2-15/16	2-1/2	3	1-7/8"-12	2	267.60
CM-RC2500	3.032	2-1/2	6-1/2	3-1/2	1-1/2	3-1/2	3	3-1/2	2-1/4"-12	2-1/2	360.73
CM-RC3000	3.032	3	6-3/4	3-7/8	1-1/2	3-7/8	3-1/4	3-1/2	2-1/2"-12	2-3/4	608.57
CM-RC3500	4.032	3-1/2	8-1/2	5	2	5	4	4-1/2	3-1/4"-12	3-1/2	816.09
CM-RC4000	4.532	4	10	6-1/8	2-1/4	6-1/8	4-1/2	5-1/2	4"-12	4	1395.93



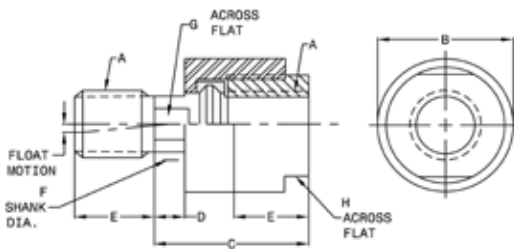
Alignment Coupler



1/16 Radial Float 2°
Spherical Motion

ALIGNMENT COUPLER	A	B	C	D	E	F	G	H	MAX PULL YIELD	LIST PRICE
CM-BD-437	7/16"-20	1-1/4	2	1/2	3/4	5/8	1/2	1	10,000	\$ 82.16
CM-BD-500	1/2"-20	1-1/4	2	1/2	3/4	5/8	1/2	1	14,000	82.16
CM-BD-625	5/8"-18	1-1/4	2	1/2	3/4	5/8	1/2	1	19,000	97.42
CM-BD-750	3/4"-16	1-3/4	2-5/16	1/2	1-1/8	31/32	13/16	1-1/2	34,000	74.11
CM-BD-875	7/8"-14	1-3/4	2-5/16	1/2	1-1/8	31/32	13/16	1-1/2	39,000	112.72
CM-BD-1000	1"-14	2-1/2	2-15/16	1/2	1-5/8	1-3/8	1-5/32	2-1/4	64,000	149.46
CM-BD-1250	1-1/4"-12	2-1/2	2-15/16	1/2	1-5/8	1-3/8	1-5/32	2-1/4	78,000	227.32
CM-BD-1500	1-1/2"-12	3-1/4	4-3/8	13/16	2-1/4	1-3/4	1-1/2	3	134,000	396.78
CM-BD-1750	1-3/4"-12	3-1/4	4-3/8	13/16	2-1/4	1-3/4	1-1/2	3	134,000	396.50
CM-BD-1875	1-7/8"-12	3-3/4	5-7/16	7/8	3	2	1-7/8	3-1/2	240,000	538.41

NOTE: Metric Thread Sizes Also Available



INDUSTRIAL REPAIR PARTS

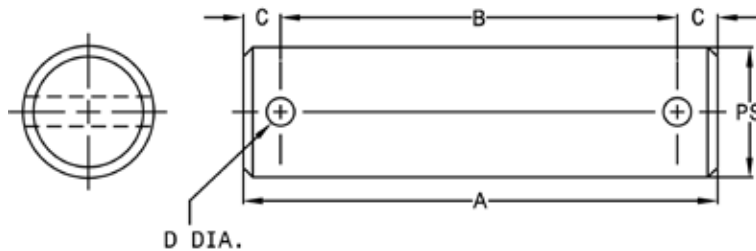
INDUSTRIAL MOUNTS

Pivot Pin



Material: 1144 Steel Nitrotec
Treated Surface

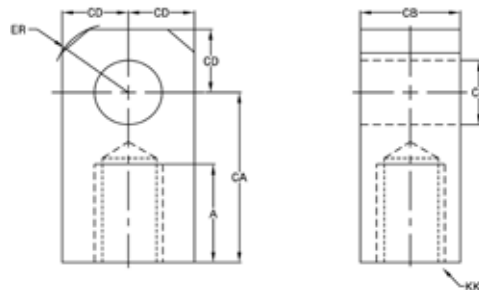
PART NUMBER	PIN SIZE	A	B	C	D	LIST PRICE
CM-PP0500	0.500	2.281	1.938	0.172	0.106	\$ 5.82
CM-PP0750	0.750	3.094	2.719	0.188	0.140	6.73
CM-PP1000	1.000	3.594	3.219	0.188	0.140	15.93
CM-PP1375	1.375	4.656	4.250	0.203	0.173	25.45
CM-PP1750	1.750	5.656	5.250	0.203	0.173	40.39
CM-PP2000	2.000	5.719	5.281	0.219	0.204	49.00
CM-PP2500	2.500	6.781	6.313	0.234	0.219	114.25



Material: 05 thru
13, C.F. Bar
Material: 17 thru
40, Steel Plate

Rod Eyes

PART NUMBER	A	CA	CB	CD	ER	KK	LIST PRICE
CM-RE0500	3/4	1-1/2	3/4	1/2	5/8	7/16"-20	\$ 16.94
CM-RE0750	1-1/8	2-1/16	1-1/4	3/4	7/8	3/4"-16	31.90
CM-RE1000	1-5/8	2-13/16	1-1/2	1	1-3/16	1"-14	52.23
CM-RE1375	2	3-7/16	2	1-3/8	1-9/16	1-1/4"-12	98.42
CM-RE1750	2-1/4	4	2-1/2	1-3/4	2	1-1/2"-12	127.31
CM-RE2000	3	5	2-1/2	2	2-1/2	1-7/8"-12	295.60
CM-RE2500	3-1/2	5-13/16	3	2-1/2	2-13/16	2-1/4"-12	432.03



INDUSTRIAL REPAIR PARTS

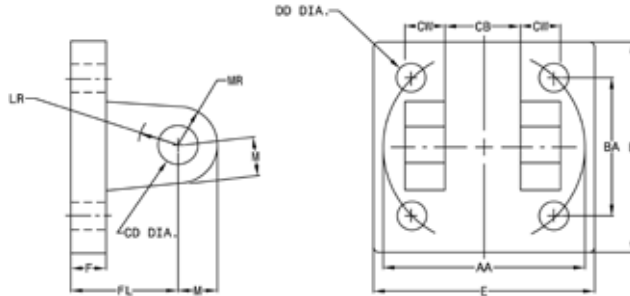
INDUSTRIAL MOUNTS



Clevis Bracket

PART NUMBER	AA	BA	CB	CD	CW	DD	E	F	FL	LR	M	MR	LIST PRICE
CM-BDCB-07	3.6	2-9/16	1.265	3/4	5/8	1/2"-20	3-1/2	5/8	1-7/8	1-1/16	3/4	1-1/16	\$ 113.86
CM-BDCB-10	4.6	3-1/4	1.515	1	3/4	5/8"-18	4-1/2	3/4	2-1/4	1-1/4	1	1-1/8	191.01
CM-BDCB-13	5.4	3-13/16	2.032	1-3/8	1	5/8"-18	5	7/8	3	7/8	1-3/8	1-3/4	322.55
CM-BDCB-20	8.2	5-3/4	2.531	2	1-1/4	1"-14	7-1/2	1	3-12	2-1/8	2	2-1/8	636.20

Material: Forging, Weldment, or Ductile Iron

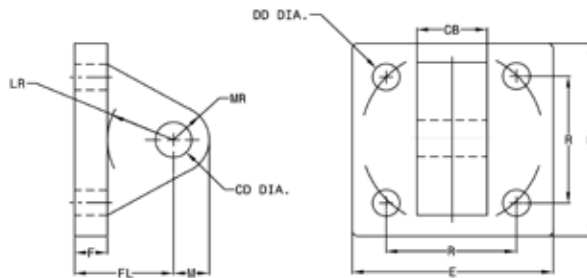


Eye Bracket



PART NUMBER	CB	CD	DD	E	F	FL	LR	M	MR	R	LIST PRICE
CM-BDEB-05	3/4	1/2	13/32	2-1/2	3/8	1-1/8	3/4	1/2	9/16	1.63	\$ 28.89
CM-BDEB-07	1-1/4	3/4	17/32	3-1/2	5/8	1-7/8	1-1/4	3/4	7/8	2.56	53.40
CM-BDEB-10	1-1/2	1	21/32	4-1/2	3/4	2-1/4	1-1/2	1	1-1/4	3.25	87.17
CM-BDEB-13	2	1-3/8	21/32	5	7/8	3	2-1/8	1-3/8	1-5/8	3.81	149.82
CM-BDEB-17	2-1/2	1-3/4	29/32	6-1/2	7/8	3-1/8	2-1/4	1-3/4	2-1/8	4.95	295.42
CM-BDEB-20	2-1/2	2	1-1/16	7-1/2	1	3-1/2	2-1/2	2	2-7/16	5.75	516.52
CM-BDEB-25	3	2-1/2	1-3/16	8-1/2	1	4	3	2-1/2	3	6.59	666.54
CM-BDEB-30	3	3	1-5/16	9-1/2	1	4-1/4	3-1/4	3	3-1/4	7.50	809.83
CM-BDEB-40	4-1/2	4	2-1/16	14-7/8	1-15/16	6-7/16	4-1/2	4	5-1/4	11.50	3532.05

Material: Forging, Weldment, or Ductile Iron



INDUSTRIAL REPAIR PARTS

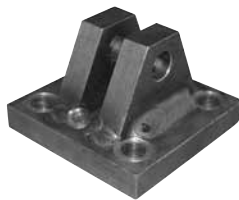
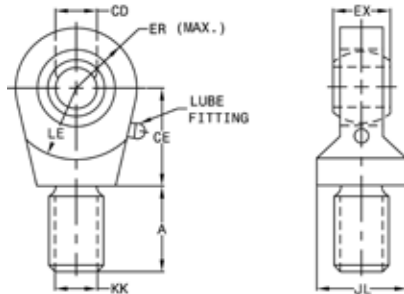
INDUSTRIAL MOUNTS



Spherical Rod Eye

PART NUMBER	CD	A	CE	EX	ER	LE	KK	JL REF	LOAD CAP	SPACER WIDTH	LIST PRICE
CM-RES-05	0.500	11/16	7/8	7/16	7/8	3/4	7/16"-20	7/8	2,600	0.150	\$ 104.41
CM-RES-07	0.750	1	1-1/4	21/32	1-1/4	1-1/16	3/4"-16	1-5/16	9,400	0.250	130.71
CM-RES-10	1.000	1-1/2	1-7/8	7/8	1-3/8	1-7/16	1"-14	1-1/2	16,800	0.250	140.12
CM-RES-13	1.375	2	2-1/8	1-3/16	1-13/16	1-7/8	1-1/4"-12	2	28,600	0.375	198.43
CM-RES-17	1.750	2-1/8	2-1/2	1-17/32	2-3/16	2-1/8	1-1/2"-12	2-1/4	43,000	0.416	459.37
CM-RES-20	2.000	2-7/8	2-3/4	1-3/4	2-5/8	2-1/2	1-7/8"-12	2-3/4	70,000	0.375	613.50

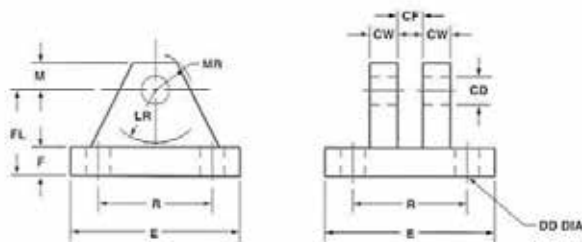
Material: Forging,
Weldment, or Ductile Iron



Spherical Clevis Brackets

PART NUMBER	E	F	M	R	CD	CF	CW	DD	FL	LR	MR	LIST PRICE
CM-CBS-0500	3.00	.50	.50	2.05	.500	.44	.50	.41	1.50	.94	.62	\$ 107.78
CM-CBS-0750	3.75	.62	.88	2.76	.750	.66	.62	.53	2.00	1.38	1.00	172.46
CM-CBS-1000	5.50	.75	1.00	4.10	1.000	.88	.75	.53	2.50	1.69	1.19	215.55
CM-CBS-1375	6.50	.88	1.38	4.95	1.375	1.19	1.00	.66	3.50	2.44	1.62	323.33
CM-CBS-1750	8.50	1.25	1.75	6.58	1.750	1.53	1.25	.91	4.50	2.88	2.06	609.04

Material: Steel Weldment



INDUSTRIAL REPAIR PARTS

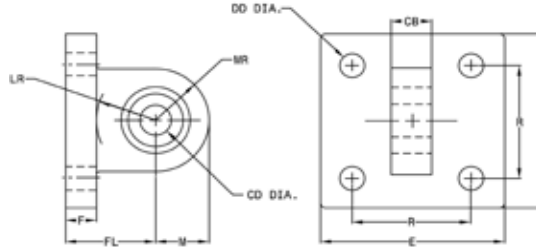
INDUSTRIAL MOUNTS AND PIVOT PINS



Spherical Eye Bracket

PART NUMBER	CB	CD	DD	E	F	FL	LR	M	MR	R	LIST PRICE
CM-BDS-07	3/4	3/4	17/32	3-1/2	5/8	1-7/8	1-1/4	1-3/16	1-3/16	2.56	\$ 409.51
CM-BDS-10	1	1	21/32	4-1/2	3/4	2-1/4	1-1/2	1-3/8	1-3/8	3.25	327.76
CM-BDS-13	1-3/8	1-3/8	21/32	5	7/8	3	2-1/8	2	2	3.81	532.10

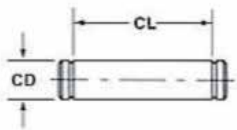
Material: Forging,
Weldment, or Ductile Iron



Pivot Pins for Spherical Clevis Brackets

PART NUMBER	CD	CL	LIST PRICE
CM-PPS0500	.4997-.0004	1 9/16	\$ 9.14
CM-PPS0750	.7497-.0005	2.1/32	14.15
CM-PPS1000	.9997-.0005	2 1/2	19.63
CM-PPS1375	1.3746-.0006	3 5/16	33.72
CM-PPS1750	1.7496-.0006	4 7/32	66.47
CM-PPS2000	1.9996-.0007	4 15/16	128.32

Material: CD1144
- Close tolerance on pin diameter



INDUSTRIAL REPAIR PARTS

Repair Accessories

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ACCESSORIES



SPECIFICATIONS:

- Black epoxy coated metal shroud with Polyamid sight tube
- Suitable for use with mineral and petroleum based hydraulic fluids, lubricants and gasoline
- Maximum operating temperature 194°F (90°C)
- Thermometer calibration from -20°F to 180°F (-10°C to 80°C)
- SNA 076 has M10 bolts as standard
- SNA 127, SNA 254 has M12 bolts as standard
- Tightening torque 70"lb (7.9Nm)

Fluid Level Gauges



PART NUMBER	DESCRIPTION	LIST PRICE
STF-SNA076BS0-10	FLUID LEVEL GAUGE 3" long without thermometer	\$ 16.55
STF-SNA076BST-10	FLUID LEVEL GAUGE 3" long with thermometer	20.92
STF-SNA127BST-12	FLUID LEVEL GAUGE 5" long with thermometer	18.69
STF-SNA127BN012	FLUID LEVEL GAUGE 5" long without thermometer	21.69

SPECIFICATIONS:

- Chrome-Plated Metal Cap
- Cork Gaskets
- Air Flow to 25cfm

Filler Breather



PART NUMBER	DESCRIPTION	LIST PRICE
STF-SES6-P-40-N06	FILLER BREATHER WEATHER PROOFED MINI 40 MICRON 3/8" NPT	\$ 10.96
STF-SES3-P-40-S80	FILLER BREATHER WEATHER PROOFED 40 MICRON 80MM LONG BASKET	13.55
STF-SES3-40-S80	FILLER BREATHER 40 MICRON 80MM LONG BASKET	12.46
STF-SES3L-40-S80	FILLER BREATHER LOCKING TAB 40 MICRON 80MM LONG BASKET	18.46
STF-SES3-40-S150	FILLER BREATHER 40 MICRON 150MM LONG BASKET	17.84
STF-SES6-40-N04	FILLER BREATHER MINI 40 MICRON 1/4" NPT	8.92
STF-SES6-40-N06	FILLER BREATHER MINI 40 MICRON 3/8" NPT	8.54
STF-SES5-40-N12	FILLER BREATHER 40 MICRON 3/4" NPT	12.29

ACCESSORIES



Pressure Gauges



SPECIFICATIONS:

- Copper alloy bourden tube
- Dual scales
- Built in relief valve
- Operating temperatures
Ambient - 4°F to 140°F (-20°C to 60°C)
Media 150°F (+60°C)
- Acrylic lens
- Accuracy = 1.5% of full scale
- Built in snubber

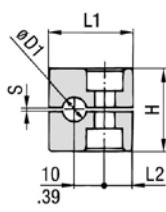
PART NUMBER	DESCRIPTION	LIST PRICE
STF-SPG-63-3030S	PRESSURE GAUGE 2.5" 30" HG - 30 PSI BOTTOM MOUNT	\$ 22.97
STF-SPG-63-100S	PRESSURE GAUGE 2.5" 100 PSI BOTTOM MOUNT	22.97
STF-SPG-63-160S	PRESSURE GAUGE 2.5" 160 PSI BOTTOM MOUNT	22.97
STF-SPG-63-500S	PRESSURE GAUGE 2.5" 500 PSI BOTTOM MOUNT	22.97
STF-SPG-63-600S	PRESSURE GAUGE 2.5" 600 PSI BOTTOM MOUNT	22.97
STF-SPG-63-1000S	PRESSURE GAUGE 2.5" 1,000 PSI BOTTOM MOUNT	26.85
STF-SPG-63-1500S	PRESSURE GAUGE 2.5" 1,500 PSI BOTTOM MOUNT	22.97
STF-SPG-63-2000S	PRESSURE GAUGE 2.5" 2,000 PSI BOTTOM MOUNT	22.97
STF-SPG-63-3000S	PRESSURE GAUGE 2.5" 3,000 PSI BOTTOM MOUNT	22.97
STF-SPG-63-5000S	PRESSURE GAUGE 2.5" 5,000 PSI BOTTOM MOUNT	22.97
STF-SPG-63-6000S	PRESSURE GAUGE 2.5" 6,000 PSI BOTTOM MOUNT	22.97
STF-SPG-63-10000S	PRESSURE GAUGE 2.5" 10,000 PSI BOTTOM MOUNT	29.00
STF-SPG-63-3000P-U	PRESSURE GAUGE 2.5" 3,000 PSI PANEL MOUNT	27.57
STF-SPG-63-300S	PRESSURE GAUGE 2.5" 300 PSI BOTTOM MOUNT	22.97
STF-SPG-63-5000P-U	PRESSURE GAUGE 2.5" 5,000 PSI PANEL MOUNT	27.57
STF-SPG-100-10000S	PRESSURE GAUGE 4" 10,000 PSI BOTTOM MOUNT	82.21

REPAIR ACCESSORIES

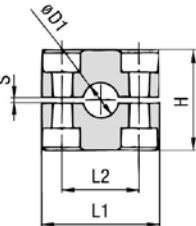
ACCESSORIES



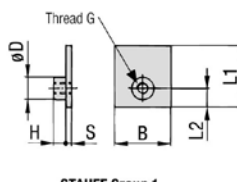
**Support Clamps - Standard Series
DIN 3015, Part 1**



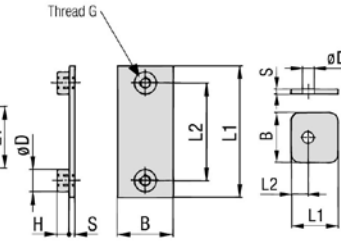
STAUFF Group 1



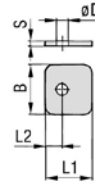
STAUFF Group 1A to 8



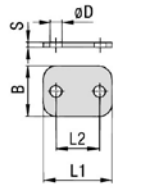
STAUFF Group 1



STAUFF Group 1A to 8



STAUFF Group 1



STAUFF Group 1A to 8

REPAIR ACCESSORIES

Sales Part	Group	Clamp Body						Weld Plate						Cover Plate					List Price	
		Tube Size	L1	L2	H	S	Width	Thread G	L1	L2	B	S	H	OD	L1	L2	B	S		OD
STF-SP1064PPDPASUW10K	1	1/4	1.1	0.37	1.06	0.02	1.18	1/4-20 UNC	1.24	0.39	1.18	0.12	0.26	0.47	1.1	0.37	1.18	0.12	0.28	\$ 2.78
STF-SP1095PPDPASUW10K	1	3/8	1.1	0.37	1.06	0.02	1.18	1/4-20 UNC	1.24	0.39	1.18	0.12	0.26	0.47	1.1	0.37	1.18	0.12	0.28	2.78
STF-SP2127PPDPASUW10K	2	1/2	1.65	1.02	1.3	0.02	1.18	1/4-20 UNC	1.65	1.02	1.18	0.12	0.26	0.47	1.59	1.02	1.18	0.12	0.28	3.48
STF-SP216PPDPASUW10K	2	5/8	1.65	1.02	1.3	0.02	1.18	1/4-20 UNC	1.65	1.02	1.18	0.12	0.26	0.47	1.59	1.02	1.18	0.12	0.28	3.48
STF-SP319PPDPASUW10K	3	3/4	1.97	1.3	1.42	0.02	1.18	1/4-20 UNC	1.97	1.3	1.18	0.12	0.26	0.47	1.89	1.3	1.18	0.12	0.28	3.67
STF-SP3254PPDPASUW10K	3	1	1.97	1.3	1.42	0.02	1.18	1/4-20 UNC	1.97	1.3	1.18	0.12	0.26	0.47	1.89	1.3	1.18	0.12	0.28	3.67
STF-SP532PPDPASUW10K	5	1-1/4	2.8	2.05	2.28	0.03	1.18	1/4-20 UNC	2.8	2.05	1.18	0.12	0.26	0.47	2.76	2.05	1.18	0.12	0.28	4.56
STF-SP538PPDPASUW10K	5	1-1/2	2.8	2.05	2.28	0.03	1.18	1/4-20 UNC	2.8	2.05	1.18	0.12	0.26	0.47	2.76	2.05	1.18	0.12	0.28	4.56

KIT INCLUDES:

- Clamp Body
- Weld Plate
- Cover Plate
- Hexagon Head Bolts

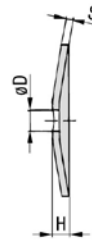
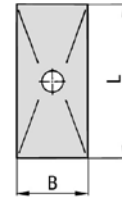
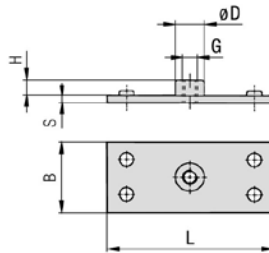
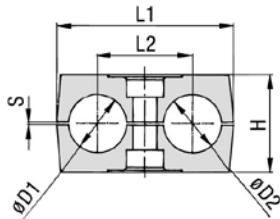
MATERIAL:

- Clamp Body – Polypropylene
- Weld Plate – Carbon Steel, phosphated
- Cover Plate – Carbon Steel, zinc/nickel-plated
- Bolts – Carbon Steel, zinc/nickel-plated

ACCESSORIES



**Support Clamps - Twin Series
DIN 3015, Part 3**



Sales Part	Tube Size D1/D2	Clamp Body					Weld Plate						Cover Plate					List Price
		L1	L2	H	S	Width	L	B	S	H	OD	G Thread	L Length	B Width	H Height	S Thick	OD	
STF-SP2095/095PPGDASUW10K	3/8	2.09	1.14	1.06	0.03	1.18	2.17	1.18	0.2	0.24	0.55	5/16-18 UNC	2.05	1.18	0.28	0.12	0.35	\$ 4.06
STF-SP2127/127PPGDASUW10K	1/2	2.09	1.14	1.06	0.03	1.18	2.17	1.18	0.2	0.24	0.55	5/16-18 UNC	2.05	1.18	0.28	0.12	0.35	4.06
STF-SP216/16PPGDASUW10K	5/8	2.09	1.14	1.06	0.03	1.18	2.17	1.18	0.2	0.24	0.55	5/16-18 UNC	2.05	1.18	0.28	0.12	0.35	4.09
STF-SP319/19PPGDASUW10K	3/4	2.64	1.42	1.46	0.03	1.18	2.76	1.18	0.2	0.24	0.55	5/16-18 UNC	2.56	1.18	0.28	0.12	0.35	4.92
STF-SP322/22PPGDASUW10K	7/8	2.64	1.42	1.46	0.03	1.18	2.76	1.18	0.2	0.24	0.55	5/16-18 UNC	2.56	1.18	0.28	0.12	0.35	4.92

KIT INCLUDES:

- Clamp Body
- Weld Plate
- Cover Plate
- Hexagon Head Bolts

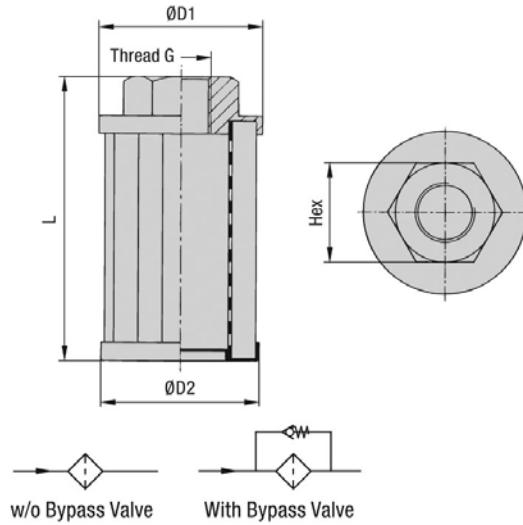
MATERIAL:

- Clamp Body – Polypropylene
- Weld Plate – Carbon Steel, phosphated
- Cover Plate – Carbon Steel, zinc/nickel-plated
- Bolts – Carbon Steel, zinc/nickel-plated

ACCESSORIES



Suction Strainers



Sales Part No	Description	OD1	OD2	L	Hex	List Price
STF-TFS-100-0	1 NPT, 13 GPM, No Bypass	2.68	2.6	5.51	1.65	\$ 24.51
STF-TFS-120-0	1.25 NPT, 16.9 GPM, No Bypass	3.46	3.35	7.68	2.36	32.31
STF-TFS-120-3	1.25 NPT, 16.9 GPM, 3 PSI Bypass	3.46	3.35	7.68	2.36	28.04
STF-TFS-150-0	1.5 NPT, 36.4 GPM, No Bypass	3.46	3.35	8.9	2.36	41.22
STF-TFS-200-0	2 NPT, 59.8 GPM, No Bypass	3.46	3.35	10.24	2.76	51.24
STF-TFS-250-0	2.5 NPT, 88.4 GPM, No Bypass	5.91	5.71	8.39	3.54	73.53
STF-TFS-300-0	3 NPT, 104 GPM, No Bypass	5.91	5.71	10.71	3.94	82.44

FEATURES:

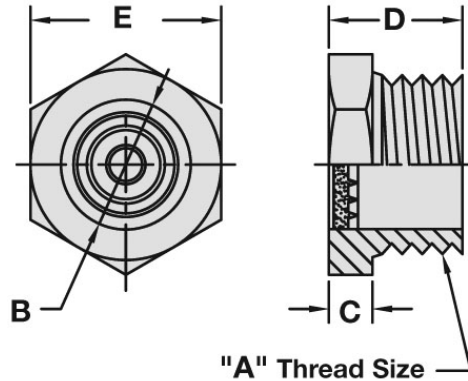
- Stainless steel mesh, 125 µm
- Aluminum end caps
- Suitable for mineral and petroleum based hydraulic fluids
- Temperature to 212 °F

REPAIR ACCESSORIES

ACCESSORIES



Metal Sight Glasses



Sales Part No	Description	OD	L1	L2	Hex	List Price
STF-SLW-06	3/8-18 NPT, 3700 PSI	0.44	0.72	0.32	0.75	\$ 5.94
STF-SLW-08	1/2-14 NPT, 3500 PSI	0.56	0.78	0.32	0.94	6.18
STF-SLW-12	3/4-14 NPT, 3000 PSI	0.75	0.94	0.32	1.38	6.99
STF-SLW-16	1-11-1/2 NPT, 2500 PSI	0.94	1.25	0.32	1.38	12.23

FEATURES:

- Electroless nickel-plated steel housings
- Hermetically sealed prism glass lenses
- Temperatures to 500 °F

REPAIR ACCESSORIES

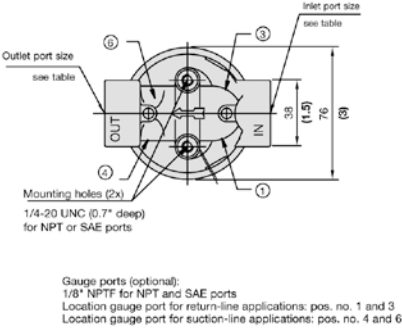
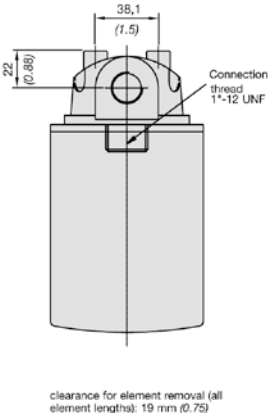
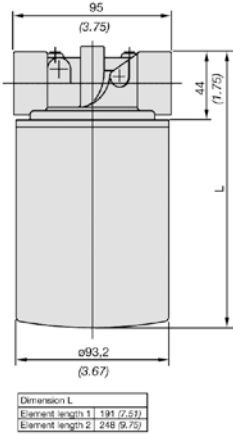
ACCESSORIES

Hercules Brand Return Spin-On Filters

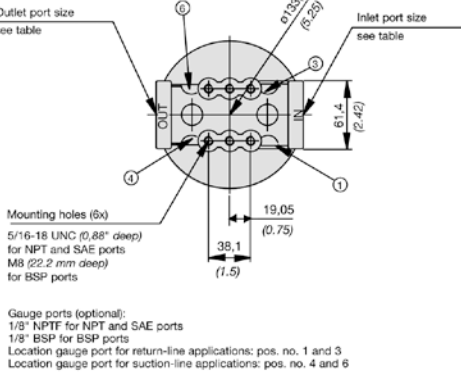
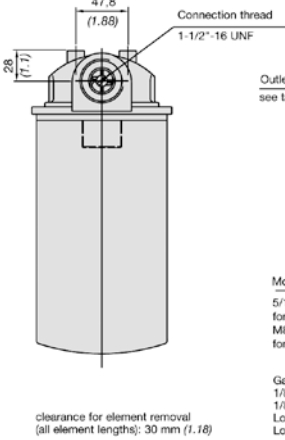
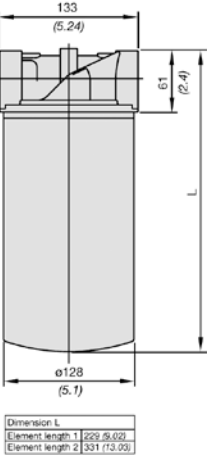


- SPECIFICATIONS:**
- Hercules SF6500 Series spin-on elements are used with the Hercules SAF series spin-on filters.
 - Hercules SF6700 Series spin-on elements are used with the Hercules SSF150 spin-on filters.
 - Seals: NBR
 - Working pressure: Max 14 bar (200 PSI), maximum pressure differential of 5.5 bar (80PSI) for any application with no bypass valve
 - Temperature range: -32°C to 100°C (-25°F to 212°F)
 - Mineral oils, other fluids on request

SAF07 Spin-On Filter Dimensions



SSF150 Spin-On Filter Dimensions



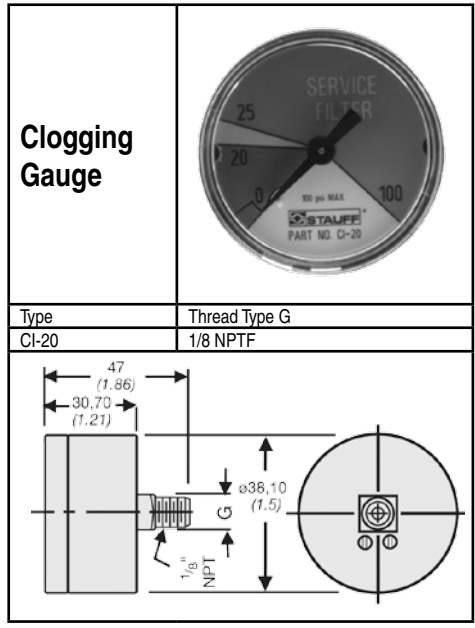
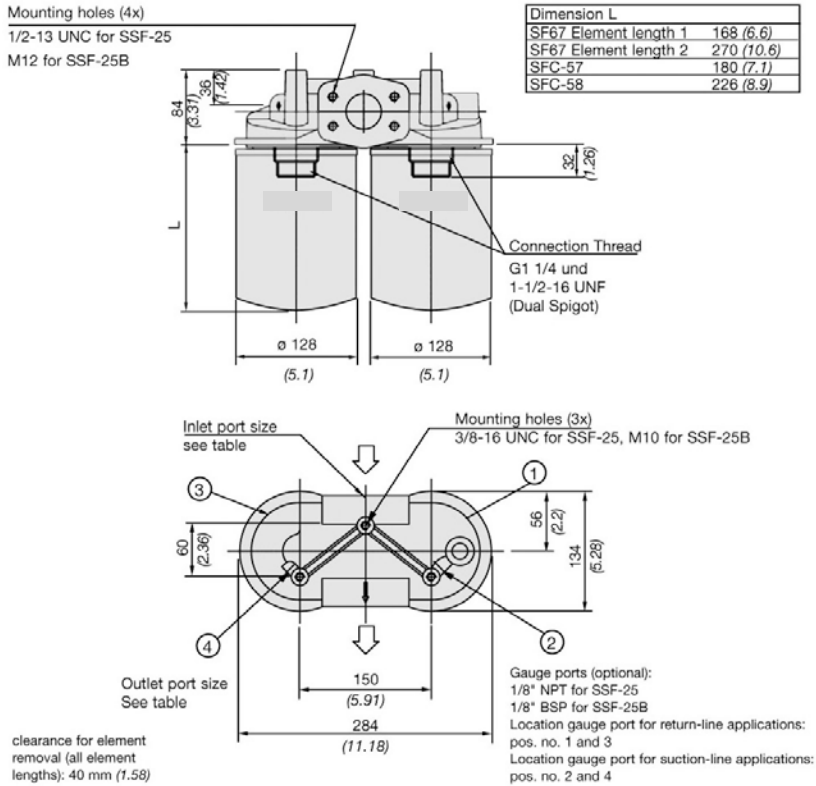
REPAIR ACCESSORIES

ACCESSORIES

FILTER HEADS			ELEMENTS			CLOGGING GAUGE		
PART NUMBER	DESCRIPTION	LIST PRICE	PART NUMBER	DESCRIPTION	LIST PRICE	PART NUMBER	DESCRIPTION	LIST PRICE
HFP-SAF-07-25-1	25 GPM Return Line ¾ NPT Port Connection 25 PSI By-Pass Return Gauge Port Drilled	\$ 20.70	HFP-SF6520	10 µm filter paper 5.76" long x 3.67" diam	\$ 12.42	STF-CI-20	Visual Red/Green Gauge 25 PSI By-Pass 1/8" NPTF	\$ 13.93
			HFP-SF6510	25 µm filter paper 5.76" long x 3.67" diam	12.42			
HFP-SSF-150-25-1	80 GPM Return Line 1½ NPT Port Connection 25 PSI By-Pass Return Gauge Port Drilled	\$ 44.99	HFP-SF6720	10 µm filter paper 6.6" long x 5.1" diam	21.74			
			HFP-SF6710	25 µm filter paper 6.6" long x 5.1" diam	21.74			
HFP-SSF-25-25-1	Double Spin-On Filter Head 120 GPM Return Line 1½ NPT and 2 SAE Code 61 Flange Port Connections 25 PSI By-Pass Return Gauge Port Drilled	\$ 181.03	HFP-SF6720	10 µm filter paper 6.6" long x 5.1" diam	21.74			
			HFP-SF6710	25 µm filter paper 6.6" long x 5.1" diam	21.74			

200 PSI Filter Operating Pressure

SSF25 Spin-On Filter Dimensions



REPAIR ACCESSORIES



PLASTIC CAP PLUGS

CAP PLUG APPLICATION CHART



This style cap plug is equipped with a handy fold-down pull ring.

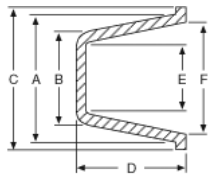
Tapered Caps & Plugs With Pull Ring

Part Number	NPT Port Size	OD Size Tapered	HT	Min Std Pkg	List Price
CAP-PR-9	1/8	.337/.375	1/4	50	\$ 0.12
CAP-PR-12	1/4	.436/.475	1/4	50	0.35
CAP-PR-17	3/8	.552/.615	3/8	50	0.20
CAP-PR-22	1/2	.668/.767	1/2	40	0.22
CAP-PR-27X	3/4	.878/.977	1/2	40	0.25
CAP-PR-32	1	1.113/1.212	1/2	25	0.28
CAP-PR-39	1-1/4	1.505/1.580	1/2	25	0.36
CAP-PR-43	1-1/2	1.780/1.860	1/2	20	0.40
CAP-PR-50	2	2.226/2.258	1/2	20	0.50

CAP-	NPT		INCH THREAD		METRIC THREAD	
	CAPS	PLUGS	CAPS	PLUGS	CAPS	PLUGS
00				10/32	M2,M2.5	M5
0				1/4	M3,M3.5	M6
1				5/16	M5	M8x1
1-X					M6	
2			15/64	3/8	M7	M10x1.25
2-X		1/8				
3				7/16	M8x1	M12
3-X			3/8			M12x1.25
4	1/8	1/4		1/2	M10x1.25	M14
4-X			7/16			M14x1.5
5			1/2	9/16		
5-X					M12x1.25	M16
6	1/4			5/8		
6-X		3/8	9/16			M18
7			5/8		M14x1.5	M18x1.5
7-X						
8				3/4		M20
8-X	3/8				M16x1.5	M20x1.5
9		1/2				M22
9-X			3/4			M22x1.5
10				7/8	M18x1.5	M24
11	1/2					M24x2
11-X			7/8		M20x1.5	
12		3/4				
12-X				1-1/16	M22x1.5	M27x2
13	3/4				M24x2	
13-X			1-1/16			M30x2
14		1			M27x2	M33
17		1-1/4			M36x3	
17-S				1-5/8		
18	1-1/4		1-5/8	1-3/4	M39x3	
19		1-1/2		1-7/8		
20	1-1/2		1-7/8			
20-S						
21						
220						
230			2-1/4			
24-S		2				
240	2					
250			2-1/2			

REPAIR ACCESSORIES

PLASTIC CAP PLUGS



Tapered Caps & Plugs For Misc. Applications

Part Number	A	B	C	D	E	F	List Price
CAP-00	.180	.115	5/16	13/32	.051	.118	\$ 0.25
CAP-0	.240	.175	3/8	3/8	.109	.175	0.38
CAP-0-X	0.275	0.209	7/16	3/8	0.150	0.209	0.08
CAP-1	.302	.240	15/32	3/8	.175	.240	0.27
CAP-1-X	.335	.265	15/32	3/8	.240	.275	0.27
CAP-2	.365	.300	17/32	3/8	.234	.301	0.27
CAP-3	.428	.360	19/32	3/8	.299	.365	0.23
CAP-3-X	.460	.390	5/8	3/8	.325	.396	0.27
CAP-4-X	.512	.447	5/8	3/8	.385	.448	0.05
CAP-5	.547	.490	23/32	1/2	.409	.485	0.05
CAP-5-X	.568	.500	3/4	7/16	.435	.503	0.06
CAP-6	.620	.531	3/4	1/2	.468	.555	0.05
CAP-6A-X	0.576	0.500	0.720	0.470	0.440	0.516	0.09
CAP-7	.675	.590	7/8	17/32	.520	.605	0.06
CAP-7-X	.695	.610	27/32	1/5	.549	.634	0.08
CAP-8	.728	.641	7/8	1/2	.575	.665	0.06
CAP-8-X	.754	.675	7/8	5/8	.615	.690	0.06
CAP-9-X	.925	.725	1	3/4	.662	.760	0.06
CAP-10	.848	.750	1-1/32	5/8	.686	.785	0.06
CAP-11	.910	.802	1-3/32	3/4	.740	.846	0.20
CAP-11-X	.931	.820	1-1/8	5/8	.754	.868	0.06
CAP-12A-X	0.973	0.856	1-1/8	3/4	0.768	0.906	0.16
CAP-13	1.091	.966	1-1/4	3/4	.902	1.025	0.20
CAP-13-X	1.145	1.002	1-5/16	3/4	.938	1.079	0.08
CAP-14-X	1.285	1.180	1-7/16	3/4	1.105	1.215	0.63
CAP-16A-X	1.312	1.276	1.380	0.560	1.155	1.190	0.22
CAP-17A-X	1.507	1.344	1-3/4	15/16	1.282	1.450	0.24
CAP-18	1.680	1.560	1-7/8	3/4	1.497	1.620	0.18
CAP-20	1.958	1.806	2.125	1	1.745	1.893	0.69
CAP-20-X	2.310	1.940	2.470	0.880	1.875	2.255	0.42
CAP-21	2.078	1.902	2-1/4	1	1.839	2.015	0.28
CAP-38	1.045	.980	1-1/4	1/2	.916	.984	0.27
CAP-220	2.132	1.980	2-1/4	1	1.915	2.068	0.28
CAP-230	2.330	2.156	2-5/8	1	2.094	2.264	0.78
CAP-240	2.465	2.300	2-5/8	1	2.235	2.400	0.36
CAP-250	2.605	2.395	2-5/8	1	2.331	2.541	0.38

Tapered Caps & Plugs For NPT Style Ports

Part Number	NPT Port Size	OD Size Tapered	HT	Min Std Pkg	List Price
CAP-2-X	1/8	.330/.396	3/8	50	\$ 0.08
CAP-4	1/4	.419/.485	3/8	50	0.08
CAP-6-X	3/8	.550/.631	7/16	50	0.12
CAP-9	1/2	.690/.788	9/16	50	0.12
CAP-12	3/4	.870/.975	5/8	120	0.06
CAP-12-X	3/4	.915/1.040	11/16	25	0.22
CAP-14	1	1.094/1.215	3/4	25	0.22
CAP-15	1	1.225/1.355	3/4	3	0.39
CAP-15-X	1	1.235/1.350	3/4	25	0.25
CAP-17	1-1/4	1.450/1.600	3/4	60	0.12
CAP-17-S	1-1/4	1.513/1.600	1/2	25	0.95
CAP-19	1-1/2	1.735/1.870	3/4	25	0.39
CAP-20-S	1-1/2	1.781/1.805	3/8	25	0.25
CAP-24-S	2	2.230/2.260	1/2	20	0.31

MCAP Tapered Caps & Plugs For Misc. Applications



Part Number	A mm	B mm	C mm	D mm	E mm	F mm	List Price
CAP-M10X1	13.00	11.35	15.88	10.32	9.78	11.38	\$ 0.05
CAP-M12X1	14.43	12.70	19.05	11.11	11.05	12.78	0.06
CAP-M12X1.5	14.63	12.70	18.29	11.94	11.18	13.11	0.09
CAP-M14X1.5	17.15	14.99	22.23	13.49	13.21	15.37	0.06
CAP-M16X1.5	19.15	17.15	22.23	15.88	15.62	17.53	0.06
CAP-M18X1.5	21.54	19.05	26.19	15.88	17.42	19.74	0.06
CAP-M20X1.5	24.71	21.74	28.58	19.05	19.51	23.01	0.16
CAP-M22X1.5	26.42	22.73	29.37	19.05	21.13	24.77	0.22
CAP-M25X1.5	29.08	25.45	33.34	19.05	23.83	27.41	0.08
CAP-M26X1.5	29.08	25.45	33.34	19.05	23.83	27.41	0.08
CAP-M27	31.12	29.19	38.50	19.05	26.37	29.97	0.22
CAP-M28X1.5	32.81	29.59	36.10	19.05	27.69	30.61	0.63
CAP-M30X2	33.32	32.41	35.05	14.22	29.34	30.23	0.22
CAP-M35	38.53	34.14	44.45	23.81	32.56	36.83	0.24
CAP-M39	42.49	39.62	47.63	19.05	38.02	41.15	0.18
CAP-M4	6.99	5.31	11.11	9.53	3.81	5.31	0.08
CAP-M42X2	44.45	40.79	49.21	19.05	39.83	42.80	0.58
CAP-M45	49.73	45.87	53.98	25.40	44.32	48.08	0.69
CAP-M48	58.67	49.28	62.74	22.35	47.63	57.28	0.42
CAP-M5	7.67	6.1	11.91	9.53	4.45	6.1	0.27
CAP-M6	8.51	6.73	11.91	9.53	5.18	6.99	0.27
CAP-M8X1	10.87	9.14	15.08	9.53	7.59	9.27	0.23

REPAIR ACCESSORIES

PLASTIC CAP PLUGS



**Female Threaded Cap Plugs
for J.I.C. Fittings**

Part Number	Std Thread Size	O.D. Size Tube	Dash Size	Min Std Pkg	List Price
CAP-G-2	7/16-20	1/4	#4	20	\$ 0.22
CAP-G-8	9/16-18	3/8	#6	20	0.22
CAP-G-14	3/4-16	1/2	#8	20	0.25
CAP-G-18	7/8-14	5/8	#10	20	0.25
CAP-G-20	7/8-18	5/8	#10	20	0.56
CAP-G-22	1-1/16-12	3/4	#12	20	0.31
CAP-G-25	1-3/16-12	7/8	#14	20	0.36
CAP-G-27	1-5/16-12	1	#16	20	0.36



Flat Face Fitting Caps

Part Number	Tube Size OD	Thread Size	Min Std Pkg	List Price
CAP-PDF-40	1/4	9/16-18	25	\$ 0.35
CAP-PDF-60	3/8	11/16-16	25	0.31
CAP-PDF-80	1/2	13/16-16	25	0.35
CAP-PDF-100	5/8	1-14	20	0.37
CAP-PDF-120	3/4	1-3/16-12	20	0.45
CAP-PDF-160	1	1-7/16-12	10	2.04



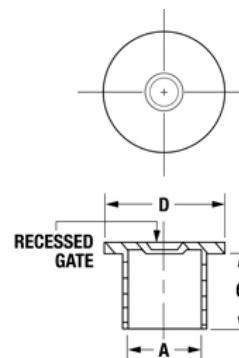
O-Ring Face Fitting Caps

These low density polyethylene caps are designed to fit female o-ring face seals.

Part Number	Thread Size	Min Std Pkg	List Price
CAP-OR-4	9/16-18	35	\$ 0.23
CAP-OR-6	11/16-16	25	0.25
CAP-OR-8	13/16-16	25	0.28
CAP-OR-10	1-14	25	0.35
CAP-OR-12	1-3/16-12	25	0.37
CAP-OR-16	1-7/16-12	15	0.84
CAP-OR-20	1-11/16-12	10	1.41



Unlike tear-tab closures that can only be used once, the CAP-PO series is designed to be reused. Specifically designed to protect straight threads with or without o-rings, this unique design is also ideal for use on a variety of thread forms and non-threaded fittings.



Straight Threaded Cap Plugs

Part Number	Min Std Pkg	To Cap Thread size	A	C	D	List Price
CAP-PO-20	25	7/16"	0.428	0.47	0.69	\$ 0.38
CAP-PO-30	25	1/2"	0.49	0.47	0.75	0.53
CAP-PO-40	25	9/16"	0.55	0.50	0.81	0.56
CAP-PO-50	25	11/16"	0.676	0.50	0.94	0.60
CAP-PO-55	25	-	0.721	0.67	1.00	0.63
CAP-PO-60	25	3/4"	0.738	0.67	1.00	0.63
CAP-PO-70	25	13/16"	0.802	0.56	1.06	0.66
CAP-PO-80	25	7/8"	0.864	0.66	1.12	0.68
CAP-PO-90	25	1.00"	0.99	0.66	1.25	0.71
CAP-PO-100	15	1-1/16"	1.051	0.75	1.31	0.76
CAP-PO-110	15	1-3/16"	1.175	0.75	1.44	0.93
CAP-PO-120	15	1-5/16"	1.298	0.75	1.56	1.04
CAP-PO-130	15	1-7/16"	1.426	0.75	1.69	1.29
CAP-PO-140	10	1-5/8"	1.12	0.85	1.88	1.42

**Cap Plug Assortment Kits
Also Available -
See the Kit & Tool Section**

PLASTIC CAP PLUGS



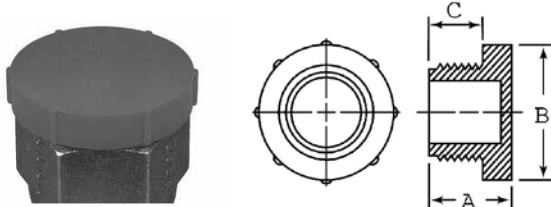
Male Threaded Pipe Plugs (Sq. Top)



Male Threaded Cap Plugs for Flared J.I.C. Fittings

Part Number	NPT Port Size	Thread Size	Min Std Pkg	List Price
CAP-P-18	1/8	0.364	25	\$ 0.12
CAP-P-28	1/4	0.477	25	0.22
CAP-P-38	3/8	0.612	25	0.25
CAP-P-48	1/2	0.758	25	0.25
CAP-P-68-H	3/4	0.968	25	0.28
CAP-P-88-H	1	1.214	20	1.13
CAP-TP-13	1-1/4	1.557	5	1.97
CAP-TP-15	1-1/2	1.796	5	1.97

Part Number	Std Thread Size	OD Size Tube	Dash Size	Min Std Pkg	List Price
CAP-PD-40	7/16-20	1/4	#4	25	\$ 0.37
CAP-PD-50	1/2-20	5/16	#5	25	0.37
CAP-PD-60	9/16-18	3/8	#6	25	0.22
CAP-PD-80	3/4-16	1/2	#8	25	0.22
CAP-PD-100	7/8-14	5/8	#10	25	0.25
CAP-PD-120	1-1/16-12	3/4	#12	25	0.25
CAP-PD-140	1-3/16-12	7/8	#14	20	0.38
CAP-PD-160	1-5/16-12	1	#16	20	0.38
CAP-PD-200	1-5/8-12	1-1/4	#20	15	0.47
CAP-PD-220	1-3/4-12	1-3/8	#22	10	1.20
CAP-PD-240	1-7/8-12	1-1/2	#24	10	1.08



Miscellaneous - MCAP- TP

Part Number	To Fit Metric Thread Size	A		B		C		Min Std Pkg	List Price
		in	mm	in	mm	in	mm		
MCAP-TP-M8X1	M8 x 1	0.562	14.27	0.484	12.29	0.374	9.50	10	\$ 0.65
MCAP-TP-M10X1	M10 x 1	0.574	14.58	0.602	15.29	0.409	10.39	10	0.91
MCAP-TP-M12X1	M12 x 1	0.657	16.69	0.728	18.49	0.421	10.69	10	0.97
MCAP-TP-M12X1.5	M12 x 1.5	0.641	16.28	0.657	16.69	0.342	8.69	10	1.12
MCAP-TP-M14X1.5	M14 x 1.5	0.677	17.20	0.728	18.49	0.374	9.50	10	1.19
MCAP-TP-M16X1.5	M16 x 1.5	0.677	17.20	0.866	22.00	0.492	12.50	10	1.16
MCAP-TP-M18X1.5	M18 x 1.5	0.720	18.29	0.960	24.38	0.539	13.69	10	1.22
MCAP-TP-M20X1.5	M20 x 1.5	0.716	18.19	1.035	26.29	0.551	14.00	10	1.16
MCAP-TP-M22X1.5	M22 x 1.5	0.720	18.29	1.110	28.19	0.539	13.69	10	1.16
MCAP-TP-M24X1.5	M24 x 1.5	0.728	18.49	1.232	31.29	0.543	13.79	10	1.34
MCAP-TP-M25X1.5	M25 x 1.5	0.728	18.49	1.232	31.30	0.551	14.00	5	1.47
MCAP-TP-M26X1.5	M26 x 1.5	0.736	18.69	1.287	32.69	0.543	13.79	5	1.49
MCAP-TP-M52X1.5	M52 x 1.5	0.846	21.50	2.508	63.70	0.610	15.50	5	1.68

REPAIR ACCESSORIES

PLASTIC CAP PLUGS

BOLTED SPLIT FLANGE PROTECTORS



These low density polyethylene caps protect the faces of split flange connectors

Split Flange Coupling Caps - SAE CODE 61

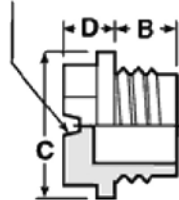
Part Number	Flange Size	Cap Size	Min Std Pkg	List Price
CAP-SF-8	1/2	1.19	50	\$ 0.12
CAP-SF-10	5/8	1.35	50	0.18
CAP-SF-12	3/4	1.50	50	0.20
CAP-SF-16	1	1.75	35	0.22
CAP-SF-20	1-1/4	2.00	35	0.23
CAP-SF-24	1-1/2	2.38	25	0.36
CAP-SF-32	2	2.81	15	0.48
CAP-SF-40	2-1/2	3.31	15	0.68

Split Flange Coupling Caps - SAE CODE 62

Part Number	Flange Size	Cap Size	Min Std Pkg	List Price
CAP-HPSF-8	1/2	1.25	10	\$ 1.21
CAP-HPSF-12	3/4	1.625	10	1.26
CAP-HPSF-16	1	1.87	10	1.29
CAP-HPSF-20	1-1/4	2.125	10	1.34
CAP-HPSF-24	1-1/2	2.5	10	1.62
CAP-HPSF-32	2	3.125	10	1.62



SCREWDRIVER SLOT



Threaded O-Ring Plugs

Part Number	Std Thread Size	B	C	D	Min Std Pkg	List Price
CAP-TF-9-OR	9/16-18	0.35	0.81	0.19	10	\$ 1.46
CAP-TF-12-OR	3/4-16	0.44	0.89	0.18	10	1.54



3,000 PSI Flanges
SAE Code 61

Part Number	Port Size	Min Std Pkg	List Price
CAP-8218	1/2	10	\$ 1.46
CAP-8219	3/4	10	1.49
CAP-8220	1	10	1.60
CAP-8221	1-1/4	10	1.70
CAP-8222	1-1/2	10	1.80
CAP-8223	2	10	1.99
CAP-8224	2-1/2	10	1.99

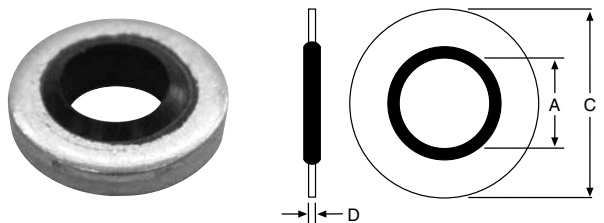
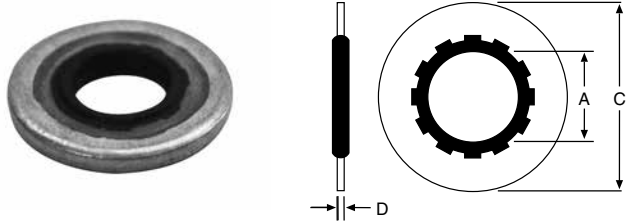
5,000 PSI Flanges
SAE Code 62

Part Number	Port Size	Min Std Pkg	List Price
CAP-XP-075	3/4	10	\$ 1.49
CAP-XP-100	1	10	1.60
CAP-XP-125	1-1/4	10	1.70
CAP-XP-150	1-1/2	10	1.80
CAP-XP-200	2	10	1.99

**Cap Plug Assortment Kits
Also Available -
See the Kit & Tool Section**

REPAIR ACCESSORIES

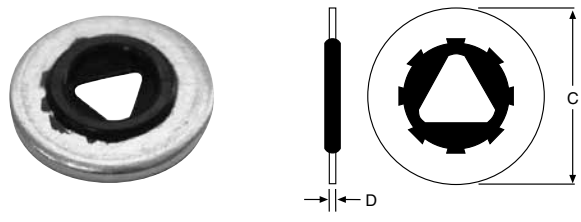
STYLE 110 FACE SEALS STYLE SB FACE SEALS



Part Number	Max Screw Size	A Rubber I.D.	B Steel I.D.	C Steel O.D.	D Steel Thick.	List Price
DY-110X8	.164	.156	.255	.385	.041	\$ 1.38
DY-110X10	.177	.180	.317	.443	.050	1.91
DY-110X3/16	.190	.220	.281	.425	.054	3.75
DY-110X7/32	.216	.246	.307	.455	.054	13.23
DY-110X1/4	.250	.240	.381	.505	.054	2.21
DY-110X5/16	.312	.301	.488	.603	.054	2.21
DY-110X3/8	.375	.368	.546	.666	.054	2.21
DY-110X7/16	.437	.427	.618	.760	.054	5.66
DY-110X1/2	.500	.490	.696	.880	.054	6.28
DY-110X9/16	.562	.552	.759	1.067	.054	6.28
DY-110X5/8	.625	.615	.818	1.193	.054	7.69

Part Number	A	C	D	List Price
DY-SB-001	.115	.250	.048	\$ 1.93
DY-SB-002	.157	.286	.048	1.93
DY-SB-003	.205	.330	.051	1.50
DY-SB-004	.270	.520	.051	1.50
DY-SB-005	.270	.525	.048	2.13
DY-SB-006	.322	.525	.048	2.13
DY-SB-007	.340	.560	.051	1.54
DY-SB-020A	.408	.625	.083	1.64
DY-SB-008	.443	.723	.083	1.64
DY-SB-009	.460	.750	.083	1.66
DY-SB-225	.531	.866	.059	1.70
DY-SB-021B	.541	.810	.083	1.66
DY-SB-010	.585	.875	.083	1.81
DY-SB-022BB	.625	.875	.083	1.83
DY-SB-011	.650	1.000	.083	1.86
DY-SB-023C	.680	.937	.083	1.89
DY-SB-012	.715	1.000	.097	1.89
DY-SB-024CC	.775	1.060	.097	2.08
DY-SB-025D	.848	1.125	.097	2.34
DY-SB-026E	.925	1.250	.097	2.57
DY-SB-013	.955	1.310	.097	4.49
DY-SB-027F	1.065	1.375	.097	3.12
DY-SB-240	1.083	1.417	.07	3.19
DY-SB-028	1.095	1.520	.097	4.05
DY-SB-014	1.150	1.440	.092	4.43
DY-SB-029G	1.213	1.500	.097	4.71
DY-SB-015	1.280	1.630	.128	5.06
DY-SB-031	1.329	1.685	.092	5.56
DY-SB-030H	1.334	1.685	.133	4.75
DY-SB-016	1.410	1.750	.133	10.9
DY-SB-032J	1.690	2.062	.103	9.10
DY-SB-033K	1.907	2.307	.103	10.55
DY-SB-019	2.030	2.500	.128	16.54
DY-SB-034	2.161	2.750	.133	17.82
DY-SB-036	2.385	2.875	.133	14.90
DY-SB-038	2.625	3.130	.133	23.91
DY-SB-039	2.995	3.550	.133	26.80

THREAD SEAL



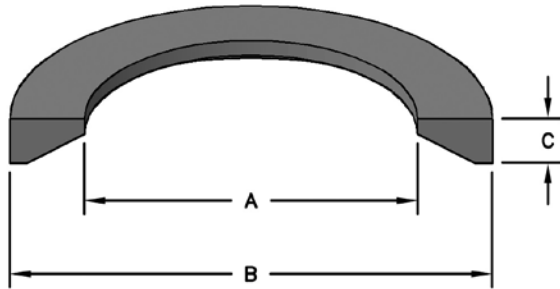
Thread seals provide a positive seal directly against the threads of a bolt. Self-centering and easily installed.

Part Number	C	D	Thread Size	List Price
TS7500X10	.469	.051	-10	\$ 2.88
TS7500X1/4	.562	.051	1/4	2.88
TS7500X5/16	.687	.064	5/16	3.59
TS7500X3/8	.750	.064	3/8	3.74
TS7500X7/16	.906	.078	7/16	5.24
TS7500X1/2	1.000	.078	1/2	11.56
TS7500X7/8	1.562	.109	7/8	18.92

REPAIR ACCESSORIES

DIN 3869 CONNECTOR RINGS

DIN 3869 profile rings are axially static soft seals in combination with threaded elements. They are molded from elastomers used for sealing threaded tube connections and fittings. Most common application, construction machinery, hydraulic presses, injection machines, etc. The DIN3869 is offered in two materials, an NBR 85 Shore A (black finish), and FKM 80 Shore A (green finish).



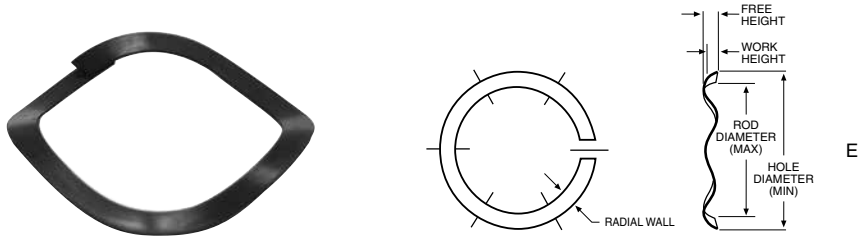
SEAL INFORMATION

MATERIAL	COLOR	TEMP RANGE
85A NBR	BLACK	-30° TO +100° C -22° TO +212° F
VITON (FKM)	GREEN	-20° TO +200° C -4° TO +392° F

Part Number	Nominal Size	Thread	A Inside Diameter	B Outside Diameter	C Height	Package Quantity	List Price
DIN3869-M8X1	8	M8 x 1	6.50	9.90	1.00	5	\$ 1.40
DIN3869-M10X1	10	M10 x 1	8.40	11.90	1.00	5	0.85
DIN3869-M12X1.5	12	M12 x 1.5	9.80	14.40	1.50	5	0.85
DIN3869-M14X1.5	14	M14 x 1.5	11.60	16.50	1.50	5	1.10
DIN3869-M16X1.5	16	M16 x 1.5	13.80	18.90	1.50	5	1.10
DIN3869-M17X1.5	17	M17 x 1.5	14.70	18.90	1.50	5	1.10
DIN3869-M18X1.5	18	M18 x 1.5	15.70	20.90	1.50	5	1.20
DIN3869-M20X1.5	20	M20 x 1.5	17.80	22.90	1.50	5	1.40
DIN3869-M21X1.5	21	M21 x 1.5	18.50	23.90	1.50	5	1.65
DIN3869-M22X1.5	22	M22 x 1.5	19.60	24.30	1.50	5	1.67
DIN3869-M27X2	27	M27 x 2	23.90	29.20	2.00	5	1.60
DIN3869-M30X2	30	M30 x 2	27.70	32.70	2.00	2	3.34
DIN3869-M33X2	33	M33 x 2	29.70	35.70	2.00	2	1.00
DIN3869-M42X2	42	M42 x 2	38.80	45.80	2.00	2	1.66
DIN3869-M48X2	48	M48 x 2	44.70	50.70	2.00	2	2.12
DIN3869-M8X1-V	8	M8 x 1	6.50	9.90	1.00	5	3.05
DIN3869-M10X1-V	10	M10 x 1	8.40	11.90	1.00	5	3.05
DIN3869-M12X1.5-V	12	M12 x 1.5	9.80	14.40	1.50	5	5.00
DIN3869-M14X1.5-V	14	M14 x 1.5	11.60	16.50	1.50	5	5.00
DIN3869-M16X1.5-V	16	M16 x 1.5	13.80	18.90	1.50	2	2.56
DIN3869-M18X1.5-V	18	M18 x 1.5	15.70	20.90	1.50	2	2.78
DIN3869-M20X1.5-V	20	M20 x 1.5	17.80	22.90	1.50	2	3.56
DIN3869-M21X1.5-V	21	M21 x 1.5	18.50	23.90	1.50	2	3.78
DIN3869-M22X1.5-V	22	M22 x 1.5	19.60	24.30	1.50	2	3.89
DIN3869-M27X2-V	27	M27 x 2	23.90	29.20	2.00	2	4.12
DIN3869-M30X2-V	30	M30 x 2	27.70	32.70	2.00	2	7.00

WAVE SPRINGS

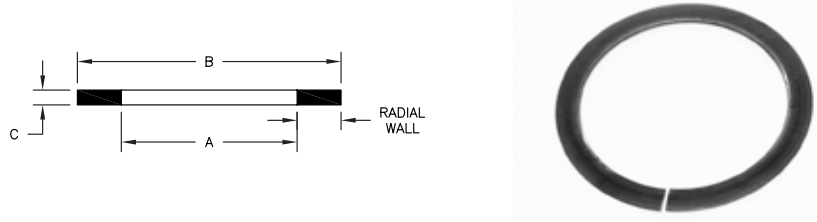
Wave Springs offer a convenient method of exerting a pre-load on vee packing where little or no adjustment is available. Because of a low fatigue factor, the spring should provide a proper pre-load throughout the life of the packing.



Part Number	WORK HEIGHT	FREE HEIGHT	E ROD DIAMETER	HOLE DIAMETER	RADIAL WALL	List Price
SSR-0125	.078	.150	.960	1.250	.133	\$4.53
SSR-0150	.078	.170	1.170	1.500	.143	4.81
SSR-0175	.078	.140	1.440	1.750	.143	4.81
SSR-0187	.078	.150	1.560	1.875	.143	4.81
SSR-0200	.093	.140	1.680	2.000	.150	5.23
SSR-0225	.093	.170	1.930	2.250	.150	5.53
SSR-0237	.093	.160	1.990	2.375	.178	5.71
SSR-0250	.093	.170	2.120	2.500	.178	6.00
SSR-0262	.093	.190	2.240	2.625	.178	6.00
SSR-0275	.109	.170	2.340	2.750	.188	6.60
SSR-0300	.109	.190	2.590	3.000	.188	7.06
SSR-0312	.109	.210	2.710	3.120	.188	7.00
SSR-0325	.109	.200	2.750	3.250	.233	7.59
SSR-0350	.109	.230	3.000	3.500	.233	14.15
SSR-0362	.109	.240	3.120	3.625	.233	14.42
SSR-0375	.109	.260	3.250	3.750	.233	8.91
SSR-0425	.109	.210	3.740	4.250	.233	28.08
SSR-0462	.109	.230	4.125	4.625	.233	10.96
SSR-0512	.125	.340	4.610	5.125	.233	39.31

CARBON STEEL SHIMS

These carbon steel shims are commonly used with vee packing sets to fill the empty space in a gland.



Part Number	A Nom. ID	B Nom. OD	C Nom. Ht	RADIAL WALL	List Price
SSRS-0150	1.2	1-1/2	.024	.150	\$1.93
SSRS-0175	1.45	1-3/4	.024	.150	1.93
SSRS-0200	1.7	2	.024	.150	2.69
SSRS-0237	2.019	2-3/8	.024	.178	4.02
SSRS-0312	2.749	3-1/8	.03	.188	2.57
SSRS-0375	3.284	3-3/4	.03	.233	3.03

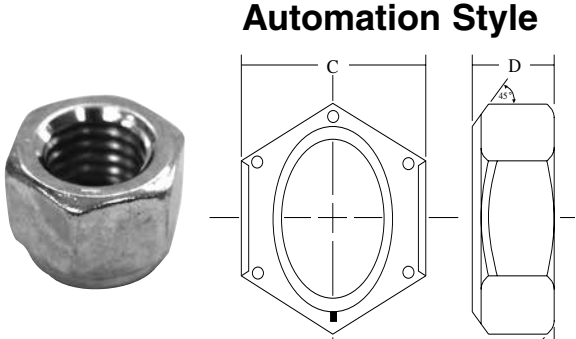
REPAIR ACCESSORIES

GRADE C LOCKNUTS

These fine-threaded Grade C locknuts are formed from medium carbon, heat-treated steel and are designed to be used with a Grade 8 bolt. Smaller size locknuts employ an automation style collar while the larger ones use a full collar design. Both locknut types are stocked with cadmium and wax plating.

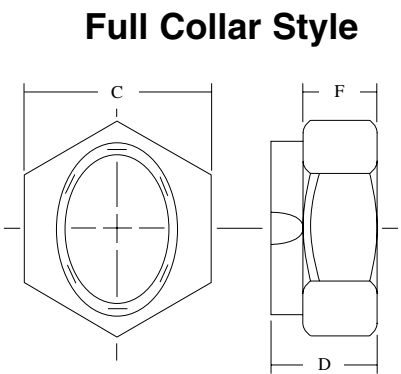
Automation Style

Part Number	Size	Thread Pitch	C Width Across Flats		D Overall Thickness		List Price
			Max	Min	Max	Min	
LN-1/2-13	1/2	13	0.7500	0.736	0.510	0.490	\$ 0.95
LN-1/2-20	1/2	20	0.752	0.741	0.609	0.579	0.57
LN-1-14	1	14	1.5020	1.450	0.887	0.831	4.72
LN-3/4-16	3/4	16	1.1250	1.088	0.665	0.617	2.84
LN-5/8-18	5/8	18	0.9375	0.922	0.645	0.621	1.36
LN-7/8-14	7/8	14	1.3145	1.269	0.922	0.724	3.76
LN-7/16-20	7/16	20	0.627	0.616	0.468	0.438	2.44



Full Collar Style

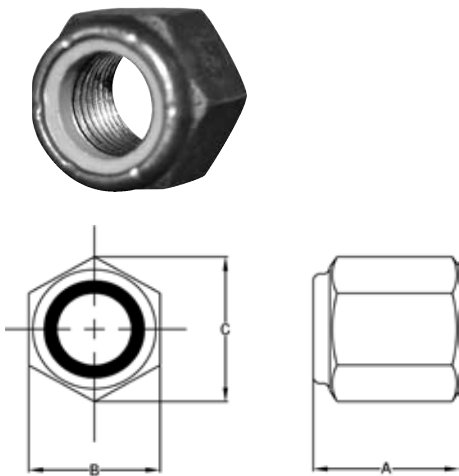
Part Number	Size	Thread Pitch	C Width Across Flats		D Overall Thickness		F Hex Height		List Price
			Max	Min	Max	Min	Max	Min	
LN-1-1/2-12	1-1/2	12	2.250	2.175	1.317	1.246	0.885	0.843	\$ 25.01
LN-1-1/4-12	1-1/4	12	1.876	1.812	1.094	1.030	0.719	0.698	15.09
LN-1-1/8-12	1-1/8	12	1.687	1.631	0.999	0.939	0.657	0.636	12.21
LN-1-3/4-12	1-3/4	12	2.625	2.538	1.540	1.460	1.012	0.989	45.85
LN-1-3/8-12	1-3/8	12	2.062	1.994	1.206	1.138	0.795	0.771	22.37
LN-2-12	2	12	3.000	2.900	1.763	1.675	1.158	1.134	101.61
LN-2-1/2-12	2-1/2	12	3.750	3.625	2.193	2.089	1.930	1.840	122.83



REPAIR ACCESSORIES

Part Number	Bar Size	A	B	C	List Price
CM-LN45050	1/2"-20	0.60	0.75	0.84	\$ 4.35
CM-LN45062	5/8"-18	0.75	0.94	1.06	5.19
CM-LN45075	3/4"-16	0.88	1.06	1.19	18.94
CM-LN45087	7/8"-14	1.00	1.25	1.40	10.43
CM-LN45100	1"-14	1.06	1.44	1.62	14.13
CM-LN45101	1"-14	0.88	1.62	1.83	16.83
CM-LN45112	1-1/8"-12	1.19	1.62	1.83	19.39
CM-LN45126	1-1/4"-12	1.38	1.81	2.06	22.55
CM-LN45151	1-1/2"-12	1.62	2.19	2.44	29.62
CM-LN45152	1-1/2"-12	0.81	2.19	2.44	23.26
CM-LN45175	1-3/4"-12	1.50	2.75	3.06	57.00
CM-LN45200	2"-12	1.62	3.12	3.50	60.85
CM-LN45225	2-1/4"-12	1.94	3.50	3.94	129.57
CM-LN45226	2-1/4"-12	2.81	3.50	3.94	177.41
CM-LN45250	2-1/2"-12	2.25	4.00	4.50	280.94

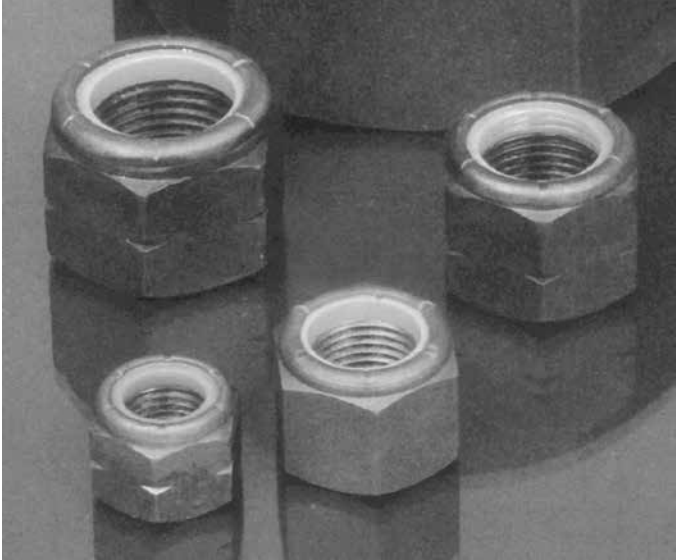
Nylon Insert Lock Nut



“NYLON INSERT” LOCKING NUTS

Manufactured from the finest quality steel to offer superior strength, Hercules® Sealing Products locking nuts with nylon inserts are specifically designed and manufactured to exact dimensions. The high temperature locking inserts are designed to withstand the high temperatures associated with close tolerance performance applications.

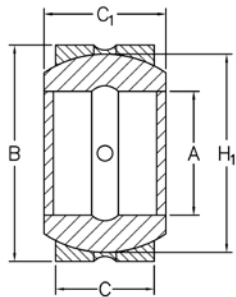
Part Number	Thread Size & Pitch	Height	Flats	List Price
CTC-2J0564	2 - 12	1-5/8	3-1/8	\$ 60.85
CTC-2J3247	1-3/4 - 12	1-7/16	2-3/4	57.00
CTC-2J3950	1-1/2 - 12	1-5/16	2-3/8	39.19
CTC-2J6384	1-1/4 - 12	1-1/8	2	34.92
CTC-2J7686	2-1/2 - 12	2-3/16	4	280.94
CTC-3J6899	2-1/4 - 12	2-13/16	3-1/2	177.41
CTC-3J9449	2-1/2 - 12	2-5/8	4	262.58
CTC-3J9545	2 - 12	2-7/16	3-1/8	163.29
CTC-4J6888	2-3/4 - 12	2-1/4	4	165.98
CTC-4J8734	2-3/4 - 12	3-1/8	4	317.35
CTC-5J3488	2-1/4 - 12	1-15/16	3-1/2	129.57
CTC-5J5731	1-3/4 - 12	1-7/16	2-1/2	46.80
CTC-7J9250	3-1/4 - 12	3-1/8	4-1/2	339.36
CTC-9X6018	4 - 12	3.73	5.62	712.30
CTC-1438149	M48 × 2	50 mm	75 mm	151.72
CTC-1438150	M56 × 2	56 mm	85 mm	159.44
CTC-1336686	M56 × 2	57 mm	80 mm	174.34
CTC-1475835	M64 × 2	63 mm	95 mm	214.32
CTC-7Y4622	M72 × 2	70 mm	105 mm	396.59
CTC-7Y4695	M80 × 2	76 mm	115 mm	379.34
CTC-1232060	M80 × 2	64 mm	115 mm	268.94
CTC-1232112	M90 × 2	76 mm	130 mm	476.02
CTC-7Y4956	M90 × 2	84 mm	130 mm	454.24
CTC-0875385	M95 × 2	88 mm	135 mm	565.72
CTC-1261971	M100 × 2	89 mm	146 mm	1085.51
CTC-1163513	M105 × 2	97 mm	150 mm	976.76
CTC-1163516	M120 × 2	108 mm	170 mm	1080.48



REPAIR ACCESSORIES

* Grade N8 (Grade C equivalent) or non-heat treated micro-alloy steel.

STYLE HH SELF ALIGNING BEARINGS (INCH)



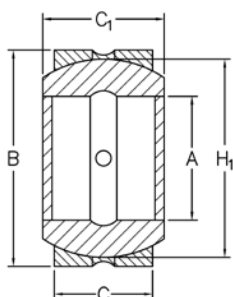
SEAL INFORMATION	
MATERIAL	CARBON CHROMIUM STEEL

SUFFIX:
2RS = SEALED BEARINGS

REPAIR ACCESSORIES

Part Number	A Nom. ID	B Nom. OD	C Nom. Ht	C ₁ OVERALL HEIGHT	G HOUSING DIAMETER	H ₁ BEARING GROOVE DIAMETER	Static Radial Load (lbs)	Dynamic Radial Load (lbs)	MATERIAL	List Price
HH008ES	1/2	7/8	3/8	.437	.875 ^{+0.000} _{-.0008}	.709	9337	3156	STEEL	\$22.30
HH010ES	5/8	1-1/16	15/32	.547	1.0625 ^{+0.000} _{-.0008}	.899	14732	4864	STEEL	24.53
HH012ES	3/4	1-1/4	9/16	.656	1.250 ^{+0.000} _{-.001}	1.083	20927	7089	STEEL	23.06
HH100ES	1	1-5/8	3/4	.875	1.625 ^{+0.000} _{-.001}	1.417	37359	12605	STEEL	20.08
HH104ES	1-1/4	2	15/16	1.093	2.000 ^{+0.000} _{-.0012}	1.772	58507	19468	STEEL	28.98
HH106ES	1-3/8	2-3/16	1-1/32	1.187	2.1875 ^{+0.000} _{-.0012}	1.929	69756	23404	STEEL	43.86
HH108ES	1-1/2	2-7/16	1-1/8	1.312	2.4375 ^{+0.000} _{-.0012}	2.165	84379	28129	STEEL	37.92
HH108ES2RS	1-1/2	2-7/16	1-1/8	1.312	2.4375 ^{+0.000} _{-.0012}	2.165	84379	28129	STEEL	50.54
HH112ES	1-3/4	2-13/16	1-5/16	1.531	2.8125 ^{+0.000} _{-.0012}	2.520	114752	38255	STEEL	52.05
HH112ES2RS	1-3/4	2-13/16	1-5/16	1.531	2.8125 ^{+0.000} _{-.0012}	2.520	114752	38255	STEEL	65.41
HH200ES	2	3-3/16	1-1/2	1.750	3.1875 ^{+0.000} _{-.0014}	2.874	150754	50408	STEEL	70.63
HH200ES2RS	2	3-3/16	1-1/2	1.750	3.1875 ^{+0.000} _{-.0014}	2.874	150754	50408	STEEL	84.76
HH204ES	2-1/4	3-9/16	1-11/16	1.969	3.5625 ^{+0.000} _{-.0014}	3.228	191251	63002	STEEL	96.65
HH204ES2RS	2-1/4	3-9/16	1-11/16	1.969	3.5625 ^{+0.000} _{-.0014}	3.228	191251	63002	STEEL	131.90
HH208ES	2-1/2	3-15/16	1-7/8	2.187	3.9375 ^{+0.000} _{-.0014}	3.583	234007	77629	STEEL	130.87
HH212ES	2-3/4	4-3/8	2-1/16	2.406	4.375 ^{+0.000} _{-.0014}	3.937	285752	95628	STEEL	153.66
HH300ES	3	4-3/4	2-1/4	2.625	4.750 ^{+0.000} _{-.0016}	4.331	337506	112505	STEEL	230.48
HH300ES2RS	3	4-3/4	2-1/4	2.625	4.750 ^{+0.000} _{-.0016}	4.331	337506	112505	STEEL	274.65
HH308ES	3-1/2	5-1/2	2-5/8	3.062	5.500 ^{+0.000} _{-.0016}	5.039	459001	153003	STEEL	408.93
HH308ES2RS	3-1/2	5-1/2	2-5/8	3.062	5.500 ^{+0.000} _{-.0016}	5.039	459001	153003	STEEL	453.55
HH312ES	3-3/4	5-7/8	2-13/16	3.281	5.875 ^{+0.000} _{-.0016}	5.394	531004	175507	STEEL	441.64
HH400ES	4	6-1/4	3	3.500	6.250 ^{+0.000} _{-.0016}	5.748	596256	202508	STEEL	596.28

STYLE MHH SELF ALIGNING BEARINGS (METRIC)



SEAL INFORMATION	
MATERIAL	CARBON CHROMIUM STEEL

SUFFIX:
2RS = SEALED BEARINGS

Part Number	A Nom. ID	B Nom. OD	C Nom. Ht	C ₁ OVERALL HEIGHT	G HOUSING DIAMETER	H ₁ BEARING GROOVE DIAMETER	Static Radial Load (lbs)	Dynamic Radial Load (lbs)	List Price
MHH20ES	20	35	12	16.00	35.00 ^{+0.000} _{-0.025}	29.00	32857	6759	\$28.13
MHH25ES	25	42	16	20.00	42.00 ^{+0.000} _{-0.025}	35.50	54003	10804	35.02
MHH25ES2RS	25	42	16	20.00	42.00 ^{+0.000} _{-0.025}	35.50	54003	10804	32.69
MHH30ES	30	47	18	22.00	47.00 ^{+0.000} _{-0.025}	40.70	69751	13951	37.07
MHH30ES2RS	30	47	18	22.00	47.00 ^{+0.000} _{-0.025}	40.70	69751	13951	46.38
MHH35ES	35	55	20	25.00	55.00 ^{+0.00} _{-0.03}	47.00	90008	18009	48.03
MHH35ES2RS	35	55	20	25.00	55.00 ^{+0.00} _{-0.03}	47.00	90008	18009	46.38
MHH40ES	40	62	22	28.00	62.00 ^{+0.00} _{-0.03}	53.00	112507	22501	53.00
MHH40ES2RS	40	62	22	28.00	62.00 ^{+0.00} _{-0.03}	53.00	112507	22501	45.49
MHH45ES2RS	45	68	25	32.00	68.00 ^{+0.00} _{-0.03}	60.00	144009	28578	81.84
MHH50ES	50	75	28	35.00	75.00 ^{+0.00} _{-0.03}	66.00	175509	35109	77.41
MHH50ES2RS	50	75	28	35.00	75.00 ^{+0.00} _{-0.03}	66.00	175509	35109	150.86
MHH60ES	60	90	36	44.00	90.00 ^{+0.000} _{-0.035}	80.00	274509	55128	119.55
MHH70ES2RS	70	105	30	49.00	105.00 ^{+0.000} _{-0.035}	92.00	351007	70876	150.86
MHH70ES	70	105	40	49.00	105.00 ^{+0.000} _{-0.035}	92.00	351007	70876	179.23
MHH80ES	80	120	45	55.00	120.00 ^{+0.000} _{-0.035}	105.00	450005	90008	195.63

REPAIR ACCESSORIES

SET SCREWS



These set screws are used on many cylinder headnuts. Use nylon plugs to ensure no damage to the headnut threads. All set screws employ Allen wrench heads.

Part Number	Thread Size	Length	List Price
SS-1/4-20X1/2	1/4-20	1/2	\$ 1.01
SS-1/4-20X3/8	1/4-20	3/8	1.19
SS-1/4-28X1/4	1/4-28	1/4	0.96
SS-1/4-28X3/8	1/4-28	3/8	0.96
SS-5/16-18X1/4	5/16-18	1/4	0.96
SS-5/16-18X3/8	5/16-18	3/8	0.96
SS-5/16-18X3/4	5/16-18	3/4	1.29
SS-5/16-24X5/16	5/16-24	5/16	0.41
SS-5/16-24X3/8	5/16-24	3/8	1.29
SS-3/8-16X3/8	3/8-16	3/8	0.72
SS-3/8-16X1/2	3/8-16	1/2	1.01
SS-3/8-16X5/8	3/8-16	5/8	1.25
SS-3/8-16X7/8	3/8-16	7/8	1.44
SS-1/2-13X1/2	1/2-13	1/2	1.69
SS-1/2-13X5/8	1/2-13	5/8	1.96
SS-#8-32X1/4	#8-32	1/4	2.27
SS-#10-24X1/4	#10-24	1/4	0.96

NYLON PLUGS



These nylon plugs are used with headnut set screws to ensure that there is no damage to the headnut threads.

Part Number	Diameter	Length	List Price
NYPLUG-125-125	1/8	1/8	0.66
NYPLUG-125-156	1/8	5/32	0.66
NYPLUG-125-875	1/8	7/8	0.46
NYPLUG-187-109	3/16	7/64	0.47
NYPLUG-187-187	3/16	3/16	0.66
NYPLUG-187-250	3/16	1/4	0.67
NYPLUG-250-070	1/4	0.070	0.81
NYPLUG-250-125	1/4	1/8	0.66
NYPLUG-250-187	1/4	3/16	0.66
NYPLUG-250-250	1/4	1/4	0.55
NYPLUG-312-125	5/16	1/8	0.66
NYPLUG-312-250	5/16	1/4	2.02
NYPLUG-312-312	5/16	5/16	1.90
NYPLUG-375-250	3/8	1/4	0.66
NYPLUG-500-875-125H	1/2	7/8	4.96

WIND-IN LOCK WIRES



Part Number	Thickness	Length	List Price
LW-093-1262	3/32 sq.	12-5/8	\$ 27.42
MARION-35240	1/8 sq.	10-1/4	12.67
MARION-35250	1/8 sq.	13-3/8	11.94
MARION-35260	1/8 sq.	16-3/8	12.16
MARION-35270	1/8 sq.	19-1/4	13.97
MARION-1031	3/16 sq.	21.00	18.61
1/8 RD WIRE	1/8 round	11	2.27

FILTER VENT PLUGS



These plugs are used to allow air to pass in and out of the non-pressurized end of a single-acting cylinder.

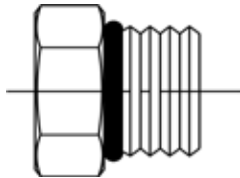
Part Number	NPT Port Size	List Price
FV-.125	1/8	\$ 4.76
FV-.250	1/4	6.45
FV-.375	3/8	7.79
FV-.500	1/2	9.36
FV-.750	3/4	14.39
FV-1.000	1	17.24

STEEL PLUGS AND VENTS

Steel Plug (O-Ring Boss)



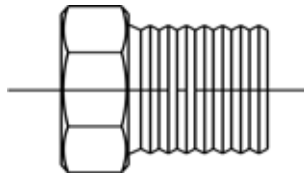
PART NUMBER	PORT SIZE	LIST PRICE
CM-74004	#4 SAE	\$ 2.27
CM-74005	#5 SAE	2.35
CM-74006	#6 SAE	2.7
CM-74008	#8 SAE	6.34
CM-74010	#10 SAE	4.54
CM-74012	#12 SAE	7.04
CM-74014	#14 SAE	12.36
CM-74016	#16 SAE	15.83
CM-74020	#20 SAE	22.97



NPT Steel Plug



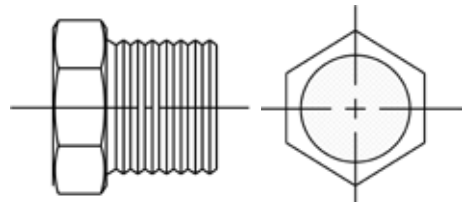
PART NUMBER	PORT SIZE	LIST PRICE
CM-74112	1/8" NPT	\$ 0.76
CM-74125	1/4" NPT	0.77
CM-74137	3/8" NPT	1.65
CM-74150	1/2" NPT	7.59
CM-74175	3/4" NPT	1.57
CM-74199	1" NPT	3.6
CM-74200	1-1/4" NPT	8.27



NPT Air Vent

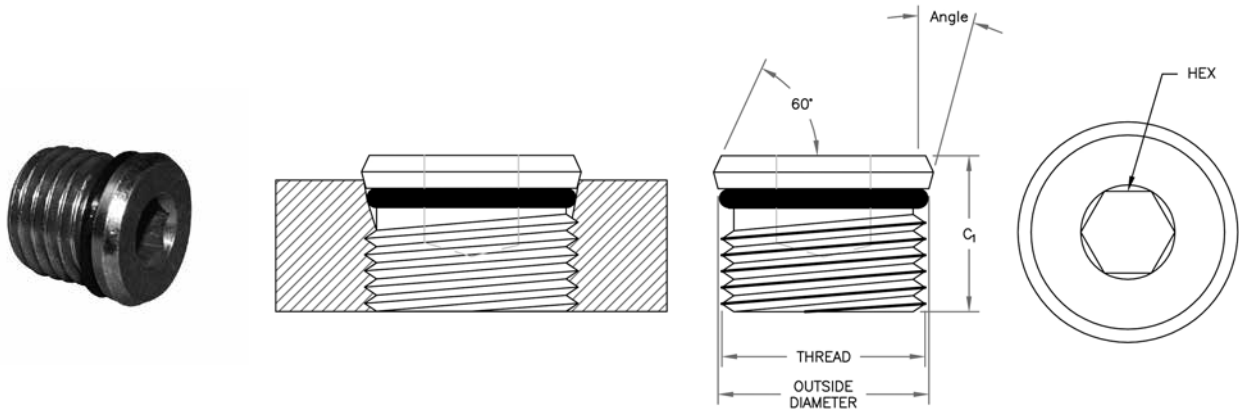


PART NUMBER	PORT SIZE	LIST PRICE
CM-77002	1/8" NPT	\$ 4.76
CM-77004	1/4" NPT	6.45
CM-77006	3/8" NPT	7.79
CM-77008	1/2" NPT	9.36
CM-77010	3/4" NPT	14.39



REPAIR ACCESSORIES

ZERO-LEAK GOLD STANDARD THREAD PORT PLUGS



REPAIR ACCESSORIES

Part Number	SIZE NUMBER	C ₁ OVERALL HEIGHT	OUTSIDE DIAMETER	HEX	Angle	TESTED TORQUE (ft-lbs)	O-RING	THREAD	List Price
SHTPP-S04	4	.450 ±.020	.477 ±.003	.188 ^{+0.005} / _{+0.000}	12 ^{+0.0} / _{-0.5}	7	MOR-8X1.5	7/16-20 UNF	\$2.32
SHTPP-S06	6	.480 ±.020	.606 ±.003	.250 ^{+0.005} / _{+0.000}	12 ^{+0.0} / _{-0.5}	11	MOR-12.1X1.6	9/16-18 UNF	2.93
SHTPP-S08	8	.560 ±.020	.800 ±.003	.313 ^{+0.005} / _{+0.000}	15 ^{+0.0} / _{-0.5}	28	568-016	3/4-16 UNF	3.45
SHTPP-S10	10	.630 ±.020	.930 ±.003	.375 ^{+0.005} / _{+0.000}	15 ^{+0.0} / _{-0.5}	46	MOR-18X2	7/8-14 UNF	4.66
SHTPP-S12	12	.750 ±.020	1.130 ±.003	.563 ^{+0.005} / _{+0.000}	15 ^{+0.0} / _{-0.5}	51	MOR-22.3X2.4	1-1/16-12 UN	8.25
SHTPP-S16	16	.750 ±.020	1.385 ±.003	.625 ^{+0.005} / _{+0.000}	15 ^{+0.0} / _{-0.5}		MOR-27X2.5	1-5/16-12 UN	15.84

MANUAL BLEEDER VALVES

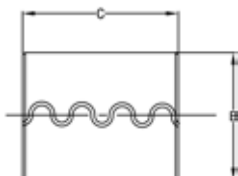


Part Number	Thread Size	Min Pkg Qty	List Price
WH705	1/8 NPT	3	\$ 5.36

SPLIT TENSION BUSHINGS



Material: Hardened Spring Steel



PART NUMBER	A	B	C	HOUSING DIAMETER	LIST PRICE
CM-99507	0.75	1.00	2.00	1.002/1.006	\$ 13.07
CM-99508	0.88	1.00	2.00	1.002/1.006	12.58
CM-99510	1.00	1.25	0.75	1.252/1.256	8.22
CM-99514	1.00	1.25	0.88	1.252/1.256	10.49
CM-99511	1.00	1.25	1.00	1.252/1.256	9.20
CM-99513	1.00	1.25	1.25	1.252/1.256	12.18
CM-99512	1.00	1.25	1.50	1.252/1.256	10.89
CM-99519	1.25	1.50	1.25	1.502/1.506	9.69
CM-99522	1.25	1.50	1.50	1.502/1.506	13.78
CM-99521	1.25	1.50	2.00	1.502/1.506	15.24
CM-99531	1.50	1.75	1.50	1.752/1.756	12.13
CM-99533	1.50	1.75	2.00	1.752/1.756	16.44
CM-99535	1.50	1.75	3.00	1.752/1.756	24.76
CM-99534	1.50	1.88	2.00	1.877/1.881	27.91
CM-995335	1.50	1.75	2.50	1.752/1.756	23.24
CM-99537	1.50	2.00	1.25	2.002/2.006	22.67

PART NUMBER	A	B	C	HOUSING DIAMETER	LIST PRICE
CM-995371	1.50	2.00	2.00	2.002/2.006	\$ 30.09
CM-99540	1.75	2.00	1.25	2.002/2.006	15.69
CM-995375	1.75	2.00	1.50	2.002/2.006	19.20
CM-99538	1.75	2.00	2.00	2.002/2.006	17.69
CM-99539	1.75	2.00	2.25	2.002/2.006	26.93
CM-995410	1.75	2.00	3.00	2.002/2.006	32.89
CM-99541	1.75	2.25	2.00	2.252/2.256	36.89
CM-99546	2.00	2.38	3.00	2.377/2.381	49.96
CM-99549	2.00	2.25	1.50	2.252/2.256	16.93
CM-99550	2.00	2.25	2.50	2.252/2.256	21.78
CM-99547	2.00	2.50	2.00	2.502/2.506	37.29
CM-99545	2.00	2.50	2.50	2.502/2.506	48.71
CM-99556	2.50	3.00	2.00	3.002/3.006	53.42
CM-99557	2.50	3.00	3.00	3.002/3.006	89.78
CM-99565	3.00	3.50	2.50	3.502/3.506	89.11

REPAIR ACCESSORIES

LOCTITE



Threadlocker 242 locks fasteners 1/4" and larger yet allows easy disassembly with hand tools. Prevents rust and corrosion.

Part Number	Application	List Price
LOCTITE-24205	Removable Threadlocker 0.5 ml bottle	\$ 12.74
LOCTITE-24221	Removable Threadlocker 10 ml bottle	47.32
LOCTITE-24231	Removable Threadlocker 50 ml bottle	129.62
LOCTITE-27105	High Strength Threadlocker 0.5 ml bottle	8.71
LOCTITE-29031	Penetrating Threadlocker 50 ml bottle	115.30
LOCTITE-54531	Hyd/Pneum Thread Sealant 50 ml tube	116.59
LOCTITE-82325	Super Lube 3 oz tube	25.97

TURBO LOCK



Turbo Lock threadlocker adhesive series is an economical alternative to Loctite.

Part Number	Application	List Price
THREAD LOCKER-11-001	Removable Threadlocker 2 ml bottle	\$ 4.80
THREAD LOCKER-11-010	Removable Threadlocker 10 ml bottle	33.47
THREAD LOCKER-11-050	Removable Threadlocker 50 ml bottle	58.58
THREAD LOCKER-14-001	High Strength Threadlocker 2 ml bottle	4.80
THREAD LOCKER-14-250	High Strength Threadlocker 250 ml bottle	201.21
THREAD LOCKER-16-010	Penetrating Threadlocker 10 ml bottle	20.73
THREAD LOCKER-16-050	Penetrating Threadlocker 50 ml bottle	53.68

SEAL LUBE™

O-Ring Lubricant



Part Number: SEAL LUBE

List Price: \$ 22.77

Seal-Lube™ lubricant is a thick, clear, high viscosity silicone oil recommended for use with most seal compounds (except silicone) and a wide variety of hydraulic fluids. Insoluble in water, alcohol, petroleum oil and glycol, Seal-Lube™ can prolong seal life when applied prior to seal installation. Chemically inert and non-toxic, Seal-Lube™ retains its viscosity over a wide temperature range. The handy squeeze 2 ounce bottle dispenses just enough where you want it.

**Set Screw and Nylon Plug
Assortment Kits
Also Available -
See the Kits & Tools Section**

GREASE FITTINGS



Part Number	Description	List Price
GF-125NPTS	1/8" NPT STRAIGHT	\$ 1.05
GF-125NPT45	1/8" NPT 45°	2.12
GF-125NPT90	1/8" NPT 90°	2.12
GF-187DS	3/16" DRIVE STRAIGHT	0.93
GF-250-28S	1/4"-28 STRAIGHT	0.69
GF-250-28-45	1/4"-28 45°	1.87
GF-250-28-90	1/4"-28 90°	1.87
GF-312DS	5/16" DRIVE STRAIGHT	1.20

GREASE FITTING CAP



Low density polyethane cap plug for use with standard grease fittings.

Part Number	Description	List Price
CAP-GF-10	Cap Plug	\$ 0.20

PTFE THREAD SEAL TAPE

Part Number: PTFE TAPE
List Price: \$ 2.96



1/2" Wide by 520" Roll

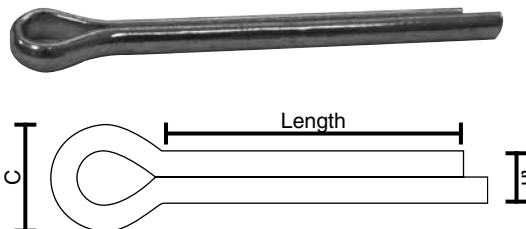
SILICONE TAPE



Used to create permanent seals for low pressure gas or liquid leaks in hydraulic hoses.
Temperature Range: -62/+500° F

Part Number	Description	List Price
SILICONE TAPE	1" X 432" Roll	\$ 45.77

COTTER PINS



Part Number	C	Length	th	List Price
CP-1X3/32	0.1875	1	0.082	\$ 0.42
CP-1-1/4X1/8	0.25	1.25	0.115	0.31
CP-1-1/2X5/32	0.3125	1.5	0.15	0.42
CP-1-3/4X3/16	0.39	1.75	0.1875	0.23
CP-2X3/16	0.375	2	0.176	0.52
CP-2X1/4	0.5	2	0.225	0.42
CP-2-1/2X1/8	0.25	2.5	0.115	0.31
CP-2-1/2X5/32	0.357	2.5	0.15625	0.51
CP-2-1/2X3/16	0.375	2.5	0.176	0.62
CP-2-1/2X1/4	0.5	2.5	0.225	0.58
CP-3X5/32	0.3125	3	0.15	0.54
CP-3X1/4	0.52	3	0.25	1.44
CP-3-1/2X1/4	0.5	3.5	0.225	0.8
CP-4X1/4	0.5	4	0.225	0.91
CP-5X1/4	0.5	5	0.225	2.87
CP-6X5/16	0.625	6	0.28	3.41

STYLE MCPL COUPLINGS

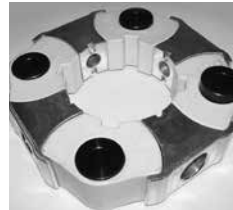
MCPL power transmission couplings are commonly found on mobile equipment to solve vibration problems in combustion engine driven equipment. The rubber or Hytrel elements effectively absorb shock loads, misalignment forces, and torsional vibrations generated by the connecting equipment at start-up for example. The coupling is axially connected to a PTO or flywheel on the engine side and radially connected to the driven equipment such as hydraulic pumps, generators, compressors, etc.



50H



110H



140H



50A

Part Number	ID X OD Dimensions	Material	Application	List Price
MCPL-110H-AL	100 X 222 mm	Hytrel with Aluminum	Hitachi, Kato, etc.	\$ 503.72
MCPL-140H-AL	130 X 250 mm	Hytrel with Aluminum	Komatsu, Kobelco, Kato, etc.	797.09
MCPL-50A-AL	107 X 200 mm	Rubber with Aluminum	Kobelco, Mitsubishi, etc.	374.61
MCPL-50H-AL	97 X 200 mm	Hytrel with Aluminum	Komatsu, Hitachi, Kobelco, Mitsubishi, Kato, etc.	330.06

**Cotter Pin and Grease Fitting Assortment Kits
Also Available -
See the Kits & Tools Section**

Assortment Kits and Tools

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O-RING KITS

O-RING KIT

Part Number: 568 KIT-A

List Price: \$ 35.43

DASH NUMBER	QTY
006 THRU 012	20
110 THRU 116	13
210 THRU 222	10
325 THRU 327	7



This kit contains a total of 382 O-Rings in 30 different sizes, providing an extremely low cost per size value.

HNBR O-RING KIT

Part Number: 568 HNBR KIT

List Price: \$ 56.17

PART NUMBER	QTY
568-008H	20
568-010H	20
568-011H	20
568-012H	20
568-013H	20
568-014H	20
568-015H	15
568-017H	15
568-111H	15
568-116H	15
568-118H	10
568-211H	10



This kit contains a total of 200 70A Durometer HNBR o-rings in 12 different sizes, providing an extremely low cost per size value.

O-RING METRIC KIT

Part Number: METRIC O KIT-J-A

List Price: \$ 53.07

I.D X C.S. (mm)	QTY	I.D X C.S. (mm)	QTY	I.D X C.S. (mm)	QTY
3 X 2.0	16	14 X 2.5	13	28 X 3.0	12
4 X 2.0	16	16 X 2.5	13	30 X 3.0	12
5 X 2.0	16	17 X 2.5	13	32 X 3.0	12
6 X 2.0	16	19 X 2.5	13	33 X 3.0	12
7 X 2.0	16	19 X 3.0	11	35 X 3.0	12
8 X 2.0	16	20 X 3.0	12	36 X 3.0	12
10 X 2.0	16	22 X 3.0	12	38 X 3.0	12
10 X 2.5	13	24 X 3.0	12	38 X 4.0	9
11 X 2.5	13	25 X 3.0	12	41 X 4.0	9
12 X 2.5	13	27 X 3.0	12	44 X 4.0	9

The Metric O-Kit J-A contains a total of 385 O-Rings in 30 different sizes, another extremely low cost per size value.



MASTER O-RING FITTING KIT

Part Number: MASTER OR FITTING KIT

List Price: \$ 211.25

PORT DASH SIZE	PART NUMBER	QTY	PORT DASH SIZE	PART NUMBER	QTY
SAE BOSS #4	568-904	50	ORS #8	568-014-90D	50
SAE BOSS #5	568-905	50	ORS #10	568-016-90D	50
SAE BOSS #6	568-906	50	ORS #12	568-018-90D	50
SAE BOSS #8	568-908	50	ORS #16	568-021-90D	50
SAE BOSS #10	568-910	50	ORS #20	568-025-90D	50
SAE BOSS #12	568-912	50	ORS #24	568-029-90D	40
SAE BOSS #14	568-914	40	SAE #8	568-210-90D	50
SAE BOSS #16	568-916	40	SAE #12	568-214-90D	50
SAE BOSS #20	568-920	20	SAE #16	568-219-90D	20
SAE BOSS #24	568-924	10	SAE #20	568-222-90D	20
SAE BOSS #32	568-932	10	SAE #24	568-225-90D	20
ORS #4	568-011-90D	50	SAE #32	568-228-90D	20
ORS #6	568-012-90D	50	SAE #40	568-232-90D	10



This 1000 piece assortment contains 1/16" CS, 1/8" CS, and Boss 90A Durometer NBR O-rings in 26 of the most popular fitting sizes, including O-ring face seals and SAE straight thread boss fittings. Individually separated inside of a sturdy steel case.

O-RING KITS

SAE FLANGE SEALS

Part Number: SAE FLANGE SEALS

List Price: \$ 36.94

BOX PART NUMBER	PART NUMBER	QTY
-8	568-210-90D	8
-12	568-214-90D	8
-16	568-219-90D	8
-20	568-222-90D	8
-24	568-225-90D	8
-32	568-228-90D	8



Fits SAE J518 code 61/62 split flanges.

FLAT FACE SEALS

Part Number: FLAT FACE O-RINGS

List Price: \$ 39.12

BOX PART NUMBER	PART NUMBER	QTY
-4	568-011-90D	8
-6	568-012-90D	8
-8	568-014-90D	8
-10	568-016-90D	8
-12	568-018-90D	8
-16	568-021-90D	8
-20	568-025-90D	8
-24	568-029-90D	8



Fits SAE O-ring face seal fittings.

BOSS & TUBE SEALS

Part Number: BOSS-TUBE FITTINGS-1

List Price: \$ 26.99

Part Number: BOSS-TUBE FITTINGS-2

List Price: \$ 38.58

BOX PART NUMBER	PART NUMBER	QTY	KIT NUMBER
-2	568-902	8	FITTINGS-1
-3	568-903	8	FITTINGS-1
-4	568-904	8	FITTINGS-1
-5	568-905	8	FITTINGS-1
-6	568-906	8	FITTINGS-1
-8	568-908	8	FITTINGS-1
-10	568-910	8	FITTINGS-1
-12	568-912	8	FITTINGS-1
-14	568-914	8	FITTINGS-1
-16	568-916	8	FITTINGS-2
-20	568-920	8	FITTINGS-2
-24	568-924	8	FITTINGS-2
-32	568-932	8	FITTINGS-2

Fits SAE Boss straight thread tube fittings.



HOSE END & ADAPTER KIT

Part Number: O-R FITTING KIT

List Price: \$ 150.59

This handy kit contains 27 sizes and 216 pieces of 90A Durometer O-rings for boss, split flange, and flat face hose end fittings and adapters. Each box has a graphic label identifying the type of application and dash number for the seal. A chart on the back of the box lists popular OEM part number matches for each O-ring. Due to popular demand, these kits are now available individually.



O-RING KITS

SAE 900 O-RING BOSS FLUOROCARBON KIT

Part Number: 900 BOSS FC
List Price: \$ 195.74

PART NUMBER	QTY	SAE PORT SIZE
568-901V	10	-1
568-902V	10	-2
568-903V	10	-3
568-904V	10	-4
568-905V	12	-5
568-906V	12	-6
568-907V	12	-7
568-908V	12	-8
568-909V	12	-9
568-910V	12	-10
568-911V	10	-11
568-912V	10	-12
568-913V	10	-13
568-914V	10	-14
568-916V	10	-16
568-918V	10	-18
568-920V	10	-20
568-924V	10	-24
568-928V	10	-28
568-932V	10	-32



This 212 piece assortment contains the most popular size 90 Durometer FKM Boss O-rings in 20 different fitting sizes, individually separated, which will supply your shop, service truck, or parts counter with the sizes you need!

SAE J514 O-RING BOSS KIT

Part Number: 900 BOSS KIT
List Price: \$ 37.14

PART NUMBER	QTY	SAE PORT SIZE
568-901	10	-1
568-902	10	-2
568-903	10	-3
568-904	10	-4
568-905	12	-5
568-906	12	-6
568-907	12	-7
568-908	12	-8
568-909	12	-9
568-910	12	-10
568-911	10	-11
568-912	10	-12
568-913	10	-13
568-914	10	-14
568-916	10	-16
568-918	10	-18
568-920	10	-20
568-924	10	-24
568-928	10	-28
568-932	10	-32



This 212 piece assortment contains the most popular size 90 Durometer Boss O-rings in 20 different fitting sizes, individually separated, which will supply your shop, service truck, or parts counter with the sizes you need!

O-RING FACE KIT

Part Number: 568 FACE KIT
List Price: \$ 33.29

DASH NUMBER	FITTING	QTY
011-90D	#4	25
012-90D	#6	25
014-90D	#8	25
016-90D	#10	25
018-90D	#12	20
021-90D	#16	15
025-90D	#20	10
029-90D	#24	10



This kit contains a total of 155 90 durometer O-Rings in 8 different sizes, providing an extremely low cost per size value.

SAE CODE 61 & 62 O-RING FLANGE KIT

Part Number: 568 FLANGE KIT
List Price: \$ 39.16

DASH NUMBER	FITTING	QTY
210-90D	1/2"	10
214-90D	3/4"	10
219-90D	1"	10
222-90D	1-1/4"	10
225-90D	1-1/2"	10
228-90D	2"	10
232-90D	2-1/2"	10



This kit contains a total of 70 90 durometer O-Rings, in 7 different sizes, providing an extremely low cost per size value.

O-RING KITS

SPLIT FLANGE SEAL KIT

Part Number: SFS KIT

List Price: \$ 105.62

PART NUMBER	Flange Size	Replaces O-Ring No.	Outside Diam.	QTY
SFS-8	1/2"	-210	1.005	5
SFS-12	3/4"	-214	1.255	5
SFS-16	1"	-219	1.565	5
SFS-20	1-1/4"	-222	1.755	5
SFS-24	1-1/2"	-225	2.125	5
SFS-32	2"	-228	2.500	5
SFS-40	2-1/2"	-232	3.005	5



This kit contains 35 seals in 7 popular sizes for SAE J518 4-Bolt code 61 and code 62 split flanges.

U.S. INDUSTRIAL O-RING KIT

Part Number: 568 KIT

List Price: \$ 43.79

DASH NUMBER	QTY
005 THRU 011	25
012	15
013 THRU 018	10
110	15
111 THRU 116	10
117 THRU 121	7
210 THRU 211	10
212 THRU 219	7



This kit contains a total of 436 70 durometer O-Rings in 36 different sizes, providing an extremely low cost per size value.

QUAD RING KIT

Part Number: QUAD-RING KIT

List Price: \$ 107.82

DASH NUMBER	QTY
4005 THRU 4012	10
4013 THRU 4016	6
4017 THRU 4018	5
4110 THRU 4116	6
4117 THRU 4121	4
4210 THRU 4219	5



QUAD WAREHOUSE KIT

Part Number: QUAD-RING WH KIT

List Price: \$ 567.65

DASH NUMBER	QTY
4004 THRU 4012	10
4013 THRU 4030	5
4031 THRU 4038	3
4039 THRU 4048	2
4108 THRU 4116	10
4117 THRU 4124	5
4125 THRU 4135	3
4136 THRU 4154	2
4204 THRU 4216	5
4217 THRU 4229	3
4230 THRU 4338	2



Similar to the O-Ring Warehouse kit, the Quad Seal Warehouse kit contains a total of 583 four-lobed seals in 145 different sizes. This kit is ideal for the small distributor who wishes to have a comprehensive on-hand inventory of Quad seals for counter sales.

O-RING KITS

90 DUROMETER O-RING KIT

Part Number: 568 90D KIT

List Price: \$ 62.36

DASH NUMBER	QTY
005 THRU 011-90D	25
012-90D	15
013 THRU 018-90D	10
110-90D	15
111 THRU 116-90D	10
117 THRU 121-90D	7
210 THRU 211-90D	10
212 THRU 219-90D	7



This kit contains a total of 436 90 durometer O-Rings in 36 different sizes, providing an extremely low cost per size value.

PTFE O-RING KIT

Part Number: 568 PTFE KIT

List Price: \$ 607.23

DASH NUMBER	QTY
005 THRU 012T	15
013 THRU 018T	10
110 THRU 116T	10
117 THRU 121T	5
210 THRU 219T	5



This kit contains a total of 325 PTFE O-Rings (55 - 58 Shore D) in 36 different sizes. PTFE O-Rings can withstand temperatures up to 500° F and are impervious to a wide range of chemicals.

FLUOROCARBON O-RING KIT

Part Number: 568 FC KIT

List Price: \$ 278.37

DASH NUMBER	QTY
005 THRU 011V	25
012V	15
013 THRU 018V	10
110V	15
111 THRU 116V	10
117 THRU 121V	7
210 THRU 211V	10
212 THRU 219V	7



This kit contains a total of 436 75 durometer fluorocarbon O-Rings in 36 different sizes, providing an extremely low cost per size value.

FLUOROCARBON O-RING KIT

Part Number: 568 FC KIT-A

List Price: \$ 123.25

DASH NUMBER	QTY
006 THRU 012	10
110 THRU 114	10
115 THRU 116	5
210 THRU 214	5
216 THRU 222	2
325 THRU 327	2



This kit contains a total of 180 75 Shore A fluorocarbon o-rings in 30 different sizes.

VITON KIT

Part Number: METRIC O KIT-V

List Price: \$ 108.80

I.D.	C.S	QTY	I.D.	C.S	QTY	I.D.	C.S	QTY
5.00	1.50	20	9.00	2.00	15	19.00	2.00	10
2.20	1.60	20	10.00	2.00	15	20.00	2.00	10
3.10	1.60	20	12.00	2.00	15	10.00	2.50	10
4.10	1.60	20	4.30	2.40	15	13.00	2.50	10
7.10	1.60	20	5.30	2.40	15	14.00	2.50	10
4.00	2.00	20	5.60	2.40	15	15.00	2.50	10
6.00	2.00	20	7.60	2.40	15	17.00	2.50	10
13.00	1.50	15	8.30	2.40	15	18.00	2.50	10
9.10	1.60	15	8.60	2.40	15	19.00	2.50	10
10.10	1.60	15	16.00	1.50	10	9.00	3.00	10
13.10	1.60	15	14.00	2.00	10	10.00	3.00	10
8.00	2.00	15	16.00	2.00	10	11.00	3.00	10

This 500 piece kit contains 75 Shore A fluorocarbon o-rings in 36 metric sizes.



O-RING KITS

O-RING WAREHOUSE KIT

Part Number: 568 WH KIT
List Price: \$ 544.66

DASH NUMBER	QTY	DASH NUMBER	QTY	DASH NUMBER	QTY
001 THRU 016	20	125 THRU 142	5	325 THRU 328	5
017 THRU 024	10	143 THRU 146	3	329 THRU 330	4
025 THRU 031	7	147 THRU 151	2	331 THRU 338	2
032 THRU 043	5	210 THRU 216	10	901 THRU 914	5
044 THRU 046	2	217 THRU 229	5	916, 918	5
110 THRU 116	15	230 THRU 232	3	920, 924	5
117 THRU 124	10	233 THRU 237	2	928, 932	5

Our O-ring Warehouse kit is ideally suited for the repair shop that needs a large on-hand selection of O-rings to ensure quick repair of all machine types. 1,110 O-Rings in 150 different sizes are included in this kit. Each size is individually packaged in heavy duty ziploc bags to protect against environmental exposure and contamination. All packages are then stored in a sturdy styrene cabinet with pull-out drawers for easy access to parts. Included card shows size, dimensions, and drawer location for each ring.



FLUOROCARBON O-RING WAREHOUSE KIT

Part Number: 568 WH KIT-FC
List Price: \$ 735.00

DASH NUMBER	QTY	DASH NUMBER	QTY	DASH NUMBER	QTY
001 THRU 016V	20	125 THRU 142V	5	325 THRU 328V	5
017 THRU 024V	10	143 THRU 146V	3	329 THRU 330V	4
025 THRU 031V	7	147 THRU 151V	2	331 THRU 338V	2
032 THRU 043V	5	210 THRU 216V	10	901 THRU 914V	5
044 THRU 046V	2	217 THRU 229V	5	916V, 918V	5
110 THRU 116V	15	230 THRU 232V	3	920V, 924V	5
117 THRU 124V	10	233 THRU 237V	2	928V, 932V	5

Our 75 Durometer Fluorocarbon O-ring Warehouse kit is ideally suited for the repair shop that needs a large on-hand selection of O-rings to ensure quick repair of all machine types. 1,110 O-Rings in 150 different sizes are included in this kit. Each size is individually packaged in heavy duty ziploc bags to protect against environmental exposure and contamination. All packages are then stored in a sturdy styrene cabinet with pull-out drawers for easy access to parts. Included card shows size, dimensions, and drawer location for each ring.



90 DUROMETER O-RING WAREHOUSE KIT

Part Number: 568 WH KIT-90D
List Price: \$ 510.52

DASH NUMBER	QTY	DASH NUMBER	QTY
001 THRU 016-90D	20	217 THRU 229-90D	5
017 THRU 024-90D	10	230 THRU 232-90D	3
025 THRU 031-90D	7	233 THRU 237-90D	2
032 THRU 043-90D	5	325 THRU 328-90D	5
044 THRU 046-90D	2	329 THRU 330-90D	4
110 THRU 116-90D	15	331 THRU 338-90D	2
117 THRU 124-90D	10	901 THRU 914-90D	5
125 THRU 142-90D	5	916, 918-90D	5
143 THRU 146-90D	3	920, 924-90D	5
147 THRU 151-90D	2	928, 932-90D	5
210 THRU 216-90D	10		

Our 90 Durometer O-ring Warehouse kit is ideally suited for the repair shop that needs a large on-hand selection of O-Rings to insure quick repair of all machine types. 1,110 O-Rings in 150 different sizes are included in this kit.



O-RING KITS

MAX O-RING KIT

Part Number: MAX 1381 KIT
List Price: \$ 372.80

Part Number: MAX 1381 KIT-90D
List Price: \$ 426.76



These sturdy kits, packaged in a heavy duty box, contain 1415 O-Rings in the most popular sizes. Every service truck should have one of these. Five internal boxes contain 1/16" C/S, 3/32" C/S, 1/8" C/S, Boss, and Flange fitting o-rings. Contents and quantities are listed below.

Flange Seals

DASH NUMBER	QTY
8	10
12	10
16	10
20	5
24	5
32	5

Boss O-Rings

DASH NUMBER	QTY
903	15
904	25
905	15
906	25
90	25
910	25
912	15
916	10

1/16" C/S O-Rings

DASH NUMBER	QTY
006 THRU 018	25
019 THRU 021	20
022 THRU 026	15
028	15
029	10
030	10

1/8" C/S O-Rings

DASH NUMBER	QTY
210 THRU 214	20
215 THRU 222	15
223 THRU 224	10
226	10
228	10
232	10
236	10

3/32" C/S O-Rings

DASH NUMBER	QTY
109 THRU 118	25
119 THRU 120	20
121 THRU 127	15
128	10
129	10
131	10
133	10
135	5

O-RING KITS

COMMON JAPANESE SIZE O-RINGS IN 70 DUROMETER

Part Number: METRIC O KIT-J
List Price: \$ 68.67

I.D.	C.S	QTY	I.D.	C.S	QTY
2.8	1.9	25	20.8	2.4	8
3.8	1.9	20	21.8	2.4	8
4.8	1.9	20	24.4	3.1	6
5.8	1.9	20	29.4	3.1	7
6.8	1.9	15	21.7	3.5	5
7.8	1.9	15	22.1	3.5	5
8.8	1.9	15	23.7	3.5	7
9.8	1.9	15	24.7	3.5	7
9.8	2.4	15	25.2	3.5	7
10.8	2.4	15	25.7	3.5	7
11.0	2.4	15	27.7	3.5	7
11.8	2.4	12	28.7	3.5	6
12.8	2.4	12	29.2	3.5	6
13.8	2.4	12	29.7	3.5	6
14.8	2.4	12	30.7	3.5	6
15.8	2.4	12	31.2	3.5	6
17.8	2.4	8	14.5	4.0	4
19.8	2.4	8	23.5	4.0	6



This 380 piece kit contains the most popular Japanese Industrial metric O-ring sizes.

COMMON EUROPEAN SIZE O-RINGS IN 70 DUROMETER

Part Number: METRIC O KIT-E
List Price: \$ 52.47

I.D.	C.S.	QTY	I.D.	C.S.	QTY
5.0	1.5	20	19.0	2.0	10
13.0	1.5	15	20.0	2.0	10
16.0	1.5	10	4.3	2.4	15
2.2	1.6	20	5.3	2.4	15
3.1	1.6	20	5.6	2.4	15
4.1	1.6	20	7.6	2.4	15
7.1	1.6	20	8.3	2.4	15
9.1	1.6	15	8.6	2.4	15
10.1	1.6	15	10.0	2.5	10
13.1	1.6	15	13.0	2.5	10
4.0	2.0	20	14.0	2.5	10
6.0	2.0	20	15.0	2.5	10
8.0	2.0	15	17.0	2.5	10
9.0	2.0	15	18.0	2.5	10
10.0	2.0	15	19.0	2.5	10
12.0	2.0	15	9.0	3.0	10
14.0	2.0	10	10.0	3.0	10
16.0	2.0	10	11.0	3.0	10



This 500 piece kit contains the most popular European metric O-ring sizes.

O-RING KITS

COMMON JAPANESE SIZE O-RINGS IN 90 DUROMETER

Part Number: METRIC O KIT-J-90D
List Price: \$ 167.11

I.D.	C.S	QTY	I.D.	C.S	QTY
2.8	1.9	25	20.8	2.4	8
3.8	1.9	20	21.8	2.4	8
4.8	1.9	20	24.4	3.1	6
5.8	1.9	20	29.4	3.1	7
6.8	1.9	15	21.7	3.5	5
7.8	1.9	15	22.1	3.5	5
8.8	1.9	15	23.7	3.5	7
9.8	1.9	15	24.7	3.5	7
9.8	2.4	15	25.2	3.5	7
10.8	2.4	15	25.7	3.5	7
11.0	2.4	15	27.7	3.5	7
11.8	2.4	12	28.7	3.5	6
12.8	2.4	12	29.2	3.5	6
13.8	2.4	12	29.7	3.5	6
14.8	2.4	12	30.7	3.5	6
15.8	2.4	12	31.2	3.5	6
17.8	2.4	8	14.5	4.0	4
19.8	2.4	8	23.5	4.0	6



This 380 piece kit contains the most popular Japanese Industrial metric O-ring sizes in 90 durometer NBR.

COMMON EUROPEAN SIZE O-RINGS IN 90 DUROMETER

Part Number: METRIC O KIT-E-90D
List Price: \$ 178.59

I.D.	C.S.	QTY	I.D.	C.S.	QTY
5.0	1.5	20	19.0	2.0	10
13.0	1.5	15	20.0	2.0	10
16.0	1.5	10	4.3	2.4	15
2.2	1.6	20	5.3	2.4	15
3.1	1.6	20	5.6	2.4	15
4.1	1.6	20	7.6	2.4	15
7.1	1.6	20	8.3	2.4	15
9.1	1.6	15	8.6	2.4	15
10.1	1.6	15	10.0	2.5	10
13.1	1.6	15	13.0	2.5	10
4.0	2.0	20	14.0	2.5	10
6.0	2.0	20	15.0	2.5	10
8.0	2.0	15	17.0	2.5	10
9.0	2.0	15	18.0	2.5	10
10.0	2.0	15	19.0	2.5	10
12.0	2.0	15	9.0	3.0	10
14.0	2.0	10	10.0	3.0	10
16.0	2.0	10	11.0	3.0	10



This 500 piece kit contains the most popular European metric O-ring sizes in 90 durometer NBR.

O-RING SPLICE KITS

O-RING SPLICE KIT INCH SIZES

Part Number: 568 SPLICE KIT
List Price: \$ 51.42

Kit Contains:

1. Stock of 70 Durometer Buna O-ring Cord*
2. Razor Blade
3. Splicing tool
4. Tube of Adhesive

Replacement Parts

Parts:	List Price
568 SPLICE TOOL	\$10.74 ea
568 ADHESIVE	\$7.70 ea
70 Duro. Cord	



*Cross Sections: 1/16"(.070), 3/32"(.103), 1/8"(.139), 3/16"(.210), 1/4"(.275).
Length: 7 Feet Each

O-RING SPLICE KIT INCH & METRIC SIZES

Part Number: MET/INCH SPLICE KIT
List Price: \$ 91.11

This kit can produce O-Rings of any standard inch size cross-section plus a wide variety of metric sizes. Each kit contains quick drying adhesive, cutting and splicing jig, razor blade, and 14 lengths of 70 Durometer Buna-N cord stock as follows:

- Inch cross-sections: (inch)**
1/16" (.070), 3/32" (.103), 1/8" (.139), 3/16" (.210), 1/4" (.275)
Metric cross-sections: (mm)
1.6, 2.0, 2.5, 3.0, 3.5, 4.0, 5.0, 5.7, 8.4
Length: 1 Meter Each



These kits can produce O-Rings of any circumference. The 568 kit contains the most popular inch cross sectional sized O-ring cord. The Metric and Inch Kit has both standard inch size cross sectional cord plus a wide variety of metric sized cord. Both kits contain quick drying adhesive, a cutting and splicing jig, a razor blade and 70 Durometer Buna-N cord.

FLUOROCARBON O-RING SPLICE KIT INCH SIZES

Part Number: 568 FC SPLICE KIT
List Price: \$ 199.42

Kit Contains:

1. Stock of 75 Durometer Fluorocarbon Cord*
2. Razor Blade
3. Splicing tool
4. Tube of Adhesive

Replacement Parts

Parts:	List Price
568 SPLICE TOOL	\$10.74 ea
568 ADHESIVE	\$7.70 ea
75 Duro. Fluorocarbon Cord	



*Cross Sections: 1/16" (.070), 3/32"(.103), 1/8"(.139), 3/16"(.210), 1/4"(.275). Length: 7 Feet Each

BACK-UP RING KITS

574 BACK-UP RING KIT

Part Number: 574 KIT
List Price: \$ 81.99

PART NUMBER	QTY	PART NUMBER	QTY
574-005	10	574-114	10
574-006	10	574-115	10
574-007	10	574-116	10
574-008	10	574-117	5
574-009	10	574-118	5
574-010	10	574-119	5
574-011	10	574-120	5
574-012	10	574-121	5
574-013	10	574-210	7
574-014	10	574-211	7
574-015	10	574-212	7
574-016	10	574-213	7
574-017	10	574-214	5
574-018	10	574-215	5
574-110	10	574-216	5
574-111	10	574-217	5
574-112	10	574-218	5
574-113	10	574-219	5



This 293 piece kit contains 36 of the most popular size "Parback®" Style Dished Cross Section back-up rings. Molded of 90A Durometer Buna-N Rubber, they stretch for installation and return quickly to their original size. SIZES CORRESPOND TO O-RING NUMBERS. Your shop and service truck should not be without this handy kit.

575 BACK-UP RING KIT

Part Number: 575 KIT
List Price: \$ 180.08

PART NUMBER	QTY	PART NUMBER	QTY
575-111	25	575-216	25
575-112	25	575-217	15
575-113	25	575-218	15
575-114	25	575-219	15
575-115	25	575-220	15
575-116	25	575-221	15
575-210	25	575-222	15
575-211	25	575-223	15
575-212	25	575-224	15
575-213	25	575-325	10
575-214	25	575-326	10
575-215	25	575-327	10



This 475 piece kit contains 24 of the most popular size urethane back-up rings. This assortment is essential for parts counters, shop use, and service trucks.

PTFE BACK-UP RING KIT

Part Number: 575 PTFE KIT S
List Price: \$ 186.94

PART NUMBER	QTY	PART NUMBER	QTY
575-005ST	15	575-114ST	10
575-006ST	15	575-115ST	10
575-007ST	15	575-116ST	10
575-008ST	15	575-117ST	5
575-009ST	15	575-118ST	5
575-010ST	15	575-119ST	5
575-011ST	15	575-120ST	5
575-012ST	15	575-121ST	5
575-013ST	10	575-210ST	5
575-014ST	10	575-211ST	5
575-015ST	10	575-212ST	5
575-016ST	10	575-213ST	5
575-017ST	10	575-214ST	5
575-018ST	10	575-215ST	5
575-110ST	10	575-216ST	5
575-111ST	10	575-217ST	5
575-112ST	10	575-218ST	5
575-113ST	10	575-219ST	5

This 325 piece kit contains 36 of the most popular size PTFE Back-up Rings. These rings are compatible with all hydraulic fluids, since they are virtually chemically inert, and can be used in applications involving elevated operating temperatures. These rings are scarf cut to facilitate installation.



RETAINER RING KITS

SPIRAL WOUND

Part Number: SRR KIT
List Price: \$ 249.79

PART NUMBER	QTY.	PART NUMBER	QTY.
WHM-050	12	WSM-050	12
WHM-062	12	WSM-062	12
WHM-075	12	WSM-075	12
WHM-087	12	WSM-087	12
WHM-100	12	WSM-100	12
WHM-112	12	WSM-112	12
WHM-125	12	WSM-125	12
WHM-137	12	WSM-137	12
WHM-150	12	WSM-150	12



EATON

Part Number: ERR KIT
List Price: \$ 319.11

PART NUMBER	QTY.	PART NUMBER	QTY.
NAN-050	12	XAN-050	12
NAN-062	12	XAN-062	12
NAN-075	12	XAN-075	12
NAN-087	12	XAN-087	12
NAN-100	12	XAN-100	12
NAN-112	12	XAN-112	12
NAN-125	12	XAN-125	12
NAN-137	12	XAN-137	12
NAN-150	12	XAN-150	12



Each kit contains: 18 sizes - 9 internal, 9 external • 216 rings per box • 12 rings per size

Each kit has an assortment of retainer rings (Spiral and Eaton style) packed in a reusable plastic box. All rings are made in the USA from carbon spring steel.

EXTERNAL RETAINER RINGS

Part Number: 310 KIT
List Price: \$ 87.83

PART NUMBER	SHAFT SIZE	QTY.	PART NUMBER	SHAFT SIZE	QTY.
310-100	1.000	5	310-200	2.000	5
310-125	1.250	5	310-225	2.250	5
310-137	1.375	5	310-250	2.500	5
310-150	1.500	5	310-275	2.750	3
310-175	1.750	5	310-300	3.000	3



These assortments contain the most popular size retainer rings commonly used in many application such as pumps, motors, and forklift cylinders. Boxed in a handy storage and display case, which will supply your shop, service truck, or parts counter with the sizes you need!

INTERNAL RETAINER RINGS

Part Number: 300 KIT
List Price: \$ 166.06

PART NUMBER	BORE SIZE	QTY.	PART NUMBER	BORE SIZE	QTY.
300-075	0.750	10	300-200	2.000	10
300-087	0.875	10	300-225	2.250	5
300-100	1.000	10	300-250	2.500	5
300-112	1.125	10	300-275	2.750	5
300-125	1.250	10	300-300	3.000	5
300-137	1.375	10	300-350	3.500	5
300-150	1.500	10	300-400	4.000	5
300-162	1.625	10	300-450	4.500	2
300-175	1.750	10	300-500	5.000	2



ASSORTMENT KITS

CAT® D-RING KIT

Part Number: CTC-4C4784
List Price: \$ 160.18

PART NUMBER	ID	QTY.
1P3700	19.0	10
1P3702	25.4	10
1P3703	31.9	10
1P3704	38.2	10
1P3705	44.7	10
1P3706	51.1	10
1P3707	54.2	10
1P3708	57.4	5
1P3709	63.9	5



This handy kit, in an unbreakable box, contains the 9 most popular sized D-Rings used on Caterpillar® equipment.

CAT® SILICONE O-RING KIT

Part Number: CTC-4C8253
List Price: \$ 431.48

PART NUMBER	QTY.	PART NUMBER	QTY.
8M4986	10	8M4992	3
8M8157	5	8M4443	3
8M4437	10	9M9647	3
8M4438	5	8M5010	3
8M4389	5	1S0004	5
8M8283	3	9H6067	5
8M5252	3	9M4849	5
8M5661	3	8M4991	3
8M8515	5	2S2251	5
8M4432	5	8M4390	3
8M5248	5	8M4435	5
8M5254	5	8M4445	5
9M7002	3	8M4446	5
8M4436	3	8M4988	5
8M4987	10	8M4990	3
8M5249	5	6L1651	3



This handy kit, in an unbreakable box, contains 149 silicone o-rings in the 32 most popular sizes used on Caterpillar® equipment.

CAT® FLANGE KIT

Part Number: CTC-2701545
List Price: \$ 41.59

PART NUMBER	QTY.
4J0524	10
4J0527	10
4J0522	10
4J5267	10
4J5140	10
4J0520	10



CAT® NITRILE O-RING KIT

Part Number: CTC-4C4782
List Price: \$ 270.64

PART NUMBER	QTY.	PART NUMBER	QTY.
4J0527	10	3D2824	20
4J7533	20	2S4078	20
7J0204	20	4J0524	15
3J7354	20	6V9746	20
1J9671	20	5K9090	20
3J1907	20	6V8400	20
4K1388	20	8T0315	20
4J0526	10	6K6307	20
4J0522	15	4J0523	15
4J0520	15	4J5477	20
4J5267	20	6V8397	20
2M9780	20	6V8398	20
7M8485	20	7J9108	20
4J0525	10	3K0360	20
4J0519	15	304606	20
4J5140	20		



This handy kit, in an unbreakable box, contains 570 nitrile o-rings in the 32 most popular sizes used on Caterpillar® equipment.

ASSORTMENT KITS

BULLDOG O-RING KIT

Part Number: BD-959007
List Price: \$ 545.77

227 general purpose silicone O-rings in 53 sizes for high temperature, engine, transmission and hydraulic oil applications.



BULLDOG O-RING KIT

Part Number: BD-959008
List Price: \$ 273.51

227 general purpose nitrile O-rings in 53 sizes for use with fuel oil, gasoline and lubricant applications.



BULLDOG O-RING KIT

Part Number: BD-959010
List Price: \$ 280.04

142 general purpose silicone O-rings in 23 sizes for high temperature, engine, transmission and hydraulic oil applications.



BULLDOG O-RING KIT

Part Number: BD-959012
List Price: \$ 443.86

227 silicone and nitrile O-rings in 53 sizes for general purpose applications.



BULLDOG O-RING KIT

Part Number: BD-959013
List Price: \$ 328.85

225 nitrile O-rings and D-rings in 21 sizes for use with XT series and Code 61 flange fittings.



BULLDOG O-RING KIT

Part Number: BD-959100
List Price: \$ 328.80

243 nitrile O-rings and D-rings in 21 sizes for use with XT series and Code 61 flange fittings.



ASSORTMENT KITS

BULLDOG O-RING KIT

Part Number: CT-2701528

List Price: \$ 286.34

570 nitrile O-rings in 32 sizes for use with SAE O-ring face seal, SAE straight thread O-ring, and SAE code 61/62 connections.



BULLDOG O-RING KIT

Part Number: CT-2701533

List Price: \$ 317.81

149 general purpose silicone O-rings in 32 sizes for use with hose couplings, engines and transmissions.



BULLDOG O-RING KIT

Part Number: CT-2701535

List Price: \$ 116.84

80 nitrile D-rings in 9 sizes for use with XT-5 and XT-6 flange connections.



BULLDOG O-RING KIT

Part Number: CT-2701537

List Price: \$ 90.41

125 nitrile O-rings in 10 sizes for use with metric adapters.



BULLDOG O-RING KIT

Part Number: CT-2701539

List Price: \$ 67.16

120 nitrile O-rings in 8 sizes for use with face seal hose coupling and adapter fittings.



BULLDOG O-RING KIT

Part Number: CT-2701545

List Price: \$ 44.96

60 nitrile O-rings in 6 sizes for use with Code 61 and XT-3 hose couplings and flange fittings.



ASSORTMENT KITS

BULLDOG O-RING KIT

Part Number: CT-4C4782
List Price: \$ 272.71

580 nitrile O-rings in 32 sizes for use with XT-3, O-ring face seal and O-ring boss connections.



BULLDOG O-RING KIT

Part Number: CT-4C4784
List Price: \$ 109.51

80 nitrile D-rings in 9 sizes for use with XT-5 and XT-6 flange connections.



BULLDOG O-RING KIT

Part Number: CT-4C4786
List Price: \$ 41.19

85 nitrile O-rings in 7 sizes for use with air conditioning fittings.



BULLDOG O-RING KIT

Part Number: CT-4C4788
List Price: \$ 86.11

125 nitrile O-rings in 10 sizes for use with metric adapters.



BULLDOG O-RING KIT

Part Number: CT-4C5859
List Price: \$ 59.82

120 nitrile O-rings in 8 sizes for use with face seal hose coupling and adapter fittings.



BULLDOG O-RING KIT

Part Number: CT-4C8253
List Price: \$ 302.96

149 general purpose silicone O-rings in 32 sizes for use with hose couplings, engines and transmissions.



ASSORTMENT KITS

BULLDOG O-RING KIT

Part Number: CT-9S3135
List Price: \$ 41.94

60 nitrile O-rings in 6 sizes for use with Code 61 and XT-3 hose couplings and flange fittings.



BULLDOG O-RING KIT

Part Number: JH-AT85197
List Price: \$ 86.90

80 nitrile O-rings in 8 sizes for use with face seal hose coupling and adapter fittings.



JOHN DEERE O-RING KIT

Part Number: JD-32X451
List Price: \$ 61.70

This John Deere O-Ring kit contains a total of 451 components, 70 Shore A and 90 Shore A O-rings. OEM parts numbered for easy reference.

CONTENTS OF KIT

- 160 flat-face fittings
- 291 low pressure fittings



PART NUMBER	QTY.	PART NUMBER	QTY.
R26976	20	T76938*	20
R27490	20	R495R	10
A4365R	20	R27149	10
T77814*	20	A4730R*	10
T77613*	20	T78612*	20
T77857*	20	A3606R	10
F3353R	13	R1225R	10
P46051	13	R29463	10
R394R	13	U12037	10
R459R	13	T78784*	20
T77932*	20	R30319	10
R34404	13	U10289	10
T77858*	20	T11220	10
P47889	13	R31378	10
32240	13	B3690R	10
B2762R	10	P50631	10

* Used for ORS fittings.

JOHN DEERE O-RING KIT

Part Number: JD-AT85197
List Price: \$ 24.97

This kit contains a total of 80, 90 Durometer o-rings in 8 popular sizes used on John Deere equipment.

PART NUMBER	FITTING.	QTY.
T77814	#4	10
T77613	#6	12
T77857	#8	12
T77932	#10	12
T77858	#12	12
T76938	#16	12
T78612	#20	5
T78784	#24	5



KOMATSU O-RING KIT

Part Number: KOM-30-KU-90
List Price: \$ 303.37

This handy kit, in an unbreakable box, contains 74 21T series o-rings & 165 07000-1 series o-rings in the most popular sizes used on Komatsu equipment.



PART NUMBER	QTY.	PART NUMBER	QTY.	PART NUMBER	QTY.
21T-09-11410	10	07000-12010	10	07000-13025	7
21T-09-11420	8	07000-12011	10	07000-13028	7
21T-09-11430	7	07000-12012	10	07000-13030	7
21T-09-11440	7	07000-12014	10	07000-13032	7
21T-09-11450	7	07000-12015	10	07000-13035	7
21T-09-11460	7	07000-12016	10	07000-13038	5
21T-09-11470	7	07000-12018	10	07000-13040	9
21T-09-11480	7	07000-12020	10	07000-13042	7
21T-09-11490	7	07000-12055	8	07000-13045	7
21T-09-11510	7	07000-13022	7	07000-13048	7

ASSORTMENT KITS

THE ULTIMATE NITRILE O-RING ASSORTMENT

Part Number: 568 KIT-ULTIMATE

List Price: \$ 3968.94



Includes: 12 drawers and 3 slide racks, plus base. Total weight 232 lbs.

214 Items, 1324 Pieces.

Sizes Include:

-001 THRU -010

-012 THRU -050

-106 THRU -163

-204 THRU -262

-314 THRU -355

-425 THRU -429

3 racks - each one is: 20" wide x 15-3/4" deep x 15" high

1 base - 20-3/8" wide x 16" deep x 15-1/8" high

Approximately 61" from top to bottom

THE ULTIMATE FLUOROCARBON O-RING ASSORTMENT

Part Number: 568 FC KIT-ULTIMATE

List Price: \$ 8392.94



Includes: 12 drawers and 3 slide racks, plus base. Total weight 232 lbs.

214 Items, 1324 Pieces.

Sizes Include:

-001 THRU -010

-012 THRU -050

-106 THRU -163

-204 THRU -262

-314 THRU -355

-425 THRU -429

3 racks - each one is: 20" wide x 15-3/4" deep x 15" high


1 base - 20-3/8" wide x 16" deep x 15-1/8" high

Approximately 61" from top to bottom

ASSORTMENT KITS

COTTER PIN KIT

Part Number: COTTER PIN KIT
List Price: \$ 37.23


	1/8" X 1-1/4" 75 pcs.	3/32" X 1" 150 pcs.
	1/8" X 2" 50 pcs.	3/32" X 1-1/2" 100 pcs.
	1/16" X 1" 150 pcs.	5/32" X 2-1/2" 30 pcs.

555 Pieces



WOODRUFF KEYS KIT

Part Number: WOODRUFF KEYS KIT
List Price: \$ 83.03


	1/8" X 1/2" No. 3 16 pcs.	1/8" X 5/8" No. 5 15 pcs.
	3/32" X 5/8" No. 6 15 pcs.	3/16" X 3/4" No. 9 10 pcs.
	1/4" X 7/8" No. A 5 pcs.	1/4" X 1" No. 15 4 pcs.

65 Pieces



GREASE FITTING KIT

Part Number: GREASE FITTING KIT
List Price: \$ 45.00


	1/8" NPT Straight 6 pcs.	1/4" - 28 Straight 6 pcs.
	3/16" Drive Straight 4 pcs.	1/8" NPT 45 1/8" NPT 90 3 pcs. ea.
	1/4" - 28 45 1/4" - 28 90 3 pc. ea.	5/16" Drive Straight 4 pcs.

32 Pieces



GREASE FITTING KIT-A

Part Number: GREASE FITTING KIT-A
List Price: \$ 40.00


	1/8" PT Straight 25 pcs.	1/8" PT 45° 1/8" PT 90° 1/8" PT 7.5° 5 pcs.
	1/4"-28 PT Straight 50 pcs.	1/4"-28 PT 45° 1/4"-28 PT 90° 5 pcs.

100 Pieces



NYLON PLUG KIT

Part Number: NYLON PLUG KIT
List Price: \$ 112.35

	Nyplug-125-125 1/8" x 1/8" 20 pcs.	Nyplug-187-109 3/16" x 7/64" 20 pcs.	Nyplug-250-125 1/4" x 1/8" 20 pcs.	
	Nyplug-125-156 1/8" x 5/32" 20 pcs.	Nyplug-187-187 3/16" x 3/16" 20 pcs.	Nyplug-250-187 1/4" x 3/16" 20 pcs.	Nyplug-312-125 5/16" x 1/8" 20 pcs.
	Nyplug-125-875 1/8" x 7/8" 20 pcs.	Nyplug-187-250 3/16" x 1/4" 20 pcs.	Nyplug-250-250 1/4" x 1/4" 20 pcs.	Nyplug-375-250 3/8" x 1/4" 20 pcs.

220 Pieces
11 Sizes



SET SCREW KIT

Part Number: SSK-INCH
List Price: \$ 62.05



Use these set screws in confined areas, where there is no room for a protruding head. Nine coarse sizes, three fine sizes.

Hex wrench shown not included. Coarse sizes: 1/8"-40 x 3/16", 5/32"-32 x 3/16", 3/16"-24 x 1/4", 1/4"-20 x 1/4", 1/4"-20 x 3/8", 5/16"-18 x 3/8", 5/16"-18 x 1/2", 3/8"-16 x 3/8", and 3/8"-16 x 1/2".

Fine sizes: 1/4"-28 x 1/4", 5/16"-24 x 3/8", 3/8"-24 x 3/8"

ASSORTMENT KITS

CAP PLUG KIT

Part Number: CAP PLUG KIT
List Price: \$ 217.53



Our new and improved cap plug kit contains 22% more cap plugs in an environmentally friendly corrugated box. Separated areas hold 645 cap plugs in 24 of the most popular sizes.

Cap Plug Number	QTY	Cap Plug Number	QTY	Cap Plug Number	QTY
CAP-2-X	50	CAP-PD-100	25	CAP-G-22	20
CAP-4	50	CAP-PD-120	25	CAP-G-25	20
CAP-6-X	50	CAP-PD-140	20	CAP-G-27	20
CAP-9	50	CAP-PD-160	20	CAP-P-28	25
CAP-12-X	25	CAP-G-2	20	CAP-P-38	25
CAP-14	20	CAP-G-8	20	CAP-P-48	25
CAP-PD-60	25	CAP-G-14	20	CAP-P-68-H	25
CAP-PD-80	25	CAP-G-18	20	CAP-P-88-H	20

CAP PLUG CASE

Part Number: CAP PLUG CASE
List Price: \$ 111.62

This rugged case has 24 empty compartments to hold a limited variety of cap plugs from the master kit (shown above).

Case only - cap plugs sold separately.

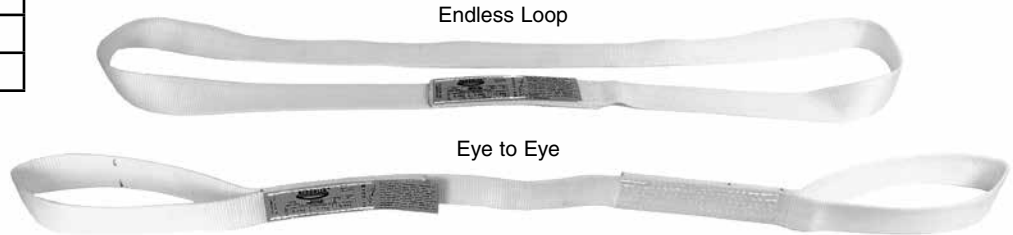


LIFTING SLINGS

Hercules now carries new synthetic web lifting slings which are primarily composed of nylon. Our lifting slings are a soft and flexible solution to rigging and are offered in endless and eye to eye styles. All of the synthetic web slings are constructed with 9800 lbs. maximum load rated heavy duty webbing, and are in full compliance with current ASME B30.9 standards, with a 5:1 safety factor.

Nylon web slings with flat eye to eye loops are one of the most popular straps for lifting because of their versatility: they can be used in a choker, basket or vertical hitch. The design also makes it easy to remove from underneath a load.

Material	Nylon
Max Temperature	180°F
UV Degradation	High



Part Number	Width (in)	Length (ft)	Product	Vertical Load Limit (lbs.)	Choker Load Limit (lbs.)	Basket Load Limit (lbs.)	Net Price
SLEN1-4	1"	4'	Endless Loop	3200	2500	6400	\$ 7.92
SLEN1-6	1"	6'	Endless Loop	3200	2500	6400	10.08
SLEN2-4	2"	4'	Endless Loop	6400	5000	12800	11.94
SLEN2-6	2"	6'	Endless Loop	6400	5000	12800	15.88
SLEN2-8	2"	8'	Endless Loop	6400	5000	12800	19.82
SLEE1-4	1"	4'	Eye to Eye	1600	1200	3200	7.38
SLEE1-6	1"	6'	Eye to Eye	1600	1200	3200	8.46
SLEE2-4	2"	4'	Eye to Eye	3200	2400	6400	10.95
SLEE2-6	2"	6'	Eye to Eye	3200	2400	6400	12.92
SLEE2-8	2"	8'	Eye to Eye	3200	2400	6400	14.89

INSTALLATION TOOLS

SEAL TOOL KIT

Part Number: SEAL TOOL KIT
Net Price: \$ 320.16

- Kit contains:
- Piston seal compressor
 - Pick set
 - Pi tape
 - Seal installation tool set
 - Wear strip cutter
 - O-ring adhesive
 - Precision cord cutter
 - Seal install and remove tool
 - O-ring detector



INSTALLATION TOOL SET

Part Number: IT TOOL SET-A
Net Price: \$ 43.20

Sizes Included	Max Heel Cross Section
S (22 - 30 mm)	6.6 mm
M (30 - 50 mm)	10.7 mm
L (50 - 70 mm)	19.3 mm
XL (70 - 165 mm)	27.1 mm



This handy tool set has 4 different size installation tools, along with a holder.

SEAL CLASPER

Part Number: SEAL CLASPER
Net Price: \$ 98.00



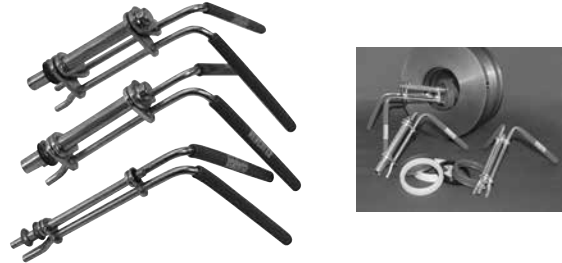
The Seal clasper is designed to press a PTFE piston seal back into the groove. The clasper works on seals from 50mm to 360mm OD. It allows a piston seal to be installed into a cylinder safely and rapidly.

The stainless steel belt can be adjusted according to the dimension of seals. The HPU triangle protector prevents seal damage.

How to use:

1. Adjust the length of stainless steel belt to match the seal.
2. Pull the grid to clasp the PTFE piston seal back into groove.

QUALITY ROD U-SEAL INSTALLATION TOOLS



Part Number	Seal ID Range		Max Heel Cross Section	Net Price
IT 100	3/4" to 1-1/4"	19 - 31 mm	0.300"	\$ 22.59
IT 150	1-3/8" to 1-7/8"	35 - 47 mm	0.360"	22.59
IT 200	2" to 3"	51 - 76 mm	0.600"	22.59
IT 100-NN	3/4" to 1-1/4"	19 - 31 mm	0.300"	21.78
IT 150-NN	1-3/8" to 1-7/8"	35 - 47 mm	0.360"	21.78
IT 200-NN	2" to 3"	51 - 76 mm	0.600"	21.78

These tools aid U-seal installation, eliminating the risk of damaging the seal lip. NN = Without Hercules® logo.

Usage Instructions online at www.HerculesUS.com / Inquiry Forms / Technical Assistance.

VALUE ROD U-SEAL INSTALLATION TOOLS



Part Number	Seal ID Range		Net Price
SEAL TWISTOR M	1-3/16" to 2"	30 - 50 mm	\$ 12.00
SEAL TWISTOR L	2" to 2-3/4"	50 - 70 mm	13.50
SEAL TWISTOR XL	2-3/4" to 6-1/2"	70 - 165 mm	15.00

These tools aid Rod U-seal installation, eliminating the risk of damaging the seal lip.

Usage Instructions online at www.HerculesUS.com / Inquiry Forms / Technical Assistance.

SPLICING / CUTTING TOOLS

O-RING SPLICE TOOL

Part Number: OR SPLICER

Net Price: \$ 30.00

- Splicing tool for o-rings
- For cross section diameter from 2.5 to 20 mm
- Clamping plates for locking
- Aluminium stands for use with glue or heat



WEAR STRIP CUTTER

Part Number: WS CUTTER

Net Price: \$ 22.80



Cut your own wear rings to exact dimensions.

O-RING SPLICE KIT

Part Number: OR SPLICE KIT

Net Price: \$ 133.71

Kit contains:

- Splice iron
- Pi tape
- Grinding tool
- O-ring adhesive
- Precision cord cutter
- Splice tool



CUTTER BLADES

Part Number: WS CUTTER BLADE

Net Price: \$ 7.50



Quantity of 10 Wear Strip Cutter Blades.

SPLICE IRON

Part Number: SEAL HEATER

Net Price: \$ 42.00



100 to 400°C

CHOPPING AND REMOVAL TOOLS

O-RING CORD CHOPPER

Part Number: ORC CHOPPER

Net Price: \$ 32.40



- Cuts o-ring cord to prepare it for splicing
- Suitable for cross section from 0.103 to 0.551 inches (2.62 to 14 mm)

CHOPPER BLADES

Part Number: ORC CHOPPER BLADE

Net Price: \$ 6.00



Quantity of 20 Chopper Blades.

OIL SEAL REMOVAL & INSTALLATION TOOL

Part Number: SR TOOL

Net Price: \$ 60.20



O-RING PICK SET

Part Number: OR HOOK

List Price: \$ 6.50



This Value package of O-ring Picks in plastic carrying case, aid in the installation and extraction of O-rings.

O-RING PICK SET 1

Part Number: O-RING PICK

Net Price: \$ 6.00

These bronze O-ring picks, w/ black vinyl case, aid in the installation and extraction of O-rings.



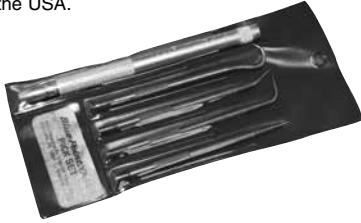
REMOVAL TOOLS

O-RING PICK SET 2

Part Number: O PICK SET

Net Price: \$ 28.20

Designed for heavy duty use and packaged in a clear vinyl pouch, this kit contains a knurled handle and four screw-in picks with different hook configurations. Set includes straight tip, o-ring 90° tip, hook tip, and angle tip. Made in the USA.



SNAP-ON O-RING PICK SET 4

Part Number: MAXI PICK SET

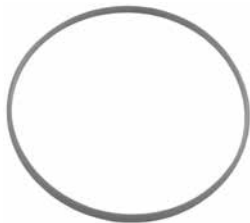
Net Price: \$ 55.74

Designed for heavy duty use and packaged in a plastic pouch, these highly visible picks feature screwdriver-type colored handles. Set includes awl, hook tip, 45° bent tip tool, and 90° bent tip tool. Made in the USA.



GLAND REMOVAL TOOLS

Part Number	Bore Diameter	List Price
JD-6.00X0.40-IT	6"	\$ 24.13
JD-70MM-IT	70 mm	8.34
JD-80MM-IT	80 mm	8.92
JD-90MM-IT	90 mm	9.81
JD-100MM-IT	100 mm	11.31



CHEVRON ASSEMBLY TOOL

Part Number: CM-376-9067-001

Net Price: \$ 52.30

Vee packing assembly tool for telescopic cylinders.

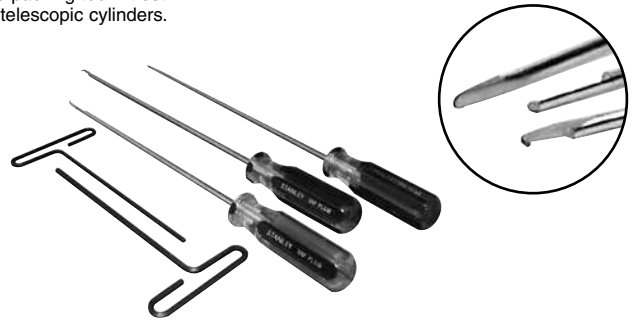


5 PIECE TOOL KIT SET

Part Number: CH-TK-1

Net Price: \$ 84.94

Vee packing tool kit set for telescopic cylinders.



8 PIECE O-RING PICK SET

Part Number: O PICK SET-A

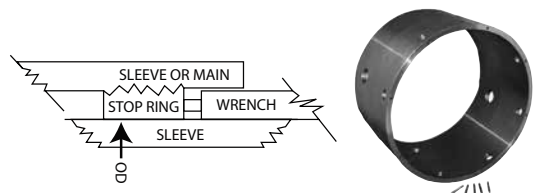
Net Price: \$ 18.00

This economical seal pick tool set lowers your chance of surface damage. It contains 8 different hard metal hooks with sturdy plastic handles. The kit also comes with a twist lid for easy carrying.



STOP RING WRENCH

Part Number	Sleeve or Plunger O.D.	Pins	Net Price
CM-376-6067-047	2-3/4"	5 Pins	\$ 239.92
CM-376-6067-048	3-3/4"	5 Pins	272.2
CM-376-6067-049	4-3/4"	5 Pins	287.28
CM-376-6067-050	5-3/4"	5 Pins	322.08
CM-376-6067-051	6-3/4"	5 Pins	340.1
CM-376-6067-052	7-7/8"	5 Pins	404.57
CM-376-6067-053	9-3/8"	5 Pins	462.72
CM-391-2086-007	Replacement Stop Wrench Pin		2.88



ASSORTMENT KITS AND TOOLS

REMOVAL TOOLS

11 PIECE PACKING TOOL KIT

Part Number: PACK TOOL SET-11
Net Price: \$ 125.83



Part Number	QTY	Part Number	QTY
FPH-312R	2	FPH-RTC312	1
FPH-437R	2	FPH-RTC437	1
SSP-125	1	WRENCH	1
SSP-187	1	BOX	1
SSP-312	1		

REPLACEABLE WOODSCREW TIPS

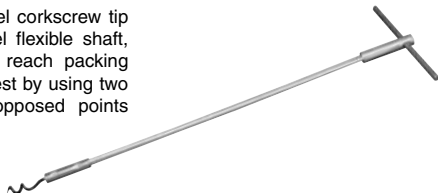
Part Number	Packing Space	Net Price
FPH-RTW312	5/16"-up	\$ 7.67
FPH-RTW437	7/16"-up	9.00
FPH-RTW500	1/2"-up	9.50



FLEXIBLE PACKING HOOKS

Part Number	Packing Space	Length	Net Price
FPH-187	3/16"-up	6-1/2"	\$ 14.83
FPH-312R	5/16"-up	7-1/2"	14.50
FPH-437R	7/16"-up	10-1/2"	15.67
FPH-500R	1/2"-up	14-1/2"	21.83

With a tempered tool steel corkscrew tip and a woven strand steel flexible shaft, this tool makes hard to reach packing easy to pull out. Works best by using two hooks at diametrically opposed points (180°).



17 PIECE PACKING TOOL KIT

Part Number: PACK TOOL SET-17
Net Price: \$ 207.17



Part Number	QTY	Part Number	QTY
FPH-312R	2	FPH-RTC437	1
FPH-437R	2	FPH-RTC500	1
FPH-500R	2	FPH-RTW312	1
SSP-125	1	FPH-RTW437	1
SSP-187	1	FPH-RTW500	1
SSP-312	1	WRENCH	1
FPH-RTC312	1	BOX	1

REPLACEABLE CORKSCREW TIPS

Part Number	Packing Space	Net Price
FPH-RTC312	5/16"-up	\$ 5.33
FPH-RTC437	7/16"-up	6.83
FPH-RTC500	1/2"-up	8.83



SOLID SHAFT PICKS

Part Number	Packing Space	Length	Net Price
SSP-125	1/8 -up	9-1/2"	\$ 9.17
SSP-187	3/16 -up	10"	9.83
SSP-312	5/16"-up	10"	19.33

Formed from hardened steel, this tool's length and sharp angled point gets at hard to reach o-rings, back-up rings & braided packing. You'll be amazed at all the uses you find for this tool.



DISMANTLING TOOLS

SPANNER WRENCHES

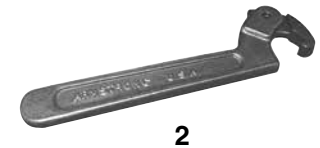
(1) ADJUSTABLE HEAD — PIN STYLE

PART NUMBER	PART OD RANGE	PIN DIA.	PIN LGTH.	NET PRICE
SPAP-2.00X0.13	3/4" to 2" (19mm to 50mm)	1/8"	1/8"	\$ 39.52
SPAP-2.00X0.19	3/4" to 2" (19mm to 50mm)	3/16"	5/32"	39.47
SPAP-3.00X0.19	1-1/4" to 3" (32mm to 76mm)	3/16"	3/16"	47.13
SPAP-3.00X0.25	1-1/4" to 3" (32mm to 76mm)	1/4"	7/32"	47.88
SPAP-4.75X0.25	2" to 4-3/4" (51mm to 120mm)	1/4"	1/4"	79.80
SPAP-6.25X0.38	4-1/2" to 6-1/4" (115mm to 159mm)	3/8"	1/4"	84.17



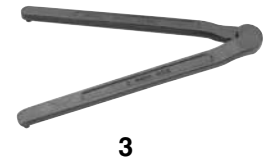
(2) ADJUSTABLE HEAD — HOOK STYLE

PART NUMBER	PART OD RANGE	HOOK WD.	HOOK DP.	NET PRICE
SPAH-2.00	3/4" to 2" (19mm to 50mm)	11/32"	1/8"	\$ 39.42
SPAH-3.00	1-1/4" to 3" (32mm to 76mm)	13/32"	5/32"	43.43
SPAH-4.75	2" to 4-3/4" (51mm to 120mm)	15/32"	3/16"	65.63
SPAH-6.25	4-1/2" to 6-1/4" (115mm to 159mm)	15/32"	1/4"	68.95
SPAH-8.75	6-1/8" to 8-3/4" (155mm to 222mm)	15/32"	5/16"	75.62

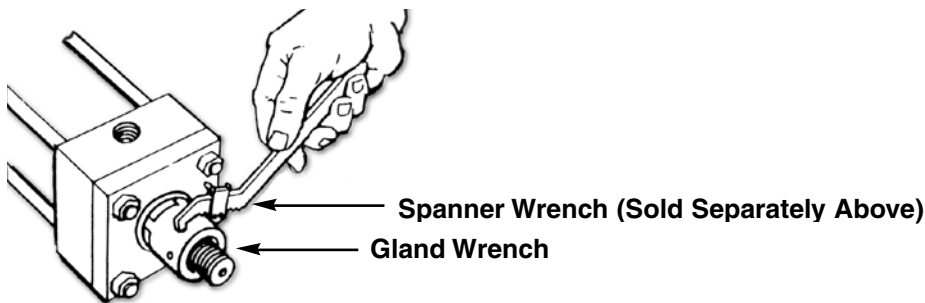


(3) ADJUSTABLE FACE — PIN STYLE

PART NUMBER	DIA. RANGE (CENTER TO CENTER)	PIN DIA.	PIN LGTH.	NET PRICE
SPAPF-2.00X0.19	5/8" to 2" (16mm to 50mm)	3/16"	1/8"	\$ 35.57
SPAPF-3.00X0.25	5/8" to 3" (16mm to 76mm)	1/4"	3/16"	46.47
SPAPF-4.00X0.31	5/8" to 4" (16mm to 101mm)	5/16"	1/4"	60.70



PARKER GLAND WRENCHES



Rod Dia.	Kit #	ID X OD X HT	Net Price	Spanner (Sold Separately Above)
1/2", 5/8", 12mm & 14mm	PKH-069590	11/16" X 1-1/8" X 1-3/8"	\$ 33.78	SPAP-2.00X0.19
18mm	PKH-084765	13/16" X 1-1/4" X 1-7/16"	31.67	SPAP-2.00X0.19 or SPAP-3.00X0.19
1" & 22mm	PKH-069591	1-1/16" X 1-5/8" X 1-1/2"	20.40	SPAP-2.00X0.19 or SPAP-3.00X0.19
28mm	PKH-084766	1-1/4" X 1-11/16" X 1-9/16"	30.29	SPAP-2.00X0.19 or SPAP-3.00X0.19
1-3/8" & 36mm	PKH-069592	1-7/16" X 1-7/8" X 1-5/8"	39.51	SPAP-2.00X0.19 or SPAP-3.00X0.19
1-3/4" & 45mm	PKH-069593	1-13/16" X 2-1/4" X 1-5/8"	37.56	SPAP-3.00X0.25 or SPAP-4.75X0.25
2"	PKH-069594	2-1/16" X 2-1/2" X 2"	42.07	SPAP-3.00X0.25 or SPAP-4.75X0.25
2-1/2" & 56mm	PKH-069595	2-9/16" X 3" X 2-1/8"	73.67	SPAP-3.00X0.25 or SPAP-4.75X0.25
70mm	PKH-069596	2-15/16" X 3-1/2" X 2-3/8"	90.38	SPAP-4.75X0.25

REMANUFACTURING TOOLS

SUNNEN PORTABLE HONES - AN-815 AND ANR-275

Part Number: H-AN-815
Net Price: \$ 614.04



Additional sizes and accessories shown below.

Hand Feed - ID Range 64-533 mm (2.500" - 21.000")
 For occasional heavy-duty portable honing

Illustration shows standard AN-815 Portable Hone assembled with single length master holder set and stone set. Requires 16 mm (5/8") chuck capacity for 63.5-127 mm (2.5"-5") diameter. Requires 19mm (3/4") chuck capacity for 127-381 mm (5"-15") diameter. Requires 25.4 mm (1") chuck capacity for larger than 381 mm (15") diameter.

Weight 2.3 kg (5 lbs).

Part Number: H-ANR-275
Net Price: \$ 2150.00



Additional sizes and accessories shown below.

Remote Feed - ID Range 64-533 mm (2.500" - 21.000")
 For production heavy-duty honing - to be used in a machine or honing rig.

Illustration shows the ANR-275 Portable Hone assembled with Stone Support, Single Length Master Holder Set, Stone Set and 76 mm (3") Drive Shank. (3/4") chuck capacity for 127-381 mm (5"-15") diameter. Requires 16 mm (5/8") chuck capacity for 63.5-127 mm (2.5"-5") diameter. Requires 19 mm (5/8") diameter. Requires 25.4 mm (1") chuck capacity for larger than 381 mm (15") diameter.

Weight 5.2 kg (11.5 lbs).

FOR A COMPLETE PORTABLE HONE ORDER A + B + C + D + E				A - BASIC HONE	B - MASTER HOLDER SETS				C - STONE SUPPORT		D - STONE SET	E - SHAFT EXTENSION
Diameter Range					Single Length		Double Length		Part Number	Net Price		
General Purpose Stone Sets		Guideless and Keyway Stone Sets			Part Number	Net Price	Part Number	Net Price				
mm	Inches	mm	Inches	Part Number					Net Price	Part Number	Net Price	Part Number
64-140	2.5-5.5	64-142	2.5-5.6	See Honers H-AN-815 and H-ANR-275 Above	None	-	None	-	None	-	See Table on the next page for portable hone stone sets	For long holes - see table below for Shaft Extensions.
104-160	4.1-6.3	114-165	4.5-6.5		H-AN-345	\$ 108.36	None	-	None	-		
119-178	4.7-7.0	130-183	5.1-7.2		H-AN-355	110.42	H-AN-855	\$ 154.80	None	-		
152-229	6.0-9.0	163-234	6.4-9.2		H-AN-365	112.49	H-AN-865	162.02	H-AN-260	\$ 66.05		
206-305	8.1-12.0	213-310**	8.4-12.2**		H-AN-375	114.55	H-AN-875	163.06	H-AN-280	84.11		
279-381	11.0-15.0	284-386**	11.2-15.2**		H-AN-385	118.68	H-AN-885	168.22	H-AN-290	99.85		
356-457	14.0-18.0	363-465**	14.3-18.3**	See honers above	H-AN-395	121.78	H-AN-895	169.25	H-AN-340	117.65		
432-533	17.0-21.0	437-538**	17.2-21.2**		H-AN-415	127.97	H-AN-915	173.38	H-AN-450	138.29		

* For light work only in this diameter range.

** Do not use WW (Guideless) Stone Sets in this range due to lack of stability.

Length		Drive Shanks		AN-815 Shaft Extensions		AN-275 Shaft Extensions		Master Holder Sets and Stone Supports			
mm	Inches	Part Number	Net Price	Part Number	Net Price	Part Number	Net Price				
76	3	H-AN-608A**	\$ 23.74	None	-	None	-				
152	6	H-AN-618A*	32.80	H-AN-840	\$ 36.84	None	-				
235	9.25	None	-	None	-	H-ANR-741	348.00	Master Holder Sets, listed in the table above, are used with Type W47, WW51 and WY51 Stone Sets. Double Length Master Holders require two stone sets - use when the bore is more than 457 mm (18") long or when it is necessary to bridge interruptions in the bore. Each Master Holder Set consists of two holders for stones and two holders for guides. Stone Supports are required to give rigidity to the hone assembly when honing bores larger than 178 mm (7") diameter. Stone length is 102 mm (4") or 203 mm (8") when two sets of stones are used with double length master holder set.			
305	12	None	-	H-AN-841*	47.47	None	-				
483	19	None	-	None	-	H-ANR-742	398.00				
610	24	None	-	H-AN-842	165.12	None	-				
1086	42.75	None	-	None	-	H-ANR-744	464.00				
1220	48	None	-	H-AN-844	199.18	None	-				
1835	72.25	None	-	None	-	H-ANR-746	580.00				

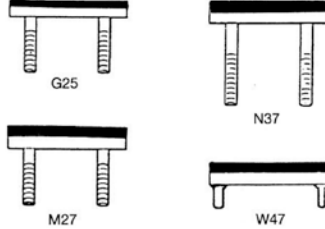
* Supplied with AN-815 hone. ** Supplied with ANR-275 hone.

ASSORTMENT KITS AND TOOLS

REMANUFACTURING TOOLS

SUNNEN HONE STONE SETS FOR AN-815 AND ANR-275

Sunnen Stone Sets for 2.5" to 60" diameter, portable tools (two stones and two guides per set). Stone length is 102 mm (4") or 203 mm (8") when two sets of stones are used with double length master holder set. For Industrial applications. From fast stock removal in deburred, bored, ground, or reamed holes to fine finishing in previously honed holes, these hone stone sets are in stock and ready for next day delivery.



Stone Number	Diameter
G25	2.5 - 2.7
M27	2.7 - 4.1
N37	3.5 - 5.5
W47	4.1 - 60.0*

* Requires Master Holder Set - Limited to 21" with H-AN-815

ALUMINUM OXIDE STONES

MODEL		G25		M27		N37		W47	
GRIT SIZE		64 TO 69 mm 2.5" - 2.7"	NET PRICE	69 TO 104 mm 2.7" - 4.1"	NET PRICE	89 TO 140 mm 3.5" - 5.5"	NET PRICE	104 TO 1524 mm 4.1" - 60"***	NET PRICE
80	HARD - SOFT	H-G25-A23	\$ 20.50	H-M27-A23	\$ 20.50	H-N37-A23	\$ 20.50	H-W47-A23	\$ 22.30
		H-G25-A25	20.50	H-M27-A25	20.50	H-N37-A25	20.94	H-W47-A25	23.02
		H-G25-R25X	35.90	H-M27-R25X	35.90	H-N37-R25X	20.95	H-W47-R25X	23.01
		H-G25-A27	20.50	H-M27-A27	20.50	H-N37-A27	20.50	H-W47-A27	22.30
150	H - S	H-G25-A43	\$ 20.50	H-M27-A43	\$ 20.50	H-N37-A43	\$ 20.95	H-W47-A43	\$ 23.01
		H-G25-A45	20.50	H-M27-A45	20.50	H-N37-A45	20.95	H-W47-A45	23.01
		H-G25-A47	20.50	H-M27-A47	20.50	H-N37-A47	20.50	H-W47-A47	22.30
		-	-	H-M27-A49	20.50	H-N37-A49	20.50	H-W47-A49	22.30
220	H - S	-	-	-	-	H-N37-A55	\$ 20.50	H-W47-A55	\$ 22.30
280	H - S	-	-	-	-	-	-	H-W47-A63	\$ 22.30
		H-G25-A65	\$ 20.50	H-M27-A65	\$ 20.50	H-N37-A65	\$ 20.50	H-W47-A65	23.02
		-	-	H-M27-A67	20.50	-	-	H-W47-A67	22.30
MODEL		GY25		MY33		NY40		WY51	
MAX KEYWAY WIDTH		20.3 mm 0.8"		22.86 mm 0.9"		30.48 mm 1.2"		35.56 mm 1.4"	
GRIT SIZE		64 TO 84 mm 2.5" - 3.3"		84 TO 107 mm 3.3" - 4.2"		102 TO 142 mm 4.0" - 5.6"		114 TO 1524 mm 4.5" - 60"***	
150	M	H-GY25-A47	\$ 38.80	H-MY33-A47	\$ 41.10	H-NY40-A47	\$ 38.80	H-WY51-A47	\$ 42.20

SILICON CARBIDE STONES

MODEL		G25		M27		N37		W47	
GRIT SIZE		64 TO 69 mm 2.5" - 2.7"	NET PRICE	69 TO 104 mm 2.7" - 4.1"	NET PRICE	89 TO 140 mm 3.5" - 5.5"	NET PRICE	104 TO 1524 mm 4.1" - 60"***	NET PRICE
70	HARD - SOFT	-	-	-	-	H-N37-J11	\$ 20.50	H-W47-J11	\$ 22.30
		H-G25-J15	\$ 20.50	-	-	H-N37-J13	20.50	H-W47-J13	22.30
		H-G25-J17	20.50	H-M27-J17	\$ 20.50	-	-	H-W47-J15	22.30
150	H - S	-	-	-	-	H-N37-J43	\$ 20.50	H-W47-J43	\$ 22.30
		H-G25-J45	\$ 20.50	H-M27-J45	\$ 20.50	H-N37-J45	20.94	H-W47-J45	23.02
		H-G25-J47	20.50	H-M27-J47	20.50	H-N37-J47	20.50	H-W47-J47	22.30
220	H - S	H-G25-J55	\$ 20.50	H-M27-J55	\$ 20.50	H-N37-J55	\$ 20.50	H-W47-J55	\$ 22.30
		-	-	H-M27-J57	20.50	H-N37-J57	20.50	-	-
280	H - S	H-G25-J63	\$ 20.50	H-M27-J63	\$ 20.50	-	-	H-W47-J63	\$ 22.30
		H-G25-J65	20.50	H-M27-J65	20.50	H-N37-J65	\$ 20.50	H-W47-J65	23.01
		H-G25-J67	20.50	H-M27-J67	20.50	H-N37-J67	20.50	H-W47-J67	22.30
400	H - S	H-G25-J85	\$ 20.50	H-M27-J85	\$ 20.50	H-N37-J85	\$ 20.95	H-W47-J85	\$ 23.01
		H-G25-J87	20.50	H-M27-J87	20.50	H-N37-J87	20.95	H-W47-J87	23.01

* R25X - Red aluminum oxide / sulfur Impregnated

** Requires Master Holder Set - Limited to 21" with H-AN-815 and H-ANR-275

NORTH AMERICA
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FAX 1-800-759-6391

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FAX 1-727-797-8849

REMANUFACTURING TOOLS

SUNNEN PORTABLE HONES AND STONE SETS FOR H-SNJ-10 AND H-SN-75

Part Number: H-SNJ-10
Net Price: \$ 473.00

Additional sizes and accessories shown below.

Hand Feed - ID Range 31.8-45.0 mm (1.250" - 1.770")
For occasional portable honing

Illustration shows the SNJ-10 Portable Hone assembled with Stone Set and AN-26A Drive Shank. Will hone bores up to 457 mm (18.0") long as shown; order additional Shaft Extensions for longer bores. Requires 13 mm (1/2") chuck capacity.

Weight .5 kg (1 lb).



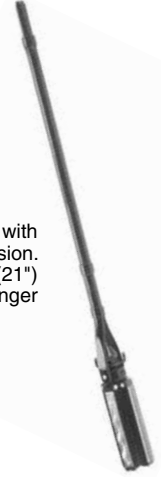
Part Number: H-SN-75
Net Price: \$ 385.00

Additional sizes and accessories shown below.

Hand Feed - ID Range 44-51 mm (1.750" - 2.000")
For occasional portable honing

Illustration shows the SN-75 Portable Hone assembled with Stone Set, Drive Shank, and 305 mm (12") Shaft Extension. 102 mm (4") stone length. Will hone bores up to 533 mm (21") long as shown; order additional Shaft Extensions for longer bores. Requires 13 mm (1/2") chuck capacity.

Weight 1.4 kg (3 lbs).



To Order:	DRIVE SHANKS				SHAFT EXTENSIONS			
	LENGTH		PART NUMBER	NET PRICE	LENGTH		PART NUMBER	NET PRICE
	MM	INCHES			MM	INCHES		
SNJ-10 and SN-75 Basic Hone include 76 mm (3") Drive Shank, 305 mm (12") Extension, and one Universal Joint.								
Additional Shaft Extensions may be ordered from table above to make up any practical length (Drive Shank can be used with any combination of Extensions).	76	3	H-AN-26A*	\$ 14.30	305	12	H-AN-241*	\$ 40.00
					610	24	H-AN-242	160.00
					1220	48	H-AN-244	176.00

* Supplied with hone

SUNNEN STONE SETS FOR H-SNJ-10 PORTABLE HONE

MATERIAL	GRIT SIZE	31.75 TO 36.50 mm 1.250" - 1.437"	NET PRICE	36.02 TO 40.74 mm 1.418" - 1.604"	NET PRICE	40.13 TO 45.00 mm 1.580" - 1.770"	NET PRICE
Aluminum Oxide	150 (4)	H-SNJ1-A45	\$ 23.00	H-SNJ2-A45	\$ 23.00	H-SNJ3-A45	\$ 23.00
Silicon Carbide	150 (4)	H-SNJ1-J45	\$ 23.00	-	-	-	-
	280 (6)	H-SNJ1-J63	23.00	H-SNJ2-J63	\$ 23.00	H-SNJ3-J63	\$ 23.00
	400 (8)	H-SNJ1-J87	23.00	H-SNJ2-J87	23.00	H-SNJ3-J87	23.00

Consists of 3 stones.

SUNNEN STONE SETS FOR H-SN-75 PORTABLE HONE

MATERIAL	GRIT SIZE	SOFT - HARD	44 TO 51 1.75" - 2.00"	NET PRICE
Aluminum Oxide	80 (2)	Hard	H-S18-A25	\$ 19.50
	150 (4)	Medium	H-S18-A45	19.50
Silicon Carbide	150 (4)	Medium	H-S18-J45	\$ 19.50
	400 (8)	Medium	H-S18-J85	19.50

Consists of 2 stones and 2 guides.

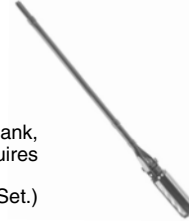
REMANUFACTURING TOOLS

SUNNEN PORTABLE HONES FOR H-JN-95

Part Number: H-JN-95

Net Price: \$ 385.00

Hand Feed - ID Range 51 - 66 mm (2.000" - 2.600")
 For occasional portable honing
 JN-95 Basic Portable Honer includes 76 mm (3") Drive Shank,
 305 mm (12") Extension, and one Universal Joint. Requires
 13 mm (1/2") chuck capacity.
 (Illustration shows Portable Honer assembled with Stone Set.)



SUNNEN HONE STONE SETS FOR H-JN-95 PORTABLE HONE

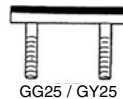
Stone sets for the H-JN-95 Portable Honer (two stones and two guides per set). The stone sets are for 2" to 2.4" diameters. The listed stone sets are in stock and ready for next day delivery.

ALUMINUM OXIDE STONES							
MODEL		T20		U22		V24	
GRIT SIZE		51 TO 56 mm 2" - 2.2"	NET PRICE	56 TO 61 mm 2.2" - 2.4"	NET PRICE	61 TO 66 mm 2.2" - 2.4"	NET PRICE
80	H-S	H-T20-A25	\$ 19.25	H-U22-A25	\$ 19.25	H-V24-A25	\$ 19.25
150	H-S	H-T20-A45	19.25	H-U22-A45	19.50	H-V24-A45	19.50
280	H-S	H-T20-A65	19.25	H-U22-A65	19.25	-	-
SILICON CARBIDE STONES							
MODEL		T20		U22		V24	
GRIT SIZE		51 TO 56 mm 2" - 2.2"	NET PRICE	56 TO 61 mm 2.2" - 2.4"	NET PRICE	56 TO 61 mm 2.2" - 2.4"	NET PRICE
150	H-S	H-T20-J45	\$ 19.25	-	-	-	-
280	H-S	-	-	-	-	H-V24-J65	\$ 19.25
400	H-S	H-T20-J85	19.25	-	-	-	-
		-	-	H-U22-J87	\$ 19.25	H-V24-J87	19.25

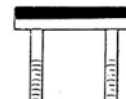
ADDITIONAL SUNNEN HONE STONE SETS AVAILABLE

SUNNEN HONE STONE SETS

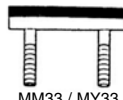
Sunnen Stone Sets for 2.5" to 60" diameter, portable tools (two stones and two guides per set). For Industrial applications. From fast stock removal in deburred, bored, ground, or reamed holes to fine finishing in previously honed holes, these hone stone sets are in stock and ready for next day delivery.



GG25 / GY25



NN40 / NY40



MM33 / MY33



WW51 / WY51

Stone Number	Diameter
Gx25	2.5 - 3.3
Mx33	3.3 - 4.2
Nx40	4.0 - 5.6
Wx51	4.5 - 60*

* Requires the use of Master Holders

PART NUMBER	BORE SIZE	MATERIAL	GRIT SIZE	HARDNESS	NET PRICE
H-GY25-A45	2.500 - 3.300	Aluminum Oxide	150	Medium	\$ 38.80
H-GY25-J85	2.500 - 3.300	Silicon Carbide	400	Medium	38.80
H-H70-A45	2.900 - 11.500	Aluminum Oxide	150	Medium	22.60
H-MM33-A45	3.300 - 4.200	Aluminum Oxide	150	Medium	30.80
H-MM33-J85	3.300 - 4.200	Silicon Carbide	400	Medium	30.80
H-MM33-J87	3.300 - 4.200	Silicon Carbide	400	Hard	30.80
H-NN40-A45	4.000 - 5.600	Aluminum Oxide	150	Medium	30.80
H-NN40-J85	4.000 - 5.600	Silicon Carbide	400	Medium	30.80
H-T20-A45	2.000 - 2.200	Aluminum Oxide	150	Medium	19.25
H-U22-A45	2.200 - 2.400	Aluminum Oxide	150	Medium	19.50
H-V24-A45	2.400 - 2.600	Aluminum Oxide	150	Medium	19.50
H-WY51-A43	4.500 - 60.000	Aluminum Oxide	150	Medium	42.20
H-WY51-A45	4.500 - 60.000	Aluminum Oxide	150	Medium	42.20
H-WY51-J85	4.500 - 60.000	Silicon Carbide	400	Medium	42.20

REMANUFACTURING TOOLS

HONING OIL - 5 GALLON PAIL

Part Number: H-MB-30-5
Net Price: \$ 121.00

Sunnen Honing Oil is specially compounded for ferrous and non ferrous honing to:

- Dissipate heat from the workpiece
- Lubricate tool contact surfaces (guides)
- Flush bore free of honing swarf
- And maintain clean, free cutting abrasive conditions

Recommended for continuous honing of most materials, including: steel, cast iron, carbide, aluminum, bronze and ceramics. Use with any make honing equipment or tooling.



PORTABLE HONE ACCESSORIES QUICK COUPLER

Part Number: H-AN-80
Net Price: \$ 228.00

Provides instant coupling or uncoupling of hone from drive motor. Install between Drive Shank and Shaft Extension, or between Drive Shank and Hone Head on short bores.

(Can be used with; H-SNJ-10, H-SN-75, & H-JN-95.)



PISTON SEAL REFORMING TOOL

Part Number: PS CONSTRICTOR
Net Price: \$ 13.00



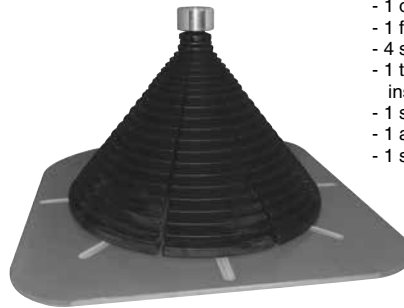
PTFE Piston seal resizing tool.

PISTON SEAL STRETCHER

Part Number: SEAL STRETCHER
Net Price: \$ 65.00

The Seal Stretcher Includes the following:

- 8 stepped segments
- 1 top nut/handle
- 1 o-ring
- 1 flat base
- 4 screws
- 1 threaded rod with a piston pre-installed
- 1 stop nut
- 1 aluminum support base
- 1 spring



Usage Instructions online at www.HerculeUS.com / Inquiry Forms / Technical Assistance.

MINI GRINDER

Part Number: OR GRINDER
Net Price: \$ 48.57

The Mini Grinder has a no load speed of 5000-18,000 rpm adjustable, and includes the following:

- Copper collet: 2.4 & 3.2 (mm)
- 2 Diamonds bits
- 2 Grinding Stones
- 1 Nylon Brush
- 1 Connective posts for sanding bands
- 2 sanding bands
- 1 engraving bit
- 1 collet (2.4 mm)



LEAK DETECTION

LEAK DETECTION KIT

Part Number: LDU-OPK-341

Net Price: \$ 373.69

HOW IT WORKS

A small amount of liquid fluorescent dye is added to a circulating fluid system that is being inspected for leaks. The system is then run for a short time to allow the dye to mix and circulate with the host fluid. The dye/fluid mixture escapes with the host fluid wherever there is a leak and glows a bright yellow/green when inspected with a high-intensity ultraviolet or UV/black light lamp. This method is extremely effective in locating even the smallest, most elusive leaks, as well as multiple leaks.



INDIVIDUAL LEAK DETECTION PRODUCTS

Part Number	Description	Net Price
LDU-CR-800	CLEANER, 8 OZ SPRAY	\$ 11.58
LDU-OIL-GLO-44-P	DYE, ALL-IN-ONE, 16 OZ	105.26
LDU-OPX-3000	LAMP, LED, 115V CHARGER	184.21
LDU-UVS-40	SPECTACLES, UV ENHANCING	18.95

MEASURING TOOLS

HIGH QUALITY DIGITAL CALIPER

Part Number: HH-CALIPER-6-FR

Net Price: \$ 40.33

This high quality instrument measures to 6" (150 mm). A push of a button changes from fractions, mm and inches. Functions also include: On/Off function, zero key, data input capabilities, test for low voltage, and "Auto Off" function when unit sits dormant for more than 4 minutes.



DIGITAL CALIPERS

Part Number	Net Price
HH-CALIPER-6	\$ 35.00
HH-CALIPER-6-P	35.00
HH-CALIPER-12	84.33
HH-CALIPER-12-P	84.33

Quality calipers able to measure up to 6" (150mm) or 12" (300mm). A push of a button changes from inches to mm. A clear LCD display shows a reading with a resolution of 0.0005" (0.01mm) that is accurate to ±0.001" (±0.03mm). These calipers come in a sturdy, padded plastic case with instructions and a spare battery.
P = No Hercules logo.



INNER GROOVE CALIPER

Part Number: INNER CALIPER

Net Price: \$ 105.00

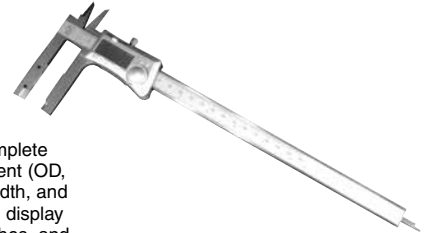


Inner Groove Caliper - 200 mm.

INNER DEPTH CALIPER

Part Number: INNER-DEPTH CALIPER

Net Price: \$ 131.00



This inner depth caliper is complete with five modes of measurement (OD, ID, General Depth, Groove Width, and Groove Depth). It has a digital display capable of displaying mm, inches, and fractions and can take measurements of up to 8" (205 mm). The four groove depth pins located on the back of the calipers measure 10mm, 20mm, 3/8", and 3/4".

INNER DEPTH CALIPER PINS

Part Number: INNER-DEPTH CALIPER DP

Net Price: \$ 12.00

This Inner-Depth Caliper replacement part includes four groove depth pins measuring 10mm, 20mm, 3/8", and 3/4".



INNER DEPTH CALIPER KNIVES

Part Number: INNER-DEPTH CALIPER WK

Net Price: \$ 12.00

This Inner-Depth Caliper replacement part includes one pair of width knives and four installation screws.



MEASURING TOOLS

O-RING COMPOUND IDENTIFIER

Part Number: OR RECOGNISER
Net Price: \$ 12.00

Identify a variety of o-ring compounds with this handy O-Ring Recognizer kit. Testing for EPDM70, NBR, FFKM (KALREZ®) and FKM o-rings. Three sample seals included.



BORE TAPE

Part Number: BORE TAPE 300
Net Price: \$ 92.75

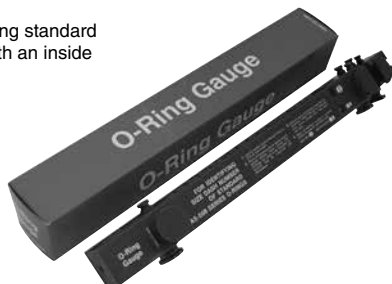
Measures inside and outside diameters from 50 mm 300 mm (2"-12").



O-RING GAUGE

Part Number: OR-GAUGE
Net Price: \$ 21.00

Slide gauge for measuring standard cross-section o-rings with an inside diameter up to 13".



O-RING MEASURING CONE

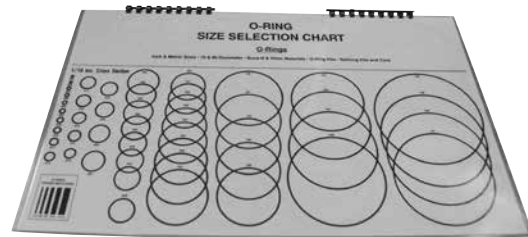
Part Number: O RING CONE-INCH
Net Price: \$ 20.00

Handy cone provides o-ring dash numbers instantly. Measures 184 of the most widely used sizes in 5 standard widths, 1/4" ID to 5-5/8" ID. Made of high density polyurethane, the cone stands 17-1/2" high.



O-RING CHART

Part Number: O-RING CHART
Net Price: \$ 18.22
Part Number: O-RING CHART NN
Net Price: \$ 18.22



Durable, Accurate, and Fast, these charts allow for easy Standard O-ring size identification. No shop should be without one!
 NN = Without Hercules® logo.

SEAL REFERENCE CHART

Part Number: SEAL REFERENCE CHART
Net Price: \$ 23.00

HERCULES SEALING PRODUCTS Quality Seals First!		Seal Reference Chart		INCH
1000 SERIES	RTBR RTBR RTBR	1000 SERIES	LFPU-ES LFPU-ES LFPU-ES	PU PU PU
1000 SERIES	RTN RTN RTN	1000 SERIES	LFPU-SR LFPU-SR LFPU-SR	PU PU PU
1000 SERIES	RTU RTU RTU	1000 SERIES	LFPU-SG LFPU-SG LFPU-SG	PU PU PU
1000 SERIES	R20 R20 R20	1000 SERIES	LFPU-BE LFPU-BE LFPU-BE	PU PU PU
1000 SERIES	R21 R21 R21	1000 SERIES	LFPU-BS LFPU-BS LFPU-BS	PU PU PU
1000 SERIES	R22 R22 R22	1000 SERIES	LFPU-BS LFPU-BS LFPU-BS	PU PU PU
1000 SERIES	R23 R23 R23	1000 SERIES	LFPU-BS LFPU-BS LFPU-BS	PU PU PU
1000 SERIES	R24 R24 R24	1000 SERIES	LFPU-BS LFPU-BS LFPU-BS	PU PU PU
1000 SERIES	R25 R25 R25	1000 SERIES	LFPU-BS LFPU-BS LFPU-BS	PU PU PU
1000 SERIES	R26 R26 R26	1000 SERIES	LFPU-BS LFPU-BS LFPU-BS	PU PU PU
1000 SERIES	R27 R27 R27	1000 SERIES	LFPU-BS LFPU-BS LFPU-BS	PU PU PU
1000 SERIES	R28 R28 R28	1000 SERIES	LFPU-BS LFPU-BS LFPU-BS	PU PU PU
1000 SERIES	R29 R29 R29	1000 SERIES	LFPU-BS LFPU-BS LFPU-BS	PU PU PU
1000 SERIES	R30 R30 R30	1000 SERIES	LFPU-BS LFPU-BS LFPU-BS	PU PU PU
1000 SERIES	R31 R31 R31	1000 SERIES	LFPU-BS LFPU-BS LFPU-BS	PU PU PU
1000 SERIES	R32 R32 R32	1000 SERIES	LFPU-BS LFPU-BS LFPU-BS	PU PU PU
1000 SERIES	R33 R33 R33	1000 SERIES	LFPU-BS LFPU-BS LFPU-BS	PU PU PU
1000 SERIES	R34 R34 R34	1000 SERIES	LFPU-BS LFPU-BS LFPU-BS	PU PU PU
1000 SERIES	R35 R35 R35	1000 SERIES	LFPU-BS LFPU-BS LFPU-BS	PU PU PU
1000 SERIES	R36 R36 R36	1000 SERIES	LFPU-BS LFPU-BS LFPU-BS	PU PU PU
1000 SERIES	R37 R37 R37	1000 SERIES	LFPU-BS LFPU-BS LFPU-BS	PU PU PU
1000 SERIES	R38 R38 R38	1000 SERIES	LFPU-BS LFPU-BS LFPU-BS	PU PU PU
1000 SERIES	R39 R39 R39	1000 SERIES	LFPU-BS LFPU-BS LFPU-BS	PU PU PU
1000 SERIES	R40 R40 R40	1000 SERIES	LFPU-BS LFPU-BS LFPU-BS	PU PU PU
1000 SERIES	R41 R41 R41	1000 SERIES	LFPU-BS LFPU-BS LFPU-BS	PU PU PU
1000 SERIES	R42 R42 R42	1000 SERIES	LFPU-BS LFPU-BS LFPU-BS	PU PU PU
1000 SERIES	R43 R43 R43	1000 SERIES	LFPU-BS LFPU-BS LFPU-BS	PU PU PU
1000 SERIES	R44 R44 R44	1000 SERIES	LFPU-BS LFPU-BS LFPU-BS	PU PU PU
1000 SERIES	R45 R45 R45	1000 SERIES	LFPU-BS LFPU-BS LFPU-BS	PU PU PU
1000 SERIES	R46 R46 R46	1000 SERIES	LFPU-BS LFPU-BS LFPU-BS	PU PU PU
1000 SERIES	R47 R47 R47	1000 SERIES	LFPU-BS LFPU-BS LFPU-BS	PU PU PU
1000 SERIES	R48 R48 R48	1000 SERIES	LFPU-BS LFPU-BS LFPU-BS	PU PU PU
1000 SERIES	R49 R49 R49	1000 SERIES	LFPU-BS LFPU-BS LFPU-BS	PU PU PU
1000 SERIES	R50 R50 R50	1000 SERIES	LFPU-BS LFPU-BS LFPU-BS	PU PU PU
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1000 SERIES	R52 R52 R52	1000 SERIES	LFPU-BS LFPU-BS LFPU-BS	PU PU PU
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1000 SERIES	R56 R56 R56	1000 SERIES	LFPU-BS LFPU-BS LFPU-BS	PU PU PU
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1000 SERIES	R66 R66 R66	1000 SERIES	LFPU-BS LFPU-BS LFPU-BS	PU PU PU
1000 SERIES	R67 R67 R67	1000 SERIES	LFPU-BS LFPU-BS LFPU-BS	PU PU PU
1000 SERIES	R68 R68 R68	1000 SERIES	LFPU-BS LFPU-BS LFPU-BS	PU PU PU
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1000 SERIES	R71 R71 R71	1000 SERIES	LFPU-BS LFPU-BS LFPU-BS	PU PU PU
1000 SERIES	R72 R72 R72	1000 SERIES	LFPU-BS LFPU-BS LFPU-BS	PU PU PU
1000 SERIES	R73 R73 R73	1000 SERIES	LFPU-BS LFPU-BS LFPU-BS	PU PU PU
1000 SERIES	R74 R74 R74	1000 SERIES	LFPU-BS LFPU-BS LFPU-BS	PU PU PU
1000 SERIES	R75 R75 R75	1000 SERIES	LFPU-BS LFPU-BS LFPU-BS	PU PU PU
1000 SERIES	R76 R76 R76	1000 SERIES	LFPU-BS LFPU-BS LFPU-BS	PU PU PU
1000 SERIES	R77 R77 R77	1000 SERIES	LFPU-BS LFPU-BS LFPU-BS	PU PU PU
1000 SERIES	R78 R78 R78	1000 SERIES	LFPU-BS LFPU-BS LFPU-BS	PU PU PU
1000 SERIES	R79 R79 R79	1000 SERIES	LFPU-BS LFPU-BS LFPU-BS	PU PU PU
1000 SERIES	R80 R80 R80	1000 SERIES	LFPU-BS LFPU-BS LFPU-BS	PU PU PU
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1000 SERIES	R82 R82 R82	1000 SERIES	LFPU-BS LFPU-BS LFPU-BS	PU PU PU
1000 SERIES	R83 R83 R83	1000 SERIES	LFPU-BS LFPU-BS LFPU-BS	PU PU PU
1000 SERIES	R84 R84 R84	1000 SERIES	LFPU-BS LFPU-BS LFPU-BS	PU PU PU
1000 SERIES	R85 R85 R85	1000 SERIES	LFPU-BS LFPU-BS LFPU-BS	PU PU PU
1000 SERIES	R86 R86 R86	1000 SERIES	LFPU-BS LFPU-BS LFPU-BS	PU PU PU
1000 SERIES	R87 R87 R87	1000 SERIES	LFPU-BS LFPU-BS LFPU-BS	PU PU PU
1000 SERIES	R88 R88 R88	1000 SERIES	LFPU-BS LFPU-BS LFPU-BS	PU PU PU
1000 SERIES	R89 R89 R89	1000 SERIES	LFPU-BS LFPU-BS LFPU-BS	PU PU PU
1000 SERIES	R90 R90 R90	1000 SERIES	LFPU-BS LFPU-BS LFPU-BS	PU PU PU
1000 SERIES	R91 R91 R91	1000 SERIES	LFPU-BS LFPU-BS LFPU-BS	PU PU PU
1000 SERIES	R92 R92 R92	1000 SERIES	LFPU-BS LFPU-BS LFPU-BS	PU PU PU
1000 SERIES	R93 R93 R93	1000 SERIES	LFPU-BS LFPU-BS LFPU-BS	PU PU PU
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1000 SERIES	R95 R95 R95	1000 SERIES	LFPU-BS LFPU-BS LFPU-BS	PU PU PU
1000 SERIES	R96 R96 R96	1000 SERIES	LFPU-BS LFPU-BS LFPU-BS	PU PU PU
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1000 SERIES	R99 R99 R99	1000 SERIES	LFPU-BS LFPU-BS LFPU-BS	PU PU PU
1000 SERIES	R100 R100 R100	1000 SERIES	LFPU-BS LFPU-BS LFPU-BS	PU PU PU

The seal identification chart will assist you when visually identifying seals at the sales counter or back in the shop. Many seal profile pictures with detailed descriptions and technical data are listed on the multi-color laminated flip-chart.

HERCULES MERCHANDISE

COFFEE MUG

Part Number: HB-COFFEE MUG-01
Net Price: \$ 5.00

Blue stainless steel, double wall, insulated travel mug, with black plastic inner liner. Holds 14 oz.



MOUSE PAD

Part Number: HB-MOUSE PAD
Net Price: \$ 2.00

This sturdy mouse pad measures 7-1/4" x 8-3/8", and features a vinyl top with 1/8" foam backing.



BASEBALL HAT

Part Number: HB-HAT-01
Net Price: \$ 6.00

Black canvas baseball hat. Low profile with adjustable Velcro strap. One size fits most.



BLACK TRUCKER HAT

Part Number: HB-HAT-02
Net Price: \$ 9.00

Black trucker hat. High profile with plastic snapping adjustable strap. One size fits most.



HERCULES T-SHIRT

Part Number	Size	Net Price
HB-T-SHIRT-01M	MED	\$ 6.00
HB-T-SHIRT-01L	LARGE	6.00
HB-T-SHIRT-01XL	X-LARGE	6.00
HB-T-SHIRT-01XXL	XX-LARGE	7.00
HB-T-SHIRT-01XXXL	XXX-LARGE	7.00

100% Cotton Gildan™ black t-shirt. Hercules logo on front, with larger vintage graphics on the back.



HERCULES SHIRT

Part Number	Size	Net Price
HB-SHIRT-01SM	SMALL	\$ 17.50
HB-SHIRT-01M	MEDIUM	17.50
HB-SHIRT-01L	LARGE	17.50
HB-SHIRT-01XL	X-LARGE	17.75
HB-SHIRT-01XXL	XX-LARGE	18.75

55% Cotton / 45% Polyester Ahead brand cobalt blue Polo Shirts. Hercules logo on left chest.



COUNTER MAT

Part Number: HH-COUNTER MAT
Net Price: \$ 12.75

Full color 26" x 17" vinyl Counter Mat with 1/8" foam backing.



COUNTER STOOL - 30" TALL

Part Number: HHCOUNTERSTOOL
Net Price: \$ 79.95

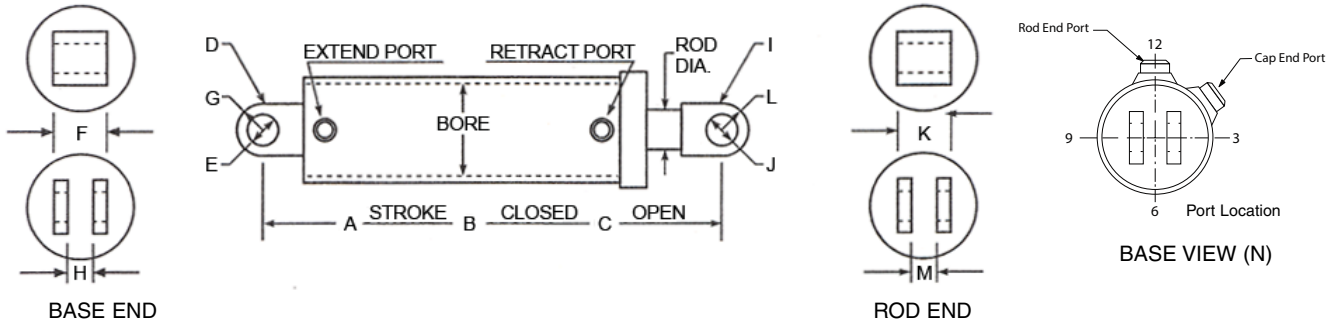
30" Tall Counter Stool with vinyl padded seat and metal legs. Some assembly required.



Technical Information

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HERCULES CUSTOM CYLINDER APPLICATION DATA FORM



Cylinder application _____

Single - or Double-acting _____ System operating pressure Normal _____ Max. _____

Bore _____ Is there a relief valve in system _____ Setting _____

Rod diameter _____ System flow in G.P.M Min. _____ Max. _____

Head & gland design _____ System operating temp. Normal _____ Max. _____

Piston design _____ Fluid type _____

Mounting conditions ___Vert.___Horz.___Incline angle Load holding requirements _____

Any side or eccentric loading possible _____ Environmental condition _____

Average cycles per week _____ Cylinder max force during: Push___ Pull___ Both _____

A : Total stroke _____

B : Closed length _____ I : Rod mount type or code _____

C : Open length _____ J : Rod pin diameter _____

D : Base mount type or code _____ K : Rod mount width _____

E : Base pin diameter _____ L : Rod mount radius _____

F : Base mount width _____ M : Rod clevis gap (if applicable) _____

G : Base mount radius _____ N : Base End Port Location _____

H : Base Clevis Gap (if applicable) _____ Rod End Port Location _____

Special mounting (if applicable) _____

Extend port size and type _____ Extend port location _____

Retract port size and type _____ Retract port location _____

Special features or comments _____
(This includes break-a-way force, shock loads, etc.)

Requested by: Company Name _____ Quantity / Shipment _____

Address _____ Annual Usage _____

City _____ State _____ Zip _____

Phone _____ Fax _____

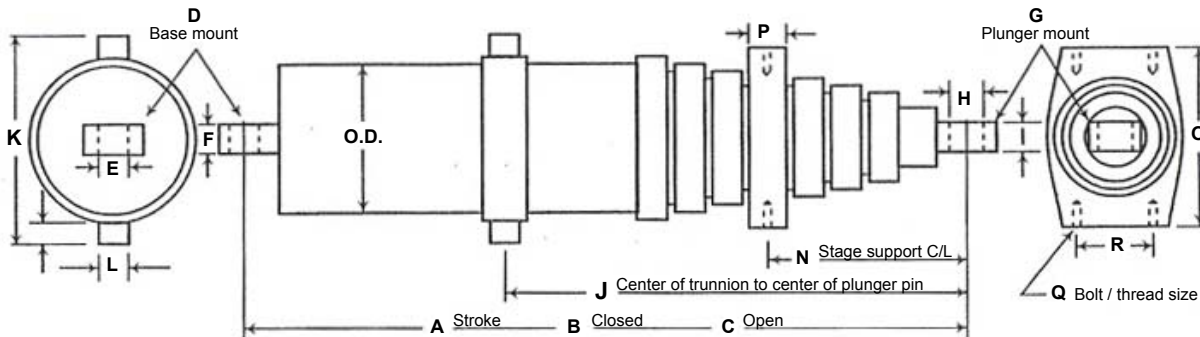
Contact _____

Phone (800) 777-5617 Fax (800) 759-6391



Hercules Sealing Products
1016 N. Belcher Rd
Clearwater, FL 33765

TELESCOPIC CYLINDER APPLICATION DATA FORM



Cylinder application _____

Single - or Double-acting _____ System operating pressure Normal _____ Max. _____

O.D. of body _____ Is there a relief valve in system _____ Setting _____

O.D. largest moving stage _____ System flow in G.P.M. Min. _____ Max. _____

Number of moving stages _____ System operating temp. Normal _____ Max. _____

Chrome or non-chrome stages _____ Fluid type _____

Mounting conditions ___Vert.___Horz.___Incline angle Load holding requirements _____

Any side or eccentric loading possible _____ Environmental condition _____

A : Total stroke _____ J : Plunger pin to trunnion C/L (if applicable) _____

B : Closed length _____ K : Trunnion overall width _____

C : Open length _____ L : Trunnion lug diameters _____

D : Base mount type or code _____ M : Trunnion lug lengths _____

E : Base pin diameter _____ N : Plunger pin to stage support (if applicable) _____

F : Base mount width _____ O : Stage support width _____

G : Plunger mount type or code _____ P : Stage support thickness _____

H : Plunger pin diameter _____ Q : Stage support bolt & thread size _____

I : Plunger mount width _____ R : Stage support bolt locations & C/L's _____

Special mounting (if applicable) _____

Extend port size and type _____ Extend port location _____

Retract port size and type _____ Retract port location _____

Special features or comments _____

Requested by: Firm _____ Current Quan. _____

Address _____ Future Quan. _____

City _____ State _____ Zip _____

Phone _____ Fax _____

Contact _____

Phone (800) 777-5617 Fax (800) 759-6391



Hercules Sealing Products
1016 N. Belcher Rd
Clearwater, FL 33765

CYLINDER PUSH AND PULL FORCES

Square Head "High Pressure" Cylinders

Working Pressure of Hydraulic Fluid P.S.I.

BORE	AREA	ROD	SIZE	50	100	250	500	1000	1500	2000	3000	5000
1-1/2	PUSH	—		88	177	443	885	1,770	2,655	3,540	5,310	8,850
	PULL	STD	5/8	73	146	365	730	1,460	2,190	2,920	4,380	7,300
	PULL	2:1	1	49	98	245	490	980	1,470	1,960	2,940	4,900
2	PUSH	—		157	314	785	1,570	3,140	4,710	6,280	9,420	15,700
	PULL	STD	1	118	236	590	1,180	2,360	3,540	4,720	7,080	11,800
	PULL	2:1	1-3/8	83	166	415	830	1,660	2,490	3,320	4,980	8,300
2-1/2	PUSH	—		246	491	1,228	2,455	4,910	7,265	9,820	14,730	24,550
	PULL	STD	1	206	412	1,030	2,060	4,120	6,180	8,240	12,360	20,600
	PULL	2:1	1-3/4	125	250	625	1,250	2,500	3,750	5,000	7,500	12,500
3-1/2	PUSH	—		415	830	2,075	4,150	8,300	12,450	16,600	24,900	41,500
	PULL	STD	1-3/8	341	681	1,703	3,405	6,810	10,215	13,620	20,430	34,050
	PULL	2:1	2	258	515	1,288	2,575	5,150	7,725	10,300	15,450	25,750
4	PUSH	—		628	1,257	3,143	6,285	12,570	18,855	25,140	37,710	62,850
	PULL	STD	1-3/4	508	1,016	2,540	5,080	10,160	15,240	20,320	30,480	50,800
	PULL	2:1	2-1/2	383	766	1,916	3,830	7,660	11,490	15,320	22,980	38,300
5	PUSH	—		982	1,964	4,910	9,820	19,640	29,460	39,280	58,920	98,200
	PULL	STD	2	825	1,649	4,123	8,245	16,490	24,735	32,980	49,470	82,450
	PULL	2:1	3-1/2	500	1,001	2,503	5,005	10,010	15,015	20,020	30,030	50,050
6	PUSH	—		1,413	2,827	7,068	14,135	28,270	42,405	56,540	84,810	141,350
	PULL	STD	2-1/2	1,168	2,336	5,840	11,680	23,360	35,040	46,720	70,080	116,800
	PULL	2:1	4	786	1,571	3,928	7,855	15,710	23,565	31,420	47,130	78,550
7	PUSH	—		1,924	3,849	9,623	19,245	38,490	57,735	76,980	115,470	192,450
	PULL	STD	3	1,571	3,142	7,855	15,710	31,420	47,130	62,840	94,260	157,100
	PULL	2:1	5	942	1,885	4,713	9,425	18,850	28,275	37,700	56,550	94,250
8	PUSH	—		2,514	5,027	12,568	25,135	50,270	75,405	100,540	150,810	251,350
	PULL	STD	3-1/2	2,032	4,064	10,160	20,320	40,640	60,960	81,280	121,920	203,200
	PULL	2:1	5-1/2	1,326	2,651	6,628	13,255	26,510	39,765	53,020	79,530	132,550
10	PUSH	—		3,927	7,854	19,635	39,270	78,540	117,810	157,080	235,620	392,700
	PULL	STD	4-1/2	3,132	6,264	15,660	31,320	62,640	93,960	125,280	187,920	313,200
	PULL	2:1	7	2,003	4,006	10,015	20,030	40,060	60,090	80,120	120,180	200,300

This table is a ready reference of forces available from either end from various cylinder and rod sizes at a range of pressures. For pressures intermediate between those shown, add force values from two or more pressures whose sum equals the given operating pressure.

HYDRAULIC CYLINDER SPEEDS

Inches / Minute

PISTON DIAMETER	ROD DIAMETER	FLOW - GPM										
		1	2	3	5	10	12	15	20	25	50	75
1	—	298	596	894	1490							
	1/2	392	784	1176	1960							
1-1/2	—	130	260	392	654	1308						
	5/8	158	316	476	792	1584						
	1	235	470	706	1176	2352						
2	—	73	146	221	368	736	883	1120				
	3/4	85	170	257	428	956	1025	1283				
	1	97	184	294	490	980	1175	1465				
	1-3/8	139	278	418	697	1394	1673	2090				
2-1/2	—	47	94	141	235	470	565	675	940	1175		
	1	56	112	168	280	560	672	840	1120	1400		
	1-3/8	67	134	203	339	678	813	1015	1355	1695		
	1-3/4	92	184	277	463	926	1110	1385	1850	2310		
3	—	32	64	98	163	326	392	490	653	817		
	1	36	72	110	184	368	440	551	735	920		
	1-1/2	43	86	131	218	436	523	655	872	1090		
	2	58	116	176	294	588	705	882	1175	1470		
3-1/2	—	24	48	72	120	240	288	360	480	600	1200	
	1-1/4	27	54	82	137	274	330	411	548	685	1370	
	1-3/4	32	64	96	160	320	384	480	640	800	1600	
	2	35	70	107	178	356	428	534	712	890	1780	
4	—	18	36	55	92	184	220	276	368	460	920	
	1-1/4	20	40	61	102	204	244	306	408	510	1020	
	1-3/4	22	44	68	113	226	273	339	452	565	1130	
	2	24	48	73	122	244	294	366	488	610	1220	
	2-1/2	30	60	90	150	300	362	450	600	750	1500	
5	—	12	24	35	58	116	141	174	232	290	580	870
	1-1/2	13	26	39	64	128	155	193	258	320	640	960
	2	14	28	42	70	140	168	210	280	350	700	1050
	2-1/2	16	32	47	78	156	188	235	315	390	780	1170
	3	18	36	55	92	184	220	275	365	460	920	1380
	3-1/2	22	44	66	111	222	266	333	444	555	1110	1665
6	—	8	16	24	41	82	98	123	162	202	404	606
	1-3/4	9	18	27	45	90	107	135	180	225	450	675
	2-1/2	10	20	30	50	100	118	150	200	250	500	750
	3	11	22	33	54	108	130	165	206	270	540	810
	3-1/2	12	24	37	62	124	148	185	245	310	620	930
8	—	4	8	14	23	46	55	69	92	115	230	345
	3-1/2	5-1/2	11	17	28	56	68	85	115	140	280	420
	4	6	12	18	30	60	73	90	122	150	300	450
	5	7-1/2	15	22	38	76	90	114	150	185	375	555
	5-1/2	8-1/2	17	26	43	86	104	129	172	215	430	645
10	—	3	6	9	15	30	35	44	60	73	146	220
	4-1/2	3-1/2	7	11	18	36	44	55	75	92	184	275
	5	4	8	12	20	40	47	60	80	100	200	300
	5-1/2	4-1/2	9	13	21	42	50	63	84	105	210	315
	7	5-1/2	11	17	29	58	69	87	115	145	290	435

TECHNICAL INFORMATION

This chart is based on the formula $V = \frac{231 \times \text{GPM}}{\text{EFF. CYL. AREA (Sq. Inches)}}$

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ELECTRIC MOTOR HORSEPOWER

Required to Drive a Hydraulic Pump

GPM	PUMP PRESSURE PSI										
	100	200	250	300	400	500	750	1000	1250	1500	2000
1/2	.04	.07	.09	.10	.14	.17	.26	.34	.43	.52	.69
1	.07	.14	.17	.21	.28	.34	.52	.69	.86	1.03	1.37
1 1/2	.10	.21	.26	.31	.41	.52	.77	1.03	1.29	1.54	2.06
2	.14	.28	.34	.41	.55	.69	1.03	1.37	1.72	2.06	2.75
2 1/2	.17	.34	.43	.52	.69	.86	1.29	1.72	2.15	2.58	3.43
3	.21	.41	.52	.62	.83	1.03	1.54	2.06	2.57	3.09	4.12
3 1/2	.24	.48	.60	.72	.96	1.20	1.80	2.40	3.00	3.60	4.81
4	.28	.55	.69	.82	1.10	1.37	2.06	2.75	3.43	4.12	5.49
5	.34	.69	.86	1.03	1.32	1.72	2.57	3.43	4.29	5.15	6.86
6	.41	.82	1.03	1.24	1.65	2.06	3.09	4.12	5.15	6.18	8.24
7	.48	.96	1.20	1.44	1.92	2.40	3.60	4.81	6.01	7.21	9.61
8	.55	1.10	1.37	1.65	2.20	2.75	4.12	5.49	6.86	8.24	11.0
9	.62	1.24	1.55	1.85	2.47	3.09	4.63	6.18	7.72	9.27	12.4
10	.69	1.37	1.62	2.06	2.75	3.43	5.15	6.86	8.58	10.3	13.8
11	.76	1.51	1.89	2.27	3.02	3.78	5.66	7.55	9.44	11.3	15.1
12	.83	1.65	2.06	2.47	3.30	4.12	6.18	8.24	10.3	12.4	16.5
13	.89	1.79	2.23	2.68	3.57	4.46	6.69	8.92	11.2	13.4	17.8
14	.96	1.92	2.40	2.88	3.84	4.81	7.21	9.61	12.0	14.4	19.2
15	1.03	2.06	2.57	3.09	4.12	5.15	7.72	10.3	12.9	15.4	20.6
16	1.10	2.20	2.75	3.30	4.39	5.49	8.24	11.0	13.7	16.5	22.0
17	1.17	2.33	2.92	3.50	4.68	5.83	8.75	11.7	14.6	17.5	23.3
18	1.24	2.47	3.09	3.71	4.94	6.18	9.27	12.4	15.4	18.5	24.7
19	1.30	2.61	3.26	3.91	5.22	6.52	9.78	13.0	16.3	19.6	26.1
20	1.37	2.75	3.43	4.12	5.49	6.86	10.3	13.7	17.2	21.6	27.5
25	1.72	3.43	4.29	5.15	6.86	8.58	12.9	17.2	21.5	25.8	34.3
30	2.06	4.12	5.15	6.18	8.24	10.3	15.4	20.6	25.7	30.9	41.2
35	2.40	4.81	6.01	7.21	9.61	12.0	18.0	24.0	30.0	36.0	48.0
40	2.75	5.49	6.86	8.24	11.0	13.7	20.6	27.5	34.3	41.2	54.9
45	3.09	6.18	7.72	9.27	12.4	15.4	23.2	31.0	38.6	46.3	61.8
50	3.43	6.86	8.58	10.3	13.7	17.2	25.7	34.3	42.9	51.5	68.6
55	3.78	7.55	9.44	11.3	15.1	18.9	28.3	37.8	47.2	56.6	75.5
60	4.12	8.24	10.3	12.4	16.5	20.6	30.9	41.2	51.5	61.8	83.4
65	4.46	8.92	11.2	13.4	17.8	22.3	33.5	44.6	55.8	66.9	89.2
70	4.81	9.61	12.0	14.4	19.2	24.0	36.0	48.0	60.1	72.1	96.1
75	5.15	10.3	12.9	15.4	20.6	25.7	38.6	51.4	64.3	77.2	103.0
80	5.49	11.0	13.7	16.5	22.0	27.5	41.2	54.9	68.6	82.4	109.8
90	6.18	12.4	15.4	18.5	24.7	30.9	46.3	61.8	77.2	92.7	123.6
100	6.86	13.7	17.2	20.6	27.5	34.4	51.5	68.6	85.8	103.0	137.3

TECHNICAL INFORMATION

This chart is based on the formula

$$HP = \frac{GPM \times PSI}{1714 \times \text{EFFICIENCY}}$$

For the purposes of this chart, pump efficiency was assumed to be 85%.

As horsepower varies directly with flow or pressure, multiply proportionately to determine values not shown. For instance, at 4000 PSI multiply 2000 PSI values by 2.

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FLUID POWER FORMULAS

BASIC FORMULAS		
FORMULA FOR:	WORD FORMULA	LETTER FORMULA
FLUID PRESSURE In Pounds/Square Inch	PRESSURE = $\frac{\text{FORCE (pounds)}}{\text{UNIT AREA (Square Inches)}}$	$P = \frac{F}{A}$ or $\text{psi} = \frac{F}{A}$
FLUID FLOW RATE In Gallons/Minute	FLOW RATE = $\frac{\text{VOLUME (Gallons)}}{\text{UNIT TIME (Minutes)}}$	$Q = \frac{V}{T}$
FLUID POWER In Horsepower	HORSEPOWER = $\frac{\text{PRESSURE (PSI)} \times \text{FLOW (GPM)}}{1714}$	$HP = \frac{PQ}{1714}$
FLUID FORMULAS		
VELOCITY THROUGH PIPING In Feet/Second Velocity	VELOCITY = $\frac{.3208 \times \text{FLOW RATE THROUGH I.D. (GPM)}}{\text{INTERNAL AREA (Square Inches)}}$	$V = \frac{.3208Q}{A}$
COMPRESSIBILITY OF OIL In Additional Required Oil To Reach Pressure	ADDITIONAL VOLUME = $\frac{\text{PRESSURE (PSI)} \times \text{VOLUME OF OIL UNDER PRESSURE}}{250,000 \text{ (Approx.)}}$	$VA = \frac{PV^*}{250,000}$ <small>* Approximately 1/2% per 1000 psi</small>
COMPRESSIBILITY OF A FLUID	COMPRESSIBILITY = $\frac{1}{\text{BULK MODULUS OF THE FLUID}}$	$C(\beta) = \frac{1}{BM}$
SPECIFIC GRAVITY OF A FLUID	SPECIFIC GRAVITY = $\frac{\text{WEIGHT OF ONE CUBIC FOOT OF FLUID}}{\text{WEIGHT OF ONE CUBIC FOOT OF WATER}}$	$SG = \frac{W}{62.4283}$
VALVE (CV) FLOW FACTOR	VALVE FACTOR (CV) = $\frac{\text{FLOW RATE (GPM)} \times \sqrt{\text{SPECIFIC GRAVITY}}}{\text{PRESSURE DROP (PSI)}}$	$CV = \frac{Q \cdot SG}{\Delta P}$
VISCOSITY IN CENTISTOKES	For Viscosities of 32 to 100 Saybolt Universal Seconds: CENTISTOKES = $.2253 \times \text{SUS} - \frac{194.4}{\text{SUS}}$	$CS = .2253 \text{ SUS} - \frac{194.4}{\text{SUS}}$
VISCOSITY IN CENTISTOKES	For Viscosities of 100 to 240 Saybolt Universal Seconds: CENTISTOKES = $.2193 \times \text{SUS} - \frac{134.6}{\text{SUS}}$	$CS = .2193 \text{ SUS} - \frac{134.6}{\text{SUS}}$
VISCOSITY IN CENTISTOKES	For Viscosities Greater Than 240 Saybolt Universal Seconds: CENTISTOKES = $\frac{\text{SUS}}{4.635}$	$CS = \frac{\text{SUS}}{4.635}$

NOTE: Saybolt Universal Seconds is often abbreviated SSU.

PUMP FORMULAS		
PUMP OUTLET FLOW In Gallons/Minute	FLOW = $\frac{\text{RPM} \times \text{PUMP DISPLACEMENT (Cu. In./Rev.)}}{231}$	$Q = \frac{nd}{231}$
PUMP INPUT POWER In Horsepower Required	HORSEPOWER INPUT = $\frac{\text{FLOW RATE OUTPUT (GPM)} \times \text{PRESSURE (psi)}}{1714 \times \text{EFFICIENCY (Overall)}}$	$HP_{IN} = \frac{QP}{1714 \text{ Eff}}$ or $\frac{\text{GPM} \times \text{psi}}{1714 \text{ Eff}}$
PUMP EFFICIENCY Overall in Percent	OVERALL EFFICIENCY = $\frac{\text{OUTPUT HORSEPOWER}}{\text{INPUT HORSEPOWER}} \times 100$	$f_{OV} = \frac{HP_{OUT}}{HP_{IN}} \times 100$
	OVERALL EFFICIENCY = $\text{VOLUMETRIC Eff.} \times \text{MECHANICAL Eff.}$	$f_{OV} = \text{Eff}_{VOL.} \times \text{Eff}_{MECH.}$
PUMP EFFICIENCY Overall in Percent	VOLUMETRIC EFFICIENCY = $\frac{\text{ACTUAL FLOW RATE OUTPUT (GPM)}}{\text{THEORETICAL FLOW RATE OUTPUT (GPM)}} \times 100$	$f_{VOL} = \frac{Q_{ACT}}{Q_{THEO.}} \times 100$
PUMP EFFICIENCY Mechanical in Percent	MECHANICAL EFFICIENCY = $\frac{\text{THEORETICAL TORQUE TO DRIVE}}{\text{ACTUAL TORQUE TO DRIVE}} \times 100$	$\text{Eff}_{MEC} = \frac{T_{THEO.}}{T_{ACT.}} \times 100$
PUMP LIFE B ₁₀ BEARING LIFE	B ₁₀ HOURS OF BEARING LIFE = $\text{RATED LIFE HOURS} \times \frac{\text{RATED SPEED (RPM)}}{\text{NEW SPEED (RPM)}} \times \left(\frac{\text{RATED PRESSURE (PSI)}}{\text{NEW PRESSURE (PSI)}} \right)^3$	$B_{10} = \text{RATED HRS.} \times \frac{\text{RPM}_R}{\text{RPM}_N} \times \left(\frac{\text{PR}}{\text{PN}} \right)^3$

TECHNICAL INFORMATION



FLUID POWER FORMULAS

ACTUATOR FORMULAS

FORMULA FOR:	WORD FORMULA	LETTER FORMULA
CYLINDER AREA In Square Inches	AREA = $\pi \times \text{RADIUS}^2$ (Inches)	A = πr^2
	= $\frac{\pi \times \text{DIAMETER}^2}{4}$ (Inches)	A = $\frac{\pi D^2}{4}$ or A = $.785D^2$
CYLINDER FORCE In Pounds, Push or Pull	FORCE = PRESSURE (psi) X NET AREA (Square Inches)	F = psi X A or F = PA
CYLINDER VELOCITY or SPEED In Feet/Second	VELOCITY = $\frac{231 \times \text{FLOW RATE (GPM)}}{12 \times 60 \times \text{NET AREA (Square Inches)}}$	F = $\frac{231Q}{720A}$ or V = $\frac{.3208Q}{A}$
CYLINDER VOLUME CAPACITY In Gallons of Fluid	VELOCITY = $\frac{\pi \times \text{RADIUS}^2 \text{ (Inches)} \times \text{STROKE (Inches)}}{231}$	V = $\frac{\pi r^2 l}{231}$
	= $\frac{\text{NET AREA (Square Inches)} \times \text{STROKE (Inches)}}{231}$	V = $\frac{A l}{231}$ l = Length of Stroke
CYLINDER FLOW RATE In Gallons Per Minute	FLOW RATE = $\frac{12 \times 60 \times \text{VELOCITY (Feet/Sec.)} \times \text{NET AREA (Sq. Inches)}}{231}$	Q = $\frac{720vA}{231}$ or Q = $3.117vA$
FLUID MOTOR TORQUE In Inch Pounds	TORQUE = $\frac{\text{PRESSURE (psi)} \times \text{F.M. DISPLACEMENT (Cu. In./Rev.)}}{2\pi}$	T = $\frac{\text{psi } d}{2\pi}$ or T = $\frac{Pd}{2\pi}$
	= $\frac{\text{HORSEPOWER} \times 63025}{\text{RPM}}$	T = $\frac{63025 \text{ HP}}{n}$
	= $\frac{\text{FLOW RATE (GPM)} \times \text{PRESSURE (psi)} \times 36.77}{\text{RPM}}$	T = $\frac{36.77QP}{n}$ or T = $\frac{36.77Q\text{psi}}{n}$
FLUID MOTOR TORQUE/100 psi In Inch Pounds	TORQUE/100 psi = $\frac{\text{F.M. DISPLACEMENT (Cu. Inches/Revolution)}}{.0628}$	T _{100psi} = $\frac{d}{.0628}$
FLUID MOTOR SPEED In Revolutions/Minute	SPEED = $\frac{231 \times \text{FLOW RATE (GPM)}}{\text{F.M. DISPLACEMENT (Cu. Inches/Revolution)}}$	n = $\frac{231Q}{d}$
FLUID MOTOR POWER In Horsepower Output	HORSEPOWER = $\frac{\text{TORQUE OUTPUT (Inch Pounds)} \times \text{RPM}}{63025}$	HP = $\frac{Tn}{63025}$

THERMAL FORMULAS

			Δ
RESERVOIR COOLING CAPACITY Based on Adequate Air Circulation	HEAT (BTU/HR) = $2 \times \text{TEMPERATURE DIFFERENCE BETWEEN RESERVOIR WALLS AND AIR (°F)} \times \text{AREA OF RESERVOIR (Sq. Ft.)}$	BTU/HR = $2.0 \times T \times A$	Δ
HEAT IN HYDRAULIC OIL (approx.) Due to System Inefficiency (SG=.89-.92)	HEAT (BTU/HR) = $\text{FLOW RATE (GPM)} \times 210 \times \text{TEMPERATURE DIFFERENCE (°F)}$	BTU/HR = $Q \times 210 \times T$	Δ
HEAT IN FRESH WATER (approx.)	HEAT (BTU/HR) = $\text{FLOW RATE (GPM)} \times 500 \times \text{TEMPERATURE DIFFERENCE (°F)}$	BTU/HR = $Q \times 500 \times T$	

NOTE: One British Thermal Unit (BTU) is the amount of heat required to raise the temperature of one pound of water one degree. One Horsepower = 2545 BTU/HR.

VOLUME & CAPACITY EQUIVALENTS

	Cubic Inches	Cubic Feet	Cubic Yards	Liters	U.S. Gallons	Imperial Gallons	Water at Max. Density 39.2°F 4°C	
							Pounds of Water	Kilograms of Water
Cu Inches	1	.0005787	.00002143	.016384	.004329	.0036065	.0361275	.0163872
Cu Feet	1728	1	.037037	28.317	7.48052	6.23210	62.4283	28.3170
Cu Yards	46,656	27	1	764.56	201.974	168.266	1685.56	764.559
Liters	61.0234	.0353145	.001308	1	.264170	.220083	2.20462	1
U.S. Gallons	231	.133681	.004951	3.78543	1	.833111	8.34545	3.78543
Imp. Gallons	277.274	.160459	.0059429	4.54374	1.20032	1	10.0172	4.54373
Lbs Water	27.6798	.0160184	.0005929	.453592	.119825	.0998281	1	.453593

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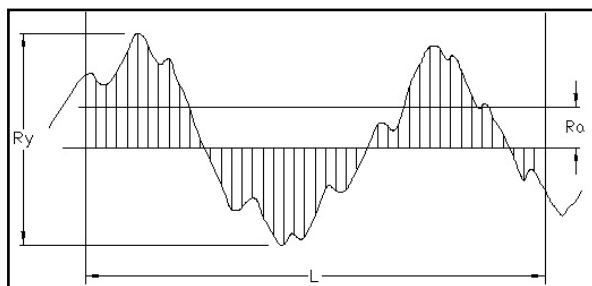
TECH TIP - SURFACE FINISH

The surface finish has a critical influence on excellent sealing performance, low friction and long seal life. A finish that is either too rough or very smooth will cause a negative result. The surface microstructures allow pockets of fluid in very small volumes to pass under the seal with each cycle. This lubricating fluid lowers friction and extends seal life. Seal interface lubrication is reduced with a very fine surface finish and the seal will suffer increased friction and wear. In the case of rod sealing, a rougher finish may result in leakage if the fluid passes under the seal, is removed from the rod and not returned back into the cylinder. The wear rate is a major factor in the life of a dynamic application, and depends on the quality of the rod and the cylinder bore surface finish.

DEFINITIONS

The most frequently specified parameters in the fluid power industry are Ra, Ry, Rt, Rz, Rq, and Rsk which are defined in ISO 4287 and ISO 4288.

Ra is defined as the arithmetical mean deviation of the assessed profile. The inch equivalent parameter is CLA (centre line average). A surface finish of 0.4 μm Ra is equivalent to 16 μin CLA. The "checkmark" symbol used on drawings to specify a surface texture control requirement is an Ra specification.



Ry (also Rmax) is the maximum roughness height in one cutoff length (L) of the profile.

Rt is the maximum roughness height in five cutoff lengths of the roughness profile.

Rz is the average of the five greatest peak-to-valley separations crossing the mean line in a single cutoff length.

Rq is the root mean square deviation of the assessed profile. The equivalent term in inches is RMS (Root Mean Square). The Rq (RMS) of a surface is approximately 10% greater than the Ra (CLA) value.

Rsk is the assessed profile skewness or the measure of symmetry about the mean. A negative Rsk indicates greater valleys than peaks and imparts a better seal mating surface.

RECOMMENDATIONS

A single parameter rating is not sufficient in assessing the surface irregularities. Several parameters should be specified to accurately evaluate the surface depth, shape and orientation and their affect on sealing performance, friction and wear.

Reciprocating Cylinder Rod
Hydraulic and Low Pressure Pneumatic

Ra = 4 to 12 μin [0.1 to 0.3 μm]
Rz \leq 50 μin [1.3 μm]
Rsk = -1.0 to -4.0

Reciprocating Cylinder Bore and Slow Rotary Rod
Hydraulic and Low Pressure Pneumatic

Ra = 4 to 20 μin [0.1 to 0.5 μm]
Rz \leq 80 μin [2.0 μm]
Rsk = -1.0 to -4.0

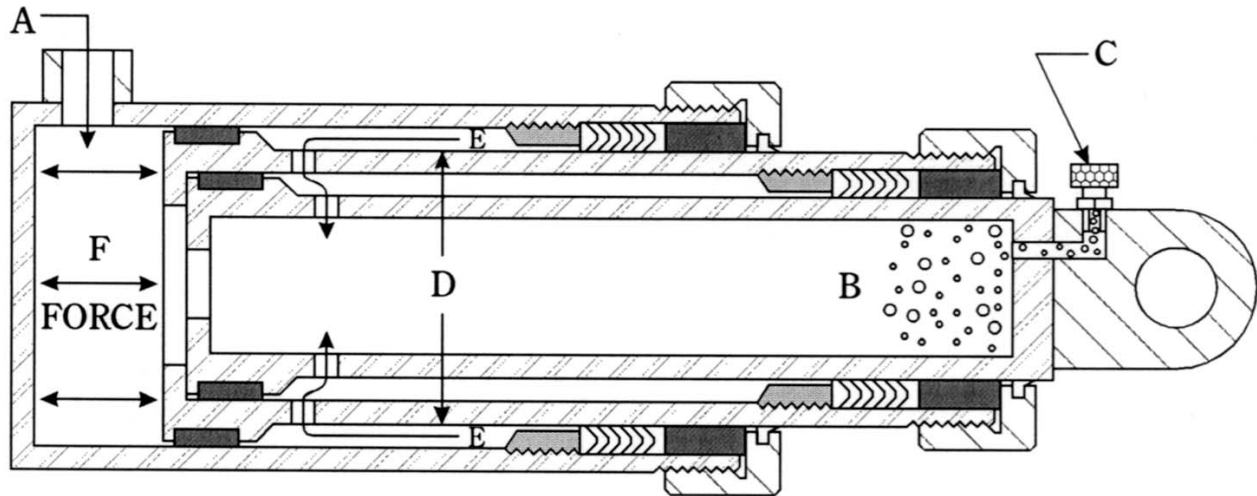
SURFACE FINISHING

The surface roughness is dependent on the machining process employed. Scores, scratches, voids, concentric or linear machining marks are not permitted. Common production methods result in a metal surface finish of between 1 μin to 140 μin [0.02 μm to 3.5 μm] Ra roughness as shown in the table below.

PROCESS ROUGHNESS Ra (μin [μm])

Turning	40 - 140 [1.0 - 3.5]
Boring	24 - 95 [0.6 - 2.4]
Broaching	16 - 63 [0.4 - 1.6]
Precision Rolling	8 - 48 [0.2 - 1.2]
Grinding	8 - 40 [0.2 - 1.0]
Smooth	3 - 12 [0.08 - 0.3]
Super Fine	0.5 - 3 [0.012 - 0.08]
Polished	0.5 - 3 [0.012 - 0.08]

SINGLE ACTING TELESCOPIC CYLINDERS



To Extend:

High pressure oil from the pump is directed by the control valve through the port (A) to fill the cylinder. Any air in the system is trapped in the end of the cylinder (B) and may be bled off through the bleeder valve (C). Generally, bleeding is only necessary on initial start up or if air has been allowed to enter the system.

Oil pushes on the bottom of the sleeve or plunger forcing (F) it to move out. The outside diameter or sealing area of the sleeve or plunger (D) determines the effective area.

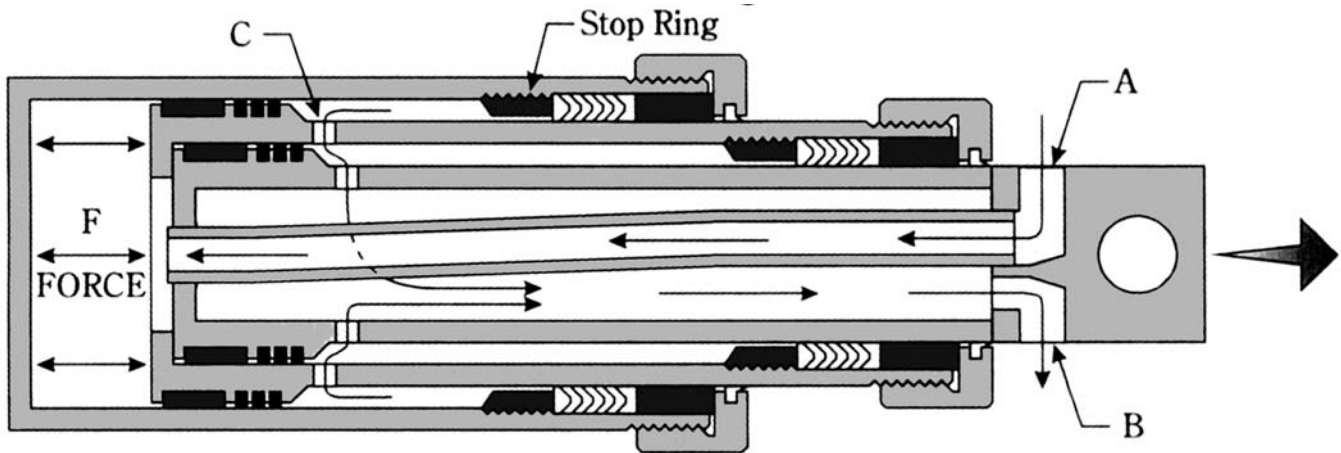
As the sleeve or plunger moves out, the oil trapped between (E) the sleeve or plunger wall is released through holes in the sleeve or plunger.

To Retract:

A single acting cylinder must be retracted by gravity or mechanical means.

DOUBLE ACTING TELESCOPIC CYLINDERS

EXTENDING



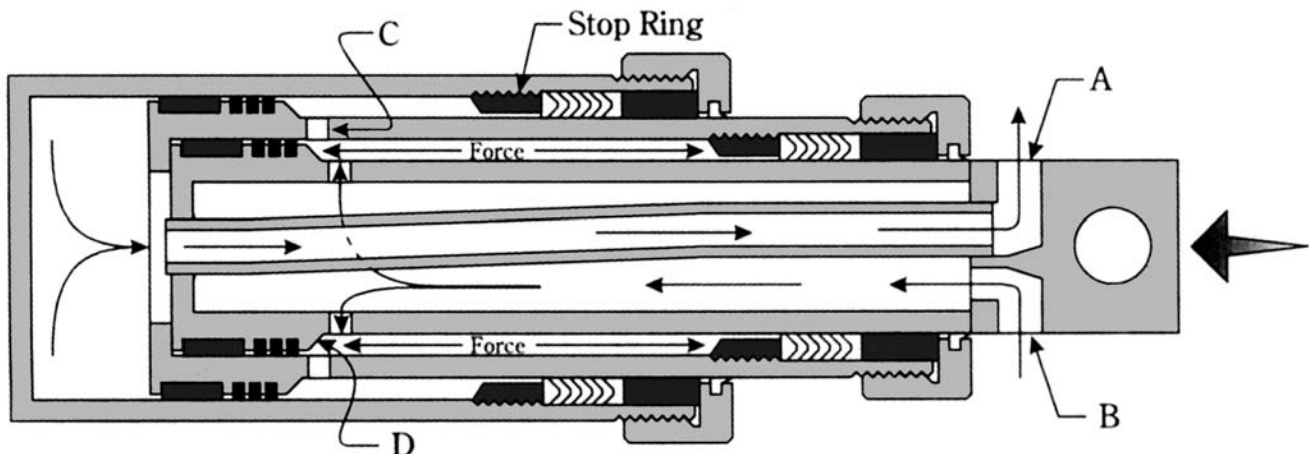
To Extend:

High pressure oil is directed by the control valve into port A. The oil passes through the transfer tube in the rod to the base of the cylinder. The pressure acts on the effective area (area of the largest piston) and extends all stages to the first stop ring.

The next stage then begins to extend. The effective area of each stage is figured from the inside diameter of the next largest stage. Each stage extends in its turn to the stop ring.

Oil trapped between the sleeves escapes through holes (c) in each sleeve and returns to tank through port B.

RETRACTING

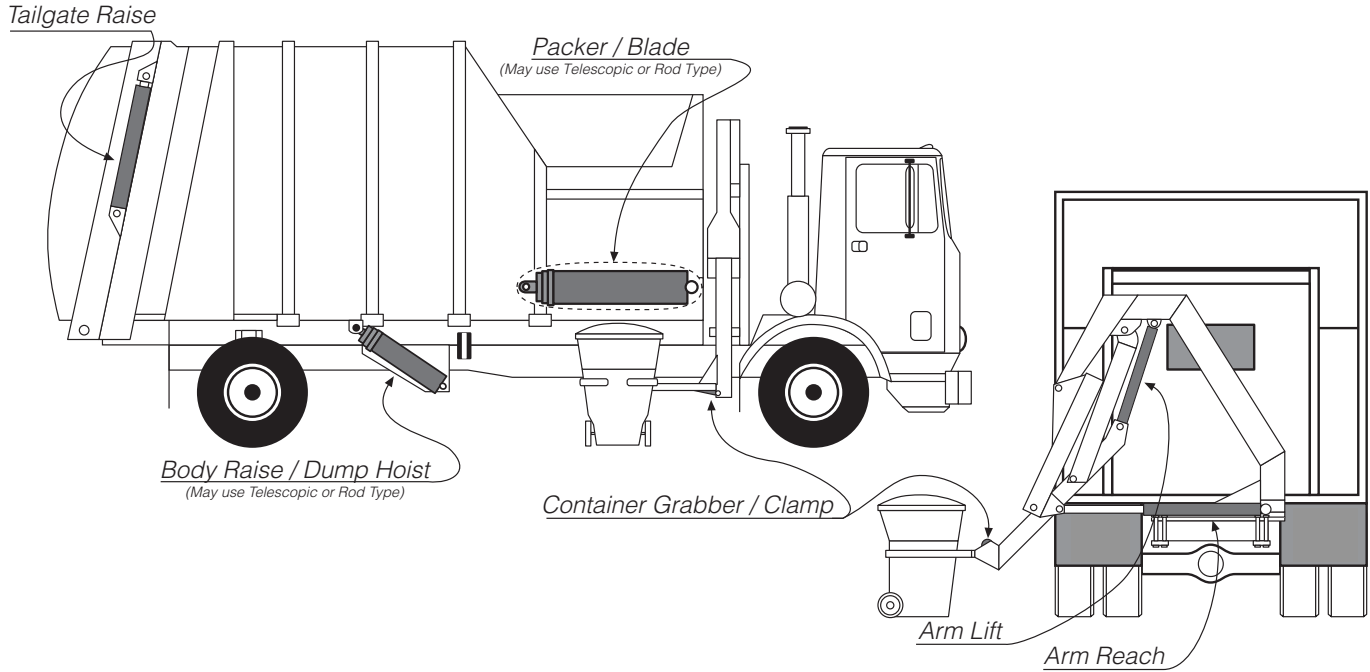


To Retract:

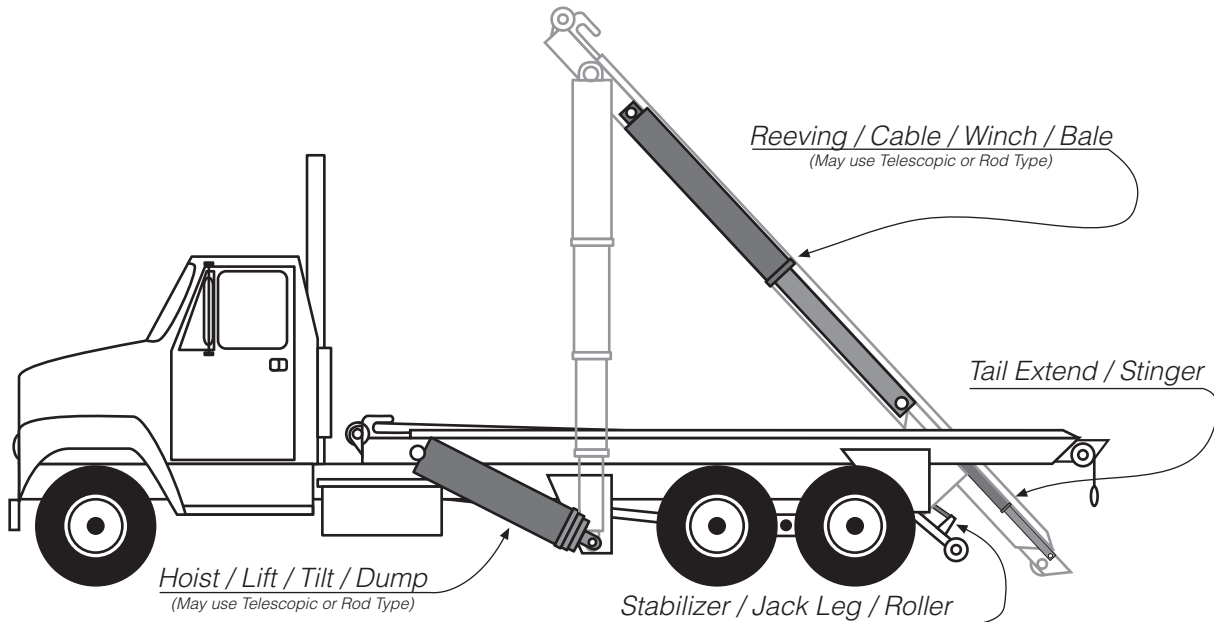
High pressure oil is directed by the control valve in port B. The pressure is applied to the effective area (d) of the plunger which retracts first. Each stage from the smallest to the largest retracts in its turn, however, THE EFFECTIVE AREA FOR RETRACTING EACH STAGE IS THE AREA (D) OF THE PLUNGER.

REFUSE BODIES

Side Loader Refuse Bodies



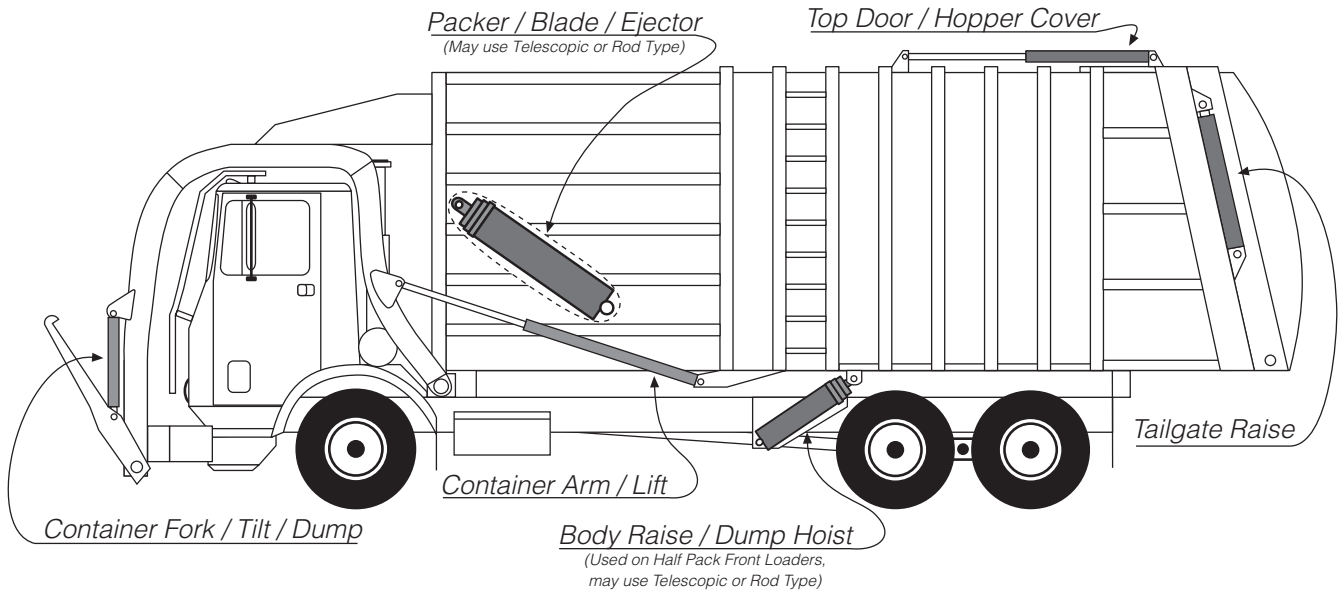
Roll Off & Tilt Frame Hoists



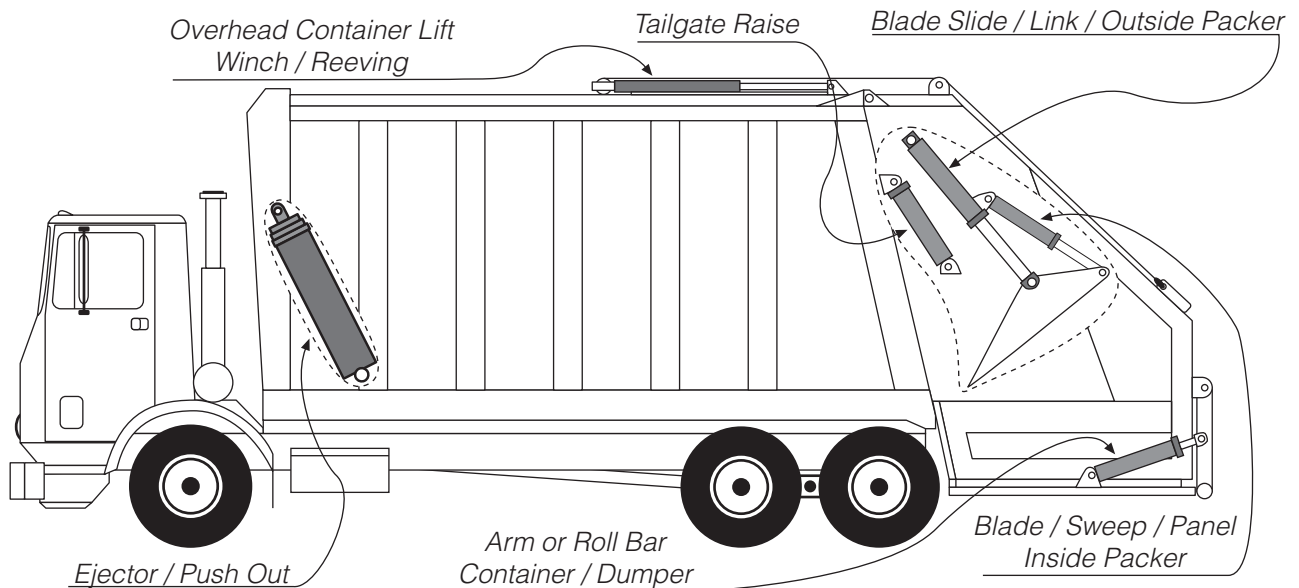
TECHNICAL INFORMATION

REFUSE BODIES

Front Loader Refuse Bodies



Rear Loader Refuse Bodies



TECHNICAL INFORMATION

FRONT MOUNT DUMP BODY

Stroke & Lifting Calculations Mounting

NOTE: This guide is for use to determine approximate stroke and lifting requirements for a front mount dump body. Final dimensions should be determined by an engineering drawing.

Formula for Calculating Initial Required Cylinder Force to Lift a Load

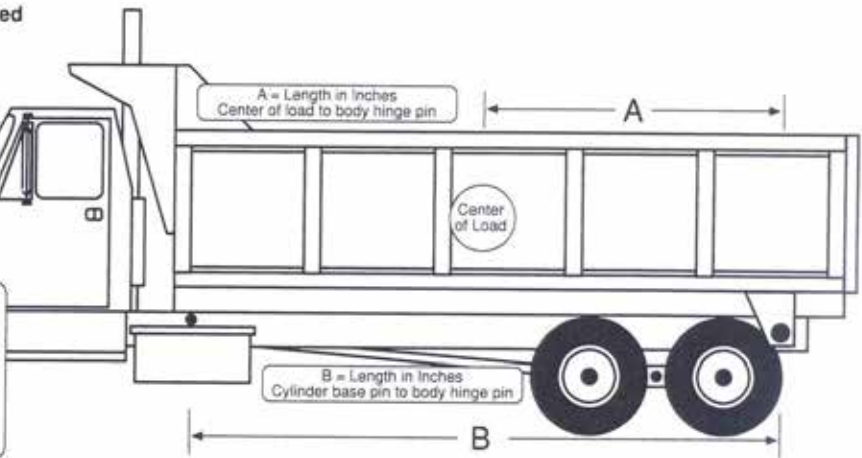
$$\frac{\text{Load (lbs)} \times \text{"A"}}{\text{"B"}} = \text{Initial required cylinder force}$$

Example

$$\frac{50,000\# \times 85"}{166"} = 25,803\# \text{ of force to start the lift}$$

Note: For a good design, initial pressure should not exceed 800 psi at start of lift

Telescopic Lifting Capabilities				
Stage O.D. in inches	800 psi	1000 psi	1500 psi	2000 psi
2.75"	4752	5940	8909	11879
3.75"	8836	11045	16507	22089
4.75"	14176	17721	26581	35441
5.75"	20774	25967	38951	51935
6.75"	28628	35785	53677	71570
7.90"	39213	49017	73525	98034
9.37"	55165	68956	103434	137911



Formula for Calculating the Required Cylinder Stroke for a Dump Angle

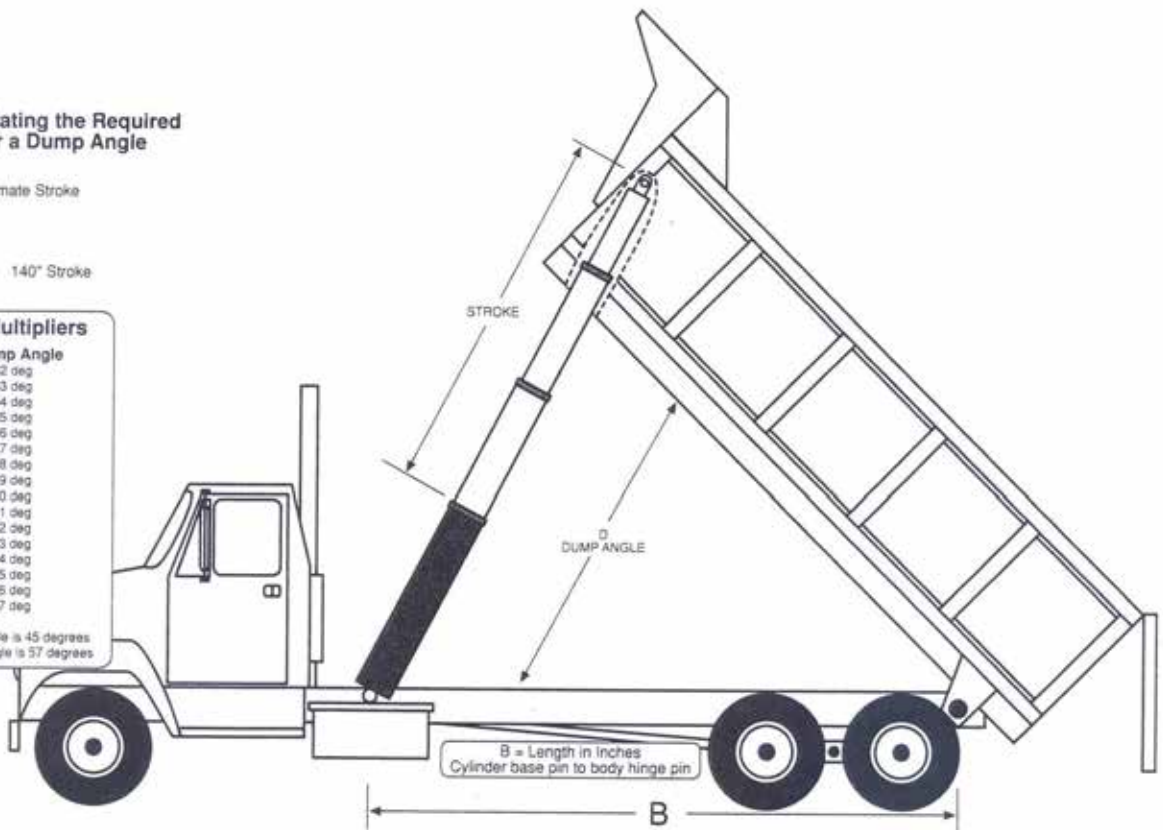
$$\text{"B"} \times \text{"D"} = \text{Approximate Stroke}$$

Example

$$166" (\text{B}) \times .845 (\text{D}) = 140" \text{ Stroke}$$

Dump Angle Multipliers	
"D" = Dump Angle	
.715	42 deg
.733	43 deg
.750	44 deg
.765	45 deg
.780	46 deg
.797	47 deg
.813	48 deg
.830	49 deg
.845	50 deg
.861	51 deg
.877	52 deg
.892	53 deg
.903	54 deg
.923	55 deg
.939	56 deg
.954	57 deg

Normal minimum dump angle is 45 degrees
Normal maximum dump angle is 57 degrees



TECHNICAL INFORMATION



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