

INSTALLATION TOOLS

ROD U-SEAL INSTALLATION TOOLS

List Price: \$ 63.83

Part Number	Seal ID Range
IT 100	3/4" to 1-1/4"
IT 150	1-3/8" to 1-7/8"
IT 200	2" to 3"
IT 100-NN	3/4" to 1-1/4"
IT 150-NN	1-3/8" to 1-7/8"
IT 200-NN	2" to 3"

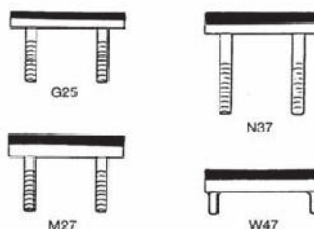


These tools aid U-seal installation, eliminating the risk of damaging the seal lip.

REMANUFACTURING TOOLS

HONE STONE SETS

Stone sets for 2.5" to 21" 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.



Stone Number	Diameter
G25	2.500 - 2.700
M27	2.700 - 4.250
N37	3.700 - 5.500
W47	4.125 - 21.000

PART NUMBER	STONE SIZE	MATERIAL	GRIT SIZE	HARDNESS	LUBRICANT	LIST PRICE
H-G25-J87 2.500	2.500 - 2.700	Silicon Carbide	400	Hard	N/A	\$ 45.56
H-G25-R25X 2.500	2.500 - 2.700	Red Aluminum Oxide	80	Medium	Sulfur Impregnated	45.56
H-M27-R25X	2.700 - 4.250	Red Aluminum Oxide	80	Medium	Sulfur Impregnated	45.98
H-N37-A43	3.700 - 5.500	Aluminum Oxide	150	Soft	N/A	47.63
H-N37-A45	3.700 - 5.500	Aluminum Oxide	150	Medium	N/A	47.63
H-N37-A63	3.700 - 5.500	Aluminum Oxide	280	Soft	N/A	47.63
H-N37-J85	3.700 - 5.500	Silicon Carbide	400	Medium	N/A	47.63
H-N37-J87	3.700 - 5.500	Silicon Carbide	400	Hard	N/A	47.63
H-N37-R25X	3.700 - 5.500	Red Aluminum Oxide	80	Medium	Sulfur Impregnated	47.63
H-W47-A43	4.125 - 21.000	Aluminum Oxide	150	Soft	N/A	52.32
H-W47-A45	4.125 - 21.000	Aluminum Oxide	150	Medium	N/A	52.32
H-W47-J65	4.125 - 21.000	Silicon Carbide	280	Medium	N/A	52.32
H-W47-J85	4.125 - 21.000	Silicon Carbide	400	Medium	N/A	52.32
H-W47-J87	4.125 - 21.000	Silicon Carbide	400	Hard	N/A	52.32
H-W47-R25X	4.125 - 21.000	Red Aluminum Oxide	80	Medium	Sulfur Impregnated	52.32

TESTING TOOLS

FasTest® WEH 17 SERIES



Your Ergonomic Solution to Eliminate Wrenches and Bottle-Necks

FasTest® WEH 17 connectors provide leak tight connections for filling, charging, evacuation and pressure testing. The WEH 17 automatically seals when pressurized. Available in lever or pneumatically activated versions to grip and seal to female threads. Test pressures to 3500 psi.

How to Operate

To Connect: Collapse split collets in accordance with the operating method you have selected. Insert collets into female thread of the component to be tested. Expand collet to grip and seal. Activate test media through connector side port.

To Disconnect: Deactivate test pressure. Collapse split collets in accordance with the operating method you have selected. Remove connector from test piece.

Caution: WEH Series 17 connectors are not internally valved. Disconnecting while pressurized will cause leakage of test media.

Technical Data

Seals: Nitrile

Materials: Stainless steel

Temperature: -40° to +250°F

Pressure Ranges: 0 to 5000 psi. (static)

Pneumatic Operation: Requires a minimum air supply of 75 psi.

Rated Pressure: Based on test results using threaded ports manufactured to the referenced specifications and steel material. Other materials or deviations from those specifications may reduce the safe working pressure and should be verified by test. For dynamic pressure cycles or heavy side-load applications please see **FasMate®** Series.

NPTF Pipe Thread



PART NUMBER	CONNECTS TO FEMALE THREAD	RATED PRESSURE	NET PRICE
HH17H-40204041-1BB1	1/4" NPTF	5000	\$ 629.26
HH17H-40206061-1BB1*	3/8" NPTF	5000	641.11
HH17H-40208081-1BB1	1/2" NPTF	5000	678.83
HH17H-40212121-1BB1	3/4" NPTF	3500	968.67

MAIN SEAL SET 5/PKG	NET PRICE
S17-041B	\$ 14.76
S17-061B	14.76
S17-081B	19.50
S17-121B	19.50

SAE O-Ring



PART NUMBER	CONNECTS TO FEMALE THREAD	RATED PRESSURE	NET PRICE
HH17H-044021-1BB1	-4 (7/16-20)	5000	\$ 629.26
HH17H-064041-1BB1	-6 (9/16-18)	5000	629.26
HH17H-084061-1BB1*	-8 (3/4-16)	5000	641.11
HH17H-104081-1BB1	-10 (7/8-14)	5000	678.83
HH17H-124121-1BB1	-12 (1 1/16-12)	3500	968.67

MAIN SEAL SET 5/PKG	NET PRICE
S17-042B	\$ 14.76
S17-062B	14.76
S17-082B	19.50
S17-102B	19.50
S17-122B	19.50

* In-stock. Additional sizes available for order.

TESTING TOOLS

TwistMate® MIT SERIES

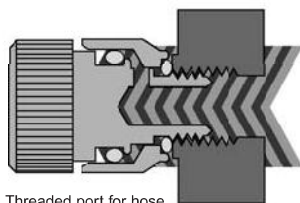


No Wrenches Needed • Hand Tighten Your Port Adapters • Shortens Testing Time

Twistmate® MIT mechanical internal thread connectors and plugs provide fast leak tight threaded connections for testing, filling, flushing, plugging, calibrating or venting applications. The patented pressure assisted sealing eliminates wrench tightening and thread sealants for safe secure connections up to 10,000 psi. With sizes up to 4" NPTF, and high flow design, the MIT is ideal for large unit run testing. Fast and reliable sealing reduces test time and production losses from scrap, rework and re-testing. Full flow design for shortest filling and test times.

Spin Twistmate® finger-tight onto thread until face seal contacts test piece. They seal automatically when the system is pressurized. Air, gas or hydraulic pressure in the system provides a sealing force that presses the urethane main seal against the face of the threads. This automatic internal piston action maintains the seal with minimum pressure.

Piston Action



Threaded port for hose quick disconnect.

Operation

- Step 1. Spin **Twistmate®** into the threaded port until the seal makes contact.
- Step 2. Introduce the media and pressure. The external sleeve automatically moves toward the test port enhancing the seal squeeze. Vacuum applications will require finger-tightening.

Technical Data

Seals: Urethane and Nitrile
Materials: Steel with QPQ or Stainless Steel
Temperature: -40° to +200°F
Pressure: Vacuum to 10,000 psi
Rated Pressure: Based on test results using threaded ports manufactured to the referenced specifications and steel material. Other materials or deviations from those specifications may reduce the safe working pressure and should be verified by test.

NPTF Pipe Thread



PART NUMBER	CONNECTS TO FEMALE THREAD	RATED PRESSURE	CONNECTOR TYPE	NET PRICE	MAIN SEAL SET 5/PKG	NET PRICE
HHMIT-022021	1/8" NPTF	5000	SWIVEL	\$ 62.50	S1109-U70	\$ 14.65
HHMIT-042041	1/4" NPTF	5000	SWIVEL	64.00	S1111-U70	15.73
HHMIT-062061	3/8" NPTF	5000	SWIVEL	72.95	S1113-U70	16.92
HHMIT-082081	1/2" NPTF	5000	SWIVEL	84.69	S1209-U70	18.10
HHMIT-122121X	3/4" NPTF	5000	CONNECTOR	110.98	S1213-U70	19.45
HHMIT-162161X	1" NPTF	5000	CONNECTOR	123.91	S1216-U70	20.90
HHMIT-202201X	1-1/2" NPTF	5000	CONNECTOR	170.25	S1222-U70	21.66
HHMIT-242241X	2" NPTF	5000	CONNECTOR	414.84	S1327-U70	52.26

SAE O-Ring



PART NUMBER	CONNECTS TO FEMALE THREAD	RATED PRESSURE	CONNECTOR TYPE	NET PRICE	MAIN SEAL SET 5/PKG	NET PRICE
HHMIT-044021X	-04 (7/16-20)	5000	CONNECTOR	\$ 58.19	S1109-U70	\$ 14.65
HHMIT-064041X	-06 (9/16-18)	5000	CONNECTOR	66.81	S1111-U70	15.73
HHMIT-084081X	-08 (3/4-16)	4000	CONNECTOR	80.81	S1209-U70	18.10
HHMIT-104081X	-10 (7/8-14)	4000	CONNECTOR	80.81	S1209-U70	18.10
HHMIT-124121X	-12 (1 1/16-12)	4000	CONNECTOR	167.01	S1213-U70	19.45
HHMIT-164161X	-16 (1 5/16-12)	4000	CONNECTOR	186.41	S1217-U70	20.90
HHMIT-204201X	-20 (1 5/8-12)	4000	CONNECTOR	255.37	S1222-U70	21.66

REMOVAL TOOLS

**We have the packing removal tools to fit your needs.
Try out these high quality tools in your shop.**

Proper tools make the job of servicing cylinders easier and faster and reduce the possibility of damaging the finely machined surfaces. The handy tools listed on this page aid in the repair of telescopic cylinders and make it easier to do a quality job.

O-RING PICK SET 1

Part Number: O-Ring Pick
List Price: \$ 15.30

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



O-RING PICK SET 2

Part Number: ORP-B
List Price: \$ 29.94
Part Number: ORP-SS
List Price: \$ 29.94

Available in brass (ORP-B) or stainless steel (ORP-SS), these tools have been specifically engineered to enhance o-ring removal and replacement. Coated handles increase the tools performance in less than perfect environments.



O-RING PICK SET 3

Part Number: O Pick Set
List Price: \$ 63.06

Packaged in a clear vinyl pouch, 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.



O-RING PICK SET 4

Part Number: Maxi Pick Set
List Price: \$ 211.11

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.



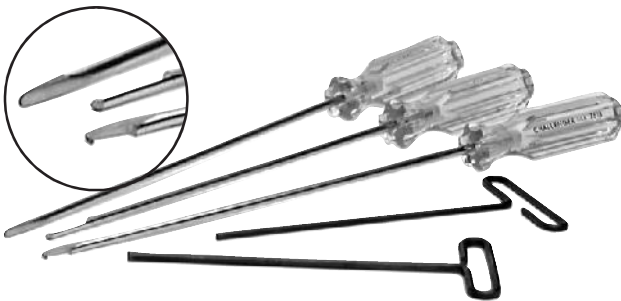
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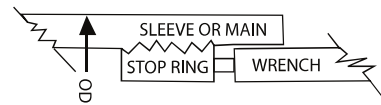
5 PIECE TOOL KIT SET

Part Number: CH-TK-1
List Price: \$ 214.00



STOP RING WRENCH

Part Number	Sleeve or Main O.D.	Pins	List Price
CM-376-6067-047	3 3/4"	5 Pins	\$ 519.94
CM-376-6067-048	4 3/4"	5 Pins	589.94
CM-376-6067-049	5 3/4"	7 Pins	635.06
CM-376-6067-050	6 3/4"	7 Pins	698.11
CM-376-6067-051	7 7/8"	7 Pins	737.06
CM-376-6067-052	9 3/8"	8 Pins	847.28
CM-376-6067-053	11 1/8"	8 Pins	1,116.61



FLEXIBLE PACKING HOOKS

Part Number	Packing Space	Length	List Price
FPH-187	3/16"-up	6-1/2"	\$ 33.78
FPH-312R	5/16"-up	7-1/2"	29.17
FPH-437R	7/16"-up	10-1/2"	37.39
FPH-500R	1/2"-up	14-1/2"	45.22

With a tempered tool steel cork-screw 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°).



CHEVRON ASSEMBLY TOOL

Part Number: CM-376-9067-001
List Price: \$ 179.39



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REPLACEABLE WOODSCREW TIPS

Part Number	Packing Space	List Price
FPH-RTW312	5/16"-up	\$ 16.61
FPH-RTW437	7/16"-up	21.39



REPLACEABLE CORKSCREW TIPS

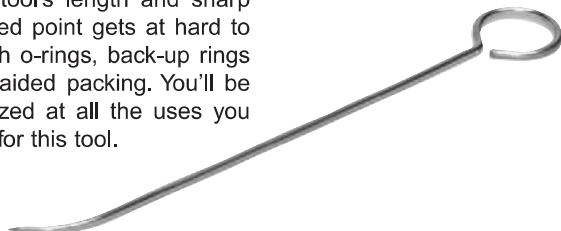
Part Number	Packing Space	List Price
FPH-RTC312	5/16"-up	\$ 12.94
FPH-RTC437	7/16"-up	15.67
FPH-RTC500	1/2"-up	21.00



SOLID SHAFT PICKS

Part Number	Packing Space	Length	List Price
SSP-125		9-1/2"	\$ 19.17
SSP-312	5/16"-up	10"	38.06

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.



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11 PIECE PACKING TOOL KIT

Part Number: Pack Tool Set-11
List Price: \$ 252.78

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		



17 PIECE PACKING TOOL KIT

Part Number: Pack Tool Set-17
List Price: \$ 434.33

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



ASSORTMENT KITS AND TOOLS

DISMANTLING TOOLS

SPANNER WRENCHES

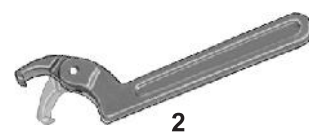
(1) ADJUSTABLE HEAD — PIN STYLE

PART NUMBER	PART OD RANGE	PIN DIA.	PIN LGTH.	LIST PRICE
SPAP-2.00X0.13	3/4" to 2" (19mm to 50mm)	1/8"	1/8"	\$ 83.59
SPAP-2.00X0.19	3/4" to 2" (19mm to 50mm)	3/16"	5/32"	96.00
SPAP-3.00X0.19	1-1/4" to 3" (32mm to 76mm)	3/16"	3/16"	95.95
SPAP-3.00X0.25	1-1/4" to 3" (32mm to 76mm)	1/4"	7/32"	97.14
SPAP-4.75X0.25	2" to 4-3/4" (51mm to 120mm)	1/4"	1/4"	131.55
SPAP-6.25X0.38	4-1/2" to 6-1/4" (115mm to 159mm)	3/8"	1/4"	140.91



(2) ADJUSTABLE HEAD — HOOK STYLE

PART NUMBER	PART OD RANGE	HOOK WD.	HOOK DP.	LIST PRICE
SPAH-2.00	3/4" to 2" (19mm to 50mm)	11/32"	1/8"	\$ 78.45
SPAH-3.00	1-1/4" to 3" (32mm to 76mm)	13/32"	5/32"	88.68
SPAH-4.75	2" to 4-3/4" (51mm to 120mm)	15/32"	3/16"	122.91
SPAH-6.25	4-1/2" to 6-1/4" (115mm to 159mm)	15/32"	1/4"	131.36
SPAH-8.75	6-1/8" to 8-3/4" (155mm to 222mm)	15/32"	5/16"	160.23

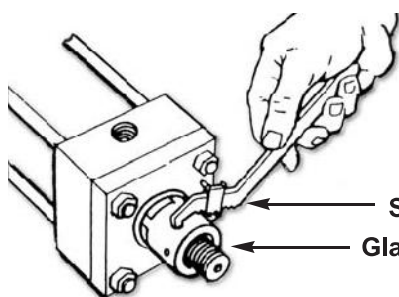


(3) ADJUSTABLE FACE — PIN STYLE

PART NUMBER	DIA. RANGE (CENTER TO CENTER)	PIN DIA.	PIN LGTH.	LIST PRICE
SPAPF-2.00X0.19	5/8" to 2" (16mm to 50mm)	3/16"	1/8"	\$ 76.77
SPAPF-3.00X0.25	5/8" to 3" (16mm to 76mm)	1/4"	3/16"	109.73
SPAPF-4.00X0.31	5/8" to 4" (16mm to 101mm)	5/16"	1/4"	143.50

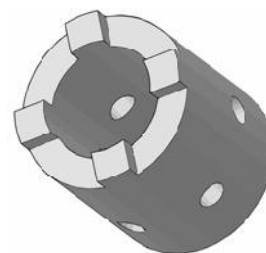


PARKER GLAND WRENCHES



Spanner Wrench (Sold Separately Above)

Gland Wrench



Rod Dia.	Kit #	ID X OD X HT	List Price	Spanner (Sold Separately Above)
1/2", 5/8", 12mm & 14mm	PKH-069590	11/16" X 1-1/8" X 1-3/8"	\$ 86.85	SPAP-2.00X0.19
18mm	PKH-084765	13/16" X 1-1/4" X 1-7/16"	80.56	SPAP-2.00X0.19 or SWP-3.00X0.19
1" & 22mm	PKH-069591	1-1/16" X 1-5/8" X 1-1/2"	88.30	SPAP-2.00X0.19 or SWP-3.00X0.19
28mm	PKH-084766	1-1/4" X 1-11/16" X 9/16"	93.11	SPAP-2.00X0.19 or SWP-3.00X0.19
1-3/8" & 36mm	PKH-069592	1-7/16" X 1-7/8" X 1-5/8"	91.20	SPAP-2.00X0.19 or SWP-3.00X0.19
1-3/4" & 45mm	PKH-069593	1-13/16" X 2-1/4" X 1-5/8"	92.63	SPAP-3.00X0.25 or SWP-4.75X0.25
2"	PKH-069594	2-1/16" X 2-1/2" X 2"	104.22	SPAP-3.00X0.25 or SWP-4.75X0.25
2-1/2" & 56mm	PKH-069595	2-9/16" X 3" X 2-1/8"	99.86	SPAP-3.00X0.25 or SWP-4.75X0.25
70mm	PKH-069596	2-15/16" X 3-1/2" X 2-3/8"	121.67	SPAP-4.75X0.25

MEASURING TOOLS

HIGH QUALITY DIGITAL CALIPER

Part Number	List Price
HH-Caliper-6-FR	\$ 100.00

This high quality instrument measures from 0-75, 0-100, 0-150, 0-200, 0-300. A push of a button changes from inches, mm, and fractions. 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	List Price
HH-Caliper-6	\$ 90.46
HH-Caliper-6-P	90.46
HH-Caliper-12	195.41
HH-Caliper-12-P	195.41

Quality calipers able to measure up to 150mm or 6". A push of a button changes from inches to metric. A clear LCD display shows a reading with a resolution of 0.0005" (0.01mm) that is accurate to $\pm 0.03\text{mm}$. These calipers come in a sturdy, padded plastic case with instructions and a spare battery.



O-RING MEASURING CONE

Part Number:	O-Ring Cone-Inch
List Price:	\$ 169.35

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.



MEASURING TOOLS

PI TAPES

Part Number	Size	List Price
PI-212	2" - 12"	\$ 292.78

This handy tool allows for quick accurate measuring of the outside diameters (OD) of vee packing, large U-Seals, Piston Rings, and metal parts such as cylinder stages, rams and rods. This tape comes with certificate of calibration. Accurate to .001".



O-RING GAUGE

Part Number:	OR- GAUGE
List Price:	\$ 52.03

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



POWER PUNCH MAXI SET

Part Number:	Maxi Punch Set
List Price:	\$ 723.83

PART NUMBER	PUNCH RANGE
Punch Set	1/4, 5/16, 3/8, 7/16, 1/2, 16,5/8, 1/16, 3/4, 3/16, 7/8, 5/16, 1

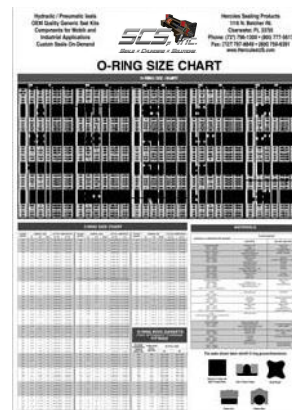
This extremely high quality punch set includes 13 punches, power punch, centering pin, punch pad and carrying case. Durable cutting heads cut washers and bolt holes effortlessly. Guaranteed 100% satisfaction.



O-RING SIZE CHART

Part Number:	O-Ring Size Chart
List Price:	\$ 2.77

This handy chart gives complete dimensions for both static and reciprocating o-ring gland design. Dimensions shown are universal for o-rings, quad rings, square rings and split flange seals, rod and piston r-seals, and piston seals.



MEASURING TOOLS

SEAL REFERENCE CHART

Part Number: Seal Reference Chart
List Price: \$ 35.59

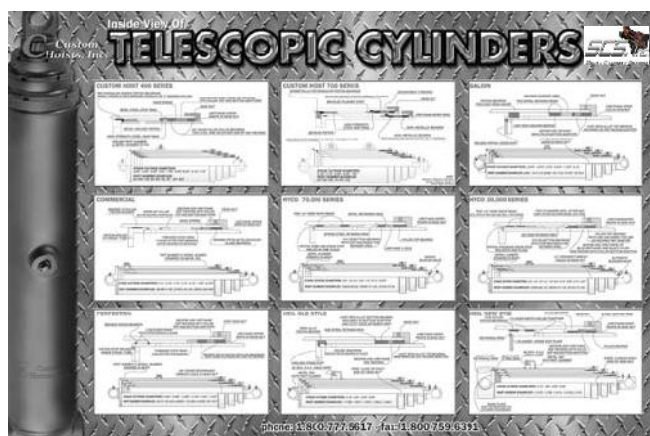
The seal identification chart will assist you when visually identifying seals at the sales counter or back in the shop. Many seal profile pictures with detailed descriptions and technical data are listed on the multi-color laminated flip-chart.



TELESCOPIC CYLINDER POSTER

Part Number: Tele-Cyl Chart
List Price: \$ 3.00

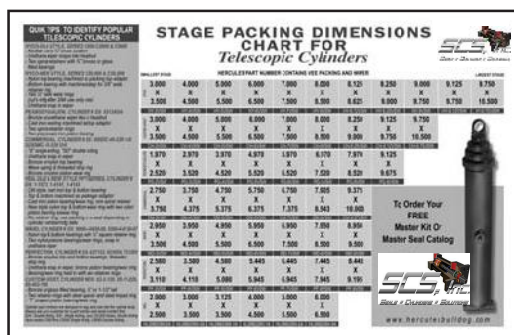
This colorful poster is an invaluable tool for determining seal placement within the most popular telescopic cylinders.



STAGE PACKING CHART

Part Number: Stage-Packing Chart
List Price: \$ 3.00

Your guide for quickly identifying popular telescopic cylinder dimensions. Series include Hyco, Peabody Galion, Commercial, Heil, Ward, Perfection and Custom Hoist.



O-RING CHART

Part Number: O-Ring Chart
List Price: \$ 40.48
Part Number: O-Ring Chart NN
List Price: \$ 40.48

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

NN = Without logo.





NOTES