

CHIEF

Hydraulic Cylinders

MAXIM

Hydraulic Cylinders



Mobile Hydraulics Catalog

Hydraulic Cylinders, Valves, Pumps, Motors, Power Units, Bearings, Mobile Products and More



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Mobile Products



Tie-rod Cylinders

Lowest Price 2500 PSI Tie-Rod Cylinder with Clevis Mounts!

The Maxim Tie-Rod Cylinder is our lowest priced standard tie-rod cylinder design to perform in the Agricultural industry as well as other industries. When price is the most important thing you should not have to give up quality. We have thoroughly tested these cylinders to our standards for quality and performance and they meet or exceed them. **1 year limited warranty.** Painted black. **Designed for double-acting applications only.**

Features:

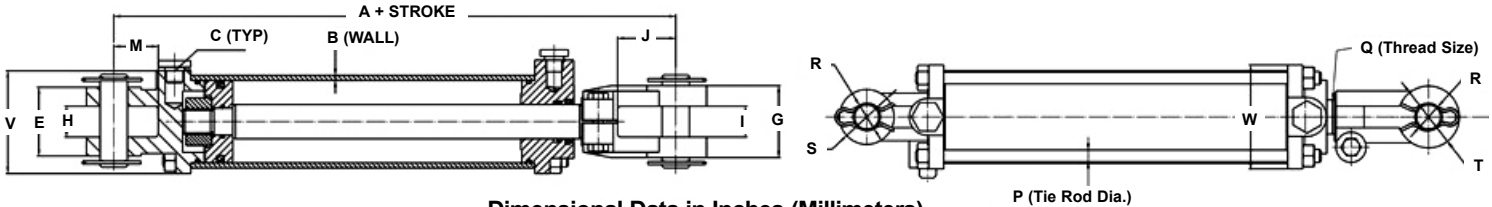
- Double-acting applications
- All Seals: Manufactured to US specification
- 100% hydro-pressure tested
- Rod: Superior quality chrome plated
- Ports: NPT



2500 PSI

Maxim Tie-Rod Cylinders

Intended Use: Double-acting applications • **Piston:** Ductile iron ASTM A536 65-45-12 for excellent life • **Piston Lock Nut :** Grade 8, high tensile zinc-plated • **Gland:** Ductile iron ASTM A536 65-45-12 • **Tube:** High tensile cold drawn tube, precision honed for extended seal life • **Tube seal:** O-ring • **Rod:** High tensile ground & polished hard chrome plated rod • **Rod seal:** Std PolyPak with B lip design (Polyurethane U-cup with nitrite O-ring expander) • **Wiper:** Polyurethane • **End Mounts:** Ductile iron female clevises with pins and clips included • **Clevis Clamp Bolt:** Grade 8.8 • **Clevis Clamp Nut:** Grade 8 • **Pin and Pin clip:** High tensile zinc-plated steel • **Piston ID seal:** O-ring • **Piston OD seal:** Hallite 755 Piston Seal • **Tie Rod:** ASTM 5140, high tensile, rolled threads for durability • **Tie rod nut:** Grade 8 • **Cap:** Ductile iron ASTM A536 65-45-12 • **Ports:** NPT • **Port Plug (shipping):** Plastic • **Port Plug (Sealed):** Pre-coated steel • **Paint:** Black • **Packaging:** Individually poly bagged



Dimensional Data in Inches (Millimeters)

BORE	DIMENSIONS															
	A*	B	C	E	G	H	I	J	M	P	Q	R**	S	T	V	W
2.000 (50.8)	10.250 (260.4)	0.189 (4.80)	3/8" NPT	2.500 (63.5)	2.500 (63.5)	1.125 (28.6)	1.125 (28.6)	2.125 (54.0)	1.50 (38.1)	0.394 (10)	1 1/8-12 UNF	1.000 (25.4)	2.000 (50.8)	2.000 (50.8)	2.795 (71.0)	2.835 (72.0)
2.500 (63.5)	10.250 (260.4)	0.189 (4.80)	3/8" NPT	2.500 (63.5)	2.500 (63.5)	1.125 (28.6)	1.125 (28.6)	2.125 (54.0)	1.50 (38.1)	0.394 (10)	1 1/8-12 UNF	1.000 (25.4)	2.000 (50.8)	2.000 (50.8)	3.110 (79.0)	3.150 (80.0)
3.000 (76.2)	10.250 (260.4)	0.189 (4.80)	1/2" NPT	2.500 (63.5)	2.625 (66.7)	1.125 (28.6)	1.125 (28.6)	2.125 (54.0)	1.50 (38.1)	0.472 (12)	1 1/4-12 UNF	1.000 (25.4)	2.000 (50.8)	2.250 (57.2)	3.740 (95.0)	3.780 (96.0)
3.500 (88.9)	10.250 (260.4)	0.218 (5.53)	1/2" NPT	2.500 (63.5)	2.625 (66.7)	1.125 (28.6)	1.125 (28.6)	2.125 (54.0)	1.50 (38.1)	0.551 (14)	1 1/4-12 UNF	1.000 (25.4)	2.250 (57.2)	2.250 (57.2)	4.213 (107.0)	4.250 (108.0)
4.000 (101.6)	10.250 (260.4)	0.244 (6.20)	1/2" NPT	2.625 (66.7)	2.625 (66.7)	1.125 (28.6)	1.125 (28.6)	2.125 (54.0)	1.50 (38.1)	0.630 (16)	1 1/4-12 UNF	1.000 (25.4)	2.250 (57.2)	2.250 (57.2)	4.882 (124.0)	4.920 (125.0)

A* 12.25" (311.2) for 8" (203.2) stroke ASAE cylinders and 15.50" (393.7) for 16" (406.4) stroke ASAE cylinders. ** (Pin diameter): 1.25 (31.75) for 16" (406.4) stroke ASAE cylinders from 3" to 4" bore.

ORDER NO.	STROKE	ROD DIAMETER	DIMENSIONS		COLUMN LOAD	PORT SIZE	PIN DIAMETER	SHIP WT.
			RETRACTED	EXTENDED				
2" Bore • 2500 PSI								
218-297	4"	1 1/8"	14 1/4"	18 1/4"	7,850 lbs.	3/8" NPTF	1"	16
218-298	6"	1 1/8"	16 1/4"	22 1/4"	7,850 lbs.	3/8" NPTF	1"	17
218-299	8"	1 1/8"	18 1/4"	26 1/4"	7,850 lbs.	3/8" NPTF	1"	18
218-300	8" ASAE	1 1/8"	20 1/4"	28 1/4"	7,850 lbs.	3/8" NPTF	1"	19
218-306	10"	1 1/8"	20 1/4"	30 1/4"	7,850 lbs.	3/8" NPTF	1"	20
218-307	12"	1 1/8"	22 1/4"	34 1/4"	7,850 lbs.	3/8" NPTF	1"	22
218-308	14"	1 1/8"	24 1/4"	38 1/4"	7,850 lbs.	3/8" NPTF	1"	23
218-309	16"	1 1/8"	26 1/4"	42 1/4"	7,850 lbs.	3/8" NPTF	1"	25
218-310	18"	1 1/8"	28 1/4"	46 1/4"	7,850 lbs.	3/8" NPTF	1"	26
218-311	20"	1 1/8"	30 1/4"	50 1/4"	6,950 lbs.	3/8" NPTF	1"	28
218-312	24"	1 1/8"	34 1/4"	58 1/4"	5,180 lbs.	3/8" NPTF	1"	31
218-313	30"	1 1/8"	40 1/4"	70 1/4"	3,570 lbs.	3/8" NPTF	1"	35
218-314	36"	1 1/8"	46 1/4"	82 1/4"	2,610 lbs.	3/8" NPTF	1"	41
218-315	48"	1 1/8"	58 1/4"	106 1/4"	1,570 lbs.	3/8" NPTF	1"	59
204-500		1 1/8"	Packing Kit					

FOR LARGER VOLUME CALL FOR A QUOTE

ORDER NO.	STROKE	ROD DIAMETER	DIMENSIONS		COLUMN LOAD	PORT SIZE	PIN DIAMETER	SHIP WT.
			RETRACTED	EXTENDED				
2 1/2" Bore • 2500 PSI								
218-316	4"	1 1/8"	14 1/4"	18 1/4"	12,270 lbs.	3/8" NPTF	1"	18
218-317	6"	1 1/8"	16 1/4"	22 1/4"	12,270 lbs.	3/8" NPTF	1"	19
218-318	8"	1 1/8"	18 1/4"	26 1/4"	12,270 lbs.	3/8" NPTF	1"	20
218-301	8" ASAE	1 1/8"	20 1/4"	28 1/4"	12,270 lbs.	3/8" NPTF	1"	21
218-319	10"	1 1/8"	20 1/4"	30 1/4"	12,270 lbs.	3/8" NPTF	1"	22
218-320	12"	1 1/8"	22 1/4"	34 1/4"	12,270 lbs.	3/8" NPTF	1"	24
218-321	14"	1 1/8"	24 1/4"	38 1/4"	12,170 lbs.	3/8" NPTF	1"	26
218-322	16"	1 1/8"	26 1/4"	42 1/4"	10,000 lbs.	3/8" NPTF	1"	28
218-323	18"	1 1/8"	28 1/4"	46 1/4"	8,370 lbs.	3/8" NPTF	1"	30
218-324	20"	1 1/8"	30 1/4"	50 1/4"	7,100 lbs.	3/8" NPTF	1"	31
218-325	24"	1 1/8"	34 1/4"	58 1/4"	5,300 lbs.	3/8" NPTF	1"	34
218-329	30"	1 1/4"	40 1/4"	70 1/4"	5,500 lbs.	3/8" NPTF	1"	46
218-330	36"	1 1/4"	46 1/4"	82 1/4"	4,020 lbs.	3/8" NPTF	1"	51
218-331	48"	1 1/4"	58 1/4"	106 1/4"	2,410 lbs.	3/8" NPTF	1"	62
204-501		1 1/8"						Packing Kit
204-502		1 1/4"						Packing Kit

3" Bore • 2500 PSI								
218-333	4"	1 1/4"	14 1/4"	18 1/4"	17,670 lbs.	1/2" NPTF	1"	22
218-334	6"	1 1/4"	16 1/4"	22 1/4"	17,670 lbs.	1/2" NPTF	1"	24
218-335	8"	1 1/4"	18 1/4"	26 1/4"	17,670 lbs.	1/2" NPTF	1"	26
218-302	8" ASAE	1 1/4"	20 1/4"	28 1/4"	17,670 lbs.	1/2" NPTF	1"	27
218-336	10"	1 1/4"	20 1/4"	30 1/4"	17,670 lbs.	1/2" NPTF	1"	28
218-337	12"	1 1/4"	22 1/4"	34 1/4"	17,670 lbs.	1/2" NPTF	1"	31
218-338	14"	1 1/4"	24 1/4"	38 1/4"	17,670 lbs.	1/2" NPTF	1"	33
218-339	16"	1 1/4"	26 1/4"	42 1/4"	17,670 lbs.	1/2" NPTF	1"	35
218-340	16" ASAE	1 1/4"	31 1/2"	47 1/2"	17,670 lbs.	1/2" NPTF	1 1/4"	37
218-395	18"	1 1/4"	28 1/4"	46 1/4"	12,690 lbs.	SAE 8	1"	35
218-341	18"	1 1/4"	28 1/4"	46 1/4"	12,690 lbs.	1/2" NPTF	1"	37
218-342	20"	1 1/4"	30 1/4"	50 1/4"	10,780 lbs.	1/2" NPTF	1"	39
218-343	24"	1 1/4"	34 1/4"	58 1/4"	8,050 lbs.	1/2" NPTF	1"	44
218-344	30"	1 1/2"	40 1/4"	70 1/4"	11,240 lbs.	1/2" NPTF	1"	61
218-345	36"	1 1/2"	46 1/4"	82 1/4"	8,220 lbs.	1/2" NPTF	1"	67
218-346	48"	1 1/2"	58 1/4"	106 1/4"	4,950 lbs.	1/2" NPTF	1"	81
204-503		1 1/4"						Packing Kit
204-504		1 1/2"						Packing Kit

3 1/2" Bore • 2500 PSI								
218-347	4"	1 1/4"	14 1/4"	18 1/4"	24,050 lbs.	1/2" NPTF	1"	29
218-348	6"	1 1/4"	16 1/4"	22 1/4"	24,050 lbs.	1/2" NPTF	1"	31
218-349	8"	1 1/4"	18 1/4"	26 1/4"	24,050 lbs.	1/2" NPTF	1"	32
218-303	8" ASAE	1 1/4"	20 1/4"	28 1/4"	24,050 lbs.	1/2" NPTF	1"	33
218-350	10"	1 1/4"	20 1/4"	30 1/4"	24,050 lbs.	1/2" NPTF	1"	35
218-351	12"	1 1/4"	22 1/4"	34 1/4"	24,050 lbs.	1/2" NPTF	1"	37
218-352	14"	1 1/4"	24 1/4"	38 1/4"	18,730 lbs.	1/2" NPTF	1"	39
218-353	16"	1 1/4"	26 1/4"	42 1/4"	15,390 lbs.	1/2" NPTF	1"	41
218-354	16" ASAE	1 1/2"	31 1/2"	47 1/2"	22,050 lbs.	1/2" NPTF	1 1/4"	52
218-355	18"	1 1/4"	28 1/4"	46 1/4"	12,870 lbs.	1/2" NPTF	1"	44
218-356	20"	1 1/4"	30 1/4"	50 1/4"	10,920 lbs.	1/2" NPTF	1"	47
218-326	24"	1 1/2"	34 1/4"	58 1/4"	16,650 lbs.	1/2" NPTF	1"	62
218-327	30"	1 1/2"	40 1/4"	70 1/4"	11,480 lbs.	1/2" NPTF	1"	70
218-328	36"	1 1/2"	46 1/4"	82 1/4"	8,390 lbs.	1/2" NPTF	1"	76
218-357	48"	1 1/2"	58 1/4"	106 1/4"	5,040 lbs.	1/2" NPTF	1"	93
204-505		1 1/4"						Packing Kit
204-506		1 1/2"						Packing Kit

4" Bore • 2500 PSI								
218-360	8"	1 1/2"	18 1/4"	26 1/4"	31,410 lbs.	1/2" NPTF	1"	39
218-393	8" ASAE	1 1/2"	20 1/4"	28 1/4"	31,410 lbs.	SAE 8	1"	39
218-304	8" ASAE	1 1/2"	20 1/4"	28 1/4"	31,410 lbs.	1/2" NPTF	1"	40
218-361	10"	1 1/2"	20 1/4"	30 1/4"	31,410 lbs.	1/2" NPTF	1"	42
218-362	12"	1 1/2"	22 1/4"	34 1/4"	31,410 lbs.	1/2" NPTF	1"	44
218-363	14"	1 1/2"	24 1/4"	38 1/4"	31,410 lbs.	1/2" NPTF	1"	47
218-364	16"	1 1/2"	26 1/4"	42 1/4"	31,410 lbs.	1/2" NPTF	1"	50
218-365	16" ASAE	2"	31 1/2"	47 1/2"	31,410 lbs.	1/2" NPTF	1 1/4"	67
218-366	18"	1 1/2"	28 1/4"	46 1/4"	31,410 lbs.	1/2" NPTF	1"	60
218-367	20"	1 1/2"	30 1/4"	50 1/4"	22,600 lbs.	1/2" NPTF	1"	62
218-305	24"	1 1/2"	34 1/4"	58 1/4"	16,870 lbs.	1/2" NPTF	1"	68
218-332	24"	2"	34 1/4"	58 1/4"	31,410 lbs.	1/2" NPTF	1"	80
218-368	30"	2"	40 1/4"	70 1/4"	31,410 lbs.	1/2" NPTF	1"	91
218-369	36"	2"	46 1/4"	82 1/4"	25,890 lbs.	1/2" NPTF	1"	103
218-390	40"	2"	50 1/4"	90 1/4"	21,530 lbs.	1/2" NPTF	1"	111
218-370	48"	2"	58 1/4"	106 1/4"	15,560 lbs.	1/2" NPTF	1"	127
204-507		1 1/2"						Packing Kit
204-508		2"						Packing Kit



SPECIAL PRICING AVAILABLE ON LARGER VOLUME PURCHASES. CALL FOR A FREE QUOTE.

Similar Items



Our **CHIEF TC** tie-rod cylinders on pages 4-5 feature a 2500 PSI rating.

Related Items

Hose Products	p.84-89
Stroke Controls	p.36
Directional Control Valves	p.68-73
Filters and Strainers	p.61-62
Pressure Gauges	p.60,62

Also Available

SAE Porting

Technical Information

Column Load is the maximum recommended push load (lb) to maintain at minimum a 2:1 column safety factor. The column load is a calculated value based on pin-pin mounting.

Common 3/8" NPT Adapters

- 470-007 06MP-08FPS STRAIGHT SWIVEL
- 470-003 06MP-06FPS STRAIGHT SWIVEL

Common 1/2" NPT Adapters

- 470-005 08MP-06FPS STRAIGHT SWIVEL
- 470-009 08MP-08FPS STRAIGHT SWIVEL
- 471-059 08MP-06FP REDUCER BUSHING

Fittings on page 86-87

Best 2500 PSI Performer!

High Quality, 3 Year Warranty and Priced Right!

The Chief TC is our high quality standard tie-rod cylinder design to perform in the Agricultural industry as well as other industries like OEM manufacture of trailers, compact construction equipment, and waste/recycling. The base end clevis has been extended to 2" for greater swing ability on applications.



Each and every Chief TC cylinder is functionally tested and pressurized to 1.5 times the normal working pressure to insure performance reliability. The Chief TC is available in bore sizes from 2" to 4" and strokes from 4" to 72". It has a 2,500 PSI operating range and 3 year limited warranty. Painted red, available in custom colors.

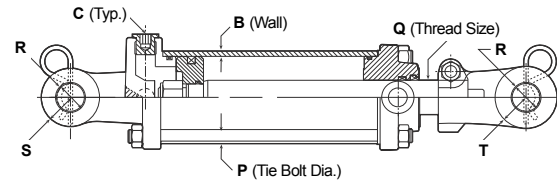
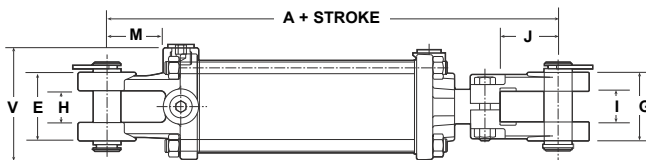
- Hard Chrome Plated Rod
- Hallite 755 Piston Seal with wear ring
- Ductile Iron Piston & Gland
- NPT Ports
- Clevis Mounting



2500 PSI

Chief TC Tie-Rod Cylinders

Intended Use: Double-acting applications • **Piston:** Ductile iron • **Gland:** Ductile iron, drilled oil passages • **Tube:** Precision honed steel • **Rod:** Hard chrome plated • **End Mounts:** Ductile iron female clevises with pins and clips included • **Tube Seals:** Buna O-ring • **Rod Seal:** Deep polypak with B lip design • **Rod Wiper:** Urethane, snap-in • **Piston Seal:** Hallite 755 for prolonged wear resistance with wear ring • **All Seals:** Manufactured to US specifications • **Ports:** NPT • **Paint:** Red, unless otherwise indicated. Custom colors are available • **Packaging:** Individually poly bagged



Dimensional Data in Inches (Millimeters)

BORE	DIMENSIONS															
	A*	B	C	E	G	H	I	J	M	P	Q	R**	S	T	V	
2.000 (50.8)	10.250 (260.4)	0.188 (4.78)	3/8" NPT	2.500 (63.5)	2.500 (63.5)	1.125 (28.6)	1.125 (28.6)	2.125 (54.0)	2.000 (50.8)	0.350 (8.9)	1 1/8-12 UNF	1.015 (25.8)	1.000 (25.4)	1.000 (25.4)	2.960 (75.2)	
2.500 (63.5)	10.250 (260.4)	0.188 (4.78)	3/8" NPT	2.500 (63.5)	2.500 (63.5)	1.125 (28.6)	1.125 (28.6)	2.125 (54.0)	2.000 (50.8)	0.350 (8.9)	1 1/8-12 UNF	1.015 (25.8)	1.000 (25.4)	1.000 (25.4)	3.811 (96.8)	
3.000 (76.2)	10.250 (260.4)	0.188 (4.78)	1/2" NPT	2.500 (63.5)	2.717 (69.0)	1.125 (28.6)	1.125 (28.6)	2.125 (54.0)	2.000 (50.8)	0.425 (10.8)	1 1/4-12 UNF	1.015 (25.8)	1.000 (25.4)	1.125 (28.6)	4.134 (105.0)	
3.500 (88.9)	10.250 (260.4)	0.188 (4.78)	1/2" NPT	2.500 (63.5)	2.717 (69.0)	1.125 (28.6)	1.125 (28.6)	2.125 (54.0)	2.000 (50.8)	0.425 (10.8)	1 1/4-12 UNF	1.015 (25.8)	1.125 (28.6)	1.125 (28.6)	4.550 (115.6)	
4.000 (101.6)	10.250 (260.4)	0.219 (5.60)	1/2" NPT	2.756 (70.0)	2.717 (69.0)	1.125 (28.6)	1.125 (28.6)	2.125 (54.0)	2.000 (50.8)	0.500 (12.7)	1 1/4-12 UNF	1.015 (25.8)	1.125 (28.6)	1.125 (28.6)	5.086 (129.2)	

* Retracted length is 12.250 (311.2) for 8.000 (203.2) stroke ASAE cylinders and 15.500 (393.7) for 16.000 (406.4) stroke ASAE cylinders.

** Pin hole diameter is 1.265 (32.1) for 16.000 (406.4) stroke ASAE cylinders.

ORDER NO.	STROKE	ROD DIAMETER	DIMENSIONS		COLUMN LOAD	PORT SIZE	PIN DIA.	SHIP WT.
			RETRACTED	EXTENDED				
2" Bore • 2500 PSI								
211-099	4"	1 1/8"	14 1/4"	18 1/4"	7,850 lbs.	3/8" NPTF	1"	16
211-101	6"	1 1/8"	16 1/4"	22 1/4"	7,850 lbs.	3/8" NPTF	1"	17
211-102	8"	1 1/8"	18 1/4"	26 1/4"	7,850 lbs.	3/8" NPTF	1"	18
211-103	8" ASAE	1 1/8"	20 1/4"	28 1/4"	7,850 lbs.	3/8" NPTF	1"	18
211-104	10"	1 1/8"	20 1/4"	30 1/4"	7,850 lbs.	3/8" NPTF	1"	20
211-105	12"	1 1/8"	22 1/4"	34 1/4"	7,850 lbs.	3/8" NPTF	1"	21
211-106	14"	1 1/8"	24 1/4"	38 1/4"	7,850 lbs.	3/8" NPTF	1"	23
211-107	16"	1 1/8"	26 1/4"	42 1/4"	7,850 lbs.	3/8" NPTF	1"	26
211-108	18"	1 1/8"	28 1/4"	46 1/4"	7,850 lbs.	3/8" NPTF	1"	27
211-109	20"	1 1/8"	30 1/4"	50 1/4"	6,950 lbs.	3/8" NPTF	1"	28
215-193	22"	1 1/8"	32 1/4"	54 1/4"	5,970 lbs.	3/8" NPTF	1"	29
211-110	24"	1 1/8"	34 1/4"	58 1/4"	5,180 lbs.	3/8" NPTF	1"	30
211-194	26"	1 1/8"	36 1/4"	62 1/4"	4,540 lbs.	3/8" NPTF	1"	30
211-162	30"	1 1/8"	40 1/4"	70 1/4"	3,570 lbs.	3/8" NPTF	1"	34
211-163	36"	1 1/8"	46 1/4"	82 1/4"	2,610 lbs.	3/8" NPTF	1"	42
203-001		1 1/8"						TC Packing Kit

FOR LARGER VOLUME CALL FOR A QUOTE

ORDER NO.	STROKE	ROD DIA.	DIMENSIONS		COLUMN LOAD	PORT SIZE	PIN DIA.	SHIP WT.
			RETRACTED	EXTENDED				
2 1/2" Bore • 2500 PSI								
211-179	4"	1 1/8"	14 1/4"	18 1/4"	12,270 lbs.	3/8" NPTF	1"	19
211-158	6"	1 1/8"	16 1/4"	22 1/4"	12,270 lbs.	3/8" NPTF	1"	21
211-111	8"	1 1/8"	18 1/4"	26 1/4"	12,270 lbs.	3/8" NPTF	1"	21
211-112	8" ASAE	1 1/8"	20 1/4"	28 1/4"	12,270 lbs.	3/8" NPTF	1"	22
211-113	10"	1 1/8"	20 1/4"	30 1/4"	12,270 lbs.	3/8" NPTF	1"	22
211-114	12"	1 1/8"	22 1/4"	34 1/4"	12,270 lbs.	3/8" NPTF	1"	25
211-115	14"	1 1/8"	24 1/4"	38 1/4"	12,270 lbs.	3/8" NPTF	1"	27
211-116	16"	1 1/8"	26 1/4"	42 1/4"	10,000 lbs.	3/8" NPTF	1"	28
211-117	18"	1 1/8"	28 1/4"	46 1/4"	8,370 lbs.	3/8" NPTF	1"	30
211-118	20"	1 1/8"	30 1/4"	50 1/4"	7,100 lbs.	3/8" NPTF	1"	32
211-119	24"	1 1/8"	34 1/4"	58 1/4"	5,300 lbs.	3/8" NPTF	1"	36
211-164	30"	1 1/4"	40 1/4"	70 1/4"	5,500 lbs.	3/8" NPTF	1"	43
211-165 or 218-172*	36"	1 1/4"	46 1/4"	82 1/4"	4,020 lbs.	3/8" NPTF	1"	49
211-180	48"	1 1/4"	58 1/4"	106 1/4"	2,410 lbs.	3/8" NPTF	1"	61
211-181	60"	1 1/4"	70 1/4"	130 1/4"	1,610 lbs.	3/8" NPTF	1"	73
211-182 or 218-173*	72"	1 1/4"	82 1/4"	154 1/4"	1,140 lbs.	3/8" NPTF	1"	85
203-002		1 1/8"						TC Packing Kit
203-011		1 1/4"						TC Packing Kit
3" Bore • 2500 PSI								
211-160	4"	1 1/4"	14 1/4"	18 1/4"	17,670 lbs.	1/2" NPTF	1"	24
211-159	6"	1 1/4"	16 1/4"	22 1/4"	17,670 lbs.	1/2" NPTF	1"	26
211-120	8"	1 1/4"	18 1/4"	26 1/4"	17,670 lbs.	1/2" NPTF	1"	28
211-121 or 218-175*	8" ASAE	1 1/4"	20 1/4"	28 1/4"	17,670 lbs.	1/2" NPTF	1"	27
211-122 or 218-176*	10"	1 1/4"	20 1/4"	30 1/4"	17,670 lbs.	1/2" NPTF	1"	31
211-123 or 218-177*	12"	1 1/4"	22 1/4"	34 1/4"	17,670 lbs.	1/2" NPTF	1"	32
211-124	14"	1 1/4"	24 1/4"	38 1/4"	17,670 lbs.	1/2" NPTF	1"	33
211-125 or 218-178*	16"	1 1/4"	26 1/4"	42 1/4"	15,160 lbs.	1/2" NPTF	1"	37
211 or 215-126	16" ASAE	1 1/4"	31 1/2"	47 1/2"	10,640 lbs.	1/2" NPTF	1 1/4"	40
211-127	18"	1 1/4"	28 1/4"	46 1/4"	12,960 lbs.	1/2" NPTF	1"	40
211-128	20"	1 1/4"	30 1/4"	50 1/4"	10,780 lbs.	1/2" NPTF	1"	41
211-129 or 218-179*	24"	1 1/4"	34 1/4"	58 1/4"	8,050 lbs.	1/2" NPTF	1"	47
211-166	30"	1 1/2"	40 1/4"	70 1/4"	11,240 lbs.	1/2" NPTF	1"	59
215-204	32"	1 1/2"	42 1/4"	74 1/4"	10,070 lbs.	1/2" NPTF	1"	58
211-167	36"	1 1/2"	46 1/4"	82 1/4"	8,220 lbs.	1/2" NPTF	1"	59
211-184	48"	1 1/2"	58 1/4"	106 1/4"	4,950 lbs.	1/2" NPTF	1"	77
203-003		1 1/4"						TC Packing Kit
203-029		1 1/2"						TC Packing Kit
3 1/2" Bore • 2500 PSI								
215-192	6"	1 1/4"	16 1/4"	22 1/4"	24,050 lbs.	1/2" NPTF	1"	28
215-130	8"	1 1/4"	18 1/4"	26 1/4"	24,050 lbs.	1/2" NPTF	1"	32
215-131 or 218-180*	8" ASAE	1 1/4"	20 1/4"	28 1/4"	24,050 lbs.	1/2" NPTF	1"	33
215-132	10"	1 1/4"	20 1/4"	30 1/4"	24,050 lbs.	1/2" NPTF	1"	35
215-133	12"	1 1/4"	22 1/4"	34 1/4"	23,280 lbs.	1/2" NPTF	1"	37
215-134 or 218-181*	14"	1 1/4"	24 1/4"	38 1/4"	18,730 lbs.	1/2" NPTF	1"	41
215-135 or 218-182*	16"	1 1/4"	26 1/4"	42 1/4"	15,390 lbs.	1/2" NPTF	1"	43
215-136	16" ASAE	1 1/2"	31 1/2"	47 1/2"	22,050 lbs.	1/2" NPTF	1 1/4"	45
215-137	18"	1 1/4"	28 1/4"	46 1/4"	12,870 lbs.	1/2" NPTF	1"	44
215-138	20"	1 1/4"	30 1/4"	50 1/4"	10,920 lbs.	1/2" NPTF	1"	46
215-176	22"	1 1/2"	32 1/4"	54 1/4"	19,170 lbs.	1/2" NPTF	1"	51
215-139	24"	1 1/2"	34 1/4"	58 1/4"	16,650 lbs.	1/2" NPTF	1"	56
215-168	30"	1 1/2"	40 1/4"	70 1/4"	11,480 lbs.	1/2" NPTF	1"	69
215-208	32"	1 1/2"	42 1/4"	72 1/4"	10,290 lbs.	1/2" NPTF	1"	62
215-169	36"	1 1/2"	46 1/4"	82 1/4"	8,390 lbs.	1/2" NPTF	1"	73
203-004		1 1/4"						TC Packing Kit
203-005		1 1/2"						TC Packing Kit
4" Bore • 2500 PSI								
215-210	4"	1 1/2"	14 1/4"	18 1/4"	31,410 lbs.	1/2" NPTF	1"	34
215-140	8"	1 1/2"	18 1/4"	26 1/4"	31,410 lbs.	1/2" NPTF	1"	39
215-141	8" ASAE	1 1/2"	20 1/4"	28 1/4"	31,410 lbs.	1/2" NPTF	1"	40
215-142	10"	1 1/2"	20 1/4"	30 1/4"	31,410 lbs.	1/2" NPTF	1"	41
215-143	12"	1 1/2"	22 1/4"	34 1/4"	31,410 lbs.	1/2" NPTF	1"	43
215-212	14"	1 1/2"	24 1/4"	38 1/4"	31,410 lbs.	1/2" NPTF	1"	46
215-144	16"	1 1/2"	26 1/4"	42 1/4"	31,410 lbs.	1/2" NPTF	1"	50
215-145	16" ASAE	2"	31 1/2"	47 1/4"	31,410 lbs.	1/2" NPTF	1 1/4"	63
217-810	18"	2"	28 1/4"	46 1/4"	26,630 lbs.	SAE 8	1"	59
215-147	20"	1 1/2"	30 1/4"	50 1/4"	26,630 lbs.	1/2" NPTF	1"	56
215-148	24"	1 1/2"	34 1/4"	58 1/4"	16,870 lbs.	1/2" NPTF	1"	63
215-161	24"	2"	34 1/4"	58 1/4"	31,410 lbs.	1/2" NPTF	1"	75
215-170	30"	2"	40 1/4"	70 1/4"	31,410 lbs.	1/2" NPTF	1"	87
215-171	36"	2"	46 1/4"	82 1/4"	25,890 lbs.	1/2" NPTF	1"	99
215-218	40"	2"	50 1/4"	90 1/4"	21,530 lbs.	1/2" NPTF	1"	105
215-221	46"	2"	56 1/4"	102 1/4"	16,790 lbs.	1/2" NPTF	1"	116
215-178	48"	2"	58 1/4"	106 1/4"	15,560 lbs.	1/2" NPTF	1"	120
203-007		1 1/2"						TC Packing Kit
203-008		2"						TC Packing Kit

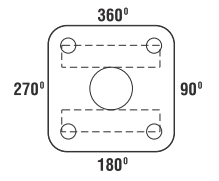
* Nitro Rod

SPECIAL PRICING AVAILABLE ON LARGER VOLUME PURCHASES. CALL FOR A FREE QUOTE.



ASAE Cylinder **Standard Cylinder**

Port Location Guide (Rod End View)



- Standard Port Position:
Main @ 360°
Auxiliary @ 270°
- SAE ORB Porting Available



Thread Sealant
For Hydraulic/Pneumatic Fittings. See Page 115

- Common 3/8" NPT Adapters**
470-007 06MP-08FPS STRAIGHT SWIVEL
470-003 06MP-06FPS STRAIGHT SWIVEL
- Common 1/2" NPT Adapters**
470-005 08MP-06FPS STRAIGHT SWIVEL
470-009 08MP-08FPS STRAIGHT SWIVEL
471-059 08MP-06FP REDUCER BUSHING
- Fittings on page 86-87



Lowest Price 3000 PSI Tie-Rod Cylinder with Clevis Mounts!

The Maxim Tie-Rod Cylinder is our lowest priced 3,000 PSI tie-rod cylinder design to perform in the Agricultural industry as well as other industries. When price is the most important thing you should not have to give up quality. We have thoroughly tested these cylinders to our standards for quality and performance and they meet or exceed them. **1 year limited warranty.** Painted black.

Features:

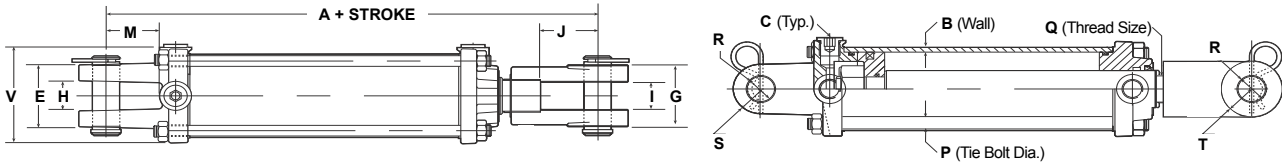
- Hard Chrome Plated Rod
- Ductile Iron Piston & Gland
- NPT or SAE O-ring Ports
- High Strength Clevis Mounting
- 3000 PSI Working Pressure



3000 PSI

Maxim Tie-Rod Cylinders

Intended Use: Double-acting applications • **Piston:** Ductile iron • **Gland:** Ductile iron, drilled oil passages • **Tube:** Precision honed steel • **Rod:** Hard chrome plated • **End Mounts:** High strength, ductile iron female clevises with swaged pins and R-clips included • **Tube Seal:** Nitrile rubber O-ring with back-up ring • **Rod Seal:** Polyurethane seal with back-up ring • **Rod Wiper:** D style prevents contamination • **All Seals:** Manufactured to US specifications • **Ports:** NPT or SAE O-ring • **Paint:** Black, unless otherwise indicated. Custom colors are available • **Packaging:** Individually poly bagged.



Dimensional Data in Inches (Millimeters)

BORE	DIMENSIONS														
	A*	B	C	E	G	H	I	J	M	P	Q	R**	S	T	V
2.000 (50.8)	10.250 (260.4)	0.188 (4.78)	SAE 8 or 3/8 NPT 3/4-16	2.441 (62.0)	2.756 (70.0)	1.142 (29.0)	1.181 (30.0)	2.126 (54.0)	2.000 (50.8)	0.331 (8.4)	1 1/8-12 UNF	1.015 (25.8)	0.886 (22.5)	1.142 (29.0)	2.874 (73.0)
2.500 (63.5)	10.250 (260.4)	0.188 (4.78)	SAE 8 or 3/8 NPT 3/4-16	2.441 (62.0)	2.756 (70.0)	1.142 (29.0)	1.181 (30.0)	2.126 (54.0)	2.000 (50.8)	0.331 (8.4)	1 1/8-12 UNF	1.015 (25.8)	0.984 (25.0)	1.142 (29.0)	3.228 (82.0)
3.000 (76.2)	10.250 (260.4)	0.188 (4.78)	SAE 8 or 1/2 NPT 3/4-16	2.756 (70.0)	2.913 (74.0)	1.181 (30.0)	1.220 (31.0)	2.126 (54.0)	2.000 (50.8)	0.445 (11.3)	1 1/4-12 UNF	1.015 (25.8)	1.016 (25.8)	1.142 (29.0)	3.740 (95.0)
3.500 (88.9)	10.250 (260.4)	0.188 (4.78)	SAE 8 or 1/2 NPT 3/4-16	2.756 (70.0)	2.913 (74.0)	1.181 (30.0)	1.220 (31.0)	2.126 (54.0)	2.000 (50.8)	0.524 (13.3)	1 1/4-12 UNF	1.015 (25.8)	1.134 (28.8)	1.142 (29.0)	4.173 (106.0)
4.000 (101.6)	10.250 (260.4)	0.250 (6.35)	SAE 8 or 1/2 NPT 3/4-16	2.874 (73.0)	2.913 (74.0)	1.240 (31.5)	1.220 (31.0)	2.126 (54.0)	2.000 (50.8)	0.583 (14.8)	1 1/4-12 UNF	1.015 (25.8)	1.280 (32.5)	1.142 (29.0)	5.000 (127.0)

* Retracted length is 12.250 (311.2) for 8,000 (203.2) stroke ASAE cylinders and 15.500 (393.7) for 16,000 (406.4) stroke ASAE cylinders.

Now with SAE or NPT Ports!

SAE 8 PORTS ORDER NO.	3/8 NPT PORTS ORDER NO.	STROKE	ROD DIA.	DIMENSIONS		COLUMN LOAD	PIN DIA.	SHIP WT.
				RETRACTED	EXTENDED			
2" Bore • 3000 PSI								
218-857	218-513	4"	1 1/8"	14 1/4"	18 1/4"	9,420 lbs.	1"	14
218-858	218-514	6"	1 1/8"	16 1/4"	22 1/4"	9,420 lbs.	1"	15
218-825	218-515	8"	1 1/8"	18 1/4"	26 1/4"	9,420 lbs.	1"	17
218-827	218-516	10"	1 1/8"	20 1/4"	30 1/4"	9,420 lbs.	1"	19
218-828	218-517	12"	1 1/8"	22 1/4"	34 1/4"	9,420 lbs.	1"	22
218-829	218-518	14"	1 1/8"	24 1/4"	38 1/4"	9,420 lbs.	1"	22
218-859	218-500	16"	1 1/8"	26 1/4"	42 1/4"	9,420 lbs.	1"	22
218-860	218-519	18"	1 1/8"	28 1/4"	46 1/4"	8,310 lbs.	1"	25
218-861	218-501	20"	1 1/8"	30 1/4"	50 1/4"	7,050 lbs.	1"	24
218-830	218-502	24"	1 1/8"	34 1/4"	58 1/4"	5,250 lbs.	1"	30
218-862	218-521	30"	1 1/8"	40 1/4"	70 1/4"	3,610 lbs.	1"	35
218-863	218-503	36"	1 1/8"	46 1/4"	82 1/4"	2,630 lbs.	1"	35
218-816			1 1/8"	Packing Kit				

**FOR LARGER VOLUME
CALL FOR A FREE QUOTE.**

Now with SAE or NPT Ports!

Tie-rod
Cylinders



SAE 8 PORTS ORDER NO.	3/8 NPT PORTS ORDER NO.	STROKE	ROD DIA.	DIMENSIONS		COLUMN LOAD	PIN DIA.	SHIP WT.
				RETRACTED	EXTENDED			
2 1/2" Bore • 3000 PSI								
218-864	218-522	4"	1 1/8"	14 1/4"	18 1/4"	14,720 lbs.	1"	17
218-865	218-505	6"	1 1/8"	16 1/4"	22 1/4"	14,720 lbs.	1"	19
218-831	218-523	8"	1 1/8"	18 1/4"	26 1/4"	14,720 lbs.	1"	20
218-832	218-524	8" ASAE	1 1/8"	20 1/4"	28 1/4"	14,720 lbs.	1"	22
218-866	218-525	10"	1 1/8"	20 1/4"	30 1/4"	14,720 lbs.	1"	22
218-833	218-526	12"	1 1/8"	22 1/4"	34 1/4"	14,720 lbs.	1"	24
218-867	218-527	14"	1 1/4"	24 1/4"	38 1/4"	14,720 lbs.	1"	27
218-834	218-528	16"	1 1/4"	26 1/4"	42 1/4"	14,720 lbs.	1"	29
218-835	218-529	18"	1 1/4"	28 1/4"	46 1/4"	12,790 lbs.	1"	30
218-836	218-530	20"	1 1/4"	30 1/4"	50 1/4"	10,840 lbs.	1"	32
218-837	218-531	24"	1 1/4"	34 1/4"	58 1/4"	8,070 lbs.	1"	37
218-868	218-532	30"	1 1/4"	40 1/4"	70 1/4"	5,550 lbs.	1"	41
218-869	218-533	36"	1 1/4"	46 1/4"	82 1/4"	4,050 lbs.	1"	48
218-870	218-534	48"	1 1/4"	58 1/4"	106 1/4"	2,430 lbs.	1"	59
218-817		1 1/8"						Packing Kit
218-818		1 1/4"						Packing Kit


SAE 8 PORTS ORDER NO.	1/2 NPT PORTS ORDER NO.	STROKE	ROD DIA.	DIMENSIONS		COLUMN LOAD	PIN DIA.	SHIP WT.
				RETRACTED	EXTENDED			
3" Bore • 3000 PSI								
218-871	218-535	4"	1 1/4"	14 1/4"	18 1/4"	21,200 lbs.	1"	21
218-838	218-536	6"	1 1/4"	16 1/4"	22 1/4"	21,200 lbs.	1"	23
218-839	218-537	8"	1 1/4"	18 1/4"	26 1/4"	21,200 lbs.	1"	27
218-840	218-538	8" ASAE	1 1/4"	20 1/4"	28 1/4"	21,200 lbs.	1"	28
218-841	218-539	10"	1 1/4"	20 1/4"	30 1/4"	21,200 lbs.	1"	32
218-842	218-540	12"	1 1/4"	22 1/4"	34 1/4"	21,200 lbs.	1"	34
218-843	218-506	14"	1 1/2"	24 1/4"	38 1/4"	21,200 lbs.	1"	35
218-844	218-541	16"	1 1/2"	26 1/4"	42 1/4"	21,200 lbs.	1"	37
218-872	218-542	18"	1 1/2"	28 1/4"	46 1/4"	21,200 lbs.	1"	40
218-873	218-507	20"	1 1/2"	30 1/4"	50 1/4"	21,200 lbs.	1"	30
218-845	218-543	24"	1 1/2"	34 1/4"	58 1/4"	16,580 lbs.	1"	52
218-874	218-544	30"	1 1/2"	40 1/4"	70 1/4"	11,410 lbs.	1"	54
218-875	218-508	36"	1 1/2"	46 1/4"	82 1/4"	8,330 lbs.	1"	61
218-876	218-545	48"	1 1/2"	58 1/4"	106 1/4"	4,990 lbs.	1"	75
218-819			1 1/4"					Packing Kit
218-820			1 1/2"					Packing Kit

3 1/2" Bore • 3000 PSI								
218-877	218-546	8"	1 1/2"	18 1/4"	26 1/4"	28,860 lbs.	1"	32
218-846	218-547	8" ASAE	1 1/2"	20 1/4"	28 1/4"	28,860 lbs.	1"	36
218-878	218-548	10"	1 1/2"	20 1/4"	30 1/4"	28,860 lbs.	1"	35
218-879	218-549	12"	1 1/2"	22 1/4"	34 1/4"	28,860 lbs.	1"	37
218-880	218-550	14"	1 1/2"	24 1/4"	38 1/4"	28,860 lbs.	1"	40
218-847	218-551	16"	1 1/2"	26 1/4"	42 1/4"	28,860 lbs.	1"	50
218-881	218-509	18"	1 1/2"	28 1/4"	46 1/4"	26,730 lbs.	1"	45
218-882	218-552	20"	1 1/2"	30 1/4"	50 1/4"	22,660 lbs.	1"	46
218-848	218-553	24"	1 1/2"	34 1/4"	58 1/4"	16,880 lbs.	1"	53
218-849	218-554	30"	1 1/2"	40 1/4"	70 1/4"	11,610 lbs.	1"	61
218-883	218-555	36"	1 1/2"	46 1/4"	82 1/4"	8,480 lbs.	1"	70
218-821			1 1/2"					Packing Kit

4" Bore • 3000 PSI								
218-850	218-556	6"	1 1/2"	16 1/4"	22 1/4"	37,690 lbs.	1"	38
218-884	218-557	8"	1 1/2"	18 1/4"	26 1/4"	37,690 lbs.	1"	42
218-851	218-512	8" ASAE	1 1/2"	20 1/4"	28 1/4"	37,690 lbs.	1"	42
218-852	218-558	10"	1 1/2"	20 1/4"	30 1/4"	37,690 lbs.	1"	45
218-885	218-559	12"	1 1/2"	22 1/4"	34 1/4"	37,690 lbs.	1"	45
218-853	218-560	16"	1 3/4"	26 1/4"	42 1/4"	37,690 lbs.	1"	62
218-886	218-510	18"	1 3/4"	28 1/4"	46 1/4"	37,690 lbs.	1"	49
218-887	218-561	20"	1 3/4"	30 1/4"	50 1/4"	37,690 lbs.	1"	53
218-854	218-511	24"	2"	34 1/4"	58 1/4"	37,690 lbs.	1"	79
218-855	218-562	30"	2"	40 1/4"	70 1/4"	36,070 lbs.	1"	92
218-888	218-563	36"	2"	46 1/4"	82 1/4"	26,340 lbs.	1"	98
218-856	218-564	48"	2"	58 1/4"	106 1/4"	15,790 lbs.	1"	130
218-822			1 1/2"					Packing Kit
218-823			1 3/4"					Packing Kit
218-824			2"					Packing Kit

SPECIAL PRICING AVAILABLE ON LARGER VOLUME PURCHASES. CALL FOR A FREE QUOTE.

Similar Items



Our **CHIEF TC3** tie-rod cylinders on pages 8-10 feature a 3000 PSI rating.

Related Items

Hose Products	p.84-89
Stroke Controls	p.36
Directional Control Valves	p.68-73
Filters and Strainers	p.61-62
Pressure Gauges	p.60, 62

Also Available

SAE Porting

Technical Information

Column Load is the maximum recommended push load (lb) to maintain at minimum a 2:1 column safety factor. The column load is a calculated value based on pin-pin mounting.

Top-of-the-Line Tie-Rod! 3000 PSI and SAE O-ring Ports!

The Chief TC3 is our highest quality 3000 PSI tie-rod cylinder design with more strength and durability than our Chief TC model. It also performs well in agricultural applications as well as other industries like OEM manufacture of trailers, compact construction equipment, and waste/recycling. The base end clevis extends out 2 inches for greater swing ability on applications. SAE O-ring ports for easy hookup.

Each and every Chief TC3 cylinder is functionally tested and pressurized to 1.5 times the normal working pressure to insure performance reliability. The Chief TC3 is available in bore sizes from 2" to 5" and strokes from 4" to 60". It has a 3,000 PSI operating range and our best limited warranty at 4 years. Painted red, available in custom colors.

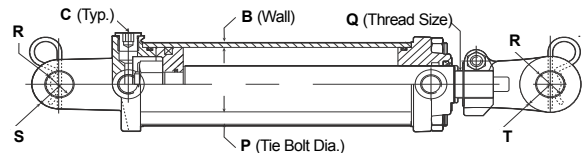
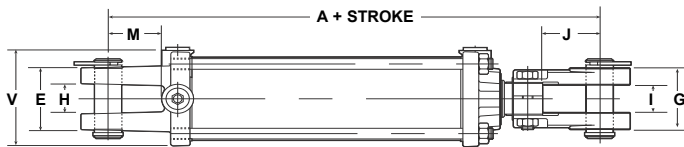
- Hard Chrome Plated Rod
- Hallite 755 Piston Seal with Wear Ring
- Ductile Iron Piston & Gland
- SAE O-ring Ports
- High Strength Clevis Mounting
- 3000 PSI Working Pressure



3000 PSI

Chief TC3 Tie-Rod Cylinders

Intended Use: Double-acting applications • **Piston:** Ductile iron • **Gland:** Ductile iron, drilled oil passages • **Tube:** Precision honed steel • **Rod:** Hard chrome plated • **End Mounts:** High strength, ductile iron female clevises with pins and R-clips included • **Tube Seal:** Buna O-ring with Polytemp hytel backup • **Rod Seal:** Twin lip design for a dry rod • **Rod Wiper:** D style prevents contamination • **Piston Seal:** Hallite 755 for prolonged wear resistance with wear ring • **All Seals:** Manufactured to US specifications • **Ports:** SAE O-ring • **Paint:** Red, unless otherwise indicated. Custom colors are available • **Packaging:** Individually poly bagged.



Dimensional Data in Inches (Millimeters)

BORE	DIMENSIONS														
	A*	B	C	E	G	H	I	J	M	P	Q	R**	S	T	V
2.000 (50.8)	10.250 (260.4)	0.188 (4.78)	SAE 8 3/4-16	2.345 (59.6)	2.500 (63.5)	1.125 (28.6)	1.125 (28.6)	2.125 (54.0)	2.000 (50.8)	0.350 (8.9)	11/8-12 UNF	1.015 (25.8)	0.945 (24.0)	1.000 (25.4)	2.969 (75.4)
2.500 (63.5)	10.250 (260.4)	0.188 (4.78)	SAE 8 3/4-16	2.380 (60.5)	2.500 (63.5)	1.125 (28.6)	1.125 (28.6)	2.125 (54.0)	2.000 (50.8)	0.350 (8.9)	11/8-12 UNF	1.015 (25.8)	0.945 (24.0)	1.000 (25.4)	3.312 (84.1)
3.000 (76.2)	10.250 (260.4)	0.188 (4.78)	SAE 8 3/4-16	2.500 (63.5)	2.717 (69.0)	1.125 (28.6)	1.125 (28.6)	2.125 (54.0)	2.000 (50.8)	0.425 (10.8)	11/4-12 UNF	1.015 (25.8)	1.000 (25.4)	1.132 (28.8)	4.062 (103.2)
3.500 (88.9)	10.250 (260.4)	0.188 (4.78)	SAE 8 3/4-16	2.600 (66.0)	2.717 (69.0)	1.125 (28.6)	1.125 (28.6)	2.125 (54.0)	2.000 (50.8)	0.496 (12.6)	11/4-12 UNF	1.015 (25.8)	1.132 (28.8)	1.132 (28.8)	4.562 (115.9)
4.000 (101.6)	10.250 (260.4)	0.250 (6.35)	SAE 8 3/4-16	2.660 (67.6)	2.717 (69.0)	1.125 (28.6)	1.125 (28.6)	2.125 (54.0)	2.000 (50.8)	0.577 (14.7)	11/4-12 UNF	1.015 (25.8)	1.250 (31.8)	1.132 (28.8)	5.250 (133.4)
5.000 (127.0)	12.250 (311.2)	0.250 (6.35)	SAE 12 11/16-12	2.875 (73.0)	2.953 (75.0)	1.125 (28.6)	1.125 (28.6)	2.125 (54.0)	2.118 (53.8)	0.722 (18.3)	11/2-12 UNF	1.265 (32.1)	1.378 (35.0)	1.378 (35.0)	6.500 (165.1)

* Retracted length is 12.250 (311.2) for 8.000 (203.2) stroke ASAE cylinders and 15.500 (393.7) for 16.000 (406.4) stroke ASAE cylinders.

** Pin hole diameter is 1.265 (32.1) for 16.000 (406.4) stroke ASAE cylinders.

Chief® Cylinders are Manufactured at **ISO 9001:2000** Certified Facilities

Tie-Rod Cylinders **CHIEF** TC3

Tie-rod Cylinders

MIX & MATCH
Mix and match within this product group to obtain volume discounts.

ORDER NO.	STROKE	ROD DIA.	DIMENSIONS		COLUMN LOAD	PORT SIZE	PIN DIAMETER	SHIP WT.
			RETRACTED	EXTENDED				
2" Bore • 3000 PSI								
211-300	4"	11/8"	14 1/4"	18 1/4"	9,420 lbs.	SAE 8	1"	13
211-302	8"	11/8"	18 1/4"	26 1/4"	9,420 lbs.	SAE 8	1"	17
211-303	8" ASAE	11/8"	20 1/4"	28 1/4"	9,420 lbs.	SAE 8	1"	19
211-304	10"	11/8"	20 1/4"	30 1/4"	9,420 lbs.	SAE 8	1"	19
211-305	12"	11/8"	22 1/4"	34 1/4"	9,420 lbs.	SAE 8	1"	22
211-306	14"	11/8"	24 1/4"	38 1/4"	9,420 lbs.	SAE 8	1"	22
211-307	16"	11/8"	26 1/4"	42 1/4"	9,420 lbs.	SAE 8	1"	26
211-308	18"	11/8"	28 1/4"	46 1/4"	8,310 lbs.	SAE 8	1"	25
211-309	20"	11/8"	30 1/4"	50 1/4"	7,050 lbs.	SAE 8	1"	27
211-310	22"	11/8"	32 1/4"	54 1/4"	6,050 lbs.	SAE 8	1"	28
211-311	24"	11/8"	34 1/4"	58 1/4"	5,250 lbs.	SAE 8	1"	30
211-312	26"	11/8"	36 1/4"	62 1/4"	4,600 lbs.	SAE 8	1"	31
211-313	28"	11/8"	38 1/4"	66 1/4"	4,160 lbs.	SAE 8	1"	33
211-314	30"	11/8"	40 1/4"	70 1/4"	3,610 lbs.	SAE 8	1"	35
211-315	36"	11/8"	46 1/4"	82 1/4"	2,630 lbs.	SAE 8	1"	41
204-010		11/8"	TC3 Packing Kit					

2 1/2" Bore • 3000 PSI								
211-320	4"	11/8"	14 1/4"	18 1/4"	14,720 lbs.	SAE 8	1"	17
211-321	6"	11/8"	16 1/4"	22 1/4"	14,720 lbs.	SAE 8	1"	19
214-472*	6"	11/8"	16 1/4"	22 1/4"	14,720 lbs.	SAE 8	1"	19
211-322	8"	11/8"	18 1/4"	26 1/4"	14,720 lbs.	SAE 8	1"	20
211-323	8" ASAE	11/8"	20 1/4"	28 1/4"	14,720 lbs.	SAE 8	1"	22
211-324	10"	11/8"	20 1/4"	30 1/4"	14,720 lbs.	SAE 8	1"	22
211-325	12"	11/8"	22 1/4"	34 1/4"	14,720 lbs.	SAE 8	1"	24
211-326	14"	11/4"	24 1/4"	38 1/4"	14,720 lbs.	SAE 8	1"	27
211-327	16"	11/4"	26 1/4"	42 1/4"	14,720 lbs.	SAE 8	1"	29
211-328 or 218-183*	18"	11/4"	28 1/4"	46 1/4"	12,790 lbs.	SAE 8	1"	30
211-329 or 218-184*	20"	11/4"	30 1/4"	50 1/4"	10,840 lbs.	SAE 8	1"	32
211-331	24"	11/4"	34 1/4"	58 1/4"	8,070 lbs.	SAE 8	1"	34
211-333	28"	11/4"	38 1/4"	66 1/4"	6,240 lbs.	SAE 8	1"	40
211-334	30"	11/4"	40 1/4"	70 1/4"	5,550 lbs.	SAE 8	1"	41
211-335	32"	11/4"	42 1/4"	74 1/4"	4,970 lbs.	SAE 8	1"	43
211-337	36"	11/4"	46 1/4"	82 1/4"	4,050 lbs.	SAE 8	1"	48
211-338	48"	11/4"	58 1/4"	106 1/4"	2,430 lbs.	SAE 8	1"	59
211-339 or 218-185*	60"	11/4"	70 1/4"	130 1/4"	1,620 lbs.	SAE 8	1"	66
204-011		11/8"	TC3 Packing Kit					
204-012		11/4"	TC3 Packing Kit					

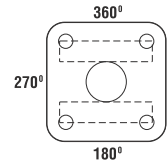
3" Bore • 3000 PSI								
211-345	4"	11/4"	14 1/4"	18 1/4"	21,200 lbs.	SAE 8	1"	21
211-346	6"	11/4"	16 1/4"	22 1/4"	21,200 lbs.	SAE 8	1"	23
211-347 or 218-186*	8"	11/4"	18 1/4"	26 1/4"	21,200 lbs.	SAE 8	1"	27
211-348	8" ASAE	11/4"	20 1/4"	28 1/4"	21,200 lbs.	SAE 8	1"	28
211-349 or 218-187*	10"	11/4"	20 1/4"	30 1/4"	21,200 lbs.	SAE 8	1"	28
211-350	12"	11/4"	22 1/4"	34 1/4"	21,200 lbs.	SAE 8	1"	32
211-351	14"	11/2"	24 1/4"	38 1/4"	21,200 lbs.	SAE 8	1"	35
211-352	16"	11/2"	26 1/4"	42 1/4"	21,200 lbs.	SAE 8	1"	37
211-353	16" ASAE	11/2"	31 1/2"	47 1/2"	21,200 lbs.	SAE 8	1"	40
211-354	18"	11/2"	28 1/4"	46 1/4"	21,200 lbs.	SAE 8	1"	40
211-355	20"	11/2"	30 1/4"	50 1/4"	21,200 lbs.	SAE 8	1"	42
211-356	22"	11/2"	32 1/4"	54 1/4"	19,110 lbs.	SAE 8	1"	46
211-357	24"	11/2"	34 1/4"	58 1/4"	16,580 lbs.	SAE 8	1"	47
211-360	30"	11/2"	40 1/4"	70 1/4"	11,410 lbs.	SAE 8	1"	54
211-363	36"	11/2"	46 1/4"	82 1/4"	8,330 lbs.	SAE 8	1"	61
211-364	48"	11/2"	58 1/4"	106 1/4"	4,990 lbs.	SAE 8	1"	75
211-365	60"	11/2"	70 1/4"	130 1/4"	3,320 lbs.	SAE 8	1"	93
204-013		11/4"	TC3 Packing Kit					
204-014		11/2"	TC3 Packing Kit					

* With Nitro Chrome Rod

SPECIAL PRICING AVAILABLE ON LARGER VOLUME PURCHASES. CALL FOR A FREE QUOTE.



Port Location Guide (Rod End View)



- Standard Port Position:
Main @ 360°
Auxiliary @ 270°
- NPTF Porting Available

(MORE BORE SIZES CONTINUED ON FOLLOWING PAGE)

CUSTOMIZE? Chief TC3 cylinders can be customized to your specifications on orders of 25 or more cylinders. Call us for details.

CHIEF TC3 Tie-Rod Cylinders

3000 PSI

Chief TC3 Tie-Rod Cylinders

Tie-rod Cylinders



ASAE Cylinder

ORDER NO.	STROKE	ROD DIA.	DIMENSIONS		COLUMN LOAD	PORT SIZE	PIN DIAMETER	SHIP WT.
			RETRACTED	EXTENDED				
3 1/2" Bore • 3000 PSI								
214-370	4"	1 1/2"	14 1/4"	18 1/4"	28,860 lbs	SAE 8	1"	26
214-371	6"	1 1/2"	16 1/4"	22 1/4"	28,860 lbs	SAE 8	1"	34
214-372	8"	1 1/2"	18 1/4"	26 1/4"	28,860 lbs	SAE 8	1"	37
214-373	8" ASAE	1 1/2"	20 1/4"	28 1/4"	28,860 lbs	SAE 8	1"	36
214-374	10"	1 1/2"	20 1/4"	30 1/4"	28,860 lbs	SAE 8	1"	36
214-375	12"	1 1/2"	22 1/4"	34 1/4"	28,860 lbs	SAE 8	1"	43
214-376	14"	1 1/2"	24 1/4"	38 1/4"	28,860 lbs	SAE 8	1"	46
214-377	16"	1 1/2"	26 1/4"	42 1/4"	28,860 lbs	SAE 8	1"	50
214-378	16" ASAE	1 1/2"	31 1/2"	47 1/2"	22,350 lbs.	SAE 8	1 1/4"	48
214-379	18"	1 1/2"	28 1/4"	46 1/4"	26,730 lbs.	SAE 8	1"	51
214-380	20"	1 1/2"	30 1/4"	50 1/4"	22,660 lbs.	SAE 8	1"	55
214-382	24"	1 1/2"	34 1/4"	58 1/4"	16,880 lbs.	SAE 8	1"	53
214-385	30"	1 1/2"	40 1/4"	70 1/4"	11,610 lbs.	SAE 8	1"	61
214-388	36"	1 1/2"	46 1/4"	82 1/4"	8,480 lbs.	SAE 8	1"	68
214-389	48"	1 1/2"	58 1/4"	106 1/4"	5,080 lbs.	SAE 8	1"	86
204-015		1 1/2"	TC3 Packing Kit					

4" Bore • 3000 PSI								
214-394	4"	1 1/2"	14 1/4"	18 1/4"	37,690 lbs.	SAE 8	1"	35
214-395	6"	1 1/2"	16 1/4"	22 1/4"	37,690 lbs.	SAE 8	1"	38
214-396	8"	1 1/2"	18 1/4"	26 1/4"	37,690 lbs.	SAE 8	1"	41
214-397	8" ASAE	1 1/2"	20 1/4"	28 1/4"	37,690 lbs.	SAE 8	1"	42
214-398	10"	1 1/2"	20 1/4"	30 1/4"	37,690 lbs.	SAE 8	1"	45
214-399	12"	1 1/2"	22 1/4"	34 1/4"	37,690 lbs.	SAE 8	1"	48
214-434	14"	2"	24 1/4"	38 1/4"	37,690 lbs.	SAE 8	1"	58
214-483*	14"	2"	24 1/4"	38 1/4"	37,690 lbs.	SAE 8	1"	58
214-400	16"	1 3/4"	26 1/4"	42 1/4"	37,690 lbs.	SAE 8	1"	62
214-401	16" ASAE	2"	31 1/2"	47 1/2"	37,690 lbs.	SAE 8	1 1/4"	66
214-402	18"	1 3/4"	28 1/4"	46 1/4"	37,690 lbs.	SAE 8	1"	62
214-403	20"	1 3/4"	30 1/4"	50 1/4"	37,690 lbs.	SAE 8	1"	67
214-405	24"	2"	34 1/4"	58 1/4"	37,690 lbs.	SAE 8	1"	79
214-407	26"	2"	36 1/4"	62 1/4"	37,690 lbs.	SAE 8	1"	83
214-409	30"	2"	40 1/4"	70 1/4"	36,070 lbs.	SAE 8	1"	92
214-410	32"	2"	42 1/4"	74 1/4"	32,300 lbs.	SAE 8	1"	96
214-412	36"	2"	46 1/4"	82 1/4"	26,340 lbs.	SAE 8	1"	104
214-414	42"	2"	52 1/4"	94 1/4"	20,070 lbs.	SAE 8	1"	116
214-417	48"	2"	58 1/4"	106 1/4"	15,790 lbs.	SAE 8	1"	130
204-016		1 1/2"	TC3 Packing Kit					
204-017		1 3/4"	TC3 Packing Kit					
204-018		2"	TC3 Packing Kit					

5" Bore • 3000 PSI								
214-418	4"	2"	16 1/4"	20 1/4"	58,900 lbs.	SAE 12	1 1/4"	68
214-476*	4"	2"	16 1/4"	20 1/4"	58,900 lbs.	SAE 12	1 1/4"	62
214-419	6"	2"	18 1/4"	24 1/4"	58,900 lbs.	SAE 12	1 1/4"	69
214-420	8" ASAE	2"	20 1/4"	28 1/4"	58,900 lbs.	SAE 12	1 1/4"	75
214-421	10"	2"	22 1/4"	32 1/4"	58,900 lbs.	SAE 12	1 1/4"	80
214-422	12"	2"	24 1/4"	36 1/4"	58,900 lbs.	SAE 12	1 1/4"	86
214-423	14"	2"	26 1/4"	40 1/4"	58,900 lbs.	SAE 12	1 1/4"	92
214-424	16"	2"	28 1/4"	44 1/4"	58,900 lbs.	SAE 12	1 1/4"	97
214-425	16" ASAE	2"	31 1/2"	47 1/4"	58,900 lbs.	SAE 12	1 1/4"	100
214-426	18"	2"	30 1/4"	48 1/4"	58,900 lbs.	SAE 12	1 1/4"	105
214-427	20"	2"	32 1/4"	52 1/4"	58,900 lbs.	SAE 12	1 1/4"	108
117-247**	24"	2"	36 1/4"	60 1/4"	58,900 lbs.	1/2" NPT	1 1/4"	125
214-428	24"	2 1/4"	36 1/4"	60 1/4"	58,900 lbs.	SAE 12	1 1/4"	127
214-430	30"	2 1/4"	42 1/4"	72 1/4"	56,340 lbs.	SAE 12	1 1/4"	147
214-432	36"	2 1/4"	48 1/4"	84 1/4"	41,380 lbs.	SAE 12	1 1/4"	163
214-433	48"	2 1/4"	60 1/4"	108 1/4"	25,020 lbs.	SAE 12	1 1/4"	186
204-019		2"	TC3 Packing Kit					
204-020		2 1/4"	TC3 Packing Kit					

* With Nitro Chrome Rod ** Non-Chief Brand. Painted black.

Similar Items

Our 3000 PSI

CHIEF welded cylinders on pages 16-17 feature tie-rod interchangeability.

Related Items

Hose Products	p.84-89
Stroke Controls	p.36
Directional Control Valves	p.68-73
Filters and Strainers	p.61-62
Pressure Gauges	p.60,62

Also Available

NPT Porting

Technical Information

Column Load is the maximum recommended push load (lb) to maintain at minimum a 2:1 column safety factor. The column load is a calculated value based on pin-pin mounting.

Common SAE#8 O-Ring Adapters

- 471-432 8MORB-8FJS STRAIGHT SWIVEL
- 470-845 08MORB-06FP STR. FITTING
- 907-7485 08MORB-08FP STR. SWIVEL
- 470-043 08MORB-06FPS STR. SWIVEL
- 470-045 08MORB-08FPS STR. SWIVEL

Common SAE#12 O-Ring Adapters

- 907-0129 12MORB-12FJS STR. SWIVEL
- 470-851 12MORB-12FP STR. FITTING
- 470-049 12MORB-12FPS STR. SWIVEL

Fittings on page 86-87

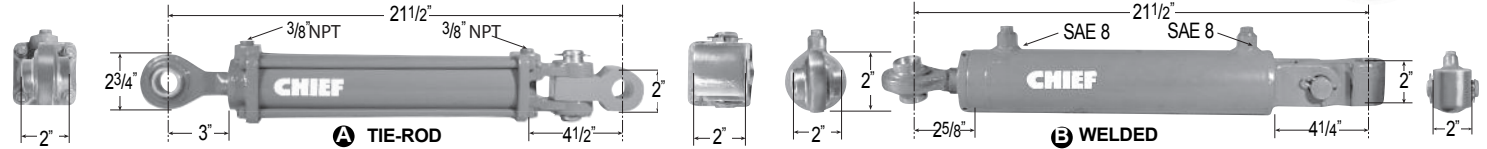
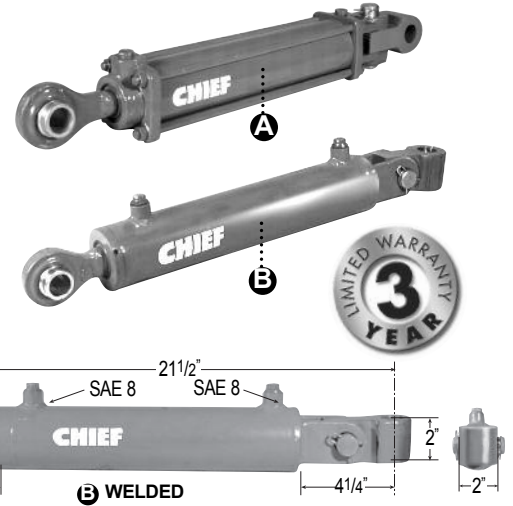
SPECIAL PRICING AVAILABLE ON LARGER VOLUME PURCHASES. CALL FOR A FREE QUOTE.

CHIEF[®] TL

2500 PSI

Chief TL Top Link Cylinders • Category 2

• The Chief TL is a Order-engineered, Category 2, top-link cylinder that takes much of the difficulty out of 3-point hitch operations. These rugged cylinders are based on the high quality-standards that make all Chief cylinders and components so popular. Improve the efficiency of your existing 3-point hitch system by replacing your existing solid top-link with a Chief TL hydraulic top-link cylinder. These cylinders are used to control the forward-aft movement of the hitch when connecting implements to tractors and can be operated by connecting to the tractor's existing remote circuit. Category 2 top-links are designed to work with systems that have a tractor drawbar horsepower of 40-100. Once you try it, you will never go back to a standard linkage pin! Painted red.



ORDER NO.	BORE	STROKE	ROD DIAMETER	DIMENSIONS		PORT SIZE	PIN DIAMETER	PSI	SHIP WT	LIST PRICE
				RETRACTED	EXTENDED					
214-995 A	2 1/2"	10"	1 1/8"	21 1/2"	31 1/2"	3/8" NPTF	1"	2500	22	234.00
215-990 B	2 1/2"	10"	1 1/4"	21 1/2"	31 1/2"	SAE 8	1"	3000	22	272.00

ORDER NO.	DESCRIPTION	SHIP WT.	PIN DIAMETER
133-474 C	Top Link End - Category 1	2	3/4"
133-475 C	Top Link End - Category 2	2	1"

12 Volt DC Linear Actuators

• Gear driven drive motors that extend a shaft used primarily to open and close devices in tight or hard to reach areas. Their compact design, numerous control and mounting options make them ideally suited for many industrial, agricultural, automotive and off highway applications.

LD Series

• Load capacity 110 lbs, 550 lbs static capacity • IP Graded 63, total dust protection and water resistant • Max load speed .50 in/sec • These potentiometer equipped actuators can be used with the optional controller offering the user the flexibility of up to 3 programmable pre-sets.

ORDER NO.	STROKE	RETRACTED	EXTENDED	WT.
139-270	1.96"	7.68"	9.65"	3
139-271	3.93"	9.69"	13.62"	3
139-272	5.90"	11.69"	17.60"	3
139-273	7.87"	13.70"	21.57"	3
139-274	9.84"	15.71"	25.55"	3
139-275	11.81"	17.72"	28.53"	4

ID Series – ACME Drive

• Load capacity 562 lbs, 1000 lbs static capacity • IP Graded 65, total dust protection and protected against low pressure jets in all directions • Max load speed .51 in/sec • Overload clutch stops the shaft when it reaches full extension

139-282	6.03"	12.24"	18.27"	4
139-283	8.03"	14.25"	22.28"	4
139-284	12.04"	18.27"	30.31"	4

ID Series – Ball Screw Drive

• Load capacity 1,010 lbs, 3000 lbs static capacity • IP Graded 65, total dust protection and protected against low pressure jets in all directions • Max load speed .55 in/sec • Overload clutch stops the shaft when it reaches full extension

139-280	5.31"	14.06"	19.37"	4
139-285	7.33"	16.06"	23.39"	4
139-279	11.34"	20.08"	31.42"	4

Accessories

ORDER NO.	CONTROLLER	DESCRIPTION	WT.
139-276	LD series single controller, 3 programmable settings w/3 additional inputs		1
139-277	LD series Dual controller, control 2 actuators to act independently, together or in sequence		1
139-278	LD series mounting brackets (2 needed per actuator)		1
139-286	ID series mounting bracket (2 needed per actuator)		1

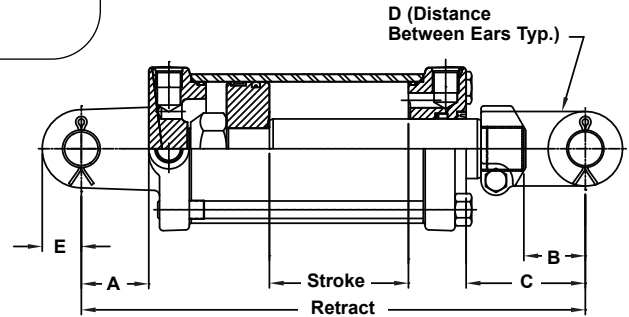
LD Series

ID Series



PRINCE Tie-Rod Cylinders

Tie-rod
Cylinders



Prince 3000 PSI Tie-Rod Cylinders Made In The USA

• Honed tubing • Heavy duty, high strength tie-rods • Induction hardened piston rods plated with RoyalPlate Plus (piston rods on 2" bore not hardened ductile iron piston, butt, gland & clevis • Urethane u-cup & metal encased wiper 2 1/2" bore & larger models • Crown seal on piston • Standard color is gloss black

ORDER NO.	MFG. NO.	STROKE	ROD DIA.	RETRACT	COLUMN LOAD	PORT SIZE	PIN DIA.	DIMENSIONS					SHIP WT.
								A	B	C	D	E	
2" Bore • 3000 PSI													
209-901	B200040ABAAA07B	4"	1 1/8"	14 1/4"	9425 lbs.	SAE 8	1"	113/16"	113/16"	3 1/2"	1.06"	15/16"	17
209-902	B200060ABAAA07B	6"	1 1/8"	16 1/4"	9425 lbs.	SAE 8	1"	113/16"	113/16"	3 1/2"	1.06"	15/16"	19
209-903	A200080ABAAA07B	8"	1 1/8"	20 1/4"	9425 lbs.	SAE 8	1"	113/16"	113/16"	5 1/2"	1.06"	15/16"	21
209-904	B200100ABAAA07B	10"	1 1/8"	20 1/4"	9425 lbs.	SAE 8	1"	113/16"	113/16"	3 1/2"	1.06"	15/16"	22
209-905	B200120ABAAA07B	12"	1 1/8"	22 1/4"	9425 lbs.	SAE 8	1"	113/16"	113/16"	3 1/2"	1.06"	15/16"	23
209-906	B200140ABAAA07B	14"	1 1/8"	24 1/4"	9425 lbs.	SAE 8	1"	113/16"	113/16"	3 1/2"	1.06"	15/16"	25
209-907	A200160ABAAA07B	16"	1 1/8"	31 1/4"	7630 lbs.	SAE 8	1"	113/16"	113/16"	8 3/4"	1.06"	15/16"	27
209-908	B200180ABAAA07B	18"	1 1/8"	28 1/4"	9200 lbs.	SAE 8	1"	113/16"	113/16"	3 1/2"	1.06"	15/16"	28
209-909	B200200ABAAA07B	20"	1 1/8"	30 1/4"	7760 lbs.	SAE 8	1"	113/16"	113/16"	3 1/2"	1.06"	15/16"	30
209-910	B200240ABAAA07B	24"	1 1/8"	34 1/4"	5730 lbs.	SAE 8	1"	113/16"	113/16"	3 1/2"	1.06"	15/16"	33
209-911	B200300ABAAA07B	30"	1 1/8"	40 1/4"	3910 lbs.	SAE 8	1"	113/16"	113/16"	3 1/2"	1.06"	15/16"	36
205-407	PMCK-B200000		1 1/8"										
Prince 3000 Packing Kit													
2 1/2" Bore • 3000 PSI													
209-912	B250060ABAAA07B	6"	1 1/4"	16 1/4"	14730 lbs.	SAE 8	1"	17/8"	113/16"	35/16"	1.06"	15/16"	23
209-913	A250080ABAAA07B	8"	1 1/4"	20 1/4"	14730 lbs.	SAE 8	1"	17/8"	113/16"	55/16"	1.06"	15/16"	26
209-914	B250100ABAAA07B	10"	1 1/4"	20 1/4"	14730 lbs.	SAE 8	1"	17/8"	113/16"	35/16"	1.06"	15/16"	27
209-915	B250120ABAAA07B	12"	1 1/4"	22 1/4"	14730 lbs.	SAE 8	1"	17/8"	113/16"	35/16"	1.06"	15/16"	29
209-916	B250140ABAAA07B	14"	1 1/4"	24 1/4"	14730 lbs.	SAE 8	1"	17/8"	113/16"	35/16"	1.06"	15/16"	31
209-917	A250160ABAAA07B	16"	1 1/4"	31 1/2"	11520 lbs.	SAE 8	1"	17/8"	113/16"	89/16"	1.06"	15/16"	34
209-918	B250180ABAAA07B	18"	1 1/4"	28 1/4"	13880 lbs.	SAE 8	1"	17/8"	113/16"	35/16"	1.06"	15/16"	35
209-919	B250200ABAAA07B	20"	1 1/4"	30 1/4"	11720 lbs.	SAE 8	1"	17/8"	113/16"	35/16"	1.06"	15/16"	37
209-920	B250240ABAAA07B	24"	1 1/4"	34 1/4"	8670 lbs.	SAE 8	1"	17/8"	113/16"	35/16"	1.06"	15/16"	41
209-921	B250300ABAAA07B	30"	1 1/4"	40 1/4"	5930 lbs.	SAE 8	1"	17/8"	113/16"	35/16"	1.06"	15/16"	47
205-408	PMCK-B250000		1 1/4"										
Prince 3000 Packing Kit													
3" Bore • 3000 PSI													
209-922	B300060ABAAA07B	6"	1 3/8"	16 1/4"	21210 lbs.	SAE 8	1"	17/8"	113/16"	33/4"	1.06"	11/16"	26
209-923	A300080ABAAA07B	8"	1 3/8"	20 1/4"	21210 lbs.	SAE 8	1"	17/8"	113/16"	53/4"	1.06"	11/16"	29
209-924	B300100ABAAA07B	10"	1 3/8"	20 1/4"	21210 lbs.	SAE 8	1"	17/8"	113/16"	33/4"	1.06"	11/16"	30
209-925	B300120ABAAA07B	12"	1 3/8"	22 1/4"	21210 lbs.	SAE 8	1"	17/8"	113/16"	33/4"	1.06"	11/16"	33
209-926	B300140ABAAA07B	14"	1 3/8"	24 1/4"	21210 lbs.	SAE 8	1"	17/8"	113/16"	33/4"	1.06"	11/16"	35
209-927	A300160ABAAA07B	16"	1 3/8"	31 1/2"	16730 lbs.	SAE 8	1"	17/8"	113/16"	9"	1.06"	11/16"	40
209-928	B300180ABAAA07B	18"	1 3/8"	28 1/4"	20120 lbs.	SAE 8	1"	17/8"	113/16"	33/4"	1.06"	11/16"	40
209-929	B300200ABAAA07B	20"	1 3/8"	30 1/4"	17010 lbs.	SAE 8	1"	17/8"	113/16"	33/4"	1.06"	11/16"	42
209-930	B300240ABAAA07B	24"	1 3/8"	34 1/4"	12620 lbs.	SAE 8	1"	17/8"	113/16"	33/4"	1.06"	11/16"	47
209-931	B300300ABAAA07B	30"	1 3/8"	40 1/4"	8640 lbs.	SAE 8	1"	17/8"	113/16"	33/4"	1.06"	11/16"	54
209-932	B300360ABAAA07B	36"	1 3/8"	46 1/4"	6290 lbs.	SAE 8	1"	17/8"	113/16"	33/4"	1.06"	11/16"	61
209-933	B300480ABAAA07B	48"	1 3/8"	58 1/4"	3760 lbs.	SAE 8	1"	17/8"	113/16"	37/8"	1.06"	11/16"	75
205-330	PMCK-B300000		1 3/8"										
Prince 3000 Packing Kit													
3 1/2" Bore • 3000 PSI													
209-934	A350080ABAAA07B	8"	1 3/8"	20 1/4"	28860 lbs.	SAE 8	1"	17/8"	113/16"	53/4"	1.06"	11/4"	35
209-935	B350100ABAAA07B	10"	1 3/8"	20 1/4"	28860 lbs.	SAE 8	1"	17/8"	113/16"	33/4"	1.06"	11/4"	37
209-936	B350120ABAAA07B	12"	1 3/8"	22 1/4"	28860 lbs.	SAE 8	1"	17/8"	113/16"	33/4"	1.06"	11/4"	39
209-937	B350140ABAAA07B	14"	1 3/8"	24 1/4"	28860 lbs.	SAE 8	1"	17/8"	113/16"	33/4"	1.06"	11/4"	42
209-938	A350160ABAAA07B	16"	1 3/8"	31 1/2"	16900 lbs.	SAE 8	1"	17/8"	113/16"	9"	1.06"	11/4"	46
209-939	B350180ABAAA07B	18"	1 3/8"	28 1/4"	20400 lbs.	SAE 8	1"	17/8"	113/16"	33/4"	1.06"	11/4"	47
209-940	B350200ABAAA07B	20"	1 3/8"	30 1/4"	17240 lbs.	SAE 8	1"	17/8"	113/16"	33/4"	1.06"	11/4"	49
209-941	B350240ABAAA07B	24"	1 3/8"	34 1/4"	12780 lbs.	SAE 8	1"	17/8"	113/16"	33/4"	1.06"	11/4"	54
209-942	B350300ABAAA07B	30"	1 3/8"	40 1/4"	8760 lbs.	SAE 8	1"	17/8"	113/16"	33/4"	1.06"	11/4"	62
209-943	B350360ABAAA07B	36"	1 3/8"	46 1/4"	6370 lbs.	SAE 8	1"	17/8"	113/16"	33/4"	1.06"	11/4"	69
209-944	B350480ABAAA07B	48"	1 3/8"	58 1/4"	3800 lbs.	SAE 8	1"	17/8"	113/16"	33/4"	1.06"	11/4"	85
205-409	PMCK-B350000		1 3/8"										
Prince 3000 Packing Kit													

Free Drop-Ship Service!

Many times there are instances where shipping your order directly from our supplier source will save you time and shipping costs. There are no additional fees for this service.

Continued on page 13

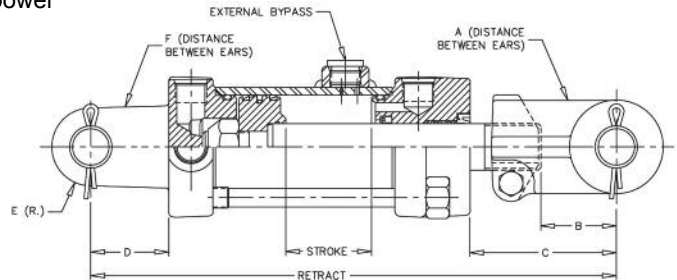
Prince 3000 PSI Tie-Rod Cylinders continued from page 12.

ORDER NO.	MFG. NO.	STROKE	ROD DIA.	RETRACT	COLUMN LOAD	PORT SIZE	PIN DIA.	DIMENSIONS					SHIP WT.
								A	B	C	D	E	
4" Bore • 3000 PSI													
209-945	A400080ABACA07B	8"	1 3/4"	20 1/4"	37700 lbs.	SAE 8	1"	13/4"	17/8"	5 1/4"	1.06"	1 1/4"	48
209-946	B400100ABACA07B	10"	1 3/4"	20 1/4"	37700 lbs.	SAE 8	1"	13/4"	17/8"	3 1/4"	1.06"	1 1/4"	50
209-947	B400120ABACA07B	12"	1 3/4"	22 1/4"	37700 lbs.	SAE 8	1"	13/4"	17/8"	3 1/4"	1.06"	1 1/4"	54
209-948	B400140ABACA07B	14"	1 3/4"	24 1/4"	37700 lbs.	SAE 8	1"	13/4"	17/8"	3 1/4"	1.06"	1 1/4"	57
209-949	A400160ABACA07B	16"	1 3/4"	31 1/2"	37700 lbs.	SAE 8	1"	13/4"	17/8"	8 1/2"	1.06"	1 1/4"	64
209-950	B400180ABACA07B	18"	1 3/4"	28 1/4"	37700 lbs.	SAE 8	1"	13/4"	17/8"	3 1/4"	1.06"	1 1/4"	64
209-951	B400200ABACA07B	20"	1 3/4"	30 1/2"	37700 lbs.	SAE 8	1"	13/4"	17/8"	3 1/4"	1.06"	1 1/4"	68
209-952	B400240ABACA07B	24"	1 3/4"	34 1/4"	33710 lbs.	SAE 8	1"	13/4"	17/8"	3 1/4"	1.06"	1 1/4"	75
209-953	B400300ABACA07B	30"	1 3/4"	40 1/4"	22990 lbs.	SAE 8	1"	13/4"	17/8"	3 1/4"	1.06"	1 1/4"	85
209-954	B400360ABACA07B	36"	1 3/4"	46 1/4"	16680 lbs.	SAE 8	1"	13/4"	17/8"	3 1/4"	1.06"	1 1/4"	95
209-956	B400480ABACA07B	48"	1 3/4"	58 1/4"	9920 lbs.	SAE 8	1"	13/4"	17/8"	3 1/4"	1.06"	1 1/4"	116
205-394	PMCK-B400000		1 3/4"	Prince 3000 Packing Kit									
4 1/2" Bore • 3000 PSI													
209-957	B450080ACDDA07B	8"	2"	20 1/4"	47710 lbs.	SAE 10	1 1/4"	2 1/4"	2"	4"	1.13"	1 15/16"	60
209-958	B450120ACDDA07B	12"	2"	24 1/4"	47710 lbs.	SAE 10	1 1/4"	2 1/4"	2"	4"	1.13"	1 15/16"	69
209-959	B450140ACDDA07B	14"	2"	26 1/4"	47710 lbs.	SAE 10	1 1/4"	2 1/4"	2"	4"	1.13"	1 15/16"	74
209-960	A450160ACDDA07B	16"	2"	31 1/2"	47710 lbs.	SAE 10	1 1/4"	2 1/4"	2"	7 1/4"	1.13"	1 15/16"	81
209-961	B450180ACDDA07B	18"	2"	30 1/4"	47710 lbs.	SAE 10	1 1/4"	2 1/4"	2"	4"	1.13"	1 15/16"	83
209-962	B450200ACDDA07B	20"	2"	32 1/4"	47710 lbs.	SAE 10	1 1/4"	2 1/4"	2"	4"	1.13"	1 15/16"	87
209-963	B450240ACDDA07B	24"	2"	36 1/4"	47710 lbs.	SAE 10	1 1/4"	2 1/4"	2"	4"	1.13"	1 15/16"	97
209-964	B450300ACDDA07B	30"	2"	42 1/4"	37530 lbs.	SAE 10	1 1/4"	2 1/4"	2"	4"	1.13"	1 15/16"	110
209-965	B450360ACDDA07B	36"	2"	48 1/4"	27430 lbs.	SAE 10	1 1/4"	2 1/4"	2"	4"	1.13"	1 15/16"	124
209-966	B450480ACDDA07B	48"	2"	60 1/4"	16470 lbs.	SAE 10	1 1/4"	2 1/4"	2"	4"	1.13"	1 15/16"	152
205-410	PMCK-B450000		2"	Prince 3000 Packing Kit									
5" Bore • 3000 PSI													
209-967	B500080ACDDA07B	8"	2"	20 1/4"	58900 lbs.	SAE 10	1 1/4"	1 3/4"	2"	4"	1.13"	1 3/8"	72
209-968	B500120ACDDA07B	12"	2"	24 1/4"	58900 lbs.	SAE 10	1 1/4"	1 3/4"	2"	4"	1.13"	1 3/8"	83
209-969	B500140ACDDA07B	14"	2"	26 1/4"	58900 lbs.	SAE 10	1 1/4"	1 3/4"	2"	4"	1.13"	1 3/8"	88
209-970	A500160ACDDA07B	16"	2"	31 1/2"	58900 lbs.	SAE 10	1 1/4"	1 3/4"	2"	7 1/4"	1.13"	1 3/8"	96
209-971	B500180ACDDA07B	18"	2"	30 1/4"	58900 lbs.	SAE 10	1 1/4"	1 3/4"	2"	4"	1.13"	1 3/8"	98
209-972	B500200ACDDA07B	20"	2"	32 1/4"	58900 lbs.	SAE 10	1 1/4"	1 3/4"	2"	4"	1.13"	1 3/8"	103
209-973	B500240ACDDA07B	24"	2"	36 1/4"	54510 lbs.	SAE 10	1 1/4"	1 3/4"	2"	4"	1.13"	1 3/8"	113
209-974	B500300ACDDA07B	30"	2"	42 1/4"	37620 lbs.	SAE 10	1 1/4"	1 3/4"	2"	4"	1.13"	1 3/8"	129
209-975	B500360ACDDA07B	36"	2"	48 1/4"	27520 lbs.	SAE 10	1 1/4"	1 3/4"	2"	4"	1.13"	1 3/8"	144
209-976	B500480ACDDA07B	48"	2"	60 1/4"	16550 lbs.	SAE 10	1 1/4"	1 3/4"	2"	4"	1.13"	1 3/8"	175
205-411	PMCK-B500000		2"	Prince 3000 Packing Kit									



Prince Rephasing Tie-Rod Cylinders Made In The USA

- Induction hardened piston rods • DU bushing • SAE 8 ports
- 3000 PSI • 1" Pin diameter • Master cylinder provides power for entire system • Painted red



ORDER NO.	MFG. NO.	STROKE	ROD DIA.	RETRACT	PORT SIZE	PIN DIA.	DIMENSIONS					SHIP WT.	
							A	B	C	D	E		F
3 1/4" Bore • 3000 PSI													
212-103	PMS-AM-2568	8"	1 1/4"	20 1/4"	SAE 8	1"	1 1/16"	1 13/16"	5 27/32"	17/8"	1 1/4"	1 1/16"	32
212-106	PMS-AM-2570	12"	1 1/4"	24 1/4"	SAE 8	1"	1 1/16"	1 13/16"	5 27/32"	17/8"	1 1/4"	1 1/16"	40
3 1/2" Bore • 3000 PSI													
212-104	PMS-AM-2562	8"	1 1/4"	20 1/4"	SAE 8	1"	1 1/16"	1 13/16"	5 27/32"	17/8"	1 1/4"	1 1/16"	32
212-116	PMS-AM-2564	12"	1 1/4"	24 1/4"	SAE 8	1"	1 1/16"	1 13/16"	5 27/32"	17/8"	1 1/4"	1 1/16"	39
3 3/4" Bore • 3000 PSI													
212-111	PMS-AM-2556A	8"	1 3/8"	20 1/4"	SAE 8	1"	1 1/8"	1 7/8"	5 11/32"	13/4"	1 1/4"	1 1/16"	40
212-105	PMS-AM-2558A	12"	1 3/8"	24 1/4"	SAE 8	1"	1 1/8"	1 7/8"	5 11/32"	13/4"	1 1/4"	1 1/16"	32
4" Bore • 3000 PSI													
212-110	PMS-AM-2550A	8"	1 3/8"	20 1/4"	SAE 8	1"	1 1/8"	1 7/8"	5 11/32"	13/4"	1 1/4"	1 1/16"	40
212-125	PMS-AM-2552A	12"	1 3/8"	24 1/4"	SAE 8	1"	1 1/8"	1 7/8"	5 11/32"	13/4"	1 1/4"	1 1/16"	32



Lowest Price 3000 PSI Welded Cylinder with Clevis Mounts!

Welded Cylinders

This Maxim Welded Cylinder is our lowest priced Clevis Mounted cylinder tested to our high standards. Designed to perform in the Agricultural industry as well as other industries. When price is the most important thing you should not have to give up quality. We have thoroughly tested these cylinders to our standards for quality and performance and they meet or exceed them. **1 year limited warranty.** Painted black.

Features:

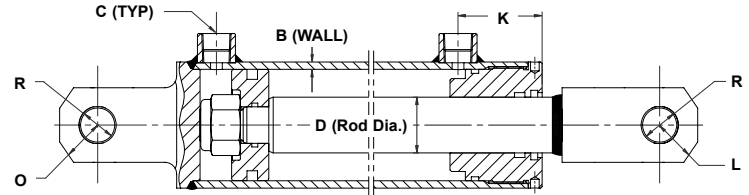
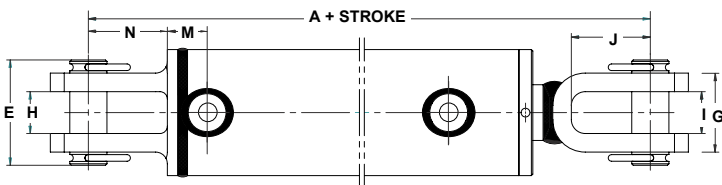
- Double-acting applications
- All Seals: Manufactured to US specification
- 100% hydro-pressure tested
- Rod: Superior quality chrome plated
- Ports: SAE O-rings



3000 PSI

Maxim Welded Cylinders

Intended Use: Double-acting applications • **Piston:** Ductile iron ASTM A536 65-45-12 for excellent life • **Piston Lock Nut:** Grade 8, high tensile zinc-plated • **Gland:** Ductile iron ASTM A536 65-45-12 • **Tube:** High tensile cold drawn tube, precision honed for extended seal life • **Tube seal:** Nitrile O-ring with Polytemp hytrel back-up • **Rod:** High tensile ground & polished hard chrome plated rod • **Rod seal:** Std PolyPak with B lip design (Polyurethane U-cup with Nitrile O-ring expander) • **Wiper:** Polyurethane • **End Mounts:** Cast female clevises with pins and clips included • **Pin and Pin clip:** High tensile zinc-plated steel • **Piston ID Seal:** O-ring • **Piston OD seal:** Hallite 755 piston seal • **Ports:** SAE O-rings



Dimensional Data in Inches (Millimeters)

BORE	DIMENSIONS															
	A*	B	C	D	E	G	H	I	J	K	L	M	N	O	R	
2.000 (51)	10.25 (260)	0.188 (4.8)	SAE 6	1.250 (31.8)	2.125 (53.9)	2.125 (53.9)	1.125 (28.57)	1.125 (28.57)	2.125 (53.9)	1.965 (49.9)	1.024 (26)	0.952 (24.18)	2.125 (53.9)	1.024 (26)	1.012 (25.7)	
2.500 (64)	10.25 (260)	0.188 (4.8)	SAE 8	1.500 (38.1)	2.125 (53.9)	2.125 (53.9)	1.125 (28.57)	1.125 (28.57)	2.125 (53.9)	1.965 (49.9)	1.024 (26)	0.952 (24.18)	2.125 (53.9)	1.024 (26)	1.012 (25.7)	
3.000 (76)	10.25 (260)	0.197 (5.0)	SAE 8	1.500 (38.1)	2.125 (53.9)	2.125 (53.9)	1.125 (28.57)	1.125 (28.57)	2.125 (53.9)	2.264 (57.5)	1.024 (26)	1.071 (27.20)	2.125 (53.9)	1.024 (26)	1.012 (25.7)	
3.500 (89)	10.25 (260)	0.219 (5.563)	SAE 8	1.750 (44.5)	2.386 (60.6)	2.386 (60.6)	1.125 (28.57)	1.125 (28.57)	2.125 (53.9)	2.264 (57.5)	1.024 (26)	1.071 (27.20)	2.125 (53.9)	1.024 (26)	1.012 (25.7)	
4.000 (102)	10.25 (260)	0.250 (6.350)	SAE 8	2.000 (50.8)	2.386 (60.6)	2.386 (60.6)	1.125 (28.57)	1.125 (28.57)	2.125 (53.9)	2.264 (57.5)	1.024 (26)	1.071 (27.20)	2.125 (53.9)	1.024 (26)	1.012 (25.7)	

*Dimension "A" is 12.25" (311.2) for 8" (203.2) stroke ASAE cylinders.

ORDER NO.	STROKE	ROD DIAMETER	DIMENSIONS		COLUMN LOAD	PORT SIZE	PIN DIAMETER	SHIP WT.
			RETRACTED	EXTENDED				
2" Bore • 3000 PSI								
288-400	4"	1 1/4"	14 1/4"	18 1/4"	9420 lbs.	SAE 6	1"	15
288-401	6"	1 1/4"	16 1/4"	22 1/4"	9420 lbs.	SAE 6	1"	17
288-402	8" ASAE	1 1/4"	20 1/4"	28 1/4"	9420 lbs.	SAE 6	1"	18
288-403	8"	1 1/4"	18 1/4"	26 1/4"	9420 lbs.	SAE 6	1"	18
288-404	10"	1 1/4"	20 1/4"	30 1/4"	9420 lbs.	SAE 6	1"	18
288-405	12"	1 1/4"	22 1/4"	34 1/4"	9420 lbs.	SAE 6	1"	19
288-406	14"	1 1/4"	24 1/4"	38 1/4"	9420 lbs.	SAE 6	1"	20
288-407	16"	1 1/4"	26 1/4"	42 1/4"	9420 lbs.	SAE 6	1"	22
288-408	18"	1 1/4"	28 1/4"	46 1/4"	9420 lbs.	SAE 6	1"	24
288-409	20"	1 1/4"	30 1/4"	50 1/4"	9420 lbs.	SAE 6	1"	27
288-410	24"	1 1/4"	34 1/4"	58 1/4"	7730 lbs.	SAE 6	1"	30
288-411	30"	1 1/4"	40 1/4"	70 1/4"	5330 lbs.	SAE 6	1"	37
288-412	36"	1 1/4"	46 1/4"	82 1/4"	3890 lbs.	SAE 6	1"	41
204-600		1 1/4"			Packing Kit			

**FOR LARGER VOLUME
CALL FOR A QUOTE**

ORDER NO.	STROKE	ROD DIAMETER	DIMENSIONS		COLUMN LOAD	PORT SIZE	PIN DIAMETER	SHIP WT.
			RETRACTED	EXTENDED				
2 1/2" Bore • 3000 PSI								
288-413	4"	1 1/2"	14 1/4"	18 1/4"	14,720 lbs.	SAE 8	1"	19
288-414	6"	1 1/2"	16 1/4"	22 1/4"	14,720 lbs.	SAE 8	1"	22
288-415	8" ASAE	1 1/2"	20 1/4"	28 1/4"	14,720 lbs.	SAE 8	1"	24
288-416	8"	1 1/2"	18 1/4"	26 1/4"	14,720 lbs.	SAE 8	1"	23
288-417	10"	1 1/2"	20 1/4"	30 1/4"	14,720 lbs.	SAE 8	1"	24
288-418	12"	1 1/2"	22 1/4"	34 1/4"	14,720 lbs.	SAE 8	1"	26
288-419	14"	1 1/2"	24 1/4"	38 1/4"	14,720 lbs.	SAE 8	1"	29
288-420	16"	1 1/2"	26 1/4"	42 1/4"	14,720 lbs.	SAE 8	1"	32
288-421	18"	1 1/2"	28 1/4"	46 1/4"	14,720 lbs.	SAE 8	1"	32
288-422	20"	1 1/2"	30 1/4"	50 1/4"	14,720 lbs.	SAE 8	1"	35
288-423	24"	1 1/2"	34 1/4"	58 1/4"	14,720 lbs.	SAE 8	1"	39
288-424	30"	1 1/2"	40 1/4"	70 1/4"	10,960 lbs.	SAE 8	1"	46
288-465	32"	1 1/2"	42 1/4"	74 1/4"	9,810 lbs.	SAE 8	1"	49
288-425	36"	1 1/2"	46 1/4"	82 1/4"	8,010 lbs.	SAE 8	1"	53
204-601		1 1/2"			Packing Kit			

3" Bore • 3000 PSI								
288-426	4"	1 1/2"	14 1/4"	18 1/4"	21,200 lbs.	SAE 8	1"	24
288-427	6"	1 1/2"	16 1/4"	22 1/4"	21,200 lbs.	SAE 8	1"	27
288-428	8" ASAE	1 1/2"	20 1/4"	28 1/4"	21,200 lbs.	SAE 8	1"	30
288-429	8"	1 1/2"	18 1/4"	26 1/4"	21,200 lbs.	SAE 8	1"	29
288-430	10"	1 1/2"	20 1/4"	30 1/4"	21,200 lbs.	SAE 8	1"	31
288-431	12"	1 1/2"	22 1/4"	34 1/4"	21,200 lbs.	SAE 8	1"	31
288-432	14"	1 1/2"	24 1/4"	38 1/4"	21,200 lbs.	SAE 8	1"	33
288-433	16"	1 1/2"	26 1/4"	42 1/4"	21,200 lbs.	SAE 8	1"	37
288-434	18"	1 1/2"	28 1/4"	46 1/4"	21,200 lbs.	SAE 8	1"	41
288-435	20"	1 1/2"	30 1/4"	50 1/4"	21,200 lbs.	SAE 8	1"	43
288-436	24"	1 1/2"	34 1/4"	58 1/4"	16,760 lbs.	SAE 8	1"	48
288-437	30"	1 1/2"	40 1/4"	70 1/4"	11,510 lbs.	SAE 8	1"	56
288-438	36"	1 1/2"	46 1/4"	82 1/4"	8,390 lbs.	SAE 8	1"	62
204-602		1 1/2"			Packing Kit			


3 1/2" Bore • 3000 PSI								
288-439	4"	1 3/4"	14 1/4"	18 1/4"	28,860 lbs.	SAE 8	1"	27
288-440	6"	1 3/4"	16 1/4"	22 1/4"	28,860 lbs.	SAE 8	1"	30
288-441	8" ASAE	1 3/4"	20 1/4"	28 1/4"	28,860 lbs.	SAE 8	1"	35
288-442	8"	1 3/4"	18 1/4"	26 1/4"	28,860 lbs.	SAE 8	1"	34
288-443	10"	1 3/4"	20 1/4"	30 1/4"	28,860 lbs.	SAE 8	1"	37
288-444	12"	1 3/4"	22 1/4"	34 1/4"	28,860 lbs.	SAE 8	1"	41
288-445	14"	1 3/4"	24 1/4"	38 1/4"	28,860 lbs.	SAE 8	1"	42
288-446	16"	1 3/4"	26 1/4"	42 1/4"	28,860 lbs.	SAE 8	1"	46
288-447	18"	1 3/4"	28 1/4"	46 1/4"	28,860 lbs.	SAE 8	1"	50
288-448	20"	1 3/4"	30 1/4"	50 1/4"	28,860 lbs.	SAE 8	1"	54
288-449	24"	1 3/4"	34 1/4"	58 1/4"	28,860 lbs.	SAE 8	1"	57
288-450	30"	1 3/4"	40 1/4"	70 1/4"	21,350 lbs.	SAE 8	1"	67
288-451	36"	1 3/4"	46 1/4"	82 1/4"	15,560 lbs.	SAE 8	1"	78
204-603		1 3/4"			Packing Kit			

4" Bore • 3000 PSI								
288-452	4"	2"	14 1/4"	18 1/4"	37,690 lbs.	SAE 8	1"	33
288-453	6"	2"	16 1/4"	22 1/4"	37,690 lbs.	SAE 8	1"	38
288-454	8" ASAE	2"	20 1/4"	28 1/4"	37,690 lbs.	SAE 8	1"	43
288-455	8"	2"	18 1/4"	26 1/4"	37,690 lbs.	SAE 8	1"	43
288-456	10"	2"	20 1/4"	30 1/4"	37,690 lbs.	SAE 8	1"	47
288-457	12"	2"	22 1/4"	34 1/4"	37,690 lbs.	SAE 8	1"	48
288-458	14"	2"	24 1/4"	38 1/4"	37,690 lbs.	SAE 8	1"	52
288-459	16"	2"	26 1/4"	42 1/4"	37,690 lbs.	SAE 8	1"	54
288-460	18"	2"	28 1/4"	46 1/4"	37,690 lbs.	SAE 8	1"	58
288-461	20"	2"	30 1/4"	50 1/4"	37,690 lbs.	SAE 8	1"	62
288-462	24"	2"	34 1/4"	58 1/4"	37,690 lbs.	SAE 8	1"	67
288-463	30"	2"	40 1/4"	70 1/4"	36,430 lbs.	SAE 8	1"	83
288-464	36"	2"	46 1/4"	82 1/4"	26,560 lbs.	SAE 8	1"	95
204-604		2"			Packing Kit			



Welded Cylinders

Similar Items



Our **CHIEF WC** tie-rod cylinders on pages 16-17 feature a 3000 PSI rating.

Related Items

Hose Products	p.84-89
Stroke Controls	p.36
Directional Control Valves	p.68-73
Filters and Strainers	p.61-62
Pressure Gauges	p.60,62

Available in
SAE Porting

Technical Information

Column Load is the maximum recommended push load (lb) to maintain at minimum a 2:1 column safety factor. The column load is a calculated value based on pin-pin mounting.

Common SAE#6 O-Ring Adapters
 907-0126 6MORB-6FJS STR. SWIVEL
 471-430 6MORB-8FJS STRAIGHT SWIVEL
 907-7757 06MORB-06FP STR. SWIVEL
 470-039 06MORB-06FPS STR. SWIVEL
 470-041 06MORB-08FPS STR. SWIVEL

Common SAE#8 O-Ring Adapters
 471-432 8MORB-8FJS STRAIGHT SWIVEL
 470-845 08MORB-06FP STR. FITTING
 907-7485 08MORB-08FP STR. SWIVEL
 470-043 08MORB-06FPS STR. SWIVEL
 470-045 08MORB-08FPS STR. SWIVEL

Fittings on page 86-87



Adjustable Spanner Wrench
Page 28

Welded and Versatile!

A Great Replacement For Tie Rod Cylinders!

The Chief WC, a high quality welded cylinder, is a step-up from a tie-rod cylinder. Stronger base end of forged steel. The new Chief WC 287 model has been improved with a screw in gland that reduces the cylinder profile by replacing a collar style gland. The Chief WC provides added strength to agricultural applications as well as other industries like OEM manufacture of trailers, compact construction equipment, and waste/recycling. The base end clevis extends out 2 inches for greater swing ability on applications. SAE 8 o-ring ports for easy hookup.

Each and every Chief WC cylinder is functionally tested and pressurized to 1.5 times the normal working pressure to insure performance reliability. Available in bore sizes from 1.5" to 4" and strokes from 4" to 48". It has a 3,000 PSI operating range and 3 year limited warranty. Painted red, available in custom colors.

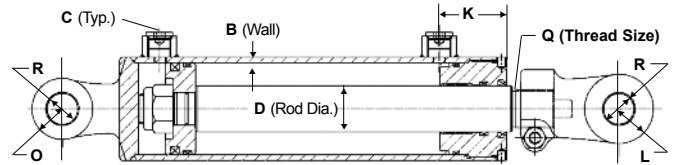
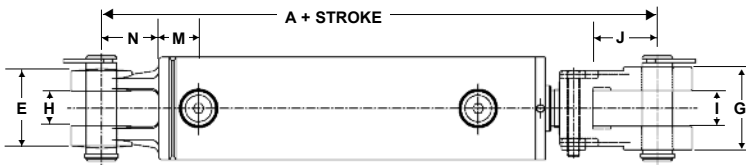


- Welded Cylinder
- Hard Chrome Plated Rod
- Screw-in Gland Design with Wear Ring
- Ductile Iron Piston with Wear Ring
- Hallite 755 Piston Seal with Wear Ring
- SAE 8 O-rings Ports (SAE 6 O-rings on 1 1/2" bore)
- Forged Steel Clevis Base End
- 3000 PSI Working Pressure

3000 PSI

Chief WC Welded Cylinders

Intended Use: Double-acting applications • **Piston:** Ductile iron with wear ring • **Gland:** Ductile iron, screw-in design with wear ring • **Tube:** Precision honed steel • **Rod:** Hard chrome plated • **Rod End Mount:** Ductile iron, threaded female clevis with pin and clips (Clevis welded to rod on 1 1/2" bore) • **Base End Mount:** Forged steel female clevis with pin and clips • **Tube Seal:** Buna O-ring with Polytemp hytrel backup • **Rod Seal:** Deep polypak with B lip design • **Rod Wiper:** Urethane, snap-in • **Piston Seal:** Hallite 755 for prolonged wear resistance with wear ring • **All Seals:** Manufactured to US specifications • **Ports:** SAE O-rings • **Paint:** Red. Custom colors are available • **Packaging:** Individually poly bagged.



Dimensional Data in Inches (Millimeters)

BORE	DIMENSIONS																
	A*	B	C	D	E	G	H	I	J	K	L	M	N	O	Q	R	T
** 1.500 (38.10)	10.250 (260.35)	0.188 (4.78)	SAE 6	.75*** (19.05)	1.850 (46.99)	1.732 (43.99)	0.787 (19.99)	0.787 (19.99)	2.216 (56.29)	2.125 (53.98)	0.906 (23.01)	0.922 (23.42)	2.126 (54.00)	0.787 (19.99)	NA	0.765 (19.43)	NA
2.000 (51)	10.250 (260)	0.188 (4.8)	SAE 8	1.125 (28.6)	2.618 (66.50)	2.500 (63.5)	1.126 (28.60)	1.165 (29.59)	2.125 (54.0)	1.895 (48.13)	1.000 (25.4)	1.044 (26.52)	2.125 (54.0)	1.000 (25.4)	11/8-12 UNF	1.011 (25.7)	NA
2.500 (64)	10.250 (260)	0.188 (4.8)	SAE 8	1.250 (31.8)	2.618 (66.50)	2.500 (63.5)	1.134 (28.80)	1.165 (29.59)	2.125 (54.0)	2.020 (51.31)	1.000 (25.4)	1.044 (26.52)	2.125 (54.0)	1.000 (25.4)	11/8-12 UNF	1.011 (25.7)	NA
3.000 (76)	10.250 (260)	0.188 (4.8)	SAE 8	1.500 (38.1)	2.618 (66.50)	2.717 (69.01)	1.134 (28.80)	1.165 (29.59)	2.125 (54.0)	2.199 (55.85)	1.132 (28.75)	1.310 (33.27)	1.875 (47.6)	1.000 (25.4)	11/4-12 UNF	1.011 (25.7)	NA
3.500 (89)	10.250 (260)	0.188 (4.8)	SAE 8	1.750 (44.5)	2.618 (66.50)	2.717 (69.01)	1.134 (28.80)	1.165 (29.59)	2.125 (54.0)	2.313 (58.75)	1.132 (28.75)	1.252 (31.80)	1.875 (47.6)	1.000 (25.4)	11/4-12 UNF	1.011 (25.7)	NA
4.000 (102)	10.250 (260)	0.25 (6.4)	SAE 8	2.000 (50.8)	2.622 (66.60)	2.717 (69.01)	1.134 (28.80)	1.165 (29.59)	2.125 (54.0)	2.208 (56.08)	1.132 (28.75)	1.614 (41.00)	1.750 (44.5)	1.250 (31.75)	11/4-12 UNF	1.011 (25.7)	NA

* Dimension "A" is 121/4" (311.2) for 8" (203.2) stroke ASAE cylinders. ** Clevis welded to rod on 1.5" bore sizes, all other sizes are threaded ***1.5" bore with strokes 18" and above have 1" rod diameter.

ORDER NO.	STROKE	ROD DIAMETER	RETRACT	COLUMN LOAD	PORT SIZE	PIN DIAMETER	SHIP WT.
1.5" Bore • 3000 PSI (Rod end welded on Clevis)							
287-070	6"	3/4"	16 1/4"	5,300 lbs.	SAE 6	3/4"	10
287-079	8"	3/4"	18 1/4"	4,930 lbs.	SAE 6	3/4"	11
287-071	8" ASAE	3/4"	20 1/4"	3,950 lbs.	SAE 6	3/4"	11
287-072	10"	3/4"	20 1/4"	3,740 lbs.	SAE 6	3/4"	12
287-073	12"	3/4"	22 1/4"	2,940 lbs.	SAE 6	3/4"	13
287-074	14"	3/4"	24 1/4"	2,370 lbs.	SAE 6	3/4"	14
287-075	16"	3/4"	26 1/4"	1,950 lbs.	SAE 6	3/4"	15
287-076	18"	1"	28 1/4"	4,950 lbs.	SAE 6	3/4"	16
287-077	20"	1"	30 1/4"	4,210 lbs.	SAE 6	3/4"	17
287-078	24"	1"	34 1/4"	3,140 lbs.	SAE 6	3/4"	19
286 or 287-098		3/4"			WC Packing Kit		
286-099		1"			WC Packing Kit		

FOR LARGER VOLUME CALL FOR A QUOTE

Welded Cylinders

Similar Items

Our 3000 PSI CHIEF WC tie-rod cylinders on pages 8-10.

Related Items

- Spherical Bushings p.102
- Solenoid Valves p.80-82
- Filters and Strainers p.60-62
- Check Valves p.74-75
- Lock Valves p.75
- Hose Products p.84-89

Sample Applications

- Agricultural Equipment
- Construction Equipment

Technical Information

Column Load is the maximum recommended push load (lb) to maintain at minimum a 2:1 column safetyfactor. The column load is a calculated value based on pin-pin mounting.



Adjustable Spanner Wrench
Page 28

ORDER NO.	STROKE	ROD DIAMETER	RETRACT	COLUMN LOAD	PORT SIZE	PIN DIAMETER	SHIP WT.
2" Bore • 3000 PSI							
287-001	4"	11/8"	141/4"	9,420 lbs.	SAE 8	1"	12
287-002 or 200-210	6"	11/8"	161/4"	9,420 lbs.	SAE 8	1"	15
287-003	8" ASAE	11/8"	201/4"	9,420 lbs.	SAE 8	1"	17
287-004 or 200-211	8"	11/8"	181/4"	9,420 lbs.	SAE 8	1"	16
287-005	10"	11/8"	201/4"	9,420 lbs.	SAE 8	1"	17
287-006	12"	11/8"	221/4"	9,420 lbs.	SAE 8	1"	19
287-007 or 200-212	14"	11/8"	241/4"	9,420 lbs.	SAE 8	1"	20
287-008 or 200-213	16"	11/8"	261/4"	9,420 lbs.	SAE 8	1"	21
287-009 or 200-214	18"	11/8"	281/4"	8,100 lbs.	SAE 8	1"	23
287-010	20"	11/8"	301/4"	6,880 lbs.	SAE 8	1"	26
287-011	24"	11/8"	341/4"	5,140 lbs.	SAE 8	1"	27
286 or 287-014	30"	11/8"	401/4"	3,550 lbs.	SAE 8	1"	31
287-015	36"	11/8"	461/4"	2,600 lbs.	SAE 8	1"	34
287-081	48"	11/8"	581/4"	1,560 lbs.	SAE 8	1"	36
286-100	11/8"				WC Packing Kit		
2 1/2" Bore • 3000 PSI							
287-016	4"	11/4"	141/4"	14,720 lbs.	SAE 8	1"	17
287-017 or 200-216	6"	11/4"	161/4"	14,720 lbs.	SAE 8	1"	18
286 or 287-018	8" ASAE	11/4"	201/4"	14,720 lbs.	SAE 8	1"	20
287-019	8"	11/4"	181/4"	14,720 lbs.	SAE 8	1"	20
287-020 or 200-217	10"	11/4"	201/4"	14,720 lbs.	SAE 8	1"	21
287-021	12"	11/4"	221/4"	14,720 lbs.	SAE 8	1"	23
287-022 or 200-218	14"	11/4"	241/4"	14,720 lbs.	SAE 8	1"	25
287-023	16"	11/4"	261/4"	14,720 lbs.	SAE 8	1"	27
287-024 or 200-219	18"	11/4"	281/4"	12,500 lbs.	SAE 8	1"	28
287-025	20"	11/4"	301/4"	10,610 lbs.	SAE 8	1"	29
287-026	24"	11/4"	341/4"	7,920 lbs.	SAE 8	1"	33
287-027	30"	11/4"	401/4"	5,470 lbs.	SAE 8	1"	37
287-028	36"	11/4"	461/4"	4,000 lbs.	SAE 8	1"	46
287-082	48"	11/4"	581/4"	2,400 lbs.	SAE 8	1"	49
286-101	11/4"				WC Packing Kit		
3" Bore • 3000 PSI							
287-029	4"	11/2"	141/4"	21,200 lbs.	SAE 8	1"	21
287-030	6"	11/2"	161/4"	21,200 lbs.	SAE 8	1"	23
287-031	8" ASAE	11/2"	201/4"	21,200 lbs.	SAE 8	1"	27
287-032	8"	11/2"	181/4"	21,200 lbs.	SAE 8	1"	27
287-033	10"	11/2"	201/4"	21,200 lbs.	SAE 8	1"	28
287-034	12"	11/2"	221/4"	21,200 lbs.	SAE 8	1"	34
287-035	14"	11/2"	241/4"	21,200 lbs.	SAE 8	1"	32
287-036 or 200-221	16"	11/2"	261/4"	21,200 lbs.	SAE 8	1"	39
287-037	18"	11/2"	281/4"	21,200 lbs.	SAE 8	1"	36
287-038	20"	11/2"	301/4"	21,200 lbs.	SAE 8	1"	38
287-039	24"	11/2"	341/4"	16,410 lbs.	SAE 8	1"	42
287-040	30"	11/2"	401/4"	11,310 lbs.	SAE 8	1"	49
287-080	32"	11/2"	421/4"	10,930 lbs.	SAE 8	1"	49
287-041	36"	11/2"	461/4"	8,270 lbs.	SAE 8	1"	54
287-083	48"	11/2"	581/4"	4,970 lbs.	SAE 8	1"	58
286-102	11/2"				WC Packing Kit		
3 1/2" Bore • 3000 PSI							
287-042	4"	13/4"	141/4"	28,860 lbs.	SAE 8	1"	24
287-043	6"	13/4"	161/4"	28,860 lbs.	SAE 8	1"	27
287-044	8" ASAE	13/4"	201/4"	28,860 lbs.	SAE 8	1"	29
287-045	8"	13/4"	181/4"	28,860 lbs.	SAE 8	1"	30
287-046	10"	13/4"	201/4"	28,860 lbs.	SAE 8	1"	34
287-047	12"	13/4"	221/4"	28,860 lbs.	SAE 8	1"	37
286 or 287-048	14"	13/4"	241/4"	28,860 lbs.	SAE 8	1"	40
287-049	16"	13/4"	261/4"	28,860 lbs.	SAE 8	1"	42
287-050	18"	13/4"	281/4"	28,860 lbs.	SAE 8	1"	43
287-051	20"	13/4"	301/4"	28,860 lbs.	SAE 8	1"	45
287-052	24"	13/4"	341/4"	28,860 lbs.	SAE 8	1"	53
287-053	30"	13/4"	401/4"	20,780 lbs.	SAE 8	1"	60
287-054	36"	13/4"	461/4"	15,190 lbs.	SAE 8	1"	66
287-084	48"	13/4"	581/4"	0,000 lbs.	SAE 8	1"	69
286-103	13/4"				WC Packing Kit		
4" Bore • 3000 PSI							
286 or 287-055	4"	2"	141/4"	37,690 lbs.	SAE 8	1"	34
286 or 287-056	6"	2"	161/4"	37,690 lbs.	SAE 8	1"	38
287-057	8" ASAE	2"	201/4"	37,690 lbs.	SAE 8	1"	44
287-058	8"	2"	181/4"	37,690 lbs.	SAE 8	1"	42
287-059	10"	2"	201/4"	37,690 lbs.	SAE 8	1"	46
287-060	12"	2"	221/4"	37,690 lbs.	SAE 8	1"	48
287-061	14"	2"	241/4"	37,690 lbs.	SAE 8	1"	53
287-062	16"	2"	261/4"	37,690 lbs.	SAE 8	1"	57
287-063	18"	2"	281/4"	37,690 lbs.	SAE 8	1"	58
287-064	20"	2"	301/4"	37,690 lbs.	SAE 8	1"	60
287-065	24"	2"	341/4"	37,690 lbs.	SAE 8	1"	71
287-066	30"	2"	401/4"	36,080 lbs.	SAE 8	1"	83
287-067	36"	2"	461/4"	26,340 lbs.	SAE 8	1"	94
287-068	48"	2"	581/4"	15,800 lbs.	SAE 8	1"	118
286-104	2"				WC Packing Kit		

SPECIAL PRICING AVAILABLE ON LARGER VOLUME PURCHASES. CALL FOR A FREE QUOTE.



Welded Cylinders

Common SAE#6 O-Ring Adapters

- 907-0126 6MORB-6FJS STR. SWIVEL
- 471-430 6MORB-8FJS STRAIGHT SWIVEL
- 907-7757 06MORB-06FP STR. SWIVEL
- 470-039 06MORB-06FPS STR. SWIVEL
- 470-041 06MORB-08FPS STR. SWIVEL

Common SAE#8 O-Ring Adapters

- 471-432 8MORB-8FJS STRAIGHT SWIVEL
- 470-845 08MORB-06FP STR. FITTING
- 907-7485 08MORB-08FP STR. SWIVEL
- 470-043 08MORB-06FPS STR. SWIVEL
- 470-045 08MORB-08FPS STR. SWIVEL

Fittings on page 86-87



Lowest Price 3000 PSI Welded Cylinder with Cross Tubes!

This Maxim Welded Cylinder is our lowest priced Cross Tube Mounted cylinder tested to our high standards. Designed to perform in the Agricultural industry as well as other industries. When price is the most important thing you should not have to give up quality. We have thoroughly tested these cylinders to our standards for quality and performance and they meet or exceed them. 1 year limited warranty. Painted black.

Features:

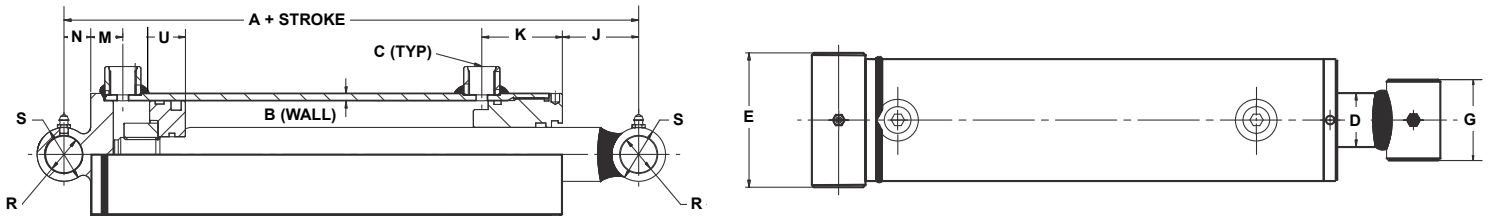
- Double-acting applications
- All Seals: Manufactured to US specification
- 100% hydro-pressure tested
- Rod: Superior quality chrome plated
- Ports: SAE O-ring



3000 PSI

Maxim Welded Cylinders

Intended Use: Double-acting applications • **Piston:** Ductile iron ASTM A536 65-45-12 for excellent life • **Piston Lock Nut :** Grade 8, high tensile zinc-plated • **Gland:** Ductile iron ASTM A536 65-45-12 • **Tube:** Precision honed steel • **Tube seal:** Nitrile O-ring with Polytemp hytrel back-up • **Rod:** High tensile ground & polished hard chrome plated rod • **Rod seal:** Std PolyPak with B lip design (Polyurethane U-cup with Nitrile O-ring expander) • **Wiper:** Polyurethane • **End Mounts:** Cross Tubes • **Piston ID Seal:** O-ring • **Piston OD seal:** Hallite 755 piston seal with wear ring • **Ports:** SAE O-rings



Dimensional Data in Inches (Millimeters)

BORE	DIMENSIONS												
	A	B	C	D	E	G	J	K	M	N	R	S	U
1.500 (38.1)	8.000 (203.2)	0.188 (4.8)	SAE 4	1.000 (25.4)	2.250 (57.2)	2.000 (50.8)	2.910 (74)	2.129 (54.1)	0.929 (23.6)	0.625 (15.9)	0.764 (19.4)	1.250 (31.8)	0.945 (24)
2.000 (51)	8.000 (203.2)	0.188 (4.8)	SAE 6	1.250 (31.8)	2.750 (69.85)	2.250 (57.15)	2.840 (72.1)	1.937 (49.2)	0.894 (22.7)	0.750 (19.1)	1.015 (25.8)	1.500 (38.1)	1.000 (25.4)
2.500 (64)	8.000 (203.2)	0.188 (4.8)	SAE 8	1.500 (38.1)	3.250 (82.55)	2.250 (57.15)	2.650 (67.3)	1.925 (48.9)	0.894 (22.7)	0.750 (19.1)	1.015 (25.8)	1.500 (38.1)	1.000 (25.4)
3.000 (76)	8.000 (203.2)	0.197 (5.0)	SAE 8	1.500 (38.1)	3.750 (95.25)	2.250 (57.15)	2.300 (58.4)	2.244 (57)	1.012 (25.7)	0.750 (19.1)	1.015 (25.8)	1.500 (38.1)	1.000 (25.4)
3.500 (89)	10.000 (254)	0.219 (5.563)	SAE 8	1.750 (44.5)	4.250 (107.95)	2.250 (57.15)	3.980 (101.1)	2.248 (57.1)	1.012 (25.7)	1.000 (25.4)	1.265 (32.1)	2.000 (50.8)	1.000 (25.4)
4.000 (102)	10.000 (254)	0.250 (6.350)	SAE 8	2.000 (50.8)	4.750 (120.65)	2.500 (63.5)	3.930 (99.8)	2.244 (57)	1.012 (25.7)	1.126 (28.6)	1.515 (38.5)	2.252 (57.2)	1.000 (25.4)

ORDER NO.	STROKE	ROD DIA.	DIMENSIONS		COLUMN LOAD	PORT SIZE	PIN HOLE DIAMETER	SHIP WT.
			RETRACTED	EXTENDED				
1 1/2" Bore • 3000 PSI								
288-300	4"	1"	12"	16"	5,300 lbs.	SAE 4	3/4"	10
288-301	6"	1"	14"	20"	5,300 lbs.	SAE 4	3/4"	11
288-302	8"	1"	16"	24"	5,300 lbs.	SAE 4	3/4"	12
288-303	10"	1"	18"	28"	5,300 lbs.	SAE 4	3/4"	14
288-304	12"	1"	20"	32"	5,300 lbs.	SAE 4	3/4"	16
288-305	14"	1"	22"	36"	5,300 lbs.	SAE 4	3/4"	17
288-306	16"	1"	24"	40"	5,300 lbs.	SAE 4	3/4"	18
204-605		1"			Packing Kit			

2" Bore • 3000 PSI								
288-307	4"	1 1/4"	12"	16"	9,420 lbs.	SAE 6	1"	11
288-308	6"	1 1/4"	14"	20"	9,420 lbs.	SAE 6	1"	13
288-309	8"	1 1/4"	16"	24"	9,420 lbs.	SAE 6	1"	15
288-310	10"	1 1/4"	18"	28"	9,420 lbs.	SAE 6	1"	16
288-311	12"	1 1/4"	20"	32"	9,420 lbs.	SAE 6	1"	18
288-312	14"	1 1/4"	22"	36"	9,420 lbs.	SAE 6	1"	20
288-313	16"	1 1/4"	24"	40"	9,420 lbs.	SAE 6	1"	21
288-314	18"	1 1/4"	26"	44"	9,420 lbs.	SAE 6	1"	23

**FOR LARGER VOLUME
CALL FOR A QUOTE**

(CONTINUED ON FOLLOWING PAGE)

Welded Cylinders

Similar Items

Our **CHIEFWT** tie-rod cylinders on pages 20-22 feature a 3000 PSI rating.

Related Items

- Hose Products p.84-89
- Stroke Controls p.36
- Directional Control Valves p.68-73
- Filters and Strainers p.61-62
- Pressure Gauges p.60,62

Available in
SAE Porting

Technical Information
Column Load is the maximum recommended push load (lb) to maintain at minimum a 2:1 column safety factor. The column load is a calculated value based on pin-pin mounting.

ORDER NO.	STROKE	ROD DIA.	DIMENSIONS		COLUMN LOAD	PORT SIZE	PIN HOLE DIAMETER
			RETRACTED	EXTENDED			

2" Bore • 3000 PSI

288-315	20"	1 1/4"	28"	48"	9,420 lbs.	SAE 6	1"	
288-316	24"	1 1/4"	32"	56"	8,370 lbs.	SAE 6	1"	
288-317	30"	1 1/4"	38"	68"	5,690 lbs.	SAE 6	1"	
288-318	32"	1 1/4"	40"	72"	5,080 lbs.	SAE 6	1"	
288-319	36"	1 1/4"	44"	80"	4,120 lbs.	SAE 6	1"	
204-606		1 1/4"	Packing Kit					

2 1/2" Bore • 3000 PSI

288-320	4"	1 1/2"	12"	16"	14,720 lbs.	SAE 8	1"	
288-321	6"	1 1/2"	14"	20"	14,720 lbs.	SAE 8	1"	
288-322	8"	1 1/2"	16"	24"	14,720 lbs.	SAE 8	1"	
288-323	10"	1 1/2"	18"	28"	14,720 lbs.	SAE 8	1"	
288-324	12"	1 1/2"	20"	32"	14,720 lbs.	SAE 8	1"	
288-325	14"	1 1/2"	22"	36"	14,720 lbs.	SAE 8	1"	
288-326	16"	1 1/2"	24"	40"	14,720 lbs.	SAE 8	1"	
288-327	18"	1 1/2"	26"	44"	14,720 lbs.	SAE 8	1"	
288-328	20"	1 1/2"	28"	48"	14,720 lbs.	SAE 8	1"	
288-329	24"	1 1/2"	32"	56"	14,720 lbs.	SAE 8	1"	
288-330	30"	1 1/2"	38"	68"	11,710 lbs.	SAE 8	1"	
288-331	32"	1 1/2"	40"	72"	10,450 lbs.	SAE 8	1"	
288-332	36"	1 1/2"	44"	80"	8,470 lbs.	SAE 8	1"	
204-607		1 1/2"	Packing Kit					

3" Bore • 3000 PSI

288-333	4"	1 1/2"	12"	16"	21,200 lbs.	SAE 8	1"	
288-334	6"	1 1/2"	14"	20"	21,200 lbs.	SAE 8	1"	
288-335	8"	1 1/2"	16"	24"	21,200 lbs.	SAE 8	1"	
288-336	10"	1 1/2"	18"	28"	21,200 lbs.	SAE 8	1"	
288-337	12"	1 1/2"	20"	32"	21,200 lbs.	SAE 8	1"	
288-338	14"	1 1/2"	22"	36"	21,200 lbs.	SAE 8	1"	
288-339	16"	1 1/2"	24"	40"	21,200 lbs.	SAE 8	1"	
288-340	18"	1 1/2"	26"	44"	21,200 lbs.	SAE 8	1"	
288-341	20"	1 1/2"	28"	48"	21,200 lbs.	SAE 8	1"	
288-342	24"	1 1/2"	32"	56"	18,070 lbs.	SAE 8	1"	
288-343	30"	1 1/2"	38"	68"	12,250 lbs.	SAE 8	1"	
288-344	32"	1 1/2"	40"	72"	10,930 lbs.	SAE 8	1"	
288-345	36"	1 1/2"	44"	80"	8,850 lbs.	SAE 8	1"	
288-346	40"	1 1/2"	48"	88"	7,310 lbs.	SAE 8	1"	
288-347	48"	1 1/2"	56"	104"	5,230 lbs.	SAE 8	1"	
204-608		1 1/2"	Packing Kit					

3 1/2" Bore • 3000 PSI

288-348	4"	1 3/4"	14"	18"	28,860 lbs.	SAE 8	1 1/4"	
288-349	6"	1 3/4"	16"	22"	28,860 lbs.	SAE 8	1 1/4"	
288-350	8"	1 3/4"	18"	26"	28,860 lbs.	SAE 8	1 1/4"	
288-351	10"	1 3/4"	20"	30"	28,860 lbs.	SAE 8	1 1/4"	
288-352	12"	1 3/4"	22"	34"	28,860 lbs.	SAE 8	1 1/4"	
288-353	14"	1 3/4"	24"	38"	28,860 lbs.	SAE 8	1 1/4"	
288-354	16"	1 3/4"	26"	42"	28,860 lbs.	SAE 8	1 1/4"	
288-355	18"	1 3/4"	28"	46"	28,860 lbs.	SAE 8	1 1/4"	
288-356	20"	1 3/4"	30"	50"	28,860 lbs.	SAE 8	1 1/4"	
288-357	24"	1 3/4"	34"	58"	28,860 lbs.	SAE 8	1 1/4"	
288-358	30"	1 3/4"	40"	70"	20,980 lbs.	SAE 8	1 1/4"	
288-359	32"	1 3/4"	42"	74"	18,790 lbs.	SAE 8	1 1/4"	
288-360	36"	1 3/4"	46"	82"	15,330 lbs.	SAE 8	1 1/4"	
288-361	40"	1 3/4"	50"	90"	12,740 lbs.	SAE 8	1 1/4"	
288-362	48"	1 3/4"	58"	106"	9,210 lbs.	SAE 8	1 1/4"	
204-609		1 3/4"	Packing Kit					

4" Bore • 3000 PSI

288-363	4"	2"	14"	28"	37,690 lbs.	SAE 8	1 1/2"	
288-364	6"	2"	16"	22"	37,690 lbs.	SAE 8	1 1/2"	
288-365	8"	2"	18"	26"	37,690 lbs.	SAE 8	1 1/2"	
288-366	10"	2"	20"	30"	37,690 lbs.	SAE 8	1 1/2"	
288-367	12"	2"	22"	34"	37,690 lbs.	SAE 8	1 1/2"	
288-368	14"	2"	24"	38"	37,690 lbs.	SAE 8	1 1/2"	
288-369	16"	2"	26"	42"	37,690 lbs.	SAE 8	1 1/2"	
288-370	18"	2"	28"	46"	37,690 lbs.	SAE 8	1 1/2"	
288-371	20"	2"	30"	50"	37,690 lbs.	SAE 8	1 1/2"	
288-372	24"	2"	34"	58"	37,690 lbs.	SAE 8	1 1/2"	
288-373	30"	2"	40"	70"	35,730 lbs.	SAE 8	1 1/2"	
288-374	32"	2"	42"	74"	32,010 lbs.	SAE 8	1 1/2"	
288-375	36"	2"	46"	82"	26,120 lbs.	SAE 8	1 1/2"	
288-376	40"	2"	50"	90"	21,720 lbs.	SAE 8	1 1/2"	
288-377	48"	2"	58"	106"	15,700 lbs.	SAE 8	1 1/2"	
204-610		2"	Packing Kit					

SPECIAL PRICING AVAILABLE ON LARGER VOLUME PURCHASES. CALL FOR A FREE QUOTE.



Welded Cylinders



Adjustable Spanner Wrench
Page 28

Common SAE#4 O-Ring Adapters
470-035 04MORB-04FPS STR. SWIVEL
471-428 04MORB-06FJS STR. SWIVEL

Common SAE#6 O-Ring Adapters
907-0126 6MORB-6FJS STR. SWIVEL
471-430 6MORB-8FJS STRAIGHT SWIVEL
907-7757 06MORB-06FP STR. SWIVEL
470-039 06MORB-06FPS STR. SWIVEL
470-041 06MORB-08FPS STR. SWIVEL

Common SAE#8 O-Ring Adapters
471-432 8MORB-8FJS STRAIGHT SWIVEL
470-845 08MORB-06FP STR. FITTING
907-7485 08MORB-08FP STR. SWIVEL
470-043 08MORB-06FPS STR. SWIVEL
470-045 08MORB-08FPS STR. SWIVEL
Fittings on page 86-87

Top of the Line Welded! Our Strongest Welded Cylinder!

Welded Cylinders

The Chief WT is our highest quality welded cylinder designed for heavier loads. The rod and base ends are welded cross tubes with grease zerk. Designed for performance, the Chief WT has a heavy-duty piston and a piston stem combined with wear rings to reduce friction. Screw-in gland is removable from rod end. Ideal for construction and agricultural applications as well as other industries like metal fabricating, waste/recycling and OEM manufacture of trailers. SAE o-ring port hookups on small bores and NPTF on large bores.

Each and every Chief WT cylinder is functionally tested and pressurized to 1.5 times the normal working pressure to insure performance reliability. The Chief WT is available in bore sizes from 2" to 8" and strokes from 4" to 96". It has a 3,000 PSI operating range and **3 year limited warranty**. Painted black. Available in custom colors.

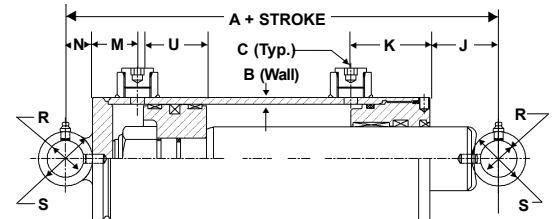
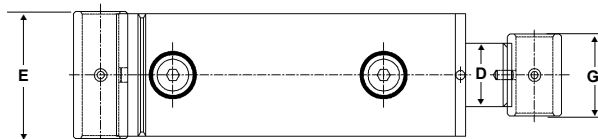
- Welded Cylinder
- 3000 PSI Working Pressure
- SAE O-ring Ports
- Cross Tube Ends with Grease Zerk



3000 PSI

Chief WT Welded Cylinders

Intended Use: Double-acting applications • **Piston:** Ductile iron with wear ring(s) • **Gland:** Ductile iron, screw-in design with wear ring • **Tube:** Precision honed steel • **Rod:** Ground and polished chromed steel, minimum 75,000 PSI yield • **Butt Plate:** Steel • **End Mounts:** Steel cross tubes with grease zerk • **Spacer Tube:** Steel on 48" stroke and above • **Gland Seal:** Polyurethane U-cup • **Wiper:** Polyurethane • **Piston Seal:** 755 Hallite with wear ring(s) • **All Other Seals:** Selected and designed for maximum life • **Ports:** SAE O-ring • **Paint:** Black



Dimensional Data in Inches (Millimeters)

BORE	DIMENSIONS													
	A*	B	C	D	E	G	J	K	M	N	R	S	T	U
2.000 (50.8)	7.000 (177.8)	0.188 (4.8)	SAE 8	1.250 (31.8)	2.500 (63.50)	1.750 (44.5)	2.440 (61.98)	1.880 (47.75)	0.970 (24.64)	0.630 (16.00)	0.765 (19.4)	1.250 (31.8)	NA	1.000 (25.40)
2.500 (63.5)	8.000 (203.2)	0.188 (4.8)	SAE 8	1.500 (38.1)	3.000 (76.20)	2.000 (50.8)	3.120 (79.25)	2.000 (50.80)	1.125 (28.64)	0.630 (16.00)	0.765 (19.4)	1.250 (31.8)	NA	1.000 (25.40)
3.000 (76.2)	8.000 (203.2)	0.188 (4.8)	SAE 8	1.750 (44.5)	3.500 (88.90)	2.250 (57.2)	1.910 (48.51)	2.190 (55.63)	1.250 (31.75)	0.750 (19.1)	1.015 (25.8)	1.500 (38.1)	NA	1.750 (44.45)
3.500 (88.9)	8.000 (203.2)	0.188 (4.8)	SAE 8	2.000 (50.8)	4.000 (101.60)	2.500 (63.5)	1.600 (40.64)	2.310 (58.67)	1.310 (33.27)	0.750 (19.1)	1.015 (25.8)	1.500 (38.1)	NA	1.750 (44.45)
4.000 (101.6)	9.000 (228.60)	0.250 (6.4)	SAE 8	2.250 (57.2)	4.625 (117.48)	4.000 (101.6)	2.073 (52.65)	2.185 (55.50)	1.610 (40.89)	1.000 (25.4)	1.265 (32.1)	2.000 (50.8)	NA	1.875 (47.63)
5.000 (127)	11.00 (279.4)	0.250 (6.4)	3/4" NPTF	2.500 (63.5)	5.750 (146.1)	4.000 (101.6)	2.750 (69.9)	3.000 (76.2)	2.000 (50.8)	1.250 (31.8)	1.515 (38.5)	2.500 (63.5)	6.250 (158.8)	2.00 (50.8)
6.000 (152.4)	11.00 (279.4)	0.250 (6.4)	3/4" NPTF	3.000 (76.2)	6.750 (171.5)	4.000 (101.6)	2.250 (57.2)	3.000 (76.2)	2.250 (57.2)	1.250 (31.8)	1.515 (38.5)	2.500 (63.5)	7.250 (184.2)	2.25 (57.2)
8.000 (203.2)	16.00 (406.4)	0.375 (9.5)	1" NPTF	4.000 (101.6)	9.000 (228.6)	5.000 (127.0)	3.500 (88.9)	3.313 (84.2)	3.187 (80.9)	2.000 (50.8)	2.515 (63.9)	4.000 (101.6)	9.910 (251.7)	4.00 (101.6)

*Dimension A 2.000 (50.8) spacer is added at 48.000 (1219.2) stroke, and an additional 1.000 (25.4) is added for each additional 6.000 (152.4) of stroke thereafter to a 6.000 (152.4) maximum spacer. ** For 2.0" with 1.0" pins "J" = 2.32", For 2.5" with 1.0" pins "J" = 3.00". ***For 2.0" and 2.5" bore there are additional cylinders the difference being R = 1.015" and S = 1.500".

ORDER NO.	STROKE	ROD DIA.	COLUMN RETRACT	LOAD	PORT SIZE	PIN HOLE DIA.	CROSS TUBE LENGTH ROD END	SHIP WT.
2" Bore • 3000 PSI								
217 or 212-674	4"	1 1/4"	11	9,420 lbs.	SAE 8	1"	13/4" 25/8"	10
212-700	4"	1 1/4"	11	9,420 lbs.	SAE 8	3/4"	13/4" 25/8"	10
319-162	4"	1 1/4"	10 1/2	9,420 lbs.	SAE 8	3/4"	13/4" 25/8"	10
212-675	6"	1 1/4"	13	9,420 lbs.	SAE 8	1"	13/4" 25/8"	11
212-701	6"	1 1/4"	13	9,420 lbs.	SAE 8	3/4"	13/4" 25/8"	11
212-676	8"	1 1/4"	15	9,420 lbs.	SAE 8	1"	13/4" 25/8"	12
216 or 212-702	8"	1 1/4"	15	9,420 lbs.	SAE 8	3/4"	13/4" 25/8"	12
212-677	10"	1 1/4"	17	9,420 lbs.	SAE 8	1"	13/4" 25/8"	13
217-703	10"	1 1/4"	17	9,420 lbs.	SAE 8	3/4"	13/4" 25/8"	13

FOR LARGER VOLUME CALL FOR A QUOTE

(2" BORE - CONTINUED ON FOLLOWING PAGE)

ORDER NO.	STROKE	ROD DIA.	RETRACT	COLUMN LOAD	PORT SIZE	PIN HOLE DIA.	CROSS TUBE LENGTH		SHIP WT.
							ROD END	BASE END	
2" Bore • 3000 PSI									
212-678	12"	1 1/4"	19	9,420 lbs.	SAE 8	1"	13/4"	25/8"	15
212-704	12"	1 1/4"	19	9,420 lbs.	SAE 8	3/4"	13/4"	25/8"	15
216-679	14"	1 1/4"	21	9,420 lbs.	SAE 8	1"	13/4"	25/8"	17
212-705	14"	1 1/4"	21	9,420 lbs.	SAE 8	3/4"	13/4"	25/8"	17
216-680	16"	1 1/4"	23	9,420 lbs.	SAE 8	1"	13/4"	25/8"	19
216 or 217-706	16"	1 1/4"	23	9,420 lbs.	SAE 8	3/4"	13/4"	25/8"	19
216-681	18"	1 1/4"	25	9,420 lbs.	SAE 8	1"	13/4"	25/8"	20
216 or 217-707	18"	1 1/4"	25	9,420 lbs.	SAE 8	3/4"	13/4"	25/8"	20
212-682	20"	1 1/4"	27	9,420 lbs.	SAE 8	1"	13/4"	25/8"	22
212-683	24"	1 1/4"	31	8,800 lbs.	SAE 8	1"	13/4"	25/8"	24
212-684	30"	1 1/4"	37	5,933 lbs.	SAE 8	1"	13/4"	25/8"	29
216-710	30"	1 1/4"	37	5,933 lbs.	SAE 8	3/4"	13/4"	25/8"	29
216-711	32"	1 1/4"	39	5,280 lbs.	SAE 8	3/4"	13/4"	25/8"	30
217-712	36"	1 1/4"	43	4,260 lbs.	SAE 8	3/4"	13/4"	25/8"	33
216-800		1 1/4"							

WT Packing Kit

2 1/2" Bore • 3000 PSI									
212-687	4"	1 1/2"	12"	14,720 lbs.	SAE 8	1"	2"	3 1/8"	14
216-713	4"	1 1/2"	12"	14,720 lbs.	SAE 8	3/4"	2"	3 1/8"	14
212-688	6"	1 1/2"	14"	14,720 lbs.	SAE 8	1"	2"	3 1/8"	16
212-714	6"	1 1/2"	14"	14,720 lbs.	SAE 8	3/4"	2"	3 1/8"	14
212-689	8"	1 1/2"	16"	14,720 lbs.	SAE 8	1"	2"	3 1/8"	18
212-715	8"	1 1/2"	16"	14,720 lbs.	SAE 8	3/4"	2"	3 1/8"	18
216-690	10"	1 1/2"	18"	14,720 lbs.	SAE 8	1"	2"	3 1/8"	20
212-716	10"	1 1/2"	18"	14,720 lbs.	SAE 8	3/4"	2"	3 1/8"	20
212-691	12"	1 1/2"	20"	14,720 lbs.	SAE 8	1"	2"	3 1/8"	22
212-717	12"	1 1/2"	20"	14,720 lbs.	SAE 8	3/4"	2"	3 1/8"	22
212-692	14"	1 1/2"	22"	14,720 lbs.	SAE 8	1"	2"	3 1/8"	24
212-693	16"	1 1/2"	24"	14,720 lbs.	SAE 8	1"	2"	3 1/8"	26
212-719	16"	1 1/2"	24"	14,720 lbs.	SAE 8	3/4"	2"	3 1/8"	26
212-694	18"	1 1/2"	26"	14,720 lbs.	SAE 8	1"	2"	3 1/8"	28
217 or 212-720	18"	1 1/2"	26"	14,720 lbs.	SAE 8	3/4"	2"	3 1/8"	28
212-695	20"	1 1/2"	28"	14,720 lbs.	SAE 8	1"	2"	3 1/8"	30
212-696	24"	1 1/2"	32"	14,720 lbs.	SAE 8	1"	2"	3 1/8"	34
212-722	24"	1 1/2"	32"	14,720 lbs.	SAE 8	3/4"	2"	3 1/8"	34
212-697	30"	1 1/2"	38"	11,690 lbs.	SAE 8	1"	2"	3 1/8"	39
212-723	30"	1 1/2"	38"	11,690 lbs.	SAE 8	3/4"	2"	3 1/8"	40
212-698	32"	1 1/2"	40"	10,430 lbs.	SAE 8	1"	2"	3 1/8"	42
212-699	36"	1 1/2"	44"	8,460 lbs.	SAE 8	1"	2"	3 1/8"	44
212-725	36"	1 1/2"	44"	8,460 lbs.	SAE 8	3/4"	2"	3 1/8"	44
216-801		1 1/2"							

WT Packing Kit

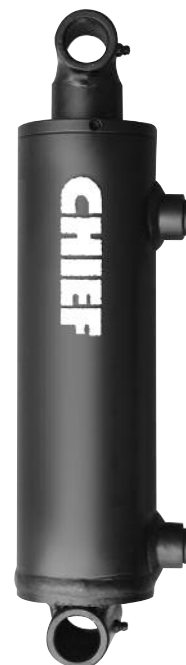
3" Bore • 3000 PSI									
212-726	4"	1 3/4"	12"	21,200 lbs.	SAE 8	1"	2 1/4"	3 5/8"	20
212-727	6"	1 3/4"	14"	21,200 lbs.	SAE 8	1"	2 1/4"	3 5/8"	23
212-728	8"	1 3/4"	16"	21,200 lbs.	SAE 8	1"	2 1/4"	3 5/8"	25
212-729	10"	1 3/4"	18"	21,200 lbs.	SAE 8	1"	2 1/4"	3 5/8"	27
212-730	12"	1 3/4"	20"	21,200 lbs.	SAE 8	1"	2 1/4"	3 5/8"	30
212-731	14"	1 3/4"	22"	21,200 lbs.	SAE 8	1"	2 1/4"	3 5/8"	33
212-732	16"	1 3/4"	24"	21,200 lbs.	SAE 8	1"	2 1/4"	3 5/8"	35
212-733	18"	1 3/4"	26"	21,200 lbs.	SAE 8	1"	2 1/4"	3 5/8"	37
212-734	20"	1 3/4"	28"	21,200 lbs.	SAE 8	1"	2 1/4"	3 5/8"	40
212-735	24"	1 3/4"	32"	21,200 lbs.	SAE 8	1"	2 1/4"	3 5/8"	45
212-736	30"	1 3/4"	38"	21,200 lbs.	SAE 8	1"	2 1/4"	3 5/8"	53
212-737	32"	1 3/4"	40"	15,880 lbs.	SAE 8	1"	2 1/4"	3 5/8"	56
212-738	36"	1 3/4"	44"	15,880 lbs.	SAE 8	1"	2 1/4"	3 5/8"	60
212-739	40"	1 3/4"	48"	21,200 lbs.	SAE 8	1"	2 1/4"	3 5/8"	79
217 or 212-740	42"	1 3/4"	50"	11,990 lbs.	SAE 8	1"	2 1/4"	3 5/8"	68
212-741	48"	1 3/4"	58"	9,370 lbs.	SAE 8	1"	2 1/4"	3 5/8"	78
216-802		1 3/4"							

WT Packing Kit

3 1/2" Bore • 3000 PSI									
212-745	10"	2"	18"	28,860 lbs.	SAE 8	1"	2 1/2"	4 1/8"	37
212-746	12"	2"	20"	28,860 lbs.	SAE 8	1"	2 1/2"	4 1/8"	38
217-747	14"	2"	22"	28,860 lbs.	SAE 8	1"	2 1/2"	4 1/8"	40
212-748	16"	2"	24"	28,860 lbs.	SAE 8	1"	2 1/2"	4 1/8"	44
217 or 212-749	18"	2"	26"	28,860 lbs.	SAE 8	1"	2 1/2"	4 1/8"	47
212-750	20"	2"	28"	28,860 lbs.	SAE 8	1"	2 1/2"	4 1/8"	50
212-751	24"	2"	32"	28,860 lbs.	SAE 8	1"	2 1/2"	4 1/8"	57
212-752	30"	2"	38"	28,860 lbs.	SAE 8	1"	2 1/2"	4 1/8"	66
217-753	32"	2"	40"	28,860 lbs.	SAE 8	1"	2 1/2"	4 1/8"	69
212-754	36"	2"	44"	27,040 lbs.	SAE 8	1"	2 1/2"	4 1/8"	75
217-755	40"	2"	48"	22,370 lbs.	SAE 8	1"	2 1/2"	4 1/8"	81
212-756	42"	2"	50"	19,000 lbs.	SAE 8	1"	2 1/2"	4 1/8"	84
212-757	48"	2"	58"	15,930 lbs.	SAE 8	1"	2 1/2"	4 1/8"	97
216-803		2"							

WT Packing Kit

SPECIAL PRICING AVAILABLE ON LARGER VOLUME PURCHASES. CALL FOR A FREE QUOTE.



Welded Cylinders

Common SAE#8 O-Ring Adapters
 471-432 8MORB-8FJS STRAIGHT SWIVEL
 470-845 08MORB-06FP STR. FITTING
 907-7485 08MORB-08FP STR. SWIVEL
 470-043 08MORB-06FPS STR. SWIVEL
 470-045 08MORB-08FPS STR. SWIVEL
 Fittings on page 86-87

CHIEF® WT Welded Cylinders

Welded
Cylinders



ORDER NO.	STROKE	ROD		COLUMN LOAD	PORT SIZE	PIN HOLE DIA.	CROSS TUBE LENGTH		SHIP WT.
		DIA.	RETRACT				ROD END	BASE END	
4" Bore • 3000 PSI									
212-760	8"	2 1/4"	17"	37,690 lbs.	SAE 8	1 1/4"	4"	43 3/4"	50
217 or 212-761	10"	2 1/4"	19"	37,690 lbs.	SAE 8	1 1/4"	4"	43 3/4"	54
212-762	12"	2 1/4"	21"	37,690 lbs.	SAE 8	1 1/4"	4"	43 3/4"	58
212-763	14"	2 1/4"	23"	37,690 lbs.	SAE 8	1 1/4"	4"	43 3/4"	63
212-764	16"	2 1/4"	25"	37,690 lbs.	SAE 8	1 1/4"	4"	43 3/4"	67
212-765	18"	2 1/4"	27"	37,690 lbs.	SAE 8	1 1/4"	4"	43 3/4"	71
212-766	20"	2 1/4"	29"	37,690 lbs.	SAE 8	1 1/4"	4"	43 3/4"	76
212-767	24"	2 1/4"	33"	37,690 lbs.	SAE 8	1 1/4"	4"	43 3/4"	83
212-768	30"	2 1/4"	39"	37,690 lbs.	SAE 8	1 1/4"	4"	43 3/4"	96
212-769	32"	2 1/4"	41"	37,690 lbs.	SAE 8	1 1/4"	4"	43 3/4"	100
212-770	36"	2 1/4"	45"	37,690 lbs.	SAE 8	1 1/4"	4"	43 3/4"	109
212-771	40"	2 1/4"	49"	33,700 lbs.	SAE 8	1 1/4"	4"	43 3/4"	116
212-772	42"	2 1/4"	51"	30,920 lbs.	SAE 8	1 1/4"	4"	43 3/4"	122
212-773	48"	2 1/4"	59"	23,280 lbs.	SAE 8	1 1/4"	4"	43 3/4"	140
212-774	54"	2 1/4"	66"	18,520 lbs.	SAE 8	1 1/4"	4"	43 3/4"	149
212-775	60"	2 1/4"	73"	15,090 lbs.	SAE 8	1 1/4"	4"	43 3/4"	170
212-776	72"	2 1/4"	87"	10,570 lbs.	SAE 8	1 1/4"	4"	43 3/4"	198
212-777	84"	2 1/4"	99"	8,020 lbs.	SAE 8	1 1/4"	4"	43 3/4"	212
212-778	96"	2 1/4"	111"	6,290 lbs.	SAE 8	1 1/4"	4"	43 3/4"	270
216-804		2 1/4"			WT Packing Kit				

ORDER NO.	STROKE	ROD		COLUMN LOAD	PORT SIZE	PIN HOLE DIA.	CROSS TUBE LENGTH		SHIP WT.
		DIA.	RETRACT				ROD END	BASE END	
5" Bore • 3000 PSI Made In The USA									
216-120	8"	2 1/2"	19"	58,900 lbs.	3/4" NPTF	1 1/2"	4"	53 3/4"	
216-136	10"	2 1/2"	21"	58,900 lbs.	3/4" NPTF	1 1/2"	4"	53 3/4"	
216-121	12"	2 1/2"	23"	58,900 lbs.	3/4" NPTF	1 1/2"	4"	53 3/4"	
216-137	14"	2 1/2"	25"	58,900 lbs.	3/4" NPTF	1 1/2"	4"	53 3/4"	
216-122	16"	2 1/2"	27"	58,900 lbs.	3/4" NPTF	1 1/2"	4"	53 3/4"	
216-138	18"	2 1/2"	29"	58,900 lbs.	3/4" NPTF	1 1/2"	4"	53 3/4"	
216-123	20"	2 1/2"	31"	58,900 lbs.	3/4" NPTF	1 1/2"	4"	53 3/4"	
216-124	24"	2 1/2"	35"	58,900 lbs.	3/4" NPTF	1 1/2"	4"	53 3/4"	
216-125	30"	2 1/2"	41"	58,900 lbs.	3/4" NPTF	1 1/2"	4"	53 3/4"	
216-132	32"	2 1/2"	43"	58,900 lbs.	3/4" NPTF	1 1/2"	4"	53 3/4"	
216-126	36"	2 1/2"	47"	58,900 lbs.	3/4" NPTF	1 1/2"	4"	53 3/4"	
216-133	40"	2 1/2"	51"	55,884 lbs.	3/4" NPTF	1 1/2"	4"	53 3/4"	
216-131	42"	2 1/2"	53"	52,258 lbs.	3/4" NPTF	1 1/2"	4"	53 3/4"	
216-127	48"	2 1/2"	61"	41,837 lbs.	3/4" NPTF	1 1/2"	4"	53 3/4"	
216-128	54"	2 1/2"	68"	34,586 lbs.	3/4" NPTF	1 1/2"	4"	53 3/4"	
216-129	60"	2 1/2"	75"	28,994 lbs.	3/4" NPTF	1 1/2"	4"	53 3/4"	
216-130	72"	2 1/2"	89"	21,127 lbs.	3/4" NPTF	1 1/2"	4"	53 3/4"	
216-505		2 1/2"			WT Packing Kit				

ORDER NO.	STROKE	ROD		COLUMN LOAD	PORT SIZE	PIN HOLE DIA.	CROSS TUBE LENGTH		SHIP WT.
		DIA.	RETRACT				ROD END	BASE END	
6" Bore • 3000 PSI Made In The USA									
216-140	8"	3"	19"	84,820 lbs.	3/4" NPTF	1 1/2"	4"	63 3/4"	
216-156	10"	3"	21"	84,820 lbs.	3/4" NPTF	1 1/2"	4"	63 3/4"	
216-141	12"	3"	23"	84,820 lbs.	3/4" NPTF	1 1/2"	4"	63 3/4"	
216-157	14"	3"	25"	84,820 lbs.	3/4" NPTF	1 1/2"	4"	63 3/4"	
216-142	16"	3"	27"	84,820 lbs.	3/4" NPTF	1 1/2"	4"	63 3/4"	
216-158	18"	3"	29"	84,820 lbs.	3/4" NPTF	1 1/2"	4"	63 3/4"	
216-143	20"	3"	31"	84,820 lbs.	3/4" NPTF	1 1/2"	4"	63 3/4"	
216-144	24"	3"	35"	84,820 lbs.	3/4" NPTF	1 1/2"	4"	63 3/4"	
216-145	30"	3"	41"	84,820 lbs.	3/4" NPTF	1 1/2"	4"	63 3/4"	
216-152	32"	3"	43"	84,820 lbs.	3/4" NPTF	1 1/2"	4"	63 3/4"	
216-146	36"	3"	47"	84,820 lbs.	3/4" NPTF	1 1/2"	4"	63 3/4"	
216-153	40"	3"	51"	84,820 lbs.	3/4" NPTF	1 1/2"	4"	63 3/4"	
216-151	42"	3"	53"	84,820 lbs.	3/4" NPTF	1 1/2"	4"	63 3/4"	
216-147	48"	3"	61"	80,701 lbs.	3/4" NPTF	1 1/2"	4"	63 3/4"	
216-148	54"	3"	68"	67,530 lbs.	3/4" NPTF	1 1/2"	4"	63 3/4"	
216-149	60"	3"	75"	57,152 lbs.	3/4" NPTF	1 1/2"	4"	63 3/4"	
216-150	72"	3"	89"	42,210 lbs.	3/4" NPTF	1 1/2"	4"	63 3/4"	
216-506		3"			WT Packing Kit				

ORDER NO.	STROKE	ROD		COLUMN LOAD	PORT SIZE	PIN HOLE DIA.	CROSS TUBE LENGTH		SHIP WT.
		DIA.	RETRACT				ROD END	BASE END	
8" Bore • 3000 PSI Made In The USA									
216-160	8"	4"	24"	150,790 lbs.	1" NPTF	2 1/2"	5"	9"	
216-161	12"	4"	28"	150,790 lbs.	1" NPTF	2 1/2"	5"	9"	
216-162	16"	4"	32"	150,790 lbs.	1" NPTF	2 1/2"	5"	9"	
216-171	20"	4"	36"	150,790 lbs.	1" NPTF	2 1/2"	5"	9"	
216-164	24"	4"	40"	150,790 lbs.	1" NPTF	2 1/2"	5"	9"	
216-165	30"	4"	46"	150,790 lbs.	1" NPTF	2 1/2"	5"	9"	
216-166	36"	4"	52"	150,790 lbs.	1" NPTF	2 1/2"	5"	9"	
216-167	48"	4"	66"	150,790 lbs.	1" NPTF	2 1/2"	5"	9"	
216-169	60"	4"	80"	150,790 lbs.	1" NPTF	2 1/2"	5"	9"	
216-507		4"			WT Packing Kit				

Bore sizes 5, 6 & 8" made in the USA have a gland collar design as shown above and are Painted black.

Common 3/4" NPT Adapters

- 907-0183 12MP-08FPS STRAIGHT SWIVEL
- 470-013 12MP-12FPS STRAIGHT SWIVEL
- 471-128 12MP-08FP REDUCER BUSHING

Common 1" NPT Adapter

- 470-687 16MP-12FP REDUCER BUSHING

Common SAE#8 O-Ring Adapters

- 471-432 8MORB-8FJS STRAIGHT SWIVEL
- 470-845 08MORB-06FP STR. FITTING
- 907-7485 08MORB-08FP STR. SWIVEL
- 470-043 08MORB-06FPS STR. SWIVEL
- 470-045 08MORB-08FPS STR. SWIVEL

Fittings on page 86-87



Thread Sealant

For Hydraulic/Pneumatic Fittings. See Page 115

SPECIAL PRICING AVAILABLE ON LARGER VOLUME PURCHASES. CALL FOR A FREE QUOTE.

Loader Cylinders

3000 PSI Welded Cylinder!

The Chief LD is our small bore welded cylinder designed for light duty loaders. The rod and base ends are welded cross tubes with grease zerk. The ductile iron piston utilizes a wear ring to protect the seal from wear. Ideal for construction, agricultural and other applications.

Each and every Chief LD cylinder is functionally tested and pressurized to 1.5 times the normal working pressure to insure performance reliability. It has a 3,000 PSI operating range and **3 year limited warranty**. The Chief LD is manufactured at Order's ISO 9001:2000 certified facility. Painted Black.

- Welded Cylinder
- 3000 PSI Working Pressure
- SAE O-ring Ports
- Cross Tube Ends with Grease Zerk



Welded Cylinders

3000 PSI

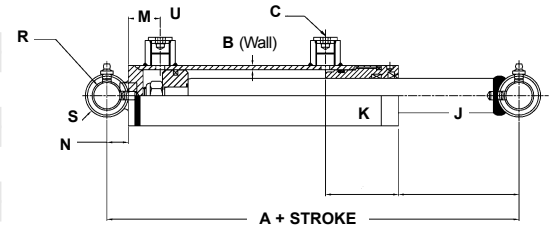
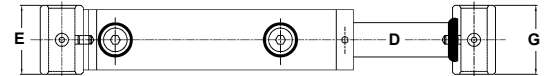
Chief LD Welded Cylinders by Order

Intended Use: Double-acting applications • **Piston:** Ductile iron • **Gland:** Ductile iron • **Tube:** Honed steel • **Rod:** Hard chrome plated • **End Mounts:** Cross tubes • **Tube Seal:** Buna O-ring with Polytemp hytrel back-up • **Rod Seal:** Polyurethane u-cup • **Rod Wiper:** Polyurethane, snap-in • **Piston Seal:** 755 with wear rings, (2 ea.) wear bearings • **All Seals:** Manufactured to US specifications • **Ports:** SAE O-rings • **Paint:** Black Custom colors are available. • **Packaging:** Individually poly bagged.

Dimensional Data in Inches (Millimeters)

DIMENSIONS													
BORE	A*	B	C	D	E	G	J	K	M	N	R	S	U
1.500	8.000	0.188	SAE 6	1.000	2.000	2.000	3.507*	2.125	0.930	0.625	0.765	1.250	0.750
(38.10)	(203.2)	(4.78)	SAE 6	(25.40)	(50.80)	(50.80)	(89.08)*	(53.98)	(23.62)	(15.88)	(19.43)	(31.75)	(19.05)
1.750	Varies	0.188	SAE 6	1.000	2.125	3.000	Varies	1.875	0.123	0.750	1.016	1.500	1.000
(44.45)	Varies	(4.78)	SAE 6	(25.40)	(53.98)	(76.20)	Varies	(47.63)	(28.52)	(19.05)	(25.81)	(38.10)	(25.40)
2.000	Varies	0.188	SAE 6	1.250	2.382	2.756	Varies	1.875	0.974	1.000	1.264	2.000	1.000
(50.80)	Varies	(4.78)	SAE 6	(31.75)	(60.50)	(70.00)	Varies	(47.63)	(24.74)	(25.40)	(32.11)	(50.80)	(25.40)
2.250	Varies	0.188	SAE 8	1.500	2.630	3.500	Varies	2.000	1.140	1.000	1.264	2.000	1.000
(57.15)	Varies	(4.78)	SAE 8	(38.10)	(66.80)	(88.90)	Varies	(50.80)	(28.96)	(25.40)	(32.11)	(50.80)	(25.40)
2.500	Varies	0.188	SAE 8	1.500	2.870	3.504	Varies	2.000	1.040	1.000	1.264	2.000	1.000
(63.05)	Varies	(4.78)	SAE 8	(38.10)	(72.90)	(89.00)	Varies	(50.80)	(26.42)	(25.40)	(32.11)	(50.80)	(25.40)
2.750	13.875	0.200	SAE 8	1.750	3.130	3.500	8.250	2.190	1.260	1.000	1.264	2.000	1.000
(69.85)	(352.43)	(5.08)	SAE 8	(44.45)	(79.50)	(88.90)	(209.55)	(55.63)	(32.00)	(25.40)	(32.11)	(50.80)	(25.40)
3.000	8.875	0.188	SAE 8	1.750	3.386	3.504	2.254	2.187	1.254	1.000	1.264	2.000	1.000
(76.20)	(225.43)	(4.78)	SAE 8	(44.45)	(86.00)	(89.00)	(82.65)	(55.55)	(31.85)	(25.40)	(32.11)	(50.80)	(25.40)

** Clevis welded to rod on 1.5" bore sizes, all other sizes are threaded.***1.5" bore with strokes 18" and above have 1" rod diameter.



ORDER NO.	STROKE	ROD DIA.	RETRACT	COLUMN LOAD	PORT SIZE	PIN HOLE DIA.	CROSS TUBE LENGTH ROD END	CROSS TUBE LENGTH BASE END	SHIP WT.
New!									
1 1/2" Bore • 3000 PSI									
219-200	12"	1"	20"	5,300 lbs.	SAE 6	3/4"	2"	2"	12
219-201	14"	1"	22"	5,300 lbs.	SAE 6	3/4"	2"	2"	12
219-202	16"	1"	24"	5,300 lbs.	SAE 6	3/4"	2"	2"	14
219-203	18"	1"	26"	5,300 lbs.	SAE 6	3/4"	2"	2"	16
219-206	18 1/2"	1"	25"	5,300 lbs.	SAE 6	3/4"	3"	17 7/8"	16
219-204	20"	1"	28"	4,510 lbs.	SAE 6	3/4"	2"	2"	16
219-205	24"	1"	32"	3,340 lbs.	SAE 6	3/4"	2"	2"	22

1 3/4" Bore • 3000 PSI									
219-207	14"	1"	28 1/2"	5,150 lbs.	SAE 6	1"	3"	2 1/8"	25
219-208	14 1/4"	1"	28 1/4"	5,200 lbs.	SAE 6	1"	3"	2 1/8"	25
219-209	15 1/2"	1"	22 3/4"	7,210 lbs.	SAE 6	1"	3"	2 1/8"	27
219-210	16 1/4"	1"	24.13"	6,690 lbs.	SAE 6	1"	3"	2 1/8"	32
219-211	18"	1"	27 1/4"	5,160 lbs.	SAE 6	1"	3"	2 1/8"	34

2" Bore • 3000 PSI									
219-213	19 1/4"	1 1/4"	267/8"	9,420 lbs.	SAE 6	1 1/4"	2 3/4"	3 3/8"	27
219-212	19 3/4"	1 1/4"	263/8"	9,420 lbs.	SAE 6	1 1/4"	2 3/4"	3 3/8"	27
219-214	22 3/4"	1 1/4"	297/8"	9,420 lbs.	SAE 6	1 1/4"	2 3/4"	3 3/8"	30

2 1/4" Bore • 3000 PSI									
219-216	19 1/2"	1 1/2"	27 1/4"	11,920 lbs.	SAE 8	1 1/4"	3 1/2"	2 5/8"	28
219-215	23 1/4"	1 1/2"	30 1/4"	11,920 lbs.	SAE 8	1 1/4"	3 1/2"	2 5/8"	30

2 1/2" Bore • 3000 PSI									
219-219	18 1/4"	1 1/2"	31 3/4"	14,720 lbs.	SAE 8	1 1/4"	3 1/2"	2 7/8"	27
219-217	23 1/2"	1 1/2"	34"	14,720 lbs.	SAE 8	1 1/4"	3 1/2"	2 7/8"	34
219-218	23 1/2"	1 1/2"	37"	13,440 lbs.	SAE 8	1 1/4"	3 1/2"	2 7/8"	34

2 3/4" Bore • 3000 PSI									
219-220	18 1/4"	1 3/4"	32 1/8"	16,000 lbs.	SAE 8	1 1/4"	3 1/2"	3 1/8"	35



FOR LARGER VOLUME CALL FOR A QUOTE

Medium-Duty Welded! Highly Versatile Welded Cylinder!

Welded Cylinders

The Chief WP is a high quality welded and very versatile cylinder. The rod end comes eye drilled and can easily be customized by cutting and welding to fit your rod end of choice. Base end has a strong cross tube with grease zerk. Ideal for construction and agricultural applications as well as other industries like OEM manufacture of trailers, Metal fabricating and waste/recycling equipment. SAE 8 O-ring ports for easy hookup.

Each and every Chief WP cylinder is functionally tested and pressurized to 1.5 times the normal working pressure to insure performance reliability. The Chief WP is available in bore sizes from 1 1/2" to 4" and strokes from 4" to 72". It has a 3,000 PSI operating range and **3 year limited warranty**. Painted black, available in custom colors.

- Hard Chrome Plated Rod
- Ductile Iron Piston with Wear Ring
- Hallite 755 Piston Seal
- SAE 8 O-ring Ports (SAE 6 O-rings on 1 1/2" bore)
- Cross Tube Base End with Grease Zerk
- 3000 PSI Working Pressure
- Eye Drilled Rod End

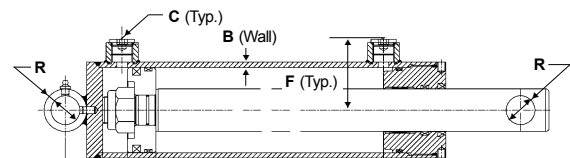
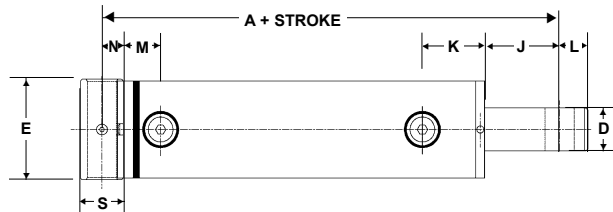


Made In USA

3000 PSI

Chief WP Welded Cylinders

Intended Use: Double-acting applications • **Piston:** Ductile iron with wear ring • **Gland:** Ductile iron, screw-in design with wear ring • **Tube:** Precision honed steel • **Rod:** Hard chrome plated • **Rod End Mount:** Rod eye drilled • **Base End Mount:** Steel cross tube with grease zerk • **Tube Seal:** Buna O-ring with Polytemp hytrel backup • **Rod Seal:** Deep polypak with B lip design • **Rod Wiper:** Urethane, snap-in • **Piston Seal:** Hallite 755 provides prolonged wear resistance with wear ring • **All Seals:** Manufactured to US specifications • **Ports:** SAE O-rings • **Paint:** Black. Custom colors are available. • **Packaging:** Individually poly bagged



Dimensional Data in Inches (Millimeters)

BORE	DIMENSIONS												
	A	B	C	D	E	F	J	K	L	M	N	R	S
1.500 (38.1)	7.000 (177.8)	0.188 (4.8)	SAE 6	1.000 (25.4)	2.000 (50.8)	1.625 (41.28)	2.507 (63.68)	2.125 (53.98)	0.625 (15.88)	0.851 (21.62)	0.625 (15.9)	0.640 (16.3)	1.250 (31.75)
2.000 (50.8)	8.000 (203.2)	0.188 (4.8)	SAE 8	1.250 (31.8)	2.500 (63.5)	1.874 (47.60)	3.444 (87.48)	1.875 (47.6)	0.750 (19.1)	0.974 (24.74)	0.625 (15.9)	0.765 (19.4)	1.250 (31.75)
2.500 (63.5)	8.000 (203.2)	0.188 (4.8)	SAE 8	1.375 (34.9)	3.000 (76.2)	2.125 (53.98)	3.125 (79.38)	2.000 (50.8)	0.750 (19.1)	1.044 (26.52)	0.625 (15.9)	0.765 (19.4)	1.250 (31.75)
3.000 (76.2)	8.000 (203.2)	0.188 (4.8)	SAE 8	1.500 (38.1)	3.500 (88.9)	2.375 (60.33)	2.629 (66.78)	2.187 (55.5)	1.000 (25.4)	1.245 (31.62)	0.750 (19.1)	1.015 (25.8)	1.500 (38.10)
3.500 (88.9)	8.000 (203.2)	0.188 (4.8)	SAE 8	1.750 (44.5)	4.000 (101.6)	2.624 (66.65)	2.438 (61.93)	2.312 (58.7)	1.000 (25.4)	1.312 (33.32)	0.750 (19.1)	1.015 (25.8)	1.500 (38.10)
4.000 (101.6)	9.000 (228.6)	0.25 (6.4)	SAE 8	2.000 (50.8)	4.625 (117.5)	2.937 (74.60)	3.002 (76.25)	2.185 (55.50)	1.250 (31.8)	1.613 (40.97)	1.000 (25.4)	1.265 (32.1)	2.000 (50.80)

CUSTOMIZE?

Chief WP cylinders can be customized to your specifications. Contact us for details.



Adjustable Spanner Wrench
Page 28

ORDER NO.	STROKE	ROD DIA.	RETRACT	COLUMN LOAD	PORT SIZE	CROSS TUBE/ PIN HOLE I.D.	SHIP WT.
1 1/2" Bore • 3000 PSI							
287-200	4"	1"	11"	5,300 lbs.	SAE 6	5/8"	8
287-201	6"	1"	13"	5,300 lbs.	SAE 6	5/8"	8
287-202	8"	1"	15"	5,300 lbs.	SAE 6	5/8"	8
200-224	8"	1"	15"	5,300 lbs.	SAE 6	5/8"	13
287-203	10"	1"	17"	5,300 lbs.	SAE 6	5/8"	9
287-204	12"	1"	19"	5,300 lbs.	SAE 6	5/8"	10
286-350		1"			WP Packing Kit		

2" Bore • 3000 PSI							
287-207 or 200-225	8"	1 1/4"	16"	9,420 lbs.	SAE 8	3/4"	14
287-208 or 200-226	10"	1 1/4"	18"	9,420 lbs.	SAE 8	3/4"	16
287-211	16"	1 1/4"	24"	9,420 lbs.	SAE 8	3/4"	18
287-213	20"	1 1/4"	28"	9,420 lbs.	SAE 8	3/4"	21
287-214	24"	1 1/4"	32"	8,180 lbs.	SAE 8	3/4"	24
287-216	30"	1 1/4"	38"	5,580 lbs.	SAE 8	3/4"	28
287-218	32"	1 1/4"	40"	4,990 lbs.	SAE 8	3/4"	30
287-219	36"	1 1/4"	44"	4,050 lbs.	SAE 8	3/4"	34
287-221	42"	1 1/4"	50"	3,070 lbs.	SAE 8	3/4"	35
287-222	48"	1 1/4"	56"	2,410 lbs.	SAE 8	3/4"	40
287-225	60"	1 1/4"	68"	1,590 lbs.	SAE 8	3/4"	49
287-226	72"	1 1/4"	80"	1,130 lbs.	SAE 8	3/4"	58
286-351		1 1/4"			WP Packing Kit		

2 1/2" Bore • 3000 PSI							
287-229	8"	1 3/8"	16"	14,720 lbs.	SAE 8	3/4"	14
287-231	12"	1 3/8"	20"	14,720 lbs.	SAE 8	3/4"	20
287-233 or 200-227	16"	1 3/8"	24"	14,720 lbs.	SAE 8	3/4"	23
287-235	20"	1 3/8"	28"	14,720 lbs.	SAE 8	3/4"	27
287-236	24"	1 3/8"	32"	12,250 lbs.	SAE 8	3/4"	30
287-238	30"	1 3/8"	38"	8,350 lbs.	SAE 8	3/4"	33
287-239	32"	1 3/8"	40"	7,460 lbs.	SAE 8	3/4"	37
287-240	36"	1 3/8"	44"	6,050 lbs.	SAE 8	3/4"	41
287-242 or 200-228	42"	1 3/8"	50"	4,590 lbs.	SAE 8	3/4"	46
287-244	48"	1 3/8"	56"	3,600 lbs.	SAE 8	3/4"	51
287-248	60"	1 3/8"	68"	2,380 lbs.	SAE 8	3/4"	62
286-352		1 3/8"			WP Packing Kit		

3" Bore • 3000 PSI							
287-252 or 200-229	8"	1 1/2"	16"	21,200 lbs.	SAE 8	1"	21
287-254	12"	1 1/2"	20"	21,200 lbs.	SAE 8	1"	25
287-256	16"	1 1/2"	24"	21,200 lbs.	SAE 8	1"	29
287-258 or 200-230	20"	1 1/2"	28"	21,200 lbs.	SAE 8	1"	33
287-259	24"	1 1/2"	32"	17,840 lbs.	SAE 8	1"	37
287-261	30"	1 1/2"	38"	12,120 lbs.	SAE 8	1"	43
287-263	36"	1 1/2"	44"	8,770 lbs.	SAE 8	1"	50
287-265	40"	1 1/2"	48"	7,250 lbs.	SAE 8	1"	55
287-266	42"	1 1/2"	50"	6,640 lbs.	SAE 8	1"	57
287-269	48"	1 1/2"	56"	5,200 lbs.	SAE 8	1"	63
287-272	60"	1 1/2"	68"	3,430 lbs.	SAE 8	1"	76
286-353		1 1/2"			WP Packing Kit		

3 1/2" Bore • 3000 PSI							
287-275	8"	1 3/4"	16"	28,860 lbs.	SAE 8	1"	27
287-276	10"	1 3/4"	18"	28,860 lbs.	SAE 8	1"	29
287-277	12"	1 3/4"	20"	28,860 lbs.	SAE 8	1"	31
287-278	16"	1 3/4"	24"	28,860 lbs.	SAE 8	1"	39
287-279	18"	1 3/4"	26"	28,860 lbs.	SAE 8	1"	43
287-280 or 200-231	20"	1 3/4"	28"	28,860 lbs.	SAE 8	1"	46
287 or 286-281	24"	1 3/4"	32"	28,860 lbs.	SAE 8	1"	48
287-282	30"	1 3/4"	38"	22,290 lbs.	SAE 8	1"	52
287-283	36"	1 3/4"	44"	16,120 lbs.	SAE 8	1"	64
287-284	40"	1 3/4"	48"	13,330 lbs.	SAE 8	1"	69
286-354		1 3/4"			WP Packing Kit		

4" Bore • 3000 PSI							
287-290	8"	2"	17"	37,690 lbs.	SAE 8	1 1/4"	40
287-291	10"	2"	19"	37,690 lbs.	SAE 8	1 1/4"	47
287-292	12"	2"	21"	37,690 lbs.	SAE 8	1 1/4"	49
287-294	16"	2"	25"	37,690 lbs.	SAE 8	1 1/4"	56
287-295	18"	2"	27"	37,690 lbs.	SAE 8	1 1/4"	59
287-296	20"	2"	29"	37,690 lbs.	SAE 8	1 1/4"	64
287-300	24"	2"	33"	37,690 lbs.	SAE 8	1 1/4"	70
287-301	30"	2"	39"	37,690 lbs.	SAE 8	1 1/4"	80
287-302	36"	2"	45"	27,380 lbs.	SAE 8	1 1/4"	93
287-305	48"	2"	57"	16,280 lbs.	SAE 8	1 1/4"	118
287-309	60"	2"	69"	10,780 lbs.	SAE 8	1 1/4"	130
286-355		2"			WP Packing Kit		



Welded
Cylinders

SPECIAL PRICING AVAILABLE ON LARGER VOLUME PURCHASES. CALL FOR A FREE QUOTE.

Common SAE#6 O-Ring Adapters
 907-0126 6MORB-6FJS STR. SWIVEL
 471-430 6MORB-8FJS STRAIGHT SWIVEL
 907-7757 06MORB-06FP STR. SWIVEL
 470-039 06MORB-06FPS STR. SWIVEL
 470-041 06MORB-08FPS STR. SWIVEL

Common SAE#8 O-Ring Adapters
 471-432 8MORB-8FJS STRAIGHT SWIVEL
 470-845 08MORB-06FP STR. FITTING
 907-7485 08MORB-08FP STR. SWIVEL
 470-043 08MORB-06FPS STR. SWIVEL
 470-045 08MORB-08FPS STR. SWIVEL

Fittings on page 86-87

Related Items	
Filters and Strainers	p.60-62
Flow Dividers	p.78-79
Lock Valves	p.75
Relief Valves	p.75-76
Oil Coolers	p.63-67
Sample Applications	
Agricultural Equipment	
Construction Equipment	
Technical Information	
Column Load is the maximum recommended push load (lb) to maintain at minimum a 2:1 column safety factor. The column load is a calculated value based on pin-pin mounting.	



One Cylinder Fits All!

Our Most Innovative Cylinder Design!
Reduce Cost & Eliminate Inventory of Custom Cylinders!

The patented Chief[®] WX is ideal for applications where port adjustability and over all hydraulic cylinder space is restricted. The adjustable 360 degree rotating gland allows you to make port alignments as needed. All ports are recessed to maximize an already slender cylinder design. One port is located on the rotating gland and two on the fixed base. Adjustments are made by using a spanner wrench to rotate the gland with port in a clock-wise or counter clock-wise direction. The Chief WX has become the cylinder of choice where the same size cylinder can be used in a variety of directions and port positions thereby eliminating the need to stock assorted cylinders. The final port positioning is done during assembly.

Each and every Chief WX cylinder is functionally tested and pressurized to 1.5 times the normal working pressure to insure performance reliability. The Chief WX is available in bore sizes from 1.5" to 4" and strokes from 4" to 60". It has a 3,000 PSI operating range and 3 year limited warranty.

- 360° Rotating Gland
- Sleek Cylinder Profile
- 3 Ports Recessed
- 3,000 PSI Working Pressure
- Cross Tube Mounting
- Nitrided Piston Rod
- Multi-port Base End
- Durable Black Coating



Rotate with a spanner wrench.

360° Rotating Gland for Easy Hook-ups!



3 Recessed Ports for tight fits!
 One at the rod end and two at the base end.

3000 PSI

Versatile

Adjustable Gland, Recessed Ports, and Compact Dimensions

Reliable

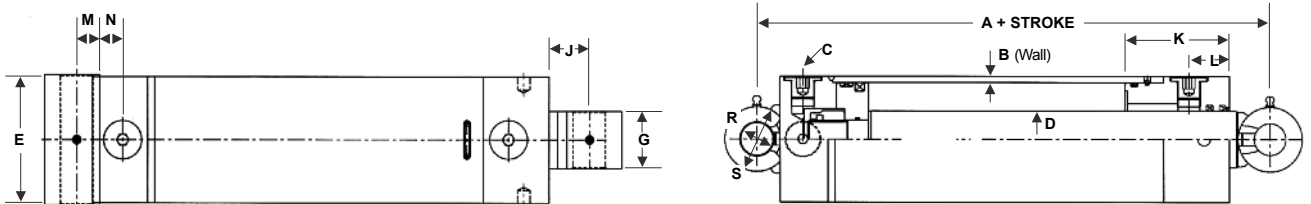
Tested in accordance with SAE J214 for 50,000 cycles. (Fully loaded at full pressure).

Corrosion Resistant

Corrosion and scratch/dent resistant Nitrided Steel Rod (64 -71 RC max, 0.001" per side thick; Hardness gradient from low 50's to 40 Rc at 0.015" depth).

Chief WX Welded Cylinders

Intended Use: Double-acting applications • **Piston:** Ductile iron with wear ring • **Gland:** Keyed joint Ductile iron • **Tube:** Precision honed steel • **Rod:** Nitrided Steel Bar, Scratch Resistant and Corrosion Resistant • **Rod End Mount:** Rod width cross tube with grease zerk • **Base End Mount:** Cross tube with grease zerk • **Tube Seal:** Buna O-ring with Polytemp hytel backup • **Rod Seal:** Twin Lip design • **Rod Wiper:** D Style prevents contamination • **Piston Seal:** Hallite 755 provides prolonged wear resistance • **Piston Wear Ring:** Nylon, glass filled • **All Seals:** Manufactured to US specifications • **Paint:** Satin Black. Custom colors are available • **Packaging:** Individually poly bagged



Dimensional Data in Inches (Millimeters)

BORE	DIMENSIONS													
	A	B	C	D	E	G	J	K	L	M	N	R	S	
1.500 (38.10)	7.000 (177.80)	0.188 (4.76)	SAE 4	0.750 (19.05)	2.000 (50.80)	0.750 (19.05)	0.959 (24.36)	3.390 (86.10)	1.653 (41.99)	0.625 (15.88)	0.461 (11.71)	0.765 (19.43)	1.250 (31.75)	
2.000 (50.80)	8.000 (203.20)	0.188 (4.76)	SAE 8	1.125 (28.58)	2.500 (63.50)	1.125 (28.58)	1.508 (38.30)	2.992 (76.00)	1.339 (34.01)	0.750 (19.05)	0.709 (18.01)	1.015 (25.78)	1.500 (38.10)	
2.50 (63.5)	8.000 (203.20)	0.187 (4.75)	SAE 8	1.375 (34.93)	3.000 (76.20)	1.375 (34.93)	1.658 (42.11)	2.992 (76.00)	1.339 (34.01)	0.708 (17.98)	0.600 (15.24)	0.764 (19.41)	1.500 (38.10)	
3.00 (76.2)	8.000 (203.20)	0.187 (4.75)	SAE 8	1.500 (38.10)	3.500 (88.90)	1.500 (38.10)	1.549 (39.34)	2.992 (76.00)	1.339 (34.01)	0.708 (17.98)	0.708 (17.98)	1.015 (25.78)	2.000 (50.80)	
3.50 (88.9)	8.000 (203.20)	0.187 (4.75)	SAE 8	1.750 (44.45)	4.000 (101.60)	1.750 (44.45)	1.262 (32.05)	3.268 (83.01)	1.378 (35.00)	0.708 (17.98)	0.720 (18.29)	1.015 (25.78)	2.000 (50.80)	
4.00 (101.6)	9.000 (228.60)	0.250 (6.35)	SAE 8	2.000 (50.80)	4.625 (117.48)	2.000 (50.80)	1.840 (46.74)	3.545 (90.04)	1.535 (38.99)	0.708 (17.98)	0.867 (22.02)	1.264 (32.11)	2.250 (57.15)	

ORDER NO.	STROKE	ROD DIA.	RETRACT	COLUMN LOAD	PORT SIZE	PIN DIAMETER	SHIP WT.
1 1/2" Bore • 3000 PSI							
207-371	4"	3/4"	11"	5,300 lbs.	SAE 4	3/4"	7
207-372	6"	3/4"	13"	5,300 lbs.	SAE 4	3/4"	9
207-373	8"	3/4"	15"	5,300 lbs.	SAE 4	3/4"	9
207-374	10"	3/4"	17"	5,110 lbs.	SAE 4	3/4"	10
207-375	12"	3/4"	19"	3,860 lbs.	SAE 4	3/4"	16
207-376	14"	3/4"	21"	3,020 lbs.	SAE 4	3/4"	17
207-377	16"	3/4"	23"	2,430 lbs.	SAE 4	3/4"	13
207-378	18"	3/4"	25"	1,990 lbs.	SAE 4	3/4"	19
207-379	20"	3/4"	27"	1,670 lbs.	SAE 4	3/4"	20
207-380	24"	3/4"	31"	1,210 lbs.	SAE 4	3/4"	22
207-098		3/4"			WX Packing Kit		

FOR LARGER VOLUME CALL FOR A QUOTE

Similar Items



Our **CHIEFWT** welded cylinders on pages 20-22 feature a 3000 PSI rating.

Related Items

- Hose Products p.84-89
- Stroke Controls p.36
- Directional Control Valves p.68-73
- Filters and Strainers p.61-62
- Pressure Gauges p.60,62

Also Available

NPT Porting

Technical Information

Column Load is the maximum recommended push load (lb) to maintain at minimum a 2:1 column safety factor. The column load is a calculated value based on pin-pin mounting.

ORDER NO.	STROKE	ROD DIA.	RETRACT	COLUMN LOAD	PORT SIZE	PIN DIAMETER	SHIP WT.
2" Bore • 3000 PSI							
207-381	4"	1 1/8"	12	9,420	SAE 8	1"	13
207-382	6"	1 1/8"	14	9,420	SAE 8	1"	14
207-383	8"	1 1/8"	16	9,420	SAE 8	1"	15
207-384	10"	1 1/8"	18	9,420	SAE 8	1"	16
207-385	12"	1 1/8"	20	9,420	SAE 8	1"	17
207-386	14"	1 1/8"	22	9,420	SAE 8	1"	19
207-387	16"	1 1/8"	24	9,420	SAE 8	1"	20
207-388	18"	1 1/8"	26	9,420	SAE 8	1"	21
207-389	20"	1 1/8"	28	7,930	SAE 8	1"	22
207-390	24"	1 1/8"	32	6,750	SAE 8	1"	25
207-391	30"	1 1/8"	38	5,810	SAE 8	1"	26
207-392	32"	1 1/8"	40	3,930	SAE 8	1"	28
207-393	36"	1 1/8"	44	3,500	SAE 8	1"	31
207-394	40"	1 1/8"	48	2,830	SAE 8	1"	33
207-395	42"	1 1/8"	50	2,140	SAE 8	1"	35
207-396*	48"	1 1/8"	58	1,610	SAE 8	1"	38
207-397*	60"	1 1/8"	72	1,030	SAE 8	1"	51
207-099		1 1/8"					WX Packing Kit

2 1/2" Bore • 3000 PSI							
207-398	4"	1 3/8"	12	14,720	SAE 8	3/4"	15
207-399	6"	1 3/8"	14	14,720	SAE 8	3/4"	17
207-400	8"	1 3/8"	16	14,720	SAE 8	3/4"	19
207-402	10"	1 3/8"	18	14,720	SAE 8	3/4"	21
207-404	12"	1 3/8"	20	14,720	SAE 8	3/4"	22
207-406	14"	1 3/8"	22	14,720	SAE 8	3/4"	24
207-408	16"	1 3/8"	24	14,720	SAE 8	3/4"	26
207-410	18"	1 3/8"	26	14,720	SAE 8	3/4"	28
207-412	20"	1 3/8"	28	14,720	SAE 8	3/4"	29
207-414	24"	1 3/8"	32	12,750	SAE 8	3/4"	33
207-416	30"	1 3/8"	38	8,630	SAE 8	3/4"	38
207-420	36"	1 3/8"	44	6,230	SAE 8	3/4"	43
207-422	40"	1 3/8"	48	5,140	SAE 8	3/4"	47
207-424	42"	1 3/8"	50	4,710	SAE 8	3/4"	49
207-426*	48"	1 3/8"	58	3,540	SAE 8	3/4"	55
207-427*	60"	1 3/8"	72	2,280	SAE 8	3/4"	65
207-100		1 3/8"					WX Packing Kit

3" Bore • 3000 PSI							
207-428	4	1 1/2"	12	21,200	SAE 8	1"	22
207-429	6	1 1/2"	14	21,200	SAE 8	1"	23
207-430	8	1 1/2"	16	21,200	SAE 8	1"	29
207-432	10	1 1/2"	18	21,200	SAE 8	1"	24
207-434	12	1 1/2"	20	21,200	SAE 8	1"	32
207-436	14	1 1/2"	22	21,200	SAE 8	1"	32
207-438	16	1 1/2"	24	21,200	SAE 8	1"	34
207-440	18	1 1/2"	26	21,200	SAE 8	1"	32
207-442	20	1 1/2"	28	21,200	SAE 8	1"	37
207-444	24	1 1/2"	32	18,210	SAE 8	1"	41
207-446	30	1 1/2"	38	12,330	SAE 8	1"	47
207-450	36	1 1/2"	44	8,900	SAE 8	1"	50
207-452	40	1 1/2"	48	7,350	SAE 8	1"	54
207-454	42	1 1/2"	50	6,720	SAE 8	1"	56
207-456*	48	1 1/2"	58	5,010	SAE 8	1"	62
207-457*	60	1 1/2"	72	3,210	SAE 8	1"	74
207-101		1 1/2"					WX Packing Kit

3 1/2" Bore • 3000 PSI							
207-460	8"	1 3/4"	16	28,860	SAE 8	1"	37
207-462	10"	1 3/4"	18	28,860	SAE 8	1"	35
207-464	12"	1 3/4"	20	28,860	SAE 8	1"	38
207-466	14"	1 3/4"	22	28,860	SAE 8	1"	41
207-468	16"	1 3/4"	24	28,860	SAE 8	1"	43
207-470	18"	1 3/4"	26	28,860	SAE 8	1"	46
207-472	20"	1 3/4"	28	28,860	SAE 8	1"	53
207-474	24"	1 3/4"	32	28,860	SAE 8	1"	54
207-476	30"	1 3/4"	38	22,850	SAE 8	1"	62
207-478	32"	1 3/4"	40	20,360	SAE 8	1"	64
207-480	36"	1 3/4"	44	16,460	SAE 8	1"	79
207-482	40"	1 3/4"	48	13,590	SAE 8	1"	75
207-484	42"	1 3/4"	50	12,420	SAE 8	1"	72
207-486*	48"	1 3/4"	58	9,340	SAE 8	1"	85
207-487*	60"	1 3/4"	72	6,010	SAE 8	1"	101
207-102		1 3/4"					WX Packing Kit

*Stop Tube

(4" BORE - CONTINUED ON FOLLOWING PAGE)

SPECIAL PRICING AVAILABLE ON LARGER VOLUME PURCHASES. CALL FOR A FREE QUOTE.



Welded Cylinders

Common SAE#4 O-Ring Adapters
 470-035 04MORB-04FPS STR. SWIVEL
 471-428 04MORB-06FJS STR. SWIVEL

Common SAE#8 O-Ring Adapters
 471-432 08MORB-8FJS STRAIGHT SWIVEL
 470-845 08MORB-06FP STR. FITTING
 907-7485 08MORB-08FP STR. SWIVEL
 470-043 08MORB-06FPS STR. SWIVEL
 470-045 08MORB-08FPS STR. SWIVEL
 Fittings on page 86-87



Adjustable Spanner Wrench
 Page 28

Chief WX, Snowplow Welded Cylinders

CHIEF®

CHIEF WX WELDED CYLINDERS CONTINUED FROM PREVIOUS PAGE

ORDER NO.	STROKE	ROD DIA.	RETRACT	COLUMN LOAD	PORT SIZE	PIN DIAMETER	SHIP WT.
4" Bore • 3000 PSI							
207-490	8"	2"	17	37,690	SAE 8	1 1/4"	46
207-492	10"	2"	19	37,690	SAE 8	1 1/4"	49
207-494	12"	2"	21	37,690	SAE 8	1 1/4"	53
207-496	14"	2"	23	37,690	SAE 8	1 1/4"	57
207-498	16"	2"	25	37,690	SAE 8	1 1/4"	60
207-500	18"	2"	27	37,690	SAE 8	1 1/4"	64
207-502	20"	2"	29	37,690	SAE 8	1 1/4"	67
207-504	24"	2"	33	37,690	SAE 8	1 1/4"	74
207-506	30"	2"	39	37,690	SAE 8	1 1/4"	85
207-508	32"	2"	41	33,890	SAE 8	1 1/4"	88
207-510	36"	2"	45	27,500	SAE 8	1 1/4"	96
207-512	40"	2"	49	22,760	SAE 8	1 1/4"	103
207-514	42"	2"	51	20,840	SAE 8	1 1/4"	106
207-516	48"	2"	59	15,720	SAE 8	1 1/4"	125
207-518	60"	2"	73	9,490	SAE 8	1 1/4"	147
207-103		2"					WX Packing Kit

ORDER NO.	STROKE	ROD DIA.	RETRACT	COLUMN LOAD	PORT SIZE	PIN DIAMETER	SHIP WT.
5" Bore • 3000 PSI							
207-520	8"	2 1/2"	20	58,900	SAE 12	1 1/2"	73
207-522	10"	2 1/2"	22	58,900	SAE 12	1 1/2"	78
207-524	12"	2 1/2"	24	58,900	SAE 12	1 1/2"	83
207-526	16"	2 1/2"	28	58,900	SAE 12	1 1/2"	94
207-528	20"	2 1/2"	32	58,900	SAE 12	1 1/2"	103
207-530	24"	2 1/2"	36	58,900	SAE 12	1 1/2"	114
207-532	30"	2 1/2"	42	58,900	SAE 12	1 1/2"	130
207-534	36"	2 1/2"	48	58,900	SAE 12	1 1/2"	145
207-536*	48"	2 1/2"	62	36,100	SAE 12	1 1/2"	182
207-538*	60"	2 1/2"	76	22,000	SAE 12	1 1/2"	220
207-540	72"	2 1/2"	90	15,600	SAE 12	1 1/2"	258

*Stop Tube

FOR LARGER VOLUME CALL FOR A QUOTE

Welded Cylinders



Single Acting Welded Cylinders For Snowplow Applications

• Pin holes at base and rod end • Two 1/4" ports 90° apart, one parallel to and one perpendicular to the pins in order to accommodate variable installation requirements • Pin hole center is 1 1/16" from rod end • Painted black

New!

ORDER NO.	STROKE	ROD DIA.	RETRACT	EXTEND	PORT SIZE	PIN HOLE DIAMETER	SHIP WT.
1.5" Bore • 2500 PSI							
288-500	6"	1 1/2"	12"	18"	1/4" NPT	5/8"	12
288-501	10"	1 1/2"	16 1/4"	26 1/4"	1/4" NPT	5/8"	13
288-502	12"	1 1/2"	18"	30"	1/4" NPT	5/8"	14
288-503	6"	1 1/2"	13"	19"	1/4" NPT	3/4"	12
288-504	8"	1 1/2"	15 1/4"	23 1/4"	1/4" NPT	3/4"	12
288-505	10"	1 1/2"	17 1/4"	27 1/4"	1/4" NPT	3/4"	13
288-506	10"	1 1/2"	17 1/4"	27 1/4"	1/4" NPT	1"	13
288-507	10"	1 1/2"	17"	27"	1/4" NPT	3/4"	13
288-508	10"	1 1/2"	17 1/4"	27 1/4"	1/4" NPT	1"	13
288-509	12"	1 1/2"	19 3/8"	31 3/8"	1/4" NPT	1"	14
288-510							Packing Kit

FOR LARGER VOLUME CALL FOR A QUOTE



Adjustable Spanner Wrench

• Pins forged integral with wrench and milled to exact size • Meets Gov. Specification GGG-W-665b • Black • Made in USA

ORDER NO.	CAPACITY	OVERALL LENGTH	PIN LENGTH	PIN SIZE
322-268	1 1/4" to 3"	8 1/8"	3/16"	3/16"
322-269	1 1/4" to 3"	8 1/8"	7/32"	1/4"
322-270	2" to 4 3/4"	11 3/8"	1/4"	1/4"
322-271	4 1/2" to 6 1/4"	12 1/8"	1/4"	3/8"

Telescopic Cylinders



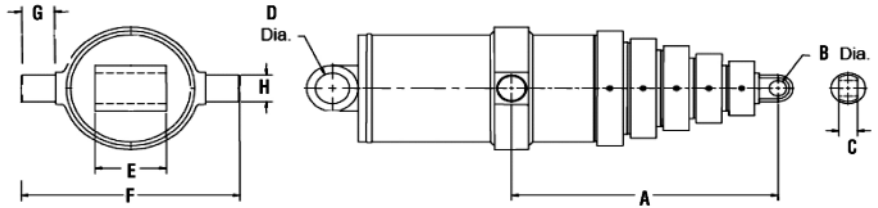
Single Acting Telescopic Cylinders

- Rebuildable • Adjustable V-packing provides low-pressure and high-pressure sealing • External packing nuts provide added support for tubes and simplify servicing
- 2500 PSI Max • 1/2-14 npt ports • Polished steel stages • Primer finished • Painting available for an additional charge • Volumes listed are at full extension

ORDER NO.	STAGES	STROKE	RET.	EXT.	MOUNTING	DIMENSIONS								MAX LOAD (LBS)	VOL. (GAL.)	SHIP WT.
						A	B	C	D	E	F	G	H			
Two-Stage • 2500 PSI • Single-Acting																
210-480	3", 2"	40.38"	29.69"	70.07"	Cross tube -	1.25"	1.88"	1.5"	4"	-	-	-	-	17,650	1.5	60
210-481	3", 2"	46.67"	32.84"	79.51"	Cross tube -	1.25"	1.88"	1.5"	4"	-	-	-	-	17,650	1.7	66
210-483	4", 3"	47.25"	33.69"	80.94"	Cross tube -	1.5"	2.75"	1.5"	5"	-	-	-	-	31,400	3.0	95
210-482	4", 3"	51.25"	35.07"	86.32"	Trunion	8.5"	1.5"	2.75"	-	-	8.81"	.88"	1.75"	31,400	3.5	97
210-484	4", 3"	65.00"	42.07"	107.07"	Trunion	8.5"	1.5"	2.75"	-	-	8.81"	.88"	1.75"	31,400	4.4	115
Three-Stage • 2500 PSI • Single-Acting																
210-486	4", 3", 2"	73.88"	35.69"	109.57"	Cross tube -	1.25"	1.88"	1.5"	5"	-	-	-	-	31,400	3.5	109
210-488	4", 3", 2"	89.83"	41.13"	130.96"	Cross tube -	1.25"	1.88"	1.5"	5"	-	-	-	-	31,400	4.2	124
210-490	5", 4", 3"	69.14"	33.82"	102.96"	Cross tube -	1.5"	2.75"	1.5"	6.25"	-	-	-	-	49,075	5.5	137
210-492	5", 4", 3"	86.55"	39.63"	126.18"	Cross tube -	1.5"	2.75"	2"	6"	-	-	-	-	49,075	6.9	159
210-485	4", 3", 2"	73.88"	34.63"	108.51"	Trunion	8.5"	1.25"	1.88"	-	-	8.81"	.88"	1.75"	31,400	3.5	106
210-489	5", 4", 3"	74.00"	34.63"	108.63"	Trunion	8.5"	1.5"	2.75"	-	-	8.81"	.88"	1.75"	49,075	5.9	141
210-491	5", 4", 3"	86.06"	38.63"	124.69"	Trunion	8.5"	1.5"	2.75"	-	-	8.81"	.88"	1.75"	49,075	6.8	156

Welded Cylinders

Plunger Lifting Capacities				
Plunger Dia. (in)	lbs. @ 1500 PSI	lbs. @ 2000 PSI	lbs. @ 2500 PSI	lbs. @ 3000 PSI
2	4710	6280	7850	9420
3	10,590	14,120	17,650	21,180
4	18,840	25,120	31,400	37,680
5	29,445	39,260	49,075	58,890
6	42,405	56,540	70,675	84,810
7	57,720	76,960	96,211	N/A
8	75,390	100,520	N/A	N/A



Custom Hoists, Inc. Single Acting Telescopic Cylinders

- Cross tube mounting is standard, custom and trunion designs are available. • Rebuildable • V-packing provides high-pressure and low-pressure sealing • External packing nuts provide added support for tubes and simplify servicing • Polished steel stages • Primer finished • Volumes listed are at full extension • Refer to the chart above for max PSI per stage.



ORDER NO.	STAGES	STROKE	RET.	EXT.	DIMENSIONS				MAX LOAD (LBS.)	VOL. (GAL.)	SHIP WT.
					B	C	D	E			
Three-Stage											
231-002	5", 4", 3"	84 ³ / ₁₆ "	41 ¹ / ₈ "	125 ⁵ / ₁₆ "	1.68"	1.5"	2.12"	7"	58,890	4.8	168
231-009	6", 5", 4"	84 ⁵ / ₈ "	41"	125 ⁵ / ₈ "	2.07"	2"	2.12"	7"	84,810	7.3	206
231-010	6", 5", 4"	103 ³ / ₄ "	47 ⁵ / ₈ "	151 ³ / ₈ "	2.07"	2"	2.12"	7"	84,810	9.1	244
231-011	6", 5", 4"	108 ⁵ / ₈ "	49"	157 ⁵ / ₈ "	2.07"	2"	2.12"	7"	84,810	9.4	246
231-012	6", 5", 4"	120 ⁵ / ₈ "	53"	173 ⁵ / ₈ "	2.07"	2"	2.12"	7"	84,810	10.5	279
231-013	6", 5", 4"	125 ⁷ / ₈ "	55"	180 ³ / ₈ "	2.07"	2"	2.12"	7"	84,810	11.0	290
231-014	6", 5", 4"	132 ⁵ / ₈ "	57"	189 ⁵ / ₈ "	2.07"	2"	2.12"	7"	84,810	11.5	299
Four-Stage											
231-020	6", 5", 4", 3"	134 ²⁵ / ₆₄ "	47 ¹ / ₈ "	181 ¹ / ₂ "	1.56"	2.89"	1.87"	8"	84,810	9.9	293
231-022	6", 5", 4", 3"	155 ⁵ / ₆₄ "	52 ⁵ / ₈ "	208 ¹ / ₂ "	2.03"	1.75"	2.06"	7.25"	84,810	11.4	293
231-031	7", 6", 5", 4"	155 ³ / ₁₆ "	53 ²⁵ / ₆₄ "	208 ⁹ / ₁₆ "	2.06"	2"	2.12"	8.62"	96,211	16.5	363
231-027	7", 6", 5", 4"	119 ³ / ₁₆ "	44 ³ / ₄ "	163 ¹⁵ / ₁₆ "	2.06"	2"	2.12"	8.62"	96,211	12.7	295
231-028	7", 6", 5", 4"	134 ¹¹ / ₁₆ "	48 ¹ / ₄ "	183"	2.06"	2"	2.12"	8.62"	96,211	14.3	328
231-034	7", 6", 5", 4"	179 ¹¹ / ₁₆ "	59 ¹ / ₂ "	239 ³ / ₁₆ "	2.06"	2"	2.12"	8.62"	96,211	19.0	406
230-035	8", 7", 6", 5"	145"	54 ¹ / ₂ "	196 ¹ / ₂ "	2.06"	2"	2.12"	9.5"	100,520	21.8	230
230-039	8", 7", 6", 5"	176 ¹ / ₂ "	59 ¹ / ₂ "	236"	2.06"	2"	2.12"	9.5"	100,520	26.5	509
Five-Stage											
230-041	8", 7", 6", 5", 4"	188 ¹ / ₄ "	53 ⁷ / ₈ "	242 ¹ / ₈ "	2.06"	2"	2.12"	9.5"	100,520	24.3	487
230-043	8", 7", 6", 5", 4"	218 ¹ / ₄ "	59 ⁷ / ₈ "	278 ¹ / ₈ "	2.06"	2"	2.12"	9.5"	100,520	28.2	544
230-044	8", 7", 6", 5", 4"	233 ¹ / ₄ "	65"	298 ¹ / ₄ "	2.06"	2"	2.12"	9.5"	100,520	30.1	604
230-045	8", 7", 6", 5", 4"	248 ¹ / ₄ "	68"	316 ¹ / ₄ "	2.06"	2"	2.12"	9.5"	100,520	32.0	628
230-048	8", 7", 6", 5", 4"	279 ¹ / ₄ "	77 ¹ / ₂ "	356 ³ / ₄ "	2.06"	2"	2.12"	9.5"	100,520	36	726

Sample Applications
Dump Trucks
Dump Trailers
Also Available
Additional Sizes
Packing Kits
Repair Components

Free Drop-Ship Service!

Many times there are instances where shipping your order directly from our supplier source will save you time and shipping costs. There are no additional fees for this service.

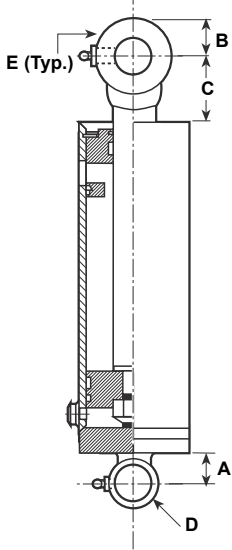
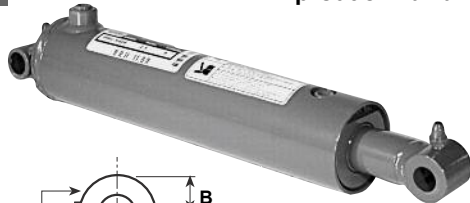
PRINCE Welded Cylinders

Welded Cylinders



High Quality Prince Cylinders Made In The USA

Prince has been engineering and producing the highest quality hydraulic cylinders and products for over 55 years and has become well known throughout the fluid power industry. Order is a Nationwide Distributor for Prince products providing easy access and very competitive pricing to our customers. Order has access to all Prince products, so if you don't see it listed please ask. Prince products are produced at ISO 9001:2000 certified facilities and come with a 3-year standard product warranty.



Prince Royal Welded Cylinders

- All-steel welded construction • Piston: ductile iron • Tube: honed steel • Gland: ductile iron
- Piston rod: chromed, ground and polished • End fittings: cross tubes with grease zerks
- Seals: urethane u-cup and urethane wiper in gland, o-ring with backup washers and cast iron ring piston seals, urethane u-cup rod seal • Paint: Red

ORDER NO.	MFG. NO.	STROKE	ROD DIA.	COLUMN RETRACT	COLUMN LOAD	PORT SIZE	CROSS TUBE I.D.	DIMENSIONS					SHIP WT.
								A	B	C	D	E	
2 1/2" Bore • 2500 PSI													
209-208	PMC-5408	8"	1 3/8"	16"	12271 lbs.	3/8" NPTF	3/4"	9/16"	3/4"	29/16"	3"	13/8"	17
209-212	PMC-5412	12"	1 3/8"	20"	12271 lbs.	3/8" NPTF	3/4"	9/16"	3/4"	29/16"	3"	13/8"	21
209-216	PMC-5416	16"	1 3/8"	24"	12271 lbs.	3/8" NPTF	3/4"	9/16"	3/4"	29/16"	3"	13/8"	23
209-220	PMC-5420	20"	1 3/8"	28"	12271 lbs.	3/8" NPTF	3/4"	9/16"	3/4"	29/16"	3"	13/8"	27
209-224	PMC-5424	24"	1 3/8"	32"	12271 lbs.	3/8" NPTF	3/4"	9/16"	3/4"	29/16"	3"	13/8"	31
209-230	PMC-5430	30"	1 3/8"	38"	8975 lbs.	3/8" NPTF	3/4"	9/16"	3/4"	29/16"	3"	13/8"	35
209-232	PMC-5432	32"	1 3/8"	40"	8000 lbs.	3/8" NPTF	3/4"	9/16"	3/4"	29/16"	3"	13/8"	41
209-236	PMC-5436	36"	1 3/8"	44"	6475 lbs.	3/8" NPTF	3/4"	9/16"	3/4"	29/16"	3"	13/8"	44
209-242	PMC-5442	42"	1 3/8"	50"	4870 lbs.	3/8" NPTF	3/4"	9/16"	3/4"	29/16"	3"	13/8"	47
205-017	PMCK-5400		1 3/8"										
Royal Packing Kit													
3" Bore • 2500 PSI													
209-350	PMC-8308	8"	1 1/2"	16"	17671 lbs.	1/2" NPTF	1"	11/16"	1"	25/16"	3 1/2"	1 1/2"	22
209-352	PMC-8312	12"	1 1/2"	20"	17671 lbs.	1/2" NPTF	1"	11/16"	1"	25/16"	3 1/2"	1 1/2"	26
209-354	PMC-8316	16"	1 1/2"	24"	17671 lbs.	1/2" NPTF	1"	11/16"	1"	25/16"	3 1/2"	1 1/2"	31
209-356	PMC-8320	20"	1 1/2"	28"	17671 lbs.	1/2" NPTF	1"	11/16"	1"	25/16"	3 1/2"	1 1/2"	35
209-358	PMC-8324	24"	1 1/2"	32"	17671 lbs.	1/2" NPTF	1"	11/16"	1"	25/16"	3 1/2"	1 1/2"	41
209-360	PMC-8330	30"	1 1/2"	38"	13000 lbs.	1/2" NPTF	1"	11/16"	1"	25/16"	3 1/2"	1 1/2"	46
209-362	PMC-8332	32"	1 1/2"	40"	11540 lbs.	1/2" NPTF	1"	11/16"	1"	25/16"	3 1/2"	1 1/2"	48
209-364	PMC-8336	36"	1 1/2"	44"	9320 lbs.	1/2" NPTF	1"	11/16"	1"	25/16"	3 1/2"	1 1/2"	52
209-366	PMC-8340	40"	1 1/2"	48"	7660 lbs.	1/2" NPTF	1"	11/16"	1"	25/16"	3 1/2"	1 1/2"	56
209-368	PMC-8342	42"	1 1/2"	50"	7020 lbs.	1/2" NPTF	1"	11/16"	1"	25/16"	3 1/2"	1 1/2"	59
209-370	PMC-8348	48"	1 1/2"	56"	5460 lbs.	1/2" NPTF	1"	11/16"	1"	25/16"	3 1/2"	1 1/2"	65
205-103	PMCK-8300		1 1/2"										
Royal Packing Kit													
3 1/2" Bore • 2500 PSI													
209-308	PMC-5508	8"	1 1/2"	16"	24052 lbs.	1/2" NPTF	1"	11/16"	1"	111/16"	4"	1 1/2"	26
209-312	PMC-5512	12"	1 1/2"	20"	24052 lbs.	1/2" NPTF	1"	11/16"	1"	111/16"	4"	1 1/2"	30
209-316	PMC-5516	16"	1 1/2"	24"	24052 lbs.	1/2" NPTF	1"	11/16"	1"	111/16"	4"	1 1/2"	34
209-320	PMC-5520	20"	1 1/2"	28"	24052 lbs.	1/2" NPTF	1"	11/16"	1"	111/16"	4"	1 1/2"	38
209-324	PMC-5524	24"	1 1/2"	32"	20210 lbs.	1/2" NPTF	1"	11/16"	1"	111/16"	4"	1 1/2"	44
209-330	PMC-5530	30"	1 1/2"	38"	13540 lbs.	1/2" NPTF	1"	11/16"	1"	111/16"	4"	1 1/2"	48
209-336	PMC-5536	36"	1 1/2"	44"	9700 lbs.	1/2" NPTF	1"	11/16"	1"	111/16"	4"	1 1/2"	56
209-348	PMC-5548	48"	1 1/2"	56"	5680 lbs.	1/2" NPTF	1"	11/16"	1"	111/16"	4"	1 1/2"	70
205-019	PMCK-5500		1 1/2"										
Royal Packing Kit													
4" Bore • 2500 PSI													
209-408	PMC-5608	8"	2"	17"	31415 lbs.	1/2" NPTF	1 1/4"	15/16"	1 1/8"	2 1/8"	4 1/2"	2"	35
209-412	PMC-5612	12"	2"	21"	31415 lbs.	1/2" NPTF	1 1/4"	15/16"	1 1/8"	2 1/8"	4 1/2"	2"	41
209-416	PMC-5616	16"	2"	25"	31415 lbs.	1/2" NPTF	1 1/4"	15/16"	1 1/8"	2 1/8"	4 1/2"	2"	48
209-420	PMC-5620	20"	2"	29"	31415 lbs.	1/2" NPTF	1 1/4"	15/16"	1 1/8"	2 1/8"	4 1/2"	2"	56
209-424	PMC-5624	24"	2"	33"	31415 lbs.	1/2" NPTF	1 1/4"	15/16"	1 1/8"	2 1/8"	4 1/2"	2"	62
209-430	PMC-5630	30"	2"	39"	31415 lbs.	1/2" NPTF	1 1/4"	15/16"	1 1/8"	2 1/8"	4 1/2"	2"	72
209-432	PMC-5632	32"	2"	41"	31415 lbs.	1/2" NPTF	1 1/4"	15/16"	1 1/8"	2 1/8"	4 1/2"	2"	74
209-436	PMC-5636	36"	2"	45"	28710 lbs.	1/2" NPTF	1 1/4"	15/16"	1 1/8"	2 1/8"	4 1/2"	2"	80
209-440	PMC-5640	40"	2"	49"	23700 lbs.	1/2" NPTF	1 1/4"	15/16"	1 1/8"	2 1/8"	4 1/2"	2"	85
209-442	PMC-5642	42"	2"	51"	21680 lbs.	1/2" NPTF	1 1/4"	15/16"	1 1/8"	2 1/8"	4 1/2"	2"	92
209-448	PMC-5648	48"	2"	57"	16930 lbs.	1/2" NPTF	1 1/4"	15/16"	1 1/8"	2 1/8"	4 1/2"	2"	100
209-460	PMC-5660	60"	2"	69"	11160 lbs.	1/2" NPTF	1 1/4"	15/16"	1 1/8"	2 1/8"	4 1/2"	2"	120
205-111	PMCK-5600		2"										
Royal Packing Kit													

- Common 3/8" NPT Adapters**
 470-007 06MP-08FPS STRAIGHT SWIVEL
 470-003 06MP-06FPS STRAIGHT SWIVEL

- Common 1/2" NPT Adapters**
 470-005 08MP-06FPS STRAIGHT SWIVEL
 470-009 08MP-08FPS STRAIGHT SWIVEL
 471-059 08MP-06FP REDUCER BUSHING

- Common 3/4" NPT Adapters**
 907-0183 12MP-08FPS STRAIGHT SWIVEL
 470-013 12MP-12FPS STRAIGHT SWIVEL
 471-128 12MP-08FP REDUCER BUSHING
 Fittings on page 86-87

Free Drop-Ship Service!

Many times there are instances where shipping your order directly from our supplier source will save you time and shipping costs. There are no additional fees for this service.

PRINCE Welded Cylinders

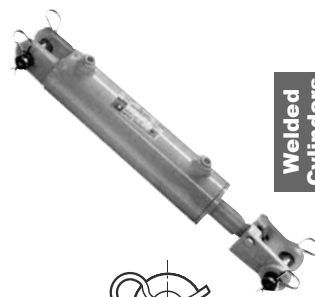


Prince Sword Welded Cylinders Made In The USA

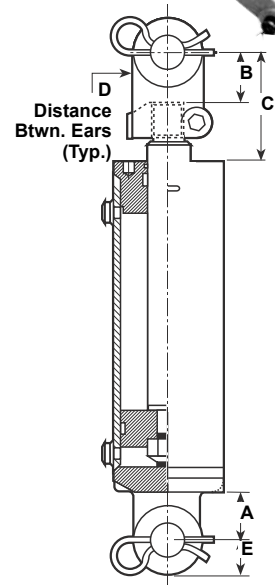
• Heavy-duty welded construction • Piston: ductile iron • Tube: skived / honed • Gland: ductile iron • Piston rod: chromed, ground and polished • End fittings: ductile iron female clevises
• Seals: urethane u-cup and urethane wiper in gland, crown seal on piston • Square ring gland retainer provides positive lock • Pins, clips and cotter pins included • Paint: White

ORDER NO.	MFGR. NO.	STROKE	ROD DIA.	RETRACT	COLUMN LOAD	PORT SIZE	DIMENSIONS				PIN DIA.	SHIP WT.	
							A	B	C	D			
1 1/2" Bore • 3000 PSI													
210-108*	PMC-19408	8"	3/4"	201/4"	5301 lbs.	3/8" NPTF	25/8"	25/8"	51/4"	5/8"	3/4"	3/4"	13
210-110*	PMC-19410	10"	3/4"	201/4"	4600 lbs.	3/8" NPTF	25/8"	25/8"	31/4"	5/8"	3/4"	3/4"	14
210-112*	PMC-19412	12"	3/4"	221/4"	3525 lbs.	3/8" NPTF	25/8"	25/8"	31/4"	5/8"	3/4"	3/4"	16
205-130	PMCK-19400		3/4"										
Sword Packing Kit													
2" Bore • 3000 PSI													
210-210	PMC-42010	10"	1 1/8"	201/4"	9424 lbs.	1/2" NPTF	13/4"	113/16"	39/16"	11/16"	1"	1"	20
210-212	PMC-42012	12"	1 1/8"	221/4"	9424 lbs.	1/2" NPTF	13/4"	113/16"	39/16"	11/16"	1"	1"	20
210-216	PMC-42016	16"	1 1/8"	311/2"	9424 lbs.	1/2" NPTF	13/4"	113/16"	813/16"	11/16"	1"	1"	25
210-220	PMC-42020	20"	1 1/8"	301/4"	7525 lbs.	1/2" NPTF	13/4"	113/16"	39/16"	11/16"	1"	1"	28
210-224	PMC-42024	24"	1 1/8"	341/4"	5600 lbs.	1/2" NPTF	13/4"	113/16"	39/16"	11/16"	1"	1"	31
205-137	PMCK-42000		1 1/8"										
Sword Packing Kit													
2 1/2" Bore • 3000 PSI													
210-226	PMC-42508	8"	1 1/4"	201/4"	14726 lbs.	1/2" NPTF	13/4"	113/16"	59/16"	11/16"	1"	1"	22
210-228	PMC-42510	10"	1 1/4"	201/4"	14726 lbs.	1/2" NPTF	13/4"	113/16"	39/16"	11/16"	1"	1"	22
210-230	PMC-42512	12"	1 1/4"	221/4"	14726 lbs.	1/2" NPTF	13/4"	113/16"	39/16"	11/16"	1"	1"	24
210-232	PMC-42516	16"	1 1/4"	311/2"	10800 lbs.	1/2" NPTF	13/4"	113/16"	89/16"	11/16"	1"	1"	30
210-234	PMC-42520	20"	1 1/4"	301/4"	11700 lbs.	1/2" NPTF	13/4"	113/16"	59/16"	11/16"	1"	1"	31
210-236	PMC-42524	24"	1 1/4"	341/4"	8600 lbs.	1/2" NPTF	13/4"	113/16"	59/16"	11/16"	1"	1"	35
205-026	PMCK-42500		1 1/4"										
Sword Packing Kit													
3" Bore • 3000 PSI													
210-308	PMC-43008	8"	1 3/8"	201/4"	21205 lbs.	1/2" NPTF	13/4"	113/16"	59/16"	11/16"	1 1/8"	1"	30
210-310	PMC-43010	10"	1 3/8"	201/4"	21205 lbs.	1/2" NPTF	13/4"	113/16"	39/16"	11/16"	1 1/8"	1"	26
210-312	PMC-43012	12"	1 3/8"	221/4"	21205 lbs.	1/2" NPTF	13/4"	113/16"	39/16"	11/16"	1 1/8"	1"	28
210-316	PMC-43016	16"	1 3/8"	311/2"	16900 lbs.	1/2" NPTF	13/4"	113/16"	813/16"	11/16"	1 1/8"	1"	33
210-320	PMC-43020	20"	1 3/8"	301/4"	17300 lbs.	1/2" NPTF	13/4"	113/16"	39/16"	11/16"	1 1/8"	1"	39
210-324	PMC-43024	24"	1 3/8"	341/4"	12800 lbs.	1/2" NPTF	13/4"	113/16"	39/16"	11/16"	1 1/8"	1"	43
205-382	PMCK-43000		1 3/8"										
Sword Packing Kit													
3 1/2" Bore • 3000 PSI													
210-332	PMC-43516	16"	1 1/2"	311/2"	24200 lbs.	1/2" NPTF	13/4"	113/16"	83/8"	11/16"	1 1/4"	1"	38
210-334	PMC-43520	20"	1 1/2"	301/4"	24700 lbs.	1/2" NPTF	13/4"	113/16"	33/8"	11/16"	1 1/4"	1"	43
210-336	PMC-43524	24"	1 1/2"	341/4"	18250 lbs.	1/2" NPTF	13/4"	113/16"	33/8"	11/16"	1 1/4"	1"	48
205-029	PMCK-43500		1 1/2"										
Sword Packing Kit													
4" Bore • 3000 PSI													
210-408	PMC-44008	8"	1 3/4"	201/4"	37699 lbs.	1/2" NPTF	13/4"	113/16"	53/8"	11/8"	1 1/4"	1"	40
210-410	PMC-44010	10"	1 3/4"	201/4"	37699 lbs.	1/2" NPTF	13/4"	113/16"	33/8"	11/8"	1 1/4"	1"	43
210-412	PMC-44012	12"	1 3/4"	221/4"	37699 lbs.	1/2" NPTF	13/4"	113/16"	33/8"	11/8"	1 1/4"	1"	45
210-416	PMC-44016	16"	1 3/4"	311/2"	37699 lbs.	1/2" NPTF	13/4"	113/16"	83/8"	11/8"	1 1/4"	1"	54
210-420	PMC-44020	20"	1 3/4"	301/4"	37699 lbs.	1/2" NPTF	13/4"	113/16"	33/8"	11/8"	1 1/4"	1"	58
210-424	PMC-44024	24"	1 3/4"	341/4"	33525 lbs.	1/2" NPTF	13/4"	113/16"	33/8"	11/8"	1 1/4"	1"	60
205-022	PMCK-44000		1 3/4"										
Sword Packing Kit													

* Clevis end welded to rod



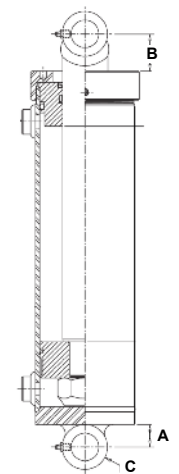
Welded Cylinders



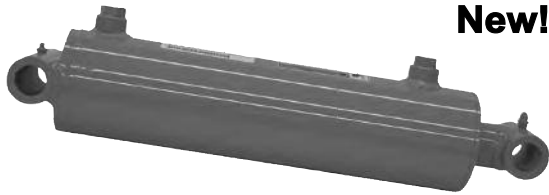
Prince Gladiator Welded Cylinders Made In The USA

• Heavy-duty welded construction • Piston: ductile iron • Tube: skived • Piston rod: chromed, ground and polished • End fittings: 1 1/2" ID cross tubes with 1/2" thick walls and grease zerks • Seals: urethane u-cup, metal-encased wiper, polyurethane crown seal and wear ring • Paint: Highway Yellow

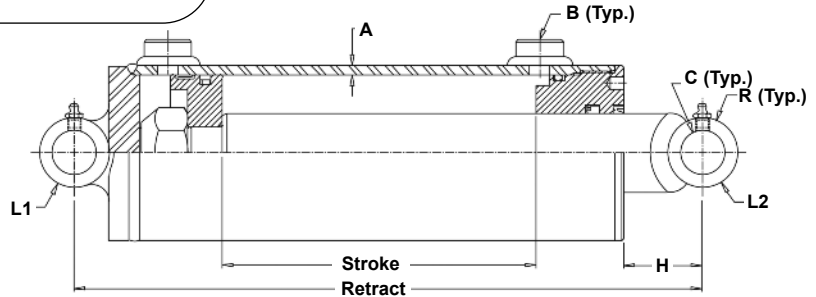
ORDER NO.	MFGR. NO.	STROKE	ROD DIA.	RETRACT	PORT SIZE	COLUMN LOAD	DIMENSIONS			SHIP WT.
							A	B	C	
5" Bore • 3000 PSI										
211-508	PMC-21008	8"	2 1/2"	19"	3/4" NPTF	58904 lbs.	1 1/4"	21/16"	53/4"	75
211-510	PMC-21010	10"	2 1/2"	21"	3/4" NPTF	58904 lbs.	1 1/4"	21/16"	53/4"	80
211-512	PMC-21012	12"	2 1/2"	23"	3/4" NPTF	58904 lbs.	1 1/4"	21/16"	53/4"	85
211-516	PMC-21016	16"	2 1/2"	27"	3/4" NPTF	58904 lbs.	1 1/4"	21/16"	53/4"	90
211-520	PMC-21020	20"	2 1/2"	31"	3/4" NPTF	58904 lbs.	1 1/4"	21/16"	53/4"	105
211-524	PMC-21024	24"	2 1/2"	35"	3/4" NPTF	58904 lbs.	1 1/4"	21/16"	53/4"	115
211-530	PMC-21030	30"	2 1/2"	41"	3/4" NPTF	58904 lbs.	1 1/4"	21/16"	53/4"	130
211-536	PMC-21036	36"	2 1/2"	47"	3/4" NPTF	58904 lbs.	1 1/4"	21/16"	53/4"	145
211-548	PMC-21048	48"	2 1/2"	61"	3/4" NPTF	39125 lbs.	1 1/4"	21/16"	53/4"	180
211-554	PMC-21054	54"	2 1/2"	68"	3/4" NPTF	31150 lbs.	1 1/4"	21/16"	53/4"	195
211-560	PMC-21060	60"	2 1/2"	75"	3/4" NPTF	25360 lbs.	1 1/4"	21/16"	53/4"	215
205-024	PMCK-21000		2 1/2"							
Gladiator Packing Kit										
6" Bore • 3000 PSI										
211-608	PMC-22008	8"	3"	19"	3/4" NPTF	84822 lbs.	1 1/4"	21/16"	63/4"	100
211-612	PMC-22012	12"	3"	23"	3/4" NPTF	84822 lbs.	1 1/4"	21/16"	63/4"	110
211-616	PMC-22016	16"	3"	27"	3/4" NPTF	84822 lbs.	1 1/4"	21/16"	63/4"	125
211-624	PMC-22024	24"	3"	35"	3/4" NPTF	84822 lbs.	1 1/4"	21/16"	63/4"	150
211-630	PMC-22030	30"	3"	41"	3/4" NPTF	84822 lbs.	1 1/4"	21/16"	63/4"	170
211-636	PMC-22036	36"	3"	47"	3/4" NPTF	84822 lbs.	1 1/4"	21/16"	63/4"	190
211-648	PMC-22048	48"	3"	61"	3/4" NPTF	79700 lbs.	1 1/4"	21/16"	63/4"	240
211-654	PMC-22054	54"	3"	68"	3/4" NPTF	63400 lbs.	1 1/4"	21/16"	63/4"	265
211-660	PMC-22060	60"	3"	75"	3/4" NPTF	51700 lbs.	1 1/4"	21/16"	63/4"	290
205-016	PMCK-22000		3"							
Gladiator Packing Kit										



Hydraulic Cylinders



New!



Prince 8" Bore Double Acting Welded Cylinders 3000 PSI

- Chromed, ground and polished piston rod • Skived tubing • Ductile iron piston & thread-in Ductile iron gland • Teflon cap seal & wear ring on piston
- Urethane u-cup, metal encased wiper & wear ring on piston rod • Cross tube end fittings with grease zerks • Painted Gloss Black

ORDER NO.	MFR. NO.	STROKE	ROD DIA.	RETRACT	COLUMN LOAD	DIMENSIONS						SHIP WT.	
						A	B	C	R	H	L1		L2
8" Bore • 3000 PSI													
212-500	SAE-68008	8"	4"	24"	Full PSI	.38	16 SAE	2.515"	4"	3"	9"	5"	250
212-501	SAE-68012	12"	4"	28"	Full PSI	.38	16 SAE	2.515"	4"	3"	9"	5"	275
212-502	SAE-68016	16"	4"	32"	Full PSI	.38	16 SAE	2.515"	4"	3"	9"	5"	300
212-503	SAE-68020	20"	4"	36"	Full PSI	.38	16 SAE	2.515"	4"	3"	9"	5"	325
212-504	SAE-68024	24"	4"	40"	Full PSI	.38	16 SAE	2.515"	4"	3"	9"	5"	350
212-506	SAE-68030	30"	4"	46"	Full PSI	.38	16 SAE	2.515"	4"	3"	9"	5"	385
212-507	SAE-68036	36"	4"	52"	Full PSI	.38	16 SAE	2.515"	4"	3"	9"	5"	425
212-508	SAE-68048*	48"	4"	66"	Full PSI	.38	16 SAE	2.515"	4"	3"	9"	5"	425
212-509	SAE-68054*	54"	4"	73"	Full PSI	.38	16 SAE	2.515"	4"	3"	9"	5"	540
212-510	SAE-68060*	60"	4"	80"	Full PSI	.38	16 SAE	2.515"	4"	3"	9"	5"	580

Rods are sized for maximum safe push load (2:1 safety factor) given in the table. This is based on the pin configuration shown with no center support.

Recommended pin material 100,000 minimum yield strength.

*Spacers included in these models

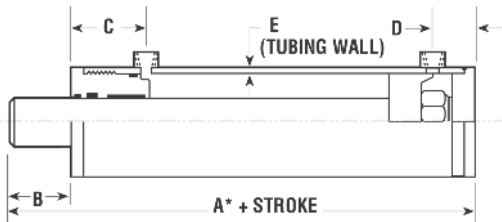
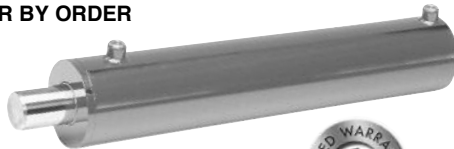
Custom Cylinders

CHIEF^{WHP} 4000 PSI

HEAVY DUTY WELDED CYLINDER BY ORDER

5, 6, and 8" bore, 4,000 PSI hydraulic cylinders in the most popular sizes.

Manufactured with no ends ready for your own do-it-yourself mounting.



Dimensional Data in Inches (Millimeters)

BORE	DIMENSIONS				
	A*	B	C	D	E
5.00 (127.0)	9.25 (235.0)	1.875 (47.6)	3.375 (85.7)	2 (50.5)	.375 (9.5)
6.00 (152)	10.50 (267)	2.25 (57)	3.75 (95)	2.25 (57.15)	.375 (9.52)
8.00 (203.2)	13.50 (342.9)	2.313 (58.75)	4.00 (101.6)	3.187 (80.95)	.500 (12.7)

* A 2.000 (50.8) spacer is added at 48.000 (1219.2) stroke, and an additional 1.000 (25.4) is added for each additional 6.000 (152.4) of stroke thereafter to a 6.000 (152.4) maximum spacer.

- Piston:** High-grade ductile iron with 45,000 PSI yield
• Tube: Precision honed DOM 1026 material • **Rod:** Ground and polished chromed C-1045 steel, 75,000 PSI minimum yield • **Base Plate:** C-1026 steel • **Ports:** C-1026 steel on strokes of 48" and above
• Spacer Tube: C-1026 steel
• Gland Seal: Polyurethane U-cup • **Rod Wiper:** Urethane
• Piston Seal: Hallite 755 with square section O-ring energizer Elastomer • **Rod Bearings:** Replaceable Nylon Glass Filled • **All Other Seals:** Selected and designed for maximum life • **Paint:** Black

ORDER NO.	STROKE	ROD DIA.	COLUMN LOAD	PORT SIZE	SHIP WT.
-----------	--------	----------	-------------	-----------	----------

5" Bore • 4000 PSI					
216-380	8"	23/4"	Full PSI	SAE 12	93
216-381	12"	23/4"	Full PSI	SAE 12	107
216-383	20"	23/4"	Full PSI	SAE 12	121
216-384	24"	23/4"	Full PSI	SAE 12	149
216-385	30"	23/4"	Full PSI	SAE 12	169
216-386	36"	23/4"	Full PSI	SAE 12	190
216-387	42"	23/4"	75,007 lbs.	SAE 12	211
216-388	48"	23/4"	60,461 lbs.	SAE 12	232
216-389	54"	23/4"	50,205 lbs.	SAE 12	253
216-391	72"	23/4"	30,897 lbs.	SAE 12	315
203-860	Packing Kit				

6" Bore • 4000 PSI					
216-420	8"	3"	Full PSI	SAE 12	134
216-421	12"	3"	Full PSI	SAE 12	153
216-422	16"	3"	Full PSI	SAE 12	173
216-423	20"	3"	Full PSI	SAE 12	193
216-424	24"	3"	Full PSI	SAE 12	212
216-425	30"	3"	Full PSI	SAE 12	241
216-426	36"	3"	Full PSI	SAE 12	271
216-427	42"	3"	99,834 lbs.	SAE 12	300
216-428	48"	3"	81,275 lbs.	SAE 12	330
203-861	Packing Kit				

8" Bore • 4000 PSI					
216-462	16"	4"	Full PSI	SAE 16	419
216-464	24"	4"	Full PSI	SAE 16	494
216-466	36"	4"	Full PSI	SAE 16	607
216-468	48"	4"	Full PSI	SAE 16	720
203-863	Packing Kit				

Our on-hand inventory of Chief WHP series cylinders are reserved for customers who will take them as described above without modifications. We cannot take one from stock and modify it but we can build one from start using our Custom Services which require additional manufacturing time and cost. Call today for a FREE quote and lead time.

Our Custom Service capabilities include a wide range of mounting options - such as front and rear mount flanges, trunions, devises, tangs, or cross tubes - and we can incorporate holding or check valves and cushioned ends. Available materials include both standard steel as well as stainless steel tube and rod, with a variety of sealing options with temperature ranges from -30° to 380° F.

Custom Services

Custom Cylinder Worksheet

Custom Order Quotes In 24 to 48 hours!

Lead times are based on the degree of customization requested.

We have provided custom hydraulic cylinders for the forestry industry, fertilizer spray equipment, small and medium size construction equipment, food industry, marine applications, farm equipment, industrial applications and many others. Whether you need one or one thousand, We can meet your needs.

For a no-obligation price quote for your custom hydraulic cylinder needs, please complete this form. If you prefer, provide contact information on this page and follow with your cylinder print. All information will be confirmed in writing.

To serve you quickly, this form must be filled out entirely before a quotation can be prepared. In processing this quote request Order assumes unless otherwise stated in the Special Instructions that:

1. The Cylinder oil temperature inside is 170° or less.
2. Rod Speed will be 100 ft. per minute or less.
3. System filtration will be 25 micron or better.
4. Fluid: SAE 20 weight or lighter oil based fluid & is non-foaming type for hydraulics.
5. Center-to-center and stroke dimensions are + or - 1/8 inch.
6. The cylinder is not used in a corrosive environment.

Customer Information

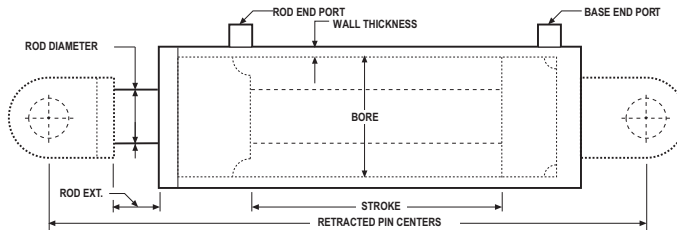
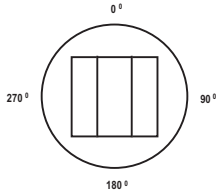
Quantity to quote: _____

All custom cylinders are painted with a semi-gloss black enamel paint unless otherwise specified.

e-mail: _____
 Company Name: _____
 Contact Name: _____
 Street Address: _____
 Mailing Address: _____
 City: _____
 State/Province: _____ Zip/Postal Code: _____ Country: _____
 Telephone: (____) _____ Fax: (____) _____

Dimensional Information

Port Location Guide



Bore: _____
Wall Thickness: _____
Stroke: _____
Retracted Pin Centers: _____
Rod: Diameter _____
 Extension: _____
 Type: Induction hardened
 Standard
 Nitro

Rod End Port: Size: _____
 Type: SAE
 NPTF
 Other _____
 Location: _____ 0
Base End Port: Size: _____
 Type: SAE
 NPTF
 Other _____
 Location: _____ 0



Please inquire for details

Application Information

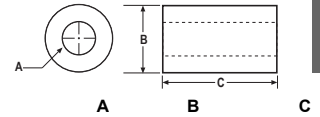
Cylinder will be used:	Yes	No
Push?.....	<input type="checkbox"/>	<input type="checkbox"/>
Pull?.....	<input type="checkbox"/>	<input type="checkbox"/>
Double Acting?.....	<input type="checkbox"/>	<input type="checkbox"/>
Single Acting?.....	<input type="checkbox"/>	<input type="checkbox"/>
Will cylinder be used to lift personnel?.....	<input type="checkbox"/>	<input type="checkbox"/>
Pressure Rating:		
Operating: _____	PSI	
Type of machine:	_____	
Installed Position:	_____	
Horizontal <input type="checkbox"/> Vertical <input type="checkbox"/> Angled or Arc <input type="checkbox"/>		

Any Special Instructions?

Please Print

Mounting Options

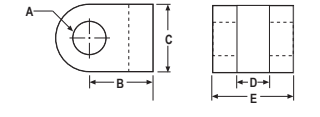
Cross Tube



Rod _____ A _____ B _____ C _____

Base _____

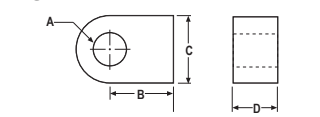
Clevis



Rod _____ A _____ B _____ C _____ D _____ E _____

Base _____

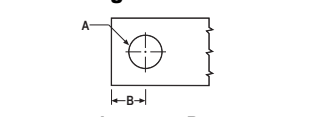
Tang



Rod _____ A _____ B _____ C _____ D _____

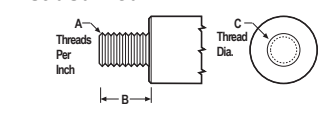
Base _____

Hole Through Rod



Rod _____ A _____ B _____

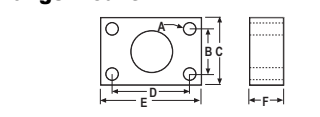
Threaded Rod



Rod _____ A* _____ B** _____ C _____

* Threads per inch ** Length

Flange Mount



Gland _____ A* _____ B** _____ C _____ D** _____ E _____ F _____

Base _____

* Print must be furnished on size, location and number of holes
 ** Bolt Hole Centers

Custom Cylinders

Universal Cylinder Components

If you are building your own hydraulic cylinder these parts will match up with each other for the completion of your project. If you are repairing or rebuilding a Chief cylinder, please call to match up these parts. Older Chief model glands, pistons, retainer rings, and base plates that are not listed in this catalog may be purchased based on availability. If we no longer stock that part it would be a custom order to produce the part. Call us for more information and a price quote.

CHIEF® Screw-In Glands • 3000 PSI

• Precisely machined with a radius on all corners • Designed to support wear bearings on 1.125" rod diameters and larger (bearings included in the packing kit) • Material: 65-45-12 ductile iron • 3000 PSI

ORDER NO.	BORE	DIMENSIONS					THREAD G (LENGTH)	SIZE	SHIP WT.
		A	B	C	D	E			
782-200*	1.5"	.75"	2.125"	1.625"	1.875"	.250"	.57"	1.660-14 UNF 1	
782-201*	1.5"	1.00"	2.125"	1.625"	1.875"	.250"	.57"	1.660-14 UNF 1	
782-202*	2.0"	1.00"	1.875"	1.625"	2.375"	.250"	.57"	2.160-14 UNF 2	
782-203	2.0"	1.125"	1.875"	1.625"	2.375"	.250"	.57"	2.160-14 UNF 2	
782-204	2.0"	1.25"	1.875"	1.625"	2.375"	.250"	.57"	2.160-14 UNF 2	
782-222	2.5"	1.125"	2.000"	1.750"	2.875"	.250"	.68"	2.660-14 UNF 3	
782-205	2.5"	1.25"	2.000"	1.750"	2.875"	.250"	.68"	2.660-14 UNF 3	
782-206	2.5"	1.375"	2.000"	1.750"	2.875"	.250"	.68"	2.660-14 UNF 3	
782-215	2.5"	1.50"	2.000"	1.750"	2.875"	.250"	.68"	2.660-14 UNF 3	
782-219	3.0"	1.25"	2.187"	1.875"	3.375"	.312"	.75"	3.160-14 UNF 3	
782-207	3.0"	1.50"	2.187"	1.875"	3.375"	.312"	.75"	3.160-14 UNF 3	
782-208	3.0"	1.75"	2.187"	1.875"	3.375"	.312"	.75"	3.160-14 UNF 3	
782-209	3.0"	2.00"	2.187"	1.875"	3.375"	.312"	.75"	3.160-14 UNF 3	
782-220	3.5"	1.25"	2.312"	2.000"	3.875"	.312"	.84"	3.660-14 UNF 3	
782-221	3.5"	1.50"	2.312"	2.000"	3.875"	.312"	.84"	3.660-14 UNF 3	
782-210	3.5"	1.75"	2.312"	2.000"	3.875"	.312"	.84"	3.660-14 UNF 5	
782-211	3.5"	2.00"	2.312"	2.000"	3.875"	.312"	.84"	3.660-14 UNF 5	
782-212	4.0"	2.00"	2.185"	1.875"	4.50"	.312"	.76"	4.160-14 UNF 8	
782-214	4.0"	2.25"	2.185"	1.875"	4.50"	.312"	.76"	4.160-14 UNF 8	
782-213	4.0"	2.50"	2.185"	1.875"	4.50"	.312"	.76"	4.160-14 UNF 8	

* No Wear Rings

Screw-In Glands • 4000 PSI

• Precisely machined with a radius on all corners • Designed to support wear bearings on 2" rod diameters and larger (bearings included in the packing kit) • Material: 65-45-12 ductile iron • 4000 PSI

ORDER NO.	BORE	DIMENSIONS					THREAD G (LENGTH)	SIZE	SHIP WT.
		A	B	C	D	E			
780-023	5.0"	3.00"	3.375"	2.875"	5.75"	.380"	1.375"	5.250-14 UNF 12	
780-028	6.0"	3.00"	3.75"	3.125"	6.75"	.625"	1.50"	6.250-12 UNF 22	
780-036	8.0"	4.00"	4.00"	3.375"	8.75"	.625"	1.75"	8.250-12 UNF 34	

ORDER NO.	SEAL KIT
783-123	Packing Kit
783-100	Packing Kit
783-101	Packing Kit
783-102	Packing Kit
783-103	Packing Kit
783-131	Packing Kit
783-104	Packing Kit
783-105	Packing Kit
783-106	Packing Kit
783-115	Packing Kit
783-107	Packing Kit
783-108	Packing Kit
783-109	Packing Kit
783-116	Packing Kit
783-130	Packing Kit
783-110	Packing Kit
783-111	Packing Kit
783-112	Packing Kit
783-114	Packing Kit

Gland Retainer Rings

• 3/8" spanner holes (two at 180° apart on bores 2" through 5", four at 90° on bores 6 through 8").

ORDER NO.	BORE	SET SCREW	DIMENSIONS			THREAD G (LENGTH)	SIZE	MATERIAL	SHIP WT.
			A	B	D				
780-331	2.0"	1/4-20"	1.625"	1.375"	2.875"	0.750"	2.375-16	DOM-1026	3
780-332	2.5"	1/4-20"	2.125"	1.375"	3.375"	0.750"	2.875-16	DOM-1026	3
780-333	3.0"	1/4-20"	3.125"	1.375"	3.875"	0.750"	3.375-16	DOM-1026	3
780-334	3.5"	1/4-20"	3.125"	1.375"	4.375"	0.750"	3.875-16	DOM-1026	3
780-335	4.0"	1/4-20"	3.625"	1.625"	5.000"	0.750"	4.5-12	DOM-1026	4
780-337	5.0"	1/4-20"	4.000"	1.625"	6.000"	0.750"	5.5-12	DOM-1026	5
780-338	6.0"	1/4-20"	5.250"	1.750"	7.250"	0.875"	6.5-12	DOM-1026	7
780-339	7.0"	3/8-16"	5.875"	2.250"	8.700"	1.500"	7.75-12	DOM-1026	13
780-340	8.0"	3/8-16"	7.060"	2.250"	9.910"	1.500"	8.75-12	DOM-1026	16

Base Plates • 3000 PSI

• Replacement base plates for Chief WC, WP, WT and WX models 1.5" bore to 4" bore.

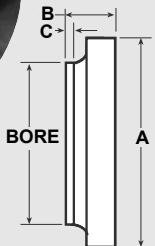
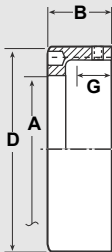
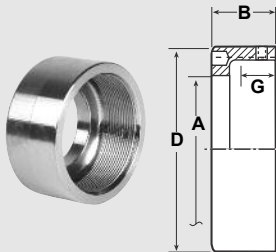
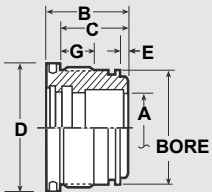
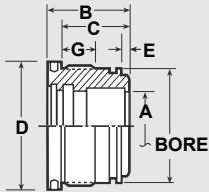
ORDER NO.	BORE	DIMENSIONS			ROLL PIN HOLE DIA.	MATERIAL	SHIP WT.
		A	B	C			
780-141	1.5"	1.875"	0.430"	0.125"	0.250"	AISI 1030	2
780-136	2.0"	2.375"	0.430"	0.125"	0.250"	AISI 1030	2
780-137	2.5"	2.875"	0.500"	0.125"	0.250"	AISI 1030	2
780-138	3.0"	3.375"	0.560"	0.125"	0.250"	AISI 1030	2
780-139	3.5"	3.875"	0.625"	0.125"	0.250"	AISI 1030	3
780-140	4.0"	4.500"	0.750"	0.185"	0.250"	AISI 1030	4

Base Plates • 4000 PSI

• Replacement base plate for Chief WHP 4000 PSI models and Chief WT 3000 PSI models 5" bore sizes and above. Chief WT 5" bore and above use Chief base part numbers 780-056 for 5" bore, 780-058 for 6" bore and 780-060 for 8" bore.

ORDER NO.	BORE	DIMENSIONS			MATERIAL	SHIP WT.
		A	B	C		
780-056	5.0"	5.500"	1.000"	0.250"	C-1026 steel	8
780-058	6.0"	6.500"	1.125"	0.250"	C-1026 steel	11
780-060	8.0"	8.750"	1.500"	0.500"	C-1026 steel	26

Cylinder Parts



CHIEF® Pistons

• 3000 PSI • 65-45-12 ductile iron

ORDER NO.	BORE	DIMENSIONS IN INCHES			SHIP WT.
		A	B	C	
782-250	1.50"	0.500"	0.75"	0.73"	2
782-251	2.00"	0.750"	1"	0.75"	2
782-258	2.25"	0.811"	1"	0.75"	3
782-252	2.50"	0.811"	1"	0.75"	3
782-257	2.75"	1.062"	1"	0.75"	3
782-253	3.00"	1.063"	1"	0.75"	4
782-254	3.50"	1.187"	1"	0.75"	4
782-255	4.00"	1.312"	1"	0.75"	5

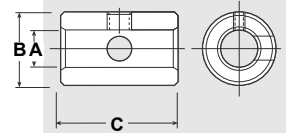
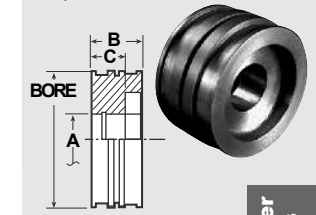
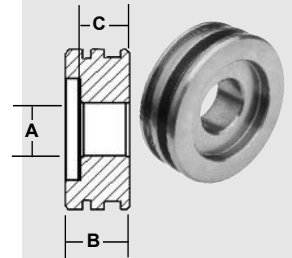
• 4000 PSI • 65-45-12 ductile iron

780-102	3.00"	1.060"	1.750"	1.375"	4
780-103	3.50"	1.310"	1.750"	1.375"	4
780-104	4.00"	1.310"	1.875"	1.375"	6
780-106	5.00"	1.560"	2.000"	1.375"	8
780-108	6.00"	2.062"	2.250"	1.500"	12
780-202*	8.00"	2.825"	4.000"	2.500"	36

* One 2" wear ring

ORDER NO.	SEAL KIT
783-117	Packing Kit
783-118	Packing Kit
783-129	Packing Kit
783-129	Packing Kit
783-128	Packing Kit
783-120	Packing Kit
783-121	Packing Kit
783-122	Packing Kit

781-102	Packing Kit
781-103	Packing Kit
781-104	Packing Kit
781-106	Packing Kit
781-108	Packing Kit
781-202	Packing Kit



Cross Tubes • All feature grease zerk **WT Series**

ORDER NO.	DIMENSIONS			FOR PIN DIA.	ROLL PIN HOLE DIA.	MATERIAL	GREASE ZERK THREAD TYPE
	A	B	C				
780-440	1.015"	1.500"	3.625"	1.000"	.250	DOM Carbon	3/16" Drive
780-433	1.265"	2.000"	4.000"	1.250"	.250	DOM Carbon	3/16" Drive
780-434	1.265"	2.000"	4.750"	1.250"	.250x.250	DOM Carbon	3/16" Drive
780-427	1.515"	2.500"	4.000"	1.500"	.250	DOM Carbon	3/16" Drive
780-430	1.515"	2.500"	6.750"	1.500"	.250x.250	DOM Carbon	3/16" Drive
780-431	2.515"	4.000"	5.000"	2.500"	None	DOM Carbon	3/16" Drive

WP Series

277-322	0.640"	1.250"	2.000"	0.625"	0.250"	Mild Steel	1/4" Drive
277-323	0.764"	1.250"	2.500"	0.750"	0.250"	Mild Steel	1/4" Drive
277-324	0.764"	1.250"	3.000"	0.750"	0.250"	Mild Steel	1/4" Drive
277-325	1.016"	1.500"	3.500"	1.000"	0.250"	Mild Steel	1/4" Drive
277-326	1.016"	1.500"	4.000"	1.000"	0.250"	Mild Steel	1/4" Drive
277-327	1.266"	2.000"	4.625"	1.250"	0.250"	Mild Steel	1/4" Drive

Rod End Clevises • TC2 & TC3 Series

• Universal ends to fit many 2", 2 1/2", 3", 3 1/2", 4" bore cylinders • 80-55-12 ductile iron

ORDER NO.	DIMENSIONS							THREAD SIZE	MATERIAL
	B	C	D	F	G*	H	I		
276-000	4.22"	2.125"	2"	1.015"	1.1"	1.165"	2.500"	1 1/8"-12 UNF	80-55-6
276-001	4.36"	2.125"	2.25"	1.015"	1.1"	1.165"	2.717"	1 1/4"-12 UNF	80-55-6
276-028	4.36"	2.125"	2.25"	1.265"	1.1"	1.165"	2.717"	1 1/4"-12 UNF	80-55-6
276-002	5.00"	2.125"	2.75"	1.265"	1.5"	1.203"	2.953"	1 1/2"-12 UNF	80-55-6

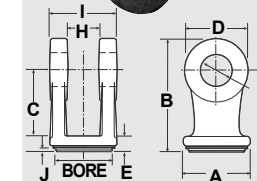
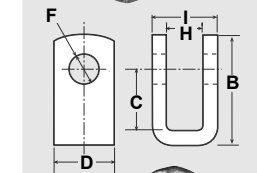
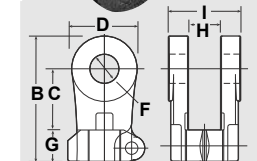
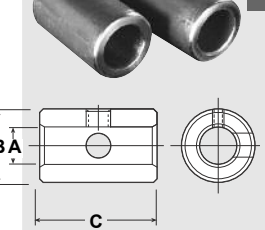
* Thread Length

Formed Rod End Clevises

ORDER NO.	DIMENSIONS							MATERIAL
	B	C	D	F	H	I		
750-346	2.25"	1.12"	1.50"	.76"	.75"	1.50"	1040 HF Bar	
750-347	2.75"	1.38"	1.87"	.99"	1.25"	2.00"	1040 HF Bar	
750-247	3.62"	2.02"	1.96"	1.01"	1.25"	2.19"	1040 HF Bar	
750-255	3.38"	1.50"	2.48"	1.01"	1.12"	2.38"	1040 HF Bar	
750-190	2.84"	2.10"	1.51"	.76"	.89"	1.68"	1040 HF Bar	
277-169	3.46"	2.10"	1.73"	.90"	.787"	1.73"	1040 HF Bar	
750-275	4.00"	2.02"	2.48"	1.25"	1.187"	3.125"	1040 HF Bar	
750-186	4.62"	2.10"	3.02"	-	1.51"	2.71"	1040 HF Bar	

Forged Base End Clevises • WC Series • Forged Steel

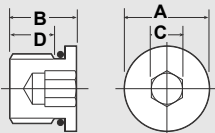
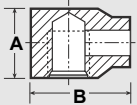
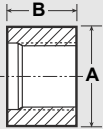
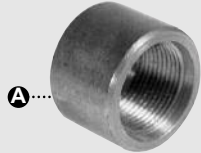
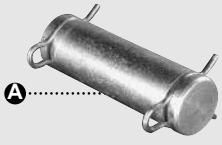
ORDER NO.	BORE	DIMENSIONS									
		A	B	C	D	E	F	H	I	J	
277-142	2.00"	2.375"	3.62"	2.125"	2.00"	0.50"	1.01"	1.13"	2.62"	0.125"	
277-154	2.50"	2.875"	3.62"	2.125"	2.00"	0.50"	1.01"	1.13"	2.62"	0.125"	
277-158	3.00"	3.375"	3.50"	1.870"	2.00"	0.62"	1.01"	1.13"	2.62"	0.125"	
277-162	3.50"	3.875"	3.50"	1.870"	2.00"	0.62"	1.01"	1.13"	2.62"	0.187"	
277-166	4.00"	4.500"	4.20"	1.750"	2.50"	0.75"	1.01"	1.13"	2.62"	0.187"	



Cylinder Parts

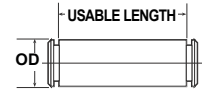
Cylinder Parts

Cylinder Parts



Steel Clevis Pins

ORDER NO.	O.D.	USABLE LENGTH	CLIP STYLE	FINISH
172-198 A	1"	23/4"	A-style	Yellow Zinc
172-250 A	1"	27/8"	A-style	Yellow Zinc
172-199 A	1"	3"	A-style	Yellow Zinc
172-200 A	1"	31/4"	A-style	Yellow Zinc
172-208 B	1"	31/2"	Cir-clip/R-clip	Yellow Zinc



Brass Breather Vents

• Enhanced design with solid top. More resistant to moisture and dirt. • Often used on single acting cylinders or valves, gear boxes, crank cases, storage tanks or other similar applications.

ORDER NO.	MICRON	PORT SIZE
113-697	10-12	1/2" NPT

Brass Breather Vents

• Often used on single acting cylinders or valves to prevent dirt and foreign particles from entering ports open to the atmosphere. Also used for vacuum pressure equalization for gear boxes, crank cases, storage tanks or other similar applications.

ORDER NO.	MICRON	THREAD SIZE
237-250	40	1/8" NPT
237-251	40	1/4" NPT
237-252	40	3/8" NPT
237-253	40	1/2" NPT
237-266	40	SAE 4

Nickel-Plated Iron Breather Vents

ORDER NO.	MICRON	THREAD SIZE
237-261	40	1/8" NPT
237-262	40	1/4" NPT
237-263	40	3/8" NPT
237-264	40	1/2" NPT
237-265	40	3/4" NPT

Stroke Controls

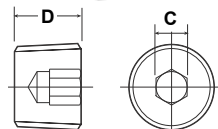
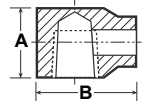
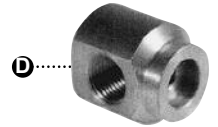
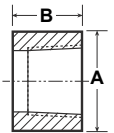
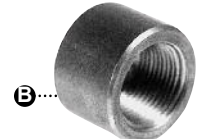
• Designed for external use.

ORDER NO.	FITS ROD DIA.	INCLUDES SEGMENT LENGTHS
237-066	11/8", 11/4"	3/4", 1", 11/4", 11/2"
237-067	13/8", 11/2"	3/4", 1", 11/4", 11/2"
237-068	13/4", 17/8"	1", 11/2", 2", 41/4"

CHIEF® Adjustable Stroke Controls

• 2 Stage. Fits ASAE style rods only.

ORDER NO.	FITS ROD DIAMETER	STROKE ADJUSTMENT
277-320	11/8"	21/4"
277-321	11/4"	21/4"



Weld-On Ports

A SAE

ORDER NO.	PORT SIZE	DIMENSIONS	
		A	B
750-098	SAE 4	0.75	0.62
750-099	SAE 5	0.87	0.56
750-100	SAE 6	0.87	0.68
750-101	SAE 8	1.12	0.68
750-102	SAE 10	1.25	0.87
750-103	SAE 12	1.50	1.00
750-105	SAE 16	1.75	1.25

B NPT

ORDER NO.	PORT SIZE	DIMENSIONS	
		A	B
750-088	1/4-18	0.87	0.50
750-089	3/8-18	1.00	0.50
750-090	1/2-14	1.25	0.68
750-091	3/4-14	1.50	0.68
750-092	1-111/2	1.75	1.18

C 90° SAE

ORDER NO.	PORT SIZE	DIMENSIONS	
		A	B
750-106	SAE 4	1.12	1.12
750-107	SAE 6	1.25	1.25
750-108	SAE 8	1.62	1.62
750-109	SAE 10	1.750	1.875
750-287	SAE 12	2.125	2.00

D 90° NPT

ORDER NO.	NPT PORT SIZE	DIMENSIONS	
		A	B
750-093	1/4-18	1.25	1.25
750-094	3/8-18	1.25	1.56
750-095	1/2-14	1.62	1.75
750-096	3/4-14	2.00	1.93

Port Plugs **E** SAE

ORDER NO.	PORT SIZE	DIMENSIONS		
		A	B	C
471-075	SAE 4	.56	.45	.19
471-076	SAE 5	.63	.45	.19
471-077	SAE 6	.69	.48	.25
471-078	SAE 8	.87	.56	.31
471-079	SAE 10	1.00	.63	.37
471-080	SAE 12	1.25	.75	.56
471-081	SAE 14	1.37	.75	.50
471-082	SAE 16	1.5	.75	.63

F NPT

ORDER NO.	PORT SIZE	DIMENSIONS	
		C	D
907-0103	1/4-18	.250	.44
907-0104	3/8-18	.312	.44
907-0105	1/2-14	.375	.59
907-0106	3/4-14	.562	.63
907-0108	1-111/2	.625	.77

Chrome Rod

Inch Dimensions

• Chrome thickness .0005" • Hardness: Surface - Rc 68-72; Core Rc 20-28 • Material: C-1045 • PSI yield: 75,000 • 16" minimum length.

ORDER NO.	O.D.	TOLERANCE	SHIP WT PER FOOT
700-260	1/2	+0/-0.0015	1
700-261	5/8	+0/-0.0015	1
700-262	3/4	+0/-0.0015	1
700-275	7/8	+0/-0.0015	1
700-263	1	+0/-0.0015	1
700-259	1 1/8	+0/-0.0015	1
700-264	1 1/4	+0/-0.0015	1
700-276	1 3/8	+0/-0.0015	1
700-265	1 1/2	+0/-0.0015	1
700-266	1 3/4	+0/-0.0015	1
700-267	2	+0/-0.0015	2
700-268	2 1/4	+0/-0.0015	2
700-269	2 1/2	+0/-0.0020	2
700-270	2 3/4	+0/-0.0020	2
700-271	3	+0/-0.0020	3
700-272	3 1/2	+0/-0.0030	4
700-273	4	+0/-0.0050	5
700-274	4 1/2	+0/-0.0050	5

Metric Dimensions

• Chrome thickness .0005" • Hardness: Surface - Rc 68-72; Core Rc 20-28 • Material: C-1045 • PSI yield: 100,000 • 16" minimum length.

ORDER NO.	O.D. IN MM	TOLERANCE IN MM	SHIP WT PER FOOT
700-332	22	+0/-0.038	1
700-314	40	+0/-0.038	1
700-326	45	+0/-0.038	1
700-327	56	+0/-0.038	2
700-330	70	+0/-0.050	2
700-331	75	+0/-0.050	3
700-322	80	+0/-0.076	3

Induction Hardened Chrome Rod

Inch Dimensions

• Chrome thickness .0005" • Hardness: Surface - Rc 68-72; Case Rc 50-52 • Material: C-1050 • PSI yield: 100,000 • 16" minimum length.

ORDER NO.	O.D.	TOLERANCE	SHIP WT PER FOOT
700-297	1	+0/-0.0015	1
700-299	1 1/4	+0/-0.0015	1
700-279	1 1/2	+0/-0.0015	1
700-280	1 3/4	+0/-0.0015	1
700-300	2	+0/-0.0015	2
700-304	3	+0/-0.0020	3

Ductile Iron Rod

• Features the strength of steel with the superior processing capabilities of cast iron • Consistent dense grain structure improves both machining accuracy and tool life resulting in the expanded adaptability to a broad range of applications • 16" minimum length.

ORDER NO.	O.D.	SHIP WT. PER FOOT
750-140	2	1
750-142	2 1/2	2
750-121	3	3
750-144	3 1/2	4
750-124	4	4
750-146	4 1/2	9
750-148	5	6
750-114	6	12
750-152	6 1/2	13
750-128	7 1/2	12

Carbon Tubing

• Material: 1026 DOM • 16" minimum length.

ORDER NO.	INCH DIMENSIONS			SHIP WT. PER FT.
	I.D.	TOLERANCE	O.D. WALL	
700-001	.77	+0/-0.005	1 1/4 1/4	1
700-002	1.01	+0/-0.006	1 3/4 3/8	1
700-011	1.02	+0.003/-0	1 1/2 1/4	1
700-019	1.01	+0/-0.006	2 1/2	1
700-003	1.27	+0/-0.006	2 3/8	1
700-007	1.51	+0.003/-0	2 1/4	1
700-008	1.51	+0/-0.008	2 1/2 1/2	2
700-004	2.00	+0.003/-0	3 1/2	2
700-006	3.01	+0/-0.027	4 1/2	2

Honed Steel Tubing

• Up to 3000 PSI working pressure, depending on wall thickness • Material: ST52.3 • 16" minimum length.

ORDER NO.	INCH DIMENSIONS			SHIP WT. PER FT.
	I.D.	TOLERANCE	O.D. WALL	
700-864	1 1/2	+0.003/-0	1 7/8 3/16	1
700-817	1 1/2	+0.003/-0	2 1/4	1
700-881	1 3/4	+0.003/-0	2 1/8 3/16	1
700-818	1 3/4	+0.003/-0	2 1/4 1/4	1
700-819	2	+0.003/-0	2 3/8 3/16	1
700-810	2	+0.003/-0	2 1/2 1/4	1
700-833	2 1/4	+0.003/-0	2 3/4 1/4	1
700-821	2 1/2	+0.003/-0	2 7/8 3/16	1
700-808	2 1/2	+0.003/-0	3 1/4	1
700-851	2 3/4	+0.003/-0	3 1/4 1/4	2
700-802	3	+0.003/-0	3 1/2 1/4	2
700-850	3	+0.003/-0	3 3/8 3/16	1
700-823	3	+0.003/-0	3 3/4 3/8	2
700-809	3 1/4	+0.003/-0	4 3/8	1
700-856	3 1/2	+0.003/-0	3 7/8 3/16	1
700-811	3 1/2	+0.003/-0	4 1/4	1

ORDER NO.	INCH DIMENSIONS			SHIP WT. PER FT.
	I.D.	TOLERANCE	O.D. WALL	
700-009	3 3/4	+0.003/-0	4 1/4 1/4	2
700-800	4	+0.003/-0	4 1/2 1/4	1
700-801	4	+0.003/-0	4 3/4 3/8	2
700-846	4	+0.003/-0	5 1/2	2
700-841	4 1/4	+0.003/-0	5 3/8	3
700-807	4 1/2	+0.003/-0	5 1/4	2
700-805	4 1/2	+0.003/-0	5 1/4 3/8	2
700-812	5	+0.003/-0	5 1/2 1/4	2
700-813	5	+0.003/-0	5 3/4 3/8	3
700-816	5	+0.003/-0	6 1/2	3
700-840	5 1/2	+0.003/-0	6 1/4 3/8	2
700-803	6	+0.005/-0	6 1/2 1/4	2
700-804	6	+0.005/-0	6 3/4 3/8	3
700-825	6	+0.005/-0	7 1/2	4
700-847	8	+0.005/-0	8 3/4 3/8	4



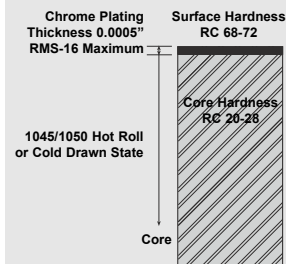
Rod & Tube Orders

We will cut to your exact specifications. The first cut is **FREE** and each additional cut is **\$9.50** (700-999)

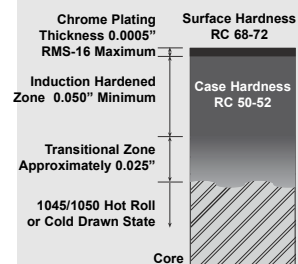
Please Note: Check your requested cut sizes carefully. Due to the speed in which we cut rods and tubes, placed orders cannot be cancelled.

Non-stock sizes may require minimum length purchases. Maximum shipping size and weight for UPS is 108" long and 150 lbs.

Max Rod and Tube size with packaging that exceeds 108" length or 150 lbs will be shipped common carrier. See LTL Shipments on page 116.



Chrome Rod



Rods & Tubing

Hydraulic Motors



Similar to Char-Lynn "H" series.

CHIEF™ Hydraulic Motors

• 1" diameter woodruff keyed cylindrical shaft • Light and medium duty applications • Dual Rotation • Similar to Char-Lynn "H" series.

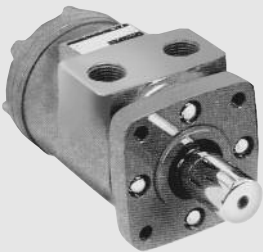
ORDER NO.	SIMILAR TO CHAR-LYNN	CU. IN. DISPL.	RPM	MAX		PORT SIZE	SHIP WT.
				TORQUE (IN/LBS)	PSI		
4-Bolt Mount							
272-201	101-1754	3.15	880	717	1840	1/2 NPTF	13
272-202	101-1002	4.75	740	1140	1840	1/2 NPTF	13
272-203	101-1003	5.90	590	1425	1840	1/2 NPTF	13
272-214	101-1755	7.20	475	1790	1840	1/2 NPTF	14
272-204	101-1004	9.50	370	2170	1840	1/2 NPTF	14
272-205	101-1005	11.60	295	2530	1625	1/2 NPTF	15
272-206	101-1006	14.10	240	3185	1625	1/2 NPTF	15
272-207	101-1007	19.00	190	3575	1625	1/2 NPTF	16
272-208	101-1008	23.60	150	3850	1450	1/2 NPTF	17
272-215	101-1750	3.15	880	717	1840	SAE 10	13
272-211	101-1010	4.75	740	1140	1840	SAE 10	13
272-216	101-1011	5.90	590	1425	1840	SAE 10	13
272-217	101-1751	7.20	475	1790	1840	SAE 10	14
272-228	101-1012	9.50	370	2170	1840	SAE 10	14
272-229	101-1013	11.60	295	2530	1625	SAE 10	15
272-230	101-1014	14.10	240	3185	1625	SAE 10	15
272-231	101-1015	19.00	190	3575	1625	SAE 10	16
272-232	101-1016	23.60	150	3850	1450	SAE 10	17
272-401	Seal Kit						

2-Bolt Mount							
272-210	101-1705	3.15	880	717	1840	1/2 NPTF	13
272-218	101-1026	4.75	740	1140	1800	1/2 NPTF	13
272-219	101-1027	5.90	590	1425	1840	1/2 NPTF	13
272-233	101-1706	7.20	475	1790	1840	1/2 NPTF	14
272-220	101-1028	9.50	370	2170	1840	1/2 NPTF	14
272-212	101-1029	11.60	295	2530	1625	1/2 NPTF	15
272-221	101-1030	14.10	240	3185	1625	1/2 NPTF	15
272-222	101-1031	19.00	190	3515	1300	1/2 NPTF	16
272-223	101-1032	23.60	150	3850	1450	1/2 NPTF	17
272-224	101-1701	3.15	880	717	1840	SAE 10	13
272-225	101-1034	4.75	740	1140	1840	SAE 10	13
272-213	101-1035	5.90	590	1425	1840	SAE 10	13
272-226	101-1702	7.20	475	1790	1840	SAE 10	13
272-234	101-1036	9.50	370	2170	1840	SAE 10	14
272-235	101-1037	11.60	295	2530	1625	SAE 10	15
272-236	101-1038	14.10	240	3185	1625	SAE 10	15
272-237	101-1039	19.00	180	2800	1300	SAE 10	16
272-227	101-1040	23.60	130	3350	1200	SAE 10	17
272-401	Seal Kit						

Char-Lynn® Hydraulic Motors • H Series

• H Series • Compact and lightweight in proportion to torque and power delivered • 1" shaft has 1/4" keyway • Dual Rotation

ORDER NO.	MFGR. NO.	CU. IN. DISPL.	RPM	MAX		PORT SIZE	SHIP WT.
				TORQUE (IN/LBS)	PSI		
4 Bolt Mount							
254-269	101-1749	2.2	1021	497	1800	SAE 10	12
254-001	101-1001	2.8	914	650	1800	1/2" NPTF	13
254-003	101-1002	4.5	723	1044	1800	1/2" NPTF	13
254-005	101-1003	5.9	559	1368	1800	1/2" NPTF	14
254-009	101-1756	8.9	385	1954	1700	1/2" NPTF	13
254-011	101-1004	9.7	342	2059	1650	1/2" NPTF	14
254-013	101-1005	11.3	294	2343	1600	1/2" NPTF	14
254-015	101-1006	14.1	238	2669	1450	1/2" NPTF	14
254-156	101-1014	14.1	238	2669	1450	SAE 10	14
254-017	101-1007	17.9	186	3110	1350	1/2" NPTF	17
254-019	101-1008	22.6	147	3604	1250	1/2" NPTF	16
254-033	101-1016	22.6	147	3604	1250	SAE 10	15
254-266*	101-1084	9.7	342	2059	1650	SAE 10	14
*1" 6B Spline Shaft							
2 Bolt Mount							
254-038	101-1026	4.5	723	1044	1800	1/2" NPTF	12
254-014	101-1027	5.9	559	1368	1800	1/2" NPTF	12
254-029	101-1035	5.9	559	1368	1800	SAE 10	12
254-154	101-1037	11.3	294	2343	1600	SAE 10	13
254-228	101-1038	14.1	238	2669	1450	SAE 10	14
254-010	101-1031	17.9	186	3110	1350	1/2" NPTF	14
254-020	101-1032	22.6	147	3604	1250	1/2" NPTF	15
253-007	Seal Kit						



CHIEF™ Hydraulic Motors

• 1" diameter woodruff keyed cylindrical shaft • For light and medium duty applications • Dual Rotation • Similar to Char-Lynn "S" Series

ORDER NO.	SIMILAR TO CHAR-LYNN	CU. IN. DISPL.	MAX			PORT SIZE	SHIP WT.
			RPM	TORQUE (IN/LBS)	PSI		
4-Bolt Mount							
272-310	103-1573	3.05	755	885	2061	1/2 NPTF	15
272-302	103-1002	4.92	750	1682	2576	1/2 NPTF	16
272-303	103-1003	6.15	600	2124	2576	1/2 NPTF	16
272-311	103-1574	7.63	475	2584	2576	1/2 NPTF	16
272-304	103-1004	9.60	375	3273	2429	1/2 NPTF	16
272-305	103-1005	12.16	300	3168	1914	1/2 NPTF	18
272-306	103-1006	15.38	240	3115	1625	1/2 NPTF	19
272-307	103-1007	19.20	190	3186	1251	1/2 NPTF	20
272-308	103-1008	22.60	160	3717	1251	1/2 NPTF	21
272-312	103-1570	3.05	755	885	2061	SAE 10	15
272-313	103-1010	4.92	750	1682	2576	SAE 10	16
272-314	103-1011	6.15	600	2124	2576	SAE 10	16
272-309	103-1571	7.63	475	2584	2576	SAE 10	16
272-315	103-1012	9.60	375	3273	2429	SAE 10	17
272-316	103-1013	12.16	300	3168	1914	SAE 10	18
272-317	103-1014	15.38	240	3115	1625	SAE 10	19
272-318	103-1015	19.20	190	3186	1251	SAE 10	20
272-319	103-1016	22.60	160	3717	1251	SAE 10	21
221-652			Seal Kit				

2-Bolt Mount							
272-320	103-1540	3.05	755	885	2061	1/2 NPTF	15
272-321	103-1026	4.92	750	1682	2576	1/2 NPTF	16
272-322	103-1027	6.15	600	2124	2576	1/2 NPTF	16
272-328	103-1028	9.60	375	3273	2429	1/2 NPTF	17
272-324	103-1029	12.16	300	3168	1914	1/2 NPTF	18
272-325	103-1030	15.38	240	3115	1625	1/2 NPTF	19
272-326	103-1031	19.20	190	3186	1251	1/2 NPTF	20
272-337	103-1032	22.60	160	3717	1251	1/2 NPTF	21
272-329	103-1034	4.92	750	1682	2576	SAE 10	16
272-331	103-1538	7.63	475	2584	2576	SAE 10	16
272-333	103-1036	9.60	375	3273	2429	SAE 10	17
272-334	103-1037	12.16	300	3168	1914	SAE 10	18
272-335	103-1038	15.38	240	3115	1625	SAE 10	19
272-332	103-1040	22.60	160	3717	1251	SAE 10	21
221-652			Seal Kit				

Char-Lynn® Hydraulic Motors • S Series

S Series Optimized Drive Running Angle Provides High Efficiency and Extended Motor Life - 1" diameter straight keyed shaft with 1/4" woodruff key.

ORDER NO.	MFRG. NO.	CU. IN. DISPL.	MAX			PORT SIZE	SHIP WT.
			RPM	TORQUE (IN/LBS)	PSI		
4 Bolt Mount							
271-055	Danfoss 151-2341	3.2	770	885	2061	SAE 10	13
254-053	103-1002	4.6	792	1325	2000	1/2" NPTF	14
254-159	103-1010	4.6	792	1325	2000	SAE 10	22
254-055	103-1003	5.7	607	1623	2000	1/2" NPTF	18
254-183	103-1011	5.7	607	1623	2000	SAE 10	14
254-061	103-1004	10.1	343	2662	1900	1/2" NPTF	18
254-104	103-1012	10.1	343	2662	1900	SAE 10	18
254-063	103-1005	11.4	304	2950	1850	1/2" NPTF	18
254-067	103-1007	18.2	190	4345	1500	1/2" NPTF	20
254-069	103-1008	22.7	153	4672	1300	1/2" NPTF	22
254-270	103-1016	22.7	153	4672	1300	SAE 10	20
2 Bolt Mount							
254-258	103-1537	3.6	963	1021	2000	SAE 10	15
254-272	103-1540	3.6	963	1021	2000	1/2" NPTF	14
254-517	103-1026	4.6	792	1325	2000	1/2" NPTF	17
254-136	103-1034	4.6	792	1325	2000	SAE 10	10
254-073	103-1027	5.7	607	1623	2000	1/2" NPTF	17
254-268	103-1035	5.7	607	1623	2000	SAE 10	17
254-002	103-1028	10.1	343	2662	1900	1/2" NPTF	18
254-077	103-1036	10.1	343	2662	1900	SAE 10	17
254-068	103-1029	11.4	304	2950	1850	1/2" NPTF	15
254-075	103-1030	13.7	253	3290	1700	1/2" NPTF	20
254-173	103-1038	13.7	253	3290	1700	SAE 10	15
254-072	103-1031	18.2	190	4345	1500	1/2" NPTF	15
254-271	103-1039	18.2	190	4345	1500	SAE 10	19
254-076	103-1032	22.7	153	4672	1300	1/2" NPTF	20
215-006	103-1040	22.7	153	4672	1300	SAE 10	22
253-008			Seal Kit				



Similar to Char-Lynn "S" series.

Motors

Also Available
Char-Lynn® Seal Kits
Contact us with your 10-digit manufacturer's number.

Related Items
Directional Control Valves p.68-73
Flow Meters p.60
Relief Valves p.75-76
Valves p.68-83

New!



Hydraulic Motors



Similar to Char-Lynn "2000" series.

CHIEF™ Hydraulic Motors

• 1 1/4" diameter straight keyed cylindrical shaft • Dual rotation • Similar to Char-Lynn "2000" series • Dual Rotation

ORDER NO.	SIMILAR TO CHAR-LYNN	CU. IN. DISPL.	MAX			PORT SIZE	SHIP WT.
			RPM	TORQUE (IN/LBS)	PSI		
2 Bolt A Mount							
272-422	104-1022	4.95	800	1682	2576	SAE 10	22
272-423	104-1023	6.15	748	2124	2576	SAE 10	22
272-432*	104-1023	6.15	748	2124	2576	SAE 10	22
272-424	104-1024	7.63	600	2744	2576	SAE 10	23
272-425	104-1025	9.39	470	4292	3045	SAE 10	24
272-426	104-1026	11.83	375	5185	3045	SAE 10	25
272-427	104-1027	14.83	300	6265	2900	SAE 10	26
272-428	104-1028	18.97	240	7787	2900	SAE 10	28
272-433*	104-1028	18.97	240	7787	2900	SAE 10	28
272-430	104-1228	24.04	185	7786	2320	SAE 10	28
272-400				Seal Kit			

* 1" woodruff key shaft

Char-Lynn® Hydraulic Motors • 2000 Series

• 2000 Series • Runs efficiently at very low speeds • 1 1/4" shaft has 5/16" keyway • Dual Rotation • 2-bolt A mount

ORDER NO.	MFR. NO.	CU. IN. DISPL.	MAX			PORT SIZE	SHIP WT.
			RPM	TORQUE (IN/LBS)	PSI		
1" Diameter Straight Keyed Shaft							
254-084	104-1001	4.9	908	2065	3000	SAE 10	26
254-120	104-1002	6.2	742	2630	3000	SAE 10	26
254-131	104-1003	8.0	576	3420	3000	SAE 10	27
254-092	104-1004	9.6	477	4040	3000	SAE 10	28
254-105	104-1005	11.9	385	4780	3000	SAE 10	29
254-012	104-1006	14.9	308	5850	3000	SAE 10	30
254-121	104-1007	18.7	246	6750	3000	SAE 10	31

1 1/4" Diameter Straight Keyed Shaft

254-081	104-1022	4.9	908	2065	3000	SAE 10	26
254-083	104-1023	6.2	742	2630	3000	SAE 10	27
254-085	104-1024	8.0	576	3420	3000	SAE 10	27
254-087	104-1025	9.6	477	4040	3000	SAE 10	26
254-089	104-1026	11.9	385	4780	3000	SAE 10	26
254-091	104-1027	14.9	308	5850	3000	SAE 10	27
254-093	104-1028	18.7	246	6750	3000	SAE 10	31
254-095	104-1228	24.0	191	6840	2250	SAE 10	32
253-002				Seal Kit			

Char-Lynn® Hydraulic Steering Valves

• For use with standard 12 tooth splined steering columns. • 2500 PSI max. pressure. • Open center. • Four 3/8" -16 mounting holes on 3 1/4" B.C. • Valves are available in two different load circuit options: Non-Load Reaction - Steering cylinder ports are blocked in neutral, locking the axle position when the operator releases the steering wheel. Load Reaction - Steering cylinder ports are tied together in neutral, allowing the axle forces to return the steering wheel to it's original position when the wheel is released (similar to steering in an automobile)

ORDER NO.	MFR. NO.	REACTION	MAX PSI	CU. IN. DISPL.	GPM FLOW	PORT SIZE	SHIP WT.
255-001	211-1001	Non Load	2500	4.5	2-4	SAE 6	15
255-021	211-1007	Non Load	2500	4.5	4-8	SAE 8	14
255-022	211-1008	Non Load	2500	5.9	4-8	SAE 8	14
255-003	211-1003	Non Load	2500	7.3	2-4	SAE 6	15
255-023	211-1009	Non Load	2500	7.3	4-8	SAE 8	14
255-009	211-1059	Load	2500	8.9	4-8	SAE 8	13
254-004	211-1010	Non Load	2500	9.7	4-8	SAE 8	14
255-025	211-1011	Non Load	2500	11.3	4-8	SAE 8	15
255-026	211-1012	Non Load	2500	14.1	4-8	SAE 8	16
255-012	211-1052	Load	2500	14.1	4-8	SAE 8	14
255-076	211-1167	Non Load	2500	17.9	8-16	SAE 8	16
255-065	211-1177	Non Load	2500	22.6	8-16	SAE 8	17
255-072	211-1179	Non Load	2500	45.1	8-16	SAE 8	22
253-026				Seal Kit			

Motors



Sample Applications

Agricultural Equipment
Construction Equipment

CHIEF™ Wheel Motors

• Similar to White RE 500 & 501 • All Have 1-1/4" tapered keyed shafts • Dual rotation • 4 Bolt Mount

ORDER NO.	MGFR. NO.	CU. IN. DISPL.	MAX				PORT SIZE	SHIP WT.
			RPM	TORQUE (IN/LBS)	GPM	PSI		
252-580	BMER-1-300-WS-T4-S	18.08	250	7169	25	2973	SAE 10	25
252-582	BMER-1-375-WS-T4-S	22.63	200	8762	24	2973	SAE 10	30
252-584	BMER-1-540-WS-T4-S	32.94	140	8673	24	2030	SAE 10	35

CHIEF™ Magneto Mount Motors

• All have 1-1/4" straight keyed shafts • Dual Rotation • 6 Bolt Mount

ORDER NO.	MGFR. NO.	CU. IN. DISPL.	MAX				PORT SIZE	SHIP WT.
			RPM	TORQUE (IN/LBS)	GPM	PSI		
252-586	BMER-1-300-MP-G2-S	18.08	250	7169	25	2973	SAE 10	25
252-588	BMER-1-375-MP-G2-S	22.63	200	8762	24	2973	SAE 10	30
252-590	BMER-1-540-MP-G2-S	32.94	140	8673	24	2030	SAE 10	35

GRESEN® Hydraulic Motors • MGG2 Series

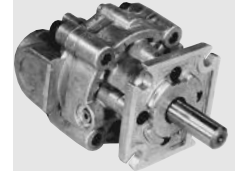
• Lightweight, aluminum alloy housing • Gerotor design with heavy duty bearings and aluminum bodies • High pressure mechanical seals

ORDER NO.	CU. IN. DISPL.	GPM @ 1000 RPM	MAX		PORT SIZE	MOUNTING FLANGE	SHIP WT.
			RPM	PSI			
9/16" Diameter Straight Keyed Shaft • Dual Rotation							
280-266	.21	.95	5000	2000	SAE 8	4-bolt	4
280-268	.37	1.61	5000	2000	SAE 8	4-bolt	4
280-270	.45	1.95	5000	2000	SAE 8	4-bolt	4
280-271	.58	2.51	5000	2000	SAE 10	2-bolt AA	4
280-272	.58	2.51	5000	2000	SAE 10	4-bolt	4
280-273	.70	3.03	5000	1500	SAE 10	2-bolt AA	4
280-274	.70	3.03	5000	1500	SAE 10	4-bolt	4

New!



New!



Motors



Similar To Gresen PGG2 Series



New! 9 Tooth Spline Shaft



Pumps

Related Items

Filters and Strainers	p.61-62
Pressure Gauges	p.60, 62
Rotary Flow Dividers	p.78-79
Hose Products	p.84-89
Reservoir Tanks	p.61
Relief Valves	p.75-76
Oil Coolers	p.63-67



CHIEF™ Gear Pumps

1/2" Diameter Straight Keyed Shaft 1" Long - 2 Bolt AA Mount

ORDER NO.	CU. IN. DISPL.	*GPM	MAX RPM	PSI	PORT		ROTATION	SHIP WT.
					INLET	OUTLET		
252-125	.07	1.4	5000	3625	SAE 8	SAE 6	CW	8
252-126	.12	2.4	5000	3625	SAE 8	SAE 6	CW	8
252-127	.16	3.2	5000	3625	SAE 8	SAE 6	CW	8
252-128	.20	4.7	5000	3625	SAE 8	SAE 6	CW	8
252-129	.25	4.0	4000	3625	SAE 8	SAE 6	CW	9
252-130	.31	4.9	4000	3625	SAE 8	SAE 6	CW	9
252-131	.37	5.9	4000	3480	SAE 8	SAE 6	CW	10

5/8" Diameter Straight Keyed Shaft 1 1/4" Long or S9 9 Tooth Spline Shaft - 2 Bolt A Mount

5/8" DIA. STRAIGHT KEYED SHAFT ORDER NO.	S9 9 TOOTH SPLINE SHAFT ORDER NO.	CU. IN. DISPL.	*GPM	MAX RPM	PSI	PORT		ROTATION
						INLET	OUTLET	
252-150	-	.36	5.2	3600	3650	SAE 12	SAE 10	CCW
252-158	-	.36	5.2	3600	3650	SAE 12	SAE 10	CW
252-151	252-210	.48	6.9	3600	3650	SAE 12	SAE 10	CCW
252-159	252-217	.48	6.9	3600	3650	SAE 12	SAE 10	CW
252-152	252-188	.61	8.8	3600	3650	SAE 12	SAE 10	CCW
252-160	252-218	.61	8.8	3600	3650	SAE 12	SAE 10	CW
252-153	252-219	.73	10.5	3600	3650	SAE 12	SAE 10	CCW
252-161	252-220	.73	10.5	3600	3650	SAE 12	SAE 10	CW
252-154	252-184	.85	12.3	3600	3650	SAE 12	SAE 10	CCW
252-162	252-191	.85	12.3	3600	3650	SAE 12	SAE 10	CW
252-155	252-193	.97	11.7	3000	2900	SAE 12	SAE 10	CCW
252-163	252-221	.97	11.7	3000	2900	SAE 12	SAE 10	CW
252-156	252-215	1.22	14.7	3000	2900	SAE 12	SAE 10	CCW
252-164	252-216	1.22	14.7	3000	2900	SAE 12	SAE 10	CW
252-157	252-213	1.52	18.3	3000	2900	SAE 12	SAE 10	CCW
252-165	252-166	1.52	18.3	3000	2900	SAE 12	SAE 10	CW

3/4" Diameter Straight Keyed Shaft 1 1/4" Long - 2 Bolt A Mount

ORDER NO.	CU. IN. DISPL.	*GPM	MAX RPM	PSI	PORT		ROTATION	SHIP WT.
					INLET	OUTLET		
252-140	.38	4.5	3000	3600	SAE 10	SAE 8	CW	5
252-139	.38	4.5	3000	3600	SAE 10	SAE 8	CCW	5
252-142	.52	6.2	3000	3600	SAE 10	SAE 8	CW	5
252-141	.52	6.2	3000	3600	SAE 10	SAE 8	CCW	5
252-144	.62	7.4	3000	3600	SAE 10	SAE 8	CW	5
252-143	.62	7.4	3000	3600	SAE 10	SAE 8	CCW	5
252-146	.76	9.1	3000	3600	SAE 10	SAE 8	CW	5
252-145	.76	9.1	3000	3600	SAE 16	SAE 12	CCW	5
252-148	.85	10.2	3000	3600	SAE 16	SAE 12	CW	6
252-147	.85	10.2	3000	3600	SAE 16	SAE 12	CCW	6
252-108	.98	11.8	3000	3000	SAE 16	SAE 12	CW	6
252-149	.98	11.8	3000	3000	SAE 16	SAE 12	CCW	6
252-109	1.22	14.7	3000	3000	SAE 16	SAE 12	CCW	6
252-110	1.22	14.7	3000	3000	SAE 16	SAE 12	CW	6
252-112	1.53	18.4	3000	3000	SAE 16	SAE 12	CW	6
252-111	1.53	18.4	3000	3000	SAE 16	SAE 12	CCW	6

7/8" Diameter Straight Keyed Shaft 1 1/4" Long - 2 Bolt B Mount

ORDER NO.	CU. IN. DISPL.	*GPM	MAX RPM	PSI	PORT		ROTATION	SHIP WT.
					INLET	OUTLET		
252-170	1.22	14.7	3000	3625	SAE 16	SAE 12	CW	10
252-171	1.22	14.7	3000	3625	SAE 16	SAE 12	CCW	10
252-172	1.53	18.4	3000	3625	SAE 16	SAE 12	CW	10
252-173	1.53	18.4	3000	3625	SAE 16	SAE 12	CCW	10
252-174	1.95	23.5	3000	3625	SAE 16	SAE 12	CW	11
252-175	1.95	23.5	3000	3625	SAE 16	SAE 12	CCW	11
252-176	2.44	29.4	3000	3625	SAE 16	SAE 12	CW	12
252-177	2.44	29.4	3000	3625	SAE 16	SAE 12	CCW	12
252-178	3.05	36.8	3000	3625	SAE 16	SAE 12	CW	13
252-179	3.05	36.8	3000	3625	SAE 16	SAE 12	CCW	13
252-180	3.86	46.6	3000	3625	SAE 16	SAE 12	CW	14
252-181	3.86	46.6	3000	3625	SAE 16	SAE 12	CCW	14

*Max GPM indicates flow at maximum RPM. To figure your actual flow rate use this formula. $\frac{CU. IN. \times RPM}{231}$

231



Gear Pumps

• Patented non-symmetrical gears ensure greater power per unit volume compared with pumps of conventional design

ORDER NO.	PRINCE NO.	CU. IN. DISPL.	MAX			PORT SIZE		SHAFT ROTATION	SHIP WT.
			*GPM	RPM	PSI	IN	OUT		
SP20B Series 5/8" Diameter Straight Keyed Shaft 1 1/4" Long - 2 Bolt A Mount									
250-471	SP20B08A9H2-R	0.49	7.2	4000	3000	SAE 12	SAE 10	CW	6
250-413	SP20B08A9H2-L	0.49	7.2	4000	3000	SAE 12	SAE 10	CCW	6
250-472	SP20B09A9H2-R	0.58	8.5	4000	3000	SAE 12	SAE 10	CW	6
250-473	SP20B11A9H2-R	0.67	9.8	4000	3000	SAE 12	SAE 10	CW	6
250-469	SP20B11A9H2-L	0.67	9.8	4000	3000	SAE 12	SAE 10	CCW	6
250-474	SP20B14A9H2-R	0.86	12.6	4000	3000	SAE 12	SAE 10	CW	6
250-467	SP20B14A9H2-L	0.86	12.6	4000	3000	SAE 12	SAE 10	CCW	6
250-475	SP20B16A9H2-R	0.97	14.2	4000	3000	SAE 12	SAE 10	CW	6
250-468	SP20B16A9H2-L	0.97	14.2	4000	3000	SAE 12	SAE 10	CCW	6
250-476	SP20B20A9H2-R	1.22	15.7	3500	3000	SAE 16	SAE 12	CW	7
250-479	SP20B20A9H2-L	1.22	15.7	3500	3000	SAE 16	SAE 12	CCW	7
250-477	SP20B23A9H2-R	1.40	18.0	3500	2500	SAE 16	SAE 12	CW	7
250-492	SP20B23A9H2-L	1.40	18.0	3500	2500	SAE 16	SAE 12	CCW	7
250-478	SP20B27A9H2-R	1.65	21.2	3500	2500	SAE 16	SAE 12	CW	7
250-490	SP20B27A9H2-L	1.65	21.2	3500	2500	SAE 16	SAE 12	CCW	7
205-166	PMCK-SP20						SP20 Seal Kit		

3/4" Diameter Straight Keyed Shaft 1 1/4" Long									
250-464	SP20B27A9H4-L	1.65	21.2	3500	2500	SAE 16	SAE 12	CCW	7
250-406	SP20B27A9H4-R	1.654	21.2	3500	2500	SAE 16	SAE 12	CW	11

SP25A Series 7/8" Diameter Straight Keyed Shaft 1 5/8" Long - 2 Bolt B M									
250-481	SP25A19A9H2-R	1.141	12.6	3000	3000	SAE 16	SAE 12	CW	11
250-502	SP25A19A9H2-L	1.141	12.6	3000	3000	SAE 16	SAE 12	CCW	11
250-482	SP25A22A9H2-R	1.349	14.9	3000	3000	SAE 16	SAE 12	CW	11
250-483	SP25A27A9H2-R	1.660	18.3	3000	3000	SAE 16	SAE 12	CW	11
250-494	SP25A27A9H2-L	1.660	18.3	3000	3000	SAE 16	SAE 12	CCW	11
250-484	SP25A32A9H2-R	2.008	22.1	3000	3000	SAE 20	SAE 16	CW	12
250-485	SP25A38A9H2-R	2.318	25.5	3000	3000	SAE 20	SAE 16	CW	13
250-500	SP25A38A9H2-L	2.318	25.5	3000	3000	SAE 20	SAE 16	CCW	13
250-486	SP25A44A9H2-R	2.697	29.7	3000	3000	SAE 20	SAE 16	CW	14
250-496	SP25A44A9H2-L	2.697	29.7	3000	3000	SAE 20	SAE 16	CCW	14
250-487	SP25A52A9H2-R	3.179	35.0	3000	2500	SAE 20	SAE 16	CW	15
250-441	SP25A52A9H2-L	3.179	35.0	3000	2500	SAE 20	SAE 16	CCW	15
250-488	SP25A63A9H2-R	3.869	42.7	3000	2500	SAE 24	SAE 16	CW	16
250-489	SP25A63A9H2-L	3.869	42.7	3000	2500	SAE 24	SAE 16	CCW	16
205-010	PMCK-SP25						SP25 Seal Kit		

*Max GPM indicates flow at maximum RPM. To figure your actual flow rate use this formula. $\frac{CU.IN \times RPM \times .85}{231}$



Gear Pumps • W900 Series

• Constructed of high strength aluminum housings and cast iron end covers • High performance, high efficiency at low and high speed operation, low noise • Keyway size 3/16"

ORDER NO.	CU. IN. DISPL.	*GPM	MAX		PORT SIZE		SHAFT ROTATION
			RPM	PSI	IN	OUT	
3/4" Diameter Straight Keyed Shaft 1 1/4" Long - 2 Bolt A Mount							
250-932	0.366	5.7	4000	4000	SAE 10	SAE 8	CW
250-934	0.488	7.6	4000	4000	SAE 12	SAE 10	CW
250-936	0.610	8.5	3600	4000	SAE 12	SAE 10	CW
250-938	0.671	9.4	3600	4000	SAE 12	SAE 10	CW
250-940	0.854	11.0	3300	4000	SAE 12	SAE 10	CW
250-942	0.976	11.4	3000	4000	SAE 12	SAE 10	CW
250-943	0.976	11.4	3000	4000	SAE 12	SAE 10	CCW
250-944	1.159	13.5	3000	4000	SAE 16	SAE 12	CW
250-946	1.403	15.3	2800	3200	SAE 16	SAE 12	CW
250-947	1.403	15.3	2800	3200	SAE 16	SAE 12	CCW
250-950							Packing Kit For W900 Pumps Above

*Max GPM indicates flow at maximum RPM. To figure your actual flow rate use this formula. $\frac{CU.IN \times RPM \times .90}{231}$



Pumps



Gear Pumps



Sample Applications
Agricultural Equipment
Landscaping Equipment



Pumps



CHIEF™ PTO Gear Pumps

- Self-adjusting wear plates both sides • Two outlet ports with plug to seal unused port • Roller bearings • Internal spline with thru-drive feature • High tensile cast iron end plates • Slips on tractor PTO (no gear box required).

ORDER NO.	MAX		PORT SIZE		DRIVE SHAFT REQUIRED	ACTUAL DISPL.	H.P. INPUT	MAX GPM @ 2000 PSI	SHIP WT.
	RPM	PSI	IN	OUT					
Aluminum Center Housing									
252-567	540	2250	SAE 16	SAE 12	13/8" dia. 6 tooth	3.6	8.8	7.2	33
252-557	540	2250	SAE 16	SAE 12	13/8" dia. 6 tooth	5.7	13.8	11.6	36
252-565	1000	2250	SAE 16	SAE 12	13/8" dia. 21 tooth	5.7	25.9	22.6	36
252-555	540	2250	SAE 16	SAE 12	13/8" dia. 6 tooth	7.8	20.4	16.9	38
252-560	540	2250	SAE 16	SAE 12	13/8" dia. 6 tooth	9.9	21.8	21.0	40
252-566	1000	2000	SAE 20	SAE 16	13/8" dia. 21 tooth	9.9	43.4	40.0	40



PTO Gear Pumps

- Self-adjusting wear plates both sides • Two outlet ports with plug to seal unused port • Roller bearings • Internal spline with thru-drive feature • High tensile cast iron end plates • Slips on tractor PTO (no gear box required).

ORDER NO.	PRINCE NO.	MAX		PORT SIZE		DRIVE SHAFT REQUIRED	ACTUAL DISPL.	H.P. INPUT	MAX GPM @2000 PSI	SHIP WT.
		RPM	PSI	IN	OUT					
Aluminum Center Housing										
251-560	HC-PTO-1A	540	2250	SAE 16	SAE 12	13/8" dia. 6 tooth	9.9	23.8	21.0	43
251-563	HC-PTO-2A	540	2250	SAE 16	SAE 12	13/8" dia. 6 tooth	5.7	13.8	11.6	38
251-565	HC-PTO-3A	1000	2250	SAE 16	SAE 12	13/8" dia. 21 tooth	5.7	25.9	22.6	38
251-555	HC-PTO-9A	540	2250	SAE 16	SAE 12	13/8" dia. 6 tooth	7.8	20.4	16.9	38
251-566	HC-P-K11	1000	2000	SAE 20	SAE 16	13/8" dia. 21 tooth	9.9	43.4	40.0	42

Cast Iron Center Housing

251-562	HC-PTO-1AC540	2250	SAE 16	SAE 12	13/8" dia. 6 tooth	9.9	23.8	21.0	58	
251-557	HC-PTO-2AC540	2250	SAE 16	SAE 12	13/8" dia. 6 tooth	5.7	13.8	11.6	48	
251-554	HC-P-K11-C	1000	2000	SAE 20	SAE 16	13/8" dia. 21 tooth	9.9	43.4	40.0	55

Accessories

205-116	PMCK-PTO-1A	Seal Kit								
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Gear Pumps/Motors • GC Series

- All feature heavy-duty cast iron construction, case drain, viton shaft seal and outboard ball bearing
- Similar to MTE D Series and Sauer-Danfoss Webster YB Series • 4-bolt flange • 1.78" pilot

ORDER NO.	CU. IN. DISPL.	GPM		MAX PSI		PORT SIZE & LOCATION	SHIP WT.
		1800 RPM	3600 RPM	CONT.	INT.		
1/2" Diameter Straight Keyed Shaft x 1 1/2" Long • Birotational							
250-055	0.065	.5	1	3000	4000	SAE 6 Side	5
250-056	0.097	.75	1	3000	4000	SAE 6 Side	5
250-057	0.129	1	2	3000	4000	SAE 8 Side	5
250-058	0.194	1.5	3	3000	4000	SAE 8 Side	5
250-059	0.258	2	4	2300	4000	SAE 8 Side	5
250-060	0.388	3	6	1600	2500	SAE 10 Side	6
250-061	0.517	4	8	1200	2000	SAE 10 Side	6
250-063	Packing Kit for GC Pumps						

Metaris Variable Speed Piston Pumps

- Open circuit • Pressure control controller • Buna seals • 1.71 cubic inch displacement
- 4,000 PSI • 3000 RPM • 21 GPM • SAE 2 bolt mount

ORDER NO.	MFG. NO.	SHAFT	ROTATION	SIDE IN/OUT	SHIP WT.
116-157	MA10VS028DR31/RPSC61NO	3/4" dia 11 tooth spline	CW	1 1/4-20 ORB	55
116-158	MA10VS028DR31/LPSC61NO	3/4" dia 11 tooth spline	CCW	1 1/4-20 ORB	55

Gear, Clutch, & Dump Pumps

P51 Gear Pumps

• Heavy duty gear pumps interchangeable with Parker "P51", Muncie "L" and Permco "P5100" series • Pumps are birotational with ports on side and rear for ease of mounting and plumbing • High grade castings and heavy duty outboard shaft bearings for severe applications like Refuse Equipment and Utility Line trucks • All models have 1" NPTF rear ports.

ORDER NO.	CU. IN. DISPL.	GPM@2400 RPM	MAX PSI	SIDE PORTS	SHAFT	SHIP WT.
4-Bolt B Mount						
252-250	2.55	23.8	3000	1" NPT	7/8" 13 tooth spline	37
252-251	3.19	29.8	3000	1" NPT	7/8" 13 tooth spline	39
252-252	4.46	41.7	3000	1" NPT	7/8" 13 tooth spline	42
252-253	5.74	53.6	2500	1" NPT	7/8" 13 tooth spline	49
252-255	3.19	29.8	3000	1" NPT	1" straight, 1/4 key	39
252-256	4.46	41.7	3000	1" NPT	1" straight, 1/4 key	42
252-257	5.74	53.6	2500	1" NPT	1" straight, 1/4 key	49

2-Bolt B Mount						
252-258	2.55	23.8	3000	1" NPT	7/8" 13 tooth spline	37
252-259	3.19	29.8	3000	1" NPT	7/8" 13 tooth spline	39
252-260	4.46	41.7	3000	1" NPT	7/8" 13 tooth spline	42
252-261	5.74	53.6	2500	1" NPT	7/8" 13 tooth spline	49
252-262	2.55	23.8	3000	1" NPT	1" straight, 1/4 key	37
252-263	3.19	29.8	3000	1" NPT	1" straight, 1/4 key	39
252-264	4.46	41.7	3000	1" NPT	1" straight, 1/4 key	42
252-265	5.74	53.6	2500	1" NPT	1" straight, 1/4 key	49

CP124 Clutch Pumps

• All pumps feature both side and rear 1 1/4" NPT inlets and 3/4" NPT outlets • Pressure balanced wear plates for high efficiency, High torque clutches in the most popular configurations • Standard rotation is clockwise (CW), counter clockwise (CCW) and other port configurations available by special order • 2-bolt A mount requires purchase of bracket or existing bracket.

ORDER NO.	CU. IN. DISPL.	GPM	MAX PSI	RPM	MOUNT	CLUTCH	SHIP WT.
252-267	0.93	10.8	3500	3000	2-Bolt A	None	45
252-268	1.55	18.1	3500	3000	2-Bolt A	None	45
252-269	1.86	21.7	3200	3000	2-Bolt A	None	45
252-270	2.48	32.2	2500	3000	2-Bolt A	None	45
252-271	1.86	21.7	3200	3000	Bracket	Type K 6 Groove	53
252-272	2.48	32.2	2500	3000	Bracket	Type K 8 Groove	53
252-273	2.48	32.2	2500	3000	Bracket	Type AA V-Belt	53
252-274	0.93	10.8	3500	3000	Pad	None	45
252-275	1.55	18.1	3500	3000	Pad	None	45
252-276	1.86	21.7	3200	3000	Pad	None	45

ACCESSORIES

252-277	AA Groove Clutch assembly 120 lb.ft. torque*						10
252-278	Type K, 6 groove serpentine clutch assembly, 120 lb.ft. torque*						10
252-279	Type K, 8 groove serpentine clutch assembly, 120 lb.ft. torque*						10
252-280	Clutch pump bracket for 2-bolt A flanges						8
252-281	Switch Kit						8
252-282	Bracket to replace Muncie H series clutch pumps with Permco units. Muncie clutches will not attach to Permco pumps.						8

* After burnishing, see owners manual

Dump Pump

• Features three-piece cast iron construction; high-pressure shaft seals, direct-acting relief with load check, pressure balance thrust plates, heavy-duty roller bearing • Interchangeable with Commercial Intertech C101 and C102. Foot/Mount Bracket pictured sold separately • birotational, 1"keyed shaft

ORDER NO.	MAX			RELIEF ADJ. RANGE	SETTING	PORT SIZE		SHIP WT.
	GPM	RPM	PSI			IN	CYL	
250-107	46	2000	2500	500-2500 PSI	2500 PSI	1 1/4"	1"	69
250-115	Foot Mount Bracket							



Pumps



Vane Pumps & Jaw Couplers



V10 and V20 Vane Pumps

Direct replacement for Vickers V10/V20 Vane Pumps • SAE ports available • 3/4" straight keyed shaft • 2 bolt A Mounting Flange • Counter clockwise rotation available.

ORDER NO.	MODEL NO.	CU. IN DISPL.	PORT SIZE		GPM @ 1200 RPM & 100 PSI	ROTATION	SHIP WT.
			IN	OUT			
V10 VANE PUMPS							
250-119	V10-1P1P-1A20	.20	1" NPT	1/2" NPT	1	CW	15
250-128	V10-1P3P-1A20	.60	1" NPT	1/2" NPT	3	CW	15
250-125	V10-1P4P-1A20	.80	1" NPT	1/2" NPT	4	CW	15
250-144*	V10-1P4P-11A	.80	1" NPT	1/2" NPT	4	CW	15
250-124	V10-1P5P-1A20	1.00	1" NPT	1/2" NPT	5	CW	15
256-132	V10-1P6P-1A20	1.19	1" NPT	1/2" NPT	6	CW	15
V20 VANE PUMPS							
256-107	V20-1P8P-1A11	1.62	1 1/4" NPT	3/4" NPT	8	CW	19
256-148	V20-1P9P-1A	1.81	1 1/4" NPT	3/4" NPT	9	CW	19
250-133	V20-1P11P-1A11	2.22	1 1/4" NPT	3/4" NPT	11	CW	22
250-134	V20-1P8P-1C11L	1.62	1 1/4" NPT	3/4" NPT	8	CCW	19
256-134	V20-1P13P-1A11	2.59	1 1/4" NPT	3/4" NPT	13	CW	19

* 9 Tooth Spline Shaft

Pumps

Jaw Couplers

• For direct mounting on engines to pumps • Order one body for engine - one for pump, plus center spider.

ORDER NO.	I.D.	O.D.	KEYWAY	HP @ 3600 RPM	LENGTH THROUGH BORE
075 Series					
235-101	7/16"	13/4"	3/32"	5	13/16"
235-103	1/2"	13/4"	1/8"	5	13/16"
235-106	5/8"	13/4"	3/16"	5	13/16"
235-107	3/4"	13/4"	3/16"	5	13/16"
235-108	7/8"	13/4"	3/16"	5	13/16"
236-075	Center Spider				
090 Series					
235-109	7/16"	2 1/8"	3/32"	8	29/32
235-111	1/2"	2 1/8"	1/8"	8	29/32
235-113	5/8"	2 1/8"	3/16"	8	29/32
235-115	3/4"	2 1/8"	3/16"	8	29/32
235-116	7/8"	2 1/8"	3/16"	8	29/32
235-117	1"	2 1/8"	1/4"	8.2	29/32
236-090	Center Spider				
095 Series					
235-119	1/2"	2 1/8"	1/8"	11	1"
235-120	9/16"	2 1/8"	1/8"	11	1"
235-121	5/8"	2 1/8"	3/16"	11	1"
235-123	3/4"	2 1/8"	3/16"	11	1"
235-137	7/8"	2 1/8"	3/16"	11	1"
235-125	1"	2 1/8"	1/4"	11	1"
235-124	1 1/8"	2 1/8"	1/4"	11	1"
236-090	Center Spider				
100 Series					
235-126	1/2"	2 1/2"	1/8"	24	13/8"
235-127	5/8"	2 1/2"	3/16"	24	13/8"
235-129	3/4"	2 1/2"	3/16"	24	13/8"
235-132	7/8"	2 1/2"	3/16"	24	13/8"
235-131	1"	2 1/2"	1/4"	24	13/8"
235-133	1 1/8"	2 1/2"	1/4"	24	13/8"
235-134	1 1/4"	2 1/2"	1/4"	24	13/8"
235-135	1 3/8"	2 1/2"	5/16"	24	13/8"
236-100	Center Spider				

ORDER NO.	I.D.	O.D.	KEYWAY	HP @ 3600 RPM	LENGTH THROUGH BORE
110 Series					
235-145	7/8"	3 5/16"	3/16"	45	11 1/16"
235-146	1"	3 5/16"	1/4"	45	11 1/16"
235-147	1 1/8"	3 5/16"	1/4"	45	11 1/16"
235-150	1 1/4"	3 5/16"	1/4"	45	11 1/16"
235-148	1 3/8"	3 5/16"	5/16"	45	11 1/16"
235-143	1 1/2"	3 5/16"	3/8"	45	11 1/16"
235-142	1 5/8"	3 5/16"	3/8"	45	11 1/16"
236-110	Center Spider				
150 Series					
235-159	7/8"	3 3/4"	3/16"	72	13/4"
235-161	1"	3 3/4"	1/4"	72	13/4"
235-177	1 1/4"	3 3/4"	1/4"	72	13/4"
235-179	1 3/8"	3 3/4"	5/16"	72	13/4"
235-155	1 1/2"	3 3/4"	3/8"	72	13/4"
235-157	1 5/8"	3 3/4"	3/8"	72	13/4"
235-156	1 3/4"	3 3/4"	3/8"	72	13/4"
235-169	1 7/8"	3 3/4"	1/2"	72	13/4"
236-150	Center Spider				



Center Spider

Two-Stage Pumps

• Compact, two-stage, external gear pumps designed for use at elevated pressures • Ideal for press-type applications requiring fast approach/retract speeds and slower peak actuator work speeds due to horsepower limitations or safety constraints • Rotation is clockwise viewed from the shaft end • 1/2" shafts use 404 woodruff key • 5/8" shafts use 3/16" x 1" straight key • 4,000 RPM max • Maximum pressure 3,000 PSI

CHIEF™ Two-Stage Pumps

ORDER NO.	GPM @ 3600	MAX		RECOMMENDED		PORT SIZE		OV'ALL LGTH.	MOUNTING FLANGE	SHAFT DIA. X LGTH.	SHIP WT.
		PSI	RPM	HP	CYL. BORE	IN	OUT				
250-095	5	3000	4000	5	3 1/2"	1/2" NPT	1/2" NPT	4.72"	4-bolt	1/2 x 1 1/2	9
250-096	7	3000	4000	5	3 1/2"	1/2" NPT	1/2" NPT	4.72"	4-bolt	1/2 x 1 1/2	10
250-097	9	3000	4000	5	3 1/2"	1/2" NPT	1/2" NPT	4.80"	4-bolt	1/2 x 1 1/2	10
250-098	11	3000	4000	6	4"	1/2" NPT	1/2" NPT	6.54"	4-bolt	1/2 x 1 1/2	10
250-092	11	3000	4000	6	4"	1" tube	1/2" NPT	6.54"	4-bolt	1/2 x 1 1/2	13
250-093	13	3000	4000	7	4"	1" tube	1/2" NPT	6.91"	4-bolt	1/2 x 1 1/2	10
250-094	16	3000	4000	8	4"	1" tube	1/2" NPT	6.91"	4-bolt	1/2 x 1 1/2	10
252-211	22	3000	4000	12	5"	1" NPT	3/4" NPT	8.09"	2-bolt A	5/8 x 1 1/2	19
252-212	28	3000	4000	16	5"	1" NPT	3/4" NPT	8.09"	2-bolt A	5/8 x 1 1/2	20

Haldex Two-Stage Pumps

249-005	5	3000	4000	5	3 1/2"	1/2" NPT	1/2" NPT	6.41"	4-bolt	1/2 x 1 1/2	10
249-007	7	3000	4000	5	3 1/2"	1/2" NPT	1/2" NPT	6.41"	4-bolt	1/2 x 1 1/2	10
249-009	9	3000	4000	5	3 1/2"	1/2" NPT	1/2" NPT	6.41"	4-bolt	1/2 x 1 1/2	10
250-004	11	3000	4000	6	4"	1/2" NPT	1/2" NPT	6.41"	4-bolt	1/2 x 1 1/2	9
250-011	11	3000	4000	6	4"	1" tube	1/2" NPT	6.41"	4-bolt	1/2 x 1 1/2	9
250-003*	11	3000	4000	6	4"	1/2" NPT	1/2" NPT	6.41"	4-bolt	1/2 x 1 1/2	10
250-014	13	3000	4000	7	4"	1" tube	1/2" NPT	6.97"	4-bolt	1/2 x 1 1/2	11
250-012	16	3000	4000	8	4"	1" tube	1/2" NPT	6.97"	4-bolt	1/2 x 1 1/2	10
250-022	22	3000	4000	12	5"	1" NPT	3/4" NPT	8.06"	2-bolt A	5/8 x 1 1/2	21
250-028	28	3000	4000	16	5"	1" NPT	3/4" NPT	8.06"	2-bolt A	5/8 x 1 1/2	21

* Counter-clockwise rotation

Mounting Brackets • E, FM, & G Series

• Cast aluminum

E Series • Electric Motor Brackets*

ORDER NO.	PUMP FLANGE	MOTOR FRAME	DIMENSIONS					BOLT CIRCLE
			A	B	C	D	E	
202-192 Ⓐ	4-bolt	56C, 143-145 TC	4 1/2"	6 5/8"	5 7/8"	1.78"	4.40"	2.828"
202-194 Ⓑ	2-bolt A	182-184 TC, 213-215 TC, 254-256 TC	8 1/2"	8 3/4"	7 1/4"	3.75"	5.81"	4.188"
202-195 Ⓒ	2-bolt A	182-184 TC, 213-215 TC, 254-256 TC	8 1/2"	8 3/4"	7 1/4"	3.75"	5.12"	4.188"
202-174 Ⓓ	2-bolt B	182-184 TC, 213-215 TC, 254-256 TC	8 1/2"	8 3/4"	7 1/4"	4.00"	5.81"	5.75"

FM Series • Foot Mount Brackets*

ORDER NO.	PUMP FLANGE	DIMENSIONS		PRICE EACH	ORDER NO.	PUMP FLANGE	DIMENSIONS	
		A	B				A	B
202-196 Ⓔ	4-bolt	37/16"	2"	31.00	202-198 Ⓕ	2-bolt B	5 1/4"	5 3/4"
202-197 Ⓗ	2-bolt A	3 1/4"	4 3/16"	39.00				

G Series • Gasoline Engine Brackets*

ORDER NO.	PUMP FLANGE	DIMENSIONS			BOLT CIRCLE	PILOT DIA.
		A	B	C		
202-005 Ⓖ	4-bolt	3 1/2"	3 1/2"	4.44"	3 5/8"	1 5/8"
202-006 Ⓖ	2-bolt A	4 1/4"	5 1/2"	4.69"	3 5/8"	1 5/8"
202-047 Ⓘ	2-bolt AA	7 1/2"	5 5/8"	—	6 1/2"	5 3/4"
202-008 Ⓘ	4-bolt	7 1/2"	5 5/8"	—	6 1/2"	5 3/4"
202-013 Ⓚ	2-bolt A	8 1/2"	6"	—	6 1/2"	5 3/4"

* Other options available

Jaw Couplers and Center Spiders page 46

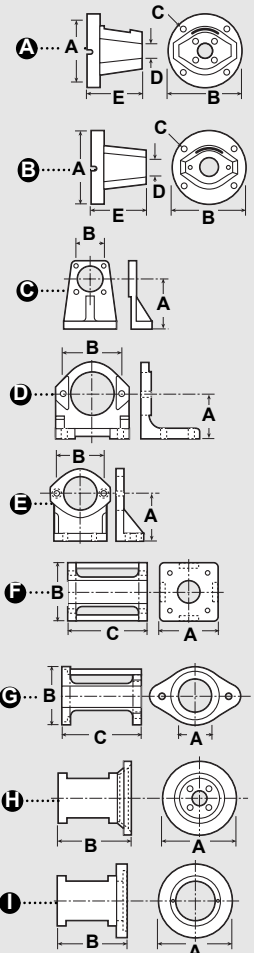
How does the 2-Stage Pump Work?

In one housing, there are two pumps, one small section and the other section three times larger. The flow of both pump sections combine to produce high flow at low pressure. When the load increases above the unloader valve setting, oil is diverted from the large pump section so that only the small section is generating flow. In this situation the flow is approximately 1/4 of full capacity with pressures up to maximum. Operation will continue until load decreases below the unloader valve setting and

then the pump shifts back smoothly into high capacity/low pressure mode. An example: when you're splitting wood you are in a high mode, until you hit a knot, which shifts the pump to a lower more powerful mode. If your control valve does not have a relief valve, you should add one. The 11 to 16 GPM two stage pumps all have the standard four bolt mount. All of these pumps are made to direct couple to gas engines that turn up to 3600 RPM. All pumps are tested before shipment.



Sample Applications
Trash Compactors
Logsplitters
Clamping Mechanisms
Crimping Machinery
Metal Forming Machinery





Our Custom Salami Pump Service will assemble your pump selections for you.

Salami Gear Pumps!

Salami gear pumps are now available to Order! Salami has built an excellent reputation in the industry for manufacturing high-quality gear pumps since 1956. The dynamic design enables you to stack multiple pumps in various sizes according to your needs. We are ready to assemble custom pump stands in any configuration, in addition to providing off-the-shelf Salami pumps.

salami Gear Pumps

- Made with aluminum alloy body, flanges and rear covers
- High volumetric efficiency by innovative design & control of machining tolerances
- Floating bushings allow high volumetric efficiency throughout the pressure range
- Side ports
- Buna seals

1/2" Diameter Straight Keyed Shaft 1 1/2" Long - SAE 4 Bolt AA

ORDER NO.	SALAMI NO.	CU. IN. DISPL.	GPM	MAX RPM	PSI	PORT		ROTATION	SHIP WT.
						INLET	OUTLET		
302-014	1,6PE1,4D-R083S1	.085	2	6000	3600	SAE 8	SAE 6	CW	5
302-015	1,6PE2,1D-R083S1	.13	3	6000	3600	SAE 8	SAE 6	CW	5
302-016	1,6PE2,8D-R083S1	.17	3	5000	3600	SAE 8	SAE 6	CW	5
302-017	1,6PE3,5D-R083S1	.21	4	5000	3600	SAE 8	SAE 6	CW	5
302-018	1,6PE4,1D-R083S1	.25	4	4000	3600	SAE 8	SAE 6	CW	5
302-019	1,6PE5,2D-R083S1	.32	5	4000	3300	SAE 8	SAE 6	CW	5
302-020	1,6PE6,2D-R083S1	.38	5	3500	3300	SAE 8	SAE 6	CW	5
302-021	1,6PE7,6D-R083S1	.46	6	3000	2900	SAE 10	SAE 8	CW	5

1" Diameter Straight Keyed Shaft 1" Long - SAE 2 Bolt AA

ORDER NO.	SALAMI NO.	CU. IN. DISPL.	GPM	MAX RPM	PSI	PORT		ROTATION	SHIP WT.
						INLET	OUTLET		
302-022	1,6PE1,4D-R080S0	.085	2	6000	3600	SAE 8	SAE 6	CW	5
302-023	1,6PE2,1D-R080S0	.13	3	6000	3600	SAE 8	SAE 6	CW	5
302-024	1,6PE2,8D-R080S0	.17	3	5000	3600	SAE 8	SAE 6	CW	5
302-025	1,6PE3,5D-R080S0	.21	4	5000	3600	SAE 8	SAE 6	CW	5
302-026	1,6PE4,1D-R080S0	.25	4	4000	3600	SAE 8	SAE 6	CW	5
302-027	1,6PE5,2D-R080S0	.32	5	4000	3300	SAE 8	SAE 6	CW	5
302-028	1,6PE6,2D-R080S0	.38	5	3500	3300	SAE 8	SAE 6	CW	5
302-029	1,6PE7,6D-R080S0	.46	6	3000	2900	SAE 10	SAE 8	CW	5

salami Gear Pumps

- Made with aluminum alloy body, flanges and rear covers
- High volumetric efficiency by innovative design & control of machining tolerances
- Floating bushings allow high volumetric efficiency throughout the pressure range
- Double shaft seals
- Multiple, stacked pump assemblies available
- Available with several rear covers with valves built in
- Extremely compact design when assembled in to multiple pump configurations
- Side ports
- Buna seals

5/8" Diameter Straight Keyed Shaft 1 1/4" Long - SAE 2 Bolt A

ORDER NO.	SALAMI NO.	CU. IN. DISPL.	GPM	MAX RPM	PSI	PORT		ROTATION	SHIP WT.
						INLET	OUTLET		
302-030	2PE4,5D-R82S2	.27	4	4000	3600	SAE 12	SAE 10	CW	5
302-031	2PE6,5D-R82S2	.40	6	4000	3600	SAE 12	SAE 10	CW	5
302-032	2PE8,3D-R82S2	.51	7	3500	3600	SAE 12	SAE 10	CW	5
302-033	2PE11,3D-R82S2	.70	10	3500	3600	SAE 12	SAE 10	CW	6
302-034	2PE13,8D-R82S2	.84	12	3500	3600	SAE 12	SAE 10	CW	6
302-035	2PE16D-R82S2	.98	12	3000	3600	SAE 12	SAE 10	CW	6
302-036	2PE19D-R82S2	1.16	14	3000	3100	SAE 12	SAE 10	CW	7
302-037	2PE22,5D-R82S2	1.37	15	2750	2900	SAE 12	SAE 10	CW	7
302-038	2PE26D-R82S2	1.59	16	2500	2600	SAE 12	SAE 10	CW	7

9 Tooth Splined 1.28" Long - SAE 2 Bolt A

ORDER NO.	SALAMI NO.	CU. IN. DISPL.	GPM	MAX RPM	PSI	PORT		ROTATION	SHIP WT.
						INLET	OUTLET		
302-039	2PE4,5D-R52S2	.27	4	4000	3600	SAE 12	SAE 10	CW	5
302-040	2PE6,5D-R52S2	.40	6	4000	3600	SAE 12	SAE 10	CW	5
302-041	2PE8,3D-R52S2	.51	7	3500	3600	SAE 12	SAE 10	CW	5
302-042	2PE11,3D-R52S2	.70	10	3500	3600	SAE 12	SAE 10	CW	6
302-043	2PE13,8D-R52S2	.84	12	3500	3600	SAE 12	SAE 10	CW	6
302-044	2PE16D-R52S2	.98	12	3000	3600	SAE 12	SAE 10	CW	6
302-045	2PE19D-R52S2	1.16	14	3000	3100	SAE 12	SAE 10	CW	7
302-046	2PE22,5D-R52S2	1.37	15	2750	2900	SAE 12	SAE 10	CW	7
302-047	2PE26D-R52S2	1.59	16	2500	2600	SAE 12	SAE 10	CW	7



302-014

Pumps



302-014

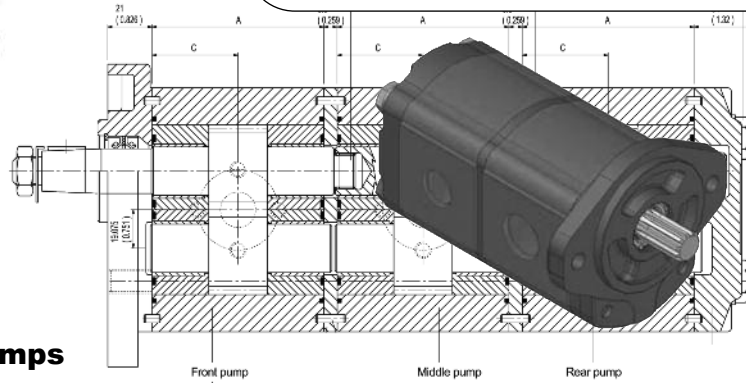


302-030



302-039

Salami Stackable Gear Pumps



salami Gear Pumps

- Made with aluminum alloy body, flanges and rear covers
- High volumetric efficiency by innovative design & control of machining tolerances
- Floating bushings allow high volumetric efficiency throughout the pressure range
- Double shaft seals
- Multiple, stacked pump assemblies available
- Available with several rear covers with valves built in
- Extremely compact design when assembled in to multiple pump configurations
- Side ports
- Buna seals

11 Tooth Splined 1.38" Long - SAE 2 Bolt A

ORDER NO.	SALAMI NO.	CU. IN. DISPL.	GPM	MAX RPM	PSI	PORT		ROTATION	SHIP WT.
						INLET	OUTLET		
302-048	2PE8,3D-R54S2	.51	7	3500	3600	SAE 12	SAE 10	CW	5
302-049	2PE11,3D-R54S2	.70	10	3500	3600	SAE 12	SAE 10	CW	5
302-050	2PE13,8D-R54S2	.84	12	3500	3600	SAE 12	SAE 10	CW	5
302-051	2PE16D-R54S2	.98	12	3000	3600	SAE 12	SAE 10	CW	6
302-052	2PE19D-R54S2	1.16	14	3000	3100	SAE 12	SAE 10	CW	6
302-053	2PE22,5D-R54S2	1.37	15	2750	2900	SAE 12	SAE 10	CW	6
302-054	2PE26D-R54S2	1.59	16	2500	2600	SAE 12	SAE 10	CW	7

3/4" Diameter Straight Keyed Shaft 1 1/4" Long - SAE 2 Bolt A

302-055	2PE6,5D-R85S2	.40	6	4000	3600	SAE 12	SAE 10	CW	5
302-056	2PE8,3D-R85S2	.51	7	3500	3600	SAE 12	SAE 10	CW	5
302-057	2PE11,3D-R85S2	.70	10	3500	3600	SAE 12	SAE 10	CW	6
302-058	2PE13,8D-R85S2	.84	12	3500	3600	SAE 12	SAE 10	CW	6
302-059	2PE16D-R85S2	.98	12	3000	3600	SAE 12	SAE 10	CW	6
302-060	2PE19D-R85S2	1.16	14	3000	3100	SAE 12	SAE 10	CW	7
302-061	2PE22,5D-R85S2	1.37	15	2750	2900	SAE 12	SAE 10	CW	7
302-062	2PE26D-R85S2	1.59	16	2500	2600	SAE 12	SAE 10	CW	7

7/8" Diameter 13 Toothed Splined 1.61" Long - SAE 2 Bolt B

302-103	2,5PB19D-R55S3	1.17	14	3000	3600	SAE 12	SAE 10	CW	8
302-104	2,5PB22D-R55S3	1.35	16	3000	3600	SAE 12	SAE 10	CW	9
302-105	2,5PB28D-R55S3	1.68	20	3000	3600	SAE 16	SAE 12	CW	10
302-106	2,5PB32D-R55S3	1.97	24	3000	3300	SAE 16	SAE 12	CW	11
302-107	2,5PB38D-R55S3	2.32	26	2750	3100	SAE 16	SAE 12	CW	11
302-108	2,5PB44D-R55S3	2.69	27	2500	2465	SAE 16	SAE 12	CW	12

302-170	3PB21D-R55S3	1.26	15	3000	3600	SAE 16	SAE 12	CW	12
302-171	3PB27D-R55S3	1.65	20	3000	3600	SAE 16	SAE 12	CW	12
302-172	3PB33D-R55S3	2.04	25	3000	3600	SAE 16	SAE 12	CW	12
302-173	3PB38D-R55S3	2.36	29	3000	3600	SAE 16	SAE 12	CW	13
302-174	3PB46D-R55S3	2.86	32	2750	3500	SAE 20	SAE 16	CW	15
302-175	3PB55D-R55S3	3.3	33	2500	3190	SAE 20	SAE 16	CW	17
302-176	3PB65D-R55S3	3.85	39	2500	2900	SAE 20	SAE 16	CW	18

7/8" Diameter Straight Keyed Shaft 1.61" Long - SAE 2 Bolt B

302-109	2,5PB19D-R87S3	1.17	14	3000	3600	SAE 12	SAE 10	CW	8
302-110	2,5PB22D-R87S3	1.35	16	3000	3600	SAE 12	SAE 10	CW	9
302-111	2,5PB25D-R87S3	1.53	18	3000	3600	SAE 12	SAE 10	CW	9
302-112	2,5PB28D-R87S3	1.68	20	3000	3600	SAE 16	SAE 12	CW	10
302-113	2,5PB32D-R87S3	1.97	24	3000	3300	SAE 16	SAE 12	CW	11
302-114	2,5PB38D-R87S3	2.32	26	2750	3100	SAE 16	SAE 12	CW	11
302-115	2,5PB44D-R87S3	2.69	27	2500	2465	SAE 16	SAE 12	CW	12

302-177	3PB21D-R55S3	1.26	15	3000	3600	SAE 16	SAE 12	CW	12
302-178	3PB27D-R55S3	1.65	20	3000	3600	SAE 16	SAE 12	CW	12
302-179	3PB33D-R55S3	2.04	25	3000	3600	SAE 16	SAE 12	CW	12
302-180	3PB38D-R55S3	2.36	29	3000	3600	SAE 16	SAE 12	CW	13
302-181	3PB46D-R55S3	2.86	32	2750	3500	SAE 20	SAE 16	CW	15
302-182	3PB55D-R55S3	3.3	33	2500	3190	SAE 20	SAE 16	CW	17
302-183	3PB65D-R55S3	3.85	39	2500	2900	SAE 20	SAE 16	CW	18

Our Custom Salami Pump Service will assemble your pump selections for you.



302-048



302-055



302-103

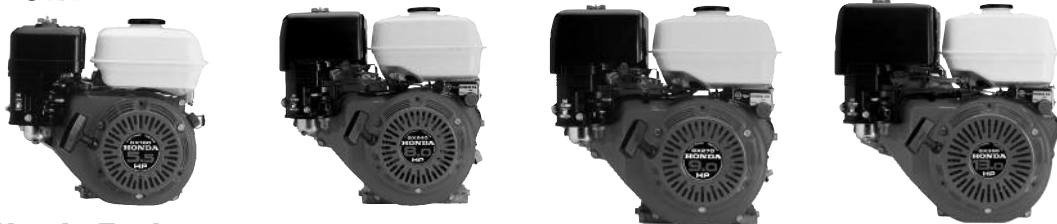


302-109

Pumps

Engines & Power Units

New!



Honda Engines

• All are horizontal crankshaft, overhead valve design, cast iron sleeve liner • All have fuel tank and muffler except GX630 & GX660 • All are individually boxed

ORDER NO.	MODEL NO.	**NET HP	STARTING SYSTEM	NOTE	CRANKSHAFT	SHIPPED FROM	SHIPPED TRUCK	WT.
116-168	GX240-QA2	7.9	Recoil		1" dia x 3.48" straight keyed	Knoxville, TN	No	70
116-169	GX270-QA2	8.4	Recoil		1" dia x 3.48" straight keyed	Knoxville, TN	No	71
116-170	GX390-QA2	11.7	Recoil		1" dia x 3.48" straight keyed	Knoxville, TN	Yes	90
100-078	GX160-UT2QX2	4.8	Recoil		3/4" dia x 27/16" straight keyed	Nashville, TN	No	38
100-080	GX160-UT2QXE2	4.8	Recoil & Electric	3 amp charging system	3/4" dia x 27/16" straight keyed	Nashville, TN	No	25
100-040	GX240-UT2QA2	7.9	Recoil		1" dia x 3.48" straight keyed	Nashville, TN	Yes	60
100-092	GX240-UT2QAE2	7.9	Recoil & Electric		1" dia x 3.48" straight keyed	Nashville, TN	Yes	90
100-106	GX270-UT2QAE2	8.4	Recoil & Electric		1" dia x 3.48" straight keyed	Nashville, TN	Yes	38
100-077	GX340-UT2QAE2	10.7	Recoil & Electric		1" dia x 3.48" straight keyed	Nashville, TN	Yes	80
100-075	GX390-UT2QA2	11.7	Recoil		1" dia x 3.48" straight keyed	Nashville, TN	Yes	38
100-107	GX390-UT2QAE2	11.7	Recoil & Electric	3 amp charging system	1" dia x 3.48" straight keyed	Knoxville, TN	Yes	80
100-099*	GX630-RQAF1	20.3	Electric	20 amp reg charging system	1" dia x 3.48" straight keyed	Nashville, TN	Yes	80
100102*	GX660-RTXA2	22.3	Electric	20 amp reg charging system	1.125" dia x 3.5" straight keyed	Nashville, TN	Yes	75

*100099 and 100102 are Twin Cylinder Design

** Power ratings for these engines are the net power output as tested on a production engine for the engine model and measured in accordance with SAE J1349 @3,600 RPM. Mass production engines may vary from this value. Actual power output for the engine installed in the final machine will vary depending on numerous factors including the operating speed of the engine in application, environmental conditions, maintenance and other variables.

100-103	654270	Top Left Muffler (when facing crankshaft) for GX630 and GX660	Nashville, TN	Yes	5
100-104	654280	Top Right Muffler (when facing crankshaft) for GX630 and GX660	Nashville, TN	Yes	5



Special Buy!

Honda 3.3 Qt. Fuel Tanks

Order No. 116-106 Large cap

Order No. 116-107 Small cap

• 3 lbs. ship wt.



Special Buys On Power Units! Limited quantity. Ready to ship!

Hydraulic Power Pack With Motor And Reservoir

Order No. 116-204

• 1 hp, single phase. 115v, 0.41gpm @ 4,000 psi compact hydraulic power unit with a 4.5 gallon steel reservoir. Unit comes with an array of 8 solenoid valves, 11 ports, 2 relief valves, 1 press reducing valve, 1 shuttle valve, and a return line filter with bypass and backflow-preventing check valve. SV1 allows you to isolate a 1,500 psi relief that is normally active, in order to be able to built to the 4,000 psi of the secondary relief valve. SV2 directs oil to either a bank of 4 solenoid activated 3-way valves that either direct pressure out when energized or block pressure and relieve the port to tank when de-energized. There is an aux pressure and tank port connected to these. When de-generated, SV2 allows oil to go through SV3 and past the pressure reducing valve (which allows free flow at full pressure on extension, but when allowing oil to come back through when SV3 is energized, will open upon reaching 700 psi) and out through the single pressure port. There are two parallel passages that have ports on either end and a shuttle valve in between that allows one passage at a time to return, through the filter to tank. 7 of the 11 ports are gauge ports. Many possible combinations are available with these various controls and a print of the schematic is available on request. 105 lbs. wt.

Custom Hydraulic Power Units



Large or small, custom power units are our specialty!

Power Units Built To Meet Your Application!

We build Chief Custom Power Units to meet the needs of almost any application. We have built units for use in a wide range of applications, such as agricultural implements, mining, compactors, automotive repairs, transportation, industrial maintenance machines and more. Our power units can be customized with a variety of features, including redundant DC backups for AC units, hand pumps, solenoid or manual control valves, two-stage pumps and many more. Let us build exactly what you need!

Better Selection, Higher Efficiency

We have added to our extensive selection of built-to-order power units. We are proud to introduce the newest line of custom DC power units, the Maxim DS series (page 57). We also want you to know that we now use EISA compliant motors for all AC, 3-phase power units. This allows your custom AC power unit to perform at higher efficiency than previously available.

Most Quotes Within 48 Hours

We have implemented a new quote matrix system in the catalog, allowing you to easily and accurately request quotes from our Custom Power Unit Design Team. This system can be found on next few pages. Simply fill in each box with the appropriate code reflecting your needs. After completing the necessary form, you may contact us with the information by phone, fax or email.

Once provided with all necessary information, our team can usually supply a quote within 48 hours!

Industry Applications

- Agricultural
- Forestry
- Construction
- Refuse
- Mining
- Food
- Automotive Lifts
- Mobile Equipment
- Marine
- And More

Custom Power Units

Choose your

Options:

- Motors
 - AC/DC
 - Gas
 - 3 to 75 HP
- Pumps
- Valves
- Oil Coolers
- Tanks
- Drip Pans
- Filters
- And Much More

Power Units

CHIEF™ AJ and AL AC Power Units

JIC-Style L-Shaped



AJ (JIC-Style)



AL (L-Shaped)

CHIEF™ Custom Power Units Built To Your Specs!

Customize a power unit to your needs. If you have a unit in mind for your application, use our Quote Matrix below to spec it out. It's simple, fast and intuitive. Most quotes can be supplied within a day.

Fill in your selection with the **BOLD KEY** letters or numbers from the charts below:

Motor		Pump		Circuit		Tank		Options		Relief	
AJ or AL											
										In 100s of psi	

HP	Voltage/Hz/Phase	Gear CID	Max PSI	Vane CID	Max PSI	AJ Size*	L	W	Options
A = 1/2	1 = 115v/230v/60Hz/1ph	F1.2 = 0.07	3000	V3.3 = 0.20	2500	J10 = 10 gal	22"	18"	O = Standard Design*
B = 1	2 = 120v/240v/50Hz/1ph	F1.6 = 0.10	3000	V9.8 = 0.60	2500	J15 = 15 gal	26"	18"	A = Quick disconnects
F = 1 1/2	3 = 230v/460v/60Hz/3ph	F2.1 = 0.13	3000	V13 = 0.80	2500	J20 = 20 gal	30"	18"	B = Cooler
C = 2	4 = 240v/380v/440v/50Hz/3ph	F3.2 = 0.19	3000	V16 = 1.00	2500	J30 = 30 gal	36"	24"	C = Heater
D = 3	5 = 575v/50Hz/3ph	F4.2 = 0.26	2300	V20 = 1.19	2500	J40 = 40 gal	36"	24"	D = Caster Wheels
E = 5		G06 = 0.36	3626	V27 = 1.62	2500	J50 = 50 gal	36"	24"	E = Temp/Level Switch
G = 7 1/2		G08 = 0.48	3626	V30 = 1.81	2500	J60 = 60 gal	48"	18"	F = System flow control
H = 10		G10 = 0.61	3626	V36 = 2.22	2500	J80 = 80 gal	22"	18"	
I = 15		G12 = 0.73	3626	V42 = 2.59	2500	J100 = 100 gal	22"	18"	
J = 20		G14 = 0.85	3626			J120 = 120 gal	22"	18"	
K = 25		G16 = 0.97	3626			J150 = 150 gal	22"	18"	
L = 30		G20s = 1.22	3626			J200 = 200 gal	22"	18"	
M = 40		G25s = 1.52	3626			J250 = 250 gal	22"	18"	
N = 50		G20 = 1.22	3650						
O = 60		G25 = 1.53	3650						
P = 75		G32 = 1.95	3650						

RPM	Enclosure Type	Valve Control	AL Size*	L	W
S = 1200 n/a	0 = TEFC (Std)	NV = No Valve	L10 = 10 gal	22"	24"
L = 1800 1500	1 = XPFC	WM = with Manual*	L20 = 20 gal	30"	30"
H = 3600 3000	2 = Severe Duty	WE = with Electrical*	L30 = 30 gal	34"	36"
	3 = Washdown Duty		L45 = 45 gal	46"	36"
			L60 = 60 gal	46"	36"
			L80 = 80 gal	59"	36"
			L100 = 100 gal	59"	48"
			L120 = 120 gal	59"	48"
			L150 = 150 gal	72"	48"
			L200 = 200 gal	72"	48"

HP = (PSI x GPM) / (1714 x 85%)

CID = (GPM x 231) / (RPM x 90%)

CID = (GPM x 231) / (RPM x 93%)

*Always included unless otherwise noted:

- 10-micron filter with indicator
- Suction strainer (100 mesh)
- Sight level gauge
- Filler breather
- Adjustable relief valve
- PSI Gage (Above highest rating of unit)

All AL units come with shutoff valve for maintenance.

Note: We recommend 3:1 reservoir size to pump flow volume on continuous duty applications.

*Nominal

AJ 10 HP Custom Power Units

ORDER NO.	MODEL CODE	GPM @ PSI	TANK	VOLTS
251-694	AJ H3L0E23NVJ200-15	10@1500	20 Gal.	230/460

Not all combinations are possible. Reasonable effort has been made to make the code as intuitive as possible, however, Our PowerUnit Team may need to make adjustments and reserves the right to do so if the combination requested cannot be accomplished.

Valve Groups	Group 1	Group 2	Group 3
M = Manual E = Electric			
1-9 = # Spools This Type			

A	B	C	D	E	F
AB PT	AB PT	AB PT	AB PT	AB PT	AB PT
3-way, 3-position Single-Acting Power up, Gravity Down	4-way, 2-position Double-Acting Reversing, No Neutral	4-way, 3-position Double-Acting Closed Center	4-way, 3-position Double-Acting Float Center	4-way, 3-position Double-Acting Tandem Center	4-way, 3-position Double-Acting Open Center

0 = None
1 = Port Relief ('A')
2 = Port Relief ('A & B')
3 = PO Check ('A')
4 = PO Check ('A & B')
5 = Counterbalance ('A')
6 = Counterbalance ('A & B')
7 = Flow Control ('A')*
8 = Flow Control ('A & B')*
*Meter Out

S = Spring Center
D = Detent
L = Pressure Release Detent*
* Manual - 1 spool only

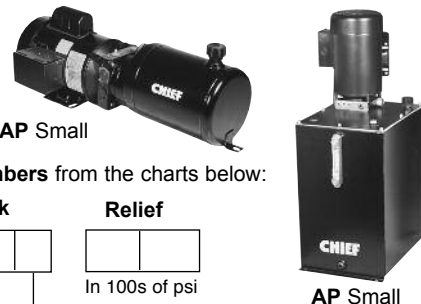
You can specify additional valve groups using the same method.

This page can be used as a faxable work order sheet or call us with the numbers you filled in and we will do the rest.

Customer Information

Contact: _____ Phone: _____
 Company: _____ E-mail: _____

CHIEF™ AP Small AC Power Units



CHIEF™ Custom Power Units Built To Your Specs!

Customize a power unit to your needs. If you do not see your power unit in the list below, use our Quote Matrix below to spec it out. It's simple, fast and intuitive. Most quotes can be supplied within a day.

Fill In your selection with the **BOLD KEY** letters or numbers from the charts below:

Motor **Pump** **Circuit** **Tank** **Relief**

In 100s of psi

HP
A = 1/2
B = 1
C = 2
D = 3
E = 5

Phase/Volt
1 = 115v/230v*
3 = 230v/460v

RPM
L = 1725*
H = 3450

Max Pressure
08 = 0.049 5000
10 = 0.061 5000
12 = 0.073 5000
16 = 0.098 5000
20 = 0.122 5000
25 = 0.153 4600
31 = 0.189 3600
40 = 0.244 3000
50 = 0.305 2300
63* = 0.384 1800
80* = 0.488 1500

Valve Type
A = pumping station
B = single acting
C = double acting open center
D = double acting tandem center
E = D03 Subplate

Operator
0 = none
1 = manual (115v)
2 = solenoid (230v)
3 = solenoid (12v)
4 = (24v)
5 = (24v)

HP = (PSI x GPM) / (1714 x 85%)

Not all combinations are possible. Reasonable effort has been made to make the code as intuitive as possible, however, our Power Unit Team may need to make adjustments and reserves the right to do so if the combination requested cannot be accomplished.

* Only use with Low RPM Motor
CID = (GPM x 231) / (RPM x 90%)

*All unit combinations have relief valve.

*Nominal
Note: We recommend 3:1 reservoir size to pump flow volume on continuous duty applications.

Custom Power Units Preconfigured and priced units

ORDER NO.	MODEL CODE	GPM	PSI	TANK GALS	MOUNTING
1/2 Horsepower					
300-657	A1L08A0S10H-23	0.32	2500	2.5	Horiz.
300-802	A3L12A0S08H-15	0.49	1450	2	Horiz.
300-675	A1L12A0S06H-15	0.49	1450	1.5	Horiz.
300-803	A1L31A0S12H-06	1.20	550	3	Horiz.
1 Horsepower					
300-579	B1H08A0S10H-22	0.65	2150	2.5	Horiz.
300-805	B3L16A0S06H-22	0.65	2150	1.5	Horiz.
300-666	B1H12A0S10H-14	1.00	1400	2.5	Horiz.
300-455	B3L25A0S10H-14	1.00	1350	2.5	Horiz.
300-512	B1H20A0S10H-08	1.60	800	2.5	Horiz.
300-806	B1H31A0S28V-05	2.50	500	7	Vert.
2 Horsepower					
300-308	C1H12A0S06H-29	1.00	2850	1.5	Horiz.
300-810	C3H12A0S12H-29	1.00	2850	3	Horiz.
300-416	C1H16A0S10H-24	1.20	2350	2.5	Horiz.
300-205	C1H20A0S12H-18	1.60	1750	3	Horiz.
300-551	C1H25A0S08H-14	2.00	1350	2	Horiz.
300-206	C1H20A0S28V-18	1.60	1750	7	Vert.
300-811	C1H31A0S28V-11	2.50	1050	7	Vert.

ORDER NO.	MODEL CODE	GPM	PSI	TANK GALS	MOUNTING
2 Horsepower					
300-812	C3H31A0S28V-11	2.50	1050	7	Vert.
300-377	C1H50A0S56V-07	4.00	650	14	Vert.
3 Horsepower					
300-393	D3H16A0S10H-36	1.20	3500	2.5	Horiz.
300-358	D3H25A0S12H-20	2.00	2000	3	Horiz.
300-304	D3H25A0S28V-20	2.00	2000	7	Vert.
300-204	D3H31A0S56V-17	2.50	1650	14	Vert.
300-560	D3H31A0S08H-17	2.50	1650	2	Horiz.
300-344	D3H40A0S10H-13	3.20	1250	2.5	Horiz.
300-815	D3H40A0S28V-13	3.20	1250	7	Vert.
300-816	D3H50A0S56V-10	4.00	950	14	Vert.
5 Horsepower					
300-210	E3H20A0S28V-45	1.60	4000	7	Vert.
300-556	E3H25A0S16H-35	2.00	3500	4	Horiz.
300-538	E3H31A0S28V-28	2.50	2800	7	Vert.
300-409	E3H40A0S28V-22	3.20	2150	7	Vert.
300-526	E3H40A0S56V-22	3.20	2150	14	Vert.
300-818	E3H50A0S56V-17	4.00	1700	14	Vert.

Two-Stage • Unloading pressure is 600 PSI • 3/8" Ports

ORDER NO.	MFGR. NO.	RESERVOIR	FIRST STAGE	SECOND STAGE	HP	MOTOR PHASE	VOLTS	MOUNTING
300-202	APC1H20/12A0S12H-06/30	3 gals	2.4 GPM @ 600 PSI	.9 GPM @ 3000 PSI	2	Three	230/460	Horiz.
300-201	APE3H40/25A0S28V-06/36	7 gals	5 GPM @ 600 PSI	2 GPM @ 3600 PSI	5	Three	230/460	Vert.

Valve Options for 1/2 to 5 HP AC Power Units

ORDER NO.	FUNCTION	VOLTAGE
300-199	Single Acting / Manual	
300-200	Single Acting / Solenoid	115 VAC
300-192	Tandem Manual Control	
300-197	Double Acting / DO3 Solenoid Tandem Center	120 VAC
300-198	Double Acting / DO3 Solenoid Open Center	120 VAC

NEW! Push-button Motor Starters
for Custom AC power units are located on page 59.

Customer Information

This page can be used as a faxable work order sheet or call us with the numbers you filled in and we will do the rest.

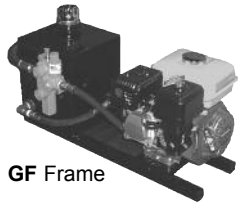
Contact: _____ Phone: _____
Company: _____ E-mail: _____

CHIEF™ GF Frame Mount Gas Driven Power Units

CHIEF™ Custom Power Units Built To Your Specs!

Customize a power unit to your needs. If you have a unit in mind for your application, use our Quote Matrix below to spec it out. It's simple, fast and intuitive. Most quotes can be supplied within a day.

Fill in your selection with the **BOLD KEY letters or numbers** from the charts below:



GF Frame

GF **Engine** **Pump** **Circuit** **Tank** **Options** **Relief**
 [] [] [] [] [] [] [] []
 In 100s of psi



	Engine					Pump
	GX16*	GX34	GX39	GX63**	GX66**	
20.6	300	595	700	1080	1295	E27
17.6	350	700	825	1270	1525	E23
15.3	400	800	950	1460	1750	E20
12.2	500	1005	1185	1825	2190	E16
11.6	525	1055	1245	1915	2300	G14
10.0	610	1225	1450	2230	2675	G12
8.3	735	1470	1735	2670	3202	G10
6.6	935	1865	2205	3390	3650	G08
4.9	1245	2485	2940	3650		G06
5.2	1178	2356	2784	3600		G6.2
4.4	1399	2798	3306	3600		G5.2
3.4	1791	3581	3600			G4.1
2.9	2132	3600				G3.5
2.3	2633	3600				G2.8
1.8	3600					G2.1
GPM@ 3400 RPM	Max PSI					Pump

Select desired GPM and then identify the engine column that will produce the desired Max PSI. Reference engine code at top of column and pump code at the end of row.

* Add "R" at end of engine code for recoil start

Valve Control
NV = No Valve
WM = with Manual*
WE = with Electrical*

* Specify valves using the code block below:

GF Size* **L** **W**
S05 = 5 gal 10" 10"
S10 = 10 gal 14" 12"
S15 = 15 gal 14" 15.5"
S20 = 20 gal 15" 18"
S25 = 25 gal 19" 15"
S30 = 30 gal 16" 24"
S40 = 40 gal 20" 24"

* Nominal

Note: We recommend 3:1 reservoir size to pump flow volume on continuous duty applications.

5 gal. reservoir, fittings, hoses, and filter.
118-259 EO# C-U-07-012 8 lbs.

**** EPA compliance on Honda GX Engines**

In compliance with new EPA regulations governing gasoline powered equipment, Order is making this EPA/CARB compliant fuel system available for purchase with our gasoline-driven power units. This system is designed to work with any unit that has a Honda GX630, GX660, or GX690 engine. This kit is stand alone or can be installed on the unit for a small fee.

Options
O = Standard Design*
A = Quick disconnects
B = Cooler
C = Heater
D = Caster Wheels
F = System flow control
H = EPA/Cap Fuel System For GX630/GX660**

* Always included unless otherwise noted:

- 10-micron filter with indicator
- Suction strainer (100 mesh)
- Sight level gauge
- Filler breather
- Adjustable relief valve
- PSI Gage (Above highest rating of unit)
- Electric start engines include battery tray

Not all combinations are possible. Reasonable effort has been made to make the code as intuitive as possible, however, our PowerUnit Team may need to make adjustments and reserves the right to do so if the combination requested cannot be accomplished.

Power Units

Valve Groups

Group 1

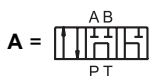
Group 2

Group 3

You can specify additional valve groups using the same method.

M = Manual
E = Electric

1-9 = # Spools This Type



3-way, 3-position
Single-Acting
Power up,
Gravity Down



4-way, 2-position
Double-Acting
Reversing,
No Neutral



4-way, 3-position
Double-Acting
Closed Center



4-way, 3-position
Double-Acting
Float Center



4-way, 3-position
Double-Acting
Tandem Center



4-way, 3-position
Double-Acting
Open Center

- 0** = None
- 1** = Port Relief ('A')
- 2** = Port Relief ('A & B')
- 3** = PO Check ('A')
- 4** = PO Check ('A & B')
- 5** = Counterbalance ('A')
- 6** = Counterbalance ('A & B')
- 7** = Flow Control ('A')*
- 8** = Flow Control ('A & B')*
- *Meter Out

- S** = Spring Center
- D** = Detent
- L** = Pressure Release Detent*
- * Manual - 1 spool only

Gas Driven Custom Power Units!

ORDER NO.	MODEL CODE	GPM	PSI	TANK GALS	MOUNTING
255-601	GFGX16F3.2NVS05O-28	2.40	2600	5	Recoil
255-617	GFGX16F3.2NVS05O-23	2.40	2600	5	Electric
255-602	GFGX34F06NVS20O-25	4.85	2500	20	Electric
255-603	GFGX39F08NVS20O-21	6.40	2100	20	Electric
255-622J	GFGX63G08NVS25O-33	6.60	3000	25	Electric
255-604H	GFGX66F11NVS15H-30	8.80	3000	15	Electric
255-604G	GFGX66F16NVS30H-21	12.0	2000	30	Electric

This page can be used as a faxable work order sheet or call us with the numbers you filled in and we will do the rest.

Customer Information

Contact: _____ Phone: _____
 Company: _____ E-mail: _____

CHIEF™ GJ JIC Gas Driven Power Units



GJ (JIC-Style)

CHIEF™ Custom Power Units Built To Your Specs!

Customize a power unit to your needs. If you have a unit in mind for your application, use our Quote Matrix below to spec it out. It's simple, fast and intuitive. Most quotes can be supplied within a day.

Fill In your selection with the **BOLD KEY** letters or numbers from the charts below:

Engine **Pump** **Circuit** **Tank** **Options** **Relief**

In 100s of psi



GPM@ 3400 RPM	Engine					Max PSI
	GX16*	GX34	GX39	GX63**	GX66**	
20.6	300	595	700	1080	1295	
17.6	350	700	825	1270	1525	
15.3	400	800	950	1460	1750	
12.2	500	1005	1185	1825	2190	
11.6	525	1055	1245	1915	2300	
10.0	610	1225	1450	2230	2675	
8.3	735	1470	1735	2670	3202	
6.6	935	1865	2205	3390	3650	
4.9	1245	2485	2940	3650		
5.2	1178	2356	2784	3600		
4.4	1399	2798	3306	3600		
3.4	1791	3581	3600			
2.9	2132	3600				
2.3	2633	3600				
1.8	3600					

Valve Control
NV = No Valve
WM = with Manual*
WE = with Electrical*

* Specify valves using the code block below:

Pump
E27
E23
E20
E16
G14
G12
G10
G08
G06
G6.2
G5.2
G4.1
G3.5
G2.8
G2.1

GJ Size*	L	W
J10 = 10 gal 22" 18"		
J15 = 15 gal 26" 18"		
J20 = 20 gal 30" 18"		
J30 = 30 gal 36" 24"		
J40 = 40 gal 36" 24"		
J50 = 50 gal 36" 24"		
J60 = 60 gal 48" 18"		
J80 = 80 gal 22" 18"		
J100 = 100 gal 22" 18"		

Options
O = Standard Design*
A = Quick disconnects
B = Cooler
C = Heater
D = Caster Wheels
F = System flow control
H = EPA/Cap Fuel System For GX630/GX660**

* Nominal
 Note: We recommend 3:1 reservoir size to pump flow volume on continuous duty applications.

* Always included unless otherwise noted:
 • 10-micron filter with indicator
 • Suction strainer (100 mesh)
 • Sight level gauge
 • Filler breather
 • Adjustable relief valve
 • PSI Gage (Above highest rating of unit)
 • Electric start engines include battery tray

5 gal. reservoir, fittings, hoses, and filter.
118-259 EO# C-U-07-012 8 lbs.

Select desired GPM and then identify the engine column that will produce the desired Max PSI. Reference engine code at top of column and pump code at the end of row.

* Add "R" at end of engine code for recoil start

**** EPA compliance on Honda GX Engines**
 In compliance with new EPA regulations governing gasoline powered equipment, Order is making this EPA/CARB compliant fuel system available for purchase with our gasoline-driven power units. This system is designed to work with any unit that has a Honda GX630, GX660, or GX690 engine. This kit is stand alone or can be installed on the unit for a small fee.

Not all combinations are possible. Reasonable effort has been made to make the code as intuitive as possible, however, the Order PowerUnit Team may need to make adjustments and reserves the right to do so if the combination requested cannot be accomplished.

Valve Groups **Group 1** **Group 2** **Group 3**

M = Manual
 E = Electric

1-9 = # Spools This Type

You can specify additional valve groups using the same method.

A =	B =	C =	D =	E =	F =
3-way, 3-position Single-Acting Power up, Gravity Down	4-way, 2-position Double-Acting Reversing, No Neutral	4-way, 3-position Double-Acting Closed Center	4-way, 3-position Double-Acting Float Center	4-way, 3-position Double-Acting Tandem Center	4-way, 3-position Double-Acting Open Center

0 = None
1 = Port Relief ('A')
2 = Port Relief ('A & B')
3 = PO Check ('A')
4 = PO Check ('A & B')
5 = Counterbalance ('A')
6 = Counterbalance ('A & B')
7 = Flow Control ('A')*
8 = Flow Control ('A & B')*
 *Meter Out

S = Spring Center
D = Detent
L = Pressure Release Detent*
 * Manual - 1 spool only

This page can be used as a faxable work order sheet or call us with the numbers you filled in and we will do the rest.

Customer Information

Contact: _____ Phone: _____
 Company: _____ E-mail: _____

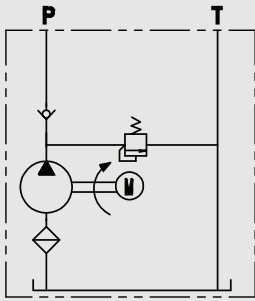
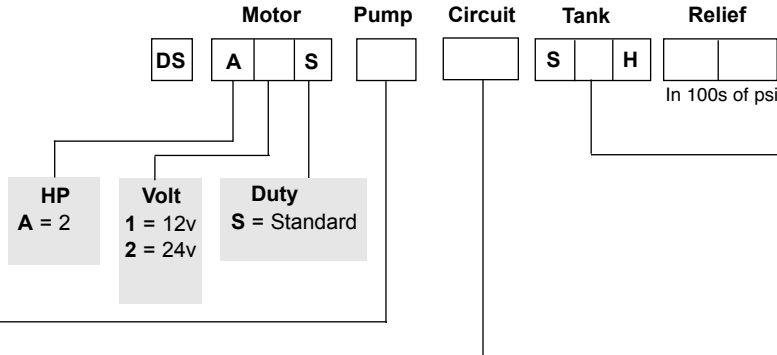


Custom Power Units Built To Your Specs!

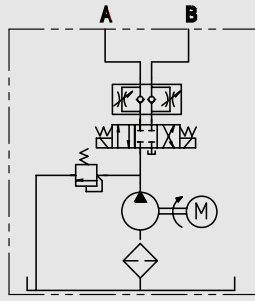
Customize a power unit to your needs. If you have a unit in mind for your application, use our Quote Matrix below to spec it out. It's simple, fast and intuitive. Most quotes can be supplied within a day.

Fill In your selection with the **BOLD KEY** letters or numbers from the charts below:

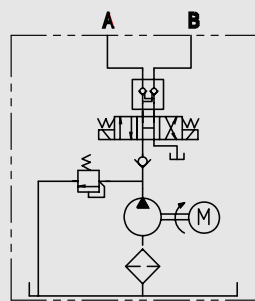
GPM Range	Pressure Range
08 = 0.8 - 0.4	1000-4000
12 = 1.1 - 0.6	1200-4000
16 = 1.4 - 0.8	1200-3500
21 = 1.9 - 1.2	800-2800
25 = 2.2 - 1.5	800-2100
27 = 2.3 - 1.6	800-1900
37 = 3.3 - 2.0	500-1500
50 = 4.4 - 3.0	400-1100



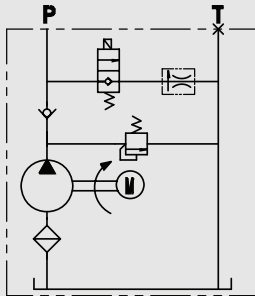
01 Pumping Station Adjustable relief SAE #6 ports



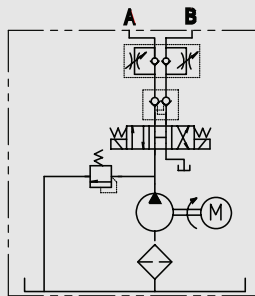
04 Double Acting Power Unit D03, closed center valve Adj flow control on both ports Adjustable relief SAE #6 ports Short term load holding



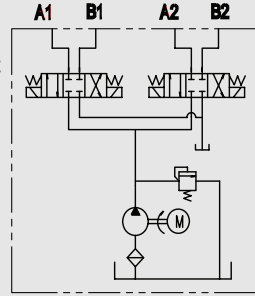
07 Double-acting Power Unit D03, open center valve Adj flow control on both ports Adjustable relief SAE #6 ports Long term load holding



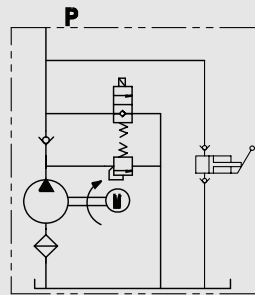
02 Single-acting Power Unit Adjustable relief SAE #6 ports



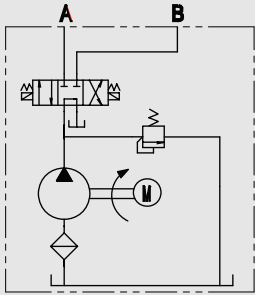
05 Double-acting Power Unit D03, open center valve Adj flow control on both ports PO checks on both ports Adjustable relief SAE #6 ports Long term load holding



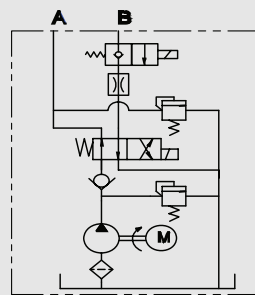
08 Double Acting Power Unit Two, D03, closed center valves Adjustable relief SAE #6 ports Short term load holding



03 Single-acting Power Unit Redundant Manual Backup Adjustable relief SAE #6 ports



06 Double-acting Power Unit D03, tandem center valve Adjustable relief SAE #6 ports Non load holding



09 Double Acting Power Unit Cartridge control valves Two, adjustable reliefs SAE #6 ports Long term load holding

Power Units

This page can be used as a faxable work order sheet or call us with the numbers you filled in and we will do the rest.

Customer Information

Contact: _____ Phone: (____) _____
 Company: _____ E-mail: _____

Single & Double Acting Power Units



Pumping Stations

• One direction pumping station • Horizontal mounting

ORDER NO.	BRAND	FLOW	PSI	PORT SIZE IN/OUT	TANK SIZE	VALVE	REMOTE	DIMENSIONS		SHIP WT.
								L	W x H	
253-120	Chief	1.3	2500	SAE 6	6 Qt.-Steel	Relief only	No	18.16	6.75 x 8.25	41
250-613	Haldex Barnes	1.3	2000	SAE 8/6	None	Relief only	No	11.75	4.5 x 4.5	28
309-222	Maxim	2.1	1400	SAE 6	12 Qt.-Steel	None	No	22.25	8.5 x 9.75	39



12 Volt Single Acting Power Units • Power units designed to lift, hold and lower • Horizontal mounting

ORDER NO.	BRAND	FLOW	PSI	PORT SIZE IN/OUT	TANK SIZE	VALVE	REMOTE	DIMENSIONS		SHIP WT.
								L	W x H	
309-219	Maxim	2.1	1400	SAE 6	8 Qt.-Steel	Solenoid	No	22.25	9.25 x 8.75	33
309-220	Maxim	2.1	1400	SAE 6	12 Qt.-Steel	Solenoid	No	21.5	9.25 x 9.75	38
309-206	Maxim	0.5	3600	SAE 6	2 Qt.-Steel	Solenoid	No	16.75	9.25 x 5.75	31
309-205	Maxim	1.3	2500	SAE 6	3 Qt.-Steel	Solenoid	No	16.75	9.25 x 7.75	32
250-530	Haldex Barnes	1.3	2500	SAE 6	3 Qt.-Steel	Solenoid	No	20.5	5 x 6	34
309-207	Maxim	1.3	2500	SAE 6	4 Qt.-Steel	Solenoid	No	18	9.25 x 9	32
253-119	Chief	1.3	2500	SAE 6	6 Qt.-Steel	Solenoid	Yes	22.25	10 x 8.75	45
253-106	Chief	1.3	3000	3/8" NPT	6 Qt.-Steel	Sol./Hand Pump	Yes	20 x 7	10.5	45
253-102	Chief	1.3	2500	SAE 6	10 Qt.-Steel	Solenoid	Yes	25.5	7 x 8.5	42
251-001	SPX	1.6	2500	3/8" NPT	3 Qt.-Poly	Lever	Yes	20.25	10 x 8	32
251-002	SPX	1.6	2500	3/8" NPT	3 Qt.-Poly	Solenoid	Yes	20.25	10 x 8	39
251-003	SPX	1.4	2000	3/8" NPT	10 Qt	Solenoid	No	24	10 x 8	39
251-026	SPX	1.4	2000	3/8" NPT	6 Qt.-Poly	Solenoid	No	22	7.7 x 8.4	35
251-013	SPX	1.4	2000	3/8" NPT	10 Qt.-Poly	Solenoid	No	24	10 x 8	39
250-355	Haldex Barnes	1.3	2000	SAE 6	10 Qt.-Steel	Solenoid	No	20.5	8 x 8	34
251-084	SPX	1.3	2000	3/8" NPT	12 Qt.-Steel	Solenoid	No	31.5	7.5 x 8.5	37
253-107	Chief	1.3	2800	SAE 6	12 Qt.-Steel	Solenoid	Yes	22	8 x 9.5	47
250-049	SPX	1.3	2000	3/8" NPT	22 Qt.-Steel	Solenoid	No	23.61	10.25 x 11.8	49

Power Units

Fluid Power Data Book

• A compact, 47-page resource for practical fluid power data.

ORDER NO.
FPH



12 Volt Double Acting Power Units • Power units designed to lift, hold and lower • Horizontal mounting

ORDER NO.	BRAND	FLOW	PSI	PORT SIZE IN/OUT	TANK SIZE	VALVE	REMOTE	DIMENSIONS		SHIP WT.
								L	W x H	
309-221	Maxim	2.1	1400	SAE 6	12 Qt.-Steel	Solenoid	Yes	23.25	8.25 x 9.75	44
250-528*	Monarch M-310	1.3	2500	1/4" NPT	2.1 Qt.-Steel	Lever	No	18	5 x 12.5	33
253-109	Chief	1.3	2500	1/4" NPT	3 Qt.-Steel	Lever	No	20.5	9 x 7.5	35
253-100	Chief	1.3	2500	SAE 6	3 Qt.-Steel	Solenoid	Yes	22.375	8.75 x 15	55
309-209	Maxim	1.3	2500	SAE 6	4 Qt.-Steel	Solenoid	No	18.25	7.25 x 8.75	27
309-208	Maxim	1.3	2500	SAE 6	12 Qt.-Steel	Solenoid	Yes	23.25	8.25 x 9.75	45
253-128	Chief	1.3	2500	SAE 6	6 Qt.-Steel	Solenoid	Yes	22.375	8.75 x 15	55
251-004	SPX	1.4	2000	3/8" NPT	3 Qt.-Poly	Solenoid	No	21	8.2 x 6.25	32
251-007	SPX	1.5	2000	SAE 6	8 Qt	Solenoid	10'	25.5	7.75 x 8.5	28
251-027	SPX	1.5	2000	SAE 6	8 Qt.-Poly	Solenoid	Yes	25.5	7.75 x 8.5	37
253-108	Chief	1.3	2500	SAE 6	8 Qt.-Steel	Solenoid	Yes	23.4	7 x 8.25	48

*4 Way-3 Position Manual Valve

ORDER NO.	BRAND	FLOW	PSI	PORT SIZE IN/OUT	TANK SIZE	VALVE	REMOTE	DIMENSIONS L x W x H	SHIP WT.
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12 Volt Double Acting Snowplow Power Unit

• Double Acting valve angles plow while a Single Acting valve provides lift, hold, lower and float functions. Adjustable double crossover relief set @ 2000 PSI
251-107 SPX 1.2 2000 SAE 6 1.5 Qt Solenoid No 23.4 x 7 x 8.25 39

12 Volt Dual Rotation Power Unit • Ideal for RV applications

• Use when no long term load holding is needed • Horizontal mounting
253-101 Chief 0.35 2500 SAE 4 1.25 Qt Dual Rot Motor No 14.75 x 7.875 x 8.5 22
253-200 80 Amp Reverse Polarity DC Motor Control
253-201 30 Amp Rocker Switch Reverse Polarity DC Motor Control

AC Auto Hoist

ORDER NO.	BRAND	FLOW	PSI	PORT SIZE IN/OUT	TANK SIZE	VALVE	REMOTE	DIMENSIONS L x W x H	SHIP WT.
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• 3 HP, single phase, 220v 60Hz, • Lever operated • For single acting cylinders • Vertical mounting
253-105 Chief 1.3 2500 SAE 6 3 Gal. Manual No 34 x 6.5 x 9.5 69

Remote Control Switches For All 12V DC Power Units • Weatherproof and dustproof • 10 Ft. 2 lbs. • 20 Ft. 4 lbs.

ORDER NO.	CORD	ACTING	BUTTONS/WIRING
250-894	10 Ft.	Single Acting	1-Button, 3-Wire
250-790	10 Ft.	Single Acting	2-Button, 3-Wire
251-200	20 Ft.	Single Acting	2-Button, 3-Wire
251-319	10 Ft.	Double Acting	2-Button, 3-Wire
251-317	10 Ft.	Double Acting	2-Button, 4-Wire
253-134	20 Ft.	Double Acting	2-Button, 4-Wire

Williams High Pressure Piston Pumps • 40 & F98 Series

• Compact, reversible and completely self-contained. Pump, reservoir and control valve are all in one unit. • Flow is constant, even at low RPM • Features steel intake and exhaust valves, which extend pump life 3-5 years over cast iron seats • May be operated from a remote position with wire control cable • 1" hardened steel shaft is supported on front and rear by heavy duty needle bearings • Heavy gauge, hot rolled steel reservoir with filler pipe filter • 3/8" NPT ports • 4-way control valve.

ORDER NO.	CU. IN. DISPL.	PISTONS	RPM RANGE	GPM AT MAX RPM	RESERVOIR SIZE	RELIEF SETTING	PORT SIZE	DIMENSIONS L x W x H	SHIP WT.
250-542	0.90	4	300-1000	3.3	15 quarts	2500 PSI	3/8" NPT	15 3/8" x 11 1/4" x 10"	50
250-545	2.35	8	100-1000	8.6	15 quarts	2500 PSI	3/8" NPT	18 3/8" x 10" x 11 7/8"	71
250-543	2.35	8	100-1000	8.6	21 quarts	2500 PSI	3/8" NPT	20 3/4" x 12" x 13 1/2"	77

Accessories

250-549	40 Replacement Pump for 250-542 above								24
250-553	F98 Replacement Pump for 250-545 above								43

Push-Button Starter For Power Units

• Motor starters for AC power units • 120V coil • Start (Flush) & Stop (Extended) pushbuttons • NEMA 4x non-metallic enclosures

ORDER NO.	MFGR NO.	PHASE	VOLTS	MAX HP	AMPS	SHIP WT.
139-245	PESWS-18V18AX-RM32	Single	230	2	10-15	5
139-246	PESWS-25V18AX-RM34	Single	115	2	22-32	5
139-247	PESW-18V18AX-R32	Three	230	5	11-17	5
139-248	PESW-9V18X-R28	Three	460	5	5.6-8.0	5

SPX Reservoir Tanks • For Fenner Power Units

ORDER NO.	MFGR. NO.	CAPACITY	USEABLE OIL CAPACITY	MATERIAL	DIMENSIONS			SHIP WT.
					L	W	H	
300-061	A KR14	3 quarts	.581 US gal.	Steel	12"	4 3/4"	4 3/4"	5
300-063	A KR40	1 gallon	.740 US gal.	Steel	7 7/8"	6 11/16"	6 11/16"	5
300-064	A KR41	1 1/2 gallons	1.16 US gal.	Steel	11 13/16"	6 11/16"	6 11/16"	6
300-072	A KR51	1 1/2 gallons	1.24 US gal.	Poly	11"	6 11/16"	6 11/16"	5
300-073	B KR52	2 gallons	1.48 US gal.	Poly	13"	6 11/16"	6 11/16"	6
251-322	B KR42	2 gallons	1.55 US gal.	Steel	15 3/4"	6 17/24"	6 17/24"	5
300-059	KR46	2 1/2 gallons	1.69 US gal.	Steel	17"	6 11/16"	6 11/16"	8
300-058	A KR56	2 1/2 gallons	1.73 US gal.	Poly	15"	6 17/24"	6 17/24"	7
251-323	KR43	3 gallons	2.16 US gal.	Steel	21 21/32"	6 17/24"	6 17/24"	10
251-324	KR44	4 gallons	2.59 US gal.	Steel	26"	6 17/24"	6 17/24"	12
300-057	KR54	4 gallons	3.09 US gal.	Poly	26"	6 17/24"	6 17/24"	5
300-066	B KR71	7 gallons	5.28 US gal.	Steel	17"	12"	10"	22
300-067	KR73	14 gallons	13.21 US gal.	Steel	17"	12"	20"	36

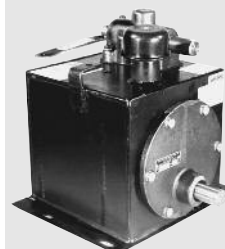
SPX



CHIEF™



CHIEF™



Power Units

New!



These motor starters will work with Custom AC power units on page 54



Gauges & Flow Meters

Glycerine Filled Gauges

• 304 stainless steel case • Plexiglass crystal • Pointer is balanced aluminum, black finish • Dial is aluminum, white background
Bottom 1/4" NPT Brass connection

ORDER NO.	DIA.	PSI RANGE
221-317	2 1/2"	0-60
221-318	2 1/2"	0-200
117-032	2 1/2"	0-300
221-550	2 1/2"	0-600
221-555	2 1/2"	0-1000
221-560	2 1/2"	0-2000
221-565	2 1/2"	0-3000
New! 221-319	2 1/2"	0-4000
221-570	2 1/2"	0-5000
New! 221-320	2 1/2"	0-6000
221-571	2 1/2"	0-10000
221-573	4"	0-10000

Center Back 1/4" NPT Brass connection

ORDER NO.	DIA.	PSI RANGE
221-551	2 1/2"	0-600
221-552	2 1/2"	0-1000
221-553	2 1/2"	0-2000
221-554	2 1/2"	0-3000
221-557	2 1/2"	0-5000
221-558	2 1/2"	0-10000



Dry Pressure Gauges Panel Clamp Mount

ORDER NO.	DIA. IN INCHES	PSI RANGE	PORT	NOTE
117-056	1 1/2"	0-100	1/4 NPT	Snubber

Gauge Snubber

• Protects pressure gauges from harmful pressure surges and pulsations • Steel

ORDER NO.	SIZE	RATED PRESSURE
221-636	1/4 NPT	10000

Fluid Level Gauges with Thermometers

• Constructed of ultrasonically welded transparent polyamid material • Features Buna-N o-ring seals and zinc plated bolts • Compatible with lubricants and mineral, petroleum, and water-based fluids.

ORDER NO.	BOLT HOLE CENTERS	MOUNTING BOLT THREAD	OVERALL LENGTH	MAX TEMP	SHIP WT.
221-199	5"	1/2-13	6.1"	+212°F	2
450-668	3"	M-10	4.25"	+212°F	2
450-669	10"	M-12	11.25"	+194°F	2

• Constructed of chrome-plated steel with an acrylic lens • Features neoprene seals and steel bolts • Compatible with petroleum-based fluids.

202-003	5"	1/2-13	7"	+225°F	2
---------	----	--------	----	--------	---

Fluid Level Sight Windows

• Steel Hex • Electroless Nickel Plate • Glass Lens • Max Temp 500 F

ORDER NO.	MAX PSI	PORT SIZE	REFLECTOR	SHIP WT.
202-306	1750	1/2" NPTF	Yes	1
202-302	1500	3/4" NPTF	Yes	1
202-303	1600	1 1/16-12 SAE	Yes	1
202-307	1250	1 NPTF	Yes	1

Inline Flow Meters

• Feature aluminum case and stainless steel internal parts • Compatible with petroleum-based fluids

ORDER NO.	MAX		PORT SIZE	OVERALL LENGTH	MAX TEMP.	SHIP WT.
	GPM	PSI				
221-595	30	3500	3/4" NPTF	7 5/32"	+240F (+115C)	2

Inline Flow Meters

• Aluminum construction • For use in cooling systems or in hydraulic systems using oil and designed for continuous monitoring or intermittent use • May be installed in hazardous areas or on applications where no power is available and may be mounted at any angle, although horizontal mounting assures best accuracy • Both flow indicator and thermometer (where indicated) are shielded behind impact-resistant windows • Range is marked in 2 GPM increments

ORDER NO.	GPM RANGE*	MAX PSI	PORT SIZE		DISPLAY SIZE	SHIP WT.
			IN/OUT	PRESSURE		
221-590	1.5-32	5000	3/4" NPTF	1/4" NPTF	2 1/2"	4
221-588	0-48	6000	3/4" NPTF	1/4" NPTF	2 1/2"	5
With Thermometer						
221-592	1.5-32	6000	3/4" NPTF	1/4" NPTF	2 1/2"	4
221-593	0-48	6000	3/4" NPTF	1/4" NPTF	2 1/2"	5

*Range is marked in 2 GPM increments

On Board Battery Charger

• 1.5 Amp with automatic shut off • Input: 120 VAC / 60 Hz • Output: 12 VDC • Light indicator for power and charging status

ORDER NO.		WT.
252-100	Panel mount	4
252-500	Bracket mount	4



New!
New!



New!

New!

Gauge Snubber

• Protects pressure gauges from harmful pressure surges and pulsations • Steel

ORDER NO.	SIZE	RATED PRESSURE
221-636	1/4 NPT	10000

Fluid Level Gauges with Thermometers

• Constructed of ultrasonically welded transparent polyamid material • Features Buna-N o-ring seals and zinc plated bolts • Compatible with lubricants and mineral, petroleum, and water-based fluids.

ORDER NO.	BOLT HOLE CENTERS	MOUNTING BOLT THREAD	OVERALL LENGTH	MAX TEMP	SHIP WT.
221-199	5"	1/2-13	6.1"	+212°F	2
450-668	3"	M-10	4.25"	+212°F	2
450-669	10"	M-12	11.25"	+194°F	2

• Constructed of chrome-plated steel with an acrylic lens • Features neoprene seals and steel bolts • Compatible with petroleum-based fluids.

202-003	5"	1/2-13	7"	+225°F	2
---------	----	--------	----	--------	---

Fluid Level Sight Windows

• Steel Hex • Electroless Nickel Plate • Glass Lens • Max Temp 500 F

ORDER NO.	MAX PSI	PORT SIZE	REFLECTOR	SHIP WT.
202-306	1750	1/2" NPTF	Yes	1
202-302	1500	3/4" NPTF	Yes	1
202-303	1600	1 1/16-12 SAE	Yes	1
202-307	1250	1 NPTF	Yes	1

Inline Flow Meters

• Feature aluminum case and stainless steel internal parts • Compatible with petroleum-based fluids

ORDER NO.	MAX		PORT SIZE	OVERALL LENGTH	MAX TEMP.	SHIP WT.
	GPM	PSI				
221-595	30	3500	3/4" NPTF	7 5/32"	+240F (+115C)	2

Inline Flow Meters

• Aluminum construction • For use in cooling systems or in hydraulic systems using oil and designed for continuous monitoring or intermittent use • May be installed in hazardous areas or on applications where no power is available and may be mounted at any angle, although horizontal mounting assures best accuracy • Both flow indicator and thermometer (where indicated) are shielded behind impact-resistant windows • Range is marked in 2 GPM increments

ORDER NO.	GPM RANGE*	MAX PSI	PORT SIZE		DISPLAY SIZE	SHIP WT.
			IN/OUT	PRESSURE		
221-590	1.5-32	5000	3/4" NPTF	1/4" NPTF	2 1/2"	4
221-588	0-48	6000	3/4" NPTF	1/4" NPTF	2 1/2"	5
With Thermometer						
221-592	1.5-32	6000	3/4" NPTF	1/4" NPTF	2 1/2"	4
221-593	0-48	6000	3/4" NPTF	1/4" NPTF	2 1/2"	5

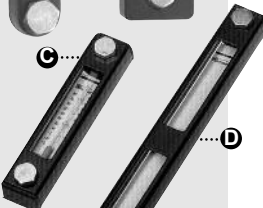
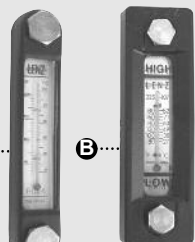
*Range is marked in 2 GPM increments

On Board Battery Charger

• 1.5 Amp with automatic shut off • Input: 120 VAC / 60 Hz • Output: 12 VDC • Light indicator for power and charging status

ORDER NO.		WT.
252-100	Panel mount	4
252-500	Bracket mount	4

Filters & Cooling



Strainers And Reservoir Tanks

Internally-Mounted Tank Strainers

• All are reusable and feature 100 mesh stainless steel pleated element, nickel-plated steel end caps, and epoxy-bonded joints for compatibility with all fluids

NON-BYPASS ORDER NO.	BYPASS ORDER NO.	PORT SIZE	MALE THREAD	OVERALL LGTH	DIA.	GPM	SHIP WT.
221-253	221-264	1/2" NPTF	-	3.1"	2.6"	5	1
221-200	221-265	3/4" NPTF	-	3.6"	2.6"	8	1
221-204	221-266	1" NPTF	-	5.4"	2.6"	10	2
221-201	221-267	1 1/4" NPTF	-	6.9"	3.0"	20	3
221-206	221-268	1 1/2" NPTF	-	8.0"	3.3"	30	2
221-254	221-269	1 1/2" NPTF	-	9.9"	3.9"	50	1
221-203	221-270	2" NPTF	-	9.9"	3.9"	50	3
221-209	221-271	2 1/2" NPTF	-	10.1"	5.1"	75	3
221-211	221-272	3" NPTF	-	11.8"	5.1"	100	4

NPT Externally-Mounted

• All feature 100 mesh stainless steel pleated elements, cast iron bushing

221-255	221-273	1/2" NPTF	1" NPTF	5.4"	1.2"	5	2
221-215	221-274	3/4" NPTF	1 1/4" NPTF	8.2"	1.4"	10	2
221-216	221-275	1" NPTF	1 1/2" NPTF	8.2"	1.7"	15	2
221-217	221-276	1 1/4" NPTF	2" NPTF	9.0"	2.1"	25	3
221-218	221-277	2" NPTF	3" NPTF	9.7"	3.0"	50	4
221-256	221-278	3" NPTF	4" NPTF	11.3"	4.0"	100	5

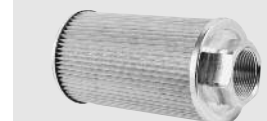
NPT Externally-Mounted

• Features 100 mesh stainless steel pleated elements, cast iron bushing and 3 psi bypass

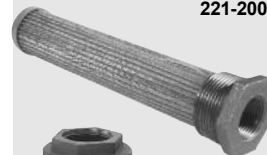
221-238	-	2" NPT	2" NPT	13.5"	-	50	4
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SAE Externally-Mounted

221-258	-	1 1/16" - 12	1 5/8" - 12	8.2"	1.42"	10	2
221-260	-	1 5/16" - 12	2 1/2" - 12	9.0"	2.24"	18	3
221-261	-	1 5/8" - 12	2 1/2" - 12	8.2"	2.13"	25	3
221-262	-	1 7/8" - 12	3 3/8" - 12	8.9"	3.07"	30	4
221-263	-	2 1/2" - 12	3 3/8" - 12	9.25"	3.07"	40	5



221-200



221-215



221-258



221-238

Reservoir Tanks

• Plastic push-on filler cap • 3/4" mag plug • Includes filler breather • 12 steel gauge

Made In The U.S.A.

ORDER NO.	GAL	STEEL GAUGE	DIMENSIONS L X W X H	PORT SIZE		SHIP WT.
				SUCTION	RETURN	
202-258	5	12	18" x 8.75" x 7.75"	1 1/2"	3/4"	22

Heavy Duty Reservoir Tanks with Integral Brackets

• All include chrome filler breather with basket strainer • Oil level gauges with temperature indicators • Suction and return ports on both sides and 3/4" mag plug • Powder coated black.

202-270	7	12	12 x 12 x 12	1 1/4"	1"	40
202-265	10	12	12 x 14 x 14	1 1/4"	1"	45
202-266	15	12	16 x 14 x 16	2"	1 1/4"	62
202-267	25	12	20 x 15 x 20	2"	1 1/4"	84
202-268	30	12	24 x 15 x 20	2"	1 1/4"	98
202-269	40	12	32 x 15 x 20	2"	1 1/4"	126



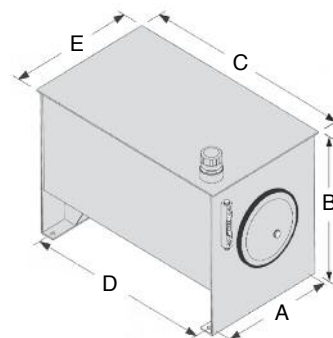
Filters & Cooling

Reservoir Tanks

• Welded riser with filler/breather • Fluid level/temp. gauge (5") • Two endcovers with seals • 3/4" NPT drain on one end-cover • Baffle with cutouts • Interior and exterior treated with rust preventative oil coating, shipped unprimed • Sloped "V" bottom • Leg height is 6" with two 11/16" dia. mounting holes on each side • Material is pickled and oiled steel • All accessories are shipped loose inside of reservoir

ORDER NO.	MODEL NO.	GALS	DIMENSIONS			END COVER DIAMETER	MOUNTING		MATERIAL		SHIP WT.
			C	E	B		D	A	ENDS	TOP	
202-120	JIC-10	10	22"	18"	20"	12"	18 1/2"	16"	7 GA	7 GA	115
202-067	JIC-15	15	26"	18"	20"	12"	22 1/2"	16"	7 GA	7 GA	140
202-058	JIC-20	20	30"	18"	20"	12"	26 1/2"	16"	7 GA	7 GA	150
202-095	JIC-30	30	36"	24"	20"	14"	32 1/2"	22"	7 GA	7 GA	185
202-069	JIC-40	40	36"	24"	22"	14"	32 1/2"	22"	7 GA	7 GA	200
202-102	JIC-50	50	36"	24"	23"	14"	32 1/2"	22"	7 GA	7 GA	210
202-079	JIC-60	60	48"	27"	21"	14"	44 1/2"	25"	7 GA	7 GA	280
202-041	JIC-80	80	60"	27"	21 1/2"	14"	56 1/2"	25"	7 GA	3/8" GA	391
202-136	JIC-100	100	60"	27"	23 1/2"	14"	56 1/2"	25"	7 GA	3/8" GA	425
202-016	JIC-120	120	60"	30"	26"	16"	55 3/4"	28"	7 GA	3/8" GA	560
202-149	JIC-150	150	60"	30"	31"	16"	55 3/4"	28"	3/8" GA	3/8" GA	630
202-300	JIC-200	200	72"	36"	29 1/2"	16"	67 3/4"	34"	3/8" GA	3/8" GA	875
202-279	JIC-250	250	72"	36"	34 1/2"	16"	67 3/4"	34"	3/8" GA	3/8" GA	995

New!



Filters & Filler Breathers



221-054



221-045

221-044



221-043

221-042



221-050

221-048

Spin-On Filters

• For use in low pressure, return-line applications with petroleum base fluids

ORDER NO.	MAX GPM RETURN	MAX PSI	MICRON	PORT SIZE	BYPASS VALVE	INDICATOR PORTS	SHIP WT.
221-046	7	200	10	3/8" NPTF	18 PSI	Yes	1
221-043*	20	100	10	3/4" NPTF	25 PSI	Yes	4
221-005	20	200	10	3/4" NPTF	15 PSI	No	3
221-006	20	200	10	3/4" NPTF	15 PSI	Yes	3
221-007	20	200	25	3/4" NPTF	15 PSI	No	3
221-008	20	200	25	3/4" NPTF	15 PSI	Yes	3
221-053	25	200	10	3/4" NPTF	15 PSI	No	3
221-009	55	150	10	1 1/4" NPTF	15 PSI	Yes	6
221-010	55	150	25	1 1/4" NPTF	15 PSI	Yes	6
221-042*	55	100	10	1 1/4" NPTF	25 PSI	Yes	10
221-054	60	150	10	1 1/4" NPTF	15 PSI	No	10
221-044	100	150	10	1 1/2" NPTF	15 PSI	Yes	11
221-045	100	150	10	1 1/2" NPTF	15 PSI	Yes	11

* Tank immersed

Replacement Elements

ORDER NO.	FITS ORDER NO.	MAX			ELEMENT THREAD	SHIP WT.
		GPM	PSI	MICRON		
221-025	221-046	7	200	10	3/4"-16 UNF	1
221-050	221-043	25	100	10	Cartridge	3
221-011	221-005,006	20	200	10	1"-12 UNF	3
221-055	221-053	25	200	10	1"-12 UNF	3
221-012	221-007,008	20	200	25	1"-12 UNF	1
221-013	221-009,044,045	55	150	10	1 1/2"-16 UNF	3
221-056	221-054	60	150	10	1 1/2"-16 UNF	3
221-014	221-010	55	150	25	1 1/2"-16 UNF	3
221-051*	221-009,044,045	55	150	10	1 1/2"-16 UNF	3
221-047	221-042	55	100	10	Cartridge	3

* Water Removal (WR) Element

Compound Indicating Gauge (Suction or Return)

• 10 to 30" Vacuum is a Red Danger Area • A red "Change Filter" sticker for the pressure side is included with each gauge for application after the pressure factor is determined

ORDER NO.	MFG. NO.	PORT SIZE
221-052	CP-2	1/8" NPTF



Filler Breather Cap

• Compatible with petroleum-based fluids



ORDER NO.	MICRON	GPM DISPL.	LGTH.	THREAD SIZE	SHIP WT.
221-605	10	300	4.8"	3/4" NPTF	2

Bolt-on Filler Breathers

• Zinc plated metal caps, 30 mesh baskets & cork gaskets and 3 new lines added with LC locking option, 3HN high neck for applications where sloshing occurs & nylon bayonet for harsh environments

ORDER NO.	MICRON	GPM	CFM	OVERALL LENGTH	SHIP WT.
221-602	10	160	26.7	5.32"	2
221-600	40	180	26.7	5.32"	2
221-640	40	71	10	4.00"	2
221-635*	40	160	24	5.32"	2
221-661	40	200	30	5.3"	2
221-660	40	180	26.7	8.3"	2
221-659	40	180	26.7	5.3"	2

*5 PSI pressure relief valve in cap

Screw-in Filler Breathers

• Feature glass-filled nylon construction and polyurethane foam element • For use with petroleum, mineral and water-based fluids • Anti-splash and dipstick options available

ORDER NO.	MICRON	CAP DIA.	GPM	CFM	OVERALL LGTH.	THREAD SIZE	SHIP WT.
220-638	40	1.6"	40	4.9	1.3"	1/4" NPTF	2
220-639	40	1.6"	40	4.9	1.3"	3/8" NPTF	2
221-606	10	1.8"	110	25	1.5"	3/4" NPTF	1
221-603	10	2.8"	250	30	2"	3/4" NPTF	1
221-601	40	2.8"	250	33.4	2"	3/4" NPTF	2
221-644	40	2.8"	192	34	2.1"	1" NPTF	2
221-643	40	2.8"	250	40	2.2"	1 1/4" NPTF	2

• Steel construction • Polyurethane foam element • For use with petroleum, mineral and water-based fluids

221-683	40	1.85"	72	10	2.17"	3/8" NPTF	1
221-680	40	3.0"	225	35	3.3"	3/4" NPTF	2
221-681*	40	3.0"	192	30	3.3"	3/4" NPTF	2
221-682	40	3.0"	190	30	3.3"	1" NPTF	1

* 5 PSI pressure relief valve in cap

Filters & Cooling



221-661

221-660



221-659

221-680



221-606

221-603



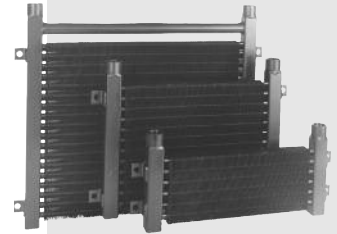
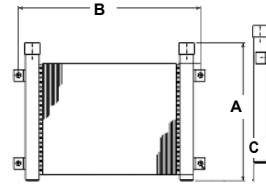
221-640



Mobile M Series

- Oil flows to 100 GPM • Operating temperature 400 degrees F • operating pressure 300 PSI • Test pressure 300 PSI
- Contact us for additional options including: Built-in relief bypass (30 PSI or 60 PSI), SAE ports available on all models

ORDER NO.	MFG NO.	MAX GPM	HEAT REJECTION BTU/HR	DIMENSIONS			PORT SIZE	SHIP WT.
				A (H)	B (MOUNT)	C (D)		
258-070	M-10	20	3.8K - 7K	8.88	19.72	1.50	1" NPT	11
258-071	M-15	30	5.5K - 10K	10.88	19.72	1.50	1" NPT	12
258-072	M-20	40	8K - 15K	14.88	19.72	1.50	1" NPT	16
258-073	M-25	60	15K - 30K	20.88	25.72	1.50	1" NPT	28
258-074	M-30	75	20K - 38K	26.88	24.72	1.50	1 1/4" NPT	34
258-075	M-35	80	25K - 45K	32.88	24.72	1.50	1 1/4" NPT	40
258-076	M-40	95	35K - 70K	38.62	30.22	1.50	1 1/4" NPT	56
258-077	M-45	100	45K - 100K	38.62	40.72	1.50	1 1/4" NPT	73

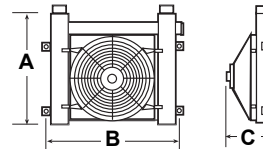


M Series

Mobile MF Series

- Same as M Series above except with 12 volt DC motor • Mounting brackets included • Contact us for additional options including: Built-in relief bypass (30 PSI or 60 PSI), 24 volt motor, hydraulic motor, SAE ports

ORDER NO.	MFG NO.	MAX GPM	HEAT REJECTION BTU/HR	DIMENSIONS			PORT SIZE	SHIP WT.
				A (H)	B (MOUNT)	C (D)		
258-190	MF-15-1-4A	55	5.5K - 10.5K	13.88	17.25	4.99	1" NPT	27
258-191	MF-30-1-4A	85	11K - 21K	16.58	21.25	6.10	1 1/2" NPT	41
258-189	MF-60-1-4A	175	22.5K - 42K	30.83	21.25	6.10	1 1/2" NPT	78
258-277	96171		Electronic Fan for all MF Models					6
258-296	68229		12 volt 12" dia Motor/Fan/Guard Assy for MF-15					10
258-283	68224		12 volt 14" dia Motor/Fan/Guard Assy for MF-30 & MF-60					10



MF Series



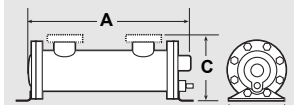
Shell & Tube EK Series

- Compact size • Low cost • 3/16" tube size • Oil flows to 80 GPM - Max pressure/shell side 500 PSI - Max pressure/tubeshell side 150 PSI - Max temperature 250 degrees F • Contact us for additional options including: one pass and four pass styles, SAE ports

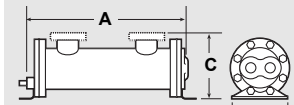
ORDER NO.	MFG. NO.	NO. OF PASSES	DIMENSIONS			OIL PORT SIZE	SHIP WT.
			A (L)	B (W)	C (HEIGHT)		
258-392	EK-505-T	2	7.38	3.5	3.74	1/2" NPT	6
258-192	EK-508-T	2	10.38	3.5	3.9	3/4" NPT	7
258-393	EK-510-T	2	12.38	3.5	3.9	3/4" NPT	8
258-202	EK-512-T	2	14.38	3.5	3.9	3/4" NPT	9
258-193	EK-514-T	2	16.38	3.5	3.9	3/4" NPT	10
258-212	EK-518-T	2	20.38	3.5	3.9	3/4" NPT	11
258-194	EK-524-T	2	26.38	3.5	3.9	3/4" NPT	13
258-195	EK-536-T	2	38.38	3.5	3.9	3/4" NPT	17
258-394	EK-708-T	2	10.19	5	5.47	1-1/2" NPT	15
258-395	EK-712-T	2	14.19	5	5.47	1-1/2" NPT	18
258-396	EK-714-T	2	16.19	5	5.47	1-1/2" NPT	19
258-196	EK-718-T	2	20.19	5	5.47	1-1/2" NPT	23
258-397	EK-724-T	2	26.19	5	5.47	1-1/2" NPT	26
258-197	EK-736-T	2	39.19	5	5.47	1-1/2" NPT	34
258-398	EK-1012-T	2	14.58	6.5	7.64	2" NPT	35
258-216	EK-1014-T	2	16.58	6.5	7.64	2" NPT	38
258-399	EK-1018-T	2	20.58	6.5	7.64	2" NPT	42
258-198	EK-1024-T	2	26.58	6.5	7.64	2" NPT	55
258-400	EK-1036-T	2	38.58	6.5	7.64	2" NPT	67
258-200	EK-1048-T	2	50.58	6.5	7.64	2" NPT	78



EK Series



One Pass

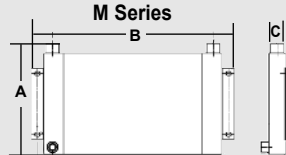


Two Pass

Fluid Cooling



New!



P-Bar Series Mobile MA (Without DC Motor Assembly)

• Flows to 150 GPM • Operating pressure 250 PSI • Operating temperature 300 degrees F • Contact us for additional options including: built-in relief bypass (30 PSI or 60 PSI), NPT ports

ORDER NO.	MFG NO.	MAX GPM	HEAT REJECTION BTU/HR	DIMENSIONS			PORT SIZE	SHIP WT.
				A (H)	B (W)	C (DEPTH)		
258-333	MA-3-2	27	5.7K-7.8K	9.02	6.14	1.77	SAE 12	5
258-334	MA-4-2	20	15K-21K	9.65	12.32	2.48	SAE 12	7
258-335	MA-8-2	18	17K-22K	6.65	20.22	2.52	SAE 12	10
258-336	MA-12-2	35	22K-35K	9.96	15.78	3.31	SAE 12	15
258-337	MA-14-2	36	24K-41K	10.98	20.22	2.52	SAE 12	14
258-338	MA-18-2	75	34K-55K	11.81	17.75	3.31	SAE 12	18
258-339	MA-20-2	50	36K-58K	15.31	20.22	2.52	SAE 16	18
258-340	MA-32-2	75	53K-95K	18.43	21.69	3.31	SAE 16	28
258-368	MA-48-2	100	80K-150K	22.13	23.62	2.56	SAE 16	41
258-369	MA-232-2	125	80K-150K	20.06	33.47	2.56	SAE 20	55
258-370	MA-248-2	125	90K-245K	20.06	31.49	2.56	SAE 20	80

P-Bar Series Mobile MA (With 12v DC Motor Assembly)

• Contact us for additional options including: Built-in relief bypass (30 PSI or 60 PSI), NPT ports, 24 volt motor

258-325	MA-3-2-4A	27	4.8K-6.2K	9.02	7.03	1.77	SAE 12	7
258-326	MA-4-2-4A	20	15K-20K	10.59	12.32	7.75	SAE 12	16
258-327	MA-12-2-4A	50	17K-22K	13.78	11.73	6.26	SAE 12	19
258-329	MA-18-2-4A	80	29K-44K	15.75	13.58	5.04	SAE 12	23
258-331	MA-32-2-4A	90	50K-83K	19.69	18.43	5.95	SAE 16	28
258-365	MA-48-2-4A	125	80K-104K	22.13	23.62	7.49	SAE 16	45
258-366	MA-232-2-4A	125	94K-148K	20.86	33.47	7.51	SAE 20	65
258-367	MA-248-2-4A	125	100K-174K	24.51	35.43	7.51	SAE 20	90
258-372	69531		DC Fan/Motor Assembly for MA-4 & MA-12					15
258-373	69532		DC Fan/Motor Assembly for MA-18					15
258-374	69533		DC Fan/Motor Assembly for MA-32 & MA-48					15
258-375	64410		DC Fan/Motor Assembly for MA-232 & MA-248					15

Mobile DH Series

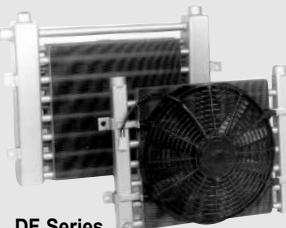
• Oil flows to 165 GPM, heat removal to 175,000 BTU/HR • Operating pressure 300 PSI • Operating temperature 350 degrees F • Test pressure 300 PSI • Contact us for additional options including: Built-in relief bypass (30 PSI or 60 PSI) available on all models

ORDER NO.	MFR. NO.	MAX GPM	A (H)	DIMENSIONS		PORT SIZE	SHIP WT.	MOUNTING KITS REQ'D
				B (W)	C (DEPTH)			
258-376	DH-051-1-1	7	4.5	15	1.5	1/2" NPT	2	2
258-018	DH-062-1-1	11	6.5	15	1.5	1/2" NPT	3	4
258-017	DH-073-1-1	12	6.5	18	1.5	1/2" NPT	3	4
258-101	DH-084-1-1	12	6.5	24	1.5	1/2" NPT	4	4
258-377	DH-095-1-1	13	8.5	18	1.5	1/2" NPT	4	4
258-025	DH-106-1-1	15	8.5	21	1.5	1/2" NPT	5	4
258-378	DH-117-1-1	25	8.5	24	1.5	1/2" NPT	5	4
258-019	DH-194-1-1	25	12.73	18	1.5	3/4" NPT	6	4
258-346	DH-205-1-1	25	12.73	21	1.5	3/4" NPT	7	4
258-379	DH-216-1-1	25	12.73	24	1.5	3/4" NPT	8	4
258-026	DH-227-1-1	28	14.73	24	1.5	3/4" NPT	9	4
258-021	DH-249-1-1	35	18.73	24	1.5	3/4" NPT	12	6
258-023	DH-326-1-1	50	25	24	1.5	1" NPT	16	8
258-100	DH-337-1-1	70	25	30	1.5	1" NPT	16	8
258-380	DH-348-1-1	55	31	24	1.5	1" NPT	19	8
258-027	DH-359-1-1	58	31	30	1.5	1" NPT	24	8
258-381	DH-370-1-1	60	31	36	1.5	1" NPT	28	8
258-028	DH-425-1-1	85	37.41	30	1.5	1 1/4" NPT	32	8
258-029	DH-447-1-1	80	41.41	42	1.5	1 1/4" NPT	43	8
258-030	DH-513-1-1	50	15	20.75	1.5	3/4" NPT	16	Included
258-032	DH-524-1-1	70	21	26.75	1.5	3/4" NPT	27	Included
258-024	DH-535-1-1	100	27	26.75	1.5	1" NPT	53	Included
258-034	DH-626-1-1	150	39.03	29.75	1.5	2" NPT	60	Included
258-035	DH-670-1-1	165	43.03	41.75	1.5	2" NPT	115	Included
258-280	L-84741							DH Mounting Kit with straps

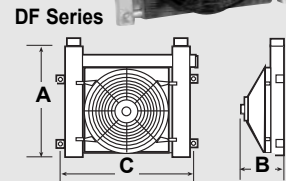
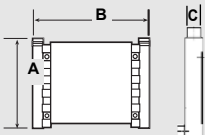
Mobile DF Series With DC Fan

• Oil flows to 110 GPM • Operating temperature 350 degrees F • Operating pressure 300 PSI • Test pressure 300 PSI • Mounting brackets included • Contact us for additional options including: 24 volt motor or hydraulic motor, optional built-in relief bypass (30 PSI or 60 PSI) available on all models

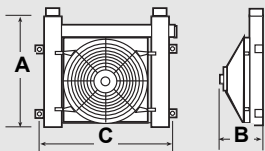
ORDER NO.	MFR. NO.	MAX GPM FLOW	HEAT DISSIPATION BTU/HR	DIMENSIONS			PORT SIZE	VOLTAGE	SHIP WT.
				A (H)	B (W)	C (DEPTH)			
258-115	DF-11-1-4A	25	7.5K - 11K	16.12	7.47	20.75	1" NPT	12	26
258-112	DF-12-1-4A	55	30K-38K	17	9.46	22.75	1" NPT	12	44
258-114	DF-12-1-4B	55	30K-38K	17	9.46	22.75	1" NPT	24	44
258-118	DF-22-1-4A	100	28K - 35K	31.47	9.46	22.75	1 1/2" NPT	12	94
258-283	68224		Electronic fan control kit for DC motors						10



DH Series



DF Series



AOC Series

• 3 Phase 208-230/460V AC Motors • Industrial duty • Flows to 200 GPM • Mounting brackets included • Contact us for additional options including: built-in bypass relief (30 PSI or 60 PSI), NPT ports, 1 phase motor, 575 volt motor, and 12 or 24 volt motors

ORDER NO.	MFGR. NO.	GPM	DIMENSIONS			PORT SIZE	SHIP WT.
			A (H)	B (W)	C (DEPTH)		
258-270	AOC-19-2-3 PH	26	13.62	16.50	13.08	SAE 12	38
258-268	AOC-22-2-3 PH	35	15.62	22.00	12.19	SAE 12	33
258-272	AOC-24-2-3 PH	36	19.62	24.75	13.19	SAE 12	56
258-274	AOC-33-2-3 PH	45	25.62	30.25	13.19	SAE 16	75
258-275	AOC-37-2-3 PH	65	18.50	39.00	15.66	SAE 20	95
258-266	AOC-50-2-3 PH	80	22.50	41.00	15.62	SAE 20	120
258-265	AOC-54-2-3PH	125	30.50	42.00	17.09	SAE 24	154
258-264	AOC-57-2-3PH	130	36.50	48.00	16.72	SAE 32	190
258-263	AOC-70-2-3PH	200	38.38	51.00	22.62	SAE 32	322

12 volt replacement motors for units above - all include motor, fan blade and fan guard

258-390	68443	12 volt motor for AOC-19	10
258-296	68229	12 volt motor for AOC-22 & 37	10
258-283	68224	12 volt motor for AOC-24, 33, 50, 54, 57	10
258-391	68211	12 volt motor for AOC-70	60

Industrial RM Series

• Mounts to rear of electric motor (TEFC) and utilizes electric motor fan air flow • Ideal for case drain applications • Mounting brackets included • Operating pressure 300 PSI - Test pressure 300 PSI - Operation temperature 350 degrees F • Contact us for additional options including: SAE ports and for pass styles

ORDER NO.	MFGR. NO.	NO. OF PASSES	DIMENSIONS			PORT SIZE	SHIP WT.
			A (H)	B (W)	C (DEPTH)		
258-341	RM-08-1-1	1	9.19	12.25	3.22	3/4" NPT	7
258-238	RM-08-2-1	2	9.41	13.12	3.22	3/4" NPT	7
258-401	RM-19-1-1	1	13.62	16.5	5.11	3/4" NPT	16
258-402	RM-19-2-1	2	13.62	16.5	8.18	3/4" NPT	16
258-403	RM-24-1-1	1	19.62	24.75	8.18	3/4" NPT	31
258-404	RM-24-2-1	2	19.62	24.75	8.18	3/4" NPT	31

P-Bar Series Industrial BOL

• Bar and plate brazed aluminum core • Rugged, lightweight, and compact • Provides the best heat transfer per given envelope size while minimizing pressure drop • Operating pressure 250 PSI - Operating temperature 300 degrees F • Contact us for additional options including: 575 volt motor, hydraulic motor, and NPT ports

ORDER NO.	MFGR. NO.	MOTOR PHASE	HP	VOLTAGE	FRAME	CUBIC FT/MIN	PORTS	DIMENSIONS			SHIP WT.
								A (W)	B (H)	C (DEPTH)	
245-040	BOL-8-2-2	1	1/3	115/230	48C	800	SAE 12	15.75	11.3	14.72	45
245-028	BOL-8-2-3	3	1/3	280-230/460	48C	800	SAE 12	15.75	11.3	14.72	45
245-042	BOL-16-2-2	1	1/2	115/230	48C	1425	SAE 20	19.69	15.06	16.16	55
245-050	BOL-16-2-3	3	1/2	280-230/460	48C	1425	SAE 20	19.69	15.06	16.16	55
245-044	BOL-30-2-2	1	1/2	115/230	56C	2200	SAE 20	26.38	19.49	18.23	125
245-045	BOL-30-2-3	3	1/2	280-230/460	56C	2200	SAE 20	26.38	19.49	18.23	125
245-046	BOL-400-2-2	1	1	115/230	56C	2200	SAE 20	22.45	17.31	18.8	148
245-047	BOL-400-2-3	3	1	280-230/460	56C	2200	SAE 20	22.45	17.31	18.8	148
245-048	BOL-725-2-2	1	1-1/2	115/230	56C	3600	SAE 20	30.32	21.60	18.60	170
245-049	BOL-725-2-3	3	1-1/2	280-230/460	56C	3600	SAE 20	30.32	21.60	18.60	170

Thermal Bypass Assembly

• Ideally suited for hydrostatic drive circuits which require fast warm-up, controlled fluid temp, and low return line back pressure • When installed in the return line of a hydraulic circuit that employs an oil cooler, will modulate fluid temp by either shifting return line flow through the cooler or bypassing directly to the reservoir • Relief valve set at 65 PSI - operating pressure 250 PSI • Proof pressure 300 PSI • Max operating temp shift temp + 75 degrees F • Max GPM flow 60

ORDER NO.	MFGR. NO.	SHIFT TEMP
258-382	65654	100 F
258-383	65655	120 F
258-384	65656	140 F
258-385	65657	160 F

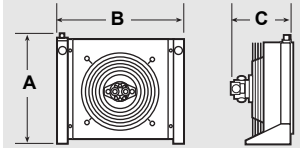
Three Way Thermostatic Valves

• Typical applications: Hydraulic power units • Diverting mode 110 F, air compressors • Mixing mode 140 F, mobile oil coolers • Diverting mode 110 F and radiators • Diverting mode 190 F • Optional port sizes available

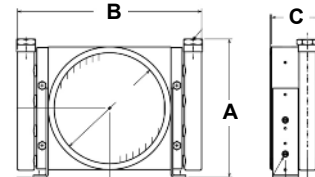
ORDER NO.	MFGR. NO.	SHIFT TEMP	PORT SIZE
258-386	66037-110	110 F	1/2" NPT
258-387	66037-140	140 F	1/2" NPT
258-382	66038-110	110 F	3/4" NPT
258-388	66038-140	140 F	3/4" NPT
258-384	66039-110	110 F	1" NPT
258-389	66039-140	140 F	1" NPT



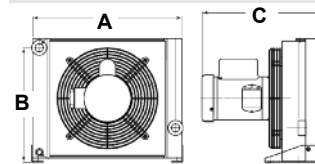
AOC Series



RM Series



BOL Series



New!

Filters & Cooling



AKG Oil Coolers - DC And DCS Series

- Rugged Bar & Plate Brazed Aluminum Construction • Flows from 2 gpm to 100 gpm for coolant and extreme oil performance and fuel applications • Additional capabilities for charge-air-coolers, condensers, and multi-circuit units
- Maximum Operating Pressure 250 psi • Maximum Operating Temperature 250° F

ORDER NO.	MFG NO.	VOLTAGE	MAX GPM	HEAT DISSIPATION BTU/HR	DIMENSIONS			PORT SIZE	SHIP WT.
					A	B	C		
DC Series (With Fan)									
258-310	DC-10-12	12	45	21K-26K	11.73	15.98	4.84	SAE 12	21
258-311	DC-16-12	12	81	27K-45K	13.50	17.94	5.04	SAE 16	25
258-312	DC-20-12	12	90	50K-65K	18.43	21.69	5.31	SAE 20	30
258-313	DC-10-24	24	78	21K-26K	11.73	15.98	4.84	SAE 12	19
258-314	DC-16-24	24	81	27K-45K	13.50	17.94	5.04	SAE 16	25
258-315	DC-20-24	24	90	50K-65K	18.43	21.69	5.31	SAE 20	28

DCS Series (With Fan and Shroud)									
ORDER NO.	MFG NO.	VOLTAGE	MAX GPM	HEAT DISSIPATION BTU/HR	A	B	C	PORT SIZE	SHIP WT.
258-300	DCS-10-12	12	45	21K-26K	11.73	15.98	6.30	SAE 12	20
258-301	DCS-16-12	12	81	27K-45K	13.50	15.98	6.46	SAE 16	25
258-302	DCS-20-12	12	90	50K-65K	18.43	21.69	7.20	SAE 20	33
258-303	DCS-30-12	12	100	75K-100K	22.13	25.62	7.20	SAE 20	53
258-205	DCS-45-12	12	60	75K-100K	18.43	33.46	7.20	SAE 20	65
258-308*	DCS-60-12	12	80	95K-166K	22.13	35.43	7.20	SAE 20	109
258-304	DCS-10-24	24	78	21K-26K	11.73	15.98	6.30	SAE 12	20
258-305	DCS-16-24	24	81	27K-45K	13.5	15.98	6.46	SAE 16	25
258-306	DCS-20-24	24	90	50K-65K	18.43	21.69	7.20	SAE 20	31
258-307	DCS-30-24	24	100	75K-100K	22.13	25.62	7.20	SAE 20	53
258-206	DCS-45-24	24	60	75K-100K	18.43	33.46	7.20	SAE 20	65
258-309*	DCS-60-24	24	75	95K-166K				SAE 20	109
118-083	TC-115	Temperature Control Switch (set at 115 degrees F)							
118-053	TC-140	Temperature Control Switch (set at 140 degrees F)							
258-324	M-404	Temp controller for cycling DC fan motor for accurate temp control 12 or 24 volt - 6 settings							

* Dual Fan Series

258-347	8407.263.3000	12 volt motor only to fit DC/DCS-10 units							
258-364	8407.360.1067	12 volt motor only to fit DC/DCS-16 units							
118-051	8407.360.0076	12 volt motor only to fit DC/DCS-20/30/60 units							
258-363	8407.263.3001	24 volt motor only to fit DC/DCS-10 units							
258-405	8407.360.1070	24 volt motor only to fit DC/DCS-16 units							
258-349	8407.360.1071	24 volt motor only to fit DC/DCS-20/30/60 units							

AKG C Series

- Leak free SAE oil connections • Mounting included • Rugged bar and plate construction • Options include built-in relief bypass (25 PSI or 65 PSI) on all models • Call for information • Working pressure 250 PSI • Working temperature 250 degrees F

ORDER NO.	MFG NO.	C SERIES MM	MAX GPM	HEAT DISSIPATION BTU/HR	DIMENSIONS			PORT SIZE	SHIP WT.
					A	B	C		
258-316	C-8	45	22	32K-58K	6.25	19.40	1.77	SAE 12	10
258-317	C-12	45	78	32K-58K	11.73	13.98	2.56	SAE 12	15
258-318	C-14	45	40	32K-58K	10.98	19.40	1.77	SAE 12	14
258-319	C-18	45	80	32K-58K	13.58	15.94	2.56	SAE 12	18
258-320	C-20	45	60	32K-58K	15.31	19.40	1.77	SAE 12	18
258-321	C-32	63	90	55K-95K	18.43	19.88	2.56	SAE 20	28
258-322	C-48	63	100	55K-95K	22.13	23.62	2.56	SAE 20	41
258-323	C-66	63	105	55K-95K	25.83	27.56	2.56	SAE 20	50
258-406	C-82	63	100	55K-95K	27.68	31.50	2.56	SAE 24	65
258-407	C-120	63	150	55K-95K	39.49	31.50	2.56	SAE 24	88

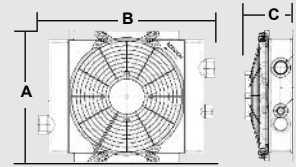
AKG ACD Series

- Ideally suited to operate in dirty environments • Higher speed fans for compact and economical advantages • Options include 575 volt motor • Built-in relief valve (25, 30, 60, 65 PSI) • Call for information

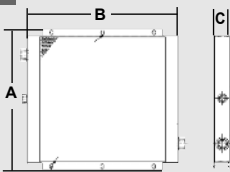
ORDER NO.	MFG NO.	MOTOR PHASE	MAX GPM	DIMENSIONS			PORT SIZE	SHIP WT.
				A	B	C		
258-408	ACD-8-1	1	40	12.44	15.75	14.72	SAE 16	45
258-357	ACD-16-1	1	50	16.26	19.98	15.59	SAE 16	55
258-359	ACD-30-1	1	80	20.59	26.38	17.76	SAE 20	125
258-409	ACD-40-1	1	80	22.44	30.32	18.74	SAE 20	163
258-362	ACD-70-1	1	190	28.27	37.01	22.60	2" SAE	240
258-410	ACD-100-1	1	200	37.40	40.95	24.76	2" SAE	405
258-414	ACD-8-3	3	40	12.44	15.75	14.72	SAE 16	45
258-358	ACD-16-3	3	50	16.26	19.98	15.59	SAE 16	55
258-360	ACD-30-3	3	80	20.59	26.38	17.76	SAE 20	125
258-415	ACD-40-3	3	80	22.44	30.32	18.74	SAE 20	163
258-361	ACD-70-3	3	190	28.27	37.01	22.60	2" SAE	240
258-416	ACD-100-3	3	200	37.40	40.95	24.76	2" SAE	405



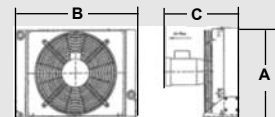
DC And DCS Series



C Series



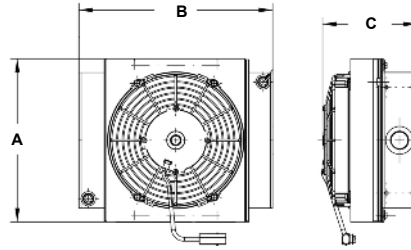
ACD Series





AKG Cool-Line D Series Oil-To-Air Coolers

• Can be universally used in hydraulic, transmission, engine, or lubricating oil and coolant circuits • Max operating pressure 377PSI, max working temperature 250 degrees F • Contact us for additional options including: Internal bypass relief in 25, 30, 60, or 65 PSI settings and 24 volt motors and SAE to NPT port size adaptors



ORDER NO.	MFG NO.	MAX GPM	DIMENSIONS			PORT SIZE	SHIP WT.
			A (H)	B (W)	C (DEPTH)		
258-421	D-10-12	50	11.46	13.78	6.02	SAE 12	20
258-422	D-16-12	50	13.63	15.75	6.52	SAE 16	23
258-420	D-20-12	50	13.63	15.75	7.23	SAE 16	26
258-423	D-30-12	80	17.63	19.69	8.7	SAE 20	32
258-424	D-36-12	80	18.03	20.47	9.96	SAE 20	47
258-425*	D-45-12	80	16.56	28.35	8.45	SAE 20	62
258-426*	D-60-12	80	20.29	35.63	8.7	SAE 20	70
258-427*	D-70-12	80	20.29	36.22	9.96	SAE 20	84

* 258425/258426/258427 are dual fan style

118-083	TC-115	Temperature Control Switch (set at 115 degrees F)
118-053	TC-140	Temperature Control Switch (set at 140 degrees F)
258-324	M-404	Temp controller for cycling DC fan motor for accurate temp control 12 or 24 volt - 6 settings

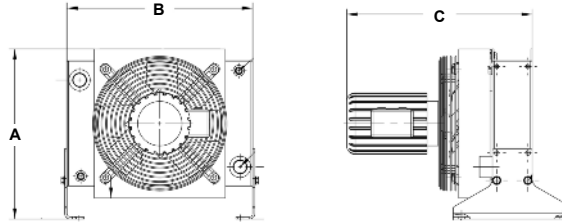
New!



Cool Line D Series

AKG Cool-Line A Series Oil-To-Air Coolers

• Can be universally used in hydraulic, transmission, engine, or lubricating oil and coolant circuits • Max operating pressure 377PSI, max working temperature 250 degrees F • Contact us for additional options including: internal bypass relief in 25, 30, 60, or 65 PSI settings, 575 volt motors and SAE to NPT port size adaptors



ORDER NO.	MFG NO.	MOTOR PHASE	MAX GPM	DIMENSIONS			PORT SIZE	SHIP WT.
				A (H)	B (W)	C (DEPTH)		
258-440	A-5-1	1	38	13.74	13.78	12.56	SAE 12	37
258-441	A-8-1	1	38	14.25	13.78	13.27	SAE 12	43
258-442	A-10-1	1	65	15.91	15.75	14.50	SAE 16	46
258-443	A-15-1	1	65	15.91	16.54	16.00	SAE 16	57
258-444	A-20-1	1	100	19.60	21.65	15.50	SAE 20	67
258-445	A-30-1	1	100	24.03	25.59	16.75	SAE 20	137
258-446	A-40-1	1	100	24.03	26.38	18.00	SAE 20	169
258-447	A-5-3	3	38	13.74	13.78	12.56	SAE 12	37
258-448	A-8-3	3	38	14.25	13.78	13.27	SAE 12	43
258-449	A-10-3	3	65	15.91	15.75	14.50	SAE 16	46
258-450	A-15-3	3	65	15.91	16.54	16.00	SAE 16	57
258-451	A-20-3	3	100	19.60	21.65	15.50	SAE 20	67
258-452	A-30-3	3	100	24.03	25.59	16.75	SAE 20	137
258-453	A-40-3	3	100	24.03	26.38	18.00	SAE 20	169

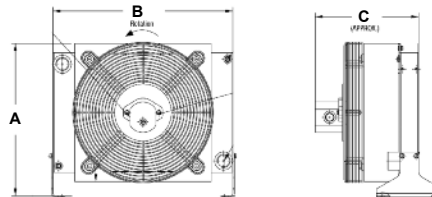
New!



Cool Line A Series

AKG HR Series Cool-Line Coolers With Hydraulic Motor

• Equipped with anti-clogging fins • Hydraulic motor fan • For the cooling of mineral oil, synthetic oil, biological oil as well as liquids and water with at least 50% of anti-freeze and anti-corrosive additives • Ideally suited for rugged environments



ORDER NO.	MFG NO.	MOTOR CU/IN/REV	MOTOR GPM/PSI	GPM	HEAT REMOVED	DIMENSIONS			PORT SIZE	SHIP WT.
						A (H)	B (W)	C (DEPTH)		
258-430	HR10-0218	0.218	3.6/500	5-30	10 hp	13.74	13.78	10.00	SAE 12	30
258-431	HR14-0218	0.218	3.6/500	10-50	14 hp	14.25	13.78	11.00	SAE 16	36
258-432	HR20-0218	0.218	3.6/500	10-50	20 hp	15.91	15.75	10.00	SAE 16	41
258-433	HR25-0218	0.218	3.6/500	10-50	25 hp	15.91	16.54	11.20	SAE 16	50
258-434	HR45-0218	0.218	1.8/1100	10-50	45 hp	19.60	21.65	11.10	SAE 16	57
258-435	HR45-0378	0.372	3.6/500	15-80	45 hp	19.60	21.65	11.10	SAE 20	57
258-436	HR55-0372	0.372	3.6/500	15-80	55 hp	19.60	21.65	15.50	SAE 20	127
258-437	HR75-0372	0.372	3.6/500	15-80	75 hp	24.03	26.38	16.75	SAE 20	159
258-438	HR100-0050	0.50	4.2/870	15-80	100 hp	19.60	21.65	16.75	SAE 20	137

New!



Filters & Cooling

Directional Control Valve

CHIEF™ Log Splitter Valves • 1 Spool • Cast iron body • Complete handle assembly included

ORDER NO.	MAX GPM	PSI	SPOOL		RELIEF SETTING	PORT SIZE		SHIP WT.
			TYPE	ACTION		IN/OUT	WORK	
220-990	25	2750	4-way tandem center	Spring center detent	2200 PSI	3/4" NPT	1/2" NPT	12
220-998	25	2750	4-way tandem center	Spring center detent	2200 PSI	3/4" NPT	1/2" NPT	12
220-965	21	3625	4-way 3-Position	Spring center detent	2500 PSI	SAE 12	SAE 10	12

Sample Applications Log Splitters

CHIEF™ Directional Control Valves

• European design • Cast iron construction • Anti-drop load check on each spool • Relief adjustable range 1500-3625
Relief setting 2500 • Complete handle assembly • Power beyond or closed center available • See accessories for power beyond plug or closed center conversion plug.

ORDER NO.	MAX GPM	PSI	NO. OF SPOOLS	SPOOL		PORT SIZE			SHIP WT.
				TYPE	ACTION	INLET	OUTLET	WORK	
220-932	10	3625	1	3-Way 3 pos. tandem center	3-pos. Spring center	SAE 10	SAE 10	SAE 8	8
220-906	10	3625	1	4-Way 3 pos. tandem center	3-pos. Spring center	SAE 10	SAE 10	SAE 8	6
220-952	10	3625	1	4-Way 3 pos. motor center	3-pos. Spring center	SAE 10	SAE 10	SAE 8	6
220-953	10	3625	1	4-Way 3 pos. motor center	3-pos. detent	SAE 10	SAE 10	SAE 8	6
220-907	10	3625	2	4-Way 3 pos. tandem center	3-pos. Spring center	SAE 10	SAE 10	SAE 8	10
220-956	10	3625	2	4w 4p/4w 3p. tandem center	4-pos. float 3-pos. Spr. center	SAE 10	SAE 10	SAE 8	12
220-908	10	3625	3	4-Way 3 pos. tandem center	3-pos. Spring center	SAE 10	SAE 10	SAE 8	15
220-959	10	3625	3	4w 4p/ 4w 3p / 4w 3p. tandem center	4-pos. float 3-pos. Spr. center	SAE 10	SAE 10	SAE 8	13
220-909	10	3625	4	4-Way 3 pos. tandem center	3-pos. Spring center	SAE 10	SAE 10	SAE 8	17
220-926	10	3625	5	4-Way 3 pos. tandem center	3-pos. Spring center	SAE 10	SAE 10	SAE 8	17
220-945*	21	3625	1	3 or 4 Way 3 position**	3-pos. Spring center	SAE 10	SAE 10	SAE 8	9
220-933	21	3625	1	3-Way 3 pos. tandem center	3-pos. Spring center	SAE 10	SAE 12	SAE 10	8
220-954	21	3625	1	4-Way 3 pos. motor center	3-pos. Spring center	SAE 10	SAE 12	SAE 10	9
220-994	21	3625	1	4-Way 3 pos. tandem center	3-pos. Spring center	SAE 10	SAE 12	SAE 10	9
220-955	21	3625	1	4-Way 3 pos. motor center	3-pos. detent	SAE 10	SAE 12	SAE 10	9
220-900	21	3625	2	4-Way 3 pos. tandem center	3-pos. Spring center	SAE 10	SAE 12	SAE 10	17
220-901	21	3625	3	4-Way 3 pos. tandem center	3-pos. Spring center	SAE 10	SAE 12	SAE 10	23
220-902	21	3625	4	4-Way 3 pos. tandem center	3-pos. Spring center	SAE 10	SAE 12	SAE 10	27
220-903	21	3625	5	4-Way 3 pos. tandem center	3-pos. Spring center	SAE 10	SAE 12	SAE 10	32
220-904	21	3625	6	4-Way 3 pos. tandem center	3-pos. Spring center	SAE 10	SAE 12	SAE 10	37
220-929	30	3625	1	4-Way 3 pos. tandem center	3-pos. Spring center	SAE 12	SAE 16	SAE 12	29
220-930	30	3625	2	4-Way 3 pos. tandem center	3-pos. Spring center	SAE 12	SAE 16	SAE 12	42
220-931	30	3625	3	4-Way 3 pos. tandem center	3-pos. Spring center	SAE 12	SAE 16	SAE 12	49

*Can not accept a power beyond sleeve due to design limitations ** May be converted to either single or double acting application

Directional Control Valve With Joy Stick

220-910	10	3625	2	4-Way 3 pos. tandem center	3-pos. Spring center	SAE 10	SAE 10	SAE 8	10
220-957	10	3625	2	4-Way 3 pos. / 4way 4pos. tandem center	3-pos. Spr. center 4-pos. float	SAE 10	SAE 10	SAE 8	10
220-905	21	3625	2	4-Way 3 pos. tandem center	3-pos. Spring center	SAE 10	SAE 12	SAE 10	17

Directional Control Valve With 2 Joy Sticks, 2 levers

220-951	10	3625	6	4-Way 3 pos. tandem center	3-pos. Spring center	SAE 10	SAE 10	SAE 8	21
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Accessories for all Chief 10 GPM Control Valves

220-911	3 Position Detent Kit P40
220-913	Closed Center Plug P40 SAE
220-915	Power Beyond Plug P40 SAE
220-958	Handle Bracket Kit (parts to connect front of spool to handle)
220-917	Handle Assembly P40 (Fits All Chief 10 GPM valves except joystick)
220-928	Joystick Handle Assembly
220-919	Relief Cart P40

Accessories for all Chief 21 GPM Control Valves

220-912	3 Position Detent Kit P80
220-925	Handle Bracket Kit (parts to connect front of spool to handle)
220-914	Closed Center Plug P80 SAE
220-916	Power Beyond Plug P80 SAE
220-918	Handle Assembly P80 Fits All Chief 21 GPM valves except joystick
220-927	Joystick Handle Assembly
220-920	Relief Cart P80

Accessories for all Chief 30 GPM Control Valves

220-938	3 Position Detent Kit
220-943	Closed Center Plug
220-944	Power Beyond Plug



Valves

Directional Control Valve



Control Valves • LS3000 Series Made In The USA

• Single 4-way spool is used to control a double-acting cylinder or bi-rotational motor • Max: 25 GPM, 2750 PSI • Handle assemblies included

ORDER NO.	PRINCE NO.	SPOOL TYPE	SPOOL ACTION	RELIEF SETTING	PORT SIZE		SHIP WT.
					IN/OUT	WORK	
220-092	LS-3000-1	4-way, 3-pos.	Pressure release detent, spring center to neutral	2250 PSI @ 3 GPM	3/4" NPTF	1/2" NPTF	10
220-093	LS-3000-2	4-way, 3-pos.	Pressure release detent, spring center to neutral	2250 PSI @ 3 GPM	3/4" NPTF	3/4" NPTF	11
220-094	LS-3030-1	4-way, 3-pos.	Spring center to neutral	2250 PSI @ 12 GPM	3/4" NPTF	1/2" NPTF	10
220-096	LS-3040-1	4-way, 3-pos.	3-pos. detent	1500 PSI @ 12 GPM	3/4" NPTF	1/2" NPTF	10

Accessories

205-181	660130001	LS-3000/RD2500 Handle Kit					
205-023	660530001	LS-3000 Seal Kit					



Sample Applications
Log Splitters



Control Valves • RD2500 Series Made In The USA

• Single 4-way spool is used to control a double-acting cylinder or bi-rotational motor • 4-way motor spool allows a cylinder to float in the neutral position or motor to free wheel • 3-way spool is used to control a single-acting cylinder or a unidirectional motor • All feature an adjustable ball spring relief and load check • Max: 20 GPM, 3000 PSI • Relief setting: 1500 PSI @12 GPM • Complete handle assembly included.

ORDER NO.	PRINCE NO.	SPOOL TYPE	SPOOL ACTION	PORT SIZE		SHIP WT.
				IN/OUT	WORK	
220-108	RD-2555T4ESA1	4-way, 3-pos. tandem	Spring center to neutral	1/2" NPTF	1/2" NPTF	11
220-113	RD-2575T4ESA1	4-way, 3-pos. tandem	Spring center to neutral	3/4" NPTF	1/2" NPTF	11
220-109	RD-2575T4EDA1	4-way, 3-pos. tandem	3-pos. detent	3/4" NPTF	1/2" NPTF	11
220-114	RD-2575T3ESA1	3-way, 3-pos.	Spring center to neutral	3/4" NPTF	1/2" NPTF	11
220-107	RD-2575M4ESA1	4-way, 3-pos. motor	Spring center to neutral	3/4" NPTF	1/2" NPTF	10
220-115	RD-2575M4EDA1	4-way, 3-pos. motor	3-pos. detent	3/4" NPTF	1/2" NPTF	12

Accessories

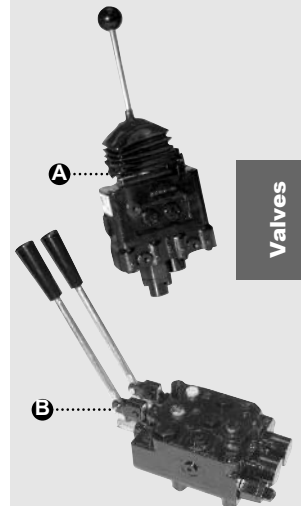
205-151	660125001	RD2500 3-Position Detent Kit	2
205-149	660125002	RD2500 Spring Center Kit	2
205-181	660130001	LS3000/RD2500 Handle Kit	1
205-055	660525001	RD2500 Seal Kit	1



Two Spool Loader Valves • LVR & LVT Series Made In The USA

• 4-position float spool for use with loader boom • 4-position regen spool for use with loader bucket
• Constructed of high tensile strength gray cast iron with hard chrome plated spool • All feature load check on each spool and a direct-acting adjustable relief • Relief adj. range 1500 - 3000 PSI • Relief setting: 2000 @ 10 GPM • Power beyond option available.

ORDER NO.	PRINCE NO.	SPOOL TYPE & ACTION	PORT SIZE & LOCATION			SHIP WT.
			IN/OUT	WORK	HANDLE	
Max 10 GPM, 3000 PSI						
220-130	B LVT1BB5AB1	A1 & B1: 4-way, 3-pos., spring center	SAE 8	SAE 6	Standard	16
		A2 & B2: 4-way, 3-pos., spring center	Top	Top	handles	
220-131	B LVT1GB5AB1	A1 & B1: 4-way, 4-pos. float, spring center	SAE 8	SAE 6	Standard	16
		A2 & B2: 4-way, 3-pos., spring center	Top	Top	handles	
220-132	A LVT1GB5AB7	A1 & B1: 4-way, 4-pos. float, spring center	SAE 8	SAE 6	Universal	16
		A2 & B2: 4-way, 3-pos., spring center	Top	Top	joystick	
220-133	A LVT1GR5AB3	A1 & B1: 4-way, 4-pos. float, spring center	SAE 8	SAE 6	Universal	16
		A2 & B2: 4-way, 4-pos. regen, spring center	Top	Top	joystick	
Max 14 GPM, 3000 PSI						
220-117	A LVR1GB5AB7	A & B: 4-way, 4-pos. float, spring center	SAE 10	SAE 8	Universal	15
		C & D: 4-way, 3-pos., spring center	End	End	joystick	
220-104	A LVR1BG5AB7	A & B: 4-way, 3-pos., spring center	SAE 10	SAE 8	Universal	15
		C & D: 4-way, 4-pos. float, spring center	End	End	joystick	



Valves

Directional Control Valves



Directional Control Valves • RD5000 Series Made In The USA

• 4-way spool is used to control a double-acting cylinder • 4-way motor spool is used to control a double-acting cylinder or bi-rotational motor • All feature adjustable differential poppet relief and all feature load check except autocycle • Relief adj. range: 1500-3000 PSI • Relief setting: 2000 PSI @ 10 GPM • Power beyond option available • Includes handles • 220-510 comes with straight joystick • Side In/out 3/4" NPTF ports • 3,000 psi max

ORDER NO.	PRINCE NO.	MAX GPM	SPOOL NO.	SPOOL TYPE	SPOOL ACTION	WORK PORT NPTF	SHIP WT.
A 220-110	RD512CA5A4B1	30	1	4-way, 3-pos. tandem center	3-pos., spring center to neutral	1/2"	16
A 220-580	RD513CA5A4B1	30	1	4-way, 3-pos. tandem center	3-pos., spring center to neutral	3/4"	15
A 220-121	RD512EA5A4B1	30	1	4-way, 3-pos. motor	3-pos., spring center to neutral	1/2"	16
A 220-581	RD513GG5A4B1	30	1	4-way, 4-pos. tandem center float spool	4-pos. spring center detent in float	3/4"	16
A 220-116	RD512GG5A4B1	30	1	4-way, 4-pos. tandem center float spool	4-pos. spring center detent in float	1/2"	16
E 220-522	RD522CCAA5A4B1	25	2	Both Spools: 4-way, 3-pos. tandem center	Both Spools: 3-pos. spring center to neutral	1/2"	24
D 220-510	RD522CCAA5A4B6	25	2	Both Spools: 4-way, 3-pos. tandem center	Both Spools: 3-pos. spring center to neutral	1/2"	28
E 220-525	RD522CCEA5A4B1	25	2	Both Spools: 4-way, 3-pos. tandem center	Pressure Release Detent spring center to neutral	1/2"	24
E 220-520	RD522GCCA5A4B1	25	2	A: 4-way, 3-pos. tandem center float spool B: 4-way, 3-pos. tandem center	A: 4-pos. spring center detent in float B: 3-pos. spring center	1/2"	26
E 220-105	RD522MMEE5A4B1	25	2	Both Spools: 4-way, 3-pos. Auto Cycle	Pressure Release Detent spring center to neutral	1/2"	28
C 220-532	RD532CCCAA5A4B1	25	3	All Spools: 4-way, 3-pos. tandem center	All Spools: 3-pos. spring center to neutral	1/2"	37
C 220-538	RD533CCCAA5A4B1	25	3	All Spools: 4-way, 3-pos. tandem center	All Spools: 3-pos. spring center to neutral	3/4"	38
E 220-540	RD523MMEE5A1A1	25	2	Both Spools: 4-way, 3-pos. Auto Cycle	Pressure Release Detent spring center to neutral	3/4"	30
E 220-106	RD523MMEE5A4B1	25	2	Both Spools: 4-way, 3-pos. Auto Cycle	Pressure Release Detent spring center to neutral	3/4"	28

Accessories

205-115	660312005	Closed Center Conversion Plug
205-119	660312004	3/4" NPTF Power Beyond Plug
205-136	660150002	3-Position Detent Kit
205-230	660150039	Complete Handle Kit



Prince Wolverine Valves

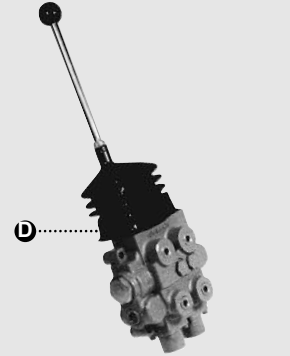
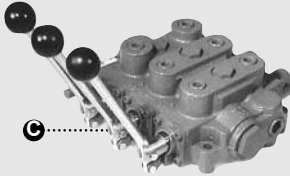
• 8 GPM Double Acting Directional Control Valves For Compact Applications

• For double acting cylinders. Ideal for small tractor and other low flow applications • Load check • Built-in adjustable pressure relief valve • Spring centering spool action • Open center with enclosed plug to convert to power beyond or closed center • 8 GPM max flow • 3,500 Max PSI • Relief set at 2000 PSI adjustable from 2000-3500 PSI • In/Out ports and work ports SAE 8 • 3 hole mounting base

ORDER NO.	PRINCE NO.	SPOOL NO.	SPOOL TYPE/ACTION	DIMENSIONS L X W X H	SHIP WT.
220-172	MB11B5C1	1	4 way 3 pos, spring center to neutral all spools	3.78 x 7.67 x 2.25	7
220-173	MB11C5C1	1	4 way 3 pos motor, 3 pos detent all spools	3.78 x 7.67 x 2.25	7
220-174	MB21BB5C1	2	4 way 3 pos, spring center to neutral all spools	5.16 x 7.67 x 2.25	10
220-175	MB21GB5C1	2	4 way 4 pos float, spring center w/float detent 1st spool 4 way 3 pos, spring center to neutral 2nd spool	5.16 x 7.67 x 2.25	10
220-176	MB31BBB5C1	3	4 way 3 pos, spring center to neutral all spools	6.62 x 7.67 x 2.25	13
220-177	MB41BBBB5C1	4	4 way 3 pos, spring center to neutral all spools	8.07 x 7.67 x 2.25	16
220-178	MB51BBBBB5C1	5	4 way 3 pos, spring center to neutral all spools	9.53 x 7.67 x 2.25	19
220-179	MB61BBBBBB5C1	6	4 way 3 pos, spring center to neutral all spools	10.99 x 7.67 x 2.25	22

Accessories

220-180	671900122	Power beyond conversion plug to convert valves to closed center	1
220-181	660170058	3 position detent kit (converts spring centering spools to 3 pos manual detent)	1



Valves

New!



Directional Control Valve



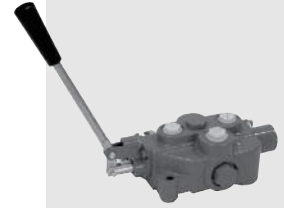
Single Spool Directional Control Valves • RD4100 Series Made In The USA

• High tensile strength cast iron • Hard chrome plated spool • All feature adjustable cartridge relief and load check • Max: 15 GPM, 3000 PSI • Relief adj. range 1500 - 3000 PSI • Relief setting: 2000 @ 15 GPM • Standard lever handle • Power beyond option available

ORDER NO.	MFRG. NO.	SPOOL TYPE	SPOOL ACTION	PORT SIZE & LOCATION		SHIP WT.
				IN/OUT	WORK	
220-125	RD412BA5A2B1	4-way, 3-pos. tandem center	Spring center to neutral	SAE 10 Side	SAE 8 Top	13

Accessories

205-128	660180002			RD4100/SV 3-Position Detent		
205-144	660280002			RD4100/SV Closed Center Plug		
205-126	660280001			RD4100/SV SAE 8 Power Beyond Plug		



Sectional Control Valves • SV Series Made In The USA

• Sectional design allows valves to be assembled with a variety of spools to meet your application requirements • To assemble a complete valve, at least one work section in addition to one inlet and one outlet section are required • All work sections feature load check • Max: 12 GPM, 3000 PSI • SAE 8 Ports

ORDER NO.	PRINCE NO.	SPOOL		PORT SIZE	HANDLE	SHIP WT.
		TYPE	ACTION			
Standard						
224-005	SVW1AA1	3-way, 3-pos.	Spring center	SAE 8	Lever	7
224-010	SVW1BA1	4-way, 3-pos.	Spring center	SAE 8	Lever	6
224-015	SVW1CA1	4-way, 3-pos.	Spring center motor	SAE 8	Lever	6
224-020	SVW1BB1	4-way, 3-pos.	3-pos. detent	SAE 8	Lever	6
224-025	SVW1CB1	4-way, 3-pos. motor	3-pos. detent	SAE 8	Lever	6
224-030	SVW1DD1	4-way, 4-pos.	Spring center float	SAE 8	Lever	6

Standard Solenoid Operated

224-016	SVW1CA1-S12Q	4-way, 3-pos. motor	Spring center	SAE 8	Lever	15
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Inlet Sections

ORDER NO.	RELIEF ADJ. RANGE	SETTING	PORT SIZE & LOCATION	SHIP WT.
224-035	None	None	SAE 10 Top and side	5
224-040	1500-3000 PSI	2000 PSI	SAE 8 Top and side	5
224-050	1500-3000 PSI	2000 PSI	SAE 10 Top and side	5

Field Conversion Kit

205-170	MFRG. No. 660250002	RD5000/RV/SV (1500-3000 PSI, not preset)	2	
		High Pressure Adjustable Relief Cartridge		

Outlet Sections

ORDER NO.	EXHAUST /TYPE	PORT SIZE & LOCATION	SHIP WT.
224-055	Power beyond outlet w/SAE 8 power beyond port	SAE 10 Top and side	5
224-070	Standard open center outlet with open center plug	SAE 8 Top and side	4
224-080	Standard open center outlet with open center plug	SAE 10 Top and side	5

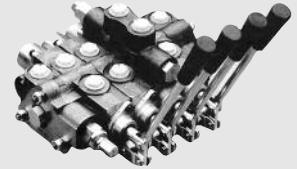
Field Conversion Kit

205-144	MFG. No. 660280002	RD4100/SV Closed Center Plug	1
205-126	MFG. No. 660280001	RD4100/SV SAE 8 Power Beyond Plug	1
205-014	MFG. No. 660280018	SV Open Center Pressure Build-Up Plug	1

Bolt Kits

ORDER NO.	WORK SECTIONS
224-081	1
224-082	2
224-083	3
224-084	4
224-085	5
224-086	6
224-087	7

Related Items	
Cylinders	p.2-33
Pressure Gauges	p.58,61
Filters and Strainers	p.59,61
Hose Products	p.80-85
Power Units	p.49-57
Reservoir Tanks	p.59



Hand Pump Hydraulic System



• Easy to operate hand pump, used for hydraulic presses, dumps, plows, snow blades, frame straighteners, etc. • Choose from three pressure and volume rates with 3-position fulcrum • Release valve • Pressure port

ORDER NO.	PSI RANGE	PORT SIZE	RESERVOIR	SHIP WT.
251-580	1000-3000	3/8" NPTF	1 gallon	31

Single-Acting Hand Operated Hydraulic Pump

• Manual pump features adjustable relief valve and manual release valve • Unique two-stage design allows you to get speed at first and then switching to the high pressure side, allows you the extra strength needed to finish the work

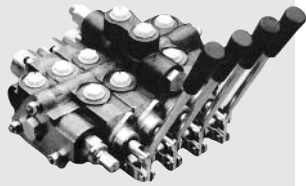
ORDER NO.	PSI RANGE	PORT SIZE	RESERVOIR	SHIP WT.
252-090	2500-3500	3/8" NPTF	1 gallon	15

Double-Acting Hand Operated Hydraulic Pump

220-996	3625 Max	3/8" NPTF	1.3 gallon	18
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Directional Control Valves



Sectional Control Valves • 20 Series Made In The USA

• Sectional design allows valves to be assembled with a variety of spools to meet your application requirements • To assemble a complete valve, at least one work section in addition to one inlet and one outlet section are required • All work sections feature load check • Standard lever handle • Max 3500 psi

Work Sections

ORDER NO.	PRINCE NO.	MAX GPM	TYPE	SPOOL		PORT SIZE	SHIP WT.
				ACTION	RELIEF		
224-102	20P1AA1AA	20	3-way/3-pos. single acting	Spring center	Plugged	SAE 10	11
225-109	20P1BA1AA	20	4-way/3-pos. double acting	Spring center	Plugged	SAE 10	10
224-105	20P1CA1AA	20	4-way motor	Spring center	Plugged	SAE 10	9
224-106	20P1CB1AA	20	4-way, 3-pos. detent	Spring center	Plugged	SAE 10	10
224-107	20P1DD1AA	20	4-way, 4-pos. float	Spring center	Plugged	SAE 10	9

Inlet Sections

ORDER NO.	PRINCE NO.	RELIEF ADJ. RANGE	RELIEF SETTING	PORT SIZE & LOCATION	SHIP WT.
224-122	20I2A	No Relief	-	SAE 12 Top and side	7
224-100	20I2G	1751-2200 PSI	2200 PSI @10 GPM	SAE 12 Top and side	6
224-101	20I2J	2201-3000 PSI	2500 PSI @10 GPM	SAE 12 Top and side	6

Outlet Sections

ORDER NO.	PRINCE NO.	EXHAUST TYPE	PORT SIZE & LOCATION	SHIP WT.
224-108	20E21	Standard open center outlet w/conversion plug	SAE 12 Side	4

Accessories

ORDER NO.	PRINCE NO.	TYPE	SHIP WT.
205-388	660290005	Closed Center Cartridge	1
224-123	660290005	Power Beyond Cartridge	1
224-126	6601900004	3 Position Detent	1

Bolt Kits

ORDER NO.	WORK SECTIONS
224-111	1
224-112	2
224-113	3
224-114	4
224-115	5
224-116	6

Handle Kits

ORDER NO.	KIT
205-386	Std. Handle

Custom Valve Worksheet

Pre-assembled Custom Prince Valves. Assembly only \$25 each!

Custom Order Prince Sectional Control Valves

Let us save you time and money by assembling your Prince sectional control valves for you. You select the arrangement and we'll assemble the valves using the manufacturer's recommended methods, test them and set the relief according to your specifications. When you receive the valves all you have to do is mount them up, plumb them in and go to work! Assembly charge is only \$25 per valve assembly. Please use the form below to identify the selection arrangement and we'll take it from there.

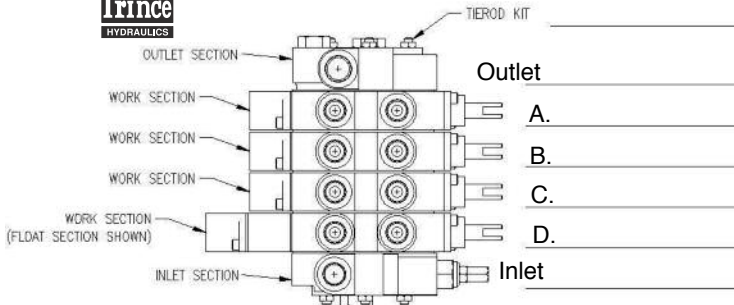
Please indicate how you would like to receive our response:

Phone Fax Email

Non-Cancellation Policy: Custom valves may not be cancelled once an order has been placed. An order is placed when we receive a signed approval of a quote/purchase order back from you and payment terms are finalized. We do not accept verbal orders for custom valves. Purchase Orders may be faxed, emailed or mailed in.



Please write in the Order part number for each section below.



List up to 10 work sections in order from A to J.

- A. _____
- B. _____
- C. _____
- D. _____
- E. _____
- F. _____
- G. _____
- H. _____
- I. _____
- J. _____

We will fax or email a confirmation for approval before building your valve.

Customer Information

Contact Name: _____
 Company Name: _____
 Street Address: _____
 Mailing Address: _____
 City: _____
 State/Province: _____ Zip/Postal Code: _____
 Country: _____
 Phone: (____) _____
 Fax: (____) _____
 Email: _____

CROSS Two Spool Valve

• 30 GPM • Complete with handles • 3/4" NPTF power beyond sleeve port • All ports SAE 10

ORDER NO.	MFG. NO.	SPOOL 1	SPOOL 2	SHIP WT.
116-090	BA2A1XA03EFO	4-way, 4-pos. open center spring centered with detent in float position	4-way, 3-pos. open center spring centered	25

BRAND Directional Control Valves • TS Series

• Chrome plated spool • Cast Iron Body • Adjustable relief from 1400-2500 PSI relief springs are available • Built in Anti-drop check prevents the load from dropping when the spool is shifted.

ORDER NO.	MAX		SPOOL			RELIEF SETTING	PORT SIZE		SHIP WT.
	GPM	PSI	SPOOLS	TYPE	ACTION		IN/OUT	WORK	
220-784	18	3000	2	Tandem 4-way 3 Pos.	Spring center	1500	SAE 12	SAE 10	14
220-788	18	3000	3	Tandem 4-way 3 Pos.	Spring center	1500	SAE 12	SAE 10	20

BRAND Sectional Control Valves • 34 Series

• Individual load check built into each section which prevents the load from dropping when the spool is shifted • Precision ground chrome plated spool that assures long life • Diamond lapped spool bore provides consistent spool fit with low leakage • Metering notches give smooth control of the load • Adjustable handles allow for positioning in any location from 90 degrees up to 90 degrees down • O-ring ports to eliminate leakage • 12 GPM flow • 3500 PSI. Order handles separately.

Low Spool Sections

ORDER NO.	SPOOL		PORT SIZE	SHIP WT.
	TYPE	ACTION		
224-303	4-Way tandem center	3-pos. detent	SAE 8	4
224-300	3-Way tandem center	Spring center	SAE 8	4
224-305*	4-Way tandem center	4th-pos./float Spring center	SAE 8	4

* Must be last work section of the stack for safety reasons.

Outlet Sections

ORDER NO.	DESCRIPTION	PORT SIZE & LOCATION	SHIP WT.
224-331	Plain	SAE 10/Top	6
224-329	Closed center plug	SAE 10/Side	6

Inlet Sections

ORDER NO.	RELIEF TYPE	PORT SETTING	PORT SIZE & LOCATION	SHIP WT.
224-320	None	None	SAE 10/Side	6

Bolt Kits

ORDER NO.	SPOOL SECTIONS
224-351	1
224-354	4

BRAND Sectional Control Valves

ORDER NO.	MFRG NO.	DESCRIPTION	SHIP WT.
224-309	36A108320	2 Spool, 4 way/3pos sectional control, 1st spool is open center, 2nd and 3rd spools are closed center. All feature electrical and automatic unloading to tank reducing back pressure. 12vdc cartridges. 12 GPM @ 3500 PSI max, 2000 psi relief setting, SAE-10 in/out, SAE-8 work ports. Handles included.	20
224-308	36A102525	4 spool, 4 way/3pos sectional control, 1st spool is open center, 2nd spool is closed center. Both feature electrical and automatic unloading to tank reducing back pressure. center, 12vdc cartridges. 12 GPM @ 3500 PSI max, 2000 psi relief setting, SAE-10 in/out, SAE-8 work ports. Handles included.	24

Gresen Directional Control Valves • SP Series

SPK Series • SPKXTE-4-HP • First spool is a 4-way, 4-position float spool which allows a cylinder to "float" or motor to "free wheel", enabling applications such as dozer blades to follow the contour of the road • Power Beyond • Outlet end and top • Complete handle assembly • Relief Setting adjustable range: 1501-2000 PSI

ORDER NO.	MAX		SPOOL			RELIEF SETTING	PORT SIZE		SHIP WT.
	GPM	PSI	SPOOLS	TYPE	ACTION		IN/OUT	WORK	
280-020	20	2000	1	4-way, 3-pos.	Spring return to neutral	1500 PSI	3/4" NPT	1/2" NPT	19

New!



CLOSEOUT!



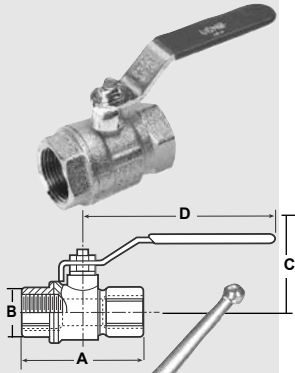
CLOSEOUT!

Valve shown assembled, components sold individually



Valves

Ball And Check Valves



Ball Valves

Low Pressure • Forged brass body & ball, PTFE ball seat, NBR O-ring: Pressure rating 600 psi at 100 degrees and 100 PSI at 210 degrees max temp 212 degrees

ORDER NO.	PORT SIZE	MAX PSI	DIMENSIONS				SHIP WT.
			A	B	C	D	
451-115	1/4" NPTF	735	1.58	.90	1.55	3.35	1
451-116	3/8" NPTF	735	1.58	.90	1.55	3.35	1
451-117	1/2" NPTF	735	1.91	1.16	1.87	3.86	1
451-118	3/4" NPTF	590	2.15	1.40	2.00	3.86	1
451-119	1" NPTF	590	2.52	1.68	2.40	4.84	1
451-120	1 1/4" NPTF	440	2.99	2.08	2.85	5.59	1

High Pressure • Carbon steel body, chrome-plated brass ball, chrome plated steel seat, minimum temp -22°, max temp 212

450-080	1/4" NPTF	7250	2.79	1.38	1.93	4.33	2
450-081	3/8" NPTF	7250	2.87	1.57	2.09	4.33	3
450-082	1/2" NPTF	7250	3.27	1.69	2.03	4.33	2
450-083	3/4" NPTF	5800	3.74	2.17	3.04	7.08	4
450-084	1" NPTF	5000	4.45	2.56	2.97	7.08	5
450-247	SAE 4	7250	2.79	1.38	1.93	4.33	2
450-248	SAE 6	7250	2.87	1.57	2.09	4.33	2
450-249	SAE 8	7250	3.27	1.69	2.03	4.33	2
450-250	SAE 12	5800	3.74	2.17	3.04	7.08	4
450-251	SAE 16	5000	4.45	2.56	2.97	7.08	5

Inline Check Valves FC

• These valves operate when mounted inline in any position • Male/Female design • Allow free flow in one direction and checked flow in the opposite direction • Max: 4000 PSI.

ORDER NO.	CRACKING PRESSURE	PORT SIZE	RATED GPM	PRESSURE RATING	SHIP WT.
280-370	1 PSI	1/2" NPTF	8	3000 PSI	1
280-372	1 PSI	3/4" NPTF	30	3000 PSI	1
280-371	1 PSI	SAE 8	18	3000 PSI	1
280-373	1 PSI	SAE 10	25	3000 PSI	1

Inline Check Valves FCF

• Provides free flow in one direction and shut off in the opposite. Carbon steel construction • FCF are Female/Female design

ORDER NO.	CRACKING PRESSURE	PORT SIZE	RATED GPM	PRESSURE RATING	SHIP WT.
452-204	5 lbs	1/4" NPTF	6	5000 PSI	1
452-200	5 lbs	3/8" NPTF	10	5000 PSI	1
452-201	5 lbs	1/2" NPTF	18	5000 PSI	1
452-202	5 lbs	3/4" NPTF	30	5000 PSI	2
452-203	5 lbs	1" NPTF	36	5000 PSI	3
452-205	5 lbs	SAE 6	10	5000 PSI	3
452-206	5 lbs	SAE 8	18	5000 PSI	3
452-207	5 lbs	SAE 12	30	3000 PSI	3

Special Buy! Parker Valves

PARKER Check Valves

ORDER NO.	MFG NO.	DESCRIPTION	RATED PSI	MATERIAL	SHIP WT.
117-361	PC200S	1/8" NPT, 3 GPM, 5 PSI Cracking	5,000	Steel	1

Parker 7PC Check valve. Prestolok ports for pneumatic applications up to 300 psi designed to use with nylon, polyethylene & polyurethane tubing

117-369	7PC200B	1/8" Tube size	Brass	1
117-370	7PC400B	1/4" Tube size	Brass	1
117-371	7PC600B	3/8" Tube size	Brass	1

Parker 7PN Needle Valve. Prestolok ports for pneumatic applications up to 300 psi designed to use with nylon, polyethylene & polyurethane tubing

117-375	7PN200B	1/8" Tube size	Brass	1
117-376	7PN400B	1/4" Tube size	Brass	1
117-377	7PN600B	3/8" Tube size	Brass	1

Parker 7PF Flow Control valves. Prestolok ports for pneumatic applications up to 300 psi designed to use with nylon, polyethylene & polyurethane tubing

117-372	7PF200B	1/8" Tube size	Brass	1
117-373	7PF400B	1/4" Tube size	Brass	1
117-374	7PF600B	3/8" Tube size	Brass	1

Check Valves Special Buy!

ORDER NO.	MFG NO.	DESCRIPTION	RATED PSI	SHIP WT.
117-150	DCVH-1001-4-5	SAE 4, 5 PSI Cracking	5000	1

Lock Valves Made In The USA

• Designed to lock a cylinder or part of a circuit while a directional control valve is in the neutral position • With directional control valve in neutral position, flow from both ends of cylinder is blocked locking cylinder piston in position • The Double Lock Valve with Flow Control has a single adjustable flow control which when adjusted changes the pressure drop in the valve which in most cases eliminates valve chatter • Max: 15 GPM, 3000 PSI.

ORDER NO.	PORT SIZE	SHIP WT.
Single		
280-365	3/8" NPTF	3
280-364	1/2" NPTF	3
Double		
280-360	1/4" NPTF	3
280-361	3/8" NPTF	3
280-362	1/2" NPTF	3
280-366	3/4" NPTF	3
280-363	SAE 6	3
280-367	SAE 8	3

ORDER NO.	PORT SIZE	SHIP WT.
Double with Flow Control		
280-369	3/8" NPTF	3
280-378	1/2" NPTF	3
280-368	SAE 8	3



Pilot Operated Check Valves

• RD-1600 is a pilot operated check valve which blocks oil from flowing from the cylinder port to the valve port until sufficient pressure is applied to the pilot port. Oil can free flow from the valve port to the cylinder port. Two stage poppet ensures smooth chatter free operation.

ORDER NO.	PRINCE NO.	GPM MAX	PILOT RATIO	PORT SIZE		SHIP WT.
				IN/OUT	PILOT	
222-181	RD-1608	20	4:1	SAE 8	SAE 4	2
222-179	RD-1637	20	4:1	3/8" NPTF	1/4" NPTF	2
222-180	RD-1650	20	4:1	1/2" NPTF	1/4" NPTF	2
222-575	RD-1475	30	4:1	3/4" NPTF	-	7
222-574	RD-1450	30	4:1	1/2" NPTF	-	7

Parker Pilot-Operated Relief Valves • RPL Series

• Pilot operated ball-type relief valve used in systems to provide a smooth, consistent performance • Compact, low profile design

ORDER NO.	MFG. NO.	MAX GPM	MAX PSI	PORT SIZE	SHIP WT.
280-122	RPL-75-A	60	2000	3/4" NPT	7
280-167	RPL-100-A	60	2000	1" NPT	7
280-123	RPL-12-A	60	5000	SAE 12	7
280-124	RPL-16-A	60	5000	SAE 16	7



High Pressure Relief Valves • RD1800 Series

• Compact, direct-acting ball/spring type pressure relief • Fast opening and well-suited for pressure spike protection • Features replaceable hardened seat and is externally adjustable • Max: 2500 PSI.

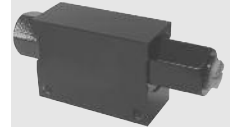
ORDER NO.	PRINCE NO.	MAX GPM	RELIEF		PORT SIZE	SHIP WT.
			ADJ. RANGE	SETTING		
222-849	RD-1837-H	8	1000-2500 PSI	1500 PSI	3/8" NPTF	2
222-850	RD-1850-H	16	1000-2500 PSI	1500 PSI	1/2" NPTF	3
222-875	RD-1875-H	20	1000-2500 PSI	1500 PSI	3/4" NPTF	3



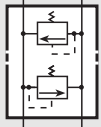
Differential Poppet Inline Relief Valves • RV Series

• Comprised of a relief cartridge and a cast iron body • Provides smooth, quiet performance with minimum variation between cracking and full flow pressure • Max: 30 GPM, 3000 PSI.

ORDER NO.	PRINCE NO.	RELIEF		PORT SIZE	SHIP WT.
		ADJ. RANGE	SETTING		
222-784	RV-1H	1500-3000 PSI	2000 PSI @ 10 GPM	SAE 12	4
222-786	RV-2H	1500-3000 PSI	2000 PSI @ 10 GPM	3/4" NPTF	4
222-787	RV-4H	1500-3000 PSI	2000 PSI @ 10 GPM	1/2" NPTF	4
222-788	RV-5NH	Non-Adjustable	2000 PSI @ 10 GPM	SAE 8	4
222-785	RV-2L	500-1500 PSI	1000 PSI @ 10 GPM	3/4" NPTF	4
222-790	RV-4L	500-1500 PSI	1000 PSI @ 10 GPM	1/2" NPTF	4
222-791	RV-5L	500-1500 PSI	1000 PSI @ 10 GPM	SAE 8	4



Relief, Flow Control & Needle Valves



Double Relief Cushion Valves

• These differential poppet type double relief valves are for use in systems requiring crossover relief protection, such as a bi-rotational motor, or systems that require a cushion valve, such as a double-acting cylinder • Max: 30 GPM, 3000 PSI.

ORDER NO.	PRINCE NO.	RELIEF		PORT SIZE	SHIP WT.
		ADJ. RANGE	SETTING		
222-801	DRV-2LL	500-1500 PSI	1000 PSI	3/4" NPTF	6
222-803	DRV-2HH	1500-3000 PSI	2000 PSI	3/4" NPTF	6
222-804	DRV-4HH	1500-3000 PSI	2000 PSI	1/2" NPTF	6
New! 222-806	DRV-1HH	1500-3000 PSI	2000 PSI	SAE 12	6
New! 223-436	DRV-1LL	500-1500 PSI	1000 PSI	SAE 12	6
New! 222-798	DRV-3LL	500-1500 PSI	1000 PSI	SAE 10	6
New! 223-437	DRV-3HH	1500-3000 PSI	2000 PSI	SAE 10	6
New! 222-802	DRV-4LL	500-1500 PSI	1000 PSI	1/2" NPTF	6
New! 222-807	DRV-5HH	1500-3000 PSI	2000 PSI	SAE 8	6
New! 223-438	DRV-5LL	500-1500 PSI	1000 PSI	SAE 8	6

Relief Valves • Balanced Piston Relief Valves

• Balanced Piston Type Relief Valve provides low pressure differential and quiet operation • SAE-4 gauge port and SAE-6 Vent port provide for remote and pilot operated options • Additional pressure ranges available

ORDER NO.	MFGR. NO.	FLOW RANGE	ADJUSTABLE RANGE	PORT SIZE	SHIP WT.
450-208	IFP CT-06C	0-60 GPM	1000-3000 PSI	3/4" NPTF	10
450-209	IFP CT-10C	0-120 GPM	1000-3000 PSI	1 1/4" NPTF	15
450-210	IFP CS-06C	0-60 GPM	1000-3000 PSI	SAE 12	10
450-211	IFP CS-10C	0-120 GPM	1000-3000 PSI	SAE 20	15

Flow Control Valves

• Designed to provide precision flow control and full shutoff in one flow direction and automatically provide unrestricted free flow in the opposite • Graduated knob to accurately control flow • Set screw locks valve in position

- Ⓐ • Nickel-plated brass body with stainless steel needle • Max: 3000 PSI.

ORDER NO.	MAX FLOW		PORT SIZE	SHIP WT.
	FREE	CONT.		
450-670	20 GPM	10 GPM	1/4" NPTF	1
450-671	30 GPM	16 GPM	3/8" NPTF	1
450-672	45 GPM	22 GPM	1/2" NPTF	2

- Ⓑ • Carbon steel body • Max: 5000 PSI.

ORDER NO.	MAX FLOW		PORT SIZE	SHIP WT.
	FREE	CONT.		
450-050	20 GPM	10 GPM	1/4" NPTF	1
450-051	30 GPM	16 GPM	3/8" NPTF	1
450-631	20 GPM	10 GPM	SAE 6	1
450-052	45 GPM	22 GPM	1/2" NPTF	2
450-054	65 GPM	35 GPM	3/4" NPTF	3
450-048*	36 GPM	21 GPM	3/4" NPTF	7
450-634	100 GPM	70 GPM	1" NPTF	3
450-636	120 GPM	80 GPM	1 1/4" NPTF	4

* Pressure Compensated

Needle Valves

• For use as speed control on hydraulic systems where a reverse flow check valve is not needed • Graduated knob to accurately control flow • Set screw locks valve in position • Meters flow in both directions.

- Ⓒ • Carbon steel body • Max: 5000 PSI.

ORDER NO.	MAX GPM	PORT SIZE	SHIP WT.
450-060	9	1/4" NPTF	1
450-061	15	3/8" NPTF	1
450-655	15	SAE 6	1
450-062	23	1/2" NPTF	2
450-063	33	3/4" NPTF	3

- Ⓓ • Nickel-plated brass body with stainless steel needle • Max: 3000 PSI.

ORDER NO.	MAX GPM	PORT SIZE	SHIP WT.
450-680	9	1/4" NPTF	1
450-681	15	3/8" NPTF	1
450-682	23	1/2" NPTF	1

Parker Two-position Selector Valves • S Series • Made In The USA

• Designed to direct the flow of oil in a hydraulic system to two separate hydraulic lines • Permits the control of two single-acting cylinders with one three-way control valve • Valve spool is the open crossover type. As spool is moved and one outlet port begins to close, the opposite outlet port is opening.

ORDER NO.	MFGR. NO.	MAX		PORT SIZE	SHIP WT.
		GPM	PSI		
280-150	S-50	20	3000	1/2" NPTF	5
280-152	S-75	30	3000	3/4" NPTF	6
280-154	S-100	60	3000	1" NPTF	10

Valves



CHIEF™ Two-position Selector Valves

Designed to direct the flow of oil in a hydraulic to two separate hydraulic lines - Permits the control of two single-acting cylinders with one three-way control valve - valve spool is the open-crossover type. Valve should be shifted before pressure is applied.

ORDER NO.	MAX		PORT SIZE	SHIP WT.
	GPM	PSI		
220-936	20	3000	SAE 8	4
220-937	30	3000	SAE 12	11

Parker Two-position Double Selector Valves • Made In The USA

• Designed to direct the flow of oil in a hydraulic system to two separate circuits • Permits operation of two double-acting cylinders with one four-way control valve or four single-acting cylinders with two three-way control valves.

ORDER NO.	MFG. NO.	MAX		PORT SIZE	SHIP WT.
		GPM	PSI		
280-160	DS-75	25	2000	3/4" NPTF	13
280-162	DS-12	25	3000	SAE 12	13



Two-position Selector Valves • SS & DS Series • Made In The USA

SS Series • Manual 3-way, 2-position single selector valves allow one pump source to supply two circuits • Max: 20 GPM, 2500 PSI.

ORDER NO.	PRINCE NO.	PORT SIZE	HANDLE	SHIP WT.
222-441	SS-1A1E	3/8" NPTF	Lever	4
222-999	SS-2A1D	1/2" NPTF	Knob	4
223-004	SS-2A1E	1/2" NPT	Lever	4
223-005	SS-3A1D	SAE 8	Knob	4
222-440	SS-3A1E	SAE 8	Lever	4
223-006	SS-4A1D	SAE 10	Knob	4
222-439	SS-4A1E	SAE 10	Lever	4

DS Series • Manual 6-way, 2-position double selector valves divert flow to two separate hydraulic circuits • Max: 40 GPM, 2500 PSI.

222-997	DS-1A1D	Ⓐ 1/2" NPTF	Knob	9
222-996	DS-1A1E	Ⓑ 1/2" NPTF	Lever	9
222-998	DS-4A1E	Ⓑ 3/4" NPTF	Lever	9
222-995	DS-5A1E	Ⓒ SAE 12	Lever	9
222-442	DS-1A4D	Ⓐ 1/2" NPTF	Knob/2 Pos. Detent	9
222-443	DS-3A4D	Ⓐ SAE 10	Knob/2 Pos. Detent	9
222-994	DS-4A4D	Ⓐ 3/4" NPTF	Knob/2 Pos. Detent	9
222-991	DS-1A4E	Ⓑ 1/2" NPTF	Lever/2 Pos. Detent	9
223-434	DS-4A4E	Ⓑ 3/4" NPTF	Lever/2 Pos. Detent	9
223-435	DS-3A4E	Ⓒ SAE 10	Lever/2 Pos. Detent	9
220-598	DS-6A4E	Ⓒ 1 NPTF	Lever/2 Pos. Detent	9
205-054*	DS-1B1E	Ⓒ 1/2" NPTF	Lever	10

*Parallel Series



Selector Valves • RD900 Series • Made In The USA

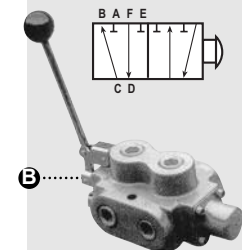
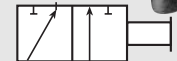
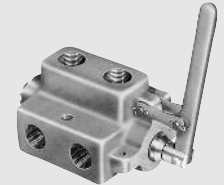
• This manual 3-way, 2-position selector valve allows one pump source to supply two separate circuits. Pushing the handle in diverts oil flow to port away from handle. Pulling the handle out diverts oil flow to port nearest handle • Max: 30 GPM, 3,000 PSI

ORDER NO.	PRINCE NO.	PORT SIZE	SHIP WT.
222-420	RD-950	1/2" NPTF	7
222-421	RD-975	3/4" NPTF	7

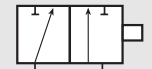
Six Port - Two Position Double Selector Valves Made In The USA

• Directs the flow of hydraulic fluid to two separate hydraulic circuits to allow for the operation of two double acting cylinders with one 4-way control valve or four single acting cylinders with two 3-way control valves • Open crossover type spool • Knob type handle • 3000 PSI

ORDER NO.	MFG NO.	PORT SIZE	GPM	SHIP WT.
280-379	DS03-20	3/8-18 NPT	20	3
280-376	DS04-20	1/2-14 NPT	20	4
280-380	DS06-20	SAE 6	20	3
280-381	DS08-20	SAE 8	20	3
280-382	MDS04-20	1/2-14 NPT	30	10
280-383	MDS05-20	3/4-14 NPT	30	10
280-384	MDS06-20	1 - 14 NPT	30	10
280-385	MDS08-20	SAE 8	30	10
280-386	MDS10-20	SAE 10	30	10
280-387	MDS12-20	SAE 12	30	10



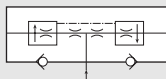
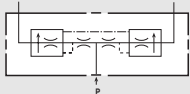
Valves



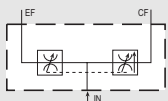
New!



Flow Dividers



New!



Also Available
Additional port size and
priority flow combinations.

Valves

CHIEF™ Rotary Flow Dividers • Relief Setting 750 PSI

• Designed to synchronize the operation of multiple cylinders or hydraulic motors; to provide proportional division of a single pump output to several circuits; to intensify flow pressure when higher pressure than pump capacity is required; or to combine flows from two sources to provide a single greater flow to a hydraulic cylinder or motor • All feature differential pressure relief valves on each section and high-pressure seals

ORDER NO.	NO. OF SECTIONS	CU. IN. DISPL. PER SECTION	MAX PSI		MAX RPM	FLOW RANGE PER SECTION	PORT SIZE		SHIP WT.
			INLET	OUTLET			IN	OUT	
253-061	2	0.129	3000	3500	4500	1.2 - 2.5 GPM	SAE 8	SAE 8	6
253-062	2	0.264	3000	3500	4500	2.5 - 5 GPM	SAE 10	SAE 10	9
253-063	2	0.517	3000	3500	4500	4.5 - 9 GPM	SAE 10	SAE 10	8
253-064	4	0.129	3000	3500	4500	1.2 - 2.5 GPM	SAE 8	SAE 8	17
253-065	4	0.258	3000	3500	4500	2.5 - 5 GPM	SAE 10	SAE 6	17



Proportional Flow Dividers • Made In The USA RD200 SERIES

• These pressure-compensated flow dividers split one inlet flow into two nearly equal outlet flows and are for use in systems including double-acting cylinders or birotational motors. Pressure compensation maintains the divider ratio with quite different loads on outlet ports provided that inlet flow falls within the recommended range. 3,000 PSI max.

ORDER NO.	MFGR. NO.	MAX GPM	FLOW RANGE	DIVIDER RATIO	PORT SIZE	SHIP WT.
222-206	RD-237-8	8	4-8 GPM	50:50	3/8" NPTF	7
222-203	RD-250-16	30	8-19 GPM	50:50	1/2" NPTF	7
222-371	RD-275-30	30	16-30 GPM	50:50	3/4" NPTF	7

RD300 SERIES

• Same as RD200 Series except they incorporate free reverse flow checks allowing flow from the outlet to the inlet. reverse flow is not pressure compensated. MFGR No. with AB also have a built in bypass which allows oil to pass from one outlet to the other if the pressure difference between them exceeds 750 psi. 3,000 PSI max.

222-369	RD-337-8	8	4-8 GPM	50:50	3/8" NPTF	7
220-519	RD-337-AB-8	8	4-8 GPM	50:50	3/8" NPTF	7
222-370	RD-350-16	30	8-19 GPM	50:50	1/2" NPTF	7
222-386	RD-350-AB-1	30	8-19 GPM	50:50	1/2" NPTF	7
222-375	RD-375-30	30	16-30 GPM	50:50	3/4" NPTF	7
222-387	RD-375-AB-30	30	16-30 GPM	50:50	3/4" NPTF	7
222-207	RD-312-30	30	16-30 GPM	50:50	SAE 12	7

RD400 SERIES Priority Flow Divider

• Used in applications where two circuits are to be supplied by a single pump, such as power steering systems • In operation, the flow of oil supplied to the inlet is divided into two flows - the priority flow and the excess flow. The priority flow will remain constant with variations in pressure on either the priority or excess flow port and will also remain nearly constant with variations in the inlet flow • 3,000 PSI max.

ORDER NO.	PRINCE NO.	MAX GPM	PRI FLOW	PORT SIZE		SHIP WT.
				IN/EXCESS FLOW	CONTROLLED FLOW	
222-162	RD-400-3	30	3	3/4" NPTF	3/8" NPTF	8
222-209	RD-400-6	30	6	3/4" NPTF	3/8" NPTF	7
222-430	RD-400-8	30	8	3/4" NPT	3/8" NPT	7
222-431	RD-405-10	30	10	3/4" NPT	1/2" NPT	7
222-432	RD-405-14	30	14	3/4" NPT	1/2" NPT	7
222-433	RD-412-8	30	8	SAE 12	SAE 8	7
222-434	RD-412-10	30	10	SAE 12	SAE 8	9
222-435	RD-412-14	30	14	SAE 12	SAE 8	9
222-161	RD-450-4	30	4	1/2" NPT	3/8" NPT	7
222-436	RD-450-8	30	8	1/2" NPT	3/8" NPT	6
222-437	RD-455-5	30	5	1/2" NPT	1/2" NPT	6
222-438	RD-455-8	30	8	1/2" NPT	1/2" NPT	6

RD500P SERIES

• Same as RD200 Series except have one adjustable orifice allowing the divider ratio to be changed in the field. 3,000 PSI max.

222-208	RD-537-P-8	8	4-8 GPM	Adjustable	3/8" NPTF	7
222-847	RD-550-P-16	16	8-16 GPM	Adjustable	1/2" NPTF	7
222-251	RD-575-P-30	30	16-30 GPM	Adjustable	3/4" NPTF	7
222-851*	RD-550	30	2-12 GPM	Adjustable	1/2" NPT	3
222-848*	RD-537	30	2-12 GPM	Adjustable	3/8" NPT	7

* Without pressure compensation

New! RD500 SERIES Adjustable Priority Flow Divider

• Same as RD400 except the controlled flow is field adjustable within the range specified.

ORDER NO.	PRINCE NO.	MAX GPM	FLOW RANGE	PORT SIZE	SHIP WT.
222-250	RD-575	30	2-12 GPM	3/4" NPTF	7



Rotary Flow Dividers • Relief Setting 750 PSI • Made In The USA

- Designed to synchronize the operation of multiple cylinders or hydraulic motors; to provide proportional division of a single pump output to several circuits; to intensify flow pressure when higher pressure than pump capacity is required; or to combine flows from two sources to provide a single greater flow to a hydraulic cylinder or motor
- All feature differential pressure relief valves on each section and high-pressure seals

ORDER NO.	NO. OF SECTIONS	CU. IN. DISPL. PER SECTION	MAX PSI		MAX RPM	FLOW RANGE PER SECTION	PORT SIZE		SHIP WT.
			INLET	OUTLET			IN	OUT	
250-972	2	0.129	3000	3500	4500	1.2 - 2.5 GPM	SAE 8	SAE 8	8
250-973	2	0.258	3000	3500	4500	2.5 - 5 GPM	SAE 10	SAE 10	10
250-974	2	0.388	3000	3500	4500	3.5 - 7 GPM	SAE 10	SAE 10	10
250-975	2	0.517	3000	3500	4500	4.5 - 9 GPM	SAE 10	SAE 10	10
250-976	4	0.129	3000	3500	4500	1.2 - 2.5 GPM	SAE 8	SAE 8	18
250-977	4	0.258	3000	3500	4500	2.5 - 5 GPM	SAE 10	SAE 6	16
250-979	4	0.813	3000	4500	4500	7 - 14 GPM	SAE 16	SAE 12	48

Parker Proportional Flow Dividers • Made In The USA

- Designed to split one inlet flow into two equal outlet flows • Pressure compensated • Divider ratio on all - 50/50

ORDER NO.	MFGR. NO.	GPM FLOW	MAX PSI	PORT SIZE	SHIP WT.
280-125	PD-10-50	20-35	2500	SAE 10	7
280-165	PD-12-50	20-35	2500	SAE 12	7
280-126	PD-50-50	5-20	2000	1/2" NPT	7
280-127	PD-75-50	20-35	2000	3/4" NPT	7

Hydraforce Flow Divider / Combiner

- In the dividing mode, will divert input flow from port 3 to ports 2 and 4, based on the ratio specified • This valve provides a highly accurate, pressure compensated division of inlet flow or combination of return flow regardless of system operating pressure • When the flow direction is reversed, the valve will combine flows from ports 2 and 4 to port 3.

ORDER NO.	MFGR. NO.	GPM	PORT SIZE	DIVIDER RATIO	MAX PSI	SHIP WT.
270-701	FD50-44-6T-N-22	1-5	SAE 6	50/50	5000	7
270-702	FD50-45-6T-N-22	4	SAE 6	50/50	5000	7
270-703	FD52-45-6T-N-22	24	SAE 6	50/50	3500	7
270-704	FD56-45-6T-N-22	52	SAE 6	50/50	5000	7

Pressure Compensated Flow Control Valves • FC Series

- Maintains constant output flow despite pressure changes on the controlled flow or excess flow line • Rotating the volume lever adjusts the orifice size from completely closed to wide open • Relief is standard adjustable range 750 - 3000 PSI • For no relief option order plug below • Max: 3000 PSI • Side ported

ORDER NO.	MFGR. NO.	FLOW RANGE	RELIEF	PORT SIZE	SHIP WT.
252-570	DFC-R-51-12-N	0-16 GPM	Yes	1/2" NPT	9
252-571	DFC-R-51-34-N	0-30 GPM	Yes	3/4" NPT	9
252-573	DFC-R-51-10-N	0-16 GPM	Yes	SAE 10	9
252-574	DFC-R-51-12-N	0-30 GPM	Yes	SAE 12	9
252-575	DFC-R-51-RP				

Relief plug for valves above

Adjustable Flow Control Valves • RD100 Series • Made In The USA

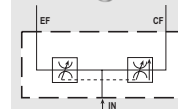
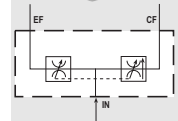
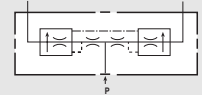
- These pressure-compensated valves may be used to start/stop or vary the speed of a motor • Speed is set with the lever and will remain constant despite load variations • Plugging the excess flow port allows use with pressure-compensated pumps • Max: 30 GPM, 3000 PSI.

ORDER NO.	PRINCE NO.	FLOW RANGE	RELIEF SETTING	PORT SIZE & LOCATION	SHIP WT.
222-550	RD-137-4	0-4 GPM	None	3/8" NPTF Top	9
222-200	RD-150-8	0-8 GPM	None	1/2" NPTF Top	9
222-199	RD-1950-8	0-8 GPM	None	1/2" NPT Side	9
222-150	RD-150-16	0-16 GPM	None	1/2" NPTF Top	10
222-198	RD-1950-16	0-16 GPM	None	1/2" NPT Side	9
222-202	RD-1975-16	0-16 GPM	None	3/4" NPT Side	9
222-453	RDRS-150-8	0-8 GPM	1500 PSI @ 10 GPM	1/2" NPT Top	8
222-455	RDRS-1950-8	0-8 GPM	1500 PSI @ 10 GPM	1/2" NPT Side	3
222-451	RDRS-150-16	0-16 GPM	1500 PSI @ 10 GPM	1/2" NPTF Top	9
222-204	RD-1975-30	0-30 GPM	None	3/4" NPTF Side	9
222-175	RD-175-30	0-30 GPM	None	3/4" NPT Top	9
222-450	RDRS-137-8	0-8 GPM	1500 PSI @ 10 GPM	3/8" NPTF Top	10
222-460	RDRS-1975-30	0-30 GPM	1500 PSI @ 10 GPM	3/4" NPT Side	9
222-452	RDRS-175-30	0-30 GPM	1500 PSI @ 10 GPM	3/4" NPTF Top	9

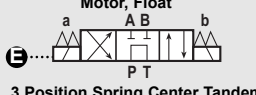
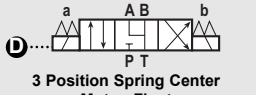
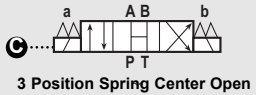
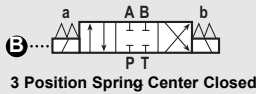
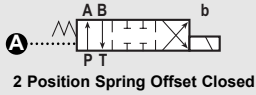
BRAND Proportional Flow Divider • B Series

- Designed to split one inlet flow into two equal outlet flows. Internal checks allow reverse free flow back through inlet port from either outlet port.

ORDER NO.	MFGR. NO.	MAX GPM	FLOW RANGE	DIVIDER RATIO	PORT SIZE	SHIP WT.
450-143	B100-3/8	8	2-8 GPM	50:50	3/8" NPT	5



Solenoid Valves



Also Available
Modular Valves
DIN Connectors
Electric Box Wiring

New!



Valves

CHIEF™ Solenoid Valves

• Maximum pressure: 5000 PSI • All feature indicator lights, junction boxes and bolt kits.
DIN connectors/coils available separately • Not waterproof.

AC

ORDER NO.	MFGR. NO.	SPOOL STYLE	GPM	NO. OF SOLENOIDS	CIRCUIT TYPE	SHIP WT.
D03						
220-301	D03S-1A-115A-35	A	20	1	Parallel	5
220-302	D03S-2B-115A-35	B	20	2	Parallel	5
220-303	D03S-2H-115A-35	C	12	2	Series	5
220-305	D03S-2F-115A-35	D	16	2	Parallel	5
220-304	D03S-2C-115A-35	E	12	2	Series	5
D05						
220-306	D05S-1A-115A-35	A	32	1	Parallel	8
220-307	D05S-2B-115A-35	B	32	2	Parallel	10
220-308	D05S-2H-115A-35	C	32	2	Series	10
220-310	D05S-2F-115A-35	D	32	2	Parallel	10
220-309	D05S-2C-115A-35	E	17	2	Series	10
220-397	D05S-2C-230A-35	E	17	2	Series	12
D08						
225-365	D08S-2C-115A-35	E	50	2	Series	31
225-130	D08S-2H-115A-35	C	50	2	Series	31

DC

ORDER NO.	MFGR. NO.	SPOOL STYLE	GPM	NO. OF SOLENOIDS	CIRCUIT TYPE	SHIP WT.
D03						
220-329	D03S-1A-12D-35	A	20	1	Parallel	5
220-321	D03S-2B-12D-35	B	20	2	Parallel	5
220-334	D03S-2H-12D-35	C	12	2	Series	5
220-311	D03S-2F-12D-35	D	20	2	Parallel	5
220-312	D03S-2F-24D-35	D	20	2	Parallel	5
220-313	D03S-2C-12D-35	E	12	2	Series	5
220-314	D03S-2C-24D-35	E	12	2	Series	5
D05						
220-372	D05S-2H-12D-35	C	40	2	Series	12
220-315	D05S-2F-12D-35	D	40	2	Parallel	13
220-317	D05S-2C-12D-35	E	25	2	Series	13
220-318	D05S-2C-24D-35	E	25	2	Series	13
220-016	SWH-G03-C4-D24-10	D	20	2	Parallel	14
D08						
225-128	D08S-2C-12D-35	E	50	2	Series	31
225-129	D08S-2H-12D-35	C	50	2	Series	31

Modular Valves

Rugged Steel body Design. Modular valving eliminates leaky connections, reduces plumbing costs and places controls together. Bolt kits for modulars are sold separately.

ORDER NO.	MFGR. NO.	DESCRIPTION	MAX GPM	MAX PSI	ADJUSTABLE	SHIP WT.
220-356	D03-DPC1-AB70	D03 Double Pilot Check Valve Module	5	3000	-	3
220-322	D03M-2C	D03 Tandem Center Manual Valve	7	3000	-	3
220-346	D03M-2H	D03 Open Center Manual Valve	7	3000	-	5
220-374	D03-PR1-P-3K	D03 Pressure Reducing Modular (P port)	5	4500	500-3000 PSI	1
223-138	MRV-03-W-2	D03 Modular Relief Valve	15	4500	100-3000 PSI	6
223-139	MRV-05-W-2	D05 Modular Relief Valve	30	4500	100-3000 PSI	9
223-140	MCB-03-A1-2	D03 Modular Counter Balance Valve	15	4500	500-3500 PSI	3
223-141	MCB-05-A1-3	D05 Modular Counter Balance Valve	30	4500	500-3500 PSI	9
220-385	DO3-N1-P	D03 Modular Needle Valve (P port)	15	4500	0-15 GPM	1
223-143	DO5-N1-P	D05 Modular Needle Valve (P port)	30	4500	0-30 GPM	6
220-340	BD03-H1	D03 Bolt Kit (1 solenoid + 1 modular valve)				1
220-342	BD05-H1	D05 Bolt Kit (1 solenoid + 1 modular valve)				1

Accessories

ORDER NO.	MFGR. NO.	DESCRIPTION	VOLTS	PORT SIZE
220-350	EB-D03S-AC-35	D03/D05 AC Electrical Box		-
220-351	EB-D03S-DC-35	D03/D05 DC Electrical Box		-
220-319	SD03-6FP-S	D03 AC/DC Subplate Side Ported		3/8" NPT
220-320	SD05-8FP-S	D05 AC/DC Subplate Side Ported		1/2" NPT
220-424	SD03-6-FS-F	D03 AC/DC Subplate Side Ported		SAE 6
220-425	SD05-8-FS-F	D05 AC/DC Subplate Side Ported		SAE 8
220-366	SD08-16-FP-S	D08 AC/DC Subplate Side Ported		1" NPT
225-366	SD08-16-FS-S	D08 AC/DC Subplate Side Ported		SAE 16
220-376	C-D03S-12D-35	D03 Replacement Sol Coil	12VDC	-
220-377	C-D03S-24D-35	D03 Replacement Sol Coil	24VDC	-
220-379	C-D03S-115-35	D03 Replacement Sol Coil	115VAC	-
220-398	C-D05S-12D-35	D05 Replacement Sol Coil	12VDC	-
220-382	C-D05S-24-35	D05 Replacement Sol Coil	24VDC	-
220-378	C-D05S-115-35	D05 Replacement Sol Coil	115VAC	-

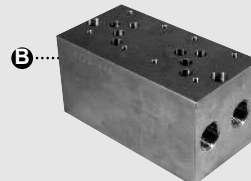
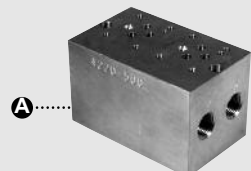
Manifold & Solenoid Valves

Damon Manifolds

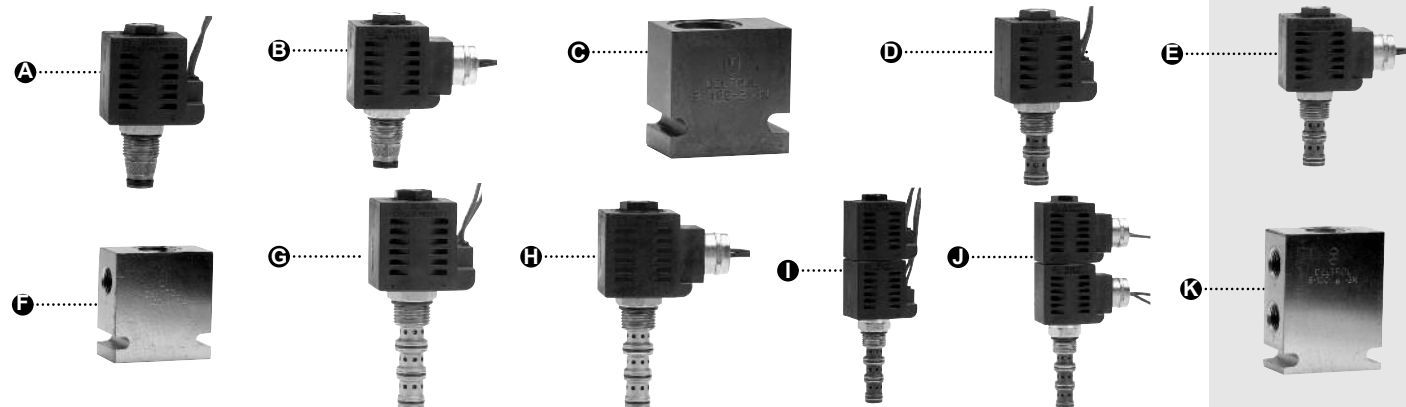
• For D03 and D05 solenoid valves • Aluminum • 3000 PSI • Other configurations available. Made In The U.S.A.

ORDER NO.	MFGR. NO.	NO. OF STATIONS	CIRCUIT TYPE	PORT SIZE		SHIP WT.
				P & T	A & B	
220-500	ADO3P022P	2	Parallel	1/2" NPTF	3/8" NPTF	3
220-501	ADO3P032P	3	Parallel	1/2" NPTF	3/8" NPTF	7
220-502	ADO3S022P	2	Series	1/2" NPTF	3/8" NPTF	7
220-499	ADO3S032P	3	Series	1/2" NPTF	3/8" NPTF	6

ORDER NO.	MFGR. NO.	NO. OF STATIONS	CIRCUIT TYPE	PORT SIZE		SHIP WT.
				P & T	A & B	
220-498	ADO5P023P	2	Parallel	3/4" NPTF	1/2" NPTF	9
220-497	ADO5P033P	3	Parallel	3/4" NPTF	1/2" NPTF	13
220-496	ADO5S023P	2	Series	3/4" NPTF	1/2" NPTF	9
220-495	ADO5S033P	3	Series	3/4" NPTF	1/2" NPTF	12



DELTRON Solenoid Valves



• Other configurations available.

ORDER NO.	MFGR. NO.	GPM	MAX PSI	DESCRIPTION	VOLTAGE	PORT SIZE
452-111 A	DSV2-100-2NOS-N-D1D	6*	3000	2-way, normally open	12 VDC	
452-110 B	DSV2-100-2NOS-N-A5B	6*	3000	2-way, normally open	120 VAC	
452-102 A	DSV2-100-2NCP-N-D1D	16**	3000	2-way, normally closed	12 VDC	
452-103 B	DSV2-100-2NCP-N-A5C	16**	3000	2-way, normally closed	120 VAC	
452-003 C	B-100-2-3N			2-way Station Block		3/8" NPTF
452-105 D	DSV2-100-3-N-D1D	6*	3000	3-way, 2-position	12 VDC	
452-100 E	DSV2-100-3-N-A5C	6*	3000	3-way, 2-position	120 VAC	
452-001 F	B-100-3-3N			3-way Station Block		3/8" NPTF
452-101 G	DSV2-100-4C0-N-D1D	6*	3000	4-way, 2-position	12 VDC	
452-106 H	DSV2-100-4C0-N-A5C	6*	3000	4-way, 2-position	120 VAC	
452-107 I	DSV-100-34T-N-D1D	4	3000	4-way, 3-position	12 VDC	
452-108 J	DSV-100-34T-N-A5C	4	3000	4-way, 3-position	120 VAC	
452-002 K	B-100-4-3N			4-way Station Block		3/8" NPTF

* Approximately 80 PSI pressure drop

** Approximately 120 PSI pressure drop

12VDC Coil Only

ORDER NO.	DESCRIPTION	VOLTAGE
452-022	080 Single Stud	12 VDC
452-032	080 Single Spade	12 VDC

Electronic Pressure Switch

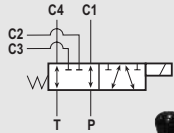
• 1/4" NPT pressure connection • DIN connection • 1 NO and 1NC contact.

ORDER NO.	ADJUSTABLE RANGE		PROOF PRESSURE	ADJUSTABLE WITH	ELECTRICAL RATING	
	DECREASING	INCREASING			125-250V	30VDC
220-388	50 - 460	90-500	2000 PSI	Allen Wrench	3A	2A
220-391	540 - 2780	600-3000	5500 PSI	Allen Wrench	3A	2A
New! 220-389	540 - 2780	600-3000	5000 PSI	Knob	3A	2A



Valves

Solenoid & Cartridge Valves



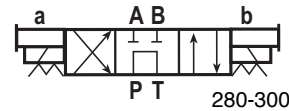
220-934



220-962



Valves



280-300



116-125

GRESEN® Solenoid Valves

- 12 volt DC • Quick, convenient installation, does not require subplate or manifolds
- 280-300 4 way series circuit • 116-125 parallel circuit

ORDER NO.	MFGR. NO.	SERIES CIRCUIT	GPM	PSI	PORT SIZE	SHIP WT.
280-312	MD04-SDNC-AD	4 way series	12	3000	1/4" NPT	14
280-300	MD06-SDNC-AD	4 way series	12	3000	3/8" NPT	14
116-125	MD06-PDNC-AD	parallel	20	3000	3/8" NPT	14

GRESEN® Solenoid-Operated Circuit Selector Valve

- Directs the flow of hydraulic oil to two separate circuits. Permits operation of two double-acting cylinders with one four-way control valve or four single-acting cylinders with two three-way control valves • 12 D.C. • Stackable up to 5 valves for additional circuit flexibility.

ORDER NO.	MFGR. NO.	MAX GPM	PSI	PORT SIZE	SHIP WT.
280-166	MS06-UDNA-12B	10 @ 2000	3000	SAE 6	11

CHIEF™ Stackable Circuit Selector Valve

- Directs the flow of hydraulic oil to two separate circuits. Permits operation of two double-acting cylinders with one four-way control valve or four single-acting cylinders with two three-way control valves • 12 volt DC on manual model.

ORDER NO.	Control	GPM @ PSI	MAX PSI	PORT SIZE	SHIP WT.
220-962	Manual Lever Handle	13 @ 3045	5000	SAE 8	6
220-934	12V DC Solenoid	13 @ 3045	5000	SAE 8	7

HydraForce Cartridge Valves

- HydraForce high performance cartridge valves offer a wide range of options and industry standard design making them perfectly suited to mobile and industrial applications • Adjustable valves will be preset to approx 50% of max pressure.

ORDER NO.	MFGR. NO.	DESCRIPTION	SHIP WT.
452-212	RV10-26A-0-N-30	Adjustable (400-3000 psi) pilot operated relief valve, 30 gpm max	1
452-213	FR50-28A-0-N	Pressure compensated flow control 0-10 gpm @ 3000 psi max	1
451-139	7024280	2-port aluminum body for above valves, SAE-8 ports	1
452-215	PS10-36A-0-N-30	Adjustable (350-3000 psi) pilot operated sequence valve 15 gpm max	1
452-216	PR50-38A-0-N-21	Adjustable (400-1500 psi) pressure reducing/relieving valve, 15 gpm max	1
452-217	FR10-39A-0-N	Pressure compensated flow control, 0-10 gpm @ 3000 psi max	1
452-218	PR50-38A-0-N-33	Adjustable (1500-3000 psi) pressure reducing/relieving valve, 15 gpm max	1
452-219	7024380	3-port aluminum body for above valves, SAE-8 ports	2
452-220	FD50-44-0-P-44	Flow divider/combiner, 50:50 ratio, 10 gpm @ 5000 psi max	1
452-221	FD50-45-0-N-66	Flow divider/combiner, 50:50 ratio, 12 gpm @ 3000 psi max	1
452-222	7027000	3-port aluminum body for above valves, SAE-6 ports	2
452-223	FD52-45-0-N-44	Flow divider/combiner, 50:50 ratio, 16 gpm @ 3000 psi max	2
452-224	FD52-45-0-N-66	Flow divider/combiner, 50:50 ratio, 24 gpm @ 3000 psi max	2
452-225	7022430	3-port aluminum body for above valves, SAE-12 ports	2
452-226	FD56-45-0-N-66	Flow divider/combiner, 50:50 ratio, 34 gpm @ 3000 psi max	1
452-227	7023460	3-port aluminum body for above valve, SAE-16 ports	2
452-228	RV12-26A-0-N-30	Adjustable (450-3000psi) pilot operated relief valve, 50gpm @ 3500 psi max	1
452-229	7022260	2-port aluminum body for above valve, SAE-16 ports	2
452-230	PCV10-8T-N	Single pilot operated check valve, 20 gpm @ 3500 psi max, SAE-8 ports, SAE-6 pilot	2
452-231	PCV16-12T-N	Single pilot operated check valve, 40 gpm @ 3500 psi max, SAE-12 ports, SAE-6 pilot	2
452-232	DCV08-6T-N	Double pilot operated check valve, 8 gpm @ 3000 psi max, SAE-6 ports	2
452-233	DCV10-8T-N	Double pilot operated check valve, 20 gpm @ 3000 psi max, SAE-8 ports	2
452-234	DCV12-12T-N	Double pilot operated check valve, 25 gpm @ 3000 psi max, SAE-12 ports	6
452-235	FR12-23A-0-N	Pressure compensated flow control, restrictive type, 0-20gpm @ 3500 psi max	1
452-236	7020650	2-port aluminum body for above valve, SAE-8 ports	2
452-237	FR12-33A-0-N	Pressure compensated flow control, bypass type, 0-18 gpm @3500 psi max	1
452-238	7022330	3-port aluminum body for above valve, SAE-10 ports	2
452-239	CRV10-22A-10T-NC-35	Adjustable (500-3500psi) Cross-over relief, 20 gpm @ 3500 psi max, SAE-10 ports	3

Electronic Pressure Switch

- Adjustable pressure switch, single pole double throw (SPDT) can be wired normally open, normally closed or both
- Comes complete with DIN connector or flying leads, 5 amp rating at 12-24VDC and 125/250VAC Max overpressure 9000 PSI • Other ranges and factory pre-set options available

ORDER NO.	ADJUSTABLE RANGE	CONNECTION	WIRING	SHIP WT.
220-255	250-1200 PSI	1/4" NPTM	Flying Lead	1
220-256	1000-3000 PSI	1/4" NPTM	Flying Lead	1
220-257	2000-5000 PSI	1/4" NPTM	Flying Lead	1
220-252	250-1200 PSI	1/4" NPTM	DIN	1
220-253	1000-3000 PSI	1/4" NPTM	DIN	1
220-254	2000-5000 PSI	1/4" NPTM	DIN	1

Transmitter And Receiver Systems

Universal Remote Controls

ORDER NO.	DESCRIPTION
301-203	Economical 2 function, 12 VDC Wireless hydraulic power unit remote 50-100 ft. range. Raise and lower dump trailer from inside or outside the vehicle. Compatible with single acting single solenoid, double acting double solenoid or double acting single solenoid systems.
301-206	2 function 12 VDC Wireless motor control. 50-100 ft. range. Used to control your existing 12 VDC electric motor on items such as fifth wheel jacks, awnings and winches.



Mini Transmitter And Receiver Systems

- Mini transmitter has an IP 67 rating and recommended for casual use or where a very small transmitter is required • 200 ft range
- 12/24 volt DC • Safety which shuts down the system in the event of an overload or any other fault*

ORDER NO.	MFGR NO.	DESCRIPTION	AMP	SHIP WT.
301-150	90000	2 Function Relay System	5	1
301-151	90002	2 Function Relay System + Master	5	1
301-152	90004	4 Function Relay System + Master	5	1
301-153	92000	2 Function FET System	15	1
301-154	92002	2 Function FET System + Master	15	1
301-155	92004	4 Function FET System + Master	15	1



Standard Transmitter And Receiver Systems

- Standard transmitter has a IP 55 rating and is ideally suited to most demanding applications • Most common choice • 200 ft range
- 12/24 volt DC • Safety which shuts down the system in the event of an overload or any other fault*

ORDER NO.	MFGR NO.	DESCRIPTION	AMP	SHIP WT.
301-142	90100	2 Function Relay System	5	1
301-143	90102	2 Function Relay System + Master	5	1
301-144	90104	4 Function Relay System + Master	5	1
301-100	92100	2 Function FET System	15	1
301-114	92100-8	2 Function FET System w/potting to limit vibration	15	1
301-137	92102	2 Function FET System + Master	15	2
301-102	92104	4 Function FET System + Master	15	2
301-106	92106	6 Function FET System + Master	15	3



IP Transmitter And Receiver Systems

- IP transmitter has a IP 67 rating and is suitable for more extreme applications or where a robust system is required • 200 ft range
- 12/24 volt DC • Safety which shuts down the system in the event of an overload or any other fault* • Available from 2-36 functions

ORDER NO.	MFGR NO.	DESCRIPTION	AMP	SHIP WT.
301-145	92202	2 Function FET System + Master	15	1
301-146	92204	4 Function FET System + Master	15	3
301-133	92206	6 Function FET System + Master	15	3
301-104	92210	10 Function FET System + Master	15	3
301-125	92216	16 Function FET System + Master	15	3

*If there is any possibility of excessive vibration then FET switching should be used.



Replacement Transmitters

- Back up or replacement standard and mini transmitters with wide band range • Easily programs to any Lodar wide band receiver for wireless operation

ORDER NO.	MFGR NO.	DESCRIPTION	SHIP WT.
301-147	90002TX	2 Function Mini Transmitter used w/301-150, 301-151, 301-153, 301-154	1
301-148	90004TX	4 Function Mini Transmitter used with 301-152, 301-155	1
301-101	92102TX	2 Function Transmitter used w/ 301-142, 301-143, 301-100, 301-114, 301-137	1
301-119	92104TX	4 Function Transmitter used with 301-102	1
301-122	92106TX	6 Function Transmitter used with 301-106	1
301-149	92202TX	2 Function IP67 Transmitter used with 301-145	1
301-156	92204TX	4 Function IP67 Transmitter used with 301-146	1
301-134	92206TX	6 Function IP67 Transmitter used with 301-133	1
301-116	92210TX	10 Function IP67 Transmitter used with 301-104	1
301-126	92216TX	16 Function IP67 Transmitter used with 301-125	1

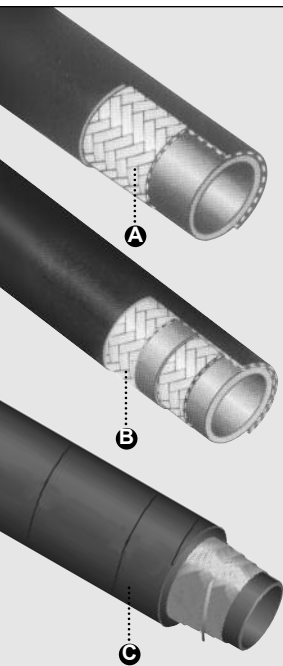
Accessories

ORDER NO.	MFGR NO.	DESCRIPTION	SHIP WT.
301-135	9810	LoCator for 2-6 function Lodar transmitter	1
301-136	9812	LoCator for 10-16 function Lodar transmitter	1



Remotes

Hoses & Hose Assemblies



Hydraulic Hose Assemblies



Overall length of hose assemblies includes fittings.

Also Available
Custom Hose Assemblies



Thread Sealant
For Hydraulic/Pneumatic Fittings. See Page 115

Hoses & Fittings



Hydraulic Hose

Black oil resistant synthetic rubber tube and cover • MSHA approved flame resistant • High tensile steel wire braid • Mineral and biological oils from -40F to +212F • Polyglycol water-oil emulsions and water up to =185F • Max intermittent temp =250F • Not suitable for fuels, acids, acetates or phosphate ester based fluids.

A One-Wire Braid Hose • Exceeds SAE 100R1AT

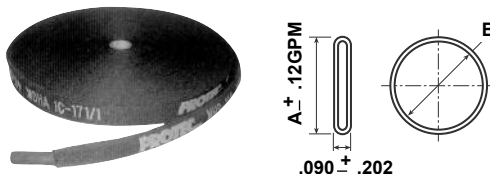
ORDER NO.	MFG. NO.	I.D.	O.D.	PSI	
				WORK	BURST
485-001	DIN1SN-04	1/4"	.528"	3265	13060
485-003	DIN1SN-06	3/8"	.685"	2610	10440
485-005	DIN1SN-08	1/2"	.811"	2320	9280

B Two-Wire Braid Hose • Exceeds SAE 100R2AT

485-062	DIN2SN-04	1/4"	.591"	5800	23200
485-063	DIN2SN-06	3/8"	.748"	4785	19140
485-064	DIN2SN-08	1/2"	.874"	3990	15960
485-065	DIN2SN-012	3/4"	1.154"	3120	12480
485-066	DIN2SN-016	1"	1.500"	2395	9580

C Suction Hose • SAE 100R

ORDER NO.	MFG. NO.	I.D.	O.D.	PSI	
				WORK	BURST
485-068	SAER4-12	3/4"	1.26"	300	1200
485-069	SAER4-16	1"	1.49"	250	1000
485-070	SAER4-20	1 1/4"	1.77"	200	800



Nylon Hose Sleeve

• Easily installed over hose, chains, cables, or springs and secured with nylon cable ties or band clamps • Extends hose life in abrasive environments and protects against personal injury in cases of hose failure • Minimum quantity - 25

ORDER NO.	DIMENSIONS	
	A	B
460-001	1.25"	.77"
460-005	2.03"	1.25"
460-010	2.56"	1.59"
460-015	3.00"	1.85"
460-020	3.81"	2.38"
460-030	5.81"	3.66"

Hose Dies for Hose Crimper

ORDER	MFG. NO.	DIE SIZE	HOSE ID	WT.
485-401	D100-16	16MM	1/4"	5
485-402	D100-19	19MM	3/8"	5
485-403	D100-22	22MM	1/2"	5
485-404	D100-31	31MM	3/4"	5
485-405	D100-39	39MM	1"	5

Hose Crimper

• Comes with D161S Crimper • This crimper will adjust to crimp any manufacturers' brand hose fitting • For use with up to 1 HP 110V pump or 2HP 220V 10,000 psi dump pumps (not included) • Works successfully with Weatherhead T400 Pumps • Hose capacity up to 1" diameter 6 wire • pneumatic start/stop switch • Automatically shuts off pump for precise crimps • Complete range of dies available.

ORDER NO.	MFG. NO.	DESCRIPTION	WT.
485-408*	D161S	Hose Crimper, 3/8" & 1/2" Dies	60
485-411*	VEP1001	10,000 PSI Elec/Hyd Pump 1HP, 110 Vac	50
485-410	VAP-10-100	10,000 PSI Air/Hyd Pump	20
485-412	VHP-10-43	10,000 PSI Hand Pump	9

Hydraulic Hose Assemblies

3/8" I.D. 2-Wire Hose

• Working pressure to 3,000 PSI • Includes 3/8" male pipe rigid fittings on both ends.

ORDER NO.	INCH LENGTH*	WT.
482-070	12"	1
482-004	18"	1
482-006	24"	2
482-007	30"	2
482-008	36"	2
482-009	48"	2
482-010	60"	3
482-011	72"	3
482-012	84"	3
482-013	96"	3
482-014	120"	4
482-015	144"	4

*Overall length of hose assemblies includes fittings

1/2" I.D. 2-Wire Hose

• Working pressure to 3,000 PSI • Includes 1/2" male pipe rigid fittings on both ends.

ORDER NO.	INCH LENGTH*	WT.
482-023	18"	2
482-025	24"	2
482-026	30"	2
482-027	36"	2
482-028	48"	3
482-029	60"	3
482-030	72"	3
482-031	84"	3
482-032	96"	3
482-033	120"	4
482-034	144"	4

*Overall length of hose assemblies includes fittings

3/4" I.D. 2-Wire Hose

• Working pressure to 2,250 PSI • Includes 3/4" male pipe rigid fittings on both ends.

ORDER NO.	INCH LENGTH*	WT.
482-042	24"	2
482-044	36"	3
482-045	48"	4
482-046	60"	5
482-047	72"	6
482-048	84"	6

*Overall length of hose assemblies includes fittings



HEAVY DUTY SPIRAL HOSE WRAP

• Installs easily without removing hoses • Offers maximum protection against abrasion and crushing of hoses, wire and cable • Impervious to oils and solvents • Can be used to bundle hoses • Black in color • Sold in box quantity only

ORDER NO.	ID	RECOMMENDED USE		LENGTH	
		HOSE ID	BUNDLING	IN FT.	WT.
460-040	.49"	.38-.50"	1.00"	66'	14
460-035	.83"	.63-.75"	1.75"	66'	15
460-036	1.06"	.75-1.00"	2.00"	66'	20
460-037	1.34"	1.00-1.13"	2.50"	66'	28
460-038	1.73"	1.25-1.50"	3.50"	66'	37
460-039	3.90"	4.00"	8.00"	40'	48

Crimp Hose Fittings & Clamps

Hydraulic Crimp Hose Fittings

• Typical Application: General purpose low, medium and high pressure hydraulics • Compatible Hose: 100R1/1SN and 100R2/2SN (sizes 1/4" through 1").

A Male Pipe Rigid

BAILEY NO.	MFGR. NO.	HOSE I.D.	THREAD SIZE
472-120	GN10-04-04	1/4"	1/4-18
472-121	GN10-06-04	1/4"	3/8-18
472-122	GN10-04-06	3/8"	1/4-18
472-124	GN10-06-06	3/8"	3/8-18
472-125	GN10-08-06	3/8"	1/2-14
472-126	GN10-06-08	1/2"	3/8-18
472-128	GN10-08-08	1/2"	1/2-14
472-130	GN10-08-10	5/8"	1/2-14
472-133	GN10-12-12	3/4"	3/4-14
472-136	GN10-16-16	1"	1 11/16-12

D Male O-ring Swivel

BAILEY NO.	MFGR. NO.	HOSE I.D.	THREAD SIZE
472-169	MV10K-08-08	1/2"	3/4-16

E SAE 37° (JIC) Male Rigid

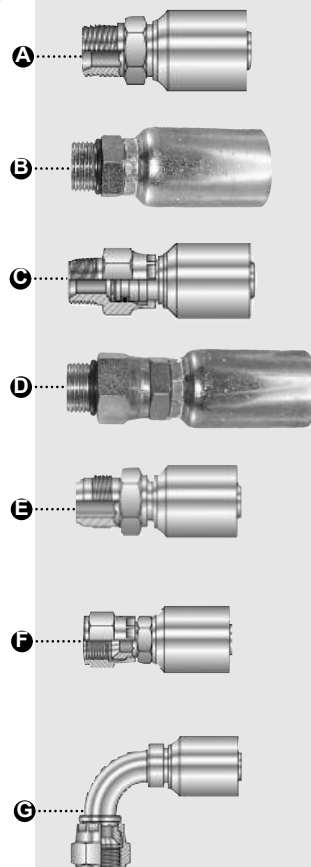
472-143	GJ10-06-06	3/8"	9/16-18
472-153	GJ10-08-06	3/8"	3/4-16
472-508	GJ10-08-08	1/2"	3/4-16
472-510	GJ10-10-08	1/2"	7/8-14

F SAE 37° (JIC) Female Swivel

BAILEY NO.	MFGR. NO.	HOSE I.D.	THREAD SIZE
472-140	GJ05-04-04	1/4"	7/16-20
472-141	GJ05-06-04	1/4"	9/16-18
472-142	GJ05-06-06	3/8"	9/16-18
472-145	GJ05-08-06	3/8"	3/4-16
472-144	GJ05-08-08	1/2"	3/4-16
472-610	GJ05-10-08	1/2"	7/8-14
472-148	GJ05-12-12	3/4"	11/16-12
472-150	GJ05-16-16	1"	15/16-12

G SAE 37° (JIC) Female Swivel 90° Tube Elbow

BAILEY NO.	MFGR. NO.	HOSE I.D.	THREAD SIZE
472-666	GJ90-06-06	3/8"	9/16-18



B Male O-Ring Rigid

BAILEY NO.	MFGR. NO.	HOSE I.D.	THREAD SIZE
472-160	ME10K-04-04	1/4"	7/16-20
472-517	ME10K-04-06	1/4"	9/16-18
472-161	ME10K-06-06	3/8"	9/16-18
472-162	ME10K-06-08	3/8"	3/4-16
472-129	ME10K-08-08	1/2"	3/4-16
472-163	ME10K-08-10	1/2"	7/8-14
472-516	ME10K-12-12	3/4"	11/16-12

C Male Pipe Swivel

BAILEY NO.	MFGR. NO.	HOSE I.D.	THREAD SIZE
472-119	GN15-04-04	1/4"	1/4-18
472-139	GN15-06-06	3/8"	3/8-18
472-514	GN15-08-06	3/8"	1/2-14
472-127	GN15-08-08	1/2"	1/2-14
472-149	GN15-12-12	3/4"	3/4-14

Weld-On Tube, Pipe and Hose Clamps

• For use as supporting systems in a wide variety of applications • Clamp halves are made of polypropylene; all other parts are zinc-plated steel.

Single Series

BAILEY NO.	SIZE	CLAMPING O.D.
------------	------	---------------

Tube Clamps

265-000	3/8"	3/8"
265-001	1/2"	1/2"
265-025	5/8"	5/8"
265-023	3/4"	3/4"
265-002	7/8"	7/8"
265-003	1"	1"
265-004	1 1/4"	1 1/4"
265-005	1 1/2"	1 1/2"

Pipe Clamps

265-006	3/8"	.675
265-007	1/2"	.840
265-008	3/4"	1.050
265-009	1"	1.315
265-010	1 1/4"	1.660
265-011	1 1/2"	1.900

Standard Hose Clamps

265-046	1/4"	.530
265-047	3/8"	.690
265-048	1/2"	.810
265-049	5/8"	.930
265-050	3/4"	1.100
265-051	1"	1.420

Twin Series

BAILEY NO.	SIZE	CLAMPING O.D.
------------	------	---------------

Tube Clamps

265-012	3/8"	3/8"
265-013	1/2"	1/2"
265-027	5/8"	5/8"
265-024	3/4"	3/4"
265-014	7/8"	7/8"
265-015	1"	1"
265-016	1 1/4"	1 1/4"
265-017	1 1/2"	1 1/2"

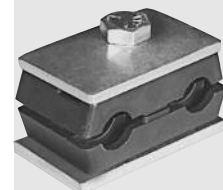
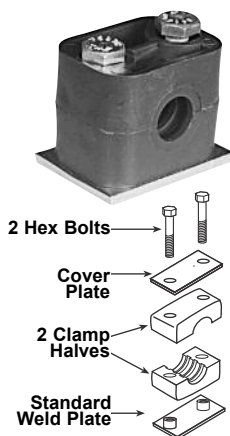
Pipe Clamps

265-018	3/8"	.675
265-019	1/2"	.840
265-020	3/4"	1.050
265-021	1"	1.315
265-022	1 1/4"	1.660

* Stainless steel

Twin Hose Clamps

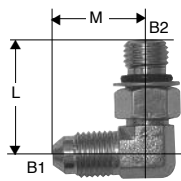
265-052	1/4"	.530
265-053	3/8"	.690
265-054	1/2"	.810
265-055	5/8"	.930
265-056	3/4"	1.100
265-057	1"	1.420



Hoses & Fittings

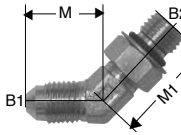
Sample Applications	
Off Highway Equipment	
Mining Equipment	
Shipbuilding	
Steel Mills	

Steel Adapters



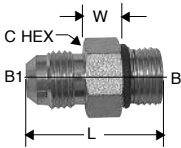
Male J.I.C. to Male O-Ring Boss 90

ORDER NO.	B1	B2	LGTH - L	M
907-7767	7/16-20	7/16-20	1.030	.890
907-7768	9/16-18	9/16-18	1.25	1.06
907-7770	3/4-16	3/4-16	1.45	1.25
471-087	7/8-14	7/8-14	1.70	1.45
907-7761	11/16-12	11/16-12	1.94	1.66
907-7763	15/16-12	15/16-12	2.05	1.81



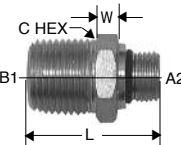
Male J.I.C. to Male O-Ring Boss 45

ORDER NO.	B1	B2	LGTH - M	M1
470-997	3/4-16	3/4-16	.980	1.30
471-020	7/8-14	7/8-14	1.110	1.520



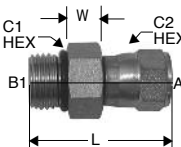
Male J.I.C. to Male O-Ring Boss Straight

ORDER NO.	B1	B2	C	L	W
907-7722	9/16-18	9/16-18	11/16	1.30	.312
907-7723	9/16-18	3/4-16	7/8	1.375	.343
907-7724	3/4-16	3/4-16	7/8	1.490	.343
471-003	3/4-16	7/8-14	1	1.590	.406
470-683	7/8-14	7/8-14	1	1.70	.406



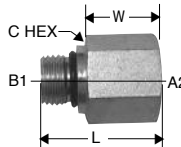
Male O-Ring Boss to Male Pipe Straight

ORDER NO.	B1	A2	L	W	C
471-399	1/2-20	3/8-18	1.30	.330	11/16
471-424	1/2-20	1/2-14	1.39	.240	7/8
471-325	1/2-14	3/4-16	1.55	.410	7/8
471-425	3/4-16	3/4-14	1.59	.260	11/8
471-426	7/8-19	3/4-14	1.77	.410	11/8
471-427	11/16-12	3/4-14	1.73	.380	11/4



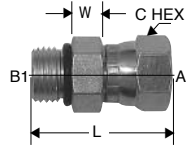
Male O-Ring Boss to Female J.I.C. Swivel Straight

ORDER NO.	B1	A2	C2	L	W
907-0126	9/16-18	9/16-18	11/16	1.480	.330
471-430	9/16-18	3/4-16	11/16	1.620	.390
471-432	3/4-16	3/4-16	7/8	1.60	.350
907-0129	11/16-12	11/16-12	11/4	2.160	.500
472-101	15/16-12	15/16-12	11/2	2.280	.520



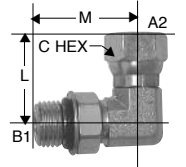
Male O-Ring Boss to Female Pipe Straight

ORDER NO.	B1	A2	C	L	W
907-7757	9/16-18	3/8-18	7/8	1.160	.672
471-035	3/4-16	1/4-18	7/8	1.160	.730
470-845	3/4-16	3/8-18	7/8	1.280	.875
907-7485	3/4-16	1/2-14	11/8	1.440	.900
907-8076	7/8-14	1/2-14	11/8	1.630	.900
470-851	11/16-12	3/4-16	13/8	1.590	.875



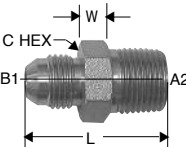
Male O-Ring to Female Pipe Swivel Straight

ORDER NO.	B1	A2	C	L	W
471-138	9/16-18	1/4-18	11/16	1.062	.310
470-039	9/16-18	3/8-18	11/16	1.171	.310
470-041	9/16-18	1/2-14	7/8	1.234	.310
470-043	3/4-16	3/8-18	7/8	1.234	.340
470-045	3/4-16	1/2-14	7/8	1.240	.340
470-047	7/8-14	1/2-14	1	1.330	.410
470-049	11/16-12	3/4-14	11/4	1.578	.470



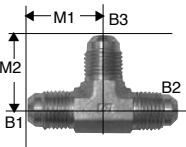
Male O-Ring to Female Pipe Swivel 90

ORDER NO.	B1	A2	C	L	M
470-062	9/16-18	1/4-18	11/16	.781	1.187
470-055	9/16-18	3/8-18	7/8	.937	1.296
470-059	3/4-16	3/8-18	7/8	1	1.515
470-061	3/4-16	1/2-14	1	1	1.515
470-063	7/8-14	1/2-14	1	1	1.640
470-065	11/16-12	3/4-14	11/4	1.250	1.921



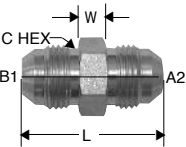
Male J.I.C. to Male Pipe Straight

ORDER NO.	B1	A2	C	L	W
907-7601	9/16-18	3/8-18	3/4	1.421	.250
470-780	3/4-16	3/8-18	3/16	1.531	.250
470-790	3/4-16	1/2-14	7/8	1.781	.310
907-7679	7/8-14	1/2-14	15/16	1.890	.310
907-7680	11/16-12	3/4-14	11/8	2.062	.380
907-7684	15/16-12	1-11/2	13/8	2.296	.380



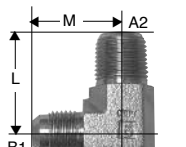
Male J.I.C. to Male J.I.C. Tee

ORDER NO.	B1	B2	B3	M1	M2
907-7777	9/16-18	9/16-18	9/16-18	1.060	1.060
907-7778	3/4-16	3/4-16	3/4-16	1.250	1.250



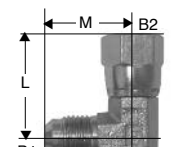
Male J.I.C. to Male J.I.C. Straight

ORDER NO.	B1	B2	C	L	W
470-972	3/4-16	3/4-16	13/16	1.625	.250
470-973	11/16-12	11/16-12	11/8	2.156	.380



Male J.I.C. to Male Pipe 90

ORDER NO.	B1	A2	L	M
471-198	9/16-18	3/8-18	1.22	1.140
471-200	3/4-16	3/8-18	1.22	1.250
470-962	3/4-16	1/2-14	1.47	1.33
470-787	11/16-12	3/4-14	1.593	1.656



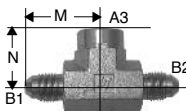
Male J.I.C. to Female J.I.C. Swivel 90

ORDER NO.	B1	B2	L	M
907-7756	9/16-18	9/16-18	1.250	1.060
470-667	3/4-16	3/4-16	1.380	1.250
470-671	7/8-14	7/8-14	1.620	1.450

THREAD SIZE, TUBE AND FLANGE HEAD O.D. CHART

DASH SIZE	TUBE OD	PIPE THREAD	SAE O-RING & 37° JIC FLARE	45° SAE FLARE	FLAT FACE THREAD	INVERTED FLARE	BRASS COMPRESSION	CODE 61 FLANGE	CODE 62 FLANGE
-02	1/8	1/8-27	5/16-24	5/16-24	-	5/16-28	5/16-24	-	-
-03	3/16	N/A	3/8-24	3/8-24	-	3/8-24	3/8-24	-	-
-04	1/4	1/4-18	7/16-20	7/16-20	9/16-18	7/16-24	7/16-24	-	-
-05	5/16	N/A	1/2-20	1/2-20	-	1/2-24	1/2-24	-	-
-06	3/8	3/8-18	9/16-18	5/8-18	11/16-16	9/16-24	9/16-24	-	-
-07	7/16	N/A	-	11/16-16	-	5/8-24	5/8-24	-	-
-08	1/2	1/2-14	3/4-16	3/4-16	13/16-16	11/16-20	11/16-20	1.19	1.25
-10	5/8	N/A	7/8-14	7/8-14	1-14	3/16-18	3/16-18	-	-
-12	3/4	3/4-14	11/16-12	11/16-14	13/16-12	1-18	1-18	1.50	1.62
-14	7/8	N/A	13/16-12	-	-	-	-	-	-
-16	1	1-11 1/2	15/16-12	-	17/16-12	-	-	1.75	1.88
-20	1 1/4	1 1/4-11 1/2	15/8-12	-	11/16-12	-	-	2.00	2.12
-24	1 1/2	1 1/2-11 1/2	17/8-12	-	2-12	-	-	2.38	2.50
-32	2	2-11 1/2	2 1/2-12	-	-	-	-	2.81	3.12

Steel Adapters

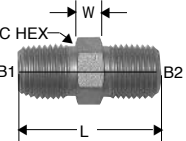


Male J.I.C. to Male J.I.C. to Female Pipe Tee

ORDER NO.	B1	B2	A3	LGTH-M	N
471-422	9/16-18	9/16-18	1/4-18	1.24	.880

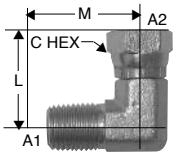
Male Pipe to Male Pipe Hex Nipple

ORDER NO.	B1	B2	C	L	W
471-119	1/4-18	1/4-18	5/8	1.450	.250
471-120	3/8-18	3/8-18	11/16	1.450	.250
471-121	1/2-14	1/2-14	7/8	1.890	.310
471-013	1/2-14	3/8-18	7/8	1.700	.310
471-122	3/4-14	3/4-14	1 1/8	1.960	.380
471-123	1-11 1/2	1-11 1/2	1 3/8	2.340	.380



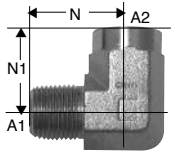
Male Pipe to Female Pipe Swivel 90° Elbow

ORDER NO.	A1	A2	C	L	M
471-099	1/4-18	1/4-18	11/16	1.190	.750
470-883	3/8-18	1/4-18	11/16	1.500	.858
470-865	3/4-16	1/4-18	11/16	1.750	.920
470-019	3/8-18	3/8-18	7/8	1.500	.940
470-021	1/2-14	3/8-18	1	1.750	1
470-023	3/8-18	1/2-14	1	1.586	.937
470-025	1/2-14	1/2-14	1	1.750	1
470-026	3/4-14	1/2-14	1	2	1.170
470-027	3/4-14	3/4-14	1 1/4	2	1.190



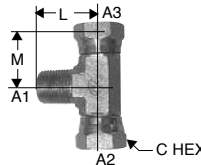
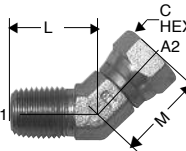
Male Pipe to Female Pipe 90° Street Elbow

ORDER NO.	A1	A2	N	N1
907-7600	3/8-18	3/8-18	1.220	1.020
907-7641	1/2-14	1/2-14	1.470	1.230
470-844	3/4-14	3/4-14	1.590	1.360



Male Pipe to Female Pipe Swivel 45° Elbow

ORDER NO.	A1	A2	C	L	M
470-796	1/4-18	1/4-18	11/16	.940	.690
470-993	3/8-18	3/8-18	7/8	1.060	.750
470-794	1/2-14	1/2-14	1	1.310	.880

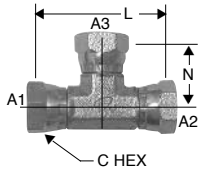


Male Pipe to Female Pipe Swivel Branch Tee

ORDER NO.	A1	A2/A3	C	L	M
471-110	3/8-18	3/8-18	7/8	1.50	.940
471-111	1/2-14	1/2-14	1	1.810	1

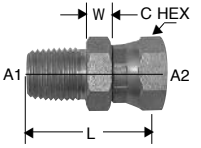
Female Pipe Swivel Branch Tee

ORDER NO.	A1/A2/A3	C	L	W
470-928	1/4-18	11/16	1.718	.781
470-927	3/8-18	7/8	1.718	.937
470-926	1/2-14	1	2.218	1



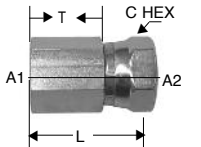
Male Pipe to Female Pipe Swivel Straight

ORDER NO.	A1	A2	C	L	W
907-7486	1/4-18	1/4-18	11/16	1.250	.240
470-001	3/8-18	1/4-18	7/8	1.312	.313
470-003	3/8-18	3/8-18	7/8	1.310	.313
470-005	1/2-14	3/8-18	1	1.590	.403
470-007	3/8-18	1/2-14	1	1.310	.266
470-009	1/2-14	1/2-14	1	1.620	.370
907-0183	3/4-14	1/2-14	1 1/4	1.650	.386
470-013	3/4-14	3/4-14	1 1/4	1.750	.370



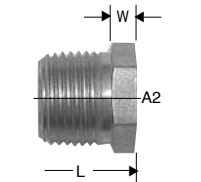
Female Pipe to Female Pipe Swivel Straight

ORDER NO.	A1	A2	C	L	T
471-103	1/2-14	1/2-14	1	1.50	1.015



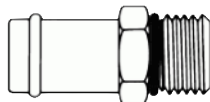
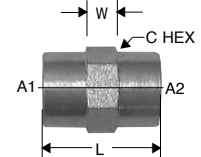
Male Pipe to Female Pipe Reducer Bushing

ORDER NO.	A1	A2	C	L	W
471-125	3/8-18	1/4-18	3/4	.859	.250
471-126	1/2-14	1/4-18	7/8	1.109	.310
471-059	1/2-14	3/8-18	7/8	1.109	.310
471-127	3/4-14	3/8-18	1 1/8	1.171	.380
471-128	3/4-14	1/2-14	1 1/8	1.171	.380
470-687	1-11 1/2	3/4-14	1 3/8	1.359	.380



Female Pipe to Female Pipe Straight

ORDER NO.	A1	A2	C	L	W
471-212	1/4-18	1/4-18	3/4	1.130	.250
470-864	3/8-18	3/8-18	3/4	1.130	.250
471-176	1/2-14	1/2-14	3/4	1.130	.250
907-7631	3/4-14	3/4-14	3/4	1.130	.250



Steel Beaded Hose Fittings

ORDER NO.	HOSE ID	THREAD
472-009	FG4404-08-08	1/2" NPT
472-010	FG4404-08-12	3/4" NPT
472-011	FG4404-12-08	1/2" NPT
472-012	FG4404-12-12	3/4" NPT
472-013	FG4404-12-16	1" NPT
472-014	FG4604-06-08	SAE 8
472-015	FG4604-06-10	SAE 10
472-016	FG4604-08	SAE 8
472-017	FG4604-12	SAE 12
472-018	FG4604-16	SAE 16
472-019	FG4604-20-20	SAE 20



Thread Sealant
For Hydraulic/Pneumatic
Fittings. See Page 115

Hoses & Fittings

Quick Couplers



Poppet Valve style for general agriculture use:

ORDER NO.	MFRG. NO.	DESCRIPTION	MAX OPERATING PRESSURE	THREAD SIZE
237-300	F.IR 14V NPT	1/4" NPT Female	4285	1/4" NPT Female
237-301	M.IR 14V NPT	1/4" NPT Male Tip	4285	1/4" NPT Female
237-302	F.IR 38V NPT	3/8" NPT Female	4285	3/8" NPT Female
237-303	M.IR 38V NPT	3/8" NPT Male Tip	4285	3/8" NPT Female
237-304	F.BIR 12 NPT	1/2" NPT Female	3571	1/2" NPT Female
237-305	M.BIR 12 NPT	1/2" NPT Male Tip	3571	1/2" NPT Female
237-306	F.IR 34V NPT	3/4" NPT Female	3571	3/4" NPT Female
237-307	M.IR 34V NPT	3/4" NPT Male Tip	3571	3/4" NPT Female

• Additional sizes and styles available upon request • Dust caps available upon request

ISO 16028 Flat Face style for hydraulic tools, skid steer/loader applications and no leak applications:

237-308	F. FIRG 38 NPT	3/8" Flat Face NPT Female	4285	3/8" NPT Female
237-309	M. FIRG 38 NPT	3/8" Flat Face NPT Male	4285	3/8" NPT Female
237-310	F. FIRG 12 NPT	3/8" Flat Face NPT Female	3571	1/2" NPT Female
237-311	M. FIRG 12 NPT	3/8" Flat Face NPT Male	3571	1/2" NPT Female
237-312	F. FIRG 12A NPT	1/2" Flat Face NPT Female	3571	1/2" NPT Female
237-313	M. FIRG 12A NPT	1/2" Flat Face NPT Male	3571	1/2" NPT Female
237-314	F. FIRG 34 NPT	1/2" Flat Face NPT Female	3571	3/4" NPT Female
237-315	M. FIRG 34 NPT	1/2" Flat Face NPT Male	3571	3/4" NPT Female
237-316	F. FIRG 34A NPT	3/4" Flat Face NPT Female	3571	3/4" NPT Female
237-317	M. FIRG 34A NPT	3/4" Flat Face NPT Male	3571	3/4" NPT Female
237-318*	F. A13D 5/8 JIC BH	1/2" Flat Face JIC Female	3571	5/8" JIC bulkhead 37
237-319*	M. A13 5/8 JIC BH	1/2" Flat Face JIC Male	3571	5/8" JIC bulkhead 37
237-322*	F. FIRG 34 SAE	1/2" Flat Face SAE Female	3571	3/4" SAE Female
237-323*	M. FIRG 34 SAE	1/2" Flat Face SAE Male	3571	3/4" SAE Female
237-324*	F. FIRG 34A SAE	3/4" Flat Face SAE Female	3571	3/4" SAE Female
237-325*	M. FIRG 34A SAE	3/4" Flat Face SAE Male	3571	3/4" SAE Female

• Additional sizes and styles, dust caps & higher pressures available upon request * Skid Steer & Attachments fits Bobcat, John Deere, Caterpillar and more!



ISO 16028 Female Connect Under Pressure style Flat Face where pressure is present on one side:

237-425	F. A13HD 1/2 NPT	1/2" Flat Face NPT Female	4714	1/2" NPT Female
237-426	F. A13HD 3/4 SAE	1/2" Flat Face SAE Female	4714	3/4" SAE Female
237-427	F. A13HD 5/8 SAE	1/2" Flat Face SAE Female	4714	5/8" SAE Female
237-428	F. A13HD 5/8 JIC BH	1/2" Flat Face JIC Female	4714	5/8" JIC Bulkhead

• Additional sizes and styles available upon request • Dust caps available upon request



ISO 16028 Male Connect Under Pressure style Flat Face where pressure is present on one side:

237-450	M. APM 13 1/2 NPT	1/2" Flat Face NPT Male	4714	1/2" NPT Female
237-451	M. APM 13 3/4 SAE	1/2" Flat Face SAE Male	4714	3/4" SAE Female
237-452	M. APM 13 5/8 SAE	1/2" Flat Face SAE Male	4714	5/8" SAE Female
237-453	M. APM 13 5/8 JIC BH	1/2" Flat Face JIC Male	4714	5/8" JIC Bulkhead

• Additional sizes and styles available upon request • Dust caps available upon request



New!

NEW VEP SERIES Connect Under Pressure Threaded Flat Face Coupler

• The ultimate solution for hydraulic circuit applications subject to high pressure impulses and circuits which experience high residual or trapped pressure in a line • Couplings can be connected and disconnected with high residual pressure Bar/3625 PSI **BOTH SIDES** up to 250 • Thread coupling system eliminates brinelling, premature leakage • Save time changing tools

237-500	F. VEP9 3/8 NPT	3/8" Body - Female	7975	3/8" NPT Female
237-501	M. VEP9 3/8 NPT	3/8" Body - Male	7975	3/8" NPT Female
237-502	F. VEP13 1/2 NPT	1/2" Body - Female	7975	1/2" NPT Female
237-503	M. VEP13 1/2 NPT	1/2" Body - Male	7975	1/2" NPT Female
237-504	F. VEP15 3/4 NPT	3/4" Body - Female	7975	3/4" NPT Female
237-505	M. VEP15 3/4 NPT	3/4" Body - Male	7975	3/4" NPT Female
237-506	F. VEP17 1 NPT	1" Body - Female	7250	1" NPT Female
237-507	M. VEP17 1 NPT	1" Body - Male	7250	1" NPT Female
237-508	F. VEP21 114 NPT	1 1/4" Body - Female	6815	1 1/4" NPT Female
237-509	M. VEP21 114 NPT	1 1/4" Body - Male	6815	1 1/4" NPT Female

• VEP SAE Thread available upon request • Dust caps available upon request



ORDER NO.	MFGR. NO.	DESCRIPTION	MAX OPERATING PRESSURE	THREAD SIZE
Enerpac/Hydraulic Jack - 10,000 PSI • Interchanges with Parker 3000 Series				
237-475	F.IVHP 1/4 NPT EXT	1/4" NPT Female	10,000	1/4" NPT Male
237-476	M.IVHP 1/4 NPT	1/4" NPT Male	10,000	1/4" NPT Female
237-477	F.IVHP 3/8 NPT EXT	3/8" NPT Female	10,000	3/8" NPT Male
237-478	M.IVHP 3/8 NPT	3/8" NPT Male	10,000	3/8" NPT Female

• Dust caps available upon request

Wing Nut style/Dump Trailer/Wet Line

237-326	F.W6F6-B	3/4" Wing Style Female	3000	3/4" NPT Female
237-327	M.W6F6-B	3/4" Wing Style Male	3000	3/4" NPT Female
237-328	F.W8F8-B	1" Wing Style Female	3000	1" NPT Female
237-329	M.W8F8-B	1" Wing Style Male	3000	1" NPT Female
237-330	F.W10F10-B	1 1/4" Wing Style Female	2750	1 1/4" NPT Female
237-331	M.W10F10-B	1 1/4" Wing Style Male	2750	1 1/4" NPT Female

• Additional sizes and styles available upon request • Dust caps available upon request

NEW Saturn Block

• User friendly relief system allows for easy connection/disconnection with residual pressure • Drain the residual pressure before connection and disconnection, allowing connection without pressure and without effort in order to reduce injury • Direct replacement for other connect under pressure systems • Low cost field replacement couplers • Main applications: skid steers, excavators and mobile construction equipment

ORDER NO.	MFGR. NO.	DESCRIPTION	MAX OPERATING PRESSURE	THREAD SIZE
237-515	F.A13HD Coupler	1/2" Body - Female	5075	3/4" JIC Pressure Lines
	F.A13HD Nipple	1/2" Body - Male		3/8" SAE Drain Line*
	M.A9 Nipple Drain Line	3/8" Drain Line-Male		Other Threads Available

*Modular design allows for optional 5/8" or 3/4" body male & female for high flow circuits and 1/2" drain line
*Threads available: 3/4 JIC for pressure lines, 3/8 SAE for drain line

Saturn Block replacement couplers

237-520	F.A13HD Replacement Female	1/2" Body - Female	5075	-
237-521	M.A13HD Replacement Male	1/2" Body - Male	5075	-
237-522	M.A9 Replacement Drain	3/8" Body - Male	5075	-

ISO 16028 A SERIES Flat Face with Special Z Plating for medium to high corrosion applications: Snow Plow, Municipality and Construction

ORDER NO.	MFGR. NO.	DESCRIPTION	MAX OPERATING PRESSURE	THREAD SIZE
237-540	F.A9ZF 3/8 NPT	3/8" Flat Face NPT Female	5075	3/8" NPT Female
237-541	M.A9ZF 3/8 NPT	3/8" Flat Face NPT Male	5075	3/8" NPT Female
237-542	F.A13ZF 1/2 NPT	1/2" Flat Face NPT Female	4785	1/2" NPT Female
237-543	M.A13ZF 1/2 NPT	1/2" Flat Face NPT Male	4785	1/2" NPT Female
237-544	F.A13ZF 3/4 NPT	1/2" Flat Face NPT Female	4785	3/4" NPT Female
237-545	M.A13ZF 3/4 NPT	1/2" Flat Face NPT Male	4785	3/4" NPT Female
237-546	F.A15ZF 3/4 NPT	5/8" Flat Face NPT Female	4785	3/4" NPT Female
237-547	M.A15ZF 3/4 NPT	5/8" Flat Face NPT Male	4785	3/4" NPT Female

• Additional sizes and styles available upon request • Dust caps available upon request

ISO 16028 FL SERIES Flat Face 316 Stainless Steel ideal for high corrosion applications: Marine, Industrial Equipment, Chemical and Food Processing

237-550	F.FL9 3/8 NPT	3/8" Flat Face NPT Female	5075	3/8" NPT Female
237-551	M.FL9 3/8 NPT	3/8" Flat Face NPT Male	5075	3/8" NPT Female
237-552	F.FL13 1/2 NPT	1/2" Flat Face NPT Female	5075	1/2" NPT Female
237-553	M.FL13 1/2 NPT	1/2" Flat Face NPT Male	5075	1/2" NPT Female
237-554	F.FL13 3/4 NPT	1/2" Flat Face NPT Female	4785	3/4" NPT Female
237-555	M.FL13 3/4 NPT	1/2" Flat Face NPT Male	4785	3/4" NPT Female
237-556	F.FL15 3/4 NPT	5/8" Flat Face NPT Female	4785	3/4" NPT Female
237-557	M.FL15 3/4 NPT	5/8" Flat Face NPT Male	4785	3/4" NPT Female

• Additional sizes and styles available upon request • Dust caps available upon request



New!



New!



New!

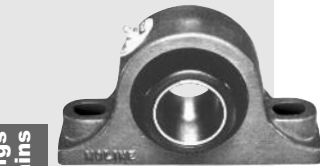
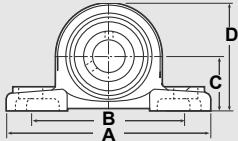


Hoses & Fittings

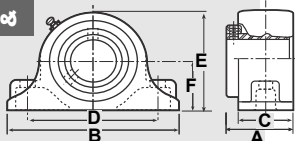
Mounted Bearings

Pillow Block Bearings

• Interchangeable with most domestics, including Fafnir RASC, Browning VPS & VPE, and Sealmaster NP & RP • Cast iron housings • Relubricatable



Bearings & Chains



Set Screw Collar

ORDER NO.	BEARING NO.	I.D.	DIMENSIONS IN INCHES				BOLT SIZE	SHIP WT.
			A	B	C	D		
151-075	UCP 201-08	1/2	5	33/4	13/16	23/8	3/8	2
151-051	SBLP 202-10	5/8	4 1/2	37/16	13/16	21/4	3/8	2
151-080	UCP 202-10	5/8	5	33/4	15/16	21/2	3/8	2
151-090	UCP 204-12	3/4	5	33/4	15/16	217/32	3/8	2
151-091	P 204 Housing only for 1.85" OD	3/4	5	33/4	15/16	217/32	3/8	1
151-095	UCP 205-14	7/8	5 1/2	41/8	17/16	23/4	3/8	2
151-100	UCP 205-16	1	5 1/2	41/8	17/16	23/4	3/8	2
151-118	UCP 206-18	1 1/8	6 1/2	43/4	111/16	35/16	1/2	4
151-119	UCP 206-19	1 3/16	6 1/2	43/4	111/16	35/16	1/2	4
151-120	UCP 206-20	1 1/4	6 1/2	43/4	111/16	35/16	1/2	4
151-156	P 207 Housing only for 2.83" OD	1 1/4	69/16	5	17/8	321/32	1/2	2
151-125	UCP 207-20	1 1/4	69/16	5	17/8	321/32	1/2	4
151-131	UCP 207-22	1 3/8	69/16	5	17/8	321/32	1/2	4
151-143	UCP 207-23	1 7/16	69/16	5	17/8	321/32	1/2	4
151-160	UCP 208-24	1 1/2	7 1/4	5 13/32	115/16	327/32	1/2	5
151-161	UCP 209-26	1 5/8	7 15/32	5 3/4	21/8	43/16	1/2	6
151-167	UCP 209-27	1 11/16	7 15/32	5 3/4	21/8	43/16	1/2	6
151-162	UCP 209-28	1 3/4	7 15/32	5 3/4	21/8	43/16	1/2	6
151-163	UCP 210-30	1 7/8	8 1/8	6 1/4	2 1/4	47/16	5/8	7
151-164	UCP 210-31	1 15/16	8 1/8	6 1/4	2 1/4	47/16	5/8	7
151-165	UCP 210-32	2	8 1/8	6 1/4	2 1/4	47/16	5/8	7
151-166	UCP 211-32	2	8 5/8	6 23/32	2 1/2	429/32	5/8	9
151-168	UCP 211-35	2 3/16	8 5/8	6 23/32	2 1/2	429/32	5/8	9
151-170	UCP 212-36	2 1/4	9 1/2	7 1/4	2 3/4	57/16	5/8	12
151-175	UCP 212-38	2 3/8	9 1/2	7 1/4	2 3/4	57/16	5/8	12
151-185	UCP 212-39	2 7/16	9 1/2	7 1/4	2 3/4	57/16	5/8	12
151-188	UCP 213-40	2 1/2	10 7/16	8	3	529/32	3/4	14
151-193	UCP 215-47	2 15/16	10 13/16	8 17/32	3 1/4	63/8	3/4	18
151-194	UCP 215-48	3	10 13/16	8 17/32	3 1/4	63/8	3/4	18
151-360	UCP 319-60 Heavy duty series	3 3/4	18 1/2	14 1/8	4 59/64	9 27/32	1 1/8	59

Eccentric Collar

151-010	HCP 202-10	5/8	5	35/16	15/16	21/2	3/8	2
151-012	HCP 204-12	3/4	5	33/4	15/16	217/32	3/8	2
151-014	HCP 205-14	7/8	5 1/2	41/8	17/16	23/4	3/8	2
151-016	HCP 205-16	1	5 1/2	41/8	17/16	23/4	3/8	2
151-018	HCP 206-18	1 1/8	6 1/2	43/4	111/16	35/16	1/2	4
151-019	HCP 206-19	1 3/16	6 1/2	43/4	111/16	35/16	1/2	4
151-021	HCP 206-20	1 1/4	6 1/2	43/4	111/16	35/16	1/2	4
151-020	HCP 207-20	1 1/4	69/16	5	17/8	321/32	1/2	4
151-022	HCP 207-22	1 3/8	69/16	5	17/8	321/32	1/2	4
151-023	HCP 207-23	1 7/16	69/16	5	17/8	321/32	1/2	4
151-024	HCP 208-24	1 1/2	7 1/4	5 13/32	115/16	327/32	1/2	5
151-028	HCP 209-28	1 3/4	7 15/32	5 3/4	21/8	43/16	1/2	6
151-031	HCP 210-31	1 15/16	8 1/8	6 1/4	2 1/4	47/16	5/8	7
151-030	HCP 210-32	2	8 1/8	6 1/4	2 1/4	47/16	5/8	7
151-032	HCP 211-32	2	8 5/8	6 23/32	2 1/2	429/32	5/8	9
151-035	HCP 211-35	2 3/16	8 5/8	6 23/32	2 1/2	429/32	5/8	9
151-039	HCP 212-39	2 7/16	9 1/2	7 1/4	2 3/4	57/16	5/8	13
151-047	HCP 215-47	2 15/16	10 13/16	8 17/32	3 1/4	63/8	3/4	20

M-2000 Pillow Block Bearings • Made In America

• Self-aligning double row spherical roller bearings with SKF inserts • Wide ratio of radial to thrust loads is possible • Factory lubricated and "Shaft Ready" for installation when shipped • Cast iron solid housings with elongated hole allowing for a broad range of bolt centers • "Triple Lip" contact seal prohibits entry of contaminants, retains lubrication and is self-purging • Interchanges with Browning SPB 1000, Dodge S2000, Link-Belt EP-B22400H.

ORDER NO.	I.D.	DIMENSIONS						SHIP WT.
		A	B	C	D	E	F	
2-Bolt Housing								
152-234	1 3/4	3	7 3/8	2 3/16	5 1/2	4 1/4	2 1/8	9
152-239	1 15/16	3	8 3/8	2 3/16	6 1/4	4 9/16	2 1/4	10
152-235	2	3	8 3/8	2 3/16	6 1/4	4 9/16	2 1/4	10
152-242	2 3/16	3 1/4	8 7/8	2 1/2	6 3/4	5	2 1/2	12
152-245	2 7/16	3 1/2	9 1/4	2 3/4	7 1/8	5 11/16	2 3/4	17

ORDER NO.	I.D.	DIMENSIONS						SHIP WT.
		A	B	C	D	E	F	
152-237	2 1/2	3 1/2	9 1/4	2 3/4	7 1/8	5 11/16	2 3/4	19
152-246	2 11/16	3 13/16	10 1/2	2 13/16	8 1/8	6 7/16	3 1/4	23
152-248	2 15/16	3 13/16	10 1/2	2 13/16	8 1/8	6 7/16	3 1/4	23
152-249	3	3 13/16	10 1/2	2 13/16	8 1/8	6 7/16	3 1/4	23
152-251	3 7/16	4 1/4	13	3 1/4	10	7 1/2	3 3/4	32
152-254	3 15/16	4 3/4	14 1/2	3 9/16	10 7/8	8 3/8	4 1/8	45

Type E Pillow Block Bearings • With TIMKEN® Tapered Roller Bearings • Made In America

• Made of high-quality gray iron • Genuine Timken Tapered Roller Bearings of vacuum degassed steel which gives rollers and races added life, provides superior load and speed characteristics • High radial and thrust load capacities • Completely assembled, adjusted, sealed and pre-lubricated at the factory • Interchangeable with: Browning PBE 920, Dodge PB, Rex ZEP 2000, and Sealmaster PRB 100-2

ORDER NO.	DIMENSIONS IN INCHES							SHIP WT.
	I.D.	A	B	C	D	E	F	

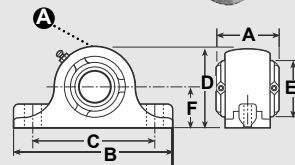
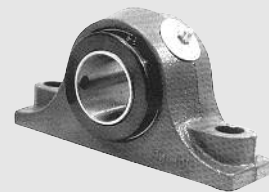
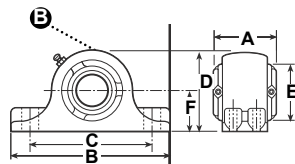
2-Bolt Housing

152-104	1 1/4	2 3/4	6	4 25/32	3	2 1/4	1 1/2	4
152-107	1 7/16	3"	7 3/8	5 3/4	3 3/4	2 3/4	1 7/8	7
152-108	1 1/2	3 3/8	7 7/8	6 1/4	4 1/4	3 3/16	2 1/8	10
152-112	1 3/4	3 1/2	8 7/8	7	4 1/2	3 7/16	2 1/4	11
152-115	1 15/16	3 1/2	8 7/8	7	4 1/2	3 7/16	2 1/4	11
152-116	2	3 1/2	8 7/8	7	4 1/2	3 7/16	2 1/4	11
152-135	2 3/16	3 3/4	9 5/8	7 3/4	5	3 3/4	2 1/2	14
152-139	2 7/16	4	10 1/2	8 1/2	5 1/2	4 1/16	2 3/4	19
152-140	2 1/2	4	10 1/2	8 1/2	5 1/2	4 1/16	2 3/4	19
152-147	2 15/16	4 1/2	12"	9 1/2	6 1/4	4 23/32	3 1/8	26
152-148	3	4 1/2	12"	9 1/2	6 1/4	4 23/32	3 1/8	26
152-150	3 1/4	5	14"	11	7 1/2	5 7/16	3 3/4	44
152-155	3 7/16	5	14"	11	7 1/2	5 7/16	3 3/4	44
152-157	3 1/2	5	14"	11	7 1/2	5 7/16	3 3/4	44

ORDER NO.	DIMENSIONS IN INCHES							SHIP WT.
	I.D.	A	B	C	D	E	F	

4-Bolt Housing

152-167	2 15/16	4 1/2	12	9 1/2	6 1/4	4 23/32	3 1/8	26
152-168	3	4 1/2	12	9 1/2	6 1/4	4 23/32	3 1/8	26
152-171	3 7/16	5	14	11	7 1/2	5 7/16	3 3/4	44
152-173	3 1/2	5	14	11	7 1/2	5 7/16	3 3/4	44
152-174	4	6 1/4	15 1/4	12 1/2	8 1/2	5 15/16	4 1/4	65



Four-Bolt Flange Bearings

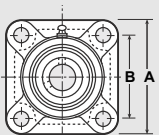
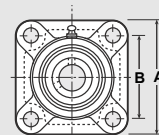
Set Screw Collar

• Interchangeable with most domestics including Fafnir RJC, Browning VF4, & MF4, and Sealmaster SF & RF • Cast iron housings • Relubricatable

ORDER NO.	BEARING NO.	I.D.	DIMENSIONS IN INCHES		BOLT SIZE	SHIP WT.
			A	B		
151-508	UCF 201-8	1/2	33/8	233/64	3/8	2
151-510	UCF 202-10	5/8	33/8	233/64	3/8	2
151-515	UCF 204-12	3/4	33/8	233/64	3/8	2
151-518	UCF 205-14	7/8	33/4	23/4	3/8	2
151-520	UCF 205-16	1	33/4	23/4	3/8	2
151-523	UCF 206-18	1 1/8	4 1/4	3 17/64	3/8	3
151-525	UCF 206-19	1 3/16	4 1/4	3 17/64	3/8	3
151-527	UCF 206-20	1 1/4	4 1/4	3 17/64	3/8	3
151-530	UCF 207-20	1 1/4	4 19/32	3 5/8	7/16	4
151-533	UCF 207-22	1 3/8	4 19/32	3 5/8	7/16	4
151-534	UCF 207-23	1 7/16	4 19/32	3 5/8	7/16	4
151-535	UCF 208-24	1 1/2	5 1/8	4 1/64	5/8	5
151-505	UCF 208-24	1 1/2	5 1/8	4 1/64	1/2	4
151-538	UCF 209-26	1 5/8	5 13/32	4 9/64	1/2	5
151-539	UCF 209-27	1 11/16	5 13/32	4 9/64	1/2	5
151-540	UCF 209-28	1 3/4	5 13/32	4 9/64	1/2	5
151-543	UCF 210-31	1 15/16	5 5/8	4 3/8	1/2	6
151-541	UCF 210-32	2	5 5/8	4 3/8	1/2	6
151-545	UCF 211-32	2	6 3/8	5 1/8	5/8	8
151-550	UCF 211-35	2 3/16	6 3/8	5 1/8	5/8	8
151-555	UCF 212-36	2 1/4	6 7/8	5 5/8	5/8	10
151-570	UCF 212-39	2 7/16	6 7/8	5 5/8	5/8	10
151-573	UCF 213-40	2 1/2	7 3/8	5 53/64	5/8	12
151-577	UCF 215-47	2 15/16	7 7/8	6 17/64	5/8	15
151-580	UCF 215-48	3	7 7/8	6 17/64	5/8	15

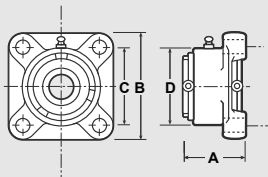
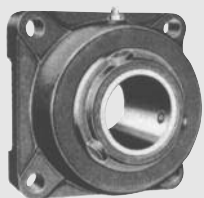
Eccentric Collar

ORDER NO.	BEARING NO.	I.D.	DIMENSIONS IN INCHES		BOLT SIZE	SHIP WT.
			A	B		
151-612	HCFS 204-12	3/4	33/8	2 1/2	3/8	2
151-616	HCFS 205-16	1	33/4	2 3/4	3/8	3
151-621	HCFS 206-20	1 1/4	4 1/4	3 9/32	3/8	4
151-620	HCFS 207-20	1 1/4	4 5/8	3 5/8	7/16	5
151-622	HCFS 207-22	1 3/8	4 5/8	3 5/8	7/16	5
151-623	HCFS 207-23	1 7/16	4 5/8	3 5/8	7/16	5
151-624	HCFS 208-24	1 1/2	5 1/8	4	1/2	6
151-628	HCFS 209-28	1 3/4	5 3/8	4 1/8	9/16	6
151-631	HCFS 210-31	1 15/16	5 5/8	4 3/8	9/16	8
151-632	HCFS 211-32	2	6 3/8	5 1/8	5/8	10
151-639	HCFS 212-39	2 7/16	6 7/8	5 5/8	5/8	12



Bearings & Chains

Mounted Bearings



Type E 4-Bolt Flange Bearings • With TIMKEN Tapered Roller Bearings

• U.S. made housing • V-Guard contact seal • High radial thrust load capacity • Interchangeable with Browning PBE920

Set Screw Collar

ORDER NO.	I.D.	DIMENSIONS IN INCHES				SHIP WT.
		A	B	C	D	
152-183	17/16	31/16	45/8	31/2	31/2	7
152-186	111/16	31/2	53/8	41/8	43/16	10
152-189	115/16	35/8	55/8	43/8	47/16	12
152-206	27/16	43/16	67/8	53/8	55/16	21
152-201	211/16	411/16	73/4	6	6	28
152-209	215/16	411/16	73/4	6	6	28
152-210	3	411/16	73/4	6	6	28
152-213	31/2	51/4	91/4	7	71/4	46
152-212	37/16	51/4	91/4	7	71/4	46
152-215	315/16	61/2	101/4	73/4	81/4	74
152-216	4	61/2	101/4	73/4	81/4	74

M2000 4-Bolt Flange Bearings • With SKF Roller Bearings

• U.S. made housing • Triple lip contact seal • +/- 1-1/2 degree misalignment capacity • Interchangeable with Browning SFB1000

ORDER NO.	I.D.	DIMENSIONS				SHIP WT.
		A	B	C	D	
152-275	17/16	215/16	45/8	317/32	37/8	8
152-278	111/16	3	5	37/8	41/4	10
152-281	115/16	3	51/4	41/16	41/2	11
152-284	23/16	31/4	57/8	417/32	5	13
152-287	27/16	31/2	61/8	425/32	53/4	17
152-288	211/16	315/16	71/4	59/16	65/8	17
152-290	215/16	315/16	71/4	59/16	65/8	25
152-291	3	315/16	71/4	59/16	65/8	25
152-293	37/16	45/16	83/8	623/32	75/8	35
152-294	31/2	45/16	83/8	623/32	75/8	35
152-295	311/16	47/8	91/2	719/32	83/8	35
152-296	315/16	47/8	91/2	719/32	83/8	48
152-297	4	47/8	91/2	719/32	83/8	48

SBTRD/SATRD Three-Bolt Flange Bearings

• 3-Bolt Ductile Iron Flange unit. • Narrow inner ring inserts • Set screw or eccentric locking collar type.

ORDER NO.	BEARING NO.	TYPE	DIMENSIONS IN INCHES			BOLT SIZE	SHIP WT.
			I.D.	P	E		
151-801	SBTRD205-16	Set Screw	1	3	2.598	5/16	4
151-807	SATRD205-16	Eccentric collar	1	3	2.598	5/16	4
151-804	SBTRD206-20	Set Screw	11/4	39/16	3.085	3/8	4
151-808	SATRD206-20	Eccentric collar	11/4	39/16	3.085	3/8	4
151-810	SATRD207-22	Eccentric collar	13/8	315/16	3.410	3/8	4
151-813	SATRD207-23	Eccentric collar	17/16	315/16	3.410	3/8	2

Three-Bolt Flange Bearings

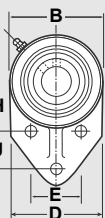
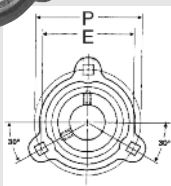
• Cast iron unit • For restricted mounting condition • Relubrication feature is standard • UC bearing has dual set screw locking, wide inner ring, slinger seal design and anti-rotation device.

ORDER NO.	BEARING NO.	I.D.	DIMENSIONS IN INCHES				BOLT SIZE	RELUBE	SHIP WT.	
			B	D	H	J				
154-565	UCFB 204-12	3/4	27/16	21/16	121/32	11/16	117/64	5/16	Yes	2
154-568	UCFB 205-16	1	211/16	27/32	149/64	11/16	111/32	5/16	Yes	2
154-570	UCFB 206-20	11/4SM	31/16	29/16	131/32	19/64	137/64	5/16	Yes	2
154-572	UCFB 207-20	11/4	317/32	23/4	211/64	117/64	113/16	7/16	Yes	3
154-576	UCFB 208-24	11/2	315/16	31/16	223/64	139/64	131/32	3/8	Yes	5
154-580	UCFB 210-31	115/16	413/32	33/8	263/64	113/16	29/32	3/8	Yes	6

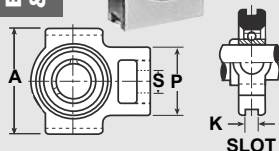
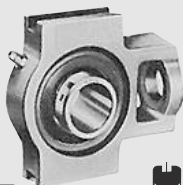
Take-Up Bearings

• Features cast iron construction with wide inner race, slinger seal and anti-rotation device

ORDER NO.	BEARING NO.	I.D.	DIMENSIONS IN INCHES				RELUBE	SHIP WT.
			A	P	S	K		
Set Screw Collar								
154-512	UCT 204-12	3/4	31/2	2	3/4	17/32	Yes	2
154-516	UCT 205-16	1	31/2	2	3/4	17/32	Yes	2
154-521	UCT 206-20	11/4	4	27/32	55/64	17/32	Yes	3
154-520	UCT 207-20	11/4	4	217/32	55/64	17/32	Yes	4
154-522	UCT 207-23	17/16	4	217/32	55/64	17/32	Yes	4
154-524	UCT 208-24	11/2	41/2	39/32	19/64	11/16	Yes	6
154-531	UCT 210-31	115/16	45/8	39/32	19/64	11/16	Yes	6

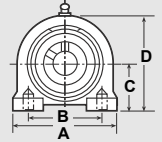


Bearings & Chains



Tapped Base Pillow Block Bearings

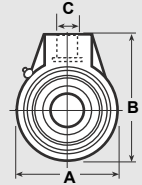
ORDER NO.	BEARING NO.	I.D.	DIMENSIONS IN INCHES				BOLT SIZE	RELUBE	SHIP WT.
			A	B	C	D			
Set Screw Collar									
154-184	UCTB 205-16	1	3	2	17/16	213/16	3/8-16	Yes	2
154-188	UCTB 206-20	1 1/4 SM	4	3	111/16	33/8	7/16-14	Yes	3
154-190	UCTB 207-20	1 1/4	4 1/4	3 1/4	17/8	33/4	1/2-13	Yes	4
154-195	UCTB 208-24	1 1/2	4 5/8	3 1/2	115/16	315/16	1/2-13	Yes	6



Screw Conveyor Hanger Bearings

• Cast iron housing for screw conveyor applications where belt tightening and shaft adjustment devices are required. All inserts are regreaseable and have set screw locking collars.

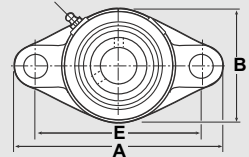
ORDER NO.	BEARING NO.	I.D.	DIMENSIONS IN INCHES			SHIP WT.
			A	B	C	
Set Screw Collar						
154-616	UCSH 205-16	1	31/16	41/16	3/4	2
154-619	UCSH 206-20	1 1/4 SM	31/16	41/16	3/4	3
154-620	UCSH 207-20	1 1/4	35/8	49/16	3/4	3
154-623	UCSH 207-23	1 7/16	35/8	49/16	3/4	3
154-624	UCSH 208-24	1 1/2	3 25/32	43/4	3/4	4



Two-Bolt Flange Bearings

• Interchangeable with most domestics including Fafnir RCJTC, Browning VF2, and Sealmaster SFT • Cast iron housings • Relubricatable • All of our mounted units are fully guaranteed.

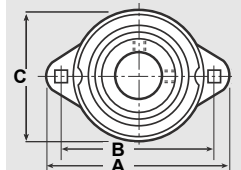
ORDER NO.	BEARING NO.	I.D.	DIMENSIONS IN INCHES			BOLT SIZE	SHIP WT.
			A	E	B		
Set Screw Collar							
154-008	UCFL 201-8	1/2	47/16	335/64	23/8	3/8	2
154-010	UCFL 202-10	5/8	47/16	335/64	23/8	3/8	2
154-012	UCFL 204-12	3/4	47/16	335/64	23/8	3/8	2
154-014	UCFL 205-14	7/8	51/8	357/64	211/16	1/2	2
154-016	UCFL 205-16	1	51/8	357/64	211/16	1/2	2
154-017	UCFL 205-16	1	51/8	357/64	211/16	5/8	2
154-018	UCFL 206-18	1 1/8	513/16	439/64	353/32	1/2	3
154-019	UCFL 206-19	1 3/16	513/16	439/64	353/32	1/2	3
154-829	SBFL 206-19	1 3/16	47/16	39/16	21/2	1/2	3
154-027	UCFL 206-20	1 1/4	513/16	439/64	353/32	1/2	3
154-020	UCFL 207-20	1 1/4	61/8	51/8	33/4	1/2	3
154-022	UCFL 207-22	1 3/8	611/32	51/8	317/32	1/2	3
154-023	UCFL 207-23	1 7/16	611/32	51/8	317/32	1/2	3
154-024	UCFL 208-24	1 1/2	67/8	543/64	41/8	1/2	4
154-026	UCFL 209-28	1 3/4	713/32	553/64	41/4	5/8	5
154-030	UCFL 211-32	2	813/16	71/4	51/8	5/8	7
Eccentric Collar							
154-814	SAFL 205-14	7/8	33/4	3	21/2	5/16	2
154-154	SAFL 205-16G	1	47/8	357/64	23/4	3/8	2
154-816	SALF 205-16	1	47/8	357/64	23/4	3/8	2
154-156	SAFL 206-20G	1 1/4	59/16	419/32	31/4	1/2	3
154-145	SAFL 207-22G	1 3/8	61/8	51/8	33/4	1/2	3



Two-Bolt Flange Bearings

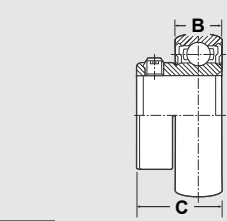
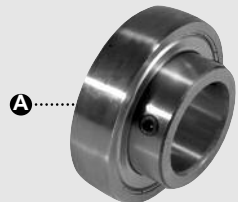
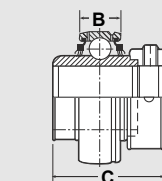
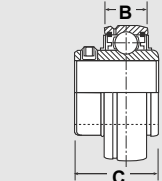
• Ductile iron housings

ORDER NO.	BEARING NO.	I.D.	DIMENSIONS IN INCHES			BOLT SIZE	SHIP WT.
			A	B	C		
Set Screw Collar							
154-251	SBFTD 202-10	5/8	31/4	29/16	29/32	1/4	1
154-252	SBFTD 204-12	3/4	311/16	213/16	239/64	5/16	1
154-254	SBFTD 205-16	1	37/8	3	223/32	5/16	1
154-255	SBFTD 206-18	1 1/8	49/16	317/32	313/64	3/8	2
154-257	SBFTD 206-20	1 1/4	49/16	317/32	313/64	3/8	2
154-258	SBFTD 207-20	1 1/4	413/16	315/16	31/2	3/8	2
154-259	SBFTD 207-22	1 3/8	413/16	315/16	31/2	3/8	2
154-260	SBFTD 207-23	1 7/16	413/16	315/16	31/2	3/8	2



Bearings & Chains

Insert Bearings



UC and HC Series Bearings • Spherical (Rounded O.D.)

ORDER NO.	BEARING NO.	SIMILAR TO FAFNIR NO.	DIMENSIONS IN INCHES			RELUBE	
			I.D.	O.D.	B		C
A Set Screw Collar • Spherical (Rounded) O.D.							
155-612	UC 204-12	GC1012KRRB	3/4	1.85	.63	1.22	Yes
155-614	UC 205-14	GC1014KRRB	7/8	2.05	.67	1.34	Yes
155-615	UC 205-15	GC1015KRRB	15/16	2.05	.67	1.34	Yes
155-616	UC 205-16	GC1100KRRB	1	2.05	.67	1.34	Yes
155-618	UC 206-18	GC1102KRRB	1 1/8	2.44	.75	1.50	Yes
155-619	UC 206-19	GC1103KRRB	1 3/16	2.44	.75	1.50	Yes
155-625	UC 206-20	GC1103KRRB3	1 1/4 ^{ASM}	2.44	.75	1.50	Yes
155-620	UC 207-20	GC1104KRRB	1 1/4	2.83	.79	1.69	Yes
155-622	UC 207-22	GC1106KRRB	1 3/8	2.83	.79	1.69	Yes
155-623	UC 207-23	GC1107KRRB	1 7/16	2.83	.79	1.69	Yes
155-624	UC 208-24	GC1108KRRB	1 1/2	3.15	.83	1.94	Yes
155-628	UC 209-28	GC1112KRRB	1 3/4	3.35	.87	1.94	Yes
155-631	UC 210-31	GC1114KRRB	1 15/16	3.54	.91	2.03	Yes
155-632	UC 211-32	GC1200KRRB	2	3.94	.94	2.19	Yes

B Eccentric Collar • Spherical (Rounded) O.D.							
155-712	HC 204-12	G1012KRRB	3/4	1.85	.63	1.72	Yes
155-716	HC 205-16	G1100KRRB	1	2.05	.67	1.75	Yes
155-718	HC 206-18	G1102KRRB	1 1/8	2.44	.75	1.91	Yes
155-719	HC 206-19	G1103KRRB	1 3/16	2.44	.75	1.91	Yes
155-717	HC 206-20	G1103KRRB3	1 1/4 ^{ASM}	2.44	.75	1.91	Yes
155-720	HC 207-20	G1104KRRB	1 1/4	2.83	.79	2.02	Yes
155-722	HC 207-22	G1106KRRB	1 3/8	2.83	.79	2.02	Yes
155-723	HC 207-23	G1107KRRB	1 7/16	2.83	.79	2.02	Yes
155-724	HC 208-24	G1108KRRB	1 1/2	3.15	.86	2.22	Yes
155-728	HC 209-28	G1112KRRB	1 3/4	3.35	.87	2.22	Yes
155-732	HC 211-32	G1200KRRB	2	3.94	.94	2.81	Yes
155-735	HC 211-35	G1203KRRB	2 3/16	3.94	.94	2.81	Yes
155-757	HC 215-47	G1215KRRB	2 15/16	5.12	1.18	3.37	Yes

SB and SA Series Bearings • Spherical (Rounded OD)

• SB and SA type bearings have a metal shroud seal for protection against fiber creeping along shaft • Bearings are precision ground and suitable for high speed applications (such as fans) and for use under rugged conditions (such as farm machinery).

ORDER NO.	BEARING NO.	SIMILAR TO FAFNIR NO.	DIMENSIONS IN INCHES			RELUBE	SHIP WT.	
			I.D.	O.D.	B			C
A Set Screw Collar • Spherical (Rounded) O.D.								
150-795	SB 202-10	YA010RRB	5/8	1.57	.47	.87	No	1
117-127*	SB 204-12	YA012RRB	3/4	1.85	.55	.98	No	1
150-800	SB 204-12	YA012RRB	3/4	1.85	.55	.98	No	1
150-804	SB 205-14	YA014RRB	7/8	2.05	.59	1.06	No	1
150-825	SB 205-16	YA100RRB	1	2.05	.59	1.06	No	1
150-828	SB 206-18G	YA102RRB	1 1/8	2.44	.63	1.18	Yes	1
150-829	SB 206-19	YA103RRB	1 3/16	2.44	.63	1.18	No	1
150-840	SB 206-20	YA103RRB2	1 1/4 ^{ASM}	2.44	.63	1.18	No	1
150-879	SB 206-20G	YA103RRB2	1 1/4 ^{ASM}	2.44	.63	1.18	Yes	1
150-880	SB 207-20G	YA104RRB2	1 1/4	2.83	.67	1.26	Yes	1
150-841	SB 207-20	YA104RRB	1 1/4	2.83	.67	1.26	No	1
150-843	SB 207-23	YA107RRB	1 7/16	2.83	.67	1.26	No	1
150-881	SB 207-23G	YA107RRB	1 7/16	2.83	.67	1.26	Yes	2
150-844	SB 208-24	YA108RRB	1 1/2	3.15	.71	1.34	No	2

* Set Screws included but not installed

B Eccentric Collar • Spherical (Rounded) O.D.								
150-851	SA 202-10	RA010RRB	5/8	1.57	.51	1.12	No	1
150-852	SA 204-12	RA012RRB	3/4	1.85	.55	1.22	No	1
150-853	SA 205-14	RA014RRB	7/8	2.04	.59	1.22	No	1
150-854	SA 205-16G	GRA100RRB	1	2.04	.59	1.22	No	1
150-864	SA 205-16G	GRA100RRB	1	2.04	.59	1.22	Yes	1
150-855	SA 206-18	RA102RRB	1 1/8	2.44	.63	1.41	No	1
150-856	SA 206-19	RA103RRB	1 3/16	2.44	.63	1.41	No	1
150-857	SA 206-20	RA103RRB2	1 1/4 ^{ASM}	2.44	.63	1.41	No	1
150-871	SA 206-20G	GRA103RRB2	1 1/4	2.44	.63	1.41	Yes	1
150-861	SA 207-20	RA104RRB	1 1/4	2.83	.67	1.53	No	2
150-858	SA 207-22	RA106RRB	1 3/8	2.83	.67	1.53	No	2
150-859	SA 207-23	RA107RRB	1 7/16	2.83	.67	1.53	No	2
150-860	SA 208-24	RA108RRB	1 1/2	3.14	.71	1.72	No	2

Insert & Cam Follower Bearings

CSB and CSA Series Bearings • Cylindrical (Flat OD)

ORDER NO.	BEARING NO.	SIMILAR TO FAFNIR NO.	DIMENSIONS IN INCHES				RELUBE	SHIP WT.
			I.D.	O.D.	B	C		
Ⓐ Set Screw Collar • Cylindrical (Flat O.D.)								
150-543	CSB 202-10	YA010RR	5/8	1.57	.47	.87	No	1
150-545	CSB 205-16	YA100RR	1	2.05	.59	1.06	No	1
150-547	CSB 206-20	YA103RR2	1 1/4 SM	2.44	.63	1.18	No	1
150-518	CSB 207-20	YA104RR2	1 1/4	2.83	.67	1.26	No	2
Ⓑ Eccentric Collar • Cylindrical (Flat O.D.)								
150-521	CSA 204-12	RA012RR	3/4	1.85	.55	1.22	No	1
150-525	CSA 205-16	RA100RR	1	2.04	.59	1.22	No	1
150-532	CSA 206-20	RA103RR2	1 1/4 SM	2.44	.63	1.41	No	1
150-534	CSA 207-20	RA104RR	1 1/4	2.83	.67	1.41	No	2
150-538	CSA 207-22	RA104RR2	1 3/8	2.83	.67	1.41	No	2
150-541	CSA 208-24	RA108RR	1 1/2	3.14	.71	1.72	No	2
150-542	CSA 209-28	RA112RR	1 3/4	3.34	.75	1.72	No	2

SER Series Bearings • with Retaining Ring

• Snap ring on set screw side • Wide inner race • Metal slingers with contact seals • Replaces FYH & Sealmaster ER series • Cylindrical (Flat) O.D.

ORDER NO.	BEARING NO.	SIMILAR TO FAFNIR NO.	DIMENSIONS IN INCHES			
			I.D.	O.D.	B	C
150-550	SER 204-12	ER12	3/4	1.85	.63	1.22
150-552	SER 205-14	ER14	7/8	2.05	.75	1.38
150-553	SER 205-16	ER16	1	2.05	.75	1.38
150-556	SER 206-19	ER19	1 3/16	2.44	.88	1.50
150-559	SER 206-20	ER20R	1 1/4 SM	2.44	.88	1.50
150-561	SER 207-20	ER20	1 1/4	2.83	.94	1.69
150-564	SER 207-23	ER23	1 7/16	2.83	.94	1.69
150-567	SER 208-24	ER24	1 1/2	3.15	1.09	1.94
150-568	SER 209-28	ER28	1 3/4	3.35	1.09	1.94
150-572	SER 210-31	ER31	1 15/16	3.54	1.12	2.03
150-578	SER 212-36	ER36	2 1/4	4.33	1.25	2.56

* Groove only around ring. No Snap Ring

IKO Cam Follower Bearings • Shielded

• Inch Series • High carbon steel with cage/with screwdriver slot • Shielded with cylindrical outer ring • All are IKO brand except 158-810

ORDER NO.	BEARING NO.	DIMENSIONS IN INCHES			
		d	D	B	L
158-804	CR-12	3/8	3/4	9/16	17/16
158-805	CR-14	3/8	7/8	9/16	17/16
158-806	CR-16	7/16	1	11/16	111/16
158-808	CR-20	1/2	1 1/4	13/16	2
158-809	CR-22	1/2	1 3/8	13/16	2

ORDER NO.	BEARING NO.	DIMENSIONS IN INCHES			
		d	D	B	L
158-810*	CR-24	5/8	1 1/2	15/16	27/16
158-811	CR-26	5/8	1 5/8	15/16	27/16
158-812	CR-28	3/4	1 3/4	11/16	2 13/16
158-814	CR-32	7/8	2	15/16	35/16
158-815	CR-36	7/8	2 1/4	15/16	35/16

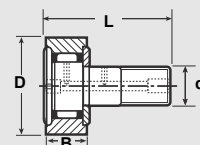
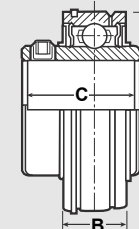
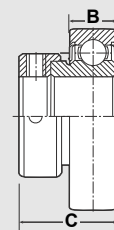
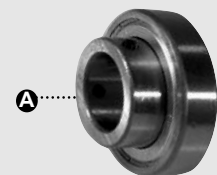
* Non IKO Brand

Cam Follower Bearings • Sealed

• Inch Series • High carbon steel with cage/with hexagon hole • Sealed with cylindrical outer ring

158-870	CR-12 BUU	3/8	3/4	9/16	17/16
158-871	CR-14 BUU	3/8	7/8	9/16	17/16
158-872	CR-16 BUU	7/16	1	11/16	111/16
158-873	CR-20 BUU	1/2	1 1/4	13/16	2
158-874	CR-22 BUU	1/2	1 3/8	13/16	2

158-875	CR-24 BUU	5/8	1 1/2	15/16	27/16
158-876	CR-26 BUU	5/8	1 5/8	15/16	27/16
158-877	CR-28 BUU	3/4	1 3/4	11/16	2 13/16
158-878	CR-32 BUU	7/8	2	15/16	35/16
158-879	CR-36 BUU	7/8	2 1/4	15/16	35/16



Bearings & Chains

Insert And Radial Bearings



Regular Duty Flanged Wheel Bearings

• Minimum quantity - 10.

ORDER NO.	I.D.	O.D.	WIDTH	FLANGE O.D.
150-005	1/2	11/8	7/16	11/4
150-050	1/2	13/8	7/16	11/2

ORDER NO.	I.D.	O.D.	WIDTH	FLANGE O.D.
150-075	5/8	13/8	7/16	11/2
150-080	3/4	13/8	7/16	11/2
150-092	1	2	5/8	21/8



Heavy Duty Flanged Wheel Bearings

ORDER NO.	SIMILAR TO HEIM NO.	I.D.	O.D.	WIDTH	FLANGE O.D.
117-170	-	7/16	13/8	1/2	11/2
150-022	RF82214	1/2	13/8	1/2	11/2
150-021	RF102214	5/8	13/8	1/2	11/2
150-025*	RF102214	5/8	13/8	1/2	11/2
116-159**	RF122214	3/4	13/8	1/2	11/2
150-020	RF122214	3/4	13/8	1/2	11/2
150-024	RF122816	3/4	13/4	9/16	17/8
150-023	RF163216	1	2	9/16	21/8

ORDER NO.	SIMILAR TO HEIM NO.	I.D.	O.D.	WIDTH	FLANGE O.D.
Made in USA					
150-089	RF82214	1/2	13/8	1/2	11/2
150-094	RF102214	5/8	13/8	1/2	11/2
150-096	RF122214	3/4	13/8	1/2	11/2
150-087	RF163216	1	2	9/16	21/8

* Open one Side ** Open Both Sides

R Series Bearings

• Conrad construction enables these bearings to take a radial thrust as well as a radial load • 1RS (1 rubber seal) • 2RS (2 rubber seals) • ZZ (2 steel shields) • NR (with snap ring).

ORDER NO.	BEARING NO.	I.D.	O.D.	WIDTH
150-688	R3-2RS	3/16	1/2	.19
150-670	R4-2RS	1/4	5/8	.19
150-671	R6-2RS	3/8	7/8	.28
150-689	R8-2RSNR	1/2	11/8	.31
150-672	R8-2RS	1/2	11/8	.31
150-673	R10-2RS	5/8	13/8	.34
150-669	R10-ZZ	5/8	13/8	.34
150-679	R12-ZZ	3/4	15/8	.43
150-674	R12-2RS	3/4	15/8	.43

ORDER NO.	BEARING NO.	I.D.	O.D.	WIDTH
150-675	R14-2RS	7/8	17/8	.50
150-141	R14-ZZ	7/8	17/8	.50
150-676	R16-2RS	1	2	.50
150-142	R16-ZZ	1	2	.50
150-677	R18-2RS	11/8	21/8	.50
150-678	R20-2RS	11/4	21/4	.50
150-146	R22-ZZ	13/8	21/2	.56
150-687	R24-2RS	11/2	25/8	.56

1600 Series Bearings

• This INCH series offers economy with electric motor quality. Close tolerance and improved ball complement allow an increased load capacity. • 2RS (2 rubber seals) • ZZ (2 steel shields) • NR (with snap ring)

ORDER NO.	BEARING NO.	I.D.	O.D.	WIDTH
150-776	1601-2RS	3/16	11/16	1/4
150-779	1604-2RS	3/8	7/8	11/32
150-780	1605-2RS	5/16	29/32	5/16
150-783	1607-2RS	7/16	29/32	5/16
150-301	1614-2RS	3/8	11/8	3/8
150-302	1616-2RS	1/2	11/8	3/8
150-617	1616-ZZ	1/2	11/8	3/8
150-306	1621-2RS	1/2	13/8	7/16
150-308	1622-2RS	9/16	13/8	7/16
150-310	1623-2RS	5/8	13/8	7/16
150-618	1623-ZZ	5/8	13/8	7/16
150-312	1628-2RS	5/8	15/8	1/2

ORDER NO.	BEARING NO.	I.D.	O.D.	WIDTH
150-314	1630-2RS	3/4	15/8	1/2
150-318	1635-2RS	3/4	13/4	1/2
116-681	1635-ZZ	3/4	13/4	1/2
150-157	1638-2RS	3/4	2	9/16
150-320	1640-2RS	7/8	2	9/16
150-322	1641-2RS	1	2	9/16
150-326	1654-2RS	11/4	21/2	5/8
116-164	1657-ZZ	11/4	29/16	11/16

5200 and 5300 Series Double Row Bearings

• For heavy radial loads, combined radial and thrust loads, and two-directional loads • 2RS (2 rubber shields) • ZZ (2 steel shields)

ORDER NO.	BEARING NO.	I.D.	O.D.	WIDTH
150-760	5200-ZZ	.39	1.18	9/16
150-692	5200-2RS	.39	1.18	9/16
150-761	5201-ZZ	.47	1.25	5/8
150-758	5201-2RS	.47	1.25	5/8
150-762	5202-ZZ	.59	1.37	5/8
150-775	5202-2RS	.59	1.37	5/8
150-763	5203-ZZ	.66	1.57	11/16
150-693	5203-2RS	.66	1.57	11/16
150-764	5204-ZZ	.78	1.85	13/16
150-694	5204-2RS	.78	1.85	13/16
150-765	5205-ZZ	.98	2.04	13/16

ORDER NO.	BEARING NO.	I.D.	O.D.	WIDTH
150-695	5205-2RS	.98	2.04	13/16
150-751	5205-OPEN	.98	2.04	13/16
150-696	5206-2RS	1.18	2.44	15/16
150-767	5207-ZZ	1.37	2.83	11/16
150-768	5208-ZZ	1.57	3.14	13/16
150-759	5210-ZZ	1.96	3.14	13/16
150-782	5304-2RS	.78	2.04	7/8
150-755	5305-2RS	.98	2.44	1
150-773	5306-ZZ	1.18	2.83	13/16
150-749	5306-2RS	1.18	2.83	13/16

7500 and 7600 Series Bearings

• Single row retainer type precision radial bearings.

ORDER NO.	BEARING NO.	I.D.	O.D.	WIDTH	
				INNER	OUTER
A 7500 Series with Snap Ring					
150-500	7510DLG	5/8	13/4	3/4	5/8
150-501	7512DLG	3/4	13/4	3/4	5/8
150-502	7516DLG	1	2	3/4	5/8

B 7600 Series with Snap Ring & Set Screw Locking Collar					
ORDER NO.	BEARING NO.	I.D.	O.D.	INNER	OUTER
150-503	7610DLG	5/8	13/4	1.09	5/8
150-504	7612DLG	3/4	13/4	1.09	5/8
150-505	7616DLG	1	2	1.17	5/8

#Z9504RST Bearing

ORDER NO.	I.D.	O.D.	DESCRIPTION
150-903	3/4	1.784	2 Steel Shields

#99502H and #499502H Bearings

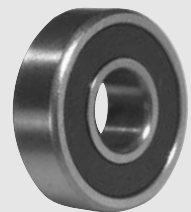
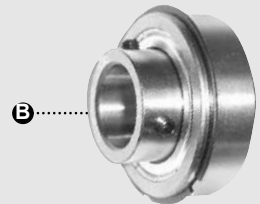
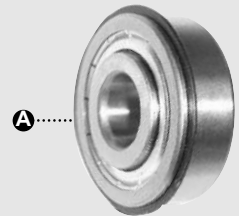
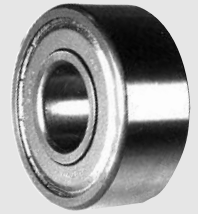
ORDER NO.	BEARING NO.	I.D.	O.D.
150-498	99502H	5/8	1.374
150-499	499502H with Snap Ring	5/8	1.374

6000 Series Bearings and 6000 Series EMQ Bearings

• Designed for applications with space limitations and where shafts are relatively large. • 2RS (2 rubber seals) • ZZ (2 steel shields) • NR (with snap ring) • EMQ (Electric Motor Quality)

ORDER NO.	BEARING NO.	I.D.	O.D.	WIDTH
150-600	6000-2RS	.39	1.02	.31
150-598	6000-ZZ	.39	1.02	.31
150-601	6001-2RS	.47	1.10	.31
153-521	6001-2RS/C3 EMQ	.47	1.10	.31
150-602	6002-2RS	.59	1.25	.35
150-614	6002-ZZ	.59	1.25	.35
153-522	6002-2RS/C3 EMQ	.59	1.25	.35
150-656	6003-2RS	.66	1.37	.39
150-651	6003-ZZ	.66	1.37	.39
150-657	6004-2RS	.78	1.65	.47
150-636	6004-ZZ	.78	1.65	.47
153-524	6004-2RS/C3 EMQ	.78	1.65	.47
150-658	6005-2RS	.98	1.85	.47
150-615	6005-ZZ	.98	1.85	.47
153-525	6005-2RS EMQ	.98	1.85	.47

ORDER NO.	BEARING NO.	I.D.	O.D.	WIDTH
150-148	6006-ZZ	1.18	2.16	.51
150-659	6006-2RS	1.18	2.16	.51
153-526	6006-2RS/C3 EMQ	1.18	2.16	.51
150-660	6007-2RS	1.37	2.44	.55
150-661	6008-2RS	1.57	2.67	.59
150-681	6008-ZZ	1.57	2.67	.59
150-662	6009-2RS	1.77	2.95	.62
150-663	6010-2RS	1.96	3.14	.62
150-149	6010-ZZ	1.96	3.14	.62
116-065	6011-2RS	2.16	3.54	.70
150-654	6012-2RS	2.36	3.74	.70
150-655	6014-2RS	2.75	4.33	.78
150-704	6020-2RS	3.93	5.90	.94



Bearings & Chains

Radial Bearings



6200 Series Bearings and 6200 Series EMQ Bearings

- Specifically designed to provide maximum performance by means of precise ball complement selection.
- 2RS (2 rubber seals) • ZZ (2 steel shields) • NR (with snap ring) • EMQ (Electric Motor Quality)

ORDER NO.	BEARING NO.	I.D.	O.D.	WIDTH
150-200	6200-ZZ	.39	1.18	.35
150-215	6200-2RS	.39	1.18	.35
116-999	6200-2RSNR-1/2	.50	1.18	.35
153-527	6200-2RS/C3 EMQ	.39	1.18	.35
150-216	6201-2RS	.47	1.25	.39
150-201	6201-ZZ	.47	1.25	.39
153-528	6201-2RS/C3 EMQ	.47	1.25	.39
150-213	6201-2RS-1/2	.50	1.25	.39
150-208	6202-ZZNR	.59	1.37	.43
150-207	6202-ZZ	.59	1.37	.43
150-106	6202-2RS-1/2	.50	1.37	.43
153-529	6202-2RS/C3 EMQ	.59	1.37	.43
116-686	6202-RS (1 Seal)	.59	1.37	.43
150-186	6202-2RS-10mm	.39	1.37	.43
150-217	6202-2RS	.59	1.37	.43
150-185	6202-2RS-5/8	.625	1.37	.43
150-233	6203-2RS	.66	1.57	.47
153-530	6203-2RS/C3 EMQ	.66	1.57	.47
150-110	6203-2RS-1/2	.50	1.57	.47
150-232	6203-2RS-5/8	.625	1.57	.47
150-221	6203-2RS-3/4	.75	1.57	.47
117-171	6203-2RSNR-12	.75	1.57	.47
150-203	6203-ZZ	.66	1.57	.47
150-210	6203-ZZ 3/4 C/3	.75	1.57	.47
150-950	6204-2RS	.78	1.85	.55
150-235	6204-2RS-3/4	.75	1.85	.55
150-985	6204-ZZ	.78	1.85	.55
153-531	6204-2RS/C3 EMQ	.78	1.85	.55

ORDER NO.	BEARING NO.	I.D.	O.D.	WIDTH
150-958	6205-2RS	.98	2.04	.59
150-626	6205-2RSNR	.98	2.04	.59
150-986	6205-ZZ	.98	2.04	.59
153-532	6205-2RS/C3 EMQ	.98	2.04	.59
150-152	6205-2RS-1	1.00	2.04	.59
150-960	6206-2RS	1.18	2.44	.62
153-533	6206-2RS/C3 EMQ	1.18	2.44	.62
150-987	6206-ZZ	1.18	2.44	.62
116-820	6206-NR	1.18	2.44	.62
150-965	6207-2RS	1.37	2.83	.66
150-989	6207-ZZ	1.37	2.83	.66
150-997	6208-ZZ	1.57	3.14	.70
150-966	6208-2RS	1.57	3.14	.70
150-967	6209-2RS	1.77	3.34	.74
150-988	6209-ZZ	1.77	3.34	.74
150-993	6210-ZZ	1.96	3.54	.78
150-968	6210-2RS	1.96	3.54	.78
153-541	6210-2RS EMQ	1.96	3.54	.78
150-981	6211-2RS	2.16	3.93	.82
153-544	6211-2RS EMQ	2.16	3.93	.82
150-978	6212-2RS	2.36	4.33	.86
153-545	6212-2RS EMQ	2.36	4.33	.86
150-980	6214-2RS	2.75	4.92	.94
150-933	6215-2RS	2.95	5.11	.98
150-111	6216-2RS	3.14	5.51	1.02
150-112	6217-2RS	3.34	5.90	1.10



6300 Series Bearings and 6300 Series EMQ Bearings

- Specifically designed to provide maximum performance through precise ball complement selection
- 2RS (2 rubber seals) • ZZ (2 steel shields) • EMQ (Electric Motor Quality)

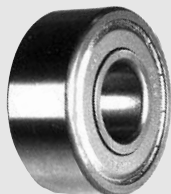
ORDER NO.	BEARING NO.	I.D.	O.D.	WIDTH
150-165	6301-2RS	.47	1.45	.47
150-934	6302-2RS	.59	1.65	.51
150-936	6303-2RS	.66	1.85	.55
150-939	6304-2RS	.78	2.04	.59
150-937	6304-ZZ	.78	2.04	.59
153-538	6304-2RS/C3 EMQ	.78	2.04	.59
150-953	6305-2RS	.98	2.44	.66
150-991	6305-ZZ	.98	2.44	.66
153-539	6305-2RS/C3 EMQ	.98	2.44	.66
150-990	6306-ZZ	1.18	2.83	.74
150-971	6306-2RS	1.18	2.83	.74
153-540	6306-2RS/C3 EMQ	1.18	2.83	.74
150-969	6306-2RS-1.25	1.25	2.83	.74

ORDER NO.	BEARING NO.	I.D.	O.D.	WIDTH
150-992	6307-ZZ	1.37	3.14	.82
150-972	6307-2RS	1.37	3.14	.82
150-973	6308-2RS	1.57	3.54	.90
150-974	6309-2RS	1.77	3.93	.98
150-975	6310-2RS	1.96	4.33	1.06
150-996	6310-ZZ	1.96	4.33	1.06
150-976	6311-2RS	2.16	4.72	1.14
116-059	6311-2RS	2.16	4.72	1.14
150-977	6312-2RS	2.36	5.11	1.22
116-060	6312-2RS	2.36	5.11	1.22
150-982	6313-2RS	2.55	5.51	1.29

6900 Series - Extra Light Bearings

- 6900 Series - Extra light • 2RS (2 rubber seals)

ORDER NO.	BEARING NO.	I.D.	O.D.	WIDTH
150-281	6901-2RS	0.47	0.94	0.24
150-290	6914-2RS	2.75	3.93	0.62



Mast Guide Bearings

• Mast guide bearings are designed to withstand the heavy radial loads required in fork lift truck applications

ORDER NO.	BEARING NO.	SIMILAR TO	DIMENSIONS IN MM		
			I.D.	O.D.	WIDTH
150-388	MG305-2RS-1	305SZZ-3	.98	3.00	1.00
150-389	MG305-2RS-2	305SZZ-6	1.00	2.93	1.00
150-395	MG307-2RS-1	307SZZ-10	1.37	3.99	1.12
150-391	MG308-2RS-1	308SZZ-5	1.57	4.48	1.25
150-392	MG309-2RS-1	309SZZ-4	1.77	5.00	1.25

Metric Miniature Precision Bearings

• 2RS (2 rubber seals) • ZZ (2 steel shields) • NR Ring Groove with Ring

ORDER NO.	BEARING NO.	I.D.	DIMENSIONS IN MM		WIDTH
			O.D.		
150-461	627-2RS	7	22		7
150-635	608-2RS	8	22		7
150-647	608-ZZ	8	22		7

Disc Harrow Bearings

• Ideal replacements for FAFNIR, BCA, NTN, NDH, and other brands • Bearing numbers with a "G" prefix are regreasable.

ORDER NO.	BEARING NO.	BCA NO.	ID	ROUND	SQUARE	O.D.	RELUBRICATABLE
Spherical (Rounded O.D.)							
157-125	W208PPB5	DS208TT5	1 1/8"		Square	3.14	No
157-135	W208PPB6	DS208TT6	1"		Square	3.14	No
157-120	W208PPB7	DS208TT7	1.18"	Round		3.14	No
157-201	W208PPB8	DS208TT8	1 1/8"		Square	3.14	No
157-202	W208PPB11	DS208TT11	7/8"		Square	3.43	No
157-203	W208PPB12	DS208TT12	1 1/8"		Square	3.43	No
157-229	W209PPB2	DS209TT2	1.77"	Round		3.34	No
157-206	W209PPB4	DS209TT4	1.53"	Round		3.34	No
157-222	W209PPB5	DS209TT5	1 1/4"		Square	3.34	No
157-207	W210PPB4	DS210TT4	1 1/8"		Square	3.54	No
157-208	W211PPB3	DS211TT3	1 1/2"		Square	3.93	No
157-130	GW208PPB5	DS208TTR5	1 1/8"		Square	3.14	Yes
157-211	GW208PPB8	DS208TTR8	1 1/8"		Square	3.14	Yes
157-140	GW209PPB4	DS209TTR4	1.53"	Round		3.34	Yes
157-225	GW211PPB3	DS211TTR3	1 1/2"		Square	3.93	Yes
Cylindrical (Flat O.D.)							
157-110*	W208PP5	DC208TT5	1 1/8"		Square		No
157-224**	W208PP8	DC208TT8	1 1/8"		Square		No
157-115	W211PP3	DC211TT3	1 1/2"		Square		No
157-190	W211PP5	DC211TT5	1 1/2"		Square		No
157-212	GW208PP17	DC208TTR17	1 1/8"		Square		Yes
157-180	GW211PP3	DC211TTR3	1 1/2"		Square		Yes

*Outer race width .709" **Outer race width 1.189"

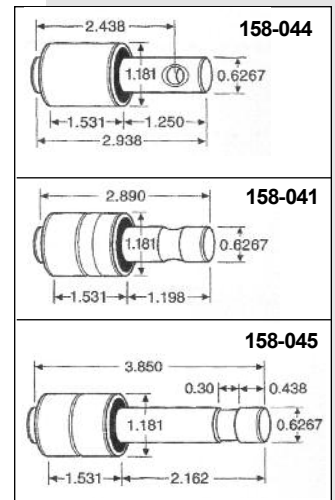
Agricultural Equipment Replacement Bearings

ORDER NO.	BEARING NO.	I.D.	O.D.
158-004	203KRR2	0.63	1.57
158-008	205PPB7	0.94	2.04
158-011	204RY2	0.62	1.78
158-044	885152	See Diagram	1.18
158-041	885154B	See Diagram	1.18
158-045	885151E	See Diagram	1.18
158-016	205KRR2	.87 hex	2.04
158-017	204KRR8	0.62	1.78
158-006	204FREN	0.63	1.78
158-009	205RVA	0.75	2.04
158-013	205NPP9	0.75	2.04
158-018	202RRE	0.59	1.37
158-005	203KRR5	0.51	1.57
150-108	8267	0.62	1.37

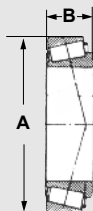
Square Flange Disc Harrow Bearings

• Tri-ply seals • Housing is riveted together with two "O" Rings • 4-hole mounting.

ORDER NO.	BEARING NO.	BCA NO.	BORE	BOLT HOLES	SHIP WT.
158-001	ST 491A	FD209RA	1 3/4" Round	Round	4
158-020	ST 491B	FD209B	1 1/2" Round	Round	4
158-021	ST 209-1 1/8	FD209RM	1 1/8" Round	Square	5

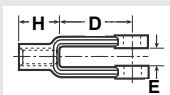


Cup/Cone Bearings, Yokes & Joints



Tapered Cup and Cone Sets

ORDER NO.	CONE / CUP NO.	CONE I.D.	DIMENSIONS	
			A	B
156-250	LM11749/LM11710	.68	1.57	.54
156-251	LM11949/LM11910	.75	1.78	.61
156-252	M12649/M12610	.84	1.96	.69
156-253	LM12749/M12710	.86	1.78	.61
156-266	LM12749/LM12711	.86	1.81	.61
156-254	L44643/L44610	1.00	1.98	.56
156-255	L44649/L44610	1.06	1.98	.56
156-256	LM67048/LM67010	1.25	2.32	.62
156-264	15123/15245	1.25	2.44	.71
156-257	LM48548/LM48510	1.37	2.56	.71
156-258	L68149/L68110	1.37	2.32	.62
156-259	L68149/L68111	1.37	2.36	.62
156-089	L68111 Tapered Cup	1.37	2.36	.62
156-260	JL69349/JL69310	1.49	2.48	.66
156-265	LM29749/LM29710	1.50	2.56	.71
156-261	LM501349/LM501310	1.62	2.89	.77
156-263	25580/25520	1.75	3.26	.93



Adjustable Yoke Ends

ORDER NO.	SIZE	DIMENSIONS IN INCHES			PIN HOLE I.D.
		H	D	E	
133-218	1/4-28	3/4	1 1/4	9/32	1/4
133-220	5/16-24	13/16	17/16	11/32	5/16
133-221	3/8-24	7/8	15/8	7/16	3/8
133-226	7/16-20	1	17/8	1/2	7/16
133-227	1/2-20	1 1/8	17/8	9/16	1/2
133-228	5/8-18	1 1/4	3 11/16	11/16	5/8
133-229	3/4-16	1 1/2	49/16	13/16	3/4



Universal Joint Assemblies • Standard Series

- Direct interchange with Spicer 1000 series • Quality drop forged yokes coupled with relubricable needle bearings
- Maximum recommended torque at continued duty 1000 RPM: 800 inch lbs • Overall length 5" • 1/4" keyways

ORDER NO.	ROUND I.D.	KEYWAY	SHIP WT.
133-014	3/4 x 3/4	3/16	3
133-015	7/8 x 7/8	3/16	3
133-016	1 x 1	1/4	3
New! 133-018	1 x 1 1/4	1/4	3
New! 133-017	1 1/8 x 1 1/8	5/16	3
133-020	1 1/4 x 1 1/4	5/16	3

Rod Ends • Bronze Raceway Series • Low carbon steel housing chrome plated • Bronze Raceway

ORDER NO.	THREAD SIZE	BEARING I.D.	LENGTH A	ULT. STATIC RADIAL LOAD LB.
Male - Pic A				
170-301 or 116-857	1/4-28	1/4	19/16	2,168
170-303	5/16-24	5/16	17/8	2,796
117-128	3/8-24	3/8	15/16	4,012
170-305 or 117-120	3/8-24	3/8	115/16	4,012
170-307	7/16-20	7/16	21/8	4,244
170-309 or 117-122	1/2-20	1/2	27/16	6,700
170-311 or 116-866	5/8-18	5/8	21/16	7,400
170-313 or 117-123	3/4-16	3/4	27/8	11,550
170-315	1-14	1	41/8	43,555

Female - Pic B				
170-321	1/4-28	1/4	15/16	2,545
170-323 or 116-838	5/16-24	5/16	13/8	3,200
170-325	3/8-24	3/8	15/8	3,950
170-327 or 116-852 or 841	7/16-20	7/16	113/16	4,300
170-329	1/2-20	1/2	21/8	6,700
170-331 or 117-112	5/8-18	5/8	21/2	7,400
170-333 or 117-113	3/4-16	3/4	27/8	11,550
170-335	1-14	1"	41/8	43,555

Male with Stud - Pic C				
170-341 or 116-867	1/4-28	-	9/16	2,168
170-343	5/16-24	-	11/16	2,796
170-345	3/8-24	-	29/32	4,012
170-349 or 117-125	1/2-20	-	11/8	6,700
170-351	5/8-18	-	11/2	7,400
170-353	3/4-16	-	113/16	11,550
170-353L	3/4-16	-	113/16	11,550

Female with Stud - Pic D				
170-361	1/4-28	-	9/16	2,545
170-363	5/16-24	-	11/16	3,200
170-365	3/8-24	-	29/32	3,950
170-367 or 116-853	7/16-20	-	11/16	4,300
170-369	1/2-20	-	11/8	6,700
170-371	5/8-18	-	11/2	7,400
170-373	3/4-16	-	113/16	11,550

Heavy Duty Rod Ends

• 3 piece, precision high strength alloy construction • Ball is 52100 steel Rc min hardness, hard chrome plated • Body and race are steel alloy heat treated, zinc plated, chromate treated

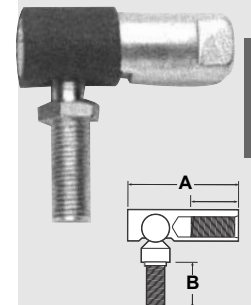
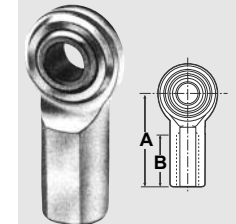
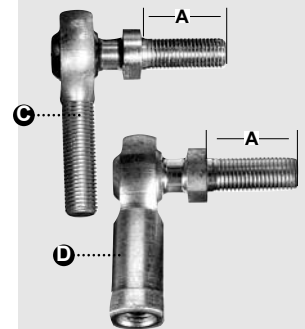
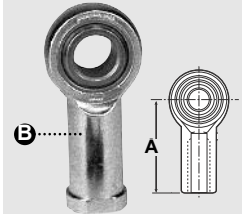
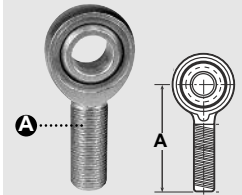
Female						Male						
ORDER NO.	THREAD SIZE	BEARING I.D.	DIMENSIONS		ULT. STATIC RADIAL LD. (LBS)	PRICE EACH	ORDER NO.	THREAD SIZE	BEARING I.D.	DIMENSIONS		ULT. STATIC RADIAL LD. (LBS)
			A	B						A	B	
170-475	1/2-20	1/2	21/8	11/16	15,340	18.00	170-459	1/2-20	1/2	27/16	11/2	16,242
170-477	5/8-18	5/8	21/2	13/8	17,959	27.00	170-461	5/8-18	5/8	25/8	15/8	17,959
170-479	3/4-16	3/4	27/8	19/16	28,090	39.00	170-463	3/4-16	3/4	27/8	13/4	28,090
170-481	11/4-12	1	41/8	21/8	76,205	87.00	170-467	11/4-12	1	41/8	21/8	76,205

Ball Joints With Dirt Shield

• Made of low carbon steel, plated and treated for corrosion resistance

ORDER NO.	THREAD SIZE	DIMENSIONS	
		A	B
170-112	#10-32	15/32	7/16
170-105	1/4-28	15/16	9/16
170-106	5/16-24	19/16	11/16
170-107	3/8-24	113/16	7/8
170-131	1/2-20	21/2	11/8
170-133	5/8-18	2 9/16	11/8

* No Dirt Shield

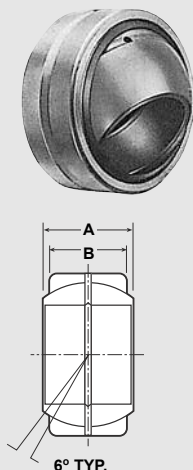


Bearings & Chains

Spherical Bushings & Bearings

Spherical Plain Bearings

• These widely-used steel on steel bushings are popular replacements in applications such as bull dozer cylinders, shovel-loaders, center pins, axial plunger pumps, tractor shovel cylinders, rock crushers, cranes and more.



Inch

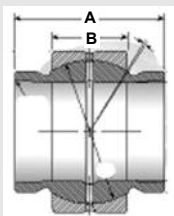
ORDER NO.	BEARING NO.	DIMENSIONS IN INCHES			
		I.D.	O.D.	A	B
158-912	GEZ19ES	3/4	1 1/4	.66	.56
158-916	GEZ25ES	1	1 5/8	.88	.75
158-920	GEZ31ES	1 1/4	2	1.09	.94
158-922	GEZ34ES	1 3/8	2 3/16	1.19	1.03
158-924	GEZ38ES	1 1/2	2 7/16	1.31	1.13
158-954	GEZ38ES-2RS	1 1/2	2 7/16	1.31	1.13
158-928	GEZ44ES	1 3/4	2 13/16	1.53	1.31
158-932	GEZ50ES	2	3 3/16	1.75	1.50
158-936	GEZ57ES	2 1/4	3 9/16	1.97	1.69
158-943	GEZ57ES-2RS	2 1/4	3 9/16	1.97	1.68
158-940	GEZ63ES	2 1/2	3 15/16	2.19	1.88
158-944	GEZ69ES	2 3/4	4 3/8	2.41	2.06
158-968	GEZ69ES-2RS	2 3/4	4 3/8	2.41	2.06
158-948	GEZ76ES	3	4 3/4	2.63	2.25
158-997	GEZ88ES	3 1/2	5 1/2	3.06	2.63
158-960	GEZ95ES	3 3/4	5 7/8	3.28	2.81
158-964	GEZ101ES	4	6 1/4	3.50	3.00
158-995	GEZ114ES	4 1/2	7	3.94	3.88

Metric

ORDER NO.	BEARING NO.	DIMENSIONS (IN MILLIMETERS)			
		I.D.	O.D.	A	B
158-611	GE17ES	17	30	14	10
158-625	GE25ES	25	42	20	16
158-650 or 116-931	GE30ES	30	47	22	18
116-932	GE35ES	35	55	25	20
116-933	GE35FO	35	62	35	22
158-640	GE40ES	40	62	28	22
158-622	GE45ES	45	68	32	25
158-670 or 116-941	GE50ES	50	75	35	28
116-936	GE50ES	50	90	56	36
116-937	GE50FO-2RS	50	90	56	36
158-623	GE60ES	60	90	44	36
158-624 or 116-939	GE70ES	70	105	49	40
116-940	GE70FO	70	120	49	45
158-626	GE80ES	80	120	55	45
116-950	GE80FO	80	130	75	50
158-627 or 116-951	GE90ES	90	130	60	50
116-952	GE90FO	90	150	85	55
116-953	GE100ES	100	150	70	55
116-954	GE100ES-2RS	100	150	70	55
116-955	GE140ES	140	210	90	70
116-956	GE180ES-2RS180	260	105	80	

New! Spherical Bearings • High Misalignment Series

Metric High Misalignment • These widely-used steel on steel bushings are popular replacements in applications such as bull dozer cylinders, shovel-loaders, center pins, axial plunger pumps, tractor shovel cylinders, rock crushers, cranes and more.



ORDER NO.	BEARING NO.	DIMENSIONS (IN MILLIMETERS)				MISALIGNMENT DEGREE
		I.D.	O.D.	A	B	
158-639	GEG25ES-2RS	25	47	28	18	18
158-647	GEG30ES-2RS	30	55	32	20	18
158-648	GEG35ES-2RS	35	62	35	22	16
158-643	GEG40ES-2RS	40	68	40	25	17
158-672	GEG45ES-2RS	45	75	43	28	15
158-671	GEG50ES-2RS	50	90	56	36	17
158-649	GEG60ES-2RS	60	105	63	40	17
158-644	GEG70ES-2RS	70	120	70	45	16
158-645	GEG80ES-2RS	80	130	75	50	15
158-646	GEG90ES-2RS	90	150	85	55	15
158-657	GEG100ES-2RS	100	160	85	55	14
158-658	GEG110ES-2RS	110	180	100	70	13

New! Spherical Bearings • Extended Inner Race Unsealed

ORDER NO.	BEARING NO.	DIMENSIONS (INCHES)			
		I.D.	O.D.	A	B
158-700	GEWZ25ES	1	1 5/8	1.5	0.75
158-701	GEWZ31ES	1 1/4	2	1.87	0.937
158-702	GEWZ34ES	1 3/8	2 3/16	2.06	1.03
158-703	GEWZ38ES	1 1/2	2 7/16	2.25	1.12
158-704	GEWZ44ES	1 3/4	2 13/16	2.625	1.312
158-705	GEWZ50ES	2	3 3/16	3.	1.5
158-706	GEWZ57ES	2 1/4	3 9/16	3.375	1.687
158-707	GEWZ63ES	2 1/2	3 3/4	3.75	1.87
158-713	GEWZ69ES	2 3/4	4 3/8	4.125	2.062
158-709	GEWZ76ES	3	4 3/4	4.5	2.25

Spherical Roller Bearings • All are brass cage and oil fill hole design

22200 Series - Cylindrical Bore

ORDER NO.	BEARING NO.	DIMENSIONS (MILLIMETERS)			SHIP WT.
		I.D.	O.D.	WIDTH	
156-535	22210 CA C3 W33	50	90	23	2
156-536	22211 CA C3 W33	55	100	25	2
156-537	22212 CA C3 W33	60	110	28	3
156-538	22213 CA C3 W33	65	120	31	3
156-539	22214 CA C3 W33	70	125	31	4
156-540	22215 CA C3 W33	75	130	31	4
156-541	22216 CA C3 W33	80	140	33	5
156-542	22217 CA C3 W33	85	150	36	7
156-543	22218 CA C3 W33	90	160	40	8
156-544	22219 CA C3 W33	95	170	43	10
156-545	22220 CA C3 W33	100	180	46	12

22300 Series - Cylindrical Bore

ORDER NO.	BEARING NO.	DIMENSIONS (MILLIMETERS)			SHIP WT.
		I.D.	O.D.	WIDTH	
156-555	22310 CA C3 W33	50	110	40	5
156-556	22311 CA C3 W33	55	120	43	6
156-557	22312 CA C3 W33	60	130	46	7
156-558	22313 CA C3 W33	65	140	48	8
156-559	22314 CA C3 W33	70	150	51	10
156-560	22315 CA C3 W33	75	160	55	12
156-561	22316 CA C3 W33	80	170	58	14
156-562	22317 CA C3 W33	85	180	60	17
156-563	22318 CA C3 W33	90	190	64	20
156-564	22319 CA C3 W33	95	200	67	23
156-565	22320 CA C3 W33	100	215	73	29



Bronze Bushings

• These high quality bushings offer a wide variety of applications • Oil filled • Self-lubricating

A Straight

ORDER NO.	I.D.	O.D.	LENGTH
153-175	3/8	1/2	3/4
153-185	1/2	5/8	1
153-190	1/2	3/4	3/4
153-195	1/2	3/4	11/2
153-205	5/8	3/4	1
153-207	5/8	7/8	1
153-215	3/4	1	3/4
153-216	3/4	1	1
153-217	3/4	1	11/4
153-220	7/8	1	1

ORDER NO.	I.D.	O.D.	LENGTH
153-227	1	11/8	11/2
153-135	1	11/4	1
153-042	1	11/4	11/2
153-043	1	11/4	2
153-230	11/4	11/2	1
153-235	11/4	11/2	11/2
153-245	11/2	13/4	2
153-247	13/4	2	2
153-253	2	21/4	2

B Flanged

ORDER NO.	I.D.	O.D.	LENGTH	FLANGE O.D.
153-305	1/2	5/8	3/4	7/8
153-310	5/8	3/4	11/4	1
153-315	5/8	7/8	1	1

ORDER NO.	I.D.	O.D.	LENGTH	FLANGE O.D.
153-317	3/4	15/16	1	11/8
153-326	1	11/4	3/4	11/2

Split Bronze Bushings • NU Series

• Steel-backed, sintered bronze bearing containing an anti-friction matrix of PTFE and Lead Oxide, enhancing product performance • Suited for dry environments where no oil is required • Interchanges with Garlock DU Series • Temperature ranges from -195C to +280C

ORDER NO.	I.D.	O.D.	LENGTH
153-823	3/4	0.87"	1
153-827	1	1.12"	1/2
153-828	1	1.12"	3/4
153-816	1	1.12"	1
116-997*	1	1.12"	1

*Self-lubricating

ORDER NO.	I.D.	O.D.	LENGTH
153-837	11/4	1.40	11/4
116-998	11/4	1.40	11/4
116-996	11/4	1.40	13/4
153-845	11/2	1.65	11/4
153-846	11/2	1.65	11/2
153-855	2	2.18	2
153-856	2	2.18	21/2

Split Hardened Bushings • Made In USA

• High quality spring steel • AISI 6150 material

ORDER NO.	I.D.	O.D.	LENGTH
153-865	3/4	1	11/4
153-861	1	11/4	1/2
153-857	1	11/4	5/8
153-871	1	11/4	3/4
153-858	1	11/4	1
153-870	1	11/4	11/2
153-859	1	11/4	2

ORDER NO.	I.D.	O.D.	LENGTH
153-862	11/4	11/2	1/2
153-863	11/4	11/2	1
153-877	11/4	11/2	11/8
153-864	11/4	11/2	11/2
153-866	11/2	13/4	1
153-867	2"	21/4	2
153-868	2"	23/8	2
153-869	2"	21/2	2

Solid Steel Shaft Collars

• Zinc plated • Machined steel with one set screw.

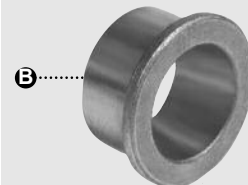
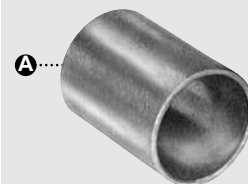
ORDER NO.	I.D.	O.D.	WIDTH
136-001	1/4	7/16	1/4
136-003	5/16	5/8	5/16
136-004	3/8	3/4	3/8
136-006	7/16	7/8	7/16
136-005	1/2	1	7/16
136-009	5/8	11/8	1/2
136-010	3/4	11/4	9/16
136-013	7/8	11/2	9/16
136-015	1	15/8	5/8
136-017	11/8	13/4	5/8

ORDER NO.	I.D.	O.D.	WIDTH
136-018	13/16	2	11/16
136-020	11/4	2	11/16
136-021	13/8	21/8	3/4
136-016	17/16	21/4	3/4
136-022	11/2	21/4	3/4
136-025	13/4	25/8	7/8
136-028	115/16	3	7/8
136-029	2	3	7/8
136-071	27/16	31/2	1
136-087	215/16	41/4	11/8

Solid Stainless Steel Shaft Collars • 304 Stainless • Sizes not listed below available on request.

ORDER NO.	I.D.	O.D.	WIDTH
136-402	1/4	7/16	1/4
136-406	3/8	3/4	3/8
136-408	1/2	1	7/16
136-410	5/8	11/8	1/2
136-412	3/4	11/4	9/16
136-416	1	15/8	5/8
136-420	11/4	2	11/16

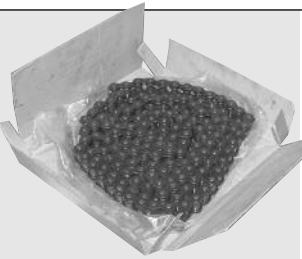
ORDER NO.	I.D.	O.D.	WIDTH
136-422	13/8	21/8	3/4
136-424	17/16	21/4	3/4
136-426	11/2	21/4	3/4
136-428	13/4	25/8	7/8
136-430	115/16	3	7/8
136-432	2	3	7/8



Bearings & Chains

New!

Chain Products & Key Shafting



Riveted Roller Chain

• Manufactured under exacting specifications of quality and tolerances.

Standard Series

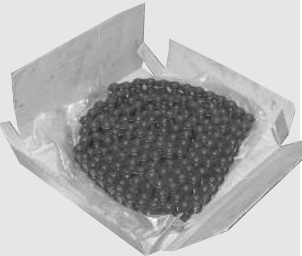
ORDER NO.	CHAIN SIZE	LENGTH IN FT.	SHIP WT.
131-535	35	10	3
131-544	35	100	25
131-536	40	10	5
131-545	40	100	47
131-546	41	10	3
131-547	41	100	30
131-537	50	10	9
131-548	50	50	42
131-549	50	100	83
131-538	60	10	10
131-550	60	50	50
131-551	60	100	100
131-539	80	10	18
131-552	80	50	90
131-540	100	10	27
131-553	100	50	135
131-541	120	10	42
131-542	140	10	50
131-543	160	10	66



Connector Links



Offset Links



Double Strand Series

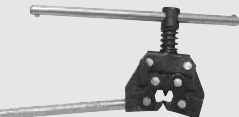
131-587	40-2	10	9
131-589	50-2	10	12
131-591	60-2	10	20
131-079	80-2	10	36
131-115	100-2	10	52

Heavy Series

131-555	50H	10	8
131-556	60H	10	12
131-557	80H	10	21
131-558	100H	10	31

Stainless Steel Series

131-303	40SS	10	5
131-307	50SS	10	8
131-309	60SS	10	10



Chain Breaker



Chain Holder

CONNECTOR LINK ORDER NO.
131-559
131-559
131-560
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131-566
131-566
131-568
131-568
131-570
131-571
131-572

OFFSET LINK ORDER NO.
131-573
131-573
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131-580
131-582
131-582
131-584
131-585
131-586

131-588
131-054
131-592
131-222
131-116

131-056
131-057
131-593
131-223
131-225

131-563
131-565
131-567
131-569

131-577
131-579
131-581
131-583

131-594
131-383
131-317

131-595
131-384
131-318

Roller Chain Breaker

• Quickly disconnect roller chains with this easy to use chain breaker • We offer two sizes which will break roller chain manufactured to ANSI specifications

ORDER NO.	MFGR #	DESCRIPTION
131-460	CB25-60	#25 to #60 Roller Chain Breaker
131-465	CB60-100	#60 to #100 Roller Chain Breaker

Roller Chain Holder

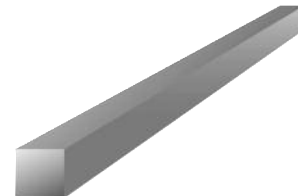
• Roller Chain Holder for ANSI chain sizes #35 through #60. • This compact tool will save time and effort by holding chain together during installation.

ORDER NO.	MFGR #	DESCRIPTION
131-470	CH-1	#35 thru #60 Roller Chain Holder

Round Keyed Shafting • Cold drawn steel • Full length keyways

ORDER NO.	DESCRIPTION DIAMETER	KEYWAY WIDTH LENGTH	SHIP WT.
136-700	1/2"	3 Ft. 1/8	3
136-701	5/8"	3 Ft. 3/16	3
136-702	3/4"	3 Ft. 3/16	6
136-703	7/8"	3 Ft. 3/16	7
136-704	1"	3 Ft. 1/4	9
136-705	1 1/8"	3 Ft. 1/4	12
136-706	1 1/4"	3 Ft. 1/4	14
136-707	1 3/8"	3 Ft. 5/16	16
136-708	1 1/2"	3 Ft. 3/8	19
136-709	1 1/2"	6 Ft. 1/8	6
136-710	5/8"	6 Ft. 3/16	8
136-711	3/4"	6 Ft. 3/16	12
136-712	7/8"	6 Ft. 3/16	14
136-713	1"	6 Ft. 1/4	18
136-714	1 1/8"	6 Ft. 1/4	24
136-715	1 1/4"	6 Ft. 1/4	28
136-716	1 3/8"	6 Ft. 5/16	32
136-717	1 1/2"	6 Ft. 3/8	38

New!



Square Key Stock

ORDER NO.	MFG NO.	DESCRIPTION	SHIP WT.
133-905	KS312	3/16" Sq. X 12" Long	.15
133-910	KS412	1/4" Sq. X 12" Long	.25
133-915	KS512	5/16" Sq. X 12" Long	.40
133-920	KS612	3/8" Sq. X 12" Long	.50



Bored To Size Sprockets

• Hardened Teeth • Keyway On Centerline Of Tooth • Black Oxide Finish • Setscrews (2) Are On Keyway And At 90 Degrees • Additional Sizes Available On Request • Bore sizes in inches

ORDER NO.	CHAIN SIZE	# OF TEETH	BORE SIZE	O.D.
132-747	40	10	5/8	1.84
133-502	40	10	3/4	1.84
133-504	40	11	5/8	2.00
133-505	40	11	3/4	2.00
133-508	40	12	3/4	2.17
132-726	40	12	1	2.17
133-510	40	13	1	2.33
133-512	40	14	5/8	2.49
133-514	40	14	3/4	2.49
133-516	40	14	1	2.49
133-545	40	15	1/2	2.65
133-518	40	15	1	2.65
133-521	40	15	1 1/4	2.65
133-520	40	16	5/8	2.81
133-522	40	16	3/4	2.81
133-524	40	16	1	2.81
132-734	40	16	1 1/4	2.81
133-526	40	17	1	2.98
133-528	40	18	5/8	3.14
133-532	40	18	1	3.14
133-533	40	18	1 1/4	3.14
133-536	40	19	1	3.30
133-538	40	20	3/4	3.46
133-540	40	20	1	3.46
133-539	40	20	1 1/4	3.46
133-544	40	22	1	3.78
133-546	40	24	3/4	4.10
133-550	40	24	1	4.10
133-552	40	25	1	4.26
133-554	40	26	1	4.42
133-556	40	28	1	4.74
133-558	40	30	1	5.06
133-549	40	30	1 1/4	5.06
133-523	40	36	3/4	6.02

ORDER NO.	CHAIN SIZE	# OF TEETH	BORE SIZE	O.D.
133-422	40	36	1	6.65
133-564	50	10	3/4	2.30
133-566	50	10	1	2.30
133-570	50	12	1	2.71
133-572	50	13	1	2.91
133-574	50	14	3/4	3.11
133-576	50	14	1	3.11
133-578	50	15	3/4	3.32
133-582	50	15	1	3.32
133-586	50	16	1	3.52
133-590	50	16	1 1/4	3.52
133-591	50	16	1 1/2	3.52
133-592	50	17	1	3.72
133-598	50	18	1	3.92
133-600	50	19	1	4.12
133-606	50	20	1	4.32
133-633	50	21	1	4.52
133-614	50	24	1	5.12
133-618	50	24	1 1/4	5.12
133-620	50	26	1	5.52
133-622	50	27	1	5.72
133-632	50	30	1	6.32
133-636	50	30	1 1/4	6.32
133-639	50	34	3/4	7.12
133-638	50	40	1	8.32
133-640	50	40	1 1/4	8.32
133-644	60	10	1	2.76
133-637	60	11	1	3.00
133-650	60	12	1	3.25
133-652	60	12	1 1/8	3.25
133-654	60	12	1 1/4	3.25
132-840	60	13	1	3.49
133-428	60	13	1 1/2	3.49

ORDER NO.	CHAIN SIZE	# OF TEETH	BORE SIZE	O.D.
132-853	60	14	1	3.74
133-662	60	14	1 1/4	3.74
133-664	60	15	1	3.98
133-666	60	15	1 7/16	3.98
133-668	60	16	1	4.22
133-670	60	16	1 1/8	4.22
133-672	60	16	1 1/4	4.22
133-674	60	17	1	4.46
133-676	60	18	1	4.70
133-680	60	18	1 1/4	4.70
133-677	60	18	1 1/2	4.70
133-682	60	19	1	4.95
133-684	60	20	1	5.19
133-686	60	20	1 1/4	5.19
133-687	60	20	1 1/2	5.19
133-696	60	24	1	6.15
132-866	60	24	1 1/4	6.15
133-708	60	26	1 7/16	6.63
133-710	60	28	1	7.11
133-718	60	30	1 1/4	7.59
133-720	60	30	1 7/16	7.59
133-722	60	32	1	8.07
133-726	60	32	1 1/4	8.07
133-730	80	11	1	4.01
133-734	80	11	1 1/4	4.01
132-650	80	11	1 1/2	4.01
133-735	80	12	1	4.33
133-770	80	12	1 3/8	4.33
133-736	80	13	1	4.66
133-742	80	15	1	5.30
133-758	80	19	1 7/16	6.59
133-761	80	20	1 3/4	6.91
133-762	80	22	1	7.56

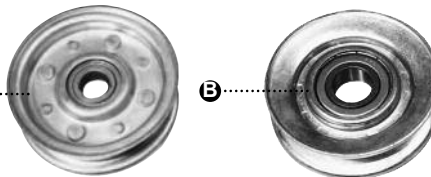


Additional Sizes Available For Special Requests. Minimum Order 10 Pieces.

BORE	KEYWAY W X D	SETScrew
1/2 - 9/16	1/8 x 1/16	10-24
5/8 - 7/8	3/16 x 3/32	1/4
15/16 - 1 1/4	1/4 x 1/8	5/16
15/16 - 1 3/8	5/16 x 5/32	5/16
17/16 - 1 3/4	3/8 x 3/16	3/8
1 13/16 - 2 1/4	1/2 x 1/4	1/2
2 5/16 - 2 3/4	5/8 x 5/16	5/8
2 13/16 - 3 1/4	3/4 x 3/8	5/8



New!



A Flat Type Idler Pulleys

ORDER NO.	OD	BEARING ID	FLAT WIDTH	SHIP WT.
133-792	4	1/2	1	1
133-793	4	5/8	3/4	1
133-794	4	5/8	1	1
133-795	4	5/8	1 1/2	1

B V-Type Idler Pulleys

ORDER NO.	OD	BEARING ID	GROOVE WIDTH	BELT SIZE	SHIP WT.
133-801	4	5/8	5/8	5L/4L	1
133-802	4 1/2	5/8	5/8	5L/4L	1
133-803	5	5/8	5/8	5L/4L	1

Idler Sprockets

• Hardened Teeth • Sealed and shielded bearing with extended race • Zinc plated.

ORDER NO.	CHAIN SIZE	# OF TEETH	BORE SIZE O.D. IN INCHES	
133-775	40	17	2.98	1/2
133-776	40	17	2.98	5/8
133-777	50	13	2.91	1/2
133-778	50	13	2.91	5/8
133-779	50	15	3.32	1/2
133-780	50	15	3.32	5/8
133-781	50	17	3.72	1/2
133-782	50	17	3.72	5/8
133-783	60	11	3.00	1/2
133-784	60	11	3.00	5/8
133-787	60	13	3.49	1/2
133-786	60	13	3.49	5/8
133-790	60	15	3.98	1/2
133-788	60	15	3.98	5/8
133-789	80	11	4.01	3/4
133-774	80	12	4.33	3/4
133-791	80	12	4.33	1

PTO Shafts, Draw Bars & More

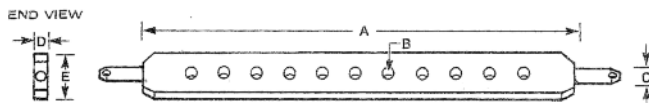
New!



Complete PTO Shafts

ORDER NO.	MFGR #	SERIES	CLOSED	EXTENDED	TRACTOR YOKE	IMPLEMENT YOKE	TYPE/APPLICATION	WT.
133-111	61194	1	51.1	80.2	1 3/8-6 spline	1 1/4 rnd w/3/8 shear pin	Light duty post digger	19
133-121	68177	4	51.5	80.7	1 3/8-6 spline	1 1/4 rnd w/3/8 shear pin	Heavy duty post digger	30
133-114	61196	4	35.8	54.4	1 3/8-6 spline	1 1/8-6 spline rnd w/1/2 shear pin	4' & 5' lift type (3 point hitch)	23
133-118	61197	4	42.5	65.6	1 3/8-6 spline	1 3/8 rnd w/1/2 shear pin	5' & 6' lift type (3 point hitch)	26
133-119	68381	6	44.9	68.7	1 3/8-6 spline	1 3/8-6 spline	6' lift type (3 point hitch)	35
133-125	68380	6	52.9	81.8	1 3/8-6 spline	1 3/8-6 spline	7' lift type (3 point hitch)	44
133-117	66654	4	44.9	68	1 3/8-6 spline	1 3/8-6 spline 4 disc friction clutch	5' & 6' lift type w/slip clutch	40
133-126	66655	6	47.1	71	1 3/8-6 spline	1 3/8-6 spline 4 disc friction clutch	6' HD lift type w/slip clutch	53
133-120	66656	6	55.2	84.1	1 3/8-6 spline	1 3/8-6 spline 4 disc friction clutch	7' HD lift type w/slip clutch	60
133-127	74112	4	34	44.2	1 3/8-6 spline	1 3/8-6 spline 2 disc friction clutch	Rotary tiller	30
133-112	68379	4	40.4	61.6	1 3/8-6 spline	1 3/8-6 spline	Finishing mower	30
133-110	61193	1	27	39.9	1 3/8-6 spline	1 3/8-6 spline	Fertilizer spreader	13
133-128	68382	4	52.2	81.3	1 3/8-6 spline	1 3/8-6 spline	Generator up to 35 HP	27
133-130	68383	6	48.7	75.3	1 3/8-6 spline	1 1/2 smooth w/3/8 keyway	Catfish pond aerator	45

New!



Drawbars

One piece 3 point hitch cross drawbars to fit category 0 through 3 tractors

ORDER NO.	CATEGORY	NO. OF HOLES	A LIFT ARM	B HOLE DIA.	C PIN DIA.	D THICKNESS	E WIDTH	COLOR	SHIP WT.
133-820	0/1	7	20"	5/8"	7/8"	1"	2 1/2"	Black	14
133-821	2	11	26"	3/4"	1 1/8"	1 1/4"	3"	Blue	27
133-822	2	13	32"	3/4"	1 1/8"	1 1/4"	3"	Green	33

New!



Lift Arm Pins

Yellow zinc plated

ORDER NO.	CATEGORY	DESCRIPTION	PIN DIA.	USABLE LENGTH	OVERALL LENGTH	THREAD DIA./LENGTH	SHIP WT.
133-830	0	Adjustable / universal	5/8"	Adjustable	37/8"	5/8" NF / 2"	1
133-831	1	Adjustable / universal	7/8"	Adjustable	5"	7/8" NF / 25/8"	2
133-832	1	Forged / universal	7/8"	13/4"	5 1/2"	7/8" NF / 15/8"	2
133-833	1 & 2	Adjustable to work cat 1 impl on cat 2 tractors	1 1/8"	Adjustable	5 1/4"	7/8" NF / 27/16"	2
133-834	1 & 2	Forged / to work cat 1 impl on cat 2 tractors	1 1/8"	1 13/16"	5 1/4"	7/8" NF / 15/8"	2
133-835	2	Adjustable / universal	1 1/8"	Adjustable	6 1/8"	1 1/8" NF / 33/8"	3
133-836	2	Forged / universal	1 1/8"	13/4"	6 1/8"	1 1/8" NF / 23/8"	3

New!



Ratchet Jack

- Heavy duty ratchet jack with 1-1/4" ACME threads & grease zerks
- Adjustable from 20" closed to 28" open
- 1" clevis pins, clip pins and handle
- Black

ORDER NO.	SHIP WT.
133-810	15

Yellow Zinc Plated Hitch Pins with cotter pin

ORDER NO.	DIA.	LENGTH	WT.
172-103	1/2"	4 1/4"	1
172-104	5/8"	6 1/4"	1
172-105	3/4"	6 1/4"	1
172-106	7/8"	6 1/4"	2
172-107	1"	6 1/4"	2
172-108	1 1/8"	6 1/4"	3

Large Red Handle Vinyl Coated Hitch Pins

ORDER NO.	DIA.	LENGTH	WT.
172-012	1/2"	35/8"	1
172-058	5/8"	1 1/2"	2
172-034	3/4"	6 1/2"	2
172-078	7/8"	6 1/2"	2
172-100	1"	7 1/2"	3
172-125	1 1/4"	8 1/2"	5
172-150	1 1/2"	8 1/2"	5

New!



Turnbuckle Implement Jack

- Turnbuckle implement jack with 1-1/4" NC threads
- Adjustable from 20" closed to 28" open
- 1" pin holes
- Red

ORDER NO.	SHIP WT.
133-811	12

Heavy Duty Ratchet Load Binders

- Double acting ratchet offers simple chain tightening - forged hooks & cast steel handle 14 1/4" long - red in color

ORDER NO.	MFGR. NO.	SIZE	MIN. BREAKING STRENGTH	WORKLOAD LIMIT	SHIP WT.
322-200	RLB5638	5/16" or 3/8"	26,600 lbs.	6,600 lbs.	11
322-201	RLB3812	3/8" or 1/2"	33,000 lbs.	9,200 lbs.	15

Clevis Grab Hook

- Drop forged and heat treated
- Zinc plated
- For use with grade 40/43 chain



ORDER NO.	CHAIN SIZE	PIN SIZE	PIN DIA.	WORKING LOAD LIMIT	SHIP WT.
322-275	1/4"	3/8 x 1 1/4"	3/8"	2600 lbs.	1
322-276	5/16"	7/16 x 1 5/16"	3/16"	3900 lbs.	1
322-277	3/8"	1/2 x 1 11/16"	1/2"	5400 lbs.	2
322-278	7/16"	9/16 x 1 7/8"	9/16"	7200 lbs.	2
322-279	1/2"	5/8 x 2"	5/8"	9300 lbs.	3

Winches, Brackets & Straps

12V DC Winch with Remote Control

• All winches include hand held remote control • Four roller fairlead and mounting plate sold separately except for winch 375-023 & 375-026 (included)



375-021, 375-022



375-023



375-024

ORDER NO.	MODEL	MAX LINE PULL	HP RATING	CABLE INCH DIA. X FT. LENGTH	OVERALL DIMENSIONS IN INCHES			SHIP WT.
					L	x W	x H	
375-021	WW200012V	2,000 lbs	.85	5/32 x 49	11 1/4	4	4	18
375-022	WW300012V	3,000 lbs	1.34	3/16 x 46	12 3/4	4	4 1/2	21
375-023	WWMO3000BU	3,000 lbs	1.34	3/16 x 46	12 3/4	4	4 1/2	26
375-024	WW500012V	5,000 lbs	1.8	1/4 x 79	18	7	10 5/8	52
375-025	WW800012V	8,000 lbs	2.2	5/16 x 95	21	7	10 5/8	72
375-026	WW1000012V	10,000 lbs	4.0	3/8 x 85	22	7	10 5/8	88
375-027	WW1200012V	12,000 lbs	4.0	7/16 x 92	22	8	9 1/2	185
375-028	WW1500012V	15,000 lbs	4.5	7/16 x 92	22	8	9 1/2	185



375-025, 375-026

Four Roller Fairleads				
375-034	WWRF2K3K	Fits 375-021, 375-022, 375-023		3 lbs.
375-035	WWRF5K	Fits 375-024		8 lbs.
375-036	WWRF8K10K	Fits 375-025, 375-026		11 lbs.
375-037	WWRF12K15K	Fits 375-027, 375-028		14 lbs.



375-027, 375-028

Mounting Plates				
375-030	WWRF2K3K	Fits 375-021, 375-022, 375-023		3 lbs.
375-031	WWRF5K	Fits 375-024		17 lbs.
375-032	WWRF8K10K	Fits 375-025, 375-026		25 lbs.
375-033	WWRF12K15K	Fits 375-027, 375-028		33 lbs.



375-010

9000 lb. Hydraulic Winch

• Hydraulic motor (sold separately #272-218 or #254-038) mounts directly to the worm input shaft • 60:1 gear ratio • Winch and motor operate with a pressure of 1,100 lbs. with a flow rate between 10 and 15 GPM • Winch can be placed in free-wheel with clutch lever located on clutch housing for unwinding cable without winch running • 8" drum will hold 150' of 5/16" cable or 100' of 3/8" cable (not included).

ORDER NO.	DIMENSIONS IN INCHES			SHIP WT.
	L	X	W	
375-010	167/8	93/4	57	

Heavy Duty Hand Winches

• Cranks in & out under load • Includes nylon strap • Winch free wheels • Zinc plated

New!



ORDER NO.	MFGR. NO.	GEAR RATIO	STRAP	WT. CAPACITY	SHIP WT.
322-205	HW800S	4.4:1	1 1/2" x 26 Ft	800 lbs.	5
322-206	HW2000S	4.1:1 & 9.8:1	2" x 20 Ft	2000 lbs.	8

Tarp Gear Motor

• High-torque direct drive 12 VDC Motor • 3-1/8" X 3/4" extended output shaft fits wide range of tarp systems • Sealed drive shaft and encased bearing prevents oil contamination • Epoxy sealed gearbox maintains lubrication • 5-bolt adjustable bolt pattern • Fits most common truck and trailer tarp systems



New!

ORDER NO.	GEAR RATIO	HP	WATTS	SHIP WT.
164-305	90:1	.8	600	13
164-300	60:1	1.2	900	14



D-Rings with mounting bracket

• Forged from C-1045 steel

ORDER NO.	RING DIA.	ID (HXW)	LOAD LIMIT	ULTIMATE BREAK STRENGTH	SHIP WT.
322-240	1/2"	2 1/2 x 2 3/8"	4080 lbs.	11781 lbs.	1
322-241	1/2"	2 1/2 x 2 3/8"	4080 lbs.	11781 lbs.	1
322-242	5/8"	3 x 3"	6130 lbs.	18390 lbs.	2
322-243	3/4"	3 x 3"	9120 lbs.	26500 lbs.	3
322-244	1"	3 x 3"	15586 lbs.	46760 lbs.	5
322-245	1"	4 x 3"	15586 lbs.	46760 lbs.	5

D-Rings are not approved for overhead use



Forged Grab Hooks

• Forged Steel • Grade 43 weld-on grab hooks

ORDER NO.	SIZE	SHIP WT.
322-259	5/16"	1
322-260	3/8"	1
322-261	1/2"	2

Heavy Duty Rubber Wheel Chock

• Reinforced rubber design • Includes chain eye

ORDER NO.	MFGR. NO.	DIMENSIONS	WT.
160-190	WC1086	10"W x 8"D x 6"H	9



Ratchet Straps • Ratchet straps for cargo control

ORDER NO.	DESCRIPTION	CAPACITY	SAFE WORKING LOAD	SHIP WT.
322-207	2" X 27' Ratchet Strap w/ Flat Hooks	10,000 lbs.	3,300 lbs.	6
322-208	2" X 27' Ratchet Strap w/ Double J Hooks	10,000 lbs.	3,300 lbs.	6
322-211	3" X 30' Ratchet Strap w/ Double J Hooks	15,000 lbs.	5,000 lbs.	12
322-209	3" X 30' Ratchet Strap w/ Flat Hooks	15,000 lbs.	5,000 lbs.	12
322-210	4" X 27' Ratchet Strap w/ Flat Hooks	17,000 lbs.	5,000 lbs.	16



Antiskid Tape

• Antiskid Tape, Self-Adhesive • Black Course Grit improves traction and safety • Easy to apply, simply peel and stick • Ideal for bumpers, steps, walkways or anywhere foot traffic can be hazardous • Helps meet OSHA & ADA requirements • Resistant to detergents and solvents

ORDER NO.	WIDTH	LENGTH	SHIP WT.
322-265	2"	60'	3
322-266	4"	60'	5



Mobile Products

Tires, Hubs, Spindles & Jacks



STUD TURF



New!



8 Ton Combination Hitch

Order No. 370-320
MFGR. No. BH82000
 • 2" Ball 3000 lbs Max vehicle load • 16,000 lbs Max Gross trailer wt.
 • Drop forged • Black powder coat finish
 • Forged steel ball
 • Drawbar eye dimensions 2 1/2" to 3" ID with 1 1/4" to 1 9/16" dia. section • Individually boxed with drilling template and capacity decals

Tire and Wheel Assemblies

Integral Hub • All tires rated NHS (Non Highway Speed) • Bearings sold separately.

ORDER NO.	TIRE SIZE	TREAD	PLY	HUB LENGTH	HUB ID	LOAD RATING	SHIP WT.
142-039	4.10 x 3.50-4	STUD	2	3" Offset	13/8	250 lbs.	5
142-502	4.10 x 3.50-4	SAWTOOTH	2	3" Centered	13/8	250 lbs.	5
142-507	13 x 5.00-6	RIB	2	3" Centered	13/8	340 lbs.	7
142-508	13 x 5.00-6	TURF	2	3" Centered	13/8	340 lbs.	7
142-512	15 x 6.00-6	TURF	2	3" Centered	13/8	365 lbs.	8
142-514	16 x 6.50-8	TURF	2	3" Centered	13/8	415 lbs.	13

Wheelbarrow Assemblies

• 2 Ply • Rib Tread • Bearings installed.

ORDER NO.	TIRE SIZE	HUB LENGTH	HUB ID	LOAD RATING	SHIP WT.
142-887	4.80-8	3" Centered	5/8" ID Bearings	550 lbs.	7
142-888	4.80-8	6" Centered	5/8" ID Bearings	550 lbs.	7

Valve Stems



ORDER NO.	DESC.	LGTH
146-002	TR 412	17 1/16"
146-003	TR 413	13 3/4"

High Speed Wheel Hubs

• Includes hub with bearing cup, studs, bearings and seal installed. With dust cap and stud nuts.

ORDER NO.	CAPACITY	HOLES/BOLT CIRCLE	INNER BEARINGS	OUTER BEARINGS	SEAL	SHIP WT.
147-410	1250 lbs./ea.	4 on 4"	1"	1"	1 1/4"	7
147-510	1250 lbs./ea.	5 on 4 1/2"	1"	1"	1 1/4"	10
147-599	1750 lbs./ea.	5 on 4 1/2"	1 1/16"	1 3/8"	1 1/4"	10

High Speed Wheel Spindles

• Made of cold rolled steel • Includes castle nut, cotter pin and washer

ORDER NO.	CAPACITY	FITS HUB SIZE	SHIP WT.
147-901	1200 lbs.	1"	4
147-904	1750 lbs.	1 1/6" and 1 3/8"	6

Receiver Tubes

• Cast steel collar • Solid stress collar opening • 5/8" Hitch pin hole

ORDER NO.	DIMENSIONS	SHIP WT.
322-120	RT25806 2" ID X 6" Long	4
322-121	RT25812 2" ID x 12" Long	7
322-122	RT25818 2" ID x 18" Long	10

ORDER NO.	DIMENSIONS	SHIP WT.
322-123	RT25824 2" ID x 24" Long	14
322-124	RT25836 2" ID x 36" Long	20
322-125	RT25848 2" ID x 48" Long	27



133-850
133-852
133-860
133-862



133-851
133-853
133-861
133-863



133-854
133-855



133-856
133-864



133-857
133-859
133-865

New!

Implement Jacks • Precision engineered with smooth turning handle, dependable inner screw and rugged foot plate

ORDER NO.	DESCRIPTION	LIFT HEIGHT	LIFT CAPACITY (LBS)	SHIP WT.
133-850	Flange (weld) mount, topwind	10"	5,000	17
133-851	Tubular mount - topwind	10"	5,000	16
133-852	Flange (weld) mount, topwind	15"	5,000	21
133-853	Tubular mount - topwind	15"	5,000	20
133-854	A-frame - topwind	15"	2,000	13
133-855	A-frame - topwind	15"	5,000	14
133-856	Flange (weld) mount - sidewind	10"	5,000	13
133-857	Tubular mount - sidewind	10"	5,000	17
133-858	Flange mount - sidewind	15"	5,000	21
133-859	Tubular mount - sidewind	15"	5,000	20
133-860	Flange (weld) mount - topwind	10"	2,000	15
133-861	Tubular mount - topwind	10"	2,000	15
133-862	Flange (weld) mount - topwind	15"	2,000	19
133-863	Tubular mount - topwind	15"	2,000	20
133-864	Flange (weld) mount - sidewind	10"	2,000	17
133-865	Tubular mount - sidewind	10"	2,000	14

Mobile Products

Heavy Duty Casters With Steel Wheels

• Heavy duty roller bearings • Grease fitting • Top plate 4" wide x 4 1/2" long • Bolt hole size 3/8" • Mounting pattern 3" x 3 1/2"

ORDER NO.	STYLE	WHEEL SIZE	OV'ALL HT.	APPROX. LOAD CAP.	SHIP WT.
404-133	Swivel	3x1 1/4"	3 13/16"	800 lbs.	3
404-201	Rigid	4x2"	5 5/8"	800 lbs.	7
404-200	Swivel	4x2"	5 5/8"	800 lbs.	8
404-256	Rigid	6x2"	7 1/2"	900 lbs.	10
404-266	Swivel	6x2"	7 1/2"	900 lbs.	11
404-258	Rigid	8x2"	9 1/2"	900 lbs.	13

Heavy Duty Casters With Mold On Rubber Wheels

• Heavy duty roller bearings • Grease fitting • Top plate 4" wide x 4 1/2" long • Bolt hole size 3/8" • Mounting pattern 3" x 3 1/2" • Cast steel center wheel

ORDER NO.	STYLE	WHEEL SIZE	OV'ALL HT.	APPROX. LOAD CAP.	SHIP WT.
404-158	Rigid	8x2"	9 1/2"	500 lbs.	11
404-168	Swivel	8x2"	9 1/2"	500 lbs.	12

NEW! Heavy Duty Casters with Polypropylene Wheels

• Offer excellent chemical resistance • Heavy duty roller bearings • Grease fitting • Top plate 4" x 4 1/2" • 3/8" bolt size • 3" x 3 1/2" mounting pattern

ORDER NO.	STYLE	WHEEL SIZE	OV'ALL HT.	APPROX. LOAD CAP.	SHIP WT.
404-412	Rigid	6x2"	7 1/2"	650 lbs.	6
404-415	Swivel	8x2"	9 1/2"	850 lbs.	7

Cast Iron Core Mold on Polyurethane Casters

• Recommended for use where high capacity is required and floor protection is essential • Quiet operation • Top plate 4" wide x 4 1/2" long • Bolt hole size 3/8" • Mounting pattern 2 5/8" x 3 5/8"

ORDER NO.	STYLE	WHEEL SIZE	OV'ALL HT.	APPROX. LOAD CAP.	SHIP WT.
404-372	Rigid	6x2"	7 1/2"	900 lbs.	9
404-375	Swivel	8x2"	9 1/2"	900 lbs.	12

NEW! Heavy Duty Casters with Soft Tread wheels

• Combines excellent floor protection and rollability • Heavy duty roller bearings • Grease fitting • Top plate 4" x 4 1/2", 3/8" • Bolt size, 3" x 3 1/2" mounting pattern

ORDER NO.	STYLE	WHEEL SIZE	OV'ALL HT.	APPROX. LOAD CAP.	SHIP WT.
404-416	Rigid	4x2"	5 5/8"	350 lbs.	5
404-417	Swivel	4x2"	5 5/8"	350 lbs.	5
404-173	Rigid	5x2"	6 1/2"	337 lbs.	6
404-174	Swivel	5x2"	6 1/2"	337 lbs.	6
404-175	Rigid	6x2"	7 1/2"	600 lbs.	6
404-176	Swivel	6x2"	7 1/2"	600 lbs.	6
404-418	Rigid	8x2"	9 1/2"	675 lbs.	7
404-419	Swivel	8x2"	9 1/2"	675 lbs.	7

20 TON Air Over Hydraulic Bottle Jack

Order No. 375-055

• Lifts 40,000 lbs. using hydraulic or air • Minimum height 10-1/4" • Max height 20" • Hose is 48" long with 1/4" connector • 36 lbs. ship wt.



Hydraulic Bottle Jacks

• Hydraulic Bottle Jacks with high quality, glide action pressure pump • Powerful jacks make big loads easy to lift

ORDER NO.	CAPACITY	LIFT HEIGHT RANGES	SHIP WT.
375-050	6 TON	7 1/2" - 15 1/4"	8
375-051	8 TON	8" - 15 1/2"	10
375-052	10 TON	8" - 16"	12
375-053	12 TON	8 1/4" - 16 1/4"	13
375-054	20 TON	9 5/8" - 18 1/2"	24

Heavy Duty Casters With Phenolic Wheels

• Top plate 4" x 4 1/2" • Bolt hole size 3/8" • Mounting pattern 2 5/8" x 3 5/8" • Non marking, impact resistant • Recommended in applications where high capacity and floor protection are required

ORDER NO.	STYLE	WHEEL SIZE	OV'ALL HT.	APPROX. LOAD CAP.	SHIP WT.
404-320	Rigid	4x2"	5 5/8"	800 lbs.	4
404-360	Rigid	6x2"	7 1/2"	900 lbs.	7
404-350	Swivel	6x2"	7 1/2"	900 lbs.	7

Pneumatic Casters

• Steel housing with pneumatic tire • Ball bearing design • Ideal for utility carts • Top plate mount 4" x 4 1/2" • Mounting pattern 3" x 3"

ORDER NO.	STYLE	WHEEL SIZE & PLY	OV'ALL HT.	APPROX. LOAD CAP.	SHIP WT.
404-449	Rigid	2.80-2.50-4	10"	295 lbs.	7
404-446	Rigid	4.10-3.50-4	12"	230 lbs.	10

NEW! Heavy Duty Casters with Phenolic Wheels

• Stainless steel casters with heavy duty roller bearings • Grease fitting • Top plate 4" x 4 1/2" • 3/8" bolt size • 3" x 3 1/2" slotted mounting pattern

ORDER NO.	STYLE	WHEEL SIZE	OV'ALL HT.	APPROX. LOAD CAP.	SHIP WT.
404-428	Rigid	4x2"	5 5/8"	500 lbs.	6
404-429	Swivel	4x2"	5 5/8"	500 lbs.	6
404-430	Rigid	5x2"	6 1/2"	650 lbs.	6
404-431	Swivel	5x2"	6 1/2"	650 lbs.	6
404-432	Rigid	6x2"	7 1/2"	700 lbs.	6
404-433	Swivel	6x2"	7 1/2"	700 lbs.	6
404-434	Rigid	8x2"	9 1/2"	800 lbs.	7
404-435	Swivel	8x2"	9 1/2"	800 lbs.	7

Heavy Duty Casters with Polyolefin Wheels

• Stainless steel casters with heavy duty roller bearings • Grease Fitting • top plate 4" x 4 1/2" • 3/8" bolt size • 3" x 3 1/2" slotted mounting pattern

ORDER NO.	STYLE	WHEEL SIZE	OV'ALL HT.	APPROX. LOAD CAP.	SHIP WT.
404-420	Rigid	4x2"	5 5/8"	500 lbs.	6
404-421	Swivel	4x2"	5 5/8"	500 lbs.	6
404-422	Rigid	5x2"	6 1/2"	650 lbs.	6
404-423	Swivel	5x2"	6 1/2"	650 lbs.	6
404-424	Rigid	6x2"	7 1/2"	700 lbs.	6
404-425	Swivel	6x2"	7 1/2"	700 lbs.	6
404-426	Rigid	8x2"	9 1/2"	800 lbs.	7
404-427	Swivel	8x2"	9 1/2"	800 lbs.	7

Heavy Duty Casters with High Temp Nylon Wheels

• Max. temp 550 deg. • Heavy duty roller bearings • Grease fitting • Top plate 4" x 4 1/2" • 3/8" bolt size • 3" x 3 1/2" mounting pattern

ORDER NO.	STYLE	WHEEL SIZE	OV'ALL HT.	APPROX. LOAD CAP.	SHIP WT.
404-400	Rigid	4x2"	5 5/8"	800 lbs.	5
404-401	Swivel	4x2"	5 5/8"	800 lbs.	5
404-402	Rigid	5x2"	6 1/2"	1000 lbs.	6
404-403	Swivel	5x2"	6 1/2"	1000 lbs.	6
404-404	Rigid	6x2"	7 1/2"	1200 lbs.	7



Solenoids, Switches, Meters & More



2 Position Key Switch

ORDER NO.	POSITIONS	BODY
160-344	Off, Run	13/16"



12 Volt Plastic Case Solenoid

• Intermittent-duty • 5/16"-24 thread terminals • 9/32" x 25/64" holes, 27/64" on center

ORDER NO.	DESCRIPTION
160-167	12 volts applied to center terminal activates solenoid



12 Volt Recessed Toggle Switch

• Two terminals/Screws • Recessed pan protects switch from impacts & accidental activation • 20 Gauge zinc plated steel pan • 2" diameter mounting hole

ORDER NO.	DESCRIPTION
160-450	12V DC 10 amp



12 Volt Steel Case Solenoid (Insulated)

• Continuous duty • 5/16"-24 thread terminals • 29/32" x 25/64" holes, 27/64" on center

ORDER NO.	DESCRIPTION
160-169	12 volts applied to center terminal activates solenoid



Push Button Switch

• Normally open switch is designed to operate tailgate solenoid valves • Can be mounted in dash-boards or consoles, 1/2" diameter hole is required

ORDER NO.	MOUNTING
160-400	Tailgate control faceplate included



12 Volt Steel Case Solenoid

• Continuous-duty • 5/16"-24 thread terminals • 29/32" x 25/64" holes, 27/64" on center

ORDER NO.	DESCRIPTION
160-170	12 volts applied to center terminal activates solenoid



Push Button Momentary 2 Position Switch

• Weatherproof, dust proof, single pole, single throw switch • For trucks, buses & farm equipment

ORDER NO.	PANEL MOUNT
160-420	Stem 5/8"-32 Thrd. 21/32" long



12 Volt Momentary Switch

• Push for ON, spring return for off • Moisture repellent insulator • Chrome push button • 5/8"-32 brass screws, 2 5/16" long

ORDER NO.	PANEL MOUNT
160-430	5/8" hole, fits through 3/4" thickness



12 Volt Plastic Case Solenoid (Insulated)

• Continuous-duty • Sealed design • 11/32" holes, 3" on center • 5/16"-24 thread terminals • 10-32 coil terminals

ORDER NO.	DESCRIPTION
160-160	12 volts



Rocker Switch Panel With Aluminum Bracket

• Open Switch Panel • Illuminated Red Rocker Switch • Pre-Wired • 14 Function Labels Included

ORDER NO.	SWITCH	FUSE	DIMENSIONS L X W X H (INCH)	SHIP WT.
164-020	Single	10 Amp/12 VDC	2 X 1.625 X 2.25	1
164-021	Double	15 Amp/12 VDC	2 X 1.625 X 2.25	1
164-022	Triple	20 Amp/12 VDC	3.875 X 1.625 X 2.25	1
164-023	Quad	*(2) 10 Amp/12VDC	4.75 X 1.625 X 2.25	1

* Blade type fuses



ENM Hourmeters

• Low power consumption • Indicates operating time in hours and tenths • Solid state electronic drive circuit • Quartz crystal assures accurate timing • Sealed to protect against moisture and dirt • High impact, tamperproof plastic case • UL recognized.

ORDER NO.	DESCRIPTION	VOLTS
160-113 Ⓐ	Plastic bezel and bracket	10-80
160-110 Ⓑ	Stainless steel bezel and bracket	8-32
Miniature		
160-114 Ⓒ	1 3/4" mounting hole centers	10-80

Vibration Activated Hourmeter

• 6-digits with hour glass running indicator runs by vibration only • Install anywhere no power source needed • Long lasting internal battery

160-115 Ⓓ	Tamper Proof/LCD display	Battery
-----------	--------------------------	---------

12 Volt Utility Light

• 5" Rubber Housed • Sealed Lamp • 12 Volt, 2.92 Amps, 35 Watts • Includes 5/16" Stud & Universal Adjustable Mounting Bracket

ORDER NO.

322-001

Quartz Halogen Minilight Bar

• 50 watt quartz halogen bulbs • Flush, low profile bottom and polycarbonate domes • 12 VDC, 8.3 amps, 320 FPM • Two Replacement bulbs included

ORDER NO.

DESCRIPTION

164-100

Magnetic Mount

164-105

Permanent Mount

Halogen Minilight Bar

• Dual, 55-watt halogen rotators • 520 flashers per minute • 12V, 9 amps • 10' power cord with on-off switch • magnetic mount standard • Removable magnets

ORDER NO.

DESCRIPTION

164-110

Magnetic Mount

Amber Revolving Light

• 105 flashes per minute • 35 watt bulb • 5.9 amps • Poly base w/3 fasteners & gasket • Stainless steel lens band

ORDER NO.

DESCRIPTION

164-115

Permanent Mount

Quad Flash LED Low Profile Strobe Light

• 12-48 VDC Quad Flash • UV stabilized amber lens • 12 volt, 1.5 amps • 10' power cord with switched plug • 3 bolt permanent mount included

ORDER NO.

DESCRIPTION

164-120

Magnetic Mount

6 LED Clear Utility Light

• 5" clear acrylic lens • 1350 lumens (18W) output • 12-24 VDC, 1.5 Amp • Built in visor & 120 viewing angle • Stainless Steel mounting bracket and fasteners • Shock resistant & waterproof

ORDER NO.

DESCRIPTION

164-125

Permanent Mount

164-150

Magnetic Mount

6 LED Swiveling Flood & Spot Lights

• 5" clear acrylic lens • 1350 Lumens (12W) output • 12-24 VDC, 1 Amp at 14VDC • 42" prewired leads • Swivels at base and light head • Shock and water resistant • Built-in handle for easy positioning • Built-in on/off switch • Stainless steel • Fasteners & gasket included • 9"H X 6.5"W X 4"D

ORDER NO.

DESCRIPTION

164-130

Flood Light

164-135

Spot Light

12 LED Swiveling Flood & Spot Lights

• 6" clear acrylic lens • 1350 Lumens (12W) output • 12-24 VDC, 1 Amp at 14VDC, .5 Amp at 28 VDC • 10" prewired leads • 360 degree swivel, plus fore-aft tilt • Shock and water resistant • Built-in large handle for easy positioning • Built-in on/off switch • Adjustable rotating mounting bracket • Stainless steel fasteners & gasket incl. • 11.25"H X 6.125"W X 6.25"D

ORDER NO.

DESCRIPTION

164-140

Flood Light

164-145

Spot Light

Back-up Alarm

• 100% quality certified • 12-24 VDC • Low frequency tone • Self-grounding • Epoxy sealed from moisture, dust & vibration • Full-color display box • Meets OSHA, Bureau of Mines, GSA & all state regulations

ORDER NO.	DECIBEL	DIMENSIONS L X W X H (INCH)	SHIP WT.
164-002	97	4 x 15/8 x 25/8	1
164-001	102	4 x 15/8 x 25/8	1
164-003	107	4 x 13/4 x 31/16	1



Mobile Products

Seats



Low Back Universal Seat

• Popular replacement for Snapper, MTD, Murray and many others • 8¹/₄ x 3 mount pattern and 1/2" center hole mount.

ORDER NO.	DIMENSIONS (INCH)			SHIP WT.
	A	B	C	
625-166	18	15	7	12



High Back Universal Seat

• 7¹/₂ x 7, 8¹/₄ x 5 mount pattern and 1/2 center hole mount • Removable cushion cover.

ORDER NO.	DIMENSIONS (INCH)			SHIP WT.
	A	B	C	
698-020	18	18	12 ³ / ₄	20



High Back Steel Pan Mower Seat

• Fits many riding mowers • Heavy duty PVC cover • Safety switch cavity • Mount patterns 6 x 5, 7.5 x 7 & 8.2 X 5

ORDER NO.	DIMENSIONS (INCH)			SHIP WT.
	A	B	C	
690-155	19 ¹ / ₄	18	13 ³ / ₄	11



New!

Universal Deluxe High Back Seat

• Steel frame construction and polyurethane cover • Waterproof • Safety switch cavity • Mount patterns 5.25 X 4.5, 6 X 5 & 7.5 X 7

ORDER NO.	DIMENSIONS (INCH)			SHIP WT.
	A	B	C	
690-115	18 ¹⁵ / ₁₆	18 ¹⁵ / ₁₆	14 ¹ / ₂	12



High Back Universal Seat

• #1 selling lawn and garden replacement seat • Drain hole and contoured for air flow • Safety switch cavity • Multiple mount patterns include 8¹/₄ x 5, 8 x 11¹/₂, 7¹/₂ x 7, 6 x 5 and 5¹/₄ x 4¹/₂

ORDER NO.	DIMENSIONS (INCH)			SHIP WT.
	A	B	C	
690-888	19 ³ / ₄	19 ¹ / ₄	14	17



Yellow
vinyl covered
molded cushion

New!

Deluxe Ultra-High Back Seat

• Steel pan with trimmed edge • Drain hole and contoured for air-flow • Safety switch cavity • Mount patterns 3 X 5, 7.5 X 3, 7.5 X 7, 8.2 X 5, 8.5 X 1.63 & 11.25 X 11

ORDER NO.	DIMENSIONS (INCH)			SHIP WT.
	A	B	C	
690-889	19 ³ / ₄	20	14	16



Universal High Back Deluxe Seat

• 8 x 11¹/₂ and 11¹/₂ x 11¹/₂ mount pattern and 1/2 center hole mount

ORDER NO.	DIMENSIONS (INCH)			SHIP WT.
	A	B	C	
681-188	18	22 ¹ / ₄	17 ¹ / ₂	18



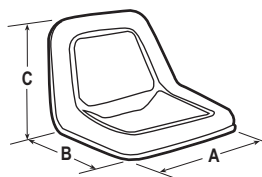
Universal Tractor Suspension Seat

• Shock absorbing system with adjuster • Ideal replacement for tractors and fork lifts

ORDER NO.	DIMENSIONS (INCH)			SHIP WT.
	A	B	C	
690-510	24	20 ¹ / ₄	20 ¹ / ₂	44

All Seat Cushions Are Black

Unless Noted Otherwise



Seat Dimension Guide

For the seats in this catalog, use the following dimension key:
A = Seat Width B = Seat Depth
C = Seat Height
All measurements are in inches.



Two Piece Deluxe Seat

- Slotted slides allow for multiple bolt patterns

ORDER NO.	DIMENSIONS (INCH)			SHIP WT.
	A	B	C	
690-340	18	20	18 1/2	44



Universal Deluxe Fold Down Seat

- Adjustable fold down back
- Slide adjusters

ORDER NO.	DIMENSIONS (INCH)			SHIP WT.
	A	B	C	
690-350	25	18 1/2	24	35



Comfort Suspension Seat

- Backrest suspension reduces operator fatigue
- Adjusts to operator weights of 110 to 265 lbs.
- Backrest angle adjuster
- Mount patterns 9, 10, 13, 15 x slotted slides

ORDER NO.	DIMENSIONS (INCH)			SHIP WT.
	A	B	C	
690-300	18 3/4	21	19	36



Contoured High Back Deluxe Seat

- Safety switch cavity
- Mount patterns 6 x 5, 5 x 7, 7 1/2 x 11 1/2, 8 x 11 1/2, 9 x 9 5/8, 9 1/2 x 11 1/2 & 11 1/4 x 11 1/2

ORDER NO.	DIMENSIONS (INCH)			SHIP WT.
	A	B	C	
690-450	18	21	19	21



High Back Steel Pan Tractor Seat

- Drop-in fit for most Kubota
- Heavy duty vinyl
- Drain hole
- 6 x 2, 6 x 4, 7 x 11/16, 7 1/2 x 2, 7 1/2 x 4, 7 1/2 x 6, 7 1/2 x 7 5/8

ORDER NO.	DIMENSIONS (INCH)			SHIP WT.
	A	B	C	
690-910	17	21 1/2	18	14



Ultra High-Back Steel Pan Seat

- Drop-in fit for most Skid Steers
- Heavy duty black vinyl cushion
- Heavy duty slides with studs
- Bolt Pattern (WxD) 10.63 x 11, 11.25 x 11

ORDER NO.	DIMENSIONS (INCH)			SHIP WT.
	A	B	C	
690-915	20	23 3/4	22 1/4	26

* Add 1" for slides

New!



Universal High-Back Seat

- Ideal for ZTR's
- Lumbar support
- Adjustable slides, armrests and upper backrest
- Fold forward and reclining backrest
- Document pouch

ORDER NO.	DIMENSIONS (INCH)			SHIP WT.
	A	B	C	
690-400	24	20	26	40



High Back Suspension Seat With Armrests

- Integrated suspension allows for low profile
- Weight adjuster and adjustable slides
- Flip up armrests included

ORDER NO.	DIMENSIONS (INCH)			SHIP WT.
	A	B	C	
698-360	23	23	24	68

Universal Full Adjustment Suspension Seat

- Steel Pan with Trimmed Edge
- Black Vinyl-Covered Molded Cushion
- Adjustable Arm Rests, Seat Back Suspension Weight and Height
- Swivel For Easy Entry
- Slides
- Mount patterns: 10 1/4 x 10 1/2, 10 1/4 x 11, 10 1/4 x 11 1/2, & 10 1/4 x 12 3/4"
- Wt. 95 lbs. ORDER NO. 690-901

- Ideal for:**
- Loaders
 - Backhoes
 - Utility Tractors
 - And more



O-Ring, Assortment Kits & Tape



O-Ring Kit • 382 O-Rings

• Standard AS568A, Buna 70 O-ring kit, Each kit contains 382 O-rings in 30 sizes

ORDER NO.	SHIP WT.
163-121	2



O-Ring Kit • 1377 O-Rings

• Most popular sizes. • 5 internal boxes, 24 sizes of 1/16" CS, 24 sizes of 3/32" CS, 19 sizes of 1/8" CS, 8 sizes of O-ring Boss and 6 sizes of flange fitting O-rings.

ORDER NO.	SHIP WT.
163-100	10



Rescue Tape

• Just Stretch, Wrap & Get Rescued! • Self Fusing Silicone Tape • Creates a permanent air tight, water-tite seal in seconds • Incredible 950 PSI tensile strength • Resists fuels, oils, acids, solvents, salt water, road salt & UV rays • Withstands 500° F degrees of heat Remains flexible to -85° F • Insulates 8,000 volts per layer • Long shelf life • 1" x 20 mil. x 12'

ORDER NO.	COLOR
-----------	-------

165-300	Black
165-301	Clear
165-302	Red
165-303	Yellow
165-304	Blue
165-305	White
165-306	Green
165-307	Orange



Assortment Kits

Compartment boxes are high strength, oil resistant polypropylene, with heavy duty reinforced hinges that allows the cover to remain in the open position when needed. The cover overlaps the box, fitting snugly for extra protection against dirt, dust and moisture. Two snap latches assure secure closure and prevent parts from moving between compartments.



Retaining Rings 360 Pc. Kit

• 360 pieces • 9 Internal and 9 External rings
• Sizes: 1/4, 15/16, 3/8, 7/16, 1/2, 9/16, 5/8, 11/16, and 3/4
163-103 Ship Wt. 1



Retaining Rings 403 Pc. Kit

• 403 pieces • E-Type Retaining Rings • 12 Sizes: 1/8, 5/32, 3/16, 7/32, 1/4, 5/16, 3/8, 7/16, 1/2, 5/8, 3/4, and 7/8
163-104 Ship Wt. 2



Key Ways Short Lengths 61 Pcs.

• Carbon Steel - Plain • 61 pieces • 11 Sizes: 1/8 x 1/8 x 3/4, 1/8 x 1/8 x 1, 3/16 x 3/16 x 3/4, 3/16 x 3/16 x 1, 3/16 x 3/16 x 1 1/4, 1/4 x 1/4 x 3/4, 1/4 x 1/4 x 1 1/4, 1/4 x 1/4 x 1 1/2, 5/16 x 5/16 x 1 1/4, 5/16 x 5/16 x 1 1/2, 3/8 x 3/8 x 1 1/4, 3/8 x 3/8 x 1 1/2, and 1/2 x 1/2 x 1 1/2.
163-105 Ship Wt. 3



Woodruff Keys 109 Pc. Kit

• Carbon Steel - Plain • 109 pieces • 18 Sizes: 3/32 x 1/2, 3/32 x 5/8, 1/8 x 1/2, 1/8 x 5/8, 5/32 x 3/4, 5/32 x 7/8, 3/16 x 3/4, 3/16 x 7/8, 3/16 x 1, 3/16 x 1 1/8, 1/4 x 3/4, 1/4 x 7/8, 1/4 x 1, 1/4 x 1 1/8, 1/4 x 1 1/4, 5/16 x 1, 5/16 x 1 1/4 and 3/8 x 1 1/4.
163-106 Ship Wt. 3



Socket Set Screws 550 Pc. Kit

• Cup Point • Alloy Steel • 550 pieces • 12 Sizes: 6-32 x 3/16, 6-32 x 3/8, 8-32 x 3/16, 8-32 x 3/8, 10-24 x 1/4, 10-24 x 1/2, 10-32 x 1/4, 10-32 x 1/2, 1/4-20 x 1/4, 1/4-20 x 1/2, 5/16-18 x 3/8, and 5/16-18 x 1/2.
163-107 Ship Wt. 2



Zerk Fittings 95 Pc. Kit

• Standard • 95 pieces • 6 Sizes: 1/4 - 28 Straight, 1/4 - 28 45°, 1/4 - 28 90°, 1/8 - NPT Straight, 1/8 - NPT 45° and 1/8 - NPT 90°.
163-108 Ship Wt. 2 Price: **39.00**



Metric Grease Fitting 80 pc.

12 sizes - Straight 6mm x 1.0, 8mm x 1, 8mm x 1.25, 10mm x 1, 10mm x 1.5 45° 6mm x 1, 8mm x 1, 8mm x 1.25, 10mm x 1, 10mm x 1.5 90° 6mm x 1, 8mm x 1.25,
163-117 Ship Wt. 2



Extension Spring 48 pc. Kit

Zinc plated steel, 12 sizes - .50 x 2.312, .50 x 3.625, .406 x 2.937, .406 x 2.75, .437 x 2.937, .375 x 2.187, .375 x 2.687, .312 x 2.125, .312 x 2.687, .25 x 2.312, .25 x 2.5, .234 x 1.5.
163-115 Ship Wt. 3



Compression Spring 36 pc.

Zinc plated steel, 12 sizes - .187 x 1.5, .218 x 1.25, .218 x 1.625, .312 x 2.0, .328 x 1.125, .328 x 3.312, .375 x 1.875, .468 x 1.125, .468 x 2.375, .625 x 1.562, .625 x 2.0.
163-116 Ship Wt. 3



Cotter Pin 170 Pc. Kit

• Extended Prong • Zinc Plated Steel • 170 pcs • 6 Sizes: 1/16 x 1 1/2, 3/32 x 1 1/2, 1/8 x 2, 5/32 x 2, 3/16 x 3, and 1/4 x 3
163-102 Ship Wt. 2



Roll Pin 327 pc. Kit

Zinc plated steel, 18 sizes - 1/16 x 1/2, 1/16 x 1, 5/64 x 1/2, 5/64 x 1, 3/32 x 1/2, 3/32 x 1, 3/32 x 1 1/2, 1/8 x 3/4, 1/8 x 1 1/4, 1/8 x 2, 5/32 x 1 1/2, 3/16 x 1, 3/16 x 1 1/2, 3/16 x 2, 7/32 x 1 3/4, 1/4 x 1, 1/4 x 2.
163-109 Ship Wt. 3



Bronze Bushing 66 pc. Kit

SAE 841 oil lubed, 16 sizes - 1/4 x 5/16 x 3/4, 5/16 x 7/16 x 3/4, 7/16 x 9/16 x 1, 1/2 x 11/16 x 1 1/8, 5/8 x 3/4 x 1 1/8, 1 x 1 1/4 x 2, 1/4 x 3/8 x 1/2, 3/8 x 1/2 x 1/2, 1/2 x 5/8 x 5/8, 1/2 x 3/4 x 1 1/8, 3/4 x 1 x 2, 1/4 x 3/8 x 1, 3/8 x 1/2 x 1, 1/2 x 5/8 x 1 1/8, 5/8 x 3/4 x 1, 7/8 x 1 1/8 x 2.
163-110 Ship Wt. 4



Universal Clevis Pin 34 pc.

Zinc plated steel, 9 sizes - 1/4 x 2, 5/16 x 2, 3/8 x 2, 7/16 x 2, 7/16 x 3, 1/2 x 2, 1/2 x 3, 5/8 x 3, 3/4 x 3.
163-111 Ship Wt. 4



Shaft Collar 32 pc. Kit

Zinc plated steel set screw collars, 8 sizes - 1/4, 5/16, 3/8, 1/2, 5/8, 3/4, 7/8, 1".
163-112 Ship Wt. 3



Hitch Pin Clip 91 pc. Kit

Zinc plated steel, 6 sizes - 30pcs 7/64 x 15/8, 20pcs 9/64 x 15/16, 15pcs 7/64 x 25/16, 10pcs 5/32 x 215/16, 8pcs 5/32 x 315/16, 8pcs 3/16 x 31/2.
163-113 Ship Wt. 3



Roller Chain Link 33 pc. Kit

Connecting, Offset and Roller links in 5 sizes - #40, #50, #60, #80, #100
163-114 Ship Wt. 5



Nylon Tubing Clamp 200 pc.

Each size comes in black and natural color, 3/16, 1/4, 5/16, 3/8, 1/2, 3/4.
163-119 Ship Wt. 2



Spring Action Hose Clamp 110 pc. Kit

6 sizes - 25 x 3/8, 25 x 7/16, 20 x 1/2, 15 x 9/16, 15 x 5/8, 10 x 3/4.
163-120 Ship Wt. 2



Neoprene Dipped Tubing Clamp 60 pc. Kit

Zinc plated steel, 6 sizes - 1/4, 5/16, 3/8, 1/2, 5/8, 3/4.
163-118 Ship Wt. 3

New! Drive Grip

Drive Grip Revolutionary solution to the problem of stripped screws. • Prevents slippage of screwdriver • Works instantly • 5 fl. oz.

ORDER NO.	MFG NO.	DESCRIPTION
165-119	47002	For use on screws and bolts which are rusted, frozen-in-place, worn or damaged



Threadlockers

Threadlocker • 50 ML Bottles

ORDER NO.	MFG NO.	COMPARE TO LOCTITE	STRENGTH	DESCRIPTION
165-101	12150	242	Medium	Removable for bolts 1/4" to 3/4" in dia.
165-105	12250	243	Medium	Oil Tolerant for fasteners from 1/4" to 3/4" in dia.
165-103	13150	262	Permanent	Permanently locks nuts or bolts from 1/4" to 3/4" in dia.
165-107	13750	272	Permanent	High Temp locks nuts or bolts up to 1 1/2" in dia.
165-108	14050	271	Permanent	Permanently locks nuts or bolts up to 1" in dia.



GEL Threadlocker • 35 ML Pump

ORDER NO.	MFG NO.	COMPARE TO LOCTITE	STRENGTH	DESCRIPTION
165-109	12535	242	Medium	Removable for nuts or bolts 1/4" to 3/4" in dia.
165-110	13535	262	Permanent	Permanently locks nuts or bolts 1/4" to 3/4" in dia.



Retaining Compounds • 50 ML Bottles

ORDER NO.	MFG NO.	COMPARE TO LOCTITE	STRENGTH	DESCRIPTION
165-111	53050	609	General Purpose	Typical use: rotors, shafts, bushings, bearings & pulleys-press fit
165-112	54150	680	High Strength	Permanently retains slip fit. Use on rotors, shafts, & splines
165-113	54250	635	High Strength	High viscosity permits larger machine tolerances-slip fit
165-114	56050	642	High Temp	High strength for rotors, shafts, bushings, bearings & pulleys

Thread Sealant • 50 ML Bottles

ORDER NO.	MFG NO.	COMPARE TO LOCTITE	STRENGTH	DESCRIPTION
165-116	42050	565/592	High Pressure	Industrial grade, controlled locking strength, metal fittings
165-104	44050	545	High Pressure	Pneu & Hyd sealant for fluid, power and gas system connections
165-117	44450	569	High Pressure	Hydraulic sealant, non shrink, high vibration and shock resistant
165-118	46050	567	High Pressure	Stainless steel and other inert metal threaded pipe and fittings



Cotton Jersey Gloves

• Brown, heavy weight • Light duty comfortable hand protection • Knitwrists keeps cold and debris out

ORDER NO.
180-925



Leather Palm Gloves

• Blue, black & red striped fabric, rubberized safety cuff • Leather knucklestrap and finger tips for extra protection • elastic closure

ORDER NO.	SIZE
180-901	Size: L



Procoat PVC Green Gloves

• Rough acid finish grip • 14" length • Superior wet grip & cut resistance • Jersey lined • Double dipped for enhanced liquid protection

ORDER NO.
180-920



Top Grain Pigskin Driver Gloves

• Premium grade • Straight thumb • Elastic back closure • Returns to original pliability after being water soaked

ORDER NO.	SIZE
180-905	Large



Red Viper Leather Welding Gloves

• All split cowhide construction • Fully welted w/one pc. back to extend wear • Cotton lined • Reinforced thumb crotch & Dupont Kevlar thread protects seams

ORDER NO.
180-910



G-Tek ONX Black Urethane Coated Palm and Finger

• Seamless knit nylon for great dexterity • Polyurethane coated palm and fingers for abrasion resistance • Breathable back for comfort • Silicone Free

ORDER NO.	SIZE
118-341	Size: L
118-342	Size: XL



G-Tek Blue Latex Crinkle Grip

• Gray cotton/Polyester shell • Latex rubber coated palm and finger tips • Seamless cotton/polyester liner • Ergonomic fingers

ORDER NO.	SIZE
180-915	Size: L

Titanium High Speed Drill Bit Sets

• Industrial quality for free cutting and proper sized holes • Up to 3/8" Shank • Multi-purpose use for wood, plastic and metal

ORDER NO.	QTY.	SIZE	SHIP WT.
116-879	21 Pc.	1/16 to 3/8"	4
116-818	29 Pc.	1/16 to 1/2"	4



Index

Measurement Equivalents

1/16"	.0625"	1.5875 MM
1/8"	.125"	3.175 MM
3/16"	.1875"	4.7625 MM
1/4"	.25"	6.35 MM
5/16"	.3125"	7.9375 MM
3/8"	.375"	9.525 MM
7/16"	.4375"	11.1125 MM
1/2"	.5"	12.7 MM
9/16"	.5625"	14.2875 MM
5/8"	.625"	15.875 MM
11/16"	.6875"	17.4625 MM
3/4"	.75"	19.05 MM
13/16"	.8125"	20.6375 MM
7/8"	.875"	22.225 MM
15/16"	.9375"	23.8125 MM
1"	1.000"	25.4 MM

Inches x 25.4 = MM
MM x 0.03937 = Inches

1 Bar = 14.50 PSI
1 Kilowatt = 1.341 HP
1 Micron = 0.000039 Inches

1 Gallon (liquid) = 231 in³
1 HP = 2545 BTU's/HR
1 Mile = 5280 ft.

1 Gallon = 3.785 Liters
1 Liter = 0.264 Gallons

Port Size

D03	3/8" NPT
D05	1/2" NPT
SAE 2	5/16-24
SAE 3	3/8-24
SAE 4	7/16-20
SAE 5	1/2-20
SAE 6	9/16-18
SAE 8	3/4-16
SAE 10	7/8-14
SAE 12	1 1/16-12
SAE 14	1 3/16-12
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