

## 5CP Plunger Pump

**Models** 5CP3120  
 5CP3120G1, 5CP3130G1  
 5CP5120, 5CP5150G1  
 5CP6120, 5CP6120G1

### FEATURES

#### Superior Design

- Triplex plunger design gives smoother liquid flow.
- Hi-Pressure Seals or V-Packings are completely lubricated and cooled by the liquid being pumped.
- Inlet and discharge valve assemblies interchange for easier maintenance.
- Lubricated Lo-Pressure Seals provides double protection against external leakage.
- Oil bath crankcase assures optimum lubrication.
- Close tolerance concentricity of the ceramic plunger maximizes seal life.

#### Quality Materials

- All stainless steel valves are heat treated and seats are roller burnished for a positive seal and extended valve life.
- Forged brass manifolds for strength and corrosion resistance.
- Special concentric, high density, polished, graphite impregnated, solid ceramic plungers are abrasion resistant and result in extended seal life.
- Specially formulated, CAT PUMP exclusive, Hi-Pressure Seals or V-Packings offer unmatched performance and seal life.
- Die cast aluminum crankcase provides high strength, minimum weight and precision tolerance control.
- Chrome-moly crankshaft gives unmatched strength and surface hardness.
- Oversized crankshaft bearings with greater loading capacity mean longer bearing life.

#### Easy Maintenance

- Convenient "press-in" style seal case for ease in servicing.
- Wet-end is easily serviced without entering crankcase, requiring less time and effort.
- Valve assemblies are accessible without disturbing piping, for quick service.
- Preset packings mean no packing gland adjustment is necessary, reducing maintenance costs.

<b>DETERMINING THE PUMP R.P.M.</b>	<u>Rated G.P.M.</u>	=	<u>"Desired" G.P.M.</u>
	<u>Rated R.P.M.</u>		<u>"Desired" R.P.M.</u>
<b>DETERMINING THE REQUIRED H.P.</b>	<u>GPM x PSI</u>	=	Electric Brake
	1460		H. P. Required
<b>DETERMINING MOTOR PULLEY SIZE</b>	<u>Motor Pulley O.D.</u>	=	<u>Pump Pulley O.D.</u>
	<u>Pump R.P.M.</u>		<u>Motor R.P.M.</u>

Note: Consult engine manufacturer when using gas or diesel engine. Refer to pump Service Manual for important Inlet Condition Check-List, Start-up Procedure, Tech Bulletins and Pump Maintenance information.

### SPECIFICATIONS

	U.S. Measure	Metric Measure	U.S. Measure	Metric Measure
<b>MODEL</b>	<b>5CP3120 and 5CP3120G1</b>		<b>5CP3130G1</b>	
Flow .....	4.5 GPM	(17 L/M)	3.8 GPM	(14.3 L/M)
Pressure Range.....	100-3500 PSI	(7-245 BAR)	100-3500 PSI	(7-245 BAR)
RPM .....	1645 RPM	(1645 RPM)	1570 RPM	(1570 RPM)
Bore .....	<b>0.630"</b>	<b>(16 mm)</b>	<b>0.630"</b>	<b>(16 mm)</b>
Stroke.....	0.709"	(18 mm)	0.650"	(16.5 mm)
Weight.....	20.02 lbs.	(9.1 kg)	20.02 lbs.	(9.1 kg)
<b>MODEL</b>	<b>5CP5120</b>		<b>5CP5150G1</b>	
Flow .....	5.0 GPM	(19 L/M)	5.0 GPM	(19 L/M)
Pressure Range.....	100-3000 PSI	(7-210 BAR)	100-3000 PSI	(7-210 BAR)
RPM .....	1415 RPM	(1415 RPM)	1570 RPM	(1570 RPM)
Bore .....	<b>0.709"</b>	<b>(18 mm)</b>	<b>0.709"</b>	<b>(18 mm)</b>
Stroke.....	0.709"	(18 mm)	.650"	(16.5 mm)
Weight.....	20.02 lbs.	(9.1 kg)	20.02 lbs.	(9.1 kg)
<b>MODEL</b>	<b>5CP6120</b>		<b>5CP6120G1</b>	
Flow .....	6.0 GPM	(23 L/M)	7.0 GPM	(27 L/M)
Pressure Range.....	100-1600 PSI	(7-110 BAR)	100-1600 PSI	(7-110 BAR)
RPM .....	1400 RPM	(1400 RPM)	1668 RPM	(1668 RPM)
Bore .....	<b>0.787"</b>	<b>(20 mm)</b>	<b>0.787"</b>	<b>(20 mm)</b>
Stroke.....	0.709"	(18 mm)	0.709"	(18 mm)
Weight.....	20.02 lbs.	(9.1 kg)	20.02 lbs.	(9.1 kg)

### COMMON SPECIFICATIONS

Inlet Pressure Range .....	Flooded to 60 PSI	(Flooded to 4 BAR)
Crankcase Capacity .....	17 oz.	(0.51 L)
Max. Liquid Temperature .....	160°F	(71°C)
Inlet Ports (2) .....	1/2" NPTF	(1/2" NPTF)
Discharge Ports (2) .....	3/8" NPTF	(3/8" NPTF)
Shaft Diameter .....	0.787"	(20 mm)
Dimensions (3120-5150)	10.35 x 10.0 x 5.78"	(263 x 254 x 147 mm)
(6120) .....	10.82 x 10.0 x 5.78"	(275 x 254 x 147 mm)

### HORSEPOWER REQUIREMENTS

MODEL	FLOW		PRESSURE						MOTOR PULLEY SIZE Using 1725 RPM Motor & 8" Std. Pump Pulley	
	U.S. GPM	L/M	PSI 1200	PSI 1600	PSI 2000	PSI 2500	PSI 3000	PSI 3500	RPM	Pulley O.D.
3120	4.5	17	3.7	4.9	6.2	7.7	9.3	10.8	1645	7.5
3120G1	4.5	17	3.7	4.9	6.2	7.7	9.3	10.8	1645	Gearbox
3130G1	3.8	14.3	3.1	4.2	5.2	5.9	7.8	9.1	1570	Gearbox
5120	5.0	19	4.1	5.5	6.9	8.6	10.3	N/A	1415	6.5
5150G1	5.0	19	4.1	5.5	6.9	8.6	10.3	N/A	1570	Gearbox
6120	6.0	23	4.9	6.6	N/A	N/A	N/A	N/A	1400	6.4
6120G1	7.0	27	5.8	7.7	N/A	N/A	N/A	N/A	1668	Gearbox

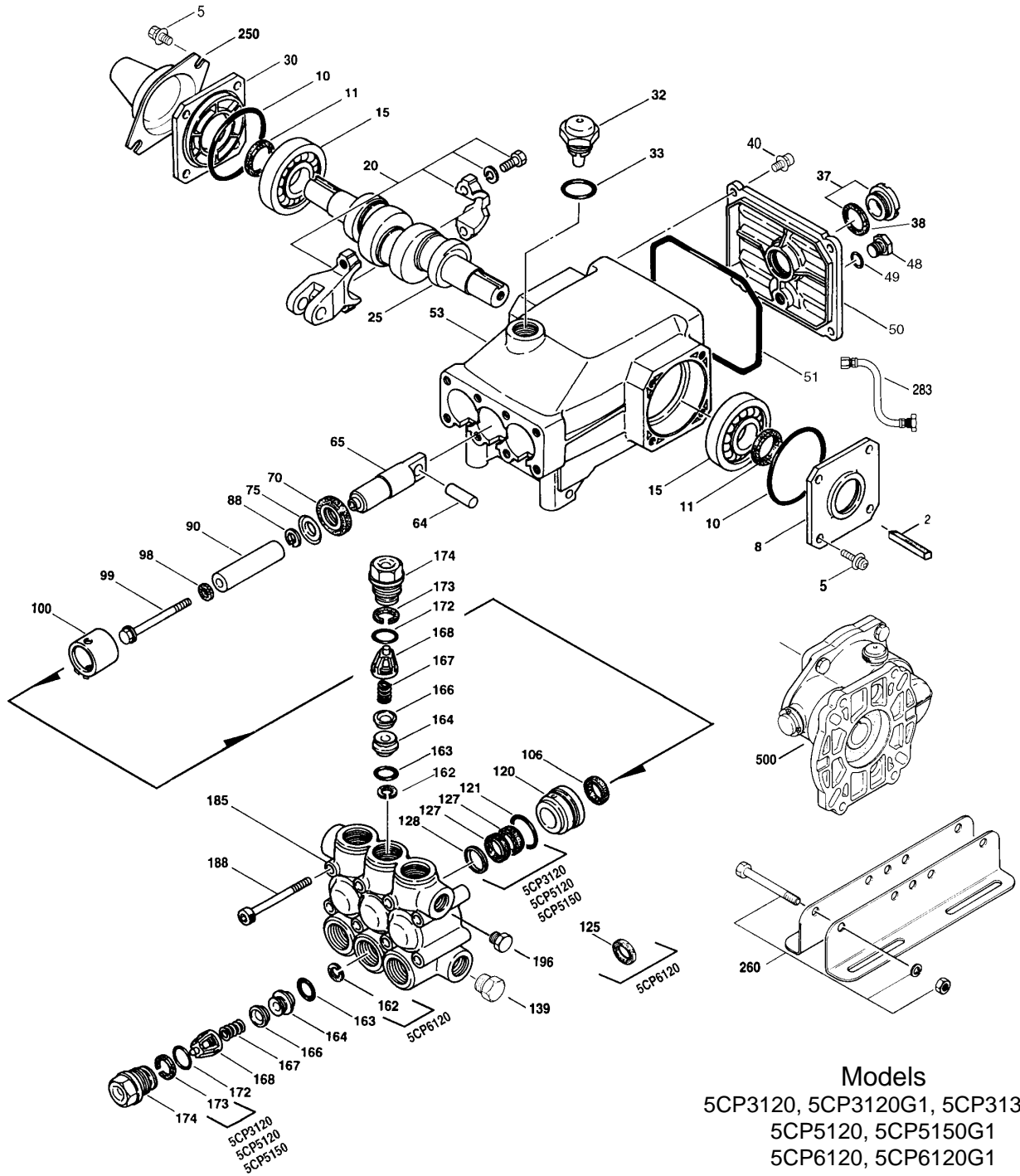
See complete Drive Packages [Incls: Pulleys, Belts, Hubs, Key] Tech Bulletin 03.

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# PARTS LIST

ITEM	PART NUMBER		DESCRIPTION		QTY	
	<b>5CP3120</b>					
	<b>5CP3120G1</b>					
	<b>5CP3130G1</b>	<b>MATL</b>	<b>5CP5150G1</b>	<b>MATL</b>	<b>5CP6120</b>	
					<b>5CP6120G1</b>	
2	30057	STL	30057	STL	Key (M6x6x25)	1
5	96031	STZP	96031	STZP	Screw, Sems (M8x16)	8
8	46910	AL	46910	AL	Cover, Bearing	2/1
10	14028	NBR	14028	NBR	O-Ring, Bearing Cover - 70D	2
11	43222	NBR	43222	NBR	Seal, Oil, Crankshaft	2
15	14480	STL	14480	STL	Bearing, Ball	2
20	† 48658	HS	† 48658	HS	Rod, Connecting Assy [2/00]	3
25	46928	FCM	46928	FCM	Crankshaft, Dual End - 3120, 5120, 6120 6120G1	1
	<b>48233</b>	<b>FCM</b>	—	—	Crankshaft, Single End - 3120G1	1
	<b>48368</b>	<b>FCM</b>	<b>48368</b>	<b>FCM</b>	Crankshaft, Single End - 3130G1, 5150G1	1
30	<b>48224</b>	<b>AL</b>	<b>48224</b>	<b>AL</b>	Cover, Bearing Blind	1
32	46798		46798		Cap, Oil Filler, Domed	1
33	14179	NBR	14179	NBR	O-Ring, Oil Filler Cap - 70D	1
37	92241		92241		Gauge, Oil, Bubble w/Gasket - 80D	1
38	44428	NBR	44428	NBR	Gasket, Flat, Oil Gauge - 80D	1
40	92519	STZP	92519	STZP	Screw, Sems (M6x16)	4
48	25625	STCP	25625	STCP	Plug, Drain (1/4"x19BSP)	1
49	23170	NBR	23170	NBR	O-Ring, Drain Plug - 70D	1
50	46940	AL	46940	AL	Cover, Rear	1
51	14044	NBR	14044	NBR	O-Ring, Rear Cover	1
● 53	48617	AL	48617	AL	Crankcase	1 ●
64	46746	CM	46746	CM	Pin, Crosshead	3
65	48458	BBNP	48458	BBNP	Rod, Plunger	3
70	46838	NBR	46838	NBR	Seal, Oil, Crankcase - 70D	3
75	<b>43900</b>	<b>S</b>	<b>43328</b>	<b>S</b>	Slinger, Barrier	3
88	45697	S	45697	S	Washer, Keyhole (M18)	3
90	<b>46884</b>	<b>CC</b>	—	—	Plunger (M16x50)	3
	—		<b>46893</b>	<b>CC</b>	Plunger (M18x50)	3
	—		—		Plunger (M20x50)	3
98	46730	NBR	46730	NBR	Washer, Seal	3
	<b>48394</b>	<b>FPM</b>	<b>48394</b>	<b>FPM</b>	Washer, Seal	3
99	48201	SS	48201	SS	Retainer, Plunger w/Stud (M6)	3
100	46749	PVDF	46749	PVDF	Retainer, Seal	3
106	<b>43316</b>	<b>NBR</b>	<b>43243</b>	<b>NBR</b>	Seal, LPS w/S-Spg	3
	<b>106660</b>	<b>FPM</b>	<b>44926</b>	<b>FPM</b>	Seal, LPS w/S-Spg	3
120	<b>46888</b>	<b>BB</b>	<b>46896</b>	<b>BB</b>	Case, Seal (Press-in-style)	3
121	13978	NBR	13978	NBR	O-Ring, Seal Case - 70D	3
	<b>14329</b>	<b>FPM</b>	<b>14329</b>	<b>FPM</b>	O-Ring, Seal Case	3
125	—		—		Seal, HPS w/S	3
	—		—		Seal, HPS w/SS	3
127	<b>43319</b>	<b>PTFE</b>	<b>44549</b>	<b>SNG</b>	V-Packing	6
	<b>46287</b>	<b>HT</b>	<b>45617</b>	<b>SFG</b>	V-Packing	6
	—		<b>48300</b>	<b>STG</b>	V-Packing	6
128	<b>46618</b>	<b>NY</b>	<b>44548</b>	<b>NY</b>	Adapter, Male	3
139	22179	BBCP	22179	BBCP	Plug, Inlet (1/2"NPT)	1
162	—		—		Back-up-Ring, Seat	6
163	<b>17547</b>	<b>NBR</b>	<b>17547</b>	<b>NBR</b>	O-Ring, Seat	6
	<b>11685</b>	<b>FPM</b>	<b>11685</b>	<b>FPM</b>	O-Ring, Seat	6
164	<b>46658</b>	<b>S</b>	<b>46658</b>	<b>S</b>	Seat	6
166	<b>46429</b>	<b>S</b>	<b>46429</b>	<b>S</b>	Valve	6
167	<b>43750</b>	<b>S</b>	<b>43750</b>	<b>S</b>	Spring	6
168	<b>44565</b>	<b>PVDF</b>	<b>44565</b>	<b>PVDF</b>	Retainer, Spring	6
172	<b>17549</b>	<b>NBR</b>	<b>17549</b>	<b>NBR</b>	O-Ring, Valve Plug	6
	<b>26996</b>	<b>FPM</b>	<b>26996</b>	<b>FPM</b>	O-Ring, Valve Plug	6
173	<b>48365</b>	<b>D</b>	<b>48365</b>	<b>D</b>	Back-up-Ring, Valve Plug	6
174	<b>45900</b>	<b>BB</b>	<b>45900</b>	<b>BB</b>	Plug, Valve	6
185	<b>46886</b>	<b>FBB</b>	<b>46895</b>	<b>FBB</b>	Manifold, Head	1
188	87872	STZP	87872	STZP	Screw, HSH (M8x70)	8
196	22187	BBCP	22187	BBCP	Plug, Discharge (3/8"NPT)	1
250	118672	STCP	118672	STCP	Protector, Shaft	1
255	30243	STZP	30243	STZP	Mount, Direct	1
260	30611	STZP	30611	STZP	Assembly, Angle Rail - B	1
					(Incls: 28499, 30900, 30910, 30920) (Belt Drive Only)	
265	30637	STZP	30637	STZP	Mount, Angle Assy-Retro Fit	1
	30659		30659		Kit, Complete Mounting	1
					(Incls: 30611, 30944, 30633, 118672) (Belt Drive Only)	
● 275	30944	STL	30944	STL	Hub & Key Assy (M20 w/M6 Keyway)	1 ●
					[See Drive Packages, Tech Bulletin 03]	
● 283	34334		34334		Kit, Oil Drain	1 ●
● 299	<b>814843</b>	<b>FBB</b>	<b>814844</b>	<b>FBB</b>	Head, Complete	1 ●

# EXPLODED VIEW



## Models

5CP3120, 5CP3120G1, 5CP3130G1  
 5CP5120, 5CP5150G1  
 5CP6120, 5CP6120G1

April 2001

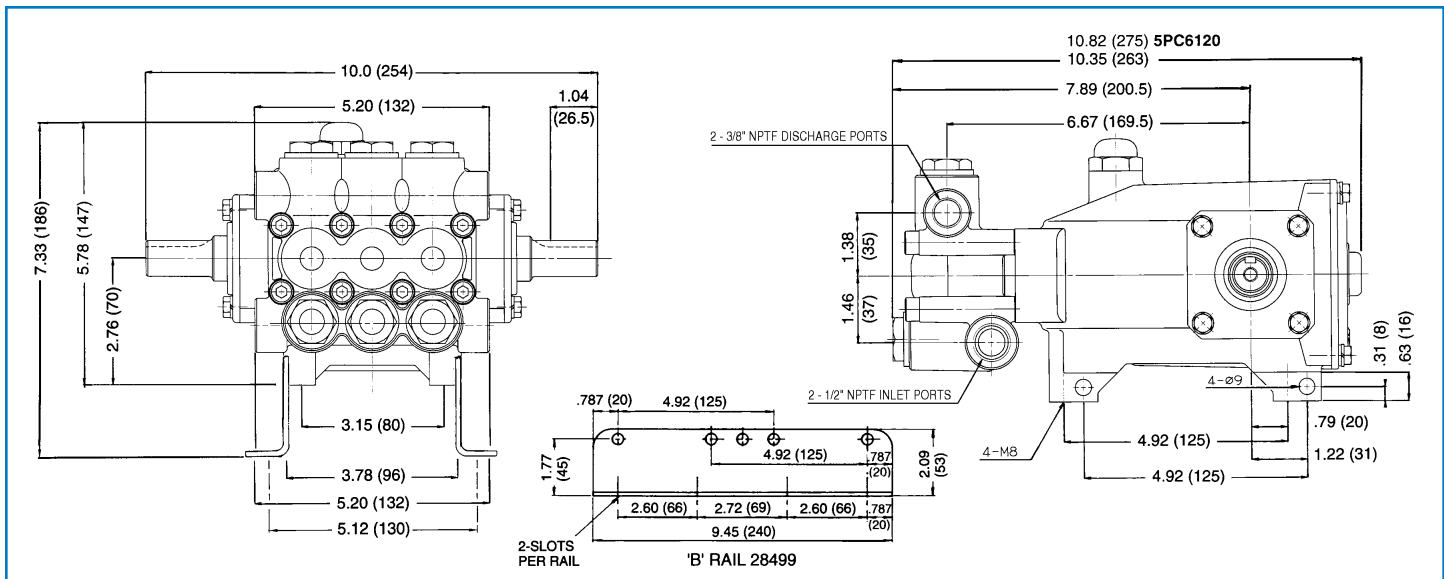
5CP3120		5CP5120		5CP6120			
5CP3120G1	MATL	5CP5120G1	MATL	5CP6120G1	MATL		
300	<b>33629</b> <i>NBR</i>	<b>33630</b> <i>NBR</i>	<b>33628</b> <i>NBR</i>	Kit, Seal (Incls: 98, 106, 121, 125, 127)			1
	<b>31340</b> <i>FPM</i>	<b>31350</b> <i>FPM</i>	<b>31628</b> <i>FPM</i>	Kit, Seal (Incls: 98, 106, 121, 125, 127)			1
310	<b>33060</b> <i>NBR</i>	<b>33060</b> <i>NBR</i>	<b>30820</b> <i>NBR</i>	Kit, Valve (Incls: 162, 163, 164, 166, 167, 168, 172)			2
	<b>31345</b> <i>FPM</i>	<b>31345</b> <i>FPM</i>	<b>31263</b> <i>FPM</i>	Kit, Valve (Incls: 162, 163, 164, 166, 167, 168, 172)			2
350	30696 <i>STZP</i>	30696 <i>STZP</i>	30696 <i>STZP</i>	Pliers, Reverse			1
400	7655 <i>BB</i>	7655 <i>BB</i>	7655 <i>BB</i>	Modular Unloader (See Individual Data Sheet)			1
500	8076-8077	8076-8077	8076-8077	Gearbox (See Individual Data Sheet)			1

● Industrial discount. **Bold print part numbers are unique to a particular pump model.** *Italics are optional items.*

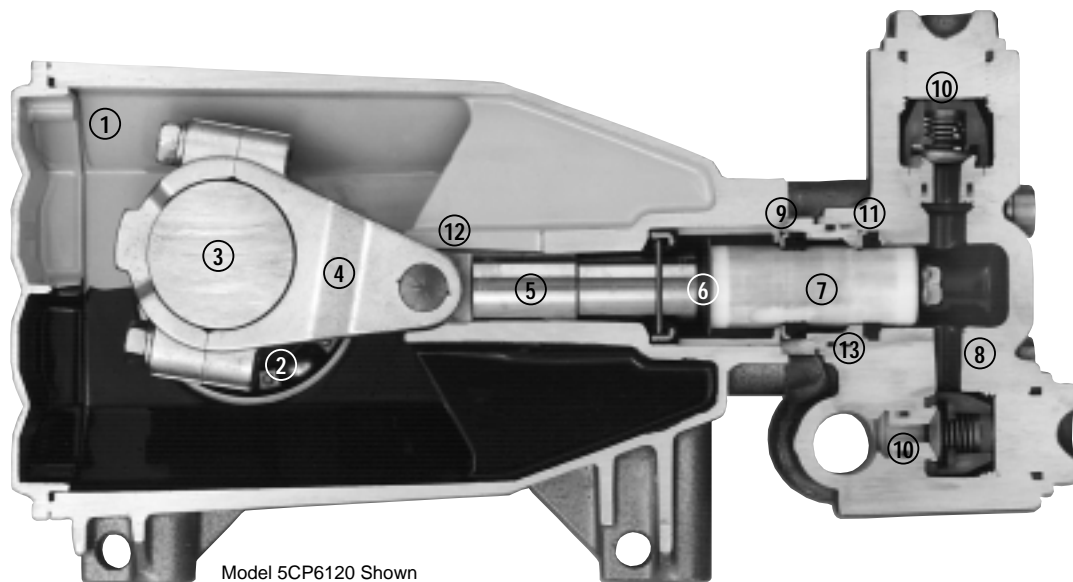
† Standard production is ZZ, replacement parts are HS. HS standard on GB.

See Tech Bulletins 02, 03, 24, 36, 43, 53, 60, 61, 64, 73, 74, 77, 78 and 83 for additional information. Add .3 for the Hi-Temp model.

MATERIAL CODES (Not Part of Part Number): AL=Aluminum BB=Brass BBNP=Brass/Nickel Plated CC=Ceramic CM=Chrome-moly D=Delrin® FBB=Forged Brass FCM=Forged Chrome-moly FPM=Fluorocarbon (Viton®) HS=High Strength HT=Hi-Temp (EPDM Alternative) NBR=Medium Nitrile (Buna-N) NY=Nylon PTFE=Pure Teflon® PVDF=Fluoroplastic (High Strength) S=304SS SS=316SS SFG=Special Blend (Viton®) SNG=Special Blend (Buna) STG=Special Blend (Teflon®) STL=Steel STCP=Steel/Chrome Plated STZP=Steel/Zinc Plated



Models 5CP3120, 5CP5120, 5CP6120



Model 5CP6120 Shown

- 1 Die cast aluminum **crankcase** means high strength, lightweight, and excellent tolerance control.
- 2 Oversized crankshaft **bearings** provide extended bearing life and pump performance.
- 3 Chrome-moly **crankshaft** provides unmatched strength and surface hardness for long life.
- 4 Matched high strength **connecting rods** noted for strength and superior bearing quality.
- 5 The **plunger rods** with hardened surfaces offer wear resistance and Zamak cross-heads for high load capacity.
- 6 The stainless steel **slinger** provides back-up protection for the crankcase seal, keeping pumped liquids out of the crankcase.
- 7 Special concentric, high density, polished, graphite impregnated, solid ceramic **plungers** are abrasion resistant and result in extended seal life.
- 8 **Manifolds** are a high tensile strength forged brass for long term, continuous duty.
- 9 100% wet **seal** design adds to service life by allowing pumped liquids to cool and lubricate on both sides of the seals.
- 10 Stainless steel **valves, seats and springs** provide corrosion-resistance, positive seating and long life.
- 11 Specially formulated, CAT PUMP exclusive, **Hi-Pressure Seals or V-Packings** offer unmatched performance and seal life.
- 12 **Crossheads** are 360° supported for uncompromising alignment.
- 13 Press-in style **seal case** offers alignment and support for seals and "no tools" servicing.

Products described hereon are covered by one or more of the following U.S. patents 3558244, 3652188, 3809508, 3920356, 3930756 and 5035580

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