

DATA SHEET

DIRECT-DRIVE PLUNGER PUMPS



Standard Brass Models: **3CP1120, 3CP1130, 3CP1140**
Gearbox Model: **3CP1120G**



Model 3CP1120 Shown
(Rails and shaft protector sold separately)

FEATURES

- Triplex design offers high efficiency and low pulsation.
- Special high-density, polished, concentric plungers provide a true wear surface and extended seal life.
- Convenient press in style seal case and interchangeable inlet and discharge valves for easy servicing
- Various Drive configurations including direct drive bell housing to electric motor, belt drive to engine or motor, and direct drive to hydraulic motor
- Standard NBR seals with alternative options for temperature and chemical compatibility
 - FPM – .0110
 - EPDM – .0220
 - High Temp, 190°F – .3000
 - High Temp, 200°F, Run Dry – .3400

COMMON SPECIFICATIONS

	U.S.	Metric
Inlet Pressure Range	Flooded to 70 psi	Flooded to 4.8 bar
Bore	0.709"	18 mm
Crankcase Capacity	12 oz.	0.35 l
Standard Liquid Temperature	160°F	71°C
Above 130°F call Cat Pumps for inlet conditions and elastomer recommendations.		
Inlet Ports (2)	1/2" NPT(F)	1/2" NPT(F)
Discharge Ports (2)	3/8" NPT(F)	3/8" NPT(F)
Pulley Mounting	Either Side	Either Side
Shaft Diameter	0.650"	16.5 mm
Weight	14.84 lbs.	6.7 kg
Dimensions	9.1 x 8.78 x 5.47"	231 x 223 x 139 mm

SPECIFICATIONS

	U.S. Measure	Metric Measure
3CP1120 Direct Drive		
Flow	4.2 gpm	16 lpm
Pressure Range	100 to 2200 psi	7 to 152 bar
RPM	1725 rpm	1725 rpm
Stroke	0.500"	12.7 mm
3CP1130 Direct Drive		
Flow	2.4 gpm	9.1 lpm
Pressure Range	100 to 2200 psi	7 to 152 bar
RPM	1725 rpm	1725 rpm
Stroke	0.287"	7.3 mm
3CP1140 Direct Drive		
Flow	3.6 gpm	13.6 lpm
Pressure Range	100 to 2200 psi	7 to 152 bar
RPM	1725 rpm	1725 rpm
Stroke	0.433"	11 mm
3CP1120G GEARBOX (2.55 : 1 RATIO)		
Flow	3.5 gpm	13.2 lpm
Pressure Range	100 to 2200 psi	7 to 152 bar
Pump RPM	1420 rpm	1420 rpm
Engine RPM	3600 rpm	3600 rpm
Stroke	0.500"	12.7 mm

ELECTRIC HORSEPOWER REQUIREMENTS

MODELS	FLOW		PRESSURE				RPM	MOTOR PULLEY SIZE Using 1725 rpm Motor & Std. 5.0" Pump Pulley
			psi 1200	psi 1500	psi 2000	psi 2200		
	U.S. gpm	lpm	bar 83	bar 103	bar 138	bar 152		PULLEY OUTER DIAMETER
3CP1120	4.2	16	3.5	4.3	5.8	6.3	1725	Direct Drive
	3.5	13.2	2.9	3.6	4.8	5.3	1531	4.4
	3.0	11.4	2.5	3.1	4.1	4.5	1313	3.8
3CP1130	2.4	9.1	2.0	2.5	3.3	3.6	1725	Direct Drive
3CP1140	3.6	13.6	3.0	3.7	5.0	5.4	1725	Direct Drive
3CP1120G	3.5	13.2	2.9	3.6	4.8	5.3	1420	Gearbox

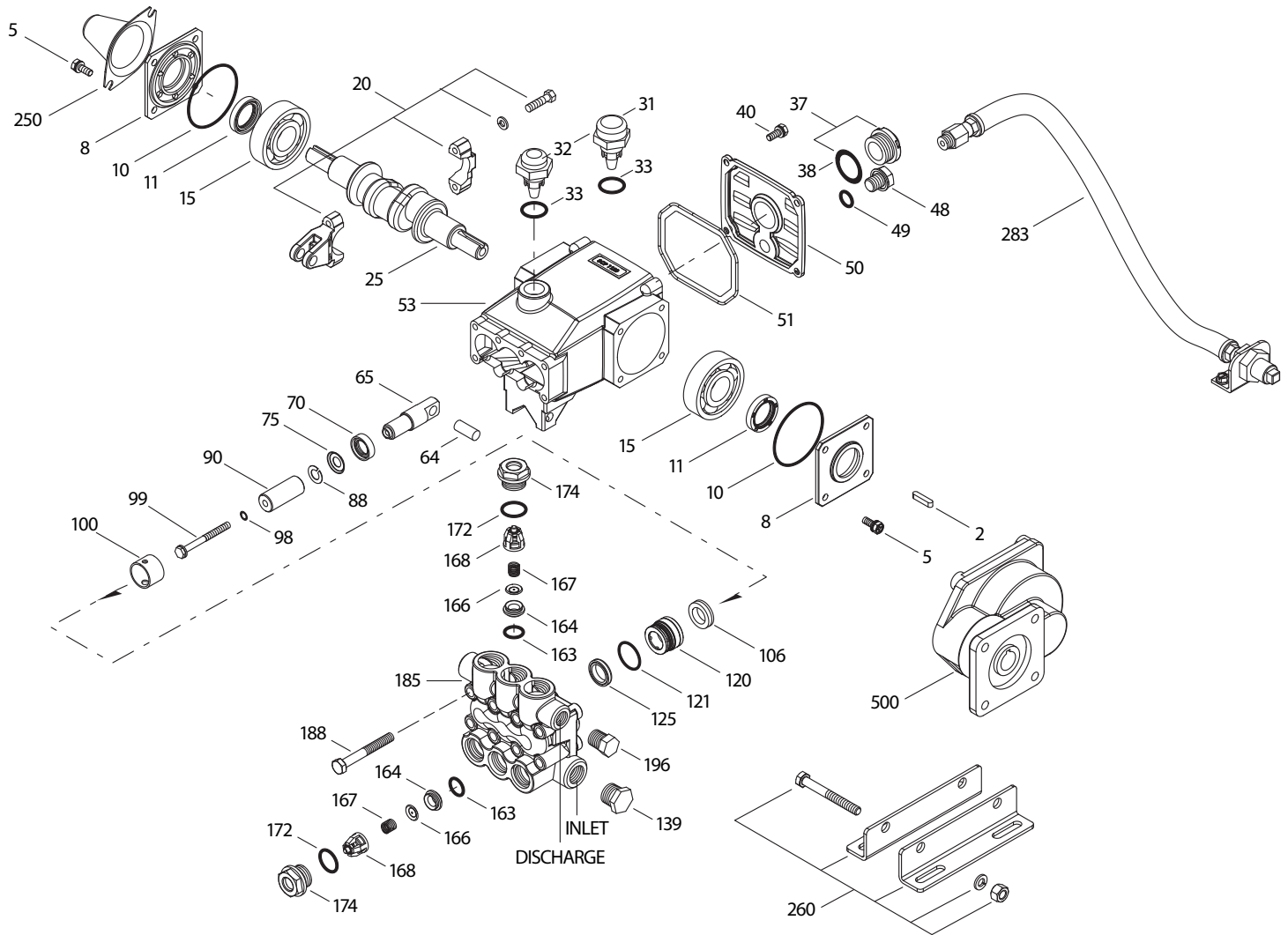
DETERMINING THE PUMP R.P.M.	Rated gpm	=	"Desired" gpm
	Rated rpm	=	"Desired" rpm
DETERMINING THE REQUIRED H.P.	gpm x psi	=	Electric Brake
	1460	=	H. P. Required
DETERMINING MOTOR PULLEY SIZE	Motor Pulley O.D.	=	Pump Pulley O.D.
	Pump rpm	=	Motor rpm

See complete Drive Packages [Includes: Pulleys, Belts, Hubs, Key] Tech Bulletin 003.
Refer to pump **Service Manual** for repair procedure and additional technical information.

PARTS LIST

ITEM	PART NUMBER	MATL	DESCRIPTION	QTY
2	30047	STL	Key (M5x5x24)	1
5	92519	STZP	Screw, HHC Sems (M6x16)	8
	125824	STCPR	Screw, HHC Sems (M6x16)	8
8	46901	AL	Cover, Bearing	2
	48259	AL	Cover, Blind - 3CP1120G	1
10	14028	NBR	O-Ring, Bearing Cover - 70D	2
11	43222	NBR	Seal, Oil, Crankshaft - 70D	1/2
15	14480	STL	Bearing, Ball	2
20	48730	TNM	Rod, Connecting, Assembly [5/01]	3
25	46927	FCM	Crankshaft, Dual End - 3CP1120 (M12.7)	1
	46994	FCM	Crankshaft, Dual End - 3CP1130 (M7.3)	1
	46991	FCM	Crankshaft, Dual End - 3CP1140 (M11)	1
	48484	FCM	Crankshaft, Single End - 3CP1140CS, 3CP1140RS, (M11)	1
	48257	FCM	Crankshaft, Single End - 3CP1120G (M12.7)	1
31	127409	—	Cap, Vented w/ O-Ring, (Rain Cap)	1
32	46798	—	Cap, Oil Filler	1
33	14179	NBR	O-Ring, Oil Filler Cap - 70D	1
37	92241	—	Gauge, Oil, Bubble w/Gasket	1
38	44428	NBR	Gasket, Flat, Oil Gauge - 80D	1
40	92519	STZP	Screw, HHC Sems (M6x16)	4
	125824	STCPR	Screw, HHC Sems (M6x16)	4
48	25625	STCP	Plug, Drain (1/4"x19BSP)	1
49	23170	NBR	O-Ring, Drain Plug - 70D	1
50	46939	AL	Cover, Rear	1
51	14041	NBR	O-Ring, Rear Cover - 70D	1
53	48644	AL	Crankcase	1
64	46615	CM	Pin, Crosshead	3
65	48459	BBNP	Rod, Plunger	3
70	46839	NBR	Seal, Oil, Crankcase	3
75	43900	S	Slinger, Barrier	3
88	45697	S	Washer, Keyhole (M18 x 10)	3
90	46976	CC	Plunger (M18x43)	3
98	46730	NBR	Washer, Seal - 90D	3
	48394	FPM	Washer, Seal - 90D	3
	◆ 48432	EPDM	Washer, Seal	3
99	† 48201	SS	Retainer, Plunger w/Stud (M6)	3
100	46541	PVDF	Retainer, Seal	3
106	43243	NBR	Seal, LPS w/S-Spg	3
	44926	FPM	Seal, LPS w/SS-Spg	3
	◆ 46651	EPDM	Seal, LPS w/SS-Spg	3
	76243	ST2	Seal, LPS w/S-Spg	3
120	46625	BB	Case, Seal (See Tech Bulletin #110)	3
121	13976	NBR	O-Ring, Seal Case - 70D	3
	48522	FPM	O-Ring, Seal Case	3
	◆ 48905	EPDM	O-Ring, Seal Case	3
125	43245	SNG	Seal, HPS w/S	3
	44925	FPM	Seal, HPS w/SS	3
	46652	HT	Seal, HPS "Hi-Temp", 2-Pc w/S-Support	3
139	43448	BB	Plug, Inlet [1/2"NPT(F)]	1
163	17547	NBR	O-Ring, Seat - 85D	6
	11685	FPM	O-Ring, Seat - 85D	6
	◆ 46648	EPDM	O-Ring, Seat - 70D	6
164	45790	S	Seat	6
166	43723	S	Valve	6
167	43750	S	Spring	6
168	44565	PVDF	Retainer, Spring	6
172	17615	NBR	O-Ring, Valve Plug - 75D	6
	15855	FPM	O-Ring, Valve Plug - 70D	6
	◆ 48431	EPDM	O-Ring, Valve Plug-75D	6
174	46756	BB	Plug, Valve	6
185	46616	FBB	Manifold, Head	1
188	126512	STCPR	Screw, HSH (M8x65)	8
196	22187	BBCP	Plug, Discharge [3/8"NPT(M)]	1
250	118672	STCP	Protector, Shaft	1
260	30612	STZP	Rail, Angle Assy	1
265	30641	—	Mount, Assy (Incls: 30612, 30032, 30047, 118672)	1
270	30246	STL	Assy, Pulley & Key (Incls: 30032, 30047) (See Tech Bulletin 003)	1
283	34334	—	Kit, Oil Drain (3/8" x 24") (See individual Data Sheet)	1
	76334	—	Kit, Oil Indicator (3/8" x 24") (See individual Data Sheet)	1
299	814841	FBB	Head, Complete w/ NBR Seals and O-Rings	1
300	33983	NBR	Kit, Seal (Incls: 98, 106, 121, 125) Standard	1
	33257	FPM	Kit, Seal (Incls: 98, 106, 121, 125) .0110	1

EXPLODED VIEW



MODELS
3CP1120, 3CP1120G
3CP1130, 3CP1140
MARCH 2016

ITEM	PART NUMBER	MATL	DESCRIPTION	QTY
	♦ 76924	EPDM	Kit, Seal (Incls: 98, 106, 121, 125) .0220	1
	31983	HT	Kit, Seal (Incls: 98, 106, 121, 125) .3000	1
	76526	STHT	Kit, Seal (Incls: 98, 106, 120, 121, 125) Prior to 4/10 .3400	1
	76983	STHT	Kit, Seal (Incls: 98, 106, 121, 125) After 4/10 .3400	1
310	33062	NBR	Kit, Valve (Incls: 163, 164, 166, 167, 168, 172) Standard	2
	33258	FPM	Kit, Valve (Incls: 163, 164, 166, 167, 168, 172) .0110	2
	♦ 76882	EPDM	Kit, Valve (Incls: 163, 164, 166, 167, 168, 172) .0220	2
350	30696	STZP	Plier, Reverse	1
500	8075	—	Gearbox (See Individual Data Sheet)	1
—	6107	—	Oil, Bottle (21 oz.) ISO 68 Hydraulic (Fill to specified crankcase capacity prior to start-up)	1

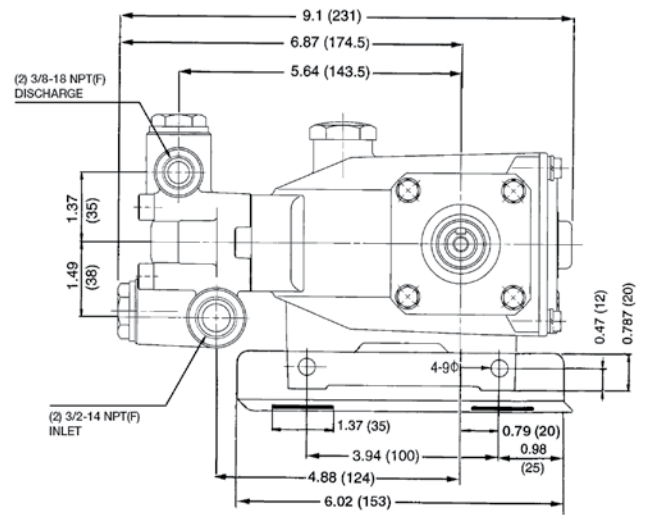
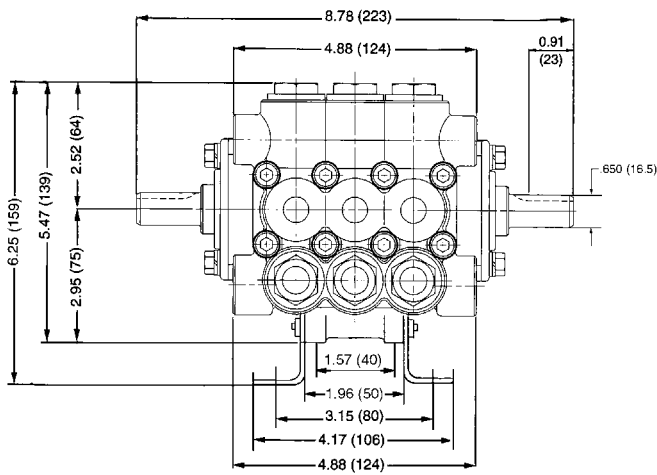
Bold print part numbers are unique to a particular pump model. *Italics are optional items.* ♦ Silicone oil/grease required [] Date of latest production change.

† Production parts are different than repair parts. R Components comply with RoHS Directive.

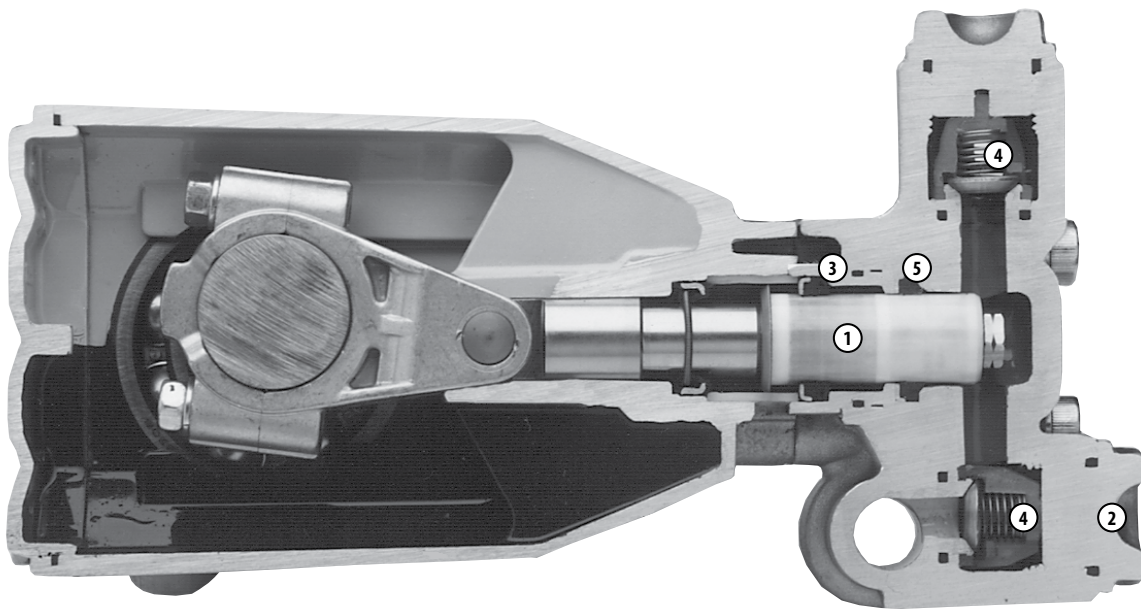
View Tech Bulletins 002, 003, 024, 036, 064, 073, 074, 077, 083, and 110 for additional information.

For motorized versions see BD motor data sheet. For Gearbox version see 8075 data sheet.

MATERIAL CODES (Not Part of Part Number): AL=Aluminum BB=Brass BBCP=Brass/Chrome Plated BBNP=Brass/Nickel Plated CC=Ceramic CM=Chrome-moly
EPDM=Ethylene Propylene Diene Monomer FBB=Forged Brass FCM=Forged Chrome-Moly FPM=Fluorocarbon HT=Hi-Temp (EPDM Alternative) NBR=Medium Nitrile (Buna-N)
PVDF=Polyvinylidene Fluoride S=304SS SNG=Special Blend (Buna) SS=316SS ST2=Special PTFE 2 STHT=Special PTFE High Temp STL=Steel STCP=Steel/Chrome Plated
STZP=Steel/Zinc Plated TNM=Special High Strength



Models 3CP1120, 3CP1120G, 3CP1130, 3CP1140



- 1. Special concentric, high-density, polished, solid ceramic plungers provide a true wear surface and extended seal life.
- 2. Manifolds are a high tensile strength forged brass for long term, continuous duty.

- 3. 100% wet seal design adds to service life by allowing pumped liquids to cool and lubricate on both sides of the seals.
- 4. Stainless steel valves, seats and springs provide corrosion-resistance, ultimate seating and extended life.

- 5. Specially formulated, Cat Pump exclusive, Hi-Pressure Seals offer unmatched performance and seal life.


CAUTIONS AND WARNINGS

All High Pressure Systems require a primary pressure regulating device (i.e. regulator, unloader) and a secondary pressure relief device (i.e. pop-off valve, relief valve). Failure to install such relief devices could result in personal injury or damage to pump or property. Cat Pumps does not assume any liability or responsibility for the operation of a customer's high pressure system.

Read all CAUTIONS and WARNINGS before commencing service or operation of any high pressure system. The CAUTIONS and WARNINGS are included in each service manual and with each Accessory Data sheet. CAUTIONS and WARNINGS can also be viewed online at www.catpumps.com/cautions-warnings or can be requested directly from Cat Pumps.

WARRANTY

View the Limited Warranty on-line at www.catpumps.com/warranty.



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