

DATA SHEET

7CP PLUNGER PUMPS



Stainless Steel Models

7CP6111, 7CP6171

Stainless Steel Flushed Models

7CP6111C, 7CP6171C

Gearbox Model

7CP6111G1



Model 7CP6171 Shown
(Rails sold separately)

FEATURES

- 316SS Stainless Steel manifold head.
- Flexible coupling/bell housing, gearbox and belt drive options provide flexibility with a compact footprint.
- Special flushed "C" manifold with 7CP6111C and 7CP6171C permits external flush for added cooling with high temperature liquids and lubrication with low lubricity liquids.
- Standard NBR seals with alternative options for temperature and chemical compatibility.
 - FPM – .0110
 - EPDM – .0220
 - High Temp, 200° F – .3400 (Intermittent Run-Dry)

COMMON

SPECIFICATIONS	U.S.	Metric
Inlet Pressure Range	Flooded to 70 psi	Flooded to 4.9 bar
Max. Liquid Temperature	140° F	60° C
Above 130°F call Cat Pumps for inlet conditions and elastomer recommendations.		
Bore	0.866"	22 mm
Crankcase Capacity	38 oz.	1.15 l
Inlet Ports (2)	3/4" NPT(F)	3/4" NPT(F)
Discharge Ports (2)	1/2" NPT(F)	1/2" NPT(F)
Flushing Ports (2) (7CP6111C, 7CP6171C)	1/8" NPT(F)	1/8" NPT(F)
Shaft Diameter	0.945"	24 mm
Weight (7CP6111, 7CP6171)	29.1 lbs.	13.2 kg
Weight (7CP6111G1)	38.6 lbs.	17.5 kg
Dimensions	13.45 x 9.26 x 6.89"	342 x 235 x 175 mm
Dimensions w/Gearbox	13.45 x 12.25 x 6.97"	342 x 311 x 177 mm

SPECIFICATIONS

	U.S. Measure	Metric Measure
7CP6111, 7CP6111C		
Flow	10.5 gpm	40 lpm
Pressure Range	100 to 2000 psi	6.9 to 138 bar
Pump RPM*	1750 rpm	1750 rpm
Stroke	0.854"	21.7 mm
7CP6171, 7CP6171C		
Flow	10.5 gpm	40 lpm
Pressure Range	100 to 2000 psi	6.9 to 138 bar
Pump RPM*	1450 rpm	1450 rpm
Stroke	1.024"	26 mm
7CP6111G1		
Flow	10.0 gpm	38 lpm
Pressure Range	100 to 2000 psi	6.9 to 138 bar
Pump RPM	1667 rpm	1667 rpm
Engine RPM	3400 rpm	3400 rpm
Stroke	0.854"	21.7 mm

*Pump is minimum 100 RPM

Mounting Flange: SAEJ609, Flange B, Extension 4 (1"Ø), Shaft Length = 3-1/4", Pilot Ø = 5-3/4", B.C. Ø = 6-1/2", Thread = 3/8"-16 UNC TAP

ELECTRIC HORSEPOWER REQUIREMENTS

MODELS	FLOW		PRESSURE			RPM
			psi 1500	psi 1800	psi 2000	
	U.S. gpm	lpm	bar 103	bar 124	bar 138	
7CP6111 7CP6111C	10.5	40.0	10.8	12.9	14.4	1750
7CP6171 7CP6171C	10.5	40.0	10.8	12.9	14.4	1450
7CP6111G1	10.0	38.0	Consult Engine Manufacturer			1667

DETERMINING THE PUMP R.P.M.

$$\frac{\text{Rated gpm}}{\text{Rated rpm}} = \frac{\text{"Desired" gpm}}{\text{"Desired" rpm}}$$

DETERMINING THE REQUIRED H.P.

$$\frac{\text{Hp (Electric Brake)}}{\text{gpm x psi}} = \frac{1460}{1460}$$

DETERMINING MOTOR PULLEY SIZE

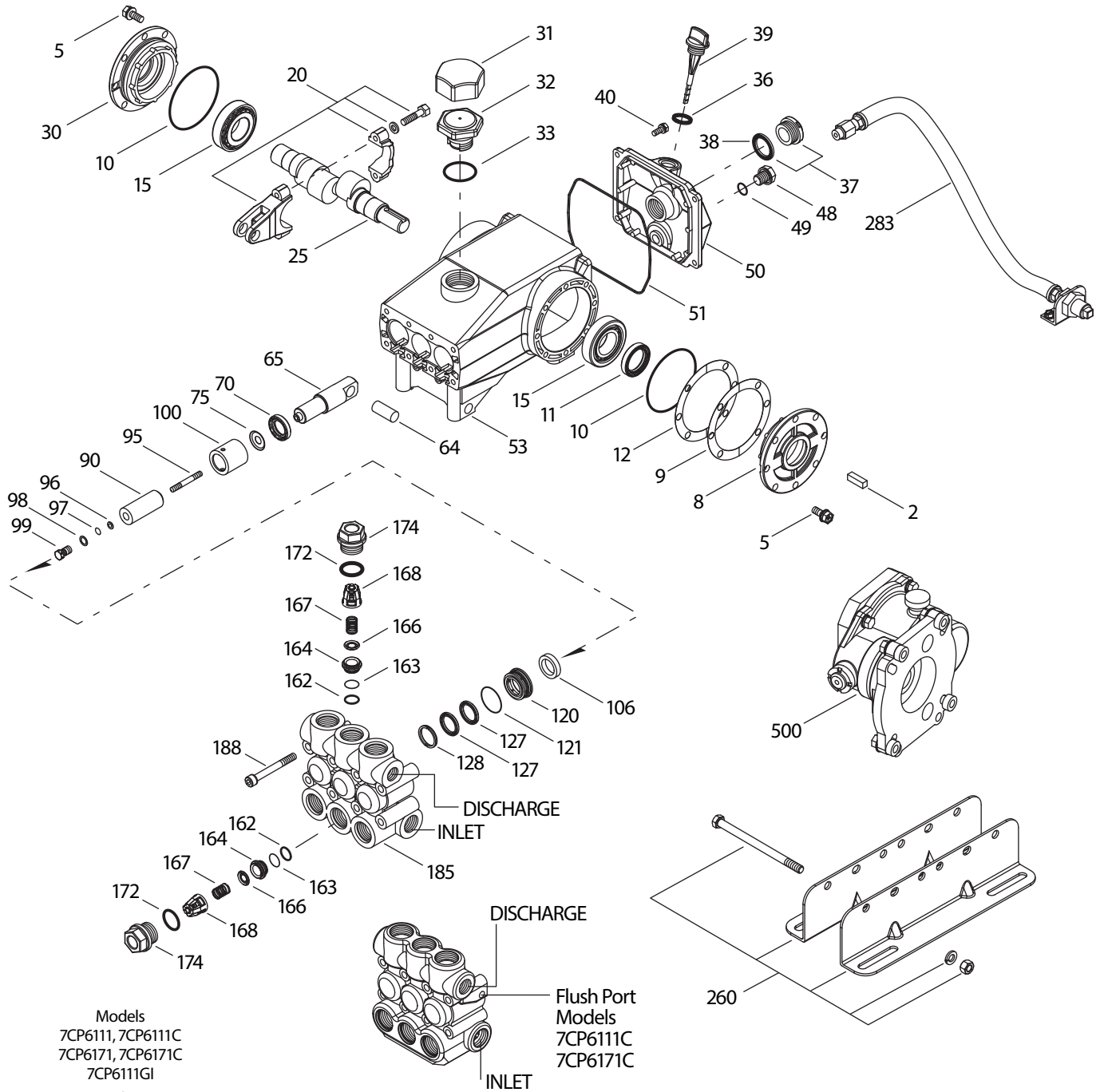
$$\frac{\text{Motor Pulley O.D.}}{\text{Pump rpm}} = \frac{\text{Pump Pulley O.D.}}{\text{Motor rpm}}$$

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	P/N	MATL	DESCRIPTION	QTY
2	30067	STL	Key (M8x7.5x25)	1
5	49651	S	Screw, HHC Sems (M8x20)	8
8	49501	AL	Cover, Bearing	1
9	49503	FBR	Shim, Split, 2-Pc, Outer	0-2
10	12393	NBR	O-Ring, Bearing Cover - 70D	2
11	49190	NBR	Seal, Oil Crankshaft - 70D	1/2
12	49504	S	Shim, Split, 2-Pc, Inner	0-2
15	63479	STL	Bearing, Roller	2
20	48727	TNM	Rod, Connecting Assy [2/03]	3
25	49498	FCM	Crankshaft, Single-End (M21.7) (7CP6111, 7CP6111C, 7CP6111G1)	1
	49649	FCM	Crankshaft, Single-End (M26) (7CP6171, 7CP6171C)	1
30	48527	AL	Cover, Blind Bearing	1
31	828710	PE	Protector, Oil Cap w/Foam Gasket	1
32	43211	ABS	Cap, Oil Filler	1
33	14177	NBR	O-Ring, Oil Filler Cap - 70D	1
36	129343	RBR	Gasket, Flat	1
37	92241	—	Gauge, Oil, Bubble w/Gasket - 80D	1
38	44428	NBR	Gasket, Flat, Oil Gauge - 80D	1
39	49948	ABS	Stick, Dip (See Reference Bulletin 005)	1
40	92538	S	Screw, HHC Sems (M6x16)	4
48	25625	STCP	Plug, Drain (1/4"x19BSP)	1
49	23170	NBR	O-Ring, Drain Plug - 70D	1
50	46959	AL	Cover, Rear	1
51	14030	NBR	O-Ring, Rear Cover - 70D	1
53	48577	AL	Crankcase	1
64	46969	CM	Pin, Crosshead	3
65	49637	SS	Rod, Plunger	3
70	48281	NBR	Seal, Oil Crankcase - 70D	3
75	43328	S	Slinger, Barrier	3
90	48559	CC	Plunger, Ceramic (M22x55)	3
95	49639	SS	Stud, Plunger Retainer (M6x50)	3
96	43235	PTFE	Back-up-Ring, Plunger Retainer	3
97	17399	NBR	O-Ring, Plunger Retainer - 80D	3
	14160	FPM	O-Ring, Plunger Retainer - 80D	3
	◆ 46204	EPDM	O-Ring, Plunger Retainer - 70D	3
98	44041	SS	Gasket	3
99	44031	SS	Retainer, Plunger (M6)	3
100	46964	NY	Retainer, Seal	3
106	49644	NBR	Seal, LPS w/SS-Spg	3
	49704	FPM	Seal, LPS w/SS-Spg	3
	◆ 48650	EPDM	Seal, LPS w/SS-Spg	3
	76704	ST	Seal, LPS w/S-Spg	3
120	49643	SS	Case, Seal	3
121	13984	NBR	O-Ring, Seal Case - 70D	3
	14333	FPM	O-Ring, Seal Case	3
	◆ 48649	EPDM	O-Ring, Seal Case	3
127	48278	STG	V-Packing	6
128	49646	SS	Adapter, Male	6
162	43248	PTFE	Back-up-Ring, Seat	6
163	43249	NBR	O-Ring, Seat - 80D	6
	44383	FPM	O-Ring, Seat - 70D	3
	◆ 46206	EPDM	O-Ring, Seat - 70D	6
164	44037	SS	Seat	6
166	44038	SS	Valve	6
167	44039	SS	Spring	6
168	44564	PVDF	Retainer, Spring	6
172	17617	NBR	O-Ring, Valve Plug - 90D	6
	11691	FPM	O-Ring, Valve Plug - 90D	6
	◆ 46207	EPDM	O-Ring, Valve Plug - 70D	6
174	49293	SS	Plug, Valve	6
185	49641	SS	Head, Manifold	1
	49972	SS	Head, Manifold Flushed (1/8" Flushed Port)	1
188	49647	S	Screw, HSH (M8x70)	8
260	30613	STZPR	Mount, Rail, Assy	1
	76513	STZPR	Mount, Rail Assy	1
283	34334	—	Kit, Oil Drain (3/8"x 24) (See Individual Data Sheet)	1
299	818456**	SS	Head, Complete w/NBR O-Rings and Seals (Models: 7CP6111, 7CP6111G1, 7CP6171, 7CP6171G1)	1
300	76933	NBR	Kit, Seal (Incls: 97, 106, 121, 127) Standard	1
	76950	FPM	Kit, Seal (Incls: 97, 106, 121, 127) .0110	1
	◆ 31936	EPDM*	Kit, Seal (Incls: 97, 106, 121, 127) .0220	1
	76068	STHT	Kit, Seal (Incls: 97, 106, 121, 127) .3400	1

EXPLODED VIEW



ITEM	P/N	MATL	DESCRIPTION	QTY
310	76387	NBR	Kit, Valve Pre-Assembled (Incls: 162, 163, 164, 166, 167, 168, 172) Standard, .3400	2
	76940	FPM	Kit, Valve Pre-Assembled (Incls: 162, 163, 164, 166, 167, 168, 172) .0110	2
	◆ 76258	EPDM	Kit, Valve Pre-Assembled (Incls: 162, 163, 164, 166, 167, 168, 172) .0220	2
500	8081	—	Gearbox (See Individual Data Sheet)	1
—	6119	—	Lubricant, Antiseize (2 oz.) [See Tech Bulletin 095]	1
—	6107	—	Oil, Bottle (21 oz.) ISO 68 Hydraulic (Fill to specified crankcase capacity prior to start-up)	1-2

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

R Components comply with RoHS Directive. *Review individual parts in each kit for material code identification.

**Complete head for models 7CP6111, 7CP6111GI, 7CP6171, 7CP6171GI only)

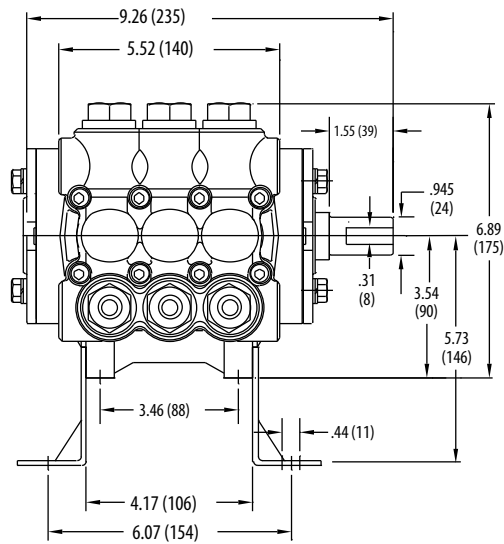
View Tech Bulletins 002, 003, 024, 036, 043, 053, 064, 074, 083 and 095 for additional information. View Reference Bulletin 005.

MATERIAL CODES (Not Part of Part Number): ABS=ABS Plastic AL=Aluminum CC=Ceramic CM=Chrome-moly

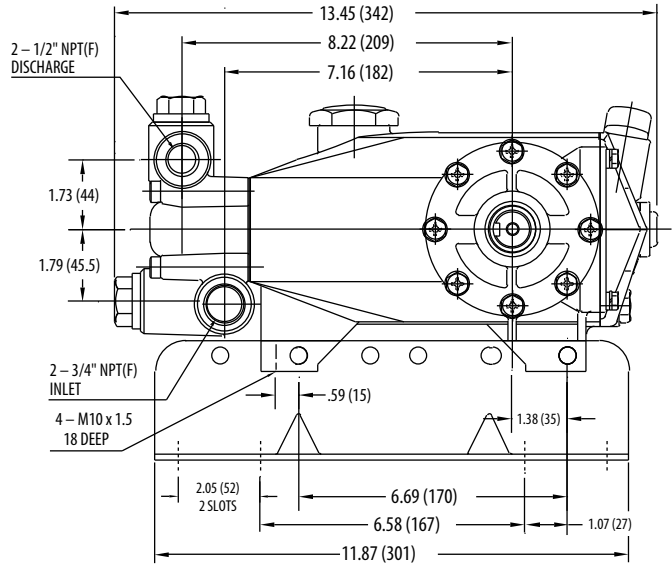
EPDM=Ethylene Propylene Diene Monomer F=Cast Iron FBR=Fiber FCM=Forged Chrome-moly FPM=Fluorocarbon NBR=Medium Nitrile (Buna-N) NY=Nylon PE=Polyethylene

PTFE=Pure Polytetrafluoroethylene PVDF=Polyvinylidene Fluoride RBR=Rubber S=304SS SS=316SS STG=Special Blend PTFE White STHT=Special PTFE High Temp STL=Steel

STCP=Steel/Chrome Plated STZP=Steel/Zinc Plated TNM=Special High Strength



Models 7CP6111 and 7CP6171



Model 7CP6111G1

⚠ 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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