

# DATA SHEET

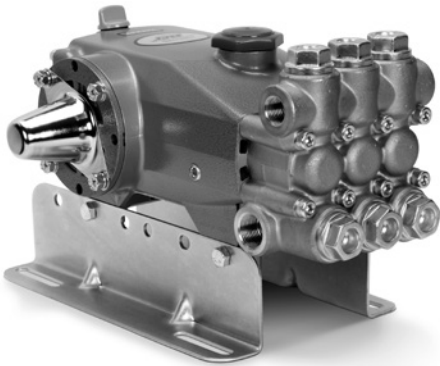
## 7CP PLUNGER PUMPS



**Direct-Drive  
Model  
7CP6110**

**Belt-Drive  
Model  
7CP6170**

**Gearbox  
Models  
7CP6110G1, 7CP6170G1**



Model 7CP6170 Shown  
(Shaft protector and rails sold separately)

### FEATURES

- Forged brass manifold head.
- Flexible coupling/bell housing, gearbox and belt drive options provide flexibility with a compact footprint.
- Rugged continuous-duty triplex design provides long life and low maintenance.
- 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
Bore	0.866"	22 mm
Crankcase Capacity	38 oz.	1.15 l
Max. Liquid Temperature	140° F	60° C
Above 130°F call Cat Pumps for inlet conditions and elastomer recommendations.		
Inlet Ports (2)	3/4" NPT(F)	3/4" NPT(F)
Discharge Ports (2)	1/2" NPT(F)	1/2" NPT(F)
Shaft Diameter	0.945"	24 mm
Weight (7CP6110)	29.1 lbs.	13.2 kg
Weight (7CP6170)	29.7 lbs.	13.5 kg
Weight (7CP6110G1, 7CP6170G1)	38.6 lbs.	17.5kg
Dimensions (7CP6110)	13.45 x 9.26 x 6.89"	342 x 235 x 175 mm
Dimensions (7CP6170)	13.45 x 11.14 x 6.89"	342 x 283 x 175 mm
Dimensions (7CP6110G1, 7CP6170G1)	13.45 x 12.89 x 8.19"	342 x 327 x 208 mm

### SPECIFICATIONS

	U.S. Measure	Metric Measure
<b>7CP6110</b>		
Flow	10.5 gpm	40 lpm
Pressure Range	100 to 2000 psi	7 to 138 bar
RPM	1750 rpm	1750 rpm
Stroke	0.854"	21.7 mm
<b>7CP6170</b>		
Flow	11 gpm	41.6 lpm
Pressure Range	100 to 2000 psi	7 to 138 bar
RPM	1450 rpm	1450 rpm
Stroke	1.024"	26 mm
<b>7CP6110G1</b>		
Flow	10.0 gpm	38.0 lpm
Pressure Range	100 to 2000 psi	7 to 138 bar
Pump RPM	1667 rpm	1667 rpm
Engine RPM	3400 rpm	3400 rpm
Stroke	0.854"	21.7 mm
<b>7CP6170G1</b>		
Flow	12.0 gpm	45.0 lpm
Pressure Range	100 to 1800 psi	7 to 124 bar
Pump RPM	1600 rpm	1600 rpm
Engine RPM	3264 rpm	3264 rpm
Stroke	1.024"	26 mm

### ALTERNATE SPECIFICATIONS

	U.S. Measure	Metric Measure
<b>7CP6170</b>		
Flow	12.0 gpm	45.0 lpm
Pressure Range	100 to 1800 psi	7 to 124 bar
Pump RPM	1600 rpm	1600 rpm

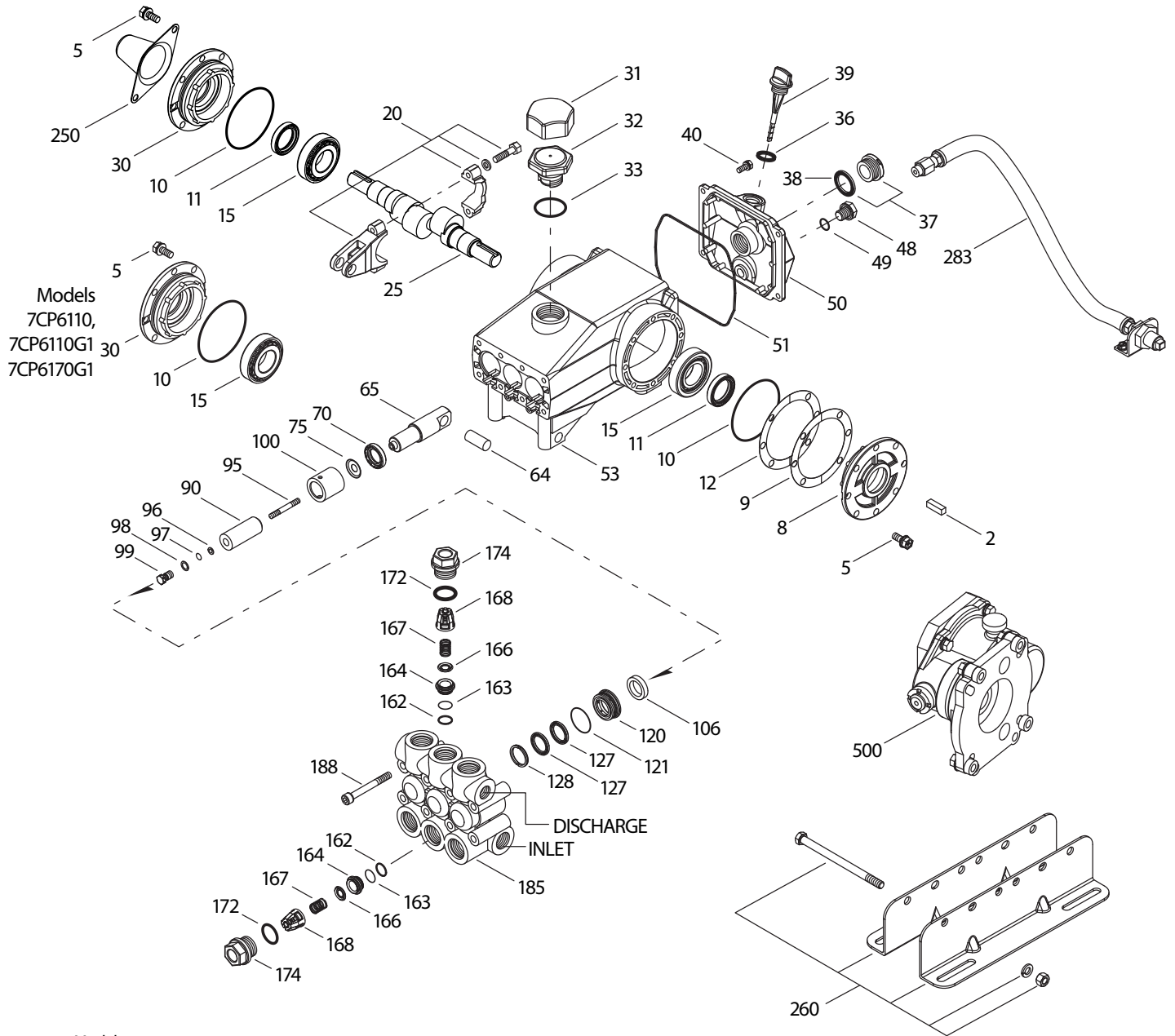
### ELECTRIC HORSEPOWER REQUIREMENTS

MODELS	FLOW		PRESSURE			MOTOR PULLEY SIZE	
			psi 1500	psi 1800	psi 2000	Using 1725 RPM Motor & Std. 9.75" Pump Pulley	
	U.S. gpm	lpm	bar 103	bar 124	bar 138	RPM	Pulley O.D.
<b>7CP6110</b>	10.5	40.0	10.8	13.0	14.4	1750	Direct Drive
<b>7CP6170</b>	11.0	41.6	11.3	13.6	15.1	1450	8.4
<b>7CP6110G1</b>	10.0	38.0	Consult Engineering Mfg.			1667	Gearbox
<b>7CP6170G1</b>	12.0	45.0				1600	Gearbox

## PARTS LIST

ITEM	P/N	MATL	DESCRIPTION	QTY
2	30067	STL	Key (M8x7.5x25)	1
5	126540	STCP R	Screw, HHC Sems (M8x20)	8
8	49501	AL	Cover, Bearing	1
9	49503	FBR	Shim, Split, 2-Pc, Outer	0-6
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	0-4
15	63479	STL	Bearing, Roller	2
20	48727	TNM	Rod, Connecting Assy [2/03]	3
25	<b>49498</b>	FCM	Crankshaft, Single-End (M21.7) (7CP6110, 7CP6110GI)	1
	<b>49649</b>	FCM	Crankshaft, Single-End (M26) (7CP6170GI)	1
	<b>49663</b>	FCM	Crankshaft, Dual-End (M26) (7CP6170)	1
30	<b>48527</b>	AL	Cover, Blind Bearing (7CP6110, 7CP6110GI, 7CP6170GI)	1
	<b>49501</b>	AL	Cover, Bearing (7CP6170)	1
31	828710	—	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 [11/12]	1
40	92519	STZP	Screw, HHC Sems (M6x16)	4
	125824	STCP R	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	46968	BBNP	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	126555	STCP R	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	45891	CU	Gasket	3
99	46504	S	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	48279	BB	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	48280	BB	Adapter, Male	3
162	43248	PTFE	Back-up-Ring, Seat	6
163	43249	NBR	O-Ring, Seat - 80D	6
	44383	FPM	O-Ring, Seat - 70D	6
	46206	EPDM	O-Ring, Seat - 70D	6
164	44718	S	Seat	6
166	43721	S	Valve	6
167	43751	S	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	43850	BB	Plug, Valve	6
185	48274	FBB	Head, Manifold	1
188	126513	STCP R	Screw, HSH (M8x70)	8
250	120220	STCP	Protector, Shaft (Model 7CP6170 only)	1
260	30613	STZP R	Mount, Rail, Assy	1
269	30206	F	Pulley (10") [See Tech Bulletin 003]	1
274	33000	STL	Hub, "H", M24 (Keyway M8) [See Tech Bulletin 003]	1
283	34334	—	Kit, Oil Drain	1
299	816764	FBB	Head, Complete <b>Standard</b>	1

# EXPLODED VIEW



ITEM	P/N	MATL	DESCRIPTION	QTY
300	76933	NBR	<i>Kit, Seal (Incls: 97, 106, 121, 127) Standard</i>	1
	76950	FPM	<i>Kit, Seal (Incls: 97, 106, 121, 127) .0110</i>	1
	◆ 31936	EPDM*	<i>Kit, Seal (Incls: 97, 106, 121, 127) .0220</i>	1
	76068	STHT	<i>Kit, Seal (Incls: 97, 106, 121, 127) .3400</i>	1
310	34920	NBR	<i>Kit, Valve Pre-Assembled (Incls: 162, 163, 164, 166, 167, 168, 172) Standard, .3400</i>	2
	31256	FPM	<i>Kit, Valve Pre-Assembled (Incls: 162, 163, 164, 166, 167, 168, 172) .0110</i>	2
	◆ 31253	EPDM	<i>Kit, Valve Pre-Assembled (Incls: 162, 163, 164, 166, 167, 168, 172) .0220</i>	2
500	8081	—	<i>Gearbox (See Individual Data Sheet)</i>	1
	6107	—	<i>Oil, Bottle (21 oz.) ISO 68 Hydraulic (Fill to specified crankcase capacity prior to start-up)</i>	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.

†Production parts are different than repair parts. R Components comply with RoHS Directive. \*Review individual parts in each kit for material code identification.

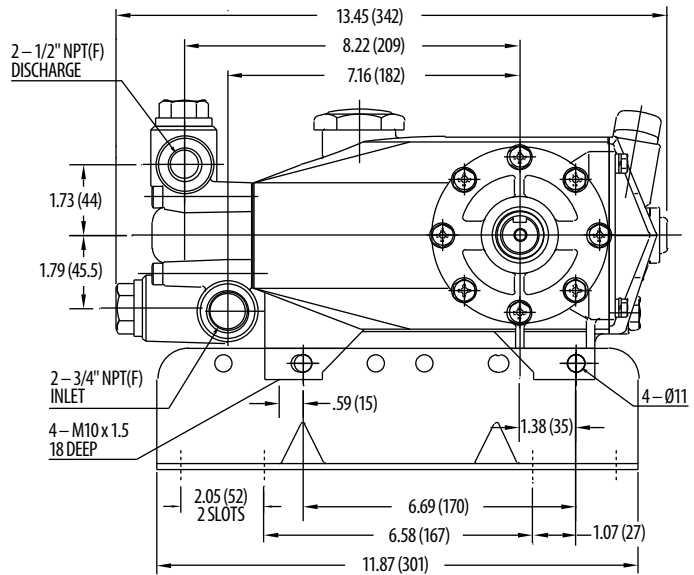
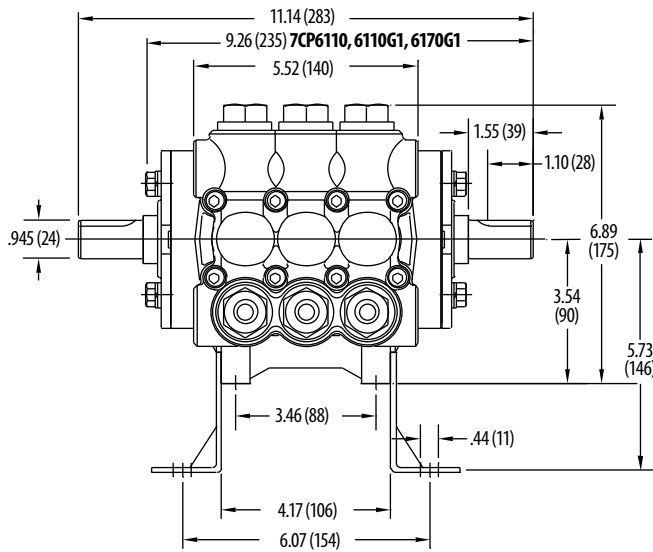
View Tech Bulletins 002, 003, 024, 036, 043, 053, 064, 074, 077 and 083 for additional information.

MATERIAL CODES (Not Part of Part Number): ABS=ABS Plastic AL=Aluminum BB=Brass BBNP=Brass/Nickel Plated CC=Ceramic CM=Chrome-moly CU=Copper

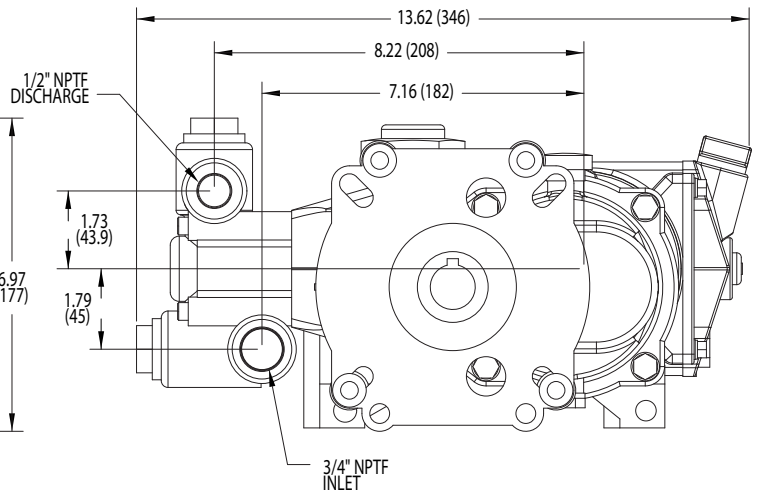
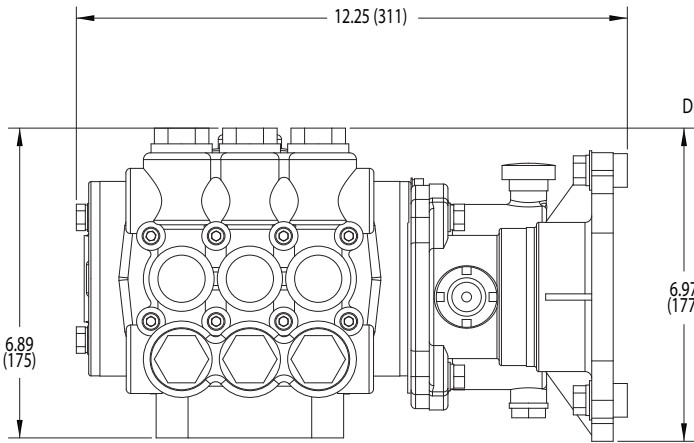
EPDM=Ethylene Propylene Diene Monomer F=Cast Iron FBB=Forged Brass FBR=Fiber FCM=Forged Chrome-moly FPM=Fluorocarbon NBR=Medium Nitrile (Buna-N)

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

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



Model 7CP6170



Models 7CP6110G1

**⚠ 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](http://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](http://www.catpumps.com/warranty).



**CAT PUMPS**

1681 - 94TH LANE N.E. MINNEAPOLIS, MN 55449-4324  
 PHONE (763) 780-5440 — FAX (763) 780-2958  
 e-mail: [techsupport@catpumps.com](mailto:techsupport@catpumps.com)  
[www.catpumps.com](http://www.catpumps.com)