



Model 7CP6170 Shown  
(Rails and shaft protector sold separately)

## FEATURES

- Forged Brass head with optional FPM and EPDM elastomers offer compatibility with a wide range of liquids.
- 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.
- Matched system accessories to complete your system whether you design or we custom build to your specifications.

## COMMON SPECIFICATIONS

Inlet Pressure Range.....	Flooded to 70 psi	(Flooded to 4.9 bar)
Bore .....	0.866"	(22 mm)
Crankcase Capacity.....	38 oz.	(1.15 l)
Maximum Liquid Temperature .....	140°F	(60°C)
Above 130°F call CAT PUMPS for inlet conditions and elastomer recommendations.		
Inlet Ports (2) .....	3/4" NPTF	(3/4" NPTF)
Discharge Ports (2).....	1/2" NPTF	(1/2" NPTF)
Shaft Diameter .....	0.945"	(24 mm)
Weight (7CP6110) .....	29.1 lbs.	(13.2 kg)
Weight (7CP6170) .....	29.7 lbs.	(13.5 kg)
Weight (7CP6110G1).....	38.6 lbs.	(17.5 kg)
Dimensions (7CP6170) .....	13.45 x 11.14 x 6.89"(342 x 283 x 175 mm)	
Dimensions (7CP6110) .....	13.45 x 9.26 x 6.89"(342 x 235 x 175 mm)	
Dimensions (7CP6110G1)....	13.45 x 12.89 x 8.19"(342 x 327 x 208 mm)	

### ⚠ 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).

# 7CP Plunger Pump

**Direct-Drive Model**

**7CP6110**

**Belt-Drive Model**

**7CP6170**

**Gearbox Model**

**7CP6110G1**

## SPECIFICATIONS

U.S. Measure

Metric Measure

### MODEL 7CP6110

Flow .....	10.5 gpm	(40 l/m)
Pressure Range.....	100 to 2000 psi	(7 to 140 bar)
RPM.....	1750 rpm	(1750 rpm)
Stroke.....	0.854"	(21.7 mm)

### MODEL 7CP6170

Flow .....	10.5 gpm	(40 l/m)
Pressure Range.....	100 to 2000 psi	(7 to 140 bar)
RPM.....	1450 rpm	(1450 rpm)
Stroke.....	1.024"	(26 mm)

### MODEL 7CP6110G1

Flow .....	10.0 gpm	(38.0 l/m)
Pressure Range.....	100 to 2000 psi	(7 to 140 bar)
Pump RPM .....	1667 rpm	1667 rpm
Engine RPM.....	3400 rpm	(3400 rpm)
Stroke.....	0.854"	(21.7 mm)

## ELECTRIC HORSEPOWER REQUIREMENTS

MODELS	FLOW		PRESSURE			MOTOR PULLEY SIZE Using 1725 rpm Motor & Std. 9.75" Pump Pulley	
			psi 1500	psi 1800	psi 2000		
	U.S. gpm	lpm	bar 105	bar 125	bar 140	rpm	Pulley O.D.
7CP6110	10.5	40.0	10.8	13.0	14.4	1750	Direct-Drive
7CP6170	10.5	40.0	10.8	13.0	14.4	1450	8.4
7CP6110G1	10.0	38.0	Consult	Eng.	Mfg.	1667	Gearbox

**DETERMINING THE PUMP RPM**

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

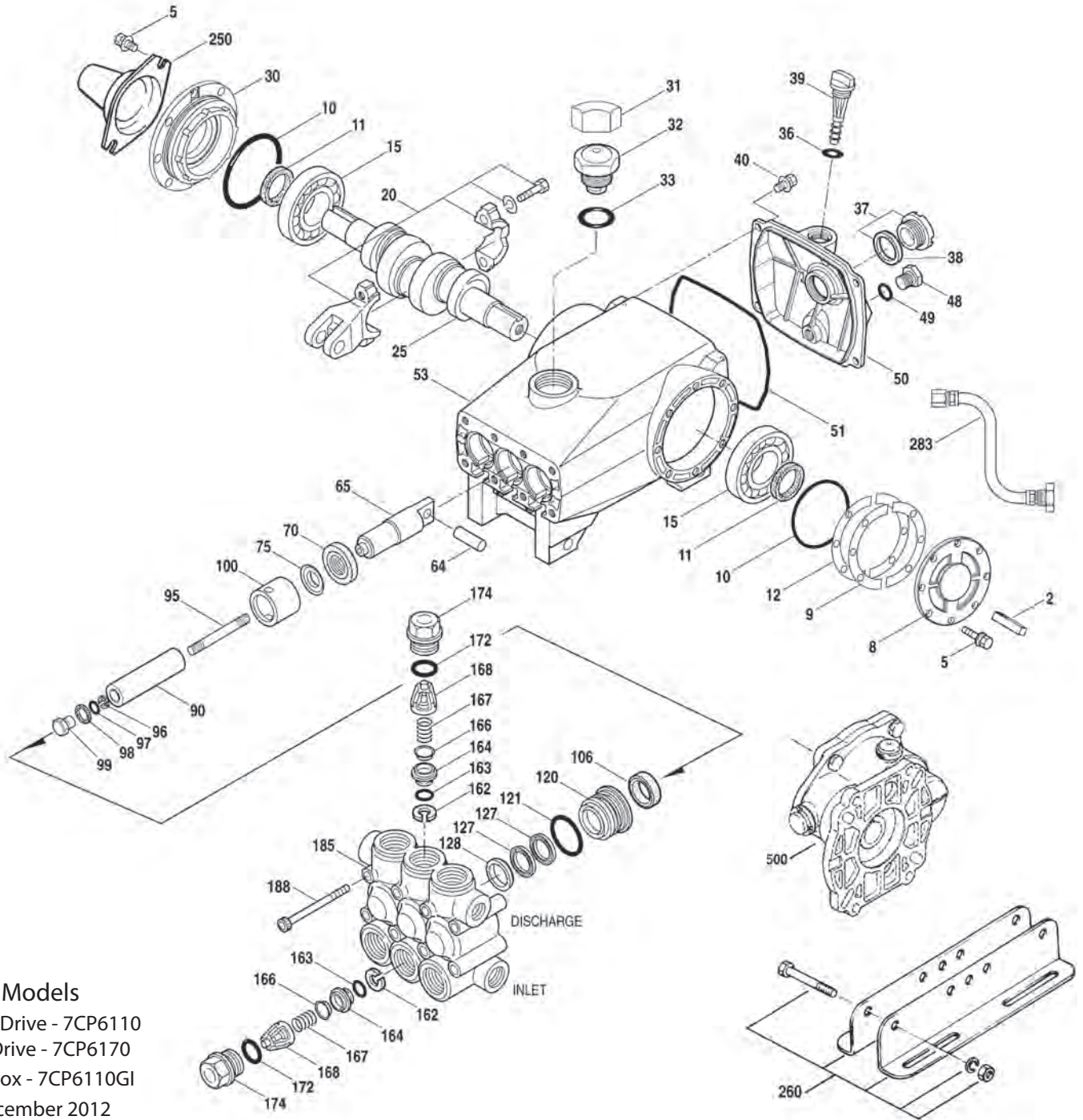
Motor rpm

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	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>	<b>FCM</b>	Crankshaft, Single-End (M21.7) (7CP6110, 7CP6110GI)	1
-	<b>46963</b>	<b>FCM</b>	Crankshaft, Dual-End (M26) (7CP6170)	1
30	<b>48527</b>	<b>AL</b>	Cover, Blind Bearing (7CP6110, 7CP6110GI)	1
	<b>49501</b>	<b>AL</b>	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	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
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	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
277	31570	AL	Bell Housing Assy, (184TC, 213-215TC) (+990213-254-256TC)	1
278	8370	STL	Flexible Coupling Assy (M24 x 1-1/8")	1
	8375	STL	Flexible Coupling Assy (M24 x 1-3/8")	1
	8380	STL	Flexible Coupling Assy (M24 x 1-5/8")	1

# EXPLODED VIEW



## Models

Direct-Drive - 7CP6110

Belt Drive - 7CP6170

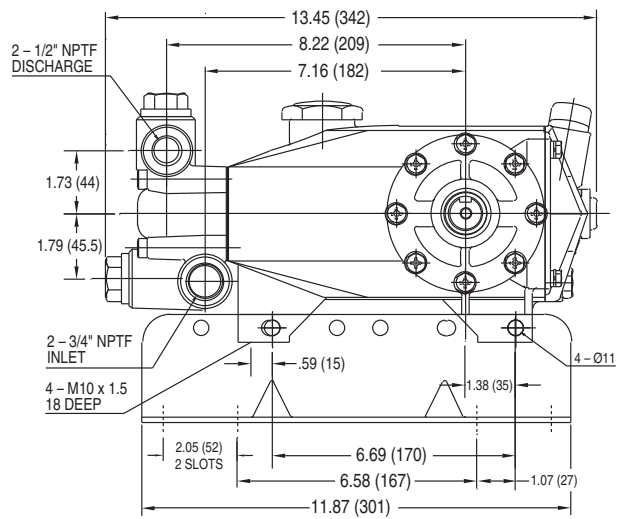
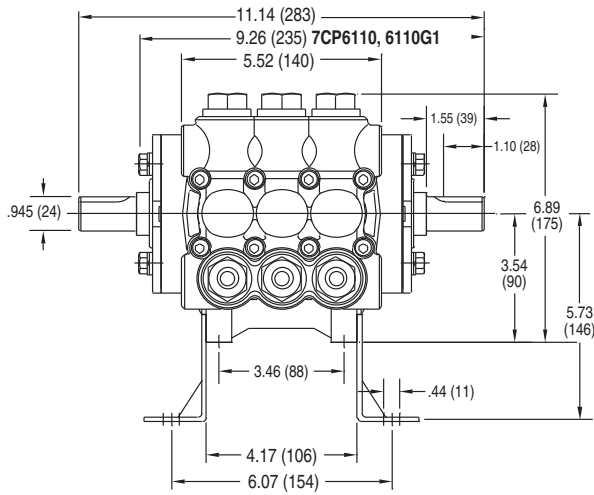
Gearbox - 7CP6110GI

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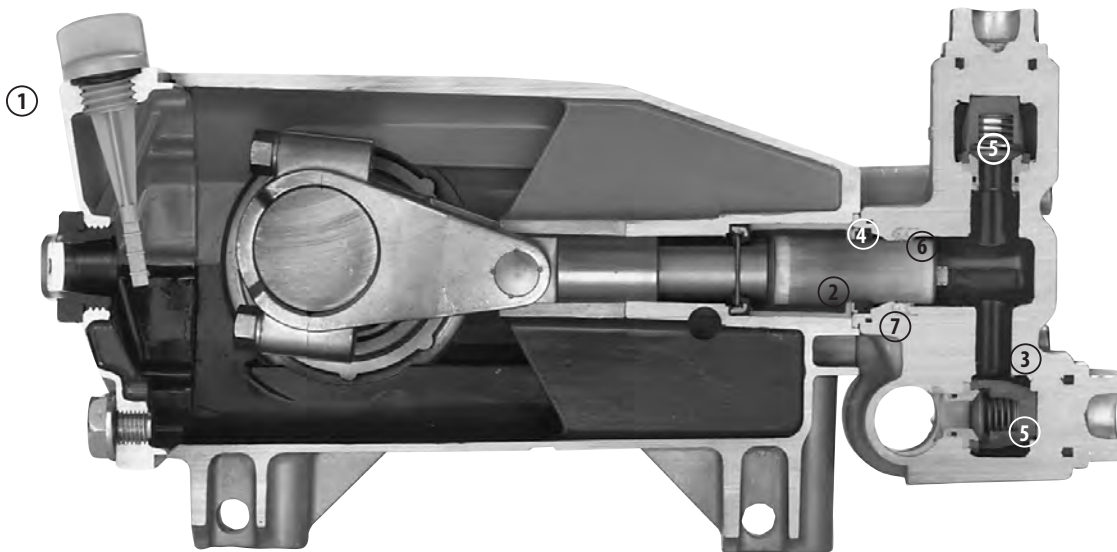
ITEM	P/N	MATL	DESCRIPTION	QTY
283	34334	—	Kit, Oil Drain	1
299	816764	FBB	Head, Complete	1
300	76933	NBR*	Kit, Seal (Incls: 97, 106, 121, 127)	1
	76950	FPM*	Kit, Seal (Incls: 97, 106, 121, 127)	1
	◆ 31936	EPDM*	Kit, Seal (Incls: 97, 106, 121, 127)	1
310	34920	NBR	Kit, Valve Pre-Assembled (Incls: 162, 163, 164, 166, 167, 168, 172)	2
	31256	FPM	Kit, Valve Pre-Assembled (Incls: 162, 163, 164, 166, 167, 168, 172)	2
	◆ 31253	EPDM	Kit, Valve Pre-Assembled (Incls: 162, 163, 164, 166, 167, 168, 172)	2
500	8081	—	Gearbox (See Individual Data Sheet)	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.  
 †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=3045S STG=Special Blend PTFE White STL=Steel  
 STCP=Steel/Chrome Plated STZP=Steel/Zinc Plated TNM=Special High Strength



Models 7CP6110,7CP6110GI,7CP6170



- 1 **Dipstick** offers optional top access in addition to rear bubble oil gauge for easy oil level check.
- 2 Special concentric, high-density, polished, solid ceramic **plungers** provide a true wear surface and extended seal life.
- 3 **Manifold** is a high tensile strength forged brass for strength and corrosion-resistance.

- 4 100% wet **seal** design adds to service life by allowing pumped liquids to cool and lubricate on both sides.
- 5 Stainless steel **valve** and seats are with hardened and polished for ultimate seating and extended life.

- 6 Exclusive specially formulated **V-Packings** offer unmatched performance and seal life.
- 7 Press-in style **seal case** offers alignment and support for seals and "no tools" servicing.



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