

# DATA SHEET

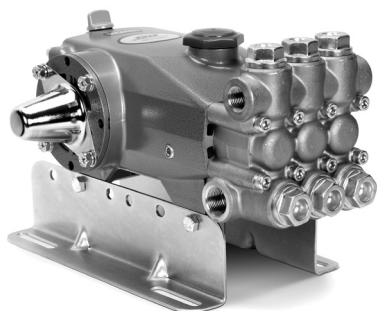
## 7CP PLUNGER PUMPS



The Pumps with Nine Lives

**Brass Models:** **7CP6110CS, 7CP6170**

**Brass Gearbox Models:** **7CP6110CSG1, 7CP6170G1**



Model 7CP6170 Shown  
(Mounting rails and shaft protector sold separately)

### FEATURES

- Triplex plunger design ensures high efficiency and low pulsation.
- Belt-driven option provides precise flow settings.
- Gearbox models available with 1" or 1½" hollow shaft to fit most common engines.
- Direct-drive option offers a compact foot print for electric motors with a NEMA or IEC frame, or SAE hydraulic motors with a bell housing/flexible coupler assembly.
- Pump comes standard with NBR seals. Alternative seal materials are available for higher temperature or chemical compatibility.

### COMMON SPECIFICATIONS

	U.S.	Metric
Inlet Pressure Range	Flooded to 70 psi	Flooded to 4.8 bar
Max. Liquid Temperature (NBR)	140° F	60° C
<b>Alternative seals available for higher temperatures up to 190° F</b>		
Bore	0.866"	22 mm
Crankcase Capacity	38 oz	1.15 l
Inlet Ports (2)	¾" NPT(F)	¾" NPT(F)
Discharge Ports (2)	½" NPT(F)	½" NPT(F)
Shaft Diameter	0.945"	24 mm
Weight (7CP6110CS)	29.1 lbs	13.2 kg
Weight (7CP6170)	29.7 lbs	13.5 kg
Weight (Gearbox)	38.6 lbs	17.5 kg
Dimensions (7CP6110CS)	13.46 x 9.25 x 6.89"	342 x 235 x 175 mm
Dimensions (7CP6170)	13.46 x 11.14 x 6.89"	342 x 283 x 175 mm
Dimensions (Gearbox Models)	13.46 x 12.24 x 6.97"	342 x 311 x 177 mm

### SPECIFICATIONS

	U.S. Measure	Metric Measure
<b>7CP6110CS</b>		
Flow	10.5 gpm	40 lpm
Pressure Range	100–2000 psi	6.9–138 bar
Pump RPM*	1750 rpm	1750 rpm
Stroke	0.854"	21.7 mm
<b>7CP6170</b>		
Flow	11 gpm	41.6 lpm
Pressure Range	100–2000 psi	6.9–138 bar
Pump RPM*	1450 rpm	1450 rpm
Stroke	1.024"	26 mm
<b>7CP6110CSG1</b>		
Flow	10.0 gpm	38.0 lpm
Pressure Range	100–2000 psi	6.9–138 bar
Engine RPM	3400 rpm	3400 rpm
Stroke	0.854"	21.7 mm
<b>7CP6170G1</b>		
Flow	12.0 gpm	45.4 lpm
Pressure Range	100–1800 psi	6.9–124 bar
Engine RPM	3264 rpm	3264 rpm
Stroke	1.024"	26 mm

\*Pump minimum is 100 RPM.

### ALTERNATE SPECIFICATIONS

	U.S. Measure	Metric Measure
<b>7CP6170</b>		
Flow	12.0 gpm	45.4 lpm
Pressure Range	100–1800 psi	6.9–124 bar
Pump RPM*	1600 rpm	1600 rpm

### ALTERNATIVE SEAL CONFIGURATION

MATERIAL	SUFFIX CODE	MAXIMUM TEMPERATURE	
NBR	—	140° F	(60° C)
FPM	.0110	180° F	(82° C)
EPDM	.0220	160° F	(71° C)
HT	.3000	180° F	(82° C)
STHT	.3400	190° F	(88° C)

See **Tech Bulletin 002** for inlet conditions and RPM at high temperature.

## PARTS LIST

ITEM	P/N	MATL	DESCRIPTION	QTY
5	126540	STCP R	Screw, HHC Sems (M8 x 20) (See Tech Bulletin 074)	8
8	131405	ALE	Cover, Bearing (See Tech Bulletin 123)	1/2
9	49503	FBR	Shim, Split, 2-Piece, Outer (See Tech Bulletin 123)	0-6
10	12393	NBR	O-Ring, Bearing Cover-70D	2
11	49190	NBR	Seal, Oil Crankshaft	1/2
12	49504	S	Shim, Split, 2-Piece, Inner (See Tech Bulletin 123)	0-4
15	63479	STL	Bearing, Roller	2
20	48727	TNM	Rod, Connecting Assembly (See Tech Bulletin 074)	3
25	<b>49498</b>	FCM	Crankshaft, Single-End (M21.7) (7CP6110CS, 7CP6110CSG1)	1
	<b>49649</b>	FCM	Crankshaft, Single-End (M26) (7CP6170G1)	1
	<b>46963</b>	FCM	Crankshaft, Dual-End (M26) (7CP6170)	1
30	<b>131407</b>	ALE	Cover, Blind Bearing (7CP6110CS, 7CP6110CSG1, 7CP6170G1) (See Tech Bulletin 123)	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	PC	Gauge, Oil, Bubble with Gasket-80D (See Tech Bulletin 074)	1
38	44428	NBR	Gasket, Flat, Oil Gauge-80D	1
39	49948	ABS	Stick, Dip (See Tech Bulletin 130)	1
40	125824	STCP R	Screw, HHC Sems (M6 x 16) (See Tech Bulletin 074)	4
48	25625	STCP	Plug, Drain (1/4" x 19 BSP)	1
49	23170	NBR	O-Ring, Drain Plug-70D	1
50	131403	ALE	Cover, Rear (See Tech Bulletin 123)	1
51	14030	NBR	O-Ring, Rear Cover-70D	1
53	131400	ALE	Crankcase (See Tech Bulletin 123)	1
64	46969	CM	Pin, Crosshead	3
65	46968	BBNP	Rod, Plunger	3
70	48281	NBR	Seal, Oil Crankcase	3
75	43328	S	Slinger, Barrier	3
90	48559	CC	Plunger, Ceramic (M22 x 55)	3
95	126555	STCP R	Stud, Plunger Retainer (M6 x 50)	3
96	43235	PTFE	Backup Ring, Plunger Retainer	3
97	17399	NBR	O-Ring, Plunger Retainer-80D	3
98	45891	CU	Gasket	3
99	46504	S	Retainer, Plunger (M6) (See Tech Bulletin 074)	3
100	46964	NY	Retainer, Seal	3
106	49644	NBR	Seal, LPS with SS-Spring	3
120	48279	BB	Case, Seal	3
121	13984	NBR	O-Ring, Seal Case-70D	3
127	48278	STG	V-Packing	6
128	48280	BB	Adapter, Male	3
162	43248	PTFE	Backup Ring, Seat	6
163	43249	NBR	O-Ring, Seat-80D	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
174	43850	BB	Plug, Valve (See Tech Bulletin 074)	6
185	48274	FBB	Head, Manifold	1
188	126513	STCP R	Screw, HSH (M8 x 70) (See Tech Bulletin 074)	8
500	<b>8081</b>	—	Gearbox 1" Shaft (See Individual Data Sheet)	1
	8072	—	Gearbox 1 1/2" Shaft (See Individual Data Sheet)	1

**Bold print part numbers are unique to a particular pump model.**

*Italics are optional items.* †Production parts are different than repair parts. R Components comply with RoHS Directive.

\*Review individual parts in each kit for material code identification. For additional technical information see [www.catpumps.com/literature/tech-bulletins](http://www.catpumps.com/literature/tech-bulletins).

MATERIAL CODES (Not Part of Part Number): ABS=ABS Plastic ALE=Aluminum Epoxy 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=Flourocarbon NBR=Medium Nitrile (Buna-N) NY=Nylon PC=Poly Carbonate

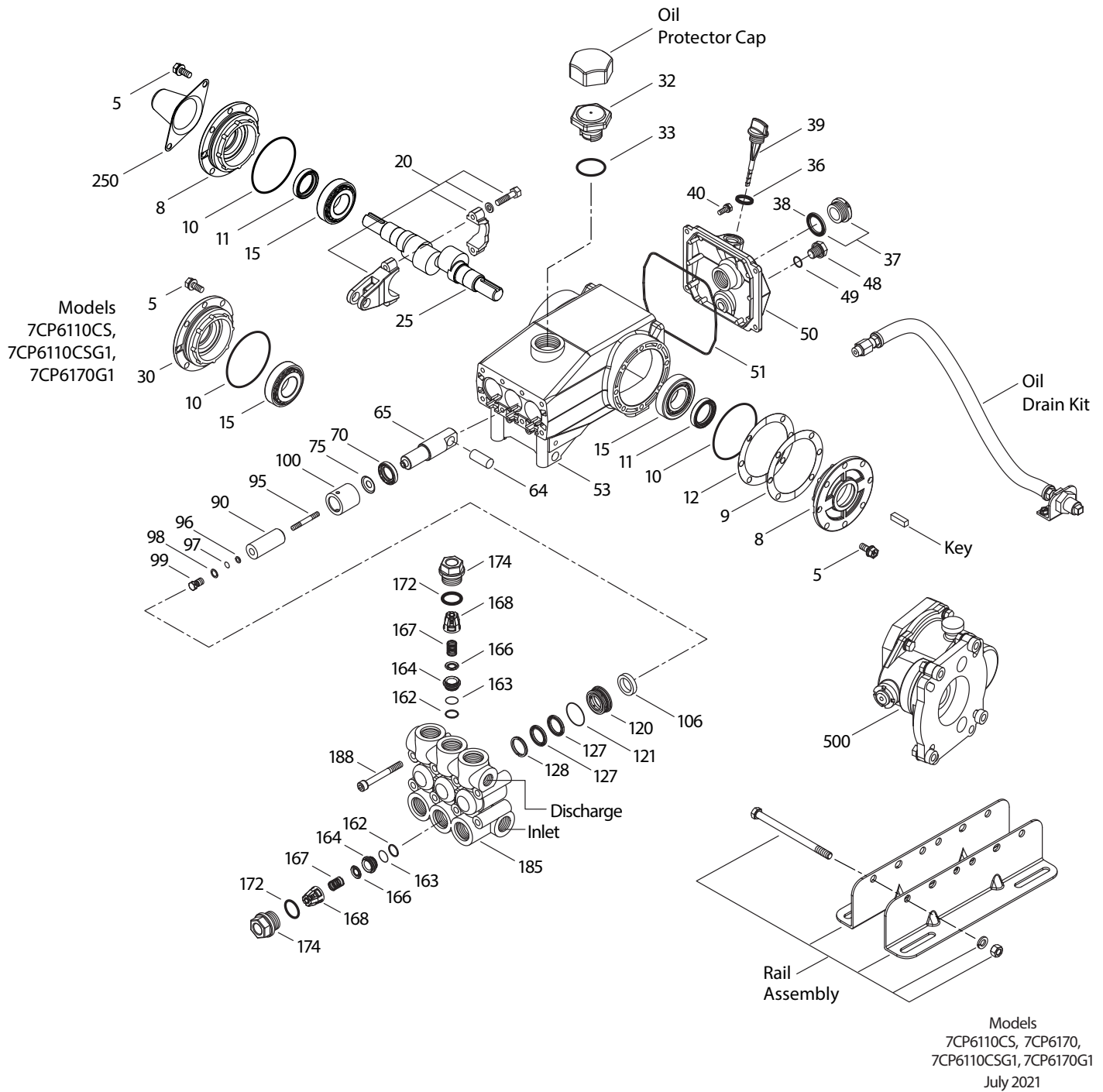
PTFE=Pure Polytetrafluoroethylene PVDF=Polyvinylidene Fluoride RBR=Rubber S=304SS ST= Special PTFE

STG=Special Blend PTFE White STHT=Special PTFE High Temp STL=Steel STCP=Steel/Chrome Plated

STZP=Steel/Zinc Plated TNM=Special High Strength

**Optional Parts and Accessories and Service parts listed on Page 3. Standard and optional Seal Kits and Valve Kits listed on page 4.**

# EXPLODED VIEW

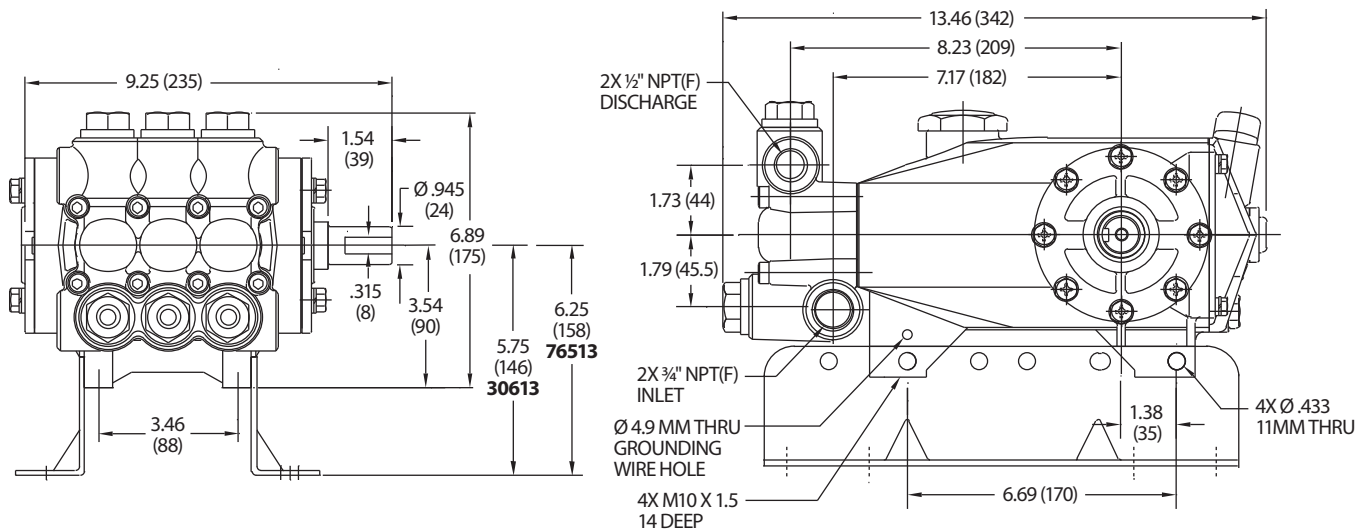


## OPTIONAL PARTS AND ACCESSORIES

PART	DESCRIPTION	QTY
30067	Key (M8 x 7.5 x 25)	1
30613	Rail Assembly (5.75" See Dimensional Drawing)	1
76513	Rail Assembly (6.25" See Dimensional Drawing)	1
120220	Protector, Shaft (7CP6170)	1
828710	Protector, Oil Cap	1
34334	Kit, Oil Drain	1
30206	Pulley, 10", 2 Groove "H"	1
33000	Hub, "H", 24 mm	1
30696	Pliers, Reverse	1

## SERVICE PARTS

PART	DESCRIPTION	QTY
<b>76933</b>	Kit, Seal—Standard NBR	1
<b>34920</b>	Kit, Valve—Standard NBR	2
6107	Oil, Bottle (21 oz)	2
6139	Lubricant, Anti-Seize (8 oz)	1
6124	Gasket, Liquid (3 oz)	1
<b>816764</b>	Head, Complete—with NBR Seals and O-Rings	1



Model 7CP6170

## SEAL KITS One (1) seal kit required per pump

PUMP MODELS	NBR (STD)	FPM (.0110)	EPDM (.0220)◆	STHT (.3400)
7CP6110CS, 7CP6170, 7CP6110CSG1, 7CP6170G1	<b>76933</b>	<b>76950</b>	<b>31936</b>	<b>76068</b>

ITEM (Included in Seal Kits)					DESCRIPTION	QTY
97	17399	14160	46204	17399	O-Ring, Plunger Retainer	3
106	49644	49704	48650	76704	Seal, LPS with SS-Spring	3
121	13984	14333	701945	13984	O-Ring, Seal Case	3
127	48278	48278	48278	48278	V-Packing	6

◆ Silicone oil/grease required

\*Review material codes for individual items (STG generally maybe used as alternative)

## VALVE KITS Two (2) valve kits required per pump

PUMP MODELS	NBR (STD)	FPM (.0110)	EPDM (.0220)◆	STHT (.3400)
7CP6110CS, 7CP6170, 7CP6110CSG1, 7CP6170G1	<b>34920</b>	<b>31256</b>	<b>31253</b>	<b>34920</b>

ITEM (Included in Valve Kits)					DESCRIPTION	QTY
162	43248	43248	43248	43248	Backup Ring, Valve Seat	3
163	43249	44383	46206	43249	O-Ring, Valve Seat	3
164	44718	44718	44718	44718	Seat	3
166	43721	43721	43721	43721	Valve	3
167	43751	43751	43751	43751	Spring	3
168	44564	44564	44564	44564	Retainer, Spring	3
172	17617	11691	46207	17617	O-Ring, Valve Plug	3

◆ Silicone oil/grease required



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BTW NL002166811B01  
IBAN NL24 RABO 0353 2970 97



*The Pumps with Nine Lives*