

DATA SHEET

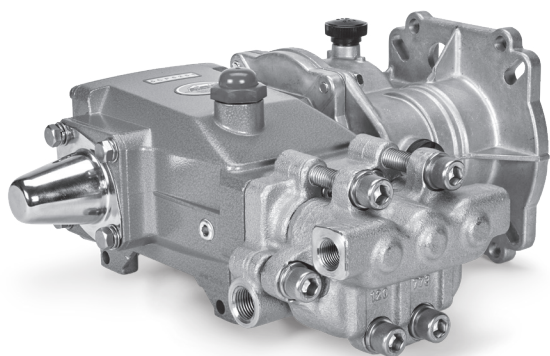
5CP PLUNGER PUMPS



The Pumps with Nine Lives

Stainless Steel Gearbox Models:

5CPQ6221G1, 5CPQ6241CSG1, 5CPQ6251G1



Model 5CPQ6251G1 Shown
(Shaft protector sold separately)

FEATURES

- 316 Stainless Steel wet end.
- Gearbox model available with 1" and 1 1/8" hollow shaft to fit a wide variety of engines.
- Standard pumps are fitted with NBR Seals. Optional seals are available for high temperatures or chemical compatibility.

SPECIFICATIONS	U.S. MEASURE	METRIC MEASURE
5CPQ6221G1		
Flow	7.4 gpm	28 lpm
Pressure Range	100–1500 psi	6.9–103 bar
Engine RPM	3600 rpm	3600 rpm
Inlet Pressure Range	Flooded to 60 psi	Flooded to 4.1 bar
Stroke	0.709"	18 mm
5CPQ6241CSG1		
Flow	4.0 gpm	15 lpm
Pressure Range	100–2000 psi	6.9–138 bar
Engine RPM	3600 rpm	3600 rpm
Inlet Pressure Range	Flooded to 60 psi	Flooded to 4.1 bar
Stroke	0.394"	10 mm
5CPQ6251G1		
Flow	5.0 gpm	19 lpm
Pressure Range	100–2000 psi	6.9–138 bar
Engine RPM	3600 rpm	3600 rpm
Inlet Pressure Range	Flooded to 60 psi	Flooded to 4.1 bar
Stroke	0.472"	12 mm

COMMON SPECIFICATIONS	U.S. MEASURE	METRIC MEASURE
Max. Liquid Temp (NBR)	160°F	71°C
Alternative seals available for higher temperatures up to 180°F		
Bore	0.787"	20 mm
Crankcase Capacity	17 oz.	0.50 l
Inlet Ports (2)	1/2" NPT(F)	1/2" NPT(F)
Discharge Ports (2)	3/8" NPT(F)	3/8" NPT(F)
Shaft Diameter	0.787"	20 mm
Weight	24.1 lbs.	10.9 kg
Dimensions	11.69 x 12.91 x 6.46"	297 x 328 x 164 mm

ALTERNATIVE SEAL CONFIGURATION

MATERIAL	SUFFIX CODE	MAXIMUM TEMPERATURE	
NBR	—	160°F	(71°C)
FPM	.0110	180°F	(82°C)
EPDM	.0220	160°F	(71°C)
HT	.3000	180°F	(82°C)

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

$$\begin{aligned} \text{DETERMINING THE PUMP R.P.M.} & \quad \frac{\text{Rated gpm}}{\text{Rated rpm}} = \frac{\text{"Desired" gpm}}{\text{"Desired" rpm}} \\ \text{DETERMINING THE REQUIRED H.P.} & \quad \frac{\text{Hp (Electric Brake)}}{1460} = \frac{\text{gpm x psi}}{1460} \\ \text{DETERMINING MOTOR PULLEY SIZE} & \quad \frac{\text{Motor Pulley O.D.}}{\text{Pump rpm}} = \frac{\text{Pump Pulley O.D.}}{\text{Motor rpm}} \end{aligned}$$

Refer to pump **Service Manual** for repair procedure and additional technical information.

PARTS LIST

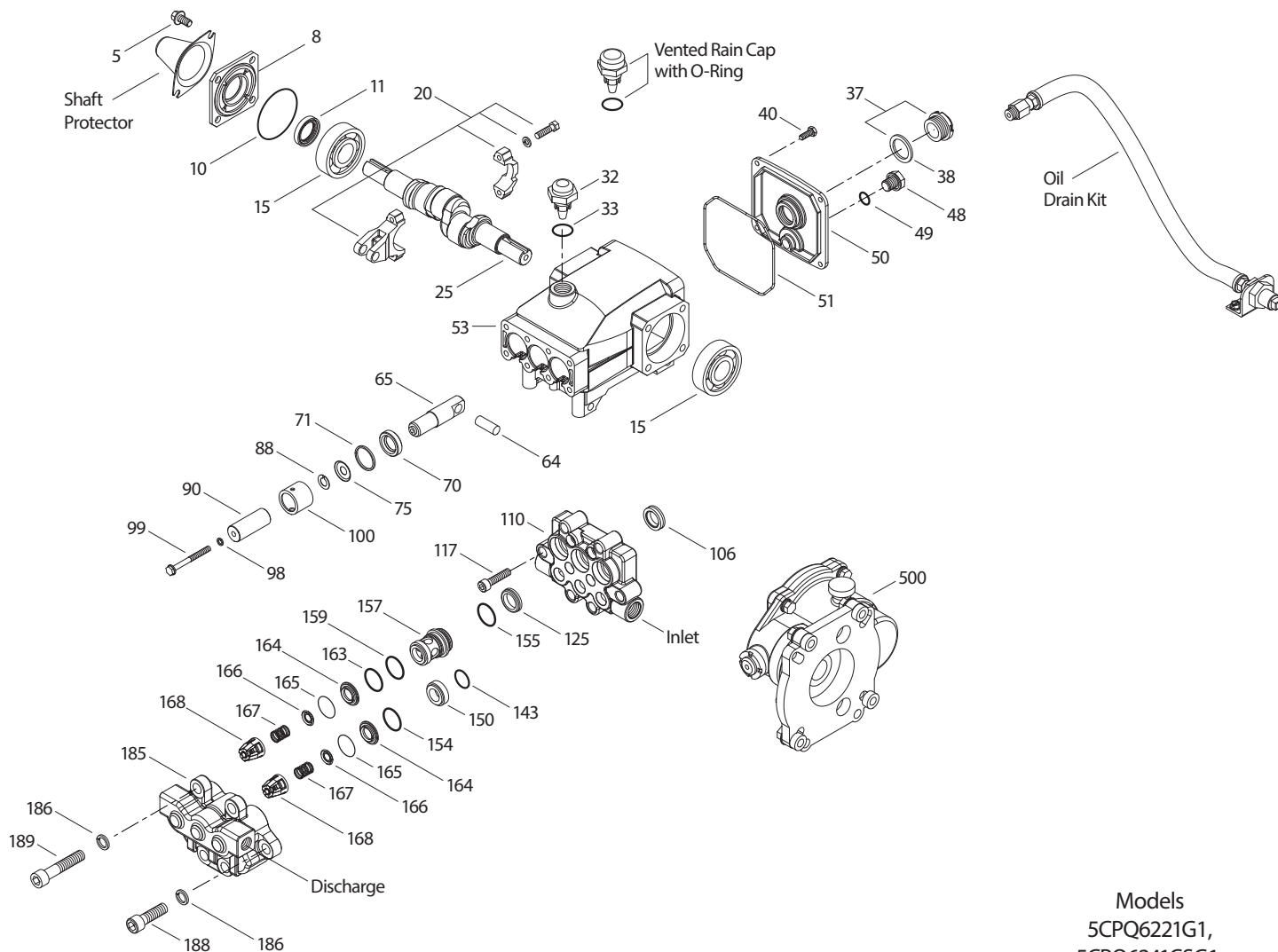
ITEM	PART #	MATL	PART #	MATL	PART #	MATL	DESCRIPTION	QTY
	5CPQ6221G1		5CPQ6241CSG1		5CPQ6251G1			
5	119049	SS	119049	SS	119049	SS	Screw, HHC, Sems (M8 x 16) (See Tech Bulletin 074)	4
8	46910	AL	48224	AL	46910	AL	Cover, Bearing	1
10	14028	NBR	14028	NBR	14028	NBR	O-Ring, Cover, Bearing – 70D	1
11	43222	NBR	—	—	43222	NBR	Seal, Oil, Crankshaft	1/0/1
15	127472	STL	127472	STL	127472	STL	Bearing, Ball	2
20	48742	TNM	48742	TNM	48742	TNM	Rod Assembly, Connecting [10/01] (See Tech Bulletin 074)	3
25	46928	FCM	—	—	46982	FCM	Crankshaft, Dual End	1
	—	—	48203	FCM	—	—	Crankshaft, Single End	1
32	46798	—	46798	—	46798	—	Cap, Oil Filler	1
33	14179	NBR	14179	NBR	14179	NBR	O-Ring, Oil Filler Cap – 70D	1
37	92241	PC	92241	PC	92241	PC	Gauge, Oil, Bubble with Gasket – 80D (See Tech Bulletin 074)	1
38	44428	NBR	44428	NBR	44428	NBR	Gasket, Flat, Oil Gauge – 80D	1
40	92538	S	92538	S	92538	S	Screw, HHC, Sems (M6 x 16) (See Tech Bulletin 074)	4
48	25625	STCP	25625	STCP	25625	STCP	Plug, Drain (1/4" x 19 BSP)	1
49	23170	NBR	23170	NBR	23170	NBR	O-Ring, Drain Plug – 70D	1
50	46940	AL	46940	AL	46940	AL	Cover, Rear	1
51	14044	NBR	14044	NBR	14044	NBR	O-Ring, Cover, Rear	1
53	48617	AL	48617	AL	48617	AL	Crankcase	1
64	46746	CM	46746	CM	46746	CM	Pin, Crosshead	3
65	48458	BBNP	48458	BBNP	48458	BBNP	Rod, Plunger	3
70	46838	NBR	46838	NBR	46838	NBR	Seal, Oil, Crankcase – 70D	3
71	48208	PVDF	48208	PVDF	48208	PVDF	Washer, Oil Seal	3
75	43328	S	43328	S	43328	S	Slinger, Barrier	3
88	45697	S	45697	S	45697	S	Washer, Keyhole (M18 x 10)	3
90	46841	CC	46841	CC	46841	CC	Plunger (M20 x 50)	3
98	46730	NBR	46730	NBR	46730	NBR	Washer, Seal – 90D	3
99 †	48201	SS †	48201	SS †	48201	SS	Retainer, Plunger (M6 x 30) (See Tech Bulletin 074)	3
100	46749	PVDF	46749	PVDF	46749	PVDF	Retainer, Seal	3
106	44127	NBR	44127	NBR	44127	NBR	Seal, LPS with SS-Spring	3
110	48552	SS	48552	SS	48552	SS	Manifold, Inlet (See Tech Bulletin 088)	1
117	119034	S	119034	S	119034	S	Screw, HSH (M8 x 35) (See Tech Bulletin 074)	4
125	833824	SNG	833824	SNG	833824	SNG	Seal, HPS	3
143	17615	NBR	17615	NBR	17615	NBR	O-Ring, Inlet Valve Adapter, Rear – 75D	3
150	48212	SS	48212	SS	48212	SS	Adapter, Inlet	3
154	43781	NBR	43781	NBR	43781	NBR	O-Ring, Inlet Valve Adapter, Front – 75D	3
155	43781	NBR	43781	NBR	43781	NBR	O-Ring, Discharge Valve Adapter, Rear – 75D	3
157	48211	SS	48211	SS	48211	SS	Adapter, Discharge	3
159	43781	NBR	43781	NBR	43781	NBR	O-Ring, Discharge Valve Adapter, Front – 75D	3
163	43781	NBR	43781	NBR	43781	NBR	O-Ring, Seat – 75D	3
164	48216	SS	48216	SS	48216	SS	Seat	6
165	43793	NBR	43793	NBR	43793	NBR	O-Ring, Seat – 90D	6
166	44038	SS	44038	SS	44038	SS	Valve	6
167	44039	SS	44039	SS	44039	SS	Spring	6
168	44564	PVDF	44564	PVDF	44564	PVDF	Retainer, Spring	6
185	48554	SS	48554	SS	48554	SS	Manifold, Discharge (See Tech Bulletin 088)	1
186	19085	S	19085	S	19085	S	Lockwasher, Split (M12)	6
188	120774	S	120774	S	120774	S	Screw, HSH (M12 x 40) (See Tech Bulletin 074)	2
189	89575	S	89575	S	89575	S	Screw, HSH (M12 x 60) (See Tech Bulletin 074)	4
500	8076	—	8076	—	8076	—	Gearbox 1" Shaft (See Individual Data Sheet)	1

Bold print part numbers are unique to a particular pump model. [] Date of latest production change.

◆ Silicone oil/grease required. † Production parts are different than repair parts. For additional technical information see www.catpumps.com/literature/tech-bulletins.

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

EXPLODED VIEW



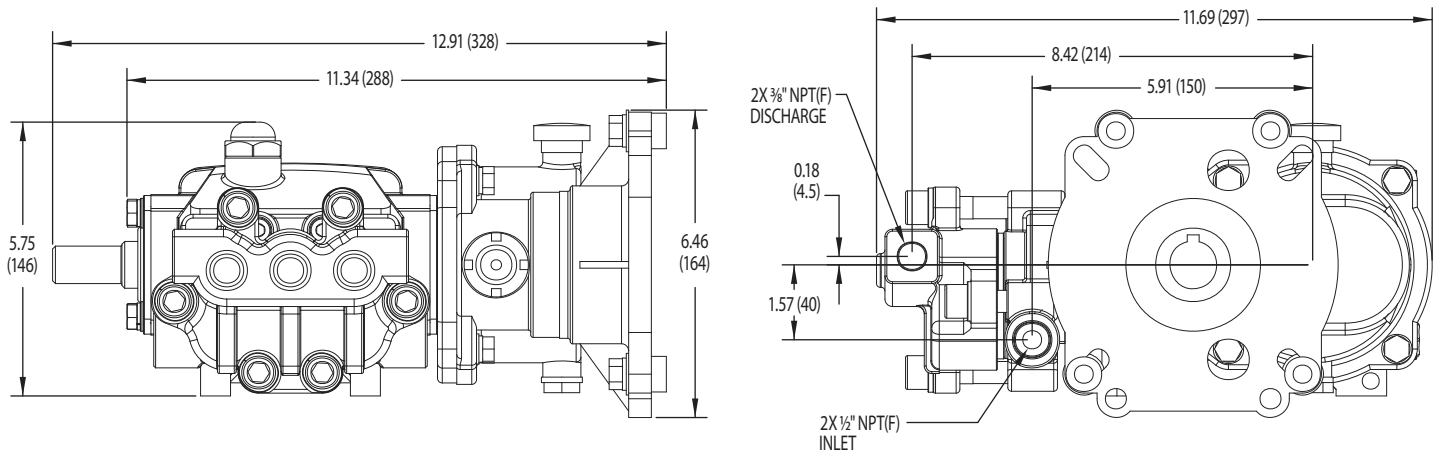
Models
 5CPQ6221G1,
 5CPQ6241CSG1,
 5CPQ6251G1
 October 2020

OPTIONAL PARTS AND ACCESSORIES

PART #	DESCRIPTION	QTY
127409	Cap, Vented with O-Ring (Rain Cap)	1
118672	Protector, Shaft (5CPQ6221G1, 5CPQ6251G1)	1
34334	Kit, Oil Drain	1
30696	Plier, Reverse	1

SERVICE PARTS

PART #	DESCRIPTION	QTY
76283	Kit, Seal – Standard NBR	1
33972	Kit, Valve – Standard NBR	1
6107	Oil, Bottle (21 oz.) ISO 68 Hydraulic (Fill to specified crankcase capacity prior to start-up)	1
6124	Gasket, Liquid (3 oz.)	1
6110	Gear Lube (16 oz.)	1
6119	Lubricant, Antiseize (2 oz.)	1



SEAL KITS

One (1) seal kit required per pump

PUMP MODELS	NBR (STD)	FPM (.0110)	EPDM (.0220)◆	HT (.3000)
5CPQ6221G1, CPQ6241CSG1, 5CPQ6251G1	76283	34351	34352	76677

ITEM (Included in Seal Kits)					DESCRIPTION	QTY
98	46730	48394	48432	46730	O-Ring, Plunger Retainer	3
106	44127	45153	48429	44127	Seal, LPS with SS-Spring	3
125	833824	44936	46667	46667	Seal, High-Pressure	3
143	17615	15855	48431	17615	O-Ring, Inlet Valve Adapter, Rear	3
154	43781	11337	48430	43781	O-Ring, Inlet Valve Adapter, Front	3
155	43781	11337	48430	43781	O-Ring, Discharge Adapter, Rear	3
159	43781	11337	48430	43781	O-Ring, Discharge Adapter, Front	3

◆ Silicone oil/grease required

VALVE KITS

One (1) valve kits required per pump

PUMP MODELS	NBR (STD)	FPM (.0110)	EPDM (.0220)◆	HT (.3000)
5CPQ6221G1, CPQ6241CSG1, 5CPQ6251G1	33972	34362	34363	33972

ITEM (Included in Valve Kits)					DESCRIPTION	QTY
143	17615	15855	48431	17615	O-Ring, Inlet Valve Adapter, Rear	3
154	43781	11337	48430	43781	O-Ring, Inlet Adapter, Front	3
163	43781	11337	48430	43781	O-Ring, Valve Seat	3
164	48216	48216	48216	48216	Seat	6
165	43793	43791	48490	43793	O-Ring, Valve Seat	6
166	44038	44038	44038	44038	Valve	6
167	44039	44039	44039	44039	Spring	6
168	44564	44564	44564	44564	Retainer, Spring	6

◆ Silicone oil/grease required

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/dynamic-literature/cautions-and-warnings or can be requested directly from Cat Pumps.

WARRANTY

View the Limited Warranty on-line at www.catpumps.com/literature/cat-pumps-limited-warranty.