

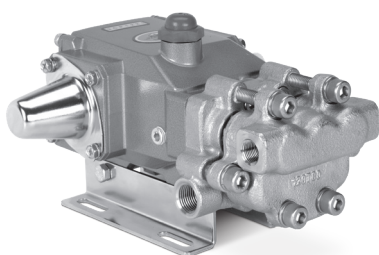
DATA SHEET

3CP PLUNGER PUMPS



Stainless Steel Models: **3CP1221, 3CP1231, 3CP1241**

Gearbox Model: **3CP1241G**



Model 3CP1221 Shown
(Mounting rails and shaft protector sold separately)

FEATURES

- Triplex plunger design ensures high efficiency and low pulsation.
- Belt-driven option provides precision flow setting.
- Direct-driven option offers a compact footprint for electric motors with a NEMA or IEC frame, or SAE hydraulic motor 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
Pump RPM*	1725	1725
Inlet Pressure Range	Flooded to 70 psi	Flooded to 4.8 bar
Standard Liquid Temp. (NBR)	160° F	71° C
Alternative seals available for higher temperatures up to 200° F		
Bore	0.708"	18 mm
Crankcase Capacity	12 oz	0.35 l
Inlet Ports (2)	½" NPT(F)	½" NPT(F)
Discharge Ports (2)	⅜" NPT(F)	⅜" NPT(F)
Shaft Diameter	0.650"	16.5mm
Pulley Mounting	Either Side	Either Side
Weight	14.84 lbs	6.7 kg
Dimensions	9.69 x 8.78 x 5.53"	246 x 223 x 136mm

SPECIFICATIONS

	U.S. Measure	Metric Measure
3CP1221		
Flow	4.2 gpm	16 lpm
Pressure Range	100–2000 psi	6.9–138 bar
Stroke	0.500"	12.7 mm
3CP1231		
Flow	2.3 gpm	8.7 lpm
Pressure Range	100–2000 psi	6.9–138 bar
Stroke	0.287"	7.3 mm
3CP1241		
Flow	3.6 gpm	13.6 lpm
Pressure Range	100–2000 psi	6.9–138 bar
Stroke	0.433"	11 mm
3CP1241G		
Flow	3.0 gpm	11.4 lpm
Pressure Range	100–2000 psi	6.9–138 bar
Engine RPM	3600 rpm	3600 rpm
Stroke	0.433"	11 mm

*Pump minimum is 100 RPM

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)
FFKM	.0770	200° F	(93° 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.

DETERMINING THE PUMP RPM

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

DETERMINING THE REQUIRED HP

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

DETERMINING MOTOR PULLEY SIZE

$$\frac{\text{Motor Pulley OD}}{\text{Pump rpm}} = \frac{\text{Pump Pulley OD}}{\text{Motor rpm}}$$

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

PARTS LIST

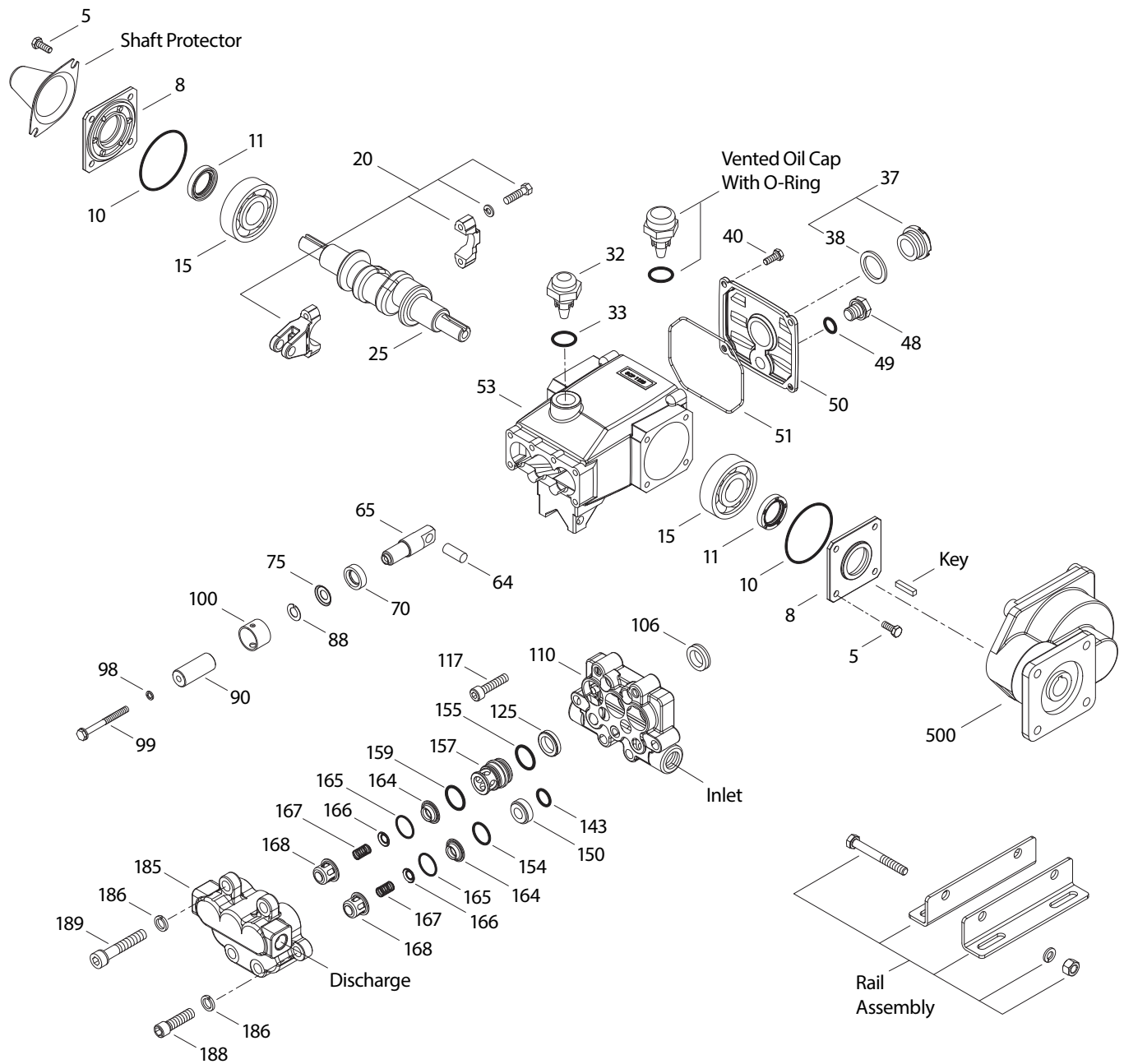
ITEM	PART NUMBER						DESCRIPTION	QTY
	3CP1221	MATL	3CP1231	MATL	3CP1241	MATL		
					3CP1241G			
5	92538	S	92538	S	92538	S	Screw, HHC Sems (M6 x 16) (See Tech Bulletin 074)	8
8	46901	AL	46901	AL	46901	AL	Cover, Bearing	2
	—	—	—	—	48259	AL	Cover, Blind (3CP1241G)	1
10	14028	NBR	14028	NBR	14028	NBR	O-Ring, Cover, Bearing	2
11	43222	NBR	43222	NBR	43222	NBR	Seal, Oil, Crankshaft	2
15	14480	STL	14480	STL	14480	STL	Bearing, Ball	2
20	48730	TNM	48730	TNM	48730	TNM	Rod, Connecting (See Tech Bulletin 074)	3
25	46927	FCM	—	—	—	—	Crankshaft, Dual-End (M12.7) (3CP1221)	1
	—	—	46994	FCM	—	—	Crankshaft, Dual-End (M7.3) (3CP1231)	1
	—	—	—	—	46991	FCM	Crankshaft, Dual-End (M11) (3CP1241)	1
	—	—	—	—	48484	FCM	Crankshaft, Single-End (M11) (3CP1241G)	1
32	46798	—	46798	—	46798	—	Cap, Oil Filler	1
33	14179	NBR	14179	NBR	14179	NBR	O-Ring, Oil Filler Cap	1
37	92241	PC	92241	PC	92241	PC	Gauge, Oil, Bubble with Gasket	1
38	44428	NBR	44428	NBR	44428	NBR	Gasket, Flat, Oil Gauge	1
40	92538	S	92538	S	92538	S	Screw, HHC Sems (M6 x 16)	4
48	25625	STCP	25625	STCP	25625	STCP	Plug, Drain (¼" x 19 BSP)	1
49	23170	NBR	23170	NBR	23170	NBR	O-Ring, Drain Plug	1
50	46939	AL	46939	AL	46939	AL	Cover, Rear	1
51	14041	NBR	14041	NBR	14041	NBR	O-Ring, Cover, Rear	1
53	48644	AL	48644	AL	48644	AL	Crankcase	1
64	46615	CM	46615	CM	46615	CM	Pin, Crosshead	3
65	48459	BBNP	48459	BBNP	48459	BBNP	Rod, Plunger	3
70	46839	NBR	46839	NBR	46839	NBR	Seal, Oil, Crankcase	3
75	43900	S	43900	S	43900	S	Slinger, Barrier	3
88	45697	S	45697	S	45697	S	Washer, Keyhole (M18 x 10)	3
90	46976	CC	46976	CC	46976	CC	Plunger (M18 x 43)	3
97	76729	SS	76729	SS	76729	SS	Washer, Flat (Not Shown) Used in 76985 Seal Kit	3
98	46730	NBR	46730	NBR	46730	NBR	Washer, Seal	3
99	† 48201	SS	† 48201	SS	† 48201	SS	Retainer, Plunger (See Tech Bulletin 074)	3
100	46541	PVDF	46541	PVDF	46541	PVDF	Retainer, Seal	3
106	44053	NBR	44053	NBR	44053	NBR	Seal, Low-Pressure with SS-Spring	3
110	48556	SS	48556	SS	48556	SS	Manifold, Inlet	1
117	119034	S	119034	S	119034	S	Screw, HSH (M8 x 35) (See Tech Bulletin 074)	4
125	44652	SNG	44652	SNG	44652	SNG	Seal, High-Pressure with SS-Support	3
143	17547	NBR	17547	NBR	17547	NBR	O-Ring, Adapter, Valve, Rear	3
150	44060	SS	44060	SS	44060	SS	Adapter, Valve	3
154	43893	NBR	43893	NBR	43893	NBR	O-Ring, Adapter, Valve, Front	3
155	26089	NBR	26089	NBR	26089	NBR	O-Ring, Adapter, Valve, Rear	3
157	44059	SS	44059	SS	44059	SS	Adapter, Valve	3
159	26089	NBR	26089	NBR	26089	NBR	O-Ring, Adapter, Valve, Front	3
164	44058	SS	44058	SS	44058	SS	Seat	6
165	44001	NBR	44001	NBR	44001	NBR	O-Ring, Seat	6
166	543669	SS	543669	SS	543669	SS	Valve	6
167	44056	SS	44056	SS	44056	SS	Spring	6
168	44055	SS	44055	SS	44055	SS	Retainer, Spring	6
185	48558	SS	48558	SS	48558	SS	Manifold, Discharge	1
186	15847	S	15847	S	15847	S	Lockwasher (M10)	6
188	87950	S	87950	S	87950	S	Screw, HSH (M10 x 35) (See Tech Bulletin 074)	2
189	87952	S	87952	S	87952	S	Screw, HSH (M10 x 55) (See Tech Bulletin 074)	4
500	—	—	—	—	8075	—	Gearbox (See Individual Data Sheet)	1

Bold print part numbers are unique to a particular pump model. R Components comply with RoHS Directive.

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
FFKM=Perfluoroelstomer FPM=Fluorocarbon HS=High Strength HT=High-Temp (EPDM Alternative) NBR=Medium Nitrile (Buna-N)
PC=Polycarbonate PTFE=Polytetra Fluoroethylene PVDF=Polyvinylidene Fluoride S=304SS SNG=Special Blend (Buna)
SS=316SS ST2=Special PTFE2 ST4=Special PTFE4 STL=Steel STHT=Special PTFE High Temp
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 and Valve Kits listed on page 4.

EXPLODED VIEW



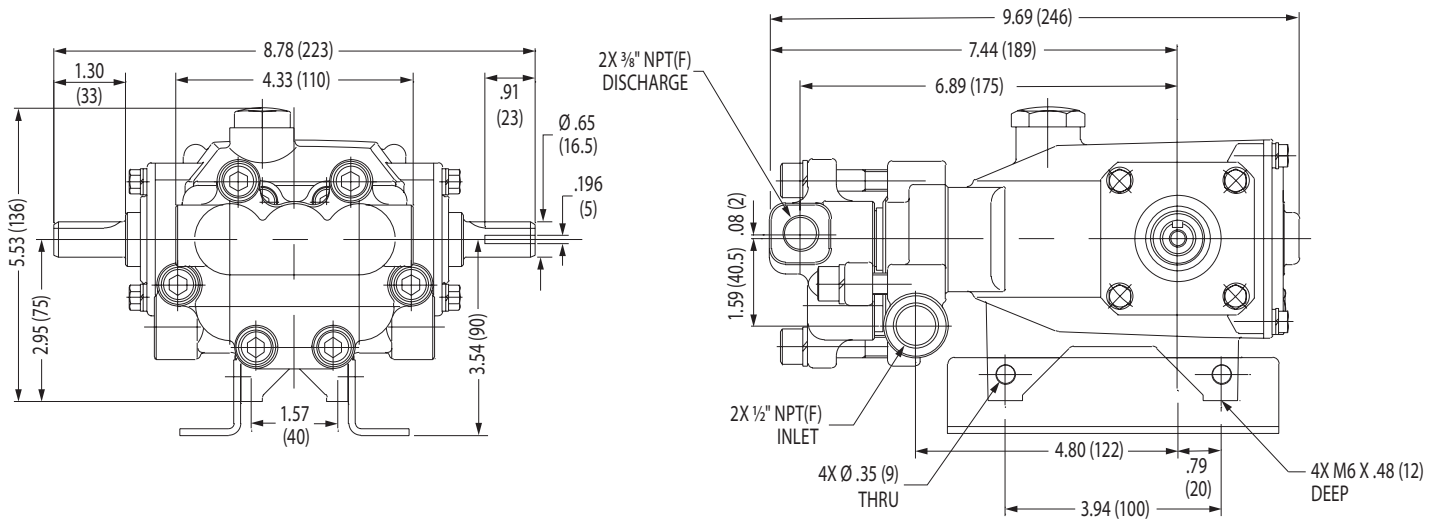
Models
3CP1221, 3CP1231,
3CP1241, 3CP1241G
February 2026

OPTIONAL PARTS AND ACCESSORIES

PART	DESCRIPTION	QTY
30047	Key (M5 x 5 x 24)	1
30612	Assembly, Rail (Belt Drive)	1
32603	Pulley, Assembly (99AK51H, 30047, 30943)	1
30243	Mount, Direct	1
118672	Protector, Shaft	1
32604	Mount, Assembly (32603, 118672)	1
127409	Cap, Vented with O-Ring (Rain Cap)	1
34334	Kit, Oil Drain (3/8" x 24) (Not Shown)	1

SERVICE PARTS

PART	DESCRIPTION	QTY
33985	Kit, Seal – Standard NBR	1
30982	Kit, Valve – Standard NBR	1
6107	Oil, Bottle (21 oz) (Fill to Specified Crankcase Capacity Prior to Start-up)	1
6124	Gasket, Liquid (3 oz)	1
6139	Lubricant, Anti-Seize (8 oz)	2
30696	Reverse Pliers (Not Shown)	1
816719	Head, Complete with NBR Seals and O-Rings	1



SEAL KITS

One (1) seal kit required per pump

PUMP MODELS	NBR (STD)	FPM (.0110)	EPDM (.0220) ♦	FFKM (.0770)	HT (.3000)	STHT (.3400)
3CP1221, 3CP1231, 3CP1241, 3CP1241G	33985	33309	33944*	76985*	76136	76167

ITEM (Included in Seal Kits)							DESCRIPTION	QTY
97				76729			Washer, Flat	3
98	46730	48394	48432	76730	46730	46730	O-Ring, Plunger Retainer	3
106	44053	44926	46651	76243	44053	76243	Seal, Low-Pressure with SS-Spring	3
125	44652	44925	46652	46652	46652	46652	Seal, High-Pressure	3
143	17547	11685	46648	703308	17547	17547	O-Ring, Adapter, Valve, Rear	3
154	43893	44927	46649	703307	43893	43893	O-Ring, Adapter, Valve, Front	3
155	26089	11377	46647	703244	26089	26089	O-Ring, Adapter, Valve, Rear	3
159	26089	11377	46647	703244	26089	26089	O-Ring, Adapter, Valve, Front	3

♦ Silicone oil/grease required

*Review material codes for individual items (HT, SNG, ST2 may be used as alternative)

VALVE KITS

Two (2) valve kits required per pump

PUMP MODELS	NBR (STD)	FPM (.0110)	EPDM (.0220) ♦	FFKM (.0770)	HT (.3000)	STHT (.3400)
3CP1221, 3CP1231, 3CP1241, 3CP1241G	30982	31216	31217	76690	30982	30982

ITEM (Included in Valve Kits)							DESCRIPTION	QTY
143	17547	11685	46648	703308	17547	17547	O-Ring, Adapter, Valve, Rear	3
154	43893	44927	46649	703307	43893	43893	O-Ring, Adapter, Valve, Front	3
159	26089	11377	46647	703244	26089	26089	O-Ring, Adapter, Valve, Front	3
164	44058	44058	44058	44058	44058	44058	Seat	6
165	44001	44928	46650	703309	44001	44001	O-Ring, Seat	6
166	543669	543669	543669	543669	543669	543669	Valve	6
167	44056	44056	44056	44056	44056	44056	Spring	6
168	44055	44055	44055	44055	44055	44055	Retainer, Spring	6

♦ Silicone oil/grease required

CAUTIONS AND WARNINGS

All high-pressure systems require a primary pressure regulating device (e.g. regulator, unloader) and a secondary pressure relief device (e.g. 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 online at www.catpumps.com/literature/cat-pumps-limited-warranty