

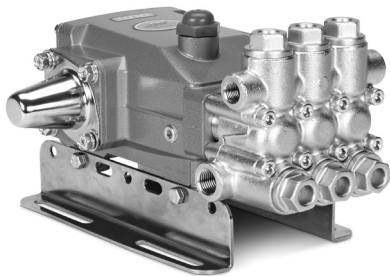
DATA SHEET

5CP PLUNGER PUMPS



Brass Models: **5CP6180CSS, 5CP6190**

Gearbox Model: **5CP6180CSSG1, 5CP6190G1**



Model 5CP6190 Shown
(Mounting rails and shaft protector sold separately)

FEATURES

- Triplex plunger design ensures high efficiency and low pulsation.
- Belt-driven option provides precise flow setting.
- Gearbox model available with 1" and 1½" hollow shaft fits a wide variety of engines.
- Direct-driven option offers a compact footprint for direct-drive 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 60 psi	Flooded to 4.1 bar
Max. Liquid Temperature (NBR)	160° F	71° C
Alternative seals available for higher temperatures up to 180° F		
Bore	0.866"	22 mm
Crankcase Capacity	17 oz	0.50 l
Inlet Ports (2)	½" NPT(F)	½" NPT(F)
Discharge Ports (2)	⅜" NPT(F)	⅜" NPT(F)
Shaft Diameter	0.787"	20 mm
Weight	20.5 lbs	9.3 kg
Dimensions (5CP6180CSS)	10.79 x 8.92 x 5.75"	274 x 226.5 x 146 mm
Dimensions (5CP6190)	10.79 x 10.0 x 5.75"	274 x 254 x 146 mm

SPECIFICATIONS

5CP6180CSS

	U.S. Measure	Metric Measure
Flow	8.2 gpm	31 lpm
Pressure Range	100–1500 psi	6.9–103 bar
Pump RPM*	1750 rpm	1750 rpm
Stroke	0.650"	16.5 mm

5CP6190

Flow	10.0 gpm	38 lpm
Pressure Range	100–1200 psi	6.9–83 bar
Pump RPM*	1750 rpm	1750 rpm
Stroke	0.787"	20 mm

ALTERNATE SPECIFICATIONS

5CP6190

Flow	8.0 gpm	30.3 lpm
Pressure Range	100–1450 psi	6.9–100 bar
Pump RPM*	1450 rpm	1450 rpm

5CP6180CSSG1

Flow	8.0 gpm	30.3 lpm
Pressure Range	100–1500 psi	6.9–103 bar
Engine RPM	3450 rpm	3450 rpm

5CP6190G1

Flow	9.7 gpm	36.7 lpm
Pressure Range	100–1200 psi	6.9–83 bar
Engine RPM	3450 rpm	3450 rpm

*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)
HT	.3000	180° F (82° C)

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

DETERMINING THE PUMP RPM

Rated gpm	=	Desired gpm
Rated rpm	=	Desired rpm

DETERMINING THE REQUIRED HP

Hp (Electric Brake)	=	gpm x psi 1460
------------------------	---	-------------------

DETERMINING MOTOR PULLEY SIZE

Motor Pulley OD Pump rpm	=	Pump Pulley OD Motor rpm
-----------------------------	---	-----------------------------

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

PARTS LIST

ITEM	PART NUMBERS	MATL	DESCRIPTION	QTY
5	126542	STCP R	Screw, HHC, Sems (M8 x 16) (See Tech Bulletin 074)	8
8	46910	AL	Cover, Bearing	2-1
10	14028	NBR	O-Ring, Cover Bearing	2
11	43222	NBR	Seal, Oil, Crankshaft	2-1
15	14480	STL	Bearing, Ball	2
20	48742	TNM	Assembly, Connecting Rod (See Tech Bulletin 074)	3
25	48646	FCM	Crankshaft, Dual-End (M20) (Models: 5CP6190, 5CP6190G1)	1
	48368	FCM	Crankshaft, Single-End (M16.5) (Models: 5CP6180CSS, 5CP6180CSSG1)	1
30	49776	AL	Cover, Bearing (Model 5CP6180CSS)	1
32	46798	—	Cap, Oil Filler, Domed	1
33	14179	NBR	O-Ring, Oil Filler Cap	1
37	92241	PC	Gauge, Oil, Bubble with Gasket (See Tech Bulletin 074)	1-2
38	44428	NBR	Gasket, Flat, Oil Gauge	1-2
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	1
50	46940	AL	Cover, Rear	1
51	14044	NBR	O-Ring, Rear Cover	1
53	48617	AL	Crankcase	1
64	46746	CM	Pin, Crosshead	3
65	48647	BBNP	Rod, Plunger	3
70	46838	NBR	Seal, Oil, Crankcase	3
87	48648	S	Washer, Flat (M10 x 24)	3
90	121391	CC	Plunger (M22 x 50)	3
98	46730	NBR	Washer, Seal	3
99	† 48201	SS	Retainer, Plunger with Stud (M6) (See Tech Bulletin 074)	3
100	46749	PVDF	Retainer, Seal	3
106	49644	NBR	Seal, Low-Pressure with SS-Spring	3
120	121394	BB	Case, Seal	3
121	13980	NBR	O-Ring, Seal Case	3
125	121395	SNG	Seal, High-Pressure with S-Support	3
162	43248	PTFE	Backup Ring, Seat	6
163	43249	NBR	O-Ring, Seat	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	6
174	125214	BBCP	Plug, Valve (See Tech Bulletin 074)	6
185	49760	BBCP	Manifold, Head	1
188	126513	STCP R	Screw, HSH (M8 x 70) (See Tech Bulletin 074)	8
500	8076	—	<i>Gearbox (See Individual Data Sheet)</i>	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. For additional technical information see www.catpumps.com/literature/tech-bulletins.

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

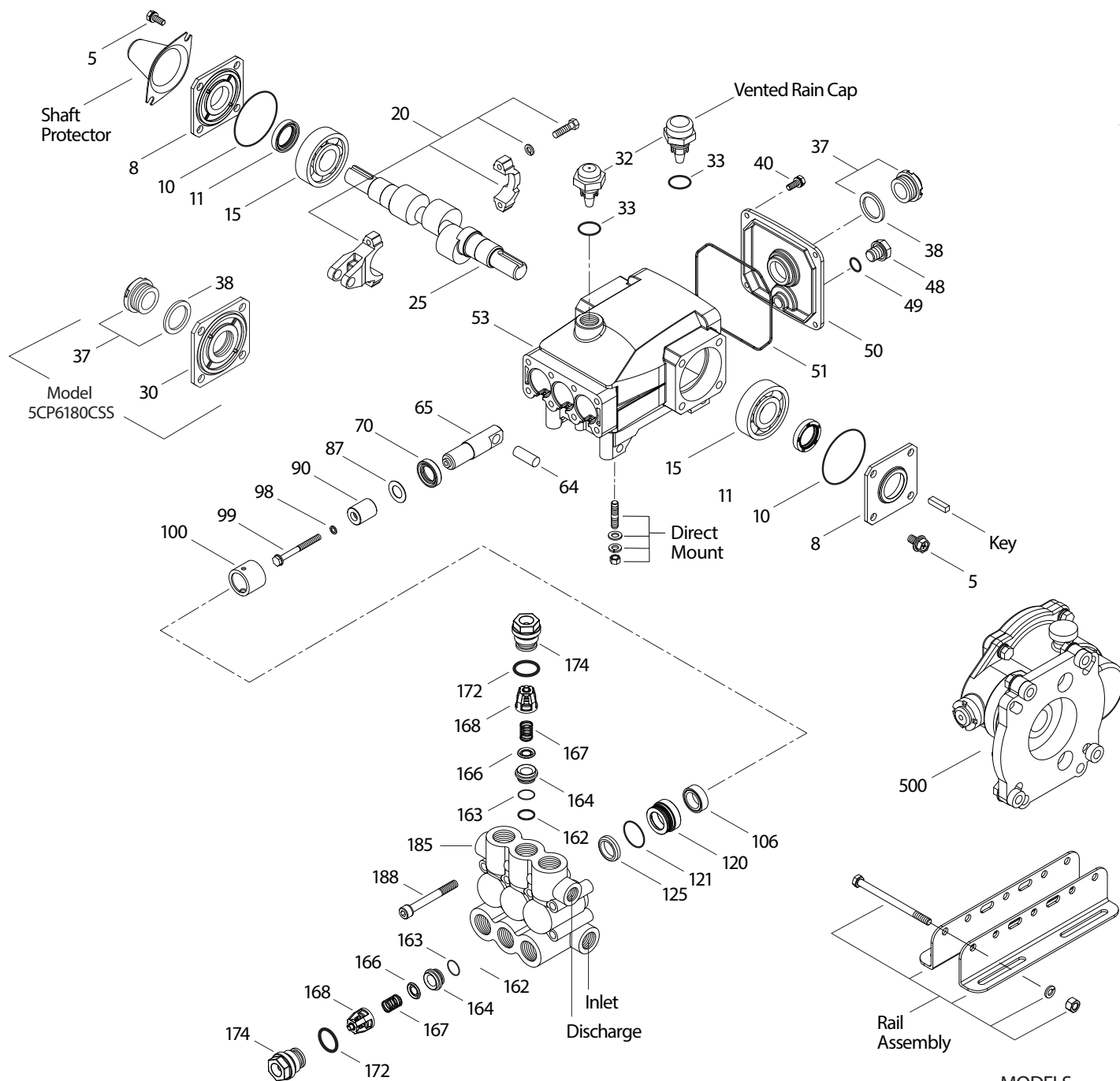
EPDM=Ethylene Propylene Diene Monomer FCM=Forged Chrome-moly FPM=Fluorocarbon HT=High Temp NBR=Medium Nitrile (Buna-N)

PC=Poly Carbonate PTFE=Pure Polytetrafluoroethylene PVDF=Polyvinylidene Fluoride S=304SS SS=316SS SNG=Special Blend (Buna)

ST=Special PTFE STG= Special Blend PTFE White STL=Steel STCP=Steel/Chrome Plated

STZP=Steel/Zinc Plated TNM=Special High Strength

EXPLODED VIEW



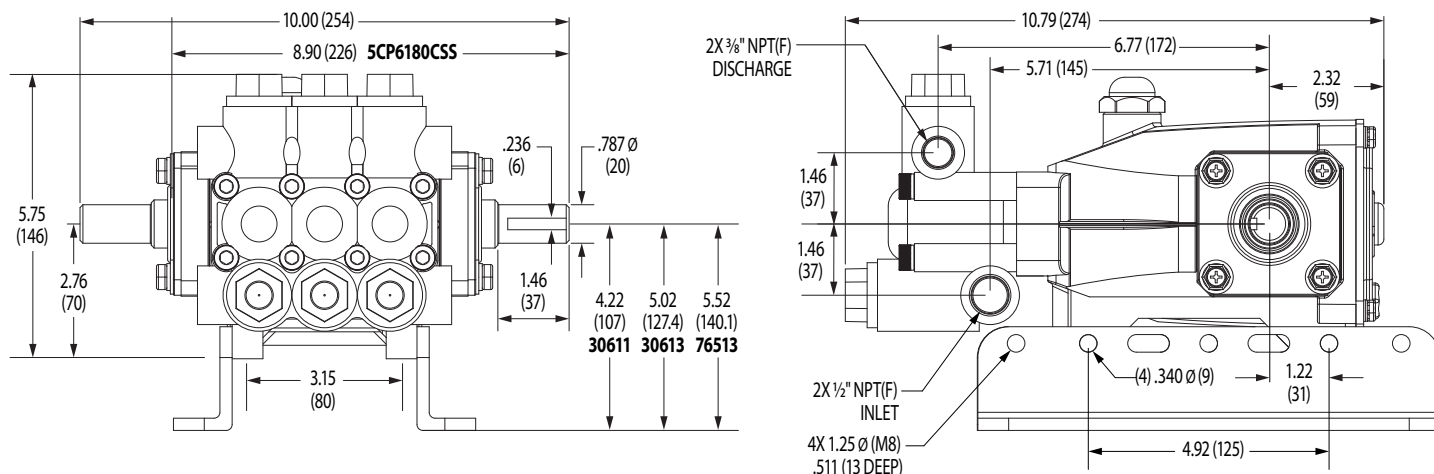
MODELS
5CP6180CSS, 5CP6190
5CP6180CSSG1, 5CP6190G1
July 2025

OPTIONAL PARTS AND ACCESSORIES

PART	DESCRIPTION	QTY
30057	Key (M6 x 6 x 25)	1
30611	Assembly, Rail (4.22" – See Dimensional Drawing)	1
30645	Assembly, Rail (5.02" – See Dimensional Drawing)	1
76513	Assembly, Rail (5.52" – See Dimensional Drawing)	1
30637	Mount, Rail Assembly (Retro Fit – See Tech Bulletin 078)	1
30243	Mount, Direct	1
118672	Protector, Shaft (Model 5CP5140)	1
127409	Cap, Vented with O-Ring (Rain Cap)	1
34334	Kit, Oil Drain ($\frac{3}{8}$ " x 24") (Not Shown)	1
22179	Plug, Inlet ($\frac{1}{2}$ " NPT[M]) (Not Shown)	1
22187	Plug, Discharge ($\frac{3}{8}$ " NPT[M]) (Not Shown)	1

SERVICE PARTS

PART	DESCRIPTION	QTY
76620	Seal Kit – Standard NBR	1
34920	Valve Kit – Standard NBR	2
6107	Oil, Bottle (21 oz bottle) (Fill to Specified Crankcase Capacity Prior to Start-up)	1
6110	Gear Lube (16 oz Bottle) for Gearbox only	1
6124	Gasket, Liquid (3 oz)	1
30696	Reverse Pliers (Not Shown)	1
818460	Head, Complete – with NBR Seals and O-Rings	1



Model 5CP6190

SEAL KITS One (1) seal kit required per pump

PUMP MODELS	NBR (STD)	FPM (.0110)	EPDM (.0220) ♦	HT (.3000)
5CP6180CSS, 5CP6190, 5CP6180CSSG1, 5CP6190CSSG1	76620	76610 *	76650 *	76616

ITEM (Included in Seal Kits)					DESCRIPTION	QTY
98	46730	48394	48432	46730	Washer, Seal	3
106	49644	49704	48650	49644	Seal, Low-Pressure with SS-Spring	3
121	13980	14330	49731	13980	O-Ring, Seal Case	3
125	121395	122188	122188	122188	Seal, High-Pressure	3

* Review material codes for individual items (STG may be used as alternative)

♦ Silicone Oil/Grease required

VALVE KITS Two (2) valve kits required per pump

PUMP MODELS	NBR (STD)	FPM (.0110)	EPDM (.0220) ♦	HT (.3000)
5CP6180CSS, 5CP6190, 5CP6180CSSG1, 5CP6190CSSG1	34920	31256	31253	34920

ITEM (Included in Valve Kits)					DESCRIPTION	QTY
162	43248	43248	43248	43248	Backup Ring, Seat	3
163	43249	44383	46206	43249	O-Ring, 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

⚠ 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