

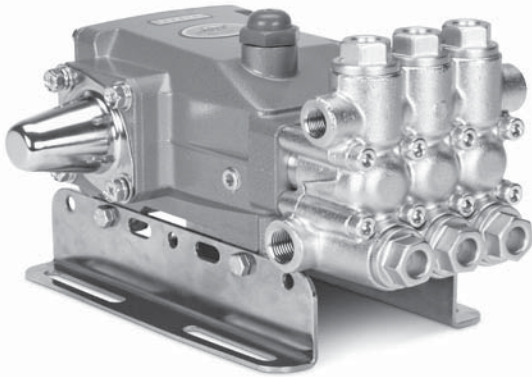
# DATA SHEET

## DIRECT-DRIVE PLUNGER PUMPS



**Standard Model: 5CP6190**

**Gearbox Model: 5CP6190G1**



Model 5CP6190 Shown  
(Rails and shaft protector sold separately)

### FEATURES

- Industrial high performance design offers reliability and versatility.
- Ultra-compact footprint enhances direct-drive pump-motor unit with bell housing and flexible coupling mount.
- Optional direct-drive motor and gearbox requirements.
- Press-in seal cases and interchangeable valve assemblies for easy servicing.
- Standard NBR seals with alternative options for temperature and chemical compatibility
  - FPM – .0110
  - EPDM – .0220

### COMMON SPECIFICATIONS

	U.S.	Metric
Inlet Pressure Range	Flooded to 60 psi	Flooded to 4 bar
Max. Liquid Temperature	160°F	71°C
Above 130°F call Cat Pumps for inlet conditions and elastomer recommendations.		
Crankcase Capacity	17 oz.	0.51 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
Dimensions (Pump Only)	11.01 x 10.0 x 5.82"	279 x 254 x 148 mm
Dimensions (w/ Gearbox)	11.01 x 12.4 x 6.40"	279 x 315 x 162 mm

### SPECIFICATIONS

	U.S. Measure	Metric Measure
<b>5CP6190</b>		
Flow	10.0 gpm	38 lpm
Pressure Range	100 - 1200 psi	7 - 83 bar
RPM	1800 rpm	1800 rpm
Bore	0.866"	22 mm
Stroke	0.787"	20 mm
Weight	19.9 lbs.	9 kg
<b>5CP6190G1</b>		
Flow	8.7 gpm	33 lpm
Pressure Range	100 - 1200 psi	7 - 83 bar
Pump RPM	1570 rpm	1570 rpm
Engine RPM	3200 rpm	3200 rpm
Weight	26.5 lbs.	12 kg

### ALTERNATE SPECIFICATIONS

	U.S. Measure	Metric Measure
<b>5CP6190</b>		
Flow	8.0 gpm	30.3 lpm
Pressure Range	100 to 1450 psi	7 to 100 bar
Pump RPM	1450 rpm	1450 rpm

### ELECTRIC HORSEPOWER REQUIREMENTS

MODELS	FLOW		PRESSURE				MOTOR PULLEY SIZE	
			psi 900	psi 1200	psi 1450	psi 1600	Using 1725 RPM Motor & Std. 8" Pump Pulley	
	U.S. gpm	lpm	bar 62	bar 83	bar 100	bar 110	RPM	Pulley O.D.
5CP6190	10	38	6.2	8.2	N/A	N/A	1800	Direct
5CP6190G1	8.7	33	Consult Eng. Mfg.				3200	Gearbox
5CP6190ALT	8.0	30.3	5.1	6.8	8.2	N/A	1450	6.7

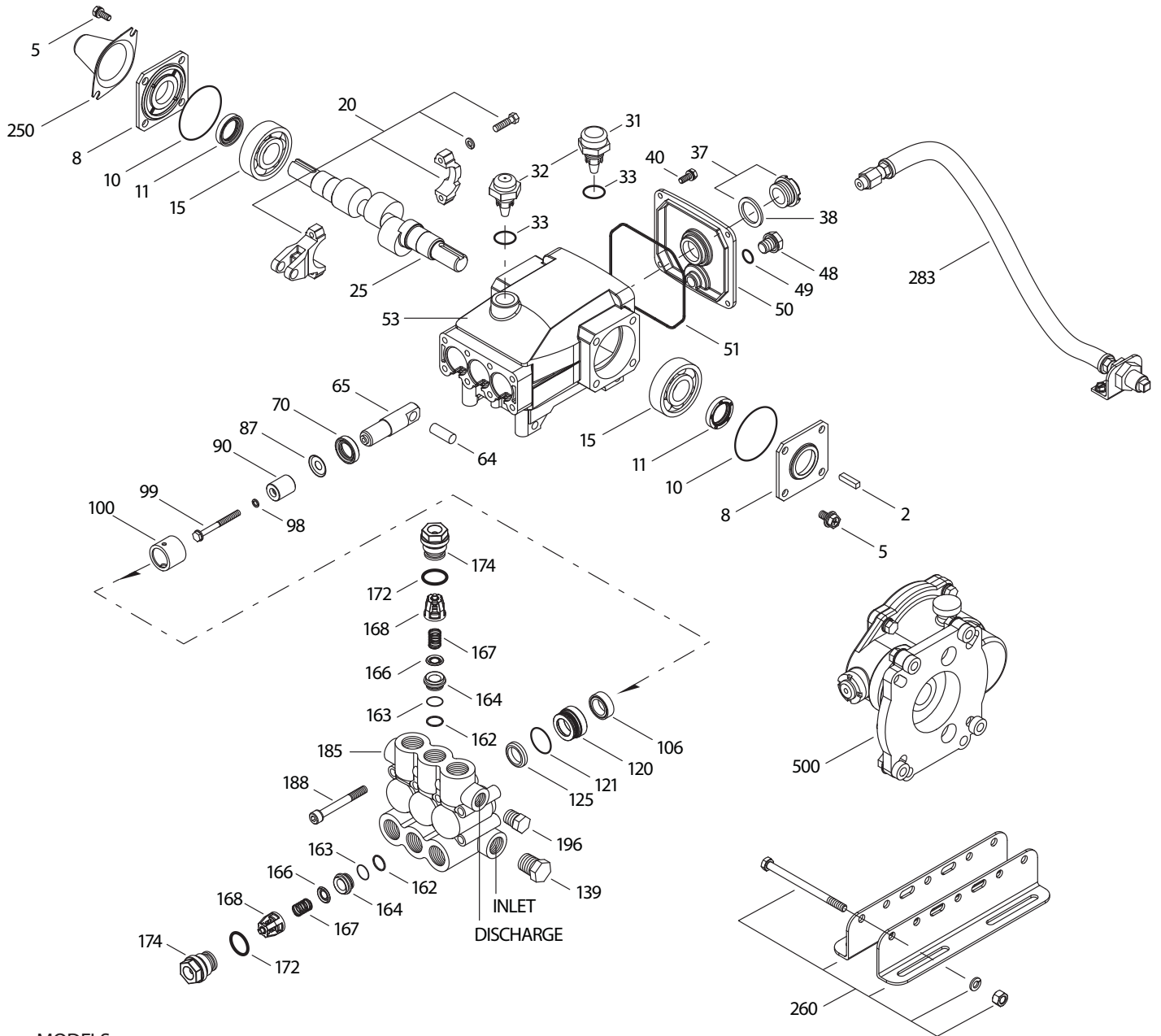
<b>DETERMINING THE PUMP R.P.M.</b>	Rated gpm	=	"Desired" gpm
	Rated rpm	=	"Desired" rpm
<b>DETERMINING THE REQUIRED H.P.</b>	gpm x psi	=	Electric Brake
	1460	=	H. P. Required
<b>DETERMINING MOTOR PULLEY SIZE</b>	Motor Pulley O.D.	=	Pump Pulley O.D.
	Pump rpm	=	Motor rpm

See complete Drive Packages [Incls: Pulleys, Belts, Hubs, Key] Tech Bulletin 003.  
Refer to pump **Service Manual** for repair procedure and additional technical information.

# PARTS LIST

ITEM	PART NUMBERS	DESCRIPTION	QTY
	<b>5CP6190</b> <b>5CP6190G1</b>	<b>MATL</b>	
2	30057	STL Key (M6x6x25)	1
5	126542	STCP R Screw, HHC, Sems (M8x16)	8
8	46910	AL Cover, Bearing	2 - 1
10	14028	NBR O-Ring, Bearing Cover - 70D	2 - 1
11	43222	NBR Seal, Oil, Crankshaft - 70D	2 - 1
15	14480	STL Bearing, Ball	2
20	48742	TNM Rod, Connecting Assy [10/01]	3
25	48646	FCM Crankshaft, Dual End M20 - 5CP6190, 5CP6190G1	1
31	127409	— Cap, Vented w/O-Ring (Rain Cap)	1
32	46798	— Cap, Oil Filler, Domed	1
33	14179	NBR O-Ring, Oil Filler Cap - 70D	1
37	92241	— Gauge, Oil, Bubble w/Gasket - 80D	1
38	44428	NBR Gasket, Flat, Oil Gauge - 80D	1
40	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	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 - 70D	3
87	48648	S Washer, Flat (M10x24)	3
90	121391	CC Plunger (M22x50)	3
98	46730	NBR Washer, Seal - 90D	3
	48394	FPM Washer, Seal - 90D	3
	◆ 48432	EPDM Washer, Seal	3
99	† 48201	SS Retainer, Plunger w/Stud (M6)	3
100	46749	PVDF 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
	76704	ST Seal, LPS w/S-Spg	3
120	121394	BB Case, Seal	3
121	13980	NBR O-Ring, Seal Case-70D	3
	14330	FPM O-Ring, Seal Case	3
	◆ 49731	EPDM O-Ring, Seal Case	3
125	121395	SNG Seal, HPS w/S	3
	122188	STG Seal, HPS w/S	3
139	22179	BBCP Plug, Inlet [1/2" NPT(M)]	1
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	125214	BBCP Plug, Valve	6
185	49760	BBCP Manifold, Head	1
188	126513	STCP R Screw, HSH (M8x70)	8
196	22187	BBCP Plug, Discharge [3/8" NPT(M)]	1
250	118672	STCP Protector, Shaft	1
255	30243	STZP Mount, Direct	1
260	30611	STZP R Mount, Rail, Assy	1
	30637	STZP Mount, Angle Assy-Retro Fit (See Tech Bulletin 078)	1
265	—	— Kit, Complete Mounting (Incls: 30611, 30633, 118672) (Belt Drive Only)	1
275	30944	STL Assembly, Hub & Key (Incls. 30945, 30057)	1
283	34334	— Kit, Oil Drain (3/8" x 24") (See Individual Data Sheet)	1
	76334	— Kit, Oil Indicator (3/8" x 24") (See Individual Data Sheet)	1
299	818460	BBCP Head, Complete <b>Standard</b>	1

# EXPLODED VIEW

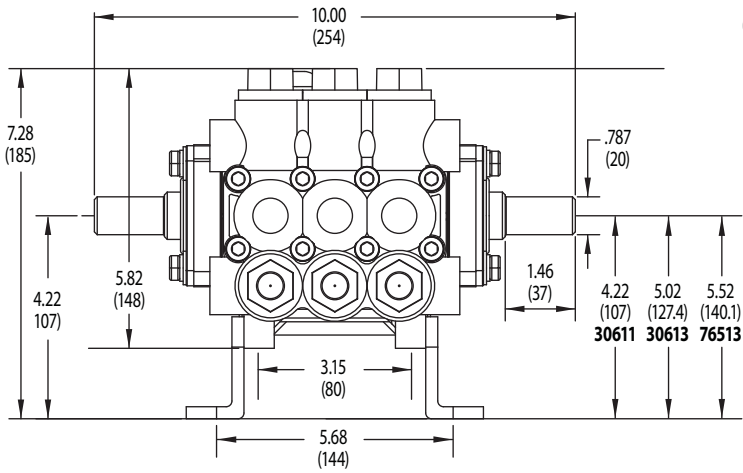


MODELS  
5CP6190, 5CP6190G1  
MAY 2015

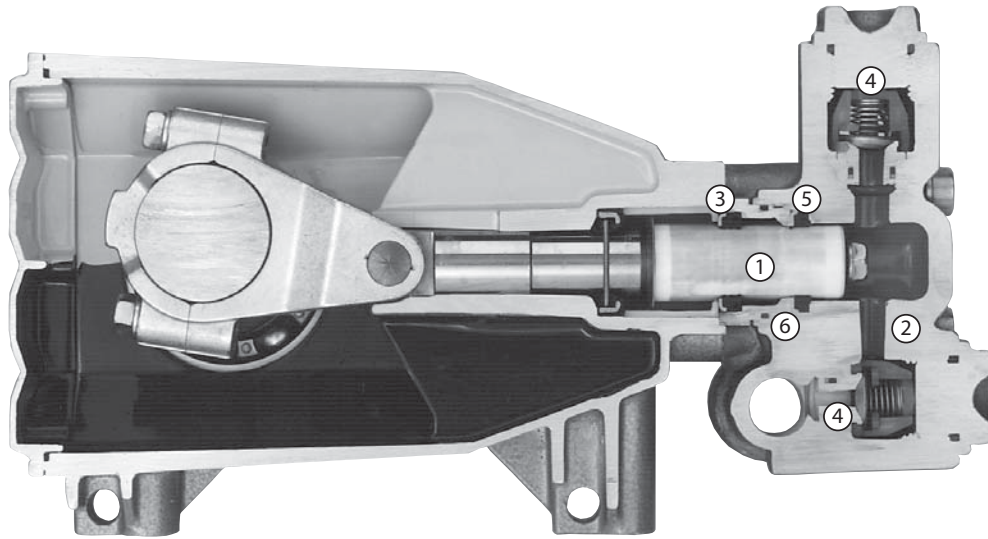
ITEM	PART NUMBERS	DESCRIPTION	QTY
	<b>5CP6190</b> <b>5CP6190G1</b>	<b>MATL</b>	
300	76620	NBR Kit, Seal (Incls: 98,106,121,125) <b>Standard</b>	1
	76610	FPM Kit, Seal (Incls: 98,106,121,125) <b>.0110</b>	1
◆	76650	EPDM Kit, Seal (Incls: 98,106,121,125) <b>.0220</b>	1
310	34920	NBR Kit, Valve Preassembled (Incls: 162,163,164,166-168,172) <b>Standard</b>	2
	31256	FPM Kit, Valve Preassembled (Incls: 162,163,164,166-168,172) <b>.0110</b>	2
◆	31253	EPDM Kit, Valve Preassembled (Incls: 162,163,164,166-168,172) <b>.0220</b>	2
350	30696	STZP Pliers, Reverse	1
500	8076	— Gearbox (See Individual Data Sheet)	1
—	6107	— Oil, Bottle (21 oz.) ISO 68 Hydraulic (Fill to specified crankcase capacity prior to start-up)	1

*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. View Tech Bulletins 002, 003, 024, 036, 043, 053, 060, 061, 064, 073, 074, 078 and 083 for additional information.

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 NBR=Medium Nitrile (Buna-N) 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



Model 5CP6190



1. Special concentric, high density, polished, solid ceramic plungers provide a true wear surface and extended seal life.
2. Manifolds are a high tensile strength chrome plated forged brass for long term, continuous duty.
3. 100% wet seal design adds to service life by allowing pumped liquids to cool and lubricate on both sides of the seals.
4. Stainless steel valves, seats and springs provide corrosion-resistance, ultimate seating and extended life.
5. Specially formulated, Cat Pump exclusive, Lo-Pressure and Hi-Pressure Seals offer unmatched performance and seal life.
6. Press-in style seal case offers alignment and support for seals and "no tools" servicing.

#### ⚠ 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).



#### CAT PUMPS

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