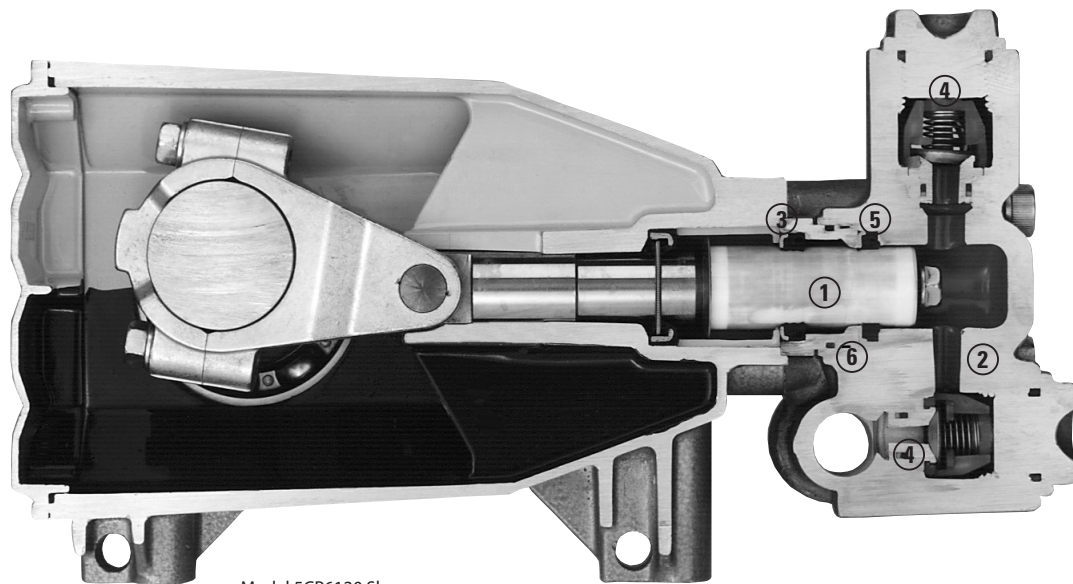


Models 5CP6120, 5CP6190



Model 5CP6120 Shown

- 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.



CAT PUMPS

1681 - 94TH LANE N.E. MINNEAPOLIS, MN 55449-4324
 PHONE (763) 780-5440 — FAX (763) 780-2958
 e-mail: techsupport@catpumps.com
 www.catpumps.com



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.
- Optional FPM and EPDM elastomers for compatibility with many liquids.
- Press-in seal cases and interchangeable valve assemblies for easy servicing.

COMMON SPECIFICATIONS

| | U.S. | Metric |
|--|----------------------|----------------------|
| Inlet Pressure Range..... | Flooded to 60 psi | (Flooded to 4 bar) |
| Crankcase Capacity..... | 17 oz | (0.51 l) |
| Max. Liquid Temperature | 160°F | (71°C) |
| Above 130°F call Cat Pumps for inlet conditions and elastomer recommendations. | | |
| Inlet Ports (2) | 1/2" NPTF | (1/2" NPTF) |
| Discharge Ports (2)..... | 3/8" NPTF | (3/8" NPTF) |
| Shaft Diameter | 0.787" | (20 mm) |
| Dimensions (Pump Only) | 10.82 x 10.0 x 5.78" | (275 x 254 x 147 mm) |
| Dimensions (w/Gearbox)..... | 11.0 x 12.4 x 6.4" | (279 x 315 x 162 mm) |

⚠ 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 or can be requested directly from CAT PUMPS.

WARRANTY

View the Limited Warranty on-line at www.catpumps.com/warranty.

5CP Plunger Pump

Standard
Models

5CP6120
5CP6190

Gearbox
Models

5CP6120CSSG1
5CP6190G1

SPECIFICATIONS

| | U.S. | Metric |
|----------------------|--------------|-------------|
| MODEL 5CP6120 | | |
| Flow..... | 6.0 gpm | (23 lpm) |
| Pressure Range..... | 100-1600 psi | (7-110 bar) |
| RPM | 1400 rpm | (1400 rpm) |
| Bore..... | 0.787" | (20 mm) |
| Stroke..... | 0.709" | (18 mm) |
| Weight..... | 19.9 lbs. | (9 kg) |

MODEL 5CP6120 ALTERNATE SPECIFICATIONS

| | | |
|---------------------|--------------|------------|
| Flow..... | 7.4 gpm | (28 lpm) |
| Pressure Range..... | 100-1200 psi | (7-85 bar) |
| Pump RPM | 1750 rpm | (1750 rpm) |

MODEL 5CP6120CSSG1

| | | |
|---------------------|--------------|-------------|
| Flow..... | 6.7 gpm | (25 lpm) |
| Pressure Range..... | 100-1600 psi | (7-110 bar) |
| Pump RPM | 1570 rpm | (1570 rpm) |
| Engine RPM | 3200 rpm | (3200 rpm) |
| Weight..... | 26.5 lbs. | (12 kg) |

MODEL 5CP6190

| | | |
|---------------------|--------------|------------|
| Flow..... | 9.7 gpm | (37 lpm) |
| Pressure Range..... | 100-1200 psi | (7-85 bar) |
| RPM | 1750 rpm | (1750 rpm) |
| Bore..... | 0.866" | (22 mm) |
| Stroke..... | 0.787" | (20 mm) |
| Weight..... | 19.9 lbs. | (9 kg) |

MODEL 5CP6190 ALTERNATE SPECIFICATIONS

| | | |
|---------------------|--------------|-------------|
| Flow..... | 8.25 gpm | (31 lpm) |
| Pressure Range..... | 100-1450 psi | (7-100 bar) |
| Pump RPM | 1450 rpm | (1450 rpm) |

MODEL 5CP6190G1

| | | |
|---------------------|--------------|------------|
| Flow..... | 8.7 gpm | (33 lpm) |
| Pressure Range..... | 100-1200 psi | (7-85 bar) |
| Pump RPM | 1570 rpm | (1570 rpm) |
| Engine RPM | 3200 rpm | (3200 rpm) |
| Weight..... | 26.5 lbs. | (12 kg) |

ELECTRIC HORSEPOWER REQUIREMENTS

| MODEL | FLOW | | PRESSURE | | | | MOTOR PULLEY SIZE | |
|--------------|----------|-----|-------------------|----------|----------|----------|-------------------|-------------|
| | U.S. gpm | lpm | psi 900 | psi 1200 | psi 1450 | psi 1600 | rpm | Pulley O.D. |
| 5CP6120 | 6.0 | 23 | 3.7 | 4.9 | 6.0 | 6.6 | 1400 | 6.4 |
| 5CP6120CSSG1 | 6.7 | 25 | Consult Eng. Mfg. | | | | 3200 | Gearbox |
| 5CP6190 | 9.7 | 37 | 6.0 | 8.0 | N/A | NA | 1750 | Direct |
| 5CP6190G1 | 8.7 | 33 | Consult Eng. Mfg. | | | | 3200 | Gearbox |

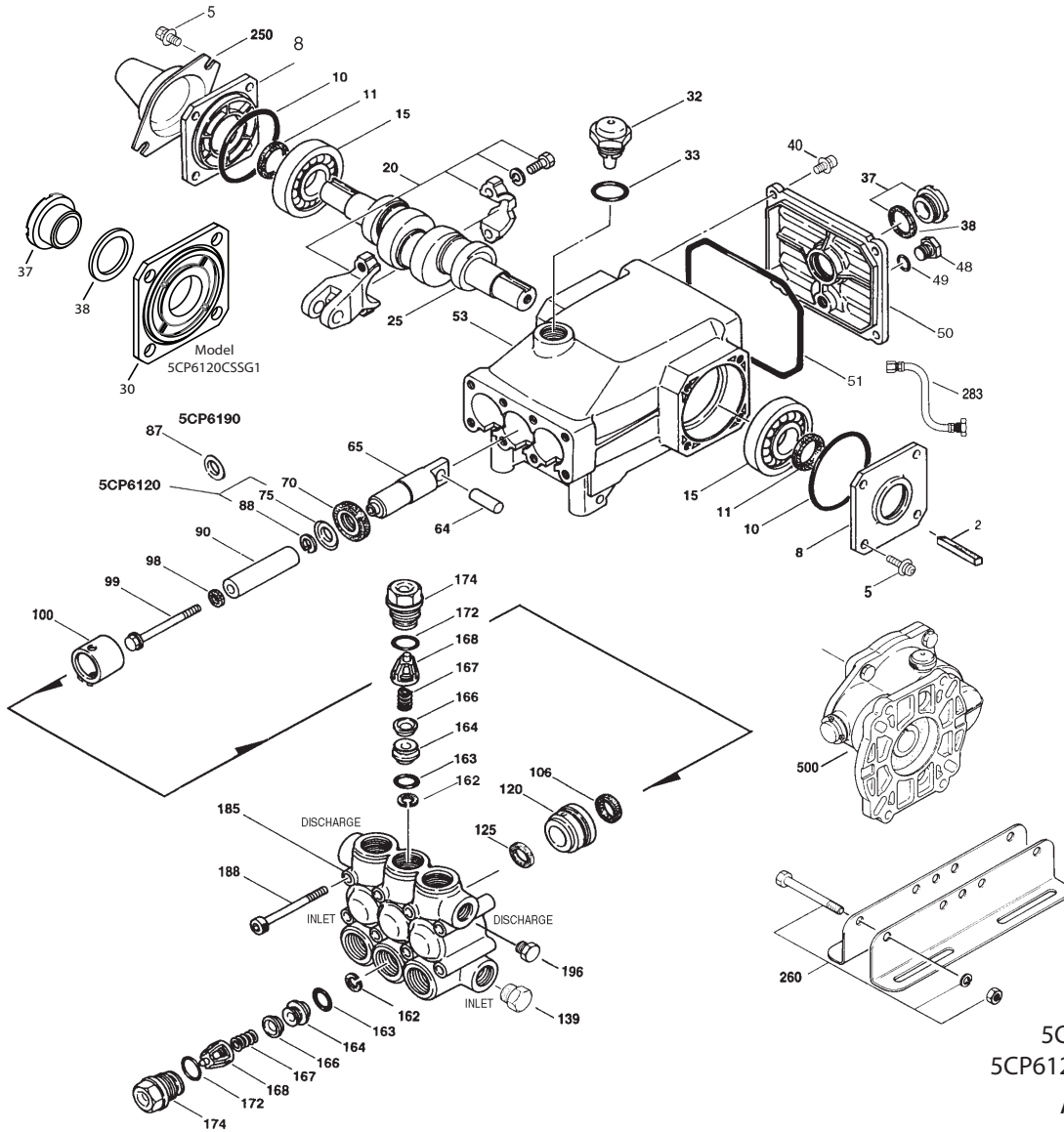
| | | | |
|--------------------------------------|-------------------|---|------------------|
| DETERMINING THE PUMP RPM | Rated gpm | = | "Desired" gpm |
| DETERMINING THE REQUIRED H.P. | Rated rpm | = | "Desired" rpm |
| DETERMINING MOTOR PULLEY SIZE | gpm x psi | = | Electric Brake |
| | 1460 | = | H. P. Required |
| | 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 | |
|------|-------------------------|-------------|----------------------|-------------|--|-------|
| | 5CP6120 5CP6120CSSG1 | MATL | 5CP6190 5CP6190G1 | MATL | | |
| 2 | 30057 | STL | 30057 | STL | Key (M6x6x25) | 1 |
| 5 | 96031 | STZP | 96031 | STZP | Screw, HHC, Sems (M8x16) | 8 |
| | 126542 | STCPR | 126542 | STCPR | Screw, HHC, Sems (M8x16) | 8 |
| 8 | 46910 | AL | 46910 | AL | Cover, Bearing | 2-0-2 |
| 10 | 14028 | NBR | 14028 | NBR | O-Ring, Bearing Cover - 70D | 2-1-2 |
| 11 | 43222 | NBR | 43222 | NBR | Seal, Oil, Crankshaft - 70D | 2-0-2 |
| 15 | 14480 | STL | 14480 | STL | Bearing, Ball | 2 |
| 20 | 48742 | TNM | 48742 | TNM | Rod, Connecting Assy [10/01] | 3 |
| 25 | 46928 | FCM | — | — | Crankshaft, Dual End M18 - 5CP6120 | 1 |
| | 48233 | FCM | — | — | Crankshaft, Single End M18 - 5CP6120CSSG1 | 1 |
| | — | — | 48646 | FCM | Crankshaft, Dual End M20 - 5CP6190, 5CP6190G1 | 1 |
| 30 | 49776 | AL | — | — | Cover, Bearing - 5CP6120CSSG1 | 1 |
| 32 | 46798 | — | 46798 | — | Cap, Oil Filler, Domed | 1 |
| 33 | 14179 | NBR | 14179 | NBR | O-Ring, Oil Filler Cap - 70D | 1 |
| 37 | 92241 | — | 92241 | — | Gauge, Oil, Bubble w/Gasket - 80D | 1-2-1 |
| 38 | 44428 | NBR | 44428 | NBR | Gasket, Flat, Oil Gauge - 80D | 1-2-1 |
| 40 | 92519 | STZP | 92519 | STZP | Screw, HHC, Sems (M6x16) | 4 |
| | 125824 | STCPR | 125824 | STCPR | Screw, HHC, Sems (M6x16) | 4 |
| 48 | 25625 | STCP | 25625 | STCP | Plug, Drain (1/4"x19BSP) | 1 |
| 49 | 23170 | NBR | 23170 | NBR | O-Ring, Drain Plug - 70D | 1 |
| 50 | 46940 | AL | 46940 | AL | Cover, Rear | 1 |
| 51 | 14044 | NBR | 14044 | NBR | O-Ring, Rear Cover | 1 |
| 53 | 48617 | AL | 48617 | AL | Crankcase | 1 |
| 64 | 46746 | CM | 46746 | CM | Pin, Crosshead | 3 |
| 65 | 48458 | BBNP | 48647 | BBNP | Rod, Plunger | 3 |
| 70 | 46838 | NBR | 46838 | NBR | Seal, Oil, Crankcase - 70D | 3 |
| 75 | 43328 | S | — | — | Slinger, Barrier | 3 |
| 87 | — | — | 48648 | S | Washer, Flat (M10x24) | 3 |
| 88 | 45697 | S | — | — | Washer, Keyhole (M18x10) | 3 |
| 90 | 46841 | CC | — | — | Plunger (M20x50) | 3 |
| | — | — | 121391 | CC | Plunger (M22x50) | 3 |
| 98 | 46730 | NBR | 46730 | NBR | Washer, Seal - 90D | 3 |
| | 48394 | FPM | 48394 | FPM | Washer, Seal - 90D | 3 |
| | ◆ 48432 | EPDM | ◆ 48432 | EPDM | Washer, Seal | 3 |
| 99 | † 48201 | SS | † 48201 | SS | Retainer, Plunger w/Stud (M6) | 3 |
| 100 | 46749 | PVDF | 46749 | PVDF | Retainer, Seal | 3 |
| 106 | 43305 | NBR | — | — | Seal, LPS w/S-Spg | 3 |
| | 45153 | FPM | — | — | Seal, LPS w/SS-Spg | 3 |
| | 76305 | ST2 | 76704 | ST | Seal, LPS w/S-Spg | 3 |
| | — | — | 49644 | NBR | Seal, LPS w/SS-Spg | 3 |
| | — | — | 49704 | FPM | Seal, LPS w/SS-Spg | 3 |
| | — | — | ◆ 48650 | EPDM | Seal, LPS w/SS-Spg | 3 |
| 120 | 46843 | BB | 121394 | BB | Case, Seal | 3 |
| | 49436 | BB | — | — | Case, Seal (5CP6120.3400 Only) (Use w/76305,13978) | 3 |
| 121 | 13978 | NBR | 13980 | NBR | O-Ring, Seal Case-70D | 3 |
| | 14329 | FPM | 14330 | FPM | O-Ring, Seal Case | 3 |
| | ◆ 48904 | EPDM | ◆ 49731 | EPDM | O-Ring, Seal Case | 3 |
| 125 | 43307 | SNG | 121395 | SNG | Seal, HPS w/S | 3 |
| | 44936 | FPM | 122188 | STG | Seal, HPS w/S | 3 |
| | 46667 | HT | — | — | Seal, HPS, 2-Pc w/S-Support | 3 |
| 139 | 22179 | BBCP | 22179 | BBCP | Plug, Inlet (1/2"NPTM) | 1 |
| 162 | 43248 | PTFE | 43248 | PTFE | Back-up-Ring, Seat | 6 |
| 163 | 43249 | NBR | 43249 | NBR | O-Ring, Seat - 80D | 6 |
| | 44383 | FPM | 44383 | FPM | O-Ring, Seat -70D | 6 |
| | ◆ 46206 | EPDM | ◆ 46206 | EPDM | O-Ring, Seat - 70D | 6 |
| 164 | 43722 | S | 44718 | S | Seat | 6 |
| 166 | 43721 | S | 43721 | S | Valve | 6 |
| 167 | 43751 | S | 43751 | S | Spring | 6 |
| 168 | 44564 | PVDF | 44564 | PVDF | Retainer, Spring | 6 |
| 172 | 17617 | NBR | 17617 | NBR | O-Ring, Valve Plug -90D | 6 |
| | 11691 | FPM | 11691 | FPM | O-Ring, Valve Plug - 90D | 6 |
| | ◆ 46207 | EPDM | ◆ 46207 | EPDM | O-Ring, Valve Plug -70D | 6 |
| 174 | 125214 | BBCP | 125214 | BBCP | Plug, Valve | 6 |
| 185 | 49761 | BBCP | 49760 | BBCP | Manifold, Head | 1 |
| 188 | 126513 | STCPR | 126513 | STCPR | Screw, HSH (M8x70) | 8 |
| 196 | 22187 | BBCP | 22187 | BBCP | Plug, Discharge (3/8"NPTM) | 1 |
| 250 | 118672 | STCP | 118672 | STCP | Protector, Shaft | 1 |
| 255 | 30243 | STZP | 30243 | STZP | Mount, Direct | 1 |

EXPLODED VIEW



Models
5CP6120, 5CP6190
5CP6120CSSG1, 5CP6190G1
August 2011

| | 5CP6120 | 5CP6190 | 5CP6190G1 | MATL | | |
|-----|----------------|----------------|------------------|-------------|---|---|
| 260 | 30611 | STZP R | 30611 | STZP R | Mount, Rail, Assy | 1 |
| | 30637 | STZP | 30637 | STZP | Mount, Angle Assy-Retro Fit (See Tech Bulletin 078) | 1 |
| 265 | 30659 | — | — | — | Kit, Complete Mounting (Incls: 30611, 30633, 118672) (Belt Drive Only) | 1 |
| 275 | 30944 | STL | 30944 | STL | Assembly, Hub & Key (Incls: 30945, 30057) | 1 |
| 283 | 34334 | — | 34334 | — | Kit, Oil Drain (3/8" x 24") (See Individual Data Sheet) | 1 |
| | 76334 | — | 76334 | — | Kit, Oil Indicator (3/8" x 24") (See Individual Data Sheet) | 1 |
| 299 | 816666 | BBCP | 818460 | BBCP | Head, Complete | 1 |
| 300 | 33628 | NBR | 76620 | NBR | Kit, Seal (Incls: 98,106,121,125) | 1 |
| | 31628 | FPM | 76610 | FPM | Kit, Seal (Incls: 98,106,121,125) | 1 |
| | ◆ 31648 | EPDM | ◆ 76650 | EPDM | Kit, Seal (Incls: 98,106,121,125) | 1 |
| | 31638 | HT | — | — | Kit, Seal (Incls: 98,106,121,125) | 1 |
| | 76536 | STHT | — | — | Kit, Seal (Incls: 98,106,120,121,125) | 1 |
| 310 | 30820 | NBR | 34920 | NBR | Kit, Valve Preassembled (Incls: 162,163,164,166-168,172) | 2 |
| | 31263 | FPM | 31256 | FPM | Kit, Valve Preassembled (Incls: 162,163,164,166-168,172) | 2 |
| | ◆ 31259 | EPDM | ◆ 31253 | EPDM | Kit, Valve Preassembled (Incls: 162,163,164,166-168,172) | 2 |
| 350 | 30696 | STZP | 30696 | STZP | Pliers, Reverse | 1 |
| 500 | 8076 | — | 8076 | — | Gearbox (See Individual Data Sheet) | 1 |
| — | 6107 | — | 6107 | — | Oil, Bottle (21 oz.) ISO 68 Hydraulic (Fill to specified crankcase capacity prior to start-up) | 1 |

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

*Review individual parts in each kit for material code identification. (HT generally may be used as alternate).

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 HT=Hi-Temp (EPDM Alternative) NBR=Medium Nitrile (Buna-N)
PTFE=Pure Polytetrafluoroethylene PVDF=Polyvinylidene Fluoride S=304SS SS=316SS SNG=Special Blend ST2=Special Blend PTFE Grey
STG= Special Blend PTFE White STL=Steel STCP=Steel/Chrome Plated STZP=Steel/Zinc Plated TNM=Special High Strength