

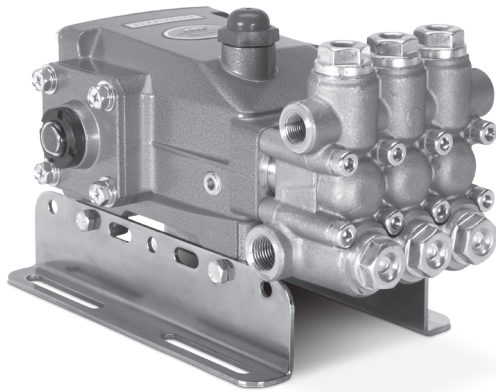
DATA SHEET

5CP PLUNGER PUMPS



The Pumps with Nine Lives

Brass Model: **5CP3150CSS**
Gearbox Model: **5CP3150CSSG1**



Model 5CP3150 Shown
(Mounting rails sold separately)

FEATURES

- Industrial triplex design offers reliability and versatility.
- Compact direct-drive mount to motor using bell housing and flexible coupling (NEMA or IEC available).
- Gearbox model available with 1" and 1-1/8" hollowshaft to fit a wide variety of engines.
- Optional belt-drive for precision flow setting.
- Press-in seal cases and interchangeable valve assemblies for easy servicing.
- Standard NBR seals with alternative options for temperature and chemical compatibility.

COMMON SPECIFICATIONS

| | U.S. | Metric |
|---|----------------|--------------|
| Inlet Pressure Range | -2.5 to 60 psi | -2 to 4 bar |
| Max. Liquid Temp. (NBR) | 160° F | 71° C |
| Alternative seals available for high temp up to 190° F | | |
| Bore | 0.630" | 16 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 |

SPECIFICATIONS

| | U.S. Measure | Metric Measure |
|---------------------------|----------------------|--------------------|
| MODEL 5CP3150CSS | | |
| Flow | 5.2 gpm | 19.7 lpm |
| Pressure Range | 100 - 3000 psi | 6.9 - 207 bar |
| Pump RPM* | 1750 rpm | 1750 rpm |
| Stroke | 0.787" | 20 mm |
| Weight | 19.9 lbs. | 9 kg |
| Dimensions | 10.90 x 8.58 x 5.79" | 277 x 218 x 147 mm |
| MODEL 5CP3150CSSG1 | | |
| Flow | 5.0 gpm | 18.9 lpm |
| Pressure Range | 100 - 3000 psi | 6.9 - 207 bar |
| Pump RPM | 1700 rpm | 1700 rpm |
| Engine RPM | 3450 rpm | 3450 rpm |
| Stroke | 0.787" | 20 mm |
| Weight | 26.5 lbs. | 12 kg |
| Dimensions | 11.0 x 12.7 x 6.4" | 279 x 324 x 163 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) |
| HT | .3000 | 180° F | (82° C) |
| STHT | .3400 | 190° F | (88° C) |

See Reference Document 99REF017 for inlet conditions and RPM at high temperature.

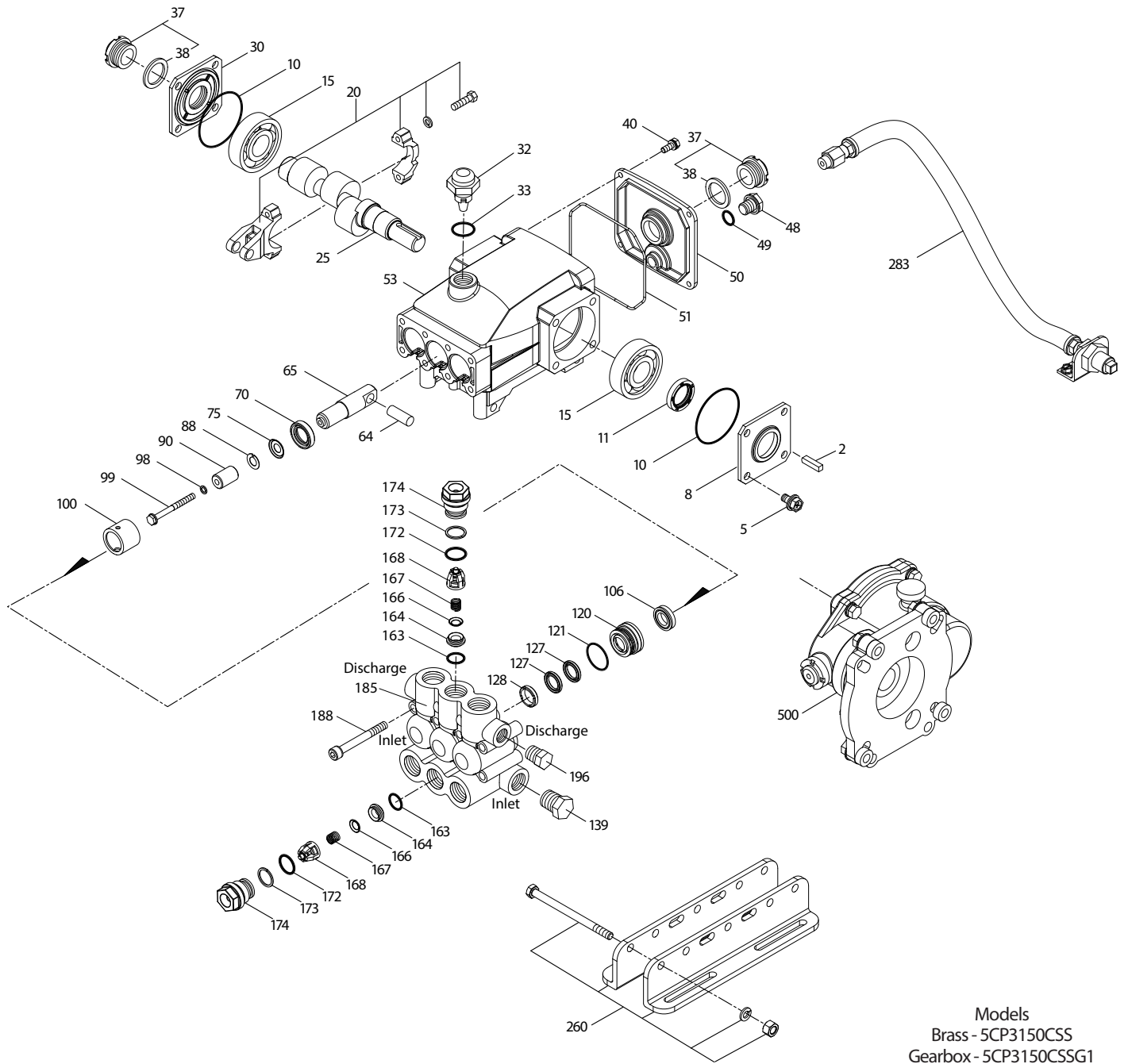
| | | | |
|--------------------------------------|-------------------|---|------------------|
| DETERMINING THE PUMP R.P.M. | Rated gpm | = | "Desired" gpm |
| | Rated rpm | = | "Desired" rpm |
| DETERMINING THE REQUIRED H.P. | Hp | = | gpm x psi |
| | (Electric Brake) | = | 1460 |
| DETERMINING MOTOR PULLEY SIZE | Motor Pulley O.D. | = | Pump Pulley O.D. |
| | Pump rpm | = | Motor rpm |

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

PARTS LIST

| ITEM | PART NUMBER | | DESCRIPTION | QTY |
|------|--------------|--------|---|-----|
| | 5CP3150CSS | | | |
| | 5CP3150CSSG1 | MATL | | |
| 2 | 30057 | STL | Key (M6x6x25) | 1 |
| 5 | 126542 | STCP R | Screw, HHC, Sems (M8x16) | 8 |
| 8 | 46910 | AL | Cover, Bearing | 1 |
| 10 | 14028 | NBR | O-Ring, Bearing Cover - 70D | 2 |
| 11 | 43222 | NBR | Seal, Oil, Crankshaft - 70D | 1 |
| 15 | 14480 | STL | Bearing, Ball | 2 |
| 20 | 48742 | TNM | Rod, Connecting Assy [10/01] | 3 |
| 25 | 49773 | FCM | Crankshaft, Single End, M20 - 5CP3150CSS, 5CP3150CSSG1 | 1 |
| 30 | 49776 | AL | Cover, Bearing - 5CP3150CSS | 1 |
| | 48224 | AL | Cover, Bearing Blind - 5CP3150G1 | 1 |
| 32 | 46798 | — | Cap, Oil Filler, Domed | 1 |
| 33 | 14179 | NBR | O-Ring, Oil Filler Cap - 70D | 1 |
| 37 | 92241 | PC | Gauge, Oil, Bubble w/Gasket - 80D | 2 |
| 38 | 44428 | NBR | Gasket, Flat, Oil Gauge - 80D | 2 |
| 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 | 48458 | BBNP | Rod, Plunger | 3 |
| 70 | 46838 | NBR | Seal, Oil, Crankcase - 70D | 3 |
| 75 | 43900 | S | Slinger, Barrier | 3 |
| 88 | 45697 | S | Washer, Keyhole (M18x10) | 3 |
| 90 | 46884 | CC | Plunger (M16x50) | 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 | 43316 | NBR | Seal, LPS w/S-Spg | 3 |
| | 106660 | FPM | Seal, LPS w/S-Spg | 3 |
| | ◆ 49134 | EPDM | Seal, LPS w/S-Spg | 3 |
| | 76316 | ST2 | Seal, LPS w/S-Spg | 3 |
| 120 | 46888 | BB | Case, Seal (Press-in-style) | 3 |
| 121 | 13978 | NBR | O-Ring, Seal Case - 70D | 3 |
| | 14329 | FPM | O-Ring, Seal Case | 3 |
| | ◆ 48904 | EPDM | O-Ring, Seal Case | 3 |
| 127 | 43319 | SNG | V-Packing | 6 |
| | 46287 | HT | V-Packing | 6 |
| 128 | 46618 | NY | Adapter, Male | 3 |
| 139 | 22179 | BBCP | Plug, Inlet [1/2" NPT(M)] | 1 |
| 163 | 17547 | NBR | O-Ring, Seat - 85D | 6 |
| | 11685 | FPM | O-Ring, Seat - 85D | 6 |
| | ◆ 46648 | EPDM | O-Ring, Seat - 70D | 6 |
| 164 | 45790 | S | Seat | 6 |
| 166 | 46429 | S | Valve | 6 |
| 167 | 43750 | S | Spring | 6 |
| 168 | † 44565 | PVDF | Retainer, Spring | 6 |
| 172 | 17549 | NBR | O-Ring, Valve Plug - 70D | 6 |
| | 26996 | FPM | O-Ring, Valve Plug - 70D | 6 |
| | ◆ 49133 | EPDM | O-Ring, Valve Plug | 6 |
| 173 | 48365 | D | Back-up-Ring, Valve Plug | 6 |
| 174 | 45900 | BB | Plug, Valve | 6 |
| 185 | 46886 | FBB | Manifold, Head | 1 |
| 188 | 126513 | STCP R | Screw, HSH (M8x70) | 8 |
| 196 | 22187 | BBCP | Plug, Discharge [3/8" NPT(M)] | 1 |
| 255 | 30243 | STZP | Mount, Direct | 1 |
| 260 | 30611 | STZP R | Mount, Rail, Assy (4.22") | 1 |
| | 30613 | STZP R | Mount, Rail, Assy (5.02") | 1 |
| | 76513 | STZP R | Mount, Rail, Assy (5.52") | 1 |
| 283 | 34334 | — | Kit, Oil Drain (3/8" x 24") (See Individual Data Sheet) | 1 |
| 299 | 814843 | FBB | Head, Complete w/NBR Seals and O-Rings | 1 |
| 300 | 33629 | NBR | Kit, Seal (Incls: 98,106,121,127,128) Standard | 1 |
| | 31340 | FPM* | Kit, Seal (Incls: 98,106,121,127,128) .0110 | 1 |
| | ◆ 31730 | EPDM* | Kit, Seal (Incls: 98,106,121,127,128) .0220 | 1 |
| | 31665 | HT | Kit, Seal (Incls: 98,106,121,127,128) .3000 | 1 |
| | 76556 | STHT | Kit, Seal (Incls: 98,106,120,121,127,128) .3400 | 1 |

EXPLODED VIEW



Models
Brass - 5CP3150CSS
Gearbox - 5CP3150CSSG1
September 2019

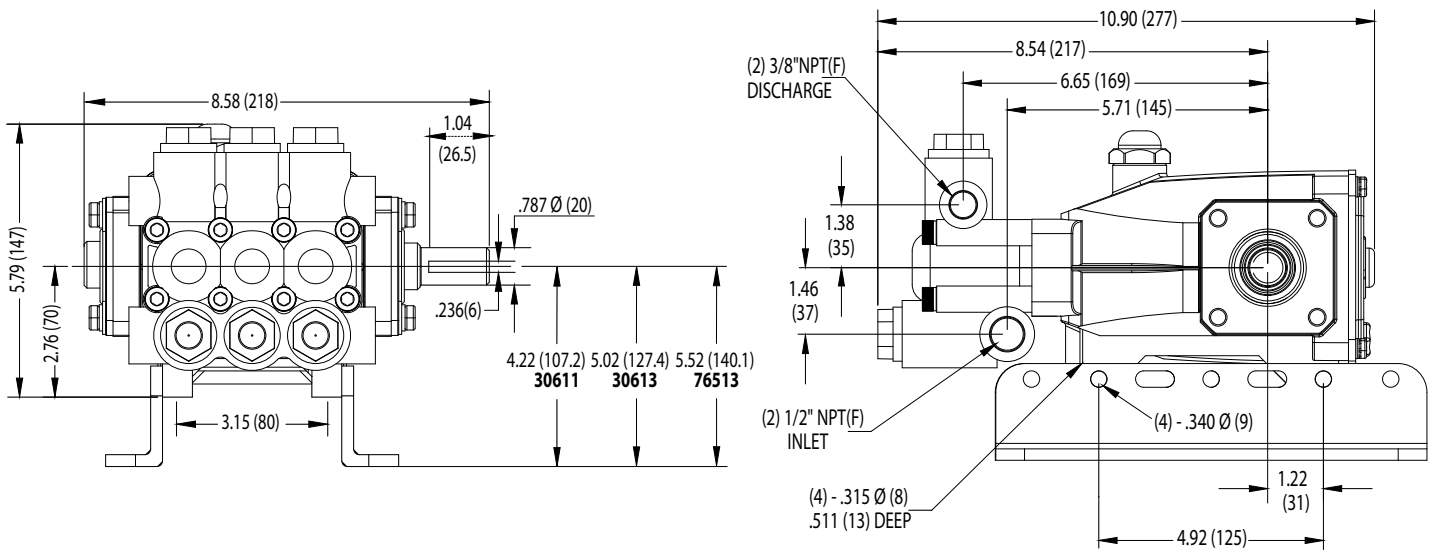
| 5CP3150CSS | | 5CP3150CSSG1 | | MATL | |
|------------|-------------|--------------|--|-------------------------------|---|
| 310 | 33060 | NBR | Kit, Valve Preassembled (Incls: 163,164,166-168,172,173) | Standard, .3000, .3400 | 2 |
| | 31345 | FPM | Kit, Valve Preassembled (Incls: 163,164,166-168,172,173) | .0110 | 2 |
| ◆ | 31735 | EPDM | Kit, Valve Preassembled (Incls: 163,164,166-168,172,173) | .0220 | 2 |
| 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 |

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.

View Tech Bulletins 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 D=Acetal EPDM=Ethylene Propylene Diene Monomer FBB=Forged Brass FCM=Forged Chrome-moly FPM=Fluorocarbon
HT=Hi-Temp (EPDM Alternative) NBR=Medium Nitrile (Buna-N) NY=Nylon PC=Polycarbonate PVDF=Polyvinylidene Fluoride S=304SS
SS=316SS SNG=Special Blend (Buna) ST2=Special Blend PTFE Grey STHT=Special PTFE High Temp STL=Steel
STCP=Steel/Chrome Plated STZP=Steel/Zinc Plated TNM=Special High Strength



Model 5CP315OCSS

⚠ 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.