

DATA SHEET

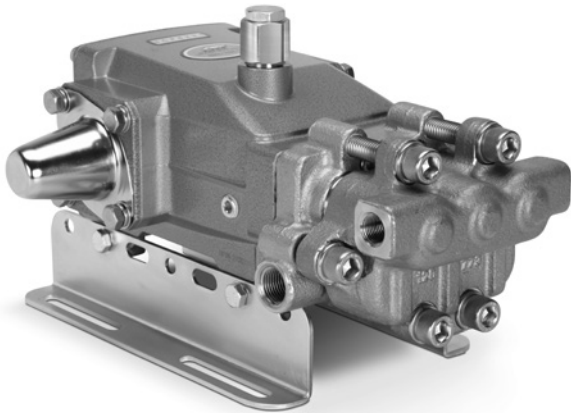
5CP PLUNGER PUMPS



The Pumps with Nine Lives

**Stainless Steel
Models:**

**5CPQ6221.44101, 5CPQ6241.44101,
5CPQ6251.44101**



Model 5CPQ6221.44101 Shown
(Rails and shaft protector sold separately)

FEATURES

- Field- tested, high pressure triplex pump configured for high temperature TEG (triethylene glycol) applications up to 240°F/115°C. May be used in other high temperature applications with fluids possessing adequate lubrication properties. Contact Cat Pumps for more information.
- Positive displacement technology for optimum energy efficiency.
- Re-configured pump .44101 option consists of following materials:
 - O-Ring material throughout the pump: Fluoropolymer elastomers.
 - Oil filler cap assembly: Brass adapters, chrome-plated steel vented cap.
 - Rear sight gauge assembly: Aluminum sight adapter and stainless steel sight gauge.
 - Seal retainers: Aluminum.
 - Low-pressure seals and V-Packings: Special PTFE blends.

COMMON

SPECIFICATIONS

| | U.S. | Metric |
|--|----------------------|--------------------|
| Bore | 0.787" | 20 mm |
| Crankcase Capacity | 17 oz. | 0.53 l |
| Maximum Liquid Temperature | 240° F | 115° C |
| Above 130°F call Cat Pumps for inlet conditions and elastomer recommendations. | | |
| Inlet Ports (2) | 1/2" NPT(F) | 1/2" NPT(F) |
| Discharge Port (2) | 3/8" NPT(F) | 3/8" NPT(F) |
| Shaft Diameter | 0.787" | 20 mm |
| Weight | 20 lbs. | 8 kg |
| Dimensions | 11.69 x 10.0 x 6.75" | 297 x 254 x 171 mm |

SPECIFICATIONS

U.S. Measure

Metric Measure

5CPQ6221.44101

| | U.S. Measure | Metric Measure |
|----------------------|-----------------|------------------|
| Flow | 6.0 gpm | 23 lpm |
| Pressure Range | 100 to 2000 psi | 6.9 to 138 bar |
| Pump RPM* | 1400 rpm | 1400 rpm |
| Inlet Pressure Range | -5 to 60 psi | -0.35 to 4.1 bar |
| Stroke | 0.709" | 18 mm |

5CPQ6241.44101

| | U.S. Measure | Metric Measure |
|----------------------|-------------------|--------------------|
| Flow | 4.0 gpm | 15 lpm |
| Pressure Range | 100 to 2000 psi | 6.9 to 138 bar |
| Pump RPM* | 1725 rpm | 1725 rpm |
| Inlet Pressure Range | Flooded to 60 psi | Flooded to 4.1 bar |
| Stroke | 0.394" | 10 mm |

5CPQ6251.44101

| | U.S. Measure | Metric Measure |
|----------------------|-------------------|--------------------|
| Flow | 5.0 gpm | 19 lpm |
| Pressure Range | 100 to 2000 psi | 6.9 to 138 bar |
| Pump RPM* | 1725 rpm | 1725 rpm |
| Inlet Pressure Range | Flooded to 60 psi | Flooded to 4.1 bar |
| Stroke | 0.472" | 12 mm |

*Pump minimum is 100 RPM.

ELECTRIC HORSEPOWER REQUIREMENTS

| MODELS | FLOW | | PRESSURE | | | RPM |
|----------------|------|-----|-------------|-------------|-------------|------|
| | | | psi 1200 | psi 1600 | psi 2000 | |
| | gpm | lpm | bar 83 | bar 110 | bar 138 | |
| 5CPQ6221.44101 | 6.0 | 23 | 5.0 | 6.6 | 8.2 | 1400 |
| | 5.0 | 19 | 4.1 | 5.5 | 6.8 | 1208 |
| | 4.0 | 15 | 3.3 | 4.4 | 5.5 | 966 |
| 5CPQ6241.44101 | 4.0 | 15 | 3.3 | 4.4 | 5.5 | 1725 |
| 5CPQ6251.44101 | 5.0 | 19 | 4.1 | 5.5 | 6.8 | 1725 |

DETERMINING THE PUMP R.P.M.

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

DETERMINING THE REQUIRED H.P.

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

DETERMINING MOTOR PULLEY SIZE

$$\frac{\text{Motor Pulley O.D.}}{\text{Pump rpm}} = \frac{\text{Pump Pulley O.D.}}{\text{Motor rpm}}$$

See complete Drive Packages [Includes: pulleys, belts, hubs, key] Tech Bulletin 003.
Refer to pump **Service Manual** for repair procedure and additional technical information.

PARTS LIST

| ITEM | PART NUMBER | MATL | DESCRIPTION | QTY |
|------|--------------|------|--|-----|
| 5 | 119049 | SS | Screw, HHC, Sems (M8x16) | 8 |
| 8 | 46910 | AL | Cover, Bearing | 2/1 |
| 10 | 76028 | FPM | O-Ring, Cover, Bearing - 70D | 2/1 |
| 11 | 76236 | FPM | Seal, Oil, Crankshaft | 2 |
| 15 | 127472 | STL | Bearing, Ball | 2 |
| 20 | 48742 | TNM | Rod Assy, Connecting | 3 |
| 25 | 46928 | FCM | Crankshaft, Dual End – 5CPQ6221.44101 (18mm) | 1 |
| | 48203 | FCM | Crankshaft, Single End – 5CPQ6241.44101 (10mm) | 1 |
| | 46982 | FCM | Crankshaft, Dual End – 5CPQ6251.44101 (12mm) | 1 |
| 30 | 48224 | AL | Cover, Blind Bearing – 5CPQ6241.44101 | 1 |
| 31 | 76142 | AL | Adapter, Breather | 1 |
| 32 | 76797 | BB | Cap, Vented | 1 |
| 36 | 76792 | SS | Gauge, Sight | 1 |
| 37 | 76791 | AL | Adapter, Sight | 1 |
| 38 | 44428 | NBR | Gasket, Flat, Adapter - 80D | 1 |
| 40 | 92538 | S | Screw, HHC, Sems (M6x16) | 4 |
| 48 | 25625 | STCP | Plug, Drain (1/4X19BSP) | 1 |
| 49 | 30322 | FPM | O-Ring, Drain Plug | 1 |
| 50 | 46940 | AL | Cover, Rear | 1 |
| 51 | 76234 | FPM | O-Ring, Cover, Rear - 70D | 1 |
| 53 | 48617 | AL | Crankcase | 1 |
| 64 | 46746 | CM | Pin, Crosshead | 3 |
| 65 | 48458 | BBNP | Rod, Plunger | 3 |
| 70 | 76838 | FPM | Seal, Oil, Crankcase | 3 |
| 75 | 43328 | S | Slinger, Barrier | 3 |
| 88 | 45697 | S | Washer, Keyhole (M18 x 10) | 3 |
| 90 | 46841 | CC | Plunger (M20x50) | 3 |
| 98 | 48394 | FPM | Washer, Seal - 90D | 3 |
| 99 | † 48201 | SS | Retainer, Plunger w/Stud (M6) | 3 |
| 100 | 76748 | AL | Retainer, Seal | 3 |
| 106 | 76149 | ST4 | Seal, LPS w/S-Spg | 3 |
| 110 | 48552 | SS | Manifold, Inlet | 1 |
| 117 | 119034 | S | Screw, HSH (M8x35) | 4 |
| 125 | 76395 | ST4 | Seal, HPS w/S | 3 |
| 143 | 15855 | FPM | O-Ring, I.V. Adapter, Rear - 70D | 3 |
| 150 | 48212 | SS | Adapter, Inlet | 3 |
| 154 | 11337 | FPM | O-Ring, I.V. Adapter, Front - 75D | 3 |
| 155 | 11337 | FPM | O-Ring, D.V. Adapter, Rear - 75D | 3 |
| 157 | 48211 | SS | Adapter, Discharge | 3 |
| 159 | 11337 | FPM | O-Ring, D.V. Adapter, Front - 75D | 3 |
| 163 | 11337 | FPM | O-Ring, Seat - 75D | 3 |
| 164 | 48216 | SS | Seat | 6 |
| 165 | 43791 | FPM | O-Ring, Seat - 90D | 6 |
| 166 | 44038 | SS | Valve | 6 |
| 167 | 44039 | SS | Spring | 6 |
| 168 | 44564 | PVDF | Retainer, Spring | 6 |
| 185 | 48554 | SS | Manifold, Discharge | 1 |
| 186 | 19085 | S | Lockwasher, Split (M12) | 6 |
| 188 | 120774 | S | Screw, HSH (M12x40) | 2 |
| 189 | 89575 | S | Screw, HSH (M12x60) | 4 |

Repair Kits/Parts and Optional Parts and Accessories on Page 4

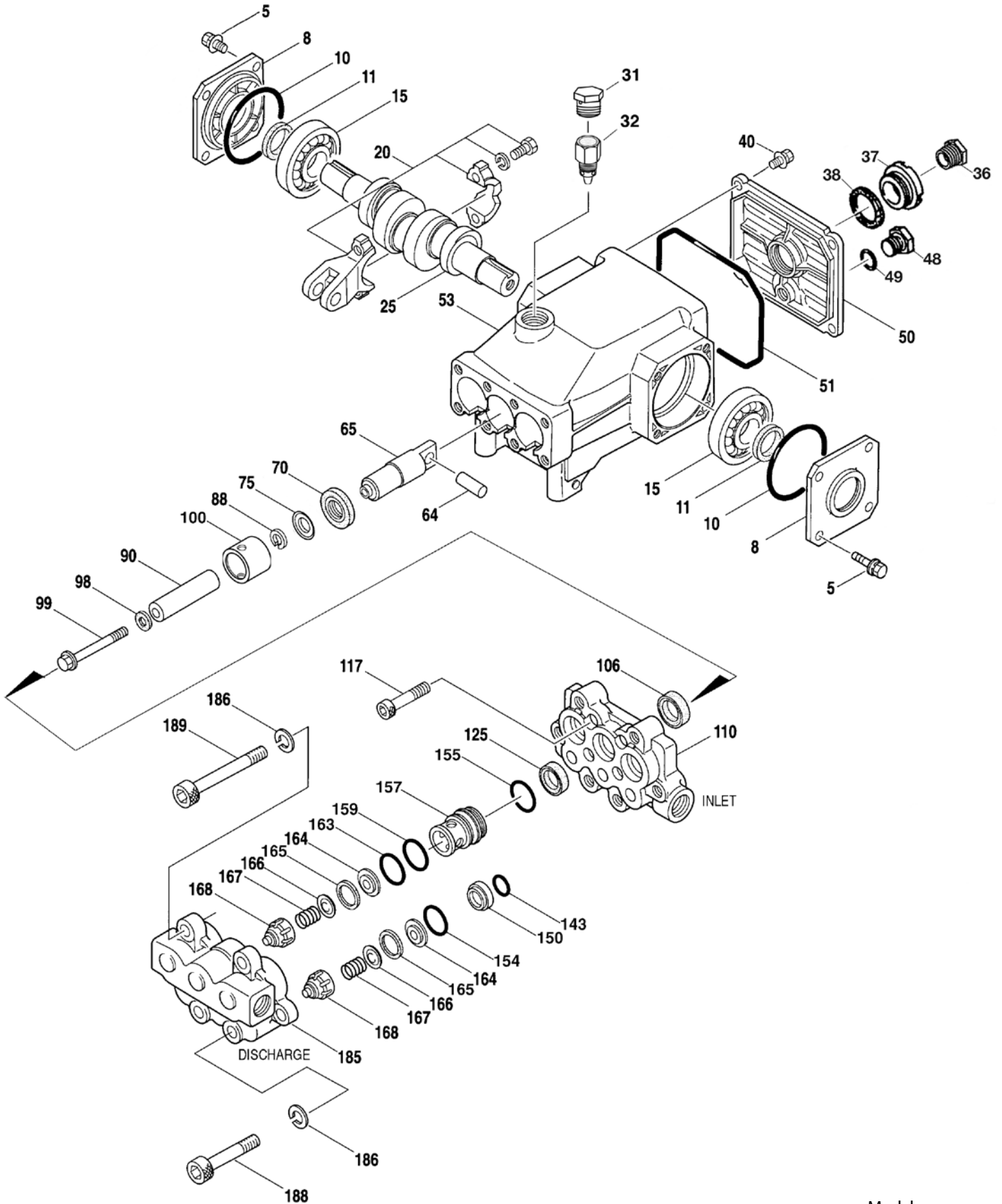
Bold print part numbers are unique to a particular pump model.

[] Date of latest production change. † Production parts are different than repair parts.

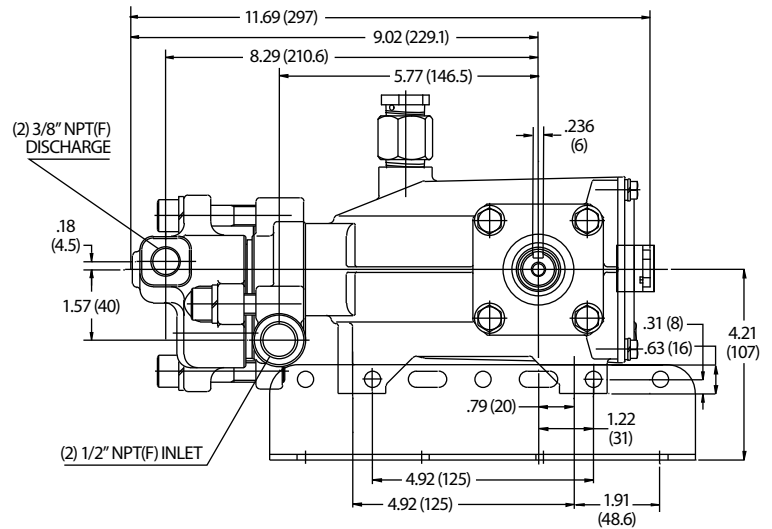
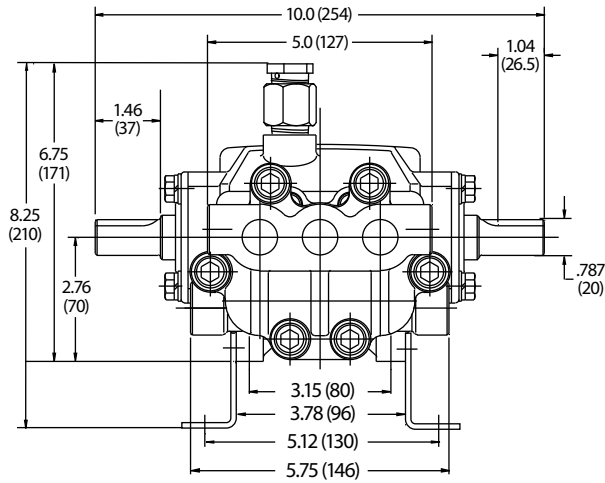
View Tech Bulletins 002, 003, 024, 036, 043, 053, 056, 074, 083, 088 and 095 for additional information.

MATERIAL CODES (Not Part of Part Number): AL=Aluminum BBNP=Brass/Nickel Plated CC=Ceramic CM=Chrome-moly FCM=Forged Chrome-Moly FPM=Fluorocarbon
NBR=Medium Nitrile (Buna-N) PVDF=Polyvinylidene Fluoride S=304SS SS=316SS STCP=Steel/Chrome Plated ST4=Special PTFE 4 STL=Steel TNM=Special High Strength

EXPLODED VIEW



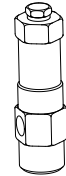
Models
 5CPQ6221.44101
 5CPQ6241.44101
 5CPQ6251.44101
 July 2017



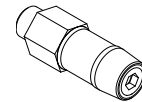
Models 5CPQ6221.44101, 5CPQ6241.44101, 5CPQ6251.44101

REPAIR KITS AND PARTS

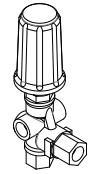
| Part No. | Description | QTY |
|----------|--|-----|
| 76095 | Kit, Seal (Includes Items 98, 106, 125, 143, 154, 155, and 159) | 1 |
| 34362 | Kit, Valve (Includes Items 143, 154, 163, 164, 165, 166, 167, and 168) | 1 |
| 6107 | Oil, Bottle (21 oz.) ISO 68 Hydraulic | 1 |
| 30057 | Key (M6x6x25) | 1 |
| 6119 | Lubricant, Antiseize (2 oz.) | 1 |



7012.100



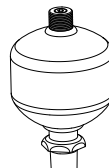
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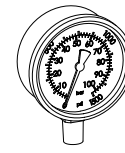
7531.0110
7531.1110

OPTIONAL PARTS AND ACCESSORIES

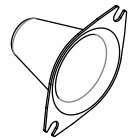
| Part No. | Description | QTY |
|--------------|---|-----|
| 7012.100 | Regulator (Primary Pressure Control) | 1 |
| 7531.0110 | Unloader (Primary Pressure Control) | 1 |
| 7531.1110 | Relief Valve (Secondary Pressure Control) | 1 |
| 99615 | Pop-Off Valve (Secondary Pressure Control) | 1 |
| 6073 | Pressure Gauge | 1 |
| 6030 | Accumulator | 1 |
| 30611 | Mounting Rails | 1 |
| 118672 | Shaft Protector | 1 |
| 76334 | Kit, Oil Indicator (3/8" x 24") See Individual Data Sheet | 1 |
| 34334 | Kit, Oil Drain (3/8" x 24") See Individual Data Sheet | 1 |
| 816720.44101 | Complete Head | 1 |
| 30696 | Pliers (Reverse) | 1 |
| 44050 | Tool, Sight Gauge Removal | 1 |



6030



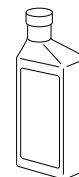
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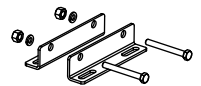
118672



34334



6107



30611

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.



CAT PUMPS

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