

DATA SHEET

7CP PLUNGER PUMPS



Brass Models: 7CP6110, 7CP6170

Brass Gearbox Models: 7CP6110G1, 7CP6170G1



Model 7CP6170 Shown
(Rails and Shaft protector sold separately)

FEATURES

- Forged brass manifold head.
- Flexible coupling/bell housing, gearbox and belt drive options provide flexibility with a compact footprint.
- Mounting Flange: SAEJ609, Flange B, Extension 4 (1"Ø), Shaft Length = 3-1/4", Pilot Ø = 5-3/4", B.C. Ø = 6-1/2", Thread = 3/8"-16 UNC TAP
- Standard NBR seals with alternative options for temperature and chemical compatibility.
 - FPM – .0110
 - EPDM – .0220
 - High Temp, 200° F – .3400 (Intermittent Run-Dry)

COMMON SPECIFICATIONS

| | U.S. | Metric |
|--|-----------------------|--------------------|
| Inlet Pressure Range | Flooded to 70 psi | Flooded to 4.9 bar |
| Max. Liquid Temperature | 140° F | 60° C |
| Above 130°F call Cat Pumps for inlet conditions and elastomer recommendations. | | |
| Bore | 0.866" | 22 mm |
| Crankcase Capacity | 38 oz. | 1.15 l |
| Inlet Ports (2) | 3/4" NPT(F) | 3/4" NPT(F) |
| Discharge Ports (2) | 1/2" NPT(F) | 1/2" NPT(F) |
| Shaft Diameter | 0.945" | 24 mm |
| Weight (7CP6110) | 29.1 lbs. | 13.2 kg |
| Weight (7CP6170) | 29.7 lbs. | 13.5 kg |
| Weight (7CP6110G1, 7CP6170G1) | 38.6 lbs. | 17.5kg |
| Dimensions (7CP6110) | 13.45 x 9.26 x 6.89" | 342 x 235 x 175 mm |
| Dimensions (7CP6170) | 13.45 x 11.14 x 6.89" | 342 x 283 x 175 mm |
| Dimensions (7CP6110G1, 7CP6170G1) | 13.45 x 12.25 x 6.97" | 342 x 311 x 177 mm |

SPECIFICATIONS

| | U.S. Measure | Metric Measure |
|------------------|-----------------|----------------|
| 7CP6110 | | |
| Flow | 10.5 gpm | 40 lpm |
| Pressure Range | 100 to 2000 psi | 6.9 to 138 bar |
| Pump RPM* | 1750 rpm | 1750 rpm |
| Stroke | 0.854" | 21.7 mm |
| 7CP6170 | | |
| Flow | 11 gpm | 41.6 lpm |
| Pressure Range | 100 to 2000 psi | 6.9 to 138 bar |
| Pump RPM* | 1450 rpm | 1450 rpm |
| Stroke | 1.024" | 26 mm |
| 7CP6110G1 | | |
| Flow | 10.0 gpm | 38.0 lpm |
| Pressure Range | 100 to 2000 psi | 6.9 to 138 bar |
| Pump RPM | 1667 rpm | 1667 rpm |
| Engine RPM | 3400 rpm | 3400 rpm |
| Stroke | 0.854" | 21.7 mm |
| 7CP6170G1 | | |
| Flow | 12.0 gpm | 45.0 lpm |
| Pressure Range | 100 to 1800 psi | 6.9 to 124 bar |
| Pump RPM | 1600 rpm | 1600 rpm |
| Engine RPM | 3264 rpm | 3264 rpm |
| Stroke | 1.024" | 26 mm |

*Pump minimum is 100 RPM.

ALTERNATE SPECIFICATIONS

| | U.S. Measure | Metric Measure |
|----------------|-----------------|----------------|
| 7CP6170 | | |
| Flow | 12.0 gpm | 45.0 lpm |
| Pressure Range | 100 to 1800 psi | 6.9 to 124 bar |
| Pump RPM* | 1600 rpm | 1600 rpm |

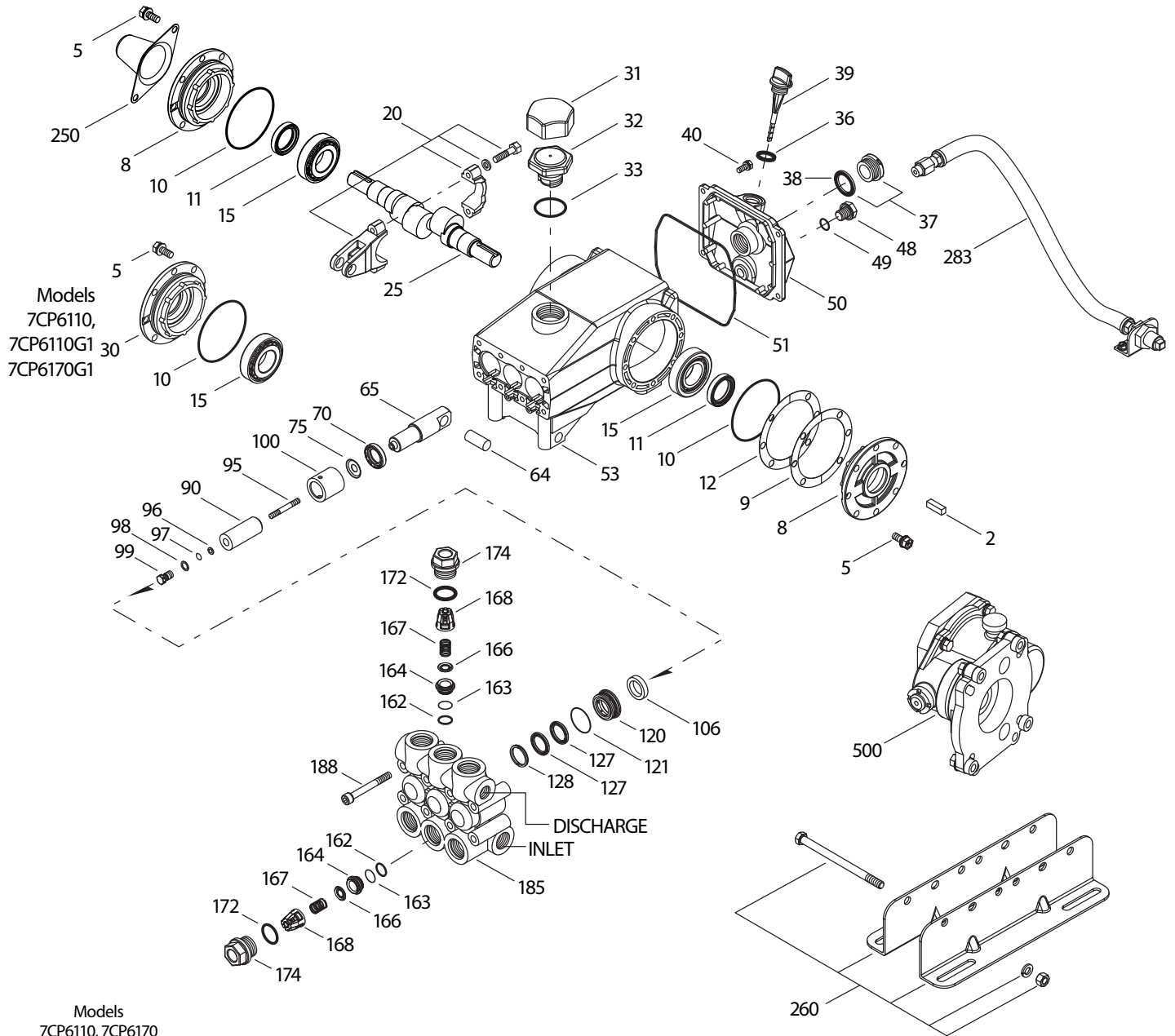
ELECTRIC HORSEPOWER REQUIREMENTS

| MODELS | FLOW | | PRESSURE | | | RPM |
|------------------|-------------|------|-----------------------------|-------------|-------------|------|
| | | | psi 1500 | psi 1800 | psi 2000 | |
| | U.S. gpm | lpm | bar 103 | bar 124 | bar 138 | |
| 7CP6110 | 10.5 | 40.0 | 10.8 | 13.0 | 14.4 | 1750 |
| 7CP6170 | 11.0 | 41.6 | 11.3 | 13.6 | 15.1 | 1450 |
| 7CP6110G1 | 10.0 | 38.0 | Consult Engine Manufacturer | | | 1667 |
| 7CP6170G1 | 12.0 | 45.0 | Consult Engine Manufacturer | | | 1600 |

PARTS LIST

| ITEM | P/N | MATL | DESCRIPTION | QTY |
|------|--------------|--------|--|-----|
| 2 | 30067 | STL | Key (M8x7.5x25) | 1 |
| 5 | 126540 | STCP R | Screw, HHC Sems (M8x20) | 8 |
| 8 | 49501 | AL | Cover, Bearing | 1/2 |
| 9 | 49503 | FBR | Shim, Split, 2-Pc, Outer | 0-6 |
| 10 | 12393 | NBR | O-Ring, Bearing Cover - 70D | 2 |
| 11 | 49190 | NBR | Seal, Oil Crankshaft - 70D | 1/2 |
| 12 | 49504 | S | Shim, Split, 2-Pc, Inner | 0-4 |
| 15 | 63479 | STL | Bearing, Roller | 2 |
| 20 | 48727 | TNM | Rod, Connecting Assy [2/03] | 3 |
| 25 | 49498 | FCM | Crankshaft, Single-End (M21.7) (7CP6110, 7CP6110G1) | 1 |
| | 49649 | FCM | Crankshaft, Single-End (M26) (7CP6170G1) | 1 |
| | 49663 | FCM | Crankshaft, Dual-End (M26) (7CP6170) | 1 |
| 30 | 48527 | AL | Cover, Blind Bearing (7CP6110, 7CP6110G1, 7CP6170G1) | 1 |
| | 49501 | AL | Cover, Bearing (7CP6170) | 1 |
| 31 | 828710 | — | Protector, Oil Cap w/Foam Gasket | 1 |
| 32 | 43211 | ABS | Cap, Oil Filler | 1 |
| 33 | 14177 | NBR | O-Ring, Oil Filler Cap - 70D | 1 |
| 36 | 129343 | RBR | Gasket, Flat | 1 |
| 37 | 92241 | — | Gauge, Oil, Bubble w/Gasket - 80D | 1 |
| 38 | 44428 | NBR | Gasket, Flat, Oil Gauge - 80D | 1 |
| 39 | 49948 | ABS | Stick, Dip [11/12] (See Reference Bulletin 005) | 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 | 46959 | AL | Cover, Rear | 1 |
| 51 | 14030 | NBR | O-Ring, Rear Cover - 70D | 1 |
| 53 | 48577 | AL | Crankcase | 1 |
| 64 | 46969 | CM | Pin, Crosshead | 3 |
| 65 | 46968 | BBNP | Rod, Plunger | 3 |
| 70 | 48281 | NBR | Seal, Oil Crankcase - 70D | 3 |
| 75 | 43328 | S | Slinger, Barrier | 3 |
| 90 | 48559 | CC | Plunger, Ceramic (M22x55) | 3 |
| 95 | 126555 | STCP R | Stud, Plunger Retainer (M6x50) | 3 |
| 96 | 43235 | PTFE | Back-up-Ring, Plunger Retainer | 3 |
| 97 | 17399 | NBR | O-Ring, Plunger Retainer - 80D | 3 |
| | 14160 | FPM | O-Ring, Plunger Retainer - 80D | 3 |
| | ◆ 46204 | EPDM | O-Ring, Plunger Retainer - 70D | 3 |
| 98 | 45891 | CU | Gasket | 3 |
| 99 | 46504 | S | Retainer, Plunger (M6) | 3 |
| 100 | 46964 | NY | 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 | 48279 | BB | Case, Seal | 3 |
| 121 | 13984 | NBR | O-Ring, Seal Case - 70D | 3 |
| | 14333 | FPM | O-Ring, Seal Case | 3 |
| | ◆ 48649 | EPDM | O-Ring, Seal Case | 3 |
| 127 | 48278 | STG | V-Packing | 6 |
| 128 | 48280 | BB | Adapter, Male | 3 |
| 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 | 43850 | BB | Plug, Valve | 6 |
| 185 | 48274 | FBB | Head, Manifold | 1 |
| 188 | 126513 | STCP R | Screw, HSH (M8x70) | 8 |
| 250 | 120220 | STCP | Protector, Shaft (Model 7CP6170 only) | 1 |
| 260 | 30613 | STZPR | Mount, Rail, Assy | 1 |
| 269 | 30206 | F | Pulley (10") [See Tech Bulletin 003] | 1 |
| 274 | 33000 | STL | Hub, "H", M24 (Keyway M8) [See Tech Bulletin 003] | 1 |
| 283 | 34334 | — | Kit, Oil Drain | 1 |
| 299 | 816764 | FBB | Head, Complete w/NBR O-Rings and Seals | 1 |

EXPLODED VIEW



Models
7CP6110, 7CP6170
7CP6110G1, 7CP6170G1
September 2016

| ITEM | P/N | MATL | DESCRIPTION | QTY |
|------|---------|-------|--|-----|
| 300 | 76933 | NBR | Kit, Seal (Incls: 97, 106, 121, 127) Standard | 1 |
| | 76950 | FPM | Kit, Seal (Incls: 97, 106, 121, 127) .0110 | 1 |
| | ◆ 31936 | EPDM* | Kit, Seal (Incls: 97, 106, 121, 127) .0220 | 1 |
| | 76068 | STHT | Kit, Seal (Incls: 97, 106, 121, 127) .3400 | 1 |
| 310 | 34920 | NBR | Kit, Valve Pre-Assembled (Incls: 162, 163, 164, 166, 167, 168, 172) Standard, .3400 | 2 |
| | 31256 | FPM | Kit, Valve Pre-Assembled (Incls: 162, 163, 164, 166, 167, 168, 172) .0110 | 2 |
| | ◆ 31253 | EPDM | Kit, Valve Pre-Assembled (Incls: 162, 163, 164, 166, 167, 168, 172) .0220 | 2 |
| 500 | 8081 | — | Gearbox (See Individual Data Sheet) | 1 |
| | 6107 | — | Oil, Bottle (21 oz.) ISO 68 Hydraulic (Fill to specified crankcase capacity prior to start-up) | 1-2 |

Bold print part numbers are unique to a particular pump model. Italics are optional items. [] Date of latest production change. ◆ Silicone oil/grease required.

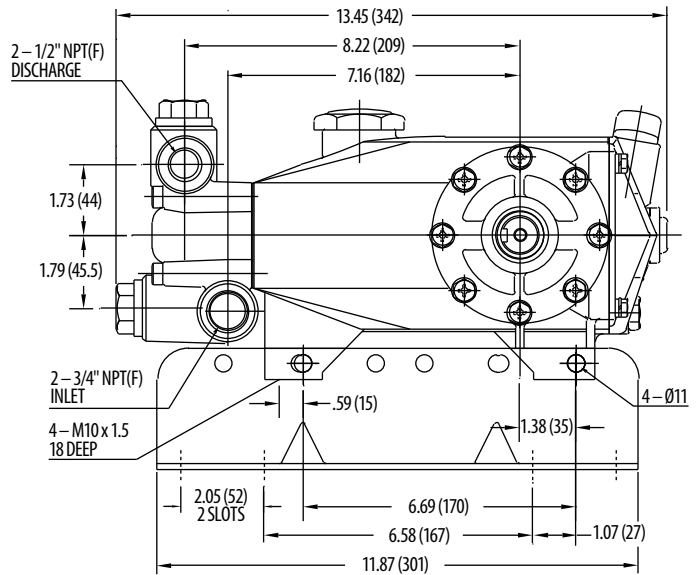
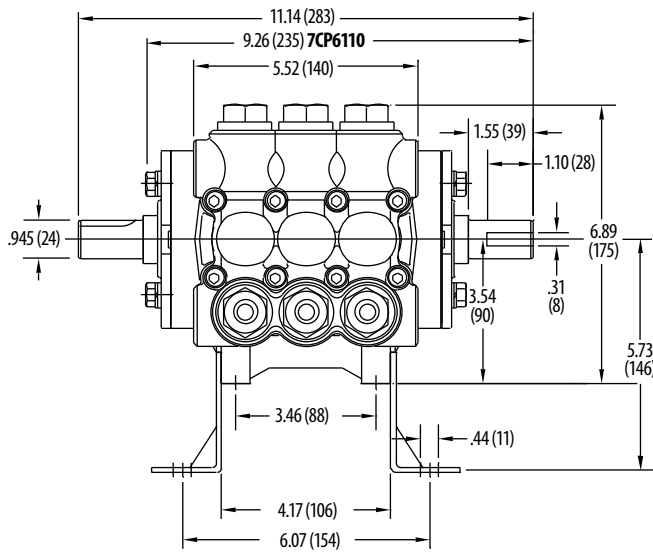
†Production parts are different than repair parts. R Components comply with RoHS Directive. *Review individual parts in each kit for material code identification. View Tech Bulletins 002, 003, 024, 036, 043, 053, 064, 074 and 083 for additional information. View Reference Bulletin 005.

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

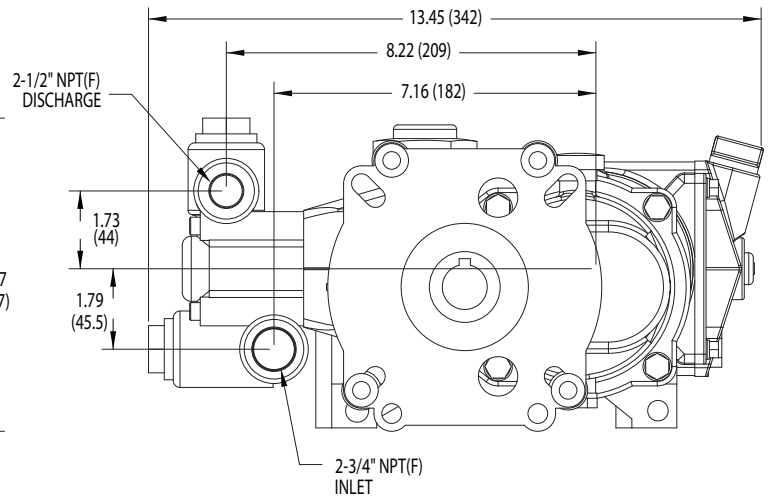
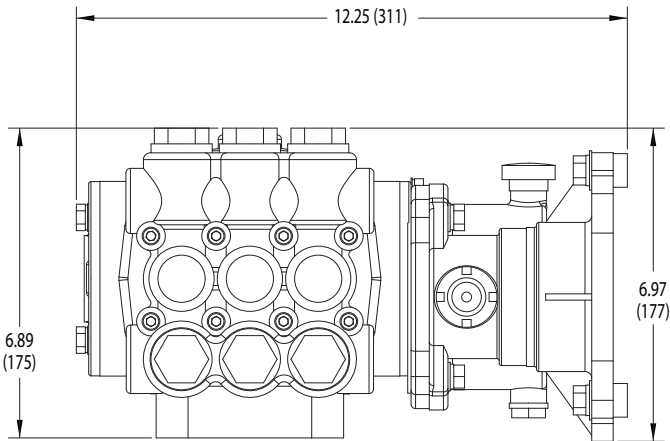
EPDM=Ethylene Propylene Diene Monomer F=Cast Iron FBB=Forged Brass FBR=Fiber FCM=Forged Chrome-moly FPM=Fluorocarbon NBR=Medium Nitrile (Buna-N)

NY=Nylon PTFE=Pure Polytetrafluoroethylene PVDF=Polyvinylidene Fluoride RBR=Rubber S=304SS STG=Special Blend PTFE White STHT=Special PTFE High Temp STL=Steel

STCP=Steel/Chrome Plated STZP=Steel/Zinc Plated TNM=Special High Strength



Model 7CP6170



Models 7CP6110G1, 7CP6170G1

⚠ 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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