

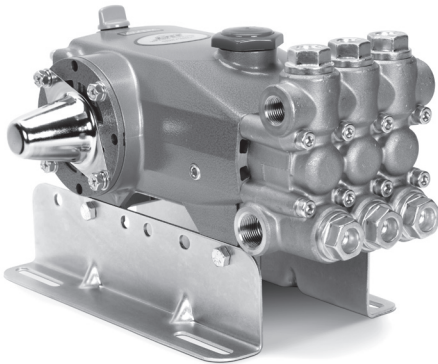
DATA SHEET

7CP PLUNGER PUMPS



Brass Models: 7CP6110CS, 7CP6170

Brass Gearbox Models: 7CP6110CSG1, 7CP6170G1



Model 7CP6170 Shown
(Mounting 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.
- Gearbox model available with 1" hollow shaft to fit most common engines.
- Standard NBR seals with alternative options allow for temperature and chemical compatibility.

COMMON SPECIFICATIONS

| | U.S. | Metric |
|--|-----------------------|--------------------|
| Inlet Pressure Range | Flooded – 70 psi | Flooded – 4.8 bar |
| Max. Liquid Temperature (NBR) | 140° F | 60° C |
| Alternative seals available for high temperature up to 190° F | | |
| Bore | 0.866" | 22 mm |
| Crankcase Capacity | 38 oz. | 1.15 l |
| Inlet Ports (2) | ¾" NPT(F) | ¾" NPT(F) |
| Discharge Ports (2) | ½" NPT(F) | ½" NPT(F) |
| Shaft Diameter | 0.945" | 24 mm |
| Weight (7CP6110CS) | 29.1 lbs. | 13.2 kg |
| Weight (7CP6170) | 29.7 lbs. | 13.5 kg |
| Weight (7CP6110CSG1, 7CP6170G1) | 38.6 lbs. | 17.5 kg |
| Dimensions (7CP6110CS) | 13.46 x 9.25 x 6.89" | 342 x 235 x 175 mm |
| Dimensions (7CP6170) | 13.46 x 11.14 x 6.89" | 342 x 283 x 175 mm |
| Dimensions (7CP6110CSG1, 7CP6170G1) | 13.46 x 12.24 x 6.97" | 342 x 311 x 177 mm |

SPECIFICATIONS

| | U.S. Measure | Metric Measure |
|--------------------|----------------|----------------|
| 7CP6110CS | | |
| Flow | 10.5 gpm | 40 lpm |
| Pressure Range | 100 – 2000 psi | 6.9 – 138 bar |
| Pump RPM* | 1750 rpm | 1750 rpm |
| Stroke | 0.854" | 21.7 mm |
| 7CP6170 | | |
| Flow | 11 gpm | 41.6 lpm |
| Pressure Range | 100 – 2000 psi | 6.9 – 138 bar |
| Pump RPM* | 1450 rpm | 1450 rpm |
| Stroke | 1.024" | 26 mm |
| 7CP6110CSG1 | | |
| Flow | 10.0 gpm | 38.0 lpm |
| Pressure Range | 100 – 2000 psi | 6.9 – 138 bar |
| Engine RPM | 3400 rpm | 3400 rpm |
| Stroke | 0.854" | 21.7 mm |
| 7CP6170G1 | | |
| Flow | 12.0 gpm | 45.0 lpm |
| Pressure Range | 100 – 1800 psi | 6.9 – 124 bar |
| 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 – 1800 psi | 6.9 – 124 bar |
| Pump RPM* | 1600 rpm | 1600 rpm |

ALTERNATIVE SEAL CONFIGURATION

| MATERIAL | SUFFIX CODE | MAXIMUM TEMPERATURE |
|----------|-------------|---------------------|
| NBR | — | 140° F (60° 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 **Tech Bulletin 002** for inlet conditions and RPM at high temperature.

PARTS LIST

| ITEM | P/N | MATL | DESCRIPTION | QTY |
|------|---------------|--------|--|-----|
| 5 | 126540 | STCP R | Screw, HHC Sems (M8 x 20) (See Tech Bulletin 074) | 8 |
| 8 | 131405 | ALE | Cover, Bearing (See Tech Bulletin 123) | 1/2 |
| 9 | 49503 | FBR | Shim, Split, 2-Piece, Outer (See Tech Bulletin 123) | 0-6 |
| 10 | 12393 | NBR | O-Ring, Bearing Cover – 70D | 2 |
| 11 | 49190 | NBR | Seal, Oil Crankshaft | 1/2 |
| 12 | 49504 | S | Shim, Split, 2-Piece, Inner (See Tech Bulletin 123) | 0-4 |
| 15 | 63479 | STL | Bearing, Roller | 2 |
| 20 | 48727 | TNM | Rod, Connecting Assembly [2/03] (See Tech Bulletin 074) | 3 |
| 25 | 49498 | FCM | Crankshaft, Single-End (M21.7) (7CP6110CS, 7CP6110CSG1) | 1 |
| | 49649 | FCM | Crankshaft, Single-End (M26) (7CP6170G1) | 1 |
| | 46963 | FCM | Crankshaft, Dual-End (M26) (7CP6170) | 1 |
| 30 | 131407 | ALE | Cover, Blind Bearing (7CP6110CS, 7CP6110CSG1, 7CP6170G1) (See Tech Bulletin 123) | 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 | PC | Gauge, Oil, Bubble with Gasket - 80D (See Tech Bulletin 074) | 1 |
| 38 | 44428 | NBR | Gasket, Flat, Oil Gauge – 80D | 1 |
| 39 | 49948 | ABS | Stick, Dip [11/12] (See Tech Bulletin 130) | 1 |
| 40 | 125824 | STCP R | Screw, HHC Sems (M6 x 16) (See Tech Bulletin 074) | 4 |
| 48 | 25625 | STCP | Plug, Drain (1/4" x 19BSP) | 1 |
| 49 | 23170 | NBR | O-Ring, Drain Plug – 70D | 1 |
| 50 | 131403 | ALE | Cover, Rear (See Tech Bulletin 123) | 1 |
| 51 | 14030 | NBR | O-Ring, Rear Cover - 70D | 1 |
| 53 | 131400 | ALE | Crankcase (See Tech Bulletin 123) | 1 |
| 64 | 46969 | CM | Pin, Crosshead | 3 |
| 65 | 46968 | BBNP | Rod, Plunger | 3 |
| 70 | 48281 | NBR | Seal, Oil Crankcase | 3 |
| 75 | 43328 | S | Slinger, Barrier | 3 |
| 90 | 48559 | CC | Plunger, Ceramic (M22 x 55) | 3 |
| 95 | 126555 | STCP R | Stud, Plunger Retainer (M6 x 50) | 3 |
| 96 | 43235 | PTFE | Back-up Ring, Plunger Retainer | 3 |
| 97 | 17399 | NBR | O-Ring, Plunger Retainer – 80D | 3 |
| 98 | 45891 | CU | Gasket | 3 |
| 99 | 46504 | S | Retainer, Plunger (M6) (See Tech Bulletin 074) | 3 |
| 100 | 46964 | NY | Retainer, Seal | 3 |
| 106 | 49644 | NBR | Seal, LPS with SS-Spring | 3 |
| 120 | 48279 | BB | Case, Seal | 3 |
| 121 | 13984 | NBR | O-Ring, Seal Case – 70D | 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 |
| 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 |
| 174 | 43850 | BB | Plug, Valve (See Tech Bulletin 074) | 6 |
| 185 | 48274 | FBB | Head, Manifold | 1 |
| 188 | 126513 | STCP R | Screw, HSH (M8 x 70) (See Tech Bulletin 074) | 8 |
| 500 | 8081 | — | <i>Gearbox 1" Shaft (See Individual Data Sheet)</i> | 1 |

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

[] Date of latest production change. †Production parts are different than repair parts. R Components comply with RoHS Directive.

*Review individual parts in each kit for material code identification. For additional technical information see www.catpumps.com/literature/tech-bulletins.

MATERIAL CODES (Not Part of Part Number): ABS=ABS Plastic ALE=Aluminum Epoxy 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=Filter

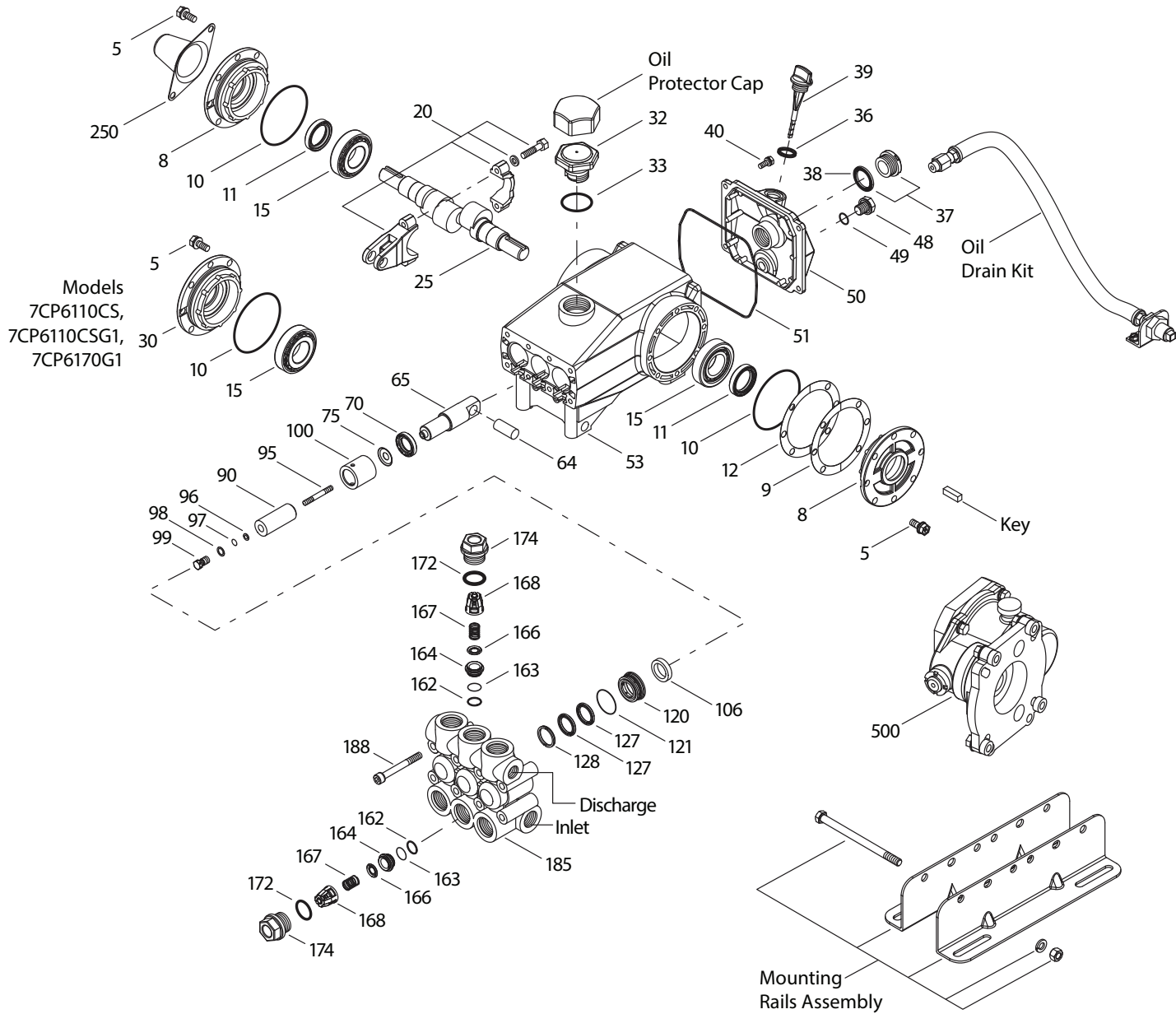
FCM=Forged Chrome-moly FPM=Flouorocarbon NBR=Medium Nitrile (Buna-N) NY= Nylon PC=Poly Carbonate

PTFE=Pure Polytetrafluoroethylene PVDF=Polyvinylidene Fluoride RBR=Rubber S=304SS ST= Special PTFE

STG=Special Blend PTFE White STHT=Special PTFE High Temp STL=Steel STCP=Steel/Chrome Plated

STZP=Steel/Zinc Plated TNM=Special High Strength

EXPLODED VIEW

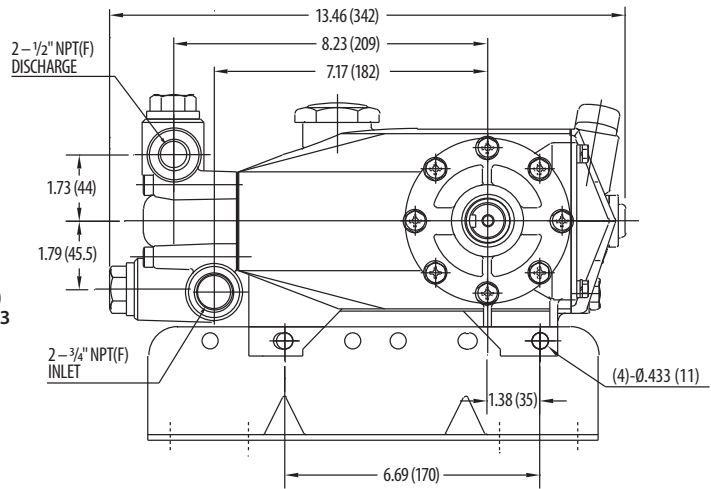
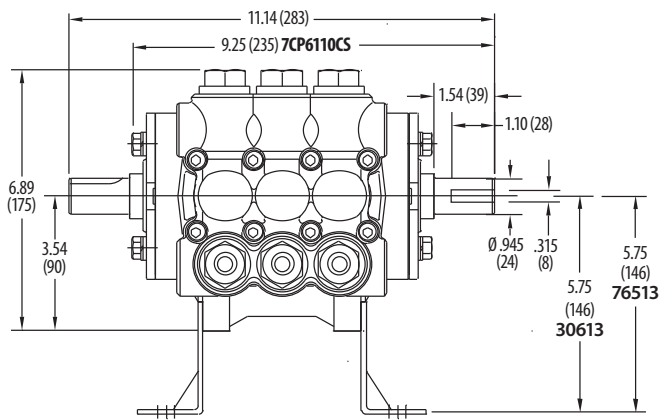


OPTIONAL PARTS AND ACCESSORIES

| PART | DESCRIPTION | QTY |
|--------|--|-----|
| 30067 | Key (M8 x 7.5 x 25) | 1 |
| 30613 | Mount, Rail Assembly (5.75" See Dimensional Drawing) | 1 |
| 76513 | Mount, Rail Assembly (6.25" See Dimensional Drawing) | 1 |
| 120220 | Protector, Shaft (7CP6170) | 1 |
| 828710 | Protector, Oil Cap | 1 |
| 34334 | Kit, Oil Drain | 1 |
| 30206 | Pulley, 10", 2 Groove "H" | 1 |
| 33000 | Hub, H, 24 mm | 1 |
| 30696 | Plier, Reverse | 1 |

SERVICE PARTS

| PART | DESCRIPTION | QTY |
|---------------|---|-------|
| 76933 | Kit, Seal – Standard NBR | 1 |
| 34920 | Kit, Valve – Standard NBR | 2 |
| 6107 | Oil, Bottle (21 oz.) | 1 - 2 |
| 6119 | Lubricant, Anti-Seize (2 oz.) | 1 |
| 6124 | Gasket, Liquid (3 oz.) | 1 |
| 816764 | Head, Complete – with NBR Seals and O-Rings | 1 |



Model 7CP6170

SEAL KITS One (1) seal kit required per pump

| PUMP MODELS | NBR (STD) | FPM (.0110) | EPDM (.0220)◆ | STHT (.3400) |
|--|-----------|-------------|---------------|--------------|
| 7CP6110CS, 7CP6170 7CP6110CSG1, 7CP6170G1 | 76933 | 76950 | 31936 | 76068 |

| ITEM (Included in Seal Kits) | | | | | DESCRIPTION | QTY |
|------------------------------|-------|-------|-------|-------|--------------------------|-----|
| 97 | 17399 | 14160 | 46204 | 17399 | O-Ring, Plunger Retainer | 3 |
| 106 | 49644 | 49704 | 48650 | 76704 | Seal, LPS with SS-Spring | 3 |
| 121 | 13984 | 14333 | 48649 | 13984 | O-Ring, Seal Case | 3 |
| 127 | 48278 | 48278 | 48278 | 48278 | V-Packing | 6 |

◆ Silicone oil/grease required

*Review material codes for individual items (STG generally maybe used as alternative)

VALVE KITS Two (2) valve kits required per pump

| PUMP MODELS | NBR (STD) STHT (.3400) | FPM (.0110) | EPDM (.0220)◆ |
|--|---------------------------|-------------|---------------|
| 7CP6110CS, 7CP6170 7CP6110CSG1, 7CP6170G1 | 34920 | 31256 | 31253 |

| ITEM (Included in Valve Kits) | | | | | DESCRIPTION | QTY |
|-------------------------------|-------|-------|-------|--|--------------------------|-----|
| 162 | 43248 | 43248 | 43248 | | Back-up Ring, Valve Seat | 3 |
| 163 | 43249 | 44383 | 46206 | | O-Ring, Valve Seat | 3 |
| 164 | 44718 | 44718 | 44718 | | Seat | 3 |
| 166 | 43721 | 43721 | 43721 | | Valve | 3 |
| 167 | 43751 | 43751 | 43751 | | Spring | 3 |
| 168 | 44564 | 44564 | 44564 | | Retainer, Spring | 3 |
| 172 | 17617 | 11691 | 46207 | | O-Ring, Valve Plug | 3 |

◆ Silicone oil/grease required

⚠ 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/dynamic-literature/cautions-and-warnings or can be requested directly from Cat Pumps.

WARRANTY

View the Limited Warranty on-line at www.catpumps.com/literature/cat-pumps-limited-warranty