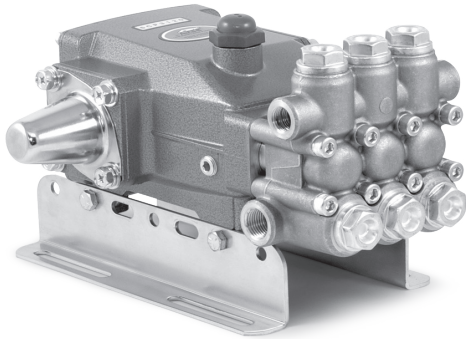


DATA SHEET

5CP PLUNGER PUMPS



Brass Models: 5CP5120, 5CP5120CSS



Model 5CP5120 Shown
(Shaft protector and mounting rails sold separately)

FEATURES

- Industrial triplex design delivers reliability and versatility.
- Direct-drive option offers a compact footprint for electric motors with a NEMA or IEC frame, or SAE hydraulic motor with a bell housing/flexible coupler assembly.
- Pump comes standard with NBR seals. Alternative seal materials are available for higher temperature or chemical compatibility.

COMMON SPECIFICATIONS

| | U.S. | Metric |
|-------------------------|--------|--------|
| Bore | 0.709" | 18 mm |
| Stroke | 0.709" | 18 mm |
| Crankcase Capacity | 17 oz | 0.51 l |
| Max. Liquid Temperature | 160° F | 71° C |

Alternative seals available for higher temperatures up to 190° F

| | | |
|---------------------|----------------------|--------------------|
| Inlet Ports (2) | ½" NPT(F) | ½" NPT(F) |
| Discharge Ports (2) | ⅜" NPT(F) | ⅜" NPT(F) |
| Shaft Diameter | 0.787" | 20 mm |
| Weight | 19.9 lbs | 9 kg |
| Dimensions | 10.89 x 10.0 x 5.78" | 277 x 254 x 147 mm |

SPECIFICATIONS

| | U.S. Measure | Metric Measure |
|----------------------------|--------------|----------------|
| 5CP5120, 5CP5120CSS | | |
| Flow | 5.0 gpm | 19 lpm |
| Pressure Range | 100–3000 psi | 6.9–207 bar |
| Pump RPM* | 1415 rpm | 1415 rpm |
| Inlet Pressure Range | -2.5–60 psi | -.2–4 bar |

5CP5120, 5CP5120CSS ALTERNATE SPECIFICATIONS

| | | |
|----------------------|--------------|-------------|
| Flow | 6.0 gpm | 23 lpm |
| Pressure Range | 100–2500 psi | 6.9–172 bar |
| Pump RPM* | 1750 rpm | 1750 rpm |
| Inlet Pressure Range | 10–60 psi | 1–4 bar |

*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 **Tech Bulletin 002** for inlet conditions and RPM at high-temperature.

| | | | |
|--------------------------------------|------------------|---|----------------|
| DETERMINING THE PUMP RPM | Rated gpm | = | Desired gpm |
| | Rated rpm | = | Desired rpm |
| DETERMINING THE REQUIRED HP | hp | = | gpm x psi |
| | (Electric Brake) | = | 1460 |
| DETERMINING MOTOR PULLEY SIZE | Motor Pulley OD | = | Pump Pulley OD |
| | Pump rpm | = | Motor rpm |

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

PARTS LIST

| ITEM | PART NUMBER | | DESCRIPTION | QTY |
|------|-------------------|-------------|--|-----|
| | 5CP5120 | | | |
| | 5CP5120CSS | MATL | | |
| 5 | 126542 | STCP R | Screw, HHC, Sems (M8 x 16) (See Tech Bulletin 074) | 8 |
| 8 | 46910 | AL | Cover, Bearing | 2-1 |
| 10 | 14028 | NBR | O-Ring, Bearing Cover-70D | 2 |
| 11 | 43222 | NBR | Seal, Oil, Crankshaft | 2-1 |
| 15 | 14480 | STL | Bearing, Ball | 2 |
| 20 | 48742 | TNM | Rod, Connecting Assembly [10/01] (See Tech Bulletin 074) | 3 |
| 25 | 46928 | FCM | Crankshaft, Dual End M18 - 5CP5120 | 1 |
| | 48233 | FCM | Crankshaft, Single End M18 - 5CP5120CSS | 1 |
| 30 | 49776 | AL | Cover, Bearing - 5CP5120CSS | 1 |
| 32 | 46798 | — | Cap, Oil Filler, Domed | 1 |
| 33 | 14179 | NBR | O-Ring, Oil Filler Cap-70D | 1 |
| 37 | 92241 | PC | Gauge, Oil, Bubble with Gasket-80D (See Tech Bulletin 074) | 1-2 |
| 38 | 44428 | NBR | Gasket, Flat, Oil Gauge-80D | 1-2 |
| 40 | 125824 | STCP R | Screw, HHC, Sems (M6 x 16) (See Tech Bulletin 074) | 4 |
| 48 | 25625 | STCP | Plug, Drain (1/4" x 19 BSP) | 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 | 3 |
| 75 | 43328 | S | Slinger, Barrier | 3 |
| 88 | 45697 | S | Washer, Keyhole (M18 x 10) | 3 |
| 90 | 49655 | CC | Plunger (M18 x 50) | 3 |
| 98 | 46730 | NBR | Washer, Seal-90D | 3 |
| 99 | 48201 | SS | Retainer, Plunger with Stud (M6) (See Tech Bulletin 074) | 3 |
| 100 | 46749 | PVDF | Retainer, Seal | 3 |
| 106 | 43243 | NBR | Seal, LPS with S-Spring | 3 |
| 120 | 49657 | BB | Case, Seal (Press-in-Style) | 3 |
| 121 | 13978 | NBR | O-Ring, Seal Case-70D | 3 |
| 127 | 44549 | SNG | V-Packing | 6 |
| 128 | 45618 | BB | Adapter, Male | 3 |
| 139 | 22179 | <i>BBCP</i> | <i>Plug, Inlet [1/2" NPT(M)]</i> | 1 |
| 163 | 17547 | NBR | O-Ring, Seat-85D | 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 |
| 173 | 48365 | D | Backup Ring, Valve Plug | 6 |
| 174 | 45900 | BB | Plug, Valve (See Tech Bulletin 074) | 6 |
| 185 | 46895 | FBB | Manifold, Head | 1 |
| 188 | 126513 | STCP R | Screw, HSH (M8 x 70) (See Tech Bulletin 074) | 8 |
| 196 | 22187 | <i>BBCP</i> | <i>Plug, Discharge [3/8" NPT(M)]</i> | 1 |

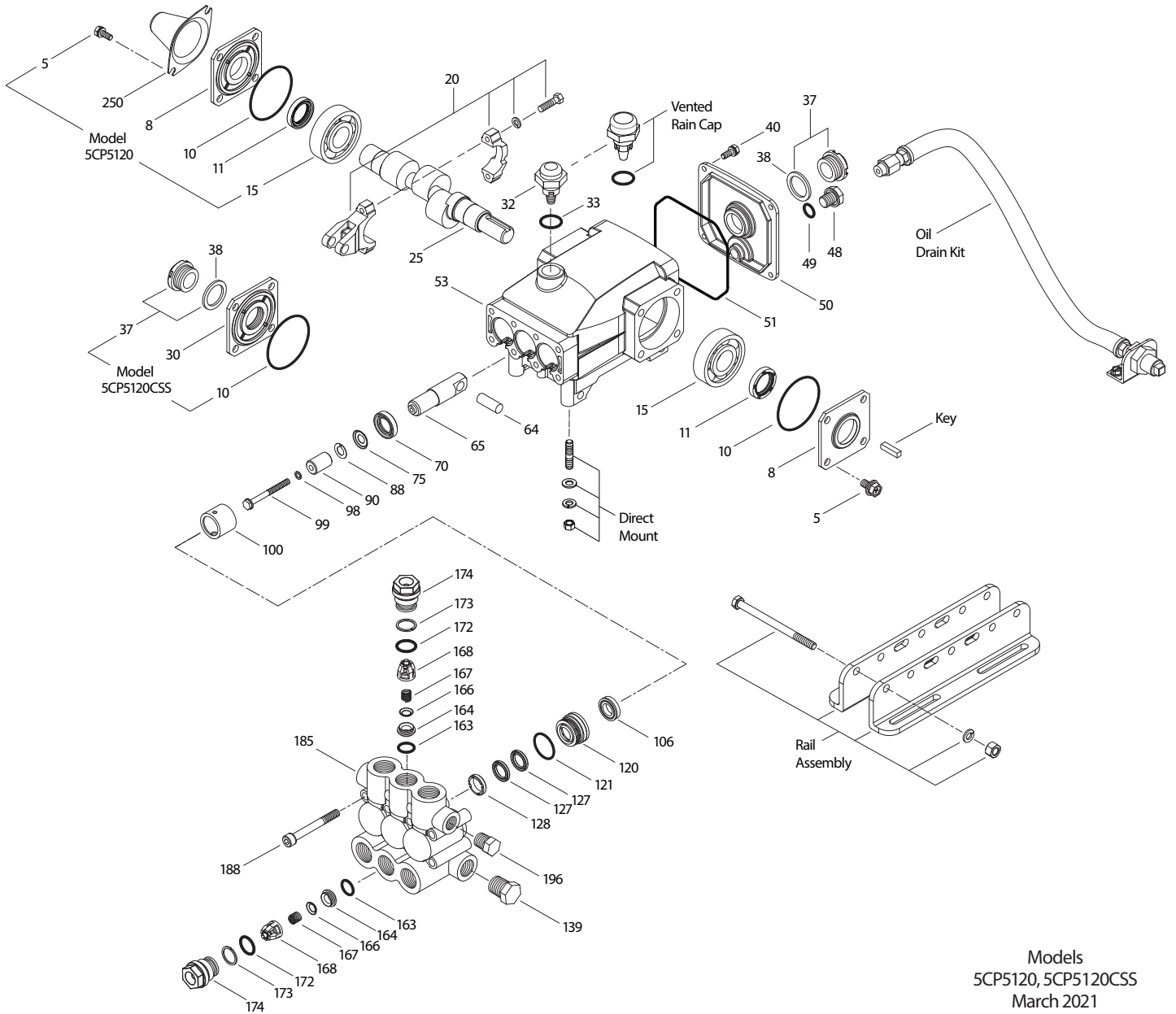
Bold print part numbers are unique to a particular pump model. *Italics are optional items.* [] Date of latest production change.

◆ 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. For additional technical information see www.catpumps.com/literature/tech-bulletins.
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) PC=Poly Carbonate PVDF=Polyvinylidene Fluoride S=304SS SS=316SS SNG=Special Blend (Buna) SFG=Special Blend (FPM)
STG= Special Blend PTFE White ST2=Special Blend PTFE Grey STL=Steel STCP=Steel/Chrome Plated STHT=Special PTFE High Temp
STZP=Steel/Zinc Plated TNM=Special High Strength

Standard and optional Seal Kits and Valve Kits listed on pages 3 and 4. Optional Parts and Accessories and Service parts listed on Page 3.

EXPLODED VIEW



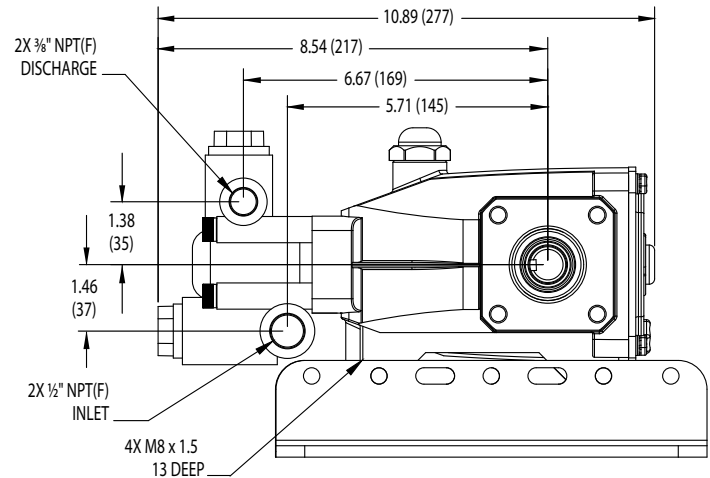
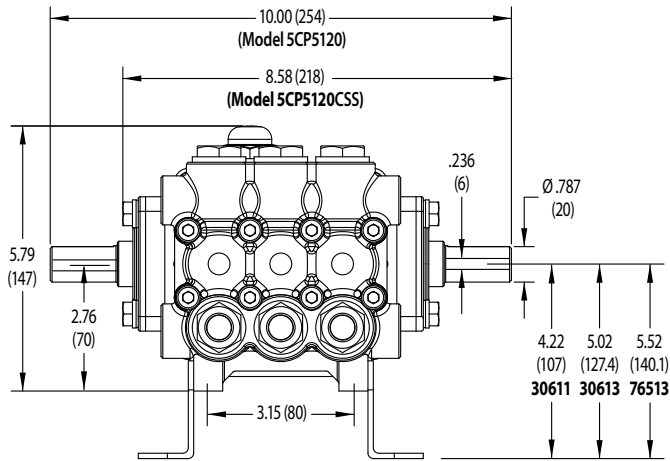
Models
5CP5120, 5CP5120CSS
March 2021

OPTIONAL PARTS AND ACCESSORIES

| PART | DESCRIPTION | QTY |
|--------|--|-----|
| 30057 | Key, M6 x 6 x 25 | 1 |
| 30611 | Assembly, Rail (4.22" See Dimensional Drawing) | 1 |
| 30613 | Assembly, Rail (5.02" See Dimensional Drawing) | 1 |
| 76513 | Assembly, Rail (5.52" See Dimensional Drawing) | 1 |
| 30637 | Mount, Rail Assembly (Retro Fit – See Tech Bulletin 078) | 1 |
| 30243 | Mount, Direct | 1 |
| 127409 | Cap, Vented with O-Ring (Rain Cap) | 1 |
| 118672 | Protector, Shaft (Model 5CP5120) | 1 |
| 34334 | Kit, Oil Drain | 1 |
| 30944 | Assembly, Hub and Key | 1 |

SERVICE PARTS

| PART | DESCRIPTION | QTY |
|--------------|---|-----|
| 33630 | Kit, Seal – Standard NBR | 1 |
| 33060 | Kit, Valve – Standard NBR | 2 |
| 6107 | Oil, Bottle (21 oz) ISO 68 Hydraulic (Fill to Specified Crankcase Capacity Prior to Start-up) | 1 |
| 6124 | Gasket, Liquid (3 oz) | 1 |
| 814844 | Head, Complete with NBR Seals and O-Rings | 1 |



Model 5CP5120

SEAL KITS One (1) seal kit required per pump

| PUMP MODELS | NBR (STD) | FPM (.0110) | EPDM (.0220)◆ | HT (.3000) | STHT (.3400) |
|------------------------|-----------|-------------|---------------|------------|--------------|
| 5CP5120, 5CP5120CSS | 33630 | 31350 | 76630 | 76645 | 76960 |

| ITEM (Included in Seal Kits) | | | | | | DESCRIPTION | QTY |
|------------------------------|-------|-------|-------|-------|-------|--------------------------|-----|
| 98 | 46730 | 48394 | 48432 | 46730 | 46730 | O-Ring, Plunger Retainer | 3 |
| 106 | 43243 | 44926 | 46651 | 43243 | 76243 | Seal, LPS with SS-Spring | 3 |
| 121 | 13978 | 14329 | 48904 | 13978 | 13978 | O-Ring, Seal Case | 3 |
| 127 | 44549 | 45617 | 48300 | 48300 | 48300 | V-Packing | 6 |

◆ Silicone oil/grease required

VALVE KITS Two (2) valve kits required per pump

| PUMP MODELS | NBR (STD) | FPM (.0110) | EPDM (.0220)◆ | HT (.3000) | STHT (.3400) |
|------------------------|-----------|-------------|---------------|------------|--------------|
| 5CP5120, 5CP5120CSS | 33060 | 31345 | 31735 | 33060 | 33060 |

| ITEM (Included in Valve Kits) | | | | | | DESCRIPTION | QTY |
|-------------------------------|-------|-------|-------|-------|-------|-------------------------|-----|
| 163 | 17547 | 11685 | 46648 | 17547 | 17547 | O-Ring, Seat | 3 |
| 164 | 45790 | 45790 | 45790 | 45790 | 45790 | Seat | 3 |
| 166 | 46429 | 46429 | 46429 | 46429 | 46429 | Valve | 3 |
| 167 | 43750 | 43750 | 43750 | 43750 | 43750 | Spring | 3 |
| 168 | 44565 | 44565 | 44565 | 44565 | 44565 | Retainer, Spring | 3 |
| 172 | 17549 | 26996 | 49133 | 17549 | 17549 | O-Ring, Valve Plug | 3 |
| 173 | 48365 | 48365 | 48365 | 48365 | 48365 | Backup 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

CAT PUMPS 1681 94th Lane N.E., Minneapolis, MN 55449-4324 P: (763) 780-5440 F: (763) 780-2958 E: techsupport@catpumps.com www.catpumps.com

©2021 Cat Pumps Inc. All rights reserved. All data contained in this document are based on the latest product information available at the time of publication. Cat Pumps reserves the right to make changes at any time without notice.