

DATA SHEET

5CP PLUNGER PUMPS



The Pumps with Nine Lives

Brass Model: **5CP5140CSS**

Brass Gearbox Models: **5CP5135CSSG1, 5CP5140CSSG1, 5CP5140CSSG118**



Model 5CP5140CSS Shown
(Rails Sold Separately)

FEATURES

- Industrial triplex design offers reliability and versatility.
- Ultra-compact footprint permits direct-drive to engine with gearbox or belt-drive for precision flow setting.
- 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, 190° F – .3000
 - High Temp, 200° F – .3400 (Intermittent Run-Dry)

COMMON

| SPECIFICATIONS | U.S. | Metric |
|--|-----------------------|--------------------|
| Inlet Pressure Range, Standard | -2.5 to 60 psi | -.2 to 4 bar |
| Inlet Pressure Range, Alternate | 10 to 60 psi | .7 to 4 bar |
| Max. Liquid Temperature | 160° F | 71° C |
| Above 130°F call Cat Pumps for inlet conditions and elastomer recommendations. | | |
| Bore | 0.709" | 18 mm |
| Crankcase Capacity | 17 oz. | 0.51 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 |
| Dimensions (pump only) | 10.89 x 10.0 x 5.78" | 277 x 254 x 147 mm |
| Dimensions (w/ gearbox) | 11.18 x 11.48 x 6.42" | 284 x 291 x 163 mm |

SPECIFICATIONS

| | U.S. Measure | Metric Measure |
|--|-----------------|----------------|
| 5CP5140CSS | | |
| Flow | 5.5 gpm | 21 lpm |
| Pressure Range | 100 to 3500 psi | 6.9 to 241 bar |
| Pump RPM* | 1500 rpm | 1500 rpm |
| Stroke | 0.787" | 20 mm |
| Weight | 19.9 lbs. | 9 kg |
| 5CP5140CSS Alternate Specifications | | |
| Flow | 6.7 gpm | 25.4 lpm |
| Pressure Range | 100 to 3000 psi | 6.9 to 207 bar |
| Pump RPM* | 1750 rpm | 1750 rpm |
| 5CP5135CSSG1 | | |
| Flow | 5.0 gpm | 19 lpm |
| Pressure Range | 100 to 3500 psi | 6.9 to 241 bar |
| Pump RPM | 1515 rpm | 1515 rpm |
| Engine RPM | 3090 rpm | 3090 rpm |
| Stroke | 0.709" | 18 mm |
| Weight | 26.5 lbs. | 12 kg |
| 5CP5140CSSG1, 5CP5140CSSG118 | | |
| Flow | 5.5 gpm | 21 lpm |
| Pressure Range | 100 to 3500 psi | 6.9 to 241 bar |
| Pump RPM | 1500 rpm | 1500 rpm |
| Engine RPM | 3060 rpm | 3060 rpm |
| Stroke | 0.787" | 20 mm |
| Weight | 26.5 lbs. | 12 kg |

*Pump minimum is 100 RPM.

ELECTRIC HORSEPOWER REQUIREMENTS

| MODELS | FLOW | | PRESSURE | | | | | | RPM |
|---------------------------|-------------|------|-----------------------------|-------------|-------------|-------------|-------------|-------------|------|
| | | | psi 1200 | psi 1500 | psi 2000 | psi 2500 | psi 3000 | psi 3500 | |
| | U.S. gpm | lpm | bar 83 | bar 103 | bar 138 | bar 172 | bar 207 | bar 241 | |
| 5CP5135CSSG1 | 5.0 | 19 | Consult Engine Manufacturer | | | | | | 1515 |
| 5CP5140CSS | 5.5 | 21 | 4.5 | 6.0 | 7.5 | 9.4 | 11.3 | 13.2 | 1500 |
| 5CP5140CSS ALT | 6.7 | 25.4 | 5.5 | 6.9 | 9.2 | 11.5 | 13.8 | NA | 1750 |
| 5CP5140CSSG1, G118 | 5.5 | 21 | Consult Engine Manufacturer | | | | | | 1500 |

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

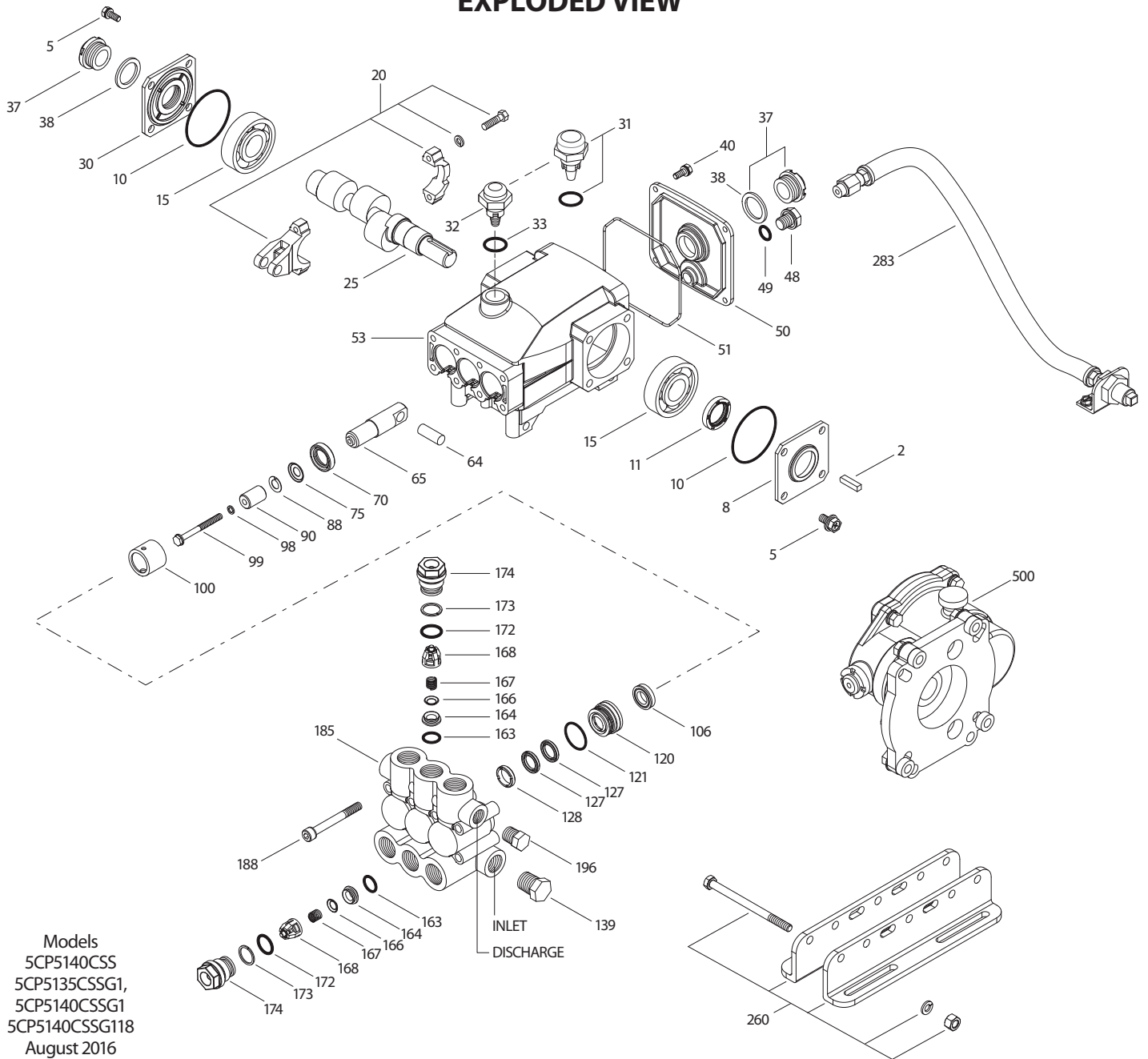
DETERMINING MOTOR PULLEY SIZE $\frac{\text{Motor Pulley O.D.}}{\text{Pump rpm}} = \frac{\text{Pump Pulley O.D.}}{\text{Motor rpm}}$

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 | PART NUMBER | MATL | DESCRIPTION | QTY |
|------|-------------------|--------|-----------------------|--------|---|-----|
| | | | 5CP3135CSSG1 | | | |
| | | | 5CP5140CSSG1 | | | |
| | 5CP5140CSS | | 5CP5140CSSG118 | | | |
| 2 | 30057 | STL | 30057 | STL | Key (M6x6x25) | 1 |
| 5 | 126542 | STCP R | 126542 | STCP R | Screw, HHC, Sems (M8x16) | 8 |
| 8 | 46910 | AL | 46910 | AL | Cover, Bearing | 1 |
| 10 | 14028 | NBR | 14028 | NBR | O-Ring, Bearing Cover - 70D | 2 |
| 11 | 43222 | NBR | 43222 | NBR | Seal, Oil, Crankshaft - 70D | 1 |
| 15 | 14480 | STL | 14480 | STL | Bearing, Ball | 2 |
| 20 | 48742 | TNM | 48742 | TNM | Rod, Connecting Assy [10/01] | 3 |
| 25 | 49773 | FCM | 49773 | FCM | Crankshaft, Single End M18 - 5CP5140CSS, 5CP5140CSSG1, 5CP5140CSSG118 | 1 |
| | — | FCM | 48233 | FCM | Crankshaft, Single End M18 - 5CP3135CSSG1 | 1 |
| 30 | 49776 | AL | 49776 | AL | Cover, Bearing | 1 |
| 31 | 127409 | — | 127409 | — | Cap, Vented w/O-Ring (Rain Cap) | 1 |
| 32 | 46798 | — | 46798 | — | Cap, Oil Filler, Domed | 1 |
| 33 | 14179 | NBR | 14179 | NBR | O-Ring, Oil Filler Cap - 70D | 1 |
| 37 | 92241 | — | 92241 | — | Gauge, Oil, Bubble w/Gasket - 80D | 2 |
| 38 | 44428 | NBR | 44428 | NBR | Gasket, Flat, Oil Gauge - 80D | 2 |
| 40 | 125824 | STCP R | 125824 | STCP R | Screw, HHC, Sems (M6x16) | 4 |
| 48 | 25625 | STCP | 25625 | STCP | Plug, Drain (1/4"x19BSP) | 1 |
| 49 | 23170 | NBR | 23170 | NBR | O-Ring, Drain Plug - 70D | 1 |
| 50 | 46940 | AL | 46940 | AL | Cover, Rear | 1 |
| 51 | 14044 | NBR | 14044 | NBR | O-Ring, Rear Cover | 1 |
| 53 | 48617 | AL | 48617 | AL | Crankcase | 1 |
| 64 | 46746 | CM | 46746 | CM | Pin, Crosshead | 3 |
| 65 | 48458 | BBNP | 48458 | BBNP | Rod, Plunger | 3 |
| 70 | 46838 | NBR | 46838 | NBR | Seal, Oil, Crankcase - 70D | 3 |
| 75 | 43328 | S | 43328 | S | Slinger, Barrier | 3 |
| 88 | 45697 | S | 45697 | S | Washer, Keyhole (M18x10) | 3 |
| 90 | 49655 | CC | 49655 | CC | Plunger (M18x50) | 3 |
| 98 | 46730 | NBR | 46730 | NBR | Washer, Seal - 90D | 3 |
| | 48394 | FPM | 48394 | FPM | Washer, Seal - 90D | 3 |
| | ◆ 48432 | EPDM | ◆ 48432 | EPDM | Washer, Seal | 3 |
| 99 | † 48201 | SS | † 48201 | SS | Retainer, Plunger w/Stud (M6) | 3 |
| 100 | 46749 | PVDF | 46749 | PVDF | Retainer, Seal | 3 |
| 106 | 43243 | NBR | 43243 | NBR | Seal, LPS w/S-Spg | 3 |
| | 44926 | FPM | 44926 | FPM | Seal, LPS w/SS-Spg | 3 |
| | ◆ 46651 | EPDM | ◆ 46651 | EPDM | Seal, LPS w/SS-Spg | 3 |
| | 76243 | ST2 | 76243 | ST2 | Seal, LPS w/S-Spg | 3 |
| 120 | 49657 | BB | 49657 | BB | Case, Seal (Press-in-style) | 3 |
| 121 | 13978 | NBR | 13978 | NBR | O-Ring, Seal Case - 70D | 3 |
| | 14329 | FPM | 14329 | FPM | O-Ring, Seal Case | 3 |
| | ◆ 48904 | EPDM | ◆ 48904 | EPDM | O-Ring, Seal Case | 3 |
| 127 | 44549 | SNG | 44549 | SNG | V-Packing | 6 |
| | 45617 | SFG | 45617 | SFG | V-Packing | 6 |
| | 48300 | STG | 48300 | STG | V-Packing | 6 |
| 128 | 45618 | BB | 45618 | BB | Adapter, Male | 3 |
| 139 | 22179 | BBCP | 22179 | BBCP | Plug, Inlet [1/2" NPT(M)] | 1 |
| 163 | 17547 | NBR | 17547 | NBR | O-Ring, Seat - 85D | 6 |
| | 11685 | FPM | 11685 | FPM | O-Ring, Seat - 85D | 6 |
| | ◆ 46648 | EPDM | ◆ 46648 | EPDM | O-Ring, Seat - 70D | 6 |
| 164 | 45790 | S | 45790 | S | Seat | 6 |
| 166 | 46429 | S | 46429 | S | Valve | 6 |
| 167 | 43750 | S | 43750 | S | Spring | 6 |
| 168 | † 44565 | PVDF | † 44565 | PVDF | Retainer, Spring | 6 |
| 172 | 17549 | NBR | 17549 | NBR | O-Ring, Valve Plug - 70D | 6 |
| | 26996 | FPM | 26996 | FPM | O-Ring, Valve Plug - 70D | 6 |
| | ◆ 49133 | EPDM | ◆ 49133 | EPDM | O-Ring, Valve Plug | 6 |
| 173 | 48365 | D | 48365 | D | Back-up-Ring, Valve Plug | 6 |
| 174 | 45900 | BB | 45900 | BB | Plug, Valve | 6 |
| 185 | 46895 | FBB | 46895 | FBB | Manifold, Head | 1 |
| 188 | 126513 | STCP R | 126513 | STCP R | Screw, HSH (M8x70) | 8 |
| 196 | 22187 | BBCP | 22187 | BBCP | Plug, Discharge [3/8" NPT(M)] | 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 |
| | 30637 | STZP | — | STZP | Mount, Angle Assy-Retro Fit (See Tech Bulletin 078) | 1 |
| 283 | 34334 | — | 34334 | — | Kit, Oil Drain (3/8" x 24") (See Individual Data Sheet) | 1 |
| | 76334 | — | 76334 | — | Kit, Oil Indicator (3/8" x 24") (See Individual Data Sheet) | 1 |
| 299 | 814844 | FBB | 814844 | FBB | Head, Complete w/NBR Seals and O-Rings | 1 |
| 300 | 33630 | NBR | 33630 | NBR | Kit, Seal (Incls: 98,106,121,127) Standard | 1 |
| | 31350 | FPM | 31350 | FPM | Kit, Seal (Incls: 98,106,121,127) .0110 | 1 |
| | 76645 | HT | 76645 | HT | Kit, Seal (Incls: 98,106,121,127) .3000 | 1 |

EXPLODED VIEW



Models
 5CP5140CSS
 5CP5135CSSG1,
 5CP5140CSSG1
 5CP5140CSSG118
 August 2016

| ITEM | PART NUMBER | MATL | PART NUMBER | MATL | DESCRIPTION | QTY |
|------|-------------------|-------------|---------------------|-------------|--|-----|
| | 5CP5140CSS | | 5CP5140CSSG1 | | | |
| | 76630 | <i>EPDM</i> | 76630 | <i>EPDM</i> | <i>Kit, Seal (Incls: 98,106,121,127) .0220</i> | 1 |
| | <i>76546</i> | <i>STHT</i> | <i>76546</i> | <i>STHT</i> | <i>Kit, Seal (Incls: 98, 106, 120, 121, 127) Prior to 2/09 .3400</i> | 1 |
| | <i>76960</i> | <i>STHT</i> | <i>76960</i> | <i>STHT</i> | <i>Kit, Seal (Incls: 98,106,121,127) After 2/09 .3400</i> | 1 |
| 310 | <i>33060</i> | <i>NBR</i> | <i>33060</i> | <i>NBR</i> | <i>Kit, Valve Preassembled (Incls: 163,164,166-168,172,173) Standard, .3400, .3000</i> | 2 |
| | <i>31345</i> | <i>FPM</i> | <i>31345</i> | <i>FPM</i> | <i>Kit, Valve Preassembled (Incls: 163,164,166-168,172,173) .0110</i> | 2 |
| | 31735 | <i>EPDM</i> | 31735 | <i>EPDM</i> | <i>Kit, Valve Preassembled (Incls: 163,164,166-168,172,173) .0220</i> | 2 |
| 500 | — | — | 8076 | — | <i>Gearbox 1" (See Individual Data Sheet)</i> | 1 |
| | — | — | 8077 | — | <i>Gear box 1-1/8" (See Individual Data Sheet)</i> | 1 |
| — | <i>6107</i> | — | <i>6107</i> | — | <i>Oil, Bottle (21 oz.) ISO 68 Hydraulic</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.

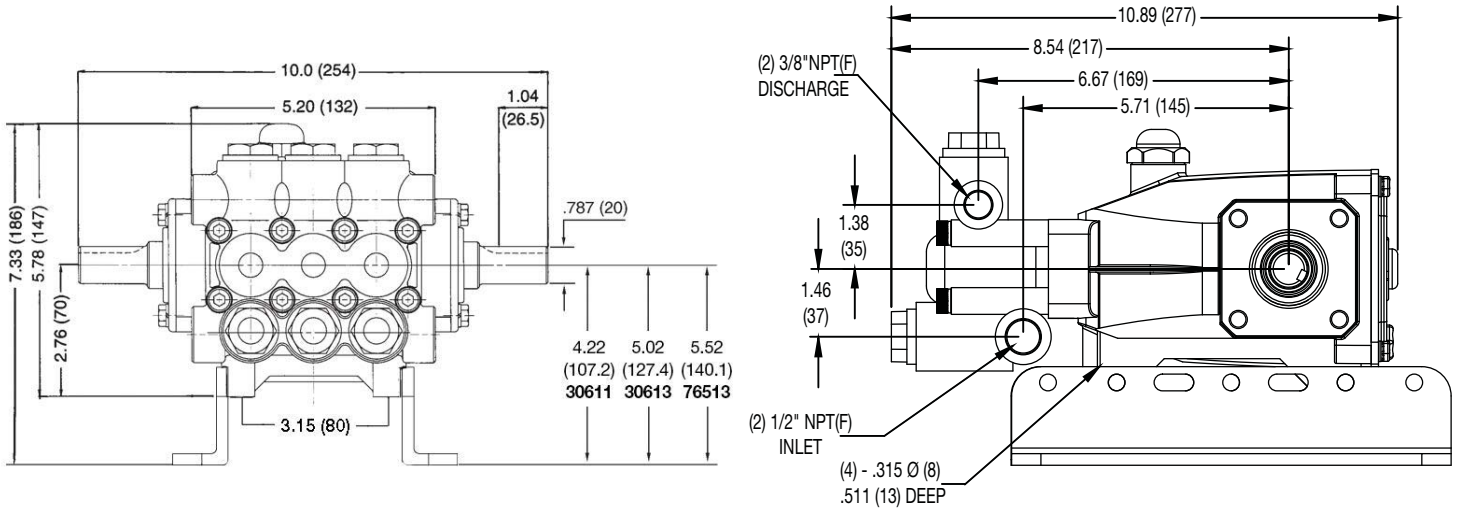
View Tech Bulletins 002, 003, 024, 036, 043, 053, 060, 061, 064, 073, 074, 078 and 083 for additional information.

MATERIAL CODES (Not Part of Part Number): AL=Aluminum BB=Brass BBCP=Brass/Chrome Plated BBNP=Brass/Nickel Plated CC=Ceramic

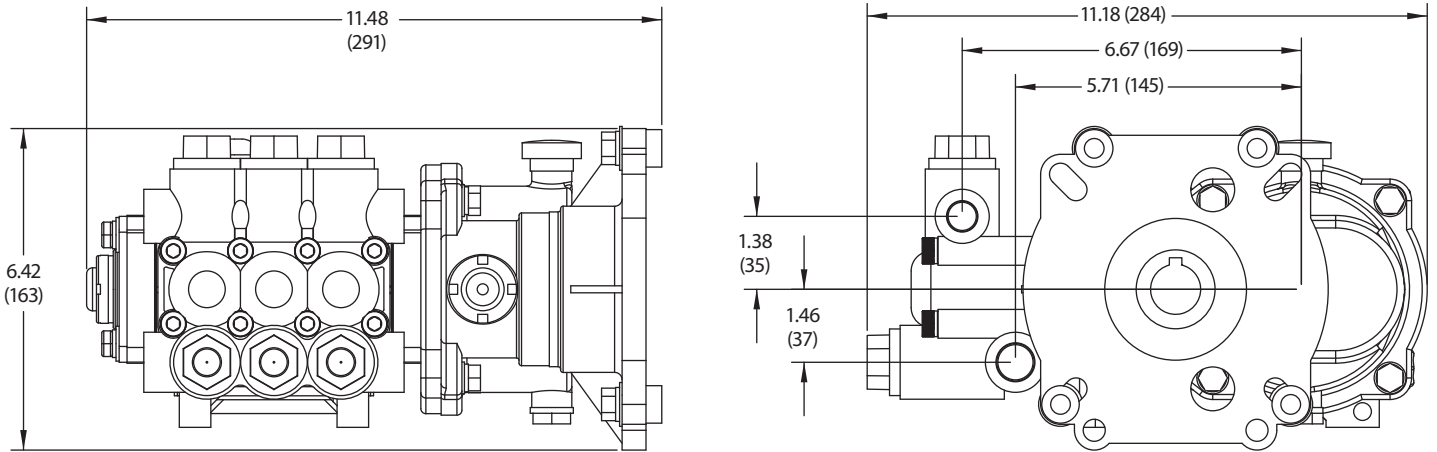
CM=Chrome-moly D=Acetal EPDM=Ethylene Propylene Diene Monomer FBB=Forged Brass FCM=Forged Chrome-moly FPM=Fluorocarbon HT=Hi-Temp (EPDM Alternative)

NBR=Medium Nitrile (Buna-N) 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



Model 5CP5140CSS



Models 5CP5135CSSG1, 5CP5140CSSG1, 5CP5140CSSG118 (with gearbox)

⚠ 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.

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