

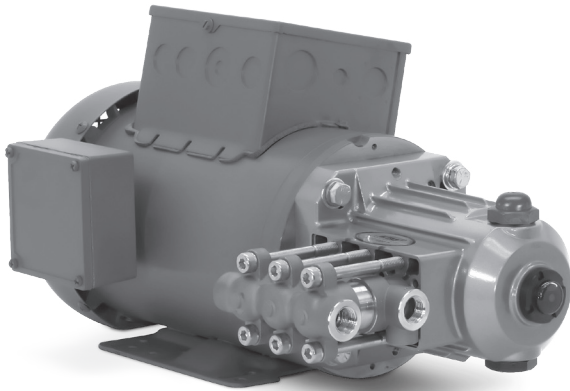
DATA SHEET

DIRECT DRIVE PLUNGER PUMPS



Stainless Steel Models:

2SF05SEEL, 2SF10SEEL, 2SF15SEEL, 2SF22SEEL



Motorized pump unit 2SF22SEELD Shown

| SPECIFICATIONS | U.S. Measure | Metric Measure |
|------------------------|--------------|----------------|
| Model 2SF05SEEL | | |
| Flow | 0.5 gpm | 1.9 lpm |
| Stroke | 0.071" | 1.8 mm |
| Model 2SF10SEEL | | |
| Flow | 1.0 gpm | 3.8 lpm |
| Stroke | 0.122" | 3.1 mm |
| Model 2SF15SEEL | | |
| Flow | 1.5 gpm | 5.7 lpm |
| Stroke | 0.177" | 4.5 mm |
| Model 2SF22SEEL | | |
| Flow | 2.2 gpm | 8.3 lpm |
| Stroke | 0.248" | 6.3 mm |

FEATURES

- Unique spring loaded inlet valves and the flow through ceramic plungers provides a smooth, steady flow.
- Hollow shaft direct drive to provide the smallest possible footprint for challenging spaces.
- Standard NBR seals with alternative options for temperature and chemical compatibility.



COMMON SPECIFICATIONS

| | U.S. | Metric |
|---|-------------------|--------------------|
| Pressure Range | 100 - 1200 psi | 6.9 - 83 bar |
| Pump RPM | 1725 rpm | 1725 rpm |
| Inlet Pressure Range | Flooded to 60 psi | Flooded to 4.1 bar |
| Max. Liquid Temp. (NBR) | 160° F | 71° C |
| Alternative seals available for high temp up to 180° F | | |
| Bore | 0.709" | 18 mm |
| Crankcase Capacity | 10.1 oz. | 0.30 l |
| Inlet Port (1) | 3/8" NPT(F) | 3/8" NPT(F) |
| Discharge Ports (2) | 3/8" NPT(F) | 3/8" NPT(F) |
| By-Pass Return Port (1) | 1/4" NPT(F) | 1/4" NPT(F) |
| Shaft Diameter | 5/8" | 15.9 mm |
| Weight (Pump Only) | 8.9 lbs. | 4 kg |
| Dimensions (Pump Only) | 6.8 x 8.7 x 5.2" | 173 x 221 x 133 mm |

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) |
| IPFE | .0770 | 180° F (82° C) |
| HT | .3000 | 180° F (82° C) |
| STHT | .3400 | 180° F (82° C) |

See Reference Document 99TCH002 for inlet conditions and RPM at high temperature.

$$\text{DETERMINING THE PUMP R.P.M.} \quad \frac{\text{Rated gpm}}{\text{Rated rpm}} = \frac{\text{"Desired" gpm}}{\text{"Desired" rpm}}$$

$$\text{DETERMINING THE REQUIRED H.P.} \quad \text{Hp (Electric Brake)} = \frac{\text{gpm} \times \text{psi}}{1460}$$

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

PARTS LIST

| ITEM | PART NUMBER | MATL | DESCRIPTION | MODEL | QTY |
|------|---------------|--------|---|--------|-----|
| 5 | 547445 | S | Screw, HHC Sems (M6x14) [3/03] | All | 3 |
| 8 | 547153 | AL | Cover, Bearing [3/03] | All | 1 |
| 10 | 14041 | NBR | O-Ring, Bearing Cover-70D [3/03] | All | 1 |
| 11 | 55337 | NBR | Seal, Oil, Crankshaft -70D [3/03] | All | 1 |
| 15 | 14488 | STL | Bearing, Ball - Inner | All | 1 |
| 20 | 547046 | TNM | Rod, Connecting | All | 3 |
| 25 | 831987 | CM | Crankshaft, 1.8mm | 05SEEL | 1 |
| | 46109 | CM | Crankshaft, 3.1mm | 10SEEL | 1 |
| | 44931 | CM | Crankshaft, 4.5mm | 15SEEL | 1 |
| | 45160 | CM | Crankshaft, 6.3mm | 22SEEL | 1 |
| 26 | 12385 | STL | Ring, Retaining, Bearing | All | 1 |
| 27 | 15710 | STL | Bearing, Ball - Outer | All | 1 |
| 31 | 549726 | — | Cap, Vented w/O-Ring (Rain Cap) | All | 1 |
| 32 | 547961 | RTP | Cap, Oil Filler w/O-Ring | All | 1 |
| 33 | 14179 | NBR | O-Ring, Oil Filler Cap - 70D | All | 1 |
| 37 | 92241 | PC | Gauge, Oil w/Gasket - 80D | All | 1 |
| 38 | 44428 | NBR | Gasket, Flat, Oil Gauge - 80D | All | 1 |
| 48 | 44842 | NY | Plug, Drain | All | 1 |
| 49 | 14179 | NBR | O-Ring, Drain Plug - 70D | All | 1 |
| 53 | 547285 | AL | Crankcase (See Tech Bulletin 92) | All | 1 |
| 64 | 16948 | CM | Pin, Crosshead | All | 3 |
| 65 | 834203 | SSTO | Rod, Plunger (See Tech Bulletin 124) | All | 3 |
| 69 | 126259 | STCP R | Washer, Oil Seal | All | 3 |
| 70 | 25461 | NBR | Seal, Oil Crankcase | All | 3 |
| 90 | 544697 | CC | Plunger, Ceramic (M18x18) | All | 3 |
| 100 | 44869 | PVDF | Retainer, Seal | All | 3 |
| 106 | 547683 | NBR | Seal, LPS w/SS-Spg | All | 3 |
| | ◆ 545192 | FPM | Seal, LPS w/SS-Spg | All | 3 |
| | 546507 | EPDM | Seal, LPS w/SS-Spg | All | 3 |
| | 76443 | ST | Seal, LPS | All | 3 |
| 110 | 547704 | SS | Manifold, Inlet | All | 1 |
| 125 | 44652 | SNG | Seal, HPS w/SS | All | 3 |
| | 46652 | HT | Seal, Hi-Temp, 2-Pc w/S-Support | All | 3 |
| | 76052 | ST4 | Seal, HPS w/s | All | 3 |
| 134 | 543691 | SS | Valve, Inlet (See Tech Bulletin 91) | All | 3 |
| | 33873 | D | Valve, Inlet (See Tech Bulletin 91) | All | 3 |
| 135 | 543689 | SS | Spacer | All | 3 |
| 136 | 543690 | SS | Spring, Inlet Valve | All | 3 |
| 137 | 88575 | S | Washer, Conical (M6) | All | 3 |
| 138 | 543692 | SS | Nut (M6) | All | 3 |
| 152 | † 26089 | NBR | O-Ring, Adapter Spacer, Inner-80D | All | 3 |
| | 11377 | FPM | O-Ring, Adapter Spacer, Inner-80D | All | 3 |
| | ◆ 46647 | EPDM | O-Ring, Adapter Spacer, Inner-80D | All | 3 |
| | 703244 | IPFE | O-Ring, Adapter Spacer, Inner | All | 3 |
| 157 | 544700 | SS | Adapter, Valve | All | 3 |
| 159 | † 26089 | NBR | O-Ring, Adapter Spacer, Outer-80D | All | 3 |
| | 11377 | FPM | O-Ring, Adapter Spacer, Outer-80D | All | 3 |
| | ◆ 46647 | EPDM | O-Ring, Adapter Spacer, Outer-80D | All | 3 |
| | 703244 | IPFE | O-Ring, Adapter Spacer, Outer | All | 3 |
| 164 | 544293 | SS | Seat | All | 3 |
| 166 | 543669 | SS | Valve | All | 3 |
| 167 | 543700 | SS | Spring | All | 3 |
| 168 | 44565 | PVDF | Retainer, Spring | All | 3 |
| 185 | 547705 | SS | Manifold, Discharge | All | 1 |
| 188 | 544701 | S | Screw, HSH (M8x80) | All | 6 |
| 255 | 30517 | STZP R | Assy, Bolt Mount | All | 1 |
| 300 | 34973 | NBR | Kit, Seal (Incls: 106, 125, 152, 159) Standard | All | 1 |
| | 33453 | FPM | Kit, Seal (Incls: 106, 125, 152, 159) .0110 | All | 1 |
| | ◆ 30536 | EPDM* | Kit, Seal (Incls: 106, 125, 152, 159) .0220 | All | 1 |
| | 33953 | HT | Kit, Seal Hi-Temp (Incls: 106, 125, 134, 152, 159) .3000 | All | 1 |
| | 76969 | IPFE | Kit, Seal (Incls: 106, 125, 152, 159) .0770 | All | 1 |
| 310 | 34972 | NBR | Kit, Valve (Incls: 152, 159, 164, 166, 167, 168) Standard, .3000 | All | 1 |
| | 33454 | FPM | Kit, Valve (Incls: 152, 159, 164, 166, 167, 168) .0110 | All | 1 |
| | ◆ 30546 | EPDM | Kit, Valve (Incls: 152, 159, 164, 166, 167, 168) .0220 | All | 1 |
| | 76596 | IPFE | Kit, Valve (Incls: 152, 159, 164, 166, 167, 168) .0770 | All | 1 |
| 311 | 39668 | NBR | Kit, Inlet Valve w/SS-IV (Incls: 134-138, 152, 159) Standard | All | 1 |
| | 34974 | NBR | Kit, Inlet Valve w/D-IV (Incls: 134-138, 152, 159) .3000 | All | 1 |
| | 33460 | FPM | Kit, Inlet Valve w/D-IV (Incls: 134-138, 152, 159) .0110 | All | 1 |
| | ◆ 30556 | EPDM | Kit, Inlet Valve w/D-IV (Incls: 134-138, 152, 159) .0220 | All | 1 |
| | 76586 | IPFE | Kit, Inlet Valve w/SS-IV (Incls: 134-138, 152, 159) .0770 | All | 1 |
| — | 6107 | — | Oil, Bottle (21 oz) ISO-68 Hydraulic (Fill to specified crankcase capacity prior to start-up) | All | 1 |

Bold print part numbers are unique to a particular pump model. Italics are optional items. ◆ Silicone oil/grease required.

[] 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.

NOTE: Discard Key that may come standard with most motors and engines and use only the key included in Bolt kit.

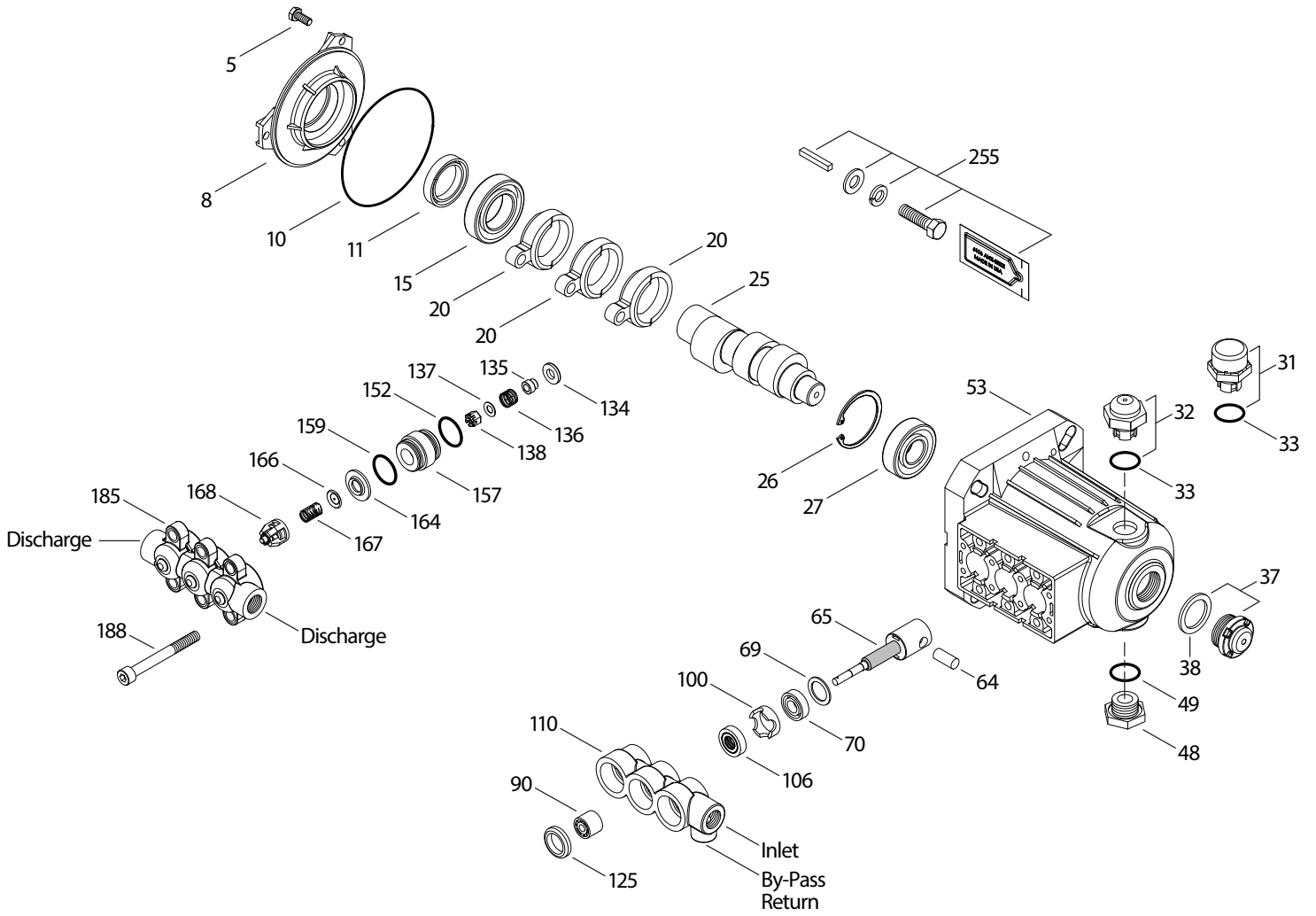
MATERIAL CODES (Not Part of Part Number): AL=Aluminum CC=Ceramic CM=Chrome-Moly D=Acetal EPDM=Ethylene Propylene Diene Monomer FPM=Fluorocarbon

HT=Hi-Temp (EPDM Alternative) IPFE=I-Perfluoroelastomer NBR=Medium Nitrile (Buna-N) NY=Nylon PC=Poly Carbonate PVDF=Polyvinylidene Fluoride

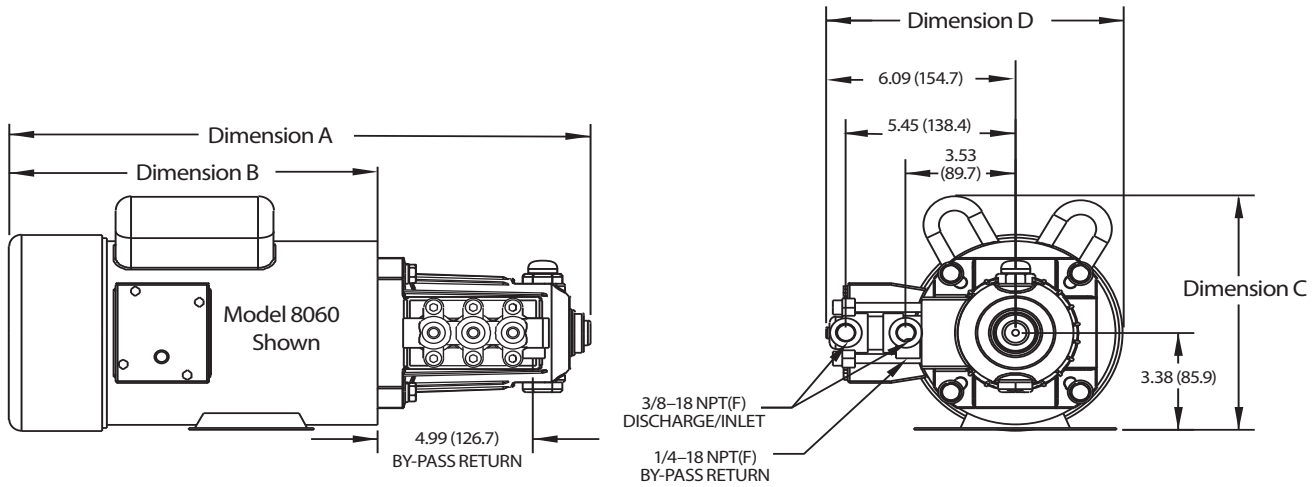
RTP=Reinforced Composite S=304SS SNG=Special Blend (Buna) SS=316SS SSTO=316SS/Titanium Oxide ST=Special PTFE ST4=Special PTFE 4

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

EXPLODED VIEW



| MODEL | 8105 | 8175 | 8110 | 8060 | 8062 | 8125/8125W |
|-------------|------|------|------|------|------|------------|
| Dimension A | 15.9 | 15.9 | 17.1 | 18.7 | 19.2 | 19.0 |
| Dimension B | 9.0 | 9.0 | 10.2 | 11.8 | 12.3 | 12.2 |
| Dimension C | 8.2 | 8.2 | 8.2 | 8.1 | 8.1 | 9.6 |
| Dimension D | 9.1 | 9.1 | 9.1 | 9.5 | 9.5 | 9.7 |



Models 2SF05SEEL, 2SF10SEEL, 2SF15SEEL, 2SF22SEEL

MOTOR SPECIFICATIONS

| MODEL | 8105 | 8175 | 8110 | 8060 | 8062 | 8125/8125W |
|-------------------------------|-------------|--------------|-------------|----------|----------|------------|
| HorsePower | 0.5 | 0.75 | 1.0 | 1.5 | 2.0 | 2.5 |
| Phase | Single | Single | Single | Single | Single | Single |
| RPM | 1750 | 1745 | 1750 | 1725 | 1725 | 1750 |
| Frame Size | 56C TEFC | 56C TEFC | 56C TEFC | 56C TEFC | 56C TEFC | 56HC TEFC |
| Shaft Diameter (inches) | 5/8 | 5/8 | 5/8 | 5/8 | 5/8 | 5/8 |
| Maximum Volts | 115/208-230 | 115/208-230 | 115/208-230 | 115/230 | 115/230 | 115/230 |
| Full Load Amps | 7.4/3.6-3.7 | 10.6/5.2-5.3 | 14/6.8-7.0 | 14.0/7.0 | 17.0/8.5 | 20.8/10.4 |
| Hertz | 60 | 60 | 60 | 60 | 60 | 60 |
| Service Factor | 1.15 | 1.15 | 1.15 | 1.2 | 1.15 | 1.15 |
| Max. Ambient Temp. (°F) | 104 | 104 | 104 | 104 | 104 | 104 |
| Capacitor Start | Yes | Yes | Yes | Yes | Yes | Yes |
| Thermal Overload-Manual Reset | No | Yes | No | Yes | Yes | No |
| Weight (lbs.) | 25 | 28 | 34 | 42 | 45.7 | 52.9 |

NOTE: Motor start-up Amps may vary, then settle within Full Load Amps rating after initial run time.

Before mounting pump on motor, apply P.N. 6106 Antiseize Lubricant to pump shaft.

Refer to Tech Bulletin 055 for instructions on removing pump from electric motor.

For electric motor warranty consideration contact motor manufacturer's local Authorized Service Center.



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