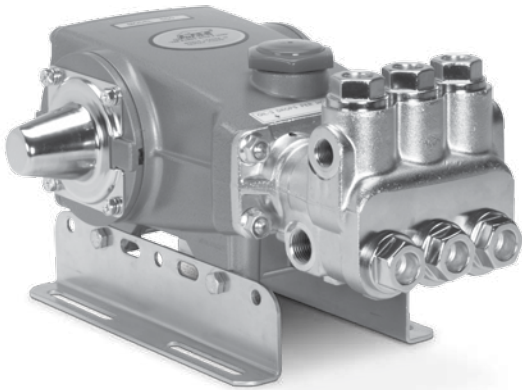


# DATA SHEET

## 7 FRAME PLUNGER PUMP



**Brass Models: 530, 550**



Model 550 Shown  
(Mounting rails and shaft protector sold separately)

### FEATURES

- Triplex design delivers high efficiency and low pulsation.
- Durable V-Packings (model 550) or High-Pressure Seals (model 530) are lubricated and cooled by the liquid being pumped.
- Pre-set Lo-Pressure Seals provide secondary protection against external leaks and require no packing adjustment.
- Special high-density, polished, concentric plungers provide a true wear surface and extended seal life.
- Standard NBR seals with alternative options for temperature and chemical compatibility
  - FPM – .0110
  - High Temp, 200°F – .3000

### COMMON SPECIFICATIONS

|  | U.S.                 | Metric             |
|--|----------------------|--------------------|
| Inlet Pressure Range   | Flooded to 60 psi    | Flooded to 4.1 bar |
| Crankcase Capacity   | 25 oz.               | 1.75 l             |
| Max. Liquid Temperature  | 160° F               | 71° C              |
| Above 130°F call Cat Pumps for inlet conditions and elastomer recommendations. |                      |                    |
| Inlet Ports (2)  | 1/2" NPT(F)          | 1/2" NPT(F)        |
| Discharge Port (2)   | 3/8" NPT(F)          | 3/8" NPT(F)        |
| Shaft Diameter   | 0.945"               | 24 mm              |
| Weight   | 25.5 lbs             | 11.5 kg            |
| Dimensions   | 13.70 x 9.61 x 5.95" | 348 x 244 x 151 mm |

### SPECIFICATIONS

|                | U.S. Measure    | Metric Measure |
|----------------|-----------------|----------------|
| <b>530</b>     |                 |                |
| Flow           | 5.0 gpm         | 19 lpm         |
| Pressure Range | 100 to 2500 psi | 6.9 to 172 bar |
| Pump RPM*      | 1100 rpm        | 1100 rpm       |
| Bore           | 0.708"          | 18 mm          |
| Stroke         | 0.945"          | 24 mm          |
| <b>550</b>     |                 |                |
| Flow           | 5.0 gpm         | 19 lpm         |
| Pressure Range | 100 to 3000 psi | 6.9 to 207 bar |
| Pump RPM*      | 1415 rpm        | 1415 rpm       |
| Bore           | 0.630"          | 16 mm          |
| Stroke         | 0.945"          | 24 mm          |

\*Pump minimum is 100 RPM.

### ELECTRIC HORSEPOWER REQUIREMENTS

| MODELS | FLOW |      | PRESSURE    |             |             |             | RPM  |
|--------|------|------|-------------|-------------|-------------|-------------|------|
|        |      |      | psi<br>1800 | psi<br>2150 | psi<br>2500 | psi<br>3000 |      |
|        | gpm  | lpm  | bar<br>124  | bar<br>148  | bar<br>172  | bar<br>207  |      |
| 530    | 5.0  | 19.0 | 6.2         | 7.4         | 8.6         | N/A         | 1100 |
|        | 4.5  | 17.0 | 5.6         | 6.6         | 7.7         | N/A         | 990  |
|        | 4.0  | 15.0 | 5.0         | 5.9         | 6.9         | N/A         | 880  |
| 550    | 5.0  | 19.0 | 6.2         | 7.4         | 8.6         | 10.3        | 1415 |
|        | 4.0  | 15.0 | 5.0         | 5.9         | 6.9         | 8.3         | 1130 |
|        | 3.0  | 11.4 | 3.7         | 4.4         | 5.2         | 6.2         | 850  |

**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**

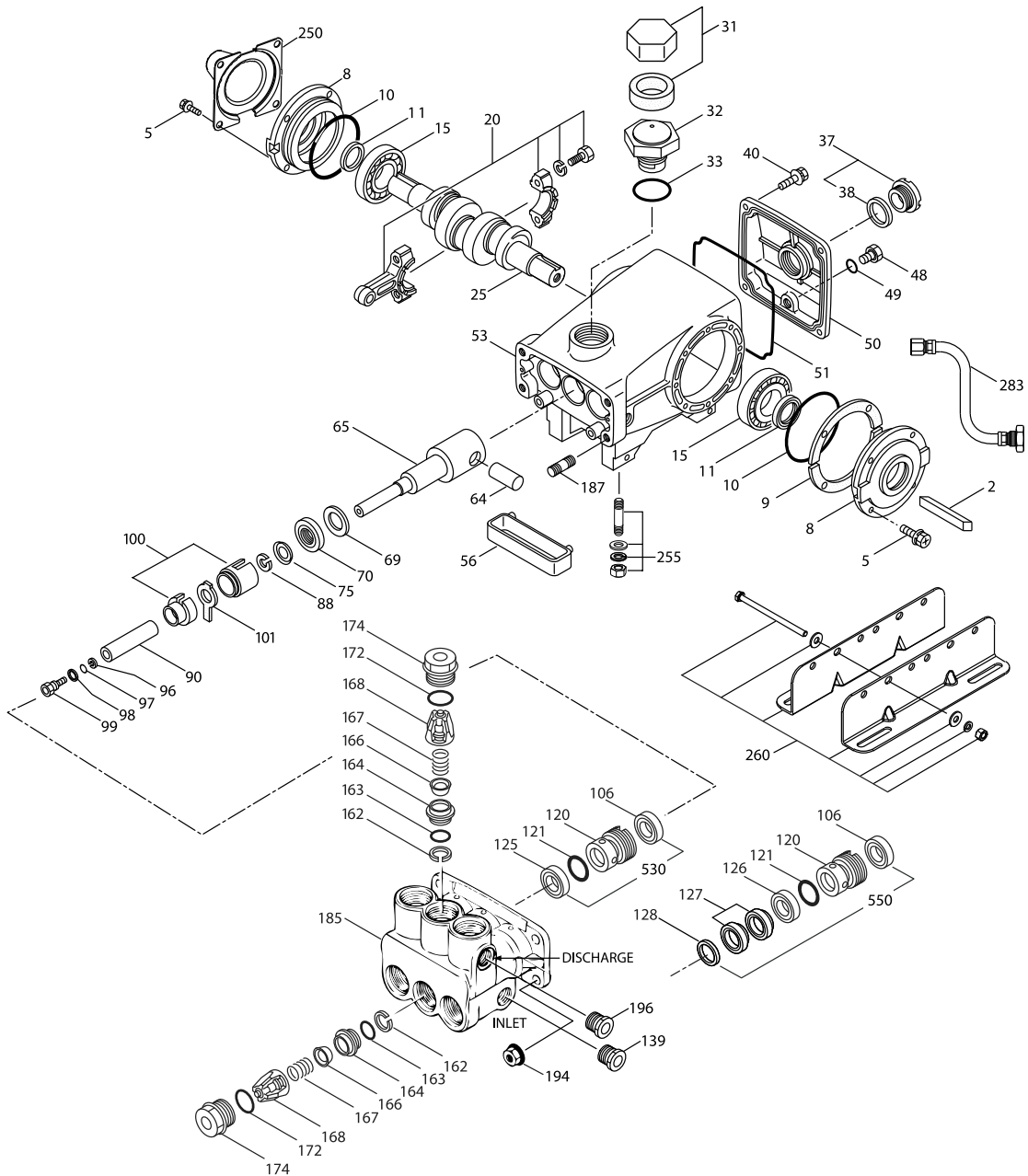
$$\frac{\text{Motor Pulley O.D.}}{\text{Pump rpm}} = \frac{\text{Pump Pulley O.D.}}{\text{Motor rpm}}$$

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 |
|------|--------------|--------|--------------|--------|--|-----|
|      | <b>530</b>   |        | <b>550</b>   |        |  |     |
| 2    | 30067        | STL    | 30067        | STL    | Key (M8x7.5x25)  | 1   |
| 5    | 125824       | STCP R | 125824       | STCP R | Screw, HHC, Sems (M6x16)                                 | 8   |
| 8    | 43223        | AL     | 43223        | AL     | Cover, Bearing   | 2   |
| 9    | 815280       | FBR    | 815280       | FBR    | Shim, Split, 2-Pc  | 1   |
| 10   | 12393        | NBR    | 12393        | NBR    | O-Ring, Bearing Cover                                    | 2   |
| 11   | 43222        | NBR    | 43222        | NBR    | Seal, Oil, Crankshaft                                    | 2   |
| 15   | 43221        | STL    | 43221        | STL    | Bearing, Roller  | 2   |
| 20   | 48863        | TNM    | 48863        | TNM    | Rod, Assy, Connecting [6/02]                             | 3   |
| 25   | 43220        | FCM    | 43220        | FCM    | Crankshaft, Dual End (M24)                               | 1   |
| 31   | 828710       | PE     | 828710       | PE     | Protector, Oil Cap w/Foam Gasket                         | 1   |
| 32   | 43211        | ABS    | 43211        | ABS    | Cap, Oil Filler  | 1   |
| 33   | 14177        | NBR    | 14177        | NBR    | O-Ring, Filler Cap - 70D                                 | 1   |
| 37   | 92241        | —      | 92241        | —      | Gauge, Oil, Bubble w/Gasket - 80D                        | 1   |
| 38   | 44428        | NBR    | 44428        | NBR    | Gasket, Flat, Oil Gauge - 80D                            | 1   |
| 40   | 125824       | STCP R | 125824       | STCP R | Screw, HHC Sems (M6x16) (See Tech Bulletin 106)          | 4   |
| 48   | 25625        | STCP   | 25625        | STCP   | Plug, Drain (1/4"x19BSP)                                 | 1   |
| 49   | 23170        | NBR    | 23170        | NBR    | O-Ring, Drain Plug - 70D                                 | 1   |
| 50   | 127701       | AL     | 127701       | AL     | Cover, Rear (M6x16) (See Tech Bulletin 106)              | 1   |
| 51   | 14047        | NBR    | 14047        | NBR    | O-Ring, Rear Cover - 70D (M6x16) (See Tech Bulletin 106) | 1   |
| 53   | 127698       | AL     | 127698       | AL     | Crankcase (M10) (M6x16) (See Tech Bulletin 106)          | 1   |
| 56   | 43240        | POP    | 43240        | POP    | Pan, Oil   | 1   |
| 64   | 43237        | CM     | 43237        | CM     | Pin, Crosshead   | 3   |
| 65   | 43229        | ZZCP   | 43229        | ZZCP   | Rod, Plunger   | 3   |
| 69   | 126589       | STCP R | 126589       | STCP R | Washer, Oil Seal   | 3   |
| 70   | 43228        | NBR    | 43228        | NBR    | Seal, Oil, Crankcase                                     | 3   |
| 75   | 43328        | S      | 43328        | S      | Slinger, Barrier   | 3   |
| 88   | 45697        | S      | 45697        | S      | Washer, Keyhole (M18xM10)                                | 3   |
| 90   | <b>43232</b> | CC     | <b>43311</b> | CC     | Plunger (M18x77 and M16x77)                              | 3   |
| 96   | 43235        | PTFE   | 43235        | PTFE   | Back-up-Ring, Plunger Retainer                           | 3   |
| 97   | 17399        | NBR    | 17399        | NBR    | O-Ring, Plunger Retainer - 80D                           | 3   |
|      | 14160        | FPM    | 14160        | FPM    | O-Ring, Plunger Retainer - 70D                           | 3   |
| 98   | 45891        | CU     | 45891        | CU     | Gasket, Plunger Retainer                                 | 3   |
| 99   | 104360       | S      | 104360       | S      | Retainer, Plunger w/Stud (See Tech Bulletin 045)         | 3   |
| 100  | 45689        | PVDF   | 45689        | PVDF   | Retainer, Seal, 2-Pc (See Tech Bulletin 105)             | 3   |
| 101  | <b>43239</b> | —      | <b>43313</b> | —      | Wick, Long Tab   | 3   |
| 106  | <b>43243</b> | NBR    | <b>43316</b> | NBR    | Seal, LPS w/S-Spg  | 3   |
|      | <b>44926</b> | FPM    | —            | —      | Seal, LPS w/SS-Spg                                       | 3   |
|      | —            | —      | 106660       | FPM    | Seal, LPS w/S-Spg  | 3   |
| 120  | <b>45683</b> | BB     | <b>45684</b> | BB     | Case, Seal   | 3   |
| 121  | 20285        | NBR    | 20285        | NBR    | O-Ring, Seal Case - 70D                                  | 3   |
|      | 11693        | FPM    | 11693        | FPM    | O-Ring, Seal Case  | 3   |
| 125  | <b>43245</b> | SNG    | —            | —      | Seal, HPS w/S  | 3   |
|      | <b>44925</b> | FPM    | —            | —      | Seal, HPS w/SS   | 3   |
| 126  | —            | —      | <b>43320</b> | BB     | Adapter, Female  | 3   |
| 127  | —            | —      | <b>43319</b> | SNG    | V-Packing  | 6   |
|      | —            | —      | <b>46287</b> | HT     | V-Packing  | 6   |
| 128  | —            | —      | <b>43318</b> | BB     | Adapter, Male  | 3   |
| 139  | 22179        | BBCP   | 22179        | BBCP   | Plug [1/2" NPT(M)]                                       | 1   |
| 162  | 43248        | PTFE   | 43248        | PTFE   | Back-up-Ring, Seat                                       | 6   |
| 163  | 43249        | NBR    | 43249        | NBR    | O-Ring, Seat - 80D                                       | 6   |
|      | 44383        | FPM    | 44383        | FPM    | O-Ring, Seat - 70D                                       | 6   |
| 164  | 43722        | S      | 43722        | S      | Seat, Q.V.   | 6   |
| 166  | 43721        | S      | 43721        | S      | Valve, Q.V.  | 6   |
| 167  | 43751        | S      | 43751        | S      | Spring, Q.V.   | 6   |
| 168  | 44564        | PVDF   | 44564        | PVDF   | Retainer, Spring   | 6   |
| 172  | 17617        | NBR    | 17617        | NBR    | O-Ring, Valve Plug - 90D                                 | 6   |
|      | 11691        | FPM    | 11691        | FPM    | O-Ring, Valve Plug - 90D                                 | 6   |
| 174  | 43851        | BBCP   | 43851        | BBCP   | Plug, Valve  | 6   |
| 185  | <b>45417</b> | BBCP   | <b>45547</b> | BBCP   | Head, Manifold (M10F)                                    | 1   |
| 187  | 46868        | S      | 46868        | S      | Stud, Manifold (M10x35)                                  | 4   |
| 194  | 126567       | STCP R | 126567       | STCP R | Nut, Flanged (M10)                                       | 4   |
| 196  | 43633        | BB     | 43633        | BB     | Plug, Discharge [3/8" NPT(M)]                            | 1   |
| 250  | 43256        | STCP   | 43256        | STCP   | Protector, Shaft   | 1   |
| 255  | 30243        | STZP   | 30243        | STZP   | Kit, Direct Mounting                                     | 1   |
| 260  | 30645        | STZP R | 30645        | STZP R | Rail, Angle, Assy A-U.S. (2.95")                         | 1   |
|      | 30611        | STZP R | 30611        | STZP R | Rail, Angle, Assy B-U.S. (2.09")                         | 1   |
| 265  | 30660        | —      | 30660        | —      | Kit, Mounting (Incls: 30645, 30206, 33000, 30067, 43256) | 1   |
| 269  | 30206        | F      | 30206        | F      | Pulley (10") (See Tech Bulletin 003)                     | 1   |
| 274  | 33000        | STL    | 33000        | STL    | Hub "H", M24 (Keyway M8) (See Tech Bulletin 003)         | 1   |

# EXPLODED VIEW



Models  
530, 550  
June 2017

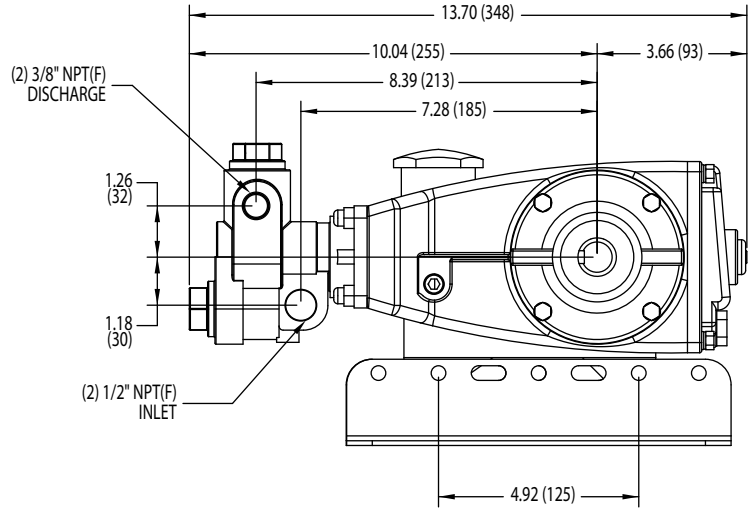
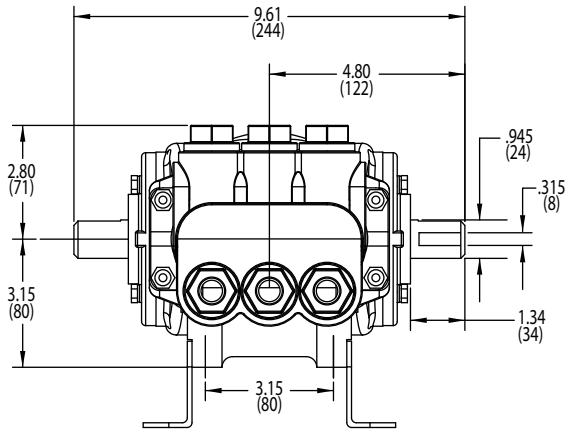
| ITEM | PART NUMBER   | MATL | PART NUMBER   | MATL | DESCRIPTION  | QTY |
|------|---------------|------|---------------|------|--|-----|
| 283  | 34334         | —    | 34334         | —    | Kit, Oil Drain   | 1   |
| 299  | <b>812183</b> | BBCP | <b>812184</b> | BBCP | Head, Complete w/NBR Seals and O-Rings   | 1   |
| 300  | <b>30488</b>  | NBR  | <b>30610</b>  | NBR  | Kit, Seal (Incls: 97, 101, 106, 121, 125 or 127) <b>Standard</b>                               | 1   |
| —    | —             | —    | <b>32936</b>  | FPM  | Kit, Seal (Incls: 97, 101, 106, 121, 127) <b>.0110</b>   | 1   |
| —    | —             | —    | <b>31610</b>  | HT   | Kit, Seal, HT (Incls: 97, 101, 106, 121, 127) <b>.3000</b>                                     | 1   |
| 310  | 30820         | NBR  | 30820         | NBR  | Kit, Valve, Quiet Valve (Incls: 162-164, 166, 167, 168, 172) <b>Standard</b>                   | 2   |
|      | 31820         | NBR  | 31820         | NBR  | Kit, Valve, Flat Valve (Incls: 162-164, 166, 167, 168, 172) <b>Standard</b>                    | 2   |
|      | 31263         | FPM  | 31263         | FPM  | Kit, Valve (Incls: 162-164, 166, 167, 168, 172) <b>.0110</b>                                   | 2   |
| 350  | 30696         | STZP | 30696         | STZP | Plier, Reverse   | 1   |
| 351  | 43257         | STZP | 43257         | STZP | Tool, Seal Case Removal  | 1   |
| 352  | 44050         | STZP | 44050         | STZP | Tool, Oil Gauge Removal  | 1   |
| —    | 6107          | —    | 6107          | —    | Oil, Bottle (21 oz.) ISO 68 Hydraulic (Fill tp 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. R Components comply with RoHS Directive

Refer to Tech Bulletins 002, 003, 024, 027, 035, 036, 043, 045, 051, 053, 054, 074, 083, 105 and 106 for additional information.

MATERIAL CODES (Not Part of Part Number): AL=Aluminum ABS=ABS Plastic BB=Brass BBCP=Brass/Chrome Plated CC=Ceramic CM=Chrome-Moly CU=Copper F=Cast Iron FBR=Fiber  
FCM=Forged Chrome-moly FPM=Fluorocarbon HT=Hi-Temp NBR=Medium Nitrile (Buna-N) PE=Ployethylene POP=Polypropylene PTFE=Pure Polytetrafluoroethylene  
PVDF=Polyvinylidene Fluoride S=304SS SNG=Special Blend (Buna) STCP=Steel/Chrome Plated STL=Steel STZP=Steel/Zinc Plated TNM=Special High Strength ZZCP=Zamak/Chrome Plated



**⚠ 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](http://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](http://www.catpumps.com/warranty).



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