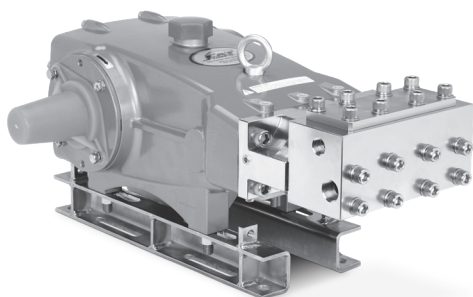


# DATA SHEET

## 35 FRAME PLUNGER PUMP



**Brass Model: 3550**



Model 3550 Shown  
(Shaft protector included; mounting rails sold separately)

### FEATURES

- Triplex plunger design ensures high efficiency and low pulsation.
- V-packings and low-pressure seals are completely lubricated and cooled by pumped liquid, greatly increasing service life.
- Special high-density, polished, concentric plungers provide a true wear surface and extended seal life.
- Wet-end easily serviced without entering crankcase.
- Pump comes standard with NBR seals. Alternative seal materials are available for higher temperature or chemical compatibility.

### SPECIFICATIONS

|                                                                         | U.S. Measure          | Metric Measure     |
|-------------------------------------------------------------------------|-----------------------|--------------------|
| Flow                                                                    | 10 gpm                | 38 lpm             |
| Pressure Range                                                          | 100–6000 psi          | 6.9–414 bar        |
| Pump RPM*                                                               | 880 rpm               | 880 rpm            |
| Inlet Pressure Range                                                    | Flooded to 70 psi     | Flooded to 4.8 bar |
| Max. Liquid Temp. (NBR)                                                 | 140° F                | 60° C              |
| <b>Alternative seals available for higher temperatures up to 180° F</b> |                       |                    |
| Bore                                                                    | 0.787"                | 20 mm              |
| Stroke                                                                  | 1.890"                | 48 mm              |
| Crankcase Capacity                                                      | 4.2 qts               | 4 l                |
| Inlets Ports (2)                                                        | ¾" NPT(F)             | ¾" NPT(F)          |
| Discharge Ports (2)                                                     | ½" NPT(F)             | ½" NPT(F)          |
| Shaft Diameter                                                          | 1.378"                | 35 mm              |
| Pulley Mounting                                                         | Either Side           | Either Side        |
| Weight                                                                  | 124 lbs               | 56.4 kg            |
| Dimensions                                                              | 24.17 x 18.11 x 9.76" | 614 x 460 x 248 mm |

\*Pump minimum is 100 RPM.

### ALTERNATIVE SEAL CONFIGURATION

| MATERIAL | SUFFIX CODE | MAXIMUM TEMPERATURE |         |
|----------|-------------|---------------------|---------|
| NBR      | —           | 140° F              | (60° C) |
| HT       | .3000       | 180° F              | (82° C) |

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

### DETERMINING THE PUMP RPM

$$\frac{\text{Rated gpm}}{\text{Rated rpm}} = \frac{\text{Desired gpm}}{\text{Desired rpm}}$$

### DETERMINING THE REQUIRED HP

$$\frac{\text{hp}}{\text{(Electric Brake)}} = \frac{\text{gpm} \times \text{psi}}{1460}$$

### DETERMINING MOTOR PULLEY SIZE

$$\frac{\text{Motor Pulley OD}}{\text{Pump rpm}} = \frac{\text{Pump Pulley OD}}{\text{Motor rpm}}$$

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

## PARTS LIST

| ITEM | P/N    | MATL   | DESCRIPTION                                                             | QTY |
|------|--------|--------|-------------------------------------------------------------------------|-----|
| 5    | 96049  | S      | Screw, HHC, Sems (M10 x 25) (See Tech Bulletin 074)                     | 8   |
| 8    | 134604 | ALE    | Cover, Bearing                                                          | 2   |
| 9    | 815279 | FBR    | Shim, Split, 2-Piece                                                    | 2   |
| 10   | 12398  | NBR    | O-Ring, Bearing Cover-70D                                               | 2   |
| 11   | 13296  | NBR    | Seal, Oil, Crankshaft                                                   | 2   |
| 12   | 855049 | S      | Shim, Split, 2-Piece                                                    | 2   |
| 15   | 29326  | STL    | Bearing, Roller                                                         | 2   |
| 20   | 121467 | TNM    | Rod, Connecting Assembly (Includes: 21, 22, 23) (See Tech Bulletin 074) | 3   |
| 21   | 126749 | STCP R | Washer, Locking (M10)                                                   | 3   |
| 22   | 126593 | STCP R | Washer, Flat (M10)                                                      | 6   |
| 23   | 122045 | STZP   | Screw, HH (M10 x 55)                                                    | 6   |
| 25   | 29325  | FCM    | Crankshaft, Dual End (M48)                                              | 1   |
| 31   | 828710 | PE     | Protector, Oil Cap with Foam Gasket                                     | 1   |
| 32   | 43211  | ABS    | Cap, Oil Filler                                                         | 1   |
| 33   | 14177  | NBR    | O-Ring, Oil Filler Cap-70D                                              | 1   |
| 34   | 126743 | STCP R | Bolt, Eye (M12 x 1.75) (For Lifting Pump Only)                          | 1   |
| 37   | 92241  | PC     | Gauge, Oil, Bubble with Gasket                                          | 2   |
| 38   | 44428  | NBR    | Gasket, Flat, Oil Gauge-80D                                             | 2   |
| 40   | 125753 | S      | Screw, HHC, Sems (M8 x 25) (See Tech Bulletin 074)                      | 8   |
| 48   | 25625  | STCP   | Plug, Drain (1/4" x 19 BSP)                                             | 1   |
| 49   | 23170  | NBR    | O-Ring, Drain Plug-70D                                                  | 1   |
| 50   | 45936  | ALE    | Cover, Crankcase                                                        | 1   |
| 51   | 16612  | NBR    | O-Ring, Crankcase-70D                                                   | 1   |
| 53   | 134786 | ALE    | Crankcase Assembly (Includes: 54)                                       | 1   |
| 54   | 27488  | S      | Pin, Guide                                                              | 2   |
| 56   | 27790  | POP    | Pan, Oil                                                                | 1   |
| 59   | 92538  | S      | Screw, HHC, Sems (M6 x 16)                                              | 2   |
| 64   | 43864  | CM     | Pin, Crosshead                                                          | 3   |
| 65   | 49076  | SHB    | Rod, Plunger                                                            | 3   |
| 69   | 126587 | STCP R | Washer, Oil Seal                                                        | 3   |
| 70   | 100488 | NBR    | Seal, Oil, Crankcase                                                    | 3   |
| 75   | 110669 | S      | Slinger, Barrier                                                        | 3   |
| 86   | 132952 | D      | Adapter                                                                 | 3   |
| 88   | 110670 | S      | Washer, Keyhole (M16)                                                   | 3   |
| 90   | 132953 | CC     | Plunger (M20 x 110)                                                     | 3   |
| 95   | 126549 | STCP R | Stud, Plunger Retainer (M7 x 103)                                       | 3   |
| 96   | 132954 | PTFB   | Backup Ring, Plunger Retainer                                           | 3   |
| 97   | 14190  | NBR    | O-Ring, Plunger Retainer-70D                                            | 3   |
| 98   | 44069  | SS     | Gasket, Retainer                                                        | 3   |
| 99   | 44068  | SS     | Retainer, Plunger (M7) (See Tech Bulletin 074)                          | 3   |
| 100  | 44119  | PPG    | Retainer, Seal                                                          | 3   |
| 101  | 44095  | —      | Wick, Long Tab                                                          | 3   |
| 106  | 43513  | NBR    | Seal, Low-Pressure with SS-Spring                                       | 3   |
| 110  | 132956 | BBCP   | Manifold, Seal                                                          | 1   |
| 112  | 11373  | NBR    | O-Ring, Inlet Manifold-70D                                              | 4   |
| 117  | 44585  | S      | Screw, HSH (M14 x 40) (See Tech Bulletin 074)                           | 4   |
| 118  | 48702  | S      | Plug (1/4" NPT[M])                                                      | 2   |
| 126  | 132958 | PTFB   | Adapter, Female                                                         | 3   |
| 127  | 43516  | SNG    | V-Packing                                                               | 9   |
| 128  | 43517  | BB     | Adapter, Male                                                           | 3   |
| 136  | 132964 | BB     | Retainer, Valve Assembly                                                | 3   |
| 155  | 14200  | NBR    | O-Ring, Valve Spacer-70D                                                | 6   |
| 156  | 132960 | PTFE   | Backup Ring, Valve Spacer                                               | 6   |
| 157  | 132959 | BB     | Spacer, Valve                                                           | 3   |
| 162  | 48510  | PTFE   | Backup Ring, Valve Seat                                                 | 6   |
| 163  | 11338  | NBR    | O-Ring, Valve Seat-70D                                                  | 6   |
| 164  | 132965 | S      | Seat, Valve                                                             | 6   |
| 166  | 48793  | SS     | Valve                                                                   | 6   |
| 167  | 43751  | S      | Spring                                                                  | 6   |
| 168  | 44564  | PVDF   | Retainer, Spring                                                        | 6   |
| 172  | 14179  | NBR    | O-Ring, Valve Plug-70D                                                  | 3   |
| 173  | 49850  | PTFB   | Backup Ring, Valve Plug                                                 | 3   |
| 174  | 132966 | BB     | Plug, Valve                                                             | 3   |
| 177  | 128261 | S      | Screw, HSH (M12 x 35) (See Tech Bulletin 074)                           | 8   |
| 178  | 670086 | BB     | Cover, Valve                                                            | 1   |
| 185  | 132962 | BBCP   | Manifold, Inlet/Discharge                                               | 1   |
| 186  | 19935  | SCP    | Washer (M12)                                                            | 16  |
| 188  | 128035 | S      | Screw, HSH (M12 x 110) (See Tech Bulletin 074)                          | 8   |
| 250  | 855042 | NY     | Protector, Shaft with Two (2) Screws, Lockwashers and Washers           | 1   |

R Components comply with RoHS Directive.

For additional technical information see [www.catpumps.com/literature/tech-bulletins](http://www.catpumps.com/literature/tech-bulletins).

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

BB=Brass BBCP= Brass/Chrome Plated CC=Ceramic CM=Chrome-Moly D=Acetal FBR=Fiber FCM=Forged Chrome-Moly NBR=Medium Nitrile (Buna-N)

NBRs=Buna, Silicone Free NY=Nylon PC=Poly Carbonate PE=Polyethylene POP=Polypropylene PPG=Glass Fitted Polypropylene PTFE=Pure Polytetrafluoroethylene

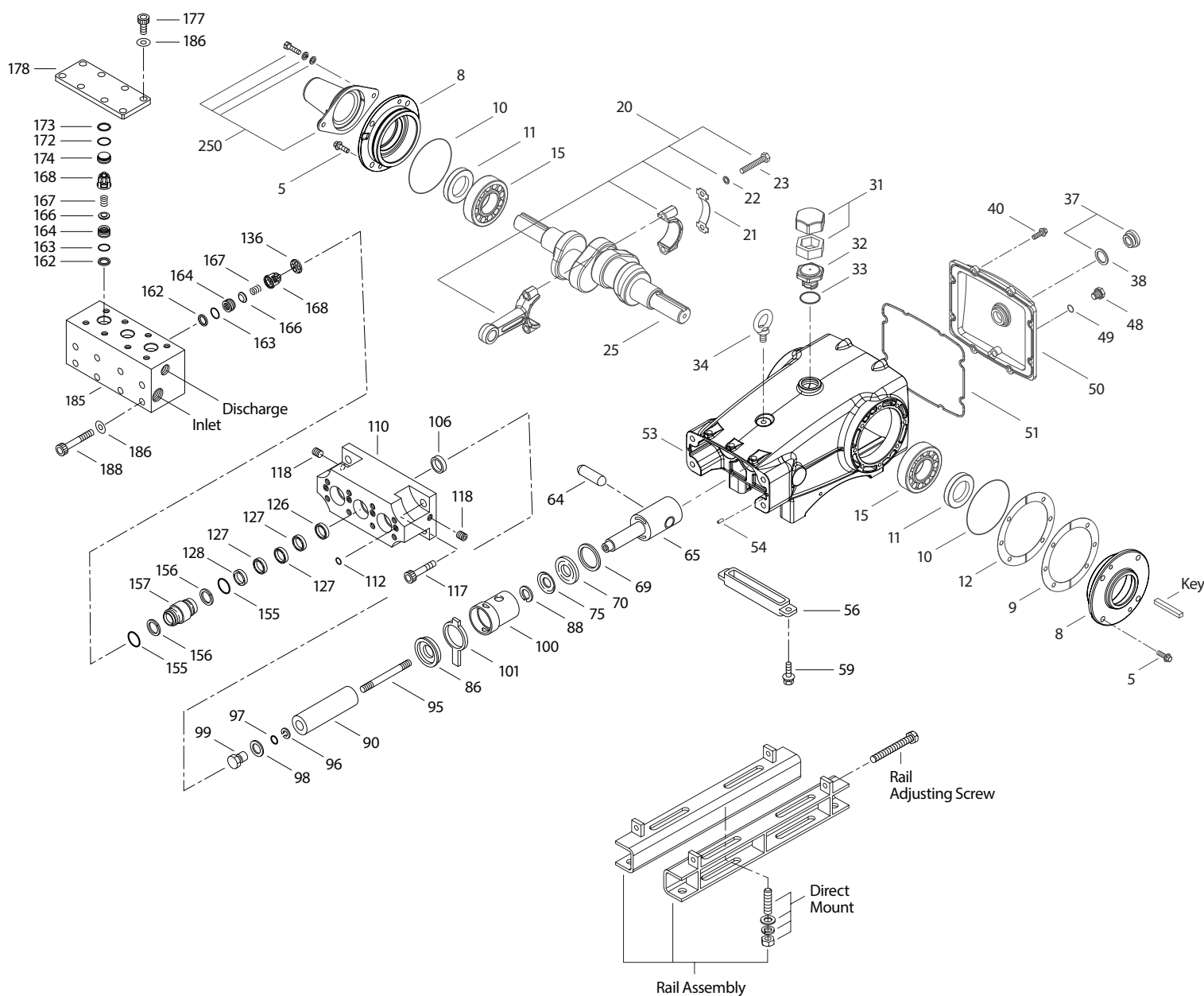
PTFB=Polyterafluoroethylene w/60% Bronze PVDF=PolyvinylideneFluoride S=304SS SCP=304SS/Chrome-Plated SNG=Special Blend (Buna)

SS=316SS SHB=304SS/High Strength Brass STCP=Steel/Chrome Plated STL=Steel STZP=Steel/Zinc Plated

TNM=Special High Strength ZP=Zinc Plated

Optional Parts and Accessories and Service Parts listed on page 3. Standard and Optional Seal and Valve Kits listed on page 4.

## EXPLODED VIEW



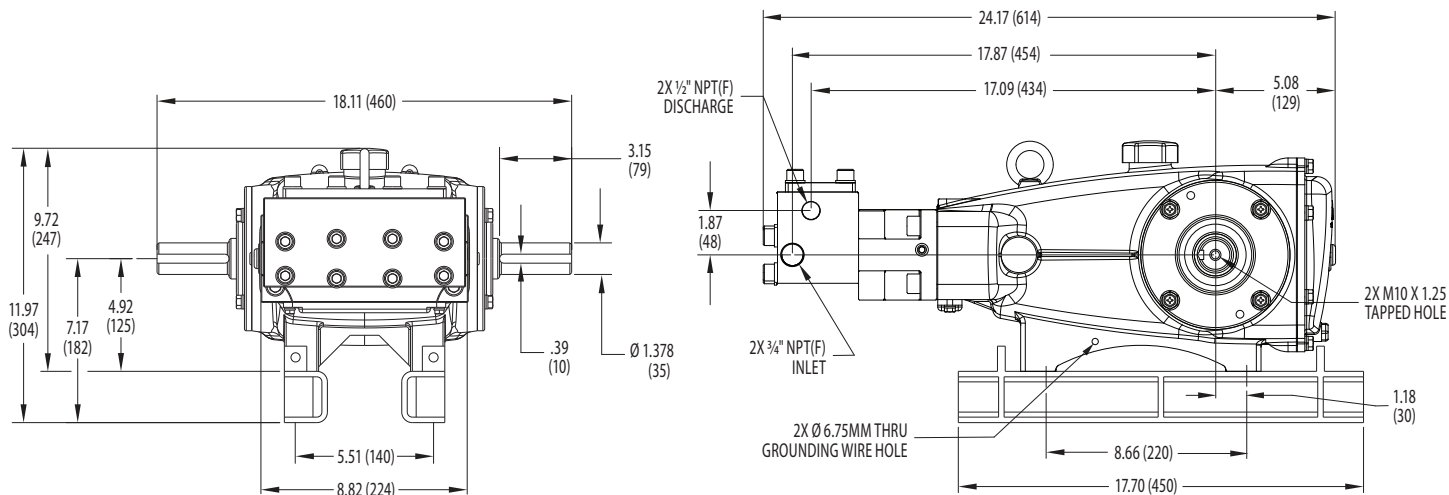
Model 3550  
October 2023

### OPTIONAL PARTS AND ACCESSORIES

| PART   | DESCRIPTION                                     | QTY |
|--------|-------------------------------------------------|-----|
| 34021  | Key (M10 x 8 x 70)                              | 1   |
| 92674  | Mount, Rail Assembly (STZP R) (Includes: 34018) | 1   |
| 34018  | Mount, Direct (STZP R)                          | 1   |
| 990013 | Hub, "B", 35 mm (STL)                           | 1   |
| 80540  | Screwing, Adjusting (M12 x 100)                 | 2   |
| 30278  | Oiler (1 oz) (Not Shown)                        | 3   |
| 34314  | Kit, Oil Drain (3/8" x 48") (Not Shown)         | 1   |

### SERVICE PARTS

| PART   | DESCRIPTION                                                                             | QTY |
|--------|-----------------------------------------------------------------------------------------|-----|
| 76982  | Kit, Seal – Standard NBR                                                                | 1   |
| 77033  | Kit, Valve – Standard NBR                                                               | 1   |
| 6100   | Oil, Case (12–21 oz bottle)<br>(Fill to Specified Crankcase Capacity Prior to Start-up) | 1   |
| 6124   | Gasket, Liquid (3 oz)                                                                   | 1   |
| 30696  | Reverse Pliers (Not Shown)                                                              | 1   |
| 32273  | Kit, Removal Tool + Crankcase Oil Seals (Not Shown)                                     | 1   |
| 818608 | Head, Complete – with NBR Seals and O-Rings                                             | 1   |



## SEAL KITS One (1) seal kit required per pump

| PUMP MODELS | NBR (STD)    | NBR (.3000)    |
|-------------|--------------|----------------|
| 3550        | <b>76982</b> | <b>77069 *</b> |

| ITEM (Included in Seal Kits) |        |        | DESCRIPTION                       | QTY |
|------------------------------|--------|--------|-----------------------------------|-----|
| 97                           | 14190  | 14190  | O-Ring, Plunger Retainer          | 3   |
| 106                          | 43513  | 43513  | Seal, Low-Pressure with SS-Spring | 3   |
| 112                          | 11373  | 11373  | O-Ring, Inlet Manifold            | 4   |
| 126                          | 132958 | 132958 | Adapter, Female                   | 3   |
| 127                          | 43516  | 44607  | V-Packing                         | 9   |
| 155                          | 14200  | 14200  | O-Ring, Valve Spacer              | 6   |
| 156                          | 132960 | 132960 | Backup Ring, Valve Spacer         | 6   |

\*Review material codes for individual items (STG generally may be used as an alternative)

## VALVE KITS One (1) valve kit required per pump

| PUMP MODELS | NBR (STD)    | NBR (.3000)  |
|-------------|--------------|--------------|
| 3550        | <b>77033</b> | <b>77033</b> |

| ITEM (Included in Valve Kits) |        |        | DESCRIPTION             | QTY |
|-------------------------------|--------|--------|-------------------------|-----|
| 162                           | 48510  | 48510  | Backup Ring, Valve Seat | 6   |
| 163                           | 11338  | 11338  | O-Ring, Valve Seat      | 6   |
| 164                           | 132965 | 132965 | Seat                    | 6   |
| 166                           | 48793  | 48793  | Valve                   | 6   |
| 167                           | 43751  | 43751  | Spring                  | 6   |
| 168                           | 44564  | 44564  | Retainer, Spring        | 6   |
| 172                           | 14179  | 14179  | O-Ring, Valve Plug      | 3   |
| 173                           | 49850  | 49850  | Backup Ring, Valve Plug | 3   |

### ⚠ CAUTIONS AND WARNINGS

All high-pressure systems require a primary pressure regulating device (e.g. regulator, unloader) and a secondary pressure relief device (e.g. 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](http://www.catpumps.com/dynamic-literature/cautions-and-warnings) or can be requested directly from Cat Pumps.

### WARRANTY

View the Limited Warranty online at [www.catpumps.com/literature/cat-pumps-limited-warranty](http://www.catpumps.com/literature/cat-pumps-limited-warranty)