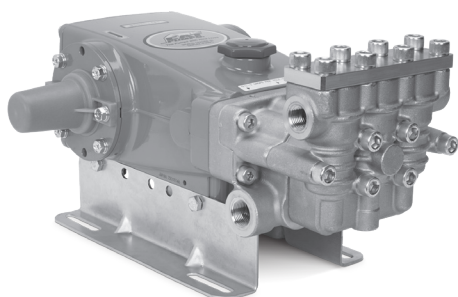


# DATA SHEET

## 15 FRAME PLUNGER PUMPS



**Brass Model: 1580**



(Shaft protector included. Mounting rails sold separately)

### FEATURES

- Triplex plunger design ensures high efficiency and low pulsation.
- Stacked valve design allows for easy servicing.
- Belt-driven option provides precision flow settings.
- 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.

### SPECIFICATIONS

|                                                                  | U.S. Measure          | Metric Measure     |
|------------------------------------------------------------------|-----------------------|--------------------|
| Flow                                                             | 12.0 gpm              | 45.4 lpm           |
| Pressure Range                                                   | 100–3000 psi          | 6.9–207 bar        |
| Pump RPM*                                                        | 1180 rpm              | 1180 rpm           |
| Inlet Pressure                                                   | Flooded to 70 psi     | Flooded to 4.8 bar |
| Max. Liquid Temp. (NBR)                                          | 140° F                | 60° C              |
| Alternative seals available for higher temperatures up to 190° F |                       |                    |
| Bore                                                             | 0.945"                | 24 mm              |
| Stroke                                                           | 1.181"                | 30 mm              |
| Crankcase Capacity                                               | 42 oz                 | 1.26 l             |
| Inlets Ports (2)                                                 | ¾" NPT(F)             | ¾" NPT(F)          |
| Discharge Ports (2)                                              | ½" NPT(F)             | ½" NPT(F)          |
| Pulley Mounting                                                  | Either Side           | Either Side        |
| Shaft Diameter                                                   | 1.181"                | 30 mm              |
| Weight                                                           | 59.5 lbs              | 27 kg              |
| Dimensions                                                       | 16.89 x 12.99 x 7.24" | 429 x 330 x 184 mm |

\*Pump minimum is 100 RPM.

### ALTERNATIVE SEAL CONFIGURATION

| MATERIAL | SUFFIX CODE | MAXIMUM TEMPERATURE |
|----------|-------------|---------------------|
| NBR      | —           | 140°F (60°C)        |
| FPM      | .0110       | 180°F (82°C)        |
| STHT     | .3400       | 190°F (88°C)        |

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

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

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

## PARTS LIST

| ITEM | P/N    | MATL   | DESCRIPTION                                                  | QTY |
|------|--------|--------|--------------------------------------------------------------|-----|
| 5    | 126540 | STCP R | Screw, HHC, Sems (M8 x 20) (See Tech Bulletin 074, 128)      | 8   |
| 8    | 134805 | ALE    | Cover, Bearing (See Tech Bulletin 118, 128)                  | 2   |
| 9    | 855043 | FBR    | Shim, Split, 2-Piece (See Tech Bulletin 128)                 | 0-2 |
| 10   | 11340  | NBR    | O-Ring, Bearing Cover-70D                                    | 2   |
| 11   | 43495  | NBR    | Seal, Oil, Crankshaft                                        | 2   |
| 12   | 855044 | S      | Shim, Split, 2-Piece (See Tech Bulletin 128)                 | 0-2 |
| 15   | 39060  | STL    | Bearing, Roller                                              | 2   |
| 20   | 126805 | BZ     | Rod, Connecting Assembly (See Tech Bulletin 074)             | 3   |
| 25   | 43494  | FCM    | Crankshaft, Dual-End (M30)                                   | 1   |
| 32   | 43211  | ABS    | Cap, Oil Filler                                              | 1   |
| 33   | 14177  | NBR    | O-Ring, Filler Cap-70D                                       | 1   |
| 37   | 92241  | PC     | Gauge, Oil, Bubble with Gasket - 80D (See Tech Bulletin 074) | 1   |
| 38   | 44428  | NBR    | Gasket, Flat, Oil Gauge-80D                                  | 1   |
| 40   | 126541 | STCP R | Screw, HHC, Sems (M6 x 20) (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   | 133576 | ALE    | Cover, Rear (See Tech Bulletin 118)                          | 1   |
| 51   | 44834  | NBR    | O-Ring, Rear Cover-70D                                       | 1   |
| 53   | 134889 | ALE    | Crankcase (Includes Guide Pins) (See Tech Bulletin 118, 128) | 1   |
| 54   | 27488  | S      | Pin, Guide                                                   | 2   |
| 56   | 44664  | POP    | Pan, Oil                                                     | 1   |
| 64   | 43507  | CM     | Pin, Crosshead                                               | 3   |
| 65   | 49223  | SBZ    | Rod, Plunger                                                 | 3   |
| 69   | 126592 | STCP R | Washer, Oil Seal                                             | 3   |
| 70   | 43500  | NBR    | Seal, Oil Crankcase                                          | 3   |
| 75   | 43506  | S      | Slinger, Barrier                                             | 3   |
| 88   | 45675  | S      | Washer, Keyhole                                              | 3   |
| 89   | 43553  | BB     | Spacer                                                       | 3   |
| 90   | 43552  | CC     | Plunger, Ceramic (M24 x 77)                                  | 3   |
| 96   | 43235  | PTFE   | Back-up Ring, Plunger Retainer                               | 3   |
| 97   | 17399  | NBR    | O-Ring, Plunger Retainer-80D                                 | 3   |
| 98   | 45891  | CU     | Gasket, Plunger Retainer                                     | 3   |
| 99   | 104360 | S      | Retainer with Stud, Plunger (See Tech Bulletin 074)          | 3   |
| 100  | 855001 | POP    | Retainer, Seal, 2-Piece                                      | 3   |
| 101  | 43554  | —      | Wick                                                         | 3   |
| 106  | 44035  | NBR    | Seal, LPS with SS-Spring                                     | 3   |
| 110  | 133140 | FBB    | Manifold, Inlet                                              | 1   |
| 112  | 14179  | NBR    | O-Ring, Inlet Manifold-70D                                   | 3   |
| 117  | 126515 | STCP R | Screw, HSH (M10 x 55) (See Tech Bulletin 074)                | 4   |
| 126  | 43558  | BB     | Adapter, Female                                              | 3   |
| 127  | 43559  | SNG    | V-Packing                                                    | 6   |
| 128  | 43560  | BB     | Adapter, Male                                                | 3   |
| 155  | 11442  | NBR    | O-Ring, Adapter-70D                                          | 6   |
| 156  | 23086  | PTFE   | Backup Ring, Adapter                                         | 6   |
| 157  | 133141 | BB     | Adapter                                                      | 3   |
| 160  | 49238  | NBR    | O-Ring, Seat, Inlet-90D                                      | 3   |
| 161  | 133144 | S      | Seat, Inlet                                                  | 3   |
| 162  | 49235  | PTFE   | Backup Ring, Seat                                            | 3   |
| 163  | 49236  | NBR    | O-Ring, Seat, Discharge-70D                                  | 3   |
| 164  | 49234  | S      | Seat, Discharge                                              | 3   |
| 165  | 49198  | PVDF   | Retainer, Spring, Inlet                                      | 3   |
| 166  | 48793  | SS     | Valve                                                        | 6   |
| 167  | 43751  | S      | Spring                                                       | 6   |
| 168  | 49199  | PVDF   | Retainer, Spring, Discharge                                  | 3   |
| 172  | 14176  | NBR    | O-Ring, Valve Plug-70D                                       | 3   |
| 173  | 49232  | PTFE   | Backup Ring, Valve Plug                                      | 3   |
| 174  | 49239  | BB     | Plug, Valve                                                  | 3   |
| 177  | 126783 | STCP R | Screw, HSH (M12 x 25) (See Tech Bulletin 074)                | 8   |
| 178  | 49227  | BB     | Cover, Valve                                                 | 1   |
| 185  | 133143 | BB     | Manifold, Discharge                                          | 1   |
| 188  | 126519 | STCP R | Screw, HSH (M12 x 70) (See Tech Bulletin 074)                | 6   |
| 250  | 855046 | NY     | Protector, Shaft with 2-Screws (See Tech Bulletin 128)       | 1   |

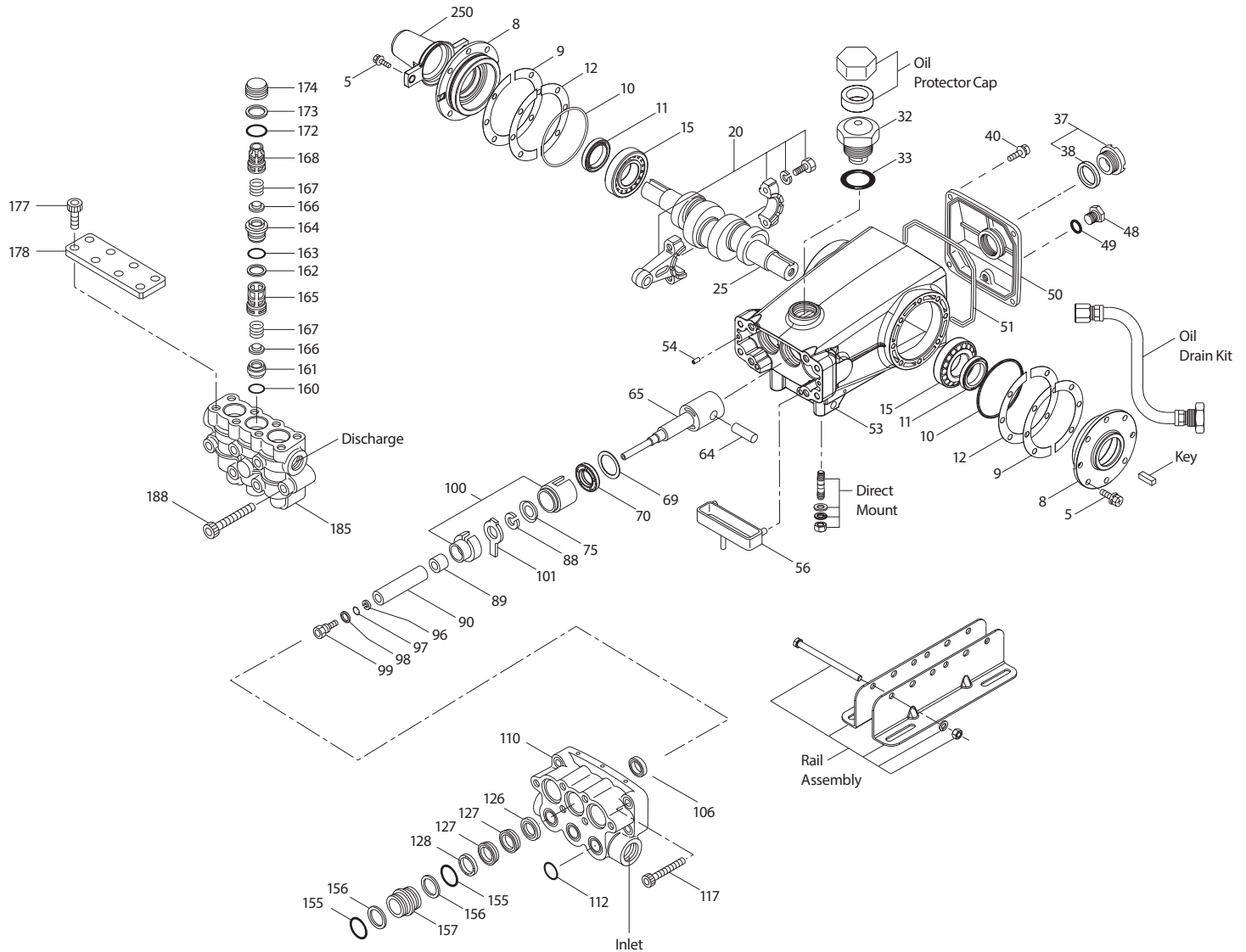
\*Review individual parts in each kit for material code identification. *Italics are optional items.*

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 BZ=Bronze CC=Ceramic CM=Chrome-moly CU=Copper  
F=Cast Iron FBB=Forged Brass FBR=Fiber FCM=Forged Chrome-moly FPM=Fluorocarbon NBR=Medium Nitrile (Buna-N) NY=Nylon PC=Poly Carbonate  
PE=Polyethylene POP=Polypropylene PTFE=Pure Polytetrafluoroethylene PVDF=Polyvinylidene Fluoride S=304SS SS=316SS SBZ=304SS/Bronze  
STCP=Steel/Chrome Plated SNG=Special Blend (Buna) STG=Special Blend PTFE White ST=Special PTFE  
STL=Steel STZP=Steel/Zinc Plated

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

# EXPLODED VIEW



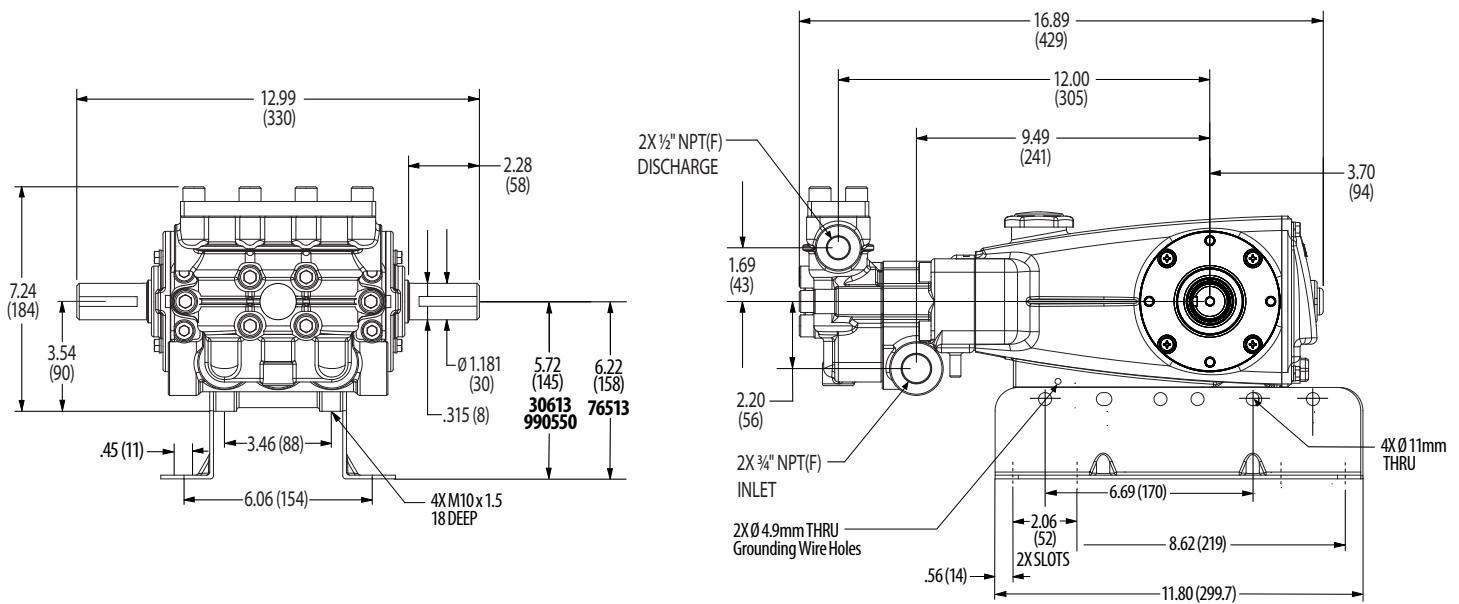
Model 1580  
August 2021

## OPTIONAL PARTS AND ACCESSORIES

| PART   | DESCRIPTION                                           | QTY |
|--------|-------------------------------------------------------|-----|
| 30067  | Key (M8 x 7.5 x 25) (Use with 30059 Hub)              | 1   |
| 990036 | Key (M8 x 7 x 40) (Use with 30059 or 990012 Hub)      | 1   |
| 30613  | Assembly, Rail (5.72" See Dimensional Drawing)        | 1   |
| 76513  | Assembly, Rail (6.22" See Dimensional Drawing)        | 1   |
| 990550 | Assembly, Rail Diesel (5.72" See Dimensional Drawing) | 1   |
| 30264  | Mount, Direct                                         | 1   |
| 828710 | Protector, Oil Cap                                    | 1   |
| 34334  | Kit, Oil Drain (3/8" x 24")                           | 1   |
| 30206  | Pulley, 10", 2 Groove                                 | 1   |
| 30059  | Hub, "H", 30mm (Use with 30067 or 990036 Keys)        | 1   |
| 990012 | Hub, "B", 30mm (Use with 990036 Key)                  | 1   |

## SERVICE PARTS

| PART         | DESCRIPTION                                                                                      | QTY |
|--------------|--------------------------------------------------------------------------------------------------|-----|
| <b>76432</b> | Kit, Seal-Standard NBR                                                                           | 1   |
| <b>76428</b> | Kit, Valve-Standard NBR                                                                          | 1   |
| 6107         | Oil, Bottle (21 oz) ISO 68 Hydraulic<br>(Fill to Specified Crankcase Capacity Prior to Start-up) | 2   |
| 6124         | Gasket, Liquid (3 oz)                                                                            | 1   |
| 818606       | Head, Complete with NBR Seals and O-Rings                                                        | 1   |



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

| PUMP MODELS | NBR (STD) | FPM (.0110) | STHT (.3400) |
|-------------|-----------|-------------|--------------|
| 1580        | 76432     | 76858       | 32125        |

| ITEM (Included in Seal Kits) |       |        |        | DESCRIPTION              | QTY |
|------------------------------|-------|--------|--------|--------------------------|-----|
| 97                           | 17399 | 14160  | 17399  | O-Ring, Plunger Retainer | 3   |
| 106                          | 44035 | 44388  | 76035  | Seal, LPS with SS-Spring | 3   |
| 112                          | 14179 | 15855  | 14179  | O-Ring, Inlet Manifold   | 3   |
| 127                          | 43559 | 103692 | 103692 | V-Packing                | 6   |
| 155                          | 11442 | 77318  | 11442  | O-Ring, Adapter          | 6   |
| 156                          | 23086 | 23086  | 23086  | Backup Ring, Adapter     | 6   |

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

| PUMP MODELS | NBR (STD) | FPM (.0110) | STHT (.3400) |
|-------------|-----------|-------------|--------------|
| 1580        | 76428     | 76871       | 76428        |

| ITEM (Included in Valve Kits) |        |        |        | DESCRIPTION                 | QTY |
|-------------------------------|--------|--------|--------|-----------------------------|-----|
| 160                           | 49238  | 129593 | 49238  | O-Ring, Seat, Inlet         | 3   |
| 161                           | 133144 | 133144 | 133144 | Seat, Inlet                 | 3   |
| 162                           | 49235  | 49235  | 49235  | Backup Ring, Discharge Seat | 3   |
| 163                           | 49236  | 129594 | 49236  | O-Ring, Seat, Discharge     | 3   |
| 164                           | 49234  | 49234  | 49234  | Seat, Discharge             | 3   |
| 165                           | 49198  | 49198  | 49198  | Retainer, Spring, Inlet     | 3   |
| 166                           | 48793  | 48793  | 48793  | Valve                       | 6   |
| 167                           | 43751  | 43751  | 43751  | Spring                      | 6   |
| 168                           | 49199  | 49199  | 49199  | Retainer, Spring, Discharge | 3   |
| 172                           | 14176  | 77319  | 14176  | O-Ring, Valve Plug          | 3   |
| 173                           | 49232  | 49232  | 49232  | Backup Ring, Valve Plug     | 3   |

### ⚠ 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](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)