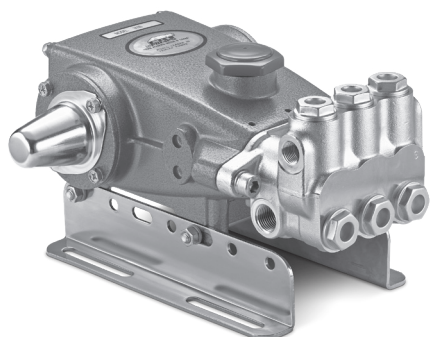


# DATA SHEET

## 5 FRAME PLUNGER PUMPS



### Brass Models: 310S, 340S, 350S



Model 310S Shown  
(Mounting rails and shaft protector sold separately)

#### FEATURES

- Triplex plunger design ensures high efficiency and low pulsation.
- Durable high-pressure seals are lubricated and cooled by pumped liquid.
- Pre-set low-pressure seals provide secondary protection against external leaks and require no packing adjustment.
- Direct-driven option offers a compact footprint for direct-drive motors with a NEMA or IEC frame, or SAE hydraulic motors with a bell housing/flexible coupler assembly.
- Pump comes standard with NBR seals. Alternative seal materials are available for higher temperature or chemical compatibility.

#### COMMON

| SPECIFICATIONS                                                   | U.S. Measure         | Metric Measure     |
|------------------------------------------------------------------|----------------------|--------------------|
| Bore                                                             | 0.787"               | 20 mm              |
| Standard Liquid Temperature                                      | 160° F               | 71° C              |
| Alternative seals available for higher temperatures up to 180° F |                      |                    |
| Crankcase Capacity                                               | 18 oz                | 0.55 l             |
| Inlet Ports (2)                                                  | ½" NPT(F)            | ½" NPT(F)          |
| Discharge Ports (2)                                              | ⅜" NPT(F)            | ⅜" NPT(F)          |
| Shaft Diameter                                                   | 0.787"               | 20 mm              |
| Weight                                                           | 19.8 lbs             | 9 kg               |
| Dimensions (Models 310S, 350S)                                   | 11.71 x 10.0 x 5.24" | 298 x 254 x 133 mm |
| Dimensions (Model 340S)                                          | 11.71 x 8.26 x 5.24" | 298 x 210 x 133 mm |

#### SPECIFICATIONS

|                          | U.S. Measure      | Metric Measure   |
|--------------------------|-------------------|------------------|
| <b>310S Belt Drive</b>   |                   |                  |
| Flow                     | 4.0 gpm           | 15 lpm           |
| Pressure Range           | 100–2200 psi      | 6.9–152 bar      |
| Pump RPM*                | 950 rpm           | 950 rpm          |
| Inlet Pressure Range     | -5–60 psi         | -0.35–4 bar      |
| Stroke                   | 0.709"            | 18 mm            |
| <b>340S Direct Drive</b> |                   |                  |
| Flow                     | 4.0 gpm           | 15 lpm           |
| Pressure Range           | 100–1800 psi      | 6.9–124 bar      |
| Pump RPM*                | 1725 rpm          | 1725 rpm         |
| Inlet Pressure Range     | Flooded to 60 psi | Flooded to 4 bar |
| Stroke                   | 0.394"            | 10 mm            |
| <b>350S Direct Drive</b> |                   |                  |
| Flow                     | 5.0 gpm           | 19 lpm           |
| Pressure Range           | 100–1500 psi      | 6.9–103 bar      |
| Pump RPM*                | 1725 rpm          | 1725 rpm         |
| Inlet Pressure Range     | Flooded to 60 psi | Flooded to 4 bar |
| Stroke                   | 0.472"            | 12 mm            |

#### ALTERNATE SPECIFICATIONS

|                | U.S. Measure | Metric Measure |
|----------------|--------------|----------------|
| <b>310S</b>    |              |                |
| Flow           | 5.0 gpm      | 19 lpm         |
| Pressure Range | 100–1500 psi | 6.9–103 bar    |
| Pump RPM*      | 1190 rpm     | 1190 rpm       |

\*Pump minimum is 100 RPM.

#### 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)      |
| 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

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

#### 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 | PART NUMBERS     |        | DESCRIPTION                                            | QTY   |
|------|------------------|--------|--------------------------------------------------------|-------|
|      | 310S, 340S, 350S | MATL   |                                                        |       |
| 5    | 125824           | STCP R | Screw, HHC, Sems (M6 x 16) (See Tech Bulletin 074)     | 8     |
| 8    | 43344            | AL     | Cover, Bearing                                         | 2/1/2 |
| 10   | 43343            | NBR    | O-Ring, Bearing Cover                                  | 2     |
| 11   | 43222            | NBR    | Seal, Oil, Crankshaft                                  | 2/1/2 |
| 15   | 14480            | STL    | Bearing, Ball                                          | 2     |
| 20   | 45883            | HS     | Rod, Connecting Assembly (See Tech Bulletin 074)       | 3     |
| 25   | <b>43342</b>     | FCM    | Crankshaft, Dual-End (M18) (Model 310S)                | 1     |
|      | <b>44945</b>     | FCM    | Crankshaft, Single-End (M10) (Model 340S)              | 1     |
|      | <b>43838</b>     | FCM    | Crankshaft, Dual-End (M12) (Model 350S)                | 1     |
| 30   | <b>44949</b>     | AL     | Cover, Blind Shaft (Model 340S)                        | 1     |
| 32   | 43211            | ABS    | Cap, Oil Filler                                        | 1     |
| 33   | 14177            | NBR    | O-Ring, Filler Cap                                     | 1     |
| 37   | 92241            | PC     | Gauge, Oil, Bubble with Gasket (See Tech Bulletin 074) | 1     |
| 38   | 44428            | NBR    | Gasket, Flat, Oil Gauge                                | 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                                     | 1     |
| 50   | 48772            | AL     | Cover, Rear                                            | 1     |
| 51   | 48773            | NBR    | O-Ring, Rear Cover                                     | 1     |
| 53   | 48769            | AL     | Crankcase                                              | 1     |
| 56   | 43355            | POP    | Pan, Oil                                               | 1     |
| 64   | 43351            | CM     | Pin, Crosshead                                         | 3     |
| 65   | 43365            | ZZCP   | Rod, Plunger                                           | 3     |
| 70   | 43228            | NBR    | Seal, Oil, Crankcase                                   | 3     |
| 75   | 43328            | S      | Slinger, Barrier                                       | 3     |
| 88   | 45697            | S      | Washer, Keyhole (M18 x 10)                             | 3     |
| 90   | 43367            | CC     | Plunger (M20 x 72)                                     | 3     |
| 96   | 43235            | PTFE   | Backup Ring, Plunger Retainer                          | 3     |
| 97   | 17399            | NBR    | O-Ring, Plunger Retainer                               | 3     |
| 98   | 45891            | CU     | Gasket                                                 | 3     |
| 99   | 104360           | S      | Retainer, Plunger with Stud (See Tech Bulletin 074)    | 3     |
| 100  | 45688            | PVDF   | Retainer, Seal, 2-Piece                                | 3     |
| 101  | 43302            | —      | Wick, Long Tab                                         | 3     |
| 106  | 43305            | NBR    | Seal, Low-Pressure with S-Spring                       | 3     |
| 120  | 45679            | BB     | Case, Seal (See Tech Bulletin 074)                     | 3     |
| 121  | 14200            | NBR    | O-Ring, Seal Case                                      | 3     |
| 125  | 43307            | SNG    | Seal, High-Pressure with S-Support                     | 3     |
| 139  | 22179            | BBCP   | Plug, Inlet (1/2" NPT[M])                              | 1     |
| 162  | 48361            | D      | Backup Ring, Seat                                      | 6     |
| 163  | 43358            | NBR    | O-Ring, Seat                                           | 6     |
| 164  | 43725            | S      | Seat                                                   | 6     |
| 166  | 43723            | S      | Valve                                                  | 6     |
| 167  | 43750            | S      | Spring, Valve                                          | 6     |
| 168  | 44565            | PVDF   | Retainer, Valve Spring                                 | 6     |
| 172  | 49382            | NBR    | O-Ring, Valve Plug                                     | 6     |
| 174  | 43849            | BBCP   | Plug, Valve (See Tech Bulletin 074)                    | 6     |
| 185  | 46278            | BBCP   | Head, Manifold                                         | 1     |
| 188  | 126520           | STCP R | Screw, HSH, Sems (M10 x 35) (See Tech Bulletin 074)    | 2     |

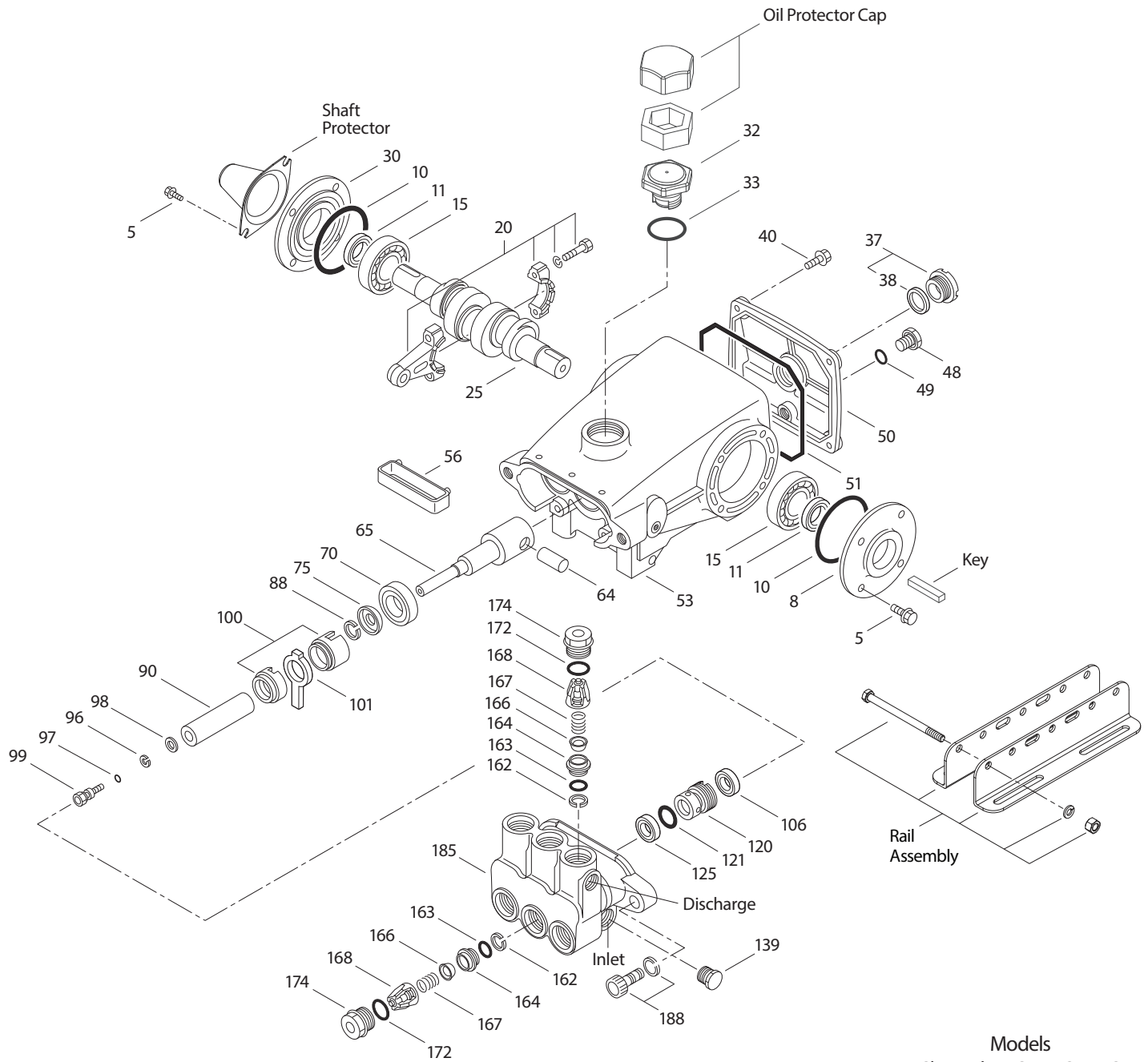
**Bold print part numbers are unique to a particular pump model.**

*Italics are optional items.* R Components comply with RoHS Directive. [ ] Date of latest production change.

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  
 AL=Aluminum BB=Brass BBCP=Brass/Chrome Plated CC=Ceramic CM=Chrome-moly CU=Copper D=Acetal EPDM=Ethylene Propylene Diene Monomer  
 FCM=Forged Chrome-moly FPM=Fluorocarbon HS=High Strength HT=High Temp (EPDM Alternative) NBR=Medium Nitrile (Buna-N)  
 PC=Polycarbonate POP=Polypropylene PTFE=Pure Polytetrafluoroethylene PVDF=Polyvinylidene Fluoride S=304SS  
 SNG=Special Blend (Buna) STL=Steel STCP=Steel/Chrome Plated STZP=Steel/Zinc Plated  
 ZZCP=Chrome Plated/Steel - Zamak

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

# EXPLODED VIEW



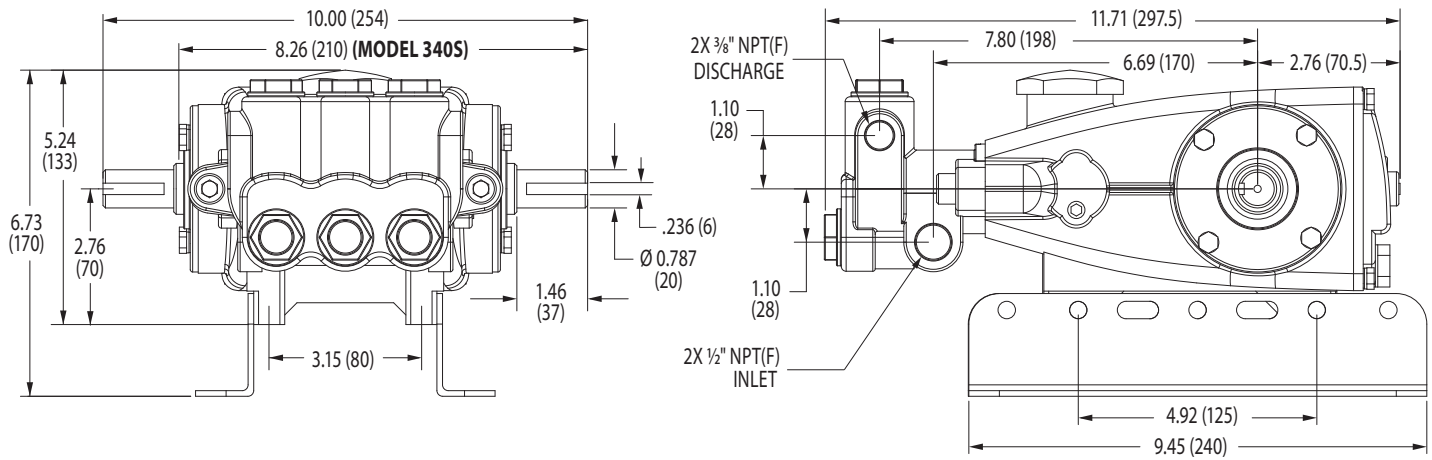
Models  
Sleeved 310S, 340S, 350S  
September 2025

## OPTIONAL PARTS AND ACCESSORIES

| PART   | DESCRIPTION                             | QTY |
|--------|-----------------------------------------|-----|
| 30057  | Key (M6 x 6 x 25)                       | 1   |
| 30659  | Kit, Complete Mounting                  | 1   |
| 30611  | Assembly, Mount, Rail (Belt-Drive Only) | 1   |
| 30645  | Assembly, Mount, Rail (Belt-Drive Only) | 1   |
| 30243  | Mount, Direct (Belt Drive-Only)         | 1   |
| 118672 | Protector, Shaft                        | 1   |
| 828710 | Protector, Oil Cap                      | 1   |
| 30633  | Assembly, Pulley & Key (Not Shown)      | 1   |
| 30944  | Assembly, Hub & Key (Not Shown)         | 1   |
| 34334  | Kit, Oil Drain (3/8" x 24") (Not Shown) | 1   |

## SERVICE PARTS

| PART          | DESCRIPTION                                                                     | QTY |
|---------------|---------------------------------------------------------------------------------|-----|
| <b>30623</b>  | Kit, Seal – Standard NBR                                                        | 1   |
| <b>30821</b>  | Kit, Valve – Standard NBR                                                       | 2   |
| 6107          | Oil, Bottle (21 oz)<br>(Fill to Specified Crankcase Capacity Prior to Start-up) | 1   |
| 30696         | Reverse Pliers (Not Shown)                                                      | 1   |
| 33004         | Socket, Seal Case (1/2" Drive) (Not Shown)                                      | 1   |
| <b>816551</b> | Head, Complete with NBR Seals and O-Rings (Models 310S, 340S, 350S)             | 1   |



Models 310S, 350S

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

| PUMP MODELS      | NBR (STD)    | FPM (.0110)  | EPDM (.0220) ♦ | HT (.3000)   |
|------------------|--------------|--------------|----------------|--------------|
| 310S, 340S, 350S | <b>30623</b> | <b>34155</b> | <b>31163*</b>  | <b>33623</b> |

| ITEM (Included in Seal Kits) |       |       |       |       | DESCRIPTION                              | QTY |
|------------------------------|-------|-------|-------|-------|------------------------------------------|-----|
| 97                           | 17399 | 14160 | 46204 | 17399 | O-Ring, Plunger Retainer                 | 3   |
| 101                          | 43302 | 43302 | 43302 | 43302 | Wick, Long Tab                           | 3   |
| 106                          | 43305 | —     | —     | 43305 | Seal, Low-Pressure with S-Spring         | 3   |
|                              | —     | 45153 | 48429 | —     | Seal, Low-Pressure with SS-Spring        | 3   |
| 121                          | 14200 | 11719 | 48907 | 14200 | O-Ring, Seal Case                        | 3   |
| 125                          | 43307 | —     | —     | —     | Seal, High-Pressure with S-Support       | 3   |
|                              | —     | 44936 | 46667 | 46667 | Seal, High-Pressure with 2-Piece Support | 3   |

♦ Silicone oil/grease required

\*Review material code for individual items (HT may be used as an alternative)

## VALVE KITS Two (2) valve kits required per pump

| PUMP MODELS      | NBR (STD)    | FPM (.0110)  | EPDM (.0220) ♦ | HT (.3000)   |
|------------------|--------------|--------------|----------------|--------------|
| 310S, 340S, 350S | <b>30821</b> | <b>31821</b> | <b>31162</b>   | <b>30821</b> |

| ITEM (Included in Valve Kits) |       |       |       |       | DESCRIPTION        | QTY |
|-------------------------------|-------|-------|-------|-------|--------------------|-----|
| 162                           | 48361 | 48361 | 48361 | 48361 | Backup Ring, Seat  | 3   |
| 163                           | 43358 | 44938 | 48908 | 43358 | O-Ring, Seat       | 3   |
| 164                           | 43725 | 43725 | 43725 | 43725 | Seat               | 3   |
| 166                           | 43723 | 43723 | 43723 | 43723 | Valve              | 3   |
| 167                           | 43750 | 43750 | 43750 | 43750 | Spring             | 3   |
| 168                           | 44565 | 44565 | 44565 | 44565 | Retainer, Spring   | 3   |
| 172                           | 49382 | 15855 | 48431 | 49382 | O-Ring, Valve Plug | 3   |

♦ Silicone oil/grease required

### ⚠ 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)