

DATA SHEET

35 FRAME PLUNGER PUMPS



Stainless Steel Model: **3531.44101**
Brass Model: **3535.44101**



Model 3531.44101 Shown
 (Shaft protector included, mounting rails sold separately)

| SPECIFICATIONS | U.S. | Metric |
|-------------------------|-----------------------|--------------------|
| Flow | 36 gpm | 136 lpm |
| Pressure Range | 100 - 1200 psi | 6.9 - 83 bar |
| Inlet Pressure Range | Flooded to 70 psi | Flooded to 4.8 bar |
| RPM | 800 rpm | 800 rpm |
| Bore | 1.575" | 40 mm |
| Stroke | 1.890" | 48 mm |
| Crankcase Capacity | 4.2 qts | 4 l |
| Max. Liquid Temperature | 240° F | 115° C |
| Inlet Ports (2) | 1-1/2" NPT(F) | 1-1/2" NPT(F) |
| Discharge Ports (2) | 1" NPT(F) | 1" NPT(F) |
| Pulley Mounting | Either Side | Either Side |
| Shaft Diameter | 1.378" | 35 mm |
| Weight | 139 lbs. | 63 kg |
| Dimensions | 24.33 x 18.11 x 9.72" | 618 x 460 x 247 mm |

FEATURES

- Positive displacement technology for optimum energy efficiency.
- Field tested, high pressure triplex pump configured for high temperature applications up to 240° F (115° C).
- Designed for continuous-duty performance where low life cycle costs are a must.

ELECTRIC HORSEPOWER REQUIREMENTS

| FLOW | | PRESSURE | | | RPM |
|-------------|-----|------------|-------------|-------------|-----|
| | | psi 800 | psi 1000 | psi 1200 | |
| U.S. gpm | lpm | bar 55 | bar 69 | bar 83 | |
| 36 | 136 | 19.8 | 24.7 | 29.7 | 800 |
| 30 | 114 | 16.5 | 20.6 | 24.7 | 667 |
| 25 | 95 | 13.7 | 17.2 | 20.6 | 556 |

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. $\frac{\text{gpm} \times \text{psi}}{1460} = \frac{\text{Electric Brake H. P. Required}}{\text{H. P. Required}}$

See complete Drive Packages [Incls: Pulleys, Belts, Hubs, Key] Tech Bulletin 003.
 Refer to pump **Service Manual** for repair procedure and additional technical information.

PARTS LIST

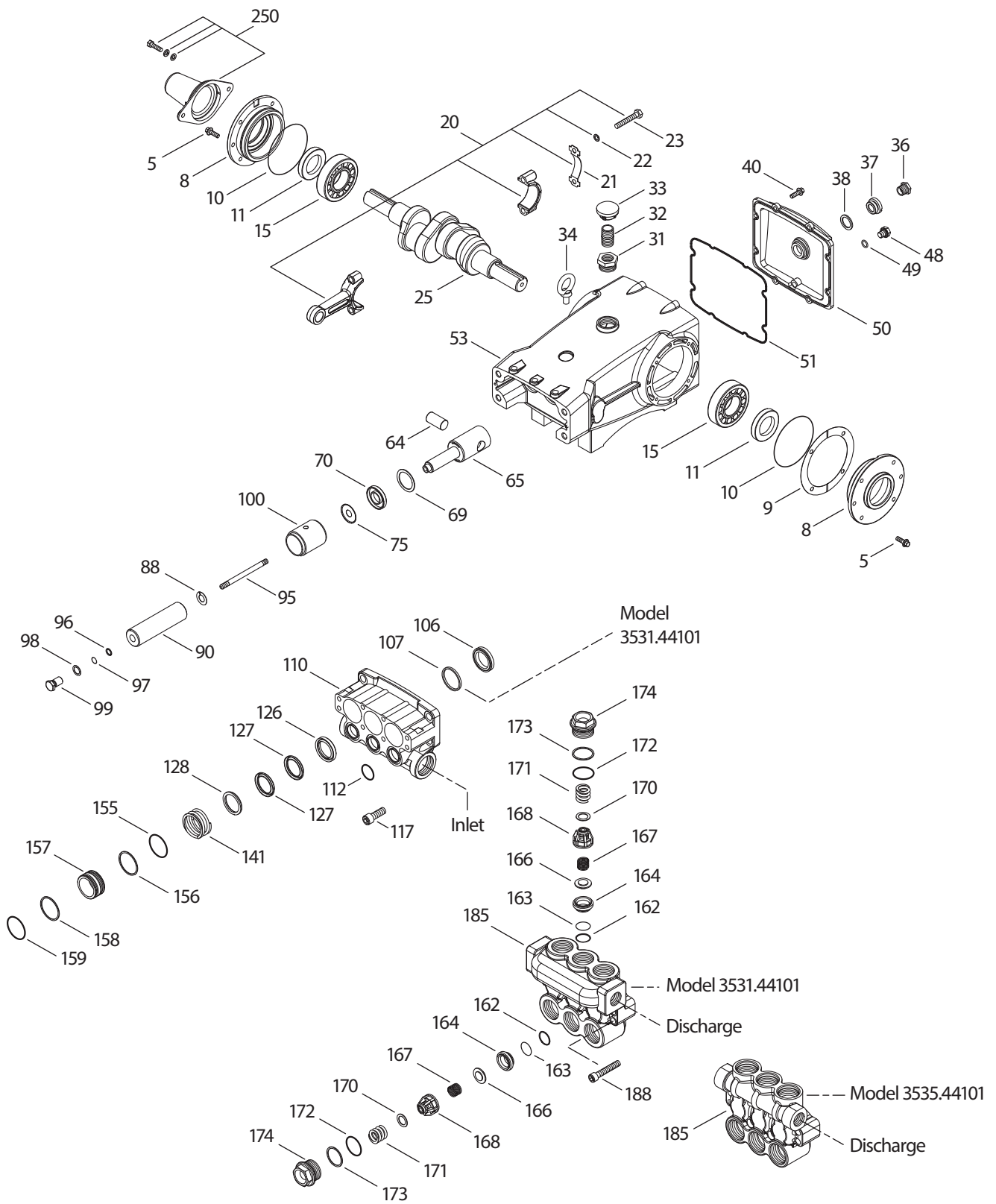
| ITEM | MATL | | MATL | | DESCRIPTION | QTY |
|------|---------------|--------|--------------|--------|--|-----|
| | 3531.44101 | | 3535.44101 | | | |
| 5 | 125753 | S | 125753 | S | Screw, HHC Sems (M8 x 25) | 8 |
| 8 | 44542 | AL | 44542 | AL | Cover, Bearing | 2 |
| 9 | 815279 | FBR | 815279 | FBR | Shim, Split 2-piece | 2 |
| 10 | 76173 | FPM | 76173 | FPM | O-Ring, Bearing Cover | 2 |
| 11 | 76172 | FPM | 76172 | FPM | Seal, Oil, Crankshaft | 2 |
| 15 | 29326 | STL | 29326 | STL | Bearing, Roller | 2 |
| 20 | 121467 | TNM | 121467 | TNM | Rod, Connecting Assy (Incls: 21, 22, 23) | 3 |
| 21 | 126749 | STCP R | 126749 | STCP R | Washer, Locking | 3 |
| 22 | 126593 | STCP R | 126593 | STCP R | Shim, Washer (M10.5) | 6 |
| 23 | 122045 | STZP | 122045 | STZP | Screw, HH (M10 x 55) | 6 |
| 25 | 29325 | FCM | 29325 | FCM | Crankshaft, Dual End | 1 |
| 31 | 76411 | BB | 76411 | BB | Adapter, 3/4"NPT(F) | 1 |
| 32 | 992623 | BB | 992623 | BB | Nipple, Close 3/4"NPT(M) | 1 |
| 33 | 76331 | STCP | 76331 | STCP | Cap, Vented | 1 |
| 34 | 126743 | STCP R | 126743 | STCP R | Bolt, Eye (M12 x 1.75) (For lifting Pump Only) | 1 |
| 36 | 76792 | SS | 76792 | SS | Gauge, Sight | 1 |
| 37 | 76791 | AL | 76791 | AL | Adapter, Sight | 1 |
| 38 | 44428 | NBR | 44428 | NBR | Gasket, Flat, Adapter - 80D | 1 |
| 40 | 125753 | S | 125753 | S | Screw, HHC Sems (M8 x 25) | 8 |
| 48 | 25625 | STCP | 25625 | STCP | Plug, Drain (1/4" x 19BSP) | 1 |
| 49 | 30322 | FPM | 30322 | FPM | O-Ring, Drain Plug | 1 |
| 50 | 45936 | AL | 45936 | AL | Cover, Rear | 1 |
| 51 | 76174 | FPM | 76174 | FPM | O-Ring, Rear Cover - 75D | 1 |
| 53 | 44487 | AL | 44487 | AL | Crankcase Assy (Incls: 34,54) | 1 |
| 54 | 27488 | S | 27488 | S | Pin, Guide | 2 |
| 64 | 43864 | CM | 43864 | CM | Pin, Crosshead | 3 |
| 65 | 45116 | SSZZ | 45116 | SSZZ | Rod, Plunger | 3 |
| 69 | 126587 | STCP R | 126587 | STCP R | Washer, Oil Seal | 3 |
| 70 | 44739 | FPM | 44739 | FPM | Seal, Oil, Crankcase | 3 |
| 75 | 43865 | S | 43865 | S | Slinger, Barrier | 3 |
| 88 | 45676 | S | 45676 | S | Washer, Keyhole | 3 |
| 90 | 43921 | CC | 43921 | CC | Plunger (M40 x 145) | 3 |
| 95 | 89778 | SS | 89778 | SS | Stud, Plunger Retainer (M10 x 135) | 3 |
| 96 | 20189 | PTFE | 20189 | PTFE | Back-up-Ring, Plunger Retainer | 3 |
| 97 | 11375 | FPM | 11375 | FPM | O-Ring, Plunger Retainer | 3 |
| 98 | 44085 | SS | 44085 | SS | Gasket, Plunger Retainer | 3 |
| 99 | 44084 | SS | 44084 | SS | Retainer, Plunger (M10) | 3 |
| 100 | 999324 | AL | 999324 | AL | Retainer, Seal | 3 |
| 106 | 701066 | SFTB | 76398 | ST4 | Seal, LPS w/S-Spg | 3 |
| 107 | 45381 | SS | — | — | Spacer, LPS | 3 |
| 110 | 45365 | SS | 49464 | BBCP R | Manifold, Inlet | 1 |
| 112 | 14183 | FPM | 14183 | FPM | O-Ring, Inlet Manifold | 3 |
| 117 | 44585 | S | 44585 | S | Screw, HSH (M14 x 40) | 4 |
| 126 | 45367 | SS | 46494 | BB | Adapter, Female | 3 |
| 127 | 76780 | ST4 | 76780 | ST4 | V-Packing | 6 |
| 128 | 45368 | SS | 43928 | BB | Adapter, Male | 3 |
| 141 | 49519 | SS | 49519 | SS | Spring, Coil | 3 |
| 155 | 20137 | FPM | 20137 | FPM | O-Ring, V-Packing Spacer - 70D | 3 |
| 156 | 20464 | PTFE | 20464 | PTFE | Backup-Ring, V-Packing Spacer | 3 |
| 157 | 49520 | SS | 49478 | BB | Spacer, V-Packing | 3 |
| 158 | 20464 | PTFE | 20464 | PTFE | Back-up-Ring, V-Packing Spacer | 3 |
| 159 | 20137 | FPM | 20137 | FPM | O-Ring, V-Packing Spacer - 70D | 3 |
| 162 | 44614 | PTFE | 44614 | PTFE | Back-up-Ring, Valve Seat | 6 |
| 163 | 14330 | FPM | 14330 | FPM | O-Ring, Valve Seat | 6 |
| 164 | 44612 | SS | 44727 | S | Seat | 6 |
| 166 | 44108 | SS | 43932 | S | Valve | 6 |
| 167 | 44109 | SS | 44109 | SS | Spring | 6 |
| 168 | 44728 | PVDF | 44728 | PVDF | Retainer, Spring | 6 |
| 170 | 44729 | SS | 44729 | SS | Washer, Spring Retainer | 6 |
| 171 | 44644 | SS | 44644 | SS | Spring, Coil | 6 |
| 172 | 11747 | FPM | 11747 | FPM | O-Ring, Valve Plug - 90D | 6 |
| 173 | 20388 | PTFE | 20388 | PTFE | Back-up-Ring, Valve Plug | 6 |
| 174 | 49300 | SSD | 46444 | FBB | Plug, Valve | 6 |
| 185 | 49299 | SSD | 49465 | BBCP R | Manifold, Discharge | 1 |
| 188 | 89981 | S | 89981 | S | Screw, HSH (M12 x 70) | 8 |
| 250 | 44516 | NY | 44516 | NY | Protector, Shaft | 1 |

Bold face part numbers are unique to a particular pump model R Components comply with RoHS Directive.

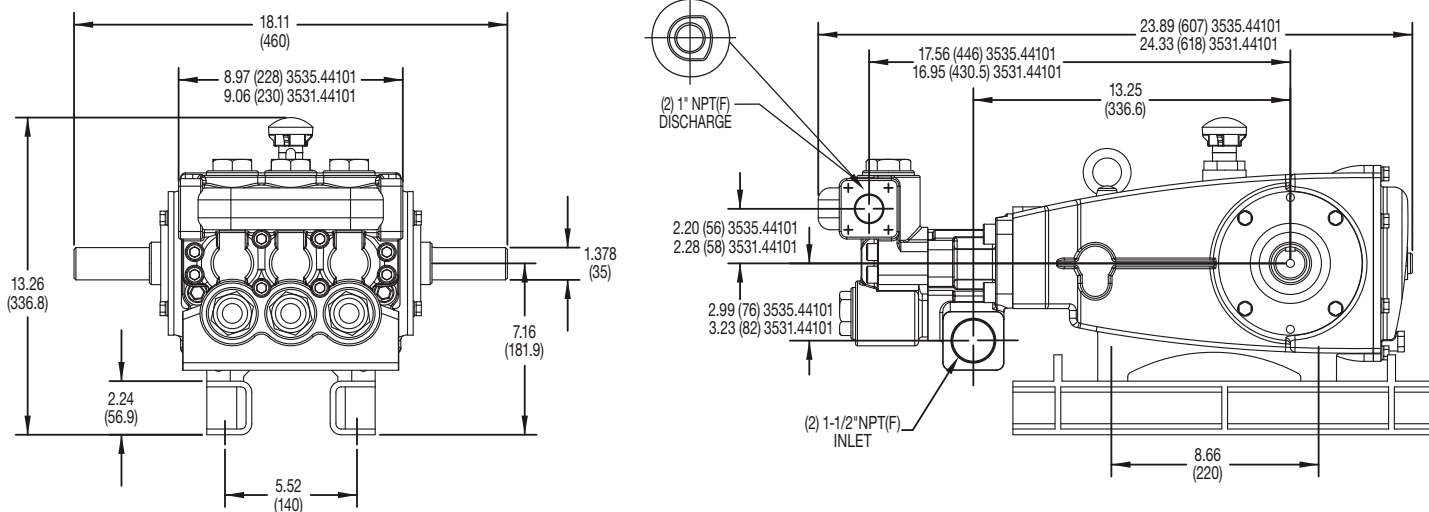
View Tech Bulletins 002, 003, 024, 040, 041, 050, 052, 053, 064, 069, 074, 083, 100, 105, 109 and 114 for additional information.

MATERIAL CODES (Not Part of Part Number): AL=Aluminum BB=Brass BBCP=Brass/Chrome Plated CC=Ceramic CM=Chrome-Moly FBB=Forged/Brass FBR=Fiber
 FCM=Forged Chrome-moly FPM=Fluorocarbon NBR=Medium Nitrile (Buna-N) NY=Nylon PTFE=Pure Polytetrafluoroethylene PVDF=Polyvinylidene Fluoride
 S=304SS SFTB=Special Blend PTFE Black SS=316SS SSD=Duplex Stainless Steel STL=Steel ST4=Special PTFE4 STCP=Steel/Chrome Plated STZP=Steel/Zinc Plated
 SSZZ=316SS/Zamak TNM=Special High Strength

EXPLODED VIEW



MODEL 3535.44101

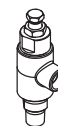


REPAIR KITS AND PARTS

| PART NUMBER | DESCRIPTION | QTY |
|--------------------|---|-----|
| 76276 (3531.44101) | Kit, Seal (Includes Items 97, 106, 112, 127, 155, 156, 158 and 159) | 1 |
| 76269 (3535.44101) | | |
| 77029 (3531.44101) | Kit, Valve (Includes Items 162, 163, 164, 166,167, 168, 170, 172 and 173) | 2 |
| 76263 (3535.44101) | | |
| 6107 | Oil, Bottle (21 oz.) ISO 68 Hydraulic | 4 |
| 34021 | Key (M10x8x70) | 1 |
| 6119 | Lubricant, Anti seize (2 oz.) (Model 3531.44101) | 1 |



7032, 7032.100



890711



890702



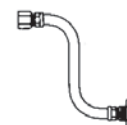
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OPTIONAL PARTS AND ACCESSORIES

| PART NUMBER | DESCRIPTION | QTY |
|----------------|---|-----|
| 7032, 7032.100 | Regulator (Primary Pressure Control) | 1 |
| 890702 | Relief Valve (Secondary Pressure Control) | 1 |
| 890711 | Pop-Off Valve (Secondary Pressure Control) | 1 |
| 6073 | Pressure Gauge | 1 |
| 6013 | Accumulator | 1 |
| 92674 | Mounting Rail Assembly | 1 |
| 76334 | Kit, Oil Indicator (3/8" x 24") See Individual Data Sheet | 1 |
| 34334 | Kit, Oil Drain (3/8" x 24") See Individual Data Sheet | 1 |
| 30696 | Pliers (Reverse) | 1 |
| 44050 | Tool, Sight Gauge Removal | 1 |



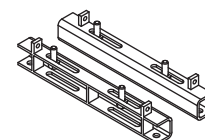
6013



34334



6107



92674

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 or can be requested directly from Cat Pumps.

WARRANTY

View the Limited Warranty on-line at www.catpumps.com/warranty.



CAT PUMPS

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