

60 Frame Piston Pump

Models

6024 6044

FEATURES

Superior Design

- Triplex UniFlo design provides continuous forward fluid flow for smooth operation.
- Wetted cups and floating pistons are lubricated and cooled by pumped fluid for long cup life.
- Mechanically actuated inlet valves give strong lift and easy prime.
- All stainless steel discharge valves are a spherical design for quieter operation.
- Oil bath crankcase assures optimum lubrication.
- Lubricated inlet seals prevent leakage and prolong life.

Quality Materials

- Cylinder and sleeve wear surfaces are hard chrome plated 304 stainless steel for maximum durability and abrasion resistance.
- Chrome plated, brass manifolds and 316 optional stainless steel manifolds are strong and corrosion resistant.
- Heavy duty connecting rods are made of high quality Zamak offering superior bearing quality strength.
- Chrome-moly crankshaft gives unmatched strength and surface hardness.
- Oversized crankshaft bearings with greater loading capacity mean longer bearing life.

Easy Maintenance

- Stepped stainless steel piston rod with chrome-plated stainless steel sleeve allows easy replacement from front of pump.
- All wet-end wear parts are easily serviced without entering crankcase, requiring less time and effort.
- Wear parts are available in handy kits.
- Routine lubrication checks are the only maintenance required on this precision built pump.

$$\frac{\text{Rated G.P.M.}}{\text{THE PUMP R.P.M.}} = \frac{\text{"Desired" G.P.M.}}{\text{"Desired" R.P.M.}}$$

$$\frac{\text{GPM} \times \text{PSI}}{\text{1460}} = \text{Electric Brake H. P. Required}$$

$$\frac{\text{Motor Pulley O.D.}}{\text{MOTOR PULLEY SIZE}} = \frac{\text{Pump Pulley O.D.}}{\text{Motor R.P.M.}}$$

Note: Consult engine manufacturer when using gas or diesel engine. Refer to pump Service Manual for important Inlet Condition Check-List, Start-up Procedure, Tech Bulletins and Pump Maintenance information.

SPECIFICATIONS

MODEL 6024

| | U.S. Measure | Metric Measure |
|--------------------|-----------------|----------------|
| Volume | 12 GPM | (45 L/M) |
| Discharge Pressure | 100 to 5000 PSI | (7 to 350 BAR) |
| RPM | 500 RPM | (500 RPM) |
| Bore | 984" | (25 mm) |

MODEL 6044

| | | |
|--------------------|-----------------|----------------|
| Volume | 20 GPM | (76 L/M) |
| Discharge Pressure | 100 to 3000 PSI | (7 to 210 BAR) |
| RPM | 500 RPM | (500 RPM) |
| Bore | 1.260" | (32 mm) |

COMMON SPECIFICATIONS

| | | |
|---------------------------|--|--------------------|
| Stroke | 2.480" | (63 mm) |
| Crankcase Capacity | 10 Qts. | (9.46 L) |
| Maximum Fluid Temperature | 140°F | (60°C) |
| Max. Inlet Pressure | -8.5 to +40 PSI | (-0.6 to +2.8 BAR) |
| Inlet Ports (1) | 2" NPT | (2" NPT) |
| Discharge Ports (3) | 1" NPT | (1" NPT) |
| Pulley Mounting | Either Side | (Either Side) |
| Shaft Diameter | 1.772" | (45 mm) |
| Weight | 265 lbs. | (120 kg) |
| Dimensions | 35.3" x 24.0" x 17.1" (895 x 610 x 434 mm) | |

HORSEPOWER REQUIREMENTS

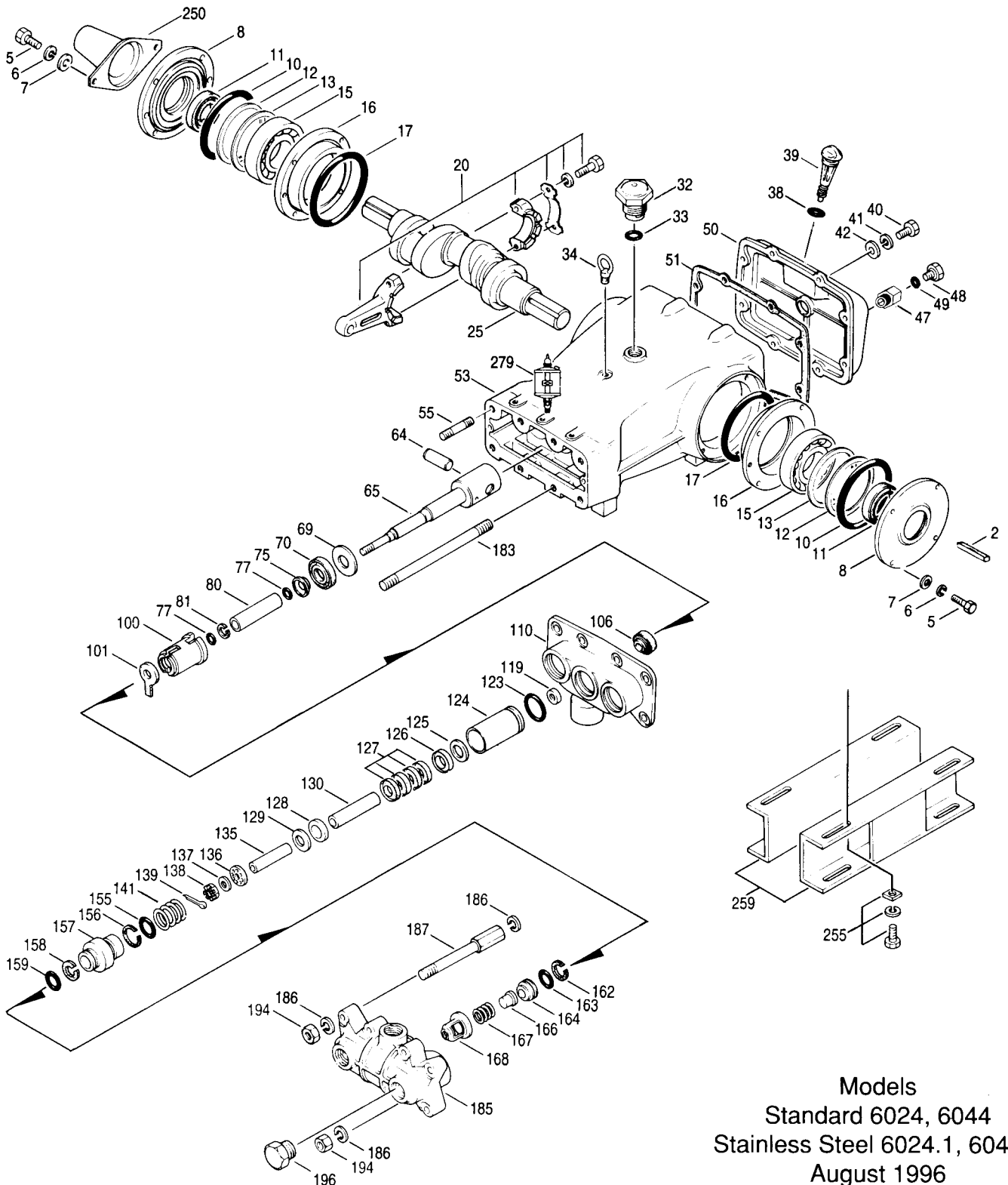
| Model | FLOW | | PRESSURE | | | | | | | RPM | DRIVE |
|-------|----------|-----|----------|----------|----------|----------|----------|----------|-----|---|-------|
| | | | PSI 2000 | PSI 2500 | PSI 3000 | PSI 4000 | PSI 4500 | PSI 5000 | | | |
| | U.S. GPM | L/M | BAR 140 | BAR 175 | BAR 210 | BAR 280 | BAR 315 | BAR 350 | | Consult CAT PUMPS for Pump and Motor Pulley Sizes | |
| 6024 | 12 | 45 | N/A | N/A | N/A | 32.9 | 37.1 | 41.2 | 500 | | |
| | 11 | 42 | N/A | N/A | N/A | 30.2 | 34.0 | 37.8 | 458 | | |
| | 10 | 38 | N/A | N/A | N/A | 27.5 | 30.9 | 34.3 | 417 | | |
| 6044 | 20 | 76 | 27.5 | 34.3 | 41.2 | N/A | N/A | N/A | 500 | | |
| | 18 | 68 | 24.7 | 30.9 | 37.6 | N/A | N/A | N/A | 450 | | |
| | 16 | 61 | 22.0 | 27.5 | 33.0 | N/A | N/A | N/A | 400 | | |

"Customer confidence is our greatest asset"

PARTS LIST

| ITEM | PART NUMBER | | DESCRIPTION | QTY |
|------|-------------|------------|--|-----|
| | Model 6024 | Model 6044 | | |
| 2 | 43048 | 43048 | Key (M14 x 9 x 90) | 1 |
| 4 | 14177 B | 14177 B | O-Ring, Filler Cap | 1 |
| 5 | 80296 Z | 80296 Z | Screw, Hex Cap (M10 x 40) | 8 |
| 6 | 12503 Z | 12503 Z | Washer, Split Lock | 8 |
| 7 | 12490 Z | 12490 Z | Washer | 8 |
| 8 | 29443 A | 29443 A | Bearing Case - Outer | 2 |
| 10 | 29444 B | 29444 B | O-Ring, Bearing Case | 2 |
| 11 | 11443 B | 11443 B | Oil Seal | 2 |
| 12 | 43642 | 43642 | Washer, Bearing Case | 2 |
| 13 | 43643 | 43643 | Washer, Bearing Case | 2 |
| 15 | 29441 | 29441 | Bearing | 2 |
| 16 | 29442 A | 29442 A | Bearing Case - Inner | 2 |
| 17 | 29444 B | 29444 B | O-Ring, Bearing Case | 2 |
| 20 | 29447 | 29447 | Connecting Rod | 3 |
| 21 | 44941 | 44941 | Washer, Tab - Conn. Rod | 3 |
| | 43641 | 43641 | Washer (M10) Conn. Rod | 6 |
| 25 | 29440 | 29440 | Crankshaft | 1 |
| 32 | 43211 | 43211 | Oil Filler Cap | 1 |
| 33 | 14177 B | 14177 B | O-Ring, Filler Cap | 1 |
| 34 | 29726 | 29726 | Eye Bolt | 1 |
| 38 | 11338 B | 11338 B | O-Ring, Dip Stick | 1 |
| 39 | 27769 | 27769 | Dip Stick | 1 |
| 40 | 80288 Z | 80288 Z | Screw, Hex Cap (M10 x 30) | 6 |
| 41 | 12503 Z | 12503 Z | Washer, Split Lock | 6 |
| 42 | 12490 Z | 12490 Z | Washer (M10) | 6 |
| 47 | 25144 Z | 25144 Z | Adapter, Drain Plug (1/4" NPT) (For Optional Drain Hose) | 1 |
| 48 | 25625 | 25625 | Drain Plug 1/4" | 1 |
| 49 | 23170 B | 23170 B | O-Ring, Drain Plug | 1 |
| 50 | 29438 A | 29438 A | Crankcase Cover | 1 |
| 52 | 29439 B | 29439 B | Gasket, Crankcase Cover | 1 |
| 53 | 43284 A | 43284 A | Crankcase | 1 |
| 55 | 85449 Z | 85449 Z | Stud (M16 x 70) | 4 |
| 64 | 29481 | 29481 | Pin, Piston Rod | 3 |
| 65 | 43002 SZZ | 43002 SZZ | Piston Rod | 3 |
| 69 | 29453 | 29453 | Washer, Oil Seal | 3 |
| 70 | 29454 B | 29454 B | Oil Seal, Crankcase | 3 |
| 75 | 29340 S | 29340 S | Barrier Slinger | 3 |
| 77 | 11345 B | 11345 B | O-Ring, Sleeve | 6 |
| | 11375 V | 11375 V | O-Ring, Sleeve | 6 |
| 80 | 43129 CS | 43129 CS | Sleeve (M25) | 3 |
| | 43271 S | 43271 S | Sleeve (M25) | 3 |
| 81 | 20189 T | 20189 T | Back-up Ring, Sleeve | 3 |
| 100 | 29456 P | 29456 P | Seal Retainer | 3 |
| 101 | 43136 | 43136 | Wick, Oil (M25) | 3 |
| 106 | 43130 B | 43130 B | Seal (M25) - ungreased | 3 |
| | 43132 V | 43132 V | Seal (M25) - ungreased | 3 |
| 110 | 43283 CBB | 43283 CBB | Inlet Manifold | 1 |
| | 29805 SS | 29805 SS | Inlet Manifold | 1 |
| 119 | 43010 S | 43029 S | Inlet Valve | 3 |
| 123 | 12392 B | 12392 B | O-Ring | 3 |
| | 13279 V | 13279 V | O-Ring | 3 |
| 124 | 43004 CB | 43021 CB | Cylinder | 3 |
| | 43118 S | 43119 S | Cylinder | 3 |
| 125 | 43005 | 43022 | Spacer, Female Adapter | 3 |
| | 43127 S | 43128 S | Spacer, Female Adapter | 3 |
| 126 | 43006 T | 43023 T | Female Adapter | 3 |
| 127 | 26592 T | 43024 T | V-Packing | 12 |
| 128 | 26589 T | 43025 T | Male Adapter | 3 |
| 129 | 27828 | 43026 | Spacer, Male Adapter | 3 |
| | 43120 S | 43121 S | Spacer, Male Adapter | 3 |
| 130 | 43011 CS | 43030 CS | Piston (Sleeve-Type) | 3 |
| | 30788 S | 30768 S | Piston (Sleeve-Type) | 3 |
| 135 | 43012 | 43012 | Spacer (Sleeve-Type), Piston | 3 |
| 136 | 43013 S | 43031 S | Piston Retainer | 3 |
| 137 | 88579 S | 88579 S | Washer, Conical (M10) | 3 |
| 138 | 29505 S | 29505 S | Slotted Nut (M10) | 3 |
| 139 | 29354 S | 29354 S | Cotterpin | 3 |
| 141 | 43007 S | 43027 S | Spring, V-Packing | 3 |
| 155 | 13429 B | 25495 B | O-Ring, Adapter - Inner | 3 |
| | 28773 V | 11748 V | O-Ring, Adapter - Inner | 3 |
| 156 | 43008 T | 28242 T | Back-up Ring, Adapter - Inner | 3 |
| 157 | 43009 S | 43028 S | Adapter | 3 |
| 158 | 43008 T | 43008 T | Back-up Ring, Adapter - Outer | 3 |
| 159 | 13429 S | 13429 S | O-Ring, Adapter - Outer | 3 |
| | 28773 V | 28773 V | O-Ring, Adapter - Outer | 3 |
| 162 | 43064 T | 43064 T | Back-up Ring | 3 |
| 163 | 43015 B | 43015 B | O-Ring | 3 |
| | 43194 V | 43194 V | O-Ring | 3 |
| 164 | 43014 S | 43014 S | Valve Seat | 3 |
| 166 | 19393 S | 19393 S | Valve, Discharge | 3 |
| 167 | 43016 S | 43016 S | Valve Spring | 3 |
| 168 | 43117 S | 43117 S | Retainer, Valve Spring | 3 |
| 183 | 88901 Z | 88901 Z | Stud (M16 x 385) | 4 |
| 185 | 43017 SS | 43017 SS | Discharge Manifold | 1 |
| 186 | 12504 Z | 12504 Z | Washer, Lock (M16) | 12 |
| 187 | 43018 Z | 43018 Z | Bolt, Cylinder | 4 |
| 194 | 88853 Z | 88853 Z | Nut, Hex | 8 |
| 196 | 27807 CBB | 27807 CBB | Plug, 1" NPT | 1 |
| 250 | 29445 | 29445 | Shaft Protector (Incl. w/Pump) | 1 |
| 255 | 33243 | 33243 | Direct Mount (Incl. w/Pump) | 4 |
| 259 | 29477 | 29477 | Mounting Rail (Incl. w/Pump) | 2 |

EXPLODED VIEW



Models
 Standard 6024, 6044
 Stainless Steel 6024.1, 6044.1
 August 1996

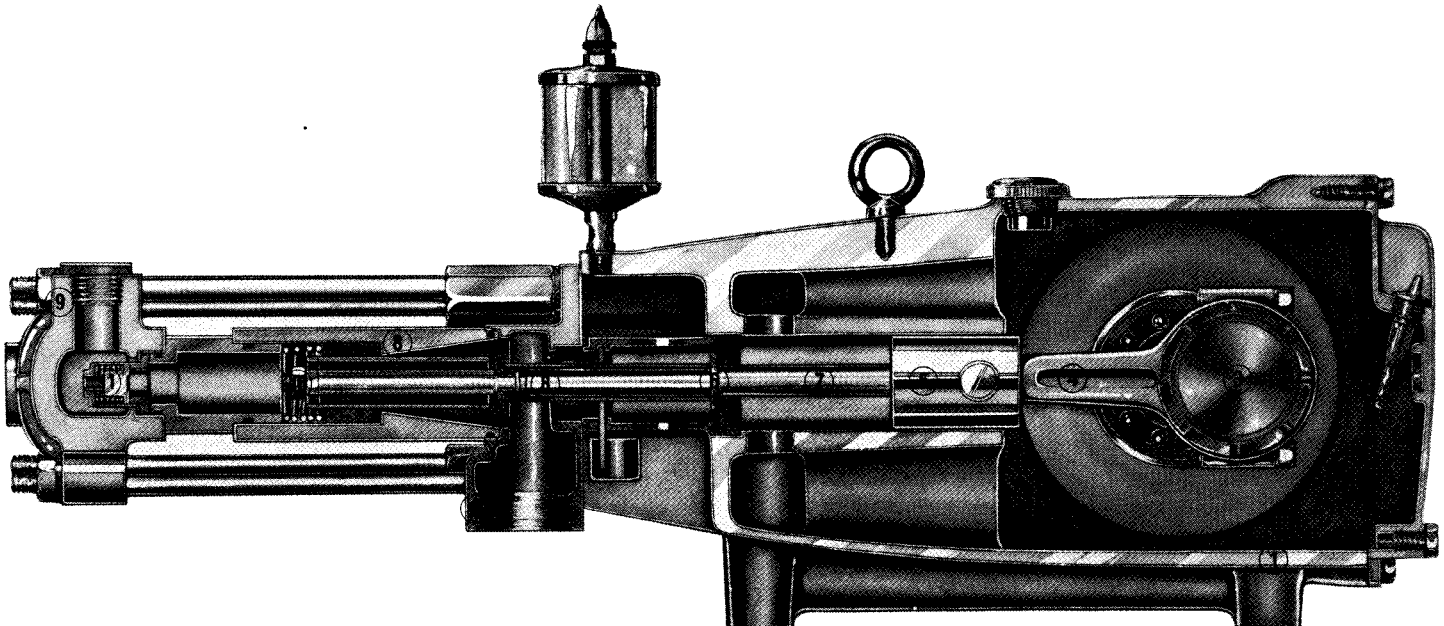
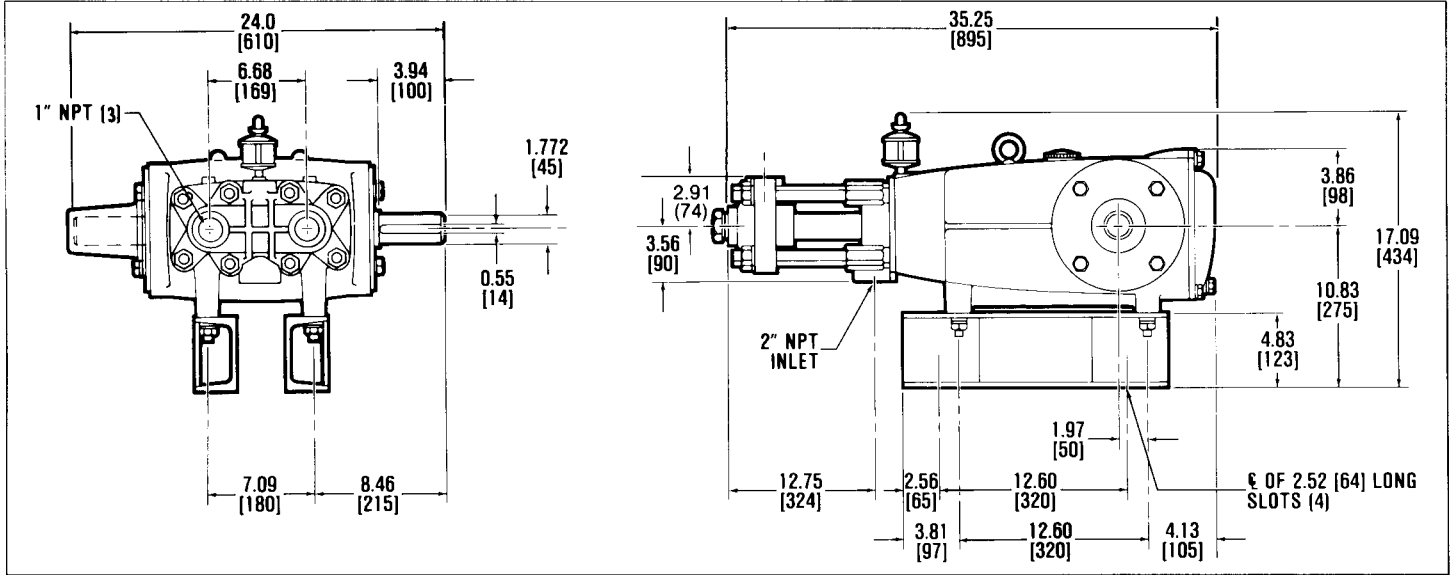
| | | | | |
|-----|-------|-------|--|---|
| 276 | 30636 | 30636 | Hub & Key Assy (See complete Drive Accessory Packages, Tech Bulletin 03) | 1 |
| 279 | 30429 | 30429 | Oilers (10 oz.) | 3 |
| 280 | 30969 | 30969 | Oilers, Glass (10 oz.) | 3 |
| 281 | 10070 | 10070 | Gasket, Oiler (10 oz.) | 3 |
| 302 | — | — | V-Packing Kit (Select: 126,127,128,139,155,156,159) | 1 |
| 306 | 30484 | 30484 | Seal Kit (Incls: 85,106,139) | 1 |
| 310 | — | — | Valve Kit (Select: 155,159,162,163,164,166,167,168) | 1 |
| 361 | — | — | C.A.T. (See individual Date Sheet for selection) | 1 |
| — | — | — | Adapters (2 per C.A.T. required) (See individual Date Sheet for selection) | 2 |

Bold printed part numbers are standard and unique to a particular pump model. Italics are optional items.

Refer to Tech Bulletins 12 and 24 for additional information.

C.A.T. highly recommended for pressurized inlet, R.O. and industrial applications.

**MATERIAL CODES (Not Part of Part Number) A=Aluminum B=Buna-N BB=Brass C=Chromeplated
 P=PVDF S=304SS SS=316SS T=Teflon TG=Teflon/Graphite V=Viton Z=Zinc Plated ZZ=Zamak**



- 1 Diecast aluminum **crankcase** means high strength, lightweight, and excellent tolerance control.
- 2 Oversized crankshaft **bearings** provide extended bearing life and pump performance.
- 3 Chrome-moly **crankshaft** provides unmatched strength and surface hardness for long life.
- 4 Matched oversized **connecting rods** are made of Zamak, a material noted for strength and superior bearing quality.
- 5 The **piston rods** are high tensile strength 316 stainless steel with zamak crossheads.
- 6 The stainless steel **slinger** provides back-up protection for the crankcase seal, keeping pumped fluids out of the crankcase.
- 7 The **patented stepped piston rod** with hard chrome-plated **sleeve** provides a durable wear surface and easy wet-end servicing.
- 8 The **cylinder and sleeve** wear surfaces are hard chrome-plated 304 stainless steel for longer service life.
- 9 **Manifolds** are of high tensile strength chrome-plated brass or 316 stainless steel for special corrosion resistance.
- 10 100% **wet seal** design adds to service life by allowing pumped fluids to cool and lubricate the elastomers on both sides.
- 11 304 stainless steel **valves, seats, and springs** provide corrosion-resistance, positive seating and long life.

Products described hereon are covered by one or more of the following U.S. patents 3558244, 3652188, 3809508, 3920356, 3930756 and 5035580 Aug 1996 7651



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