

# DATA SHEET

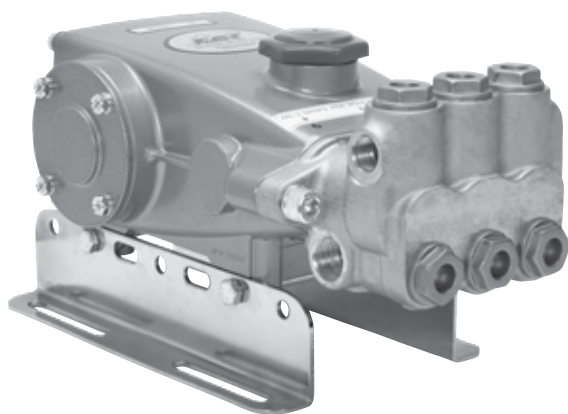
## 5 FRAME PLUNGER PUMP



**Standard  
Brass  
30**

**Stainless  
Steel  
301**

**Stainless Steel  
Flushed  
301C**



Model 30 Shown  
(Rails sold separately)

| SPECIFICATIONS                                                                 | U.S. Measure         | Metric Measure     |
|--------------------------------------------------------------------------------|----------------------|--------------------|
| Flow                                                                           | 3.2 gpm              | 12.1 lpm           |
| Pressure Range                                                                 | 100 to 2200 psi      | 6.9 to 152 bar     |
| Pump RPM*                                                                      | 1725 rpm             | 1725 rpm           |
| Inlet Pressure Range                                                           | Flooded to 60 psi    | Flooded to 4.1 bar |
| Max. Liquid Temperature                                                        | 160° F               | 71° C              |
| Above 130°F call Cat Pumps for inlet conditions and elastomer recommendations. |                      |                    |
| Bore                                                                           | 0.787"               | 20 mm              |
| Stroke                                                                         | 0.315"               | 8 mm               |
| Crankcase Capacity                                                             | 18 oz.               | 0.55 l             |
| Inlet Ports (2)                                                                | 1/2" NPT(F)          | 1/2" NPT(F)        |
| Flush Ports (2)                                                                | 1/8" NPT(F)          | 1/8" NPT(F)        |
| Discharge Ports (2)                                                            | 3/8" NPT(F)          | 3/8" NPT(F)        |
| Shaft Diameter                                                                 | 0.787"               | 20 mm              |
| Weight                                                                         | 20.1 lbs.            | 9.1 kg             |
| Dimensions                                                                     | 12.09 x 8.66 x 5.94" | 307 x 220 x 151 mm |

\*Pump minimum is 100 RPM.

### FEATURES

- Triplex design offers high efficiency and low pulsation.
- Durable high pressure seals are lubricated and cooled by pumped liquid.
- Pre-set Lo-Pressure Seals provide secondary protection against external leaks and require no packing adjustment.
- Standard NBR seals with alternative options for temperature and chemical compatibility
  - FPM – .0110
  - High Temp, 190°F – .3000

### ELECTRIC HORSEPOWER REQUIREMENTS

| FLOW |      | PRESSURE                 |                           |                           |                           | RPM  |
|------|------|--------------------------|---------------------------|---------------------------|---------------------------|------|
|      |      | psi<br>1200<br>bar<br>83 | psi<br>1500<br>bar<br>103 | psi<br>2000<br>bar<br>138 | psi<br>2200<br>bar<br>152 |      |
| gpm  | lpm  |                          |                           |                           |                           |      |
| 3.2  | 12.1 | 2.6                      | 3.3                       | 4.4                       | 4.8                       | 1725 |

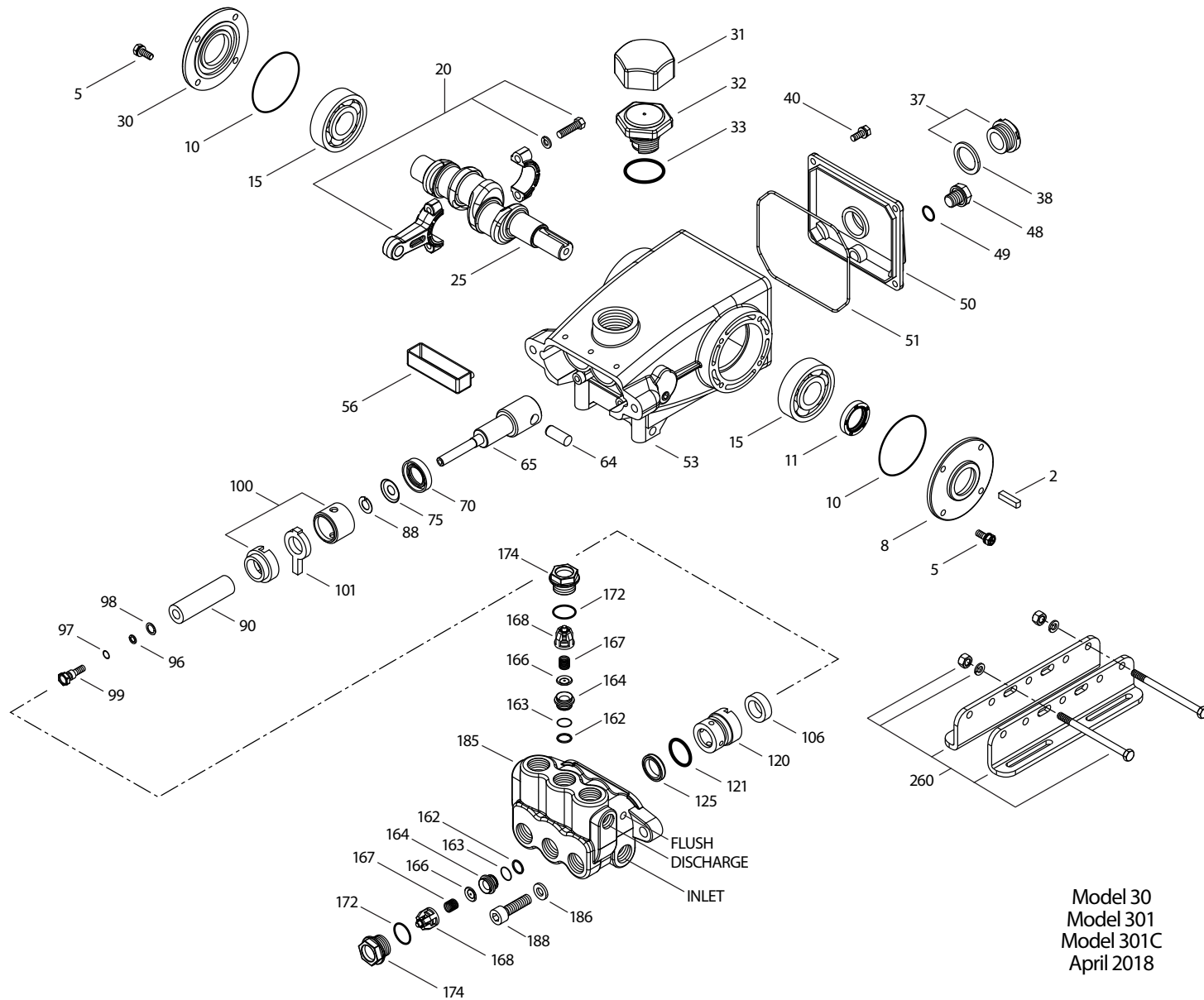
|                                          |                               |   |                               |
|------------------------------------------|-------------------------------|---|-------------------------------|
| <b>DETERMINING<br/>THE PUMP R.P.M.</b>   | Rated gpm                     | = | "Desired" gpm                 |
|                                          | Rated rpm                     | = | "Desired" rpm                 |
| <b>DETERMINING<br/>THE REQUIRED H.P.</b> | Hp<br>(Electric Brake)        | = | gpm x psi<br>1460             |
| <b>DETERMINING<br/>MOTOR PULLEY SIZE</b> | Motor Pulley O.D.<br>Pump rpm | = | Pump Pulley O.D.<br>Motor rpm |

See complete Drive Packages [Includes: pulleys, belts, hubs, key] Tech Bulletin 003.  
Refer to pump **Service Manual** for repair procedure and additional technical information.

## PARTS LIST

| ITEM | PART<br>NUMBER | MATL   | PART<br>NUMBER   | MATL | DESCRIPTION                                               | QTY |
|------|----------------|--------|------------------|------|-----------------------------------------------------------|-----|
|      | <b>30</b>      |        | <b>301, 301C</b> |      |                                                           |     |
| 2    | 30057          | STL    | 30057            | STL  | Key (M6x6x25)                                             | 1   |
| 5    | <b>125824</b>  | STCP R | <b>92538</b>     | S    | Screw, HHC Sems (M6x16)                                   | 8   |
| 8    | <b>43745</b>   | AL     | <b>43344</b>     | AL   | Cover, Bearing                                            | 1   |
| 10   | 43343          | NBR    | 43343            | NBR  | O-Ring, Bearing Case - 70D                                | 2   |
| 11   | 43222          | NBR    | 43222            | NBR  | Seal, Oil, Crankshaft                                     | 1   |
| 15   | 14480          | STL    | 14480            | STL  | Bearing, Ball                                             | 2   |
| 20   | 45883          | HS     | 45883            | HS   | Rod, Connecting, Assy                                     | 3   |
| 25   | 44923          | FCM    | 44923            | FCM  | Crankshaft, Single End (M8)                               | 1   |
| 30   | <b>44944</b>   | AL     | <b>44949</b>     | AL   | Cover, Blind Shaft                                        | 1   |
| 31   | 828710         | —      | 828710           | —    | Protector, Oil Cap w/Foam Gasket                          | 1   |
| 32   | 43211          | ABS    | 43211            | ABS  | Cap, Oil Filler                                           | 1   |
| 33   | 14177          | NBR    | 14177            | NBR  | O-Ring, Filler Cap - 70D                                  | 1   |
| 37   | 92241          | —      | 92241            | —    | Gauge, Oil, Bubble w/Gasket - 80D                         | 1   |
| 38   | 44428          | NBR    | 44428            | NBR  | Gasket, Flat, Oil Gauge - 80D                             | 1   |
| 40   | <b>126541</b>  | STCP R | <b>92542</b>     | S    | Screw, HHC Sems (M6x20)                                   | 4   |
| 48   | 25625          | STCP   | 25625            | STCP | Plug, Drain (1/4"x19BSP)                                  | 1   |
| 49   | 23170          | NBR    | 23170            | NBR  | O-Ring, Drain Plug - 70D                                  | 1   |
| 50   | 48772          | AL     | 48772            | AL   | Cover, Rear (See Tech Bulletin 090)                       | 1   |
| 51   | 48773          | NBR    | 48773            | NBR  | O-Ring, Crankcase Cover (See Tech Bulletin 090)           | 1   |
| 53   | <b>48774</b>   | AL     | <b>48769</b>     | AL   | Crankcase (See Tech Bulletin 090)                         | 1   |
| 56   | 43355          | POP    | 43355            | POP  | Pan, Oil                                                  | 1   |
| 64   | 43351          | CM     | 43351            | CM   | Pin, Crosshead                                            | 3   |
| 65   | <b>45908</b>   | ZZCP   | <b>45256</b>     | SSZZ | Rod, Plunger, Short                                       | 3   |
| 70   | 43228          | NBR    | 43228            | NBR  | Seal, Oil, Crankcase                                      | 3   |
| 75   | 43328          | S      | 43328            | S    | Slinger, Barrier                                          | 3   |
| 88   | 45697          | S      | 45697            | S    | Washer, Keyhole (M18xM10)                                 | 3   |
| 90   | 43367          | CC     | 43367            | CC   | Plunger (M20x72)                                          | 3   |
| 95   | <b>126558</b>  | STCP R | <b>89653</b>     | SS   | Stud, Plunger Retainer (M6x64.5)                          | 3   |
| 96   | 43235          | PTFE   | 43235            | PTFE | Back-up-Ring, Plunger Retainer                            | 3   |
| 97   | 17399          | NBR    | 17399            | NBR  | O-Ring, Plunger Retainer - 80D                            | 3   |
|      | 14160          | FPM    | 14160            | FPM  | O-Ring, Plunger Retainer - 80D                            | 3   |
|      | ◆ 46204        | EPDM   | ◆ 46204          | EPDM | O-Ring, Plunger Retainer - 70D                            | 3   |
| 98   | <b>45891</b>   | CU     | <b>44041</b>     | SS   | Gasket                                                    | 3   |
| 99   | <b>46504</b>   | S      | <b>44031</b>     | SS   | Retainer, Plunger (M6)                                    | 3   |
| 100  | 45688          | PVDF   | 45688            | PVDF | Retainer, Seal, 2-Pc (See Tech Bulletin 105)              | 3   |
| 101  | 43302          | —      | 43302            | —    | Wick, Long Tab                                            | 3   |
| 106  | <b>43305</b>   | NBR    | <b>44127</b>     | NBR  | Seal, LPS w/S-Spg (Model 30), w/SS-Spg (Models 301, 301C) | 3   |
|      | 45153          | FPM    | 45153            | FPM  | Seal, LPS w/SS-Spg                                        | 3   |
|      | ◆ 48429        | EPDM   | ◆ 48429          | EPDM | Seal, LPS w/SS-Spg                                        | 3   |
| 120  | <b>45679</b>   | BB     | <b>45680</b>     | SS   | Case, Seal                                                | 3   |
| 121  | 14200          | NBR    | 14200            | NBR  | O-Ring, Seal Case - 70D                                   | 3   |
|      | 11719          | FPM    | 11719            | FPM  | O-Ring, Seal Case                                         | 3   |
|      | ◆ 48907        | EPDM   | ◆ 48907          | EPDM | O-Ring, Seal Case                                         | 3   |
| 125  | <b>43307</b>   | SNG    | <b>44649</b>     | SNG  | Seal, HPS w/S (Model 30), w/SS (Models 301, 301C)         | 3   |
|      | 44936          | FPM    | 44936            | FPM  | Seal, HPS w/SS                                            | 3   |
|      | 46667          | HT     | 46667            | HT   | Seal, HPS 2-Pc w/S-Support, Hi-Temp                       | 3   |
| 162  | 48361          | D      | 48361            | D    | Back-up-Ring, Seat                                        | 6   |
| 163  | 43358          | NBR    | 43358            | NBR  | O-Ring, Seat - 70D                                        | 6   |
|      | 44938          | FPM    | 44938            | FPM  | O-Ring, Seat - 70D                                        | 6   |
|      | ◆ 48908        | EPDM   | ◆ 48908          | EPDM | O-Ring, Seat                                              | 6   |
| 164  | <b>43725</b>   | S      | <b>44128</b>     | SS   | Seat                                                      | 6   |
| 166  | <b>43723</b>   | S      | <b>44057</b>     | SS   | Valve                                                     | 6   |
| 167  | <b>43750</b>   | S      | <b>44056</b>     | SS   | Spring                                                    | 6   |
| 168  | 44565          | PVDF   | 44565            | PVDF | Retainer, Spring                                          | 6   |
| 171  | —              | —      | 44832            | S    | Spring, Coil (Not Shown)                                  | 6   |
| 172  | 17615          | NBR    | 17615            | NBR  | O-Ring, Valve Plug - 75D                                  | 6   |
|      | 15855          | FPM    | 15855            | FPM  | O-Ring, Valve Plug - 70D                                  | 6   |
|      | ◆ 48431        | EPDM   | ◆ 48431          | EPDM | O-Ring, Valve Plug - 75D                                  | 6   |
| 174  | <b>46756</b>   | BB     | <b>49296</b>     | SS   | Plug, Valve                                               | 6   |
| 185  | <b>44837</b>   | BBCP   | <b>45151</b>     | SS   | Head, Manifold                                            | 1   |
|      | —              | —      | <b>49583</b>     | SS   | Head, Manifold -Flushed                                   | 1   |
| 186  | —              | —      | <b>15847</b>     | S    | Lockwasher (M10)                                          | 1   |
| 188  | <b>126520</b>  | STCP R | <b>87950</b>     | S    | Screw, HSH Sems (M10x35)                                  | 2   |
| 255  | 30243          | STZP   | 30243            | STZP | Mount Kit, Direct                                         | 1   |
| 260  | 30611          | STZP   | 30611            | STZP | Rail Mounting, Angle - B                                  | 1   |
| 270  | 30633          | STL    | 30633            | STL  | Pulley & Key Assy (Incls: 30058, 30057)                   | 1   |
| 275  | 30944          | STL    | 30944            | STL  | Hub & Key Assy (Incls: 30945, 300057)                     | 1   |
| 283  | 34334          | —      | 34334            | —    | Kit, Oil Drain                                            | 1   |

## EXPLODED VIEW



Model 30  
Model 301  
Model 301C  
April 2018

| ITEM | PART<br>NUMBER | MATL  | PART<br>NUMBER  | MATL  | DESCRIPTION                                                                                    | QTY |
|------|----------------|-------|-----------------|-------|------------------------------------------------------------------------------------------------|-----|
|      | <b>30</b>      |       | <b>301,301C</b> |       |                                                                                                |     |
| 299  | <b>810027</b>  | BBCP  | <b>812207</b>   | SS    | Head, Complete w/NBR Seals and O-Rings                                                         | 1   |
|      |                |       | <b>818444</b>   | SS    | Head, Complete-Flushed (Model 301C w/NBR Seals and O-Rings)                                    | 1   |
| 300  | <b>30623</b>   | NBR   | <b>34153</b>    | NBR   | Kit, Seal (Incls: 97,101,106,121,125) <b>Standard</b>                                          | 1   |
|      | 34155          | FPM   | 34155           | FPM   | Kit, Seal (Incls: 97,101,106,121,125) <b>.0110</b>                                             | 1   |
|      | 33623          | HT    | 33623           | HT    | Kit, Seal (Incls: 97,101,106,121,125) <b>.3000</b>                                             | 1   |
|      | ◆ 31163        | EPDM* | ◆ 31163         | EPDM* | Kit, Seal (Incls: 97,101,106,121,125) <b>.0220</b>                                             | 1   |
| 310  | <b>30821</b>   | NBR   | <b>31152</b>    | NBR   | Kit, Valve (Incls: 162,163,164,166,167,168,172) <b>Standard</b>                                | 2   |
|      | <b>31821</b>   | FPM   | <b>34152</b>    | FPM   | Kit, Valve pre-assembled (Incls: 162-164,166-168,171,172) <b>.0110</b>                         | 2   |
| 350  | 30696          | STZP  | 30696           | STZP  | Plier, Reverse                                                                                 | 1   |
| 351  | 33004          | STZP  | 33004           | STZP  | Seal Case Socket, 1/2" Drive                                                                   | 1   |
| —    | 6107           | —     | 6107            | —     | Oil, Bottle (21 oz.) ISO 68 Hydraulic (Fill to specified crankcase capacity prior to start-up) | 1   |
| —    | —              | —     | <b>6119</b>     | —     | Lubricant, Antiseize (2 oz.) (See Tech Bulletin 095)                                           | 1   |

**Bold print part numbers are unique to a particular pump model.** *Italics are optional items.* R Components comply with RoHS Directive. ♦ Silicone oil/grease required.

[ ] Date of latest production change. See Tech Bulletins 002, 003, 024, 036, 074, 083, 090 and 105 for additional information.

MATERIAL CODES (Not Part of Part Number): ABS=ABS Plastic AL=Aluminum BB=Brass BBPC=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 NBR=Medium Nitrile (Buna-N) POP=Polypropylene PTFE=Pure Polytetrafluoroethylene PVDF=Polyvinylidene Fluoride S=304SS SNG=Special Blend (Buna) SS=316SS STL=Steel STCP=Steel/Chrome Plated STZP=Steel/Zinc Plated ZCP=Zamak/Chrome Plated

