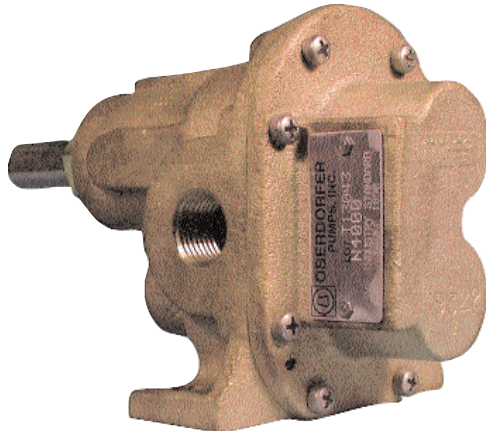
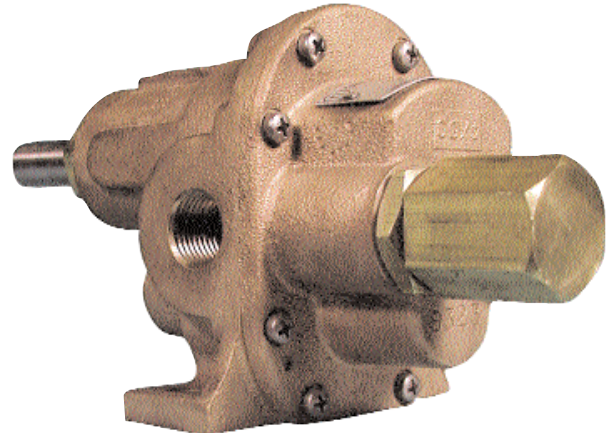


# BRONZE PEDESTAL ROTARY GEAR PUMPS

## MODEL N7000 - 3/4" NPT PORTS



## MODEL N7000R



### FEATURES

- Bronze Corrosion Resistant Castings
- Special Cast Bronze Gears
- Stainless Steel Shafts & Fasteners
- Formed Ring Seal Packing (Lip & Mechanical Seals on Special Order)
- Heavy Duty Carbon Bearings (Self Lubricating)
- Positive Displacement Flow

### DRIVE

Either direct drive with flexible coupling or pulley drive can be used. Make sure both flexible coupling halves are properly aligned. When using a pulley, do not overtighten the belt. Also, to absorb belt side thrust at higher pressures and larger size pumps, an external ball bearing support is recommended -- consult factory.

### LIQUIDS AND TEMPERATURE

Service life will be increased substantially if the liquid pumped is clean and has some degree of lubricity. These positive displacement pumps have tight tolerances. Fine abrasives like sand, silt, or powders in suspension will accelerate pump wear and reduce throughput.

Liquids compatible with bronze and stainless steel can be pumped providing proper seal has been specified (see chemical compatibility or check factory). When possible, flush the pump after each usage.

Temperature extremes are detrimental to service life and should be avoided. Basic metals of construction allow a temperature range of -40 to 400°F. Some lip and mechanical seal elastomers have a limit of 212°F. (see engineering data or check factory). Allowing a liquid to freeze in the pump can cause damage.

### SUCTION LIFT

Close tolerances and the positive pumping action make the rotary gear pump capable of lifting water on the suction side as high as 20 feet. Though gear pumps are self priming, a foot valve is recommended. If possible, wet the gears with liquid to be pumped for the first dry start. Liquid retained in the system and gear chambers serves to "wet" the pump on subsequent starts.

CAPACITY - WATER 70 F

| R.P.M. | FT.HD.<br>P.S.I. | 0     | 46    | 92    | 138   | 184   | 231   | 290   | 346   |
|--------|------------------|-------|-------|-------|-------|-------|-------|-------|-------|
|        |                  | 0     | 20    | 40    | 60    | 80    | 100   | 125*  | 150*  |
| 400    | GPM              | 4.00  | 3.45  | 2.90  | 2.35  | 1.50  | 1.30  | 1.20  | 1.00  |
|        | HP               | 0.20  | 0.23  | 0.30  | 0.39  | 0.55  | 0.65  | 0.70  | 0.90  |
|        | MOTOR            | 1/4   | 1/4   | 1/3   | 1/2   | 1/2   | 3/4   | 3/4   | 1     |
| 600    | GPM              | 6.30  | 5.78  | 5.26  | 4.74  | 4.22  | 3.95  | 3.50  | 3.10  |
|        | HP               | 0.25  | 0.30  | 0.40  | 0.65  | 0.75  | 0.95  | 1.15  | 1.40  |
|        | MOTOR            | 1/4   | 1/3   | 1/2   | 3/4   | 3/4   | 1     | 1 1/2 | 1 1/2 |
| 800    | GPM              | 8.58  | 8.18  | 7.78  | 7.38  | 6.98  | 6.57  | 6.40  | 6.20  |
|        | HP               | 0.30  | 0.40  | 0.58  | 0.85  | 0.93  | 1.15  | 1.40  | 1.70  |
|        | MOTOR            | 1/3   | 1/2   | 3/4   | 1     | 1     | 1 1/2 | 1 1/2 | 2     |
| 1000   | GPM              | 10.90 | 10.51 | 10.12 | 9.72  | 9.33  | 8.93  | 8.00  | 7.90  |
|        | HP               | 0.40  | 0.60  | 0.70  | 0.90  | 1.10  | 1.38  | 1.60  | 1.92  |
|        | MOTOR            | 1/2   | 3/4   | 3/4   | 1     | 1     | 1 1/2 | 2     | 2     |
| 1200   | GPM              | 13.33 | 12.94 | 12.55 | 12.16 | 11.76 | 11.37 | 11.20 | 11.10 |
|        | HP               | 0.50  | 0.70  | 0.85  | 1.08  | 1.35  | 1.65  | 1.90  | 2.20  |
|        | MOTOR            | 1/2   | 3/4   | 1     | 1     | 1 1/2 | 2     | 2     | 3     |
| 1600   | GPM              | 18.17 | 17.79 | 17.41 | 17.03 | 16.65 | 16.28 | 16.10 | 16.00 |
|        | HP               | 0.70  | 0.91  | 1.20  | 1.50  | 1.80  | 2.14  | 2.50  | 2.90  |
|        | MOTOR            | 3/4   | 1     | 1 1/2 | 1 1/2 | 2     | 2     | 3     | 3     |
| 1725   | GPM              | 19.85 | 19.48 | 19.11 | 18.74 | 18.37 | 18.00 | 17.70 | 17.40 |
|        | HP               | 0.80  | 1.10  | 1.42  | 1.85  | 2.18  | 2.65  | 3.00  | 3.60  |
|        | MOTOR            | 1     | 1     | 1 1/2 | 2     | 2 1/2 | 3     | 3     | 3     |

H.P. = Actual Horsepower

Motor = Convenient Fractional Size

G.P.M. = Gallons per Minute

P.S.I. = Lbs. Per Square Inch Pressure

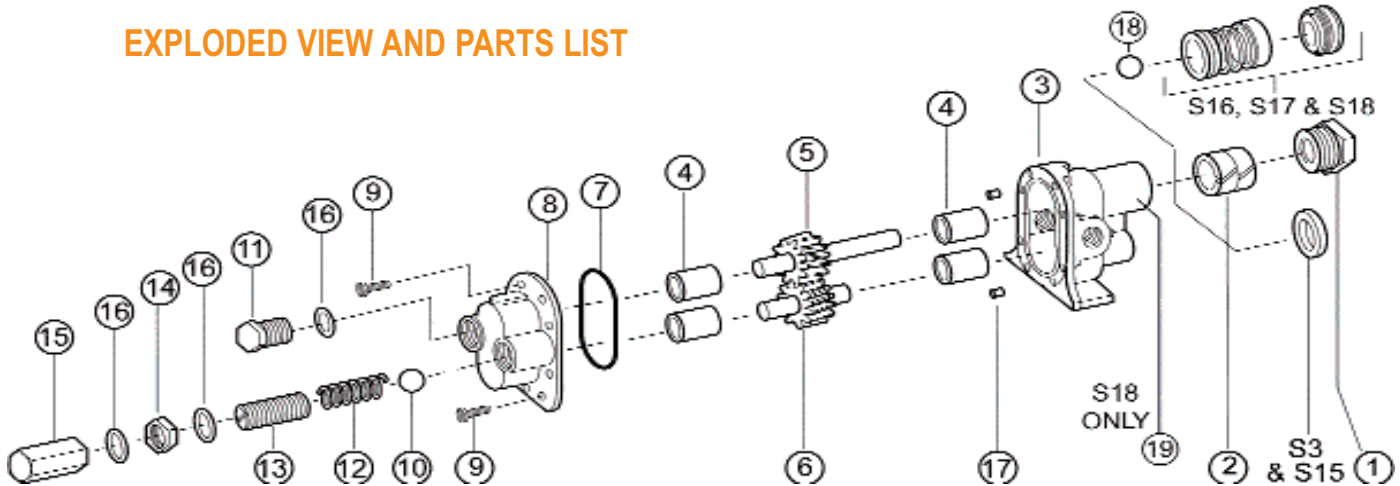
R.P.M. = Revolutions per Min.

Ft. Hd. = Equiv. Press. in Ft of Water

\*For pressures over 100 psi, the above selections are suitable for pumping fluids with lubricity (e.q. oils, polymers). Service life will decrease for fluids without lubricity (e.q. water, solvents).

# BRONZE PEDESTAL ROTARY GEAR PUMPS

## EXPLODED VIEW AND PARTS LIST



| Pump No  | Seal Arrangement    | 1                         | 2       | 3       | 4        | 5       | 6                | 7               | 8        | 9        | 10      | 11      | 12       | 13      | 14         | 15      | 16         | 17           | 18        | 19             | Repair Kit |       |
|----------|---------------------|---------------------------|---------|---------|----------|---------|------------------|-----------------|----------|----------|---------|---------|----------|---------|------------|---------|------------|--------------|-----------|----------------|------------|-------|
|          |                     | Packnut or Retaining Ring | Packing | Seal    | Body     | Bearing | Drive Gear Ass'y | Idle Gear Ass'y | O-ring   | Cover    | Screw   | Ball    | Plug Nut | Spring  | Adj. Screw | Locknut | Bypass Nut | Fiber Washer | Dowel Pin | Retaining Ring | Pipe Plug  |       |
|          |                     | 1 req'd                   | 2 req'd | 1 req'd | 1 req'd  | 4 req'd | 1 req'd          | 1 req'd         | 1 req'd  | 1 req'd  | 8 req'd | 1 req'd | 1 req'd  | 1 req'd | 1 req'd    | 1 req'd | 1 req'd    | 3 req'd      | 2 req'd   | 1 req'd        | 1 req'd    |       |
| N7000    | Packing             | 1762                      | 5479    | NA      | 9324NE1N | 5091    | 33015            | 32959           | 9797-045 | 9326NN5N | 5385    |         |          |         |            |         |            |              |           | 8885           |            | 10638 |
| N7000S3  | Buna Lip            | NA                        | NA      | 5463    | 9324NE2N | 5091    | 33015            | 32959           | 9797-045 | 9326NN5N | 5385    |         |          |         |            |         |            |              |           | 8885           |            | 11258 |
| N7000S15 | Viton Lip           | NA                        | NA      | 9997    | 9324NE2N | 5091    | 33015            | 32959           | 9797-045 | 9326NN5N | 5385    |         |          |         |            |         |            |              |           | 8885           |            | 12107 |
| N7000S16 | Buna Bellows Mech.  | 5374                      | NA      | 32202   | 9374NE9N | 5091    | 33043            | 32959           | 9797-045 | 9326NN5N | 5385    |         |          |         |            |         |            |              |           | 8885           | 5382       | 12128 |
| N7000S17 | Viton Bellows Mech. | 5374                      | NA      | 32235   | 9374NE9N | 5091    | 33043            | 32959           | 9797-045 | 9326NN5N | 5385    |         |          |         |            |         |            |              |           | 8885           | 5382       | 12129 |
| N7000S18 | Teflon Wedge Mech.  | 5374                      | NA      | 32923   | 9374NE6N | 5091    | 33043            | 32959           | 9355-045 | 9326NN5N | 5385    |         |          |         |            |         |            |              |           | 8885           | 5382       | 6052  |

Relief Valve Versions: N7000R, N7000RS3, N7000RS15, N7000RS16, N7000RS17, N7000RS18

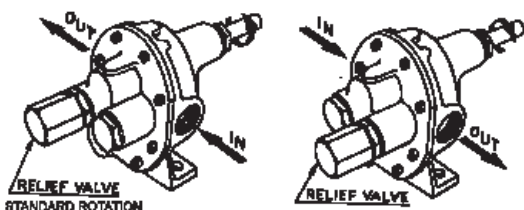
All Repair Kits contain items 2, 4, 5, 6 and 7.

## BY-PASS AND ROTATION

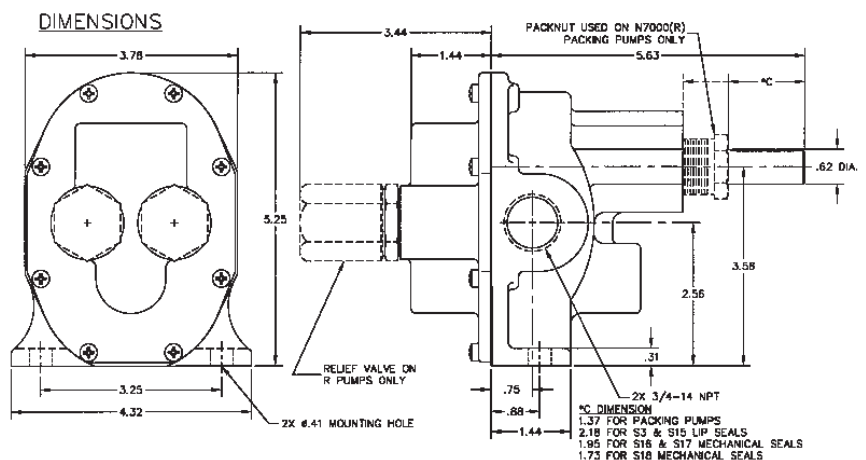
The pump by-pass is not intended to be a metering or flow control device. Its main purpose is to function as a pressure relief when the desired set point is exceeded, overheating can occur within 5 -10 minutes if the discharge line is completely shut off for extended periods.

Reversing rotation reverses the "IN" and "OUT" ports and the location of the by-pass ports have to be reversed.

The by-pass valve is factory set at 50 p.s.i. To increase the setpoint, turn the by-pass valve adjusting screw in a clockwise direction.



## DIMENSIONS



\* Viton(R) or equivalent FKM will be used. Viton(R) is a registered trademark of DuPont Dow Elastomers. Teflon(R) or equivalent PTFE will be used. Teflon(R) is a registered trademark of DuPont. Specifications are subject to change without notice.