# BRONZE PEDESTAL ROTARY GEAR PUMPS

MODEL N3000L N3000LR SERIES

# MODEL N3000L - 1/2" NPT PORTS





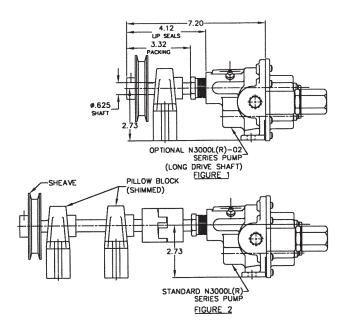
## **FEATURES**

- · Bronze corrosion resistant castings
- · Special cast bronze helical gears for quiet operation
- · Stainless steel shafts & fasteners
- Synthetic braided compression packing (with Teflon® dispersion) is standard
- · Optional lip seals are available
- Positive displacement flow
- Bronze bearing surfaces with grease fittings

## MOUNTING AND DRIVE ARRANGEMENT

Pumps should be mounted on a rigid base and properly aligned with the motor. Direct drive via flexible shaft coupling is the preferred method. When a belt drive is needed, additional support is necessary to absorb the added pulley load. this can be accomplished in two ways:

- 1) Use the standard pump arrangement by adding an independently supported jackshaft (see figure 2 below) or use kit 34P
- 2) When space is an issue, use an optional "long shafted" pump and add a properly shimmed pillow block bearing (see figure 1).



# 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). No carbon bearings used. 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  $400^{\circ}$ F. Some lip seal elastomers have a limit of  $212^{\circ}$ 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.

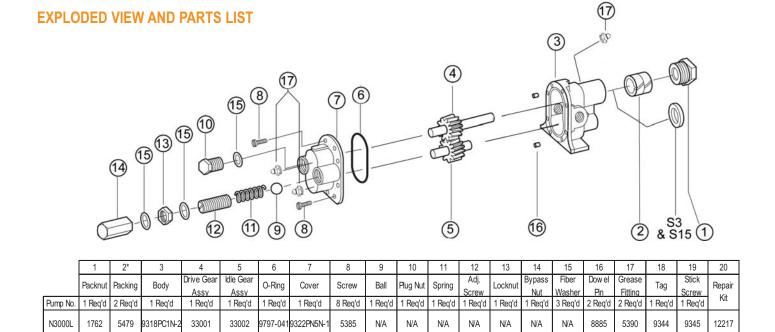
CAPACITY -	WATER 7	70° F							
R.P.M.	FT.HD.	0	46	92	138	184	231	290	346
	P.S.I.	0	20	40	60	80	100	125*	150*
	GPM	1.50	1.05	0.70	0.40	0.20	0.10		
400	HP	0.05	0.08	0.13	0.15	0.20	0.24		
	MOTOR	1/6	1/6	1/6	1/6	1/4	1/4		
	GPM	2.38	2.14	1.89	1.64	1.39	1.15	0.70	0.32
600	HP	0.06	0.10	0.17	0.20	0.28	0.35	0.44	0.53
	MOTOR	1/6	1/6	1/4	1/4	1/3	1/3	1/2	1/2
	GPM	3.17	2.90	2.64	2.37	2.11	1.85	1.70	1.30
800	HP	0.08	0.17	0.23	0.20	0.40	0.48	0.54	0.65
	MOTOR	1/6	1/4	1/4	1/3	1/2	1/2	1/2	3/4
	GPM	4.00	3.74	3.48	3.22	2.96	2.71	2.40	2.15
1000	HP	0.10	0.18	0.27	0.38	0.43	0.55	0.67	0.80
	MOTOR	1/6	1/4	1/3	1/2	1/2	3/4	3/4	1
	GPM	4.85	4.60	4.35	4.10	3.84	3.58	3.50	3.20
1200	HP	0.15	0.25	0.33	0.45	0.55	0.68	0.85	1.00
	MOTOR	1/6	1/4	1/3	1/2	3/4	3/4	1	1
1600	GPM	6.67	6.42	6.16	5.90	5.64	5.38	5.25	5.00
	HP	0.20	0.30	0.45	0.58	0.60	0.85	1.05	1.25
	MOTOR	1/4	1/3	1/2	3/4	3/4	1	1	1 1/2
1725	GPM	7.25	7.00	6.75	6.50	6.25	6.00	5.75	5.50
	HP	0.38	0.50	0.65	0.80	0.95	1.10	1.25	1.40
	MOTOR	1/3	1/2	3/4	1	1	1	1 1/2	1 1/2

H.P. = Actual Horsepow er G.P.M. = Gallons per Min. R.P.M. = Rev. per Min. Motor = Convenient Fractional Size
P.S.I. = Lbs. Per Square Inch Pressure
Ft. Hd. = Equiv. Press. in Ft of Water

<sup>\*</sup>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





Repair Kits contain items 2, 4, 5 and 6. Items 18 and 19 not shown above.

9318PC1N-

		1	2	3	20	
*Lipseals		Packnut	Lipseal	Body	Repair Kit	
Number	Description	1 Req'd	1 Req'd	1 Req'd		
S3	Buna Lipseal	N/A	5463	9318PC2N-1	12218	
S15	Viton-Teflon Lipseal	N/A	9997	9318PC2N-1	12219	

33001

33002

9797-0419323PN5B-

5385

5206

5205

5207

5200

5209

## **BY-PASS AND ROTATION**

N30001 R

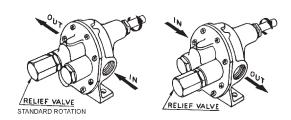
1762

5479

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**

5204

6964

8885

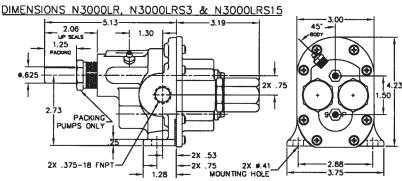
Qty. 3.00

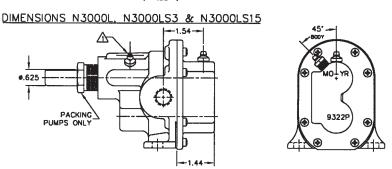
5390

9344

9345

12217





⚠ GREASE FITTINGS (ITEM 17) INSTALLED INTO .125-27 NPT CONNECTIONS.

\* Viton(® or equivalent FKM will be used. Viton® is a registered trademark of DuPont Dow Elastomers. Teflon® or equivalent PTFE will be used. Teflon® is a registered trademark of DuPont.