

BRONZE BEARINGS
BRONZE PEDESTAL
ROTARY GEAR PUMPS

MODEL N1000L - 1/4" NPT PORTS



MODEL N1000LRS3



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°F. Some lip 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.

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

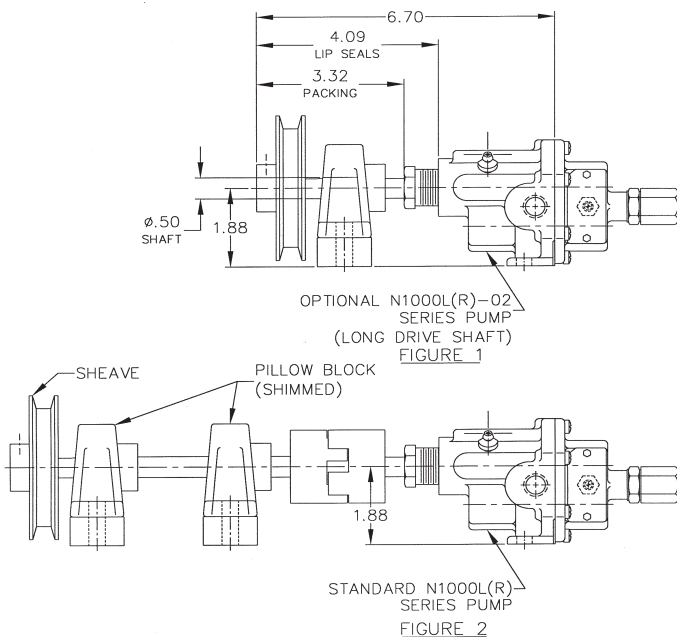
MOUNTING AND DRIVE ARRANGEMENT

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 1P
- 2) When space is an issue, use an optional "long shafted" pump and add a properly shimmed pillow block bearing (see figure 1).

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

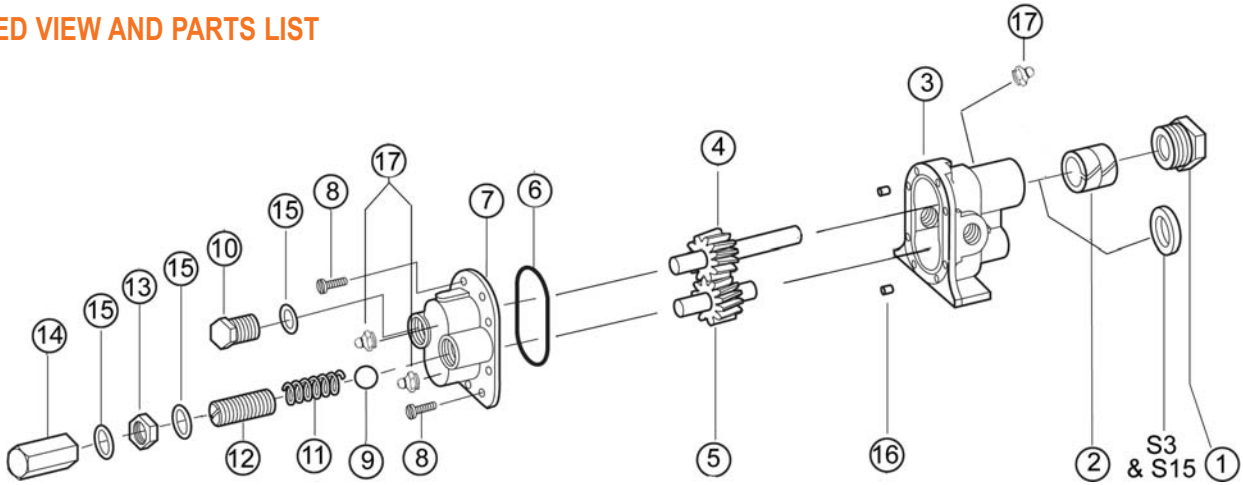
R.P.M.	FT. HD	P.S.I.									
		0	46	92	138	184	231	290	346		
400	G.P.M.	0.50	0.30	0.10	—	—	—	—	—	—	
	H.P.	0.01	0.03	0.04	—	—	—	—	—		
	MOTOR	1/6	1/6	1/6	—	—	—	—	—		
600	G.P.M.	0.80	0.62	0.44	0.27	0.10	—	—	—		
	H.P.	0.02	0.04	0.06	0.08	0.10	—	—	—		
	MOTOR	1/6	1/6	1/6	1/6	1/6	—	—	—		
800	G.P.M.	1.03	0.87	0.72	0.56	0.40	0.24	0.10	—		
	H.P.	0.02	0.04	0.07	0.10	0.12	0.15	0.18	—		
	MOTOR	1/6	1/6	1/6	1/6	1/6	1/4	1/4	—		
1000	G.P.M.	1.26	1.11	0.96	0.81	0.66	0.51	0.33	0.10		
	H.P.	0.02	0.05	0.09	0.12	0.15	0.19	0.24	0.28		
	MOTOR	1/6	1/6	1/6	1/6	1/6	1/4	1/4	1/3		
1200	G.P.M.	1.50	1.35	1.20	1.05	0.90	0.75	0.60	0.45		
	H.P.	0.03	0.05	0.12	0.14	0.17	0.21	0.26	0.29		
	MOTOR	1/6	1/6	1/6	1/6	1/4	1/4	1/3	1/3		
1600	G.P.M.	1.95	1.83	1.70	1.57	1.45	1.32	1.15	0.95		
	H.P.	0.04	0.08	0.13	0.18	0.22	0.27	0.33	0.38		
	MOTOR	1/6	1/6	1/6	1/6	1/4	1/3	1/3	1/2		
1725	G.P.M.	2.10	1.98	1.86	1.74	1.62	1.50	1.35	1.20		
	H.P.	0.05	0.09	0.14	0.19	0.23	0.28	0.34	0.39		
	MOTOR	1/6	1/6	1/6	1/6	1/4	1/3	1/3	1/2		

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 Minute Ft. Hd. = Feet Head in Ft. of Water

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

BRONZE BEARINGS
BRONZE PEDESTAL
ROTARY GEAR PUMPS

EXPLODED VIEW AND PARTS LIST



Pump No	Seal Arrangement	1	2a	2b		4	5	6				10	11	12	1	14	15	16	1	Repair Kit
		Packnut	Packing	Seal	Body	Drive ear Ass y	Idle ear Ass y	O-ring	Cover	Screw	Ball	Plug Nut	Spring	Adj. Screw	Locknut	Bypass Nut	Fiber Washer	Dowel Pin	rease Fitting	
		1 req d	2 req d	1 req d	1 req d	1 req d	1 req d	1 req d	1 req d	req d	1 req d	1 req d	1 req d	1 req d	1 req d	1 req d	req d	2 req d		
N1000L	Packing	1 2	54 1	NA	11PB1N-1	2101	2110	-0	14PN5N-1	5 5									5 5 0	122 5
N1000LS	Buna Lip	NA		500	11PB2N-1	2	2110	-0		5 5									5 5 0	11266
Relief Valve Versions: N1000LR, N1000LRS , (incremental parts)									14PN5B-1		5 0	5 5	5 06	5 66	5 4	5 6	6 66			

All Repair Kits contain items 2,4,5,6

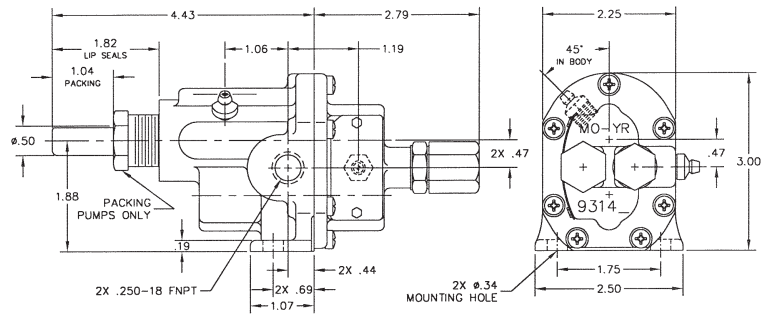
BY-PASS AND ROTATION

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.

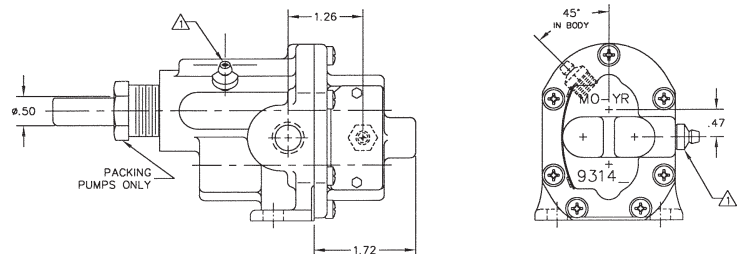
Reversing rotation reverses the "IN" and "OUT" ports and the location of the by-pass ports have to be reversed.

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.

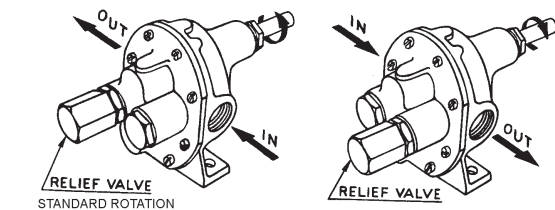
DIMENSIONS



DIMENSIONS N1000L & N1000LS3



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.