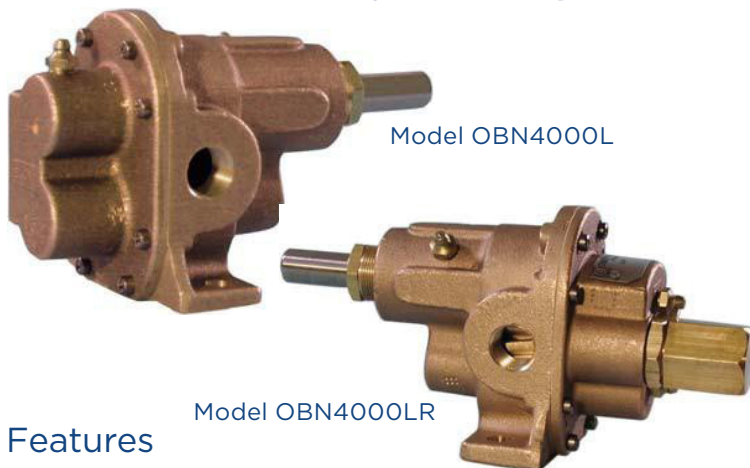




OBERDORFER®

An Ingersoll Rand Business

N4000L and LR Series Bronze Pedestal Rotary Gear Pumps



Model OBN4000L

Model OBN4000LR

Features

- 1/2" NPT Ports
- Temp. Range: -40 - 400°F
- 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
- Lip Seal and Mechanical Seal Options Available
- Positive Displacement Flow
- Bronze Bearing Surfaces With Grease Fittings

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.

Performance

Capacity Water 70° F

RPM	Ft. Hd.		0	46	92	138	184	231	290	346
			0	20	40	60	80	100	125	150*
400	GPM		2.30	2.00	1.75	1.55	1.30	1.10	0.85	0.65
	HP		0.10	0.15	0.20	0.25	0.32	0.40	0.53	0.70
	Motor		1/6	1/6	1/4	1/4	1/3	1/2	1/2	3/4
600	GPM		3.45	3.20	2.95	2.75	2.50	2.30	2.07	2.17
	HP		0.15	0.20	0.25	0.35	0.40	0.60	0.75	0.94
	Motor		1/4	1/4	1/4	1/3	1/2	1/3	3/4	1
800	GPM		4.65	4.18	4.10	3.90	3.70	3.50	3.25	3.05
	HP		0.20	0.22	0.29	0.45	0.64	0.86	1.20	1.60
	Motor		1/4	1/4	1/3	1/2	3/4	1	1 1/2	2
1000	GPM		5.86	5.65	5.40	5.18	4.95	4.76	4.50	4.30
	HP		0.22	0.25	0.30	0.45	0.65	0.75	1.20	1.50
	Motor		1/4	1/4	1/3	1/2	3/4	3/4	1 1/2	1 1/2
1200	GPM		7.10	6.85	6.60	6.35	6.12	5.90	5.68	5.45
	HP		0.25	0.30	0.40	0.60	0.75	0.97	1.30	1.70
	Motor		1/4	1/3	1/2	3/4	3/4	1	1 1/2	2
1600	GPM		9.70	9.45	9.20	8.95	8.72	8.50	8.30	8.10
	HP		0.30	0.39	0.60	0.80	1.05	1.30	1.64	2.05
	Motor		1/3	1/2	3/4	1	1	1 1/2	2	2
1725	GPM		10.56	10.33	10.10	9.85	9.63	9.42	9.20	9.00
	HP		0.50	0.75	0.90	1.20	1.50	1.75	2.00	2.32
	Motor		1/2	3/4	1	1 1/2	1 1/2	2	2	3

HP = Actual Horsepower
GPM = Gallons per minute
RPM = Rev. per minute

Motor = Convenient Fractional Size
PSI = Lbs. per square inch pressure
Ft. Hd. = Equiv. pressure in Ft. of water

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

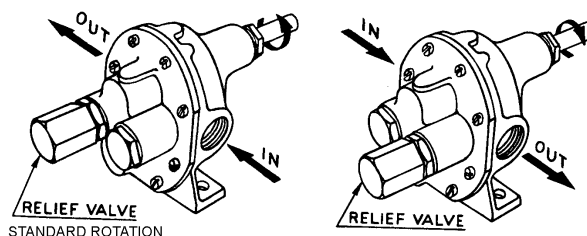
Some lip seal elastomers have a limit of 212°F. (see engineering data or check factory). Allowing a liquid to freeze in the pump can cause damage.

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 psi. To increase the setpoint, turn the by-pass valve adjusting screw in a clockwise direction.





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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.

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).

Figure 1:

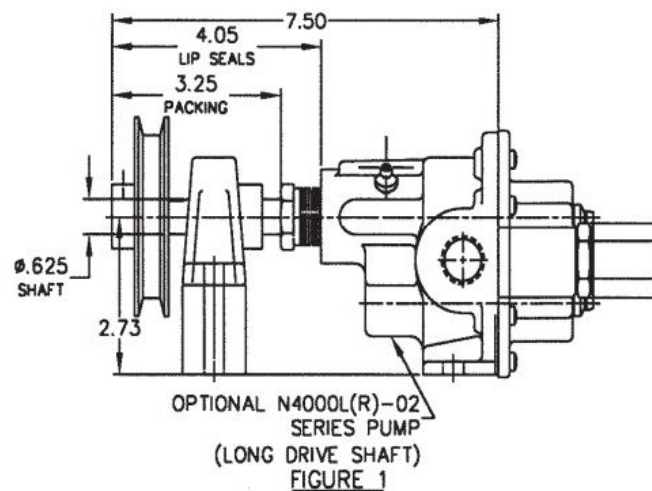
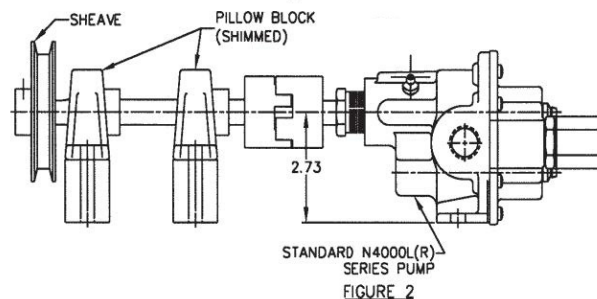


Figure 2:



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Phone (800) 448.1668

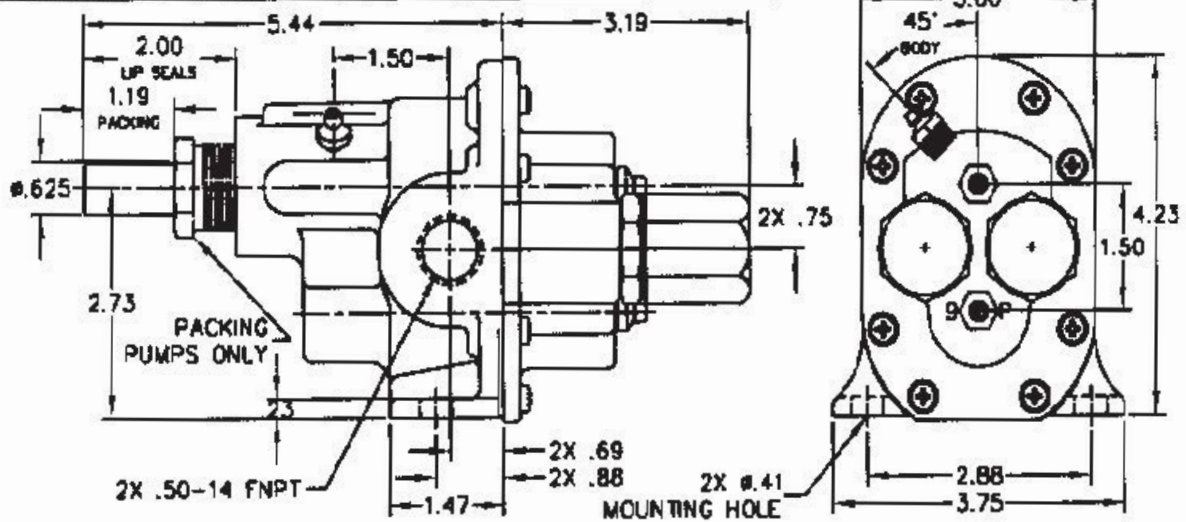


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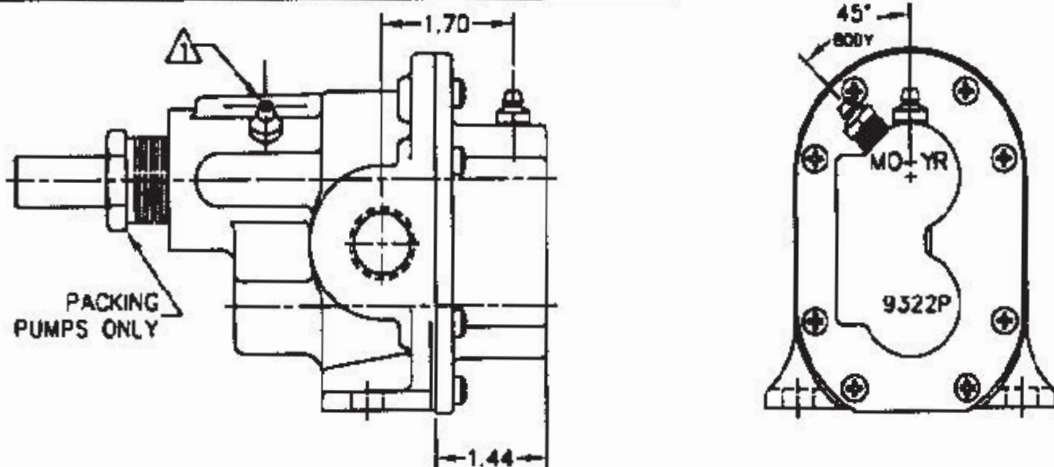
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Dimensions

DIMENSIONS N4000LR, N4000LS3 & N4000LS15



DIMENSIONS N4000L, N4000LS3 & N4000LS15



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

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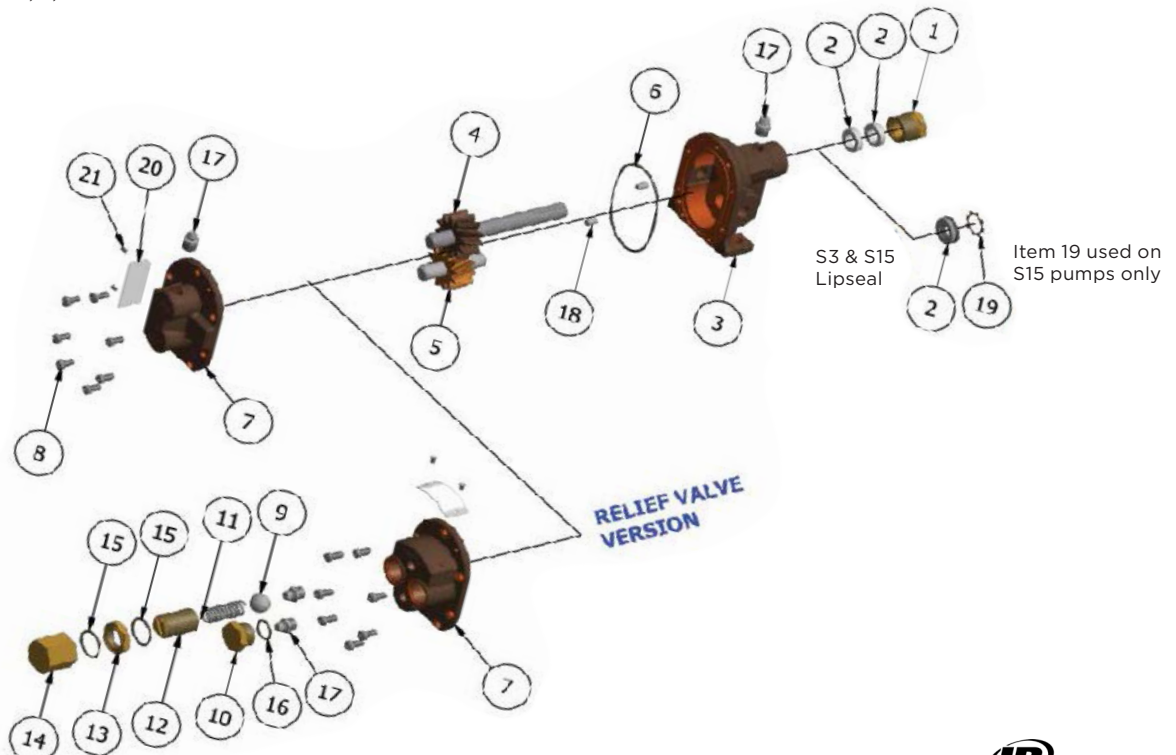
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Exploded View and Parts List

		1	2		3	4	5	6	7	8	9	10	11
		Packnut or Retaining	Packing	Seal	Body	Drive Gear Ass'y	Idle Gear Ass'y	O-Ring	Cover	Screw	Ball	Plug Nut	Spring
Model	Seal Arrangement	Qty. 1	Qty. 2	Qty. 1	Qty. 1	Qty. 1	Qty. 1	Qty. 1	Qty. 1	Qty. 8	Qty. 1	Qty. 1	Qty. 1
OBN4000L	Packing	OB1762	OB5479	NA	OB9319PD1N-1	OB33007	OB33008	OB9797-041	OB9322PN5N-1	OB5385	NA	NA	NA
OBN4000LS3	Buna Lip	NA	NA	OB5463	OB9319PD2N-1	OB33007	OB33008	OB9797-041	OB9322PN5N-1	OB5385	NA	NA	NA
OBN4000LS15	Viton Lip	NA	NA	OB9997	OB9319PD2N-1	OB33007	OB33008	OB9797-041	OB9322PN5N-1	OB5385	NA	NA	NA
OBN4000LS16	Buna Bellows Mech.	OB5374	NA	OB32202	OB9373PD9N-1	OB33044	OB33008	OB9797-041	OB9322PN5N-1	OB5385	NA	NA	NA
OBN4000LS17	Viton Bellows Mech.	OB5374	NA	OB32235	OB9373PD9N-1	OB33044	OB33008	OB9797-041	OB9322PN5N-1	OB5385	NA	NA	NA
Relief Valve Versions: OBN4000LR, OBN4000LRS3, OBN4000LRS15, OBN4000LRS16, OBN4000LRS17									OB9323PN5B-1		OB5206	OB5205	OB5207

	12	13	14	15	16	17	18	19	20	21	22	
	Adj. Screw	Locknut	Bypass Nut	O-Ring Locknut	O-Ring Plug Nut	Grease Fitting	Dowel Pin	Lock Ring	Tag	Tag Screw	Retaining Ring	Repair Kit
Model	Qty. 1	Qty. 1	Qty. 1	Qty. 2	Qty. 1	Qty. 2	Qty. 2	Qty. 1	Qty. 2	Qty. 1	Qty. 1	
OBN4000L	NA	NA	NA	NA	NA	OB5390	OB8885	NA	OB9344	OB9345	NA	OB12213
OBN4000LS3	NA	NA	NA	NA	NA	OB5390	OB8885	NA	OB9344	OB9345	NA	OB12472
OBN4000LS15	NA	NA	NA	NA	NA	OB5390	OB8885	OB3033	OB9344	OB9345	NA	OB12215
OBN4000LS16	NA	NA	NA	NA	NA	OB5390	OB8885	NA	OB9344	OB9345	OB5382	TBD
OBN4000LS17	NA	NA	NA	NA	NA	OB5390	OB8885	NA	OB9344	OB9345	OB5382	TBD
Relief Valve Versions	OB5200	OB5209D	OB5204	OB9797-021	OB9797-018	OB5390 (3 Req'd)						

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



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