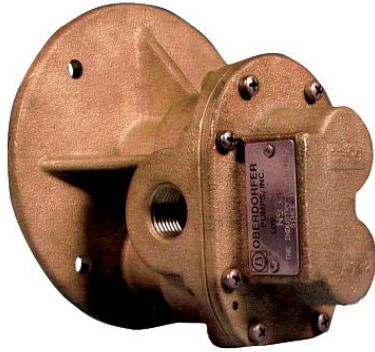




OBERDORFER[®]

An Ingersoll Rand Business

N970E Series Bronze Close Coupled Rotary Gear Pumps



Features

- Bronze Body, Stainless Steel Shaft
- Helical gears for quiet operation
- Easy Field Assembly to Motors
- Self-Lubricating Carbon Bearings
- O-ring seal for maximum leak protection
- For clutch driven version, see OBN970E-38
- 3/4" BSPT Ports

General Description

Pump housings and gears are made of top quality bronze, shafts are stainless steel 303. Bearings are made of high performance carbon-graphite material selected for wear resistance and long service life.

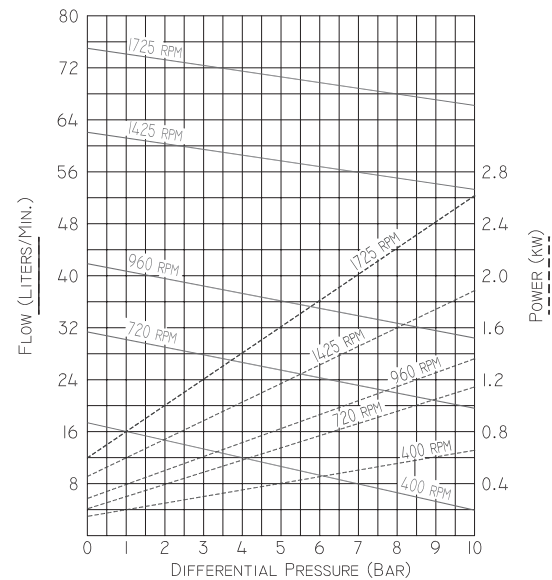
Gear pumps are positive displacement pumps. Each shaft revolution displaces a definite amount of liquid relatively unaffected by the back pressure in the discharge line. Shaft speed and flow are directly proportional.

Liquids and Temperature

These pumps are suitable for all liquids that are compatible with bronze. Most common liquids are water, oil and mild chemicals in the pH-range of 4 to 11. Viscous liquids require reduced shaft speeds of 1150 RPM or lower. Consult factory. Liquids containing solids, abrasives, powders or paint pigments are definitely not recommended for gear pumps. If abrasives are unavoidable, use a very low shaft speed.

Performance

Values @ 1cP, 20° C



The recommended liquid temperature range is 0° to 60°C for longest pump life. If more extreme temperature conditions exist, our factory should be consulted. Freezing of water-filled pumps can cause damage and must be avoided. Oils at low temperatures are very viscous requiring a lower speed or extra power.

Rotation and Relief Valve

The relief valve is not intended to be a metering or flow control device. Its main purpose is to function as a discharge pressure relief when spring tension is exceeded by the discharge pressure. Overheating can occur within 5-10 minutes if the discharge line is completely shut off for extended periods.

Unless otherwise specified, the pump motor unit is supplied by the factory for shaft rotation clockwise from shaft end. Reversing the motor rotation will reverse the “in” and “out” ports and also requires changing the relief valve location. The relief valve is always on the discharge side in this pump series. The factory pressure setting is 3.5 bar. To increase pressure, turn the relief valve adjusting screw in a clockwise direction.

To reverse single phase motors, find instructions on the inside of the junction box cover or on the name plate of the motor. Three phase motors are not wired for any particular rotation. They can be reversed by interchanging any two (2) wires of the three (3) wire leads.

Drive

Close coupled pumps are mounted directly to the electric motor by means of a suitable adapter bracket. The pump drive shaft is connected to the motor shaft by a flexible coupling.



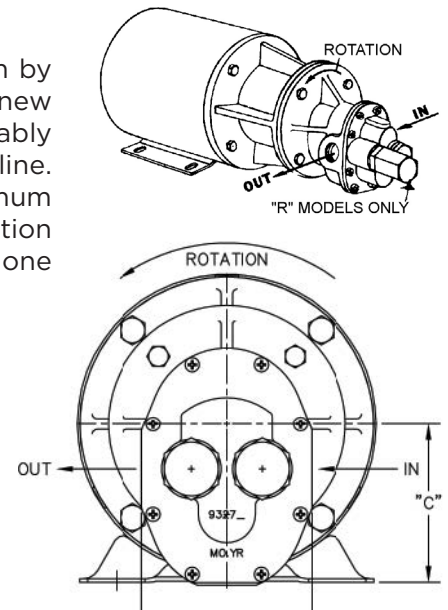
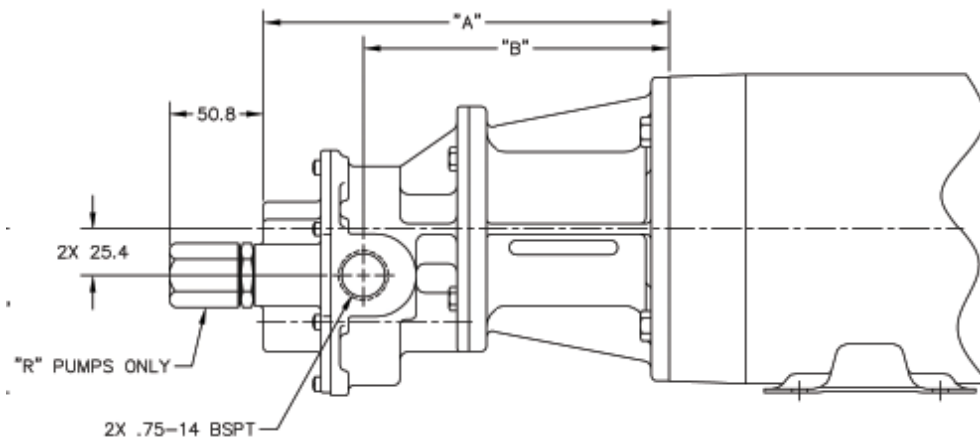
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Suction Lift

As a general rule, the suction lift should be kept at an absolute minimum by placing the pump as close to the liquid source as possible. A gear pump in new condition can lift 6 meters of water in the suction line. A foot valve (preferably with built-in strainer) is recommended at the beginning of the suction line. For a first start-up, the pump should be primed to avoid dry running. Minimum size of the suction pipe is the size of the pump inlet port. For longer suction lines (over 1 meter), or for viscous liquids, the pipe size should be at least one size or two sizes larger than the pump inlet port.

Dimensions



Adapter Kits		
Adapter Kit	Part Number	Description
H	OB11299	56C Frame
J	OB11300	143TC/145TC
K	OB11301	182TC/184TC
L	OB11302	213TC/215TC
G	OB11380	IEC 71*
T	OB11386	IEC 80*
U	OB11875	IEC 90S/90L*
V	OB11876	IEC 100L/112M*

Motor/Adapter Kit Dimensions (mm)					
Model	Motor Frame	„A“	„B“	„C“	
OBN970(R)EH & OBN970(R)ES15H	56C	220.5	166.6	88.9	
OBN970(R)EJ & OBN970(R)ES15J	143TC/145TC	220.5	166.6	88.9	
OBN970(R)EK & OBN970(R)ES15K	182TC/184TC	241.3	187.5	114.3	
OBN970(R)EL & OBN970(R)ES15L	213TC/215TC	241.3	187.5	133.4	
N970(R)EG & N970(R)ES15G	IEC 71*	220.5	166.6	71.0	
N970(R)ET & N970(R)ES15T	IEC 80*	220.5	166.6	80.0	
N970(R)EU & N970(R)ES15U	IEC 90S/90L*	233.2	179.3	90.0	
N970(R)EV & N970(R)ES15V	IEC 100L/112M*	233.2	179.3	100.0 / 112.0	

* To IEC 72 Standard B3/B14



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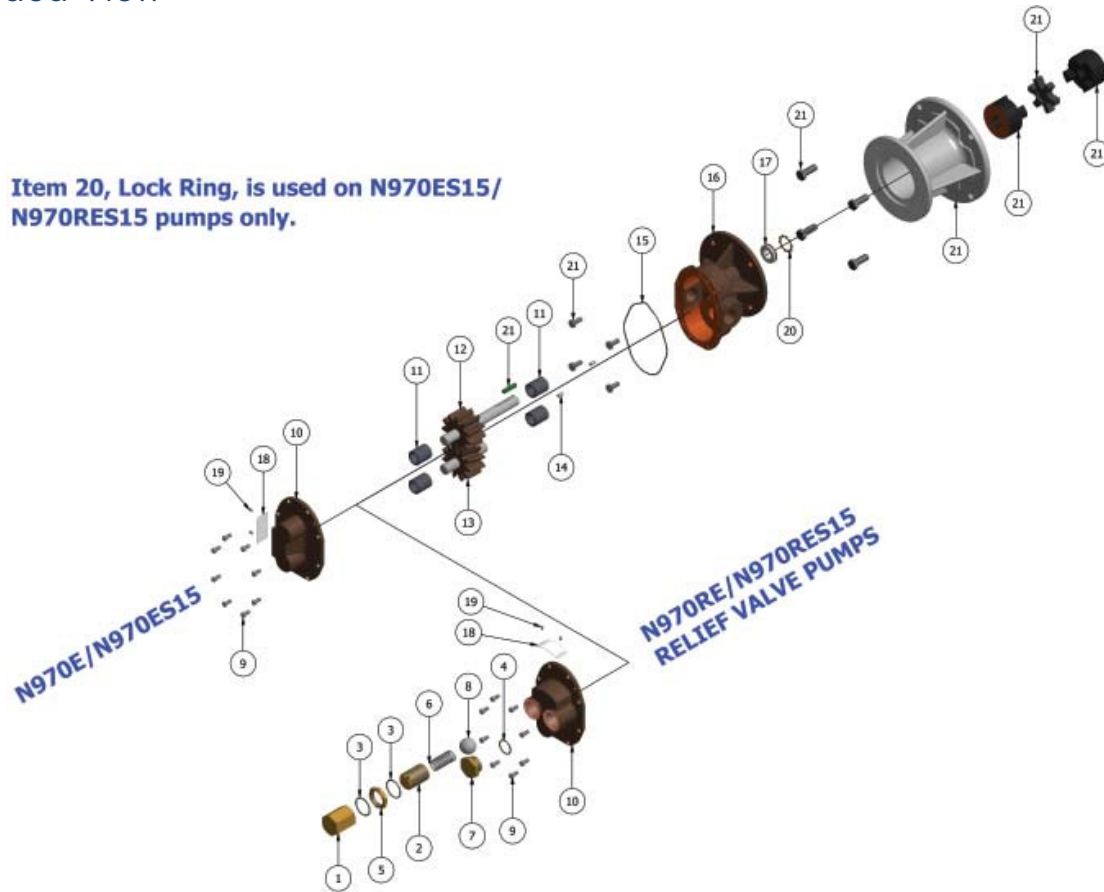


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Exploded View

**Item 20, Lock Ring, is used on N970ES15/
N970RES15 pumps only.**



Parts List

	1	2	3	4	5	6	7	8	9	10	11*
	Bypass Nut	Adj. Screw	O-Ring	O-Ring	Locknut	Spring	Plugnut	Ball	Screw	Cover	Bearing
Model	Qty. 1	Qty. 1	Qty. 2	Qty. 1	Qty. 1	Qty. 1	Qty. 1	Qty. 1	Qty. 8	Qty. 1	Qty. 4
OBN970E	NA	NA	NA	NA	NA	NA	NA	NA	OB5385	OB9326NN5N	OB5091
OBN970RE	OB5276	OB5275	OB9797-022	OB9797-019	OB1642D	OB5277	OB5278R	OB6217	OB5385	OB9327NN5B	OB5091
OBN970ES15	NA	NA	NA	NA	NA	NA	NA	NA	OB5385	OB9326NN5N	OB5091
OBN970RES15	OB5276	OB5275	OB9797-022	OB9797-019	OB1642D	OB5277	OB5278R	OB6217	OB5385	OB9327NN5B	OB5091

	12*	13*	14	15*	16	17*	18	19	20*	21	Repair Kits
	Drive Gear Assy	Idle Gear Assy	Dowel Pin	O-Ring	Body	Lipseal	Tag	Tag Screw	Lock Ring	Adapter Kits	
Model	Qty. 1	Qty. 1	Qty. 2	Qty. 1	Qty. 1	Qty. 1	Qty. 1	Qty. 2	Qty. 1		
OBN970E	OB32958	OB32959	OB8885	OB9797-045	OB9328NE2NE	OB5463	OB9344	OB9345	NA	See table (H Kit Shown)	OB12085
OBN970RE	OB32958	OB32959	OB8885	OB9797-045	OB9328NE2NE	OB5463	OB9344	OB9345	NA		OB12085
OBN970ES15	OB32958	OB32959	OB8885	OB9797-045	OB9328NE2NE	OB9997	OB9344	OB9345	OB3033		OB12111
OBN970RES15	OB32958	OB32959	OB8885	OB9797-045	OB9328NE2NE	OB9997	OB9344	OB9345	OB3033		OB12111

* Repair kit contains 11, 12, 13, 15, 17 & 20



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