



oberdorfer[®]

An Ingersoll Rand Business

N970E Series Bronze Close Coupled Rotary Gear Pumps



Features

- 3/4" BSPT Ports
- Temp. Range: 0°C - 60°F
- 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

General Description

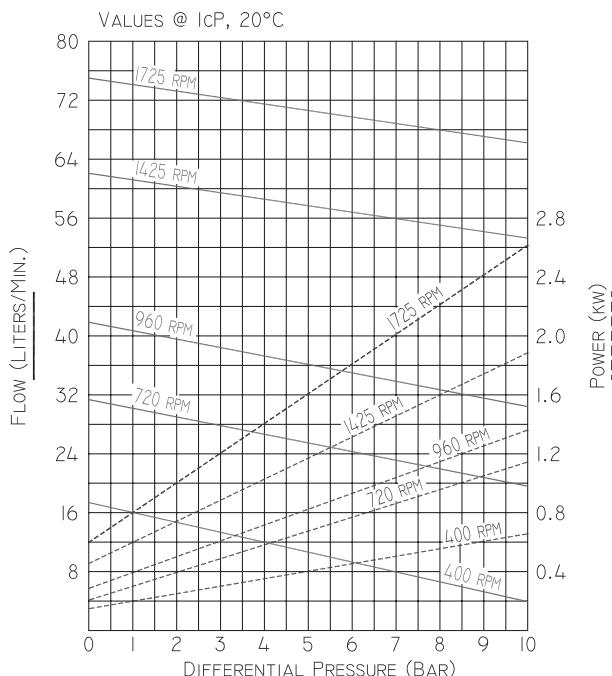
Pump housings and gears are made of top quality bronze, shafts are stainless steel 303. Bearings are made of high performance carbon-graphite material selected for wear resistance and long service life.

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. The recommended liquid temperature range is 0° to 60°C for longest pump life.

Performance



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 a flow control device; it protects the pump by relieving discharge pressure when spring tension is exceeded. Operating the pump with a closed discharge line for extended periods may cause overheating within 5-10 minutes.

By default, the pump motor rotates clockwise when viewed from the shaft end. Reversing rotation changes the inlet and outlet ports and requires relocating the relief valve, which is always installed on the discharge side. The factory pressure setting is 3.5 bar and can be increased by turning the adjusting screw clockwise.

Single-phase motor reversal instructions are located inside the junction box or on the nameplate. Three-phase motors can be reversed by swapping any two of the three power 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.



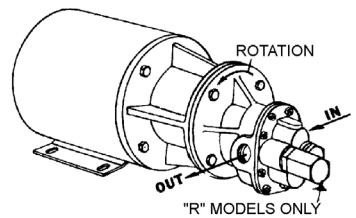
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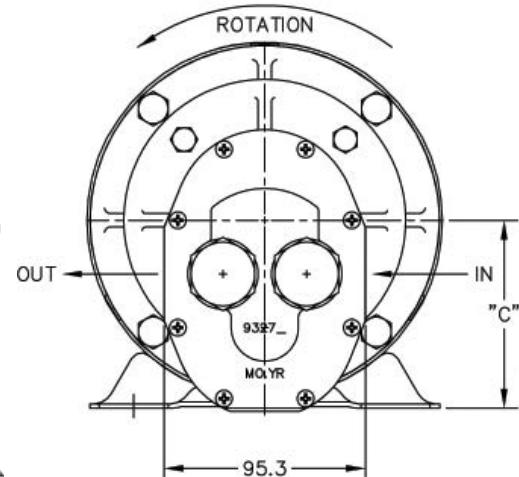
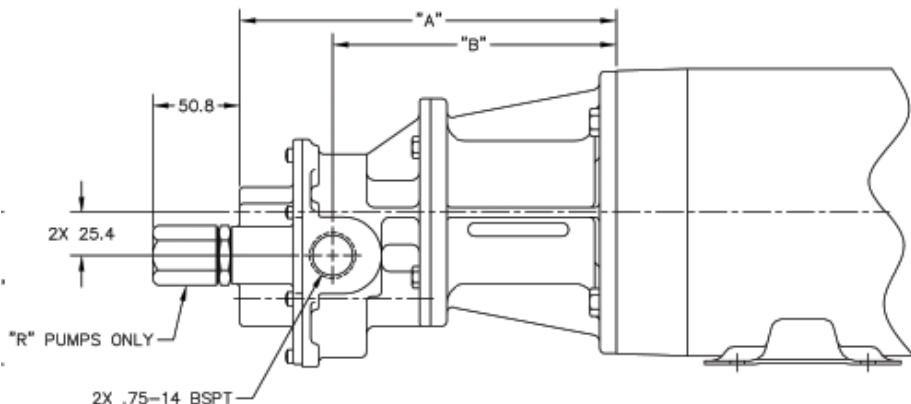


Suction Lift

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*

* To IEC 72 Standard B3/B14

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
OBN970(R)EG & OBN970(R)ES15G	IEC 71*	220.5	166.6	71.0
OBN970(R)ET & OBN970(R)ES15T	IEC 80*	220.5	166.6	80.0
OBN970(R)EU & OBN970(R)ES15U	IEC 90S/90L*	233.2	179.3	90.0
OBN970(R)EV & OBN970(R)ES15V	IEC 100L/112M*	233.2	179.3	100.0/112.0

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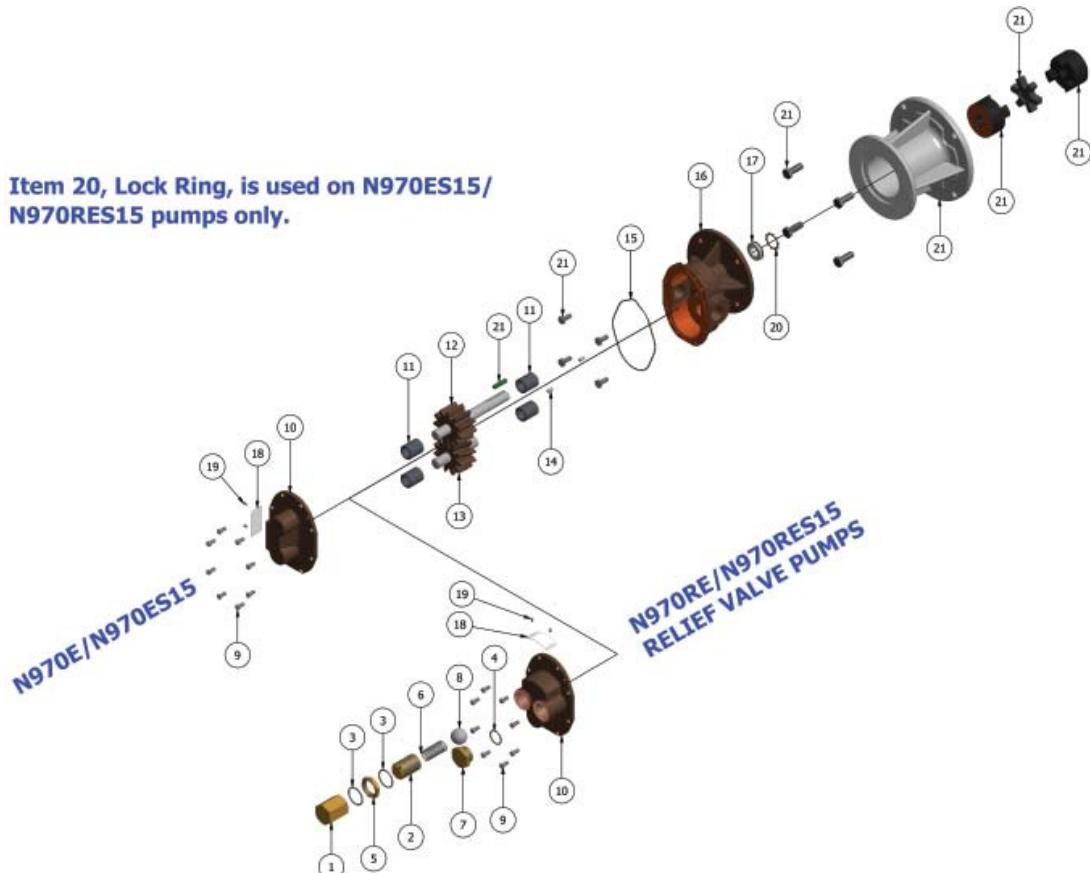
12500 South Pulaski Road
Alsip, IL 60803, USA
Phone (800) 448.1668



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Exploded View



Parts List

	1	2	3	4	5	6	7	8	9	10	11*
Model	Qty. 1	Qty. 1	Qty. 2	Qty. 1	Qty. 1	Qty. 1	Qty. 1	Qty. 1	Qty. 8	Qty. 1	Qty. 4
OBN970	NA	NA	NA	NA	NA	NA	NA	NA	OB5385	OB9326NN5N	OB5091
OBN970R	OB5276	OB5275	OB9797-022	OB9797-019	OB1642D	OB5277	OB5278R	OB6217	OB5385	OB9327NN5B	OB5091
OBN970S15	NA	NA	NA	NA	NA	NA	NA	NA	OB5385	OB9326NN5N	OB5091
OBN970RS15	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
Model	Qty. 1	Qty. 1	Qty. 2	Qty. 1	Qty. 1	Qty. 1	Qty. 2	Qty. 1	Qty. 1	See table (H Kit Shown)
OBN970	OB32958	OB32959	OB8885	OB9797-045	OB9328NE2N	OB5463	OB9344	OB9345	NA	OB12085
OBN970R	OB32958	OB32959	OB8885	OB9797-045	OB9328NE2N	OB5463	OB9344	OB9345	NA	OB12085
OBN970S15	OB32958	OB32959	OB8885	OB9797-045	OB9328NE2N	OB9997	OB9344	OB9345	OB3033	OB12111
OBN970RS15	OB32958	OB32959	OB8885	OB9797-045	OB9328NE2N	OB9997	OB9344	OB9345	OB3033	OB12111

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



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