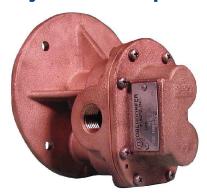


N994 Series Bronze Close Coupled Rotary Gear Pumps



Features

- 1/2" NPT Ports
- Temp. Range: 32°F 140°F
- Bronze Construction with Stainless Steel Shafts
- Helical gears for quiet operation
- Easy Field Assembly to Motors
- Self-Lubricating Carbon Bearings
- O-ring seal for maximum leak protection
- Lip or Mechanical Seal
- For Danfoss hydraulic motor driven pump units see OBN994-40

General Description

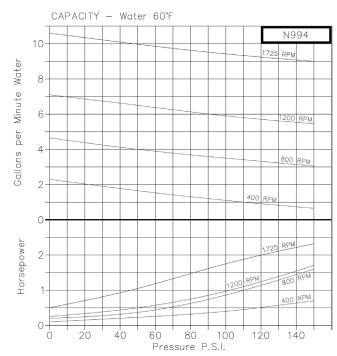
Pump housings and gears are made of top quality bronze, shafts are stainless steel 303. Bearings are made of high performance carbon-graphite material selected for wear resistance and long service life. Gear pumps are positive displacement pumps. Each shaft revolution displaces a definite amount of liquid relatively unaffected by the back pressure in the discharge line. Shaft speed and flow are directly proportional.

Drive Arrangement

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.

Performance

Capacity Water at 60°F



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. See pricebook for the recommended liquid temperature range of lip and mechanical seals. 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.

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 20 feet 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 3 feet), or for viscous liquids, the pipe size should be at least one size or two sizes larger than the pump inlet port.



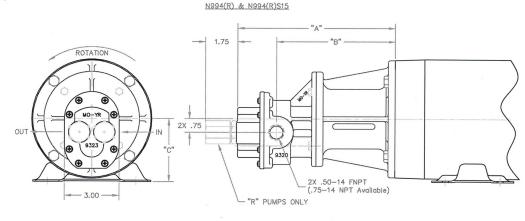
Rotation and Relief Valve

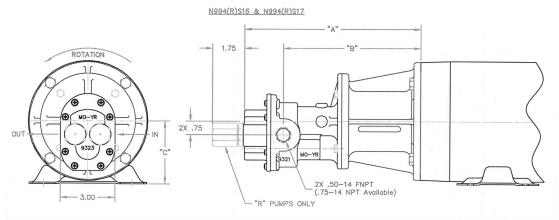
The relief valve is not intended to be a metering or flow control device. Its main purpose is to function as a discharge pressure relief when the spring tension is exceeded by the discharge pressure. Overheating can occur within 5-10 minutes if the discharge line is completely shut off for extended periods.

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 50 PSIG. 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.

Dimensions





Motor/Adapter Kit Dimensions (inches)								
Model	Motor Frame	"A"	"B"	"C"				
OBN994(R)H & OBN994(R)S15H	56C	8.63	6.50	3.50				
OBN994(R)J & OBN994(R)S15J	143TC/145TC	8.63	6.50	3.50				
OBN994(R)K & OBN994(R)S15K	182TC/184TC	9.45	7.31	4.50				
OBN994(R)L & OBN994(R)S15L	213TC/215TC	9.45	7.31	5.25				
OBN994(R)S16, S17, S8 OR S18H	56C	9.66	7.53	3.50				
OBN994(R)S16, S17, S8 OR S18J	143TC/145TC	9.66	7.53	3.50				
OBN994(R)S16, S17, S8 OR S18K	182TC/184TC	10.48	8.34	4.50				
OBN994(R)S16, S17, S8 OR S18L	213TC/215TC	10.48	8.34	5.25				



Exploded View



	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	Bypass Nut	Adj. Screw	O-Ring	O-Ring	Locknut	Spring	Plugnut	Ball	Screw	Cover	Bearing	Drive Gear Assy	ldle Gear Assy	Dowel Pin	O-Ring
Model	Qty. 1	Qty. 1	Qty. 2	Qty. 1	Qty. 1	Qty. 1	Qty. 1	Qty. 1	Qty. 8	Qty. 1	Qty. 4	Qty. 1	Qty. 1	Qty. 2	Qty. 1
OBN994	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	OB5385	OB9322NN5N	OB5091	OB33011	OB33008	OB8885	OB9797-041
OBN994R	OB5204	OB5200	OB9797-021	OB9797-018	OB5209D	OB5207	OB5205	OB5206	OB5385	OB9323NN5B	OB5091	OB33011	OB33008	OB8885	OB9797-041
OBN994S15	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	OB5385	OB9322NN5N	OB5091	OB33011	OB33008	OB8885	OB9797-041
OBN994RS15	OB5204	OB5200	OB9797-021	OB9797-018	OB5209D	OB5207	OB5205	OB5206	OB5385	OB9323NN5B	OB5091	OB33011	OB33008	OB8885	OB9797-041
OBN994S16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	OB5385	OB9322NN5N	OB5091	OB33014	OB33008	OB8885	OB9797-041
OBN994RS16	OB5204	OB5200	OB9797-021	OB9797-018	OB5209D	OB5207	OB5205	OB5206	OB5385	OB9323NN5B	OB5091	OB33014	OB33008	OB8885	OB9797-041
OBN994S17	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	OB5385	OB9322NN5N	OB5091	OB33014	OB33008	OB8885	OB9797-041
OBN994RS17	OB5204	OB5200	OB9797-021	OB9797-018	OB5209D	OB5207	OB5205	OB5206	OB5385	OB9323NN5B	OB5091	OB33014	OB33008	OB8885	OB9797-041
OBN994S8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	OB5385	OB9322NN5N	OB5091	OB33013	OB33008	OB8885	OB9999-041
OBN994RS8	OB5204	OB5200	OB9797-021	OB9797-018	OB5209D	OB5207	OB5205	OB5206	OB5385	OB9323NN5B	OB5091	OB33013	OB33008	OB8885	OB9999-041
OBN994S18	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	OB5385	OB9322NN5N	OB5091	OB33013	OB33008	OB8885	OB9355-041
OBN994RS18	OB5204	OB5200	OB9797-021	OB9797-018	OB5209D	OB5207	OB5205	OB5206	OB5385	OB9323NN5B	OB5091	OB33013	OB33008	OB8885	OB9355-041

	16	17		18	19	20	21	22	23	24	
	Body	Lipseal	Mechanical Seal	Tag	Tag Screw	Retaining Ring	Retaining Ring	Pipe Plug	Lock Ring	Adapter Kits	Repair Kits
Model	Qty. 1	Qty. 1	Qty. 1	Qty. 1	Qty. 2	Qty. 1	Qty. 1	Qty. 1	Qty. 1		
OBN994	OB9320ND2N	OB5463	N/A	OB9344	OB9345	N/A	N/A	N/A	N/A		OB11333
OBN994R	OB9320ND2N	OB5463	N/A	OB9344	OB9345	N/A	N/A	N/A	N/A		OB11333
OBN994S15	OB9320ND2N	ОВ9997	N/A	OB9344	OB9345	N/A	N/A	N/A	OB3033	See (H Kit Shown)	OB12100
OBN994RS15	OB9320ND2N	ОВ9997	N/A	OB9344	OB9345	N/A	N/A	N/A	OB3033		OB12100
OBN994S16	OB9321PD4N	N/A	OB32202	OB9344	OB9345	OB5382	OB5374	N/A	N/A		OB12400
OBN994RS16	OB9321PD4N	N/A	OB32202	OB9344	OB9345	OB5382	OB5374	N/A	N/A		OB12400
OBN994S17	OB9321PD4N	N/A	OB32235	OB9344	OB9345	OB5382	OB5374	N/A	N/A		OB12401
OBN994RS17	OB9321PD4N	N/A	OB32235	OB9344	OB9345	OB5382	OB5374	N/A	N/A		OB12401
OBN994S8	OB9321PD4N	N/A	OB33074	OB9344	OB9345	OB5382	OB5374	N/A	N/A		TBD
OBN994RS8	OB9321PD4N	N/A	OB33074	OB9344	OB9345	OB5382	OB5374	N/A	N/A		TBD
OBN994S18	OB9321PD6N	N/A	OB32923	OB9344	OB9345	OB5382	OB5374	OB6052	N/A		TBD
OBN994RS18	OB9321PD6N	N/A	OB32923	OB9344	OB9345	OB5382	OB5374	OB6052	N/A		TBD

Repair Kits contain items 11, 12, 13, 15, 17, 20, 21 & 23.

Adapter Kits

Adapter Kits								
Adapter Kit	Part Number	Description						
Н	OB11299	56C Frame						
J	OB11300	143TC/145TC						
К	OB11301	182TC/184TC						
L	OB11302	213TC/215TC						

