

BRONZE CLOSE COUPLED ROTARY GEAR PUMPS

GEAR PUMPS SERIES N991

PERFORMANCE



FEATURES

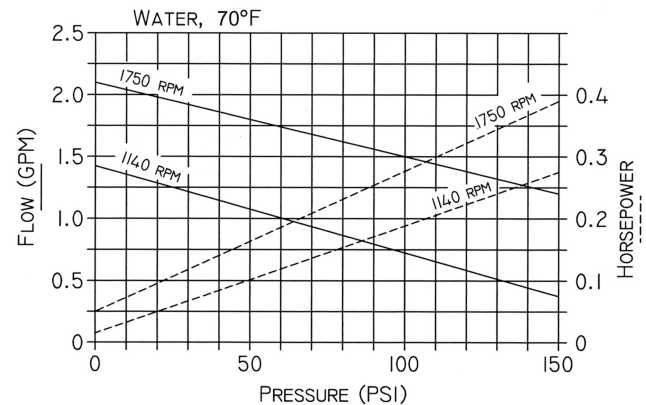
- Rugged corrosion resistant bronze construction
- Compact close-coupled design
- Stainless steel shafts
- Durable bronze spur gears
- Process lubricated carbon graphite bearings
- O-ring cover seal for maximum leak protection
- Nitrile Lip Seal -standard
- Easy field assembly to a variety of motor frames
- For typical DC motor pump units - see N991-32 DC
- For compact AC motor pump units - see Close Coupled Bronze Adapterless Rotary Gear Pumps
- For bronze pedestal pumps and mechanical seal styles - see model N1000

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.

LIQUIDS AND TEMPERATURE

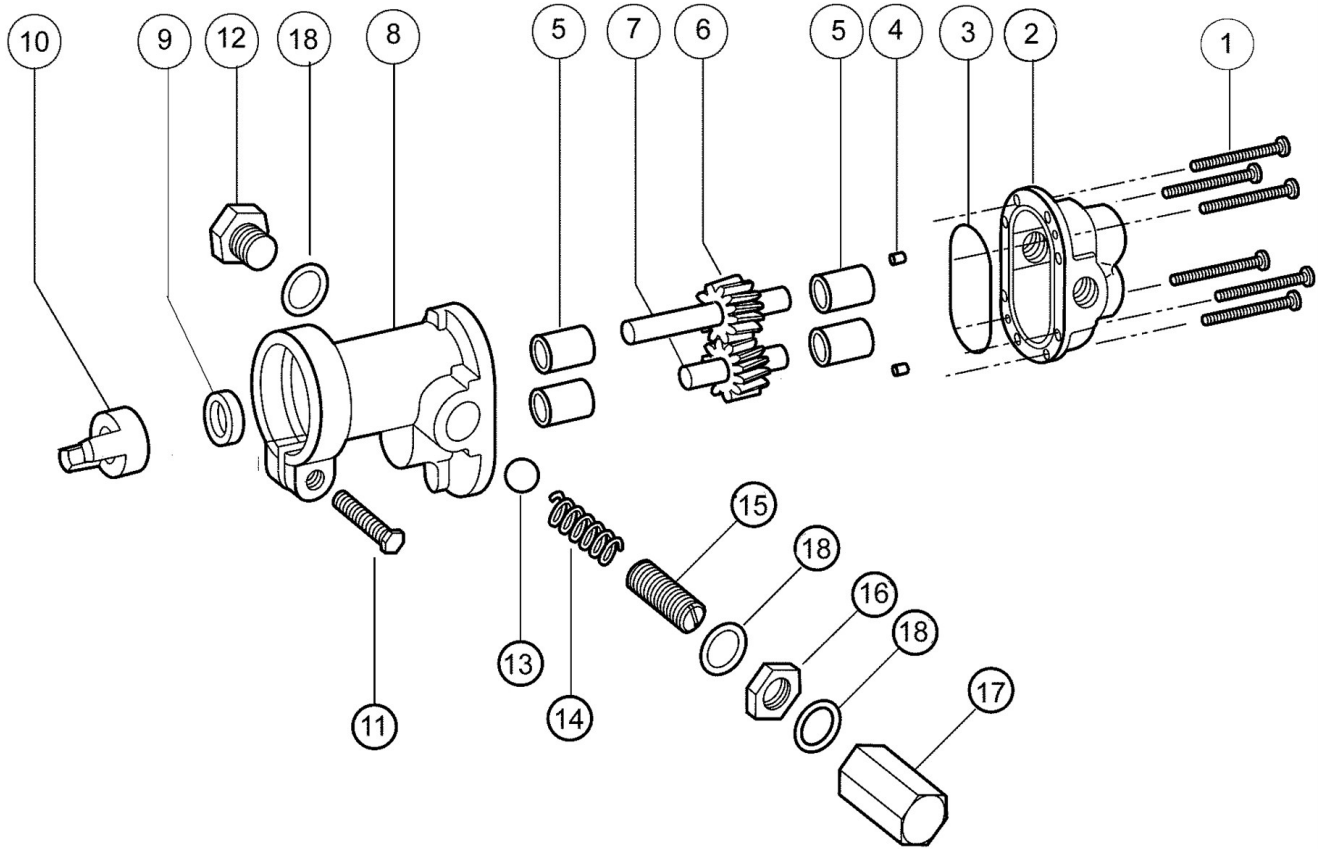
These pumps are suitable for all liquids that are compatible with bronze. Most common liquids are water, oil, and mild chemicals in the pH range of 4 to 11. Viscous liquids require reduced shaft speeds of 1150 RPM or lower. (Consult factory.) Liquids containing solids, abrasives, powders, or paint pigments are definitely not recommended for gear pumps. If abrasives are unavoidable, use a very low shaft speed. The recommended liquid temperature range is from 32o F to 140o F for best pump life. If more extreme temperature conditions exist, 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.



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 should be at least one size or two sizes larger than the pump inlet port.

EXPLODED VIEW AND PARTS LIST



Pump Parts

Pump No.	1	2	3*	4	5*	6*	7*	8	9#	10	11	12	13	14	15	16	17	18
	Screw	Body	O-Ring	Dowel Pin	Bearing	Drive Gear Assy	Idle Gear Assy	Cover	Lip Seal	Coupling	Screw	Plug Nut	Ball	Spring	Adj. Screw	Locknut	Bypass Nut	Fiber Washer
	6 Req'd	1 Req'd	1 Req'd	2 Req'd	4 Req'd	1 Req'd	1 Req'd	1 Req'd	1 Req'd	1 Req'd	1 Req'd	1 Req'd	1 Req'd	1 Req'd	1 Req'd	1 Req'd	1 Req'd	3 Req'd
N991-32	7733	9300NC5N	9797-033	8885	5024	32149	32110	9303NN2N	5007	5604	5595	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N991R-32	7733	9300NC5N	9797-033	8885	5024	32149	32110	9303NN2B	5007	5604	5595	1838	5803	1840	5237	5240	5239	6533

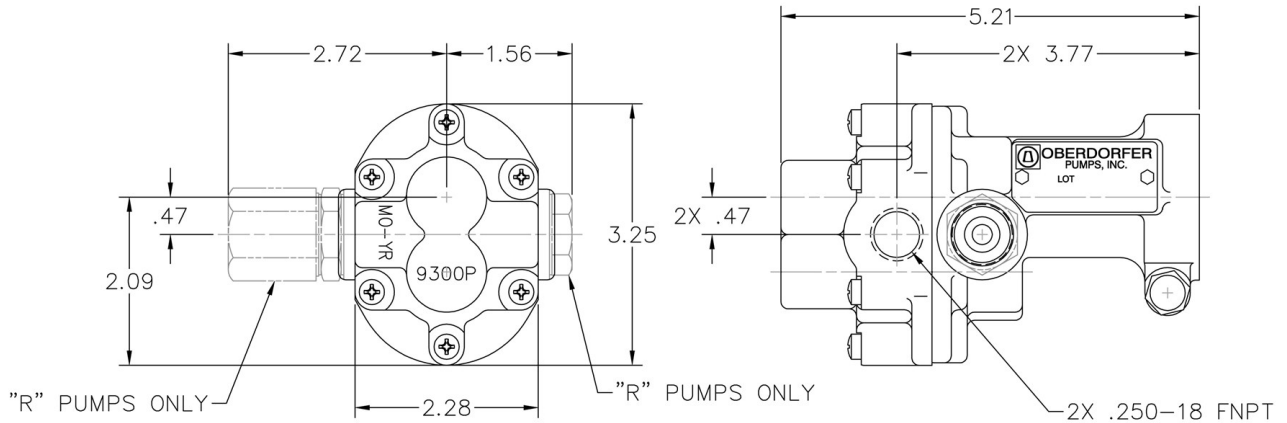
*Repair Kit contains items 3, 5, 6, 7 & 9. Repair Kit for N991(R) is #10640.

Motor Parts

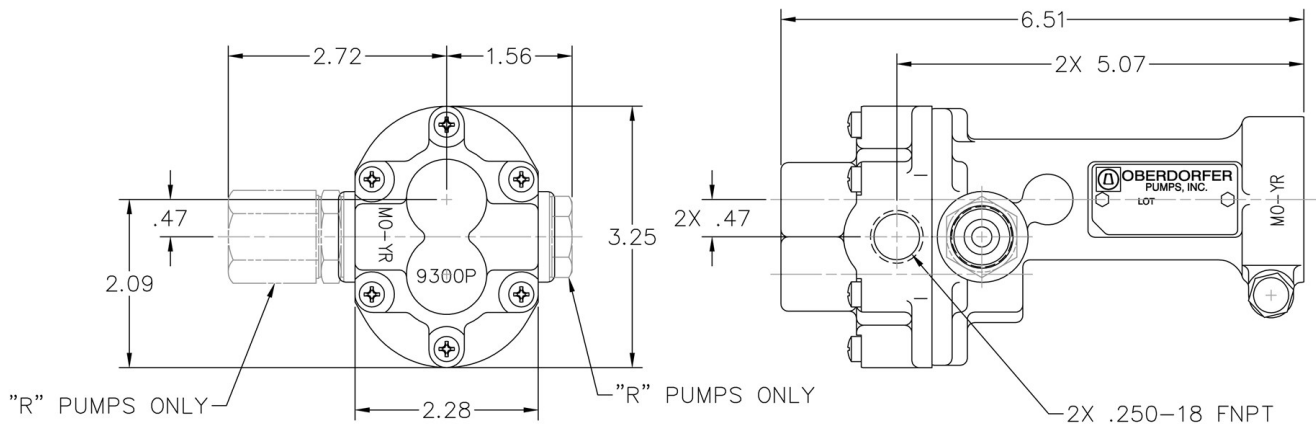
Motor No.	20	21	22	23a	23b	24	25	26	27
	Spider	Coupling Half	Bracket/Adapter	Screw	Screw	Lock Washer	Grommet	Motor	Adapter Kit
	1 Req'd	1 Req'd	1 Req'd	2 Req'd	4 Req'd	2 Req'd	4 Req'd	1 Req'd	1 Req'd
A96	7839	7714	7362	7424		5656	6650	8105	12091
A89	7839	7714	7362	7424		5656	6650	8030	12091
A97	7839	7714	7362	7424		5656	6650	8107	12091
C81	7839	7643	7602		5916			8295	12144
C82	7839	7643	7602		5916			8295	12144

DIMENSIONS

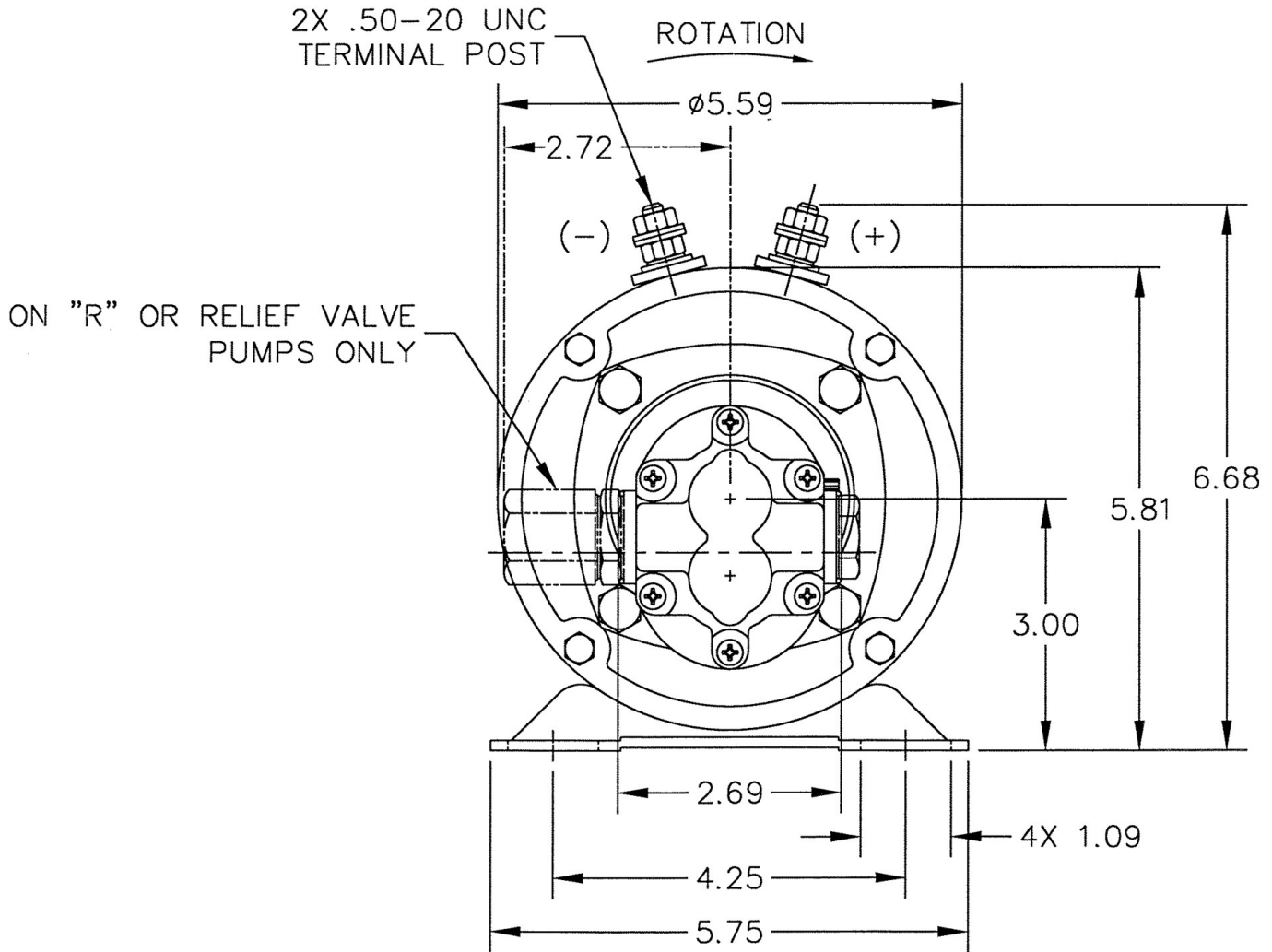
N991(R) & N991(R)S5



N991(R)S16 & N991(R)S17



ROTATION



ROTATION AND RELIEF VALVE

If the discharge line contains any throttling devices such as a shut-off valve, a spray nozzle or other restrictive device, it is necessary to have a relief valve in the system which returns the liquid to the suction side or to the tank. The relief valve is also available as part of the pump itself (R-model pumps). However, built-in relief valves are only good for intermittent service. If used continuously, the pump will overheat. A built-in relief valve is strictly a safety device against overpressure. It will not work successfully as a pressure or flow control device. For this purpose a separate relief valve in the pressure line must be used. Unless otherwise specified, the pump motor unit is supplied by the factory for shaft rotation counterclockwise from shaft end. Reversing motor will reverse "in and "out" ports and also requires changing relief valve location. The relief valve is always on the inlet side of this pump series. The factory pressure setting is 50 PSIG. To increase pressure, turn the relief valve adjusting screw in a clockwise direction.