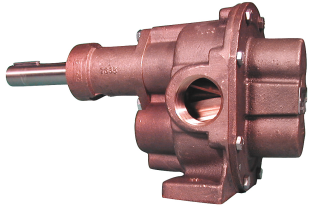


ROTARY GEAR PUMP BRONZE

GEAR PUMPS SERIES N11HDP

PERFORMANCE



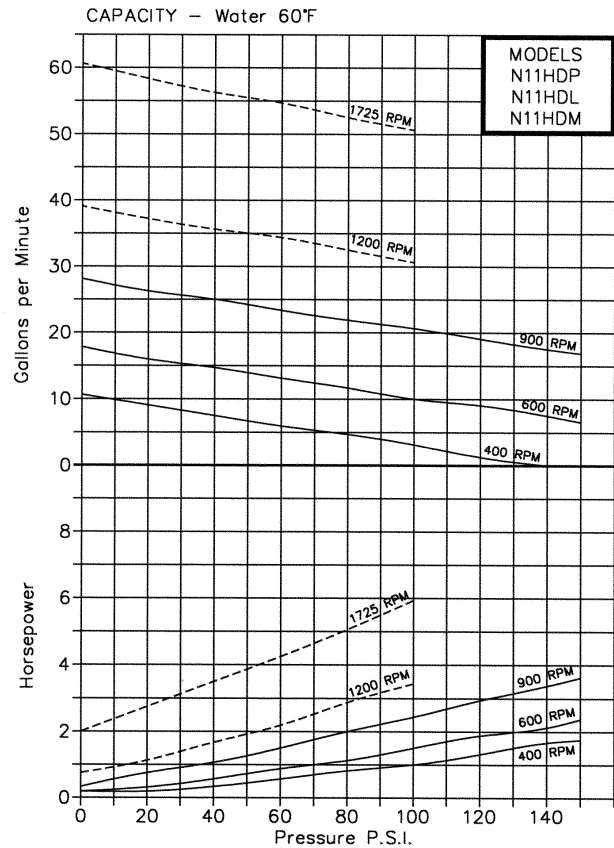
FEATURES

- All Bronze Castings and Stainless Steel Shafts
- Sealing Arrangement Interchangeable in Field with Proper Kit
- Outboard Ball Bearing Support
- Self Lubricating Carbon Bearings
- Electric Clutch (Options)

DRIVE

DRIVE & ALIGNMENT- Direct drive is the recommended drive arrangement. This pump is suitable for belt drive applications without needing pillow block bearings to achieve acceptable pump life. Correct alignment is absolutely essential for satisfactory pump life. Recheck alignment after piping has been connected to the pump. Electric clutch versions available.

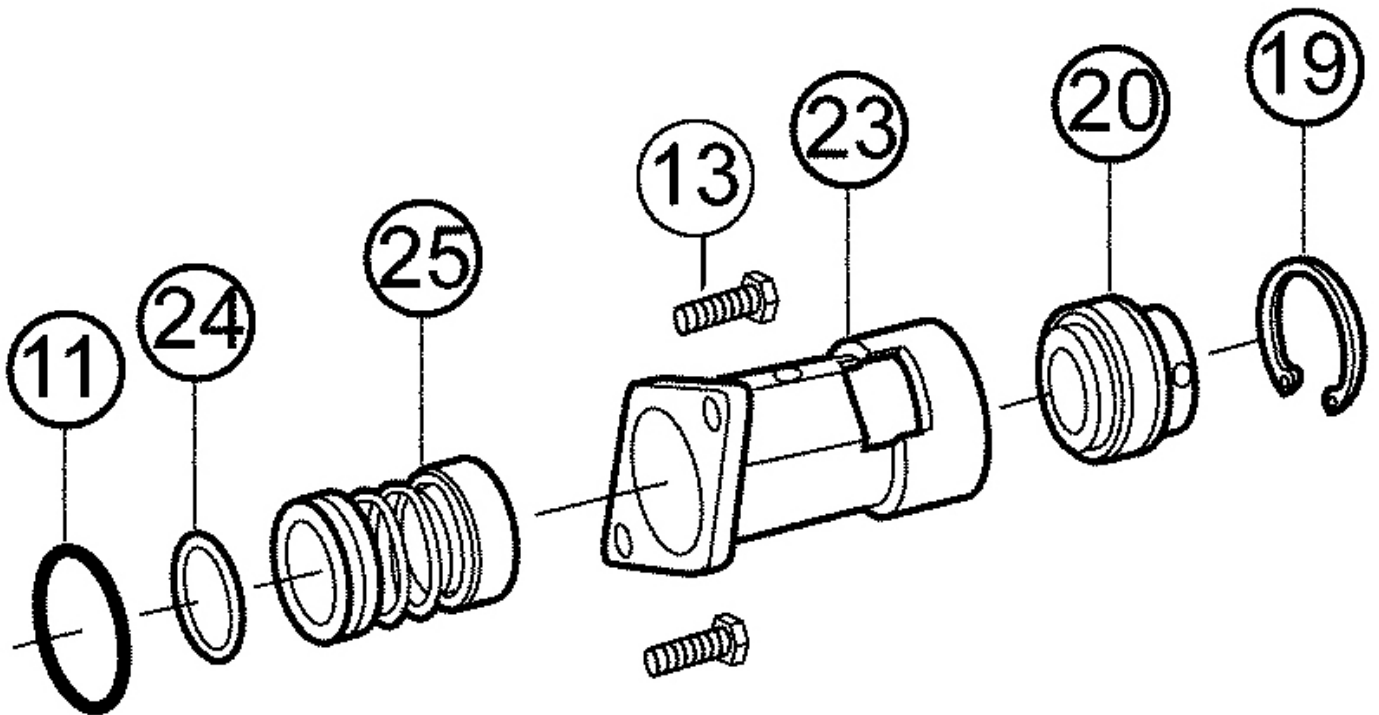
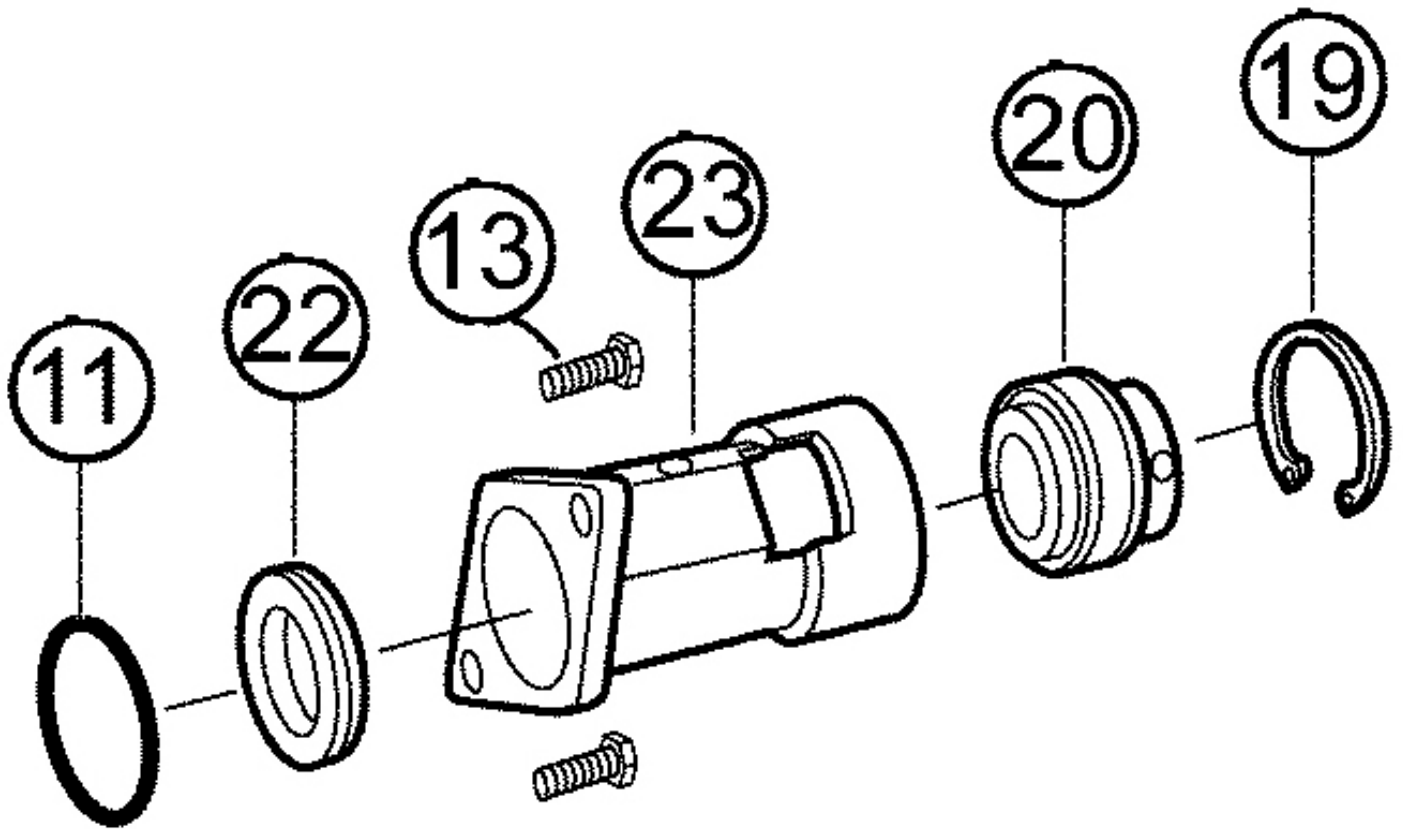
NOISE - Large gear pumps are inherently noisy due to metal to metal gear contact. Make installations far removed from offices or other relatively quiet people areas. Some noise reduction can be realized by lowering pump speed and use of isolation mounts and lines, usually the small amount of noise reduction achieved does not justify the effort and expense.

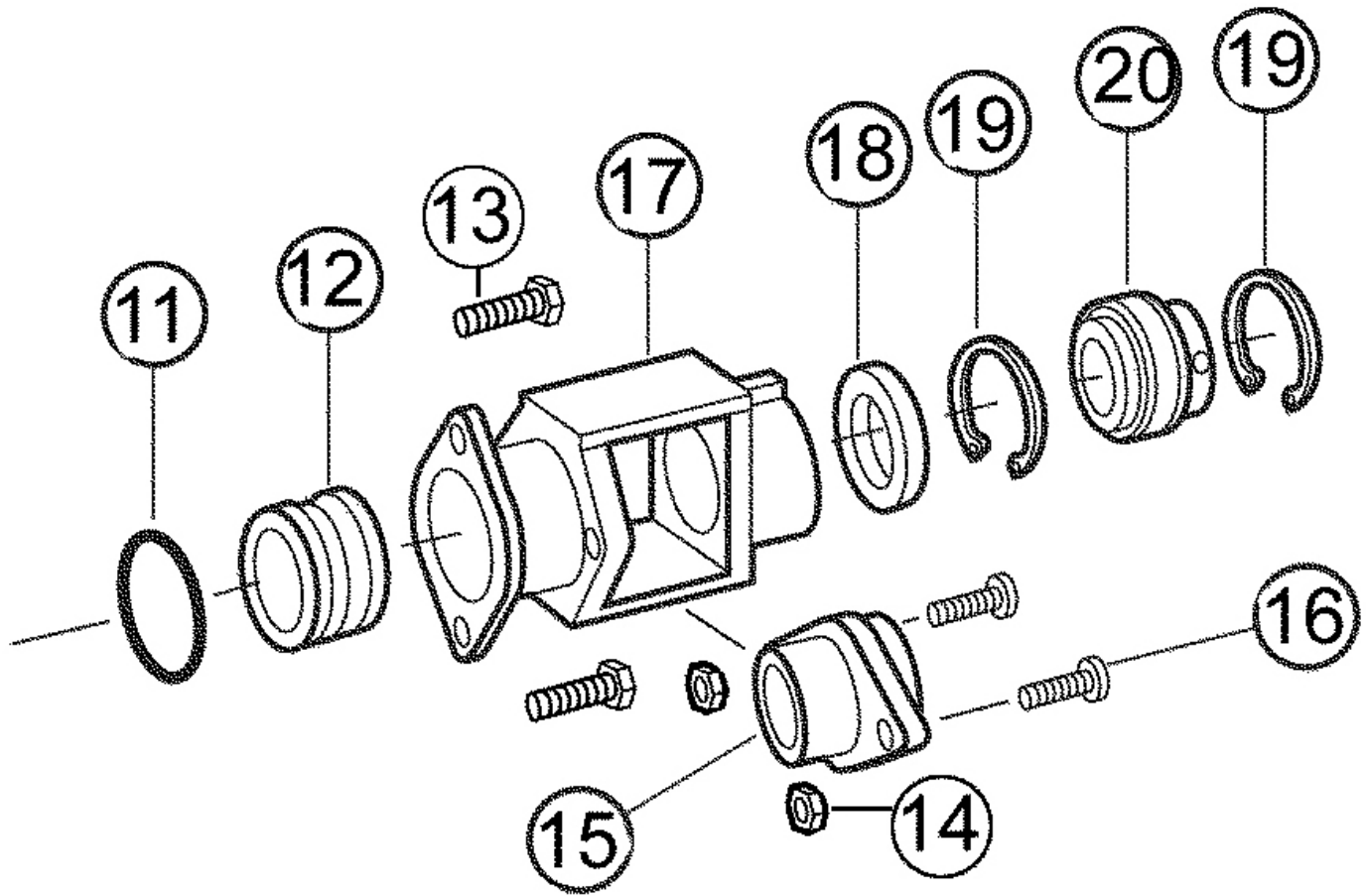


SUCTION LIFT

A rotary gear pump is capable of lifting water on the suction side as high as 20 feet. Though gear pumps are self-priming, a foot valve is recommended. For pumping water directly from streams or ponds, a wire mesh strainer must be used at the beginning of the suction line to prevent stones from entering the pump. Strainer and foot valves are commercially available as combination units.

EXPLODED VIEW AND PARTS LIST





Pump No.	1	2	3*	4*	5*	6*	7*	8*	9*	10
	Cover	Screw	Snap Ring	O-Ring	Bearing	Drive Gear	Drive Shaft	Idle Shaft	Idle Gear	Body
	1 Req'd	8 Req'd	4 Req'd	1 Req'd	4 Req'd	1 Req'd	1 Req'd	1 Req'd	1 Req'd	1 Req'd
N11HDP	9333NN5N	5393	7651	9797-158	5108	9833	7366	7652	9834	9331NG7N
N11HDL	9333NN5N	5393	7651	9797-158	5108	9833	7366	7652	9834	9331NG7N
N11HDM	9333NN5N	5393	7651	9797-158	5108	9833	7366	7652	9834	9331NG7N

Pump No.	14	15	16	17	18*	19	20	21	22*	23
	Nut	Gland	Screw	Seal Housing	Lip Seal	Snap Ring	Ball Bearing	Key	Lip Seal	Seal Housing
	2 Req'd	1 Req'd	2 Req'd	1 Req'd	1 Req'd	2 Req'd(P) 1 Req'd (L&M)	1 Req'd	3 Req'd	1 Req'd	1 Req'd
N11HDP	8395	7451	9905	7449	6710	7372	7368	6518	---	---
N11HDL	---	---	---	---	---	7372	7368	6518	7262	7365
N11HDM	---	---	---	---	---	7372	7368	6518	---	7365

*Repair Kits include parts 3, 4, 5, 6, 7, 8, 9, 11, 12, 18, 22 & 25

11*	12*	13
O-Ring	Packing Ring	Screw
1 Req'd	4 Req'd	2 Req'd
6515	7624	5916
9797-224	---	6827
9797-224	---	6827

Pump No.	Seal Options	22*	25*	Repair Kit
		Lip Seal	Seal Assy.	
N11HDL3	Buna Lip Seal	6500	---	11006
N11HDM57	Viton Mechanical	---	32372	11008

Pump No.	Clutch Drive Options	Clutch Body	Clutch Coil	Clutch Assy	Pump Repair Kit	23	7
						Seal Housing	Drive Shaft
N11HDM-E12	Gear Pump, Mechanical Seal, with 12V Clutch	7227	7224	32238	12013	9169-1	7722-1
N11HDM-E24	Gear Pump, Mechanical Seal, with 24V Clutch	7227	9902	33066			
N11HDM-E32	Gear Pump, Mechanical Seal, with 32V Clutch	7227	7225	32239			

24	25*	26	Repair Kit No.
Ring	Seal Assy.	Dowel Pin	
1 Req'd	1 Req'd	2 Req'd	
---	---	8597	11003
---	---	8597	11005
7651	32315	8597	11007

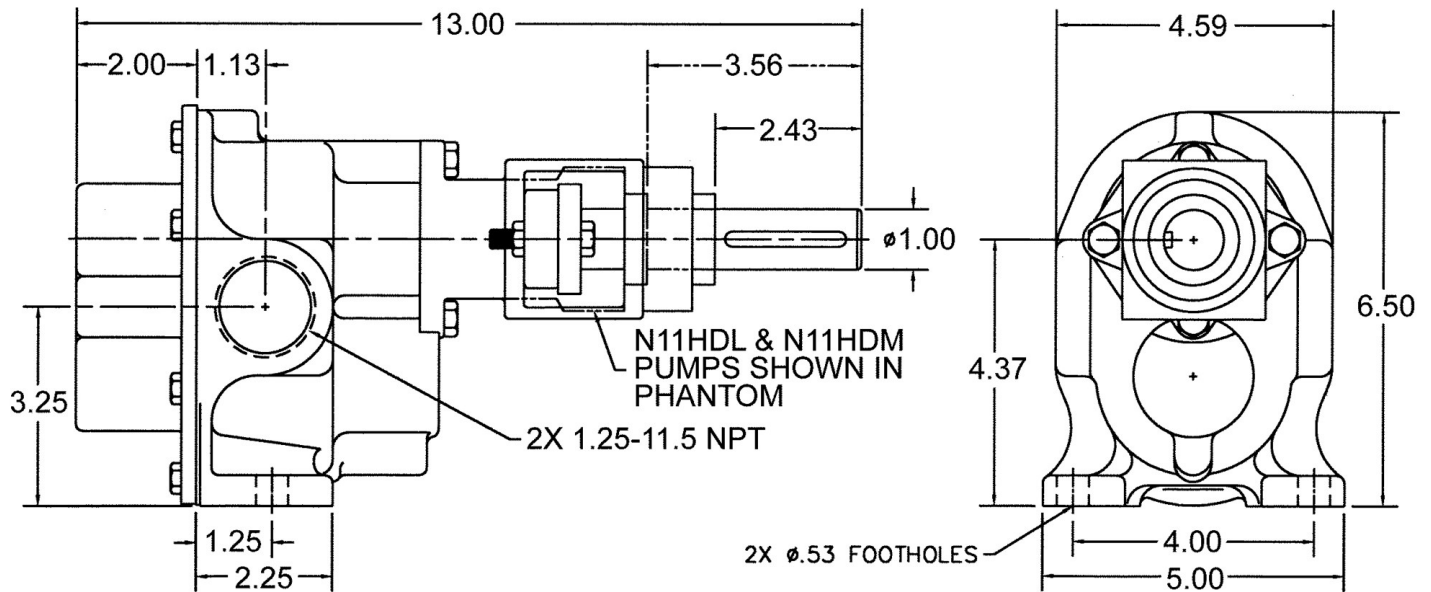
STANDARD			
Pump No.	Seal		Conversion Kit No.
	Type	Material	
N11HDP	Packing	Acrylic-Graphite	11021
N11HDL	Lip	Viton(R)*-Teflon(R)*	11023
N11HDM	Mechanical	Buna N-Ceramic	11025

SPECIAL			
Pump No.	Seal		Conversion Kit No.
	Type	Material	
N11HDP-1	Packing	Teflon	11022
N11HDLS3	Lip	Buna N	11024
N11HDMS7	Mechanical	Viton(R)*-Ceramic	11026

Seal Conversion Kit Number	Pump Models	Seal Type	Materials
11021	N11HDP,N13HDP,26HDP	Packing	Acrylic-graphite
11022	N11HDP-1,N13HDP-1, 26HDP-1	Packing	Teflon
11023	N11HDL,N13HDL,26HDL	Lip	Viton teflon
11024	N11HDL S03, N13HDL S03,26HDL S03	Lip	Buna
11025	N11HDM,N13HDM,26HDM	Mechanical	Buna-ceramic
11026	N11HDM S07,N13HDM S07,26HDM S07	Mechanical	Viton-ceramic

Pump No.	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P
N11HDM	1 1/4	12 7/8	1 7/8	1 1/8	3 1/4	1 1/4	*	2 1/4	3 5/8	4 3/8	4 19/32	4	5	6 1/2	1/4 x 1/4 x 1 1/2
N11HDL	1 1/4	12 7/8	1 7/8	1 1/8	3 1/4	1 1/4	*	2 1/4	3 5/8	4 3/8	4 19/32	4	5	6 1/2	1/4 x 1/4 x 1 1/2
N11HDP	1 1/4	12 7/8	1 7/8	1 1/8	3 1/4	1 1/4	*	2 1/4	2 1/2	4 3/8	4 19/32	4	5	6 1/2	1/4 x 1/4 x 1 1/2

DIMENSIONS



SEAL CONVERSION KITS

Seal conversion kits, illustrated (on back) are designed for quick removal and replacement. In each case, seal housings are fastened to pump bodies by means of 2 bolts, item 13. **IMPORTANT** - before attempting to remove a seal housing containing seal components by sliding them off the pump shaft, be sure to unlock the 2 set screws locking the ball bearing inner race to the pump shaft. The ball bearing is identified as item 20. Also, before attempting to slide the seal housing from the pump shaft, remove all burrs, scale, and projections that could be formed by fretting corrosion.

SERVICE WEAR FACTORS

SPEED - High speed accelerates wear. For longer service life, keep speed as low as possible. Pump speeds above 900 R.P.M. not recommended except for intermittent duty and pressures below 100 p.s.i.

PRESSURE - High pressure accelerates wear. For longer service life keep pressure as low as possible.

LIQUID TEMPERATURE - High temperature accelerates wear. Keep as close to room temperature as possible.

LIQUID CONTAMINATION - Impurities like fine abrasive silt or sand accelerate wear. Keep liquid as clean as possible.

LIQUID LUBRICITY - Lubricants increase service life many fold. Use lubricant additives whenever possible.