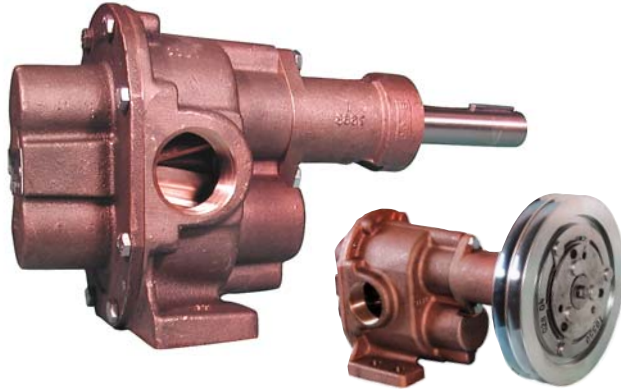


ROTARY GEAR PUMP BRONZE

1 1/4" NPT PORTS



N11HDM WITH CLUTCH

| 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 |
| N11HDL3 | Lip | Buna N | 11024 |
| N11HDM3 | Mechanical | Viton(R)*-Ceramic | 11026 |

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)

SERVICE WEAR FACTORS

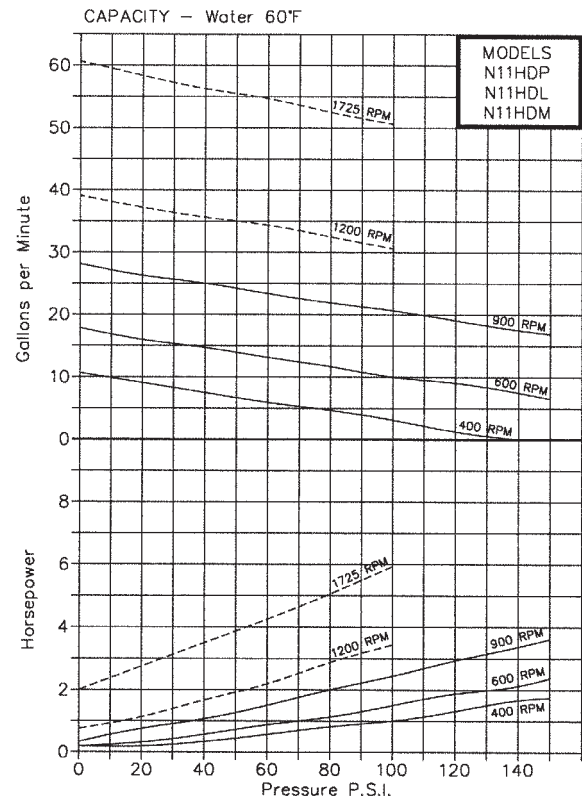
SPEED - High speed accelerates wear. For longer service life, keep speed as low as possible. Pump speeds above 900 R.P.M. not recommended except for intermittent duty and pressures below 100 p.s.i.

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.



Note: Dotted lines(---) recommended for intermittent duty only due to accelerated wear at higher speeds and pressures.

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.

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.

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.

* Viton® is a registered trademark of DuPont Dow Elastomers. Viton® or equivalent FKM will be used.
Teflon® is a registered trademark of DuPont. Teflon® or equivalent PTFE will be used.

MODELS

N11HDP
N11HDL
N11HDM

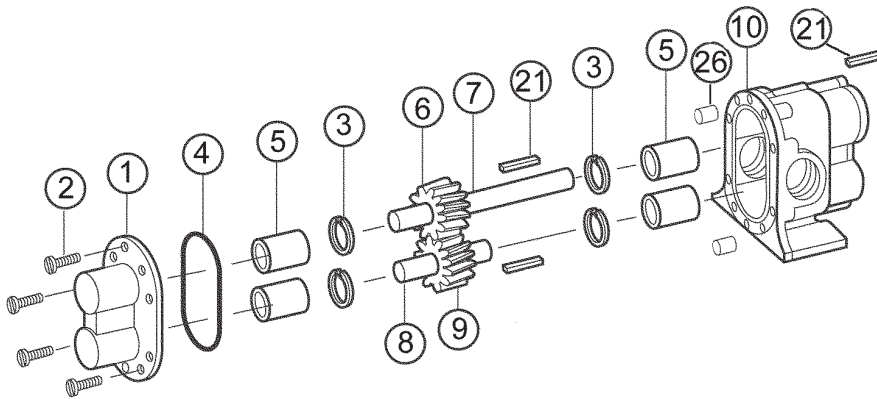
ROTARY GEAR PUMP BRONZE

EXPLODED VIEW AND PARTS LIST

| Pump No. | 1 Cover | 2 Screw | 3* Snap Ring | 4* O-Ring | 5* Bearing | 6* Drive Gear | 7* Drive Shaft | 8* Idle Shaft | 9* Idle Gear | 10 Body | 11* O-Ring | 12* Packing Ring | 13 Screw |
|----------|------------|------------|-----------------|--------------|---------------|------------------|-------------------|------------------|-----------------|------------|---------------|---------------------|-------------|
| | 1 Reqd | 8 Reqd | 4 Reqd | 1 Reqd | 4 Reqd | 1 Reqd | 1 Reqd | 1 Reqd | 1 Reqd | 1 Reqd | 1 Reqd | 4 Reqd | 2 Reqd |
| N11HDP | 9333NN5N | 5393 | 7651 | 9797-158 | 5108 | 9833 | 7366 | 7652 | 9834 | 9331NG7N | 6515 | 7624 | 5916 |
| N11HDL | 9333NN5N | 5393 | 7651 | 9797-158 | 5108 | 9833 | 7366 | 7652 | 9834 | 9331NG7N | 9797-224 | --- | 6827 |
| N11HDM | 9333NN5N | 5393 | 7651 | 9797-158 | 5108 | 9833 | 7366 | 7652 | 9834 | 9331NG7N | 9797-224 | --- | 6827 |

| Pump No. | 14 Nut | 15 Gland | 16 Screw | 17 Seal Housing | 18* Lip Seal | 19 Snap Ring | 20 Ball Bearing | 21 Key | 22* Lip Seal | 23 Seal Housing | 24 Ring | 25* Seal Assy. | 26 Dowel Pin | Repair Kit No. |
|----------|-----------|-------------|-------------|--------------------|-----------------|---------------------------|--------------------|-----------|-----------------|--------------------|------------|-------------------|-----------------|----------------|
| | 2 Reqd | 1 Reqd | 2 Reqd | 1 Reqd | 1 Reqd | 2 Reqd(P) 1 Reqd (L&M) | 1 Reqd | 3 Reqd | 1 Reqd | 1 Reqd | 1 Reqd | 1 Reqd | 2 Reqd | |
| N11HDP | 8395 | 7451 | 9905 | 7449 | 6710 | 7372 | 7368 | 6518 | --- | --- | --- | --- | 8597 | 11003 |
| N11HDL | --- | --- | --- | --- | --- | 7372 | 7368 | 6518 | 7262 | 7365 | --- | --- | 8597 | 11005 |
| N11HDM | --- | --- | --- | --- | --- | 7372 | 7368 | 6518 | --- | 7365 | 7651 | 32315 | 8597 | 11007 |

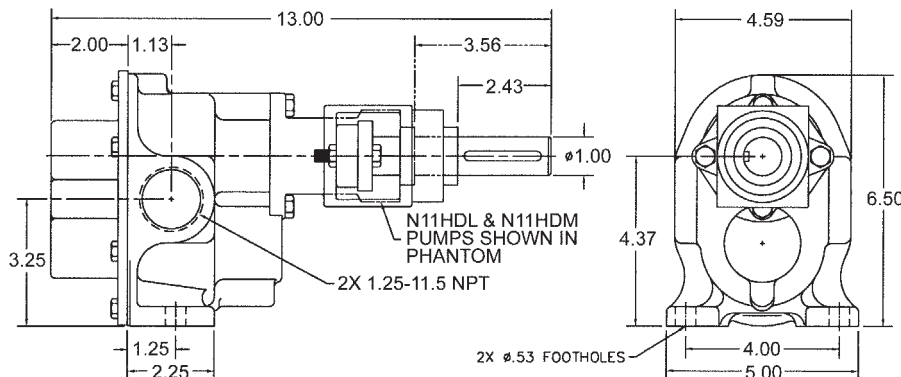
*Repair Kits include parts 3, 4, 5, 6, 7, 8, 9, 11, 12, 18, 22 & 25



CLUTCH DRIVE OPTIONS

| Pump No. | Clutch Drive Options | Clutch Body | Clutch Coil | Clutch Assy | Pump Repair Kit | 23 Seal Housing | 7 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 | | | |

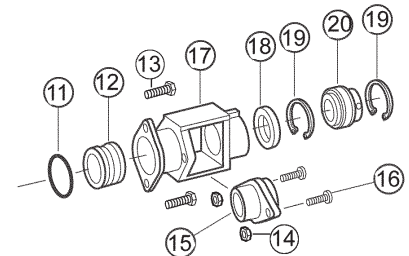
DIMENSIONS



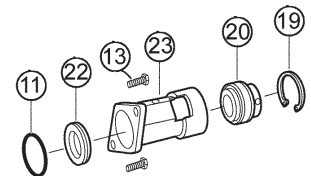
ADDITIONAL SEAL OPTIONS

| Pump No. | Seal Options | 22* | 25* | Repair Kit |
|----------|------------------|----------|------------|------------|
| | | Lip Seal | Seal Assy. | |
| N11HDLS3 | Buna Lip Seal | 6500 | --- | 11006 |
| N11HDMS7 | Viton Mechanical | --- | 32372 | 11008 |

PACKING SEAL END



LIP SEAL END



MECHANICAL SEAL END

