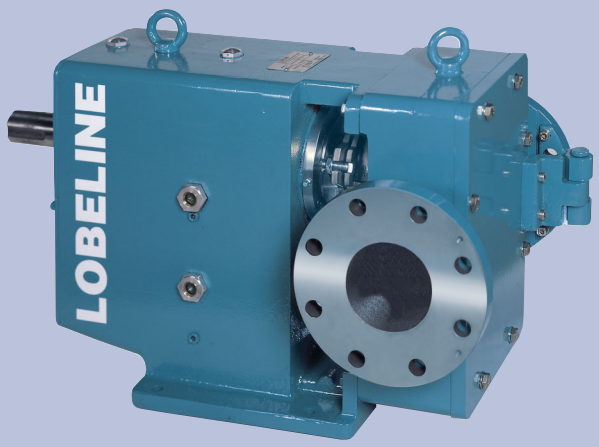
BULLETIN 728.1
September 2005

LOBELINE™ Rotary Lobe Pumps



LOBELINE™ **is designed for superior pumping capabilities in a wide range of industrial applications. Choose from 8 models, each available in 12 sizes to suit a variety of operating conditions. Both bare pump and complete pump and drive packages are available. With interchangeable seal arrangements and a selection of wet end metallurgies and designs for your specific application,** *LOBELINE* **offers the perfect engineered pumping solution to meet your needs.**

LOBELINE™

Heavy-Duty, Self-Priming Industrial Rotary Lobe Pumps

- Capacities to 2310 GPM (524 m^3/hr)
- Pressures to 150 PSIG (10 bar)
- Temperatures to 212° F (100° C)
- Fluid Viscosities up to 1,000,000 cps

LOBELINE™

is a Positive Displacement Pump with the following operational features:

Pump Runs Dry
Non-contacting pumping elements allows periodic use without fluid. Excellent for fluid transfers from tank to tank. Requires no flow indication equipment as used on Screw (Progressive Cavity) pumps that would cease and malfunction if run dry.

Low Shear Action
Smooth tri-lobe geometry provides gentle rolling action enabling shear sensitive fluids to be pumped with minimal damage.

Reversible Flow
Ability to utilize pump in both directions excellent for purging lines or changing pumping system requirements enabling greater process control.

Gas/Air Entrained Fluids
Lobe design can easily handle fluid containing gas/air. Centrifugal pumps are low on efficiency and are prone to losing prime.

Pump Jamming
With LOBELINE simply remove the front cover plate to inspect or clear the pump blockage. Many other pump types such as Screw (Progressive Cavity), Flexible Member (Hose), Plunger, Diaphragm if jammed require substantial disassembly to simple inspect or clear blockages.

Solids Handling
Ability to handle incompressible solids up to 3½" (90mm) suspended within the fluid.

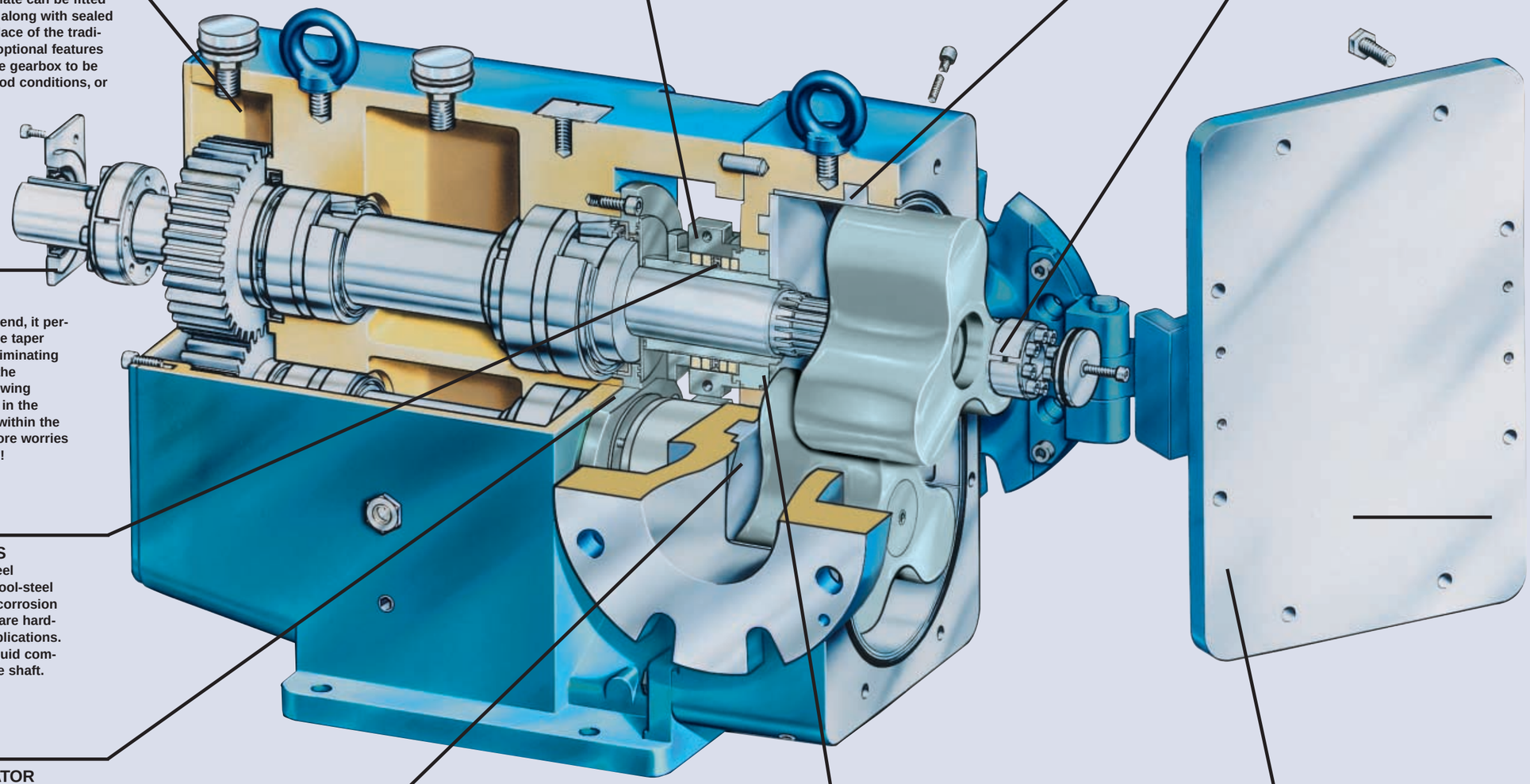
Metering/Controlled Flow
Provides smooth predictable flow with minimal pulsation or surging when faced with varying pressures. Does not require pulsation dampeners like Plunger, Diaphragm type pumps.

Power Consumption Expense
Lobe pumps require less power due to the non-contacting design. Screw (Progressive Cavity) due to their design require higher start up and running horsepower. Centrifugal pumps require increased power on viscosities greater that 300-500 cps.

Pump Installation Space Problem
Lobe pumps require substantially less floor space than traditional Screw (Progressive Cavity and Plunger type pumps.

LOBELINE™ Rotary Lobe Pump

Designed With Features That Provide Maximum Uptime



OPTIONAL SEALED GEARBOX DESIGN
In addition to the front bearing isolator, the timing port plate can be fitted with a labyrinth seal along with sealed expansion caps in place of the traditional vents. These optional features (not shown) allow the gearbox to be fully immersed in flood conditions, or to function in extremely humid environments.

TIMING PORT PLATE
Located at the drive end, it permits easy entry to the taper locking assembly (eliminating the need to remove the gearcase cover), allowing pump to be re-timed in the event of a blockage within the pump casing. No more worries about oil drain-down!

HOOKED SHAFT SLEEVES
Hooked stainless-steel sleeves protect the tool-steel shaft, providing full corrosion protection. Sleeves are hardened for packing applications. O-ring seals keep liquid completely away from the shaft.

LABYRINTH BEARING ISOLATOR
Stainless steel construction eliminates ingress of liquid into the gearbox. Double-lip oil seal retains oil; grease nipple allows grease input to act as barrier within the labyrinth. Functions in static or running state.

AXIALLY-SPLIT STUFFING BOX
Simplifies the removal and replacement of packing and lantern ring.

OPTIONAL REAR WEARPLATES
Upper and lower plates to protect casing. Retained via a series of externally-sealed fasteners.

OPTIONAL RADIAL WEARPLATES
Upper and lower wear plates patented design eliminate casing replacement. Retained via a series of externally-sealed fasteners which allow pump to be serviced in place.

TAPER LOCKING ASSEMBLIES
Used on rotors and gears to simplify removal and refitting.

FRONT-LOADING SEAL AREA
Allows the hardened shaft sleeves or mechanical seals to be removed cartridge style through the front of the pump—without removal of the casing.

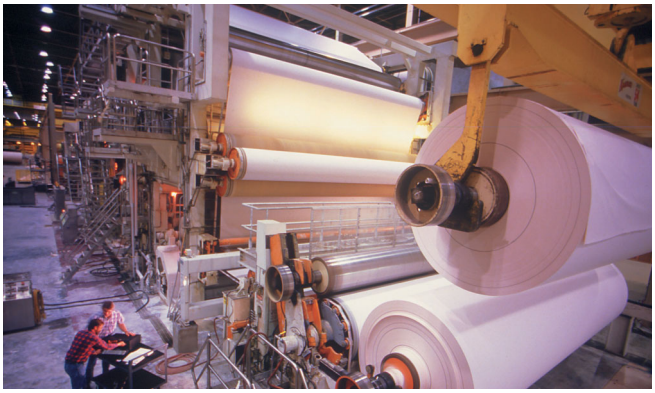
REVERSIBLE FRONT COVER
Enables the cover to be reversed when one side is worn, effectively doubling its life. Flush–mounted design has no fastener protrusions to cause premature rotor failure. Hinged on larger models.

LOBELINE™ ...State-of-the-art Rotary Lobe Pumps

For Use in a Wide Variety of Applications

Pulp and Paper

- *Paper Coating*
- *Tio_2 Pigment*
- *Clay Slurry*
- *Calcium Carbonate Slurry*
- *Latex*
- *Starch Slurry*
- *Paper Pulp*
- *Bio Solids Waste Sludge*
- *Soap Scums*
- *Resins*



Process Maintenance Alternative To

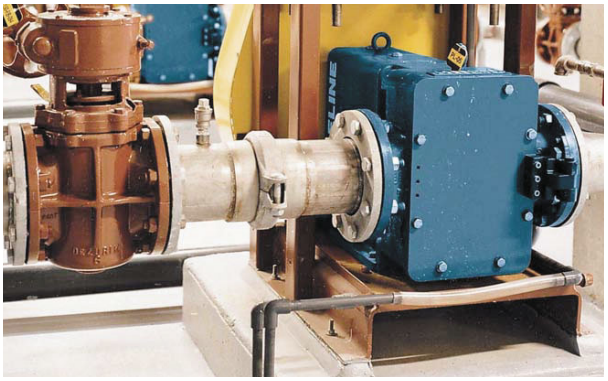
- *Conventional Lobe Pumps*
- *Gear Pumps*
- *Progressive Cavity Pumps*
- *Plunger Pumps*
- *Centrifugal Pumps*
- *Diaphragm Pumps*
- *Hose (Peristaltic) Pumps*

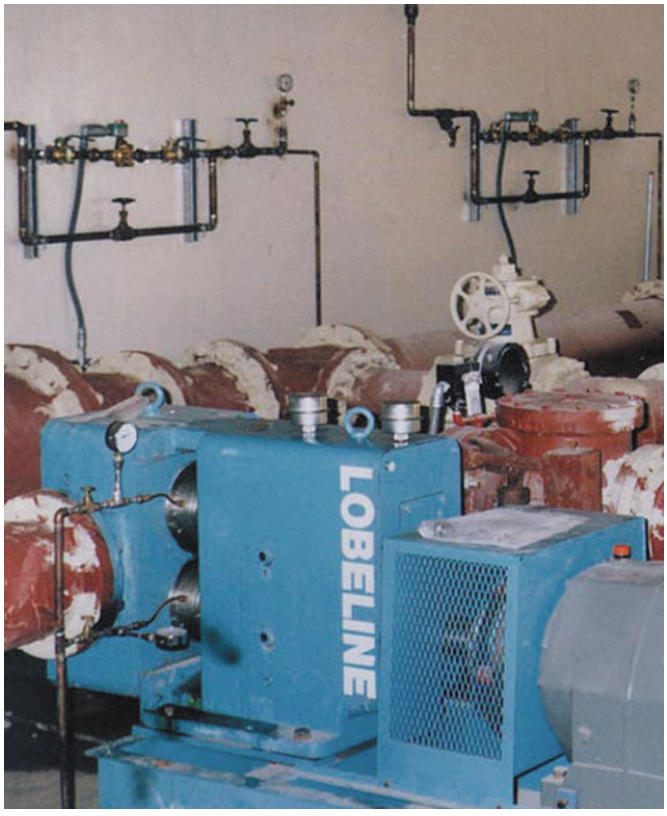
Typical Processes

- *Fluid Transfer/Handling*
- *Blending/Metering*
- *Dewatering Feed*
- *Thickening Feed/Discharge*
- *Tanker Loading/Unloading*

Water & Wastewater Industry

- *Grease & Scum*
- *Primary, Secondary, & Tertiary Sludge Transfer*
- *Waste Activated Sludge*
- *Alum Sludge*
- *Lime Sludge*
- *Polymer Solution*
- *Chemical Sludge*
- *Return Activated Sludge*
- *Digested Sludge*





Chemical Industry

- *Polymer Solutions*
- *Polymer Resins*
- *Caustic Solutions*
- *Lime Sludge*
- *Bio Waste Sludge*
- *Nylon Waste Sludge*
- *Gelatin Solution*

Sugar Industry

- *Calcium Carbonate Slurry*
- *Massecuites*
- *Magmas*
- *Thick Juices*
- *Molasses*
- *Crystaline Sugar Syrup*
- *Sugar Syrups*
- *Waste Sludge*

Petrolium/ Oil Industry

- *Oily Water*
- *Waste Oil Sludge*
- *Heavy Crude Oil*
- *Refinery Waste*
- *Waste Lube Oil Sludges*

General Industry

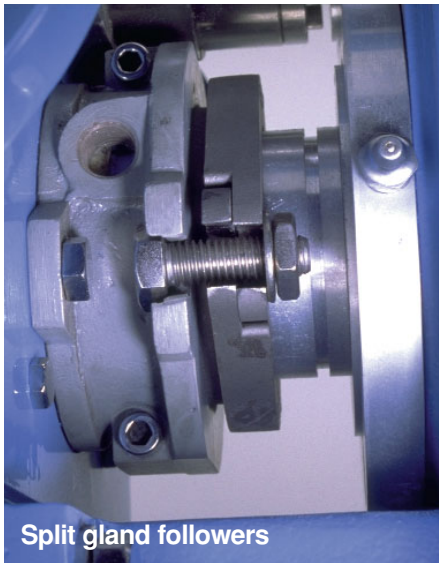
- *Paint Industry*
  - *– Waste Sludges*
  - *– Bulk Pigment Transfer*
- *Cosmetics Industry*
  - *– Raw Materials Handling Soap, Shampoo Waste Sludges*
- *Metals Industry*
  - *– Coal Tar*
  - *– Waste Sludge*
- *Mining Industry*
  - *– Concentrate Thickener Underflows*
- *Food Processing Industry*
  - *– Raw Material Handling*
  - *– Tomato Pastes*
  - *– Concentrated Fruit Juices*
  - *– Meat Processing*
  - *– Waste Products*

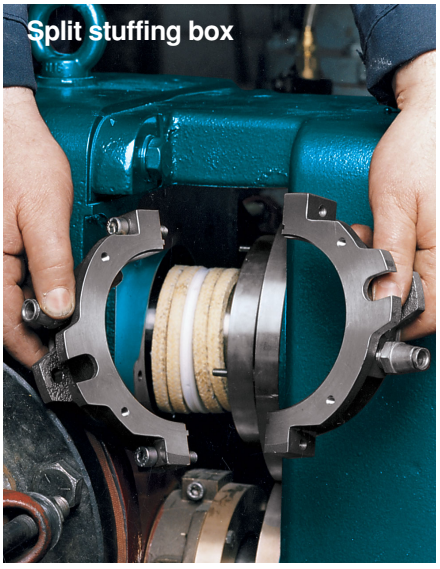
LOBELINE™ the Maintenance Friendly Pump

Optional upper and lower rear wearplates

Optional upper and lower radial wearplates

Simple rotor replacement

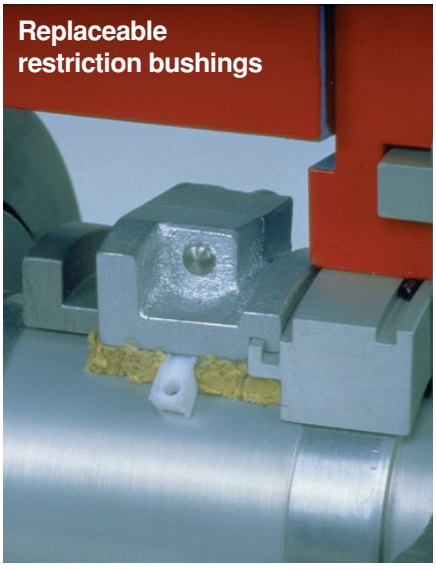

Split gland followers

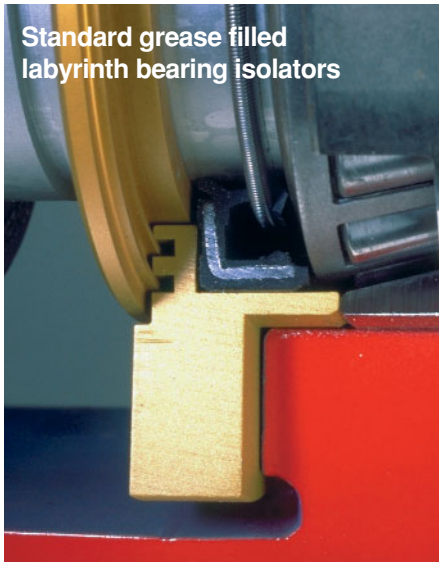

Split stuffing box


Front loading hardened sleeves

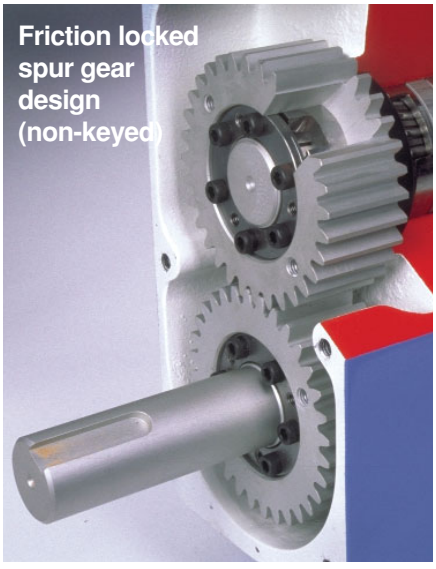

Front loading cartridge mechanical seals


Split clamp method


Replaceable restriction bushings

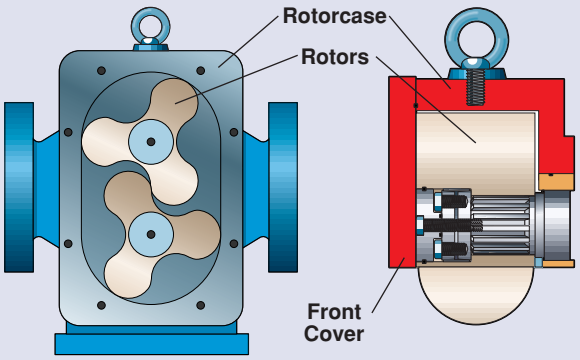

Standard grease filled labyrinth bearing isolators


Easy access to retime pump


Friction locked spur gear design (non-keyed)

Construction and Materials to Suit Your Application

For Pumping Viscous Fluids with:
Shear Sensitivity • Low Lubricating Properties • Require Dry Running, Non-contacting Pumping Action



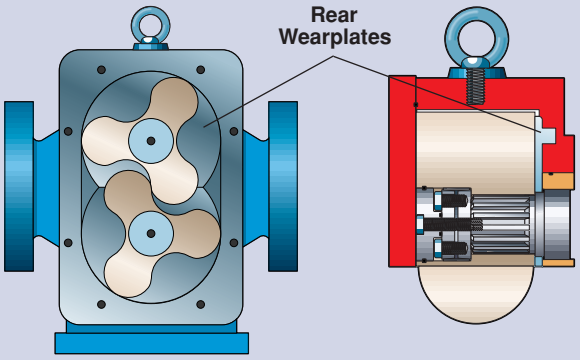
None – Low Abrasive Applications

M — Model Non-corrosive Services

Rotorcase: Ductile Iron
Rotors: Elastomer Covered, Solid Ductile Iron
Front Cover: Carbon Steel

A — Model Corrosive Services

Rotorcase: 316 Stainless Steel
Rotors: Elastomer Covered, Solid 316 Stainless Steel
Front Cover: 316 Stainless Steel



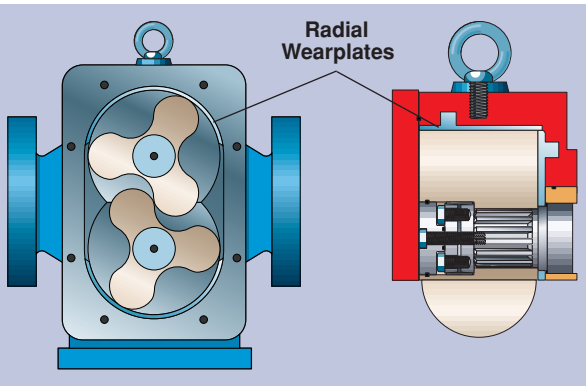
Moderate Abrasive Applications

MH — Model Non-corrosive Services

Rotorcase: Ductile Iron
Rotors: Elastomer Covered, Solid Ductile Iron
Front Cover: Reversible Hardened Carbon Steel
Rear Wearplates: Hardened Carbon Steel

AH — Model Corrosive Services

Rotorcase: 316 Stainless Steel
Rotors: Elastomer Covered, Solid 316 Stainless Steel
Front Cover: Reversible Duplex Stainless Steel
Rear Wearplates: Duplex Stainless Steel



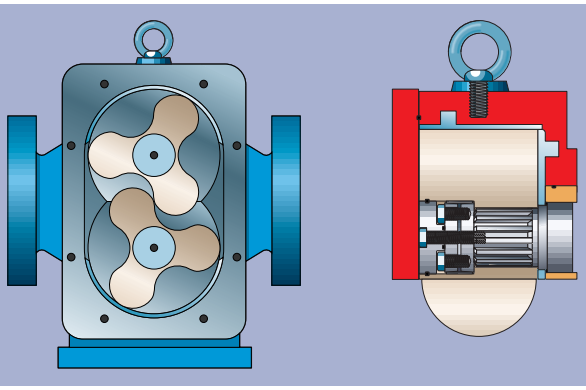
Severe Abrasive Applications

MR — Model Non-corrosive Services

Rotorcase: Ductile Iron
Rotors: Elastomer Covered, Solid Ductile Iron
Front Cover: Reversible Hardened Carbon Steel
Rear Wearplates: Hardened Carbon Steel
Radial Wearplates: Hardened Carbon Steel

AR — Model Corrosive Services

Rotorcase: 316 Stainless Steel
Rotors: Elastomer Covered, Solid 316 Stainless Steel
Front Cover: Reversible Duplex Stainless Steel
Rear Wearplates: Duplex Stainless Steel
Radial Wearplates: Duplex Stainless Steel



Extreme Abrasive Applications

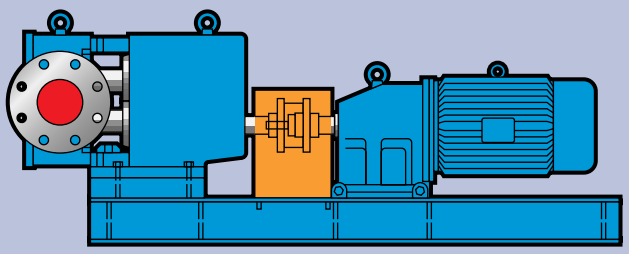
MX — Model Non-corrosive Services

Rotorcase: Consult Factory
Rotors: Consult Factory
Front Cover: Consult Factory
Rear Wearplates: Consult Factory
Radial Wearplates: Consult Factory

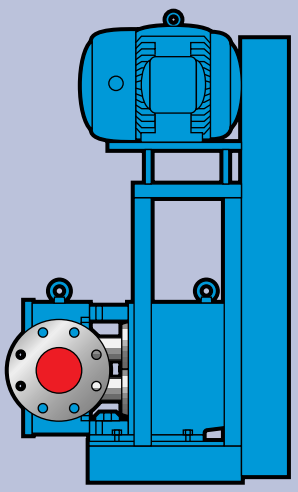
AX — Model Corrosive Services

Rotorcase: Consult Factory
Rotors: Consult Factory
Front Cover: Consult Factory
Rear Wearplates: Consult Factory
Radial Wearplates: Consult Factory

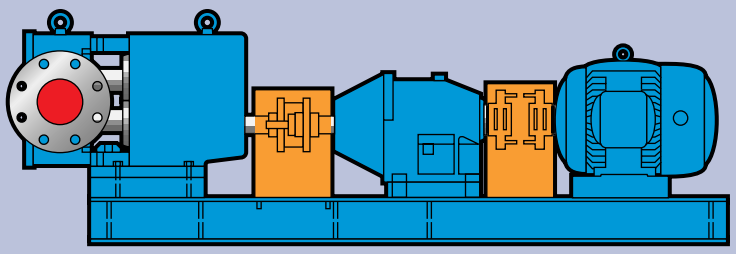
Drive Arrangement Possibilities *LOBELINE*™



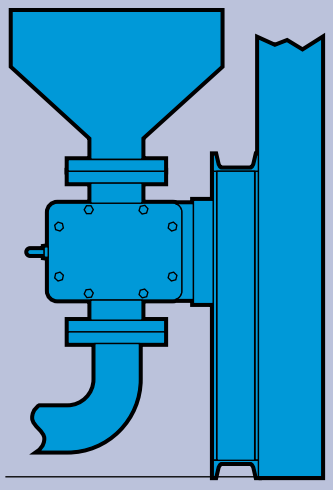
Horizontal Inline Integral Gearmotor



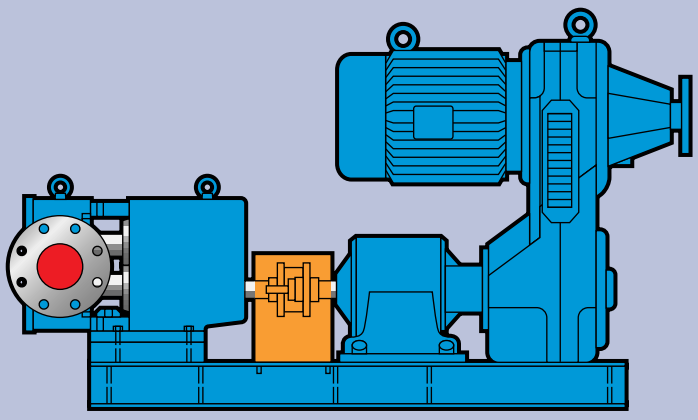
Horizontal Overhead



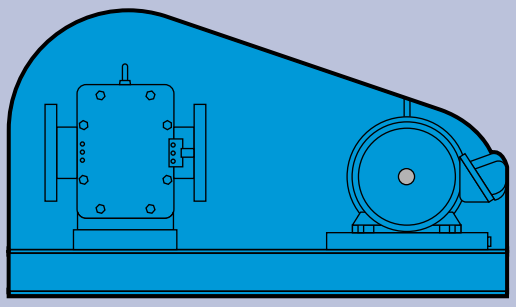
Horizontal Inline Separate Gear Reducer
and Electric Motor



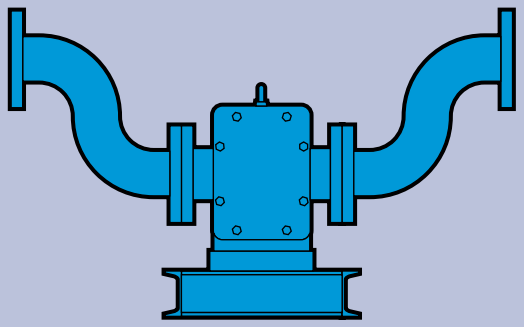
Vertical Feed Arrangement



Horizontal Inline Mechanical Variable Speed



Horizontal Side by Side

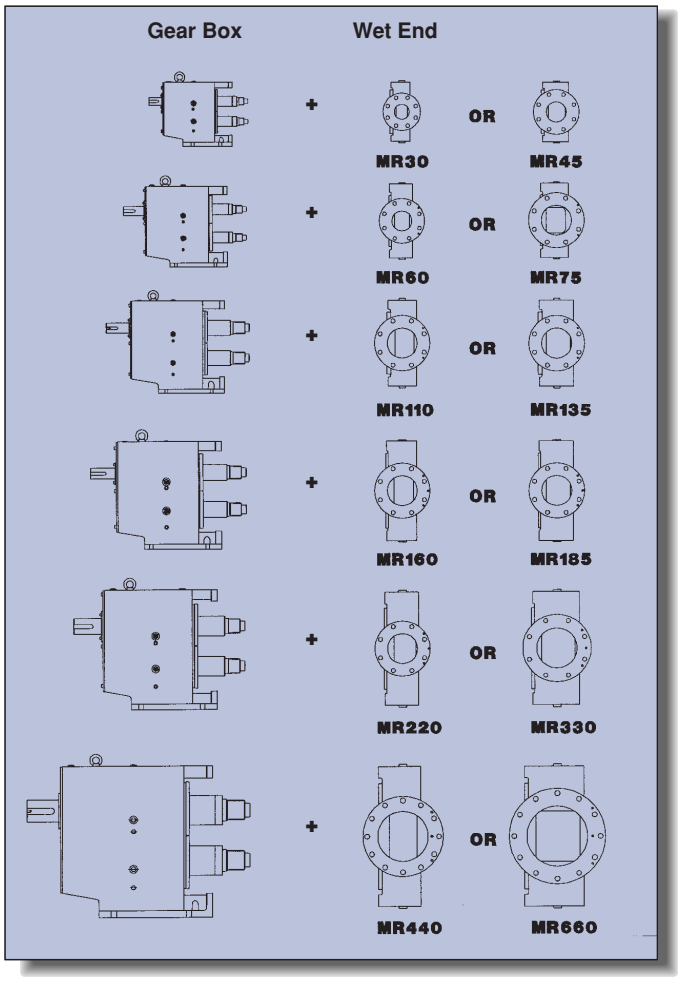


Self Priming Arrangement
(For Suction Lift Applications)

Selection Chart

Size	Displacement		Max. Differential Pressure Water		Suction/ Discharge Connection		Max Speed Water
	US gal / 100 rev	Litres / 100 rev	psi	bar	inches	mm	RPM
30	30	114	150	10	3	75	750
45	45	170	75	5	4	100	500
60	60	227	150	10	4	100	500
75	75	284	75	5	6	150	500
110	110	416	150	10	6	150	500
135	135	511	75	5	6	150	500
160	160	606	150	10	6	150	500
185	185	700	75	5	6	150	500
220	220	833	150	10	6	150	500
330	330	1250	75	5	8	200	500
440	440	1665	150	10	10	250	500
660	660	2498	75	5	12	300	350

Wet End Interchangeability



LOBELINE™ Industrial Pumps offer:

- Flow rates up to 2310 GPM (524 m^3/hr)
- Differential pressures up to 150 psi (10 bar)
- Fluid viscosities up to 1,000,000 cps
- Fluid temperatures up to 212°F (100°C)
- 8 models with a selection of wet end metallurgies and designs
- 12 sizes to suit a wide range of operating conditions
- Interchangeable seal arrangements
- Bare pump or complete pump-and-drive packages available
- Options and accessories

Plant:

SWABY Lobeline Pump Co.
921 Seaco St.
Deer Park, TX 77536
Tel. (281) 479-7500
Fax: (281) 479-1181

LOBELINE™

Visit our website at www.swabypump.com

SWABY Pumps, Since 1893 Made In U.S.A.
5420 West Roosevelt Road
Chicago, Illinois 60644
Tel: (773) 626-1400 Fax: (773) 626-3646 Email: swabypump@msn.com