

CHEMSTEEL™ PUMP

CHEMSTEEL PUMPS SERIES RM103 M

PERFORMANCE



FEATURES

Gear/bearing design allows for “trimming” for optimizing the pump’s maximum flow to reach minimum turndown or to match flow to a specific OEM’s requirement.

Special materials combinations are available for specific liquids:

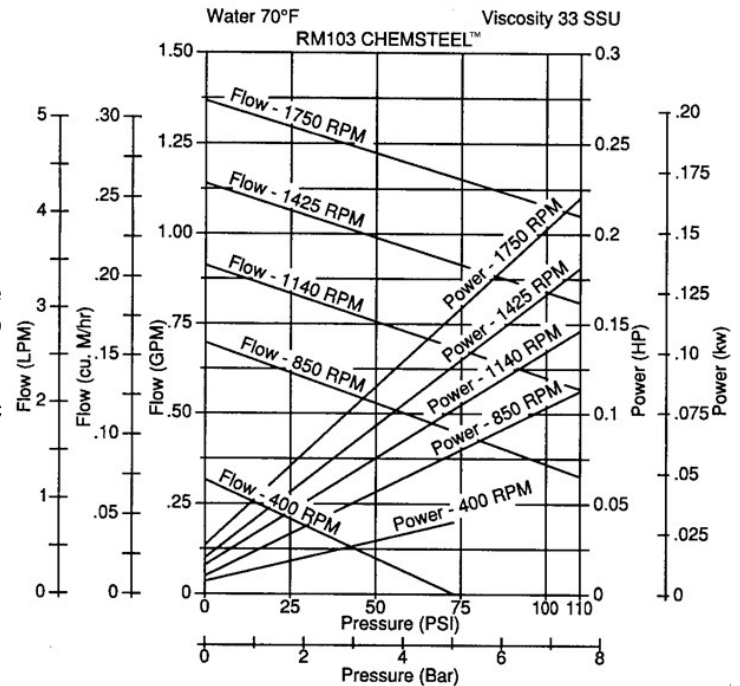
- Stainless or Alloy C housing construction.
- Gears available in 316 stainless, W88 stainless and Alloy C. Also in Polytetrafluoroethylene (PTFE), Polyphenylene Sulfide and polyetheretherketone.
- Shafts are 316 stainless steel or Alloy C.
- Bearings available in Carbon or Polytetrafluoroethylene (PTFE).

DRIVE

The pump is driven directly from the electric motor shaft by means of a flexible coupling. A close-coupled adapter connects the pump to the motor.

LIQUIDS AND TEMPERATURE

This pump is suitable to handle clear lubricating and non-lubricating fluids at temperatures to 450F. These pumps will handle viscous fluids to 100,000 cps (462,000 SSU) at reduced shaft speeds.



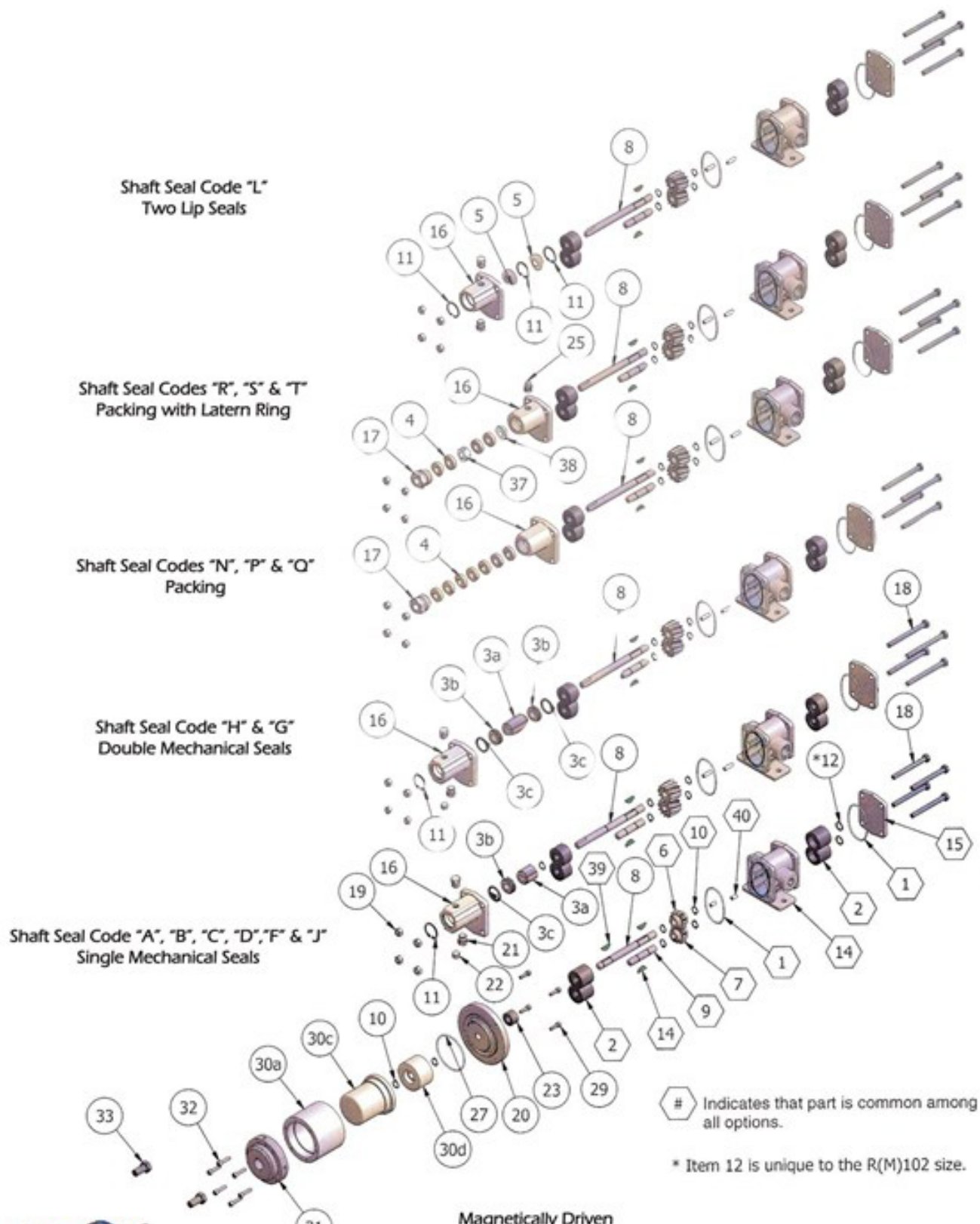
SUCTION LIFT

This pump has a suction lift capability of 20 feet for a new pump. Though gear pumps are self-priming, a foot valve is recommended. If possible, wet gears with the liquid to be pumped for the first dry start. Liquid retained in the system and gear chambers serves to wet the pump on subsequent starts.

EXPLODED VIEW AND PARTS LIST

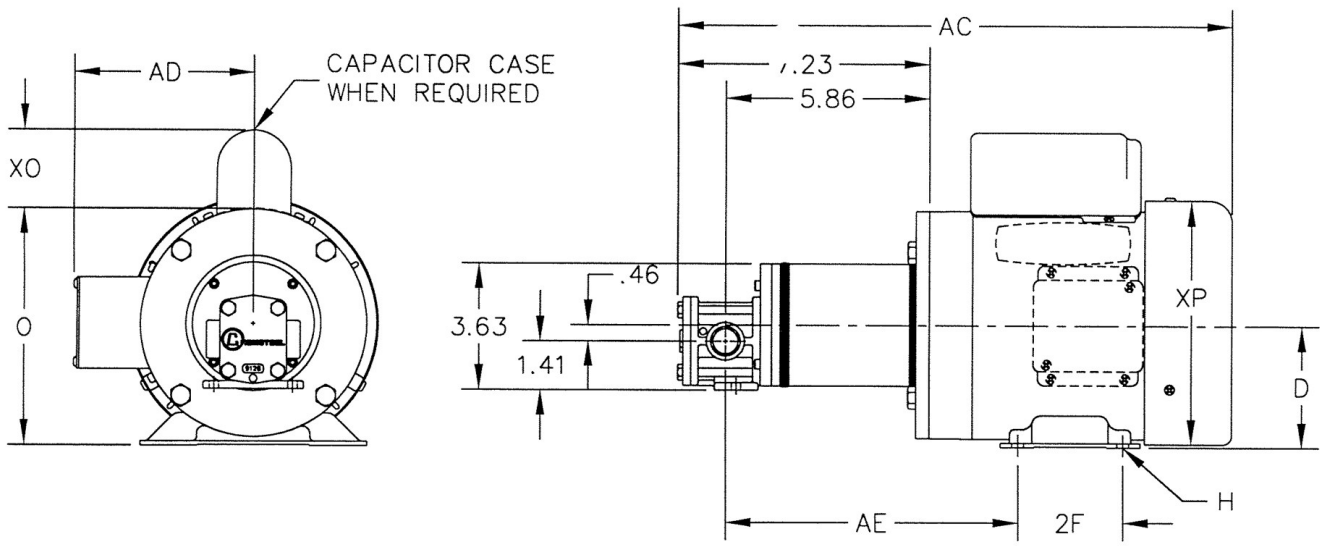
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R(M) 102, R(M) 103, R(M) 104 & R(M) 106 METALLIC EXPLODED VIEW

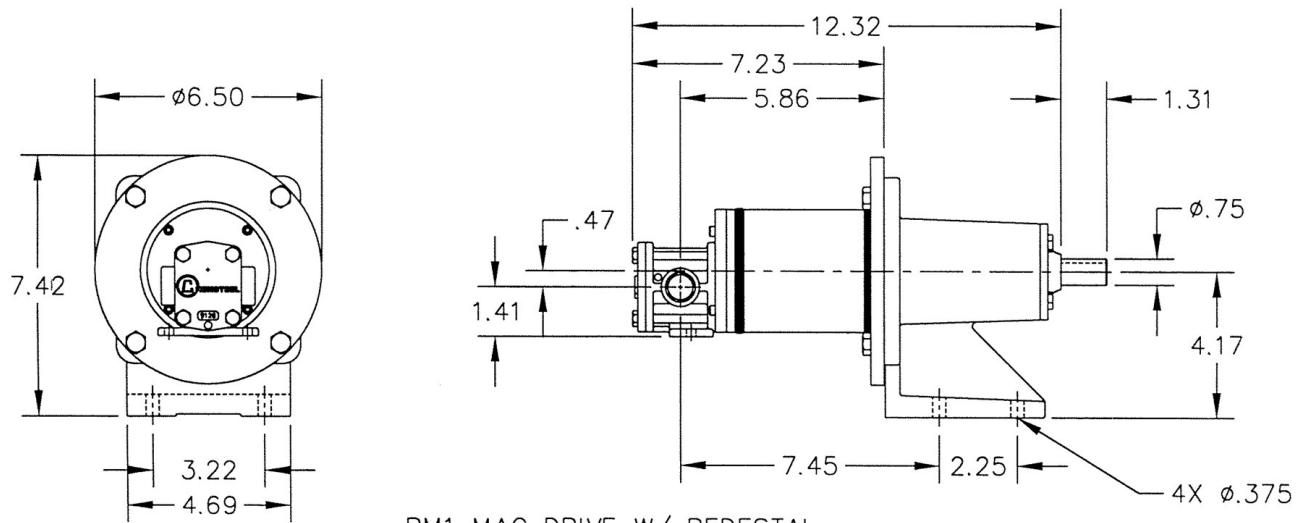


Series	Model	Repair Kit
R103 M	R10339JD-C1	R10339JD-C1K
	R10339JD	R10339JDK
	R10335CD	R10335CDK
	R10331CQ	R10331CQK
	R10331CN-4	R10331CN-4K
	R10331CN	R10331CNK
	R10331CD	R10331CDK
	R1031JH-BC1	R1031JH-BC1K
	R1031HCB-C1	R1031HCB-C1K
	R10311CA	R10311CAK
	R1031FPB	R1031FPBK
	R10311CA-3	R10311CA-3K
	R10311CB	R10311CBK
	R1031FJZ-C1	R1031FJZ-C1K
	R10311CB-3	R10311CB-3K
	R10311CB-C1	R10311CB-C1K
	R1031FJZ	R1031FJZK
	R10311JB	R10311JBK
	R10311PB	R10311PBK
	R10311PN	R10311PNK
	R1031FJQ-T2	R1031FJQ-T2K
	R10312CB	R10312CBK
	R10312CB-C1	R10312CB-C1K
	R1031FJC-4C1	R1031FJC-4C1K
	R10312CB-F50	R10312CB-F50K
	R10312JA-C1	R10312JA-C1K
	R10312PA-T81	R10312PA-T81K
	R1031FJA-C1	R1031FJA-C1K
	R10313CB	R10313CBK
	R10313CB-C1	R10313CB-C1K
	R10313PA	R10313PAK

DIMENSIONS



RM1 MAG DRIVE



RM1 MAG DRIVE W/ PEDESTAL

Mag Chemsteel Option Suffix	Power Kit Part No.	Motor Frame		AC*	D	2F
M1	MR1H56	56C	INCHES	15.98	3.50	3
			MILLIMETERS	405.9	88.9	76.2
M3	MR1F71E	IEC 71C, B14 FACE	INCHES	15.5	2.8	3.54
			MILLIMETERS	393.7	71	89.9
M4	MR1T80E	IEC 80C, B14 FACE	INCHES	17.15	3.15	3.94
			MILLIMETERS	435.6	80	100.1

* Dimensions AC, O XO and XP may vary depending on HP, Enclosure, Speed and Manufacturer

H	AE	AD	*O	*XO	*XP
.34 SLOT	8.42	5.31	6.81	2.25	7.16
8.6 SLOT	213.9	134.9	173	57.2	181.9
.28 SLOT	7.04	4.00	5.14	N/A	4.13
7.1 SLOT	178.8	101.6	130.6	N/A	104.9
.39 SLOT	8.22	4.51	6	N/A	4.72
9.9 SLOT	208.8	114.6	152.4	N/A	119.9

MODEL CHART

MODEL	RM103
Maximum Flow (gpm) @1750 RPM	1.5
Theoretical Displacement (cc/revolution)	3.8
Maximum Differential Pressure (psig)	110
Maximum System Pressure (psig)	300
Maximum Speed (RPM)	1800
Maximum Fluid Temperature	450° F
Minimum Fluid Temperature	-50° F
NPSHR @ 1750 (feet)	2
Standard Port Size	1/4 inch FNPT
weight-less motor (lbs)	13

MAINTENANCE

A three-part housing provides easy disassembly and service. Full size bearings match the gear diameter, and eliminate the need for separate wear plates. TFE encapsulating silicone o-ring pump housing seals provide elastic memory to assure an effective long lasting seal and thus avoiding the re-torquing required of pumps using pure TFE.

To order a CHEMKIT™ parts kit, simply add a "K" to the end of the model number.

A repair kit contains the following parts: bearings, gears, o-rings, shafts, keys, c clips, and retaining ring.

LIFE CYCLE/COST OF OWNERSHIP

Pump design and materials selection, together provide the longest life available from a gear pump.

Key attributes include:

- Gear & bearing combinations of metallic and nonmetallic wear surfaces.
- Slotted bearings to lubricate shaft and gear surfaces.
- Hydraulic porting to balance axial thrust and to reduce wear.
- Ample port sizing to reduce the likelihood of cavitation when inlet pressure is marginal.
- Effective housing seals with elastic memory prevent leakage of corrosives.

FIT

Connections are 1/4" female NPT or BSPT, pump hardware is metric and close couple adapters mount to both NEMA and IEC standard motor frame sizes for worldwide acceptance. The port size is the same as competitive pumps.