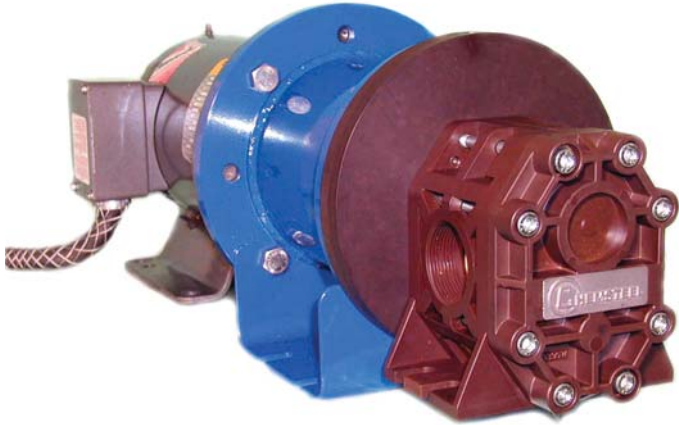


# CHEMSTEEL®

## RYTON SEAL-LESS MAGNETIC DRIVE



A full range of accessories are available including:

- line mounted pressure relief valves
- pump mounting foot for use with footless motors

## GENERAL DESCRIPTION

Chemsteel pumps are designed to handle highly corrosive liquids that must be pumped under pressure. Manufactured to extremely precise tolerance, the Chemsteel pump line prevents system contamination while maintaining the purity and integrity of the liquid being pumped. Its rugged, three-section, o-ring sealed thru-bolt construction provides ease of servicing and parts replacement.

Helical gearing offers noise reduction by as much as 10db. Additionally, Chemsteel pumps offer bi-directional operation for applications requiring reversing flow.

## 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.
- Recirculation heat port versatility.
- Containment can flush & drain connections. prevent leakage of corrosives.

## SPECIFIC SOLUTIONS

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:

- Reinforced Ryton® housing construction.
- Gears available in Metallic Alloy C. Also in Teflon®, Ryton® and PEEK®.
- Shafts are Alloy C.
- Bearings available in Carbon, Teflon® and Rulon®
- Neodymium Iron Magnet
- Ryton® containment can  
(Optional Alloy C containment can)

## FIT

Connections are 1 1/2” female NPT or BSPT, pump hardware is metric and close couple adapters mount to both NEMA and IEC standard motor frame sizes for world wide acceptance.

## MAINTENANCE

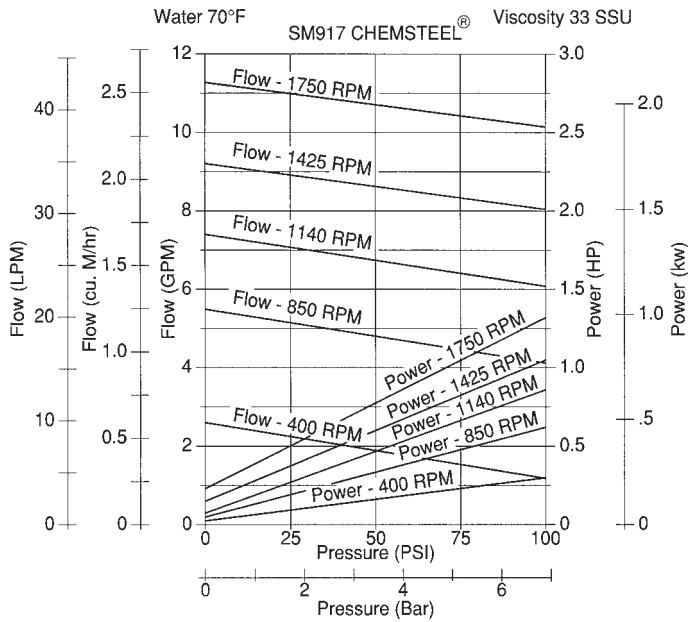
A three-part housing provides easy disassembly and service. Full size bearings match the gear diameter, and eliminate the need for separate wear plates. TFE encapsulating silicone o-ring pump housing seals provide elastic memory to assure an effective long lasting seal and thus avoiding the re-torquing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

To order a CHEMkit®, simply add a “K” to the end of the model number. A repair kit contains the following parts:

bearings, gears, o-rings, shafts, keys and retaining ring.

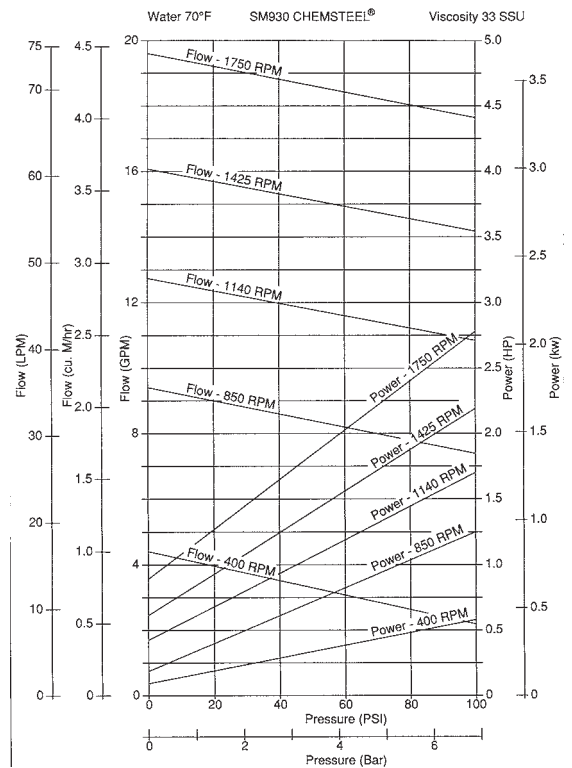
## PERFORMANCE

### SM917NM



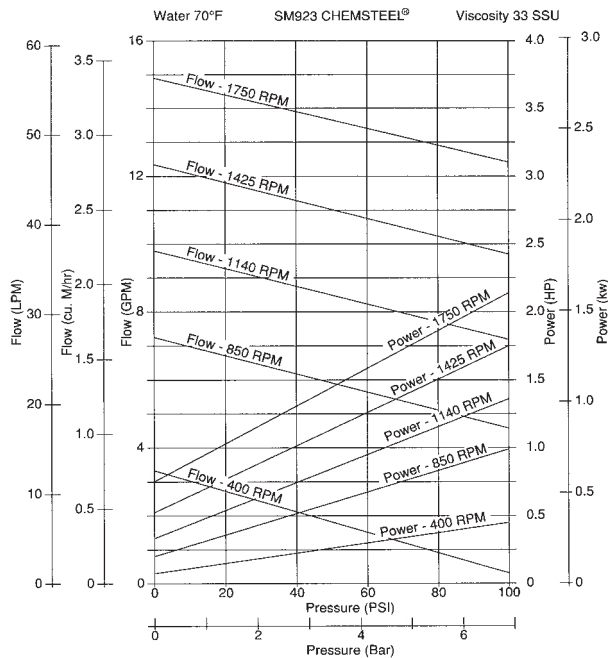
MODEL	SM917NM
Maximum Flow (gpm) @1750 RPM	10
Theoretical Displacement (cc/revolution)	28.9
Maximum Differential Pressure (psig)	100
Maximum System Pressure (psig)	200
Maximum Speed (RPM)	1800
Maximum Fluid Temperature	200° F
Minimum Fluid Temperature	-40°F
Standard Port Size	1 inch FNPT
weight-less motor (lbs)	36

### SM930NM



MODEL	SM930NM
Maximum Flow (gpm) @1750 RPM	20
Theoretical Displacement (cc/revolution)	50.1
Maximum Differential Pressure (psig)	100
Maximum System Pressure (psig)	200
Maximum Speed (RPM)	1800
Maximum Fluid Temperature	200° F
Minimum Fluid Temperature	-40°F
NPSHR @ 1750 (feet)	4
Standard Port Size	1 1/2 inch FNPT
weight-less motor (lbs)	36

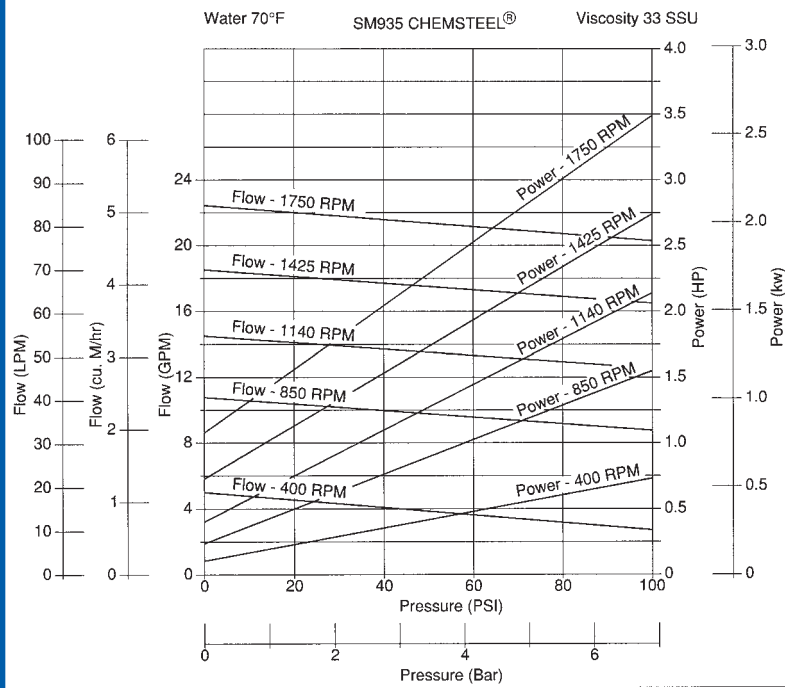
### SM923NM



MODEL	SM923NM
Maximum Flow (gpm) @1750 RPM	15
Theoretical Displacement (cc/revolution)	38.4
Maximum Differential Pressure (psig)	100
Maximum System Pressure (psig)	200
Maximum Speed (RPM)	1800
Maximum Fluid Temperature	200° F
Minimum Fluid Temperature	-40°F
NPSHR @ 1750 (feet)	2
Standard Port Size	1 1/2 inch FNPT
weight-less motor (lbs)	36

Notes: For continuous service:  
 Plastic / Plastic gear combinations are limited to 50 psi.  
 Metal / Plastic gear combinations are limited to 100 psi.

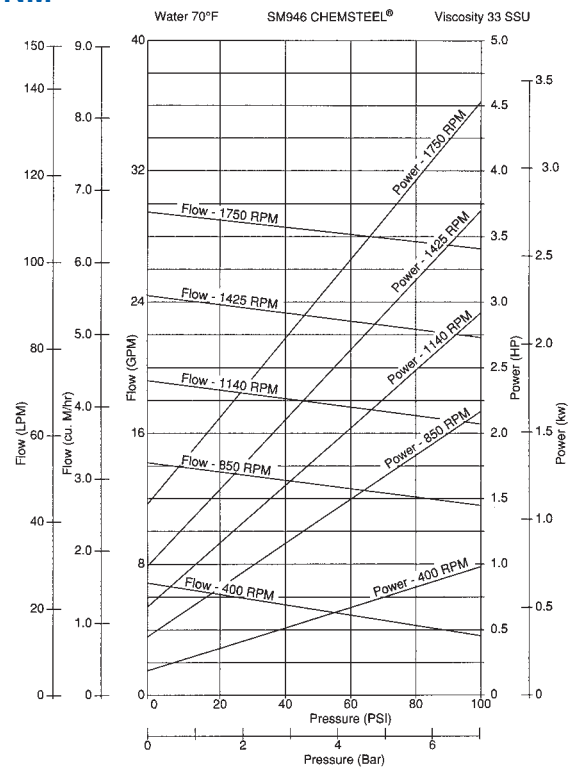
## SM935NM



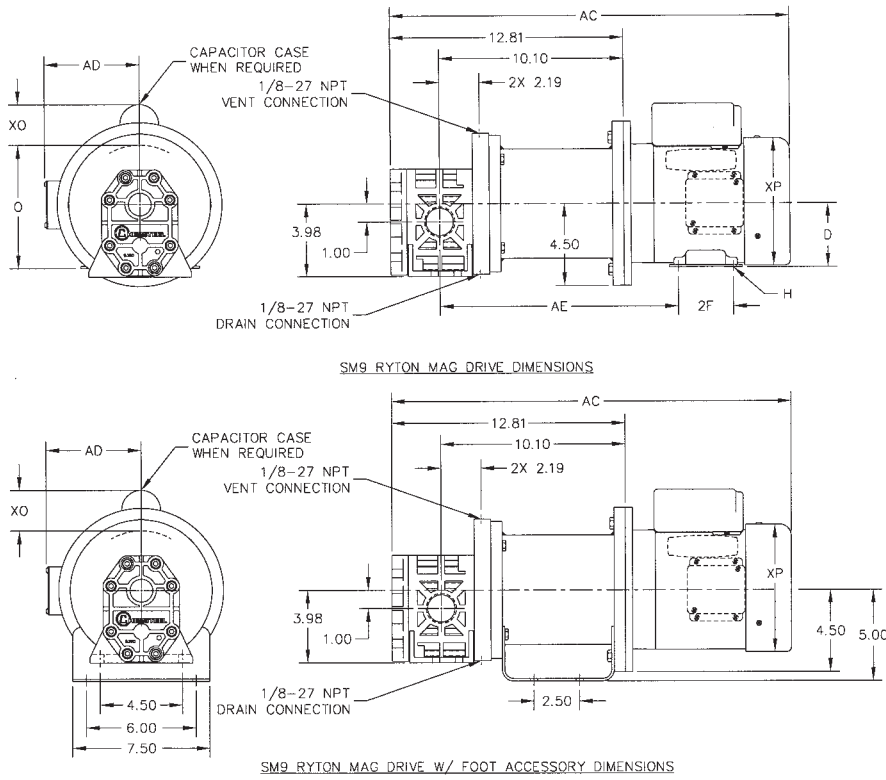
MODEL	SM935NM
Maximum Flow (gpm) @1750 RPM	23
Theoretical Displacement (cc/revolution)	57.8
Maximum Differential Pressure (psig)	100
Maximum System Pressure (psig)	200
Maximum Speed (RPM)	1800
Maximum Fluid Temperature	200° F
Minimum Fluid Temperature	-40° F
NPSHR @ 1750 (feet)	4
Standard Port Size	1 1/2 inch FNPT
weight-less motor (lbs)	36

## SM946NM

MODEL	SM946NM
Maximum Flow (gpm) @1750 RPM	30
Theoretical Displacement (cc/revolution)	76.9
Maximum Differential Pressure (psig)	100
Maximum System Pressure (psig)	200
Maximum Speed (RPM)	1800
Maximum Fluid Temperature	200° F
Minimum Fluid Temperature	-40° F
NPSHR @ 1750 (feet)	10
Standard Port Size	1 1/2 inch FNPT
weight-less motor (lbs)	19



## SM923NM, SM930NM, SM935NM, SM946NM DIMENSIONS

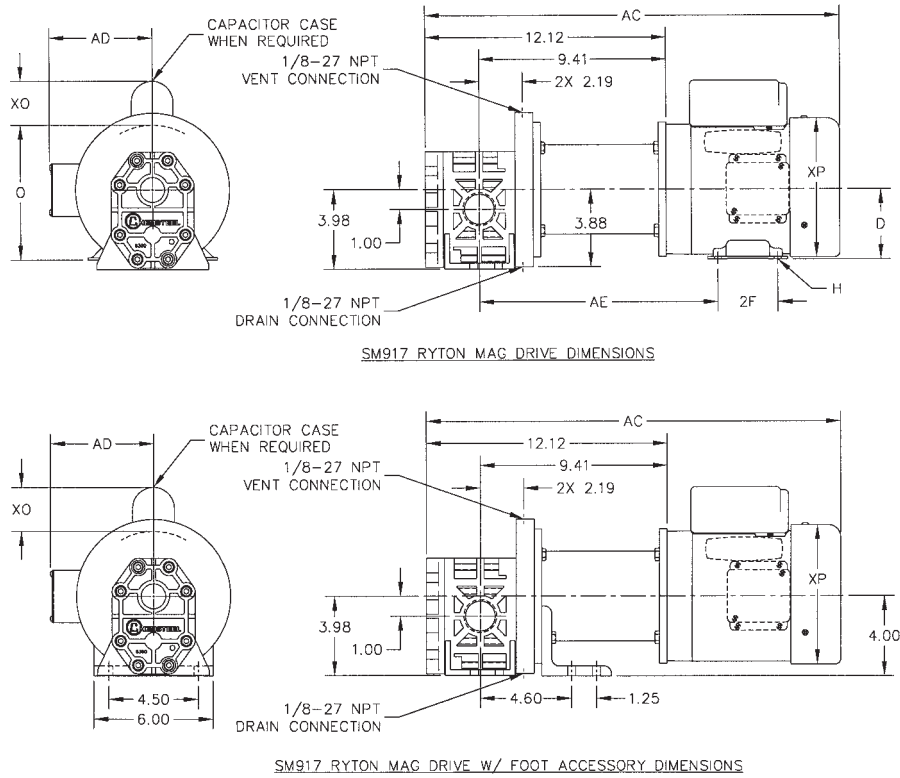


Mag Chemsteel Option Suffix		Motor Frame	Power Kit Part No.	*AC	D	2F	H	AE	AD	*O	*YO	*YP
M1	MC91H56	56C	MC91H56	inches 21.95	3.50	3.00	34 Slot	13.06	5.31	6.81	2.25	7.16
M2	MC91H45T	143TC/145TC	MC91H45T	millimeters 557.5	88.9	76.2	8.6 Slot	331.7	134.9	173	57.2	181.9
M5	MC91U09E	IEC 90S090LC, B14 Face	MC91U09E	inches 25.33	3.50	4.00/5.00	0.34	13.37	5.31	6.81	2.25	7.16
M6	MC91H4T	182TC/184TC	MC91H4T	millimeters 643.4	88.9	101.6/127	8.6	339.6	134.9	173	57.2	181.9
M7	MC91U09E	IEC 100LC, B14 Face	MC91U09E	inches 23.84	3.54	3.94/4.92	39 Slot	127.0	5.12/4.25	6.81/6.53	na	5.51
				millimeters 605.5	89.9	100.1/125	9.9 Slot	322.6	130/108	173/165.9	na	140
				inches 25.41	4.50	4.50	0.41	13.48	6.38	8.75	2.25	9.09
				millimeters 645.4	114.3	114.3	10.4	342.4	162.1	222.3	57.2	230.9
				inches 25.60	3.94	5.51	0.47	12.97	6.06	9.44	na	8.03
				millimeters 653.3	100.1	140	11.9	329.4	153.9	239.8	na	204

\*Dimensions AC, O, YO and YP may vary depending on HP, Enclosure, Speed and Manufacturer.

## SM917NM DIMENSIONS

Mag Chemsteel Option Suffix	Power Kit Part No.	Motor Frame	*AC	D	2F	H	AE	AD	*O	*YO	*YP
M1	MC91H56	56C	inches 20.87	3.50	3.00	34 Slot	11.97	5.31	6.81	2.25	7.16
M2	MC91H45T	143TC/145TC	millimeters 530.7	88.9	76.2	8.6 Slot	304.0	134.9	173	57.2	181.9
M3	MC91H71E	IEC 71C, B14 Face	inches 24.25	3.50	4.00/5.00	0.34	12.29	5.31	6.81	2.25	7.16
M4	MC91H76E	IEC 80C, B14 Face	millimeters 616.0	88.9	101.6/127	8.6	312.2	134.9	173	57.2	181.9
M5	MC91U09E	IEC 90S090LC, B14 Face	inches 20.39	2.80	3.54	28 Slot	10.59	4.00	5.14	na	4.13
			millimeters 517.9	71	89.9	7.1 Slot	269.0	101.6	130.8	na	104.9
			inches 22.04	3.15	3.94	39 Slot	12.30	4.51	6.00	na	4.72
			millimeters 558.8	80	100.1	9.9 Slot	312.4	174.6	152.4	na	119.9
			inches 23.14	3.54	3.94/4.92	39 Slot	12.01	5.12/4.25	6.81/6.53	na	5.51
			millimeters 587.8	90	100.1/125	9.9 Slot	305.1	130/108	173/165.9	na	140.0



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 Rulon® is a registered trademark of Chevron Phillips Chemical, an equivalent polyphenylene sulfide may be used.  
 PEEK® is a trademark of Victrex, an equivalent polyetheretherketone may be used.  
 RULON® is a trademark of Saint-Gobain, an equivalent compounded PTFE based material may be used