



OBERDORFER®

An Ingersoll Rand Business

SM214 METALLIC SEAL-LESS MAGNETIC DRIVE CHEMSTEEL SERIES



A full range of accessories are available including:

- line mounted pressure relief valves
- pedestal assembly

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.

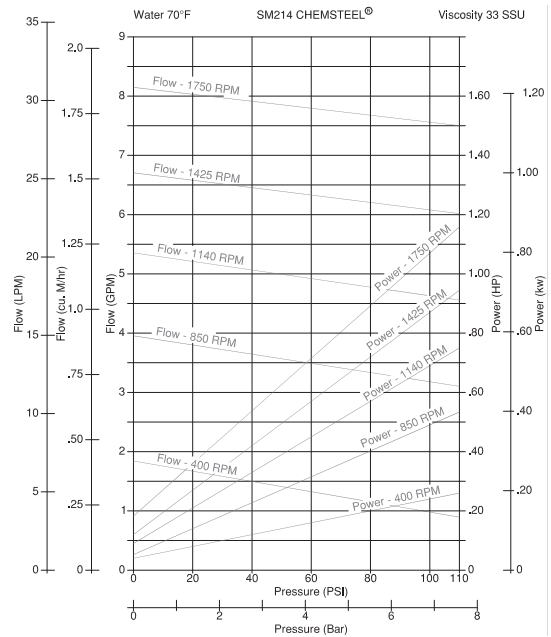
Helical gearing offers noise reduction by as much as 10db, while the tandem pumps double the output flow for a single fluid, or with isolation, handle other fluids in direct ratio to the first.

Additionally, Chemsteel pumps offer bi-directional operation for applications requiring reversing flow.

MODEL	SM214	
MAXIMUM FLOW (GPM/LPM) @1750 RPM	8 GPM	30.3 LPM (1.8 m ³ /h)
THEORETICAL DISPLACEMENT	22.2CC/REVOLUTION	
MAXIMUM DIFFERENTIAL PRESSURE	110 PSIG	7.6 BAR
MAXIMUM SYSTEM PRESSURE	300 PSIG	20.7 BAR
MAXIMUM SPEED	1800 RPM	
MAXIMUM FLUID TEMPERATURE	450° F	232° C
MINIMUM FLUID TEMPERATURE	-50° F	-46° C
NPSHR @ 1750	6 FEET	1.8 M
STANDARD PORT SIZE	1/2" FNPT	1/2" BSPT
WEIGHT-LESS MOTOR	28 LBS	12.7 KG

Performance

Capacity water at 70° F / 21.2° C



Notes: For continuous service:
Plastic / Plastic gear combinations are limited to 50 psi or 3.5 bar.
Metal / Plastic gear combinations are limited to 100 psi or 7 bar.

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:

- 316 stainless or Alloy C housing construction.
- Gears available in 316 stainless, Alloy C. Also in PTFE White and Polyetheretherketone.
- Shafts are 316 stainless steel or Alloy C.
- Bearings available in Carbon, or PTFE Red or PTFE White.
- Samarium Cobalt Magnetic Drive.

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.



OBERDORFER[®]

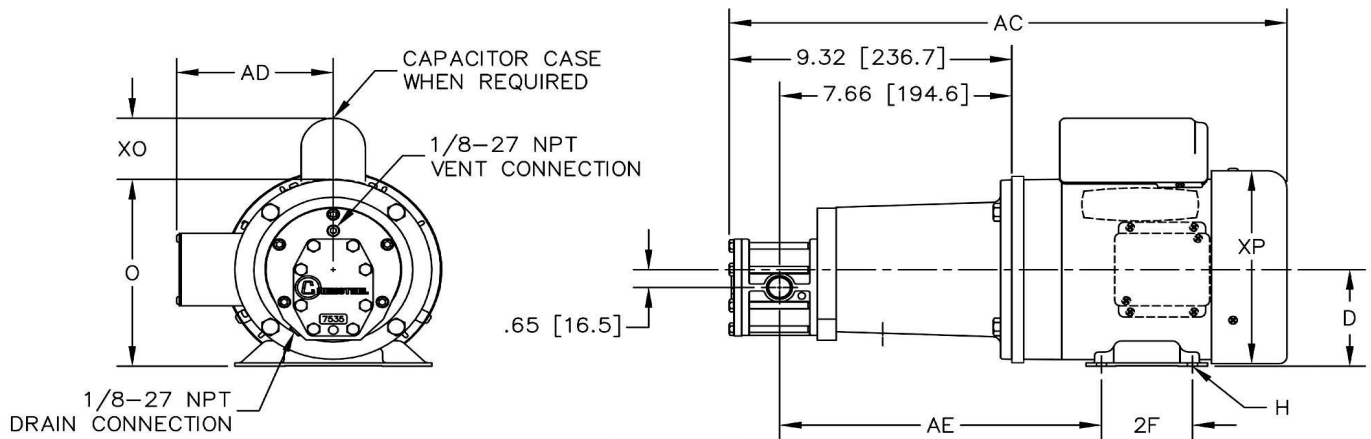
An Ingersoll Rand Business

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, c clips, and retaining ring.

Dimensions



MAG CHEMSTEEL	POWER KIT PART NO.	MOTOR FRAME		*AC	D	2F	H	AE	AD	*O	*XO	*XP
M1	OBMC2H56	56C	INCHES	18.07	3.50	3.00	.34 SLOT	10.22	5.31	6.81	2.25	7.16
			MILIMETERS	459	88.9	76.2	8.6 SLOT	259.6	134.9	173	57.2	181.9
M2	OBMC2J45T	143TC/145TC	INCHES	21.45	3.50	4.00 / 5.00	0.34	10.54	5.31	6.81	2.25	7.16
			MILIMETERS	544.8	88.9	101.6 / 127	8.6	267.7	134.9	173	57.2	181.9
M3	OBMC2F7IE	IEC 71C, B14 FACE	INCHES	17.59	2.80	3.54	.28 SLOT	9.82	4.00	5.14	N/A	4.13
			MILIMETERS	446.8	71	89.9	7.1 SLOT	249.4	101.6	130.6	N/A	104.9
M4	OBMC2T80E	IEC 80C, B14 FACE	INCHES	19.24	3.15	3.94	.39 SLOT	10.02	4.51	6.00	N/A	4.72
			MILIMETERS	488.7	80	100.1	9.9 SLOT	254.5	114.6	152.4	N/A	119.9
M5	OBMC2U90E	IEC 90SC/90LC, B14 FACE	INCHES	20.34	3.54	3.94 / 4.92	.39 SLOT	10.26	5.12 / 4.25	6.81 / 6.53	N/A	5.51
			MILIMETERS	516.6	90	100.1 / 125	9.9 SLOT	260.6	130 / 108	173 / 165.9	N/A	140

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



12500 South Pulaski Road
Alsip, IL 60803, USA
Phone (800) 448.1668