



# OBERDORFER PUMPS

by Gardner Denver

# CHEMSTEEL™

## SM207 Metallic

### SEAL-LESS MAGNETIC DRIVE



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. 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 and drain connections.

### SPECIFIC SOLUTIONS

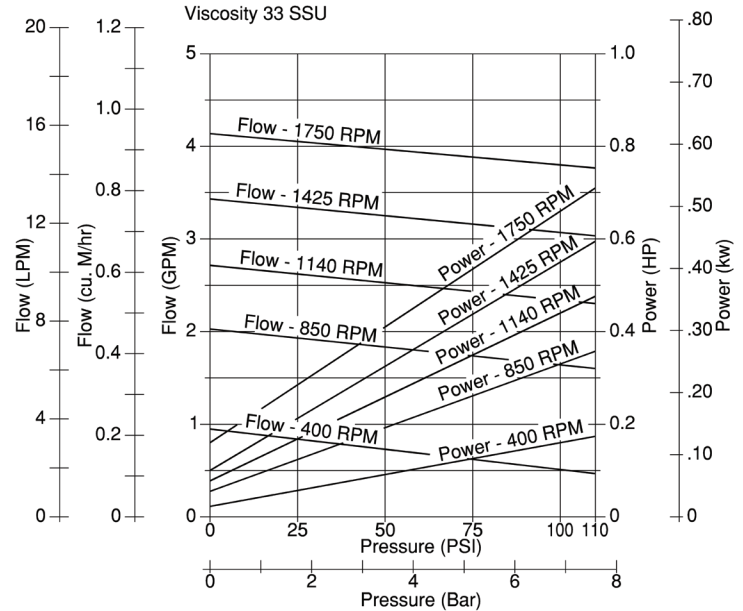
Gear/bearing design allows for “trimming” for optimizing the pump’s maximum flow to reach minimum turndown or to match flow to a specific OEM’s requirement.

Special materials combinations are available for specific liquids:

- 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.

### PERFORMANCE:

CAPACITY WATER AT 70° F



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.

- Bearings available in carbon or PTFE White or PTFE Red.
- Full range of seal options including lip seal, packing and mechanical designs.

### FIT

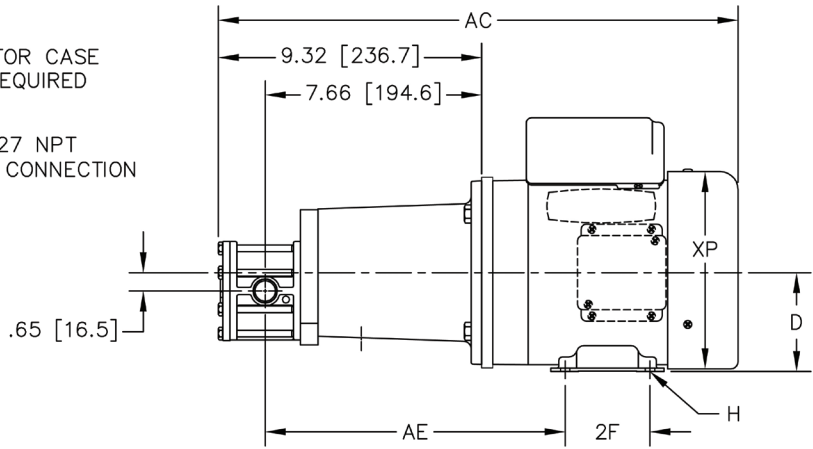
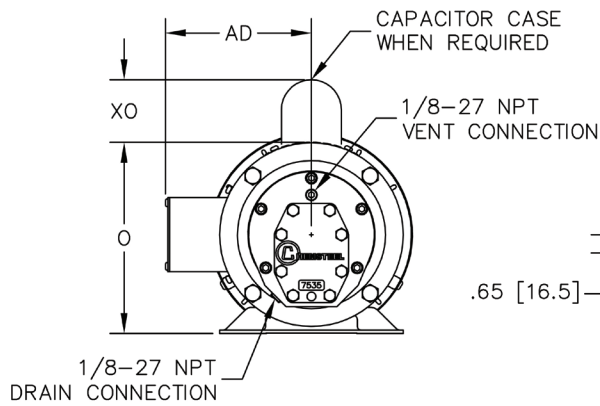
Connections are 1/2" female NPT or BSPT, pump hardware is metric and close couple adapters mount to both NEMA and IEC standard motor frame sizes for world wide acceptance. “Near” dimensional interchangeability offers easy upgrade to Chemsteel™ pump. The port size is the same as competitive pumps.

### MAINTENANCE

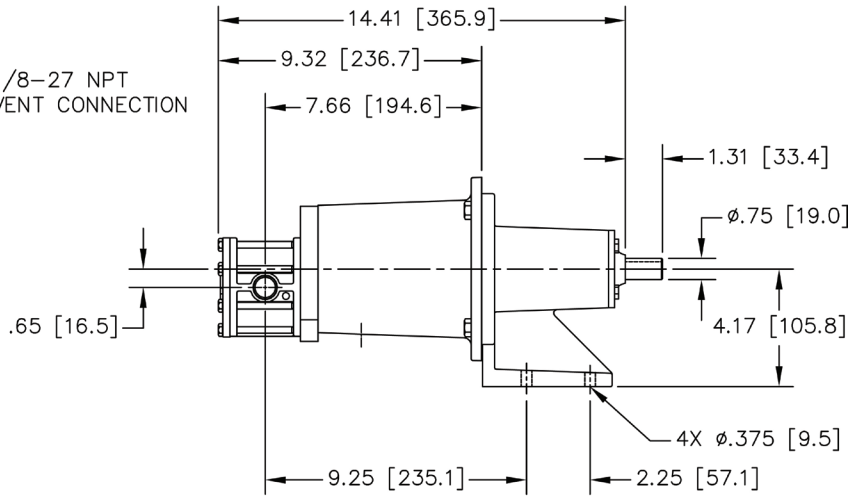
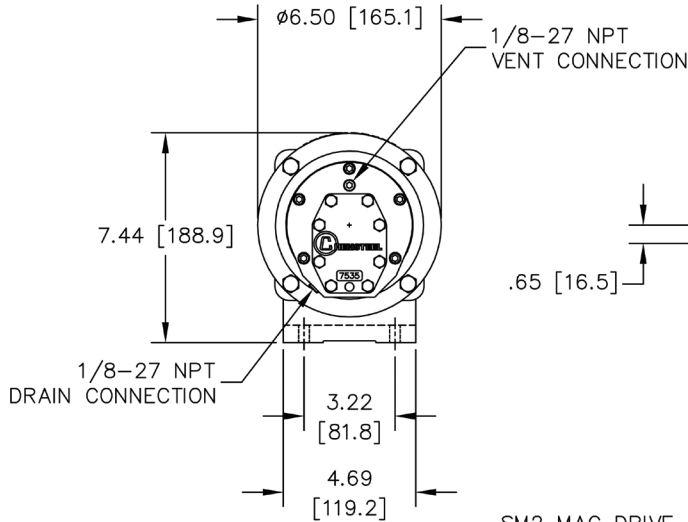
A three-part housing provides easy disassembly and service. Full size bearings match the gear diameter, and eliminate the need for separate wear plates. TFE encapsulating silicone o-ring pump housing seals provide elastic memory to assure an effective long lasting seal and thus avoiding the re-torquing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

MODEL	SM207	
Maximum flow @1750 rpm	4 GPM	15.1 LPM
Theoretical displacement	11.2 cc/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 RPM	4 feet	1.2 meters
Standard port size	1/2" FNPT	1/2" BSPT
Weight (lbs)	28 lbs	12.7 kg

### DIMENSIONS



SM2 MAG DRIVE



SM2 MAG DRIVE W/ PEDESTAL

### SM2 Series Chemsteel Mag Drive Pumps

Mag Chemsteel	Power Kit Part No.	Motor Frame		*AC	D	2F	H	AE	AD	*O	*XO	*XP
M1	MC2H56	56C	inches	18.07	3.50	3.00	.34 Slot	10.22	5.31	6.81	2.25	7.16
			millimeters	459	88.9	76.2	8.6 Slot	259.6	134.9	173	57.2	181.9
M2	MC2J45T	143TC/145TC	inches	21.45	3.50	4.00/5.00	0.34	10.54	5.31	6.81	2.25	7.16
			millimeters	544.8	88.9	101.6/127	8.6	267.7	134.9	173	57.2	181.9
M3	MC2F71E	IEC 71C, B14 Face	inches	17.59	2.80	3.54	.28 Slot	9.82	4.00	5.14	n/a	4.13
			millimeters	446.8	71	89.9	7.1 Slot	249.4	101.6	130.6	n/a	104.9
M4	MC2T80E	IEC 80C, B14 Face	inches	19.24	3.15	3.94	.39 Slot	10.02	4.51	6.00	n/a	4.72
			millimeters	488.7	80	100.1	9.9 Slot	254.5	114.6	152.4	n/a	119.9
M5	MC2U90E	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
			millimeters	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.

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.



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Visit [www.oberdorferpumps.com](http://www.oberdorferpumps.com) to find in-depth descriptions of the world's leading high-quality, dependable pumps.

Due to ongoing product improvements, data shown here is subject to change without notice. Contact Oberdorfer Pumps for latest specifications.