

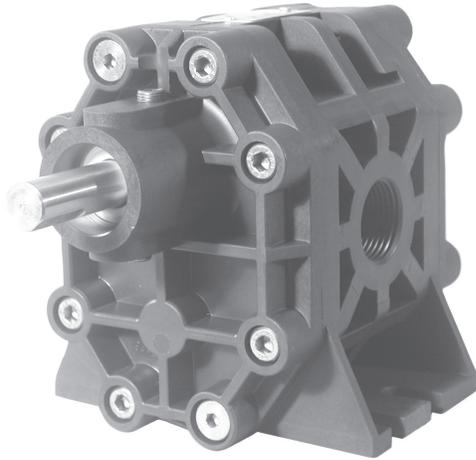


# OBERDORFER PUMPS

by Gardner Denver

# CHEMSTEEL™

## S946Non-Metallic



A full range of accessories are available including:

- close coupled mounting kits
- baseplate/pedestal mounting kits
- line mounted pressure relief valves

### GENERAL DESCRIPTION:

Chemsteel pumps are designed to handle common and 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, or-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.

### 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.

### SPECIFIC SOLUTIONS

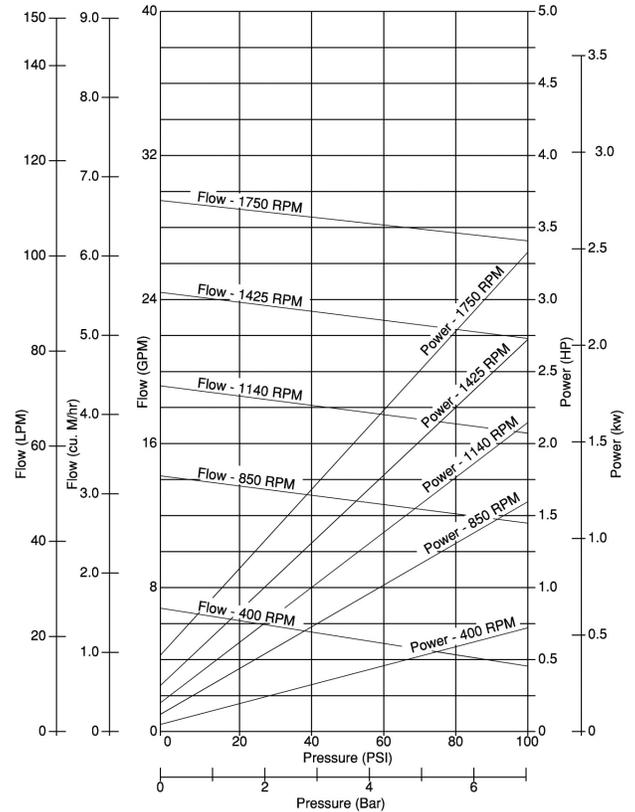
Gear/bearing design allows for “trimming” for optimizing the pump’s maximum flow to reach minimum turndown or to match flow to a specific OEM’s requirement.

Special materials combinations are available for specific liquids:

- Reinforced Polyphenylenesulfide housing construction.

### 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.
- Horsepower requirements increase for viscous fluids.

- Gears available in 316 stainless, Alloy C. Also in PTFE White, Polyetheretherketone and Polyphenylenesulfide.
  - Shafts are 316 stainless steel or Alloy C.
  - Bearings available in carbon or PTFE White or PTFE Red.
- Full range of seal options including lip seal, packing and mechanical designs.

### FIT

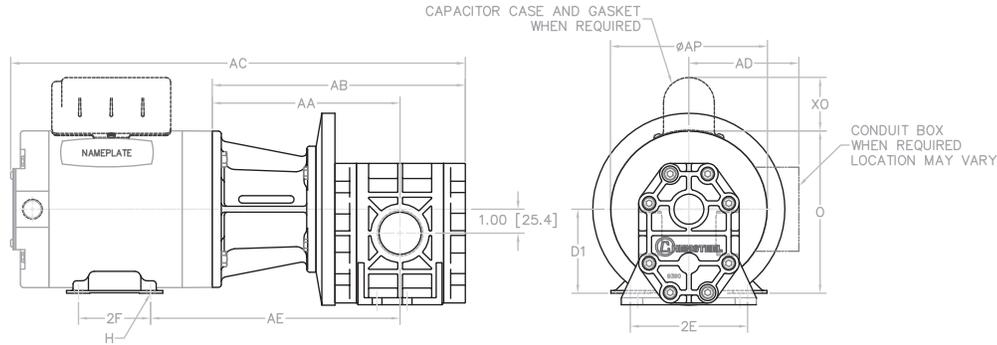
Connections are 1 1/2" female NPT or BSPT, pump hardware is metric and close couple adapters mount to both NEMA and IEC standard motor frame sizes for world wide acceptance. The port size is the same as competitive pumps.

MODEL	S946 NM	
Maximum flow @1750 rpm	30 GPM	113.6 LPM
Theoretical displacement	76.9 cc/revolution	
Maximum differential pressure	100 psig	6.9 bar
Maximum system pressure	200 psig	13.8 bar
Maximum speed	1800 RPM	
Maximum fluid temperature	200° F	93.3° C
Minimum fluid temperature	-40° F	-40° C
NPSHR @ 1750 RPM	10 feet	3.0 meters
Standard port size	1 1/2" FNPT	1 1/2" BSPT
Weight (lbs)	10 lbs	4.5 kg

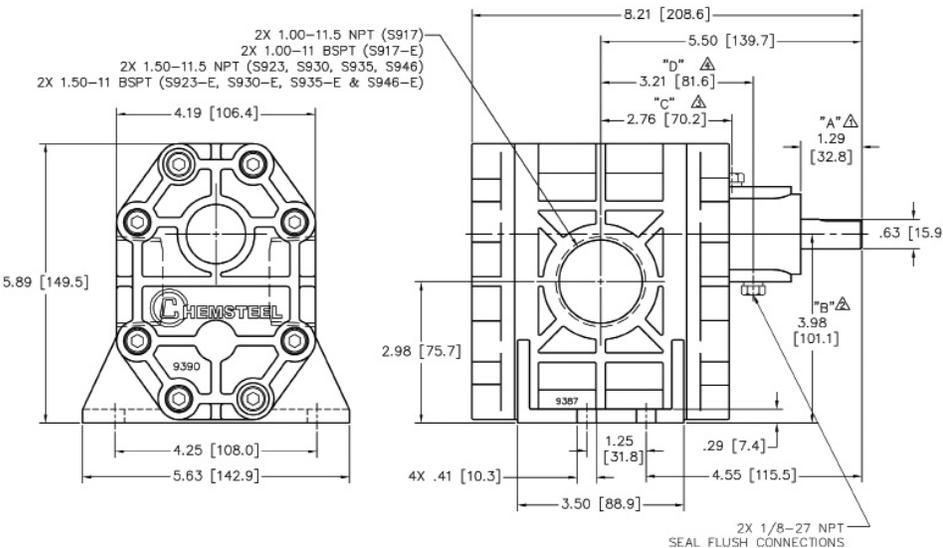
### MAINTENANCE

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. The upper shaft configuration lends itself to inline pump seal maintenance without the leakage of trapped chemicals from an incompletely drained pump.

### DIMENSIONS



MOUNTED ADAPTER CODE	KIT PART NO.	MOTOR FRAME		D1		2E		2F		H		① O	① AP	① XO	AA	AB	① AC	AD	AE	
				inches	millimeters	inches	millimeters	inches	millimeters	inches	millimeters	inches	millimeters	inches	millimeters	inches	millimeters	inches	millimeters	inches
C1	M9AD56R	56C		inches	3.50	4.88	3.00	Ø.34 SLOT	6.88	6.63	2.25	7.81	10.53	18.91	-	10.37				
				millimeters	88.9	124	76.2	Ø8.6 SLOT	174.8	168.4	57.2	198.4	267.5	480.3	-	263.4				
C2	M9AD45TR	143TC	145TC	inches	3.50	5.50	4.00	5.00	Ø.34 SLOT	6.88	6.63	2.25	7.81	10.53	20.10	21.60	-	10.19		
				millimeters	88.9	139.7	102	127	Ø8.6 SLOT	174.8	168.4	57.2	198.4	267.5	510.5	548.6	-	258.8		
		182C	184C	inches	4.50	7.50	4.50	5.50	Ø.41 SLOT	8.69	7.88	2.38	8.62	11.34	23.63	22.85	-	10.56		
				millimeters	114.3	190.5	114.3	139.7	Ø10.4 SLOT	220.7	200	60.3	218.9	288	600.2	580.4	-	268.2		
C3	M9AD71RE	IEC 71, B14 FACE		inches	2.80	4.41	3.54	Ø.28 SLOT	5.14	4.69	-	7.31	10.03	19.34	4.00	9.08				
				millimeters	71	112	89.9	Ø7 SLOT	130.6	119.1	-	185.7	254.8	491.2	102	230.7				
C4	M9AD80RE	IEC 80, B14 FACE		inches	3.15	4.92	3.94	Ø.39 SLOT	6.00	5.69	-	7.31	10.03	19.57	4.51	9.28				
				millimeters	80	125	100	Ø10 SLOT	152.4	144.5	-	185.7	254.8	497.1	116	235.7				
C5	M9AD90RE	IEC 90, B14 FACE		inches	3.54	5.51	3.94	Ø.39 SLOT	6.81	6.61	-	7.81	10.53	21.33	5.12	9.83				
				millimeters	90	140	100	Ø10 SLOT	173	168	-	198.4	267.5	541.8	130	249.7				
C6	M9AD84TR	182TC	184TC	inches	4.50	7.50	4.50	5.50	Ø.41	8.69	7.88	2.38	8.62	11.34	23.63	22.85	-	10.56		
				millimeters	114.3	190.5	114.3	139.7	Ø10.4	220.7	200	60.3	218.9	288	600.2	580.4	-	268.2		
		213C	215C	inches	5.25	8.50	5.50	7.00	Ø10.4	10.25	9.56	2.75	218.9	288	23.85	25.47	-	11.31		
				millimeters	133.4	215.9	139.7	177.8	Ø10.4	260.4	242.8	69.9	218.9	288	605.8	646.9	-	287.3		
C7	M9AD100RE	IEC 100, B14 FACE		inches	3.94	6.30	4.41	Ø.47	7.91	7.88	-	8.00	10.72	23.70	5.88	10.12				
				millimeters	100	160	112	Ø12	180	200	-	203.2	272.3	602	149.2	257				



- ① DIMENSION "A" IS APPROXIMATELY 1.00 [25.4] FOR PACKING PUMPS WITH PACKING NUT INSTALLED. DIMENSION "A" IS 1.49 [37.9] FOR LIP SEAL PUMPS.
- ② STANDARD UPPER DRIVE SHOWN. FOR LOWER DRIVE ARRANGEMENT DIMENSION "B" IS 1.98 [50.3].
- ③ FOR LIP SEAL PUMPS DIMENSION "C" IS 3.13 [79.6].
- ④ FOR LIP SEAL PUMPS DIMENSION "D" IS 3.13 [79.6].

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.

# OBARDORFER PUMPS

## by Gardner Denver

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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.