

Low-Volume Pumps



a DOVER company

Where Innovation Flows



Neptune Model 5003-S and 5005-S hydraulic diaphragm metering pumps are built to deliver very low flows with repeatable and accurate ranging down to quarts per day. Discharge pressures are higher than are possible with mechanical diaphragm pumps. Explosion-proof models are available for use in hazardous atmospheres.

These pumps are especially popular in oil/gas production, oil recovery and refineries. Typical applications include the injection of anti-foam agents, corrosion inhibitors and other additives injected at very low volumes but high pressures. (Refer to curves on reverse side.) These pumps are also used for neat feeding of boiler chemicals.

FEATURES AND BENEFITS

- High discharge pressures, to 3,000 psi (206.8 bar). Exceeds limits of most small pumps. Ideal for high-pressure systems
- EZE-CLEAN™ valve cartridges can be removed for cleaning without disturbing piping
- Electric stroke-length control available. Automatic capacity control in response to standard 4-20 mA process signal
- Explosion-proof motors available. Suitable for use in hazardous atmospheres
- Low flow-rates – quarts/day. Accurate, reliable chemical feed
- Duplex available

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Low-Volume Pumps SELECTION CHART

Standard Motor 1/3hp-1ph-115VAC-60Hz-TEFC

MODEL	STROKES PER MINUTE	CAPACITY AT 100 PSI (6.9 BAR)		MAX. PRESSURE				MATERIAL OF CONSTRUCTION
		GPH (GPD)	L/H (L/D)	1/3 HP		1/2 HP		
				PSI	BAR	PSI	BAR	
5003	37	0.35 (8.4)	1.3 (31.8)	1,500	103.4	N/A	N/A	316SS
5005	37	0.5 (12)	1.9 (44)	1,500	103.4	3,000	206.8	316SS C-20 PVC

MATERIALS OF CONSTRUCTION

MATERIAL CODE	LIQUID HEAD	DIAPHRAGM	VALVE BODY AND SEAT	VALVE CHECKS
N-3	316SS	PTFE	316SS	316SS
N-4	C-20	PTFE	C-20	C-20
N-5	PVC*	PTFE	PVC*	Glass†

* PVC head pumps are satisfactory for temperatures to 125°F (52°C).

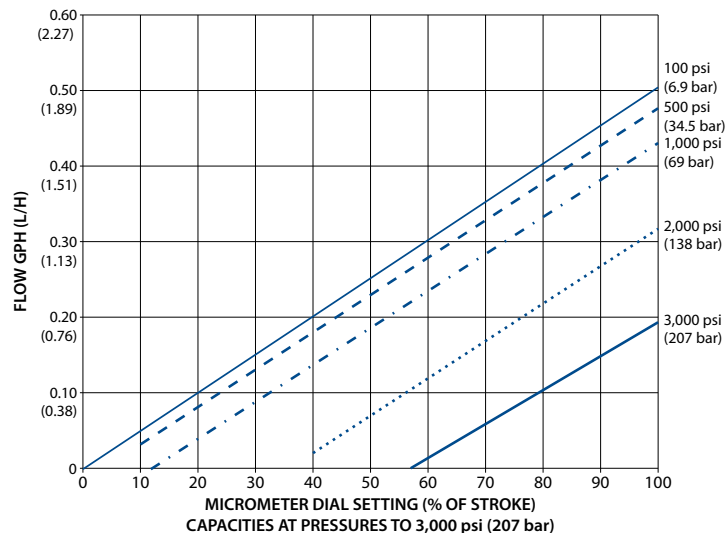
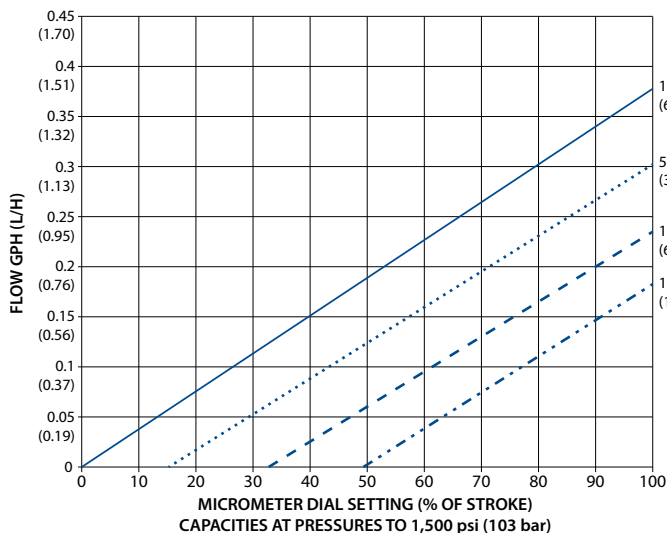
† Special materials available for services not compatible with glass.

Standard O-rings are FKM, all models; PTFE available for all models.

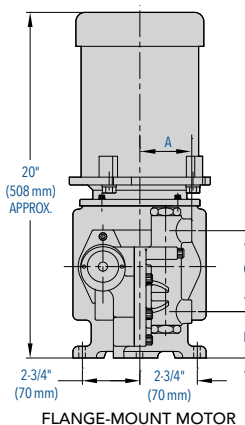
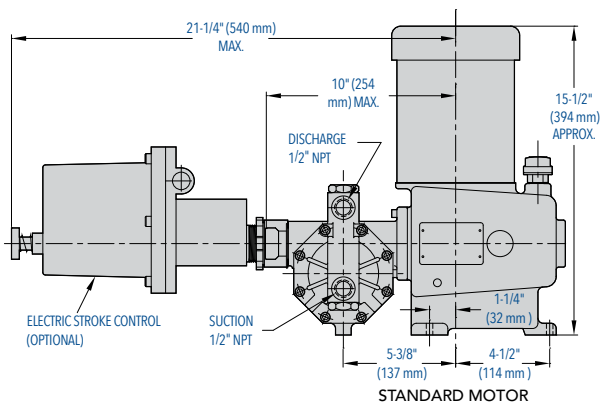
Request Bulletin DP-1100 for higher capacities.

Use with flooded suction only.

PERFORMANCE CURVES



DIMENSIONS 500/5000 Series with Metal Head



SIMPLEX

HEAD MATERIAL	DIMENSIONS INCHES (MM)		
	"A"	"B"	"C"
N3 & N4	2-1/4 57	2-3/16 56	3-7/8 98

DUPLEX

HEAD MATERIAL	DIMENSIONS INCHES (MM)		
	"A"	"B"	"C"
N3 & N4	5-3/4 146	2-3/16 56	3-7/8 98

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