

Low-Volume Pumps

Special Application Pump

Neptune Model 481-S and 501-S hydraulic diaphragm metering pumps are built to deliver very low flows, 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.

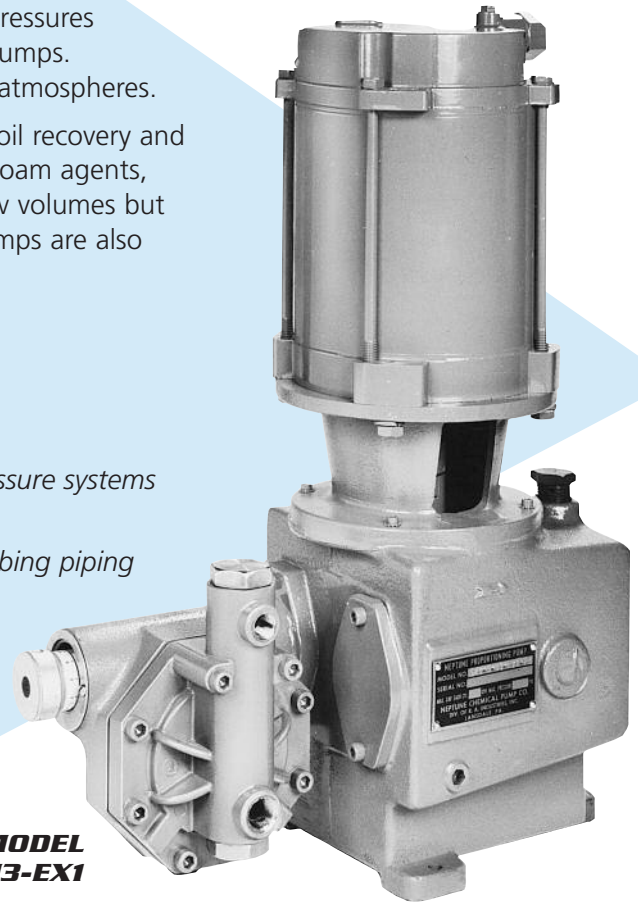
These pumps are especially popular in oil/gas production, oil recovery and refineries. Typical applications include the injection of antifoam agents, corrosion inhibitors and other additives injected at very low volumes but high pressures. (Refer to curves on reverse side.) These pumps are also used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

Design Features/Benefits

- High discharge pressures, to 3000 psi (210 kg/cm²)
Exceeds limits of most small pumps, ideal for high pressure systems
- EZE-CLEAN™ valves
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

Neptune

A DOVER COMPANY



**MODEL
481-S-N3-EX1**

Use with flooded suction only.

Model 481 is available in N3 construction. Model 501 is available in the following materials of construction:

Pump Selection Chart

Standard Motor: 1/3 HP-1ph-115VAC-60c-TEFC

MODEL NUMBER	MAXIMUM (1) CAPACITY @ 100 PSI (7 KG/CM ²)	STROKES PER MINUTE	MAXIMUM PRESSURE (2)	MATERIAL OF CONSTRUCTION
481-S-N3	0.2 gph (0.75 lph) 4.8 gpd (17.8 lpd)	18	1500 psi (105 kg/cm ²) @ 1/3 HP	316SS
501-S-N1	0.5 gph (1.9 lph) 12 gpd (44 lpd)	18	1500 psi (105 kg/cm ²) @ 1/3 HP	Cast Iron
501-S-N3			@ 1/3 HP	316SS
501-S-N4			3000 psi (210 kg/cm ²)	C-20
501-S-N5			@ 1/2 HP	PVC

1. See curves on back for minimum capacities.

2. "N1" Cast Iron Models 1500 psi (105 kg/cm²) max.;

"N5" PVC Models 150 psi (10.5 kg/cm²) max.

*Variable speed drives may not be used with Models 481 or 501 due to low stroking speed.

PART	CODE N-1	CODE N-3	CODE N-4	CODE N-5
Liquid Head	Cast Iron	316SS	C-20	PVC*
Diaphragm	Teflon®	Teflon®	Teflon®	Teflon®
Valve Body and Seat	316SS	316SS	C-20	PVC*
Valve Checks	316SS	316SS	Hastelloy-C	Glasst

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

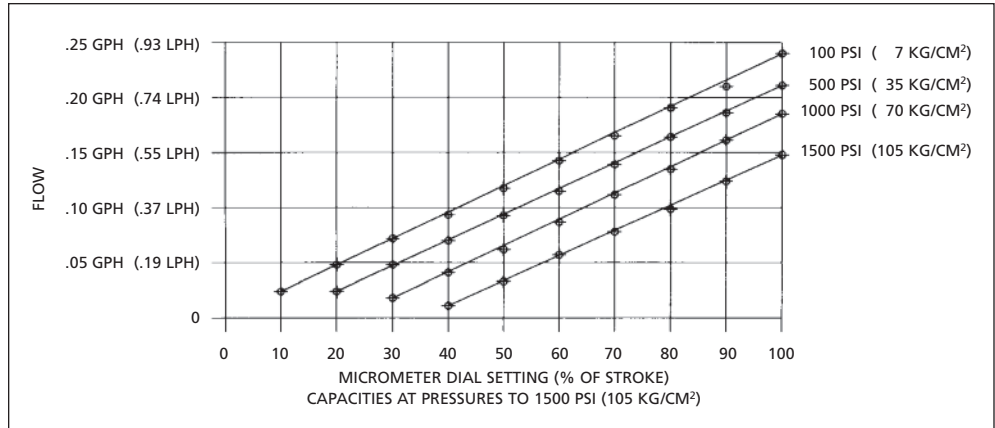
†Special materials available for services not compatible with glass.

Standard O-rings are Viton, all models; Teflon available.

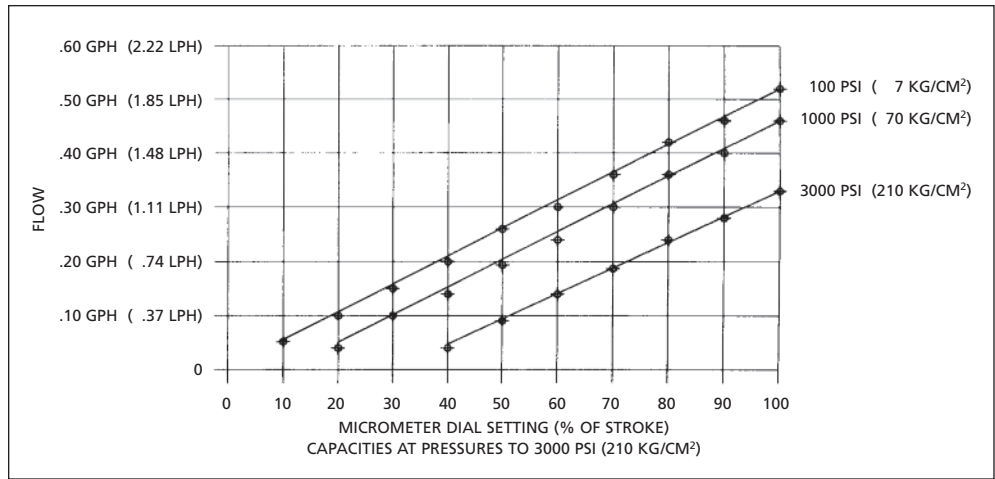
Request Bulletin DP-1100 for higher capacities.

Performance Curves

MODEL 481-S-N3 18 SPM



MODEL 501-S-N3 18 SPM



Series 500 "dia-PUMP" with Metal Head

STANDARD MOTOR

FLANGE MOUNT MOTOR

SIMPLEX

HEAD MATERIAL	DIMENSIONS		
	"A"	"B"	"C"
N1	2 ⁵ / ₁₆ " [67]	2 ¹ / ₁₆ " [62]	3 ¹ / ₁₆ " [94]
N3 & N4	2 ¹ / ₄ " [57]	2 ³ / ₁₆ " [56]	3 ³ / ₁₆ " [98]

DUPLEX

HEAD MATERIAL	DIMENSIONS		
	"A"	"B"	"C"
N1	6 ¹ / ₁₆ " [156]	2 ¹ / ₁₆ " [62]	3 ¹ / ₁₆ " [94]
N3 & N4	5 ¹ / ₂ " [146]	2 ¹ / ₁₆ " [56]	3 ³ / ₁₆ " [98]

See page 7 of Bulletin DP-1100 for bolt hole locations and for N5 (PVC) dimensions.



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