

Series 7000 “dia-PUMP”

Purpose

The Neptune Series 7000 “dia-PUMP” is a mechanically actuated diaphragm metering pump designed for water, wastewater, agricultural and process applications.

Benefits

The mechanical design eliminates the use of contour plates on the liquid side of the diaphragm. The simple, straight through valve and head design allows improved flow characteristics.

- Self-priming
- Superior performance when pumping chemicals such as sodium hypochlorite, which can off-gas
- Suction lift exceeding 20 ft. (6 m) on water-like chemicals
- Easily handles viscosities in excess of 5000 cps

For Higher Pressures
request Bulletin DP-1100
and Bulletin DP-2000.

Neptune

A DOVER COMPANY



**MODEL
7120-N3**

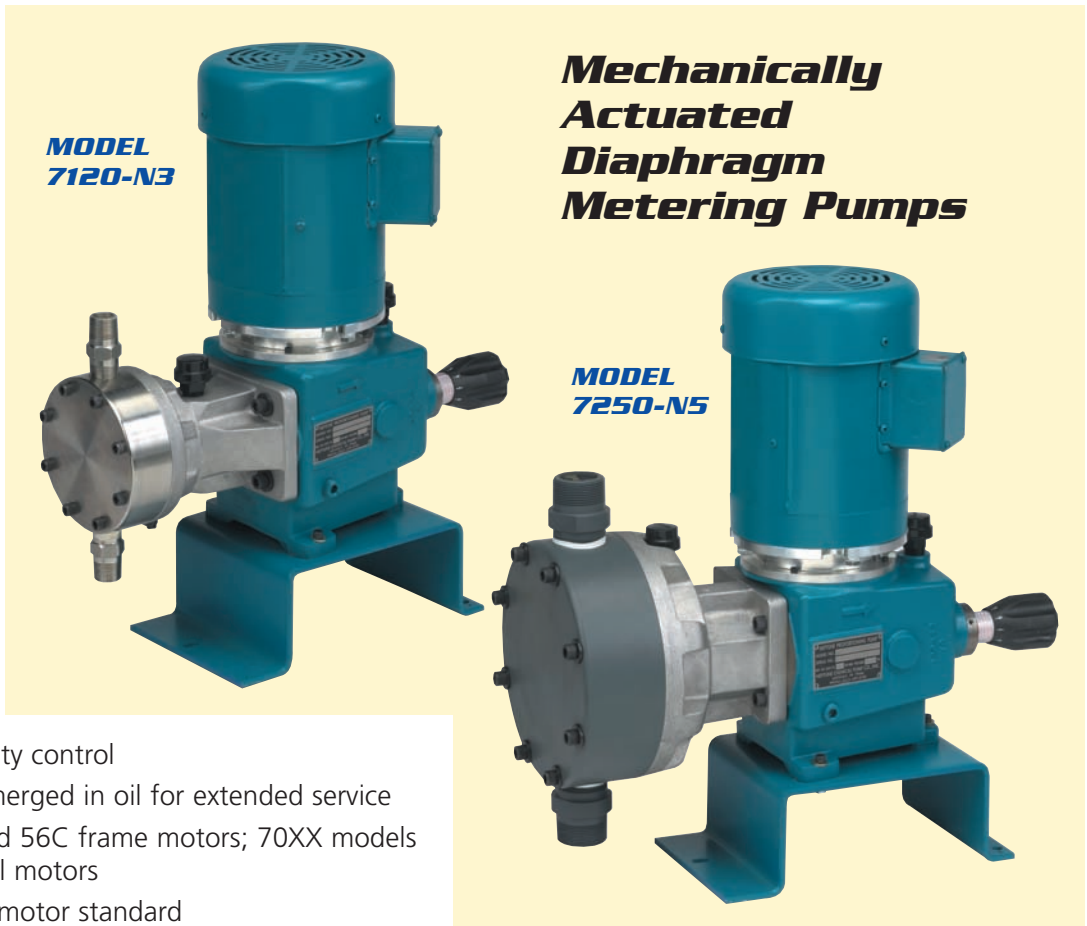
CERTIFICATIONS & ASSOCIATIONS:



Neptune Series 7000

Features

- Capacities to 300 gph (1135 lph); Pressures to 150 psi (11 bar)
- Pump capacity is adjustable by micrometer dial while the pump is running
- 10 turn micrometer dial calibrated in 1% increments; Bright colored contrasted dial protected by clear PVC covering
- Micrometer stroke length adjustment allows 10:1 turndown
- Variable speed drives allow greater turndown range or automatic capacity control
- All moving parts run submerged in oil for extended service
- All models accept standard 56C frame motors; 70XX models available also with integral motors
- International IEC adapter motor standard



Mechanically Actuated Diaphragm Metering Pumps

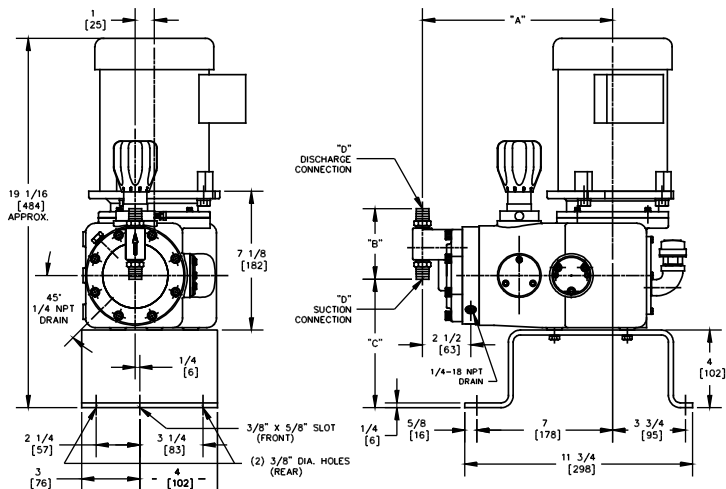
SELECTION CHART

†Use next larger motor for VS drive or SCR drive applications.

MODEL NUMBER	CAPACITY AT 60 HZ (50 HZ)		PRESSURE		VISCOSITY (CPS)	STROKES PER MINUTE AT 60 HZ (50 HZ)	STROKE LENGTH (mm)	DIAPHRAGM DIAMETER (mm)	†MOTOR SIZE REQUIRED FOR OPERATION AT:			
	GPH	LPH	PSI	BAR					50 PSI (3.5 BAR)	75 PSI (5.25 BAR)	100 PSI (7 BAR)	150 PSI (11 BAR)
7001-NX	6 (5)	23 (18.8)	150	11	1000	18 (15)	6.3	88	1/3 HP (0.25 KW)	1/3 HP (0.25 KW)	1/3 HP (0.25 KW)	1/3 HP (0.25 KW)
7000-NX	12 (10)	45 (37.7)	150	11	1000	37 (31)	6.3	88	1/3 HP (0.25 KW)	1/3 HP (0.25 KW)	1/3 HP (0.25 KW)	1/3 HP (0.25 KW)
7020-NX	25 (20.7)	94 (78)	150	11	1000	72 (60)	6.3	88	1/3 HP (0.25 KW)	1/3 HP (0.25 KW)	1/3 HP (0.25 KW)	1/3 HP (0.25 KW)
7050-NX	40 (33)	151 (125)	150	11	1000	117 (97)	6.3	88	1/3 HP (0.25 KW)	1/3 HP (0.25 KW)	1/3 HP (0.25 KW)	1/2 HP (0.37 KW)
7070-NX	50 (41)	189 (157)	150	11	1000	144 (120)	6.3	88	1/3 HP (0.25 KW)	1/3 HP (0.25 KW)	1/3 HP (0.25 KW)	1/2 HP (0.37 KW)
7101-NX	13 (10.8)	49 (40.8)	150	11	5000*	18 (15)	14	100	1/3 HP (0.25 KW)	1/3 HP (0.25 KW)	1/3 HP (0.25 KW)	1/3 HP (0.25 KW)
7100-NX	25 (20.7)	94 (78)	150	11	5000*	37 (31)	14	100	1/3 HP (0.25 KW)	1/3 HP (0.25 KW)	1/3 HP (0.25 KW)	1/3 HP (0.25 KW)
7120-NX	50 (41)	189 (157)	150	11	5000*	72 (60)	14	100	1/3 HP (0.25 KW)	1/3 HP (0.25 KW)	1/3 HP (0.25 KW)	1/2 HP (0.37 KW)
7150-NX	80 (66.4)	303 (251)	150	11	5000*	117 (97)	14	100	1/3 HP (0.25 KW)	1/3 HP (0.25 KW)	1/2 HP (0.37 KW)	3/4 HP (0.55 KW)
7200-NX	95 (78.9)	360 (299)	100	7	5000*	37 (31)	18	200	1/3 HP (0.25 KW)	1/2 HP (0.37 KW)	3/4 HP (0.55 KW)	N/A
7220-NX	185 (153)	700 (581)	100	7	5000*	72 (60)	18	200	1/2 HP (0.37 KW)	3/4 HP (0.55 KW)	1 HP (0.75 KW)	N/A
7250-NX	300 (249)	1135 (943)	100	7	5000*	117 (97)	18	200	1 HP (0.75 KW)	1-1/2 HP (1.1 KW)	2 HP (1.5 KW)	N/A

*Up to 20,000 CPS depending on suction condition and stroking speed. Contact Factory for applications over 5,000 CPS for assistance.

70XX MODELS



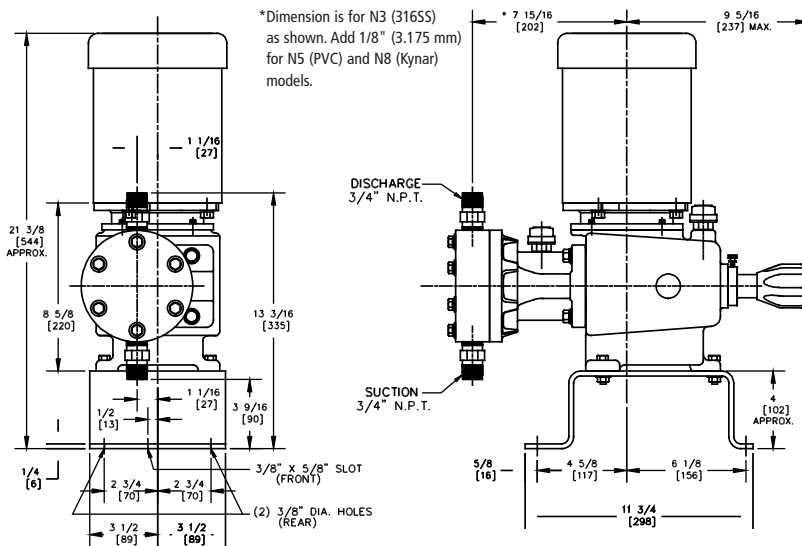
MODELS	"A"	"B"	"C"	MNPT Thread "D" Connection Suction & Discharge
70XX-N3	9-3/4" (249)	3-5/8" (92)	6-5/8" (168)	3/8 - 18 NPT
70XX-N5 & N8	8-3/4" (222)	7-3/8" (187)	3-1/8" (79)	1/2 - 14 NPT

MATERIALS OF CONSTRUCTION

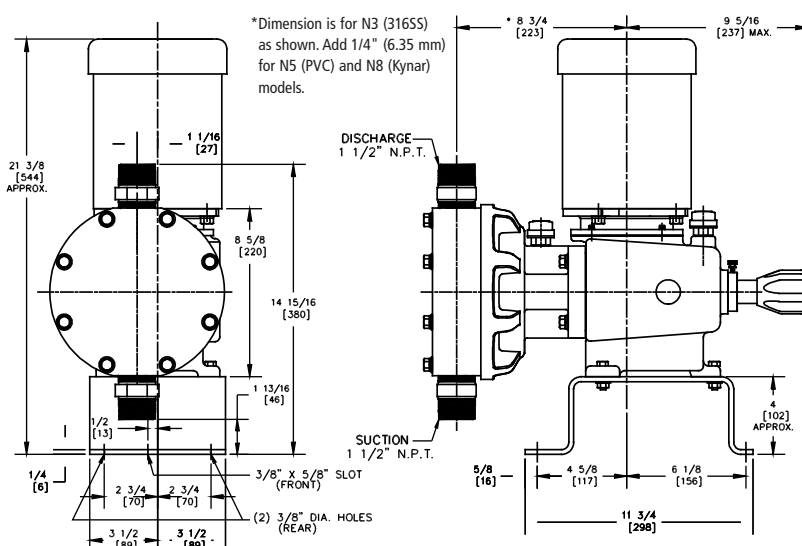
MATERIAL CODE	PUMP HEAD	VALVE CHECK	DIAPHRAGM
N3	316SS	316SS	Teflon®
N5	PVC*	Ceramic	Teflon®
N8	Kynar**	Ceramic	Teflon®

* PVC head pumps are satisfactory for temperatures to 125°F (52°C).
 ** Kynar head pumps are satisfactory for temperatures to 200°F (93°C).

71XX MODELS



72XX MODELS



APPLICATIONS INFORMATION

- External Relief Valve** An external relief valve is always required to protect the pump from the damage caused by the overpressure in case the discharge line is accidentally closed when the pump is in operation.
- Pulsation Dampener** Use of a pulsation dampener is required if the discharge pipe is over 10 ft. (3 m) long for the models 70XX and 71XX and over 5 ft. (1.5 m) long for models 72XX and the discharge pressure is over 25 psi (1.75 bar).

3. Recommended Pipe Diameter and Length

PUMP MODELS	70XX	71XX	72XX
SUCTION PIPE DIAMETER	*1/2" (12.7 mm)	1" (25.4 mm)	2" (50.8 mm)
MAXIMUM LIFT IN FEET	20' (6 m)	20' (6 m)	15' (4.5 m)
DISCHARGE PIPE DIAMETER	1/2" (12.7 mm)	1/2" (12.7 mm)	1" (25.4 mm)
MINIMUM ORIFICE AT INJECTION POINT	3/8" (9.5 mm)	1/2" (12.7 mm)	1" (25.4 mm)

*Use 3/4" (19 mm) for 50 GPH (189 LPH) Model

- Use only full port valves** in suction and discharge lines.

Chemical Feed Accessories

BACK PRESSURE VALVES

PVC, 316SS and Alloy 20 standard. Can also be used as relief valves.

Request Bulletin BP



316SS ▲

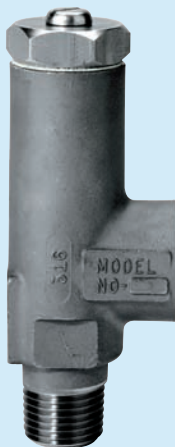


PVC ►

RELIEF VALVES

PVC, 316SS and Alloy 20 standard.

Request Bulletin RV



CALIBRATION COLUMNS

Standard sizes 100, 250, 500, 1,000 and 4,000 ml.

Request Bulletin CC

PULSATION DAMPENERS

PVC, polypropylene, 316SS and Alloy 20 bodies with Viton® or EPDM bladders.

Request Bulletin PD



PVC ▲



316SS ▲

Water Treatment Products

POLYMER BLEND & FEED

Neptune's Polymaster™ dilutes, mixes and thoroughly activates emulsion, dispersion and solution polymers including new high molecular weight products.

Request Bulletin PM



PORTABLE MIXERS

Neptune mixers are engineered for a wide variety of mixing operations.

- 1/20 to 5 HP (0.037 to 3.7 KW)
- Gear or Direct Drive
- Drums-IBC/Totes or Tanks to 5000 gallons (18925 liters)

Request Portable Mixer Catalog



Neptune

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