

# 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. on water-like chemicals
- Easily handles viscosities in excess of 5000 cps

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

**Neptune**  
CHEMICAL PUMP CO., INC.



**MODEL  
7120-N3**

# Neptune Series 7000

## Mechanically Actuated Diaphragm Metering Pumps

### Features

- Capacities to 300 gph; Pressures to 150 psi
- 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



### 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/95°C.

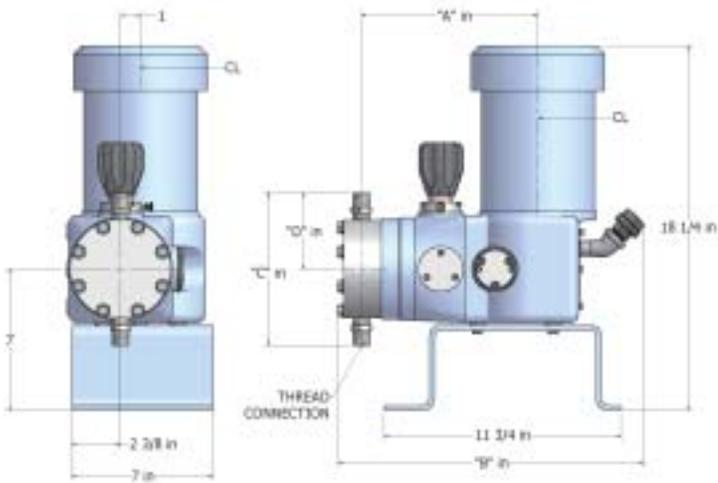
### SELECTION CHART

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

MODEL NUMBER	CAPACITY GPH (LPH)	PRESSURE PSI (KG/CM <sup>2</sup> )	VISCOSITY (CPS)	STROKES PER MINUTE	STROKE LENGTH (mm)	DIAPHRAGM DIAM. (mm)	† MOTOR SIZE REQUIRED FOR OPERATION AT:			
							50 PSI	75 PSI	100 PSI	150 PSI
7001-NX	6 ( 23)	150 (11)	1000 max.	18	6.3	88	1/3	1/3	1/3	1/3
7000-NX	12 ( 45)	150 (11)	1000 max.	37	6.3	88	1/3	1/3	1/3	1/3
7020-NX	25 ( 94)	150 (11)	1000 max.	72	6.3	88	1/3	1/3	1/3	1/3
7050-NX	40 ( 151)	150 (11)	1000 max.	117	6.3	88	1/3	1/3	1/3	1/2
7070-NX	50 ( 189)	150 (11)	1000 max.	144	6.3	88	1/3	1/3	1/3	1/2
7101-NX	13 ( 49)	150 (11)	5000 min.*	18	14	100	1/3	1/3	1/3	1/3
7100-NX	25 ( 94)	150 (11)	5000 min.*	37	14	100	1/3	1/3	1/3	1/3
7120-NX	50 ( 189)	150 (11)	5000 min.*	72	14	100	1/3	1/3	1/3	1/2
7150-NX	80 ( 303)	150 (11)	5000 min.*	117	14	100	1/3	1/3	1/2	3/4
7200-NX	95 ( 360)	100 ( 8)	5000 min.*	37	18	200	1/3	1/2	3/4	N/A
7220-NX	185 ( 700)	100 ( 8)	5000 min.*	72	18	200	1/2	3/4	1	N/A
7250-NX	300 (1135)	100 ( 8)	5000 min.*	117	18	200	1	1-1/2	2	N/A

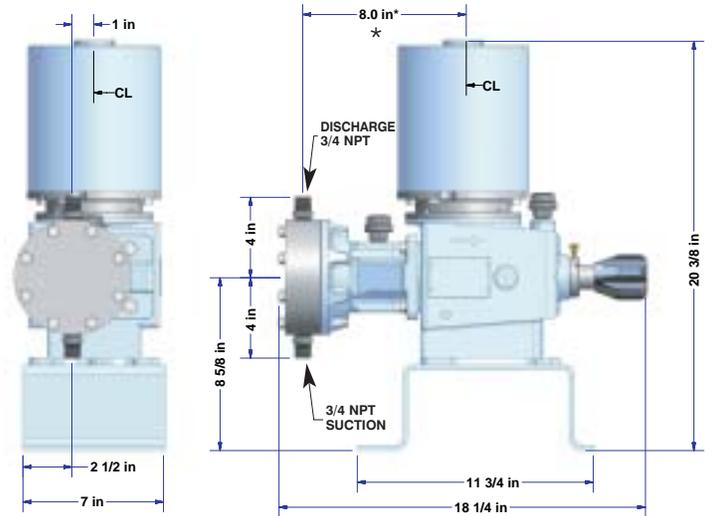
\*Up to 20,000 CPS depending on suction condition and stroking speed. Contact Factory for applications over 5,000 CPS for assistance.

## 70XX MODELS

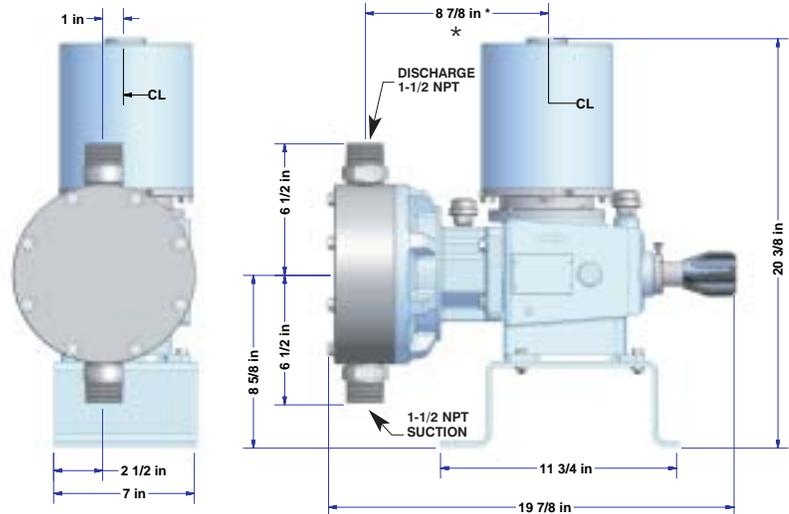


MODELS	"A"	"B"	"C"	"D"	MNPT Thread Connection Suction & Discharge
70XX-N3	10"	15-3/4"	3-3/4"	3-3/8"	3/8"
70XX-N5 & N8	8-3/4"	15-1/4"	7-5/8"	3-13/16"	1/2"

## 71XX MODELS



## 72XX MODELS

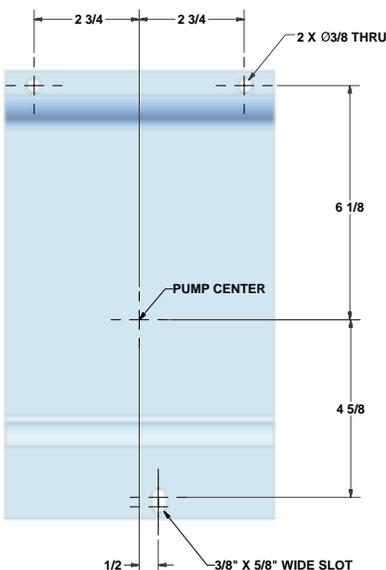


## Basic Dimensions

\*Dimension is for N3 (316SS) as shown. Add 1/4" for N5 (PVC) and N8 (Kynar) models.

## BOTTOM VIEW OF PUMP BASE

ALL 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. long for the models 70XX and 71XX and over 5 ft. long for models 72XX and the discharge pressure is over 25 PSI.
- Recommended Pipe Diameter and Length**

PUMP MODELS	SUCTION PIPE DIAMETER	MAXIMUM LIFT IN FEET	DISCHARGE PIPE DIAMETER	MINIMUM ORIFICE DIAMETER AT INJECTION POINT
70XX	*1/2"	20'	1/2"	3/8"
71XX	1"	25'	1/2"	1/2"
72XX	2"	15'	1"	1"

\*Use 3/4" for 50 GPH 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



### 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



## 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
- Gear or Direct Drive
- Drums-IBC/Totes or Tanks to 5000 gallons

Request Portable Mixer Catalog



**Neptune**  
CHEMICAL PUMP CO., INC.

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