



HYDRAULIC
SERIES
METERING PUMPS

www.NEPTUNE1.COM

HYDRAULIC DIAPHRAGM PUMP SOLUTIONS



Neptune™ Chemical Pump Company is a premier manufacturer of chemical metering pumps, chemical feed systems, and chemical injection accessories. Neptune's hydraulic diaphragm metering pumps are well-known for injecting chemicals into boilers and cooling towers, and in water and wastewater-treatment applications. Major markets include power generation, oil and gas exploration, petrochemical, and irrigation.

Other Neptune products include make-down systems to prepare and activate liquid or dry polymers for injection into water and wastewater-treatment processes, plus a complete line of portable mixers.

Neptune Chemical Pump Company, Inc., is located in North Wales, Pennsylvania, and is a member of the Pumps Solutions Group (PSG™), part of the Dover Corporation's Fluid Solution Platform.

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INDUSTRIES SERVED

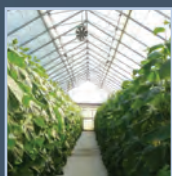
Neptune provides chemical injection, chemical and metering-pump solutions for a vast array of industries requiring the accuracy, precision and quality only Neptune can deliver.



INDUSTRIAL WATER
TREATMENT



MUNICIPAL WATER
TREATMENT



CHEMIGATION



FERTIGATION



AGRICULTURE



SPORTS TURF



GOLF COURSE



AIR POLLUTION
CONTROL



CHEMICAL FEED



CHEMICAL
PROCESSING



PETRO
CHEMICAL



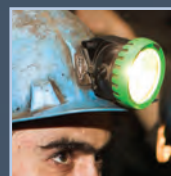
POWER GEN



BOILER
TREATMENT



OIL & GAS
PRODUCTION



MINING



GAS ODORIZATION



PULP & PAPER



SIZING AND SELECTING METERING PUMPS

Identify the required capacity in terms of flow rate and discharge pressure. Do not oversize a metering pump. A metering pump should be sized so the maximum expected flow rate is 85% to 90% of the pump capacity. This leaves additional capacity if needed. The minimum capacity should never be less than 10% of the pump capacity to maintain accuracy.

Consider materials of construction. Metering pumps are available in a variety of materials. Selection must take into consideration corrosion, erosion or solvent action. Solvent-based chemicals may dissolve plastic-headed pumps. Acids and caustics may require stainless steel or alloy liquid ends. Consider the effect of erosion when handling abrasive slurries.

Is the chemical viscous or is the chemical a slurry? Does the chemical release gas? Special liquid ends are available for these specific applications. Standard metering pumps handle clear liquids with viscosities ranging from water-like to 1,500 cPs. Special liquid ends can handle viscosities to 5,000 cPs and light suspensions. For true slurries or higher viscosity, tubular diaphragm heads allow pumping chemicals to 20,000 cPs or slurries containing up to 10% solids. Liquid ends are available which automatically vent accumulated gases.

Neptune offers four materials of construction for its Hydraulic Series pumps:

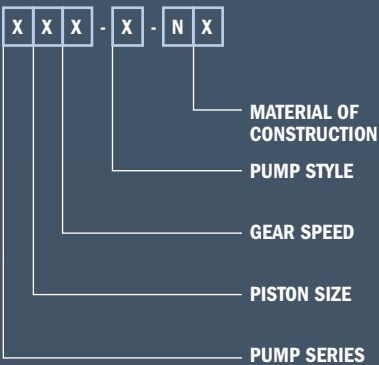
MATERIAL	TEMPERATURE	PRESSURE
316SS	200°F (93°C)	to 3,000 psi (207 bar)
C-20	200°F (93°C)	to 3,000 psi (207 bar)
PVC	125°F (52°C)	to 400 psi (28 bar)
Kynar®	125°F (52°C)	to 150 psi (10 bar)

PVC AND KYNAR® MODELS, 125°F (52°C) MAXIMUM.



NOMENCLATURE

HYDRAULIC SERIES PUMP DATA SHEET



PISTON SIZE

- 0 = 1/2" DIA
- 1 = 1/2" DIA
- 2 = 11/16" DIA
- 3 = 1-1/16" DIA
- 4 = 1-3/16" DIA
- 5 = 2" DIA
- 6 = 5/16" DIA

GEAR SPEED (Based on 1725 RPM Motor)

- | (60Hz) | (50Hz) |
|-------------|-------------|
| 0 = 37 SPM | 0 = 30 SPM |
| 1 = 18 SPM | 1 = n/a |
| 2 = 72 SPM | 2 = 60 SPM |
| 5 = 117 SPM | 5 = 98 SPM |
| 7 = 144 SPM | 7 = 120 SPM |
| 8 = 175 SPM | 8 = 144 SPM |

PUMP STYLE

- A = Simplex - Non-Removable, oil head cannot be converted to Duplex
- D = Duplex
- E = Economy Head on "A" Gear Box
- SE or DE = Used on Model 547 only to specify E-Head on Simplex or Duplex
- S = Simplex - Removable, or head can be converted to Duplex
- T = Tubular; Designation DT for Duplex Tubular
- VS = High Viscosity; Designation DVS for Duplex High Viscosity

MATERIAL OF CONSTRUCTION

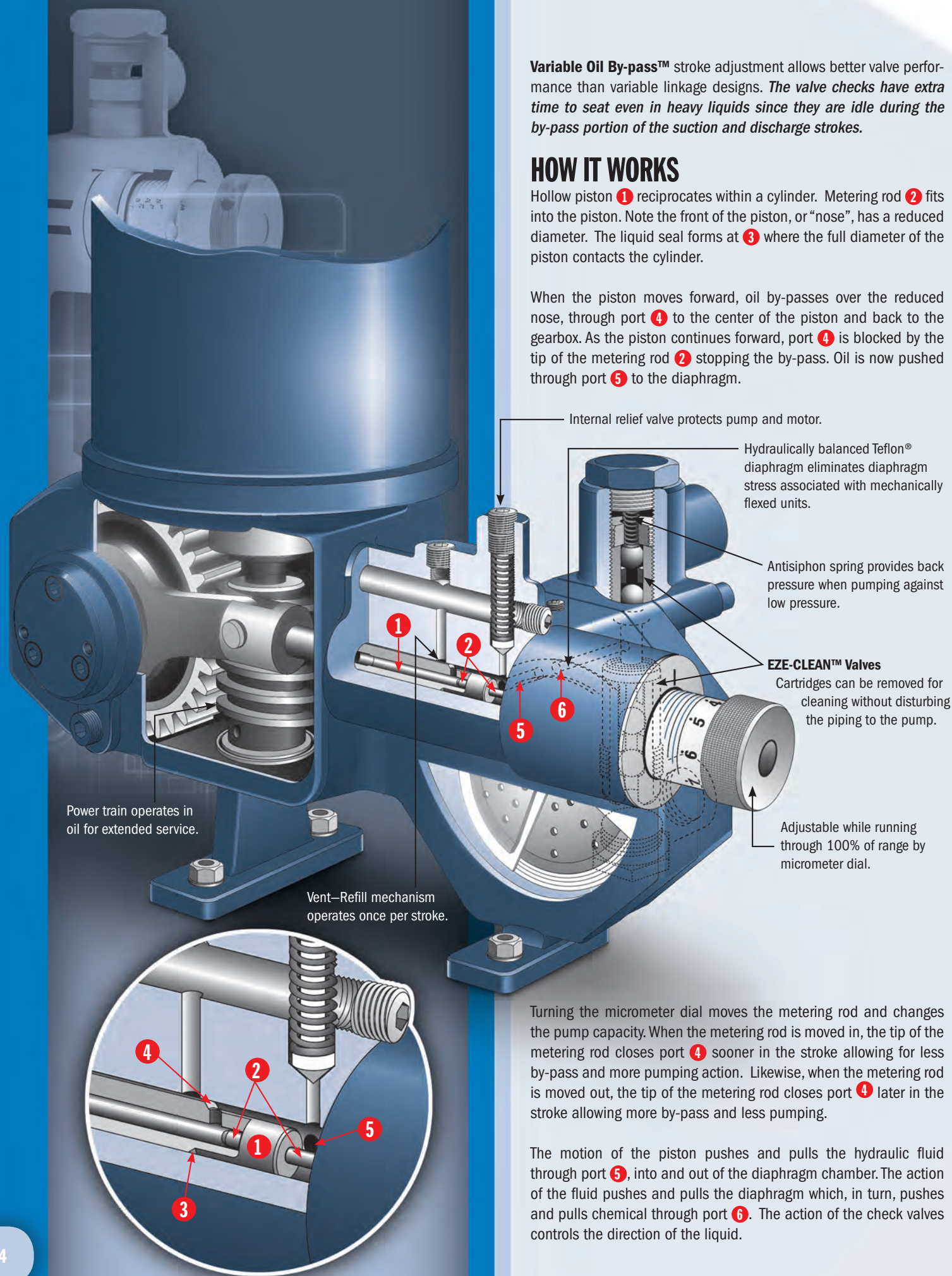
- 3 = 316SS Trim, Viton® O-Rings, Teflon® Diaphragm
- 4 = C-20, Viton® O-Rings, Teflon® Diaphragm
- 6 = PVC, Glass Ball Check, Viton® O-Rings, Teflon® Diaphragm
- 7 = 316SS with (3) Poly Check Balls, Viton® Diaphragm (Tubular Only)
- 8 = Kynar®, Teflon® Diaphragm

Variable Oil By-pass™ stroke adjustment allows better valve performance than variable linkage designs. *The valve checks have extra time to seat even in heavy liquids since they are idle during the by-pass portion of the suction and discharge strokes.*

HOW IT WORKS

Hollow piston **1** reciprocates within a cylinder. Metering rod **2** fits into the piston. Note the front of the piston, or “nose”, has a reduced diameter. The liquid seal forms at **3** where the full diameter of the piston contacts the cylinder.

When the piston moves forward, oil by-passes over the reduced nose, through port **4** to the center of the piston and back to the gearbox. As the piston continues forward, port **4** is blocked by the tip of the metering rod **2** stopping the by-pass. Oil is now pushed through port **5** to the diaphragm.



Power train operates in oil for extended service.

Vent-Refill mechanism operates once per stroke.

Internal relief valve protects pump and motor.

Hydraulically balanced Teflon® diaphragm eliminates diaphragm stress associated with mechanically flexed units.

Antisiphon spring provides back pressure when pumping against low pressure.

EZE-CLEAN™ Valves

Cartridges can be removed for cleaning without disturbing the piping to the pump.

Adjustable while running through 100% of range by micrometer dial.

Turning the micrometer dial moves the metering rod and changes the pump capacity. When the metering rod is moved in, the tip of the metering rod closes port **4** sooner in the stroke allowing for less by-pass and more pumping action. Likewise, when the metering rod is moved out, the tip of the metering rod closes port **4** later in the stroke allowing more by-pass and less pumping.

The motion of the piston pushes and pulls the hydraulic fluid through port **5**, into and out of the diaphragm chamber. The action of the fluid pushes and pulls the diaphragm which, in turn, pushes and pulls chemical through port **6**. The action of the check valves controls the direction of the liquid.

AUTOMATIC CONTROL & OTHER FEATURES

Neptune Hydraulic Series pumps feature a number of automatic control and other features. These features include:

CE MARK-IEC MOTORS

All Hydraulic Series pumps are CE-compliant and bear the CE label when coupled to a CE-marked motor. Motor options are available in IEC configurations.

DOUBLE DIAPHRAGM WITH LEAK DETECTION

For use in applications where contamination of the process fluid by the pump's hydraulic fluid cannot be tolerated. Features two "dry" coupled diaphragms that keep the area between the diaphragms evacuated with the pumping action transmitted without the use of intermediate fluids.

ELECTRIC STROKE CONTROL

Automatically controls the flow rate of any Hydraulic Series pump by changing the stroke length either manually or through the use of a process instrument (4-20MA or 1-5V). It is a self-contained system and mounted directly on the pump.

SODIUM HYPOCHLORITE GAS BLEED

This is a special head that has been designed with an automatic air-release valve that allows the venting of accumulated gas produced by chemicals that off-gas, such as sodium hypochlorite.

VARIABLE SPEED CONTROL

The flow rate of any Hydraulic Series pump can be controlled automatically by a process instrument using a variable speed drive that changes the pump's stroke speed.



481/501-LV SERIES (Low Volume)

FEATURES

- Simplex or duplex design
- Double ball-check design
- Variable Oil By-pass™ stroke adjustment
- EZE-CLEAN™ Valves have cartridges that can be removed for cleaning without disturbing the pump's piping
- Engineered to deliver accurate flow rates at low volumes
- Injection rates as low as quarts/liters per day for special applications
- Handles high discharge pressures to 3,000 psi (206.9 bar)
- Optional automatic control via electric stroke adjustment
- Explosion-proof motors available for hazardous atmospheres
- Built-in internal relief valve
- Hydraulically balanced diaphragm provides extended life

TECHNICAL DATA

- Materials of construction: 316SS, C-20, PVC
- Diaphragms: Teflon®
- Valve Body & Seats: 316SS, C-20, PVC
- Valve Checks: 316SS, Alloy 20, Glass
- Standard motor: 1/3 HP-1ph-115 VAC-60c-TEFC
- International motor: 0.25 kW-1 or 3ph-50 Hz-IEC—or optional custom motors available
- Shipping weight: 60 lb. (27.2 kg)

PERFORMANCE DATA

- Capacity at 100 psi (60 Hz): 0.2 to 0.5 gph (0.8 to 2 lph); 0.4 to 1 gph (2 to 4 lph) if duplexed
- Capacity at 7 bar (50 Hz): 0.16 to 0.4 gph (0.61 to 1.5 lph); 0.32 to 0.8 gph (1 to 3.0 lph) if duplexed
- Maximum pressures to 3,000 psi (207 bar)
- Maximum Temperatures: PVC—125°F (52°C); 316SS, C-20—200°F (93°C)
- Gear speeds available at 60 Hz: 18 strokes per minute

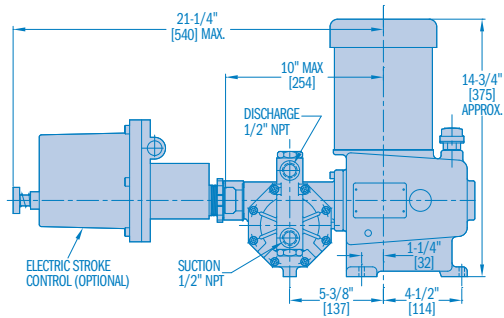
CERTIFICATIONS & ASSOCIATIONS



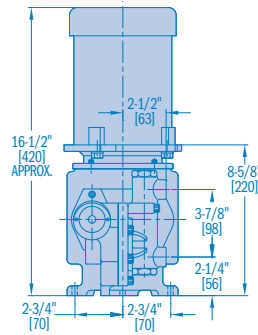
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481/501-LV SERIES (Low Volume) "DIA-PUMP" DIMENSIONS

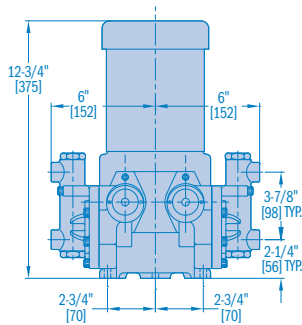
WITH METAL HEAD



STANDARD MOTOR



FLANGE MOUNT MOTOR



DUPLEX

481/501-LV SERIES (Low Volume) SELECTION CHART

	Materials of Construction	Standard Motor	Capacity at 1000 psi (60 Hz)				Capacity at 70 bar (50 Hz)				Max Pressure of the Series				Strokes/Minute				Max Temp		Weight	
			gph		lph		gph		lph		psi		bar		60 Hz		50 Hz		°F	°C	Lbs	Kg
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max				
481 501	Simplex																					
	316SS	1/3 HP	0.2	0.5	0.8	1.9	Not Applicable in 50 Hz				50	1,500	3.4	103.4	18.0	18.0	Not Applicable in 50 Hz	200	93	60	27	
	C-20	1/3 HP	0.5	0.5	1.9	1.9					50	1,500	3.4	103.4	18.0	18.0		200	93	60	27	
	PVC	1/3 HP	0.5	0.5	1.9	1.9					50	150	3.4	10.3	18.0	18.0		125	52	60	27	
	Duplex																					
	316SS	1/3 HP	0.4	1.0	1.5	3.8	Not Applicable in 50 Hz				50	900	3.4	62.1	18.0	18.0	Not Applicable in 50 Hz	200	93	85	39	
	C-20	1/3 HP	1.0	1.0	3.8	3.8					50	900	3.4	62.1	18.0	18.0		200	93	85	39	
	PVC	1/3 HP	1.0	1.0	3.8	3.8					50	400	3.4	27.6	18.0	18.0		125	52	85	39	

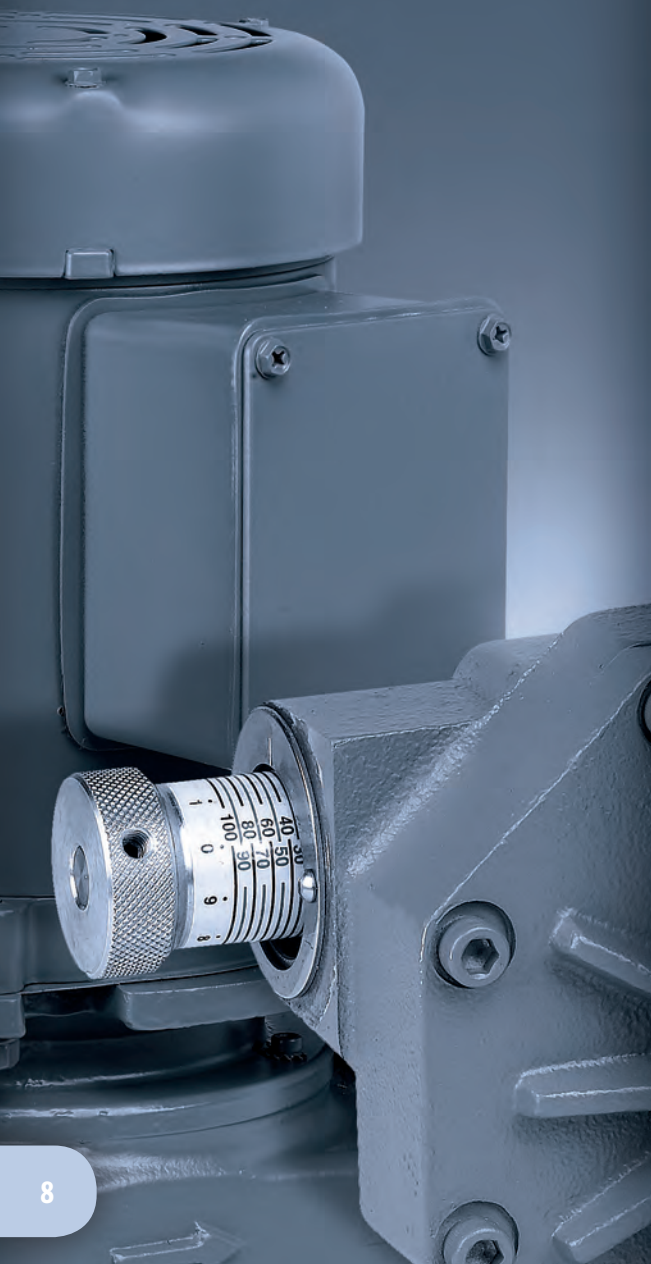
Teflon® is a registered trademark of E.I. du Pont de Nemeurs and Company

Hastelloy® C is a registered trademark of Haynes International

Note: PVC head pumps satisfactory for temperatures to 125°F (52°C).

Note: Special materials available for services not compatible with glass.

500-S SERIES



500-S SERIES

FEATURES

- Simplex or duplex design
- Engineered for fluids with viscosities to 1,500 cPs*
- Double ball-check design
- Variable Oil By-pass™ stroke adjustment
- EZE-CLEAN™ Valves have cartridges that can be removed for cleaning without disturbing the pump's piping
- Ten-turn micrometer dial calibrated to 1% increments
- Color-contrasted dial protected from corrosion by clear PVC covering
- Stroke mechanism moves only when adjusted, eliminating wear
- Piston powered through complete stroke length at all capacities, eliminating stress, wear and shock
- Optional automatic control via electric stroke adjustment and variable speed drives
- Built-in internal relief valve
- Hydraulically balanced diaphragm provides extended life

*Pumps operating at 144 strokes per minute for use with water-like chemicals only.

TECHNICAL DATA

- Materials of construction: 316SS, C-20, PVC
- Diaphragms: Teflon®
- Valve Body & Seats: 316SS, C-20, PVC
- Valve Checks: 316SS, C-20, Glass
- Standard motor: 1/3 HP-1ph-115 VAC-60c-TEFC
- International motor: 0.25 kW-1 or 3ph-50 Hz-IEC—or optional custom motors available
- Shipping weight: 70 pounds/31.8 kg (with standard motor; add 20 pounds for flange-mounted motor and 15 pounds if duplexed)

PERFORMANCE DATA

- Capacity at 100 psi (60 Hz): 1 to 30 gph (4 to 114 lph); 2 to 60 gph (8 to 227 lph) if duplexed
- Capacity at 7 bar (50 Hz): 0.8 to 25 gph (3 to 95 lph); 1.6 to 50 gph (6 to 189 lph) if duplexed
- Maximum pressure to 3,000 psi (207 bar)
- Maximum Temperatures: PVC—125°F (52°C); 316SS, C-20—200°F (93°C)
- Gear speeds available at 60 Hz: 37, 72, 117 and 144 strokes per minute
- Gear speeds available at 50 Hz: 30, 60, 98, and 120 strokes per minute

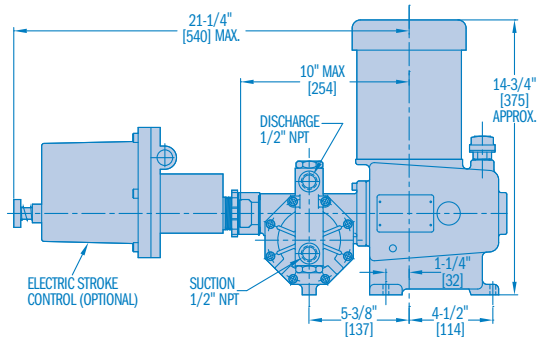
CERTIFICATIONS & ASSOCIATIONS



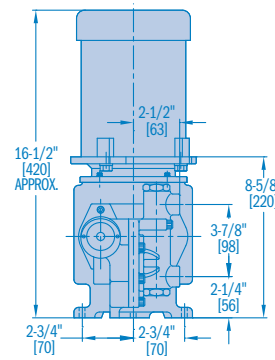
American
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500-S SERIES "DIA-PUMP" DIMENSIONS

WITH METAL HEAD

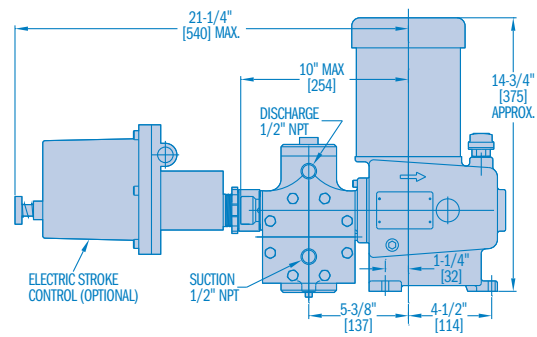


STANDARD MOTOR

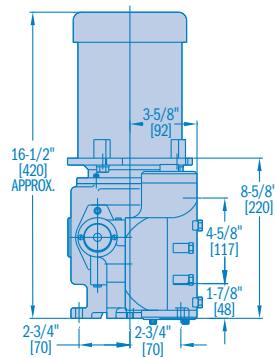


FLANGE MOUNT MOTOR

WITH PVC HEAD



STANDARD MOTOR



FLANGE MOUNT MOTOR

*Dimensions are approximate. Specifications subject to change without notice.

500-S SERIES SELECTION CHART

	Materials of Construction	Standard Motor	Capacity at 1000 psi (60 Hz)				Capacity at 70 bar (50 Hz)				Max Pressure of the Series				Strokes/Minute				Max Temp		Weight	
			gph		lph		gph		lph		psi		bar		60 Hz		50 Hz		°F	°C	Lbs	Kg
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max				
S	316SS	1/3 HP	1.0	30.0	3.8	114.0	0.8	24.9	3.2	94.6	50	1,500	3.4	103.4	37.0	144.0	30.7	119.5	200	93	70	32
	C-20	1/3 HP	1.0	30.0	3.8	114.0	0.8	24.9	3.2	94.6	50	1,500	3.4	103.4	37.0	144.0	30.7	119.5	200	93	70	32
	PVC	1/3 HP	1.0	30.0	3.8	114.0	0.8	24.9	3.2	94.6	50	400	3.4	27.6	37.0	144.0	30.7	119.5	125	52	70	32
	Kynar®	1/3 HP	1.0	30.0	3.8	114.0	0.8	24.9	3.2	94.6	50	150	3.4	10.3	37.0	144.0	30.7	119.5	125	52	70	32
	Optional Motor**	1/2 HP	1.0	30.0	3.8	114.0	0.8	24.9	3.2	94.6	50	3,000	3.4	206.9	37.0	144.0	30.7	119.52	200	93	70	32

Teflon® is a registered trademark of E.I. du Pont de Nemeurs and Company

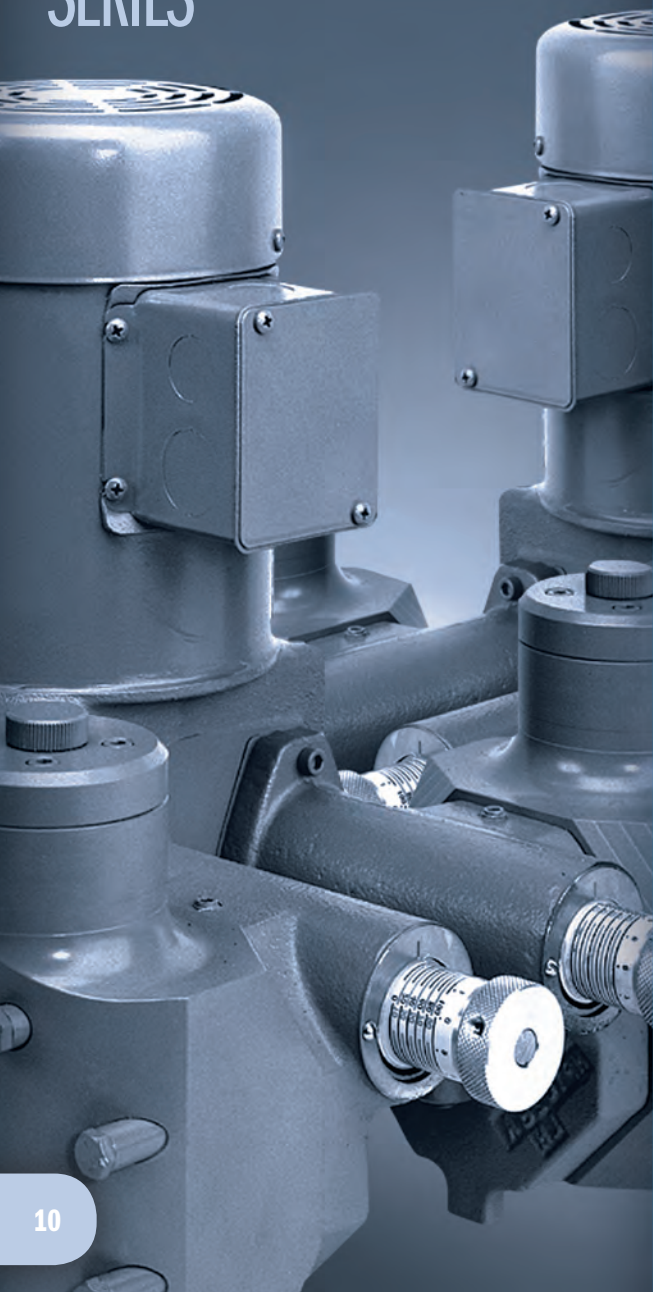
Kynar® is a registered trademark of Arkema Inc.

Note: PVC head pumps satisfactory for temperatures to 125°F (52°C).

Note: Special materials available for services not compatible with glass.

**For metallic heads only.

500-D SERIES



500-D SERIES

FEATURES

- Duplex design
- Engineered for fluids with viscosities to 1,500 cPs*
- Double ball-check design
- Variable Oil By-pass™ stroke adjustment
- EZE-CLEAN™ Valves have cartridges that can be removed for cleaning without disturbing the pump's piping
- Ten-turn micrometer dial calibrated to 1% increments
- Color-contrasted dial protected from corrosion by clear PVC covering
- Stroke mechanism moves only when adjusted, eliminating wear
- Piston powered through complete stroke length at all capacities, eliminating stress, wear and shock
- Optional automatic control via electric stroke adjustment and variable speed drives
- Built-in internal relief valve
- Hydraulically balanced diaphragm provides extended life

*Pumps operating at 144 strokes per minute for use with water-like chemicals only.

TECHNICAL DATA

- Materials of construction: 316SS, C-20, PVC
- Diaphragms: Teflon®
- Valve Body & Seats: 316SS, C-20, PVC
- Valve Checks: 316SS, C-20, Glass
- Standard motor: 1/3 HP-1ph-115 VAC-60c-TEFC
- International motor: 0.25 kW-1 or 3ph-50 Hz-IEC—or optional custom motors available
- Shipping weight: 85 pounds (38.6 kg)

PERFORMANCE DATA

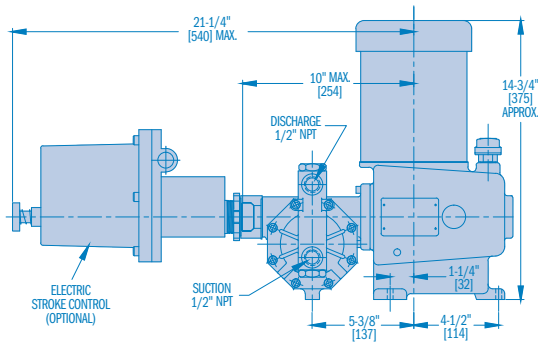
- Capacity at 100 psi (60 Hz): 1 to 60 gph (4 to 228 lph)
- Capacity at 7 bar (50 Hz): 0.8 to 50 gph (3 to 189 lph)
- Maximum pressures to 3,000 psi or 207 bar
- Maximum Temperature: PVC—125F (52°C); 316SS, C-20—200°F (93°C)
- Gear speeds available at 60 Hz: 37, 72, 177 and 144 strokes per minute
- Gear speeds available at 50 Hz: 30, 60, 98 and 120 strokes per minute

CERTIFICATIONS & ASSOCIATIONS

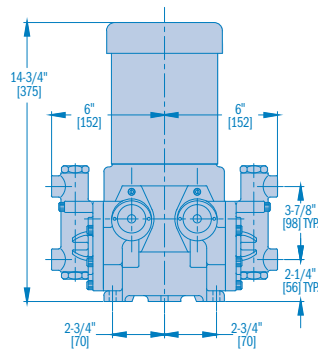


500-D SERIES "DIA-PUMP" DIMENSIONS

WITH METAL HEAD

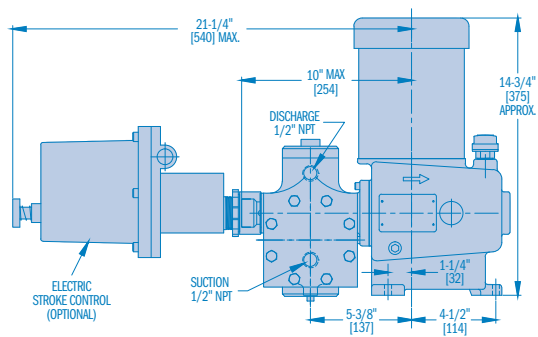


STANDARD MOTOR

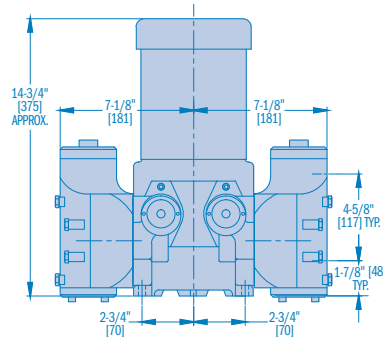


DUPLEX

WITH PVC HEAD



STANDARD MOTOR



DUPLEX

*Dimensions are approximate. Specifications subject to change without notice.

500-D SERIES SELECTION CHART

	Materials of Construction	Standard Motor	Capacity at 1000 psi (60 Hz)				Capacity at 70 bar (50 Hz)				Max Pressure of the Series				Strokes/Minute				Max Temp		Weight	
			gph		lph		gph		lph		psi		bar		60 Hz		50 Hz		°F	°C	Lbs	Kg
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max				
D	316SS	1/3 HP	1.0	60.0	3.8	228.0	0.8	49.8	3.2	189.2	50	3,000	3.4	206.9	37.0	117.0	30.7	97.1	200	93	85	39
	C-20	1/3 HP	1.0	60.0	3.8	228.0	0.8	49.8	3.2	189.2	50	3,000	3.4	206.9	37.0	117.0	30.7	97.1	125	52	85	39
	PVC	1/3 HP	1.0	60.0	3.8	228.0	0.8	49.8	3.2	189.2	50	400	3.4	27.6	37.0	117.0	30.7	97.1	125	52	85	39
	Kynar®	1/3 HP	1.0	60.0	3.8	228.0	0.8	49.8	3.2	189.2	50	150	3.4	10.3	37.0	117.0	30.7	97.1	125	52	85	39
	Optional Motor**	1/2 HP	1.0	30.0	3.8	114.0	0.8	24.9	3.2	94.6	50	3,000	3.4	206.9	37.0	144.0	30.7	119.52	200	93	70	32

Teflon® is a registered trademark of E.I. du Pont de Nemours and Company

Kynar® is a registered trademark of Arkema Inc.

Note: PVC head pumps satisfactory for temperatures to 125°F (52°C).

Note: Special materials available for services not compatible with glass.

**For metallic heads only.

500-A SERIES



500-A SERIES

FEATURES

- Simplex pump
- Engineered for fluids with viscosities to 1,500 cPs
- Double ball-check design
- Variable Oil By-pass™ stroke adjustment
- EZE-CLEAN™ Valves have cartridges that can be removed for cleaning without disturbing the pump's piping
- Ten-turn micrometer dial calibrated to 1% increments
- Color-contrasted dial protected from corrosion by clear PVC covering
- Stroke mechanism moves only when adjusted, eliminating wear
- Piston powered through complete stroke length at all capacities, eliminating stress, wear and shock
- Optional automatic control via electric stroke adjustment and variable speed drives
- Built-in internal relief valve
- Hydraulically balanced diaphragm provides extended life

TECHNICAL DATA

- Materials of construction: 316SS, C-20, PVC
- Diaphragms: Teflon®
- Valve Body & Seats: 316SS, C-20, PVC
- Valve Checks: 316SS, C-20, Glass
- Standard motor: 1/3 HP-1ph-115 VAC-60c-TEFC
- International motor: 0.25 kW-1 or 3ph-50 Hz-IEC—or optional custom motors available
- Shipping weight: 60 pounds (27.2 kg)

PERFORMANCE DATA

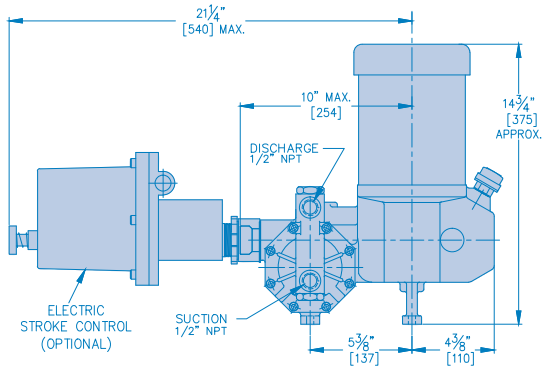
- Capacity at 100 psi (60 Hz): 1 to 18 gph (4 to 68 lph)
- Capacity at 7 bar (50 Hz): 0.8 to 15 gph (3 to 57 lph)
- Maximum pressures to 1,100 psi (76 bar)
- Maximum Temperatures: PVC—125°F (52°C); 316SS, C-20—200°F (93°C)
- Gear speeds available at 60 Hz: 37, 72 and 117 strokes per minute
- Gear speeds available at 50 Hz: 30, 60 and 98 strokes per minute

CERTIFICATIONS & ASSOCIATIONS

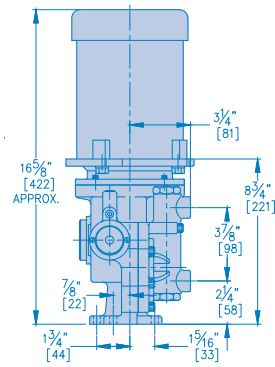


500-A SERIES "DIA-PUMP" DIMENSIONS EXCEPT KYNAR® MODELS (CODE N8)*

WITH METAL HEAD

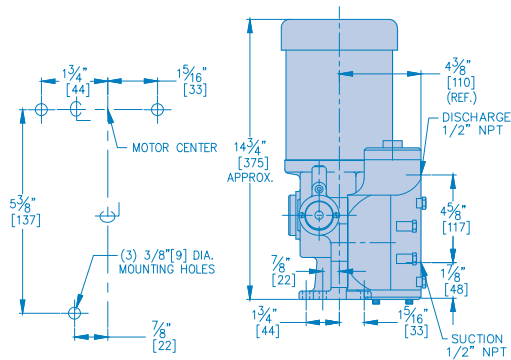


STANDARD MOTOR



FLANGE MOUNT MOTOR

WITH PVC HEAD (N5)



*Dimensions are approximate. Specifications subject to change without notice.
See Bulletin DP-500E for Kynar® (N8)

500-A SERIES SELECTION CHART

	Materials of Construction	Standard Motor	Capacity at 1000 psi (60 Hz)				Capacity at 70 bar (50 Hz)				Max Pressure of the Series				Strokes/Minute				Max Temp		Weight	
gph			lph		gph		lph		psi		bar		60 Hz		50 Hz		°F	°C	Lbs	Kg		
Min			Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min					Max	
A																						
	316SS	1/3 HP	1.0	18.0	3.8	68.4	0.8	14.9	3.2	56.8	50	1,100	3.4	75.9	37.0	117.0	30.7	97.1	200	93	60	27
	C-20	1/3 HP	1.0	18.0	3.8	68.4	0.8	14.9	3.2	56.8	50	1,100	3.4	75.9	37.0	117.0	30.7	97.1	200	93	60	27
	PVC	1/3 HP	1.0	18.0	3.8	68.4	0.8	14.9	3.2	56.8	50	400	3.4	27.6	37.0	117.0	30.7	97.1	125	52	60	27

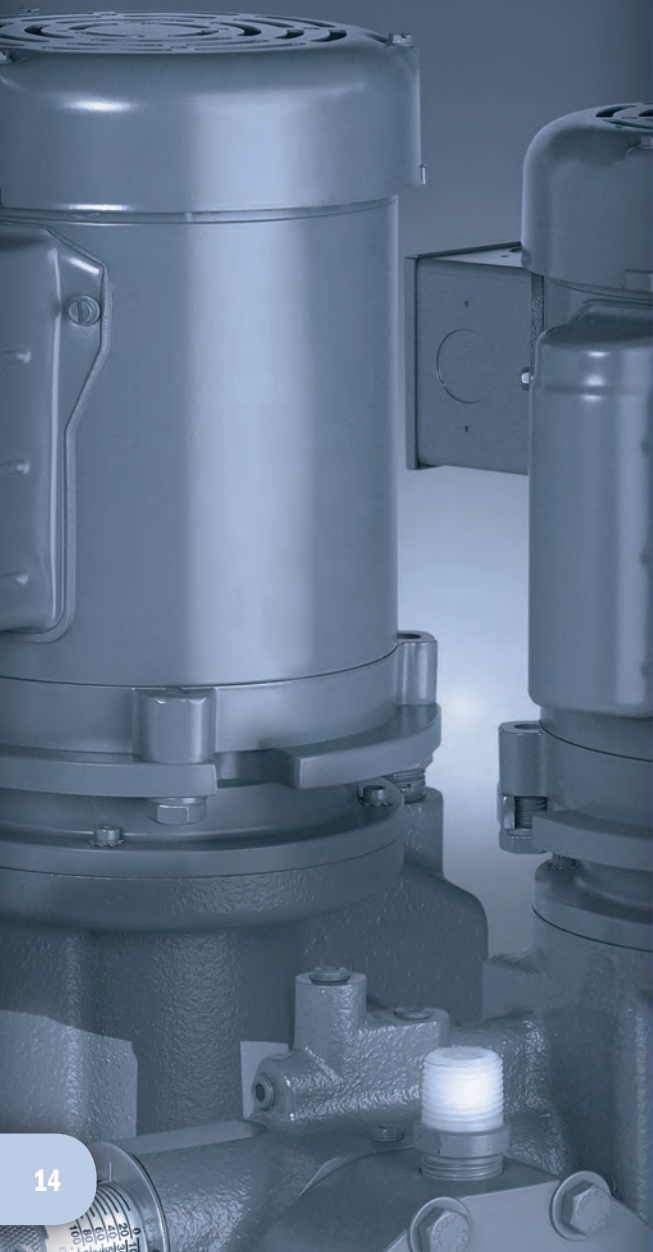
Teflon® is a registered trademark of E.I. du Pont de Nemeurs and Company

Kynar® is a registered trademark of Arkema Inc.

Note: PVC head pumps satisfactory for temperatures to 125°F (52°C).

Note: Special materials available for services not compatible with glass.

500-E SERIES



500-E SERIES

FEATURES

- Economy pump head with single ball-check design
- Engineered for fluids with viscosities to 1,500 cPs
- Cost-efficient alternative to packed-plunger pumps
- Variable Oil By-pass™ stroke adjustment
- Ten-turn micrometer dial calibrated to 1% increments
- Color-contrasted dial protected from corrosion by clear PVC covering
- Stroke mechanism moves only when adjusted, eliminating wear
- Piston powered through complete stroke length at all capacities, eliminating stress, wear and shock
- Optional automatic control via electric stroke adjustment and variable speed drives
- Built in internal relief valve
- Hydraulically balanced diaphragm provides extended life

TECHNICAL DATA

- Materials of construction: 316SS, PVC, Kynar®
- Diaphragms: Teflon®
- Valve Body & Seats: 316SS, PVC, Kynar®
- Valve Checks: 316SS, Glass, Ceramic
- Standard motor: 1/3 HP-1ph-115 VAC-60c-TEFC
- International motor: 0.25 kW-1 or 3ph-50 Hz-IEC—or optional custom motors available
- Shipping weight: 59 to 65 pounds (26.8 to 29.5 kg); 85 pounds (38.6 kg) if duplexed

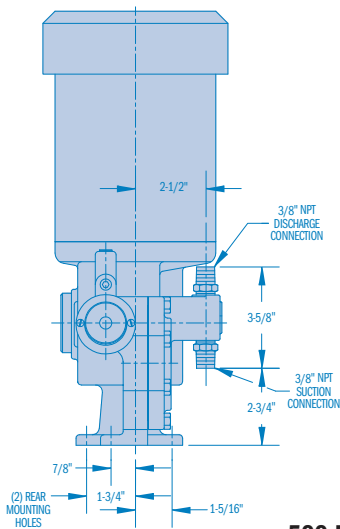
PERFORMANCE DATA

- Capacity at 100 psi (60 Hz): 0.8 to 30 gph (3 to 113 lph)
- Capacity at 7 bar (50 Hz): 0.7 to 15 gph (3 to 57 lph)
- Maximum pressures to 1,100 psi (76 bar)
- Maximum Temperatures: PVC, Kynar®—125°F (52°C); 316SS—200°F (93°C)
- Gear speeds available at 60 Hz: 37, 72, 117 and 144 strokes per minute
- Gear speeds available at 50 Hz: 30, 60, 98 and 120 strokes per minute

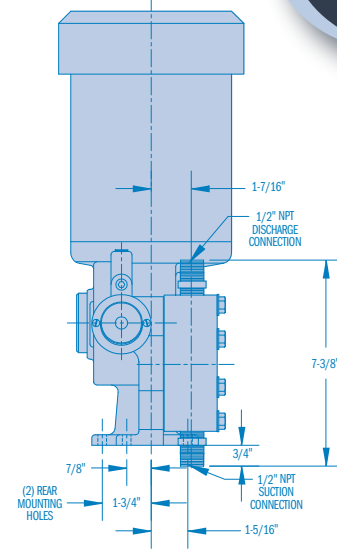
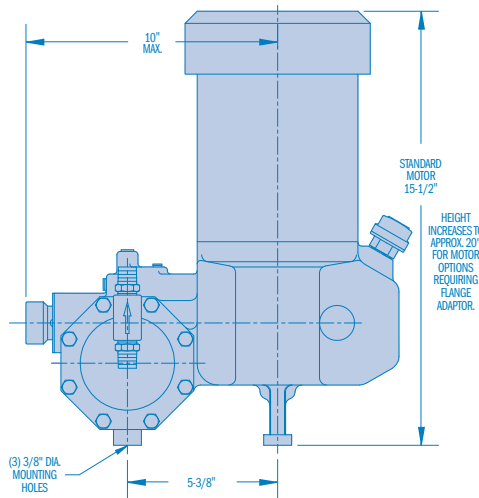
CERTIFICATIONS & ASSOCIATIONS



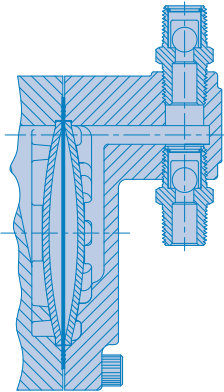
500-E SERIES "DIA-PUMP" DIMENSIONS



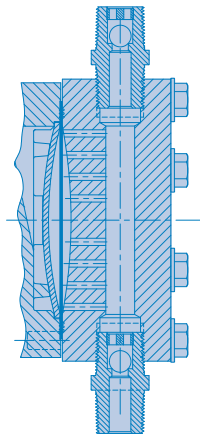
500-E-N3 (316SS) MODELS

500-E-N5 (PVC) MODELS
500-E-N8 (KYNAR) MODELS

HEAD ASSEMBLIES



N3 HEAD ASSEMBLY

N5 AND N8
HEAD ASSEMBLY

500-E SERIES SELECTION CHART

	Materials of Construction	Standard Motor	Capacity at 1000 psi (60 Hz)				Capacity at 70 bar (50 Hz)				Max Pressure of the Series				Strokes/Minute				Max Temp		Weight	
			gph		lph		gph		lph		psi		bar		60 Hz		50 Hz		°F	°C	Lbs	Kg
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max				
E	316SS	1/3 HP	0.8	18.0	3.0	68.4	0.7	14.9	2.5	56.8	50	1,100	3.4	75.9	37.0	117.0	30.7	97.1	200	93	59	27
	PVC	1/3 HP	0.8	18.0	3.0	68.4	0.7	14.9	2.5	56.8	50	150	3.4	10.3	37.0	117.0	30.7	97.1	200	93	59	27
	Kynar®	1/3 HP	0.8	18.0	3.0	68.4	0.7	14.9	2.5	56.8	50	150	3.4	10.3	37.0	117.0	30.7	97.1	125	52	60	27

Teflon® is a registered trademark of E.I. du Pont de Nemeurs and Company

Kynar® is a registered trademark of Arkema Inc.

Note: PVC head pumps satisfactory for temperatures to 125°F (52°C).

Note: Special materials available for services not compatible with glass.

500-VS SERIES



500-VS SERIES

FEATURES

- Accurately handle viscous fluids, such as polymers, up to 5,000 cPs
- Simplex or duplex models available
- Variable Oil By-pass™ stroke adjustment
- Standard flat diaphragm
- Large internal porting
- Single-ball suction check valve
- Optional automatic control via electric stroke adjustment and variable speed drives
- Built-in internal relief valve
- Hydraulically balanced diaphragm provides extended life

TECHNICAL DATA

- Materials of construction: 316SS
- Diaphragms: Teflon®
- Valve Body & Seats: 316SS
- Valve Checks: 316SS
- Standard motor: 1/3 HP-1ph-115 VAC-60c-TEFC
- International motor: 0.25 kW-1 or 3ph-50 Hz-IEC—or optional custom motors available
- Shipping weight: 70 pounds (31.6 kg)

PERFORMANCE DATA

- Capacity at 100 psi (60 Hz): 2 to 30 gph (8 to 114 lph); 4 to 60 gph (15 to 226 lph) if duplexed
- Capacity at 7 bar (50 Hz): 1.7 to 25 gph (6 to 95 lph); 3.4 to 50 gph (13 to 189 lph) if duplexed
- Maximum pressures to 700 psi (48 bar)
- Maximum Temperature: 200°F (93°C)
- Gear speeds available at 60 Hz: 37, 72, 117 and 144 strokes per minute
- Gear speeds available at 50 Hz: 30, 60, 98 and 120 strokes per minute

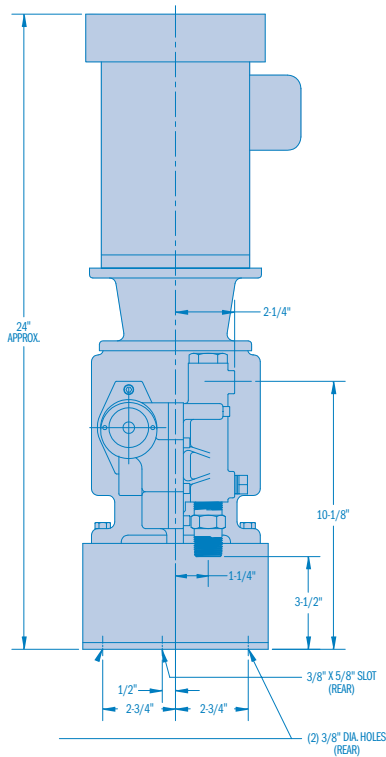
CERTIFICATIONS & ASSOCIATIONS



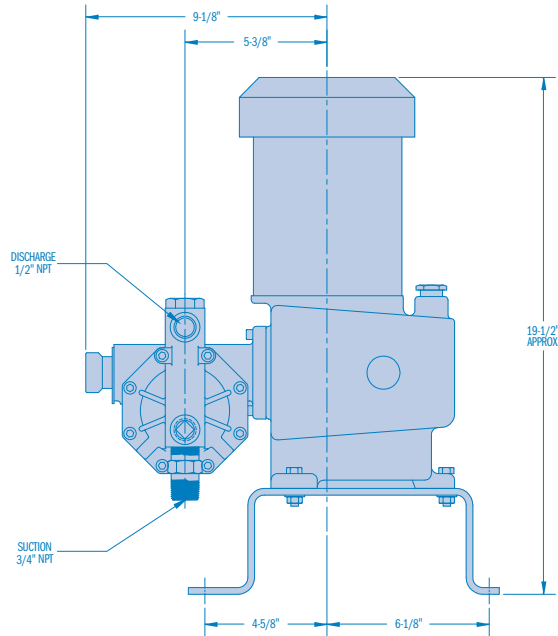
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500-VS SERIES "DIA-PUMP" DIMENSIONS

WITH METAL HEAD



STANDARD MOTOR

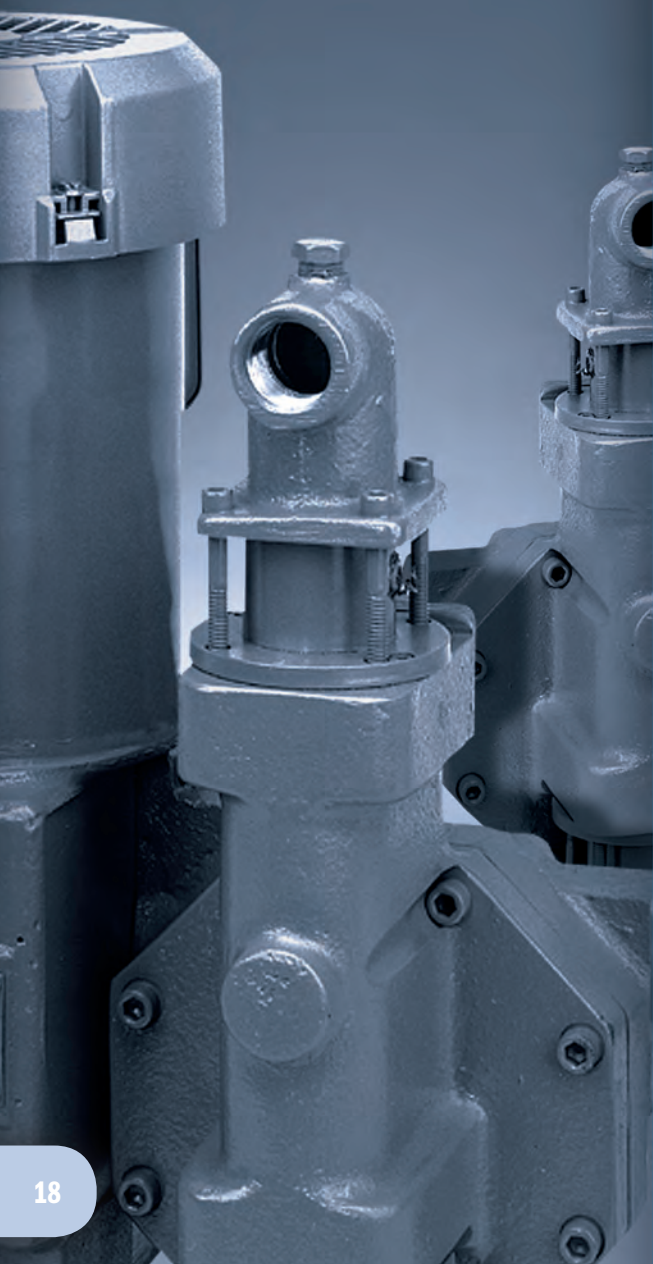


FLANGE MOUNT MOTOR

500-VS SERIES SELECTION CHART

VS	Materials of Construction	Standard Motor	Capacity at 1000 psi (60 Hz)				Capacity at 70 bar (50 Hz)				Max Pressure of the Series				Strokes/Minute				Max Temp		Weight	
			gph		lph		gph		lph		psi		bar		60 Hz		50 Hz		°F	°C	Lbs	Kg
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max				
	316SS	1/3 HP	2.0	30.0	7.6	114.0	1.7	24.9	6.3	94.6	50	900	3.4	62.1	37.0	144.0	30.7	119.5	200	93	70	32

500-T SERIES



500-T SERIES

FEATURES

- Engineered for viscous fluids up to 20,000 cPs
- Simplex or duplex design
- Can handle medium slurries with up to 10% solids
- Double ball-check design
- Variable Oil By-pass™ stroke adjustment
- Straight-through flow pattern eliminates pockets where slurries can settle
- Standard double diaphragm
- Standard double-ball suction and discharge valves; single-ball valve optional
- Elastomer tube shape and memory reduce NPSH requirements
- Spring-loaded discharge does not require external back pressure valve
- Optional automatic control via electric stroke adjustment and variable speed drives
- Built-in internal relief

TECHNICAL DATA

- Materials of construction: 316SS
- Diaphragms: Viton®
- Valve Body & Seats: 316SS
- Valve Checks: 316SS or polyurethane
- Standard motor: 1/3 HP-1ph-115 VAC-60c-TEFC
- International motor: 0.25 kW-1 or 3ph-50 Hz-IEC—or optional custom motors available
- Shipping weight: 80 to 95 pounds (36.2 to 43.1 kg)

PERFORMANCE DATA

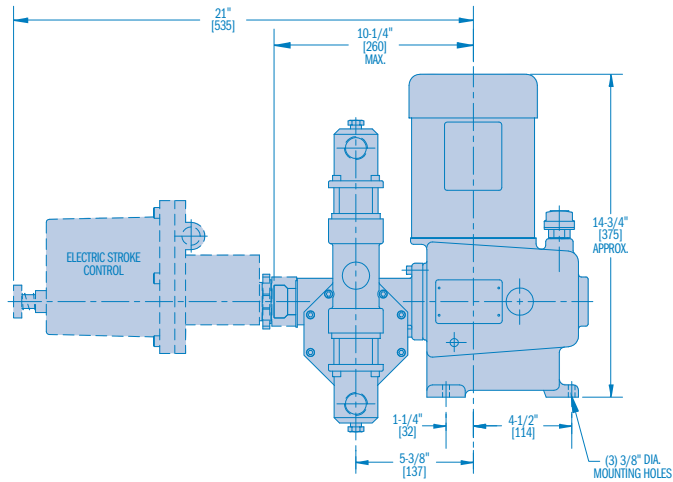
- Capacity at 100 psi (60 Hz): 2 to 80 gph (8 to 303 lph)
- Capacity at 7 bar (50 Hz): 1.7 to 25 gph (6 to 95 lph)
- Maximum pressures to 300 psi (21 bar)
- Maximum Temperature: 200°F (93°C)
- Gear speeds available at 60 Hz: 37, 72, 117 and 144 strokes per minute
- Gear speeds available at 50 Hz: 30, 60, 98 and 120 strokes per minute

CERTIFICATIONS & ASSOCIATIONS

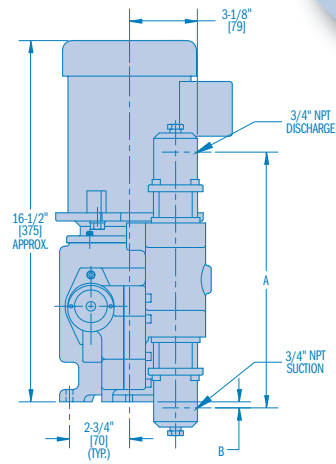


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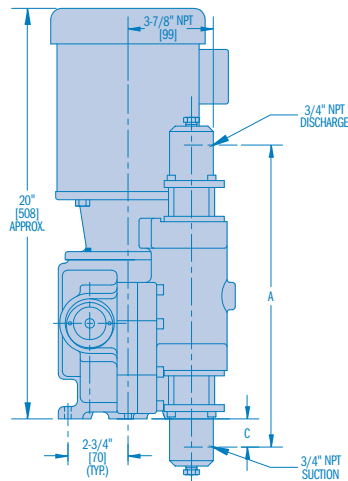
500-T SERIES "DIA-PUMP" DIMENSIONS



STANDARD MOTOR ALL MODELS



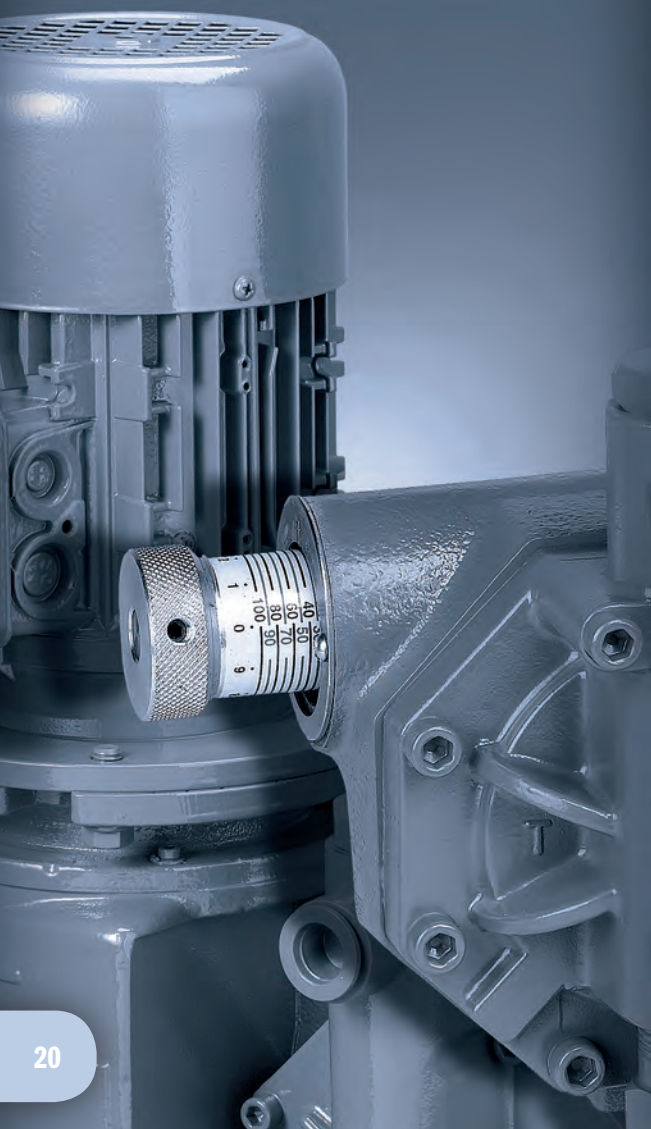
500 SERIES MODELS WITH "FALP"

560 SERIES MODELS
WITH FLANGE ADAPTOR

500-A SERIES SELECTION CHART

	Materials of Construction	Standard Motor	Capacity at 1000 psi (60 Hz)				Capacity at 70 bar (50 Hz)				Max Pressure of the Series				Strokes/Minute				Max Temp		Weight	
			gph		lph		gph		lph		psi		bar		60 Hz		50 Hz		°F	°C	Lbs	Kg
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max				
T	316SS	1/3 HP	2.0	30.0	7.6	114.0	1.7	24.9	6.3	94.6	50	300	3.4	20.7	37.0	144.0	30.7	119.5	200	93	80	36
	Optional Motor	1/2 HP	40.0	80.0	152.0	304.0	33.2	66.4	126.2	252.3	50	175	3.4	12.1	72.0	144.0	59.8	119.5	200	93	80	36

560-S SERIES



560-S SERIES

FEATURES

- Simplex or duplex design
- Variable Oil By-pass™ stroke adjustment
- EZE-CLEAN™ Valves have cartridges that can be removed for cleaning without disturbing the pump's piping (available only on 316SS or C-20 models)
- Ten-turn micrometer dial calibrated to 1% increments
- Color-contrasted dial protected from corrosion by clear PVC covering
- Stroke mechanism moves only when adjusted, eliminating wear
- Piston powered through complete stroke length at all capacities, eliminating stress, wear and shock
- Optional automatic control via electric stroke adjustment and variable speed drives
- Built-in internal relief valve
- Hydraulically balanced diaphragm provides extended life

TECHNICAL DATA

- Materials of construction: 316SS, C-20, PVC, Kynar®
- Diaphragms: Teflon®
- Valve Body & Seats: 316SS, C-20, PVC, Kynar®
- Valve Checks: 316SS, C-20, Glass
- Standard motor: 1/2 HP-1ph-115 VAC-60c-TEFC
- International motor: 0.25 kW-1 or 3ph-50 Hz-IEC—or optional custom motors available
- Shipping weight: 85 pounds/31.8 kg (with standard motor; add 20 pounds for flange-mounted motor)

PERFORMANCE DATA

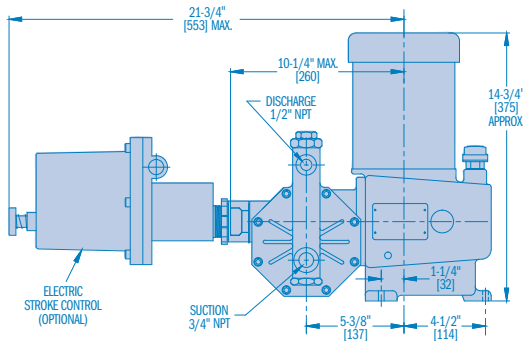
- Capacity at 100 psi (60 Hz): 40 to 80 gph (152 to 304 lph); 80 to 160 gph (304 to 608 lph) if duplexed
- Capacity at 7 bar (50 Hz): 33.2 to 66 gph (126 to 252 lph); 66 to 133 gph (252 to 505 lph) if duplexed
- Maximum pressures to 350 psi (24 bar)
- Maximum Temperatures: PVC, Kynar®—125°F (52°C); 316SS, C-20—200°F (93°C)
- Gear speeds available at 60 Hz: 37, 72, 117 and 144 strokes per minute
- Gear speeds available at 50 Hz: 30, 60, 98 and 120 strokes per minute

CERTIFICATIONS & ASSOCIATIONS

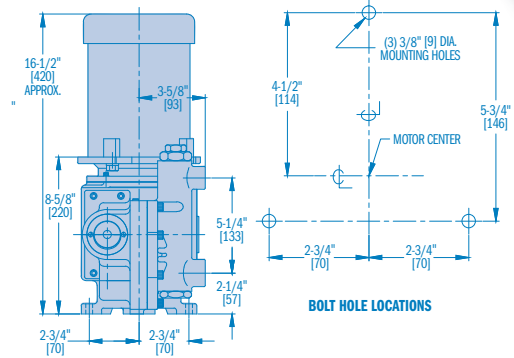


560-S SERIES "DIA-PUMP" DIMENSIONS

WITH METAL HEAD



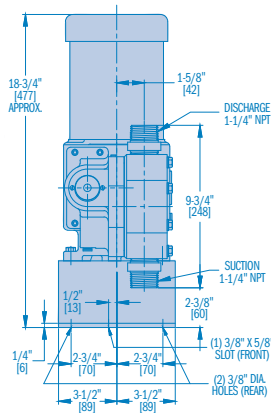
STANDARD MOTOR



FLANGE MOUNT MOTOR

*Dimensions are approximate. Specifications subject to change without notice.

WITH PVC HEAD



560-S SERIES SELECTION CHART

Materials of Construction	Standard Motor	Capacity at 1000 psi (60 Hz)				Capacity at 70 bar (50 Hz)				Max Pressure of the Series				Strokes/Minute				Max Temp		Weight	
		gph		lph		gph		lph		psi		bar		60 Hz		50 Hz		°F	°C	Lbs	Kg
		Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max				
Simplex																					
316SS	1/3 HP	40.0	80.0	152.0	304.0	33.2	66.4	126.2	252.3	50	350	3.4	24.1	72.0	144.0	59.8	119.5	200	93	85	39
C-20	1/3 HP	40.0	80.0	152.0	304.0	33.2	66.4	126.2	252.3	50	350	3.4	24.1	72.0	144.0	59.8	119.5	200	93	85	39
PVC	1/3 HP	40.0	80.0	152.0	304.0	33.2	66.4	126.2	252.3	50	150	3.4	10.3	72.0	144.0	59.8	119.5	125	52	85	39
Kynar®	1/3 HP	40.0	80.0	152.0	304.0	33.2	66.4	126.2	252.3	50	150	3.4	10.3	72.0	144.0	59.8	119.5	125	52	85	39
Optional Motor	1/2 HP	40.0	80.0	152.0	304.0	33.2	66.4	126.2	252.3	50	175	3.4	12.1	72.0	144.0	59.8	119.5			85	39
Optional Motor	3/4 HP	40.0	80.0	152.0	304.0	33.2	66.4	126.2	252.3	50	250	3.4	17.2	72.0	144.0	59.8	119.5			85	39
Optional Motor	1 HP	40.0	80.0	152.0	304.0	33.2	66.4	126.2	252.3	50	350	3.4	24.1	72.0	144.0	59.8	119.5			85	39
Duplex																					
316SS	1/3 HP	80.0	160.0	304.0	608.0	66.4	132.8	252.3	504.6	50	900	3.4	62.1	72.0	144.0	59.8	119.5	200	93	110	50
C-20	1/3 HP	80.0	160.0	304.0	608.0	66.4	132.8	252.3	504.6	50	900	3.4	62.1	72.0	144.0	59.8	119.5	200	93	110	50
PVC	1/3 HP	80.0	160.0	304.0	608.0	66.4	132.8	252.3	504.6	50	400	3.4	27.6	72.0	144.0	59.8	119.5	125	52	110	50
Kynar®	1/3 HP	80.0	160.0	304.0	608.0	66.4	132.8	252.3	504.6	50	150	3.4	10.3	72.0	144.0	59.8	119.5	125	52	110	50

Teflon® is a registered trademark of E.I. du Pont de Nemeurs and Company
Kynar® is a registered trademark of Arkema Inc.

Note: PVC head pumps satisfactory for temperatures to 125°F (52°C).
Note: Special materials available for services not compatible with glass.



600/6000 SERIES

FEATURES

- Designed for high-pressure, high-volume applications
- Simplex or duplex models available
- Variable Oil By-pass™ stroke adjustment
- Hydraulically balanced Teflon® diaphragm eliminates stress
- EZE-CLEAN™ valves are removable without disturbing piping
- Optional electronic positioners or variable speed drives available for automatic capacity control
- Power train operates submerged in oil for extended service
- Pump capacity is adjustable via micrometer dial while pump is running or stopped
- Engineered for fluids with a viscosity to 1,000 cPs
- Available with Totally Enclosed Fan Cooled (TEFC), Explosion Proof (EXP) and Chemical Plant Severe Duty (CPSD) motor enclosures

TECHNICAL DATA

- Materials of construction: 316SS, C-20, Kynar®, PVC
- Diaphragms: Teflon®
- Valve Body & Seats: 316SS, C-20, Kynar®, PVC
- Valve Checks: 316SS, C-20, Ceramic
- Motor Options:
60 Hz: 1/2 HP, 3/4 HP, 1 HP, 1-1/2 HP, 2 HP
50 Hz: 0.37 kW, 0.55 kW, 0.75 kW, 1.12 kW, 1.5 kW

PERFORMANCE DATA

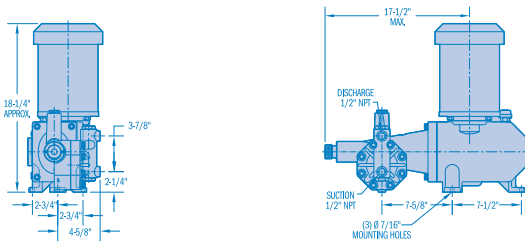
- Capacity (60 Hz): 7 gph (26.5 lph) to 240 gph (908 lph)
- Capacity (50 Hz): 22 lph to 754 lph
- Maximum pressures to 4,000 psi (281.5 bar)
- Maximum Temperature: PVC-125°F (52°C); 316SS, C-20—200°F (93°C)

CERTIFICATIONS & ASSOCIATIONS

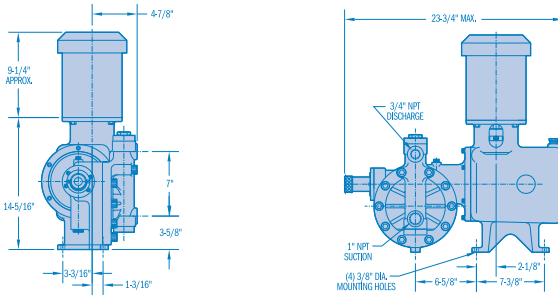


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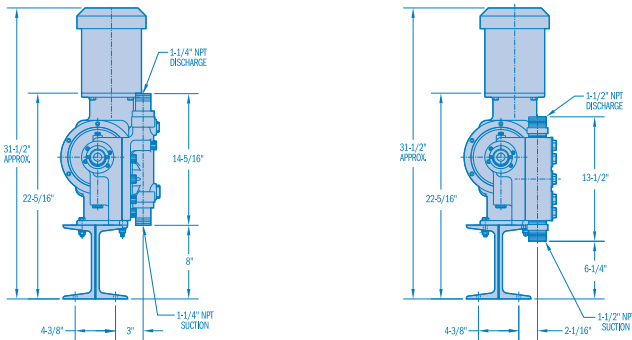
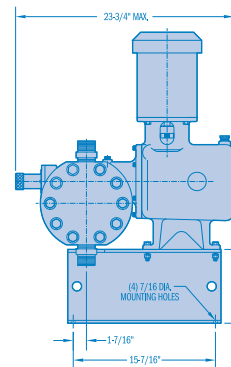
600/6000 SERIES "DIA-PUMP" DIMENSIONS



MODELS 6100/6150/6250 (316SS HEADS)



MODELS 635/637 (316SS & C-20 HEADS)

MODEL 647
(316SS & C-20 HEADS)MODELS 635/637/647
(PVC & KYNAR HEADS)MODELS 635/637 (PVC & KYNAR)
MODEL 647 (ALL MATERIALS)

*Dimensions are approximate. Specifications subject to change without notice.

600/6000 SERIES SELECTION CHART

Materials of Construction	High Low	Maximum Pressure Capability		Piston Diameter inches (mm)	Strokes Per Minute at 60 Hz (50 Hz)	Pressure/Horsepower										
		1/2 HP				3/4 HP		1 HP		1-1/2 HP		2 HP				
		60 Hz psi (gph)	50 Hz bar (lph)			60 Hz psi (gph)	50 Hz bar (lph)	60 Hz psi (gph)	50 Hz bar (lph)	60 Hz psi (gph)	50 Hz bar (lph)	60 Hz psi (gph)	50 Hz bar (lph)			
600/6000	316SS	High	4000	280	2.5 (63.5)	144 (120)	1200 (28)	82.8 (89)	2000 (160)	n/a (507)	2500 (160)	172 (507)	3500 (158)	241 (500)	4000 (240)	276 (760)
		Low	200	14	0.75 (25.4)	58 (48)	500 (7)	35.5 (22)	225 (7)	n/a (22)	275 (6.5)	19 (21)	425 (6)	29 (19)	200 (4.5)	14 (14)
	C-20	High	600	42	2.50 (63.5)	144 (120)	n/a (n/a)	n/a (n/a)	225 (160)	16 (507)	275 (160)	19 (507)	425 (158)	29 (500)	600 (240)	41 (760)
		Low	200	14	2.00 (58.8)	117 (98)	n/a (n/a)	n/a (n/a)	225 (130)	16 (412)	275 (130)	19 (412)	425 (129)	29 (409)	200 (126)	14 (399)
	PVC*	High	150	10	2.50 (63.5)	144 (120)	n/a (n/a)	n/a (n/a)	150 (160)	10 (507)	n/a (n/a)	n/a (n/a)	n/a (n/a)	n/a (n/a)	150 (240)	10 (760)
		Low	150	10	2.00 (50.8)	117 (98)	n/a (n/a)	n/a (n/a)	150 (130)	10 (412)	n/a (n/a)	n/a (n/a)	n/a (n/a)	n/a (n/a)	150 (240)	10 (760)
	Kynar®	High	150	10	2.50 (63.5)	144 (120)	n/a (n/a)	n/a (n/a)	150 (160)	10 (507)	n/a (n/a)	n/a (n/a)	n/a (n/a)	n/a (n/a)	150 (240)	10 (760)
		Low	150	10	2.00 (50.8)	117 (98)	n/a (n/a)	n/a (n/a)	150 (130)	10 (412)	n/a (n/a)	n/a (n/a)	n/a (n/a)	n/a (n/a)	150 (240)	10 (760)

Kynar® is a registered trademark of Arkema Inc.

481 & 501 SERIES SELECTION CHART

PVC AND KYNAR® MODELS, 125°F (52°C) MAXIMUM.

Model Number	Maximum (1) Capacity @ 100 psi (7 kg/cm²)	Strokes Per Minute	Maximum Pressure (2)	Materials of Construction						
481-S-N3	0.2 gph (0.75 lph) 4.8 gpd (17.8 lpd)	18	1500 psi (105 kg/cm²) @ 1/3 HP	316SS						
501-S-N1 501-S-N3 501-S-N4 501-S-N5	0.5 gph (1.9 lph) 12.0 gpd (44.0 lpd)	18	1500 psi (105 kg/cm²) @ 1/3 HP 3000 psi (210 kg/cm²) @ 1/2 HP	Cast Iron 316SS C-20 PVC						

500-S SERIES SELECTION CHART

PVC AND KYNAR® MODELS, 125°F (52°C) MAXIMUM.

Model Number	Capacity at 100 psi (7 Bar) 60 Hz (50 Hz)		Materials of Construction	Pressure 1/4 HP (0.18 kW) or 1/3 HP (0.25 kW) Motor		Pressure 1/2 HP (0.37 kW) Motor*		Piston Diameter inches (mm)	Strokes Per Minute at 60 Hz (50 Hz)	Style	Shipping Weight lbs (kg)**		
	gph	lph		psi	bar	psi	bar						
500-S-N3 500-S-N4 500-S-N5	0.8 (0.7)	3.0 (2.5)	316SS C-20 PVC	1000 1000 150	70 70 11	3000 n/a n/a	210 n/a n/a	0.500 (12.70)	37 (31)	Simplex	70 (32)		
515-S-N3 515-S-N4 515-S-N5	3.0 (2.5)	11.3 (9.4)	316SS C-20 PVC	1100 1100 400	77 77 28	1800 n/a n/a	125 n/a n/a	0.500 (12.70)	117 (97)	Simplex	70 (32)		
520-S-N3 520-S-N4 520-S-N5	2.0 (1.7)	7.5 (6.3)	316SS C-20 PVC	700 700 400	49 49 28	n/a	n/a	0.687 (17.45)	37 (31)	Simplex	70 (32)		
522-S-N3 522-S-N4 522-S-N5	4.0 (3.3)	15.1 (12.6)	316SS C-20 PVC	700 700 400	49 49 28	n/a	n/a	0.687 (17.45)	72 (60)	Simplex	70 (32)		
525-S-N3 525-S-N4 525-S-N5	7.0 (5.8)	26.5 (22.1)	316SS C-20 PVC	900 900 400	63 63 28	1500 1500 n/a	105 105 n/a	0.687 (17.45)	117 (97)	Simplex	70 (32)		
530-S-N3 530-S-N4 530-S-N5	5.5 (4.6)	20.8 (17.3)	316SS C-20 PVC	350 350 300	25 25 21	n/a	n/a	1.062 (26.97)	37 (31)	Simplex	70 (32)		
532-S-N3 532-S-N4 532-S-N5	11.0 (9.2)	41.6 (34.7)	316SS C-20 PVC	350 350 300	25 25 21	600 600 n/a	42 42 n/a	1.062 (26.97)	72 (60)	Simplex	70 (32)		
535-S-N3 535-S-N4 535-S-N5	18.0 (15.0)	68.0 (56.7)	316SS C-20 PVC	350 350 300	25 25 21	600 600 n/a	42 42 n/a	1.062 (26.97)	117 (97)	Simplex	70 (32)		
537-S-N3 537-S-N4 537-S-N5	22.0 (18.3)	83.0 (69.2)	316SS C-20 PVC	350 350 300	25 25 21	400 400 n/a	28 28 n/a	1.062 (26.97)	144 (120)	Simplex	70 (32)		
547-S-N3† 547-S-N4† 547-S-N5† 547-S-N8†§	30.0 (25.0)	113.0 (94.2)	316SS C-20 PVC Kynar®	200 200 200 150	14 14 14 11	350 350 300 n/a	25 25 21 n/a	1.187 (30.15)	144 (120)	Simplex	70 (32)		

500-A SERIES SELECTION CHART

PVC AND KYNAR® MODELS, 125°F (52°C) MAXIMUM.

Model Number	Capacity at 100 psi (7 Bar) 60 Hz (50 Hz)		Materials of Construction	Maximum Pressure		Piston Diameter inches (mm)	Strokes Per Minute at 60 Hz (50 Hz)	Shipping Weight lbs (kg)***				
	gph	lph		psi	bar							
500-A-N3 500-A-N4 500-A-N5	1.0 (0.8)	3.7 (3.1)	316SS C-20 PVC	1000 1000 150	70 70 11	0.500 (12.70)	37 (31)	60 (27)				
515-A-N3 515-A-N4 515-A-N5	3.0 (2.5)	11.3 (9.4)	316SS C-20 PVC	1100 1100 400	77 77 25	0.500 (12.70)	117 (97)	60 (27)				
520-A-N3 520-A-N4 520-A-N5	2.0 (1.7)	7.5 (6.3)	316SS C-20 PVC	700 700 400	49 49 28	0.687 (17.45)	37 (31)	60 (27)				
522-A-N3 522-A-N4 522-A-N5	4.0 (3.3)	15.1 (12.6)	316SS C-20 PVC	700 700 400	49 49 28	0.687 (17.45)	72 (60)	60 (27)				
525-A-N3 525-A-N4 525-A-N5	7.0 (5.8)	26.5 (22.0)	316SS C-20 PVC	900 900 400	63 63 28	0.687 (17.45)	117 (97)	60 (27)				
530-A-N3 530-A-N4 530-A-N5	5.5 (4.6)	20.8 (17.3)	316SS C-20 PVC	350 350 300	25 25 21	1.062 (26.97)	37 (31)	60 (27)				
532-A-N3 532-A-N4 532-A-N5	11.0 (9.2)	41.6 (34.7)	316SS C-20 PVC	350 350 300	25 25 21	1.062 (26.97)	72 (60)	60 (27)				
535-A-N3 535-A-N4 535-A-N5	18.0 (15.0)	68.1 (56.8)	316SS C-20 PVC	350 350 300	25 25 21	1.062 (26.97)	117 (97)	60 (27)				
547-S-N8§	30.0 (25.0)	113.0 (94.2)	Kynar®	150	11	1.187 (30.15)	144 (120)	70 (32)				

500-E SERIES SELECTION CHART

PVC AND KYNAR® MODELS, 125°F (52°C) MAXIMUM.

Model Number	Capacity at 100 psi (7 Bar) 60 Hz (50 Hz)		Materials of Construction	Maximum Pressure		Piston Diameter inches (mm)	Strokes Per Minute at 60 Hz (50 Hz)	Shipping Weight lbs (kg)***				
	gph	lph		psi	bar							
510-E-N3* 510-E-N5* 510-E-AR* 510-E-N8*	0.8 (0.7)	3.0 (2.5)	316SS PVC Hypochlorite Kynar®	700 150 150 150	49 11 11 11	0.500 (12.70)	37 (31)	59 (27)				
515-E-N3 515-E-N5 515-E-AR 515-E-N8	3.0 (2.5)	11.3 (9.4)	316SS PVC Hypochlorite Kynar®	1100 150 150 150	77 11 11 11	0.500 (12.70)	117 (97)	59 (27)				
520-E-N3 520-E-N5 520-E-N8	2.0 (1.7)	7.5 (6.2)	316SS PVC Kynar®	700 150 150	49 11 11	0.687 (17.40)	37 (31)	59 (27)				
522-E-N3 522-E-N5 522-E-AR 522-E-N8	4.0 (3.3)	15.1 (12.5)	316SS PVC Hypochlorite Kynar®	700 150 150 150	49 11 11 11	0.687 (17.40)	72 (60)	59 (27)				
525-E-N3 525-E-N5 525-E-AR 525-E-N8	7.0 (5.8)	26.5 (22.0)	316SS PVC Hypochlorite Kynar®	900 150 150 150	63 11 11 11	0.687 (17.40)	117 (97)	59 (27)				
527-E-AR	8.6 (7.1)	32.0 (26.6)	Hypochlorite	150	11	0.687 (17.40)	144 (119)	59 (27)				
532-E-N3 532-E-N5 532-E-N8	11.0 (9.1)	41.6 (34.5)	316SS PVC Kynar®	350 150 150	25 11 11	1.062 (27.00)	72 (60)	59 (27)				
535-E-N3 535-E-N5 535-E-N8	18.0 (14.9)	68.0 (56.4)	316SS PVC Kynar®	350 150 150	25 11 11	1.062 (27.00)	117 (97)	59 (27)				
547-SE-N3 547-SE-N5	30.0 (24.9)	113.0 (93.8)	316SS PVC	200 150	14 11	1.187 (30.10)	144 (119)	65 (30)				
547-DE-N3	30.0 (24.9) ea. head	113.0 (93.8) each	316SS	200	14	1.187 (30.10)	144 (119)	85 (39)				

500-VS SERIES SELECTION CHART

PVC AND KYNAR® MODELS, 125°F (52°C) MAXIMUM.

Model Number	Materials of Construction	Capacity at 100 psi (7 Bar) 60 Hz (50 Hz)		Maximum Pressure		Piston Diameter inches (mm)	Strokes Per Minute at 60 Hz (50 Hz)	Shipping Weight lbs (kg)***				
		gph	lph	psi	bar							
515-VS-N3	316SS	3.0 (2.5)	11.3 (9.4)	900	63	0.500 (12.7)	117 (97)	70 (32)				
520-VS-N3	316SS	2.0 (1.7)	7.5 (6.2)	400	28	0.687 (17.4)	37 (31)	70 (32)				
522-VS-N3	316SS	4.0 (3.3)	15.1 (12.5)	500	35	0.687 (17.4)	72 (30)	70 (32)				
525-VS-N3	316SS	7.0 (5.8)	26.5 (22.0)	700	49	0.687 (17.4)	117 (97)	70 (32)				
530-VS-N3	316SS	5.5 (4.6)	20.8 (17.3)	300	21	1.062 (27.0)	37 (31)	70 (32)				
532-VS-N3	316SS	11.0 (9.1)	41.6 (34.5)	300	21	1.062 (27.0)	72 (30)	70 (32)				
535-VS-N3	316SS	18.0 (14.9)	68.0 (56.4)	300	21	1.062 (27.0)	117 (97)	70 (32)				
537-VS-N3	316SS	22.0 (18.3)	83.0 (68.9)	300	21	1.062 (27.0)	144 (119)	70 (32)				
547-VS-N3	316SS	30.0 (24.9)	113.0 (93.8)	200	14*	1.187 (30.1)	144 (119)	70 (32)				

500-T SERIES SELECTION CHART

PVC AND KYNAR® MODELS, 125°F (52°C) MAXIMUM.

Model Number	Materials of Construction	Capacity at 100 psi (7 Bar) 60 Hz (50 Hz)		Maximum Pressure		Piston Diameter inches (mm)	Strokes Per Minute at 60 Hz (50 Hz)	Shipping Weight lbs (kg)***				
		gph	lph	psi	bar							
515-T-N3	316SS	3.0 (2.5)	11.3 (9.4)	300	22	0.500 (12.7)	117 (97)	80 (36)				
515-T-N7	316SS			100	8							
520-T-N3	316SS	2.0 (1.7)	7.5 (6.2)	300	22	0.687 (17.4)	37 (31)	80 (36)				
520-T-N7	316SS			100	8							
522-T-N3	316SS	4.0 (3.3)	15.1 (12.5)	300	22	0.687 (17.4)	72 (30)	80 (36)				
522-T-N7	316SS			100	8							
525-T-N3	316SS	7.0 (5.8)	26.5 (22.0)	300	22	0.687 (17.4)	117 (97)	80 (36)				
525-T-N7	316SS			100	8							
530-T-N3	316SS	5.5 (4.6)	20.8 (17.3)	300	22	1.062 (27.0)	37 (31)	80 (36)				
530-T-N7	316SS			100	8							
532-T-N3	316SS	11.0 (9.1)	41.6 (34.5)	300	22	1.062 (27.0)	72 (30)	80 (36)				
532-T-N7	316SS			100	8							
535-T-N3	316SS	18.0 (14.9)	68.0 (56.4)	300	22	1.062 (27.0)	117 (97)	80 (36)				
535-T-N7	316SS			100	8							
547-T-N3*	316SS	30.0 (24.9)	113.0 (93.8)	200	15	1.062 (27.0)	144 (119)	80 (36)				
547-T-N7*	316SS			100	8							
562-T-N3	316SS	40.0 (33.2)	151.0 (125.3)	175	13	2.0 (50.8)	72 (30)	95 (43)				
562-T-N7	316SS			100	8							
565-T-N3	316SS	65.0 (54.0)	246.0 (204.2)	175	13	2.0 (50.8)	117 (97)	95 (43)				
565-T-N7	316SS			100	8							
567-T-N3	316SS	80.0 (66.4)	302.0 (250.7)	175	13	2.0 (50.8)	144 (119)	95 (43)				
567-T-N7	316SS			100	8							

560-S SERIES SELECTION CHART

PVC AND KYNAR® MODELS, 125°F (52°C) MAXIMUM.

Model Number	Capacity at 100 psi (7 Bar) 60 Hz (50 Hz)		Materials of Construction	Piston Diameter inches (mm)	Strokes Per Minute at 60 Hz (50 Hz)	Pressure/Horsepower								Style	Shipping Weight lbs. (kg)*
						1/3 HP (0.25 kW)*		1/2 HP (0.37 kW)*		3/4 HP (0.55 kW)*		1 HP (0.75 kW)*			
	gph	lph				psi	bar	psi	bar	psi	bar	psi	bar		
562-S-N3 562-S-N4 562-S-N5 562-S-N8	40 (33.3)	151 (125.8)	316SS C-20 PVC Kynar®	2.0 (50.80)	72 (60)	100	7	175	12	250	18	350	25	Simplex	85 (39)
565-S-N3 565-S-N4 565-S-N5 565-S-N8	65 (54.2)	246 (205.0)	316SS C-20 PVC Kynar®	2.0 (50.80)	117 (97)	100	7	175	12	250	18	350	25	Simplex	85 (39)
567-S-N3 567-S-N4 567-S-N5 567-S-N8	80 (66.7)	302 (251.7)	316SS C-20 PVC Kynar®	2.0 (50.80)	144 (120)	100	7	175	12	250	18	350	25	Simplex	85 (39)

ORDERING INFORMATION

When ordering, please include the following information:

1. Description of liquid to be pumped. Include chemical name, concentration, viscosity, pH and temperature of solution.
2. Maximum, normal and minimum pump capacity required.
3. Discharge pressure required.
4. Suction conditions.
5. Motor characteristics required.

600/6000 SERIES SELECTION CHART

PVC AND KYNAR® MODELS, 125°F (52°C) MAXIMUM.

Model Number	Materials of Construction	Maximum Pressure Capability		Piston Diameter inches (mm)	Strokes Per Minute at 60 Hz (50 Hz)	Pressure/Horsepower										
						1/2 HP		3/4 HP		1 HP		1-1/2 HP		2 HP		
		psi	bar			60 Hz psi (gph)	50 Hz bar (lph)	60 Hz psi (gph)	50 Hz bar (lph)	60 Hz psi (gph)	50 Hz bar (lph)	60 Hz psi (gph)	50 Hz bar (lph)	60 Hz psi (gph)	50 Hz bar (lph)	
6100-N3	316SS	4000	280	0.75 (19.05)	58 (48)	1200 (7)	82.8 (22)	2000 (7)	138 (22)	2500 (6.5)	172 (21)	3500 (6)	241 (19)	4000 (4.5)	276 (14)	
6150-N3	316SS	4000	280	0.75 (19.05)	117 (98)	1000 (15)	69.0 (47)	1500 (15)	103 (46)	2000 (14)	138 (44)	3000 (13)	207 (41)	3500 (12.5)	241 (40)	
6250-N3	316SS	2000	140	1.00 (25.4)	117 (98)	500 (28)	34.5 (89)	800 (28)	55 (89)	1000 (28)	69 (89)	1500 (27.5)	103 (87)	2000 (26)	138 (82)	
635-N3	316SS	600	42	2.00 (50.8)	117 (98)	n/a	n/a	225 (130)	16 (412)	275 (130)	19 (412)	425 (129)	29 (409)	600 (126)	41 (399)	
635-N4	C-20	600	42	2.00 (50.8)	117 (98)	n/a	n/a	225 (130)	16 (412)	275 (130)	19 (412)	425 (129)	29 (409)	600 (126)	41 (399)	
635-N5	PVC	150	10	2.00 (50.8)	117 (98)	n/a	n/a	150 (130)	10 (412)	n/a	n/a	n/a	n/a	n/a	n/a	
635-N8	Kynar®	150	10	2.00 (50.8)	117 (98)	n/a	n/a	150 (130)	10 (412)	n/a	n/a	n/a	n/a	n/a	n/a	
637-N3	316SS	600	42	2.00 (50.8)	144 (120)	n/a	n/a	225 (160)	16 (507)	275 (160)	19 (507)	425 (158)	29 (500)	600 (154)	41 (488)	
637-N4**	C-20	600	42	2.00 (50.8)	144 (120)	n/a	n/a	225 (160)	16 (507)	275 (160)	19 (507)	425 (158)	29 (500)	600 (154)	41 (488)	
637-N5	PVC	150	10	2.00 (50.8)	144 (120)	n/a	n/a	150 (160)	10 (507)	n/a	n/a	n/a	n/a	n/a	n/a	
637-N8**	Kynar®	150	10	2.00 (50.8)	144 (120)	n/a	n/a	150 (160)	10 (507)	n/a	n/a	n/a	n/a	n/a	n/a	
647-N3	316SS	200	14	2.50 (63.5)	144 (120)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	200 (240)	14 (760)	
647-N4**	C-20	200	14	2.50 (63.5)	144 (120)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	200 (240)	14 (760)	
647-N5	PVC	150	10	2.50 (63.5)	144 (120)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	150 (240)	10 (760)	
647-N8**	Kynar®	150	10	2.50 (63.5)	144 (120)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	150 (240)	10 (760)	

600/6000 SERIES MOTOR SELECTION CHART

Enclosure	Phase	Voltage	1/2 HP	3/4 HP	1 HP	1-1/2 HP	2 HP
TEFC	1	115/230	100740	100747	100753	n/a	n/a
TEFC	3	230/460	100742	100749	100755	100761	100767
EXP	1	115/230	100744	100751	100757	n/a	n/a
EXP	3	230/460	100745	100752	100758	100764	100770
CPSD	1	115/230	100741	100748	100754	n/a	n/a
CPSD	3	230/460	100746	100750	100756	100762	100768

600/6000 SERIES MATERIALS OF CONSTRUCTION

Part	Code N3	Code N4	Code N5	Code N8
Liquid Head	316SS	C-20	PVC	Kynar®
Diaphragm	Teflon®	Teflon®	Teflon®	Teflon®
Valve Body & Seat	316SS	C-20	PVC	Kynar®
Valve Checks	316SS	C-20	Ceramic	Ceramic
"O"-rings	Viton®	Viton®	Viton®	Viton®

Teflon® is a registered trademark of E.I. du Pont de Nemours and Company

Kynar® is a registered trademark of Arkema Inc.

Viton® is a registered trademark of E.I. du Pont de Nemours and Company

INJECTION QUILLS

Used to inject chemicals pumped by metering pumps into turbulent-flow zone of high-pressure water or steam lines.



- Operating pressures to 3,000 psi (207 bar)
- Spring-loaded check valve
- Available in 316SS, PVC, Kynar® and C-20
- Available in 1/2" and 3/4" NPT

CORPORATION STOPS

Used for rapid injection and dispersion of chemicals pumped into tanks, mains, cooling towers and process systems without the need to shut down the system.



- Operating pressures to 150 psi (10 bar)
- Available in 316SS, PVC, Kynar® and C-20
- Available in 1/2" through 1" NPT or AWWA
- Lever-operated stop and protection chain standard
- Available with choice of Bronze or 316SS

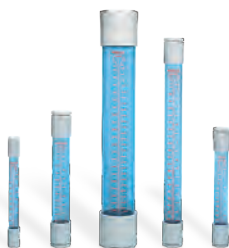
BACK PRESSURE VALVE & PRESSURE RELIEF VALVES



Ensure the set pressure is maintained at the pump outlet port to assure accurate metering and prevent siphoning, while protecting against overpressure.

- Available in 316SS, PVC, Kynar® and C-20
- PTFE diaphragm

CALIBRATION COLUMNS



A fast, easy, economical way to check the flow rate of a chemical metering pump.

- PVC with slip-on caps for top filling and easy cleaning
- Shielded-glass available for acid and strong chemical applications
- Mylar lamination for protection against harsh chemicals
- 100-4,000 ml capacity (dual scales)

SAMPLE COOLERS



Cools hot water and steam samples for easy handling and sample collection.

- Available in all 316SS with Inconel®, and or carbon steel with 316SS tubing
- Available in 3,500 psi (241 bar) at 750°F (399°C) and 1,500 psi (103 bar) at 600°F (316°C) design pressures

Kynar® is a registered trademark of Arkema Inc.
Inconel® is a registered trademark of Special Metals Corporation

PULSATION DAMPENERS



Remove the pulsating flow caused by a pump's reciprocating action, ensuring a smooth, laminar flow.

- Equipped with pressure gauge and charging valve
- Pressure ratings to 1,000 psi (69 bar) with 4:1 safety margin

EZE-GRAB PLATFORMS



For portable pump installations, molded polyethylene base provides elevated platform for use indoors or outdoors.

- Handles allow the pump to be moved easily

BY-PASS FEEDERS



Used to introduce chemicals into closed circulating-wwater systems.

- Dish bottom in or dish bottom out models available
- Standard high-pressure cap rated to 300 psi
- Filter bags available in 1-, 5-, 20- and 50-micron ratings

NIMBLE SKID PUMP PACKAGES



Complete metering systems ready to use with any bulk or intermediate bulk chemical container.

- Available in 18" x 30" and 24" x 46" footprints
- Can be used with electronic or motor-driven diaphragm pumps
- Containment available for all systems

30-GALLON MINI-TANK



For use with any hydraulic or electric metering diaphragm pump.

- Available with or without containment

PZ SERIES ELECTRONIC METERING PUMPS

PZ Series pumps from Neptune are ideal for chemical dosing, chlorine sterilization and nutrient injection applications. They meet the needs of these types of applications thanks to their state-of-the-art control and programmable features, including speed adjustment from 1 to 300 strokes per minute, which allows for more uniform distribution at all feed rates. The pumps are waterproof and UV-resistant, and unaffected by voltage fluctuations from 94 to 264 VAC and 50/60 Hz.



CHEMICAL FEED SYSTEMS

Neptune's chemical feed systems are offered with or without containment, and are a complete turnkey solution to all chemical feed needs, no matter how large or small. Neptune also offers By-Pass and Filter Feeders for boiler treatment, Bromine Feeders for cooling tower treatment and Glycol Feeders for chilled and hot water loops. Neptune chemical feed systems are also completely customizable to meet all end-user requirements.



POLYMER BLEND & FEED SYSTEMS

Neptune's Polymaster™ Polymer Blend & Feed system thoroughly dilutes, mixes and activates emulsion, dispersion and solution polymers. The key to the Polymaster's operation is the patented Gatlin Distribution Head that hydraulically segments the polymer into ultra-thin platelets. This segmentation maximizes the amount of the polymer's surface area that is exposed to the dilution water, which optimizes activation and is unaffected by fluctuating water pressures or dilution-water ratio changes.



PORTABLE MIXERS

The Neptune Mixer Company offers and manufactures a complete line of portable top-entering mixers, which are ideal for blending liquids, suspending or dissolving solids, dispersing immiscible liquids, and dispersing small amounts of gases in liquids, making them highly reliable in waste treatment, water treatment, and batch chemical preparation applications. The pumps can be clamp- or base-mounted on beams, tank walls, or other supports.



FLUID DYNAMICS™

Incorporated in 1974 and acquired by Neptune in 2004, Fluid Dynamics™ is a market leader in polymer-blending technology for use in the water and wastewater, agriculture, oil and gas, and mining industries. Its dynaBLEND™ polymer-blending technology was patented in 1985 as a revolutionary non-mechanical polymer-blending system. More than 25 years and thousands of dynaBLEND installations later, Fluid Dynamics remains a premier polymer equipment company.



**dynaBLEND™
LIQUID POLYMER BLENDING SYSTEM**



**dynaJET™
DRY POWDER PREPARATION SYSTEM**

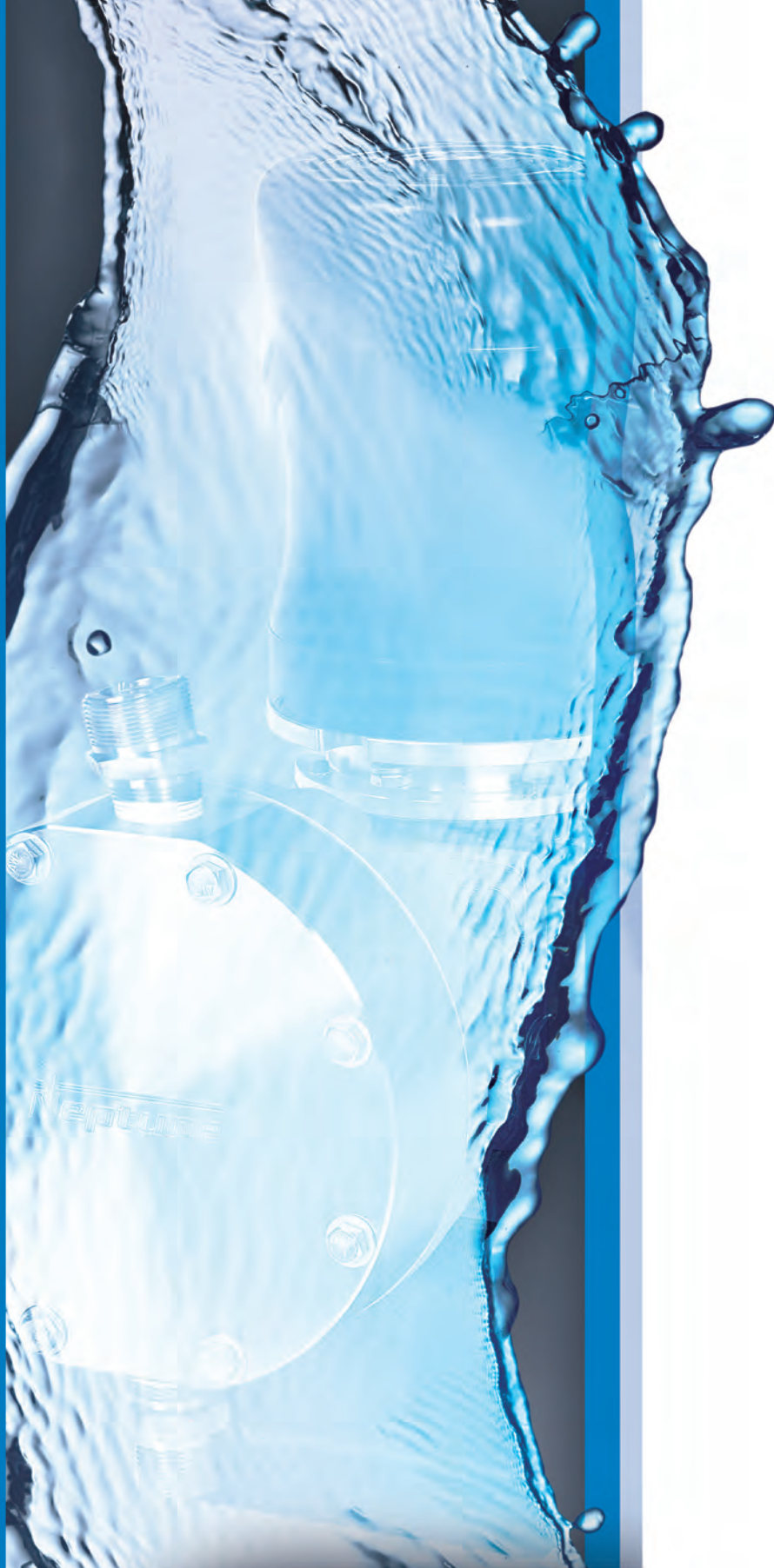


**dynaBLEND™
DRY POLYMER PREPARATION SYSTEM**



**miniBLEND™
LIQUID POLYMER BLENDING SYSTEM**

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