

Materials of Construction — Pumps

MODEL	Acetal®	Aluminum	Cast Iron	Hastelloy C	Polypropylene	PVDF Kynar®	Stainless Steel
E6	■				■	■	
E5	●	●		●	●▲	●▲	●
E1		●		●	●▲	●▲	●
E4		■	■	●■	●	●	●■
E2		●■	●■	●■	●	●	●■▲▼
E2-FV		■					
E3		●■	■	●■	●	●	●■

● Bolted Construction ■ Clamped Construction ▲ Split Manifold Model Available ▼ High Pressure Model Available

Diaphragms, Valve Balls, Valve Seats & Valve Seat O-rings

	Aluminum	Buna-N	Kynar® PVDF	Neoprene	Nordel® (EPDM)	Polypropylene	Polyurethane	316 Stainless Steel	TEFLON®		Teflon® Encapsulated Silicone	Thermoplastics		Viton®
									Tef-Matic™	Versa-Tuff™		TPE XL	FDA Hytrel®	
ELASTOMERS														
DIAPHRAGMS		●		●	●			●	●		●	●	●	
VALVE BALLS		●		●	●		●	●	●			●	●	●
VALVE SEATS	●	●	■	●	●	■	●	●	●			●	●	●
VALVE SEAT O-RINGS		■			■				●		■	■		■

● Available for plastic pump models only

Temperature Limits
NEOPRENE

0°F (-18°C) to +200°F (93°C)

BUNA-N

+10°F (-12°C) to +180°F (82°C)

NORDEL

-60°F (-51°C) to +280°F (138°C)

VITON

-40°F (-40°C) to +350°F (176°C)

TEFLON PTFE

+40°F (+4°C) to +220°F (105°C)

POLYURETHANE

+10°F (-12°C) to +170°F (77°C)

XL TPE

-20°F (-29°C) to +300°F (149°C)

TEFLON PFA

-20°F (-29°C) to +300°F (149°C)

FDA HYTREL

-20°F (-29°C) to +220°F (104°C)

METALLIC PUMPS can operate past 212°F (100°C). However, if you are operating above these limits, consult the factory for assistance.

PLASTIC PUMPS can operate to the following temperature limits:

• ACETAL

32°F (0°C) to 220°F (104°C)

• POLYPROPYLENE

32°F (0°C) to 175°F (79°C)

• PVDF (Kynar)

10°F (-12°C) to 225°F (107°C)

NOTE: These are average temperatures. Chemicals and solvents can have an effect on temperature limits.

Wetted Material Compatibility

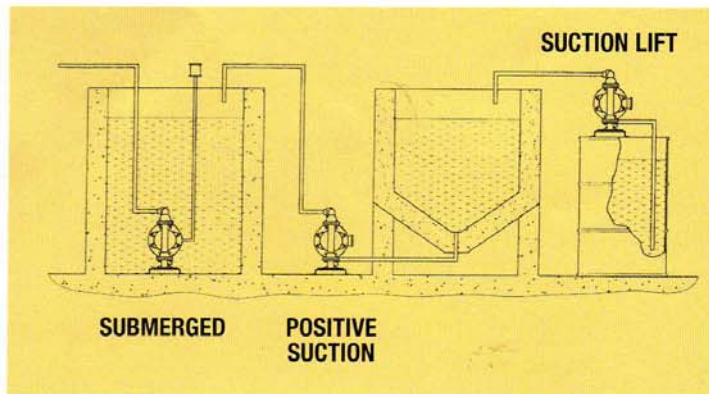
Fluid Solutions	Numeric pH Level	Wetted Section Construction Metals
ALKALINE	14	STAINLESS STEEL
	13	
	12	
CAUSTIC	11	CAST IRON
	10	
BASIC	9	ALUMINUM
	8	
NEUTRAL	7	CAST IRON
	6	
ACID	5	STAINLESS STEEL
	4	
	3	STAINLESS STEEL
	2	
	1	
	0	

Applications & Installations

SUBMERGED Versa-Matic Pumps are totally submersible. It is important that the air exhaust be ported above the level of the fluid, and that the materials of construction also be compatible with the fluid that the pump is submerged in.

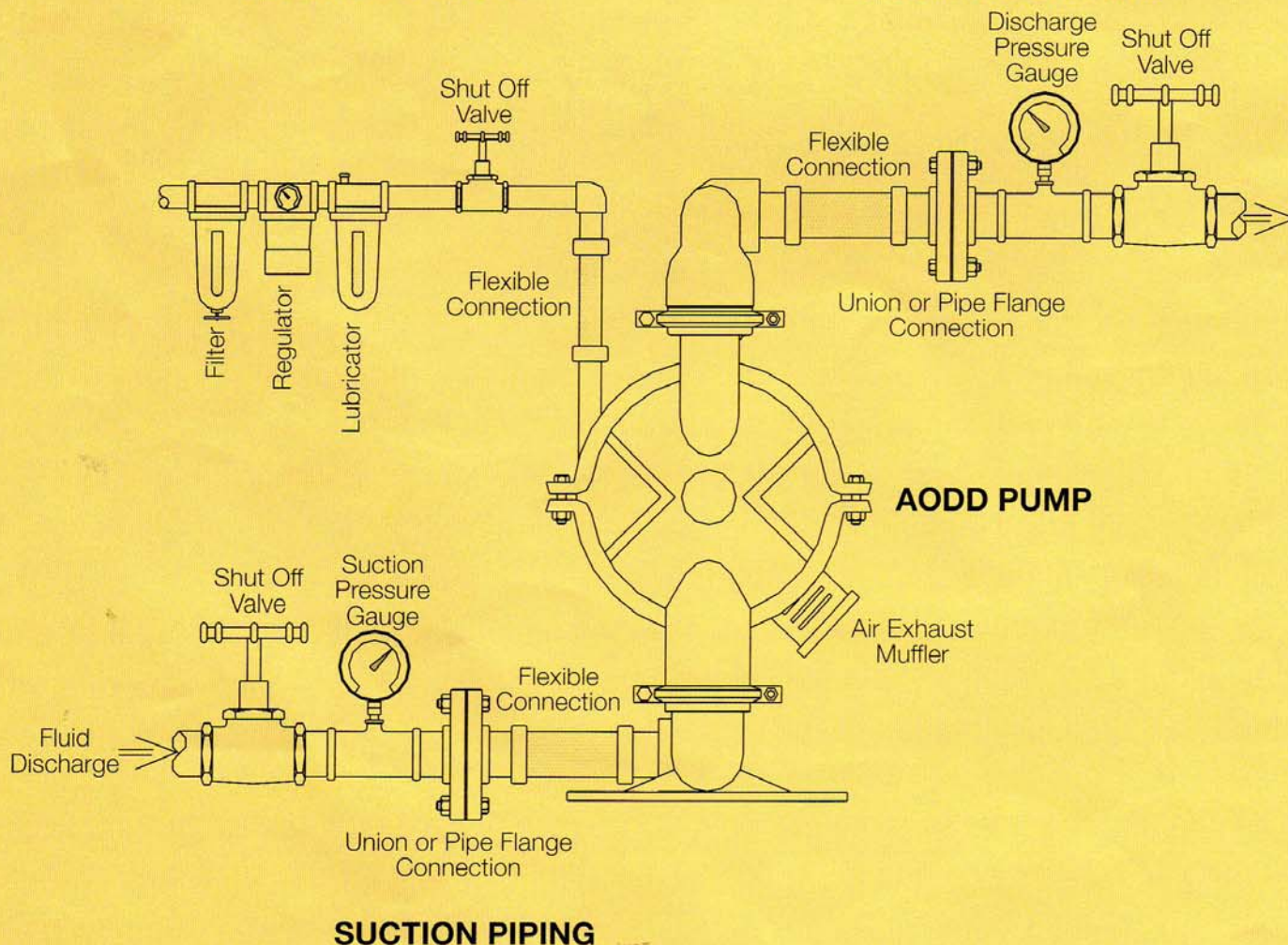
POSITIVE SUCTION For emptying tanks it is important to limit the inlet fluid pressure to approximately 10 PSI (0.69 bar) for Teflon® diaphragms and 15 PSI (1.03 bar) for rubber and thermo-plastic diaphragms. Greater inlet pressure can cause erratic pump operation and premature diaphragm failure.

SUCTION LIFT The suction capabilities of each pump may vary due to system design, product being pumped, and pump materials of construction. Please consult the factory with specific criteria.



AIR INLET PIPING

DISCHARGE PIPING



The Exclusive Elima-Matic® Air Valve System

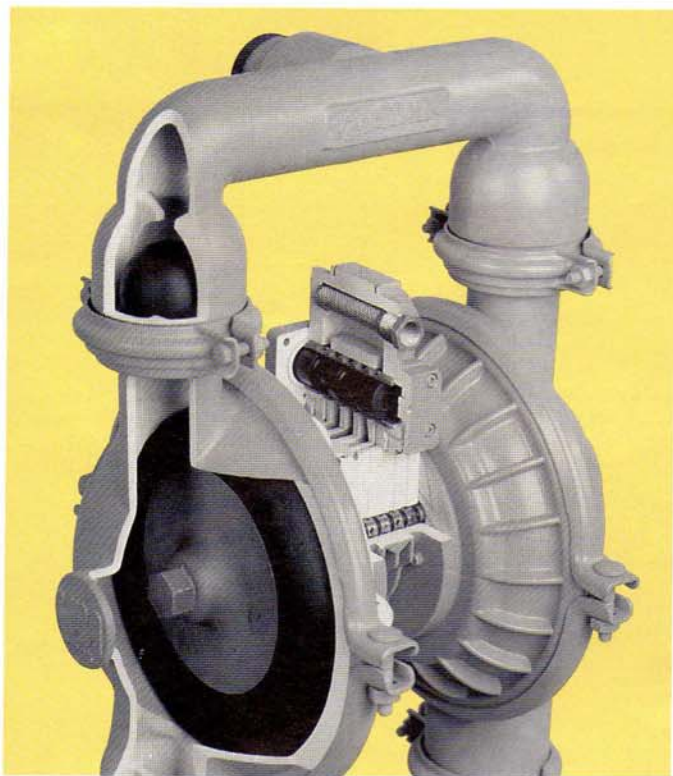
Anti-stalling, Non-icing & Lubrication-free

True to their name, ELIMA-MATIC® pumps virtually eliminate intermittent pump stalling caused by air valve system freeze-ups. By utilizing the patented ELIMA-MATIC® anti-stalling, non-icing, lubrication-free valve system, this common air diaphragm pump problem is a thing of the past.

Eliminating Downtime

ELIMA-MATIC® ensures continuous, reliable pump performance. Here's how it works:

The valve spool is positively shifted by the transfer of a pilot shaft. When the main shaft travels to full-stroke length, the inner piston on the opposite side depresses an internal pilot shaft which ports a burst of compressed air to the main spool valve. The main spool valve reciprocates in a positive reliable shift. As the pilot shaft moves back and forth, an air burst is ported to the main spool which causes it to shift every time, eliminating stalling.



Losing Your Cool

By evacuating compressed air through air passages that are designed to allow a controlled expansion, a considerable reduction in the cooling effect occurs. In addition, the center block and air valve surface areas are ribbed and act as heat exchangers to dissipate the rapid cooling effect.

Ease of Maintenance

The ELIMA-MATIC® not only eliminates freezing and stalling, but maintenance headaches as well. The ELIMA-MATIC® has only two easily accessible center block o-rings — some competitors pumps have as many as seven. The pilot shaft o-rings come out as a complete assembly and are easily replaced without the use of an o-ring tool. And the air valve can be worked on without taking the pump's center section apart.

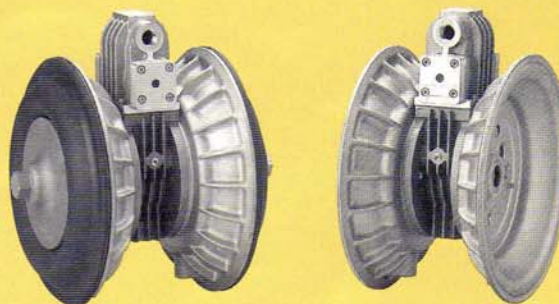
Maximizing Pumping Performance

Versa-Matic pumps can already handle anything from water to 90% solids easily and efficiently. Add the ELIMA-MATIC® air valve system and you've got a pump that offers powerhouse performance.

Air Valve Upgrades

Also available as a conversion kit for Versa-Matic V4, V2 and V3 pumps, as well as Wilden® 1 1/4", 2" and 3" metallic pumps, the ELIMA-MATIC® comes with either an aluminum, stainless steel, or Teflon-coated air section. (The air chambers, air valve and center block can be nickel-plated for diverse applications.)

Elima-Matic® Retro Fit Centers for V-Series and Wilden® Pumps



Complete Kit

Center Section Only

Available for 1-1/4", 2" and 3" pumps.
Consult Versa-Matic or your local distributor for details.

- 1 Incorrect o-ring placement
- 2 Inner diaphragm plate installed backwards
- 3 Deadhead (system pressure meets or exceeds air supply pressure)
- 4 Air valve or center block gaskets installed incorrectly

Pump cycles once and stops

- 1 Over lubrication
- 2 Lack of air (line size, PSI, CFM)
- 3 Centering of spool ("V" series)
- 4 Worn o-rings
- 5 Air porting in center block is plugged
- 6 Wrong type of lubrication (attack on o-rings) — see Operating Manual
- 7 Debris in air valve
- 8 Clogged manifolds
- 9 Incorrect o-ring placement
- 10 Deadhead (system pressure meets or exceeds air supply pressure)
- 11 Closed discharge valve

SYMPTOMS

**Pump will not operate
(stall or deadhead)**

- 1 Cavitation on suction side
- 2 Valve ball(s) not seating properly or sticking
- 3 Valve ball(s) missing (pushed into pump/thermal expansion or missing)
- 4 Valve ball(s)/seat(s) damaged or attacked by product (swelling, shrinking, etc.)
- 5 Vapor pressure
- 6 Clogged suction line

**Pump cycles and will not prime
or low flow**

- 1 Over lubrication/under lubrication
- 2 Wrong type of lubrication
- 3 Icing
- 4 Clogged manifolds
- 5 Deadhead (system pressure meets or exceeds air supply pressure)
- 6 Cavitation on suction side
- 7 Lack of air (line size, PSI, CFM)
- 8 Worn o-rings
- 9 Vapor pressure
- 10 Incorrect pump size

Pump running sluggish/stalling

- 1 Diaphragm failure — product leaking out exhaust
- 2 Diaphragm plates loose — product leaking out exhaust
- 3 Clamp bands loose — product leaking out clamp bands
- 4 Clamp bands stretched — product leaking out clamp bands
- 5 Teflon gasket tape ruined
- 6 Excessive positive suction pressure — product leaking around many or all clamp bands
- 7 Diaphragms stretched around center hole or bolt holes
- 8 Clamp bands not seated properly
- 9 Excessive air supply pressure

**Product leaking through exhaust
or around clamp bands**

- 1 Cavitation
- 2 Excessive flooded suction pressure
- 3 Misapplication (chemical/physical incompatibility)
- 4 Wrong type of lubrication (attack on air side)
- 5 Incorrect diaphragm plates
- 6 Diaphragm plates on backwards
- 7 Incorrect shaft with corresponding elastomer
- 8 Start up at full air pressure
- 9 Excessive dry running at high air pressure

Premature diaphragm failure

- 1 Build up of solids in water chamber
- 2 Elima-Matic pump missing bumper washers (see Operating Manual)
- 3 Loose diaphragm plates

Breaking and bending shafts

E1

1" UL Listed Pump

Specifications

Flow Rate adjustable to . . . 0-35 gpm (132 lpm)

Port Size

Inlet and Discharge 1.0" Female NPT (BSP)

Air Inlet 0.375" NPT

Air Exhaust 0.50" NPT

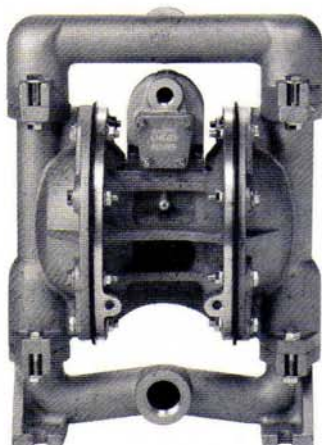
Suction Lift . . . 15' Dry/25' Wet (4.57m/7.62m)

Teflon® 10' Dry/20' Wet (3.05m/6.10m)

Max. Particle Size (Diameter) . . 0.125"(3.17mm)

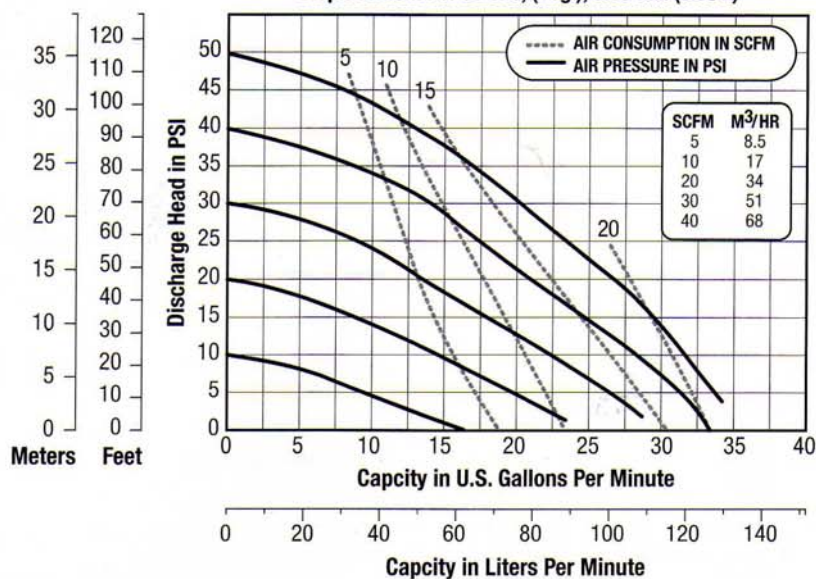
Shipping Weight

Aluminum 31 lbs (14.07 kg)



Performance

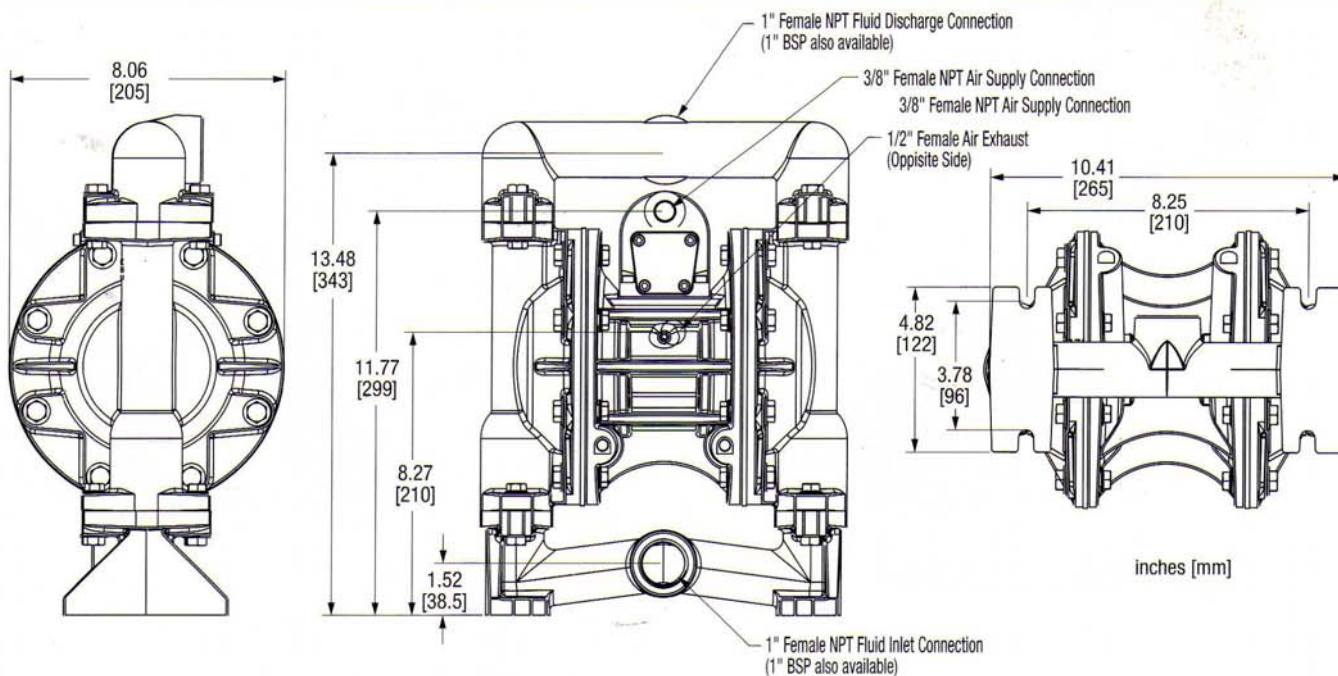
Displacement Per Stroke, (Avg.), 0.10 Gal. (0.38 L)



NOTE: For E1 pumps fitted with Teflon® diaphragms, reduce water discharge figures by 20%. Suction lift is reduced to 10' (3.05m) dry and 20' (6.10m) wet.

CAUTION: Do not exceed 50 psig (3.4 bars) air supply or liquid pressure.

Dimensions



Consult factory for certified drawings.

1" Bolted Metallic Pumps with Plastic Centers

E1

Specifications

Flow Rate adjustable to . . . 0-35 gpm (132 lpm)

Port Size

Inlet and Discharge 1.0" Female NPT (BSP)

Air Inlet 0.375" NPT

Air Exhaust 0.50" NPT

Suction Lift 15' Dry/25' Wet (4.57m/7.62m)

Teflon® 10' Dry/20' Wet (3.05m/6.10m)

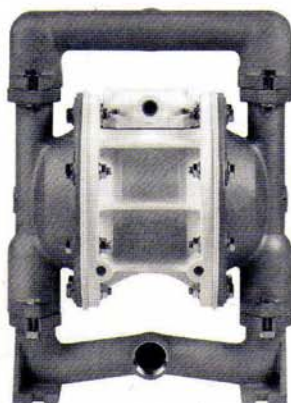
Max. Particle Size (Diameter) . . 0.125"(3.17mm)

Shipping Weights

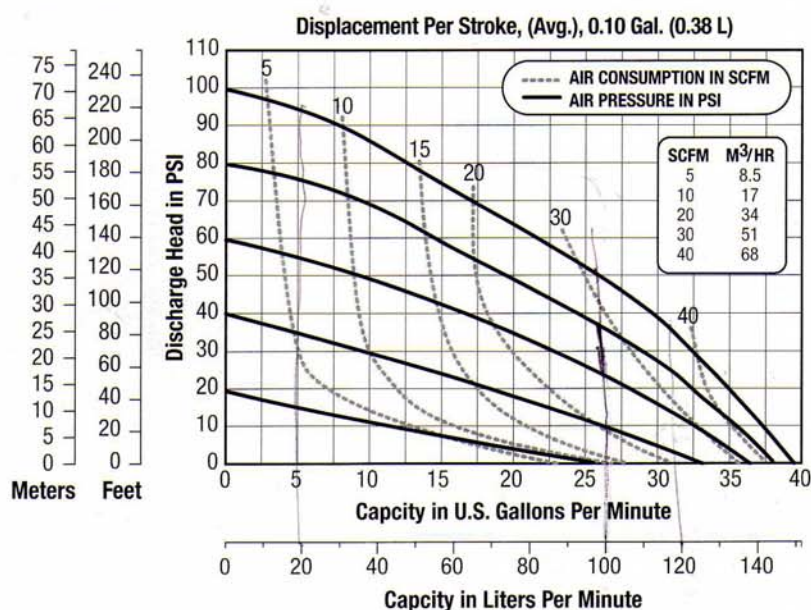
Aluminum 31 lbs (14.07 kg)

Stainless 42 lbs (19.05 kg)

Hastelloy C 42 lbs (19.05 kg)



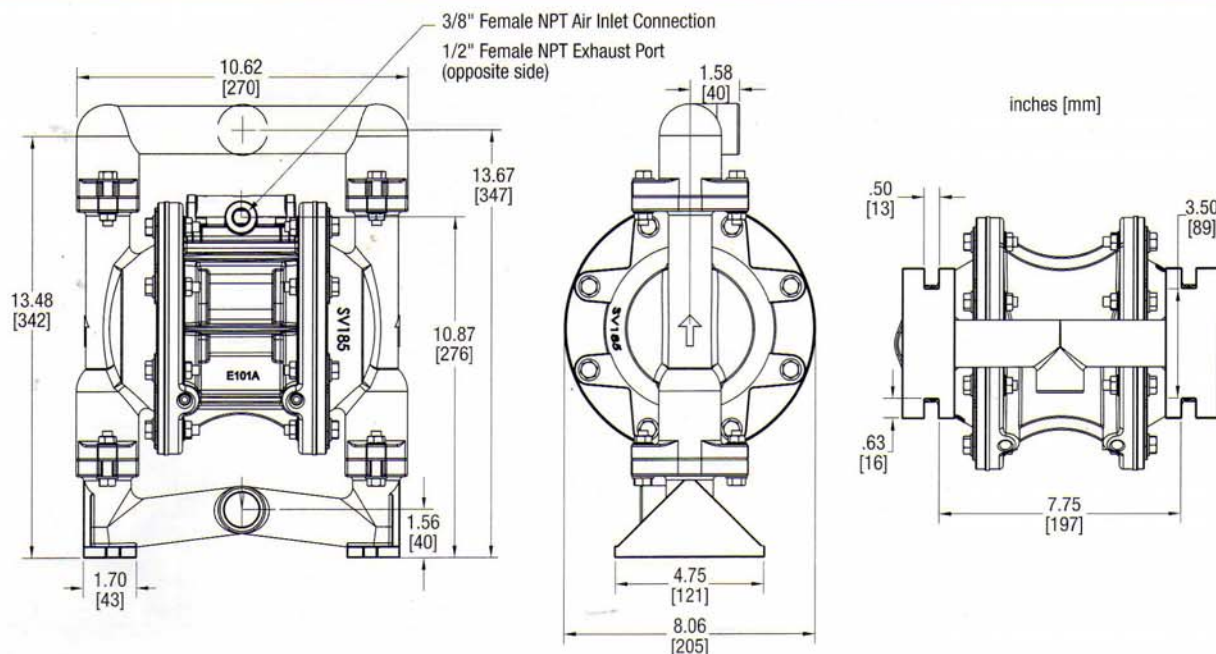
Performance



NOTE: For E1 pumps fitted with Teflon® diaphragms, reduce water discharge figures by 20%. Suction lift is reduced to 10' (3.05m) dry and 20' (6.10m) wet.

CAUTION: Do not exceed 125 psig (8.5 bars) air supply or liquid pressure.

Dimensions



Consult factory for certified drawings.

Specifications

Flow Rate adjustable to . . . 0-35 gpm (132 lpm)

Port Size

Inlet and Discharge 1.0" ANSI/DIN Flanged

Air Inlet 0.375" NPT

Air Exhaust 0.50" NPT

Suction Lift . . . 15' Dry/25' Wet (4.57m/7.62m)

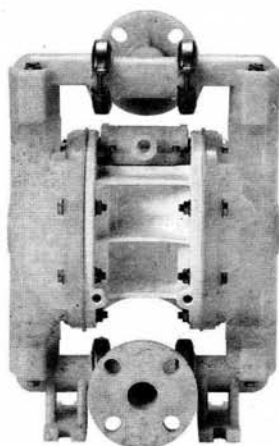
Teflon® 10' Dry/20' Wet (3.05m/6.10m)

Max. Particle Size (Dia.) 0.125"(3.17mm)

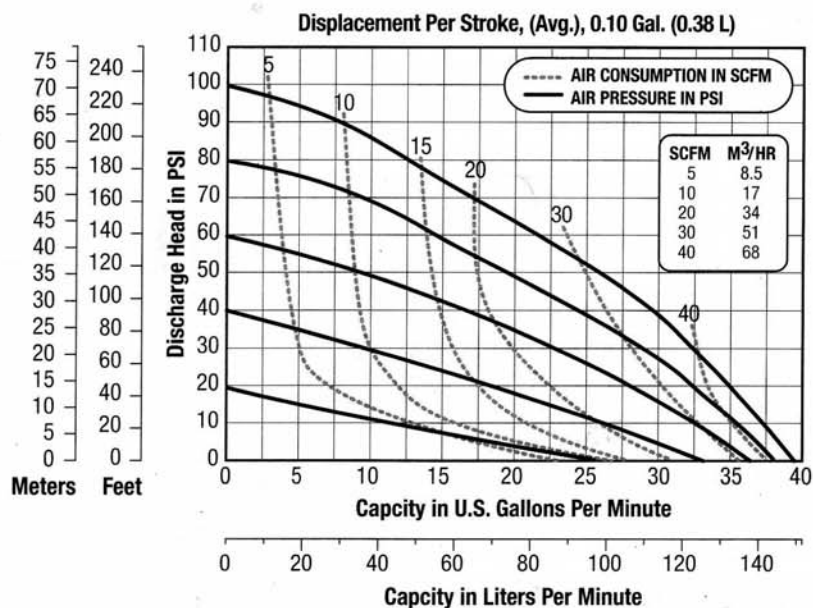
Shipping Weights

Polypropylene 24 lbs (10.89 kg)

Kynar® 24 lbs (10.89 kg)



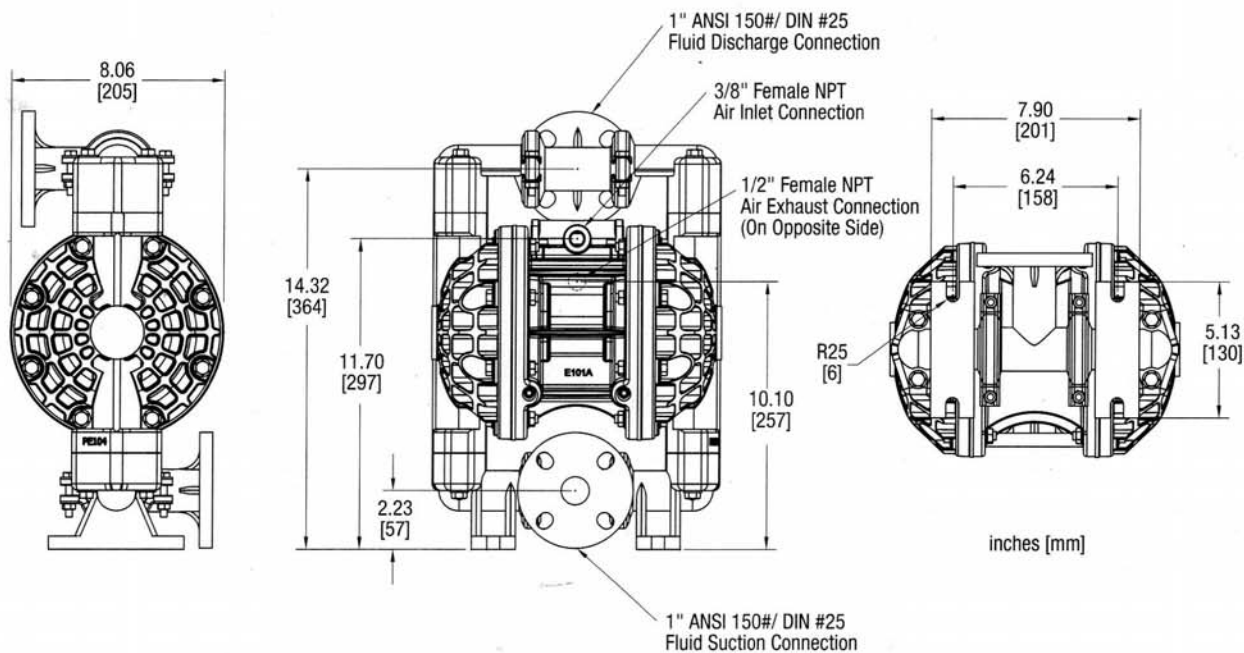
Performance



NOTE: For E1 pumps fitted with Teflon® diaphragms, reduce water discharge figures by 20%. Suction lift is reduced to 10' (3.05m) dry and 20' (6.10m) wet.

CAUTION: Do not exceed 100 psig (6.9 bars) air supply or liquid pressure.

Dimensions



Consult factory for certified drawings.

1" Bolted Plastic Pumps with Plastic Centers

Standard Side Porting — Aluminum Air Section Available

E1

Specifications

Flow Rate adjustable to . . . 0-35 gpm (132 lpm)

Port Size

Inlet and Discharge 1.0" ANSI/DIN Flanged

Air Inlet 0.375" NPT

Air Exhaust 0.50" NPT

Suction Lift . . . 15' Dry/25' Wet (4.57m/7.62m)

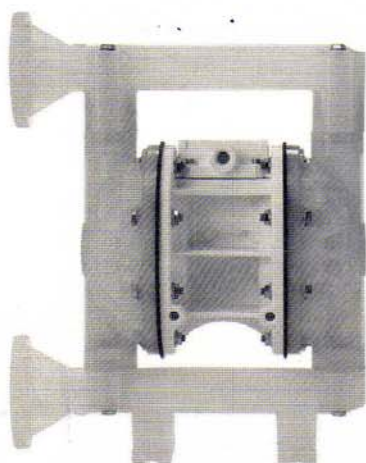
Teflon® 10' Dry/20' Wet (3.05m/6.10m)

Max. Particle Size (Dia) 0.125"(3.17mm)

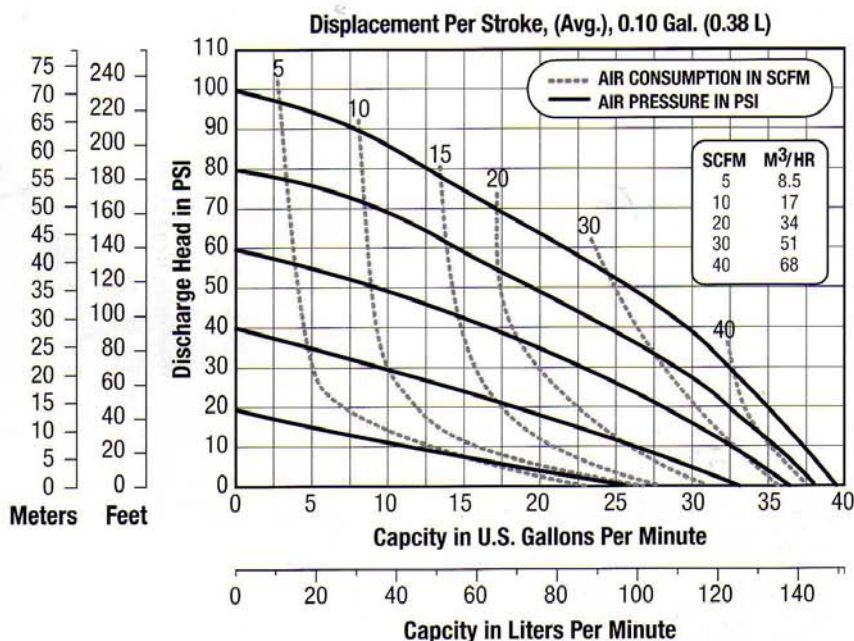
Shipping Weights

Polypropylene 24 lbs (10.89 kg)

Kynar® 24 lbs (10.89 kg)



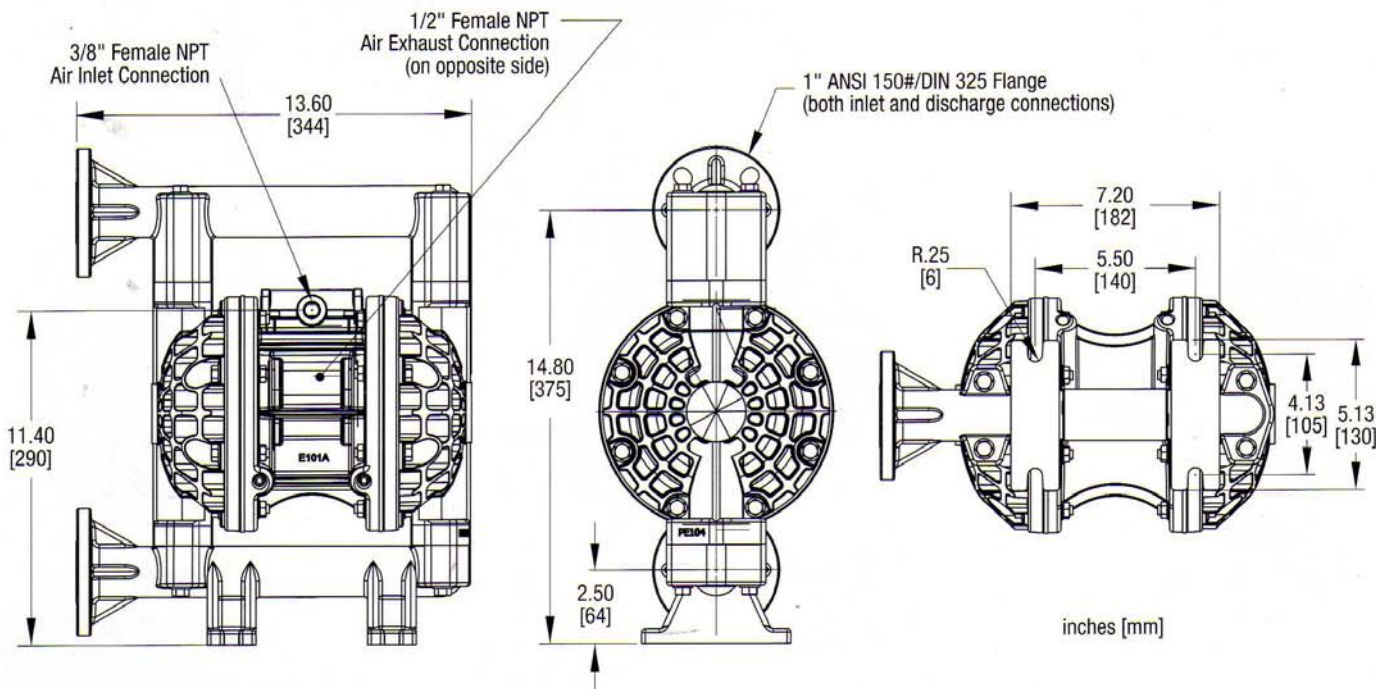
Performance



NOTE: For E1 pumps fitted with Teflon® diaphragms, reduce water discharge figures by 20%. Suction lift is reduced to 10' (3.05m) dry and 20' (6.10m) wet.

CAUTION: Do not exceed 100 psig (6.9 bars) air supply or liquid pressure.

Dimensions



Consult factory for certified drawings.

1" Food Processing Pump

Aluminum Air Section Available

E1

Specifications

Flow Rate adjustable to . . . 0-35 gpm (132 lpm)

Port Size

Inlet and Discharge 1.5" Tri-Clamp®

Air Inlet 0.375" NPT

Air Exhaust 0.50" NPT

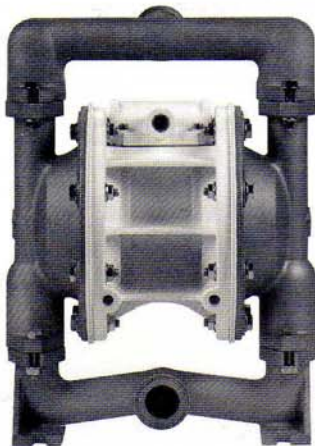
Suction Lift . . . 15' Dry/25' Wet (4.57m/7.62m)

Teflon® 10' Dry/20' Wet (3.05m/6.10m)

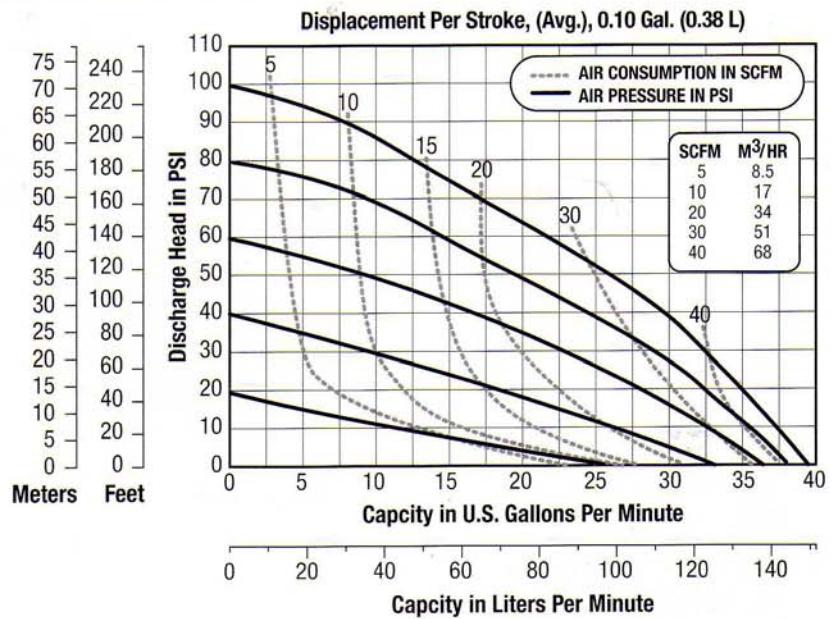
Max. Particle Size (Diameter) . . 0.125"(3.17mm)

Shipping Weights

Stainless Steel 42 lbs (19.05 kg)



Performance

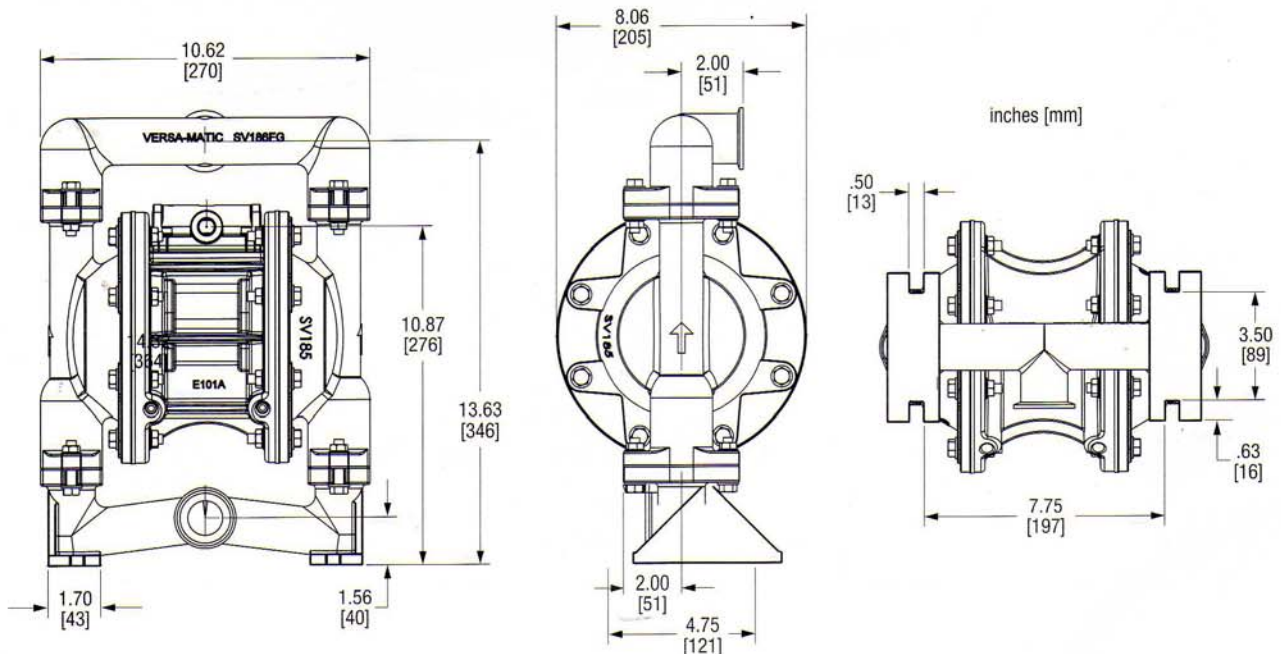


NOTE: For E1 pumps fitted with Teflon® diaphragms, reduce water discharge figures by 20%.
Suction lift is reduced to 10' (3.05m) dry and 20' (6.10m) wet.

CAUTION: Do not exceed 125 psig (8.5 bars) air supply or liquid pressure.

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Dimensions



Consult factory for certified drawings.

2" Clamped Metallic Pumps

Screen Mount Available for Aluminum Model, Stainless Steel Air Section Available

E2

Specifications

Flow Rate adjustable to . . . 0-155 gpm (586 lpm)

Port Size

Inlet and Discharge 2.0" NPT (BSP)

Air Inlet 0.50" NPT

Air Exhaust 0.75" NPT

Suction Lift . . . 20' Dry/25' Wet (6.10m/7.62m)

Teflon® 10' Dry/20' Wet (3.05m/6.10m)

Max. Particle Size (Dia.) 0.25" (6.35mm)

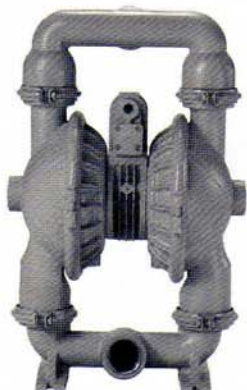
Shipping Weights

Aluminum 70 lbs (31.75 kg)

Cast Iron 115 lbs (52.16 kg)

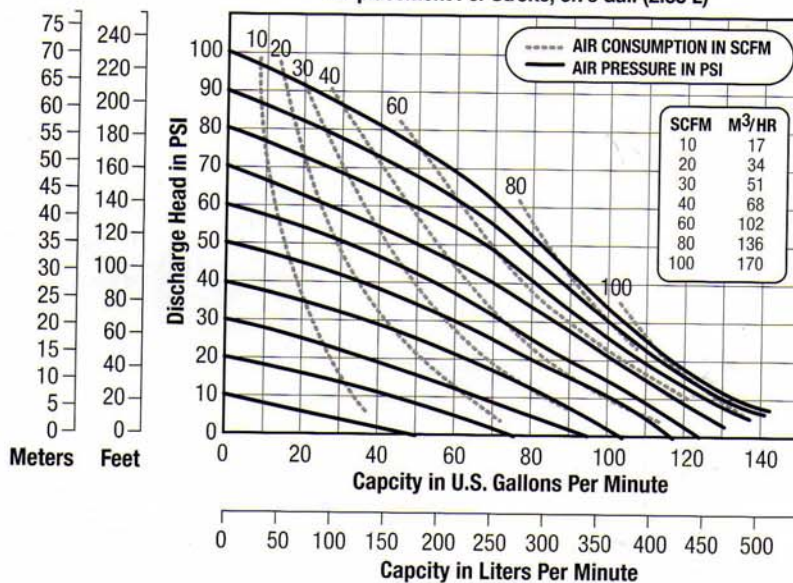
Stainless 115 lbs (52.16 kg)

Hastelloy C 125 lbs (56.70 kg)



Performance

Displacement Per Stroke, 0.70 Gal. (2.65 L)

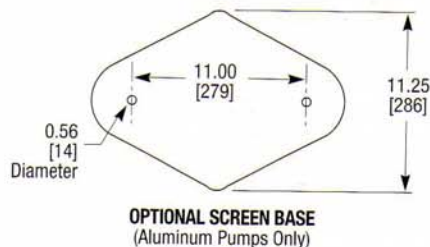
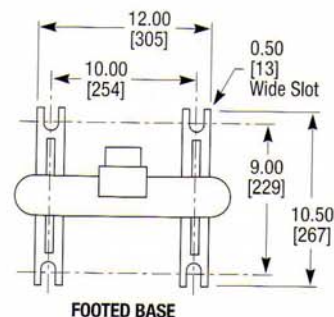
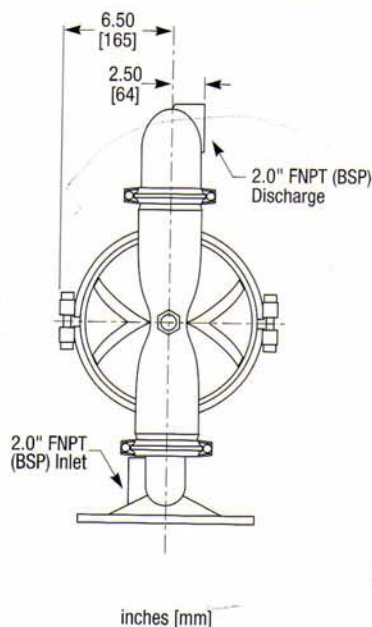
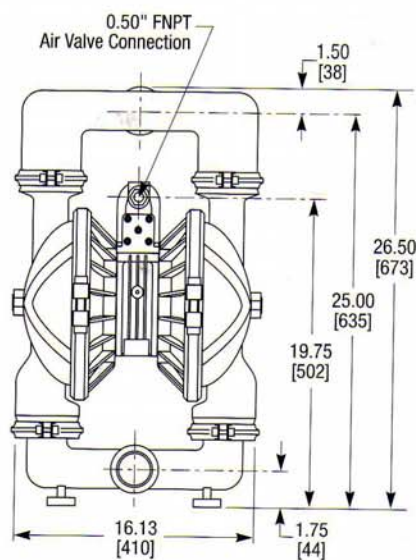


NOTE: For E2 pumps fitted with Teflon® diaphragms, reduce water discharge figures by 20%. Suction lift is reduced to 10' (3.05m) dry and 20' (6.10m) wet.

CAUTION: Do not exceed 125 psig (8.5 bars) air supply or liquid pressure.

19

Dimensions



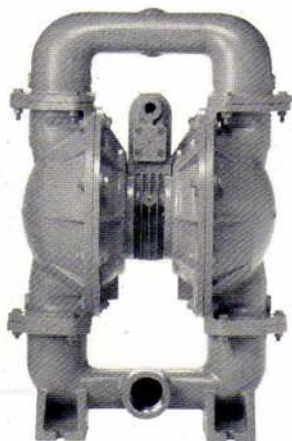
Consult factory for certified drawings.

2" Bolted Aluminum Pumps

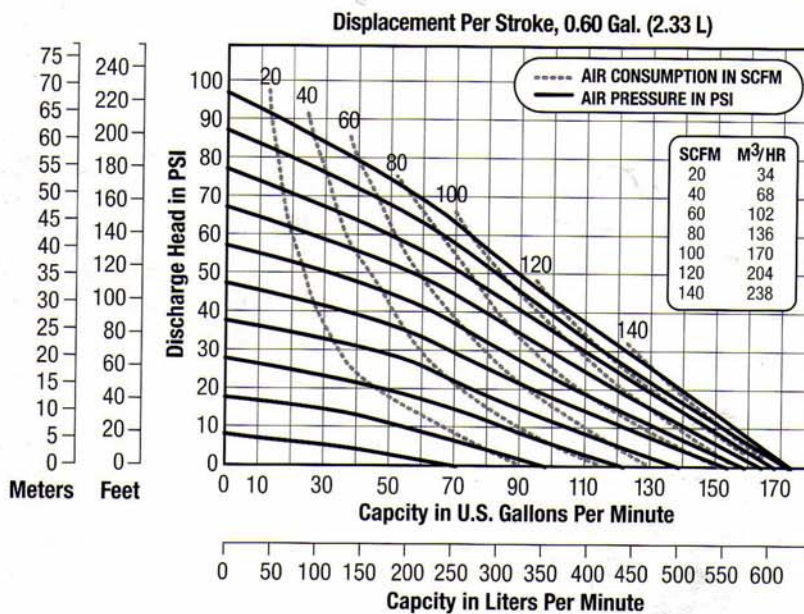
E2

Specifications

Flow Rate adjustable to . . . 0-174 gpm (658 lpm)
Port Size
 Inlet 2.0" NPT (BSP)
 Discharge 2.0" NPT (BSP)
Air Inlet 0.50" NPT
Air Exhaust 0.75" NPT
Suction Lift . . . 20' Dry/25' Wet (6.10m/7.62m)
 Teflon® 10' Dry/20' Wet (3.05m/6.10m)
Max. Particle Size (Dia.) 0.43"(11mm)
Shipping Weight
 Aluminum 74 lbs (33.34 kg)



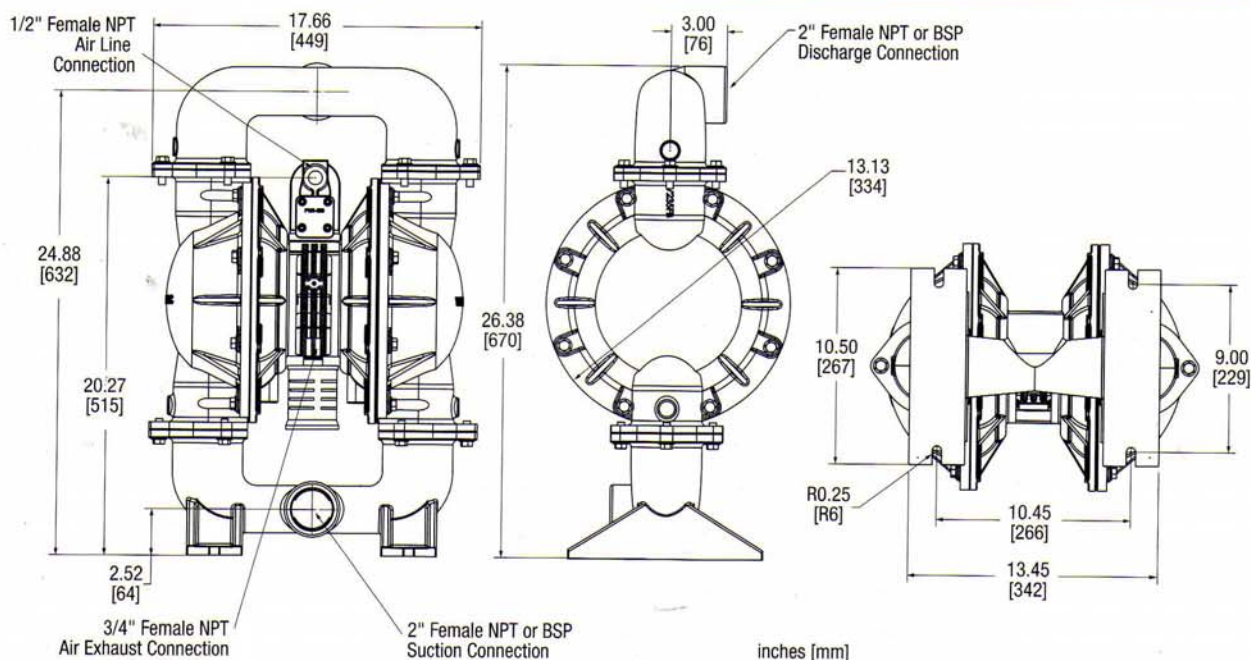
Performance



NOTE: For E2AL pumps fitted with Teflon® diaphragms, reduce water discharge figures by 20%. Suction lift is reduced to 10' (3.05m) dry and 20' (6.10m) wet.

CAUTION: Do not exceed 125 psig (8.5 bars) air supply or liquid pressure.

Dimensions



Consult factory for certified drawings.

R

21

2" Bolted Plastic Pumps

Optional Center Porting with Adjustable Inlet/Discharge

E2

Specifications

Flow Rate adjustable to . . . 0-155 gpm (586 lpm)

Port Size

Inlet and Discharge 2.0" ANSI,
150 Class (DIN 50)

Air Inlet 0.50" NPT

Air Exhaust 0.75" NPT

Suction Lift . . . 20' Dry/25' Wet (6.10m/7.62m)

Teflon® 10' Dry/20' Wet (3.05m/6.10m)

Max. Particle Size (Dia.) 0.25"(6.35mm)

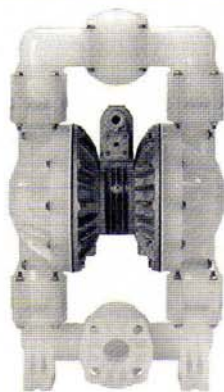
Shipping Weights

Plastic w/Aluminum Center . . . 76 lbs (34.56 kg)

Plastic w/Stainless Center . . . 110 lbs (49.99 kg)

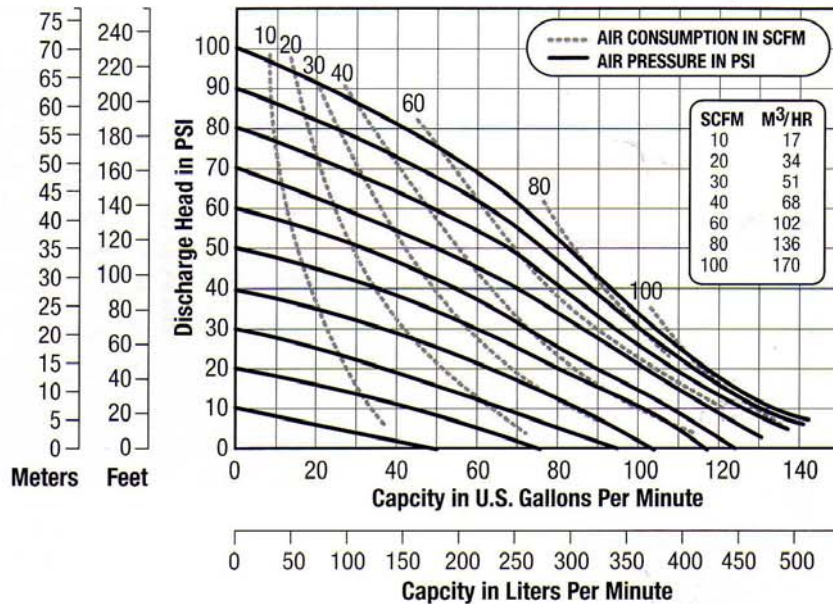
Kynar® w/Aluminum Center . . 102 lbs (46.36 kg)

Kynar® w/Stainless Center . . . 136 lbs (61.78 kg)



Performance

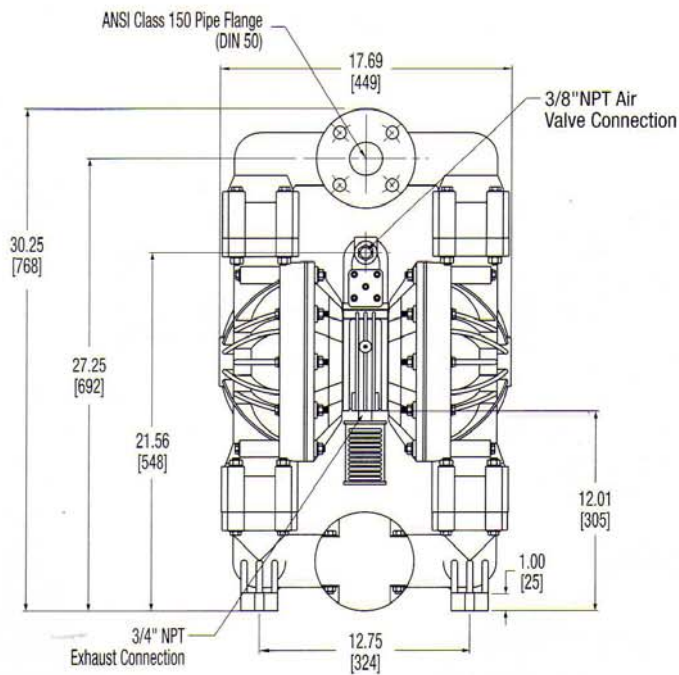
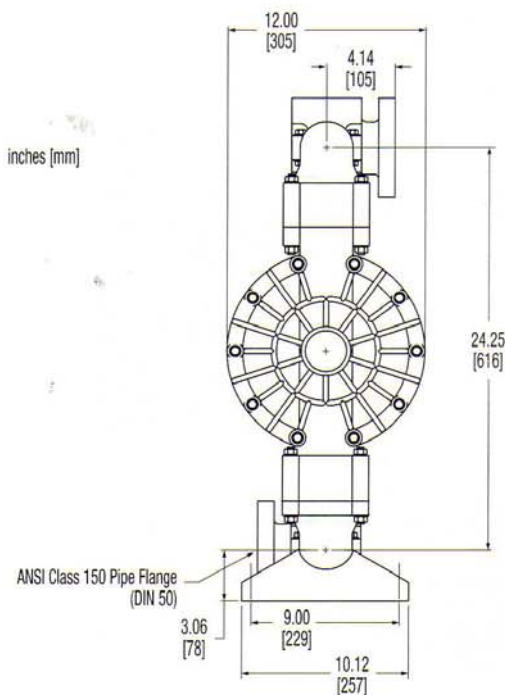
Displacement Per Stroke, 0.70 Gal. (2.65 L)



NOTE: For E2P pumps fitted with Teflon® diaphragms, reduce water discharge figures by 20%. Suction lift is reduced to 10' (3.05m) dry and 20' (6.10m) wet.

CAUTION: Do not exceed 100 psig (6.9 bars) air supply or liquid pressure.

Dimensions



Consult factory for certified drawings.

Specifications

Flow Rate adjustable to . . . 0-155 gpm (586 lpm)

Port Size

Inlet and Discharge 2.0" ANSI,
150 Class (DIN 50)

Air Inlet 0.50" NPT

Air Exhaust 0.75" NPT

Suction Lift . . . 20' Dry/25' Wet (6.10m/7.62m)

Teflon® 10' Dry/20' Wet (3.05m/6.10m)

Max. Particle Size (Dia.) 0.25"(6.35mm)

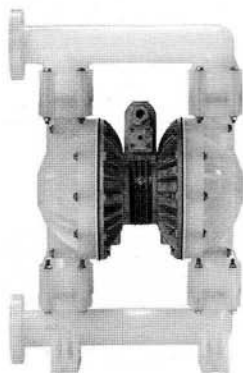
Shipping Weights

Plastic w/Aluminum Center . . . 72 lbs (32.68 kg)

Plastic w/Stainless Center . . . 106 lbs (48.12 kg)

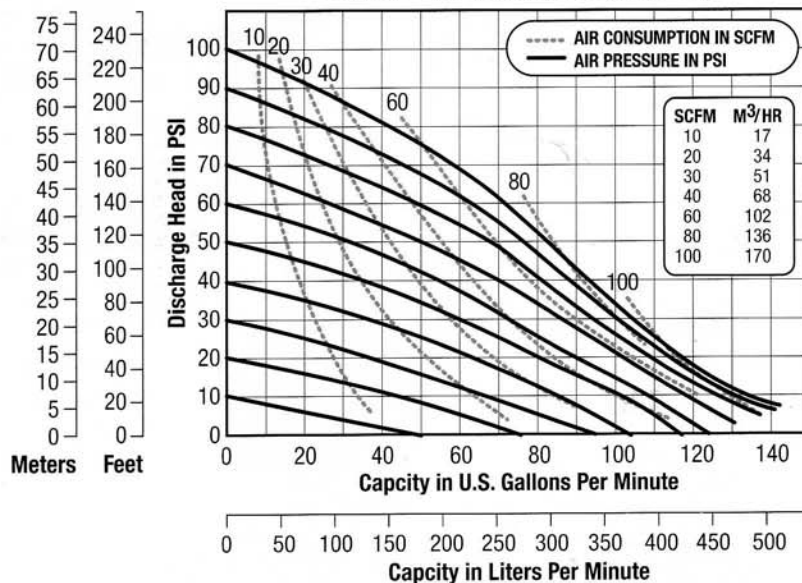
Kynar® w/Aluminum Center . . . 98 lbs (44.49 kg)

Kynar® w/Stainless Center . . . 132 lbs (59.92 kg)



Performance

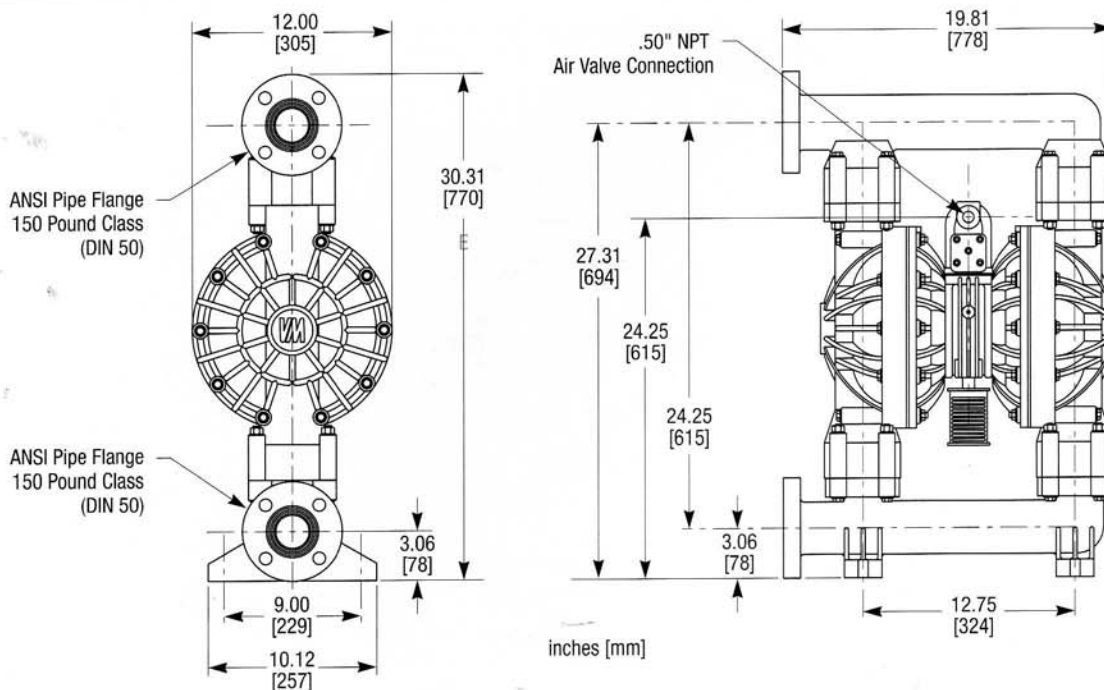
Displacement Per Stroke, 0.70 Gal. (2.65 L)



NOTE: For E2P pumps fitted with Teflon® diaphragms, reduce water discharge figures by 20%. Suction lift is reduced to 10' (3.05m) dry and 20' (6.10m) wet.

CAUTION: Do not exceed 100 psig (6.9 bars) air supply or liquid pressure.

Dimensions



Consult factory for certified drawings.

E3

3" Clamped Metallic Pumps

Screen Mount Available for Aluminum Model, Stainless Steel Air Section Available

Specifications

Flow Rate adjustable to . . . 0-260 gpm (984 lpm)**Port Size**

Inlet and Discharge 3.0" NPT (BSP)

Air Inlet 0.5" NPT**Air Exhaust** 1.0" NPT**Suction Lift** . . . 20' Dry/25' Wet (6.10m/7.62m)

Teflon® 10' Dry/20' Wet (3.05m/6.10m)

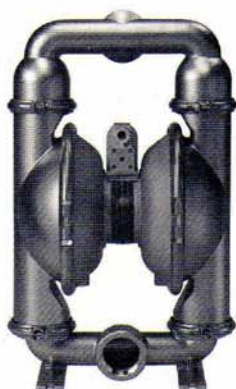
Max. Particle Size (Diam.) 0.375" (9.52mm)**Shipping Weights**

Aluminum 115 lbs (52.16 kg)

Cast Iron 210 lbs (95.25 kg)

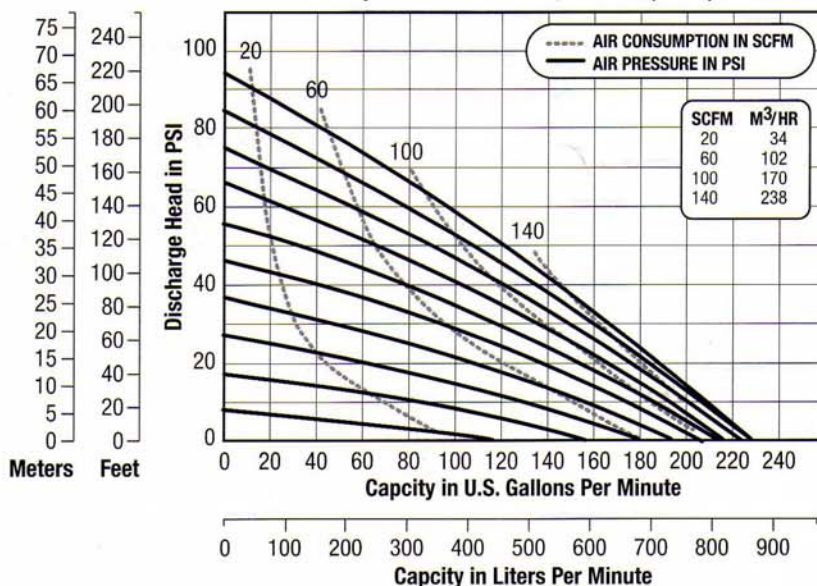
Stainless 210 lbs (95.25 kg)

Hastelloy C 220 lbs (99.79 kg)



Performance

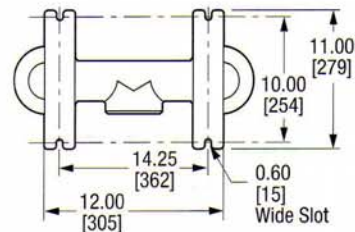
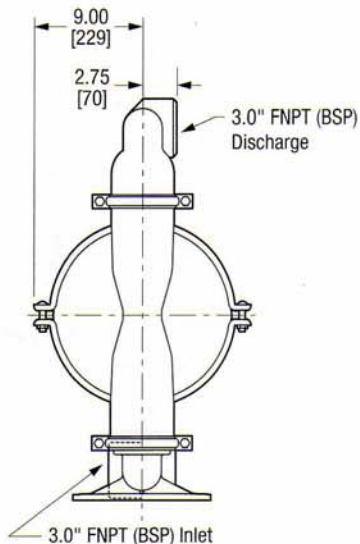
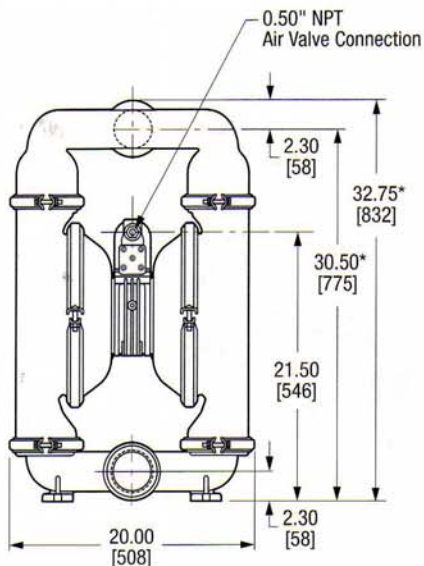
Displacement Per Stroke, 1.38 Gal. (5.22 L)



NOTE: For E3 pumps fitted with Teflon® diaphragms, reduce water discharge figures by 20%.
Suction lift is reduced to 10' (3.05m) dry and 20' (6.10m) wet.

CAUTION: Do not exceed 125 psig (8.5 bars) air supply or liquid pressure.

Dimensions



inches [mm]

* Measurement is for Cast Iron pumps.
Other materials of construction may be slightly smaller.

Consult factory for certified drawings.

Specifications

Flow Rate adjustable to ... 0-70 gpm (265 lpm)

Port Size

Inlet ... 1.50" NPT (BSP)

Discharge ... 1.25" NPT (BSP)

Air Inlet ... 0.50" NPT

Air Exhaust ... 0.75" NPT

Suction Lift ... 15' Dry/25' Wet (4.57m/7.62m)

Teflon® ... 10' Dry/20' Wet (3.05m/6.09m)

Max. Particle Size (Dia.) ... 0.1875" (4.76mm)

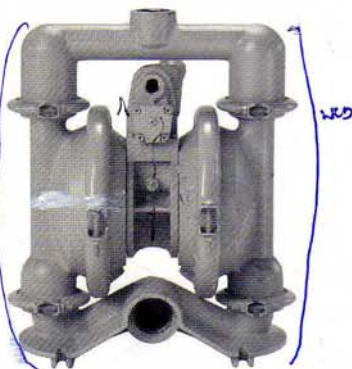
Shipping Weights

Aluminum ... 41 lbs (18.60 kg)

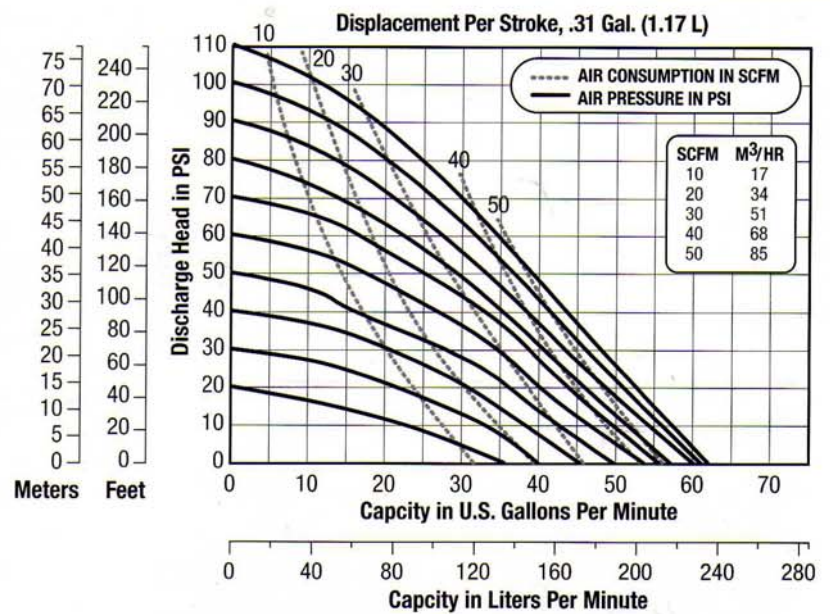
Cast Iron ... 57 lbs (25.85 kg)

Hastelloy C ... 57 lbs (25.85 kg)

Stainless ... 57 lbs (25.85 kg)



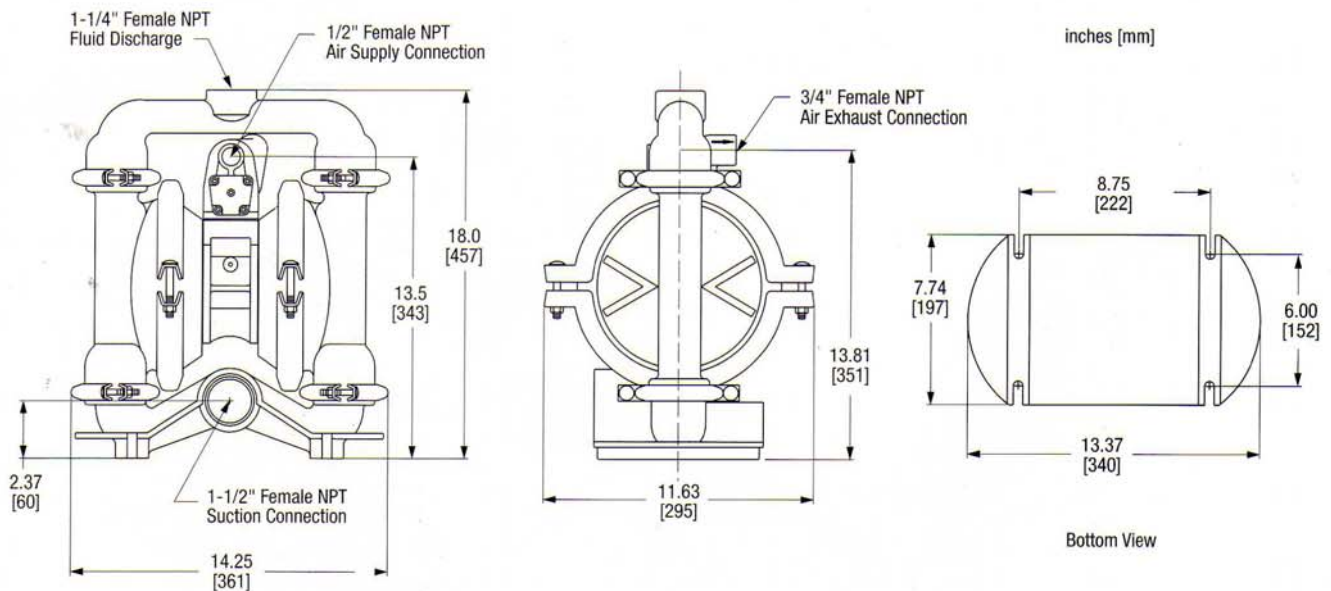
Performance



NOTE: For E4 pumps fitted with Teflon® diaphragms, reduce water discharge figures by 20%. Suction lift is reduced to 10' (3.05m) dry and 20' (6.10m) wet.

CAUTION: Do not exceed 125 psig (8.5 bars) air supply or liquid pressure.

Dimensions



Consult factory for certified drawings.

E4**1-1/2" Bolted Plastic Pumps**

Swivel Inlet/Discharge

Specifications**Flow Rate** adjustable to . . . 0-72 gpm (272 lpm)**Port Size**

Inlet and Discharge . . . 1.50" ANSI/DIN Flanged

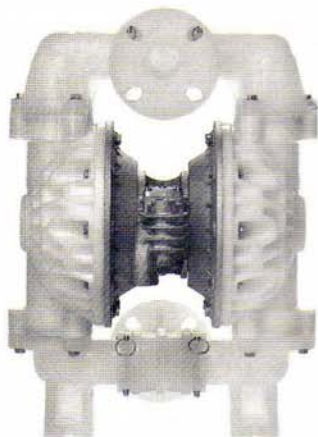
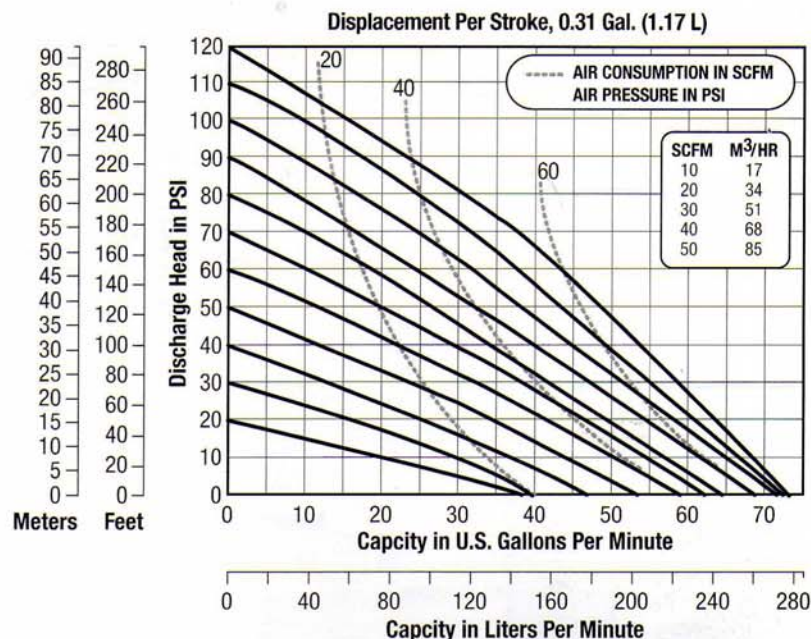
Air Inlet 0.50" NPT**Air Exhaust** 0.75" NPT**Suction Lift** . . . 15' Dry/25' Wet (4.57m/7.62m)

Teflon® 10' Dry/20' Wet (3.05m/6.09m)

Max. Particle Size (Dia.) 0.1875" (4.76mm)**Shipping Weights**

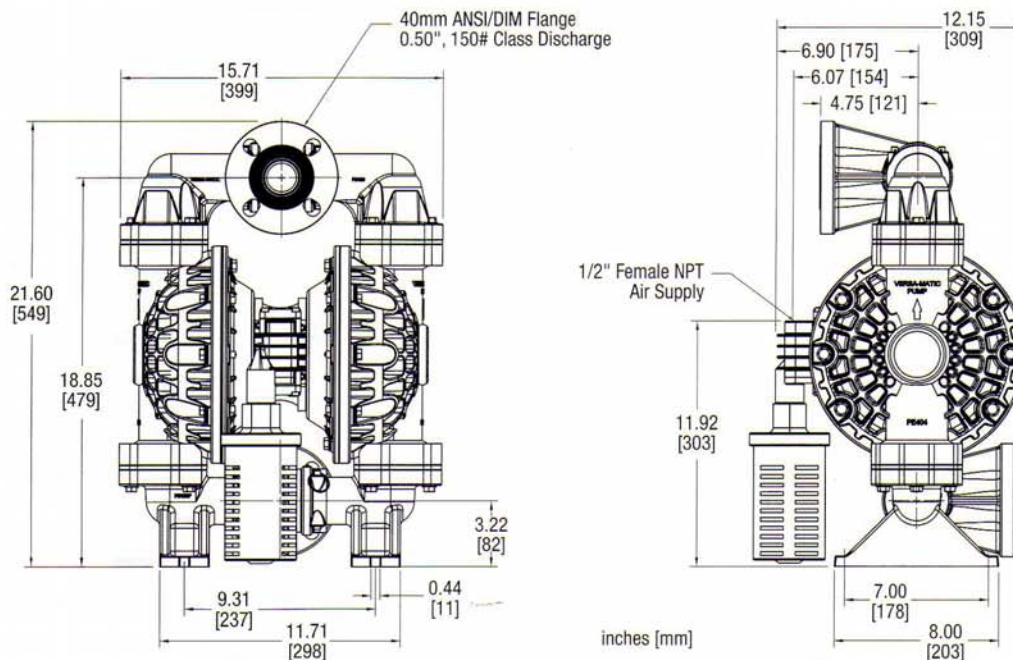
Polypropylene 32 lbs (14.51 kg)

Kynar® 45 lbs (20.41 kg)

**Performance**

NOTE: For E4 pumps fitted with Teflon® diaphragms, reduce water discharge figures by 20%. Suction lift is reduced to 10' (3.05m) dry and 20' (6.10m) wet.

CAUTION: Do not exceed 125 psig (8.5 bars) air supply or liquid pressure.

Dimensions

Consult factory for certified drawings.

Specifications

Flow Rate adjustable to ... 0-14 gpm (53 lpm)

Port Size

Inlet and Discharge 0.50" NPT

Air Inlet 0.375" NPT

Air Exhaust 0.375" NPT

Suction Lift .. 15' Dry/25' Wet (6.096m/7.62m)

Teflon® 5' Dry/10' Wet (1.52m/3.048m)

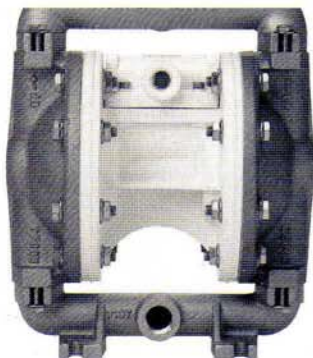
Max. Particle Size (Dia.) 0.0625" (1.6mm)

Shipping Weights

Stainless Steel 18 lbs (8.17 kg)

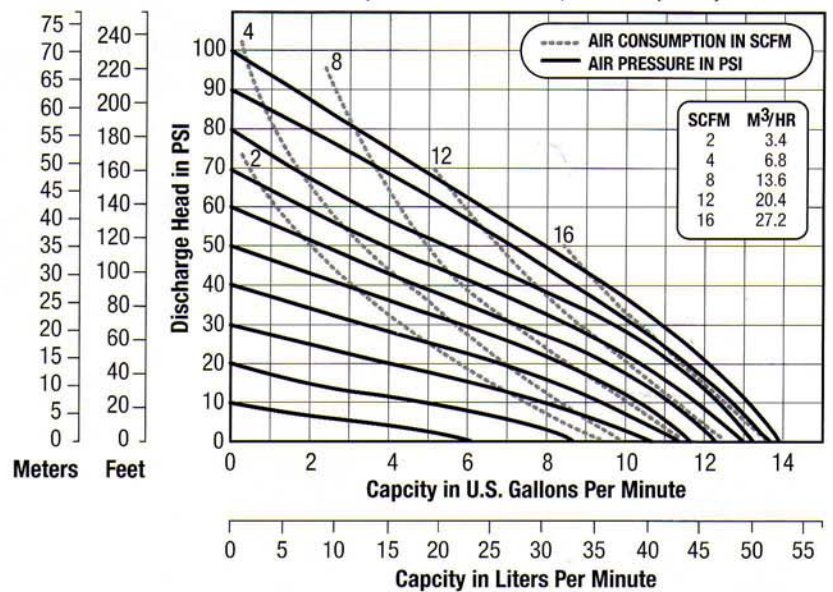
Hastelloy C 18 lbs (8.17 kg)

Aluminum 15 lbs (6.80 kg)



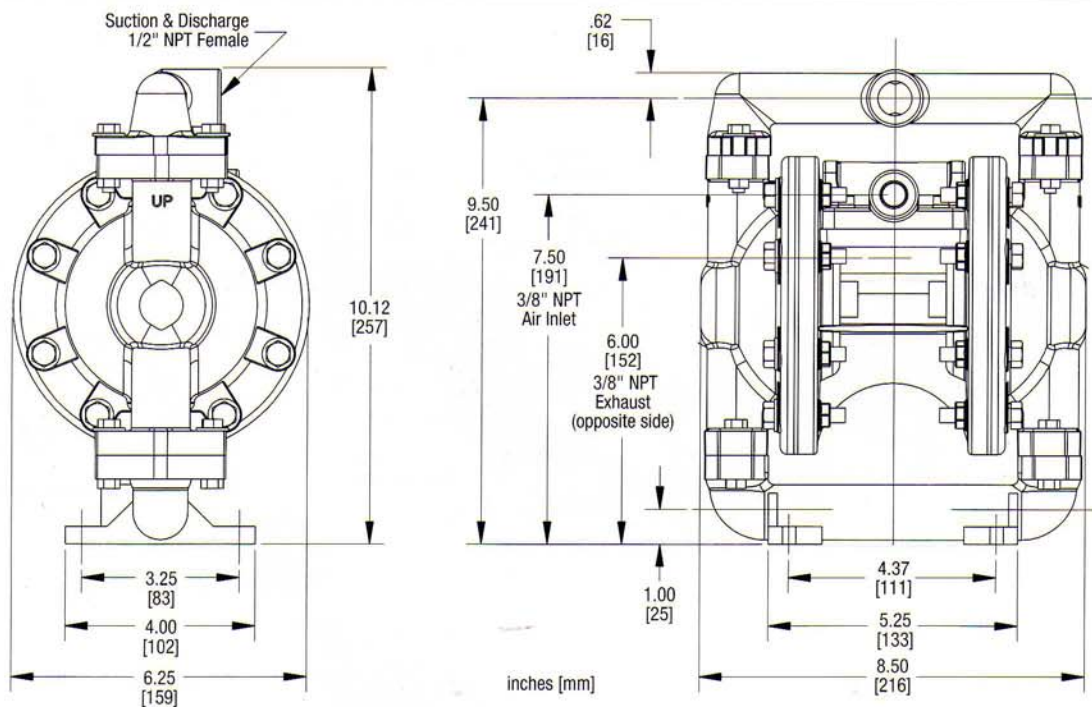
Performance

Displacement Per Stroke, 0.03 Gal. (0.11 L)



CAUTION: Do not exceed 100 psig (6.9 bars) air supply or liquid pressure.

Dimensions



Consult factory for certified drawings.

1/2" Bolted Plastic Pumps

Aluminum Air Section Available

E5

Specifications

Flow Rate adjustable to 0-14 gpm (53 lpm)

Port Size Inlet and Discharge

. 0.50" NPT I.D.

. 0.75" NPT O.D.

Air Inlet 0.375" NPT

Air Exhaust 0.375" NPT

Suction Lift . . 15' Dry/25' Wet (6.096m/7.62m)

Teflon® 5' Dry/10' Wet (1.52m/3.048m)

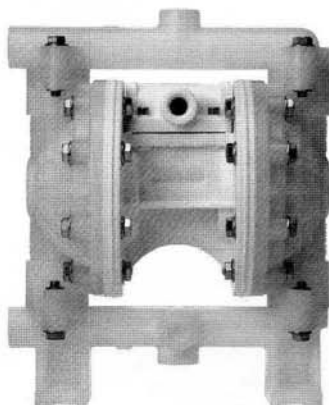
Max. Particle Size (Diameter) . . 0.0625"(1.6mm)

Shipping Weights

Polypropylene 10 lbs (4.54 kg)

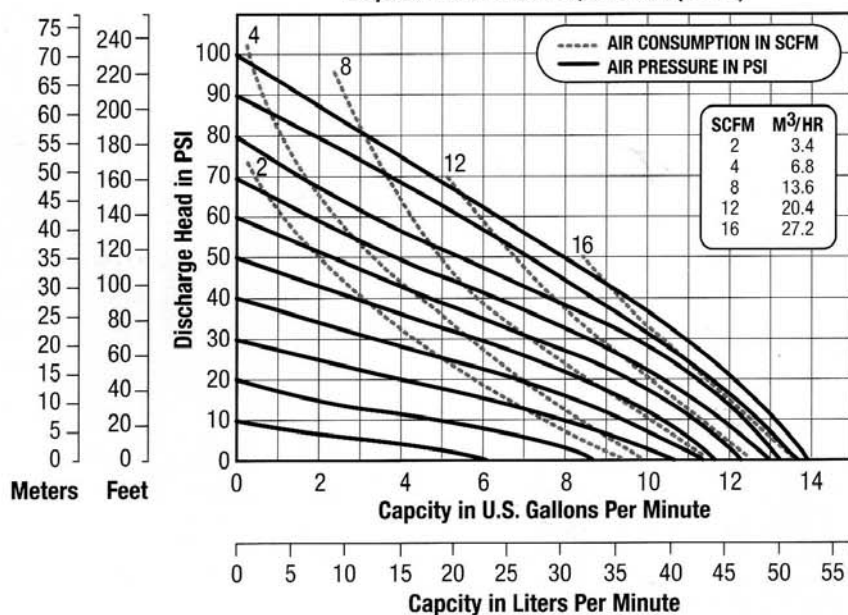
Kynar® 10 lbs (4.54 kg)

Acetal 12 lbs (5.45 kg)



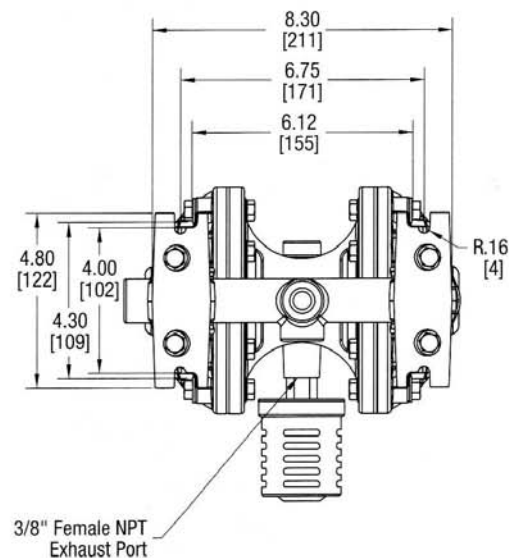
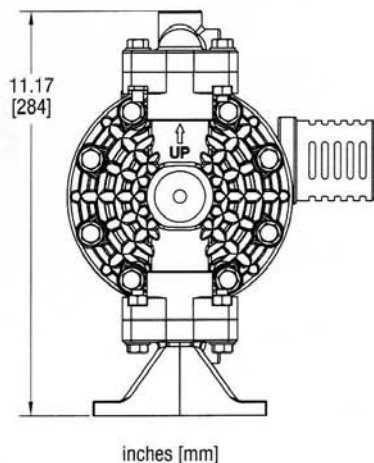
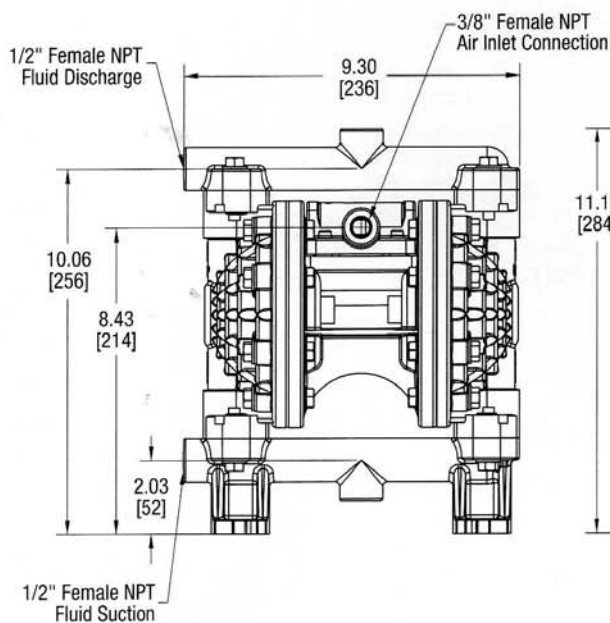
Performance

Displacement Per Stroke, 0.03 Gal. (0.11 L)



CAUTION: Do not exceed 100 psig (6.9 bars) air supply or liquid pressure.

Dimensions



Consult factory for certified drawings.

E5

1/2" Food Processing Pump

Aluminum Air Section Available

Specifications

Flow Rate adjustable to ... 0-14 gpm (53 lpm)

Port Size

Inlet and Discharge 1" Tri-Clamp®

Air Inlet 0.375" NPT

Air Exhaust 0.375" NPT

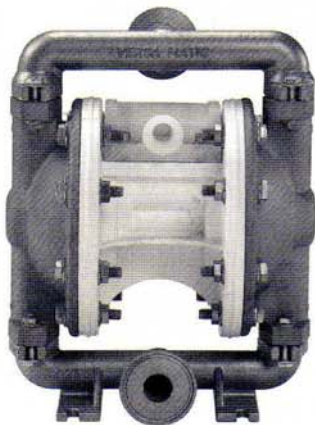
Suction Lift .. 15' Dry/25' Wet (6.096m/7.62m)

Teflon® 5' Dry/10' Wet (1.52m/3.048m)

Max. Particle Size (Dia.) 0.0625" (1.6mm)

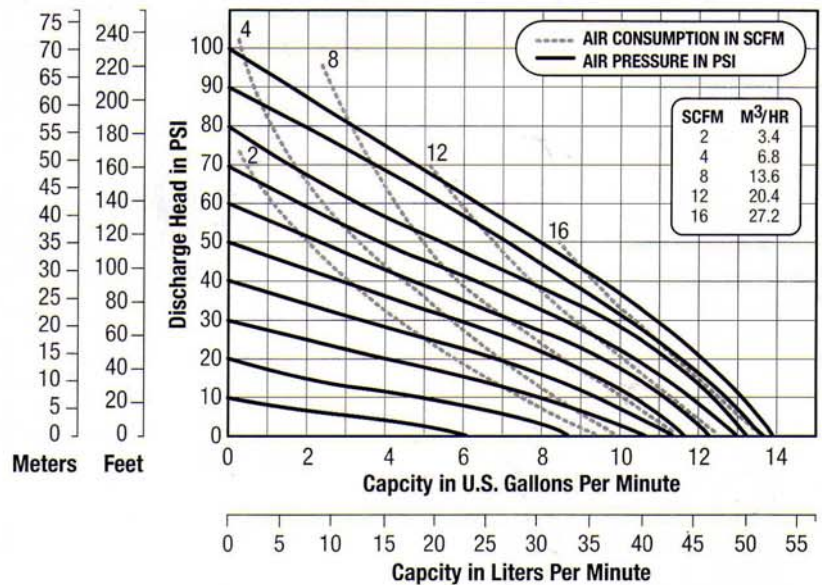
Shipping Weights

Stainless Steel 18 lbs (8.17 kg)



Performance

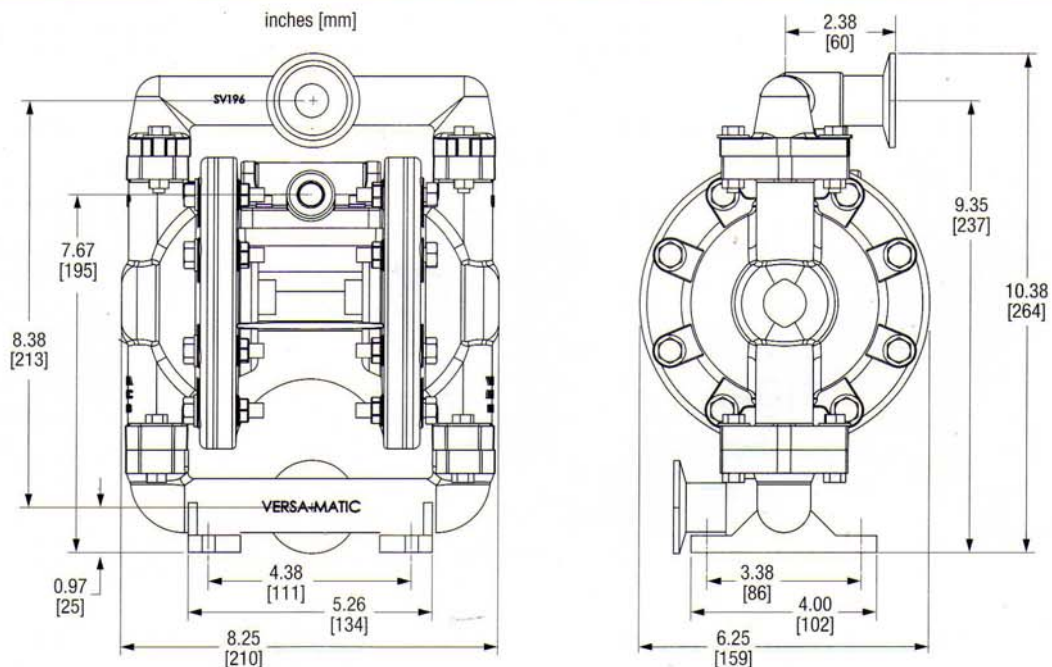
Displacement Per Stroke, 0.03 Gal. (0.11 L)



NOTE: For E5 pumps fitted with Teflon® diaphragms, reduce water discharge figures by 20%. Suction lift is reduced to 10' (3.05m) dry and 20' (6.10m) wet.

CAUTION: Do not exceed 100 psig (6.9 bars) air supply or liquid pressure.

Dimensions

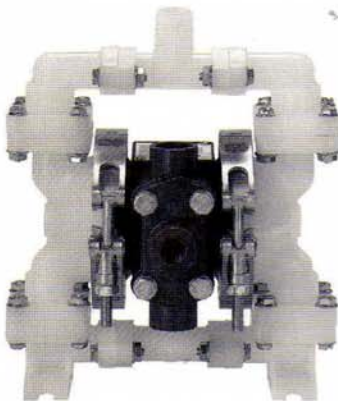
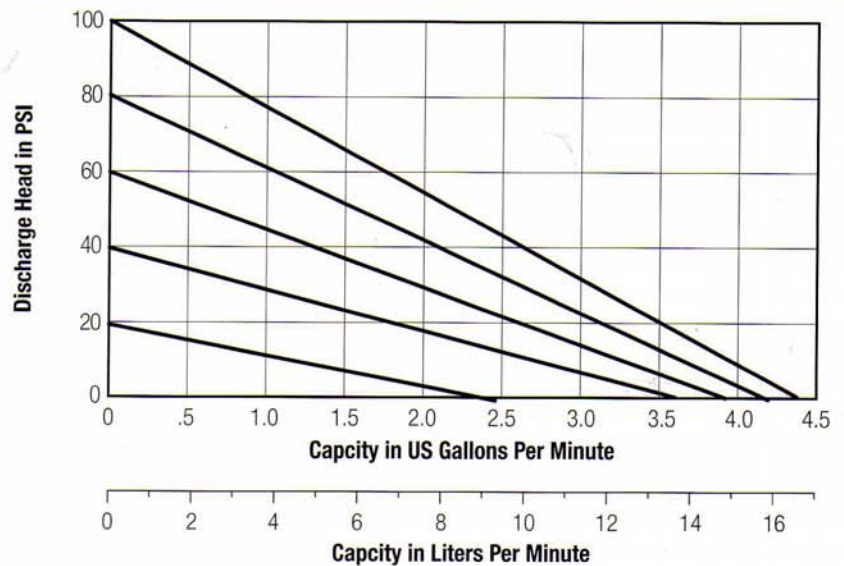


Consult factory for certified drawings.

Specifications

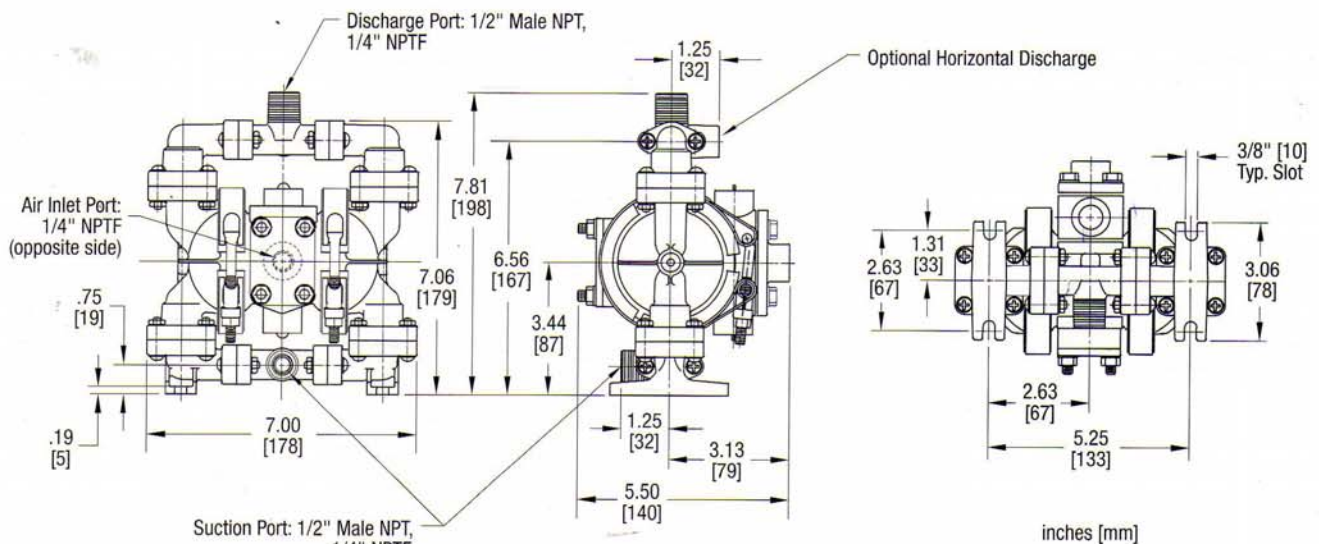
Flow Rate adjustable to 0-4 gpm (15 lpm)
Port Size
 Inlet and Discharge 0.25" NPTF I.D.
 0.50" NPTM O.D.
Air Inlet 0.25" NPTF
Air Exhaust 0.75" NPTF
Suction Lift 5.83' Dry/25.5' Wet (1.78m/777m)
Max. Particle Size (Diameter) . . . 0.3125" (1mm)
Shipping Weights
 Acetal 5.00 lbs (2.27 kg)
 Polypropylene 3.38 lbs (1.53 kg)
 PVDF 4.13 lbs (1.87 kg)

Performance



CAUTION: Do not exceed 125 psig (8.5 bars) air supply or liquid pressure.

Dimensions



Consult factory for certified drawings.

Specifications

Flow Rate adjustable to ... 0-6.8 gpm (26 lpm)

Port Size

Inlet and Discharge ... 3/8" NPTF (BSP)

Air Inlet ... 0.25" NPT

Air Exhaust ... 0.25" NPT

Suction Lift (dry) ... 11' (3.4 m)

Teflon® (dry) ... 11' (3.4 m)

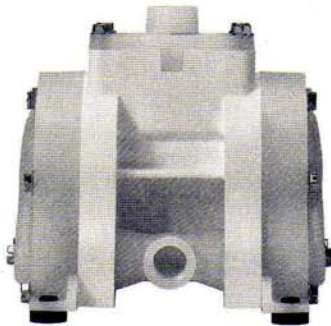
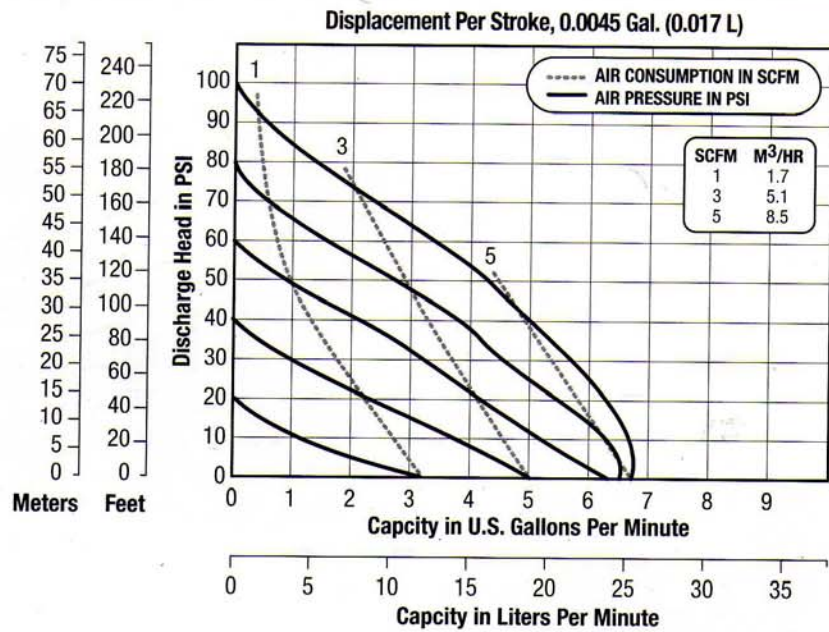
Max. Particle Size (Dia.) ... 0.10" (2.5 mm)

Shipping Weight

Polypropylene ... 3.0 lbs (1.36 kg)

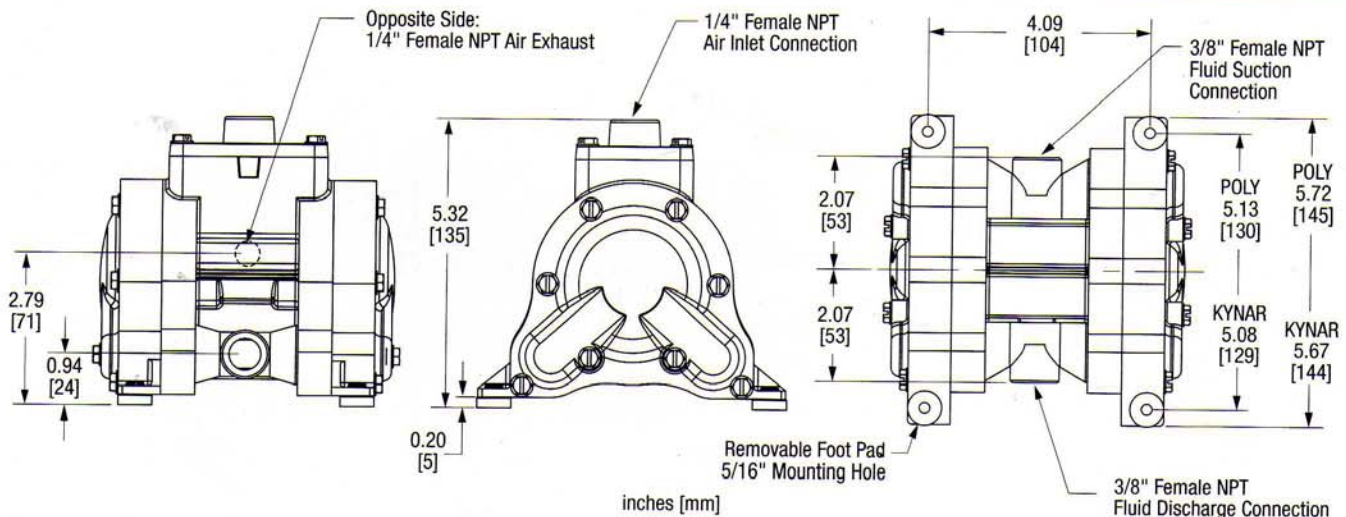
Kynar ... 3.0 lbs (1.36 kg)

Performance



CAUTION: Do not exceed 125 psig (8.5 bars) air supply or liquid pressure.

Dimensions



Consult factory for certified drawings.

- 1 Reinstall o-rings in correct position
(see Operating Manual for assistance)
- 2 Reinstall inner diaphragm plate correctly
- 3 Check system for pressure ratio to pump
- 4 Install gaskets with holes properly aligned with parts
or valve and center block

- 1 Check suction condition (move pump closer to product)
- 2 Clean out around valve ball cage and valve seat area
 - replace valve ball and valve seat if worn or damaged
 - check **Chemical Resistance Chart** for compatibility and proper elastomer match
 - use heavier valve ball material
- 3 Worn valve ball or valve seat (replace)
 - thermal expansion in discharge pipe
(add one way valve into piping)
 - worn fingers in valve ball cage (replace part)
- 4 Check **Chemical Resistance Chart** for compatibility and proper elastomer match
- 5 Consult factory for evaluation and recommendation.
- 6 Clean suction manifold or piping
 - install screen or bag filter

- 1 Replace diaphragms
(and back up diaphragm when using Teflon)
- 1,2 Clean out entire center section of pump
- 2 Check diaphragms for damage and retighten diaphragm plates
- 3 Tighten clamp bands (check for stretching)
- 4 Replace clamp bands (apply grease to inside of clamp band to assist complete compression)
- 5 Replace Teflon gasket tape with Teflon diaphragms
- 6 Check excessive positive suction pressure
(see Operating Manual for recommendations)
 - move pump closer to product
 - add accumulation tank or pulsation dampener as close to the pump as possible on suction side of pump
 - raise pump/place pump on top of tank to reduce inlet pressure
 - install flex hose on inlet and discharge as recommended installation
- 7 Check for excessive inlet pressure or air pressure
 - tighten bolts to recommended torque
(see Operating Manual for recommendation)
- 8 Seat clamp bands with mallet
- 9 Check Operating Manual for recommendations

- 1 Flush pump
 - start pump slow
- 2 Add bumper washers
- 3 Double check tightness of diaphragm plates when installing replacement diaphragms

- 1 Set lubricator on lowest possible setting.
 - Elima-Matic is lube free for intermittent service
 - clean out center section
- 2 Check:
 - air line size and length
 - compressor capacity (HP vs. cfm required)
 - other usage of air in plant
 - air requirement by pump
(pump capacity, product viscosity and specific gravity)
- 3 Disconnect and reconnect air
 - replace with Elima-Matic air valve
- 4 Replace o-rings
- 5 Clean porting in center block to allow proper air flow
- 6 Check compatibility of o-rings with lubrication
(see Operating Manual)
- 7 Clean air valve/filter
 - check for scoring on spool and sleeve
- 8 Clean suction or discharge manifolds/piping
 - clean filter bags or screens
- 9 Reinstall o-rings in correct position
(see Operating Manual for assistance)
- 10 Increase air supply pressure
- 11 Open discharge valve

- 1 Set lubricator on lowest possible setting.
 - Elima-Matic is lube free for intermittent service
- 1,2 Clean center section of pump
- 2 See Operating Manual for recommended lubrication
- 3 Replace standard "V" series with Elima-Matic
- 4 Clean manifolds to allow proper air flow
- 5 Check system to locate deadhead (equilibrium)
 - increase air supply pressure
- 6 Check suction condition (move pump closer to product)
- 7 Check:
 - air line size and length
 - compressor capacity (HP vs cfm required)
 - other usage of air in plant
 - air requirement by pump
(pump capacity, product viscosity and specific gravity)
- 8 Replace o-rings
- 9,10 Consult factory for evaluation and recommendation

- 1 Enlarge pipe diameter on suction side of pump
- 1,2 Move pump closer to product
 - raise pump/place pump on top of tank to reduce inlet pressure
- 2 Add accumulation tank or pulsation dampener as close to the pump as possible
 - start pump slowly (add smart start)
- 3,4 Consult **Chemical Resistance Chart** for compatibility with products, cleaners, temperature limitations and lubrication
- 5 Check model number on pump in comparison to Operating Manual for correct part
- 6 Check Operating Manual for correct installation
- 7 Check model number on pump in comparison to Operating Manual for correct part
(ie: Teflon shaft for Teflon diaphragm)
- 8 Start up pump slowly (manually or with Smart Start)
- 9 Install control or automatic shutoff