

### 1" Elimatic Bolted Non-Metallic

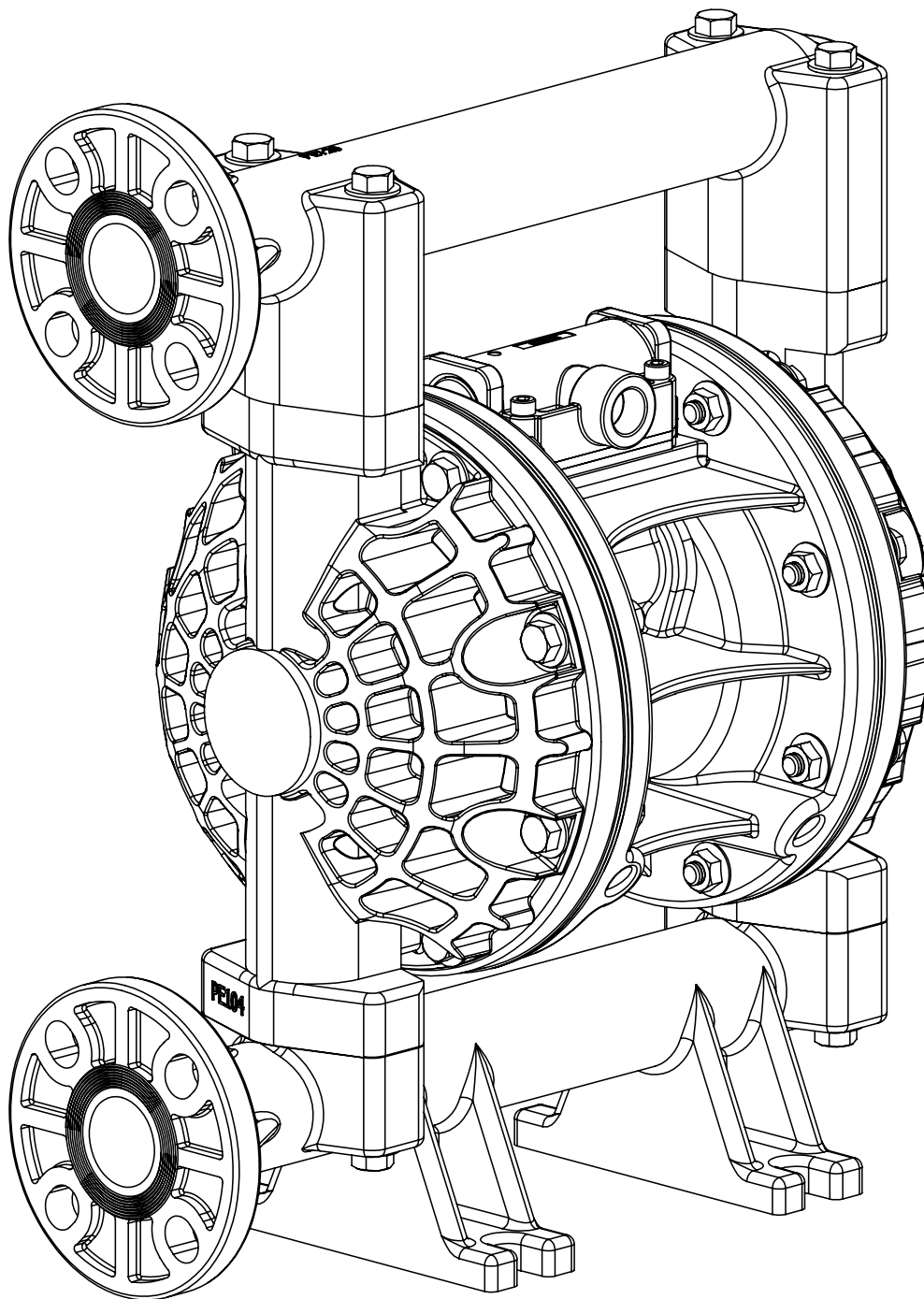
Non-Metallic Center Sections

**E1**

#### E1 Non-Metallic Pumps

- Polypropylene
- PVDF

CE

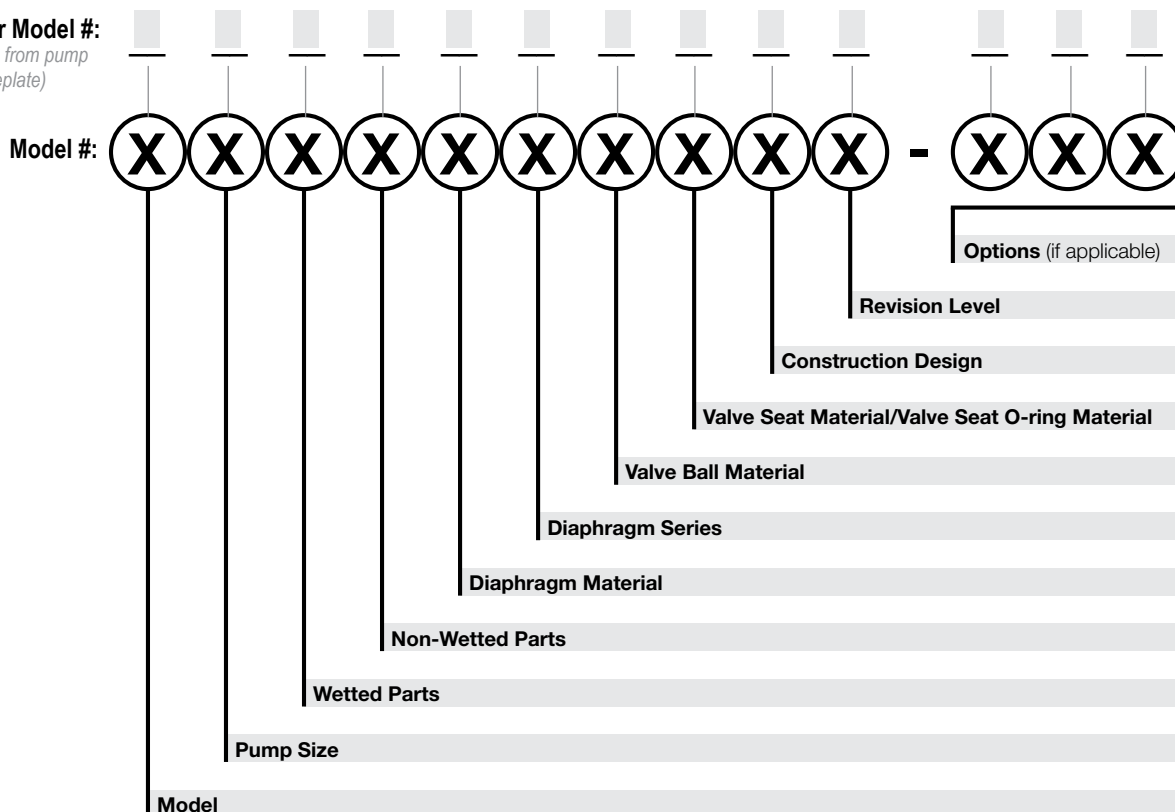


**VERSA-MATIC®**

# Explanation of Pump Nomenclature

Your Serial #: (fill in from pump nameplate) \_\_\_\_\_

Your Model #:  
(fill in from pump  
nameplate)



## Model

E Elima-Matic  
U Ultra-Matic  
V V-Series  
RE AirVantage

## Pump Size

6 1/4"  
8 3/8"  
5 1/2"  
7 3/4"  
1 1"  
4 1-1/4" or 1-1/2"  
2 2"  
3 3"

## Wetted Parts

A Aluminum  
C Cast Iron  
S Stainless Steel  
H Alloy C  
P Polypropylene  
K Kynar  
G Groundable Acetal  
B Aluminum (screen mount)

## Non-Wetted Parts

A Aluminum  
S Stainless Steel  
P Polypropylene  
G Groundable Acetal  
Z PTFE-coated Aluminum  
J Nickel-plated Aluminum  
C Cast Iron  
Q Epoxy-Coated Aluminum

## Diaphragm Material

1 Neoprene  
2 Nitrile (Nitrile)  
3 FKM (Fluorocarbon)  
4 EPDM  
5 PTFE  
6 Santoprene XL  
7 Hytrel  
9 Geolast

## Diaphragm Series

R Rugged  
D Dome  
X Thermo-Matic  
T Tef-Matic (2-piece)  
B Versa-Tuff (1-piece)  
F FUSION (one-piece integrated plate)

## Valve Ball Material Valve

1 Neoprene  
2 Nitrile  
3 (FKM) Fluorocarbon  
4 EPDM  
5 PTFE  
6 Santoprene XL  
7 Hytrel  
8 Polyurethane  
9 Geolast  
A Acetal  
S Stainless Steel

## Seat/Valve Seat O-Ring Material

1 Neoprene  
2 Nitrile  
3 (FKM) Fluorocarbon  
4 EPDM  
5 PTFE  
6 Santoprene XL  
7 Hytrel  
8 Polyurethane  
9 Geolast  
A Aluminum w/ PTFE O-Rings  
S Stainless Steel w/ PTFE O-Rings  
C Carbon Steel w/ PTFE O-Rings  
H Alloy C w/ PTFE O-Rings  
T PTFE Encapsulated Silicone O-Rings

## Construction Design

9 Bolted  
0 Clamped

# Materials

| Material Profile:                                                                                                                                                                                                                                                               | Operating Temperatures: |                |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|----------------|
|                                                                                                                                                                                                                                                                                 | Max.                    | Min.           |
| <b>CAUTION!</b> Operating temperature limitations are as follows:                                                                                                                                                                                                               |                         |                |
| <b>Conductive Acetal:</b> Tough, impact resistant, ductile. Good abrasion resistance and low friction surface. Generally inert, with good chemical resistance except for strong acids and oxidizing agents.                                                                     | 190°F<br>88°C           | -20°F<br>-29°C |
| <b>EPDM:</b> Shows very good water and chemical resistance. Has poor resistance to oils and solvents, but is fair in ketones and alcohols.                                                                                                                                      | 280°F<br>138°C          | -40°F<br>-40°C |
| <b>FKM:</b> (Fluorocarbon) Shows good resistance to a wide range of oils and solvents; especially all aliphatic, aromatic and halogenated hydrocarbons, acids, animal and vegetable oils. Hot water or hot aqueous solutions (over 70°F) will attack FKM.                       | 350°F<br>177°C          | -40°F<br>-40°C |
| <b>Hytrel®:</b> Good on acids, bases, amines and glycols at room temperatures only.                                                                                                                                                                                             | 220°F<br>104°C          | -20°F<br>-29°C |
| <b>Neoprene:</b> All purpose. Resistance to vegetable oils. Generally not affected by moderate chemicals, fats, greases and many oils and solvents. Generally attacked by strong oxidizing acids, ketones, esters and nitro hydrocarbons and chlorinated aromatic hydrocarbons. | 200°F<br>93°C           | -10°F<br>-23°C |
| <b>Nitrile:</b> General purpose, oil-resistant. Shows good solvent, oil, water and hydraulic fluid resistance. Should not be used with highly polar solvents like acetone and MEK, ozone, chlorinated hydrocarbons and nitro hydrocarbons.                                      | 190°F<br>88°C           | -10°F<br>-23°C |
| <b>Nylon:</b> 6/6 High strength and toughness over a wide temperature range. Moderate to good resistance to fuels, oils and chemicals.                                                                                                                                          | 180°F<br>82°C           | 32°F<br>0°C    |

|                                                                                                                                                                                                                                                                                                                                          |                |                |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|----------------|
| <b>Polypropylene:</b> A thermoplastic polymer. Moderate tensile and flex strength. Resists strong acids and alkali. Attacked by chlorine, fuming nitric acid and other strong oxidizing agents.                                                                                                                                          | 180°F<br>82°C  | 32°F<br>0°C    |
| <b>PVDF:</b> (Polyvinylidene Fluoride) A durable fluoroplastic with excellent chemical resistance. Excellent for UV applications. High tensile strength and impact resistance.                                                                                                                                                           | 250°F<br>121°C | 0°F<br>-18°C   |
| <b>Santoprene®:</b> Injection molded thermoplastic elastomer with no fabric layer. Long mechanical flex life. Excellent abrasion resistance.                                                                                                                                                                                             | 275°F<br>135°C | -40°F<br>-40°C |
| <b>UHMW PE:</b> A thermoplastic that is highly resistant to a broad range of chemicals. Exhibits outstanding abrasion and impact resistance, along with environmental stress-cracking resistance.                                                                                                                                        | 180°F<br>82°C  | -35°F<br>-37°C |
| <b>Urethane:</b> Shows good resistance to abrasives. Has poor resistance to most solvents and oils.                                                                                                                                                                                                                                      | 150°F<br>66°C  | 32°F<br>0°C    |
| <b>Virgin PTFE:</b> (PFA/TFE) Chemically inert, virtually impervious. Very few chemicals are known to chemically react with PTFE; molten alkali metals, turbulent liquid or gaseous fluorine and a few fluoro-chemicals such as chlorine trifluoride or oxygen difluoride which readily liberate free fluorine at elevated temperatures. | 220°F<br>104°C | -35°F<br>-37°C |
| <i>Maximum and Minimum Temperatures are the limits for which these materials can be operated. Temperatures coupled with pressure affect the longevity of diaphragm pump components. Maximum life should not be expected at the extreme limits of the temperature ranges.</i>                                                             |                |                |
| <b>Metals:</b>                                                                                                                                                                                                                                                                                                                           |                |                |
| <b>Alloy C:</b> Equal to ASTM494 CW-12M-1 specification for nickel and nickel alloy.                                                                                                                                                                                                                                                     |                |                |
| <b>Stainless Steel:</b> Equal to or exceeding ASTM specification A743 CF-8M for corrosion resistant iron chromium, iron chromium nickel and nickel based alloy castings for general applications. Commonly referred to as 316 Stainless Steel in the pump industry.                                                                      |                |                |

For specific applications, always consult the Chemical Resistance Chart.

## AFTERMARKET PARTS

### RIGHT PART, RIGHT NOW

**Pumper Parts** is your single source for parts that fit Air-Operated Double Diaphragm (AODD) pumps

- Wilden®
- ARO®
- Yamada®

**Designed to perform equal to or greater than original equipment manufacture.**



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# Performance

## E1 1" Bolted Plastic Rubber and TPE Fitted

### Flow Rate

Adjustable to . . . . . 0-43 gpm (162.8 LPM)

### Port Size

Suction . . . . . 1" 150# ANSI/DIN 325 Flange

Discharge . . . 1" 150# ANSI/DIN 325 Flange

**Air Inlet** . . . . . 3/8" NPT

**Air Exhaust** . . . . . 1/2" NPT

### Suction Lift

Dry . . . . . 11' (3.4 m)

Wet . . . . . 31' (9.4 m)

### Max Solid Size (Diameter)

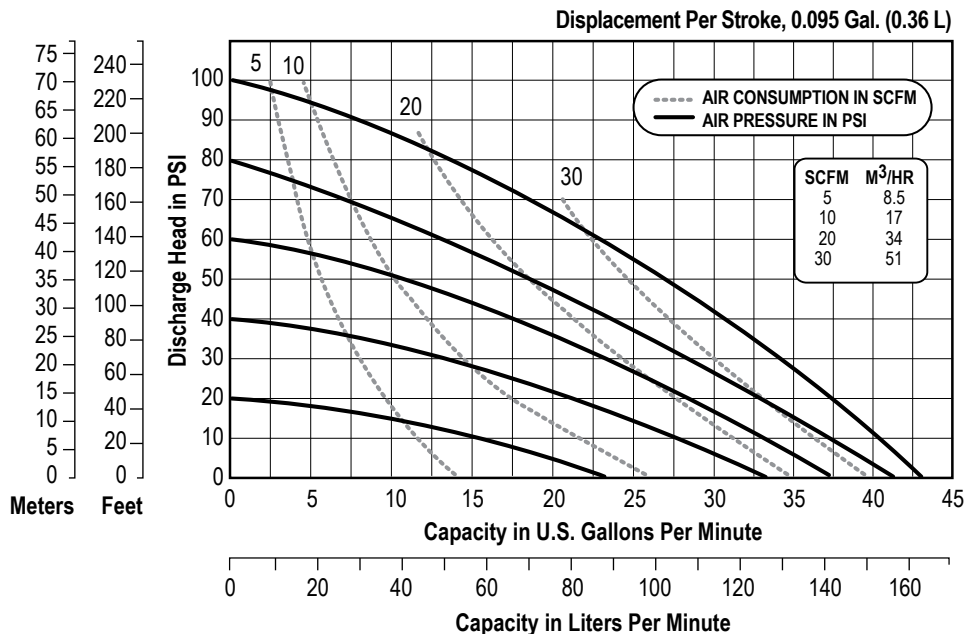
. . . . . 1/8" (3.1 mm)

**Max Noise Level** . . . . . 94 dB(A)

### Shipping Weights

Polypropylene . . . . . 17 lbs (7.7 kg)

PVDF . . . . . 22 lbs (10 kg)



NOTE: Performance based on the following: elastomeric fitted pump, flooded suction, water at ambient conditions. The use of other materials and varying hydraulic conditions may result in deviations in excess of 5%.

## E1 1" Bolted Plastic PTFE Fitted

### Flow Rate

Adjustable to . . . . . 0-36 gpm (136.3 LPM)

### Port Size

Suction . . . . . 1" 150# ANSI/DIN 325 Flange

Discharge . . . 1" 150# ANSI/DIN 325 Flange

**Air Inlet** . . . . . 3/8" NPT

**Air Exhaust** . . . . . 1/2" NPT

### Suction Lift

Dry . . . . . 7' (2.1 m)

Wet . . . . . 31' (9.4 m)

### Max Solid Size (Diameter)

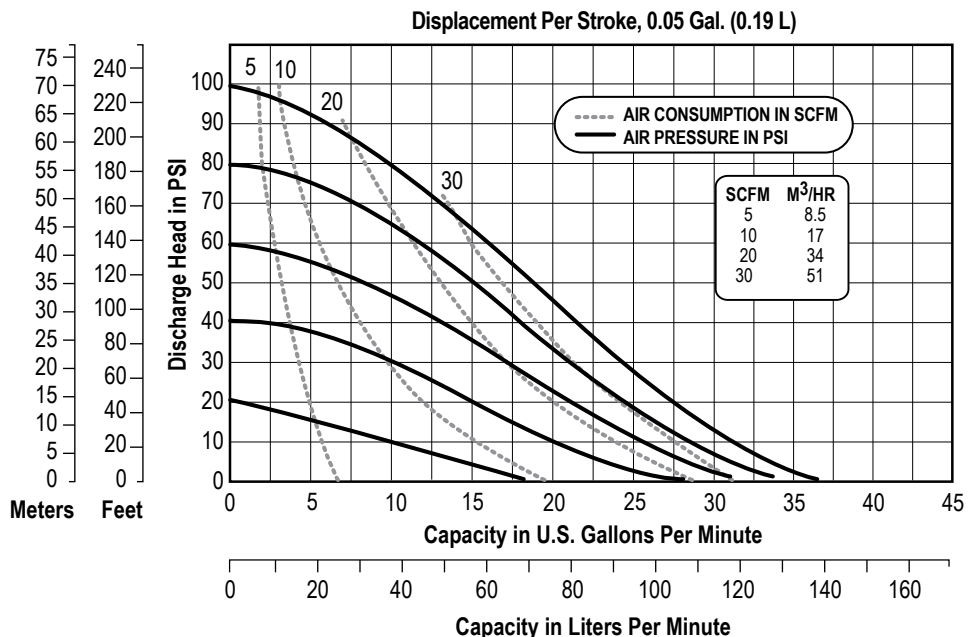
. . . . . 1/8" (3.2 mm)

**Max Noise Level** . . . . . 95 dB(A)

### Shipping Weights

Polypropylene . . . . . 17 lbs (7.7 kg)

PVDF . . . . . 22 lbs (10 kg)



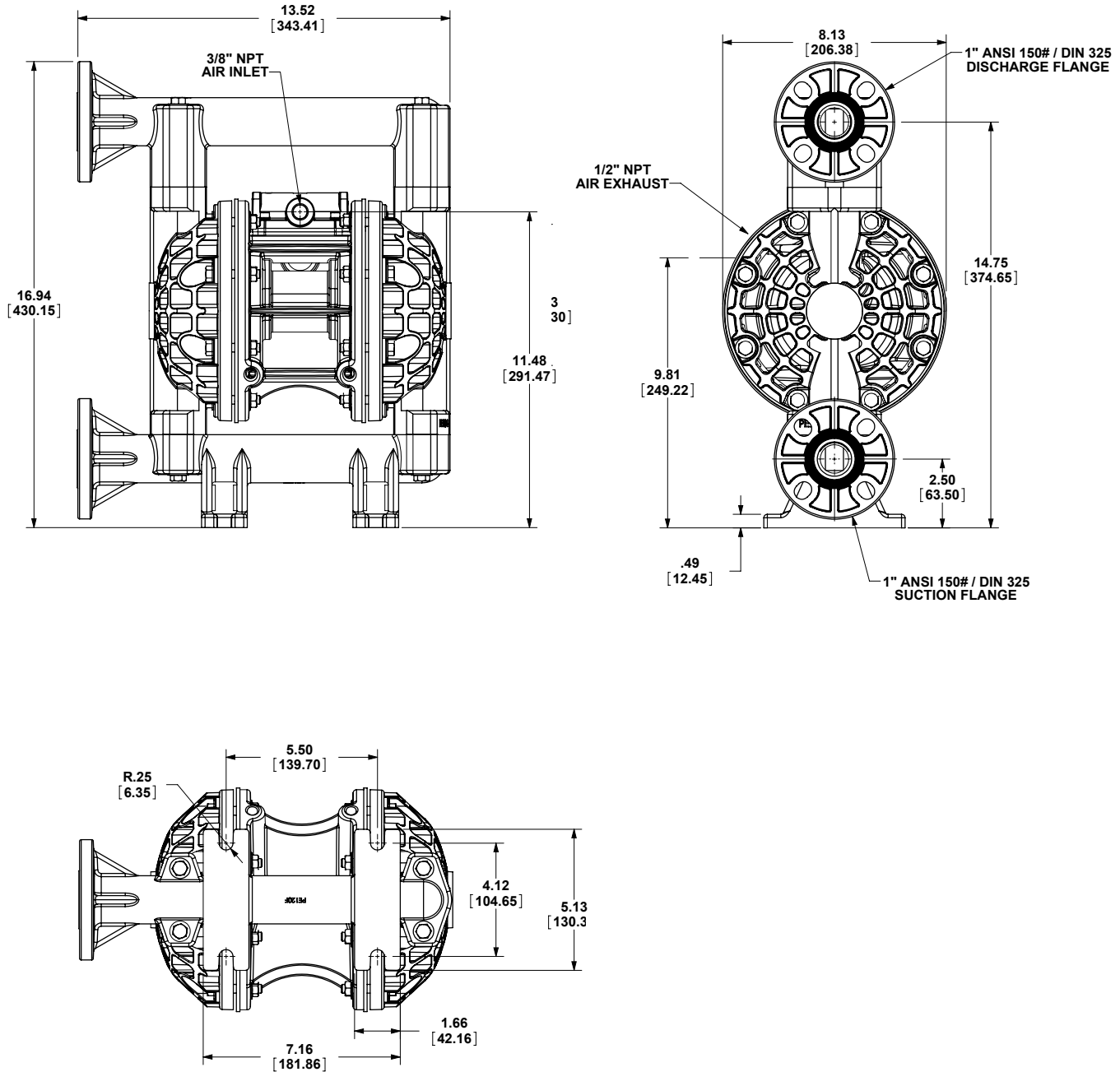
NOTE: Performance based on the following: PTFE fitted pump, flooded suction, water at ambient conditions. The use of other materials and varying hydraulic conditions may result in deviations in excess of 5%.

# Dimensional Drawings

## E1 Non-Metallic Bolted

Dimensions in inches (mm dimensions in brackets)

The dimensions on this drawing are for reference only. A certified drawing can be requested if physical dimensions are needed.

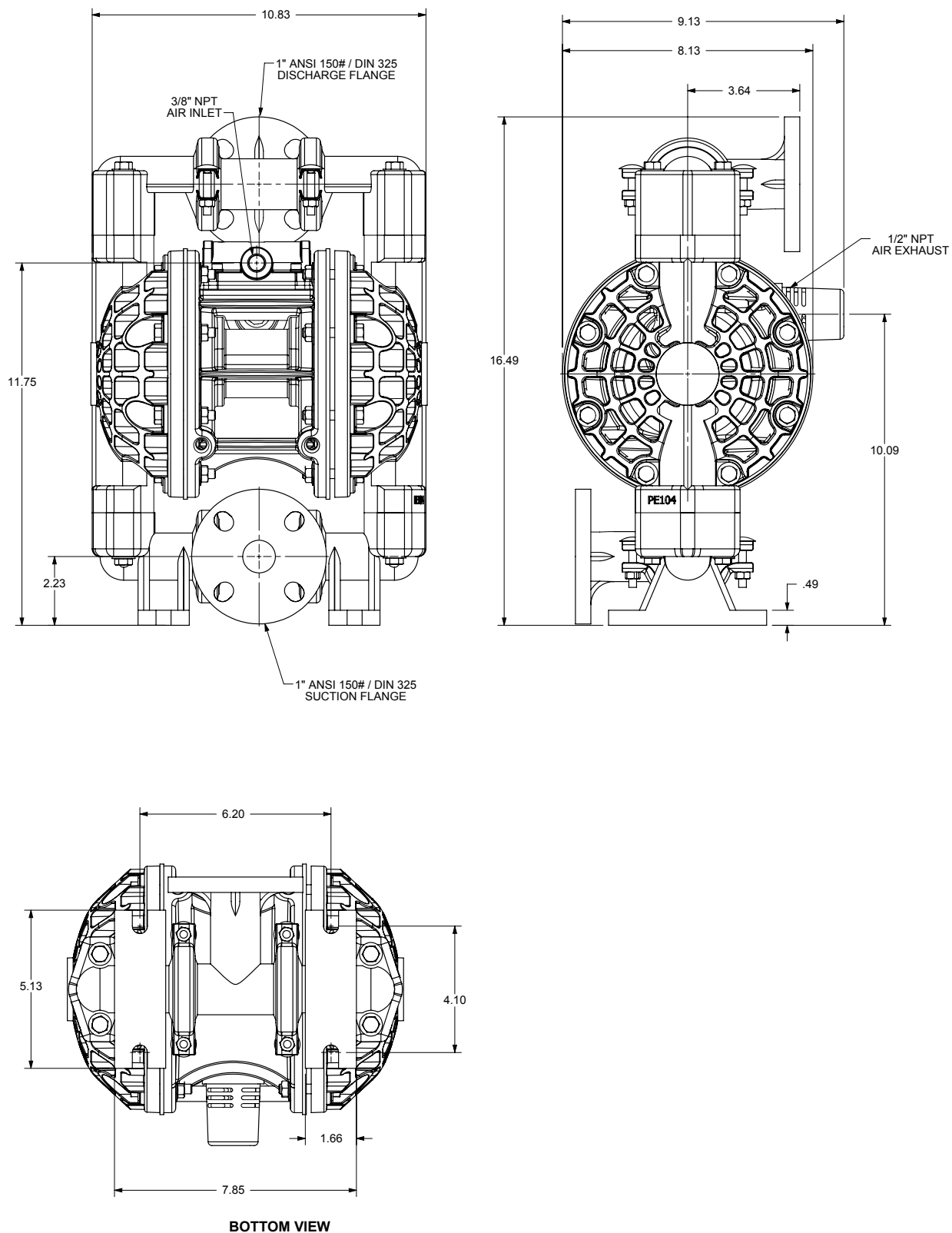


# Dimensional Drawings

## E1 Non-Metallic Bolted (Center Ported Manifold Option)

Dimensions in inches (mm dimensions in brackets)

The dimensions on this drawing are for reference only. A certified drawing can be requested if physical dimensions are needed.



# Written Warranty

## 5 - YEAR Limited Product Warranty

Quality System ISO9001 Certified • Environmental Management Systems ISO14001 Certified

Versa-Matic warrants to the original end-use purchaser that no product sold by Versa-Matic that bears a Versa-Matic brand shall fail under normal use and service due to a defect in material or workmanship within five years from the date of shipment from Versa-Matic's factory.

~ See complete warranty at <http://www.versamatic.com/pdfs/VM%20Product%20Warranty.pdf> ~

### DECLARATION OF CONFORMITY

DECLARATION DE CONFORMITE • DECLARACION DE CONFORMIDAD • ERKLÄRUNG BEZÜGLICH EINHALTUNG DER VORSCHRIFTEN  
DICHIARAZIONE DI CONFORMITÀ • CONFORMITEITSVERKLARING • DEKLARATION OM ÖVERENSSTÄMMELSE  
EF-OVERENSSTÄMMELSESERKLÄRING • VAATIMUSTENMUKAISUUSVAKUUTUS • SAMSVARSERKLÄRING  
DECLARAÇÃO DE CONFORMIDADE

#### MANUFACTURED BY:

FABRIQUE PAR:  
FABRICADA POR:  
HERGESTELLT VON:  
FABBRICATO DA:  
VERVAARDIGD DOOR:  
TILLVERKAD AV:  
FABRIKANT:  
VALMISTAJA:  
PRODUSENT:  
FABRICANTE:

VERSA-MATIC®  
Warren Rupp, Inc.  
A Unit of IDEX Corporation  
800 North Main Street  
P.O. Box 1568  
Mansfield, OH 44901-1568 USA

Tel: 419-526-7296  
Fax: 419-526-7289



#### PUMP MODEL SERIES: E SERIES, V SERIES, VT SERIES, VSMA3, SPA15, RE SERIES AND U2 SERIES

#### This product complies with the following European Community Directives:

Ce produit est conforme aux directives de la Communauté européenne suivantes:

Este producto cumple con las siguientes Directrices de la Comunidad Europea:

Dieses produkt erfüllt die folgenden Vorschriften der Europäischen Gemeinschaft:

Questo prodotto è conforme alle seguenti direttive CEE:

Dir produkt voldoet aan de volgende EG-richtlijnen:

Denna produkt överensstämmer med följande EU direktiv:

Versa-Matic, Inc., erklærer herved som fabrikant, at ovennævnte produkt er i overensstemmelse med bestemmelserne i Direktive:

Tämä tuote täyttää seuraavien EC Direktiivien vaatimukset:

Dette produkt oppfyller kravene til følgende EC Direktiver:

Este produto está de acordo com as seguintes Directivas comunitárias:

**2006/42/EC**  
on Machinery, according  
to Annex VIII

#### This product has used the following harmonized standards to verify conformance:

Ce matériel est fabriqué selon les normes harmonisées suivantes, afin d'en garantir la conformité:

Este producto cumple con las siguientes directrices de la comunidad europea:

Dieses produkt ist nach folgenden harmonisierten standards gefertigt worden, die übereinstimmung wird bestätigt:

Questo prodotto ha utilizzato i seguenti standards per verificare la conformità:

De volgende geharmoniseerde normen werden gehanteerd om de conformiteit van dit produkt te garanderen:

För denna produkt har följande harmoniserande standarder använts för att bekräfta överensstämmelse:

Harmoniserede standarder, der er benyttet:

Tässä tuotteessa on sovellettu seuraavia yhdenmukaistettuja standardeja:

Dette produkt er produsert i overensstemmelse med følgende harmoniserte standarder:

Este produto utilizou os seguintes padrões harmonizados para verificar conformidade:

**EN809:1998+**  
**A1:2009**

#### AUTHORIZED/APPROVED BY:

Approuve par:  
Aprobado por:  
Genehmigt von:  
approvato da:  
Goedgekeurd door:  
Underskrift:  
Valtuutettuna:  
Bemyndiget av:  
Autorizado Por:

  
Dave Roseberry  
Engineering Manager

**DATE: August 10, 2011**

FECHA:  
DATUM:  
DATA:  
DATO:  
PÄIVÄYS:



VMQR 044FM

04/19/2012 REV 07



# Genuine Parts, Real Value



**Repair Kit**

**VS.**



**Partial Repair**

**=**



## Ordering Parts Kits Over Individual Components:

- *Reduces frequency of repairs*
- *Reduces downtime*
- *Reduces cost*
- *Increase your uptime*
- *Improve parts availability*
- *Extended service life*

| <b>COST OF<br/>WET END<br/>REPAIR</b> | <br>Partial Repair<br>(1 Diaphragm) | <br>Complete Repair<br>Kit |
|---------------------------------------|------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|
| Parts                                 | \$56                                                                                                                   | \$148                                                                                                          |
| Labor                                 | \$125                                                                                                                  | \$125                                                                                                          |
| Lost Product                          | \$200                                                                                                                  | \$200                                                                                                          |
| Down-Time                             | \$1,000                                                                                                                | \$1,000                                                                                                        |
| Annual Frequency<br>of Repair         | <b>2</b>                                                                                                               | <b>1</b>                                                                                                       |
| Estimated<br>Cost Per Repair:         | \$1,381                                                                                                                | \$1,473                                                                                                        |
| Estimated<br>Annual Cost:             | \$2,772                                                                                                                | \$1,473                                                                                                        |
| Estimated<br>Annual Savings:*         | <b>\$0</b>                                                                                                             | <b>\$1,299</b>                                                                                                 |

**Example Data:**

Repair = 1 hour • Pump model #: E2AA2D220-OE • Buna wet-end repair  
Labor rate fully burdened at \$125/hour • Lost product assumes paint