

Versa-Matic®, IDEX Corp, Inc. • A Unit of IDEX Corp. • 800 North Main Street, P.O. Box 1568 Mansfield, Ohio 44901-1568 USA • TEL (419) 526-7296 • Fax (419) 526-7289 www.versamatic.com OM-E2MMC-FDA-0409

**E2** 

FGBPC

50

### Operating and Service Manual Model 2" Elima-Matic™ Food Processing Pumps

### **Table of Contents**

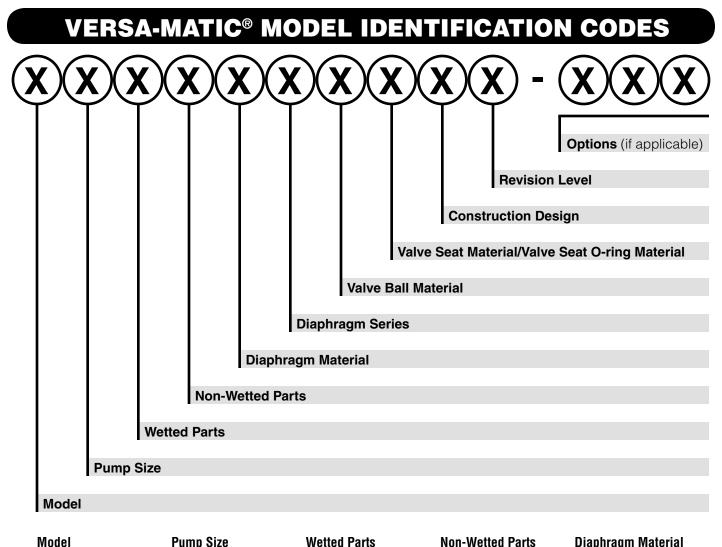
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# WARNINGS, CAUTIONS & NOTICES

Please read all cautions, warnings and notes completely before installation and start-up. It is the responsibility of the purchaser to retain this manual for reference. Failure to comply with the recommendations stated in this manual may damage the pump and void the factory warranty.

WAR	IINGS
To prevent static sparking the pump, piping,	Pump exhaust may contain contaminants that
valves, and containers must be grounded. Fire	can cause serious injury. Take precautions
or explosion can occur when handling flammable fluids	to pipe exhaust away from work area if pumping
and whenever discharge of static electricity is a hazard.	chemicals, hazardous or flammable materials.
CAUT	IONS
You must check the tightness of all hardware prior to installation.	Do not exceed the maximum inlet air pressure as stated on the pump model tag.
Maximum temperature limits are based on	Disconnect the compressed air line to the
mechanical stress only. Certain chemicals	pump and allow all air pressure to bleed
will significantly reduce maximum safe operating	from pump prior to performing any maintenance
temperatures. For chemical compatibility and	on the pump. Disconnect all intake, discharge and
temperature limits please refer to the Chemical	air lines. Drain the pump and dispose of fluid into a
Resistance Guide.	suitable container.
Check temperature limits for all wetted components when choosing pump materials. Temperature limits may vary depending on the material.	All operators of the equipment should be properly trained to ensure safe working practices.
The process fluid and cleaning fluids must be	Never allow the piping system to be supported
chemically compatible with all wetted pump	by the pump manifolds or valve housing.
components. Please refer to the Chemical Resistance	These components are not designed to support
Guide for additional information.	structural weight and pump failure may result.
Thoroughly flush pump before installing into	Noise levels can exceed 85 dBA.
process lines. FDA and sanitary approved	Always wear ear and eye protection when
pumps should be cleaned or sanitized before use.	operating or repairing pumps.
NOT	ICES
Blow out air line for at least 15 seconds	Compressed air should not be applied to
before attaching to pump to make sure that all	the exhaust port. If this happens the pump will
debris is removed. Use an in-line air filter.	not function.
Clamp style pumps fitted with PTFE or XLTPE	Before disassembly of clamp band pumps,
come standard from the factory with expanded	mark a line from each liquid chamber to its
PTFE liquid chamber gaskets. <b>PTFE gaskets cannot</b>	corresponding air chamber. This will ensure proper
<b>be reused.</b>	alignment when reassembling.
Tighten both outer pistons at the same time to ensure a tight fit when installing PTFE diaphragms. See torque settings for additional details.	The pump does not require continuous lubrication.



Model E Elima-Matic U Ultra-Matic V V-Series	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 Hastelloy C P Polypropylene K PVDF G Groundable Acet B Aluminum (scree
Diaphragm Series	Valve Ball Material	Valve Seat/Valve
R Rugged	1 Neoprene	1 Neoprene
D Dome	2 Buna-N	2 Buna-N
X Thermo-Matic	3 (FKM) Fluorocarbon	3 (FKM) Fluorocarb
T Tef-Matic (2-piece)	4 Nordel	4 Nordel
B Versa-Tuff (1-piece)	5 PTFE	5 PTFE

6 XL

7 Hytrel **8** Polyurethane

9 Geolast

S Stainless Steel

A Acetal

#### XΤ

- T
- **B** Versa-Tuff (1-piece)
- F FUSION (one-piece integrated plate)

#### C Cast Iron etal en mount) **Q** Epoxy-Coated Aluminum **9** Geolast

**A** Aluminum

Stainless Steel

**P** Polypropylene

**G** Groundable Acetal

**Z** PTFE-coated Aluminum

J Nickel-plated Aluminum

#### e Seat O-ring Material

- bon 5 PTFE 6 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** Hastellov C w/ PTFE O-rings
- **T** PTFE Encapsulated Silicone O-rings

#### **Diaphragm Material**

- **1** Neoprene 2 Buna-N **3** (FKM) Fluorocarbon 4 Nordel
- 5 PTFE
- 6 XL
- 7 Hvtrel

### **Construction Design**

- 9 Bolted
- **0** Clamped

### **E2 FDA SPECIFICATIONS & PERFORMANCE**

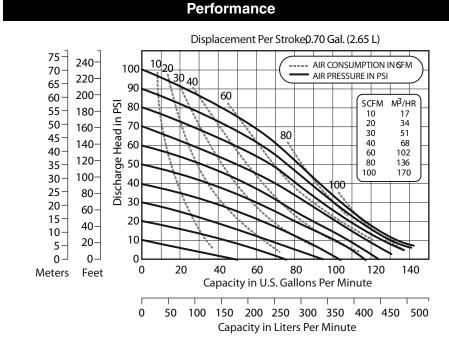
### Specifications

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

Inlet and Discharge 2.5" Tri-Clamp
Air Inlet 0.50" NPT
<b>Air Exhaust</b>
<b>Suction Lift</b> 20' Dry/25' Wet (6.10m/7.62m)
PTFE10' Dry/20' Wet (3.05m/6.10m)
Max. Particle Size (Diameter) 0.25"(6.35mm)
Shipping Weights
Stainlage Steel 115 lbg (52 16 kg)

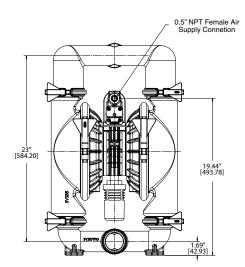
Stainless Steel ..... 115 lbs (52.16 kg)

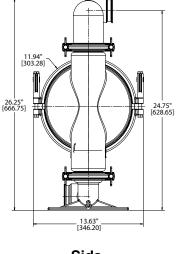


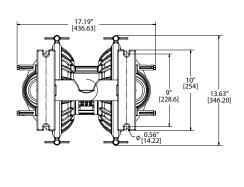


**NOTE:** For E2 pumps fitted with PTFE diaphragms, reduce water discharge figures by 20%. Suction lift is reduced to 10' (3.05m) dry and 20' (6.10m) wet.

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







Front

Side

**Bottom** 

Inches [mm] Consult factory for certified drawings.

#### Dimensions

## **INSTALLATION, OPERATION & MAINTENANCE**

### Installation

The pump should be mounted in a vertical position. In permanent installations, the pump should be attached to plant piping using a flexible

Pump Operation

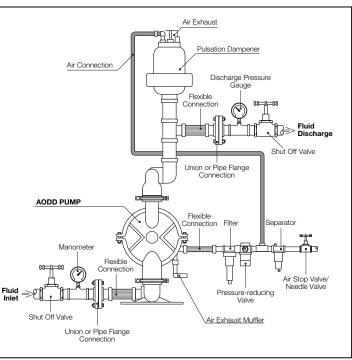
The pump is powered by compressed air. Compressed air is directed to the pump air chamber by the main air valve. The compressed air

coupling on both the intake and discharge connections to reduce vibration to the pump and piping. To further reduce vibration, a surge suppressor next to the pump may be used.

Suction pipe size should be at least the same diameter as the inlet connection size, even larger if highly viscous fluid is to be pumped. If suction hose is used, it must be of a non-collapsible reinforced type. Discharge piping should

be of at least the same diameter as the discharge connection. It is critical, especially on the suction side of the pump, that all fittings and connections are air tight or pumping efficiency will be reduced and priming will be difficult.

Make certain the air supply line and connections and compressor are capable of supplying the required pressure and volume of air to operate the pump at the desired flow rate. The quality of the compressed air source should be considered. Air that is contaminated with moisture and dirt may result in erratic pump performance and increased maintenance cost as well as frequent process "down time" when the pump fails to operate properly.



is separated from the fluid by a membrane called a diaphragm. The diaphragm in turn applies pressure on the fluid and forces it out of the pump discharge. While this is occurring, the opposite air chamber is depressurized and exhausted to atmosphere and fluid is drawn into the pump suction. The cycle again repeats, thus creating a constant reciprocating action which maintains flow through the pump. The flow is always in through the bottom

suction connection and out through the top discharge connection. Since the air pressure acts directly on the diaphragms, the pressure applied to the fluid roughly approximates the air supply pressure supplied to the main air valve.

<b>Recommended Piping Connections</b>							
Minimum Air Line Size	Minimum Suction Line Size						
1/4"	1/4"						
1/4"	3/8"						
1/2"	1/2"						
1/2"	1"						
1/2"	1-1/2"						
1/2"	2"						
3/4"	3"						
	Minimum Air Line Size           1/4"           1/4"           1/2"           1/2"           1/2"           1/2"           1/2"           1/2"						

# TROUBLESHOOTING

Symptom	Potential Cause(s)	Recommendation(s)
Pump cycles once	<ol> <li>Incorrect pilot o-ring placement</li> <li>Inner diaphragm plate installed backwards</li> <li>Deadhead (system pressure meets or exceeds air supply pressure)</li> <li>Air valve or center block gaskets installed incorrectly</li> </ol>	<ol> <li>Reinstall pilot o-rings in correct positions</li> <li>Reinstall inner diaphragm plate correctly</li> <li>Check system for pressure ratio to pump</li> <li>Install gaskets with holes properly aligned</li> </ol>
Pump will not operate	<ol> <li>Pump is over lubricated</li> <li>Lack of air (line size, PSI, CFM)</li> <li>Worn o-rings</li> <li>Wrong type of lubrication (attack on o-rings)</li> <li>Debris in air valve</li> <li>Clogged manifolds</li> <li>Incorrect o-ring placement</li> <li>Deadhead (system pressure meets or exceeds air supply pressure)</li> </ol>	<ol> <li>Set lubricator on lowest possible setting or remove         <ul> <li>Elima-Matic is designed for lube free operation</li> </ul> </li> <li>Check the air line size and length, compressor capacity (HP vs. cfm required)</li> <li>Replace o-rings</li> <li>Check compatibility of o-rings with lubrication</li> <li>Clean air valve/filter</li> <li>Clean suction or discharge manifolds/piping</li> <li>Reinstall o-rings in correct position</li> <li>Increase air supply pressure</li> </ol>
Pump cycles and will not prime or flow	<ol> <li>Cavitation on suction side</li> <li>Valve ball(s) not seating properly or sticking</li> <li>Valve ball(s) missing (pushed into chamber)</li> <li>Valve ball(s)/seat(s) damaged or attacked by product</li> <li>Clogged suction line</li> </ol>	<ol> <li>Check suction condition (move pump closer to product)</li> <li>Clean out around valve ball cage and valve seat area         <ul> <li>Replace valve ball or valve seat if damaged</li> <li>Use heavier valve ball material</li> </ul> </li> <li>Worn valve ball or valve seat         <ul> <li>Worn valve ball or valve seat</li> <li>Worn fingers in valve ball cage (replace part)</li> </ul> </li> <li>Check Chemical Resistance Guide for compatibility</li> <li>Clean suction manifold and/or piping</li> </ol>
Pump running sluggish/stalling	<ol> <li>Over lubrication</li> <li>lcing</li> <li>Clogged manifolds</li> <li>Deadhead (system pressure meets or exceeds air supply pressure)</li> <li>Cavitation on suction side</li> <li>Lack of air (line size, PSI, CFM)</li> </ol>	<ol> <li>Set lubricator on lowest possible setting or remove         <ul> <li>Elima-Matic is designed for lube free operation</li> </ul> </li> <li>Clean or replace exhaust muffler</li> <li>Clean manifolds to allow proper air flow</li> <li>Check system to locate deadhead (equilibrium)         <ul> <li>Increase air supply pressure</li> <li>Check suction (move pump closer to product)</li> <li>Check the air line size, length, compressor capacity</li> </ul> </li> </ol>
Product leaking through exhaust	<ol> <li>Diaphragm failure, or diaphragm plates loose</li> <li>Diaphragm stretched around center hole or bolt holes</li> <li>Excessive air supply pressure</li> </ol>	<ol> <li>Replace diaphragms, check for damage and ensure diaphragm plates are tight</li> <li>Check for excessive inlet pressure or air pressure         <ul> <li>Tighten bolts to recommended torque</li> </ul> </li> <li>Check Operating Manual for recommendations</li> </ol>
Premature diaphragm failure	<ol> <li>Cavitation</li> <li>Excessive flooded suction pressure</li> <li>Misapplication (chemical/physical incompatibility)</li> <li>Wrong type of lubrication (attack on air side)</li> <li>Incorrect diaphragm plates or plates on backwards</li> <li>Incorrect shaft with corresponding elastomer</li> <li>Start up at full air pressure</li> </ol>	<ol> <li>Enlarge pipe diameter on suction side of pump</li> <li>Move pump closer to product         <ul> <li>Raise pump/place pump on top of tank to reduce inlet pressure</li> <li>Add accumulation tank or pulsation dampener as close to the pump as possible</li> <li>4 Consult Chemical Resistance Chart for compatibility with products, cleaners, temperature limitations and lubrication</li> <li>6 Check Operating Manual to check for correct part and installation</li> <li>Start up pump slowly (manually or with Smart Start)</li> </ul> </li> </ol>
Breaking and bending shafts	<ol> <li>Build up of solids in water chamber</li> <li>Loose diaphragm plates</li> </ol>	<ol> <li>Flush pump, start pump slow</li> <li>Tighten diaphragm plates when replacing diaphragms</li> </ol>

# **E2 FDA PARTS LIST**

			AIR VALVE A	COEMDIV					
ltem	Description	Qty	Standard:	ASSEMIDLY	Option 1:	Option 2:			
	2000.19.1011	<b>u</b> .y	NickelPlate	d S	tainless Steel	PTFE Coated			
	Air Valve Assembly								
	(Includes items 1-8)	1	P34-200NF	כ	SP34-200	P34-200TC			
1	Valve Body	1	P34-201NF	כ	SP34-201	P34-201TC			
2	Valve Spool Asy.	1	P34-214		P34-214	P34-214			
3	Valve Spool Glyd Ring Asy.	4	P34-204F		P34-204F	P34-204F			
4	End Cap	2	P34-300TC	)	SP34-300	P34-300TC			
5	End Cap Gasket	2	P24-205		P24-205	P24-205			
6	Air Screen (Not Shown)	1	P24-210		P24-210	P24-210			
7	Valve Gasket	1	P24-202		P24-202	P24-202			
8	Valve Cap Screw	8	S1001		S1001	S1001			
			AIR END AS	SSEMBLY					
ltem	Description	Qty	Standard:		Option 1:	Option 2:			
		-	NickelPlated	d S	tainless Steel	PTFE Coated			
15	Center Block	1	P24-400-N		SP24-400	P24-400-TC			
16	Air Chamber	2	P24-101NF	D	SP24-101	P24-101TC			
17	Air Chamber Gasket	2	P24-109		P24-109	P24-109			
18	Air Chamber Bolt	8	SP24-110		SP24-110	SP24-110			
19	Bearing Sleeve	1	P24-402		P24-402	P24-402			
20	Bushing, Threaded	2	SP24-105		P24-105	P24-105TC			
21	Pilot Shaft	1	P24-104		P24-104	P24-104			
22	Pilot Shaft Spacer	5	P24-106P		P24-106P	P24-106P			
23	Pilot Shaft O-Ring	6	P24-107		P24-107	P24-107			
24	Stop Nut	2	P24-108		P24-108	P24-108			
25	Valve Cap Screw	5	S1001		S1001	S1001			
26	Center Block O-Ring	2	P24-403		P24-403	P24-403			
27	Muffler	1	VTM-6		VTM-6	VTM-6			
			DIAPHRAGM						
ltem	Description	Qty	Versa-Rugged	Versa-Dome	PTFE Bonded				
40	Main Shaft	1	P24-103	P24-103	P24-102	P24-102			
41	Diaphragm Shaft Stud	2	N/A	N/A	V221F	V221F			
42	Inner Diaphragm Plate	2	V221BNP	V226BNP	V221TINP	V221TINP			
43	Outer Diaphragm Plate	2	SVB221FG	SVB226FG	SV221TOFC				
44	Diaphragm O-ring	2	V221D	N/R	N/R	N/R			
45	Diaphragm	2	V224TPEFG	V225TPEFG	V224TX	V224TF			
46	Back-up Diaphragm	2	N/R	N/R	N/R	V224TFB			
			WET END A						
ltem	Description	Qty		Standard: Ele	ctro Polished Stainless	Steel			
50	Water Chamber	2			SV235FG				
51	Large Clamp Bolt	4	SV230C						
52	Large Clamp Wing Nut	4	FG30D						
53	Large Clamp Assembly	2	SV230						
54	Valve Seat	4	V2401		F, SV240 (Use with V				
55	Valve Seat O-Ring (Not show				Use with SV240 only)				
56	Valve Ball	4		V241TF	V241TPEFG V241SS	5			
57	Discharge Manifold	1			SV236FG				
58	Inlet Manifold	1			SV237FFG				
59	Small Clamp Bolt	8			SV239B				
60	Small Clamp Win Nut	8			FG39C				
61	Small Clamp Assembly	8	SV239						

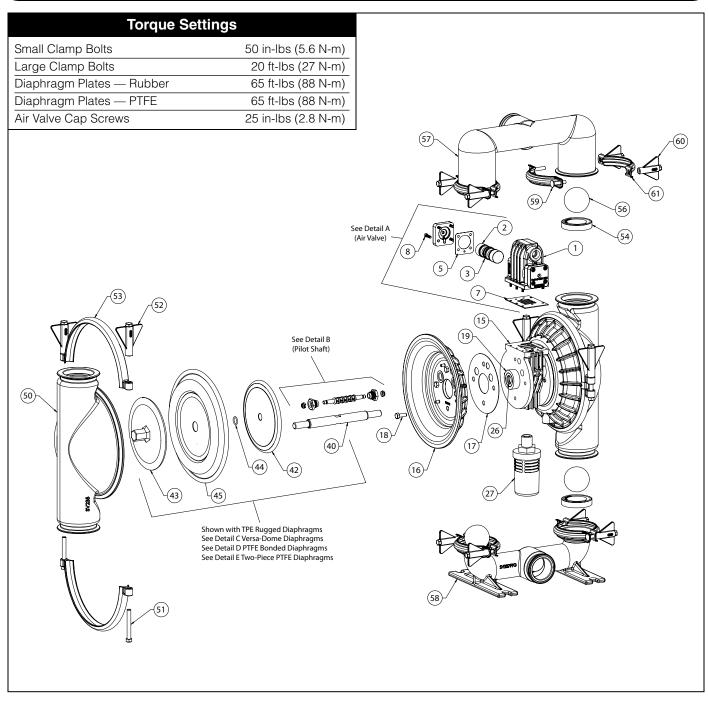
### Diaphragm Materal Codes\*

V224TPEFG (Hytrel) V227TF, PTFE 2-Piece V227TX, PTFE 1-Piece V227TFB , PTFE Back Up Dia. Hytrel

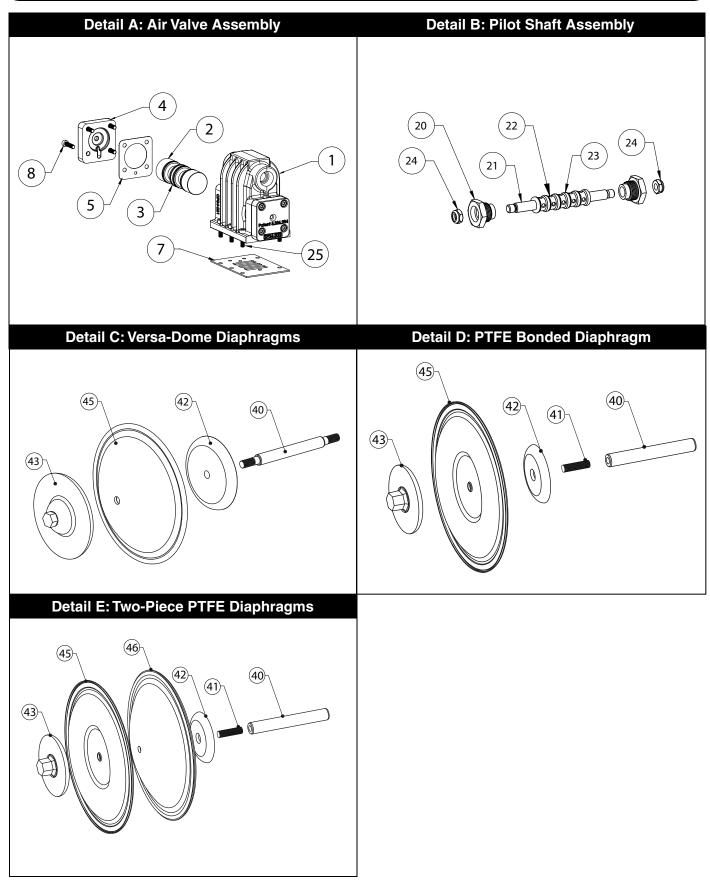
#### Valve Ball Material Codes\*\*

V241TPEFG , Hytrel V241TF, PTFE V241SS, Stainless Steel Valve Seat Part Numebr & Material\*\*\* V240TPEFG , Hytrel FDA V240TF, PTFE SV240, Stainless Steel: (Use With V240T PTFE O-ring)

### **EXPLODED VIEW**



### **E2 FDA DETAIL VIEWS**



### MATERIALS, TEMPERATURELIMITS & COMPATIBILITY

Materials of Construction — Pumps							
MODEL	Acetal®	Aluminum	Cast Iron	Hastelloy C	Polypropylene	PVDF	Stainless Stee
<b>E6</b> (1/4")							
<b>E8</b> (3/8")					•	•	
E5 (1/2")	•	•		•	●▲	●▲	•
<b>E7</b> (3/4")		•					
<b>E1</b> (1")		•		•	●▲	●▲	•
<b>E4</b> (1-1/4" – 1-1/2")				•	•	•	●■
<b>E2</b> (2")		•	•	•	•	•	
<b>E2-FV</b> (2")							
<b>E3</b> (3")				●■	•	•	•

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

Diaphragms, Valve Balls, Valve Seats & Valve Seat O-rings															
						Steel		PTFE			Thermo	plastics	pon		
ELASTOMERS	Aluminum	Buna-N	PVDF	Neoprene	EPDM	Polypropylene	Polyurethane	316 Stainless St	Tef-Matic <sup>TM</sup>	Versa-Tuff™	<b>FUSION</b> <sup>TM</sup>	Encapsulated Silicone	Santoprene (TPE XL)	FDA Hytrel®	(FKM) Fluorocarbon
DIAPHRAGMS			•		•	•				•	•		•	•	•
VALVE BALLS			•		•	•		•	•	•			•	•	•
VALVE SEATS		•	•	•		•	•		•	•			•	•	•
VALVE SEAT O-RINGS			•							•		•	•		•

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)					
(FKM) FLUOROCARBON	-40°F (-40°C) to +350°F (176°C)					
PTFE	+40°F (+4°C) to +220°F (105°C)					
POLYURETHANE	+10°F (-12°C) to +170°F (77°C)					
SANTOPRENE (TPE XL)	-20°F (-29°C) to +300°F (149°C)					
PFA	-20°F (-29°C) to +300°F (149°C)					
FDA HYTREL	-20°F (-29°C) to +220°F (104°C)					
<b>METALLIC PUMPS</b> 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 fo • ACETAL • POLYPROPYLENE • PVDF	ollowing temperature limits: 32°F (0°C) to 220°F (104°C) 32°F (0°C) to 175°F (79°C) 10°F (-12°C) to 225°F (107°C)					

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

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

### VERSA-MATIC®, INC. PRODUCT WARRANTY

Versa-Matic Pump, Inc. ("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. Versa-Matic brands include ELIMA-MATIC<sup>®</sup>, TEF-MATIC<sup>®</sup>, THERMO-MATIC<sup>®</sup> and FUSION<sup>™</sup>.

If Versa-Matic determines that a product bearing a Versa-Matic brand has failed under normal use and service due to a defect in material or workmanship within the warranty period for such product, Versa-Matic will repair or replace such product at no charge to the original enduse purchaser. The determination to repair or replace shall be made by Versa-Matic in its sole discretion. The repaired or replacement product shall be shipped to the original end-user purchaser freight collect unless the original enduser purchaser makes other arrangements for shipment. The original end-user purchaser shall bear all risk of loss or damage during shipment. Repair or replacement does not extend the original warranty period for a product, and any warranty repair or replacement is warranted only for the balance of the original warranty period.

Statements and data relating to products on Versa-Matic's website and in promotional marketing and technical literature and materials are not intended to define the performance of any product under actual conditions or when used for specific applications, are not warranties, and should not be relied upon in determining the performance of products under actual conditions or the suitability of products for specific applications.

The above warranty and repair or replacement obligation does not apply to or include:

- Any product that is not sold by Versa-Matic as new
- Any accessory or other product that does not bear a Versa-Matic brand (In the case of such products, any warranty is limited to a pass through to the original end-use purchaser of any warranty received from the manufacturer to the extent such pass through is permitted by the manufacturer)
- Any product that fails other than during normal use and service or that fails outside the warranty period for such product
- Normal wear and tear
- Any product that Versa-Matic determines (a) was tampered with, disassembled, repaired, modified or altered without the prior written authorization of Versa-Matic (b) damaged during or after shipment (c) used to pump material that the product was not designed to pump or otherwise used for a purpose or under conditions that differ from those for which it was designed (d) not properly maintained or operated or otherwise misused or (e) subjected to abnormal use or service.
- Any party other than the original end-use purchaser
- Field repair, removal, reinstallation, labor, freight or other similar items

To be eligible for warranty repair or replacement, the original end-use purchaser must notify Versa-Matic of the product failure in writing within the warranty period for such product and, if requested by Versa-Matic, the product must be promptly returned for inspection, freight prepaid, to either Versa-Matic's factory at 800 North Main Street: Mansfield. OH 44901 or to a Versa-Matic authorized distributor. The original end-user purchaser must also promptly provide Versa-Matic or its authorized distributor with all such information as either of them may request concerning the maintenance, operation, use and failure of any product that is claimed to have failed due to a defect in material or workmanship. Return of a product to Versa-Matic's factory requires a Return Goods authorization (RGA) from Versa-Matic, and the RGA No. must be included with the returned product. The original end-user purchaser shall bear all risk of loss or damage during shipment.

THIS PRODUCT WARRANTY IS VERSA-MATIC'S SOLE AND EXCLUSIVE WARRANTY AND IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ALL WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ALL OF WHICH OTHER WARRANTIES ARE EXPRESSLY EXCLUDED.

THE RIGHTS AND REMEDIES UNDER THIS PRODUCT WARRANTY ARE THE SOLE AND EXCLUSIVE RIGHTS AND REMEDIES AGAINST VERSA-MATIC WITH RESPECT TO ALL PRODUCTS. EXCEPT FOR THE SPECIFIC LIABILITIES AND OBLIGATIONS PROVIDED UNDER THIS PRODUCT WARRANTY, VERSA-MATIC SHALL HAVE NO LIABILITY OR OBLIGATION WITH RESPECT TO ANY PRODUCT.

UNDER NO CIRCUMSTANCES SHALL VERSA-MATIC HAVE ANY LIABILITY FOR ANY CLAIM, LOSS, DAMAGE, INJURY, LIABILITY, OBLIGATION, COST OR EXPENSE THAT DIRECTLY OR INDIRECTLY RELATES TO OR ARISES OUT OF THE USE OR FAILURE OF ANY PRODUCT OR ANY LIABILITY FOR INDIRECT, SPECIAL, PUNITIVE OR CONSEQUENTIAL DAMAGES, INCLUDING, BUT NOT LIMITED TO, LOSS OF SALES, LOSS OF PROFITS, LOSS OF MATERIAL BEING PUMPED, DOWN TIME, LOSS OF PRODUCTION, LOSS OF CONTRACTS, OR DAMAGE TO REPUTATION OR GOOD WILL, WHETHER OR NOT VERSA-MATIC WAS AWARE OF OR ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

IN ANY EVENT, VERSA-MATIC'S LIABILITY IN CONNECTION WITH ANY INDIVIDUAL PRODUCT SHALL BE LIMITED TO THE ORIGINAL PRICE PAID TO VERSA-MATIC FOR SUCH PRODUCT.

No Versa-Matic authorized distributor or other person is authorized to modify this Product Warranty or impose any liability or obligation on Versa-Matic other than as expressly provided herein.

Rev February 2009

### **PUMPER PARTS®**

### The Only Difference is the Price.

A division of Versa-Matic Pump Company, Pumper Parts is your single source for Air-Operated Double

### The Pumper Parts Promise

All Pumper Parts products are:

Diaphragm (AODD) pump parts. The company was formed to meet the demands for faster delivery of replacement parts at competitive prices. Pumper Parts is a global supplier of quality replacement parts that fit **ARO**<sup>®</sup>, **Wilden**<sup>®</sup>, and **Yamada**<sup>®</sup> air-operated double diaphragm pumps.

Pumper Parts serves customers all over the world in a variety of markets, including chemical, paints &

coatings, food processing, pharmaceutical, construction, mining, utilities, pulp & paper, metal finishing, and general industrial. A worldwide network of fully-stocked distributors and an extensive staff of qualified professionals are committed to supporting these customers. Pumper Parts is housed in a state-of-the-art facility to ensure that proper stock levels are maintained.



- Engineered to perform as well as or better than OEM parts guaranteed
- Manufactured to meet or exceed the highest quality standards in the industry
- Honored with the same repair parts warranty as the OEM
- Priced competitively — providing savings and value

### **Pumper Parts Tools**

The Pumper Parts website helps you find

the parts you need fast and efficiently by allowing searches by product number or description. Additionally, a Chemical Compatibility database is provided so that you can quickly find what materials are most compatible with a variety of liquids.



Pumper Parts and its products are not affiliated with any of the original equipment manufacturers referenced herein. All original equipment manufacturers' names, colors, pictures, descriptions and part numbers are used for identification purposes only.

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### **DECLARATION OF CONFORMITY**

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

#### MANUFACTURED BY:

FABRIQUE PAR: FABRICADA POR: HERGESTELLT VON: FABBRICATO DA: VERVAARDIGD DOOR: TILLVERKAD AV: FABRIKANT: VALMISTAJA: PRODUSENT: FABRICANTE: VERSA-MATIC<sup>®</sup> IDEX AODD, Inc. 800 North Main Street

Mansfield, OH 44902 • USA



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

# PUMP MODEL SERIES: E1 SERIES, E2 SERIES, E3 SERIES, E4 SERIES, E5 SERIES, E7 SERIES, E8 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 Direkktive:

Tämä tuote täyttää seuraavien EC Direktiivien vaatimukstet:

Dette produkt oppfyller kravene til følgende EC Direktiver:

Este produto está de acordo com as seguintes Directivas comunitárias:

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

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

Este producto cumple con las siquientes directrices de la comunidad europa:

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

Questo prodotto ha utilizzato i seguenti standards per verificare la conformita':

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 overenstemmelse med fløgende harmoniserte standarder:

Este produto utilizou os seguintes padrões harmonizados para varificar conformidade:

### AUTHORIZED/APPROVED BY:

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

Roseberr

Dave Roseberry Engineering Manager

DATE: March 04, 2009 FECHA: DATUM: DATA: DATO: PÄIVÄYS:



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Authority: Quality Manager

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