



VERSA-MATIC®

HYGIENIC DIAPHRAGM PUMP SOLUTIONS



**EXCEPTIONAL
CLEANABILITY**

**EASE OF
MAINTENANCE**

**SUPERIOR
RELIABILITY**



**FDA
COMPLIANT**



HYGIENIC DIAPHRAGM PUMP SOLUTIONS

Features & Benefits of AODD Pumps

OUR DIAPHRAGM PUMPS ARE THE RIGHT CHOICE

Key Solutions Provider

Versa-Matic has been a key solutions provider to the food process, hygienic, and pharmaceutical industries for over 30 years. Our Voice of the Customer (VOC) process has guided us to deliver exclusive patented product innovations focused on delivering product safety, reliability, and ease of use based on the needs of our customers.

Some of those valuable innovations include:

- **Elima-Matic Air Distribution System**; offers air efficient reliability and simple low cost maintenance
- **FUSION**; delivers extended flex-life and is part of the Clean-In-Place (CIP) design
- **Versa-Dome Thermoplastic Diaphragms**; for ease of instant and broad temperature ranges
- **Versa-Sense II Leak Detection System**; delivers peace of mind by reducing the change of air side product contamination while increasing pump control



WHY CHOOSE AODD PUMPS

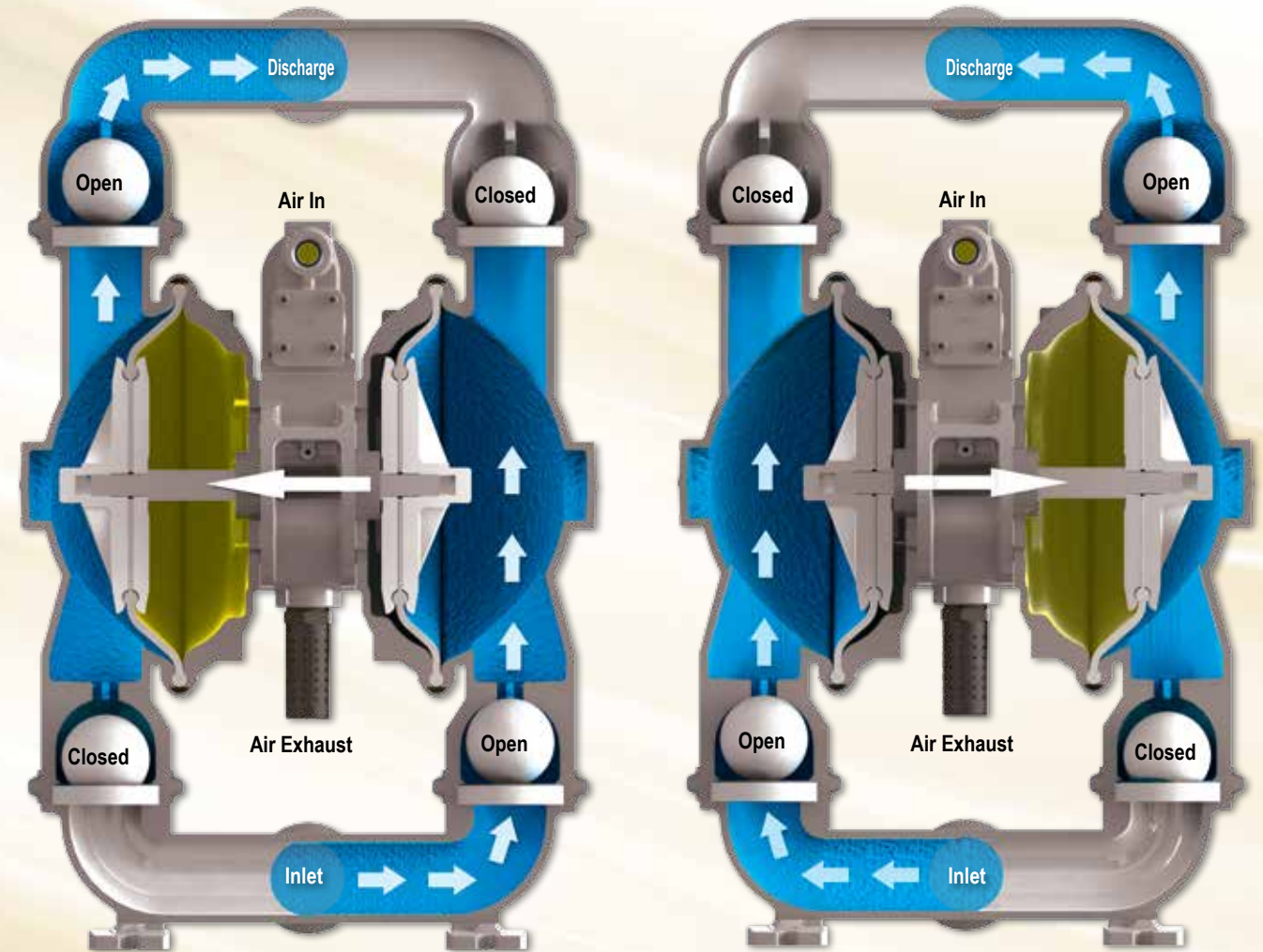
AODD pumps deliver unique benefits that are unrivaled by other pump technologies, making them the clear choice for many of the worlds most challenging applications.

- 1 Run-dry without damaging the pump or system
- 2 Pump solid laden fluids without pump or product damage
- 3 Self-priming, works in suction lift applications
- 4 Deadheads safely, with no pump or product damage
- 5 Shear sensitive, does not shear or separate product being pumped
- 6 No electricity required, and can be fully grounded
- 7 Low initial purchase price compared to other technologies
- 8 Submersible, can be submerged completely without safety or performance issues
- 9 Sealless design, no expensive mechanical seals or packing are required
- 10 Variable flow and head pressures, without sophisticated controls



HOW IT WORKS

= Compressed Air = Pumped Fluid



1: SUCTION CYCLE

Compressed air fills left inner chamber, causing the opposing diaphragm to create suction, lifting the lower valve ball, pulling in fluid at inlet. Simultaneously the left chamber is in "Discharge" cycle.

2: DISCHARGE CYCLE

Compressed air fills right inner chamber, causing upper valve ball to open and discharge fluid. Simultaneously, the left chamber is in "Suction" cycle.

HYGIENIC & 3A HYGIENIC PUMPS

Features & Benefits



Clean in Place Design

32 μ -in (Ra 0.8 μ -m) or better surface finish, removable cages, and integrated plate FUSION diaphragms



Extended-life Diaphragms

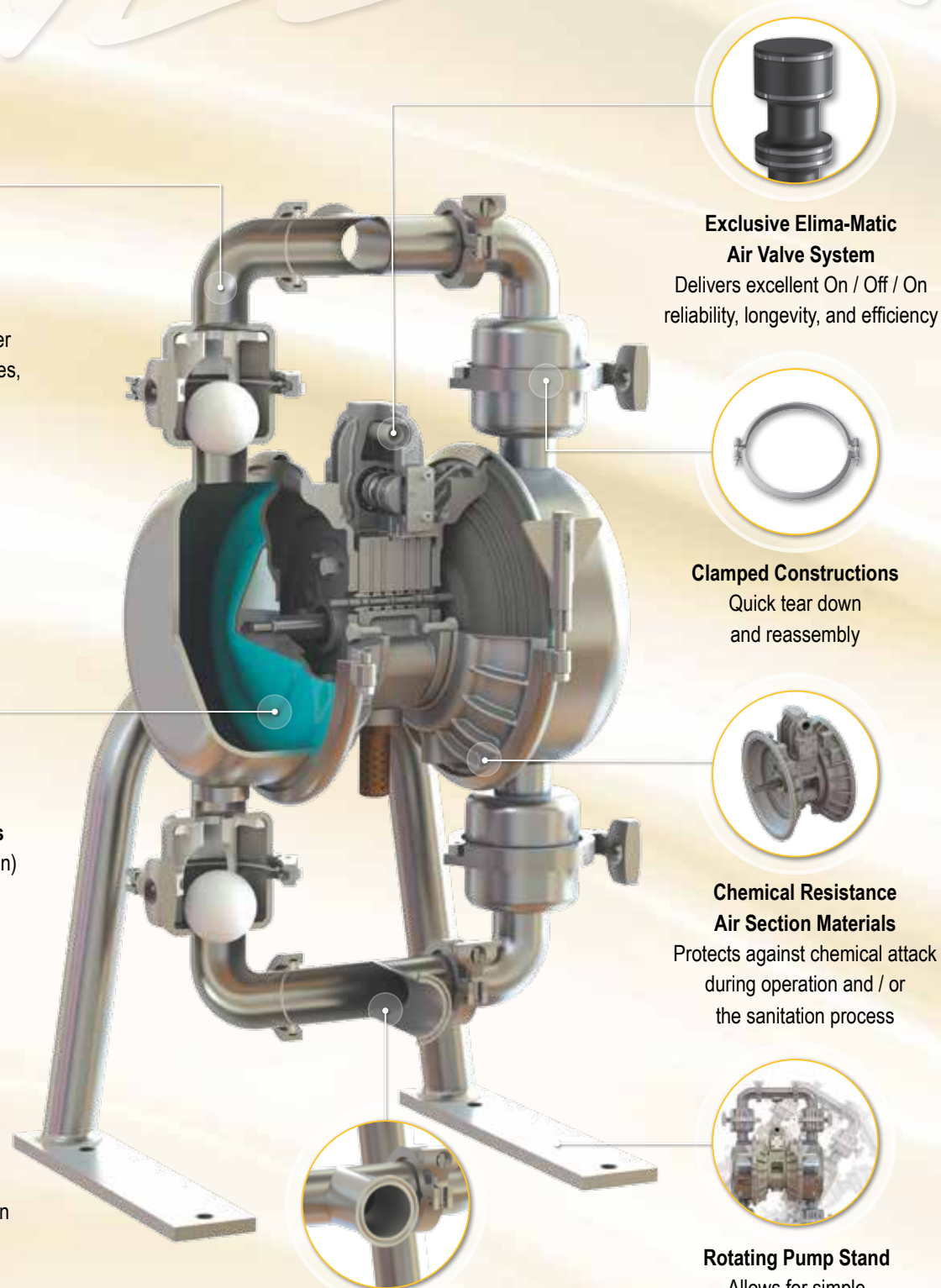
Integrated plate PTFE (Fusion) & Versa-Dome



Safety & Control

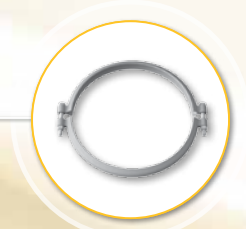
Versa-Sense II leak detection system comes standard on all 3A hygienic units

Note: 3A certified units require a leak detector and come equipped with one automatically. Standard non 3A sanitary units are also available without a leak detector.



Exclusive Elima-Matic Air Valve System

Delivers excellent On / Off / On reliability, longevity, and efficiency



Clamped Constructions

Quick tear down and reassembly



Chemical Resistance Air Section Materials

Protects against chemical attack during operation and / or the sanitation process



Rotating Pump Stand

Allows for simple cleaning and pump evacuation



Hygienic Tri-Clamp Fluid Connections

For quick disconnect

HYGIENIC & 3A HYGIENIC PUMPS

Markets & Applications

Applications: Product Transfer / Tank Over, Filling Lines, Blending and Mixing, and Ingredient Injection



DAIRY

- Yogurt
- Cottage Cheese
- Milk
- Butter
- Eggs
- Coffee Cream



PERSONAL CARE

- Hair Gel
- Shampoo
- Soap
- Perfumes
- Creams / Lotions
- Cosmetics
- Antiseptics
- Hair dye



FOOD & BEVERAGE

- Salsa
- Chili
- Soy Sauce
- Beer & Wine
- Juice Concentrates
- Corn Oils / Syrups
- Edible Oils
- Chocolate
- Salad Dressing
- Mayonnaise
- Condiments



PHARMACEUTICAL

- Chemicals
- Deionized Water
- Alcohol
- Acids



The Elima-Matic sanitary pump has been designed to the 3A sanitary standards for air or hydraulically driven diaphragm pumps for milk and milk products, number 44-01.



DELIVERING QUALITY, INTERCHANGEABLE PUMPING SOLUTIONS

FDA COMPLIANT FOOD PROCESSING PUMPS

Features & Benefits



Smooth Clean Casting Finish

Electropolished to a surface finish of 150 μ-in (Ra 3.81 μ-m) internally & externally



Exclusive Elima-Matic Air Valve System

Delivers excellent On / Off / On reliability, longevity, and efficiency



Clamped Constructions

Quick tear down and reassembly



Chemical Resistance Air Section Materials

Protects against chemical attack during operation and / or the sanitation process

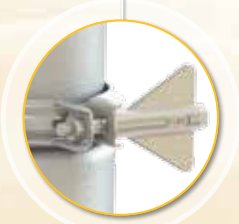


Dimensionally Interchange Pumps, Parts, Air Sections
For seamless upgrades



Extended-life Diaphragms

Integrated plate PTFE & Versa-Dome



Hygienic Wing Nuts
For easy assembly



Hygienic Tri-Clamp Fluid Connections
For quick disconnect

Note: Chemically resistant nickel plated aluminum air sections are standard. Polypropylene air sections are available for 1/2" and 1" units. Stainless steel is also available for 2" and 3" units.



FDA COMPLIANT FOOD PROCESSING PUMPS

Markets & Applications

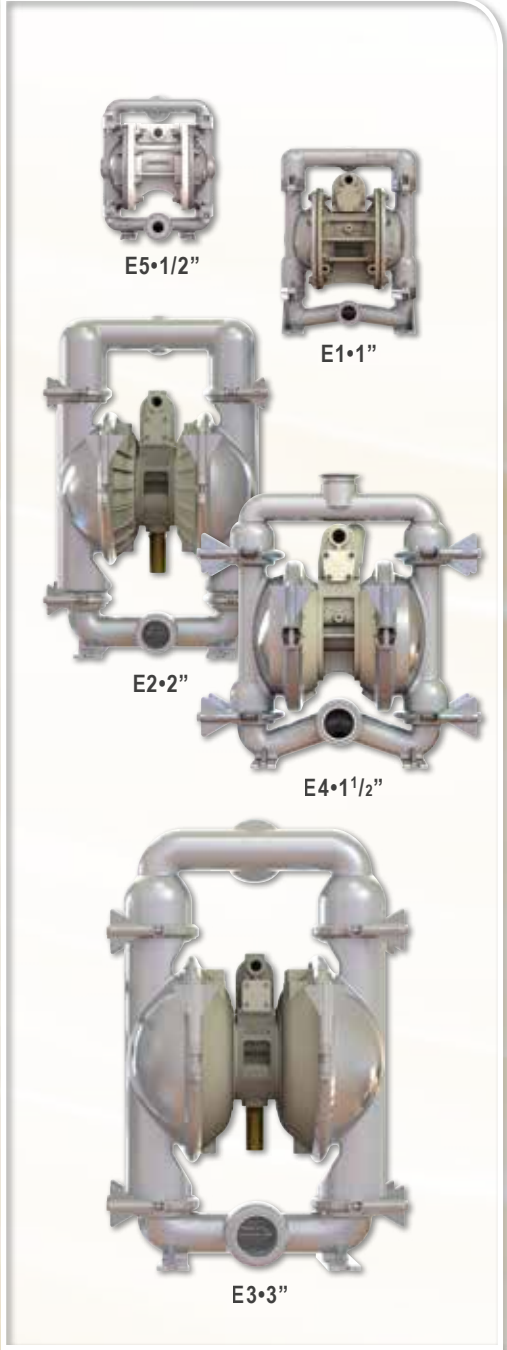
Applications: Product Transfer / Tank Over, Filling Lines, Blending / Mixing, and Ingredient Injection



- FOOD & BEVERAGE**
- Salsa
 - Chili
 - Soy Sauce
 - Beer
 - Wine & Spirits
 - Juice Concentrates
 - Corn Oils / Syrups
 - Chocolate
 - Salad Dressing
 - Barbecue Sauces
 - Mayonnaise
 - Syrup
 - Cream Soda / Root Beer
 - Confectionary Candies
 - Poultry (Saline Injection)
 - Pickle Relish
 - Flavorings
 - Pie Filling
 - Spaghetti Sauces



- PERSONAL CARE**
- Hair Gel
 - Shampoo
 - Soap
 - Creams
 - Lubricants
 - Lotions
 - Petroleum Jelly
 - Hair Dye



Elima-Matic® food processing pumps are built with FDA compliant materials so they can be specified in applications requiring FDA approval.

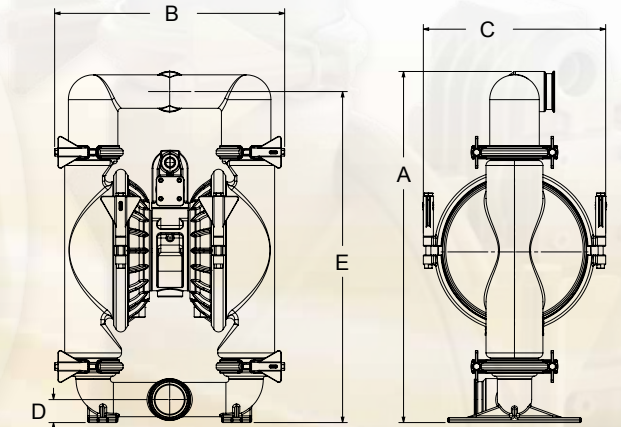
FDA COMPLIANT & 3A HYGIENIC

Technical Specifications

Offering an extensive range of products engineered to perform in your most demanding applications



PUMP MODEL	FDA COMPLIANT					SANITARY		3A SANITARY	
	E5	E1	E4	E2	E3	E4	E2	E4	E2
Port Size (Internal)	1/2" (12.7 mm)	1" (25.4 mm)	1 1/2" (38 mm)	2" (50.8 mm)	3" (76.2 mm)	1 1/2" (38 mm)	2" (51 mm)	1 1/2" (38 mm)	2" (50.8 mm)
Connection Size / Type	1 1/2" Tri-Clamp	1 1/2" Tri-Clamp	2" Tri-Clamp	2 1/2" Tri-Clamp	3" Tri-Clamp	1 1/2" Tri-Clamp	2" Tri-Clamp	1 1/2" Tri-Clamp	2" Tri-Clamp
Maximum Flow Rate	0-12 gpm (0-45.4 lpm)	0-49 gpm (0-185.5 lpm)	0-71 gpm (0-268 lpm)	0-185 gpm (0-700 lpm)	0-234 gpm (0-886 lpm)	0-86 gpm (0-325 lpm)	0-179 gpm (0-677 lpm)	0-51 gpm (0-193 lpm)	0-147 gpm (0-556 lpm)
Solids Handling -Up to-	0.0625" (1.6 mm)	0.125" (3.2 mm)	0.187" (4.76 mm)	0.25" (7.6 mm)	0.375" (9.5 mm)	0.375" (9.5mm)	0.625" (15.9 mm)	0.375" (9.5 mm)	0.625" (15.9 mm)
Displacement -Per Stroke-	0.02 gallon (0.08 liter)	0.1 gallon (0.38 liter)	0.25" gallon (.95 liter)	0.60 gallon (2.3 liter)	1.36 gallon (5.1 liter)	0.31 gallon (1.1 liter)	0.60 gallon (2.27 liter)	0.11 gallon (0.42 liter)	0.35 gallon (1.32 liter)
Head -Up to-	100 psi (7 bar)	125 psi (8.6 bar)	125 psi (8.6 bar)	125 psi (8.6 bar)	125 psi (8.6 bar)	125 psi (8.6 bar)	125 psi (8.6 bar)	125 psi (8.6 bar)	125 psi (8.6 bar)
Maximum Viscosity, cSt / SSU	cSt - 2,000 SSU - 9,400	cSt - 2,000 SSU - 9,400	cSt - 90,000 SSU - 415,500	cSt - 90,000 SSU - 415,500	cSt - 90,000 SSU - 415,500	cSt - 90,000 SSU - 415,500	cSt - 90,000 SSU - 415,500	cSt - 90,000 SSU - 415,500	cSt - 90,000 SSU - 415,500
Maximum Suction Lift	13' (3.9 m) Dry 22' (6.7 m) Wet	16' (4.9 m) Dry 31' (9.4 m) Wet	15' (4.5 m) Dry 25' (7.6 m) Wet	17' (5.1 m) Dry 32' (9.5 m) Wet	20' (6.1 m) Dry 32' (9.8 m) Wet	15' (4.6 m) Dry 25' (7.62 m) Wet	15' (4.6 m) Dry 32' (9.8 m) Wet	15' (4.6 m) Dry 25' (7.62 m) Wet	9' (2.7 m) Dry 27' (8.2 m) Wet
Cleaning / Sanitizing Methods	Clean Out of Place (COP)	Clean Out of Place (COP)	Clean Out of Place (COP)	Clean Out of Place (COP)	Clean Out of Place (COP)	Clean In Place (CIP)	Clean In Place (CIP)	Clean In Place (CIP)	Clean In Place (CIP)
Maximum Temperature, °F (°C)	275°F (135 C)	275°F (135°C)	275°F (135°C)	275°F (135°C)	275°F (135°C)	275°F (135°C)	275°F (135°C)	220°F (104°C)	220°F (104°C)
Wetted Casting Material	316 Stainless Steel	316 Stainless Steel	316 Stainless Steel	316 Stainless Steel	316 Stainless Steel	316 Stainless Steel	316 Stainless Steel	316 Stainless Steel	316 Stainless Steel
Wetted Casting Surface Finish, Microinches (Micrometers)	Ra 150 μ-in (3.81 μ-m) Electro-Polished	Ra 150 μ-in (3.81 μ-m) Electro-Polished	Ra 150 μ-in (3.81 μ-m) Electro-Polished	Ra 150 μ-in (3.81 μ-m) Electro-Polished	Ra 150 μ-in (3.81 μ-m) Electro-Polished	32 μ-in (Ra 0.8 μ-m) Polished	32 μ-in (Ra 0.8 μ-m) Polished	32 μ-in (Ra 0.8 μ-m) Polished	32 μ-in (Ra 0.8 μ-m) Polished
Air Section Material Options	Polypropylene (Standard) Nickel Plated Aluminum (Optional)	Nickel Plated Aluminum (Standard) Propylene (Optional)	Nickel Plated Aluminum (Standard)	Nickel Plated Aluminum (Standard) Stainless Steel (Optional)	Nickel Plated Aluminum (Standard) Stainless Steel (Optional)	Nickel Plated Aluminum (Standard)	Nickel Plated Aluminum (Standard) Stainless Steel (Optional)	Nickel Plated Aluminum (Standard)	Nickel Plated Aluminum (Standard) Stainless Steel (Optional)
Diaphragm Material Options	Hytrel, FDA Santoprene®, 2-Piece PTFE, IP Bonded PTFE	Hytrel, FDA Santoprene®, 2-Piece PTFE, IP Bonded PTFE	Hytrel, FDA Santoprene®, 2-Piece PTFE, IP Bonded PTFE	Hytrel, FDA Santoprene®, 2-Piece PTFE, IP Bonded PTFE	Hytrel, FDA Santoprene®, 2-Piece PTFE, IP Bonded PTFE	Hytrel, FDA Santoprene®, 2-Piece PTFE, IP Bonded PTFE	Hytrel, FDA Santoprene®, 2-Piece PTFE, IP Bonded PTFE	IP Bonded PTFE (3A Approved)	IP Bonded PTFE (3A Approved)
Diaphragm Styles	Versa-Rugged, Tef-Matic, FUSION	Versa-Rugged, Tef-Matic, FUSION	Versa-Rugged, Tef-Matic, FUSION	Versa-Dome, Versa-Rugged, Tef-Matic, FUSION	Versa-Dome, Versa-Rugged, Tef-Matic	Versa-Rugged, Tef-Matic, FUSION	Versa-Dome, Versa-Rugged, Tef-Matic	FUSION	FUSION
Shipping Weight	17 lbs. (7.7 kg)	36 lbs. (16.3 kg)	57 lbs. (25.85 kg)	106 lbs. (48.1 kg)	189 lbs. (86 kg)	75 lbs. (34 kg)	125 lbs. (56.7 kg)	75 lbs. (34 kg)	125 lbs. (56.7 kg)



FDA Dimensional Drawings

DIMENSIONS: Tolerance: ±1/8" (±3mm)					
PUMP MODEL	A	B	C	D	E
	Height	Width	Depth	Base to Center Suction	Base to Center Discharge
E5	10.4" (264.4 mm)	8.12" (206.3 mm)	6.25" (158.8 mm)	.98" (25 mm)	9.42" (240.3 mm)
E1 ATEX	14.54" (369.3 mm)	10.72" (272.3 mm)	8" (204.7 mm)	1.65" (42 mm)	13.7" (348.6 mm)
E4	17.31" (440 mm)	16.51" (419 mm)	11.43" (290 mm)	2.5" (64 mm)	17.31" (440 mm)
E2	26.22" (666 mm)	17.18" (436.3 mm)	13.62" (346 mm)	1.72" (43.6 mm)	24.72" (627.8 mm)
E3	32.01" (813 mm)	21.54" (547 mm)	16.96" (430.6 mm)	2.31" (58.7 mm)	29.76" (755.9 mm)
E4	31.55" (801.4 mm)	18.57" (472 mm)	15.7" (399 mm)	9.8" (249 mm)	29.8" (757 mm)
E2	34.7" (881.5 mm)	18.57" (472 mm)	17.1" (434 mm)	6.97" (177 mm)	32.63" (829 mm)

Note: See service manual for complete specifications.
Tef-Matic is the two piece PTFE.
Santoprene® is a registered tradename of Exxon Mobil Corp.

FDA COMPLIANT FOOD PROCESSING PUMPS

Features & Benefits

Versa-Matic is a leader in diaphragm and materials technologies. Since releasing the patented extended life Versa-Dome™ diaphragm and TPE-XL (Santoprene®), both AODD industry firsts, Versa-Matic has been known as an innovative solutions provider. This tradition continues with the release of the FUSION™ PTFE bonded product offering.



FUSION™

FUSION™ Technology

Extended Flex Life

- Oversized integrated plate supports nearly 50% of the diaphragm through the entire dynamic motion
- No outer plate to wear diaphragm or to trap abrasive particles
- Deflection ridges prevent flex points and eliminate radial cracking
- Back up ribs support and guide the diaphragm with each flex

No Leak Paths

- No center hole or torque required, superior leak free operation & installation

Hygienic / Cleanability

- No outer plate to trap particles for easy cleaning and sanitation

Sizes Available:

- ½", 1", 1½" and 2" diaphragms



VERSA-DOME™

VERSA-DOME™ Technology

Extended Flex Life

- Dome shape allow the diaphragm to roll, spreading the wear across the entire face
- No complex angles to create stress / wear points
- Low start up pressure reduces diaphragm stress
- Dome shape delivers full stroke and excellent displacement, creating flow with less strokes compared to competitive alternatives (Wilden® UF)

Ease of Installation

- The flexible dome shape makes them simple to invert and install without the use of special tools or pry bars

Interchangeable Upgrade

- 2" and 3" kits are available to upgrade the performance of Wilden® pump units

Sizes Available:

- 2" and 3" diaphragms



VERSA-RUGGED™

VERSA-RUGGED™ Technology

Solids and Slurries Handling

- The oversized outer plates leave less diaphragm exposed to solids in fluid
- Preferred for high suction lift & positive suction conditions
- Support from large diaphragm plates increases flex life in many poor operating conditions

Interchangeable

- 1½", 2", and 3" diaphragms fit into many Wilden® pump units

Sizes Available:

- ½", 1", 1½", 2" and 3" diaphragms

Please consult your distributor or factory experts for additional details.

COMPETITIVE INTERCHANGEABILITY

Pumps, Parts & Upgrade Air Sections

Displacing Wilden® Saniflo® Series



Dimensional Interchange
Seamless installation into
Wilden® installations

Wilden®

VERSAMATIC

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VALUE

- Same footprint and centerline porting dimensions as Wilden® 1 ½", 2" and 3" Original Series Sani-Flo™ Series pumps

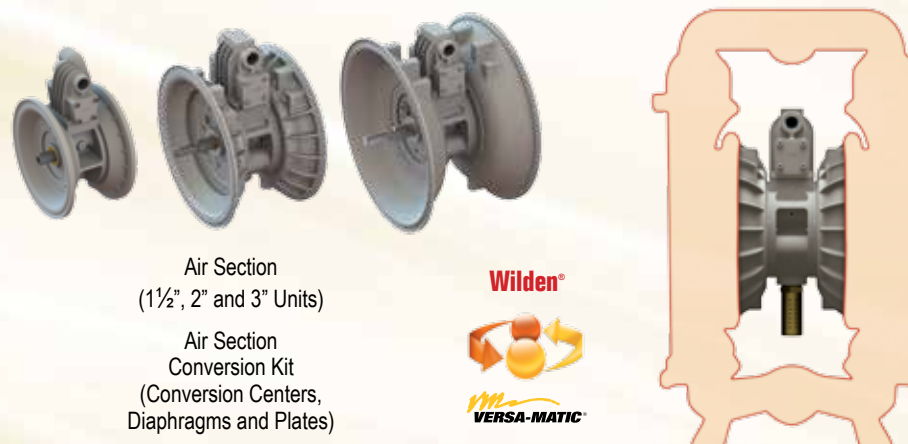
IMPORTANCE

- Eliminates the cost of pump installation (re-piping / foot pad)

BENEFIT

- Seamless, low cost transitions when converting Wilden's installed base over to value-added Versa-Matic pump units

Air Section Upgrade Kits for Wilden® Pumps



Air Section
(1½", 2" and 3" Units)

Air Section
Conversion Kit
(Conversion Centers,
Diaphragms and Plates)

Wilden®

VERSAMATIC

VALUE

- Complete Elima-Matic air section assembly
- Consistent air section design concept
- Low cost rebuild options (air / pilot valve)

IMPORTANCE

- Simple, low cost conversion or update option versus traditional pump rebuild or complete pump sale
- Consistent design compared to Wilden®
- Elima-Matic air valve system delivers overall low cost of ownership

BENEFIT

- Save time and labor compared to purchasing individual components
- Reduced parts inventory, product complexity and training required with consistent air system design

Quality Replacement Parts that fit Wilden® Pumps



Wilden®

VERSAMATIC

- Diaphragms
- Valve Balls
- Valve Seals
- Clamps
- Fluid Chambers
- Manifolds
- Plates
- Air Valves
- Seals
- Mufflers
- Shafts
- Bushings
- Center Blocks
- Pump Accessories
- FRL Units
- Pulsation Dampeners
- Liquid Level Controllers and other essential items

Visit pumperparts.com for additional AODD pump parts and brands.

VALUE

- Supplying parts that fit Wilden® pumps since 1983
- Most parts ship in 72 hours or less

IMPORTANCE

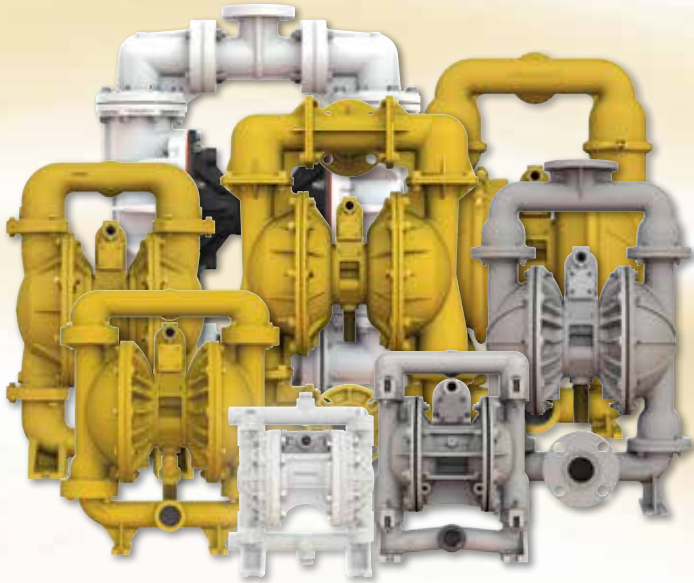
- Experts in supplying OEM parts for Versa-Matic and aftermarket parts that fit Wilden®
- Great delivery, expert service, competitive pricing

BENEFIT

- Save time and money on AODD pump parts
- One stop shopping for pumps and parts
- Reduced parts inventory

ADDITIONAL VALUE ADDED PRODUCTS

Versa-Matic offers a complete line of air operated double diaphragm pumps ranging from 1/4" – 3", in a wide array of different styles and materials to handle virtually any application.



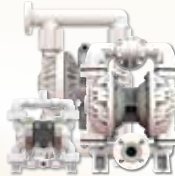
Metallic Bolted

The robust bolted design ensures a positive seal when pumping thin, low viscosity and / or hazardous products safely and reliably. Available in aluminum, cast iron, stainless steel, and alloy c to meet the most demanding applications. Flows up to 273 gpm (1,033 lpm).



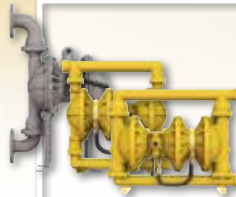
Non-Metallic Bolted

When chemical resistance is paramount, leak-free non-metallic bolted units are the clear choice. Available in polypropylene, PVDF, conductive acetyl and conductive polypropylene. They can handle even the most aggressive chemistries safely. Flows up to 238 gpm (901 lpm).



2:1 High Pressure

If discharge pressure over 125 psi (8.6 Bar) is required, consider 2:1 ratio pump units which can provide pressures up to 238 psi (16.4 Bar). Perfect for long vertical runs, filter press feed, or other high pressure applications.



Accessories

To protect your investment, consider adding:

- Filter / Regulator (clean dry air)
- Leak Detector (safety / pump control)
- Surge Suppressor (reduce fluid pulsation)
- Pneumatic Liquid Level Control (sump / pit level control)



Kits

Complete pump rebuild kits are available to make ordering and repair quick and easy. Receive all necessary items for a complete repair in one package to avoid unnecessary downtime.



Versa-Matic Pump App

- Quickly locate pump information
- Review Chemical Compatibility
- Flip through the latest literature
- Watch helpful training videos
- Access our portal and website

DOWNLOAD APP



Scan the QR code above or visit our Mobile App:
versamatic.com/mobileapps

Quickly access:

- Training videos
- Operation manuals
- Repair kits look up
- Chemical compatibility guide and other tools



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