VERSAMA-TIC®
HYGIENIC DIAPHRAGM PUMP SOLUTIONS

EXCEPTIONAL CLEANABILITY
EASE OF MAINTENANCE
SUPERIOR RELIABILITY

VERSAMATIC.COM
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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:
- Elim-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

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

- Hygienic Tri-Clamp Fluid Connections
  For quick disconnect

- Rotating Pump Stand
  Allows for simple cleaning and pump evacuation

- Chemical Resistance
  Air Section Materials
  Protects against chemical attack during operation and/or the sanitation process

- Clamped Constructions
  Quick tear down and reassembly

- Exclusive Elima-Matic Air Valve System
  Delivers excellent On / Off / On reliability, longevity, and efficiency

- 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.

Applications

- 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
  - Cosmetics

- 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.

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.
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

- **Extended-life Diaphragms**
  Integrated plate PTFE & Versa-Dome

- **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

- **Hygienic Wing Nuts**
  For easy assembly

- **Hygienic Tri-Clamp Fluid Connections**
  For quick disconnect

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

- **Personal Care**
  - Hair Gel
  - Lotions
  - Shampoo
  - Petroleum Jelly
  - Soap
  - Hair Dye
  - Creams
  - Lubricants

**Note:** Chemically resistant nickel plated aluminum air sections are standard. Polypropylene air sections are available for ½” and 1” units. Stainless steel is also available for 2” and 3” units.

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

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

**TYPICAL DIAPHRAGM PUMP HYGIENIC APPLICATIONS**

<table>
<thead>
<tr>
<th>Port Size (Internal)</th>
<th>Versa-Rugged, Tef-Matic, Diaphragm Styles</th>
<th>Diaphragm Material Options</th>
<th>Shipping Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2&quot; (12.7 mm)</td>
<td>E5</td>
<td>Polypropylene (Optional)</td>
<td>17 lbs. (7.7 kg)</td>
</tr>
<tr>
<td>1&quot; (25.4 mm)</td>
<td>E1</td>
<td>Nickel Plated Aluminum (Standard)</td>
<td>36 lbs. (16.3 kg)</td>
</tr>
<tr>
<td>1 1/2&quot; (38 mm)</td>
<td>E4</td>
<td>Stainless Steel</td>
<td>57 lbs. (26.8 kg)</td>
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<tr>
<td>2&quot; (50.8 mm)</td>
<td>E2</td>
<td>Stainless Steel</td>
<td>108 lbs. (48.5 kg)</td>
</tr>
<tr>
<td>3&quot; (76.2 mm)</td>
<td>E3</td>
<td>Stainless Steel</td>
<td>189 lbs. (86 kg)</td>
</tr>
<tr>
<td>3 1/2&quot; (89 mm)</td>
<td>E4</td>
<td>316 Stainless Steel</td>
<td>75 lbs. (34 kg)</td>
</tr>
<tr>
<td>4&quot; (101.6 mm)</td>
<td>E4</td>
<td>316 Stainless Steel</td>
<td>125 lbs. (56.7 kg)</td>
</tr>
<tr>
<td>4 1/2&quot; (114 mm)</td>
<td>E4</td>
<td>316 Stainless Steel</td>
<td>75 lbs. (34 kg)</td>
</tr>
<tr>
<td>5&quot; (127 mm)</td>
<td>E4</td>
<td>316 Stainless Steel</td>
<td>125 lbs. (56.7 kg)</td>
</tr>
</tbody>
</table>

**Maximum Flow Rate**
- 0 - 12 gpm (45.4 l/min)
- 0 - 44 gpm (165.5 l/min)
- 0 - 71 gpm (268 l/min)
- 0 - 156 gpm (570 l/min)
- 0 - 206 gpm (766 l/min)
- 0 - 326 gpm (1205 l/min)
- 0 - 466 gpm (1770 l/min)
- 0 - 697 gpm (2720 l/min)
- 0 - 1066 gpm (4000 l/min)
- 0 - 1475 gpm (5550 l/min)

**Suction Lift**
- 0 - 12 gpm (45.4 l/min)
- 0 - 44 gpm (165.5 l/min)
- 0 - 71 gpm (268 l/min)
- 0 - 156 gpm (570 l/min)
- 0 - 206 gpm (766 l/min)
- 0 - 326 gpm (1205 l/min)
- 0 - 466 gpm (1770 l/min)
- 0 - 697 gpm (2720 l/min)
- 0 - 1066 gpm (4000 l/min)
- 0 - 1475 gpm (5550 l/min)

**Displacement - Per Stroke**
- 0 - 12 gpm (45.4 l/min)
- 0 - 44 gpm (165.5 l/min)
- 0 - 71 gpm (268 l/min)
- 0 - 156 gpm (570 l/min)
- 0 - 206 gpm (766 l/min)
- 0 - 326 gpm (1205 l/min)
- 0 - 466 gpm (1770 l/min)
- 0 - 697 gpm (2720 l/min)
- 0 - 1066 gpm (4000 l/min)
- 0 - 1475 gpm (5550 l/min)

**Head Up to**
- 0 - 12 gpm (45.4 l/min)
- 0 - 44 gpm (165.5 l/min)
- 0 - 71 gpm (268 l/min)
- 0 - 156 gpm (570 l/min)
- 0 - 206 gpm (766 l/min)
- 0 - 326 gpm (1205 l/min)
- 0 - 466 gpm (1770 l/min)
- 0 - 697 gpm (2720 l/min)
- 0 - 1066 gpm (4000 l/min)
- 0 - 1475 gpm (5550 l/min)

**Maximum Viscosity**
- cSt - 2,000
- SSU - 9,400

**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)
- 220°F (104°C)
- 220°F (104°C)

<table>
<thead>
<tr>
<th>Maximum Viscosity</th>
<th>cSt</th>
<th>SSU</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Optional)</td>
<td>2,000</td>
<td>9,400</td>
</tr>
</tbody>
</table>

**Wetted Casting Material**
- Stainless Steel
- 316 Stainless Steel

**Wetted Casting Surface Finish, Micronches (Micron)**
- 32 µ-in (Ra 0.8 µ-m)

**Diaphragm Material Options**
- Hydraulic: FSA Santoprene, 2-Piece PTFE, IP Bonded PTFE
- Hybrid: FSA Santoprene, 2-Piece PTFE, IP Bonded PTFE
- Versa-Rugged, Tel-Matic, FUSION
- Versa-Dome, Versa-Rugged, Tel-Matic

**Shipping Weight**
- 17 lbs. (7.7 kg)
- 36 lbs. (16.3 kg)
- 57 lbs. (26.8 kg)
- 108 lbs. (48.5 kg)
- 189 lbs. (86 kg)
- 75 lbs. (34 kg)
- 125 lbs. (56.7 kg)
- 75 lbs. (34 kg)
- 125 lbs. (56.7 kg)
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™ 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 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™ Technology**

Extended Flex Life
- Dome shape allows 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™ 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
- ½”, 1”, 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® Sani-Flo® Series

**Dimensional Interchange**

Seamless installation into Wilden® installations

**Value**
- Same footprint and centering porting dimensions as Wilden® 1”, 2”, and 3” Original Series Sani-Flo® Series pumps

**Importance**
- Eliminates the cost of pump installation (replacing / field paid)

**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

**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**
- Saves 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

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

Please consult your distributor or factory experts for additional details.

*Wilden® and Sani-Flo® are registered trademarks of Wilden Pump and Engineering Company, a Dover Resources Company. Versa-Matic and its products are not affiliated with Wilden Pump and Engineering Company. All original equipment manufacturers’ names, colors, pictures, descriptions and part numbers are used for identification purposes only.*
Versa-Matic offers a complete line of air operated double diaphragm pumps ranging from \(\frac{1}{4}\)" – 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.

ADDITIONAL VALUE ADDED PRODUCTS

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