

# SERVICE & OPERATING MANUAL

## Original Instructions

### Certified Quality



ISO 9001 Certified  
ISO 14001 Certified



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# Tranquilizer®

## Metallic Construction

### Models:

#### TA1 & TA25

#### TA1½ & TA40

#### TA2 & TA50

#### TA3 & TA80



1: SPECS

2: INSTAL & OP

3: EXP VIEW

4: WARRANTY

**SANDPIPER®**  
A WARREN RUPP, INC. BRAND

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# Safety Information

## ! IMPORTANT



Read the safety warnings and instructions in this manual before Tranquilzer® installation and start-up. Failure to comply with the recommendations stated in this manual could damage the pump and void factory warranty.



When the Tranquilzer® is used for materials that tend to settle out or solidify, the Tranquilzer® should be flushed after each use to prevent damage. In freezing temperatures the Tranquilzer® should be completely drained between uses.

## ! CAUTION



Before Tranquilzer® operation, inspect all fasteners for loosening caused by gasket creep. Retighten loose fasteners to prevent leakage. Follow recommended torques stated in this manual.



### **WARNING**

The use of non-OEM replacement parts will void (or negate) agency certifications, including CE, ATEX, CSA, 3A and EC1935 compliance (Food Contact Materials). Warren Rupp, Inc. cannot ensure nor warrant non-OEM parts to meet the stringent requirements of the certifying agencies.

## ! WARNING



When used for toxic or aggressive fluids, the Tranquilzer® should always be flushed clean prior to disassembly.



Before doing any maintenance on the pulsation dampener, be certain all pressure is completely vented from the Tranquilzer®, suction, discharge, piping, and all other openings and connections. Be certain the air supply is locked out or made non-operational, so that it cannot be started while work is being done on the pump. Be certain that approved eye protection and protective clothing are worn all times in the vicinity of the pump. Failure to follow these recommendations may result in serious injury or death.



In the event of diaphragm rupture, pumped material may enter the air end of the Tranquilzer®, and be discharged into the atmosphere. If pumping a product that is hazardous or toxic, the air exhaust must be piped to an appropriate area for safe containment.



Take action to prevent static sparking. Fire or explosion can result, especially when handling flammable liquids. The Tranquilzer®, piping, valves, containers and other miscellaneous equipment must be properly grounded.



This Tranquilzer® is pressurized internally with air pressure during operation. Make certain that all fasteners are in good condition and are reinstalled properly during reassembly.

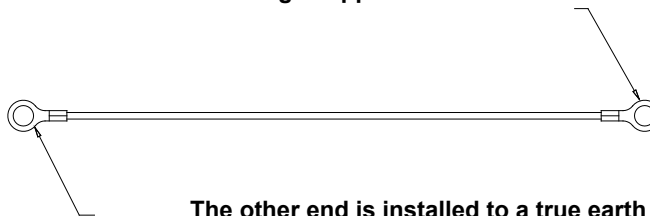


Use safe practices when lifting

## RECYCLING

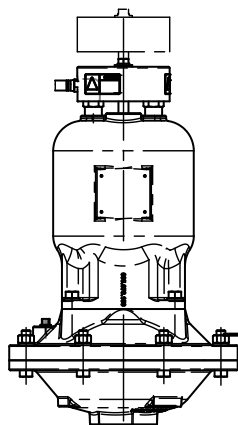
Many components of SANDPIPER® AODD pumps are made of recyclable materials. We encourage pump users to recycle worn out parts and pumps whenever possible, after any hazardous pumped fluids are thoroughly flushed.

One eyelet end is fastened to the surge suppressor hardware.



The other end is installed to a true earth ground.

## Grounding ATEX Tranquilizers®



ATEX compliant tranquilizers® are suitable for use in explosive atmospheres when the equipment is properly grounded in accordance with local electrical codes. Tranquilizers® equipped with electrically conductive diaphragms are suitable for the transfer of conductive or non-conductive fluids of any explosion group. When operating tranquilizers® equipped with non-conductive diaphragms that exceed the maximum permissible projected area, as defined in EN ISO 80079:36 (See Safety Page) section 6.7.5 table 9, the following protection methods must be applied:

- Equipment is always used to transfer electrically conductive fluids or
- Explosive environment is prevented from entering the internal portions of the Tranquilizers®, i.e. dry running

For further guidance on ATEX applications, please consult the factory.

This optional 8 foot long (244 centimeters) Ground Strap (920-025-000) is available for easy ground connection.

To reduce the risk of static electrical sparking, this surge suppressor must be grounded. Check the local electrical code for detailed grounding instruction and the type of equipment required.

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# Tranquilizer® Options

|                                                                                     | Model & Description                                                | Max. Pressure                                         | Air Inlet Size                | Liquid Inlet Size                                          | Dimensions inches (mm)                                                               |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------|-------------------------------------------------------|-------------------------------|------------------------------------------------------------|--------------------------------------------------------------------------------------|
|    | <b>TA1</b><br>Designed for 1" pumps.                               | 125 psi<br>8.6 bar<br>Self-charging.<br>Self-venting. | 1/4" NPT<br>(external thread) | 1" NPT                                                     | 13 5/8" to 15 1/8" height<br>(346mm to 384mm)<br>9" diameter<br>(229mm) NPT(F)       |
|                                                                                     | <b>TA25</b><br>Designed for 1" pumps.                              | 125 psi<br>8.6 bar<br>Self-charging.<br>Self-venting. | 1/4" NPT<br>(external thread) | 1" BSPT<br>(tapered internal thread)                       | 13 5/8" to 15 1/8" height<br>(346mm to 384mm)<br>9" diameter<br>(229mm) NPT(F)       |
|    | <b>TA1 1/2</b><br>Designed for 1" and 1 1/2" pumps.                | 125 psi<br>8.6 bar<br>Self-charging.<br>Self-venting. | 1/4" NPT<br>(external thread) | 1 1/2" NPT<br>(internal thread)                            | 19 7/8" to 21. 3/8" height<br>(505mm to 543mm)<br>10 1/2" diameter<br>(267mm) NPT(F) |
|                                                                                     | <b>TA40</b><br>Designed for 1" and 1 1/2" pumps.                   | 125 psi<br>8.6 bar<br>Self-charging.<br>Self-venting. | 1/4" NPT<br>(external thread) | 1 1/2" BSPT<br>(tapered internal thread)                   | 19 7/8" to 21. 3/8" height<br>(505mm to 543mm)<br>10 1/2" diameter<br>(267mm) NPT(F) |
|  | <b>TA2</b><br>Design Level 2<br>Designed for 1 1/2" and 2" pumps.  | 125 psi<br>8.6 bar<br>Self-charging.<br>Self-venting. | 1/4" NPT<br>(external thread) | 2" NPT<br>(internal thread)                                | 20 1/4" to 23 3/16" height<br>(514mm to 589mm)<br>12 1/2" diameter<br>(317mm) NPT(F) |
|                                                                                     | <b>TA50</b><br>Design Level 2<br>Designed for 1 1/2" and 2" pumps. | 125 psi<br>8.6 bar<br>Self-charging.<br>Self-venting. | 1/4" NPT                      | 2" BSPT<br>(tapered internal thread)                       | 20 1/4" to 23 3/16" height<br>(514mm to 589mm)<br>12 1/2" diameter<br>(317mm) NPT(F) |
|  | <b>TA3</b><br>Design Level 2<br>Designed for 3" and 4" pumps.      | 125 psi<br>8.6 bar<br>Self-Charging.<br>Self-venting. | 1/4" NPT                      | 3" 150# Ansi-style flange or 3" NPT internal thread        | 20 1/8" to 23 1/8" height<br>(511mm to 587mm)<br>16 3/16" diameter<br>(411mm) NPT(F) |
|                                                                                     | <b>TA80</b><br>Design Level 2<br>Designed for 3" and 4" pumps.     | 125 psi<br>8.6 bar<br>Self-Charging.<br>Self-venting. | 1/4" NPT                      | 3" BSPT (tapered internal thread) or 80mm DIN-style Flange | 20 1/8" to 23 1/8" height<br>(511mm to 587mm)<br>16 3/16" diameter<br>(411mm) NPT(F) |

## Tranquilizer®

- Nearly surge-free flow

- Steadier pressures.

- Less shock to pipes.

• Air-operated diaphragm pumps offer a wide range of benefits not available in any other type of pump. However, in some applications, pulsations in the discharge flow may be undesirable. Pulsation can be virtually eliminated by installing a Warren Rupp Tranquilizer®.

- Automatically maintains a constant volume of air cushion for most effective surge suppression, regardless of pump pressure.

- Automatically self-charging and self-venting to maintain most efficient air cushion pressure, no more precharge pressure calculations or guesswork, no manual pressurizing, no periodic pressure checking.

- Air cushion separated from product by flexible diaphragm . . . prevents product aeration.

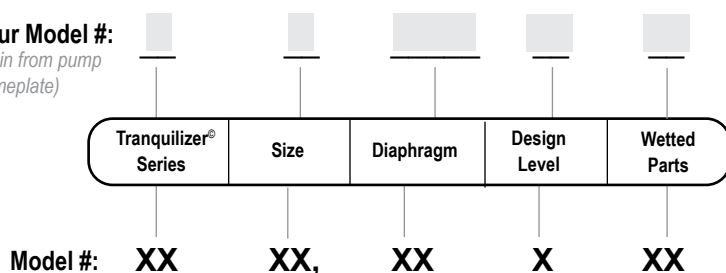
- External visual indication provides constant evidence of performance.

- Simple to install. Attention-free.

# Explanation of Nomenclature

Your Model #:

(fill in from pump nameplate)



## Tranquilizer Series

TA Tranquilizer

### Size

- 1 1" NPT
- 25 1" BSP Tapered
- 1½ 1½" NPT
- 40 1½" BSP Tapered
- 2 2" NPT
- 50 2" BSP Tapered
- 3 3" NPT
- 80 3" BSP Tapered

## Diaphragm Materials

- B Nitrile
- F FDA Accepted White Nitrile
- NG Neoprene Backup with PTFE Overlay
- H Hytrel
- I EPDM
- N Neoprene
- S Santoprene
- V FKM

## Design Level

- 1 Models: TA1, TA25, TA1½, TA40
- 2 Models: TA2, TA50, TA3, TA80

## Wetted Parts

- A Aluminum
- CI Cast Iron
- SS Stainless Steel
- HC Alloy-C Wetted

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

## ATEX Detail



II 2 G Ex h IIC T5...225°C (T2) Gb  
II 2 D Ex h IIIC T100°C...T200°C Db



Models equipped with stainless steel wetted parts (option **SS**) and PTFE diaphragms (option **NG**) are compliant with (EC) No 1935/2004 Food Contact Materials

Table 1. Category 1 & Category 2 ATEX Rated Pumps

| Ambient Temperature Range [°C] | Process Temperature Range [°C] <sup>1</sup> | Temperature Class | Maximum Surface Temperature [°C] |
|--------------------------------|---------------------------------------------|-------------------|----------------------------------|
| -20°C to +60°C                 | -20°C to +80°C                              | T5                | T100°C                           |
|                                | -20°C to +108°C                             | T4                | T135°C                           |
|                                | -20°C to + 160°C                            | T3                | T200°C                           |
|                                | -20°C to +177°C                             | (225°C) T2        |                                  |

<sup>1</sup>Per CSA standards ANSI LC6-2018 US & Canadian Technical Letter R14, G-Series Natural Gas Models are restricted to (-20°C to + 80°C) process temperature

# 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(21°C)) will attack FKM.                 | 350°F<br>177°C          | -40°F<br>-40°C |
| <b>Hytre®:</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    |

**Ambient temperature range:** -20°C to +40°C

**Process temperature range:** -20°C to +80°C for models rated as category 1 equipment  
-20°C to +100°C for models rated as category 2 equipment

In addition, the ambient temperature range and the process temperature range do not exceed the operating temperature range of the applied non-metallic parts as listed in the manuals of the pumps.

|                                                                                                                                                                                                                                                                                                                                          |                |                |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|----------------|
| <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.

# Material Codes - The Last 3 Digits of Part Number

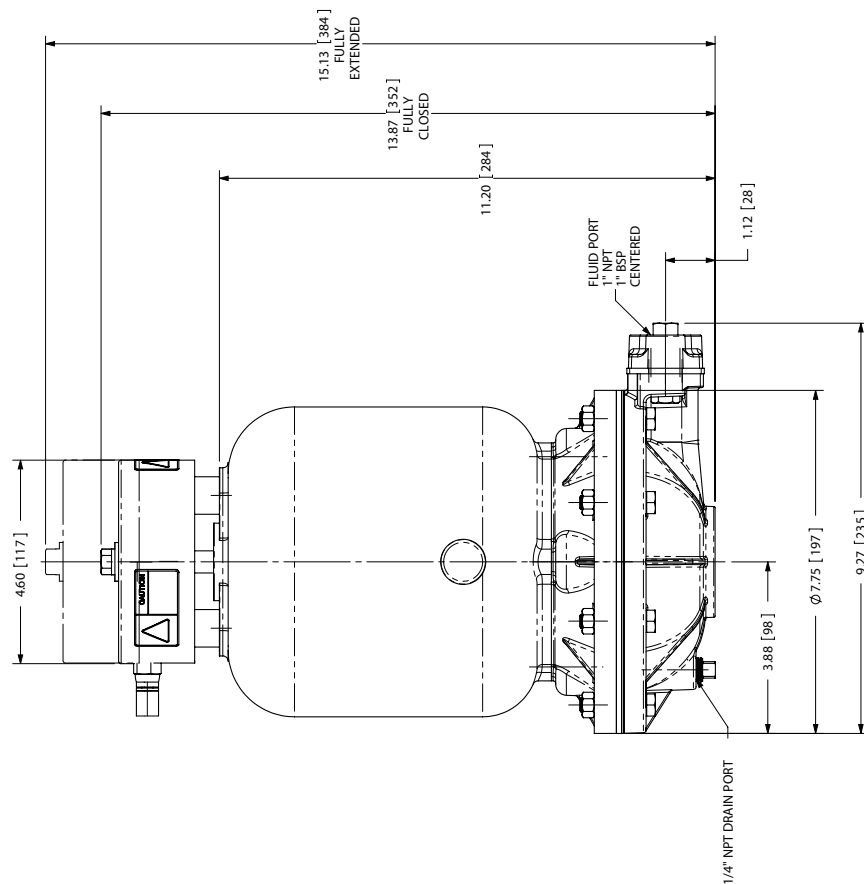
|                                                                              |                                                                  |                                                                   |
|------------------------------------------------------------------------------|------------------------------------------------------------------|-------------------------------------------------------------------|
| 000.....Assembly, sub-assembly;<br>and some purchased items                  | 364.....EPDM Rubber<br>Color coded: BLUE                         | • Delrin and Hytrel are registered<br>tradenames of E.I. DuPont.  |
| 010.....Cast Iron                                                            | 365.....Neoprene Rubber<br>Color coded: GREEN                    | • Nylatron is a registered tradename<br>of Polymer Corp.          |
| 015.....Ductile Iron                                                         | 366.....Food Grade Nitrile                                       | • Gylon is a registered tradename<br>of Garlock, Inc.             |
| 020.....Ferritic Malleable Iron                                              | 368.....Food Grade EPDM                                          | • Santoprene is a registered tradename<br>of Exxon Mobil Corp.    |
| 080.....Carbon Steel, AISI B-1112                                            | 371.....Philthane (Tuftane)                                      | • Rulon II is a registered tradename<br>of Dixon Industries Corp. |
| 110.....Alloy Type 316 Stainless Steel                                       | 374.....Carboxylated Nitrile                                     | • Ryton is a registered tradename<br>of Phillips Chemical Co.     |
| 111.....Alloy Type 316 Stainless Steel<br>(Electro Polished)                 | 375.....Fluorinated Nitrile                                      | • Valox is a registered tradename<br>of General Electric Co.      |
| 112.....Alloy C                                                              | 378.....High Density Polypropylene                               |                                                                   |
| 113.....Alloy Type 316 Stainless Steel<br>(Hand Polished)                    | 379.....Conductive Nitrile                                       |                                                                   |
| 114.....303 Stainless Steel                                                  | 408.....Cork and Neoprene                                        |                                                                   |
| 115.....302/304 Stainless Steel                                              | 425.....Compressed Fibre                                         |                                                                   |
| 117.....440-C Stainless Steel (Martensitic)                                  | 426.....Blue Gard                                                |                                                                   |
| 120.....416 Stainless Steel<br>(Wrought Martensitic)                         | 440.....Vegetable Fibre                                          |                                                                   |
| 148.....Hardcoat Anodized Aluminum                                           | 500.....Delrin® 500                                              |                                                                   |
| 150.....6061-T6 Aluminum                                                     | 502.....Conductive Acetal, ESD-800                               |                                                                   |
| 152.....2024-T4 Aluminum (2023-T351)                                         | 503.....Conductive Acetal, Glass-Filled                          |                                                                   |
| 155.....356-T6 Aluminum                                                      | 506.....Delrin® 150                                              |                                                                   |
| 156.....356-T6 Aluminum                                                      | 520.....Injection Molded PVDF<br>Natural color                   |                                                                   |
| 157.....Die Cast Aluminum Alloy #380                                         | 540.....Nylon                                                    |                                                                   |
| 158.....Aluminum Alloy SR-319                                                | 542.....Nylon                                                    |                                                                   |
| 162.....Brass, Yellow, Screw Machine Stock                                   | 544.....Nylon Injection Molded                                   |                                                                   |
| 165.....Cast Bronze, 85-5-5-5                                                | 550.....Polyethylene                                             |                                                                   |
| 166.....Bronze, SAE 660                                                      | 551.....Glass Filled Polypropylene                               |                                                                   |
| 170.....Bronze, Bearing Type,<br>Oil Impregnated                             | 552.....Unfilled Polypropylene                                   |                                                                   |
| 180.....Copper Alloy                                                         | 555.....Polyvinyl Chloride                                       |                                                                   |
| 305.....Carbon Steel, Black Epoxy Coated                                     | 556.....Black Vinyl                                              |                                                                   |
| 306.....Carbon Steel, Black PTFE Coated                                      | 558.....Conductive HDPE                                          |                                                                   |
| 307.....Aluminum, Black Epoxy Coated                                         | 570.....Rulon II®                                                |                                                                   |
| 308.....Stainless Steel, Black PTFE Coated                                   | 580.....Ryton®                                                   |                                                                   |
| 309.....Aluminum, Black PTFE Coated                                          | 600.....PTFE (virgin material)<br>Tetrafluorocarbon (TFE)        |                                                                   |
| 313.....Aluminum, White Epoxy Coated                                         | 603.....Blue Gylon®                                              |                                                                   |
| 330.....Zinc Plated Steel                                                    | 604.....PTFE                                                     |                                                                   |
| 332.....Aluminum, Electroless Nickel Plated                                  | 606.....PTFE                                                     |                                                                   |
| 333.....Carbon Steel, Electroless<br>Nickel Plated                           | 607.....Envelon                                                  |                                                                   |
| 335.....Galvanized Steel                                                     | 608.....Conductive PTFE                                          |                                                                   |
| 337.....Silver Plated Steel                                                  | 610.....PTFE Encapsulated Silicon                                |                                                                   |
| 351.....Food Grade Santoprene®                                               | 611.....PTFE Encapsulated FKM                                    |                                                                   |
| 353.....Geolast; Color: Black                                                | 632.....Neoprene/Hytrel®                                         |                                                                   |
| 354.....Injection Molded #203-40<br>Santoprene® Duro 40D +/-5;<br>Color: RED | 633.....FKM/PTFE                                                 |                                                                   |
| 356.....Hytrel®                                                              | 634.....EPDM/PTFE                                                |                                                                   |
| 357.....Injection Molded Polyurethane                                        | 635.....Neoprene/PTFE                                            |                                                                   |
| 358.....Urethane Rubber<br>(Some Applications)<br>(Compression Mold)         | 637.....PTFE, FKM/PTFE                                           |                                                                   |
| 359.....Urethane Rubber                                                      | 638.....PTFE, Hytrel®/PTFE                                       |                                                                   |
| 360.....Nitrile Rubber Color coded: RED                                      | 639.....Nitrile/TFE                                              |                                                                   |
| 363.....FKM (Fluorocarbon)<br>Color coded: YELLOW                            | 643.....Santoprene®/EPDM                                         |                                                                   |
|                                                                              | 644.....Santoprene®/PTFE                                         |                                                                   |
|                                                                              | 656.....Santoprene® Diaphragm and<br>Check Balls/EPDM Seats      |                                                                   |
|                                                                              | 661.....EPDM/Santoprene®                                         |                                                                   |
|                                                                              | 666.....FDA Nitrile Diaphragm,<br>PTFE Overlay, Balls, and Seals |                                                                   |
|                                                                              | 668.....PTFE, FDA Santoprene®/PTFE                               |                                                                   |

# Dimensional Drawings

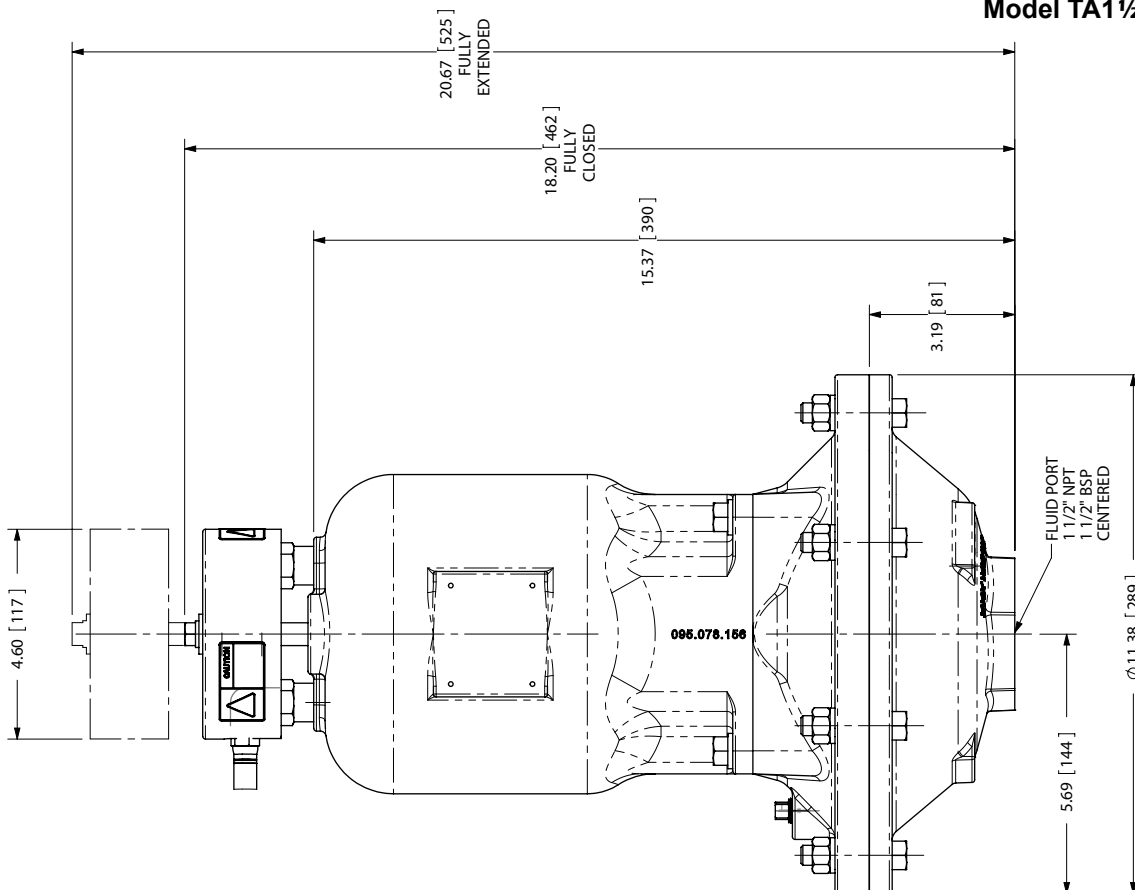
Dimensions are  $\pm 1/8"$  ( $\pm 3\text{mm}$ ). Figures in parenthesis = millimeters

## 1: PUMP SPECS

Model TA1 & TA25

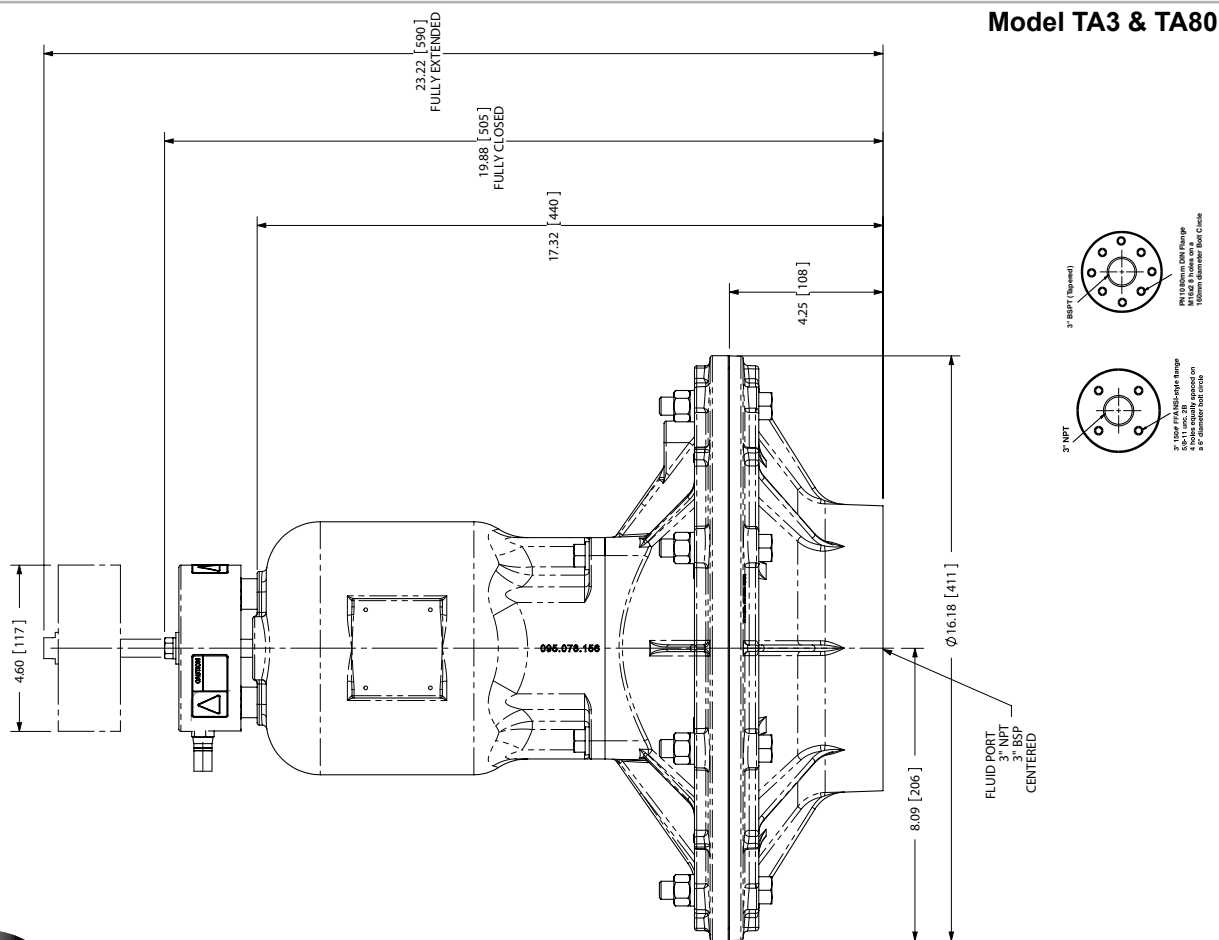
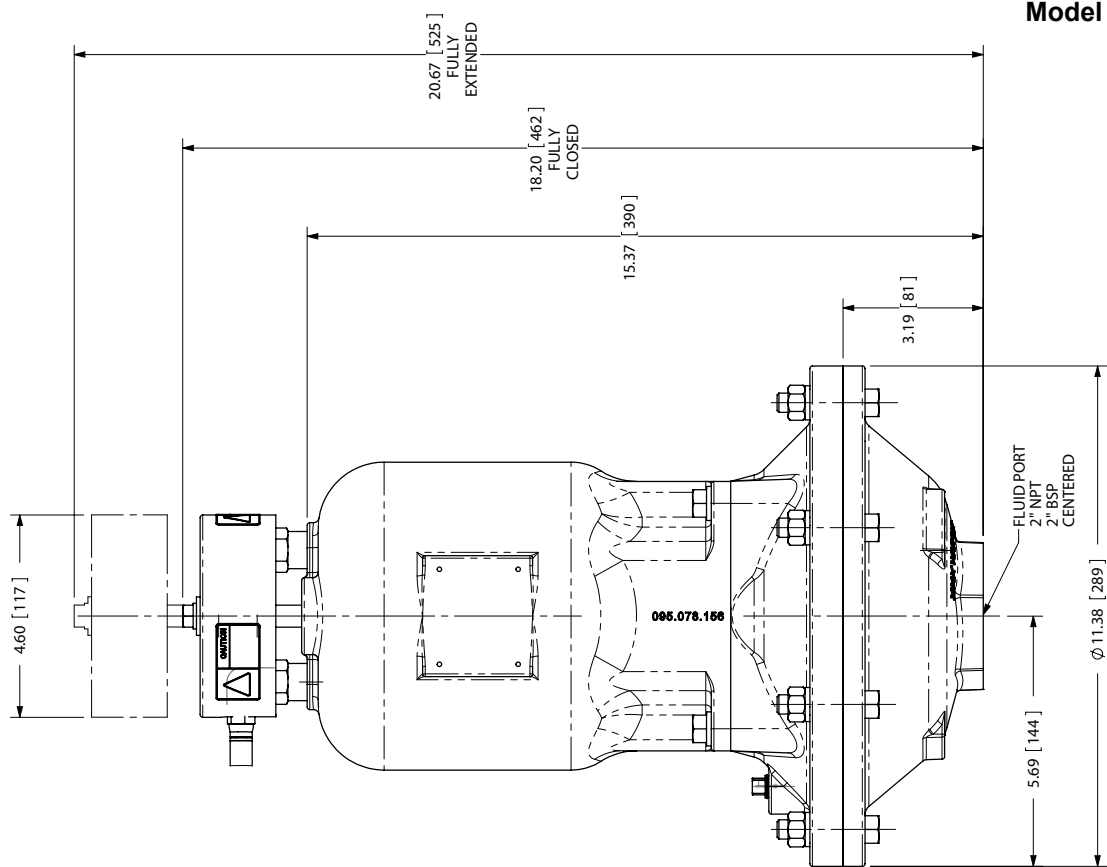


Model TA1½ & TA40



# Dimensional Drawings

Dimensions are ± 1/8" (± 3mm). Figures in parenthesis = millimeters



# SERVICE AND OPERATING INSTRUCTIONS

This Warren Rupp Tranquilizer® is a completely automatic diaphragm fitted surge suppressor to reduce the flow and pressure pulsations in a pumping system characteristic of reciprocating type pumps.

**Principle of operation:** The Tranquilizer uses a flexible diaphragm to separate a liquid chamber from a compressed air chamber. A rod connected to the center of the diaphragm activates the air inlet and exhaust valves, which automatically admits or exhausts air to the air chamber. This maintains the diaphragms in mid-range of stroke for maximum surge suppression.

quickly established by liquid pressure pushing diaphragm upward, permitting entrance of air into air chamber, until the balancing air cushion causes the diaphragm to center at its mid-stroke normal operating position.

During normal continuous operation thereafter . . . the diaphragm always flexes at its mid-range position to absorb discharge pulsations against the adjoining air cushion already established.

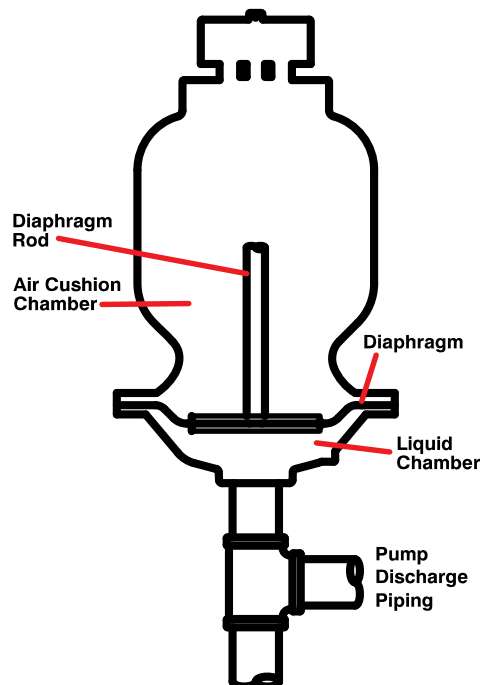
In event of change in pumped liquid pressure . . . the air cushion pressure is automatically increased or decreased as required to compensate for the change . . . always maintaining constant volume of air cushion, and the diaphragm always operating at its mid-position.

When liquid flow stops and liquid pressure is released . . . the air in air chamber is also exhausted to atmosphere.

**Service Instructions:** DISCONNECT AIR INLET PRESSURE BEFORE SERVICING. The diaphragms are serviced by simply removing the hex nuts or v-band and removing the center spool casting.

When Virgin PTFE diaphragms are used in conjunction with the elastomeric

diaphragms they are placed over the “wetted” side of the elastomeric diaphragm. Inlet and exhaust air valves are externally located for easy access and service.



## 2: INSIAL & OP

1. Surge Suppressor
2. Filter/Regulator
3. Air Dryer

The diagram illustrates a vacuum pump system with the following components and connections:

- Unregulated Air Supply to Surge Suppressor:** The main air inlet at the top.
- Surge Suppressor (1):** A cylindrical component that regulates air flow.
- Pressure Gauge:** A circular gauge for monitoring system pressure.
- Shut-Off Valve:** A valve for controlling the air flow.
- Discharge:** The outlet for the regulated air.
- Pipe Connection (Style Optional):** The main piping connecting the surge suppressor to the pump.
- Flexible Connector:** A coiled section of pipe for flexibility.
- Drain Port:** A port for removing condensate from the pipe.
- Muffler (Optional Piped Exhaust):** A component to reduce noise from the pump exhaust.
- Vacuum Gauge:** A gauge for monitoring the vacuum level.
- Shut-Off Valve:** A valve for controlling the vacuum pump.
- Drain Port:** A port for removing condensate from the pump.
- Suction:** The inlet for the material being pumped.
- Check Valve:** A valve to prevent backflow.
- Shut-Off Valve:** A valve for controlling the air flow to the pump.
- Air Inlet:** The inlet for the air entering the pump.
- Filter Regulator (2):** A component that filters and regulates the air flow.
- Air Dryer (3):** A component that removes moisture from the air.

Locate the Tranquilizer in discharge piping as close as possible to the pump. The unit will operate in any position. Connect air inlet connection to full plant air supply line before the air regulator to pump. Not to exceed 125PSI.

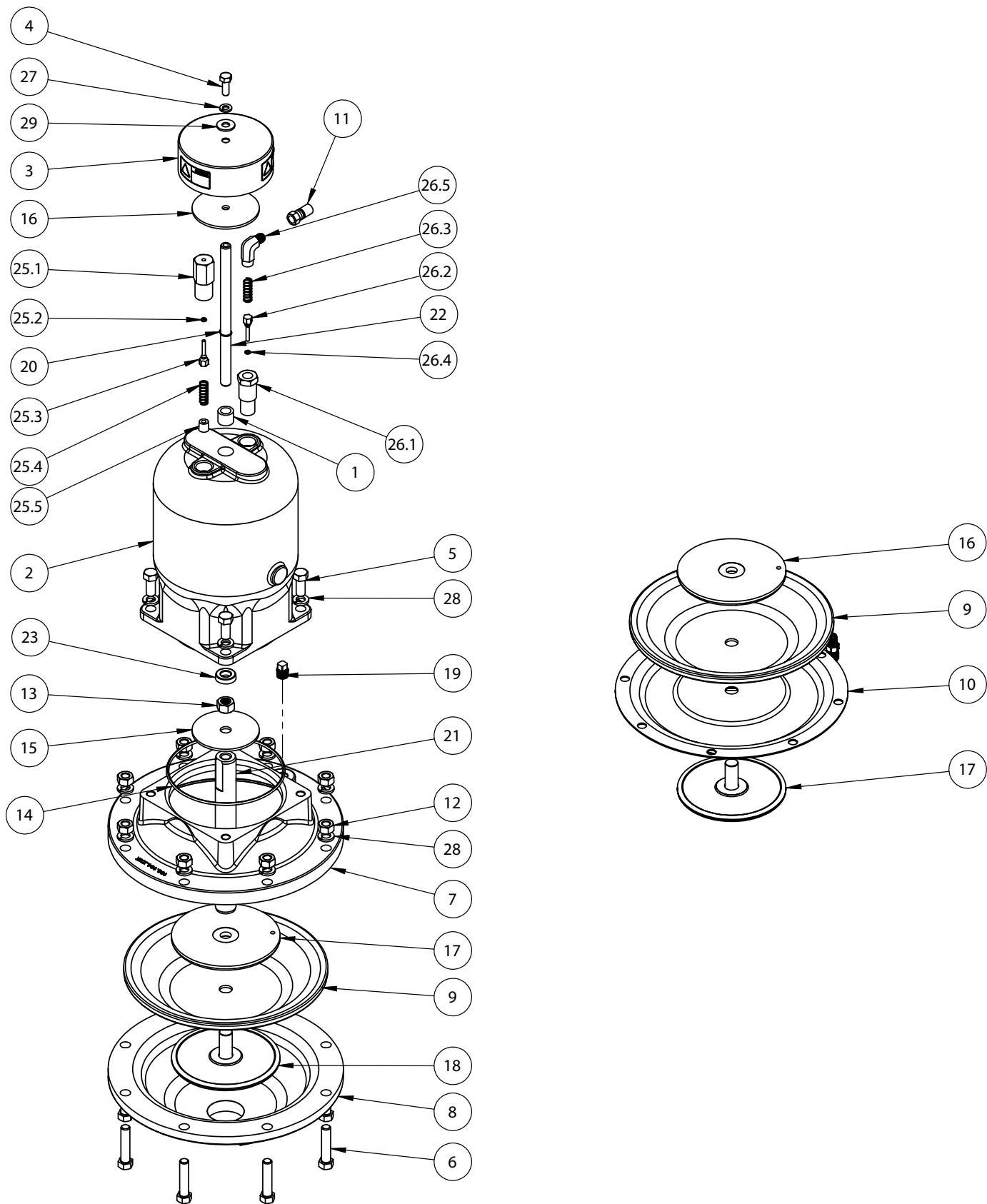


# Composite Repair Parts List- TA1 & TA25

| ITEM NO. | PART NUMBER  | DESCRIPTION                                   | QTY. |
|----------|--------------|-----------------------------------------------|------|
| 1        | 070.014.170  | Bearing, Sleeve                               | 1    |
| 2        | 095.029.156  | Body                                          | 1    |
| 3        | 165.023.000  | Cap                                           | 1    |
| 4        | 170.005.330  | Capscrew, Hex Hd 5/16-18 X 7/8                | 1    |
| 5        | 170.009.330  | Capscrew, Hex Hd 3/8-16 x 1 1/2               | 2    |
| 6        | 170.029.330  | Capscrew, Hex Hd 5/16-18 x 1 1/2              | 8    |
| 7        | 170.057.330  | Capscrew, Hx Hd 5/16-18 x 3/4                 | 4    |
| 8        | 196.012.110  | Outer Chamber (Stainless Units)               | 1    |
|          | 196.012.157  | Outer Chamber                                 | 1    |
| 9        | 196.018.157  | Chamber                                       | 1    |
| 10       | 286.008.354  | Diaphragm, Santoprene                         | 1    |
|          | 286.008.356  | Diaphragm, Hytrel                             | 1    |
|          | 286.008.360  | Diaphragm, Nitrile                            | 1    |
|          | 286.008.363  | Diaphragm, FKM                                | 1    |
|          | 286.008.364  | Diaphragm, EPDM                               | 1    |
|          | 286.008.365  | Diaphragm, Neoprene                           | 1    |
|          | 286.008.366  | Diaphragm, FDA Nitrile                        | 1    |
| 11       | 286.015.604  | Diaphragm, Overlay                            | 1    |
| 12       | 334.018.110  | Flange, Threaded (Stainless and PTFE Models)  | 1    |
|          | 334.018.110E | Flange, Threaded (1" BSP Tapered; Model TA25) | 1    |
|          | 334.018.156  | Flange, Threaded                              | 1    |
|          | 334.018.156E | Flange, Threaded (1" BSP Tapered Model TA25)  | 1    |
| 13       | 360.030.425  | Gasket, Flange                                | 1    |
|          | 360.030.600  | Gasket, Flange (PTFE and FKM Models)          | 1    |
| 14       | 866.078.330  | Tube Fitting                                  | 1    |
| 15       | 545.004.330  | Nut, Hex 5/16-18                              | 8    |
| 16       | 545.005.330  | Nut, Hex 3/8-16 (Stainless Models)            | 2    |
| 17       | 545.008.330  | Nut, Hex 1/2-13                               | 1    |
| 18       | 560.040.360  | O-Ring                                        | 1    |
| 19       | 612.022.330  | Plate, Inner Diaphragm                        | 1    |
| 20       | 612.043.330  | Plate, Activator                              | 1    |
| 21       | 612.044.330  | Plate, Activator                              | 1    |
| 22       | 612.101.110  | Plate, Outer Diaphragm                        | 1    |
|          | 612.108.157  | Plate, Outer Diaphragm                        | 1    |
| 23       | 618.003.110  | Plug, 1/4 Pipe (Stainless Models)             | 1    |
|          | 618.003.330  | Plug, 1/4 Pipe                                | 1    |
| 24       | 685.027.120  | Rod, Diaphragm                                | 1    |
| 25       | 685.028.120  | Rod, Activator                                | 1    |
| 26       | 720.012.360  | Seal, Shaft                                   | 1    |
| 29       | 893.021.000  | Valve Assembly                                | 1    |
| 29.1     | 095.020.162  | Body, Valve                                   | 1    |
| 29.2     | 560.001.360  | O-Ring                                        | 1    |
| 29.3     | 622.002.162  | Poppet                                        | 1    |
| 29.4     | 670.007.162  | Spring, Retainer                              | 1    |
| 29.5     | 780.013.115  | Spring, Compression                           | 1    |
| 30       | 893.023.000  | Valve Assembly                                | 1    |
| 30.1     | 095.019.162  | Body, Valve                                   | 1    |
| 30.2     | 622.002.162  | Poppet                                        | 1    |
| 30.3     | 780.013.115  | Spring, Compression                           | 1    |
| 30.4     | 560.001.360  | O-Ring                                        | 1    |
| 30.5     | 866.010.162  | Elbow, Male                                   | 1    |
| 31       | 900.004.330  | Washer, Lock 5/16                             | 1    |
| 32       | 901.009.115  | Washer, Flat 5/16                             | 1    |
| 33       | 901.012.180  | Washer, Sealing                               | 1    |
| 34       | 901.014.180  | Washer, Sealing                               | 4    |

# Composite Repair Parts Drawing- TA1½ & TA40

3: EXP VIEW  
TA1½ & TA40

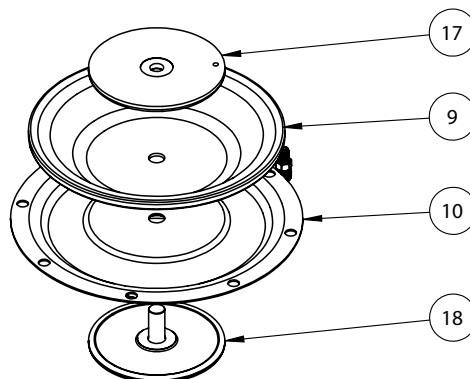
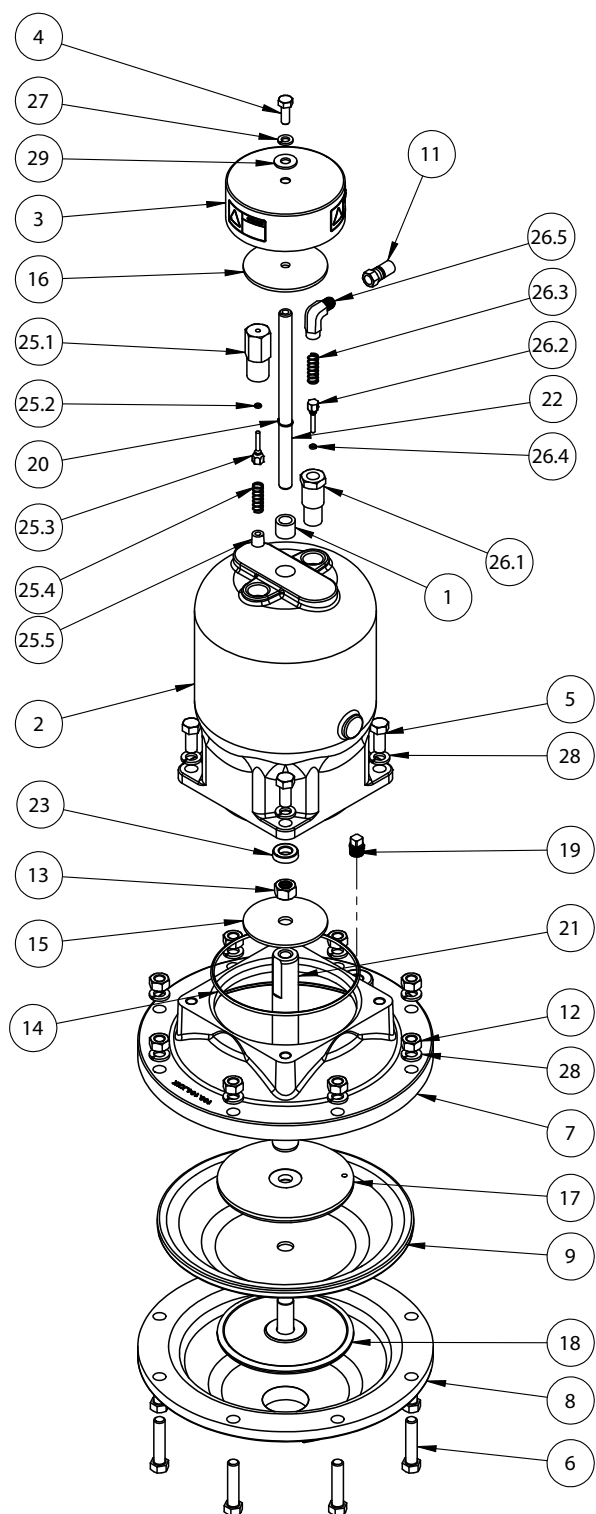


# Composite Repair Parts List- TA1½ & TA40

| ITEM NO. | PART NUMBER  | DESCRIPTION                                  | QTY. |
|----------|--------------|----------------------------------------------|------|
| 1        | 070.014.170  | Bearing, Sleeve                              | 1    |
| 2        | 095.078.156  | Body                                         | 1    |
| 3        | 165.023.000  | Cap                                          | 1    |
| 4        | 170.005.330  | Capscrew, Hex Hd - 5/16-18 X 7/8             | 1    |
| 5        | 170.024.330  | Capscrew, Hex Hd - 7/16-14 X 1               | 4    |
| 6        | 170.060.330  | Capscrew, Hex Hd - 7/16-14 X 2               | 8    |
| 7        | 196.194.156  | Chamber, Inner                               | 1    |
| 8        | 196.196.156  | Chamber, Outer - NPT                         | 1    |
|          | 196.196.156E | Chamber, Outer - 1½" BSP Tapered, Model TA40 | 1    |
|          | 196.196.010  | Chamber, Outer - NPT                         | 1    |
|          | 196.196.010E | Chamber, Outer - 1½" BSP Tapered, Model TA40 | 1    |
|          | 196.196.110  | Chamber, Outer - NPT                         | 1    |
|          | 196.196.110E | Chamber, Outer - 1½" BSP Tapered, Model TA40 | 1    |
|          | 196.196.112  | Chamber, Outer - NPT                         | 1    |
|          | 196.196.112E | Chamber, Outer - 1½" BSP Tapered, Model TA40 | 1    |
| 9        | 286.005.360  | Diaphragm                                    | 1    |
|          | 286.005.363  | Diaphragm                                    | 1    |
|          | 286.005.364  | Diaphragm                                    | 1    |
|          | 286.005.365  | Diaphragm                                    | 1    |
|          | 286.005.351  | Diaphragm                                    | 1    |
|          | 286.005.354  | Diaphragm                                    | 1    |
| 10       | 286.020.604  | Diaphragm, Overlay PTFE                      | 1    |
| 11       | 866.078.330  | Tube Fitting                                 | 1    |
| 12       | 545.007.330  | Nut, Hex - 7/16-14                           | 8    |
| 13       | 545.008.330  | Nut, Hex - 1/2-13                            | 1    |
| 14       | 560.022.360  | O-Ring                                       | 1    |
| 15       | 612.043.330  | Plate, Activator                             | 1    |
| 16       | 612.044.330  | Plate, Activator                             | 1    |
| 17       | 612.047.330  | Plate, Diaphragm Inner                       | 1    |
| 18       | 612.039.157  | Plate, Diaphragm Outer - Alum Units          | 1    |
|          | 612.039.010  | Plate, Diaphragm Outer - Cast Iron Units     | 1    |
|          | 612.097.110  | Plate, Diaphragm Outer - Stainless Units     | 1    |
|          | 612.097.112  | Plate, Diaphragm Outer - Hastalloy Units     | 1    |
| 19       | 618.003.330  | Plug, 1/4 Pipe                               | 1    |
| 20       | 675.054.080  | Ring, Retainer                               | 1    |
| 21       | 685.066.120  | Rod, Diaphragm                               | 1    |
| 22       | 685.067.120  | Rod, Activator                               | 1    |
| 23       | 720.012.360  | U-Cup, Shaft Seal                            | 1    |
| 25       | 893.021.000  | Valve Assembly                               | 1    |
| 25.1     | 095.020.162  | Body, Valve                                  | 1    |
| 25.2     | 560.001.360  | O-Ring                                       | 1    |
| 25.3     | 622.002.162  | Poppet                                       | 1    |
| 25.4     | 670.007.162  | Spring, Retainer                             | 1    |
| 25.5     | 780.013.115  | Spring, Compression                          | 1    |
| 26       | 893.023.000  | Valve Assembly                               | 1    |
| 26.1     | 095.019.162  | Body, Valve                                  | 1    |
| 26.2     | 622.002.162  | Poppet                                       | 1    |
| 26.3     | 780.013.115  | Spring, Compression                          | 1    |
| 26.4     | 560.001.360  | O-Ring                                       | 1    |
| 26.5     | 866.010.162  | Elbow, Male                                  | 1    |
| 27       | 900.004.330  | Washer, Lock - 5/16                          | 1    |
| 28       | 900.006.330  | Washer, Lock - 7/16                          | 12   |
| 29       | 901.009.330  | Washer, Flat - 5/16                          | 1    |

# Composite Repair Parts Drawing- TA2 & TA50

3: EXP VIEW  
TA2 & TA50

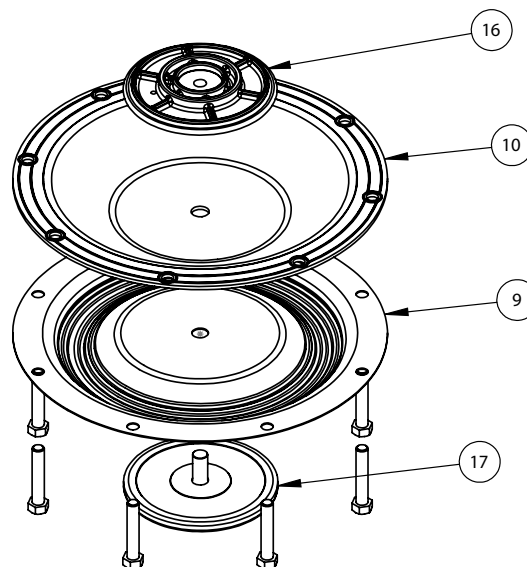
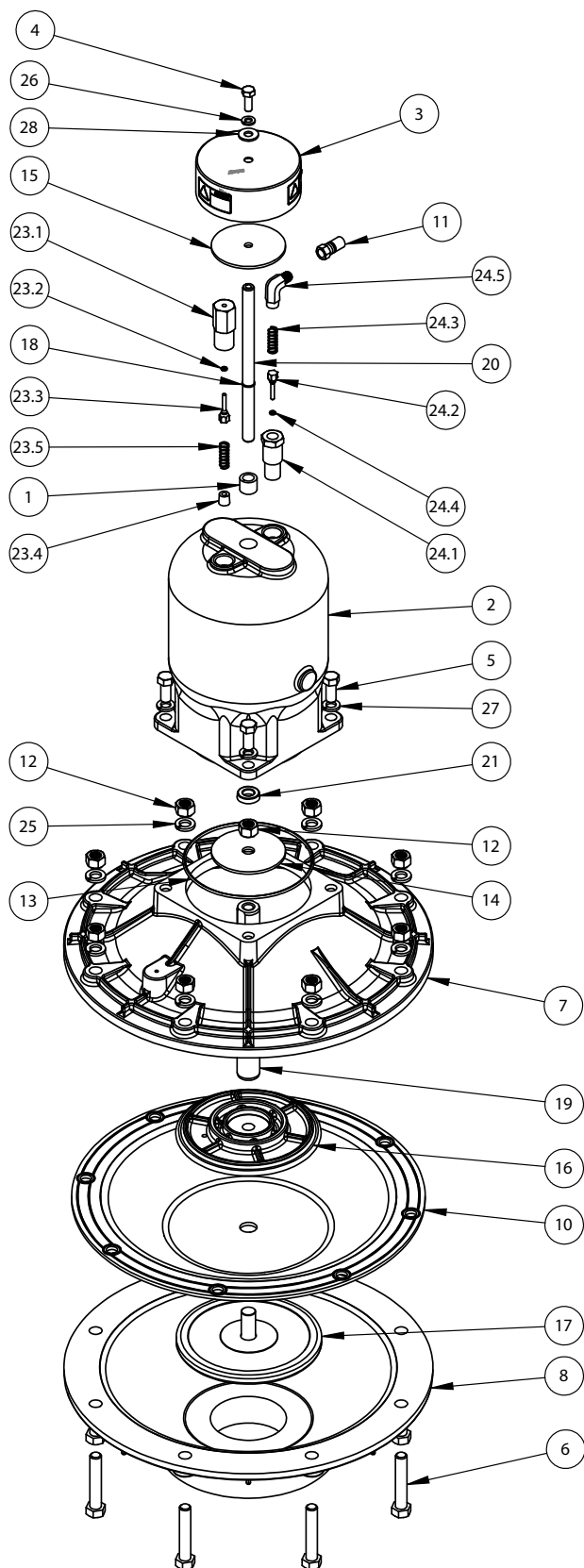


# Composite Repair Parts List- TA2 & TA50

| ITEM NO. | PART NUMBER        | DESCRIPTION                                 | QTY.     |
|----------|--------------------|---------------------------------------------|----------|
| 1        | 070.014.170        | Bearing, Sleeve                             | 1        |
| 2        | 095.078.156        | Body                                        | 1        |
| 3        | 165.023.000        | Cap                                         | 1        |
| 4        | 170.005.330        | Capscrew, Hex Hd - 5/16-18 X 7/8            | 1        |
| 5        | 170.024.330        | Capscrew, Hex Hd - 7/16-14 X 1              | 4        |
| 6        | 170.060.330        | Capscrew, Hex Hd - 7/16-14 X 2              | 8        |
| 7        | 196.194.156        | Chamber, Inner                              | 1        |
| 8        | 196.195.156        | Chamber, Outer - NPT                        | 1        |
|          | 196.195.156E       | Chamber, Outer - 2" BSP Tapered, Model TA50 | 1        |
|          | 196.195.010        | Chamber, Outer - NPT                        | 1        |
|          | 196.195.010E       | Chamber, Outer - 2" BSP Tapered, Model TA50 | 1        |
|          | 196.195.110        | Chamber, Outer - NPT                        | 1        |
|          | 196.195.110E       | Chamber, Outer - 2" BSP Tapered, Model TA50 | 1        |
|          | 196.195.112        | Chamber, Outer - NPT                        | 1        |
|          | 196.195.112E       | Chamber, Outer - 2" BSP Tapered, Model TA50 | 1        |
| 9        | <b>286.005.360</b> | <b>Diaphragm</b>                            | <b>1</b> |
|          | <b>286.005.363</b> | <b>Diaphragm</b>                            | <b>1</b> |
|          | <b>286.005.364</b> | <b>Diaphragm</b>                            | <b>1</b> |
|          | <b>286.005.365</b> | <b>Diaphragm</b>                            | <b>1</b> |
|          | <b>286.005.351</b> | <b>Diaphragm</b>                            | <b>1</b> |
|          | <b>286.005.354</b> | <b>Diaphragm</b>                            | <b>1</b> |
| 10       | <b>286.020.604</b> | <b>Diaphragm, Overlay PTFE</b>              | <b>1</b> |
| 11       | 866.078.330        | Tube Fitting                                | 1        |
| 12       | 545.007.330        | Nut, Hex - 7/16-14                          | 8        |
| 13       | 545.008.330        | Nut, Hex - 1/2-13                           | 1        |
| 14       | 560.022.360        | O-Ring                                      | 1        |
| 15       | 612.043.330        | Plate, Activator                            | 1        |
| 16       | 612.044.330        | Plate, Activator                            | 1        |
| 17       | 612.047.330        | Plate, Diaphragm Inner                      | 1        |
| 18       | 612.039.157        | Plate, Diaphragm Outer - Alum Units         | 1        |
|          | 612.039.010        | Plate, Diaphragm Outer - Cast Iron Units    | 1        |
|          | 612.097.110        | Plate, Diaphragm Outer - Stainless Units    | 1        |
|          | 612.097.112        | Plate, Diaphragm Outer - Hastalloy Units    | 1        |
| 19       | 618.003.330        | Plug, 1/4 Pipe                              | 1        |
| 20       | 675.054.080        | Ring, Retainer                              | 1        |
| 21       | 685.066.120        | Rod, Diaphragm                              | 1        |
| 22       | 685.067.120        | Rod, Activator                              | 1        |
| 23       | <b>720.012.360</b> | <b>U-Cup, Shaft Seal</b>                    | <b>1</b> |
| 25       | 893.021.000        | Valve Assembly                              | 1        |
| 25.1     | 095.020.162        | Body, Valve                                 | 1        |
| 25.2     | <b>560.001.360</b> | <b>O-Ring</b>                               | <b>1</b> |
| 25.3     | 622.002.162        | Poppet                                      | 1        |
| 25.4     | 670.007.162        | Spring, Retainer                            | 1        |
| 25.5     | 780.013.115        | Spring, Compression                         | 1        |
| 26       | 893.023.000        | Valve Assembly                              | 1        |
| 26.1     | 095.019.162        | Body, Valve                                 | 1        |
| 26.2     | 622.002.162        | Poppet                                      | 1        |
| 26.3     | 780.013.115        | Spring, Compression                         | 1        |
| 26.4     | <b>560.001.360</b> | <b>O-Ring</b>                               | <b>1</b> |
| 26.5     | 866.010.162        | Elbow, Male                                 | 1        |
| 27       | 900.004.330        | Washer, Lock - 5/16                         | 1        |
| 28       | 900.006.330        | Washer, Lock - 7/16                         | 12       |
| 29       | 901.009.330        | Washer, Flat - 5/16                         | 1        |

# Composite Repair Parts Drawing- TA3 & TA80

TA3 & TA80  
3: EXP VIEW



# Composite Repair Parts List- TA3 & TA80

| ITEM NO. | PART NUMBER        | DESCRIPTION                                               | QTY.     |
|----------|--------------------|-----------------------------------------------------------|----------|
| 1        | 070.014.170        | Bearing, Sleeve                                           | 1        |
| 2        | 095.078.156        | Body                                                      | 1        |
| 3        | 165.023.000        | Cap                                                       | 1        |
| 4        | 170.005.330        | Capscrew, Hex Hd - 5/16-18 X 7/8                          | 1        |
| 5        | 170.024.330        | Capscrew, Hex Hd - 7/16-14 X 1                            | 4        |
| 6        | 170.082.330        | Capscrew, Hex Hd, 1/2-13UNC X 2.75                        | 8        |
| 7        | 196.100.015        | Chamber, Inner                                            | 1        |
| 8        | 196.146.156        | Chamber, Outer                                            | 1        |
|          | 196.146.156E       | Chamber, Outer (3" BSP Tapered/PN10 80mm DIN, Model TA80) | 1        |
|          | 196.146.010        | Chamber, Outer                                            | 1        |
|          | 196.146.010E       | Chamber, Outer (3" BSP Tapered/PN10 80mm DIN, Model TA80) | 1        |
|          | 196.146.110        | Chamber, Outer                                            | 1        |
|          | 196.146.110E       | Chamber, Outer (3" BSP Tapered/PN10 80mm DIN, Model TA80) | 1        |
| 9        | <b>286.098.604</b> | <b>Diaphragm, Overlay</b>                                 | <b>1</b> |
| 10       | <b>286.098.360</b> | <b>Diaphragm</b>                                          | <b>1</b> |
|          | <b>286.098.363</b> | <b>Diaphragm</b>                                          | <b>1</b> |
|          | <b>286.098.364</b> | <b>Diaphragm</b>                                          | <b>1</b> |
|          | <b>286.098.365</b> | <b>Diaphragm</b>                                          | <b>1</b> |
|          | <b>286.098.354</b> | <b>Diaphragm</b>                                          | <b>1</b> |
|          | <b>286.098.351</b> | <b>Diaphragm</b>                                          | <b>1</b> |
| 11       | 866.078.330        | Tube Fitting                                              | 1        |
| 12       | 545.008.330        | Nut, Hex - 1/2-13                                         | 9        |
| 13       | 560.022.360        | O-Ring                                                    | 1        |
| 14       | 612.043.330        | Plate, Activator                                          | 1        |
| 15       | 612.044.330        | Plate, Activator                                          | 1        |
| 16       | 612.192.157        | Plate, Inner Diaphragm                                    | 1        |
| 17       | 612.194.157        | Plate, Outer Diaphragm Assy. (Alum Units Only)            | 1        |
|          | 612.194.010        | Plate, Outer Diaphragm Assy. (Cast Iron Units Only)       | 1        |
|          | 612.194.110        | Plate, Outer Diaphragm Assy. (Stainless Units Only)       | 1        |
| 18       | 675.054.080        | Ring, Retainer                                            | 1        |
| 19       | 685.066.120        | Rod, Diaphragm                                            | 1        |
| 20       | 685.048.120        | Rod, Activator                                            | 1        |
| 21       | <b>720.012.360</b> | <b>U-cup, Shaft Seal</b>                                  | <b>1</b> |
| 23       | 893.021.000        | Valve Assembly                                            | 1        |
| 23.1     | 095.020.162        | Body, Valve                                               | 1        |
| 23.2     | 560.001.360        | O-Ring                                                    | 1        |
| 23.3     | 622.002.162        | Poppet                                                    | 1        |
| 23.4     | 670.007.162        | Spring Retainer                                           | 1        |
| 23.5     | 780.013.115        | Spring, Compression                                       | 1        |
| 24       | 893.023.000        | Valve Assembly                                            | 1        |
| 24.1     | 095.019.162        | Body, Valve                                               | 1        |
| 24.2     | 622.002.162        | Poppet                                                    | 1        |
| 24.3     | 780.013.115        | Spring, Compression                                       | 1        |
| 24.4     | 560.001.360        | O-Ring                                                    | 1        |
| 24.5     | 866.010.162        | Elbow, Male                                               | 1        |
| 25       | 900.003.330        | Washer, Lock - 1/2                                        | 8        |
| 26       | 900.004.330        | Washer, Lock - 5/16                                       | 1        |
| 27       | 900.006.330        | Washer, Lock - 7/16                                       | 4        |
| 28       | 901.009.115        | Washer, Flat - 5/16                                       | 1        |

# 5 - YEAR Limited Product Warranty

Warren Rupp, Inc. ("Warren Rupp") warrants to the original end-use purchaser that no product sold by Warren Rupp that bears a Warren Rupp 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 Warren Rupp's factory. Warren Rupp brands include Warren Rupp®, SANDPIPER®, SANDPIPER Signature Series™, MARATHON®, Porta-Pump®, SludgeMaster™ and Tranquilizer®.

The use of non-OEM replacement parts will void (or negate) agency certifications, including CE, ATEX, CSA, 3A and EC1935 compliance (Food Contact Materials). Warren Rupp, Inc. cannot ensure nor warrant non-OEM parts to meet the stringent requirements of the certifying agencies.

~ See [sandpiperpump.com/content/warranty-certifications](http://sandpiperpump.com/content/warranty-certifications) for complete warranty, including terms and conditions, limitations and exclusions. ~



## EC Declaration of Conformity

Manufacturer:  
Warren Rupp, Inc.  
800 N. Main Street  
Mansfield, Ohio, 44902 USA

Certifies that Air-Operated Double Diaphragm Pump Models: DSB Series, DMF Series, G Series, HDB Series, HDF Series, HP Series, F Series, MS Series, S Series, SL Series, SP Series, SSB Series, T Series, U1F Series, WR Series; High Pressure Pump Models: EH Series, GH Series, SH Series; Submersible Pump Models: SMA3 Series, SPA Series; and Surge Dampener/Suppressor Models: DA Series, TA Series comply with the European Community Directive 2006/42/EC on Machinery, according to Annex VIII. This product has used Harmonized Standard EN809:2012, Pumps and Pump Units for Liquids - Common Safety Requirements, to verify conformance.

October 3, 2022

DATE/APPROVAL/TITLE:

Technical File on record with:  
DEKRA Certification B.V.  
Meander 1051  
6825 MJ Arnhem  
The Netherlands

A handwritten signature in black ink, appearing to read 'Dennis Hall'.

Signature of authorized person

Dennis Hall

Printed name of authorized person

Engineering Manager

Title





## EC Declaration of Conformity

**Manufacturer:**  
**Warren Rupp, Inc.**  
**800 N. Main Street**  
**Mansfield, Ohio, 44902 USA**

Certifies that Air-Operated Double Diaphragm Pump Models: DSB Series, DMF Series, G Series, HDB Series, HDF Series, HP Series, F Series, MS Series, S Series, SL Series, SP Series, SSB Series, T Series, U1F Series, WR Series; High Pressure Pump Models: EH Series, GH Series, SH Series; Submersible Pump Models: SMA3 Series, SPA Series; and Surge Dampener/Suppressor Models: DA Series, TA Series comply with the United Kingdom Statutory Instruments 2008 No. 1597, The Supply of Machinery (Safety) Regulations 2008, according to Annex VIII. This product has used Designated Standard EN809:2012, Pumps and Pump Units for Liquids - Common Safety Requirements, to verify conformance.

October 17, 2022

DATE/APPROVAL/TITLE:

Technical File on record with:  
DEKRA Certification UK Limited  
Stokenchurch House  
Oxford Road  
Stokenchurch  
HP14 3SX

Signature of authorized person

Dennis Hall

Printed name of authorized person

Engineering Manager

Title





# ATEX



## EU Declaration of Conformity

### Manufacturer:

Warren Rupp, Inc.  
A Unit of IDEX Corporation  
800 North Main Street  
Mansfield, OH 44902 USA

This declaration of conformity is issued under the sole responsibility of the manufacturer. Warren Rupp, Inc. declares that Air Operated Double Diaphragm Pumps (AODD) and Surge Suppressors listed below comply with the requirements of Directive **2014/34/EU** and applicable harmonized standards.

#### Harmonized Standards:

- EN ISO 80079-36: 2016
- EN ISO 80079-37: 2016
- EN 60079-25: 2010

1. AODD Pumps and Surge Suppressors - Technical File on record with DEKRA Certification B.V.  
Meander 1051  
6825 MJ Arnhem  
The Netherlands

#### Hazardous Location Applied:

-  II 2 G Ex h IIC T5...225°C (T2) Gb  
II 2 D Ex h IIIC T100°C...T200°C Db
- Metallic pump models with external aluminum components (DMF Series, EH Series, F Series, G & GH Series, HDB Series, HDF Series, MS Series, S Series, SH Series, SL Series, SPB Series, ST Series, T Series, and U1F Series)
  - Conductive plastic pump models with integral muffler (PB1/4 Series, S Series, SL Series, SPE Series)
  - Tranquilizer® surge suppressors (TA Series)

-  II 2 G Ex h IIB T5...225°C (T2) Gb  
II 2 D Ex h IIIB T100°C...T200°C Db
- ST Series with sight tubes (VL) and HP Series because of the projected area of non-conductive external components

2. AODD Pumps - EU Type Examination Certificate No.: DEKRA 18ATEX0094X - DEKRA Certification B.V. (0344)  
Meander 1051  
6825 MJ Arnhem  
The Netherlands

#### Hazardous Location Applied:

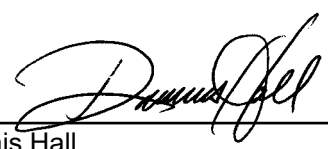
-  I M1 Ex h I Ma  
II 1 G Ex h IIC T5...225°C (T2) Ga  
II 1 D Ex h IIIC T100°C...T200°C Da
- Metallic pump models with no external aluminum (HDB Series, HDF Series, G Series, S Series, SPB Series)
  - Conductive plastic pumps equipped with conductive muffler (S Series, SPE Series)

-  II 2 G Ex h ia IIC T5 Gb  
II 2 D Ex h ia IIIC T100°C Db
- Pump models with ATEX rated pulse output kit option (HDB Series, HDF Series, PB1/4, S Series, SB Series)

-  II 2 G Ex h mb IIC T5 Gb  
II 2 D Ex h mb IIIC T100°C Db
- Pump model series S05, S1F, S15, S20, S30 equipped with ATEX rated integral solenoid option

- See "ATEX Details" page in user's manual for more information  
➤ See "Safety Information" page for conditions of safe use

DATE/APPROVAL/TITLE:  
9 NOV 2023

  
Dennis Hall  
Engineering Manager



UKEx



## EU Declaration of Conformity

### Manufacturer:

Warren Rupp, Inc.  
A Unit of IDEX Corporation  
800 North Main Street  
Mansfield, OH 44902 USA

This declaration of conformity is issued under the sole responsibility of the manufacturer.

Warren Rupp, Inc declares that Air Operated Double Diaphragm Pumps (AODD) and Surge Suppressors listed below comply with the requirements of United Kingdom Statutory Instruments **2016 No. 1107** and all the applicable standards.

#### Designated Standards:

- EN ISO 80079-36: 2016
- EN ISO 80079-37: 2016
- EN 60079-25: 2010

1. AODD Pumps and Surge Suppressors - Technical File on record with: DEKRA Certification UK Limited  
Stokenchurch House  
Oxford Road  
Stokenchurch  
HP14 3SX

#### Hazardous Location Applied:



II 2 G Ex h IIC T5...225°C (T2) Gb

II 2 D Ex h IIC T100°C...T200°C Db

- Metallic pump models with external aluminum components (DMF Series, EH Series, F Series, G & GH Series, HDB Series, HDF Series, MS Series, S Series, SH Series, SL Series, SPB Series, ST Series, T Series, and U1F Series)
- Conductive plastic pump models with integral muffler (PB1/4 Series, S Series, SL Series, SPE Series)
- Tranquilizer® surge suppressors (TA Series)



II 2 G Ex h IIB T5...225°C (T2) Gb

II 2 D Ex h IIB T100°C...T200°C Db

- ST Series with sight tubes (VL) and HP Series because of the projected area of non-conductive external components

- See "ATEX Details" page in user's manual for more information
- See "Safety Information" page for conditions of safe use

DATE/APPROVAL/TITLE:  
9 NOV 2023

Dennis Hall  
Engineering Manager



# Declaration of Compliance

**Manufacturer: Warren Rupp, Inc., 800 N. Main Street, Mansfield, Ohio, 44902 USA**

certifies that the below Air-Operated Double Diaphragm Food Processing Pump Models and Tranquilizer® Surge Suppressor Models comply with the European Community Regulations:

(EC) No 1935/2004 for Food Contact Materials

(EC) No 2023/2006 Good Manufacturing Practice

(EU) No 10/2011 on plastic materials and articles intended to come in contact with food

## Food Processing Pump Models:

|                |                |                |                |
|----------------|----------------|----------------|----------------|
| F##B1SDD#TF600 | F##B1SHD#TF600 | F##B1SKD#TF600 | F##B1SZD#TF600 |
| F##B1SDH#TF600 | F##B1SHH#TF600 | F##B1SKH#TF600 | F##B1SZH#TF600 |
| F##B1SDS#TF600 | F##B1SHS#TF600 | F##B1SKS#TF600 | F##B1SZS#TF600 |
| F15B1SDS#TC600 | F15B1SHS#TC600 | F15B1SKS#TC600 | F15B1SZS#TC600 |
| F20B1SDS#TC600 | F20B1SHS#TC600 | F20B1SKS#TC600 | F20B1SZS#TC600 |
| SSB2,TD3SS     |                |                | F05B1S#SPTF000 |
| T##B1SSS#TS600 | T##B1SAS#TS600 | T##B1SDS#TS600 | T##B1SLS#TS600 |
| T##B1SST#TS600 | T##B1SAT#TS600 | T##B1SDT#TS600 | T##B1SLT#TS600 |
|                |                |                | T##B1SZS#TS600 |
|                |                |                | T##B1SZT#TS600 |

## Tranquilizer® Surge Suppressors:

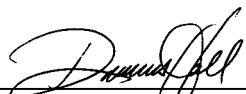
|                |            |             |             |            |
|----------------|------------|-------------|-------------|------------|
| TA1,NG1SS.     | TA2,NG2SS. | TA25,NG1SS. | TA50,NG2SS. | TA25, Z1SS |
| TA1-1/2,NG1SS. | TA3,NG2SS. | TA40,NG1SS. | TA80,NG2SS. |            |

- Materials used in equipment intended for food contact (Annex I (EC) No 1935/2004) :
  - Rubber
  - Metals & Alloys
  - Plastics

Plastic Materials: PTFE and FKM/ PTFE coated

The plastic components are suitable to come in contact with multiple food types, provided that storage contact time does not exceed 1/2 hour, contact temperature does not exceed 40°C and maximum operating temperatures within the instructions manual are not exceeded. Diaphragm failure may allow process fluids to come in contact with nonconforming materials. Regular inspections are recommended.

- This Declaration is based on :
  - Declaration of Conformities from raw material suppliers
  - Total Migration Analysis per (EU) No 10/2011
- Supporting document will be made available to competent authorities to demonstrate compliance

  
Signature of authorized person

Dennis Hall  
Printed name of authorized person

February 8, 2013

Date of issue

Engineering Manager

Title

December 2, 2025

Date of revision

