

# SANDPIPER®

A WARREN RUPP PUMP BRAND

## CONTAINMENT DUTY ET3-M Type I

### Air-Powered Double-Diaphragm Pump

ENGINEERING, PERFORMANCE  
& CONSTRUCTION DATA

Quality System  
ISO9001 Certified

Environmental  
Management System  
ISO14001 Certified



INTAKE/DISCHARGE PIPE SIZE	CAPACITY	AIR VALVE	SOLIDS-HANDLING	HEADS UP TO
3" (76mm) 150# raised face flange	0 to 260 gallons per minute (0 to 988 liters per minute)	No-lube, no-stall design.	Up to 7/16" (10 mm)	125 psi or 289 ft. of water (8.8 Kg/cm <sup>2</sup> or 88 meters)

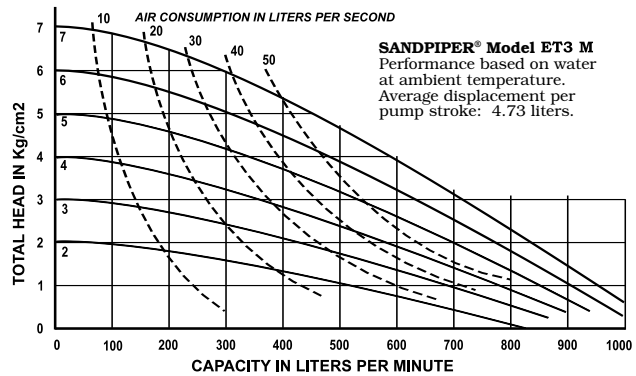
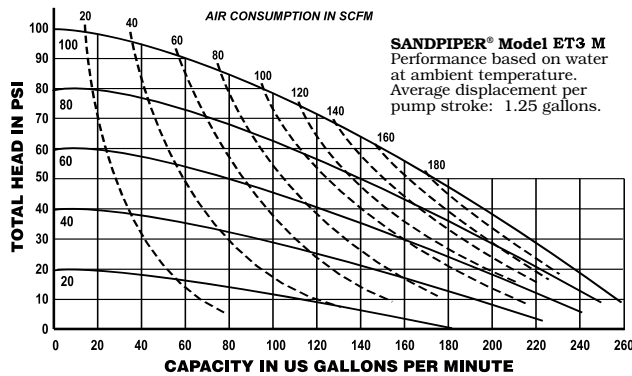
### SANDPIPER® Containment Duty Pumps: Sealless Safety

This pump is part of the Containment Duty Pumps. It is specially fitted with elastomeric driver diaphragms, aluminum spill containment chambers, and elastomeric or PTFE pumping diaphragms. The liquid-filled containment chambers provide an additional spill containment barrier, should a pumping diaphragm fail. The Containment Duty design gives the pump user advanced warning of diaphragm failure, before pumpage can damage the air valve, or be released into the work environment. A "sight tube" style of visual leak detection is standard on this pump, displaying an obvious color change if a leak occurs in the pumping diaphragm. Electronic leak detection is optional with this model.

The Containment Duty Pumps offers many different levels of materials and spill monitoring devices designed to fit a variety of applications and budgets.

### PERFORMANCE CURVES

(SANDPIPER® pumps are designed to be powered **only** by compressed air)  
Temperature Limit: 212°F - 100°C



### MATERIALS OF CONSTRUCTION

ET3-M Type 1	Manifold	Outer Chamber	Inner Chamber	Driver Chamber	Outer Diaphragm Plate	Inner Diaphragm Plate	Intermediate Housing	Diaphragm Rod	Valve Seat	Hardware	Pumping Diaphragm	Driver Diaphragm	Ball Valve Material	Air Valve	Shipping Weight (lbs)
TNN-1-A	AL356T6	AL356T6	DI	AL356T6	AL356T6	CI	AL356T6	416SS	N	PS	N	N	N	AL356T6	208
THI-1-A	AL356T6	AL356T6	DI	AL356T6	AL356T6	CI	AL356T6	416SS	T	PS	E	E	T	AL356T6	208
TCV-1-A	AL356T6	AL356T6	DI	AL356T6	AL356T6	CI	AL356T6	416SS	T	PS	V	V	T	AL356T6	208
TBB-1-A	AL356T6	AL356T6	DI	AL356T6	AL356T6	CI	AL356T6	416SS	B	PS	B	B	B	AL356T6	208
TQS-1-A	AL356T6	AL356T6	DI	AL356T6	AL356T6	CI	AL356T6	416SS	N	PS	S	S	N	AL356T6	208
TGN-1-A	AL356T6	AL356T6	DI	AL356T6	AL356T6	CI	AL356T6	416SS	T	PS	T	N	T	AL356T6	208
TGN-1-SI	SS	SS	DI	SS	SS	CI	AL356T6	416SS	T	PS	T	N	T	AL356T6	494

#### Meanings of Abbreviations:

AL = Aluminum  
B = Buna N  
CI = Cast Iron

DI = Ductile Iron  
E = EPDM  
N = Neoprene

PS = Plated Steel  
S = Santoprene®  
SS = Stainless Steel

T = Virgin PTFE  
WR-S = Warren Rupp Alloy Type 316 Stainless Steel

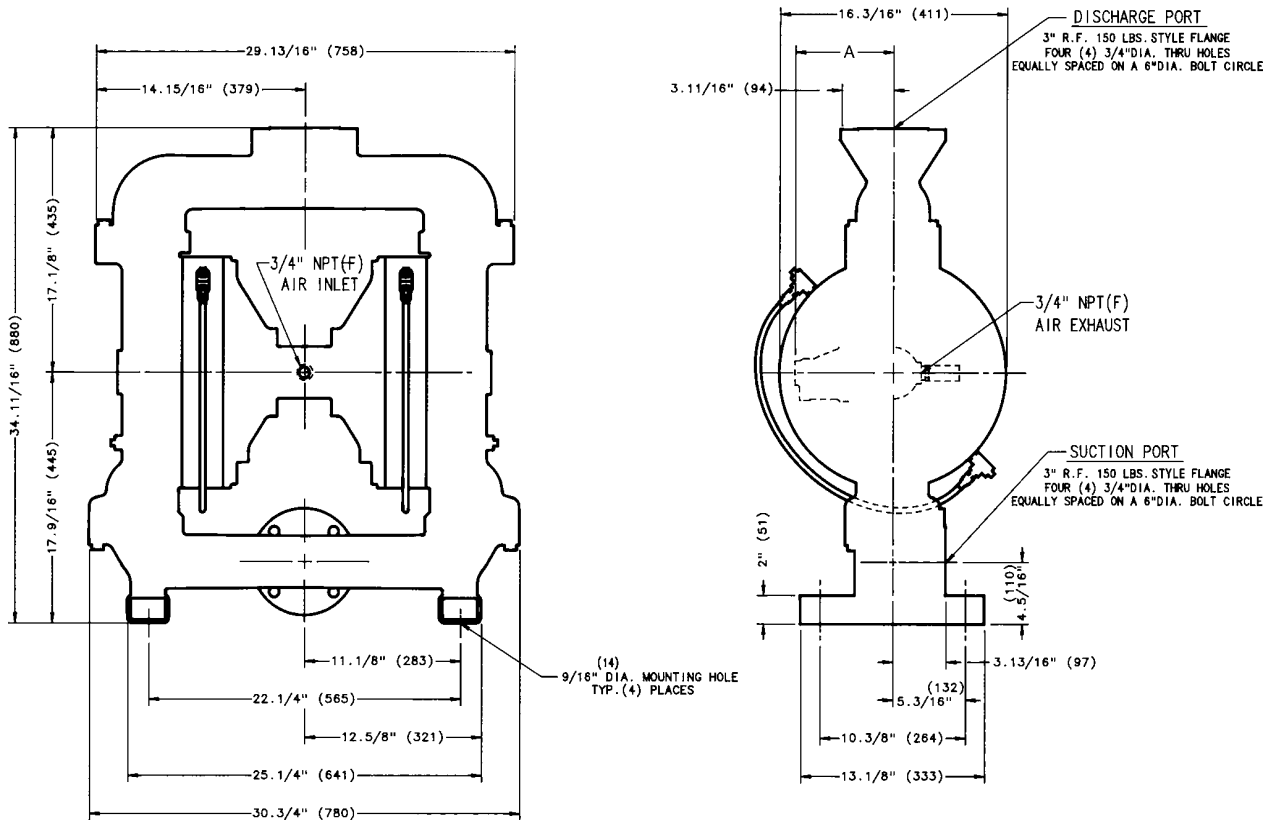
Viton® is a registered tradename of E.I. du Pont. Santoprene® is a registered tradename of Monsanto Corp. SANDPIPER® and Warren Rupp are registered tradenames of Warren Rupp, Inc.

# ET3-M CONTAINMENT DUTY

MATERIALS	Operating Temperatures		
	Maximum*	Minimum*	Optimum**
<b>BUNA-N</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 88°C	-10°F -23°C	50°F to 140°F 10°C to 60°C
<b>EPDM</b> Shows very good water and chemical resistance. Has poor resistance to oil and solvents, but is fair in ketones and alcohols.	212°F+ 100°C+	-10°F -23°C	50°F to 212°F 10°C to 100°C
<b>NEOPRENE</b> All purpose. Resistant to vegetable oils. Generally not affected by moderate chemicals, fats, greases and many oils and solvents. Generally attacked by strong oxidizing acids, ketones, esters, nitro hydrocarbons and chlorinated aromatic hydrocarbons.	170°F 77°C	-35°F -37°C	50°F to 130°F 10°C to 54°C
<b>SANTOPRENE®</b> Injection molded thermoplastic elastomer with no fabric layer. Long mechanical flex life. Excellent abrasion resistance.	212°F+ 100°C+	-35°F -37°C	50°F to 212°F 10°C to 100°C
<b>PTFE</b> 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 fluorochemicals such as chlorine trifluoride or oxygen difluoride which readily liberate free fluorine at elevated temperatures.	212°F+ 100°C+	-10°F -23°C	50°F to 212°F 10°C to 100°C
<b>VITON®</b> Shows good resistance to a wide range of oils and solvents; especially all aliphatic, aromatic and halogenated hydrocarbons, acids, animal and vegetable oils. Hot water or hot aqueous solutions (over 70°F) will attack Viton®.	212°F+ 100°C+	+32°F 0°C	75°F to 212°F 24°C to 100°C
For specific applications, always consult the Warren Rupp Chemical Resistance Chart.	*Definite reduction in service life. **Minimal reduction in service life at ends of range.		

Dimensions are ± 1/8"  
Figures in parenthesis = millimeters

Dimension	A
Standard Pump	7" (178)
Pulse Output Kit	7.9/16" (192)



**3" ASA-STYLE FLANGED SUCTION AND DISCHARGE • 3/4" NPT(F) AIR INLET PORT • 3/4" NPT(F) AIR EXHAUST PORT**