

**WARREN
RUPP®**

Quality System
ISO9001 Certified

Environmental
Management System
ISO14001 Certified

IBEX
IBEX CORPORATION



SANDPIPER®
A WARREN RUPP PUMP BRAND

CONTAINMENT DUTY

ET1 1/2-SM Type 1

**Air-Powered
Double-Diaphragm Pump**

ENGINEERING, PERFORMANCE
& CONSTRUCTION DATA

INTAKE/DISCHARGE PIPE SIZE	CAPACITY	AIR VALVE	SOLIDS-HANDLING	HEADS UP TO
1 1/2" (38mm) ASA style flange	0 to 65 gallons per minute (0 to 246 liters per minute)	No-lube, no-stall design.	1/4" (6mm)	125 psi or 289 ft. of water (8.8 Kg/cm ² or 88 meters)

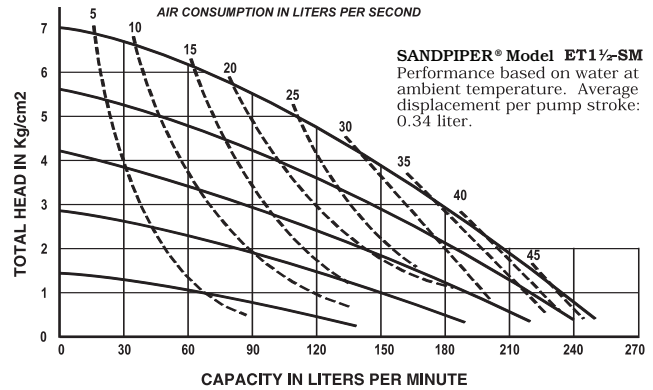
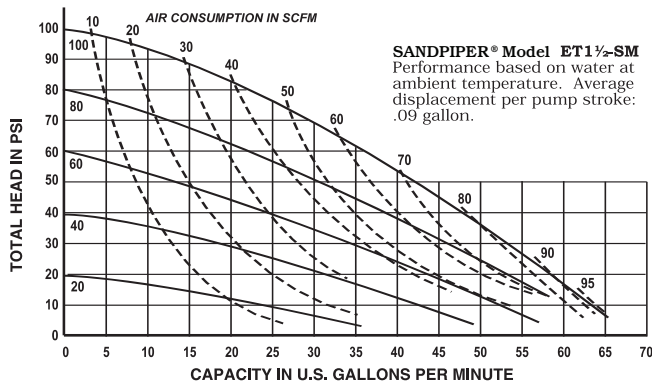
SANDPIPER® Containment Duty Pumps: Sealless Safety

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

Model ET1 1/2-SM Type 1	Driver Chamber	Manifold & Elbow	Outer Chamber	Inner Chamber	Outer Driver Diaphragm Plate	Inner Driver Diaphragm Plate	Intermediate Housing	Diaphragm Rod	Valve Seat	Hardware	Driver Diaphragm	Pumping Diaphragm	Ball Valve Material	Air Valve	Shipping Weight (lbs)
TBB-1-A	AL356T6	AL356T6	AL380DC	AL380DC	AL380DC	PS	AL380DC	416SS	B	PS	B	B	B	PP	54
TNN-1-A	AL356T6	AL356T6	AL356T6	AL380DC	AL380DC	PS	AL380DC	416SS	N	PS	N	N	N	PP	54
TQS-1-A	AL356T6	AL356T6	AL380DC	AL380DC	AL380DC	PS	AL380DC	416SS	N	PS	S	S	N	PP	54
TCV-1-A	AL356T6	AL356T6	AL380DC	AL380DC	AL380DC	PS	AL380DC	416SS	T	PS	V	V	T	PP	54
THI-1-A	AL356T6	AL356T6	AL380DC	AL380DC	AL380DC	PS	AL380DC	416SS	T	PS	E	E	T	PP	54
TGN-1-A	AL356T6	AL356T6	AL356T6	AL380DC	AL380DC	PS	AL380DC	416SS	T	PS	N	T	T	PP	54
TGGN-1-A	AL356T6	AL356T6	AL380DC	AL356T6	AL380DC	PS	AL380DC	416SS	T	PS	NT	T	T	PP	54

Meanings of Abbreviations:

AL = Aluminum
B = Buna N
DC = Die Cast
E = EPDM

N = Neoprene
NT = Neoprene with PTFE overlay
PP = Polypropylene - Glass Filled
PS = Plated Steel

*PS = Plated Steel, except wetted area which is 316SS
S = Santoprene®
SS = Stainless Steel
T = PTFE
V = Viton®

@Viton is a registered trademark of E.I. du Pont.

@Santoprene is a registered name of Monsanto Corporation.

@Warren Rupp and SANDPIPER are registered trademarks of Warren Rupp, Inc.

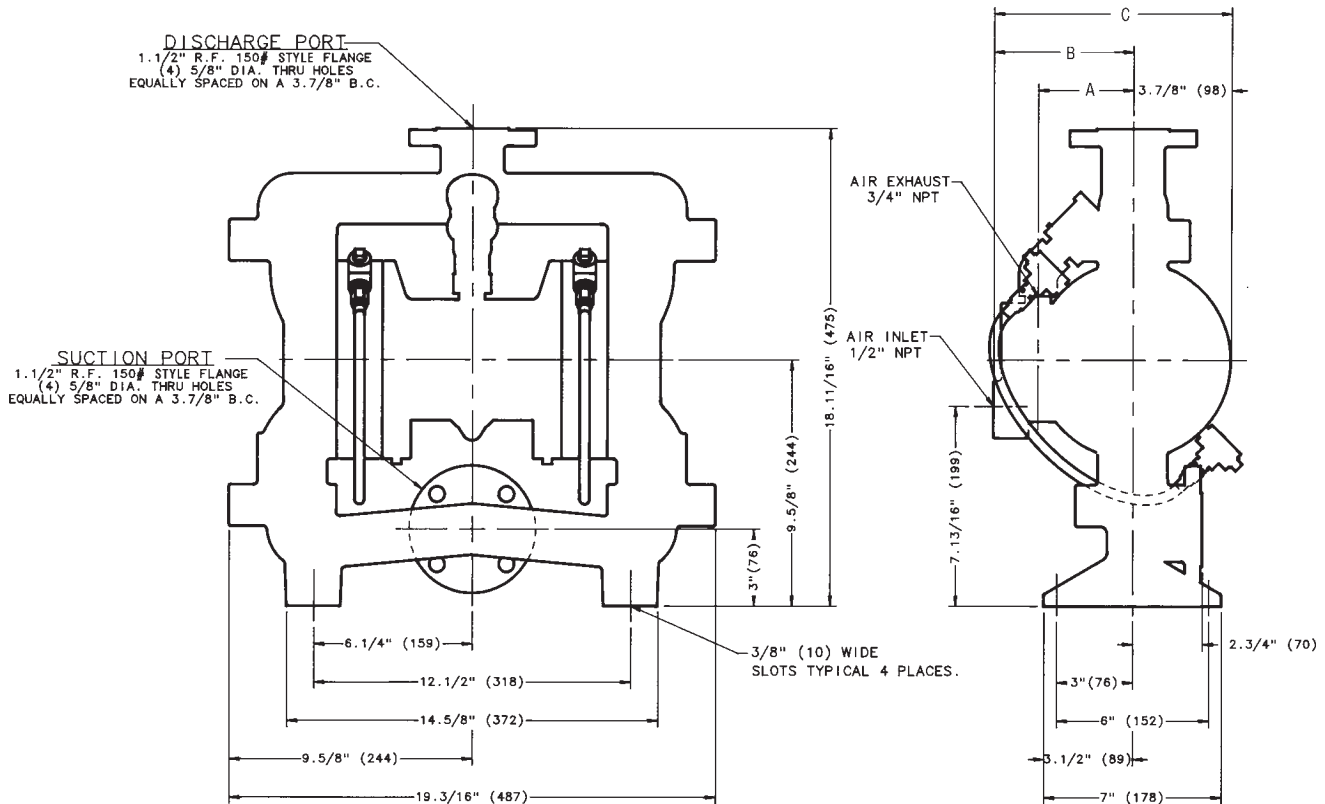
ET 1 1/2 - SM Containment Duty



MATERIALS	Operating Temperatures		
	Maximum*	Minimum*	Optimum**
NEOPRENE 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
PTFE 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.	212°F+ 100°C+	-35°F -37°C	50°F to 212°F 10°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	B	C
Standard Pump	4.3/32" (104)	5.1/2" (140)	9.9/16" (243)
Pulse Output Kit	4.17/32" (115)	5.15/16" (151)	10" (254)



1 1/2" ASA STYLE FLANGED SUCTION & DISCHARGE • 1/2" NPT(F) AIR INLET PORT • 3/4" NPT(M) AIR EXHAUST PORT