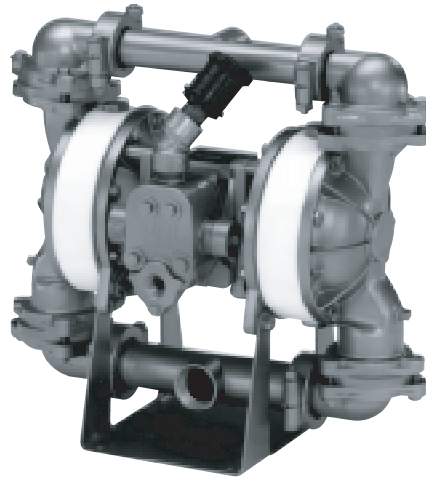


WARREN RUPP®

Quality System
ISO9001 Certified

Environmental
Management System
ISO14001 Certified

IDEX
IDEX CORPORATION



SANDPIPER®
A WARREN RUPP PUMP BRAND

Containment Duty

ET1-M Type 3

**Air-Powered
Double-Diaphragm Pump**

ENGINEERING, PERFORMANCE
& CONSTRUCTION DATA

INTAKE/DISCHARGE PIPE SIZE 1 1/4" (32mm) NPT(F) DISCHARGE PIPE SIZE 1" (25mm) NPT(F)	CAPACITY 0 to 54 gallons per minute (0 to 204 liters per minute)	AIR VALVE No-lube, no-stall design.	SOLIDS-HANDLING Occasional solids to nearly 1/4" (6mm)	HEADS UP TO 125 psi or 289 ft. of water (8.8 Kg/cm ² or 88 meters)
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SANDPIPER® Containment Duty Pumps: Sealless Safety

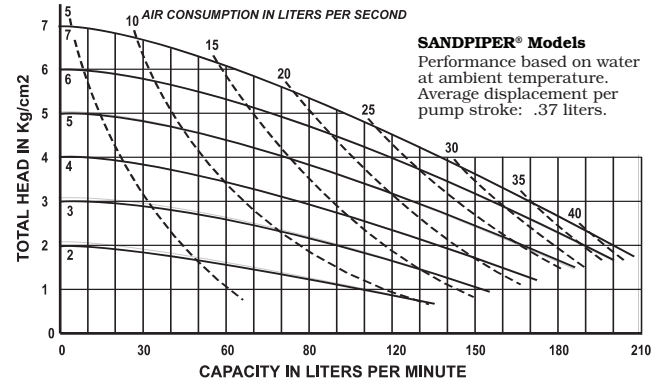
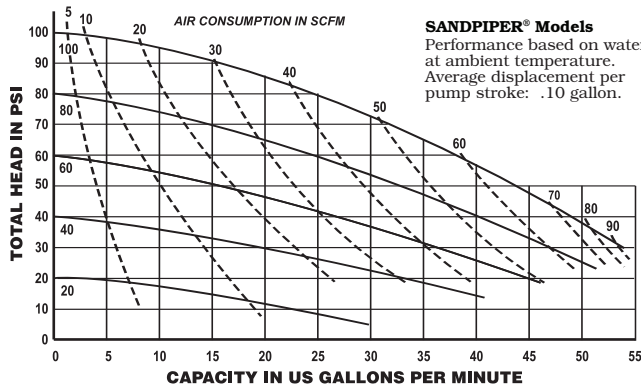
This pump is part of the Containment Duty Pumps. It is specially fitted with PTFE diaphragms as well as elastomeric or elastomeric/PTFE driver diaphragms. The liquid-filled spill chambers provide an additional chemically-resistant barrier, should a pumping diaphragm fail. The containment duty design gives the pump user advanced warning of diaphragm failure, before pumpage can damage the air valve or be released into the work environment. Two optional leak detectors available for this model:

- Electronic Leak Detector (115V) 032-043-000
- Electronic Leak Detector (220V) 032-043-000

The Containment Duty pumps offer 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 MAXIMUM



MATERIALS OF CONSTRUCTION

ET1-M Type 3	Driver Chamber	Manifold/ Elbow	Outer Chamber	Inner Chamber	Outer Driver Diaphragm Plate	Inner Driver Diaphragm Plate	Intermediate Housing	Diaphragm Rod	Valve Seat	Hard- ware	Driver Dia- phragm	Pumping Dia- phragm	Ball Valve Material	Seat/ Manifold Gasket	Cap/ Air Valve	Shipping Wt. (lbs.)
TGN-3-SS	T	WR-S	WR-S	AL380DC	WR-S	PS	AL380DC	416SS	T	304SS	N	T	T	T	AL380DC	81
TGR-3-SS	T	WR-S	WR-S	AL380DC	WR-S	PS	AL380DC	416SS	T	304SS	H	T	T	T	AL380DC	81
TGGN-3-SS	T	WR-S	WR-S	AL380DC	WR-S	PS	AL380DC	416SS	T	304SS	N/T	T	T	T	AL380DC	81
TGGR-3-SS	T	WR-S	WR-S	AL380DC	WR-S	PS	AL380DC	416SS	T	304SS	H/T	T	T	T	AL380DC	81
TGN-3-SI	T	WR-S	WR-S	CI	WR-S	PS	CI	416SS	T	304SS	N	T	T	T	PP	84
TGR-3-SI	T	WR-S	WR-S	CI	WR-S	PS	CI	416SS	T	304SS	H	T	T	T	PP	84
TGGN-3-SI	T	WR-S	WR-S	CI	WR-S	PS	CI	416SS	T	304SS	N/T	T	T	T	PP	84
TGGR-3-SI	T	WR-S	WR-S	CI	WR-S	PS	CI	416SS	T	304SS	H/T	T	T	T	PP	84

**Meanings of
Abbreviations:**

AL = Aluminum
PS = Plated Steel
SS = Stainless Steel
N = Neoprene
WR-S = Alloy Type 316 Stainless Steel

304SS = 304 Stainless Steel except
manifold bolts which are PS
H = Hytrel®
T = PTFE
DC = Die Cast

PP = Polypropylene
N/T = Neoprene Backup w/PTFE Overlay
H/T = Hytrel® Backup w/PTFE Overlay

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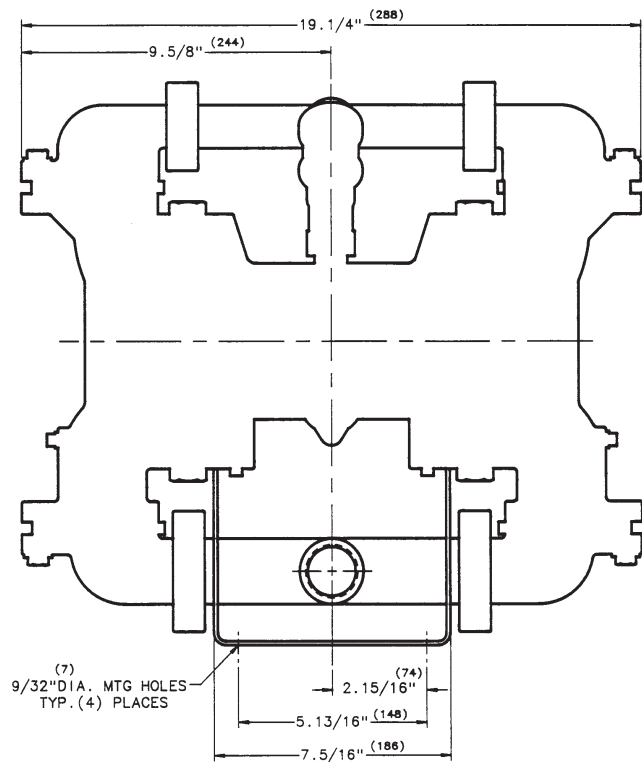
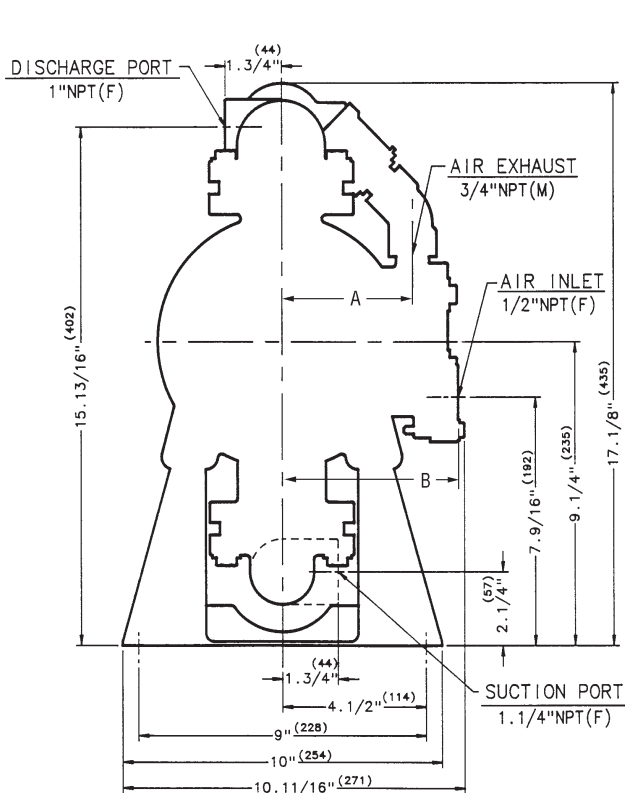
ET1-M CONTAINMENT DUTY



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. Diaphragm stock superior in omni-directional tensile strength and thermal stability.	212°F+ 100°C+	-35°F -37°C	50°F to 212°F 10°C to 100°C
HYTREL® Good on acids, bases, amines and glycols at room temperature.	190°F 88°C	-10°F -23°C	50°F to 140°F 10°C to 60°C
WR-S Warren Rupp Alloy 316 Stainless Steel 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 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)	10.11/16" (271)
Pulse Output Kit	4.17/32" (115)	5.15/16" (151)	11.1/8" (283)



NOTE: UNIT FURNISHED WITH SUB-BASE PLATE AND RUBBER FEET AS STANDARD.
FOR STATIONARY BOLT DOWN USE, SUB-BASE PLATE AND RUBBER FEET CAN BE REMOVED.