

WARREN RUPP®

Quality System
ISO9001 Certified

Environmental
Management System
ISO14001 Certified

IDEX
IDEX CORPORATION



I M2 c T5
II 2GD T5

SANDPIPER®

A WARREN RUPP PUMP BRAND

Containment Duty

ST1½-A Type 4

ST40-A Type 4

Air-Powered

Double-Diaphragm Pump

ENGINEERING, PERFORMANCE
& CONSTRUCTION DATA

INTAKE/DISCHARGE PIPE SIZE	CAPACITY	AIR VALVE	SOLIDS-HANDLING	HEADS UP TO
ST1½-A: 1½" (37.5mm) NPT(F) ST40-A: 1½" (37.5mm) BSP(F)	0 to 90 gallons per minute (0 to 340 liters per minute)	No-lube, non-stall design.	Occasional solids only. up to ¼" (6.3mm)	125 psi or 289 ft. of water (8.8 Kg/cm² or 88 meters)

SANDPIPER® Containment Duty Pumps: Sealless Safety

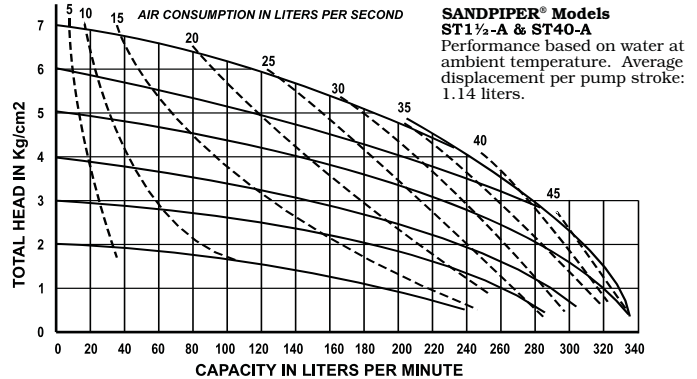
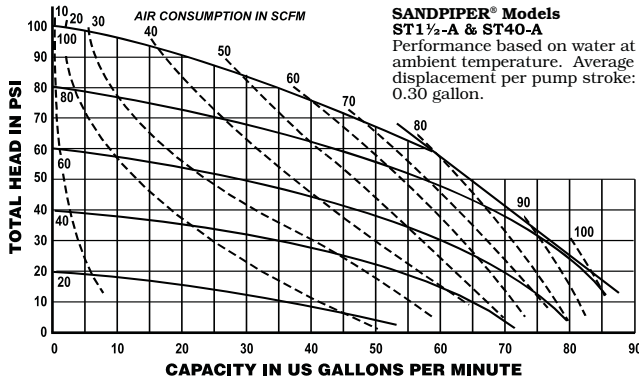
This pump is part of the Containment Duty Pumps. It is specially fitted with PTFE diaphragms as well as elastomeric or elastomeric/PTFE driver diaphragms. The liquid-filled spill chambers provide an additional chemically-resistant barrier, should a pumping diaphragm fail. The Spill Containment design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

- Mechanical VIP Leak Detector 031-025-000
- 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

Type 4 ST1½ ST40	Manifold Porting Side	Manifold	Outer Chamber	Driver Chamber	Inner Chamber	Outer Diaphragm Plate	Inner Diaphragm Plate	Intermediate Housing	Diaphragm Rod	Valve Seat	Hard- ware	Diaphragm	Ball Valve Material	Seat Gasket	Manifold Gasket Sealing Rings	Shipping Wt.(lbs)
SGI-4-A	X	AL356T6	AL356T6	AL356T6	AL356T6	316SS	AL380DC	AL356T6	416SS	316SS	304SS	T/I	T	T	T	99
SGN-4-A	X	AL356T6	AL356T6	AL356T6	AL356T6	316SS	AL380DC	AL356T6	416SS	316SS	304SS	T/N	T	T	T	99
SGV-4-A	X	AL356T6	AL356T6	AL356T6	AL356T6	316SS	AL380DC	AL356T6	416SS	316SS	304SS	T/V	T	T	T	99
SGI-4-SS	X	SS	SS	AL356T6	AL356T6	316SS	AL380DC	AL356T6	416SS	316SS	304SS	T/I	T	T	T	146
SGN-4-SS	X	SS	SS	AL356T6	AL356T6	316SS	AL380DC	AL356T6	416SS	316SS	304SS	T/N	T	T	T	146
SGV-4-SS	X	SS	SS	AL356T6	AL356T6	316SS	AL380DC	AL356T6	416SS	316SS	304SS	T/V	T	T	T	146
SGI-4-HC	X	Alloy C	Alloy C	AL356T6	AL356T6	316SS	AL380DC	AL356T6	416SS	Alloy C	304SS	T/I	T	T	T	146
SGN-4-HC	X	Alloy C	Alloy C	AL356T6	AL356T6	316SS	AL380DC	AL356T6	416SS	Alloy C	304SS	T/N	T	T	T	146
SGV-4-HC	X	Alloy C	Alloy C	AL356T6	AL356T6	316SS	AL380DC	AL356T6	416SS	Alloy C	304SS	T/V	T	T	T	146
SGI-4-II	X	CI	CI	CI	DI	316SS	CI	CI	416SS	316SS	304SS	T/I	T	T	T	212
SGN-4-II	X	CI	CI	CI	DI	316SS	CI	CI	416SS	316SS	304SS	T/N	T	T	T	212
SGV-4-II	X	CI	CI	CI	DI	316SS	CI	CI	416SS	316SS	304SS	T/V	T	T	T	212
SGN-4-HI	X	Alloy C	Alloy C	CI	DI	316SS	CI	CI	416SS	Alloy C	304SS	T/N	T	T	T	212
SGV-4-HI	X	Alloy C	Alloy C	CI	DI	316SS	CI	CI	416SS	Alloy C	304SS	T/V	T	T	T	212
SGN-4-SI	X	SS	SS	CI	DI	316SS	CI	CI	416SS	316SS	304SS	T/N	T	T	T	209
SGV-4-SI	X	SS	SS	CI	DI	316SS	CI	CI	416SS	316SS	304SS	T/V	T	T	T	209

Kit available to convert to top or bottom porting.

Meanings of Abbreviations:

AL = Aluminum
CI = Cast Iron
DC = Die Cast
DI = Ductile Iron

SS = Stainless Steel
T = PTFE
T/I = PTFE Diaphragm/EDPM Driver
T/N = PTFE Diaphragm/Neoprene Driver

T/V = PTFE Diaphragm/FKM Driver
Alloy C = Alloy C

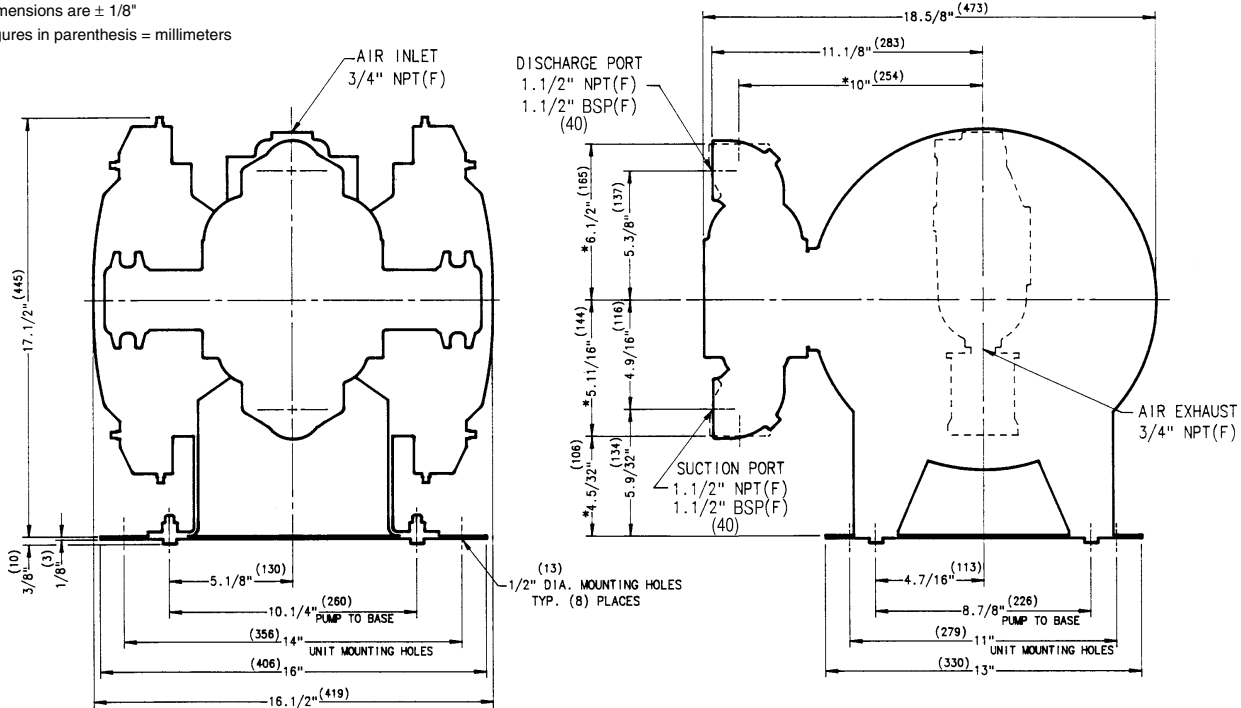
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ST1 1/2-A & ST40-A



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
FKM 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
EPDM 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
STAINLESS STEEL CF-8M equal to or exceeding ASTM specification A743 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.			
ALLOY C CW-12MW equal to or exceeding ASTM A494 specification for nickel and nickel alloy castings.			
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



* INDICATES DIMENSIONS WITH SUCTION AND DISCHARGE PORTS ROTATED 180° TO A VERTICAL POSITION.

DIMENSIONAL OUTLINES AVAILABLE SHOWING OPTIONAL TOP AND BOTTOM PORTING

* DIMENSIONS WITH SUCTION AND DISCHARGE PORTS ROTATED 90° TO VERTICAL POSITION (SHOWN WITH DOTTED LINES).

Model ST1 1/2-A features NPT threaded connections.

Model ST40-A features British Standard Pipe (BSP) threaded connections.

ST1 1/2-A: 1 1/2" NPT(F) SUCTION AND DISCHARGE • 3/4" NPT(F) AIR INLET PORT • 3/4" NPT(F) AIR EXHAUST PORT (NOT SHOWN)
ST40-A: 1 1/2" BSP(F) SUCTION AND DISCHARGE • 3/4" NPT(F) AIR INLET PORT • 3/4" NPT(F) AIR EXHAUST PORT (NOT SHOWN)