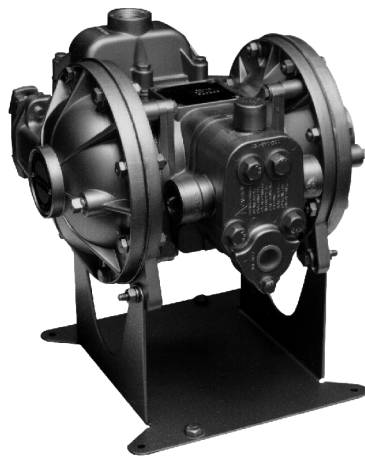


**WARREN
RUPP®**

Quality System
ISO9001 Certified

Environmental
Management System
ISO14001 Certified

IDEX
IDEX CORPORATION



SandPIPER®

BALL VALVE SB1-A Type 4 SB25-A Type 4

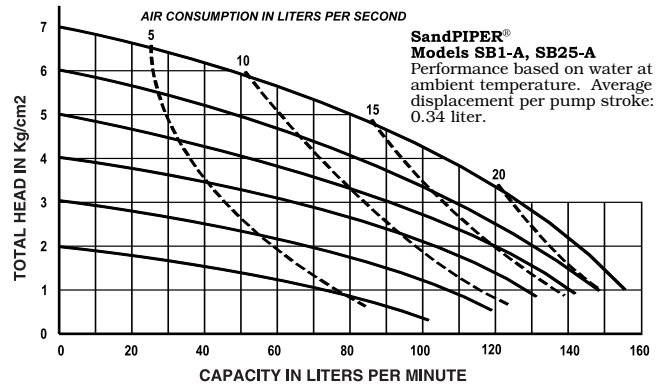
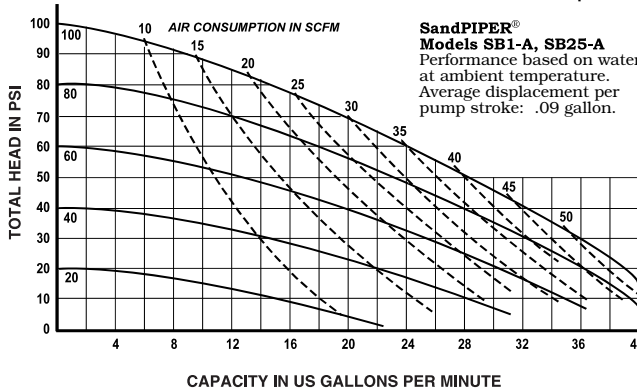
Air-Powered Double-Diaphragm Pump

ENGINEERING, PERFORMANCE
& CONSTRUCTION DATA

INTAKE/DISCHARGE PIPE SIZE	CAPACITY	AIR VALVE	SOLIDS-HANDLING	HEADS UP TO
SB1-A: 1" (25mm) NPT(F) SB25-A: 1" (25mm) BSP(T)	0 to 42 gallons per minute (0 to 159 liters per minute)	No-lube, no-stall design	Up to nearly ¼" (6.3mm)	125 psi or 289 ft. of water (8.8 Kg/cm ² or 88 meters)

PERFORMANCE CURVES

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



MATERIALS OF CONSTRUCTION

SB1-A SB25-A Type	Manifold Porting		Manifold	Outer Chamber	Inner Chamber	Outer Diaphragm Plate	Inner Diaphragm Plate	Intermediate Housing	Dia-phragm Rod	Valve Seat	Hard-ware	Dia-phragm	Ball Valve Material	Manifold Gasket	Seat Gasket	Air Valve	Air Valve Cap	Shipping Wt. (lbs)
	Dual	Side																
SB-4-A	X		356-T6AL	AL380DC	AL380DC	PS	PS	AL380DC	416SS	R	PS	B	B	A	B	PP	AL380DC	31
SC-4-A	X		356-T6AL	AL380DC	AL380DC	PS	PS	AL380DC	416SS	316SS	PS	V	T	T	T	PP	AL380DC	31
SH-4-A	X		356-T6AL	AL380DC	AL380DC	PS	PS	AL380DC	416SS	316SS	PS	I	T	T	T	PP	AL380DC	31
SN-4-A	X		356-T6AL	AL380DC	AL380DC	PS	PS	AL380DC	416SS	R	PS	N	N	A	N	PP	AL380DC	31
SR-4-A	X		356-T6AL	AL380DC	AL380DC	PS	PS	AL380DC	416SS	R	PS	H	H	A	B	PP	AL380DC	31
SS-4-A	X		356-T6AL	AL380DC	AL380DC	PS	PS	AL380DC	416SS	316SS	PS	S	S	T	T	PP	AL380DC	31
SV-4-A	X		356-T6AL	AL380DC	AL380DC	PS	PS	AL380DC	416SS	R	PS	V	V	T	T	PP	AL380DC	31
SGN-4-A	X		356-T6AL	AL380DC	AL380DC	316SS	PS	AL380DC	416SS	316SS	PS	N/T	T	T	T	PP	AL380DC	31
SGR-4-A	X		356-T6AL	AL380DC	AL380DC	316SS	PS	AL380DC	416SS	316SS	PS	H/T	T	T	T	PP	AL380DC	31
SB-4-SS	X		WR-S	WR-S	AL380DC	316SS	PS	AL380DC	416SS	R	PS	B	B	A	B	PP	AL380DC	45
SC-4-SS	X		WR-S	WR-S	AL380DC	316SS	PS	AL380DC	416SS	316SS	PS	V	T	T	T	PP	AL380DC	45
SH-4-SS	X		WR-S	WR-S	AL380DC	316SS	PS	AL380DC	416SS	316SS	PS	I	T	T	T	PP	AL380DC	45
SJ-4-SS	X		WR-S	WR-S	AL380DC	316SS	PS	AL380DC	416SS	316SS	PS	B	T	A	B	PP	AL380DC	45
SN-4-SS	X		WR-S	WR-S	AL380DC	316SS	PS	AL380DC	416SS	R	PS	N	N	A	N	PP	AL380DC	45
SR-4-SS	X		WR-S	WR-S	AL380DC	316SS	PS	AL380DC	416SS	R	PS	H	H	A	B	PP	AL380DC	45
SS-4-SS	X		WR-S	WR-S	AL380DC	316SS	PS	AL380DC	416SS	316SS	PS	S	S	T	T	PP	AL380DC	45
SV-4-SS	X		WR-S	WR-S	AL380DC	316SS	PS	AL380DC	416SS	R	PS	V	V	T	T	PP	AL380DC	45
SGN-4-SS	X		WR-S	WR-S	AL380DC	316SS	PS	AL380DC	416SS	316SS	PS	N/T	T	T	T	PP	AL380DC	45
SGR-4-SS	X		WR-S	WR-S	AL380DC	316SS	PS	AL380DC	416SS	316SS	PS	H/T	T	T	T	PP	AL380DC	45
SB-4-SI	X		WR-S	WR-S	CI	316SS	PS	CI	416SS	R	PS	B	B	A	B	PP	PP	60
SC-4-SI	X		WR-S	WR-S	CI	316SS	PS	CI	416SS	316SS	PS	V	T	T	T	PP	PP	60
SH-4-SI	X		WR-S	WR-S	CI	316SS	PS	CI	416SS	316SS	PS	I	T	T	T	PP	PP	60
SJ-4-SI	X		WR-S	WR-S	CI	316SS	PS	CI	416SS	316SS	PS	B	T	A	B	PP	PP	60
SN-4-SI	X		WR-S	WR-S	CI	316SS	PS	CI	416SS	R	PS	N	N	A	N	PP	PP	60
SR-4-SI	X		WR-S	WR-S	CI	316SS	PS	CI	416SS	R	PS	H	H	A	B	PP	PP	60
SV-4-SI	X		WR-S	WR-S	CI	316SS	PS	CI	416SS	R	PS	V	V	T	T	PP	PP	60
SGN-4-SI	X		WR-S	WR-S	CI	316SS	PS	CI	416SS	316SS	PS	N/T	T	T	T	PP	PP	60
SGR-4-SI	X		WR-S	WR-S	CI	316SS	PS	CI	416SS	316SS	PS	H/T	T	T	T	PP	PP	60
SC-4-HC	X		WR-C	WR-C	AL380DC	WR-C	PS	AL380DC	416SS	WR-C	PS	V	T	T	T	PP	AL380DC	50
SN-4-HC	X		WR-C	WR-C	AL380DC	WR-C	PS	AL380DC	416SS	WR-C	PS	N	N	A	N	PP	AL380DC	50
SV-4-HC	X		WR-C	WR-C	AL380DC	WR-C	PS	AL380DC	416SS	WR-C	PS	V	V	T	T	PP	AL380DC	50
SGN-4-HC	X		WR-C	WR-C	AL380DC	WR-C	PS	AL380DC	416SS	WR-C	PS	N/T	T	T	T	PP	AL380DC	50

SB1-A & SB25-A BALL VALVE SandPIPER®

MATERIALS OF CONSTRUCTION (Continued)

SB1-A SB25-A Type	Manifold Porting		Manifold	Outer Chamber	Inner Chamber	Outer Diaphragm Plate	Inner Diaphragm Plate	Intermediate Housing	Dia-phragm Rod	Valve Seat	Hard-ware	Dia-phragm	Ball Valve Material	Manifold Gasket	Seat Gasket	Air Valve	Air Valve Cap	Shipping Wt. (lbs)
	Dual	Side																
SR-4-HC		X	WR-C	WR-C	AL380DC	WR-C	PS	AL380DC	416SS	WR-C	PS	H	H	A	B	PP	AL380DC	50
SGR-4-HC		X	WR-C	WR-C	AL380DC	WR-C	PS	AL380DC	416SS	WR-C	PS	H/T	T	T	T	PP	AL380DC	50
*ESC-4-S	X		WR-C	WR-C	AL380DC	WR-C	PS	AL380DC	416SS	SS	PS	V	T	T	T	PP	AL380DC	45
SGN-4-HI		X	WR-C	WR-C	CI	WR-C	PS	CI	416SS	WR-C	PS	N/T	T	T	T	PP	PP	65

Meanings of Abbreviations:

Kit available to convert to top porting

A = Compressed Fibre
AL = Aluminum
B = Buna-N
CI = Cast Iron
DC = Die Cast
H = Hytrel®

H/T = Hytrel® Backup/ PTFE Overlay
I = EPDM
N = Neoprene
N/T = Neoprene Backup/PTFE Overlay
PP = Polypropylene
PS = Plated Steel

R = Ryton
S = Santoprene®
SS = Stainless Steel
T = Virgin PTFE
V = Viton®

WR-S = Warren Rupp Alloy Type 316SS
WR-C = Warren Rupp Alloy "C"
(Hastelloy "C" equivalent)

*Most other types available in dual ported design. See price book or consult factory for details.

Viton® & Hytrel® are registered tradenames of E.I. du Pont. Santoprene® is a registered tradename of Monsanto Corp.

MATERIALS

Operating Temperatures

	Operating Temperatures		
	Maximum*	Minimum*	Optimum**
BUNA-N 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
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
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
Virgin PTFE Chemically inert, virtually impervious. Very few chemicals are known to chemically react with Teflon 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
VITON® 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
SANTOPRENE® Injection molded thermoplastic elastomer with no fabric layer. Long mechanical flex life. Excellent abrasion resistance.	212°F+ 100°C+	-10°F -23°C	50°F to 212°F 10°C to 100°C

WR-S Warren Rupp Alloy Type 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.

WR-C Warren Rupp Alloy "C" equal to ASTM A494 CW-12M-1 specification for nickel and nickel alloy castings commonly referred to as Hastelloy "C" alloy in the pump industry. Hastelloy "C" is a registered trademark of the Cabot Corporation.

For specific applications, always consult "Chemical Resistance Chart" Technical Bulletin.

*Definite reduction in service life.
**Minimal reduction in service life at ends of range.

Dimensions are ± 1/8"

Figures in parenthesis = millimeters

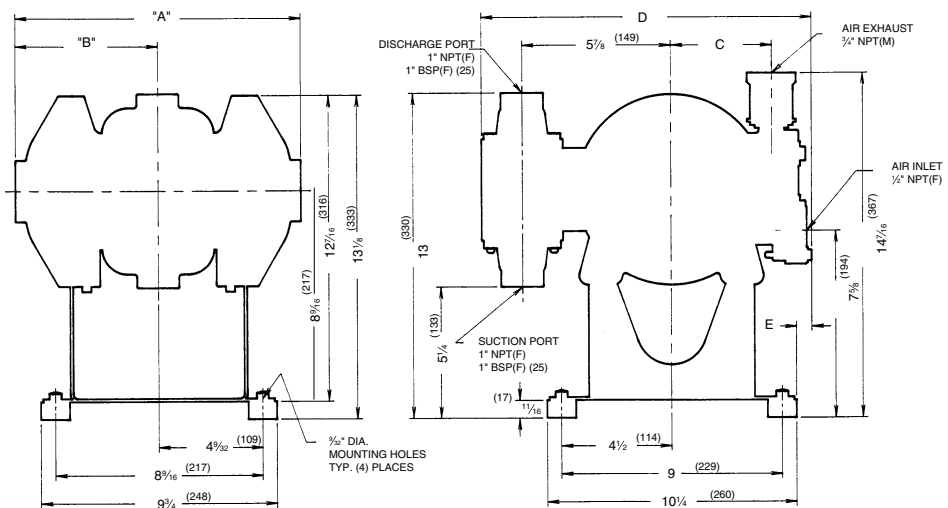
Models	"A"	"B"
SST & Alloy "C"	1 1/4" (286)	5/8" (143)
All Others	1 1/4" (298)	5/8" (149)

Dimension	C	D	E
Std. Pump	4.3/32" (104)	13.9/32" (337)	5/8" (16)
Pulse Output Kit	4.17/32" (115)	13.23/32" (348)	1.1/16" (27)

Model SB1-A features NPT threaded connections.

Model SB25-A features British Standard Pipe (BSP) threaded connections

NOTE: UNIT FURNISHED WITH FEET AS STANDARD. FOR STATIONARY BOLT DOWN USE, RUBBER FEET CAN BE REMOVED.



SB1-A: 1" NPT(F) Suction and Discharge • 1/2" NPT(F) Air Inlet Port • 3/4" NPT(F) Air Exhaust Port (not shown)
SB25-A: 1" BSP(F) Suction and Discharge • 1/2" NPT(F) Air Inlet Port • 3/4" NPT(F) Air Exhaust Port (not shown)

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Specifications are subject to improvement without notice.

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SB1-A SB25-A 12/00