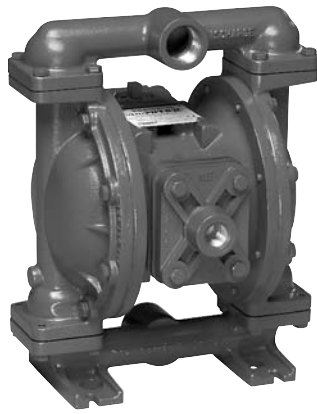


**WARREN
RUPP®**

Quality System
ISO9001 Certified

Environmental
Management System
ISO14001 Certified

IPEX
FLUID & METERING



SANDPIPER®

A WARREN RUPP PUMP BRAND

**S1F Metallic
Design Level 1
Ball Valve**

**Air-Operated
Double Diaphragm Pump**

ENGINEERING, PERFORMANCE
& CONSTRUCTION DATA

CE



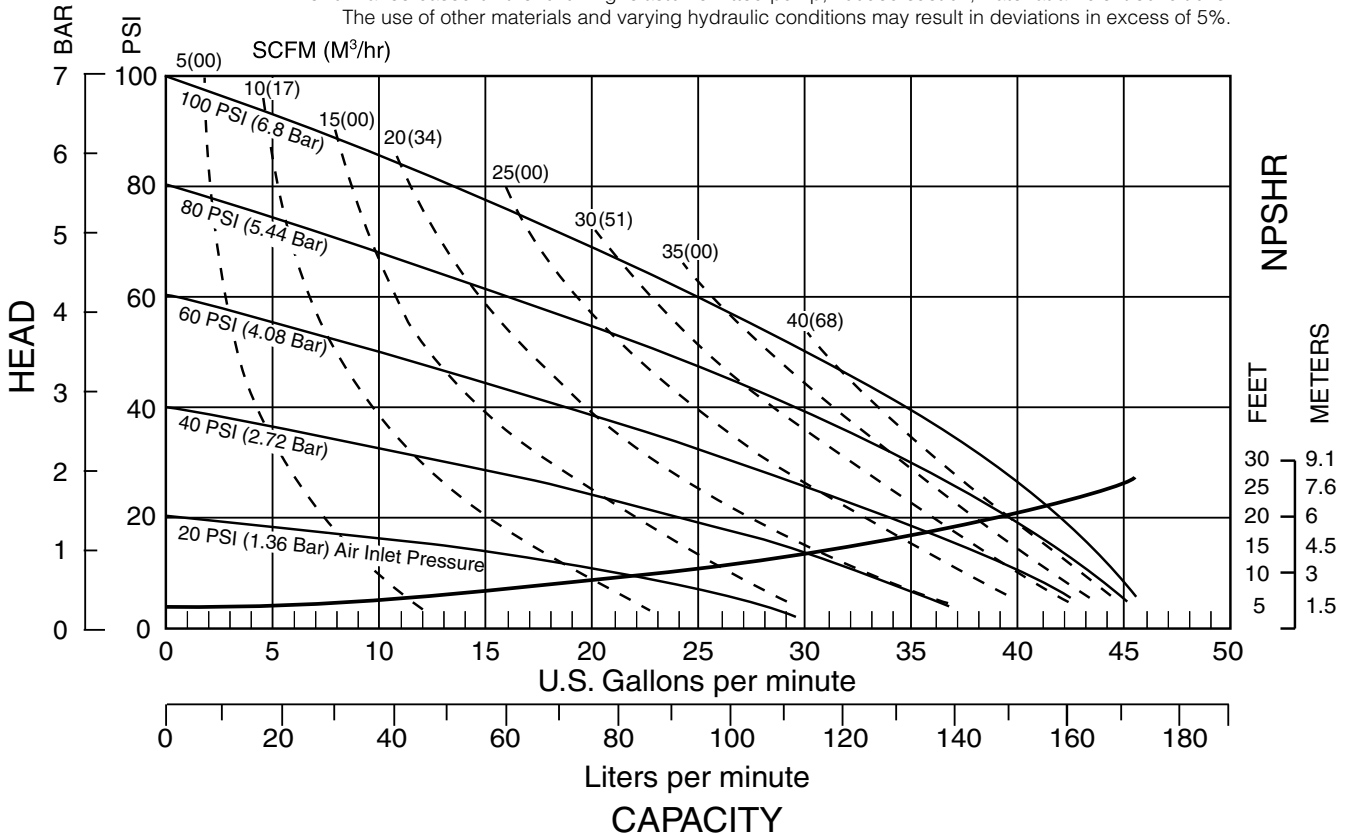
I M2 c T5
II 2GD T5

U.S. Patent #5,996,627 &
6,241,487
Other U.S. Patents Applied for

INTAKE/DISCHARGE PIPE SIZE	CAPACITY	AIR VALVE	SOLIDS-HANDLING	HEADS UP TO	DISPLACEMENT/STROKE
1" NPT (internal) 1" BSP Tapered (internal)	0 to 45 gallons per minute (0 to 170 liters per minute)	No-lube, no-stall design	Up to .25 in. (6mm)	125 psi or 289 ft. of water (8.6 Kg/cm ² or 86 meters)	.11 Gallon / .42 liter

MODEL S1F Metallic Performance Curve

Performance based on the following: elastomer fitted pump, flooded suction, water at ambient conditions.
The use of other materials and varying hydraulic conditions may result in deviations in excess of 5%.



SANDPIPER® pumps are designed to be powered only by compressed air.

Explanation of Pump Nomenclature, S1F Metallic · Design Level 1· Ball Valve

MODEL	Pump Brand	Pump Size	Check Valve Type	Design Level	Wetted Material	Diaphragm/Check Valve Materials	Check Valve Seat	Non-Wetted Material Options	Porting Options	Pump Style	Pump Options	Kit Options	Shipping Weight lbs. (kg)
S1FB1ABWANS000.	S	1F	B	1	A	B	W	A	N	S	0	00.	28 (13)
S1FB1AIWANS000.	S	1F	B	1	A	I	W	A	N	S	0	00.	28 (13)
S1FB1AGTANS000.	S	1F	B	1	A	G	T	A	N	S	0	00.	28 (13)
S1FB1ANWANS000.	S	1F	B	1	A	N	W	A	N	S	0	00.	28 (13)
S1FB1A1WANS000.	S	1F	B	1	A	1	W	A	N	S	0	00.	28 (13)
S1FB1ACTANS000.	S	1F	B	1	A	C	T	A	N	S	0	00.	28 (13)
S1FB1IBWANS000.	S	1F	B	1	I	B	W	A	N	S	0	00.	46 (21)
S1FB1I1WANS000.	S	1F	B	1	I	I	W	A	N	S	0	00.	46 (21)
S1FB1IGTANS000.	S	1F	B	1	I	G	T	A	N	S	0	00.	46 (21)
S1FB1INWANS000.	S	1F	B	1	I	N	W	A	N	S	0	00.	46 (21)
S1FB1I1WANS000.	S	1F	B	1	I	1	W	A	N	S	0	00.	46 (21)
S1FB1ICTANS000.	S	1F	B	1	I	C	T	A	N	S	0	00.	46 (21)
S1FB1I1WANS000.	S	1F	B	1	I	I	W	A	N	S	0	00.	46 (21)
S1FB1SBWANS000.	S	1F	B	1	S	B	W	A	N	S	0	00.	43 (20)
S1FB1SGTANS000.	S	1F	B	1	S	G	T	A	N	S	0	00.	43 (20)
S1FB1SNWANS000.	S	1F	B	1	S	N	W	A	N	S	0	00.	43 (20)
S1FB1S1WANS000.	S	1F	B	1	S	1	W	A	N	S	0	00.	43 (20)
S1FB1SCTANS000.	S	1F	B	1	S	C	T	A	N	S	0	00.	43 (20)

Pump Brand

S= SANDPIPER®

Pump Size

1F=1"

Check Valve Type

B= Ball

Design Level

1= Design Level

Wetted Material

A= Aluminum

I = Cast Iron

S= Stainless Steel

H= Alloy C

Diaphragm Check Valve Materials

1= Santoprene®/Santoprene®

B= Nitrile/Nitrile

C= FKM/PTFE

I = EPDM/Santoprene®

G= PTFE-Neoprene/PTFE

N= Neoprene/Neoprene

Z= One-Piece Bonded/PTFE

Check Valve Seat

A= Aluminum

C= Carbon Steel

S= Stainless Steel

T= PTFE

W= UHMW

Non-Wetted Material Options

A= Painted Aluminum

I = Cast Iron

Y= Painted Aluminum with
Stainless Steel Hardware

Z= Cast Iron with
Stainless Steel Hardware

Porting Options

N= NPT Threads

B= BSP (Tapered) Threads

R= Raised Face 150#

Threaded ANSI Flange

Pump Style

S= Standard

Pump Options

0= None

1= Sound Dampening Muffler

2= Mesh Muffler

3= High temperature Air Valve
w/Integral Muffler

4= High temperature Air Valve
w/Sound Dampening Muffler

5= High temperature Air Valve
w/Mesh Muffler

⚠ 6= Metal Muffler

⚠ 7= Metal Muffler with Grounding Cable

Kit Options

⚠ 00.= None

P0.= 10-30VDC Pulse Output Kit

⚠ P1.= Intrinsically-Safe 5-30VDC, 110/120VAC,
220/240VAC Pulse Output Kit

P2.= 110/120 or 220/240VAC Pulse Output Kit

⚠ E0.= Solenoid Kit with 24VDC Coil

⚠ E1.= Solenoid Kit with 24VDC Explosion-Proof Coil

⚠ E2.= Solenoid Kit with 24VAC/12VDC Coil

⚠ E3.= Solenoid Kit with 12VDC Explosion-Proof Coil

⚠ E4.= Solenoid Kit with 110VAC Coil

⚠ E5.= Solenoid Kit with 110VAC, 60 Hz Explosion-Proof Coil

⚠ E6.= Solenoid Kit with 220VAC Coil

⚠ E7.= Solenoid Kit with 220VAC, 60 Hz Explosion-Proof Coil

⚠ E8.= Solenoid Kit with 110VAC, 50 Hz Explosion-Proof Coil

⚠ E9.= Solenoid Kit with 230VAC, 50 Hz Explosion-Proof Coil

SP.= Stroke Indicator Pins



Note: Pumps are only ATEX compliant when ordered with pump options 6 or 7, and kit options 00, P1, E1, E3, E5, E7, E8 or E9.

**CAUTION! Operating temperature limitations are as follows:**

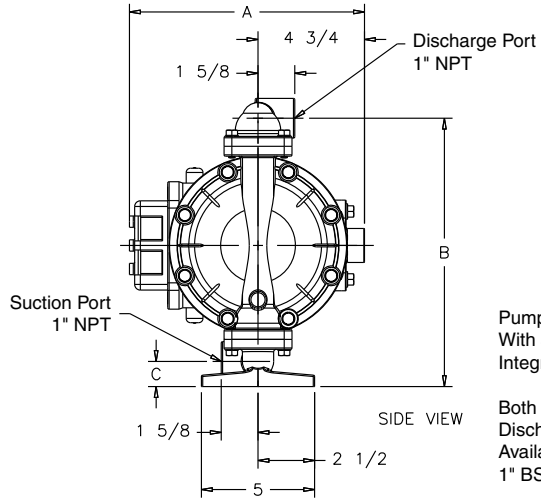
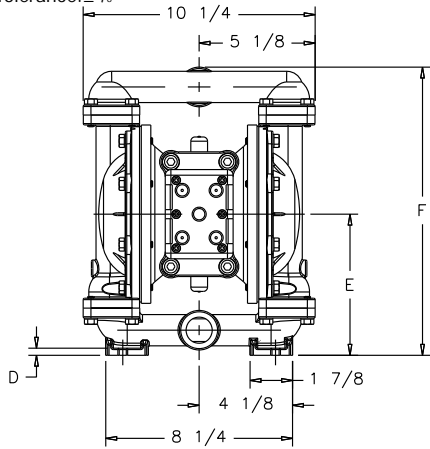
Materials	Operating Temperatures	
	Maximum	Minimum
Nitrile: General purpose, oil-resistant. Shows good solvent, oil, water and hydraulic fluid resistance. Should not be used with highly polar solvents like acetone and MEK, ozone, chlorinated hydrocarbons and nitro hydrocarbons.	190°F 88°C	-10°F -23°C
EPDM: Shows very good water and chemical resistance. Has poor resistance to oil and solvents, but is fair in ketones and alcohols.	280°F 138°C	-40°F -40°C
Neoprene: All purpose. Resistant to vegetable oil. 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.	200°F 93°C	-10°F -23°C
Santoprene®: Injection molded thermoplastic elastomer with no fabric layer. Long mechanical flex life. Excellent abrasion resistance.	275°F 135°C	-40°F -40°C
Virgin PTFE: Chemically inert, virtually impervious. Very few chemicals are known to react chemically 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.	220°F 104°C	-35°F -37°C
FKM (Fluorocarbon): 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 FKM.	350°F 177°C	-40°F -40°C
Polypropylene:	180°F 82°C	32°F 0°C
UHMW:	180°F 82°C	-35°F -37°C

For specific applications, always consult The Warren Rupp Chemical Resistance Chart

Dimensions: S1F Metallic

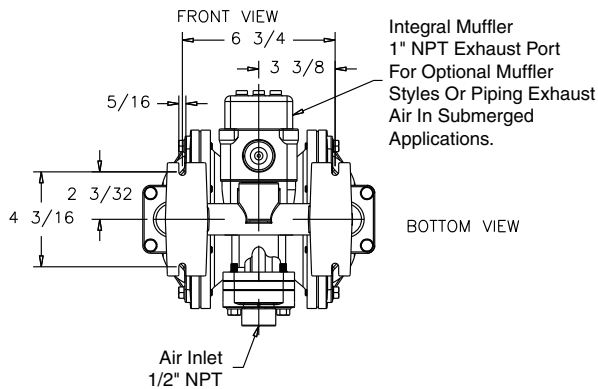
Dimensions in Inches

Dimensional Tolerance: $\pm 1/8"$



Pump Shown
With 530-028-550
Integral Muffler

Both Suction And
Discharge Ports Are
Available With
1" BSP Tapered Connection



Integral Muffler
1" NPT Exhaust Port
For Optional Muffler
Styles Or Piping Exhaust
Air In Submerged
Applications.

BOTTOM VIEW

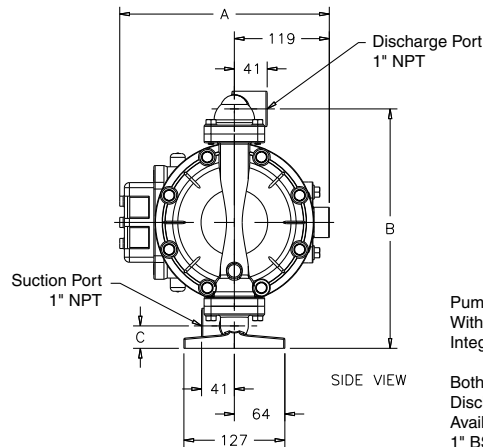
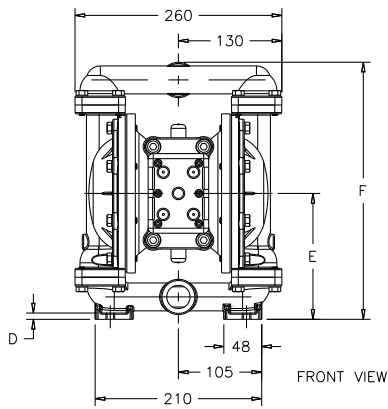
Air Inlet
1/2" NPT

Dimension	A	B	C	D	E	F
Integral Muffler	10 3/8					
Pulse Output Kit	10 3/8					
Aluminum		11 27/32	1 3/32	5/16	6 7/32	12 23/32
Stainless Steel		11 31/32	1 7/32	7/16	6 11/32	12 27/32
Mesh Muffler	13					
Sound Dampening Muffler	13					
Metal Muffler	12 1/2					

Metric Dimensions: S1F Metallic

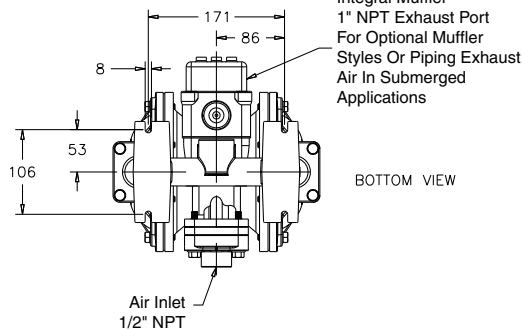
Dimensions in Millimeters

Dimensional Tolerance: $\pm 3\text{mm}$



Pump Shown
With 530-028-550
Integral Muffler

Both Suction And
Discharge Ports Are
Available With
1" BSP Tapered Connection



Integral Muffler
1" NPT Exhaust Port
For Optional Muffler
Styles Or Piping Exhaust
Air In Submerged
Applications.

BOTTOM VIEW

Air Inlet
1/2" NPT

Dimension	A	B	C	D	E	F
Integral Muffler	264					
Pulse Output Kit	264					
Aluminum		301	28	8	158	323
Stainless Steel		304	31	11	161	326
Mesh Muffler	330					
Sound Dampening Muffler	330					
Metal Muffler	319					