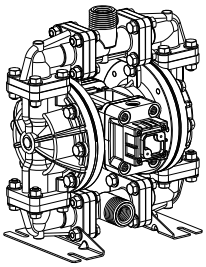
WARREN RUPP®

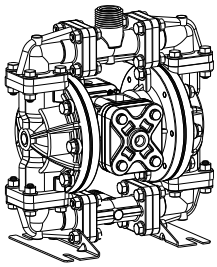
SANDPIPER®
A WARREN RUPP PUMP BRAND

Quality System
ISO9001 Certified

Environmental
Management System
ISO14001 Certified



Air Exhaust Side View



Air Inlet Side View

S05 Non-Metallic Design Level 2 Ball Valve

Air-Operated Double Diaphragm Pump

ENGINEERING, PERFORMANCE & CONSTRUCTION DATA

IDEX FLUID & METERING

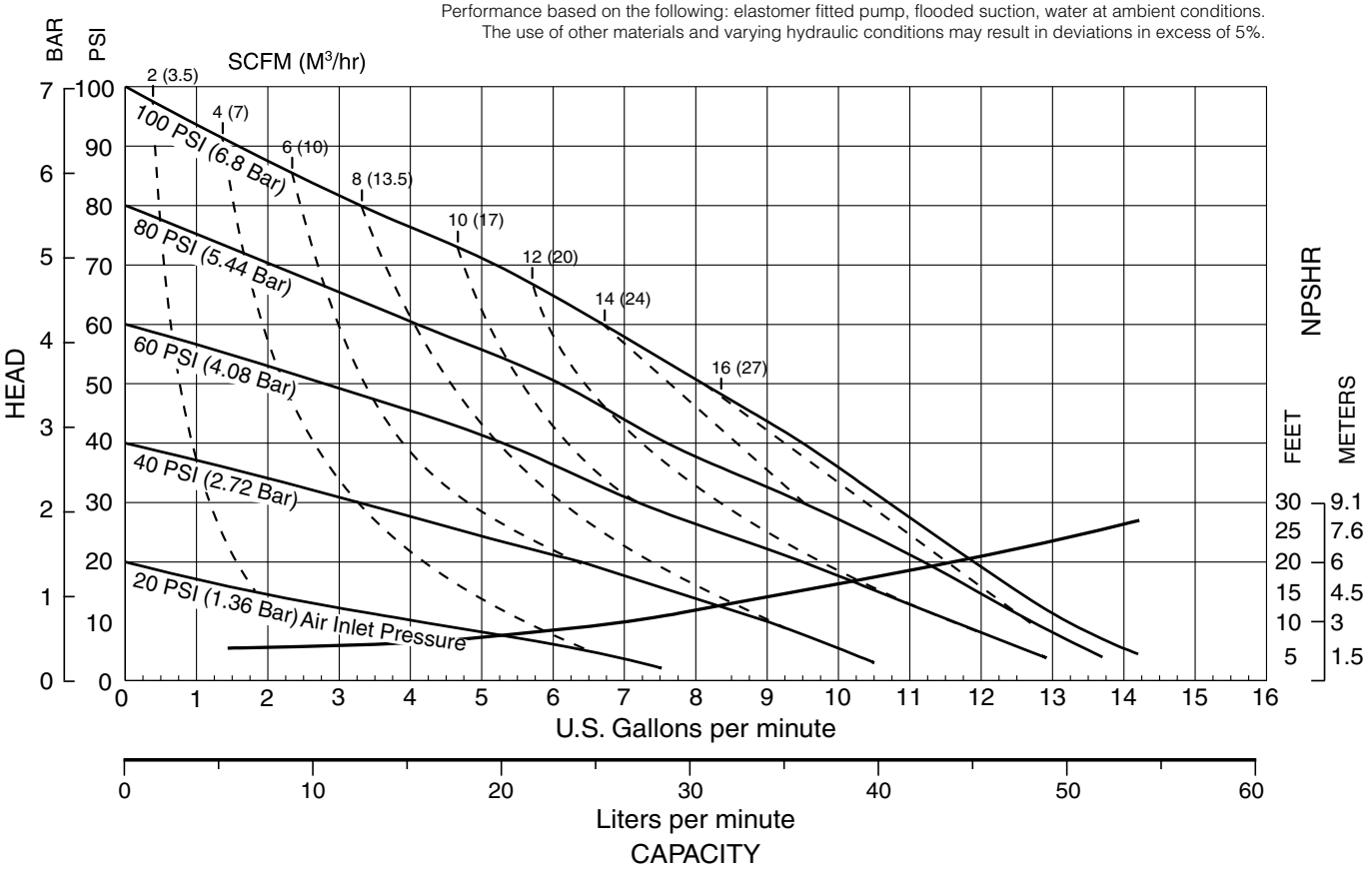
U.S. Patent #5,996,627; 6,241,487
Other U.S. Patents Applied for

See page 2 for ATEX ratings.

INTAKE/DISCHARGE PIPE SIZE	CAPACITY	AIR VALVE	SOLIDS-HANDLING	HEADS UP TO	DISPLACEMENT/STROKE
½" NPT (internal) or ½" BSP (Tapered) 1" NPT (external) or 1" BSP (Tapered)	0 to 14 gallons per minute (0 to 52 liters per minute)	No-lube, no-stall design	Up to .125 in. (3mm)	100 psi or 231 ft. of water (7 bar or 70 meters)	.026 Gallon / .098 liter

MODEL S05 Non-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

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)
S05B2P1TPNS000.	S	05	B	2	P	1	T	P	N	S	0	00.	16 (8)
S05B2P2TPNS000.	S	05	B	2	P	2	T	P	N	S	0	00.	16 (8)
S05B2PUTPNS000.	S	05	B	2	P	U	T	P	N	S	0	00.	16 (8)
S05B2K1TPNS000.	S	05	B	2	K	1	T	P	N	S	0	00.	18 (9)
S05B2K2TPNS000.	S	05	B	2	K	2	T	P	N	S	0	00.	18 (9)
S05B2KUTPNS000.	S	05	B	2	K	U	T	P	N	S	0	00.	18 (9)
S05B2N1TPNS000.	S	05	B	2	N	1	T	P	N	S	0	00.	16 (8)
S05B2N2TPNS000.	S	05	B	2	N	2	T	P	N	S	0	00.	16 (8)
S05B2NUTPNS000.	S	05	B	2	N	U	T	P	N	S	0	00.	16 (8)

Note: Models listed in the table are for reference only. See nomenclature below for other models.

Pump Brand
S= SANDPIPER®

Pump Size
05=1/2"

Check Valve Type
B= Soild Ball

Design Level
2= Design Level

Wetted Material
K= PVDF
N= Nylon
P= Polypropylene
⚠ C= Conductive Polypropylene
⚠ V= Conductive PVDF

Diaphragm/Check Valve Materials
1= Santoprene/Santoprene
2= Virgin PTFE-Santoprene Backup/Virgin PTFE
B= Nitrile/Nitrile
U= Polyurethane/Polyurethane
Z= One-Piece Bonded/PTFE

Check Valve Seat
T= Virgin PTFE

Non-Wetted Material Options
P= Polypropylene
1= Polypropylene w/PTFE Coated Hardware
⚠ C= Conductive Polypropylene

Porting Options
N= NPT Threads
B= BSP (Tapered) Threads
1= Dual Porting (NPT)
2= Top Dual Porting (NPT)
3= Bottom Dual Porting (NPT)
4= Dual Porting (BSP Tapered)
5= Top Dual Porting (BSP Tapered)
6= Bottom Dual Porting (BSP Tapered)

Pump Style
S= Standard

Pump Options
⚠ 0= None
1= Sound Dampening Muffler
2= 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 220/240 VAC 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 Explosion-Proof Coil
E6.= Solenoid Kit with 220VAC Coil
△ E7.= Solenoid Kit with 220VAC 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

◆ A1.= Solenoid Kit with 12 VDC Explosion-Proof Coil
◆ A2.= Solenoid Kit with 24 VDC Explosion-Proof Coil
◆ A3.= Solenoid Kit with 110/120 VAC 50/60 Hz Explosion-Proof Coil
◆ A4.= Solenoid Kit with 220/240 VAC 50/60 Hz Explosion-Proof Coil

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(1) ⟨Ex⟩ II 2GD T5

⚠ Note: Pumps are only ATEX compliant when ordered with wetted material option C or V, non-wetted material option C, pump option 0, 6 or 7, and kit option 0.

(2) ⟨Ex⟩ II 2G Ex ia c IIC T5
II 2D c iaD 20 IP67 T100˚C

◇ Note: Pumps ordered with the options listed in (1) above are ATEX compliant when ordered with kit option P1.

(3*) ⟨Ex⟩ II 2G EEx m c T5
II 2D c IP65 T100°C

◆ Note: Pumps ordered with the options listed in (1) to the left are ATEX compliant when ordered with kit option A1, A2, A3, or A4.

*Refer to the service manual to see special conditions for safe use.

(4) FM APPROVED IEC EEX m T4 CSA®

△ Note: Pump models equipped with these explosion-proof solenoid kit options E1, E3, E5, E7, E8 or E9, are certified and approved by the above agencies. They are NOT ATEX compliant.

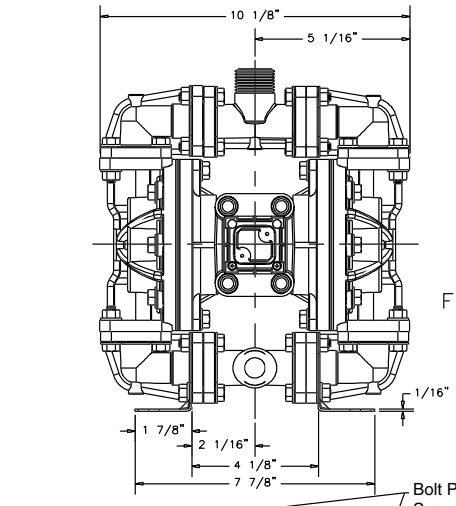
CAUTION! ***Operating temperature limitations are as follows:***

Materials	Operating Temperatures Maximum*	Minimum*
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
Santoprene®: Injection molded thermoplastic elastomer with no fabric layer. Long mechanical flex life. Excellent abrasion resistance.	275°F 135°C	-40°F -40°C
PVDF: Generally reserved for applications requiring the highest purity, strength, and resistance to solvents, acids & bases.	250°F 121°C	0°F -18°C
Polypropylene: Generally rugged and usually resistant to many chemicals solvents. Rugged and often stiffer than other plastics, economical.	180°F 82°C	32°F 0°C
Nylon:	180°F 82°C	-35°F 0°C
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 hydrocarbon.	190°F 88°C	-10°F -23°C

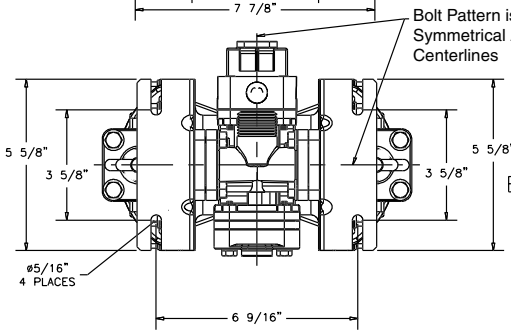
For specific applications, always consult "Chemical Resistance Chart" Technical Bulletin

Dimensions: S05 Non-Metallic

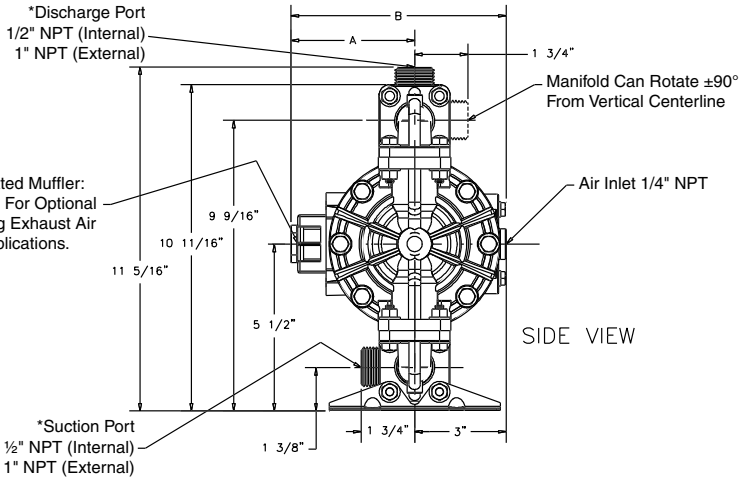
Dimensions in Inches
Dimensional Tolerance: ±1/8"



FRONT VIEW



BOTTOM VIEW

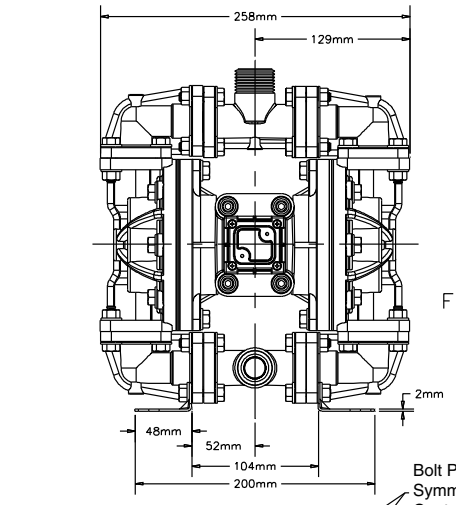


SIDE VIEW

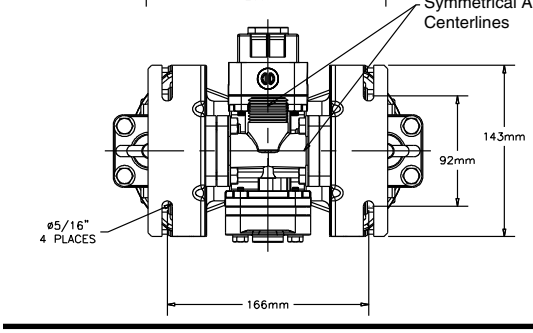
*Both Suction And Discharge Ports are Available in
½" BSP Tapered (Internal)
1" BSP Tapered (External)

DIMENSION	A	B
Standard Pump	4 1/16"	7 1/16"
Pulse Output Kit	4 1/16"	7 1/16"
Mesh Muffler	5 3/4"	8 3/4"
Sound Dampening Muffler	5 3/4"	8 3/4"
Metal Muffler	5 1/4"	8 1/4"

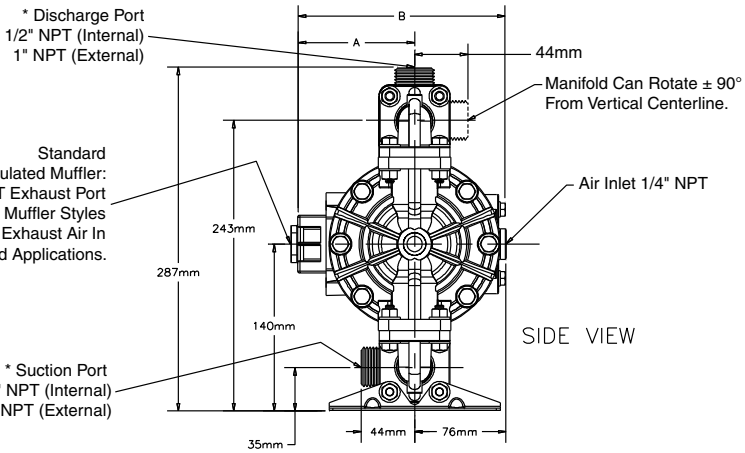
Dimensions in Millimeters
Dimensional Tolerance: ± 3mm



FRONT VIEW



BOTTOM VIEW



SIDE VIEW

*Both Suction And Discharge Ports are Available in
½" BSP Tapered (Internal)
1" BSP Tapered (External)

DIMENSION	A	B
Standard Pump	103mm	179mm
Pulse Output Kit	103mm	179mm
Mesh Muffler	146mm	222mm
Sound Dampening Muffler	146mm	222mm
Mesh Muffler	133mm	210mm