WARREN RUPP®

SANDPIPER®
A WARREN RUPP PUMP BRAND

Quality System ISO9001 Certified

Environmental Management System ISO14001 Certified

IDEX FLUID & METERING

CE

Ex II 2GD T5

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

S20 Non-Metallic Design Level 3 Ball Valve

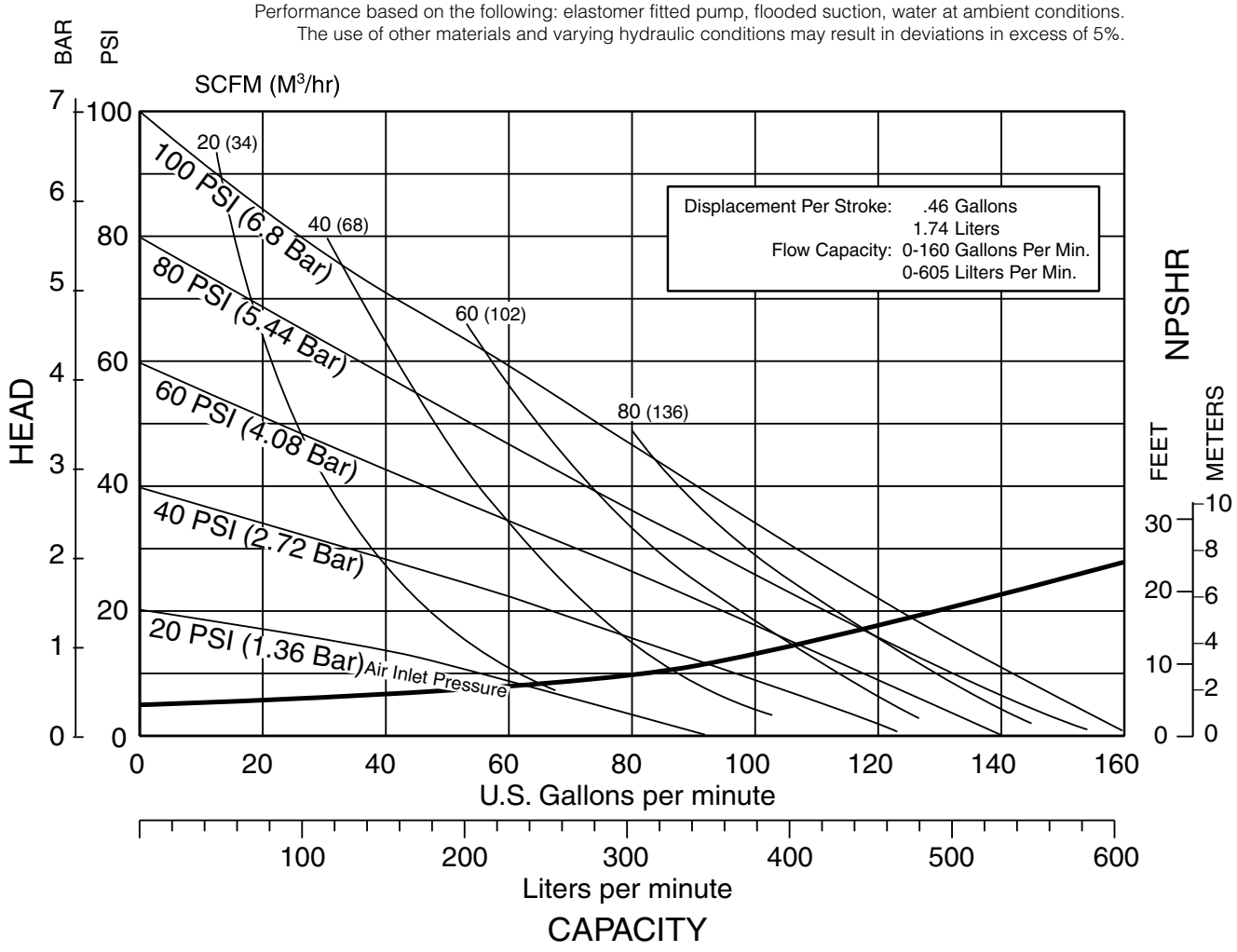
Air-Operated Double Diaphragm Pump

ENGINEERING, PERFORMANCE & CONSTRUCTION DATA

INTAKE/DISCHARGE PIPE SIZE	CAPACITY	AIR VALVE	SOLIDS-HANDLING	HEADS UP TO	DISPLACEMENT/STROKE
2" ANSI Flange or PN10 50mm DIN Flange	0 to 160 gallons per minute (0 to 605 liters per minute)	No-lube, no-stall design	Up to .66 in. (17mm)	100 psi or 231 ft. of water (7 bar or 70 meters)	.46 Gallon / 1.73 liter

MODEL S20 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

S20 Non-Metallic • Design Level 3 • 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	Shipping Kit Options	Weight lbs. (kg)
S20B3P1PPAS000.	S	20	B	3	P	1	P	P	A	S	0	00.	90 (41)
S20B3K1KPAS000.	S	20	B	3	K	1	K	P	A	S	0	00.	125 (57)
S20B3P2PPAS000.	S	20	B	3	P	2	P	P	A	S	0	00.	95 (43)
S20B3K2KPAS000.	S	20	B	3	K	2	K	P	A	S	0	00.	130 (59)
S20B3PGPPAS000.	S	20	B	3	P	G	P	P	A	S	0	00	126 (57)
S20B3KGKPAS000.	S	20	B	3	K	G	K	P	A	S	0	00	131 (59)
S20B3C1PCAS000.	S	20	B	3	C	1	P	C	A	S	0	00.	94 (43)
S20B3C2PCAS000.	S	20	B	3	C	2	P	C	A	S	0	00.	100 (45)
S20B3P6PPAV000.	S	20	B	3	P	6	P	P	A	V	0	00.	NA*
S20B3K6KKAV000.	S	20	B	3	K	6	K	K	A	V	0	00.	NA*

Pump Brand
S= SANDPIPER®

Pump Size
20= 2"

Check Valve Type
B= Ball

Design Level
3= Design Level 3

Wetted Material
K= PVDF
P= Polypropylene
⚠ C= Conductive Polypropylene

Diaphragm / Check Valve Materials
1= Santoprene/Santoprene
2= PTFE-Santoprene Backup/PTFE
6= PTFE Pumping, PTFE-Neoprene Backup Driver/PTFE
B= Nitrile/Nitrile
C= FKM / PTFE
G= PTFE-Neoprene Backup/PTFE
N= Neoprene/Neoprene

Check Valve Seat
K= PVDF
P= Polypropylene

⚠ **Non-Wetted Material Options**
C= Carbon Filled Conductive Polypropylene
P= 40%Glass Filled Polypropylene
1= 40%Glass Filled Polypropylene w/PTFE Coated Hardware

Porting Options
A= ANSI Flange
D= DIN Flange
7= Dual Porting (ANSI)
8= Top Dual Porting (ANSI)
9= Bottom Dual Porting (ANSI)

Pump Style
⚠ D= with Electronic Leak Detection (110V)
E= with Electronic Leak Detection (220V)
M= with Mechanical Leak Detection
S= Standard
V= with Visual Leak Detection

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 w/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

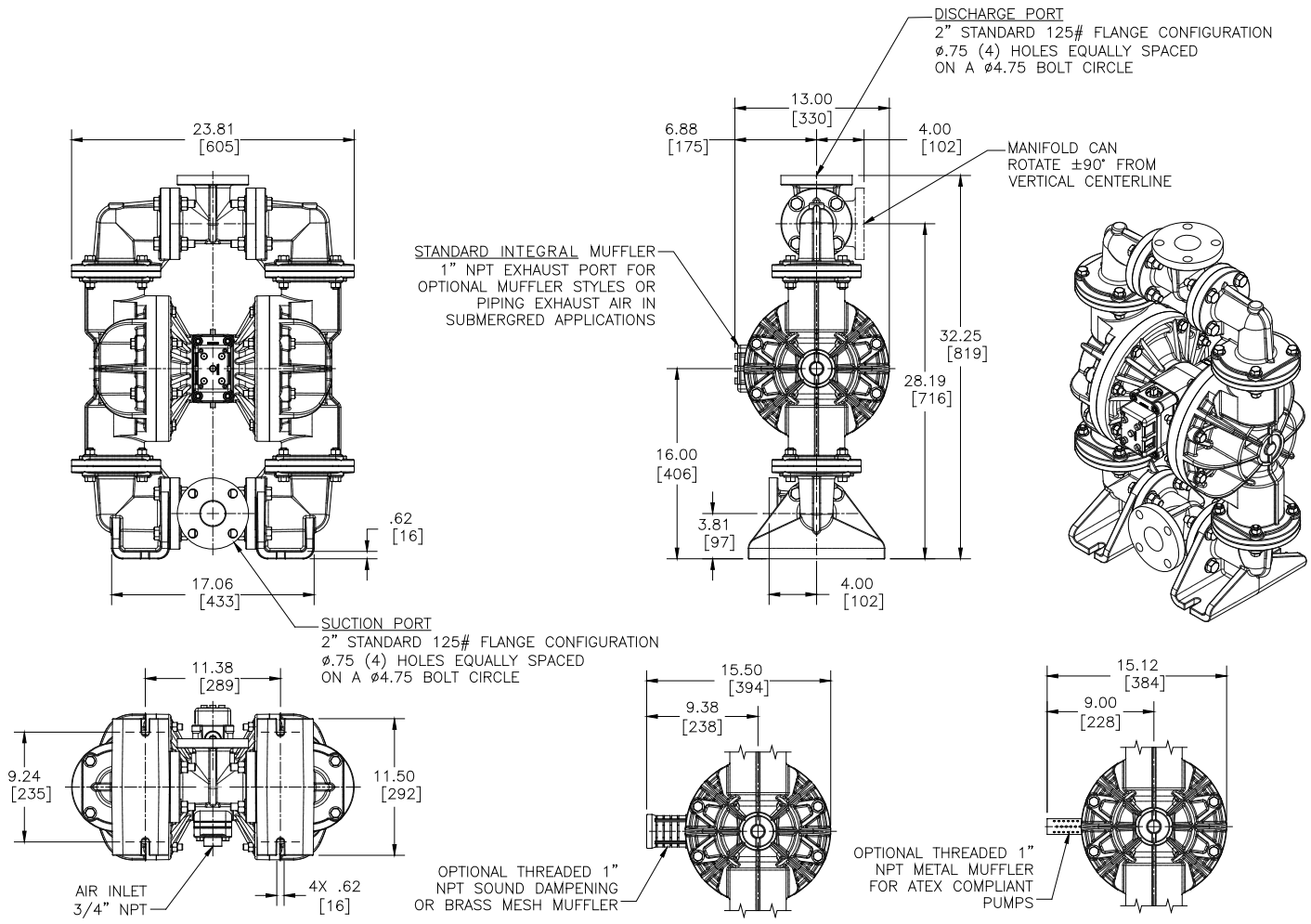
⚠ **Note: Pumps are only ATEX compliant when ordered with wetted options C, non-wetted option C, pump options 6 or 7, and kit options 00, P1, E1, E3, E5, E7, E8 or E9.**

⚠ CAUTION! Operating temperature limitations are as follows:	Operating Temperatures	
Materials	Maximum	Minimum
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
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	-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 hydrocarbons.	190°F 88°C	-10°F -23°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
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

For specific applications, always consult “Chemical Resistance Chart” Technical Bulletin

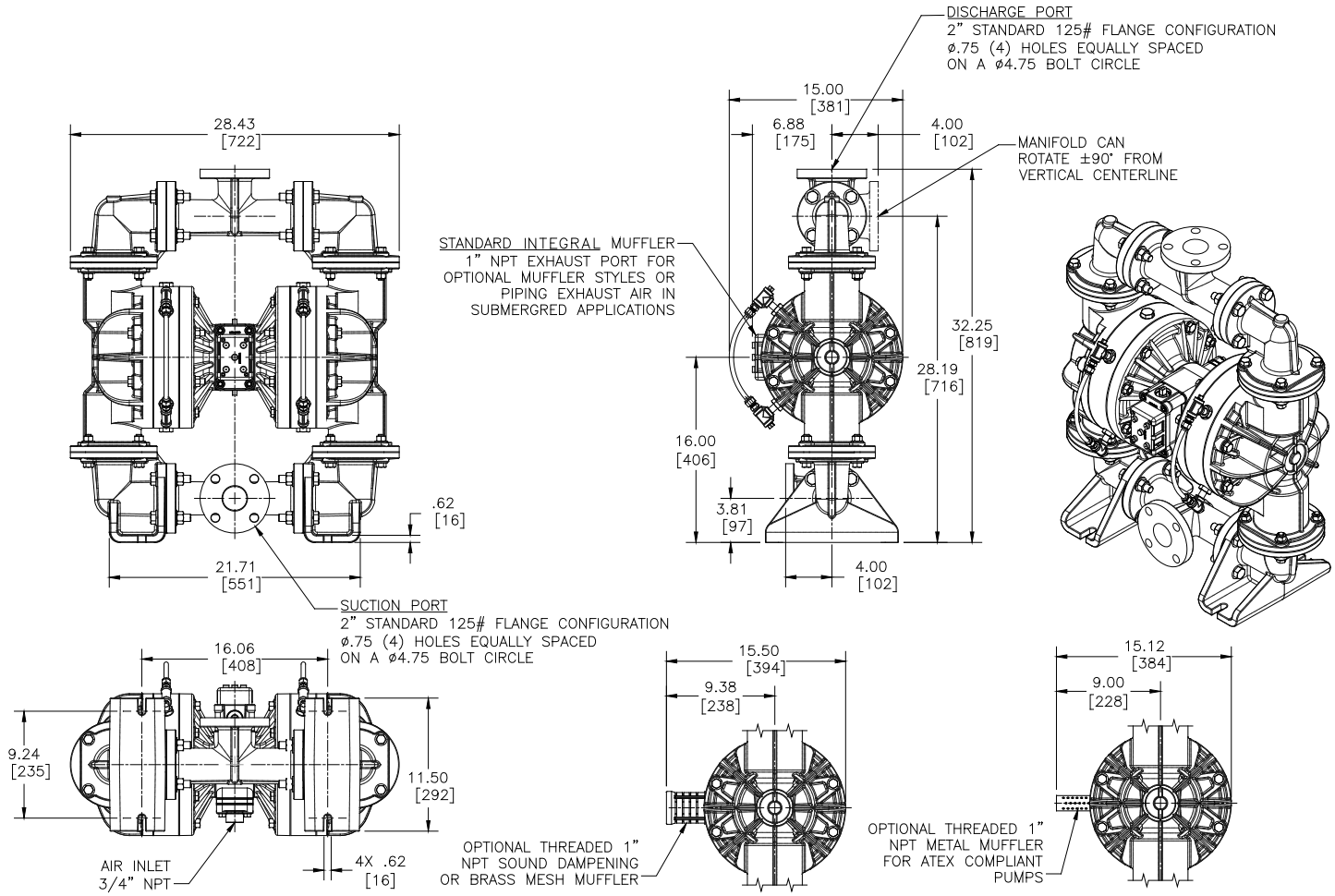
Dimensions: S20 Non-Metallic

Dimensions in Inches [ ] in Millimeters
Dimensional tolerance: +/- 1/8" [ ] +/- 3mm



Note: Porting Flanges are also available with
PN10 40mm DIN bolting configuration.

Dimensions: S20 Non-Metallic with Spill Containment



Note: Porting Flanges are also available with PN10 40mm DIN bolting configuration.