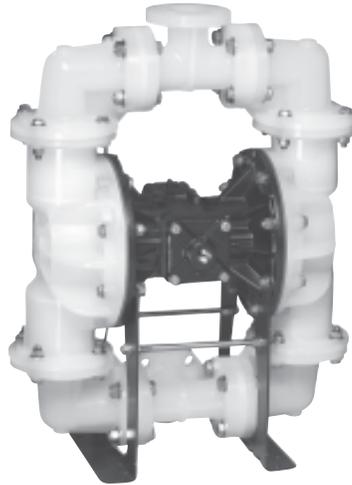


**WARREN  
RUPP®**

Quality System  
ISO9001 Certified

Environmental  
Management System  
ISO14001 Certified

**IDEX**  
IDEX CORPORATION



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



**SANDPIPER®**

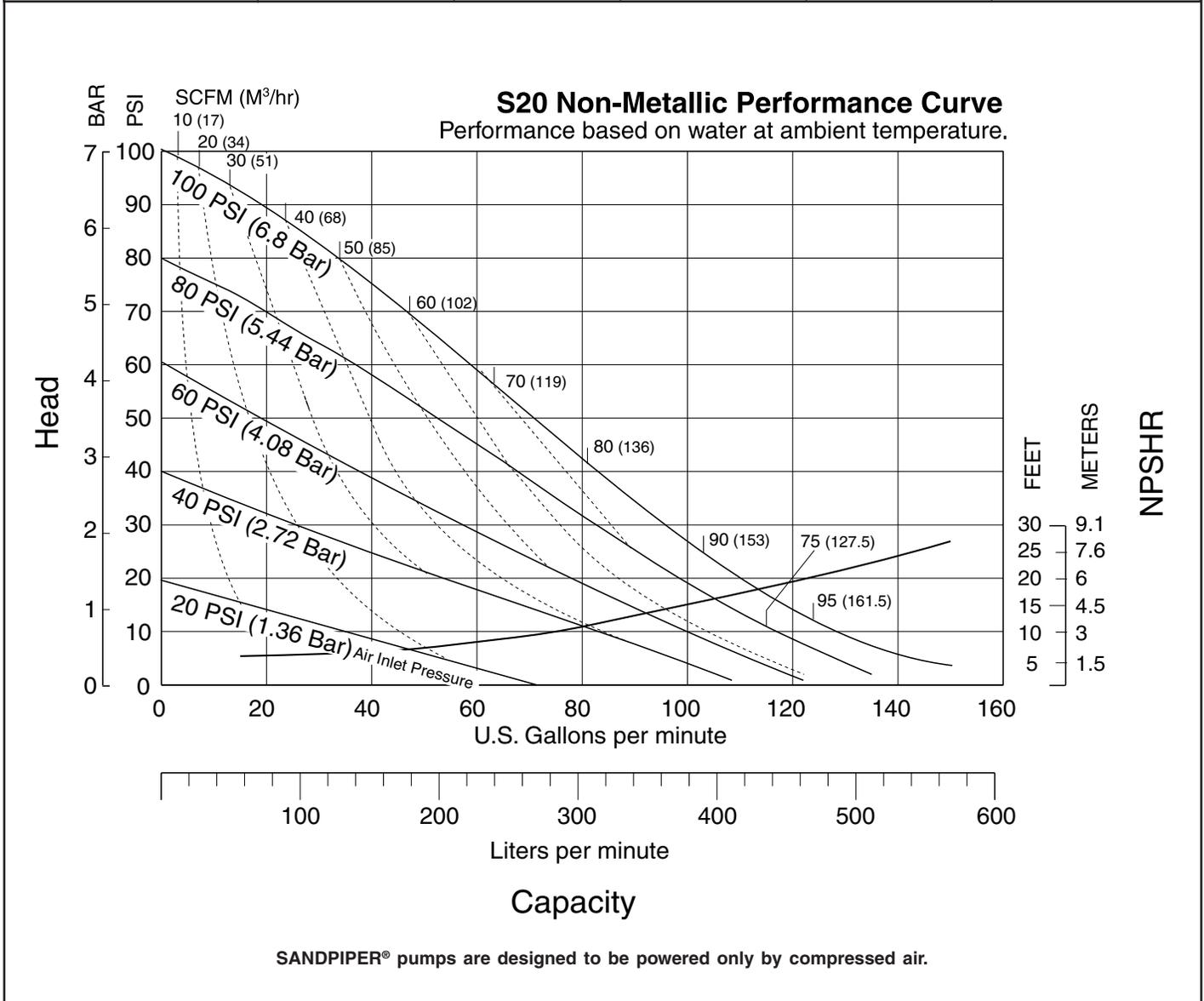
A WARREN RUPP PUMP BRAND

# S20 Non-Metallic Design Level 2 Ball Valve

**Air-Powered  
Double-Diaphragm Pump**

ENGINEERING, PERFORMANCE  
& CONSTRUCTION DATA

INTAKE/DISCHARGE PIPE SIZE	CAPACITY	AIR VALVE	SOLIDS-HANDLING	HEADS UPTO	DISPLACEMENT/STROKE
2" ANSI Flange or PN10 50mm DIN Flange	0 to 150 gallons per minute (0 to 568 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)	.36 Gallon / 1.36 liter



# Explanation of Pump Nomenclature

## S20 Non-Metallic · Design Level 2· 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)
S20B2P1PQAS000.	S	20	B	2	P	1	P	Q	A	S	0	00.	117 (53)
S20B2K1KQAS000.	S	20	B	2	K	1	K	Q	A	S	0	00.	117 (53)
S20B2P2PQAS000.	S	20	B	2	P	2	P	Q	A	S	0	00.	151 (68)
S20B2K2KQAS000.	S	20	B	2	K	2	K	Q	A	S	0	00.	151 (68)
S20B2P3PQAV000.	S	20	B	2	P	3	P	Q	A	V	0	00.	148 (67)
S20B2K3KQAV000.	S	20	B	2	K	3	K	Q	A	V	0	00.	189 (86)
S20B2P4PQAV000.	S	20	B	2	P	4	P	Q	A	V	0	00.	148 (67)
S20B2K4KQAV000.	S	20	B	2	K	4	K	Q	A	V	0	00.	189 (86)

**Pump Brand**  
S= SANDPIPER®

**Pump Size**  
20=2"

**Check Valve Type**  
B= Ball

**Design Level**  
2= Design Level

**Wetted Material**  
K= PVDF  
P= Polypropylene

**Diaphragm Check Valve Materials**  
1= Santoprene/Santoprene  
2= PTFE-Santoprene Backup/PTFE  
3= PTFE Pumping, PTFE-Santoprene Backup Driver/PTFE  
4= Santoprene Pumping, Santoprene Driver/Santoprene

**Check Valve Seat**  
K= PVDF  
P= Polypropylene

**Non-Wetted Material Options**

A= Painted Aluminum  
J= Painted Aluminum w/PTFE Coated Hardware  
Q= Epoxy Coated Aluminum  
K= PTFE Coated Aluminum  
L= PTFE Coated Aluminum with PTFE Coated Hardware  
R= Epoxy Coated Aluminum with 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= Containment Duty with Electronic Leak Detection (110V)  
E= Containment Duty with Electronic Leak Detection (220V)  
M= Containment Duty with Mechanical Leak Detection  
S= Standard  
V= Containment Duty with Visual Leak Detection

**Pump Options**

0= None  
1= 3M Muffler  
2= Mesh Muffler  
3= High temperature Air Valve w/Encapsulated Muffler  
4= High temperature Air Valve w/3M Muffler  
5= High temperature Air Valve w/Mesh Muffler

**Kit Options**

00.=None  
P0.=0-30VDC Pulse Output Kit  
P1.=Intrinsically-Safe 10-30VDC Pulse Output Kit  
P2.=110/120 or 220/240VAC Pulse Output Kit  
P3.=Intrinsically-Safe 110/120VAC Pulse Output Kit  
P4.=Intrinsically-Safe 220/240VAC Pulse Output Kit  
SP.=Stroke Indicator Pins

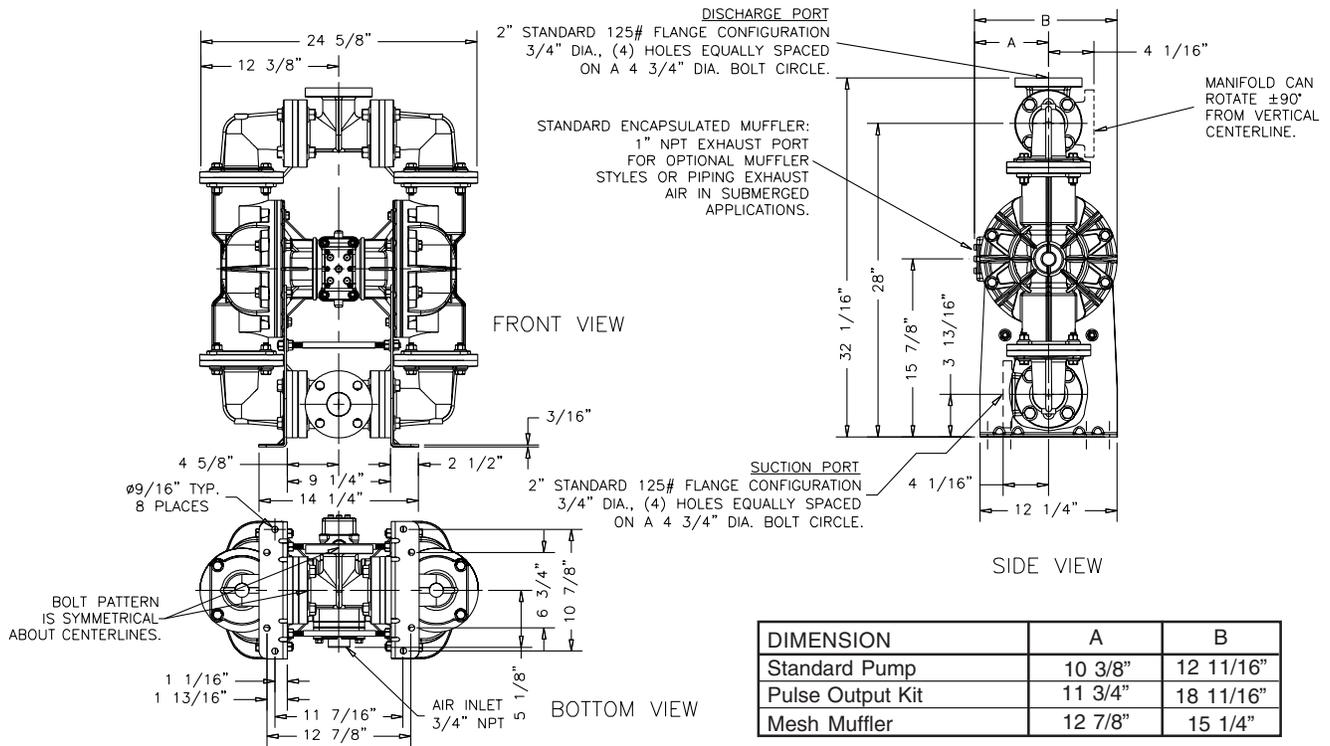
 **CAUTION! Operating temperature limitations are as follows:**

Materials	Operating Temperatures	
	Maximum	Minimum
<b>Virgin PTFE</b> 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.	212°F 100°C	-10°F -23°C
<b>Santoprene®</b> Injection molded thermoplastic elastomer with no fabric layer. Long mechanical flex life. Excellent abrasion resistance.	212°F 100°C	-35°F -37°C
<b>Polypropylene</b>	150°F 65°C	-40°F 5°C
<b>Polyurethane</b>	180°F 82°C	-35°F -37°C

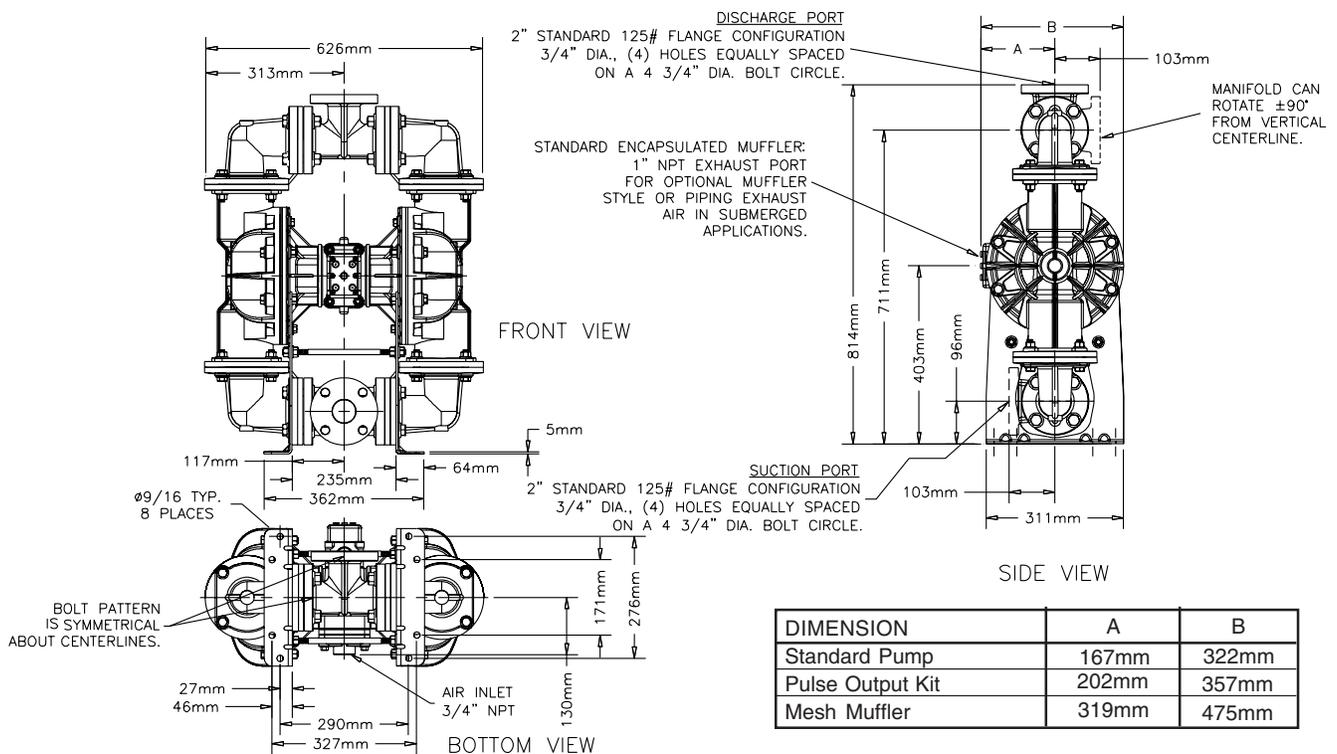
For specific applications, always consult the Warren Rupp Chemical Resistance Chart

# Dimensions: S20 Non-Metallic

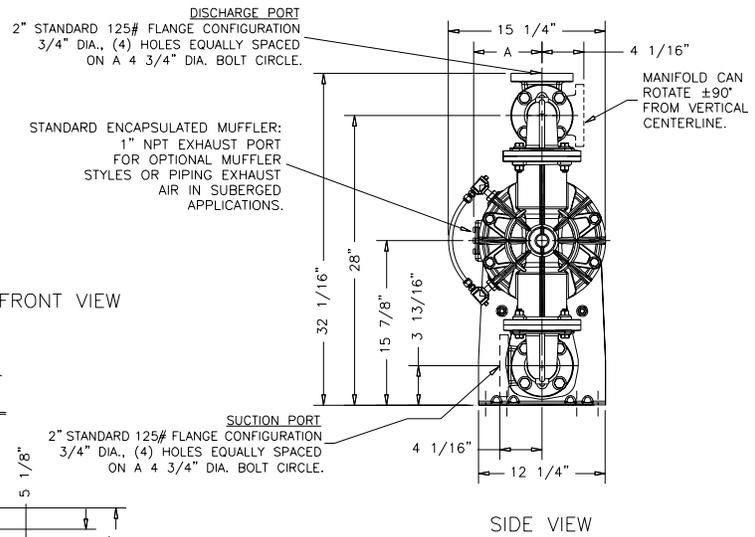
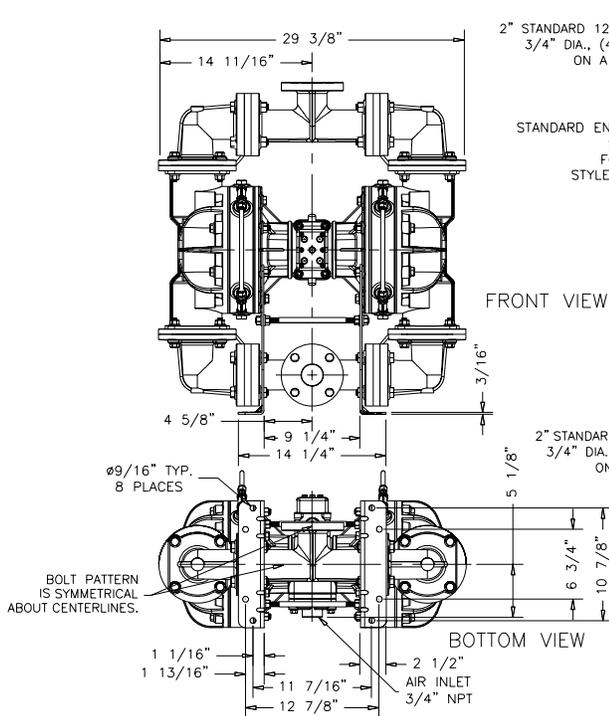
Dimensions in Inches  
Dimensional Tolerance:  $\pm 1/8"$



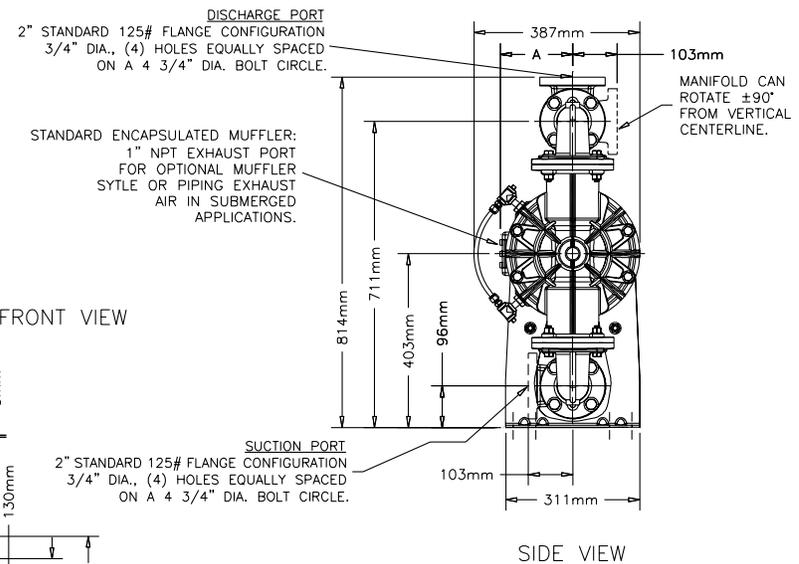
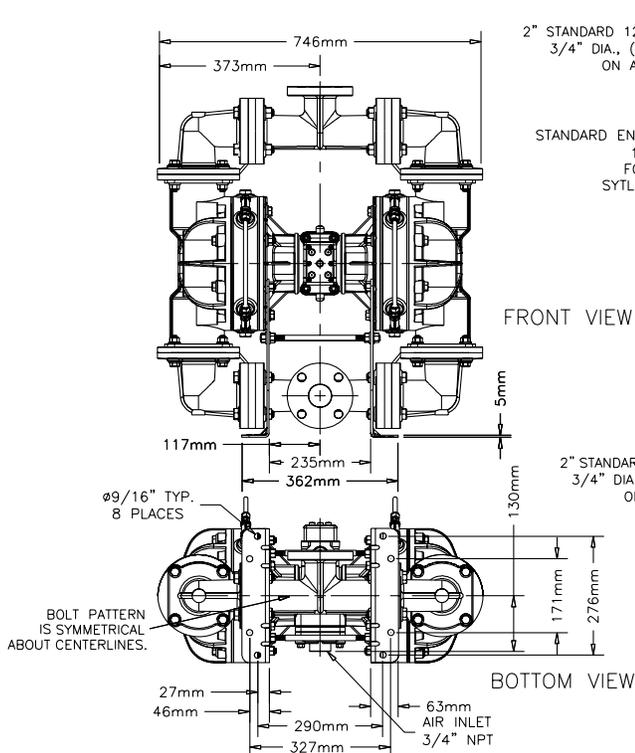
Dimensions in Millimeters  
Dimensional Tolerance:  $\pm 3\text{mm}$



# Dimensions: S20 Non-Metallic with Spill Containment



DIMENSION	A	B
Standard Pump	6 9/16"	12 11/16"
Pulse Output Kit	7 15/16"	14 1/16"
Mesh Muffler	8 13/16"	14 15/16"



DIMENSION	A	B
Standard Pump	167mm	322mm
Pulse Output Kit	202mm	357mm
Mesh Muffler	225mm	380mm