



U.S. Patent #5,851,109; 5,996,627;
400,210; 6,241,487
Other U.S. Patents Applied for



S07 Non-Metallic Design Level 1 Ball Valve

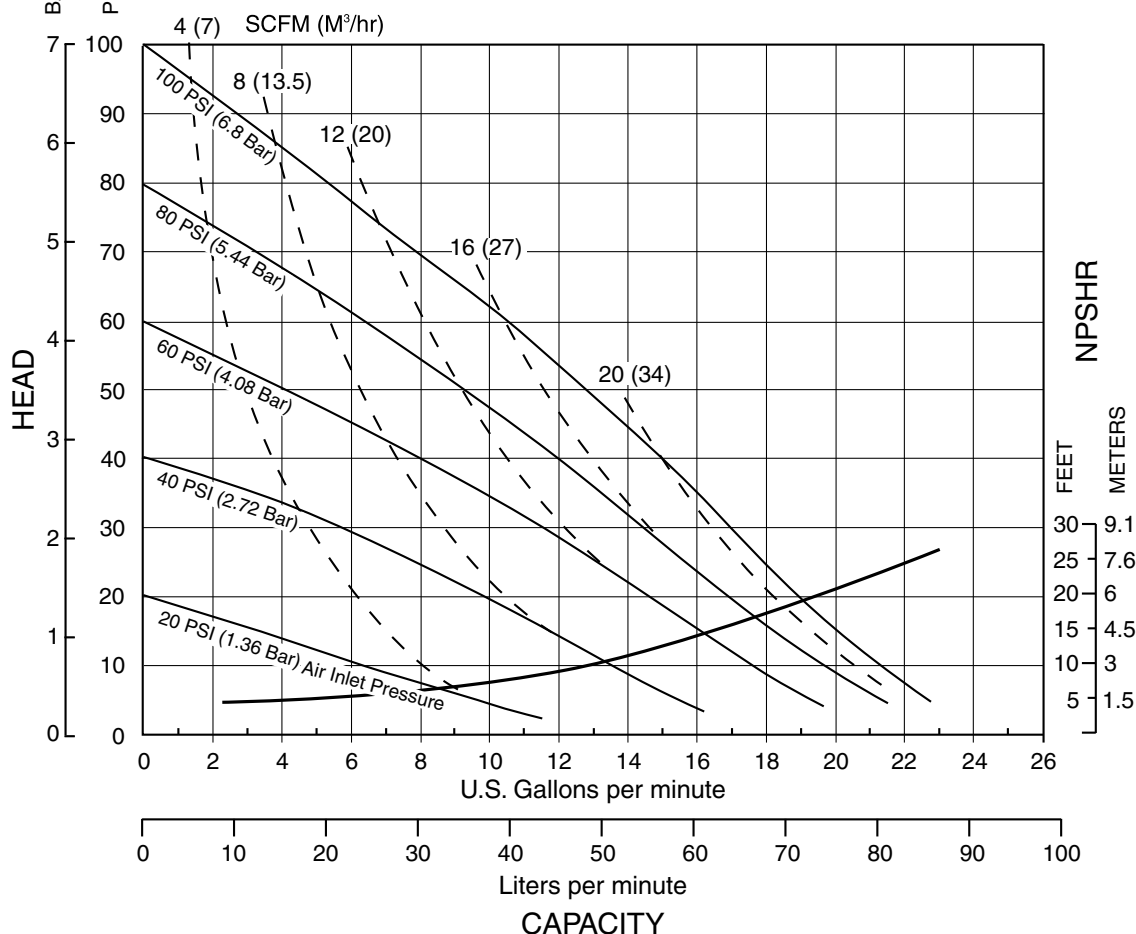
**Air-Operated
Double Diaphragm Pump**

ENGINEERING, PERFORMANCE
& CONSTRUCTION DATA

INTAKE/DISCHARGE PIPE SIZE	CAPACITY	AIR VALVE	SOLIDS-HANDLING	HEADS UP TO	DISPLACEMENT/STROKE
Internal Threads ¾" NPT or ¾" BSP Tapered	0 to 23 gallons per minute (0 to 87 liters per minute)	No-lube, no-stall design	Ball Valve S07B - Up to .15 in. (4mm) Trihedral Valve S07T - Up to .36 in. (9.1mm) Diameter or .16 in² area (10.3cm²)	100 psi or 231 ft. of water (7 bar or 70 meters)	.026 Gallon / .098 liter
External Threads 1½" NPT or 1½" BSP Tapered					

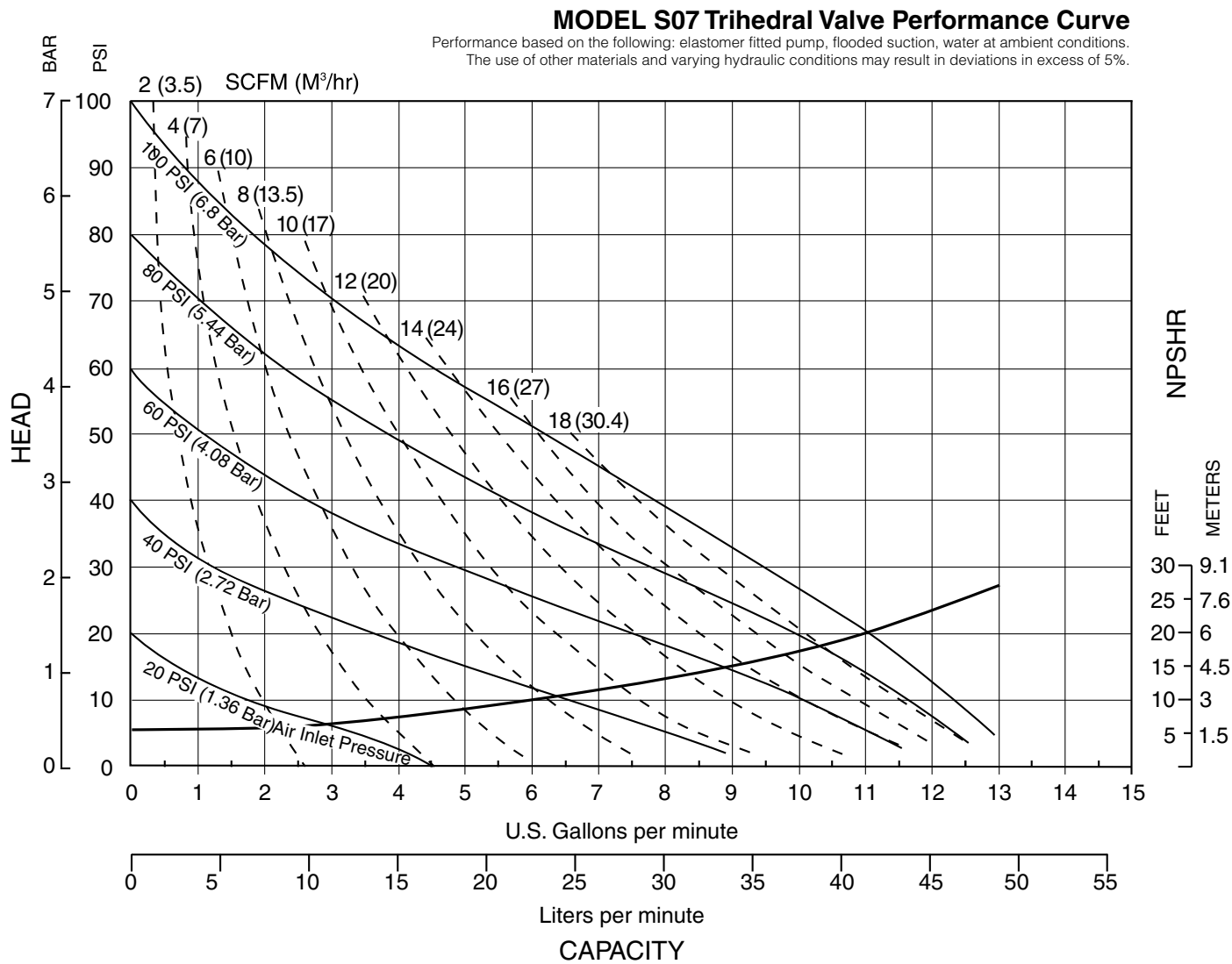
MODEL S07 Ball Valve Non-Metallic Performance Curve

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.

S07 Non-Metallic Performance Curve, Trihedral Model



Explanation of Pump Nomenclature

S07 Non-Metallic · Design Level 1· Ball Valve

Type	Pump Brand	Pump Size	Check Valve Type	Design Level	Wetted Material	Diaphragm/Check Valve Options	Check Valve Seat	Non-Wetted Material Options	Porting Options	Pump Style	Pump Options	Kit Options	Shipping Weight lbs (kg)
S07B1P1PPNS000.	S	07	B	1	P	1	P	P	N	S	0	00.	17 (8)
S07B1P2PPNS000.	S	07	B	1	P	2	P	P	N	S	0	00.	17 (8)
S07B1K1KPNS000.	S	07	B	1	K	1	K	P	N	S	0	00.	21 (9.5)
S07B1K2KPNS000.	S	07	B	1	K	2	K	P	N	S	0	00.	21 (9.5)
S07B1N1NPNS000.	S	07	B	1	N	1	N	P	N	S	0	00.	18 (9)
S07B1N2NPNS000.	S	07	B	1	N	2	N	P	N	S	0	00.	18 (9)
S07T1P7PPNS000.	S	07	T	1	P	7	P	P	N	S	0	00.	17 (8)
S07T1P8PPNS000.	S	07	T	1	P	8	P	P	N	S	0	00.	17 (8)
S07T1PBPPNS000.	S	07	T	1	P	B	P	P	N	S	0	00.	17 (8)
S07B1P1PPBS000.	S	07	B	1	P	1	P	P	B	S	0	00.	17 (8)
S07B1P2PPBS000.	S	07	B	1	P	2	P	P	B	S	0	00.	17 (8)
S07B1K1KPBS000.	S	07	B	1	K	1	K	P	B	S	0	00.	21 (9.5)
S07B1K2KPBS000.	S	07	B	1	K	2	K	P	B	S	0	00.	21 (9.5)
S07B1N1NPBS000.	S	07	B	1	N	1	N	P	B	S	0	00.	18 (9)
S07B1N2NPBS000.	S	07	B	1	N	2	N	P	B	S	0	00.	18 (9)
S07T1P7PPBS000.	S	07	T	1	P	7	P	P	B	S	0	00.	21 (9.5)
S07T1P8PPBS000.	S	07	T	1	P	8	P	P	B	S	0	00.	21 (9.5)
S07T1PBPPBS000.	S	07	T	1	P	B	P	P	B	S	0	00.	21 (9.5)

Pump Brand
S= SANDPIPER®

Pump Size
07= 3/4"

Check Valve Type
B= Ball
T= Tihedral

Design Level
1= Design Level 1

Wetted Material
K= PVDF
N= Nylon
P= Polypropylene

Daiphragm/Check Valve Materials
1= Santoprene/Santoprene
2= Virgin PTFE-Santoprene Backup/Virgin PTFE
7= Santoprene/Nitrile
8= Virgin PTFE-Santoprene Backup/FKM
B= Nitrile/Nitrile
Z= One-Piece Bonded/PTFE

Check Valve Seat
K= PVDF
N= Nylon
P= Polypropylene

Non-Wetted Material Options
P= Polypropylene
I= Polypropylene with PTFE Hardware

Porting Options
N= NPT Threads
1= Dual Porting (NPT)
2= Top Dual Porting (NPT)
3= Bottom Dual Porting (NPT)
B= BSP Threads (tapered)
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
2= Mesh Muffler
6= Metal Muffler

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 w/24VDC Coil
E1.= Solenoid Kit 24VDC Explosion-Proof Coil
E2.= Solenoid Kit w/24VAC/12VDC Coil
E3.= Solenoid Kit w/12VDC Explosion-Proof Coil
E4.= Solenoid Kit w/110VAC Coil
E5.= Solenoid Kit w/110VAC 60 Hz Explosion-Proof Coil
E6.= Solenoid Kit w/220VAC Coil
E7.= Solenoid Kit w/220VAC 60 Hz Explosion-Proof Coil
E8.= Solenoid Kit w/110VAC 50 Hz Explosion-Proof Coil
E9.= Solenoid Kit w/230VAC 50 Hz Explosion-Proof Coil
SP= Stroke Indicator Pins



CAUTION! Operating temperature limitations are as follows:

Materials	Operating Temperatures	
	Maximum*	Minimum*
Santoprene®: Injection molded thermoplastic elastomer with no fabric layer. Long mechanical flex life. Excellent abrasion resistance.	275°F 135°C	-10°F -23°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.	-35°F 104°C	-37°C
PVDF:	250°F 121°C	0°F -18°C
Polypropylene:	180°F 82°C	32°F 0°C
Nylon:	180°F 82°C	32°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
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

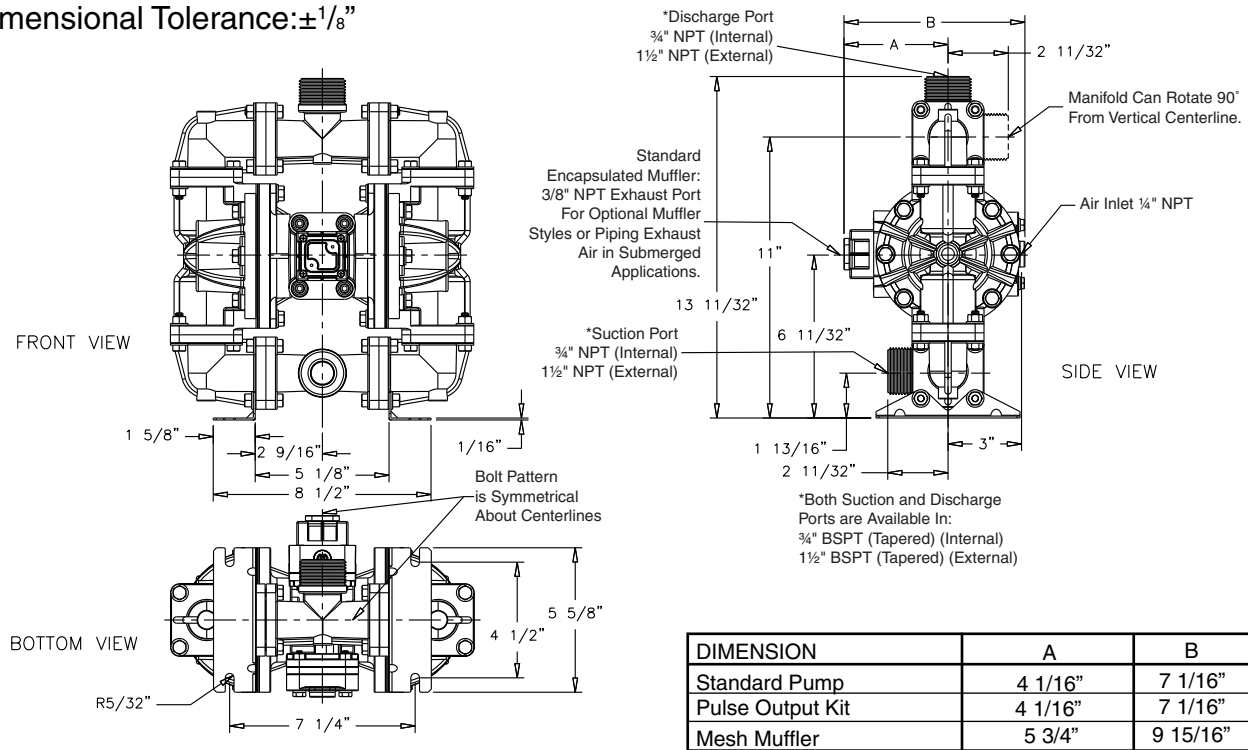
For specific applications, always consult "Chemical Resistance Chart" Technical Bulletin

*Definite reduction in service life.

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

Dimensions: S07 Non-Metallic

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



Dimensions in Millimeters
Dimensional Tolerance: ± 3 mm

