WARREN RUPP®

Quality System ISO9001 Certified

Environmental Management System ISO14001 Certified

IDEX FLUID & METERING

c UL us LISTED 1TA3

CE

Ex See pages 2, 7 and 8 for ATEX ratings.

SANDPIPER®
A WARREN RUPP PUMP BRAND

U1F

Metallic Ball Valve

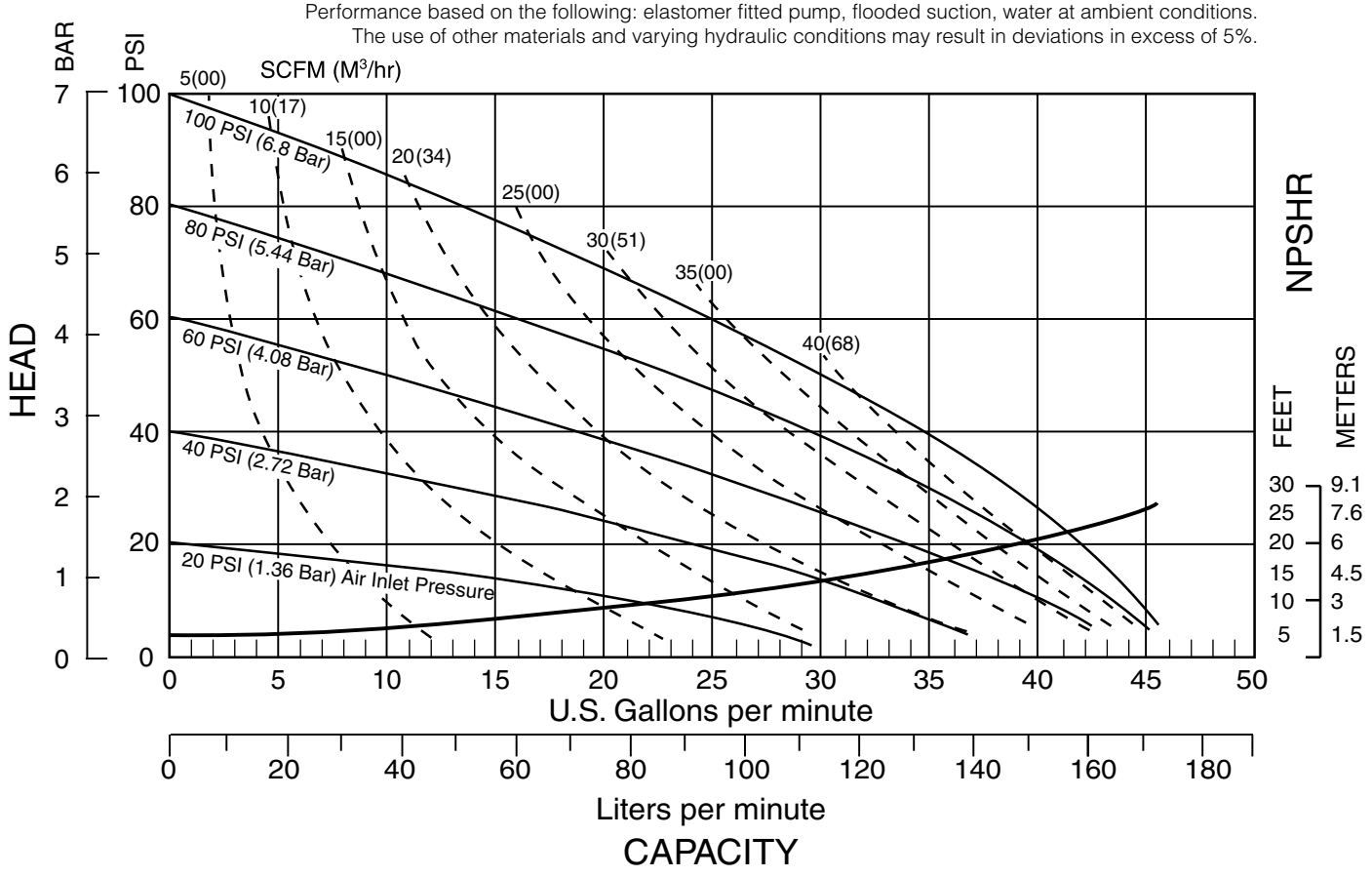
Design Level 1

Air-Operated Double Diaphragm Pump

ENGINEERING, PERFORMANCE & CONSTRUCTION DATA

INTAKE/DISCHARGE PIPE SIZE	CAPACITY	AIR VALVE	SOLIDS-HANDLING	HEADS UP TO	DISPLACEMENT/STROKE
1" NPT (internal) 1" BSPT Tapered (internal)	0 to 45 gallons per minute (0 to 170 liters per minute)	No-lube, no-stall design	Up to .25 in. (6mm)	100 psi or 230.7 ft. of water (7 Kg/cm² or 70 meters)	.11 Gallon / .42 liter

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
U1F UL79 Listed 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)
U1F B1XBTXNS600.	U	1F	B	1	X	B	T	X	N	S	6	00.	53 (24)
U1F B1XGTXNS600.	U	1F	B	1	X	G	T	X	N	S	6	00.	53 (24)
U1F B1XGAXNS600.	U	1F	B	1	X	G	A	X	N	S	6	00.	53 (24)
U1FB1CBTCNS600.	U	1F	B	1	C	B	T	C	N	S	6	00.	53 (24)
U1FB1CGTCNS600.	U	1F	B	1	C	G	T	C	N	S	6	00.	53 (24)
U1F B1XBTXSS600.	U	1F	B	1	X	B	T	X	S	S	6	00.	53 (24)
U1F B1XGTXSS600.	U	1F	B	1	X	G	T	X	S	S	6	00.	53 (24)

Pump Brand
U= UL79 Listed SANDPIPER®

Pump Size
1F=1"

Check Valve Type
B= Ball

Design Level
1= Design Level

Wetted Material
X= Unpainted Aluminum
C= Conductive Painted Aluminum

Diaphragm Check Valve Materials
B= Nitrile/Nitrile
G= PTFE-Neoprene/PTFE

Check Valve Seat
A= Aluminum
T= PTFE

Non-Wetted Material Options
X= Unpainted Aluminum
C= Conductive Painted Aluminum

Porting Options
N= NPT Threads
B= BSPT (Tapered) Threads
S= NPT Suction Port Facing Air Inlet, NPT Discharge Port Facing Air Exhaust

Pump Style
S= Standard

Pump Options
6= Metal Muffler

II 2G c T5
II 3/2 G c T5
II 2D c T100°C

NOTE: See page 25 for ATEX Explanation of Type Examination Certificate

Model U1FB1XBTXNS600 is UL79 listed for pumping: Gasoline, Diesel Fuel, No. 4 Fuel Oils (or lighter), Motor Oil, Kerosene, Aviation Fuel and Water

Model U1FB1XGTXNS600 and U1FB1XGAXNS600 are UL79 listed for pumping: Gasoline (Including Alcohol Blends up to 15%), Diesel Fuel, Motor Oil, No. 4 Oil (or lighter), Kerosene, Aviation Fuel, Automatic Transmission Fluid, Water, Waste Oil, and Ethylene Glycol.

⚠ WARNING

In the event of diaphragm rupture, pumped material may enter the air end of the pump, and be discharged into the atmosphere. If pumping a product which is hazardous or toxic, the air exhaust must be piped to an appropriate area for safe disposition.

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

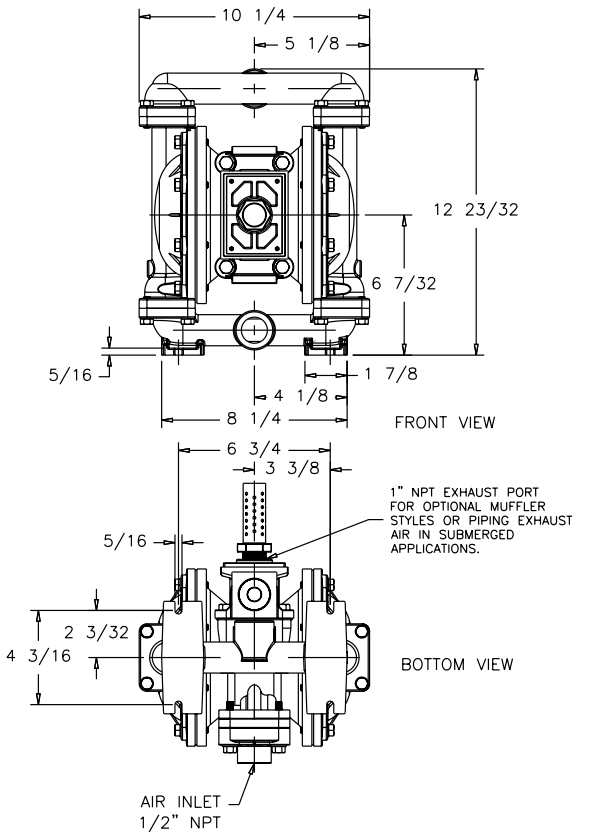
Maximum and Minimum Temperatures are the limits for which these materials can be operated. Temperatures coupled with pressure affect the longevity of diaphragm pump components. Maximum life should not be expected at the extreme limits of the temperature ranges.

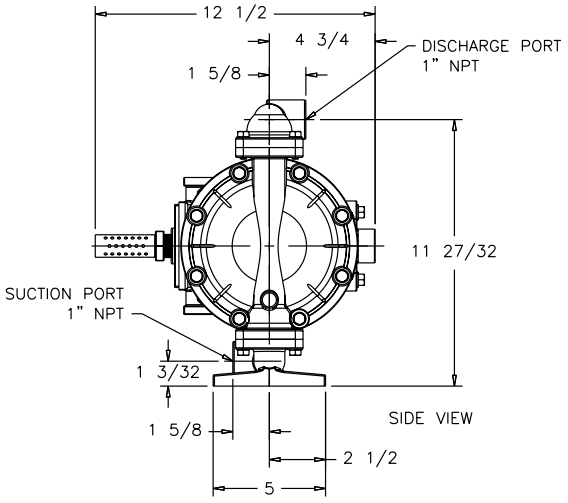
Materials	Operating Temperatures	
	Maximum	Minimum
Nitrile General purpose, oil-resistant. Shows good solvent, oil, water and hydraulic fluid resistance. Should not be used with highly polar solvents like acetone and MEK, ozone, chlorinated hydrocarbons and nitro hydrocarbons.	190°F 88°C	-10°F -23°C
NEOPRENE All purpose. Resistant to vegetable oils. 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
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
Polypropylene: A thermoplastic polymer. Moderate tensile and flex strength. Resists strong acids and alkalie. Attacked by chlorine, fuming nitric acid and other strong oxidizing agents.	180°F 82°C	32°F 0°C
UHMW PE: A thermoplastic polymer that is highly resistant to a broad range of chemicals. Exhibits outstanding abrasion and impact resistance, along with environmental stress-cracking resistance.	180°F 82°C	-35°F -37°C

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

Dimensions: U1F Metallic

Dimensions in Inches
Dimensional Tolerance:±1/8"





MODELS U1F

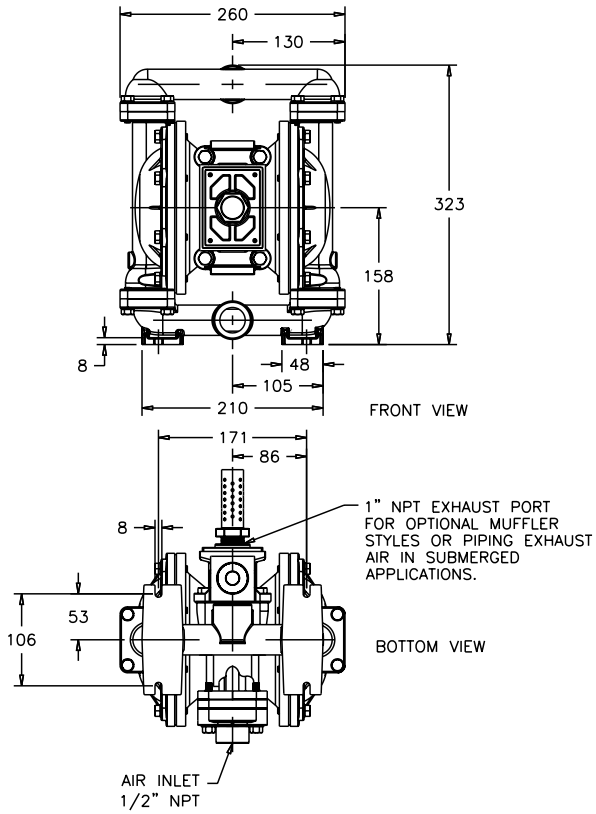
DIMENSIONS IN INCHES
DIMENSIONAL TOLERANCE: ±1/8

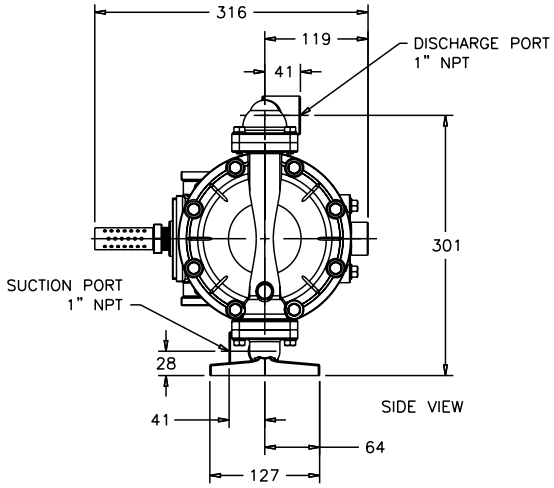
WITH 530-033-000 MUFFLER

BOTH SUCTION AND DISCHARGE PORTS ARE AVAILABLE WITH 1" BSPT TAPERED THREADS

Metric Dimensions: U1F Metallic

Dimensions in Millimeters
Dimensional Tolerance:± 3mm





MODELS U1F

DIMENSIONAL TOLERANCE: ±3mm

WITH 530-033-000 MUFFLER

BOTH SUCTION AND DISCHARGE PORTS ARE AVAILABLE WITH 1" BSPT TAPERED THREADS

Declaration of Conformity

WARREN RUPP®

Declaration of Conformity

Manufacturer:
Warren Rupp, Inc.®, 800 N. Main Street, P.O. Box 1568,
Mansfield, Ohio, 44901-1568 USA
certifies that Air-Operated Double Diaphragm Pump Series: HDB, HDF, M Non-Metallic, S Non-Metallic, M Metallic, S Metallic, T Series, G Series, RS Series U Series, EH and SH High Pressure, W Series, SMA and SPA Submersibles, and Tranquilizer Surge Suppressors comply with the European Community Directive 2006/42/EC on Machinery, according to Annex VIII. This product has used Harmonized Standard EN 809, Pumps and Pump Units for Liquids - Common Safety Requirements, to verify conformance.

David Roseberry
Signature of authorized person

October 20, 2005
Date of issue

David Roseberry
Printed name of authorized person

Engineering Manager
Title

Revision Level: E

MAY 27, 2010
Date of revision

IDEX FLUID & METERING

CE

Declaration of Conformity

WARREN RUPP®

EC Declaration of Conformity

In accordance with ATEX Directive 94/9/EC,
Equipment intended for use in potentially explosive environments.

Manufacturer:
Warren Rupp, Inc.®
A Unit of IDEX Corpordtion
800 North Main Street
P.O. Box 1568
Mansfield, OH 44901-1568 USA

Applicable Standard:
EN13463-1: 2001,
EN13463-5: 2003

EN 60079-25: 2004
For pumps equipped with Pulse Output ATEX Option
KEMA Quality B.V. (0344)

AODD Pumps and Surge Suppressors
For Type Examination Designations, see page 2 (back)

AODD (Air-Operated Double Diaphragm) Pumps
EC Type Examination Certificate No. Pumps: KEMA 09ATEX0071 X

KEMA Quality B.V.
Utrechtseweg 310
6812 AR Arnhem, The Netherlands

SANDPIPER®
A WARREN RUPP PUMP BRAND

Tranquilizer®

DATE/APPROVAL/TITLE:
27 MAY 2010

David Roseberry, Engineering Manager

IDEX FLUID & METERING

WARREN RUPP®

EC Declaration of Conformity

ATEX Summary of Markings

Type	Marking			Listed In	Non-Conductive Fluids
Pump types, S1F, S15, S20, and S30 provided with the pulse output option		II 2 G Ex ia c IIC T5 II 3/2 G Ex ia c IIC T5 II 2 D Ex c iaD 20 IP67 T100ºC	KEMA 09ATEX0071 X CE 0344	KEMA 09ATEX0071 X KEMA 09ATEX0071 X KEMA 09ATEX0071 X	No Yes Yes
Pump types, S1F, S15, S20, and S30 provided with the integral solenoid option		II 2 G EEx m c II T5 II 3/2 G EEx m c II T5 II 2 D c IP65 T100ºC	KEMA 09ATEX0071 X CE 0344	KEMA 09ATEX0071 X KEMA 09ATEX0071 X KEMA 09ATEX0071 X	No Yes Yes
Pump types, HDB1½, HDB40, HDB2, HDB50, HDB3, HDF1, HDF25, HDF2, HDF3M, PB¼, S05, S1F, S15, S20, S30, SB1, SB25, ST1½, ST40, G15, G20, and G30, without the above listed options, no aluminum parts		II 1 G c T5 II 3/1 G c T5 II 1 D c T100ºC I M1 c I M2 c	KEMA 09ATEX0071 X KEMA 09ATEX0072 X CE 0344	KEMA 09ATEX0071 X KEMA 09ATEX0071 X KEMA 09ATEX0071 X KEMA 09ATEX0071 X KEMA 09ATEX0072 X	No Yes Yes No Yes
Pump types, DMF2, DMF3, HDB1½, HDB40, HDB2, HDB50, HDB3, HDF1, HDF25, HDF2, HDF3M, PB¼, S05, S1F, S15, S20, S30, SB1, SB25, SE½, ST1, ST25, ST1½, ST40, U1F, G05, G1F, G15, G20, and G30		II 2 G c T5 II 3/2 G c T5 II 2 D c T100ºC	KEMA 09ATEX0072 X CE	KEMA 09ATEX0072 X KEMA 09ATEX0072 X KEMA 09ATEX0072 X	No Yes Yes
Surge Suppressors all types		II 2 G T5 II 3/2 G T5 II 2 D T100ºC	KEMA 09ATEX0073 CE	KEMA 09ATEX0073 KEMA 09ATEX0073 KEMA 09ATEX0073	No Yes Yes

EC Type Certificate No. Pumps: KEMA 09ATEX0071 X
Type Certificate No. Pumps: KEMA 09ATEX0072 X
Type Certificate No. Suppressors: KEMA 09ATEX0073

IDEX FLUID & METERING