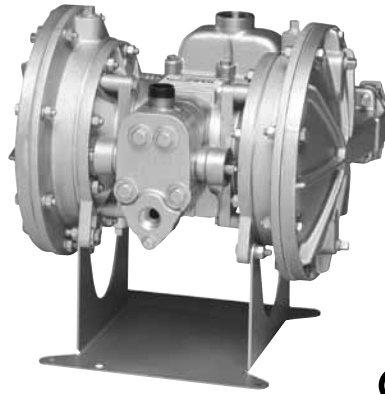


**WARREN
RUPP®**

Quality System
ISO9001 Certified

Environmental
Management System
ISO14001 Certified

IDEX
FLUID & METERING



CE



See pages 2, 5 and 6
for ATEX ratings.

SANDPIPER®

A WARREN RUPP PUMP BRAND

**Containment Duty
ST1 Type 4
ST25 Type 4**

**Air-Operated
Double Diaphragm Pump**

ENGINEERING, PERFORMANCE
& CONSTRUCTION DATA

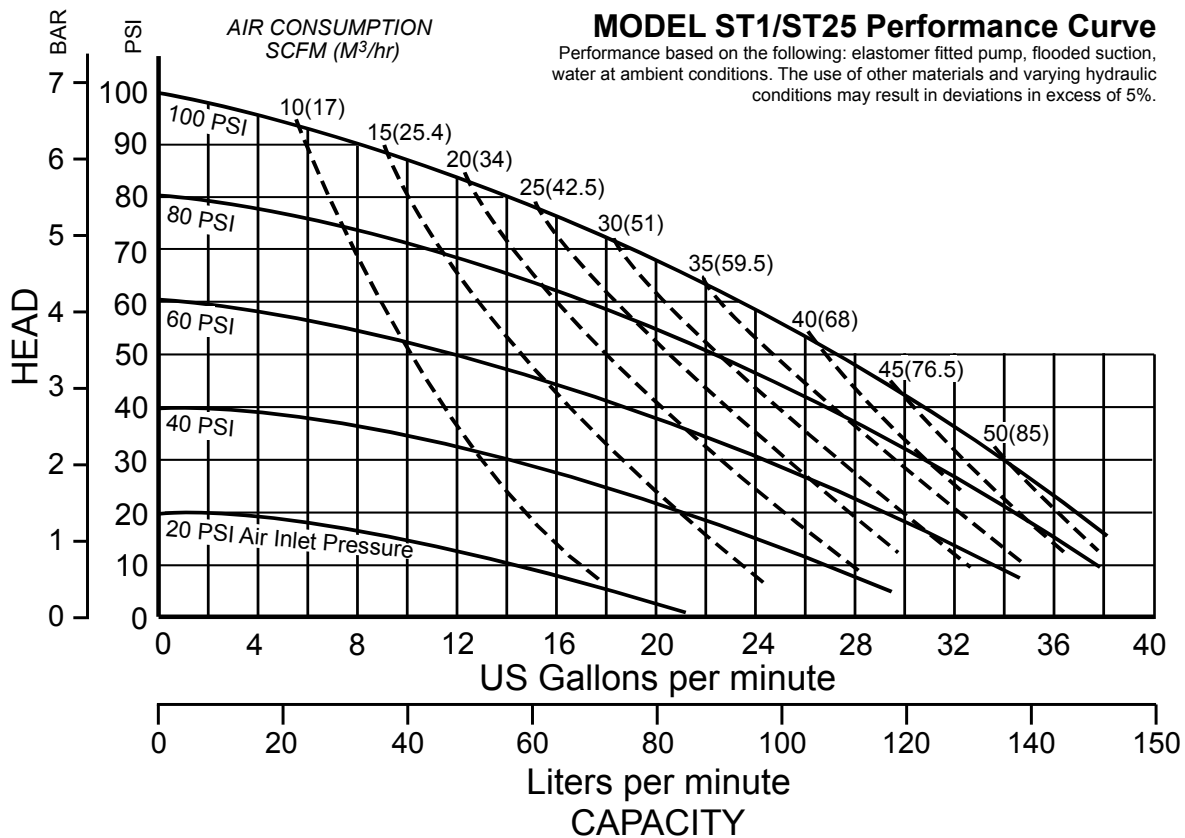
INTAKE/DISCHARGE PIPE SIZE	CAPACITY	AIR VALVE	SOLIDS-HANDLING	HEADS UP TO	DISPLACEMENT/STROKE
ST1: 1" NPT (internal) ST25: 1" BSP Tapered (internal)	0 to 42 gallons per minute (0 to 159 liters per minute)	No-lube, no-stall design	Occasional solids only, to nearly .25" (6.3mm)	125 psi or 289 ft. of water (8.8 Kg/cm ² or 88 meters)	.09 Gallon / .34 liter

SANDPIPER® Containment Duty Pumps: Sealless Safety

This pump is part of the Containment Duty Pumps. It is specially fitted with PTFE diaphragms as well as elastomeric or elastomeric/PTFE driver diaphragms. The liquid-filled spill chambers provide an additional chemically-resistant barrier, should a pumping diaphragm fail. The Spill Containment design gives the pump user advanced warning of diaphragm failure, before pumpage can damage the air valve or be released into the work environment. Three optional leak detectors available for this model:

- Mechanical VIP Leak Detector 031-026-000
- Electronic Leak Detector (115V) 032-043-000
- Electronic Leak Detector (220V) 032-043-000

The Containment Duty pumps offer many different levels of materials and spill monitoring devices designed to fit a variety of applications and budgets.



SANDPIPER® pumps are designed to be powered only by compressed air.

Warren Rupp, Inc. • A Unit of IDEX Corporation • 800 N. Main St., Mansfield, Ohio 44902 USA
Telephone (419) 524-8388 • Fax (419) 522-7867 • www.warrenrupp.com

Explanation of Pump Nomenclature

MATERIALS OF CONSTRUCTION

To order a pump or replacement parts, first enter the Model Number **ST1**, or **ST25**, followed by the Type Designation listed below in the far left column.

Type 4	Manifold Porting Side	Manifold	Outer Chamber	Driver Chamber	Inner Chamber	Outer Diaphragm Plate	Inner Diaphragm Plate	Intermediate Housing	Diaphragm Rod	Valve Seat	Hard-ware	Diaphragm	Ball Valve Material	Seat/Manifold Gasket	Air Valve	Cap	Shipping Wt. (lbs)
DNG4A.	X	AL356T6	AL356T6	AL356T6	AL380DC	316SS	PS	AL380DC	416SS	316SS	304SS	T/N	T	T	PE	AL380DC	46
DVG4A.	X	AL356T6	AL356T6	AL356T6	AL380DC	316SS	PS	AL380DC	416SS	316SS	304SS	T/V	T	T	PE	AL380DC	46
DGNG4A.	X	AL356T6	AL356T6	AL356T6	AL380DC	316SS	PS	AL380DC	416SS	316SS	304SS	T/T/N	T	T	PE	AL380DC	46
DNG4SS.	X	SS	SS	AL356T6	AL380DC	316SS	PS	AL380DC	416SS	316SS	304SS	T/N	T	T	PE	AL380DC	67
DVG4SS.	X	SS	SS	AL356T6	AL380DC	316SS	PS	AL380DC	416SS	316SS	304SS	T/V	T	T	PE	AL380DC	67
DGNG4SS.	X	SS	SS	AL356T6	AL380DC	316SS	PS	AL380DC	416SS	316SS	304SS	T/T/N	T	T	PE	AL380DC	67
DNG4HC.	X	Alloy C	Alloy C	AL356T6	AL380DC	Alloy C	PS	AL380DC	416SS	Alloy C	304SS	T/N	T	T	PE	AL380DC	67

Kit available to convert to top porting

Meanings of Abbreviations:

AL = Aluminum
 DC = Die Cast
 PS = Plated Steel
 HC = Alloy C
 SS = Stainless Steel
 PE = Conductive HDPE

304SS = 304 Stainless Steel except Manifold Bolts which are PS
 T = PTFE
 T/N = PTFE Diaphragm/Neoprene Driver
 T/V = PTFE Diaphragm/FKM Driver
 T/T/N = PTFE Diaphragm/PTFE over Neoprene Driver



II 2 G c T5
 II 3/2 G c T5
 II 2 D c T100oC
 All models, including pumps equipped with Aluminum wetted and midsection parts. See page 6 for ATEX Explanation of Type Examination Certificate.

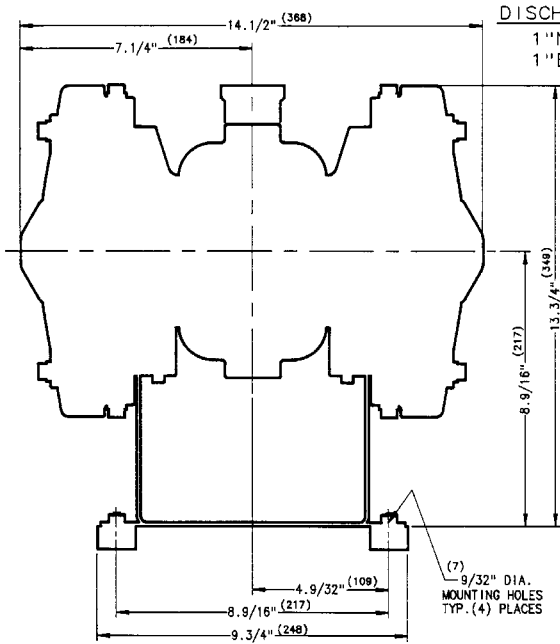
Maximum and Minimum Temperatures are the limits for which these materials can be operated. Temperatures coupled with pressure affect the longevity of diaphragm pump components. Maximum life should not be expected at the extreme limits of the temperature ranges.

Materials	Operating Temperatures	
	Maximum	Minimum
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
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
‡ CF-8M Stainless Steel equal to or exceeding ASTM specification A743 for corrosion resistant iron chromium, iron chromium nickel, and nickel based alloy castings for general applications. Commonly referred to as 316 Stainless Steel in the pump industry.		
ALLOY C CW-12MW equal to or exceeding ASTM A494 specification for nickel and nickel alloy castings.		

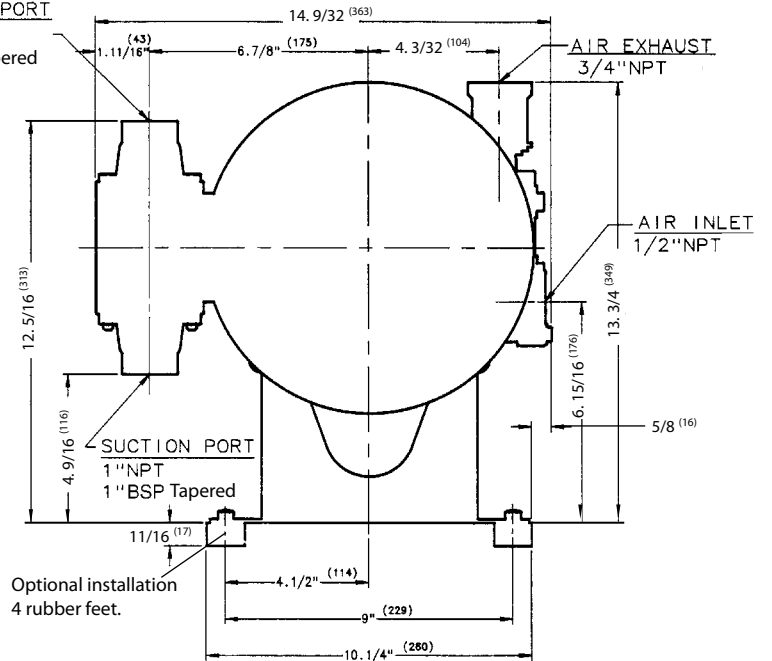
For specific applications, always consult "Chemical Resistance Chart" Technical Bulletin

Dimensions: ST1 & ST25

Dimensions are $\pm 1/8"$
 Figures in parenthesis = millimeters



Dimensional outlines available showing optional top and bottom porting.



Model ST1 features NPT threaded connections.
Model ST25 features British Standard Pipe (BSP) Tapered threaded connections.

Declaration of Conformity

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



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 Corporation
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
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 T100°C	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 T100°C	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 T100°C 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 T100°C	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 T100°C	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