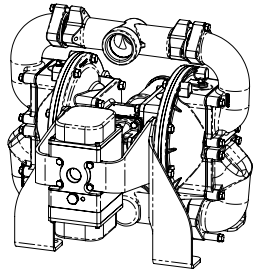


**WARREN RUPP®**

Quality System  
ISO9001 Certified

Environmental  
Management System  
ISO14001 Certified

**IDEX**  
FLUID & METERING



US Patent # 6,241,487  
US Patent # 7,521,921 Pending

CE

Ex II 2GD T4

Ex d ib IIB T4 Gb  
Ex tb IIIC 135°C Db IP66  
-20°C to +40°C  
Sira 10ATEX1151X  
IECEX SIR 10.0110X

SP 2350863  
c us

Class I Div 1 - Groups C,D T4  
Class II Div 1 - Groups F,G  
Class I Zone 1, Ex d ib IIB T4  
Class I Zone 1, AEx d ib IIB T4  
Enclosure Type 4X  
12 Volt (2 - 8) mA

**SANDPIPER®**

A WARREN RUPP PUMP BRAND

**RHDF2  
Hazardous Duty  
Heavy Duty Flap Valve  
AirVantage  
Design Level 1**

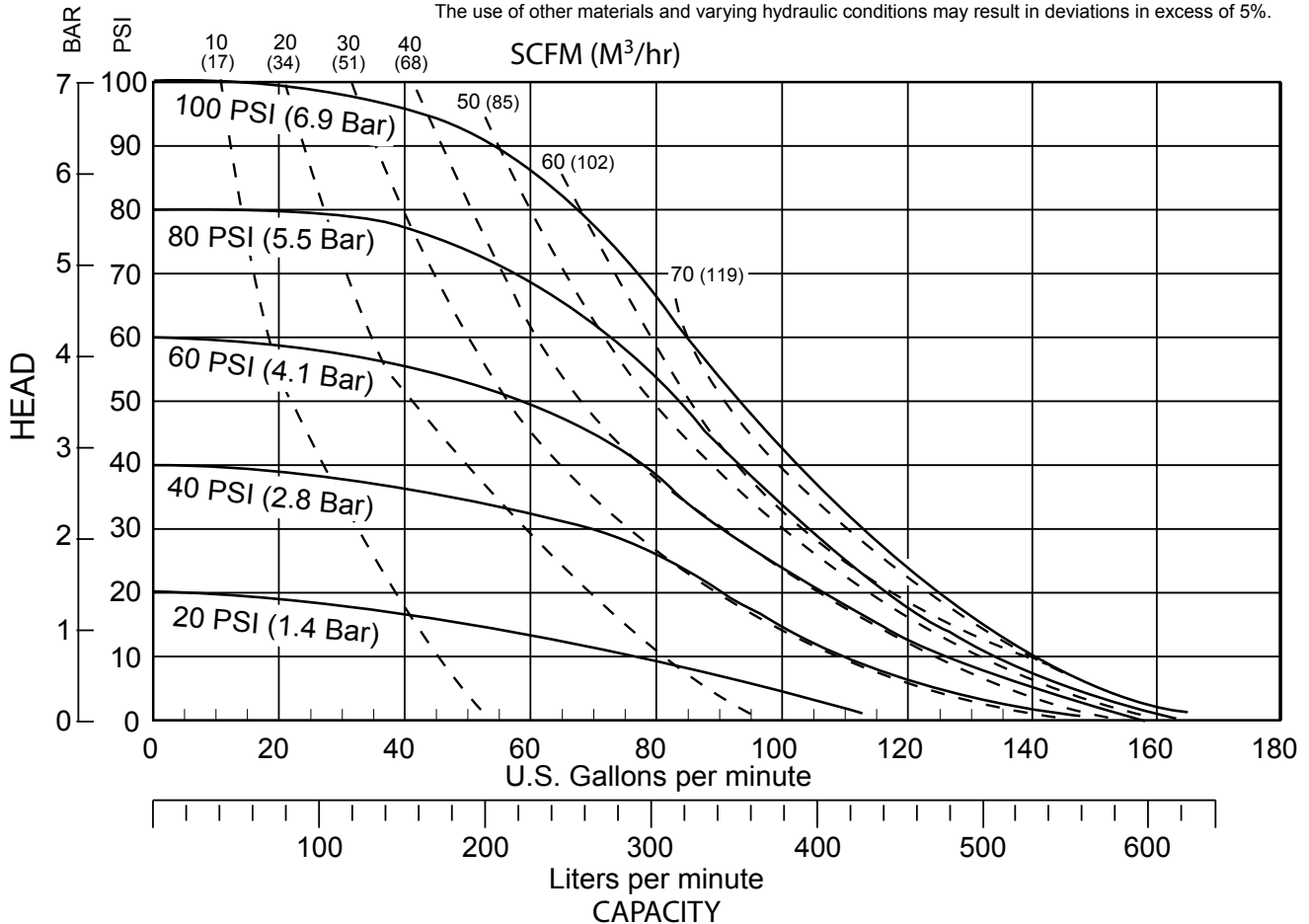
**Air-Operated  
Double Diaphragm Pump**

ENGINEERING, PERFORMANCE  
& CONSTRUCTION DATA

INTAKE/DISCHARGE PIPE SIZE	CAPACITY	AIR VALVE	SOLIDS-HANDLING	HEADS UP TO	DISPLACEMENT/STROKE
2" (50mm) NPT (F)	0 to 165 gallons per minute (0 to 625 liters per minute)	No-lube, no-stall design	Up to 2" (50mm)	125 psi or 289 ft. of water (125 psi or 8.6 bar inlet) (8.6 bar or 88 meters)	.48 Gallon / 1.82 liter

**Model RHDF2 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.

Warren Rupp, Inc. • A Unit of IDEX Corporation • 800 N. Main Street • Mansfield, OH 44901 USA

Tel: 419-524-8388 • Fax: 419-522-7867 • www.warrenrupp.com

# Explanation of Pump Nomenclature: RHDF2 Hazardous Duty

## Materials of Construction

RHDF2 Type 1	Manifold Elbow	Outer Chamber	Inner Chamber	Inner Diaphragm Plate	Diaphragm Plate	Intermediate Housing	Diaphragm Rod	Valve Seat	Hard-ware	Flap Diaphragm	Valve Material	Sealing Rings	Shipping Wt. (lbs.)	AirVantage Options
DA-6-A	AL	AL	AL	PS	PS	AL	SS	SS	PS	N	U	N	86	Y
DB-6-A	AL	AL	AL	PS	PS	AL	SS	SS	PS	B	B	B	86	Y
DV-6-A	AL	AL	AL	PS	PS	AL	SS	SS	PS	V	V	V	86	Y
DN-6-A	AL	AL	AL	PS	PS	AL	SS	SS	PS	N	N	N	86	Y
DI-6-A	AL	AL	AL	PS	PS	AL	SS	SS	PS	I	I	I	86	Y
DP-6-A	AL	AL	AL	PS	PS	AL	SS	SS/I	PS	S	S	I	86	Y
DR-6-A	AL	AL	AL	PS	PS	AL	SS	SS	PS	H	H	N	86	Y
DA-6-I	CI	CI	AL	PS	PS	AL	SS	SS	PS	N	U	N	133	Y
DB-6-I	CI	CI	AL	PS	PS	AL	SS	SS	PS	B	B	B	133	Y
DV-6-I	CI	CI	AL	PS	PS	AL	SS	SS	PS	V	V	V	133	Y
DN-6-I	CI	CI	AL	PS	PS	AL	SS	SS	PS	N	N	N	133	Y
DI-6-I	CI	CI	AL	PS	PS	AL	SS	SS	PS	I	I	I	133	Y
DR-6-I	CI	CI	AL	PS	PS	AL	SS	SS	PS	H	H	N	133	Y
DP-6-I	CI	CI	AL	PS	PS	AL	SS	SS/I	PS	S	S	I	133	Y
DA-6-S	‡SS	‡SS	AL	‡SS	PS	AL	SS	SS	PS	N	U	N	133	Y
DB-6-S	‡SS	‡SS	AL	‡SS	PS	AL	SS	SS	PS	B	B	B	133	Y
DF-6-S	‡SS	‡SS	AL	‡SS	PS	AL	SS	SS	PS	F	F	F	133	Y
DV-6-S	‡SS	‡SS	AL	‡SS	PS	AL	SS	SS	PS	V	V	V	133	Y
DN-6-S	‡SS	‡SS	AL	‡SS	PS	AL	SS	SS	PS	N	N	N	133	Y
DI-6-S	‡SS	‡SS	AL	‡SS	PS	AL	SS	SS	PS	I	I	I	133	Y
DP-6-S	‡SS	‡SS	AL	‡SS	PS	AL	SS	SS/I	PS	S	S	I	133	Y
DR-6-S	‡SS	‡SS	AL	‡SS	PS	AL	SS	SS	PS	H	H	N	133	Y

### Meanings of Abbreviations:

A = Compressed Fibre  
AL = Aluminum  
B = Nitrile  
CI = Cast Iron

DC = Die Cast  
H = Hytrel®  
I = EPDM  
N = Neoprene

PS = Plated Steel  
S = Santoprene®  
SS = Stainless Steel  
V = FKM (Fluorocarbon)

SS/I = Stainless Steel seat w/EPDM O-Ring  
T = PTFE  
U = Urethane  
F = FDA Accepted White Nitrile

X = AirVantage  
ATEX Certified  
Y = US Hazardous Duty

‡ **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.

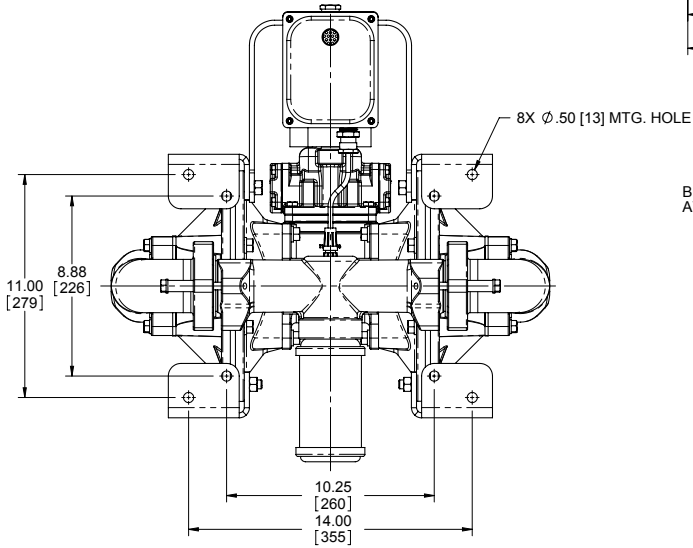
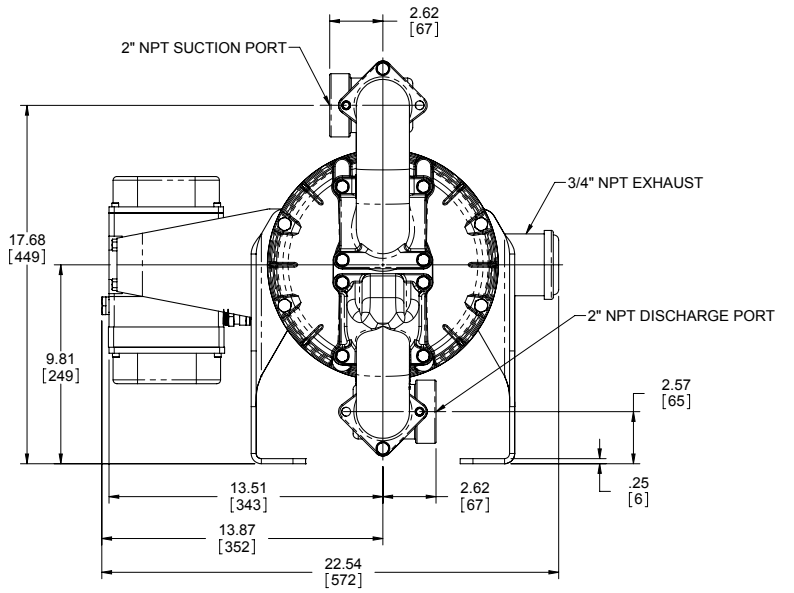
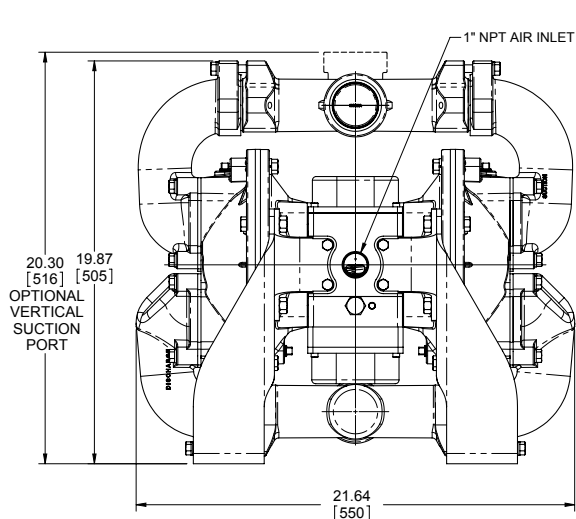
## CAUTION! Operating temperature limitations are as follows:

Materials	Operating Temperatures	
	Maximum	Minimum
<b>Nitrile:</b> 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
<b>EPDM:</b> Shows very good water and chemical resistance. Has poor resistance to oil and solvents, but is fair in ketones and alcohols.	280° F 138° C	-40° F -40° C
<b>Neoprene:</b> 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
<b>Santoprene®:</b> Injection molded thermoplastic elastomer with no fabric layer. Long mechanical flex life. Excellent abrasion resistance.	275° F 135° C	-40° F -40° C
<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.	220° F 104° C	-35° F -37° C
<b>FKM (Fluorocarbon):</b> 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
<b>Polypropylene:</b>	180° F 82° C	32° F 0° C
<b>UHMW Polyethylene:</b>	180° F 82° C	32° F 0° C
<b>HYTREL®</b> Good on acids, bases, amines and glycols at room temperature.	190° F 88° C	-10° F -23° C

Santoprene is a registered tradename of Exxon Mobil Corp.  
Hytrel is a registered tradename of E.I. du Pont.

# Dimensions: RHDF2 Hazardous Duty

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



BOTH SUCTION AND DISCHARGE PORTS ARE AVAILABLE WITH 2" BSP CONNECTIONS

