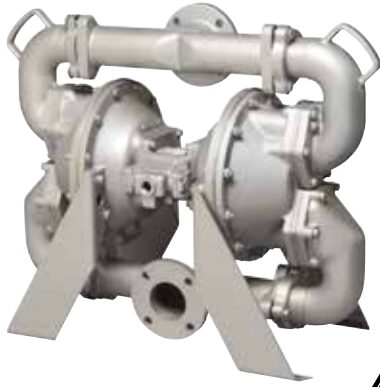


**WARREN RUPP®**

Quality System  
ISO 9001 Certified

Environmental  
Management System  
ISO 14001 Certified

**IDEX**



**SANDPIPER®**

A WARREN RUPP PUMP BRAND

**Heavy Duty Flap Valve**

**HDF3-A Type 7**  
**HDF4-A Type 3**

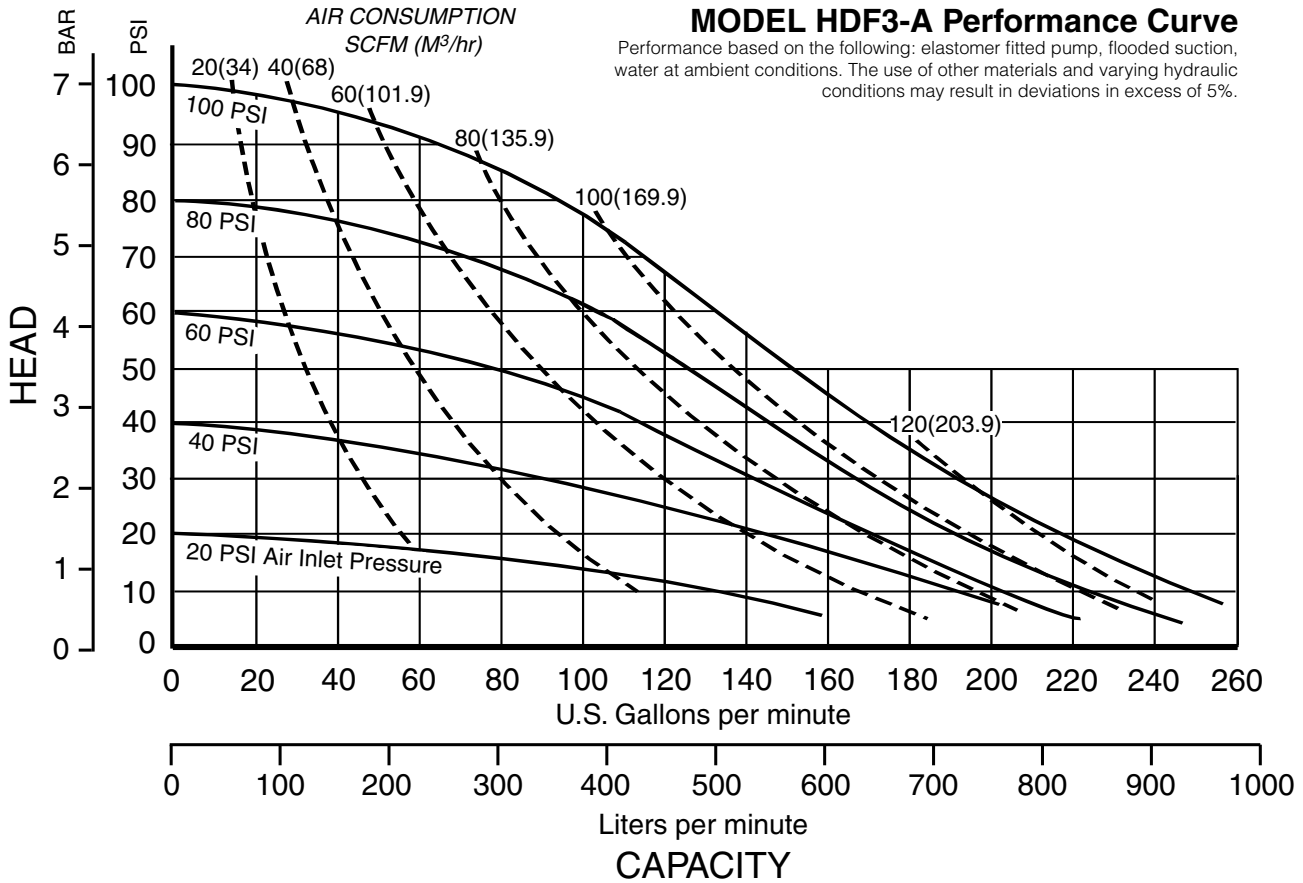
**Air-Operated  
Double Diaphragm Pump**

ENGINEERING, PERFORMANCE  
& CONSTRUCTION DATA



See pages 16  
for ATEX ratings

INTAKE/DISCHARGE PIPE SIZE	CAPACITY	AIR VALVE	SOLIDS-HANDLING	HEADS UP TO
3" 150# ANSI Flange	0 to 260 gallons per minute (0 to 988 liters per minute)	No-lube, no-stall design	Up to nearly 3" (75mm)	125 psi or 289 ft. of water (8.8 Kg/cm <sup>2</sup> or 88 meters)



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

# Explanation of Pump Nomenclature, HDF3-A & HDF4-A

## MATERIALS OF CONSTRUCTION

To order a pump or replacement parts, first enter the Model Number **HDF3-A**, or **HDF4-A**, followed by the Type Designation listed below in the far left column.

Type	Manifold Elbow	Outer Chamber	Inner Chamber	Outer Diaphragm Plates	Inner Diaphragm Plate	Intermediate Housing	Diaphragm Rod	Valve Seat	Hardware	Diaphragm	Flap Valve Material	Seat Gasket	Sealing Rings	Shipping Wt. (lbs)
DA7.	356-T6AL	356-T6AL	356-T6AL	Alm35AL	Alm35AL	356-T6AL	416SS	SS	PS	N	R	A	B	245
DN7.	356-T6AL	356-T6AL	356-T6AL	Alm35AL	Alm35AL	356-T6AL	416SS	SS	PS	N	N	A	B	245
DB7.	356-T6AL	356-T6AL	356-T6AL	Alm35AL	Alm35AL	356-T6AL	416SS	SS	PS	B	B	A	B	245
DK7.	356-T6AL	356-T6AL	356-T6AL	Alm35AL	Alm35AL	356-T6AL	416SS	SS	PS	N	H	A	B	245
DS7.	356-T6AL	356-T6AL	356-T6AL	Alm35AL	Alm35AL	356-T6AL	416SS	SS	PS	S	S	A	B	245

### Meanings of Abbreviations:

A = Compressed Fibre  
 AL = Aluminum  
 ALM = Almag 35 Aluminum  
 B = Nitrile  
 CI = Cast Iron  
 H = Hytrel®  
 N = Neoprene  
 PS = Plated Steel  
 R = Urethane  
 SS = Stainless Steel  
 S = Santoprene®

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

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
<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>NEOPRENE</b> 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
<b>HYTREL®</b> Good on acids, bases, amines and glycols at room temperature.	220°F 104°C	-20°F -29°C
<b>Urethane</b> Shows good resistance to abrasives. Has poor resistance to most solvents and oils.	150°F 66°C	+32°F 0°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>CF-8M Stainless Steel</b> 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.		

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



II 2 G c T5  
 II 2 D c T100°C

All models, including pumps equipped with Aluminum wetted and midsection parts.

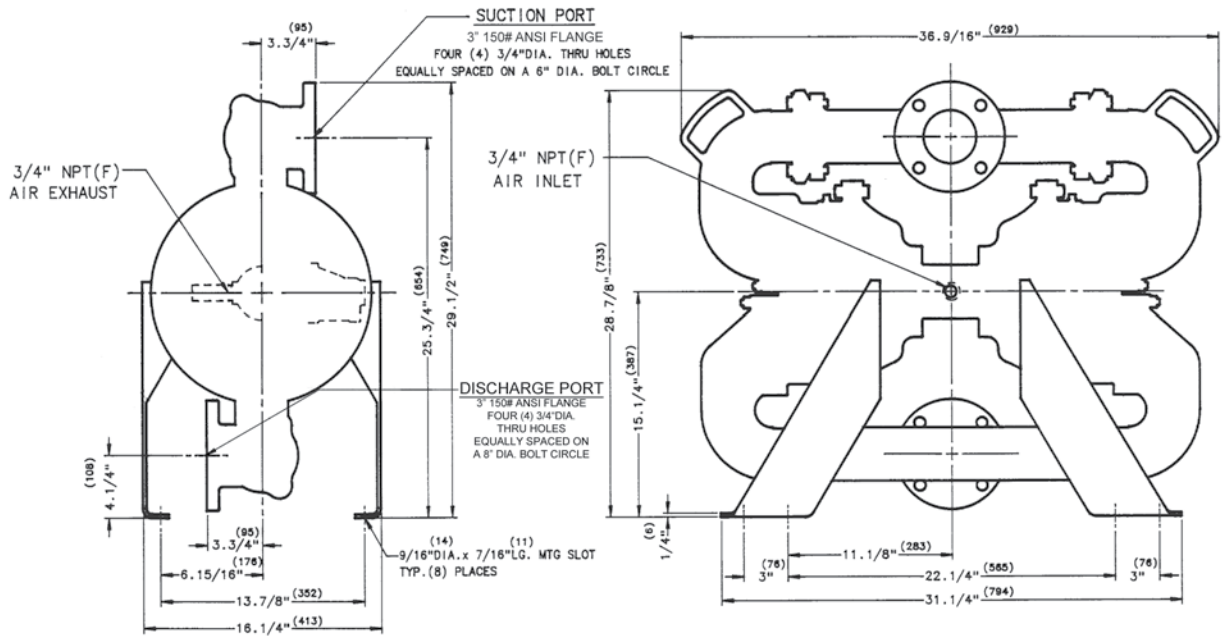
## RECYCLING

Many components of SANDPIPER® AODD pumps are made of recyclable materials (see chart on page 10 for material specifications). We encourage pump users to recycle worn out parts and pumps whenever possible, after any hazardous pumped fluids are thoroughly flushed.

# Dimensions: HDF3-A & HDF4-A

Dimensions are ± 1/8"

Figures in parenthesis = millimeters



# 5 - YEAR Limited Product Warranty

Warren Rupp, Inc. ("Warren Rupp") warrants to the original end-use purchaser that no product sold by Warren Rupp that bears a Warren Rupp brand shall fail under normal use and service due to a defect in material or workmanship within five years from the date of shipment from Warren Rupp's factory. Warren Rupp brands include Warren Rupp®, SANDPIPER®, MARATHON®, PortaPump®, SludgeMaster™ and Tranquilizer®.

~ See [sandpiperpump.com/content/warranty-certifications](http://sandpiperpump.com/content/warranty-certifications) for complete warranty, including terms and conditions, limitations and exclusions. ~

**WARREN  
RUPP, INC.**

## Declaration of Conformity

Manufacturer: Warren Rupp, Inc., 800 N. Main Street  
Mansfield, Ohio, 44902 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, U Series, EH and SH High Pressure, RS Series, 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 EN809:1998+A1:2009, Pumps and Pump Units for Liquids - Common Safety Requirements, to verify conformance.

David Roseberry  
Signature of authorized person

David Roseberry  
Printed name of authorized person

Revision Level: F

October 20, 2005  
Date of issue

Engineering Manager  
Title

August 23, 2012  
Date of revision

**IBEX**

**CE**

# **WARREN RUPP, INC.**

## **EC / EU Declaration of Conformity**

The objective of the declaration described is in conformity with the relevant Union harmonisation legislation: Directive 94/9/EC (until April 19, 2016) and Directive 2014/34/EU (from April 20, 2016).

**Manufacturer:**

Warren Rupp, Inc.  
A Unit of IDEX Corporation  
800 North Main Street  
P.O. Box 1568  
Mansfield, OH 44902 USA

**Applicable Standard:**

EN13463-1: 2001  
EN13463-5: 2003  
EN60079-25: 2004

**Harmonised Standard:**

EN13463-1: 2009  
EN13463-5: 2011  
EN60079-25:2010

The harmonised standards have been compared to the applicable standards used for certification purposes and no changes in the state of the art technical knowledge apply to the listed equipment.

**AODD Pumps and Surge Suppressors**

Technical File No.: 203104000-1410/MER

**AODD (Air-Operated Double Diaphragm) Pumps**

EC Type Examination Certificate No. Pumps: KEMA 09ATEX0071 X

DEKRA Certification B.V. (0344)  
Meander 1051  
6825 MJ Arnhem  
The Netherlands

**Hazardous Locations Applied:**

I M1 c	II 1 G c T5
II 2 G Ex ia c II CT5	II 1 D c T100°C
II 2 D Ex c iaD 20 IP67 T100°C	II 2 G c T5
II 2 G Eex m c II T5	II 2 D c T100°C
II 2 D c IP65 T100°C	

**SANDPIPER<sup>®</sup>**  
A WARREN RUPP, INC. BRAND

**Tranquilizer<sup>®</sup>**

DATE/APPROVAL/TITLE:  
18 March 2016

*David Roseberry*  
David Roseberry, Director of Engineering

**IDEX**