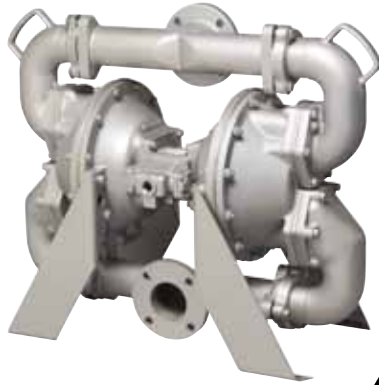


WARREN RUPP®

Quality System
ISO9001 Certified

Environmental
Management System
ISO14001 Certified

IDEX
FLUID & METERING



See pages 2, 5 & 6
for ATEX ratings

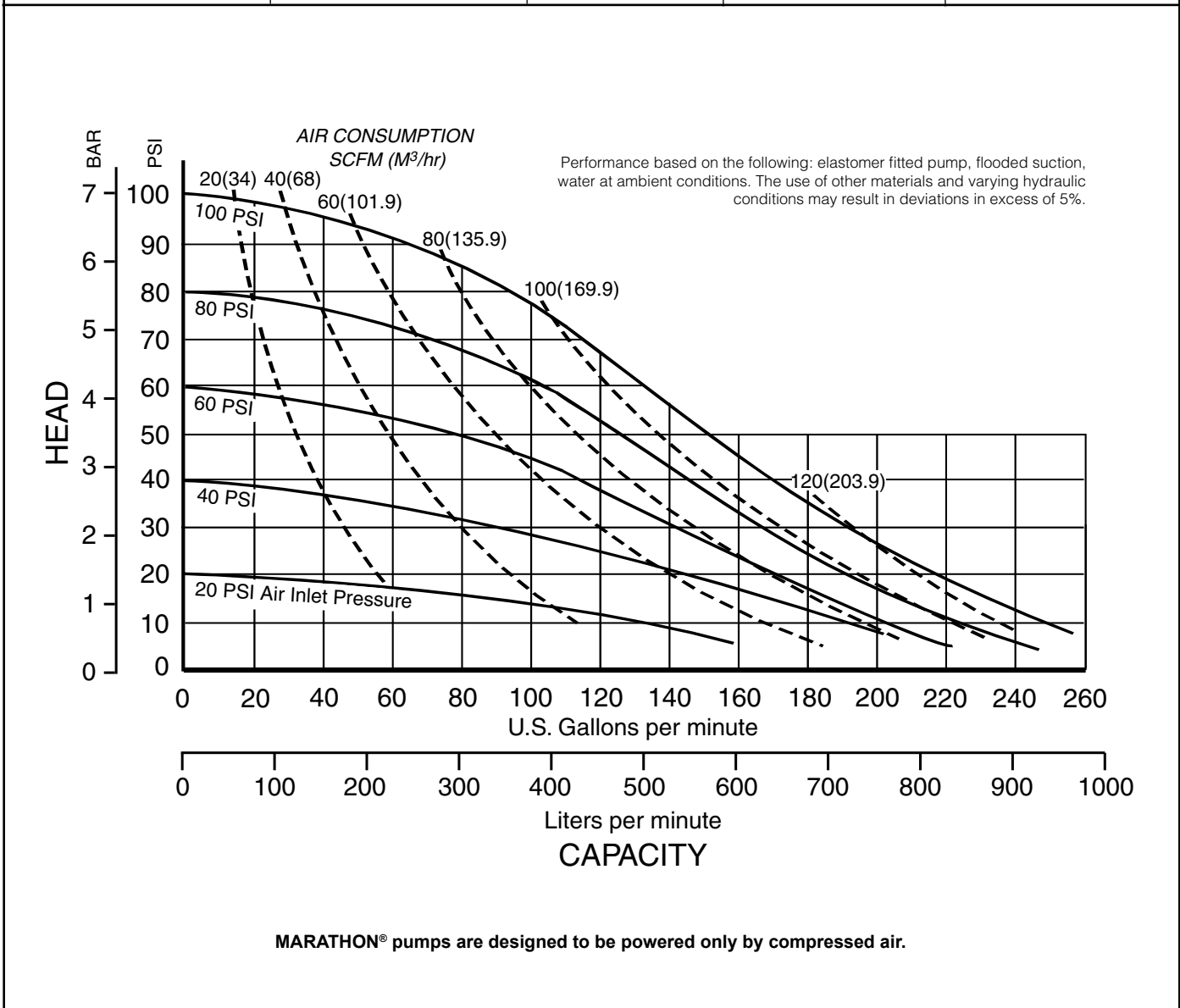
MARATHON®
A WARREN RUPP, INC. BRAND

**Heavy Duty Flap Valve
MHDF3 Type 7**

**Air-Operated
Double Diaphragm Pump**

ENGINEERING, PERFORMANCE
& CONSTRUCTION DATA

INTAKE/DISCHARGE PIPE SIZE	CAPACITY	AIR VALVE	SOLIDS-HANDLING	HEADS UP TO
3" 150# ANSI Flange 4" 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 ² or 88 meters)



Explanation of Pump Nomenclature, MHDF3

MATERIALS OF CONSTRUCTION

To order a pump or replacement parts, first enter the Model Number **MDF3**, 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
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
HYTREL® Good on acids, bases, amines and glycols at room temperature.	220°F 104°C	-20°F -29°C
Urethane Shows good resistance to abrasives. Has poor resistance to most solvents and oils.	150°F 66°C	+32°F 0°C
Santoprene® Injection molded thermoplastic elastomer with no fabric layer. Long mechanical flex life. Excellent abrasion resistance.	275°F 135°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.		

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

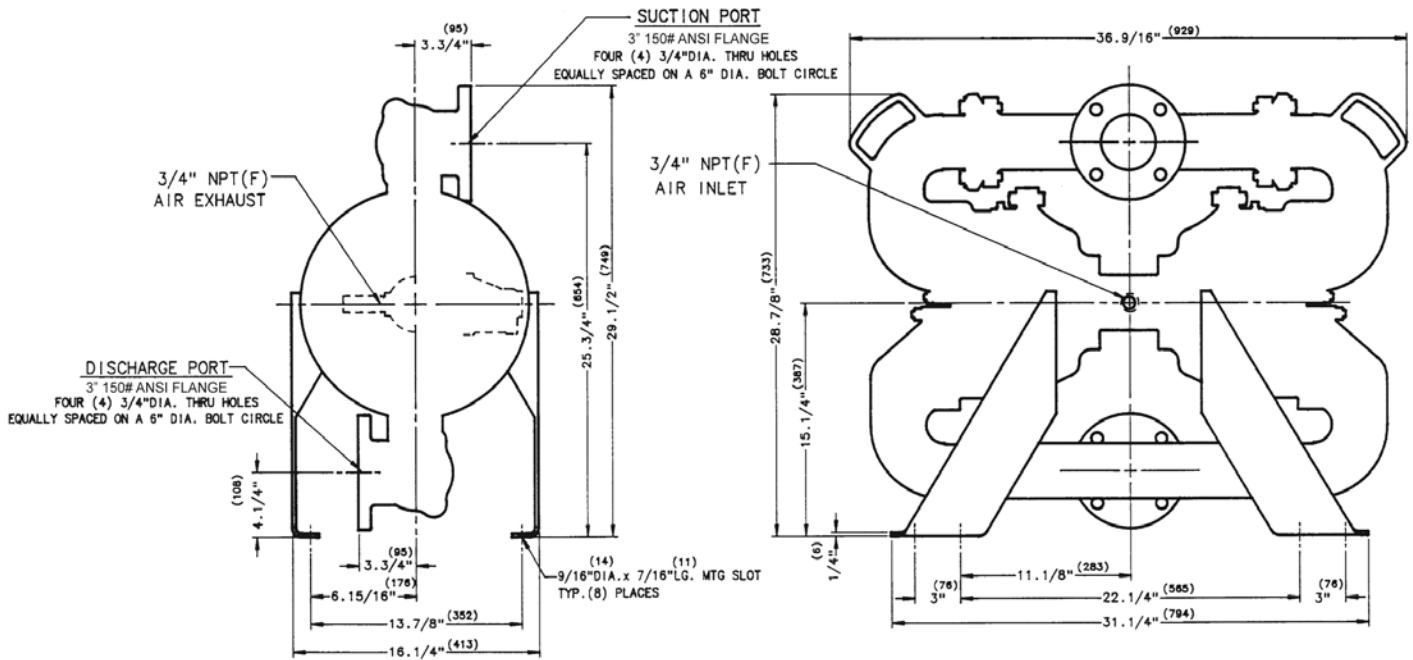


II 2 G c T5
 II 3/2 G c T5
 II 2 D c T100oC

All models, including pumps equipped with Aluminum wetted and midsection parts.
 See page 6 for ATEX Explanation of Type Examination Certificate.

Dimensions: MHDF3

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





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:
M Non-Metallic, M Metallic, and 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



Declaration of Conformity

Declaration of Conformity



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 Sppressors

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


DATE/APPROVAL/TITLE:
27 MAY 2010


David Roseberry, Engineering Manager



EC Declaration of Conformity

ATEX Summary of Markings

Type	Marking	Listed In	Non-Conductive Fluids		
Pump types, M05, M1F, M15, M20 and M30 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, M05, M1F, M15 M20 and M30 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, MPB1/4, M05, M1F, M15, M20, M30, MSB1, MHDF1, MHDF2 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, MPB1/4, M05, M1F, M15, M20, M30, MSB1, MHDF1, MHDF2, MHDF3		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
MT Series Surge Suppressors		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