

# DATA SHEET

## Specifications & Performance

### Certified Quality



Quality System  
ISO9001 Certified



Environmental Management System  
ISO14001 Certified



Certified to CSA Technical Letter No, R-14



Certified to ANSI LC6-2008

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.SANDPIPERPUMP.COM



© Copyright 2013 Warren Rupp, Inc.  
All rights reserved

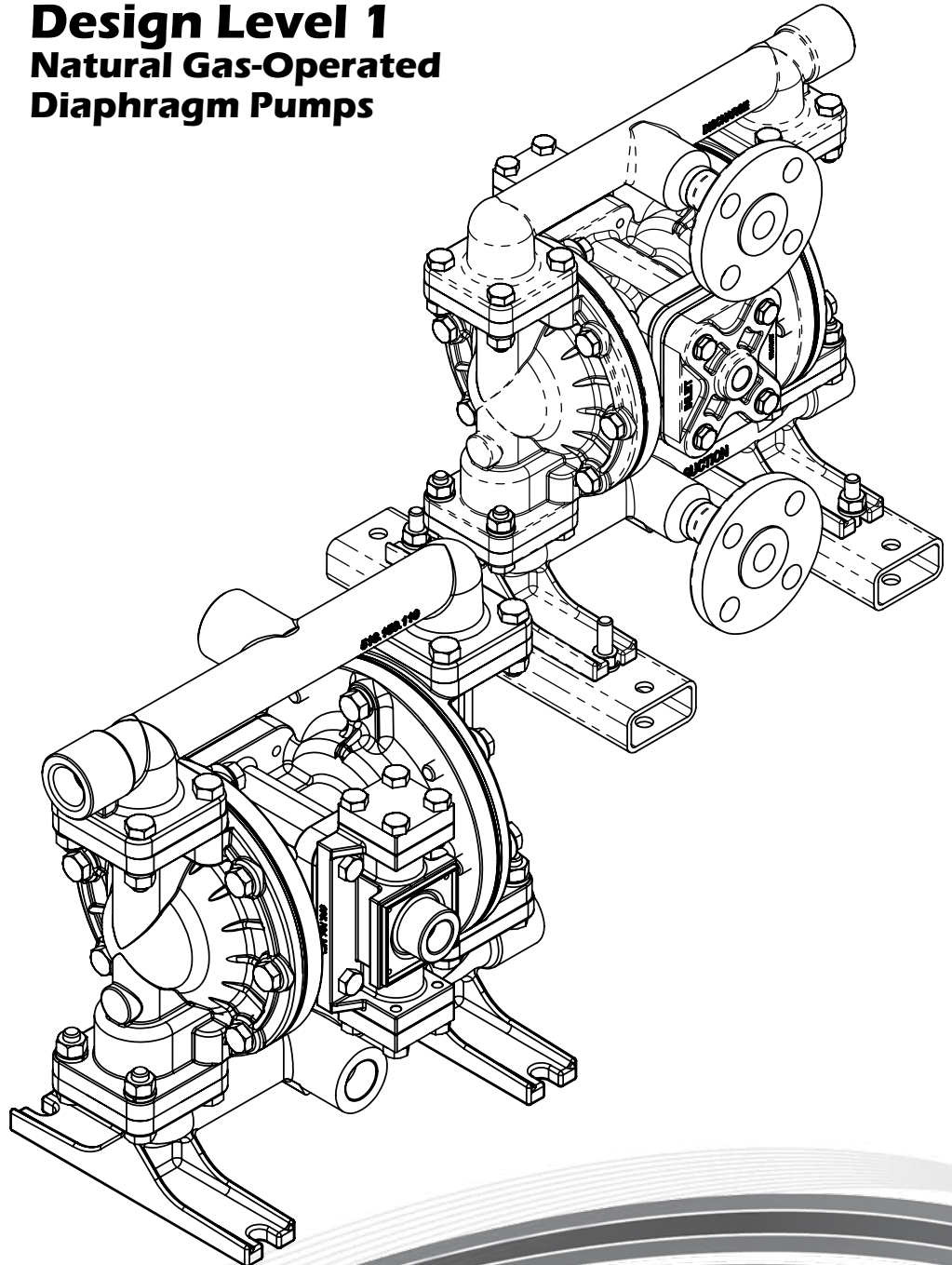
# Model G05

## Metallic

### Design Level 1

### Natural Gas-Operated

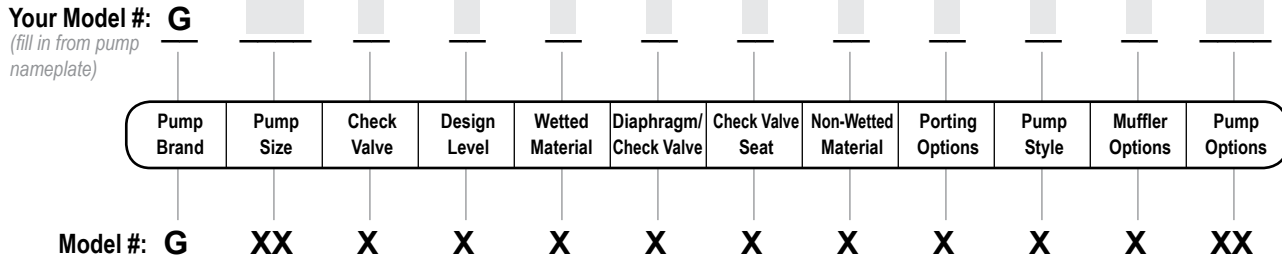
### Diaphragm Pumps



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

WWW.SANDPIPERPUMP.COM

# Explanation of Pump Nomenclature



## Pump Brand

**G** Natural Gas Operated

## Pump Size

**05** 1/2"

## Check Valve Type

**B** Ball

## Design Level

**1** Design Level

## Wetted Material

**A** Aluminum  
**S** Stainless Steel

## Diaphragm/Check Valve Materials

**B** Nitrile/Nitrile  
**T** PTFE Overlay, Nitrile/ PTFE  
**5** Nitrile/PTFE

## Check Valve Seat

**T** Virgin PTFE  
**A** Aluminum  
**S** Stainless Steel

## Non-Wetted Material Options

**A** Painted Aluminum  
**X** Unpainted Aluminum  
**0** Unpainted Aluminum/FKM Elastomers  
**V** Painted Aluminum/ FKM Elastomers

## Porting Options

**N** NPT Threads  
**B** BSP (Tapered) Threads  
**R** 150# Raised Face 1/2" ANSI Flange w/ Threaded Pipe Connections  
**W** 150# Welded Raised Face 1/2" ANSI Flanged Manifolds

## Pump Style

**S** Standard

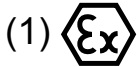
## Muffler Options

**X** No Muffler Permitted\*

\* Welded Raised Face Manifolds are available for models equipped with stainless steel wet end components

Your Serial #: (fill in from pump nameplate) \_\_\_\_\_

## ATEX Detail



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

Models equipped with Wetted Options A or S, Non-Wetted Options A, X, 0, or V, Pump Option X.

**Note:** See ATEX Explanation of Type Examination Certificate

# Performance

## G05 METALLIC

### SUCTION/DISCHARGE PORT SIZE

- 1/2" NPT or 1/2" BSP Tapered (internal)
- 1/2" NPT or 1/2" BSP Tapered (external)
- 1/2" Raised Face 150# ANSI Flange (Stainless Steel Only)

### CAPACITY

- 0 to 15 gallons per minute (0 to 56 liters per minute)

### GAS DISTRIBUTION VALVE

- No-lube, no-stall design

### SOLIDS-HANDLING

- Up to .125 in. (3mm)

### HEADS UP TO

- 100 psi or 231 ft. of water (7 bar or 70 meters)

### MAXIMUM OPERATING PRESSURE

- 100 psi (7 bar)

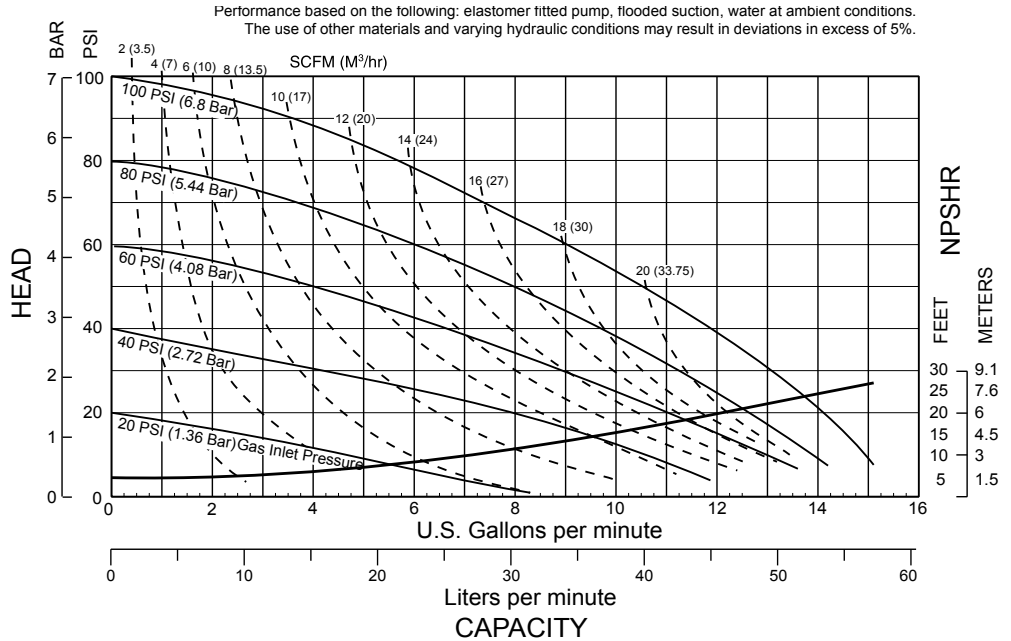
### DISPLACEMENT/STROKE

- .026 Gallon / .098 liter

### SHIPPING WEIGHT

- Aluminum 15 lbs. (7kg)
- Stainless Steel 21 lbs. (10kg)

These pump models are designed to pump the following fluids: Crude Oil, Salt Water, Drilling Mud, Condensate, Lubrication Oils, Glycol, Caustic Liquids, and Acids."



**Exhaust Gas:** The exhausted natural gas must be vented to a low pressure safe location in accordance with local fire safety and environmental codes, or in the absence of local codes, an industry or nationally recognized code having jurisdiction over the specific installations, and/or CAN/CGA B149, Installation Codes

# Materials

Material Profile:	Operating Temperatures:	
	Max.	Min.
<b>FKM:</b> (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(21°C)) will attack FKM.	350°F 177°C	-40°F -40°C
<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>Virgin PTFE:</b> (PFA/TFE) Chemically inert, virtually impervious. Very few chemicals are known to chemically react 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
<i>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.</i>		
Metals:		
<b>Stainless Steel:</b> Equal to or exceeding ASTM specification A743 CF-8M 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 the Chemical Resistance Chart.

**Ambient temperature range:** -20°C to +40°C

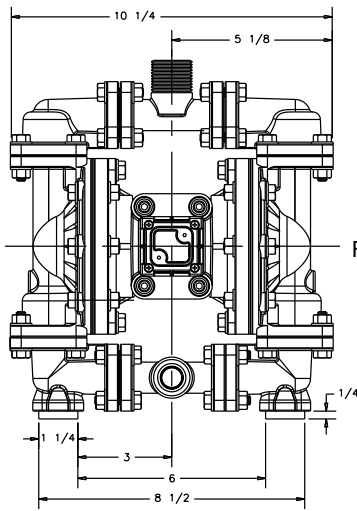
**Process temperature range:** -20°C to +80°C for models rated as category 1 equipment  
-20°C to +100°C for models rated as category 2 equipment

In addition, the ambient temperature range and the process temperature range do not exceed the operating temperature range of the applied non-metallic parts as listed in the manuals of the pumps.

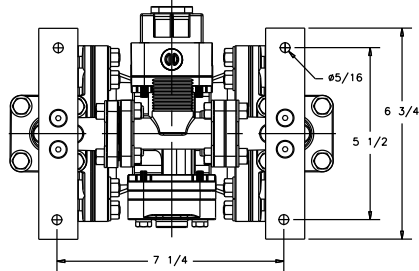
# Dimensional Drawings

## G05 Metallic - Aluminum

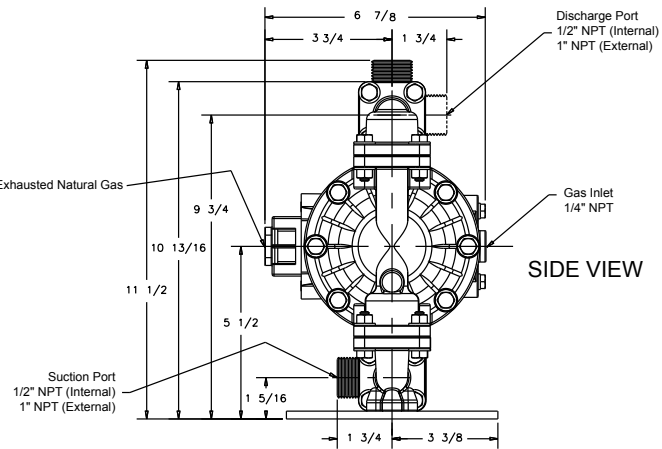
Dimensions in Inches. Dimensional Tolerance:  $\pm 1/8"$



FRONT VIEW



BOTTOM VIEW



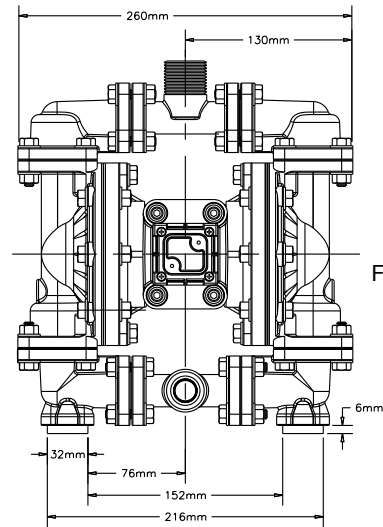
SIDE VIEW

Both Suction And Discharge Ports Are Available In  
1/2" BSPT (Tapered Internal)  
1" BSPT (Tapered External)

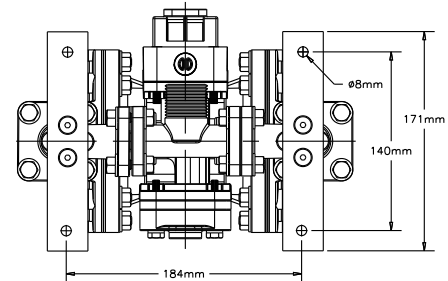
**Note: The pump is to be mounted in a horizontal position**

## G05 Metallic - Aluminum

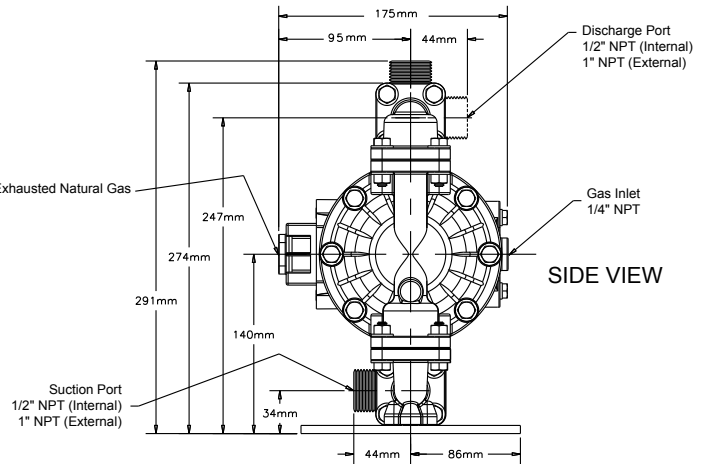
Dimensions in Millimeters. Dimensional Tolerance:  $\pm 3\text{mm}$



FRONT VIEW



BOTTOM VIEW



SIDE VIEW

Both Suction and Discharge Ports Are Available In  
1/2" BSPT (Tapered Internal)  
1" BSPT (Tapered External)

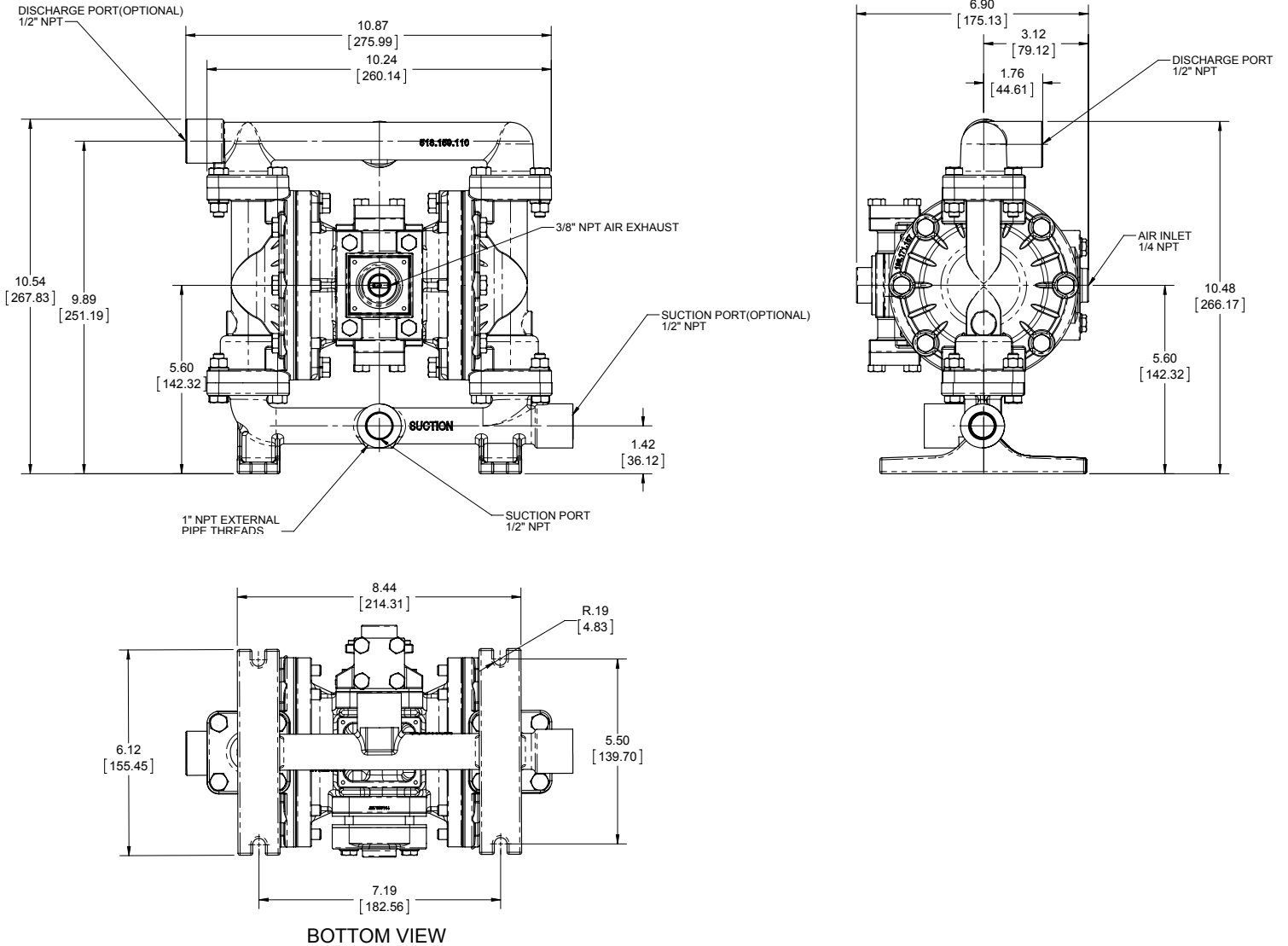
**Note: The pump is to be mounted in a horizontal position**

# Dimensional Drawings

## G05 Metallic - Stainless Steel NPT

Dimensions in inches (mm dimensions in brackets). Dimensional Tolerance:  $\pm 1/8"$  ( $\pm 3\text{mm}$ )

The dimensions on this drawing are for reference only. A certified drawing can be requested if physical dimensions are needed.

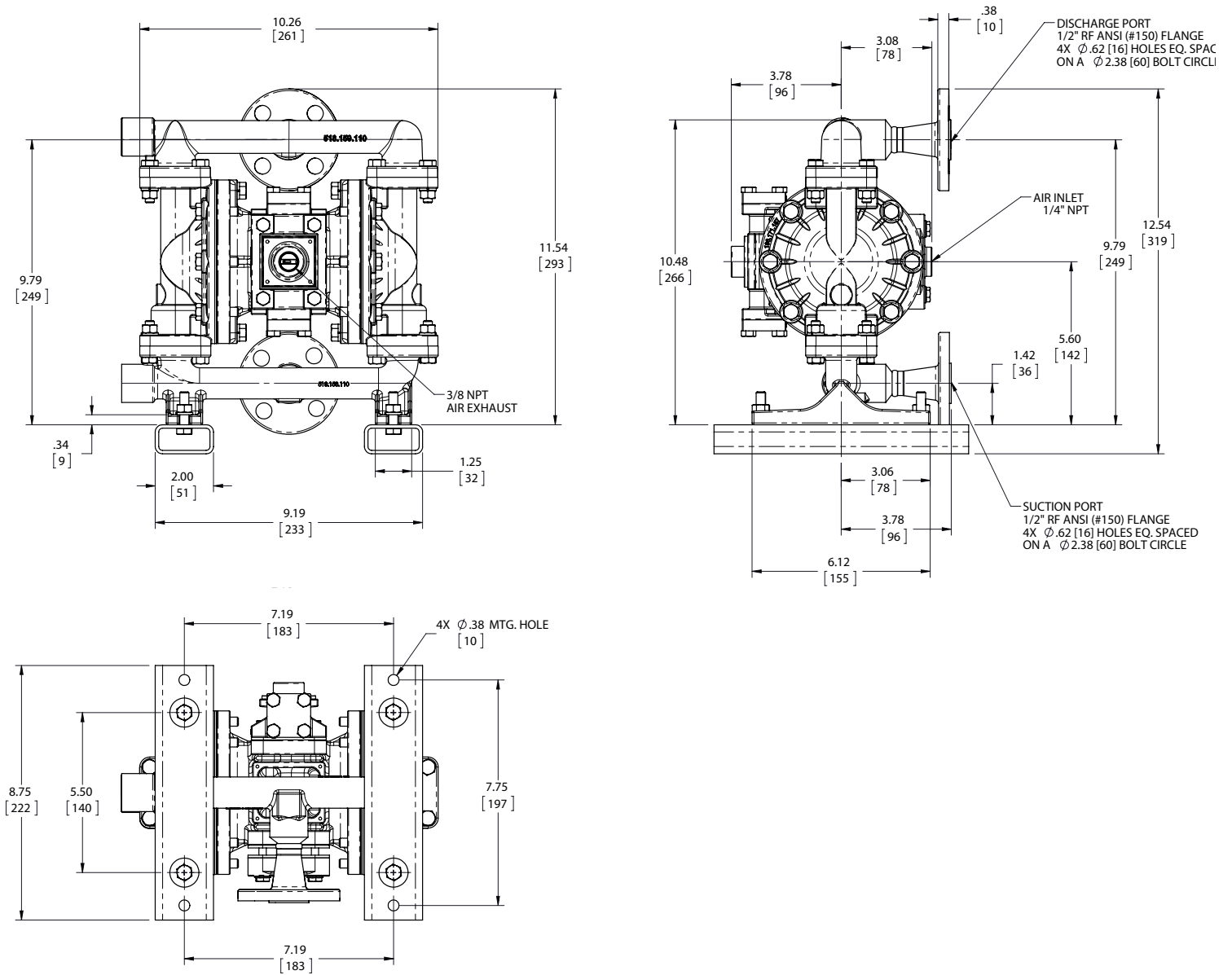


# Dimensional Drawings

## G05 Metallic - Stainless Steel ANSI Flange

Dimensions in inches (mm dimensions in brackets). Dimensional Tolerance:  $\pm 1/8"$  ( $\pm 3\text{mm}$ )

The dimensions on this drawing are for reference only. A certified drawing can be requested if physical dimensions are needed.



# Written Warranty

## 5 - YEAR Limited Product Warranty

Quality System ISO9001 Certified • Environmental Management Systems ISO14001 Certified

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 SANDPIPER®, MARATHON®, PortaPump®, SludgeMaster™ and Tranquilizer®.

~ See complete warranty at [www.sandpiperpump.com/About/guaranteesandwarranties.html](http://www.sandpiperpump.com/About/guaranteesandwarranties.html) ~

**WARREN  
RUPP, INC.®**

### 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, 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

**IDEX**  
CORPORATION





# WARREN RUPP, INC.®

## 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

### EN 60079-25: 2004

For pumps equipped with Pulse Output ATEX Option  
KEMA Quality B.V. (0344)

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



### AODD Pumps and Surge Suppressors

For Type Examination Designations

### 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



**Tranquilizer®**



DATE/APPROVAL/TITLE:  
27 MAY 2010

*David Roseberry*  
David Roseberry, Engineering Manager

## 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