



CERTIFICATE NUMBER	19-HS1917778-PDA
EFFECTIVE DATE	02-Dec-2019
EXPIRY DATE	01-Dec-2024
ABS TECHNICAL OFFICE	Houston ESD - Piping

CERTIFICATE OF Product Design Assessment

This is to certify that a representative of this Bureau did, at the request of

WARREN RUPP, INC.

located at

**800 NORTH MAIN ST., P.O. BOX 1568, MANSFIELD, OH, United
States, 44901**

assess design plans and data for the below listed product. This assessment is a representation by the Bureau as to the degree of compliance the design exhibits with applicable sections of the Rules. This assessment does not waive unit certification or classification procedures required by ABS Rules for products to be installed in ABS classed vessels or facilities. This certificate, by itself, does not reflect that the product is Type Approved. The scope and limitations of this assessment are detailed on the pages attached to this certificate.

Product Pump, Natural Gas Powered Diaphragm

Model Sandpiper Models: G05(1/2"), G1F (1"), G10F (1"), G15(1-1/2"), G20F(2"), G20(2"), G30 (3")

This Product Design Assessment (PDA) Certificate remains valid until 01/Dec/2024 or until the Rules and/or Standards used in the assessment are revised or until there is a design modification warranting design reassessment (whichever occurs first).

Acceptance of product is limited to the "Intended Service" details prescribed in the certificate and as per applicable Rules and Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or previous to the effective date of the ABS Rules and standards applied at the time of PDA issuance. Use of the Product for non-ABS units is subject to agreement between the manufacturer and intended client.

American Bureau Of Shipping

Tim Kimble, Engineer/Consultant

NOTE: This certificate evidences compliance with one or more of the Rules, Guides, standards or other criteria of ABS or a statutory, industrial or manufacturer's standards. It is issued solely for the use of ABS, its committees, its clients or other authorized entities. Any significant changes to the aforementioned product without approval from ABS will result in this certificate becoming null and void. This certificate is governed by ABS Rules 1-1-A3/5.9 Terms and Conditions of the Request for Product Type Approval and Agreement (2010)

WARREN RUPP

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MANSFIELD OH

United States 44901

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Tier: 3 - Type Approved, unit certification not required

Product: Pump, Natural Gas Powered Diaphragm**Model:** Sandpiper Models: G05(1/2"), G1F (1"), G10F (1"), G15(1-1/2"), G20F(2"), G20(2"), G30 (3")**Intended Service:**

Marine & Offshore Applications - Sanitary System, Seawater and General Purpose Non-Essential Applications, & Bilge Application as a Secondary Non-Required Pump.

Description:

G Series Natural Gas Operated Horizontal Mounted Double Diaphragm Pump.

Rating:

Maximum Operating Pressure G Series Models: 100 psi (7 barg);

Operating Temperature Range: -10°F to 180°F;

Capacity:

G05 (0-15 GPM);

G1F (0-45 GPM).

G10F (0-70 GPM).

G15 (0-106 GPM).

G20 (0-150 GPM).

G20F (0-140 GPM).

G30 (0-235 GPM).

Consult Manufacturer's Service and Operating Manuals for performance curves.

Service Restriction:

- i) Unit Certification is not required for this product. If the manufacturer or purchase request an ABS Certificate for compliance with a specification or standard, the specification or standard, including inspection standards and tolerances, must be clearly defined.
- ii) Pumps used for Bilge and Ballast System are to be Self Priming type or connected to a Priming System as indicated in Marine Vessels Rules/Steel Vessels Rules 4-6-4/5.5.2 c)
- iii) These Pumps are not to be used for pumping Fluids with a Flash Point of less than 100 °F (30 °C).
- iv) Each installation is to be reviewed by ABS Technical Office.

Comments:

- i) The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.
- ii) Manufacturer recommendations are to be followed for pumping hazardous liquids and piping of gas exhaust/muffler (see Service and Operating Manual).
- iii) This approval does not include the Flexible Conductive Connections or Pipe Connections of the Pumps.
- iv) These Pumps are not approved for essential service or Bilge service as listed in Marine Vessels Rules/Steel Vessels Rules 4-6-1/7.3.1

Notes/Drawing/Documentation:

DEKRA EU-Type Examination Certificate: DEKRA 18ATEX0094 X Issue No: 0;

CSA Group Descriptive Report and Test Results 1392353, Project: 70206542 Dated 03 December 2018;

Warren Rupp, Inc. Declaration of Conformity on EN 809:2012 date of revision 27 February 2017;

Supporting Documentation (previous task):

Drawing No. 020.058.000, Natural Gas Regulator with Gauge, Revision A.

Document No. g05mdl1sm Rev. 0614, Service and Operating Manual for G05.

Document No. g1fmdl1sm Rev. 0614, Service and Operating Manual for G1F.

Document No. g15mdl1sm Rev. 0614, Service and Operating Manual for G15.

Document No. g20mdl1sm Rev. 0614, Service and Operating Manual for G20.

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Document No. g30mdl1sm Rev. 0614, Service and Operating Manual for G30.

CSA Certificate of Compliance, CSA Certificate No. 1392353 (Project 2609590) dated 5 April 2013.

Canadian Technical Information Letter No. R-14 dated 6 June 2003, Certification and Testing Division, Natural Gas Operated Diaphragm Pumps.

EU Declaration of Conformity, ATEX Summary of Markings dated 27 May 2010; 14 & 27 May 2014

Complies with ATEX Directive 2014/34/EU and EC Directive 2006/42/EC in accordance with Annex VIII.

Warren Rupp, Inc. Hydrostatic Pressure Test Certifications dated 3 Feb. 2012 for pump models: G05, G1F, G15, G20, G30;

Technical Documentation for Models G10F and G20F.

Drawing Package No. G10F Certificate 210481-1392353 Project 70030875.

Drawing Package No. G20F Certificate 210481-1392553, Project 70013128.

Terms of Validity:

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STANDARDS**ABS Rules:**

The Rules for Condition of Classification, Part 1, 2019, 1-1-4/7.7, 1-1-A3, 1-1-A4, which covers the following:

Steel Vessels Rules (2019): 4-6-1/7.3.1, 7.5.3 iii).

Marine Vessels Rules (2019): 4-6-1/7.3.1, 7.5.3 iii).

Steel Vessels Under 90 Meters (295 Feet) in Length Rules (2019); 4-4-2/1.1.

Offshore Support Vessels (2019): 4-6-1/7.3.1.

The Rules for Condition of Classification, Part 1, 2019 - High-Speed Craft, 1-1-4/11.9, 1-1-A2, 1-1-A3, which covers the following:

High-Speed Craft (2019): 4-4-2/1.1

The Rules for Condition of Classification, Part 1, 2019 - Offshore Units and Structures, 1-1-4/9.7, 1-1-A2, 1-1-A3, which covers the following:

Mobile Offshore Drilling Units (2015): 4-2-2/3, 6-1-6/7.3.2.

Mobile Offshore Units (2015): 4-2-2/3, 6-1-6/7.3.2.

National:

ANSI LC 6-2008, 1st Ed Natural Gas Operated Diaphragm Pumps

International:

EN 809:2012,

EN ISO 80079-36:2016,

EN ISO 80079-37:2016;

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Government:

NA

EUMED:

NA

OTHERS:

NA