



## *Confirmation of Product Type Approval*

Please refer to the "Service Restrictions" shown below to determine if Unit Certification is required for this product.

This certificate reflects the information on the product in the ABS Records as of the date and time the certificate is printed.

Pursuant to the Rules of the American Bureau of Shipping (ABS), the manufacturer of the below listed product held a valid Manufacturing Assessment (MA) with expiration date of 02-NOV-2021. The continued validity of the Manufacturing Assessment is dependent on completion of satisfactory audits as required by the ABS Rules.

And; a Product Design Assessment (PDA) valid until subject to continued compliance with the Rules or standards used in the evaluation of the product.

The above entitle the product to be called Product Type Approved.

The Product Design Assessment is valid for products intended for use on ABS classed vessels, MODUs or facilities which are in existence or under contract for construction on the date of the ABS Rules used to evaluate the Product.

ABS makes no representations regarding Type Approval of the Product for use on vessels, MODUs or facilities built after the date of the ABS Rules used for this evaluation.

Due to wide variety of specifications used in the products ABS has evaluated for Type Approval, it is part of our contract that; whether the standard is an ABS Rule or a non-ABS Rule, the Client has full responsibility for continued compliance with the standard.

**Product Name:** Brake, Stearns Spring-Set Disc  
**Model Name(s):** 56X00, 81000, 82X00, 86000, 87X00

**Presented to:**

REXNORD INDUSTRIES, LLC STEARNS DIVISION  
5150 S. INTERNATIONAL DR.  
WI 53110  
United States

**Intended Service:**

Marine and Offshore Applications - Stop and/or hold loads typically driven by an Electric Motor (except for jacking system).

**Description:**

Solenoid Actuated Brakes (SAB)- Spring-Set, Electrically-Released Disc Brakes. Series 56X00 - 56000, 56100, 56200, 56300, 56400, 56500, 56600, 56700, 56800, 56900; Series 81000; Series 82000 - 82300; Series 86000; Series 87X00 - 87000, 87100, 87300, 87700, 87800.

**Tier:**

3

**Ratings:**

Ratings as tabulated in Series 56X00, 81000, 82X00, 86000, and 87X00 tables. See attached PDF for ratings. Design Ambient Temperature Range: -30 °C (-22 °F) through 55 °C (131 °F).

**Service Restrictions:**

Unit Certification is not required for this product. If the manufacturer or purchaser requests an ABS Certificate for compliance with a specification or standard, the specification or standard, including inspection standards and tolerances, must be clearly defined. - For use in Hazardous Locations, see attached "pdf" file pages in Ratings, and also, see UL and CSA Files indicated. - Operation at ambient temperatures above 22 °C (72 °F) requires derating of the thermal capacity rating. See attached Derating Thermal Capacity Chart.

**Comments:**

1) The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product. 2) Common Features: Self-Adjusting Design (except

56X00), Spring-Set Electrically-Released; 2) Coil Insulation: Standard Class B, Optional Class H. 3) During construction or after installation, performance test may be required to the satisfaction of the attending Surveyor as applicable. 4) For low temperature applications, Charpy Testing of the enclosure may be required as applicable. 5) DuPont Zytel 80G33HS1L-NC010 plunger guide is acceptable to be used in solenoid assembly for brakes having a -30 °C to +55 °C temperature range.

**Notes / Documentation:**

Dwg. 1-056-001-D, S/B Rev. D, "Brake assembly-IP 23 Enclosure"; Dwg. 1-056-002-D, Rev. A, "Brake assembly-IP 54 Enclosure"; Dwg. 1-056-101-D, Rev. B, "Brake Assembly-Std. Enclosure"; Dwg. 1-056-102-D, Rev. A, "Brake Assembly-IP 54 Enclosure"; Dwg. 1-056-201-D, Rev. C, "Brake Assembly-IP 23 Enclosure"; Dwg. 1-056-202-D, Rev. B, "Brake Assembly-IP 56 & IP 57 Enclosure"; Dwg. 1-056-301-D, Rev. B, "Brake Assembly-IP 20 Std Enclosure"; Dwg. 1-056-401-D, Rev. D, "Brake Assembly-IP 23 Enclosure"; Dwg. 1-056-402-D, Rev. B, "Brake Assembly-IP 54 Enclosure"; Dwg. 1-056-501-D, Rev. C, "Brake Assembly-Std Enclosure"; Dwg. 1-056-502-D, Rev. B, "Brake Assembly-IP54 Enclosure"; Dwg. 1-056-601-D, Rev. D, "Brake Assembly-Std Enclosure"; Dwg. 1-056-602-D, Rev. C, "Brake Assembly-IP 54 Enclosure"; Dwg. 1-056-701-D, Rev. C, "Coupler Brake Assembly"; Dwg. 1-056-70S-5D, Rev. A, "Brake Outline St. Steel Coupler"; Dwg. 1-056-802-D, Rev. D, "Brake Assembly UL Class 1, Div. 2"; Dwg. 1-056-904-D, Rev. B, "Brake Assembly Stainless-IP56 & IP57 Enclosures"; Dwg. 1-081-001-2D, Rev. C, "Outline Drawing -Standard Open Enclosure"; Dwg. 1-081-002-2D, Rev. D, "Outline Drawing -IP54 Enclosure"; Dwg. 1-081-001-3D, Rev. A, "Outline Drawing -Aluminum Housing, IP23"; Dwg. 1-081-002-3D, Rev. A, "Outline Drawing -Aluminum Housing, IP54"; Dwg. 1-082-002-2D, Rev. E, "Outline Drawing -DTWP Enclosure"; Dwg. 1-082-002-2MC, Rev. G, "Outline Dwg-IP56/57 Enclosure, w/Conduit Junction Box"; Dwg. 1-082-002-IP56, Rev. A, "Outline Drawing -Side Manual Release O-Ring Gaskets & Close Coupled"; Dwg. 1-082-002-BMZD, Rev. C, "Outline Drawing -Side Manual Release IP56"; Dwg. 1-082-001-3D, Rev. B, "Outline Drawing -Aluminum Housing (NEMA 2)"; Dwg. 1-082-002-3MC-1, Rev. G, "Outline Drawing, NEMA 4 Enclosure w/Conduit Box"; Dwg. 1-082-002-3MC-2, Rev. F, "Outline Drawing, IP56 Enclosure w/Conduit Box"; Dwg. 1-082-002-3MC-4, Rev. B, "Outline Drawing, NEMA 4 Enclosure w/Conduit Box"; Dwg. 1-082-002-3MC-5, Rev. C, "Outline Drawing, NEMA 4 Enclosure w/Conduit Box"; Dwg. 1-082-052-03-050, Rev. A, "Outline Drawing, IP56 Enclosure w/Conduit Box"; Dwg. 1-082-052-03-051, Rev. A, "Outline Drawing, IP56 Enclosure w/Conduit Box"; Dwg. 1-082-052-03-053, Rev. A, "Outline Drawing, IP56 Enclosure w/Conduit Box"; Dwg. 1-082-052-03-054, Rev. A, "Outline Drawing, IP56 Enclosure w/Conduit Box"; Dwg. 1-082-304-D, "Outline Drawing, Motor Mounted"; Dwg. 1-082-304-2D, "Outline Drawing, Fan Guard Mounted"; Dwg. 1-082-305-D, "Outline Drawing, Motor Mounted"; Dwg. 1-086-001-D, Rev. A, "Outline Drawing, Std Open Enclosure"; Dwg. 1-086-002-D, Rev. A, "Outline Drawing, DTWP Enclosure"; Dwg. 1-087-000-D, Rev. 2, "Outline Drawing -Close Couple Mounted to Achieve IP 56/57 Enclosure"; Dwg. 1-087-001-DB, Rev. A, "Outline Drawing -Standard Enclosure"; Dwg. 1-087-001-ZD, Rev. B, "Outline Drawing -Standard Enclosure Z & Y Mod"; Dwg. 1-087-002-D, Rev. J, "Outline Drawing -IP 55 Cast Iron Enclosure"; Dwg. 1-087-004-DB, Rev. A, "Outline Drawing -IP 54/55 Enclosure"; Dwg. 1-087-101-D, Rev. G, "Outline Drawing -Rev. B, IP 23 Std Enclosure"; Dwg. 1-087-102-D, Rev. F, "Outline Drawing -Rev. B, IP 55 Cast iron Enclosure"; - The test report of DuPont Zytel Plunger Guide; - Product guide and properties of DuPont Zytel 80G33HS1L-NC010; - UL File E14893; - CSA Files: 009584 and 006254

**Term of Validity:**

This Product Design Assessment (PDA) Certificate 16-HS1577612-PDA, dated 03/Nov/2016 remains valid until 02/Nov/2021 or until the Rules or specifications used in the assessment are revised (whichever occurs first). This PDA is intended for a product to be installed on an ABS classed vessel, MODU or facility which is in existence or under contract for construction on the date of the ABS Rules or specifications used to evaluate the Product. Use of the Product on an ABS classed vessel, MODU or facility which is contracted after the validity date of the ABS Rules and specifications used to evaluate the Product, will require re-evaluation of the PDA. Use of the Product for non ABS classed vessels, MODUs or facilities is to be to an agreement between the manufacturer and intended client.

**ABS Rules:**

Rules for Conditions of Classification, Part 1- 2016 Steel Vessels Rules 1-1-4/7.7, 1-1-A3, 1-1-A4, which covers the following: 2016 Steel Vessels 4-8-3/1.11,

4-8-3/13.3.2; The Rules for Conditions of Classification, Part 1 - 2016 Offshore Units and Structures 1-1-4/9.7, 1-1-A2, 1-1-A3, which covers the following: 2016 Mobile Offshore Drilling Units 4-1-1/3.; 4-3-3/1.5, 4-3-3/3.1, 4-3-3/9, 4-3-6;

**National Standards:** .

**International Standards:**

**Government Authority:**

**EUMED:**

**Others:** Manufacturer's Standards and Practices.

<b>Model Certificate</b>	<b>Model Certificate No</b>	<b>Issue Date</b>	<b>Expiry Date</b>
PDA	16-HS1577612-PDA	03-NOV-2016	02-NOV-2021



ABS Programs

ABS has used due diligence in the preparation of this certificate and it represents the information on the product in the ABS Records as of the date and time the certificate was printed. Type Approval requires Drawing Assessment, Prototype Testing and assessment of the manufacturer's quality assurance and quality control arrangements. Limited circumstances may allow only Prototype Testing to satisfy Type Approval. The approvals of Drawings and Products remain valid as long as the ABS Rule, to which they were assessed, remains valid. ABS cautions manufacturers to review and maintain compliance with all other specifications to which the product may have been assessed. Further, unless it is specifically indicated in the description of the product; Type Approval does not necessarily waive witnessed inspection or survey procedures (where otherwise required) for products to be used in a vessel, MODU or facility intended to be ABS classed or that is presently in class with ABS. Questions regarding the validity of ABS Rules or the need for supplemental testing or inspection of such products should, in all cases, be addressed to ABS.