



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 20/AUG/2017. 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 26/OCT/2021 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: Actuator, Pneumatic
Model Name(s): 2R or TR Prefix and DA, DAR, SR or SO Suffix.

Presented to:

A-T CONTROLS
9955 INTERNATIONAL BOULEVARD
United States

Intended Service:

Marine & Offshore Application - for Compressed Air System, Bulk Mud, Liquid Mud, Ballast, Liquid & Dry Cargo, Seawater Cooling, Lube & Fuel Oil.

Description:

Double Acting & Spring Return Quarter-Turn Pneumatic Rack & Pinion Valve Actuators. 2R (Base Model Number) DA is Double Acting Actuator. DAR same as DA except piston is installed in reverse rotation (clockwise instead of counter clockwise). 2R (Base Model Number) SR is spring return fail clockwise configuration and SO is spring return fail counter-clockwise configuration and involves installing pistons opposite of normal in order to have the springs drive the actuator the opposite rotation. Operating media-clean, dry air, non-corrosive gas or light hydraulic oil. TR10, TR20 & 2R (Base Model Number), DA is Double Acting Torque and SR is Spring Return Torque.

Ratings:

TR10 & TR20, 2R40, 2R80, 2R130, 2R200, 2R300, 2R500, 2R850, 2R1200, 2R1750 and Suffix DA, DAR, SR or SO. Standard Working Temperature Range for all models: -20 °F to +175 °F (-29 °C to +79 °C). Wall Thickness of the actuator housing is 10mm on models 2R850, 2R1200 and 2R1750. Wall Thickness of the actuator housing is 6mm on models 2R40, 2R80, 2R130, 2R200, 2R300 and 2R500. The Actual Valve Break Torque is not to exceed the Manufacturer's recommended Valve Demand Break Torque per attached "pdf" pages. For additional Rating and Dimensions see the attached "pdf" pages.

Service Restrictions:

Unit Certification is not required for this product. If the manufacturer or purchaser's request an ABS Certificate for compliance with a specification or standard, the

specification or standard, including inspection standards and tolerances, must be clearly defined. The Actuators are not to be used to maintain valves in the Open Position for the Fuel Oil System. The Air Supply for the Pneumatic System must have an Air Receiver with sufficient capacity to Close all Connected Valves Twice, Low Air Pressure Alarm, and a Non-return Valve adjacent to the Air Receiver in the Air Supply Line as indicated on SVR 4.6.4/13.5.3 (b).

Comments: The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product. 1) For Class III components, manufacturer's trademark, pressure/temperature rating and material identification, as applicable, stamped or cast on the component and verifiable against the manufacturer's catalog or similar documentation will suffice in accordance with SVR 4-6-1/7.1.3. 2) For models TR10 & TR20 the travel stops are located in the end caps for adjustment in one direction only. 3) The Solenoid valve is not part of this approval.

Notes / Documentation: Burst Pressure Test Report (6 July 06) - TRIAC 2R500; Burst Pressure Test Report (20 Nov 06) - TRIAC 2R1750; TR & 2R Brochure dated September 2016; Test Report for TRIAC 2R500 dated November 17, 2006; Test Report for TRIAC 2R1750 dated November 20, 2006. ISO 9001:2008 Certificate Number: 00014-4;

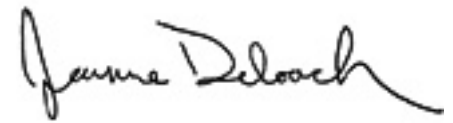
Term of Validity: This Product Design Assessment (PDA) Certificate 16-HS1574348-PDA, dated 27/Oct/2016 remains valid until 26/Oct/2021 or until the Rules or specifications used in the assessment are revised (whichever occurs first). This PDA is intended for a product to be installed on an ABS classed 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 Rules 4-6-1/5, 4-6-1/Table 1, 4-6-1/7.1.3, 4-6-7/3.5.5 (a), (c), (e), 4-6-7/5.3.3; Rules for Conditions of Classification, Part 1 – 2016 Offshore Units and Structures 1-1-4/9.7, 1-1-A2, 1-1-A3;

National Standards:
International Standards: ISO 9001: 2008

Government Authority:
EUMED:
Others:

Model Certificate	Model Certificate No	Issue Date	Expiry Date
PDA	16-HS1574348-PDA	27/OCT/2016	26/OCT/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.