

CERTIFICATE NUMBER EFFECTIVE DATE EXPIRY DATE ABS TECHNICAL OFFICE 21-2161609-PDA 23-Sep-2021 22-Sep-2026 Houston ESD - Offshore Equipment

CERTIFICATE OF

Product Design Assessment

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

A-T CONTROLS

located at

9955 INTERNATIONAL BOULEVARD, CINCINNATI, OH, United States, 45246

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: Actuator, Pneumatic

Model: 3R and DA, DAR, SR or SO Suffix

Endorsements:

Tier: 3 - Type Approved, unit certification not required

This Product Design Assessment (PDA) Certificate remains valid until 22/Sep/2026 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

Sohail Ahmed Mohammed, Engineer/Consultant

Sohail A. Mohammed

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)

A-T CONTROLS

9955 INTERNATIONAL BOULEVARD

CINCINNATI OH United States 45246 Telephone: 513-247-5465

Fax: 513-247-5462

Email: jmurphy@atcontrols.com

Web: a-tcontrols.com

Tier: 3 - Type Approved, unit certification not required

Product: Actuator, Pneumatic

Model: 3R and DA, DAR, SR or SO Suffix

Endorsements:

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. 3R (Base Model Number) DA is Double Acting Actuator. DAR same as DA except piston is installed in reverse rotation (clockwise instead of counter clockwise). 3R 3 (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

Rating:

Standard Working Temperature: -5°F to 175° Low Temperature Option: -45° to 175°F High Temperature Option:0° F to 300°F

Maximum Working Pressure: 150 PSI

Air Supply: 40 to 150 psi

Service Restriction:

- Unit Certification is not required for this product.
- If the manufacturer or purchaser request an ABS Certificate for compliance with a specification or standard, the specification or standard, including inspection standards and tolerances, must be clearly defined.

Comments:

The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.

Notes/Drawing/Documentation:

Drawing No. 3R Catalog, 3R Catalog, Revision: 0, Pages: 1
Drawing No. P03593, 3R10 Dimension Dwg and Torque Data, Revision: 0, Pages: 1
Drawing No. P03913, 3R200 Dimension Dwg and Torque Data, Revision: 0, Pages: 1
Drawing No. P03914, 3R40 Dimension Dwg and Torque Data, Revision: 0, Pages: 1
Drawing No. P03915, 3R300 Dimension Dwg and Torque Data, Revision: 0, Pages: 1
Drawing No. P03916, 3R130 Dimension Dwg and Torque Data, Revision: 0, Pages: 1
Drawing No. P03917, 3R80 Dimension Dwg and Torque Data, Revision: 0, Pages: 1
Drawing No. P03922, 3R500 Dimension Dwg and Torque Data, Revision: 0, Pages: 1
Drawing No. P03923, 3R700 Dimension Dwg and Torque Data, Revision: 0, Pages: 1
Drawing No. P03924, 3R850 Dimension Dwg and Torque Data, Revision: 0, Pages: 1
Drawing No. P03925, 3R1000 Dimension Dwg and Torque Data, Revision: 0, Pages: 1
Drawing No. P03927 Rev A, 3R20 Dimension Dwg and Torque Data, Revision: 0, Pages: 1
Drawing No. P03936, 3R1200 Dimension Dwg and Torque Data, Revision: 0, Pages: 1
Drawing No. P03937, 3R1750 Dimension Dwg and Torque Data, Revision: 0, Pages: 1
Drawing No. P03938, 3R2400 Dimension Dwg and Torque Data, Revision: 0, Pages: 1
Drawing No. P03939, 3R2700 Dimension Dwg and Torque Data, Revision: 0, Pages: 1
Drawing No. P03940, 3R3300 Dimension Dwg and Torque Data, Revision: 0, Pages: 1
Drawing No. P03954, 3R2500 Dimension Dwg and Torque Data, Revision: 0, Pages: 1
Drawing No. P03955, 3R3500 Dimension Dwg and Torque Data, Revision: 0, Pages: 1
Drawing No. P03955, 3R3500 Dimension Dwg and Torque Data, Revision: 0, Pages: 1
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STANDARDS

ABS Rules:

2021 Marine Vessels Rules: 1-1-4/7.7, 1-1-A3, 1-1-A4, 4-6-1/5, 4-6-1/Table 1, 4-6-1/7.1.3, 4-6-7/3.5.5, 4-6-7/5.3.3

2021 Mobile Offshore Units: 1-1-4/9.7, 1-1-A2, 1-1-A3, 4-2-2/21.9; 4-2-4/11.5,

National:

NA

International:

ISO 5211 - 2017 Edition

Government:

NA

EUMED:

NA

OTHERS:

NA