



Certificate No:  
**TAP00002DX**

# TYPE APPROVAL CERTIFICATE

## This is to certify:

**That the Pneumatic Actuator**

with type designation(s)  
**GT Range (GTA/GTB/GTC), GTS Range**

Issued to

**ROTORK FLUID SYSTEM S.r.l.**  
**Porcari, LU, Italy**

is found to comply with

**DNV rules for classification – Ships Pt.4 Ch.6 Piping systems**  
**DNV-OS-D101 – Marine and machinery systems and equipment, Edition July 2021**

## Application :

**Product(s) approved by this certificate is/are accepted for installation on vessels classed by DNV.**

|                               |                            |
|-------------------------------|----------------------------|
| <b>Type</b>                   | <b>Dsgn. press./Torque</b> |
| <b>GT Range (GTA/GTB/GTC)</b> | <b>see page 2</b>          |
| <b>GTS Range</b>              | <b>see page 2</b>          |

Issued at **Høvik** on **2021-12-07**

This Certificate is valid until **2026-12-06**.

for **DNV**

DNV local station: **Italy/Malta CMC**

Approval Engineer: **Maheshraja Venkatesan**

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**Zeinab Sharifi**  
**Head of Section**

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.  
The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



Form code: TA 251

Revision: 2021-03

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## Product description

Rack & Pinion pneumatic actuators designed in accordance with EN 15714-3 comprising of the following types:

| Type Designation |                     | Models covered                                                                 |
|------------------|---------------------|--------------------------------------------------------------------------------|
| <b>GT Range</b>  | GTA – 90° rotation  | 52, 63, 75, 83, 92, 110, 118, 127, 143, 160, 190, 210, 253, 254, 255, 300, 302 |
|                  | GTB – 120° rotation | 52, 63, 75, 83, 92, 110, 118, 127, 143, 160, 210, 253, 254, 255, 300           |
|                  | GTC – 180° rotation | 52, 63, 75, 83, 92, 110, 118, 127, 143, 160, 210, 253, 254                     |
| <b>GTS Range</b> |                     | 52, 63, 75, 83, 92, 110, 118, 127, 143, 160                                    |

## Material of construction:

| Type Designation               | Actuator part    | Material of construction |                                                               |
|--------------------------------|------------------|--------------------------|---------------------------------------------------------------|
|                                |                  | Material grade           | Delivery standard                                             |
| GT range<br>(aluminium alloy)  | Body             | EN AW-6063 T6            | EN 755-2 (Mech. Properties)<br>EN 573-3 (Chemical properties) |
|                                | End cap          | EN AC-46100              | EN 1706                                                       |
|                                | Bolting          | ISO 3506-1               | A2-70                                                         |
| GTS Range<br>(Stainless steel) | Sealing (O-ring) | NBR/ Viton               |                                                               |
|                                | Body & End cap   | CF3M                     | ASTM A351                                                     |
|                                | Bolting          | ISO 3506-1               | A4-70                                                         |
|                                | Sealing (O-ring) | NBR/ Viton               |                                                               |

## Application/Limitation

Operating media are air or inert gas and no corrosion allowance is considered.

Design pressure of cylinders : 8 bar  
Design temperature : -20/+80 °C  
Output Torque : as per the submitted catalogues PUB110-001-00 & PUB110-005-00 (up to 8 bar)

Materials and material protection chosen for the specific system shall be suitable for the intended medium and environmental conditions. The actuators have not been subject to fire or endurance testing.

## Type Approval documentation

### Tests carried out

Type testing as per EN 15714-3 (except endurance testing), Burst testing as per ASME Sec. VIII Div. 1



Job Id: **262.1-035987-1**  
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## **Production testing and Certification**

Production Testing and Certification for the actual intended application shall follow EN 15714-3 and the latest applicable edition of the Rules (as mentioned on the front page of this certificate), as appropriate.

## **Marking of product**

For traceability to this type approval the actuators are to be marked in accordance with EN 15714-3 [6].

## **Periodical assessment**

For retention of the Type Approval, a DNV Surveyor shall perform periodical assessment after two years (+/- 90 days) and after 3.5 years (+/- 90 days) to verify that the conditions for the approval are complied with. Reference is made to DNV-CP-0338.