



Certificate No:
TAP00002N5

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Pneumatic Actuator

with type designation(s)
82-/83-/84-Series

Issued to

VALBIA S.R.L.

,

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.

Dsgn. press./Torque 8 bar(g)

Issued at **Høvik** on **2023-01-20**

This Certificate is valid until **2028-01-19**.

for **DNV**

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

Approval Engineer: **Thomas Wilhelm Juell**

Bosman van der Merwe
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.



Product description

Rack and pinion pneumatic actuator, double acting or spring return:

Type Designation	Models covered
82-series	32, 52, 63, 75, 85, 100, 115, 125, 140, 160, 180, 200, 230, 270, 330
83-series	52, 63, 75, 85, 100, 115, 125, 140, 160
84-series	52, 63, 75, 85, 100

Type Designation	Actuator part	Material of construction	
		Material grade	Delivery standard
82-series	Body	EN AW-6060 T6 / EN AW-6063 T6	EN 573-3 & EN 755-2
	End cap	EN AC-46100 / EN AC-46400	EN 1706
	Bolting	A2-70	ISO 3506-1
	Sealing (O-ring)	NBR / Silicone / Viton	
83-series	Body	EN AW-6063 T6	EN 573-3
	End cap	EN AC-46100	EN 1706
	Bolting	A2-70	ISO 3506-1
	Sealing (O-ring)	NBR / Silicone / Viton	
84-series	Body & End cap	CF8M	ASTM A351
	Bolting	A2-70	ISO 3506-1
	Sealing (O-ring)	NBR / Silicone / Viton	

Type 82-/84-series: Rotation angle up to 0° - 90°

Type 83-series: Rotation angle up to 0° - 180°

Application/Limitation

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

Design pressure of cylinders : 8 bar

Design temperature:

Actuator version	Not ATEX	ATEX
Standard	-20°C/+85°C	-20°C/+60°C
High temperature	-20°C/+150°C	-20°C/+150°C
Low temperature	-40°C/+85°C	-40°C/+60°C
Range extension for optional actuator	-40°C/+150°C	

Output Torque : as per the submitted catalogues CAT223003 (up to 8 bar)

Seal temperature range:

-20°C to 85°C with NBR.

-40°C to 150°C with Silicone.

-20°C to 150°C with Viton.

The actuators have not been subject to fire testing.

Materials and material protection chosen for the specific system shall be suitable for the intended medium and environmental conditions.

Type Approval documentation

Production testing

Each actuator is to be tested at 1.5 x the maximum allowable pressure before delivery.

Testing shall be witnessed by DNV when product certificate is required by society rules or purchaser.

Marking of product

For traceability to this type approval the actuators are to be marked with:

- Manufacturer's name or trade mark
- Pressure rating and maximum torque
- Type designation



Job Id: **262.1-038115-1**
Certificate No: **TAP00002N5**

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.