



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**

for **DNV**

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

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

Doc. ref.
30007080002 rev.B, 30007120001 rev.E, 30007120002 rev.F,
30007120006 rev.A, 30007130001 rev.C, 30010000039 rev.B,
30010000040 rev.B, 30010080007 rev.A, 30010120008 rev.F,
30010120009 rev.F, 30010120010 rev.E, 30010120012 rev.F,
30010120013 rev.E, 30010210011 rev.B, 30012000032 rev.B,
30012000033 rev.B, 30012080006 rev.A, 30012120007 rev.G,
30012120008 rev.G, 30012120009 rev.H, 30012120010 rev.F,
30012210011 rev.C, 30014000033 rev.B, 30014080006 rev.A,
30014120004 rev.F, 30014120005 rev.F, 30014210006 rev.C,
30018000031 rev.B, 30018000032 rev.B, 30018080005 rev.A,
30018120004 rev.F, 30018120005 rev.F, 30018150002 rev.A,
30018150003 rev.A, 30018210006 rev.C, 30019080003 rev.A,
30019120005 rev.E, 30019120006 rev.E, 30019120007 rev.B,
30019120008 rev.A, 30019150001 rev.A, 30020080002 rev.B,
30020120004 rev.F, 30020120005 rev.D, 30020150001 rev.A,
30021120003 rev.C, 30021120004 rev.C, 30021130002 rev.B,
30021130003 rev.A, 30023120001 rev.C, 30023120002 rev.B,
30023130001 rev.A, 30033120001 rev.D, 30033120002 rev.C,
30070080002 rev.A, 30070120005 rev.E, 30070120006 rev.D,
30070120008 rev.B, 30070210007 rev.A, 30075000031 rev.B,
30075000032 rev.B, 30075080003 rev.A, 30075120004 rev.F,
30075120005 rev.G, 30075210006 rev.C, 30077120001 rev.C,
30077120002 rev.E, 30077130001 rev.B, 30079120004 rev.B,
30079120005 rev.C, 30079120006 rev.A, 30079150001 rev.A,
30080120001 rev.D, 30080120002 rev.C, 30080130001 rev.A

Description
Cylinder drawings for 82-/83-/84-series

30807040001 rev.A, 30807040003 rev.C, 30810000041 rev.B,
 30810000042 rev.B, 30810040009 rev.A, 30810040010 rev.A,
 30810120008 rev.A, 30810120005 rev.A, 30810120006 rev.A,
 30810120007 rev.A, 30812000037 rev.B, 30812000038 rev.B,
 30812040009 rev.A, 30812040010 rev.A, 30812120005 rev.B,
 30812120006 rev.B, 30812120008 rev.A, 30814000043 rev.B,
 30814000044 rev.B, 30814040009 rev.A, 30814040010 rev.A,
 30814120005 rev.A, 30814120005 rev.A, 30814120006 rev.A,
 30814120007 rev.A, 30814120008 rev.A, 30814120009 rev.A,
 30814120010 rev.A, 30818000045 rev.B, 30818000046 rev.B,
 30818040009 rev.A, 30818040010 rev.A, 30818120005 rev.A,
 30818120006 rev.A, 30818120007 rev.A, 30818120008 rev.A,
 30819040009 rev.A, 30819040010 rev.A, 30819120003 rev.A,
 30819120004 rev.A, 30819120005 rev.A, 30819120006 rev.A,
 30820040007 rev.B, 30820040008 rev.B, 30820120003 rev.A,
 30820120004 rev.A, 30821040003 rev.A, 30821040004 rev.A,
 30821130001 rev.A, 30821130002 rev.A, 30823040001 rev.B,
 30823040002 rev.B, 30823120001 rev.A, 30823120002 rev.A,
 30833040001 rev.A, 30833120001 rev.B, 30833120002 rev.B,
 30870040009 rev.B, 30870040010 rev.B, 30870120005 rev.A,
 30870120006 rev.A, 30870120007 rev.A, 30870120008 rev.A,
 30875000043 rev.B, 30875000044 rev.B, 30875040009 rev.A,
 30875040010 rev.A, 30875120005 rev.A, 30875120006 rev.A,
 30875120007 rev.A, 30875120008 rev.A, 30877040001 rev.E,
 30877130003 rev.A, 30877130004 rev.A, 30879040008 rev.A,
 30879120007 rev.A, 30879120008 rev.A, 30880040001 rev.A,
 30880040002 rev.A, 30880120001 rev.-, 30880120002 rev.-,
 30880130001 rev.A, 30880130002 rev.A, MOD03084501 rev.A,
 MOD3081001 rev.A, MOD3081002 rev.A, MOD3081201 rev.A,
 MOD3081202 rev.A, MOD3081401 rev.A, MOD3081402 rev.A,
 MOD3081801 rev.A, MOD3081802 rev.A, MOD3087502 rev.A
 AR17TEST014

End cap drawings for 82-/83-/84-series

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 CAT223003

Maximum surface temperature and resistance to
 impact test as per EN 13463
 Instruction manual VB S82/83/84
 Actuator catalogue

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

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.