

TYPE APPROVAL CERTIFICATE

This is to certify:

That the **Pneumatic Cylinders**

with type designation(s)
322 06 ...

Issued to

Aventics GmbH
Laatzen, Niedersachsen, Germany

is found to comply with

DNV GL rules for classification – Ships Pt.4 Ch.6 Piping systems

Application :

Products approved by this certificate are accepted for installation on all vessels classed by DNV.

Design pressure (push) 10 bar

Design pressure (pull) 10 bar

Cylinder sizes Ø 40, 50, 63, 80, 100, 125, 160 mm

Issued at **Hamburg** on **2021-05-17**

This Certificate is valid until **2026-05-16**.

DNV local station: **Essen**

Approval Engineer: **Christian Kaemmer**

for **DNV**

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Olaf Drews
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

Double Acting Cylinder for compressed air with solenoid piston. For the use in compressed air systems. With or without adjustable end-position dampers.

Technical data:

Max. Operating Pressure	10 bar
Ambient Temperature	253 K – 353 K / -25 °C - +75°C
Admissible Medium	Compressed air, lubricated or non-lubricated
Materials Piston Rod	X10CrNi5 18.9
Materials Cylinder Tube	Al-anodized
Seals	NBR

Type No's	Diameter Ø	Stroke	Type No's	Diameter Ø	Stroke
322 061 190 0	40	50	322 064 190 0	80	140
322 062 189 0	50	55	322 064 191 0	80	140
322 062 188 0	50	70	322 064 195 0	80	140
322 062 199 0	50	72	322 064 196 0	80	160
322 062 185 0	50	85	322 065 185 0	100	160
322 062 186 0	50	100	322 065 186 0	100	160
322 062 195 0	50	100	322 065 195 0	100	160
322 062 986 0	50	100	322 066 191 0	125	180
322 063 185 0	63	120	322 066 192 0	125	180
322 063 186 0	63	120	322 066 195 0	125	180
322 063 195 0	63	120	322 067 190 0	160	195

Special Attachments		Type No's:
Magnet Field Switch	12V ~ 230 V	894 041 060 2
Clamp	Ø 32-63 mm	322 061 356 2
Clamp	Ø 80-125 mm	322 064 356 2
Clamp	Ø 160 mm	322 067 353 2
Plug-Connector without LED-Indication	---	894 100 470 2
Plug-Connector with LED-Indication	24 V	894 101 610 2
Plug-Connector with LED-Indication	24 V	894 101 612 2

Production place

- Emerson Automation Solutions, Bánki donát utca3, Eger 3300, Hungary

Responsibility

Aventics GmbH, Laatzen takes the responsibility that the design and production of pneumatic cylinders are in compliance with Rules, Standards and/or Regulations listed on page 1 of this certificate.

Application/Limitation

For the use in compressed air systems.

Type Approval documentation

Production testing

All pneumatic cylinders shall be subject to a function & performance test.

Tests carried out

Cylinder Test, Leakage Test, Stroke and Piston Rod Force-Test, Visual Inspection.

Marking of product

For traceability to this Type Approval, the products are to be marked with:

Manufacturer's trade mark "AVENTICS"



Job Id: 262.1-031188-1
Certificate No: TAP00002C1

Material Number	
Series	Diameter - Stroke
Manufacturing Date	Max. Operating Pressure
Designation of Origin	Facility Number

Periodical assessment

For retention of the Type Approval, a DNV GL Surveyor shall perform periodical assessment to verify that the conditions for the Type Approval are complied with. Refer to the Class Programme DNVGL-CP-0338, Sec.4.

To check the validity of this certificate, please look it up in <https://approvalfinder.dnvgl.com>