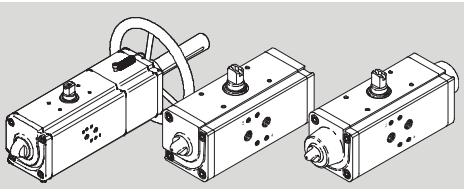
DAPS
Quarter turn actuator



FESTO

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Operating conditions I EX

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[8102757]

8102755

Translation of the original instructions

1 Identification EX

Identification		
Ex	II 2G	Ex h IIC T6...T3 Gb X
Ex	II 2D	Ex h IIIC T85°C...T200 °C Db X

Tab. 1

2 Further applicable documents

NOTICE!

Technical data for the product can have different values in other documents. For operation in an explosive atmosphere, the technical data in this document always have priority.

All available documents for the product ➔ www.festo.com/pk.

3 Function

Pressurising the cylinder chambers causes the piston in the pipe to move back and forth. The conversion of the linear movement into turning movement is carried out by a scotch yoke system. The torque does not consistently develop up to the swivel angle.

4 Safety

4.1 Safety instructions

– The device can be used under the stated operating conditions in zones 1 and 2, explosive gas atmospheres, and in zones 21 and 22, explosive dust atmospheres.
– All work must be carried out outside of potentially explosive areas.
– Extraction of the operating medium outside the potentially explosive area.
– The device is not intended for use with other fluids.
– It is not intended to be used as a spring or cushioning component. Impermissible loads may occur.

4.2 Intended use

The actuator is intended for use for fittings with a movement range limited to 90°, e.g. ball valves and butterfly valves (quarter turn actuator).

4.3 Identification X: special conditions

– Danger of electrostatic discharge.
– Temperature range DAPS-...-...: –20°C ≤ T_a ≤ +60°C
– Temperature range DAPS-...-T6: –50°C ≤ T_a ≤ +60°C
– Temperature range DAPS-...-T4: –20°C ≤ T_a ≤ +150°C
– The maximum surface temperature is not dependent on the device itself, but mainly on the temperature of the compressed air.

5 Commissioning

WARNING!

The discharge of electrostatically charged parts can lead to ignitable sparks.
- Prevent electrostatic charging by taking appropriate installation and cleaning measures.
- Include the device in the system's potential equalisation.
- Include the housing in the equipotential bonding of the system.
- Include the shaft separately in the equipotential bonding of the system. The shaft is electrically insulated from the actuator.
- Restrict the electrical resistance between the fitting and the drive to a maximum of 10 Ω.

WARNING!

Corrosive gases and dust particles inside components can result in changes to material and material damage. Explosive gas atmospheres or dust should not penetrate into the spring area of single-acting drives.
- Install an exhaust return using a 3/2-way valve that is suitable for zones 1, 2, 21 and 22 or
- Extract the air in the spring area via tubing lines at connection B outside potentially explosive areas.

NOTICE!

Strong charge-generating processes can charge non-conductive layers and coatings on metal surfaces.

NOTICE!

Escaping exhaust air can swirl up dust and create an explosive dust atmosphere.

NOTICE!

Related type of ignition protection: c (constructional safety)

NOTICE!

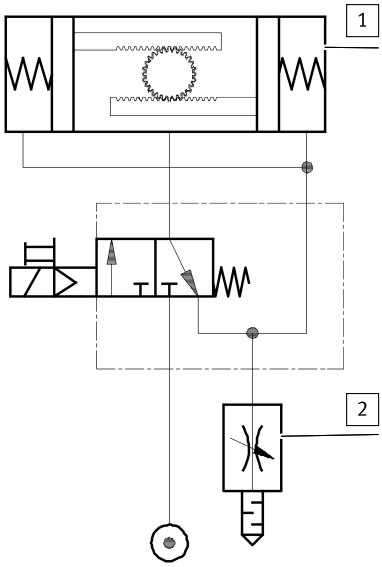
Particulate matter in the compressed air can cause electrostatic charges.

– Observe the product labelling.
– Seal unused openings with blanking plugs or slot covers.

When using PPV end-position cushioning:
– Adjust the cushioning so that the piston rod safely reaches the end positions and that it does not strike hard against them or rebound.

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In the following NAMUR valves from Festo, the exhaust air return is included in the design:
- VSNC-...
- VOFC/VOFD-...



1 DAPS-...-T6 2 GRE-... / GRU-...

Fig. 1 Exhaust return

6 Maintenance and care

– Check the operational reliability of the device regularly. Interval: 1 million movement cycles or after 6 months at the latest.

The replacement of wearing and spare parts is possible in individual cases. Repairs of this type must only be carried out by trained and authorised specialists.
– Please contact your Festo technical consultant.

Operating conditions		
Max. operating pressure	[bar]	8.4
Nominal pressure	[bar]	5.6
Operating medium		Compressed air to ISO 8573-1:2010 [7:4:4]
Mounting position		Any
Min. operating pressure		
DAPS...RS1 single-acting	[bar]	2.8
DAPS...RS2 single-acting	[bar]	3.5
DAPS...RS3 single-acting	[bar]	4.2
DAPS...RS4 single-acting	[bar]	5.6
DAPS...R double-acting	[bar]	1.0
Ambient temperature T_a / temperature of medium / storage temperature		
DAPS-...-...	[°C]	–20 ... +60
DAPS-...-T4	[°C]	–20 ... +150
DAPS-...-T6	[°C]	–50 ... +60
Lifecycle at 45 % nominal moment load, 6 bar operating pressure, T_a = 20 °C		
up to 1920 (double-acting) up to 0960 (single-acting)		1 mill. cycles
2880 ... 8000 (double-acting) 1440 ... 4000 (single-acting)		100 000 cycles
T4 variant		50 000 cycles
All T6 variants		10 000 cycles
MW variant		500 000 cycles
Max. operating frequency	[Hz]	1
Torques		➔ www.festo.com/catalogue

Tab. 2