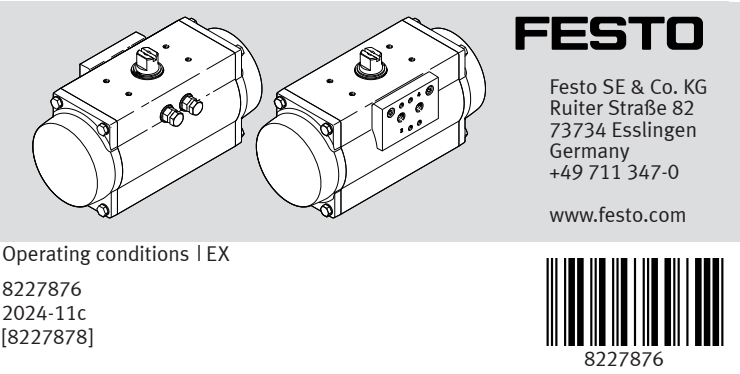


DFPD
Semi-rotary drive



Original instructions
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1 Identification EX

Table with 3 columns: Identification EX, Standard variant, Variant T4, Variant T6. It lists various explosion protection ratings (Ex h IIC T4 Gb X, etc.) and temperature ranges for different models.

Tab. 1: Identification EX

2 Applicable documents

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

All available documents for the product -> www.festo.com/sp.

3 Certified products

Table with 2 columns: Type, Type. It lists various DFPD models (DFPD-10, DFPD-20, DFPD-40, DFPD-60, DFPD-80, DFPD-120, DFPD-160) and their corresponding types (DFPD-240, DFPD-300, DFPD-480, DFPD-700, DFPD-900, DFPD-1200, DFPD-2300).

Tab. 2

4 Safety

4.1 Safety instructions

- The device can be used under the stated operating conditions in zones 1 and 2 of explosive gas atmospheres and in zones 21 and 22 of explosive dust atmospheres.
- All work must be carried out outside of explosive areas.
- The device is not intended for use with other fluids.
- It is not intended to be used as a spring and damping element. Impermissible loads may occur.

4.2 Intended use

The semi-rotary drive operates process valves in fluid engineering systems, e.g. ball valves or butterfly valves, with a rotation angle up to 180°.

4.3 Identification X: special conditions

- Danger of electrostatic discharge.
- Ambient temperature
- Standard: -20°C ≤ Ta ≤ +80°C
- Variant T4: 0°C ≤ Ta ≤ +150°C
- Variant T6: -50°C ≤ Ta ≤ +60°C

5 Function

Pressurising the cylinder chambers causes the piston in the pipe to move back and forth. The linear motion is converted to rotary motion by a rack and pinion unit.

6 Commissioning

- Seal unused openings with blanking plugs or slot covers.

WARNING
The discharge of electrostatically charged parts may cause ignitable sparks.
• Prevent electrostatic charges by taking appropriate installation and cleaning measures.
• For equipotential bonding connect all conductive metal parts together.
• Include the shaft in the equipotential bonding of the system.
• Include the housing in the equipotential bonding of the system.
• Earth the entire system.

WARNING
Corrosive gases and dust particles inside components may cause changes to material and material damage. Explosive gas atmospheres or dust should not penetrate into the spring cavity 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 cavity by tubing lines at port 4 outside potentially explosive zones.

NOTICE
Installation and commissioning should only be carried out in accordance with the operating instructions and by qualified specialist personnel.

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

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

NOTICE
Related type of ignition protection: c (constructional safety)

NOTICE
Particulate matter in the compressed air can cause electrostatic charges.

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

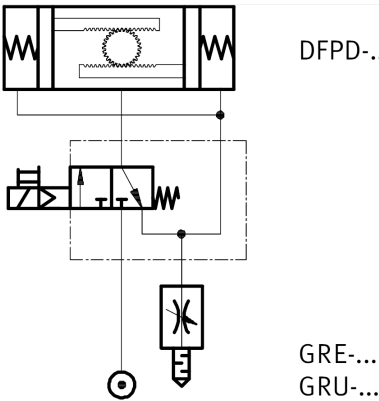


Fig. 1: Exhaust return

7 Maintenance

- Service the device after 6 months at the latest and check that it is functioning correctly.

8 Fault clearance

Malfunction	Remedy
External damage after visual inspection.	<ul style="list-style-type: none">– Replace device.– Return the device to the Festo repair service.
The mounting is not secure.	<ul style="list-style-type: none">– Tighten the retaining screws.
Audible leakage.	<ul style="list-style-type: none">– Replace wear part.– Return the device to the Festo repair service.

Tab. 3: Fault clearance

Wearing parts and spare parts can be replaced in individual cases. Work of this type must be carried out by trained and authorised specialists only.

- Please contact your Festo technical consultant.

9 Technical data

DFPD	
Maximum operating pressure [MPa] [bar]	0.8 8
Ambient temperature [°C]	–20 ... +80
Ambient temperature T4 [°C]	0 ... +150
Ambient temperature T6 [°C]	–50 ... +60
Max. operating frequency [Hz]	1
Torques	➔ www.festo.com/catalogue
Operating medium	Compressed air in accordance with ISO 8573-1:2010 [7:4:4]
Operating medium T4, T6	Compressed air in accordance with ISO 8573-1:2010 [7:2:4]
Information on the operating medium	Pressure dew point at least 10 °C below the outside temperature.
Mounting position	Any
Materials	
Seals	Standard: NBR T4: FKM T6: FVMQ
All aluminium alloys used contain less than 7.5% magnesium (Mg).	

Tab. 4: Technical data