

Quarter turn actuator DFPD-3500-...

Part number: 8042197

FESTO



Data sheet

Feature	Value
Size of valve actuator	3500
Flange hole pattern	F16
Swivel angle	90 deg
End-position adjusting range at 0°	-5 deg...5 deg
End-position adjusting range at nominal swivel angle	-5 deg...5 deg
Depth shaft connection	48 mm...50 mm
Standard connection for valve	ISO 5211
Mounting position	Any
Mode of operation	Double-acting Single-acting
Structural design	Scotch yoke system Gear rack/pinion
Closing direction	Clockwise closing Closes to the left
Valve connection conforms to standard	VDI/VDE 3845 (NAMUR)
Connection point for positioner and position sensor conforms to standard	VDI/VDE 3845 size AA 2 VDI/VDE 3845 size AA 3
Safety function	The safety function consists of the drive switching to the defined safety switching position. This switching movement is achieved by pressurizing the corresponding pressure chamber with compressed air. The value of the torque generated depends on the pressure difference between the two pressure chambers separated by the piston. The safety function consists of the drive switching to the defined safety switching position when the compressed air is switched off and the spring chamber is exhausted. This switching movement is achieved by the spring force of the spring assembly.
Safety integrity level (SIL)	Up to SIL 2 low demand mode up to SIL 3 in a redundant architecture
Certified for safety function to ISO 13849 and IEC 61508 (SIL)	Product can be used in safety-related parts of control systems up to SIL 2, low demand up to SIL 3 in a redundant architecture
Burst pressure	24 bar
Operating pressure	0.2 MPa...0.8 MPa 2 bar...8 bar 29 psi...116 psi

Feature	Value
Nominal operating pressure	0.3 MPa...0.6 MPa 3 bar...6 bar 43.5 psi...87 psi
CE marking (see declaration of conformity)	as per EU explosion protection directive (ATEX)
UKCA marking (see declaration of conformity)	acc. to UK EX instructions
Explosion protection certification outside the EU	EPL Db (GB) EPL Gb (GB)
Explosion prevention and protection	Zone 1 (ATEX) Zone 1 (UKEX) Zone 2 (ATEX) Zone 21 (ATEX) Zone 21 (UKEX) Zone 22 (ATEX)
Certificate issuing authority	German Technical Control Board (TÜV) Rheinland 968/V 2959.00/2025
ATEX category gas	II 2G
ATEX category for dust	II 2D
Type of ignition protection for gas	Ex h IIC T6 Gb
Type of (ignition) protection for dust	Ex h IIIC T85°C Db
Explosive ambient temperature	-20°C ≤ Ta ≤ +80°C
Operating medium	Compressed air as per ISO 8573-1:2010 [7:3:4]
Information on operating and pilot media	Dew point min. 10 °C below the ambient temperature and temperature of medium Operation with oil lubrication possible (required for further use)
LABS (PWIS) conformity	VDMA24364 zone III
Storage temperature	-20 °C...60 °C
Ambient temperature	-20 °C...80 °C
Torque at nominal operating pressure and 0° swivel angle	1052 Nm...3993.9 Nm
Torque at nominal operating pressure and 90° swivel angle	764 Nm...3993.9 Nm
Note about the torque	The actuator's operating torque must not be higher than the maximum permissible torque listed in ISO 5211, based on the size of the mounting flange and the coupling.
Spring return torque at 0° swivel angle	710 Nm...1627 Nm
Spring return torque with 90° swivel angle	997 Nm...2822 Nm
Air consumption at 6 bar per cycle 0°-nominal swivel angle-0°	91.7 l...314.37 l
Product weight	75500 g...174000 g
Shaft connection	T46
Pneumatic connection	G1/2
Note on materials	RoHS-compliant
Material of end caps	Spheroidal graphite cast iron
Stop screw material	Steel
Material of sub-base	Wrought aluminum alloy, anodized
Cover material	Die cast aluminum, painted
Seals material	NBR
Material of spring	Spring steel
Spring rod material	Steel
Housing material	Aluminum, anodized Spherulitic graphite iron
Material number of housing	EN AW-6005
Material of piston	Die-cast aluminum Spheroidal graphite cast iron
Piston rod material	Steel
Material of bearing	POM
Material of screws	High-alloy stainless steel
Shaft material	Steel, nickel-plated
Tie rod material	Steel
Material of cylinder barrel	Steel