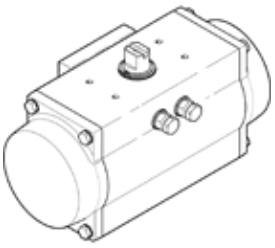
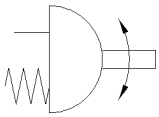
Semi-rotary actuator
DFPD-N-120-RP-90-RS60-F0507

Part number: 8066447

FESTO

single-acting, rack and pinion design, connection pattern according to NAMUR VDI/VDE 3845 for mounting solenoid valves, position sensors and positioners, standard connection to fitting ISO 5211, NPT-control air connection thread type.





Data sheet

Feature	Value
Size of actuator	120
Flange hole pattern	F0507
Swivel angle	90 deg
End-position adjustment range at 0°	-5 ... 5 deg
End-position adjusting range at nominal swivel angle	-5 ... 5 deg
Shaft connection depth	19 mm
Fitting connection conforms to standard	ISO 5211
Assembly position	Any
Mode of operation	single-acting
Design structure	Rack and pinion
Closing direction	right-closing
Valve connection conforms to standard	VDI/VDE 3845 (NAMUR)
Connection for positioner and position sensor conforms to standard	VDI/VDE 3845 size AA 1
Component suitable for safety functions	Safety device
Safety function	The safety function consists of the actuator switching to the specified safety switching position when the compressed air is switched off and the spring chamber is exhausted. This switching movement is achieved through the spring force of the spring assembly.
Safety Integrity Level (SIL)	Product can be used in SRP/CS up to SIL 2 low demand Up to SIL 3 in redundant architecture up to SIL 1 high demand mode
Certified for safety function to ISO 13849 and IEC 61508 (SIL)	Product can be used in SRP/CS up to SIL 2 low demand up to SIL 1 high demand mode Up to SIL 3 in redundant architecture
Operating pressure MPa	0.2 ... 0.8 MPa
Working pressure	2 ... 8 bar
Operating pressure	29 ... 116 psi
Nominal operating pressure	0.6 MPa
Nominal working pressure	6 bar
Nominal operating pressure (psi)	87 psi
Maritime classification	see certificate
CE symbol (see declaration of conformity)	according to EU-Ex protection guideline (ATEX)
UKCA marking (see declaration of conformity)	To UK EX instructions
Explosion protection certification outside the EU	EPL Db (GB) EPL Gb (GB)
Certificate issuing department	DNV TAP00001CE German Technical Control Board (TÜV) Rheinland 968/V 1106.01/2023
ATEX category Gas	II 2G
ATEX category Dust	II 2D
Explosion ignition protection type Gas	Ex h IIC T4 Gb X
Explosion ignition protection type Dust	Ex h IIIC T105°C Db X

Feature	Value
Explosion-proof ambient temperature	-20°C <= Ta <= +80°C
Operating medium	Compressed air in accordance with ISO8573-1:2010 [7:4:4]
Note on operating and pilot medium	Pressure dew point 10°C below ambient temperature/temperature of medium Lubricated operation possible (subsequently required for further operation)
Corrosion resistance classification CRC	1 - Low corrosion stress
PWIS conformity	VDMA24364-B1/B2-L
Storage temperature	-20 ... 60 °C
Ambient temperature	-20 ... 80 °C
Torque at rated working pressure and 0° rotation angle	86 Nm
Torque at nominal operating pressure with 90° swivel angle	44.8 Nm
Note about the torque	The operating torque of the actuator must not be higher than the maximum permissible torque listed in ISO 5211, with reference to the size of the mounting flange and of the coupling.
Spring return torque with 0° swivel angle	42.1 Nm
Spring return torque at 90°	83.3 Nm
Mean Time to Dangerous Failure (MTTFd)	1126 years
Probability of Failure per Hour in [1/h].	1.01E-07
PFD (Probability of Failure on Demand)	7.8E-04
Air consumption at 0.6 MPa (6 bar, 87 psi) per cycle 0°-nominal swivel angle-0°	4.3 l
Product weight	5,736 g
Shaft connection	T17
Pneumatic connection	1/4 NPT
Materials note	Conforms to RoHS
Material of connecting plate	Anodised wrought aluminium alloy
Material cover	Coated die-cast aluminium
Material seals	NBR
Material spring	Spring steel
Material housing	Anodised wrought aluminium alloy
Material piston	Aluminum die cast
Material bearing	POM
Material cam	High alloy steel, non-corrosive
Material screws	High alloy steel, non-corrosive
Material shaft	Steel, nickel-plated