

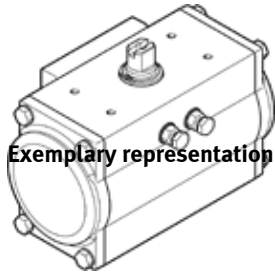
# Semi-rotary actuator

## DFPD-120-

Part number: 8042188

FESTO

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.



## Data sheet

Overall data sheet – Individual values depend upon your configuration.

Feature	Value
Size of actuator	120
Flange hole pattern	F07 F0507
Swivel angle	90 ... 180 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	double-acting single-acting
Design structure	Rack and pinion
Closing direction	right-closing Closes to the left
Valve connection conforms to standard	VDI/VDE 3845 (NAMUR)
Connection for positioner and position sensor conforms to standard	VDI/VDE 3845 size AA 1
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 working pressure	2 ... 6 bar
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 T3 Gb X Ex h IIC T4 Gb X Ex h IIC T6 Gb X
Explosion ignition protection type Dust	Ex h IIIC T105°C Db X Ex h IIIC T175°C Db X Ex h IIIC T85°C Db X

Feature	Value
Explosion-proof ambient temperature	-20°C ≤ Ta ≤ +80°C -50°C ≤ Ta ≤ +60°C 0°C ≤ Ta ≤ +150°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 VDMA24364 zone III
Storage temperature	-20 ... 60 °C
Ambient temperature	-50 ... 150 °C
Torque at rated working pressure and 0° rotation angle	28.7 ... 117.4 Nm
Torque at nominal operating pressure with 90° swivel angle	14.9 ... 117.4 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	14 ... 42.1 Nm
Spring return torque at 90°	27.8 ... 83.3 Nm
Air consumption at 0.6 MPa (6 bar, 87 psi) per cycle 0°-nominal swivel angle-0°	4.3 ... 12.8 l
Product weight	4,872 ... 7,122 g
Shaft connection	T17
Pneumatic connection	G1/4 1/8 NPT 1/4 NPT
Materials note	Conforms to RoHS
Material of connecting plate	Anodised wrought aluminium alloy
Material cover	Coated die-cast aluminium
Material seals	FPM FVMQ NBR
Material spring	Spring steel
Material housing	Anodised wrought aluminium alloy
Material piston	Aluminum die cast
Material bearing	POM PPS-reinforced
Material cam	Steel High alloy steel, non-corrosive
Material screws	High alloy steel, non-corrosive
Material shaft	Steel, nickel-plated High alloy steel, non-corrosive