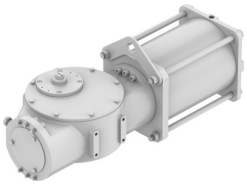
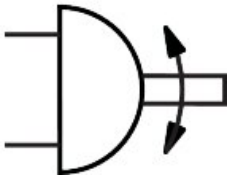
Quarter turn actuator
DFPD-4500-SY-Y-90-RD-F1625

Part number: 8211837





Data sheet

Feature	Value
Size of valve actuator	4500
Flange hole pattern	F1625
Swivel angle	90 deg
End-position adjustment range at 0°	-5 deg...5 deg
End-position adjustment range at nominal swivel angle	-5 deg...5 deg
Shaft connection depth	57 mm
Fitting connection conforms to standard	ISO 5211
Mounting position	Any
Mode of operation	Double-acting
Design	Scotch yoke system
Closing direction	Closes to the right
Valve connection conforms to standard	VDI/VDE 3845 (NAMUR)
Connection point for positioner and position sensor conforms to standard	VDI/VDE 3845 size AA 3
Safety function	The safety function consists of the actuator switching to the specified safety switching position. This switching movement is achieved by pressurising the corresponding pressure chamber with compressed air. The value of the generated torque depends on the pressure difference between the two pressure chambers separated by the piston.
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 SRP/CS up to SIL 2 (Low Demand) Up to SIL 3 in a redundant architecture
Burst pressure	18 bar
Operating pressure	0.3 MPa...0.6 MPa 3 bar...6 bar 43.5 psi...87 psi
Nominal operating pressure	0.55 MPa 5.5 bar 79.75 psi
CE mark (see declaration of conformity)	To EU Explosion Protection Directive (ATEX)
UKCA marking (see declaration of conformity)	To UK EX instructions
Explosion protection certification outside the EU	EPL Db (GB) EPL Gb (GB)
Explosion protection	Zone 1 (ATEX)

Feature	Value
	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 dust	II 2D
Explosion ignition protection type for gas	Ex h IIC T6 Gb
Explosion ignition protection type for dust	Ex h IIIC T85°C Db
Explosion ambient temperature	-20°C <= Ta <= +80°C
Operating medium	Compressed air to ISO 8573-1:2010 [7:3:4]
Note on operating and pilot medium	Dew point at least 10 °C below the ambient temperature and temperature of the medium Lubricated operation possible (in which case lubricated operation will always be required)
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	4780 Nm
Torque at nominal operating pressure and 90° swivel angle	4780 Nm
Note on 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.
Air consumption at 0.6 MPa (6 bar, 87 psi) per cycle 0°-nominal swivel angle-0°	210 l
Product weight	139000 g
Shaft connection	T55
Pneumatic connection	G1/2
Note on materials	RoHS compliant
Material end cap	Steel
Material stop screw	Steel
Material seals	NBR
Material spring	Spring steel
Material spring rod	Steel
Material housing	Spheroidal graphite cast iron
Material piston	Spheroidal graphite cast iron
Material piston rod	Steel
Material tie rod	Steel
Material cylinder barrel	Steel