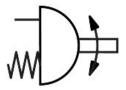
## Semi-rotary drive DFPD-300-RP-90-RS60-F10-R3-C Part number: 8102853

**FESTO** 





## **Data sheet**

Feature	Value
Size of valve actuator	300
Flange hole pattern	F10
Swivel angle	90 deg
End-position adjustment range at 0°	-5 deg5 deg
End-position adjustment range at nominal swivel angle	-5 deg5 deg
Shaft connection depth	24 mm
Fitting connection conforms to standard	ISO 5211
Mounting position	optional
Mode of operation	Single-acting
Design	Rack and pinion
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 2
Device type according to VDMA 66413	Safety device
Safety function	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 realised by the spring force of the spring assembly.
Safety Integrity Level (SIL)	To SIL 2 Low Demand mode Up to SIL 3 in a 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) Product can be used in SRP/CS up to SIL 1 (High Demand) Up to SIL 3 in a redundant architecture
Burst pressure	24 bar
Operating pressure	0.2 MPa0.8 MPa 2 bar8 bar 29 psi116 psi
Nominal operating pressure	0.6 MPa 6 bar 87 psi
Maritime classification	See certificate
CE mark (see declaration of conformity)	To EU Explosion Protection Directive (ATEX)
UKCA marking (see declaration of conformity)	To UK EX instructions

Explosion protection  Explosion grows (UKEX)  Zone 2 (	Feature	Value
Zone 1 (UKEX) Zone 21 (ATEX) Zone 21 (ATEX) Zone 22 (ATEX) Zone 24 (TEX) Zone 25 (TEX) Zone 26 (TEX) Zone 26 (TEX) Zone 26 (TEX) Zone 26 (TEX) Zone 27 (TEX) Zone 26 (TEX) Zone 27 (TEX) Zone	Explosion protection certification outside the EU	
German Technical Control Board (TÜV) Rheinland 968/V 1106.01/2023 ATEX category gas II 2G ATEX category dust II 2G Explosion ignition protection type for gas Ex h IIC T4 Gb X Explosion ignition protection type for dust Exh IIC T105°C Db X Explosion ignition protection type for dust Exh IIC T105°C Db X Explosion ignition protection type for dust Exh IIC T105°C Db X Explosion ambient temperature 20°C < = Ta < = 80°C Operating medium Compressed air to ISO 8573·1:2010 [7:4:4] Note on operating and pilot medium Dubricated operation possible (in which case lubricated operation will always be required)  LABS (PWIS) conformity VDMA24364-81/82-L Storage temperature 20°C60°C Ambient temperature 20°C60°C Ambient temperature 20°C60°C Ambient temperature 210°C60°C Ambient temperature 211 Mm Torque at nominal operating pressure and 90° swivel angle 115.3 Nm Note on torque more an operating pressure and 90° swivel angle 115.3 Nm Note on torque Marcha and Scholar Marcha a	Explosion protection	Zone 1 (UKEX) Zone 2 (ATEX) Zone 21 (ATEX) Zone 21 (UKEX)
ATEX category dust Explosion ignition protection type for gas Explosion ignition protection type for dust Explosion ignition protection for Explosion ignition protection will Explosion ignition igni	Certificate issuing authority	
Explosion ignition protection type for gas Explosion ignition protection type for dust Explosion ignition protection type for dust Explosion ignition protection type for dust Explosion ambient temperature -20 °C <= Ta <= +80 °C Operating medium Compressed air to ISO 8573-1:2010 [7:4:4] Note on operating and pilot medium Unbricated operation possible (in which case lubricated operation will always be required)  LABS (PWIS) conformity VDMA24364-B1/B2-L Storage temperature -20 °C80 °C -20 °C80 °C -21 Mm Torque at nominal operating pressure and 0° swivel angle 115.3 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.  Spring return torque at 0° swivel angle 108.4 Nm Spring return torque at 0° swivel angle 214.1 Nm Mean time to dangerous failure (MTTFd) 1126 years Probability of Failure per Hour (PFH) 1.01E-07 Probability of Failure per Hour (PFH) 1.01E-07 Probability of Failure on Demand (PFD) Air consumption at 0.6 MPa (6 bar, 87 psi) per cycle 0°-nominal swivel angle-0° Product weight Shaft connection 51/4 Note on materials Material sub-base Anodised wrought aluminium alloy Material cover Material south Sas Anodised wrought aluminium alloy Material cover Material south Sas Anodised wrought aluminium alloy Material south Sas Anodised wrought aluminium alloy Material piston Material south Sas Anodised wrought aluminium alloy Material piston Material sources Mater	ATEX category gas	II 2G
Explosion ignition protection type for dust Explosion ignition protection type for dust Explosion ambient temperature  -20 °C <= Ta <= +80 °C Operating medium Compressed air to ISO 8573-1:2010 [7:4:4] 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 VDMA24364-81/B2-L  Storage temperature -20 °C60 °C Ambient temperature -20 °C80 °C Torque at nominal operating pressure and 0° swivel angle 115.3 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.  Spring return torque at 0° swivel angle 108.8 Nm Spring return torque at 90° swivel angle 214.1 Nm Mean time to dangerous failure (MTTFd) 1126 years Probability of Failure per Hour (PFH) 1.01E-07 Probability of Failure on Demand (PFD) 0.00078 Air consumption at 0.6 MPa (6 bar, 87 psi) per cycle 0°-nominal swivel angle-0° Product weight 12899 g Shaft connection 172 Pheumatic connection 171 Material sub-base Anodised wrought aluminium alloy Material soub-base Material soub-base Material soub-base Material souring Material souring Material souring Material piston Material bosing Material piston Material bosing Material bosing Material piston Material souring Material souri	ATEX category dust	II 2D
Explosion ambient temperature  -20 °C <= Ta <= +80 °C  Operating medium  Compressed air to ISO 8573-1:2010 [7:4:4]  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-B1/B2-L  Storage temperature  -20 °C60 °C  Ambient temperature  -20 °C60 °C  Ambient temperature  Torque at nominal operating pressure and 0° swivel angle  Torque at nominal operating pressure and 90° swivel angle  Torque at nominal operating pressure and 90° swivel angle  Torque at nominal operating pressure and 90° swivel angle  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 at 90° swivel angle  Spring return torque at 90° swivel angle  108.4 Nm  Spring return torque at 90° swivel angle  1126 years  Probability of Failure per Hour (PFH)  1.01E-07  Probability of Failure per Hour (PFH)  1.01E-07  Probability of Failure on Demand (PFD)  3.000078  Air consumption at 0.6 MPa (6 bar, 87 psi) per cycle 0°-nominal swivel angle o'  Prefundation on Eemand (PFD)  Anodised wrought aluminium alloy  Material sub-base  Anodised wrought aluminium alloy  Material sub-base	Explosion ignition protection type for gas	Ex h IIC T4 Gb X
Operating medium  Compressed air to ISO 8573-1:2010 [7:4:4]  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-B1/82-L  Storage temperature  -20 °C60 °C  Ambient temperature  -20 °C60 °C  Torque at nominal operating pressure and 0° swivel angle  221 Nm  Torque at nominal operating pressure and 90° swivel angle  Torque at nominal operating pressure and 90° swivel angle  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 at 0° swivel angle  Spring return torque at 90° swivel angle  214.1 Nm  Mean time to dangerous failure (MTTFd)  1126 years  Probability of Failure per Hour (PFH)  1.01E-07  Probability of Failure on Demand (PFD)  Air consumption at 0.6 MPa (6 bar, 87 psi) per cycle 0°-nominal swivel angle  Product weight  Shaft connection  T22  Predumatic connection  G1/4  Note on materials  RoHS-compliant  Material sub-base  Anodised wrought aluminium alloy  Material sub-base  Material sub-base  Material spring  Material seals  NBR  Material spring  Material bousing  Material bousing  Material bousing  Material bousing  Material bearing  Material bearing  Material bearing  Material sears  Material	Explosion ignition protection type for dust	Ex h IIIC T105°C Db X
Dew point at least 10 °C below the ambient temperature and temperature of the medium ubricated operation possible (in which case lubricated operation will always be required)  LABS (PWIS) conformity  VDMA24364-B1/B2-L  Storage temperature  -20 °C60 °C  Ambient temperature  -20 °C80 °C  Torque at nominal operating pressure and 0° swivel angle  221 Nm  Torque at nominal operating pressure and 90° swivel angle  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 at 0° swivel angle  108.4 Nm  Spring return torque at 90° swivel angle  214.1 Nm  Mean time to dangerous failure (MTTFd)  1126 years  Probability of Failure per Hour (PFH)  1.01E-07  Probability of Failure on Demand (PFD)  Air consumption at 0.6 MPa (6 bar, 87 psi) per cycle 0°-nominal swivel angle  12899 g  Shaft connection  T22  Preduct weight  Note on materials  RoHS-compliant  Material sub-base  Anodised wrought aluminium alloy  Material sub-base  Anodised wrought aluminium alloy  Material spring  Material spring  Material spring  Material spring  Material bousing  Material bousing  Material bousing  Material bearing  Material bearing  Material bearing  Material bearing  Material screws  High-alloy stainless steel	Explosion ambient temperature	-20 °C <= Ta <= +80 °C
temperature of the medium Lubricated operation possible (in which case lubricated operation will always be required)  LABS (PWIS) conformity  VDMA24364-B1/B2-L  Storage temperature  -20 °C60 °C  Ambient temperature  -20 °C60 °C  Torque at nominal operating pressure and 0° swivel angle  Torque at nominal operating pressure and 90° swivel angle  Torque at nominal operating pressure and 90° swivel angle  Torque at nominal operating pressure and 90° swivel angle  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 at 9° swivel angle  108.4 km  Spring return torque at 9°0° swivel angle  214.1 km  Mean time to dangerous failure (MTTFd)  1126 years  Probability of Failure per Hour (PFH)  1.01E-07  Probability of Failure on Demand (PFD)  0.00078  Air consumption at 0.6 MPa (6 bar, 87 psi) per cycle 0°-nominal swivel angle-0°  Product weight  12899 g  Shaft connection  722  Pheumatic connection  G1/4  Note on materials  RoHS-compliant  Material sub-base  Anodised wrought aluminium alloy  Material sub-base  Material sub-base  Material spring  Material spring  Material spring  Material spring  Material bousing  Anodised wrought aluminium alloy  Material spring  Material bousing  Material bousing  Material spring	Operating medium	Compressed air to ISO 8573-1:2010 [7:4:4]
Storage temperature -20 °C60 °C Ambient temperature -20 °C80 °C Torque at nominal operating pressure and 0° swivel angle 221 Nm Torque at nominal operating pressure and 90° swivel angle 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.  Spring return torque at 90° swivel angle 108.4 Nm Spring return torque at 90° swivel angle 214.1 Nm Mean time to dangerous failure (MTTFd) 1126 years Probability of Failure per Hour (PFH) 1.01E-07 Probability of Failure on Demand (PFD) 0.00078 Air consumption at 0.6 MPa (6 bar, 87 psi) per cycle 0°-nominal swivel angle-0°-nominal swi	Note on operating and pilot medium	temperature of the medium Lubricated operation possible (in which case lubricated operation will
Ambient temperature -20 °C80 °C Torque at nominal operating pressure and 90° swivel angle Torque at nominal operating pressure and 90° swivel angle 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.  Spring return torque at 90° swivel angle 108.4 Nm Spring return torque at 90° swivel angle 214.1 Nm Mean time to dangerous failure (MTTFd) 1126 years Probability of Failure per Hour (PFH) 1.01E-07 Probability of Failure on Demand (PFD) 0.00078 Air consumption at 0.6 MPa (6 bar, 87 psi) per cycle 0°-nominal swivel angle-0° Product weight 12899 g Shaft connection T22 Pheumatic connection G1/4 Note on materials RoHS-compliant Material sub-base Anodised wrought aluminium alloy Material seals NBR Material seals NBR Material spring Spring steel Material housing Material piston Die-cast aluminium Material piston Material bearing POM Material cam Material scares High-alloy stainless steel	LABS (PWIS) conformity	VDMA24364-B1/B2-L
Torque at nominal operating pressure and 0° swivel angle Torque at nominal operating pressure and 90° swivel angle Torque at nominal operating pressure and 90° swivel angle 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.  Spring return torque at 0° swivel angle 108.4 Nm  Spring return torque at 90° swivel angle 214.1 Nm  Mean time to dangerous failure (MTTFd) 1126 years  Probability of Failure per Hour (PFH) 1.01E-07  Probability of Failure on Demand (PFD) 0.00078  Air consumption at 0.6 MPa (6 bar, 87 psi) per cycle 0°-nominal swivel angle-0°  Product weight 12899 g  Shaft connection T22  Pneumatic connection G1/4  Note on materials RoHS-compliant Material sub-base Anodised wrought aluminium alloy Material seals NBR  Material spring Spring steel Material positon Die-cast aluminium Material bousing Material bousing Material bousing Material bearing POM Material core Material cam Material cam High-alloy stainless steel	Storage temperature	-20 °C60 °C
Torque at nominal operating pressure and 90° swivel angle  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.  Spring return torque at 90° swivel angle  108.4 Nm  Spring return torque at 90° swivel angle  214.1 Nm  Mean time to dangerous failure (MTTFd)  1126 years  Probability of Failure per Hour (PFH)  1.01E-07  Probability of Failure on Demand (PFD)  0.00078  Air consumption at 0.6 MPa (6 bar, 87 psi) per cycle 0°-nominal swivel angle-0°  Product weight  12899 g  Shaft connection  722  Pneumatic connection  G1/4  Note on materials  RoHS-compliant  Material sub-base  Anodised wrought aluminium alloy  Material seals  Material spring  Anodised wrought aluminium alloy  Material piston  Material piston  Die-cast aluminium  Material bearing  POM  Material com  Material cam  Material screws  High-alloy stainless steel	Ambient temperature	-20 °C80 °C
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 at 9° swivel angle  108.4 Nm  Spring return torque at 9°° swivel angle  214.1 Nm  Mean time to dangerous failure (MTFd)  1126 years  Probability of Failure per Hour (PFH)  1.01E-07  Probability of Failure on Demand (PFD)  0.00078  Air consumption at 0.6 MPa (6 bar, 87 psi) per cycle 0°-nominal swivel angle-0°  Product weight  12899 g  Shaft connection  51/4  Note on materials  Anotised wrought aluminium alloy  Material sub-base  Anodised wrought aluminium alloy  Material seals  NBR  Material spring  Spring steel  Material piston  Material piston  Material piston  Material bearing  POM  Material cam  Material screws  High-alloy stainless steel	Torque at nominal operating pressure and 0° swivel angle	221 Nm
maximum permissible torque listed in ISO 5211, with reference to the size of the mounting flange and of the coupling.  Spring return torque at 9° swivel angle  108.4 Nm  Mean time to dangerous failure (MTTFd)  1126 years  Probability of Failure per Hour (PFH)  1.01E-07  Probability of Failure on Demand (PFD)  Air consumption at 0.6 MPa (6 bar, 87 psi) per cycle 0°-nominal swivel angle-0°  Product weight  12899 g  Shaft connection  722  Pneumatic connection  G1/4  Note on materials  Material sub-base  Anodised wrought aluminium alloy  Material cover  Anodised wrought aluminium alloy  Material spring  Material spring  Material spring  Material piston  Material piston  Material bearing  Material cam  Material screws  Material screws  High-alloy stainless steel	Torque at nominal operating pressure and 90° swivel angle	115.3 Nm
Spring return torque at 90° swivel angle  Mean time to dangerous failure (MTTFd)  Probability of Failure per Hour (PFH)  1.01E-07  Probability of Failure on Demand (PFD)  Air consumption at 0.6 MPa (6 bar, 87 psi) per cycle 0°-nominal swivel angle-0°  Product weight  12899 g  Shaft connection  T22  Pneumatic connection  G1/4  Note on materials  RoHS-compliant  Material sub-base  Anodised wrought aluminium alloy  Material seals  Material spring  Material spring  Material housing  Material piston  Material bearing  Material com  Material com  Material com  Material bearing  Material com  Material com  Material com  Material piston  Material piston  Material com  Material com  Material com  Material com  Material bearing  Material bearing  Material com  Material screws  High-alloy stainless steel	Note on torque	maximum permissible torque listed in ISO 5211, with reference to the
Mean time to dangerous failure (MTFd)  1126 years  Probability of Failure per Hour (PFH)  1.01E-07  Probability of Failure on Demand (PFD)  Air consumption at 0.6 MPa (6 bar, 87 psi) per cycle 0°-nominal swivel angle-0°  Product weight  11 l  12899 g  Shaft connection  T22  Pneumatic connection  Note on materials  RoHS-compliant  Material sub-base  Anodised wrought aluminium alloy  Material cover  Anodised wrought aluminium alloy  Material seals  NBR  Material spring  Spring steel  Material housing  Anodised wrought aluminium alloy  Material piston  Die-cast aluminium  Material bearing  POM  Material corews  High-alloy stainless steel	Spring return torque at 0° swivel angle	108.4 Nm
Probability of Failure per Hour (PFH)  1.01E-07  Probability of Failure on Demand (PFD)  Air consumption at 0.6 MPa (6 bar, 87 psi) per cycle 0°-nominal swivel angle-0°  Product weight  12899 g  Shaft connection  T22  Pneumatic connection  Kote on materials  Material sub-base  Anodised wrought aluminium alloy  Material seals  Material spring  Material spring  Material housing  Material piston  Material bearing  Material cam  Material screws  High-alloy stainless steel	Spring return torque at 90° swivel angle	214.1 Nm
Probability of Failure on Demand (PFD)  Air consumption at 0.6 MPa (6 bar, 87 psi) per cycle 0°-nominal swivel angle-0°  Product weight  12899 g  Shaft connection  T22  Pneumatic connection  G1/4  Note on materials  Material sub-base  Anodised wrought aluminium alloy  Material seals  NBR  Material seals  Material spring  Material piston  Material piston  Material bearing  Material cam  Material screws  Material screws  Material screws  Material screws  Material screws  Material screws  Migh-alloy stainless steel	Mean time to dangerous failure (MTTFd)	1126 years
Air consumption at 0.6 MPa (6 bar, 87 psi) per cycle 0°-nominal swivel angle-0°  Product weight  Shaft connection  T22  Pneumatic connection  Mote on materials  Material sub-base  Anodised wrought aluminium alloy  Material seals  NBR  Material spring  Material spring  Material housing  Material piston  Material bearing  Material com  Material com  Material com  Material piston  Material bearing  POM  Material screws  High-alloy stainless steel	Probability of Failure per Hour (PFH)	1.01E-07
angle-0°  Product weight  12899 g  Shaft connection  T22  Pneumatic connection  G1/4  Note on materials  Material sub-base  Anodised wrought aluminium alloy  Material seals  NBR  Material spring  Material spring  Spring steel  Material housing  Anodised wrought aluminium alloy  Die-cast aluminium alloy  Material bearing  Material bearing  POM  Material cam  Material screws  High-alloy stainless steel	Probability of Failure on Demand (PFD)	0.00078
Shaft connection T22 Pneumatic connection G1/4 Note on materials Material sub-base Anodised wrought aluminium alloy Material seals NBR Material spring Spring steel Material housing Anodised wrought aluminium alloy Die-cast aluminium alloy Material bearing Material searing Material searing Material searing Material searing High-alloy stainless steel Material screws  T22  RoHS-Compliant Anodised wrought aluminium alloy Die-cast aluminium Material searing Material searing Material screws High-alloy stainless steel	Air consumption at 0.6 MPa (6 bar, 87 psi) per cycle 0°-nominal swivel angle-0°	11
Pneumatic connection  G1/4  Note on materials  RoHS-compliant  Material sub-base  Anodised wrought aluminium alloy  Material cover  Anodised wrought aluminium alloy  Material seals  NBR  Material spring  Spring steel  Material housing  Anodised wrought aluminium alloy  Die-cast aluminium alloy  Material bearing  POM  Material cam  Steel  Material screws  High-alloy stainless steel	Product weight	12899 g
Note on materials  Material sub-base  Anodised wrought aluminium alloy  Material cover  Anodised wrought aluminium alloy  Material seals  NBR  Material spring  Spring steel  Material housing  Anodised wrought aluminium alloy  Die-cast aluminium alloy  Material bearing  POM  Material cam  Steel  Material screws  High-alloy stainless steel	Shaft connection	T22
Material sub-base Anodised wrought aluminium alloy Material cover Anodised wrought aluminium alloy Material seals NBR Material spring Spring steel Material housing Anodised wrought aluminium alloy Material piston Die-cast aluminium Material bearing POM Material cam Steel Material screws High-alloy stainless steel	Pneumatic connection	G1/4
Material cover  Material seals  MBR  Material spring  Spring steel  Material housing  Anodised wrought aluminium alloy  Material piston  Die-cast aluminium  Material bearing  POM  Material cam  Steel  Material screws  High-alloy stainless steel	Note on materials	RoHS-compliant
Material seals  Material spring  Spring steel  Material housing  Anodised wrought aluminium alloy  Die-cast aluminium  Material bearing  POM  Material cam  Steel  Material screws  High-alloy stainless steel	Material sub-base	Anodised wrought aluminium alloy
Material spring Spring steel  Material housing Anodised wrought aluminium alloy  Material piston Die-cast aluminium  Material bearing POM  Material cam Steel  Material screws High-alloy stainless steel	Material cover	Anodised wrought aluminium alloy
Material housing Anodised wrought aluminium alloy Material piston Die-cast aluminium Material bearing POM Material cam Steel Material screws High-alloy stainless steel	Material seals	NBR
Material piston Die-cast aluminium  Material bearing POM  Material cam Steel  Material screws High-alloy stainless steel	Material spring	Spring steel
Material bearing POM  Material cam Steel  Material screws High-alloy stainless steel	Material housing	Anodised wrought aluminium alloy
Material cam Steel Material screws High-alloy stainless steel	Material piston	Die-cast aluminium
Material screws High-alloy stainless steel	Material bearing	РОМ
	Material cam	Steel
Material shaft High-alloy stainless steel	Material screws	High-alloy stainless steel
	Material shaft	High-alloy stainless steel