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Process Automation Specialist Partner



www.actuation.co.uk



Quarter turn actuators DFPD

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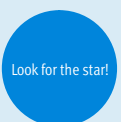


Festo core product range
Covers 80% of your automation tasks

Worldwide:
Superb:
Easy:

Always in stock
Festo quality at an attractive price
Reduces procurement and storing complexity

★ Generally ready for shipping ex works in 24 hours
Held in stock in 13 service centres worldwide
More than 2200 product
★ Generally ready for shipping ex works in 5 days
Assembled for you in 4 service centres worldwide
Up to 6 x 10¹² variants per product series



Quarter turn actuators DFPD

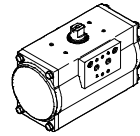
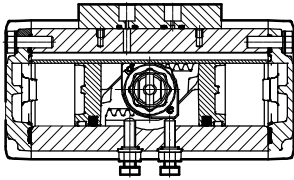
Key features



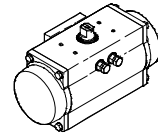
Function

The DFPD series features a rack and pinion combination with a constant torque characteristic across the entire swivel range. Sizes 10 to 2300 are available. The DFPD is suitable for the automation of butterfly valves, ball valves and air

dampers. It is also suitable for water/wastewater, beverage, pharmaceutical and process automation. The modular and compact design of the DFPD allows various spring configurations as a suitable solution for different applications.



DFPD-...-D
Double-acting



DFPD-...-S
Single-acting

Types of connection

- Port pattern to NAMUR VDI/VDE 3845 for mounting solenoid valves, position sensors and positioners
- Standards-base connection to ISO 5211

Variants

High temperature
DFPD-...-T4

- Seals made of FKM and plain bearings made of PPS
- For applications up to +150 °C
- II 2G c T3 X
II 2D c 175°C X
0 °C ≤ Ta ≤ +150 °C

Low temperature
DFPD-...-T6

- Seals made of FVMQ for applications down to -50 °C
- II 2G c T6 X
II 2D c 85°C X
-50 °C ≤ Ta ≤ +60 °C

Closes to the left and right
DFPD-...-R/L

- The modular system offers the option of closing to the left. This is done by turning the pistons

Spring configuration
DFPD-...-S

- The spring force can be adapted to the system's supply pressure in steps of 0.5 bar through free selection of the number of spring cartridges (4 to 12)

Epoxy coating
DFPD-...-EP

- Actuator with epoxy coating

Stainless steel shaft
DFPD-...-R3

- With stainless steel shaft

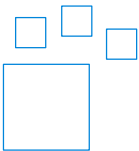
NPT version
DFPD-...-N

- Pneumatic connections with NPT threads

180° version
DFPD-...-180

- Sizes 40, 120, 240, 480 double-acting also available with 180° swivel angle

Ordering data – Product options



Configurable product
This product and all its product options can be ordered using the configurator.

The configurator can be found under Products on the DVD or
→ www.festo.com/catalogue/...

Part No.	Type code
8042184	DFPD-10
8042185	DFPD-20
8042186	DFPD-40
8042187	DFPD-80
8042188	DFPD-120
8042189	DFPD-160
8042190	DFPD-240
8042191	DFPD-300
8042192	DFPD-480
8042193	DFPD-700
8042194	DFPD-900
8042195	DFPD-1200
8042196	DFPD-2300

Quarter turn actuators DFPD

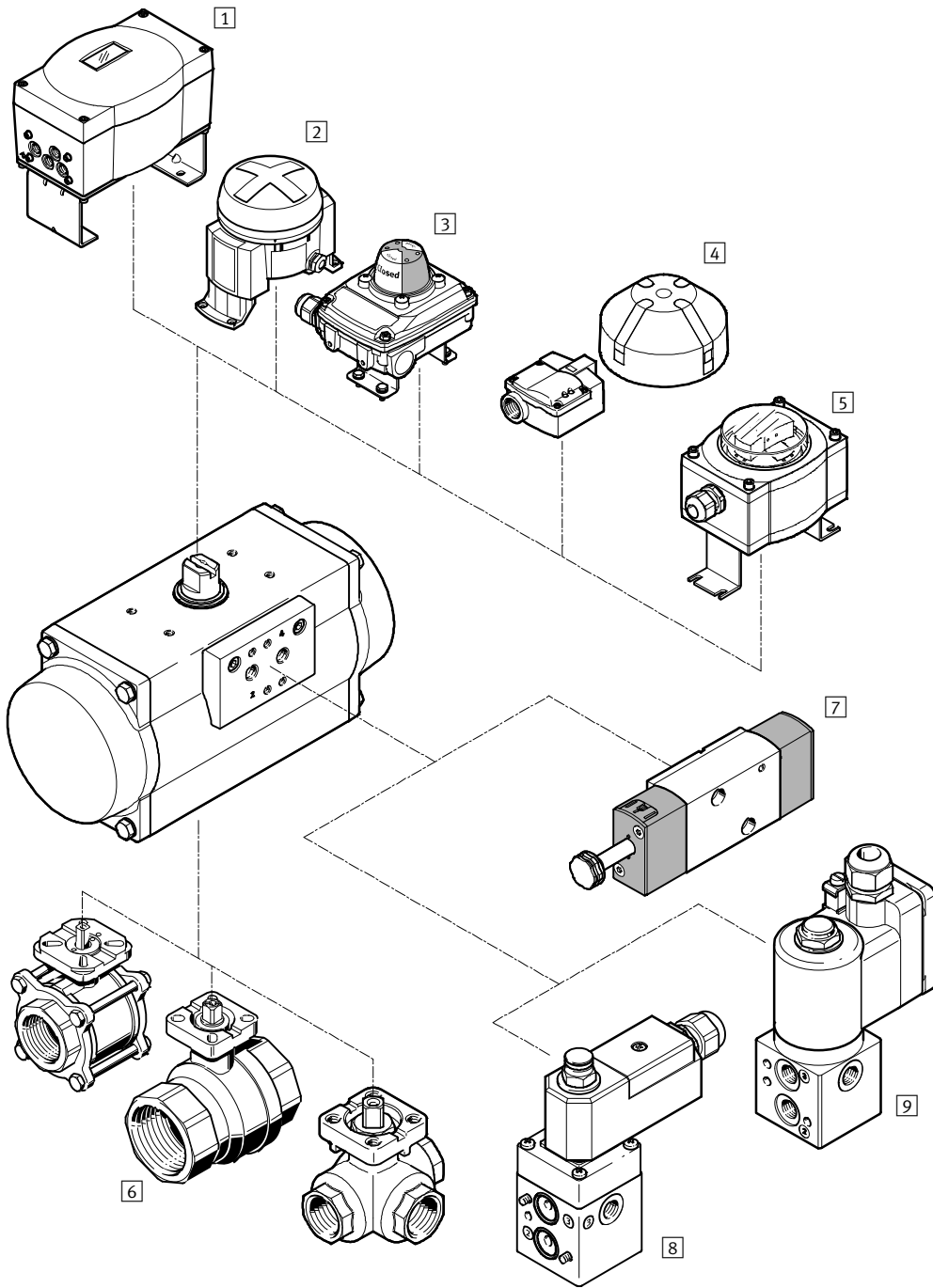


Key features

Size	Flange pattern	Shaft connection	Shaft connection depth [mm]	Pneumatic connection
10	F03	V9	10.7	G 1/8 1/8 NPT
	F04			
20	F03	V9	10.7	G 1/8 1/8 NPT
	F04	V11	13.2	
	F05			
40	F04	V11	13.2	G 1/8 1/8 NPT
	F05F07	V14	16.5	
80	F05F07	V17	19.3	G 1/8 1/8 NPT
120	F05F07	V17	19.3	G 1/4 1/4 NPT
160	F07F10	V22	24.3	G 1/4 1/4 NPT
240	F07F10	V22	24.3	G 1/4 1/4 NPT
300	F07F10	V22	24.3	G 1/4 1/4 NPT
480	F10F12	V27	29.5	G 1/4 1/4 NPT
700	F10F12	V27	29.7	G 1/4 1/4 NPT
900	F10F12	V27	30.2	G 1/4 1/4 NPT
	F14	V36	40.2	
1200	F10F12	V27	31	G 1/4 1/4 NPT
	F14	V36	40	
2300	F12F16	V46	50	G 1/4 1/4 NPT
	F14	V36	40	

Quarter turn actuators DFPD

Peripherals overview



Quarter turn actuators DFPD

Peripherals overview

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Mounting components and accessories		
	Description	→ Page/Internet
1	Positioner CMSX	For controlling the position of quarter turn actuators in process automation systems cmsx
2	Sensor box DAPZ	Round design, variant AR, electrical, inductive or inductive and explosion-proof sensing dapz
3	Sensor box SRBC	For electrical position feedback and monitoring the position of process valves actuated using quarter turn actuators srbc
4	Sensor box SRBG	For electrical position feedback and monitoring the position of process valves actuated using quarter turn actuators srbg
5	Sensor box SRAP	Analogue sensor box continuously senses the entire swivel range and reports this back to the controller srp
6	Ball valve VAPB, VZBA	2-way brass or stainless steel, corrosion-resistant; 3-way stainless steel, corrosion-resistant vapb
7	Solenoid valve VSNC	For single- and double-acting quarter turn actuators with a port pattern to VDI/VDE 3845 vsnc
8	Solenoid valve VOFC	Solenoid valve with solenoid coil, port pattern to Namur vofc
9	Solenoid valve VOFD	Solenoid valve with solenoid coil, port pattern to Namur vofd

Quarter turn actuators DFPD

Type codes

DFPD - [] - [] - [] - RP - [] - [] - [] - [] - []

Type

DFPD	Quarter turn actuator
------	-----------------------

System of units

-	Metric
N	Imperial

Version

-	Standard
---	----------

Size

10	10
20	20
40	40
80	80
120	120
160	160
240	240
300	300
480	480
700	700
900	900
1200	1200
2300	2300

Design

RP	Rack and pinion
----	-----------------

Yoke type

-	None
---	------

Swivel angle

90	90°
180	180°

Swivel direction

L	To the left
R	To the right

Function

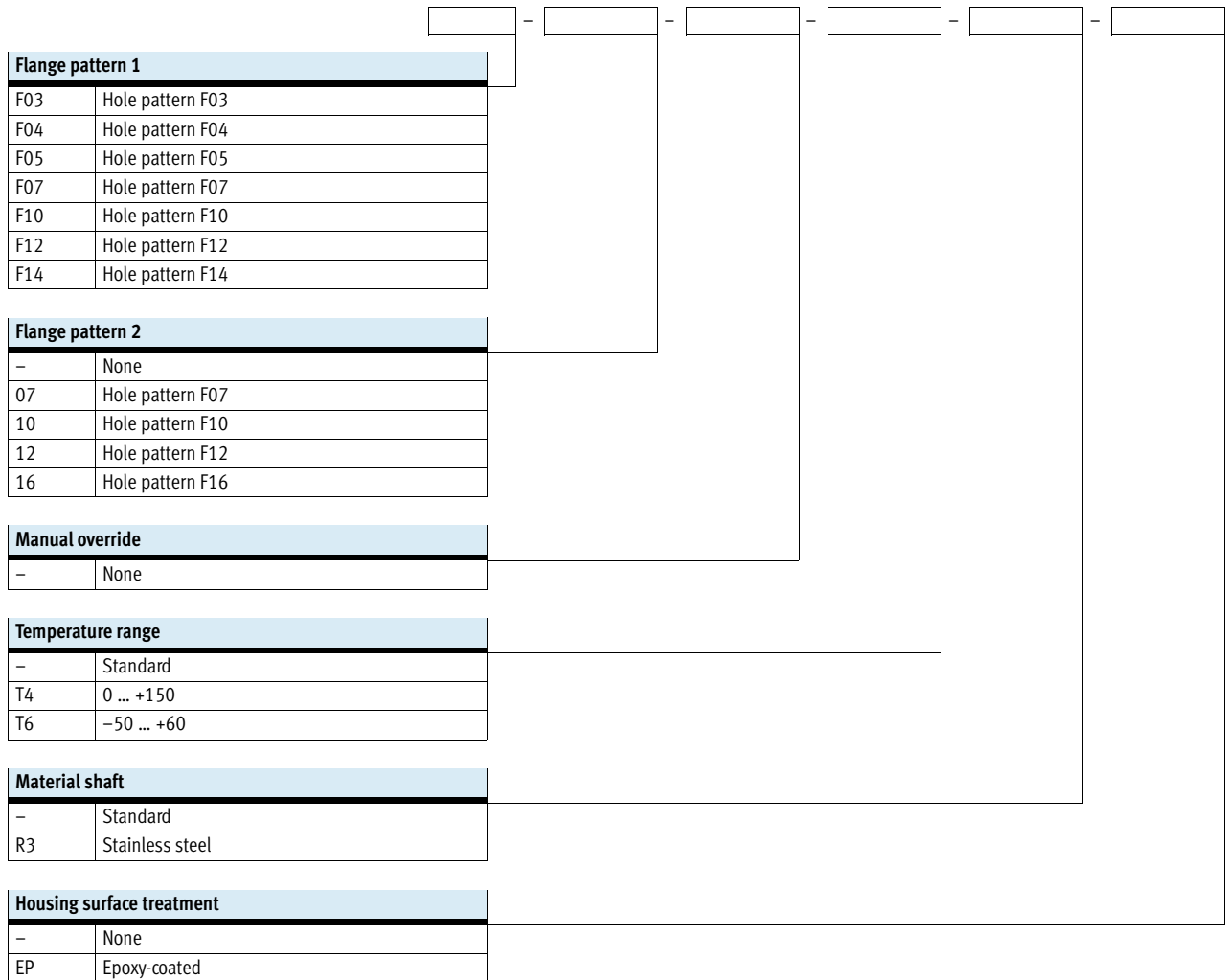
D	Double-acting
S	Single-acting

Spring configuration

-	None
20	For connection pressure 2 bar
25	For connection pressure 2.5 bar
30	For connection pressure 3 bar
35	For connection pressure 3.5 bar
40	For connection pressure 4 bar
45	For connection pressure 4.5 bar
50	For connection pressure 5 bar
55	For connection pressure 5.5 bar
60	For connection pressure 6 bar

Quarter turn actuators DFPD

Type codes

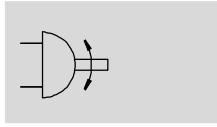


Quarter turn actuators DFPD, double-acting

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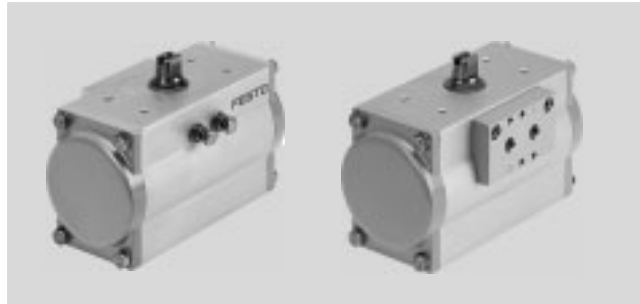
Technical data

Function



Swivel angle
0 ... 90°

Size
10 ... 2300



General technical data											
Size	10	20	40	80	120	160					
Mode of operation	Double-acting										
Design	Rack and pinion										
Cushioning	No cushioning										
Mounting position	Any										
Pneumatic connection	G 1/8					G 1/4					
	1/8 NPT					1/4 NPT					
Standards-based connection	ISO 5211										
Valve connection conforms to standard	VDI/VDE 3845 (NAMUR)										
Connection for positioner and position sensor conforms to standard	VDI/VDE 3845 (NAMUR)										
Safety Integrity Level (SIL)	Up to SIL 2 High Demand mode										
Size	AA 1										
Flange hole pattern 1	F03	F04	F03	F04	F05	F04	F05	F05	F05	F07	
Flange hole pattern 2	-	-	-	-	-	F07	F07	F07	F07	F10	
Swivel angle [°]	90										
	-							120	-	120	-
	-							135	-	135	-
	-							180	-	180	-
End-position adjusting range at 0° [°]	-5 ... +5										
End-position adjusting range at 90° [°]	-5 ... +5										
End-position adjusting range at 180° [°]	-						-5 ... +5	-	-5 ... +5	-	
Position sensing	Opto-electrical										
Closing direction	Closes to the right										

Quarter turn actuators DFPD, double-acting

Technical data

General technical data							
Size	240	300	480	700	900	1200	2300
Mode of operation	Double-acting						
Design	Rack and pinion						
Cushioning	No cushioning						
Mounting position	Any						
Pneumatic connection	G 1/4						
	1/4 NPT						
Standards-based connection	ISO 5211						
Valve connection conforms to standard	VDI/VDE 3845 (NAMUR)						
Connection for positioner and position sensor conforms to standard	VDI/VDE 3845 (NAMUR)						
Safety Integrity Level (SIL)	Up to SIL 2 High Demand mode						
Size	AA 2				AA 3		
Flange hole pattern 1	F07	F07	F10	F10	F10	F10	F12
					F14	F14	F14
Flange hole pattern 2	F10	F10	F12	F12	F12	F12	F16
Swivel angle [°]	90						
	120	–	120	–			
	135	–	135	–			
	180	–	180	–			
End-position adjusting range at 0° [°]	–5 ... +5						
End-position adjusting range at 90° [°]	–5 ... +5						
End-position adjusting range at 180° [°]	–5 ... +5	–	–5 ... +5	–			
Position sensing	Opto-electrical						
Closing direction	Closes to the right						


Operating and environmental conditions	
Operating pressure [bar]	2 ... 8
Nominal operating pressure [bar]	5.5
Operating medium	Compressed air to ISO 8573-1:2010 [7:4:4]
Note on operating/pilot medium	Pressure dew point 10 °C below ambient temperature/temperature of medium
	Lubricated operation possible (in which case lubricated operation will always be required)
Ambient temperature [°C]	–20 ... +80

Quarter turn actuators DFPD, double-acting

Technical data

ATEX	
ATEX category for gas	II 2G
Type of ignition protection for gas	Ex h IIC T4 Gb X
ATEX category for dust	II 2D
Type of ignition protection for dust	Ex h IIIC T105°C Db X
Explosion-proof temperature rating [°C]	-20 ≤ Ta ≤ +80
CE marking (see declaration of conformity)	To EU Explosion Protection Directive (ATEX)

Theoretical torque [Nm] as a function of operating pressure											
Size	Operating pressure [bar]										
	2	2.5	3	3.5	4	4.5	5	5.5	6	7	8
10	3.7	4.7	5.6	6.6	7.5	8.4	9.4	10.3	11.2	13.1	15.0
20	7.3	9.1	11.0	12.8	14.6	16.4	18.3	20.1	21.9	25.6	29.2
40	13.9	17.4	20.9	24.4	27.9	31.3	34.8	38.3	41.8	48.7	55.7
80	30.0	37.5	44.9	52.4	59.9	67.4	74.9	82.4	89.9	104.9	119.9
120	42.7	53.4	64.0	74.7	85.4	96.1	106.7	117.4	128.1	149.4	170.8
160	58.5	73.2	87.8	102.5	117.1	131.7	146.4	161.0	175.6	204.9	234.2
240	85.2	106.5	127.8	149.1	170.4	191.7	213.0	234.3	255.6	298.2	340.8
300	109.8	137.2	164.7	192.1	219.6	247.0	274.5	301.9	329.3	384.2	439.1
480	172.4	215.5	258.5	301.6	344.7	387.8	430.9	474.0	517.1	603.3	689.5
700	241.2	301.5	361.8	422.1	482.4	542.7	603.0	663.3	723.6	844.2	964.8
900	306.2	382.7	459.3	535.8	612.4	688.9	765.4	842.0	918.5	1071.6	1224.7
1200	425.2	531.6	637.9	744.2	850.5	956.8	1063.1	1169.4	1275.7	1488.4	1701.0
2300	812.1	1015.1	1218.2	1421.2	1624.2	1827.2	2030.3	2233.3	2436.3	2842.4	3248.4

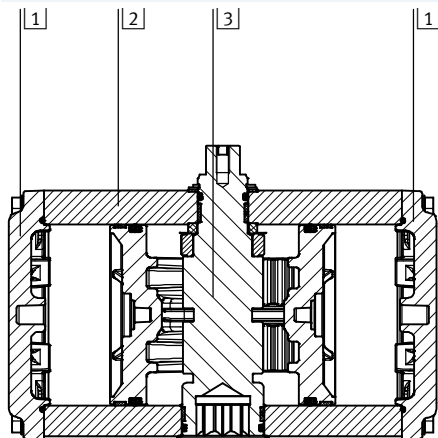
 - Note
 The operating torque of the actuator must not be greater than the maximum permissible torque listed in ISO 5211 in relation to the size of the mounting flange and of the coupling.

Quarter turn actuators DFPD, double-acting

Technical data

Materials

Sectional view



Quarter turn actuators		Material number
1	Cap	Coated die-cast aluminium EN AC-46100-D
2	Housing	Anodised wrought aluminium alloy EN AW-6063-T6
3	Shaft	Nickel-plated steel 1.0715
		R3 High-alloy stainless steel 1.4305
-	Mounting plate	Anodised wrought aluminium alloy EN AW-6063-T6
	Piston/piston rod	Die cast aluminium EN AC-46100-D
	Seals	NBR -
	Bearing	POM -
	Cam	Stainless steel casting (DFPD-10/20/40/80/120/160-90) 1.4308
		Steel (DFPD-240/300/480/700/900/1200/ 2300-90) 1.0765
	Screws	High-alloy stainless steel 1.4301
	Note on materials	RoHS-compliant -

Air consumption [l/cycle] at 6 bar

Type code	
DFPD-10-RP-90-D	1
DFPD-20-RP-90-D	1.8
DFPD-40-RP-90-D	3.4
DFPD-40-RP-180-D	5.2
DFPD-80-RP-90-D	7.4
DFPD-120-RP-90-D	10.4
DFPD-120-RP-180-D	12.8
DFPD-160-RP-90-D	14
DFPD-240-RP-90-D	20.3
DFPD-240-RP-180-D	25.7
DFPD-300-RP-90-D	26.4

Type code	
DFPD-480-RP-90-D	40.5
DFPD-480-RP-180-D	61.4
DFPD-700-RP-90-RD	58.8
DFPD-900-RP-90-RD	75.9
DFPD-1200-RP-90-RD	105
DFPD-2300-RP-90-RD	204

Quarter turn actuators DFPD, double-acting

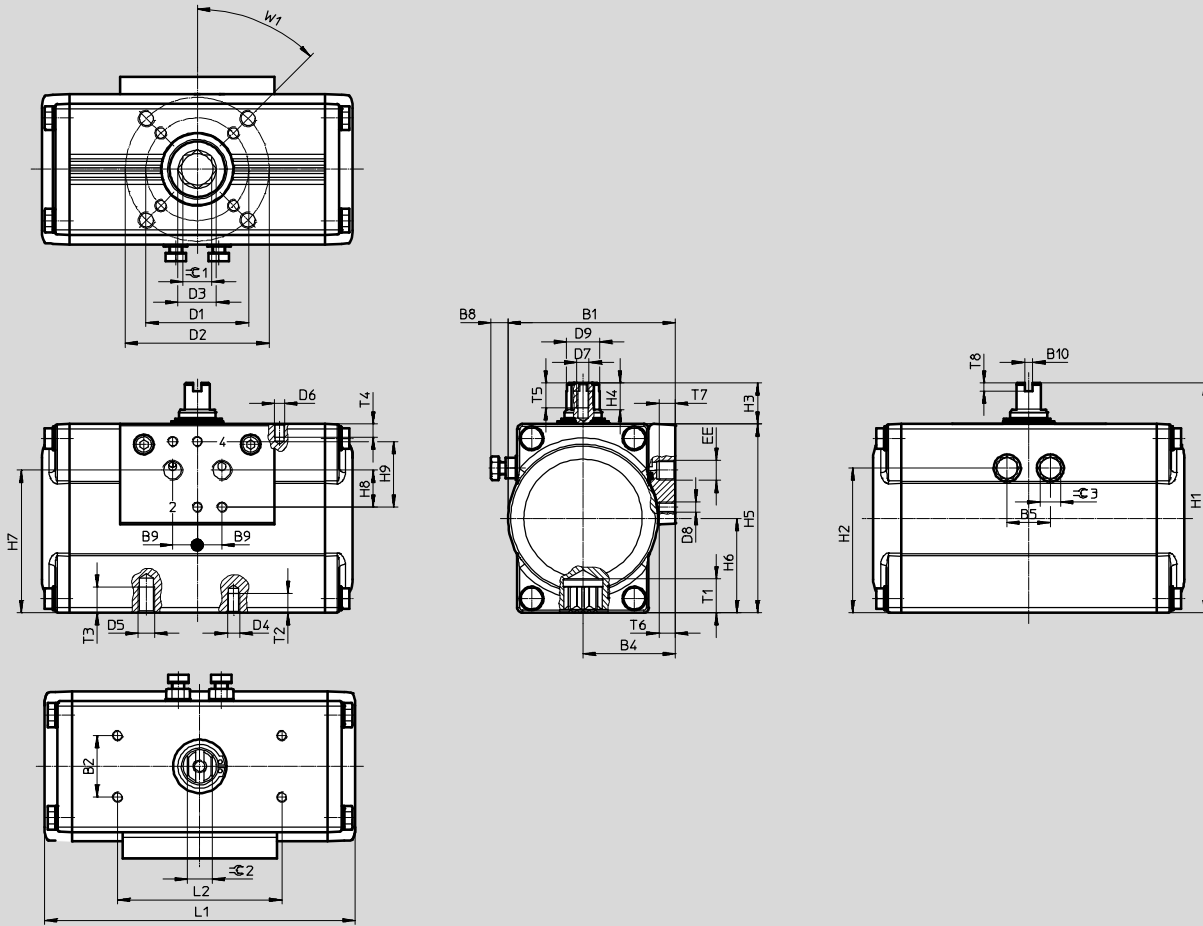
Technical data

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Dimensions

Download CAD data → www.festo.com

Size 10 ... 80



Quarter turn actuators DFPD, double-acting



Technical data

Type code	B1	B2 ±0.1	B4	B5	B8 max.	B9	B10	D1 ∅ ±0.1	D2 ∅ ±0.1	D3 ∅	D4	D5	D6
DFPD-10-F03	59.5	30	35	16	10.7	12	4	36	-	12	M5	-	M5
DFPD-10-F04								42					
DFPD-20-F04	68.5		38.5	19	9.2			-	14.6	M6			
DFPD-20-F05													
DFPD-40	81.5		45	21	8.2			70	18.7	M8			
DFPD-40-180													
DFPD-80	99	53	26	9	23.3	M6							

Type code	D7	D8	D9 ∅ ±0.1	EE	H1	H2	H3 -0.5	H4 +0.1	H5	H6 ±0.2	H7 ±0.3	H8 ±0.1	H9
DFPD-10-F03	M6	M5	10.9	G 1/8 or 1/8 NPT	90	51	20	10	70	35	47	16	32
DFPD-10-F04													
DFPD-20-F04													
DFPD-20-F05													
DFPD-40													
DFPD-40-180													
DFPD-80	12.7	100	59.75	10	80	40	57.5						
	16.2	112	70.5	13	92	46	67.5						
	20.2	130	86	13	110	55	86.5						

Type code	L1	L2 ±0.1	T1 ±0.4	T2	T3	T4	T5	T6	T7	T8 +0.5	≈C 1 H11	≈C 2 h11	≈C 3	W1
DFPD-10-F03	124.7	80	10.7	8	-	8	12	8	8	4	9	9	10	45°
DFPD-10-F04														
DFPD-20-F04	133.3		13.2	8	-									
DFPD-20-F05				9										
DFPD-40	151.4		16.5	9	12									
DFPD-40-180	227													
DFPD-80	189.3	19.3	17	15	13									

Quarter turn actuators DFPD, double-acting

Technical data

Type code	B1	B2 ±0.1	B4	B5	B8 max.	B9	B10	D1 ∅ ±0.1	D2 ∅ ±0.1	D3 ∅	D4	D5	D6
DFPD-120	111.5	30	60.5	32	12.3	12	4	50	70	23.3	M6	M8	M5
DFPD-120-180													
DFPD-160	120		63.5	36	13.4			70	102	23.2	M8	M10	
DFPD-240	135.5		71.5	41	18.5					30			
DFPD-240-180										30.3			
DFPD-300	144		74.5	46	17			102	125	30	M10	M12	
DFPD-480	163		83	52	19.3					37.4			
DFPD-480-180													

Type code	D7	D8	D9 ∅ ±0.1	EE	H1	H2	H3 -0.5	H4 +0.1	H5	H6	H7 ±0.3	H8 ±0.1	H9
DFPD-120	M6	M5	22.5	G 1/4 or 1/4 NPT	143	97.75	20	13	123	61.5±0.2	98.4	16	32
DFPD-120-180													
DFPD-160			25.5		154	106.25	134	67±0.2	109.4				
DFPD-240			31.8		180	120.5	150	75±0.2	120.2				
DFPD-240-180													
DFPD-300			192		131	30	19.5	162	81±0.3	132.1			
DFPD-480			38		214	149.5	184	92±0.4	152.5				
DFPD-480-180													

Type code	L1	L2 ±0.1	T1 ±0.4	T2	T3	T4	T5	T6	T7	T8 +0.5	≈C 1 H11	≈C 2 h11	≈C 3	W1					
DFPD-120	213.7	80	19.3	9	12	8	14	8	12	4	17	15	13	45°					
DFPD-120-180	326.8																		
DFPD-160	230.9		24.3	12	15						8	14	8		12	4	22	22	18
DFPD-240	257																		
DFPD-240-180	395.5																		
DFPD-300	334.4		29.5	15	18						27	27	21						
DFPD-480	374.2																		
DFPD-480-180	550.3																		

Quarter turn actuators DFPD, double-acting

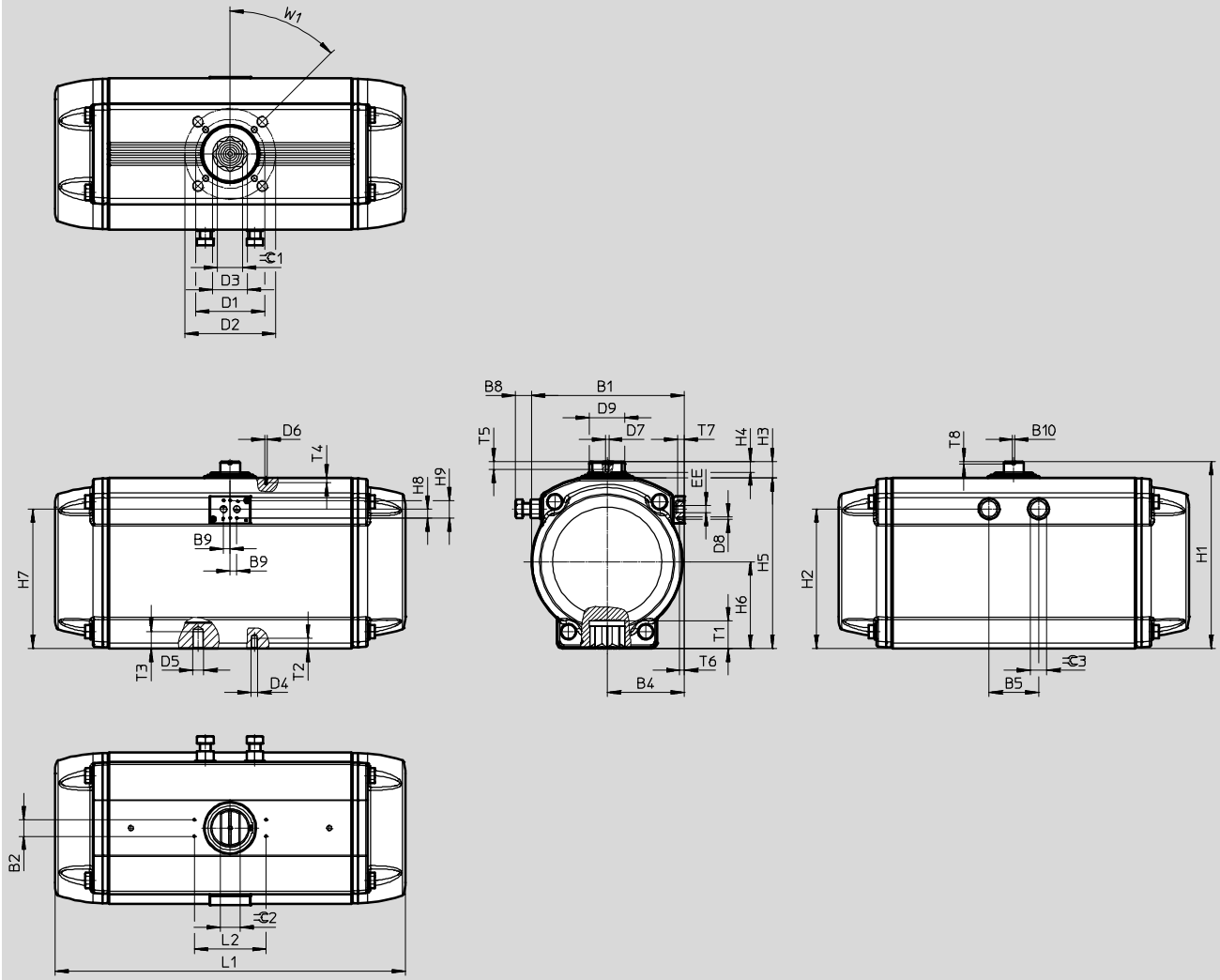
Technical data

FESTO

Dimensions

Download CAD data → www.festo.com

Size 700 ... 2300



Quarter turn actuators DFPD, double-acting

Technical data

Type code	B1	B2 ±0.1	B4	B5	B8 max.	B9	B10 ±0.1	D1 ∅	D2 ∅	D3 ∅	D4	D5	D6
DFPD-700- ... -F10/12	184	30	93	57.6	17.5	12	4	102	125	37.4	M10	M12	M5
DFPD-900- ... -F10/12	202		102	64.8	28.6			140	-	50.1	M16	-	
DFPD-900- ... -F14	221.5		111.5	72	24			102	125	37.4	M10	M12	
DFPD-1200- ... -F10/12			140	-	50.1			M16	-				
DFPD-1200- ... -F14			125	165	62.9			M12	M20				
DFPD-2300- ... -F12/16	277		139.8	90	33			140	-	50.1	M16	-	
DFPD-2300- ... -F14													

Type code	D7	D8	D9 ±0.1	EE	H1	H2	H3	H4	H5	H6	H7	H8 ±0.1	H9	
DFPD-700- ... -F10/12	M6	M5	41	G 1/4 or 1/4 NPT	232.7	168	29.7	21	203	103	164.9	16	32	
DFPD-900- ... -F10/12			44		252.7	182			223	113	178.3			
DFPD-900- ... -F14			50		275.7	204			246	125	199.6			
DFPD-1200- ... -F10/12			64		338.7	253			19	309	157			252.3
DFPD-1200- ... -F14														
DFPD-2300- ... -F12/16														
DFPD-2300- ... -F14														

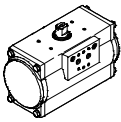
Type code	L1	L2 ±0.1	T1 min.	T2	T3	T4	T5	T6	T7	T8 +0.5	≈C 1 H11	≈C 2 h11	≈C 3	W1
DFPD-700- ... -F10/12	428.2	80	29.7	15	18	8	8.5	14	8	12	4	27	30	21
DFPD-900- ... -F10/12	469.6	130	30.2	15.5	18.5	36						32	24	
DFPD-900- ... -F14			40.2	24.5	-	36						36		
DFPD-1200- ... -F10/12			31	15.5	18.5	27								
DFPD-1200- ... -F14	519.3		40	24.5	-	36						36		
DFPD-2300- ... -F12/16			50	18.5	30	46							30	
DFPD-2300- ... -F14	636		40	24.5	-	36								

Quarter turn actuators DFPD, double-acting

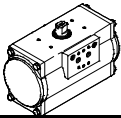
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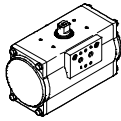
Technical data

★ Core product range

Ordering data				
Type code	Size	Product weight [g]	Part No.	Type code
	10	965	★ 8047613	DFPD-10-RP-90-RD-F03
	20	1275	★ 8047614	DFPD-20-RP-90-RD-F04
	40	1882	★ 8047615	DFPD-40-RP-90-RD-F0507
	80	3308	★ 8047616	DFPD-80-RP-90-RD-F0507
	120	4872	★ 8048123	DFPD-120-RP-90-RD-F0507

★ Core product range

Ordering data				
Type code	Size	Product weight [g]	Part No.	Type code
	160	6082	☆ 8048124	DFPD-160-RP-90-RD-F0710
	240	8594	☆ 8048125	DFPD-240-RP-90-RD-F0710
	300	11224	☆ 8048126	DFPD-300-RP-90-RD-F0710
	480	16025	☆ 8048127	DFPD-480-RP-90-RD-F1012

Ordering data				
Type code	Size	Product weight [g]	Part No.	Type code
	10	965	8048010	DFPD-10-RP-90-RD-F04
	20	1275	8048011	DFPD-20-RP-90-RD-F05
	40	2608	8065336	DFPD-40-RP-180-RD-F0507
	40	2467	8065337	DFPD-40-RP-135-RD-F0507
	40	2419	8065338	DFPD-40-RP-120-RD-F0507
	120	7122	8065339	DFPD-120-RP-180-RD-F0507
	120	6363	8065340	DFPD-120-RP-135-RD-F0507
	120	6250	8065341	DFPD-120-RP-120-RD-F0507
	240	12549	8065342	DFPD-240-RP-180-RD-F0710
	240	11139	8065343	DFPD-240-RP-135-RD-F0710
	240	10939	8065344	DFPD-240-RP-120-RD-F0710
	480	23456	8065345	DFPD-480-RP-180-RD-F1012
	480	21013	8065346	DFPD-480-RP-135-RD-F1012
	480	20653	8065347	DFPD-480-RP-120-RD-F1012
	700	22464	8065261	DFPD-700-RP-90-RD-F1012
	900	25574	8065265	DFPD-900-RP-90-RD-F14
	1200	35834	8065269	DFPD-1200-RP-90-RD-F14
2300	64900	8065273	DFPD-2300-RP-90-RD-F1216	

Festo core product range

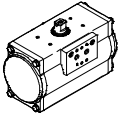
★ Generally ready for shipping ex works in 24 hours

☆ Generally ready for shipping ex works in 5 days

Quarter turn actuators DFPD, double-acting

Technical data

FESTO

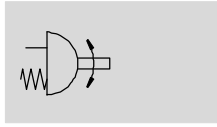
Ordering data				
Type code	Size	Product weight [g]	Part No.	Type code
Version R3-EP, epoxy-coated				
	10	965	8047617	DFPD-10-RP-90-RD-F03-R3-EP
			8048012	DFPD-10-RP-90-RD-F04-R3-EP
	20	1275	8047618	DFPD-20-RP-90-RD-F04-R3-EP
			8048013	DFPD-20-RP-90-RD-F05-R3-EP
	40	1882	8047619	DFPD-40-RP-90-RD-F0507-R3-EP
	80	3308	8047620	DFPD-80-RP-90-RD-F0507-R3-EP
	120	4872	8048128	DFPD-120-RP-90-RD-F0507-R3-EP
	160	6082	8048129	DFPD-160-RP-90-RD-F0710-R3-EP
	240	8594	8048130	DFPD-240-RP-90-RD-F0710-R3-EP
	300	11224	8048131	DFPD-300-RP-90-RD-F0710-R3-EP
	480	16025	8048132	DFPD-480-RP-90-RD-F1012-R3-EP
	700	22464	8065263	DFPD-700-RP-90-RD-F1012-R3-EP
	900	25574	8065267	DFPD-900-RP-90-RD-F14-R3-EP
	1200	35834	8065271	DFPD-1200-RP-90-RD-F14-R3-EP
2300	64900	8065275	DFPD-2300-RP-90-RD-F1216-R3-EP	

Quarter turn actuators DFPD, single-acting

FESTO

Technical data

Function



Swivel angle
0 ... 90°

Size
20 ... 2300



General technical data																			
Size	20	40	80	120	160	240	300	480	700	900	1200	2300							
Mode of operation	Single-acting																		
Design	Rack and pinion																		
Cushioning	No cushioning																		
Mounting position	Any																		
Pneumatic connection	G 1/8							G 1/4											
	1/8 NPT							1/4 NPT											
Standards-based connection	ISO 5211																		
Valve connection conforms to standard	VDI/VDE 3845 (NAMUR)																		
Connection for positioner and position sensor conforms to standard	VDI/VDE 3845 (NAMUR)																		
Safety Integrity Level (SIL)	Up to SIL 2 High Demand mode																		
Size	AA 1								AA 2						AA 3				
Flange hole pattern 1	F03	F04	F05	F04	F05	F05	F05	F07	F07	F07	F10	F10	F10	F14	F10	F14	F12	F14	
Flange hole pattern 2	-	-	-	F07	F07	F07	F07	F10	F10	F10	F12	F12	F12	F12	F12	F12	F16	F16	
Swivel angle [°]	90																		
End-position adjusting range at 0° [°]	-5 ... +5																		
End-position adjusting range at 90° [°]	-5 ... +5																		
Position sensing	Opto-electrical																		
Closing direction	Closes to the right																		

Operating and environmental conditions		
Variant	RS30	RS60
Operating pressure [bar]	2 ... 8	
Nominal operating pressure [bar]	3	6
Operating medium	Compressed air to ISO 8573-1:2010 [7:4:4]	
Note on operating/pilot medium	Pressure dew point 10 °C below ambient temperature/temperature of medium	
	Lubricated operation possible (in which case lubricated operation will always be required)	
Ambient temperature [°C]	-20 ... +80	

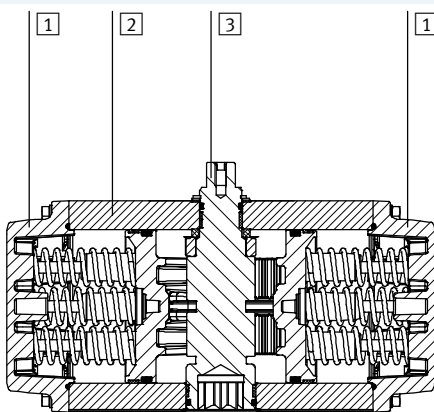
Quarter turn actuators DFPD, single-acting

Technical data

ATEX	
ATEX category for gas	II 2G
Type of ignition protection for gas	Ex h IIC T4 Gb X
ATEX category for dust	II 2D
Type of ignition protection for dust	Ex h IIIC T105°C Db X
Explosion-proof temperature rating [°C]	-20 ≤ Ta ≤ +80
CE marking (see declaration of conformity)	To EU Explosion Protection Directive (ATEX)

Materials

Sectional view



Quarter turn actuators		Material number
1	Cap	Coated die-cast aluminium EN AC-46100-D
2	Housing	Anodised wrought aluminium alloy EN AW-6063-T6
3	Shaft	Nickel-plated steel 1.0715
		R3 High-alloy stainless steel 1.4305
-	Mounting plate	Anodised wrought aluminium alloy EN AW-6063-T6
	Piston rod	Die cast aluminium EN AC-46100-D
	Seals	NBR -
	Spring	Spring steel -
	Bearing	POM -
	Cam	Stainless steel casting (DFPD-20...160...-RS) 1.4308
		Steel (DFPD-240 ... 2300...-RS) 1.0765
	Screws	High-alloy stainless steel 1.4301
	Note on materials	RoHS-compliant -

Air consumption [l/cycle] at 6 bar

Type code		Type code	
DFPD-20-RP-90-S	0.60	DFPD-700-RP-90-RS60	24.48
DFPD-40-RP-90-S	1.80	DFPD-900-RP-90-RS60	31.5
DFPD-80-RP-90-S	3.60	DFPD-1200-RP-90-RS60	43.44
DFPD-120-RP-90-S	5.40	DFPD-2300-RP-90-RS60	84.3
DFPD-160-RP-90-S	7.20		
DFPD-240-RP-90-S	10.20		
DFPD-300-RP-90-S	13.20		
DFPD-480-RP-90-S	21.00		

Quarter turn actuators DFPD, single-acting

Technical data

Theoretical torque [Nm] as a function of operating pressure [bar] and swivel angle [°]													
Spring configuration	Nominal swivel angle	Spring torque [Nm]	Operating pressure [bar]										
	[°]		2	2.5	3	3.5	4	4.5	5	5.5	6	7	8
Size DFPD-20													
20	0	2.4	4.9	6.7	8.6	10.4	12.2	14.0	15.9	17.7	19.5	23.2	26.8
	90	4.8	2.5	4.4	6.2	8.0	9.9	11.7	13.5	15.3	17.2	20.8	24.5
25	0	3.0	4.3	6.1	8.0	9.8	11.6	13.4	15.3	17.1	18.9	22.6	26.2
	90	6.0	1.4	3.2	5.0	6.8	8.7	10.5	12.3	14.2	16.0	19.6	23.3
30	0	3.6		5.5	7.4	9.2	11.0	12.8	14.7	16.5	18.3	22.0	25.6
	90	7.1		2.0	3.8	5.7	7.5	9.3	11.1	13.0	14.8	18.4	22.1
35	0	4.2			6.8	8.6	10.4	12.2	14.1	15.9	17.7	21.4	25.0
	90	8.3			2.6	4.5	6.3	8.1	9.9	11.8	13.6	17.3	20.9
40	0	4.8				8.0	9.8	11.6	13.5	15.3	17.1	20.8	24.4
	90	9.5				3.3	5.1	6.9	8.8	10.6	12.4	16.1	19.7
45	0	5.4					9.2	11.0	12.9	14.7	16.5	20.2	23.8
	90	10.7					3.9	5.7	7.6	9.4	11.2	14.9	18.5
50	0	6.0						10.4	12.3	14.1	15.9	19.6	23.2
	90	11.9						4.5	6.4	8.2	10.0	13.7	17.3
55	0	6.6							11.7	13.5	15.3	19.0	22.6
	90	13.1							5.2	7.0	8.8	12.5	16.1
60	0	7.2								12.9	14.7	18.4	22.0
	90	14.3								5.8	7.6	11.3	15.0
Size DFPD-40													
20	0	4.6	9.3	12.8	16.3	19.8	23.3	26.7	30.2	33.7	37.2	44.1	51.1
	90	9.1	4.8	8.3	11.8	15.3	18.8	22.3	25.7	29.2	32.7	39.7	46.6
25	0	5.8	8.2	11.7	15.1	18.6	22.1	25.6	29.1	32.6	36.0	43.0	50.0
	90	11.4	2.6	6.1	9.5	13.0	16.5	20.0	23.5	27.0	30.4	37.4	44.4
30	0	6.9		10.5	14.0	17.5	21.0	24.4	27.9	31.4	34.9	41.8	48.8
	90	13.6		3.8	7.3	10.8	14.2	17.7	21.2	24.7	28.2	35.1	42.1
35	0	8.1			12.8	16.3	19.8	23.3	26.8	30.3	33.7	40.7	47.7
	90	15.9			5.0	8.5	12.0	15.4	18.9	22.4	25.9	32.9	39.8
40	0	9.2				15.2	18.7	22.1	25.6	29.1	32.6	39.5	46.5
	90	18.2				6.2	9.7	13.2	16.7	20.1	23.6	30.6	37.5
45	0	10.4					17.5	21.0	24.5	28.0	31.4	38.4	45.4
	90	20.4					7.4	10.9	14.4	17.9	21.4	28.3	35.3
50	0	11.5						19.8	23.3	26.8	30.3	37.2	44.2
	90	22.7						8.6	12.1	15.6	19.1	26.0	33.0
55	0	12.7							22.2	25.7	29.1	36.1	43.1
	90	25.0							9.8	13.3	16.8	23.8	30.7
60	0	13.8								24.5	28.0	34.9	41.9
	90	27.2								11.1	14.5	21.5	28.5

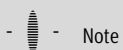
-  - Note

The operating torque of the actuator must not be greater than the maximum permissible torque listed in ISO 5211 in relation to the size of the mounting flange and of the coupling.

Quarter turn actuators DFPD, single-acting

Technical data

Theoretical torque [Nm] as a function of operating pressure [bar] and swivel angle [°]													
Spring configuration	Nominal swivel angle [°]	Spring torque [Nm]	Operating pressure [bar]										
			2	2.5	3	3.5	4	4.5	5	5.5	6	7	8
Size DFPD-80													
20	0	9.9	20.1	27.6	35.1	42.6	50.0	57.5	65.0	72.5	80.0	95.0	110.0
	90	19.5	10.5	18.0	25.5	33.0	40.4	47.9	55.4	62.9	70.4	85.4	100.4
25	0	12.4	17.6	25.1	32.6	40.1	47.6	55.1	62.6	70.1	77.5	92.5	107.5
	90	24.4	5.6	13.1	20.6	28.1	35.6	43.1	50.6	58.1	65.5	80.5	95.5
30	0	14.8		22.6	30.1	37.6	45.1	52.6	60.1	67.6	75.1	90.1	105.0
	90	29.2		8.2	15.7	23.2	30.7	38.2	45.7	53.2	60.7	75.5	90.6
35	0	17.3			27.7	35.1	42.6	50.1	57.6	65.1	72.6	87.6	102.6
	90	34.1			10.9	18.3	25.8	33.3	40.8	48.3	55.8	70.8	85.8
40	0	19.8				32.7	40.2	47.7	55.1	62.6	70.1	85.1	100.1
	90	39.0				13.5	21.0	28.5	35.9	43.4	50.9	65.9	80.9
45	0	22.2					37.7	45.2	52.7	60.2	67.7	82.6	97.6
	90	43.8					16.1	23.6	31.1	38.6	46.1	61.0	76.0
50	0	24.7						42.7	50.2	57.7	65.2	80.2	95.2
	90	48.7						18.7	26.2	33.7	41.2	56.2	71.2
55	0	27.2							47.7	55.2	62.7	77.7	92.7
	90	53.6							21.3	28.8	36.3	51.3	66.3
60	0	29.6								52.8	60.3	75.2	90.2
	90	58.4								24.0	31.5	46.4	61.4
Size DFPD-120													
20	0	14.0	28.7	39.3	50.0	60.7	71.3	82.0	92.7	103.4	114.0	135.4	156.7
	90	27.8	14.9	25.6	36.3	46.9	57.6	68.3	79.0	89.6	100.3	121.7	143.0
25	0	17.6	25.1	35.8	46.5	57.2	67.8	78.5	89.2	99.9	110.5	131.9	153.2
	90	34.7	8.0	18.7	29.3	40.0	50.7	61.4	72.0	82.7	93.4	114.7	136.1
30	0	21.1		32.3	43.0	53.6	64.3	75.0	85.7	96.3	107.0	128.4	149.7
	90	41.6		11.7	22.4	33.1	43.7	54.4	65.1	75.8	86.4	107.8	129.1
35	0	24.6			39.5	50.1	60.8	71.5	82.2	92.8	103.5	124.8	146.2
	90	48.6			15.5	26.1	36.8	47.5	58.1	68.8	79.5	100.8	122.2
40	0	28.1				46.6	57.3	68.0	78.6	89.3	100.0	121.3	142.7
	90	55.5				19.2	29.9	40.5	51.2	61.9	72.6	93.9	115.2
45	0	31.6					53.8	64.5	75.1	85.8	96.5	117.8	139.2
	90	62.5					22.9	33.6	44.3	54.9	65.6	87.0	108.3
50	0	35.1						61.0	71.6	82.3	93.0	114.3	135.7
	90	69.4						26.7	37.3	48.0	58.7	80.0	101.4
55	0	38.6							68.1	78.8	89.5	110.8	132.2
	90	76.3							30.4	41.1	51.7	73.1	94.4
60	0	42.1								75.3	86.0	107.3	128.6
	90	83.3								34.1	44.8	66.1	87.5



Note

The operating torque of the actuator must not be greater than the maximum permissible torque listed in ISO 5211 in relation to the size of the mounting flange and of the coupling.

Quarter turn actuators DFPD, single-acting

Technical data

Theoretical torque [Nm] as a function of operating pressure [bar] and swivel angle [°]													
Spring configuration	Nominal swivel angle	Spring torque [Nm]	Operating pressure [bar]										
	[°]		2	2.5	3	3.5	4	4.5	5	5.5	6	7	8
Size DFPD-160													
20	0	19.2	39.3	53.9	68.6	83.2	97.9	112.5	127.1	141.8	156.4	185.7	214.9
	90	38.1	20.5	35.1	49.7	64.4	79.0	93.6	108.3	122.9	137.6	166.8	196.1
25	0	24.1	34.5	49.1	63.8	78.4	93.0	107.7	122.3	137.0	151.6	180.9	210.1
	90	47.6	37.6	25.6	40.2	54.9	69.5	84.1	98.8	113.4	128.0	157.3	186.6
30	0	28.9		44.3	59.0	73.6	88.2	102.9	117.5	132.1	146.8	176.0	205.3
	90	57.1		16.1	30.7	45.3	60.0	74.6	89.2	103.9	118.5	147.8	177.1
35	0	33.7			54.1	68.8	83.4	98.1	112.7	127.3	142.0	171.2	200.5
	90	66.6			21.2	35.8	50.4	65.1	79.7	94.4	109.0	138.3	167.5
40	0	38.5				64.0	78.6	93.2	107.9	122.5	137.2	166.4	195.7
	90	76.2				26.3	40.9	55.6	70.2	84.8	99.5	128.7	158.0
45	0	43.3					73.8	88.4	103.1	117.7	132.3	161.6	190.9
	90	85.7					31.4	46.0	60.7	75.3	90.0	119.2	148.5
50	0	48.1						83.6	98.3	112.9	127.5	156.8	186.1
	90	95.2						36.5	51.2	65.8	80.4	109.7	139.0
55	0	52.9							93.5	108.1	122.7	152.0	181.3
	90	104.7							41.6	56.3	70.9	100.2	129.5
60	0	57.7								103.3	117.9	147.2	176.5
	90	114.2								46.8	61.4	90.7	119.9
Size DFPD-240													
20	0	28.0	57.2	78.5	99.8	121.1	142.4	163.7	185.0	206.3	227.6	270.2	312.8
	90	55.4	29.8	51.1	72.4	93.7	115.0	136.3	157.6	178.9	200.2	242.8	285.4
25	0	35.0	50.2	71.5	92.8	114.1	135.4	156.7	178.0	199.3	220.6	263.2	305.8
	90	69.2	16.0	37.3	58.6	79.9	101.2	122.5	143.8	165.1	186.4	229.0	271.6
30	0	42.0		64.5	85.8	107.1	128.4	149.7	171.0	192.3	213.6	256.2	298.8
	90	83.0		23.5	44.8	66.1	87.4	108.7	130.0	151.3	172.6	215.2	257.8
35	0	49.0			78.8	100.1	121.4	142.7	164.0	185.3	206.6	249.2	291.8
	90	96.9			30.9	52.2	73.5	94.8	116.1	137.5	158.7	201.3	243.9
40	0	56.0				93.1	114.4	135.7	157.0	178.3	199.6	242.2	284.8
	90	110.7				38.4	59.7	81.0	102.3	123.6	144.9	187.5	230.1
45	0	63.0					107.4	128.7	150.0	171.3	192.6	235.2	277.8
	90	124.6					45.8	67.1	88.4	109.7	131.0	173.6	216.2
50	0	70.0						121.7	143.0	164.3	185.6	228.2	270.8
	90	138.4						53.3	74.6	95.9	117.2	159.8	202.4
55	0	77.0							136.0	157.3	178.6	221.2	263.8
	90	152.2							60.8	82.1	103.4	146.0	188.6
60	0	84.0								150.3	171.6	214.2	256.8
	90	166.1								68.2	89.5	132.1	174.7


-  - Note

The operating torque of the actuator must not be greater than the maximum permissible torque listed in ISO 5211 in relation to the size of the mounting flange and of the coupling.

Quarter turn actuators DFPD, single-acting

Technical data


Theoretical torque [Nm] as a function of operating pressure [bar] and swivel angle [°]													
Spring configuration	Nominal swivel angle [°]	Spring torque [Nm]	Operating pressure [bar]										
			2	2.5	3	3.5	4	4.5	5	5.5	6	7	8
Size DFPD-300													
20	0	36.1	73.7	101.1	128.6	156.0	183.4	210.9	238.3	265.8	293.2	348.1	403.0
	90	71.4	38.4	65.9	93.3	120.8	148.2	175.6	203.1	230.5	258.0	312.9	367.8
25	0	45.2	64.6	92.1	119.5	147.0	174.4	201.9	229.3	256.8	284.2	339.1	394.0
	90	89.2	20.6	48.0	75.5	102.9	130.4	157.8	185.3	212.7	240.1	295.0	349.9
30	0	54.2		83.0	110.5	137.9	165.4	192.8	220.3	247.7	275.2	330.1	384.9
	90	107.0		30.2	57.6	85.1	112.5	140.0	167.4	194.9	222.3	277.2	332.1
35	0	63.2			101.5	128.9	156.4	183.8	211.2	238.7	266.1	321.0	375.9
	90	124.9			39.8	67.2	94.7	122.1	149.6	177.0	204.5	259.4	314.2
40	0	72.2				119.9	147.3	174.8	202.2	229.7	257.1	312.0	366.9
	90	142.7				49.4	76.8	104.3	131.7	159.2	186.6	241.5	296.4
45	0	81.3					138.3	165.7	193.2	220.6	248.1	303.0	357.9
	90	160.6					59.0	86.4	113.9	141.3	168.8	223.7	278.6
50	0	90.3						156.7	184.2	211.6	239.0	293.9	348.8
	90	178.4						68.6	96.1	123.5	150.9	205.8	260.7
55	0	99.3							175.1	202.6	230.0	284.9	339.8
	90	196.2							78.2	105.7	133.1	188.0	242.9
60	0	108.4								193.5	221.0	275.9	330.8
	90	214.1								87.8	115.3	170.2	225.0
Size DFPD-480													
20	0	56.7	115.7	158.8	201.9	245.0	288.0	331.1	374.2	417.3	460.4	546.6	632.8
	90	112.0	60.3	103.4	146.5	189.6	232.7	275.8	318.9	362.0	405.1	491.2	577.4
25	0	70.9	101.5	144.6	187.7	230.8	273.9	317.0	360.1	403.2	446.2	532.4	618.6
	90	140.1	32.3	75.4	118.5	161.6	204.7	247.8	290.9	334.0	377.0	463.2	549.4
30	0	85.0		130.4	173.5	216.6	259.7	302.8	345.9	389.0	432.1	518.3	604.4
	90	168.1		47.4	90.5	133.6	176.7	219.8	262.8	305.9	349.0	435.2	521.4
35	0	99.2			159.4	202.4	245.5	288.6	331.7	374.8	417.9	504.1	590.3
	90	196.1			62.5	105.6	148.7	191.7	234.8	277.9	321.0	407.2	493.4
40	0	113.4				188.3	231.4	274.5	317.5	360.6	403.7	489.9	576.1
	90	224.1				77.6	120.6	163.7	206.8	249.9	293.0	379.2	465.4
45	0	127.5					217.2	260.3	303.4	346.5	389.6	475.7	561.9
	90	252.1					92.6	135.7	178.8	221.9	265.0	351.2	437.4
50	0	141.7						246.1	289.2	332.3	375.4	461.6	547.8
	90	280.1						107.1	150.8	193.9	237.0	323.2	409.4
55	0	155.9							275.0	318.1	361.2	447.4	533.6
	90	308.1							122.8	165.9	209.0	295.2	381.3
60	0	170.0								304.0	347.1	433.2	519.4
	90	336.1								137.9	181.0	267.2	353.3

 Note
 The operating torque of the actuator must not be greater than the maximum permissible torque listed in ISO 5211 in relation to the size of the mounting flange and of the coupling.

Quarter turn actuators DFPD, single-acting

Technical data


Theoretical torque [Nm] as a function of operating pressure [bar] and swivel angle [°]														
Spring configuration	Nominal swivel angle	Spring torque [Nm]	Operating pressure [bar]											
	[°]		2	2.5	3	3.5	4	4.5	5	5.5	6	7	8	
Size DFPD-700														
20	0	78.8	162.4	222.7	283.0	343.3	403.6	463.9	524.2	584.5	644.8	705.1	765.4	825.7
	90	143.7	97.5	157.8	218.1	278.4	338.7	399.0	459.3	519.6	579.9	640.2	700.5	760.8
25	0	99.6	141.6	201.9	262.2	322.5	382.8	443.1	503.4	563.7	624.0	684.3	744.6	804.9
	90	181.7	59.5	119.8	180.1	240.4	300.7	361.0	421.3	481.6	541.9	602.2	662.5	722.8
30	0	120.9		180.6	240.9	301.2	361.5	421.8	482.1	542.4	602.7	663.0	723.3	783.6
	90	220.5		81.0	141.3	201.6	261.9	322.2	382.5	442.8	503.1	563.4	623.7	684.0
35	0	142.6			219.2	279.5	339.8	400.1	460.4	520.7	581.0	641.3	701.6	761.9
	90	260.1			101.6	161.9	222.2	282.5	342.8	403.1	463.4	523.7	584.0	644.3
40	0	164.8				257.3	317.6	377.9	438.2	498.5	558.8	619.1	679.4	739.7
	90	300.6				121.5	181.8	242.1	302.4	362.7	423.0	483.3	543.6	603.9
45	0	187.4					295.0	355.3	415.6	475.9	536.2	596.5	656.8	717.1
	90	341.9					140.5	200.8	261.1	321.4	381.7	442.0	502.3	562.6
50	0	210.5						332.2	392.5	452.8	513.1	573.4	633.7	694.0
	90	384.0						158.7	219.0	279.3	339.6	399.9	460.2	520.5
55	0	234.1							368.9	429.2	489.5	549.8	610.1	670.4
	90	427.0							176.0	236.3	296.6	356.9	417.2	477.5
60	0	258.1								405.2	465.5	525.8	586.1	646.4
	90	470.7								192.5	252.8	313.1	373.4	433.7
Size DFPD-900														
20	0	99.2	206.9	283.5	360.0	436.6	513.1	589.7	666.2	742.8	819.3	895.8	972.4	1048.9
	90	181.6	124.6	201.1	277.6	354.2	430.7	507.3	583.8	660.4	736.9	813.4	890.0	966.5
25	0	125.5	180.7	257.3	333.8	410.3	486.9	563.4	640.0	716.5	793.1	869.6	946.2	1022.7
	90	229.6	76.5	153.1	229.6	306.2	382.7	459.3	535.8	612.4	688.9	765.4	842.0	918.5
30	0	152.3		230.5	307.0	383.5	460.1	536.6	613.2	689.7	766.3	842.9	919.5	996.0
	90	278.7		104.0	180.6	257.1	333.7	410.2	486.8	563.3	639.8	716.4	792.9	869.4
35	0	179.6			279.6	356.2	432.7	509.3	585.8	662.3	738.9	815.4	892.0	968.5
	90	328.8			130.5	207.0	283.6	360.1	436.7	513.2	589.7	666.2	742.8	819.3
40	0	207.6				328.2	404.8	481.3	557.9	634.4	710.9	787.4	864.0	940.5
	90	379.9				155.9	232.4	309.0	385.5	462.1	538.6	615.1	691.7	768.2
45	0	236.1					376.2	452.8	529.3	605.9	682.4	758.9	835.5	912.0
	90	432.1					180.2	256.8	333.3	409.9	486.4	563.0	639.5	716.0
50	0	265.2						423.7	500.3	576.8	653.3	729.8	806.4	882.9
	90	485.4						203.5	280.1	356.6	433.2	509.7	586.3	662.8
55	0	294.8							470.6	547.1	623.7	700.2	776.7	853.2
	90	539.6							225.8	302.4	378.9	455.4	532.0	608.5
60	0	325.1								516.9	593.5	670.0	746.5	823.0
	90	595.0								247.0	323.6	400.1	476.7	553.2

 Note
 The operating torque of the actuator must not be greater than the maximum permissible torque listed in ISO 5211 in relation to the size of the mounting flange and of the coupling.

Quarter turn actuators DFPD, single-acting

Technical data

Theoretical torque [Nm] as a function of operating pressure [bar] and swivel angle [°]													
Spring configuration	Nominal swivel angle [°]	Spring torque [Nm]	Operating pressure [bar]										
			2	2.5	3	3.5	4	4.5	5	5.5	6	7	8
Size DFPD-1200													
20	0	146.4	278.9	385.2	491.5	597.8	704.1	810.5	916.8	1023.1	1129.4	1342	1554
	90	243.8	181.5	287.8	394.1	500.4	606.7	713.0	819.3	925.7	1032.0	1244	1457
25	0	185.0	240.2	346.5	452.8	559.1	665.4	771.8	878.1	984.4	1090.7	1303	1515
	90	308.2	117.0	223.3	329.7	436.0	542.3	648.6	754.9	861.2	967.5	1180	1392
30	0	224.6		307.0	413.3	519.6	625.9	732.2	838.5	944.9	1051.2	1263	1476
	90	374.1		157.5	263.8	370.1	476.4	582.7	689.1	795.4	901.7	1114	1326
35	0	264.9			372.9	479.2	585.5	691.9	798.2	904.5	1010.8	1223	1436
	90	441.3			196.6	302.9	409.2	515.5	621.8	728.1	834.4	1047	1259
40	0	306.2				438.0	544.3	650.6	757.0	863.3	969.6	1182	1394
	90	510.0				234.2	340.5	446.8	553.2	659.5	765.8	978.4	1191
45	0	348.2					502.3	608.6	714.9	821.2	927.5	1140	1352
	90	580.0					270.5	376.8	483.1	589.4	695.7	908.4	1121
50	0	391.1						565.7	672.0	778.3	884.6	1097	1309
	90	651.5						305.3	411.7	518.0	624.3	836.9	1049
55	0	434.9							628.3	734.6	840.9	1053	1266
	90	724.3							338.8	445.1	551.4	764.1	976.7
60	0	479.4								690.0	796.3	1008	1221
	90	798.6								370.9	477.2	689.8	902.4
Size DFPD-2300													
20	0	278.8	533.3	736.3	939.4	1142	1345	1548	1751	1954	2157	2563	2969
	90	473.5	338.6	541.6	744.7	947.7	1150	1353	1556	1759	1962	2368	2774
25	0	352.5	459.6	662.6	865.7	1068	1271	1474	1677	1880	2083	2489	2895
	90	598.7	213.4	416.4	619.5	822.5	1025	1228	1431	1634	1837	2243	2649
30	0	427.8		587.3	790.4	993.4	1196	1399	1602	1805	2008	2414	2820
	90	726.6		288.5	491.6	694.6	897.6	1100	1303	1506	1709	2115	2521
35	0	504.7			713.5	916.5	1119	1322	1525	1728	1931	2337	2743
	90	857.2			361.0	564.0	767.0	970.0	1173	1376	1579	1985	2391
40	0	583.2				838.0	1041	1244	1447	1650	1853	2259	2665
	90	990.5				430.6	633.7	836.7	1039	1242	1445	1851	2257
45	0	663.3					960.9	1163	1367	1570	1773	2179	2585
	90	1127					497.6	700.6	903.6	1106	1309	1715	2121
50	0	745.0						1082	1285	1488	1691	2097	2503
	90	1265						561.8	764.9	967.9	1170	1577	1983
55	0	828.3							1201	1405	1608	2014	2420
	90	1407							623.4	826.4	1029	1435	1841
60	0	913.2								1320	1523	1929	2335
	90	1551								682.2	885.2	1291	1697

 Note
 The operating torque of the actuator must not be greater than the maximum permissible torque listed in ISO 5211 in relation to the size of the mounting flange and of the coupling.

Quarter turn actuators DFPD, single-acting

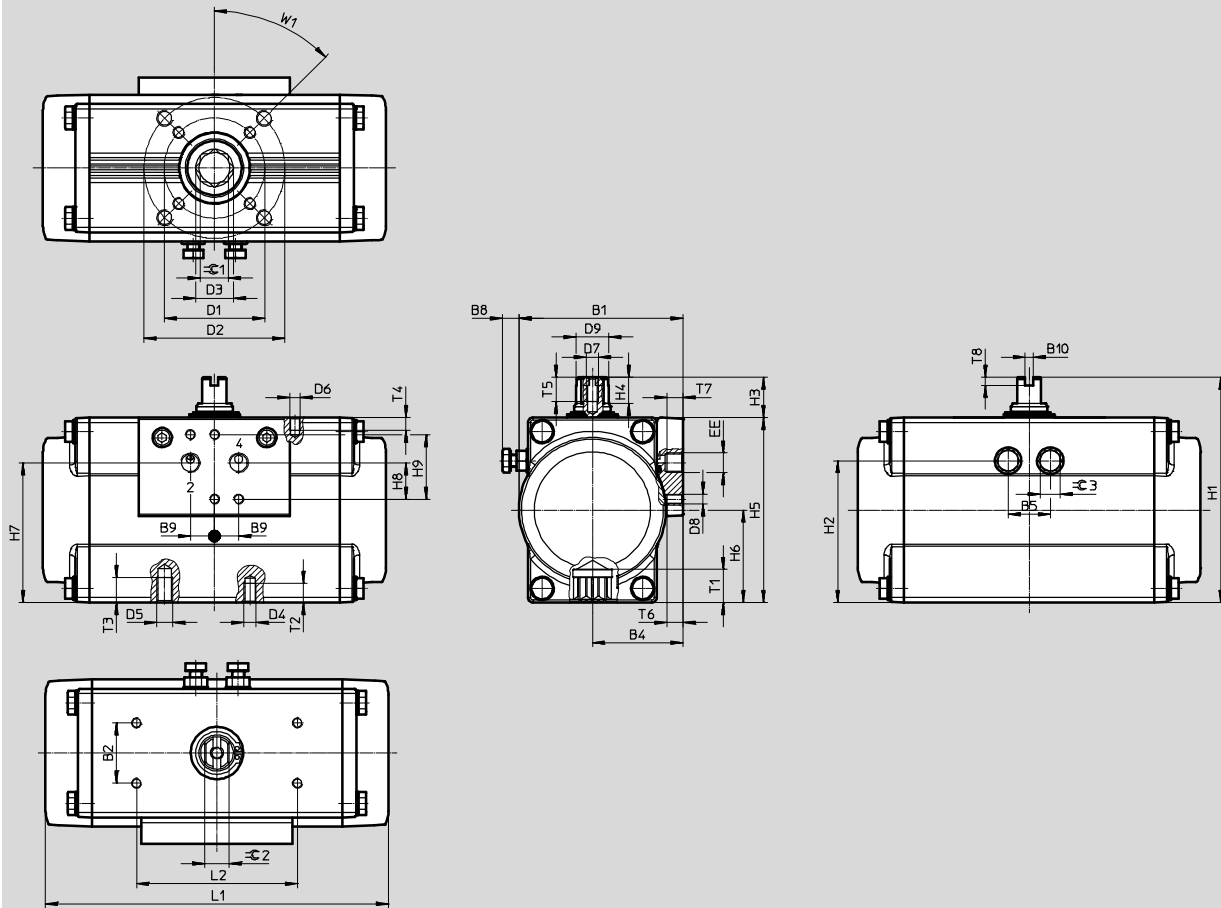
Technical data

FESTO

Dimensions

Download CAD data → www.festo.com

Size 20 ... 80



Quarter turn actuators DFPD, single-acting

Technical data

Type code	B1	B2	B4	B5	B8	B9	B10	D1 ∅	D2 ∅	D3 ∅	D4	D5	D6
[mm]		±0.1			max.		+0.1	±0.1	±0.1				
DFPD-20-F03	68.5	30	38.5	19	9.2	12	4	36	-	12	M5	-	M5
DFPD-20-F04								42		14.6			
DFPD-20-F05								50					
DFPD-40-F04	81.5	30	45	21	8.2	12	4	42	70	18.7	M6	M8	M5
DFPD-40-F0507								50		23.3			
DFPD-80-F0507	99		53	26	9								

Type code	D7	D8	D9 ∅	EE	H1	H2	H3	H4	H5	H6	H7	H8	H9
[mm]			±0.1				-0.5	+0.1		±0.2	±0.3	±0.1	
DFPD-20-F03	M6	M5	12.7	G 1/8 or 1/8 NPT	100	59.8	20	10	80	40	57.5	16	32
DFPD-20-F04													
DFPD-20-F05													
DFPD-40-F04	M6	M5	16.2	G 1/8 or 1/8 NPT	112	70.5	20	13	92	46	67.5	16	32
DFPD-40-F0507													
DFPD-80-F0507			20.2		130	86			110	55	86.5		

Type code	L1	L2	T1	T2	T3	T4	T5	T6	T7	T8	⊖ 1	⊖ 2	⊖ 3	W1
[mm]		±0.1	±0.4							+0.5	H11	h11		
DFPD-20-F03	145.7	80	10 min.	8	-	8	12	8	8	4	9	9	10	45°
DFPD-20-F04			13.2	9							11			
DFPD-20-F05			12 min.	8							14			
DFPD-40-F04	170.4	80	16.5	9	12	8	12	8	8	4	17	15	13	
DFPD-40-F0507														
DFPD-80-F0507	223.1	80	19.3											

Quarter turn actuators DFPD, single-acting

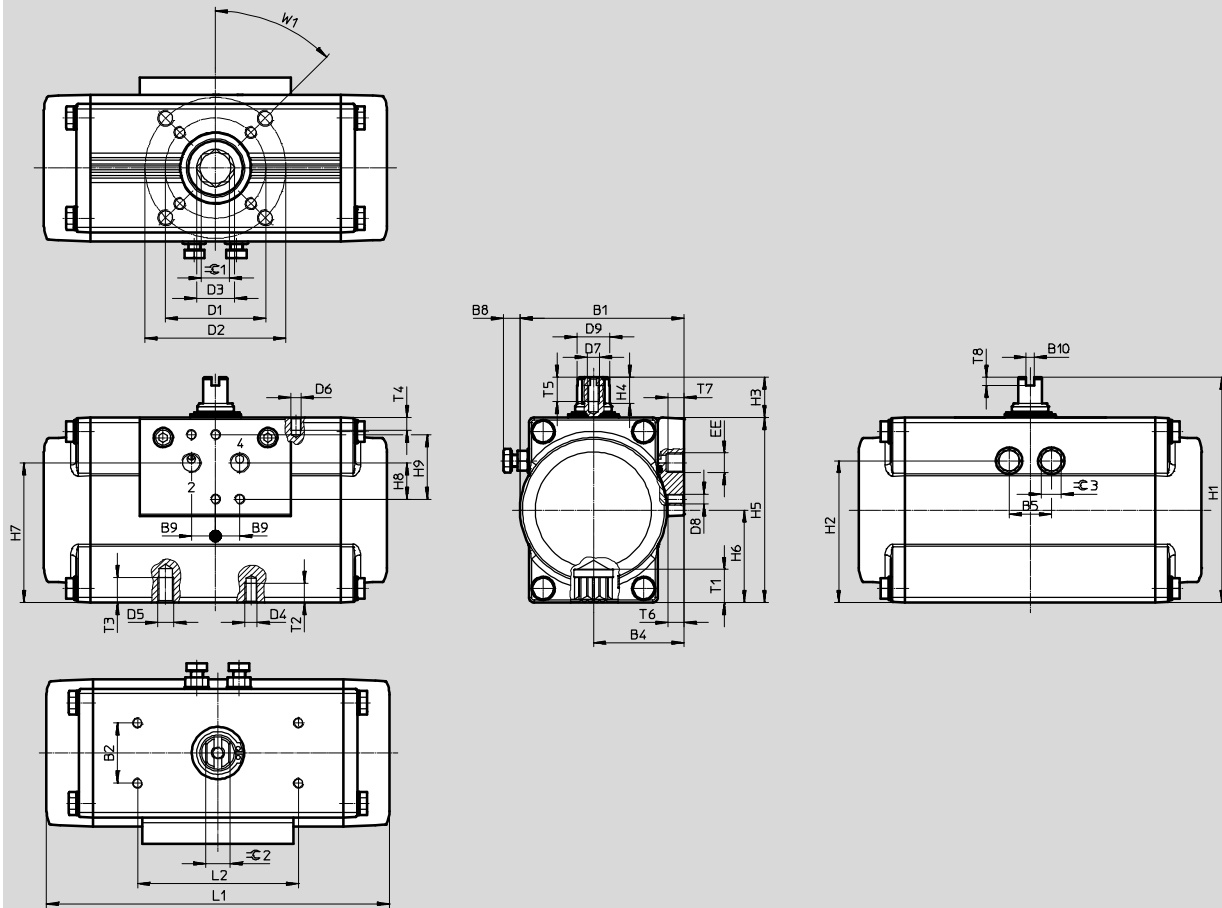
Technical data

FESTO

Dimensions

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Size 120 ... 480



Quarter turn actuators DFPD, single-acting

Technical data

Type code [mm]	B1	B2 ±0.1	B4	B5	B8 max.	B9	B10	D1 ∅ ±0.1	D2 ∅ ±0.1	D3 ∅	D4	D5	D6
DFPD-120-F0507	111.5	30	60.5	32	12.3	12	4	50	70	23.2	M6	M8	M5
DFPD-160-F0710	120		63.5	36	13.4			70	102	30	M8	M10	
DFPD-240-F0710	135.5		71.5	41	18.5			102	125	30.3			
DFPD-300-F0710	144		74.5	46	17					M10	M12	30	
DFPD-480-F1012	163		83	52	19.3								

Type code [mm]	D7	D8	D9 ∅ ±0.1	EE	H1	H2	H3 0.5	H4 +0.1	H5	H6	H7 ±0.3	H8 ±0.1	H9
DFPD-120-F0507	M6	M5	22.5	G 1/4 or 1/4 NPT	143	97.75	20	13	123	61.5	98.4	16	32
DFPD-160-F0710			25.5		154	106.25			134	67	109.4		
DFPD-240-F0710			31.8		180	120.5	30	19.5	150	75	120.2		
DFPD-300-F0710			38		192	131			162	81	132.1		
DFPD-480-F1012					214	149.5			184	92	152.5		

Type code [mm]	L1	L2 ±0.1	T1 ±0.4	T2	T3	T4	T5	T6	T7	T8 +0.5	≈C 1 H11	≈C 2 h11	≈C 3	W1
DFPD-120-F0507	252.3	80	19.3	9	12	8	14	8	12	4	17	15	13	45°
DFPD-160-F0710	270.9		24.3	12	15						22	19	16	
DFPD-240-F0710	301.4		29.5	15	18						27	27	21	
DFPD-300-F0710	334.4													
DFPD-480-F1012	374.2													

Quarter turn actuators DFPD, single-acting

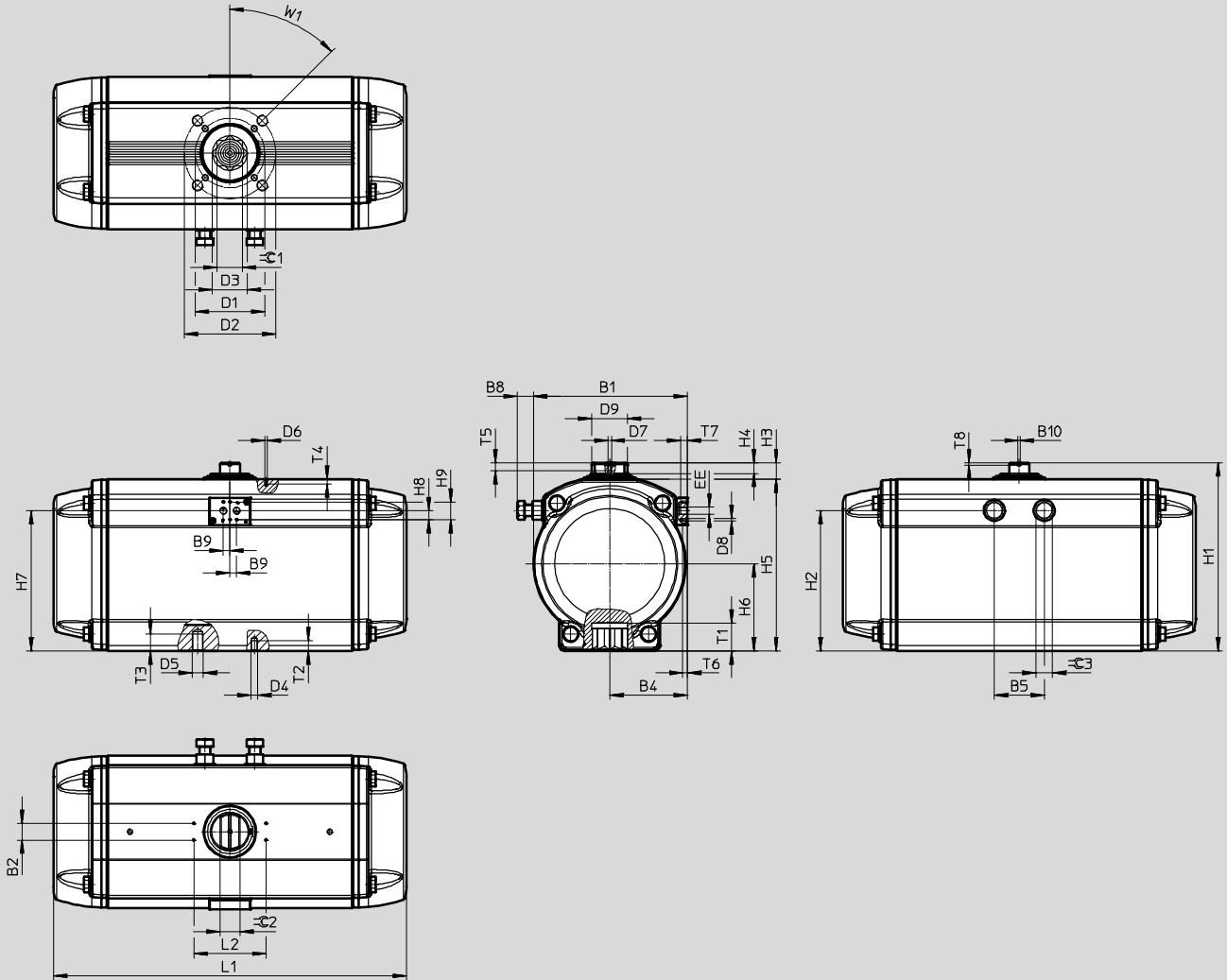
Technical data

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Dimensions

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Size 700 ... 2300



Quarter turn actuators DFPD, single-acting

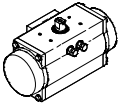
Technical data

Type code	B1	B2	B4	B5	B8	B9	B10	D1 ∅	D2 ∅	D3 ∅	D4	D5	D6
[mm]		±0.1			max.		±0.1						
DFPD-700-...-F1012	184	30	93	57.6	17.5	12	4	102	125	37.4	M10	M12	M5
DFPD-900-...-F1012	202		102	64.8	28.6			140	-	50.1	M16	-	
DFPD-900-...-F14			102	125	37.4			M10	M12				
DFPD-1200-...-F1012	221.5		111.5	72	24			140	-	50.1	M16	-	
DFPD-1200-...-F14			125	165	62.9			M12	M20				
DFPD-2300-...-F1216	277		139.8	90	33			140	-	50.1	M16	-	
DFPD-2300-...-F14													

Type code	D7	D8	D9 ∅	EE	H1	H2	H3	H4	H5	H6	H7	H8	H9	
[mm]			±0.1									±0.1		
DFPD-700-...-F1012	M6	M5	41	G 1/4 or 1/4 NPT	232.7	168	29.7	21	203	103	164.9	16	32	
DFPD-900-...-F1012			44		252.7	182			223	113	178.3			
DFPD-900-...-F14			50		275.7	204			246	125	199.6			
DFPD-1200-...-F1012			64		338.7	253			19	309	157			252.3
DFPD-1200-...-F14														
DFPD-2300-...-F1216														
DFPD-2300-...-F14														

Type code	L1	L2	T1	T2	T3	T4	T5	T6	T7	T8	≈C 1	≈C 2	≈C 3	W1
[mm]		±0.1	Min.							+0.5	H11	h11		
DFPD-700-...-F1012	428.2	80	29.7	15	18	8	14	8	12	4	27	30	21	45°
DFPD-900-...-F1012	469.6	130	30.2	15.5	18.5	36					32	24		
DFPD-900-...-F14			40.2	24.5	-	27					36			
DFPD-1200-...-F1012	519.3		31	15.5	18.5	36						36	30	
DFPD-1200-...-F14			40	24.5	-	46								
DFPD-2300-...-F1216	636		50	18.5	30	36								
DFPD-2300-...-F14			40	24.5	-									

★ Core product range

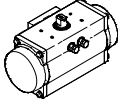
Ordering data				
Type code	Size	Product weight [g]	Part No.	Type code
	20	1419	★ 8047622	DFPD-20-RP-90-RS60-F04
	40	2180	★ 8047624	DFPD-40-RP-90-RS60-F0507
	80	3960	★ 8047626	DFPD-80-RP-90-RS60-F0507
	120	5736	★ 8048134	DFPD-120-RP-90-RS60-F0507
	160	7179	★ 8048136	DFPD-160-RP-90-RS60-F0710
	240	10036	★ 8048138	DFPD-240-RP-90-RS60-F0710
	300	12880	★ 8048140	DFPD-300-RP-90-RS60-F0710
	480	18485	★ 8048142	DFPD-480-RP-90-RS60-F1012

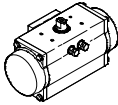
Festo core product range

- ★ Generally ready for shipping ex works in 24 hours
- ☆ Generally ready for shipping ex works in 5 days

Quarter turn actuators DFPD, single-acting

Technical data

Ordering data				
Type code	Size	Product weight [g]	Part No.	Type code
	20	1371	8047644	DFPD-20-RP-90-RS30-F03
		1419	8047645	DFPD-20-RP-90-RS60-F03
		1371	8047621	DFPD-20-RP-90-RS30-F04
		1371	8048014	DFPD-20-RP-90-RS30-F05
		1419	8048015	DFPD-20-RP-90-RS60-F05
	40	2087	8047635	DFPD-40-RP-90-RS30-F04
		2180	8047636	DFPD-40-RP-90-RS60-F04
		2087	8047623	DFPD-40-RP-90-RS30-F0507
	80	3746	8047625	DFPD-80-RP-90-RS30-F0507
	120	5422	8048133	DFPD-120-RP-90-RS30-F0507
	160	6767	8048135	DFPD-160-RP-90-RS30-F0710
	240	9442	8048137	DFPD-240-RP-90-RS30-F0710
	300	12052	8048139	DFPD-300-RP-90-RS30-F0710
	480	17261	8048141	DFPD-480-RP-90-RS30-F1012
	700	26268	8065262	DFPD-700-RP-90-RS60-F1012
	900	30395	8065266	DFPD-900-RP-90-RS60-F14
1200	43022	8065270	DFPD-1200-RP-90-RS60-F14	
2300	77884	8065274	DFPD-2300-RP-90-RS60-F1216	

Ordering data				
Type code	Size	Product weight [g]	Part No.	Type code
Version EP, epoxy-coated				
	20	1371	8047646	DFPD-20-RP-90-RS30-F03-R3-EP
		1419	8047647	DFPD-20-RP-90-RS60-F03-R3-EP
		1371	8047627	DFPD-20-RP-90-RS30-F04-R3-EP
		1419	8047628	DFPD-20-RP-90-RS60-F04-R3-EP
		1371	8048016	DFPD-20-RP-90-RS30-F05-R3-EP
		1419	8048017	DFPD-20-RP-90-RS60-F05-R3-EP
	40	2087	8047642	DFPD-40-RP-90-RS30-F04-R3-EP
		2180	8047643	DFPD-40-RP-90-RS60-F04-R3-EP
		2087	8047629	DFPD-40-RP-90-RS30-F0507-R3-EP
		2180	8047630	DFPD-40-RP-90-RS60-F0507-R3-EP
	80	3746	8047631	DFPD-80-RP-90-RS30-F0507-R3-EP
		3960	8047632	DFPD-80-RP-90-RS60-F0507-R3-EP
	120	5422	8048143	DFPD-120-RP-90-RS30-F0507-R3-EP
		5736	8048144	DFPD-120-RP-90-RS60-F0507-R3-EP
	160	6767	8048145	DFPD-160-RP-90-RS30-F0710-R3-EP
		7179	8048146	DFPD-160-RP-90-RS60-F0710-R3-EP
	240	9442	8048147	DFPD-240-RP-90-RS30-F0710-R3-EP
		10036	8048148	DFPD-240-RP-90-RS60-F0710-R3-EP
	300	12052	8048149	DFPD-300-RP-90-RS30-F0710-R3-EP
		12880	8048150	DFPD-300-RP-90-RS60-F0710-R3-EP
	480	17261	8048151	DFPD-480-RP-90-RS30-F1012-R3-EP
		18485	8048152	DFPD-480-RP-90-RS60-F1012-R3-EP
	700	26268	8065264	DFPD-700-RP-90-RS60-F1012-R3-EP
	900	30395	8065268	DFPD-900-RP-90-RS60-F14-R3-EP
1200	43022	8065272	DFPD-1200-RP-90-RS60-F14-R3-EP	
2300	77884	8065276	DFPD-2300-RP-90-RS60-F1216-R3-EP	

Quarter turn actuators DFPD

Ordering data – Modular product system, size 120 ... 480



Ordering table			120	160	240	300	480	Condi- tions	Code	Enter code	
M	Module No.		8042188	8042189	8042190	8042191	8042192				
	Function		Quarter turn actuator, based on ISO 5211						DFPD	DFPD	
O	System of units	Metric									
		Imperial							-N		
	Version	Standard									
M	Size	120		-	-	-	-		-120		
		160	-		-	-	-		★ -160		
		240	-	-		-	-		★ -240		
		300	-	-	-		-		★ -300		
		480	-	-	-	-			★ -480		
M	Design	Rack and pinion							-RP	-RP	
O	Yoke type	None									
M	Swivel angle	90°							-90		
		180°		-		-			-180		
	Swivel direction	To the left							-L		
		To the right							-R		
	Function	Double-acting							D		
		Single-acting						1	★ S		
O	Spring configuration	None									
		Connection pressure	2 bar						5	20	
			2.5 bar						5	25	
			3 bar						5	30	
			3.5 bar						5	35	
			4 bar						5	40	
			4.5 bar						5	45	
			5 bar						5	50	
			5.5 bar						5	55	
	6 bar							5	★ 60		

1 S Not in combination with swivel angle 180°

5 20, 25, 30, 35, 40, 45, 50, 55, 60 Not in combination with double-acting function, with 2 cylinders (DD), mandatory specification in combination with (function) single-acting (S)

M Mandatory data

O Options

Transfer order code

DFPD - - - - - - - -

Festo core product range

★ Generally ready for shipping ex works in 24 hours

☆ Generally ready for shipping ex works in 5 days

Quarter turn actuators DFPD

Ordering data – Modular product system, size 120 ... 480

Ordering table				120	160	240	300	480	Condi- tions	Code	Enter code
M	Flange pattern 1	Hole pattern	F05		-	-	-	-		-F05	
			F07	-						★-F07	
			F10	-	-	-	-			★-F10	
O	Flange pattern 2	Standard		-	-	-	-				
		Hole pattern	F07		-	-	-	-	6	07	
			F10	-						★10	
			F12	-	-	-	-			★12	
O	Manual override	None									
	Temperature range	Standard									
		0 ... +150 °C								-T4	
		-50 ... +60 °C								-T6	
	Material shaft	Standard									
		High						8	-R3		
	Housing surface treatment	None									
		Epoxy-coated						4	-EP		

4 EP Only in combination with material shaft -R3

6 07 Mandatory specification in combination with (torque) 40 Nm, 80 Nm, 120 Nm
 8 R3 Mandatory specification in combination with (housing surface treatment) epoxy-coated -EP

- M Mandatory data
- O Options

Transfer order code

- - - - -

Festo core product range ★ Generally ready for shipping ex works in 24 hours
 ☆ Generally ready for shipping ex works in 5 days

Quarter turn actuators DFPD

Ordering data – Modular product system, size 700 ... 2300



Ordering table			700	900	1200	2300	Condi- tions	Code	Entry code
M	Module no.		8042193	8042194	8042195	8042196			
	Function		Quarter turn actuator, based on ISO 5211					DFPD	DFPD
O	System of units	Metric							
		Imperial						-N	
	Version	Standard							
M	Size	700		-	-	-		-700	
		900	-		-	-		-900	
		1200	-	-		-		-1200	
		2300	-	-	-			-2300	
M	Design	Rack and pinion						-RP	-RP
O	Yoke type	None							
M	Swivel angle	90°						-90	
	Swivel direction	To the left						-L	
		To the right						-R	
	Function	Double-acting						D	
		Single-acting						S	
O	Spring configuration	Without							
	Connection	2 bar					5	20	
	pressure	2.5 bar					5	25	
		3 bar					5	30	
		3.5 bar					5	35	
		4 bar					5	40	
		4.5 bar					5	45	
		5 bar					5	50	
		5.5 bar					5	55	
		6 bar					5	60	
M	Flange pattern 1	Hole pattern							
		F10				-		-F10	
		F12	-	-	-			-F12	
		F14	-	-	-			-F14	
O	Flange pattern 2	None							
		Hole pattern							
		F12				-	2	12	
		F16	-	-	-		15	16	
	Manual override	None							
	Temperature range	Standard							
	Shaft material	Standard							
		Stainless steel					8	-R3	
	Housing surface	None							
	treatment	Epoxy-coated					4	-EP	

2 12 Mandatory specification in combination with (flange pattern 1) hole pattern F10 (-F10)

4 EP Not in combination with (flange pattern 1) hole pattern F14 (-F14)
Only in combination with shaft material -R3

5 20, 25, 30, 35, 40, 45, 50, 55, 60

Not in combination with double-acting function, with 2 cylinders (DD), mandatory specification in combination with (function) single-acting (S)

8 R3 Mandatory specification in combination with (housing surface treatment) epoxy-coated -EP

15 16 Mandatory specification in combination with (flange pattern 1) hole pattern F12 (-F12)
Not in combination with (flange pattern 1) hole pattern F14 (-F14)

M Mandatory data

O Options

Order code

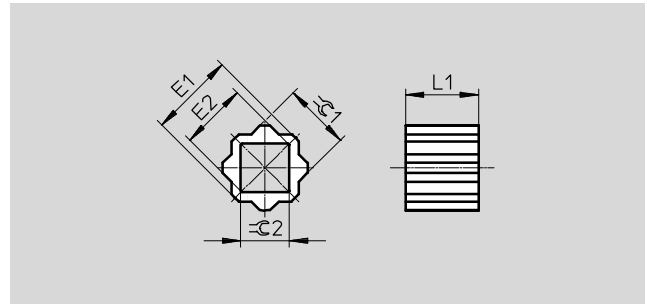
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Quarter turn actuators DFPD

Accessories

Reducing sleeve square DARQ

- Connection 1, function drive outlet
- Connection 2, function reducing outlet
- Material: Sintered stainless steel
- RoHS-compliant
- Contains paint-wetting impairment substances



DARQ-R-A-...	E1 +0.1/-0.3	E2 +0.3/-0.1	L1 ±0.2	⌀ 1 -0.02/-0.12	⌀ 2 +0.04/+0.18
S11-S8-...	14	11	12	11	8
S11-S9-...	14	12.3	11	11	9
S14-S8-...	18	11	16	14	8
S14-S9-...	18	12.3	16	14	9
S14-S10-...	18	13.3	16	14	10
S14-S11-...	18	14.3	16	14	11
S14-S12-...	18	16.3	16	14	12
S17-S8-...	22	11	17	17	8
S17-S11-...	22	14.3	17	17	11
S17-S12-...	22	16.3	17	17	12
S17-S14-...	22	18.3	17	17	14
S22-S11-...	28	14.3	22	22	11
S22-S14-...	28	18.3	22	22	14
S22-S16-...	28	21.3	22	22	16
S22-S17-...	28	22.3	22	22	17
S27-S17-...	36	22.3	27	27	17
S27-S22-...	36	28.5	27	27	22
S36-S27-...	48	36.1	36	36	27
S46-S36-...	59	48	46	46	36

Quarter turn actuators DFPD

Accessories



Ordering data									
Design	Connection		Length [mm]	CRC ¹⁾	Weight/piece [g]	Part No.	Type	PU ²⁾	
	Drive outlet	Reducing outlet							
Internal square and external octagon	Size 11	Size 8	12	2	7	8082116	DARQ-R-A-S11-S8-12	1	
	Size 11	Size 9	11		5	8082117	DARQ-R-A-S11-S9-11		
	Size 14	Size 8	16		20	8086383	DARQ-R-A-S14-S8-16		
	Size 14	Size 9	16		18	8082118	DARQ-R-A-S14-S9-16		
	Size 14	Size 10	16		16	8082119	DARQ-R-A-S14-S10-16		
	Size 14	Size 11	16		13	8082120	DARQ-R-A-S14-S11-16		
	Size 14	Size 12	16		10	8082121	DARQ-R-A-S14-S12-16		
	Size 17	Size 8	17		36	8086384	DARQ-R-A-S17-S8-17		
	Size 17	Size 11	17		29	8082122	DARQ-R-A-S17-S11-17		
	Size 17	Size 12	17		25	8086385	DARQ-R-A-S17-S12-17		
	Size 17	Size 14	17		19	8082123	DARQ-R-A-S17-S14-17		
	Size 22	Size 11	22		75	8086386	DARQ-R-A-S22-S11-22		
	Size 22	Size 14	22		62	8082124	DARQ-R-A-S22-S14-22		
	Size 22	Size 16	22		52	8082125	DARQ-R-A-S22-S16-22		
	Size 22	Size 17	22		46	8082126	DARQ-R-A-S22-S17-22		
	Size 27	Size 17	27		121	8086387	DARQ-R-A-S27-S17-27		
	Size 27	Size 22	27		80	8082127	DARQ-R-A-S27-S22-27		
	Size 36	Size 27	36		215	8082128	DARQ-R-A-S36-S27-36		
	Size 46	Size 36	46		410	8082129	DARQ-R-A-S46-S36-46		
	Size 11	Size 8	12		35	8082130	DARQ-R-A-S11-S8-12-P5	5	
	Size 11	Size 9	11		25	8082131	DARQ-R-A-S11-S9-11-P5		
	Size 14	Size 8	16		100	8086388	DARQ-R-A-S14-S8-16-P5		
	Size 14	Size 9	16		90	8082132	DARQ-R-A-S14-S9-16-P5		
	Size 14	Size 11	16		65	8082133	DARQ-R-A-S14-S11-16-P5		
	Size 17	Size 11	17		145	8082134	DARQ-R-A-S17-S11-17-P5		
	Size 17	Size 12	17		125	8086389	DARQ-R-A-S17-S12-17-P5		
	Size 17	Size 14	17		95	8082135	DARQ-R-A-S17-S14-17-P5		
	Size 22	Size 14	22		310	8082136	DARQ-R-A-S22-S14-22-P5		
	Size 22	Size 17	22		230	8082137	DARQ-R-A-S22-S17-22-P5		
	Size 27	Size 22	27		400	8082138	DARQ-R-A-S27-S22-27-P5		
	Size 36	Size 27	36		1075	8082139	DARQ-R-A-S36-S27-36-P5		
	Size 11	Size 9	11		50	8082140	DARQ-R-A-S11-S9-11-P10		10
	Size 14	Size 9	16		180	8082141	DARQ-R-A-S14-S9-16-P10		
Size 14	Size 11	16	130	8082142	DARQ-R-A-S14-S11-16-P10				
Size 17	Size 14	17	190	8082143	DARQ-R-A-S17-S14-17-P10				
Size 22	Size 17	22	460	8082144	DARQ-R-A-S22-S17-22-P10				
Size 11	Size 9	11	250	8082145	DARQ-R-A-S11-S9-11-P50	50			
Size 14	Size 9	16	900	8082146	DARQ-R-A-S14-S9-16-P50				
Size 14	Size 11	16	650	8082147	DARQ-R-A-S14-S11-16-P50				
Size 17	Size 11	17	1450	8082148	DARQ-R-A-S17-S11-17-P50				
Size 22	Size 17	22	2300	8082149	DARQ-R-A-S22-S17-22-P50				

1) Corrosion resistance class CRC 2 to Festo standard FN 940070
Moderate corrosion stress. Indoor applications in which condensation may occur. External visible parts with primarily decorative requirements for the surface and which are in direct contact with the ambient atmosphere typical for industrial applications.

2) Packaging unit



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