

Quarter turn actuators DFPD

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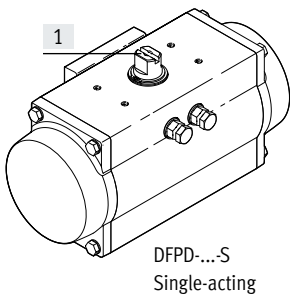
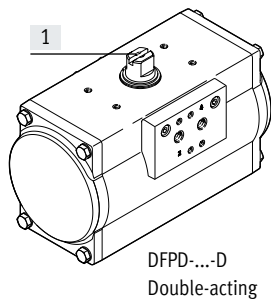
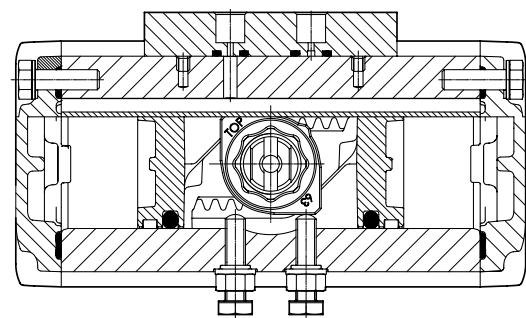
Just look
for the
star!

Key features

Function

The DFPD series features a rack and pinion combination with a constant torque characteristic across the entire swivel range. It is available in sizes 10 to 2300. 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.



[1] Position of the shaft on delivery

Types of connection

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

Variants

High temperature DFPD-...-T4	Closes to the left and right DFPD-...-R/L	Spring configuration DFPD-...-S	180° version DFPD-...-180
• 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	• The modular system offers the option of closing to the left. This is done by turning the pistons	• The spring force can be adapted to the system's supply pressure in increments of 0.5 bar by freely selecting the number of spring cartridges (4 to 12)	• Sizes 40, 120, 240, 480 double-acting also available with 180° swivel angle
Epoxy coating DFPD-...-EP	Stainless-steel shaft DFPD-...-R3	NPT version DFPD-...-N	
• Actuator with epoxy coating	• With stainless-steel shaft	• Pneumatic connections with NPT threads	

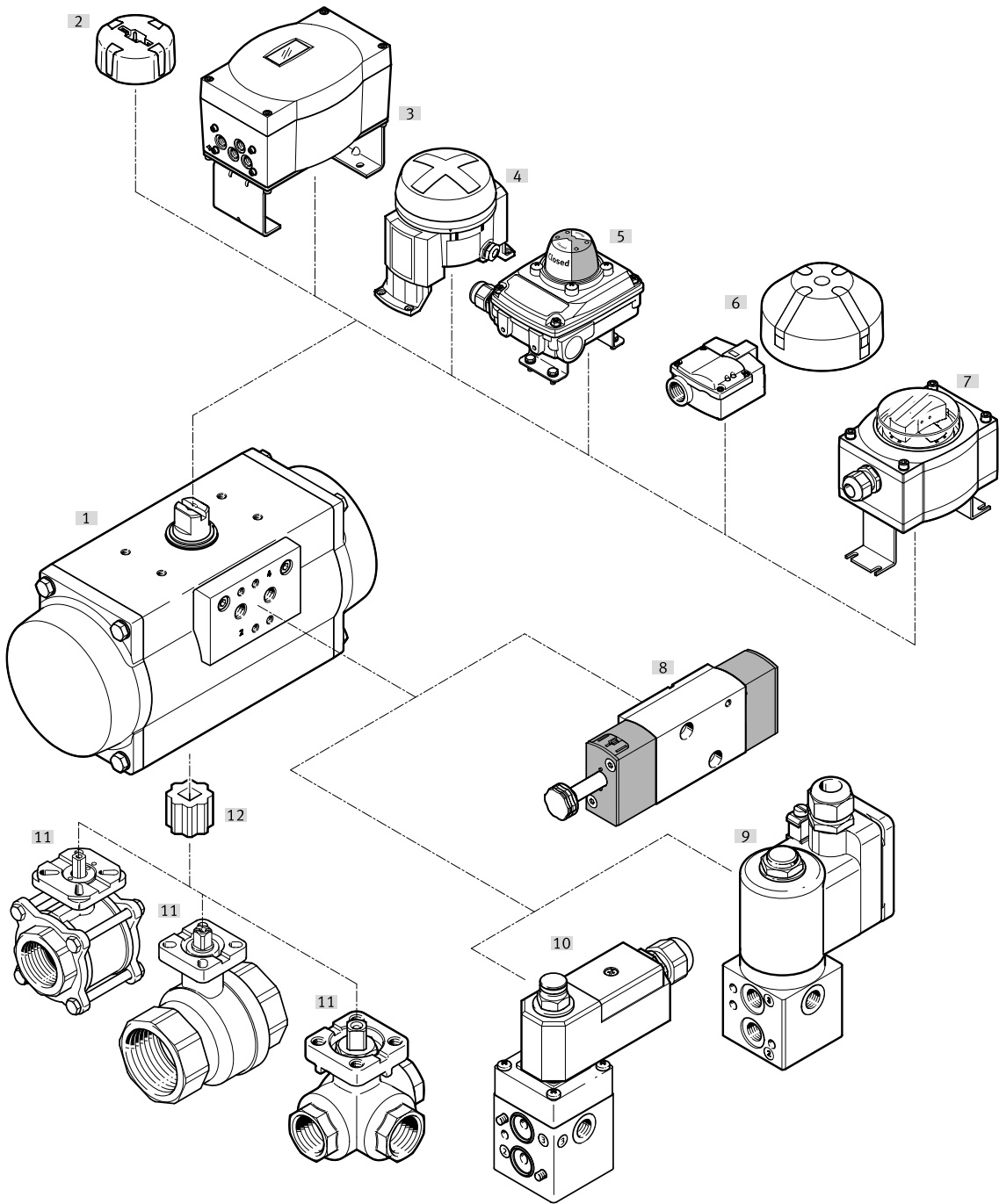
Ordering data – Product options

	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 at → www.festo.com/catalogue/...	Part no.	Type
			8042184	DFPD-10
			8042185	DFPD-20
			8042186	DFPD-40
			4930238	DFPD-60
			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

Key features

Size	Flange hole pattern	Shaft connection	Shaft connection depth [mm]	Pneumatic connection
10	F03	T9	10	G1/8
	F04			1/8 NPT
20	F03	T9	10	G1/8
	F04	T11	12	1/8 NPT
	F05			
40	F04	T11	12	G1/8
	F05F07	T14	16	1/8 NPT
60	F04	T11	12	G1/8
	F0507	T14	16	1/8 NPT
80	F05F07	T17	19	G1/8
	F07			1/8 NPT
120	F05F07	T17	19	G1/4
	F07			1/4 NPT
160	F07F10	T22	24	G1/4
	F07			1/4 NPT
240	F07F10	T22	24	G1/4
	F10			1/4 NPT
300	F07F10	T22	24	G1/4
	F10			1/4 NPT
480	F10F12	T27	29	G1/4
	F12			1/4 NPT
700	F10F12	T27	29	G1/4
	F12			1/4 NPT
900	F10F12	T27	29	G1/4
	F14	T36	38	1/4 NPT
1200	F10F12	T27	29	G1/4
	F14	T36	38	1/4 NPT
2300	F12F16	T46	48	G1/4
	F14	T36	38	1/4 NPT

Peripherals overview



Peripherals overview

Mounting attachments and accessories		Description	→ Page/Internet
[1]	Quarter-turn actuators DFPD	Sizes 10 to 2300	7
[2]	Position indicator SASF	The size of the SASF corresponds to the shaft size of the DFPD	39
[3]	Positioner CMSX	For controlling the position of quarter turn actuators in process automation systems	cmsx
[4]	Sensor box DAPZ	Round design, variant AR, electrical, inductive or inductive and explosion-proof sensing	dapz
[5]	Sensor box SRBC	For electrical feedback and position monitoring of process valves actuated by quarter turn actuators	srbc
[6]	Sensor box SRBG	For electrical feedback and position monitoring of process valves actuated by quarter turn actuators	srbg
[7]	Sensor box SRAP	Analogue sensor box continuously senses the entire swivel range and reports this back to the controller	srap
[8]	Solenoid valve VSNC	For single- and double-acting quarter turn actuators with a port pattern to VDI/VDE 3845	vsnc
[9]	Solenoid valve VOFD	Solenoid valve with solenoid coil, NAMUR connection pattern	vofd
[10]	Solenoid valve VOFC	Solenoid valve with solenoid coil, NAMUR connection pattern	vofc
[11]	Ball valve VAPB, VZBA	2-way brass or stainless steel, corrosion-resistant; 3-way stainless steel, corrosion-resistant	vapb
[12]	Reducing sleeve DARQ	With female square and male octagon for mounting VAPB, VZBA	39

Type codes

001	Series
DFPD	Semi-rotary drive

002	System of units
	Metric
N	Imperial

003	Size
10	10
20	20
40	40
60	60
80	80
120	120
160	160
240	240
300	300
480	480
700	700
900	900
1200	1200
2300	2300
3500	3500
4500	4500
6500	6500
9500	9500

004	Design
RP	Rack and pinion
SY	Scotch yoke system

005	Yoke type
	None
Y	Symmetrical

006	Swivel angle [°]
90	90
120	120
135	135
180	180

007	Swivel direction
L	Left
R	Right

008	Function
D	Double-acting
S	Single-acting

009	Spring force
	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 connecting pressure 5 bar
55	For connection pressure 5.5 bar
60	For connection pressure 6 bar

010	Normal position
	Closed
U	Open

011	Flange pattern 1
F03	Hole pattern F03
F04	Hole pattern F04
F05	Hole pattern F05
F07	Hole pattern F07
F10	Hole pattern F10
F12	Hole pattern F12
F14	Hole pattern F14
F16	Hole pattern F16

012	Flange pattern 2
	None
07	Hole pattern F07
10	Hole pattern F10
12	Hole pattern F12
16	Hole pattern F16
25	Hole pattern F25

013	Width across flats
	Standard
9	9 mm
11	11 mm
17	17 mm
27	27 mm
36	36 mm
46	46 mm
55	55 mm

014	Pneumatic connection
	Standard
X	Alternative connection size

015	Temperature range
	Standard
T4	0 ... +150°C

016	Shaft material
	Standard
R3	Stainless steel

017	Housing surface treatment
	None
EP	Epoxy coated

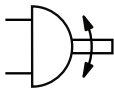
018	Industry focus
	General
C	Chemical industry

019	Mechanical interface
	Standard
VDE2	VDI/VDE 3847-2

020	Approval for installation on ships
	None
GL	To DNV-GL for integration on ships

Datasheet

Function



-  - Size
10 ... 2300
-  - Swivel angle
0 ... 180°



General technical data											
Size	10		20			40		60	80	120	160
Operating mode	Double-acting										
Design	Rack and pinion										
Cushioning	No cushioning										
Mounting position	Any										
Pneumatic connection	G1/8									G1/4	
	1/8 NPT									1/4 NPT	
Process valve connection to standard	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 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										
Size	AA 1										
Flange hole pattern 1	F03	F04	F03	F04	F05	F04	F05	F0507	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	Optical										
Closing direction	Closes to the right										

Datasheet

General technical data							
Size	240	300	480	700	900	1200	2300
Operating mode	Double-acting						
Design	Rack and pinion						
Cushioning	No cushioning						
Mounting position	Any						
Pneumatic connection	G1/4						
	1/4 NPT						
Process valve connection to standard	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 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						
Size	AA 2				AA 3		
Flange hole pattern 1	F07	F07	F10	F10	F10 F14	F10 F14	F12 F14
Flange hole pattern 2	F10	F10	F12	F12	F12	F12	F16
Swivel angle [°]	90						
	120	–	120	–			
	135	–	135	–			
	180	–	180	–			
End-position adjustment range at 0° [°]	–5 ... +5						
End-position adjustment range at 90° [°]	–5 ... +5						
End-position adjustment range at 180°	–5 ... +5	–	–5 ... +5	–			
Position sensing	Optical						
Closing direction	Closes to the right						

Datasheet

Operating and environmental conditions		DFPD	DFPD-...-T4
Operating pressure	[bar]	2 ... 8	3 ... 8
	[MPa]	0.2 ... 0.8	0.3 ... 0.8
	[psi]	29 ... 116	43.5 ... 116
Nominal operating pressure	[bar]	5.5	
	[MPa]	0.55	
	[psi]	79.75	
Operating medium		Compressed air to ISO 8573-1:2010 [7:4:4]	
Note on the 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	0 ... +150
Storage temperature	[°C]	-20 ... +60	
Maritime classification		See certificate	
Certificate-issuing authority		DNV TAP00001CE, German Technical Control Board (TÜV) Rheinland 968/V 1106.01/2023	DNV TAP00001CE
LABS (PWIS) conformity		VDMA24364-B1/B2-L	

ATEX		DFPD	DFPD-...-T4
ATEX category for gas		II 2G	
Type of ignition protection for gas		Ex h IIC T4 Gb X	Ex h IICT3 Gb X
ATEX category for dust		II 2D	
Type of ignition protection for dust		Ex h IIIC T105°C Db X	Ex h IIIC T175°C Db X
Explosion-proof ambient temperature	[°C]	-20 <= Ta <= +80	0 <= Ta <= +150
CE marking (see declaration of conformity)		To EU Explosion Protection Directive (ATEX)	
UKCA marking (see declaration of conformity)		To UK explosion regulations	
Ex-protection outside the EU		EPL Db (GB)	
		EPL Gb (GB)	
Deposit number of the document for mechanical devices of category 2		557/Ex-Ab 2649/16	

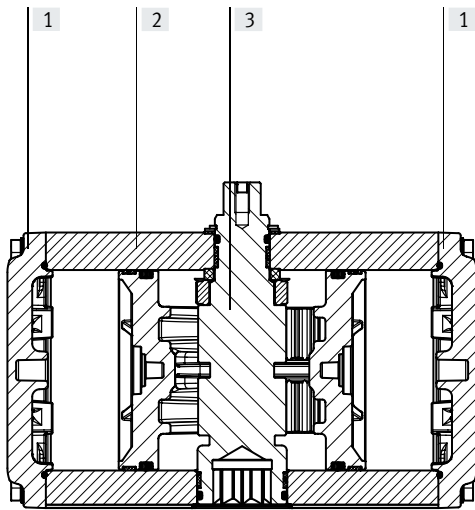
Datasheet

Theoretical torque [Nm] as a function of operating pressure											
	Operating pressure [bar]										
Size	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
60	23.0	28.8	34.5	40.3	46.0	51.8	57.5	63.3	69.0	80.5	92.0
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.

Datasheet

**Materials**

Sectional view

Quarter turn actuator

[1]	Cover	Coated die-cast aluminium
[2]	Housing	Anodised wrought aluminium alloy
[3]	Shaft	Nickel-plated steel
	R3	High-alloy stainless steel
–	Sub-base	Anodised wrought aluminium alloy
	Piston/piston rod	Die-cast aluminium
	Seals	NBR
	Bearings	POM
	Cam	Cast stainless steel (DFPD-10, 20, 40, 80, 120, 160-90) Steel (DFPD-240, 300, 480, 700, 900, 1200, 2300-90)
	Screws	High-alloy stainless steel
	Note on materials	RoHS-compliant

Air consumption [l/cycle] at 6 bar

Type

DFPD-10-RP-90-D	1
DFPD-20-RP-90-D	1.8
DFPD-40-RP-90-D	3.4
DFPD-40-RP-120-D	4.2
DFPD-40-RP-135-D	5.6
DFPD-40-RP-180-D	5.2
DFPD-60-RP-90-D	3.8
DFPD-80-RP-90-D	7.4
DFPD-120-RP-90-D	10.4
DFPD-120-RP-120-D	11.9
DFPD-120-RP-135-D	12.6
DFPD-120-RP-180-D	12.8
DFPD-160-RP-90-D	14

Type

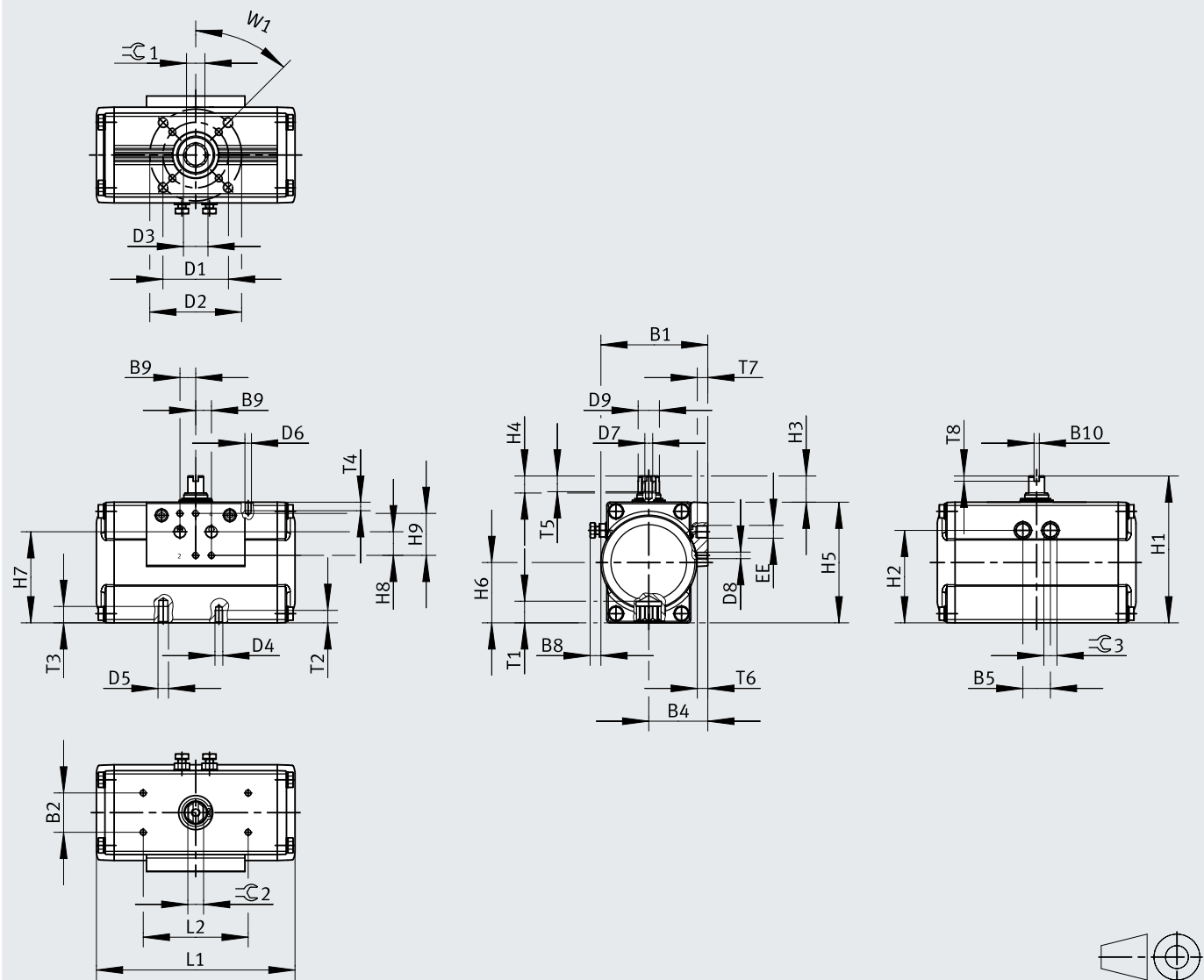
DFPD-240-RP-90-D	20.3
DFPD-240-RP-120-D	24.5
DFPD-240-RP-135-D	26.6
DFPD-240-RP-180-D	25.7
DFPD-300-RP-90-D	26.4
DFPD-480-RP-90-D	40.5
DFPD-480-RP-120-D	48.3
DFPD-480-RP-135-D	51.8
DFPD-480-RP-180-D	61.4
DFPD-700-RP-90-D	58.8
DFPD-900-RP-90-D	75.9
DFPD-1200-RP-90-D	105
DFPD-2300-RP-90-D	204

Datasheet

Dimensions

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Size 10 ... 80



Datasheet

	B1	B2	B4	B5	B8	B9	B10	D1 ∅ ±0.1	D2 ∅ ±0.1	D3 ∅	D4	D5	D6
		±0.1			max.								
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	M5	–		
DFPD-20-F05										M6			
DFPD-40-...-F0507	81.5		45	21	8.2			50	70	18.7	M6	M8	
DFPD-40-180-...-F0507													
DFPD-60-F05	93.5		50.5	24	11								
DFPD-60-...													
DFPD-80-...-F0507	99		53	26	9					23.3			

	D7	D8	D9 ∅ ±0.1	EE	H1	H2	H3 min.	H3 max.	H4 +0.1	H5	H6 ±0.2	H7 ±0.3	H8 ±0.1	H9				
DFPD-10-F03	M6	M5	10.9	G1/8 1/8 NPT	90	51	19.5	20.4	10	70	35	47	16	32				
DFPD-10-F04			12.7		100	59.75			10	80	40	57.5	17					
DFPD-20-F04			16.2		112	70.5	19.5	20.3	13	92	46	67.5						
DFPD-20-F05															19	124.9	82.1	19.4
DFPD-40-...-F0507			20.2		130	86	19.5	20.3		110	55	86.5	16					
DFPD-40-180-...-F0507																		
DFPD-60-F05																		
DFPD-60-...																		
DFPD-80-...-F0507																		

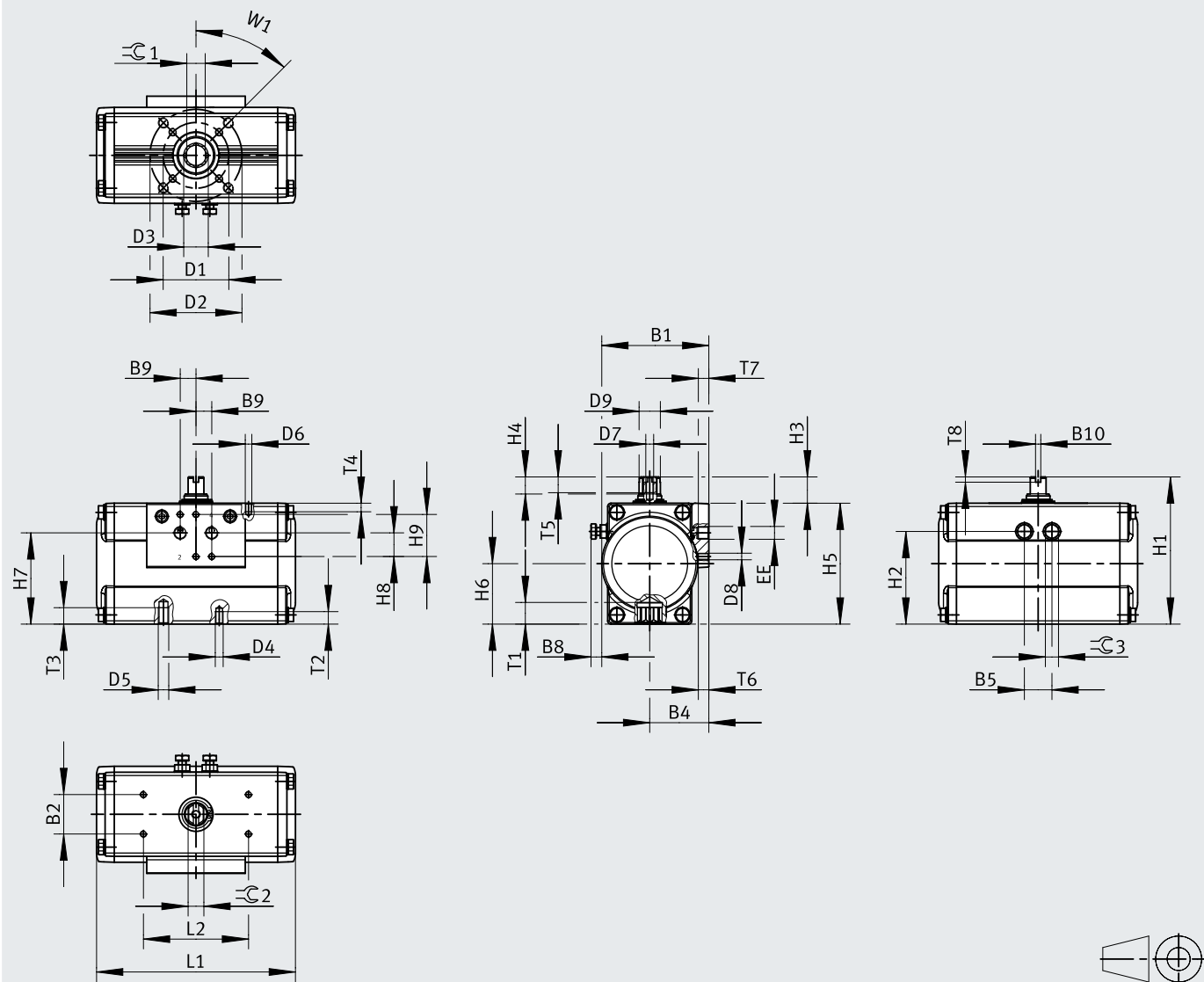
	L1	L2	T1	T2	T3	T4	T5	T6	T7	T8	≈C 1	≈C 2	≈C 3	W1		
		±0.1	min.	min.	min.	min.	min.		min.	+0.5	H11	h11				
DFPD-10-F03	124.7	80	10	8	–	8	12	8	8	4	9	9	10	45°		
DFPD-10-F04			12		–						11	9	10			
DFPD-20-F04	16			9	12						14	12	10			
DFPD-20-F05																
DFPD-40-...-F0507			170												14	13
DFPD-40-180-...-F0507																
DFPD-60-F05			189.3								17	15				
DFPD-60-...																
DFPD-80-...-F0507																

Datasheet

Dimensions

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Size 120 ... 480



Datasheet

Type	B1	B2	B4	B5	B8	B9	B10	D1 ∅ ±0.1	D2 ∅ ±0.1	D3 ∅	D4	D5	D6		
		±0.1			max.										
DFPD-120-...-F0507	111.5	30	60.5	32	12.3	12	4	50	70	23.2	M6	M8	M5		
DFPD-120-180-...-F0507															
DFPD-160-...-F0710	120		63.5	36	13.4			70	102	30	M8	M10			
DFPD-240-...-F0710	135.5		71.5	41	18.5					30.3					
DFPD-240-180-...-F0710			74.5	46	17					30.3					
DFPD-300-...-F0710			144							30					
DFPD-480-...-F1012	163			83	52			19.3		102	125	37.4		M10	M12
DFPD-480-180-...-F1012															

Type	D7	D8	D9 ∅ ±0.1	EE	H1	H2	H3	H4	H5	H6	H7	H8	H9	
							-0.5	+0.1			±0.3	±0.1		
DFPD-120-...-F0507	M6	M5	22.5	G1/4 or 1/4 NPT	143	97.75	20	13	123	61.5 _{±0.2}	98.4	16	32	
DFPD-120-180-...-F0507			25.5		154	106.25			134	67 _{±0.2}	109.4			
DFPD-160-...-F0710			31.8		180	120.5	30	19.5	150	75 _{±0.2}	120.2			
DFPD-240-...-F0710					192	131			162	81 _{±0.3}	132.1			
DFPD-240-180-...-F0710					38	214			149.5	184	92 _{±0.4}			152.5
DFPD-300-...-F0710														
DFPD-480-...-F1012														
DFPD-480-180-...-F1012														

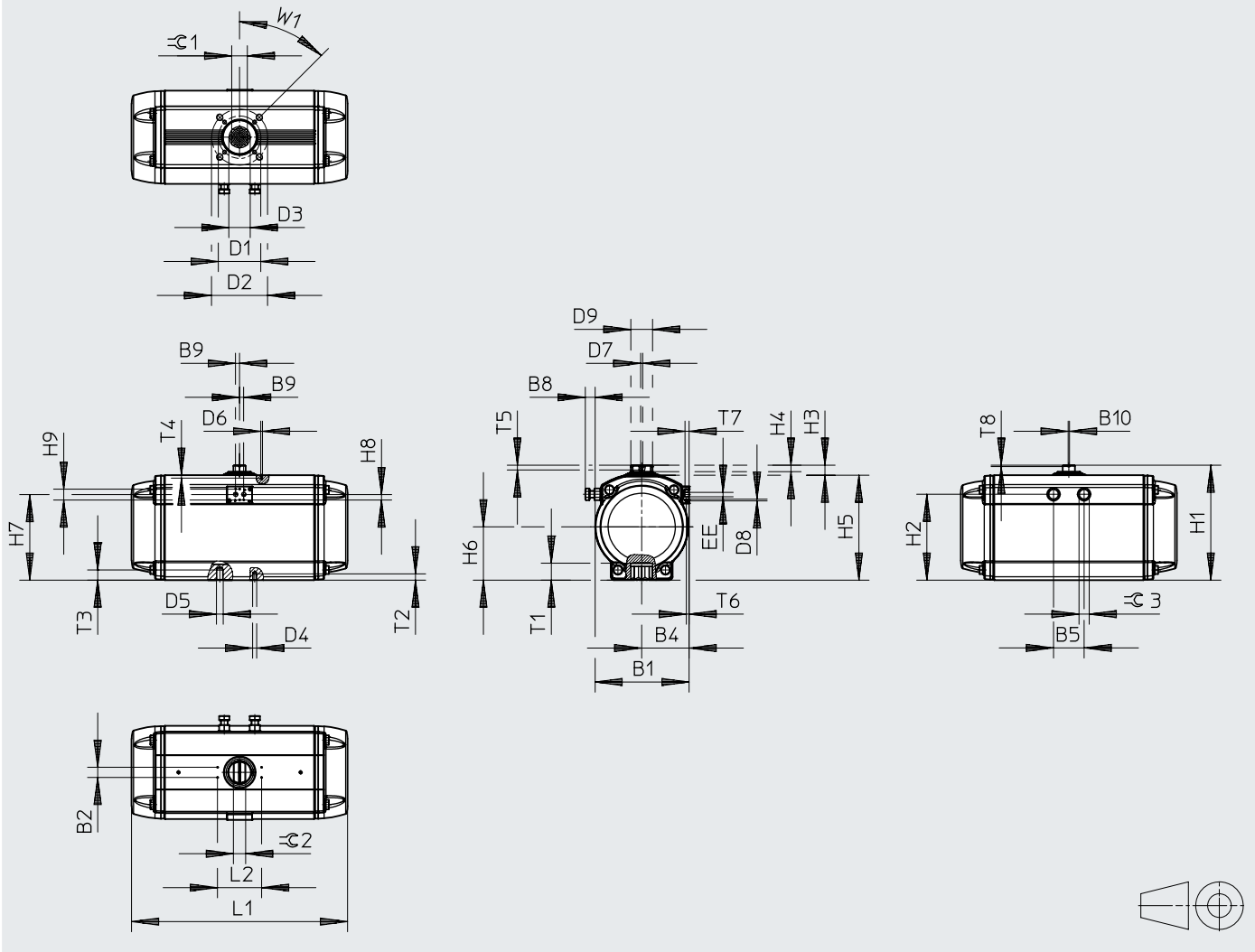
Type	L1	L2	T1	T2	T3	T4	T5	T6	T7	T8	≡ 1	≡ 2	≡ 3	W1											
		±0.1	±0.4							+0.5	H11	h11													
DFPD-120-...-F0507	213.7	80	19.3	9	12	8	14	8	12	4	17	15	13	45°											
DFPD-120-180-...-F0507	326.8		24.3	12	15						22	19	16												
DFPD-160-...-F0710	230.9											29.5	15		18										
DFPD-240-...-F0710	257																								
DFPD-240-180-...-F0710	395.5																								
DFPD-300-...-F0710	334.4																								
DFPD-480-...-F1012	374.2																								
DFPD-480-180-...-F1012	550.3																								

Datasheet

Dimensions

Size 700 ... 2300

Download CAD data → www.festo.com



Datasheet

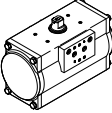
Type	B1	B2	B4	B5	B8	B9	B10	D1 ∅	D2 ∅	D3 ∅	D4	D5	D6
		±0.1			max.		±0.1						
DFPD-700- ... -F10/12	184	30	93	57.6	17.5	12	4	102	125	37.4	M10	M12	M5
DFPD-900- ... -F10/12	202		102	64.8	28.6			140	–	50.1	M16	–	
DFPD-900- ... -F14								102	125	37.4	M10	M12	
DFPD-1200- ... -F10/12	221.5		111.5	72	24		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

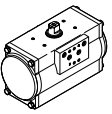
Type	D7	D8	D9	EE	H1	H2	H3	H4	H5	H6	H7	H8	H9									
			±0.1									±0.1										
DFPD-700- ... -F10/12	M6	M5	41	G1/4 or 1/4 NPT	232.7	168	29.7	21	203	103	164.9	16	32									
DFPD-900- ... -F10/12			44		252.7	182			223	113	178.3											
DFPD-900- ... -F14			50		204				246	125	199.6											
DFPD-1200- ... -F10/12					19	309		157	252.3													
DFPD-1200- ... -F14			64											253								
DFPD-2300- ... -F12/16																						
DFPD-2300- ... -F14																						

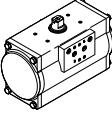
Type	L1	L2	T1	T2	T3	T4	T5	T6	T7	T8	≈G 1	≈G 2	≈G 3	W1	
		±0.1	min.							+0.5	H11	h11			
DFPD-700- ... -F10/12	428.2	80	29.7	15	18	8	14	8	12	4	27	30	21	45°	
DFPD-900- ... -F10/12	469.6	130	30.2	15.5	18.5	8.5					36	32	24		
DFPD-900- ... -F14			40.2	24.5	–										
DFPD-1200- ... -F10/12	519.3		31	15.5	18.5								27		36
DFPD-1200- ... -F14			40	24.5	–								36		
DFPD-2300- ... -F12/16	636		50	18.5	30								46		
DFPD-2300- ... -F14			40	24.5	–								36		

Datasheet

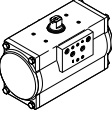
★ Core Range

Ordering data				
Type	Size	Product weight [g]	Part no.	Type
	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

Ordering data				
Type	Size	Product weight [g]	Part no.	Type
	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

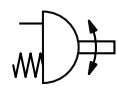
Ordering data				
Type	Size	Product weight [g]	Part no.	Type
	10	965	8048010	DFPD-10-RP-90-RD-F04
	20	1275	8048011	DFPD-20-RP-90-RD-F05
	40	2608	8065336	DFPD-40-RP-180-RD-F0507
	40	2467	8065337	DFPD-40-RP-135-RD-F0507
	40	2419	8065338	DFPD-40-RP-120-RD-F0507
	60	2792	8083510	DFPD-60-RP-90-RD-F0507
	60	2792	8083516	DFPD-N-60-RP-90-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

Datasheet

Ordering data				
Type	Size	Product weight [g]	Part no.	Type
Variant 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
	60	2792	8083511	DFPD-60-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

Datasheet

Function



-  - Size
20 ... 2300
-  - Swivel angle
0 ... 90°



General technical data															
Size	20			40		60		80		120		160		240	
Operating mode	Single-acting														
Design	Rack and pinion														
Cushioning	No cushioning														
Mounting position	Any														
Pneumatic connection	G1/8								G1/4						
	1/8 NPT								1/4 NPT						
Process valve connection to standard	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 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														
Size	AA 1												AA 2		
Flange hole pattern 1	F03	F04	F05	F04	F05	F04	F05	F05	F05	F05	F07	F07			
Flange hole pattern 2	–	–	–	F07	F07	–	F07	F07	F07	F07	F10	F10			
Swivel angle [°]	90														
End-position adjustment range at 0° [°]	–5 ... +5														
End-position adjustment range at 90° [°]	–5 ... +5														
Position sensing	Optical														
Closing direction	Closes to the right														

Datasheet

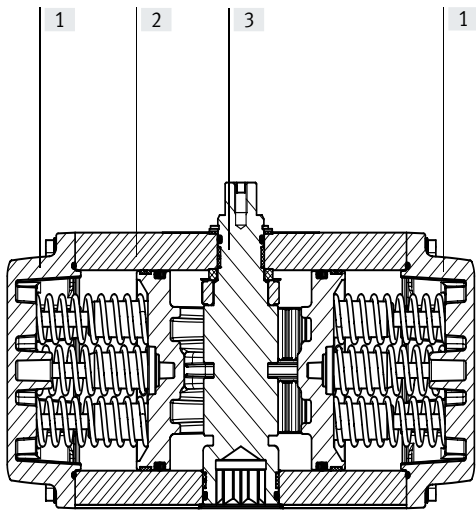
General technical data									
Size	300	480	700	900	1200	1200	2300		
Operating mode	Single-acting								
Design	Rack and pinion								
Cushioning	No cushioning								
Mounting position	Any								
Pneumatic connection	G1/4								
	1/4 NPT								
Process valve connection to standard	ISO 5211								
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 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								
Size	AA 2				AA 3				
Flange hole pattern 1	F07	F10	F10	F10	F14	F10	F14	F12	F14
Flange hole pattern 2	F10	F12	F12	F12	F12	F12	F12	F16	F16
Swivel angle [°]	90								
End-position adjustment range at 0° [°]	-5 ... +5								
End-position adjustment range at 90° [°]	-5 ... +5								
Position sensing	Optical								
Closing direction	Closes to the right								

Datasheet

Operating and environmental conditions										
Variant		S20	S25	S30	S35	S40	S45	S50	S55	S60
Operating pressure	[bar]	2 ... 8								
	[MPa]	0.2 ... 0.8								
Nominal operating pressure	[bar]	2	2.5	3	3.5	4	4.5	5	5.5	6
	[MPa]	0.2	0.25	0.3	0.35	0.4	0.45	0.5	0.55	0.6
	[psi]	29	36.25	43.5	50.75	58	65.25	72.5	79.75	87
Operating medium		Compressed air to ISO 8573-1:2010 [7:4:4]								
Note on the 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								
Storage temperature		−20 ... +60								
Maritime classification		See certificate								
Certificate-issuing authority		German Technical Control Board (TÜV) Rheinland 968/V 1106.01/2023								
		DNV TAP00001CE								
LABS (PWIS) conformity		VDMA24364-B1/B2-L								
Note on materials		RoHS-compliant								

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 ambient temperature	[°C] -20 ≤ Ta ≤ +80
CE marking (see declaration of conformity)	To EU Explosion Protection Directive (ATEX)
UKCA marking (see declaration of conformity)	UK regs EX
Ex-protection outside the EU	EPL Db (GB)
	EPL Gb (GB)
Certificate-issuing authority	DNV TAP00001CE
	German Technical Control Board (TÜV) Rheinland 968/V 1106.01/23
Deposit number of the document for mechanical devices of category 2	557/Ex-Ab 2649/16

Datasheet

**Materials**

Sectional view

Quarter turn actuator

[1]	Cover	Coated die-cast aluminium
[2]	Housing	Anodised wrought aluminium alloy
[3]	Shaft	Nickel-plated steel
	R3	High-alloy stainless steel
–	Sub-base	Anodised wrought aluminium alloy
	Piston rod	Die-cast aluminium
	Seals	NBR
	Spring	Spring steel
	Bearings	POM
	Cam	Stainless-steel casting (DFPD-20...160...RS)
		Steel (DFPD-240 ... 2300...RS)
	Screws	High-alloy stainless steel
	Note on materials	RoHS-compliant

Air consumption [l/cycle] at 6 bar

Type

DFPD-20-RP-90-S	0.8
DFPD-40-RP-90-S	1.5
DFPD-60-RP-90-S	2
DFPD-80-RP-90-S	3.1
DFPD-120-RP-90-S	4.3
DFPD-160-RP-90-S	5.9
DFPD-240-RP-90-S	8.6
DFPD-300-RP-90-S	11.0

Type

DFPD-480-RP-90-S	17.2
DFPD-700-RP-90-S	24.5
DFPD-900-RP-90-S	31.5
DFPD-1200-RP-90-S	43.5
DFPD-2300-RP-90-S	84.4

Datasheet

Theoretical torque [Nm] as a function of operating pressure [bar] and swivel angle [°]													
Spring configuration	Nominal swivel angle	Spring torque	Operating pressure [bar]										
	[°]	[Nm]	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

 - Note

The design of quarter turn actuators that, when de-energised, are moved into a specific switching position by spring force, results in a loss of at least 30% of the calculated torque because of relaxation of the spring assemblies and friction. Please observe an appropriate safety factor when selecting and configuring your drive.

Datasheet

Theoretical torque [Nm] as a function of operating pressure [bar] and swivel angle [°]													
Spring configuration	Nominal swivel angle	Spring torque	Operating pressure [bar]										
	[°]	[Nm]	2	2.5	3	3.5	4	4.5	5	5.5	6	7	8
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 design of quarter turn actuators that, when de-energised, are moved into a specific switching position by spring force, results in a loss of at least 30% of the calculated torque because of relaxation of the spring assemblies and friction. Please observe an appropriate safety factor when selecting and configuring your drive.

Datasheet

Theoretical torque [Nm] as a function of operating pressure [bar] and swivel angle [°]													
Spring configuration	Nominal swivel angle	Spring torque	Operating pressure [bar]										
	[°]	[Nm]	2	2.5	3	3.5	4	4.5	5	5.5	6	7	8
Size DFPD-60													
20	0	8.4	14.7	20.6	26.4	32.3	38.2	44.1	49.9	53.8	61.7	73.4	85.2
	90	14.7	8.3	13.9	19.5	25.1	30.6	36.2	41.7	47.3	52.9	64.0	75.1
25	0	10.5	12.5	18.3	24.2	30.1	36.0	41.9	47.7	53.6	59.5	71.2	83
	90	18.4	4.8	10.4	16.0	21.5	27.1	32.7	38.2	43.8	49.4	60.5	71.6
30	0	12.6		16.1	22.0	27.9	33.8	39.6	45.5	51.4	57.3	69.0	80.8
	90	22.1		6.9	12.5	18.0	23.6	29.2	34.7	40.3	45.9	57.0	68.1
35	0	14.7			19.8	25.7	31.6	37.4	43.3	49.2	55.1	66.8	78.6
	90	25.8			9.0	14.6	20.1	25.7	31.3	36.8	42.4	53.5	64.7
40	0	16.7				23.5	29.3	35.2	41.1	47.0	52.9	64.6	76.4
	90	29.5				11.1	16.6	22.2	27.8	33.3	38.9	50.0	61.2
45	0	18.8					27.1	33.0	38.9	44.8	50.6	62.4	74.2
	90	33.2					13.1	18.7	24.3	29.8	35.4	46.5	57.7
50	0	20.9						30.8	36.7	42.6	48.4	60.2	71.9
	90	36.8						15.2	20.8	26.4	31.9	43.1	54.2
55	0	23.0							34.5	40.4	46.2	58.0	69.7
	90	40.5							17.3	22.9	28.4	39.6	50.7
60	0	25.1								38.1	44.0	55.8	67.5
	90	44.2								19.4	24.9	36.1	47.2

 Note

The design of quarter turn actuators that, when de-energised, are moved into a specific switching position by spring force, results in a loss of at least 30% of the calculated torque because of relaxation of the spring assemblies and friction. Please observe an appropriate safety factor when selecting and configuring your drive.

Datasheet

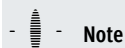
Theoretical torque [Nm] as a function of operating pressure [bar] and swivel angle [°]													
Spring configuration	Nominal swivel angle	Spring torque	Operating pressure [bar]										
	[°]	[Nm]	2	2.5	3	3.5	4	4.5	5	5.5	6	7	8
Size DFPD-80													
20	0	9.9	20.1	27.6	35.1	42.6	50.0	57.5	65.0	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

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Datasheet

Theoretical torque [Nm] as a function of operating pressure [bar] and swivel angle [°]													
Spring configuration	Nominal swivel angle	Spring torque	Operating pressure [bar]										
	[°]	[Nm]	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**

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Datasheet

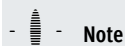
Theoretical torque [Nm] as a function of operating pressure [bar] and swivel angle [°]													
Spring configuration	Nominal swivel angle	Spring torque [Nm]	Operating pressure [bar]										
	[°]		2	2.5	3	3.5	4	4.5	5	5.5	6	7	8
Size DFPD-300													
20	0	36.1	73.7	101.1	128.6	156.0	183.4	210.9	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

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Datasheet

Theoretical torque [Nm] as a function of operating pressure [bar] and swivel angle [°]													
Spring configuration	Nominal swivel angle	Spring torque	Operating pressure [bar]										
	[°]	[Nm]	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	765.4	886.0
	90	143.7	97.5	157.8	218.1	278.4	338.7	399.0	459.3	519.6	579.9	700.5	821.1
25	0	99.6	141.6	201.9	262.2	322.5	382.8	443.1	503.4	563.7	624.0	744.6	865.2
	90	181.7	59.5	119.8	180.1	240.4	300.7	361.0	421.3	481.6	541.9	662.5	783.1
30	0	120.9		180.6	240.9	301.2	361.5	421.8	482.1	542.4	602.7	723.3	843.9
	90	220.5		81.0	141.3	201.6	261.9	322.2	382.5	442.8	503.1	623.7	744.3
35	0	142.6			219.2	279.5	339.8	400.1	460.4	520.7	581.0	701.6	822.2
	90	260.1			101.6	161.9	222.2	282.5	342.8	403.1	463.4	584.0	704.6
40	0	164.8				257.3	317.6	377.9	438.2	498.5	558.8	679.4	800.0
	90	300.6				121.5	181.8	242.1	302.4	362.7	423.0	543.6	664.2
45	0	187.4					295.0	355.3	415.6	475.9	536.2	656.7	777.3
	90	341.9					140.5	200.8	261.1	321.4	381.7	502.3	622.9
50	0	210.5						332.2	392.5	452.8	513.1	633.7	754.3
	90	384.0						158.7	219.0	279.3	339.6	460.2	580.7
55	0	234.1							368.9	429.2	489.5	610.1	730.7
	90	427.0							176.0	236.3	296.6	417.2	537.8
60	0	258.1								405.2	465.5	586.1	706.7
	90	470.7								192.5	252.8	373.4	494.0
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	972.4	1125.5
	90	181.6	124.6	201.1	277.6	354.2	430.7	507.3	583.8	660.4	736.9	890.0	1043.1
25	0	125.5	180.7	257.3	333.8	410.3	486.9	563.4	640.0	716.5	793.1	946.2	1099.2
	90	229.6	76.5	153.1	229.6	306.2	382.7	459.3	535.8	612.4	688.9	842.0	995.1
30	0	152.3		230.5	307.0	383.5	460.1	536.6	613.2	689.7	766.3	919.3	1072.4
	90	278.7		104.0	180.6	257.1	333.7	410.2	486.8	563.3	639.8	792.9	946.0
35	0	179.6			279.6	356.2	432.7	509.3	585.8	662.3	738.9	892.0	1045.1
	90	328.8			130.5	207.0	283.6	360.1	436.7	513.2	589.7	742.8	895.9
40	0	207.6				328.2	404.8	481.3	557.9	634.4	710.9	864.0	1017.1
	90	379.9				155.9	232.4	309.0	385.5	462.1	538.6	691.7	844.8
45	0	236.1					376.2	452.8	529.3	605.9	682.4	835.5	988.6
	90	432.1					180.2	256.8	333.3	409.9	486.4	639.5	792.6
50	0	265.2						423.7	500.3	576.8	653.3	806.4	959.5
	90	485.4						203.5	280.1	356.6	433.2	586.3	739.4
55	0	294.8							470.6	547.1	623.7	776.8	929.9
	90	539.6							225.8	302.4	378.9	532.0	685.1
60	0	325.1								516.9	593.5	746.5	899.6
	90	595.0								247.0	323.6	476.7	629.8

**Note**

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Datasheet

Theoretical torque [Nm] as a function of operating pressure [bar] and swivel angle [°]													
Spring configura- tion	Nominal swivel angle	Spring torque	Operating pressure [bar]										
	[°]	[Nm]	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

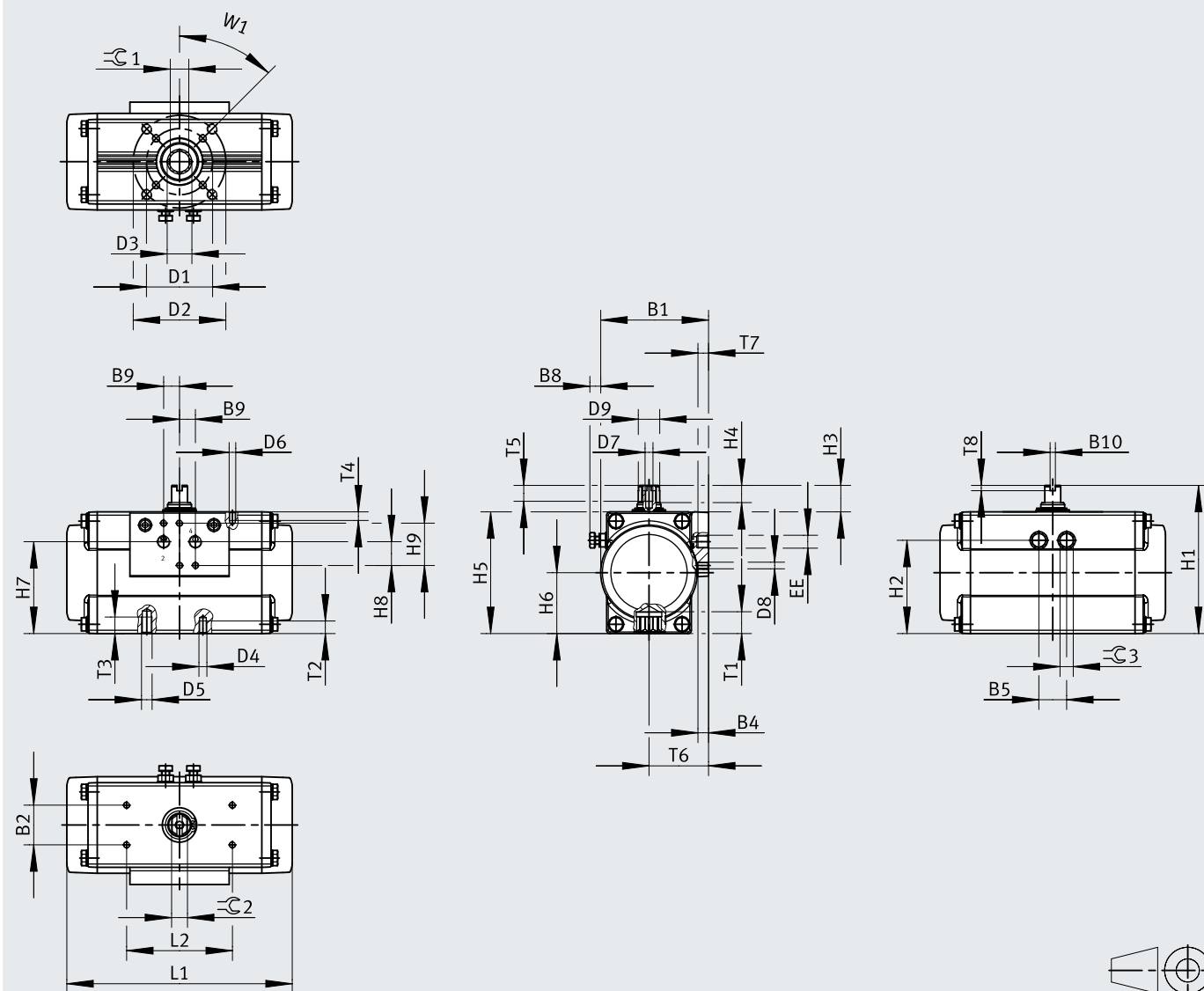
The design of quarter turn actuators that, when de-energised, are moved into a specific switching position by spring force, results in a loss of at least 30% of the calculated torque because of relaxation of the spring assemblies and friction. Please observe an appropriate safety factor when selecting and configuring your drive.

Datasheet

Dimensions

Size 20 ... 80

Download CAD data → www.festo.com



Datasheet

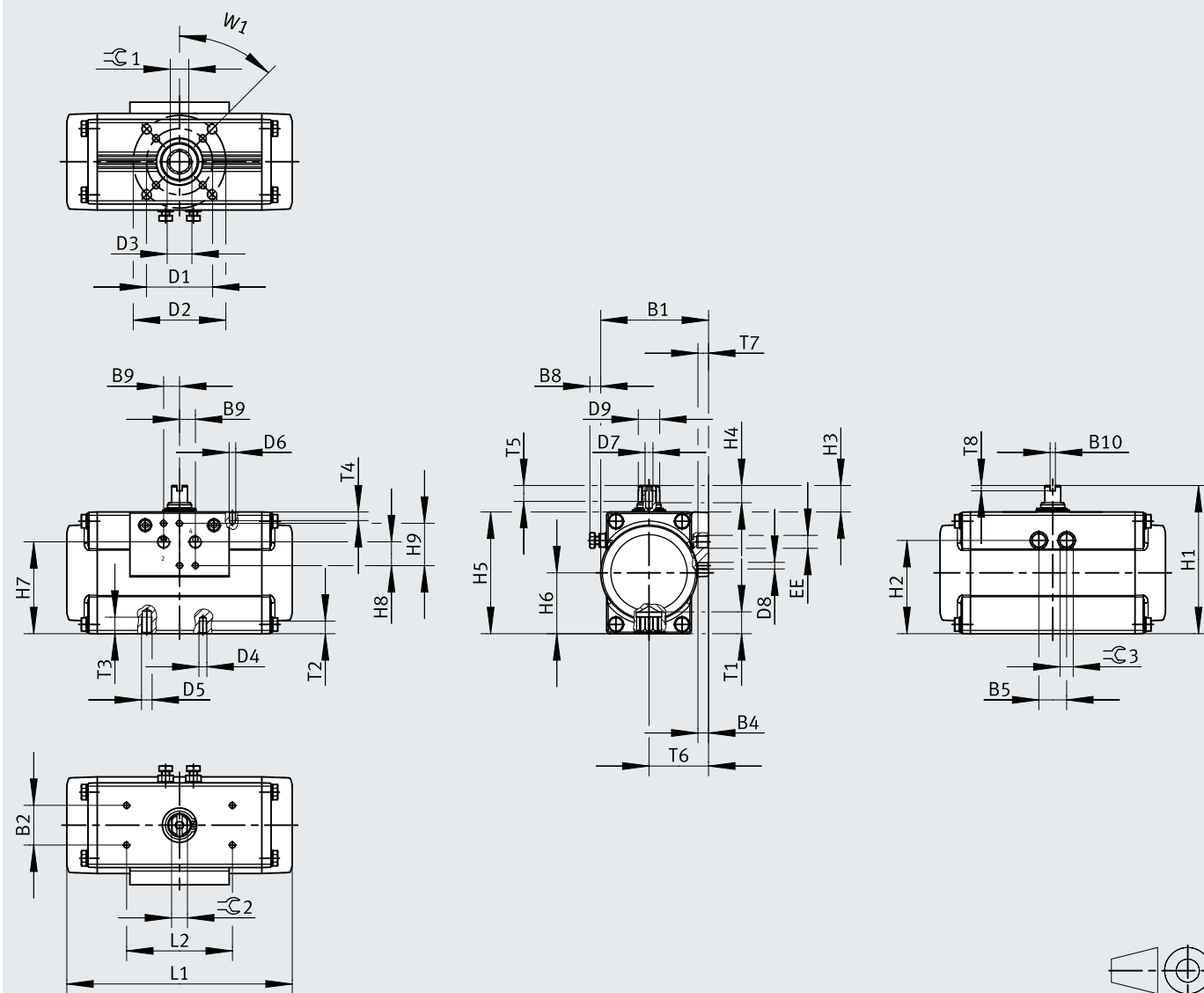
	B1	B2	B4	B5	B8	B9	B10	D1 ∅	D2 ∅	D3 ∅	D4	D5	D6	
		±0.1			max.		+0.1	±0.1	±0.1					
DFPD-20-F03	68.5	30	38.5	19	9.2	12	4	36	–	12	M5	–	M5	
DFPD-20-F04								42		14.6				M6
DFPD-20-F05								50						
DFPD-40-F04	81.5		45	21	8.2			42	70	18.7	M6	M8		
DFPD-40-F0507										14.6	M5	–		
DFPD-60-F04										93.5	50.5	24		11
DFPD-60-F05	23.3													
DFPD-60-...														
DFPD-80-F0507	99		53	26	9									

	D7	D8	D9 ∅ ±0.1	EE	H1	H2	H3 min.	H3 max.	H4 +0.1	H5	H6 ±0.2	H7 ±0.3	H8 ±0.1	H9
DFPD-20-F03	M6	M5	12.7	G1/8 1/8 NPT	100	59.75	19.5	20.4	10	80	40	57.5	17	32
DFPD-20-F04			16.2		112	70.5	19.5	20.3	13	92	46	67.5		
DFPD-20-F05														
DFPD-40-F04			19		124.9	82.1	19.4	20		105	52.5	82.4	18	
DFPD-40-F0507														
DFPD-60-F04			20.2	130	86	19.5	20.3	110		55	86.5			
DFPD-60-F05														
DFPD-60-...														
DFPD-80-F0507														

	L1	L2	T1	T2	T3	T4	T5	T6	T7	T8	≈C 1	≈C 2	≈C 3	W1	
		±0.1	min.	min.	min.	min.	min.		min.	+0.5	H11	h11			
DFPD-20-F03	145.7	80	10	8	–	8	12	8	8	4	9	9	10	45°	
DFPD-20-F04			12	9							11				
DFPD-20-F05				8							12				
DFPD-40-F04	170.4		16	9	12						14	11			14
DFPD-40-F0507			12	8	–						17		15		
DFPD-60-F04			201	16	9						12	14	17		15
DFPD-60-F05															
DFPD-60-...															
DFPD-80-F0507	223.1		19												

Size 120 ... 480

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Datasheet

Type	B1	B2	B4	B5	B8	B9	B10	D1 Ø	D2 Ø	D3 Ø	D4	D5	D6	
[mm]		±0.1			max.			±0.1	±0.1					
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					30.3				
DFPD-300-F0710	144		74.5	46	17					30				
DFPD-480-F1012	163		83	52	19.3			102	125	37.4	M10	M12		

Type	D7	D8	D9 Ø	EE	H1	H2	H3	H4	H5	H6	H7	H8	H9
[mm]			±0.1				0.5	+0.1			±0.3	±0.1	
DFPD-120-F0507	M6	M5	22.5	G1/4 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					192	131			162	81	132.1		
DFPD-480-F1012			38		214	149.5			184	92	152.5		

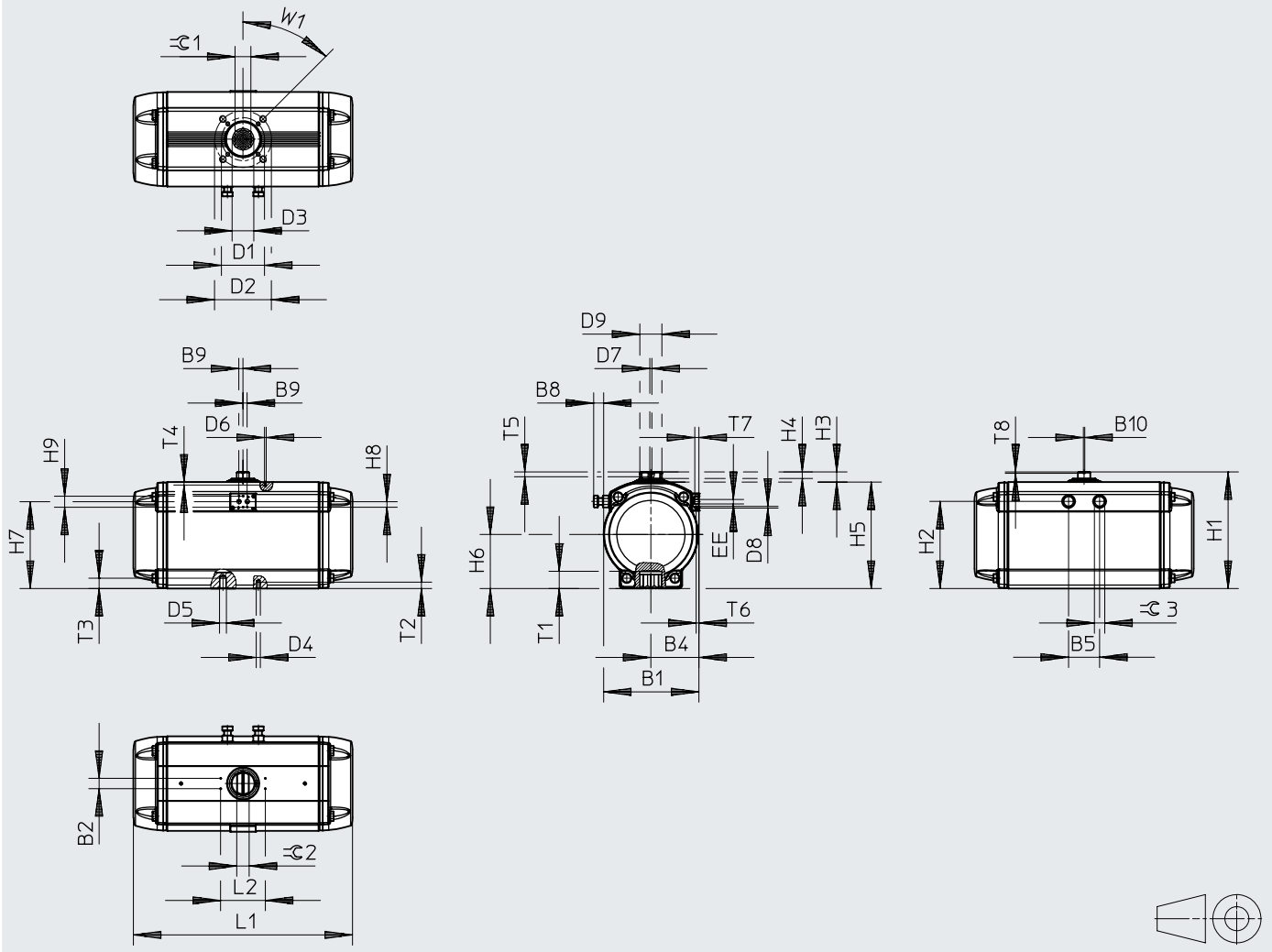
Type	L1	L2	T1	T2	T3	T4	T5	T6	T7	T8	⌀ 1	⌀ 2	⌀ 3	W1					
[mm]		±0.1	±0.4							+0.5	H11	h11							
DFPD-120-F0507	252.3	80	19.3	9	12	8	14	8	12	4	17	15	13	45°					
DFPD-160-F0710	270.9		24.3	12	15						22	19	16						
DFPD-240-F0710	301.4											22	18						
DFPD-300-F0710	334.4											22	18						
DFPD-480-F1012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

Datasheet

Dimensions

Size 700 ... 2300

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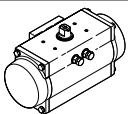
Datasheet

Type	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	221.5		111.5	72	24			102	125	37.4	M10	M12	
DFPD-1200-...-F1012								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													

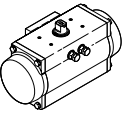
Type	D7	D8	D9 ∅ ±0.1	EE	H1	H2	H3	H4	H5	H6	H7	H8	H9	
[mm]												±0.1		
DFPD-700-....F1012	M6	M5	41	G1/4 or 1/4 NPT	232.7	168	29.7	21	203	103	164.9	16	32	
DFPD-900-....F1012														
DFPD-900-....F14														
DFPD-1200-....F1012														
DFPD-1200-....F14														
DFPD-2300-....F1216														
DFPD-2300-....F14														

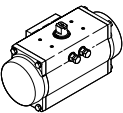
Type	L1	L2	T1	T2	T3	T4	T5	T6	T7	T8	≡ 1	≡ 2	≡ 3	W1
[mm]		±0.1	min.							+0.5	H11	h11		
DFPD-700-...-F1012	428.2	80	29.7	15	18	8	14	8	12	4	27	30	21	45°
DFPD-900-...-F1012	469.6	130	30.2	15.5	18.5	32					24			
DFPD-900-...-F14			40.2	24.5	—							36		
DFPD-1200-...-F1012			31	15.5	18.5							27	36	
DFPD-1200-...-F14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

Ordering data

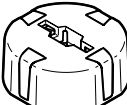
Type	Size	Product weight [g]	Part no.	Type
	20	1419	★ 8047622	DFPD-20-RP-90-RS60-F04
		1371	8047644	DFPD-20-RP-90-RS30-F03
		1419	8047645	DFPD-20-RP-90-RS60-F03
		1371	8047621	DFPD-20-RP-90-RS30-F04
		1371	8048014	DFPD-20-RP-90-RS30-F05
		1419	8048015	DFPD-20-RP-90-RS60-F05
	40	2180	★ 8047624	DFPD-40-RP-90-RS60-F0507
		2087	8047635	DFPD-40-RP-90-RS30-F04
		2180	8047636	DFPD-40-RP-90-RS60-F04
		2087	8047623	DFPD-40-RP-90-RS30-F0507

Datasheet

Ordering data				
Type	Size	Product weight [g]	Part no.	Type
	60	3262	8083508	DFPD-60-RP-90-RS60-F04-11
		3100	8083512	DFPD-60-RP-90-RS30-F0507
		3262	8083514	DFPD-60-RP-90-RS60-F0507
		3262	8083520	DFPD-N-60-RP-90-RS60-F04-11
	80	3746	8047625	DFPD-80-RP-90-RS30-F0507
		3960	★ 8047626	DFPD-80-RP-90-RS60-F0507
	120	5422	8048133	DFPD-120-RP-90-RS30-F0507
		5736	★ 8048134	DFPD-120-RP-90-RS60-F0507
	160	6767	8048135	DFPD-160-RP-90-RS30-F0710
		7179	8048136	DFPD-160-RP-90-RS60-F0710
	240	9442	8048137	DFPD-240-RP-90-RS30-F0710
		10036	8048138	DFPD-240-RP-90-RS60-F0710
	300	12052	8048139	DFPD-300-RP-90-RS30-F0710
		12880	8048140	DFPD-300-RP-90-RS60-F0710
	480	17261	8048141	DFPD-480-RP-90-RS30-F1012
		18485	8048142	DFPD-480-RP-90-RS60-F1012
	700	26268	8065262	DFPD-700-RP-90-RS60-F1012
	900	30395	8065266	DFPD-900-RP-90-RS60-F14
			8084135	DFPD-900-RP-90-RS60-F1012
	1200	43022	8065270	DFPD-1200-RP-90-RS60-F14
			8084143	DFPD-1200-RP-90-RS60-F1012
	2300	77884	8065274	DFPD-2300-RP-90-RS60-F1216

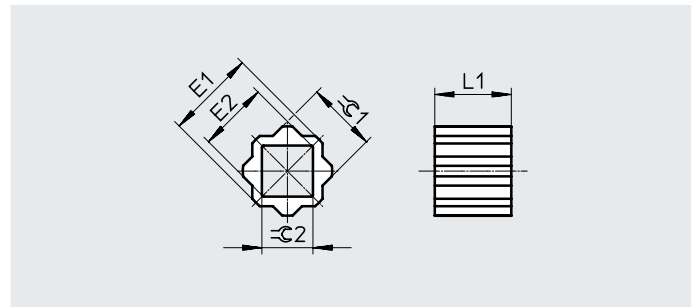
Ordering data				
Type	Size	Product weight [g]	Part no.	Type
Variant EP, epoxy coated				
	20	1371	8047646	DFPD-20-RP-90-RS30-F03-R3-EP
		1419	8047647	DFPD-20-RP-90-RS60-F03-R3-EP
		1371	8047627	DFPD-20-RP-90-RS30-F04-R3-EP
		1419	8047628	DFPD-20-RP-90-RS60-F04-R3-EP
		1371	8048016	DFPD-20-RP-90-RS30-F05-R3-EP
		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
	60	3262	8083515	DFPD-60-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
			8084137	DFPD-900-RP-90-RS60-F1012-R3-EP
	1200	43022	8065272	DFPD-1200-RP-90-RS60-F14-R3-EP
			8084145	DFPD-1200-RP-90-RS60-F1012-R3-EP
	2300	77884	8065276	DFPD-2300-RP-90-RS60-F1216-R3-EP

Accessories

Position indicator SASF						
	For size	Dimensions W x L x H	Ambient temperature	Product weight	Part no.	Type
	DFPD-20	Ø 50 mm x 20 mm	-20 ... 80 °C	17 g	8147090	SASF-F9-DE-12-A20
	DFPD-40				8147091	SASF-F9-DE-16-A20
	DFPD-60				8147092	SASF-F9-DE-19-A20
	DFPD-80				8147093	SASF-F9-DE-20-A20
	DFPD-120				8147094	SASF-F9-DE-22-A20
	DFPD-160				8147095	SASF-F9-DE-25-A20
	DFPD-240, 300	Ø 70 mm x 25 mm		16 g	8147096	SASF-F9-DE-31-A30
	DFPD-480			30 g	8147098	SASF-F9-DE-38-A30
	DFPD-700			29 g	8147099	SASF-F9-DE-41-A30
	DFPD-900			28 g	8147100	SASF-F9-DE-44-A30
	DFPD-1200			27 g	8147101	SASF-F9-DE-50-A30
	DFPD-2300			26 g	8147102	SASF-F9-DE-64-A30
		Ø 101 mm x 30 mm		50 g		

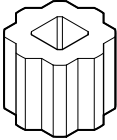
Reducing sleeve DARQ

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



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

Accessories

Ordering data								
Design	Connection		Length [mm]	CRC ¹⁾	Weight/piece [g]	Part no.	Type	PU ²⁾
	Drive outlet	Reducing outlet						
Female square and male octagon								
	A/F 11	A/F 8	12	2	7	8082116	DARQ-R-A-S11-S8-12	1
	A/F 11	A/F 9	11		5	8082117	DARQ-R-A-S11-S9-11	
	A/F 14	A/F 8	16		20	8086383	DARQ-R-A-S14-S8-16	
	A/F 14	A/F 9	16		18	8082118	DARQ-R-A-S14-S9-16	
	A/F 14	A/F 10	16		16	8082119	DARQ-R-A-S14-S10-16	
	A/F 14	A/F 11	16		13	8082120	DARQ-R-A-S14-S11-16	
	A/F 14	A/F 12	16		10	8082121	DARQ-R-A-S14-S12-16	
	A/F 17	A/F 8	17		36	8086384	DARQ-R-A-S17-S8-17	
	A/F 17	A/F 9	17		34	8096914	DARQ-R-A-S17-S9-17	
	A/F 17	A/F 11	17		29	8082122	DARQ-R-A-S17-S11-17	
	A/F 17	A/F 12	17		25	8086385	DARQ-R-A-S17-S12-17	
	A/F 17	A/F 14	17		19	8082123	DARQ-R-A-S17-S14-17	
	A/F 22	A/F 11	22		75	8086386	DARQ-R-A-S22-S11-22	
	A/F 22	A/F 14	22		62	8082124	DARQ-R-A-S22-S14-22	
	A/F 22	A/F 16	22		52	8082125	DARQ-R-A-S22-S16-22	
	A/F 22	A/F 17	22		46	8082126	DARQ-R-A-S22-S17-22	
	A/F 27	A/F 14	27		140	8096913	DARQ-R-A-S27-S14-27	
	A/F 27	A/F 17	27		121	8086387	DARQ-R-A-S27-S17-27	
	A/F 27	A/F 22	27		80	8082127	DARQ-R-A-S27-S22-27	
	A/F 36	A/F 22	36		286	8096915	DARQ-R-A-S36-S22-36	
	A/F 36	A/F 27	36		215	8082128	DARQ-R-A-S36-S27-36	
	A/F 46	A/F 36	46		410	8082129	DARQ-R-A-S46-S36-46	
	A/F 11	A/F 8	12		35	8082130	DARQ-R-A-S11-S8-12-P5	5
	A/F 11	A/F 9	11		25	8082131	DARQ-R-A-S11-S9-11-P5	
	A/F 14	A/F 8	16		100	8086388	DARQ-R-A-S14-S8-16-P5	
	A/F 14	A/F 9	16		90	8082132	DARQ-R-A-S14-S9-16-P5	
	A/F 14	A/F 11	16		65	8082133	DARQ-R-A-S14-S11-16-P5	
	A/F 17	A/F 11	17		145	8082134	DARQ-R-A-S17-S11-17-P5	
	A/F 17	A/F 12	17		125	8086389	DARQ-R-A-S17-S12-17-P5	
	A/F 17	A/F 14	17		95	8082135	DARQ-R-A-S17-S14-17-P5	
	A/F 22	A/F 14	22		310	8082136	DARQ-R-A-S22-S14-22-P5	
	A/F 22	A/F 17	22		230	8082137	DARQ-R-A-S22-S17-22-P5	
	A/F 27	A/F 22	27		400	8082138	DARQ-R-A-S27-S22-27-P5	
	A/F 36	A/F 27	36		1075	8082139	DARQ-R-A-S36-S27-36-P5	
	A/F 11	A/F 9	11		50	8082140	DARQ-R-A-S11-S9-11-P10	10
	A/F 14	A/F 9	16		180	8082141	DARQ-R-A-S14-S9-16-P10	
	A/F 14	A/F 11	16		130	8082142	DARQ-R-A-S14-S11-16-P10	
	A/F 17	A/F 14	17		190	8082143	DARQ-R-A-S17-S14-17-P10	
	A/F 22	A/F 17	22		460	8082144	DARQ-R-A-S22-S17-22-P10	
	A/F 11	A/F 9	11		250	8082145	DARQ-R-A-S11-S9-11-P50	50
	A/F 14	A/F 9	16		900	8082146	DARQ-R-A-S14-S9-16-P50	
	A/F 14	A/F 11	16		650	8082147	DARQ-R-A-S14-S11-16-P50	
	A/F 17	A/F 11	17		1450	8082148	DARQ-R-A-S17-S11-17-P50	
	A/F 22	A/F 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 can occur. External visible parts with primarily decorative surface requirements that are in direct contact with a normal industrial environment.

2) Packaging unit