Quarter turn actuators DFPD for the chemical industry

FESTO

Key features

Function

This design of the DFPD series is suitable for the harsh conditions in the chemical industry. DFPD and DFPD-VDE2 have a NAMUR interface to VDI/VDE 3847, hard-anodised end caps, blow-out-proof adjusting screws for the end position, shaft centring ring and captive spring cartridges that are free of non-ferrous metals.

The DFPD for the chemical industry is suitable for actuating butterfly valves, plug valves and ball valves in process plants in the chemical and petrochemical industries, and can also be used with a positioner for control applications.

At a glance

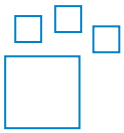
DFPD-...-C

DFPD-...-C-VDE2

DFPD-...-C-VDE2
DADG-FM-F9-VDE2

DFPD-...-C-VDE2
DADG-FM-F9-VDE2

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
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

Key features and type codes

Size	Flange pattern	Shaft connection	Shaft connection depth [mm]	Pneumatic connection
20	F05	T11	12	G1/8
40	F05	T14	16	G1/8
80	F07	T17	19	G1/8
120	F07	T17	19	G1/4
160	F07	T22	24	G1/4
240	F10	T22	24	G1/4
300	F10	T27	24	G1/4
480	F12	T27	29	G1/4
700	F12	T27	29	G1/4
900	F14	T36	38	G1/4
1200	F14	T36	38	G1/4
2300	F16	T46	48	G1/4

001	Series	
DFPD	Semi-rotary drive	

002	System of units	
	Metric	
N	Imperial	

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

004	Design	
RP	Rack and pinion	

005	Swivel angle [°]	
90	90	

006	Swivel direction	
R	Right	

007	Function	
S	Single-acting	

008	Spring force	
35	For connection pressure 3.5 bar	
45	For connection pressure 4.5 bar	
60	For connection pressure 6 bar	

009	Flange pattern 1	
F05	Hole pattern F05	
F07	Hole pattern F07	
F10	Hole pattern F10	
F12	Hole pattern F12	
F14	Hole pattern F14	
F16	Hole pattern F16	

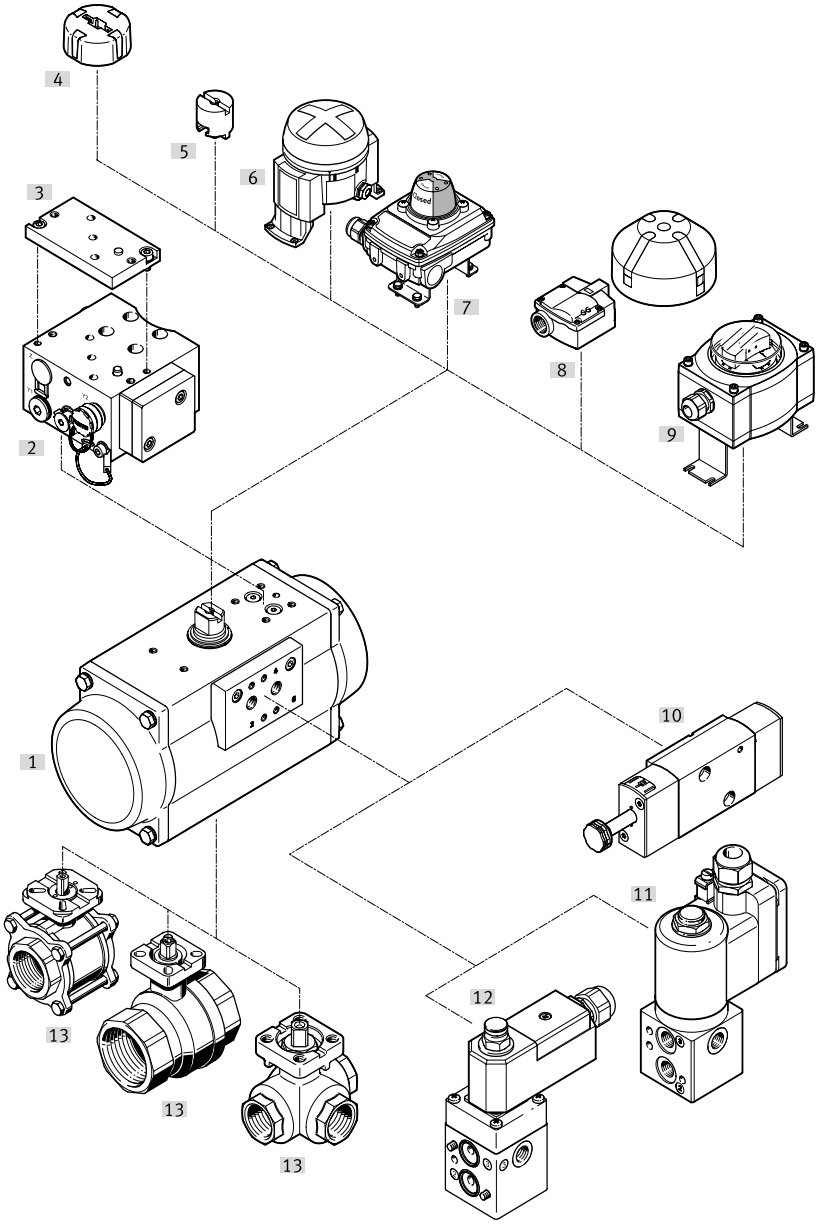
010	Pneumatic connection	
	Standard	
X	Alternative connection size	

011	Shaft material	
R3	Stainless steel	

012	Industry focus	
C	Chemical industry	

013	Mechanical interface	
	Standard	
VDE2	VDI/VDE 3847-2	

Peripherals overview

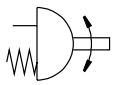


Peripherals overview

Mounting components and accessories			
		Description	→ Page/Internet
[1]	Quarter turn actuators DFPD-C	This design of the DFPD series is suitable for the harsh conditions in the chemical industry	6
[2]	Control plate DADG-FM-F9-VDE2	For sizes 80 to 2300	22
[3, 5]	Adapter kit DADG-AK-F9-1	The VDI/VDE 3847-2 interface is increased of 10 mm	25
[4]	Position indicator SASF	The different sizes of the SASF corresponds to the DFPD shaft size	27
[6]	Sensor box DAPZ	Round design, variant AR, electrical, inductive or inductive and explosion-proof sensing	dapz
[7]	Sensor box SRBC	For electrical feedback and position monitoring of process valves that are actuated with quarter turn actuators	srbc
[8]	Sensor box SRBG	For electrical feedback and position monitoring of process valves that are actuated with quarter turn actuators	srbg
[9]	Sensor box SRAP	Analogue sensor box continuously senses the entire swivel range and reports this back to the controller	srap
[10]	Solenoid valve VSNC	For single-acting and double-acting quarter turn actuators with a plug pattern to VDI/VDE 3845	vsnc
[11]	Solenoid valve VOFD	Solenoid valve with solenoid coil, plug pattern to NAMUR	vofd
[12]	Solenoid valve VOFC	Solenoid valve with solenoid coil, plug pattern to NAMUR	vofc
[13]	Ball valve VAPB, VZBA	2-way brass or stainless steel, corrosion-resistant; 3-way stainless steel, corrosion-resistant	vapb
–	Spring assembly DADG	Spring assembly size 20 to 2300, free of non-ferrous metals	27

Data sheet

Function



Swivel angle
0 ... 90°

General technical data												
Size	20	40	80	120	160	240	300	480	700	900	1200	2300
Mode of operation	Single-acting											
Design	Gear rack/pinion											
Mounting position	Any											
Pneumatic connection	G1/8			G1/4								
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											
Size	AA 1					AA 2				AA 3		
Swivel angle [°]	90											
End-position adjustment range at 0° [°]	–5 ... +5											
End-position adjustment range at 90° [°]	–5 ... +5											
Closing direction	Closes to the right											

Operating and environmental conditions				
Variant	RS35	RS45	RS60
Operating pressure [bar]	2 ... 8		
Nominal operating pressure [bar]	3.5	4.5	6
Operating medium	Compressed air to ISO 8573-1:2010 [7:4:4]		
Note on operating/ pilot medium	Dew point at least 10°C below the ambient temperature and temperature of medium		
	Lubricated operation possible (in which case lubricated operation will always be required)		
Ambient temperature [°C]	–20 ... +80		
Storage temperature [°C]	–20 ... +60		
Certificate issuing authority	German Technical Control Board (TÜV) Rheinland		

Data sheet

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)

Materials

Sectional view

Quarter turn actuators

[1]	Cover	Coated die-cast aluminium
[2]	Housing	Anodised wrought aluminium alloy
–	Shaft	High-alloy stainless steel
–	Sub-base	Anodised wrought aluminium alloy
	Piston	Die-cast aluminium
	Seals	NBR
	Spring	Spring steel
	Bearing	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-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
DFPD-480-RP-90-S	17.2

Type	
DFPD-700-RP-90-RS60	24.5
DFPD-900-RP-90-RS60	31.5
DFPD-1200-RP-90-RS60	43.5
DFPD-2300-RP-90-RS60	84.4

Data sheet

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
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 higher than the maximum permissible torque listed in ISO 5211 in relation to the size of the mounting flange and of the coupling.

Data sheet

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

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

Data sheet

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

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

Data sheet

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-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 higher than the maximum permissible torque listed in ISO 5211 in relation to the size of the mounting flange and of the coupling.

Data sheet

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

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

Data sheet

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-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

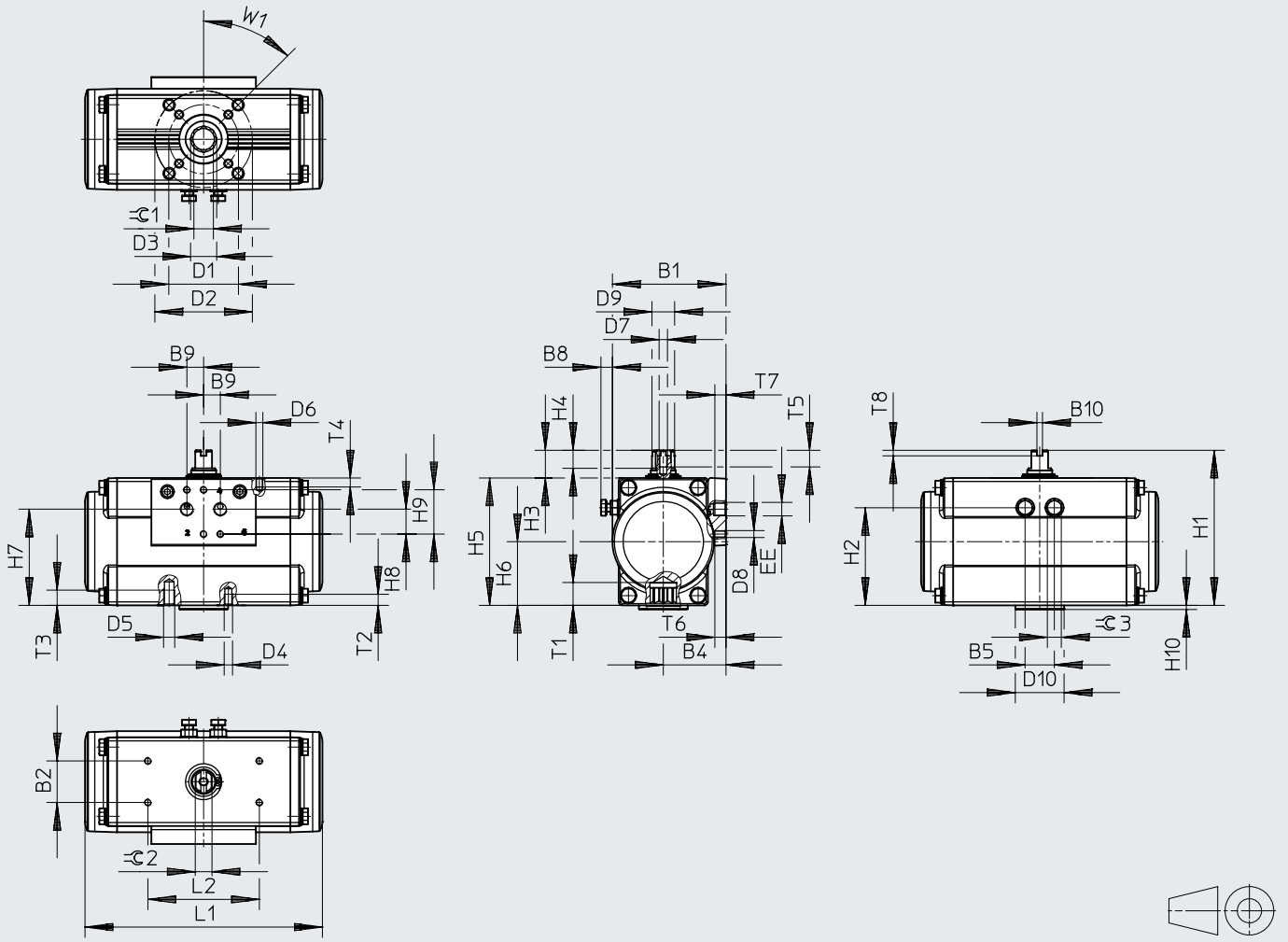
Note

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

Data sheet

Dimensions Download CAD data ➔ www.festo.com

Size 10 ... 480



Data sheet

Type [mm]	B1	B2 ±0.1	B4	B5	B8	B9	B10	D1 Ø	D2 Ø	D3 Ø	D4	D5	D6	D7
DFPD-20-...-F03	68.5	30	38.5	19	9.2	12	4	36	–	12	M5	–	M5	M6
DFPD-20-...-F04								42		14.6				
DFPD-20-...-F05								50			M6			
DFPD-40-...-F0407	81.5		45	21	8.2			42			M5			
DFPD-40-...-F0507								50	70	18.7	M6	M8		
DFPD-80-...-F0507	99		53	26	9					23.3				
DFPD-120-...-F0507	111.5		60.5	32	12.3					23.2				
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 [mm]	D8	D9 Ø	D10	EE	H1	H2	H3 –0.5	H4 +0.1	H5	H6	H7	H8 ±0.1	H9	H10
DFPD-20-...-F03	M5	12.7	–	G1/8 or 1/8 NPT	100	59.75	20	10	80	40	57.5	17	32	–
DFPD-20-...-F04			30											3
DFPD-20-...-F05			–											
DFPD-40-...-F0407		16.2	35		112	70.5		13	92	46	67.5			
DFPD-40-...-F0507														
DFPD-80-...-F0507		20.2			130	86			110	55	86.5	18		
DFPD-120-...-F0507		22.5	55	G1/4 or 1/4 NPT	143	97.75			123	61.5	98.4	16		
DFPD-160-...-F0710		25.5			154	106.25			134	67	109.4			
DFPD-240-...-F0710		31.8	70		180	120.5	30	19.5	150	75	120.2			
DFPD-300-...-F0710					192	131			162	81	132.1			
DFPD-480-...-F1012		38	85		214	149.5			184	92	152.5			

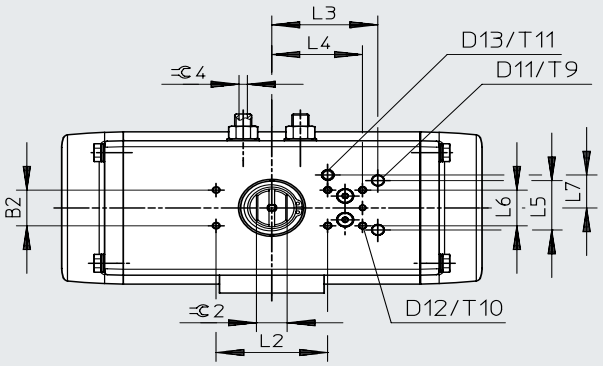
Type [mm]	L1	L2	T1 min.	T2 min.	T3 min.	T4 min.	T5 min.	T6	T7 min.	T8 +0.5	W1	⊂ 1 H11	⊂ 2 h11	⊂ 3
DFPD-20-...-F03	145.7	80	10	8	–	8	12	8	8	4	45°	9	9	10
DFPD-20-...-F04			12	9								11		
DFPD-20-...-F05				8									12	
DFPD-40-...-F0407	170.4		16	9	12							14		
DFPD-40-...-F0507														
DFPD-80-...-F0507	233.1		19						12			17	15	13
DFPD-120-...-F0507	252.3												19	
DFPD-160-...-F0710	270.9		24	12	15							22	22	16
DFPD-240-...-F0710	301.4													18
DFPD-300-...-F0710	334.4		29											
DFPD-480-...-F1012	374.2			15	18							27	27	21

Data sheet

Dimensions Download CAD data ➔ www.festo.com

Size 20 ... 480

Variant -VDE2



Data sheet

Variant -VDE2	B2	D11	D12 Ø	D13	L2	L3 ±0.1	L4 ±0.1	L5	L6	L7	T9	T10	T11	⌀ 2 h11	⌀ 4
DFPD-20-F04	30	–	–	–	80	–	65	–	–	–	–	–	–	9	3
DFPD-20-F05															
DFPD-40-...-F0507														12	
DFPD-40-180-...-F0507															
DFPD-80-...-F0507						76								15	4
DFPD-120-...-F0507															
DFPD-120-180-...-F0507															
DFPD-160-...-F0710														19	5
DFPD-240-...-F0710		M5	8	M8				41.5	30	27.7	10	12	12.5	22	6
DFPD-240-180-...-F0710															
DFPD-300-...-F0710															
DFPD-480-...-F1012														27	8
DFPD-480-180-...-F1012															

Data sheet

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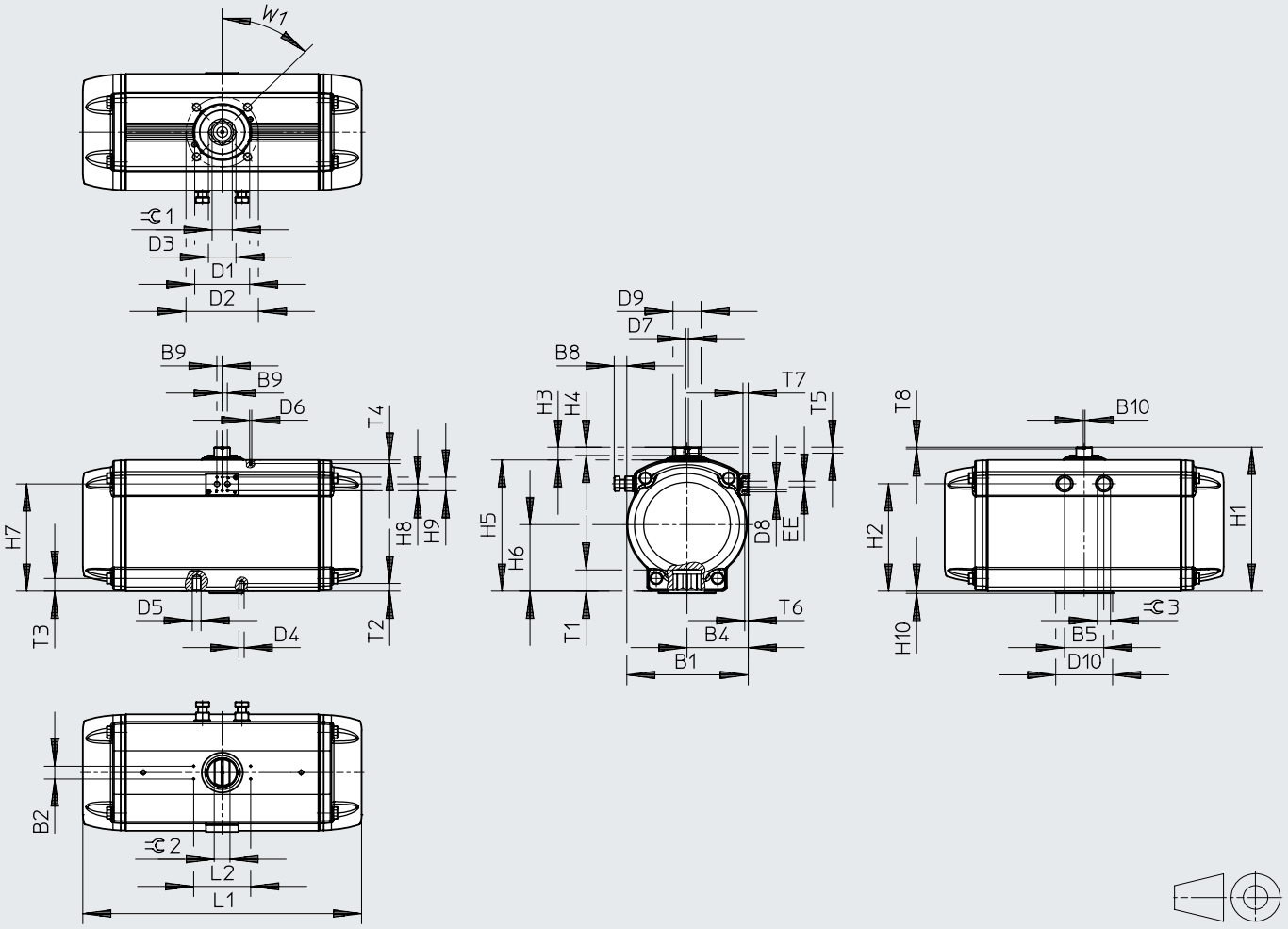
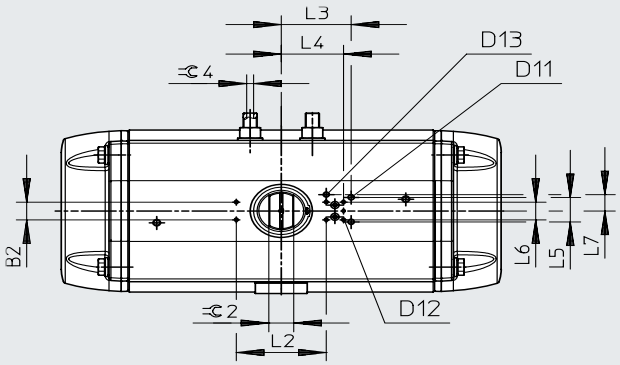
Size 700 ... 2300



Dimensions Download CAD data ➔ www.festo.com

Size 700 ... 2300

Variant -VDE2



Data sheet

Type [mm]	B1	B2 ±0.1	B4	B5	B8 max.	B9	B10 ±0.1	D1 Ø	D2 Ø	D3 Ø	D4	D5	D6	D7
DFPD-700-...-F1012	184	30	93	57.6	17.5	12	4	102	125	37.4	M10	M12	M5	M6
DFPD-900-...-F1012	202		102	64.8	28.6									
DFPD-900-...-F14								140	–	50.1	M16	–		
DFPD-1200-...-F1012	221.5		111.5	72	24			102	125	37.4	M10	M12		
DFPD-1200-...-F14								140	–	50.1	M16			
DFPD-2300-...-F1216	277		139.8	90	33			125	165	62.9	M12	M20		
DFPD-2300-...-F14								140	–	50.1	M16	–		
DFPD-2300-...-F16								165		62.9	M20			

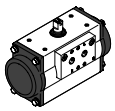
Type [mm]	D8	D9 Ø ±0.1	D10 Ø max.	EE	H1	H2	H3 –0.5	H4	H5	H6	H7	H8 ±0.1	H9	H10
DFPD-700-...-F1012	M5	41	85	G1/4 or 1/4NPT	232.7	168	30	21	203	103	164.9	16	32	3
DFPD-900-...-F1012		44	100		252.7	182			223	113	178.3			4
DFPD-900-...-F14														
DFPD-1200-...-F1012		50			275.7	204			246	125	199.6			
DFPD-1200-...-F14														
DFPD-2300-...-F1216		64	–		338.7	253		19	309	157	252.3			–
DFPD-2300-...-F14														
DFPD-2300-...-F16			130											5

Type [mm]	L1	L2 ±0.1	T1 min.	T2	T4	T5	T6	T7	T8 +0.4	⫧ 1 H11	⫧ 2 h11	⫧ 3	W1
DFPD-700-...-F1012	428.2	80	29.7	15	8	14	8	12	4	27	30	21	45°
DFPD-900-...-F1012	469.6	130	30.2	15.5	8.5						32	24	
DFPD-900-...-F14			40.2	24.5						36			
DFPD-1200-...-F1012	519.3		31	15.5						27	36		
DFPD-1200-...-F14			40	24.5						36			
DFPD-2300-...-F1216	636		50	18.5						46		30	
DFPD-2300-...-F14			40	24.5						36			
DFPD-2300-...-F16			50	30						46			

Variant -VDE2	B2	D11 Ø	D12	D13	L2	L3 ±0.1	L4 ±0.1	L5	L6	L7	⫧ 2 h11	⫧ 4
DFPD-700- ... -F1012	30	8	M5	M8	80	76	40	41.5	30	27.7	30	8
DFPD-900- ... -F1012					130			–	–	–	32	
DFPD-900- ... -F14												
DFPD-1200- ... -F1012											36	
DFPD-1200- ... -F14												
DFPD-2300- ... -F1216						101	65					10
DFPD-2300- ... -F14												

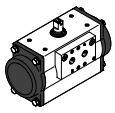
Data sheet

Ordering data

Type	Size	Product weight [g]	Part no.	Type
	20	1399	**8102796**	**DFPD-20-RP-90-RS45-F05-R3-C**
		1383	**8102797**	**DFPD-20-RP-90-RS35-F05-R3-C**
		1423	**8102798**	**DFPD-20-RP-90-RS60-F05-R3-C**
	40	2108	**8102802**	**DFPD-40-RP-90-RS35-F05-R3-C**
		2139	**8102803**	**DFPD-40-RP-90-RS45-F05-R3-C**
		2185	**8102804**	**DFPD-40-RP-90-RS60-F05-R3-C**
	80	3792	**8102809**	**DFPD-80-RP-90-RS35-F07-R3-C**
		3863	**8102810**	**DFPD-80-RP-90-RS45-F07-R3-C**
		3970	**8102811**	**DFPD-80-RP-90-RS60-F07-R3-C**
		3785	**8102815**	**DFPD-80-RP-90-RS35-F07-R3-C-VDE2**
		3856	**8102816**	**DFPD-80-RP-90-RS45-F07-R3-C-VDE2**
		3963	**8102817**	**DFPD-80-RP-90-RS60-F07-R3-C-VDE2**
	120	5485	**8102818**	**DFPD-120-RP-90-RS35-F07-R3-C**
		5590	**8102819**	**DFPD-120-RP-90-RS45-F07-R3-C**
		5747	**8102820**	**DFPD-120-RP-90-RS60-F07-R3-C**
		5476	**8102824**	**DFPD-120-RP-90-RS35-F07-R3-C-VDE2**
		5581	**8102825**	**DFPD-120-RP-90-RS45-F07-R3-C-VDE2**
		5738	**8102826**	**DFPD-120-RP-90-RS60-F07-R3-C-VDE2**
	160	6863	**8102832**	**DFPD-160-RP-90-RS35-F07-R3-C**
		7000	**8102833**	**DFPD-160-RP-90-RS45-F07-R3-C**
		7206	**8102834**	**DFPD-160-RP-90-RS60-F07-R3-C**
		6853	**8102838**	**DFPD-160-RP-90-RS35-F07-R3-C-VDE2**
		6990	**8102839**	**DFPD-160-RP-90-RS45-F07-R3-C-VDE2**
		7196	**8102840**	**DFPD-160-RP-90-RS60-F07-R3-C-VDE2**
	240	9558	**8102842**	**DFPD-240-RP-90-RS35-F10-R3-C**
		9756	**8102843**	**DFPD-240-RP-90-RS45-F10-R3-C**
		10053	**8102844**	**DFPD-240-RP-90-RS60-F10-R3-C**
		9539	**8102848**	**DFPD-240-RP-90-RS35-F10-R3-C-VDE2**
		9737	**8102849**	**DFPD-240-RP-90-RS45-F10-R3-C-VDE2**
		10034	**8102850**	**DFPD-240-RP-90-RS60-F10-R3-C-VDE2**
	300	12209	**8102851**	**DFPD-300-RP-90-RS35-F10-R3-C**
		12485	**8102852**	**DFPD-300-RP-90-RS45-F10-R3-C**
		12899	**8102853**	**DFPD-300-RP-90-RS60-F10-R3-C**
		12187	**8102857**	**DFPD-300-RP-90-RS35-F10-R3-C-VDE2**
		12463	**8102858**	**DFPD-300-RP-90-RS45-F10-R3-C-VDE2**
		12877	**8102859**	**DFPD-300-RP-90-RS60-F10-R3-C-VDE2**
	480	17498	**8102860**	**DFPD-480-RP-90-RS35-F12-R3-C**
		17906	**8102861**	**DFPD-480-RP-90-RS45-F12-R3-C**
		18518	**8102862**	**DFPD-480-RP-90-RS60-F12-R3-C**
		17848	**8102866**	**DFPD-480-RP-90-RS35-F12-R3-C-VDE2**
		17892	**8102867**	**DFPD-480-RP-90-RS45-F12-R3-C-VDE2**
		18504	**8102868**	**DFPD-480-RP-90-RS60-F12-R3-C-VDE2**

Data sheet

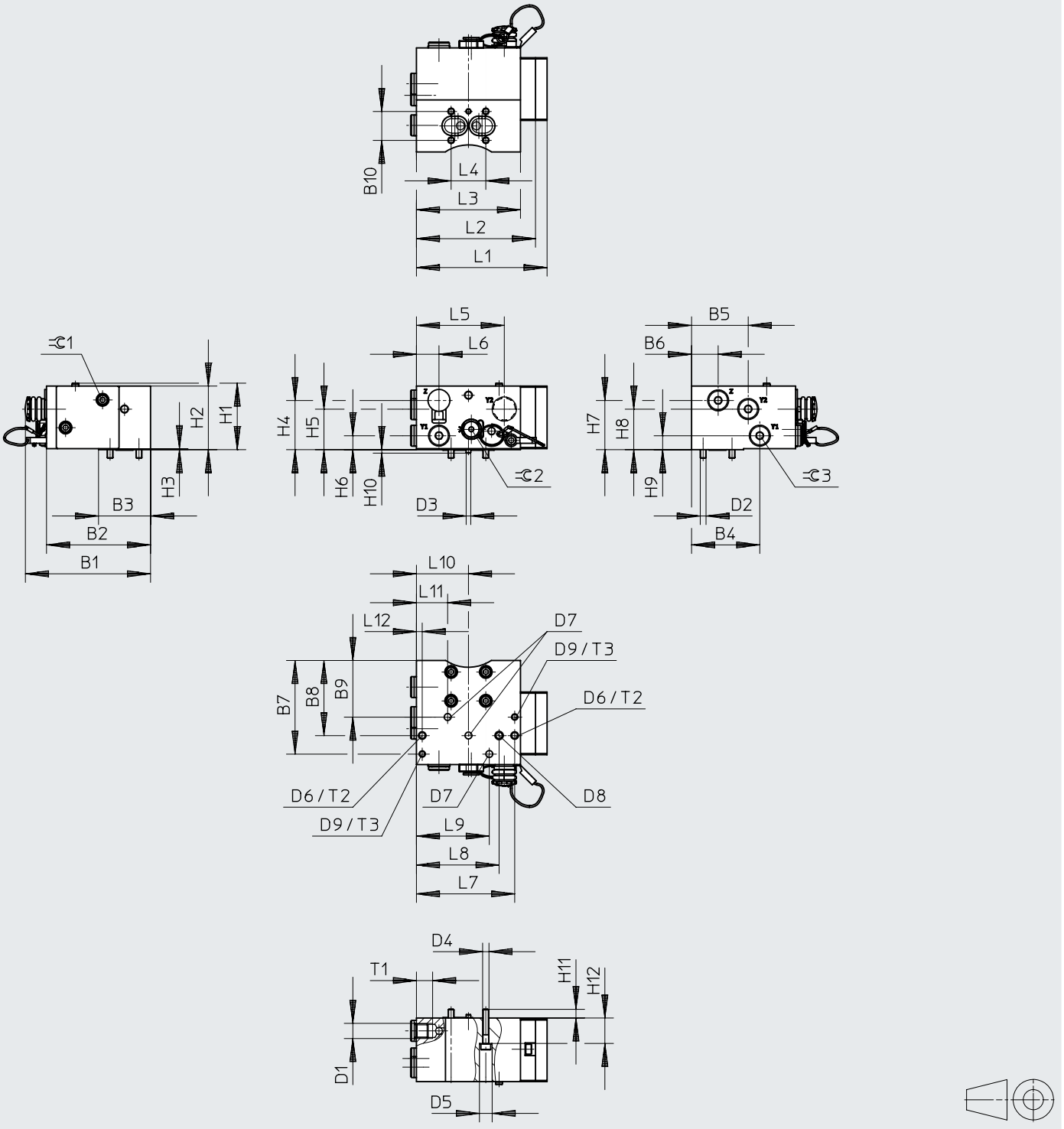
Ordering data

Type	Size	Product weight [g]	Part no.	Type
	700	24723	**8102879**	**DFPD-700-RP-90-RS35-F12-R3-C**
		25357	**8102880**	**DFPD-700-RP-90-RS45-F12-R3-C**
		26308	**8102881**	**DFPD-700-RP-90-RS60-F12-R3-C**
		24708	**8102885**	**DFPD-700-RP-90-RS35-F12-R3-C-VDE2**
		25342	**8102886**	**DFPD-700-RP-90-RS45-F12-R3-C-VDE2**
		26293	**8102887**	**DFPD-700-RP-90-RS60-F12-R3-C-VDE2**
	900	28395	**8102888**	**DFPD-900-RP-90-RS35-F14-R3-C**
		29199	**8102889**	**DFPD-900-RP-90-RS45-F14-R3-C**
		30405	**8102890**	**DFPD-900-RP-90-RS60-F14-R3-C**
		28184	**8102894**	**DFPD-900-RP-90-RS35-F14-R3-C-VDE2**
		28988	**8102895**	**DFPD-900-RP-90-RS45-F14-R3-C-VDE2**
		30194	**8102896**	**DFPD-900-RP-90-RS60-F14-R3-C-VDE2**
	1200	40067	**8102897**	**DFPD-1200-RP-90-RS35-F14-R3-C**
		41240	**8102898**	**DFPD-1200-RP-90-RS45-F14-R3-C**
		43062	**8102899**	**DFPD-1200-RP-90-RS60-F14-R3-C**
		40042	**8102903**	**DFPD-1200-RP-90-RS35-F14-R3-C-VDE2**
		41240	**8102904**	**DFPD-1200-RP-90-RS45-F14-R3-C-VDE2**
		43037	**8102905**	**DFPD-1200-RP-90-RS60-F14-R3-C-VDE2**
	2300	72562	**8102908**	**DFPD-2300-RP-90-RS35-F16-R3-C**
		74726	**8102909**	**DFPD-2300-RP-90-RS45-F16-R3-C**
		77972	**8102910**	**DFPD-2300-RP-90-RS60-F16-R3-C**
		72531	**8102911**	**DFPD-2300-RP-90-RS35-F16-R3-C-VDE2**
		74695	**8102912**	**DFPD-2300-RP-90-RS45-F16-R3-C-VDE2**
		77941	**8102913**	**DFPD-2300-RP-90-RS60-F16-R3-C-VDE2**

Accessories

Dimensions Download CAD data ➔ www.festo.com

Control plate DADG-FM-F9-VDE2



Accessories

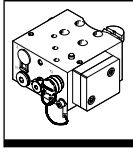
Type	B1 max.	B2	B3	B4	B5	B6	B7	B8	B9	B10	D1	D2
DADG-FM-F9-VDE2	115	90	45	59	49	23	81	65	49	25	G1/4	M5

Type	D3 Ø m6	D4 Ø	D5 Ø	D6	D7 Ø	D8 Ø m6	D9	H1	H2	H3	H4	H5
DADG-FM-F9-VDE2	4	11	5.5	M6	6	6	M5	57.5	55	0.8	42.5	35

Type	H6	H7	H8	H9	H10	H11	H12	L1	L2	L3	L4	L5
DADG-FM-F9-VDE2	12	42.5	35	12	3	7.4	22	113	103	90	30	76

Type	L6	L7	L8	L9	L10	L11	T1	T2	T3	⌯ 1	⌯ 2	⌯ 2
DADG-FM-F9-VDE2	19.5	85	71.5	63	45	27	14	10	10	9	14	9

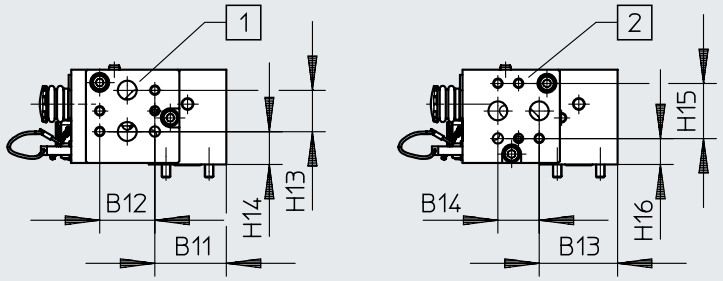
Ordering data – Control plate

	Description	Part no.	Type
	For sizes 80 to 2300	**8104802**	**DADG-FM-F9-VDE2**

Accessories

Dimensions Download CAD data ➔ www.festo.com

Adapter kit DADG-FM-F9-VDE2



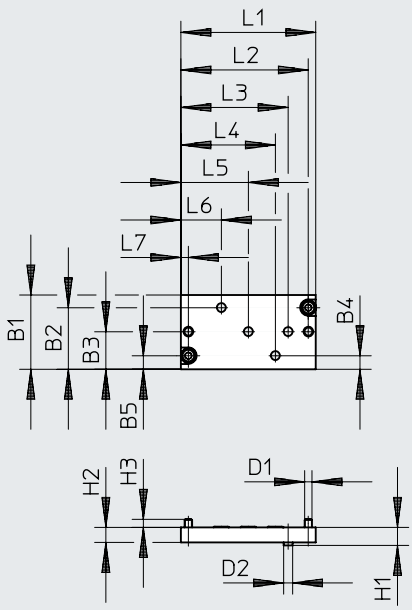
[1] VDI/VDE 3845
[2] VDI/VDE 3845 swivelled by 90°

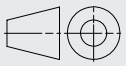
Type	B11	B12	B13	B14	H13	H14	H15	H16
DADG-FM-F9-VDE2	41.5	32	45.5	24	24	19	32	14.8

Accessories

Dimensions Download CAD data ➔ www.festo.com

Adapter kit DADG-AK-F9-1

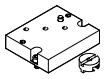




Type	B1	B2	B3	B4	B5	D1	D2 ⌀	H1	H2
DADG-AK-F9-1	49.5	41	25	9	9	M5	6	12	10

Type	H3	L1	L2	L3	L4	L5	L6	L7
DADG-AK-F9-1	2	90	85	71.5	63	45	27	5

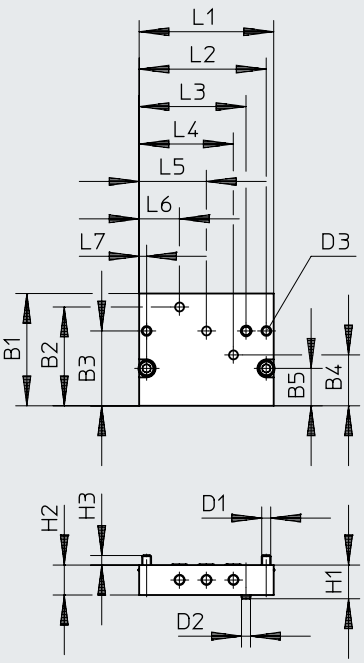
Ordering data – Adapter kit DADG-AK-F9-1

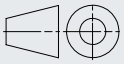
	Description	Part no.	Type
	For sizes 80 to 160 The VDI/VDE 3847-2 interface is increased of 10 mm	**8125947**	**DADG-AK-F9-1**

Accessories

Dimensions Download CAD data ➔ www.festo.com

Adapter kit DADG-AK-F9-2

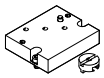




Type	B1	B2	B3	B4	B5	D1	D2 ø m6	D3	H1
DADG-AK-F9-2	75	66	50	34	25	M6	6	M6	22.5

Type	H2	H3	L1	L2	L3	L4	L5	L6	L7
DADG-AK-F9-2	20	6.3	90	85	71.5	63	45	27	5

Ordering data – Adapter kit DADG-AK-F9-2

	Description	Part no.	Type
	For size 2300 The VDI/VDE 3847-2 interface is increased of 10 mm	**8104804**	**DADG-AK-F9-2**

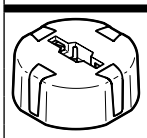
Accessories

Ordering data – Spring assembly

Size	Pack size	Note on materials	Spring guide material	CRC[1)]	Weight [g]	Part no.	Type
20	100	RoHS-compliant	High-alloy stainless steel	0	7.8	**8103224**	**DADG-FP-F9-20-R3-P100**
40	100				16.5	**8103225**	**DADG-FP-F9-40-R3-P100**
80	100				33.3	**8103226**	**DADG-FP-F9-80-R3-P100**
120	100				52	**8103227**	**DADG-FP-F9-120-R3-P100**
160	100				65.8	**8103228**	**DADG-FP-F9-160-R3-P100**
240	100				93.8	**8103229**	**DADG-FP-F9-240-R3-P100**
300	100				127	**8103230**	**DADG-FP-F9-300-R3-P100**
480	100				198	**8103231**	**DADG-FP-F9-480-R3-P100**
700	50				316	**8103232**	**DADG-FP-F9-700-R3-P50**
900	50				399	**8103233**	**DADG-FP-F9-900-R3-P50**
1200	50				595	**8103234**	**DADG-FP-F9-1200-R3-P50**
2300	25				1083	**8103235**	**DADG-FP-F9-2300-R3-P25**

1) Corrosion resistance class CRC 0 to Festo standard FN 940070
No corrosion stress. Applies to small, visually unimportant standard parts such as threaded pins, circlips and clamping sleeves which are usually only available on the market in a phosphated or burnished version (and possibly oiled) as well as to ball bearings (for components < CRC 3) and plain bearings.

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			16 g	**8147095**	**SASF-F9-DE-25-A20**
	DFPD-240, 300	Ø 70 mm x 25 mm		30 g	**8147096**	**SASF-F9-DE-31-A30**
	DFPD-480			29 g	**8147098**	**SASF-F9-DE-38-A30**
	DFPD-700			28 g	**8147099**	**SASF-F9-DE-41-A30**
	DFPD-900			27 g	**8147100**	**SASF-F9-DE-44-A30**
	DFPD-1200			26 g	**8147101**	**SASF-F9-DE-50-A30**
	DFPD-2300	Ø 101 mm x 30 mm		50 g	**8147102**	**SASF-F9-DE-64-A30**