



- High-precision guidance
- Able to absorb high torques
- Saves space in comparison with standard cylinders
- For contactless position sensing

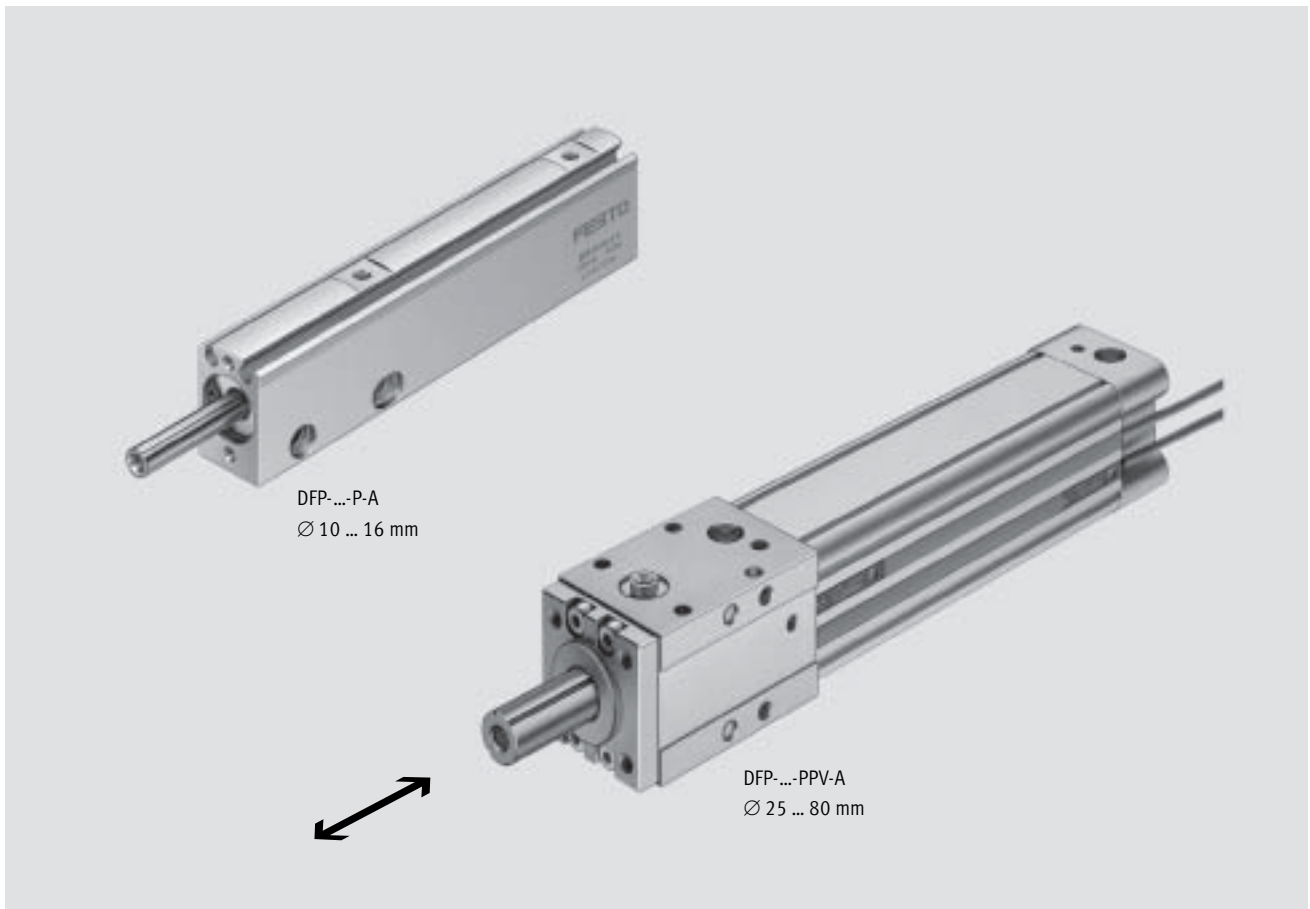
Guided cylinder DFP

Features

FESTO

Drives with linear guides
Rod guides

6.2



Brief description

- Double-acting
- High-precision guidance thanks to recirculating ball bearing guide
- Able to absorb high torques
- Saves space in comparison with standard cylinders with external guide unit
- With flexible cushioning rings in the end positions for Ø 10 ... 16 mm
- With end-position cushioning adjustable at both ends for Ø 25 ... 80 mm
- For contactless position sensing

Guided cylinder DFP

Features



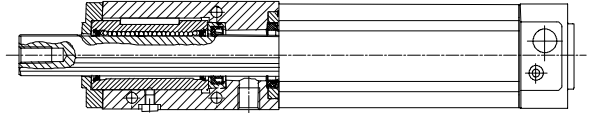
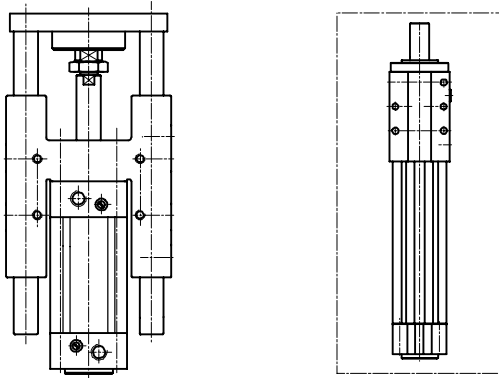
Less installation space required

Standard cylinder with guide unit

Guided cylinder DFP

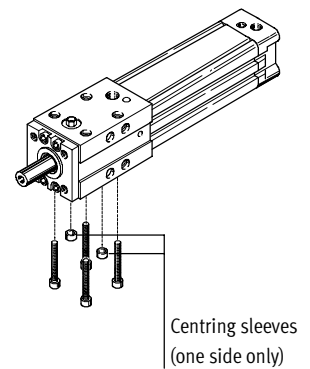
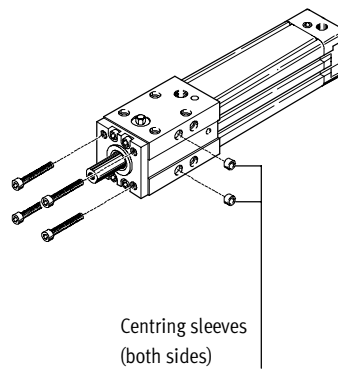
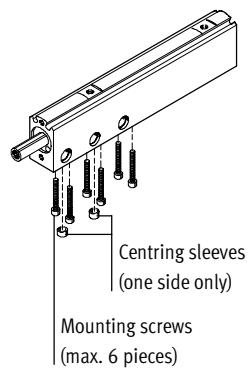
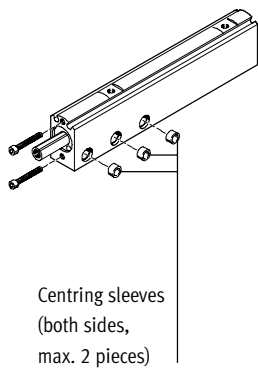
High precision

Grooved piston rod with recirculating ball bearing guide

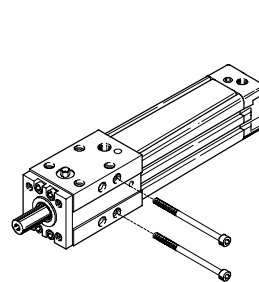
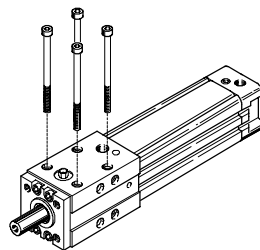
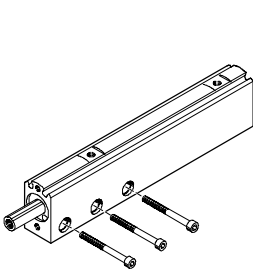


Mounting options

Via female thread

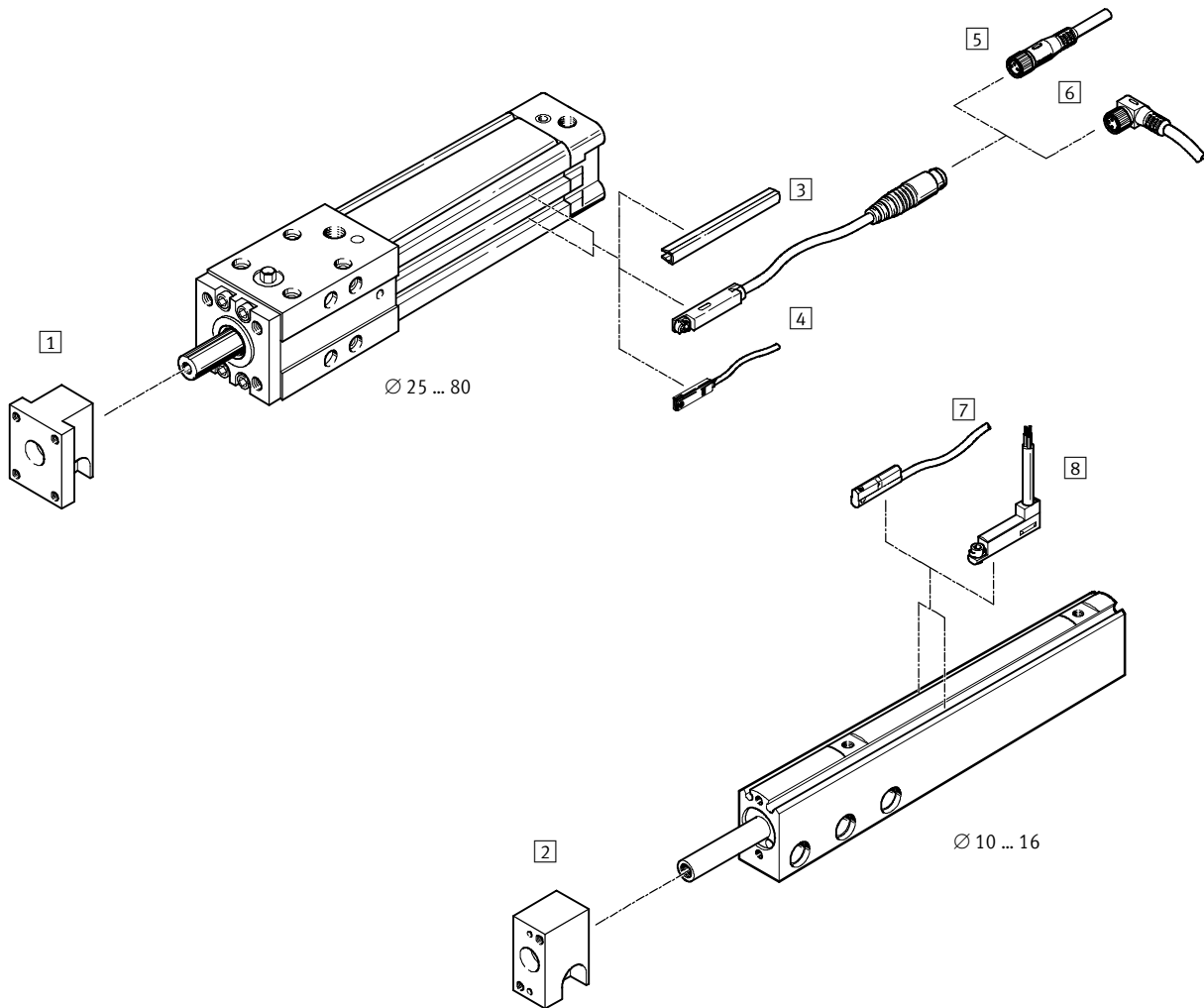


Via through-holes



Guide cylinders DFP

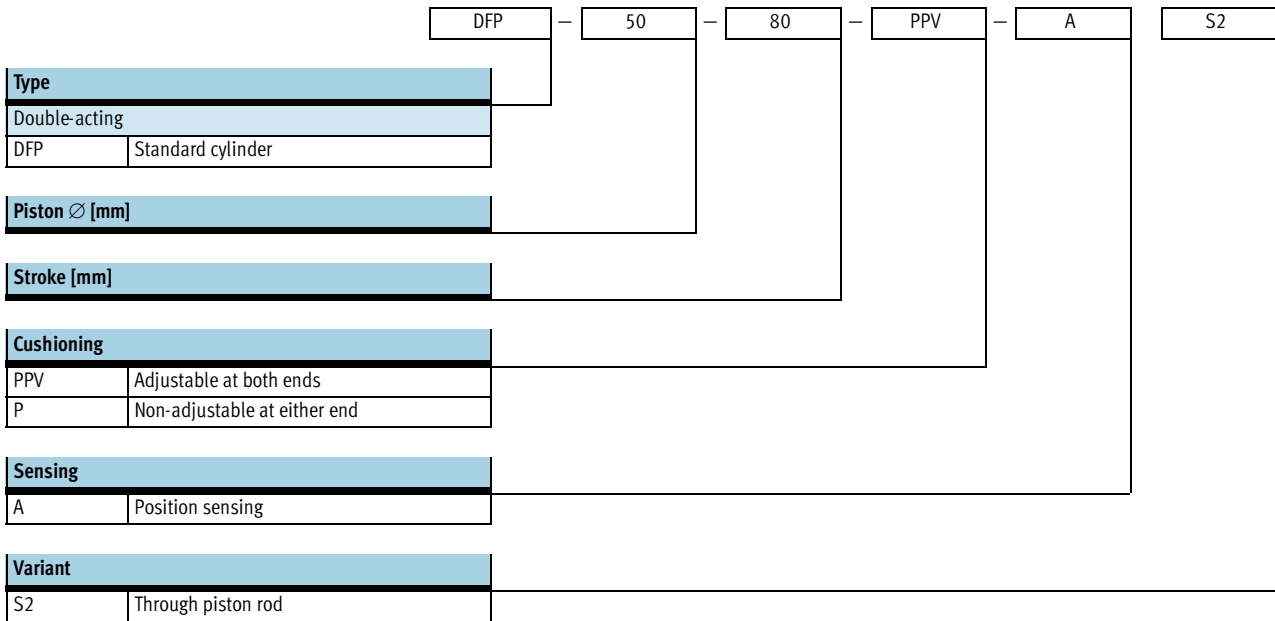
Peripherals overview



Accessories					
	Brief description	Piston \varnothing [mm]		→ Page	
		10 ... 16	25 ... 32		
1	Push-on flange FFP	For piston \varnothing 25 ... 32 mm	-	■	1 / 6.2-16
2	Push-on flange FFP	For piston \varnothing 10 ... 16 mm	■	-	1 / 6.2-16
3	Slot cover ABP-5-S	To protect the sensor cable and keep dirt out of the sensor slots	-	■	1 / 6.2-18
4	Proximity sensors SME/SMT-8	Can be integrated in the cylinder profile barrel	-	■	1 / 6.2-18
5	Plug socket with cable, straight SIM-M8	-	-	■	1 / 6.2-18
6	Plug socket with cable, angled SIM-M8	-	-	■	1 / 6.2-18
7	Proximity sensors SME/SMT-10	Can be integrated in the cylinder profile barrel	■	-	1 / 6.2-17
8	Proximity sensors SME/SMT-10F	Can be integrated in the cylinder profile barrel	■	-	1 / 6.2-17
-	Centring pins/sleeves ZBH	-	■	■	1 / 6.2-17

Guided cylinder DFP

Type codes



Guided cylinder DFP

Technical data



Function



Variant



S2



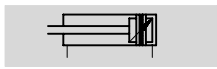
DFP-...-P-A

- - Diameter
10 ... 16 mm

- - Stroke length
25 ... 100 mm

- - www.festo.com/en/Spare_parts_service

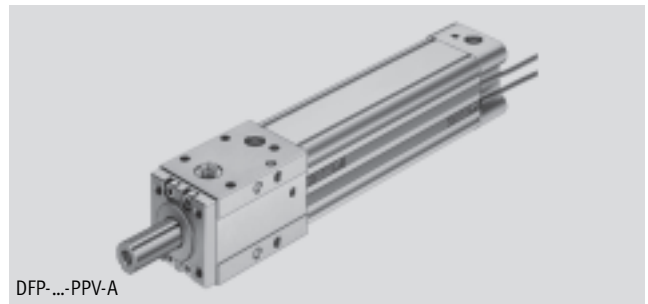
Function



Variant



S2



DFP-...-PPV-A

- - Diameter
25 ... 80 mm

- - Stroke length
25 ... 500 mm

- - www.festo.com/en/Spare_parts_service

General technical data						
Piston \varnothing	10	16	25	32	50	80
Pneumatic connection	M3	M5	G $\frac{1}{8}$	G $\frac{1}{8}$	G $\frac{1}{4}$	G $\frac{3}{8}$
Operating medium	Filtered compressed air, lubricated or unlubricated					
Guide	Via ball bearings					
Cushioning	Non-adjustable at either end		Adjustable at both ends			
Cushioning length [mm]	-	-	17	20	22	32
Position sensing	Via proximity sensor					
Type of mounting	Via female threads Using through holes					
Mounting position	Any					

Operating and environmental conditions						
Piston \varnothing	10	16	25	32	50	80
Operating pressure [bar]	0.5 ... 10					
Ambient temperature ¹⁾ [°C]	-10 ... +60					

1) Note operating range of proximity sensors

Forces [N] and impact energy [Nm]						
Piston \varnothing	10	16	25	32	50	80
Theoretical force at 6 bar, advancing ¹⁾	47	121	295	483	1,178	3,016
Theoretical force at 6 bar, retracting	31	91	217	364	884	2,262
Max. impact energy at the end positions	0.05	0.07	0.2	0.35	0.6	1.6

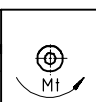
1) The force in the advance stroke is the same as the force in the return stroke with the variant S2.

Guided cylinder DFP

Technical data

FESTO

Speed [mm/s]							
Piston Ø		10	16	25	32	50	80
Maximum speed advancing	v_{maxA}	0.8	0.8	1.5	1.5	1	0.9
Minimum speed retracting	v_{maxL}	0.8	0.8	1.5	1.5	1	0.7

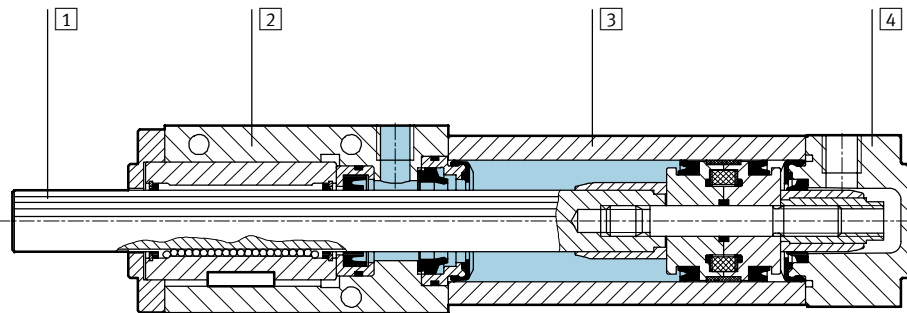
Max. torque ¹⁾ [Nm]							
Piston Ø		10	16	25	32	50	80
	dynamic	0.2	0.4	1.1	5.8	19	75
	static	0.4	0.6	2.7	8.5	25	100

1) Torque at piston rod

Weights [g]													
Stroke [mm]	Piston Ø												
	10		16		25		32		50		80		
	Basic version	S2	Basic version	S2	Basic version	S2	Basic version	S2	Basic version	S2	Basic version	S2	
25	118	124	180	195	590	652	-	-	-	-	-	-	
50	147	156	218	238	660	737	1,180	1,297	2,960	3,351	8,077	8,814	
80	173	185	263	290	740	836	1,295	1,439	3,150	3,570	8,561	9,414	
100	198	212	293	325	794	902	1,357	1,519	3,340	3,855	8,856	9,787	
160	-	-	-	-	957	1,102	1,590	1,805	3,804	4,468	9,786	10,949	
200	-	-	-	-	-	-	1,732	1,983	4,100	4,863	10,460	11,778	
250	-	-	-	-	-	-	1,914	2,210	4,490	5,377	11,289	12,801	
320	-	-	-	-	-	-	-	-	5,030	6,091	12,436	14,220	
400	-	-	-	-	-	-	-	-	5,610	6,869	13,750	15,844	
500	-	-	-	-	-	-	-	-	-	-	15,442	17,924	

Materials

Sectional view



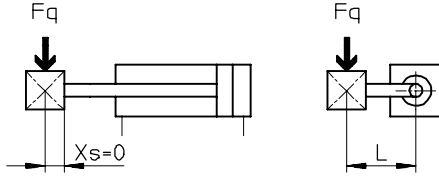
Guided cylinder		
1	Piston rod	Tempered steel
2	Bearing end cap	Aluminium
3	Cylinder barrel	Anodised aluminium
4	End cap	Aluminium
-	Seals	Polyurethane, polyacetal, nitrile rubber
Note on material		Free of copper, PTFE and silicone

Guided cylinder DFP

Technical data



Max. permissible dynamic lateral force F_q at the piston rod



Calculation of the max. permissible dynamic lateral force F_q

$$F_q = \frac{A}{(B + X_s + H) \times K + 1 + C \times L}$$

- F_q = Permissible lateral force [N]
- A = Equivalent bearing load [N]
- B = Constant [mm]
- C = Constant [1/mm]
- H = Stroke [mm]
- L = Lever arm [mm]
- K = Constant [1/mm]
- X_s = Distance from centre of mass [mm]

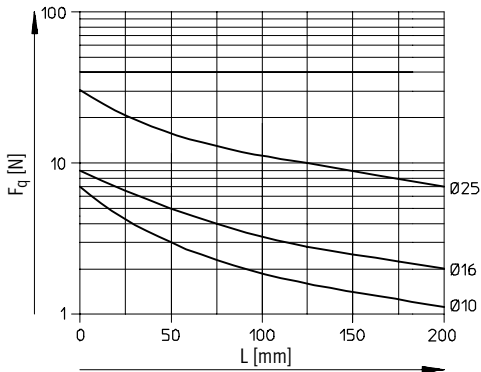
Calculation parameters

	Piston \varnothing [mm]					
	10	16	25	32	50	80
A	220	274	725	1,460	2,430	5,620
B	37.5	37.5	48	57	75.5	96
C	0.84	0.51	0.4	0.22	0.14	0.09
K	0.47	0.47	0.3	0.19	0.13	0.088

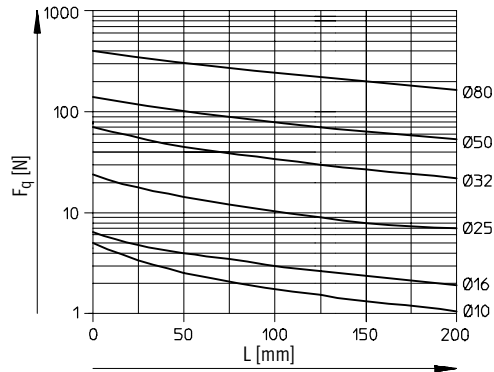
Max. permissible dynamic lateral force F_q at the piston rod as a function of the lever arm L

Distance from the centre of mass $X_s = 0$ mm

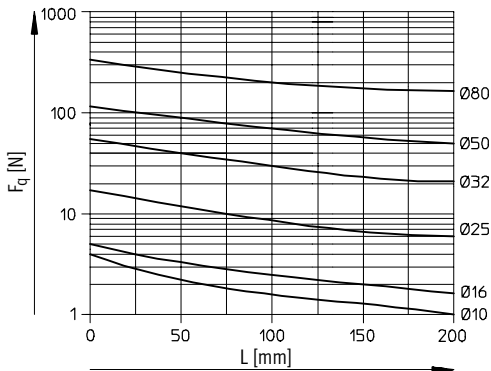
F_q with 25 mm stroke



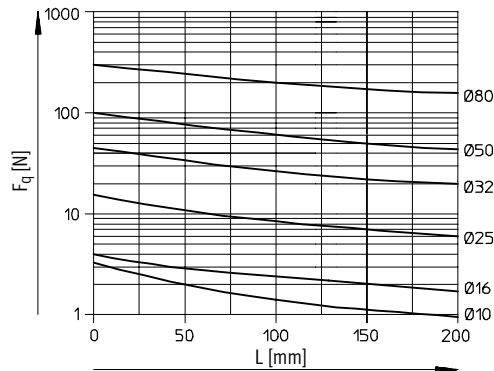
F_q with 50 mm stroke



F_q with 80 mm stroke



F_q with 100 mm stroke



Guided cylinder DFP

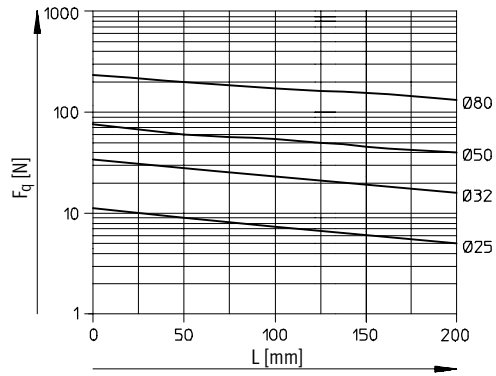
Technical data



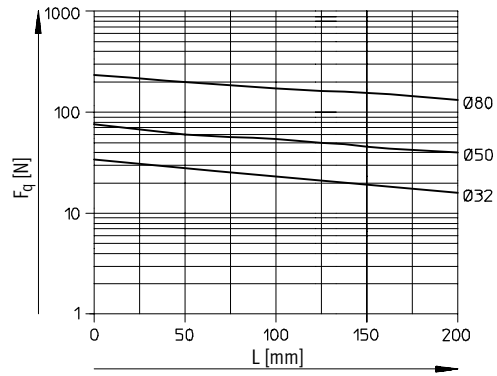
Max. permissible dynamic lateral force F_q at the piston rod as a function of the lever arm L

Distance from the centre of mass $X_s = 0$ mm

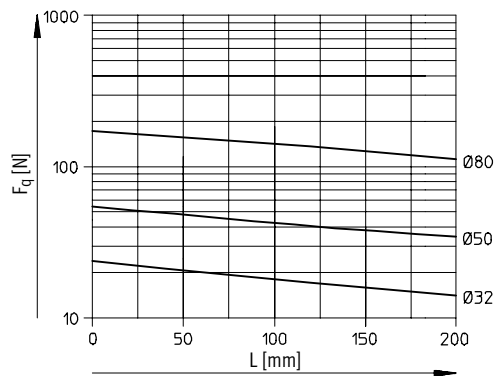
F_q with 160 mm stroke



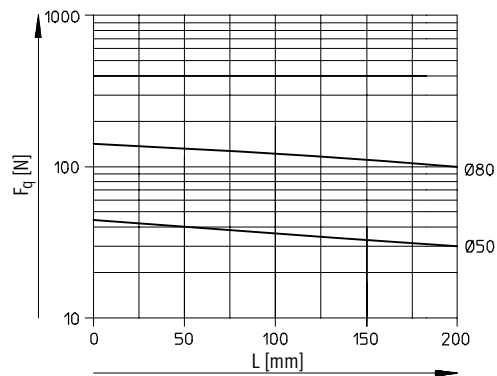
F_q with 200 mm stroke



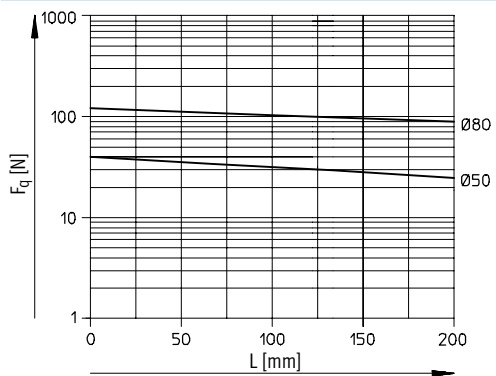
F_q with 250 mm stroke



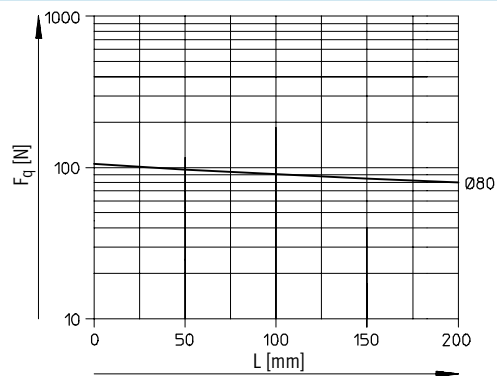
F_q with 320 mm stroke



F_q with 400 mm stroke



F_q with 500 mm stroke



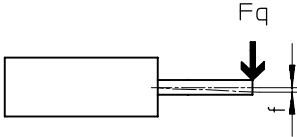
Drives with linear guides
Rod guides
6.2

Guided cylinder DFP

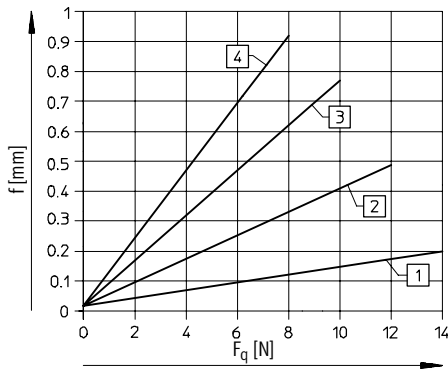
Technical data



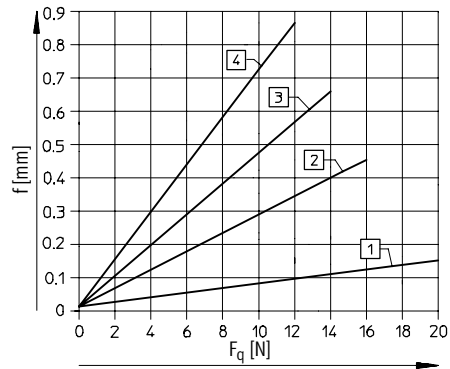
Deflection f at the piston rod as a function of the lateral force F_q



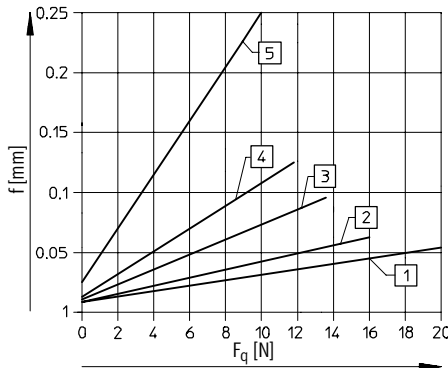
DFP-10



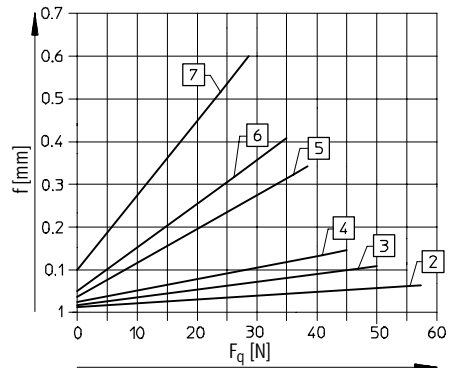
DFP-16



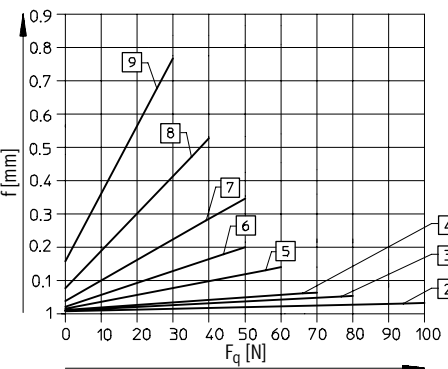
DFP-25



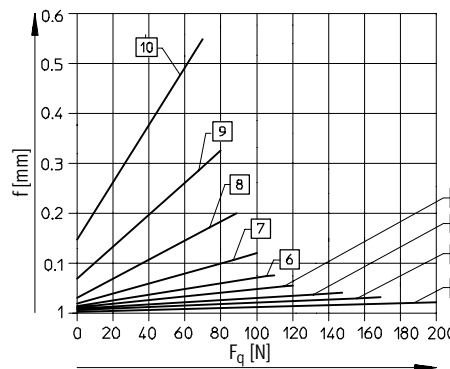
DFP-32



DFP-50



DFP-80



- 1 25 mm stroke
- 2 50 mm stroke
- 3 80 mm stroke

- 4 100 mm stroke
- 5 160 mm stroke
- 6 200 mm stroke

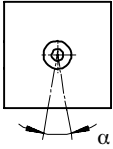
- 7 250 mm stroke
- 8 320 mm stroke

- 9 400 mm stroke
- 10 500 mm stroke

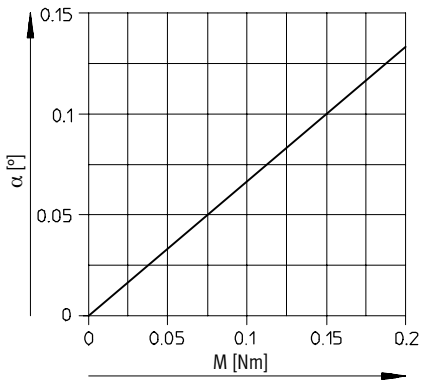
Guided cylinder DFP

Technical data

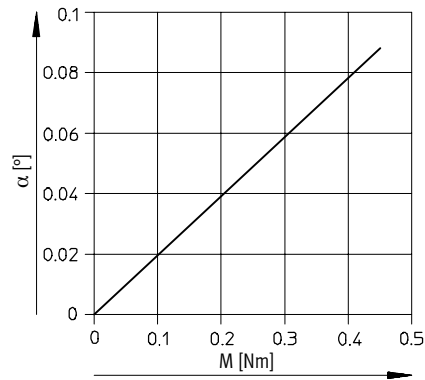
Torsion angle α of the piston rod as a function of the torque M



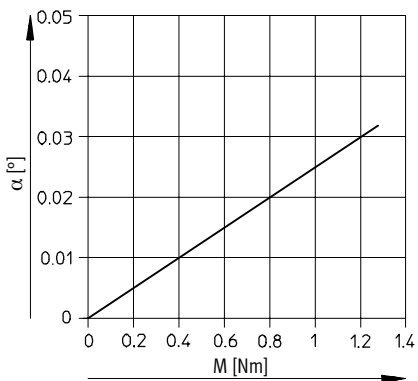
DFP-10



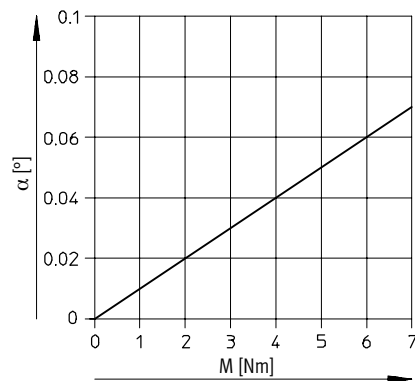
DFP-16



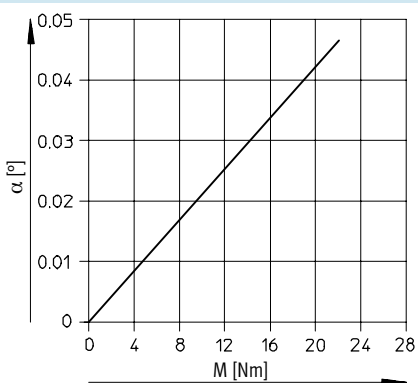
DFP-25



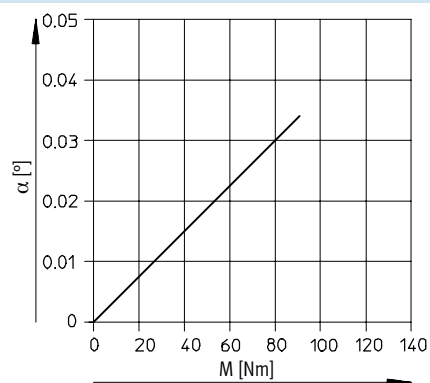
DFP-32



DFP-50



DFP-80



Guided cylinder DFP

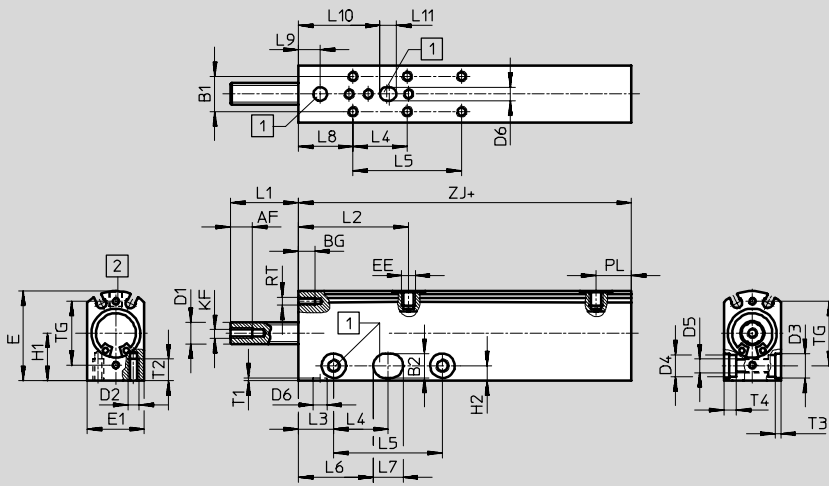
Technical data



Dimensions

Download CAD data → www.festo.com/en/engineering

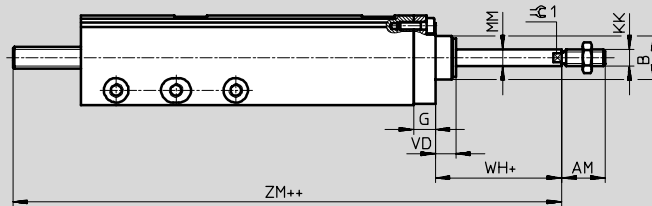
Piston Ø 10...16 mm



- 1 Centring hole for centring sleeves ZBH (accessory)
- 2 Mounting hole pattern (not for S2 variant)

+ = plus stroke length

Variant S2



+ = plus stroke length

++ = plus 2x stroke length

Ø	AF	AM	B Ø	B1	B2 Ø H7	BG	D1 Ø h7	D2	D3 Ø H7	D4	D5	D6 Ø H7	E	E1	EE
10	8	12	–	11	7	6	6	M3	7	6	M4	5	28	17	M3
16	8	16	15.9	13	9	6	8	M4	9	8	M5	5	33	21	M5

Ø	G	H1	H2	KF	KK	L1	L2	L3	L4	L5 ¹⁾	L6	L7	L8	L9	L10
[mm]						min.									
10	6	14.3	4.5	M4	M4	25	38.5	12.5	25	50	33	9	5.5	5.5	28.5
16	8	17.5	5.5	M4	M6	25	40.5	13	20	44	27.5	11	20	8	30

Ø	L11	MM Ø h8	PL	RT	T1	T2	T3	T4	TG	VD	WH	ZJ	ZM	⊙1
[mm]														
10	6	4	12	M2.5	1	6	1.6	3.2	21	–	4.8	65	100.8	–
16	6	6	13	M3	1	8	2.1	4.6	23.5	7.5	12.5	72.5	118	5

1) With stroke > 80 mm

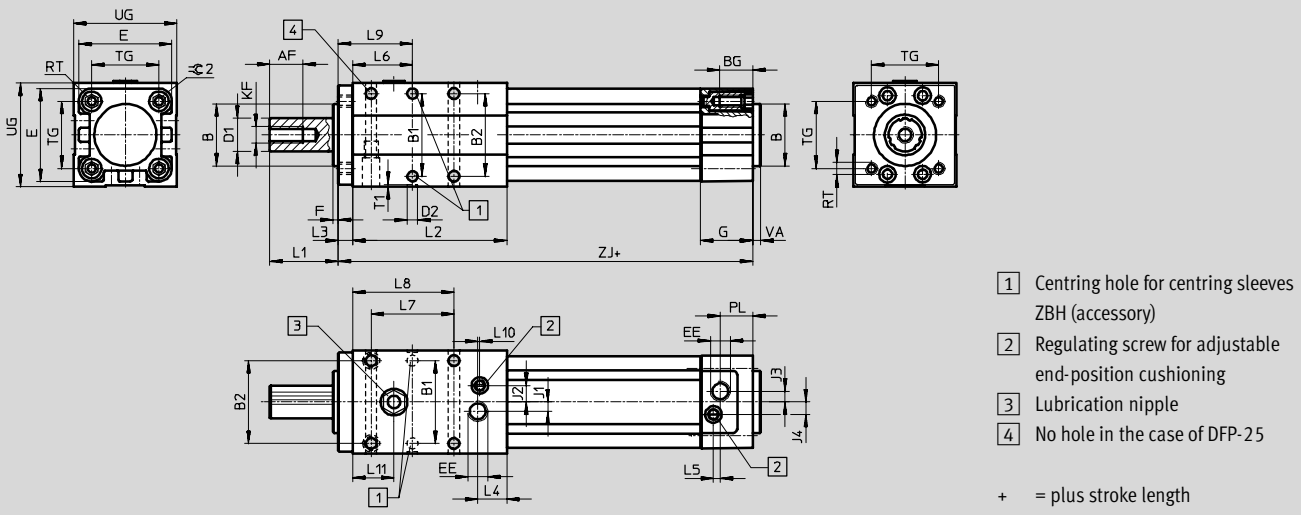
Guided cylinder DFP

Technical data

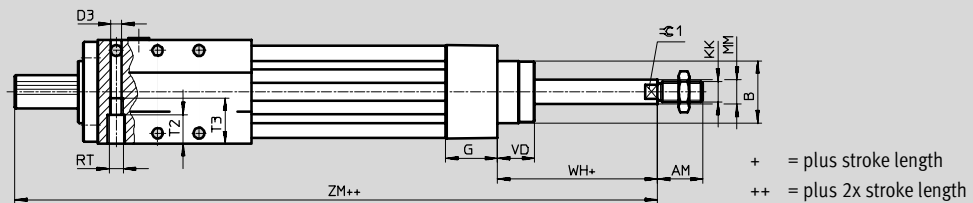


Dimensions Download CAD data → www.festo.com/en/engineering

Piston \varnothing 25 ... 80 mm



Variant S2



\varnothing [mm]	AF	AM	B \varnothing d11	B1 ± 0.02	B2	BG	D1 \varnothing h7	D2 \varnothing H7	D3 \varnothing	I	EE	F	G	J1	J2
25	12.5	22	25	31	31	14	13	5	4.5	38	G $\frac{1}{8}$	2.5	22	3.6	7
32	16	22	30	40	40	16	16	5	5.3	45	G $\frac{1}{8}$	2.5	25.1	4.5	8
50	20	32	40	52	52	17	25	9	6.6	64	G $\frac{1}{4}$	2.5	29.6	7.5	14
80	24	40	45	75	75	17	40	9	8.4	93	G $\frac{3}{8}$	2.5	35.9	7	20

\varnothing [mm]	J3	J4	KF	KK	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	L11
25	3.1	6	M6	M10x1.25	30	58	6.5	11.8	4.1	22.5	31	38	29	2.3	12.8
32	5.2	6	M8	M10x1.25	32	74.5	7	14	3.3	29	40	49	36	1	20
50	8.5	10.4	M10	M16x1.5	40	107.5	10	18	5.1	44	52	70	54	4.2	29
80	8	12.5	M12	M20x1.5	41	143	14	23	10.5	58.5	75	96	72.5	5	39.5

\varnothing [mm]	MM \varnothing f8	PL	RT	T1	T2	T3	TG	UG	VA	VD	WH	ZJ	ZM	$\approx \varnothing 1$	$\approx \varnothing 2$
25	10	8.5	M5	1	11	21	27	40	2	17.5	29.4	119.5	179	9	5
32	12	15.6	M6	1	14	22	32.5	50	4	18	26	150.4	210	10	6
50	20	14	M8	2.1	16	32	46.5	66	4	28	37	194	273	17	8
80	25	16.4	M10	2.1	20	40	72	96	4	34.7	46	249	338	22	6


Guided cylinder DFP

Technical data

FESTO

Drives with linear guides
Rod guides

6.2


Ordering data – Basic version						
Design	Stroke [mm]	Part No.	Type ¹⁾	Stroke [mm]	Part No. Type ¹⁾	
	Piston Ø 10 mm			Piston Ø 16 mm		
	25	186 729	DFP-10-25-P-A	25	186 733 DFP-16-25-P-A	
	50	186 730	DFP-10-50-P-A	50	186 734 DFP-16-50-P-A	
	80	186 731	DFP-10-80-P-A	80	186 735 DFP-16-80-P-A	
	100	186 732	DFP-10-100-P-A	100	186 736 DFP-16-100-P-A	
	Piston Ø 25 mm			Piston Ø 32 mm		
	25	186 737	DFP-25-25-PPV-A	25	– –	
	50	186 738	DFP-25-50-PPV-A	50	186 742 DFP-32-50-PPV-A	
	80	186 739	DFP-25-80-PPV-A	80	186 743 DFP-32-80-PPV-A	
	100	186 740	DFP-25-100-PPV-A	100	186 744 DFP-32-100-PPV-A	
	160	186 741	DFP-25-160-PPV-A	160	186 745 DFP-32-160-PPV-A	
	200	–	–	200	186 746 DFP-32-200-PPV-A	
	250	–	–	250	186 747 DFP-32-250-PPV-A	
	Piston Ø 50 mm			Piston Ø 80 mm		
	50	186 748	DFP-50-50-PPV-A	50	186 756 DFP-80-50-PPV-A	
	80	186 749	DFP-50-80-PPV-A	80	186 757 DFP-80-80-PPV-A	
	100	186 750	DFP-50-100-PPV-A	100	186 758 DFP-80-100-PPV-A	
	160	186 751	DFP-50-160-PPV-A	160	186 759 DFP-80-160-PPV-A	
	200	186 752	DFP-50-200-PPV-A	200	186 760 DFP-80-200-PPV-A	
	250	186 753	DFP-50-250-PPV-A	250	186 761 DFP-80-250-PPV-A	
	320	186 754	DFP-50-320-PPV-A	320	186 762 DFP-80-320-PPV-A	
	400	186 755	DFP-50-400-PPV-A	400	186 763 DFP-80-400-PPV-A	
	500	–	–	500	186 764 DFP-80-500-PPV-A	

1) In each case the scope of delivery includes 2 of the centring sleeves listed as accessories. Centring sleeves are supplied to repeat order in packs of 10. Proximity sensors and mounting screws are not included in the scope of delivery for guided cylinders.

Guided cylinder DFP

Technical data

FESTO

Ordering data – Variants						
Design	Stroke [mm]	Part No.	Type ¹⁾²⁾	Stroke [mm]	Part No. Type ¹⁾²⁾	
S2 – Through piston rod						
	Piston Ø 10 mm			Piston Ø 16 mm		
	25	186 765	DFP-10-25-P-A-S2	25	186 769	DFP-16-25-P-A-S2
	50	186 766	DFP-10-50-P-A-S2	50	186 770	DFP-16-50-P-A-S2
	80	186 767	DFP-10-80-P-A-S2	80	186 771	DFP-16-80-P-A-S2
	100	186 768	DFP-10-100-P-A-S2	100	186 772	DFP-16-100-P-A-S2
	Piston Ø 25 mm			Piston Ø 32 mm		
	25	186 773	DFP-25-25-PPV-A-S2	25	–	–
	50	186 774	DFP-25-50-PPV-A-S2	50	186 778	DFP-32-50-PPV-A-S2
	80	186 775	DFP-25-80-PPV-A-S2	80	186 779	DFP-32-80-PPV-A-S2
	100	186 776	DFP-25-100-PPV-A-S2	100	186 780	DFP-32-100-PPV-A-S2
	160	186 777	DFP-25-160-PPV-A-S2	160	186 781	DFP-32-160-PPV-A-S2
	200	–	–	200	186 782	DFP-32-200-PPV-A-S2
	250	–	–	250	186 783	DFP-32-250-PPV-A-S2
	Piston Ø 50 mm			Piston Ø 80 mm		
	50	186 784	DFP-50-50-PPV-A-S2	50	186 792	DFP-80-50-PPV-A-S2
	80	186 785	DFP-50-80-PPV-A-S2	80	186 793	DFP-80-80-PPV-A-S2
	100	186 786	DFP-50-100-PPV-A-S2	100	186 794	DFP-80-100-PPV-A-S2
	160	186 787	DFP-50-160-PPV-A-S2	160	186 795	DFP-80-160-PPV-A-S2
	200	186 788	DFP-50-200-PPV-A-S2	200	186 796	DFP-80-200-PPV-A-S2
	250	186 789	DFP-50-250-PPV-A-S2	250	186 797	DFP-80-250-PPV-A-S2
	320	186 790	DFP-50-320-PPV-A-S2	320	186 798	DFP-80-320-PPV-A-S2
	400	186 791	DFP-50-400-PPV-A-S2	400	186 799	DFP-80-400-PPV-A-S2
	500	–	–	500	186 800	DFP-80-500-PPV-A-S2

- 1) In each case the scope of delivery includes 2 of the centring sleeves listed as accessories. Centring sleeves are supplied to repeat order in packs of 10. Proximity sensors and mounting screws are not included in the scope of delivery for guided cylinders.
- 2) The scope of delivery also includes a hex nut for the piston rod thread.

Guided cylinder DFP

Accessories



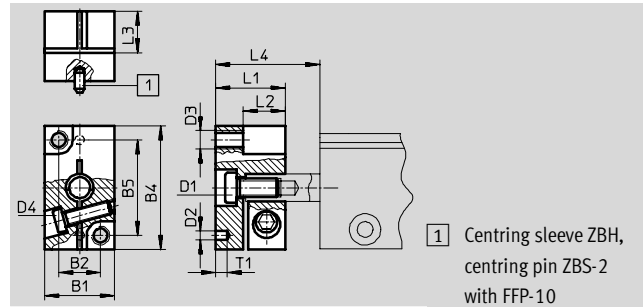
Push-on flange FFP

for piston \varnothing 10 ... 16 mm

Material:

Wrought aluminium alloy

Free of copper, PTFE and silicone



1 Centring sleeve ZBH, centring pin ZBS-2 with FFP-10

Dimensions and ordering data

For \varnothing	B1	B2	B4	B5	D1	D2	D3	D4	L1	L2	L3	L4	T1	CRC ¹⁾	Part No.	Type
[mm]		± 0.02				\varnothing H7							+0.2			
10	15	9	26	20	M4	2	M4	M3	15	8.5	9	31.5	2.5	2	186 801	FFP-10
16	19	12	33	26	M4	5	M4	M4	17	10.5	11	31.5	1	2	186 802	FFP-16

1) Corrosion resistance class 2 according to Festo standard 940 070

Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a surrounding industrial atmosphere or media such as cooling or lubricating agents.

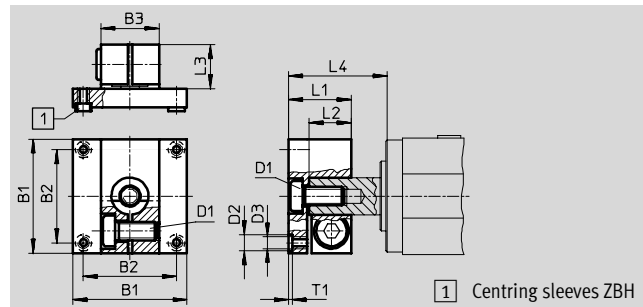
Push-on flange FFP

for piston \varnothing 25 ... 80 mm

Material:

Wrought aluminium alloy

Free of copper, PTFE and silicone



1 Centring sleeves ZBH

Dimensions and ordering data

For \varnothing	B1	B2	B3	D1	D2	D3	L1	L2	L3	L4	T1	CRC ¹⁾	Part No.	Type
[mm]		± 0.02			\varnothing H7						+0.2			
25	38	30	22	M6	7	M5	27	18	19	39	1.6	2	186 803	FFP-25
32	49	40	25	M8	7	M5	27	18	19	41	1.6	2	186 804	FFP-32
50	64	50	36	M10	9	M6	35	23	25	52	2.1	2	186 805	FFP-50
80	94	70	54	M12	12	M8	40	25	27	56	2.6	2	186 806	FFP-80

1) Corrosion resistance class 2 according to Festo standard 940 070

Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a surrounding industrial atmosphere or media such as cooling or lubricating agents.

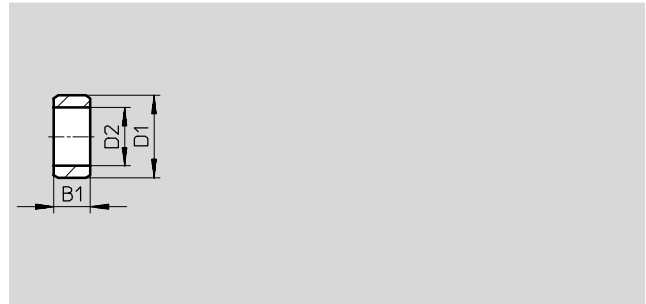
Guided cylinder DFP

Accessories



Centring sleeves ZBH

Material:
Steel, corrosion resistant
Free of copper, PTFE and silicone



Dimensions and ordering data							
D1 ∅ h7	B1	D2 ∅	CRC ¹⁾	Weight [g]	Part No.	Type	PU ²⁾
5	2.4	3.2	2	1	189 652	ZBH-5	10
7	3	5.3	2	1	186 717	ZBH-7	10
9	4	6.4	2	1	150 927	ZBH-9	10

1) Corrosion resistance class 2 according to Festo standard 940 070

Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a surrounding industrial atmosphere or media such as cooling or lubricating agents.

2) Packaging unit quantity

Ordering data – Proximity sensors for slot type 10, magneto-resistive							Technical data → 1 / 10.2-47	
	Mounting	Switch output	Electrical connection		Cable length [m]	Connection direction	Part No.	Type
			Cables	M8 plug				
NO contact								
	Insertable from above	PNP	3-wire	–	2.5	In-line	525 915	SMT-10F-PS-24V-K2,5L-OE
			–	3-pin	0.3	In-line	525 916	SMT-10F-PS-24V-K0,3L-M8D
			–	–	–	Lateral	526 675	SMT-10F-PS-24V-K0,3Q-M8D
	Insertable from end	PNP	–	3-pin	0.3	In-line	173 220	SMT-10-PS-SL-LED-24
			3-wire	–	2.5	–	173 218	SMT-10-PS-KL-LED-24

Ordering data – Proximity sensors for slot type 10, magnetic reed							Technical data → 1 / 10.2-50	
	Mounting	Electrical connection		Cable length [m]	Connection direction	Part No.	Type	
		Cables	M8 plug					
NO contact								
	Insertable from above	–	3-pin	0.3	In-line	525 914	SME-10F-DS-24V-K0,3L-M8D	
		3-wire	–	2.5	In-line	525 913	SME-10F-DS-24V-K2,5L-OE	
		2-wire	–	–	–	526 672	SME-10F-ZS-24V-K2,5L-OE	
	Insertable from end	3-wire	–	0.3	In-line	173 212	SME-10-SL-LED-24	
		–	3-pin	2.5	–	173 210	SME-10-KL-LED-24	

Core Range

Guided cylinder DFP

Accessories



Ordering data – Proximity sensors for slot type 8, magneto-resistive							Technical data → 1 / 10.2-13		
	Mounting	Switch output	Electrical connection			Cable length [m]	Part No.	Type	
			Cables	M8 plug	M12 plug				
NO contact									
	Insertable from above	PNP	3-wire	–	–	2.5	525 898	SMT-8F-PS-24V-K2,5-OE	
		NPN		–	–		525 909	SMT-8F-NS-24V-K2,5-OE	
		–	2-wire	–	–	2.5	525 908	SMT-8F-ZS-24V-K2,5-OE	
		PNP	–	3-pin	–	0.3	525 899	SMT-8F-PS-24V-K0,3-M8D	
		NPN			–		525 910	SMT-8F-NS-24V-K0,3-M8D	
PNP	–	–	3-pin	0.3	525 900	SMT-8F-PS-24V-K0,3-M12			
	Insertable, flush with the cylinder profile	PNP	3-wire	–	–	2.5	175 436	SMT-8-PS-K-LED-24-B	
		–	–	3-pin	–	0.3	175 484	SMT-8-PS-S-LED-24-B	
NC contact									
	Insertable from above	PNP	3-wire	–	–	7.5	525 911	SMT-8F-PO-24V-K7,5-OE	

Ordering data – Proximity sensors for slot type 8, magnetic reed							Technical data → 1 / 10.2-16		
	Mounting	Electrical connection		Cable length [m]	Part No.	Type			
		Cables	M8 plug						
NO contact									
	Insertable from above	3-wire		–	2.5	525 895	SME-8F-DS-24V-K2,5-OE		
		–		–		5.0	525 897	SME-8F-DS-24V-K5,0-OE	
		2-wire		–	–	2.5	525 907	SME-8F-ZS-24V-K2,5-OE	
		–		–	3-pin	0.3	525 896	SME-8F-DS-24V-K0,3-M8D	
	Insertable, flush with the cylinder profile	3-wire		–	2.5	150 856	SME-8-K-LED-24		
		–		–	0.3	150 857	SME-8-S-LED-24		
NC contact									
	Insertable from above	3-wire		–	7.5	525 906	SME-8F-DO-24V-K7,5-OE		

Ordering data – Plug sockets							Technical data → 1 / 10.2-100	
	Mounting	Switch output		Connection	Cable length [m]	Part No.	Type	
		PNP	NPN					
Straight socket								
	M8 union nut			3-pin	2.5	159 420	SIM-M8-3GD-2,5-PU	
					5	159 421	SIM-M8-3GD-5-PU	
	M12 union nut			3-pin	2.5	159 428	SIM-M12-3GD-2,5-PU	
					5	159 429	SIM-M12-3GD-5-PU	
Angled plug socket								
	M8 union nut			3-pin	2.5	159 422	SIM-M8-3WD-2,5-PU	
					5	159 423	SIM-M8-3WD-5-PU	
	M12 union nut			3-pin	2.5	159 430	SIM-M12-3WD-2,5-PU	
					5	159 431	SIM-M12-3WD-5-PU	

Ordering data – Slot cover for slot type 8				
	Mounting	Length [m]	Part No.	Type
	Insertable from above	2x 0.5	151 680	ABP-5-S

Core Range