

Twin-piston drives DGTZ

FESTO



Key features

At a glance

Drive and guide unit in a single housing

Sturdy and precise

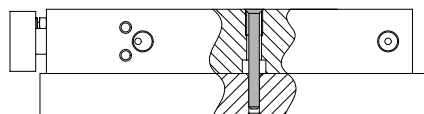
High resistance to torques and transverse loads

Large stroke range

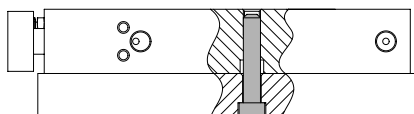
- Minimal space requirement
- Minimal mounting time
- Wide range of mounting options
- Perfect for use in the electronics industry: materials free of copper
- Good protection against torsion
- High rigidity
- Maintenance-free
- Plain-bearing guide: high rigidity thanks to large-diameter guide rods and two plain-bearing bushes
- Standard strokes of up to 100 mm
- Variable strokes of up to 200 mm

Mounting options

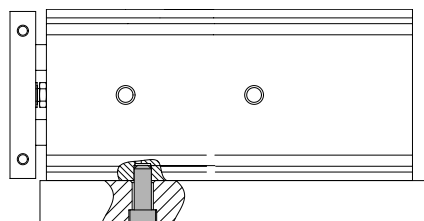
Flat from above



Flat from underneath



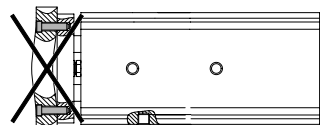
Flat from the side



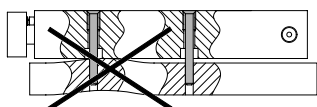
Note

Make sure that the drives are mounted correctly

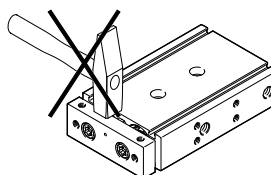
Additional information is available at www.festo.com/sp → User documentation



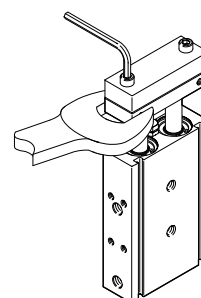
- Distortion-free



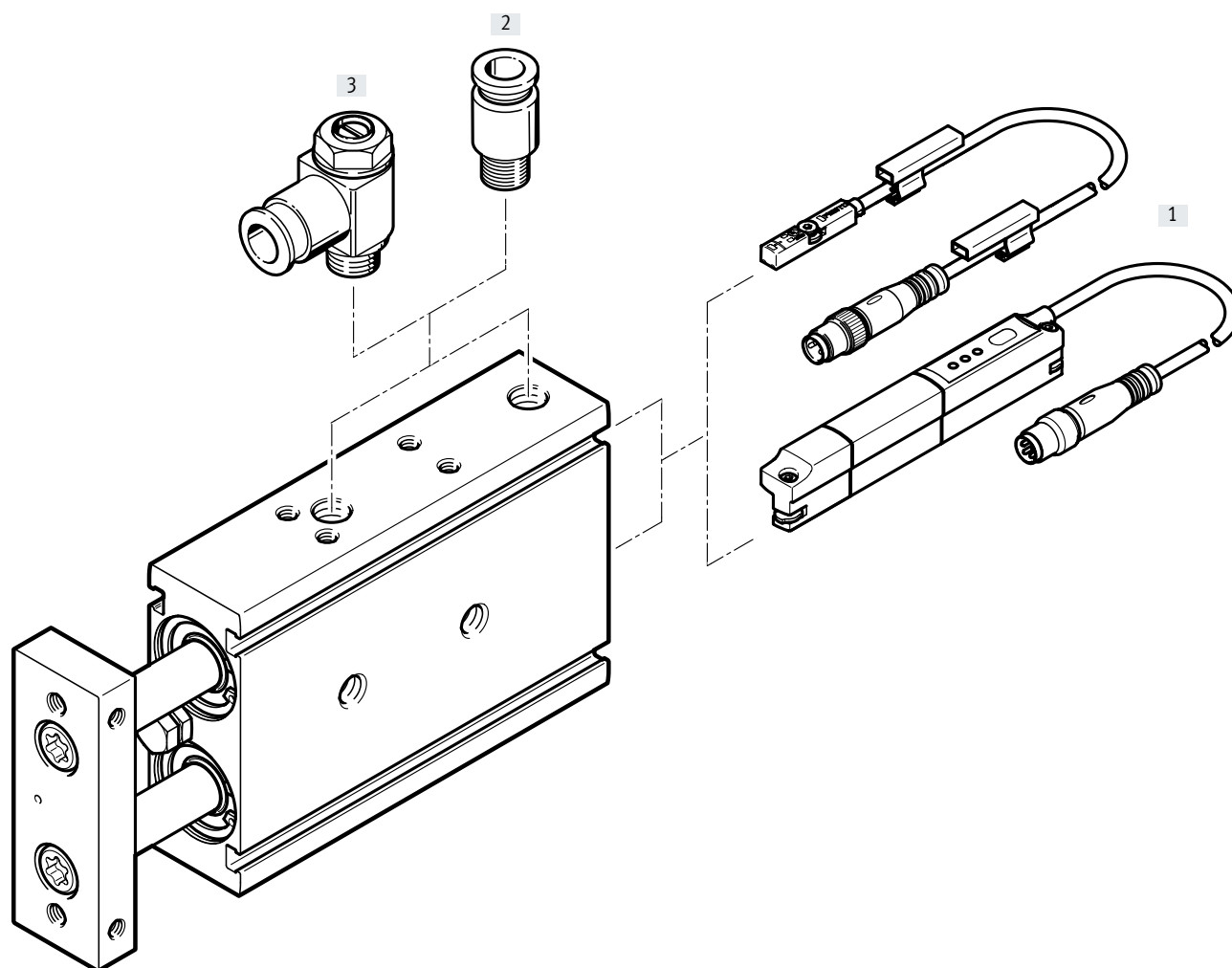
- On even surfaces



- Protect the end plate, the piston rods and the housing



Peripherals overview



Accessories			Piston Ø			→ Page/Internet
Type/order code	Description		6	10, 16, 20	25, 32	
[1] Proximity switch SDBC-MSB	For position sensing		■	■	–	17
Proximity switch SMT-10			■	■	–	17
Proximity switch SME/SMT-8			–	–	■	19
Position transmitter SMAT/SDAT	For detecting the current position		–	–	■	19
[2] Push-in fitting QS	For connecting tubing with standard O.D.		■	■	■	qs
[3] One-way flow control valve GRLA	For regulating speed		■	■	■	19

Type codes

001	Series	
DGTZ	Twin cylinder	

002	Guide	
GF	Plain bearing	

003	Piston diameter	
6	6	
10	10	
16	16	
20	20	
25	25	
32	32	

004	Stroke	
10	10	
20	20	
30	30	
40	40	
50	50	
60	60	
70	70	
80	80	
90	90	
100	100	

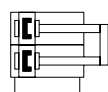
005	Stroke	
...	51 ... 200	

006	Cushioning	
P	Elastic cushioning rings/plates on both sides	

007	Position sensing	
A	For proximity sensor	

Data sheet

Function



-  Diameter
6 ... 32 mm
-  Stroke length
10 ... 200 mm



General technical data						
Piston Ø	6	10	16	20	25	32
Design	Guide					
Mode of operation	Double-acting					
Guide	Plain-bearing guide					
Pneumatic connection	M5				G1/8	
Stroke [mm]	10 ... 60	10 ... 150	10 ... 200			
Adjustable end-position range/length [mm]	10					
Cushioning	Elastic cushioning rings/pads at both ends					
Position sensing	Via proximity switch					
Mounting position	Any					

Operating and environmental conditions							
Piston Ø		6	10	16	20	25	32
Operating medium		Compressed air to ISO 8573-1:2010 [7:4:4]					
Note on the operating/pilot medium		Lubricated operation possible (in which case lubricated operation will always be required)					
Operating pressure	[MPa]	0.2 ... 0.8	0.15 ... 0.8	0.1 ... 0.8			
	[bar]	2 ... 8	1.5 ... 8	1 ... 8			
Ambient temperature	[°C]	-10 ... +80					
Operating mode of the drive unit		Yoke					
Corrosion resistance class CRC ¹⁾		1					

1) Corrosion resistance class CRC 1 to Festo standard FN 940070

Low corrosion stress. Dry indoor application or transport and storage protection. Also applies to parts behind covers, in the non-visible interior area, and parts which are covered in the application (e.g. drive trunnions).

Speeds [m/s]		Piston ø					
Stroke							
[mm]		6	10	16	20	25	32
Advancing v_{min}/v_{max} ¹⁾							
50		0.06/1	–				
150		–	0.04/1	–			
200		–	–	0.04/1	0.02/1		0.02/0.7
Retracting v_{min}/v_{max} ¹⁾							
50		0.07/1	–				
150		–	0.05/1	–			
200		–	–	0.03/1	0.02/1	0.02/0.8	0.02/0.6

1) To avoid damage to the cylinder, the speed must be throttled. This also applies during operation without additional load.
The maximum speed must not be exceeded.

Data sheet

Forces [N] and impact energy [J]						
Piston ø	6	10	16	20	25	32
Theoretical force at 6 bar, advancing	34	94	242	376	590	966
Theoretical force at 6 bar, retracting	18.6	60	181	283	454	724
Max. impact energy at the end positions	0.01	0.08	0.15	0.2	0.3	0.4

Permissible impact velocity:

$$v = \sqrt{\frac{2 \cdot E}{m_1 + m_2}}$$

v Permissible impact velocity

E Max. impact energy

m₁ Moving mass (drive)m₂ Moving payload

Maximum permissible mass:

$$m_2 = \frac{2 \cdot E}{v^2} - m_1$$

**Note**

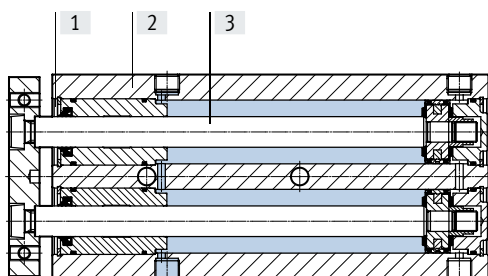
These specifications represent the maximum values that can be achieved. The maximum permissible impact energy must be observed.

Weights [g] ¹⁾						
Piston ø	6	10	16	20	25	32
Basic weight at 0 mm stroke	65.5	115	236	374	563	966
Additional weight per 10 mm stroke	16.5	20	27	37	53	83.5
Moving mass with 0 mm stroke	15	35.5	80	138.5	209	421
Additional moving mass per 10 mm stroke	2	4.5	8	12.5	18	31.5

1) The weights were determined mathematically and may deviate by ±15%.

Materials

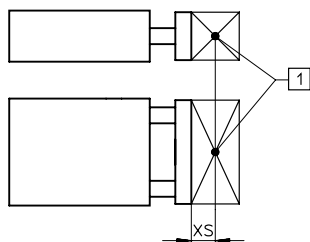
Sectional view



Linear drives	
[1] Cover	Wrought aluminium alloy
[2] Housing	Anodised wrought aluminium alloy
[3] Piston rod	High-alloy stainless steel
– Seals	NBR
	HNBR
	TPE-U
Note on materials	RoHS-compliant
	Free of copper
	Free of paint-wetting impairment substances
	Contains paint-wetting impairment substances

Data sheet

Maximum payload F [N]

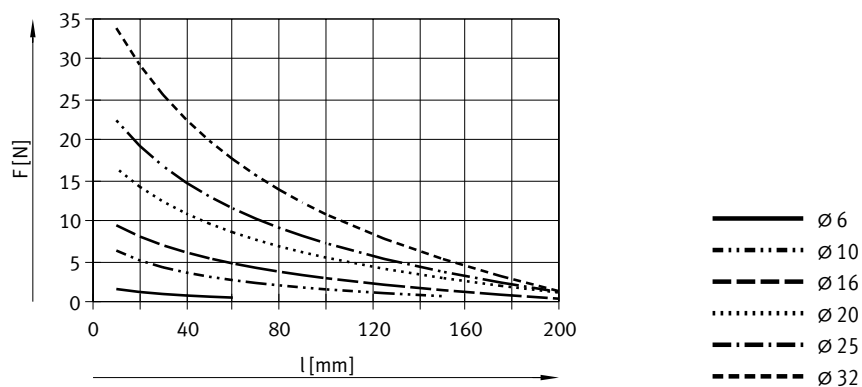


[1] Centre of gravity of payload

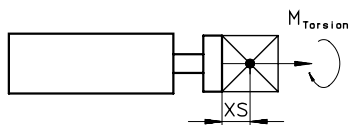
Piston $\varnothing$	6	10	16	20	25	32
XS [mm]	5	5	20	20	20	20

Stroke [mm]	Piston $\varnothing$					
	6	10	16	20	25	32
10	1.6	6.3	9.5	16.5	22.4	33.9
20	1.2	5.1	8.1	14.2	19.3	29.3
30	0.9	4.3	7	12.4	16.8	25.6
40	0.8	3.6	6.1	10.9	14.7	22.5
50	0.6	3.1	5.4	9.7	13	19.9
60	0.5	2.7	4.7	8.6	11.5	17.6
70	–	2.3	4.2	7.7	10.3	15.6
80	–	2	3.7	6.8	9.1	13.8
90	–	–	3.3	6.1	8.1	12.2
100	–	–	2.9	5.5	7.2	10.8
81 ... 150	–	1 ... 2	–	–	–	–
101 ... 200	–	–	1.5 ... 2.9	2 ... 5.5	2.5 ... 7.2	3 ... 10.8

Maximum payload F [N] as a function of stroke l [mm]

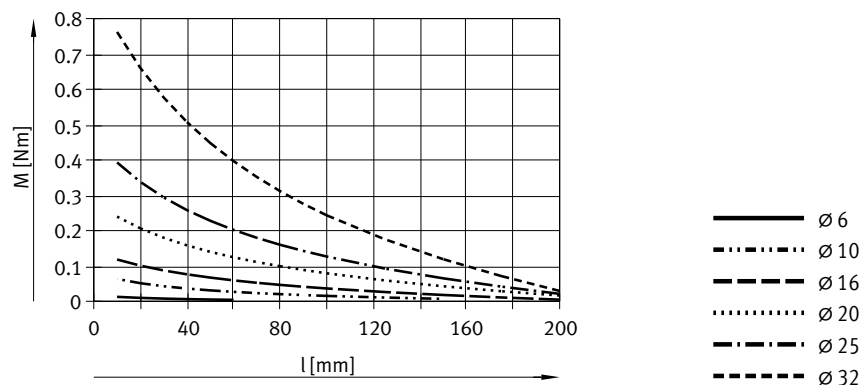


Data sheet

Permissible torque load M [Nm]

Piston $\varnothing$	6	10	16	20	25	32
XS [mm]	5	5	20	20	20	20

Stroke [mm]	Piston $\varnothing$					
	6	10	16	20	25	32
10	0.0125	0.0633	0.1182	0.2396	0.3929	0.7621
20	0.0096	0.0511	0.1009	0.2064	0.3378	0.6602
30	0.0759	0.0425	0.0873	0.1798	0.2939	0.5768
40	0.0061	0.0360	0.0763	0.1582	0.2579	0.5072
50	0.0050	0.0308	0.0670	0.1399	0.2279	0.4479
60	–	0.0267	0.0592	0.1245	0.2020	0.3968
70	–	0.0231	0.0523	0.1111	0.1796	0.3517
80	–	0.0202	0.0464	0.0991	0.1598	0.3116
90	–	–	0.0411	0.0887	0.1424	0.2756
100	–	–	0.0363	0.0791	0.1266	0.2432

Permissible torque load M [Nm] as a function of stroke l [mm]
Note

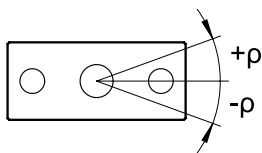
Engineering tool

→ www.festo.com/engineeringtools

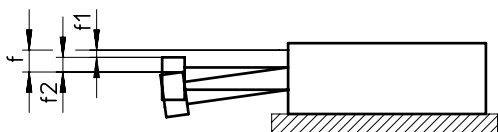
Data sheet

Torsional backlash ρ

Plain-bearing guide GF in retracted state, without load



Piston $\varnothing$	6	10	16	20	25	32
Torsional backlash [°]	± 0.1					

Deflection of end plate

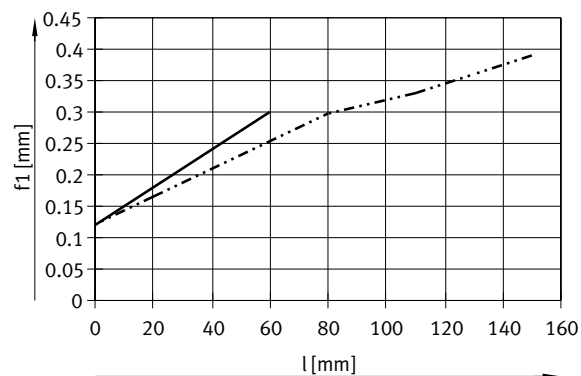
$$f = f_1 + f_2$$

f = total deflection of the end plate

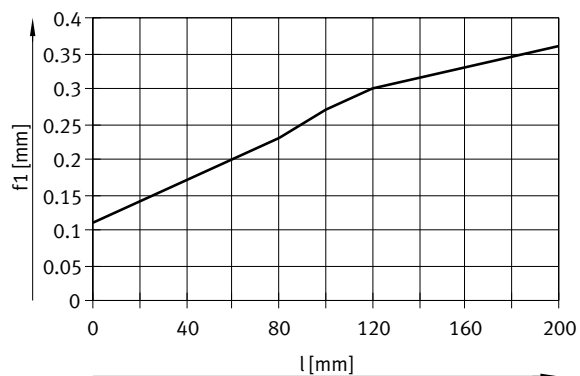
f_1 = deflection due to average bearing clearance (GF)

bearing clearance GF with production tolerance ± 0.01 mm

f_2 = deflection due to lateral force

Deflection f_1 due to bearing clearance as a function of stroke l (with no load)

— $\varnothing 6$
 - - - $\varnothing 10$



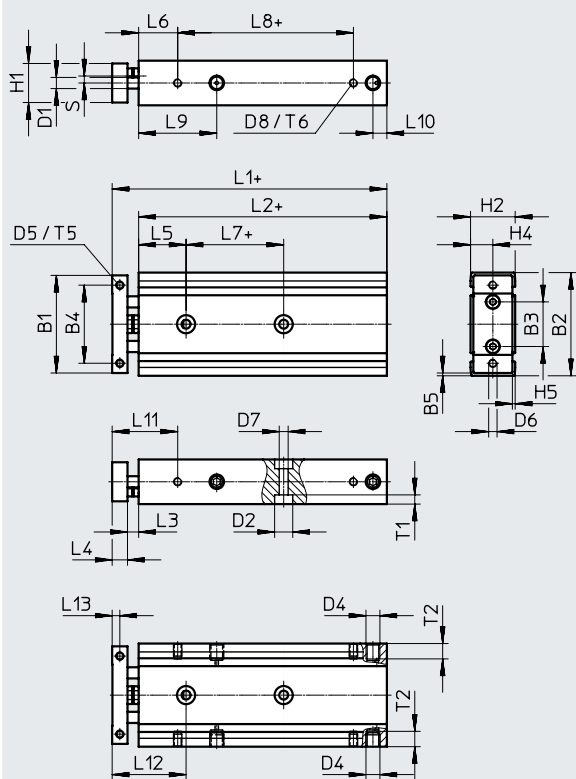
— $\varnothing 16 \dots 32$

Data sheet

Dimensions

Download CAD data → www.festo.com

Ø 6



+ = plus stroke length

Data sheet

∅	Stroke	B1	B2	B3	B4	B5	D1 ∅	D2 ∅	D4	D5	D6	D7 ∅
[mm]	[mm]											
6	10 ... 50	35	37	16	28	1	4	6.5	M5	M3	M3	3.2

∅	Stroke	D8	H1	H2	H4	H5	L1	L2	L3	L4	L5	L6
[mm]	[mm]											
6	10 ... 50	M3	14	16	8	1	48.5 ¹⁾	39 ¹⁾	4	5.5	17	14
	51 ... 60						108.5	99				

1) Plus stroke length

∅	Stroke	L9	L10	L11	L12	L13	S	T1	T2	T5	T6
[mm]	[mm]										
6	10 ... 50	28	5	23.5	26.5	2.8	2.5	3.3	5.5	6	4.5

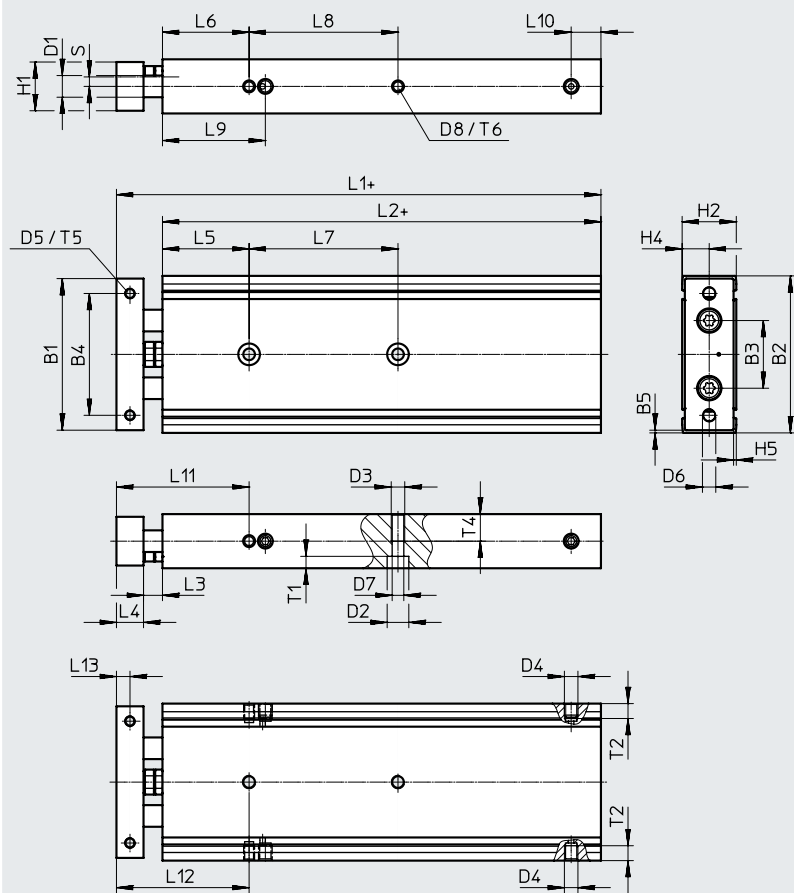
Piston ∅ 6											
Stroke											
[mm]	L7						L8				
10	15						23				
20	20						33				
30	25						43				
40	30						53				
50	35						63				
51 ... 60	35						63				

Data sheet

Dimensions

Download CAD data → www.festo.com

Ø 10 ... 16



+= plus stroke length

Data sheet

∅	Stroke	B1	B2	B3	B4	B5	D1 ∅	D2 ∅	D3	D4	D5	D6	D7 ∅
[mm]	[mm]												
10	10 ... 150	44	46	20	35	1	6	6.5	M4	M5	M3	M4	3.4
16	10 ... 200	56	58	25	45	1	8	8	M5	M5	M4	M5	4.3

∅	Stroke	D8	H1	H2	H4	H5	L1	L2	L3	L4	L5	L6	L9
[mm]	[mm]												
10	10 ... 80	M3	15	17	8.5	1	60 ¹⁾	46 ¹⁾	6	8	23	23	34
	81 ... 100						164	150					
	101 ... 125						189	175					
	126 ... 150						214	200					
16	10 ... 100	M4	18	20	10	1	79 ¹⁾	62 ¹⁾	7	10	32	32	38
	101 ... 125						204	187					
	126 ... 150						229	212					
	151 ... 175						254	237					
	176 ... 200						279	262					

1) Plus stroke length

∅	Stroke	L10	L11	L12	L13	S	T1	T2	T4	T5	T6
[mm]	[mm]										
10	10 ... 80	5	37	37	4	2.5	3.3	5.5	7	6	4.5
	81 ... 150	9									
16	10 ... 200	11	49	49	5	3.5	4.4	5.5	9	7	5.5

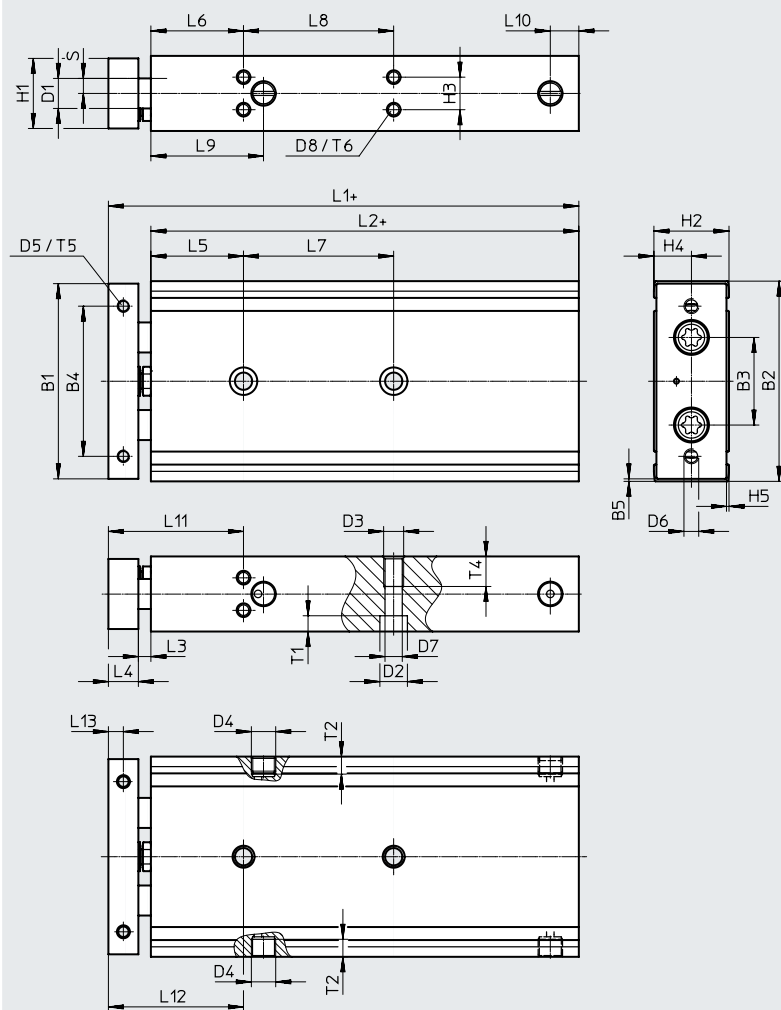
Piston ∅ 10			Piston ∅ 16		
Stroke [mm]	L7	L8	Stroke [mm]	L7	L8
10	20		10	20	
20	30		20	25	
30	40		30	35	
40	40		40	35	
50	40		50	35	
60	50		60	45	
70	50		70	45	
80	50		80	45	
81 ... 100	60		90	55	
101 ... 125	70		100	55	
126 ... 150	80		101 ... 125	65	
			126 ... 150	75	
			151 ... 175	85	
			176 ... 200	85	

Data sheet

Dimensions

Download CAD data → www.festo.com

Ø 20 ... 32



+ = plus stroke length

Data sheet

∅ [mm]	Stroke [mm]	B1	B2	B3	B4	B5	D1 ∅	D2 ∅	D3	D4	D5	D6	D7 ∅
20	10 ... 200	62	64	29	50	1	10	9.5	M6	M5	M4	M5	5.5
25		78	80	35	60	1	12	11	M8	G1/8	M5	M6	6.9
32		94	96	45	75	1	16	11	M8	G1/8	M5	M6	6.9

∅ [mm]	Stroke [mm]	D8	H1	H2	H3	H4	H5	L1	L2	L3	L4	L5	L6
20	10 ... 100	M4	23	25	9.5	12.5	1	86.5 ¹⁾	69.5 ¹⁾	5	12	37	37
	101 ... 125							211.5	194.5				
	126 ... 150							236.5	219.5				
	151 ... 175							261.5	244.5				
	176 ... 200							286.5	269.5				
25	10 ... 100	M5	28	30	13	15	1	88 ¹⁾	71 ¹⁾	5	12	37	37
	101 ... 125							213	196				
	126 ... 150							238	221				
	151 ... 175							263	246				
	176 ... 200							288	271				
32	10 ... 100	M5	36	38	20	19	1	97 ¹⁾	76 ¹⁾	5	16	39	39
	101 ... 125							222	201				
	126 ... 150							247	226				
	151 ... 175							272	251				
	176 ... 200							297	276				

1) Plus stroke length

∅ [mm]	Stroke [mm]	L9	L10	L11	L12	L13	S	T1	T2	T4	T5	T6
20	10 ... 200	42.5	12	54	54	6	6	5.3	5.5	10	8	5.5
25		45	11.4	54	54	6	6	6.3	7	12	9	7.5
32		49.5	11.6	60	60	8	8	6.3	7	12	10	7.5

Piston ∅ 20, 25			Piston ∅ 32		
Stroke [mm]	L7	L8	Stroke [mm]	L7	L8
10	25		10	30	
20	30		20	40	
30	40		30	50	
40	40		40	50	
50	40		50	50	
60	60		60	70	
70	60		70	70	
80	60		80	70	
90	60		90	70	
100	60		100	70	
101 ... 125	80		101 ... 125	90	
126 ... 150	80		126 ... 150	90	
151 ... 175	100		151 ... 175	110	
176 ... 200	100		176 ... 200	110	

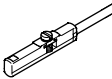
Data sheet

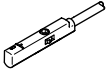
Ordering data			Part no.	Type	Part no.	Type
Stroke [mm]	Ø 6 mm					
10	8100542	DGTZ-GF-6-10-P-A				
20	8100543	DGTZ-GF-6-20-P-A				
30	8100544	DGTZ-GF-6-30-P-A				
40	8100545	DGTZ-GF-6-40-P-A				
50	8100546	DGTZ-GF-6-50-P-A				
51 ... 60 ¹⁾	8116420	DGTZ-GF-6-...-P-A				
Stroke [mm]	Ø 10 mm					
10	8100554	DGTZ-GF-10-10-P-A				
20	8100555	DGTZ-GF-10-20-P-A				
30	8100556	DGTZ-GF-10-30-P-A				
40	8100557	DGTZ-GF-10-40-P-A				
50	8100558	DGTZ-GF-10-50-P-A				
60	8100559	DGTZ-GF-10-60-P-A				
70	8100560	DGTZ-GF-10-70-P-A				
80	8100561	DGTZ-GF-10-80-P-A				
81 ... 150 ¹⁾	8116418	DGTZ-GF-10-...-P-A				
Stroke [mm]	Ø 16 mm				Ø 20 mm	
10	8100570	DGTZ-GF-16-10-P-A			8100607	DGTZ-GF-20-10-P-A
20	8100571	DGTZ-GF-16-20-P-A			8100608	DGTZ-GF-20-20-P-A
30	8100572	DGTZ-GF-16-30-P-A			8100609	DGTZ-GF-20-30-P-A
40	8100573	DGTZ-GF-16-40-P-A			8100610	DGTZ-GF-20-40-P-A
50	8100574	DGTZ-GF-16-50-P-A			8100611	DGTZ-GF-20-50-P-A
60	8100575	DGTZ-GF-16-60-P-A			8100612	DGTZ-GF-20-60-P-A
70	8100576	DGTZ-GF-16-70-P-A			8100613	DGTZ-GF-20-70-P-A
80	8100577	DGTZ-GF-16-80-P-A			8100614	DGTZ-GF-20-80-P-A
90	8100578	DGTZ-GF-16-90-P-A			8100615	DGTZ-GF-20-90-P-A
100	8100579	DGTZ-GF-16-100-P-A			8100616	DGTZ-GF-20-100-P-A
101 ... 200 ¹⁾	8116417	DGTZ-GF-16-...-P-A			8116415	DGTZ-GF-20-...-P-A
Stroke [mm]	Ø 25 mm				Ø 32 mm	
10	8100637	DGTZ-GF-25-10-P-A			8100657	DGTZ-GF-32-10-P-A
20	8100638	DGTZ-GF-25-20-P-A			8100658	DGTZ-GF-32-20-P-A
30	8100639	DGTZ-GF-25-30-P-A			8100659	DGTZ-GF-32-30-P-A
40	8100640	DGTZ-GF-25-40-P-A			8100660	DGTZ-GF-32-40-P-A
50	8100641	DGTZ-GF-25-50-P-A			8100661	DGTZ-GF-32-50-P-A
60	8100642	DGTZ-GF-25-60-P-A			8100662	DGTZ-GF-32-60-P-A
70	8100643	DGTZ-GF-25-70-P-A			8100663	DGTZ-GF-32-70-P-A
80	8100644	DGTZ-GF-25-80-P-A			8100664	DGTZ-GF-32-80-P-A
90	8100645	DGTZ-GF-25-90-P-A			8100665	DGTZ-GF-32-90-P-A
100	8100646	DGTZ-GF-25-100-P-A			8100666	DGTZ-GF-32-100-P-A
101 ... 200 ¹⁾	8116422	DGTZ-GF-25-...-P-A			8116424	DGTZ-GF-32-...-P-A

1) Strokes freely selectable in 1 mm increments.

Accessories

Proximity switches for piston diameter 6 ... 20

Ordering data – Proximity switch for C-slot, magneto-resistive							Data sheets → Internet: sdbc
	Type of mounting	Switching output	Electrical connection, outlet direction of connection	Cable length [m]	Part no.	Type	
N/O contact							
	Inserted in the slot from above	PNP	Cable, 3-wire, in-line	2	8139723	SDBC-MSB-1L-PU-K-2-LE	
			Plug M8x1, 3-pin, in-line	0.3	8139726	SDBC-MSB-1L-PU-K-0.3-M8	
		NPN	Cable, 3-wire, in-line	2	8139724	SDBC-MSB-1L-NU-K-2-LE	
			Plug M8x1, 3-pin, in-line	0.3	8139727	SDBC-MSB-1L-NU-K-0.3-M8	
		Non-contacting, 2-wire	Cable, 2-wire, in-line	2	8139725	SDBC-MSB-1L-ZU-K-2-LE	

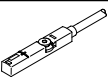
Ordering data – Proximity switch for C-slot, magneto-resistive							Data sheets → Internet: smt
	Type of mounting	Switching output	Electrical connection, outlet direction of connection	Cable length [m]	Part no.	Type	
N/O contact							
	Inserted in the slot from above	PNP	Cable, 3-wire, in-line	2.5	551373	SMT-10M-PS-24V-E-2.5-L-OE	
			Cable, 3-wire, lateral	2.5	551374	SMT-10M-PS-24V-E-2.5-Q-OE	
			Plug M8x1, 3-pin, in-line	0.3	551375	SMT-10M-PS-24V-E-0.3-L-M8D	
			Plug M8x1, 3-pin, lateral	0.3	551376	SMT-10M-PS-24V-E-0.3-Q-M8D	
		NPN	Cable, 3-wire, in-line	2.5	551377	SMT-10M-NS-24V-E-2.5-L-OE	
			Cable, 3-wire, lateral	2.5	551378	SMT-10M-NS-24V-E-2.5-Q-OE	
			Plug M8x1, 3-pin, in-line	0.3	551379	SMT-10M-NS-24V-E-0.3-L-M8D	
			Plug M8x1, 3-pin, lateral	0.3	551380	SMT-10M-NS-24V-E-0.3-Q-M8D	
		Non-contacting, 2-wire	Cable, 2-wire, in-line	2.5	551382	SMT-10M-ZS-24V-E-2.5-L-OE	
			Cable, 2-wire, lateral	2.5	551383	SMT-10M-ZS-24V-E-2.5-Q-OE	

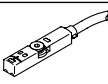
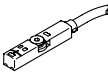
Ordering data – Proximity switch for C-slot, magneto-resistive							Data sheets → Internet: smt
	Type of mounting	Switching output	Electrical connection, outlet direction of connection	Cable length [m]	Part no.	Type	
N/O contact							
	Inserted in the slot lengthwise	PNP	Cable, 3-wire, lateral	2.5	547862	SMT-10G-PS-24V-E-2.5-Q-OE	
			Plug M8x1, 3-pin, lateral	0.3	547863	SMT-10G-PS-24V-E-0.3-Q-M8D	
		NPN	Cable, 3-wire, lateral	2.5	8065030	SMT-10G-NS-24V-E-2.5-Q-OE	
			Plug M8x1, 3-pin, lateral	0.3	8065029	SMT-10G-NS-24V-E-0.3-Q-M8D	

Ordering data – Connecting cables							Data sheets → Internet: nebu
	Electrical connection, left	Electrical connection, right	Cable length [m]	Part no.	Type		
	Straight socket, M8x1, 3-pin	Cable, open end, 3-wire	2.5	541333	NEBU-M8G3-K-2.5-LE3		
			5	541334	NEBU-M8G3-K-5-LE3		
	Angled socket, M8x1, 3-pin	Cable, open end, 3-wire	2.5	541338	NEBU-M8W3-K-2.5-LE3		
			5	541341	NEBU-M8W3-K-5-LE3		

Accessories

Proximity switches for piston diameter 25 ... 32

Ordering data – Proximity switch for T-slot, magnetic reed							Data sheets → Internet: sme
	Type of mounting	Switching output	Electrical connection	Cable length [m]	Part no.	Type	
N/O contact							
	Inserted in the slot from above, flush with the cylinder profile	Contacting	Cable, 3-wire	2.5	543862	SME-8M-DS-24V-K-2.5-OE	
				5.0	543863	SME-8M-DS-24V-K-5.0-OE	
			Cable, 2-wire	2.5	543872	SME-8M-ZS-24V-K-2.5-OE	
			Plug M8x1, 3-pin	0.3	543861	SME-8M-DS-24V-K-0.3-M8D	

Ordering data – Proximity switch for T-slot, magneto-resistive							Data sheets → Internet: smt
	Type of mounting	Switching output	Electrical connection	Cable length [m]	Part no.	Type	
N/O contact							
	Inserted in the slot from above, flush with the cylinder profile, short design	PNP	Cable, 3-wire	2.5	574335	SMT-8M-A-PS-24V-E-2.5-OE	
			Cable, 3-wire	5	574336	SMT-8M-A-PS-24V-E-5.0-OE	
			Plug M8x1, 3-pin	0.3	574334	SMT-8M-A-PS-24V-E-0.3-M8D	
			Plug M12x1, 3-pin	0.3	574337	SMT-8M-A-PS-24V-E-0.3-M12	
		NPN	Cable, 3-wire	2.5	574338	SMT-8M-A-NS-24V-E-2.5-OE	
			Plug M8x1, 3-pin	0.3	574339	SMT-8M-A-NS-24V-E-0.3-M8D	
N/C contact							
	Inserted in the slot from above, flush with the cylinder profile, short design	PNP	Cable, 3-wire	7.5	574340	SMT-8M-A-PO-24V-E-7.5-OE	

Ordering data – Proximity switch for T-slot, magneto-resistive							Data sheets → Internet: smt
	Type of mounting	Switching output	Electrical connection, outlet direction of connection	Cable length [m]	Part no.	Type	
N/O contact							
	Inserted in the slot lengthwise	PNP	Cable, 3-wire, lateral	2.5	547859	SMT-8G-PS-24V-E-2.5Q-OE	
			Plug M8x1, 3-pin, lateral	0.3	547860	SMT-8G-PS-24V-E-0.3Q-M8D	
		NPN	Cable, 3-wire, lateral	2.5	8065028	SMT-8G-NS-24V-E-2.5Q-OE	
			Plug M8x1, 3-pin, lateral	0.3	8065027	SMT-8G-NS-24V-E-0.3Q-M8D	

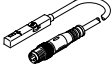
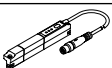
Ordering data – Connecting cables							Data sheets → Internet: nebu
	Electrical connection, left	Electrical connection, right	Cable length [m]	Part no.	Type		
	Straight socket, M8x1, 3-pin	Cable, open end, 3-wire	2.5	541333	NEBU-M8G3-K-2.5-LE3		
			5	541334	NEBU-M8G3-K-5-LE3		
	Straight socket, M12x1, 5-pin	Cable, open end, 3-wire	2.5	541363	NEBU-M12G5-K-2.5-LE3		
			5	541364	NEBU-M12G5-K-5-LE3		
	Angled socket, M8x1, 3-pin	Cable, open end, 3-wire	2.5	541338	NEBU-M8W3-K-2.5-LE3		
			5	541341	NEBU-M8W3-K-5-LE3		
	Angled socket, M12x1, 5-pin	Cable, open end, 3-wire	2.5	541367	NEBU-M12W5-K-2.5-LE3		
			5	541370	NEBU-M12W5-K-5-LE3		

Accessories

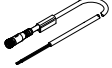
Position transmitters for piston diameter 25 ... 32

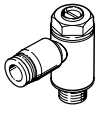
The position transmitter continuously senses the position of the piston.

It has an analogue output with an output signal relative to the piston position.

Ordering data – Position transmitter for T-slot							Data sheets → Internet: position transmitter
	Position measuring range	Analogue output [V] [mA]		Type of mounting	Electrical connection	Cable length [m]	Part no. Type
	0 ... 40	0 ... 10	–	Inserted in the slot from above	Plug M8x1, 4-pin, in-line	0.3	553744 SMAT-8M-U-E-0.3-M8D ¹⁾
	0 ... 50	–	4 ... 20	Inserted in the slot from above	Plug M8x1, 4-pin, in-line	0.3	1531265 SDAT-MHS-M50-1L-SA-E-0.3-M8
	0 ... 80						1531266 SDAT-MHS-M80-1L-SA-E-0.3-M8
	0 ... 100						1531267 SDAT-MHS-M100-1L-SA-E-0.3-M8
	0 ... 125						1531268 SDAT-MHS-M125-1L-SA-E-0.3-M8
	0 ... 160						1531269 SDAT-MHS-M160-1L-SA-E-0.3-M8

1) Only with piston diameter 25

Ordering data – Connecting cables					Data sheets → Internet: nebu
	Electrical connection, left	Electrical connection, right	Cable length [m]	Part no.	Type
	Straight socket, M8x1, 4-pin	Cable, open end, 4-wire	2.5	541342	NEBU-M8G4-K-2.5-LE4
			5	541343	NEBU-M8G4-K-5-LE4
	Angled socket, M8x1, 4-pin	Cable, open end, 4-wire	2.5	541344	NEBU-M8W4-K-2.5-LE4
			5	541345	NEBU-M8W4-K-5-LE4

Ordering data – One-way flow control valves					Data sheets → Internet: grla
	Connection		Material	Part no.	Type
	Thread	For tubing O.D.			
	M5	3	Metal design	193137	GRLA-M5-QS-3-D
		4		193138	GRLA-M5-QS-4-D
		6		193139	GRLA-M5-QS-6-D
	G1/8	3		193142	GRLA-1/8-QS-3-D
		4		193143	GRLA-1/8-QS-4-D
		6		193144	GRLA-1/8-QS-6-D
		8		193145	GRLA-1/8-QS-8-D