



- Maximum torsional rigidity for high forces
- Widely-spaced piston rods for high load capacity
- Plain bearing or recirculating ball bearing guide

Specified types in accordance with ATEX directive for potentially explosive atmospheres

➔ www.festo.com/en/ex

Slide units SPZ, twin piston

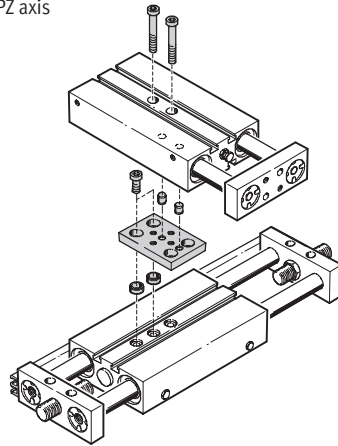
Key features

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Multi-axis and drive combinations

The slide unit SPZ can be combined with different drives. An adapter kit is required for mounting between the two drives.

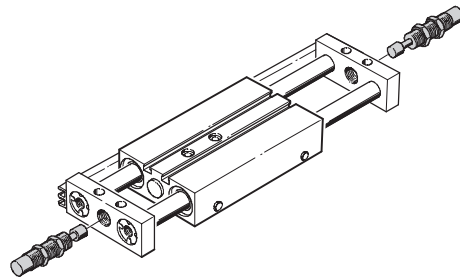
DPZ-/SPZ axis



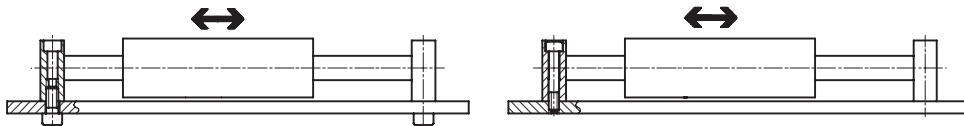
Adapter kits

Shock absorbers for slide operation

- From 30 ... 900 mm/s
- In slide operation, shock absorbers provide highly dynamic but gentle operating characteristics



Slide operation SPZ-...



Slide units SPZ, twin piston

Overview and type codes

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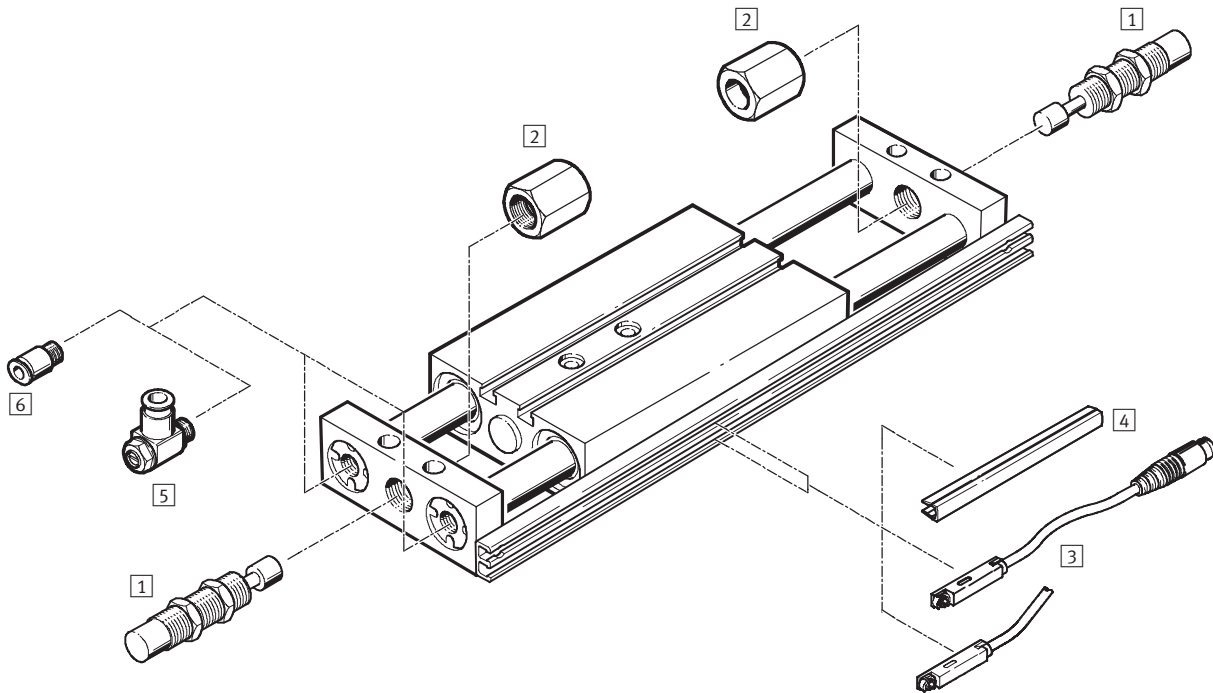
Function	Version	Piston Ø [mm]	Stroke [mm]	Position sensing A	Plain bearing guide GF	Recirculating ball bearing guide KF
Double-acting		10	10, 25, 40, 50	■	■	■
		16, 20, 25, 32	10, 25, 40, 50, 80, 100			

		SPZ	–	16	–	100	–	P	–	A	–	KF
Type												
Double-acting												
SPZ	Slide unit											
Piston Ø [mm]												
Stroke [mm]												
Cushioning												
P	Flexible cushioning rings/plates at both ends											
Position sensing												
A	For proximity sensor											
Guide												
	Plain bearing guide											
KF	Recirculating ball bearing guide											

Slide units SPZ, twin piston

Peripherals overview

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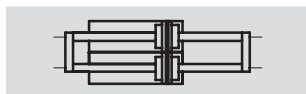
Accessories				
	Brief description	Piston Ø		→ Page/Internet
		10, 16 mm	20, 25, 32 mm	
1 Shock absorber YSR-C	Hydraulic shock absorber with rapidly increasing cushioning characteristic	■	■	13
2 Stop limiters YSRA	Stroke limiter for shock absorber	■	■	13
3 Proximity sensor SME/SMT-8	Can be integrated in the cylinder profile barrel	■	■	14
4 Slot cover ABP-5-S	To protect the sensor cable and keep dirt out of the sensor slots	■	■	14
5 One-way flow control valve GRLA	To regulate speed	■	■	15
6 Push-in fitting QS	For connecting compressed air tubing with standard O.D.	■	■	quick star
– Centring pin ZBS	4 pieces included in scope of delivery	■	–	15
– Centring sleeve ZBH	4 pieces included in scope of delivery	–	■	15

Slide units SPZ, twin piston

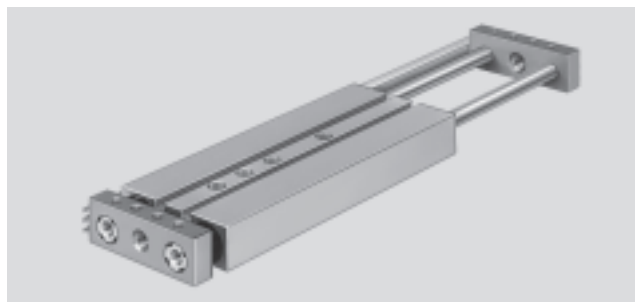
Technical data

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Function



-  - Diameter
10 ... 32 mm
-  - Stroke length
10 ... 100 mm



www.festo.com/en/Spare_parts_service

General technical data								
Piston Ø	10	16	20	25	32			
Pneumatic connection	M5	M5	M5	M5	G1/8			
Operating medium	Filtered compressed air, lubricated or unlubricated							
Operating pressure [bar]	2,5 ... 10		1 ... 10					
Constructional design	Slide							
	Parallel piston rods							
Cushioning	Flexible cushioning rings/plates at both ends							
Position sensing	For proximity sensing							
Type of mounting	Via through-holes							
	With female thread							
	With mounting plate							
Mounting position	Any							
Protection against torsion/guide	Parallel piston rods/with plain-bearing guide or ball bearing guide							

Ambient conditions		
Variant	Plain-bearing guide GF	Recirculating ball bearing guide KF
Ambient temperature ¹⁾ [°C]	-20 ... +80	-20 ... +80
Corrosion resistance class CRC ²⁾	2	-

1) Note operating range of proximity sensors.

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

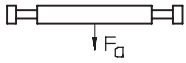
Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a surrounding industrial atmosphere or media such as cooling or

Slide units SPZ, twin piston

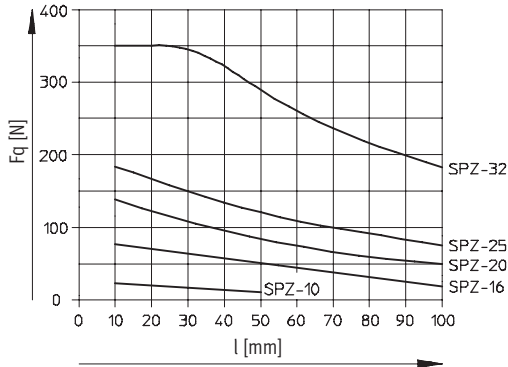
Technical data

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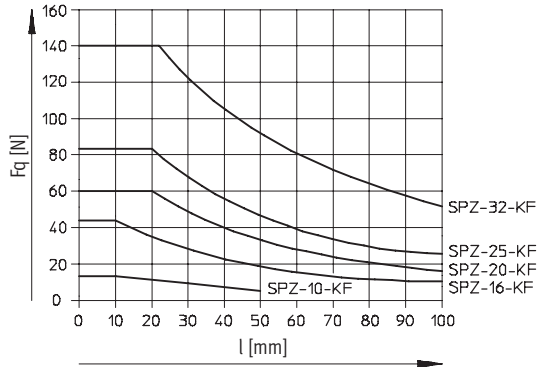
Permissible lateral force F_Q as a function of stroke l



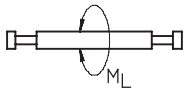
Plain-bearing guide GF



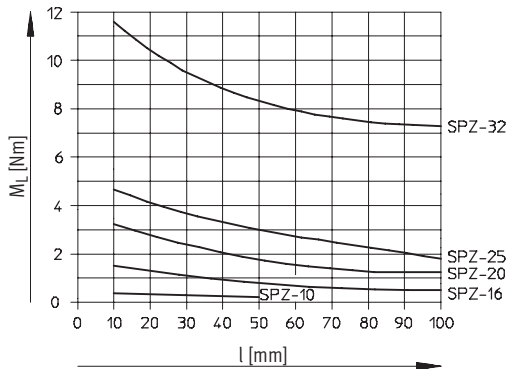
Recirculating ball bearing guide KF



Permissible torque M_L as a function of stroke l



Plain-bearing guide GF



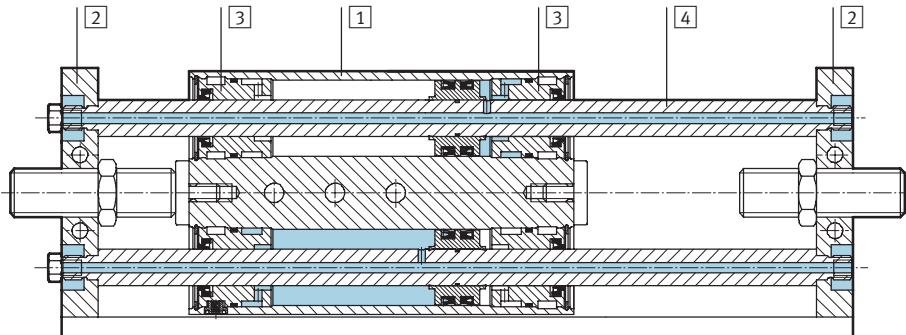
Slide units SPZ, twin piston

Technical data

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Materials

Sectional view



Variant		Basic version	S6
1	Housing	Wrought aluminium alloy	Wrought aluminium alloy
2	Yoke plate	Tool steel	Tool steel
3	Plug cap	GF	Brass
		KF	Wrought aluminium alloy
4	Piston rod	GF	High-alloy stainless steel
		KF	Tempered steel
–	Seals	Polyurethane, nitrile rubber	Flurocarbon rubber, nitrile rubber

Slide units SPZ, twin piston

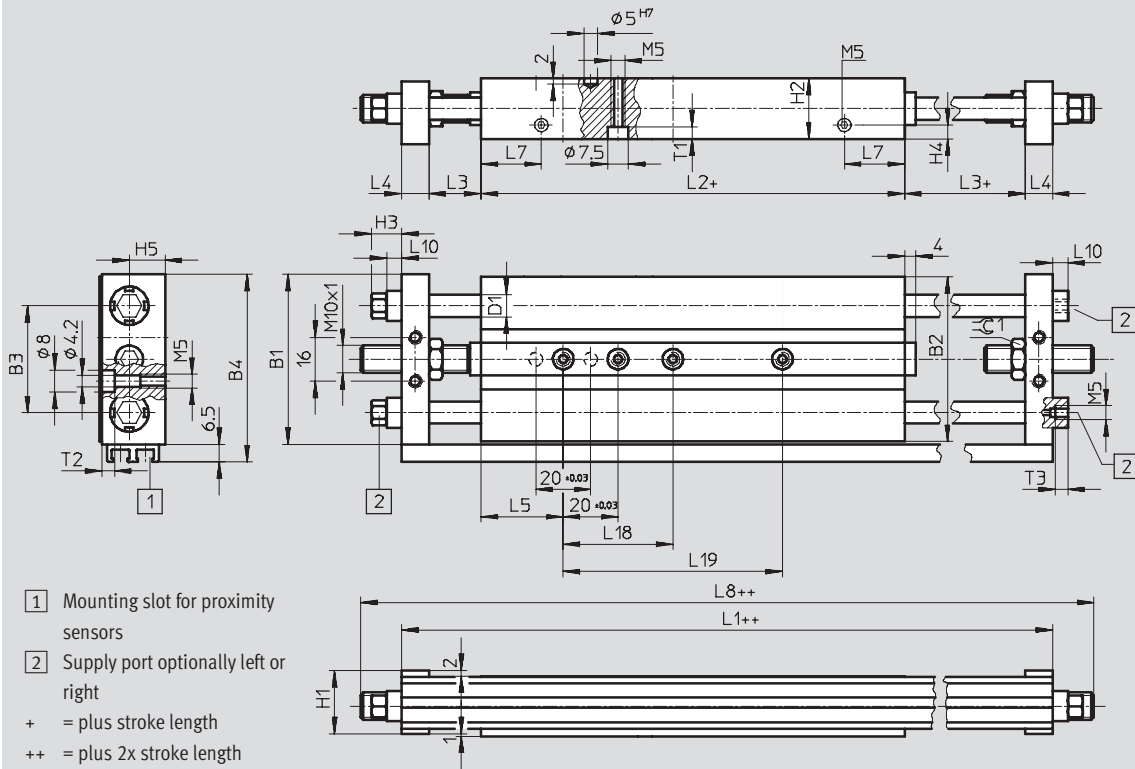
Technical data

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Dimensions

Download CAD Data → www.festo.com/us/cad

Piston Ø 10, 16 mm, plain-bearing guide GF



Ø	B1	B2	B3	B4	D1	H1	H2	H3	H4	H5	L1
[mm]					Ø						
10	52	50	33	58.5	6	20	19	10	4.5	11.5	129.6
16	62	60	39	68.5	8	23	22	11	6	13	132.6

Ø	L2	L3	L4	L5	L7	L8	L10	T1	T2	T3	⌀C1
[mm]											
10	71.6	19	10	30	23.4	159.6	4.5	4.4	3.4	5	13
16	74.6	19	10	30	22	162.6	5.5	4.4	4.6	4.5	13

Stroke	L18	L19
[mm]	±0.03	±0.03
10	–	–
25	–	–
40	40	–
50	40	–
80	40	80
100	40	80

Slide units SPZ, twin piston

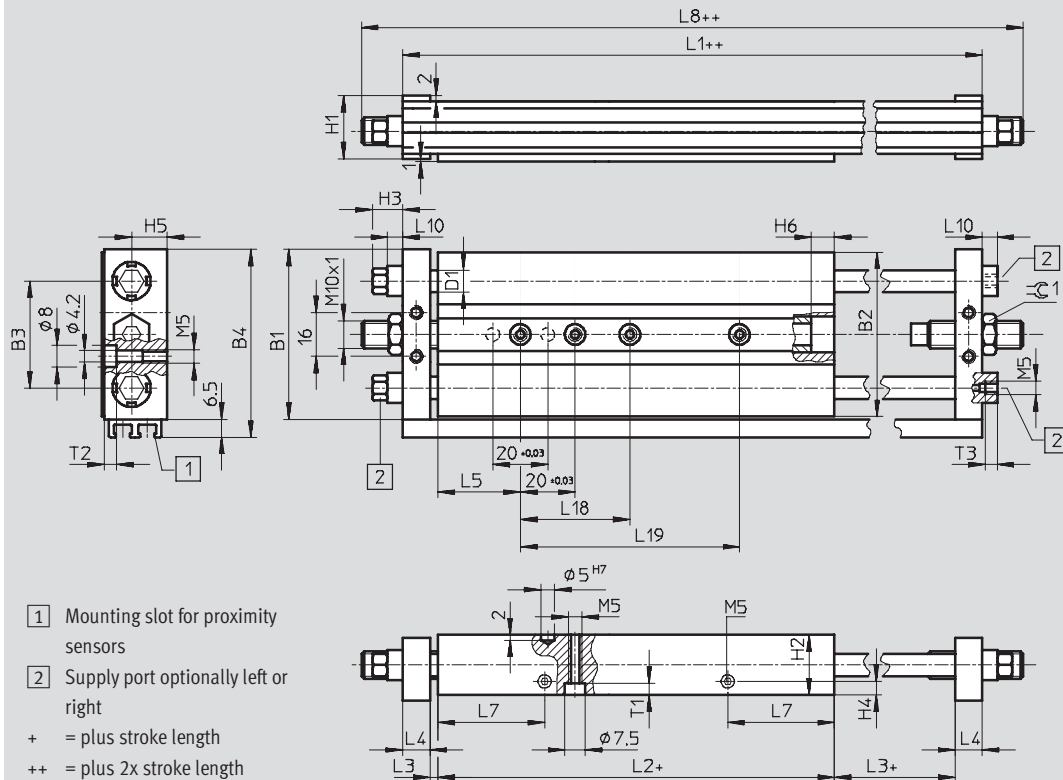
Technical data

FESTO

Dimensions

Download CAD Data → www.festo.com/us/cad

Piston Ø 10, 16 mm, recirculating ball bearing guide KF



Ø	B1	B2	B3	B4	D1 Ø	H1	H2	H3	H4	H5	H6	L1
[mm]												
10	52	50	33	58.5	6	20	19	10	5	11.5	7.5	129.6
16	62	60	39	68.5	8	23	22	11	5	13	7.5	132.6

Ø	L2	L3	L4	L5
---	----	----	----	----

Slide units SPZ, twin piston

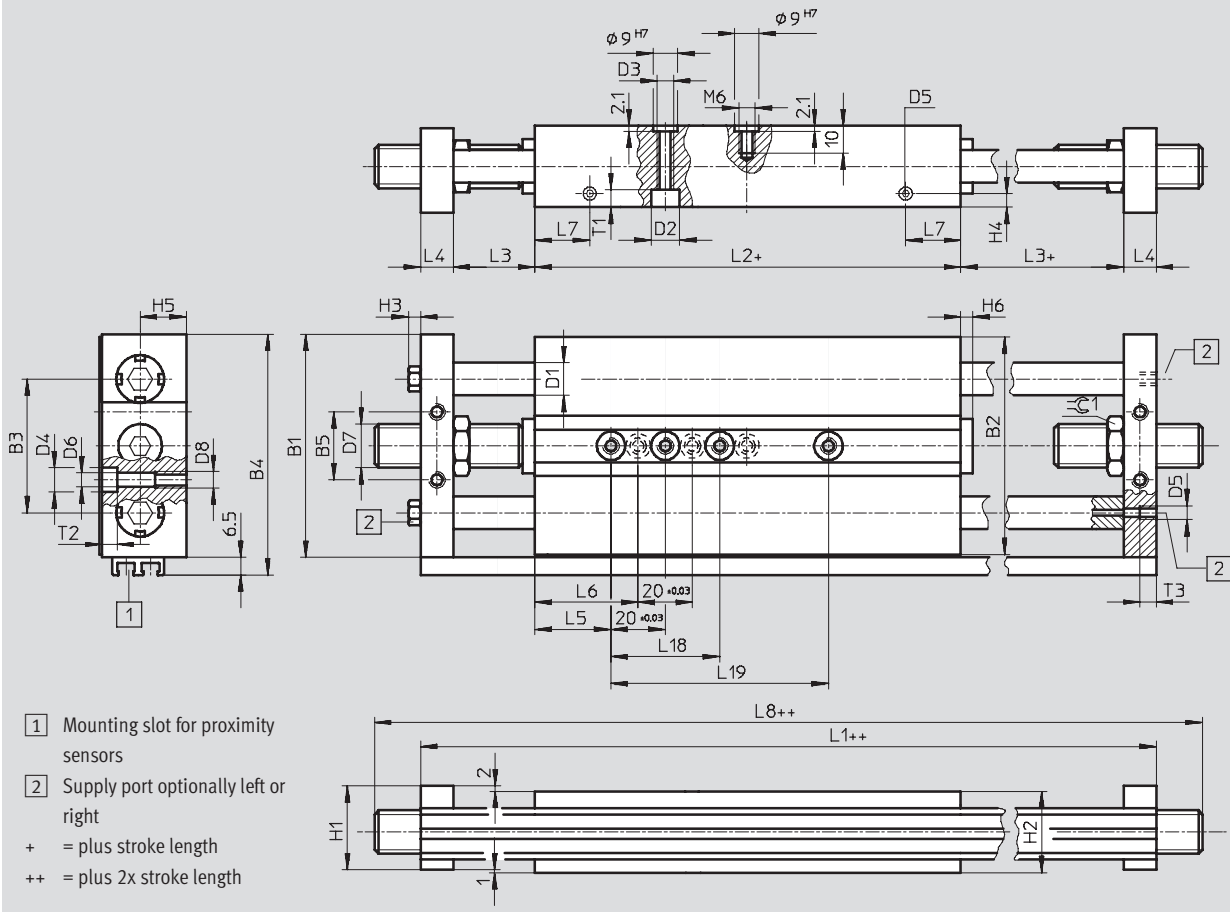
Technical data

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Dimensions

Download CAD Data → www.festo.com/us/cad

Piston Ø 20, 25, 32 mm, plain-bearing guide GF



Ø	B1	B2	B3	B4	B5	D1 Ø	D2 Ø	D3 Ø	D
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Slide units SPZ, twin piston

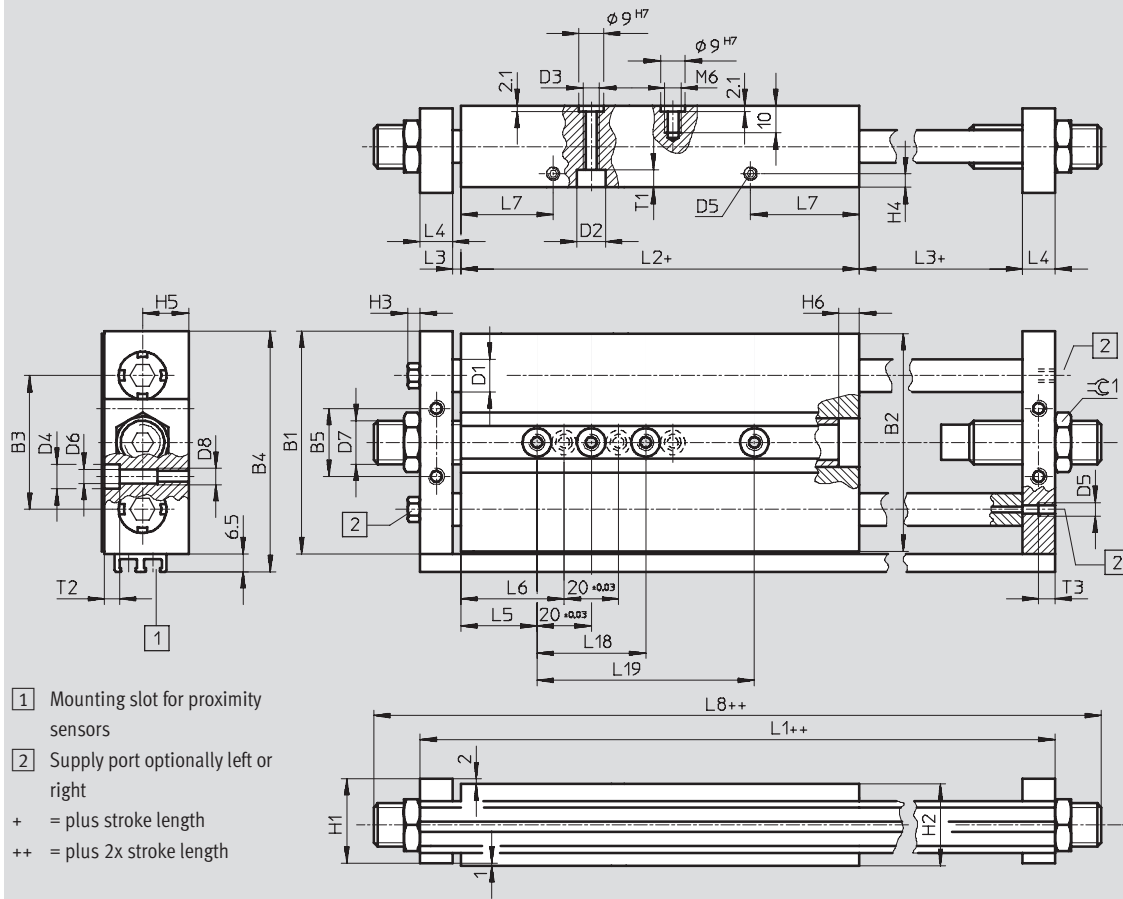
Technical data

FESTO

Dimensions

Download CAD Data → www.festo.com/us/cad

Piston Ø 20, 25, 32 mm, recirculating ball bearing guide KF



Ø	B1	B2	B3	B4	B5	D1	D2	D3	D4	D5	D6	D7	D8
---	----	----	----	----	----	----	----	----	----	----	----	----	----

Slide units SPZ, twin piston

Technical data

FESTO

Ordering data – Basic version						
Type	Piston Ø [mm]	Stroke [mm]	Plain-bearing guide GF		Recirculating ball bearing guide KF	
			Part No.	Type ¹⁾	Part No.	Type ¹⁾
	10	10	32 714	SPZ-10-10-P-A	162 166	SPZ-10-10-P-A-KF
		25	32 715	SPZ-10-25-P-A	162 167	SPZ-10-25-P-A-KF
		40	32 716	SPZ-10-40-P-A	162 168	SPZ-10-40-P-A-KF
		50	32 717	SPZ-10-50-P-A	162 169	SPZ-10-50-P-A-KF
	16	10	32 719	SPZ-16-10-P-A	162 171	SPZ-16-10-P-A-KF
		25	32 720	SPZ-16-25-P-A	162 172	SPZ-16-25-P-A-KF
		40	32 721	SPZ-16-40-P-A	162 173	SPZ-16-40-P-A-KF
		50	32 722	SPZ-16-50-P-A	162 174	SPZ-16-50-P-A-KF
		80	32 723	SPZ-16-80-P-A	162 175	SPZ-16-80-P-A-KF
		100	32 724	SPZ-16-100-P-A	162 176	SPZ-16-100-P-A-KF
	20	10	32 726	SPZ-20-10-P-A	162 178	SPZ-20-10-P-A-KF
		25	32 727	SPZ-20-25-P-A	162 179	SPZ-20-25-P-A-KF
		40	32 728	SPZ-20-40-P-A	162 180	SPZ-20-40-P-A-KF
		50	32 729	SPZ-20-50-P-A	162 181	SPZ-20-50-P-A-KF
		80	32 730	SPZ-20-80-P-A	162 182	SPZ-20-80-P-A-KF
		100	32 731	SPZ-20-100-P-A	162 183	

Slide units SPZ, twin piston

Accessories

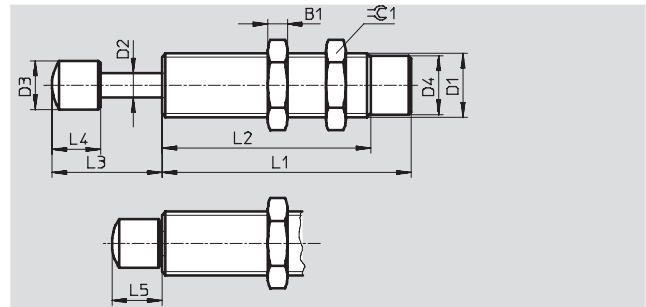
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Shock absorber YSR-C

Material:

YSR-7-5-C, YSR-8-8-C: Nickel-plated brass

YSR-12-12-C: Galvanised steel
Free of copper, PTFE and silicone



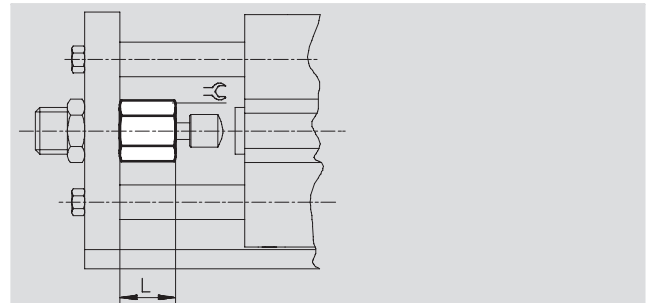
Dimensions and ordering data												Part No.	Type
For Ø	B1	D1	D2 Ø	D3 Ø	D4 Ø	L1 ±0.1	L2 ±0.3	L3 +0.7/-0.35	L4 ±0.2	L5 +0.55/-0.25	≅		
[mm]													
10, 16	3.5	M10x1	3	6 ±0.1	8.6 ±0.05	34	23	12.3	7	7.3	13	160 272	YSR-7-5-C
20	4	M12x1	4	8 ±0.2	10.4 ±0.1	46	33	16.3	8	8.3	15	34 571	YSR-8-8-C
25, 32	5	M16x1	6	12 ±0.2	14.5 ±0.1	64	51	24.5	12	12.5	19	34 572	YSR-12-12-C

Stop limiter YSRA

for use when shock absorbers are fitted
(not in the case of recirculating ball bearing guide)

Material:

Steel

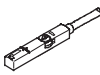
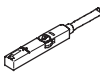


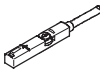
Dimensions and ordering data					
For Ø	L	≅	For shock absorbers	Weight	Part No. Type
[mm]				[g]	

Slide units SPZ, twin piston

Accessories

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Ordering data – Proximity sensors for T-slot, magneto-resistive						Technical data → Internet: smt
	Type of mounting	Switch output	Electrical connection	Cable length [m]	Part No.	Type
N/O contact						
	Insertable in the slot from above, flush with cylinder profile	PNP	Cable, 3-wire	2.5	543 867	SMT-8M-PS-24V-K-2,5-OE
			Plug M8x1, 3-pin	0.3	543 866	SMT-8M-PS-24V-K-0,3-M8D
			Plug M12x1, 3-pin	0.3	543 869	SMT-8M-PS-24V-K-0,3-M12
		NPN	Cable, 3-wire	2.5	543 870	SMT-8M-NS-24V-K-2,5-OE
			Plug M8x1, 3-pin	0.3	543 871	SMT-8M-NS-24V-K-0,3-M8D
	Insertable in the slot lengthwise, flush with the cylinder profile	PNP	Cable, 3-wire	2.5	175 436	SMT-8-PS-K-LED-24-B
			Plug M8x1, 3-pin	0.3	175 484	SMT-8-PS-S-LED-24-B
N/C contact						
	Insertable in the slot from above, flush with cylinder profile	PNP	Cable, 3-wire	7.5	543 873	SMT-8M-PO-24V-K7,5-OE

Ordering data – Proximity sensors for T-slot, magnetic reed						Technical data → Internet: sme
	Type of mounting	Switch output	Electrical connection	Cable length [m]	Part No.	Type
N/O contact						
	Insertable in the slot from above, flush with cylinder profile	Contacting	Cable, 3-wire	2.5	543 862	SME-8M-DS-24V-K-2,5-OE
				5.0	543	

Slide units SPZ, twin piston

Accessories

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Ordering data – One-way flow control valves				Technical data → Internet: grla	
	Connection	For tubing O.D.	Material	Part No.	Type
	Thread				
	M5	3	Metal design	193 137	GRLA-M5-QS-3-D
		4		193 138	GRLA-M5-QS-4-D
		6		193 139	GRLA-M5-QS-6-D
	G1/8	3		193 142	GRLA-1/8-QS-3-D
		4		193 143	GRLA-1/8-QS-4-D
		6		193 144	GRLA-1/8-QS-6-D
		8		193 145	GRLA-1/8-QS-8-D

Ordering data – Accessories					PE ¹⁾
	For dia. [mm]	Material	Part No.	Type	
Centring pin ZBS					Technical data → Internet: zbs
	10, 16	Stainless steel Free of copper, PTFE and silicone	150 928	ZBS-5	10
Centring sleeve ZBH					Technical data → Internet: zbh
	20, 25, 30	Stainless steel Free of copper, PTFE and silicone	150 927	ZBH-9	10

1) Packaging unit quantity

Product Range and Company Overview

A Complete Suite of Automation Services

Our experienced engineers provide complete support at every stage of your development process, including: conceptualization, analysis, engineering, design, assembly, documentation, validation, and production.



Custom Automation Components
Complete custom engineered solutions



Custom Control Cabinets
Comprehensive engineering support and on-site services



Complete Systems
Shipment, stocking and storage services

The Broadest Range of Automation Components

With a comprehensive line of more than 30,000 automation components, Festo is capable of solving the most complex automation requirements.



Electromechanical
Electromechanical actuators, motors, controllers & drives



Pneumatics
Pneumatic linear and rotary actuators, valves, and air supply



PLCs and I/O Devices
PLC's, operator interfaces, sensors and I/O devices

Supporting Advanced Automation... As No One Else Can!

Festo is a leading global manufacturer of pneumatic and electromechanical systems, components and controls for industrial automation, with more than 12,000 employees in 56 national headquarters serving more than 180 countries. For more than 80 years, Festo has continuously elevated the state of manufacturing with innovations and optimized motion control solutions that deliver higher performing, more profitable automated manufacturing and processing equipment. Our dedication to the advancement of automation extends beyond technology to the education and development of current and future automation and robotics designers with simulation tools, teaching programs, and on-site services.

Quality Assurance, ISO 9001 and ISO 14001 Certifications

Festo Corporation is committed to supply all Festo products and services that will meet or exceed our customers' requirements in product quality, delivery, customer service and satisfaction.

To meet this commitment, we strive to ensure a consistent, integrated, and systematic approach to management that will meet or exceed the requirements of the ISO 9001 standard for Quality Management and the ISO 14001 standard for Environmental Management.



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