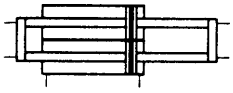
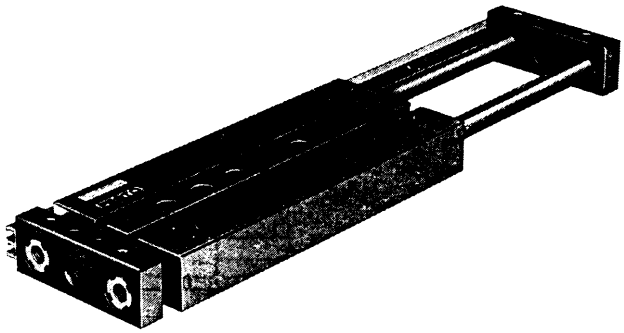
Linear unit

with two piston rods, slide bearing guide and elastic end piston cushioning rings, secured against rotation.

Traversing slide with two piston rods

Type SPZ-...-P-A





The Festo twin linear unit combines two pistons arranged in parallel coupled by a yoke. This combination ensures high protection against rotating during positioning and transporting of tools and components. Moreover, this twin piston principle offers double the force whilst being the same height as standard linear units and twin linear units.

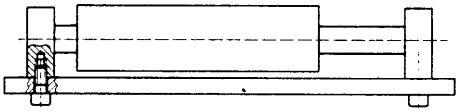
The spacing between mounting holes of 20 to 40 mm permits easy assembly on current profile systems.

Special design see sheet 3.7/50-3.

Both cylinder pistons are fitted with a permanent magnet activating proximity sensors through their magnetic field.

One or several proximity sensors can be clamped into the mounting rail on the cylinder. The sensors permit contactless sensing of the end or intermediate positions of the cylinder.

Basic cylinder installation



Accessories:
Magnetically actuated proximity sensor, type SME-8-...
see sheet 3.9/40-1 and 3.9/40-2.

Mounting plates for multi-axis operation, type BPL
see sheet 3.7/50-3.

Centring pins, type ZBS-5, and centring sleeves, type ZBH-9, form part of scope of delivery depending on piston diameter.

Groove cover for sensor groove, type ABP-5-S (0.5 m).

Stop limiter for shock absorber, type YSR-... see sheet 3.7/50-3.

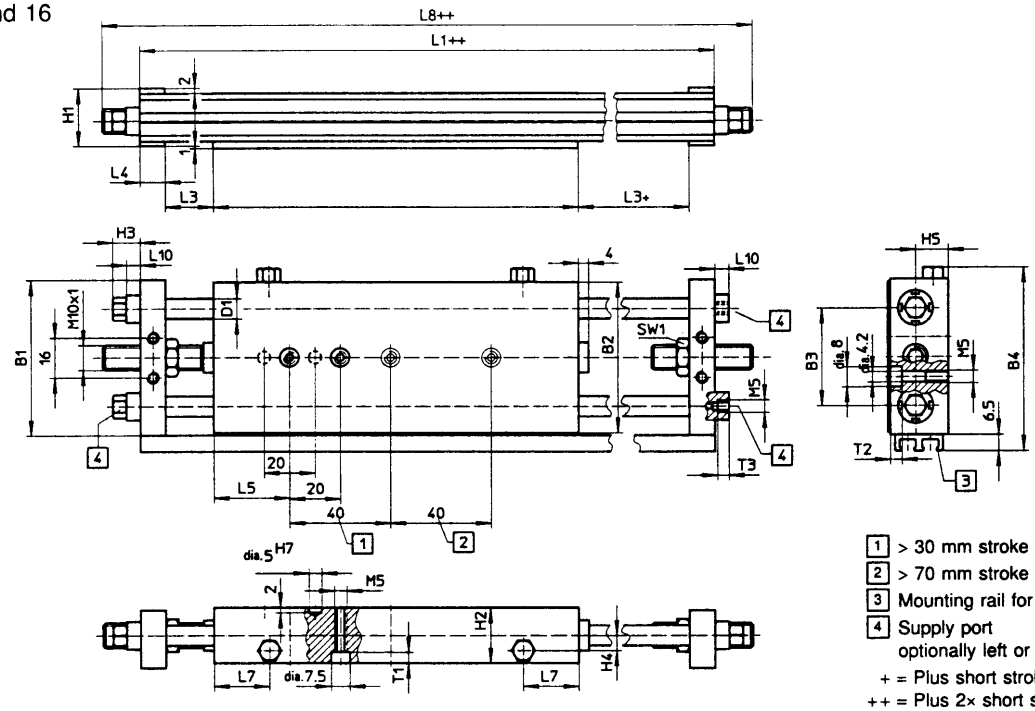
Shock absorber, type YSR-...-C self-adjustable see sheet 3.11/21-1.

Order code (see sheet 3.7/50-4)	Part No. + SPZ + piston-dia. + stroke length + end position cushioning + sensing *Order example: Piston-dia. 20 mm, stroke length 50 mm = 32729 SPZ-20-50-P-A*
Medium	Compressed air, filtered (lubricated or unlubricated)
Design	Twin piston cylinder
Max. permissible operating pressure	10 bar
Temperature range	−20 to +80 °C (observe operating range of proximity sensors)
Material	Housing: Al, anodized: yoke plate; Steel, galvanized; Piston rod: X 10 Cr Ni Mo Ti 18 10 (S3); Seals: polyurethane

Piston dia. mm	Standard stroke length mm	Thrust and return force at 6 bar* N	(≈ kp)	Connection	Working load and torque
10	10, 25, 40, 50	60	(6)	M5	see sheet 3.7/50-3
16	10, 25, 40, 50, 80, 100	180	(18)	M5	
20		282	(28.2)	M5	
25		452	(45.2)	M5	
32		724	(72.4)	G 1/8	

* Theoretical values

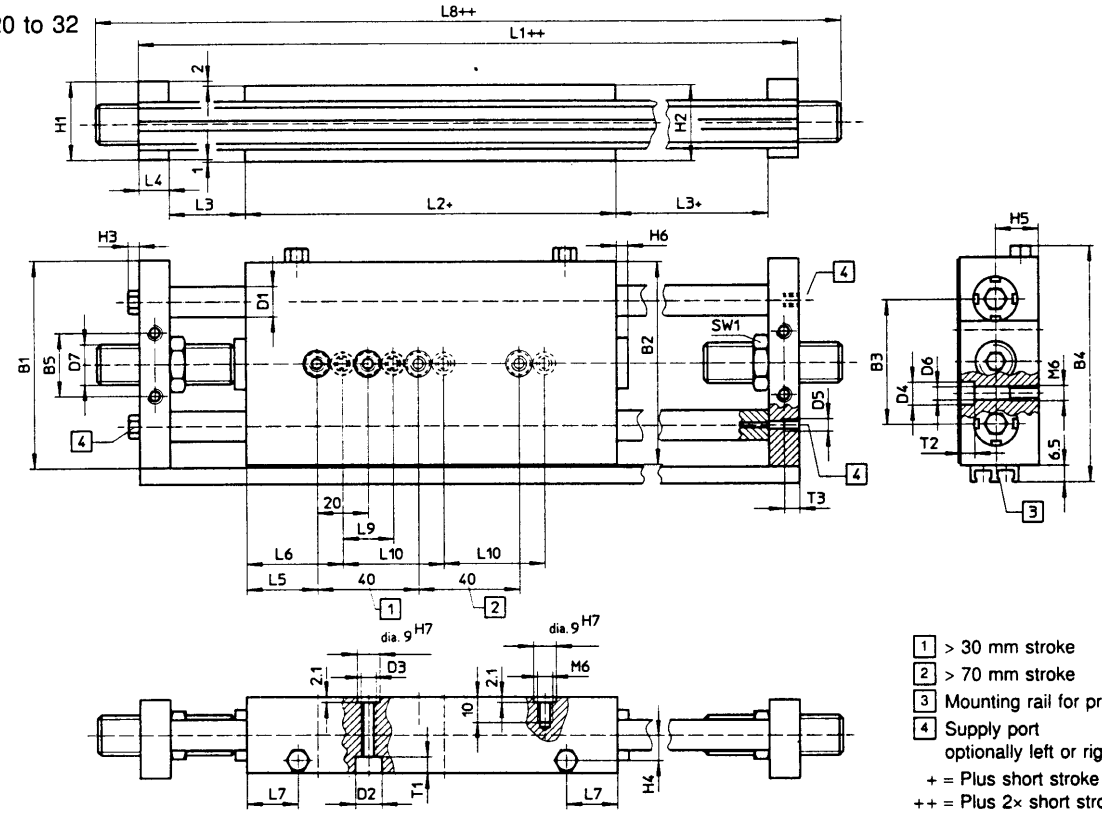
Type SPZ-10 and 16



1 > 30 mm stroke
2 > 70 mm stroke
3 Mounting rail for proximity sensors
4 Supply port optionally left or right
\+ = Plus short stroke
++ = Plus 2× short stroke

Type	B_1	B_2	B_3	B_4	D_1 dia.	H_1	H_2	H_3	H_4	H_5	L_1	L_2	L_3	L_4	L_5	L_7	L_8	L_{10}	SW_1	T_1	T_2	T_3
SPZ-10	52	50	33	63	6	20	19	10	4.5	11.5	129.6	71.6	19	10	30	23.4	159.6	4.5	13	4.4	3.4	5
SPZ-16	62	60	39	73	8	23	22	11	6	13	132.6	74.6	19	10	30	22	162.6	5.5	13	4.4	4.6	4.5

Type SPZ-20 to 32

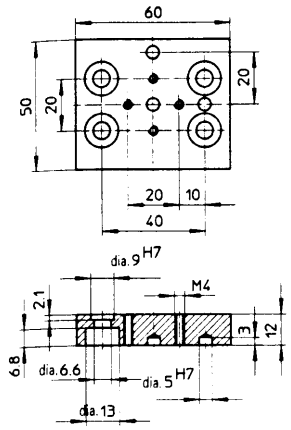


1 > 30 mm stroke
2 > 70 mm stroke
3 Mounting rail for proximity sensors
4 Supply port optionally left or right
\+ = Plus short stroke
++ = Plus 2× short stroke

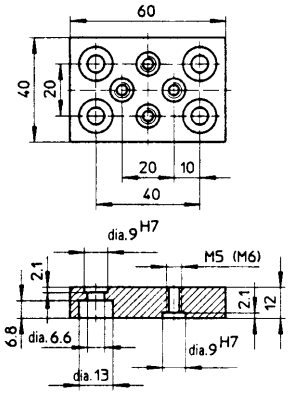
Type	B_1	B_2	B_3	B_4	B_5	D_1 dia.	D_2 dia.	D_3 dia.	D_4	D_5	D_6	D_7	H_1	H_2	H_3	H_4	H_5	H_6	L_1	L_2	L_3	L_4	L_5	L_6	L_7	L_8	L_9	L_{10}	SW_1	T_1	T_2	T_3
SPZ-20	74	72	45.6	85	23	10	9	M6	9.5	M5	5.2	M12×1	25	24	5	7	14	4	146.6	76.6	23	12	30	–	22.8	178.6	–	–	15	5.4	5	6
SPZ-25	82	80	49.2	93	25	12	10.5	6.4	9.5	M5	5.2	M16×1	31	30	5	10	17	4.5	160.6	76.6	30	12	28	38	20.2	194.6	20	40	19	6.4	5	6
SPZ-32	100	98	57	106.5	24	16	10.5	6.4	10.5	G 1/8	6.2	M16×1	39	38	–	11.5	21	4.5	170.1	80.1	30	15	35	45	25	204.1	20	40	19	6.4	6.5	10

Mounting plate for multi-axis operation
(multi-axis operation see overleaf)

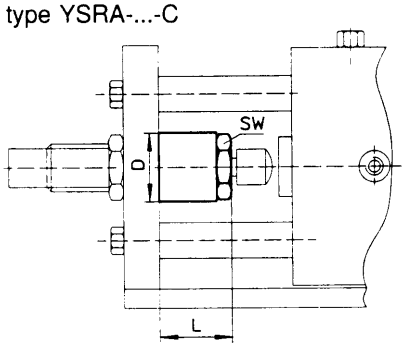
Type BPL-1



Type BPL-2
BPL-3 (dimension in brackets)

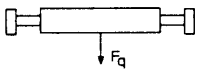


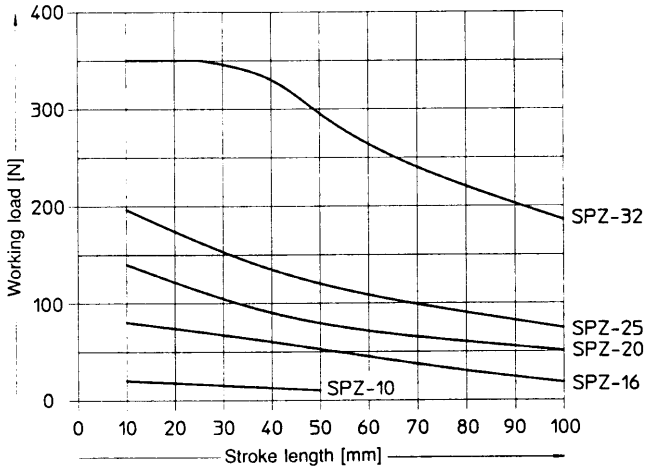
Stop limiter for shock absorber assembly
type YSRA-...-C



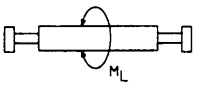
Type	D	L	SW	for shock absorber
YSRA-7-C	14	13.3	12	YSR-7-5-C
YSRA-8-C	19	18	17	YSR-8-8-C
YSRA-12-C	23	24.5	20	YSR-12-12-C

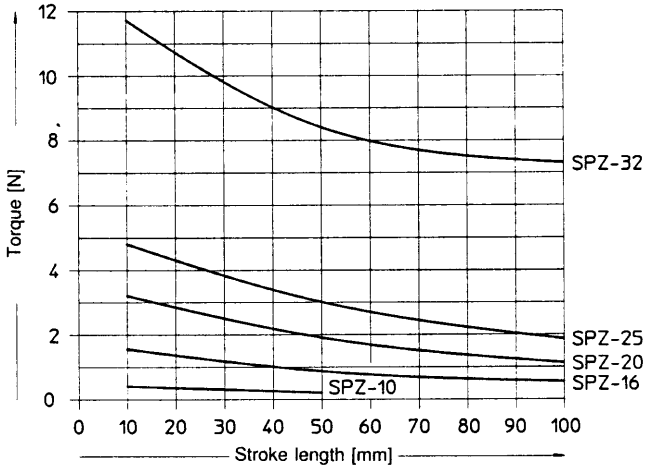
Permissible working load on slide
in relation to stroke length





Permissible torque on slide
in relation to stroke length





Dia. / Stroke	Type SPZ perm. load F (N)				
	10	16	20	25	32
10	22	79	139	196	350
25	17	63	112	162	350
40	14	51	92	135	329
50	12	45	82	121	295
80	–	32	60	90	220
100	–	26	49	75	185

Dia. / Stroke	Type SPZ perm. torque; centrally applied (Nm)				
	10	16	20	25	32
10	0.37	1.54	3.17	4.83	11.72
25	0.29	1.22	2.56	3.98	11.72
40	0.23	0.99	2.11	3.33	9.38
50	0.21	0.87	1.87	2.98	8.42
80	–	0.62	1.36	2.21	6.28
100	–	0.51	1.12	1.86	5.28

Special design

S6		Heat-resistant seals for max. 150 °C

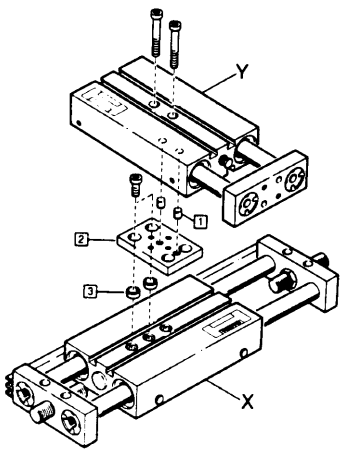
Order code for standard design						Order code for special design S6						Order code accessories	
Part No.	Type	Piston dia.	Stroke	End position cushioning	Special design	Part No.	Type	Piston dia.	Stroke	End position cushioning	Special design	Part No.	Type
32714	SPZ-	10-	10-	P-A		159 730	SPZ-	10-	10-	P-A-	S6	150 927	ZBH- 9*
32715	SPZ-	10-	25-	P-A		159 731	SPZ-	10-	25-	P-A-	S6	150 928	ZBS- 5*
32716	SPZ-	10-	40-	P-A		159 732	SPZ-	10-	40-	P-A-	S6	151 680	ABP- 5-S
32717	SPZ-	10-	50-	P-A		159 733	SPZ-	10-	50-	P-A-	S6		
32719	SPZ-	16-	10-	P-A		159 734	SPZ-	16-	10-	P-A-	S6	150 929	BPL- 1
32720	SPZ-	16-	25-	P-A		159 735	SPZ-	16-	25-	P-A-	S6	150 930	BPL- 2
32721	SPZ-	16-	40-	P-A		159 736	SPZ-	16-	40-	P-A-	S6	150 931	BPL- 3
32722	SPZ-	16-	50-	P-A		159 737	SPZ-	16-	50-	P-A-	S6	15932	YSRA- 7-C
32723	SPZ-	16-	80-	P-A		159 738	SPZ-	16-	80-	P-A-	S6	15933	YSRA- 8-C
32724	SPZ-	16-	100-	P-A		159 739	SPZ-	16-	100-	P-A-	S6	15934	YSRA- 12-C
32726	SPZ-	20-	10-	P-A		159 743	SPZ-	20-	10-	P-A-	S6	160 772	YSR- 7-5-C
32727	SPZ-	20-	25-	P-A		159 744	SPZ-	20-	25-	P-A-	S6	34571	YSR- 8-8-C
32728	SPZ-	20-	40-	P-A		159 745	SPZ-	20-	40-	P-A-	S6	34572	YSR- 12-12-C
32729	SPZ-	20-	50-	P-A		159 746	SPZ-	20-	50-	P-A-	S6		
32730	SPZ-	20-	80-	P-A		159 747	SPZ-	20-	80-	P-A-	S6		
32731	SPZ-	20-	100-	P-A		159 748	SPZ-	20-	100-	P-A-	S6		
32733	SPZ-	25-	10-	P-A		159 752	SPZ-	25-	10-	P-A-	S6	* Part of scope of delivery	
32734	SPZ-	25-	25-	P-A		159 753	SPZ-	25-	25-	P-A-	S6		
32735	SPZ-	25-	40-	P-A		159 754	SPZ-	25-	40-	P-A-	S6		
32736	SPZ-	25-	50-	P-A		159 755	SPZ-	25-	50-	P-A-	S6		
32737	SPZ-	25-	80-	P-A		159 756	SPZ-	25-	80-	P-A-	S6		
32738	SPZ-	25-	100-	P-A		159 757	SPZ-	25-	100-	P-A-	S6		
159 721	SPZ-	32-	10-	P-A		159 762	SPZ-	32-	10-	P-A-	S6		
159 722	SPZ-	32-	25-	P-A		159 763	SPZ-	32-	25-	P-A-	S6		
159 723	SPZ-	32-	40-	P-A		159 764	SPZ-	32-	40-	P-A-	S6		
159 724	SPZ-	32-	50-	P-A		159 765	SPZ-	32-	50-	P-A-	S6		
159 725	SPZ-	32-	80-	P-A		159 766	SPZ-	32-	80-	P-A-	S6		
159 726	SPZ-	32-	100-	P-A		159 767	SPZ-	32-	100-	P-A-	S6		

Combinations – multi-axis operation

Y-axis / X-axis	Twin cylinder type DPZ-.../DPZJ-...*					
Twin linear unit type SPZ-... Twin cylinder type DPZ-...* type DPZJ-...*	Piston dia. mm	10	16	20	25	32
	10	–	–	–	–	–
	16	–	–	–	–	–
	20	BPL-1	BPL-1	BPL-2	–	–
	25	BPL-1	BPL-1	BPL-2	BPL-3	–
	32	BPL-1	BPL-1	BPL-2	BPL-3	BPL-3

* Twin cylinder type DPZ and DPZJ, see sheet 3.2/40-1

SPZ-/DPZ-axis



1 Centring sleeve type ZBN-9
2 Mounting plate type BPL
3 Centring pin type ZBS-5

Allocation acessories

Description		Twin linear unit type SPZ-... piston dia mm				
Description	Type	10	16	20	25	32
Centring pin*	ZBS-5	×	×			
Centring sleeve*	ZBH-9			×	×	×
Mounting plate	BPL-1	×	×			
Mounting plate	BPL-2			×		
Mounting plate	BPL-3				×	×
Proximity sensor	SME-8	×	×	×	×	×
Stop limiter	YSRA-7-C	×	×			
Stop limiter	YSRA-8-C			×		
Stop limiter	YSRA-12-C				×	×
Shock absorber**	YSR-7-5-C	×	×			
Shock absorber**	YSR-8-8-C			×		
Shock absorber**	YSR-12-12-C				×	×

* Part of scope of delivery
** Technical data for shock absorbers see sheet 3.11/21-1