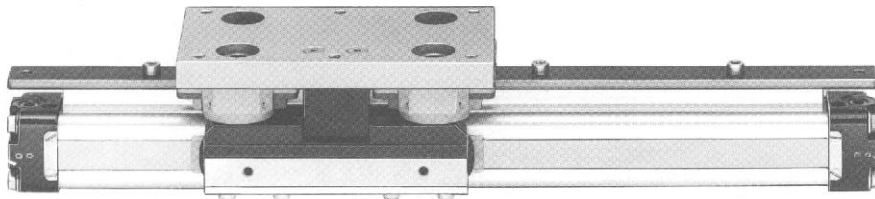


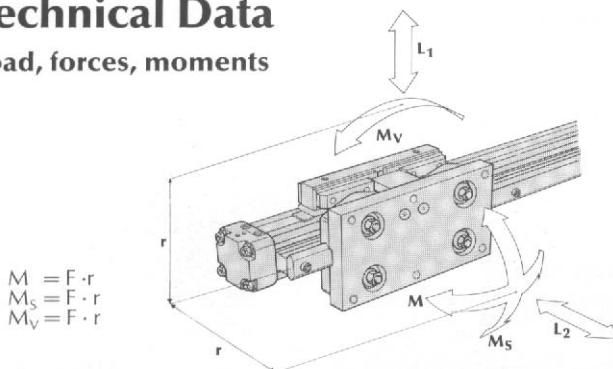
Series S-PS

Diameters 25 and 32 mm, optional stroke length up to 3,000 mm.
(Longer strokes available on request.)



Technical Data

Load, forces, moments



The maximum moment and direct load capacities are given in the table below. To calculate the life of a given Powerslide, the LOAD FACTOR L_f should be calculated using the equation below. The system life can then be read from the Nomogram on the opposite page.

$$L_f = \frac{M}{M(\max.)} + \frac{M_s}{M_s(\max.)} + \frac{M_v}{M_v(\max.)} + \frac{L_1}{L_1(\max.)} + \frac{L_2}{L_2(\max.)}$$

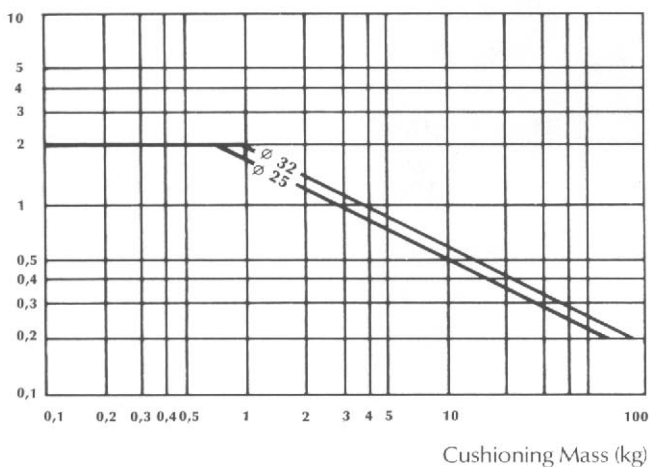
L_f should not exceed 1 for any combination of loads.

Series	Cyl. Ø	effective Force (N) at 6 bar	Cushion Length (mm)	Max. Allowed Moment Load (Nm)		Max. Allowed Torque (Nm) M_v	Max. Allowed Direct Load (N)		Powerslide weight (kg) for increase 0 stroke 100 mm stroke	
				M	M_s		L_1	L_2		
S-PS 25/25	25	250	21	51	11	51	1175	1175	1,70	0,43
S-PS 32/44	32	420	26	136	51	136	2350	2350	3,10	0,76

Values are based on shock-free duty and slide lubrication according to instructions.
Operating pressure max. 8 bar.

Cushioning diagramm

max. Piston Speed (m/s) at cushion impact

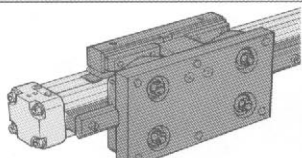


Relating load applied to life

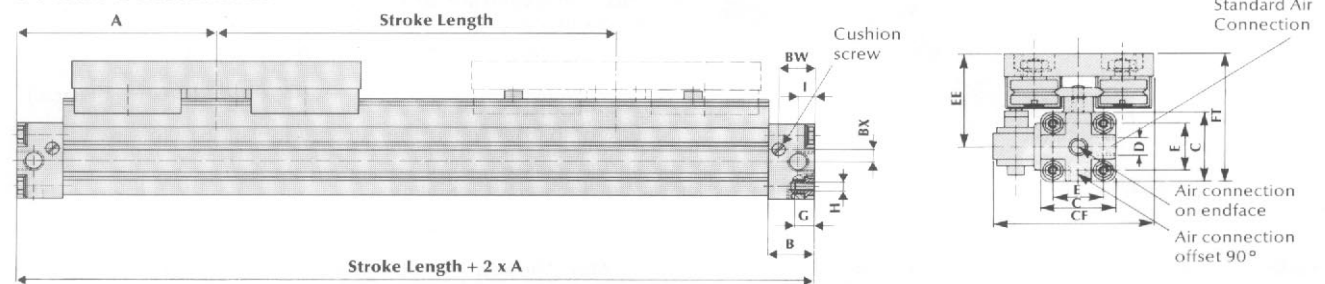
It is important to satisfy both load and life requirements when looking at an application. In many instances it will not be necessary to calculate the life of a system, but if a high number of strokes coupled with a heavy load are evident then life can be an important factor. This is also particularly relevant in short stroke or moment load applications – see LOAD/LIFE example on page 3.9/4.

For piston speeds of more than 1 m/s, viton seals are recommended.
If the approved limits are exceeded additional shock absorbers are advisable.
For piston speeds of less than 0,2 m/s slow speed lubrication is recommended.
Maximum seal life will be achieved when piston speeds do not exceed 1 m/s.

Options

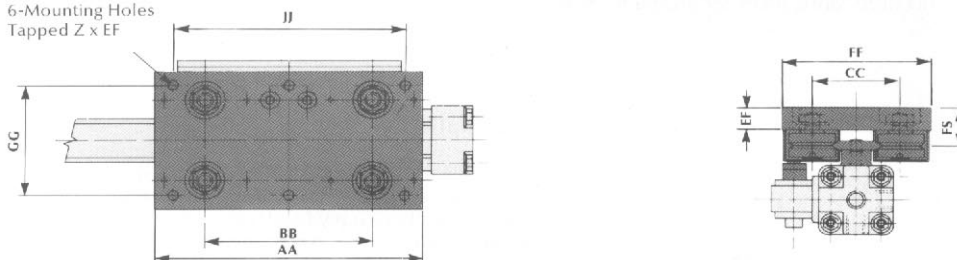
Cylinder Mountings		Cyl. Ø	Cyl. Weight [kg] for 0 stroke Increase 100 mm stroke		Ident No.	
Type S-PS		Piston mounting No. 20				
		Aluminium/steel	25	1,70	0,43	2910
		Mounted during cylinder assembly.	32	3,10	0,76	3910

Overall Dimensions

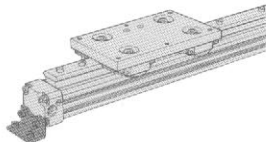


Series	Cyl. $\varnothing$	A	B	C	D	E	G	H	I	BW	BX	CF	EE	FT
S-PS 25/25	25	100	23	40	G 1/8	27	9	M5	8,5	18	6,5	84	53	73
S-PS 32/44	32	125	27	52	G 1/4	36	14	M6	10,5	21,5	9	113	64	90

6-Mounting Holes
Tapped Z x EF



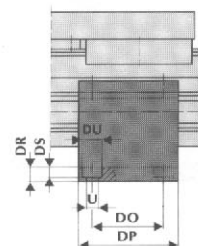
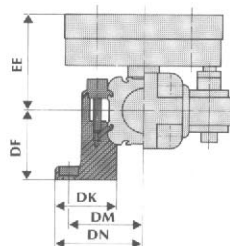
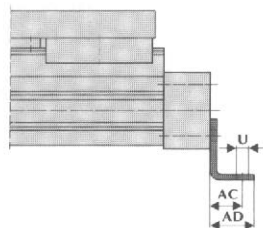
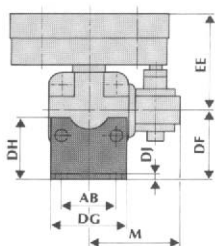
Series	Cyl. $\varnothing$	Z	AA	BB	CC	EF	FF	FS	GG	JJ
S-PS 25/25	25	M 6	145	90	47	13	80	22	64	125
S-PS 32/44	32	M 8	190	118	73	15	116	26	96	164

Cylinder Mountings		Cyl. ϕ	Weight [kg]	Ident-No.
	end Cap mounting No. 10 (Pair)	25	0,044	2040
	Galvanized steel	32	0,068	3040
	Including screws (8.8 galvanised.)			
Soley for support of cylinder. Axial forces cannot be transferred.	Mid-section support No. 11	25	0,100	2050
	Anodised aluminium	32	0,125	3050
	For placing in the profiled groove of the cylinder barrel.			
This mounting permits the use of VO valves.	End-cap mounting No. 12 (Pair)	25	0,060	2060
	Galvanized steel	32	0,077	3060
	Including screws (8.8 galvanised)			
Soley for support of cylinder Axial forces cannot be transferred This mounting permits the use of VO valves.	Mid-section support No. 13	25	0,149	2070
	Anodised Aluminium	32	0,163	3070
	For placing in the profiled groove of the cylinder barrel.			

End-cap mountings and mid-section supports – for use with proximity switches

End cap mounting No. 10

Mid-section support No. 11

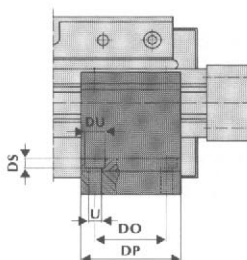
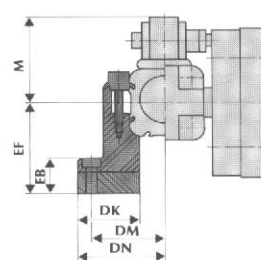
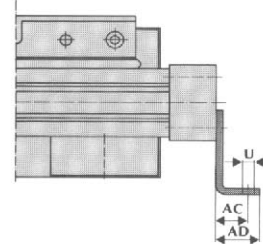
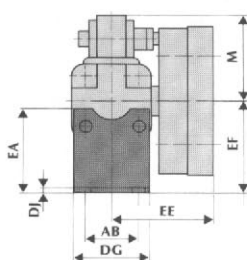


Series	Cyl. ϕ	M	U	AB	AC	AD	DF	DG	DH	DJ	DK	DM	DN	DO	DP	DR	DS	DU	EE
S-PS 25/25	25	44	5,5	27	16	22	37	39	33	3	31	37	44	36	50	7	5	10	53
S-PS 32/44	32	55	6,6	36	18	26	44	50	34	3	36	45	52	36	50	8	6	11	64

End cap mountings and mid-section supports – for use with optional integrated control valves VOE/VOP

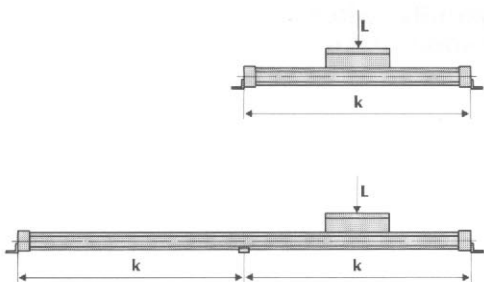
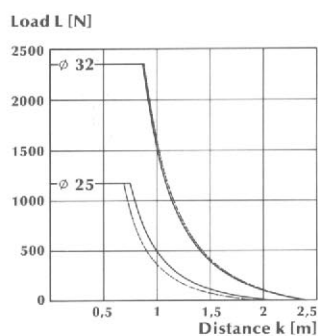
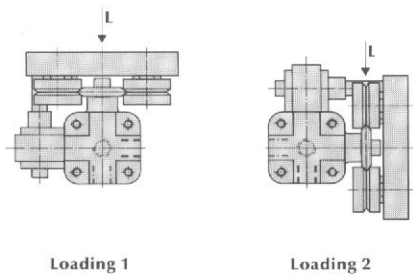
End cap mounting No. 12

Mid-section support No. 13



Series	Cyl. ϕ	M	U	AB	AC	AD	DG	DJ	DK	DM	DN	DO	DP	DS	DU	EA	EB	EE	EF
S-PS 25/25	25	44	5,5	27	16	22	39	3	31	37	44	36	50	5	10	45	19	53	49
S-PS 32/44	32	55	6,6	36	18	26	50	3	36	45	52	36	50	6	11	42	16	64	52

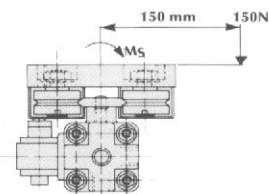
Position of Cylinder Mountings



Load/life nomogram



Example S-PS 32/44



$$\text{Moment } M_s = 0,15 \times 150 = 22,5$$

$$L_2 = 150 \text{ N}$$

Applying formula

$$L_f = \frac{M_s}{M_s (\text{max.})} + \frac{L_2}{L_2 (\text{max.})}$$

$$L_f = \frac{22,5}{51} + \frac{150}{2350} = 0,505$$

Basic life $\geq 1300 \text{ km}$

Note:

LOAD/LIFE capacities are based on linear speeds up to 1.5 m/s and lubrication being evident at the bearing and slide contact faces.

End cap options

Air connection in End cap (see illustration page 3.9/3)

Cylinder- $\varnothing$	Ident No.	
	25	32
Offset by 90°	2751	3751
End face $\varnothing 25$: G 1/8, $\varnothing 32$: G 1/4	2752	3752

Optional Features

Viton seals (see Cushioning diagram page 3.9/1)

Ident No.	
End cap and piston	2771 3771

Stainless Steel Parts

Ident No.	
Screws and Schiene	3872 3873

Lubrication

Ident No.	
Grease lubrication for slow speed $< 0,2 \text{ m/s}$	2791 3791

Accessories: Electrical VOE or pneumatic VOP control valves, proximity switches RS or IS
– Please refer to Chapter 4 – Accessories.