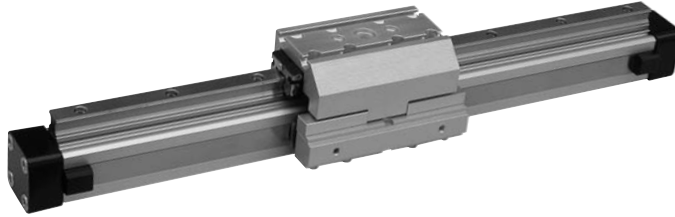


## Versions

for Pneumatic Linear Drive:  
Series OSP-P KF

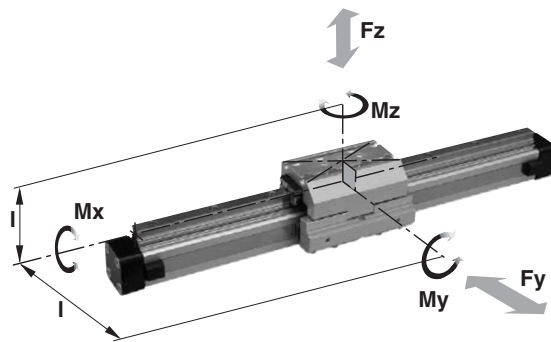


# Recirculating Ball Bearing Guide KF

**OSP**  
— ORIGA  
— SYSTEM  
— PLUS

Series KF16 to KF50  
For Linear Drives  
Series OSP-P CLASSIC

## Loads, Forces and Moments



### Features:

- Anodized aluminium guide carriage, the mounting dimensions correspond to FESTO Type: DGPL-KF
- Polished and hardened steel guide rail
- For high loads in all directions
- High precision
- Integrated wiper system
- Integrated grease nipples
- Any length of stroke up to 3700 mm
- Maximum speed  
KF16, KF40: v = 3 m/s  
KF25, KF32, KF50: v = 5 m/s

### Technical Data

The table shows the maximum permissible loads. If multiple moments and forces act upon the cylinder simultaneously, the following equation applies:

$$\frac{M_x}{M_{x_{max}}} + \frac{M_y}{M_{y_{max}}} + \frac{M_z}{M_{z_{max}}} + \frac{F_y}{F_{y_{max}}} + \frac{F_z}{F_{z_{max}}} \leq 1$$

The sum of the loads should not exceed >1

The table shows the maximum permissible values for light, shock-free operation, which must not be exceeded even under dynamic conditions.

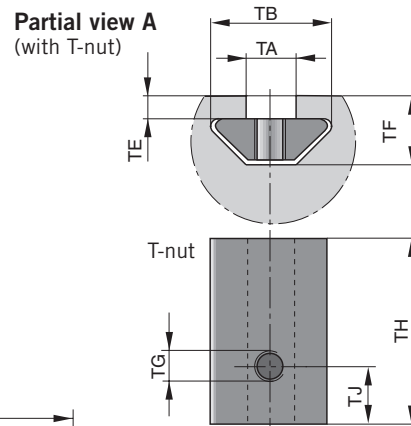
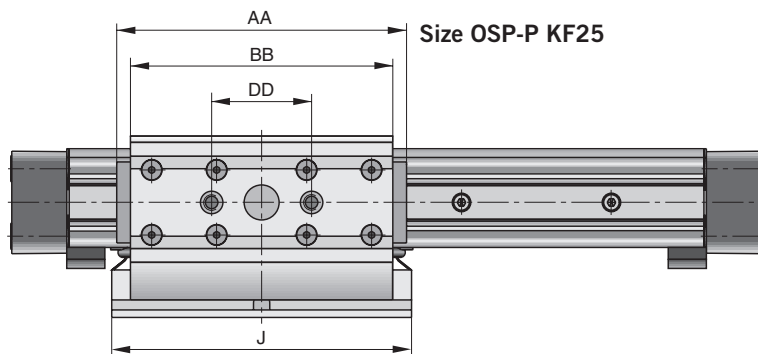
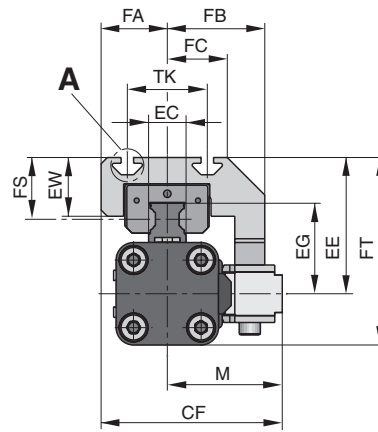
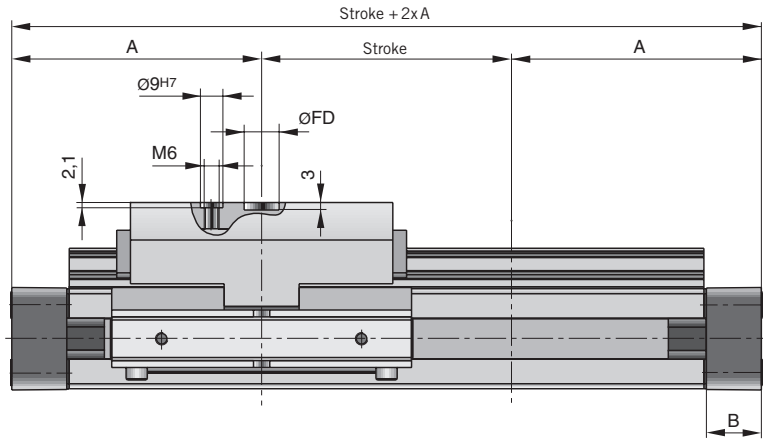
**\* Please note:**  
the mass of the carriage has to be added to the total moving mass when using the cushioning diagram.

Series	for Linear Drive	Max. Moments [Nm]			Max. Load [N]		Mass of drive with guide [kg]		Mass * guide carriage [kg]	Groove stone Thread Size	Order No.	
		Mx	My	Mz	Fy	Fz	with 0 mm stroke	increase per 100 mm stroke			Groove Stone	KF for OSP-P
<b>KF16</b>	OSP-P16	12	25	25	1000	1000	0.558	0.21	0.228	—	—	<b>21101</b>
<b>KF25</b>	OSP-P25	35	90	90	3100	3100	1.522	0.369	0.607	M5	<b>13508</b>	<b>21102</b>
<b>KF32</b>	OSP-P32	44	133	133	3100	3100	2.673	0.526	0.896	M5	<b>13508</b>	<b>21103</b>
<b>KF40</b>	OSP-P40	119	346	346	4000	7100	4.167	0.701	1.531	M6	<b>13509</b>	<b>21104</b>
<b>KF50</b>	OSP-P50	170	480	480	4000	7500	7.328	0.936	2.760	M8	<b>13510</b>	<b>21105</b>

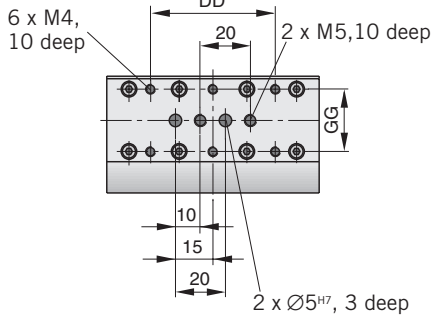
For linear drives see 1.10.002E  
For mountings see 1.45.005E

**ORIGA**

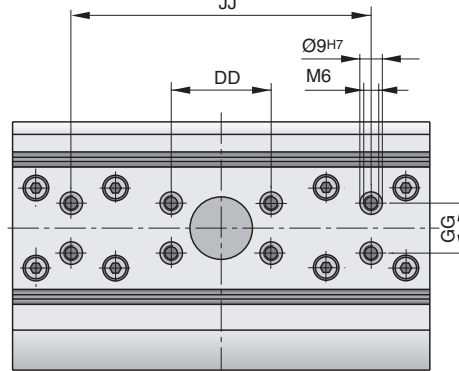
Dimensions Series OSP-P KF16 to KF50



Size OSP-P KF16



Size OSP-P KF32 to KF50



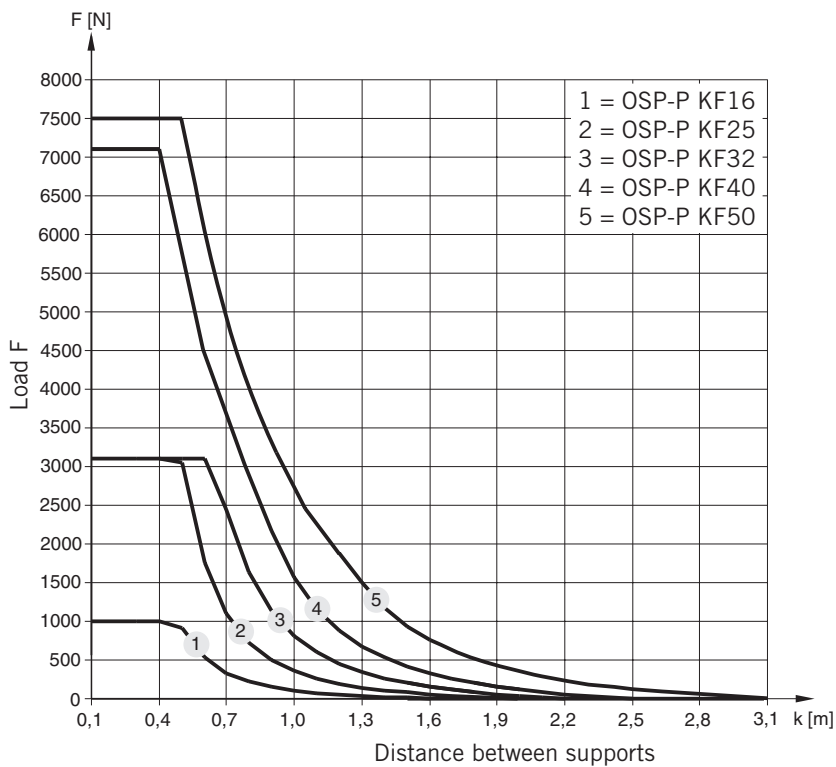
Dimension Table (mm) Series OSP-P KF16, KF25, KF32, KF40, KF50

Series	A	B	J	AA	BB	CF	DD	EC	EE	EG	EW	JJ	GG	M
KF16	65	14	76	93	85	48	50	15	41	24.6	10	-	25	30
KF25	100	22	120	120.2	105	72.5	40	15	54.5	36.2	23.5	-	-	46
KF32	125	25.5	160	146.2	131	93.8	40	15	60.5	42.2	23.5	-	20	59.8
KF40	150	28	150	188.5	167	103.3	40	20	69.5	51.6	26.5	120	20	60.8
KF50	175	33	180	220.2	202	121	40	23	90.5	62.3	32.5	120	40	69

Series	FA	FB	FC	FD	FT	FS	TA	TB	TE	TF	TG	TH	TJ	TK
KF16	17.7	29	16.5	-	56	19	-	-	-	-	-	-	-	-
KF25	26.5	39	24	14 <sup>G7</sup>	75	24.7	5	12.1	2.3	6.9	M5	11.5	4	32
KF32	34	53.8	34	25 <sup>G7</sup>	86.5	24.7	5	12.1	1.8	6.4	M5	11.5	4	47
KF40	42.5	56.8	41	25 <sup>G7</sup>	104	26	6	12.8	1.8	8.4	M6	17	5.5	55
KF50	52	65	50	25 <sup>G7</sup>	134	38	8	21.1	4.5	12.5	M8	23	7.5	72

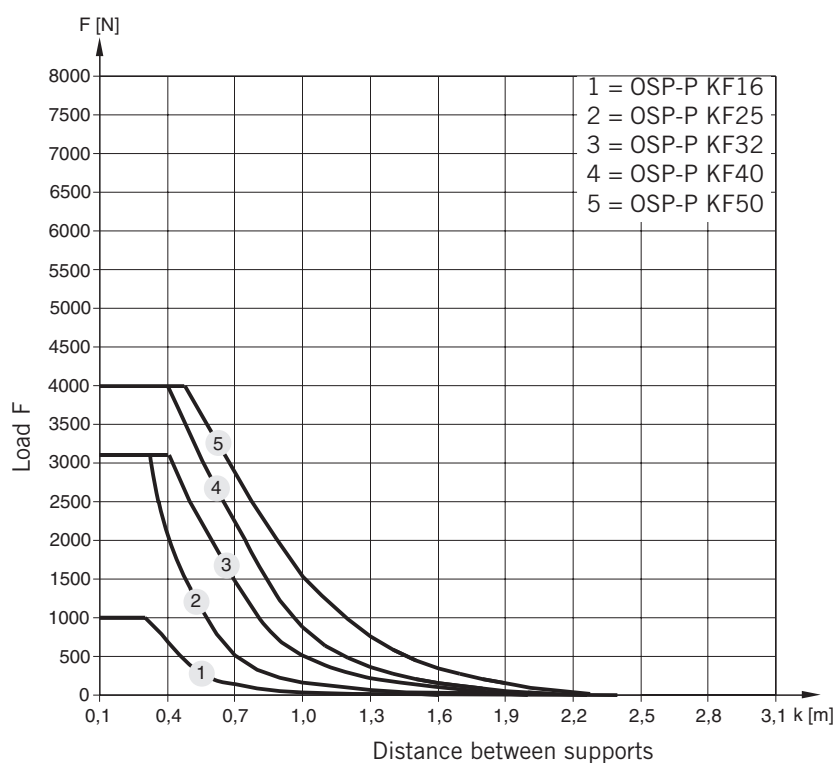
### Permissible Unsupported Length OSP-P KF16 to KF50

Loading 1 – Top carrier



### Permissible Unsupported Length OSP-P KF16 to KF50

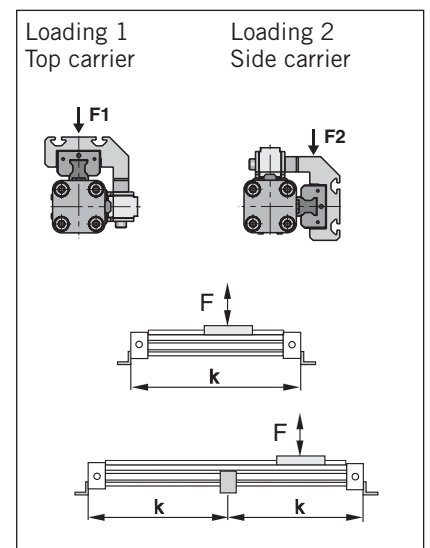
Loading 2 – Side carrier



## Mid-Section Support

(For versions, see 1.45.005-5E, 1.45.005E-8, 1.45.005E-9)

Mid-section supports are required from a certain stroke length to prevent excessive deflection and vibration of the linear drive. The diagrams show the maximum permissible unsupported length in relation to loading. A distinction must be drawn between loading 1 and loading 2. Deflection of 0.5 mm max. between supports is permissible.



#### Note:

For speeds  $v > 0.5$  m/s the distance between supports should not exceed 1 m.

## Variable Stop

The variable stop Type VS provides simple stroke limitation.

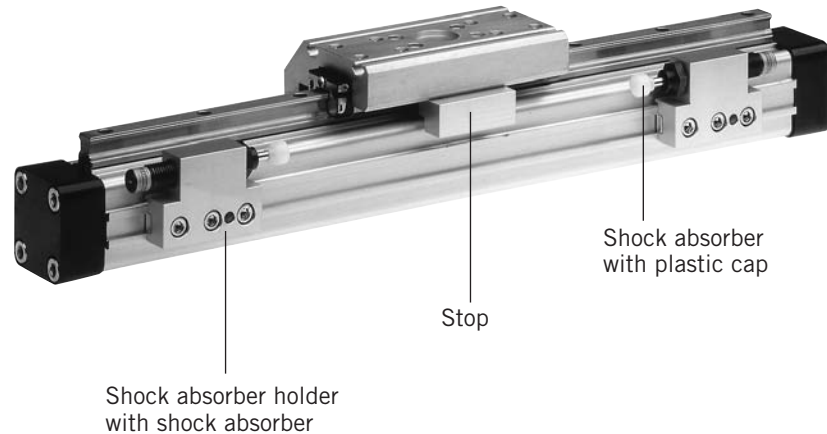
It can be retrofitted and positioned anywhere along the stroke length. For every cylinder diameter two types of shock absorber are available – see „Shock Absorber Selection“ below.

Mid-section supports and magnetic switches can still be fitted on the same side as the variable stop.

Depending on the application, two variable stops can be fitted if required.

### Variable Stop Type VS16 to VS50

Arrangement with two variable stops

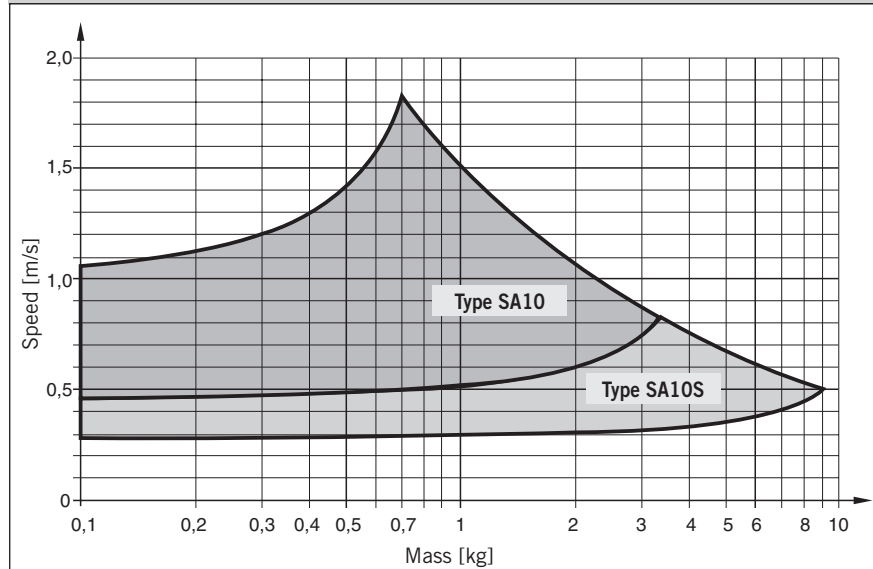


## Shock Absorber Selection

The shock absorber is selected in dependence on the mass and speed.

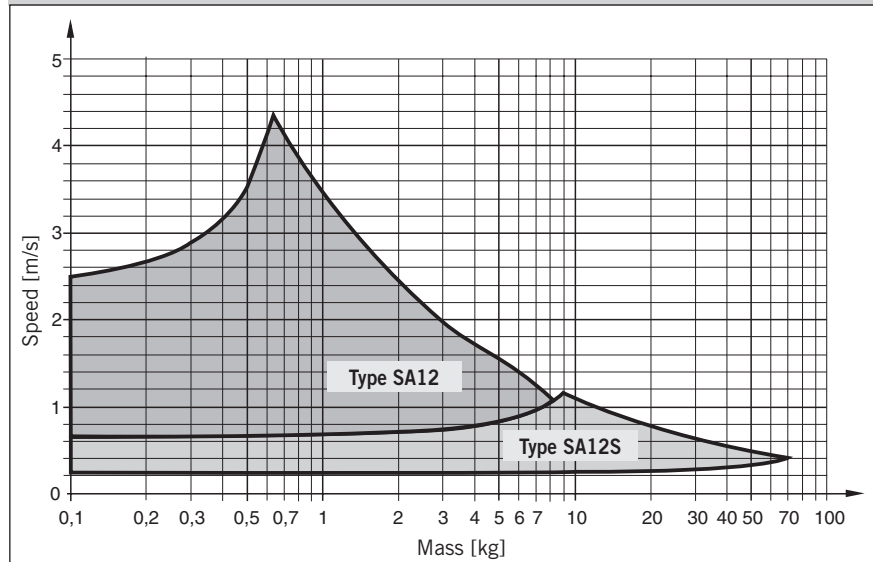
The mass of the carrier itself must be taken into account.

### Shock Absorber Selection in Dependence on Mass and Speed for Series OSP-KF16



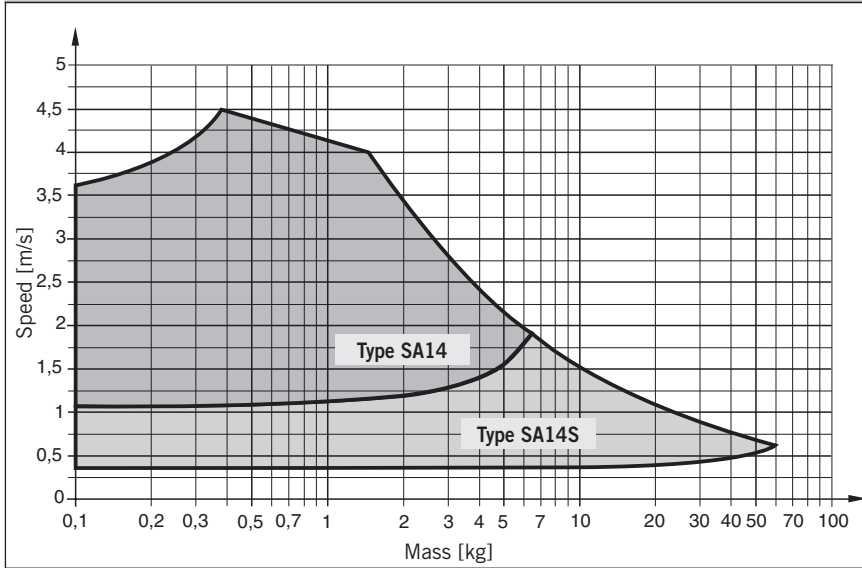
The values relate to an effective driving force of 78 N (6 bar)

### Shock Absorber Selection in Dependence on Mass and Speed for Series OSP-KF25



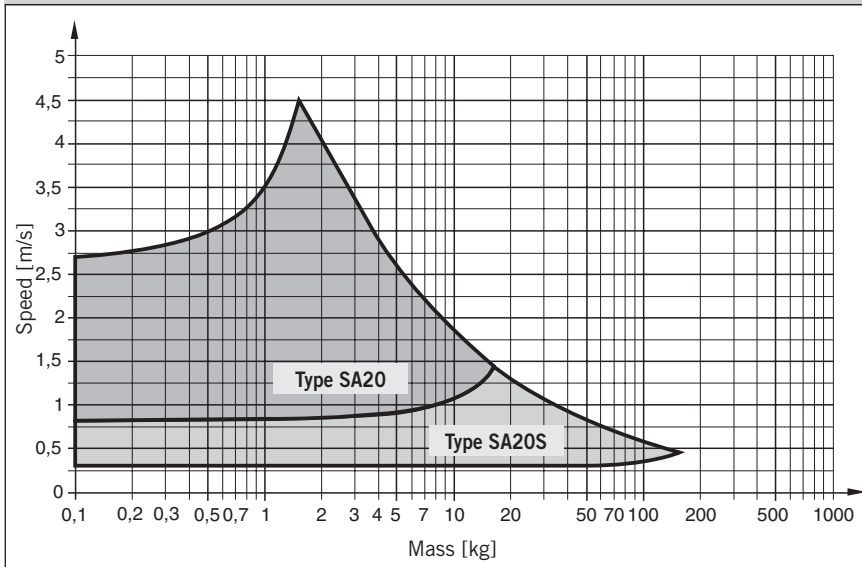
The values relate to an effective driving force of 250 N (6 bar)

**Shock Absorber Selection in Dependence on Mass and Speed for Series OSP-KF32**



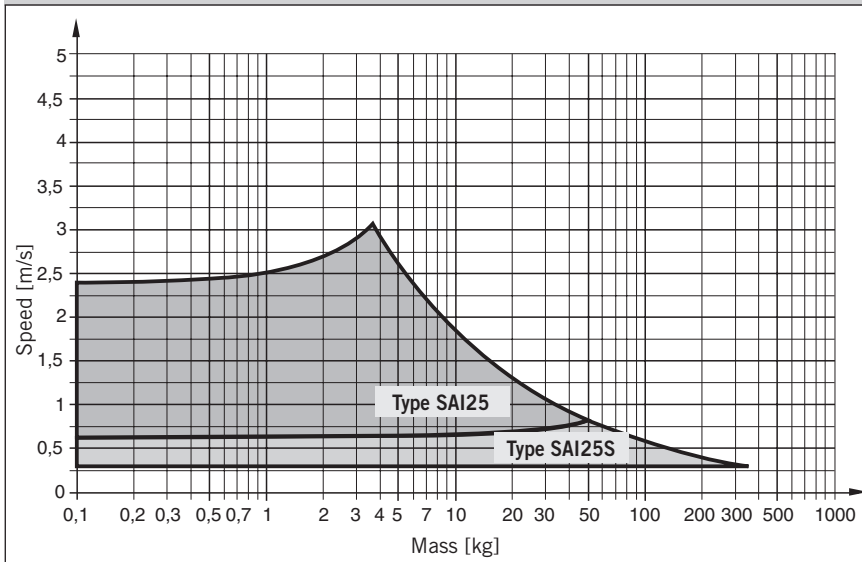
The values relate to an effective driving force of 420 N (6 bar)

**Shock Absorber Selection in Dependence on Mass and Speed for Series OSP-KF40**



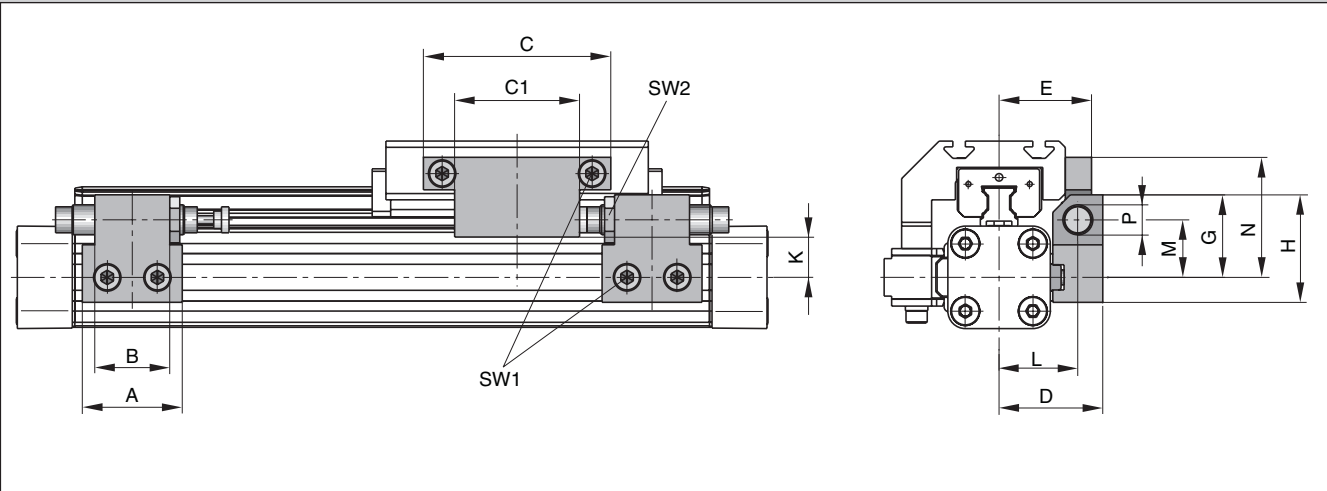
The values relate to an effective driving force of 640 N (6 bar)

**Shock Absorber Selection in Dependence on Mass and Speed for Series OSP-KF50**



The values relate to an effective driving force of 1000 N (6 bar)

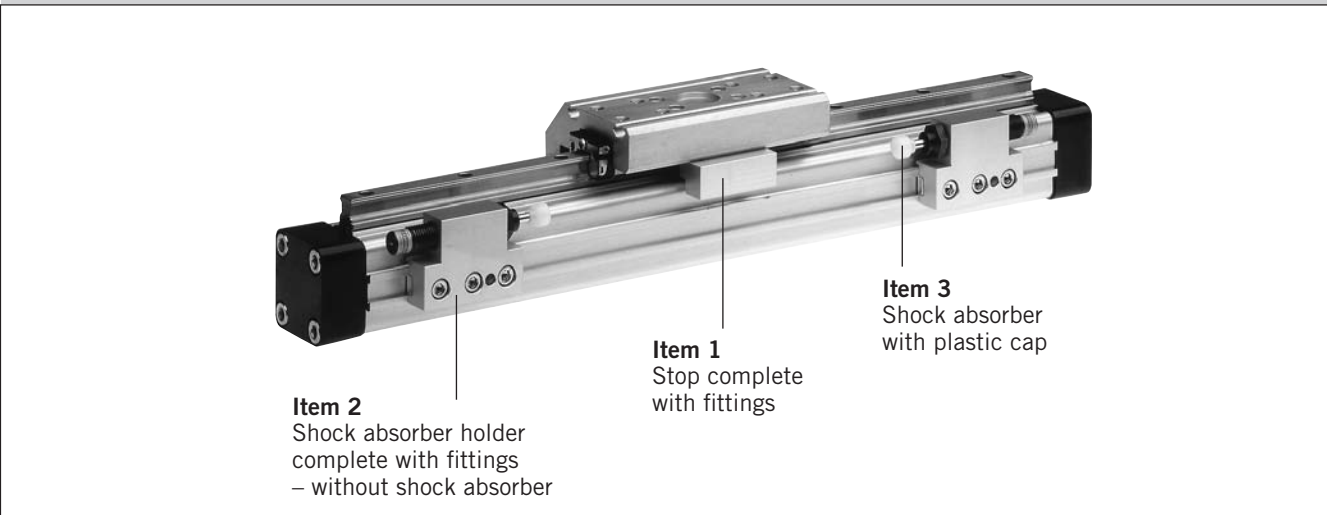
**Dimensions – Variable Stop Type VS16 to VS50**



**Dimension Table (mm) – Variable Stop Type VS16 to VS50**

Series	Type	A	B	C	C1	D	E	G	H	K	L	M	N	P	SW1	SW2
OSP-KF16	VS16	30	14	50	25	33	29.7	28	38	16.2	25.5	20.5	40.5	M10 x 1	4	12.5
OSP-KF25	VS25	40	30	75	50	41.5	37	33	43	18	31.5	23	48	M12 x 1	5	16
OSP-KF32	VS32	60	40	50	-	45.5	41.5	35	45	19	35.5	25	37	M14 x 1.5	5	17
OSP-KF40	VS40	84	52	60	-	64	59	48	63	25.5	50	34	43	M20 x 1.5	5	24
OSP-KF50	VS50	84	-	60	-	75	69	55	70	26.9	57	38	58	M25 x 1.5	5	30

**Order Information – Variable Stop Type VS16 to VS50**



**Order Instructions – Variable Stop Type VS16 to VS50**

Item	Description	Size VS16		VS25		VS32		VS40		VS50	
		Type	Order No.	Type	Order No.	Type	Order No.	Type	Order No.	Type	Order No.
1	Stop, complete	-	21186	-	21187	-	21188	-	21189	-	21190
2	Shock absorber holder, complete	-	21201	-	21202	-	21203	-	21204	-	21205
3 *	Shock absorber, standard	SA10	7900	SA12	7706	SA14	7708	SA20	7710	SAI25	7712
	Shock absorber, version S	SA10S	7907	SA12S	7707	SA14S	7709	SA20S	7711	SAI25S	7713

\* Shock absorber with plastic cap