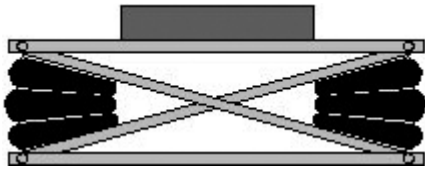


Bellows Cylinders Applications

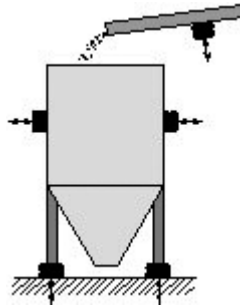


Bellows Cylinders

Applications



Scissor lift



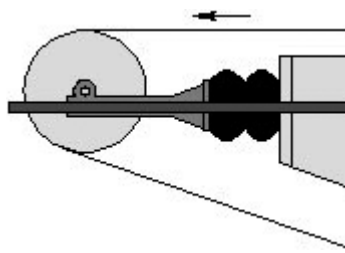
Hopper vibration and damping



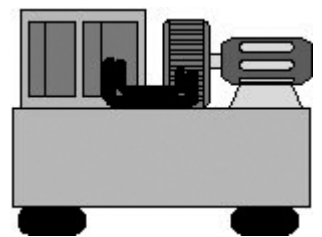
Mechanical handling stop



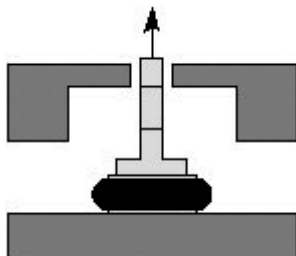
Quick lock device



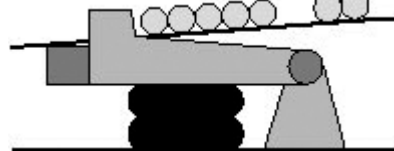
Reel tensioning



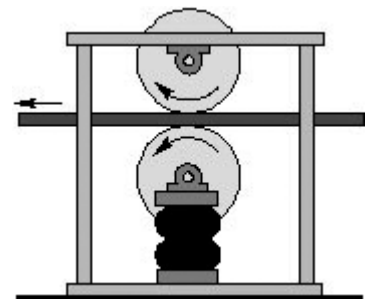
Machine isolation



Direct force



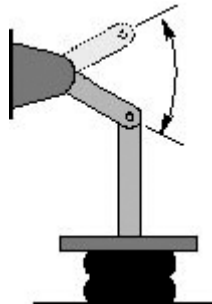
Impact absorption



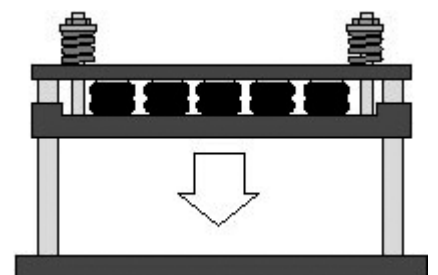
Roller tensioning



Platform lift



Short stroke mechanical linkage



Hot foil stamping press

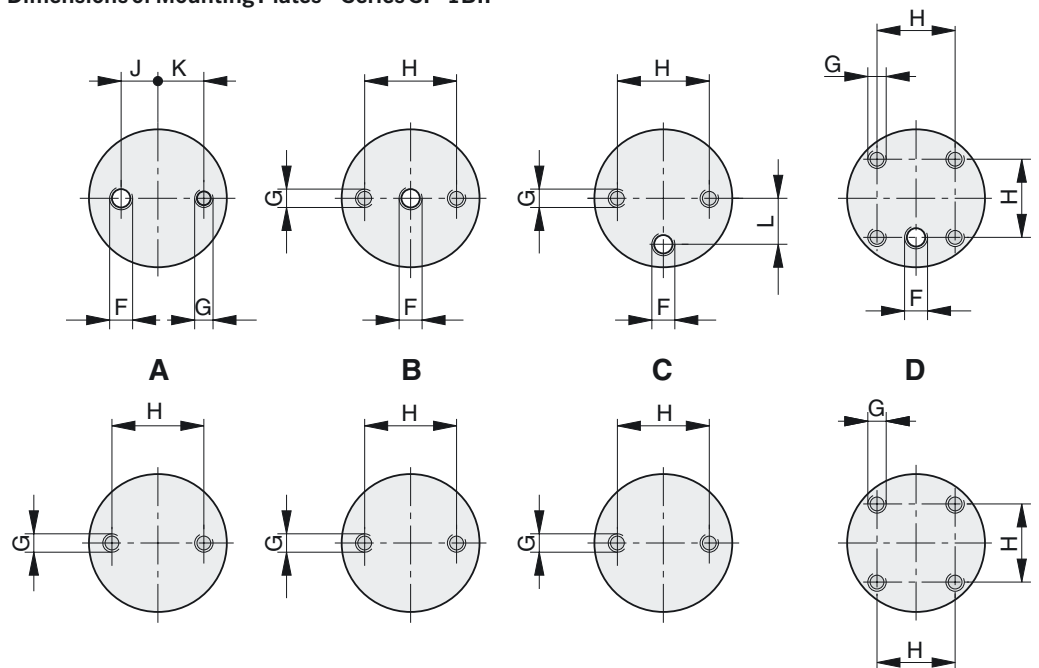
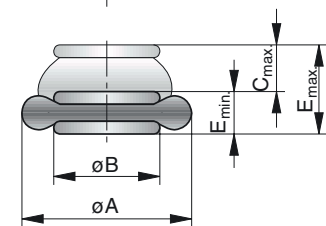
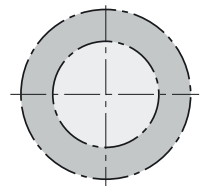
Bellows Cylinders

SP-1B...

Single convolution

Dimensions
Series SP-1B..

Dimensions of Mounting Plates – Series SP-1B..



Dimension Table (mm) and Order Instructions

Type	Order-No.	Mounting plate	ØA at 8 bar	ØB	C _{max} **	E _{max} **	E _{min}	F	G*	H	J	K	L
SP-1B04	KY9500	A	150	88	55	105	50	G1/4	M8	22	9	11	–
SP-1B05	KY8401	B	165	110	45	95	50	G1/4	M8	44.5	–	–	–
SP-1B07	KY9501	C	205	135	80	130	50	G1/4	M8	54	–	–	27
SP-1B12	KY9502	C	250	160	100	150	50	G3/4	M8	89	–	–	38
SP-1B22	KY9590	C	350	229	110	170	60	G3/4	M12	157.5	–	–	73
SP-1B34	KY8010	D	420	288	110	170	60	G3/4	M8	158.8	–	–	–

* 15 deep

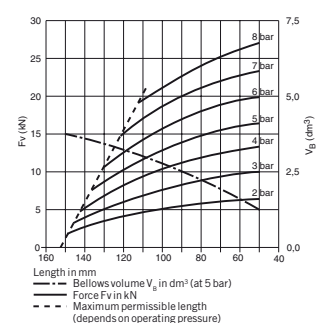
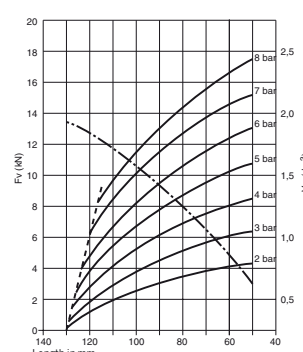
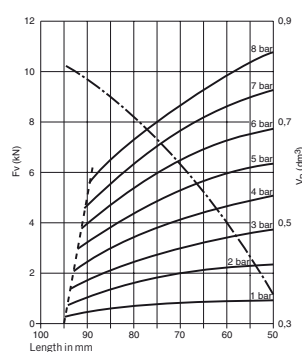
** These dimensions depend on the operating pressure: see force diagrams

Symbol	Ø mm (inches)	Port size	Max force (N) at 1 bar (0 stroke)	Max stroke mm	Type	Order code
	150	G1/4	1250	55	SP-1B04	KY9500
	165	G1/4	1350	45	SP-1B05	KY8401
	205	G1/4	1550	90	SP-1B07	KY9501
	250	G3/4	2800	100	SP-1B12	KY9502
	350	G3/4	5050	110	SP-1B22	KY9590
	420	G3/4	7600	110	SP-1B34	KY8010

Type: SP-1B05, Stroke: max. 45 mm

Type: SP-1B07, Stroke: max. 90 mm

Type: SP-1B12, Stroke: max. 100 mm

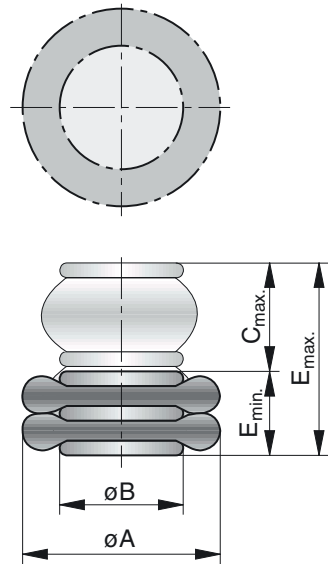


Bellows Cylinders

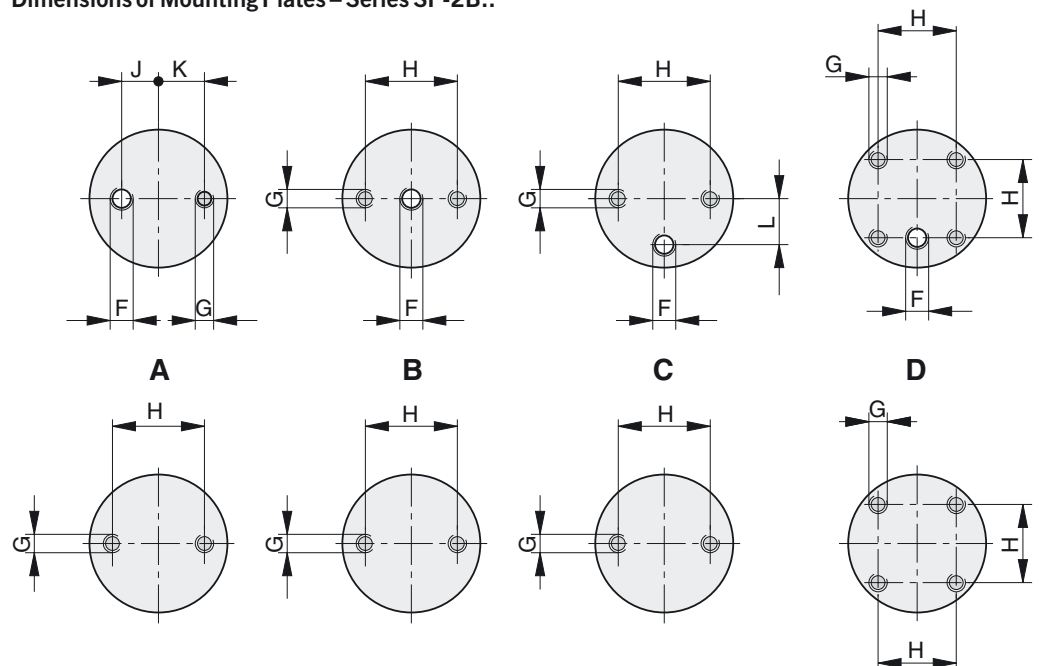
SP-2B...

Double convolution

Dimensions Series SP-2B..



Dimensions of Mounting Plates – Series SP-2B..



Dimension Table (mm) and Order Instructions

Type	Order-No.	Mounting	ØA at 8 bar	ØB	C _{max} **	E _{max} **	E _{min}	F	G*	H	J	K	L
SP-2B04	KY9612	A	165	82	110	190	80	G1/4	M8	22	9	11	-
SP-2B05	KY8011	B	165	110	80	160	80	G1/4	M8	44.5	-	-	-
SP-2B05A	KY8012	B	170	110	105	185	80	G1/4	M8	44.5	-	-	-
SP-2B07	KY9589	C	215	135	125	220	95	G1/4	M8	54	-	-	27
SP-2B12	KY9611	C	250	160	150	240	90	G3/4	M8	89	-	-	38
SP-2B22	KY9591	C	320	229	170	260	90	G3/4	M12	157.5	-	-	73
SP-2B34	KY8007	D	390	288	170	260	90	G3/4	M8	158.8	-	-	-

* 15 deep

** These dimensions depend on the operating pressure: see force diagrams

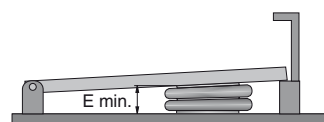
Symbol	Ø mm (inches)	Port size	Max force (N) at 1 bar (0 stroke)	Max stroke mm	Type	Order code
	165	G1/4	1250	110	SP-2B04	KY9612
	165	G1/4	1350	80	SP-2B05	KY8011
	170	G1/4	1750	105	SP-2B05A	KY8012
	215	G1/4	2200	125	SP-2B07	KY9589
	250	G3/4	3700	150	SP-2B12	KY9611
	320	G3/4	5000	170	SP-2B22	KY9591
	390	G3/4	8000	170	SP-2B34	KY8007

Maximum permissible pitch

The pitch of the end plates must not exceed 30°.

Minimum permissible length (E_{min}) and maximum permissible length (E_{max}), must be observed.

Position at minimum
permissible length



Position at maximum
permissible length

