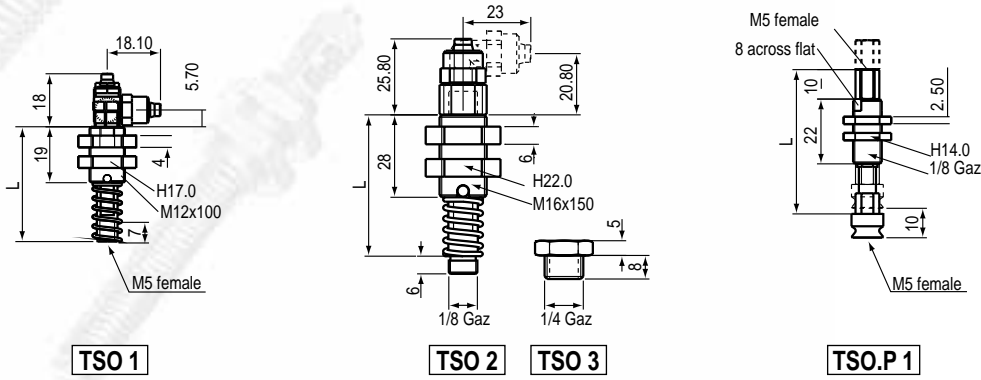


Anti-rotation spring systems, series TSO



Applications:

The anti-rotation spring systems, series TSO, are standard spring systems. They allow a horizontal manipulation of parts on different levels. The anti-rotation function so ensures a part gripping in always the same position.

Characteristics:

Models	TSO.P 1	TSO1	TSO1	TSO1	TSO2	TSO2	TSO2	TSO2	TSO3	TSO3	TSO3	TSO3
Stroke (mm)	10	10	20	30	10	30	50	70	10	30	50	70
L (mm)	49	39	59	79	48	88	128	168	48	88	128	168
Spring force N/mm	0,45	0,15	0,07	0,045	0,9	0,2	0,115	0,08	0,9	0,2	0,115	0,08
Force at rest N	1,8	1,70	1,45	2	8,1	4,2	4,5	4,5	8,1	4,2	4,5	4,5

Specifications:

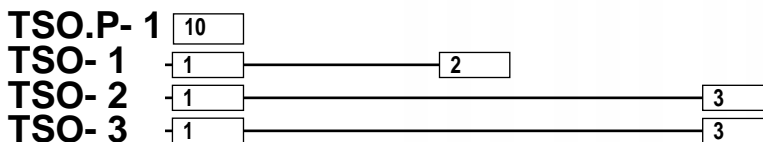
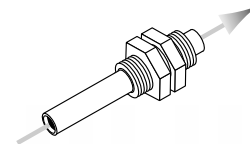
Spring material	Stainless steel
Tube material	Zinc-plated steel
Slider material	Brass

Fitting of suction cups:

To select the appropriate spring system according to the suction cup, see pages 74 to 79, in taking the couplings into account.

Avantage of TSO.P 1:

Le TSO.P1 is an anti-rotation spring-system, designed for manipulations demanding a higher precision.



1 : Spring stroke	
10 - 20	For models TSO 1
30	
10 - 30	For models TSO 2 and TSO 3
50 - 70	

2 : Couplings for TSO 1	
D46	Straight 4x6
C46	Elbowed 4x6
T46	T 4x6

3 : Couplings for TSO 2 and TSO 3	
D46	Straight 4x6
D68	Straight 6x8
C46	Elbowed 4x6
C68	Elbowed 6x8

Dimensions and characteristics may be modified without notice.