

# TSOP - TSOG

## Anti-Rotation Level Compensators



The TSOP and TSOG series spring systems are anti-rotation spring systems. They are used for horizontal handling of parts at different levels. The anti-rotation function ensures that objects are always gripped in the same position

The TSOP range is designed for applications requiring very precise handling.

- The hexagonal rod prevents the suction cup from rotating.
- Protected spring.

### Characteristics - TSOP

References	A	F1	F2	C	D	L	1	2	Fres (lbf/in)	Frep (lbf)	(g)
TSOP 107	M5-F	M5-F	G1/8"-M	7	18	42	7	14	3.88	0.29	20
TSOP 110	M5-F	M5-F	G1/8"-M	10	22	49	7	14	2.57	0.40	22
TSOP 120	M5-F	M5-F	G1/8"-M	20	39	73.5	7	14	1.37	0.38	33
TSOP 140	M5-F	M5-F	G1/8"-M	40	64	118.5	7	14	0.74	0.36	50

Note: All dimensions are in mm

C = Stroke

Fres = Spring force

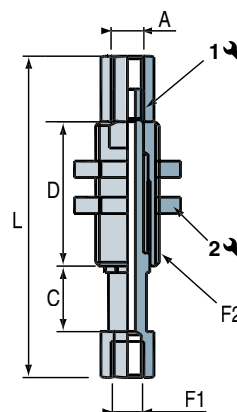
Frep = Force at rest

Materials

**Spring** Stainless steel

**Tubing** Anodized aluminum

**Slider** Nickel-plated steel



### Characteristics - TSOG

References	A	F1	F2	C	B	D	E	G	L	1	2	3	Fres (lbf/in)	Frep (lbf)	(g)
TSOG2 20F	G1/8"-F	G1/8"-F	M16x1-M	20	22	52	7	9	107	12	19	12	1.44	0.82	46.5
TSOG2 35F	G1/8"-F	G1/8"-F	M16x1-M	35	22	72	7	9	142	12	19	12	0.78	0.97	58
TSOG3 25F	G1/4"-F	G1/4"-F	M20x1.5-M	25	28	58	10	10	126	16	24	16	1.47	0.99	86
TSOG3 50F	G1/4"-F	G1/4"-F	M20x1.5-M	50	28	90.5	10	10	183.5	16	24	16	0.74	1.00	115
TSOG4 40F	G3/8"-F	G3/8"-F	M25x1.5-M	40	28	90	11	11	173	22	32	22	1.31	1.37	205
TSOG4 80F	G3/8"-F	G3/8"-F	M25x1.5-M	80	28	140	11	11	263	22	32	22	0.68	1.35	275

Note: All dimensions are in mm

C = Stroke

Fres = Spring force

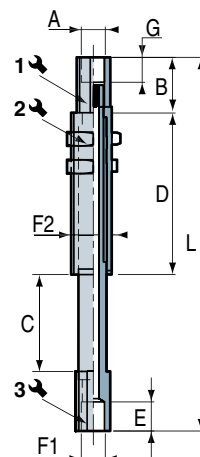
Frep = Force at rest

Materials

**Spring** Stainless steel

**Tubing** Anodized aluminum

**Slider** Anodized aluminum



 Please specify the part e.g.: TSOG350F  
See part n° table above.