# TS

# **Level Compensators**

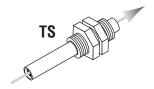


TS series compensated spring systems are recommended for horizontal handling of parts at different levels. The spring function also ensures that the gripping points are applied on the same plane when gripping with multiple suction cups.

**Materials** 

**Spring** Stainless steel **Tubing** Zinc-plated steel

**Slider** Brass



Characteristics													
Models	TS1				TS2				TS3				TS1.20 LG
Stroke	05	10	20	30	10	30	50	70	10	30	50	70	20
L	29	39	59	79	48	88	128	168	48	88	128	168	59
k (lbf/in)	2.06	0.86	0.40	0.26	5.14	1.14	0.66	0.46	5.14	1.14	0.66	0.46	0.40
Frep (lbf)	0.22	0.38	0.33	0.45	1.82	0.94	1.01	1.01	1.15	0.94	1.01	1.01	0.33

Note: All dimensions are in mm

**k** = Spring stiffness

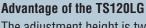
Frep = Force at rest

# **TS1** TS2 TS3 TS1.20 LG 23.8 23.8 M12 x 1-M H 17.0 H 22.0 H 22.0 M12x1-M M16x1.5-M M16x1.5-M M5-F G1/8"-M G1/4"-M \_M5-F

## Please specify the part n° e.g.: Model + Spring stroke + Fitting e.g.: TS350C46 1: Model 3: Fittings (for TS series) 2: Spring stroke TS1 **05 - 10 - 20 - 30** (TS1) **D46** (Straight 4 x 6 - TS1, TS2, TS3) TS2 **10 - 30 - 50 - 70** (TS2, TS3) **D68** (Straight 6 x 8 - TS2, TS3) TS3 C46 (Elbow 4 x 6 - TS1, TS2, TS3) C68 (Elbow 6 x 8 - TS2, TS3) T46<sup>1</sup> (T-shape 4 x 6 - TS1) $N^2$ (Without fitting)

# (1) versions T46 and T68 on request for TS2 and TS3.

(2) For TS1 model, vacuum connection M5-F and for models TS2 and TS3 vacuum connection G1/8"-M.



The adjustment height is twice that of the standard TS1 spring system and its spring is protected.



# **Level Compensators**



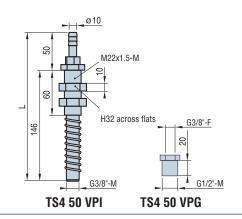
Characteristics								
Models	TS4 50	TS5 60						
Stroke	45	60						
L	196	234						
k (lbf/in)	2.68	7.02						
Force at rest (lbf)	0.90	0						

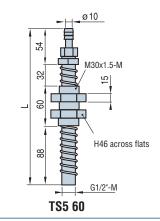
**k** = Spring stiffness

# **Materials**

Spring Stainless steel Tubina Zinc-plated steel Slider Zinc-plated steel

Note: All dimensions are in mm





# **Multi-Compensator Systems**

# Use

The system of 4 compensated springs is particularly recommended for horizontal handling requiring large diameter suction cups. The upper stainless steel springs act as dampers for all vertical movements. They compensate for different levels between the suction cups. The system of 4 compensated springs mounted in a square gives the assembly a ball-joint effect.



Spring Stainless steel **Damper** Stainless steel

Studs A 60

Colour Yellow RAL 1023

Charac	Characteristics																	
Models	Max. load (lbf)	Stroke under traction	Vertical force (lbf)	Maxi. weigth (kg)	Ball-joint angle	Tube mounted	Α	В	С	D	E	F	G	Н	ı	J	K	L
RSC1	449.60	30	35.97	1	10 °	50	140	106	88	50	M8-F	M10-M	8	120	5	52	52	9
RSC2	899.20	30	76.43	2.7	10 °	80	190	150	120	70	M12-F	M14-M	8	130	8	83	83	13

# **♦**E

# RSC option...VAC

**Square tube mounting options** (Tightening by indexable lever).

- RSC1 VAC on 50 mm square tube.
- RSC2 VAC on 80 mm square tube.

Note: All dimensions are in mm

# Note:

- RSC1: for SPL 240 suction cups, 5085 steel suction cups.
- RSC2: for SPL 340 suction cups, 5150 steel suction cups.

Please specify the part: Model + Type + Tube mounting option e.g.: RSC2VAC										
1: Model	2: T	ype	3: Tube-mounting option							
RSC	1 2	max. 449.60 lbf max. 899.20 lbf	VAC	with tube-mounting option						

