Suspensions pour ventouses

- Les suspensions (ou buffer, ou compensateurs de niveau) sont employées pour maintenir en position les ventouses durant l'approche du robot.
- Gimatic propose une gamme spécialement conçue pour les applications plastiques.
- Elles sont généralement montées sur des effecteurs de robot (EOAT) avec les étriers MFI.

Vacuum cup suspensions

- *The suspensions (or buffers, or level compensators) are used to keep the suction cups in position as the robot approaches.*
- *Gimatic offers a range specifically designed for Plastics applications.*
- *They are typically mounted on EOATs (End Of Arm Toolings) with MFI brackets.*

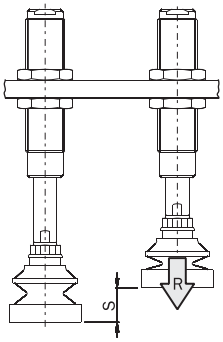
Force de réaction

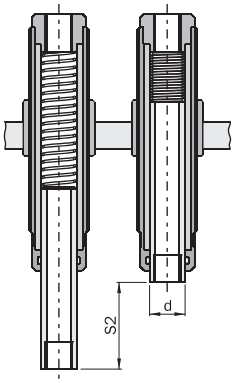
La force de réaction dépend de la compression (S) du ressort interne. Elle dépend aussi du diamètre du piston (d) et de la pression d'utilisation (p) dans le cas des suspensions télescopiques.
Utiliser la formule suivante pour le calcul.

Reaction force

The reaction force depends on the compression (S) of the internal spring. And also on the piston diameter (d) and operation pressure (p), in the case of telescopic suspensions.
Use the following formula for calculation.

$$R = R1 + K \cdot S + d^2 \cdot \frac{\pi}{40} \cdot p$$





R [N]	Force de réaction *Reaction force*
R1 [N]	Force du ressort au début de la course *Spring force at the beginning*
K [N/mm]	Elasticité constante du ressort *Spring rate*
S [mm]	Course effectuée *Compression stroke*
d [mm]	Alésage *Piston bore*
p [bar]	Pression *Pressure*
R2 [N]	Force du ressort à la fin de la course *Spring force at the end-stroke*
S2 [mm]	Course maximum *Maximum stroke*
m [g]	Poids *Weight*



VSL **VSC** **VSR** **VSRT** **VSE** **VSET** **VVX** **VSRTG**

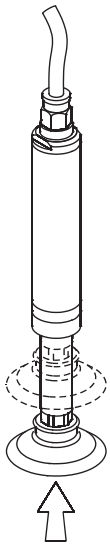


VSNG **VSNTG** **VSS** **VSD** **VSNF** **VSNTF** **VSRF** **VSRTF**

VSRT

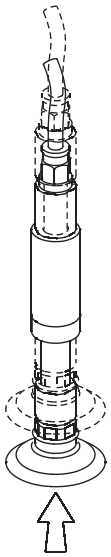
Suspensions télescopiques
Telescopic suspensions

- VSC
- VSL
- VSS



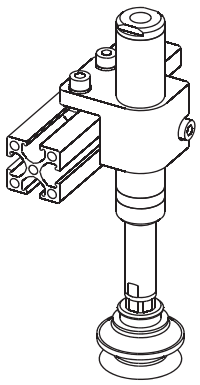
Suspensions à tige traversante
Through rod suspensions

- VSR
- VSRT
- VSN
- VSNT
- VSE
- VSET
- VVX
- VSRTG
- VSNG
- VSNTG
- VSD



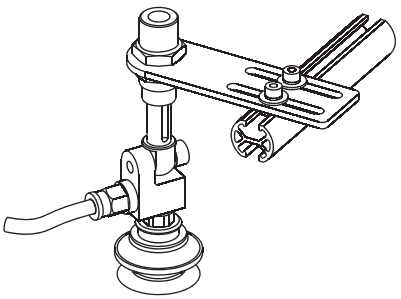
Suspensions avec corps lisse
Suspensions with smooth body

- VSL
- VSS
- VSR
- VSN
- VSE
- VVX
- VSNG
- VSD
- VSNF
- VSRF



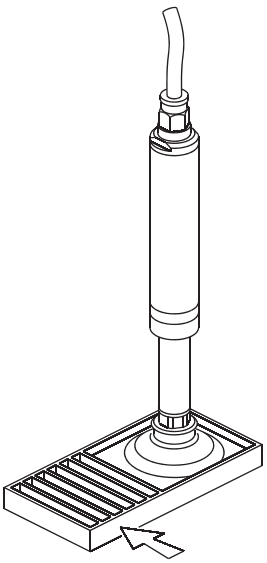
Suspensions avec corps taraudé
Suspensions with threaded body

- VSC
- VSRT
- VSNT
- VSET
- VSRTG
- VSNTG
- VSNTF
- VSRTF



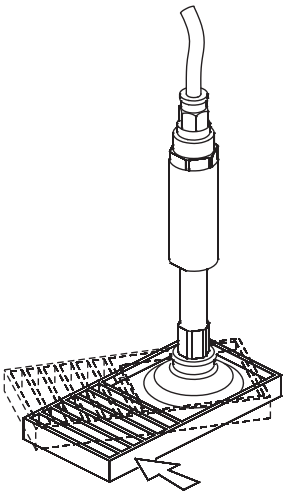
Suspensions anti-rotation
Non-rotative suspensions

- VSC
- VSL
- VSN
- VSNT
- VSE
- VSET
- VVX
- VSNG
- VSNTG
- VSD
- VSNF
- VSNTF



Suspensions rotatives
Rotative suspensions

- VSS
- VSR
- VSRT
- VSRTG
- VSRF
- VSRTF

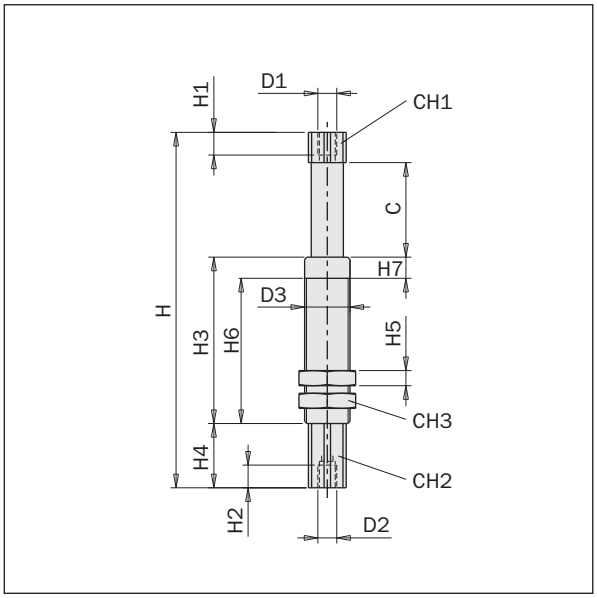


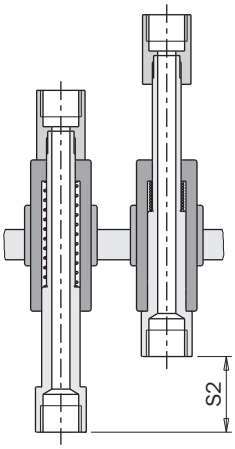
Suspensions sans anti-rotation avec corps fileté

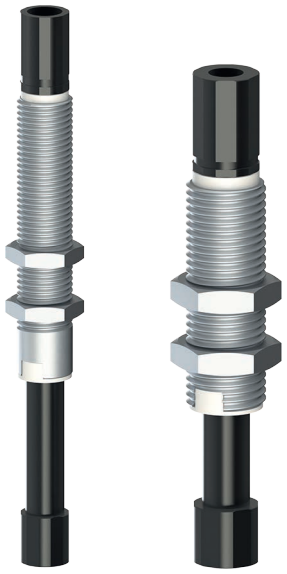
- Corps et tige en aluminium anodisé.
- Tige tournante.
- Pression d'utilisation: -1 ÷ 8 bar.
- Graisse alimentaire FDA-H1.

Threaded-body rotative suspensions

- *Body and rod in anodized aluminum.*
- *Rotative rod.*
- *Pressure range: -1 ÷ 8 bar.*
- *FDA-H1 food-grade grease.*







	NEW	NEW	NEW	NEW	NEW	NEW	NEW	NEW
	VSRT1010 9900001	VSRT1025 9900002	VSRT1420 9900003	VSRT1435 9900004	VSRT1620 9900005	VSRT1635 9900006	VSRT2025 9900007	VSRT2050 9900008
H [mm]	56	90.5	107	142	107	142	126	183.5
H1 [mm]	5	5	7	7	7	7	10	10
H2 [mm]	5	5	7	7	7	7	10	10
H3 [mm]	24.5	44	52	72	52	72	58	90.5
H4 [mm]	13.5	13.5	22	22	22	22	28	28
H5 [mm]	3.5	3.5	4	4	5	5	6	6
H6 [mm]	17.5	37	39	59	52	72	58	90.5
H7 [mm]	*7	*7	*13	*13	/	/	/	/
D1	M5	M5	G1/8"	G1/8"	G1/8"	G1/8"	G1/8"	G1/8"
D2	M5	M5	G1/8"	G1/8"	G1/8"	G1/8"	G1/8"	G1/8"
D3	M10x1	M10x1	M14x1.5	M14x1.5	M16x1	M16x1	M20x1.5	M20x1.5
CH1 [mm]	8	8	12	12	12	12	16	16
CH2 [mm]	8	8	12	12	12	12	16	16
CH3 [mm]	13	13	17	17	19	19	24	24
C [mm]	10	25	20	35	20	35	25	50
S2 [mm]	10	25	20	35	20	35	25	50
d [mm]	0	0	0	0	0	0	0	0
K [N/mm]	0.213	0.085	0.268	0.15	0.252	0.137	0.275	0.141
R1 [N]	1.49	1.575	3.617	4.267	3.650	4.325	4.131	4.308
R2 [N]	3.619	3.704	8.975	9.507	8.685	9.132	11.02	11.37
m [g]	12 g	16.5 g	37 g	47 g	46.5 g	58 g	90 g	118 g

*Non fileté
**Not threaded*