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.*

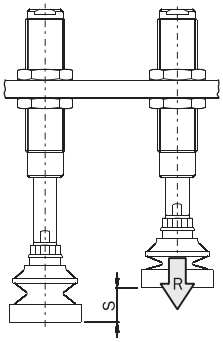
Force de réaction

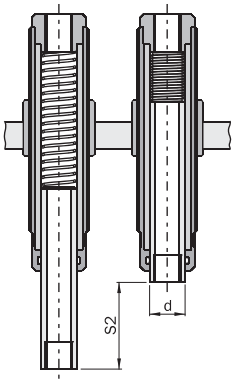
La force de réaction dépend de la compression (S) du ressort interne. Elle dépend aussi du diamètre du piston (d) et de la pression d'utilisation (p) dans le cas des suspensions télescopiques.
Utiliser la formule suivante pour le calcul.

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**

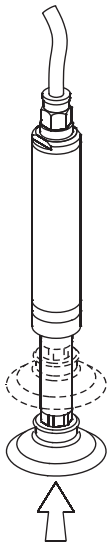


VSNG **VSNTG** **VSS** **VSD** **VSNF** **VSNTF** **VSRF** **VSRTF**

VSRTG

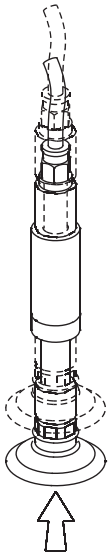
Suspensions télescopiques
Telescopic suspensions

- VSC
- VSL
- VSS



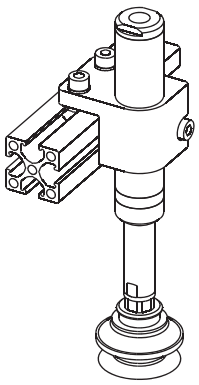
Suspensions à tige traversante
Through rod suspensions

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



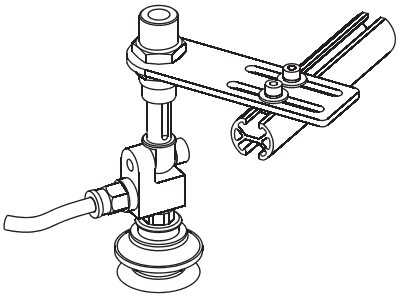
Suspensions avec corps lisse
Suspensions with smooth body

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



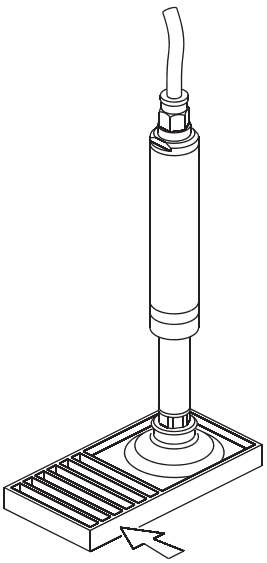
Suspensions avec corps taraudé
Suspensions with threaded body

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



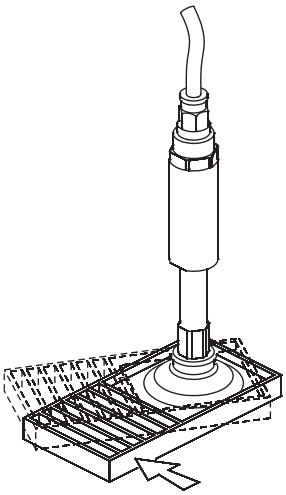
Suspensions anti-rotation
Non-rotative suspensions

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



Suspensions rotatives
Rotative suspensions

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

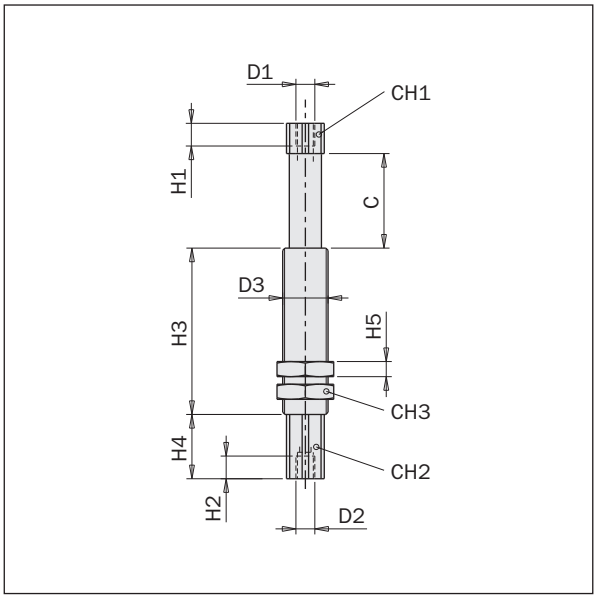


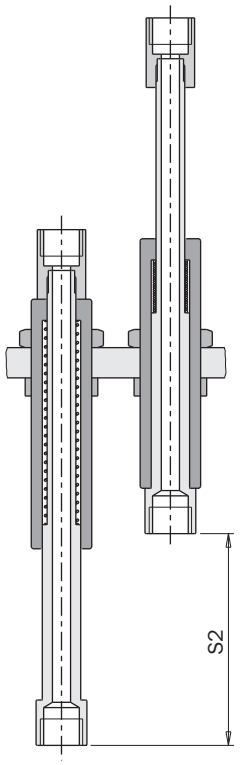
Suspensions inox rotatives avec corps fileté

- Corps, tige et ressort en acier inoxydable.
- Tige tournante.
- Graisse alimentaire FDA-H1.
- Pression d'utilisation: -1 ÷ 8 bar.

Rotative stainless suspensions with threaded body

- *Body, rod and spring in stainless steel.*
- *Rotative rod.*
- *FDA-H1 food-grade grease.*
- *Pressure range: -1 ÷ 8 bar.*







	VSRTG1225	VSRTG1635	VSRTG2050	VSRTG2580
H [mm]	94	127.5	170.5	249
H1 [mm]	5.5	9	10	11
H2 [mm]	5.5	7	10	11
H3 [mm]	44	58.5	82.5	121
H4 [mm]	17	20	23	33
H5 [mm]	4	5	6	8
D1	M5	G1/8"	G1/4"	G3/8"
D2	M5	G1/8"	G1/4"	G3/8"
D3	M12x1	M16x1	M20x1.5	M25x1.5
CH1 [mm]	10	12	16	23
CH2 [mm]	10	12	16	23
CH3 [mm]	15	19	24	32
C [mm]	25	35	50	80
S2 [mm]	25	35	50	80
d [mm]	0	0	0	0
K [N/mm]	0.108	0.137	0.129	0.119
R1 [N]	2.112	4.325	4.452	6.005
R2 [N]	4.820	9.132	10.90	15.52
m [g]	50	110	220	560