Sospensioni per ventose / *Suspensions for vacuum cups*

VSS

Sospensioni telescopiche auto-ritraenti

- Corpo e stelo in alluminio anodizzato.
- Tenuta senza guarnizioni.
- Usabile solo con il vuoto.
- Quando la ventosa prende un pezzo, il vuoto che agisce sul pistone interno supera la forza della molla e muove lo stelo.
- La velocità del movimento di ritrazione può essere calibrata con un regolatore di flusso standard.
- Quando si rimuove il vuoto, il pezzo viene rilasciato e la molla interna riporta lo stelo a fondo corsa.

Telescopic self-retracting suspensions

- *Body and rod in anodized aluminum.*
- *Sealing with no seals.*
- *Only for vacuum applications.*
- *When the cup takes a part, the vacuum on the internal piston overtakes the spring force and moves the rod up.*
- *The speed of the retraction movement can be adjusted by a standard throttle valve.*
- *When the vacuum is removed the part is released and the internal spring resets the rod.*

VSL VSC

Sospensioni telescopiche anti-rotazione

- Corpo e stelo in alluminio anodizzato.
- Trattamento anti-frizione sullo stelo.
- Cuscinetto in polimero per un movimento più omogeneo.
- Stelo anti-rotazione con gioco ridotto.
- Movimento telescopico: i raccordi ed i tubi non si muovono.
- Guarnizioni unidirezionali: usabile solo con il vuoto.

Telescopic non-rotative suspensions

- *Body and rod in anodized aluminum.*
- *Anti-friction treatment on the rod.*
- *Smooth movement thanks to the plastic bearing.*
- *Non-rotative rod with reduced tolerance.*
- *Telescopic lay-out: fittings and hoses don't move.*
- *Unidirectional sealing: only for vacuum applications.*

VSR VSRT

Sospensioni rotanti

- Corpo e stelo in alluminio anodizzato.
- Stelo girevole.

Rotative vacuum suspensions

- *Body and rod in anodized aluminum.*
- *Rotative rod.*

VSN VSNT

Sospensioni anti-rotazione

- Corpo e stelo in alluminio anodizzato.
- Stelo anti-rotazione con elevata capacità di carico.

Non-rotative suspensions

- *Body and rod in anodized aluminum.*
- *Non-rotative rod with high load capability.*

VSE VSET

Sospensioni anti-rotazione con giunto angolare integrato

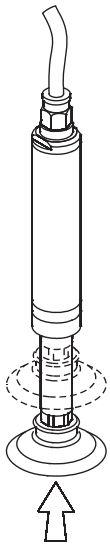
- L'angolo è regolabile continuamente fra 0° e +/-90°.
- Alimentazione esterna.
- Corpo e stelo in alluminio anodizzato.
- Stelo anti-rotazione con elevata capacità di carico.

Non-rotative suspensions with integrated elbow arms

- *It is possible to set continuously the angle between 0° and +/-90°.*
- *External air feeding.*
- *Body and rod in anodized aluminum.*
- *Non-rotative rod with high load capability.*

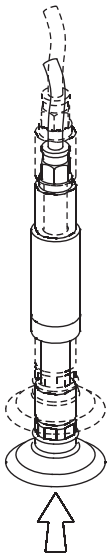
Sospensioni telescopiche
Telescopic suspensions

VSC
VSL
VSS



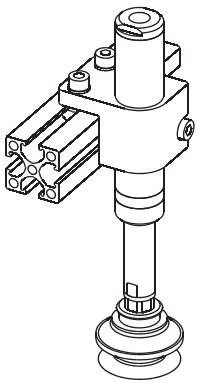
Sospensioni con stelo passante
Through rod suspensions

VSR
VSRT
VSN
VSNT
VSE
VSET



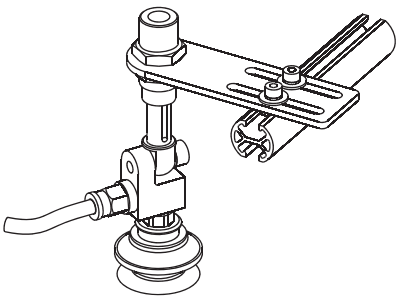
Sospensioni con corpo liscio
Suspensions with smooth body

VSL
VSS
VSR
VSN
VSE



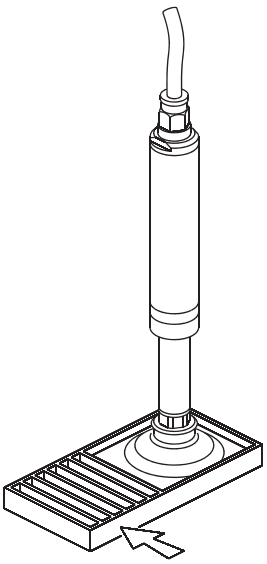
Sospensioni con corpo filettato
Suspensions with threaded body

VSC
VSRT
VSNT
VSET



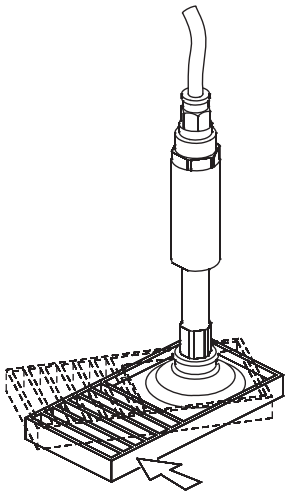
Sospensioni anti-rotazione
Non-rotative suspensions

VSC
VSL
VSN
VSNT
VSE
VSET



Sospensioni rotanti
Rotative suspensions

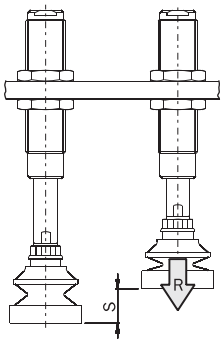
VSS
VSR
VSRT



Forza di reazione / *Reaction force*

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

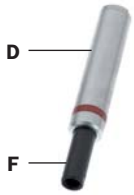
R [N] Forza di reazione
Reaction force
R1 [N] Forza della molla all'inizo della corsa
Spring force at the beginning
K [N/mm] Costante elastica della molla
Spring rate
S [mm] Corsa effettuata
Compression stroke
d [mm] Alesaggio
Piston bore
p [bar] Pressione
Pressure
R2 [N] Forza della molla alla fine della corsa
Spring force at the end-stroke
S2 [mm] Corsa massima
Maximum stroke
m [g] Peso
Weight



	Prezzo *Price*	F	M	T	D [mm]	S2 [mm]	d [mm]	K [N/mm]	R1 [N]	R2 [N]	m [g]	p [bar]
VSS2025		M5	G1/8"	-	Ø20	25	14.5	0.085	1.525	3.642	40	- 1 ÷ 0
VSS2050		M5	G1/8"	-	Ø20	50	14.5	0.052	1.606	4.197	55	- 1 ÷ 0
VSL1620		M5	-	-	Ø16	20	8	0.311	9.338	16.04	30	- 1 ÷ 0
VSL2030		G1/8"	-	-	Ø20	30	13	0.239	14.80	22.37	55	- 1 ÷ 0
VSL2430		G1/4"	-	-	Ø24	30	16	0.334	20.05	30.42	70	- 1 ÷ 0
VSC1620		M5	-	M16x1	-	20	8	0.311	9.338	16.04	35	- 1 ÷ 0
VSC2230		G1/8"	-	M22x1.5	-	30	13	0.239	14.80	22.37	80	- 1 ÷ 0
VSC2530		G1/4"	-	M25x1.5	-	30	16	0.334	20.05	30.42	115	- 1 ÷ 0
VSR1010S		M5	-	-	Ø10	10	0	0.106	0.957	2.020	7	- 1 ÷ 8
VSR1010		M5	-	-	Ø10	10	0	0.213	1.490	3.619	7	- 1 ÷ 8
VSR1010H		M5	-	-	Ø10	10	0	0.367	2.257	6.247	7	- 1 ÷ 8
VSR1025S		M5	-	-	Ø10	25	0	0.045	1.052	2.170	11	- 1 ÷ 8
VSR1025		M5	-	-	Ø10	25	0	0.085	1.575	3.704	11	- 1 ÷ 8
VSR1025H		M5	-	-	Ø10	25	0	0.138	3.1	6.545	11	- 1 ÷ 8
VSR1420S		G1/8"	-	-	Ø14	20	0	0.082	1.771	3.419	23	- 1 ÷ 8
VSR1420		G1/8"	-	-	Ø14	20	0	0.268	3.617	8.975	23	- 1 ÷ 8
VSR1420H		G1/8"	-	-	Ø14	20	0	0.522	5.480	15.92	23	- 1 ÷ 8
VSR1435S		G1/8"	-	-	Ø14	35	0	0.048	1.979	3.649	32	- 1 ÷ 8
VSR1435		G1/8"	-	-	Ø14	35	0	0.150	4.267	9.507	32	- 1 ÷ 8
VSR1435H		G1/8"	-	-	Ø14	35	0	0.317	5.229	16.32	32	- 1 ÷ 8
VSR2025S		G1/8"	-	-	Ø20	25	0	0.070	2.460	4.218	50	- 1 ÷ 8
VSR2025		G1/8"	-	-	Ø20	25	0	0.275	4.131	11.02	50	- 1 ÷ 8
VSR2025H		G1/8"	-	-	Ø20	25	0	0.635	5.716	21.59	50	- 1 ÷ 8
VSR2025S		G1/8"	-	-	Ø20	50	0	0.054	2.543	5.219	77	- 1 ÷ 8
VSR2050		G1/8"	-	-	Ø20	50	0	0.141	4.308	11.37	77	- 1 ÷ 8
VSR2050H		M5	-	-	Ø20	50	0	0.318	5.557	21.43	77	- 1 ÷ 8
VSRT1010		M5	-	M10x1	-	10	0	0.213	1.490	3.619	11	- 1 ÷ 8
VSRT1025		M5	-	M10x1	-	25	0	0.085	1.575	3.704	16	- 1 ÷ 8
VSRT1420		G1/8"	-	M14x1.5	-	20	0	0.268	3.617	8.975	32	- 1 ÷ 8
VSRT1435		G1/8"	-	M14x1.5	-	35	0	0.150	4.267	9.507	42	- 1 ÷ 8
VSRT1620		G1/8"	-	M16x1	-	20	0	0.268	3.617	8.975	40	- 1 ÷ 8
VSRT1635		G1/8"	-	M16x1	-	35	0	0.150	4.267	9.507	50	- 1 ÷ 8
VSRT2025		G1/8"	-	M20x1.5	-	25	0	0.275	4.131	11.02	70	- 1 ÷ 8
VSRT2050		G1/8"	-	M20x1.5	-	50	0	0.141	4.308	11.37	104	- 1 ÷ 8
VSN1010S		M5	-	-	Ø10	10	0	0.106	0.957	2.020	7	- 1 ÷ 8
VSN1010		M5	-	-	Ø10	10	0	0.213	1.490	3.619	7	- 1 ÷ 8
VSN1010H		M5	-	-	Ø10	10	0	0.367	2.257	6.247	7	- 1 ÷ 8
VSN1025S		M5	-	-	Ø10	25	0	0.045	1.052	2.170	11	- 1 ÷ 8
VSN1025		M5	-	-	Ø10	25	0	0.085	1.575	3.704	11	- 1 ÷ 8
VSN1025H		M5	-	-	Ø10	25	0	0.138	3.100	6.545	11	- 1 ÷ 8

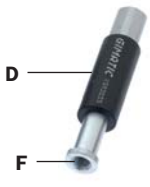
VSS

VSL



VSC

VSR



VSRT

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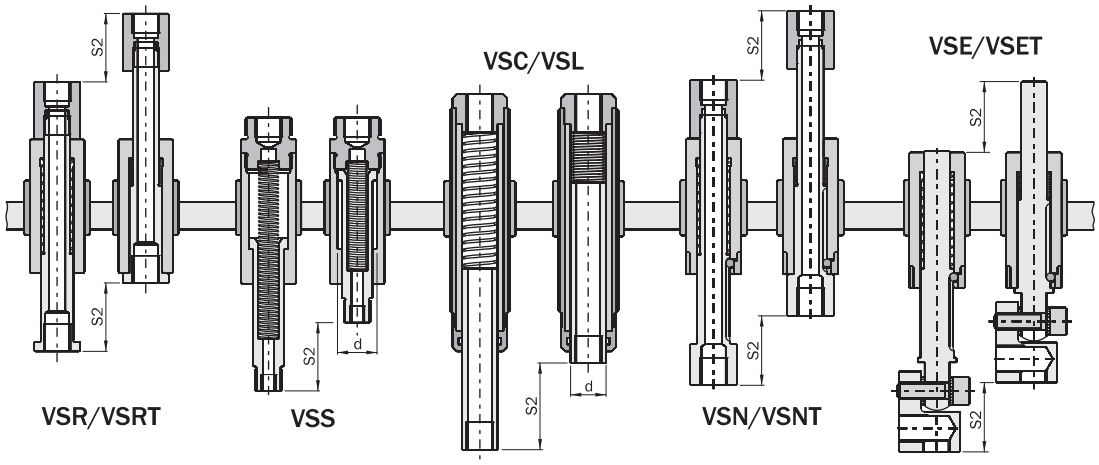
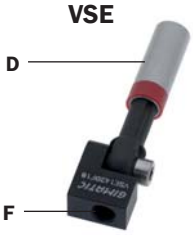


	Prezzo *Price*	F	M	T	D [mm]	S2 [mm]	d [mm]	K [N/mm]	R1 [N]	R2 [N]	m [g]	p [bar]
VSN1420S		G1/8”	-	-	Ø14	20	0	0.082	1.771	3.419	24	- 1 ÷ 8
VSN1420		G1/8”	-	-	Ø14	20	0	0.268	3.617	8.975	24	- 1 ÷ 8
VSN1420H		G1/8”	-	-	Ø14	20	0	0.522	5.480	15.92	24	- 1 ÷ 8
VSN1435S		G1/8”	-	-	Ø14	35	0	0.048	1.979	3.649	33	- 1 ÷ 8
VSN1435		G1/8”	-	-	Ø14	35	0	0.150	4.267	9.507	33	- 1 ÷ 8
VSN1435H		G1/8”	-	-	Ø14	35	0	0.317	5.229	16.32	33	- 1 ÷ 8
VSN2025S		G1/8”	-	-	Ø20	25	0	0.070	2.46	4.218	54	- 1 ÷ 8
VSN2025		G1/8”	-	-	Ø20	25	0	0.275	4.131	11.02	54	- 1 ÷ 8
VSN2025H		G1/8”	-	-	Ø20	25	0	0.635	5.716	21.59	54	- 1 ÷ 8
VSN2050S		G1/8”	-	-	Ø20	50	0	0.054	2.543	5.219	80	- 1 ÷ 8
VSN2050		G1/8”	-	-	Ø20	50	0	0.141	4.308	11.37	80	- 1 ÷ 8
VSN2050H		G1/8”	-	-	Ø20	50	0	0.318	5.557	21.43	80	- 1 ÷ 8
VSNT1010		M5	-	M10x1	-	10	0	0.213	1.490	3.619	12	- 1 ÷ 8
VSNT1025		M5	-	M10x1	-	25	0	0.085	1.575	3.704	16	- 1 ÷ 8
VSNT1620		G1/8”	-	M16x1	-	20	0	0.268	3.617	8.975	41	- 1 ÷ 8
VSNT1635		G1/8”	-	M16x1	-	35	0	0.150	4.267	9.507	53	- 1 ÷ 8
VSNT2025		G1/8”	-	M20x1.5	-	25	0	0.275	4.131	11.02	75	- 1 ÷ 8
VSNT2050		G1/8”	-	M20x1.5	-	50	0	0.141	4.308	11.37	107	- 1 ÷ 8
VSE1010F05S		(x2) M5	-	-	Ø10	10	0	0.106	0.957	2.020	15	- 1 ÷ 8
VSE1025F05S		(x2) M5	-	-	Ø10	25	0	0.138	3.100	6.545	20	- 1 ÷ 8
VSE1420F18S		(x2) G1/8”	-	-	Ø14	20	0	0.082	1.771	3.419	45	- 1 ÷ 8
VSE1420F18		(x2) G1/8”	-	-	Ø14	20	0	0.268	3.617	8.975	45	- 1 ÷ 8
VSE1435F18S		(x2) G1/8”	-	-	Ø14	35	0	0.048	1.979	3.649	55	- 1 ÷ 8
VSE1435F18		(x2) G1/8”	-	-	Ø14	35	0	0.150	4.267	9.507	55	- 1 ÷ 8
VSE2025F18S		(x2) G1/8”	-	-	Ø20	25	0	0.070	2.46	4.218	70	- 1 ÷ 8
VSE2025F18		(x2) G1/8”	-	-	Ø20	25	0	0.275	4.131	11.02	70	- 1 ÷ 8
VSE2025F14		(x2) G1/4”	-	-	Ø20	25	0	0.275	4.131	11.02	90	- 1 ÷ 8
VSE2050F18S		(x2) G1/8”	-	-	Ø20	50	0	0.054	2.543	5.219	105	- 1 ÷ 8
VSE2050F18		(x2) G1/8”	-	-	Ø20	50	0	0.141	4.308	11.37	105	- 1 ÷ 8
VSE2050F14		(x2) G1/4”	-	-	Ø20	50	0	0.141	4.308	11.37	120	- 1 ÷ 8
VSET1010F05		(x2) M5	-	M10x1	-	10	0	0.213	1.490	3.619	18	- 1 ÷ 8
VSET1025F05		(x2) M5	-	M10x1	-	25	0	0.085	1.575	3.704	23	- 1 ÷ 8
VSET1620F18		(x2) G1/8”	-	M16x1	-	20	0	0.268	3.617	8.975	57	- 1 ÷ 8
VSET1635F18		(x2) G1/8”	-	M16x1	-	35	0	0.150	4.267	9.507	70	- 1 ÷ 8
VSET2025F18		(x2) G1/8”	-	M20x1.5	-	25	0	0.275	4.131	11.02	88	- 1 ÷ 8
VSET2025F14		(x2) G1/4”	-	M20x1.5	-	25	0	0.275	4.131	11.02	109	- 1 ÷ 8
VSET2050F18		(x2) G1/8”	-	M20x1.5	-	50	0	0.141	4.308	11.37	125	- 1 ÷ 8
VSET2050F14		(x2) G1/4”	-	M20x1.5	-	50	0	0.142	4.308	11.37	142	- 1 ÷ 8

VSN

VSNT

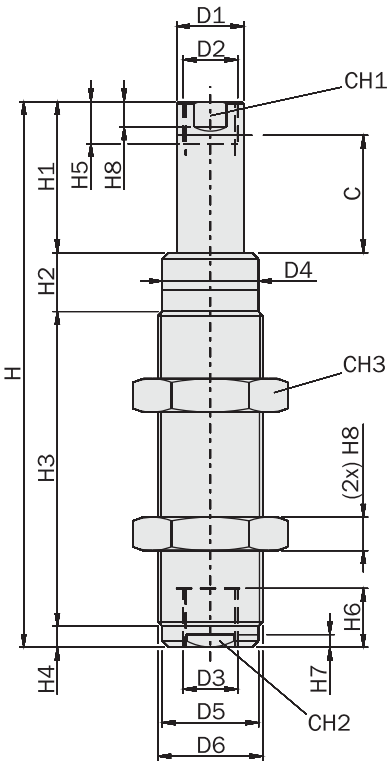
VSE

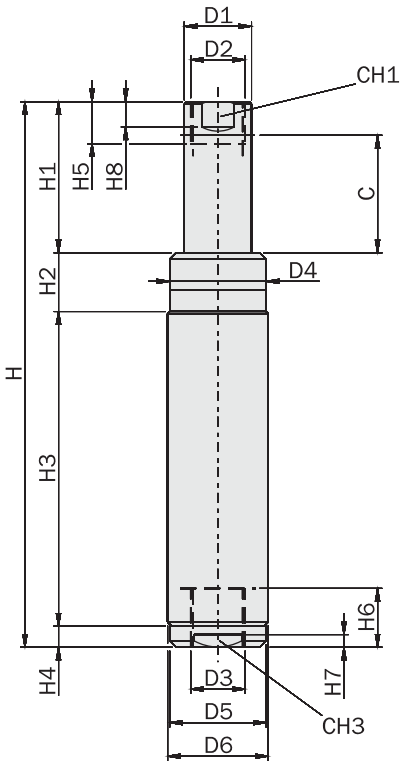


VSET

Dimensioni (mm) / *Dimensions (mm)*

VSC
VSL





	VSC1620	VSC2230	VSC2530	VSL1620	VSL2030	VSL2430
H	100	130	130	100	130	130
H1	26	36	36	26	36	36
H2	12	14	14	12	14	14
H3	57	75	75	57	75	75
H4	5	5	5	5	5	5
H5	10	10	10	10	10	10
H6	14	14	14	14	14	14
H7	3	3	3	3	3	3
H8	5	6	6	5	6	6
D1	Ø8	Ø13	Ø16	Ø8	Ø13	Ø16
D2	M5	G1/8"	G1/4"	M5	G1/8"	G1/4"
D3	M5	G1/8"	G1/4"	M5	G1/8"	G1/4"
D4	Ø14.5	Ø20	Ø23	Ø14.5	Ø20	Ø23
D5	Ø14.5	Ø20	Ø23	Ø14.5	Ø20	Ø23
D6	M16x1	M22x1.5	M25x1.5	Ø16	Ø20	Ø24
CH1	7	12	14	7	12	14
CH2	13	16	20	13	16	20
CH3	19	27	32	-	-	-
C	20	30	30	20	30	30

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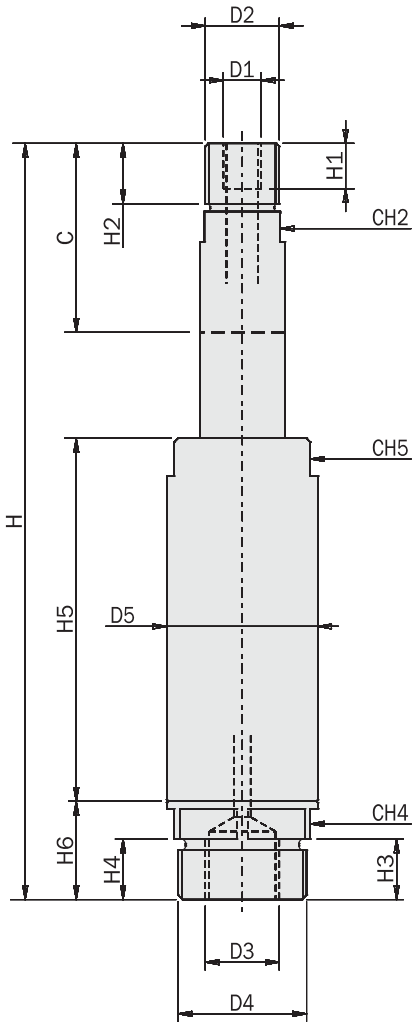
Dimensioni (mm) / *Dimensions (mm)*

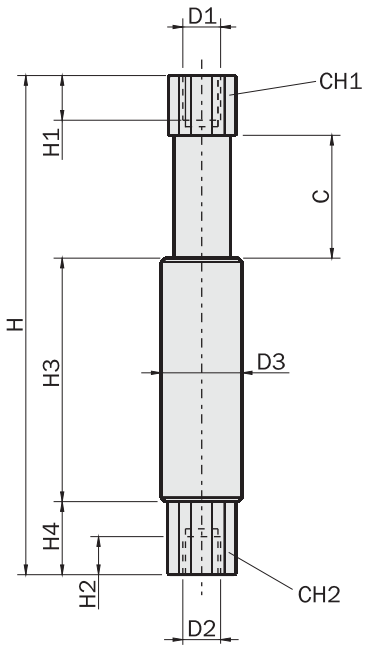
VSS



	VSS2025	VSS2050
H	100	150
H1	6	6
H2	8	8
H3	8	8
H4	8	8
H5	48	73
H6	13	13
D1	M5	M5
D2	G1/8”	G1/8”
D3	G1/8”	G1/8”
D4	M17x1	M17x1
D5	Ø20	Ø20
CH2	10	10
CH4	18	18
CH5	18	18
C	25	50

Dimensioni (mm) / *Dimensions (mm)*

VSR

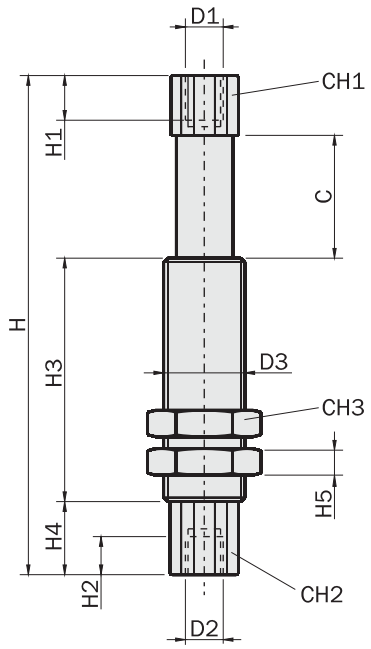


	VSR1010	VSR1025	VSR1420	VSR1435	VSR2025	VSR2050
H	51	85.5	92.5	127.5	98.5	156
H1	6	6	10	10	10	10
H2	5	5	7	7	7	7
H3	21	40.5	38.5	58.5	49	81.5
H4	17	17	20	20	21	21
D1	M5	M5	G1/8”	G1/8”	G1/8”	G1/8”
D2	M5	M5	G1/8”	G1/8”	G1/8”	G1/8”
D3	Ø10	Ø10	Ø14	Ø14	Ø20	Ø20
CH1	8	8	12	12	16	16
CH2	8	8	12	12	16	16
C	10	25	20	35	25	50

09/2011

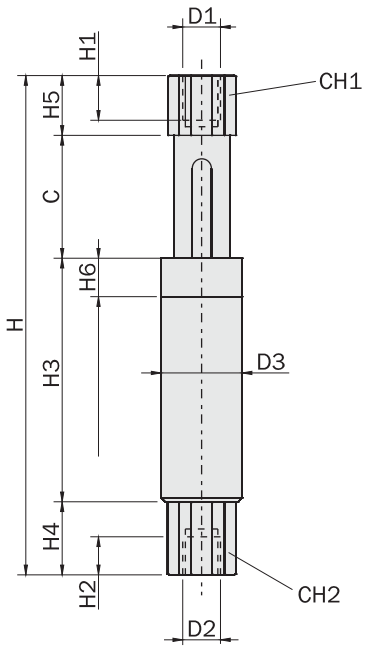
Dimensioni (mm) / *Dimensions (mm)*

VSRT



	VSRT1010	VSRT1025	VSRT1420	VSRT1435	VSRT1620 NEW	VSRT1635 NEW	VSRT2025	VSRT2050
H	51	85.5	92.5	127.5	92.5	127.5	98.5	156
H1	6	6	10	10	10	10	10	10
H2	5	5	7	7	7	7	7	7
H3	21	40.5	38.5	58.5	38,5	58,5	49	81.5
H4	17	17	20	20	20	20	21	21
H5	3.5	3.5	4	4	5	5	6	6
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	8	8	12	12	12	12	16	16
CH2	8	8	12	12	12	12	16	16
CH3	13	13	17	17	19	19	24	24
C	10	25	20	35	20	35	25	50

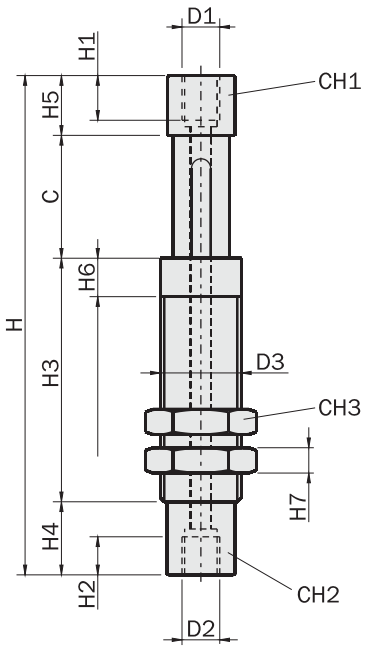
Dimensioni (mm) / *Dimensions (mm)* **VSN**



	VSN1010	VSN1025	VSN1420	VSN1435	VSN2025	VSN2050
H	56	90.5	98.5	133.5	110	167.5
H1	6	6	10	10	10	10
H2	5	5	7	7	7	7
H3	21	40.5	38.5	58.5	49	81.5
H4	17	17	20	20	21	21
H5	8	8	20	20	15	15
H6	5	5	7	7	8	8
D1	M5	M5	G1/8”	G1/8”	G1/8”	G1/8”
D2	M5	M5	G1/8”	G1/8”	G1/8”	G1/8”
D3	Ø10	Ø10	Ø14	Ø14	Ø20	Ø20
CH1	8	8	12	12	16	16
CH2	8	8	12	12	16	16
C	10	25	20	35	25	50

Dimensioni (mm) / *Dimensions (mm)*

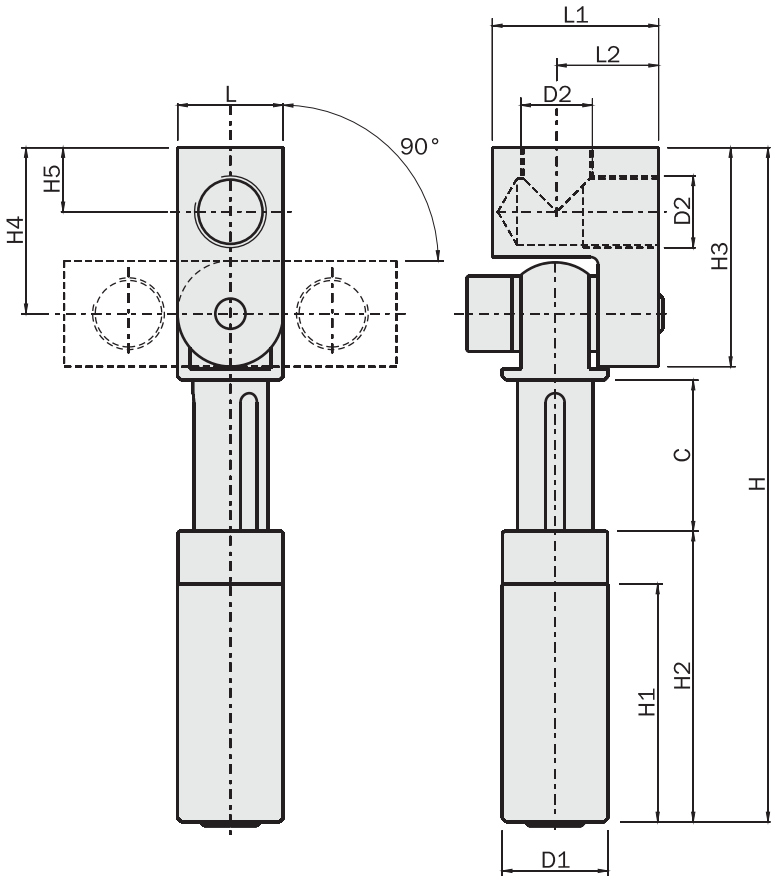
VSNT



	VSNT1010	VSNT1025	VSNT1620	VSNT1635	VSNT2025	VSNT2050
H	56	90.5	98.5	133.5	110	167.5
H1	6	6	10	10	10	10
H2	5	5	7	7	7	7
H3	21	40.5	38.5	58.5	49	81.5
H4	17	17	20	20	21	21
H5	8	8	20	20	15	15
H6	5	5	7	7	8	8
H7	3.5	3.5	5	5	6	6
D1	M5	M5	G1/8"	G1/8"	G1/8"	G1/8"
D2	M5	M5	G1/8"	G1/8"	G1/8"	G1/8"
D3	M10x1	M10x1	M16x1	M16x1	M20x1.5	M20x1.5
CH1	8	8	12	12	16	16
CH2	8	8	12	12	16	16
CH3	13	13	19	19	24	24
C	10	25	20	35	25	50

Dimensioni (mm) / *Dimensions (mm)*

VSE

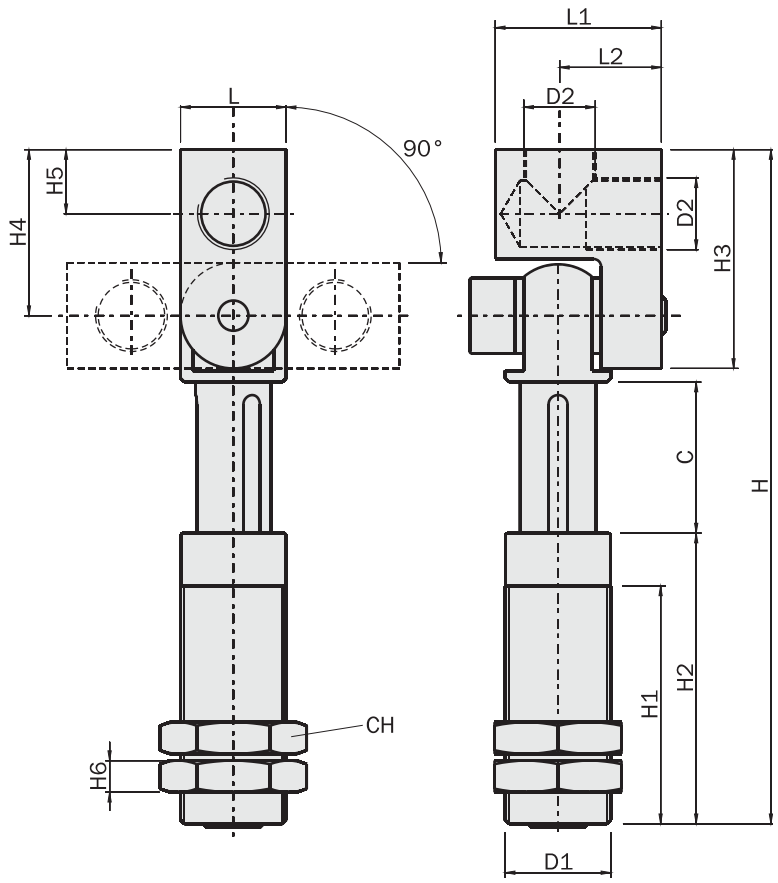


	VSE1010F05S	VSE1025F05S	VSE1420F18S VSE1420F18	VSE1435F18S VSE1435F18	VSE2025F18S VSE2025F18	VSE2025F14	VSE2050F18S VSE2050F18	VSE2050F14
H	51.5	86	89.3	124.3	108	114	165.5	171.5
H1	16	35.5	31.4	51.4	41	41	73.5	73.5
H2	21	40.5	38.5	58.5	49	49	81.5	81.5
H3	19	19	29	29	29	38	29	38
H4	14	14	22	22	22	28	22	28
H5	5.5	5.5	8.5	8.5	8.5	12	8.5	12
D1	Ø10	Ø10	Ø14	Ø14	Ø20	Ø20	Ø20	Ø20
D2	M5	M5	G1/8”	G1/8”	G1/8”	G1/4”	G1/8”	G1/4”
L	10	10	14	14	14	20	14	20
L1	16.5	16.5	22	22	22	27	22	27
L2	11	11	13.5	13.5	13.5	15	13.5	15
C	10	25	20	35	25	25	50	50

09/2011

Dimensioni (mm) / *Dimensions (mm)*

VSET



	VSET1010F05	VSET1025F05	VSET1620F18	VSET1635F18	VSET2025F18	VSET2025F14	VSET2050F18	VSET2050F14
H	51.5	86	89.3	124.3	108	114	165.5	171.5
H1	16	35.5	31.4	51.4	41	41	73.5	73.5
H2	21	40.5	38.5	58.5	49	49	81.5	81.5
H3	19	19	29	29	29	38	29	38
H4	14	14	22	22	22	28	22	28
H5	5.5	5.5	8.5	8.5	8.5	12	8.5	12
H6	3.5	3.5	5	5	6	6	6	6
D1	M10x1	M10x1	M16x1	M16x1	M20x1.5	M20x1.5	M20x1.5	M20x1.5
D2	M5	M5	G1/8”	G1/8”	G1/8”	G1/4”	G1/8”	G1/4”
L	10	10	14	14	14	20	14	20
L1	16.5	16.5	22	22	22	27	22	27
L2	11	11	13.5	13.5	13.5	15	13.5	15
C	10	25	20	35	25	25	50	50
CH	13	13	19	19	24	24	24	24