



VACUUM SUCTION CUP WITH NIPPLE

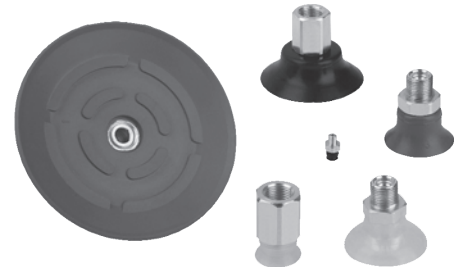
Series VS1RF

Cat No VS1RF - 01 - 01 - B

VACUUM SUCTION CUP WITH NIPPLE (ROUND TYPE) - Size (Ø3.5 to Ø95 mm)

Features

- ☐ High suction force
- ☐ Fastest cycle times
- ☐ Wide range of diameters
- ☐ Support surfaces on the bottom prevent permanent deformation of thin walled workpiece



Application

Round suction cups are used for handling flat workpieces with smooth or slightly rough surfaces.

Technical Specifications

Model		VS1RF - 3.5	VS1RF - 5	VS1RF - 8	VS1RF - 10		VS1RF - 15	VS1RF - 20	VS1RF - 30
Nipple size		M3	M5		M5	G1/8	G1/8		
Suction force * (N)		0.42	0.75	2.3	4		9	15.5	34
Volume (cm³)		0.002	0.005	0.03	0.07		0.4	0.8	1.3
Workpiece radius minimum (convex) (mm)		8	8	10	13		13	20	40
Tube diameter (OD) # (mm)		4	4	4	4		6	6	6
Weight (g)	NBR (Male thread)	1	1.1	1.2	1.3	-	4.5	5.6	7.9
	Silicone (Male thread)								
	NBR (Female thread)	-	-	-	1.6	5.3	5.8	7.0	9.2
	Silicone (Female thread)								
Material of construction		Aluminium, Silicone, NBR							
Ambient temperature (°C)		NBR: -10 to +70							
		Silicone: -20 to +180							

Model		VS1RF- 35	VS1RF- 40	VS1RF- 50	VS1RF- 60	VS1RF- 80	VS1RF- 95
Nipple size		G1/8			G1/4		
Suction force * (N)		44	57.7	91	125	260	350
Volume (cm³)		2.7	3.8	7	10	25	35
Workpiece radius minimum (convex) (mm)		50	50	75	100	150	200
Tube diameter (OD) # (mm)		6	6	6	10	10	10
Weight (g)	NBR (Male thread)	10.6	12.2	15.3	34.2	62.5	102.2
	Silicone (Male thread)						
	NBR (Female thread)	11.9	13.5	17.3	36.9	65.2	104.9
	Silicone (Female thread)						
Material of construction		Aluminium, Silicone, NBR					
Ambient temperature (°C)		NBR: -10 to +70					
		Silicone: -20 to +180					

* - Specified suction forces are theoretical values at a vacuum of -0.6 bar and with a smooth, dry workpiece surface (Do not include a safety factor)

- Recommended tube diameter is based on a tube length of approx. 2 m

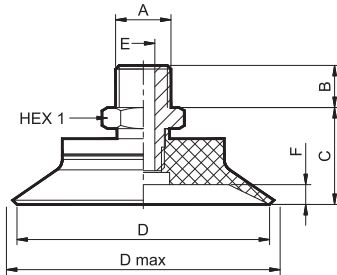
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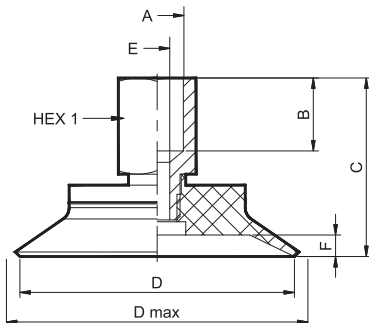
Basic dimensions

Male threaded nipple



Male thread - Size: Ø3.5 to 95 mm								
Size Ø	D max*	Nipple size A	B	C	D	E	F	HEX 1
3.5	4	M3-M	3	6	3.5	1	0.5	5
5	5.5	M5-M	4.5	11.5	5.0	1.5	0.9	8
8	9	M5-M	4.5	12	8.0	2	1.3	8
10	11.5	M5-M	4.5	12.5	10.0	2	1.4	8
15	17.5	G1/8-M	8	13	15.0	2	1.9	14
20	23	G1/8-M	8	15	20.0	2	2.2	14
30	31.5	G1/8-M	8	17	28.8	2.4	2	14
35	38	G1/8-M	8	19	35.0	2.4	3	14
40	43	G1/8-M	8	19	40.0	2.4	3.5	14
50	53.5	G1/8-M	8	20	50.0	2.4	4	14
60	64	G1/4-M	10	23	60.0	5.5	4.7	17
80	86	G1/4-M	10	25	80.0	5.5	6	17
95	102	G1/4-M	10	25.5	95.0	5.5	6	17

Female threaded nipple

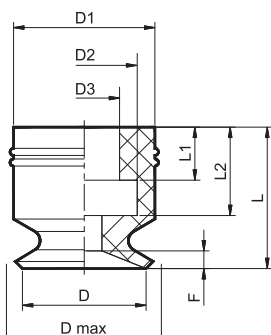


Female thread - Size: Ø10 to 95 mm								
Size Ø	D max*	Nipple size A	B	C	D	E	F	HEX 1
10	11.5	M5-F	5.5	17.5	10.0	2	1.4	8
10	11.5	G1/8-F	9	23.5	10.0	2	1.4	14
15	17.5	G1/8-F	9	24	15.0	2	1.9	14
20	23	G1/8-F	9	26	20.0	2	2.2	14
30	31.5	G1/8-F	9	28	28.8	3.5	2	14
35	38	G1/8-F	9	30	35.0	3.5	3	14
40	43	G1/8-F	9	30	40.0	3.5	3.5	14
50	53.5	G1/8-F	9	31	50.0	3.5	4	14
60	64	G1/4-F	11	39	60.0	5.5	4.7	17
80	86	G1/4-F	11	41.5	80.0	5.5	6	17
95	102	G1/4-F	11	41.5	95.0	5.5	6	17

* External dimensions of the suction cup when it is pressed against the workpiece by the vacuum

ACCESSORIES

Suction Cup - Size Ø3.5 to 10 mm



Size: Ø3.5 to 10 mm											
Size Ø	D	D1	D2	D3	D max*	F	L	L1	L2	Ordering No.	
										NBR	SILICONE
3.5	3.5	4.2	3	2	4	0.5	4	1.5	2.5	VS1RF-3.5-N1	VS1RF-3.5-S1
5	5	7.7	6	4	5.5	0.9	6.5	2	4	VS1RF-5-N1	VS1RF-5-S1
8	8	8.2	6	4	9	1.3	7	2	4	VS1RF-8-N1	VS1RF-8-S1
10	10	8.7	6	4	11.5	1.4	7.5	2	4	VS1RF-10-N1	VS1RF-10-S1

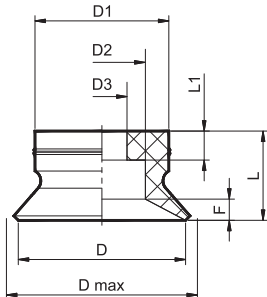
* External dimensions of the suction cup when it is pressed against the workpiece by the vacuum

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Series VS1RF

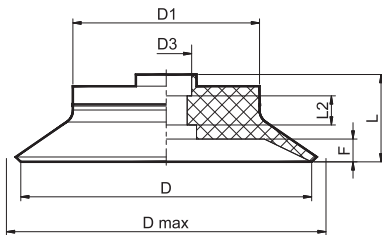
Cat No VS1RF - 01 - 01 - B

Suction Cup - Size Ø15 to 50 mm



Size: Ø15 to 50 mm										
Size Ø	D	D1	D2	D3	D max*	F	L	L1	Ordering No.	
									NBR	SILICONE
15	15	12.2	7.8	4.5	17.5	1.9	8	2.6	VS1RF-15-N1	VS1RF-15-S1
20	20	15.2	11	4.5	23	2.2	10	4.5	VS1RF-20-N1	VS1RF-20-S1
30	28.8	15.1	11	6	31.5	2	12	7	VS1RF-30-N1	VS1RF-30-S1
35	35	20.5	11	6	38	3	14	7	VS1RF-35-N1	VS1RF-35-S1
40	40	24.3	11	6	43	3.5	14	7	VS1RF-40-N1	VS1RF-40-S1
50	50	29.1	20	8	53.5	4	15	7	VS1RF-50-N1	VS1RF-50-S1

Suction Cup - Size Ø60 to 95 mm



Size: Ø60 to 95 mm									
Size Ø	D	D1	D3	D max*	F	L	L2	Ordering No.	
								NBR	SILICONE
60	60	38.7	M10x1.25F	64	4.7	18	6	VS1RF-60-N1	VS1RF-60-S1
80	80	52.3	M10x1.25F	86	6	20.5	6	VS1RF-80-N1	VS1RF-80-S1
95	95	68.2	M10x1.25F	102	6	21.5	6	VS1RF-95-N1	VS1RF-95-S1

* External dimensions of the suction cup when it is pressed against the workpiece by the vacuum

How to order

VS1RF		3.5		S1		73		M	
Size Ø		Suction cup material		Nipple size		Thread			
3.5	3.5 mm	N1	NBR	73	M3	M	Male thread		
5	5 mm	S1	Silicone	70	M5	F	Female thread		
8	8 mm			60	G1/8				
10	10 mm			61	G1/4				
15	15 mm								
20	20 mm								
30	30 mm								
35	35 mm								
40	40 mm								
50	50 mm								
60	60 mm								
80	80 mm								
95	95 mm								

Note:

Available size and their corresponding Nipple / Thread variants

- Ø3.5 - M3 (Male)
- Ø5, Ø8, Ø10 - M5 (Male)
- Ø10 - M5, G1/8 (Female)
- Ø15, Ø20, Ø30, Ø35, Ø40, Ø50 - G1/8 (Male & Female)
- Ø60, Ø80, Ø95 - G1/4 (Male & Female)

Ordering example:

Ordering no. for Vacuum suction cup with nipple (Round type) Size - 3.5 mm, Silicone material, M3 Nipple with Male thread : **VS1RF-3.5-S1-73M**

Subject to change