

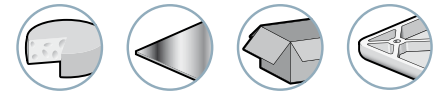
VPF

Flat Suction Cups with Cleats Ø 15 to 50 mm



VPF series suction cups are suitable for gripping flat, smooth and rigid products. Cleats prevent the deformation of the product and provide excellent non-slip properties.

Industry-specific applications



Types of use



2

Materials

NBR Nitrile
SI Translucent Silicone

STN Siton®

VPF

Suction Cup Properties

	Ø (mm)	(cm³)	(N) ⁽¹⁾	(N) ⁽¹⁾	R _{min} (mm)	NBR	SI	STN
VPF 15	15.7	0.37	3.6	1.8	13	VPF15NBR	VPF15SI	VPF15STN
VPF 20	22	1.00	7.2	3.6	18	VPF20NBR	VPF20SI	VPF20STN
VPF 25	26.8	1.10	9.4	4.7	22	VPF25NBR	VPF25SI	VPF25STN
VPF 30	32	2.00	11.6	5.8	25	VPF30NBR	VPF30SI	VPF30STN
VPF 40	42.5	1.80	18.1	9.0	52	VPF40NBR	VPF40SI	VPF40STN
VPF 50	53	10.00	34.7	17.3	55	VPF50NBR	VPF50SI	VPF50STN

(1) Actual force of the suction cup in use with 65% vacuum and including a safety factor of 2 for horizontal handling and a factor of 4 for vertical handling.

Choice of Fittings

(Ø)	M5-M	G1/8"-M	G1/4"-M
15	■	-	-
20 - 30	-	■	-
40 - 50	-	-	■

■ Standard available configurations (suction cup + fitting) Fittings: M = Male refer to n° table above

Types of Assembly

C **Version C: Barbed fitting**

References "Suction Cup + Fitting"

Ø 15 mm		THREAD	M5-M	Ø 20 - 30 mm		THREAD	G1/8"-M	Ø 40 - 50 mm		THREAD	G1/4"-M
		VPF5NBR	VPF15NBRIMM5C			VPF20NBR	VPF20NBRIM18C			VPF40NBR	VPF40NBRIM14C
		VPF5SI	VPF15SIIMM5C			VPF20SI	VPF20SIIM18C			VPF40SI	VPF40SIIM14C
		VPF15STN	VPF15STNIMM5C			VPF20STN	VPF20STNIM18C			VPF40STN	VPF40STNIM14C
						VPF25NBR	VPF25NBRIM18C			VPF50NBR	VPF50NBRIM14C
						VPF25SI	VPF25SIIM18C			VPF50SI	VPF50SIIM14C
						VPF25STN	VPF25STNIM18C			VPF50STN	VPF50STNIM14C
						VPF30NBR	VPF30NBRIM18C				
						VPF30SI	VPF30SIIM18C				
						VPF30STN	VPF30STNIM18C				

Accessories

To optimize use of your suction cups, Coval offers a comprehensive range of accessories (sensors, spring extensions, and feeder systems, etc.) see chapters 4 and 12.



Please specify the part n°. e.g. VPF20NBRIM18C
See part n° table above

VPF

Flat Suction Cups with Cleats Ø 15 to 50 mm Assembly Diagrams



Suction Cup + Fitting

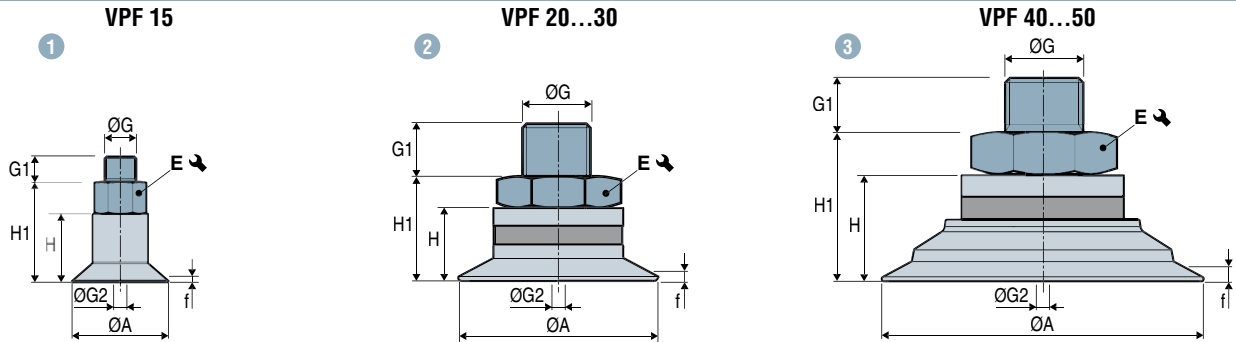
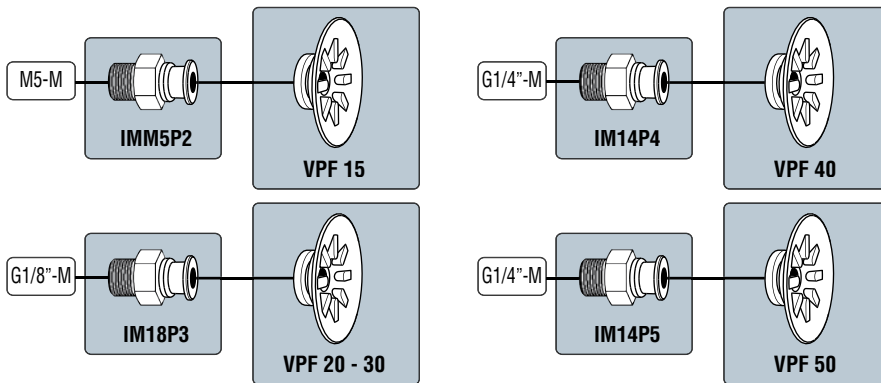


	Diagram	ØA	f ⁽¹⁾	H	H1	ØG	G1	ØG2 ⁽²⁾	E ↘	⚖(g)
VPF15---IMM5C	1	15.7	1	11	15.5	M5-M	4	2.7	7	1.5
VPF20---IM18C	2	22	1	8	11.5	G1/8"-M	7	4	14	4.2
VPF25---IM18C	2	26.8	1.3	9	12.5	G1/8"-M	7	4	14	4.7
VPF30---IM18C	2	32	1.8	10	13.5	G1/8"-M	7	4	14	5.2
VPF40---IM14C	3	42.5	1.9	13	19	G1/4"-M	9	5	17	11.9
VPF50---IM14C	3	53	2.4	17.5	23.5	G1/4"-M	9	5	21	22.7

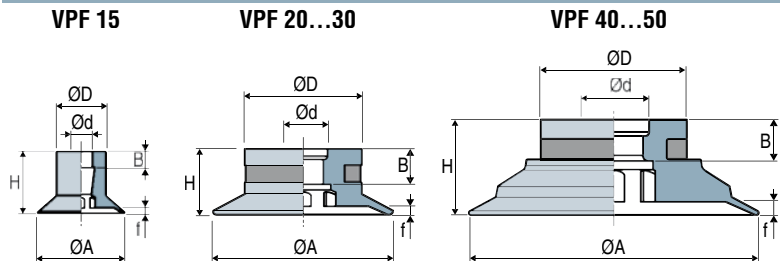
Note: All dimensions are in mm.

(1) f = Deflection of the suction cup. (2) Ø G2 = Ø internal orifice of the fitting.

Assembly Diagrams



Suction Cups



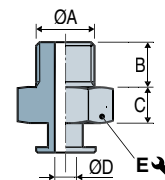
	Ø A	H	Ø d	Ø D	f ⁽¹⁾	B	⚖(g)
VPF 15	15.7	11	4	9	1	3	0.7
VPF 20	22	8	5	14.3	1	4.5	1.2
VPF 25	26.8	9	5	14.3	1.3	4.5	1.7
VPF 30	32	10	5	14.3	1.8	4.5	2.2
VPF 40	42.5	13	7	20	1.9	6	5.6
VPF 50	53	17.5	10.5	27	2.4	7.5	12.7

Note: All dimensions are in mm.

(1) f = Deflection of the suction cup.

The values represent the average characteristics of our products.

Barbed Male Fitting



	ØA	B	C	ØD	E ↘	Material	⚖(g)
IMM5P2	M5-M	4	4.5	2.7	7	Aluminum	0.8
IM18P3	G1/8"-M	7	3.5	4	14	Aluminum	3
IM14P4	G1/4"-M	9	6	5	17	Aluminum	6.3
IM14P5	G1/4"-M	9	6	5	21	Aluminum	10