

# VPU

## Flat Suction Cups Ø 6 to 50 mm



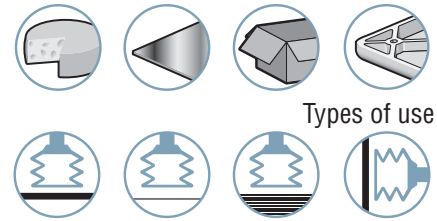
VPU series suction cups are suitable for gripping flat, smooth and rigid products. They benefit from an excellent hold for vertical gripping.

### Materials

**NBR** Nitrile  
**SI** Translucent Silicone

**STN** SITON®

Industry-specific applications



Types of use

2  
VPU

### Suction Cup Properties

	Ø (mm)	(cm <sup>3</sup> )	(N) <sup>(1)</sup>	(N) <sup>(1)</sup>	(mm)	NBR	SI	STN
VPU 6	7	0.05	0.9	0.4	5	VPU6NBR	VPU6SI	VPU6STN(*)
VPU 8	9	0.1	1.4	0.7	6	VPU8NBR	VPU8SI	VPU8STN(*)
VPU 10	11	0.018	2.5	1.2	8	VPU10NBR	VPU10SI	VPU10STN(*)
VPU 15	16.5	0.5	4.3	2.2	8	VPU15NBR	VPU15SI	VPU15STN(*)
VPU 20	22	1	6.5	3.3	13	VPU20NBR	VPU20SI	VPU20STN(*)
VPU 30	32	2	13.0	6.5	20	VPU30NBR	VPU30SI	VPU30STN(*)
VPU 40	41	5.5	18.8	9.4	30	VPU40NBR	VPU40SI	VPU40STN(*)
VPU 50	51.4	12	33.2	16.6	35	VPU50NBR	VPU50SI	VPU50STN(*)

(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.

(\*) On request

### Choice of Fittings

(Ø)	M5-M	G1/8"-M	G1/4"-M	G3/8"-M
6...15	■	-	-	-
20...30	-	■	-	-
40...50	-	-	■	■

■ Standard available configurations (suction cup + fitting) Fittings: M = Male  
See part n° schedule as below

### Type of Assembly

- C** **Version C: Barbed fitting**
- E** **Version E: Pressed fitting**

### References - "Section Cup + Fitting"

Ø 6 - 15 mm	<b>C</b>		Ø 20 - 30 mm	<b>E</b>	
	THREAD	M5-M		THREAD	G1/8"-M
	VPU6NBR	VPU6NBRIMM5C		Fitting with filter	Fitting without filter
	VPU6SI	VPU6SIIMM5C	VPU20NBR	VPU20NBRIM18MPF	VPU20NBRIM18MP
	VPU6STN	VPU6STNIMM5C	VPU20SI	VPU20SIIM18MPF	VPU20SIIM18MP
	VPU8NBR	VPU8NBRIMM5C	VPU20STN(*)	VPU20STNIM18MPF	VPU20STNIM18MP
	VPU8SI	VPU8SIIMM5C	VPU30NBR	VPU30NBRIM18MPF	VPU30NBRIM18MP
	VPU8STN	VPU8STNIMM5C	VPU30SI	VPU30SIIM18MPF	VPU30SIIM18MP
	VPU10NBR	VPU10NBRIMM5C	VPU30STN(*)	VPU30STNIM18MPF	VPU30STNIM18MP
	VPU10SI	VPU10SIIMM5C			
	VPU10STN	VPU10STNIMM5C			
	VPU15NBR	VPU15NBRIMM5C			
	VPU15SI	VPU15SIIMM5C			
	VPU15STN	VPU15STNIMM5C			
Ø 40 - 50 mm	<b>E</b>		Ø 40 - 50 mm	<b>E</b>	
	THREAD	G1/4"-M		THREAD	G3/8"-M
	VPU40NBR	VPU40NBRIM14MPF		Fitting with filter	Fitting without filter
	VPU40SI	VPU40SIIM14MPF	VPU40NBR	VPU40NBRIM38MPF	VPU40NBRIM38MP
	VPU40STN(*)	VPU40STNIM14MPF	VPU40SI	VPU40SIIM38MPF	VPU40SIIM38MP
	VPU50NBR	VPU50NBRIM14MPF	VPU40STN(*)	VPU40STNIM38MPF	VPU40STNIM38MP
	VPU50SI	VPU50SIIM14MPF	VPU50NBR	VPU50NBRIM38MPF	VPU50NBRIM38MP
	VPU50STN(*)	VPU50STNIM14MPF	VPU50SI	VPU50SIIM38MPF	VPU50SIIM38MP
			VPU50STN(*)	VPU50STNIM38MPF	VPU50STNIM38MP

(\*) On request

### 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 14.

Please specify the part n°. e.g. VPU20NBRIM18MPF  
See part n° table above

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### Assembly Diagrams



#### Suction Cups + Fittings

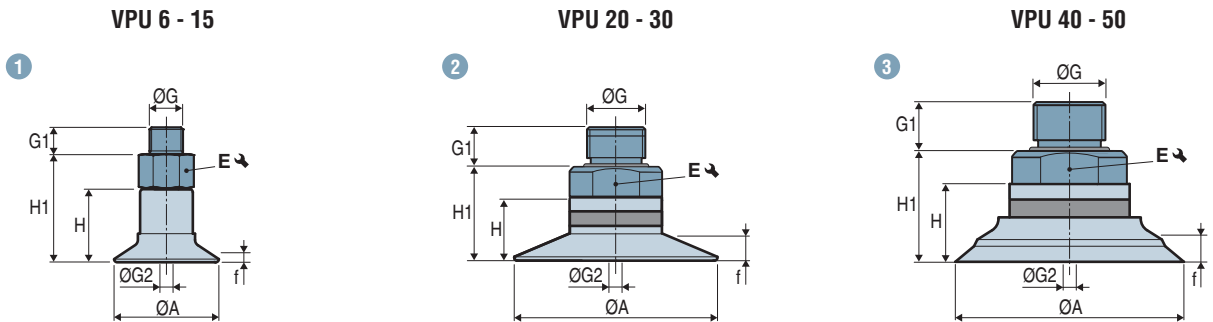
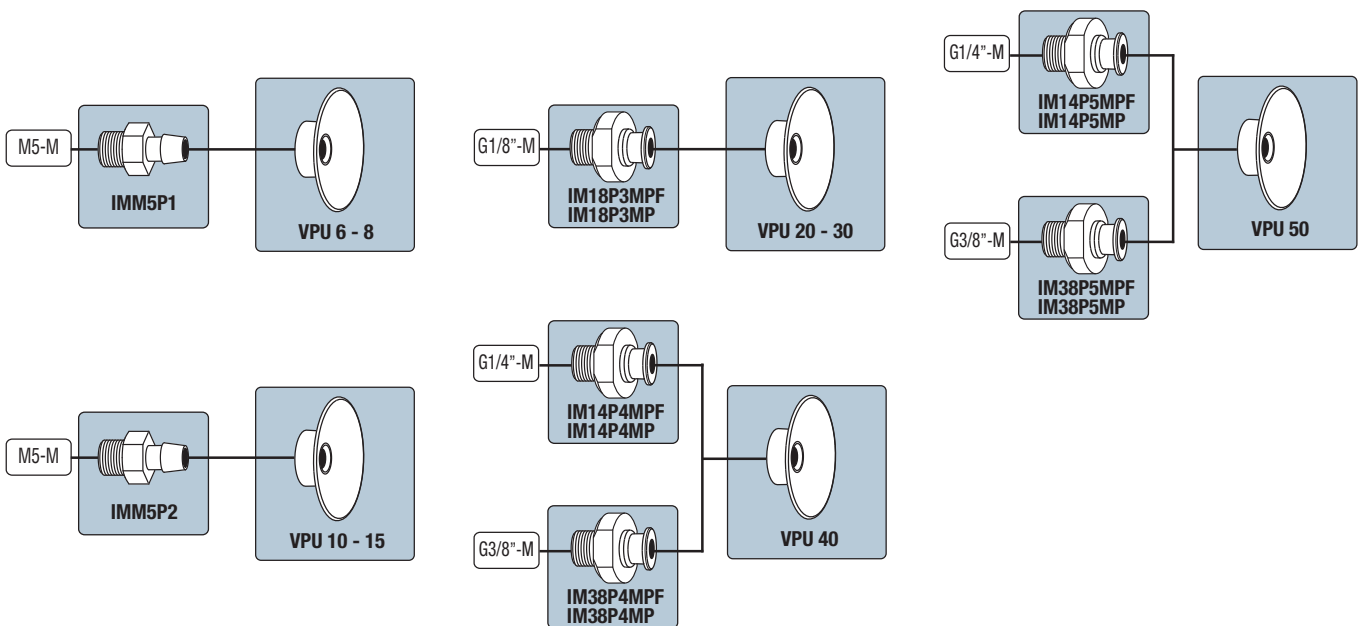


	Diagram	ØA	f <sup>(1)</sup>	H	H1	ØG	G1	ØG2 <sup>(2)</sup>	E ↘	⊞ (g)
VPU6---IMM5C	1	7	0.3	6.5	10	M5-M	4	1.5	7	1.8
VPU8---IMM5C	1	9	0.5	7	10.5	M5-M	4	1.5	7	1.9
VPU10---IMM5C	1	11	0.5	10.5	15	M5-M	4	2.7	7	1.3
VPU15---IMM5C	1	16.5	1.5	11.5	16	M5-M	4	2.7	7	1.6
VPU20---IM18MP-	2	22	2.5	8	13	G1/8"-M	7	4	13	4.4
VPU30---IM18MP-	2	32	3.5	9.5	14.5	G1/8"-M	7	4	13	5.1
VPU40---IM14MP-	3	41	4.5	13	19	G1/4"-M	9	5	19	12
VPU40---IM38MP-	3	41	4.5	13	19	G3/8"-M	10	5	22	16.6
VPU50---IM14MP-	3	51.4	6	17.5	23.5	G1/4"-M	9	5	22	24.1
VPU50---IM38MP-	3	51.4	6	17.5	23.5	G3/8"-M	10	6	23.9	27.1

(1) f = Deflection of the suction cup.

(2) Ø G2 = Ø internal orifice of the fitting.

#### Assembly Diagrams



Note: All dimensions are in mm.

# VPU

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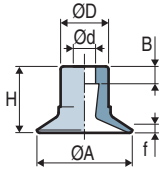
### Dimensions



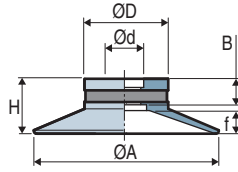
2  
VPU

#### Suction Cups

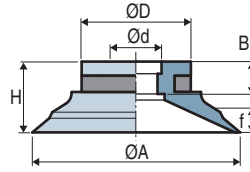
VPU 6 - 15



VPU 20 - 30



VPU 40 - 50

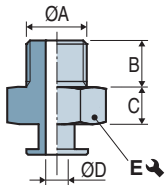


	ØA	H	Ød	ØD	f (1)	B	⚖ (g)
VPU 6	7	6.5	2	5	0.3	3.5	0.12
VPU 8	9	7	2	5	0.5	3.5	0.15
VPU 10	11	10.5	3.8	9	0.5	3	0.51
VPU 15	16.5	11.5	3.8	8.3	1.5	3	0.75
VPU 20	22	8	5	14.5	2.5	4.5	1.2
VPU 30	32	9.5	5	14.5	3.5	4.5	1.9
VPU 40	41	13	6.5	20	4.5	6	5
VPU 50	51.4	17.5	10.5	27	6	8	12

(1) f = Deflection of the suction cup.

#### Barbed Fittings

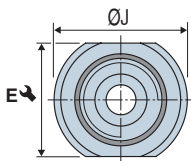
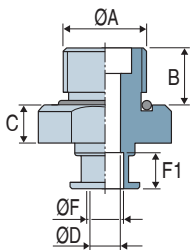
IMM5P1 - IMM5P2



	ØA	B	C	ØD	E	Material	⚖ (g)
IMM5P1	M5-M	4	3.5	1.5	7	Brass	1.7
IMM5P2	M5-M	4	4.5	2.7	7	Aluminum	0.8

#### Pressed fittings

Male fittings



Fitting with stainless steel filter 200 µm	Fitting without filter	ØA	B	C	ØD	E	ØJ	ØF	F1	Materials Fitting*	⚖ (g)
IM18P3MPF	IM18P3MP	G1/8"-M	7	5	4	13	15	5	4.7	Aluminum	3.2
IM14P4MPF	IM14P4MP	G1/4"-M	9	6	5	19	21	6	5.7	Aluminum	7
IM14P5MPF	IM14P5MP	G1/4"-M	9	6	6	22	28	10	8.7	Aluminum	12.1
IM38P4MPF	IM38P4MP	G3/8"-M	10	6	5	22	24	6	5.7	Aluminum	11.6
IM38P5MPF	IM38P5MP	G3/8"-M	10	6	6	23.9	28	10	8.7	Aluminum	15.1

\*Male fittings (IM) equipped with O-ring sealing

Note: All dimensions are in mm.  
The values represent the average characteristics of our products.