

KPP CO.,LTD
부산시 해운대구 센텀동로 99,
백산이센텀클래스원 515호
48059

VACUUM PADS

KPP MODEL

2022

진공흡착패드 / 공장생산 작업장 이송 자동화, 프레스·절단기·크레인 자동화, 작업공정 이송·이동 자동화,
각종 부품 운반·조립·이동·검사·선별 자동화

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아래의 사이트에서
KPP의 다양한 제품을 확인하실 수 있습니다.

홈페이지) www.kppeng.co.kr
블로그) blog.naver.com/kppeng

진공흡착력의 계산

- 진공흡착력(Vacuum attraction strength)은 진공도와 Pad의 면적에 비례한다.
이에 따라 우리는 다음의 식을 얻을 수 있다.

$$W = \frac{P \times A}{760}$$

W=이론흡착력(kg)

P=진공도(mmHg)

A:Pad면적(m²)

- 상기의 계산된 흡착력은 정지 상태하의 이론적인 것이다. 실제적 적용에 있어서는 작용방향, 작용완급 및 효율 등의 여러가지 요인을 고려하여 세심한 주의를 기울여야 한다.
- 물체의 위쪽에서의 흡착력 ————— 이론계산흡착력 X 1/3(안전율을 고려하여 1/3만 사용)
- 물체의 측면에서의 흡착력 ————— 이론계산흡착력 X 1/5
- 공기의 누설이 있는 물체들의 흡착력의 계산은 실제적인 흡착에 의하여 얻어진 진공도를 근거로 산출되어야 한다.

흡착력의 이론적인 강도 LIST

(Unit : kg)

		Dia of Pad 패드직경(mm)											
		Ø1	Ø2	Ø3.5	Ø5	Ø8	Ø10	Ø15	Ø20	Ø25	Ø30	Ø35	Ø40
Vacuum Degree 진공도	-600 mmHg	0.01	0.03	0.08	0.15	0.40	0.62	1.4	2.5	3.9	5.6	7.6	9.9
	-500 mmHg	0.01	0.02	0.06	0.12	0.33	0.52	1.2	2.1	3.2	4.7	6.3	8.3
	-400 mmHg	0	0.02	0.05	0.10	0.26	0.41	0.9	1.7	2.6	3.7	5.1	6.6
	-300 mmHg	0	0.01	0.04	0.08	0.20	0.31	0.7	1.3	2.0	2.8	3.8	5.0
		Dia of Pad 패드직경(mm)											
		Ø50	Ø60	Ø80	Ø100	Ø120	Ø150	Ø200	Ø300	Ø400	Ø500	Ø600	-
Vacuum Degree 진공도	-600 mmHg	16	22	40	62	89	140	248	558	992	1550	2234	-
	-500 mmHg	13	19	33	52	74	116	207	466	828	1294	1864	-
	-400 mmHg	10	15	26	41	60	93	165	371	660	1031	1484	-
	-300 mmHg	8	11	20	31	45	70	124	279	496	775	1116	-

KPP MODEL Vacuum Pad 사양

몸체를 제외한 고무 부분(Rubber Only)

패드 형상에 따라 일반패드와 이중패드로
구분되며 패드의 재질에 따라 NBR(합성고무)와
SILICON(실리콘)으로 구분되어진다.



01 일반패드

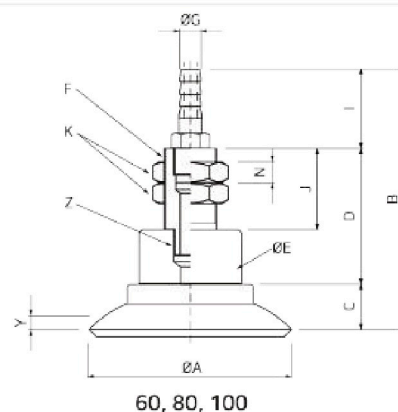
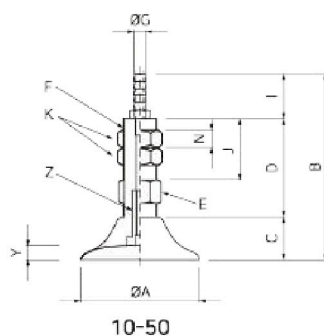
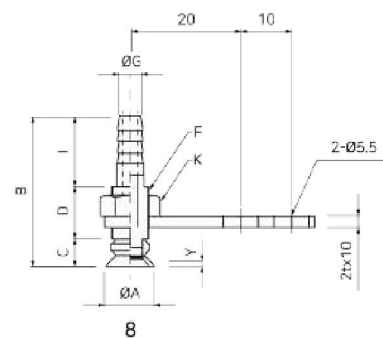
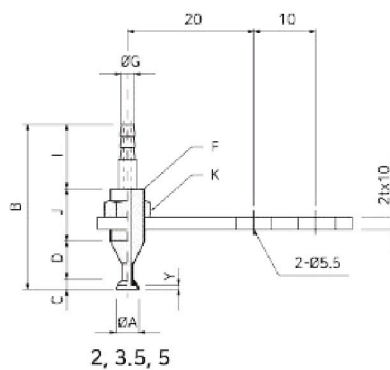
	NBR 재질	SILICON 재질
직경		
2Ø	KIST-2-N	KIST-2-S
3.5Ø	KIST-3.5-N	KIST-3.5-S
5Ø	KIST-5-N	KIST-5-S
8Ø	KIST-8-N	KIST-8-S
10Ø	KIST-10-N	KIST-10-S
15Ø	KIST-15-N	KIST-15-S
20Ø	KIST-20-N	KIST-20-S
25Ø	KIST-25-N	KIST-25-S
30Ø	KIST-30-N	KIST-30-S
35Ø	KIST-35-N	KIST-35-S
40Ø	KIST-40-N	KIST-40-S
50Ø	KIST-50-N	KIST-50-S
60Ø	KIST-60-N	KIST-60-S
80Ø	KIST-80-N	KIST-80-S
100Ø	KIST-100-N	KIST-100-S
120Ø	KIST-120-N	KIST-120-S
150Ø	KIST-150-N	KIST-150-S
200Ø	KIST-200-N	KIST-200-S

02 이중패드 (벨로즈형)

	NBR 재질	SILICON 재질
직경		
10Ø	KIST-B10-N	KIST-B10-S
15Ø	KIST-B15-N	KIST-B15-S
20Ø	KIST-B20-N	KIST-B20-S
30Ø	KIST-B30-N	KIST-B30-S
40Ø	KIST-B40-N	KIST-B40-S
50Ø	KIST-B50-N	KIST-B50-S
62.5Ø	KIST-KB62.5-N	KIST-KB62.5-S
75Ø	KIST-B75-N	KIST-B75-S
110Ø	KIST-B110-N	KIST-B110-S
150Ø	KIST-B150-N	KIST-B150-S

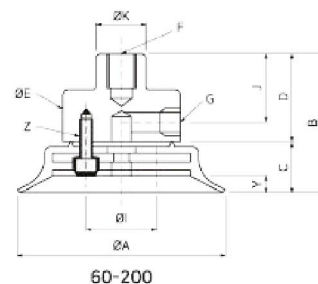
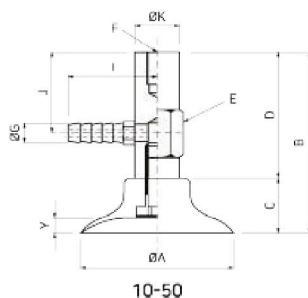
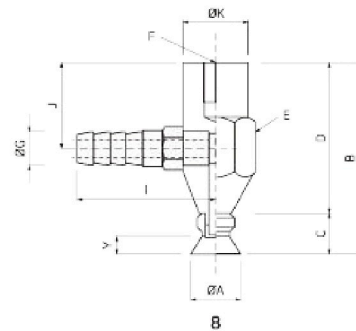
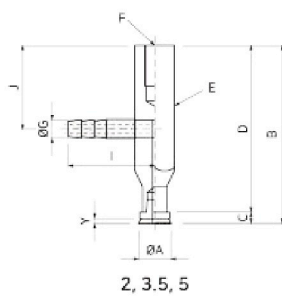
KPIF : 수직 고정형 패드

형 식	A	B	C	D	E	F	G	I	J	K	N	Y	Z
KPIF-2	2	2.4	0.8	6.4		M5x0.8	2.5	8.5	8	7H		0.4	
3.5	3.5	25.5	5.5	4		M5x0.8	2.5	8.5	8	7H		0.5	
5	5	26	5.5	4		M5x0.8	2.5	8.5	8	7H		1.0	
8	8	27.5	5.5	10		M8x1.0	5	12		10H		1.5	
10	10	40	8	22	10H	M8x1.25	5	10	15	10H	4	1.3	M5
15	15	40	8	22	10H	M8x1.25	5	10	15	10H	4	1.9	M5
20	20	42	10	22	10H	M8x1.25	5	10	15	10H	4	2.3	M5
25	25	56	14	32	14H	M10x1.5	5	10	20	14H	5	3.0	M6
30	30	56	14	32	14H	M10x1.5	5	10	20	14H	5	2.0	M6
35	35	56	14	32	14H	M10x1.5	5	10	20	14H	5	3.0	M6
40	40	56	14	32	14H	M10x1.5	5	10	20	14H	5	4.0	M6
50	50	57	14	32	14H	M10x1.5	5	10	20	14H	5	4.0	M6
60	60	68	15	43	35Ø	M16x1.5	5	10	23	21H	5	6.0	M10x1.25
80	80	78	20	48	35Ø	M16x1.5	5	10	23	21H	5	6.0	M10x1.25
100	100	78	20	48	35Ø	M16x1.5	5	10	23	21H	5	6.0	M10x1.25



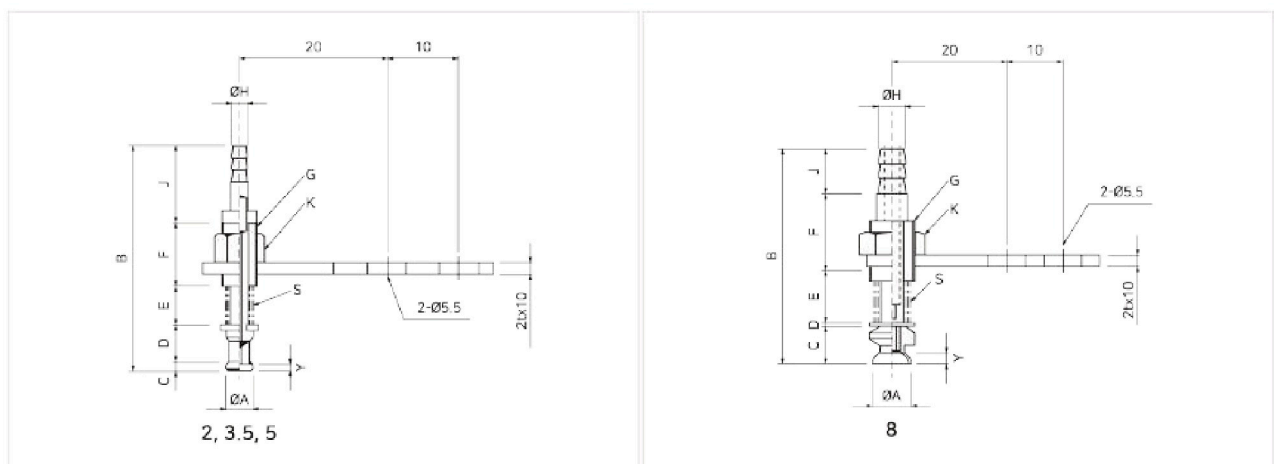
KPTF : 수평 고정형 패드

형 식	A	B	C	D	E	F	G	I	J	K	Y	Z
KPTF-2	2	20.8	0.8	20	5H	M3x0.5x7	2.5	11	11		0.4	
3.5	3.5	22.8	5.5	17.3	5H	M3x0.5x7	2.5	11	11		0.5	
5	5	22.8	5.5	17.3	5H	M3x0.5x7	2.5	11	11		1.0	
8	8	28	5.5	22.5	10H	M4x0.7x9	5	15	13	10	1.5	
10	10	30	8	22	10H	M4x0.7x9	5	15	14	10	1.3	M5
15	15	30	8	22	10H	M4x0.7x9	5	15	14	10	1.9	M5
20	20	32	10	22	10H	M4x0.7x9	5	15	14	10	2.3	M5
25	25	46	14	32	14H	M6x1.0x11	5	17	20	12	3.0	M6
30	30	46	14	32	14H	M6x1.0x11	5	17	20	12	2.0	M6
35	35	46	14	32	14H	M6x1.0x11	5	17	20	12	3.0	M6
40	40	46	14	32	14H	M6x1.0x11	5	17	20	12	4.0	M6
50	50	46	14	32	14H	M6x1.0x11	5	17	20	12	4.0	M8
60	60	50	15	35	35	M10x1.25	PS1/8		22	20	6.0	
80	80	60	20	40	35	M10x1.25	PS1/8		22	20	6.0	
100	100	60	20	40	35	M10x1.25	PS1/8		22	20	6.0	
120	120	75	25	50	75	M16x1.5	PS1/8	40	35	30	6.0	M8
150	150	90	40	50	75	M16x1.5	PS1/8	40	35	30	14.5	M8
200	200	90	40	50	75	M16x1.5	PS1/8	40	35	30	14.5	M8



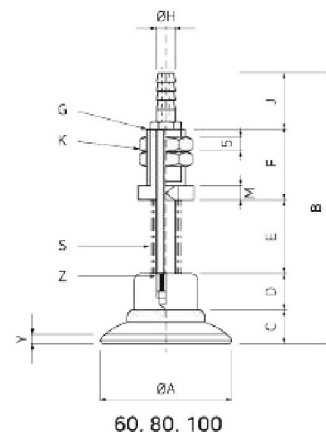
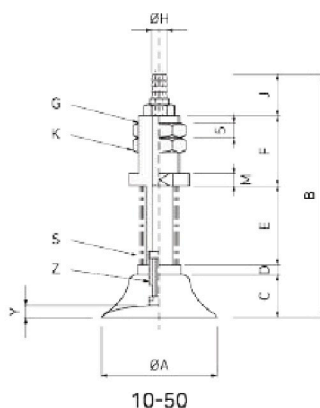
KPIS : 수직 스프링형 패드

형 식	A	B	C	D	E	F	G	H	J	K	M	S	Y	Z
KPIS-2	2	27	0.8	3.5	5	8	M5x0.8	2.5	10	7H		2.5	0.4	
3.5	3.5	30	5	1.6	5	8	M5x0.8	2.5	10	7H		2.5	1.5	
5	5	30	5.5	1.6	5	8	M5x0.8	2.5	10	7H		2.5	1.0	
8	8	34	5.5	0.6	6	11.5	M8x1.25	5	10.5	10H		3	1.5	
10 - 4	10	54	8	3	7	20	M11x1.0	5	16	14H	3	4	1.3	M5
10-10	10	67	8	3	20	20	M11x1.0	5	16	14H	3	10	1.3	M5
10-20	10	87	8	3	40	20	M11x1.0	5	16	14H	3	20	1.3	M5
10-30	10	107	8	3	60	20	M11x1.0	5	16	14H	3	30	1.3	M5
15 - 4	15	54	8	3	7	20	M11x1.0	5	16	14H	3	4	1.9	M5
15-10	15	67	8	3	20	20	M11x1.0	5	16	14H	3	10	1.9	M5
15-20	15	87	8	3	40	20	M11x1.0	5	16	14H	3	20	1.9	M5
15-30	15	107	8	3	60	20	M11x1.0	5	16	14H	3	30	1.9	M5
20 - 4	20	56	10	3	7	20	M11x1.0	5	16	14H	3	4	2.3	M5
20-10	20	69	10	3	20	20	M11x1.0	5	16	14H	3	10	2.3	M5
20-20	20	89	10	3	40	20	M11x1.0	5	16	14H	3	20	2.3	M5
20-30	20	109	10	3	60	20	M11x1.0	5	16	14H	3	30	2.3	M5
25 - 6	25	71	14	3	13	24	M14x1.5	5	17	17H	4	6	3.0	M6
25-15	25	88	14	3	30	24	M14x1.5	5	17	17H	4	15	3.0	M6
25-30	25	118	14	3	60	24	M14x1.5	5	17	17H	4	30	3.0	M6
25-50	25	158	14	3	100	24	M14x1.5	5	17	17H	4	50	3.0	M6
30 - 6	30	71	14	3	13	24	M14x1.5	5	17	17H	4	6	2.0	M6
30-15	30	88	14	3	30	24	M14x1.5	5	17	17H	4	15	2.0	M6
30-30	30	118	14	3	60	24	M14x1.5	5	17	17H	4	30	2.0	M6
30-50	30	158	14	3	100	24	M14x1.5	5	17	17H	4	50	2.0	M6



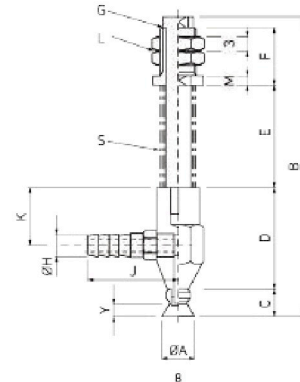
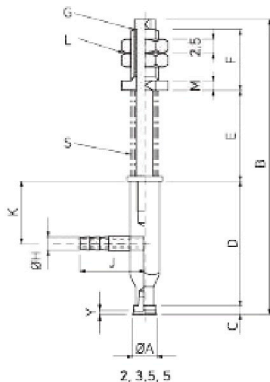
KPIS : 수직 스프링형 패드

형 식	A	B	C	D	E	F	G	H	J	K	M	S	Y	Z
35 - 6	35	71	14	3	13	24	M14x1.5	5	17	17H	4	6	3.0	M6
35-15	35	88	14	3	30	24	M14x1.5	5	17	17H	4	15	3.0	M6
35-30	35	118	14	3	60	24	M14x1.5	5	17	17H	4	30	3.0	M6
35-50	35	158	14	3	100	24	M14x1.5	5	17	17H	4	50	3.0	M6
40 - 6	40	71	14	3	13	24	M14x1.5	5	17	17H	4	6	4.0	M6
40-15	40	88	14	3	30	24	M14x1.5	5	17	17H	4	15	4.0	M6
40-30	40	118	14	3	60	24	M14x1.5	5	17	17H	4	30	4.0	M6
40-50	40	158	14	3	100	24	M14x1.5	5	17	17H	4	50	4.0	M6
50 - 6	50	91	14	3	13	24	M14x1.5	5	17	17H	4	6	4.0	M8
50-15	50	88	14	3	30	24	M14x1.5	5	17	17H	4	15	4.0	M8
50-30	50	118	14	3	60	24	M14x1.5	5	17	17H	4	30	4.0	M8
50-50	50	158	14	3	100	24	M14x1.5	5	17	17H	4	50	4.0	M8
60-10	60	98	15	20	25	28	M16x1.5	5	10	21H	5	10	6.0	M12x1.25
60-30	60	151	15	23	60	28	M16x1.5	8	25	21H	5	30	6.0	M12x1.25
60-50	60	191	15	23	100	28	M16x1.5	8	25	21H	5	50	6.0	M12x1.25
60-70	60	231	15	23	140	28	M16x1.5	8	25	21H	5	70	6.0	M12x1.25
80-10	80	108	20	25	25	28	M16x1.5	5	10	21H	5	10	6.0	M12x1.25
80-30	80	156	20	23	60	28	M16x1.5	8	25	21H	5	30	6.0	M12x1.25
80-50	80	196	20	23	100	28	M16x1.5	8	25	21H	5	50	6.0	M12x1.25
80-70	80	236	20	23	140	28	M16x1.5	8	25	21H	5	70	6.0	M12x1.25
100-10	100	108	20	25	25	28	M16x1.5	5	10	21H	5	10	6.0	M12x1.25
100-30	100	156	20	23	60	28	M16x1.5	8	25	21H	5	30	6.0	M12x1.25
100-50	100	196	20	23	100	28	M16x1.5	8	25	21H	5	50	6.0	M12x1.25
100-70	100	236	20	23	140	28	M16x1.5	8	25	21H	5	70	6.0	M12x1.25



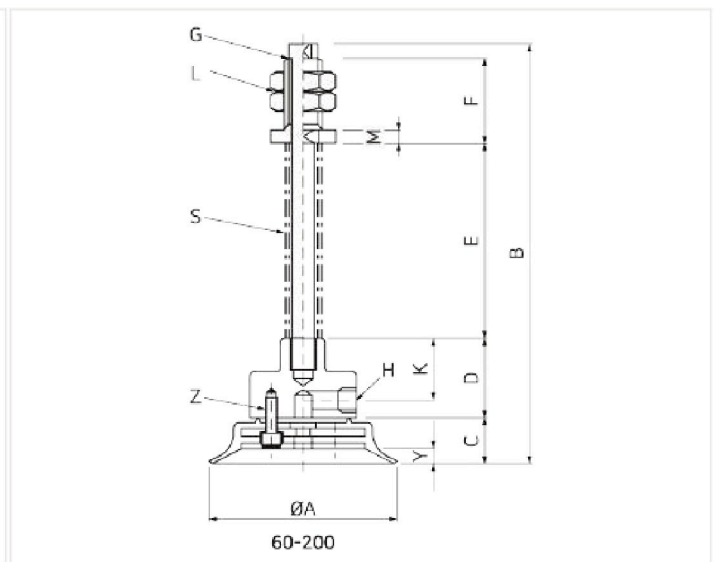
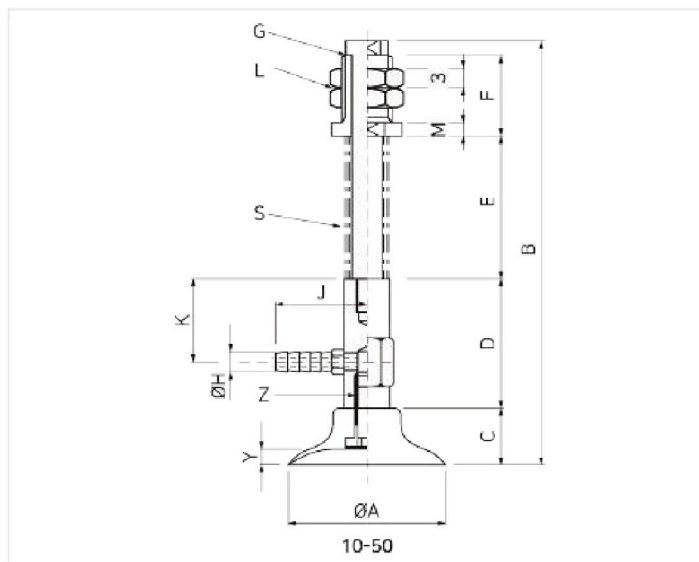
KPTS : 수평 스프링형 패드

형 식	A	B	C	D	E	F	G	H	J	K	L	M	S	Y	Z
KPTS-2	2	36	0.8	20.5	4.5	9	M5x0.8	2.5	11	11	7H	1.5	2.5	0.4	
3.5	3.5	38	5.5	17.3	4.5	9	M5x0.8	2.5	11	11	7H	1.5	2.5	0.5	
5	5	38	5.5	17.3	4.5	9	M5x0.8	2.5	11	11	7H	1.5	2.5	1.0	
8	8	50	5.5	22.5	6	13	M9x1.0	5	15	13	12H	1.5	3	1.5	
10	10	60	8	22	7	20	M11x1.0	5	15	14	14H	3	4	1.3	M5
15	15	60	8	22	7	20	M11x1.0	5	15	14	14H	3	4	1.9	M5
20 - 4	20	62	10	22	7	20	M11x1.0	5	15	14	14H	3	4	2.3	M5
20-10	20	75	10	22	20	20	M11x1.0	5	15	14	14H	3	10	2.3	M5
20-20	20	95	10	22	40	20	M11x1.0	5	15	14	14H	3	20	2.3	M5
20-30	20	115	10	22	60	20	M11x1.0	5	15	14	14H	3	30	2.3	M5
25 - 6	25	87	14	32	13	24	M14x1.5	5	23	20	17H	4	6	3.0	M6
25-15	25	104	14	32	30	24	M14x1.5	5	23	20	17H	4	15	3.0	M6
25-30	25	134	14	32	60	24	M14x1.5	5	23	20	17H	4	30	3.0	M6
25-50	25	174	14	32	100	24	M14x1.5	5	23	20	17H	4	50	3.0	M6
30 - 6	30	87	14	32	13	24	M14x1.5	5	23	20	17H	4	6	2.0	M6
30-15	30	104	14	32	30	24	M14x1.5	5	23	20	17H	4	15	2.0	M6
30-30	30	134	14	32	60	24	M14x1.5	5	23	20	17H	4	30	2.0	M6
30-50	30	174	14	32	100	24	M14x1.5	5	23	20	17H	4	50	2.0	M6
35 - 6	35	87	14	32	13	24	M14x1.5	5	23	20	17H	4	6	3.0	M6
35-15	35	104	14	32	30	24	M14x1.5	5	23	20	17H	4	15	3.0	M6
35-30	35	134	14	32	60	24	M14x1.5	5	23	20	17H	4	30	3.0	M6
35-50	35	174	14	32	100	24	M14x1.5	5	23	20	17H	4	50	3.0	M6
40 - 6	40	87	14	32	13	24	M14x1.5	5	23	20	17H	4	6	4.0	M6
40-15	40	104	14	32	30	24	M14x1.5	5	23	20	17H	4	15	4.0	M6
40-30	40	134	14	32	60	24	M14x1.5	5	23	20	17H	4	30	4.0	M6
40-50	40	174	14	32	100	24	M14x1.5	5	23	20	17H	4	50	4.0	M6



KPTS : 수평 스프링형 패드

형 식	A	B	C	D	E	F	G	H	J	K	L	M	S	Y	Z
50 - 6	50	87	14	32	13	24	M14x1.5	5	23	20	17H	4	6	4.0	M8
50-15	50	104	14	32	30	24	M14x1.5	5	23	20	17H	4	15	4.0	M8
50-30	50	134	14	32	60	24	M14x1.5	5	23	20	17H	4	30	4.0	M8
50-50	50	174	14	32	100	24	M14x1.5	5	23	20	17H	4	50	4.0	M8
60-10	60	103	15	35	20	28	M16x1.5	PS1/8		22	21H	5	10	6.0	M12x1.25
60-30	60	143	15	35	60	28	M16x1.5	PS1/8		22	21H	5	30	6.0	M12x1.25
60-50	60	183	15	35	100	28	M16x1.5	PS1/8		22	21H	5	50	6.0	M12x1.25
60-70	60	223	15	35	140	28	M16x1.5	PS1/8		22	21H	5	70	6.0	M12x1.25
80-10	80	113	20	40	20	28	M16x1.5	PS1/8		22	21H	5	10	6.0	M12x1.25
80-30	80	153	20	40	60	28	M16x1.5	PS1/8		22	21H	5	30	6.0	M12x1.25
80-50	80	193	20	40	100	28	M16x1.5	PS1/8		22	21H	5	50	6.0	M12x1.25
80-70	80	250	20	40	140	28	M16x1.5	PS1/8		22	21H	5	70	6.0	M12x1.25
100 - 10	100	113	20	40	20	28	M16x1.5	PS1/8		22	21H	5	10	6.0	M12x1.25
100 - 30	100	153	20	40	60	28	M16x1.5	PS1/8		22	21H	5	30	6.0	M12x1.25
100 - 50	100	193	20	40	100	28	M16x1.5	PS1/8		22	21H	5	50	6.0	M12x1.25
100 - 70	100	250	20	40	140	28	M16x1.5	PS1/8		22	21H	5	70	6.0	M12x1.25
120 - 15	120	205	25	50	75	45	M30x1.5	PS1/8		35	36H	10	15	6.0	M8
120-100	120	295	25	50	165	45	M30x1.5	PS1/8		35	36H	10	100	6.0	M8
150 - 15	150	220	40	50	75	45	M30x1.5	PS1/8		35	36H	10	15	14.5	M8
150-100	150	310	40	50	165	45	M30x1.5	PS1/8		35	36H	10	100	14.5	M8
200 - 15	200	220	40	50	75	45	M30x1.5	PS1/8		35	36H	10	15	14.5	M8
200-100	200	310	40	50	165	45	M30x1.5	PS1/8		35	36H	10	100	14.5	M8



SUCTION CUPS

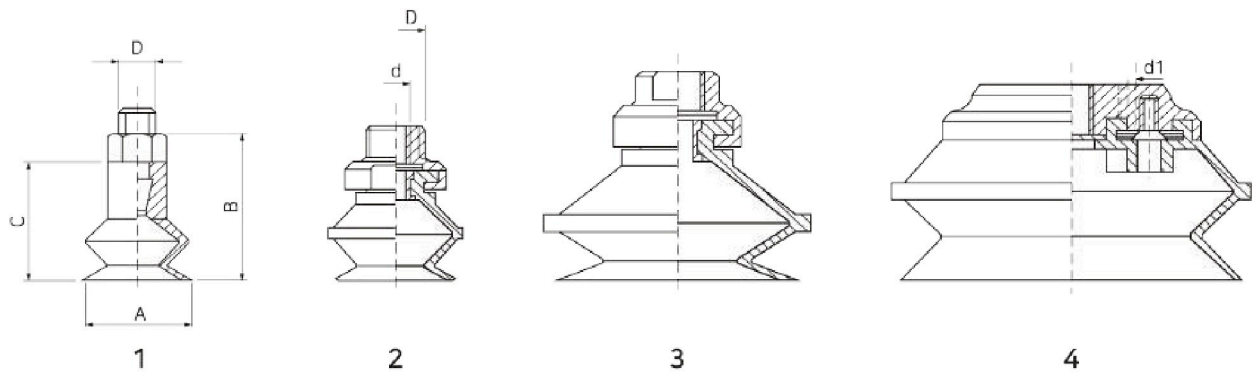
이중패드

Bellow Suction Cups

Is used when level compensation is desired, or when a vertical offset motion is involved, on curved surfaces and when separating thin work pieces.

Available as standard in sizes from 10 to 150mm.

Bellows Suction Cups : 이중패드



Measurements and Article Number

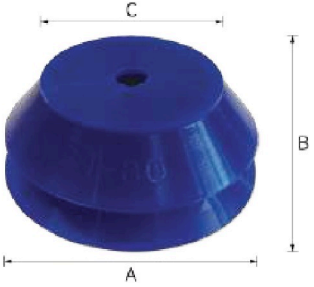
Model	Fig.	A Outer Diameter mm	B Min.Height incl.Fittings mm	C Height without Fittings	Suction Cup Complete Art.No.	Suction Cup without Fittings Art.No.	d-D, d1 Connection Threads	Fittings Art.No.	Connection Plate Art.No.	Filter Art.No.	Locking Plug Alt. Locking Washer Art.No.
B 10	1	11	20.5	16	31.50.023	31.50.101	M5	31.07.030			
B 15	1	16	24	19,5	31.50.024	31.50.102	M5	31.07.030			
B 20	2	22	21.7	19	31.50.025	31.50.103	M5/R1/8"		31.50.141	31.50.163	31.50.140
B 30	2	33	28.7	26	31.50.026	31.50.104	M5/R1/8"		31.50.141	31.50.163	31.50.140
B 40	3	43	36.5	28	31.50.027	31.50.105	R1/8"		31.50.143	31.50.164	31.50.142
B 50	3	53	43.5	35	31.50.028	31.50.106	R1/8"		31.50.145	31.50.165	31.50.144
B 75	4	78	44	37	31.50.029	31.50.107	R1/8", M5		31.50.043	31.50.166	31.50.146
B110	4	115	61	54	31.50.030	31.50.108	R1/2", R1/8"		31.50.044	31.50.167	31.50.148
B150	4	156	78	71	31.50.031	31.50.109	R1/2", R1/8"		31.50.045	31.50.167	31.50.150

When ordering a silicone cup, an "S" should be added after the article number.

Bellows Suction Cups : 이중패드

Lifting Power

Model	A	B	C
KB-40	40	22	17
KB-50	50	25	25
KB-62,5	62,5	27	32
KB-80	80	34	57
KB-110	110	43	61



The diagram shows a blue bellows suction cup. Dimension A is the diameter of the base, dimension B is the height of the bellows, and dimension C is the diameter of the top flange.

Material Properties

Material	Wear Resistance	Oil Resistance	Working Temperature	Weather and Ozone Resistance
SILICONE 50	Good	Very good	-70 ° — + 250℃	Excellent
TWO 50	Excellent	Good	-40 ° — + 110℃	Excellent

Other qualities on request.