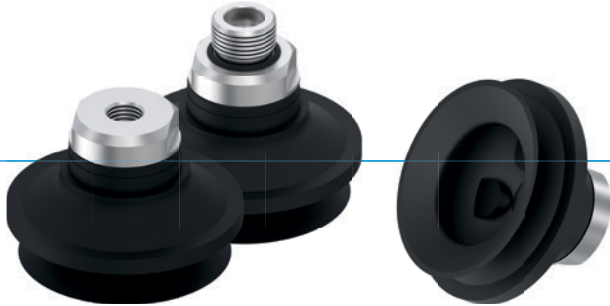


BELLOWS SUCTION CUP

SERIES ZB

▶ PRODUCT ADVANTAGES



▶ Optimum geometry

- For flat and convex surfaces
- Can be used universally
- Height compensation and damping function with 1.5 folds

▶ Application areas

- Packaging
- Consumer goods
- Intralogistics
- Wood and composite materials

▶ PRODUCT KEY

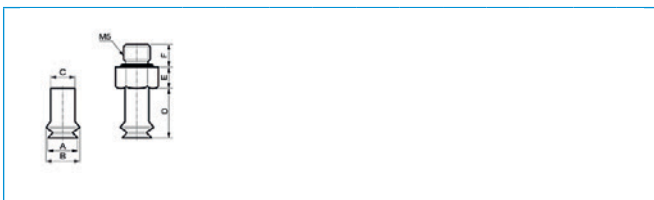
ZB	17	-	N	-	M5F18M	-	M
Series	Diameter		Material		Fixing thread		Filter type

▶ MATERIAL CHARACTERISTICS

Version	Material	Color	Operating temperature [°C]	Shore hardness
N	NBR	Black	-20 ... +110	60
PU	Polyurethane	Translucent orange	0 ... +60	60
S	Silicone	Red	-70 ... +200	55
WS	Silicone food-safe	Translucent white	-70 ... +200	55

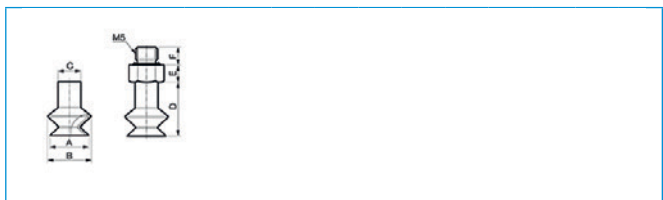
▶ DIMENSIONS

ZB5



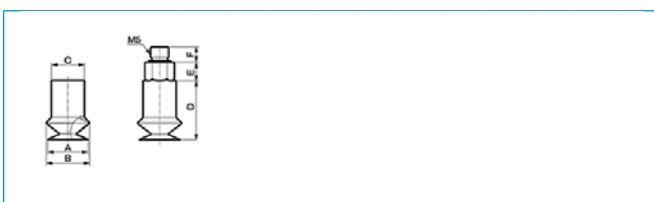
Legend	A	B	C	D	E	F
Dimensions [mm]	5.5	6.2	4.5	9.2	4	4.2

ZB8



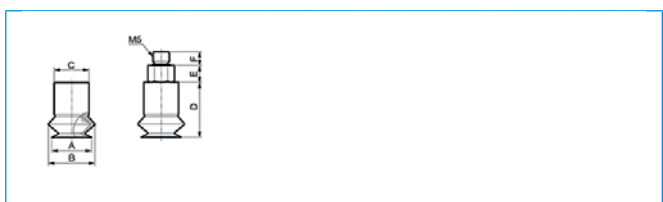
Legend	A	B	C	D	E	F
Dimensions [mm]	8.8	9.6	5.2	12.5	4	4.2

ZB10



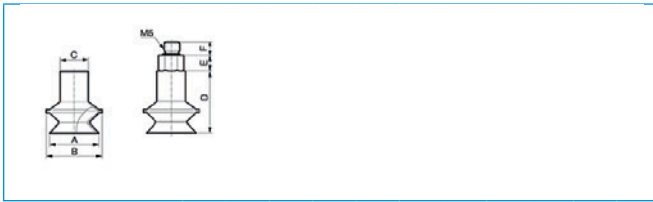
Legend	A	B	C	D	E	F
Dimensions [mm]	11	12	9	16	4	4.2

ZB12



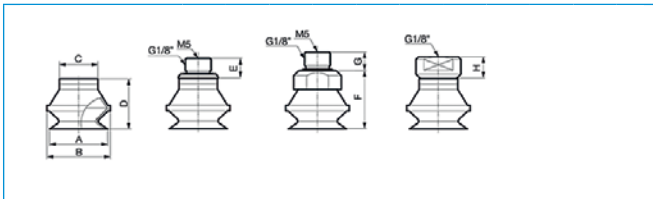
Legend	A	B	C	D	E	F
Dimensions [mm]	12	14	10.5	16.5	4	4.2

ZB15



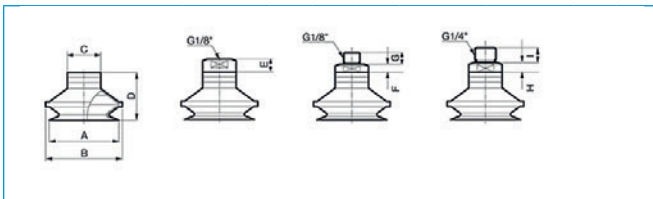
Legend	A	B	C	D	E	F
Dimensions [mm]	15.5	17.5	9	19.5	4	4.2

ZB20



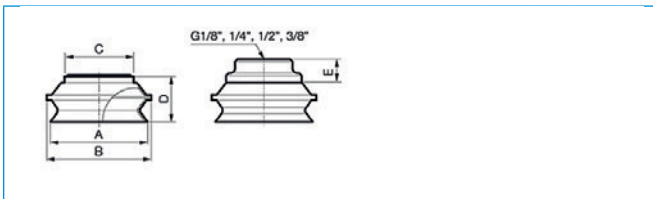
Legend	A	B	C	D	E	F	G	H
Dimensions [mm]	22	24	14.6	19	7.5	22	7	8

ZB40



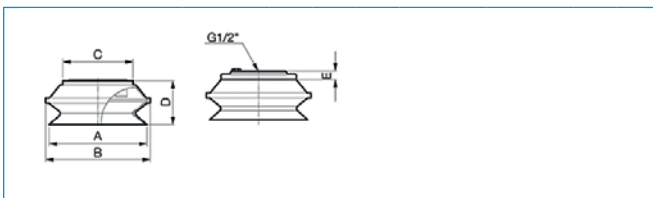
Legend	A	B	C	D	E	F	G	H	I
Dimensions [mm]	43	46	20	28	8	5	7	6	9

ZB75



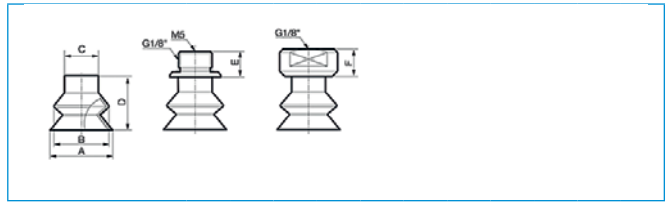
Legend	A	B	C	D	E
Dimensions [mm]	78	83	55	36	14

ZB150



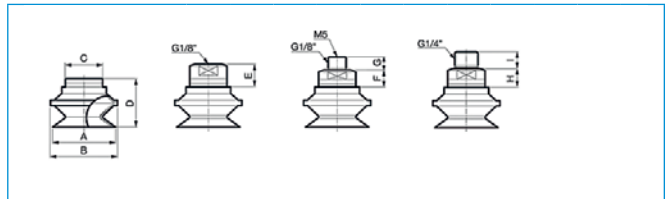
Legend	A	B	C	D	E
Dimensions [mm]	155	166	120	78	14

ZB17



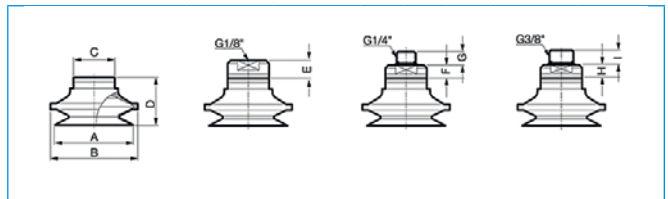
Legend	A	B	C	D	E	F
Dimensions [mm]	18.5	16.6	10	16	7.5	8

ZB30



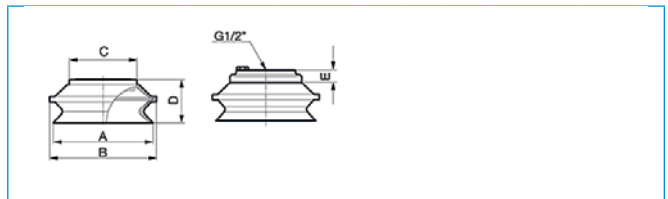
Legend	A	B	C	D	E	F	G	H	I
Dimensions [mm]	34	36	20	26	8	5	9	5.8	9

ZB50



Legend	A	B	C	D	E	F	G	H	I
Dimensions [mm]	53	58	28	32	12	9	9	9	10

ZB110



Legend	A	B	C	D	E
Dimensions [mm]	115	124	85	51.4	15

BELLOWS SUCTION CUP

SERIES ZB

► TECHNICAL DATA

Installation size	ZB5	ZB6	ZB8	ZB10	ZB12	ZB15	ZB17
Lifting force parallel at -20 kPa [N]							
Lifting force parallel at -60 kPa [N]							
Lifting force parallel at -90 kPa [N]							
Lifting force vertical at -20 kPa [N]	0.29	0.49	0.78	1.47	1.96	2.84	3.92
Lifting force vertical at -60 kPa [N]	0.78	1.08	1.57	3.34	4.02	5.89	7.85
Lifting force vertical at -90 kPa [N]	0.98	1.37	2.45	4.91	6.08	8.83	9.81
Lifting force parallel at -20 kPa [kg]							
Lifting force parallel at -60 kPa [kg]							
Lifting force parallel at -90 kPa [kg]							
Lifting force vertical at -20 kPa [kg]	0.030	0.050	0.080	0.150	0.200	0.290	0.400
Lifting force vertical at -60 kPa [kg]	0.080	0.110	0.160	0.340	0.410	0.600	0.800
Lifting force vertical at -90 kPa [kg]	0.100	0.140	0.250	0.500	0.620	0.900	1.000
Volume [cm³]	0.050	0.090	0.150	0.480	0.590	1.100	1.500

Installation size	ZB20	ZB30	ZB30	ZB40	ZB50	ZB50	ZB75	ZB110
Lifting force parallel at -20 kPa [N]								
Lifting force parallel at -60 kPa [N]								
Lifting force parallel at -90 kPa [N]								
Lifting force vertical at -20 kPa [N]	5.89	14.72	11.97	21.97	31.39	32.96	75.05	137.05
Lifting force vertical at -60 kPa [N]	9.81	25.51	21.97	38.95	77.5	65.04	167.16	343.35
Lifting force vertical at -90 kPa [N]	13.93	38.26	23.74	49.05	103.01	82.01	226.22	461.46
Lifting force parallel at -20 kPa [kg]								
Lifting force parallel at -60 kPa [kg]								
Lifting force parallel at -90 kPa [kg]								
Lifting force vertical at -20 kPa [kg]	0.600	1.500	1.220	2.240	3.200	3.360	7.650	13.970
Lifting force vertical at -60 kPa [kg]	1.000	2.600	2.240	3.970	7.900	6.630	17.040	35.000
Lifting force vertical at -90 kPa [kg]	1.420	3.900	2.420	5.000	10.500	8.360	23.060	47.040
Volume [cm³]	2.700	10.000	10.000	15.000	32.000	32.000	110.000	310.000

► Technical data

Order no.	Diameter [mm]	Material	Fixing thread	Filter type
ZB5-N	5	NBR		
ZB5-N-M5M	5	NBR	M5 external	
ZB5-S	5	Silicone		
ZB5-S-M5M	5	Silicone	M5 external	
ZB5-WS	5	Silicone food-safe		
ZB5-WS-M5M	5	Silicone food-safe	M5 external	
ZB8-N	8	NBR		
ZB8-N-M5M	8	NBR	M5 external	
ZB8-S	8	Silicone		
ZB8-S-M5M	8	Silicone	M5 external	
ZB8-WS	8	Silicone food-safe		
ZB8-WS-M5M	8	Silicone food-safe	M5 external	
ZB10-N	10	NBR		
ZB10-N-M5M	10	NBR	M5 external	
ZB10-S	10	Silicone		
ZB10-S-M5M	10	Silicone	M5 external	
ZB10-WS	10	Silicone food-safe		
ZB10-WS-M5M	10	Silicone food-safe	M5 external	
ZB12-N	12	NBR		
ZB12-N-M5M	12	NBR	M5 external	
ZB12-S	12	Silicone		
ZB12-S-M5M	12	Silicone	M5 external	
ZB12-WS	12	Silicone food-safe		
ZB15-N	15	NBR		
ZB15-N-M5M	15	NBR	M5 external	
ZB15-PU	15	Polyurethane		
ZB15-PU-M5M	15	Polyurethane	M5 external	

Order no.	► Technical data			
	Diameter [mm]	Material	Fixing thread	Filter type
ZB15-S	15	Silicone		
ZB15-S-M5M	15	Silicone	M5 external	
ZB15-WS	15	Silicone food-safe		
ZB15-WS-M5M	15	Silicone food-safe	M5 external	
ZB17-N	17	NBR		
ZB17-N-18F	17	NBR	G1/8" internal	
ZB17-N-M5F18M	17	NBR	M5 internal - G1/8" external	
ZB17-N-M5F18M-M	17	NBR	M5 internal - G1/8" external	Mesh filter
ZB17-S	17	Silicone		
ZB17-S-18F	17	Silicone	G1/8" internal	
ZB17-S-M5F18M	17	Silicone	M5 internal - G1/8" external	
ZB17-WS	17	Silicone food-safe		
ZB17-WS-18F	17	Silicone food-safe	G1/8" internal	
ZB17-WS-M5F18M	17	Silicone food-safe	M5 internal - G1/8" external	
ZB20-N	20	NBR		
ZB20-N-18F	20	NBR	G1/8" internal	
ZB20-N-18F-M	20	NBR	G1/8" internal	Mesh filter
ZB20-N-M5F18M	20	NBR	M5 internal - G1/8" external	
ZB20-N-M5F18MB	20	NBR	M5 internal - G1/8" external	
ZB20-N-M5F18M-M	20	NBR	M5 internal - G1/8" external	Mesh filter
ZB20-PU	20	Polyurethane		
ZB20-PU-18F	20	Polyurethane	G1/8" internal	
ZB20-PU-18F-M	20	Polyurethane	G1/8" internal	Mesh filter
ZB20-PU-M5F18M	20	Polyurethane	M5 internal - G1/8" external	
ZB20-PU-M5F18M-M	20	Polyurethane	M5 internal - G1/8" external	Mesh filter
ZB20-S	20	Silicone		
ZB20-S-18F	20	Silicone	G1/8" internal	
ZB20-S-18F-M	20	Silicone	G1/8" internal	Mesh filter
ZB20-S-M5F18M	20	Silicone	M5 internal - G1/8" external	
ZB20-S-M5F18MB	20	Silicone	M5 internal - G1/8" external	
ZB20-S-M5F18M-M	20	Silicone	M5 internal - G1/8" external	Mesh filter
ZB20-WS	20	Silicone food-safe		
ZB20-WS-18F	20	Silicone food-safe	G1/8" internal	
ZB20-WS-M5F18M	20	Silicone food-safe	M5 internal - G1/8" external	
ZB20-WS-M5F18MB	20	Silicone food-safe	M5 internal - G1/8" external	
ZB20-WS-M5F18M-M	20	Silicone food-safe	M5 internal - G1/8" external	Mesh filter
ZB30M-N	30	NBR		
ZB30M-PU	30	Polyurethane		
ZB30M-S	30	Silicone		
ZB30-N	30	NBR		
ZB30-N-14M	30	NBR	G1/4" external	
ZB30-N-14M-M	30	NBR	G1/4" external	Mesh filter
ZB30-N-18F	30	NBR	G1/8" internal	
ZB30-N-18F-M	30	NBR	G1/8" internal	Mesh filter
ZB30-N-18M	30	NBR	G1/8" external	
ZB30-N-18M-M	30	NBR	G1/8" external	Mesh filter
ZB30-PU	30	Polyurethane		
ZB30-PU-14M	30	Polyurethane	G1/4" external	
ZB30-PU-14M-M	30	Polyurethane	G1/4" external	Mesh filter
ZB30-PU-18F	30	Polyurethane	G1/8" internal	
ZB30-PU-18F-M	30	Polyurethane	G1/8" internal	Mesh filter
ZB30-PU-18M	30	Polyurethane	G1/8" external	
ZB30-PU-18M-M	30	Polyurethane	G1/8" external	Mesh filter
ZB30-S	30	Silicone		
ZB30-S-14M	30	Silicone	G1/4" external	
ZB30-S-14M-M	30	Silicone	G1/4" external	Mesh filter
ZB30-S-18F	30	Silicone	G1/8" internal	
ZB30-S-18FB	30	Silicone	G1/8" internal	
ZB30-S-18F-M	30	Silicone	G1/8" internal	Mesh filter
ZB30-S-18M	30	Silicone	G1/8" external	

BELLOWS SUCTION CUP

SERIES ZB

Order no.	► Technical data			
	Diameter [mm]	Material	Fixing thread	Filter type
ZB30-S-18M-M	30	Silicone	G1/8" external	Mesh filter
ZB30-WS	30	Silicone food-safe		
ZB30-WS-14M	30	Silicone food-safe	G1/4" external	
ZB30-WS-18F	30	Silicone food-safe	G1/8" internal	
ZB30-WS-18M	30	Silicone food-safe	G1/8" external	
ZB40-N	40	NBR		
ZB40-N-14M	40	NBR	G1/4" external	
ZB40-N-14M-M	40	NBR	G1/4" external	Mesh filter
ZB40-N-18F	40	NBR	G1/8" internal	
ZB40-N-18F-M	40	NBR	G1/8" internal	Mesh filter
ZB40-N-18M	40	NBR	G1/8" external	
ZB40-N-18M-M	40	NBR	G1/8" external	Mesh filter
ZB40-PU	40	Polyurethane		
ZB40-PU-14M	40	Polyurethane	G1/4" external	
ZB40-PU-14M-M	40	Polyurethane	G1/4" external	Mesh filter
ZB40-PU-18F	40	Polyurethane	G1/8" internal	
ZB40-PU-18F-M	40	Polyurethane	G1/8" internal	Mesh filter
ZB40-PU-18M	40	Polyurethane	G1/8" external	
ZB40-PU-18M-M	40	Polyurethane	G1/8" external	Mesh filter
ZB40-S	40	Silicone		
ZB40-S-14M	40	Silicone	G1/4" external	
ZB40-S-14M-M	40	Silicone	G1/4" external	Mesh filter
ZB40-S-18F	40	Silicone	G1/8" internal	
ZB40-S-18FB	40	Silicone	G1/8" internal	
ZB40-S-18F-M	40	Silicone	G1/8" internal	Mesh filter
ZB40-S-18M	40	Silicone	G1/8" external	
ZB40-S-18M-M	40	Silicone	G1/8" external	Mesh filter
ZB40-WS	40	Silicone food-safe		
ZB40-WS-14M	40	Silicone food-safe	G1/4" external	
ZB40-WS-18F	40	Silicone food-safe	G1/8" internal	
ZB40-WS-18M	40	Silicone food-safe	G1/8" external	
ZB50-N	50	NBR		
ZB50-N-14M	50	NBR	G1/4" external	
ZB50-N-14M-M	50	NBR	G1/4" external	Mesh filter
ZB50-N-18F	50	NBR	G1/8" internal	
ZB50-N-18F-M	50	NBR	G1/8" internal	Mesh filter
ZB50-N-38M	50	NBR	G3/8" external	
ZB50-N-38M-M	50	NBR	G3/8" external	Mesh filter
ZB50-PU	50	Polyurethane		
ZB50-PU-14M	50	Polyurethane	G1/4" external	
ZB50-PU-14M-M	50	Polyurethane	G1/4" external	Mesh filter
ZB50-PU-18F	50	Polyurethane	G1/8" internal	
ZB50-PU-18F-M	50	Polyurethane	G1/8" internal	Mesh filter
ZB50-PU-38M	50	Polyurethane	G3/8" external	
ZB50-PU-38M-M	50	Polyurethane	G3/8" external	Mesh filter
ZB50-S	50	Silicone		
ZB50-S-14M	50	Silicone	G1/4" external	
ZB50-S-14M-M	50	Silicone	G1/4" external	Mesh filter
ZB50-S-18F	50	Silicone	G1/8" internal	
ZB50-S-18F-M	50	Silicone	G1/8" internal	Mesh filter
ZB50-S-38M	50	Silicone	G3/8" external	
ZB50-S-38M-M	50	Silicone	G3/8" external	Mesh filter
ZB50-WS	50	Silicone food-safe		
ZB50-WS-14M	50	Silicone food-safe	G1/4" external	
ZB50-WS-14M-M	50	Silicone food-safe	G1/4" external	Mesh filter
ZB50-WS-18F	50	Silicone food-safe	G1/8" internal	
ZB50-WS-18F-M	50	Silicone food-safe	G1/8" internal	Mesh filter
ZB75-N	75	NBR		
ZB75-N-12F	75	NBR	G1/2" internal	
ZB75-N-12F-M	75	NBR	G1/2" internal	Mesh filter

Order no.	► Technical data			
	Diameter [mm]	Material	Fixing thread	Filter type
ZB75-N-14F	75	NBR	G1/4" internal	
ZB75-N-14F-M	75	NBR	G1/4" internal	Mesh filter
ZB75-N-18F	75	NBR	G1/8" internal	
ZB75-N-18F-M	75	NBR	G1/8" internal	Mesh filter
ZB75-N-38F	75	NBR	G3/8" internal	
ZB75-N-38F-M	75	NBR	G3/8" internal	Mesh filter
ZB75-PU	75	Polyurethane		
ZB75-PU-12F	75	Polyurethane	G1/2" internal	
ZB75-PU-12F-M	75	Polyurethane	G1/2" internal	Mesh filter
ZB75-PU-14F	75	Polyurethane	G1/4" internal	
ZB75-PU-14F-M	75	Polyurethane	G1/4" internal	Mesh filter
ZB75-PU-18F	75	Polyurethane	G1/8" internal	
ZB75-PU-18F-M	75	Polyurethane	G1/8" internal	Mesh filter
ZB75-PU-38F	75	Polyurethane	G3/8" internal	
ZB75-PU-38F-M	75	Polyurethane	G3/8" internal	Mesh filter
ZB75-S	75	Silicone		
ZB75-S-12F	75	Silicone	G1/2" internal	
ZB75-S-12F-M	75	Silicone	G1/2" internal	Mesh filter
ZB75-S-14F	75	Silicone	G1/4" internal	
ZB75-S-14F-M	75	Silicone	G1/4" internal	Mesh filter
ZB75-S-18F	75	Silicone	G1/8" internal	
ZB75-S-18F-M	75	Silicone	G1/8" internal	Mesh filter
ZB75-S-38F	75	Silicone	G3/8" internal	
ZB75-S-38F-M	75	Silicone	G3/8" internal	Mesh filter
ZB75-WS	75	Silicone food-safe		
ZB75-WS-12F	75	Silicone food-safe	G1/2" internal	
ZB75-WS-14F	75	Silicone food-safe	G1/4" internal	
ZB75-WS-18F	75	Silicone food-safe	G1/8" internal	
ZB75-WS-18F-M	75	Silicone food-safe	G1/8" internal	Mesh filter
ZB110-N	110	NBR		
ZB110-N-12F	110	NBR	G1/2" internal	
ZB110-N-12F-M	110	NBR	G1/2" internal	Mesh filter
ZB110-S	110	Silicone		
ZB110-S-12F	110	Silicone	G1/2" internal	
ZB110-S-12F-M	110	Silicone	G1/2" internal	Mesh filter
ZB110-WS	110	Silicone food-safe		
ZB150-N	150	NBR		
ZB150-N-12F	150	NBR	G1/2" internal	
ZB150-N-12F-M	150	NBR	G1/2" internal	Mesh filter
ZB150-S	150	Silicone		
ZB150-S-12F	150	Silicone	G1/2" internal	
ZB150-S-12F-M	150	Silicone	G1/2" internal	Mesh filter
ZB150-WS	150	Silicone food-safe		