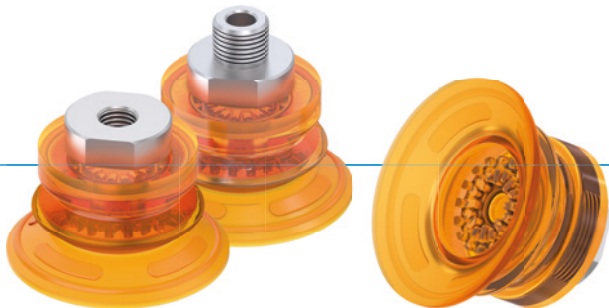


BELLOWS SUCTION CUP

SERIES ZBF

► PRODUCT ADVANTAGES



► Optimum geometry

- For thin, oily and bent metal plates and car body panels
- Profile structure on the underside of the suction cup for increased friction between the workpiece and vacuum suction cup
- Height compensation and damping function with 1.5 folds

► Application areas

- Automotive
- Glass
- Wood and composite materials
- Metal

► PRODUCT KEY

ZBF	25	-	PU	-	18F
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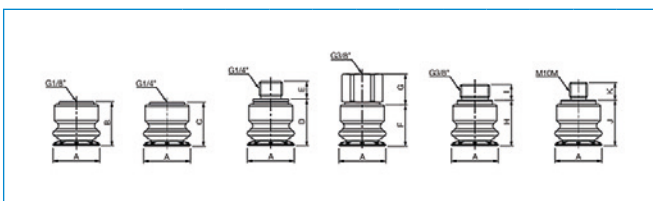
Series	Diameter	Material	Fixing thread
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► MATERIAL CHARACTERISTICS

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

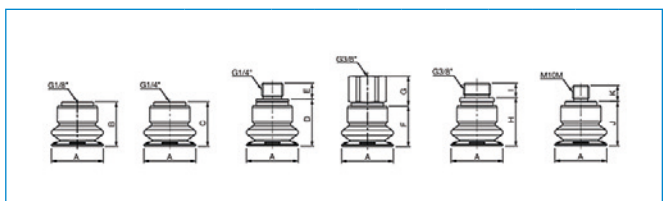
► DIMENSIONS

ZBF25



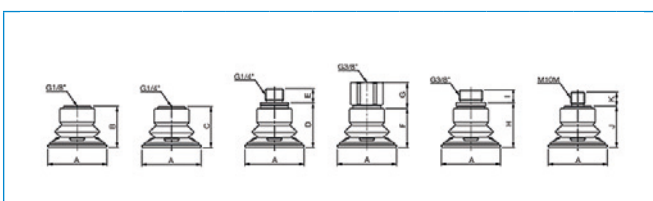
Legend	A	B	C	D	E	F	G	H	I	J	K
Dimensions [mm]	26.5	25	25	26.6	10	23.5	17.5	26	9	26	10

ZBF30



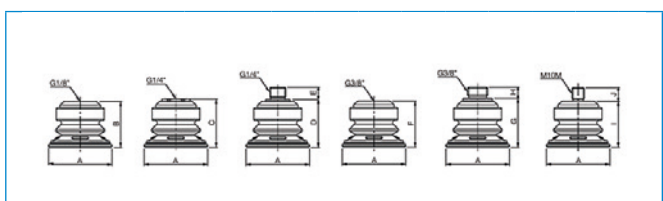
Legend	A	B	C	D	E	F	G	H	I	J	K
Dimensions [mm]	32	27.5	27.5	29.1	10	25	18.5	30	9	27.5	10

ZBF40

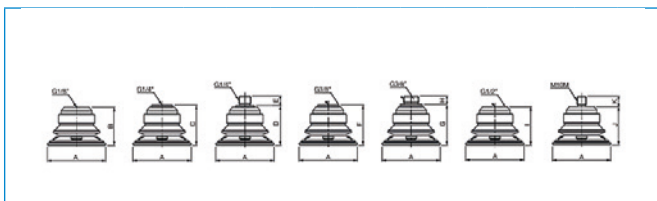


Legend	A	B	C	D	E	F	G	H	I	J	K
Dimensions [mm]	42	29.1	29.1	30.7	10	27.6	17.5	31.6	9	29.1	10

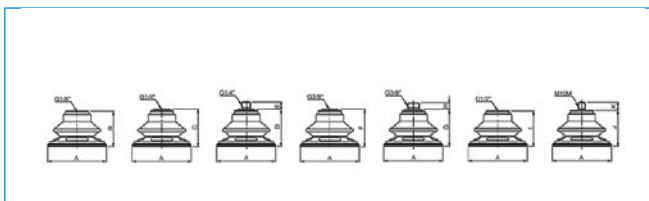
ZBF50



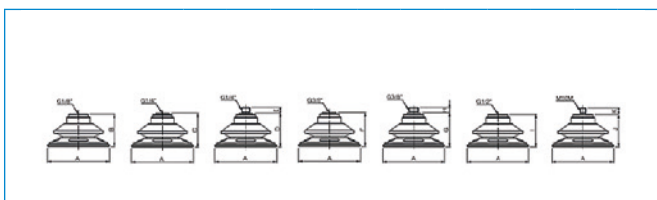
Legend	A	B	C	D	E	F	G	H	I	J
Dimensions [mm]	51.5	37.2	39.2	38.8	10	37.2	39.7	9	37.2	11

ZBF60

Legend	A	B	C	D	E	F	G	H	I	J	K
Dimensions [mm]	62.8	41.4	43.4	43	10	43.4	43.9	9	41.4	41.4	11

ZBF80

Legend	A	B	C	D	E	F	G	H	I	J	K
Dimensions [mm]	83	49.6	52.6	52.3	10	52.6	52.1	9	49.6	50.6	11

ZBF100

Legend	A	B	C	D	E	F	G	H	I	J	K
Dimensions [mm]	102	54.3	56.3	56	10	56.3	56.8	9	54.3	54.3	11

TECHNICAL DATA

Installation size	ZBF25	ZBF30	ZBF40	ZBF50	ZBF60	ZBF80	ZBF100
Lifting force parallel at -20 kPa [N]	5.98	8.44	11.58	20.5	67.1	89.47	111.83
Lifting force parallel at -60 kPa [N]	13.44	30.31	63.77	94.18	125.96	167.95	209.93
Lifting force parallel at -90 kPa [N]	18.54	76.03	110.85	144.21	165.99	221.31	276.64
Lifting force vertical at -20 kPa [N]	10.79	17.36	24.53	41.01	87.7	116.94	146.17
Lifting force vertical at -60 kPa [N]	31.39	61.41	94.76	129.49	159.51	212.68	265.85
Lifting force vertical at -90 kPa [N]	37.28	93	125.57	159.71	181.88	242.5	303.13
Lifting force parallel at -20 kPa [kg]	0.610	0.860	1.180	2.090	6.840	9.120	11.400
Lifting force parallel at -60 kPa [kg]	1.370	3.090	6.500	9.600	12.840	17.120	21.400
Lifting force parallel at -90 kPa [kg]	1.890	7.750	11.300	14.700	16.920	22.560	28.200
Lifting force vertical at -20 kPa [kg]	1.100	1.770	2.500	4.180	8.940	11.920	14.900
Lifting force vertical at -60 kPa [kg]	3.200	6.260	9.660	13.200	16.260	21.680	27.100
Lifting force vertical at -90 kPa [kg]	3.800	9.480	12.800	16.280	18.540	24.720	30.900
Volume [cm³]	2.600	6.000	7.200	11.000	22.000	59.500	103.500

Order no.	► Technical data		
	Diameter [mm]	Material	Fixing thread
ZBF25-N	25	NBR	
ZBF25-N-14F	25	NBR	G1/4" internal
ZBF25-N-14M	25	NBR	G1/4" external
ZBF25-N-18F	25	NBR	G1/8" internal
ZBF25-N-M10M	25	NBR	M10 external
ZBF25-PU	25	Polyurethane	
ZBF25-PU-14F	25	Polyurethane	G1/4" internal
ZBF25-PU-14M	25	Polyurethane	G1/4" external
ZBF25-PU-18F	25	Polyurethane	G1/8" internal
ZBF25-PU-M10M	25	Polyurethane	M10 external
ZBF25-S-14F	25	Silicone	G1/4" internal
ZBF25-S-14M	25	Silicone	G1/4" external
ZBF25-S-18F	25	Silicone	G1/8" internal
ZBF25-S-M10M	25	Silicone	M10 external
ZBF30-N	30	NBR	
ZBF30-N-14F	30	NBR	G1/4" internal
ZBF30-N-14M	30	NBR	G1/4" external
ZBF30-N-18F	30	NBR	G1/8" internal
ZBF30-N-M10M	30	NBR	M10 external

BELLOWS SUCTION CUP

SERIES ZBF

Order no.	► Technical data		
	Diameter [mm]	Material	Fixing thread
ZBF30-PU	30	Polyurethane	
ZBF30-PU-14F	30	Polyurethane	G1/4" internal
ZBF30-PU-14M	30	Polyurethane	G1/4" external
ZBF30-PU-18F	30	Polyurethane	G1/8" internal
ZBF30-PU-M10M	30	Polyurethane	M10 external
ZBF30-S-14F	30	Silicone	G1/4" internal
ZBF30-S-14M	30	Silicone	G1/4" external
ZBF30-S-18F	30	Silicone	G1/8" internal
ZBF30-S-M10M	30	Silicone	M10 external
ZBF40-N	40	NBR	
ZBF40-N-14F	40	NBR	G1/4" internal
ZBF40-N-14M	40	NBR	G1/4" external
ZBF40-N-18F	40	NBR	G1/8" internal
ZBF40-N-M10M	40	NBR	M10 external
ZBF40-PU	40	Polyurethane	
ZBF40-PU-14F	40	Polyurethane	G1/4" internal
ZBF40-PU-14M	40	Polyurethane	G1/4" external
ZBF40-PU-18F	40	Polyurethane	G1/8" internal
ZBF40-PU-M10M	40	Polyurethane	M10 external
ZBF40-S-14F	40	Silicone	G1/4" internal
ZBF40-S-14M	40	Silicone	G1/4" external
ZBF40-S-18F	40	Silicone	G1/8" internal
ZBF40-S-M10M	40	Silicone	M10 external
ZBF50-N	50	NBR	
ZBF50-N-14F	50	NBR	G1/4" internal
ZBF50-N-14M	50	NBR	G1/4" external
ZBF50-N-18F	50	NBR	G1/8" internal
ZBF50-N-38F	50	NBR	G3/8" internal
ZBF50-N-38M	50	NBR	G3/8" external
ZBF50-N-M10M	50	NBR	M10 external
ZBF50-PU	50	Polyurethane	
ZBF50-PU-14F	50	Polyurethane	G1/4" internal
ZBF50-PU-14M	50	Polyurethane	G1/4" external
ZBF50-PU-18F	50	Polyurethane	G1/8" internal
ZBF50-PU-38F	50	Polyurethane	G3/8" internal
ZBF50-PU-38M	50	Polyurethane	G3/8" external
ZBF50-PU-M10M	50	Polyurethane	M10 external
ZBF50-S	50	Silicone	
ZBF50-S-14F	50	Silicone	G1/4" internal
ZBF50-S-14M	50	Silicone	G1/4" external
ZBF50-S-18F	50	Silicone	G1/8" internal
ZBF50-S-38F	50	Silicone	G3/8" internal
ZBF50-S-38M	50	Silicone	G3/8" external
ZBF50-S-M10M	50	Silicone	M10 external
ZBF60-N	60	NBR	
ZBF60-N-12F	60	NBR	G1/2" internal
ZBF60-N-14F	60	NBR	G1/4" internal
ZBF60-N-14M	60	NBR	G1/4" external
ZBF60-N-18F	60	NBR	G1/8" internal
ZBF60-N-38F	60	NBR	G3/8" internal
ZBF60-N-38M	60	NBR	G3/8" external
ZBF60-N-M10M	60	NBR	M10 external
ZBF60-PU	60	Polyurethane	
ZBF60-PU-12F	60	Polyurethane	G1/2" internal
ZBF60-PU-14F	60	Polyurethane	G1/4" internal
ZBF60-PU-14M	60	Polyurethane	G1/4" external
ZBF60-PU-18F	60	Polyurethane	G1/8" internal
ZBF60-PU-38F	60	Polyurethane	G3/8" internal
ZBF60-PU-38M	60	Polyurethane	G3/8" external
ZBF60-PU-M10M	60	Polyurethane	M10 external

Order no.	► Technical data		
	Diameter [mm]	Material	Fixing thread
ZBF60-S-12F	60	Silicone	G1/2" internal
ZBF60-S-14F	60	Silicone	G1/4" internal
ZBF60-S-14M	60	Silicone	G1/4" external
ZBF60-S-18F	60	Silicone	G1/8" internal
ZBF60-S-38F	60	Silicone	G3/8" internal
ZBF60-S-38M	60	Silicone	G3/8" external
ZBF60-S-M10M	60	Silicone	M10 external
ZBF80-N	80	NBR	
ZBF80-N-12F	80	NBR	G1/2" internal
ZBF80-N-14F	80	NBR	G1/4" internal
ZBF80-N-14M	80	NBR	G1/4" external
ZBF80-N-18F	80	NBR	G1/8" internal
ZBF80-N-38F	80	NBR	G3/8" internal
ZBF80-N-38M	80	NBR	G3/8" external
ZBF80-N-M10M	80	NBR	M10 external
ZBF80-PU	80	Polyurethane	
ZBF80-PU-12F	80	Polyurethane	G1/2" internal
ZBF80-PU-14F	80	Polyurethane	G1/4" internal
ZBF80-PU-14M	80	Polyurethane	G1/4" external
ZBF80-PU-18F	80	Polyurethane	G1/8" internal
ZBF80-PU-38F	80	Polyurethane	G3/8" internal
ZBF80-PU-38M	80	Polyurethane	G3/8" external
ZBF80-PU-M10M	80	Polyurethane	M10 external
ZBF80-S	80	Silicone	
ZBF80-S-12F	80	Silicone	G1/2" internal
ZBF80-S-14F	80	Silicone	G1/4" internal
ZBF80-S-14M	80	Silicone	G1/4" external
ZBF80-S-18F	80	Silicone	G1/8" internal
ZBF80-S-38F	80	Silicone	G3/8" internal
ZBF80-S-38M	80	Silicone	G3/8" external
ZBF80-S-M10M	80	Silicone	M10 external
ZBF100-N	100	NBR	
ZBF100-N-12F	100	NBR	G1/2" internal
ZBF100-N-14F	100	NBR	G1/4" internal
ZBF100-N-14M	100	NBR	G1/4" external
ZBF100-N-18F	100	NBR	G1/8" internal
ZBF100-N-38F	100	NBR	G3/8" internal
ZBF100-N-38M	100	NBR	G3/8" external
ZBF100-N-M10M	100	NBR	M10 external
ZBF100-PU	100	Polyurethane	
ZBF100-PU-12F	100	Polyurethane	G1/2" internal
ZBF100-PU-14F	100	Polyurethane	G1/4" internal
ZBF100-PU-14M	100	Polyurethane	G1/4" external
ZBF100-PU-18F	100	Polyurethane	G1/8" internal
ZBF100-PU-38F	100	Polyurethane	G3/8" internal
ZBF100-PU-38M	100	Polyurethane	G3/8" external
ZBF100-PU-M10M	100	Polyurethane	M10 external
ZBF100-S	100	Silicone	
ZBF100-S-12F	100	Silicone	G1/2" internal
ZBF100-S-14F	100	Silicone	G1/4" internal
ZBF100-S-14M	100	Silicone	G1/4" external
ZBF100-S-18F	100	Silicone	G1/8" internal
ZBF100-S-38F	100	Silicone	G3/8" internal
ZBF100-S-38M	100	Silicone	G3/8" external
ZBF100-S-M10M	100	Silicone	M10 external