

Bellows Suction Cups SPB2f (2.5 Folds)

Suction area (Ø) from 15 mm to 50 mm



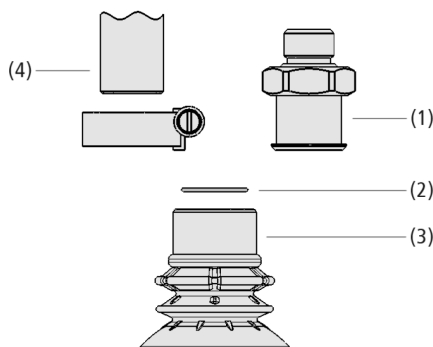
Suitability for Industry Specific Applications

Applications

- Round bellows suction cup with 2.5 folds for dynamical handling of pouches and other types of very flexible packaging
- Process reliable gripping and handling of pouches containing fluids, solids or powder and packaging that is not very full
- Stable in extremely quick packaging processes, particularly in conjunction with delta robots (case packer and pick-and-place applications)



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System Design Bellows Suction Cups SPB2f (2.5 Folds)

Design

- Bellows suction cup SPB2f with 2.5 folds (3) and a gentle and flexible sealing lip with segmented flow vanes and integrated bag stabilizer
- Very large shaft diameter for high volume flow rates
- Specially reinforced suction bellows for additional stability
- Mounting via connection element SC (1); alternatively direct attachment on 3/8" - or 1/2" pipe (4) on the machine side and mounting with a hose clamp
- All connection elements SC with male threads come equipped with an integrated sealing ring
- Optional insert filter for pre-filter (2)

Product Highlights

- FDA compliant silicone SI allows direct food contact
- Integrated bag stabilizer prevents even thin and soft films from being sucked in
- Reinforced main body with 2.5 folds for secure gripping and stability even at high speeds
- Large nominal diameter enables high flow rates for short cycle times



Bellows suction cups SPB2f when handling pouches

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☑ Designation Code Bellows Suction Cups SPB2f (2.5 Folds)

SPB2f	–	30	–	SI-55	–	G1/8-AG
1		2		3		4

1 – Abbreviated designation

Code	Version
SPB2f	2.5 folds

2 – Suction area

Code	Diameter in mm
30...50	ø 30 to 50

3 – Material

Code	Material
SI-55	Silicone

4 – Connection

Code	Connection
G1/8-AG	G1/8-AG (AG = male (M))
G1/8-IG	G1/8-IG (IG = female (F))
G1/4-AG	G1/4-AG
G1/4-IG	G1/4-IG
G3/8-AG	G3/8-AG
G3/8-IG	G3/8-IG
G1/2-AG	G1/2-AG
G1/2-IG	G1/2-IG

Suction cup SPB2f (elastomer part + connection element) is delivered assembled. The assembly consists of:

- Suction cup of type SPB2f - elastomer part, available in various diameters
- Connection element of type SC - available with various threads

Available spare parts: suction cup SPB2f, Schmalz-Connector

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Ordering Data Bellows Suction Cups SPB2f (2.5 Folds)

Type	Part no.
SPB2f 15 SI-55 G1/8-AG	10.01.06.04263
SPB2f 15 SI-55 G1/8-IG	10.01.06.04262
SPB2f 20 SI-55 G1/8-AG	10.01.06.04314
SPB2f 20 SI-55 G1/8-IG	10.01.06.04313
SPB2f 25 SI-55 G1/8-AG	10.01.06.04316
SPB2f 25 SI-55 G1/8-IG	10.01.06.04315
SPB2f 30 SI-55 G1/8-AG	10.01.06.03698
SPB2f 30 SI-55 G1/8-IG	10.01.06.03699
SPB2f 30 SI-55 G1/4-AG	10.01.06.03700
SPB2f 30 SI-55 G1/4-IG	10.01.06.03701
SPB2f 30 SI-55 G3/8-AG	10.01.06.03702
SPB2f 30 SI-55 G3/8-IG	10.01.06.03703
SPB2f 40 SI-55 G1/8-AG	10.01.06.03646
SPB2f 40 SI-55 G1/8-IG	10.01.06.03647
SPB2f 40 SI-55 G1/4-AG	10.01.06.03648
SPB2f 40 SI-55 G1/4-IG	10.01.06.03649
SPB2f 40 SI-55 G3/8-AG	10.01.06.03650
SPB2f 40 SI-55 G3/8-IG	10.01.06.03651
SPB2f 50 SI-55 G1/8-AG	10.01.06.03652
SPB2f 50 SI-55 G1/8-IG	10.01.06.03653
SPB2f 50 SI-55 G1/4-AG	10.01.06.03654
SPB2f 50 SI-55 G1/4-IG	10.01.06.03655
SPB2f 50 SI-55 G3/8-AG	10.01.06.03656
SPB2f 50 SI-55 G3/8-IG	10.01.06.03657
SPB2f 50 SI-55 G1/2-AG	10.01.06.03658
SPB2f 50 SI-55 G1/2-IG	10.01.06.03659

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Ordering Data Spare Parts Bellows Suction Cups SPB2f (2.5 Folds)

Type	Spare Parts			Part no.
SPB2f	15	Bellows suction cup (round)	SPB2f 15 SI-55 SC040	10.01.06.04090
SPB2f	20	Bellows suction cup (round)	SPB2f 20 SI-55 SC040	10.01.06.04225
SPB2f	25	Bellows suction cup (round)	SPB2f 25 SI-55 SC040	10.01.06.04226
SPB2f	30	Bellows suction cup (round)	SPB2f 30 SI-55 SC080	10.01.06.03643
SPB2f	40	Bellows suction cup (round)	SPB2f 40 SI-55 SC080	10.01.06.03559
SPB2f	50	Bellows suction cup (round)	SPB2f 50 SI-55 SC090	10.01.06.03560

Type	Spare Parts		Part no.
SPB2f 15 SI-55 G1/8-AG	Schmalz-Connector	SC 040 G1/8-AG	10.01.06.02490
SPB2f 15 SI-55 G1/8-IG	Schmalz-Connector	SC 040 G1/8-IG	10.01.06.02482
SPB2f 20 SI-55 G1/8-AG	Schmalz-Connector	SC 040 G1/8-AG	10.01.06.02490
SPB2f 20 SI-55 G1/8-IG	Schmalz-Connector	SC 040 G1/8-IG	10.01.06.02482
SPB2f 25 SI-55 G1/8-AG	Schmalz-Connector	SC 040 G1/8-AG	10.01.06.02490
SPB2f 25 SI-55 G1/8-IG	Schmalz-Connector	SC 040 G1/8-IG	10.01.06.02482
SPB2f 30 SI-55 G1/8-AG	Schmalz-Connector	SC 080 G1/8-AG	10.01.06.03142
SPB2f 30 SI-55 G1/8-IG	Schmalz-Connector	SC 080 G1/8-IG	10.01.06.03270
SPB2f 30 SI-55 G1/4-AG	Schmalz-Connector	SC 080 G1/4-AG	10.01.06.03268
SPB2f 30 SI-55 G1/4-IG	Schmalz-Connector	SC 080 G1/4-IG	10.01.06.03271
SPB2f 30 SI-55 G3/8-AG	Schmalz-Connector	SC 080 G3/8-AG	10.01.06.02593
SPB2f 30 SI-55 G3/8-IG	Schmalz-Connector	SC 080 G3/8-IG	10.01.06.02594
SPB2f 40 SI-55 G1/8-AG	Schmalz-Connector	SC 080 G1/8-AG	10.01.06.03142
SPB2f 40 SI-55 G1/8-IG	Schmalz-Connector	SC 080 G1/8-IG	10.01.06.03270
SPB2f 40 SI-55 G1/4-AG	Schmalz-Connector	SC 080 G1/4-AG	10.01.06.03268
SPB2f 40 SI-55 G1/4-IG	Schmalz-Connector	SC 080 G1/4-IG	10.01.06.03271
SPB2f 40 SI-55 G3/8-AG	Schmalz-Connector	SC 080 G3/8-AG	10.01.06.02593
SPB2f 40 SI-55 G3/8-IG	Schmalz-Connector	SC 080 G3/8-IG	10.01.06.02594
SPB2f 50 SI-55 G1/8-AG	Schmalz-Connector	SC 090 G1/8-AG	10.01.06.03269
SPB2f 50 SI-55 G1/8-IG	Schmalz-Connector	SC 090 G1/8-IG	10.01.06.03272
SPB2f 50 SI-55 G1/4-AG	Schmalz-Connector	SC 090 G1/4-AG	10.01.06.02793
SPB2f 50 SI-55 G1/4-IG	Schmalz-Connector	SC 090 G1/4-IG	10.01.06.03273
SPB2f 50 SI-55 G3/8-AG	Schmalz-Connector	SC 090 G3/8-AG	10.01.06.02791
SPB2f 50 SI-55 G3/8-IG	Schmalz-Connector	SC 090 G3/8-IG	10.01.06.03274
SPB2f 50 SI-55 G1/2-AG	Schmalz-Connector	SC 090 G1/2-AG	10.01.06.02595
SPB2f 50 SI-55 G1/2-IG	Schmalz-Connector	SC 090 G1/2-IG	10.01.06.02596

Technical Data Bellows Suction Cups SPB2f (2.5 Folds)

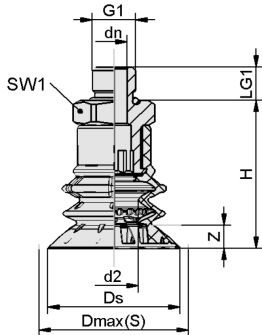
Type		Suction force at -200 mbar [N]	Suction force at -400 mbar [N]	Suction force (-600 mbar) [N]*	Volume [cm ³]
SPB2f	15	0.3	0.5	0.8	1.2
SPB2f	20	0.6	1.1	1.7	1.9
SPB2f	25	1.0	2.0	3.0	3.0
SPB2f	30	4.3	8.5	12.8	7.2
SPB2f	40	6.8	13.6	20.4	12.9
SPB2f	50	13.7	27.3	41.0	26.5

*The specified suction forces are theoretical values at a vacuum of -0.6 bar and with a smooth, dry workpiece surface - they do not include a safety factor

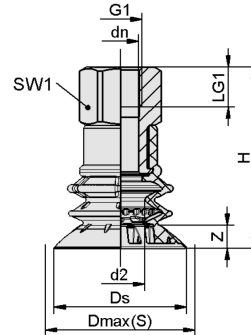
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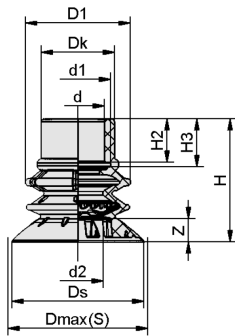
Design Data Bellows Suction Cups SPB2f (2.5 Folds)



SPB2f AG



SPB2f IG



SPB2f

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Design Data Bellows Suction Cups SPB2f (2.5 Folds)

Type*	d2 [mm]	Dmax(S) [mm]**	dn [mm]	Ds [mm]	G1	H [mm]	LG1 [mm]	SW1 [mm]	Z (Stroke) [mm]
SPB2f 15 SI-55 G1/8-IG	4.0	17.0	4.1	15.0	G1/8"-F	35	8.0	14	8
SPB2f 15 SI-55 G1/8-AG	4.0	17.0	4.1	15.0	G1/8"-M	27	7.5	14	8
SPB2f 20 SI-55 G1/8-IG	6.0	22.5	4.1	20.0	G1/8"-F	38	8.0	14	10
SPB2f 20 SI-55 G1/8-AG	6.0	22.5	4.1	20.0	G1/8"-M	30	7.5	14	10
SPB2f 25 SI-55 G1/8-IG	8.0	28.0	4.1	25.0	G1/8"-F	40	8.0	14	10
SPB2f 25 SI-55 G1/8-AG	8.0	28.0	4.1	25.0	G1/8"-M	32	7.5	14	10
SPB2f 30 SI-55 G1/8-AG	7.2	32.0	4.0	30.0	G1/8"-M	40	7.5	22	5
SPB2f 30 SI-55 G1/8-IG	7.2	32.0	8.6	30.0	G1/8"-F	50	12.0	22	5
SPB2f 30 SI-55 G1/4-AG	7.2	32.0	8.0	30.0	G1/4"-M	40	10.0	22	5
SPB2f 30 SI-55 G1/4-IG	7.2	32.0	11.0	30.0	G1/4"-F	50	12.0	22	5
SPB2f 30 SI-55 G3/8-AG	7.2	32.0	10.3	30.0	G3/8"-M	40	10.0	22	5
SPB2f 30 SI-55 G3/8-IG	7.2	32.0	11.0	30.0	G3/8"-F	50	12.0	22	5
SPB2f 40 SI-55 G1/8-AG	15.3	42.0	4.0	39.7	G1/8"-M	45	7.5	22	7
SPB2f 40 SI-55 G1/8-IG	15.3	42.0	8.6	39.7	G1/8"-F	55	12.0	22	7
SPB2f 40 SI-55 G1/4-AG	15.3	42.0	8.0	39.7	G1/4"-M	45	10.0	22	7
SPB2f 40 SI-55 G1/4-IG	15.3	42.0	11.0	39.7	G1/4"-F	55	12.0	22	7
SPB2f 40 SI-55 G3/8-AG	15.3	42.0	10.3	39.7	G3/8"-M	45	10.0	22	7
SPB2f 40 SI-55 G3/8-IG	15.3	42.0	11.0	39.7	G3/8"-F	55	12.0	22	7
SPB2f 50 SI-55 G1/8-AG	21.0	52.0	4.0	49.7	G1/8"-M	54	7.5	27	9
SPB2f 50 SI-55 G1/8-IG	21.0	52.0	8.6	49.7	G1/8"-F	68	12.0	27	9
SPB2f 50 SI-55 G1/4-AG	21.0	52.0	8.0	49.7	G1/4"-M	54	10.0	27	9
SPB2f 50 SI-55 G1/4-IG	21.0	52.0	11.4	49.7	G1/4"-F	68	12.0	27	9
SPB2f 50 SI-55 G3/8-AG	21.0	52.0	10.3	49.7	G3/8"-M	54	10.0	27	9
SPB2f 50 SI-55 G3/8-IG	21.0	52.0	15.0	49.7	G3/8"-F	68	12.0	27	9
SPB2f 50 SI-55 G1/2-AG	21.0	52.0	15.0	49.7	G1/2"-M	54	14.0	27	9
SPB2f 50 SI-55 G1/2-IG	21.0	52.0	15.0	49.7	G1/2"-F	68	16.0	27	9

*Acceptable dimensional tolerances for rubber parts concerning to DIN ISO 3302-1 E3

**External dimension of the suction cup when it is pressed against the workpiece by the vacuum

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Suction area (Ø) from 15 mm to 50 mm

Type*		d [mm]	d1 [mm]	d2 [mm]	D1 [mm]	Dk [mm]	Dmax(S) [mm]**	Ds [mm]	H [mm]	H2 [mm]	H3 [mm]	Z (Stroke) [mm]
SPB2f	15	7.5	10.5	4.0	14.0	13.1	17.0	15.0	20.3	4.6	6.6	8
SPB2f	20	7.5	10.5	6.0	15.7	13.5	22.5	20.0	23.4	4.7	6.7	10
SPB2f	25	7.5	10.5	8.0	18.5	14.5	28.0	25.0	25.3	4.7	6.7	10
SPB2f	30	16.0	19.6	7.2	24.4	22.0	32.0	30.0	32.3	13.0	14.4	5
SPB2f	40	16.0	19.6	15.3	31.6	24.4	42.0	39.7	37.0	13.0	14.4	7
SPB2f	50	20.0	24.8	21.0	41.6	31.0	52.0	49.7	45.6	14.0	16.0	9

*Acceptable dimensional tolerances for rubber parts concerning to DIN ISO 3302-1 E3

**External dimension of the suction cup when it is pressed against the workpiece by the vacuum