



SPB4f

Bellows Suction Cups

For packaging bags/soft bags

/shrink film use

Suction area (Ø) from 30 mm to 50 mm

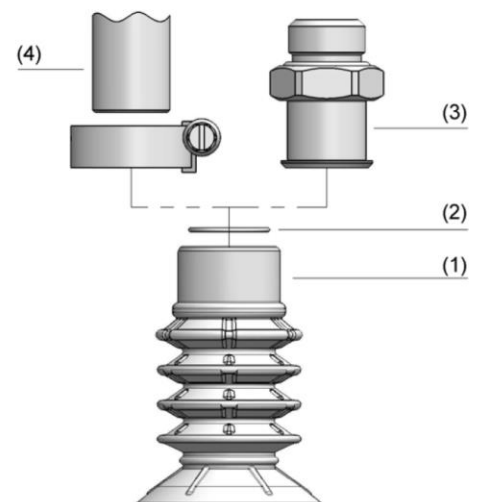


Applications

- Round bellows suction cup with 4.5 folds for handling pouches and other very flexible packaging
- Process reliable gripping and handling especially of pouches and packaging with low filling degree as well as liquid, solid or powder filled pouches
- Use in fast packaging processes, particularly together with delta robots (case packers and pick-and-place applications)

Design

- Bellows suction cup SPB4f with 4.5 folds (1) as well as soft, flexible sealing lip with segmented flow fins 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 (3); 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 thread are equipped with an integrated sealing ring
- Optional clip-in filter as 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 and folds for secure gripping under high lateral loads
- Large nominal diameter enables high flow rates for short cycle times
- Extremely flexible sealing lip seals optimally on pouches with strong wrinkling



Ordering Data

SPB4f **30** **SI-55** **G3/8-AG**
 ① ② ③

①Suction area ⁽¹⁾		②Material		③Connection	
Code	Diameter	Code	Material	Code	Connection
30	Ø30.7 mm	SI-55	Silicone(55±5 ShA)	none	no connection
40	Ø39.7 mm			G1/8-AG	G1/8(AG = male(M))
50	Ø49.7 mm			G1/8-IG	G1/8(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

(1) For available combinations of suction cup diameter and thread model, please refer to the " Ordering Data".

Technical Data

Type		Suction force at -200 mbar [N]	Suction force at -400 mbar [N]	Suction force (-600 mbar) [N]*	Volume [cm ³]
SPB4f	30	4.3	8.5	12.80	6.0
SPB4f	40	6.8	13.6	20.40	15.2
SPB4f	50	13.7	27.3	41.00	33.2

*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.

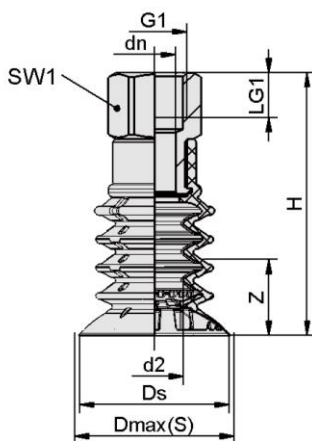
Ordering Data

Type	Connection							
	G1/8-AG	G1/8-IG	G1/4-AG	G1/4-IG	G3/8-AG	G3/8-IG	G1/2-AG	G1/2-IG
SPB4f-30-...	10.01.06.03538	10.01.06.03541	10.01.06.03539	10.01.06.03542	10.01.06.03540	10.01.06.03543	-	-
SPB4f-40-...	10.01.06.03544	10.01.06.03547	10.01.06.03545	10.01.06.03548	10.01.06.03546	10.01.06.03549	-	-
SPB4f-50-...	10.01.06.03550	10.01.06.03554	10.01.06.03551	10.01.06.03555	10.01.06.03552	10.01.06.03556	10.01.06.03553	10.01.06.03557

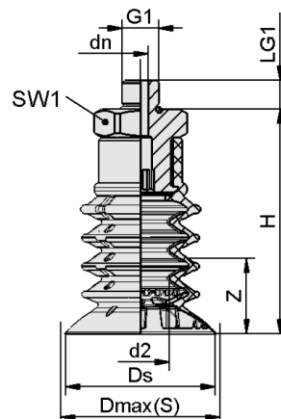
Type	suction cup	Optional attachment	
		filter screen : SIEB ⁽³⁾	Hose clamp : SSB
SPB4f-30-...	10.01.06.03264	10.07.01.00320	10.07.10.00002
SPB4f-40-...	10.01.06.03265	10.07.01.00320	10.07.10.00002
SPB4f-50-...	10.01.06.03266	10.07.01.00321	10.07.10.00003

(3) If you purchase both the vacuum suction cup and the filter screen simultaneously, they can be assembled together before shipping.

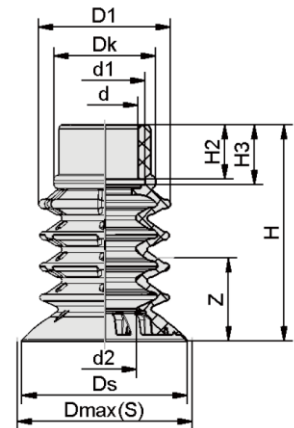
Design Data



SPB4f IG



SPB4f AG



SPB4f

Type*	dn [mm]	d2 [mm]	Dmax(S) [mm]**	Ds [mm]	G1	H [mm]	LG1 [mm]	SW1 [mm]	Z (Stroke) [mm]	Artikelnummer
SPB4f 30 SI-554.0 G1/8-AG		12.3	32.0	30.7	G1/8"-M	47.5	7.5	22	11	10.01.06.03538
SPB4f 30 SI-558.6 G1/8-IG		12.3	32.0	30.7	G1/8"-F	57.5	12.0	22	11	10.01.06.03541
SPB4f 30 SI-558.0 G1/4-AG		12.3	32.0	30.7	G1/4"-M	47.5	10.0	22	11	10.01.06.03539
SPB4f 30 SI-5511.0 G1/4-IG		12.3	32.0	30.7	G1/4"-F	57.5	12.0	22	11	10.01.06.03542
SPB4f 30 SI-5510.3 G3/8-AG		12.3	32.0	30.7	G3/8"-M	47.5	10.0	22	11	10.01.06.03540
SPB4f 30 SI-5511.0 G3/8-IG		12.3	32.0	30.7	G3/8"-F	57.5	12.0	22	11	10.01.06.03543
SPB4f 40 SI-554.0 G1/8-AG		15.3	42.0	39.7	G1/8"-M	59.5	7.5	22	18	10.01.06.03544
SPB4f 40 SI-558.6 G1/8-IG		15.3	42.0	39.7	G1/8"-F	69.5	12.0	22	18	10.01.06.03547
SPB4f 40 SI-558.0 G1/4-AG		15.3	42.0	39.7	G1/4"-M	59.5	10.0	22	18	10.01.06.03545
SPB4f 40 SI-5511.0 G1/4-IG		15.3	42.0	39.7	G1/4"-F	69.5	12.0	22	18	10.01.06.03548
SPB4f 40 SI-5510.3 G3/8-AG		15.3	42.0	39.7	G3/8"-M	59.5	10.0	22	18	10.01.06.03546
SPB4f 40 SI-5511.0 G3/8-IG		15.3	42.0	39.7	G3/8"-F	69.5	12.0	22	18	10.01.06.03549
SPB4f 50 SI-554.0 G1/8-AG		21.0	52.0	49.7	G1/8"-M	72.5	7.5	27	26	10.01.06.03550
SPB4f 50 SI-558.6 G1/8-IG		21.0	52.0	49.7	G1/8"-F	86.5	12.0	27	26	10.01.06.03554
SPB4f 50 SI-558.0 G1/4-AG		21.0	52.0	49.7	G1/4"-M	72.5	10.0	27	26	10.01.06.03551
SPB4f 50 SI-5511.4 G1/4-IG		21.0	52.0	49.7	G1/4"-F	86.5	12.0	27	26	10.01.06.03555
SPB4f 50 SI-5510.3 G3/8-AG		21.0	52.0	49.7	G3/8"-M	72.5	10.0	27	26	10.01.06.03552
SPB4f 50 SI-5515.0 G3/8-IG		21.0	52.0	49.7	G3/8"-F	86.5	12.0	27	26	10.01.06.03556
SPB4f 50 SI-5515.0 G1/2-AG		21.0	52.0	49.7	G1/2"-M	72.5	14.0	27	26	10.01.06.03553
SPB4f 50 SI-5515.0 G1/2-IG		21.0	52.0	49.7	G1/2"-F	86.5	16.0	27	26	10.01.06.03557

*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

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]
SPB4f 30	16.0	19.6	12.3	22.4	24.4	32	30.7	40.0	13.0	14.4	11
SPB4f 40	16.0	19.6	15.3	31.6	24.4	42	39.7	52.0	13.0	14.4	18
SPB4f 50	20.0	24.8	21.0	41.6	31.0	52	49.7	65.0	14.0	16.0	26

*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