

Suction Pads for Packaging

Bellows Suction Pads SPB4f (4.5 Folds)



The Flexible Gripper Solution for a Wide Variety of Bags

Dynamic and reliable handling of bags regardless of packaging material, goods and filling degree - the new bag suction pad SBP4f masters these tasks. The SPB4f grips reliably, even when the packaging film has many wrinkles and the filling degree is low. The bag stabilizer in the robust 4.5 bellows ensures additional stability even with high transverse dynamics. The silicone suction pad material allows direct contact with food and guarantees quick and easy cleaning of the suction pad.

Design and Highlights

Schmalz Connector

- Connection element with a high nominal flow and a large variety of threads
- Suction pad can also be attached directly to a pipe (push-on) and fastened using a hose clamp

Reinforced suction bellows with 4.5 folds

- Big stroke and good damping effect when gripping the workpiece
- High intrinsic stability with high transverse dynamics

Extremely flexible and adaptable sealing lip

- Excellent sealing on bag packaging, even with strong wrinkling

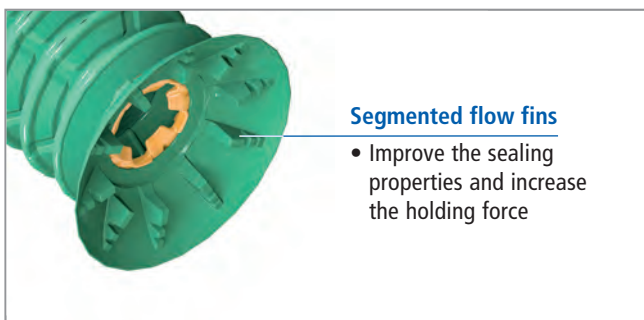


Filter screen

- Protection of the vacuum system already in the suction pad (optional)

Bag stabilizer

- Bag stabilization when gripping
- Prevents thinner plastic films from being sucked in



Segmented flow fins

- Improve the sealing properties and increase the holding force



FDA-compliant silicone suction pad material

- Enables direct food contact
- Quick and easy cleaning of suction pad

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Suction area (Ø) from 30 mm to 50 mm



Suitability for Industry-Specific Applications

Applications

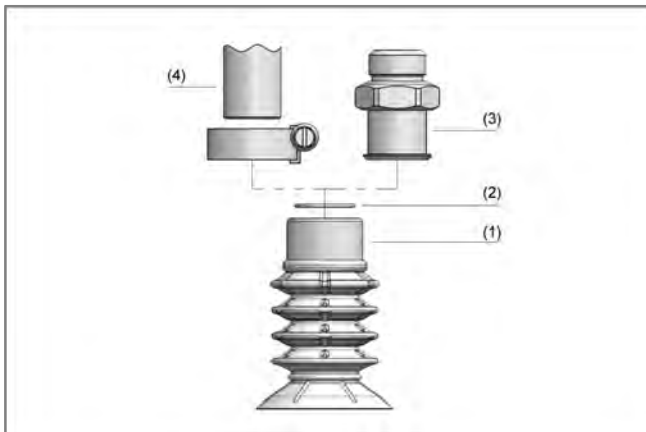
- Bellows suction pad for handling bags and other very flexible packaging
- Reliable gripping and handling especially of bags and packaging with low filling degree as well as liquid, solid or powder filled pouches
- For use in quick packaging processes, particularly together with delta robots (case packers and pick-and-place applications)



Bellows suction pads SPB4f (4.5 folds)

Design

- Bellows suction pad SPB4f with 4.5 folds (1) and integrated bag stabilizer
- Very large shaft diameter for high volume flow rates
- Installation using the Schmalz connection element SC (3); alternatively by attaching directly onto a 3/8" or 1/2" pipe (4) on the machine side and fixing with a hose clamp
- All connection elements with male thread are equipped with an integrated sealing ring
- Flexible sealing lip with segmented flow fins
- Optional pre-filter (2)



System design bellows suction pads SPB4f (4.5 folds)

Our Highlights...

- Extremely flexible and adaptable sealing lip
- Integrated bag stabilizer
- Reinforced body and folds
- Very large nominal diameter for high volume flow rates
- Suction pad made from FDA-compliant silicone

Your Benefits...

- > Optimal sealing on bags, even with strong wrinkles, low filling degree or during swivel motion
- > Additional bag stabilization; even thin and soft plastic films (LDPE) are not drawn in
- > Secure gripping with high lateral loads and swinging workpieces
- > Designed for operation using pumps, blowers and multi-stage ejectors
- > Can be used directly in the food industry



Bellows suction pads SPB4f for handling bags

Suction Pads for Packaging



Bellows Suction Pads SPB4f (4.5 Folds)

Suction area (\emptyset) from 30 mm to 50 mm



Designation Code Bellows Suction Pads SPB4f (4.5 Folds)

Abbreviated designation	Suction area \emptyset in mm	Material and Shore hardness
Example SPB4f 40 SI-55:		
SPB4f	40	SI-55
SPB4f	30 to 50	SI-55



Ordering Data Bellows Suction Pads SPB4f (4.5 Folds)

Suction pad SPB4f (elastomer part) is supplied as an individual part. In order to receive a complete suction pad (elastomer part + connection element + accessories), the following ordering steps are required:

- Suction pad of type SPB4f (step 1) – elastomer part, available in various diameters
- Connection element of type SC (step 2) – available with various threads

Available accessories: filter screen, hose clamp

Step 1: Bellows Suction Pads SPB4f (4.5 Folds)

Type	Part Number
SPB4f 30 SI-55 SC080	10.01.06.03264
SPB4f 40 SI-55 SC080	10.01.06.03265
SPB4f 50 SI-55 SC090	10.01.06.03266

Step 2: Connection Elements Bellows Suction Pads SPB4f (4.5 Folds)

Type	SPB4f 30	SPB4f 40	SPB4f 50
SC 080 G1/8-AG	10.01.06.03142	10.01.06.03142	-
SC 080 G1/8-IG	10.01.06.03270	10.01.06.03270	-
SC 080 G1/4-AG	10.01.06.03268	10.01.06.03268	-
SC 080 G1/4-IG	10.01.06.03271	10.01.06.03271	-
SC 080 G3/8-AG	10.01.06.02593	10.01.06.02593	-
SC 080 G3/8-IG	10.01.06.02594	10.01.06.02594	-
SC 090 G1/8-AG	-	-	10.01.06.03269
SC 090 G1/8-IG	-	-	10.01.06.03272
SC 090 G1/4-AG	-	-	10.01.06.02793
SC 090 G1/4-IG	-	-	10.01.06.03273
SC 090 G3/8-AG	-	-	10.01.06.02791
SC 090 G3/8-IG	-	-	10.01.06.03274
SC 090 G1/2-AG	-	-	10.01.06.02595
SC 090 G1/2-IG	-	-	10.01.06.02596



Ordering Data Accessories Bellows Suction Pads SPB4f (4.5 Folds)

Type	Filter screen	Hose clamp
SPB4f 30 SI-55 SC080	10.07.01.00320	10.07.10.00002
SPB4f 40 SI-55 SC080	10.07.01.00320	10.07.10.00002
SPB4f 50 SI-55 SC090	10.07.01.00321	10.07.10.00003



Technical Data Bellows Suction Pads SPB4f (4.5 Folds)

Type	Suction force [N] at -200 mbar*	Suction force [N] at -400 mbar*	Suction force [N] at -600 mbar*	Volume [cm ³]	Type Connection element SC...
SPB4f 30 SI-55 SC080	4.3	8.5	12.8	6.0	SC 080
SPB4f 40 SI-55 SC080	6.8	13.6	20.4	15.1	SC 080
SPB4f 50 SI-55 SC090	13.7	27.3	41.0	33.1	SC 090

*The specified suction forces are theoretical values with a smooth, dry workpiece surface - they do not include a safety factor

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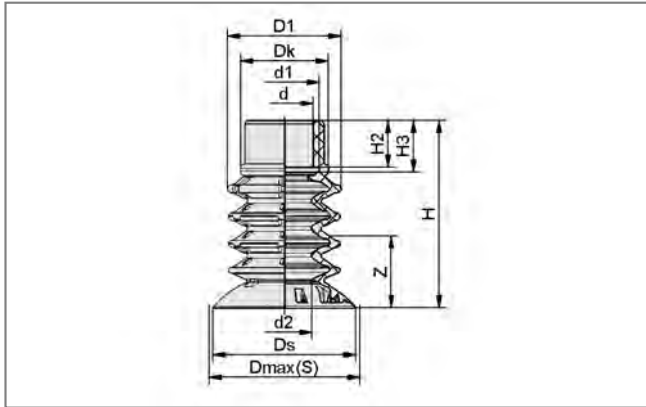


Bellows Suction Pads SPB4f (4.5 Folds)

Suction area (\emptyset) from 30 mm to 50 mm



Design Data Bellows Suction Pads SPB4f (4.5 Folds)



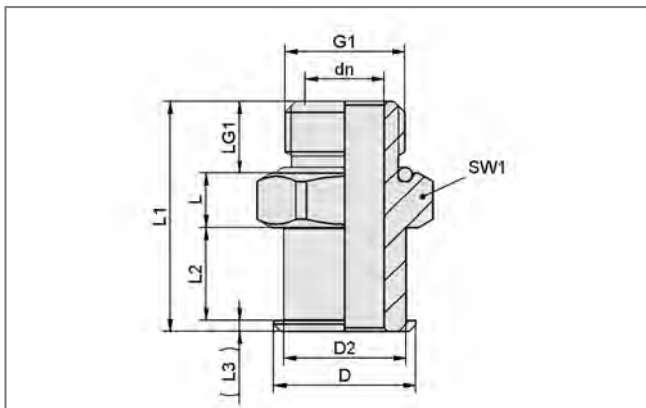
SPB4f 30...50

Type	Dimensions in mm*										
	d	d1	d2	D1	Dk	Dmax(S)	Ds	H	H2	H3	Z (Stroke)
SPB4f 30 SI-55 SC080	16	19.6	12.1	22.4	24.4	32	30	40	13	14.4	10
SPB4f 40 SI-55 SC080	16	19.6	15.3	31.6	24.4	42	40	52	13	14.4	20
SPB4f 50 SI-55 SC090	20	24.8	21.0	41.6	31.0	52	50	65	14	16.0	26

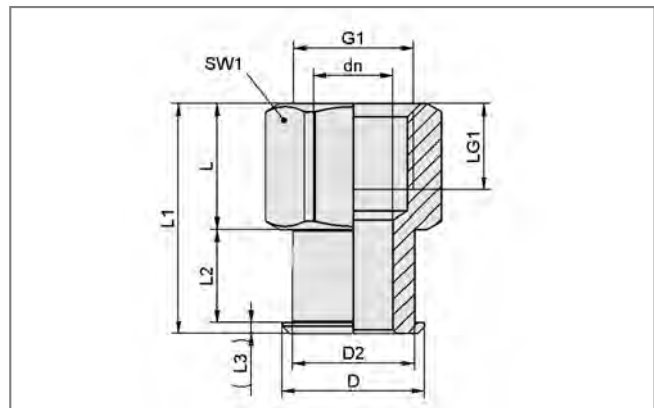
*Acceptable dimensional tolerances for rubber parts concerning to DIN ISO 3302-1 M3



Design Data Connection Elements Bellows Suction Pads SPB4f



Connection element SC...AG



Connection element SC...IG

Type	Dimensions in mm										
	D	D2	dn	G1	L	L1	L2	L3	LG1	SW1	
SC 080 G1/8-AG	19.8	17	4	G1/8"-M	6.0	28.0	13	1.5	8	22	
SC 080 G1/8-IG	19.8	17	9	G1/8"-F	17.5	32.0	13	1.5	12	22	
SC 080 G1/4-AG	19.8	17	8	G1/4"-M	7.5	32.0	13	1.5	10	22	
SC 080 G1/4-IG	19.8	17	11	G1/4"-F	17.5	32.0	13	1.5	12	22	
SC 080 G3/8-AG	19.8	17	10	G3/8"-M	7.5	32.0	13	1.5	10	22	
SC 080 G3/8-IG	19.8	17	11	G3/8"-F	17.5	32.0	13	1.5	12	22	
SC 090 G1/8-AG	25.0	21	4	G1/8"-M	7.5	31.0	14	2.0	8	27	
SC 090 G1/8-IG	25.0	21	9	G1/8"-F	21.5	37.5	14	2.0	12	27	
SC 090 G1/4-AG	25.0	21	8	G1/4"-M	7.5	33.5	14	2.0	10	27	
SC 090 G1/4-IG	25.0	21	11	G1/4"-F	21.5	37.5	14	2.0	12	27	
SC 090 G3/8-AG	25.0	21	10	G3/8"-M	7.5	33.5	14	2.0	10	27	
SC 090 G3/8-IG	25.0	21	15	G3/8"-F	21.5	37.5	14	2.0	12	27	
SC 090 G1/2-AG	25.0	21	15	G1/2"-M	7.5	37.5	14	2.0	14	27	
SC 090 G1/2-IG	25.0	21	15	G1/2"-F	21.5	37.5	14	2.0	16	27	

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