

## Bellows Suction Cups SPOB1 (Oval, 1.5 Folds)

Suction area (LxW) from 60 x 20 mm and 100 x 40 mm



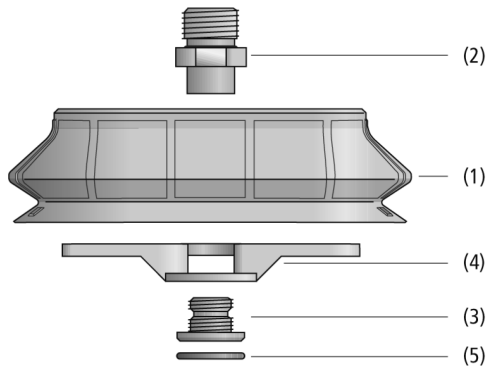
### Suitability for industry specific applications

#### Application

- Oval bellows suction cup with 1.5 folds for the use in cardboard box and tray erectors
- Handling of cardboards and rigid or flexible packaging in top-loading and side-loading machines
- Palletizing and depalletizing processes
- Heavy-duty applications that require suction cups with excellent sealing and low wear



Bellows Suction Cups SPOB1 (Oval, 1.5 Folds)



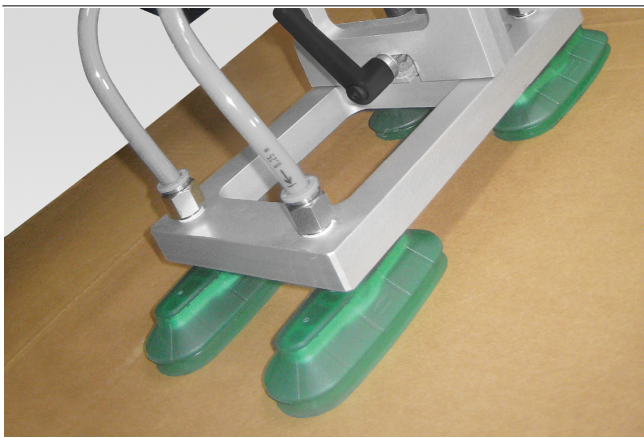
System design Bellows Suction Cups SPOB1 (Oval, 1.5 Folds)

#### Design

- Oval bellows suction cup SPOB1 with 1.5 folds (1) and soft, flexible sealing lip
- Made of wear-proof material Elastodur ED-65 with a long service life
- All sizes come with a 2-piece connection element: consisting of machine-side component (2) and suction-side component (3)
- Size 100 x 40 mm with additional suction cup insert (4); included in scope of delivery reusable connection elements
- Clip-in filter screen (5) as pre-filter (filter pore size 250 µm)

#### Product highlights

- Oval design ideal for elongated workpieces
- High intrinsic stability of the suction cup in dynamic processes
- Spacing elements between sealing lip and fold prevent the suction cup from moving
- Material Elastodur ED-65 minimizes wear (service life approx. 3 times higher than with NBR)



Bellows suction cups SPOB1 being used for handling of cardboard

## Bellows Suction Cups SPOB1 (Oval, 1.5 Folds)

Suction area (LxW) from 60 x 20 mm and 100 x 40 mm

### Designation code Bellows Suction Cups SPOB1 (Oval, 1.5 Folds)

<b>SPOB1</b>	–	<b>60x20</b>	–	<b>ED-65</b>	–	<b>G1/8-AG</b>
<b>1</b>		<b>2</b>		<b>3</b>		<b>4</b>

#### 1 – Abbreviated designation

Code	Version
SPOB1	1.5 folds, oval

#### 2 – Suction area

Code	LxW in mm
60x20...100x40	60x20 and 100x40

#### 3 – Material

Code	Material
ED-65	Elastodur

#### 4 – Connection

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

Suction cup SPOB1 (elastomer part + connection element) is delivered assembled. The assembly consists of:

- Suction cup of type SPOB1 – elastomer part, available in various diameters
- Connection element of type SC – available with various threads, includes stabilization plate for model size 100 x 400 mm

Available spare parts: suction cup SPOB1, Schmalz-Connector

Available accessories: filter screen (sieve, round)

### Ordering data Bellows Suction Cups SPOB1 (Oval, 1.5 Folds)

Type*	Part no.
SPOB1 60x20 ED-65 G1/8-AG	10.01.06.03510
SPOB1 60x20 ED-65 G1/8-IG	10.01.06.03511
SPOB1 100x40 ED-65 G1/4-AG	10.01.06.03512
SPOB1 100x40 ED-65 G1/4-IG	10.01.06.03513

\*Additional material specifications at beginning of the section "Vacuum Suction Cups"

### Ordering data Spare parts Bellows Suction Cups SPOB1 (Oval, 1.5 Folds)

Type	Spare parts	Part no.
SPOB1 60x20	Bellows suction cup (oval)	SPOB1 60x20 ED-65 SC040-AR
SPOB1 100x40	Bellows suction cup (oval)	SPOB1 100x40 ED-65 SC050-AR

Type	Spare parts	Part no.
SPOB1 60x20 ED-65 G1/8-AG	Schmalz-Connector	SC 040-AR G1/8-AG MOD
SPOB1 60x20 ED-65 G1/8-IG	Schmalz-Connector	SC 040-AR G1/8-IG MOD
SPOB1 100x40 ED-65 G1/4-AG	Schmalz-Connector	SC 050-AR G1/4-AG MOD
SPOB1 100x40 ED-65 G1/4-IG	Schmalz-Connector	SC 050-AR G1/4-IG MOD

### Ordering data Accessories Bellows Suction Cups SPOB1 (Oval, 1.5 Folds)

Type	Accessories	Part no.
SPOB1 60x20	Sieve, round	SIEB 11x1 MS-A2 280 0.28/0.16
SPOB1 100x40	Sieve, round	SIEB 17.5x0.8 MS-A2 280 0.28/0.16

## Bellows Suction Cups SPOB1 (Oval, 1.5 Folds)

Suction area (LxW) from 60 x 20 mm and 100 x 40 mm

### Technical data Bellows Suction Cups SPOB1 (Oval, 1.5 Folds)

Type		Suction force (-600 mbar) [N]*	Pull-off force [N]	Lateral force [N]	Volume [cm <sup>3</sup> ]	Workpiece radius min. (convex) [mm]	Hose inner diameter (recom.) d [mm]**
SPOB1	60x20	32.5	39.8	32.2	11.0	25	6
SPOB1	100x40	111.2	131.4	76.9	60.1	50	6

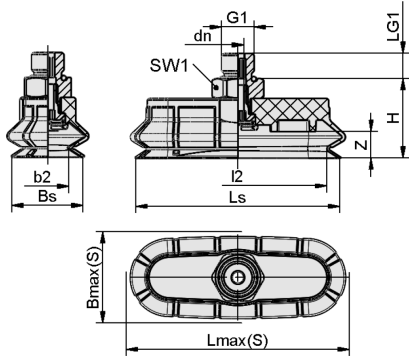
\*The specified suction forces are theoretical values at a vacuum of -0.6 bar and with a smooth, dry workpiece surface - they do not include a safety factor

\*\*The recommended hose diameter is based on a hose length of approx. 2 m

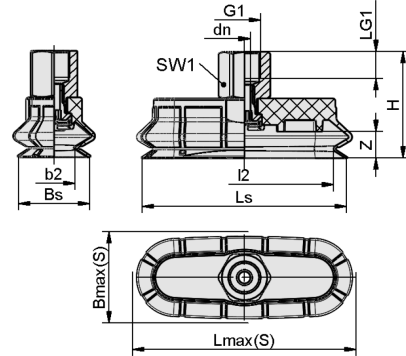
## Bellows Suction Cups SPOB1 (Oval, 1.5 Folds)

Suction area (LxW) from 60 x 20 mm and 100 x 40 mm

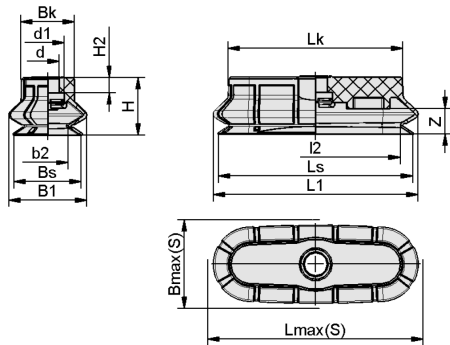
### Design data Bellows Suction Cups SPOB1 (Oval, 1.5 Folds)



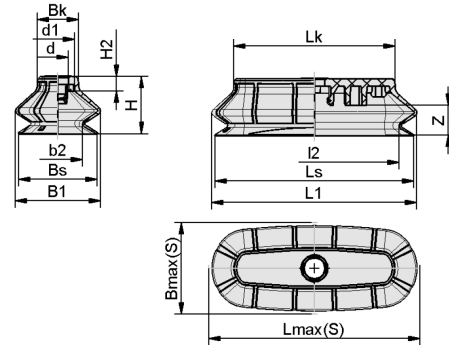
SPOB1 AG



SPOB1 IG



SPOB1 60x20



SPOB1 100x40

## Bellows Suction Cups SPOB1 (Oval, 1.5 Folds)

Suction area (LxW) from 60 x 20 mm and 100 x 40 mm

### Design data Bellows Suction Cups SPOB1 (Oval, 1.5 Folds)

Type*	b2 [mm]	Bmax(S) [mm]**	Bs [mm]	dn [mm]	G1	H [mm]	LG1 [mm]	Lmax.(S) [mm]***	Ls [mm]	l2 [mm]	SW1 [mm]	Z (Stroke) [mm]
SPOB1 60x20 ED-65 G1/8- AG	12.8	27.5	21.4	3.6	G1/8"-M	24	7.5	67	61.4	53.5	14	8
SPOB1 60x20 ED-65 G1/8- IG	12.8	27.5	21.4	3.6	G1/8"-F	32	8.0	67	61.4	53.5	14	8
SPOB1 100x40 ED-65 G1/4- AG	25.9	52.0	41.4	6.1	G1/4"-M	37	10.0	113	104.4	88.9	17	16
SPOB1 100x40 ED-65 G1/4- IG	25.9	52.0	41.4	6.1	G1/4"-F	47	12.0	113	104.4	88.9	17	16

\*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

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

Type*	b2 [mm]	B1 [mm]	Bk [mm]	Bmax(S) [mm]**	Bs [mm]	d [mm]	d1 [mm]	H [mm]	H2 [mm]	L1 [mm]	l2 [mm]	Lk [mm]	Lmax.(S) [mm]***	Ls [mm]	Z (Stroke) [mm]
SPOB1 60x20 ED-65 SC040-AR	12.8	24.6	16.8	27.5	21.4	7.3	10.5	18	4.8	64.6	53.4	55.1	67	61.4	8.0
SPOB1 100x40 ED-65 SC050-AR	25.9	44.6	21.6	52.0	41.4	11.0	17.5	30	7.0	107.6	88.9	84.6	113	104.4	16.0

\*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

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