

Bellows Suction Cups PSPF

Suction area (Ø) from 33 mm to 53 mm



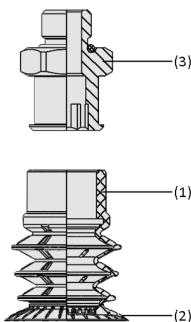
Suitability for industry specific applications



Bellows Suction Cups PSPF

Application

- 2-component bellows suction cup with 3.5 bellows for handling very thin and flexible bags
- Used for handling bags and packages filled with liquids, solids or powders, especially with a low degree of filling
- Use in dynamic packaging processes in combination with delta robots, in case packers and in pick-and-place applications



Design

- 2C bellows suction cup PSPF consisting of flexible bellows (1) and a soft and adaptable sealing lip (2)
- Suction cup with 3.5 bellows available in food grade silicone
- Very large shaft diameter for high flow rates
- Use of one-piece, plug-in connection elements (3)
- Connection element with external thread and integrated sealing ring

System design Bellows Suction Cups PSPF



Bellows suction cups PSPF for handling flexible pouch packaging

Product highlights

- Reliable handling of thin, flexible or liquid-filled bags
- High-strength 2C connection of bellows and sealing lip combines sophisticated material properties in one suction cup
- Supple and soft sealing lip enables optimum sealing even on bags with strong wrinkling
- Reinforced bellows with interlocking bellows ensures optimum stability and support during rapid cycles
- Suction cup made of FDA-compliant silicone is suitable for direct contact with food

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Designation code Bellows Suction Cups PSPF

| | | | | | | |
|-------------|---|-----------|---|-----------------|---|----------------|
| PSPF | - | 33 | - | SI-30/55 | - | G1/4-AG |
| 1 | | 2 | | 3 | | 4 |

1 – Abbreviated designation

| Code | Version |
|------|-----------|
| PSPF | 3.5 folds |

2 – Suction area

| Code | Diameter in mm |
|---------|----------------|
| 33...53 | ø 33 to 53 |

3 – Material

| Code | Material |
|----------|----------|
| SI-30/55 | 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 |

The bellows suction cup PSPF (elastomer part + connection element) is delivered assembled. The product consists of:

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

Ordering data Bellows Suction Cups PSPF

| Type | | Vacuum connection: | | | | | |
|------|----|--------------------|----------------|----------------|----------------|----------------|----------------|
| | | G1/8-AG | G1/8-IG | G1/4-AG | G1/4-IG | G3/8-AG | G3/8-IG |
| PSPF | 33 | 10.01.06.05586 | 10.01.06.05588 | 10.01.06.05589 | 10.01.06.05590 | 10.01.06.05591 | 10.01.06.05592 |
| PSPF | 43 | 10.01.06.05595 | 10.01.06.05596 | 10.01.06.05597 | 10.01.06.05598 | 10.01.06.05599 | 10.01.06.05600 |
| PSPF | 53 | - | - | 10.01.06.05605 | 10.01.06.05606 | 10.01.06.05607 | 10.01.06.05608 |

Bellows Suction Cups PSPF

Suction area (Ø) from 33 mm to 53 mm

Ordering data Spare parts Bellows Suction Cups PSPF

| Type | | | Suction cup material with ShA: * SI-30/55 |
|------|----|--------|--|
| PSPF | 33 | SC 080 | 10.01.06.05502 |
| PSPF | 43 | SC 080 | 10.01.06.05244 |
| PSPF | 53 | SC 090 | 10.01.06.05505 |

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

| Type | Spare parts | | | Part no. | |
|------|-------------|---------|-------------------|----------------|----------------|
| PSPF | 33 | G1/8"-M | Schmalz-Connector | SC 080 G1/8-AG | 10.01.06.03142 |
| PSPF | 33 | G1/8"-F | Schmalz-Connector | SC 080 G1/8-IG | 10.01.06.03270 |
| PSPF | 33 | G1/4"-M | Schmalz-Connector | SC 080 G1/4-AG | 10.01.06.03268 |
| PSPF | 33 | G1/4"-F | Schmalz-Connector | SC 080 G1/4-IG | 10.01.06.03271 |
| PSPF | 43 | G1/8"-M | Schmalz-Connector | SC 080 G1/8-AG | 10.01.06.03142 |
| PSPF | 43 | G1/8"-F | Schmalz-Connector | SC 080 G1/8-IG | 10.01.06.03270 |
| PSPF | 43 | G1/4"-M | Schmalz-Connector | SC 080 G1/4-AG | 10.01.06.03268 |
| PSPF | 43 | G1/4"-F | Schmalz-Connector | SC 080 G1/4-IG | 10.01.06.03271 |
| PSPF | 53 | G1/4"-M | Schmalz-Connector | SC 090 G1/4-AG | 10.01.06.02793 |
| PSPF | 53 | G1/4"-F | Schmalz-Connector | SC 090 G1/4-IG | 10.01.06.03273 |
| PSPF | 33 | G3/8"-M | Schmalz-Connector | SC 080 G3/8-AG | 10.01.06.02593 |
| PSPF | 33 | G3/8"-F | Schmalz-Connector | SC 080 G3/8-IG | 10.01.06.02594 |
| PSPF | 43 | G3/8"-M | Schmalz-Connector | SC 080 G3/8-AG | 10.01.06.02593 |
| PSPF | 43 | G3/8"-F | Schmalz-Connector | SC 080 G3/8-IG | 10.01.06.02594 |
| PSPF | 53 | G3/8"-M | Schmalz-Connector | SC 090 G3/8-AG | 10.01.06.02791 |
| PSPF | 53 | G3/8"-F | Schmalz-Connector | SC 090 G3/8-IG | 10.01.06.03274 |

Technical data Bellows Suction Cups PSPF

| Type | Suction force (-600 mbar) [N]* | Material hardness [Shore A] | Material hardness [Shore A] | Volume [cm³] | Hose inner diameter (recom.) d [mm]** | |
|------|--------------------------------|-----------------------------|-----------------------------|--------------|---------------------------------------|------|
| PSPF | 33 | 24.0 | 30 | 55 | 7.5 | 9.0 |
| PSPF | 43 | 40.0 | 30 | 55 | 16.7 | 9.0 |
| PSPF | 53 | 61.0 | 30 | 55 | 31.9 | 12.0 |

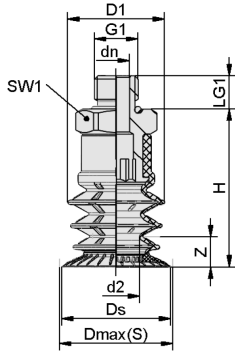
*The specified suction forces are theoretical values at a vacuum of -0.6 bar and with a smooth, dry workpiece surface - they do not include a safety factor

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

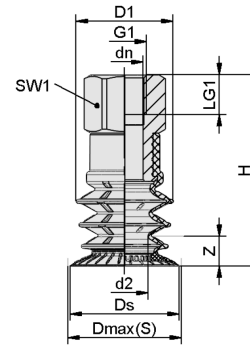
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Design data Bellows Suction Cups PSPF



PSPF 33 - 53 AG



PSPF 33 - 53 IG

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Design data Bellows Suction Cups PSPF

| Type | d2 [mm] | dn [mm] | Dmax(S) [mm] | Ds [mm] | G1 | H [mm] | LG1 [mm] | SW1 [mm] | Z (Stroke) [mm] |
|-----------------------------|---------|---------|--------------|---------|---------|--------|----------|----------|-----------------|
| PSPF 33 SI-30/55 G1/8-AG | 14.0 | 4.0 | 34 | 33.0 | G1/8"-M | 47.5 | 7.5 | 22 | 15 |
| PSPF 33 SI-30/55 G1/8-IG | 14.0 | 8.6 | 34 | 33.0 | G1/8"-F | 57.5 | 12.0 | 22 | 15 |
| PSPF 33 SI-30/55 G1/4-AG | 14.0 | 8.0 | 34 | 33.0 | G1/4"-M | 47.5 | 10.0 | 22 | 15 |
| PSPF 33 SI-30/55 G1/4-IG | 14.0 | 11.0 | 34 | 33.0 | G1/4"-F | 57.5 | 12.0 | 22 | 15 |
| PSPF 33 SI-30/55 G3/8-AG | 14.0 | 10.3 | 34 | 33.0 | G3/8"-M | 47.5 | 10.0 | 22 | 15 |
| PSPF 33 SI-30/55 G3/8-IG | 14.0 | 11.0 | 34 | 33.0 | G3/8"-F | 57.5 | 12.0 | 22 | 15 |
| PSPF 43 SI-30/55 G1/8-AG | 18.2 | 4.0 | 44 | 43.0 | G1/8"-M | 54.1 | 7.5 | 22 | 20 |
| PSPF 43 SI-30/55 G1/8-IG | 18.2 | 8.6 | 44 | 43.0 | G1/8"-F | 64.1 | 12.0 | 22 | 20 |
| PSPF 43 SI-30/55 G1/4-AG | 18.2 | 8.0 | 44 | 43.0 | G1/4"-M | 54.1 | 10.0 | 22 | 20 |
| PSPF 43 SI-30/55 G1/4-IG | 18.2 | 11.0 | 44 | 43.0 | G1/4"-F | 64.1 | 12.0 | 22 | 20 |
| PSPF 43 SI-30/55 G3/8-AG | 18.2 | 10.3 | 44 | 43.0 | G3/8"-M | 54.1 | 10.0 | 22 | 20 |
| PSPF 43 SI-30/55 G3/8-IG | 18.2 | 11.0 | 44 | 43.0 | G3/8"-F | 64.1 | 12.0 | 22 | 20 |
| PSPF 53 SI-30/55 G1/4-AG | 22.4 | 8.0 | 55 | 53.0 | G1/4"-M | 63.5 | 10.0 | 27 | 26 |
| PSPF 53 SI-30/55 G1/4-IG | 22.4 | 11.4 | 55 | 53.0 | G1/4"-F | 77.5 | 12.0 | 27 | 26 |
| PSPF 53 SI-30/55 G3/8-AG | 22.4 | 10.3 | 55 | 53.0 | G3/8"-M | 63.5 | 10.0 | 27 | 26 |
| PSPF 53 SI-30/55 G3/8-IG | 22.4 | 15.0 | 55 | 53.0 | G3/8"-F | 77.5 | 12.0 | 27 | 26 |

Multimedia product presentation

Medium

Application video

Product video

Link

<https://vimeo.com/747332590>
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