

Suction cups VAS/VASB

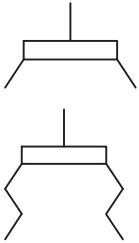


# Suction cups

Key features

## Product overview

Suction gripper and suction cup



Festo vacuum suction grippers offer outstanding functionality and quality.

An extensive range of modular suction cups in different shapes, materials and sizes, plus a wide selection of suction cup holders, angle and height compensators and filters within the

modular suction gripper system, provide users with a huge range of possible combinations for a wide variety of applications.

## Suction grippers ESG

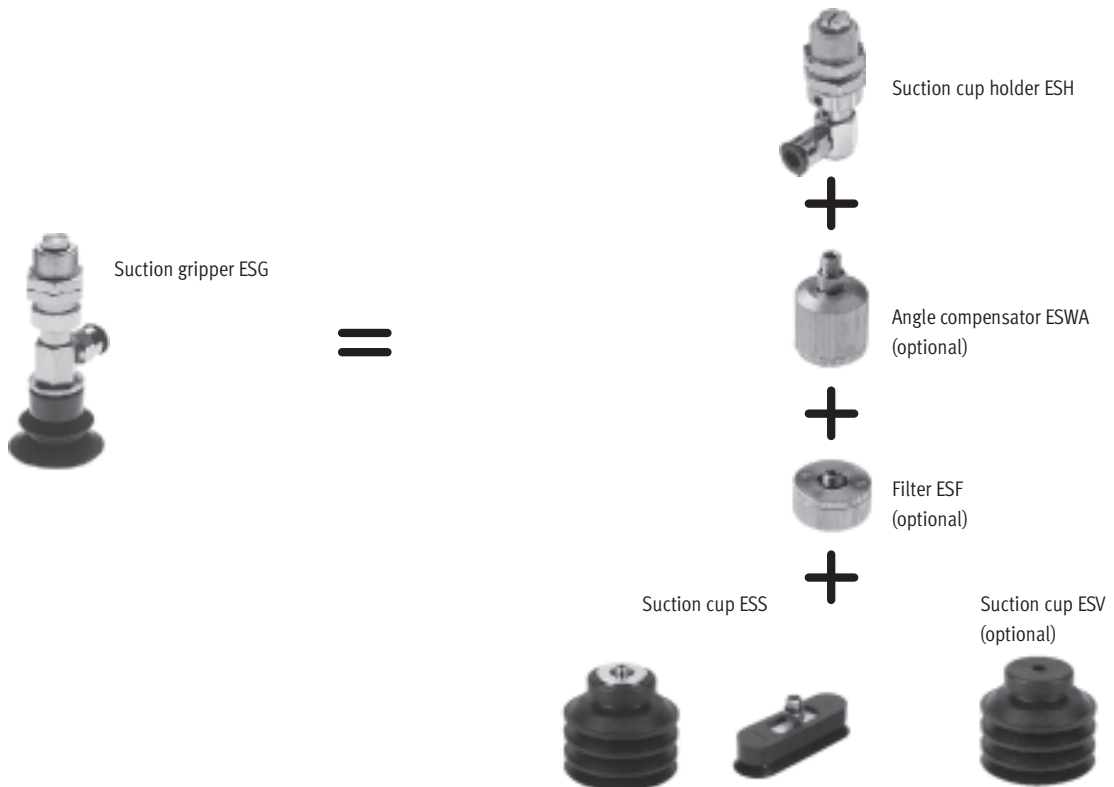
Technical data → Internet: esg

Modular products with over 2000 variants

- The ideal solution for the transport of workpieces of different weights, surfaces and shapes
- Choose from:
  - 15 suction cup diameters
  - 5 different materials – including antistatic types
  - 5 suction cup shapes
  - Various suction cup holders
  - Optional accessories (filters and angle compensators)
- Wide range of variants
- A suitable solution for every task
- Wide range to suit applications with various temperature ranges and workpiece surfaces
- Suction cups made from silicone are approved for use in the food industry

Suction grippers as a complete solution

Suction grippers made from individual components



# Suction cups

Key features

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## Suction cups VAS/VASB

→ 6

Sturdy and reliable

- The ideal solution for the transport of workpieces of different weights, surfaces and shapes
- Choose from:
  - 12 suction cup diameters
  - 2 suction cup shapes: round and bellows design
  - 3 suction cup materials: nitrile rubber, polyurethane and silicone for use in a wide variety of applications
- Wide range to suit applications with various temperature ranges and workpiece surfaces
- Suction cups made from silicone are approved for use in the food industry
- All tubing connector sizes correspond to a holder size



# Suction cups VAS/VASB

Features

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## Suction cups with fixed connecting thread

- VAS: 1 ... 125 mm diameter
- VASB: 8 ... 125 mm diameter
- Suction retention of workpieces with smooth, impervious surfaces
- Bellows suction cups can adapt to suit uneven, curved and inclined surfaces

### Nitrile rubber (NBR)

- Minimal markings left on shiny surfaces

### Polyurethane (PUR)

- Long service life
- Gentle handling with soft suction cup material

### Silicone (SI)

- Excellent thermal resistance
- Approved for use in the food industry



## Accessories

### Vacuum security valve ISV

Technical data → Internet: [isv](#)

- Vacuum does not dissipate when any of several suction cups arranged in parallel fail to maintain contact
- Saves compressed air and energy



### Height compensator VAL

Technical data → Internet: [val](#)

- Gentle handling of the workpieces by compensating for tolerance differences in the workpiece thickness.



### Elbow fitting LJK

Technical data → Internet: [ljk](#)

- Redirection of air connection
- Swivel joint rotatable 360°



### Adapter AD

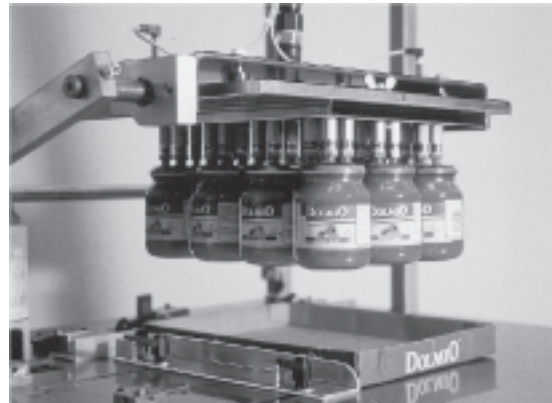
Technical data → Internet: [ad](#)

- For connection of suction cup with piston rod thread, for example



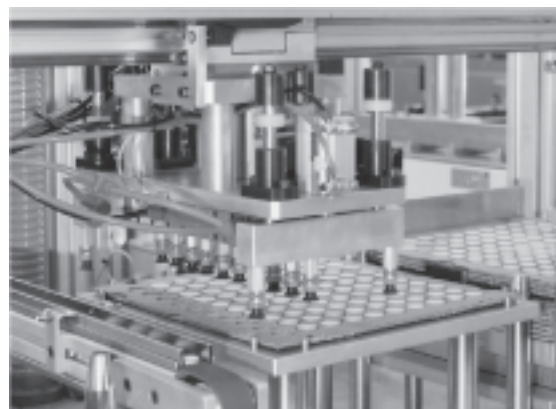
## Vacuum technology can be used in a wide range of applications

- Lifting
- Placing
- Moving
- Insertion
- Conveying
- Gripping
- Holding
- Loading
- Clamping
- Transporting
- Repositioning
- Turning



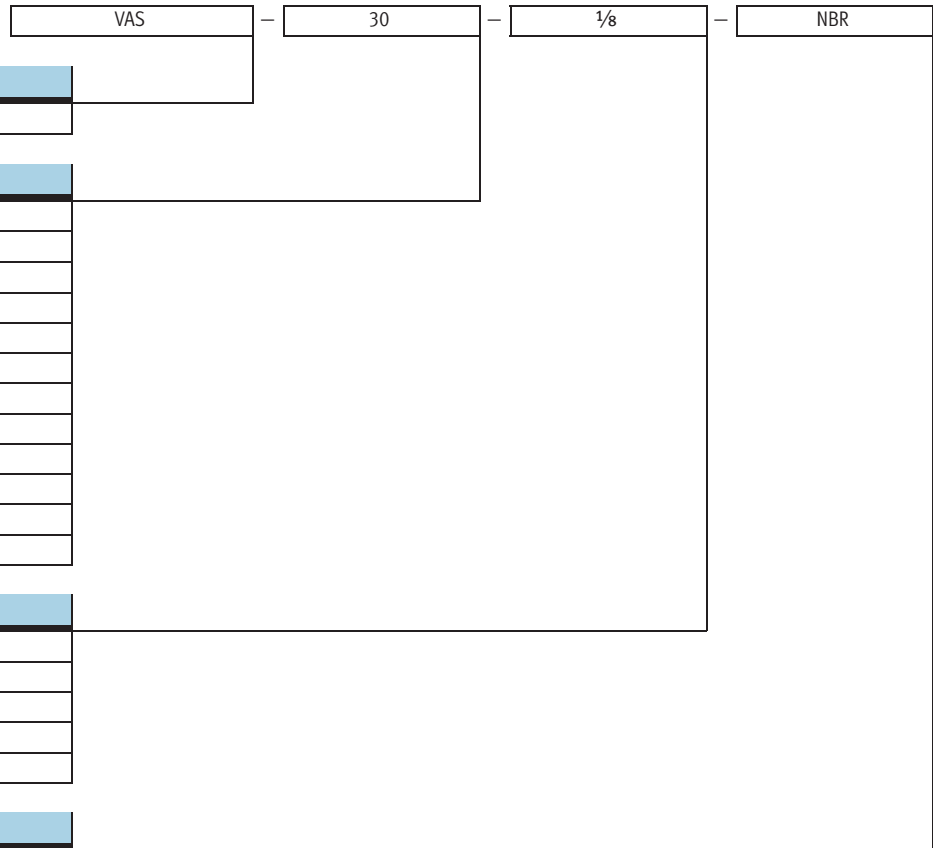
Flexible automation technology is an important field of application for vacuum technology:

- Small, mid-sized and large series manufacturing
- Assembly
- Conveyor and packaging technology



# Suction cups VAS

Type code





| Type |             |
|------|-------------|
| VAS  | Suction cup |

| Suction cup Ø [mm] |     |
|--------------------|-----|
| 1                  | 1   |
| 2                  | 2   |
| 5                  | 5   |
| 8                  | 8   |
| 10                 | 10  |
| 15                 | 15  |
| 30                 | 30  |
| 40                 | 40  |
| 55                 | 55  |
| 75                 | 75  |
| 100                | 100 |
| 125                | 125 |

| Connection sizes |             |
|------------------|-------------|
| M3               | M3 thread   |
| M5               | M5 thread   |
| 1/8              | G1/8 thread |
| 1/4              | G1/4 thread |
| 3/8              | G3/8 thread |

| Materials |                |
|-----------|----------------|
| NBR       | Nitrile rubber |
| PUR       | Polyurethane   |
| SI        | Silicone       |

 Note  
Possible combinations can be found in the ordering data.

-  - Type discontinued VAS-...-CT  
Available up until 12/2010



## Suction cups VAS

Technical data

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Function



-  - Temperature range  
-20 ... +200 °C
-  - Diameter  
1 ... 125 mm



| General technical data   |  |                  |                    |                      |                                    |                |                                      |            |            |           |
|--------------------------|--|------------------|--------------------|----------------------|------------------------------------|----------------|--------------------------------------|------------|------------|-----------|
| Suction cup<br>Ø<br>[mm] | Design                                       | Vacuum port      | Type of mounting   | Nominal size<br>[mm] | Effective suction cup<br>Ø<br>[mm] | Shore hardness | Breakaway force at 70% vacuum<br>[N] | Weight     |            |           |
|                          |  |                  |                    |                      |                                    |                |                                      | NBR<br>[g] | PUR<br>[g] | SI<br>[g] |
| 1                        | Vacuum port<br>on top,<br>round,<br>standard | M3               | Screw-in<br>thread | 0.4                  | 0.8                                | 55±5           | 0.035                                | 1          | -          | -         |
| 2                        |  | M3               |                    | 1                    | 1.6                                | 55±5           | 0.14                                 | 11         | -          | -         |
| 5                        |  | M5               |                    | 1.5                  | 4                                  | 55±5           | 0.9                                  | 2          | -          | -         |
| 8                        |  | M5 <sup>1)</sup> |                    | 2                    | 5.5                                | 73             | 1.6                                  | 4          | 4          | 2         |
| 10                       |  | M5               |                    | 2                    | 8                                  | 73             | 4.5                                  | 3          | 3          | 3         |
| 15                       |  | G1/8             |                    | 3                    | 12                                 | 73             | 7.9                                  | 11         | 11         | 6         |
| 30                       |  | G1/8             |                    | 3                    | 25                                 | 73             | 34                                   | 13         | 13         | 7         |
| 40                       |  | G1/4             |                    | 4                    | 32                                 | 73             | 56                                   | 26         | 27         | 13        |
| 55                       |  | G1/4             |                    | 4                    | 44                                 | 73             | 106                                  | 32         | 32         | 16        |
| 75                       |  | G1/4             |                    | 4                    | 60                                 | 73             | 197                                  | 76         | 78         | 36        |
| 100                      |  | G1/4             |                    | 4                    | 85                                 | 73             | 397                                  | 138        | 142        | 67        |
| 125                      |  | G3/8             |                    | 7                    | 105                                | 73             | 606                                  | 152        | 148        | 148       |

1) VAS-8-M5-S: Barbed fittings for 3 mm plastic tubing, lateral connection

| Ambient conditions                     |                 |             |              |
|--|-----------------|-------------|--------------|
| Variant                                | VAS-...-NBR     | VAS-...-PUR | VAS-...-SI   |
| Operating medium                       | Atmospheric air |             |              |
| Ambient temperature [°C]               | -20 ... +80     | -20 ... +60 | -40 ... +200 |
| Corrosion resistance CRC <sup>1)</sup> | 2               |             |              |

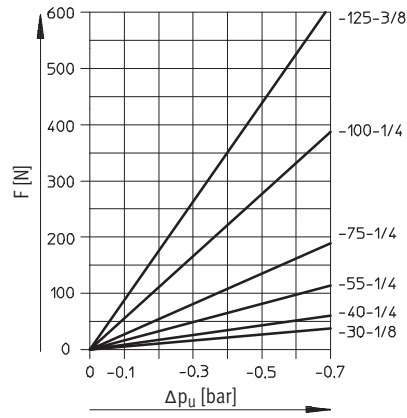
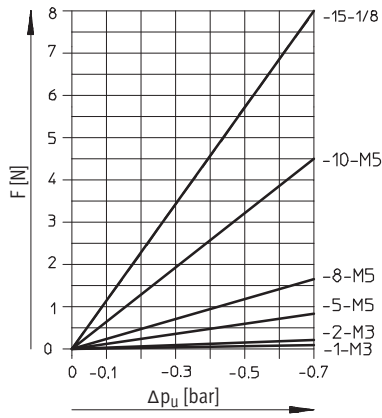
1) Corrosion resistance class 2 according to Festo standard 940 070

Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a surrounding industrial atmosphere or media such as cooling or lubricating agents.

# Suction cups VAS

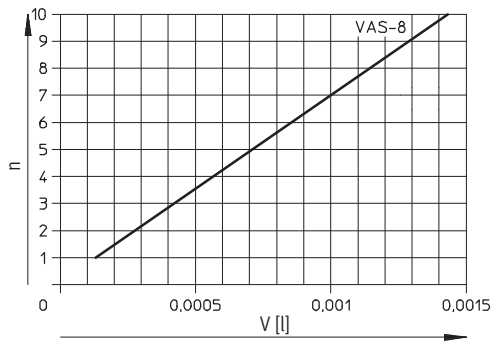
Technical data

## Theoretical suction force F as a function of vacuum $p_u$

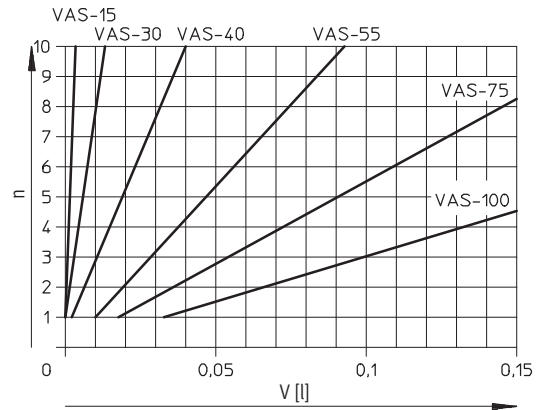


## Suction cup volume

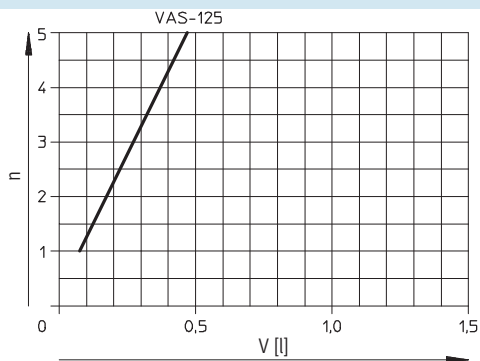
VAS-8




VAS-15 ... 100



VAS-125



-  - Type discontinued VAS-...-CT  
Available up until 12/2010

## Suction cups VAS

Technical data

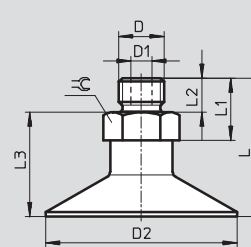
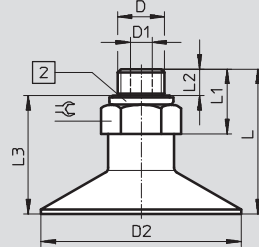
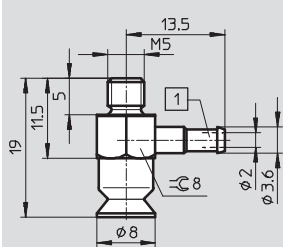
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### Dimensions

VAS-8-M5-S

VAS-...-NBR-PUR

VAS-...-SI




1) Barbed fitting for 3 mm plastic tubing

2) Sealing ring

| Type                       | D    | D1<br>Ø | D2<br>Ø | L    | L1   | L2  | L3   | ⊕   |
|----------------------------|------|---------|---------|------|------|-----|------|-----|
| <b>VAS-...-NBR</b>         |      |         |         |      |      |     |      |     |
| VAS-1-M3-NBR <sup>1)</sup> | M3   | 0.9     | 1       | 6.6  | 5    | 3   | 3.6  | 4.5 |
| VAS-2-M3-NBR <sup>1)</sup> | M3   | 1       | 2       | 9    | 5    | 3   | 6    | 4.5 |
| VAS-5-M5-NBR               | M5   | 1.5     | 5       | 16.5 | 11.5 | 3.5 | 13   | 8   |
| VAS-8-M5-NBR               | M5   | 2       | 8       | 18.7 | 11.5 | 3   | 15.7 | 8   |
| VAS-10-M5-NBR              | M5   | 2       | 10      | 19.2 | 11.5 | 3.5 | 15.7 | 8   |
| VAS-15-1/8-NBR             | G1/8 | 3       | 15      | 20   | 12   | 4.7 | 15.3 | 13  |
| VAS-30-1/8-NBR             | G1/8 | 3       | 30      | 21.5 | 12   | 4.7 | 16.8 | 13  |
| VAS-40-1/4-NBR             | G1/4 | 4       | 40      | 30.5 | 19   | 5.8 | 24.7 | 17  |
| VAS-55-1/4-NBR             | G1/4 | 4       | 55      | 33.5 | 19   | 5.8 | 27.7 | 17  |
| VAS-75-1/4-NBR             | G1/4 | 4       | 75      | 27   | 18   | 5.8 | 21.2 | 17  |
| VAS-100-1/4-NBR            | G1/4 | 4       | 100     | 27   | 18   | 5.8 | 21.2 | 17  |
| VAS-125-3/8-NBR            | G3/8 | 7       | 125     | 36   | 20   | 6   | 30   | 19  |
| <b>VAS-...-PUR</b>         |      |         |         |      |      |     |      |     |
| VAS-8-M5-PUR               | M5   | 2       | 8       | 18.7 | 11.5 | 3   | 15.7 | 8   |
| VAS-10-M5-PUR              | M5   | 2       | 10      | 19.2 | 11.5 | 3.5 | 15.7 | 8   |
| VAS-15-1/8-PUR             | G1/8 | 3       | 15      | 20   | 12   | 4.7 | 15.3 | 13  |
| VAS-30-1/8-PUR             | G1/8 | 3       | 30      | 21.5 | 12   | 4.7 | 16.8 | 13  |
| VAS-40-1/4-PUR             | G1/4 | 4       | 40      | 29.5 | 19   | 5.8 | 23.7 | 17  |
| VAS-55-1/4-PUR             | G1/4 | 4       | 55      | 32.5 | 19   | 5.8 | 26.7 | 17  |
| VAS-75-1/4-PUR             | G1/4 | 4       | 75      | 27   | 18   | 5.8 | 21.2 | 17  |
| VAS-100-1/4-PUR            | G1/4 | 4       | 100     | 27   | 18   | 5.8 | 21.2 | 17  |
| VAS-125-3/8-PUR            | G3/8 | 7       | 125     | 36   | 20   | 6   | 30   | 19  |
| <b>VAS-...-SI</b>          |      |         |         |      |      |     |      |     |
| VAS-8-M5-SI                | M5   | 2       | 8       | 19.2 | 11.5 | 5   | 14.2 | 8   |
| VAS-10-M5-SI               | M5   | 2       | 10      | 19.2 | 11.5 | 5   | 14.2 | 8   |
| VAS-15-1/8-SI              | G1/8 | 3       | 15      | 20   | 12   | 6.5 | 13.5 | 13  |
| VAS-30-1/8-SI              | G1/8 | 3       | 30      | 21.5 | 12   | 6.5 | 15   | 13  |
| VAS-40-1/4-SI              | G1/4 | 4       | 40      | 30.5 | 17   | 8   | 22.5 | 17  |
| VAS-55-1/4-SI              | G1/4 | 4       | 55      | 33.5 | 17   | 8   | 25.5 | 17  |
| VAS-75-1/4-SI              | G1/4 | 4       | 75      | 28   | 14   | 8   | 20   | 17  |
| VAS-100-1/4-SI             | G1/4 | 4       | 100     | 28.5 | 14.5 | 8   | 20.5 | 17  |
| VAS-125-3/8-SI             | G3/8 | 7       | 125     | 36   | 16.5 | 9   | 27   | 19  |

1) Sealing rings are not included in the scope of delivery.









 Type discontinued VAS-...-CT  
Available up until 12/2010

**FESTO**

## Suction cups VAS

Technical data

| Ordering data                     |                 |                |   |              |   |          |                |
|-----------------------------------|-----------------|----------------|---|--------------|---|----------|----------------|
| Suction cup Ø<br>[mm]             | Screw-in thread | Nitrile rubber |   | Polyurethane |   | Silicone |                |
|                                   |                 | Part No.       | Type  | Part No.     | Type  | Part No. | Type           |
| 1                                 | M3              | 173437         | VAS-1-M3-NBR  | –            | –   | –        | –              |
| 2                                 | M3              | 173438         | VAS-2-M3-NBR  | –            | –   | –        | –              |
| 5                                 | M5              | 173439         | VAS-5-M5-NBR  | –            | –   | –        | –              |
| 8                                 | M5              | 34588          | VAS-8-M5-NBR  | 36135        | VAS-8-M5-PUR  | 160988   | VAS-8-M5-SI    |
| 10                                | M5              | 173440         | VAS-10-M5-NBR   | 173441       | VAS-10-M5-PUR   | 173442   | VAS-10-M5-SI   |
| 15                                | G1/8            | 36142          | VAS-15-1/8-NBR  | 36136        | VAS-15-1/8-PUR  | 158973   | VAS-15-1/8-SI  |
| 30                                | G1/8            | 34587          | VAS-30-1/8-NBR  | 36137        | VAS-30-1/8-PUR  | 158974   | VAS-30-1/8-SI  |
| 40                                | G1/4            | 36143          | VAS-40-1/4-NBR  | 36138        | VAS-40-1/4-PUR  | 158975   | VAS-40-1/4-SI  |
| 55                                | G1/4            | 36144          | VAS-55-1/4-NBR  | 36139        | VAS-55-1/4-PUR  | 158976   | VAS-55-1/4-SI  |
| 75                                | G1/4            | 36145          | VAS-75-1/4-NBR  | 36140        | VAS-75-1/4-PUR  | 160989   | VAS-75-1/4-SI  |
| 100                               | G1/4            | 34586          | VAS-100-1/4-NBR   | 36141        | VAS-100-1/4-PUR   | 160990   | VAS-100-1/4-SI |
| 125                               | G3/8            | 152605         | VAS-125-3/8-NBR   | 152606       | VAS-125-3/8-PUR   | 160991   | VAS-125-3/8-SI |
| Lateral outlet                    |                 |                |   |              |   |          |                |
| 8                                 | M5              | –              | –   | 12612        | VAS-8-M5-S  | –        | –              |
| Free of copper, PTFE and silicone |                 |                |   |              |   |          |                |
| 8                                 | M5              | 183508         | VAS-8-M5-NBR-CT      | 183511       | VAS-8-M5-PUR-CT      | –        | –              |
| 15                                | G1/8            | 183509         | VAS-15-1/8-NBR-CT   | 183512       | VAS-15-1/8-PUR-CT   | –        | –              |
| 30                                | G1/8            | 183510         | VAS-30-1/8-NBR-CT  | 183513       | VAS-30-1/8-PUR-CT  | –        | –              |

# Bellows suction cups VASB

Type code

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VASB - 30 - 1/8 - NBR

| Type |                     |
|------|---------------------|
| VASB | Bellows suction cup |

| Suction cup Ø [mm] |     |
|--------------------|-----|
| 8                  | 8   |
| 15                 | 15  |
| 30                 | 30  |
| 40                 | 40  |
| 55                 | 55  |
| 75                 | 75  |
| 100                | 100 |
| 125                | 125 |

| Connection sizes |             |
|------------------|-------------|
| M5               | M5 thread   |
| 1/8              | G1/8 thread |
| 1/4              | G1/4 thread |
| 3/8              | G3/8 thread |

| Materials |                |
|-----------|----------------|
| NBR       | Nitrile rubber |
| PUR       | Polyurethane   |
| SI        | Silicone       |

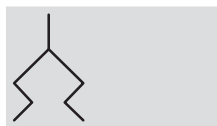
-  - Note

Possible combinations can be found in the ordering data.

## Bellows suction cups VASB

Technical data

Function



-  - Temperature range  
-20 ... +200 °C

-  - Diameter  
8 ... 125 mm



| General technical data   |  |                 |                     |                      |                                       |                   |  |            |            |           |
|--------------------------|--|-----------------|---------------------|----------------------|---------------------------------------|-------------------|--|------------|------------|-----------|
| Suction cup<br>Ø<br>[mm] | Design   | Vacuum port     | Type of<br>mounting | Nominal size<br>[mm] | Effective<br>suction cup<br>Ø<br>[mm] | Shore<br>hardness | Breakaway<br>force at 70%<br>vacuum<br>[N] | Weight     |            |           |
|                          |  |                 |                     |                      |                                       |                   |  | NBR<br>[g] | PUR<br>[g] | SI<br>[g] |
| 8                        | Vacuum port<br>on top,<br>round,<br>bellows, 1.5<br>convolutions | M5              | Screw-in<br>thread  | 2                    | 5.5                                   | 73                | 1.6  | 4          | 4          | 2         |
| 15                       |  | G $\frac{1}{8}$ |                     | 3                    | 12                                    | 73                | 7.9  | 11         | 11         | 6         |
| 30                       |  | G $\frac{1}{8}$ |                     | 3                    | 25                                    | 73                | 34   | 15         | 15         | 9         |
| 40                       |  | G $\frac{1}{4}$ |                     | 4                    | 32                                    | 73                | 56   | 30         | 30         | 16        |
| 55                       |  | G $\frac{1}{4}$ |                     | 4                    | 44                                    | 73                | 106  | 42         | 42         | 26        |
| 75                       |  | G $\frac{1}{4}$ |                     | 4                    | 60                                    | 73                | 197  | 95         | 95         | 53        |
| 100                      |  | G $\frac{1}{4}$ |                     | 4                    | 85                                    | 73                | 397  | 170        | 170        | 95        |
| 125                      |  | G $\frac{3}{8}$ |                     | 7                    | 105                                   | 73                | 606  | 207        | 194        | 194       |

| Ambient conditions                     |                 |             |              |
|--|-----------------|-------------|--------------|
| Variant                                | VAS-...-NBR     | VAS-...-PUR | VAS-...-SI   |
| Operating medium                       | Atmospheric air |             |              |
| Ambient temperature [°C]               | -20 ... +80     | -20 ... +60 | -40 ... +200 |
| Corrosion resistance CRC <sup>1)</sup> | 2               |             |              |

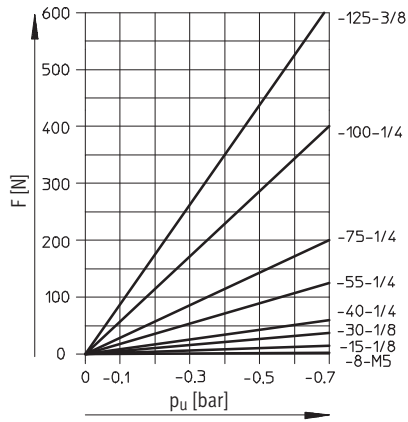
1) Corrosion resistance class 2 according to Festo standard 940 070

Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a surrounding industrial atmosphere or media such as cooling or lubricating agents.

## Bellows suction cups VASB

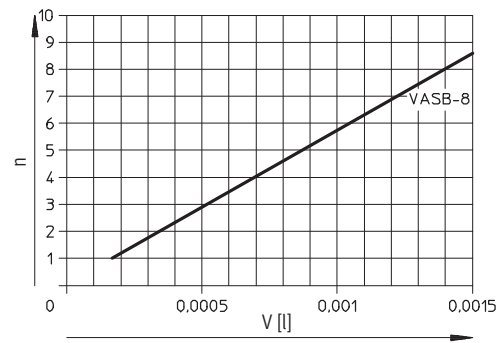
Technical data

### Theoretical suction force F as a function of vacuum $p_u$

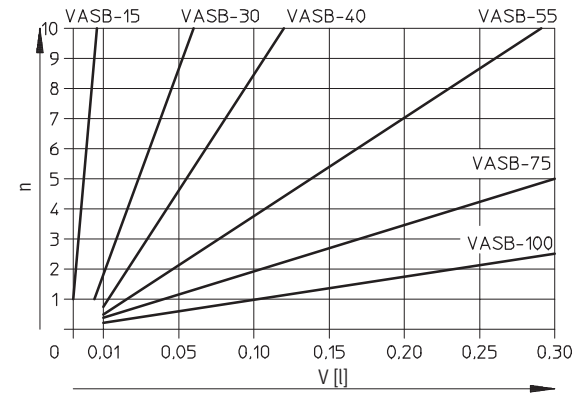


### Suction cup volume

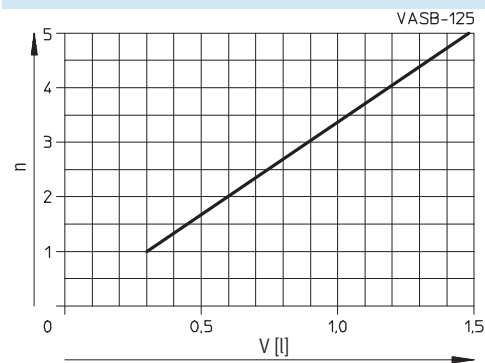
VASB-8



VASB-15 ... 100



VASB-125



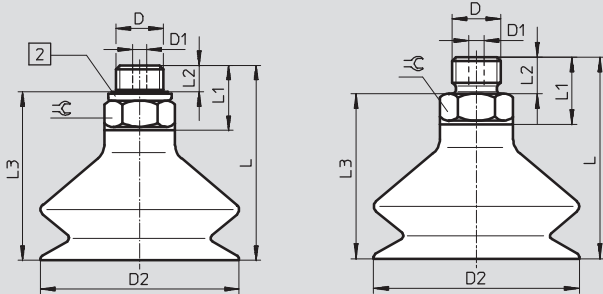
## Bellows suction cups VASB

Technical data

### Dimensions

VASB-...-NBR/VASB-...-PUR


VASB-...-SI



2) Sealing ring

| Type                | D    | D1<br>Ø | D2<br>Ø | L    | L1   | L2  | L3   | ⌀  |
|---------------------|------|---------|---------|------|------|-----|------|----|
| <b>VASB-...-NBR</b> |      |         |         |      |      |     |      |    |
| VASB-8-M5-NBR       | M5   | 0.5     | 8       | 22.5 | 11.5 | 3.5 | 19   | 8  |
| VASB-15-1/8-NBR     | G1/8 | 3       | 15      | 25.5 | 12   | 4.7 | 20.8 | 13 |
| VASB-30-1/8-NBR     | G1/8 | 3       | 30      | 34   | 12   | 4.7 | 29.3 | 13 |
| VASB-40-1/4-NBR     | G1/4 | 4       | 40      | 43   | 17   | 5.8 | 37.2 | 17 |
| VASB-55-1/4-NBR     | G1/4 | 4       | 55      | 52   | 17   | 5.8 | 46.2 | 17 |
| VASB-75-1/4-NBR     | G1/4 | 4       | 75      | 43.5 | 17   | 5.8 | 37.7 | 17 |
| VASB-100-1/4-NBR    | G1/4 | 4       | 100     | 43.5 | 17   | 5.8 | 37.7 | 17 |
| VASB-125-3/8-NBR    | G3/8 | 7       | 125     | 60   | 20   | 6   | 54   | 19 |
| <b>VASB-...-PUR</b> |      |         |         |      |      |     |      |    |
| VASB-8-M5-PUR       | M5   | 0.5     | 8       | 22.5 | 11.5 | 3.5 | 19   | 8  |
| VASB-15-1/8-PUR     | G1/8 | 3       | 15      | 25.5 | 12   | 4.7 | 20.8 | 13 |
| VASB-30-1/8-PUR     | G1/8 | 3       | 30      | 34   | 12   | 4.7 | 29.3 | 13 |
| VASB-40-1/4-PUR     | G1/4 | 4       | 40      | 43   | 17   | 5.8 | 37.2 | 17 |
| VASB-55-1/4-PUR     | G1/4 | 4       | 55      | 52   | 17   | 5.8 | 46.2 | 17 |
| VASB-75-1/4-PUR     | G1/4 | 4       | 75      | 43.5 | 17   | 5.8 | 37.7 | 17 |
| VASB-100-1/4-PUR    | G1/4 | 4       | 100     | 43.5 | 17   | 5.8 | 37.7 | 17 |
| VASB-125-3/8-PUR    | G3/8 | 7       | 125     | 60   | 20   | 6   | 54   | 19 |
| <b>VASB-...-SI</b>  |      |         |         |      |      |     |      |    |
| VASB-8-M5-SI        | M5   | 2       | 8       | 22.5 | 11.5 | 5   | 17.5 | 8  |
| VASB-15-1/8-SI      | G1/8 | 3       | 15      | 25.5 | 12   | 6.5 | 19   | 13 |
| VASB-30-1/8-SI      | G1/8 | 3       | 30      | 34   | 12   | 6.5 | 27.5 | 13 |
| VASB-40-1/4-SI      | G1/4 | 4       | 40      | 43   | 17   | 8   | 35   | 17 |
| VASB-55-1/4-SI      | G1/4 | 4       | 55      | 52   | 17   | 8   | 44   | 17 |
| VASB-75-1/4-SI      | G1/4 | 4       | 75      | 43.5 | 14   | 8   | 35.5 | 17 |
| VASB-100-1/4-SI     | G1/4 | 4       | 100     | 43.5 | 14   | 8   | 35.5 | 17 |
| VASB-125-3/8-SI     | G3/8 | 7       | 125     | 60   | 16.5 | 9   | 51   | 19 |







1) Sealing rings are not included in the scope of delivery.

-  - Type discontinued VASB-...-CT  
Available up until 12/2010

## Bellows suction cups VASB

Technical data

FESTO

| Ordering data                     |                 |                |  |              |  |          |                 |
|-----------------------------------|-----------------|----------------|--|--------------|--|----------|-----------------|
| Suction cup Ø<br>[mm]             | Screw-in thread | Nitrile rubber |  | Polyurethane |  | Silicone |                 |
|                                   |                 | Part No.       | Type   | Part No.     | Type   | Part No. | Type            |
| 8                                 | M5              | 35410          | VASB-8-M5-NBR  | 35417        | VASB-8-M5-PUR  | 160992   | VASB-8-M5-SI    |
| 15                                | G1/8            | 35411          | VASB-15-1/8-NBR  | 35418        | VASB-15-1/8-PUR  | 158977   | VASB-15-1/8-SI  |
| 30                                | G1/8            | 35412          | VASB-30-1/8-NBR  | 35419        | VASB-30-1/8-PUR  | 158978   | VASB-30-1/8-SI  |
| 40                                | G1/4            | 35413          | VASB-40-1/4-NBR  | 35420        | VASB-40-1/4-PUR  | 158979   | VASB-40-1/4-SI  |
| 55                                | G1/4            | 35414          | VASB-55-1/4-NBR  | 35421        | VASB-55-1/4-PUR  | 158980   | VASB-55-1/4-SI  |
| 75                                | G1/4            | 35415          | VASB-75-1/4-NBR  | 35422        | VASB-75-1/4-PUR  | 160993   | VASB-75-1/4-SI  |
| 100                               | G1/4            | 35416          | VASB-100-1/4-NBR   | 35423        | VASB-100-1/4-PUR   | 160994   | VASB-100-1/4-SI |
| 125                               | G3/8            | 152609         | VASB-125-3/8-NBR   | 152610       | VASB-125-3/8-PUR   | 160995   | VASB-125-3/8-SI |
| Free of copper, PTFE and silicone |                 |                |  |              |  |          |                 |
| 8                                 | M5              | 183514         | VASB-8-M5-NBR-CT    | 183517       | VASB-8-M5-PUR-CT    | -        | -               |
| 15                                | G1/8            | 183515         | VASB-15-1/8-NBR-CT  | 183518       | VASB-15-1/8-PUR-CT  | -        | -               |
| 30                                | G1/8            | 183516         | VASB-30-1/8-NBR-CT  | 183519       | VASB-30-1/8-PUR-CT  | -        | -               |