# Vacuum suction

## Material overview (only reference values, does not replace technical advise)

| Material | Description              | Temperature range    | Wear<br>strength* | Oil<br>resistance* | Weather and ozone resistance* | Petrol<br>resistance* | Advantage                                      | Recommended for                     |
|----------|--------------------------|----------------------|-------------------|--------------------|-------------------------------|-----------------------|--|-------------------------------------|
| CR       | Chloroprene              | -40°C to max. +110°C | 3                 | 2                  | 2                             | х                     | Weather resistant                              | Universal use                       |
| NBR      | Nitrile rubber           | -30°C to max. +90°C  | 3                 | 1                  | х                             | 3                     | Oil-resistant, water-resistant up to max. 70°C | C Universal use                     |
| SI       | Silicone rubber          | -40°C to max. +200°C | х                 | х                  | 1                             | х                     | Temperature resistant, very flexible           | Food, electronics                   |
| PUR      | Polyurethane             | -20°C to max. +80°C  | 2                 | 1                  | 3                             | 2                     | Long service life                              | Harsh opera. conditions, automobile |
| NR       | Natural rubber           | -40°C to max. +80°C  | 2                 | x                  | x                             | x                     | Flexible, abrasion resistant                   | Wood, uneven surfaces               |
| NRE      | Natural rubber           | -40°C to max. +80°C  | 2                 | х                  | х                             | х                     | Very flexible, abrasion resistant              | Wood, uneven surfaces               |
| SBR      | Styrene-butadiene rubber | -30°C to max. +80°C  | 1                 | х                  | 3                             | х                     | Non-marking, flexible, very wear-resistant     | Wood, uneven surfaces               |

All materials 45 - 55 Shore A (unless otherwise specified)

\* 1 = Very good, 2 = Good, 3 = Fair, x = Not recommended



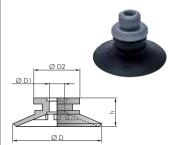
### P series ( Ø 5 - 16 mm) Flat suction cups

| Type CR          | Type silicone    |      |        | Conr | nection |     |      |      | Bracket |
|------------------|------------------|------|--------|------|---------|-----|------|------|---------|
| (black)          | (transparent)    | D    | Stroke | MT   | D1      | D2  | h    | Н    | type    |
| VSP 5 F CR       | VSP 5 F Si       | 5.0  | 0.5    | M5   | 2.0     | 4.5 | 6.0  | 13.5 | Α       |
| VSP 7 F CR       | VSP 7 F Si       | 7.0  | 1.0    | M5   | 2.0     | 5.0 | 6.5  | 14.0 | Α       |
| VSP 9 F CR       | VSP 9 F Si       | 9.0  | 1.5    | M5   | 2.0     | 5.0 | 7.0  | 14.5 | Α       |
| VSP 11 F CR      | VSP 11 F Si      | 11.0 | 1.0    | M5   | 3.8     | 9.0 | 10.5 | 19.5 | В       |
| VSP 16-0.5 F CR* | VSP 16-0.5 F Si* | 16.5 | 0.5    | M5   | 3.8     | 8.0 | 11.5 | 20.5 | В       |
| VSP 16 F CR      | VSP 16 F Si      | 16.5 | 2.0    | M5   | 3.8     | 9.0 | 11.5 | 20.5 | В       |

Suitable bracket (must be ordered separately)

| Ł | Type <b>brass</b> |                  |     |              |
|---|-------------------|------------------|-----|--------------|
|   | nickel-plated     | Thread connector | DN  | Bracket type |
|   | VSPH A50          | M5 MT            | 1.3 | Α            |
|   | VSPH B50          | M5 MT            | 2.8 | В            |

\* with support rib

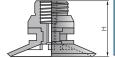


### Flat suction cups with supports P series ( Ø 20 - 50 mm)

|   | Type CR          | Type silicone    |    | Connection |          |      |      |      |      |      |  |
|---|------------------|------------------|----|------------|----------|------|------|------|------|------|--|
|   | (black)          | (transparent)    | D  | Stroke     | FT/MT    | D1   | D2   | h    | Н    | type |  |
|   | VSP 20 F CR      | VSP 20 F Si      | 22 | 0.5        | M5/G1/8" | 5.5  | 14.5 | 8.0  | 17.5 | С    |  |
|   | VSP 20-2.5 F CR* | VSP 20-2.5 F Si* | 22 | 2.5        | M5/G1/8" | 5.5  | 14.5 | 8.0  | 17.5 | С    |  |
|   | VSP 25 F CR      | VSP 25 F Si      | 28 | 1.0        | M5/G1/8" | 5.5  | 14.5 | 9.0  | 18.5 | С    |  |
| - | VSP 30 F CR      | VSP 30 F Si      | 32 | 2.5        | M5/G1/8" | 5.5  | 14.5 | 10.0 | 19.5 | С    |  |
|   | VSP 40 F CR      | VSP 40 F Si      | 42 | 2.0        | G1/8"/-  | 6.5  | 20.0 | 13.0 | 21.0 | D    |  |
|   | VSP 50 F CR      | VSP 50 F Si      | 53 | 2.5        | G1/8"/-  | 10.5 | 27.0 | 17.5 | 26.5 | Е    |  |

Suitable bracket (must be ordered separately)

Type **retaining** 



| aluminium  | ring (optional) | Thread connector | DN  |  |
|------------|-----------------|------------------|-----|--|
| VSPH C18   | VSPH C18 HR     | M5 FT/G 1/8" MT  | 3.1 |  |
| VSPH D18 i | VSPH D18 i HR   | G 1/8" FT        | 5.2 |  |
| VSPH E18 i | VSPH E18 i HR   | G 1/8" FT        | 6.3 |  |

without support ribs mounting example with bracket



#### P series ( Ø 20 - 50 mm) Flat suction cups with support ribs complete with brackets

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Supply volume: 1 pc. suction cup with assembled bracket and installed suction strainer

| Type CR      | Type silicone |    |        | Connection |     |    |  |
|--------------|---------------|----|--------|------------|-----|----|--|
| (black)      | (transparent) | D  | Stroke | FT/MT      | DN  | Н  |  |
| VSP 20 FK CR | VSP 20 FK Si  | 22 | 0.5    | M5/G1/8"   | 4.3 | 16 |  |
| VSP 25 FK CR | VSP 25 FK Si  | 28 | 1.0    | M5/G1/8"   | 4.3 | 17 |  |
| VSP 30 FK CR | VSP 30 FK Si  | 32 | 2.5    | M5/G1/8"   | 4.3 | 18 |  |
| VSP 40 FK CR | VSP 40 FK Si  | 42 | 2.0    | G1/8"/-    | 6.0 | 21 |  |
| VSP 50 FK CR | VSP 50 FK Si  | 53 | 2.5    | G1/8"/-    | 8.8 | 26 |  |



#### **Bellows suction pads, 1.5 times** P series ( Ø 6 - 16 mm)

| Type CR      | Type silicone |    |        | Conr | nection |     |     |    |      | Bracket |
|--------------|---------------|----|--------|------|---------|-----|-----|----|------|---------|
| (black)      | (transparent) | D  | Stroke | MT   | D1      | D2  | D3  | h  | Н    | type    |
| VSP 6 B1 CR  | VSP 6 B1 Si*  | 6  | 2.0    | M5   | 2       | 4.5 | 2.2 | 9  | 16.5 | Α       |
| VSP 9 B1 CR  | VSP 9 B1 Si*  | 9  | 3.5    | M5   | 2       | 5.5 | 3.8 | 12 | 19.5 | Α       |
| VSP 11 B1 CR | VSP 11 B1 Si  | 11 | 5.0    | M5   | 4       | 9.0 | 6.0 | 17 | 26.5 | В       |
| VSP 16 B1 CR | VSP 16 B1 Si  | 16 | 7.0    | M5   | 4       | 9.0 | 8.0 | 19 | 28.5 | В       |

Suitable bracket (must be ordered separately)

| Type <b>brass</b> |                  |     |              |
|-------------------|------------------|-----|--------------|
| nickel-plated     | Thread connector | DN  | Bracket type |
| VSPH A50          | M5 MT            | 1.3 | Α            |
| VSPH B50          | M5 MT            | 2.8 | В            |
| * red             |                  |     |              |

All data are considered to be unbinding reference values. We accept no liability for data selection that is not confirmed in writing. Pressure data refer, if not otherwise indicated, to liquids of Group II at +20°C.