

# SUCTION CUPS / Flat

## VF50



### Features and Strengths

Specifically designed for flat and curved surface  
Available to handle multiple objects with the same suction cup

### Examples of use

Metal sheet, Veneer sheets, Glass, Electronic components



### Recommended Lifting Force (Max.)

| Model | Volume (cm <sup>3</sup> ) | Lifting Force (Kg) - Perpendicular |          |          | Lifting Force (Kg) - Parallel |          |          |
|-------|---------------------------|------------------------------------|----------|----------|-------------------------------|----------|----------|
|       |                           | - 20 kPa                           | - 60 kPa | - 90 kPa | - 20 kPa                      | - 60 kPa | - 90 kPa |
| VF50  | 10.00                     | 3.67                               | 7.55     | 9.79     | 2.44                          | 4.08     | 5.10     |

※ The lifting force above does not include safety factor

### Material Specifications

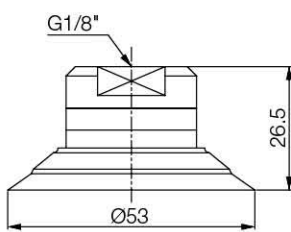
| Material             | Hardness Shore (°) | Color              | Temperature (°C) |
|----------------------|--------------------|--------------------|------------------|
| NBR                  | 60                 | Black              | -20~110          |
| Silicone             | 55                 | Red                | -70~200          |
| White Silicone       | 55                 | Translucent White  | -70~200          |
| White Silicone (FDA) | 55                 | Translucent White  | -70~200          |
| High temp. Silicone  | 50                 | Blue               | -70~280          |
| Conductive Silicone  | 70                 | Smoky Black        | -45~90           |
| Urethane             | 60                 | Dark Green         | 0~100            |
| Mark Free            | 75                 | Black              | -10~100          |
| Polyurethane         | 60                 | Translucent Orange | 0~60             |

### Material Resistance

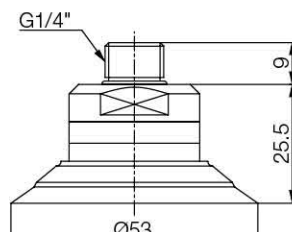
| Description     | NBR       | Silicone  | White Silicone | High temp. Silicone | Conductive Silicone | Urethane  | Mark Free | Polyurethane |
|-----------------|-----------|-----------|----------------|---------------------|---------------------|-----------|-----------|--------------|
| Wear Resistance | Excellent | Good      | Good           | Good                | Good                | Excellent | Good      | Excellent    |
| Oil             | Excellent | Poor      | Poor           | Poor                | Poor                | Excellent | Excellent | Excellent    |
| Weather / Ozone | Fair      | Excellent | Excellent      | Excellent           | Excellent           | Excellent | Excellent | Excellent    |
| Alcohol         | Good      | Good      | Good           | Good                | Good                | Fair      | Good      | Fair         |
| Acid            | Fair      | Poor      | Poor           | Poor                | Poor                | Poor      | Excellent | Fair         |

### Dimension

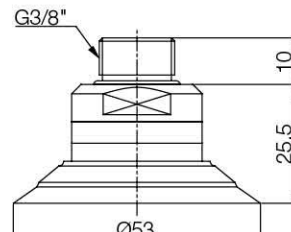
[ Unit : mm ]



[With 18F fitting]

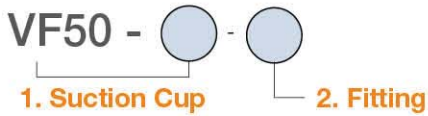


[With 14M fitting]



[With 38M fitting]

## I Build an Ordering No.



| 1. Suction cup | Description  | Symbol        |
|----------------|--|---------------|
|                | Flat suction cup, 50mm diameter, Nitrile (NBR)             | VF50-N        |
|                | Flat suction cup, 50mm diameter, Silicone                  | VF50-S        |
|                | Flat suction cup, 50mm diameter, White silicone            | VF50-WS       |
|                | Flat suction cup, 50mm diameter, White silicone (FDA)      | VF50-WS (FDA) |
|                | Flat suction cup, 50mm diameter, High temperature silicone | VF50-HS       |
|                | Flat suction cup, 50mm diameter, Conductive silicone       | VF50-CS       |
|                | Flat suction cup, 50mm diameter, Urethane                  | VF50-U        |
|                | Flat suction cup, 50mm diameter, Mark free                 | VF50-A        |
|                | Flat suction cup, 50mm diameter, Polyurethane              | VF50-PU       |

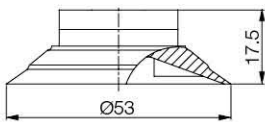
| 2. Fitting | Description   | Symbol  |
|------------|---|---------|
|            | Fitting, G1/8 female                                | 18F     |
|            | Fitting, G1/8 female, Mesh filter                   | M-18F   |
|            | Efficiency valve, Fitting, G1/8 female              | 18F-EV  |
|            | Fitting, G1/8 female, Button valve                  | 18F-BV  |
|            | Fitting, G1/8 female, Old profile                   | 18FO    |
|            | Fitting, G1/8 female, Old profile, Mesh filter      | M-18FO  |
|            | Efficiency valve, Fitting, G1/8 female, Old profile | 18FO-EV |
|            | Fitting, G1/4 male                                  | 14M     |
|            | Fitting, G1/4 male, Mesh filter                     | M-14M   |
|            | Efficiency valve, Fitting, G1/4 male                | 14M-EV  |
|            | Fitting, G3/8 male                                  | 38M     |
|            | Fitting, G3/8 male, Mesh filter                     | M-38M   |
|            | Efficiency valve, Fitting, G3/8 male                | 38M-EV  |

## I Spare Parts – Rubber Parts

| Part No.      | Description  | Weight (g) | Color              |
|---------------|--|------------|--------------------|
| VF50-N        | Flat suction cup, 50mm diameter, Nitrile (NBR)             | 12.25      | Black              |
| VF50-S        | Flat suction cup, 50mm diameter, Silicone                  | 11.88      | Red                |
| VF50-WS       | Flat suction cup, 50mm diameter, White silicone            | 11.88      | Translucent White  |
| VF50-WS (FDA) | Flat suction cup, 50mm diameter, White silicone (FDA)      | 11.88      | Translucent White  |
| VF50-HS       | Flat suction cup, 50mm diameter, High temperature silicone | 11.88      | Blue               |
| VF50-CS       | Flat suction cup, 50mm diameter, Conductive silicone       | 11.98      | Smoky Black        |
| VF50-U        | Flat suction cup, 50mm diameter, Urethane                  | 12.30      | Dark Green         |
| VF50-A        | Flat suction cup, 50mm diameter, Mark free                 | 14.20      | Black              |
| VF50-PU       | Flat suction cup, 50mm diameter, Polyurethane              | 11.18      | Translucent Orange |

## I Dimension

[ Unit : mm ]



[Rubber Part]

## I Spare Parts – Fittings

| Part No.     | Part No. | Description                                | Weight (g) |
|--------------|----------|--|------------|
| 350 000 3312 | 18F      | G1/8 female                                | 14.47      |
| 350 000 4312 | 18F-F    | G1/8 female, Mesh filter                   | 14.58      |
| 350 010 3312 | 18F-EV   | Efficiency valve, G1/8 female              | 15.81      |
| 350 020 3312 | 18F-BV   | G1/8 female, Button valve                  | 14.86      |
| 350 000 1312 | 18FO     | G1/8 female, Old profile                   | 10.12      |
| 350 000 4912 | 18FO-F   | G1/8 female, Old profile, Mesh filter      | 10.2       |
| 350 010 1312 | 18FO-EV  | Efficiency valve, G1/8 female, Old profile | 10.22      |
| 350 000 3405 | 14M      | G1/4 male                                  | 14.18      |
| 350 000 3805 | 14M-F    | G1/4 male, Mesh filter                     | 14.42      |
| 350 010 3405 | 14M-EV   | Efficiency valve, G1/4 male                | 14.38      |
| 350 000 3505 | 38M      | G3/8 male                                  | 18.14      |
| 350 000 3905 | 38M-F    | G3/8 male, Mesh filter                     | 17.75      |
| 350 010 3505 | 38M-EV   | Efficiency valve, G3/8 male                | 17.53      |