

# SUCTION CUPS / Mark free flat Structure

## FF25



### Features and Strengths

Excellent performance for very thin and light weight products  
Mark free

### Examples of use

Semiconductor, Display, Thin Film



### Recommended Lifting Force (Max.)

| Model | Volume (cm <sup>3</sup> ) | Lifting Force (Kg) - Perpendicular |          |          |
|-------|---------------------------|------------------------------------|----------|----------|
|       |                           | - 20 kPa                           | - 60 kPa | - 90 kPa |
| FF25  | 0.11                      | 0.86                               | 1.40     | 1.60     |

※ The lifting force above does not include safety factor

### Material Specifications

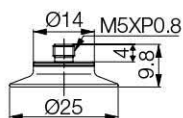
| Material             | Hardness Shore (°) | Color             | Temperature (°C) |
|----------------------|--------------------|-------------------|------------------|
| NBR                  | 60                 | Black             | -20~110          |
| Silicone             | 55                 | 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          |

### Material Resistance

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

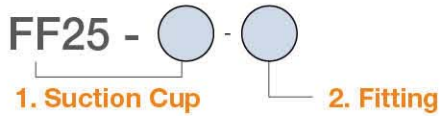
### Dimension

[ Unit : mm ]



[With M5M fitting]

## Build an Ordering No.



| 1. Suction cup | Description  | Symbol        |
|----------------|--|---------------|
|                | Mark free and Flat structure suction cup, 25mm diameter, Nitrile (NBR)             | FF25-N        |
|                | Mark free and Flat structure suction cup, 25mm diameter, Silicone                  | FF25-S        |
|                | Mark free and Flat structure suction cup, 25mm diameter, White silicone            | FF25-WS       |
|                | Mark free and Flat structure suction cup, 25mm diameter, White silicone (FDA)      | FF25-WS (FDA) |
|                | Mark free and Flat structure suction cup, 25mm diameter, High temperature silicone | FF25-HS       |
|                | Mark free and Flat structure suction cup, 25mm diameter, Conductive silicone       | FF25-CS       |
|                | Mark free and Flat structure suction cup, 25mm diameter, Urethane                  | FF25-U        |
|                | Mark free and Flat structure suction cup, 25mm diameter, Mark free                 | FF25-A        |

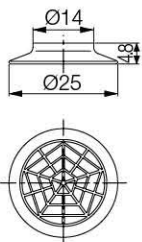
| 2. Fitting | Description      | Symbol |
|------------|------------------|--------|
|            | Fitting, M5 male | M5M    |

## Spare Parts – Rubber Parts

| Part No.      | Description  | Weight (g) | Color             |
|---------------|--|------------|-------------------|
| FF25-N        | Mark free and Flat structure suction cup, 25mm diameter, Nitrile (NBR)             | 1.22       | Black             |
| FF25-S        | Mark free and Flat structure suction cup, 25mm diameter, Silicone                  | 1.17       | Red               |
| FF25-WS       | Mark free and Flat structure suction cup, 25mm diameter, White silicone            | 1.18       | Translucent White |
| FF25-WS (FDA) | Mark free and Flat structure suction cup, 25mm diameter, White silicone (FDA)      | 1.18       | Translucent White |
| FF25-HS       | Mark free and Flat structure suction cup, 25mm diameter, High temperature silicone | 1.26       | Blue              |
| FF25-CS       | Mark free and Flat structure suction cup, 25mm diameter, Conductive silicone       | 1.2        | Smoky Black       |
| FF25-U        | Mark free and Flat structure suction cup, 25mm diameter, Urethane                  | 1.26       | Dark Green        |
| FF25-A        | Mark free and Flat structure suction cup, 25mm diameter, Mark free                 | 1.31       | Black             |

## Dimension

[ Unit : mm ]



## Spare Parts – Fittings

| Part No. (Code No.) | Fitting size | Description | Weight (g) |
|---------------------|--------------|-------------|------------|
| 350 007 0102        | M5M          | M5 male     | 2.59       |