

# SUCTION CUPS / Sponge

## VS Series

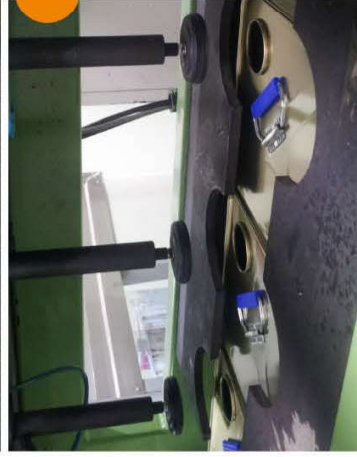
### Features and Strengths

Excellent performance for rough and uneven surfaces

### Advantages

Used for handling rough surfaces and when used with ball joint option and level compensator surfaces

### Application



### Examples of use

Marbles, Paving Slabs, Bricks, Rough Wood, Masonry

### Available size option

| Model   | Description               | Model | Description              |
|---------|---------------------------|-------|--------------------------|
| VS30x80 | Sponge suction cup, 30x80 | VS150 | Sponge suction cup, Ø150 |
| VS35    | Sponge suction cup, Ø35   | VS200 | Sponge suction cup, Ø200 |
| VS60    | Sponge suction cup, Ø60   | VS300 | Sponge suction cup, Ø300 |
| VS100   | Sponge suction cup, Ø100  | VS400 | Sponge suction cup, Ø400 |

### Recommended Lifting Force (Max.)

| Model   | Volume(cm <sup>3</sup> ) | Lifting Force (Kg) - Perpendicular |          |          | Page |
|---------|--------------------------|------------------------------------|----------|----------|------|
|         |                          | - 20 kPa                           | - 60 kPa | - 90 kPa |      |
| VS30x80 | 43.00                    | 2.70                               | 9.10     | 14.00    |      |
| VS35    | 6.00                     | 2.04                               | 5.10     | 7.14     |      |
| VS60    | 20.00                    | 6.12                               | 15.30    | 22.44    |      |
| VS100   | 55.00                    | 18.36                              | 45.90    | 67.34    |      |
| VS150   | 125.00                   | 38.00                              | 97.00    | 138.00   |      |
| VS200   | 543.00                   | 76.53                              | 193.87   | 275.51   |      |
| VS300   | 1285.00                  | 163.26                             | 438.77   | 653.06   |      |
| VS400   | 2288.00                  | 326.00                             | 876.00   | 1300.00  |      |

※ The lifting force above does not include safety factor



## VS30x80

### Features and Strengths

Excellent performance for rough and uneven surfaces

### Examples of use

Marbles, Paving Slabs, Bricks, Rough Wood, Masonry



### Recommended Lifting Force (Max.)

| Model   | Volume(cm <sup>3</sup> ) | Lifting Force (Kg) - Perpendicular |          |          |
|---------|--------------------------|------------------------------------|----------|----------|
|         |                          | - 20 kPa                           | - 60 kPa | - 90 kPa |
| VS30x80 | 43.00                    | 2.70                               | 9.10     | 14.00    |

※ The lifting force above does not include safety factor

### Material Specifications

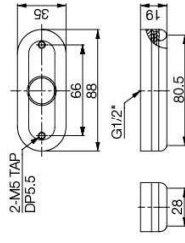
| Material | Hardness Shore (°) | Color | Temperature (°C) |
|----------|--------------------|-------|------------------|
| EPDM     | 40°                | Black | 0--150           |

### Material Resistance

| Description     | EPDM      |
|-----------------|-----------|
| Wear Resistance | Fair      |
| Oil             | Poor      |
| Weather / Ozone | Excellent |
| Alcohol         | Excellent |
| Acid            | Poor      |

### Dimension

[Unit: mm]



[With 12F fitting]

### Build an Ordering No.



| 1. Suction cup | Description                                | Symbol    |
|----------------|--|-----------|
|                | Sponge suction cup, 30x80mm diameter, EPDM | VS30x80-E |

| 2. Fitting | Description          | Symbol |
|------------|----------------------|--------|
|            | Fitting, G1/2 female | 12F    |

### Spare Parts – Rubber Part

| Part No.  | Description         | Weight (g) | Color |
|-----------|---------------------|------------|-------|
| VS30x80-E | EPDM Perimeter Seal | 9.2        | Black |

### Spare Parts – Fittings

| Part No. (Code No.) | Fitting size | Description | Weight (g) |
|---------------------|--------------|-------------|------------|
| 350 001 3611        | 12F          | G1/2 female | 63.1       |

## VS35

### Features and Strengths

Excellent performance for rough and uneven surfaces

### Examples of use

Marbles, Paving Slabs, Bricks, Rough Wood, Masonry



### Recommended Lifting Force (Max.)

| Model | Volume(cm <sup>3</sup> ) | Lifting Force (Kg) - Perpendicular |          |          |
|-------|--------------------------|------------------------------------|----------|----------|
|       |                          | - 20 kPa                           | - 60 kPa | - 90 kPa |
| VS35  | 6.00                     | 2.04                               | 5.10     | 7.14     |

※ The lifting force above does not include safety factor

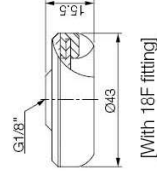
### Material Specifications

| Material | Hardness Shore (°) | Color | Temperature (°C) |
|----------|--------------------|-------|------------------|
| EPDM     | 40°                | Black | 0-150            |

### Material Resistance

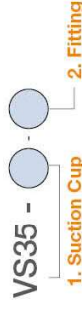
| Description     | EPDM      |
|-----------------|-----------|
| Wear Resistance | Fair      |
| Oil             | Poor      |
| Weather / Ozone | Excellent |
| Alcohol         | Excellent |
| Acid            | Poor      |

### Dimension



[Unit : mm]

### Build an Ordering No.



| 1. Suction cup | Description                             | Symbol |
|----------------|---|--------|
|                | Sponge suction cup, 35mm diameter, EPDM | VS35-E |

| 2. Fitting | Description                        | Symbol |
|------------|------------------------------------|--------|
|            | Fitting, G1/8 female               | 18F    |
|            | Button valve, Fitting, G1/8 female | 18F-BV |

### Spare Parts – Rubber Part

| Part No. | Description         | Weight (g) | Color |
|----------|---------------------|------------|-------|
| VS35-E   | EPDM Perimeter Seal | 5.39       | Black |

### Spare Parts – Fittings

| Part No. (Code No.) | Fitting size | Description               | Weight (g) |
|---------------------|--------------|---------------------------|------------|
| 350 001 3311        | 18F          | G1/8 female               | 17.81      |
| 350 021 3311        | 18F-BV       | Button valve, G1/8 female | 41.17      |

## VS60

### Features and Strengths

Excellent performance for rough and uneven surfaces

### Examples of use

Marbles, Paving Slabs, Bricks, Rough Wood, Masonry



### Recommended Lifting Force (Max.)

| Model | Volume(cm <sup>3</sup> ) | Lifting Force (Kg) - Perpendicular |          |          |
|-------|--------------------------|------------------------------------|----------|----------|
|       |                          | - 20 kPa                           | - 60 kPa | - 90 kPa |
| VS60  | 20.00                    | 6.12                               | 15.30    | 22.44    |

※ The lifting force above does not include safety factor

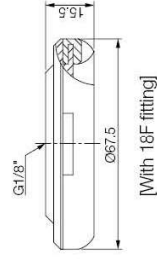
### Material Specifications

| Material | Hardness Shore (°) | Color | Temperature (°C) |
|----------|--------------------|-------|------------------|
| EPDM     | 40°                | Black | 0-150            |

### Material Resistance

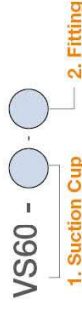
| Description     | EPDM      |
|-----------------|-----------|
| Wear Resistance | Fair      |
| Oil             | Poor      |
| Weather / Ozone | Excellent |
| Alcohol         | Excellent |
| Acid            | Poor      |

### Dimension



[Unit : mm]

### Build an Ordering No.



| 1. Suction cup | Description                             | Symbol |
|----------------|---|--------|
|                | Sponge suction cup, 60mm diameter, EPDM | VS60-E |

| 2. Fitting | Description                        | Symbol |
|------------|------------------------------------|--------|
|            | Fitting, G1/8 female               | 18F    |
|            | Button valve, Fitting, G1/8 female | 18F-BV |

### Spare Parts – Rubber Part

| Part No. | Description         | Weight (g) | Color |
|----------|---------------------|------------|-------|
| VS60-E   | EPDM Perimeter Seal | 9.4        | Black |

### Spare Parts – Fittings

| Part No. (Code No.) | Fitting size | Description               | Weight (g) |
|---------------------|--------------|---------------------------|------------|
| 350 001 3312        | 18F          | G1/8 female               | 47.57      |
| 350 021 3312        | 18F-BV       | Button valve, G1/8 female | 70.92      |

## VS100

### Features and Strengths

Excellent performance for rough and uneven surfaces

### Examples of use

Marbles, Paving Slabs, Bricks, Rough Wood, Masonry



### Recommended Lifting Force (Max.)

| Model | Volume(cm <sup>3</sup> ) | Lifting Force (Kg) - Perpendicular |          |          |
|-------|--------------------------|------------------------------------|----------|----------|
|       |                          | - 20 kPa                           | - 60 kPa | - 90 kPa |
| VS100 | 55.00                    | 18.36                              | 45.90    | 67.34    |

※ The lifting force above does not include safety factor

### Material Specifications

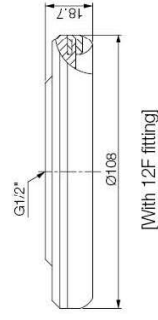
| Material | Hardness Shore (°) | Color | Temperature (°C) |
|----------|--------------------|-------|------------------|
| EPDM     | 40°                | Black | 0-150            |

### Material Resistance

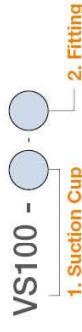
| Description     | EPDM      |
|-----------------|-----------|
| Wear Resistance | Fair      |
| Oil             | Poor      |
| Weather / Ozone | Excellent |
| Alcohol         | Excellent |
| Acid            | Poor      |

### Dimension

[Unit : mm]



### Build an Ordering No.



| 1. Suction cup | Description                              | Symbol  |
|----------------|--|---------|
|                | Sponge suction cup, 100mm diameter, EPDM | VS100-E |

| 2. Fitting | Description                        | Symbol |
|------------|------------------------------------|--------|
|            | Fitting, G1/2 female               | 12F    |
|            | Button valve, Fitting, G1/2 female | 12F-BV |

### Spare Parts – Rubber Part

| Part No. | Description         | Weight (g) | Color |
|----------|---------------------|------------|-------|
| VS100-E  | EPDM Perimeter Seal | 16.43      | Black |

### Spare Parts – Fittings

| Part No. (Code No.) | Fitting size | Description               | Weight (g) |
|---------------------|--------------|---------------------------|------------|
| 350 001 3623        | 12F          | G1/2 female               | 222.99     |
| 350 021 3623        | 12F-BV       | Button valve, G1/2 female | 338.53     |

## VS150

### Features and Strengths

Excellent performance for rough and uneven surfaces

### Examples of use

Marbles, Paving Slabs, Bricks, Rough Wood, Masonry



### Recommended Lifting Force (Max.)

| Model | Volume(cm <sup>3</sup> ) | Lifting Force (Kg) - Perpendicular |          |          |
|-------|--------------------------|------------------------------------|----------|----------|
|       |                          | - 20 kPa                           | - 60 kPa | - 90 kPa |
| VS150 | 125.00                   | 38.00                              | 97.00    | 138.00   |

※ The lifting force above does not include safety factor

### Material Specifications

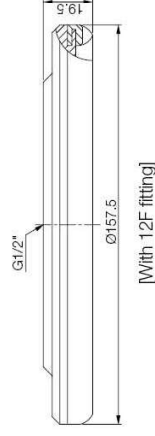
| Material | Hardness Shore (°) | Color | Temperature (°C) |
|----------|--------------------|-------|------------------|
| EPDM     | 40°                | Black | 0-150            |

### Material Resistance

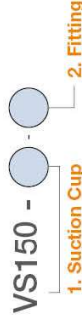
| Description     | EPDM      |
|-----------------|-----------|
| Wear Resistance | Fair      |
| Oil             | Poor      |
| Weather / Ozone | Excellent |
| Alcohol         | Excellent |
| Acid            | Poor      |

### Dimension

[Unit : mm]



### Build an Ordering No.



| 1. Suction cup | Description                               | Symbol  |
|----------------|---|---------|
|                | Sponge suction cup, 150mm diameter, EPDM, | VS150-E |

| 2. Fitting | Description                        | Symbol |
|------------|------------------------------------|--------|
|            | Fitting, G1/2 female               | 12F    |
|            | Button valve, Fitting, G1/2 female | 12F-BV |

### Spare Parts – Rubber Part

| Part No. | Description         | Weight (g) | Color |
|----------|---------------------|------------|-------|
| VS150-E  | EPDM Perimeter Seal | 25         | Black |

### Spare Parts – Fittings

| Part No. (Code No.) | Fitting size | Description               | Weight (g) |
|---------------------|--------------|---------------------------|------------|
| 350 001 3615        | 12F          | G1/2 female               | 525        |
| 350 021 3615        | 12F-BV       | Button valve, G1/2 female | 640.54     |

## VS200

### Features and Strengths

Excellent performance for rough and uneven surfaces

### Examples of use

Marbles, Paving Slabs, Bricks, Rough Wood, Masonry



### Recommended Lifting Force (Max.)

| Model | Volume(cm <sup>3</sup> ) | Lifting Force (Kg) - Perpendicular |          |          |
|-------|--------------------------|------------------------------------|----------|----------|
|       |                          | - 20 kPa                           | - 60 kPa | - 90 kPa |
| VS200 | 543.00                   | 76.53                              | 193.87   | 275.51   |

※ The lifting force above does not include safety factor

### Material Specifications

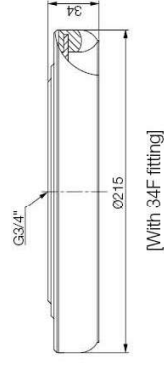
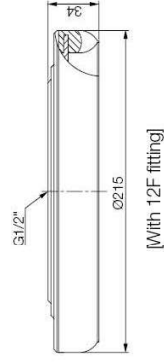
| Material | Hardness Shore (°) | Color | Temperature (°C) |
|----------|--------------------|-------|------------------|
| EPDM     | 40°                | Black | 0~150            |

### Material Resistance

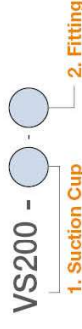
| Description     | EPDM      |
|-----------------|-----------|
| Wear Resistance | Fair      |
| Oil             | Poor      |
| Weather / Ozone | Excellent |
| Alcohol         | Excellent |
| Acid            | Poor      |

### Dimension

[Unit : mm]



### Build an Ordering No.



|                       |  |               |
|-----------------------|--|---------------|
| <b>1. Suction cup</b> | <b>Description</b>                       | <b>Symbol</b> |
|                       | Sponge suction cup, 200mm diameter, EPDM | VS200-E       |
| <b>2. Fitting</b>     | <b>Description</b>                       | <b>Symbol</b> |
|                       | Fitting, G1/2 female                     | 12F           |
|                       | Fitting, G3/4 female                     | 34F           |

### Spare Parts – Rubber Part

| Part No. | Description         | Weight (g) | Color |
|----------|---------------------|------------|-------|
| VS200-E  | EPDM Perimeter Seal | 176.66     | Black |

### Spare Parts – Fittings

| Part No. (Code No.) | Fitting size | Description | Weight (g) |
|---------------------|--------------|-------------|------------|
| 350 001 3616        | 12F          | G1/2 female | 1015       |
| 350 001 3716        | 34F          | G3/4 female | 1015       |

## VS300

### Features and Strengths

Excellent performance for rough and uneven surfaces

### Examples of use

Marbles, Paving Slabs, Bricks, Rough Wood, Masonry



### Recommended Lifting Force (Max.)

| Model | Volume(cm <sup>3</sup> ) | Lifting Force (Kg) - Perpendicular |          |          |
|-------|--------------------------|------------------------------------|----------|----------|
|       |                          | - 20 kPa                           | - 60 kPa | - 90 kPa |
| VS300 | 1285.00                  | 163.26                             | 438.77   | 653.06   |

※ The lifting force above does not include safety factor

### Material Specifications

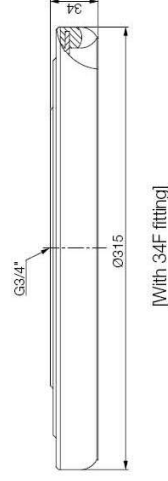
| Material | Hardness Shore (°) | Color | Temperature (°C) |
|----------|--------------------|-------|------------------|
| EPDM     | 40°                | Black | 0~150            |

### Material Resistance

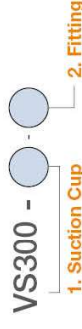
| Description     | EPDM      |
|-----------------|-----------|
| Wear Resistance | Fair      |
| Oil             | Poor      |
| Weather / Ozone | Excellent |
| Alcohol         | Excellent |
| Acid            | Poor      |

### Dimension

[Unit : mm]



### Build an Ordering No.



| 1. Suction cup | Description                              | Symbol  |
|----------------|--|---------|
|                | Sponge suction cup, 300mm diameter, EPDM | VS300-E |

| 2. Fitting | Description          | Symbol |
|------------|----------------------|--------|
|            | Fitting, G3/4 female | 34F    |

### Spare Parts – Rubber Part

| Part No. | Description         | Weight (g) | Color |
|----------|---------------------|------------|-------|
| VS300-E  | EPDM Perimeter Seal | 265        | Black |

### Spare Parts – Fittings

| Part No. (Code No.) | Fitting size | Description | Weight (g) |
|---------------------|--------------|-------------|------------|
| 350 001 3717        | 34F          | G3/4 female | 2303       |



## VS400

### Features and Strengths

Excellent performance for rough and uneven surfaces

### Examples of use

Marbles, Paving Slabs, Bricks, Rough Wood, Masonry



### Recommended Lifting Force (Max.)

| Model | Volume(cm <sup>3</sup> ) | Lifting Force (Kg) - Perpendicular |          |          |
|-------|--------------------------|------------------------------------|----------|----------|
|       |                          | - 20 kPa                           | - 60 kPa | - 90 kPa |
| VS400 | 2288.00                  | 326.00                             | 876.00   | 1300.00  |

※ The lifting force above does not include safety factor

### Material Specifications

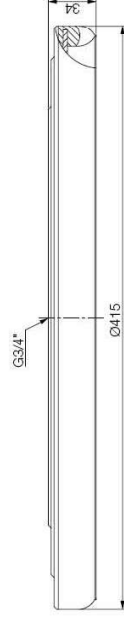
| Material | Hardness Shore (°) | Color | Temperature (°C) |
|----------|--------------------|-------|------------------|
| EPDM     | 40°                | Black | 0~150            |

### Material Resistance

| Description     | EPDM      |
|-----------------|-----------|
| Wear Resistance | Fair      |
| Oil             | Poor      |
| Weather / Ozone | Excellent |
| Alcohol         | Excellent |
| Acid            | Poor      |

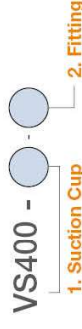
### Dimension

[Unit : mm]



[With 34F fitting]

### Build an Ordering No.



| 1. Suction cup | Description                              | Symbol  |
|----------------|--|---------|
|                | Sponge suction cup, 400mm diameter, EPDM | VS400-E |

| 2. Fitting | Description          | Symbol |
|------------|----------------------|--------|
|            | Fitting, G3/4 female | 34F    |

### Spare Parts – Rubber Part

| Part No. | Description         | Weight (g) | Color |
|----------|---------------------|------------|-------|
| VS400-E  | EPDM Perimeter Seal | 350        | Black |

### Spare Parts – Fittings

| Part No. (Code No.) | Fitting size | Description | Weight (g) |
|---------------------|--------------|-------------|------------|
| 350 001 3718        | 34F          | G3/4 female | 3016       |