

VACUUM PAD  
FOR PACKAGING BAG

**PB** Type



2D / 3D  
Download

2 selections for lip hardness to lift any food packaging



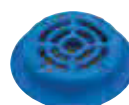
## New

✓ Pad size of  $\varnothing 20$  and  $\varnothing 25$  mm is newly added

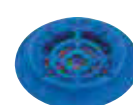


✓ Stainless steel mesh filter is available as option

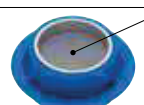
- To prevent the products from contamination
- The filtration of the mesh is  $100\ \mu\text{m}$  (reference only)



Flat type



Spherical type



Reverse side

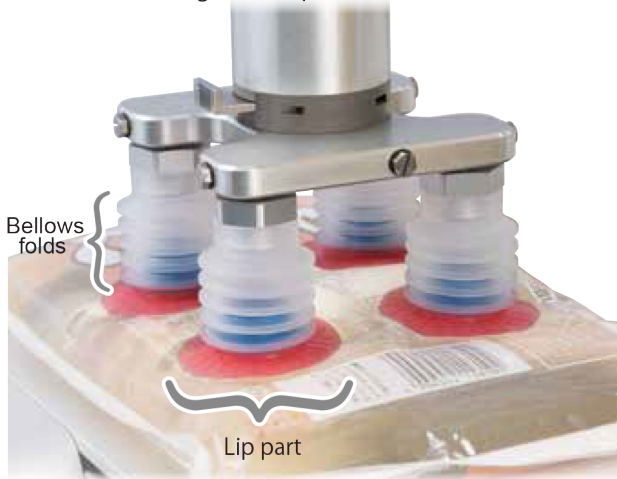
Stainless steel mesh

## Feature

Three features realize followability to speedy and precise movement of conveyance robot.

- ① 5.5-folded bellows absorb the shock when contacting a workpiece and follow the inclined surface. (3.5-folded and 5.5-folded can be selected according to a workpiece angle and conveyance speed.)
- ② Lip part follows the surface of a workpiece. (Two selections for lip hardness according to workpieces)
- ③ Folded bellows contract and help the posture stability of a workpiece in conveyance.

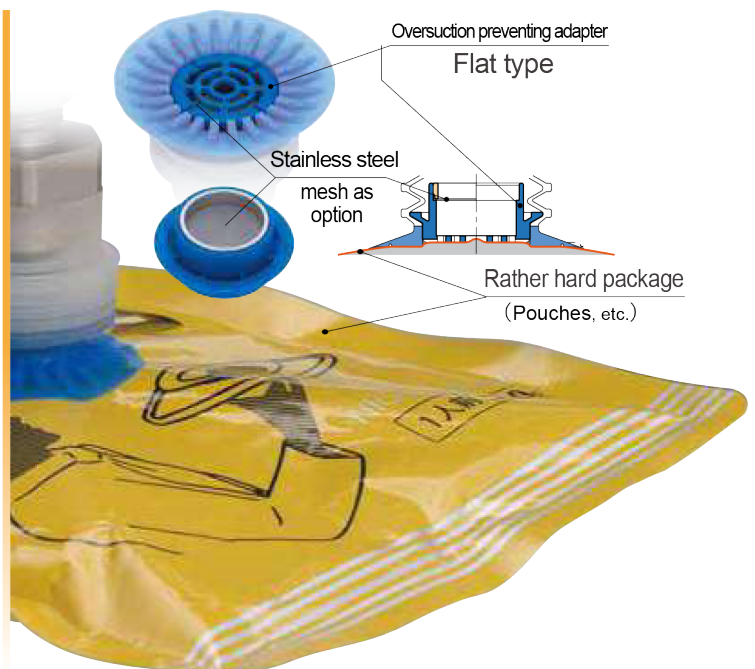
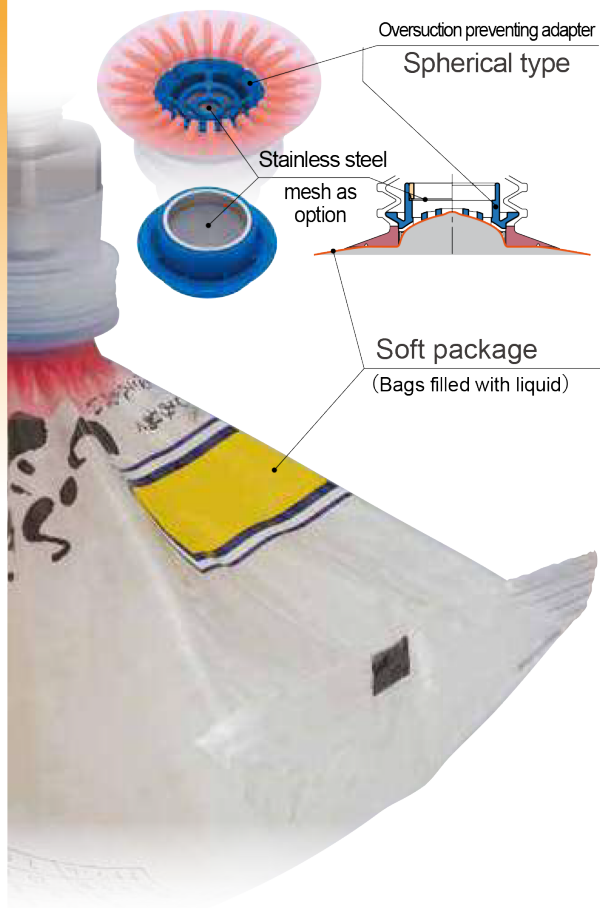
When contacting a work-piece ①



When conveying a work-piece ②,③

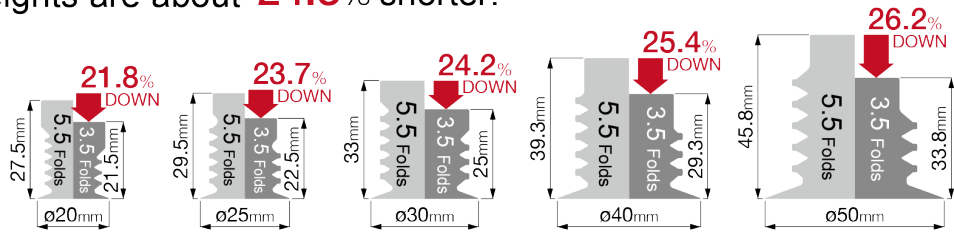


4 types of oversuction preventing adapters are provided. Select one depending on the packaging material/environment.

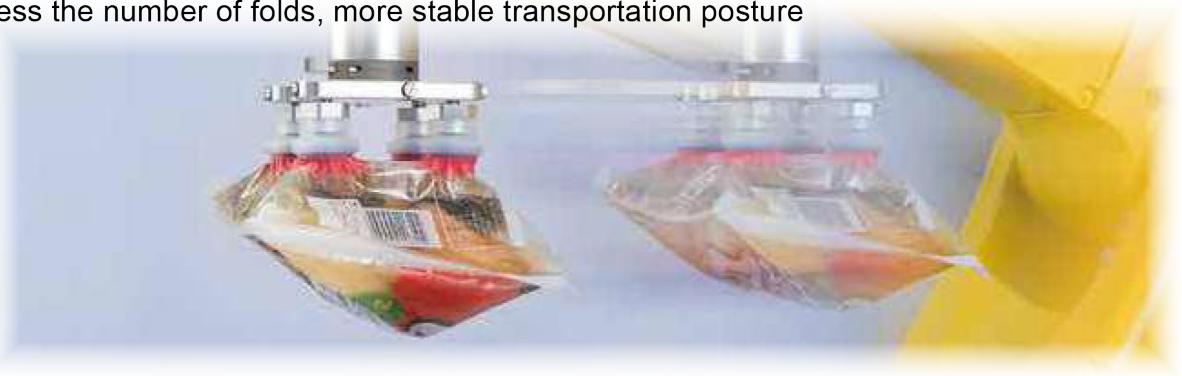


3.5-folds type has advantages of space-saving and high-speed conveyance by a robot hand.

✓ The heights are about 24.3% shorter.

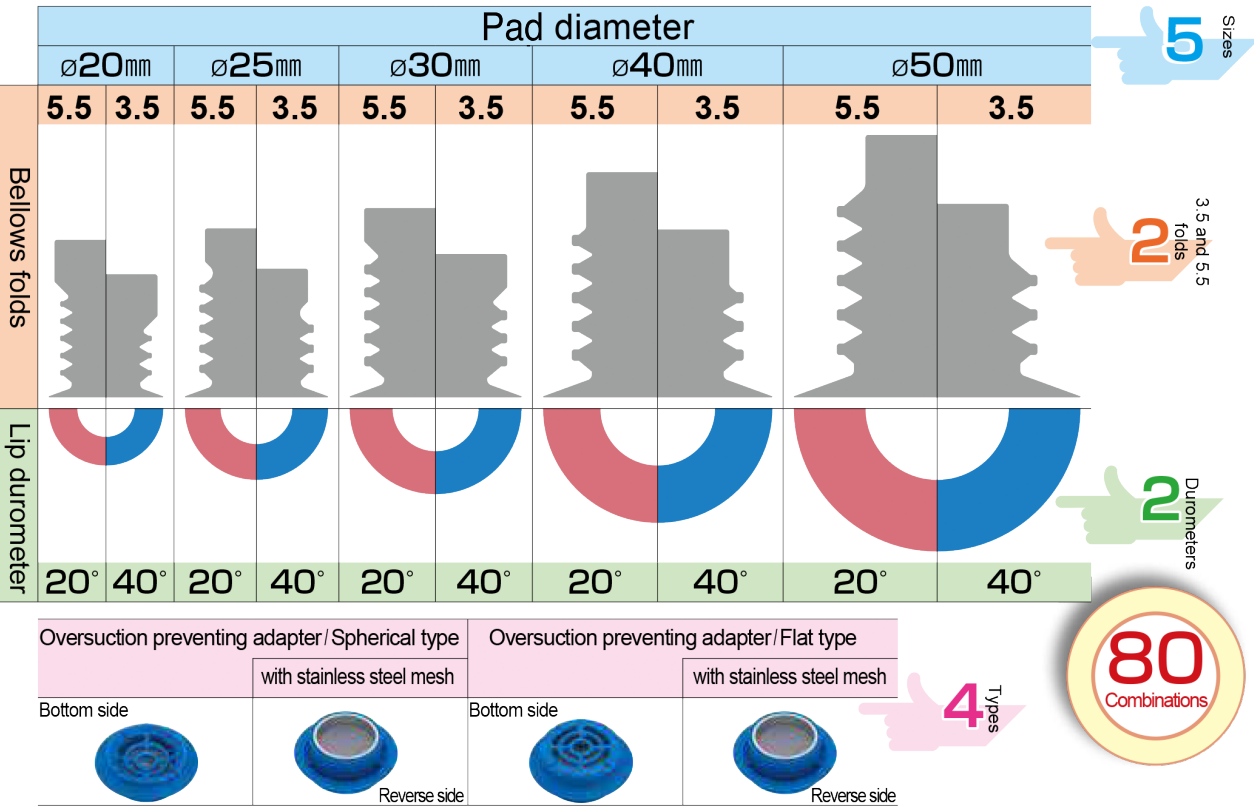


✓ Less the number of folds, more stable transportation posture



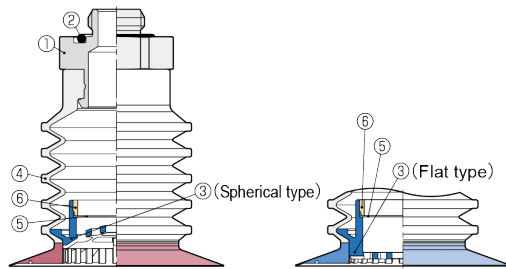
Lip part is made of FDA compliance silicone rubber.

Select a bellows pad from the wide range of combinations.



## Construction

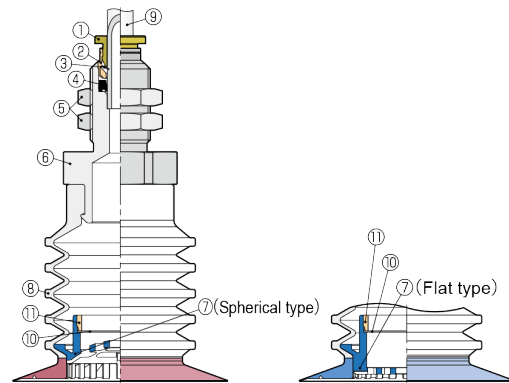
### ■ Direct mount type (VPE) - Parallel piping thread



| No. | Part                           | Material |
|-----|--------------------------------|----------|
| ①   | Metallic body                  | Aluminum |
| ②   | O-ring (※)                     | Silicone |
| ③   | Oversuction preventing adapter | PP       |
| ④   | Bellows pad for packaging      | Silicone |
| ⑤   | Stainless steel mesh filter    | SUS316L  |
| ⑥   | Mesch filter remainder         | Aluminum |

※) In case of metric thread type (size : M8, M14), the product comes with O-ring like Parallel thread type. However, in case of M5 and M6 thread type, it comes with a gasket (Material : SUS316 + FKM) as standard.  
The part numbers of gasket for M5 and M6 as follows:  
M5 : GAS-M5SUS M6 : GAS-M6SUS

### ■ Panel mount type (VPA)



| No. | Part                           | Material                           |
|-----|--------------------------------|------------------------------------|
| ①   | Release ring                   | POM                                |
| ②   | Guide ring                     | Brass (Electroless nickel plating) |
| ③   | Lock claws                     | Stainless steel                    |
| ④   | Elastic sleeve                 | EPDM                               |
| ⑤   | Nut                            | Carbon steel (Trivalent chromate)  |
| ⑥   | Metallic body                  | Aluminum                           |
| ⑦   | Oversuction preventing adapter | PP                                 |
| ⑧   | Bellows pad for packaging      | Silicone                           |
| ⑨   | Tubing                         | Polyurethane, Nylon, etc.          |
| ⑩   | Stainless steel mesh filter    | SUS316L                            |
| ⑪   | Mesch filter remainder         | Aluminum                           |

## Safety Instructions

### ⚠ Warning

- When installing a panel mount type, please refer to the tightening torque listed in the following table (chart 1). Please tighten the panel mount nuts using right tools and tightening torque. Make sure no nuts loosening.

#### ● Chart 1. Tightening torque for panel mount nuts

| Nut size | Tightening torque |
|----------|-------------------|
| M12×1    | 12 ~ 14N·m        |
| M14×1    | 18 ~ 21N·m        |
| M16×1    | 18 ~ 21N·m        |
| M20×1    | 19 ~ 21N·m        |
| M22×1    | 19 ~ 21N·m        |

- When installing a direct mount type, please refer to the tightening torque listed in the following table (chart 2). Please tighten the thread using right tools and tightening torque. Make sure no screw loosening.

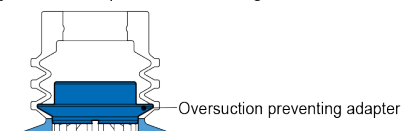
#### ● Chart 2. Tightening torque for mounting screws

| Thread                               | Thread size | Tightening torque |
|--------------------------------------|-------------|-------------------|
| Metric thread                        | M5×0.8      | 1 ~ 1.5N·m        |
|                                      | M6×1        | 2 ~ 2.7N·m        |
|                                      | M8×1        | 2.5 ~ 3.5N·m      |
|                                      | M14×1       | 18 ~ 21N·m        |
| G thread<br>(Parallel piping thread) | G1/8        | 7 ~ 9N·m          |
|                                      | G1/4        | 12 ~ 14N·m        |
|                                      | G3/8        | 22 ~ 24N·m        |
|                                      | G1/2        | 28 ~ 30N·m        |

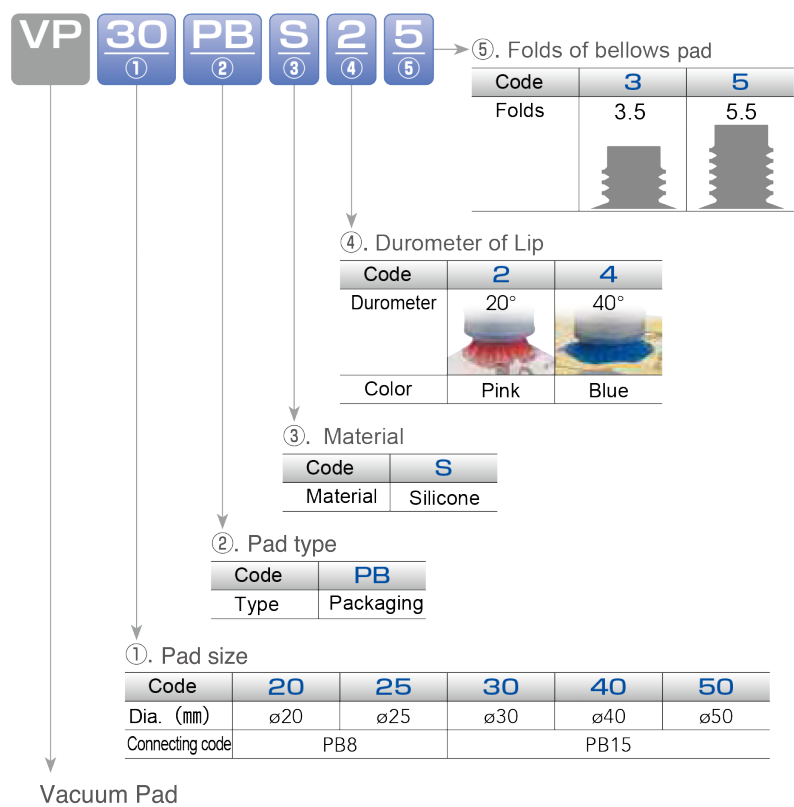
- Direct mount type with G thread comes with an O-ring and with metric thread comes with either an O-ring (size : M8 and M14) or a gasket (size : M5 and M6).
- The suction force of vacuum pad for packaging may exceed the strength of the pad itself. Please apply the safety factor of 1/16 or stricter for horizontal lifting and 1/25 or stricter for vertical lifting. Make sure to carry out a suction test before making decisions.

### ⚠ Caution

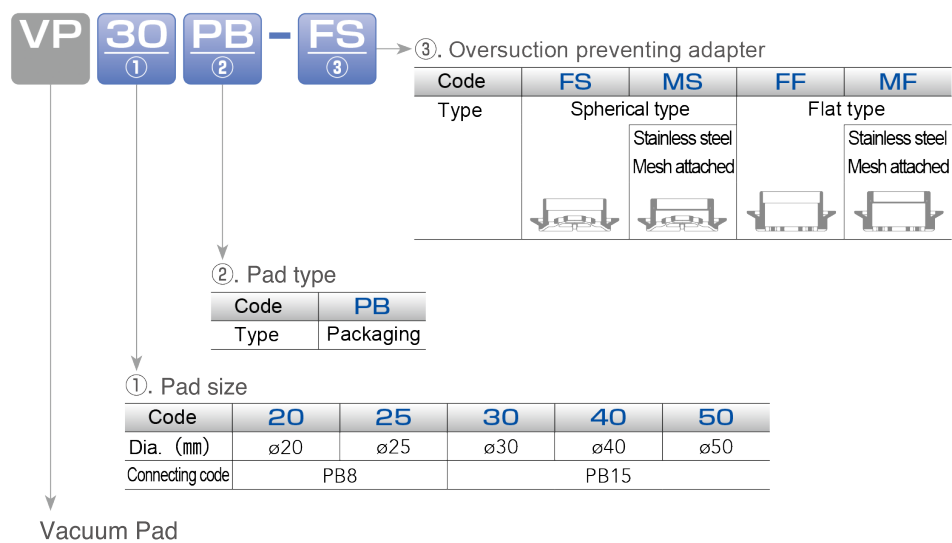
- Please install an oversuction preventing adapter for the bellows vacuum pad for packaging. Using the vacuum pad with no adapter may cause deformation of the vacuum pad and suction failure.
- When installing/removing an oversuction preventing adapter, pulling the lip of the cup excessively could damage the lip.
- Make sure to carry out a suction test when using a mesh filter type because it is to reduce the suction flow structurally.
- Check the clogging of mesh filter periodically. Otherwise, it may cause the performance degradation or the machine failure. Wash and clean it or replace it with a new one if necessary.
- Place an oversuction preventing adapter in the right position referring to the illustration.  
Not placing in the right position could result in suction failure.



Model Designation for Vacuum Pad (Example)

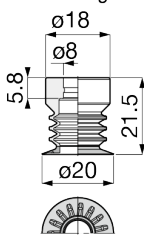
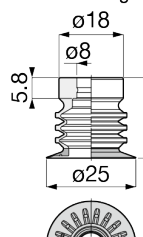
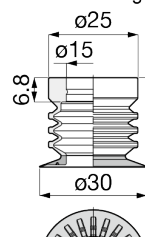
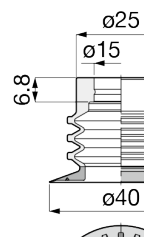
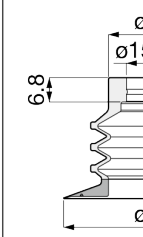


Model Designation for Oversuction Preventing Adapter (Example)



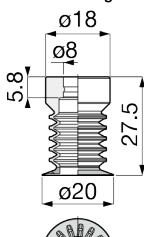
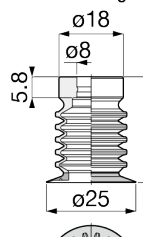
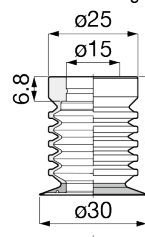
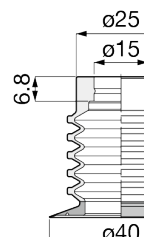
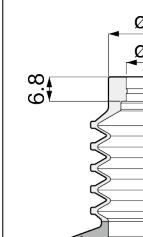
Dimensions for vacuum pad

Bellows pad 3.5 folds

|                                                                                                                                     |                                                                                                                        |                                                                                                                        |                                                                                                                         |                                                                                                                          |
|-------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|
| <b>VP20PBS43</b><br>Weight : 2.8g<br><br>Unit : mm | <b>VP25PBS43</b><br>Weight : 3.1g<br> | <b>VP30PBS43</b><br>Weight : 4.8g<br> | <b>VP40PBS43</b><br>Weight : 7.2g<br> | <b>VP50PBS43</b><br>Weight : 9.5g<br> |
| Connecting code : -PB8                                                                                                              |                                                                                                                        |                                                                                                                        | Connecting code : -PB15                                                                                                 |                                                                                                                          |

|           |           |           |           |           |
|-----------|-----------|-----------|-----------|-----------|
| Model     | Model     | Model     | Model     | Model     |
| VP20PBS43 | VP25PBS43 | VP30PBS43 | VP40PBS43 | VP50PBS43 |

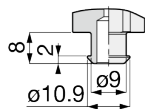
Bellows pad 5.5 folds

|                                                                                                                                      |                                                                                                                         |                                                                                                                         |                                                                                                                          |                                                                                                                          |
|--------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|
| <b>VP20PBS45</b><br>Weight : 3.1g<br><br>Unit : mm | <b>VP25PBS45</b><br>Weight : 3.6g<br> | <b>VP30PBS45</b><br>Weight : 5.7g<br> | <b>VP40PBS45</b><br>Weight : 8.8g<br> | <b>VP50PBS45</b><br>Weight : 12g<br> |
| Connecting code : -PB8                                                                                                               |                                                                                                                         |                                                                                                                         | Connecting code : -PB15                                                                                                  |                                                                                                                          |

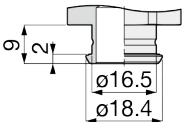
|           |           |           |           |           |
|-----------|-----------|-----------|-----------|-----------|
| Model     | Model     | Model     | Model     | Model     |
| VP20PBS45 | VP25PBS45 | VP30PBS45 | VP40PBS45 | VP50PBS45 |

Pad mounting area dimensions

Pad connecting code : -PB8



Pad connecting code : -PB15



Model Designation for Fitting (Example)



③ Connecting size and type

■ VPE type

| Thread      | G thread - parallel piping thread |       |       |       |
|-------------|-----------------------------------|-------|-------|-------|
| Code        | G1                                | G2    | G3    | G4    |
| Thread size | G1/8A                             | G1/4A | G3/8A | G1/2A |
| Connect PB8 | ✓                                 |       |       |       |
| code PB15   | ✓                                 | ✓     | ✓     | ✓     |

| Thread      | Metric thread |      |      |       |
|-------------|---------------|------|------|-------|
| Code        | M5            | M6   | M8   | M14   |
| Thread size | M5×0.8        | M6×1 | M8×1 | M14×1 |
| Connect PB8 | ✓             | ✓    | ✓    |       |
| code PB15   | ✓             | ✓    | ✓    | ✓     |

■ VPA type

| Joint       | Push-in fitting |    |    |     |     |
|-------------|-----------------|----|----|-----|-----|
| Code        | 4J              | 6J | 8J | 10J | 12J |
| O.D. (mm)   | ø4              | ø6 | ø8 | ø10 | ø12 |
| Connect PB8 | ✓               | ✓  | ✓  |     |     |
| code PB15   |                 | ✓  | ✓  | ✓   | ✓   |

②. Pad connecting code

| Code          | -PB8    | -PB15 |
|---------------|---------|-------|
| Installation  | Snap-on |       |
| Pad size (mm) | ø20     | ✓     |
|               | ø25     | ✓     |
|               | ø30     |       |
|               | ø40     | ✓     |
|               | ø50     | ✓     |

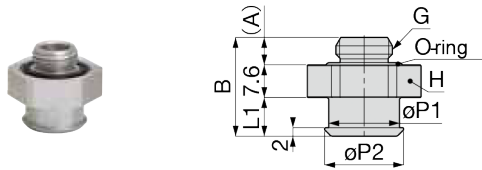
①. Fitting type

| Code | E                                                                                   | A                                                                                   |
|------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Type | Direct-mount type                                                                   | Panel-mount type                                                                    |
|      |  |  |

Vacuum pad

## Dimensions for Fitting of Vacuum pad

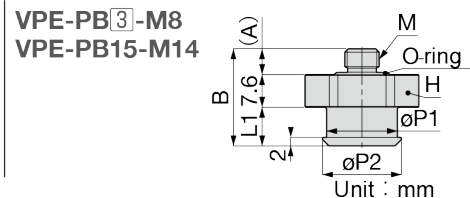
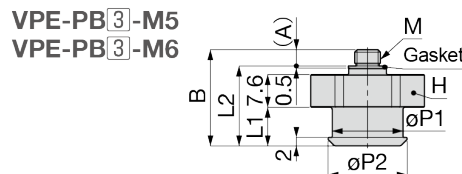
### VPE Direct-mount type (Connection : G thread - parallel piping thread)



Unit : mm

| Model       | G     | A   | B    | L1 | øP1  | øP2  | Hex. H | Weight (g) | Connecting Code |
|-------------|-------|-----|------|----|------|------|--------|------------|-----------------|
| VPE-PB8-G1  | G1/8A | 5.3 | 20.9 | 8  | 9    | 10.9 | 17     | 5.7        | -PB8            |
| VPE-PB15-G1 | G1/8A | 5.3 | 21.9 | 9  | 16.5 | 18.4 | 24     | 12         | -PB15           |
| VPE-PB15-G2 | G1/4A | 6.4 | 23   |    |      |      | 24     | 12         |                 |
| VPE-PB15-G3 | G3/8A | 7.9 | 24.5 |    |      |      | 27     | 16         |                 |
| VPE-PB15-G4 | G1/2A | 8.4 | 25   |    |      |      | 27     | 16         |                 |

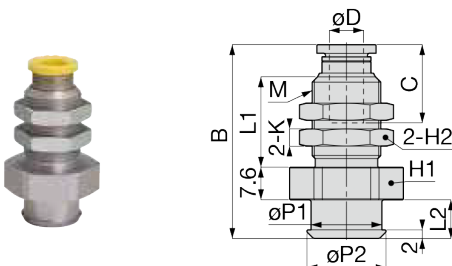
### VPE Direct-mount type (Connection : Metric thread)



Unit : mm

| Model        | M      | A   | B    | L1 | L2   | øP1  | øP2  | Hex. H | Weight (g) | Connecting Code |
|--------------|--------|-----|------|----|------|------|------|--------|------------|-----------------|
| VPE-PB8-M5   | M5×0.8 | 2.8 | 20.4 | 8  | 17.6 | 9    | 10.9 | 17     | 6.3        | -PB8            |
| VPE-PB8-M6   | M6×1   | 3.8 | 21.4 |    | —    |      |      |        | 5.7        |                 |
| VPE-PB8-M8   | M8×1   | 6   | 21.6 |    | —    |      |      |        | —          |                 |
| VPE-PB15-M5  | M5×0.8 | 2.8 | 21.4 | 9  | 18.6 | 16.5 | 18.4 | 24     | 12         | -PB15           |
| VPE-PB15-M6  | M6×1   | 3.8 | 22.4 |    | —    |      |      |        | —          |                 |
| VPE-PB15-M8  | M8×1   | 6   | 22.6 |    | —    |      |      |        | —          |                 |
| VPE-PB15-M14 | M14×1  | 8   | 24.6 |    | —    |      |      |        | —          |                 |

### VPA Panel-mount type



Unit : mm

| Model        | Tubing O.D. øD | M     | B    | L1   | L2 | øP1  | øP2  | Tube end C | Hex. H1 | Hex. H2 | K | Weight (g) | Connecting Code |
|--------------|----------------|-------|------|------|----|------|------|------------|---------|---------|---|------------|-----------------|
| VPA-PB8-4J   | 4              | M12×1 | 38.6 | 16.5 | 8  | 9    | 10.9 | 14.9       | 17      | 14      | 4 | 15         | -PB8            |
| VPA-PB8-6J   | 6              | M14×1 | 42.6 | 20.5 |    |      |      | 17         |         | 17      |   | 20         |                 |
| VPA-PB8-8J   | 8              | M16×1 | 44.1 | 21   |    |      |      | 18.2       |         | 19      |   | 23         |                 |
| VPA-PB15-6J  | 6              | M14×1 | 43.6 | 20.5 | 9  | 16.5 | 18.4 | 17         | 24      | 17      | 4 | 25         | -PB15           |
| VPA-PB15-8J  | 8              | M16×1 | 45.1 | 21   |    |      |      | 18.2       |         | 19      |   | 28         |                 |
| VPA-PB15-10J | 10             | M20×1 | 48   | 22.5 |    |      |      | 20.7       |         | 24      |   | 40         |                 |
| VPA-PB15-12J | 12             | M22×1 | 52.3 | 25.5 |    |      |      | 23.3       |         | 27      |   | 55         |                 |

Model Designation for Bellows pad with Fitting (Example)

VP

E

30

PB

S

2

5

G2

FS

①

②

③

④

⑤

⑥

⑦

⑧

⑧. Oversuction preventing adapter

| Code | FS                               | MS | FF                               | MF |
|------|----------------------------------|----|----------------------------------|----|
| Type | Spherical type                   |    | Flat type                        |    |
|      | Stainless steel<br>Mesh attached |    | Stainless steel<br>Mesh attached |    |
|      |                                  |    |                                  |    |

⑦. Connecting size and type

■ VPE type

| Thread      | G thread - parallel piping thread |       |       |       |
|-------------|-----------------------------------|-------|-------|-------|
| Code        | G1                                | G2    | G3    | G4    |
| Thread size | G1/8A                             | G1/4A | G3/8A | G1/2A |
| Connect PB8 | ✓                                 |       |       |       |
| code PB15   | ✓                                 | ✓     | ✓     | ✓     |

■ VPA type

| Joint       | Push-in fitting |    |    |     |     |
|-------------|-----------------|----|----|-----|-----|
| Code        | 4J              | 6J | 8J | 10J | 12J |
| O.D. (mm)   | ø4              | ø6 | ø8 | ø10 | ø12 |
| Connect PB8 | ✓               | ✓  | ✓  |     |     |
| code PB15   |                 | ✓  | ✓  | ✓   | ✓   |

⑥. Folds of bellows pad

| Code  | 3   | 5   |
|-------|-----|-----|
| Folds | 3.5 | 5.5 |

⑤. Durometer of Lip

| Code      | 2    | 4    |
|-----------|------|------|
| Durometer | 20°  | 40°  |
|           |      |      |
| Color     | Pink | Blue |

④. Material

| Code     | S        |
|----------|----------|
| Material | Silicone |

③. pad type

| Code | PB        |
|------|-----------|
| Type | Packaging |

②. pad size

| Code            | 20  | 25  | 30   | 40  | 50  |
|-----------------|-----|-----|------|-----|-----|
| Dia. (mm)       | ø20 | ø25 | ø30  | ø40 | ø50 |
| Connecting code | PB8 |     | PB15 |     |     |

①. Fitting type

| Code | E                 | A                |
|------|-------------------|------------------|
| Type | Direct-mount type | Panel-mount type |
|      |                   |                  |

Vacuum pad

## Dimensional information

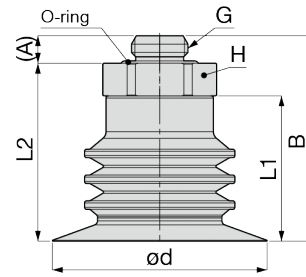
**VPE** Direct mount type (Connection : G thread - Parallel piping thread), Bellows : 3.5 folds



Model code - [5]  
▶ 2 ( Lip durometer : 20°)



Model code - [5]  
▶ 4 ( Lip durometer : 40°)



Unit : mm

| Model           | Pad size<br>ød | G     | A   | B    | L1   | L2   | Hex.<br>H | Weight (g) |         | Connecting |
|-----------------|----------------|-------|-----|------|------|------|-----------|------------|---------|------------|
|                 |                |       |     |      |      |      |           | [8] : F    | [8] : M | Code       |
| VPE20PBS53-G1-8 | 20             | G1/8A | 5.3 | 34.4 | 21.5 | 29.1 | 17        | 8.8        | 9.3     | -PB8       |
| VPE25PBS53-G1-8 | 25             | G1/8A | 5.3 | 35.4 | 22.5 | 30.1 | 17        | 9.3        | 9.6     |            |
| VPE30PBS53-G1-8 | 30             | G1/8A | 5.3 | 37.9 | 25   | 32.6 | 24        | 18         | 19      | -PB15      |
| VPE30PBS53-G2-8 |                | G1/4A | 6.4 | 39   |      |      |           |            |         |            |
| VPE30PBS53-G3-8 |                | G3/8A | 7.9 | 40.5 |      |      |           |            |         |            |
| VPE30PBS53-G4-8 |                | G1/2A | 8.4 | 41   |      |      | 27        | 22         | 23      |            |
| VPE40PBS53-G1-8 | 40             | G1/8A | 5.3 | 42.2 | 29.3 | 36.9 | 24        | 21         | 22      |            |
| VPE40PBS53-G2-8 |                | G1/4A | 6.4 | 43.3 |      |      |           |            |         |            |
| VPE40PBS53-G3-8 |                | G3/8A | 7.9 | 44.8 |      |      |           |            |         |            |
| VPE40PBS53-G4-8 |                | G1/2A | 8.4 | 45.3 |      |      | 27        | 25         | 26      |            |
| VPE50PBS53-G1-8 | 50             | G1/8A | 5.3 | 46.7 | 33.8 | 41.4 | 24        | 24         | 25      |            |
| VPE50PBS53-G2-8 |                | G1/4A | 6.4 | 47.8 |      |      |           |            |         |            |
| VPE50PBS53-G3-8 |                | G3/8A | 7.9 | 49.3 |      |      |           |            |         |            |
| VPE50PBS53-G4-8 |                | G1/2A | 8.4 | 49.8 |      |      | 27        | 28         | 29      |            |

※ Fill the lip durometer in [5] and the oversuction preventing adapter option in [8] of the model code referring to the model designation example.

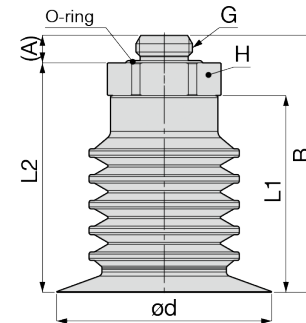
**VPE** Direct mount type (Connection : G thread - Parallel piping thread), Bellows : 5.5 folds



Model code - [5]  
▶ 2 ( Lip durometer : 20°)



Model code - [5]  
▶ 4 ( Lip durometer : 40°)



Unit : mm

| Model           | Pad size<br>ød | G     | A   | B    | L1   | L2   | Hex.<br>H | Weight (g) |       | Connecting<br>Code |
|-----------------|----------------|-------|-----|------|------|------|-----------|------------|-------|--------------------|
|                 |                |       |     |      |      |      |           | ⌀ : F      | ⌀ : M |                    |
| VPE20PBS55-G1-8 | 20             | G1/8A | 5.3 | 40.4 | 27.5 | 35.1 | 17        | 9.1        | 9.4   | -PB8               |
| VPE25PBS55-G1-8 | 25             | G1/8A | 5.3 | 42.4 | 29.5 | 37.1 | 17        | 9.8        | 11    |                    |
| VPE30PBS55-G1-8 | 30             | G1/8A | 5.3 | 45.9 | 33   | 40.6 | 24        | 19         | 20    | -PB15              |
| VPE30PBS55-G2-8 |                | G1/4A | 6.4 | 47   |      |      |           |            |       |                    |
| VPE30PBS55-G3-8 |                | G3/8A | 7.9 | 48.5 |      |      |           |            |       |                    |
| VPE30PBS55-G4-8 |                | G1/2A | 8.4 | 49   |      |      | 27        | 23         | 24    |                    |
| VPE40PBS55-G1-8 | 40             | G1/8A | 5.3 | 52.2 | 39.3 | 46.9 | 24        | 23         | 24    |                    |
| VPE40PBS55-G2-8 |                | G1/4A | 6.4 | 53.3 |      |      |           |            |       |                    |
| VPE40PBS55-G3-8 |                | G3/8A | 7.9 | 54.8 |      |      |           |            |       |                    |
| VPE40PBS55-G4-8 |                | G1/2A | 8.4 | 55.3 |      |      | 27        | 27         | 28    |                    |
| VPE50PBS55-G1-8 | 50             | G1/8A | 5.3 | 58.7 | 45.8 | 53.4 | 24        | 27         | 28    |                    |
| VPE50PBS55-G2-8 |                | G1/4A | 6.4 | 59.8 |      |      |           |            |       |                    |
| VPE50PBS55-G3-8 |                | G3/8A | 7.9 | 61.3 |      |      |           |            |       |                    |
| VPE50PBS55-G4-8 |                | G1/2A | 8.4 | 61.8 |      |      | 27        | 31         | 32    |                    |

※) Fill the lip durometer in [5] and the oversuction preventing adapter option in [8] of the model code referring to the model designation example.

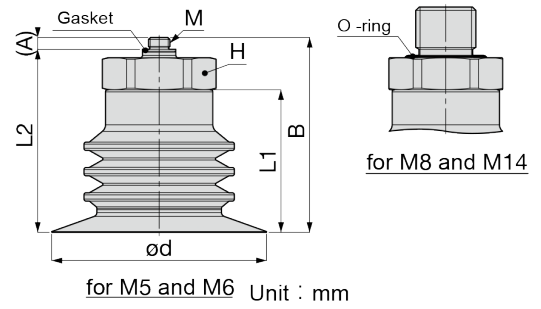
**VPE** Direct mount type (Connection : Metrice thread)  
Bellows : 3.5 folds



Model code - [5]  
▶ 2 ( Lip durometer : 20°)



Model code - [5]  
▶ 4 ( Lip durometer : 40°)



| Model            | Pad size<br>ød | M      | A   | B    | L1   | L2   | Hex.<br>H | Weight (g) |       | Connecting<br>Code |  |  |  |  |
|------------------|----------------|--------|-----|------|------|------|-----------|------------|-------|--------------------|--|--|--|--|
|                  |                |        |     |      |      |      |           | 8 : F      | 8 : M |                    |  |  |  |  |
| VPE20PBS53-M5-8  | 20             | M5×0.8 | 2.8 | 33.9 | 21.5 | 31.1 | 17        | 9.4        | 9.7   | -PB8               |  |  |  |  |
| VPE20PBS53-M6-8  |                | M6×1   | 3.8 | 34.9 |      | 29.1 |           | 8.8        | 9.1   |                    |  |  |  |  |
| VPE20PBS53-M8-8  |                | M8×1   | 6   | 35.1 |      |      |           |            |       |                    |  |  |  |  |
| VPE25PBS53-M5-8  | 25             | M5×0.8 | 2.8 | 34.9 | 22.5 | 32.1 | 17        | 9.9        | 11    |                    |  |  |  |  |
| VPE25PBS53-M6-8  |                | M6×1   | 3.8 | 35.9 |      | 30.1 |           | 9.3        | 9.6   |                    |  |  |  |  |
| VPE25PBS53-M8-8  |                | M8×1   | 6   | 36.1 |      |      |           |            |       |                    |  |  |  |  |
| VPE30PBS53-M5-8  | 30             | M5×0.8 | 2.8 | 37.4 | 25   | 34.6 | 24        | 18         | 19    | -PB15              |  |  |  |  |
| VPE30PBS53-M6-8  |                | M6×1   | 3.8 | 38.4 |      | 32.6 |           |            |       |                    |  |  |  |  |
| VPE30PBS53-M8-8  |                | M8×1   | 6   | 38.6 |      |      |           |            |       |                    |  |  |  |  |
| VPE30PBS53-M14-8 |                | M14×1  | 8   | 40.6 |      |      |           |            |       |                    |  |  |  |  |
| VPE40PBS53-M5-8  | 40             | M5×0.8 | 2.8 | 41.7 | 29.3 | 38.9 | 24        | 21         | 22    |                    |  |  |  |  |
| VPE40PBS53-M6-8  |                | M6×1   | 3.8 | 42.7 |      | 36.9 |           |            |       |                    |  |  |  |  |
| VPE40PBS53-M8-8  |                | M8×1   | 6   | 42.9 |      |      |           |            |       |                    |  |  |  |  |
| VPE40PBS53-M14-8 |                | M14×1  | 8   | 44.9 |      |      |           |            |       |                    |  |  |  |  |
| VPE50PBS53-M5-8  | 50             | M5×0.8 | 2.8 | 46.2 | 33.8 | 43.4 | 24        | 24         | 25    |                    |  |  |  |  |
| VPE50PBS53-M6-8  |                | M6×1   | 3.8 | 47.2 |      | 41.4 |           |            |       |                    |  |  |  |  |
| VPE50PBS53-M8-8  |                | M8×1   | 6   | 47.4 |      |      |           |            |       |                    |  |  |  |  |
| VPE50PBS53-M14-8 |                | M14×1  | 8   | 49.4 |      |      |           |            |       |                    |  |  |  |  |

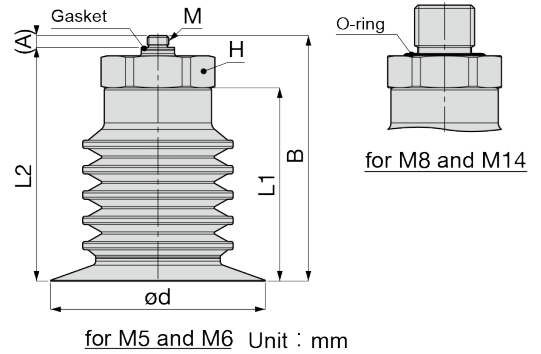
**VPE** Direct mount type (Connection : Metrice thread)  
Bellows : 3.5 folds



Model code - [5]  
▶ 2 ( Lip durometer : 20°)



Model code - [5]  
▶ 4 ( Lip durometer : 40°)



| Model            | Pad size<br>ød | M      | A   | B    | L1   | L2   | Hex.<br>H | Weight (g) |       | Connecting<br>Code |  |  |  |  |
|------------------|----------------|--------|-----|------|------|------|-----------|------------|-------|--------------------|--|--|--|--|
|                  |                |        |     |      |      |      |           | 8 : F      | 8 : M |                    |  |  |  |  |
| VPE20PBS55-M5-8  | 20             | M5×0.8 | 2.8 | 39.9 | 27.5 | 37.1 | 17        | 9.7        | 10    | -PB8               |  |  |  |  |
| VPE20PBS55-M6-8  |                | M6×1   | 3.8 | 40.9 |      | 35.1 |           | 9.1        | 9.4   |                    |  |  |  |  |
| VPE20PBS55-M8-8  |                | M8×1   | 6   | 41.1 |      |      |           |            |       |                    |  |  |  |  |
| VPE25PBS55-M5-8  | 25             | M5×0.8 | 2.8 | 41.9 | 29.5 | 39.1 | 17        | 11         | 11    |                    |  |  |  |  |
| VPE25PBS55-M6-8  |                | M6×1   | 3.8 | 42.9 |      | 37.1 |           | 9.8        | 9.8   |                    |  |  |  |  |
| VPE25PBS55-M8-8  |                | M8×1   | 6   | 43.1 |      |      |           |            |       |                    |  |  |  |  |
| VPE30PBS55-M5-8  | 30             | M5×0.8 | 2.8 | 45.4 | 33   | 42.6 | 24        | 19         | 20    | -PB15              |  |  |  |  |
| VPE30PBS55-M6-8  |                | M6×1   | 3.8 | 46.4 |      | 40.6 |           |            |       |                    |  |  |  |  |
| VPE30PBS55-M8-8  |                | M8×1   | 6   | 46.6 |      |      |           |            |       |                    |  |  |  |  |
| VPE30PBS55-M14-8 |                | M14×1  | 8   | 48.6 |      |      |           |            |       |                    |  |  |  |  |
| VPE40PBS55-M5-8  | 40             | M5×0.8 | 2.8 | 51.7 | 39.3 | 48.9 | 24        | 23         | 24    |                    |  |  |  |  |
| VPE40PBS55-M6-8  |                | M6×1   | 3.8 | 52.7 |      | 46.9 |           |            |       |                    |  |  |  |  |
| VPE40PBS55-M8-8  |                | M8×1   | 6   | 52.9 |      |      |           |            |       |                    |  |  |  |  |
| VPE40PBS55-M14-8 |                | M14×1  | 8   | 54.9 |      |      |           |            |       |                    |  |  |  |  |
| VPE50PBS55-M5-8  | 50             | M5×0.8 | 2.8 | 58.2 | 45.8 | 55.4 | 24        | 27         | 28    |                    |  |  |  |  |
| VPE50PBS55-M6-8  |                | M6×1   | 3.8 | 59.2 |      | 53.4 |           |            |       |                    |  |  |  |  |
| VPE50PBS55-M8-8  |                | M8×1   | 6   | 59.4 |      |      |           |            |       |                    |  |  |  |  |
| VPE50PBS55-M14-8 |                | M14×1  | 8   | 61.4 |      |      |           |            |       |                    |  |  |  |  |

※) Fill the lip durometer in [5] and the oversuction preventing adapter option in [8] of the model code referring to the model designation example.

## VPA Panel Mount type Bellows : 3.5 folds



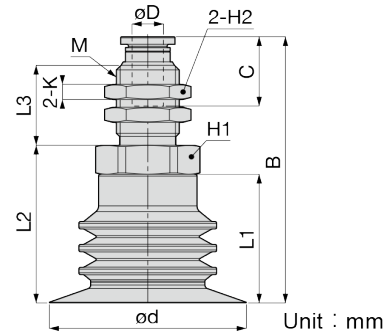
Model code - [5]

▶ 2 (Lip durometer : 20°)



Model code - [5]

▶ 4 (Lip durometer : 40°)



| Model                | Pad size<br>ød | Tubing O.D.<br>øD | M     | B    | L1   | L2   | L3   | Tube end<br>C | Hex.<br>H1 | Hex.<br>H2 | K | Weight (g) |          | Connecting<br>Code |
|----------------------|----------------|-------------------|-------|------|------|------|------|---------------|------------|------------|---|------------|----------|--------------------|
|                      |                |                   |       |      |      |      |      |               |            |            |   | [8] : F□   | [8] : M□ |                    |
| VPA20PBS[5]3-4J-[8]  | 20             | 4                 | M12×1 | 52.1 | 21.5 | 29.1 | 16.5 | 14.9          | 17         | 14         | 4 | 19         | 19       | -PB8               |
| VPA20PBS[5]3-6J-[8]  |                | 6                 | M14×1 | 56.1 |      |      | 20.5 | 17            |            | 17         |   | 24         | 24       |                    |
| VPA20PBS[5]3-8J-[8]  |                | 8                 | M16×1 | 57.6 |      |      | 21   | 18.2          |            | 19         |   | 27         | 27       |                    |
| VPA25PBS[5]3-4J-[8]  | 25             | 4                 | M12×1 | 53.1 | 22.5 | 30.1 | 16.5 | 14.9          | 17         | 14         | 4 | 19         | 19       | -PB8               |
| VPA25PBS[5]3-6J-[8]  |                | 6                 | M14×1 | 57.1 |      |      | 20.5 | 17            |            | 17         |   | 24         | 24       |                    |
| VPA25PBS[5]3-8J-[8]  |                | 8                 | M16×1 | 58.6 |      |      | 21   | 18.2          |            | 19         |   | 27         | 27       |                    |
| VPA30PBS[5]3-6J-[8]  | 30             | 6                 | M14×1 | 59.6 | 25   | 32.6 | 20.5 | 17            | 24         | 17         | 4 | 31         | 32       | -PB15              |
| VPA30PBS[5]3-8J-[8]  |                | 8                 | M16×1 | 61.1 |      |      | 21   | 18.2          |            | 19         |   | 34         | 35       |                    |
| VPA30PBS[5]3-10J-[8] |                | 10                | M20×1 | 64   |      |      | 22.5 | 20.7          |            | 24         |   | 46         | 47       |                    |
| VPA30PBS[5]3-12J-[8] |                | 12                | M22×1 | 68.3 |      |      | 25.5 | 23.3          |            | 27         |   | 61         | 62       |                    |
| VPA40PBS[5]3-6J-[8]  | 40             | 6                 | M14×1 | 63.9 | 29.3 | 36.9 | 20.5 | 17            | 24         | 17         | 4 | 34         | 35       | -PB15              |
| VPA40PBS[5]3-8J-[8]  |                | 8                 | M16×1 | 65.4 |      |      | 21   | 18.2          |            | 19         |   | 37         | 38       |                    |
| VPA40PBS[5]3-10J-[8] |                | 10                | M20×1 | 68.3 |      |      | 22.5 | 20.7          |            | 24         |   | 49         | 50       |                    |
| VPA40PBS[5]3-12J-[8] |                | 12                | M22×1 | 72.6 |      |      | 25.5 | 23.3          |            | 27         |   | 64         | 65       |                    |
| VPA50PBS[5]3-6J-[8]  | 50             | 6                 | M14×1 | 68.4 | 33.8 | 41.4 | 20.5 | 17            | 24         | 17         | 4 | 37         | 38       | -PB15              |
| VPA50PBS[5]3-8J-[8]  |                | 8                 | M16×1 | 69.9 |      |      | 21   | 18.2          |            | 19         |   | 40         | 41       |                    |
| VPA50PBS[5]3-10J-[8] |                | 10                | M20×1 | 72.8 |      |      | 22.5 | 20.7          |            | 24         |   | 52         | 53       |                    |
| VPA50PBS[5]3-12J-[8] |                | 12                | M22×1 | 77.1 |      |      | 25.5 | 23.3          |            | 27         |   | 67         | 68       |                    |

## VPA Panel Mount type Bellows : 5.5 folds



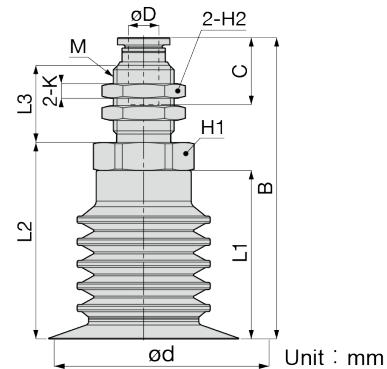
Model code - [5]

▶ 2 (Lip durometer : 20°)



Model code - [5]

▶ 4 (Lip durometer : 40°)



| Model                | Pad size<br>ød | Tubing dia.<br>øD | M     | B    | L1   | L2   | L3   | Tube end<br>C | Hex.<br>H1 | Hex.<br>H2 | K | Weight (g) |          | Connecting<br>Code |
|----------------------|----------------|-------------------|-------|------|------|------|------|---------------|------------|------------|---|------------|----------|--------------------|
|                      |                |                   |       |      |      |      |      |               |            |            |   | [8] : F□   | [8] : M□ |                    |
| VPA20PBS[5]5-4J-[8]  | 20             | 4                 | M12×1 | 58.1 | 27.5 | 35.1 | 16.5 | 14.9          | 17         | 14         | 4 | 19         | 19       | -PB8               |
| VPA20PBS[5]5-6J-[8]  |                | 6                 | M14×1 | 62.1 |      |      | 20.5 | 17            |            | 17         |   | 24         | 24       |                    |
| VPA20PBS[5]5-8J-[8]  |                | 8                 | M16×1 | 63.6 |      |      | 21   | 18.2          |            | 19         |   | 27         | 27       |                    |
| VPA25PBS[5]5-4J-[8]  | 25             | 4                 | M12×1 | 60.1 | 29.5 | 37.1 | 16.5 | 14.9          | 17         | 14         | 4 | 20         | 20       | -PB8               |
| VPA25PBS[5]5-6J-[8]  |                | 6                 | M14×1 | 64.1 |      |      | 20.5 | 17            |            | 17         |   | 25         | 25       |                    |
| VPA25PBS[5]5-8J-[8]  |                | 8                 | M16×1 | 65.6 |      |      | 21   | 18.2          |            | 19         |   | 28         | 28       |                    |
| VPA30PBS[5]5-6J-[8]  | 30             | 6                 | M14×1 | 67.6 | 33   | 40.6 | 20.5 | 17            | 24         | 17         | 4 | 32         | 33       | -PB15              |
| VPA30PBS[5]5-8J-[8]  |                | 8                 | M16×1 | 69.1 |      |      | 21   | 18.2          |            | 19         |   | 35         | 36       |                    |
| VPA30PBS[5]5-10J-[8] |                | 10                | M20×1 | 72   |      |      | 22.5 | 20.7          |            | 24         |   | 47         | 48       |                    |
| VPA30PBS[5]5-12J-[8] |                | 12                | M22×1 | 76.3 |      |      | 25.5 | 23.3          |            | 27         |   | 62         | 63       |                    |
| VPA40PBS[5]5-6J-[8]  | 40             | 6                 | M14×1 | 73.9 | 39.3 | 46.9 | 20.5 | 17            | 24         | 17         | 4 | 36         | 37       | -PB15              |
| VPA40PBS[5]5-8J-[8]  |                | 8                 | M16×1 | 75.4 |      |      | 21   | 18.2          |            | 19         |   | 39         | 40       |                    |
| VPA40PBS[5]5-10J-[8] |                | 10                | M20×1 | 78.3 |      |      | 22.5 | 20.7          |            | 24         |   | 51         | 52       |                    |
| VPA40PBS[5]5-12J-[8] |                | 12                | M22×1 | 82.6 |      |      | 25.5 | 23.3          |            | 27         |   | 66         | 67       |                    |
| VPA50PBS[5]5-6J-[8]  | 50             | 6                 | M14×1 | 80.4 | 45.8 | 53.4 | 20.5 | 17            | 24         | 17         | 4 | 40         | 41       | -PB15              |
| VPA50PBS[5]5-8J-[8]  |                | 8                 | M16×1 | 81.9 |      |      | 21   | 18.2          |            | 19         |   | 43         | 44       |                    |
| VPA50PBS[5]5-10J-[8] |                | 10                | M20×1 | 84.8 |      |      | 22.5 | 20.7          |            | 24         |   | 55         | 56       |                    |
| VPA50PBS[5]5-12J-[8] |                | 12                | M22×1 | 89.1 |      |      | 25.5 | 23.3          |            | 27         |   | 70         | 71       |                    |

※) Fill the lip durometer in [5] and the oversuction preventing adapter option in [8] of the model code referring to the model designation example.

## Components

### ■ Gasket (coming with Fitting)

#### ■ Direct mount type

| Model       | Fitting<br>Thread size | Connect<br>code |
|-------------|------------------------|-----------------|
| VPE-PB8-M5  | M5×0.8                 | PB8             |
| VPE-PB8-M6  | M6×1                   |                 |
| VPE-PB15-M5 | M5×0.8                 | PB15            |
| VPE-PB15-M6 | M6×1                   |                 |

※) The model includes a gasket

#### ■ Direct mount type

| Model        | Fitting<br>Thread size | Connect<br>code |
|--------------|------------------------|-----------------|
| VPE-PB8-M8   | M8×1                   | PB8             |
| VPE-PB8-G1   | G1/8A                  |                 |
| VPE-PB15-M8  | M8×1                   | PB15            |
| VPE-PB15-M14 | M14×1                  |                 |
| VPE-PB15-G1  | G1/8A                  |                 |
| VPE-PB15-G2  | G1/4A                  |                 |
| VPE-PB15-G3  | G3/8A                  |                 |
| VPE-PB15-G4  | G1/2A                  |                 |

※) The model includes an O-ring

### ■ 3.5 folds bellows pad for packaging (lip duro. : 20°)

| Model     | Pad size<br>(ømm) | Connect<br>code |
|-----------|-------------------|-----------------|
| VP20PBS23 | 20                | PB8             |
| VP25PBS23 | 25                |                 |
| VP30PBS23 | 30                | PB15            |
| VP40PBS23 | 40                |                 |
| VP50PBS23 | 50                |                 |

### ■ 5.5 folds bellows pad for packaging (lip duro. : 20°)

| Model     | Pad size<br>(ømm) | Connect<br>code |
|-----------|-------------------|-----------------|
| VP20PBS25 | 20                | PB8             |
| VP25PBS25 | 25                |                 |
| VP30PBS25 | 30                | PB15            |
| VP40PBS25 | 40                |                 |
| VP50PBS25 | 50                |                 |

### ■ Oversuction preventing adapter Spherical type

| Model     | Pad size<br>(ømm) |
|-----------|-------------------|
| VP20PB-FS | 20                |
| VP25PB-FS | 25                |
| VP30PB-FS | 30                |
| VP40PB-FS | 40                |
| VP50PB-FS | 50                |

### ■ O-ring (spare parts)

| Model     | Fitting<br>Thread size |
|-----------|------------------------|
| 9×2(VMQ)  | M8×1                   |
| 15×2(VMQ) | M14×1                  |
| 10×2(VMQ) | G1/8A                  |
| 14×2(VMQ) | G1/4A                  |
| 17×2(VMQ) | G3/8A                  |
| 21×2(VMQ) | G1/2A                  |

### ■ Panel mount type

| Model        | Tubing O.D.<br>(ømm) | Connect<br>code |
|--------------|----------------------|-----------------|
| VPA-PB8-4J   | 4                    | PB8             |
| VPA-PB8-6J   | 6                    |                 |
| VPA-PB8-8J   | 8                    |                 |
| VPA-PB15-6J  | 6                    | PB15            |
| VPA-PB15-8J  | 8                    |                 |
| VPA-PB15-10J | 10                   |                 |
| VPA-PB15-12J | 12                   |                 |

### ■ 3.5 folds bellows pad for packaging (lip duro. : 40°)

| Model     | Pad size<br>(ømm) | Connect<br>code |
|-----------|-------------------|-----------------|
| VP20PBS43 | 20                | PB8             |
| VP25PBS43 | 25                |                 |
| VP30PBS43 | 30                |                 |
| VP40PBS43 | 40                | PB15            |
| VP50PBS43 | 50                |                 |

### ■ 5.5 folds bellows pad for packaging (lip duro. : 40°)

| Model     | Pad size<br>(ømm) | Connect<br>code |
|-----------|-------------------|-----------------|
| VP20PBS45 | 20                | PB8             |
| VP25PBS45 | 25                |                 |
| VP30PBS45 | 30                | PB15            |
| VP40PBS45 | 40                |                 |
| VP50PBS45 | 50                |                 |

### ■ Oversuction preventing adapter Flat type with stainless steel mesh filter

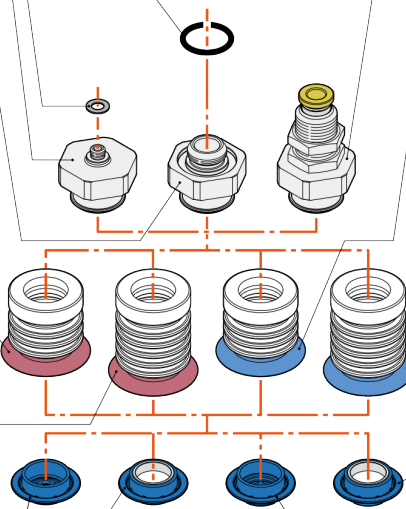
| Model     | Pad size<br>(ømm) |
|-----------|-------------------|
| VP20PB-MF | 20                |
| VP25PB-MF | 25                |
| VP30PB-MF | 30                |
| VP40PB-MF | 40                |
| VP50PB-MF | 50                |

### ■ Oversuction preventing adapter Flat type

| Model     | Pad size<br>(ømm) |
|-----------|-------------------|
| VP20PB-FF | 20                |
| VP25PB-FF | 25                |
| VP30PB-FF | 30                |
| VP40PB-FF | 40                |
| VP50PB-FF | 50                |

### ■ Oversuction preventing adapter Spherical type with stainless steel mesh filter

| Model     | Pad size<br>(ømm) |
|-----------|-------------------|
| VP20PB-MS | 20                |
| VP25PB-MS | 25                |
| VP30PB-MS | 30                |
| VP40PB-MS | 40                |
| VP50PB-MS | 50                |



# PISCO



**บริษัท นานตีอินเตอร์เทรด จำกัด**  
**NANDEE INTER-TRADE CO., LTD.**

314, 316, 318, 320, 322 ซอยจันทน์ 32 ถนนจันทน์ แขวงทุ่งวัดดอน เขตสาทร กทม. 10120

Tel : 0-2675-8239 Fax : 0-2212-1448, 0-2213-0360

LINE : @nandeeintertrade

f : nandeeintertrade

globe : [www.nandee.co.th](http://www.nandee.co.th)

✉ : [marketing@nandee.co.th](mailto:marketing@nandee.co.th),  
[sales@nandee.co.th](mailto:sales@nandee.co.th)

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