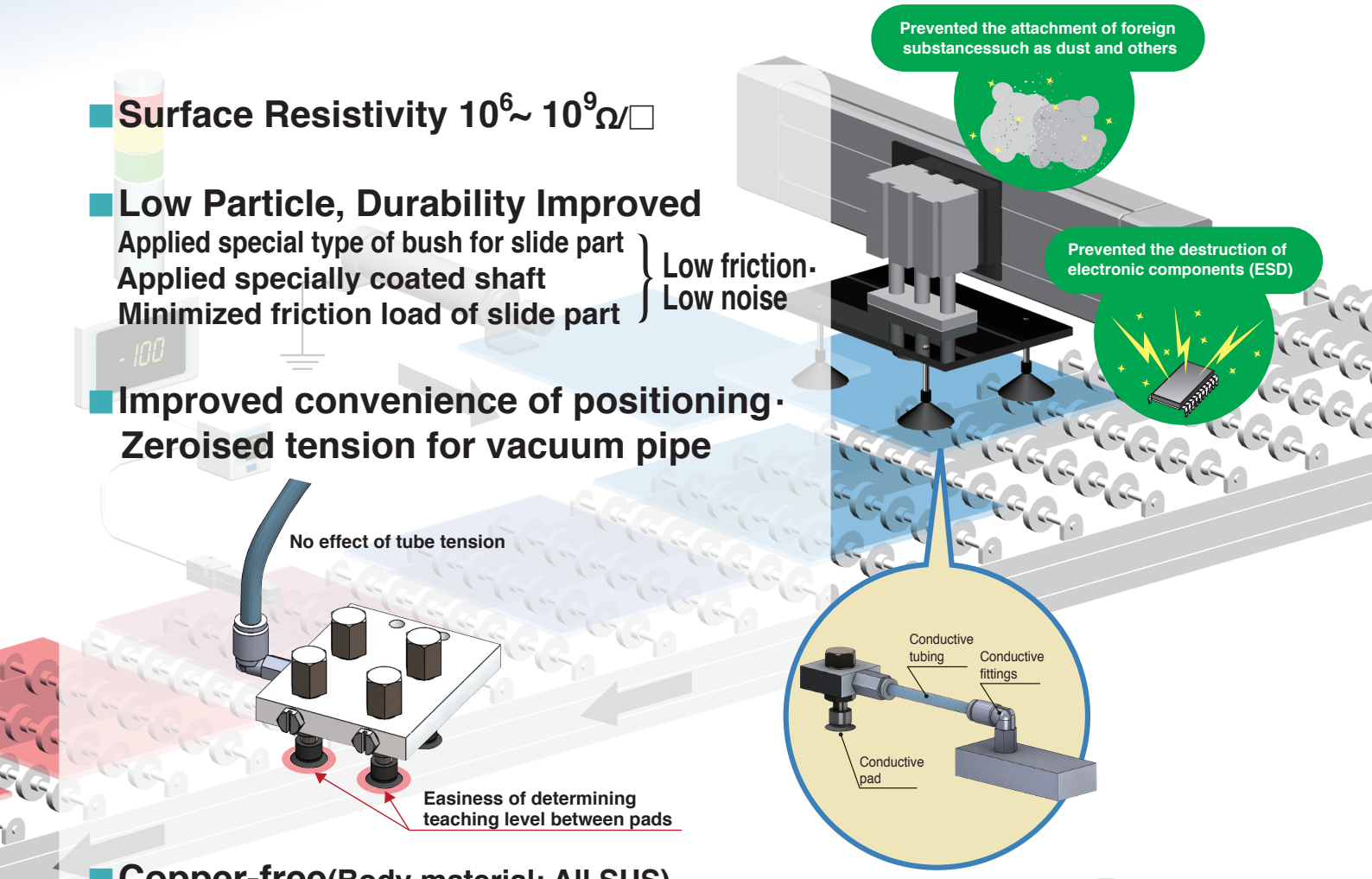
CAT.SK-E19-01

Dispersive Vacuum Pad & Buffer

Various pads & buffers applicable to wide range of electrostatic environments

- **Surface Resistivity 10^6~ $10^9\Omega/\square$**
- **Low Particle, Durability Improved**
  - Applied special type of bush for slide part
  - Applied specially coated shaft
  - Minimized friction load of slide part

  } Low friction· Low noise
- **Improved convenience of positioning· Zeroised tension for vacuum pipe**
- **Copper-free(Body material: All SUS)**
- **Ground Connectable Structure**



ZP Series

Anti Static Vacuum Pad
: Surface Resistivity 10^{6}~$10^{9}\Omega/\square$
ZP-905-CJXN0525 Series

Pad diameter ø4, ø6, ø8, ø10, ø15, ø16, ø20, ø25, ø30

How to Order

Pad unit ZP−905−□□□−CJXN0525

Pad diameter

Symbol	Pad diameter
04	ø4
06	ø6
08	ø8
10	ø10
15	ø15
16	ø16
20	ø20
25	ø25
30	ø30

※Refer to the table below for applicable diameter by shape.

Pad material

Symbol	Material	Carbon
Nil	Silicon	Contain(Black)
HBU	SCZ-NBR	Non(Blue)

Pad type

Symbol	Type
MU	Flat
UM	Flat with groove
MT	Thin Flat
MB	Bellows

Pad unit form

Pad Type / Pad diameter symbol		04	06	08	10	15	16	20	25	30
	**MU** (Flat)	●	●							
	**UM** (Flat with groove)		●	●	●		●			
	**MT** (Thin Flat)				●	●		●	●	●
	**MB** (Bellows)			●	●					

⚠ Handling Precautions

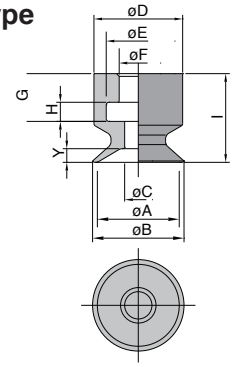
Be sure to read this before handling the products.Refer to back page for Safety Instructions and Product Handling Precautions on SMC hompage for Vacuum Equipment Precautions.

1. Use the anti-static pad for static-sensitive workpieces to disperse static electricity generated by friction with the work-pieces.
2. Select the optimal shape of vacuum pad in accordance with the workpiece and operating environment because the surface resistance is affected by the operating environment (temperature, humidity).
3. The application varies depending on the shape of the vacuum pad. Select the optimal shape in accordance with the workpiece and operating environment.
4. Use the spring built-in type of buffer together in case that the height of pad and workpiece is not constant, such as the adsorption of a work with uneven height.
5. Continued use of the anti-static vacuum pad(rubber) will cause wear and the exterior dimensions will gradually get smaller and smaller. As the pad diameter gets smaller, lifting force will be decreased, but it is available to adsorb.
6. The replacement timing of vacuum pads depends on the operating conditions, such as external change by wear reduction of vacuum pressure reached, delayed response time of adsorption, etc. In case of such an any abnormality, replace it through inspection.

Dimensions: Vaccum Pad

※The shape of pad rib differs on the pad diameter

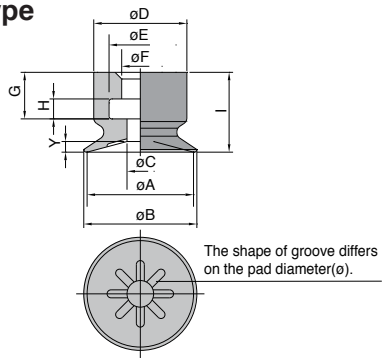
MU Type



(mm)

Symbol	A	B	C	D	E	F	G	H	I	Y
04	4	4.8	1.5	6.5	5	3	3.5	1.4	6.5	0.8
06	6	6.7	2	6.5	5	3	3.5	1.4	6.5	1

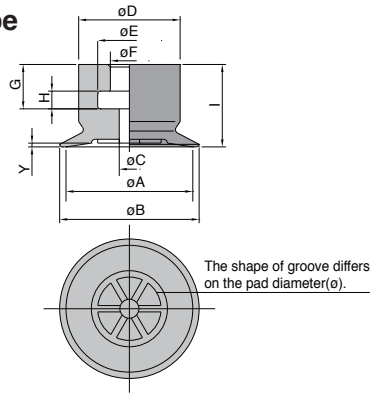
UM Type



(mm)

Symbol	A	B	C	D	E	F	G	H	I	Y
06	6	6.5	2	7	5	3	3.5	1.5	6	0.8
08	8	8.5	2	7	5	3	3.5	1.5	6	0.8
10	10	11	2	9	6	4	4	2	7	1
16	16	17	2	9	6	4	4	2	7	1.2

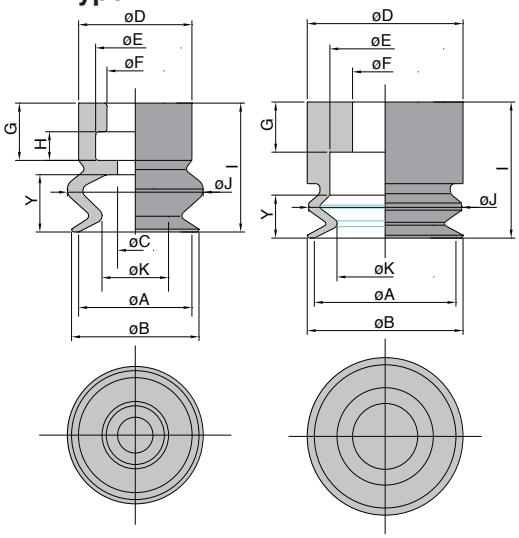
MT Type



(mm)

Symbol	A	B	C	D	E	F	G	H	I	Y
10	10	11	1.6	8	5	3	3.5	1.4	6.5	0.3
15	15	16	1.5	8.5	6	4	4	2	5.5	0.3
20	20	21	1.5	13.5	10	6	4	2	5.5	0.3
25	25	26	1.5	15	10	6	4	2	5.5	0.3
30	30	31	1.5	18	10	6	4	2	5.5	0.3

MB Type



Pad diameter : ø8 **Pad diameter : ø10**

(mm)

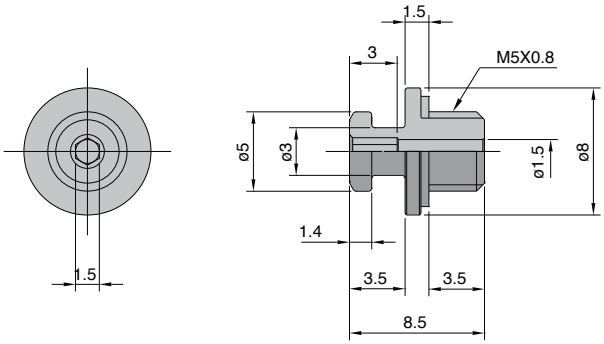
Symbol	A	B	C	D	E	F	G	H	I	J	K	Y
08	8	9	2.5	8	6	4	4	2	9	9.6	4.7	4
10	10	11	-	11	7.8	4.6	3.5	-	9.5	10.8	6.8	3

Mounting adapter Part No.and dimensions (Material : SUS)

Including Gasket

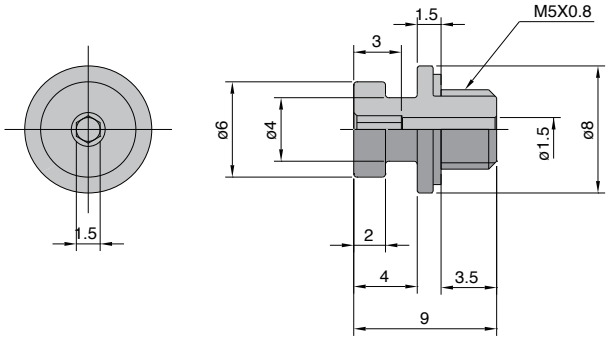
ZP2A-0305-CJXN0885

Application pad
04MU
06MU
06UM
08UM
10MT※



ZP2A-0406-CJXN0885

Application pad
08MB
10UM
16UM
15MT※

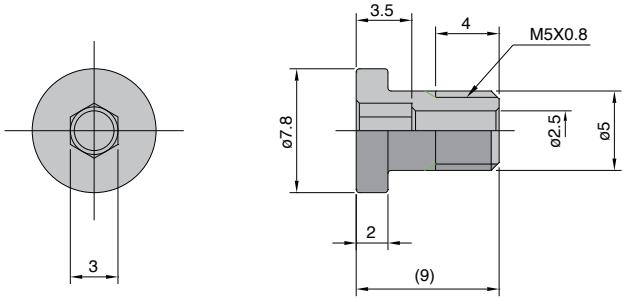


※Gasket thickness : 0.5t
※In MT specification, the gasket is not mounted on the adapter.

Without Gasket

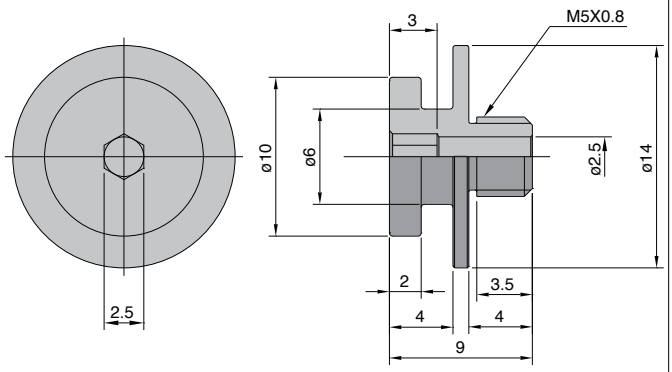
ZP2A-4678-CJXN0885

Application pad
10MB



ZP2A-0610-CJXN0885

Application pad
20MT
25MT
30MT



Vacuum Pad Buffer
ZP3-CJXU0723 Series

- **Applied resin-containing bushing to prevent particles generation**
- **Insert type (Fixed type) uses filters to prevent the scattering of internal particles**

How to Order

Buffer Ass'y **ZP3 – □ □ □ S – CJXU0723**

Buffer Type

Symbol	Type
M	Insert type
D	Fixed type

Buffer body size

Symbol	size
08	8mm
10	10mm
14	14mm

*Based on outside diameter thread

Buffer Stroke

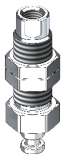
Symbol	Stroke
03	3mm
06	6mm
10	10mm
15	15mm
20	20mm

Rod end option

Symbol	Option	Applicable body size
S	With adapter	8mm,10mm
SM	Rod end female nut M5 tap	10mm,14mm

*S and SM have a difference of whole length.
*Please use a same size of pad as of the adhered part of adapter for the specification S (An incorrect pad size may cause leakage.)

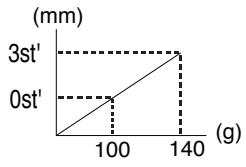
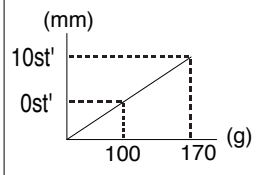
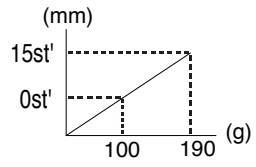
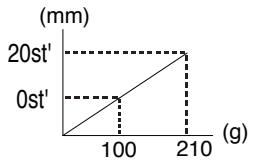
Buffer unit form

Buffer type		Body size	Stroke type / Adapter	03	06	10	15	20
Insert type		M8x0.75	With adapter(S)	●	●			
Fixed type		M8x0.75	With adapter(S)	●				
		M10x1.0	With adapter(S)			●	●	
			Rod end female nut(SM) M5 TAP					
		M14x1.0	Rod end female nut(SM) M5 TAP			●		●

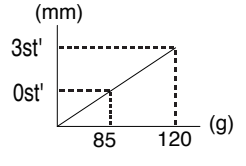
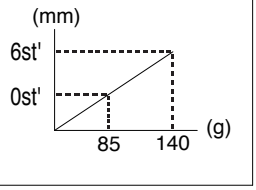
※Select pad or pad with adapter after checking dimension of the pad accessories.
※Please check the available range of strokes depending on the body size mounting type before selecting.

Buffer Spring force (default state: no load)

Fixed type

D0803S	D1010S(SM) / D1410SM	D1015S(SM)	D1420SM
			

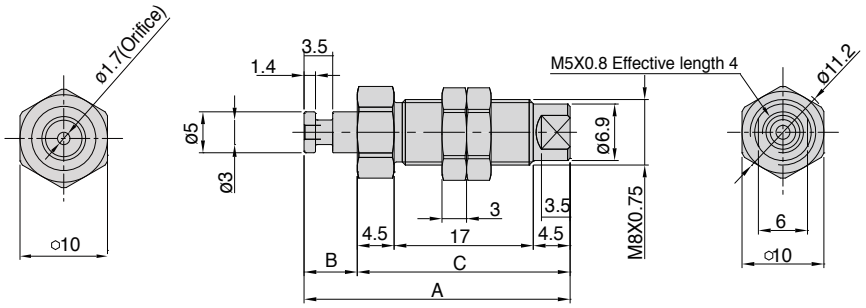
Inserted type

M0803S	M0806S
	

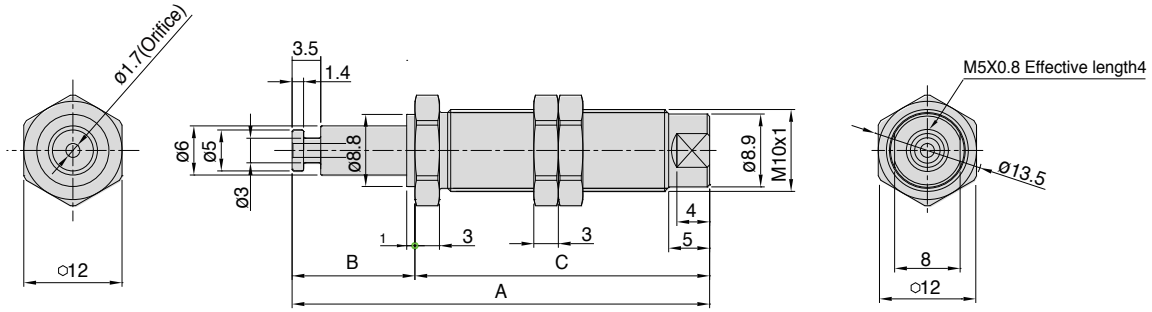
※1g=0.0098N.
※The actual buffer force is 10 to 20% stronger than the spring force due to the resistance of the folding inside of the buffer.

Dimensions / Fixed Type buffer

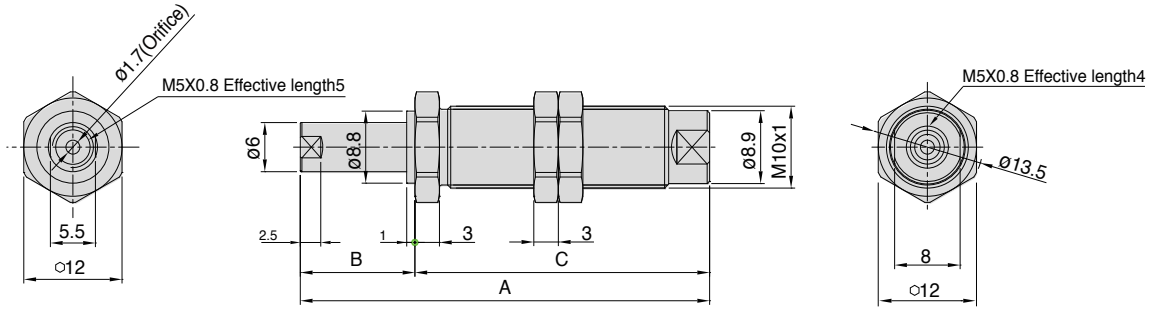
D0803S



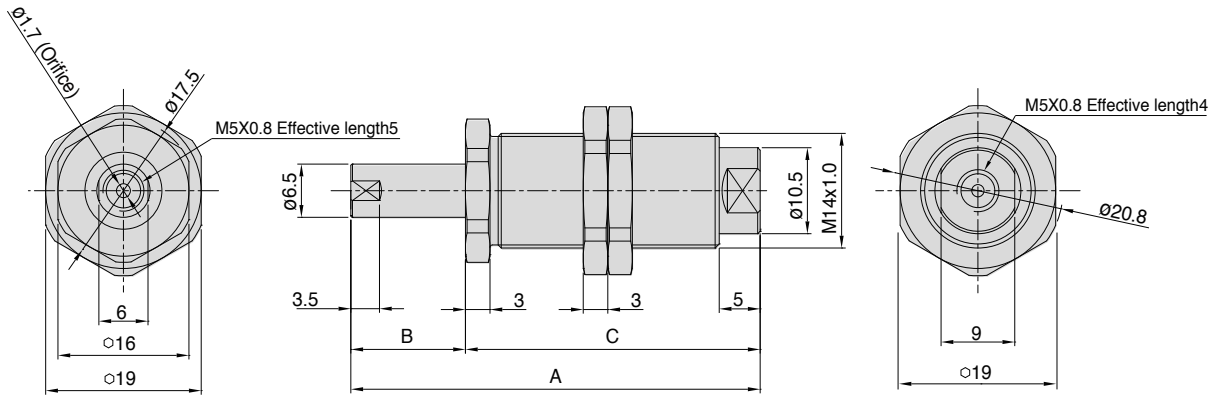
D10□□S



D10□□SM



D14□□SM



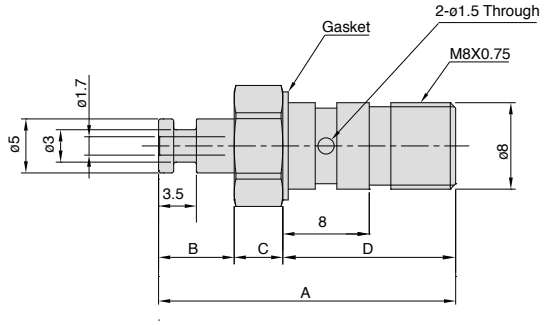
Dimensions

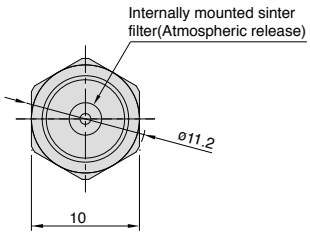
(mm)

D0803S	32.5	6.5	26
D1010S	51	15	36
D1010SM	50	14	36
D1015S	62	20	42
D1015SM	61	19	42
D1410SM	50	14	36
D1420SM	72	24	48

Dimensions / Insert type buffer

M08□□S type (extended state)



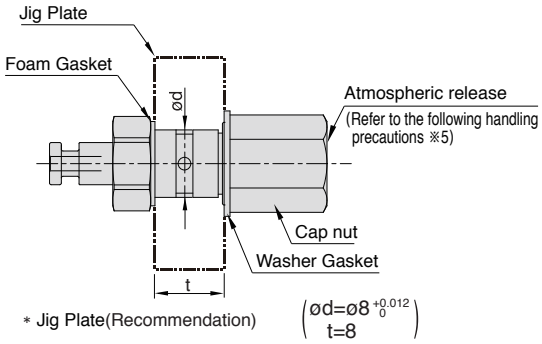


Dimension (mm)

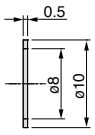
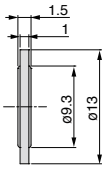
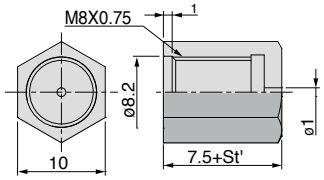
M0803S	27.5	7	4.5	16
M0806S	36.5	10	7.5	19

Gasket tightening tool for Insert type

Use the enclosed dedicated gasket and tightening tool, and fasten them as shown below.



Dimensions of the dedicated gasket tightening tool

Foam Gasket	Washer Gasket	Cap nut	
			
ZP3-16A-VU2628	ZP3-16B-VU2628	3st	ZP3-13AA-XU0723
		6st	ZP3-13AB-XU0723

※Please use the above P/N for addtitional orders for replacement/maintenance of dedicated gaskets and clamps.

⚠ Handling Precautions

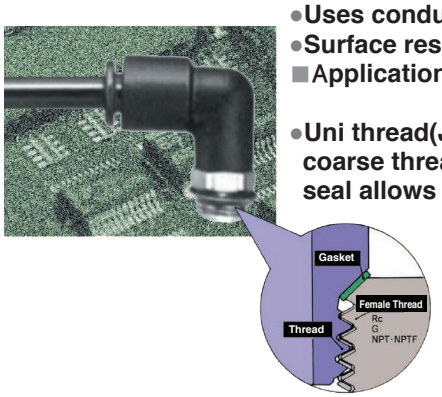
Be sure to read this before handling the products.Refer to back page for Safety Instructions and Product Handling Precautions on SMC hompage for Vacuum Equipment Precautions.

1. The life of a buffer will be shortened when the lateral force is applied to the buffer rod
2. Tighthen the nut and cap nut with the recommended torque
   M8 : 5~2.0NM, M10 : 2~3NM, M14 : 6.5~7.6NM
3. As the nut may become loose depending on the operating conditions and environment, be sure to perform regular maintenance.
4. Insert type (Fixed type) buffer may cause a pressure drop of 0~1kPa depending on the operating conditions and environment.

※5. Do not block the hole as the top of the cap nut when using the insert type (fixed type) of buffer

6. First, Check the dimensions in the specification. Then assurtive the insert type(Fixed type) is property installen in the Jig

Related Products



- **Uses conductive resin**
- **Surface resistance : 10^4~$10^7\Omega$**
- **Applications : Semiconductor related**
- **Uni thread(JIS B 0209, metric coarse thread) structure without seal allows grounding.**

■One-touch Fittings
Anti-static *KA Series*

■Speed Controller with One-touch Fitting
Elbow Type *AS□2□1F-X260 Series*

■Tube
Anti-static *TAS/TAU Series*

⚠ Safety Instructions

These safety instructions are intended to prevent hazardous situations and/or equipment damage. These instructions indicate the level of potential hazard with the labels of **"Caution," "Warning"** or **"Danger."** They are all important notes for safety and must be followed in addition to International Standards (ISO/IEC)*1), and other safety regulations.

⚠ Caution: **Caution** indicates a hazard with a low level of risk which, if not avoided, could result in minor or moderate injury.

⚠ Warning: **Warning** indicates a hazard with a medium level of risk which, if not avoided, could result in death or serious injury.

⚠ Danger : **Danger** indicates a hazard with a high level of risk which, if not avoided, will result in death or serious injury.

*1) ISO 4414: Pneumatic fluid power – General rules relating to systems.
ISO 4413: Hydraulic fluid power – General rules relating to systems.
IEC 60204-1: Safety of machinery – Electrical equipment of machines.
(Part 1: General requirements)
ISO 10218-1: Manipulating industrial robots – Safety.
etc.

⚠ Warning

1. The compatibility of the product is the responsibility of the person who designs the equipment or decides its specifications.

Since the product specified here is used under various operating conditions, its compatibility with specific equipment must be decided by the person who designs the equipment or decides its specifications based on necessary analysis and test results. The expected performance and safety assurance of the equipment will be the responsibility of the person who has determined its compatibility with the product. This person should also continuously review all specifications of the product referring to its latest catalog information, with a view to giving due consideration to any possibility of equipment failure when configuring the equipment.

2. Only personnel with appropriate training should operate machinery and equipment.

The product specified here may become unsafe if handled incorrectly. The assembly, operation and maintenance of machines or equipment including our products must be performed by an operator who is appropriately trained and experienced.

3. Do not service or attempt to remove product and machinery/ equipment until safety is confirmed.

1. The inspection and maintenance of machinery/equipment should only be performed after measures to prevent falling or runaway of the driven objects have been confirmed.
2. When the product is to be removed, confirm that the safety measures as mentioned above are implemented and the power from any appropriate source is cut, and read and understand the specific product precautions of all relevant products carefully.
3. Before machinery/equipment is restarted, take measures to prevent unexpected operation and malfunction.

4. Contact SMC beforehand and take special consideration of safety measures if the product is to be used in any of the following conditions.

1. Conditions and environments outside of the given specifications, or use outdoors or in a place exposed to direct sunlight.
2. Installation on equipment in conjunction with atomic energy, railways, air navigation, space, shipping, vehicles, military, medical treatment, combustion and recreation, or equipment in contact with food and beverages, emergency stop circuits, clutch and brake circuits in press applications, safety equipment or other applications unsuitable for the standard specifications described in the product catalog.
3. An application which could have negative effects on people, property, or animals requiring special safety analysis.
4. Use in an interlock circuit, which requires the provision of double interlock for possible failure by using a mechanical protective function, and periodical checks to confirm proper operation.

⚠ Caution

1. The product is provided for use in manufacturing industries.

The product herein described is basically provided for peaceful use in manufacturing industries.
If considering using the product in other industries, consult SMC beforehand and exchange specifications or a contract if necessary.
If anything is unclear, contact your nearest sales branch.

Limited warranty and Disclaimer/ Compliance Requirements

The product used is subject to the following "Limited warranty and Disclaimer" and "Compliance Requirements".
Read and accept them before using the product.

Limited warranty and Disclaimer

1. The warranty period of the product is 1 year in service or 1.5 years after the product is delivered, whichever is first.*2)
   Also, the product may have specified durability, running distance or replacement parts. Please consult your nearest sales branch.
2. For any failure or damage reported within the warranty period which is clearly our responsibility, a replacement product or necessary parts will be provided.
   This limited warranty applies only to our product independently, and not to any other damage incurred due to the failure of the product.
3. Prior to using SMC products, please read and understand the warranty terms and disclaimers noted in the specified catalog for the particular products.

*2) **Vacuum pads are excluded from this 1 year warranty.**
A vacuum pad is a consumable part, so it is warranted for a year after it is delivered.
Also, even within the warranty period, the wear of a product due to the use of the vacuum pad or failure due to the deterioration of rubber material are not covered by the limited warranty.

Compliance Requirements

1. The use of SMC products with production equipment for the manufacture of weapons of mass destruction (WMD) or any other weapon is strictly prohibited.
2. The exports of SMC products or technology from one country to another are governed by the relevant security laws and regulations of the countries involved in the transaction. Prior to the shipment of a SMC product to another country, assure that all local rules governing that export are known and followed.

⚠ Caution

SMC products are not intended for use as instruments for legal metrology.

Measurement instruments that SMC manufactures or sells have not been qualified by type approval tests relevant to the metrology (measurement) laws of each country. Therefore, SMC products cannot be used for business or certification ordained by the metrology (measurement) laws of each country.