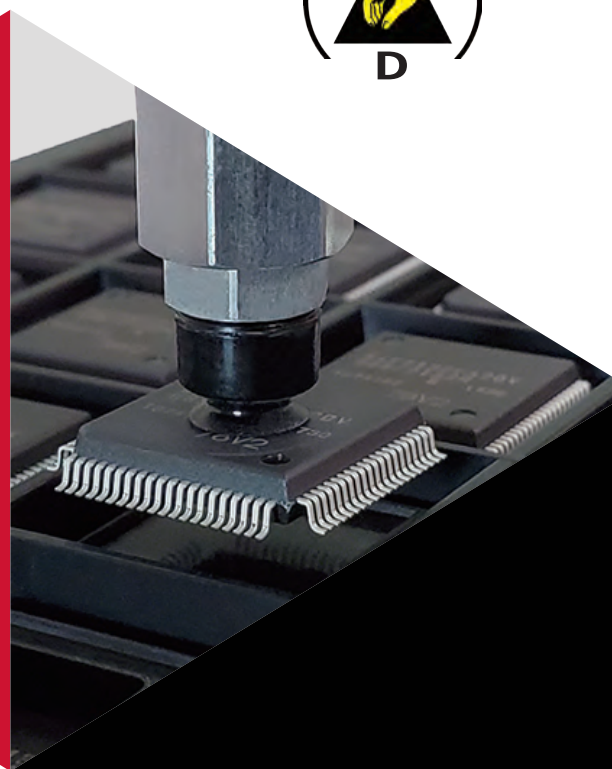


CONVUM

ESD
series

Electrostatic Discharge Protection Cup



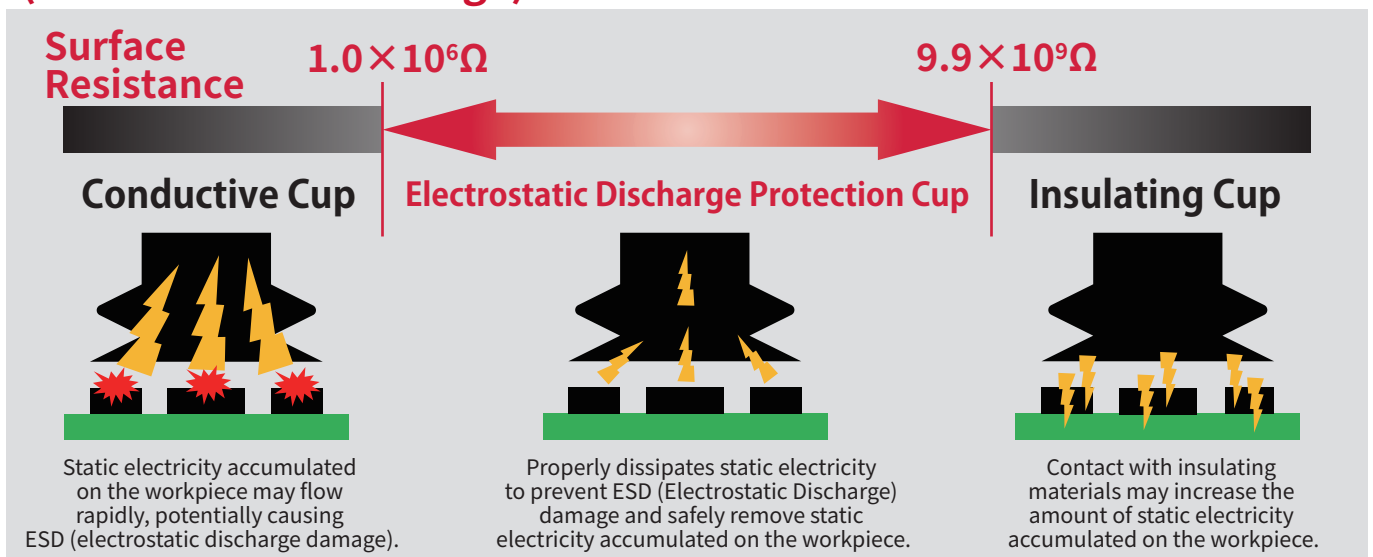
Electrostatic Discharge Protection Cup

ESD
series

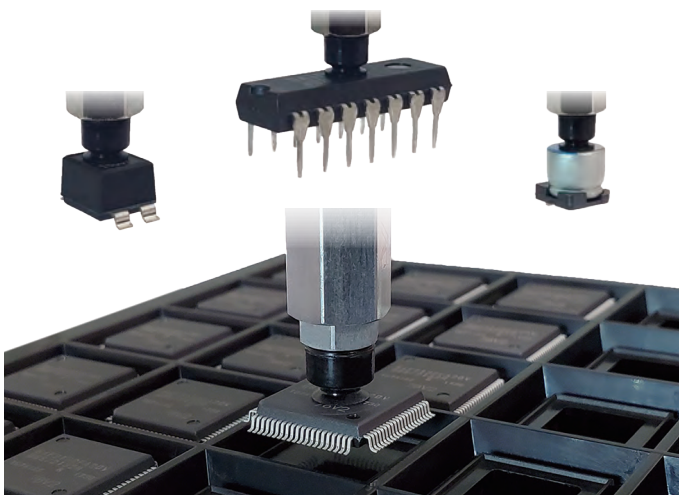


All products are inspected to ensure surface resistance values of 1.0×10^6 to $9.9 \times 10^9 \Omega$.

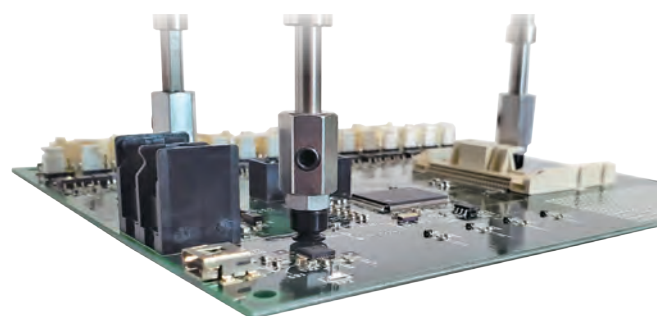
Prevents damage to electronic components caused by ESD (Electrostatic Discharge).



Our surface resistance measurements are conducted in accordance with ANSI/ESD STM11.13. The standard defines the static dissipative range as a surface resistance of 1.0×10^4 to $1.0 \times 10^{11} \Omega$. However, we maintain a stricter control range of 1.0×10^6 to $9.9 \times 10^9 \Omega$, inspect every product before shipment, and provide an inspection certificate.



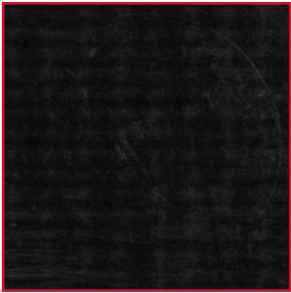
○ Suction of Electronic Components



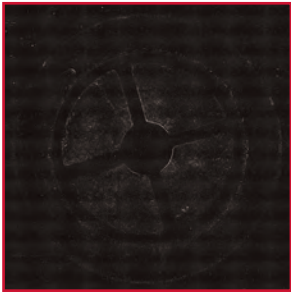
○ Suction of Printed Circuit Boards

Developed "Elec-Con," a proprietary material specialized for ESD performance.
 Non-marking, silicone-free, and ozone-resistant, allowing use with ionizers.

EC




SESD




Conductive NBR




Suction Marks

Conditions:Suction surface
Glass suction for 10 minutes
at a vacuum pressure of -90 kPa, then observed.

Ozone Resistance

Observed after 2 weeks
in a low-concentration
ozone environment.

Simplified Physical Properties Comparison Table

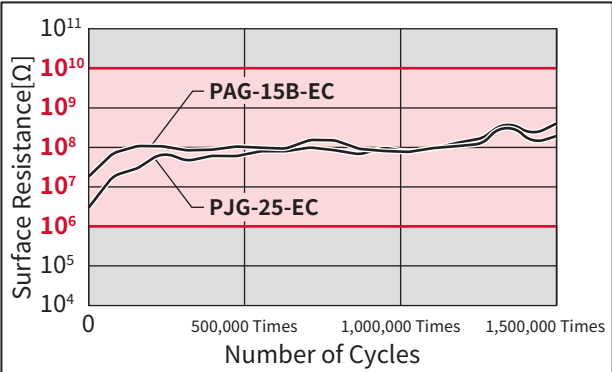
Material Code	Material	Hardness	Mechanical Properties Abrasion Resistance	Heat Resistance	Siloxane	Suction Marks	Ozone Resistance	Oil	Alcohol Resistance	Acid Resistance	Alkali Resistance	Water
EC	Elec-Con ^{Note 1)}	A 60	○	0~100°C	Absent	○	○	×	○	○	○	○
SESD	Silicone Rubber	A 40	×	-60~200°C	Present ^{Note 2)}	×	○	×	○	○	○	○

Note 1) Elec-Con is our proprietary rubber compound newly developed for ESD protection applications.
 Using SBR as its main component, it is siloxane-free and ozone-resistant, while providing non-marking performance equivalent to that of conventional RA-treated ESD caps. ○: Good ×: Poor

Note 2) During the secondary curing process, low-molecular-weight siloxanes that can cause contact failures are removed.

"Elec-Con" is a registered trademark of CONVUM Ltd.

Material-based ESD protection minimizes variation in surface resistance.



Unlike coating-based ESD protection, conductivity is controlled through the material formulation itself, resulting in stable surface resistance values.

Test Conditions
 Vacuum Pressure: -60 kPa
 Workpiece Weight : 16 g for Ø10 mm and larger,
 3.5 g for smaller than Ø10 mm
 Suction Cycle Time 2 s Continuous
 operation for 24 hours
 (Used approximately 40,000 times per day)

Caution) Variations in surface resistance values are not guaranteed.

Flat and bellows-type caps are available up to Ø30.



○ Flat Cup
PFGseries



○ Thin Lip Cup
PAG series



○ 2 Bellows Cup
PJG series



○ 3 Bellows Cup
PCG series

Model Number

PFG-5A-EC

①

②

③

① Suction Cup series^{Note 1)}② Cup Diameter^{Note 1)}

Note 1) Compatibility varies depending on the suction cup series and cup diameter.
Please select the appropriate model number from the Model Number List provided later.

③ Material

Code	Material	Hardness	Color (Laser Marking)	Operating Temperature Range	Surface Resistance ^{Note 3)}
EC	Elec-Con ^{Note 2)}	A 60	Black (EC)	0~100°C	1.0×10 ⁶ ~9.9×10 ⁹ [Ω]
SESD	ESD-Protective Silicone Rubber	A 40	BlackSE 6-9)	-60~200°C	

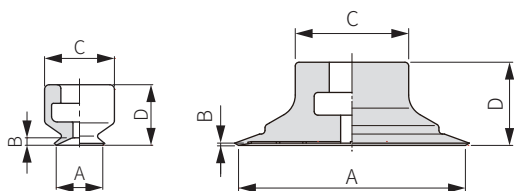
Note 2) Elec-Con is a newly developed proprietary rubber compound designed for ESD control.

Using SBR as its main component, it is siloxane-free and ozone-resistant, while providing non-marking performance equivalent to that of conventional RA-treated ESD caps.

Note 3) Surface resistance values are based on measurements conducted under our test conditions and measurement environment.
23°C, 50% RH environment, 100 V applied



Flat Suction Cup Model Number List



Flat Suction Cup
PFGseries

Thin-Lip Suction Cup
PAGseries

CODE	Model Number	A	B	C	D	Mass
300100831	PAG-5B-EC	Ø5	0.3	Ø4	4	0.1g
300100830	PAG-10B-EC	Ø10	0.3	Ø8.5	7.5	0.3g
300100829	PAG-15B-EC	Ø15	0.5	Ø8.5	7.5	0.3g
300100832	PAG-20B-EC	Ø20	0.8	Ø8.5	9	0.6g
300100833	PAG-30B-EC	Ø30	0.3	Ø15	11	2.8g
300700875	PFG-2A-EC	Ø2	0.4	Ø4	4	0.1g
300700872	PFG-3.5A-EC	Ø3.5	0.5	Ø4	4	0.1g
300700869	PFG-5A-EC	Ø5	0.8	Ø7.5	6.5	0.2g
300700871	PFG-6A-EC	Ø6	0.8	Ø7.5	6.5	0.2g
300700870	PFG-8A-EC	Ø8	1.2	Ø8	7	0.2g
300700874	PFG-10A-EC	Ø10	1.5	Ø8.5	7.5	0.3g
300700873	PFG-15A-EC	Ø15	2.0	Ø9	8	0.4g

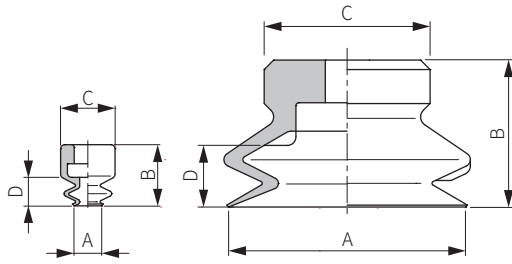
CODE	Model Number	A	B	C	D	Mass
300100797	PAG-5B-SESD	Ø5	0.3	Ø4	4	0.1g
300100803	PAG-10B-SESD	Ø10	0.3	Ø8.5	7.5	0.3g
300100809	PAG-15B-SESD	Ø15	0.5	Ø8.5	7.5	0.3g
300100815	PAG-20B-SESD	Ø20	0.8	Ø8.5	9	0.6g
300100818	PAG-30B-SESD	Ø30	0.3	Ø15	11	2.8g
300700823	PFG-2A-SESD	Ø2	0.4	Ø4	4	0.1g
300700826	PFG-3.5A-SESD	Ø3.5	0.5	Ø4	4	0.1g
300700829	PFG-5A-SESD	Ø5	0.8	Ø7.5	6.5	0.2g
300700832	PFG-6A-SESD	Ø6	0.8	Ø7.5	6.5	0.2g
300700835	PFG-8A-SESD	Ø8	1.2	Ø8	7	0.2g
300700838	PFG-10A-SESD	Ø10	1.5	Ø8.5	7.5	0.3g
300700844	PFG-15A-SESD	Ø15	2.0	Ø9	8	0.4g

Compatible Set Screw Model Number List

Cup	CODE	Set Screw Model Number	Thread Size	Mass
PAG-5B	318100026	TN-PS-2A-M3	M3×0.5	1.2g
	318100027	TN-PS-2A-M3F	M3×0.5Female Thread	0.8g
	318100240	TN-PS-2A-M5	M5×0.8	0.5g
PAG-10B	318100024	TN-PS-10-M5	M5×0.8	0.8g
	318100025	TN-PS-10-M5F	M5×0.8Female Thread	1.1g
PAG-15B	300700823	TN-PS-10-M5	M5×0.8	0.8g
	300700826	TN-PS-10-M5F	M5×0.8Female Thread	1.1g
PAG-20B	300700823	TN-PS-10-M5	M5×0.8	0.8g
	300700826	TN-PS-10-M5F	M5×0.8Female Thread	1.1g
PAG-30B	318100028	TN-PA-30-M6	M6×1.0	8.6g

Cup	CODE	Set Screw Model Number	Thread Size	Mass
PFG-2A	318100026	TN-PS-2A-M3	M3×0.5	1.2g
	318100027	TN-PS-2A-M3F	M3×0.5Female Thread	0.8g
	318100240	TN-PS-2A-M5	M5×0.8	0.5g
PFG-3.5A	318100026	TN-PS-2A-M3	M3×0.5	1.2g
	318100027	TN-PS-2A-M3F	M3×0.5	0.8g
PFG-5A	318100240	TN-PS-2A-M5	M3×0.5Female Thread	0.5g
	318100024	TN-PS-10-M5	M5×0.8	1.1g
PFG-6A	318100025	TN-PS-10-M5F	M5×0.8Female Thread	0.8g
	300700823	TN-PS-10-M5	M5×0.8	1.1g
PFG-8A	300700826	TN-PS-10-M5F	M5×0.8Female Thread	0.8g
	300700823	TN-PS-10-M5	M5×0.8	1.1g
PFG-10A	300700826	TN-PS-10-M5F	M5×0.8Female Thread	0.8g
	300700823	TN-PS-10-M5	M5×0.8	1.1g
PFG-15A	300700826	TN-PS-10-M5F	M5×0.8Female Thread	0.8g
	300700823	TN-PS-10-M5	M5×0.8	1.1g

2 Bellows Cup Model Number List



2 Bellows Cup
PJGseries

CODE	Model Number	A	B	C	D	Mass
301000351	PJG-2-EC	Ø2	4.5	Ø4	-	0.1g
301000352	PJG-4-EC	Ø4	5.5	Ø4	-	0.1g
301000353	PJG-6-EC	Ø6	9	Ø7.5	-	0.2g
301000350	PJG-8-EC	Ø8	9	Ø8	4	0.2g
301000348	PJG-10-EC	Ø10	9.5	Ø11	3	0.5g
301000354	PJG-15-EC	Ø15	11	Ø12	3.3	0.7g
301000355	PJG-20-EC	Ø20	13	Ø15	5.5	1.4g
301000356	PJG-25-EC	Ø25	15.5	Ø17.5	6.5	2.4g
301000349	PJG-30-EC	Ø30	18	Ø20	7	4.5g

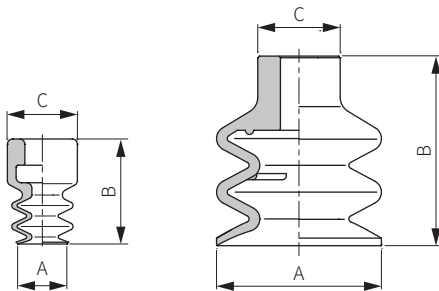
CODE	Model Number	A	B	C	D	Mass
301000315	PJG-2-SESD	Ø2	4.5	Ø4	-	0.1g
301000318	PJG-4-SESD	Ø4	5.5	Ø4	-	0.1g
301000321	PJG-6-SESD	Ø6	9	Ø7.5	-	0.2g
301000324	PJG-8-SESD	Ø8	9	Ø8	4	0.2g
301000327	PJG-10-SESD	Ø10	9.5	Ø11	3	0.5g
301000330	PJG-15-SESD	Ø15	11	Ø12	3.3	0.7g
301000333	PJG-20-SESD	Ø20	13	Ø15	5.5	1.4g
301000336	PJG-25-SESD	Ø25	15.5	Ø17.5	6.5	2.4g
301000339	PJG-30-SESD	Ø30	18	Ø20	7	4.5g

Compatible Set Screw Model Number List

Cup	CODE	Set Screw Model Number	Thread Size	Mass
PJG-2	318100026	TN-PS-2A-M3	M3×0.5	1.2g
	318100027	TN-PS-2A-M3F	M3×0.5Female Thread	0.8g
	318100240	TN-PS-2A-M5	M5×0.8	0.5g
PJG-4	318100026	TN-PS-2A-M3	M3×0.5	1.2g
	318100027	TN-PS-2A-M3F	M3×0.5Female Thread	0.8g
	318100240	TN-PS-2A-M5	M5×0.8	0.5g
PJG-6	318100024	TN-PS-10-M5	M5×0.8	0.8g
	318100025	TN-PS-10-M5F	M5×0.8Female Thread	1.1g
	318100024	TN-PS-10-M5	M5×0.8	0.8g
PJG-8	318100025	TN-PS-10-M5F	M5×0.8Female Thread	1.1g

Cup	CODE	Set Screw Model Number	Thread Size	Mass
PJG-10	318100013	TN-PF-15-M5	M5×0.8	1.4g
PJG-15	318100013	TN-PF-15-M5	M5×0.8	1.4g
PJG-20	318100014	TN-PF-20-M5	M5×0.8	2.3g
PJG-25	318100014	TN-PF-20-M5	M5×0.8	2.3g
PJG-30	318100015	TN-PF-25-M6	M6×1.0	3.3g

3 Bellows Cup Model Number List



3 Bellows Cup
PCGseries

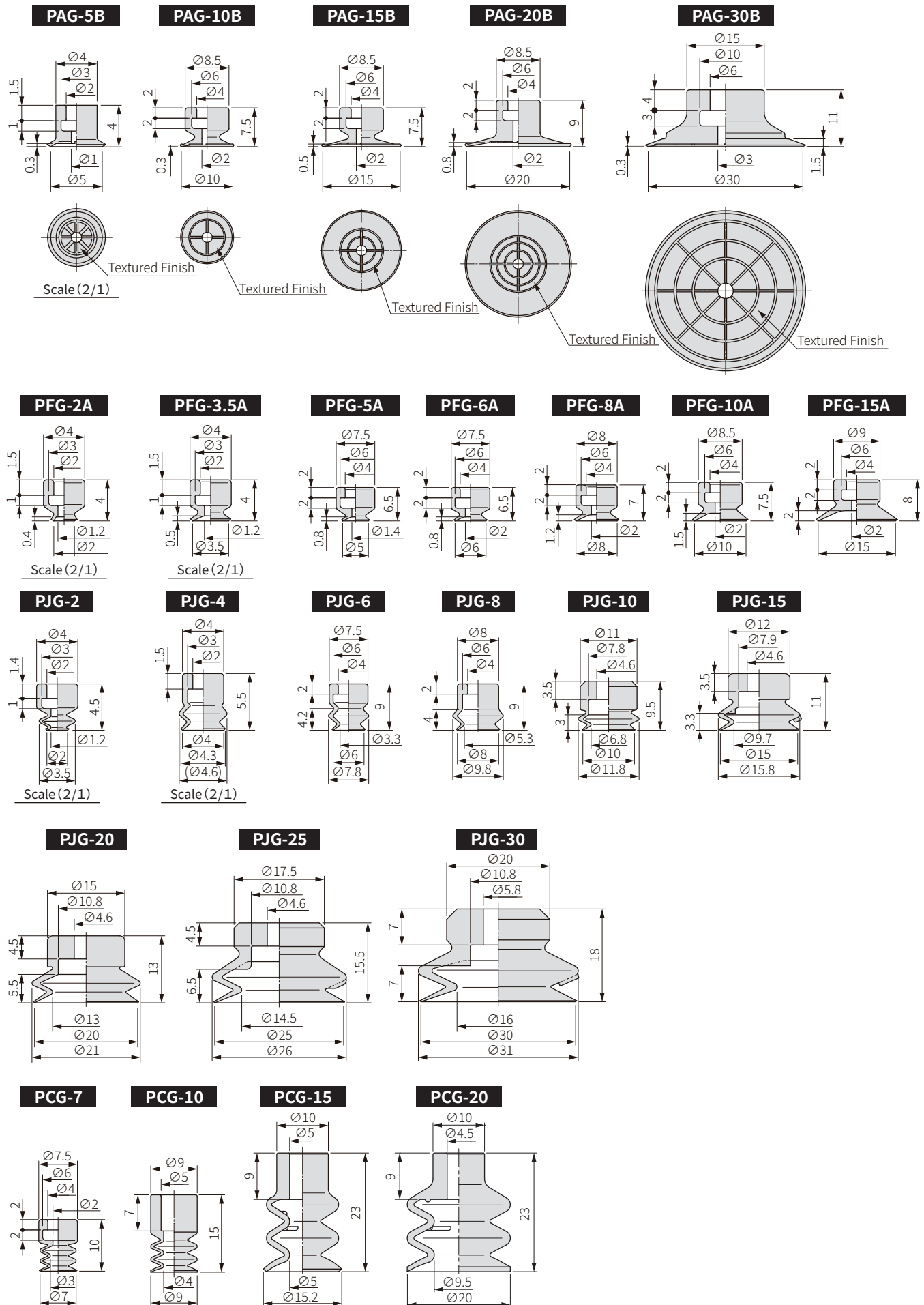
CODE	Model Number	A	B	C	D	Mass
300400262	PCG-7-EC	Ø7	10	Ø7.5	6	0.2g
300400263	PCG-10-EC	Ø9	15	Ø9	8	0.5g
300400264	PCG-15-EC	Ø15.2	23	Ø10	14	1.4g
300400265	PCG-20-EC	Ø20	23	Ø10	14	2.3g

CODE	Model Number	A	B	C	D	Mass
300400250	PCG-7-SESD	Ø7	10	Ø7.5	6	0.2g
300400251	PCG-10-SESD	Ø9	15	Ø9	8	0.5g
300400252	PCG-15-SESD	Ø15.2	23	Ø10	14	1.4g
300400257	PCG-20-SESD	Ø20	23	Ø10	14	2.3g

Compatible Set Screw Model Number List

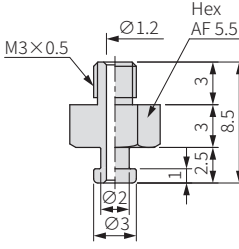
Cup	CODE	Set Screw Model Number	Thread Size	Mass
PCG-7	318100024	TN-PS-10-M5	M5×0.8	0.8g
	318100025	TN-PS-10-M5F	M5×0.8Female Thread	1.1g
PCG-10	318100009	TN-PC-10-M5	M5×0.8	3.9g
PCG-15	318100009	TN-PC-10-M5	M5×0.8	3.9g
PCG-20	318100009	TN-PC-10-M5	M5×0.8	3.9g

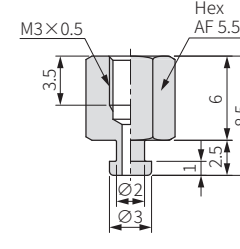
Dimensions

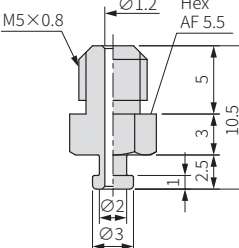


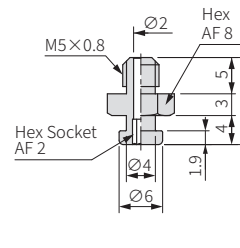
Compatible Set Screw

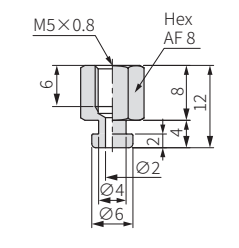
All set screws listed below are electrically conductive.

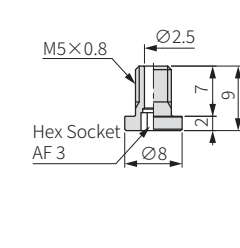
Model Number	TN-PS-2A-M3	Mass	1.2g
		Material	Brass
		Treatment	Nickel Plating
		Compatible Suction Cup Model Number	PAG-5A PFG-2A/3.5A PJG-2/4
			
Scale (2/1)		Recommended Tightening Torque 0.315[N·m]	

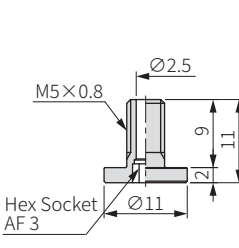
Model Number	TN-PS-2A-M3F	Mass	0.8g
		Material	Brass
		Treatment	Nickel Plating
		Compatible Suction Cup Model Number	PAG-5A PFG-2A/3.5A PJG-2/4
			
Scale (2/1)		Recommended Tightening Torque 0.315[N·m]	

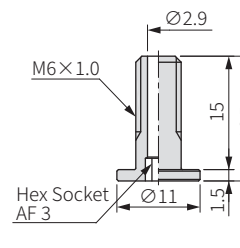
Model Number	TN-PS-2A-M5	Mass	0.5g
		Material	Aluminum Alloy
		Treatment	Zirconium Conversion Coating
		Compatible Suction Cup Model Number	PAG-5A PFG-2A/3.5A PJG-2/4
			
Scale (2/1)		Recommended Tightening Torque 1.5[N·m]	

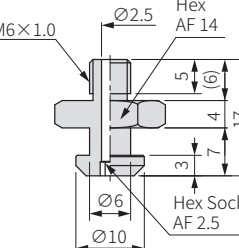
Model Number	TN-PS-10-M5	Mass	0.8g
		Material	Aluminum Alloy
		Treatment	Zirconium Conversion Coating
		Compatible Suction Cup Model Number	PAG-10B/15B/20B PFG-5A/6A/8A/10A/15A PJG-6/8 PCG-7
			
		Recommended Tightening Torque 1.5[N·m]	

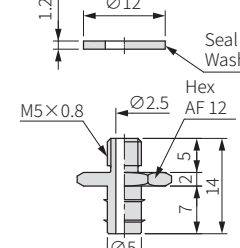
Model Number	TN-PS-10-M5F	Mass	1.1g
		Material	Aluminum Alloy
		Treatment	Zirconium Conversion Coating
		Compatible Suction Cup Model Number	PAG-10B/15B/20B PFG-5A/6A/8A/10A/15A PJG-6/8 PCG-7
			
		Recommended Tightening Torque 1.5[N·m]	

Model Number	TN-PF-15-M5	Mass	1.4g
		Material	Brass
		Treatment	Nickel Plating
		Compatible Suction Cup Model Number(Recommended Tightening Torque)	PJG-10(90°(12.8~16cN·m)) PJG-15(90°(11.3~18.7cN·m))
			
		Recommended Tightening Torque -	

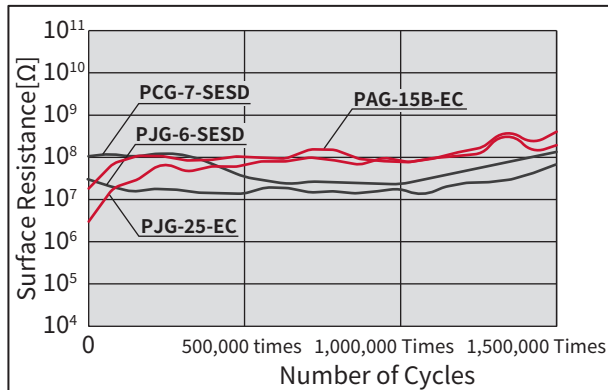
Model Number	TN-PF-20-M5	Mass	2.3g
		Material	Brass
		Treatment	Nickel Plating
		Compatible Suction Cup Model Number(Recommended Tightening Torque)	PJG-20(90°~180°(12.8~16.0cN·m)) PJG-25(90°~180°(18.7~28.8cN·m))
			
		Recommended Tightening Torque -	

Model Number	TN-PF-25-M6	Mass	3.3g
		Material	Brass
		Treatment	Nickel Plating
		Compatible Suction Cup Model Number(Recommended Tightening Torque)	PJG-30(90°~180°(23.3~45.1cN·m))
			
		Recommended Tightening Torque -	

Model Number	TN-PA-30-M6	Mass	8.6g
		Material	Brass
		Treatment	Nickel Plating
		Compatible Suction Cup Model Number	PAG-30B
			
		Recommended Tightening Torque 2.6[N·m]	

Model Number	TN-PC-10-M5	Mass	3.9g
		Material	Brass
		Treatment	Nickel Plating
		Compatible Suction Cup Model Number	PCG-10/15/20
			
		Recommended Tightening Torque 1.5[N·m]	

Durability Test Results



Test Conditions

Vacuum Pressure: -60 kPa

Workpiece Weight: 16 g for Ø10 mm and larger,

3.5 g for smaller than Ø10 mm

Suction Cycle Time 2 s Continuous

operation for 24 hours

(Used approximately 40,000 times per day)

Note) The data is based on actual measurements conducted under our company's conditions and does not constitute specifications. Please use it as a reference when selecting or using the product. Variations in surface resistance values are not guaranteed.

Physical Properties / Chemical Resistance

Material			Elec-Con ^{Note 2)}	ESD-Protective Silicone Rubber
Our Specification	Code		EC	SESD
	Color Identification		Black Laser Marking 「EC」	Black Laser Marking 「SE 6-9」
Mechanical Properties	Hardness	JIS K6253/K7311	60	40
	Specific Gravity	JIS K6268/Z8807	1.07	1.08
	Tensile Strength	JIS K6251/K7311	◎	×
	Elongation	JIS K6251/K7311	○	○
	Tear Strength	JIS K6252/K7311	◎	×
	Abrasion Resistance	JIS K6264-2/K7311	◎	△
	Tackiness	In-House Test Method	○	○
Physical Properties	Maximum Operating Temperature (°C)	-	100	200
	Brittleness Temperature (°C)	-	0	-60
	Weather Resistance (UV)	-	◎	◎
	Ozone Resistance	-	◎	◎
Electrical Properties	Volume Resistivity (Ω·cm)	In-House Test Method 23°C•50%rh	10 ⁵ ~10 ⁸	10 ⁵ ~10 ⁸
	Surface Resistance (Ω)	In-House Test Method 23°C•100V印加	1.0×10 ⁶ ~9.9×10 ⁹	1.0×10 ⁶ ~9.9×10 ⁹
Oil & Chemical Resistance	Kerosene		×	×
	Alcohol	Ethanol	○	◎
		IPA	○	◎
	Acid	Hydrochloric Acid (10%)	○	◎
		Sulfuric Acid (10%)	○	◎
	Alkali	Calcium Hydroxide Solution	○	○
		Aqueous Ammonia	○	○
		Sodium Hypochlorite (5%)	○	○
	Water		○	○

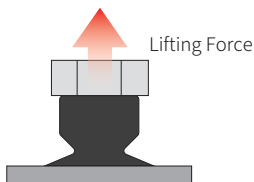
Note 1) This table shows the general properties of our rubber materials. The values shown are for reference only and are not guaranteed. Rubber properties may deteriorate significantly near the maximum and minimum operating temperatures. Even within the operating temperature range, properties may vary depending on the suction cup shape and duration of use. Please conduct sufficient evaluation and verification before use.

Note 2) Elec-Con is a proprietary rubber compound with our own unique formulation, newly developed as an ESD-control rubber material. Using SBR as its main component, it is siloxane-free and ozone-resistant, while providing non-marking performance equivalent to that of conventional RA-treated ESD suction cups.

Lifting Force

Suction Cup	Maximum Lifting Force[N]				
	Vacuum Pressure[kPa]				
	-50	-60	-70	-80	-90
PAG-5B	0.9	1.2	1.3	1.5	1.7
PAG-10B	3.1	3.5	4.0	4.6	5.2
PAG-15B	4.2	4.7	5.1	5.5	5.8
PAG-20B	11.0	13.0	14.8	16.5	18.2
PAG-30B	30.7	35.7	40.6	45.3	50.1
PFG-2A	0.1	0.2	0.2	0.3	0.3
PFG-3.5A	0.4	0.5	0.6	0.7	0.7
PFG-5A	0.9	1.0	1.2	1.3	1.5
PFG-6A	1.2	1.5	1.7	1.9	2.1
PFG-8A	2.1	2.5	2.9	3.2	3.7
PFG-10A	3.3	3.3	3.9	4.3	4.9
PFG-15A	7.1	8.4	9.6	10.9	12.0
PJG-2	0.14	0.16	0.19	0.20	0.21
PJG-4	0.5	0.6	0.6	0.7	0.7
PJG-6	1.2	1.4	1.6	1.8	2.1
PJG-8	2.0	2.4	2.7	3.1	3.5
PJG-10	3.2	3.8	4.4	5.0	5.6
PJG-15	6.9	8.2	9.3	10.4	11.3
PJG-20	12.0	13.9	15.8	17.3	18.8
PJG-25	18.1	20.6	23.1	25.4	27.6
PJG-30	23.9	27.6	30.9	34.0	37.0
PCG-7	1.4	1.7	1.9	2.1	2.2
PCG-10	2.1	2.5	2.9	3.2	3.4
PCG-15	6.3	7.4	8.4	9.6	10.9
PCG-20	12.2	14.5	16.6	18.3	18.8

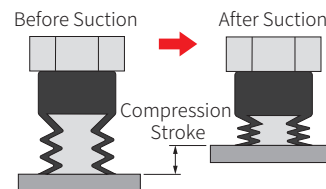
Note) The data shown are actual measured values obtained under our test conditions and do not constitute specifications.
Please use them as reference values when selecting or using the products.
The maximum lifting force is based on the maximum force measured when a fixed flat plate is picked up by suction and peeled off.
Please design with an appropriate safety factor.
Actual performance may vary depending on the material and shape of the workpiece.
Be sure to conduct testing under actual operating conditions.



Bellows Suction Cup Compression Stroke

Suction Cup	Compression Stroke[mm]				
	Vacuum Pressure[kPa]				
	-50	-60	-70	-80	-90
PJG-2	0.6	0.6	0.7	0.7	0.7
PJG-4	0.8	1.0	1.2	1.3	1.3
PJG-6	0.9	1.4	2.1	2.2	2.2
PJG-8	2.1	2.2	2.3	2.3	2.3
PJG-10	1.6	1.6	1.7	1.8	1.8
PJG-15	2.5	2.5	2.6	2.6	2.7
PJG-20	3.5	3.5	3.7	3.7	3.7
PJG-25	4.7	4.8	4.9	5.0	5.1
PJG-30	4.1	4.3	4.3	4.3	4.3
PCG-7	2.7	2.7	2.7	2.7	2.7
PCG-10	3.1	3.1	3.2	3.3	3.3
PCG-15	8.2	8.3	8.4	8.4	8.5
PCG-20	8.3	8.4	8.6	8.7	8.7

Note) The data shown are actual measured values obtained under our test conditions and do not constitute specifications.
Please use them as reference values when selecting or using the products.
Bellows compression stroke values are based on suction of a flat workpiece.



Safety Instructions

Be sure to read these precautions before use.

Also read and understand the safety instructions provided for each product series.

These safety instructions are intended to prevent personal injury and damage to equipment. Potential hazards are classified using the labels[DANGER],[WARNING], and[CAUTION]. All of these notices are important and must be observed.

 **DANGER** DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.

 **WARNING** WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.

 **CAUTION** CAUTION indicates a hazardous situation which, if not avoided, may result in minor or moderate injury, or property damage.

Please also refer to JIS B 8370*¹ and ISO 4414*². Please comply with the Industrial Safety and Health Law, the High Pressure Gas Safety Act, and other applicable safety regulations.

* 1 JIS B 8370 : Pneumatic fluid power — General rules relating to systems.

* 2 ISO 4414 : Pneumatic fluid power — Recommendations for the application of equipment to transmission and control systems.

Even the matters described under [CAUTION] may result in serious consequences depending on the circumstances.

All of these notices are important and must be observed.

WARNING

● Vacuum and pneumatic equipment shall be selected properly.

The compatibility of the vacuum and pneumatic equipment is the responsibility of the person who designs the equipment or decides its specifications.

Since the products specified here are 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.

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

Inappropriate usage or handling may cause injury, equipment damage or indirect damage.

Vacuum and pneumatic equipment is intended for industrial use. The assembly, operation and maintenance of machinery or equipment including our products must be performed by an operator who is appropriately trained and experienced.

● Do not operate or reinstall the equipment or machine without first performing a safety check.

• When inspecting or adjusting the equipment, make sure to take measures against the dropping or uncontrolled movements of the actuators.

• Before reinstallation, make sure to switch off power and compressed air supply.

• Before restart, make sure that no parts can break off.

● Use this pneumatic equipment only in accordance with the specifications.

Contact CONVUM when using it outside the specifications.

• Environments outside the specifications, like using in outdoor applications.

• nuclear energy, railways, airplanes, railway cars, ships, medical equipment, food or beverage processing equipment, pharmaceutical equipment, emergency, cutout and similar devices with security issues.

• All machinery which in case of wrong handling or operating might pose hazardous effects on human life or property.

Warranty and Disclaimer

1、Warranty

① If a failure occurs during the warranty period and is determined to be the responsibility of CONVUM, we will provide a replacement product or the necessary replacement parts free of charge, or repair the product free of charge.

② The warranty period for our products is one year from the start of operation or 18 months from the date of delivery, whichever comes first.

However, some products may have specified durability limits, such as operating cycles or sliding distance. For details, please contact our Customer Support Center.

③ The suction cup is a consumable component. Therefore, the one-year warranty period from the start of operation does not apply, and the warranty period is one year from the date of delivery.

However, deterioration of the rubber material or wear resulting from the use of the suction cup is not covered by the warranty, even during the warranty period.

2、Disclaimer

① The warranty does not apply in the following cases:

• Use outside the specifications stated in this catalog or other specification documents.

• Failures caused by factors other than this product.

• Failures or damage resulting from modifications or any other causes not attributable to CONVUM.

• Failures caused by factors that could not reasonably have been foreseen based on the state of technical knowledge at the time of delivery.

• Failures or damage caused by natural disasters, accidents, actions of third parties, intentional acts or negligence by the customer, or other force majeure events.

② This warranty applies only to the product itself and does not cover any indirect, incidental, or consequential damages resulting from product failure.

Specifications are subject to change without notice.

For operating instructions and precautions, refer to our catalog and instruction manual.

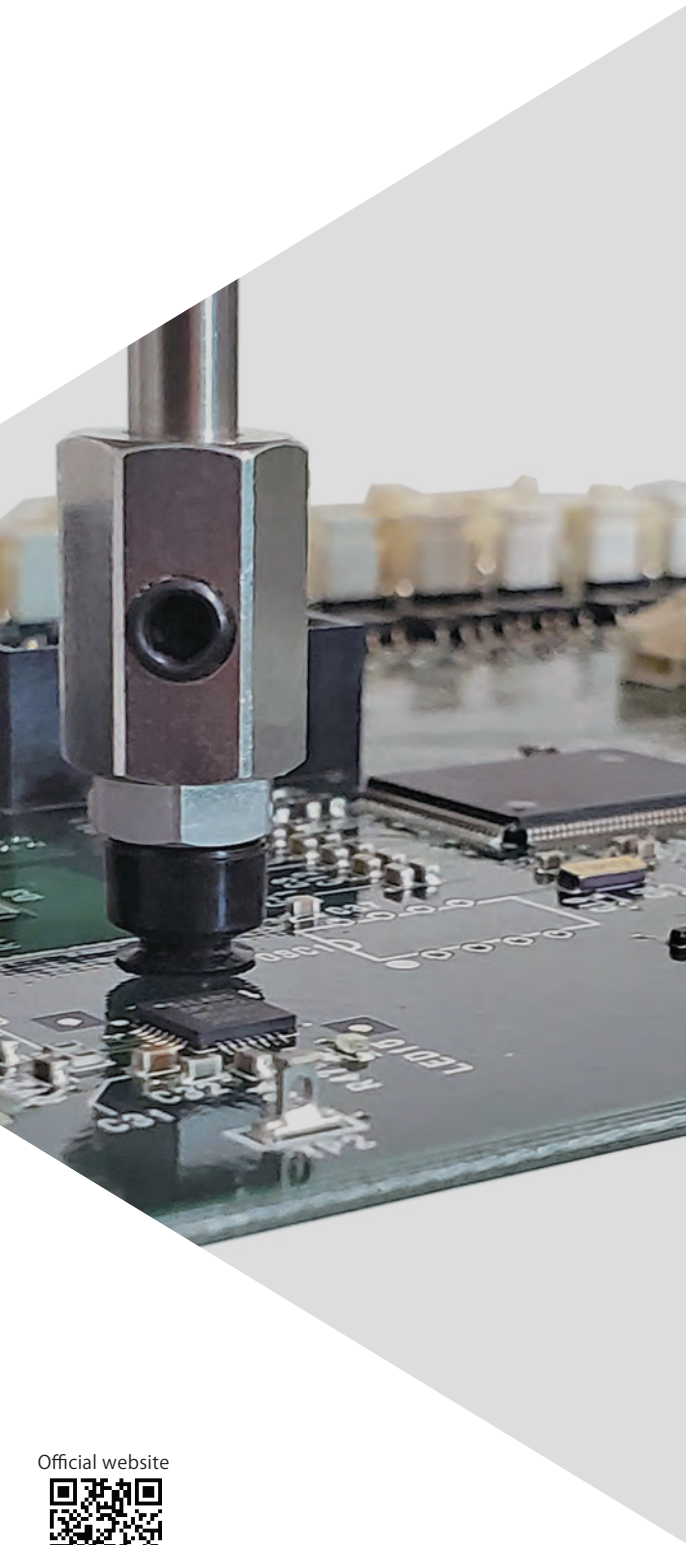
For delivery lead times, please contact our Customer Support Center.

CONVUM Ltd.

6-18 Shimomaruko2-chome, Ohta-ku, Tokyo 146-0092, Japan
TEL +81-3-5741-7201

Contact Information

<https://convum.com/contact>



Official website



CONVUM Ltd.

6-18 Shimomaruko2-chome, Ohta-ku, Tokyo 146-0092, Japan
TEL +81-3-5741-7201

Contact Information
<https://convum.com/contact>

email
faq@convum.co.jp

2025.10.17