

CONVUM

HG

series

Hygienic Cup

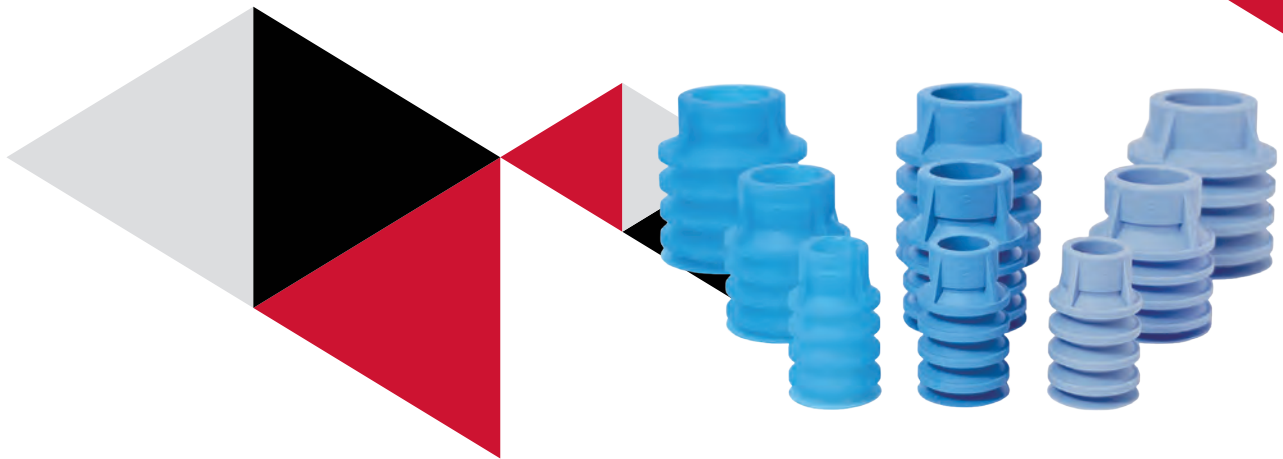
SIAA
Anti Bacteria

inorganic antibacterial agent,
incorporated, body
JP0113396X0002G



Hygienic Suction Cup

HG
series



Cleanroom production ensures safe and reliable suction.

Our New Cleanroom Facility



1. Material Loading



2. Material Loading



3. Mixing Process



4. Molding Process



5. Final Inspection



6. Packing



By completing the entire suction cup production process within a cleanroom environment, we provide **hygienic suction cups** unlike any previously available.

Reuse of molds, dust and contamination from the production environment, and contamination caused by operator contact...

By eliminating various contamination risks, we provide suction cups that customers can use with confidence.



○ Suction of Food Products

○ Suction of Pharmaceutical Products

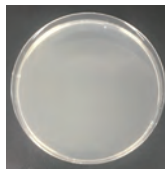
Industry-first antibacterial suction cup developed using our own Registered as an SIAA-Certified Product.

Suppresses bacterial growth on the suction cup surface and helps prevent problems caused by bacterial contamination.

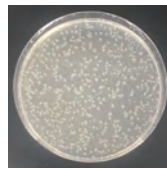


inorganic antibacterial agent,
incorporated, body
JP0113396X0002G

the SIAA brand mark is borne on products under quality control and information disclosure by the guidelines of the Society of International Sustaining Growth for Antimicrobial Articles.



Contains Antibacterial Agent



No Antibacterial Agent

Antibacterial Suction Cup (Material Code: AS5)

A commonly used silver-based antibacterial agent is incorporated into the material, providing longer-lasting antibacterial performance than coating-based treatments.

Compliant with the Food Sanitation Act and FDA regulations, making it suitable for handling food products and pharmaceutical products.

Viable Cell Count After 24 Hours of Incubation	No Antibacterial Agent	Gram-Negative Bacteria	Gram-Positive Bacteria
		10 ⁷	10 ⁵
	Contains Antibacterial Agent (Material Code: AS5)	>10 ¹	10 ¹
Antibacterial Activity Value (Material Code: AS5)		7.3	4.7

Tested by the BOKEN Quality Evaluation Institute in accordance with JIS Z 2801:2012 (Film Contact Method).

Water Resistance Classification 0 and Light Resistance Classification 1 (SIAA Durability Standards)

An antibacterial activity value of 2.0 or higher (kill rate of 99% or more) is defined as having antibacterial effectiveness.

※ Specific bacterial names are not shown in accordance with the Pharmaceuticals and Medical Devices Act.

Available in a choice of 40 Shore A silicone rubber with excellent heat resistance and conformity, or nitrile rubber with superior oil and abrasion resistance.



Material Code	Material	Hardness	Antibacterial Performance	Food Sanitation Act	FDA	Production Environment
CS4	Food-Grade Silicone Rubber	A 40	None	Compliant	Compliant	Cleanroom
CN5	Food-Grade Nitrile Rubber	A 55	None	Compliant	Compliant	Cleanroom
AS5	Antibacterial Silicone Rubber	A 55	Yes	Compliant	Compliant	Cleanroom

【Antibacterial Performance】 JIS Z 2801 (Antibacterial Processed Products – Antibacterial Test Method and Antibacterial Effect)

【Food Sanitation Act】 Rubber Utensils or Food-Contact Packaging Materials (Excluding Nursing Bottles and Related Products) Compliance Testing for Utensils and Food-Contact Packaging Materials (For Use at Temperatures up to 100°C) As a thermosetting rubber material, it is not subject to the Positive List system.

【FDA (U.S. Food and Drug Administration)】 21CFR § 177.2600 (Testing for Repeated-Use Rubber Products)

【Production Environment】 Cleanroom Environment ISO 14644-1 class 8

Food Sanitation Act and FDA compliance testing was conducted using actual suction cups produced on production equipment rather than test specimens.

The products passed the tests after considering potential contamination from contact during the manufacturing process, including the production environment, rollers, molds, release

A lineup of stainless steel (SUS304) pad fittings.

Further hygienization through the use of our stainless steel vacuum equipment.



Fitting Body: SUS304
O-ring: Food Sanitation Act-Compliant Silicone

○ Pad Attachment



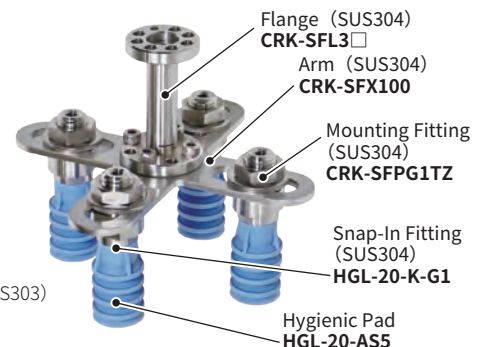
Washable Ejector MVE series

Stainless Steel (SUS304)
Countermeasures against leakage during food handling through disassemblable cleaning and high suction flow.

Standard Ejector CV series

Stainless Steel Specification (SUS303)
High Salt Resistance
SUS316 Also Available

○ Vacuum Generator (Ejector)



○ CRKT-SUS304 Specification

Model Number

HG L - 20 - AS5

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① Suction Cup Series

L	PLG (Multi-Bellows)
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② Pad Diameter

20	20mm
30	30mm
40	40mm



③ Material

	Material	Hardness	Color
CS4	Food-Grade Silicone Rubber	A 40	Translucent Turquoise Blue
CN5	Food-Grade Nitrile Rubber	A 55	Sky Blue
AS5	Antibacterial Silicone Rubber ^{Note 3) Note 4)}	A 55	Light Blue

③ Material



Note1) Hygienic Cups are sold in units of 10, as packaging is performed in a cleanroom.

When ordering, please order the required quantity in units by Model Number.

Example: Quantity 10 → 10 products will be delivered.

Orders resulting in quantities of 9 or fewer products, or quantities with a remainder such as 11, 12, or 24 products, cannot be accepted.

Note2) Clean-Washed and Clean-Packaged Specifications Are Not Available.

Note3) Contains an antibacterial agent and therefore cannot be used in South Korea, the EU, the United Kingdom, Türkiye, Switzerland, or Canada.

Intended for use within Japan.

Note4) Black stains may be present on the surface of the cup or may develop over time.

This discoloration is caused by a reaction between components of the material and substances in the air. It does not affect product performance. Please continue to use the product as is.

Model Number List

Model Number	Mass
HGL-20-CS4	2.7g
HGL-20-CN5	2.7g
HGL-20-AS5	2.9g

Model Number	Mass
HGL-30-CS4	6.6g
HGL-30-CN5	6.6g
HGL-30-AS5	7.1g

Model Number	Mass
HGL-40-CS4	15g
HGL-40-CN5	15g
HGL-40-AS5	16g

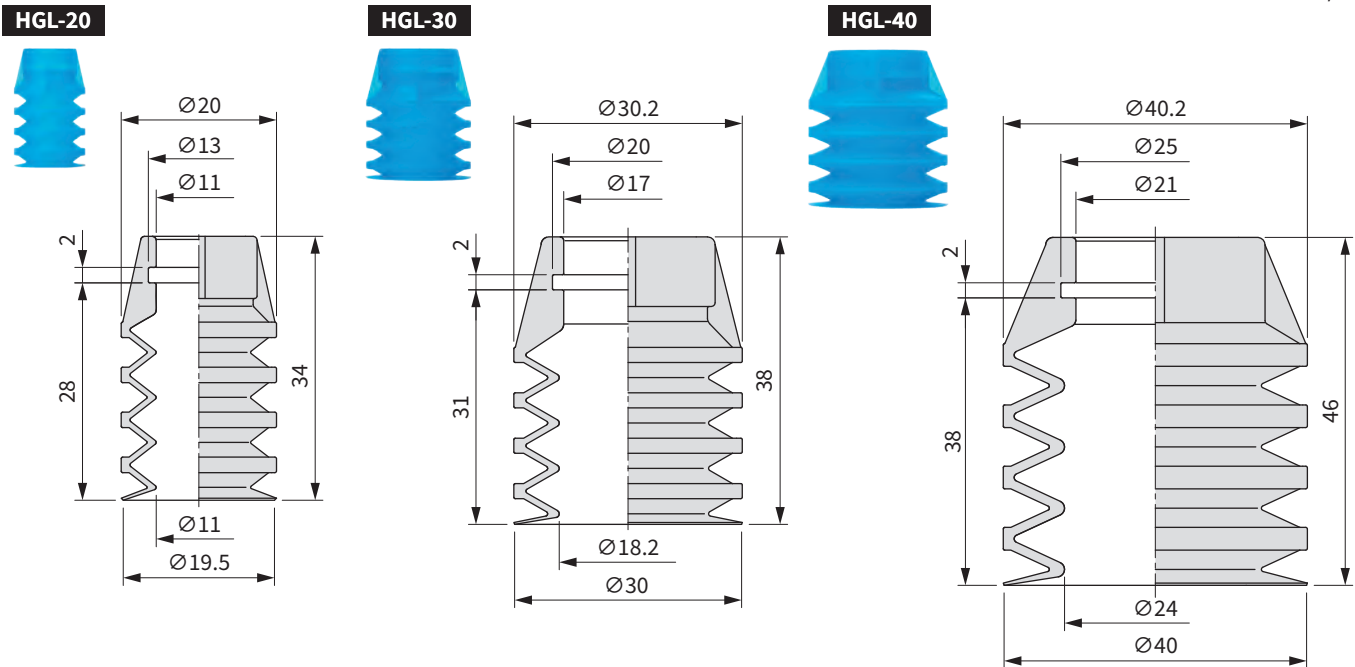
Note5) **Sold in units of 10. When ordering, please order the required quantity in units by Model Number.**

Example: Quantity 10 → 10 products will be delivered.

Orders resulting in quantities of 9 or fewer products, or quantities with a remainder such as 11, 12, or 24 products, cannot be accepted.

Dimensions

Scale (1/1)



Specification

Material			Food-Grade Silicone Rubber	Food-Grade Nitrile Rubber	Antibacterial Silicone Rubber
Our Specifications	Symbol		CS4	CN5	AS5
	Color / Identification		Translucent Turquoise Blue	Sky Blue	Light Blue
			CONVUM		
Mechanical Properties	Hardness	JIS K6253	40	55	55
	Specific Gravity	JIS K6268	1.14	1.10	1.20
	Tensile Strength	JIS K6251	○	◎	○
	Elongation	JIS K6251	◎	◎	○
	Tear Strength	JIS K6252	○	◎	○
	Abrasion Resistance	JIS K6264-2	○	◎	◎
	Tackiness	In-House Measurement Method	◎	○	◎
Physical Properties	Maximum Operating Temperature (°C)	-	200	100	200
	Brittleness Temperature (°C)	JIS K6261/K6301	-60	0	0
	Ozone Resistance	-	◎	×	◎
Oil Resistance / Chemical Resistance	Oil	Kerosene	×	◎	×
		Vegetable Oil	○	◎	○
	Alcohol	Ethanol	◎	○	◎
		IPA	◎	○	◎
	Acid	Hydrochloric Acid (10%)	◎	○	◎
		Sulfuric Acid (10%)	◎	◎	◎
	Alkali	Calcium Hydroxide Aqueous Solution	◎	◎	◎
		Aqueous Ammonia	○	○	○
		Sodium Hypochlorite (5%)	◎	◎	◎
Water		◎	◎	◎	
Food Sanitation Act Test (t Test Standards for Rubber Utensils and Food Contact Containers and Packaging [100°C or Below])			Pass	Pass	Pass
F D A 21CFR § 177.2600 (Rubber Articles Intended for Repeated Use)			Pass	Pass	Pass
Antibacterial Performance (JIS Z 2801: Antibacterial Products - Test for Antibacterial Activity and Efficacy)			None	None	Yes
Cleanroom Production (ISO 14644-1 Class 8)			○	○	○

【Mechanical Properties】 ◎Good ○Standard △Very Poor ×Poor

【Ozone, Oil and Chemical Resistance】

◎Resistant

○Usable (Please note that material deterioration may occur depending on conditions such as high concentrations, repeated exposure, or prolonged immersion.)

×Not Resistant

Note1) The values shown in this table represent the general properties of our rubber materials. They are provided 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.

Be sure to conduct sufficient evaluation and verification before use.

Pad Attachment Model Number

HGL-20-G1-K

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① Pad Diameter (Applicable Models)

20	HGL-20-□
30	HGL-30-□
40	HGL-40-□

② Thread Size

G1	G1/8
G2	G1/4
G3	G3/8

Note 1) HGL-20-K is available only with G1 thread size.

Note 2) Clean-Washed and Clean-Packaged Specifications Are Not Available.



Snap-In Fitting Specifications

Fitting Material	SUS304
Surface Treatment	None
O-ring	Recommended Tightening Torque
Recommended Tightening Torque	
G1(G1/8)	5 [N·m]
G2(G1/4)	10 [N·m]
G3(G3/8)	15 [N·m]



Fig) After Pad Installation

Note 3) Pads assembled with conventional fittings are not available.

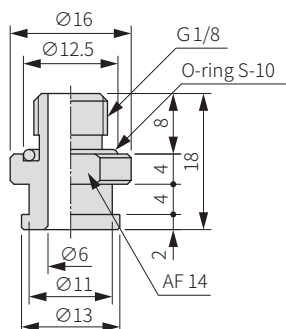
Pad Attachment Model Number List

CODE	Model Number	Mass
318000760	HGL-20-G1-K	11g

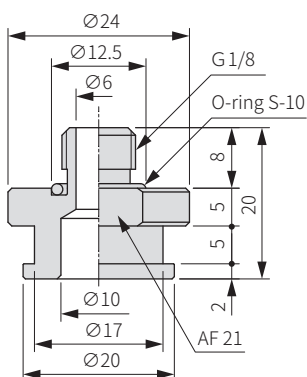
CODE	Model Number	Mass
318000761	HGL-30-G1-K	27g
318000762	HGL-30-G2-K	28g
318000763	HGL-30-G3-K	32g

CODE	Model Number	Mass
318000764	HGL-40-G1-K	52g
318000765	HGL-40-G2-K	53g
318000766	HGL-40-G3-K	55g

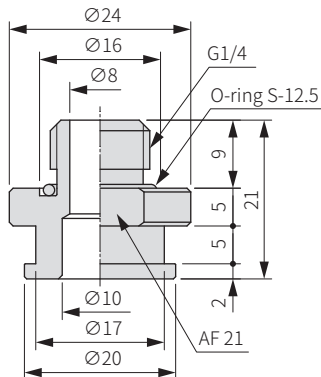
HGL-20-G1-K



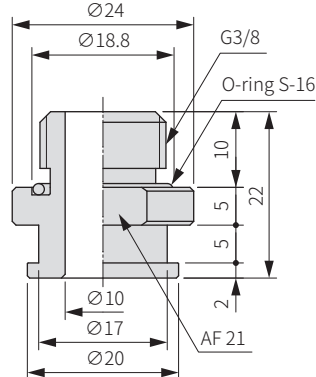
HGL-30-G1-K



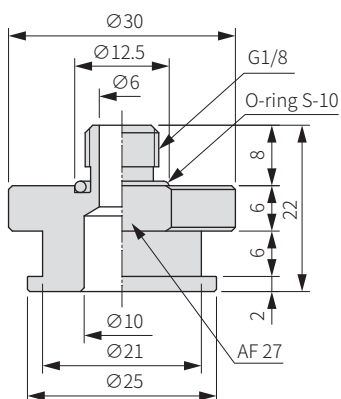
HGL-30-G2-K



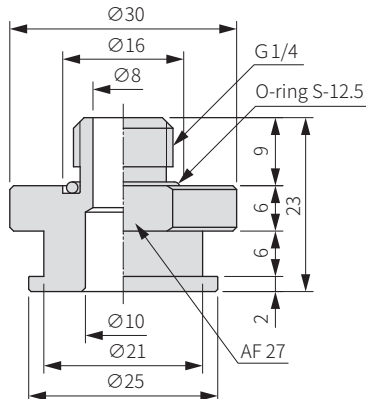
HGL-30-G3-K



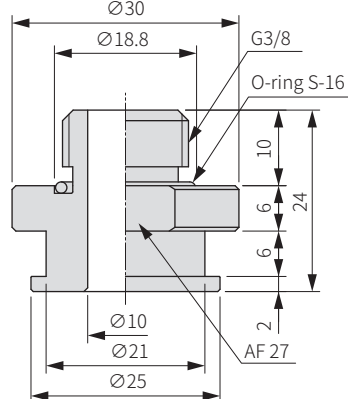
HGL-40-G1-K



HGL-40-G2-K



HGL-40-G3-K



CORE- **PL20** -PO

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① Applicable Cups

PL20	HGL-20
PL30	HGL-30
PL40	HGL-40

② Material

PO	POM (Food Sanitation Act Compliant)
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Note 1) Clean-Washed and Clean-Packaged Specifications Are Not Available.

CORE Installation Method

① Insert the CORE from the cup contact surface side and attach it to the first bellows section from the contact surface.

* Performance varies depending on the installation orientation of the convex side.

Install it in the orientation that provides the best compatibility.

Convex Side Facing the Contact Surface:

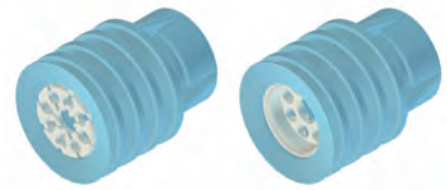
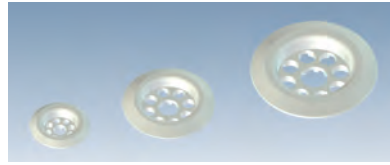
Less workpiece deformation

Convex Side Facing the Mounting Side:

Good Conformability to Workpieces

Convex Side Facing the Contact Surface

Convex Side Facing the Mounting Side



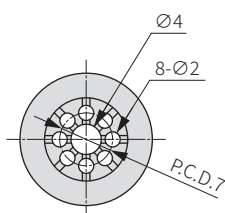
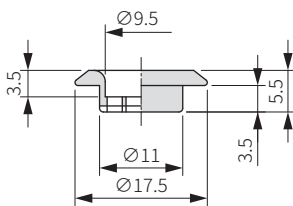
HGL-30, CORE-PL30-PO Installed (Image)

Model Number List / Mass

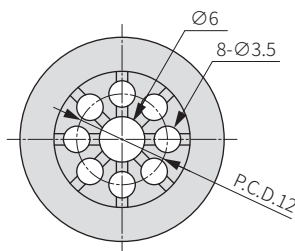
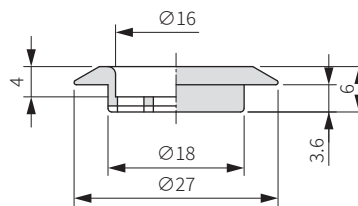
CODE	Model Number	Mass
318000732	CORE-PL20-PO	0.6g
318000733	CORE-PL30-PO	1.4g
318000734	CORE-PL40-PO	3.2g

Dimensions Scale (1/1)

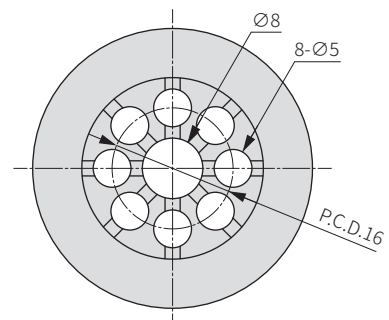
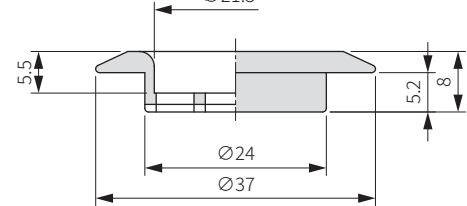
CORE-PL20-PO



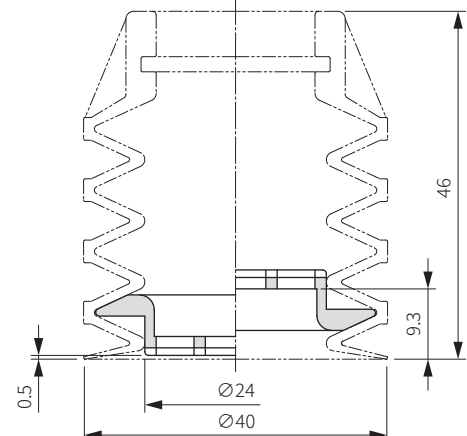
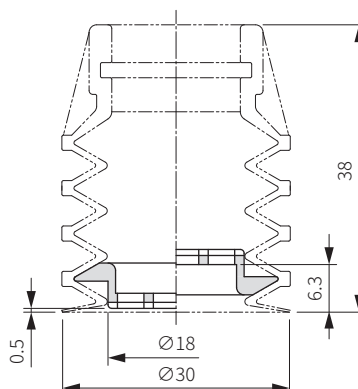
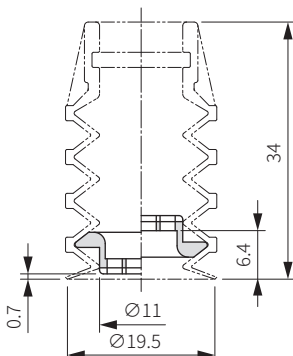
CORE-PL30-PO



CORE-PL40-PO



Pad Installation Example



CRK-SFPG1TZ

Note 1) Clean-Washed and Clean-Packaged Specifications Are Not Available.

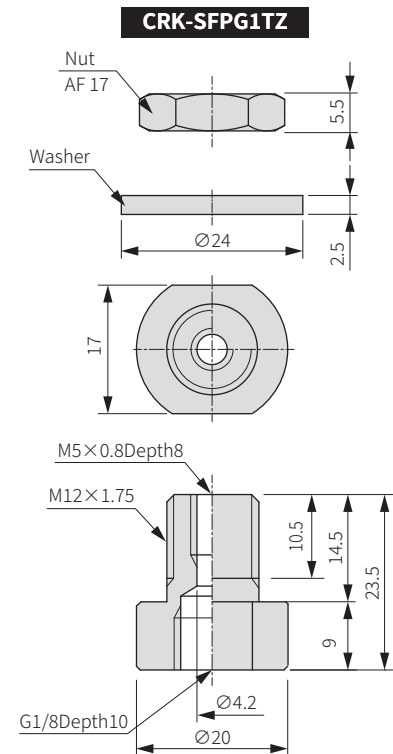
Model Number List / Mass

CODE	Model Number	Mass
502600637	CRK-SFPG1TZ	36g



CRK-SFPG1TZ

Dimensions Scale (1/1)

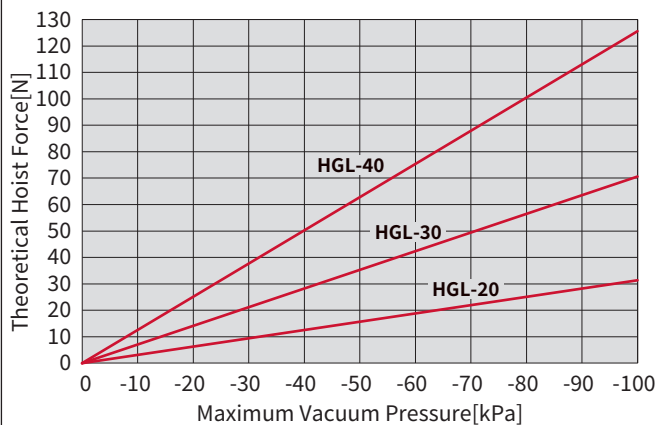


Material

Fitting	SUS304
Nut	SUS304
Washer	SUS304

Theoretical Hoist Force

HGL-20/30/40

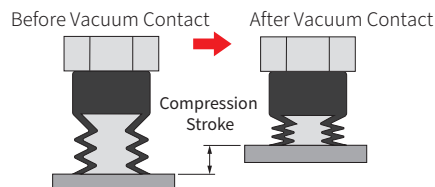


Note) Theoretical Hoist Force at Each Vacuum Pressure
Please use this value as a reference for confirming how much Theoretical Hoist Force (suction force) a vacuum-held workpiece can theoretically maintain.

Bellows Cup Compression Stroke

Suction Cup	Compression Stroke[mm]							
	Vacuum Pressure[kPa]							
	-20	-30	-40	-50	-60	-70	-80	-90
HGL-20-CS4	15	15	16	17	17	17	17	17
HGL-20-CN5/AS5	15	15	16	16	17	17	17	17
HGL-30-CS4	16	17	17	18	18	18	19	19
HGL-30-CN5/AS5	16	16	17	17	17	18	18	18
HGL-40-CS4	21	22	22	23	23	23	24	24
HGL-40-CN5/AS5	21	22	22	23	23	23	23	24

Note) The data are actual measured values obtained under our test conditions and are not specifications.
Please use them as reference values when selecting or using the product.
The conditions are based on the bellows cup compression stroke when a flat plate is vacuum-held.



Hygienic Cup (HG) Precautions



Official website

Before use, be sure to read the "For Safe Use" section in this catalog, the "General Precautions" and "Common Precautions for CONVUM Products" in the General Catalog, as well as the Instruction Manual for this product.

<https://www.convum.co.jp/english/index.html>

Antibacterial Vacuum Suction Cup

⚠ Caution

- Antibacterial Vacuum Suction Cups (Material Code: AS5) contain an antibacterial agent and therefore cannot be used in South Korea, the European Union (EU), the United Kingdom, Türkiye, or Switzerland. When using these products in countries other than those listed above, please confirm that their use does not violate the laws and regulations of the country in which they will be used. Antibacterial Vacuum Suction Cups are intended for use within Japan.
- Thin black stains may be present on the surface of the suction cup or may develop over time. This discoloration is caused by a reaction between components of the material and substances in the air. It does not affect product performance, including compliance with the Food Sanitation Act and antibacterial performance. Please continue to use the product as is.



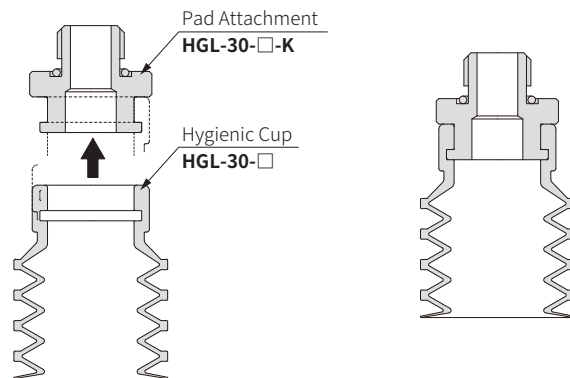
Fig, Suction Cup with Black Stains

Installation

⚠ Caution

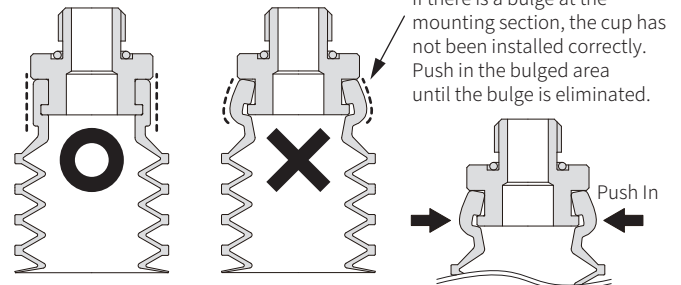
If the suction cup is not securely attached to the pad attachment, it may come off and fall during vacuum transfer.

Please observe the following precautions.



⚠ Precautions

Please check the installation condition.



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

2025.9.12