



Give Your Robot A Soft Hand

IF YOU NEED SELECTION CONSULTING SERVICES, PLEASE CONTACT:



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WeChat



Online

Online service and free3D-CAD-models download



Fast counsel and delivery







Abundant product models

We provide a large number of soft gripper models, with modular applications, which can quickly work out your soft gripping solution.

🗟 Many ways to help you choose

Don't know how to choose models? Don't worry. We have professional consultants to assist you, and we can also provide gripping tests for your samples if provi ded to eliminate your worries.

Save design time

You can download 3D-CAD-models at www.rochu.com, a variety of models for your choice!

Fast customizable service

Rochu's professional technical team provides you with customizable services. The average develop-time is 5 working days.

质

Worry-free warranty service

Where from the date of purchase of goods within one year (consumable products within 6 months), due to quality problems of non-human damage, the company to apply, the company will replace or repair the corresponding products.

Honor and qualification



Rochu

Partners



Applications

The movement of the Rochu grippers is inspired by the tentacles of the octopus, which can softly wrap the object without damaging the object or leaving scratches on its surface. The grippers can be widely used in auto parts, 3C electronics, food, medical, clothing, daily chemicals, and other industries. Soft Fingers can be used in a variety of industrial applications such as assembly, sorting, and handling, as well as in new retail industries such as vending machines. High safety, good versatility, and convenient installation make up for the vacancy that mechanical grippers and vacuum suction cups can not be applied on some occasions.

3C Electronics

It applies to the high-precision plug and pull of precision electronic instruments, as well as the assembly, sorting, testing, packaging, and other production processes of related accessories of mobile phones, circuit boards, silicon wafers, thin glass, and other workpieces.



Auto parts

It is used for sorting, handling, loading, and unloading automobile headlights, metal special-shaped parts, and exterior parts. Especially suitable for small batch and multi -batch soft production requirements.



Injection molded product

Suitable for medical, daily chemicals, stationery, consumer electronics and other injection molding products grab material, high temperature resistance of 200° C or more, can be matrix arrangement



Food

Food safe materials. It has obtained FDA Certification and can directly contact the food. It is especially suitable for sorting and packaging fruits and vegetables, irregular vacuum packaged food, dairy products, dough cakes, and so on.



Fabric

It is suitable for layered grasping or multi-layer simultaneous grasping of knitted and woven fabrics. During layered grabbing, it can only grab the top layer or handle a whole stack of pieces.



Medical Supplies

It is used for grasping medical consumables such as infusion tubes, test tubes, ampoules, as well as bottled and bagged reagents, and for the process of production and disinfection of medical instruments.







Bionics structure design and covering clamp enable the soft grippers to grasp the objects with centimeter-level adaptive ability. Facing the soft production line of small-batch and multi-batch in the factory, Rochu can effectively save the switching time of the production line. Can adapt to most industrial scenes with 300 times/min opening and closing speed, \pm 0.05mm precision, millions of times service life, 9kg maximum load, good chemical and temperature resistance.



Rochu 's soft gripper is made of pure soft material and possesses adjustable clamping strength, making it safe to pick and place soft and flimsy objects.

To deal with vulnerable and fragile products, Rochu 's soft gripper can not only avoid damage but also avoid scratches on the surface while the safety of the operator is also guaranteed.

The material has obtained FDA Certification and can be in direct contact with food.

The standardized finger module makes the construction of soft gripper as simple as building blocks and saves design time.

Rochu Control Unit is equipped with a standard communication interface, which is seamlessly matched with all kinds of mechanical arms and PLC, as easy as using a USB flash drive.

The controller has a wireless remote control function and built-in air source (ACU configuration), which is convenient for installation and adjustment. It can also be used in the mobile working environment without an air source.

Thin, brittle and fragile













Ring

9(









Different sizes





Product introduction

Rochu Gripper Introduction

Rochu gripper is a kind of soft fixture independently researched and developed by Rochu Robotics. Rochu's soft gripper applies the principle of bionics to imitate the action of octopus tentacles wrapping the object and grasping the object in a wrapped manner.

Traditional fixtures often cannot provide a successful grasping scheme because of many limitations, such as object shape, material, grasping requirements, and so on. Rochu soft gripper is made of soft materials, which will not damage the target object. At the same time, due to its centimeter-level adaptive ability, it has high versatility. One gripper is universal and suitable for objects of different shapes. Users do not need to change the gripper frequently.

Rochu gripper fills the vacancy of the robot's end gripper and greatly expands the application scene of the industrial robot.

Working principle

Rochu soft gripper adopts pneumatic drive technology. Through positive and negative pressure switching, the gripper achieves soft fingers/ soft beak opening and closing action, so as to achieve grasp or outward expansion action.

At the same time, by adjusting the air pressure to control the clamping strength of the gripper or the angle of opening and closing, to achieve the flexible grasp of different objects, while avoiding pinching objects.





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The air pressure must be strictly controlled within the Safe Pressure range. Overload use may cause irreversible damage to the product. It is recommended to use the original Rochu control unit to ensure the service life and stability of the product. Please refer to the product page or package identification for the air pressure of the product.



Rochu



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Material safety performance







1935/2004/EC Regulation

Temperature resistance performance



*: High temperature-resistant fingers need to be customized according to the requirements of the scene. Please consult relevant technical support for specific information.

Chemical resistance performance

Classification	Concrete Conditions	Performance
	General aging resistance	Excellent
Weather Fastness	UV-Resistance	Good
	Ozone resistance	Good
	Vegetable oil	Good
Oil Resistance	Heavy oil (lubricating oil, anti-rust oil, hydraulic oil)	Good
	Light oil (gasoline, kerosene, stamping oil, emulsified oil, tensile oil and other volatile oils)	Not good
	Alcohols (methanol, ethanol, etc.)	Good
Solvent Resistance	Organic solvent (benzene, toluene, acetone, ethyl acetate)	Not good
	Strong acids (hydrochloric, sulfuric, nitric, etc.)	Not good
	Strong base (sodium hydroxide, potassium hydroxide, etc.)	Not good
Acid-base Resistance	Weak acid pH: 6-7 (such as low concentration phosphoric acid, oxalic acid, etc.)	Good
	Weak base pH: 7-8 (low concentration ammonia, etc.)	Good
	Hydrofluoric acid and other highly corrosive substances	Not good
water-fast	Water vapor	Good
water last	Water-soluble cutting fluid	Good

Anti-static materials [AS] electrical parameters

Project	Test Standard 材料	材料					
roject		Conductive material	Antistatic material	Conventional material			
Surface resistance[]	IEC 61340-2-3:2016	104-105	106-109	>1012			

General Index

DK

Development Kit



Beak kit



All-purpose kit

GC

Gripper Combination



Non-standard GC



3C Electronics Parts Applications



Automobile Parts Applications



Fabric Applications



Food Industry Applications

BM / B

Beak Module / Soft Beak



Single finger module



Bicuspid Soft Beak



Tricuspid Soft Beak



Quadricuspid Soft Beak

Rochu

FM / F Finger Module / Finger



Finger Module A



Finger Module B



Finger Module C

CU

Control Unit



iPCU2 Integrated Passive Control Unit

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Active Control Unit

ACU2-B



Active Control Unit

ACU2-H



PCU2 Passive Control Unit



LCU-H Light Control Unit AF

Assembling Fittings



QCM

Quick changer Module



RF

Robot flange

FCM

SMP



Flange Connection Module



Slide

Mounting Plate

СР

Connector Part



Profile

Ρ

СМ

ΡN

Connection Module



Pneumatic Fittings



DK-1.30 Soft Beak Newly Kit



DK-1.30 Soft Beak Newly Kit

- Soft Beak kit used for 0-50mm small and micro workpiece grip or internal support;
- Contains 33 types of soft beaks, 3 types of connecting rods and 4 types of side pass plug;
- Applicable industries: flexible feeding station, testing equipment, injection molding blanking, etc.

Rochu



Application case



DK-1.31 Soft Beak Expansion Kit



DK-1.31 Soft Beak Expansion Kit

- Used for 0-55mm small and micro workpiece grip or internal support;
- Contains 40 types of soft beaks and 4 types of connecting rods ;
- Applicable industries: flexible feeding station, testing equipment, injection molding blanking, etc.







Application case



DK-2.0 omnipotence kit

ft ft. 1-11 0

DK-2.0 omnipotence kit

It includes a full range of Rochu grippers from soft beaks to fingers. It can be used without additional accessories and tools. Modules can be assembled and tested quickly in minutes. Contains a standard plug-and-play control unit that can be driven by compressed air or power. It can be used for the food fresh, 3C electronic parts, clothing fabrics, and auto parts industry, etc.

Rochu

DK-2.0 omnipotence kit





Rochu

GC

Gripper Combination



Standard GC



Non-standard GC











3C Electronics Parts Applications









Fabric Applications



Food Industry Applications





Standard Gripper Combination

A standard Rochu Soft finger Gripper Combination [GC] is built of different modules and named in a standard way. The building of modules can be in the following steps: 1. Finger module [FM], 2.Slide Mounting plate [SMP], 3.Flange Connection Module [FCM], 4.Quick changer Module [QCM] (Optional).



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Quick changer module

Quick changer module [QCM] is an optional module for automatic and quick replacement of spare grippers. Quick changer module[QCM] is installed between the flange connection module [FCM] and the end of the robot arm. A pair of QCMs can be divided into two parts, the robot side (R side, installed at the end of the robot arm) and the gripper side (G side, installed at the gripper end).

lange connection modul

Flange connection module [FCM] is a connector between the end of the robot arm and the sliding mounting plate [SMP]. It can also be connected with **quick changer** module [QCM]. There are two types of [FMC], the spring rod type (S) and the rigid rod type (R).

Slide Mounting Plate

The **sliding mounting plate [SMP]** is the standard mounting plate for Rochu **finger module [FM]**, and the mounting plate is equipped with a standard chute and scale mark. The installation position and posture angle of the **finger module [FM]** in the chute can be adjusted freely.

-inger Module

Finger module [FM] is the actuator of Rochu claw. According to the finger load capacity, it can be divided into three series, finger(**A**), finger(**B**), and finger(**C**). Each module can be installed separately or combined seamlessly, which is easy to assemble and disassemble.



Encoding Method of standard Gripper Combination





Encoding Method of standard Gripper Combination

 $\label{eq:standard} Standard\,Rochu \, beak\,gripper\, combination\,[GC]\, {\rm can}\, {\rm be}\, {\rm combined}\, {\rm in}\, {\rm the}\, {\rm following}\, {\rm order},$

1. Soft beak module [BM], 2. Connection module [FCM] / [CM], 3. Sliding mounting plate [SMP] (optional).



Non-Standard GC



GC - BML20802[P] - FCMS01





Non-standard Gripper Combination

Product Features

- Suitable for products with large volumes or irregular shapes.
- $\boldsymbol{\cdot}$ Aluminum alloy profiles are used for combination and connection.
- Standard gripper combination [GC] or module [FM] can be installed in any part of the bracket.
- Suction cups, sensors, cylinders, or other components can also be added according to the working conditions.
- The gripper plan adopts the BOM(Bill Of Materials) method.



Non-Standard GC



BOM List		
Product Name	Product code	Quantity
Connection Part	CP-04	1
Connection Part	CP-01	4
Profile	P-20200	2
Profile	P-20400	2
Slide Mounting Plate	SMP-03	4
Slide Mounting Plate	SMP-14	2
Finger Module	FM-B4V5/LS1[P]	8
Standard Gripper Combination	GC -BMC20802[P]-CMS04	2



3C Electronics Parts Applications:

Gripper combination for flat parts



GC - 2FMA3V5/LS1[P] - SMP2L





iPCU2-SMN Integrated Passive Control Unit – Standard Model* *: For other Control Units

Gripper Combination Plans



Finger Module : FM-C3V5/LS1[P]

Slide Mounting Plate : SMP-4L



Standard Gripper Combination: GC-4FMC3V5/LS1[P]-SMP4L



Finger Module : FM-A4V5/LS1[P]

Slide Mounting Plate : SMP-3L



Standard Gripper Combination: GC-3FMA4V5/LS1[P]-SMP3L



Non-standard

BOM List					
Product Name	Product code	Quantity			
Finger Module	FM-A3V5/LS8 [PAS]	8			
Profile	P-20400 2				
Profile	P-20300	2			
Connection Part	CP-01	4			
Connection Part	CP-04	1			
Flange Connection Module	FCM-R08	1			



Integrated circuit



Silicon wafers









Coated glass

Rochu

Gripper Combination

3C Electronics Parts Applications :

Soft beak for micro and small parts





Recommended soft beak: Select the soft beak according to the shape, volume, material and working condition of the clamped object to achieve the best grasping effect. For the technical parameters of the soft beak





BMC-4B18[P]/S



BMC-4B50[P]/S

Automobile Parts Applications

• Gripper combination for car headlight, seat slide, bearing, soft pack battery, etc.



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iPCU2-SMN

*: For other Control Units



BOM List		
Product Name	Product code	Quantity
Finger Module	FM-A3V5/LS8 [AS]	4
Slide Mounting Plate	SMP-02	4
Profile	P-20300	2
Connection Part	CP-04	1
Flange Connection Module	FCM-R06	1

Gripper Combination Plans



Finger Module: FM-A4V5/FS3[P] Slide Mounting Plate: SMP-4S



Standard Gripper Combination : GC-4FMA4V5/FS3[P]-SMP4S



Finger Module: FM-A3V4/LS1[P] Slide Mounting Plate: SMP-2L



Standard Gripper Combination : GC-6FMA3V4/LS1[P]-SMP2L



Integrated Passive Control Unit – Standard Model*

Finger Module: FM-A4V4/LS1[H] Slide Mounting Plate: SMP-2S



Standard Gripper Combination : GC-8FMA4V4/LS1[H]-3SMP2S



Car Headlight



Bearing



Soft Pack Battery



Soft Pack Battery



Seat Headrest

Gripper Combination

Fabric Handling Applications:

• Beak module combinations can be used for soft and breathable thin knitting and woven fabrics in layers. Only the first piece of multi-layer fabrics can be grabbed at a time.



Customized gripper combination:

BOM List		
Product Name	Product code	Quantity
Gripper Combination	GC -BMC20006[P]-CMS04-SMP13	8
Profile	P-20400	2
Connection Part	CP-04	1
Flange Connection Module	FCM-R04	1

Note: For large soft fabric layers (e.g. T-shirts, sweatshirts, etc.), it is recommended to install multiple independent soft beak grippers at intervals along the edge of the fabric.



BOM List		
Product Name	Product code	Quantity
Gripper Combination	GC -BMC20006[P]-CMS04-SMP13	6
Profile	P-20200	1
Flange Connection Module	FCM-R08	1

Note: For hard fabric layers (e.g., denim, etc.), it is recommended to install multiple soft beak grippers closely in rows.



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Fabric Handling Applications:

• The two-finger gripper can be used for layered grasping of thick and hard fabrics, such as wool textile, towel, carpet, etc. the gripper can be combined with customized bracket in series according to the shape of the fabric.



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Customized gripper combination:

BOM List		
Product Name	Product code	Quantity
Gripper Combination	GC –2FMB4V5/FS3[P]-SMP2S	2
Profile	P-20200	1
Flange Connection Module	FCM-R04	1

Recommended Plan



+



iPCU2-SMN Integrated Passive Control Unit – Standard Model* *: For other Control Units



GC -2FMB4V5/FS3[P]-SMP2S



FM-A4V5/FS3[P]

FM-B4V5/FS3[P]



FM-C5V5/FS3[P]

**: Finger modules shall be selected appropriately according to the weight, thickness, and hardness of different fabrics to ensure the stability of layered grasping.

Applicable fabric



Carpet



Canvas







Wristband



Wollen Clothes

Food Industry Applications

• Multi-finger centripetal gripper combination, suitable for spherical or square candy, pastry, or fruit.



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iPCU2-HMN Integrated Passive Control Unit – Standard Model* *: For other Control Units

GC – 4FMA3V5/LS1[P] - SMP4S -FCMR02

When the grasped object changes, the finger module or slide mounting plate should be replaced according to the shape, volume, weight, and material of the grasped object to achieve the best grasping effect. For the selection of the finger module. For the selection of slide mounting plate.



Finger Module: FM-B3V5/LS1[P] Slide Mounting Plate: SMP-3S



GC-3FMB3V5/LS1[P]-SMP3S



Finger Module: FM-A5V5/LS1[P] Slide Mounting Plate: SMP-4S



GC-4FMA5V5/LS1[P]-SMP4S



Finger Module:FM-A5V5/LS1[P]Slide Mounting Plate:SMP-4L



GC-4FMA5V5/LS1[P]-SMP4L





Food Industry Applications

• Multi-finger subtending gripper combination, suitable for the strip, oval-shaped fruit, food, etc.



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GC - 6FMA3V4/LS1[P] - CP04 - FCMR02



iPCU2-HMN Integrated Passive Control Unit – High-speed model* *: For other Control Units

When the grasped object changes, the finger module or slide mounting plate should be replaced according to the shape, volume, weight, and material of the grasped object to achieve the best grasping effect. For the selection of the finger module. For the selection of slide mounting plate.







B / BM Soft Beak / Beak Module



Unicuspid Soft Beak

Bicuspid Soft Beak

Tricuspid Soft Beak

Quadricuspid Soft Beak



BMC-1G071010[P]/S BML-1G071010[P]/S

/S B-1G071010[P]/S





BMC-1G122018[H]/SN BML-1G122018[H]/SN B-1G122018[H]/SN





BMC-1G182521[H]/SN BML-1G182521[H]/SN B-1G182521[H]/SN







BMC-1G243024[H]/SN BML-1G243024[H]/SN B-1G243024[H]/SN



BMC-1G303527[H]/SN BML-1G303527[H]/SN B-1G303527[H]/SN

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BMC-1G364030[H]/S	BML-1G364030[H]/S	B-1G364030[H]/S
F		
BMC-1GN364030[H]/S	BML-1GN364030[H]/S	B-1GN364030[H]/S

BMC-20201[H]/S	BML-20201[H]/S	B-20201[H]/S
h		27
BMC-2D08[H]/S	BML-2D08[H]/S	B-2D08[H]/S
BMC-2051D5[P]/S	BML-2051D5[P]/S	B-2051D5[P]/S
		<i>\</i>
BMC-2076D5[P]/S	BML-2076D5[P]/S	B-2076D5[P]/S
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BMC-20301[H]/S	BML-20301[H]/S	B-20301[H]/S
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BMC-20501[H]/S	BML-20501[H]/S	B-20501[H]/S
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BMC-20606[P]

BMC-2G1012[H]/SN

BMC-20606[P]/M

BMC-21413[P]

BMC-21606[P]/M

BMC-2G1217[H]/SN

BMC-21812[P]

BML-20606[P]	B-20606[P]	BMC-2	1812[P]/M	BML-21812[P]/M	B-21812[P]/M
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BML-2G1012[H]/SN	B-2G1012[H]/SN	BMC-2	2219[P]/M	BML-22219[P]/M	B-22219[P]/M
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BML-20606[P]/M	B-20606[P]/M	BMC-2G	1622[H]/SN	BML-2G1622[H]/SN	B-2G1622[H]/SI
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BML-21413[P]	B-21413[P]	BMC-2G	1624[HB]/S	BMC-2G1624[HB]/S	B-2G1624[HB]/
E					
BML-21606[P]/M	B-21606[P]/M	BMC-2G	2027[H]/SN	BML-2G2027[H]/SN	B-2G2027[H]/SM
		I			P
BML-2G1217[H]/SN	B-2G1217[H]/SN	BMC-2G	2032[H]/SN	BML-2G2032[H]/SN	B-2G2032[H]/SM
W		-			
BML-21812[P]	B-21812[P]	BMC-2G	2037[H]/SN	BML-2G2037[H]/SN	B-2G2037[H]/SI

BMC-2G2042[H]/SN	BML-2G2042[H]/SN	B-2G2042[H]/SN
F		
BMC-2G2047[H]/SN	BML-2G2047[H]/SN	B-2G2047[H]/SN
F		
BMC-2G2052[H]/SN	BML-2G2052[H]/SN	B-2G2052[H]/SN
BMC-2G2057[H]/SN	BML-2G2057[H]/SN	B-2G2057[H]/SN
Soft Beak / Beak Module

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BMC-3B08[H]/S	BML-3B08[H]/S	B-3B08[H]/S	BMC-3A18[P]/S
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BMC-3B10[H]/S	BML-3B10[H]/S	B-3B10[H]/S	BMC-3A18[H]/S
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BMC-3B12[H]/S	BML-3B12[H]/S	B-3B12[H]/S	BMC-3B18[P]/S
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BMC-3C12[H]/S	BML-3C12[H]/S	B-3C12[H]/S	BMC-3A20[H]/S
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BMC-3B13[H]/S	BML-3B13[H]/S	B-3B13[H]/S	BMC-3G20[H]/S
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BMC-3B14[H]/S	BML-3B14[H]/S	B-3B14[H]/S	BMC-3B24[H]/S
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BMC-3B14[P]/S	BML-3B14[P]/S	B-3B14[P]/S	BMC-3C24[H]/S
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BMC-3A15[P]/S	BML-3A15[P]/S	B-3A15[P]/S	BMC-3C24[P]/S

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BMC-3A18[P]/S	BML-3A18[P]/S	B-3A18[P]/S
		7
BMC-3A18[H]/S	BML-3A18[H]/S	B-3A18[H]/S
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BMC-3B18[P]/S	BML-3B18[P]/S	B-3B18[P]/S
r.		
BMC-3A20[H]/S	BML-3A20[H]/S	B-3A20[H]/S
BMC-3G20[H]/S	BML-3G20[H]/S	B-3G20[H]/S
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BMC-3B24[H]/S	BML-3B24[H]/S	B-3B24[H]/S
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BMC-3C24[H]/S	BML-3C24[H]/S	B-3C24[H]/S
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BMC-3C24[P]/S	BML-3C24[P]/S	B-3C24[P]/S



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BMC-4B18[P]	BML-4B18[P]	B-4B18[P]
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BMC-4B18[P]/S	BML-4B18[P]/S	B-4B18[P]/S
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BMC-4H18[H]/S	BML-4H18[H]/S	B-4H18[H]/S
A		
BMC-4G22[H]/SN	BML-4G22[H]/SN	B-4G22[H]/SN
Ň		
BMC-4A24[H]/S	BML-4A24[H]/S	B-4A24[H]/S
Ŵ		
BMC-4G27[H]/SN	BML-4G27[H]/SN	B-4G27[H]/SN
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BMC-4A30[P]/M	BML-4A30[P]/M	B-4A30[P]/M

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BMC-4G40[H]/S	BML-4G40[H]/S	B-4G40[H]/S
M		
BMC-4G44[H]/S	BML-4G44[H]/S	B-4G44[H]/S
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BMC-4B50[P]/S	BML-4B50[P]/S	BMC-4B50[P]/S
BMC-4G51[H]/SN	BML-4G51[H]/SN	B-4G51[H]/SN
BMC-4G58[H]/SN	BML-4G58[H]/SN	B-4G58[H]/SN
P		2F
BMC-4G64[H]/S	BML-4G64[H]/S	B-4G64[H]/S
F		
BMC-4BG64[P]/S	BML-4BG64[P]/S	B-4BG64[P]/S

	İ	-	
BMC-4B70[P]/S	BML-4B70[P]/S	B-4B70[P]/S	

- Fingertip open under pressure and clamped in a vacuum. Fingertip distance G can be adjusted by working pressure. It is suggested to be used with Rochu control unit.

- Anti-static material meets the national standard GB/T11210-2014, point-to-point resistance 0.1-1000MΩ requirements. When the workpiece is light, or very soft, easy to adhere to adsorp on the soft beak, anti-static dust-free traceless material [LPAS] is preferred.

	BMC-1G071010 Straight Fitting Anti-static	[LP]/S Normal Materia	BML-1G071010 Side Fitting Anti-static N	[LP]/S Iormal Materia	
	BMC-1G071010[I Straight Fitting Anti-static Dust-fr	LPAS]/S ree Normal Materia	BML-1G071010[Side Fitting Anti-static Dust-fr	LPAS]/S ee Normal Materia	
V					
	BMC Weight	4g	BML Weight	15.5g	

Parameter

Gripping range	≥6mm	Gripping force	0-0.2N	Gripping load*	8g	Ideal gripping workpiece size**	_
Internal gripping range	_	Internal gripping force	—	Internal gripping load*	—	Ideal internal gripping workpiece size**	—
Joint size	M5	Lifetime*	150 万次	Contact Temperature	<220°C	Safe Pressure***	<80kPa

*: Experimental conditions of load weight(Vertical gripping of rectangular smooth stainless steel workpiece with ideal size)

***: According to the working air pressure in the use scene and the surface roughness of the grabbed object, the lifetime may be affected to varying degrees. It is recommended to use Rochu control Unit. The working air pressure should not exceed the safe working pressure range.





6.5







Pressure-Fingertip Distance deformation curve

2.5







- Fingertip open under pressure and clamped in a vacuum. Fingertip distance G can be adjusted by working pressure. It is suggested to be used with Rochu control unit.

- Soft beak material is divided into Normal Material [P] and Dust-free Normal Material [PAS]. When the workpiece is light, or very soft, easy to adhere to adsorp on the soft beak, Dust-free Normal Material [PAS] is preferred.

BMC-1G071010 Straight Fitting Norm	D[P]/S nal Materia	BML-1G07101 Side Fitting Norma	0[P]/S Il Materia	
BMC-1G071010[PAS]/S Straight Fitting Dust-free Normal Material		BML-1G071010[PAS]/S Side Fitting Dust-free Normal Material		
BMC Weight	4g	BML Weight	15.5g	

Parameter

Gripping range	≥6mm	Gripping force	0-0.2N	Gripping load*	8g	Ideal gripping workpiece size**	_
Internal gripping range	_	Internal gripping force	_	Internal gripping load*	—	Ideal internal gripping workpiece size**	_
Joint size	M5	Lifetime*	150 万次	Contact Temperature	<220°C	Safe Pressure***	<80kPa

*: Experimental conditions of load weight(Vertical gripping of rectangular smooth stainless steel workpiece with ideal size)

Pressure

***: According to the working air pressure in the use scene and the surface roughness of the grabbed object, the lifetime may be affected to varying degrees. It is recommended to use Rochu control Unit. The working air pressure should not exceed the safe working pressure range.





6.5







Pressure-Fingertip Distance deformation curve

2.5





In安裝方式的



- Fingertip open under pressure and clamped in a vacuum. Fingertip distance G can be adjusted by working pressure. It is suggested to be used with Rochu control unit.

- Soft beak material is divided into Normal Material [H] and Dust-free Normal Material [PAS]. When the workpiece is light, or very soft, easy to adhere to adsorp on the soft beak, Dust-free Normal Material [HAS] is preferred.

BMC-1G364030 Straight Fitting Norm	P[H]/M nal Materia	BML-1G364030 Side Fitting Norma)[H]/M Il Materia	
BMC-1G364030[HAS]/M Straight Fitting Dust-free Normal Material		BML-1G364030[HAS]/M Side Fitting Dust-free Normal Material		
L				
BMC Weight	77.4g	BML Weight	91.9g	

Parameter

Gripping range	≥ 26mm	Gripping force	0-5.6N	Gripping load*	305g	Ideal gripping workpiece size**	—
Internal gripping range	—	Internal gripping force	—	Internal gripping load*	_	Ideal internal gripping workpiece size**	—
Joint size	G1/8	Lifetime*	150 万次	Contact Temperature	<220°C	Safe Pressure***	<160kPa

*: Experimental conditions of load weight(Vertical gripping of rectangular smooth stainless steel workpiece with ideal size)

***: According to the working air pressure in the use scene and the surface roughness of the grabbed object, the lifetime may be affected to varying degrees. It is recommended to use Rochu control Unit. The working air pressure should not exceed the safe working pressure range.



Vacuum



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Pressure













- Fingertip open under pressure and clamped in a vacuum. Fingertip distance G can be adjusted by working pressure. It is suggested to be used with Rochu control unit.

- Soft beak material is divided into Normal Material [P] and Dust-free Normal Material [PAS]. When the workpiece is light, or very soft, easy to adhere to adsorp on the soft beak, Dust-free Normal Material [PAS] is preferred.

9	BMC-1GN36403 Straight Fitting Norm	0[H]/M nal Materia	BML-1GN36403 Side Fitting Norma	0[H]/M al Materia	
	BMC-1GN364030[HAS]/M Straight Fitting Dust-free Normal Material		BML-1GN364030[HAS]/M Side Fitting Dust-free Normal Material		
	BMC Weight	78g	BML Weight	92g	

Parameter

Gripping range ≥ 26mm	Gripping force	0-5.6N	Gripping load*	305g	Ideal gripping workpiece size**	_
Internal gripping range —	Internal gripping force	—	Internal gripping load*	—	Ideal internal gripping workpiece size**	—
Joint size G1/8	Lifetime*	150 万次	Contact Temperature	<220°C	Safe Pressure***	<120kPa

*: Experimental conditions of load weight(Vertical gripping of rectangular smooth stainless steel workpiece with ideal size)

***: According to the working air pressure in the use scene and the surface roughness of the grabbed object, the lifetime may be affected to varying degrees. It is recommended to use Rochu control Unit. The working air pressure should not exceed the safe working pressure range.











- Fingertip open under pressure and clamped in a vacuum. Fingertip distance G can be adjusted by working pressure. It is suggested to be used with Rochu control unit.

- Soft beak material is divided into Normal Material [P] and Dust-free Normal Material [PAS]. When the workpiece is light, or very soft, easy to adhere to adsorp on the soft beak, Dust-free Normal Material [PAS] is preferred.

BMC-20201[ŀ Straight Fitting Norm	1]/S nal Materia	BML-20201[ł Side Fitting Norma	H]/S Il Materia	
BMC-20201[HAS]/S Straight Fitting Dust-free Normal Material		BML-20201[HAS]/S Side Fitting Dust-free Normal Material		
BMC Weight	1.2g	BML Weight	16.3g	

Parameter

Gripping range	0-3mm	Gripping force	0-0.5N	Gripping load*	21g	Ideal gripping workpiece size**	3mm
Internal gripping range	—	Internal gripping force	—	Internal gripping load*	—	Ideal internal gripping workpiece size**	—
Joint size	M5	Lifetime*	150 万次	Contact Temperature	<220°C	Safe Pressure***	<160kPa

*: Experimental conditions of load weight(Vertical gripping of rectangular smooth stainless steel workpiece with ideal size)

***: According to the working air pressure in the use scene and the surface roughness of the grabbed object, the lifetime may be affected to varying degrees. It is recommended to use Rochu control Unit. The working air pressure should not exceed the safe working pressure range.

Vacuum















- Fingertip open under pressure and clamped in a vacuum. Fingertip distance D can be adjusted by working pressure. It is suggested to be used with Rochu control unit.

- Soft beak material is divided into Normal Material [P] and Dust-free Normal Material [PAS]. When the workpiece is light, or very soft, easy to adhere to adsorp on the soft beak, Dust-free Normal Material [PAS] is preferred.

BMC-2D08[H Straight Fitting Norm	I]/S nal Materia	BML-2D08[H Side Fitting Norma	I]/S I Materia	
BMC-2D08[HA	NS]/S	BML-2D08[HA	AS]/S	
Straight Fitting Dust-free N	Normal Material	Side Fitting Dust-free No	ormal Material	
				Edf
BMC Weight	0.8g	BML Weight	15.9g	

Parameter

Gripping range	_	Gripping force	_	Gripping load*	_	Ideal gripping workpiece size**	_
Internal gripping range	4-13mm	Internal gripping force	0-1.1N	Internal gripping load*	65g	Ideal internal gripping workpiece size**	6mm
Joint size	M5	Lifetime*	150 万次	Contact Temperature	<220°C	Safe Pressure***	<170kPa

*: Experimental conditions of load weight(Vertical gripping of rectangular smooth stainless steel workpiece with ideal size)

***: According to the working air pressure in the use scene and the surface roughness of the grabbed object, the lifetime may be affected to varying degrees. It is recommended to use Rochu control Unit. The working air pressure should not exceed the safe working pressure range.









- Fingertip open under pressure and clamped in a vacuum. Fingertip distance G can be adjusted by working pressure. It is suggested to be used with Rochu control unit.
- The antistatic material meets the requirements of GB/T 11210-2014 and point-to-point resistance of 0.1-1000MΩ. It is suitable for grasping scenarios with antistatic requirements.

BMC-2051D5[I	_P]/S	BML-2051D5[LP]/S	
Straight Fitting Anti-static	Normal Materia	Side Fitting Anti-static N	Normal Materia	0
Straight Fitting Anti-static Dust-fr	°AS]/S	BML-2001D0[LI	PAS]/S	
BMC Weight	3.9σ	BML Weight	15 4σ	
DIVIC Weight	J.Jg	DIVIL Weight	13.48	

Parameter

Gripping range 0-)-3mm	Gripping force	0-0.6N	Gripping load*	24g	Ideal gripping workpiece size**	3mm
Internal gripping range	-	Internal gripping force	—	Internal gripping load*	—	Ideal internal gripping workpiece size**	—
Joint size M	45	Lifetime*	150 万次	Contact Temperature	<220°C	Safe Pressure***	<90kPa

*: Experimental conditions of load weight(Vertical gripping of rectangular smooth stainless steel workpiece with ideal size)

***: According to the working air pressure in the use scene and the surface roughness of the grabbed object, the lifetime may be affected to varying degrees. It is recommended to use Rochu control Unit. The working air pressure should not exceed the safe working pressure range.

Vacuum





Atmosphere













- Fingertip open under pressure and clamped in a vacuum. Fingertip distance G can be adjusted by working pressure. It is suggested to be used with Rochu control unit.

The antistatic material meets the requirements of GB/T 11210-2014 and point-to-point resistance of $0.1-1000M\Omega$. It is suitable for grasping scenarios with antistatic requirements.

BMC-2051D5[P]/S	BML-2051D5	[P]/S	
Straight Fitting Norm	al Materia	Side Fitting Norma	Il Materia	
BMC-2051D5[P	AS]/S	BML-2051D5[PAS]/S		
Straight Fitting Dust-free N	Normal Material	Side Fitting Dust-free No	ormal Material	
BMC Weight	3.9g	BML Weight	15.4g	

Parameter

Gripping range	0-3mm	Gripping force	0-0.6N	Gripping load*	24g	Ideal gripping workpiece size**	3mm
Internal gripping range	—	Internal gripping force	—	Internal gripping load*	—	Ideal internal gripping workpiece size**	—
Joint size	M5	Lifetime*	150 万次	Contact Temperature	<220°C	Safe Pressure***	<90kPa

*: Experimental conditions of load weight(Vertical gripping of rectangular smooth stainless steel workpiece with ideal size)

***: According to the working air pressure in the use scene and the surface roughness of the grabbed object, the lifetime may be affected to varying degrees. It is recommended to use Rochu control Unit. The working air pressure should not exceed the safe working pressure range.



















- Fingertip open under pressure and clamped in a vacuum. Fingertip distance G can be adjusted by working pressure. It is suggested to be used with Rochu control unit.

- Soft beak material is divided into Normal Material [P] and Dust-free Normal Material [PAS]. When the workpiece is light, or very soft, easy to adhere to adsorp on the soft beak, Dust-free Normal Material [PAS] is preferred.

BMC-2076D5	[P]/S pal Materia	BML-2076D5	[P]/S	
BMC-2076D5[PAS]/S Straight Fitting Dust-free Normal Material		BML-2076D5[PAS]/S Side Fitting Dust-free Normal Material		2
				EH
[
BMC Weight	5.4g	BML Weight	16.9g	

Parameter

Gripping range	5.5-7.5mm	Gripping force	0-0.08N	Gripping load*	7g	Ideal gripping workpiece size**	6.5mm
Internal gripping range	—	Internal gripping force	—	Internal gripping load*	—	Ideal internal gripping workpiece size**	—
Joint size	M5	Lifetime*	150 万次	Contact Temperature	<220°C	Safe Pressure***	<80kPa

*: Experimental conditions of load weight(Vertical gripping of rectangular smooth stainless steel workpiece with ideal size)

***: According to the working air pressure in the use scene and the surface roughness of the grabbed object, the lifetime may be affected to varying degrees. It is recommended to use Rochu control Unit. The working air pressure should not exceed the safe working pressure range.





Atmosphere



G

Pressure











- Fingertip open under pressure and clamped in a vacuum. Fingertip distance D can be adjusted by working pressure. It is suggested to be used with Rochu control unit.

- Soft beak material is divided into Normal Material [P] and Dust-free Normal Material [PAS]. When the workpiece is light, or very soft, easy to adhere to adsorp on the soft beak, Dust-free Normal Material [PAS] is preferred.

BMC-20301[ł Straight Fitting Norm	H]/S nal Materia	BML-20301[H Side Fitting Norma	H]/S I Materia	
BMC-20301[H/ Straight Fitting Dust-free I	AS]/S Normal Material	BML-20301[H/ Side Fitting Dust-free No	AS]/S ormal Material	
BMC Weight	6g	BML Weight	17.5g	

Parameter

Gripping range	0-3.5mm	Gripping force	0-1.0N	Gripping load*	43g	Ideal gripping workpiece size**	3.5mm
Internal gripping range	—	Internal gripping force	—	Internal gripping load*	—	Ideal internal gripping workpiece size**	—
Joint size	M5	Lifetime*	150 万次	Contact Temperature	<220°C	Safe Pressure***	<120kPa

*: Experimental conditions of load weight(Vertical gripping of rectangular smooth stainless steel workpiece with ideal size)

***: According to the working air pressure in the use scene and the surface roughness of the grabbed object, the lifetime may be affected to varying degrees. It is recommended to use Rochu control Unit. The working air pressure should not exceed the safe working pressure range.

Vacuum





Atmosphere















- Fingertip open under pressure and clamped in a vacuum. Fingertip distance D can be adjusted by working pressure. It is suggested to be used with Rochu control unit.

- Soft beak material is divided into Normal Material [P] and Dust-free Normal Material [PAS]. When the workpiece is light, or very soft, easy to adhere to adsorp on the soft beak, Dust-free Normal Material [PAS] is preferred.

	BMC-20501[ł Straight Fitting Norm	H]/S nal Materia	BML-20501[H Side Fitting Norma	H]/S I Materia	
	BMC-20501[HAS]/S Straight Fitting Dust-free Normal Material		BML-20501[HAS]/S Side Fitting Dust-free Normal Material		
Rojahi kon					
	BMC Weight	6.6g	BML Weight	18.1g	

Parameter

Gripping range	_	Gripping force	_	Gripping load*	_	Ideal gripping workpiece size**	_
Internal gripping range	4-9mm	Internal gripping force	0-8.3N	Internal gripping load*	504g	Ideal internal gripping workpiece size**	6.5mm
Joint size	M5	Lifetime*	150 万次	Contact Temperature	<220°C	Safe Pressure***	<160kPa

*: Experimental conditions of load weight(Vertical gripping of rectangular smooth stainless steel workpiece with ideal size)

***: According to the working air pressure in the use scene and the surface roughness of the grabbed object, the lifetime may be affected to varying degrees. It is recommended to use Rochu control Unit. The working air pressure should not exceed the safe working pressure range.





Atmosphere



Pressure











- Fingertip open under pressure and clamped in a vacuum. Fingertip distance D can be adjusted by working pressure. It is suggested to be used with Rochu control unit.

- Soft beak material is divided into Normal Material [P] and Dust-free Normal Material [PAS]. When the workpiece is light, or very soft, easy to adhere to adsorp on the soft beak, Dust-free Normal Material [PAS] is preferred.

	BMC-2102D5[ł Straight Fitting Norm	H]/SN nal Materia	BML-2102D5[ł Side Fitting Norma	H]/SN Il Materia	
E	BMC-2102D5[H/ Straight Fitting Dust-free I	AS]/SN Normal Material	BML-2102D5[H, Side Fitting Dust-free No	AS]/SN ormal Material	
	BMC Weight	3.9g	BML Weight	15.4g	

Parameter

Gripping range	_	Gripping force	_	Gripping load*	_	Ideal gripping workpiece size**	_
Internal gripping range	8-15mm	Internal gripping force	0-0.54N	Internal gripping load*	27g	Ideal internal gripping workpiece size**	10mm
Joint size	M5	Lifetime*	150 万次	Contact Temperature	<220°C	Safe Pressure***	<180kPa

*: Experimental conditions of load weight(Vertical gripping of rectangular smooth stainless steel workpiece with ideal size)

***: According to the working air pressure in the use scene and the surface roughness of the grabbed object, the lifetime may be affected to varying degrees. It is recommended to use Rochu control Unit. The working air pressure should not exceed the safe working pressure range.





Atmosphere



Pressure









- Fingertip open under pressure and clamped in a vacuum. Fingertip distance G can be adjusted by working pressure. It is suggested to be used with Rochu control unit.

- Soft beak material is divided into Normal Material [P] and Dust-free Normal Material [PAS]. When the workpiece is light, or very soft, easy to adhere to adsorp on the soft beak, Dust-free Normal Material [PAS] is preferred.

BMC-2V0401 Straight Fitting Norn	[P]/S nal Materia	BML-2V0401 Side Fitting Norma	[P]/S al Materia	
BMC-2V0401[PAS]/S Straight Fitting Dust-free Normal Material		BML-2V0401[PAS]/S Side Fitting Dust-free Normal Material		
BMC Weight	6.9g	BML Weight	18.4g	

Parameter

Gripping range 0-7.5mm	Gripping force	0-1.5N	Gripping load*	79g	Ideal gripping workpiece size**	3mm
Internal gripping range —	Internal gripping force	—	Internal gripping load*	_	Ideal internal gripping workpiece size**	—
Joint size M5	Lifetime*	150 万次	Contact Temperature	<220°C	Safe Pressure***	<100kPa

*: Experimental conditions of load weight(Vertical gripping of rectangular smooth stainless steel workpiece with ideal size)

***: According to the working air pressure in the use scene and the surface roughness of the grabbed object, the lifetime may be affected to varying degrees. It is recommended to use Rochu control Unit. The working air pressure should not exceed the safe working pressure range.







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Rochu

- Fingertip open under pressure and clamped in a vacuum. Fingertip distance D can be adjusted by working pressure. It is suggested to be used with Rochu control unit.

- Soft beak material is divided into Normal Material [P] and Dust-free Normal Material [PAS]. When the workpiece is light, or very soft, easy to adhere to adsorp on the soft beak, Dust-free Normal Material [PAS] is preferred.

BMC-20603[ł Straight Fitting Norm	H]/S nal Materia	BML-20603[H Side Fitting Norma	l]/S I Materia	
BMC-20603[H, Straight Fitting Dust-free I	AS]/S Normal Material	BML-20603[HA Side Fitting Dust-free No	AS]/S ormal Material	
BMC Weight	7.3g	BML Weight	18.8g	

Parameter

Gripping range —	Gripping force	_	Gripping load*	_	Ideal gripping workpiece size**	_
Internal gripping range 8-16mm	Internal gripping force	0-1.8N	Internal gripping load*	83g	Ideal internal gripping workpiece size**	9mm
Joint size M5	Lifetime*	150 万次	Contact Temperature	<220°C	Safe Pressure***	<180kPa

*: Experimental conditions of load weight(Vertical gripping of rectangular smooth stainless steel workpiece with ideal size)

***: According to the working air pressure in the use scene and the surface roughness of the grabbed object, the lifetime may be affected to varying degrees. It is recommended to use Rochu control Unit. The working air pressure should not exceed the safe working pressure range.





Atmosphere















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- Fingertip open under pressure and clamped in a vacuum. Fingertip distance G can be adjusted by working pressure. It is suggested to be used with Rochu control unit.

- Soft beak material is divided into Normal Material [P] and Dust-free Normal Material [PAS]. When the workpiece is light, or very soft, easy to adhere to adsorp on the soft beak, Dust-free Normal Material [PAS] is preferred.

BMC-2G1211 Straight Fitting Norm	L[H] nal Materia	BML-2G1211 Side Fitting Norma	.[H] I Materia	
BMC-2G1211[Straight Fitting Dust-free N	HAS] Normal Material	BML-2G1211[Side Fitting Dust-free No	HAS] ormal Material	
BMC Weight	11.3g	BML Weight	19.7g	

Parameter

Gripping range	1-18mm	Gripping force	0-3.7N	Gripping load*	233g	Ideal gripping workpiece size**	18mm
Internal gripping range	—	Internal gripping force	—	Internal gripping load*	—	Ideal internal gripping workpiece size**	—
Joint size	M5	Lifetime*	150 万次	Contact Temperature	<220°C	Safe Pressure***	<160kPa

*: Experimental conditions of load weight(Vertical gripping of rectangular smooth stainless steel workpiece with ideal size)

***: According to the working air pressure in the use scene and the surface roughness of the grabbed object, the lifetime may be affected to varying degrees. It is recommended to use Rochu control Unit. The working air pressure should not exceed the safe working pressure range.

Vacuum





Pressure-Fingertip Distance deformation curve

2.5

Pressure









- Fingertip open under pressure and clamped in a vacuum. Fingertip distance G can be adjusted by working pressure. It is suggested to be used with Rochu control unit.

- Soft beak material is divided into Normal Material [P] and Dust-free Normal Material [PAS]. When the workpiece is light, or very soft, easy to adhere to adsorp on the soft beak, Dust-free Normal Material [PAS] is preferred.

BMC-20802 Straight Fitting Norm	[P] nal Materia	BML-20802 Side Fitting Norma	[P] I Materia	
BMC-20802[PAS] Straight Fitting Dust-free Normal Material		BML-20802[PAS] Side Fitting Dust-free Normal Material		0
BMC Weight	13.1g	BML Weight	21.5g	

Parameter

Gripping range	0-5mm	Gripping force	0-2.0N	Gripping load*	84g	Ideal gripping workpiece size**	4.5mm
Internal gripping range	—	Internal gripping force	—	Internal gripping load*	—	Ideal internal gripping workpiece size**	—
Joint size	M5	Lifetime*	150 万次	Contact Temperature	<220°C	Safe Pressure***	<120kPa

*: Experimental conditions of load weight(Vertical gripping of rectangular smooth stainless steel workpiece with ideal size)

***: According to the working air pressure in the use scene and the surface roughness of the grabbed object, the lifetime may be affected to varying degrees. It is recommended to use Rochu control Unit. The working air pressure should not exceed the safe working pressure range.














- Fingertip open under pressure and clamped in a vacuum. Fingertip distance G can be adjusted by working pressure. It is suggested to be used with Rochu control unit.

- Soft beak material is divided into Normal Material [P] and Dust-free Normal Material [PAS]. When the workpiece is light, or very soft, easy to adhere to adsorp on the soft beak, Dust-free Normal Material [PAS] is preferred.

BMC-21608 Straight Fitting Norm	[P] nal Materia	BML-21608 Side Fitting Norma	[P] Il Materia	
BMC-21608[F Straight Fitting Dust-free N	PAS] Normal Material	BML-21608[F Side Fitting Dust-free No	PAS] ormal Material	
BMC Weight	13g	BML Weight	21.4g	

Parameter

Gripping range	0-12mm	Gripping force	0-1.4N	Gripping load*	63g	Ideal gripping workpiece size**	10mm
Internal gripping range	—	Internal gripping force	—	Internal gripping load*	—	Ideal internal gripping workpiece size**	_
Joint size	M5	Lifetime*	150 万次	Contact Temperature	<220°C	Safe Pressure***	<80kPa

*: Experimental conditions of load weight(Vertical gripping of rectangular smooth stainless steel workpiece with ideal size)

***: According to the working air pressure in the use scene and the surface roughness of the grabbed object, the lifetime may be affected to varying degrees. It is recommended to use Rochu control Unit. The working air pressure should not exceed the safe working pressure range.









- Fingertip open under pressure and clamped in a vacuum. Fingertip distance G can be adjusted by working pressure. It is suggested to be used with Rochu control unit.

- Soft beak material is divided into Normal Material [P] and Dust-free Normal Material [PAS]. When the workpiece is light, or very soft, easy to adhere to adsorp on the soft beak, Dust-free Normal Material [PAS] is preferred.

BMC-20005V	/[P]	BML-20005V	/[P]			
BMC-20005V[PAS] Straight Fitting Dust-free Normal Material		BML-20005V[PAS] Side Fitting Dust-free Normal Material				
BMC Weight	16.5g	BML Weight	24.9g			

Parameter

Gripping range	0-9.5mm	Gripping force	0-3.0N	Gripping load*	123g	Ideal gripping workpiece size**	9.5mm
Internal gripping range	—	Internal gripping force	—	Internal gripping load*	—	Ideal internal gripping workpiece size**	—
Joint size	M5	Lifetime*	150 万次	Contact Temperature	<220°C	Safe Pressure***	<80kPa

*: Experimental conditions of load weight(Vertical gripping of rectangular smooth stainless steel workpiece with ideal size)

***: According to the working air pressure in the use scene and the surface roughness of the grabbed object, the lifetime may be affected to varying degrees. It is recommended to use Rochu control Unit. The working air pressure should not exceed the safe working pressure range.







- Fingertip open under pressure and clamped in a vacuum. Fingertip distance G can be adjusted by working pressure. It is suggested to be used with Rochu control unit.

- Soft beak material is divided into Normal Material [P] and Dust-free Normal Material [PAS]. When the workpiece is light, or very soft, easy to adhere to adsorp on the soft beak, Dust-free Normal Material [PAS] is preferred.

-When used with the fittings PN-CW5A11, the soft installation Angle will not be offset after multiple opening and closing.

BMC-20005V[F Anti rotation straight fitting	P]/A11 normal material	BML-20005V[P Anti rotation side fitting r]/A11 normal material	
BMC-20005V[PAS]/A11 Anti rotation straight fitting dust-free normal material		BML-20005V[PAS]/A11 Anti rotation side fitting dust-free normal material		
BMC Weight	16.5g	BML Weight	24.9g	

Parameter

Gripping range	0-9.5mm	Gripping force	0-3.0N	Gripping load*	123g	Ideal gripping workpiece size**	9.5mm
Internal gripping range	—	Internal gripping force	—	Internal gripping load*	_	Ideal internal gripping workpiece size**	—
Joint size	M5	Lifetime*	150 万次	Contact Temperature	<220°C	Safe Pressure***	<80kPa

*: Experimental conditions of load weight(Vertical gripping of rectangular smooth stainless steel workpiece with ideal size)

***: According to the working air pressure in the use scene and the surface roughness of the grabbed object, the lifetime may be affected to varying degrees. It is recommended to use Rochu control Unit. The working air pressure should not exceed the safe working pressure range.





Pressure









- Fingertip open under pressure and clamped in a vacuum. Fingertip distance G can be adjusted by working pressure. It is suggested to be used with Rochu control unit.

- Soft beak material is divided into Normal Material [P] and Dust-free Normal Material [PAS]. When the workpiece is light, or very soft, easy to adhere to adsorp on the soft beak, Dust-free Normal Material [PAS] is preferred.

BMC-20006[P]	BML-20006	[P]	
Straight Fitting Norm	al Materia	Side Fitting Normal Materia		
BMC-20006[PAS]		BML-20006[PAS]		
Straight Fitting Dust-free Normal Material		Side Fitting Dust-free Normal Material		
BMC Weight	16.3g	BML Weight	24.7g	
	.0		0	

Parameter

Gripping range	0-14.5mm	Gripping force	0-2.1N	Gripping load*	89g	Ideal gripping workpiece size**	11mm
Internal gripping range	—	Internal gripping force	—	Internal gripping load*	—	Ideal internal gripping workpiece size**	_
Joint size	M5	Lifetime*	150 万次	Contact Temperature	<220°C	Safe Pressure***	<80kPa

*: Experimental conditions of load weight(Vertical gripping of rectangular smooth stainless steel workpiece with ideal size)

***: According to the working air pressure in the use scene and the surface roughness of the grabbed object, the lifetime may be affected to varying degrees. It is recommended to use Rochu control Unit. The working air pressure should not exceed the safe working pressure range.

0

Vacuum



Atmosphere











- Fingertip open under pressure and clamped in a vacuum. Fingertip distance G can be adjusted by working pressure. It is suggested to be used with Rochu control unit.

- Soft beak material is divided into Normal Material [P] and Dust-free Normal Material [PAS]. When the workpiece is light, or very soft, easy to adhere to adsorp on the soft beak, Dust-free Normal Material [PAS] is preferred.

	BMC-20606 Straight Fitting Norm	[P] nal Materia	BML-20606 Side Fitting Norma	[P] I Materia	
<u>e</u>	BMC-20606[PAS] Straight Fitting Dust-free Normal Material		BML-20606[PAS] Side Fitting Dust-free Normal Material		
	BMC Weight	16.3g	BML Weight	24.7g	

Parameter

Gripping range	0-11mm	Gripping force	0-2.1N	Gripping load*	89g	Ideal gripping workpiece size**	11mm
Internal gripping range	—	Internal gripping force	—	Internal gripping load*	—	Ideal internal gripping workpiece size**	—
Joint size	M5	Lifetime*	150 万次	Contact Temperature	<220°C	Safe Pressure***	<80kPa

*: Experimental conditions of load weight(Vertical gripping of rectangular smooth stainless steel workpiece with ideal size)

***: According to the working air pressure in the use scene and the surface roughness of the grabbed object, the lifetime may be affected to varying degrees. It is recommended to use Rochu control Unit. The working air pressure should not exceed the safe working pressure range.









- Fingertip open under pressure and clamped in a vacuum. Fingertip distance G can be adjusted by working pressure. It is suggested to be used with Rochu control unit.

- Soft beak material is divided into Normal Material [P] and Dust-free Normal Material [PAS]. When the workpiece is light, or very soft, easy to adhere to adsorp on the soft beak, Dust-free Normal Material [PAS] is preferred.

BMC-2G1012[H Straight Fitting Norm	H]/SN nal Materia	BML-2G1012[I Side Fitting Norma	H]/SN Il Materia	
BMC-2G1012[HAS]/SN Straight Fitting Dust-free Normal Material		BML-2G1012[HAS]/SN Side Fitting Dust-free Normal Material		
BMC Weight	14.3g	BML Weight	28.8g]

Parameter

Gripping range	0-14.5mm	Gripping force	0-2.9N	Gripping load*	125g	Ideal gripping workpiece size**	14mm
Internal gripping range	—	Internal gripping force	—	Internal gripping load*	—	Ideal internal gripping workpiece size**	—
Joint size	G1/8	Lifetime*	150 万次	Contact Temperature	<220°C	Safe Pressure***	<100kPa

*: Experimental conditions of load weight(Vertical gripping of rectangular smooth stainless steel workpiece with ideal size)

***: According to the working air pressure in the use scene and the surface roughness of the grabbed object, the lifetime may be affected to varying degrees. It is recommended to use Rochu control Unit. The working air pressure should not exceed the safe working pressure range.



Atmosphere



Pressure











- Fingertip open under pressure and clamped in a vacuum. Fingertip distance G can be adjusted by working pressure. It is suggested to be used with Rochu control unit.

- Soft beak material is divided into Normal Material [P] and Dust-free Normal Material [PAS]. When the workpiece is light, or very soft, easy to adhere to adsorp on the soft beak, Dust-free Normal Material [PAS] is preferred.

BMC-20606[F Straight Fitting Norm	P]/M nal Materia	BML-20606[F Side Fitting Norma	P]/M I Materia	
BMC-20606[PAS]/M Straight Fitting Dust-free Normal Material		BML-20606[PAS]/M Side Fitting Dust-free Normal Material		
BMC Weight	23.2g	BML Weight	20.9g	

Parameter

Gripping range	0-18mm	Gripping force	0-2.4N	Gripping load*	124g	Ideal gripping workpiece size**	14mm
Internal gripping range	—	Internal gripping force	—	Internal gripping load*	—	Ideal internal gripping workpiece size**	—
Joint size	M5	Lifetime*	150 万次	Contact Temperature	<220°C	Safe Pressure***	<80kPa

*: Experimental conditions of load weight(Vertical gripping of rectangular smooth stainless steel workpiece with ideal size)

***: According to the working air pressure in the use scene and the surface roughness of the grabbed object, the lifetime may be affected to varying degrees. It is recommended to use Rochu control Unit. The working air pressure should not exceed the safe working pressure range.















- Fingertip open under pressure and clamped in a vacuum. Fingertip distance G can be adjusted by working pressure. It is suggested to be used with Rochu control unit.

- Soft beak material is divided into Normal Material [P] and Dust-free Normal Material [PAS]. When the workpiece is light, or very soft, easy to adhere to adsorp on the soft beak, Dust-free Normal Material [PAS] is preferred.

BMC-21413 Straight Fitting Norm	[P] nal Materia	BML-21413 Side Fitting Norma	[P] I Materia	
BMC-21413[PAS] Straight Fitting Dust-free Normal Material		BML-21413[PAS] Side Fitting Dust-free Normal Material		
BMC Weight	20.2g	BML Weight	28.6g	

Parameter

Gripping range	0-17mm	Gripping force	0-2.1N	Gripping load*	91g	Ideal gripping workpiece size**	14.5mm
Internal gripping range	—	Internal gripping force	—	Internal gripping load*	—	Ideal internal gripping workpiece size**	—
Joint size	M5	Lifetime*	150 万次	Contact Temperature	<220°C	Safe Pressure***	<60kPa

*: Experimental conditions of load weight(Vertical gripping of rectangular smooth stainless steel workpiece with ideal size)

***: According to the working air pressure in the use scene and the surface roughness of the grabbed object, the lifetime may be affected to varying degrees. It is recommended to use Rochu control Unit. The working air pressure should not exceed the safe working pressure range.









- Fingertip open under pressure and clamped in a vacuum. Fingertip distance G can be adjusted by working pressure. It is suggested to be used with Rochu control unit.

- Soft beak material is divided into Normal Material [P] and Dust-free Normal Material [PAS]. When the workpiece is light, or very soft, easy to adhere to adsorp on the soft beak, Dust-free Normal Material [PAS] is preferred.

BMC-21606[F Straight Fitting Norm	P]/M nal Materia	BML-21606[F Side Fitting Norma	P]/M Il Materia	
BMC-21606[PAS]/M Straight Fitting Dust-free Normal Material		BML-21606[PAS]/M Side Fitting Dust-free Normal Material		
BMC Weight	22.7g	BML Weight	20.4g	

Parameter

Gripping range	0-18mm	Gripping force	0-2.4N	Gripping load*	124g	Ideal gripping workpiece size**	14mm
Internal gripping range	—	Internal gripping force	—	Internal gripping load*	—	Ideal internal gripping workpiece size**	_
Joint size	M5	Lifetime*	150 万次	Contact Temperature	<220°C	Safe Pressure***	<80kPa

*: Experimental conditions of load weight(Vertical gripping of rectangular smooth stainless steel workpiece with ideal size)

***: According to the working air pressure in the use scene and the surface roughness of the grabbed object, the lifetime may be affected to varying degrees. It is recommended to use Rochu control Unit. The working air pressure should not exceed the safe working pressure range.







- Fingertip open under pressure and clamped in a vacuum. Fingertip distance G can be adjusted by working pressure. It is suggested to be used with Rochu control unit.

- Soft beak material is divided into Normal Material [H] and Dust-free Normal Material [PAS]. When the workpiece is light, or very soft, easy to adhere to adsorp on the soft beak, Dust-free Normal Material [HAS] is preferred.

BMC-2G1217[ł Straight Fitting Norn	H]/SN nal Materia	BML-2G1217[I Side Fitting Norma	H]/SN Il Materia	•
BMC-2G1217[HAS]/SN Straight Fitting Dust-free Normal Material		BML-2G1217[HAS]/SN Side Fitting Dust-free Normal Material		
BMC Weight	19.3g	BML Weight	33.8g	

Parameter

Gripping range	0-20mm	Gripping force	0-6.8N	Gripping load*	346g	Ideal gripping workpiece size**	18mm
Internal gripping range	—	Internal gripping force	—	Internal gripping load*	—	Ideal internal gripping workpiece size**	—
Joint size	G1/8	Lifetime*	150 万次	Contact Temperature	<220°C	Safe Pressure***	<100kPa

*: Experimental conditions of load weight (Vertical gripping of rectangular smooth stainless steel workpiece with ideal size)

***: According to the working air pressure in the use scene and the surface roughness of the grabbed object, the lifetime may be affected to varying degrees. It is recommended to use Rochu control Unit. The working air pressure should not exceed the safe working pressure range.



Pressure







Pressure-Fingertip Distance deformation curve

16.1 25.







- Fingertip open under pressure and clamped in a vacuum. Fingertip distance G can be adjusted by working pressure. It is suggested to be used with Rochu control unit.

- Soft beak material is divided into Normal Material [P] and Dust-free Normal Material [PAS]. When the workpiece is light, or very soft, easy to adhere to adsorp on the soft beak, Dust-free Normal Material [PAS] is preferred.

	BMC-21812	[P]	BML-21812	[P]	
	Straight Fitting Norm	nal Materia	Side Fitting Normal Materia		
	BMC-21812[PAS]		BML-21812[PAS]		
	Straight Fitting Dust-free Normal Material		Side Fitting Dust-free Normal Material		
					W
	BMC Weight	23g	BML Weight	31.4g	

Parameter

Gripping range	0-14.5mm	Gripping force	0-1.8N	Gripping load*	81g	Ideal gripping workpiece size**	14.5mm
Internal gripping range	24-29mm	Internal gripping force	0-1.5N	Internal gripping load*	67g	Ideal internal gripping workpiece size**	26mm
Joint size	M5	Lifetime*	150 万次	Contact Temperature	<220°C	Safe Pressure***	<80kPa

*: Experimental conditions of load weight(Vertical gripping of rectangular smooth stainless steel workpiece with ideal size)

***: According to the working air pressure in the use scene and the surface roughness of the grabbed object, the lifetime may be affected to varying degrees. It is recommended to use Rochu control Unit. The working air pressure should not exceed the safe working pressure range.







- Fingertip open under pressure and clamped in a vacuum. Fingertip distance G can be adjusted by working pressure. It is suggested to be used with Rochu control unit.

- Soft beak material is divided into Normal Material [P] and Dust-free Normal Material [PAS]. When the workpiece is light, or very soft, easy to adhere to adsorp on the soft beak, Dust-free Normal Material [PAS] is preferred.

BMC-21812[F Straight Fitting Norm	P]/M nal Materia	BML-21812[F Side Fitting Norma	P]/M I Materia	
BMC-21812[PAS]/M Straight Fitting Dust-free Normal Material		BML-21812[PAS]/M Side Fitting Dust-free Normal Material		
BMC Weight	39.6g	BML Weight	37.3g	

Parameter

Gripping range	0-14.5mm	Gripping force	0-1.8N	Gripping load*	81g	Ideal gripping workpiece size**	14.5mm
Internal gripping range	24-29mm	Internal gripping force	0-1.5N	Internal gripping load*	67g	Ideal internal gripping workpiece size**	26mm
Joint size	M5	Lifetime*	150 万次	Contact Temperature	<220°C	Safe Pressure***	<80kPa

*: Experimental conditions of load weight(Vertical gripping of rectangular smooth stainless steel workpiece with ideal size)

***: According to the working air pressure in the use scene and the surface roughness of the grabbed object, the lifetime may be affected to varying degrees. It is recommended to use Rochu control Unit. The working air pressure should not exceed the safe working pressure range.

Vacuum







Pressure









- Fingertip open under pressure and clamped in a vacuum. Fingertip distance G can be adjusted by working pressure. It is suggested to be used with Rochu control unit.

- Soft beak material is divided into Normal Material [P] and Dust-free Normal Material [PAS]. When the workpiece is light, or very soft, easy to adhere to adsorp on the soft beak, Dust-free Normal Material [PAS] is preferred.

_	BMC-22219[F Straight Fitting Norm	P]/M nal Materia	BML-22219[F Side Fitting Norma	P]/M Il Materia	
	BMC-22219[PAS]/M Straight Fitting Dust-free Normal Material		BML-22219[PAS]/M Side Fitting Dust-free Normal Material		
	BMC Weight	47.9g	BML Weight	45.6g	

Parameter

Gripping range	1.5-20mm	Gripping force	0-1.3N	Gripping load*	54g	Ideal gripping workpiece size**	20mm
Internal gripping range	28-40mm	Internal gripping force	0-1.7N	Internal gripping load*	71g	Ideal internal gripping workpiece size**	30mm
Joint size	M5	Lifetime*	150 万次	Contact Temperature	<220°C	Safe Pressure***	<80kPa

*: Experimental conditions of load weight(Vertical gripping of rectangular smooth stainless steel workpiece with ideal size)

***: According to the working air pressure in the use scene and the surface roughness of the grabbed object, the lifetime may be affected to varying degrees. It is recommended to use Rochu control Unit. The working air pressure should not exceed the safe working pressure range.











- Fingertip open under pressure and clamped in a vacuum. Fingertip distance G can be adjusted by working pressure. It is suggested to be used with Rochu control unit.

- Soft beak material is divided into Normal Material [P] and Dust-free Normal Material [PAS]. When the workpiece is light, or very soft, easy to adhere to adsorp on the soft beak, Dust-free Normal Material [PAS] is preferred.

BMC-2G1622[H Straight Fitting Norm	H]/SN nal Materia	BML-2G1622[ł Side Fitting Norma	H]/SN al Materia	
BMC-2G1622[H/ Straight Fitting Dust-free N	AS]/SN Normal Material	BML-2G1622[H, Side Fitting Dust-free No	AS]/SN ormal Material	
				1 and 1
BMC Weight	23.6g	BML Weight	38.1g	

Parameter

Gripping range	0-25mm	Gripping force	0-14.3N	Gripping load*	663g	Ideal gripping workpiece size**	25mm
Internal gripping range	—	Internal gripping force	—	Internal gripping load*	—	Ideal internal gripping workpiece size**	—
Joint size	G1/8	Lifetime*	150 万次	Contact Temperature	<220°C	Safe Pressure***	<120kPa

*: Experimental conditions of load weight (Vertical gripping of rectangular smooth stainless steel workpiece with ideal size)

***: According to the working air pressure in the use scene and the surface roughness of the grabbed object, the lifetime may be affected to varying degrees. It is recommended to use Rochu control Unit. The working air pressure should not exceed the safe working pressure range.



Pressure







Pressure-Fingertip Distance deformation curve

34





- Fingertip open under pressure and clamped in a vacuum. Fingertip distance G can be adjusted by working pressure. It is suggested to be used with Rochu control unit.

- Soft beak material is divided into Normal Material [HB] and Dust-free Normal Material [PAS]. When the workpiece is light, or very soft, easy to adhere to adsorp on the soft beak, Dust-free Normal Material [HBAS] is preferred.

	BMC-2G1624[H Straight Fitting Norm	HB]/S nal Materia	BML-2G1624[Side Fitting Norma	HB]/S al Materia	
	BMC-2G1624[HBAS]/S Straight Fitting Dust-free Normal Material		BML-2G1624[HBAS]/S Side Fitting Dust-free Normal Material		
	BMC Weight	23.6g	BML Weight	38.1g	

Parameter

Gripping range	8-24mm	Gripping force	0-5.8N	Gripping load*	349g	Ideal gripping workpiece size**	24mm
Internal gripping range	—	Internal gripping force	—	Internal gripping load*	—	Ideal internal gripping workpiece size**	_
Joint size	G1/8	Lifetime*	150 万次	Contact Temperature	<220°C	Safe Pressure***	<120kPa

*: Experimental conditions of load weight(Vertical gripping of rectangular smooth stainless steel workpiece with ideal size)

***: According to the working air pressure in the use scene and the surface roughness of the grabbed object, the lifetime may be affected to varying degrees. It is recommended to use Rochu control Unit. The working air pressure should not exceed the safe working pressure range.









- Fingertip open under pressure and clamped in a vacuum. Fingertip distance G can be adjusted by working pressure. It is suggested to be used with Rochu control unit.

- Soft beak material is divided into Normal Material [P] and Dust-free Normal Material [PAS]. When the workpiece is light, or very soft, easy to adhere to adsorp on the soft beak, Dust-free Normal Material [PAS] is preferred.

BMC-2G2027[H Straight Fitting Norm	H]/SN nal Materia	BML-2G2027[I Side Fitting Norma	H]/SN al Materia	
BMC-2G2027[H/ Straight Fitting Dust-free N	AS]/SN Normal Material	BML-2G2027[HJ Side Fitting Dust-free No	AS]/SN ormal Material	
BMC Weight	22.9g	BML Weight	37.4g	

Parameter

Gripping range	3-30mm	Gripping force	0-8.9N	Gripping load*	376g	Ideal gripping workpiece size**	30mm
Internal gripping range	—	Internal gripping force	—	Internal gripping load*	—	Ideal internal gripping workpiece size**	—
Joint size	G1/8	Lifetime*	150 万次	Contact Temperature	<220°C	Safe Pressure***	<140kPa

*: Experimental conditions of load weight(Vertical gripping of rectangular smooth stainless steel workpiece with ideal size)

***: According to the working air pressure in the use scene and the surface roughness of the grabbed object, the lifetime may be affected to varying degrees. It is recommended to use Rochu control Unit. The working air pressure should not exceed the safe working pressure range.



Atmosphere



Pressure



20

25









- Fingertip open under pressure and clamped in a vacuum. Fingertip distance G can be adjusted by working pressure. It is suggested to be used with Rochu control unit.

- Soft beak material is divided into Normal Material [P] and Dust-free Normal Material [PAS]. When the workpiece is light, or very soft, easy to adhere to adsorp on the soft beak, Dust-free Normal Material [PAS] is preferred.

BMC-2G2032[ł Straight Fitting Norm	H]/SN nal Materia	BML-2G2032[H Side Fitting Norma	H]/SN I Materia	
BMC-2G2032[H/ Straight Fitting Dust-free N	AS]/SN Normal Material	BML-2G2032[H/ Side Fitting Dust-free No	AS]/SN ormal Material	
BMC Weight	26.1g	BML Weight	40.6g	

Parameter

Gripping range	14-35.5mm	Gripping force	0-10.4N	Gripping load*	434g	Ideal gripping workpiece size**	35.5mm
Internal gripping range	—	Internal gripping force	—	Internal gripping load*	_	Ideal internal gripping workpiece size**	—
Joint size	G1/8	Lifetime*	150 万次	Contact Temperature	<220°C	Safe Pressure***	<150kPa

*: Experimental conditions of load weight(Vertical gripping of rectangular smooth stainless steel workpiece with ideal size)

***: According to the working air pressure in the use scene and the surface roughness of the grabbed object, the lifetime may be affected to varying degrees. It is recommended to use Rochu control Unit. The working air pressure should not exceed the safe working pressure range.



Atmosphere

30.5

40.5















- Fingertip open under pressure and clamped in a vacuum. Fingertip distance G can be adjusted by working pressure. It is suggested to be used with Rochu control unit.

- Soft beak material is divided into Normal Material [P] and Dust-free Normal Material [PAS]. When the workpiece is light, or very soft, easy to adhere to adsorp on the soft beak, Dust-free Normal Material [PAS] is preferred.

BMC-2G2037[H Straight Fitting Norm	H]/SN nal Materia	BML-2G2037[H Side Fitting Norma	1]/SN l Materia	
BMC-2G2037[H/ Straight Fitting Dust-free I	AS]/SN Normal Material	BML-2G2037[H/ Side Fitting Dust-free No	AS]/SN ormal Material	
BMC Weight	29.6g	BML Weight	44.1g	

Parameter

Gripping range	18-40.5mm	Gripping force	0-7.2N	Gripping load*	377g	Ideal gripping workpiece size**	37mm
Internal gripping range	—	Internal gripping force	—	Internal gripping load*	—	Ideal internal gripping workpiece size**	—
Joint size	G1/8	Lifetime*	150 万次	Contact Temperature	<220°C	Safe Pressure***	<150kPa

*: Experimental conditions of load weight(Vertical gripping of rectangular smooth stainless steel workpiece with ideal size)

***: According to the working air pressure in the use scene and the surface roughness of the grabbed object, the lifetime may be affected to varying degrees. It is recommended to use Rochu control Unit. The working air pressure should not exceed the safe working pressure range.






- Fingertip open under pressure and clamped in a vacuum. Fingertip distance G can be adjusted by working pressure. It is suggested to be used with Rochu control unit.

- Soft beak material is divided into Normal Material [P] and Dust-free Normal Material [PAS]. When the workpiece is light, or very soft, easy to adhere to adsorp on the soft beak, Dust-free Normal Material [PAS] is preferred.

	BMC-2G2042[ł Straight Fitting Norm	H]/SN nal Materia	BML-2G2042[H Side Fitting Norma	1]/SN Il Materia	9
	BMC-2G2042[HAS]/SN Straight Fitting Dust-free Normal Material		BML-2G2042[HAS]/SN Side Fitting Dust-free Normal Material		
	BMC Weight	125.9g	BML Weight	140.4g	

Parameter

Gripping range	26.5-40mm	Gripping force	0-5N	Gripping load*	303g	Ideal gripping workpiece size**	40mm
Internal gripping range	—	Internal gripping force	_	Internal gripping load*	_	Ideal internal gripping workpiece size**	_
Joint size	G1/8	Lifetime*	150 万次	Contact Temperature	<220°C	Safe Pressure***	<100kPa

*: Experimental conditions of load weight(Vertical gripping of rectangular smooth stainless steel workpiece with ideal size)

***: According to the working air pressure in the use scene and the surface roughness of the grabbed object, the lifetime may be affected to varying degrees. It is recommended to use Rochu control Unit. The working air pressure should not exceed the safe working pressure range.







- Fingertip open under pressure and clamped in a vacuum. Fingertip distance G can be adjusted by working pressure. It is suggested to be used with Rochu control unit.

- Soft beak material is divided into Normal Material [P] and Dust-free Normal Material [PAS]. When the workpiece is light, or very soft, easy to adhere to adsorp on the soft beak, Dust-free Normal Material [PAS] is preferred.

	BMC-2G2047[I Straight Fitting Norn	H]/SN nal Materia	BML-2G2047[I Side Fitting Norma	H]/SN Il Materia	
	BMC-2G2047[H. Straight Fitting Dust-free I	AS]/SN Normal Material	BML-2G2047[HJ Side Fitting Dust-free No	AS]/SN ormal Material	
	BMC Weight	32g	BML Weight	46g	

Parameter

B-2G2047[H]/SN

Gripping range	30-48mm	Gripping force	0-9.7N	Gripping load*	682g	Ideal gripping workpiece size**	43.5mm
Internal gripping range	—	Internal gripping force	—	Internal gripping load*	—	Ideal internal gripping workpiece size**	_
Joint size	G1/8	Lifetime*	150 万次	Contact Temperature	<220°C	Safe Pressure***	<100kPa

*: Experimental conditions of load weight(Vertical gripping of rectangular smooth stainless steel workpiece with ideal size)

***: According to the working air pressure in the use scene and the surface roughness of the grabbed object, the lifetime may be affected to varying degrees. It is recommended to use Rochu control Unit. The working air pressure should not exceed the safe working pressure range.







Rochu

- Fingertip open under pressure and clamped in a vacuum. Fingertip distance G can be adjusted by working pressure. It is suggested to be used with Rochu control unit.

- Soft beak material is divided into Normal Material [H] and Dust-free Normal Material [PAS]. When the workpiece is light, or very soft, easy to adhere to adsorp on the soft beak, Dust-free Normal Material [HAS] is preferred.

BMC-2G2052[H Straight Fitting Norm	H]/SN nal Materia	BML-2G2052[H Side Fitting Norma	H]/SN al Materia	0
BMC-2G2052[H Straight Fitting Dust-free N	IAS]/S Normal Material	BML-2G2052[H/ Side Fitting Dust-free No	AS]/SN ormal Material	
BMC Weight	139.9g	BML Weight	154.4g	

Parameter

Gripping range	34-54mm	Gripping force	0-12.8N	Gripping load*	656g	Ideal gripping workpiece size**	52.5mm
Internal gripping range	—	Internal gripping force	_	Internal gripping load*	—	Ideal internal gripping workpiece size**	_
Joint size	G1/8	Lifetime*	100 万次	Contact Temperature	<220°C	Safe Pressure***	<180kPa

*: Experimental conditions of load weight(Vertical gripping of rectangular smooth stainless steel workpiece with ideal size)

***: According to the working air pressure in the use scene and the surface roughness of the grabbed object, the lifetime may be affected to varying degrees. It is recommended to use Rochu control Unit. The working air pressure should not exceed the safe working pressure range.



Pressure-Fingertip Distance deformation curve

Pressure





24.7 +0.00





- Fingertip open under pressure and clamped in a vacuum. Fingertip distance G can be adjusted by working pressure. It is suggested to be used with Rochu control unit.

- Soft beak material is divided into Normal Material [P] and Dust-free Normal Material [PAS]. When the workpiece is light, or very soft, easy to adhere to adsorp on the soft beak, Dust-free Normal Material [PAS] is preferred.

BMC-2G2057[H Straight Fitting Norm	H]/SN nal Materia	BML-2G2057[F Side Fitting Norma	H]/SN Materia	0
BMC-2G2057[HAS]/S Straight Fitting Dust-free Normal Material		BML-2G2057[HAS]/SN Side Fitting Dust-free Normal Material		
L				
BMC Weight	39.2g	BML Weight	45.2g	

Parameter

Gripping range	31-59mm	Gripping force	0-18.1N	Gripping load*	930g	Ideal gripping workpiece size**	58mm
Internal gripping range	—	Internal gripping force	_	Internal gripping load*	_	Ideal internal gripping workpiece size**	_
Joint size	G1/8	Lifetime*	150 万次	Contact Temperature	<220°C	Safe Pressure***	<100kPa

*: Experimental conditions of load weight(Vertical gripping of rectangular smooth stainless steel workpiece with ideal size)

***: According to the working air pressure in the use scene and the surface roughness of the grabbed object, the lifetime may be affected to varying degrees. It is recommended to use Rochu control Unit. The working air pressure should not exceed the safe working pressure range.







- Fingertip open under pressure and clamped in a vacuum. Fingertip distance G can be adjusted by working pressure. It is suggested to be used with Rochu control unit.

- Soft beak material is divided into Normal Material [P] and Dust-free Normal Material [PAS]. When the workpiece is light, or very soft, easy to adhere to adsorp on the soft beak, Dust-free Normal Material [PAS] is preferred.

BMC-3B08[H]/S	BML-3B08[H	I]/S	
Straight Fitting Norm	nal Materia	Side Fitting Norma	l Materia	
BMC-3B08[HA	S]/S	BML-3B08[HA	NS]/S	
Straight Fitting Dust-free N	Normal Material	Side Fitting Dust-free No	ormal Material	
BMC Weight	1g	BML Weight	16.1g	

Parameter

Gripping range	0.5-2mm	Gripping force	0-0.2N	Gripping load*	9g	Ideal gripping workpiece size**	2mm
Internal gripping range	—	Internal gripping force	—	Internal gripping load*	_	Ideal internal gripping workpiece size**	_
Joint size	M5	Lifetime*	150 万次	Contact Temperature	<220°C	Safe Pressure***	<170kPa

*: Experimental conditions of load weight(Vertical gripping of rectangular smooth stainless steel workpiece with ideal size)

***: According to the working air pressure in the use scene and the surface roughness of the grabbed object, the lifetime may be affected to varying degrees. It is recommended to use Rochu control Unit. The working air pressure should not exceed the safe working pressure range.

Vacuum















- Fingertip open under pressure and clamped in a vacuum. Fingertip distance D can be adjusted by working pressure. It is suggested to be used with Rochu control unit.

- Soft beak material is divided into Normal Material [P] and Dust-free Normal Material [PAS]. When the workpiece is light, or very soft, easy to adhere to adsorp on the soft beak, Dust-free Normal Material [PAS] is preferred.

BMC-3B10[H Straight Fitting Norm	l]/S nal Materia	BML-3B10[H Side Fitting Norma	I]/S I Materia	
BMC-3B10[HA Straight Fitting Dust-free N	NS]/S Normal Material	BML-3B10[HA Side Fitting Dust-free No	AS]/S ormal Material	
BMC Weight	2.4g	BML Weight	17.5g	

Parameter

Gripping range	—	Gripping force	_	Gripping load*	_	Ideal gripping workpiece size**	_
Internal gripping range	7.5-10mm	Internal gripping force	0-0.1N	Internal gripping load*	2g	Ideal internal gripping workpiece size**	7.5mm
Joint size	M5	Lifetime*	150 万次	Contact Temperature	<220°C	Safe Pressure***	<250kPa

*: Experimental conditions of load weight(Vertical gripping of rectangular smooth stainless steel workpiece with ideal size)

***: According to the working air pressure in the use scene and the surface roughness of the grabbed object, the lifetime may be affected to varying degrees. It is recommended to use Rochu control Unit. The working air pressure should not exceed the safe working pressure range.







Pressure









- Fingertip open under pressure and clamped in a vacuum. Fingertip distance D can be adjusted by working pressure. It is suggested to be used with Rochu control unit.

- Soft beak material is divided into Normal Material [P] and Dust-free Normal Material [PAS]. When the workpiece is light, or very soft, easy to adhere to adsorp on the soft beak, Dust-free Normal Material [PAS] is preferred.

BMC-3B12[H]/S	BML-3B12[H]/S	
Straight Fitting Norm	nal Materia	Side Fitting Norma	l Materia	0
BMC-3B12[HAS]/S		BML-3B12[HAS]/S		
Straight Fitting Dust-free Normal Material		Side Fitting Dust-free Normal Material		
BMC Weight	5.1g	BML Weight	16.6g	

Parameter

Gripping range	_	Gripping force	_	Gripping load*	_	Ideal gripping workpiece size**	_
Internal gripping range	8-14mm	Internal gripping force	0-0.2N	Internal gripping load*	7g	Ideal internal gripping workpiece size**	8mm
Joint size	M5	Lifetime*	150 万次	Contact Temperature	<220°C	Safe Pressure***	<240kPa

*: Experimental conditions of load weight(Vertical gripping of rectangular smooth stainless steel workpiece with ideal size)

***: According to the working air pressure in the use scene and the surface roughness of the grabbed object, the lifetime may be affected to varying degrees. It is recommended to use Rochu control Unit. The working air pressure should not exceed the safe working pressure range.

















- Fingertip open under pressure and clamped in a vacuum. Fingertip distance G can be adjusted by working pressure. It is suggested to be used with Rochu control unit.

- Soft beak material is divided into Normal Material [P] and Dust-free Normal Material [PAS]. When the workpiece is light, or very soft, easy to adhere to adsorp on the soft beak, Dust-free Normal Material [PAS] is preferred.

BMC-3C12[H	I]/S	BML-3C12[H]/S	
Straight Fitting Norm	nal Materia	Side Fitting Norma	l Materia	
BMC-3C12[HA	\S]/S	BML-3C12[HA	S]/S	
Straight Fitting Dust-free I	Normal Material	Side Fitting Dust-free No	ormal Material	
BMC Weight	4g	BML Weight	15.5g	

Parameter

Gripping range	4-7mm	Gripping force	0-0.4N	Gripping load*	22g	Ideal gripping workpiece size**	7mm
Internal gripping range	11-14mm	Internal gripping force	0-6.6N	Internal gripping load*	399g	Ideal internal gripping workpiece size**	12mm
Joint size	M5	Lifetime*	150 万次	Contact Temperature	<220°C	Safe Pressure***	<200kPa

*: Experimental conditions of load weight(Vertical gripping of rectangular smooth stainless steel workpiece with ideal size)

***: According to the working air pressure in the use scene and the surface roughness of the grabbed object, the lifetime may be affected to varying degrees. It is recommended to use Rochu control Unit. The working air pressure should not exceed the safe working pressure range.





Atmosphere

Pressure



φ12^{-0.00} 4.5







- Fingertip open under pressure and clamped in a vacuum. Fingertip distance D can be adjusted by working pressure. It is suggested to be used with Rochu control unit.

- Soft beak material is divided into Normal Material [P] and Dust-free Normal Material [PAS]. When the workpiece is light, or very soft, easy to adhere to adsorp on the soft beak, Dust-free Normal Material [PAS] is preferred.

BMC-3B13[H	I]/S	BML-3B13[H]/S	
Straight Fitting Norm	nal Materia	Side Fitting Norma	Il Materia	
BMC-3B13[HAS]/S		BML-3B13[HAS]/S		
Straight Fitting Dust-free Normal Material		Side Fitting Dust-free Normal Material		
BMC Weight	4.9g	BML Weight	16.4g	

Parameter

Gripping range	—	Gripping force	_	Gripping load*	_	Ideal gripping workpiece size**	_
Internal gripping range	10-18mm	Internal gripping force	0-0.5N	Internal gripping load*	23g	Ideal internal gripping workpiece size**	10mm
Joint size	M5	Lifetime*	150 万次	Contact Temperature	<220°C	Safe Pressure***	<180kPa

*: Experimental conditions of load weight(Vertical gripping of rectangular smooth stainless steel workpiece with ideal size)

***: According to the working air pressure in the use scene and the surface roughness of the grabbed object, the lifetime may be affected to varying degrees. It is recommended to use Rochu control Unit. The working air pressure should not exceed the safe working pressure range.





Atmosphere



¢6.9 2.1 ¢2.7

Pressure-Fingertip Distance deformation curve

27







- Fingertip open under pressure and clamped in a vacuum. Fingertip distance D can be adjusted by working pressure. It is suggested to be used with Rochu control unit.

- Soft beak material is divided into Normal Material [P] and Dust-free Normal Material [PAS]. When the workpiece is light, or very soft, easy to adhere to adsorp on the soft beak, Dust-free Normal Material [PAS] is preferred.

BMC-3B14[H Straight Fitting Norm	l]/S nal Materia	BML-3B14[H Side Fitting Norma	l]/S Il Materia	
BMC-3B14[HAS]/S Straight Fitting Dust-free Normal Material		BML-3B14[HAS]/S Side Fitting Dust-free Normal Material		0
BMC Weight	5.7g	BML Weight	17.2g	

Parameter

Gripping range	_	Gripping force	_	Gripping load*	_	Ideal gripping workpiece size**	_
Internal gripping range	8-12mm	Internal gripping force	0-0.5N	Internal gripping load*	23g	Ideal internal gripping workpiece size**	8mm
Joint size	M5	Lifetime*	150 万次	Contact Temperature	<220°C	Safe Pressure***	<180kPa

*: Experimental conditions of load weight(Vertical gripping of rectangular smooth stainless steel workpiece with ideal size)

***: According to the working air pressure in the use scene and the surface roughness of the grabbed object, the lifetime may be affected to varying degrees. It is recommended to use Rochu control Unit. The working air pressure should not exceed the safe working pressure range.

Vacuum



Atmosphere



Pressure









- Fingertip open under pressure and clamped in a vacuum. Fingertip distance D can be adjusted by working pressure. It is suggested to be used with Rochu control unit.

- Soft beak material is divided into Normal Material [P] and Dust-free Normal Material [PAS]. When the workpiece is light, or very soft, easy to adhere to adsorp on the soft beak, Dust-free Normal Material [PAS] is preferred.

BMC-3B14[F Straight Fitting Norm]/S nal Materia	BML-3B14[F Side Fitting Norma	P]/S Il Materia	
BMC-3B14[PA Straight Fitting Dust-free I	.S]/S Normal Material	BML-3B14[PA Side Fitting Dust-free No	NS]/S ormal Material	
BMC Weight	5.2g	BML Weight	16.7g	

Parameter

Gripping range	_	Gripping force	_	Gripping load*	_	Ideal gripping workpiece size**	_
Internal gripping range	11-17mm	Internal gripping force	0-0.2N	Internal gripping load*	12g	Ideal internal gripping workpiece size**	11mm
Joint size	M5	Lifetime*	150 万次	Contact Temperature	<220°C	Safe Pressure***	<100kPa

*: Experimental conditions of load weight (Vertical gripping of rectangular smooth stainless steel workpiece with ideal size)

***: According to the working air pressure in the use scene and the surface roughness of the grabbed object, the lifetime may be affected to varying degrees. It is recommended to use Rochu control Unit. The working air pressure should not exceed the safe working pressure range.

Vacuum Atmosphere 30





Pressure









- Fingertip open under pressure and clamped in a vacuum. Fingertip distance G can be adjusted by working pressure. It is suggested to be used with Rochu control unit.

- Soft beak material is divided into Normal Material [P] and Dust-free Normal Material [PAS]. When the workpiece is light, or very soft, easy to adhere to adsorp on the soft beak, Dust-free Normal Material [PAS] is preferred.

BMC-3A15[P Straight Fitting Norm]/S nal Materia	BML-3A15[P Side Fitting Norma]/S I Materia	
BMC-3A15[PA Straight Fitting Dust-free N	S]/S Normal Material	BML-3A15[PA Side Fitting Dust-free No	S]/S ormal Material	
BMC Weight	6.4g	BML Weight	17.9g	

Parameter

Gripping range	2-8mm	Gripping force	0-0.3N	Gripping load*	13g	Ideal gripping workpiece size**	7.5mm
Internal gripping range	15-22mm	Internal gripping force	0-0.4N	Internal gripping load*	22g	Ideal internal gripping workpiece size**	15mm
Joint size	M5	Lifetime*	150 万次	Contact Temperature	<220°C	Safe Pressure***	<90kPa

*: Experimental conditions of load weight(Vertical gripping of rectangular smooth stainless steel workpiece with ideal size)

***: According to the working air pressure in the use scene and the surface roughness of the grabbed object, the lifetime may be affected to varying degrees. It is recommended to use Rochu control Unit. The working air pressure should not exceed the safe working pressure range.















- Fingertip open under pressure and clamped in a vacuum. Fingertip distance G can be adjusted by working pressure. It is suggested to be used with Rochu control unit.

- Soft beak material is divided into Normal Material [H] and Dust-free Normal Material [PAS]. When the workpiece is light, or very soft, easy to adhere to adsorp on the soft beak, Dust-free Normal Material [HAS] is preferred.

BMC-3A18[H Straight Fitting Norm	l]/S nal Materia	BML-3A18[H Side Fitting Norma	I]/S I Materia	
BMC-3A18[HA Straight Fitting Dust-free N	NS]/S Normal Material	BML-3A18[HA Side Fitting Dust-free No	NS]/S prmal Material	
BMC Weight	9.9g	BML Weight	21.4g	

Parameter

Gripping range	9-12mm	Gripping force	0-0.4N	Gripping load*	23g	Ideal gripping workpiece size**	12mm
Internal gripping range	17-21mm	Internal gripping force	0-1.1N	Internal gripping load*	62g	Ideal internal gripping workpiece size**	17mm
Joint size	M5	Lifetime*	150 万次	Contact Temperature	<220°C	Safe Pressure***	<200kPa

*: Experimental conditions of load weight(Vertical gripping of rectangular smooth stainless steel workpiece with ideal size)

***: According to the working air pressure in the use scene and the surface roughness of the grabbed object, the lifetime may be affected to varying degrees. It is recommended to use Rochu control Unit. The working air pressure should not exceed the safe working pressure range.



 100
 -0. Gripping migerup distance

 0
 -0. Griping migerup distance



Rochu

- Fingertip open under pressure and clamped in a vacuum. Fingertip distance G can be adjusted by working pressure. It is suggested to be used with Rochu control unit.

- Soft beak material is divided into Normal Material [P] and Dust-free Normal Material [PAS]. When the workpiece is light, or very soft, easy to adhere to adsorp on the soft beak, Dust-free Normal Material [PAS] is preferred.

	BMC-3A18[P]/S	BML-3A18[P]/S	
2	Straight Fitting Norm	al Materia	Side Fitting Normal Materia		
	BMC-3A18[PAS]/S		BML-3A18[PAS]/S		
	Straight Fitting Dust-free Normal Material		Side Fitting Dust-free Normal Material		
	BMC Weight	9.9g	BML Weight	21.4g	

Parameter

Gripping range	3.5-10.5mm	Gripping force	0-0.3N	Gripping load*	16g	Ideal gripping workpiece size**	10.5mm
Internal gripping range	18-29mm	Internal gripping force	0-1.5N	Internal gripping load*	76g	Ideal internal gripping workpiece size**	18mm
Joint size	M5	Lifetime*	150 万次	Contact Temperature	<220°C	Safe Pressure***	<100kPa

*: Experimental conditions of load weight(Vertical gripping of rectangular smooth stainless steel workpiece with ideal size)

***: According to the working air pressure in the use scene and the surface roughness of the grabbed object, the lifetime may be affected to varying degrees. It is recommended to use Rochu control Unit. The working air pressure should not exceed the safe working pressure range.









- Fingertip open under pressure and clamped in a vacuum. Fingertip distance D can be adjusted by working pressure. It is suggested to be used with Rochu control unit.

- Soft beak material is divided into Normal Material [P] and Dust-free Normal Material [PAS]. When the workpiece is light, or very soft, easy to adhere to adsorp on the soft beak, Dust-free Normal Material [PAS] is preferred.

BMC-3B18[P]/S	BML-3B18[F	P]/S	
BMC-3B18[PA Straight Fitting Dust-free N	S]/S Jormal Material	BML-3B18[PA Side Fitting Dust-free No	S]/S prmal Material	
BMC Weight	10g	BML Weight	21.5g	

Parameter

Gripping range	—	Gripping force	_	Gripping load*	_	Ideal gripping workpiece size**	_
Internal gripping range	19-29mm	Internal gripping force	0-0.4N	Internal gripping load*	20g	Ideal internal gripping workpiece size**	19mm
Joint size	M5	Lifetime*	150 万次	Contact Temperature	<220°C	Safe Pressure***	<100kPa

*: Experimental conditions of load weight(Vertical gripping of rectangular smooth stainless steel workpiece with ideal size)

***: According to the working air pressure in the use scene and the surface roughness of the grabbed object, the lifetime may be affected to varying degrees. It is recommended to use Rochu control Unit. The working air pressure should not exceed the safe working pressure range.







- Fingertip open under pressure and clamped in a vacuum. Fingertip distance G can be adjusted by working pressure. It is suggested to be used with Rochu control unit.

- Soft beak material is divided into Normal Material [P] and Dust-free Normal Material [PAS]. When the workpiece is light, or very soft, easy to adhere to adsorp on the soft beak, Dust-free Normal Material [PAS] is preferred.

	BMC-3A20[H	I]/S	BML-3A20[H	I]/S	
	Straight Fitting Norm	nal Materia	Side Fitting Normal Materia		
	BMC-3A20[HA	NS]/S	BML-3A20[HAS]/S		
	Straight Fitting Dust-free I	Normal Material	Side Fitting Dust-free Normal Material		
F					
	BMC Weight	8.1g	BML Weight	19.6g	

Parameter

Gripping range	8.5-12mm	Gripping force	0-2.1N	Gripping load*	178g	Ideal gripping workpiece size**	12mm
Internal gripping range	—	Internal gripping force	—	Internal gripping load*	_	Ideal internal gripping workpiece size**	_
Joint size	M5	Lifetime*	150 万次	Contact Temperature	<220°C	Safe Pressure***	<180kPa

*: Experimental conditions of load weight(Vertical gripping of rectangular smooth stainless steel workpiece with ideal size)

***: According to the working air pressure in the use scene and the surface roughness of the grabbed object, the lifetime may be affected to varying degrees. It is recommended to use Rochu control Unit. The working air pressure should not exceed the safe working pressure range.







- Fingertip open under pressure and clamped in a vacuum. Fingertip distance G can be adjusted by working pressure. It is suggested to be used with Rochu control unit.

- Soft beak material is divided into Normal Material [P] and Dust-free Normal Material [PAS]. When the workpiece is light, or very soft, easy to adhere to adsorp on the soft beak, Dust-free Normal Material [PAS] is preferred.

	BMC-3G20[H	I]/S	BML-3G20[H]/S	
9	Straight Fitting Norm	nal Materia	Side Fitting Norma	Il Materia	
	BMC-3G20[HA	AS]/S	BML-3G20[HAS]/S		
	Straight Fitting Dust-free I	Normal Material	Side Fitting Dust-free No	ormal Material	
	BMC Weight	8.4g	BML Weight	19.9g	

Parameter

Gripping range	4-12mm	Gripping force	0-5.3N	Gripping load*	273g	Ideal gripping workpiece size**	12mm
Internal gripping range	—	Internal gripping force	_	Internal gripping load*	_	Ideal internal gripping workpiece size**	_
Joint size	M5	Lifetime*	150 万次	Contact Temperature	<220°C	Safe Pressure***	<180kPa

*: Experimental conditions of load weight(Vertical gripping of rectangular smooth stainless steel workpiece with ideal size)

***: According to the working air pressure in the use scene and the surface roughness of the grabbed object, the lifetime may be affected to varying degrees. It is recommended to use Rochu control Unit. The working air pressure should not exceed the safe working pressure range.

Pressure















B-3G20[H]/S

- Fingertip open under pressure and clamped in a vacuum. Fingertip distance G can be adjusted by working pressure. It is suggested to be used with Rochu control unit.

- Soft beak material is divided into Normal Material [H] and Dust-free Normal Material [PAS]. When the workpiece is light, or very soft, easy to adhere to adsorp on the soft beak, Dust-free Normal Material [HAS] is preferred.

BMC-3B24[H Straight Fitting Norm	I]/S nal Materia	BML-3B24[H Side Fitting Norma	I]/S I Materia	
BMC-3B24[HA Straight Fitting Dust-free N	\S]/S Normal Material	BML-3B24[HA Side Fitting Dust-free No	AS]/S ormal Material	
BMC Weight	17.1g	BML Weight	34.3g	

Parameter

Gripping range	3.5-12mm	Gripping force	0-0.7N	Gripping load*	38g	Ideal gripping workpiece size**	12mm
Internal gripping range	24-35mm	Internal gripping force	0-2.1N	Internal gripping load*	110g	Ideal internal gripping workpiece size**	25mm
Joint size	M5	Lifetime*	150 万次	Contact Temperature	<220°C	Safe Pressure***	<180kPa

*: Experimental conditions of load weight(Vertical gripping of rectangular smooth stainless steel workpiece with ideal size)

***: According to the working air pressure in the use scene and the surface roughness of the grabbed object, the lifetime may be affected to varying degrees. It is recommended to use Rochu control Unit. The working air pressure should not exceed the safe working pressure range.





Pressure-Fingertip Distance deformation curve










- Fingertip open under pressure and clamped in a vacuum. Fingertip distance G can be adjusted by working pressure. It is suggested to be used with Rochu control unit.

- Soft beak material is divided into Normal Material [P] and Dust-free Normal Material [PAS]. When the workpiece is light, or very soft, easy to adhere to adsorp on the soft beak, Dust-free Normal Material [PAS] is preferred.

BMC-3C24[H	I]/S	BML-3C24[H]/S	
Straight Fitting Norm	nal Materia	Side Fitting Norma	Il Materia	0
BMC-3C24[HAS]/S		BML-3C24[HAS]/S		
Straight Fitting Dust-free Normal Material		Side Fitting Dust-free Normal Material		
BMC Weight	16.5g	BML Weight	33.7g	

Parameter

B-3C24[H]/S

Gripping range	6-24mm	Gripping force	0-5.4N	Gripping load*	321g	Ideal gripping workpiece size**	22.5mm
Internal gripping range	24-33mm	Internal gripping force	0-5.4N	Internal gripping load*	292g	Ideal internal gripping workpiece size**	24mm
Joint size	G1/8	Lifetime*	150 万次	Contact Temperature	<220°C	Safe Pressure***	<180kPa

*: Experimental conditions of load weight(Vertical gripping of rectangular smooth stainless steel workpiece with ideal size)

***: According to the working air pressure in the use scene and the surface roughness of the grabbed object, the lifetime may be affected to varying degrees. It is recommended to use Rochu control Unit. The working air pressure should not exceed the safe working pressure range.

Pressure













- Fingertip open under pressure and clamped in a vacuum. Fingertip distance G can be adjusted by working pressure. It is suggested to be used with Rochu control unit.

- Soft beak material is divided into Normal Material [P] and Dust-free Normal Material [PAS]. When the workpiece is light, or very soft, easy to adhere to adsorp on the soft beak, Dust-free Normal Material [PAS] is preferred.

	BMC-3C24[P	?]/S	BML-3C24[P]/S	
<u>I</u>	Straight Fitting Norm	nal Materia	Side Fitting Norma	l Materia	9
	BMC-3C24[PA	.S]/S	BML-3C24[PA	S]/S	
T	Straight Fitting Dust-free N	Normal Material	Side Fitting Dust-free No	ormal Material	
	BMC Weight	16.5g	BML Weight	33.7g	

Parameter

Gripping range	4-15mm	Gripping force	0-0.8N	Gripping load*	43g	Ideal gripping workpiece size**	15mm
Internal gripping range	26-38mm	Internal gripping force	0-2.5N	Internal gripping load*	130g	Ideal internal gripping workpiece size**	26mm
Joint size	G1/8	Lifetime*	150 万次	Contact Temperature	<220°C	Safe Pressure***	<90kPa

*: Experimental conditions of load weight(Vertical gripping of rectangular smooth stainless steel workpiece with ideal size)

***: According to the working air pressure in the use scene and the surface roughness of the grabbed object, the lifetime may be affected to varying degrees. It is recommended to use Rochu control Unit. The working air pressure should not exceed the safe working pressure range.



















- Fingertip open under pressure and clamped in a vacuum. Fingertip distance G can be adjusted by working pressure. It is suggested to be used with Rochu control unit.

- Soft beak material is divided into Normal Material [P] and Dust-free Normal Material [PAS]. When the workpiece is light, or very soft, easy to adhere to adsorp on the soft beak, Dust-free Normal Material [PAS] is preferred.

BMC-4B18[Straight Fitting Norm	P] nal Materia	BML-4B18[Side Fitting Norma	[P] Il Materia	
BMC-4B18[PAS] Straight Fitting Dust-free Normal Material		BML-4B18[PAS] Side Fitting Dust-free Normal Material		
BMC Weight	13.8g	BML Weight	22.2g	

Parameter

Gripping range	3-7mm	Gripping force	0-1.2N	Gripping load*	61g	Ideal gripping workpiece size**	7mm
Internal gripping range	—	Internal gripping force	—	Internal gripping load*	—	Ideal internal gripping workpiece size**	—
Joint size	M5	Lifetime*	150 万次	Contact Temperature	<220°C	Safe Pressure***	<90kPa

*: Experimental conditions of load weight(Vertical gripping of rectangular smooth stainless steel workpiece with ideal size)

***: According to the working air pressure in the use scene and the surface roughness of the grabbed object, the lifetime may be affected to varying degrees. It is recommended to use Rochu control Unit. The working air pressure should not exceed the safe working pressure range.









- Fingertip open under pressure and clamped in a vacuum. Fingertip distance G can be adjusted by working pressure. It is suggested to be used with Rochu control unit.

- Soft beak material is divided into Normal Material [P] and Dust-free Normal Material [PAS]. When the workpiece is light, or very soft, easy to adhere to adsorp on the soft beak, Dust-free Normal Material [PAS] is preferred.

BMC-4B18[P]/S	BML-4B18[P	?]/S	
Straight Fitting Norm	al Materia	Side Fitting Normal Materia		
BMC-4B18[PAS]/S		BML-4B18[PA	S]/S	
Straight Fitting Dust-free Normal Material		Side Fitting Dust-free Normal Material		
BMC Weight	10g	BML Weight	21.5g	

Parameter

Gripping range	3-7mm	Gripping force	0-1.2N	Gripping load*	61g	Ideal gripping workpiece size**	7mm
Internal gripping range	—	Internal gripping force	—	Internal gripping load*	—	Ideal internal gripping workpiece size**	—
Joint size	M5	Lifetime*	150 万次	Contact Temperature	<220°C	Safe Pressure***	<90kPa

*: Experimental conditions of load weight(Vertical gripping of rectangular smooth stainless steel workpiece with ideal size)

***: According to the working air pressure in the use scene and the surface roughness of the grabbed object, the lifetime may be affected to varying degrees. It is recommended to use Rochu control Unit. The working air pressure should not exceed the safe working pressure range.









- Fingertip open under pressure and clamped in a vacuum. Fingertip distance D can be adjusted by working pressure. It is suggested to be used with Rochu control unit.

- Soft beak material is divided into Normal Material [P] and Dust-free Normal Material [PAS]. When the workpiece is light, or very soft, easy to adhere to adsorp on the soft beak, Dust-free Normal Material [PAS] is preferred.

8	BMC-4H18[H Straight Fitting Norm	I]/S nal Materia	BML-4H18[F Side Fitting Norma	l]/S Il Materia	
	BMC-4H18[HAS]/S Straight Fitting Dust-free Normal Material		BML-4H18[HAS]/S Side Fitting Dust-free Normal Material		
					4
				1	
	BMC Weight	12.2g	BML Weight	23.7g	

Parameter

Gripping range	—	Gripping force	_	Gripping load*	_	Ideal gripping workpiece size**	_
Internal gripping range	12-22mm	Internal gripping force	0-1.0N	Internal gripping load*	47g	Ideal internal gripping workpiece size**	14mm
Joint size	M5	Lifetime*	150 万次	Contact Temperature	<220°C	Safe Pressure***	<180kPa

*: Experimental conditions of load weight(Vertical gripping of rectangular smooth stainless steel workpiece with ideal size)

***: According to the working air pressure in the use scene and the surface roughness of the grabbed object, the lifetime may be affected to varying degrees. It is recommended to use Rochu control Unit. The working air pressure should not exceed the safe working pressure range.





Pressure





2xM2.5





- Fingertip open under pressure and clamped in a vacuum. Fingertip distance G can be adjusted by working pressure. It is suggested to be used with Rochu control unit.

- Soft beak material is divided into Normal Material [P] and Dust-free Normal Material [PAS]. When the workpiece is light, or very soft, easy to adhere to adsorp on the soft beak, Dust-free Normal Material [PAS] is preferred.

	BMC-4G22[H]]/SN	BML-4G22[H]/SN	
		s1/SNI	Side Fitting Norma	sl/sn	99
	Straight Fitting Dust-free N	Normal Material	Side Fitting Dust-free No	ormal Material	
	<u></u>				
(A)					0
2					E
	[]			1	
	BMC Weight	14.1g	BML Weight	28.6g	

Parameter

Gripping range	7.5-13mm	Gripping force	0-1.9N	Gripping load*	99g	Ideal gripping workpiece size**	13mm
Internal gripping range	—	Internal gripping force	—	Internal gripping load*	—	Ideal internal gripping workpiece size**	—
Joint size	G1/8	Lifetime*	150 万次	Contact Temperature	<220°C	Safe Pressure***	<120kPa

*: Experimental conditions of load weight (Vertical gripping of rectangular smooth stainless steel workpiece with ideal size)

***: According to the working air pressure in the use scene and the surface roughness of the grabbed object, the lifetime may be affected to varying degrees. It is recommended to use Rochu control Unit. The working air pressure should not exceed the safe working pressure range.



Pressure







Pressure-Fingertip Distance deformation curve

φ21.5

ф11 φ17.5







- Fingertip open under pressure and clamped in a vacuum. Fingertip distance G can be adjusted by working pressure. It is suggested to be used with Rochu control unit.

- Soft beak material is divided into Normal Material [H] and Dust-free Normal Material [PAS]. When the workpiece is light, or very soft, easy to adhere to adsorp on the soft beak, Dust-free Normal Material [HAS] is preferred.

	BMC-4A24[H	I]/S	BML-4A24[H]/S	
	Straight Fitting Norm	nal Materia	Side Fitting Norma	l Materia	2
	BMC-4A24[HA	\S]/S	BML-4A24[HA	S]/S	
	Straight Fitting Dust-free Normal Material		Side Fitting Dust-free Normal Material		
Rí					RA
	BMC Weight	14.9g	BML Weight	23.1g	

Parameter

Gripping range	5.5-16mm	Gripping force	0-2.1N	Gripping load*	115g	Ideal gripping workpiece size**	15.5mm
Internal gripping range	24-32mm	Internal gripping force	0-11.2N	Internal gripping load*	589g	Ideal internal gripping workpiece size**	24mm
Joint size	G1/8	Lifetime*	150 万次	Contact Temperature	<220°C	Safe Pressure***	<160kPa

*: Experimental conditions of load weight(Vertical gripping of rectangular smooth stainless steel workpiece with ideal size)

***: According to the working air pressure in the use scene and the surface roughness of the grabbed object, the lifetime may be affected to varying degrees. It is recommended to use Rochu control Unit. The working air pressure should not exceed the safe working pressure range.





φ24



G









- Fingertip open under pressure and clamped in a vacuum. Fingertip distance G can be adjusted by working pressure. It is suggested to be used with Rochu control unit.

- Soft beak material is divided into Normal Material [P] and Dust-free Normal Material [PAS]. When the workpiece is light, or very soft, easy to adhere to adsorp on the soft beak, Dust-free Normal Material [PAS] is preferred.

BMC-4G27[H]	/SN	BML-4G27[H]]/SN	
Straight Fitting Norm	nal Materia	Side Fitting Norma	Il Materia	
BMC-4G27[HA	S]/SN	BML-4G27[HAS]/SN		
Straight Fitting Dust-free Normal Material		Side Fitting Dust-free Normal Material		
BMC Weight	17.5g	BML Weight	32g	

Parameter

Gripping range	8-18.5mm	Gripping force	0-2.9N	Gripping load*	145g	Ideal gripping workpiece size**	18.5mm
Internal gripping range	—	Internal gripping force	—	Internal gripping load*	_	Ideal internal gripping workpiece size**	—
Joint size	G1/8	Lifetime*	150 万次	Contact Temperature	<220°C	Safe Pressure***	<120kPa

*: Experimental conditions of load weight(Vertical gripping of rectangular smooth stainless steel workpiece with ideal size)

***: According to the working air pressure in the use scene and the surface roughness of the grabbed object, the lifetime may be affected to varying degrees. It is recommended to use Rochu control Unit. The working air pressure should not exceed the safe working pressure range.









- Fingertip open under pressure and clamped in a vacuum. Fingertip distance G can be adjusted by working pressure. It is suggested to be used with Rochu control unit.

- Soft beak material is divided into Normal Material [P] and Dust-free Normal Material [PAS]. When the workpiece is light, or very soft, easy to adhere to adsorp on the soft beak, Dust-free Normal Material [PAS] is preferred.

<u>a</u>	BMC-4A30[P Straight Fitting Norm]/M nal Materia	BML-4A30[P Side Fitting Norma]/M Il Materia	
	BMC-4A30[PAS]/M Straight Fitting Dust-free Normal Material		BML-4A30[PAS]/M Side Fitting Dust-free Normal Material		
	BMC Weight	43.4g	BML Weight	60.6g	

Parameter

Gripping range	6-11mm	Gripping force	0-0.9N	Gripping load*	46g	Ideal gripping workpiece size**	11mm
Internal gripping range	29-68mm	Internal gripping force	0-6.4N	Internal gripping load*	329g	Ideal internal gripping workpiece size**	29mm
Joint size	G1/8	Lifetime*	150 万次	Contact Temperature	<220°C	Safe Pressure***	<100kPa

*: Experimental conditions of load weight(Vertical gripping of rectangular smooth stainless steel workpiece with ideal size)

***: According to the working air pressure in the use scene and the surface roughness of the grabbed object, the lifetime may be affected to varying degrees. It is recommended to use Rochu control Unit. The working air pressure should not exceed the safe working pressure range.



















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- Soft beak material is divided into Normal Material [H] and Dust-free Normal Material [PAS]. When the workpiece is light, or very soft, easy to adhere to adsorp on the soft beak, Dust-free Normal Material [HAS] is preferred.

	BMC-4B30[H]/S	BML-4B30[H	I]/S	
6	Straight Fitting Norm	al Materia	Side Fitting Norma	l Materia	
3	BMC-4B30[HA	.S]/S	BML-4B30[HA	NS]/S	
	Straight Fitting Dust-free N	Normal Material	Side Fitting Dust-free No	ormal Material	
R					
	BMC Weight	28.3g	BML Weight	45.5g	

Parameter

Gripping range	11-19.5mm	Gripping force	0-3.1N	Gripping load*	160g	Ideal gripping workpiece size**	19mm
Internal gripping range	28-45mm	Internal gripping force	0-15.9N	Internal gripping load*	817g	Ideal internal gripping workpiece size**	28mm
Joint size	M5	Lifetime*	150 万次	Contact Temperature	<220°C	Safe Pressure***	<140kPa

*: Experimental conditions of load weight(Vertical gripping of rectangular smooth stainless steel workpiece with ideal size)

***: According to the working air pressure in the use scene and the surface roughness of the grabbed object, the lifetime may be affected to varying degrees. It is recommended to use Rochu control Unit. The working air pressure should not exceed the safe working pressure range.



















- Fingertip open under pressure and clamped in a vacuum. Fingertip distance G can be adjusted by working pressure. It is suggested to be used with Rochu control unit.

- Soft beak material is divided into Normal Material [H] and Dust-free Normal Material [PAS]. When the workpiece is light, or very soft, easy to adhere to adsorp on the soft beak, Dust-free Normal Material [HAS] is preferred.

	BMC-4B32[H	I]/S	BML-4B32[H	I]/S	
	Straight Fitting Norm	nal Materia	Side Fitting Norma	l Materia	
	BMC-4B32[HAS]/S		BML-4B32[HAS]/S		
	Straight Fitting Dust-free Normal Material		Side Fitting Dust-free Normal Material		
A					
	BMC Weight	37.9g	BML Weight	52.4g	

Parameter

B-4B32[H]/S

Gripping range	11-19mm	Gripping force	0-4.8N	Gripping load*	247g	Ideal gripping workpiece size**	19mm
Internal gripping range	28-51mm	Internal gripping force	0-14.8N	Internal gripping load*	776g	Ideal internal gripping workpiece size**	29mm
Joint size	G1/8	Lifetime*	150 万次	Contact Temperature	<220°C	Safe Pressure***	<120kPa

*: Experimental conditions of load weight(Vertical gripping of rectangular smooth stainless steel workpiece with ideal size)

***: According to the working air pressure in the use scene and the surface roughness of the grabbed object, the lifetime may be affected to varying degrees. It is recommended to use Rochu control Unit. The working air pressure should not exceed the safe working pressure range.









- Fingertip open under pressure and clamped in a vacuum. Fingertip distance G can be adjusted by working pressure. It is suggested to be used with Rochu control unit.

- Soft beak material is divided into Normal Material [P] and Dust-free Normal Material [PAS]. When the workpiece is light, or very soft, easy to adhere to adsorp on the soft beak, Dust-free Normal Material [PAS] is preferred.

	BMC-4B32[F	?]/S	BML-4B32[F	P]/S	
9	Straight Fitting Norm	nal Materia	Side Fitting Norma	al Materia	
	BMC-4B32[PAS]/S		BML-4B32[PAS]/S		
	Straight Fitting Dust-free I	Normal Material	Side Fitting Dust-free Normal Material		FIE
					4
	BMC Weight	37.9g	BML Weight	52.4g	

Parameter

Gripping range	10-15mm	Gripping force	0-2.6N	Gripping load*	136g	Ideal gripping workpiece size**	14.5mm
Internal gripping range	29-64mm	Internal gripping force	0-8.5N	Internal gripping load*	454g	Ideal internal gripping workpiece size**	31mm
Joint size	G1/8	Lifetime*	150 万次	Contact Temperature	<220°C	Safe Pressure***	<70kPa

*: Experimental conditions of load weight(Vertical gripping of rectangular smooth stainless steel workpiece with ideal size)

***: According to the working air pressure in the use scene and the surface roughness of the grabbed object, the lifetime may be affected to varying degrees. It is recommended to use Rochu control Unit. The working air pressure should not exceed the safe working pressure range.







- Fingertip open under pressure and clamped in a vacuum. Fingertip distance G can be adjusted by working pressure. It is suggested to be used with Rochu control unit.

- Soft beak material is divided into Normal Material [P] and Dust-free Normal Material [PAS]. When the workpiece is light, or very soft, easy to adhere to adsorp on the soft beak, Dust-free Normal Material [PAS] is preferred.

	BMC-4G34[H Straight Fitting Norm]/SN nal Materia	BML-4G34[H Side Fitting Norma]/SN al Materia	
	BMC-4G34[HAS]/SN Straight Fitting Dust-free Normal Material		BML-4G34[HAS]/SN Side Fitting Dust-free Normal Material		
R					
	BMC Weight	25.5g	BML Weight	40g	

Parameter

Gripping range	10-24mm	Gripping force	0-8.4N	Gripping load*	426g	Ideal gripping workpiece size**	23.5mm
Internal gripping range	—	Internal gripping force	—	Internal gripping load*	—	Ideal internal gripping workpiece size**	—
Joint size	G1/8	Lifetime*	150 万次	Contact Temperature	<220°C	Safe Pressure***	<120kPa

*: Experimental conditions of load weight(Vertical gripping of rectangular smooth stainless steel workpiece with ideal size)

***: According to the working air pressure in the use scene and the surface roughness of the grabbed object, the lifetime may be affected to varying degrees. It is recommended to use Rochu control Unit. The working air pressure should not exceed the safe working pressure range.









- Fingertip open under pressure and clamped in a vacuum. Fingertip distance G can be adjusted by working pressure. It is suggested to be used with Rochu control unit.

- Soft beak material is divided into Normal Material [P] and Dust-free Normal Material [PAS]. When the workpiece is light, or very soft, easy to adhere to adsorp on the soft beak, Dust-free Normal Material [PAS] is preferred.

BMC-4G39[H] Straight Fitting Norm	/SN nal Materia	BML-4G39[H Side Fitting Norma]/SN Il Materia	
BMC-4G39[HA: Straight Fitting Dust-free N	S]/SN Normal Material	BML-4G39[HA Side Fitting Dust-free No	S]/SN ormal Material	
BMC Weight	29.2g	BML Weight	43.7g	

Parameter

Gripping range	14-27.5mm	Gripping force	0-14.8N	Gripping load*	902g	Ideal gripping workpiece size**	20mm
Internal gripping range	—	Internal gripping force	—	Internal gripping load*	—	Ideal internal gripping workpiece size**	_
Joint size	G1/8	Lifetime*	150 万次	Contact Temperature	<220°C	Safe Pressure***	<100kPa

*: Experimental conditions of load weight(Vertical gripping of rectangular smooth stainless steel workpiece with ideal size)

***: According to the working air pressure in the use scene and the surface roughness of the grabbed object, the lifetime may be affected to varying degrees. It is recommended to use Rochu control Unit. The working air pressure should not exceed the safe working pressure range.









- Fingertip open under pressure and clamped in a vacuum. Fingertip distance G can be adjusted by working pressure. It is suggested to be used with Rochu control unit.

- Soft beak material is divided into Normal Material [H] and Dust-free Normal Material [PAS]. When the workpiece is light, or very soft, easy to adhere to adsorp on the soft beak, Dust-free Normal Material [HAS] is preferred.

	BMC-4B40[H Straight Fitting Norm	l]/S nal Materia	BML-4B40[F Side Fitting Norma	I]/S I Materia	
	BMC-4B40[HAS]/S Straight Fitting Dust-free Normal Material		BML-4B40[HAS]/S Side Fitting Dust-free Normal Material		
R					
	BMC Weight	57.2g	BML Weight	71.7g	

Parameter

Gripping range	17-25.5mm	Gripping force	0-4.2N	Gripping load*	215g	Ideal gripping workpiece size**	25.5mm
Internal gripping range	37-66mm	Internal gripping force	0-42.4N	Internal gripping load*	3853g	Ideal internal gripping workpiece size**	40mm
Joint size	G1/8	Lifetime*	150 万次	Contact Temperature	<220°C	Safe Pressure***	<160kPa

*: Experimental conditions of load weight(Vertical gripping of rectangular smooth stainless steel workpiece with ideal size)

***: According to the working air pressure in the use scene and the surface roughness of the grabbed object, the lifetime may be affected to varying degrees. It is recommended to use Rochu control Unit. The working air pressure should not exceed the safe working pressure range.









Soft Beak / Beak Module

Product features

- 正压状态指尖打开,真空状态夹紧,内指尖距 G 与外指尖距 D 可使用工作气压调节,建议配合柔触驱动器使用。
- 柔爪材质分为常规型 [P] 和无痕型 [PAS],有防尘要求或微型、较轻的工件,易吸附于柔爪指尖,应优选无痕型 [PAS]。

	BMC-4B40[F	P]/S	BML-4B40[F	P]/S	
0	Straight Fitting Norm	nal Materia	Side Fitting Norma	l Materia	
	BMC-4B40[PAS]/S		BML-4B40[PAS]/S		
	Straight Fitting Dust-free I	Normal Material	Side Fitting Dust-free No	ormal Material	
	BMC Weight	59.2g	BML Weight	73.7g	

Parameter

Gripping range	18-23.5mm	Gripping force	0-1.6N	Gripping load*	80g	Ideal gripping workpiece size**	22.5mm
Internal gripping range	37-78mm	Internal gripping force	0-18.6N	Internal gripping load*	967g	Ideal internal gripping workpiece size**	37mm
Joint size	G1/8	Lifetime*	150 万次	Contact Temperature	<220°C	Safe Pressure***	<70kPa

*: Experimental conditions of load weight(Vertical gripping of rectangular smooth stainless steel workpiece with ideal size)

***: According to the working air pressure in the use scene and the surface roughness of the grabbed object, the lifetime may be affected to varying degrees. It is recommended to use Rochu control Unit. The working air pressure should not exceed the safe working pressure range.



Pressure-Fingertip Distance deformation curve



B-4B40[P]/S





- Fingertip open under pressure and clamped in a vacuum. Fingertip distance G can be adjusted by working pressure. It is suggested to be used with Rochu control unit.

- Soft beak material is divided into Normal Material [H] and Dust-free Normal Material [PAS]. When the workpiece is light, or very soft, easy to adhere to adsorp on the soft beak, Dust-free Normal Material [HAS] is preferred.

	BMC-4G40[H]/S	BML-4G40[H	I]/S	
	Straight Fitting Norm	al Materia	Side Fitting Norma	l Materia	0
	BMC-4G40[HA	.S]/S	BML-4G40[HAS]/S		
	Straight Fitting Dust-free N	Iormal Material	Side Fitting Dust-free Normal Material		The second second second second second second second second second second second second second second second se
	BMC Weight	61.7g	BML Weight	76.2g	

Parameter

Gripping range	9-24mm	Gripping force	0-9.6N	Gripping load*	489g	Ideal gripping workpiece size**	24mm
Internal gripping range	35-52mm	Internal gripping force	0-32.7N	Internal gripping load*	1726g	Ideal internal gripping workpiece size**	36mm
Joint size	G1/8	Lifetime*	150 万次	Contact Temperature	<220°C	Safe Pressure***	<150kPa

*: Experimental conditions of load weight(Vertical gripping of rectangular smooth stainless steel workpiece with ideal size)

***: According to the working air pressure in the use scene and the surface roughness of the grabbed object, the lifetime may be affected to varying degrees. It is recommended to use Rochu control Unit. The working air pressure should not exceed the safe working pressure range.









- Fingertip open under pressure and clamped in a vacuum. Fingertip distance G can be adjusted by working pressure. It is suggested to be used with Rochu control unit.

- Soft beak material is divided into Normal Material [P] and Dust-free Normal Material [PAS]. When the workpiece is light, or very soft, easy to adhere to adsorp on the soft beak, Dust-free Normal Material [PAS] is preferred.

	BMC-4G44[H	I]/S	BML-4G44[H	I]/S	
	Straight Fitting Norm	nal Materia	Side Fitting Normal Materia		
	BMC-4G44[HAS]/S		BML-4G44[HAS]/S		
	Straight Fitting Dust-free Normal Material		Side Fitting Dust-free Normal Material		
	BMC Weight	50g	BML Weight	64.5g	

Parameter

Gripping range	15-31.5mm	Gripping force	0-12N	Gripping load*	611g	Ideal gripping workpiece size**	31.5mm
Internal gripping range	—	Internal gripping force	—	Internal gripping load*	—	Ideal internal gripping workpiece size**	—
Joint size	G1/8	Lifetime*	150 万次	Contact Temperature	<220°C	Safe Pressure***	<80kPa

*: Experimental conditions of load weight(Vertical gripping of rectangular smooth stainless steel workpiece with ideal size)

***: According to the working air pressure in the use scene and the surface roughness of the grabbed object, the lifetime may be affected to varying degrees. It is recommended to use Rochu control Unit. The working air pressure should not exceed the safe working pressure range.








- Fingertip open under pressure and clamped in a vacuum. Fingertip distance G can be adjusted by working pressure. It is suggested to be used with Rochu control unit.

- Soft beak material is divided into Normal Material [P] and Dust-free Normal Material [PAS]. When the workpiece is light, or very soft, easy to adhere to adsorp on the soft beak, Dust-free Normal Material [PAS] is preferred.

BMC-4B50[P]/S	BML-4B50[F	P]/S	
Straight Fitting Norm	al Materia	Side Fitting Norma	l Materia	
BMC-4B50[PAS]/S		BML-4B50[PAS]/S		
Straight Fitting Dust-free N	Iormal Material	Side Fitting Dust-free Normal Material		
BMC Weight	92.1g	BML Weight	106.6g	

Parameter

B-4B50[P]/S

Gripping range	14-29mm	Gripping force	0-8.4N	Gripping load*	439g	Ideal gripping workpiece size**	27mm
Internal gripping range	42-87mm	Internal gripping force	0-29N	Internal gripping load*	1693g	Ideal internal gripping workpiece size**	45mm
Joint size	G1/8	Lifetime*	150 万次	Contact Temperature	<220°C	Safe Pressure***	<80kPa

*: Experimental conditions of load weight(Vertical gripping of rectangular smooth stainless steel workpiece with ideal size)

***: According to the working air pressure in the use scene and the surface roughness of the grabbed object, the lifetime may be affected to varying degrees. It is recommended to use Rochu control Unit. The working air pressure should not exceed the safe working pressure range.









- Fingertip open under pressure and clamped in a vacuum. Fingertip distance G can be adjusted by working pressure. It is suggested to be used with Rochu control unit.

- Soft beak material is divided into Normal Material [P] and Dust-free Normal Material [PAS]. When the workpiece is light, or very soft, easy to adhere to adsorp on the soft beak, Dust-free Normal Material [PAS] is preferred.



Parameter

Gripping range	20-33.5mm	Gripping force	0-15.4N	Gripping load*	795g	Ideal gripping workpiece size**	30mm
Internal gripping range	—	Internal gripping force	_	Internal gripping load*	_	Ideal internal gripping workpiece size**	_
Joint size	G1/8	Lifetime*	150 万次	Contact Temperature	<220°C	Safe Pressure***	<120kPa

*: Experimental conditions of load weight(Vertical gripping of rectangular smooth stainless steel workpiece with ideal size)

***: According to the working air pressure in the use scene and the surface roughness of the grabbed object, the lifetime may be affected to varying degrees. It is recommended to use Rochu control Unit. The working air pressure should not exceed the safe working pressure range.



Vacuum



Pressure

G









- Fingertip open under pressure and clamped in a vacuum. Fingertip distance G can be adjusted by working pressure. It is suggested to be used with Rochu control unit.

- Soft beak material is divided into Normal Material [P] and Dust-free Normal Material [PAS]. When the workpiece is light, or very soft, easy to adhere to adsorp on the soft beak, Dust-free Normal Material [PAS] is preferred.

	BMC-4G58[H] Straight Fitting Norm	/SN nal Materia	BML-4G58[H] Side Fitting Norma]/SN al Materia	
	BMC-4G58[HAS Straight Fitting Dust-free N	S]/SN Normal Material	BML-4G58[HAS]/SN Side Fitting Dust-free Normal Material		
P					
	BMC Weight	60.4g	BML Weight	74.4g	

Parameter

Gripping range	24.5-43mm	Gripping force	0-49.4N	Gripping load*	2652g	Ideal gripping workpiece size**	43mm
Internal gripping range	—	Internal gripping force	_	Internal gripping load*	_	Ideal internal gripping workpiece size**	_
Joint size	G1/8	Lifetime*	150 万次	Contact Temperature	<220°C	Safe Pressure***	<120kPa

*: Experimental conditions of load weight(Vertical gripping of rectangular smooth stainless steel workpiece with ideal size)

***: According to the working air pressure in the use scene and the surface roughness of the grabbed object, the lifetime may be affected to varying degrees. It is recommended to use Rochu control Unit. The working air pressure should not exceed the safe working pressure range.







- Fingertip open under pressure and clamped in a vacuum. Fingertip distance G can be adjusted by working pressure. It is suggested to be used with Rochu control unit.

- Soft beak material is divided into Normal Material [P] and Dust-free Normal Material [PAS]. When the workpiece is light, or very soft, easy to adhere to adsorp on the soft beak, Dust-free Normal Material [PAS] is preferred.

	BMC-4G64[H Straight Fitting Norm	I]/S nal Materia	BML-4G64[H Side Fitting Norma	I]/S Il Materia			
2	BMC-4G64[HAS]/S Straight Fitting Dust-free Normal Material		BML-4G64[HAS]/S Side Fitting Dust-free Normal Material				
	BMC Weight	114.7g	BML Weight	129.2g			

Parameter

Gripping range	27-48mm	Gripping force	0-55.8N	Gripping load*	2926g	Ideal gripping workpiece size**	48mm
Internal gripping range	—	Internal gripping force	—	Internal gripping load*	—	Ideal internal gripping workpiece size**	—
Joint size	G1/8	Lifetime*	150 万次	Contact Temperature	<220°C	Safe Pressure***	<80kPa

*: Experimental conditions of load weight(Vertical gripping of rectangular smooth stainless steel workpiece with ideal size)

***: According to the working air pressure in the use scene and the surface roughness of the grabbed object, the lifetime may be affected to varying degrees. It is recommended to use Rochu control Unit. The working air pressure should not exceed the safe working pressure range.









- Fingertip open under pressure and clamped in a vacuum. Fingertip distance G can be adjusted by working pressure. It is suggested to be used with Rochu control unit.

- Soft beak material is divided into Normal Material [P] and Dust-free Normal Material [PAS]. When the workpiece is light, or very soft, easy to adhere to adsorp on the soft beak, Dust-free Normal Material [PAS] is preferred.



Parameter

Gripping range	24-35mm	Gripping force	0-9.1N	Gripping load*	475g	Ideal gripping workpiece size**	35mm
Internal gripping range	_	Internal gripping force	_	Internal gripping load*	_	Ideal internal gripping workpiece size**	_
Joint size	G1/8	Lifetime*	150 万次	Contact Temperature	<220°C	Safe Pressure***	<70kPa

*: Experimental conditions of load weight(Vertical gripping of rectangular smooth stainless steel workpiece with ideal size)

***: According to the working air pressure in the use scene and the surface roughness of the grabbed object, the lifetime may be affected to varying degrees. It is recommended to use Rochu control Unit. The working air pressure should not exceed the safe working pressure range.







- Fingertip open under pressure and clamped in a vacuum. Fingertip distance G can be adjusted by working pressure. It is suggested to be used with Rochu control unit.

- Soft beak material is divided into Normal Material [P] and Dust-free Normal Material [PAS]. When the workpiece is light, or very soft, easy to adhere to adsorp on the soft beak, Dust-free Normal Material [PAS] is preferred.

BMC-4B70[P]/S Straight Fitting Normal Materia		BML-4B70[P]/S Side Fitting Normal Materia		9
BMC-4B70[PAS]/S Straight Fitting Dust-free Normal Material		BML-4B70[PAS]/S Side Fitting Dust-free Normal Material		
BMC Weight	210.1g	BML Weight	224.6g	

Parameter

B-4B70[P]/S

Gripping range	28-35mm	Gripping force	0-16.9N	Gripping load*	815g	Ideal gripping workpiece size**	35mm
Internal gripping range	71-110mm	Internal gripping force	0-42.7N	Internal gripping load*	2203g	Ideal internal gripping workpiece size**	71mm
Joint size	G1/8	Lifetime*	150 万次	Contact Temperature	<220°C	Safe Pressure***	<100kPa

*: Experimental conditions of load weight(Vertical gripping of rectangular smooth stainless steel workpiece with ideal size)

***: According to the working air pressure in the use scene and the surface roughness of the grabbed object, the lifetime may be affected to varying degrees. It is recommended to use Rochu control Unit. The working air pressure should not exceed the safe working pressure range.









FM / F Finger Module / Finger



Finger Module A



Finger Module B



Finger Module C

FM-A3V1/LS1	FM-A3V2/LS1	FM-A3V3/LS1	FM-A3V4/LS1	FM-A3V5/LS1	F-A3T/LS1
					-
FM-A3V1/LS8	FM-A3V2/LS8	FM-A3V3/LS8	FM-A3V4/LS8	FM-A3V5/LS8	F-A3T/LS8
FM-A3V1/LF1	FM-A3V2/LF1	FM-A3V3/LF1	FM-A3V4/LF1	FM-A3V5/LF1	F-A3T/LF1
	,				
FM-A3V1/U30	FM-A3V2/U30	FM-A3V3/U30	FM-A3V4/U30	FM-A3V5/U30	F-A3T/U30
	,				M
FM-A3V1/NSU	FM-A3V2/NSU	FM-A3V3/NSU	FM-A3V4/NSU	FM-A3V5/NSU	F-A3T/NSU
FM-A4V1/LS1	FM-A4V2/LS1	FM-A4V3/LS1	FM-A4V4/LS1	FM-A4V5/LS1	F-A4T/LS1
F					
FM-A4V1/LS8	FM-A4V2/LS8	FM-A4V3/LS8	FM-A4V4/LS8	FM-A4V5/LS8	F-A4T/LS8
W					and a
FM-A4V1/FS3	FM-A4V2/FS3	FM-A4V3/FS3	FM-A4V4/FS3	FM-A4V5/FS3	F-A4T/FS3
FM-A4V1/LF1	FM-A4V2/LF1	FM-A4V3/LF1	FM-A4V4/LF1	FM-A4V5/LF1	F-A4T/LF1

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FM-A4V1/NSU	FM-A4V2/NSU	FM-A4V3/NSU	FM-A4V4/NSU	FM-A4V5/NSU	F-A4T/NSU
		200 e	- Jooor		THE
FM-A4V1/U32	FM-A4V2/U32	FM-A4V3/U32	FM-A4V4/U32	FM-A4V5/U32	F-A4T/U32
Ŵ					
FM-A4V1/U42	FM-A4V2/U42	FM-A4V3/U42	FM-A4V4/U42	FM-A4V5/U42	F-A4T/U42
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FM-A4V1/N4	FM-A4V2/N4	FM-A4V3/N4	FM-A4V4/N4	FM-A4V5/N4	F-A4T/N4
	Ĩ				
FM-A5V1/LS1	FM-A5V2/LS1	FM-A5V3/LS1	FM-A5V4/LS1	FM-A5V5/LS1	F-A5T/LS1
F					
FM-A5V1/LS8	FM-A5V2/LS8	FM-A5V3/LS8	FM-A5V4/LS8	FM-A5V5/LS8	F-A5T/LS8
F			ŧ	4.	ann
FM-A5V1/FS3	FM-A5V2/FS3	FM-A5V3/FS3	FM-A5V4/FS3	FM-A5V5/FS3	F-A5T/FS3
FM-A5V1/LF1	FM-A5V2/LF1	FM-A5V3/LF1	FM-A5V4/LF1	FM-A5V5/LF1	F-A5T/LF1
				The second second second second second second second second second second second second second second second se	THE
FM-A5V1/NSU	FM-A5V2/NSU	FM-A5V3/NSU	FM-A5V4/NSU	FM-A5V5/NSU	F-A5T/NSU



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FM-A8V1/LS8	FM-A8V2/LS8	FM-A8V3/LS8	FM-A8V4/LS8	FM-A8V5/LS8	F-A8T/LS8

FM-B3V1/LS1	FM-B3V2/LS1	FM-B3V3/LS1	FM-B3V4/LS1	FM-B3V5/LS1	F-B3T/LS1
FM-B3V1/LF1	FM-B3V2/LF1	FM-B3V3/LF1	FM-B3V4/LF1	FM-B3V5/LF1	F-B3T/LF1
FM-B3V1/LF1[PLG]	FM-B3V2/LF1 [PLG]	FM-B3V3/LF1[PLG]	FM-B3V4/LF1[PLG]	FM-B3V5/LF1[PLG]	F-B3T/LF1[PLG]
					- Contraction of the second se
FM-B3V1/PF1	FM-B3V2/PF1	FM-B3V3/PF1	FM-B3V4/PF1	FM-B3V5/PF1	F-B3T/PF1
FM-B3V1/AC1	FM-B3V2/AC1	FM-B3V3/AC1	FM-B3V4/AC1	FM-B3V5/AC1	F-B3T/AC1
FM-B4V1/LS1	FM-B4V2/LS1	FM-B4V3/LS1	FM-B4V4/LS1	FM-B4V5/LS1	F-B4T/LS1
FM-B4V1/LS8	FM-B4V2/LS8	FM-B4V3/LS8	FM-B4V4/LS8	FM-B4V5/LS8	F-B4T/LS8
					ans.
FM-B4V1/FS3	FM-B4V2/FS3	FM-B4V3/FS3	FM-B4V4/FS3	FM-B4V5/FS3	F-B4T/FS3
FM-B4V1/LF1	FM-B4V2/LF1	FM-B4V3/LF1	FM-B4V4/LF1	FM-B4V5/LF1	F-B4T/LF1

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			M	The second second		
FM-B4V1/U40	FM-B4V2/U40	FM-B4V3/U40	FM-B4V4/U40	FM-B4V5/U40	F-B4T/U40	
FM-B5V1/LS1	FM-B5V2/LS1	FM-B5V3/LS1	FM-B5V4/LS1	FM-B5V5/LS1	F-B5T/LS1	
Į	Ĩ				anns.	
FM-B5V1/FS3	FM-B5V2/FS3	FM-B5V3/FS3	FM-B5V4/FS3	FM-B5V5/FS3	F-B5T/FS3	
FM-B5V1/LF1	FM-B5V2/LF1	FM-B5V3/LF1	FM-B5V4/LF1	FM-B5V5/LF1	F-B5T/LF1	
FM-B6V1/LS1	FM-B6V2/LS1	FM-B6V3/LS1	FM-B6V4/LS1	FM-B6V5/LS1	F-B6T/LS1	
FM-B6V1/LS8	FM-B6V2/LS8	FM-B6V3/LS8	FM-B6V4/LS8	FM-B6V5/LS8	F-B6T/LS8	
I					anne.	
FM-B6V1/FS3	FM-B6V2/FS3	FM-B6V3/FS3	FM-B6V4/FS3	FM-B6V5/FS3	F-B6T/FS3	
FM-B7V1/LS1	FM-B7V2/LS1	FM-B7V3/LS1	FM-B7V4/LS1	FM-B7V5/LS1	F-B7T/LS1	
FM-B8V1/LS1	FM-B8V2/LS1	FM-B8V3/LS1	FM-B8V4/LS1	FM-B8V5/LS1	F-B8T/LS1	

FM-B8V1/FS3	FM-B8V2/FS3	FM-B8V3/FS3	FM-B8V4/FS3	FM-B8V5/FS3	F-B8T/FS3		
FM-B8V1/LF1	FM-B8V2/LF1	FM-B8V3/LF1	FM-B8V4/LF1	FM-B8V5/LF1	F-B8T/LF1		

	1				
	P				-
FM-C3V1/LS1	FM-C3V2/LS1	FM-C3V3/LS1	FM-C3V4/LS1	FM-C3V5/LS1	F-C3T/LS1
FM-C4V1/LS1	FM-C4V2/LS1	FM-C4V3/LS1	FM-C4V4/LS1	FM-C4V5/LS1	F-C4T/LS1
	P		P		-
FM-C4V1/LS8	FM-C4V2/LS8	FM-C4V3/LS8	FM-C4V4/LS8	FM-C4V5/LS8	F-C4T/LS8
FM-C4V1/LF1	FM-C4V2/LF1	FM-C4V3/LF1	FM-C4V4/LF1	FM-C4V5/LF1	F-C4T/LF1
					ann.
FM-C4V1/V15	FM-C4V2/V15	FM-C4V3/V15	FM-C4V4/V15	FM-C4V5/V15	F-C4T/V15
FM-C5V1/LS8	FM-C5V2/LS8	FM-C5V3/LS8	FM-C5V4/LS8	FM-C5V5/LS8	F-C5T/LS8
Ŵ		u, i)	P		-
FM-C5V1/FS3	FM-C5V2/FS3	FM-C5V3/FS3	FM-C5V4/FS3	FM-C5V5/FS3	F-C5T/FS3
Ŵ					ams
FM-C5V1/LF1	FM-C5V2/LF1	FM-C5V3/LF1	FM-C5V4/LF1	FM-C5V5/LF1	F-05T/LF1
		4			and a second
FM-C6V1/LS1	FM-C6V2/LS1	FM-C6V3/LS1	FM-C6V4/LS1	FM-C6V5/LS1	F-06T/LS1

	F				Caller Control
FM-C6V1/LS1	FM-C6V2/LS1	FM-C6V3/LS1	FM-C6V4/LS1	FM-C6V5/LS1	F-C6T/LS1
FM-C7V1/LS1	FM-C7V2/LS1	FM-C7V3/LS1	FM-C7V4/LS1	FM-C7V5/LS1	F-07T/LS1
FM-C7V1/LF1	FM-C7V2/LF1	FM-C7V3/LF1	FM-C7V4/LF1	FM-C7V5/LF1	F-C7T/LF1
FM-C8V1/LS1	FM-C8V2/LS1	FM-C8V3/LS1	FM-C8V4/LS1	FM-C8V5/LS1	F-C8T/LS1

Finger Module[FM]

- · Finger Module [FM] is composed of the Finger [F] and the Fixed Module [SFM].
- Differrent Fixed [SFM] has different air intake, fixation position, and combination mode.
- Select the appropriate Finger [F] type according to the weight and size of the gripped workpiece, gripping force is determined by the Finger [F] type, working pressure and installation position.

• The safe pressure of the Finger Module [FM] is 120-300kpa. Please refer to the product label or packaging instructions.



Size of Finger Module [FM]

According to the width and length of Fingers[F], they are divided into the following 18 sizes*.

A3, A4, A5, A6, A7, A8; B3, B4, B5, B6, B7, B8;

C3, C4, C5, C6, C7, C8.

Select different finger-widths [Wf] according to the weight of the workpiece. The larger the [Wf], the greater the gripping force According to the workpiece size, select different finger-lengths [Lf]. Long fingers have a better fitting of the big workpiece. Short fingers have higher accuracy.



	3 Segments	4 Segments	5 Segments	6 Segments	7 Segments	8 Segments	Wf [mm]	
Finger Size	A3	A4	A5	A6	A7	A8		
Lf [mm]	41	55	69	83	97	111		
A							24	Fſ
Finger Size	B3	B4	B5	B6	B7	B8		
Lf [mm]	31	41.5	52	62.5	73	83.5		
В							18	
Finger Size	C3	C4	C5	C6	C7	C8		
Lf [mm]	21	28	35	42	49	56		
С		*					12	

Core Finger size

* : If you need to customize non-standard soft finger, please consult customer service

** According to the working pressure in the application scenario and the surface roughness of the gripped object, the service life may be affected to different degrees. It is recommended to configure a flexible touch standard driver. The working pressure must not exceed the safe working pressure range.



Finger Module

Encoding Method



Fingertip & B Print	ottom	Features	Pictures					
Standard	LS1	Good versatility and wear resistance, suitable for rough object surfaces such as food, metal, and plastics.	R					
Special*	LF1	Suitable for smooth dry workpieces and soft food.	R					
	FS3	Suitable for soft fabric products.	A.					
	LS8	Suitable for sheet metal parts, flat glass, PCB, car headlights, and other plates.						
	* Pleas	e consult our customer service for me	ore Special Finge	rtips and Bottom pr	ints.			

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Finger Module

FM

Rochu

Series Division of Finger Fixed Modules

There're five Fixed Modules V1, V2, V3, V4 and V5 with different air intakes and fixation positions.

Fixed Module	Pictures	Structural Features
V1 Compact two-finger Module		 Features: Double finger module combination, compact structure, and small space. Finger spacing and installation angle are unadjustable. It is suitable for gripping small, light, and thin workpieces. Fixation: Can be fixed on three sides (optional). Air intake: Intake joints are installed on three sides (optional). Additional Sensor module (optional).
V2 Single-finger Module		 Features: Single finger module combination, compatible with [SMP] sliding mounting plate, adjustable spacing and angle between fingers. Fixation: Can be fixed on four sides (optional). Air intake: Intake joints can be installed on three sides (optional). Additional Sensor module (optional).
V3 Siner-finger Module		 Features: Single finger module combination, compatible with [SMP] Slide Mounting Plate, adjustable spacing, and angle between fingers. Fixation: Can be fixed on three sides (optional). Air intake: The intake joint can only be installed on one side (the back of the finger). Additional Sensor module (optional).
V4 Siner-finger Module		 Features: Series-finger Module, the gripping force is large, which can be used in series (using a parts kit [PK]).Only one air intake when more finger modules build in series. More fingers in series are good at gripping large and heavy objects. Fixation: It is fixed with T-nut. When installed with a sliding mounting plate, it can adjust the front and rear, left and right, and rotation respectively. Air intake: Air intake on left or right sides (optional).
V5 Siner-finger Module		 Features: Series-finger Module, can be used in series. the minimum finger spacing of the installation module is only 10mm, which is suitable for clamping small and light workpieces. Compared with V4, each finger needs an independent air intake. Fixation: It is fixed with T-nut. When installed with a sliding mounting plate, it can adjust the front and rear, left and right, and rotation respectively. Air intake: Single air intake on finger backside.



-M

V1 Fixed Module: Compact Two-finger Module

- **Features**: Double finger module combination, compact structure, and small space. Finger spacing and installation angle are unadjustable. It is suitable for gripping small, light, and thin workpieces.
- Fixation: Can be fixed on three sides (optional).
- Air intake: Intake joints are installed on three sides (optional).
- Additional Sensor module (optional).







Air Intake



Sensor Installation



V1 Fixed Module: Compact Two-finger Module

Fixation

Dimensions









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Finger Module

V1 Fixed Module: Compact Two-finger Module





-M Fin	Finger	ger Finger	Normal Pressure Fingertip Distance*	Negative Pressure Fingertip Distance* Gmax [mm]		Module- Height	Finger- Height	Module- Lenth	Finger- Lenth	Module- Width	Finger- Width	Weight	Safe Pressure [kPa]		
	Size	Module	Dmax [mm]	[P]/[PAS]	[H]/[HAS]	Hm [mm]	Hf [mm]	Lm [mm]	Lf [mm]	Wm [mm]	Wf [mm]	[g]	[P]/[PAS]	[H]/[HAS]	
	A3	FM-A3V1	18	34	32	80	28	81	41	29	24	153	120	300	
	A4	FM-A4V1	18	38	42	80	28	95	55	29	24	167	120	300	
	A5	FM-A5V1	18	56	50	80	28	109	69	29	24	181	120	300	
	A6	FM-A6V1	18	84	62	80	28	123	83	29	24	195	120	300	
	A7	FM-A7V1	18	96	72	80	28	137	97	29	24	210	120	300	
	A8	FM-A8V1	18	108	82	80	28	151	111	29	24	224	120	300	
	B3	FM-B3V1	18	38	30	65	21	64	31	23	18	77	120	260	
	B4	FM-B4V1	18	44	38	65	21	74.5	41.5	23	18	85	120	260	
	B5	FM-B5V1	18	50	46	65	21	85	52	23	18	94	120	260	
	B6	FM-B6V1	18	64	52	65	21	95.5	62.5	23	18	102	120	260	
	B7	FM-B7V1	18	78	60	65	21	106	73	23	18	110	120	260	
	B8	FM-B8V1	18	92	68	65	21	116.5	83.5	23	18	118	120	260	
	C3	FM-C3V1	15	25	17	47	14	46	21	21.5	12	42	120	220	
	C4	FM-C4V1	15	33	21	47	14	53	28	21.5	12	44	120	220	
	C5	FM-C5V1	15	39	31	47	14	60	35	21.5	12	45	120	220	
	C6	FM-C6V1	15	55	35	47	14	67	42	21.5	12	47	120	220	
	C7	FM-C7V1	15	73	41	47	14	74	49	21.5	12	48	120	220	
	<u>C</u> 8	FM-C8V1	15	91	47	47	14	81	56	21.5	12	50	120	220	

*: Negative pressure fingertip distance G_{max} : Measured when real working pressure is -80kPa



V2 Fixed Module: Singel-Finger Module

- **Features**: Single finger module combination, compatible with [SMP] sliding mounting plate, adjustable spacing and angle between fingers.
- Fixation: Can be fixed on four sides (optional).
- Air intake: Intake joints can be installed on three sides (optional).
- Additional Sensor module (optional).







Pose Adjustment







Sensor Installation



FM

Finger Module

V2 Fixed Module: Singel-Finger Module





Spare Part:

- 1) Shell
- 2 Plug
- ③ Finger
- ④ Mounting Block



V2 Fixed Module: Singel-Finger Module







Finger Size	Finger Module	Fingertip	Fingertip Stroke	Positive Pressure Bange**	Module- Height	dule- Finger- eight Height		Module- Finger- Lenth Lenth		Finger- Width	Weight	Safe Pressure t [kPa]			
Size	wodule	HR [mm]	[P]/[PAS]	[H]/[HAS]	Hmin [mm]	Hm [mm]	Hf [mm]	Lm [mm]	Lf [mm]	Wm [mm]	Wf [mm]	[g]	[P]/[PAS]	[H]/[HAS	EV
															IIV
A3	FM-A3V2	16.5	8	7	8.5	45	28	82	41	31	24	92	120	300	
A4	FM-A4V2	27	10	12	17	45	28	96	55	31	24	99	120	300	
A5	FM-A5V2	43.5	19	16	24.5	45	28	110	69	31	24	106	120	300	
A6	FM-A6V2	72	33	22	39	45	28	124	83	31	24	113	120	300	
A7	FM-A7V2	90	39	27	51	45	28	138	97	31	24	120	120	300	
A8	FM-A8V2	109	45	32	64	45	28	152	111	31	24	127	120	300	
B3	FM-B3V2	19	10	6	9	37.5	21	65	31	25	18	52	120	260	
B4	FM-B4V2	29	13	10	16	37.5	21	76	41.5	25	18	56	120	260	
B5	FM-B5V2	40	16	14	24	37.5	21	86	52	25	18	60	120	260	
B6	FM-B6V2	53	23	17	30	37.5	21	97	62.5	25	18	64	120	260	
B7	FM-B7V2	75	30	21	45	37.5	21	107	73	25	18	68	120	260	
B8	FM-B8V2	98	37	25	61	37.5	21	118	83.5	25	18	72	120	260	
C3	FM-C3V2	10.5	5	1	5.5	30	14	44	21	18	12	27	120	220	
C4	FM-C4V2	20	9	3	11	30	14	51	28	18	12	27	120	220	
C5	FM-C5V2	27	12	8	15	30	14	58	35	18	12	28	120	220	
C6	FM-C6V2	42	20	10	22	30	14	65	42	18	12	29	120	220	
C7	FM-C7V2	63	29	13	34	30	14	72	49	18	12	30	120	220	
C8	FM-C8V2	80	38	16	42	30	14	79	56	18	12	31	120	220	

*: Negative Pressure Range Hmax : Measured when real working pressure is -80kPa.

**: Positive Pressure Range Hmin: For Normal Material Finger [P]/[PAS], working pressure is 100kPa. For Strong Material Finger[H]/[HAS], working pressure is 250kPa.

V3 Fixed Module: Singel-Finger Module

- **Features**: Single finger module combination, compatible with [SMP] Slide Mounting Plate, adjustable spacing, and angle between fingers.
- **Fixation**: Can be fixed on three sides (optional).
- Air intake: The intake joint can only be installed on one side (the back of the finger).
- Additional Sensor module (optional).







Pose Adjustment



Air Intake

FM





V3 Fixed Mocdule: Singel-Finger Module





- Spare Part:
- Shell
- ② Plug

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- ③ Finger
- ④ Mounting Block
V3 Fixed Module: Singel-Finger Module



Finger Size	Finger Module	Fingertip Stroke HR [mm]	Negative Fingertip Hmax	Pressure Distance* [mm]	Positive Pressure Range**	Module- Height Hm [mm]	Finger- Height Hf [mm]	Module- Lenth Lm [mm]	Finger- Lenth Lf [mm]	Module- Width Wm [mm]	Finger- Width Wf [mm]	Weight	Safe F [k	Pressure Pa]
			[P]/[PAS]	[H]/[HAS]									[P]/[PAS] [H]/[HAS]
A3	FM-A3V3	16.5	8	7	8.5	60	28	85.5	41	31	24	77	120	300
A4	FM-A4V3	27	10	12	17	60	28	99.5	55	31	24	84	120	300
A5	FM-A5V3	43.5	19	16	24.5	60	28	113.5	69	31	24	91	120	300
A6	FM-A6V3	72	33	22	39	60	28	127.5	83	31	24	98	120	300
A7	FM-A7V3	90	39	27	51	60	28	141.5	97	31	24	105	120	300
A8	FM-A8V3	109	45	32	64	60	28	155.5	111	31	24	112	120	300
B3	FM-B3V3	19	10	6	9	53	21	68.5	31	25	18	43	120	260
B4	FM-B4V3	29	13	10	16	53	21	79.5	41.5	25	18	47	120	260
B5	FM-B5V3	40	16	14	24	53	21	89.5	52	25	18	51	120	260
B6	FM-B6V3	53	23	17	30	53	21	100.5	62.5	25	18	55	120	260
B7	FM-B7V3	75	30	21	45	53	21	110.5	73	25	18	59	120	260
B8	FM-B8V3	98	37	25	61	53	21	121.5	83.5	25	18	63	120	260
C3	FM-C3V3	10.5	5	1	5.5	46	14	51	21	18	12	24	120	220
C4	FM-C4V3	20	9	3	11	46	14	58	28	18	12	25	120	220
C5	FM-C5V3	27	12	8	15	46	14	65	35	18	12	26	120	220
C6	FM-C6V3	42	20	10	22	46	14	72	42	18	12	26	120	220
C7	FM-C7V3	63	29	13	34	46	14	79	49	18	12	27	120	220
C8	FM-C8V3	80	38	16	42	46	14	86	56	18	12	28	120	220

*: Negative Pressure Range Hmax : Measured when real working pressure is -80kPa.

**: Positive Pressure Range Hmin: For Normal Material Finger [P]/[PAS], working pressure is 100kPa. For Strong Material Finger[H]/[HAS], working pressure is 250kPa.

V4 Series-finger Module: Series air circuit, high load.

- **Features**: Series-finger Module, the gripping force is large, which can be used in series (using a parts kit [PK]).Only one air intake when more finger modules build in series. More fingers in series are good at gripping large and heavy objects.
- **Fixation**: It is fixed with T-nut. When installed with a sliding mounting plate, it can adjust the front and rear, left and right, and rotation respectively.
- Air intake: Air intake on left or right sides (optional).



Series combination:

- Multiple finger modules are combined in series to increase the gripping force.
- It can realize the seamless splicing between fingers and share the air inlet to save space.
- *Splicing finger modules requires a parts kit [PK] containing the bolts, nuts, sealings, and pins. The parts kit is not included in the finger module and needs to be ordered separately.



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- Spare Part:
- 1) Shell
- 2 Plug
- ③ Finger
- ④ Mounting Block

V4 Series-finger Module: Series air circuit, high load.



Finge	· Finger Module	Fingertip Stroke	Negative Fingertip Hmax	Pressure Distance* [mm]	Positive Pressure Range**	Module- Height	Finger- Height	Module- Lenth	Finger- Lenth	Module- Width	Finger- Width	Weight	Safe Pr [kP	essure a]
		HR [mm]	[P]/[PAS]	[H]/[HAS]	Hmin [mm]	()	[]		C i (iimiij	vvm [mm]	Wf [mm]	[g]	[P]/[PAS]	[H]/[HAS]
A3	FM-A3V4	16.5	8	7	8.5	51	28	78	41	31	24	97	120	300
A4	FM-A4V4	27	10	12	17	51	28	92	55	31	24	104	120	300
A5	FM-A5V4	43.5	19	16	24.5	51	28	106	69	31	24	111	120	300
A6	FM-A6V4	72	33	22	39	51	28	120	83	31	24	119	120	300
A7	FM-A7V4	90	39	27	51	51	28	134	97	31	24	126	120	300
A8	FM-A8V4	109	45	32	64	51	28	148	111	31	24	133	120	300
	_													
B3	FM-B3V4	19	10	6	9	45	21	61	31	25	18	61	120	260
B4	FM-B4V4	29	13	10	16	45	21	72	41.5	25	18	65	120	260
B5	FM-B5V4	40	16	14	24	45	21	82	52	25	18	69	120	260
B6	FM-B6V4	53	23	17	30	45	21	93	62.5	25	18	73	120	260
B7	FM-B7V4	75	30	21	45	45	21	103	73	25	18	77	120	260
B8	FM-B8V4	98	37	25	61	45	21	114	83.5	25	18	81	120	260
	-													
C3	FM-C3V4	10.5	5	1	5.5	35	14	50	21	18	12	35	120	220
C4	FM-C4V4	20	9	3	11	35	14	57	28	18	12	36	120	220
C5	FM-C5V4	27	12	8	15	35	14	64	35	18	12	37	120	220
C6	FM-C6V4	42	20	10	22	35	14	71	42	18	12	38	120	220
C7	FM-C7V4	63	29	13	34	35	14	78	49	18	12	38	120	220
C8	FM-C8V4	80	38	16	42	35	14	85	56	18	12	39	120	220

*: Negative Pressure Range Hmax : Measured when real working pressure is -80kPa.

**: Positive Pressure Range Hmin: For Normal Material Finger [P]/[PAS], working pressure is 100kPa. For Strong Material Finger[H]/[HAS], working pressure is 250kPa.

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V5 Fixed Module: Series-finger Module

- **Features:** Series-finger Module, can be used in series. the minimum finger spacing of the installation module is only 10mm, which is suitable for clamping small and light workpieces. Compared with V4, each finger needs an independent air intake.
- **Fixation:** It is fixed with T-nut. When installed with a sliding mounting plate, it can adjust the front and rear, left and right, and rotation respectively.
- Air intake: Single air intake on finger backside.



Series combination:

- · Multiple fingers are combined in series to work at the same time to increase the gripping force
- It can realize the seamless splicing between fingers and share the air inlet to save space.
- *Splicing finger modules requires a parts kit [PK] containing the bolts, nuts, sealings, and pins. The parts kit is not included in the finger module and needs to be ordered separately.



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- Spare Part:
- Shell
- 2 Plug
- ③ Finger
- ④ Mounting Block

V5 Fixed Module







Finger Size	Finger Module	Fingertip Stroke HR [mm]	Negative Fingertip Hmax	Pressure Distance* [mm]	Positive Pressure Range**	Module- Height Hm [mm]	Finger- Height Hf [mm]	Module- Lenth Lm [mm]	Finger- Lenth Lf [mm]	Module- Width Wm [mm]	Finger- Width Wf [mm]	Weight [g]	Safe P [kf	ressure Pa]
			[P]/[PAS]	[H]/[HAS]	Hmin (mm)								[P]/[PAS]	[H]/[HAS]
A3	FM-A3V5	16.5	8	7	8.5	58	28	88	41	31	24	76	120	300
A4	FM-A4V5	27	10	12	17	58	28	102	55	31	24	83	120	300
A5	FM-A5V5	43.5	19	16	24.5	58	28	116	69	31	24	90	120	300
A6	FM-A6V5	72	33	22	39	58	28	130	83	31	24	97	120	300
A7	FM-A7V5	90	39	27	51	58	28	144	97	31	24	104	120	300
A8	FM-A8V5	109	45	32	64	58	28	158	111	31	24	111	120	300
B3	FM-B3V5	19	10	6	9	51	21	71	31	25	18	44	120	260
B4	FM-B4V5	29	13	10	16	51	21	82	41.5	25	18	48	120	260
B5	FM-B5V5	40	16	14	24	51	21	92	52	25	18	52	120	260
B6	FM-B6V5	53	23	17	30	51	21	103	62.5	25	18	56	120	260
B7	FM-B7V5	75	30	21	45	51	21	113	73	25	18	60	120	260
B8	FM-B8V5	98	37	25	61	51	21	124	83.5	25	18	64	120	260
C3	FM-C3V5	10.5	5	1	5.5	44	14	53	21	18	12	28	120	220
C4	FM-C4V5	20	9	3	11	44	14	60	28	18	12	28	120	220
C5	FM-C5V5	27	12	8	15	44	14	67	35	18	12	29	120	220
C6	FM-C6V5	42	20	10	22	44	14	74	42	18	12	30	120	220
C7	FM-C7V5	63	29	13	34	44	14	81	49	18	12	31	120	220
C8	FM-C8V5	80	38	16	42	44	14	88	56	18	12	32	120	220

*: Negative Pressure Range Hmax : Measured when real working pressure is -80kPa.

**: Positive Pressure Range Hmin: For Normal Material Finger [P]/[PAS], working pressure is 100kPa. For Strong Material Finger[H]/[HAS], working pressure is 250kPa.

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Finger Module

Characteristic parameter: Adjustment and calculation method of gripping force of finger module

When the finger module is inflated, it bends inward and generates a horizontal gripping force FG when contacting the gripped workpiece. This gripping force is related to the shape of the workpiece, the type of finger, the contact area between the finger and the workpiece, the installation fingertip distance Dn (page. 59), and the working air pressure P.

Take FM-A5 finger module (normal material) as an example to clamp a square workpiece under different working conditions. The width of the workpiece is W = 80mm, and the covering length of the fingertip is LG = 20mm:



1, Higher working pressure P, higher Gripping force FG.

2, Shorter finger distance Dn, higher Gripping force FG.

3, Bigger finger size, higher Gripping force FG.

4, The strong material finger can hold higher air pressure and has a stronger force than the normal material finger.

5, Exceeding the safe working pressure will cause irreversible damage to the soft finger and a shorter lifetime, while shorter Dn may increase the abrasion of the finger bottom.

6, More fingers in series (Page. 37,39) can also improve the overall Gripping force.

7, Besides the Gripping force FG, the real handling load of the gripper is also related to the shape of the object, friction coefficient, finger bottom print, machine speed, etc.

Finger Module

Finger Module Gripping force diagram

The relevant values in the curve are determined under the following conditions:

- Finger material: normal material, strong material
- Use square workpiece, finger pattern LS1
- Only the fingertip part is in contact with the workpiece, and the fingertip covering length LG = 10mm.
- The following data is for reference only. Under other working conditions, the values will be different





Rochu Finger [F] can be replaced independently.

There are 18 finger sizes (A3, A4, A5, A6, A7, A8; B3, B4, B5, B6, B7, B8; C3, C4, C5, C6, C7, C8).

With the same working pressure, the wider fingers have higher gripping force, and the shorter fingers have better positioning accuracy and stability.

For customized finger sizes, please contact our customer service.

Finger Sizes



Finger Module







Finger Size	Fingertip Range	Negative Fingertip Hmax	Pressure Distance* [mm]	Positive Pressure Range**	Width	Length	Length	Width	Weight	Safe P [k	ressure Pa]
	HR [mm]	[P]/[PAS]	[H]/[HAS]	Hmin [mm]	Hf [mm]	Lf [mm]	L[mm]	Wf [mm]	[g]	[P]/[PAS]	[H]/[HAS]
F-43	165	0	7	0 5	20	/1	60	24	22	120	200
F-A4	27	10	12	17	20	55	83	24	<u>40</u>	120	300
F-A5	27 13 5	10	16	24.5	20	69	97	24	40 47	120	300
F-A6	43.5 72	33	22	39	28	83	111	24	/ 55	120	300
F-A7	90	39	27	51	28	97	125	24	62	120	300
F-A8	109	45	32	64	28	111	139	24	69	120	300
F-B3	19	10	6	9	21	31	52	18	11	120	260
F-B4	29	13	10	16	21	42	62	18	16	120	260
F-B5	40	16	14	24	21	52	73	18	20	120	260
F-B6	53	23	17	30	21	63	83	18	24	120	260
F-B7	75	30	21	45	21	73	94	18	28	120	260
F-B8	98	37	25	61	21	84	104	18	32	120	260
F-C3	10.5	5	1	5.5	14	21	34	12	4	120	220
F-C4	20	9	3	11	14	28	41	12	5	120	220
F-C5	27	12	8	15	14	35	48	12	6	120	220
F-C6	42	20	10	22	14	42	55	12	7	120	220
F-C7	63	29	13	34	14	49	62	12	7	120	220
F-C8	80	38	16	42	14	56	69	12	8	120	220

*: Negative Pressure Range Hmax : Measured when real working pressure is -80kPa.

**: Positive Pressure Range Hmin: For Normal Material Finger [P]/[PAS], working pressure is 100kPa. For Strong Material Finger[H]/[HAS], working pressure is 250kPa.



CU

C**o**n**trol**Uni**t**



iPCU2

Integrated Passive Control Unit



ACU2-B

Active Control Uni



ACU2-H

Active Control Un

PCU2

Passive Control Unit

LCU-H

Light Control Unit



iPCU2 Integrated Passive Control Unit

Compact Passive control unit

- -90~300kPa three levels can adjust the output pressure range, fully support from soft Beak to soft finger drive.
- Manual knob type pressure regulating.
- Integrated panel with digital display and operation buttons.
- With manual (button) and automatic (I/O level signal) two control modes, with all kinds of mechanical arm, PLC and others.
- Equipped with Installation bracket and industrial rail buckle, a variety of Installation.
- Intelligent alarm function, safe and stable, no need to worry about misoperation.
- with European CE safety certification.



Parameter

Cl

Range	ltem	Range
24VDC ±10%	Frame Material	ABS
12W	Size	208x134x141mm
50 million times	N.W.	2.0kg
0.45~1.00MPa	Protection grade	IP54
Dry, Clear, Stable	Control modo	1. Manual button
flow > 200L/min	Control mode	2. I/O, level signal
-90~300kPa	Working mode	Continuous drive mode
50db		
2 1 5 0 C	Range4VDC ±10%2W0 million times0.45~1.00MPa0ry, Clear, Stablelow > 200L/min90~300kPa0db	RangeItem4VDC ±10%Frame Material2WSize0 million timesN.W.0.45~1.00MPaProtection grade0ry, Clear, StableControl mode0w > 200L/minWorking mode90~300kPaWorking mode

Model

IPCU2 has two options: standard **iPCU2-SMN** and high-speed **iPCU2-HMN**. High-speed ipCU2-HMN has a larger Vacuum flow, which is suitable for high-speed handling.

Model		manual	electronic	Wireless remote	feedback	Safe pressure	Max pressure [kPa]	Pressure flow	Vacuum flow
								[L/min]	[L/min]
Standard	iPCU2-SMN	•				adjustable	-90	260	40
High speed	iPCU2-HMN	•				adjustable	-80	260	80

The flow parameters test conditions: air source port Pressure= 0.6mpa, gripper set Pressure=100kPa



iPCU2 Size



Use-pattern for iPCU2

Air comp	oressor	Remote control	Manual control
Pressure range:	0.45-1.00MPa	Robot / PLC / PC	Button
ļ	,	I/O Signal	
		iPCU2 Integr	ated Passive Control Unit
Soft Gripper	Vacuum Vacuum grab	Atmosphere	Pressure
Soft Finger	open	a per se se se se se se se se se se se se se	grab

CU



iPCU2 Installation

1 Slot to install





ACU2-H Active Control Unit

- All-in-one flexible active Control Unit.
- Built-in air source, full interface.
- -80~280kPa Output pressure Range, suitable for all series of soft gripper drive.
- Work Pressure, work Vacuum can be real-time digital Adjust through the panel button, Output accuracy±3kPa.
- Integrated panel with digital display and operation buttons.
- With manual (button), I/O, analog and MODBUS control modes, suit for all kinds of mechanical arm, PLC terminal.
- Products through the European CE safety certification.



CU

Parameter

Item	Range	ltem	Range
Nominal Voltage	24VDC±10%	Frame Material	Anodic oxidation of aluminum alloy
Rated Power	48W	Size	120x223x75mm
Life time	5000小时	Net Weight	1.8kg
Output pressure	-80~280kPa	Protect grade	IP54
Output accuracy	±3kPa		1. Manual button
PressureFlow	8L/min		2. I/O, level signal
VacuumFlow	8L/min	Mode	3. Voltage analog regulating pressure
working noise	50db		4. MODBUS TCP/RTU
		working mode	Continuous signal drive



ACU2-B Size





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ACU2-H Active Control Unit

- All-in-one flexible active Control Unit.
- Built-in air source, full interface.
- -80~280kPa Output pressure Range, suitable for all series of soft gripper drive.
- Work Pressure, work Vacuum can be real-time digital Adjust through the panel button, Output accuracy±3kPa.
- Integrated panel with digital display and operation buttons.
- With manual (button), I/O, analog and MODBUS control modes, suit for all kinds of mechanical arm, PLC terminal.
- Products through the European CE safety certification.



CU

Parameter

Item	Range	ltem	Range
Nominal Voltage	24VDC±10%	Frame Material	Anodic oxidation of aluminum alloy
Rated Power	48W	Size	120x223x75mm
Life time	5000小时	Net Weight	1.8kg
Output pressure	-80~280kPa	Protect grade	IP54
Output accuracy	±3kPa		1. Manual button
PressureFlow	8L/min		2. I/O, level signal
VacuumFlow	8L/min	Mode	3. Voltage analog regulating pressure
working noise	50db		4. MODBUS TCP/RTU
		working mode	Continuous signal drive



ACU2-H Size





Use-pattern for ACU2-B & ACU2-H





PCU2 Passtive Control Unit

Full function controller

- -80~300kPa digital Adjust Output pressure Range, suit for all kinds of Beak & Finger.
- It can precisely adjust the working Pressure or Vacuum, and can choose the manual knob pressure regulating type PCU2-M or the electronic analog pressure regulating type PCU2-V.
- The integrated panel integrates digital display and operation buttons.
- It has various control modes of manual (button), I/O and MODBUS, and is compatible with various mechanical arms and PLC terminals.
- With attitude feedback signal function.
- With an intelligent output alarm signal, it is safe, and there is no need to worry about misoperation.



Parameter

ltem	Range	ltem	Range
Nominal Voltage	24VDC±10%	Frame Material	Anodic oxidation of aluminum alloy
Rated Power	24W	Net Weight	3.85kg
Life time	50 million times	Protect grade	IP54
	0.45~1.00MPa		1. Manual button
input air	dry、clean、stable	Mada	2. I/O, level signal
	Flow > 200L/min	widde	3. remote (PCU2-M)
Output pressure	-80~300kPa		4. Modbus TCP/RTU
Pressure Flow	260L/min	working mode	Continuous signal drive
Vacuum Flow	80L/min	working noise	50db

Model

Mod	lel	Manual	Electronic	remote	feedback	Safe pressure	Size [mm]	Net Weight [kg]
Manual regulator	PCU2-M	•		•	•	adjustable	165x280x124	3.85
Electronic regulator	PCU2-V		•		•	adjustable	165x280x154	4.40



CU

PCU2-M Size





PCU2-V Size



CU

Use-pattern for PCU2





PCU2 Installation

Panel to install





LCU-H Micro Control Unit

- Micro Driver
- -85~300kPa Output pressure Range, Suit for all Beaks and Fingers.
- Cylinder pneumatic Mode, simple operation, convenient replacement.
- Small size, light weight, multi way and composed of asynchronous drive mode
- Equipped with plane, flange Installation hole and industrial rail buckle, a variety of Installation.



Parameter

ltem	Range	ltem	Range
Output pressure	-85~300kPa	Frame material	Anodic oxidation of aluminum alloy
working noise	50db	Size	85x63.6x31mm
Life time	50 million times	Net Weight	350g
	0.45~0.80MPa	working mode	penumatic
input air	dry, clean, stable	Pressure Flow	165L/min*
	Flow > 200L/min	Vacuum Flow	55L/min

*: The Flow Parameter test conditions are :

High pressure air source port H=0.6MPa, Low pressure air source port L=100kPa



LCU-H Size



Way 1: Two- position Single drive









Way 3: Multiple Drive



CU



LCU-H Installation

①DIN-Rail Installation



Installation

②Bottom Installation Model UCU-KI Rach 0 0 0 0 A) 0 G install hole4 x J Į 4 x M4 0 Y ③Side installation install hole4 x ĥ 46.5 Kou-H 60 I P AXM 0 Ø 0 0 0 0 Ũ

CU



Q

Installation



Controling of Cylinder & Finger module combination

- The combination of cylinder and finger module is a specific combination of the basic control mode
- It has the advantages of large clamping force of traditional clamping cylinder and soft and self-adaptive of flexible fingers, and the clamping force can reach up to 70N
- Independent solenoid valve control, simple structure, small size, low deployment cost.
- · Grasp a wider range, can be combined with various brands of cylinder, Y cylinder, 180 degree cylinder



Translational cylinder

Y Cylinder

180 degree Cylinder

The a

CU

The air pressure must be strictly controlled within the Safe limit. Overloading may cause irreversible damage to the product.

AF

AssemblingFittings



QCM

Quick changer Module



RF

Robot flange



Module



Slide

r. ∃≣

Connector Pa



Deef

Profile

CM

Connection Module



Pneumatic Fittings

QC-15

Features

· Paired mounting modules for connecting the grippers, including manipulator side modules and gripper side modules, which can be locked, rotated or quickly replaced.

Rotation Angle: gently and easily open the locking screw, rotate the soft claw to the appropriate working Angle, after locking the screw, the soft claw is fixed, and the coaxial degree is less than 0.15mm.

· Quick-change Function: completely loosen the locking screw, can pull out the side module of the soft claw, to achieve quick replacement of the soft claw.





Model	Screw thred B	Н	Weight
QC-15W5N5	M5 inner teeth	18.8mm	12.53g
QC-15W5W5	M5 external teeth	18.8mm	13.25g
QC-15W5N18	G1/8 inner teeth	23.3mm	17.75g
QC-15W5W18	G1/8 external teeth	18.8mm	17.41g

Screw thread B

Installation





Quick-change Module

Quick-change Module [QCM] is used for automatic and quick replacement of grippers. The Quick-change Module [QCM] is installed between the Flange Connection Module [FCM] and the end of the robot arm, and is divided into the robot side (R side) and the gripper side (G side).

QCM-01 Manual quick change module

Product features

- Conform to ISO 9409-1:2004 (i.e. GB / T 14468.1:2006).
- Manual locking/unlocking.
- Recommended Load 5kg, Vertical tension.



Lock Max 2Nm



QCM-01RWeight [g]	146	QCM-01GWeight [g]	135	
Vertical tension F	150[N]	Tracheal tube diameter	φ 6mm	
Rotary torque Mt	20[Nm]	Recommend-ed Load	5[kg]	QC
Flip torque Mb	10[Nm]			

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Quick-change Module

Quick-change Module [QCM] is used for automatic and quick replacement of grippers. The Quick-change Module [QCM] is installed between the Flange Connection Module [FCM] and the end of the robot arm, and is divided into the robot side (R side) and the gripper side (G side).

QCM-02 Pneumatic Quick-change Module

- Conform to ISO 9409-1:2004 (i.e. GB / T 14468.1:2006).
- Pneumatic control, air-out self-locking protection.
- Recommended Load 5kg.







Connector Part

RF-SFB Transfer Flange

- SCARA arm transfer flange with internal multi-channel ventilation
- Weight 61g
- Can fitted with Beak Module [BMC] or Slide Mounting Plate [SMP]





Accessory p	oackage PK-RFSFB					
4 x S	SF-063 (M3x10)	5 x	PN-196	_	1 x	PIN-01
2 x	SF-165 (M4x22)	4 x	PN-268	jun jun	1 x	PN-175



Assembling Fittings

Connector Part

RF-S16 / RF-S20 / RF-S25 Transfer Flange

· RF-SFB Connect the transfer flange of the manipulator





Model	Height [mm]	Weight [g]	Adapted Screw Diameter [E]
RF-S16	10	36	16
RF-S20	10	33	20
RF-S25	10	28	25

Connector Part

Installation

- Suitable for ϕ 16mm, ϕ 20mm, ϕ 25mm shaft diameter SCARA robotic arm end.
- Assembling Soft Beak Module [BMC] or Slide Mounting Plate[SMP]



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Slide Mounting Plate [SMP] & Soft Finger Module [FM] Installation



. ..

Assembling Fittings

Flange connection module [FCM] is fixed between the robot flange and the slip mounting plate [SMP]. It can also be connected with quick change module [QCM], There are two kinds of [FCM], the spring rod type (S) and rigid rod type (R).

FCM-S01 Sping rod flange connection module

- Meet ISO 9409-1:2004 robot flange standard. Suitable for most robot flanges.
- Robot connection with the soft beak module [BM], or light soft grippers. The max. loading is 500g.
- · Can improve the adaptability of the gripper in the vertical direction and adaptability in gripping of very different size object .
- Accessory package (PK-FCMS01) included



FCM-R(01~05) Fixed rod type Flange Connection Module (light)

Product features

- Conform to ISO 9409-1:2004 standard (GB/T 14468.1-2006/), suitable for most robot flanges.
- Light weight, suitable for lightweight multi-joint robot. Recommended maximum load: 5 kg.
- Can be used for high-precision handling, assembly and other scenarios.
- Different lengths are available.
- Accessory package PK-FCMR01 included.





Lightweight FCM series sizes

Model	Length [mm]	Overall Length FL[mm]	Weight [g]
FCM-R01	35	42	116
FCM-R02	55	62	113
FCM-R03	75	82	117
FCM-R04	95	102	121
FCM-R05	115	122	165



 $4x\phi$ 5.5 Sink hole $4x\phi$ 6.5 Sink hole $4x\phi$ 6.5 Sink hole





FCM

Flange connection

FCM-R08 Fixed rod type Flange Connection Module

Product features

- Conform to ISO 9409-1:2004 standard (GB/T 14468.1-2006/), suitable for most robot flanges in the market.
- Suitable for non-standard gripper combination and Slide Mounting Plate [SMP].
- Can be used for high-precision handling, assembly and other scenarios.
- Accessory package PK-FCMR08 included.



Weight159g







SMP- Soft Beak Module Series

- Length: SMP-13/ SMP-14 / SMP-15/ SMP-16.
- Assembling between soft beak module [BM], connection module [CM] and aluminum profile [P].
- The installation Angle and position of the soft beak module **[BM]** can be adjusted freely.
- Accessory package (PK-SMP01) included.









Model	Slot Length A [mm]	Slot Space B [mm]	Slot Width E [mm]	Length L [mm]	Width W [mm]	Thickness [mm]	Slot Spacing [mm]	Weight [g]	Mounting hole [mm]
SMP-13	20	10	4.2	50	20	6	14	10.7	10.2
SMP-14	48	10	4.2	80	20	6	14	16.2	10.2
SMP-15	80	10	4.2	110	20	6	14	21.6	10.2
SMP-16	110	10	4.2	140	20	6	14	27.1	10.2
SMP-1420	20	10	4.2	56	22	6	17	14	14.2
SMP-1448	48	10	4.2	84	22	6	17	20	14.2



SMP- Independent Finger Module Series

- Length: SMP-01 / SMP-02 / SMP-03
- Assembling between soft finger module **[FM]**, and aluminum profile **[P]**.
- The installation Angle and position of the soft finger module **[FM]** can be adjusted freely.
- Accessory package (PK-SMP01) included.







	Model	Slot Length A [mm]	Slot Space B [mm]	Slot Width E [mm]	Length L [mm]	Width W [mm]	Thickness [mm]	Weight [g]
	SMP-01	50	10	4.2	65	20	6	10.8
/IP	SMP-02	75	10	4.2	90	20	6	16.1
	SMP-03	100	10	4.2	115	20	6	18.5



Product features

- Different styles according to shape and slot length. Assembling between soft finger module **[FM]**, and flange •
- connection module [FCM].
- The installation Angle and position of the soft finger module [FM] can be adjusted freely.







SMP-2S



SMP-2L

	Model	Thickness	Atmospheric Fingertip Distance Dn [mm] Dnmin~Dnmax		Weight	
		լտոյ	V2,V4 Finger Module	V3,V5 Finger Module	[9]	
Ture were	SMP-2S	8	40~69	10~37	18.2	S
Two-way	SMP-2L	8	40~119	10~87	28.2	

Product features

- Different styles according to shape and Slot Length. Assembling between soft finger module **[FM]**, and flange •
- connection module [FCM].
- The installation Angle and position of the soft finger • module [FM] can be adjusted freely.





SMP-3S



		Model	Thickness	AtmosphereFing Dnm	ertip DistanceDn [mm] in~Dnmax	Weight[g]
			[]	V2,V4Finger Module	V3,V5Finger Module	
MP	Three way	SMP-3S	8	58~82	28~50	34.6
	Three-way	SMP-3L	8	58~152	28~120	54.1

Product features

- Different styles according to shape and Slot Length.
- Assembling between soft finger module **[FM]**, and flange connection module **[FCM]**.
- The installation Angle and position of the soft finger module **[FM]** can be adjusted freely.





SMP-4L

<--->

€

Dn **m**i

Dn max

€



SMP-4S



Product features

- Different styles according to shape and Slot Length.
- Assembling between soft finger module **[FM]**, and flange connection module **[FCM]**.
- The installation Angle and position of the soft finger module **[FM]** can be adjusted freely.





SMP-5S





	Model	Thickness	AtmosphereFinge Dnmi	ertip DistanceDn [mm] in~Dnmax	Weight[g]
		[[[[[[[V2,V4Finger Module	V3,V5Finger Module	
	SMP-5S	10	91~112	53~80	95.4
FIVE-way	SMP-5L	10	91~222	53~109	181

Connector Part

CP-AC Soft finger module installation Angle adjustment piece

- Can be used to adjust the installation angle of soft finger module **[FM]**. Assembling between finger module **[FM]**and slide mounting plate**[SMP]**. •
- •





D

D



Model	Angle range[°]		Adaptive soft finger module[FM]				
		V1	V2	V3	V4	V5	
CP-ACA	0~45		\checkmark	\checkmark			22
CP-ACB	0~45		\checkmark	\checkmark			19
CP-ACC	0~45			\checkmark			15



Connector Part

CP-04 Connector Part

- Assembling Finger Module[FM] or aluminum profile [P].
- Accessory package (PK-CP04) included. •



CP-01 Connector Part

- Profile **[P]** cross fixed arch mounting bracket Accessory package (PK-CP01) included. ٠
- •



Profile



Model	Length[mm]	Weigth[mm]	Hijght[mm]	Weight[g]
P-G2020A<100>	100	20	20	47
P-G2020A<150>	150	20	20	70.5
P-G2020A<200>	200	20	20	94
P-G2020A<300>	300	20	20	141
P-G2020A<400>	400	20	20	188
P-G2020A<500>	500	20	20	235
P-G2020A<1000>	1000	20	20	470



P-C3030A Series Profile

Features

·Air ducting aluminum profile for multiple Soft Beak arrangements.

It can be equipped with standard mounting end cover and flange, which can be used at the end of the robot arm.

•The profile is equipped with an internal air path, which improves assembly accuracy and saves installation time.







型号	₩L	Nut for slot A adaptation	Nut for slot B adaptation	Weight
P-C3030A<100>	100mm	European Standard 20 Series	European Standard 30 Series	120g
P-C3030A<200>	200mm	European Standard 20 Series	European Standard 30 Series	240g
P-C3030A<300>	300mm	European Standard 20 Series	European Standard 30 Series	360g
P-C3030A<400>	400mm	European Standard 20 Series	European Standard 30 Series	480g
P-C3030A<500>	500mm	European Standard 20 Series	European Standard 30 Series	600g
P-C3030A<1000>	1000mm	European Standard 20 Series	European Standard 30 Series	1200g

CM-PC3030A Connect Module

•Profile P-C3030A dedicated end cap, capable of connecting joints in five directions. •Includes accessory package PK-CMPC3030A.



Accessory package PK-CP01				
0	1 x O R - 1 0			
()	2xSF-292			
84	1xPN-160			
8 ⁶⁶⁶	1xPN-168			
H	4xPN-268			
1	1xPN-293			
W	2xSF-308			







P-C3030A Series Profile



CM -**R** Soft Beak rigid connection module series

- Aluminum alloy rigid structure design, can be used for high • positioning accuracy scenes.
- Soft Beak Module [**BMC/BML**] can be installed at the end. Can be installed with Slide Mounting Plate [**SMP**]. •
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	Model	S [mm]	T [mm]	L1 [mm]	L2 [mm]	Weight [g]	Е	Sc	Recommend -ed load [g]	SMP Adaptive	Pipe Diameter [mm]	Positioning accuracy [mm]	Rotation accuracy [°]
CM	CM-RM525M5	3	12	25	39.5	11	M5	M10x1	500	Yes	6	±0.01	±0.01
	CM-RM558M5	28.5	20	58	73	17	M5	M10x1	500	Yes	6	±0.01	±0.01
	CM- RG1840G18	9.5	16.5	40	57	33	G1/8	M14x1	1500	No	6	±0.01	±0.01
	CM- RG18128G18	59	47	128	145	58	G1/8	M14x1	1500	No	6	±0.01	±0.01

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CM -S Soft Beak buffer connection module series

- It has elastic cushioning function. We do not recommend it to be used in scenarios requiring high Positioning accuracy
- Soft Beak Module [BMC/BML] can be installed at the end.
- Some Modesl ca be installed with Slide Mounting Plate[SMP]





Model	s	т	L1	L2	Weight	E	Sc	Elastic buffer force [N]	Recommend -ed Load [g]	Pipe diameter [mm]	Positioning accuracy [mm]	Rotation accuracy [°]
CM-SN51011B	11mm	33.9mm	63.1mm	77.7mm	25.5g	M5	M10x1	0~3N	300g	6mm	± 0.2 mm	± 0.4 °
CM-SN51015B	15mm	39mm	72.8mm	87.4mm	27.7g	M5	M10x1	0~3N	300g	6mm	± 0.2 mm	± 0.4 °
CM-S04	10.5mm	23mm	58.5mm	73.9mm	28g	M5	M10x1	0~3N	300g	6mm	± 0.5mm	± 1.5 °
CM-S05	20mm	51mm	96mm	111.4mm	43g	M5	M10x1	0~3N	200g	6mm	± 0.5mm	± 1.5 °
CM-S06	30mm	51mm	106mm	121.4mm	50g	M5	M10x1	0~3N	200g	6mm	± 0.5mm	± 1.5 °
CM-S07	40mm	77mm	142mm	157.4mm	56g	M5	M10x1	0~3N	200g	6mm	± 0.5mm	± 1.5 °
CM-S01	21mm	30mm	93mm	110mm	38.4g	G1/8	M14x1	0~10N	800g	6mm	± 0.5mm	± 0.8 °
CM-S02	36mm	50mm	128mm	145mm	45.4g	G1/8	M14x1	0~10N	800g	6mm	± 0.5mm	± 0.8 °

Rotary Joint

CM-RS18

Features

- · The weight of the product is only 13g, small and lightweight
- · Suitable for multiple Connection Modules: CM-RM525M5, CM-RM558M5, CM-S04, CM-S05, CM-S06, CM-S07
- · The swivel can be locked or relaxed by adjusting the screws on one side of the swivel
- · When the rotary joint is relaxed, the freedom of rotation in the Z-axis direction is unlocked and the rotation Angle can be adjusted
- · When the rotary joint is locked, the rotation degree of freedom in the Z-axis direction is locked, and the rotation Angle cannot be adjusted





Rotary Joint CM-RS18

Matrrix Installation



CM

PN-Pneumatic joint series Features

The plug used for connecting or disconnecting pneumatic circuits with soft beaks is divided into two types of connection threads: M5 and G1/8.

•This series is divided into two types: straight plug and side plug (quick insertion).



Assembling Fittings 258