

Robot Handling Components Guide

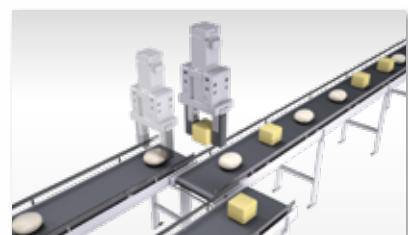
An incredible range of Grip with Air / Electricity

variations Suction with Vacuum

Electric gripper

2-Finger Gripper Type

FLSH/DLSH Series

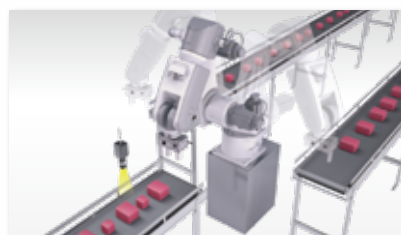


FLSH Series
The same dimensions and gripping force as Pneumatics

DLSH Series
Gripping force is continuously generated even when power is not energized.



FFLD Series



High gripping force and long stroke ideal for Robot End-of-Arm.



3-Finger Gripper Type

GCKW/DCKW Series



GCKW Series
The same dimensions and gripping force as Pneumatics

DCKW Series
Gripping force is continuously generated even when power is not energized.



Air hand / Air chuck

A lineup of 52 models with various shapes and diverse functions

Gripping force : 1.5 to 2000 N Stroke : 4 to 200 mm

Parallel Gripper



Basic type with a wide range of hands.



Low Profile Parallel Gripper



Low-profile body contributes to compact equipment.



Wide Parallel Gripper



Wide opening is ideal for large workpieces.



180 degree open/close Fulcrum Hands



Fingers open and close 180 degrees to avoid interference with workpieces.



3-Jaw Chuck



Uses a 3-way grip, making it ideal for cylindrical or round workpieces.



Suction Pads

Lineup of 14 types of shape and 17 types of rubber materials

Pad Diameter 0.7 to 200 mm

Standard Type (General Type)



Ideal for thick, flat workpieces.



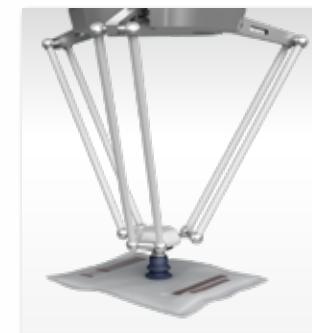
Standard Type (Compact)



Ideal for small workpieces and semiconductor manufacturing equipment.



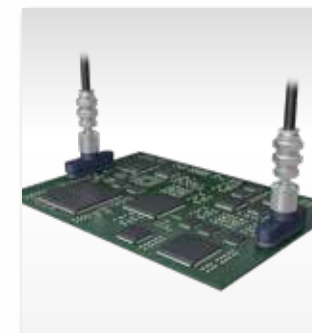
Bellows Type



Also has a swivel pad, making it ideal for retort pouches, etc.



Oval Type



Ideal for substrates and semiconductor manufacturing equipment.



Vacuum Ejector

Single Unit Type

VSJ Series



Compact and lightweight with integrated ejector and vacuum burst function.



Unit Type

VSJM Series




A vacuum ejector unit designed for high-speed operation.




Wireless Components (IO-Link Wireless)

Introducing products compatible with Open Network IO-Link Wireless.


Plug-in Valve
TVG Series






Click!


Input Unit
WD Series
[Japan-EU-USA Only Release]






Click!


PLC



Host communication supported by the IO-Link Wireless master




Communication Distance :
Max. 20 m

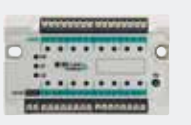


Cycle Time : **5 ms**


One antenna
||
1 track



IO-Link Wireless master



IO-Link Wireless Input Unit




Solenoid valve with IO-Link Wireless device unit

Use Case

Wireless Cylinder Switches for Robot Grippers

Before Robot machine external wiring


Disconnection risk increases, and the robot's range of motion is restricted.



Long

After No wiring outside the robot. Internal wiring for power only

Wireless communication from the IO-Link Wireless input unit reduces the risk of disconnection.



Short



Electric Gripper Selection

Here are some typical examples from a wide variety of models.


















Electric Grippers

For details of each product and other models, please refer to our website (<https://www.ckd.co.jp/en/>).

Category	Lineup		Features	Motor Size (mm)	Gripping Force (N) Per finger	Stroke (mm)* Both sides
Electric 2-Finger Gripper		2-Finger Gripper FLSH	Achieves the same dimensions and gripping force as air. Option equivalent to that of air can be selected. IP50 compatible by combining the rubber cover and option with case. Compact stroke operation, workpiece identification, and IoT are possible.	□20 to □25L High torque	20 to 65	6 to 22
		2-Finger Gripper DLSH	The spring drive mechanism has a built-in spring in a drive mechanism. Reduces impact on the workpiece and generates thrust even when the power supply is not energized when gripping. Ideal for gripping workpieces of the same size.	□28 to □42	10 to 40	10 to 22
		2-Finger Gripper FFLD	Integrated Controllers. Low profile body, reduced wiring for ideal Robot End-of-Arm Tooling. Industry top-class gripping force and long stroke realized.	□20 to □25L High torque	40 to 500	100 to 160
Electric 3-Finger Gripper		3-Finger Gripper GCKW	Ideal for gripping round workpieces. Connected to a high-function Controllers, enabling small-stroke operation, workpiece identification, and IoT.	□20 to □25L (High torque)	7 to 29	4 to 6
		3-Finger Gripper DCKW	The spring drive mechanism has a built-in spring in a drive mechanism. Reduces impact on the workpiece and generates thrust even when the power supply is not energized when gripping. Ideal for gripping round workpieces of the same size.	□28 to □42	8 to 30	4 to 8

* The gripping force indicates a guideline value. The actual gripping force depends on the operating conditions. Consult the catalog when making a selection.

Controllers for electric gripper

Category	Lineup	Compatible products				Compatible Interface					
		FLSH	DLSH	GCKW	DCKW	PIO	CC-Link	EtherCAT	EtherNet/IP	IO-Link	PROFINET
Controller	Single-axis controller ECG										
	Multi-axis controller ECMG										
	Single-axis controller ESC4										

* 2-Finger Gripper FFLD has an integrated Controllers. The interface is compatible with IO-Link.

Air hand/Air chuck selection

Here are some typical examples from a wide variety of models.

Air hand

Category	Lineup		Features	Bore size (mm)	Gripping Force* (N) Per finger	Stroke (mm)
<div>Parallel Gripper</div> <div></div>	Linear Slide Gripper LSH-HP1 LSHL-HP1		Linear guide with increased rigidity to achieve high rigidity, high precision, and high durability. Helps achieve stable operation at non-stop production facilities.	LSH-HP1 : ø6 to ø32 LSHL-HP1 : ø10 to ø25	LSH-HP1 : 3.3 to 158 LSHL-HP1 : 11 to 65	LSH-HP1 : 4 to 22 LSHL-HP1 : 8 to 22
	Linear Slide Gripper with Length Measuring Function LSHM-HP2		Long measuring hand with high precision analog output of finger position. A high repeatability of ±0.02 mm is realized with the integrated structure with built-in displacement sensor and amplifier.	ø10 to ø25	11 to 65	4 to 14
	Feather Gripper (Mini Parallel Gripper) FH100		Lightweight and compact basic model Types with built-in speed controller can also be selected.	ø10 to ø25	6 to 30	8 to 20
<div>Low-profile Parallel Gripper</div> <div></div>	Low Profile Long Stroke Gripper LST-HP1		Double piston method. High rigidity and high precision are realized by improving the performance of the linear guide. Helps achieve stable operation at non-stop production facilities.	ø8 x 2 to ø20 x 2	19 to 141	8 to 80
	Low Profile Long Stroke Gripper with Length Measurement Function LSTM-HP2		Low Profile Long Stroke Hand Equipped with a displacement sensor on the tank. Contributes to workpiece model judgment and predictive maintenance by detecting the gripping position with high repeatability of ±0.04 mm and linearity of F.S.±0.5%.	ø12 x 2 to ø20 x 2	48 to 141	12 to 20
	Low Profile Long Stroke Gripper HLF2		Equipped with linear guide. Enables precise handling with a long stroke. 3 types of strokes can be selected to suit the application.	ø8 x 2 to ø20 x 2	20 to 135	12 to 96
	Low Profile Long Stroke Gripper HLC		Equipped with linear guide. Strives for high rigidity while maintaining long stroke features. Can be used in applications with large loads.	ø8 x 2 to ø30 x 2	18 to 310	20 to 140
	Ultra Low Profile Parallel Gripper HLD		Revolutionary model with extremely thin hand. Achieves high gripping force using 4 pistons	ø8 x 4 to ø20 x 4	35 to 250	12 to 30
<div>Wide Parallel Gripper</div> <div></div>	Wide Parallel Gripper HMC-HP1		The design of the guide has been revised to increase the rigidity of the guide by 1.3 times. Durability more than twice that of conventional models is realized by technological innovation in sliding. Compact and high gripping force realized by double piston structure.	ø10 x 2 to ø40x2	14 to 396	20 to 200
	Compact Wide Parallel Gripper HMF		Ideal for long stroke handling. Wide variations of bore sizes and strokes allow for optimal selection	ø12 x 2 to ø40 x 2	32 to 430	20 to 200
	Compact coolant proof specifications HMF-G		With Scraper Increased durability compared to conventional products in environments exposed to cutting fluid.	ø16 x 2 to ø25 x 2	66 to 170	30 to 120
	Large Wide Parallel Gripper with Linear Guide HMFB		Enables high precision handling of large workpieces.	ø25 x 2 to ø40 x 2	120 to 310	100 to 200

* Gripping force is the value with air pressure of 0.5 MPa on the closed side. Actual gripping force varies depending on the distance to the gripping point and the angle of the fingers, so please check the catalog when selecting.

For details of each product and other models, please refer to our website (<https://www.ckd.co.jp/en/>).



Air hand

Category	Lineup		Features	Bore size (mm)	Gripping Force* (N) Per finger	Stroke (mm)
<div>Pivot Gripper</div> <div></div>	180-degree Opening/Closing Low Profile Wide Angle Gripper HMD		Thin, space-saving type that enables flexible line structures.	ø12 to ø25	16 to 120	Opening Angle 184°
	180-degree Opening/Closing High Gripping Force Wide Angle Gripper HJD		Large Fulcrum Hands with 180 degree opening fingers. Uses a toggle mechanism to achieve high gripping force.	ø32 to ø63	200 to 1250	Opening Angle 184°
	Feather Gripper (Mini Pivot Gripper) FH500		Lightweight and compact basic model Types with built-in speed controller can also be selected.	ø10 to ø20	2 to 15	Opening Angle 20°





* Gripping force is the value with air pressure of 0.5 MPa on the closed side. Actual gripping force varies depending on the distance to the gripping point and the angle of the fingers, so please check the catalog when selecting.

Air chuck

Category	Lineup		Features	Bore size (mm)	Gripping Force* (N) Per finger	Stroke (mm)
<div>3-Jaw Chuck</div> <div></div>	3-Jaw Chuck CKW-HP1		More than twice the durability of conventional products is achieved by improving guide rigidity and technological innovation in cylinder sliding. The high precision positioning hole and new switch replacement system greatly reduce the maintenance man-hours.	ø16 to ø40	14 to 118	4 to 8
	3-Jaw Chucks with length measurement function CKWM-HP2 [Special Order Item]		Length measuring chuck that outputs finger position with high precision analog output. A high repeatability of ±0.02 mm is realized with the integrated structure with built-in displacement sensor and amplifier. Grips and measures the length of a cylindrical workpiece.	ø16 to ø40	14 to 118	4 to 8
	Powerful Chuck CKL2		Basic 3-Jaw Chuck type suitable for gripping round workpieces and cylindrical workpieces.	ø16 to ø100	17 to 780	5 to 23
	Powerful Chuck CKL2-□-L1		CKL2 Series long stroke. Achieves approximately 2 times the stroke without changing the body size.	ø50 to ø100	190 to 780	30 to 40
	Powerful Chuck with Rubber Cover CKLG2		CKL2 Series equipped with a rubber cover. Achieves long service life by preventing the entry of cutting chips or water drops.	ø20 to ø100	28 to 680	5 to 23
	Low-profile Chuck CKS		Internal structure changed and thickness reduced by half. Can be used in places where height is limited.	ø8 x 3 to ø32 x 3	17 to 320	10 to 32
	Low Profile Chuck (Hollow Type) CKS-F		Equipped with hollow holes. A pusher can be installed. Can be mounted on pusher, air blow, sensor, etc.	ø16 x 3 to ø50 x 3	75 to 800	16 to 50
	Ultra-long Stroke Chuck CKJ		Ultra-long stroke type of thin 3-way jaw chuck. The longest stroke of 130 mm is realized with the 3-way jaw chuck.	ø12 x 6 to ø50 x 6	86 to 1550	40 to 130

* Gripping force is the value with air pressure of 0.5 MPa on the closed side. Actual gripping force varies depending on the distance to the gripping point and the angle of the fingers, so please check the catalog when selecting.

Gripper for Collaborative Robots

Category	Lineup		Features	Bore size (mm)	Gripping Force (N)	Stroke (mm)
Gripper for Collaborative Robots 	Compact Type RLSH		Compact body that does not interfere with robot's trajectory Equipped with an edgeless resin cover and an LED indicator lamp that can be viewed 360° for high safety.	ø20	42	18
	Long stroke Type RHLF		Long stroke with reduced height and thin profile Equipped with an edgeless resin cover and an LED indicator lamp that can be viewed 360° for high safety.	ø16x2	85	32
	3-Jaw Type RCKL		3-Jaw ideal for cylindrical and round workpieces Equipped with an edgeless resin cover and an LED indicator lamp that can be viewed 360° for high safety.	ø40	125	10

Supported Collaborative robots manufacturers


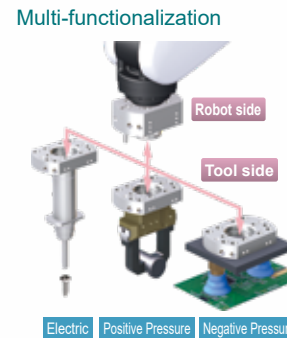

UNIVERSAL ROBOTS Certified 	TECHMAN ROBOT Certified 	OMRON Robot Certified 	FANUC Robot Compatible 	JAKA Robot compatible 	YASKAWA Robot Compatible 	Kawasaki Robot Compatible 
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Handling related products

Auto tool changer


KHBC Series

The robot itself automatically replaces Robot End-of-Arm tools. Wide range of size variations. Load capacity 1 kg to 300 kg, 11 sizes in total. Compact and lightweight. Substantially smaller and lighter, reducing the load on the robot.

Multi-functionalization Supports various models

Electric Positive Pressure Negative Pressure

Click! 

Magnet suction hand

MHC Series **MHC2 Series**




The workpiece is suctioned with magnetic power. Ideal for shapes that cannot easily be suctioned with common pads, or for magnetic workpieces with oil adhered. Please contact us for details.



Custom specifications

Auto Gripper Changer

CHC Series

Automatically changes robot end-of-arm tooling

Click! 

Air booster

ABP2-HP1 Series

Long service life Air Boosters of more than twice as long as conventional models.

Click! 

Quick exhaust valve with one-touch fitting

QEL Series

Ideal for preventing condensation at the hand chuck.

Click! 





For details of each product and other models, please refer to our website (<https://www.ckd.co.jp/en/>).
Click! 

Recommended hands and chucks

High-durability Components HP Series : Changing "gripping" changes manufacturing



HP1 Series

Significant reduction in minor stops

Significant reduction in replacement frequency

Significant reduction in replacement time

Durability count over 20 million cycles
Subject to CKD prescribed conditions

Optimized sliding parts. Do not break even with high-frequency operation.

Linear Slide Gripper **LSH-HP1 Series**

Low Profile Long Stroke Gripper **LST-HP1 Series**

Wide Parallel Gripper **HMC-HP1 Series**

3-Jaw Chuck **CKW-HP1 Series**

Long Life
Perfecting sliding technology, achieving over 4 times the durability of conventional models.
Operation cycles: HP1 Series vs. Our conventional product. Compared to conventional 4 times.

High rigidity
Increased guide rigidity achieved by reviewing the design of the guide section.
Compared to conventional 1.3 times or more.

Significant reduction in replacement time
High-precision positioning hole ± 0.025 mm
The addition of "positioning holes" based on the gripping center allows for easy reproduction of centering accuracy.
Positioning hole

* Excluding HMC-HP1 Series.

HP2 Series

Significant reduction in minor stops

Significant reduction in replacement frequency

Predictive maintenance possible

Durability count over 20 million cycles
Subject to CKD prescribed conditions

Enables measurement simultaneously with gripping. Enables replacement before failure occurs.

Linear Slide Gripper with Length Measuring Function **LSHM-HP2 Series**

Low Profile Long Stroke Gripper with Length Measurement **LSTM-HP2 Series**


3-Jaw Chuck with length measurement function **CKWM-HP2 Series**

Integrated Structure
Finger positioning with high precision analog output. The hand body has a built-in stroke detection sensor and amplifier. The integrated structure achieves high-precision.
Repeatability LSHM, CKWM : ± 0.02 mm
LSTM ± 0.04 mm

Grips minute workpieces / mis-grip detection
Accurately determines whether a minute workpiece was gripped or if a mis-grip occurred.
NG

Predictive maintenance
Monitors abnormal wear or deformation of gripping fingers and jigs based on changes in output, preventing damage to equipment or robots.
Example: Pre-work inspection record
Output vs. Normal/Threshold/Error graph.
NG Error

Vacuum System Equipment Best Selection

For details of each product and other models, please refer to our website (<https://www.ckd.co.jp/en/>).
 [Click!](#)














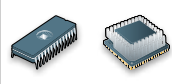
Suction Pads

VSP Series

A lineup of 14 shapes and 17 rubber materials is available. Enables suction for various workpieces such as retort pouches, building exterior materials, pressed parts, and vinyl sheets, realizing flexible transport.

Suction Pads



Category		Lineup		Recommended Workpiece		Pad Diameter	
Suction Pads	Standard type	General Type	VSP-□R		 Flat workpieces (hard and not flimsy)	18 types	ø1 to ø200
		Deep Shape	VSP-□A		 Spherical workpieces (apples or balls)	9 types	ø15 to ø100
		Compact	VSP-□RM		 Semiconductor Components	6 types	ø0.7 to ø4
	Sponge Type		VSP-□S		 Workpieces such as building outer wall materials, small stones and shells	9 types	ø10 to ø100
	Bellows Type		VSP-□B		 Bags containing retort pouches, foodstuffs, etc.	12 types	ø6 to ø100
	Multi-stage Bellows Type		VSP-□W			5 types	ø10 to ø50
	Oval Type		VSP-□E		 Long workpieces such as substrates, round bars, and semiconductor components	13 types	2x4 to 8x30
	Soft Type		VSP-□L		 Extraction of molded products and easily scratched workpieces	8 types	ø4 to ø40
	Soft Bellows Type		VSP-□LB			5 types	ø6 to ø20

Category	Lineup		Recommended Workpiece		Pad Diameter	
Suction Pads	Anti-slip Type	VSP-□K		 Workpieces with oil adhesion such as press parts	5 types	ø10 to ø50
	Type for Thin Workpieces	VSP-□P		 Thin workpieces such as copy paper and vinyl	4 types	ø8 to ø20
	Flat Type	VSP-□F		 Thin workpieces such as sheets and vinyl	5 types	ø10 to ø30
	Suction Mark Prevention Type	VSP-□Q		 Liquid crystal glass, painting process and semiconductor manufacturing facilities, etc.	3 types	ø10 to 30
	Packaging Bag Type	VSP-□PB		 Bags and pouch packs containing liquids	4 types	ø20 to ø40
	Metal Detector Type	VSP-□BE VSP-□BD		 Processes for which contamination of foreign matter is a problem, including food manufacturing lines	3 types	ø10 to ø20
Suction Pads	Mechanical Break Function Type	VSP-KE□Y		 Compact and lightweight	6 types	ø2.5 to ø10

Suction transport related products

Fine Buffer



FBU2 Series

[Click!](#)

A magnetic spring utilizing the attraction force of magnets is used in the buffer section.

Active Fine Buffer



AFB-RB Series

[Click!](#)

Rotary alignment and buffer operation are integrated.

Precision Suction Plate



PVP Series

[Click!](#)

Suction of the entire surface by precise resin porous material.

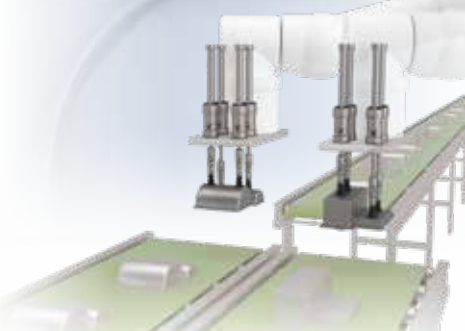
3D Suction Gripper

FSH Series

[Click!](#)



Holds the pad at any desired profiling position

Custom specifications



Compact Cylinder with Vacuum Suction


MVC Series

[Click!](#)

Cylinder and vacuum suction pad are compactly integrated

Vacuum System Components Best Selection

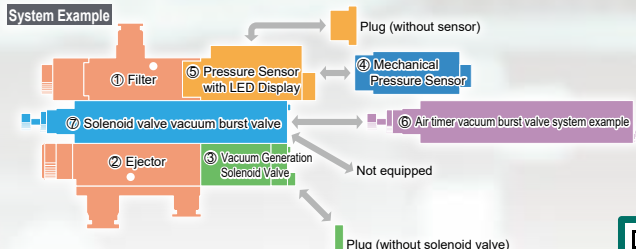
For details of each product and other models, please refer to our website (<https://www.ckd.co.jp/en/>). 




Ejector System/Vacuum Pump System VS Series

Discrete to manifold : A variety of system configurations are possible

System Example



For details of each product and other models, please refer to our website (<https://www.ckd.co.jp/en/>). 

Ejector System

Category	Lineup	Features	Configuration Components								Ultimate Vacuum Pressure (-kPa) *	Intake flow rate (L/min (ANR)) *
			With Valve For Generation	With Valve For Break	With Switch Mechanical	With Switch Analog output	With Vacuum Filter	With Silencer	With Check Valve	With Centralized Exhaust Type		
Ejector System	VSY	Vacuum ejector equipped with vacuum burst function. A compact lightweight body that condenses the necessary functions for easy use with robot hands.									H : 90 L : 66 E : 90	H : 7 to 12.5 L : 12 to 21 E : 3 to 9
	VSH	Solenoid valve direct mounting The supply port is M5/R thread, enabling direct mounting to solenoid valves.									H : 90 to 93 L : 66 E : 92	H : 7 to 104 L : 12 to 174 E : 10.5 to 82
	VSU	Tubular (inline) Supply port and vacuum port are arranged linearly for easy installation.									H : 90 to 92 L : 66 E : 90	H : 7 to 12.5 L : 12 to 22 E : 10
	VSC	Pad direct mounting The vacuum port has an R thread that allows direct attachment to the pad.									H : 90 to 93 L : 66 E : 92	H : 7 to 110 L : 11 to 180 E : 10.5 to 84
	VSB	Square (Box) Box shape enables fixing to the body.									H : 90 to 93 L : 66 E : 92	H : 7 to 38 L : 12 to 42 E : 10.5 to 27
	VSK/ VSKM	All-mighty type that can be used universally with full functions and well-balanced performance.									H : 91 to 93 L : 67 E : 91	H : 7 to 38 L : 11 to 50 E : 21 to 27
Vacuum ejector unit	VSN/ VSNM	Achieves fast and stable response. For high speed Pick & Place. ON/OFF response = 5 msec or less.									H : 90.4 L : - E : 90.4	H : 7 to 9.5 L : - E : 2 to 4.5
	VSQ	Ideal for controlling large flow rates. Can also be used for applications that require a high vacuum flow rate, such as suction of leaky workpieces.									H : 93 L : 66 to 93 E : 92 to 93	H : 24 to 110 L : 24 to 180 E : 24 to 84

* Supply pressure of H and L is 0.5 MPa and supply pressure of E is 0.35 MPa. Ultimate vacuum pressure and suction flow rate differ depending on supply pressure and nozzle diameter.
H-type : High vacuum/medium flow = high vacuum
L-type : Medium vacuum/large flow = large flow
E-type : High vacuum/Low flow type = Low supply pressure High vacuum type (Energy-saving type)

Vacuum Pump System

Category	Lineup	Features	Configuration Components								Ultimate Vacuum Pressure (-kPa) *	Intake flow rate (L/min (ANR)) *
			With Valve For Generation	With Valve For Break	With Switch Mechanical	With Switch Analog output	With Vacuum Filter	With Silencer	With Check Valve	With Centralized Exhaust Type		
Vacuum Pump System	VSXP/ VSXPM	Balanced performance is incorporated into a compact body, enabling general-purpose use.									Vacuum Valve Effective Area 2-Port Valve Specs : 3.5 mm ² (ø4) 4.5 mm ² (ø6) 3-Port Valve Specs : 3.0 mm ² (ø4) 3.6 mm ² (ø6)	
	VSNP/ VSNPM	For high speed Pick & Place. ON/OFF response = 5 msec or less.									0.4 mm ²	
	VSQP	Ideal for controlling large flow rates. Can also be used for applications that require a high vacuum flow rate, such as suction of leaky workpieces.									16.5 mm ²	

* Supply pressure of H and L is 0.5 MPa and supply pressure of E is 0.35 MPa. Ultimate vacuum pressure and suction flow rate differ depending on supply pressure and nozzle diameter.
H-type : High vacuum/medium flow = high vacuum
L-type : Medium vacuum/large flow = large flow
E-type : High vacuum/Low flow type = Low supply pressure High vacuum type (Energy-saving type)


Directional control valve that can be used with negative pressure

Direct Acting 3-Port Valve

MV3QR Series

Vacuum suction unit with emphasis on functions. Achieved high-speed stabilization of the suction/transport process without a positive pressure source.

For negative pressure only
Effective Area 2 mm²




High response
Response Time...**4±1ms/ 1.5±1ms (ON/OFF)**
According to JIS B 8419 : 2010 Dynamic performance test.

Long Life
Durability...**100 million cycles**
* In accordance with in-house test conditions.

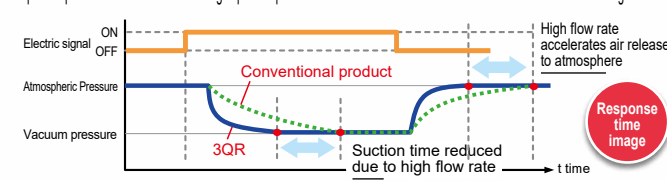
3QR Series

Both positive and negative pressure can be mixed. Positive pressure supply for workpiece release is also possible.

Positive/negative pressure mixed
Effective Area 2 mm²



High-speed tact
Speeds up the vacuum release in returning to positive pressure and shortens suction time with the use of solenoid valve with large flow rate.

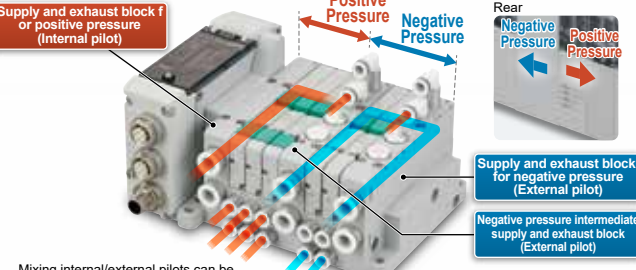


Response time image

Pilot Operated 3, 5 Port Valve


TVG Series

It is possible to control mixture of positive and negative pressures with a single communication device unit. Air/vacuum flow rate supply can be added by adding intermediate intake and exhaust blocks.



Supply and exhaust block f or positive pressure (Internal pilot)
Positive Pressure
Negative Pressure
Rear Negative Pressure
Positive Pressure
Supply and exhaust block for negative pressure (External pilot)
Negative pressure intermediate supply and exhaust block (External pilot)
Mixing internal/external pilots can be handled as a special specification product.

Positive/negative pressure mixed					
TVG1	Effective Area	3.85 mm ²	TVG2	Effective Area	8.5 mm ²
Valve width 10 mm	Response Time	15 ms	Valve width 15 mm	Response Time	20 ms

Click! 

Supported communication

- EtherNet/IP *1
- DeviceNet
- EtherCAT *1
- CC-Link IE TSN *1
- CC-Link IE Field *1
- CC-Link IE Field Basic *1
- CC-Link
- PROFINET *1
- IO-Link *1
- IO-Link Wireless *1

*1 solenoid valve ON count function

Vacuum system related products

For details of each product and other models, please refer to our website (<https://www.ckd.co.jp/en/>).

Drop Prevention Valve

VSECV Series



Even if the workpiece comes off, the pressure in the source circuit is maintained.

Vacuum Break Unit

VSLF Series



Vacuum release control valve with blow-off air flow rate and relief pressure adjustment needle.

Vacuum Filter

VFA Series



Removes dust and moisture suctioned up by vacuum pump or ejector.

Compact Vacuum Regulator

VSRVV Series



Allows control of the source pressure as well as at the terminal end

Vacuum Filter

VSFB/VSFU/VSFJ Series



Vacuum filter compatible with various vacuum pipes.

Vacuum Pressure Switch with Digital Display

VSUS Series



Digital display of set pressure and applied pressure.

Vacuum Regulator

VRA2000 Series



Compact/large flow rate/high-precision Vacuum regulators.

Inline Filter

FSL Series



Inline filters that can be used with both positive and negative pressures.

Ultra Compact Flow Sensor Rapiflow

FSM-X/V Series



Miniature, lightweight & high response flow rate sensor. Recommended for confirmation of suction/release for electronic parts, etc.

High speed/high precision handling components

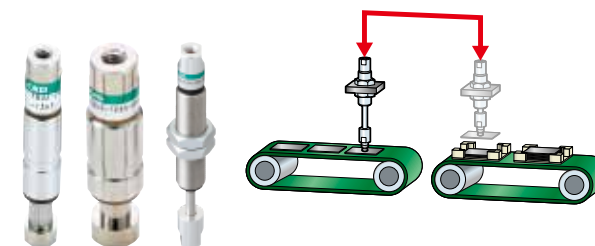
We meet the needs for various handling.

For handling fine parts

Fine Buffer

FBU2 Series

Buffer unit used in vacuum suction transport. Magnetic spring is used instead of metal spring, enabling transport without damaging delicate workpieces. Clean & long life.

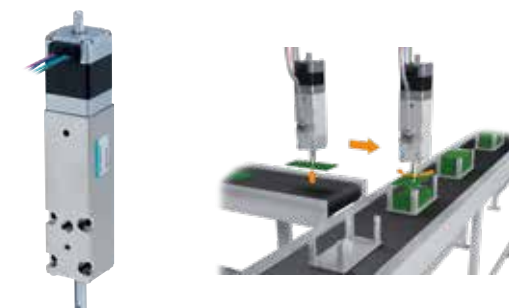


Adjustment of the rotation position of precision parts

Active Fine Buffer

AFB-RB Series

Integrated motor and Fine Buffers. Damage-free transport of delicate workpieces and adjustment of rotation position are realized simultaneously.

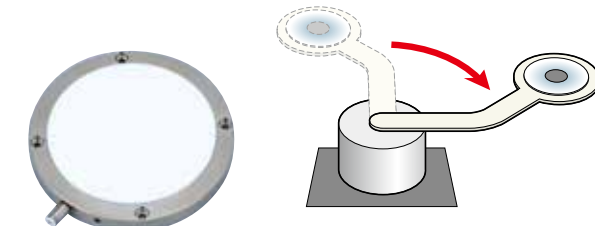


Damage-free transport of thin workpieces

Precision Suction Plate

PVP Series

Suction Surface Flatness : 2 μ m, parallelism : High precision 5 μ m Precision Suction Plates. Full-surface suction using porous material eliminates distortion and deformation of ultra-thin materials such as wafers and films.



Highly accurate Z-axis rotation position

ABSODEX

AX6000M Series

Compact direct drive motor with an 80 mm diameter, fitting in the palm of your hand. Realizes high-speed, high-precision Z-axis rotational positioning and Θ correction.



Other system components

Robot

Electric Actuator

KBX Series



Flexible combination of modules allows application in a variety of transporting situations.

Horizontal articulated robot [Japan only]

KHL/KHE Series



Compact and high performance SCARA Robots.

Image processing software

Visual programming tool for image processing/

Facilea / Facilea AI



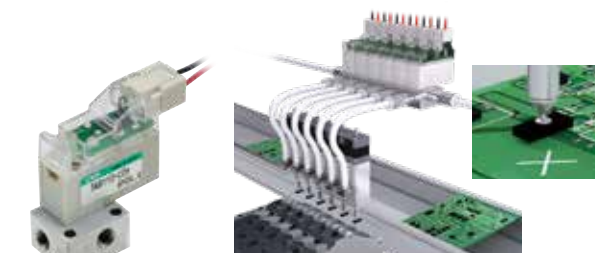
Easy image processing in 20 minutes, even for first-time users.

High speed positive/negative pressure switching/ideal for high speed small object transport

Direct Acting 3-Port Valve

3QB Series

Switching between positive pressure and low vacuum at high speed with a high-speed response of 5 ms or less. High-speed operation, including mounting of electronic parts.

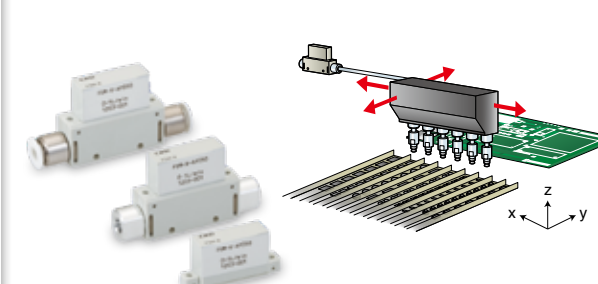


Semiconductor fine chip suction/release confirmation

Rapiflow

FSM-X Series

The platinum sensor chip realizes a high speed response. High-speed detection of semiconductor fine chip suction/release. Ultra-compact with the thinnest 8 mm, it can be mounted near the measurement section.



Guide to CKD Catalogs

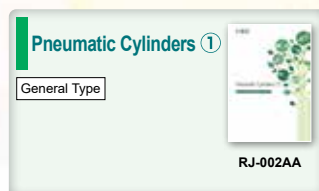
Check details by product category in the printed catalogs



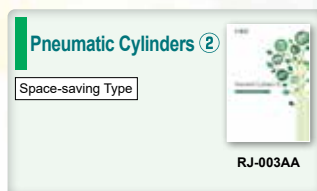
RJ-001AA-2

Search through component overviews
in the "Component Products Digest" to
find what you need.

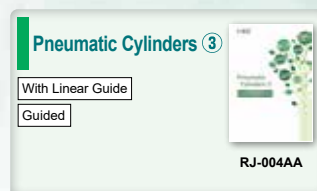
Detailed specifications
can be found in each
printed catalog or the
WEB catalogs.



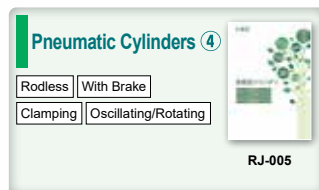
RJ-002AA



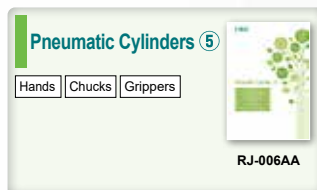
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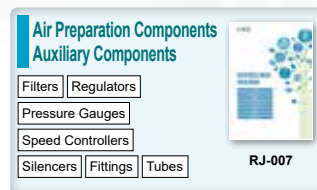
RJ-004AA



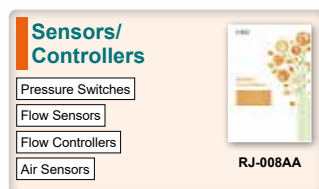
RJ-005



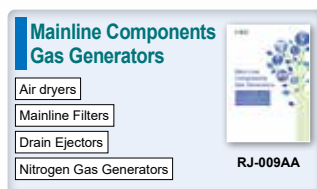
RJ-006AA



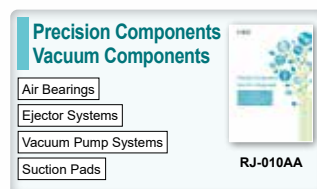
RJ-007



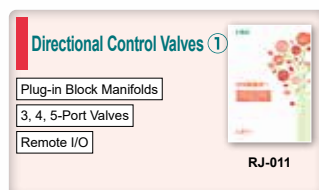
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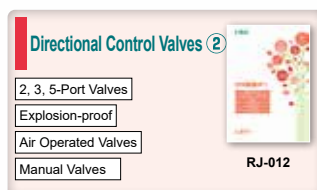
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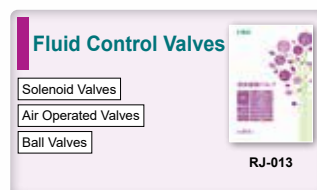
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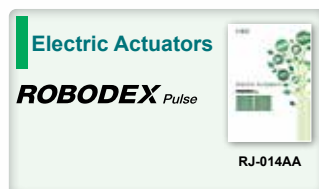
RJ-011



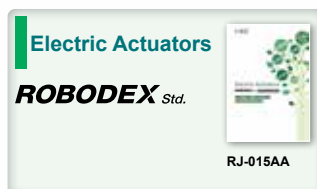
RJ-012



RJ-013



RJ-014AA

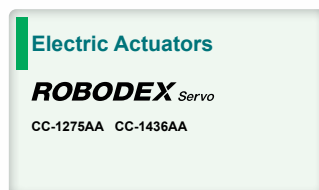


RJ-015AA

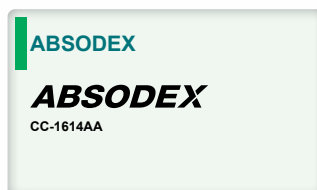


CB-031A

RJ-016AA



CC-1275AA CC-1436AA

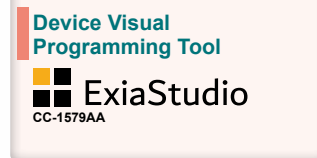


CC-1614AA



CC-1548AA

Facilea AI
CC-1623AA



CC-1579AA

Check Details on the WEB Catalogs

<https://www.ckd.co.jp/kiki/en/>



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CKD Corporation

[Website]

<https://www.ckd.co.jp/en/>

Head Office • Plant
Tokyo Office

Osaka Office

2-250, Ouji, Komaki, Aichi 485-8551
4F, Bunkahousou Media Plus, 1-31-1, Hamamatsu-cho,
Minato-ku, Tokyo 105-0013
6F, PMO EX Shin-Osaka, 4-2-10 Miyahara,
Yodogawa-ku, Osaka 532-0003

TEL(0568)77-1111 FAX(0568)77-1123
TEL(03)5402-3620 FAX(03)5402-0120
TEL(06)6396-9630 FAX(06)6396-9631