

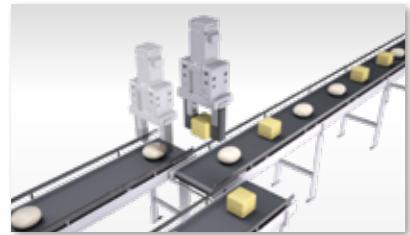
Robot Handling Components Guide

An incredible range of Grip with Air / Electricity

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

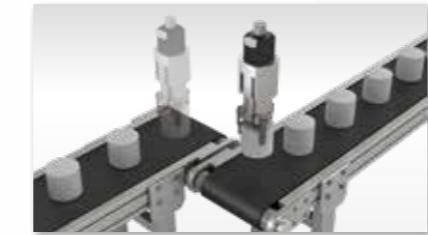


High gripping force and long stroke ideal for Robot End-of-Arm.



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.

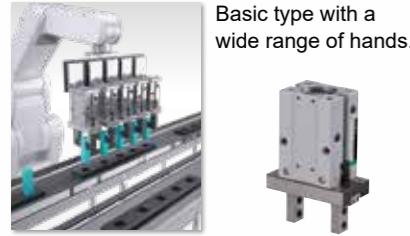


Air hand / Air chuck

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 body contributes to compact equipment.

Wide Parallel Gripper



Wide opening is ideal for large workpieces.

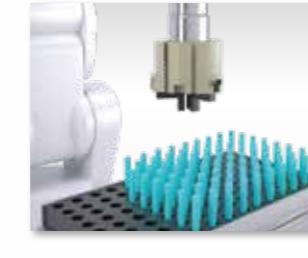
180 degree open/close Fulcrum Hands



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.

vibrations Suction with Vacuum

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

VSY Series



Compact and lightweight with integrated ejector and vacuum burst function.

Unit Type

VSNM Series



A vacuum ejector unit designed for high-speed operation.



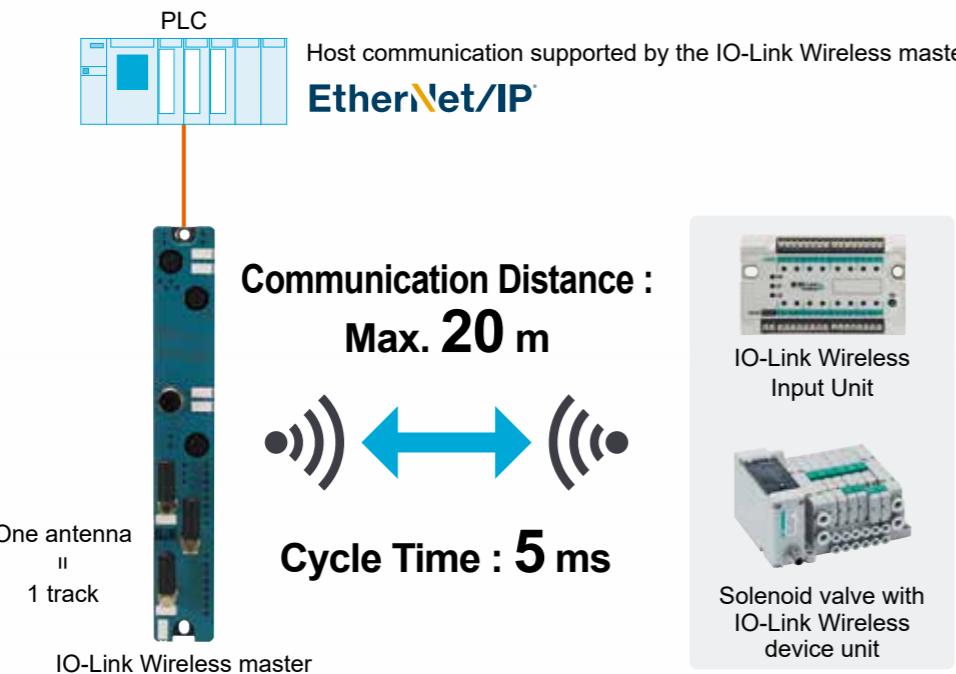
Wireless Components (IO-Link Wireless)

Introducing products compatible with Open Network IO-Link Wireless.

Plug-in Valve TVG Series



- Wireless is uninterrupted! (Error rate is 1/1 billion.)
- IO-Link Wireless enables I/O control in moving and oscillating parts where it was previously abandoned
- Reduced signal lines to the PLC achieves reduced wiring within the 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.



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.



Electric Gripper Selection

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

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



Electric Grippers

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 FFID	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 FFID 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)
Parallel Gripper 	Linear Slide Gripper LSH-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 : $\phi 6$ to $\phi 32$ LShL-HP1 : $\phi 10$ to $\phi 25$	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.	$\phi 10$ to $\phi 25$	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.	$\phi 10$ to $\phi 25$	6 to 30	8 to 20
Low-profile Parallel Gripper 	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.	$\phi 8 \times 2$ to $\phi 20 \times 2$	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. $\pm 0.5\%$.	$\phi 12 \times 2$ to $\phi 20 \times 2$	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.	$\phi 8 \times 2$ to $\phi 20 \times 2$	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.	$\phi 8 \times 2$ to $\phi 30 \times 2$	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	$\phi 8 \times 4$ to $\phi 20 \times 4$	35 to 250	12 to 30
Wide Parallel Gripper 	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.	$\phi 10 \times 2$ to $\phi 40 \times 2$	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	$\phi 12 \times 2$ to $\phi 40 \times 2$	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.	$\phi 16 \times 2$ to $\phi 25 \times 2$	66 to 170	30 to 120
	Large Wide Parallel Gripper with Linear Guide HMFB		Enables high precision handling of large workpieces.	$\phi 25 \times 2$ to $\phi 40 \times 2$	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.

Air hand

Category	Lineup		Features	Bore size (mm)	Gripping Force' (N) Per finger	Stroke (mm)
Pivot Gripper 	180-degree Opening/Closing Low Profile Wide Angle Gripper HMD		Thin, space-saving type that enables flexible line structures.	$\phi 12$ to $\phi 25$	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.	$\phi 32$ to $\phi 63$	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.	$\phi 10$ to $\phi 20$	2 to 15	Opening Angle 20°

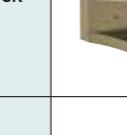
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For details of each product and other models, please refer to our website (<https://www.ckd.co.jp/en/>).



Click!

Air chuck

Category	Lineup		Features	Bore size (mm)	Gripping Force' (N) Per finger	Stroke (mm)
3-Jaw Chuck 	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.	$\phi 16$ to $\phi 40$	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.	$\phi 16$ to $\phi 40$	14 to 118	4 to 8
	Powerful Chuck CKL2		Basic 3-Jaw Chuck type suitable for gripping round workpieces and cylindrical workpieces.	$\phi 16$ to $\phi 100$	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.	$\phi 50$ to $\phi 100$	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.	$\phi 20$ to $\phi 100$	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.	$\phi 8 \times 3$ to $\phi 32 \times 3$	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.	$\phi 16 \times 3$ to $\phi 50 \times 3$	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.	$\phi 12 \times 6$ to $\phi 50 \times 6$	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
R□□□-UR Series	R□□□-TM Series	R□□□-TM Series	R□□□-FN Series	R□□□-JK Series	R□□□-YS Series	R□□□-KW Series

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

Robot side

Tool side

Electric Positive Pressure Negative Pressure

Custom specifications

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

ABP2-HP1 Series

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

Air booster

Quick exhaust valve with one-touch fitting

QEL Series

Ideal for preventing condensation at the hand chuck.

Click!

Recommended hands and chucks

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

HP

HIGH PRODUCTIVITY

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



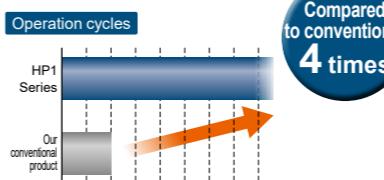
3-Jaw Chuck

CKW-HP1 Series



Long Life

Perfected sliding technology, achieving over 4 times the durability of conventional models.



High rigidity

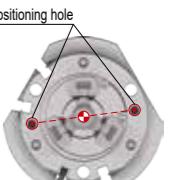
Increased guide rigidity achieved by reviewing the design of the guide section.



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.



* 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

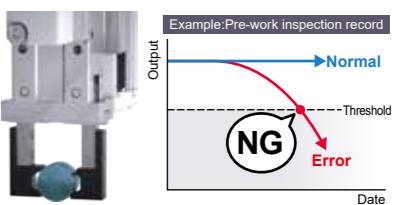
Grips minute workpieces / mis-grip detection

Accurately determines whether a minute workpiece was gripped or if a mis-grip occurred.



Predictive maintenance

Monitors abnormal wear or deformation of gripping fingers and jigs based on changes in output, preventing damage to equipment or robots.



Vacuum System Equipment Best Selection

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



Suction Pads

Category	Lineup				Recommended Workpiece		Pad Diameter	
Suction Pads	General Type	VSP-□R			Flat workpieces (hard and not flimsy)	18 types	ø1 to ø200	
	Standard type	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
	Mechanical Break Function Type	VSP-KE□Y			Compact and lightweight	6 types ø2.5 to ø10

Suction transport related products

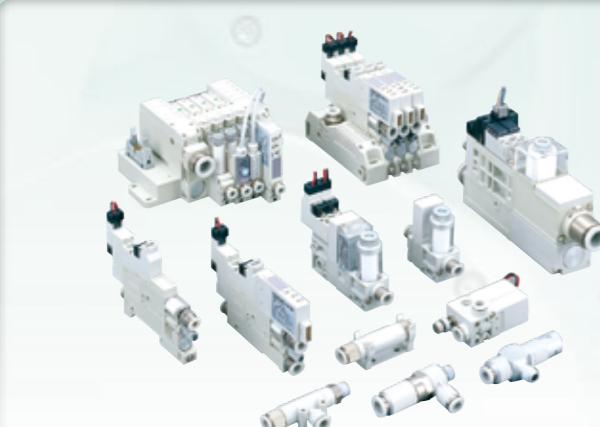
This chart compares five different industrial components:

- Fine Buffer (FBU2 Series):** Features a magnetic spring utilizing the attraction force of magnets in the buffer section. It includes a QR code and a "Click!" button.
- Active Fine Buffer (AFB-RB Series):** Features rotary alignment and buffer operation integrated. It includes a QR code and a "Click!" button.
- Precision Suction Plate (PVP Series):** Features suction of the entire surface by precise resin porous material. It includes a QR code and a "Click!" button.
- 3D Suction Gripper (FSH Series):** Holds the pad at any desired profiling position. It includes a QR code and a "Click!" button.
- Compact Cylinder with Vacuum Suction (MVC Series):** Cylinder and vacuum suction pad are compactly integrated. It includes a QR code and a "Click!" button.

Vacuum System Components Best Selection



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

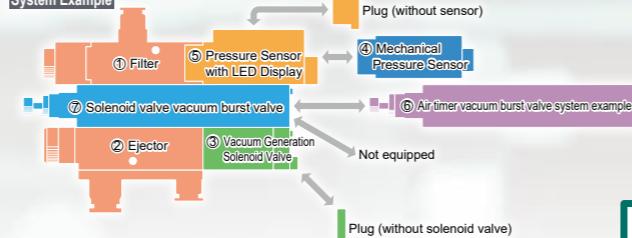


Ejector System/Vacuum Pump System

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/>).



● : Standard equipment ○ : Option

Ejector System

Category	Lineup	Features	Configuration Components							Ultimate Vacuum Pressure (-kPa) *	Intake flow rate (L/min (ANR)) *
			With Valve	With Switch	With Filter	With Silencer	With Centrifugal Extractor	With Check Valve			
Ejector System	Vacuum ejector Discrete	VSY		Vacuum ejector equipped with vacuum burst function. A compact lightweight body that condenses the necessary functions for easy use with robot hands.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	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.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	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.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	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.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	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.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	H: 90 to 93 L: 66 E: 92	H: 7 to 38 L: 12 to 42 E: 10.5 to 27
Vacuum ejector unit	VSK/VSKM		All-mighty type that can be used universally with full functions and well-balanced performance.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	H: 91 to 93 L: 67 E: 91	H: 7 to 38 L: 11 to 50 E: 21 to 27
	VSN/VSNM		Achieves fast and stable response. For high speed Pick & Place. ON/OFF response = 5 msec or less.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	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.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	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	With Switch	With Filter	Mechanical	Switch Output	Analog Output	With Silencer	With Centrifugal Extractor	With Check Valve	
Vacuum Pump System	VSXP/VSXPM											Balanced performance is incorporated into a compact body, enabling general-purpose use.
	VSNP/VSNPM											For high speed Pick & Place. ON/OFF response = 5 msec or less.
	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.

* 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.

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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



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 response

Response Time...4±1ms/
1.5±1ms (ON/OFF)

According to JIS B 8419 : 2010 Dynamic performance test.

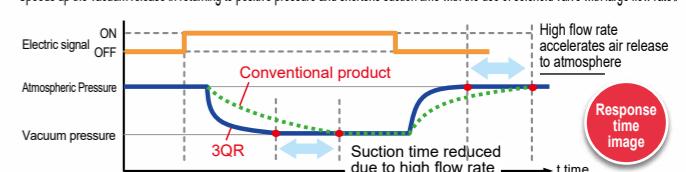
Long Life

Durability...
100 million cycles

* In accordance with in-house test conditions.

High-speed tact

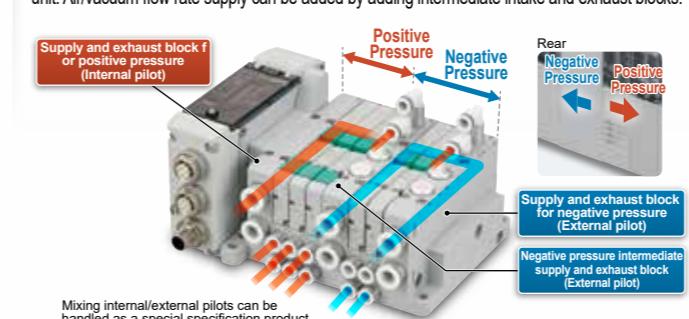
Speeds up the vacuum release in returning to positive pressure and shortens suction time with the use of solenoid valve with large flow rate.



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.



Positive/negative pressure mixed

TVG1 Effective Area 3.85 mm²
Valve width 10 mm Response Time 15 ms

TVG2 Effective Area 8.5 mm²
Valve width 15 mm Response Time 20 ms

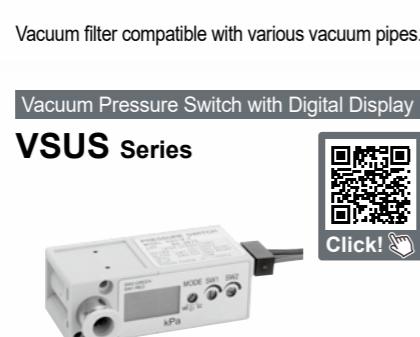
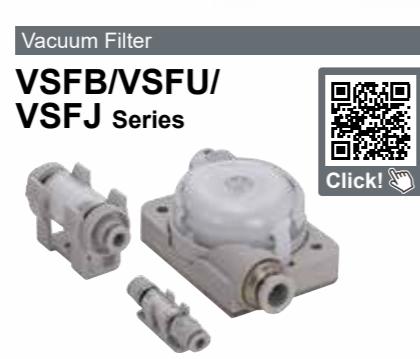


Supported communication

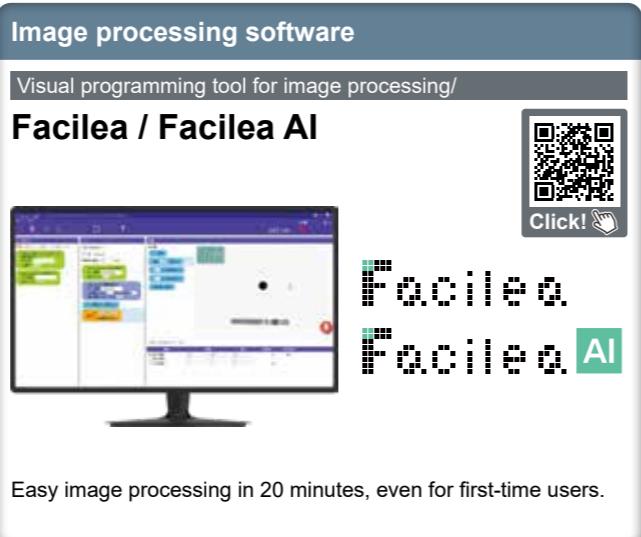
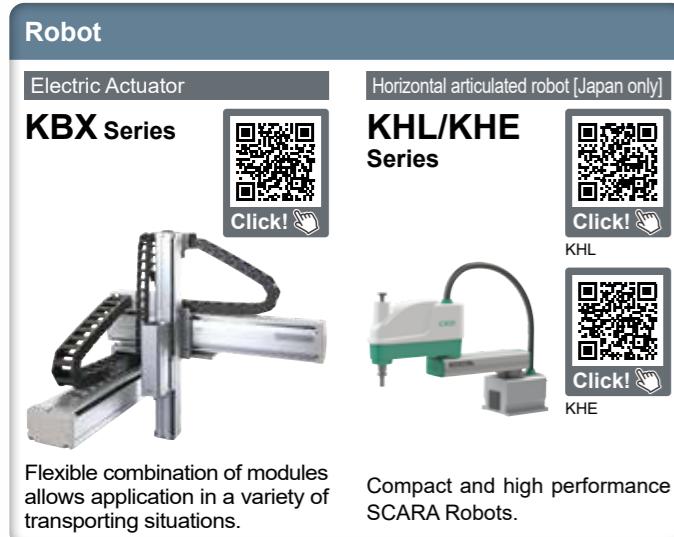
- EtherNet/IP *1
- DeviceNet
- EtherCAT *1
- CC-Link IE TSN *1
- CC-Link IE Field *1
- CC-Link IE Basic *1
- CC-Link
- PROFINET *1
- IO-Link *1
- IO-Link Wireless *1

*1 solenoid valve ON count function

Vacuum system related products

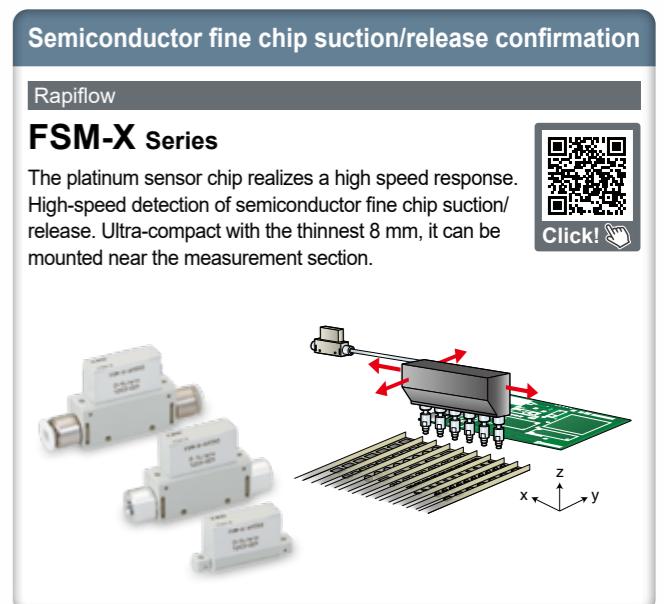
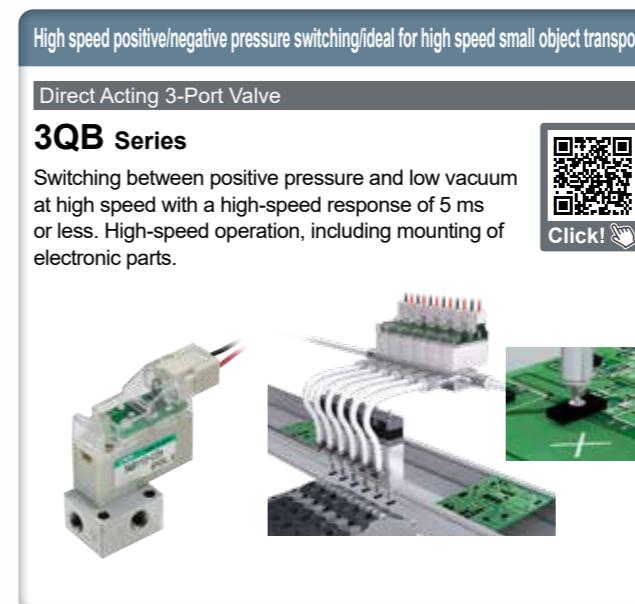
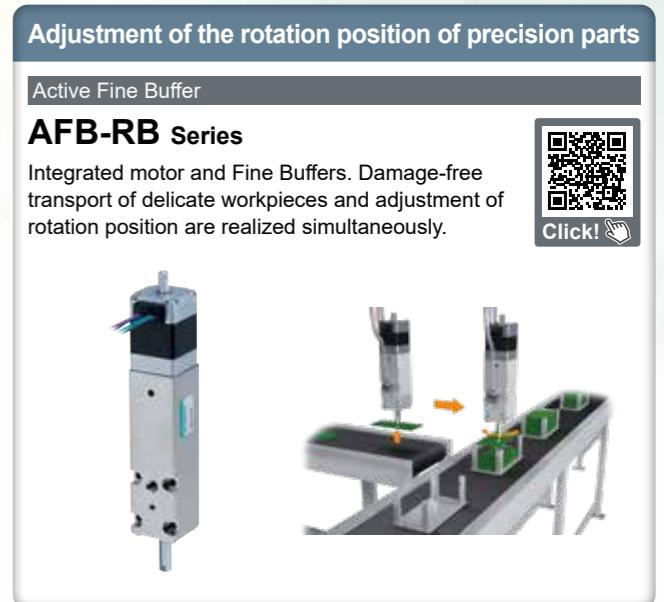
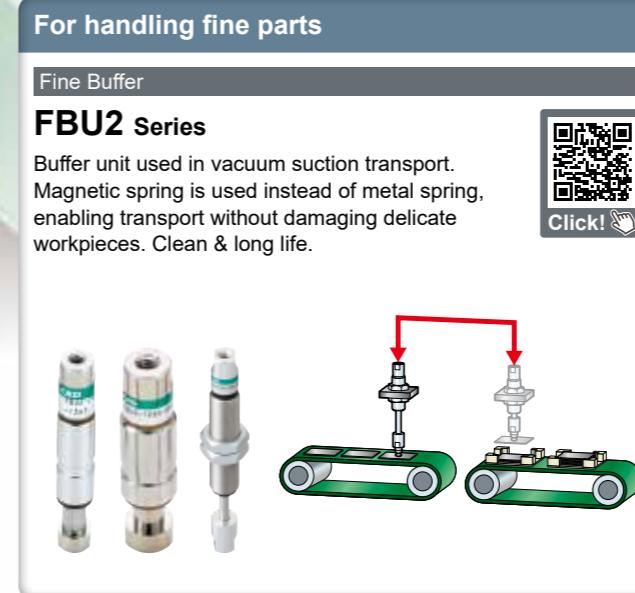


Other system components



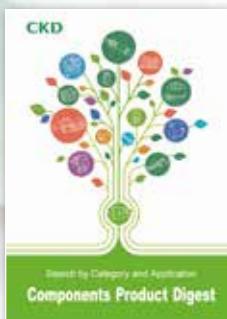
High speed/high precision handling components

We meet the needs for various handling.



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.

Pneumatic Cylinders ① General Type RJ-002AA	Pneumatic Cylinders ② Space-saving Type RJ-003AA	Pneumatic Cylinders ③ With Linear Guide Guided RJ-004AA
Pneumatic Cylinders ④ Rodless With Brake Clamping Oscillating/Rotating RJ-005	Pneumatic Cylinders ⑤ Hands Chucks Grippers RJ-006AA	Air Preparation Components Auxiliary Components Filters Regulators Pressure Gauges Speed Controllers Silencers Fittings Tubes RJ-007
Sensors/ Controllers Pressure Switches Flow Sensors Flow Controllers Air Sensors RJ-008AA	Mainline Components Gas Generators Air dryers Mainline Filters Drain Ejectors Nitrogen Gas Generators RJ-009AA	Precision Components Vacuum Components Air Bearings Ejector Systems Vacuum Pump Systems Suction Pads RJ-010AA
Directional Control Valves ① Plug-in Block Manifolds 3, 4, 5-Port Valves Remote I/O RJ-011	Directional Control Valves ② 2, 3, 5-Port Valves Explosion-proof Air Operated Valves Manual Valves RJ-012	Fluid Control Valves Solenoid Valves Air Operated Valves Ball Valves RJ-013
Electric Actuators ROBODEX Pulse RJ-014AA	Electric Actuators ROBODEX Std. RJ-015AA	Wet-Fine Components General CB-031A
Electric Actuators ROBODEX Servo CC-1275AA CC-1436AA	ABSODEX CC-1614AA	Image processing visual programming tools Focileo CC-1548AA Focileo AI CC-1623AA

Check Details on the WEB Catalogs

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



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