

# I N D E X

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 Selection can be made based on the appearance and product overview of each series.

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**Unit Conversion Table**

Posted on the CKD website:  
<https://www.ckd.co.jp/kiki/en/>

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 >>> P. 107

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# Search by Product Lineup List

You can select by the appearance and product overview of each series.

## Components for Process Gas >>> P. 1

### Process Gas Valve



Page 3

| Model No.                 | Connection Method  | Cv Value            | Page |
|---------------------------|--|---------------------|------|
| <b>Air Operated Valve</b> |  |                     |      |
| AGD0□R                    | 1/4" JXR Male Fitting<br>1/4" JXR Female Fitting   | 0.1                 | 6    |
| AGD1-□-R                  | 1/4" JXR Male Fitting<br>1/4" JXR Female Fitting<br>1/4" Double Ferrule Fitting  | 0.3                 | 8    |
| AGD2-□-R                  | 3/8" JXR Male Fitting<br>3/8" JXR Female Fitting<br>3/8" Double Ferrule Fitting  | 0.65                |      |
| LGD11/12                  | Equivalent to 1/4" JXR Male Fitting<br>Equivalent to 1/4" JXR Female Fitting<br>1/4" Double Ferrule Fitting                                | 0.3                 | 46   |
| LGD21/22                  | Equivalent to 1/2" JXR Male Fitting<br>Equivalent to 1/2" JXR Female Fitting<br>3/8" Double Ferrule Fitting<br>1/2" Double Ferrule Fitting | 0.7<br>(3/8": 0.65) |      |
| <b>Manual Valve</b>       |  |                     |      |
| OGD10R                    | 1/4" JXR Male Fitting<br>1/4" JXR Female Fitting<br>1/4" Double Ferrule Fitting  | 0.3                 | 26   |
| OGD20R                    | 3/8" JXR Male Fitting<br>3/8" JXR Female Fitting<br>3/8" Double Ferrule Fitting  | 0.65                |      |
| MGD10R                    | 1/4" JXR Male Fitting<br>1/4" JXR Female Fitting<br>1/4" Double Ferrule Fitting  | 0.3                 | 36   |
| MGD20R                    | 3/8" JXR Male Fitting<br>3/8" JXR Female Fitting<br>3/8" Double Ferrule Fitting  | 0.65                |      |
| LGD10                     | Equivalent to 1/4" JXR Male Fitting<br>Equivalent to 1/4" JXR Female Fitting<br>1/4" Double Ferrule Fitting                                | 0.3                 | 50   |
| LGD20                     | Equivalent to 1/2" JXR Male Fitting<br>Equivalent to 1/2" JXR Female Fitting<br>3/8" Double Ferrule Fitting<br>1/2" Double Ferrule Fitting | 0.7                 |      |

### Process Gas Valve, High Durability Type



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| Model No.                 | Connection Method   | Cv Value                                     | Page |
|---------------------------|---|--|------|
| <b>Air Operated Valve</b> |   |  |      |
| AGD0□R-HD                 | 1/4" JXR Male Fitting<br>1/4" JXR Female Fitting                                | 0.1  | 58   |
| AGD1□R-HD                 | 1/4" JXR Male Fitting<br>1/4" JXR Female Fitting<br>1/4" Double Ferrule Fitting | 0.3  |      |
| AGD1□R-HDF                | 1/4" JXR Male Fitting<br>1/4" JXR Female Fitting<br>1/4" Double Ferrule Fitting | 0.3  | 60   |
| AGD2□R-HDF                | 3/8" JXR Male Fitting<br>3/8" JXR Female Fitting<br>3/8" Double Ferrule Fitting | 0.65   |      |
| AGD21R-A                  | 3/8" JXR Male Fitting<br>3/8" JXR Female Fitting<br>3/8" Double Ferrule Fitting | 0.4<br>*At 200°C,<br>under negative pressure | 62   |

### Other Process Gas Components



Page 67

| Model No.               | Connection Method  | Supply fluid pressure (MPa) | Ultimate Vacuum Level (kPa (abs)) | Page |
|-------------------------|--|-----------------------------|-----------------------------------|------|
| <b>Vacuum Generator</b> |  |                             |                                   |      |
| VG                      | IN 1/4" JXR Male Fitting<br>VAC. 1/4" JXR Female Fitting<br>VENT 3/8" JXR Male Fitting | 0.4 to 0.6                  | 13.3 or less                      | 68   |
| <b>Other Valves</b>     |  |                             |                                   |      |
| Flow Rate Control Valve | 1/4" JXR Male Fitting<br>1/4" JXR Female Fitting<br>1/4" Double Ferrule Fitting        | -                           | -                                 | 72   |
| Piston type Check Valve | 1/4" JXR Male Fitting<br>1/4" JXR Female Fitting<br>1/4" Double Ferrule Fitting        | -                           | -                                 | 73   |

### Regulator



Page 75

| Model No. | Connection Method *  | Maximum Operating Pressure (MPa) | Setting Pressure Range (MPa)                        | Setting Pressure Range (psi)                | Page |
|-----------|--|----------------------------------|---|---|------|
| PGM       | 1/4" JXR Male Fitting<br>1/4" JXR Female Fitting<br>1/4" JXR Male to Female Fitting<br>1/4" JXR Female to Male Fitting | 1.0                              | -0.07 to 0.21<br>0 to 0.21<br>0 to 0.35<br>0 to 0.7 | -10 to 30<br>0 to 30<br>0 to 50<br>0 to 100 | 78   |
|           | 3/8" JXR Male Fitting<br>3/8" JXR Female Fitting<br>3/8" JXR Male to Female Fitting<br>3/8" JXR Female to Male Fitting |                                  | -0.07 to 0.21<br>0 to 0.21<br>0 to 0.42<br>0 to 0.7 | -10 to 30<br>0 to 30<br>0 to 60<br>0 to 100 |      |

\*Compatible with various integrated interfaces

### Integrated Gas Supply System



Page 89

| Model No. | Connection Method | Cv Value | Page |
|-----------|-------------------|----------|------|
| IAGD5     | 1.125" W-Seal     | 0.1/0.26 | 94   |

## Components for High Vacuum >>> P. 107

### Air Operated Valve



Page 109

| Model No. | Connection Method  | Orifice Diameter (mm)                    | Page |
|-----------|--|--|------|
| AVB□□7    | Fittings Vacuum clamp NW16, NW25, NW40, NW50, NW63, NW80, NW100, NW160 | ø17, ø24, ø39, ø48, ø68, ø80, ø100, ø150 | 112  |
| AVB□□3    | Fittings 1/4" tube, vacuum clamp NW25, NW40, NW50, NW80, NW100         | ø5, ø24, ø40, ø50, ø80, ø100             | 126  |
| AVB21-8T  | 1/4" Tube  | ø5                                       | 134  |

### Manual Valve



Page 144

| Model No. | Connection Method                            | Orifice Diameter (mm) | Page |
|-----------|--|-----------------------|------|
| MVB□17    | Fittings Vacuum clamp NW16, NW25, NW40, NW50 | ø17, ø24, ø39, ø48    | 144  |

### Vacuum Pressure Control System



Page 149

| Model No. | Connection Method                            | Orifice Diameter (mm) | Page |
|-----------|--|-----------------------|------|
| IAVB      | Fittings Vacuum clamp NW16, NW25, NW40, NW50 | ø17, ø24, ø43, ø48    | 152  |

# CKD How to use CAD data

Pneumatic valve manifold specifications and CAD data are easily available on the Web.

Free download!

This is what makes CKD's CAD great!

**Comprehensive list of CKD's leading products**



Japanese, English, Chinese (Simplified and Traditional), and Korean are supported.

**Simultaneous with new product launch**

**NEW** Model No. **AX1R**

**ABSODEX**



**Supports various data formats**

- + PDF DataSheet (2D)
- + CAD-DataSheet (3D)
- + SAT 7.0 (3D)
- + Solid Edge 2019 (3D)
- + Solid Edge 2023 (3D)
- + Solid Edge 2021 (3D)
- + Solid Edge 2022 (3D)
- + AutoCAD (2004~2023)
- + AutoCAD (2019~2023)
- + STEP (AP214) (3D)
- + STEP (AP214) (3D)
- + IFC (3D)
- + STP (3D)
- + TIA (2D/3D) (3D)
- + Triang (3D) (3D)

More than 25 types of 2D and more than 35 types of 3D  
Supports PDF and JPEG formats!

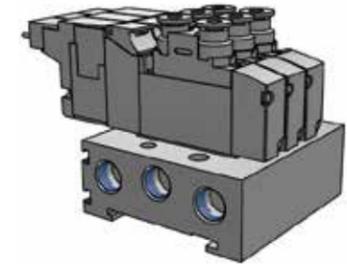
\*To use 3D CAD, you must register as a CKD plus member.

Specifications are available



Manifold specifications for pneumatic valves can be prepared and shipped assembled to the customer.

Get CAD data



2D and 3D CAD data available for pneumatic valve manifold assemblies

## Specifications and download method of CAD data

## CKD plus How to register as a member

**STEP 1**

From the CKD components product top page, click "New member registration"



**STEP 2**

Enter your name, company name, contact information, and email address

Easy registration in 2 STEPS

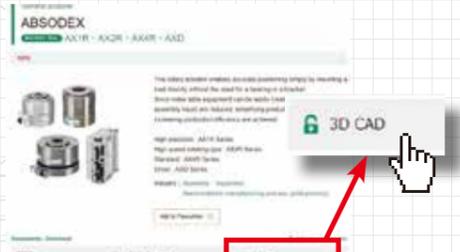
**Registration complete!**



## How to download CAD

**STEP 1**

Click on "3D CAD" from the product detail page



**STEP 2**

Select model No.

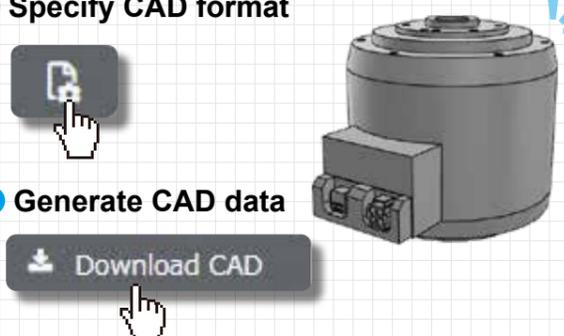
**STEP 3**

Download complete!

1 Specify CAD format

2 Generate CAD data

Download CAD



**STEP 1**

CKD components product TOP page > Product details page > Click "Manifold specifications sheet"

Manifold Specifications

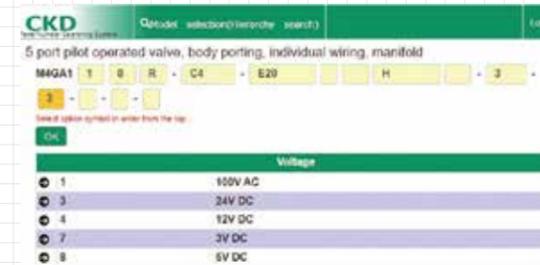


**STEP 2**

Select model No.

**STEP 3**

Create specifications sheet



**STEP 4**

Download complete!

- For specifications output, **Specification output** Click
- If downloading CAD data **2D/3D CAD** Click



Significantly reduces work time

# Website Guide

Various information is provided on our website.  
Please make use of it.



You can find the information you need here.

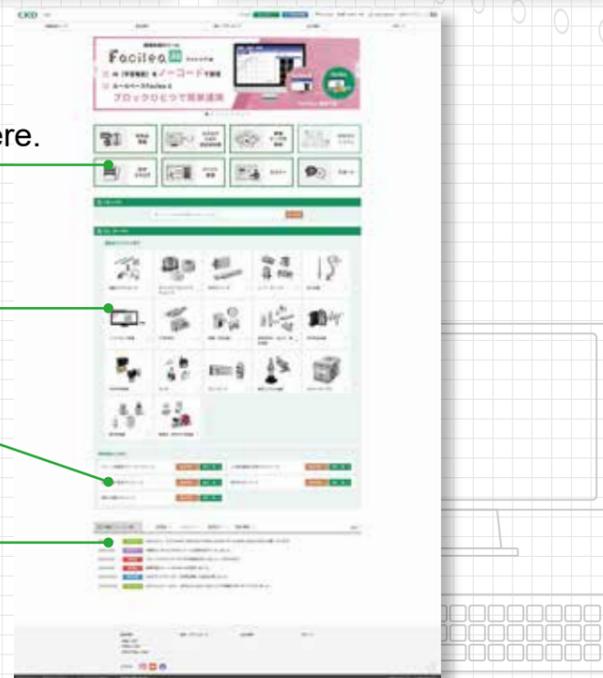
You can search for desired products.

You can find suitable products by application.

You can check the latest news.



Each product page provides various information.



Various information is published by product axis and application.

# Model Selection System Guide

## About Using the Model Selection System

We provide a system that supports the selection of the following items. Please use it when selecting models and designing.

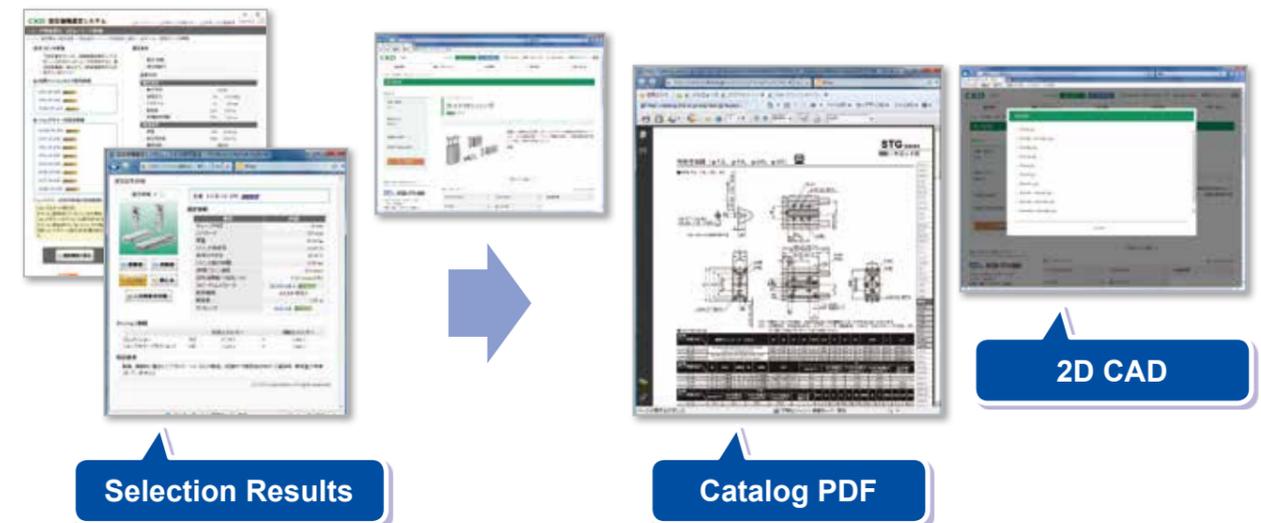
Published on our website

This system is for selecting products according to your application and operating conditions.



\*Downloadable software may not be able to be downloaded due to your company's security policy. In that case, please contact us.

## Link from selection results to catalog PDFs and CAD data!



## No registration required, available anytime!

We offer various services for CKD products, including catalogs, PDFs, CAD data, and model selection. Please take a look.

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



# Safety Precautions

Be sure to read this section before use.

When designing and manufacturing equipment using CKD products, the manufacturer is obligated to ensure that the safety of the mechanism, pneumatic control circuit and/or water control circuit and the system that runs the electrical controls are secured.

It is important to select, use, handle and maintain CKD products appropriately to ensure their safe usage. Observe warnings and precautions to ensure device safety.

Check that device safety is ensured, and manufacture a safe device.

## WARNING

**1** This product is designed and manufactured as a general industrial machine part. It must be handled by an operator having sufficient knowledge and experience.

**2** Use this product in accordance with specifications.

This product must be used within its stated specifications. In addition, never modify or additionally machine this product. This product is intended for use in general industrial machinery equipment or parts. It is not intended for use outdoors (except for products with outdoor specifications) or for use under the following conditions or environments. (Note that this product can be used when CKD is consulted prior to its usage and the customer consents to CKD product specifications. The customer should provide safety measures to avoid danger in the event of problems.)

**1** Use for applications requiring safety, including nuclear energy, railways, aircraft, marine vessels, vehicles, medical devices, devices or applications in contact with beverages or foodstuffs, amusement devices, emergency cutoff circuits, press machines, brake circuits, or safety devices or applications.

**2** Use for applications where life or assets could be significantly affected, and special safety measures are required.

**3** Observe organization standards and regulations, etc., related to the safety of device design and control, etc. ISO4414, JIS B 8370 (Pneumatics fluid power - General rules and safety requirements for systems and their components) JFPS2008 (Principles for pneumatic cylinder selection and use) Including the High Pressure Gas Safety Act, Industrial Safety and Health Act, other safety rules, organization standards and regulations, etc.

**4** Do not handle, pipe, or remove devices before confirming safety.

**1** Inspect and service the machine and devices after confirming safety of all systems related to this product.

**2** Note that there may be hot or charged sections even after operation is stopped.

**3** When inspecting or servicing the device, turn OFF the energy source (air supply or water supply), and turn OFF power to the facility. Discharge any compressed air from the system, and pay attention to possible water leakage and leakage of electricity.

**4** When starting or restarting a machine or device that incorporates pneumatic components, make sure that the systemsafety, such as pop-out prevention measures, is secured.

**5** Observe warnings and cautions in the following pages to prevent accidents.

■ The precautions are ranked as "DANGER", "WARNING" and "CAUTION" in this section

**DANGER:** When a dangerous situation may occur if handling is mistaken leading to fatal or serious injuries, and when there is a high degree of emergency to a warning.

**WARNING:** If handled incorrectly, a dangerous situation may occur, resulting in death or serious injury.

**CAUTION:** When a dangerous situation may occur if handling is mistaken leading to minor injuries or physical damage.

Note that some items described as "CAUTION" may lead to serious results depending on the situation. Every item provides important information and must be observed.

## Warranty

**1** Warranty period

The product specified herein is warranted for one (1) year from the date of delivery to the location specified by the customer.

**2** Warranty coverage

If the product specified herein fails for reasons attributable to CKD within the warranty period specified above, CKD will promptly provide a replacement for the faulty product or a part thereof or repair the faulty product at one of CKD's facilities free of charge.

However, following failures are excluded from this warranty:

- 1) Failure caused by handling or use of the product under conditions and in environments not conforming to those stated in the catalog, the Specifications, or the Instruction Manual.
- 2) Failure caused by use of the product exceeding its durability (cycles, distance, time, etc.) or caused by consumable parts.
- 3) Failure not caused by the product.
- 4) Failure caused by use not intended for the product.
- 5) Failure caused by modifications/alterations or repairs not carried out by CKD.
- 6) Failure caused by reasons unforeseen at the level of technology available at the time of delivery.
- 7) Failure caused by acts of nature and disasters beyond control of CKD.

The warranty stated herein covers only the delivered product itself. Any loss or damage induced by failure of the delivered product is excluded from this warranty.

Note: For details on the durability and consumable parts, contact your nearest CKD sales office.

**3** Compatibility check

The customer is responsible for confirming the compatibility of CKD products with the customer's systems, machines and equipment.

# Precautions for export

## Security Trade Control

The products in this catalog and their related technologies may require approval before export or provision.

For the sake of maintaining world peace and safety, there may be cases in which approval under the Foreign Exchange and Foreign Trade Control Law is required in advance, depending on the country to where the product or related technology is being exported or provided.

The scope of products and related technologies requiring approval are listed in the Export Trade Control Order Appendix Table 1 or Foreign Exchange Order Appendix Table.

The Export Trade Control Order Appendix Table 1 and Foreign Exchange Order Appendix Table contain the following two types of information.

- "List controls" specified for items 1 to 15
- "Catch-all controls" that do not indicate specifications by item, but restriction by application (Section 16)



An application for approval is

received by the Security Export Licensing Division of the Ministry of Economy, Trade and Industry or local bureaus of the Ministry of Economy, Trade and Industry.

## Products and related technologies in this catalog

The products and related technologies in this catalog are subject to the catch-all control of the Foreign Exchange and Foreign Trade Control Law.

When exporting or providing the products or related technologies in this catalog, ensure that they are not used for arms or weapons.

## Contact

Contact your local CKD Sales Office for information on the Security Trade Control of products and related technologies in this catalog.