



Air Operated Valve for Process Gas LGD□□ Series

- Metal diaphragm
- Forged body



LGD□□ Series

Internal Structure Diagram and Materials

Model No. Notation Method

LGD1 **1** - **4RM**

Model No. ① Actuation Method ② Connection Method

① Actuation method

Code	Content
1	NC Type (Normally Closed)
2	NO Type (Normally Open)

② Connection Method

Code	Content
4RM	1/4" Male Fitting (JXR Equivalent)
4R	1/4" Female Fitting (JXR Equivalent)
4S	1/4" Double Ferrule Fitting

Note) JXR fitting can be connected to VCR fitting.

LGD2 **1** - **8RM**

Model No. ① Actuation Method ② Connection Method

① Actuation method

Code	Content
1	NC Type (Normally Closed)
2	NO Type (Normally Open)

② Connection Method

Code	Content
8RM	1/2" Male Fitting (JXR Equivalent)
8R	1/2" Female Fitting (JXR Equivalent)
6S	3/8" Double Ferrule Fitting
8S	1/2" Double Ferrule Fitting

Note) JXR fitting can be connected to VCR fitting.

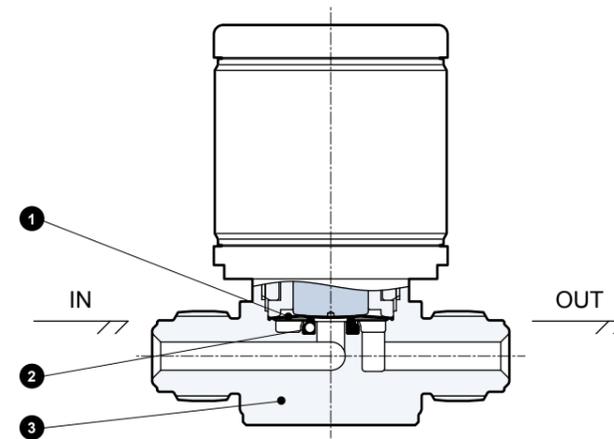
Specifications

Item	LGD1□	LGD2□
Applicable Fluid	Inert gas / Process gas	
Operating Pressure Pa (abs) - MPa (G)	1.3x10 ⁻⁶ to 0.99	
Fluid Temperature °C	5 to 80	
Ambient Temperature °C	5 to 80	
Valve Seat Leakage Pa·m ³ /sec.He	1.0x10 ⁻¹⁰ or less	
External Leakage Pa·m ³ /sec.He	1.0x10 ⁻¹⁰ or less	
Cv Value (at 23°C, under pressure)	0.3	3/8": 0.65 1/2": 0.7
Connection Method	1/4" JXR Male Fitting Equivalent 1/4" JXR Female Fitting Equivalent 1/4" Double Ferrule Fitting	1/2" JXR Male Fitting equivalent (compatible with 3/8") 1/2" JXR Female Fitting equivalent (compatible with 3/8") 3/8" Double Ferrule Fitting 1/2" Double Ferrule Fitting
Actuation Method	NC Type (Normally Closed) NO Type (Normally Open)	
Operating Pressure MPa	NC: 0.4 to 0.6 NO: 0.4 to 0.5	
Pilot Port	M5	
Weight *1 kg	0.23	0.57
Durability	Proven 3 million cycles *2	

*1: Weight is for the JXR male fitting equivalent.

*2: Service life when the applicable fluid is an inert gas within the specifications and does not contain solid matter such as reaction products.

Internal Structure Diagram/Material



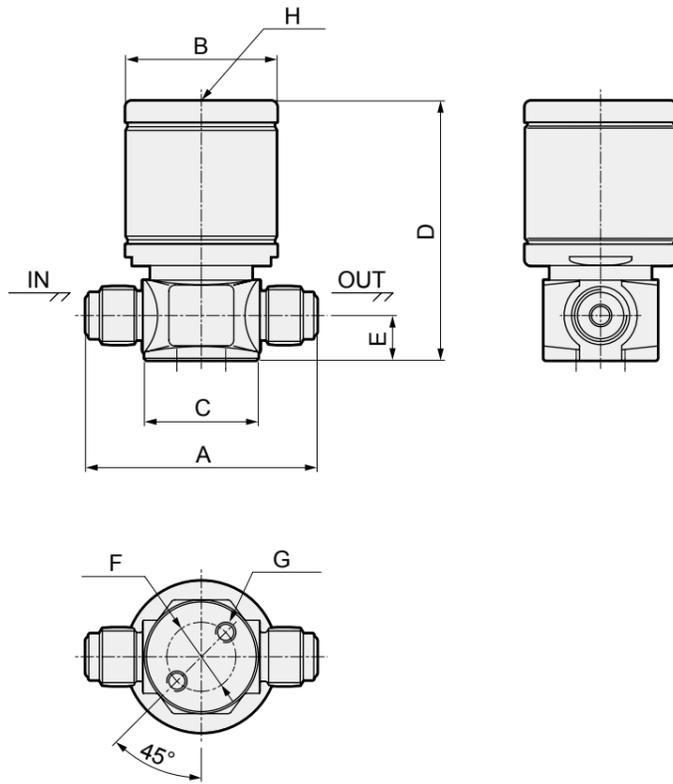
Gas-wetted Materials

Part No.	Part Name	Material
1	Diaphragm	Ni-Co Alloy
2	Valve Seat	PCTFE
3	Body	SUS316L

External Dimensions

LGD□□-□RM

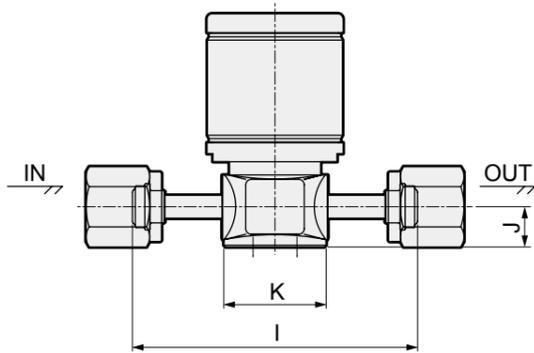
●JXR male Fitting equivalent



Model No.	A	B	C	D	E	F	G	H
LGD1□-4RM	57	ø37	ø28	64	11	ø17	2-M5 Thread Depth 5	M5
LGD2□-8RM	77	ø48.3	ø38	87	16	ø28	2-M5 Thread Depth 6	M5

LGD□□-□R

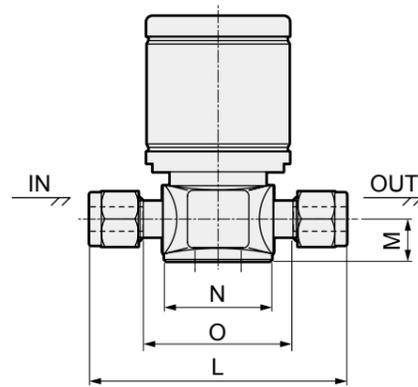
●JXR Female Fitting equivalent



Model No.	I	J	K
LGD1□-4R	78	11	ø28
LGD2□-8R	104.6	16	ø38

LGD□□-□S

●Double Ferrule Fitting



Model No.	L	M	N	O
LGD1□-4S	67	11	ø28	39.1
LGD2□-6S	82.5	16	ø38	48.9
LGD2□-8S	90.2	16	ø38	44.6

MEMO



Manual Valve for Process Gas

LGD□0 Series

- Metal diaphragm
- Forged body
- 180° rotation



LGD□0 Series

External Dimensions

Model No. Notation Method

LGD10 - 4RM

Model No. ① Connection Method

① Connection Method

Code	Content
4RM	1/4" Male Fitting (JXR Equivalent)
4R	1/4" Female Fitting (JXR Equivalent)
4S	1/4" Double Ferrule Fitting

Note) JXR fitting can be connected to VCR fitting.

LGD20 - 8RM

Model No. ① Connection Method

① Connection Method

Code	Content
8RM	1/2" Male Fitting (JXR Equivalent)
8R	1/2" Female Fitting (JXR Equivalent)
6S	3/8" Double Ferrule Fitting
8S	1/2" Double Ferrule Fitting

Note) JXR fitting can be connected to VCR fitting.

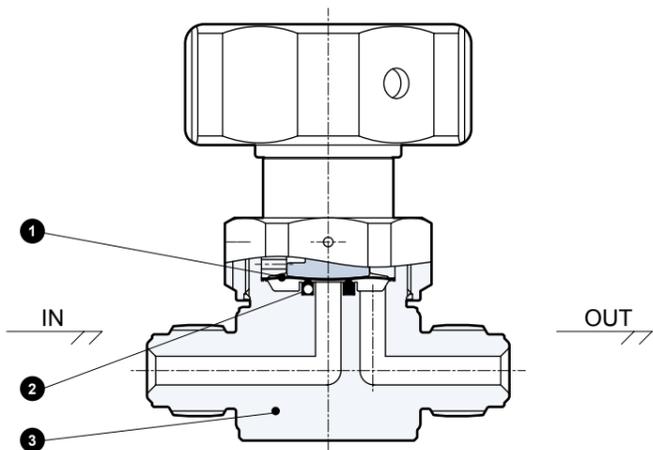
Specifications

Item	LGD10	LGD20
Applicable Fluid	Inert gas / Process gas	
Operating Pressure Pa(abs)-MPa(G)	1.3x10 ⁻⁶ to 0.99	
Fluid Temperature °C	5 to 80	
Ambient Temperature °C	5 to 60	
Valve Seat Leakage Pa·m ³ /sec.He	1.0x10 ⁻¹⁰ or less	
External Leakage Pa·m ³ /sec.He	1.0x10 ⁻¹⁰ or less	
Cv Value (at 23°C, under pressure)	0.3	0.7
Connection Method	1/4" JXR Male Fitting Equivalent 1/4" JXR Female Fitting Equivalent 1/4" Double Ferrule Fitting	Equivalent to 1/2" JXR Male Fitting (3/8" compatible) Equivalent to 1/2" JXR Female Fitting (3/8" compatible) 3/8" Double Ferrule Fitting 1/2" Double Ferrule Fitting
Weight *1	kg 0.26	0.57
Durability	Proven 60,000 cycles *2	

*1: Weight is for the JXR male fitting equivalent.

*2: Service life when the applicable fluid is an inert gas within the specifications and does not contain solid matter such as reaction products.

Internal Structure Diagram and Materials



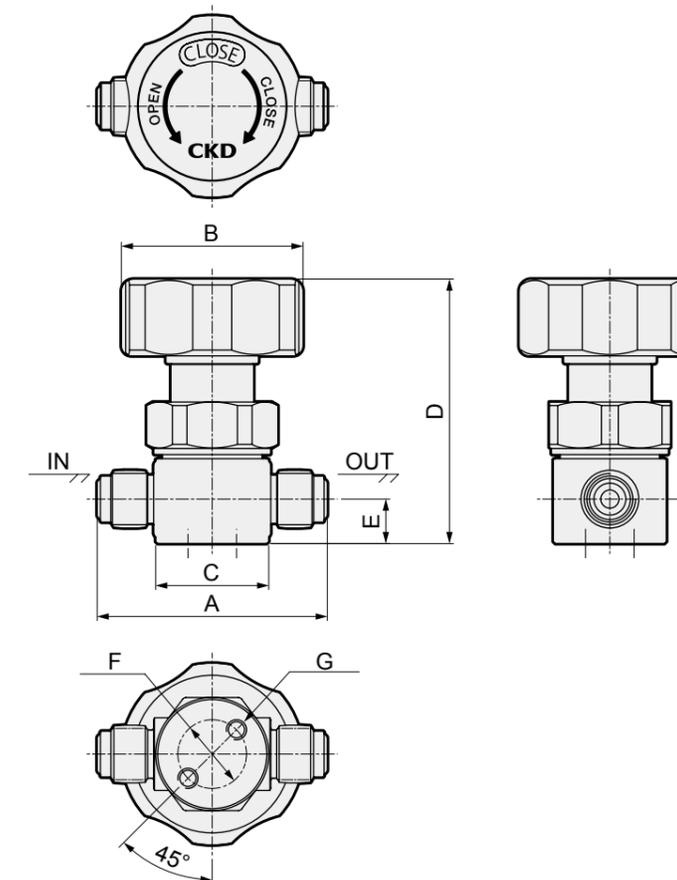
Gas-wetted Materials

Part No.	Part Name	Material
1	Diaphragm	Ni-Co Alloy
2	Valve Seat	PCTFE
3	Body	SUS316L

External Dimensions

LGD□0-□RM

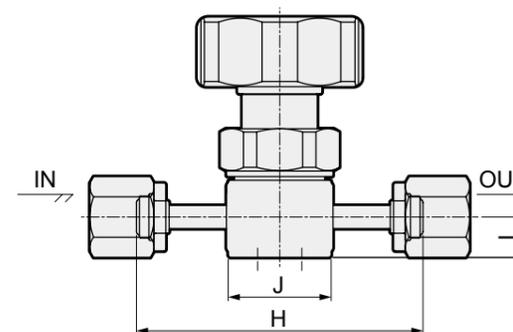
●JXR male Fitting equivalent



Model No.	A	B	C	D	E	F	G
LGD10-4RM	57	ø45	ø28	65	11	ø17	2-M5 Thread Depth 5
LGD20-8RM	77	ø45	ø38	79	16	ø28	2-M5 Thread Depth 6

LGD□0-□R

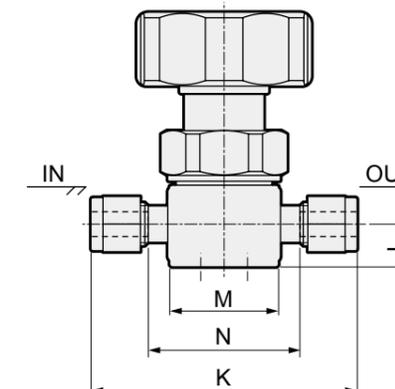
●JXR Female Fitting equivalent



Model No.	H	I	J
LGD10-4R	78	11	ø28
LGD20-8R	104.6	16	ø38

LGD□0-□S

●Double Ferrule Fitting



Model No.	K	L	M	N
LGD10-4S	67	11	ø28	39.1
LGD20-6S	82.5	16	ø38	48.9
LGD20-8S	90.2	16	ø38	44.6



Components for Process Gas

To Use This Product Safely

Please be sure to read this before use.
For General Precautions refer to Intro 9.

Individual Precautions: Process Gas Valve LGD Series

Design / Selection

1. Confirmation of Specifications

Warning

- This product is not designed to function as a safety valve, such as an emergency shut-off valve. If such a function is required, please implement other reliable safety measures.
- Incorrect equipment selection and handling can cause problems not only in this product, but also to your system. Product selection and handling should be performed after confirming the product specifications and their suitability for the customer's system, at the customer's own responsibility.
- Check the compatibility between the gas contact part materials and working fluid before use.
- Use within the specified fluid temperature and pressure range.

2. Ambient Environment

Caution

- Do not use in atmospheres containing corrosive gases or in locations where substances that may affect the product such as chemicals, salt water, water or steam could make contact. Use within the specified ambient temperature range.

3. Securing Space

Caution

- Secure sufficient space for maintenance and inspection.

4. Piping

Warning

- Foreign materials or burrs in the piping and piping work could damage the valve seat or diaphragm seal, and lead to leaks. Before installing the valve, be sure to remove any debris or burrs and take measures such as installing a primary side filter.

Caution

- Make sure not to use the wrong connecting port when connecting the pipes to the product.
- When piping, do not apply tension, compression, bending or other forces to the valve body from the piping.
- If the tube for piping is bent, it will cause malfunctions; pipe with suitable tube lengths.
- Use the driving solenoid valve connected to the drive unit according to the specifications or applications.
- As for operating air, use air or inert gas passed through a filter with a filtration rating of 5 μm or more.

5. Purging

Caution

- When removing valves using toxic, combustible or corrosive gases, purge with an inert gas such as nitrogen gas before removal.

6. During Use

Warning

- Do not touch heater-equipped products with hands or body. Direct contact may cause burns.

Caution

- Do not use valves as a footing or place any heavy objects on top of the valves.
- Store unused products in a location where they are not exposed to direct sunlight or high temperatures.

For cautions about mounting, installation, adjustment, use, and maintenance, refer to CKD components Product Site (<https://www.ckd.co.jp/kiki/jp/>) → "Model No." [Instruction Manuals](#)

MEMO

AGD
OGD
MGD
LGD
High Durability
Other Gas Components
PGM
Regulator
IAGD
Integrated System
AVB
High Vacuum Valve
MVB
High Vacuum Valve
IAYB
Vacu Press Control Sys
Ending

AGD
OGD
MGD
LGD
High Durability
Other Gas Components
Regulator
PGM
IAGD
Integrated System
AVB
High Vacuum Valve
MVB
High Vacuum Valve
IAYB
Vacu Press Control Sys
Ending