

# Gas Combustion Combination Valve GHV Series

New product



**3-in-1 package (solenoid valve + governor + solenoid valve)  
realizes compact piping in double shutoff application.**

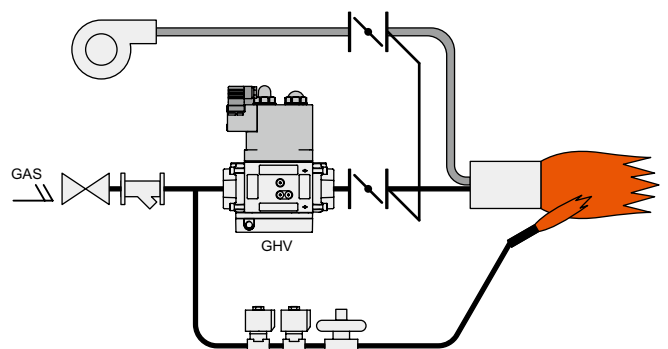
### Main features

- **Space-saving integrated structure**  
Two solenoid valves equipped with a governor function are integrated into a compact structure.  
**Face to face 1/3 (50 A, CKD comparison)**  
JIS B 8415 double shutoff is realized with one unit, reducing the space of the system or equipment.
- **Reduction of man-hour for wiring and piping**  
(The solenoid valve is of a simultaneous energizing type.)  
The integrated structure of double shutoff reduces the wiring and piping man-hour to that of one unit.
- **Available for medium pressures up to 50 kPa**
- **Ample variations**
  - Solenoid valve with integrated governor + solenoid valve
  - Solenoid valve + solenoid valve
  - Solenoid valve + solenoid valve (slow open)
- **Option**  
With switch for confirming action
- **Easily changed port size**  
The port size can be changed in the range of 20 A to 50 A by flange replacement.
- **Compliant with ISO23551-1 and ISO23551-2**

### Main applications

- Gas boiler
- Industrial furnace
- Gas absorption water cooler/heater
- Drying furnace

### System Example



**Refer to "Safety Precautions" on the rear side before use.**

**CKD Corporation**

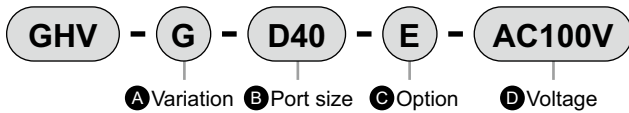
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## Specifications

Descriptions	GHV-G				GHV-N				GHV-L			
	-D25	-D32	-D40	-D50	-D25	-D32	-D40	-D50	-D25	-D32	-D40	-D50
Working fluid	City gas/Natural gas/LPG											
Working primary pressure range	kPa 0 to 50											
Pressure adjusting range	kPa 0.4 to 2.0				-							
Flow rate <small>Natural gas specific gravity 0.65 P = 0.25 kPa</small>	35	43.7	47.5	51	35	43.7	47.5	51	35	43.7	47.5	51
Voltage	V 100VAC <sup>+10%</sup> / <sub>-15%</sub> 200VAC <sup>+10%</sup> / <sub>-15%</sub>											
Frequency	Hz 50, 60 common											
Power consumption (apparent power)	VA 80											
Ambient temperature	-15 to 70 (no freezing) *1								-15 to 60 (no freezing)			
Close operating time	s 1.0 or less											
Cycle rate	times/min 10 or less								1 or less			
Installation attitude	Vertical installation with the coil facing upward or horizontal installation with the coil facing sideward (vertical piping is possible).											
Connection	Screw-in (Rp)											
Nominal diameter	1	1 1/4	1 1/2	2	1	1 1/4	1 1/2	2	1	1 1/4	1 1/2	2
Weight	kg 6.1				5.5				5.8			
Proof pressure	kPa 75											
Open operating time	s -				1 or less				Approximately 10			
Start gas adjustment	%				-				0 to 70			
Re-energizing halt time	s				-				5 and over			

\*1: -15 to 60 (no freezing) for the version with switch for confirming action

## How to order



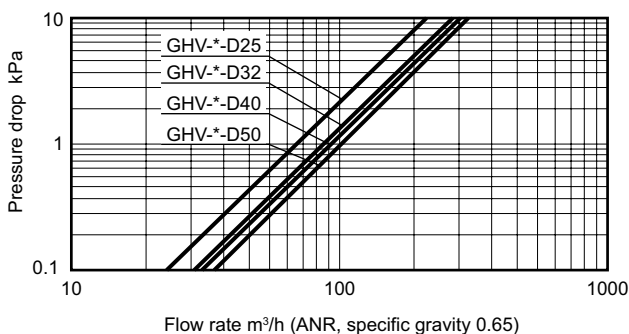
Symbol	Descriptions
<b>A Variation</b>	
<b>G</b>	Solenoid valve with integrated governor + solenoid valve
<b>N</b>	Solenoid valve + solenoid valve
<b>L</b>	Solenoid valve + solenoid valve (slow open)
<b>B Port size</b>	
<b>D00</b>	Without flange
<b>D25</b>	Rp1
<b>D32</b>	Rp1 1/4
<b>D40</b>	Rp1 1/2
<b>D50</b>	Rp2
<b>C Option</b>	
<b>Blank</b>	None
<b>E</b>	With switch for confirming action
<b>D Voltage</b>	
<b>AC100V</b>	100 VAC 50Hz/60Hz
<b>AC200V</b>	200 VAC 50Hz/60Hz

### ● Flange set



Symbol	Descriptions
<b>A Port size</b>	
<b>D25</b>	Rp1
<b>D32</b>	Rp1 1/4
<b>D40</b>	Rp1 1/2
<b>D50</b>	Rp2

## Flow characteristics

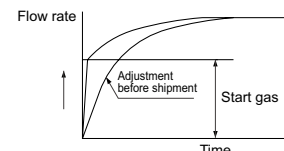


### Reference: Conversion coefficient

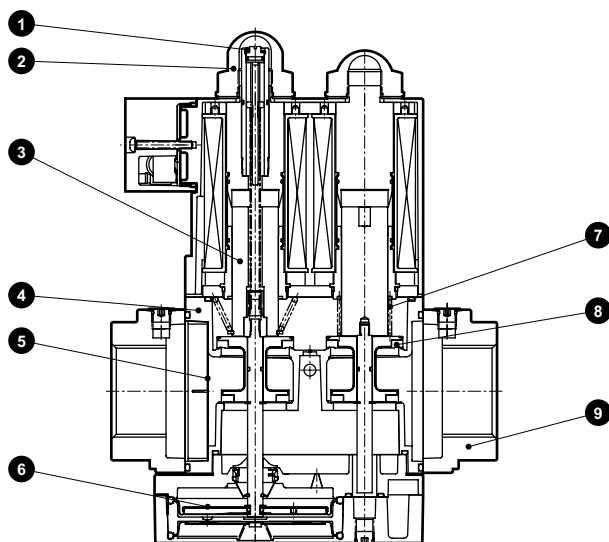
Conversion flow rate factor = (flow shown on table) x (coefficient)

Gas types	Natural gas (13A)	City gas (6B.6C)	Air	Propane
Specific gravity	0.65	0.54	1	1.6
Coefficient	1.0	1.09	0.8	0.63

### Open operating characteristics (GHV-L)



### Internal structure and parts list

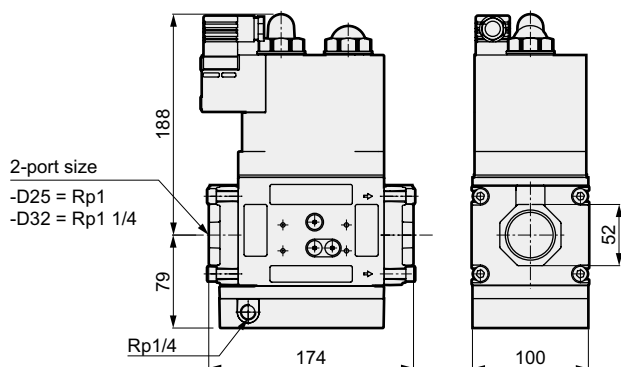


No.	Parts name	Material
1	Pressure adjusting screw	Stainless steel
2	Governor cap	Resin
3	Plunger	Steel
4	Body	Aluminum alloy die-casting
5	Strainer	Resin
6	Diaphragm	Nitrile rubber
7	Spring	Stainless steel, spring steel
8	Valve	Nitrile rubber/aluminum alloy die-casting
9	Flange	Aluminum alloy die-casting

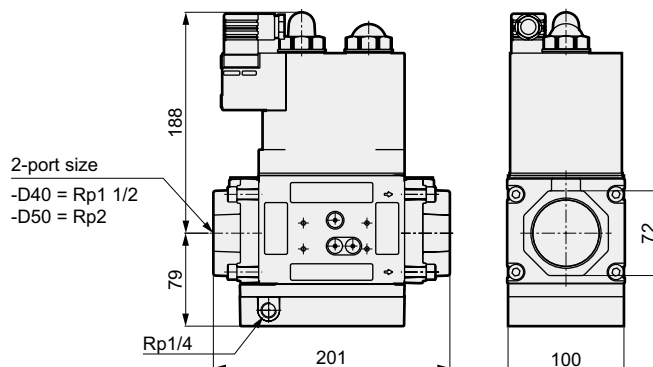
### Dimensions

● Solenoid valve with integrated governor + solenoid valve

● GHV-G-D25/D32



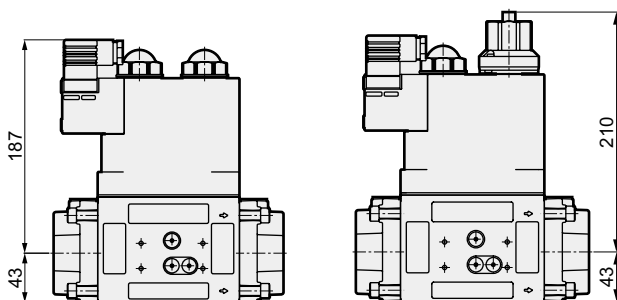
● GHV-G-D40/D50



### Dimensions with optional equipment

● Solenoid valve + solenoid valve

● GHV-N-D25 to D50

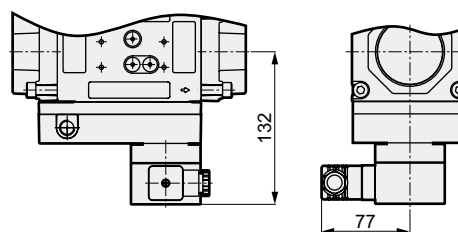


● Solenoid valve + solenoid valve (slow open)

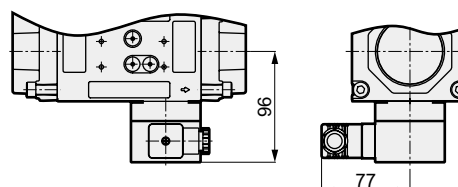
● GHV-L-D25 to D50

● With switch for confirming action

● GHV-G-D25 to D50-E



● GHV-N-D25 to D50-E



## Safety precautions

Always read before use  
Also read precautions of "Gas Combustion System (G-2)".

### ! WARNING

#### ■ Design and selection

- A solenoid valve is not designed as a safety valve such as an emergency shut off valve.  
When using in such a system, provide other measures to ensure safety.
- Install this product on a place not subject to vibration.
- Fluids other than the gases described in the specification cannot be used.
- Iron rust and dirt, etc., in fluid can cause operation faults or leaks, and lowering product performance. Eliminate such substances.
- Avoid direct sunlight and contact with water or oil when installing this product. The product can not be used outdoors. Do not use this product near heat-generating elements or where it may be subject to radiated heat.

#### ■ During use and maintenance

- Note that the surface temperature of the solenoid valve increases due to the coil temperature rises.  
(An increased surface temperature does not affect the product performance.)
- Touching electric connections (live parts) could cause electrical shock. Always disconnect the power supply before starting installation or inspection.  
Do not touch the live parts with wet hands.
- Do not disassemble the product.
- Conduct checks regularly to prevent an accident where the gases pass through the safety shut off valve.

### ! CAUTION

#### ■ Design and selection

- Make sure that the secondary pressure of the solenoid valve does not become higher than the primary pressure.

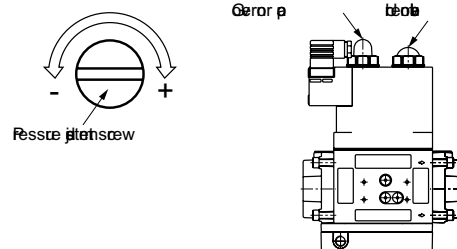
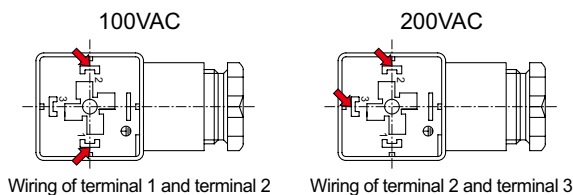
#### ■ Installation and adjustment

- Hold the body of the product when transporting the product.
- After connecting pipes, make sure that there is no leaking at all connecting sections.
- Connect the product to the power supply as shown below after removing the terminal box. The product is not polarized.

#### ■ During use and maintenance

- Adjust the pressure by rotating the pressure adjusting screw by a flat blade screwdriver after removing the governor cap. Install a pressure gauge on the secondary side to check the actual pressure while you adjust the pressure. A stopper prevents the screw to be rotated beyond the upper and lower limits of the pressure adjustment range. Breaking the pressure adjusting mechanism by rotating the screw beyond the limit may cause gas leak.

A clockwise rotation raises the pressure and a counter clockwise rotation reduces the pressure.



## Limited warranty and disclaimer

### 1 Term of warranty

"Warranty Period" is one (1) year from the first delivery to the customer.

### 2 Scope of warranty

In case any defect attributable to CKD is found during the Warranty Period, CKD shall, at its own discretion, repair the defect or replace the relevant product in whole or in part, according to its own judgment.

Note that the following faults are excluded from the warranty term:

- (1) Product abuse/misuse contrary to conditions/environment recommended in its catalogs/specifications
- (2) Failure caused by other than the delivered product
- (3) Use other than original design purposes.
- (4) Third-party repair/modification
- (5) Faults caused by reason that is unforeseeable with technology put into practical use at the time of delivery.
- (6) Failure attributable to force majeure.

In no event shall CKD be liable for business interruptions, loss of profits, personal injury, costs of delay or for any other special, indirect, incidental or consequential losses, costs or damages.

### 3 Compatibility confirmation

In no event shall CKD be liable for merchantability or fitness for a particular purpose, notwithstanding any disclosure to CKD of the use to which the product is to be put.

If the goods and their replicas, or the technology and software in this catalog are to be exported, laws require the exporter to make sure they will never be used for the development or the manufacture of weapons for mass destruction.

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