

- ④A place susceptible to influence corrosive gas (such as ammonia gas and sulfur dioxide)
- ⑤A place susceptible to influence of any gas that is detrimental to the product (such as ozone)
- ⑥Any other places judged as detrimental to the product (for example, a place on an unstable stand, a place exposed to risk of being hit by an object dropping from the above, or a place subject to a possible flood damage.)

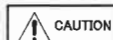
6. Warranty of Product



We will warrant the product for one year from the date of installation, and this period, however, is restricted to one and a half years from the date of production, subject to the following:

- ①The product will be repaired or changed for a new one at no charge, if the failure arises after normal usage procedures in conformity to this Manual.
- ②Repair or replacement will be performed at cost, even within the warrantable period, if the failure is attributable to one of the following cases:
 - 1) Trouble and/or damage arisen from a wrong use, an improper repair or conversion.
 - 2) Trouble and/or damage arisen from dropping, impact shock or similar.
 - 3) Trouble and/or damage arisen from unobserving the descriptions of this Manual, e.g.: ignoring the periodic inspection.
 - 4) Trouble arisen from foreign objects entered through pipelines. (Insufficiency of lockup function, clogging of strainer, etc.)

7. Exclusions



- Our Company does not assume responsibility for any damage that may be caused by a fire/ earthquake/ third party's conduct/ any other accident/ the Customer's intentional or accidental erroneous use, or any other use under abnormal conditions.
- Our Company does not assume responsibility for any incidental damage (loss of business interests, interruption of business, etc.) caused by use or non-use of the Equipment.
- Our Company does not assume responsibility for any damage that may be brought about by use other than those explained in this Instruction Manual.

Note: Kindly understand that the specifications, the forms, etc. are subject to changes for betterment without any notice.

8. Contact Offices

We ensure high quality after-the-sale service for our product.

*For details for maintenance system, make inquiries to any of the following head office and branches.

ITO Corporation

10-4, Hakodono-Cho, Higashiosaka-City, Osaka 579-8038 JAPAN
Tel: +81-72-981-3781 Fax: +81-72-987-6590

ITO f SYSTEM Corporation

Over seas dept. for ITO
Head Office: 8-6, Shimachi, Higashiosaka-City, Osaka 579-8037 JAPAN
Tel: +81-72-983-7017 Fax: +81-72-983-7018
Shanghai Office: Building 26, NO.1288 Zhongchun Road, Minhang District,
Shanghai 201109 CHINA
Tel: +86-21-6442-3472 Fax +86-21-6442-3475

ITO f ENERGY EQUIPMENT Corporation

Building 26, NO.1288 Zhongchun Road, Minhang District,
Shanghai 201109 CHINA
Tel: +86-21-6442-3473 Fax +86-21-6442-3475

<http://www.itokoki.co.jp/english>

Note : Specifications and appearance of the product described here may be changed without prior notice.

For Gas Equipment Distributors
And Builders

BALL VALVE model: **BV-206**

BALL CHECK VALVE model: **BVC-06**

INSTRUCTION MANUAL

Introduction

Thank you for your purchasing our product. Please observe relevant laws and regulations, and read this instruction manual carefully to use the product safely. The manual should be retained for future reference.

Safety precautions

*Throughout this manual, the following signal words and signs are used. Before reading the manual, well understand the significance of these words and signs.

*These safety precautions are given to ensure that the product is used safely and correctly and to prevent personal injury and property damage. Observe them strictly.

WARNING and **CAUTION**
indicate the following situations:

 WARNING	Indicates a potentially hazardous situation which could result in death or serious injury if the product is handled improperly.
 CAUTION	Indicates a potentially hazardous situation which may result in injury or property damage if the product is handled improperly.

Symbols used herein indicate the following:

 !	Strict observation
 ⊘	Prohibition
 ⊘	DONOT disassemble
 ⊘	Fire prohibited

ITO Corporation

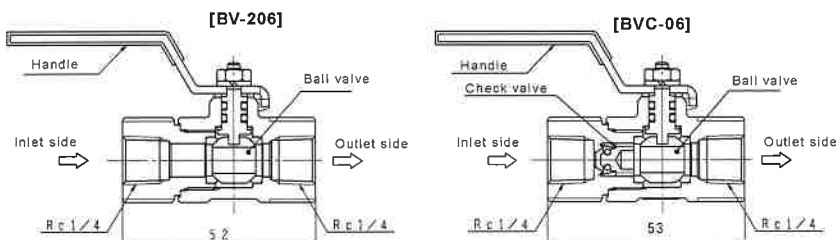
1. Description of product

The ball valve opens and closes the path of flow. To operate the ball valve, turn the handle by 90 degrees to rotate the ball valve by 90 degrees, which is linked to the handle. In addition, BVC-06 has a function to play the role of non-return valve to prevent the fluid from flowing backward by means of the check valve.

1-1. Specifications

Name	Ball valve	Ball check valve
Model	BV-206	BVC-06
Gas type	flammable gas or inactive gas	
Working pressure	1.56MPa or less	
Air-Tightness test	1.56MPa	
Hydrostatic test	2.60MPa	
Inlet connection	Rc1/4	
Outlet connection	Rc1/4	
Dimension	52mm	53mm
Working temperature	-25~70℃	
Weight	0.15kg	
Material	C3771B	

1-2. Name of parts



2. Safety Precaution



- ① Different ranges of working temperature and working pressure and various gas types are available according to the materials of pressure parts. Use the product abiding by the applicable laws and ordinances.
- ② As seal material, NBR and PTFE are used besides other metals, and therefore, the product is not applicable to those fluids that damage such sealing materials (namely, fluids such as ammonia, hydrogen sulfide, carbon monoxide, sulfur dioxide, acetylene, oxygen, coke-oven gas, FCC butane, etc.).
- ③ Since Toray silicone, SH2000 Oil 350CS, is used as lubricant in the sealing section, do not use the product for fluids that are affected by silicone oil. (Do not use the product for oxygen, pure water or other fluids.)
- ④ The product has been precisely assembled and accepted in the inspection in the factory. Do not disassemble or modify the product yourself, so as to avoid any malfunction.

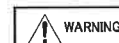
3. Installation works



- ① Only a qualified person can install the product.
- ② Be sure to mount the product in a place which is sufficiently apart from fire and not exposed to flame or radiant heat.
- ③ Be sure to mount the product in a place which is free of influence of corrosive gases, such as ammonia gas and sulfur dioxide.

- ④ Be sure to mount the product in a place which is easily accessible for inspection / replacement works.
- ⑤ For any operation required in emergency, install the product in a place around which operation can be carried out easily, and also secure an access passage to that area.
- ⑥ Before installation, be sure to fully remove foreign matter such as scale and dust from the piping.
- ⑦ The direction of fluid flow and the arrow of flow direction indicated on the product must agree with each other.
- ⑧ Be sure to directly use hands to open or close the product.
- ⑨ Open or close the valve as slowly as possible; hasty or rapid valve operation may cause accidents.
- ⑩ When mounting the product on piping or others, apply a torque value of 20N·m or so for tightening the Rc 1/4 screw.
- ⑪ Do not tighten the screw too much. Excessive tightening may break the product, piping or others, causing leak.
- ⑫ Note that the fluid will not flow if BVC-06 is mounted in the reverse direction to the path of flow because the product contains a check valve (non-return valve).
- ⑬ Do not install Ball check valve(BVC-06) for liquid phase piping. Gas in liquid form may build up inside the valve and may break the product.
- ⑭ Take considerations so that the product will be free of inadequate force by expansion and shrink of pipes, condensation, and ground subsidence, for example.
- ⑮ Support the pipes so that the valve will be free of excessive force if a large load of piping or other members is anticipated to act on the product.

4. Inspections and Maintenance



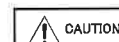
- ① Confirm that the type, model, size and flow direction are just as indicated on the drawings or in other instruction documents.
- ② Perform gas-tight inspection by non-active gas after installation.

4-1. Daily inspection

- Perform the periodical inspection concerning the following items once a month or more.
- ① Check for gas odor around potential gas leak positions and, use leakage detection liquid or soapy water to check for leakage.
*Sufficiently wipe off sticking moisture to ensure prevention of corrosion after application of leakage detection liquid, soapy water or the like.
- ② Check the appearance for remarkable corrosion, damage, oozing drain or other defects.

4-2. Periodical inspection

- ① Perform gas-tight inspection once two years or more.
Promptly replace the valve with a new one if any unusual sign is noticed during the inspection or other checkups.



*For an overhaul and a periodical inspection, call our local branch or the distributor of ours.

5. Product storage

- ① Be sure to store the product in a package case. Also, avoid putting any heavy load on the product as it can cause trouble.
- ② If hydraulic test is conducted, remove moisture sufficiently, store the product in a dry condition and take enough considerations for rust prevention.
- ③ Avoid storing the product in the following places. Also, avoid long-term storage of over one year.
 - ① A place subject to high temperature / humidity.
 - ② A place exposed to rainwater.
 - ③ A place exposed to direct sunlight for long hours.