

The type of gas valve and date of manufacture can be found on the gas valve rating plate. In the event of any queries about the gas valve, please quote all the details given on the rating plate.

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1. SAFETY REGULATIONS AND NOTES

These instructions must always be made available before working on or with the product, prior to installation and start-up, before performing any maintenance and servicing work and prior to any other usage. Keep the instructions in a safe place for later reference and for any subsequent owners.

Always study these operating instructions carefully before working on or with the product. Observe the following notes and warnings to avoid all risk of injury, damage and malfunctioning and act accordingly.

The product documentation is to be regarded as part of the gas valve. The gas valve is only to be sold or passed on together with this documentation. This product documentation can and should be duplicated and handed over as a source of information on risks and hazard avoidance.

1.1. Hazard warning levels

In this product documentation use is made of the following hazard levels to indicate potentially hazardous situations and important safety regulations:



DANGER

Indicates an imminent hazardous situation which, if the appropriate action is not taken, will result in serious and even fatal injury. The measures must be strictly observed.

WARNING

Indicates a potentially hazardous situation which, if the appropriate action is not taken, could result in serious and even fatal injury. Exercise extreme caution while working.

CAUTION

Indicates a potentially hazardous situation which, if the appropriate action is not taken, could result in slight or minor injury or damage to property.

NOTE

A potentially harmful situation can occur and, if not avoided, can lead to property damage.

1.2. Warranty and liability

Warranty and liability claims in the event of injury and property damage will not be accepted if these can be attributed to one or more of the following causes:

- Improper use of the gas valve
- Inexpert installation, start-up, operation and servicing of the gas valve
- Operation of the gas valve with defective safety equipment or with safety mechanisms and guards not correctly fitted or not in proper working order
- Non-observance of the safety and installation instructions
- Unauthorised structural modifications to the gas valve
- Inexpert repair work
- Force majeure
- Damage arising from continued usage although a fault has occurred
- Unsuitable fuels
- Defects in supply lines

1.3. Personnel qualifications

The product is only to be transported, unpacked, operated, serviced or put to any other form of use by appropriately qualified, trained and instructed specialist personnel (exclusively by a qualified electrician where applicable).

1.4. Basic safety regulations

The safety hazards associated with the gas valve must be carefully re-assessed following installation in the end device. The end product is only to be started up after being fully checked for compliance with all the pertinent legal requirements, directives and safety provisions governing the area of application concerned (e.g. specific national accident prevention regulations and technical rules). Observe the following when working on the gas valve:

- Do not make any modifications, additions or conversions to the gas valve without the approval of ebm-papst Landshut.
- Heed the information given in the operating instructions of the end device manufacturer.

1.5. Voltage and current

Check the electrical equipment of the gas valve at regular intervals. Replace loose connections and defective cables immediately.



DANGER

Gas valve electrically charged

Risk of electric shock.

→ Stand on a rubber mat when working on an electrically charged gas valve.

WARNING

If control voltage is being applied, the safety valves of the gas valve open automatically (e.g. after mains failure).

→ When working on the gas valve, switch off the mains power supply and secure against renewed switch-on.

1.6. Electromagnetic radiation



NOTE

Electrical or electromagnetic interference after fitting the gas valve in customer installations.

→ Make sure the entire installation satisfies EMC requirements.

1.7. Deflagration



DANGER

Escape of gas from leaking housing after deflagration

Risk of fatal injury

→ After deflagration check whether the gas valve is gas-tight

→ Replace a leaking gas control valve immediately

1.8. Transportation



NOTE

Transportation of gas valve

→ The gas valve is only to be transported in its original packaging.

→ During transportation the packaged gas valves must be suitably fastened and secured to prevent damage caused for example by slipping of the load.

1.9. Storage

- Store the gas valve, partially or fully assembled, in a dry and weatherproof manner in the original packaging in a clean environment.
- Protect the gas valve against ambient influences and dirt until final installation.
- We recommend storing the gas valve for no longer than one year in order to guarantee proper operation and maximum possible service life.
- Ensure compliance with the specified storage temperature.

1.10. Disposal

Observe all the relevant local requirements and regulations with regard to disposal of the gas valve.

2. INTENDED USE

The gas valve is designed exclusively as a built-in device in accordance with the technical specifications. It does not function independently and is not intended to be handed over to end customers.

Any other usage above and beyond this does not conform to the intended purpose and constitutes misuse of the gas valve.

The end manufacturer is responsible for the end product and must ensure that adequate safety precautions are taken. Customer equipment must be suited to the mechanical, thermal and service life demands involved. All intended applications must be checked by the end manufacturer with respect to safety.

2.1. The intended use also includes

- Use of the gas valve at the permissible ambient temperature only
- Observance of the specifications
- Start-up of the built-in component only after installation in the customer's device
- Operation of the gas valve with all safety devices in position
- Conveyance of gases belonging to gas families 1,2 & 3 only (as defined by DVGW worksheet G260)
- Operation of the gas valve in LPG installations at temperatures not below 0°C. Suitable for LPG in gaseous state only, liquid hydrocarbons would destroy the sealing materials.

2.2. Improper use

In particular the following types of gas valve usage are prohibited and could lead to hazardous situations:

- Operation of the gas valve in an environment containing explosive gases or dusts, combustible solids or flammable liquids
- Contact with substances which could damage gas valve components, e.g. fluids or cleaning agents
- Operation with completely or partially disassembled or manipulated safety devices
- Exposure to radiation which could damage gas valve components, e.g. intense UV radiation
- Operation with external vibration
- Operation of the gas valve in an explosive atmosphere
- All possible applications not listed under Intended use

3. CONNECTION AND START-UP

3.1. Mechanical connection



CAUTION

Risk of cuts and crushing when removing the gas valve from its packaging

→ Lift the gas valve out of its packaging carefully, taking care to avoid any impact.

→ Wear safety shoes and cut-resistant safety gloves if applicable.



- Check the gas valve for transportation damage. Damaged gas valves are not to be installed.
- Install the gas valve in accordance with the application concerned.
- Make use of suitable fasteners for installation.
- Protect flange surfaces, tighten screws diagonally and take care to avoid strain on installation.



DANGER

Gas leakage from gas valves Risk of fatal injury

- The gas supply must be interrupted when working on the unit.
- Prior to start-up and after performing any work, check the gas path and the gas control valve to make sure there is no leakage of gas.
- Avoid naked flames.



DANGER

Risk of leakage

Deflagration is also a possible cause of long-term damage or housing deformation which may result in leakage. A mixture of air and gas may accumulate on the outside of the gas valve. The device could explode and cause serious injury.

- Check the possible hazards associated with the installation, operation, servicing or disposal of the gas control valve in conjunction with the device concerned.

Avoid any such hazards.
Take all the necessary action.

Safety measures if there is a smell of gas

- Avoid naked flames and spark formation (e.g. switching lights and electrical appliances on and off, including mobile phones)
- Open windows and doors
- Close gas shut-off valve
- Warn occupants of building and leave the premises
- Inform the gas company from outside the building



DANGER

Risk of toxic gases

Offset and main flow restrictor settings influence the mixture composition and thus the combustion quality. The settings must therefore be checked and if necessary corrected on start-up and after servicing the unit. The settings made must always be in accordance with the operating instructions of the boiler/burner manufacturer.

CAUTION

The use of leak detector spray can cause malfunctioning. Leak detector spray must be kept away from electrical contacts and must not be allowed to ingress into the diaphragm opening at the gas control valve.

3.2. Electrical connection



DANGER

Voltage at gas valve

Electric shock

- Always provide a protective earth.
- Check the protective earth.



DANGER

Faulty insulation

Risk of fatal injury from electric shock

- Only use wiring conforming to the insulation specifications with regard to voltage, current, insulation material and load rating etc.
- Take care to route the wiring such that it cannot come into contact with any rotating parts.

WARNING

Voltage, electric shock

The gas valve is a built-in component with no isolating switch.

Metallic parts may be live.

- The gas valve is only to be used together with the specified cable protection.
- Only connect the gas valve to circuits which can be de-energised with an all-pole disconnection switch.
- When working on the gas valve, the power must be interrupted and the system/machine in which the gas valve is installed must be secured so as to prevent renewed switch-on.

WARNING

Ingress of water into wires or cables

The ingress of water at the customer end of the cable may damage the gas valve.

- Make sure the end of the cable is connected in a dry environment.

Prerequisites

- Check that the data on the rating plate correspond to the connection data.
- Before connecting the gas valve, make sure the power supply matches the device voltage.
- Only use cables designed for the current level indicated on the rating plate.

3.3. Gas valve plug connection

3.3.1. Preparation of cable for connection



The cables, including the customer interface, are subject to the specifications for internal wiring.

Ensure conformity with applicable standards and check the type of protection in the end device after installing the ebm-papst gas valve.

3.3.2. Making supply connections

WARNING

Voltage

The gas valve is a built-in component with no isolating switch.

- Connect the gas valve to a suitable tripping device.
- Only connect the gas valve to circuits which can be de-energised with an all-pole disconnection switch.
- When working on the gas valve, the system/machine in which the gas valve is installed must be secured so as to prevent renewed switch-on.
- Never reach into the opening - risk of injury. The protective earth must be connected.
- Caution - metallic parts may be live: Interrupt the power supply if applicable.
- Protection for the gas valve must be provided in the device by way of a fuse, thermal cut-out, overcurrent release or similar.
- In accordance with DIN EN 60335-1, a fuse with a rating of max. 16 A must be fitted in the supply line to protect the device.

- Check the pin assignment of your connector.
- Plug the built-in connector and mating connector together.
- Make sure the connector is properly engaged.



3.4. Checking electrical connections

- Ensure isolation from the supply (all phases). Secure the gas valve against renewed switch-on.
- Check that the mating connector is properly engaged in the built-in connector.
- Check that the mating connector is properly fitted to the connecting cable.

3.5. General – switching on device

- Before switching on, check the gas valve for any obvious external damage and make sure the safety devices are functioning properly.
- Apply the nominal supply voltage.

3.6. General – switching off device

Switching off the gas valve during operation and when performing maintenance:

- Disconnect the gas valve from the power supply.
- On disconnection, make sure the earth conductor connection is disconnected last.

4. MAINTENANCE

- Never perform repair work on the gas valve. Send the gas valve to ebmpapst Landshut for repair or replacement.
- Always use new seals following the removal or re-fitting of parts.