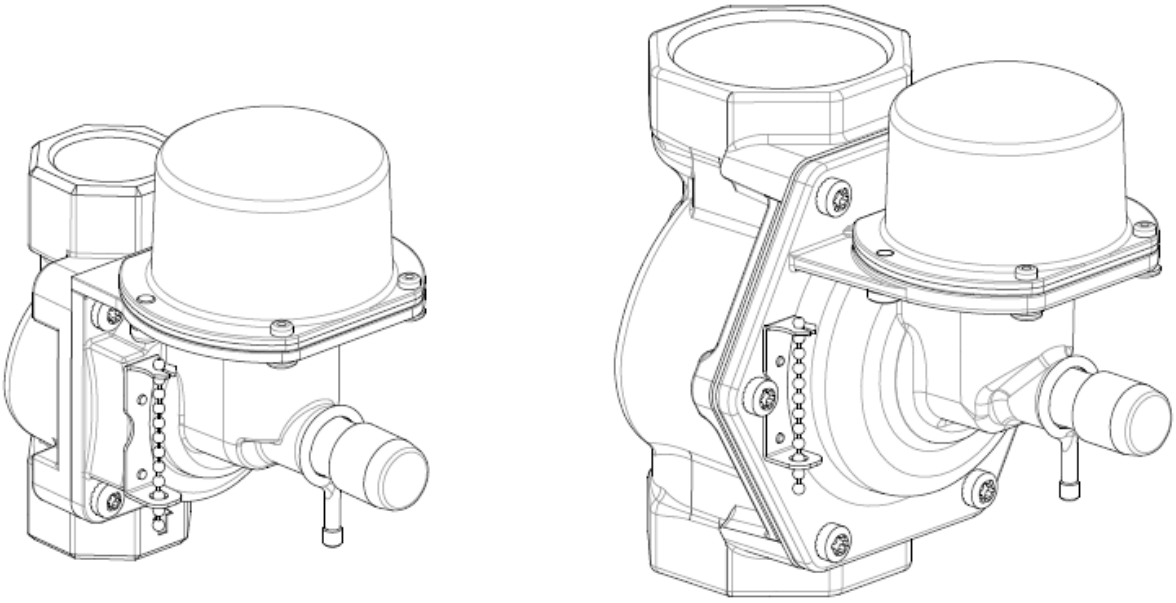
ESKA



EMV SERIES
INSTALLATION, USE AND MAINTENANCE INSTRUCTIONS FOR AUTOMATIC MECHANICAL GAS SHUT-OFF DEVICE DETECTING SEISMIC MOVEMENTS (MECHANICAL EARTHQUAKE VALVE)

READ CAREFULLY AND KEEP BEFORE OPERATION
THE DEVICE MUST BE INSTALLED BY AUTHORIZED PLUMBER.
READ THE INSTRUCTIONS BEFORE USE. THIS CONTROLLER MUST BE INSTALLED IN ACCORDANCE WITH THE RULES IN FORCE.

Rev.4 – 16.12.2024

ESKA VALVE A.Ş.
Hanlı Merkez, 11. Cadde No: 6-8, 54580 Sakarya 1. Organize Sanayi Bölgesi/Arifiye/Sakarya, Türkiye
Tel : +90 264 502 54 34 , www.eskavalve.com, info@eskavalve.com

WARNING: Please read this instruction carefully before all operations and do not perform any operations not specified, use the product according to this instruction and the information on the label, otherwise the product may not work properly, injuries, property damage may occur. All procedures written in this manual must only be carried out by expert personnel who have been approved by the competent authorities. In addition, it is not be sufficient to install this device for fire safety in the gas installation in an earthquake.

1.Model No:

For ESKA brand EMV Series seismic motion detecting mechanical gas shut-off device (mechanical earthquake valve), all information written in this manual must be read carefully and all instructions given must be followed.

2. Definitions:

Device: ESKA brand automatic mechanical gas cut-off device that detects seismic movements (mechanical earthquake valve)

Authorized Institution: Gas Distribution Company responsible for gas distribution in the province or region

Authorized Plumber: A person who is responsible for the installation and operation of the device in accordance with the legislation, who is experienced in this field, knows all the necessary precautions and is authorized by the official authorities.

Drive Mechanism: In the device, the mechanism that closes the gas shut-off valve upon the effect/signal from the component that detects seismic movement.

Detection Assembly: The component of the device designed to detect seismic movement and react/signal

Gas cut-off device: In the device, an assembly that cuts off the gas upon response/signal from the detection assembly

Specialist: An experienced person who is familiar with all the precautions stipulated in the manufacturer's instructions and legislation

3. Working Principle, Introductory and Basic Information:

Mechanical earthquake valve is a normally open hand-operating safety valve that has detection assemblies and drive mechanism that detect oscillation or seismic movements (earthquake) and automatically shuts off the gas supply by mechanical means in the gas installation in the dwelling and similar places where they are placed on the effect-signaling of these devices, and continues to remain closed until it is installed with a special tool.

When the assemble lever of the device is installed with a special tool, the orifice surface of the device opens and the gas in the pipeline starts to pass towards the user side.

When seismic movements with acceleration and frequency values of the magnitude and frequency values required for shutdown in TS 12884 standard occur, the device automatically shuts off the gas flow in a leak-proof manner thanks to the gas cut-off device it contains as a result of the detection of the detection assembly. Whether or not the seismic activity continues, the gas flow is now closed.

After the device shuts off the gas as a result of the seismic movement detected by the detection assembly, it is only possible to provide gas again to the installation after resetting with a special tool. Resetting after shutdown using a special tool must only be carried out by an authorized gas distribution company. The user or unauthorized persons must never interfere with the product or line.

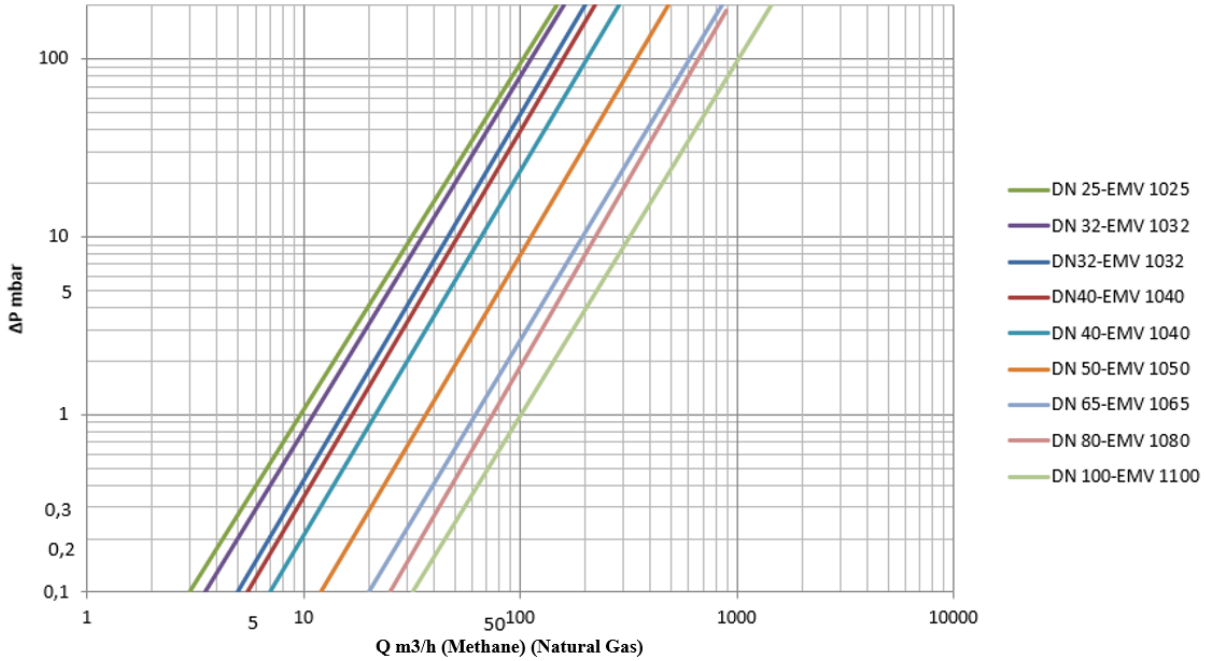
When installed and used in accordance with this manual, the device is subjected to the same seismic impact as the building to which it is connected. It is sensitive to ground movements caused by earthquakes and similar reasons, but not to movements that may be caused by dynamic reactions of the structure or equipment. Therefore, it must be installed and used in accordance with the manual.

In order for an earthquake valve to fulfill its task, it must be exposed to the acceleration and frequency values specified in TS 12884 standard. Therefore, the ground strength of the structure where the earthquake valves are installed, the strength of the structure and the installation and use of the earthquake valve in accordance with the manual affect the working structure.

All components of the product are designed and manufactured to provide reasonable safety, robustness and durability characteristics

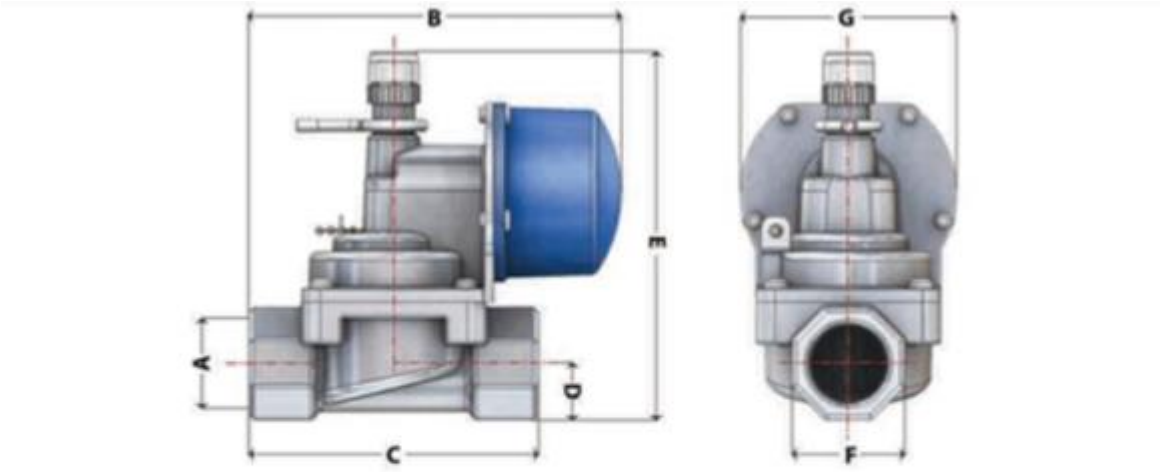
The flow rate graph of the device against pressure drop is as follows.

Pressure Drop Graph Against Flow

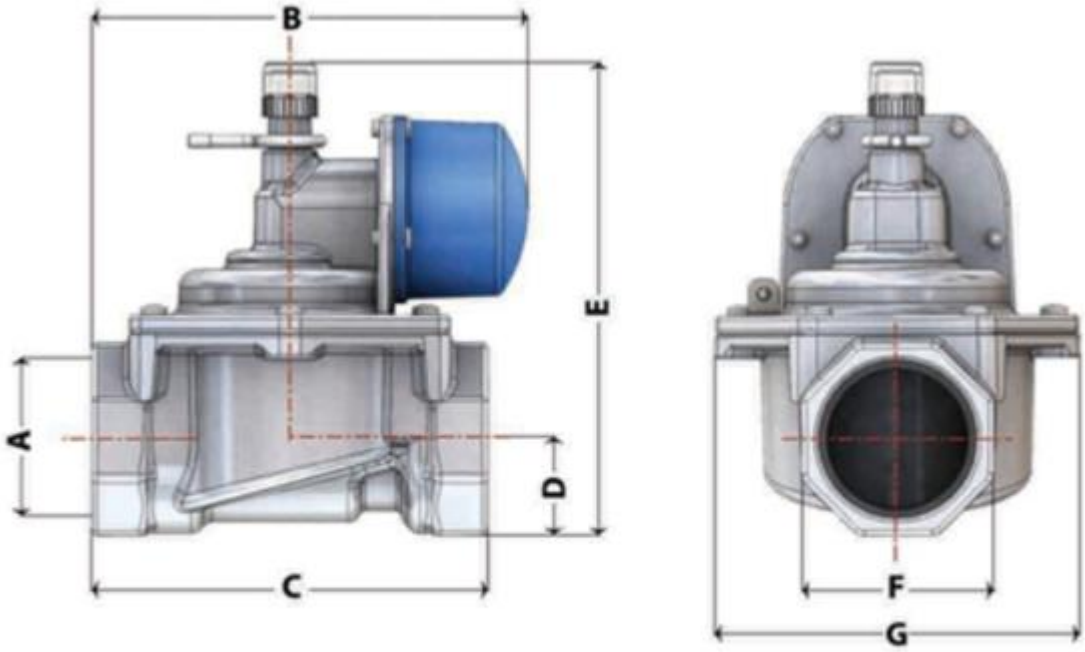


4. Dimensioning:

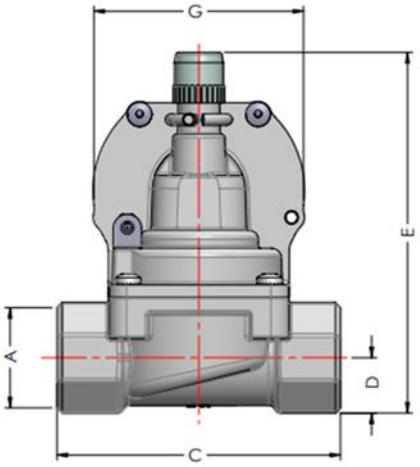
Measurements are provided in mm.

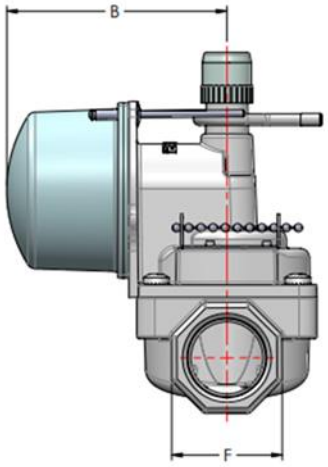


MODEL	DN	A	B	C	D	E	F	G
EMV 1025	25	1"	140,5	110	21,5	160	AA 43	82
EMV 1032	32	1 1/4"	140,5	110	29,5	155,5	AA 60	82
EMV 1040	40	1 1/2"	140,5	110	29,5	155,5	AA 60	82

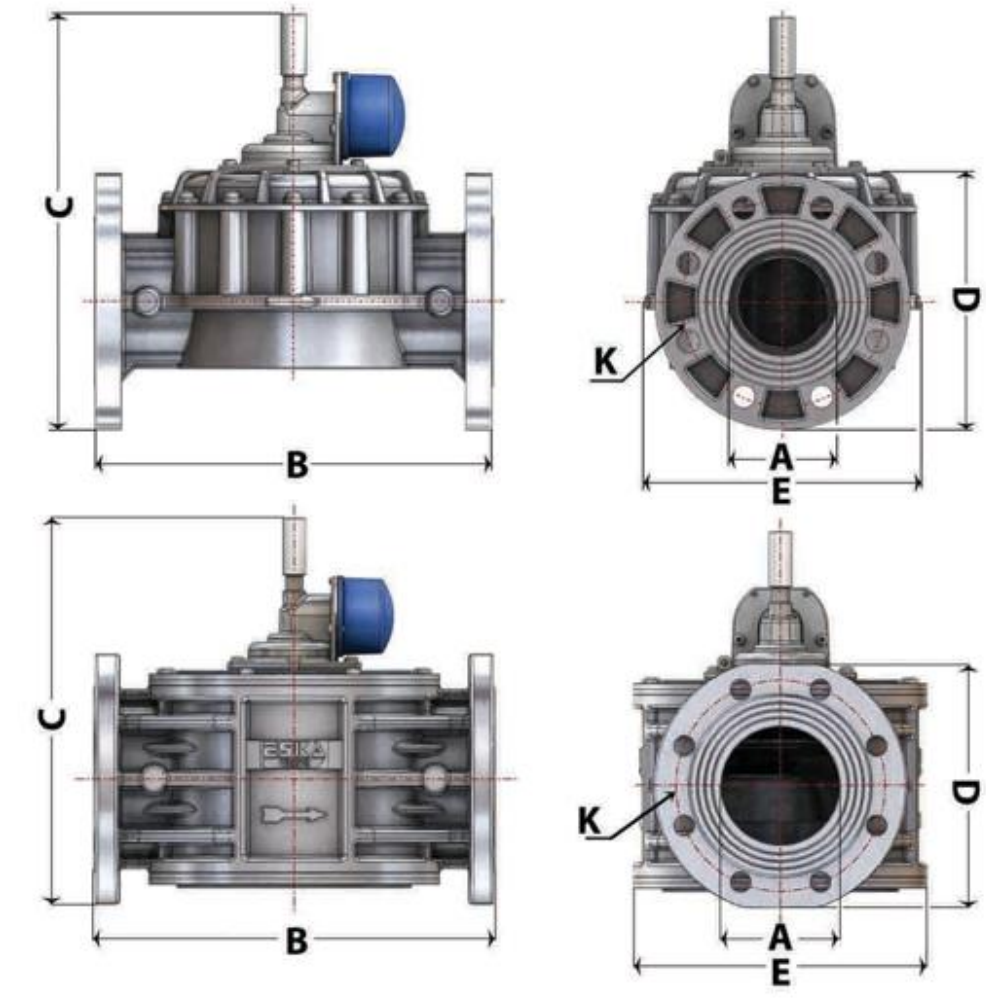


MODEL	DN	A	B	C	D	E	F	G
EMV 1050	50	2"	158	144	35	172	AA 70	133

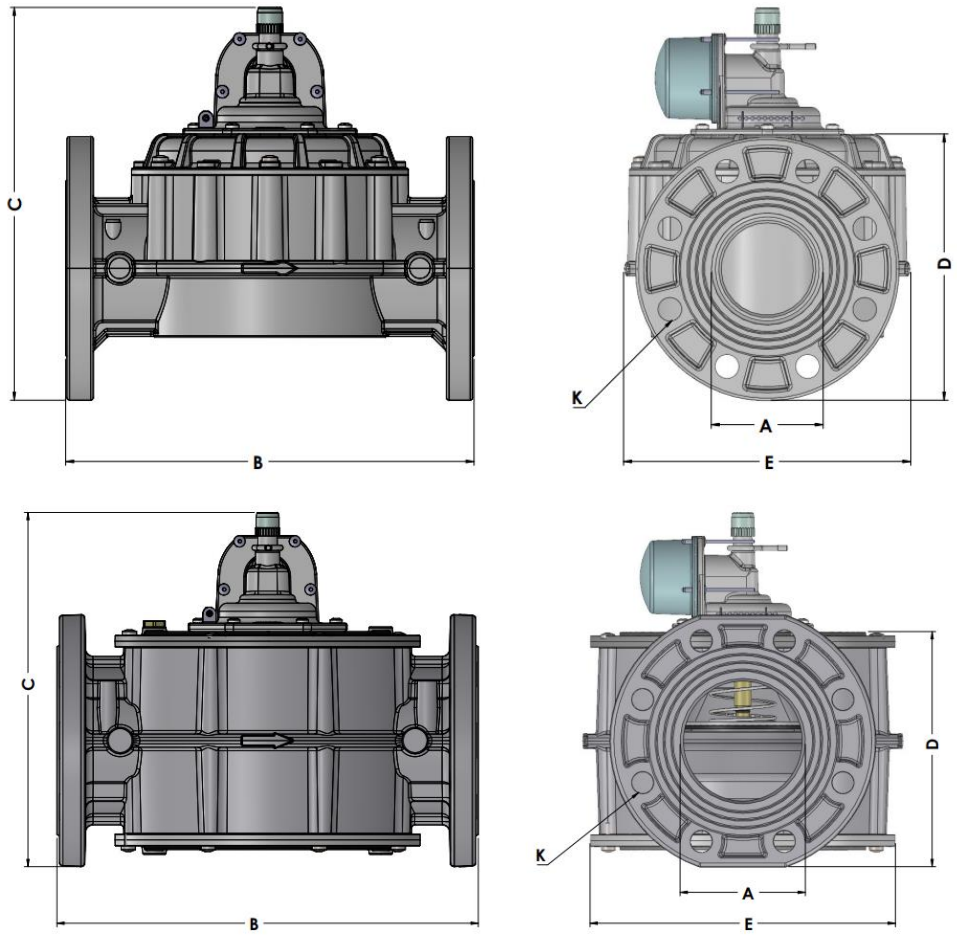




MODEL	DN	A	B	C	D	E	F	G
EMV 1025	25	1"	85,5	110	21,5	160	AA 43	82
EMV 1032	32	1 1/4"	85,5	110	29,5	155,5	AA 60	82
EMV 1040	40	1 1/2"	85,5	110	29,5	155,5	AA 60	82



MODEL	DN	A	B	C	D	E	K	Flanş delik sayısı
EMV 1065	65	70	290	316	185	216	145	4
EMV 1080	80	85	310	324	200	216	160	8
EMV 1100	100	100	350	325	210	254	180	8



MODEL	DN	A	B	C	D	E	K	Flanş delik sayısı
EMV 1065	65	70	290	290,5	194,5	218	145	4
EMV 1080	80	85	310	298	202	218	160	8
EMV 1100	100	100	350	294	195	254	180	8

5. Technical Specifications:

Model No: EMV 1025 (DN25-1”), EMV 1032 (DN32-11/4”) , EMV 1040 (DN40-11/2”) , EMV 1050 (DN 50-2”), EMV 1065 (DN65-21/2”), EMV 1080 (DN80-3”), EMV 1100 (DN100-4”),
Fluid Type: Natural gas and LPG (pre-filtered)
Operating Ambient Temperature Range: -10 °C to 51.5 °C
Connection/Placement Type / Location: Vertical (for DN50), Vertical and/or Horizontal (for DN25, DN32, DN40, DN50, DN65, DN80, DN100)
Connections: DN25 (1"), DN 32 (11/4"), DN 40 (11/2") and DN 50 (2") female inside thread, DN65-DN80 and DN 100 flanged
Type: Type 1-Mechanical
Maximum Working Pressure (Rated Pressure): 510 mbar (PN0,51)
Maximum Allowable Pressure (PS): PS 0,51
Working Pressure Range: 0-510 mbar
Intake Way Number: 2/2
Position: Normally Open
Weights: DN25:1,1kg, DN 32 : 1,2kg DN 40 : 1,1kg DN 50 : 1,6kg, DN65 : 8,3kg, DN80 : 8,7 kg, DN100 : 12,8 kg,
Materials Used: Body and cover aluminum, sealing materials NBR
Marking Class: Class I and Class III
Note: It must be specified whether the products will be connected to the vertical or horizontal line at the order stage, and the products are produced and given within this information at the order stage. The user must not perform this operation themselves.

6. Areas of Usage:

The product is used to automatically cut off the gas supply lines of devices that burn flammable and combustible gases such as natural gas and LPG. The device must be rigidly fixed to the building where the gas supply will be cut off as specified in this manual in a way to detect the seismic movement that the building will be exposed to during an earthquake.

7. Assembly / Installation / Leveling:

The devices must be installed/installed by authorized and trained plumbers, this must never be done by the end user. If not properly installed, it may not operate as intended or there may be non-warranty gas cut-off

The device will be subjected to the same seismic effect as the building in which it is installed, and will be installed in such a way that it is sensitive to ground movements caused by earthquakes and similar reasons, but not sensitive to movements caused by dynamic responses of the structure or equipment.

Check that the pipes are cleaned and aligned before installing the device.

Before assembly, it must be checked that there is no misalignment in the line to which the device will be connected.

The product must be checked for any damage before assembly.

Before assembly, it must be checked that the line pressure does not exceed the maximum pressure level indicated on the product label.

Before assembly, it must be ensured that the gas supply is shut off and that there is no pressurized gas in the line where the device will be installed and that such a possibility is prevented during installation, and that all valves used before the device and providing gas flow to the device are closed.

Before assembly, clean the entire pipeline where the device will enter and exit from foreign particles such as welding dust, dirt, sawdust, etc. Make sure that no particles remain at any point in the line.

Before assembly, the compatibility of the product to be installed with the system to be used must be checked.

Before using our products, the labels and other information on the product and box must be checked.

The product must not be subjected to excessive load and impact during assembly. Connect without mechanical tension. It must be kept in mind that there is a possibility of cracking the body in case of excessive loads to be applied to the body. The torque forces to be applied must not exceed the values specified in TS 12884.

For threaded models, do not apply hand force from the cover or body during assembly, assemble using the key surface on the product and the appropriate key.

For DN25-DN32-DN40-DN50-DN65-DN80-DN100 devices suitable for vertical connection, install the device on the gas pipeline at the entrance of the building, with the connection position perpendicular to the pipeline and at a maximum height of 2 meters above the ground. It must not be mounted on horizontal pipes.

For DN25-DN32-DN40-DN65-DN80-DN100 devices suitable for horizontal connection, install the device on the gas pipeline at the entrance of the building, parallel to the pipeline as the connection position and at a maximum height of 2 meters above the ground. These devices must not be installed on vertical pipes.

The necessary clearances around the device and between it and the wall must be left with reference to the external dimensions of the device so that the device can be tested, reinstalled and its components can be accessed.

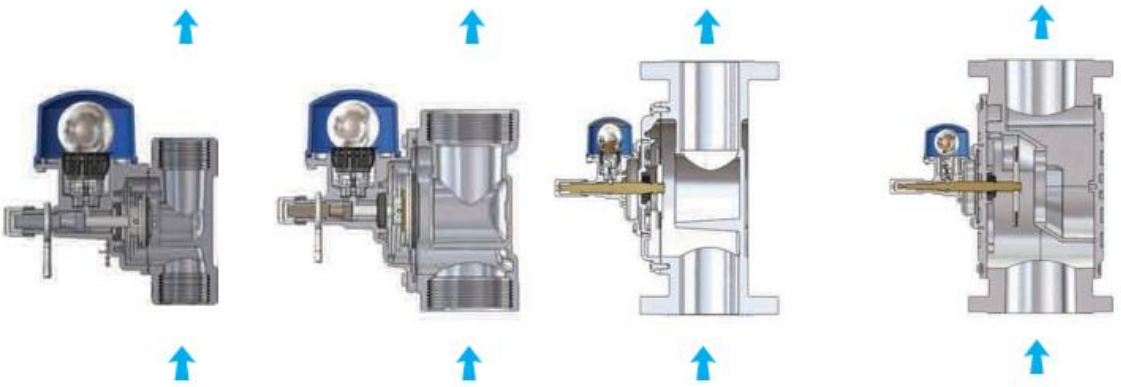
The device must be connected to the line in the direction of the arrow. The arrow on the body must be mounted pointing towards the user so that the flow is from the mains to the user.
During installation, possible gaskets, chips and metal parts must be prevented from entering the product.
To ensure tightness during assembly, use suitable sealing elements approved by the gas distribution company and make sure that the sealing is secured. Necessary precautions must be taken to ensure that the sealing elements you use do not fall or flow into the product and do not cause internal leakage. When examining the efficiency of the product operation, carefully check that there is no leakage at the point of connection to the line.

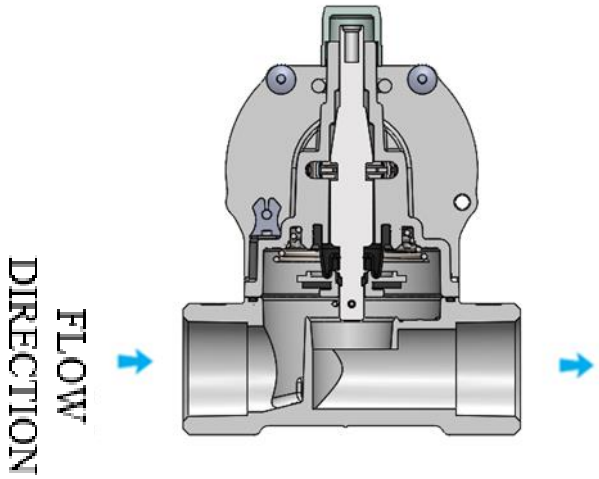
When connecting the device to the line, the inlet and outlet of the device must be connected to the relevant pipeline with nipples or movable unions.
The device must be securely fixed to the building element where the gas pipeline already passes, with 2 clamps to be used at the inlet and outlet of the device. The clamps used must be mounted on the pipe in both directions, within a maximum of 30 cm after the union or nipple connections. (Figure-1)
When assembling the device on the line, make sure that the balance scale on the device is adjusted so that it is in the center of the balance slot. (Figure-2)The device must be mounted in perfect balance, if the device is not mounted in perfect balance (e.g., Figure-3) the device may not work properly. Check that this does not occur after assembly of the device.
After installation, always check the system for gas tightness, using foam if necessary.

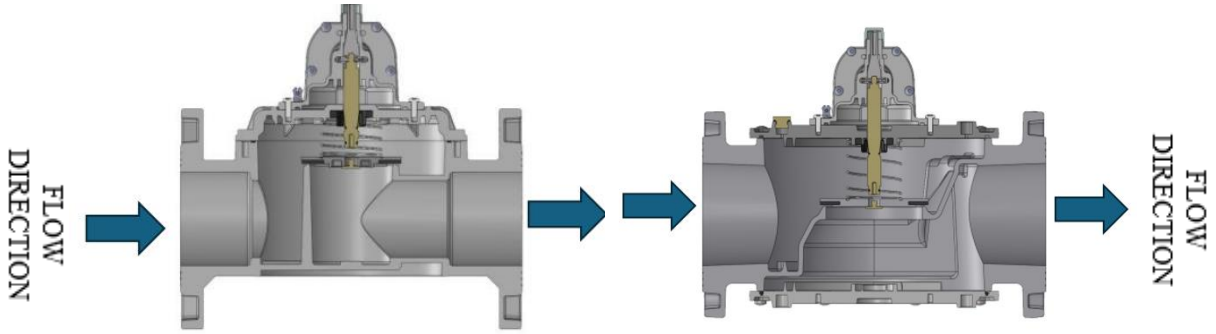
(For the tightness test, do not test the product by pulling up the assemble shaft of the product by hand, you can perform this test while the product is installed, without any extra force, etc. and in the normal operating position).

After assembly, the device must be protected with an external protection box to prevent unauthorized persons from interfering with the device and to protect the device from environmental factors such as rain, dust, dirt, etc. The dimensions of the box to be placed outside the device must be chosen to protect the device and to allow easy access to the assemble lever and the device.

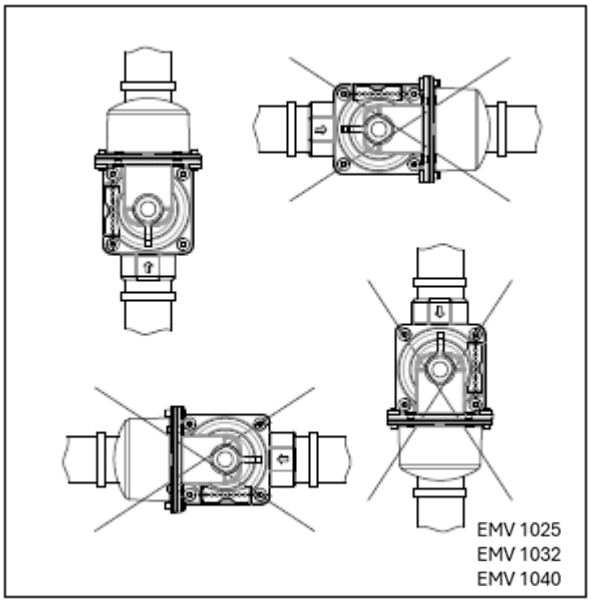
The device must be connected to the line in the following flow directions.

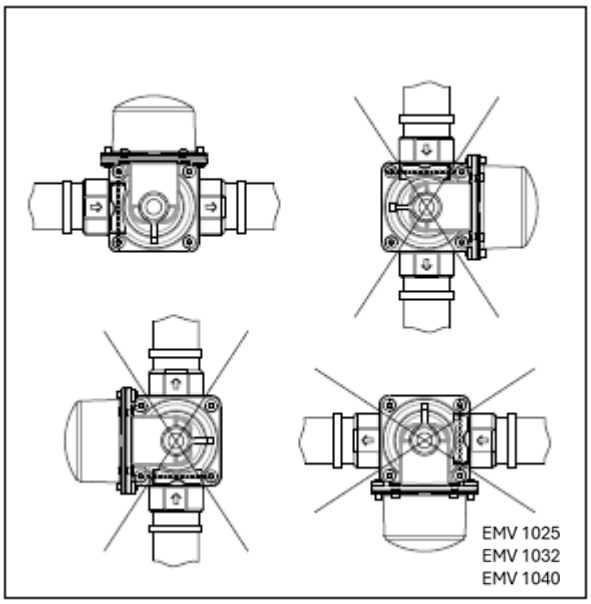


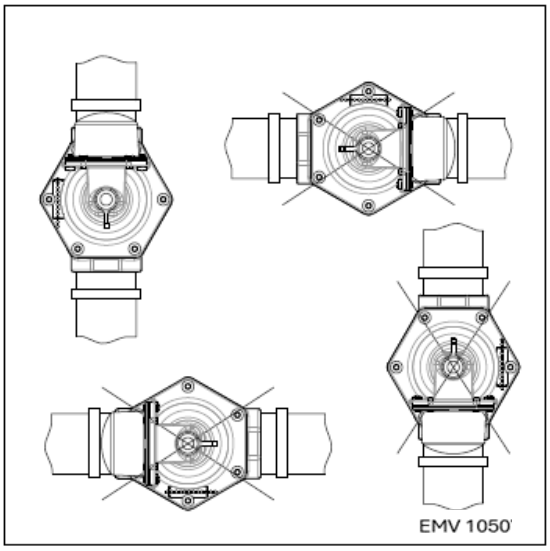




WARNING: The devices may cause a pressure drop in the line where they are installed. Unauthorized persons must not install or interfere with the device or the line with the equipment that could adversely affect the operation of the device or compensate for a pressure drop.







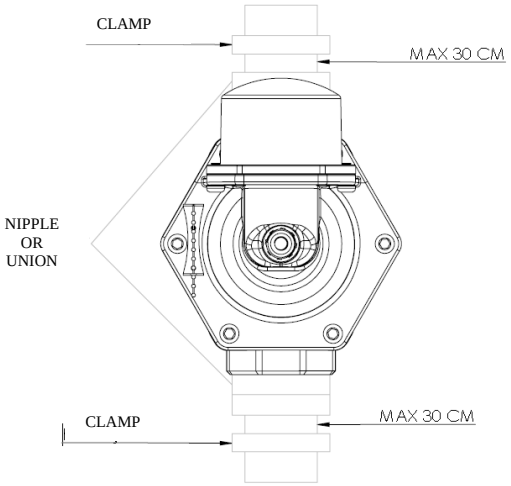


Figure-1

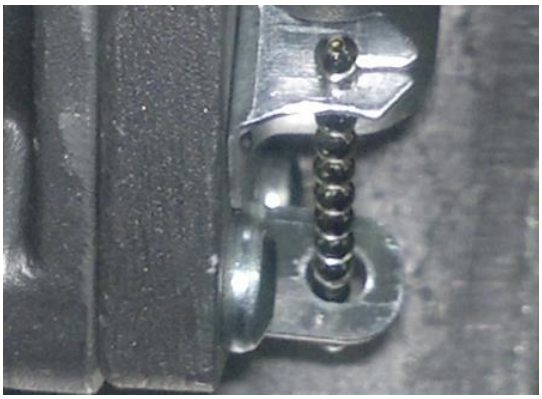


Figure-2

Figure-3

8. Setting up / Operating the Device:

Our products come out of our factory with an assemble lever closed in accordance with user demand. Therefore, the installation of our product on the customer line must be performed as follows.

To start the installation process, open the cover of the outer protective box containing the device.

Check that the scale chain of the device is in the center of the balance slot. If not, have the scale chain brought to the center of the slot by having the installation reperformed properly by an authorized plumber. (Figure-2)

Illustrative pictures of the installation of the device are given below. (Figure-1)

- Remove the plastic protection cover as shown in the figure. (1)
- Remove the metal assemble as shown in the figure. (2)
- Screw the assemble apparatus into the slot in the shaft of the device by turning it

clockwise as shown in the figure. (3)

- Gently pull the assemble apparatus towards you by hand as shown in the figure and hold for 3 seconds. (4) (Do not use other tools, do not over force the assemble lever)
- If the spindle has not returned to its initial position and remains in the position from which it was pulled, it is installed, stop pulling the assemble device and remove the assemble apparatus by turning it counterclockwise as shown in the figure. (5) (The device is installed if the assemble shaft of the device remains in a position that can be seen when the product is viewed from the outside)
- Install the assemble apparatus in place as shown in the figure. (6)
- Replace the plastic protection cover as shown in the figure. (7)

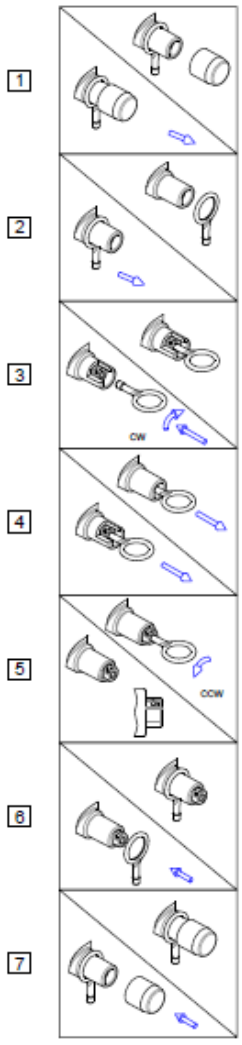


Figure-1

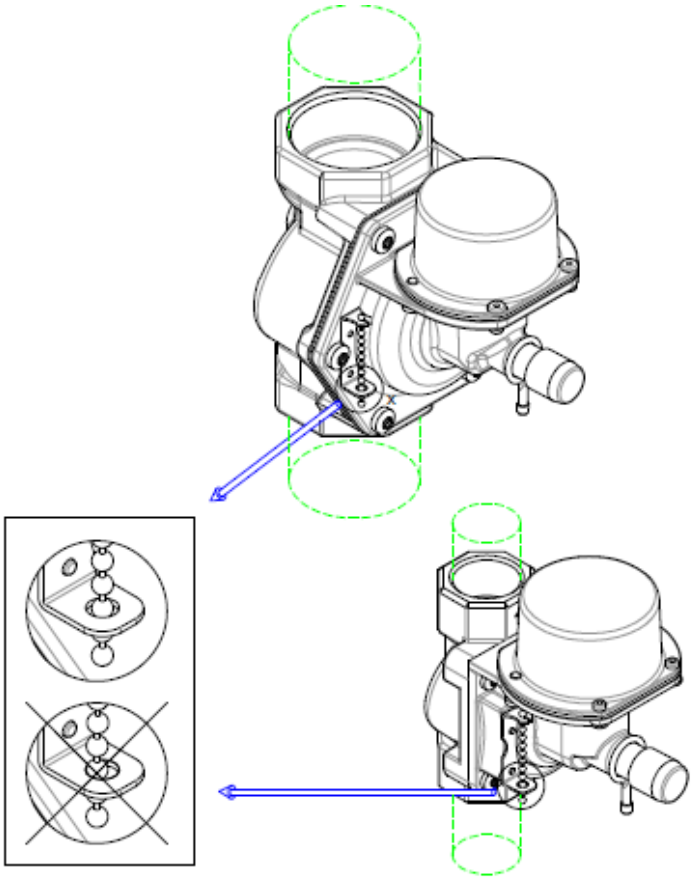


Figure-2

After installation, always check the system for gas tightness, if necessary, use foam to carry out this check and close the lid of the outer protective box in which the appliance is located.

9. Resetting:

In the event that the device cuts off the gas by operating in accordance with its normal function during an earthquake or cuts off the gas due to an unexpected situation (if the assemble shaft is not visible from the outside, the device is turned off), immediately notify the authorized gas distribution organization. In such a case, it must be verified that there is no gas

leakage by persons appointed by the authorized gas distribution organization.
The only authorized organization for re-installation of the device is the gas distribution companies.
Do not interfere with the device until the authorized personnel of the gas distribution companies arrive, do not tamper with the outer protection box.
In order to reinstall the device;
1- Ensure that all appliances connected to natural gas in all apartments are turned off.
2-Close the valves at all apartment entrances and the main line valve at the building entrance.
3-Make sure that there is no gas leakage in pipe installations.
4- Install the device according to the order in the installation process described above.

5 - Inform the apartment owners that the gas flow has been restored and that they can turn on the appliances they have turned off and use gas.

10. Maintenance, Repair, Periodic Inspection:

The user is responsible for ensuring the safe operation of the product for periods determined by the user (recommended not to exceed 1 year) according to the conditions of the system in which the product is used. The safe operation of the device must be checked by the relevant authorized plumbers after obtaining the relevant approvals and permits as described in the installation and test sections above. If the product does not work, contact our factory.

Periodic inspection is recommended for the healthy and safe operation of the product. Periodic inspection intervals must not exceed the intervals specified by the gas organization or legislation.

The device requires no maintenance. There are no components that need to be removed for cleaning, so the device does not require cleaning.

Care must be taken to inform end users before, during and after all fault operations and necessary precautions must be taken against pressurized gas hazards. In case of suspected malfunction, the product must not be intervened, it must be removed from the line and sent to our company without trying to open and repair it.

Before and during the disassembly and replacement operations, ensure that there is no compressed gas trapped between the line and the product in the line where the product is located, that the gas supply is closed and that the possibility of opening is completely avoided.

No repair must be performed by the user. Repairs must not be carried out while the product is on the line. All replacement operations must be carried out by authorized services and plumbers. Users or unauthorized persons must never intervene in the product and line in case of any malfunction.
Before removing the device from the line for replacement, make sure that there is no pressurized gas in the line, that this condition is set to be maintained until the end of the process, and that the valves used before the device and providing gas winterization are closed, if not, close them.
Since the scale chain of the device is verified to be in the center of the balance slot during assembly and assembly is carried out after this check, it is normally not necessary to carry out this check later. If there is an earthquake and the pipelines to which the device is connected are damaged, this control must be carried out by authorized plumbers, if the scale is not balanced (Figure-3), the authorized plumber or authorized gas distribution company must be notified.

11. Matters to be Considered and Warnings:

The device must be installed by an authorized plumber

The device must be installed in perfect balance.

After disconnecting the device from the gas supply, the device must only be adjusted and put into operation after the authorized person has determined that there is no gas leakage. Unauthorized persons must never interfere with the device.

The operating limits specified in the technical specifications section must not be exceeded and the product must not be pressurized more than its maximum pressure.

The device must never be opened, intervened or repaired by unauthorized persons.

Do not tamper with the device, do not open the covers of the device, do not insert wires, water, etc. into the holes of the device.

Care must be taken to ensure that gas-using devices are securely placed so that they do not tip over during seismic movement, the electricity supply must be cut off if possible upon seismic movement, and automatic fire extinguishing systems must be installed.

Do not start the procedures before obtaining and reading this instruction.

Do not make any external interventions that could improperly disable the device.

Do not interfere with the product with external tools in order to turn it off or to verify its operation.

Use appropriate tools and methods; for all procedures in this instruction and throughout the use of the product. In all processes and use, the products or their boxes must not be dropped, thrown, shaken, subjected to excessive load, force and impact, crushed or weighted. Ensure that external parts and protrusions of the products is not damaged, that heavy loads is not placed on them and they do not tip over.

Before, during or after any process and throughout the entire use of the product, ensure that the necessary legal permits are obtained, that all parties that may be involved in the operations are informed and warned, that all necessary safety precautions including personal protection are taken, that operations are carried out in accordance with the applicable legislation, regulations, technical standards and rules of gas organizations, that all necessary precautions are taken against the risk of fire, that the gas is not inhaled, that precautions are taken against hazard combinations, that substances that are likely to cause explosion and fire such as fire, sparks and cigarettes are not be in the area and near the product and are not used because the product contains flammable gas.

12. Causes and Consequences of Failure:

In case of failures, some examples of which are given below, the end user must never intervene and authorized plumber or gas distribution companies must be notified.

If the product is not installed during assembly and the product is not installed even when the assemble lever is pulled by hand try, try to install again and pull the assemble lever up and then wait 3 seconds without releasing the assemble lever. If it is not installed in this case, the product is defective, please install a new device and contact our factory.

After assembly, when there is gas on the line, if the product is turned off for any reason other than the seismic movements it is required to detect or if the assemble lever is closed; immediately notify the authorized gas distribution organization.

If the flow rate is insufficient or the device leaks gas to the external environment; check that you have made the correct selection, connected the device to the line in the direction of the arrow, that the assembly is performed correctly, and that there are no foreign particles in the line. If the problem persists, notify the gas distribution company about the leak.

If the pressure is read on the pressure gauge on the outlet side of the device after the device is

switched off as a result of seismic movement or if the pressure increases continuously, notify the authorized gas distribution organization.

13. Storage-Handling-Lowering-Transportation-Loading-Shipment

All of our devices are placed in special cardboard-boxes to prevent damages that may occur during transportation and shipment. During transportation and shipment, products must not be thrown, weights that may damage them must not be placed on them, and they must not be shaken with impact.

Do not remove the products from the original box or carton, or exchange the box or carton with others unless the products have been put into use. Store and keep products in closed and ventilated environments under clean room conditions. Ensure that the products are protected from rain, water, snow, extreme heat and cold, etc. during transportation, shipment and storage Ensure that the surfaces where the procedures are carried out are flat and clean and not wet and slippery. Do not overload or lift during transport.

14.Service Stations:

For all your problems with the product, you can contact our factory below for detailed technical information.

SERVICE STATION				
Title:	Address:	Phone / Fax Number:	E-mail:	Web
ESKA VALVE A.Ş.	Hanlı Merkez, 11. Cadde No: 6-8, 54580 Sakarya 1. Organize Sanayi Bölgesi/Arifiye/Sakarya, Türkiye	Tel : +90 264 502 54 34	info@eskavalve.com	www.eskavalve.com

15.Lifetime:

The service life of the device is 10 years. (replacement of products is recommended after this period)

WARRANTY CERTIFICATE

Manufacturer or Importer Company;

Title: ESKA VALVE A.Ş.
Address: Hanlı Merkez, 11. Cadde No: 6-8, 54580 Sakarya 1. Organize Sanayi Bölgesi/Arifiye/Sakarya, Türkiye
Tel: +90 264 502 54 34
E-Mail: info@eskavalve.com
Authorized Official's Signature:
Stamp of the Company:

Seller Company's;

Title:
Address:
Phone:
Fax:
E-Mail:
Authorized Official's Signature:
Stamp of the Company:

Product's;

Type: Mechanical Gas Shut-off Device (Mechanical Earthquake Valve) Detecting Seismic Movements
Brand: ESKA
Model: EMV
Warranty Period: 2 Years
Maximum Repair Time: 20 working days
Date and Number of Invoice:
Delivery Date to Consumer:
Place of Delivery to Consumer:
Banderole and Serial No:

WARRANTY CONDITIONS

1) The warranty period starts from the delivery date of the goods and it is 2 years.

2) The entire product, including all parts, is under warranty.

3) In case of the situation that the replacement of the good with a non-defective one will bring disproportionate difficulties for the seller, the consumer may use one of the rights to withdraw from the contract or to make a discount at the rate of the defect. In the determination of the disproportion, the value of the goods without a fault, the importance of the defect, and whether the application for other optional rights will pose a problem for the consumer will be taken into account. In cases where the consumer chooses the right to withdraw from the contract or to discount the defect rate, the seller must immediately return the entire price of the goods or the amount of discount made from the price to the consumer. If the consumer chooses the right to replace the product with a non-defective product, the seller, manufacturer or importer must fulfill this request within a maximum of thirty working days from the notification of the request to replace the product with a non-defective product.

4) In the event that the consumer chooses the right to free repair from amongst these rights, the seller is obliged to repair or have the goods repaired without demanding any labor cost, replacement part cost or any other fee. The consumer can also use the right of free repair against the manufacturer or importer. The seller, the manufacturer and the importer are jointly responsible for the use of this right requested by the consumer.

5) If the consumer uses the right to free repair, the goods; If the product fails again within the warranty period, - The maximum time required for its repair is exceeded, - It is determined by a report by the authorized service station, the seller, the manufacturer or the importer that the repair is not possible; the consumer may request from the seller a refund of the price of the goods, a reduction in the amount of the defect or, if possible, replacement of the goods with a non-defective one. The seller cannot refuse the consumer's request. If this request is not fulfilled, the seller, the manufacturer and the importer are jointly and severally liable.

6) The repair period of the goods is maximum 20 working days. This period, if it is within the warranty period, starts from the date of notification of the defect related to the goods to the service station or the seller, and if it is out of warranty period, it starts from the date of delivery of the goods to the service station. Under the circumstances that the product fails within the warranty period, the time spent in the repair is added to the warranty period. In case of malfunctions, it is obligatory to determine whether there is a usage error in the service stations, or if there is no service station, it must be reported by the seller, importer or manufacturer of the product, respectively, within the maximum repair period for the product, and a copy of this report must be given to the consumer. The warranty period of the goods replaced during the warranty application is limited to the remaining warranty period of the purchased goods.

7) The use of the product contrary to the points in the user manual or the malfunctions caused by usage errors are not covered by the warranty.

8) The consumer may apply to the Consumer Arbitration Committee or the Consumer Court in the place of residence or the consumer transaction, in case of disputes that may arise regarding the use of the rights arising from the warranty.