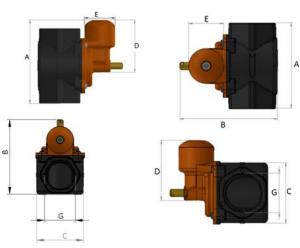


# FAY

EARTHOUAKE ACTUATED AUTOMATIC GAS SHUT-OFF VALVE (MECHANICAL EARTHQUAKE VALVE

# OPERATING MANUAL

MODEL: FM MODELS



## **DEFINITION**

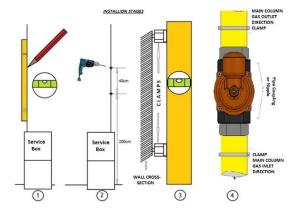
This device has been designed to automatically shut off the gas flow due to earthquakes under TS12884 and ASCE25-06 standards conditions. When the device is subjected to the momentum range of seismic vibrations given in the standard conditions, the device makes shut-off. The factory settings are made in this way presented to the user. Don't change its settings. It must not expect to operate in different values. Device cannot be automatically installed after shut down, and does not allow gas flow. The device is reinstalled by pulling drawing handle back, and gas flow is provided.

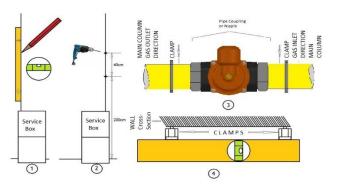
### **TECHNICAL SPECIFICATIONS**

- \*Operating Pressure:0-501mbar or 4bar
- \*Max. withstand pressure:2,5 bar or 20bar \*Operating temperature: -23°C, +60°C
- \*Thread length: min 20mm
- \*Gasses: Natural gas, LPG, methane, propane, air, etc., Gaseous fluids
- \*Aluminum Body, brass and stainless steel internal parts

## DIMENSIONS

Model	Thread ( G )	DN	Α	В	С	D	E
FM S 20 / FM S 25 / FM S 202 / FM S 252	3 /4"- 1"- 3/4"- 1"	20 -25	110	90	53	70	43
FM S 201 / FM S 251 /FM S 203 /FM S 253	3 /4"- 1"- 3/4"- 1"	20 -25	92	92	94	70	43
FM 20 / FM 25 /FM 32 / FM 252/ FM 322	3/4 "- 1 "- 1 1/4" - 1"- 1 1/4"	20-25-32	145	130	94	90	52
FM 251 / FM 253 / FM 321 / FM 323	1"- 1 "- 1 1/4"- 1 1/4"	20-25-32	130	130	125	90	52
FM 40 /FM 50 /FM 402/ FM 502	1 1/2" - 2" - 1 1/2" - 2"	40-50	145	145	94	90	52
FM 401/ FM 501 /FM 403 /FM 503	1 1/2" - 2"- 1 1/2" - 2"	40-50	125	145	128	90	52





#### INSTALLATION INSTRUCTIONS

- · Its installation must be made by installer authorized by the gas distribution company.
- . It must be established in the form that it perceives the seismic activity at the building where the device is installed, but it is not sensitive to the activities arisen from the dynamic reactions of the building or equipment.
- Please be careful to clean pipes before installation.
- The device must be installed at the arrow direction, in the upright form which has scales at the top. Please be careful when installing scales. Otherwise your device early turns off and causes undesirable gas
- breakdowns
- It must be connected to the structure with 2 clamps from entrance and exit to main line. The subsequent first clamp must be attached to the device with max 1m distance. The standard application must be made in next clamps
- The distance between clamps and pipe coupling or device must be max 150mm
- The clamps can be out of box
- The box installation must be made after installation of device scale.

#### COMMISIONING

Insert setup knob to the setup spindle of the device after its installation at the scale and in the box of device. Wait 5 seconds by pulling. Your device is installed.

- Remove setup knob from spindle, and reversely screw it on the device body.
- In doing so, you protect the device against melting the sealing rubbers with the effect of dust, water and ozone and extend the time of use of the device.

### REINSTALLATION-RESET INSTRUCTIONS

- Please inform competent authorities in the event device turns on in earthquake and shuts off the gas.
- The device can be reinstalled by the firms authorized by the gas distribution companies
- The authorized persons can give approval for whether or not there is leak at the pipe line in your building,

For this: Please assist authorities in following matters. Turn off the devices connected to the natural gas in all apartments,

- Turn off the gas valves at the apartment entrances,
- Turn off the main column valve located before earthquake valve,
- Note that there is no break and crack at the main column and pipe lines in internal installations.

#### INSTRUCTIONS FOR BOX TO BE USED

- The device must be taken inside box in a manner that the attempt of the unauthorized person is not allowed.
- The dimension of box must be bigger than the dimension of the valve.
- There must be no blockage to prevent access to the setup arm of the device inside box.
- The box must protect the device against impacts from outside, dust, water and continuous sunlight.

#### WARNING!

IN CASE OF MALEUNCTION OF THE DEVICE. IT CAN BE REMOVED FROM GAS PIPE LINE BY AUTHORIZED PERSONS. UNDER NO CIRCUMSTANCES, THE ATTEMPT IS MADE TO THE DEVICE. THE PRODUCER ASSUMES NO RESPONSIBILITY FOR MODIFICATION OF DEVICE AND RESPONSIBILITY ARISEN THERE FROM ANY MODIFIED DEVICE IS EXCLUDED FROM WARRANTY. THIS DEVICE MUST BE ESTABLISHED BY THE AUTHORIZED INSTALLER IN ACCORDANCE WITH PRODUCER'S ESTABLISHMENT INSTRUCTIONS. OTHERWISE, IT CANNOT OPERATE IN FORESEEABLE MANNER. OR GAS SHUT-OFF CAN OCCUR WITHOUT WARRANTY. AFTER SHUT-OFF GAS FEEDING, THE DEVICE MUST BE ADJUSTED AND COMMISSIONED FOLLOWING DETERMINATION OF AUTHORIZED PERSON FOR NO GAS LEAK.

## MAINTENANCE, REPAIR AND PERIODICAL EXAMINATION

The device is maintenance-free. No repair or attempt must be definitely made by user for any reason to the device and column line connected thereto. In case of malfunction, the authorized persons must be informed. All **repair procedures must be made by the Central service**. The malfunctioned device must be removed in place by the firms authorized by the gas distribution company, and sent to the Center service. After you are sure that there is no pressurized gas at the column line, the device must be removed by the authorized person from line for repair or replacement. Please make sure that the used gas valves are turn-off, if not, please turn off. Use proper sealing agent after repair of device and before installation to the column line. After repair, please absolutely check that there is no leakage in connections of device. In case of reinstallation of device, please make its control, if scale is not balanced, please inform authorized installer or authorized gas distribution company.

# MATTERS TO BE CONSIDERED AND WARNINGS

The device must be installed by authorized installer. The installation of device must be made on whole scale. This device must be established by the authorized installer in accordance with establishment instructions of the producer. The improper established device cannot operate in foreseeable manner or might cause non-warranty gas shut-off. After device shuts off the gas feeding, only authorized person must check for whether or not there is gas leakage, and the device must be commissioned again. The operating pressure as specified in technical specifications section must not be exceeded and no overpressure must be given to the product more than maximum operating pressure. Any attempt must not be made to the device, and its repair must not be made by authorized persons. The device must not be triggered, the covers of the device must not be opened, and any items like wire, water etc. must not be inserted to the orifice of the device. Do not leave device on ground. Be careful that there is no leakage of mud. stone etc. from the ground. Avoid leakage of the sealing agents like flax Teflon used in pipe valve connection to the device during removal-insertion procedure, or sealing chemicals must be used. Otherwise, the device cannot be operated in foreseeable manner. Device is not hazardous or dangerous against human or environmental health

## CAUSES AND RESULTS OF MALFUNCTION

There are three kinds of malfunction. Please contact with our center service in case of malfunction.

- 1. Malfunctions to be occurred during transportation of device from factory to end-user: our devices are offered for sales in the carton box. Please return products not inside box to the seller. Don't remove products during transportation and carrying, do not shake it with impact, do not put heavy load on it, and do not leave it at wet places. Please be check device if it has malfunction before connecting it to the column line. Hold and pull setup knob during installation. Please be sure that device is being installed, and if there is no damage in body and connections of device. In case of malfunction, send device to the center service. It is expected that the center service feeds back and gives information to the person. The service decides whether or not it is included in warranty.
- 2. Malfunctions related to the triggering of device: If the device is triggered by the snoopy person and is malfunctioned, its warranty becomes void. Do not insert the removed parts again. Because the parts are affixed and closed in irremovable way, you can damage its interior parts.
- 3. Malfunctions caused by external reasons following inserting device to the gas line:

Please be sure of correctness of installation directions. In case of malfunction, please absolutely inform your authorized installer or gas distribution company, end-user must not attempt device. Insert setup knob to the spindle during installation. Pull by hand, wait 5 seconds in pulled manner, and release setup knob, if it does not set up, try setup again. Reversely screw the setup knob to the device. If setup does not occur, the product is malfunctioned. If there is gas at the column line, and it is closed or setup knob is turned off for any reason accept for seismic movements; please immediately inform the gas distribution companies. The device can be turned off as a result of impact to the column line.

## SERVICE AND SPARE PARTS STATIONS

You can contact with our center service or factories for detailed technical information in all your problems related to the product.

### **OPERATING PRINCIPLE, INTRODUCTIVE BRIEF INFORMATION**

It is the mechanical earthquake valve that perceives seismic movements (earthquake) and automatically shuts off the flow of gas at the places using gas at the end of perceived movements, then can be manually set up, stays turn-off until it is set up, and normally in turn-on position.

The device automatically turns off at the moment of occurrence of the seismic activity having momentum and frequency values at the size depending on the standards of TS 12884, as a result of perception of this activity by the device, and in a manner not causing leakage of flow of gas with help of gas shut-off equipment. Whether or not seismic activity continues or not, it remains turn-off until the flow of gas is set up again. It is possible to give gas to the installation again after device perceived seismic activities and shuts off gas, and the setup knob (reset) is manually pulled. After said shut-off, the manual setup proceeding must be definitely made by authorized gas distribution company (IổDAŞ, EGO, IZGAZ vb.) or by firms authorized by them. The gas shut-off adjustment mechanisms of the device must be protected against attempt and triggering of it by unauthorized persons.

All parts of the product has been designed and produced in a manner that it provides the proposed safety, durability and strength features.

The device is exposed to the same seismic effect with the structure from the moment it is connected to the installation; it is sensitive to the seismic movements occurred because of earthquake and similar reasons, however, it is not sensitive to the movements occurred because of dynamic reactions to be arisen from structure or equipment.

The adjustments made in our factories are affixed in a manner not to remove sensor cover for prevention of losing adjustment features in our factory.

The device is resistant to the sulfur compounds, corrosion, natural gas, solar light, moisture, temperature changes during the expected use of device to prevent damage of device components and housing from gas flow. All materials of device used for production of exterior parts are resistant against moisture, dirt, ozone, fertilization, mineral oil, vegetable oil, grease, exposure to sunlight for a long time and exposure to freezing temperatures for a long time.

## WARRANTY CONDITIONS

The warranty period starts from the date of delivery of the product, and is for 5 years.

- All parts of product are under warranty of our company.
- In the event the product is malfunctioned within warranty period, the time of repair will be added to the warranty period.
- 3. The repair time of product cannot exceed 20 business days. This duration starts from the date of notification for malfunction of product to service station, in absence of service station, to the seller of product, dealer, agency, representation office, manufacturer or any manufacturer-producer of product. The consumer can make notification for malfunction through phone, fax, email, registered mail or similar way. However, the obligation for proof belongs to the consumer in case of discrepancies. In case of failure to remove malfunction of product within 10 business days, manufacturer-producer or importer is obliged to allocate other product having similar features for use of consumer until completion of product.
- 4. In the event product is malfunctioned because of either material, workmanship or installation faults during warranty period, its repair will be made without any claim of workmanship cost, replaced part cost or any cost under any name.
- 5. Despite the consumer uses repair right, in the event the product;
  - is malfunctioned at least four times within one year or more than six within warranty period designated by manufacturer-producer and/or importer provided that it is within warranty period as of date to be delivered to the consumer, these malfunctions make continuous failure to benefit from product,
  - -exceed the maximum time for repair,
  - -determination of impossible to repair the malfunction with the report to be prepared by service station of company, in absence of service station, in turn, seller, dealer, agency, representation office, importer or manufacturer-producer, then the consumer can request free replacement of product, return of cost or discount of cost at the rate of defect.
- The repairs caused by use of product in contrary to matters in operating manual of product are excluded from warranty.
- For the problems to be arisen from warranty certificate, you can apply to the Ministry of Customs and Trade, General Directorate of Consumer's Protection and Market Surveillance.

Manufacturer Name: FAY MEKANIK MAKINE SAN. VE TIC. LTD. STI. Center - Center Service Address: Kuçukcamlıca Mah. Guler Sok. No:1/B Uskudar / ISTANBUL Telephone: +90 216 660 0 777 Fax: +90 216 660 0 772 www.faymakine.com Product's: Type: Mechanical Earthquake Valve Brand: FAY Model: FM Banderol and Serial No: Delivery date and place: Warranty period: 5 years Maximum repair time: 20 business days Seller: Name: Address: Phone:

COMMISSIONING DATE:

Invoice date and No:

Telefax: