

Description

Normally Closed Automatic Fast Opening Solenoid Valve opens the flow of gas when the coil is electrically powered and closes when the power is cut off. It can be controlled by thermostats, switches, etc.

Reference Standard: EN161, ISIRI 6800, EN 13611.

Marked and approved by Iranian National Standards Organization based on ISIRI 6800 in compliance with EN 161.

Sealing force classification: A

Ambient temperature:

-20 °C to 60 °C

Gas Type:

NG, LPG, Town gas, Air

Connections:

DN15 (R_p 1/2)

DN20 (R_p 3/4)

Thread according to ISO 7-1, EN 10226

Supply voltages: 230 V/50-60 Hz

Supply voltage tolerance: -15% ... +10%

Cable gland: PG09

No. cycles/hour: ~1800 (ON time 1s – OFF time 1s)

Energy saving: No

Maximum inlet pressure: 200mbar

Weight: 0.85 Kg

Opening time: <1 S

Protection rating: IP54

Built-in filter:

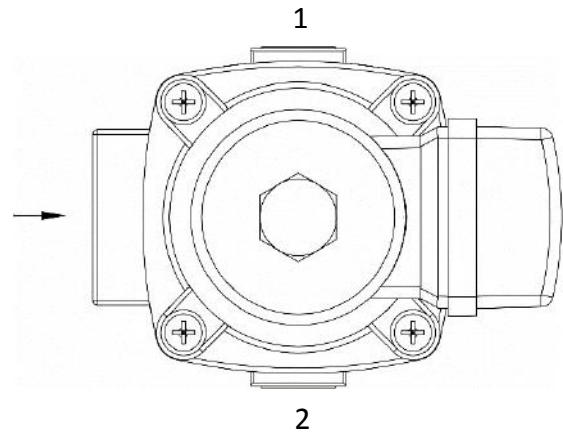
Filtration element type: metal mesh according to INSO 22107.



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Pressure measuring spots

Use connections G 1/4 insteade caps 1 or 2.

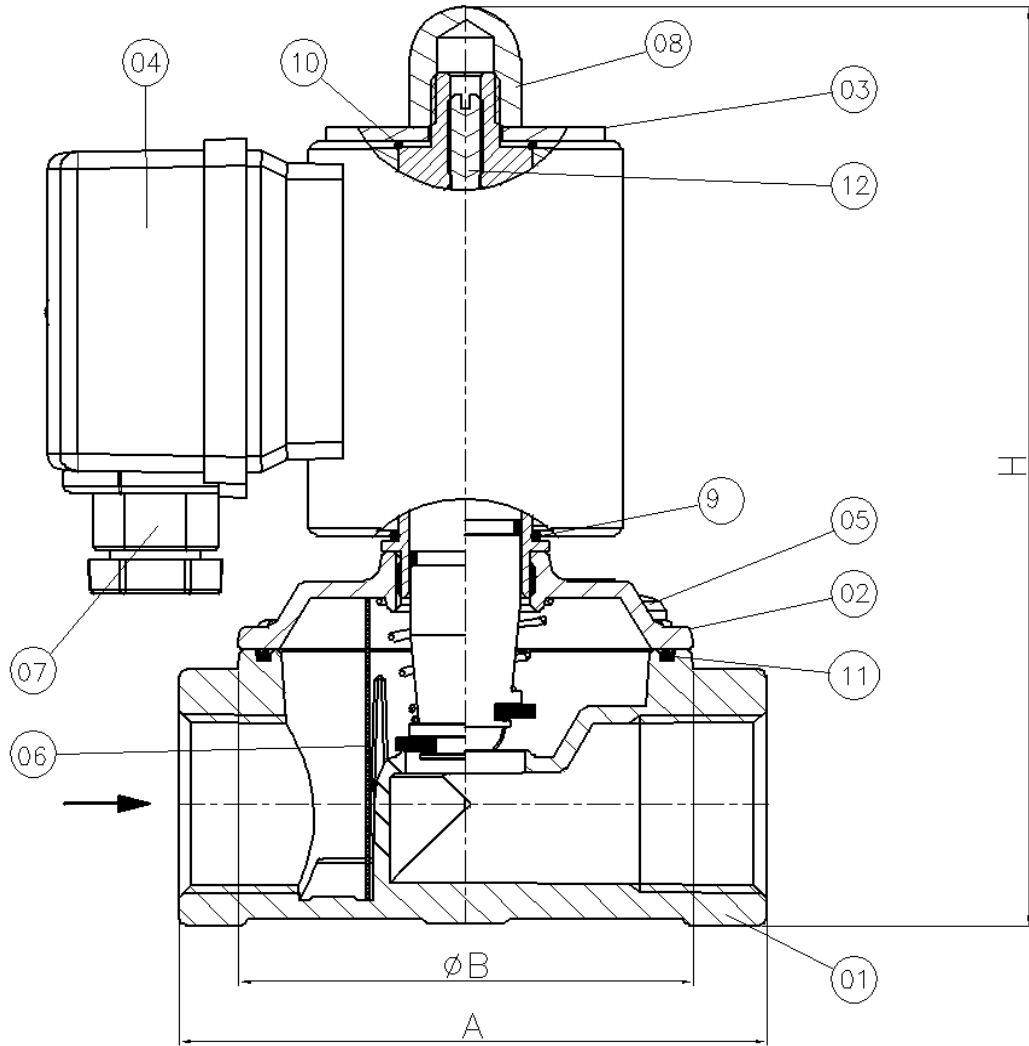


▲ *Top View (schematic view)*

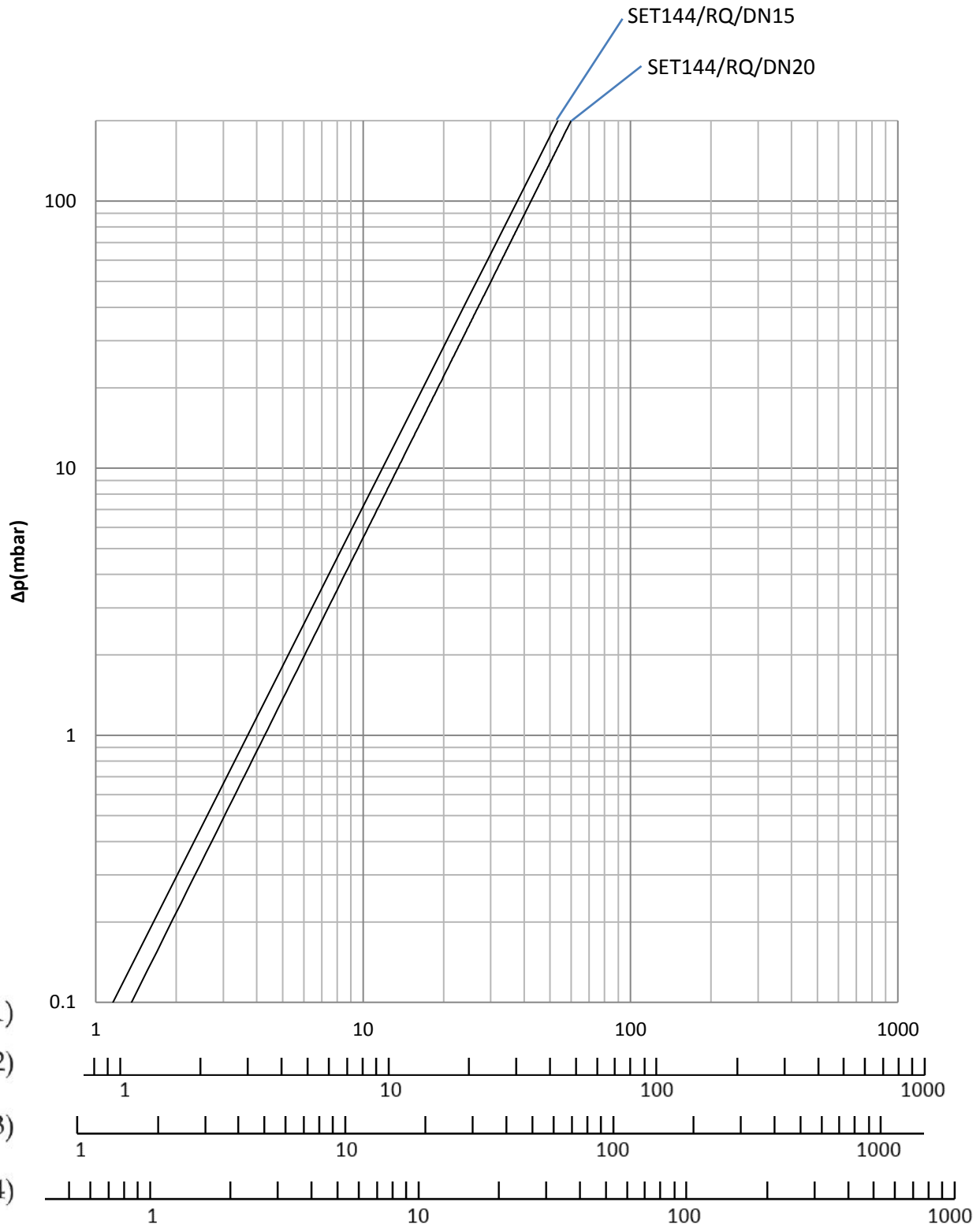
Example of ordering code

Type	SET144
Fast opening (R) + adjustable flow (Q)	/RQ
Nominal size (R _p 3/4)	/DN20
Maximum inlet pressure (200 mbar)	/020
Supply voltages	/A230
Status when off (Normally Closed)	/NC
Ordering code	SET144/RQ/DN20/020/A230/NC

Weight(kg)	A(mm)	B(mm)	H(mm)
0.9	84	65	136




08	Fastening nut	STD			
07	Cable gland	Plastic			
06	Filter	Metal			
05	Screw	STD		Adjustment screw	Steel
04	Electrical box	Plastic	12	O-Ring	NBR
03	Washer	STD	11	O-Ring	NBR
02	Top cover	AL	10	O-Ring	NBR
01	Body	AL	09	O-Ring	NBR
No.	Part name	Material	No.	Part name	Material



- 1. methane dv= 0.65
- 2. air dv= 1
- 3. town gas dv= 0.47
- 4. LPG dv= 1.67

Q(Nm³/h)(NG)

dv =density relative to the air

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Instructions

In this manual, you will learn how to properly install, run, and use this product.

The manual is required wherever this product is used.

Do not hesitate to contact the technical office if you need more information about installation, repair, or other items in the manual.



ATTENTION:

- Prior to installation, make sure that the system follows the local standards.
- Each product should only be selected, installed and maintained by experts according to instructions.
- Control should only be used for their intended purpose.
- The customer is not allowed to use any other gases than the specified.
- The control conditions must match to the range that specified on the product label and the specifications in this guide.
- In the event of a repair or a replacement, only parts approved by the manufacturer should be used. Using miscellaneous parts not only voids the warranty and support, but the controls will be also prone to malfunction.
- When the valve is installed outside, it requires a roof to protect it from rain and oxidation .The company does not accept responsibility for any damage caused by improper use.
- This valve can be powered only by single-phase, not three-phase.
- Do not allow particles or metal pleated to remain inside the pipe during installation

Considerations of Pre-installation

- It is necessary to close the gas upstream of the device prior to installation.
- In the installation, pay attention to the sign for passing the gas on the control
- Ensure that the gas line pressure is lower than the maximum allowable pressure which is on the control label.
- All components and pipes should be clean and free of foreign objects.
- For non-standard connections with parallel threads, the length of the pipe thread should be slightly less than the length of the control thread so as not to damage the internal components
- Be sure to turn off the power before performing any operation.
- Avoid installing the valve near devices that could be damaged by the coil's high temperature.

Installation

Fasten and seal the control on a pipe or any other device that is fixed and has a suitable support.



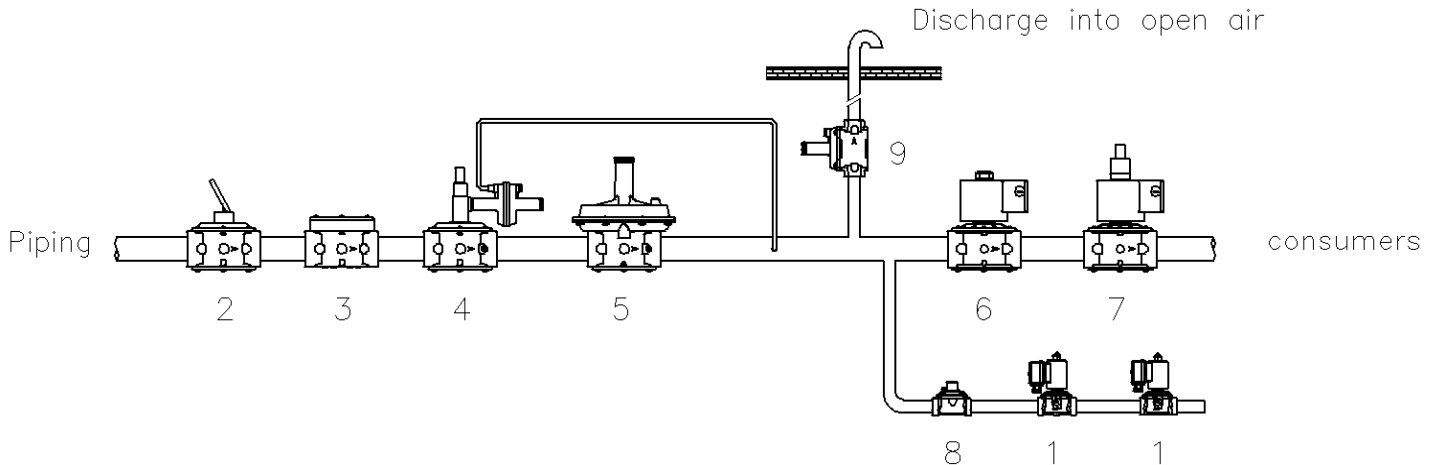
ATTENTION:

- The best position for installing the valve is with the coil facing upwards. In other installation cases, the correct function of the control must be checked.
- Once the installation is complete, ensure that there are not leaks.
- The input power should not be directly connected to the coil. It should be done through the terminals.
- The control must be connected to the ground through the pipes or input terminal (The earth cable must be connected).
- in the connection terminal wiring use from 3x0.75mm² wire with the diameter of the outer sheathing 6-7 mm . The cable must have maximum voltage of 300V, and maximum temperature of 100°C.

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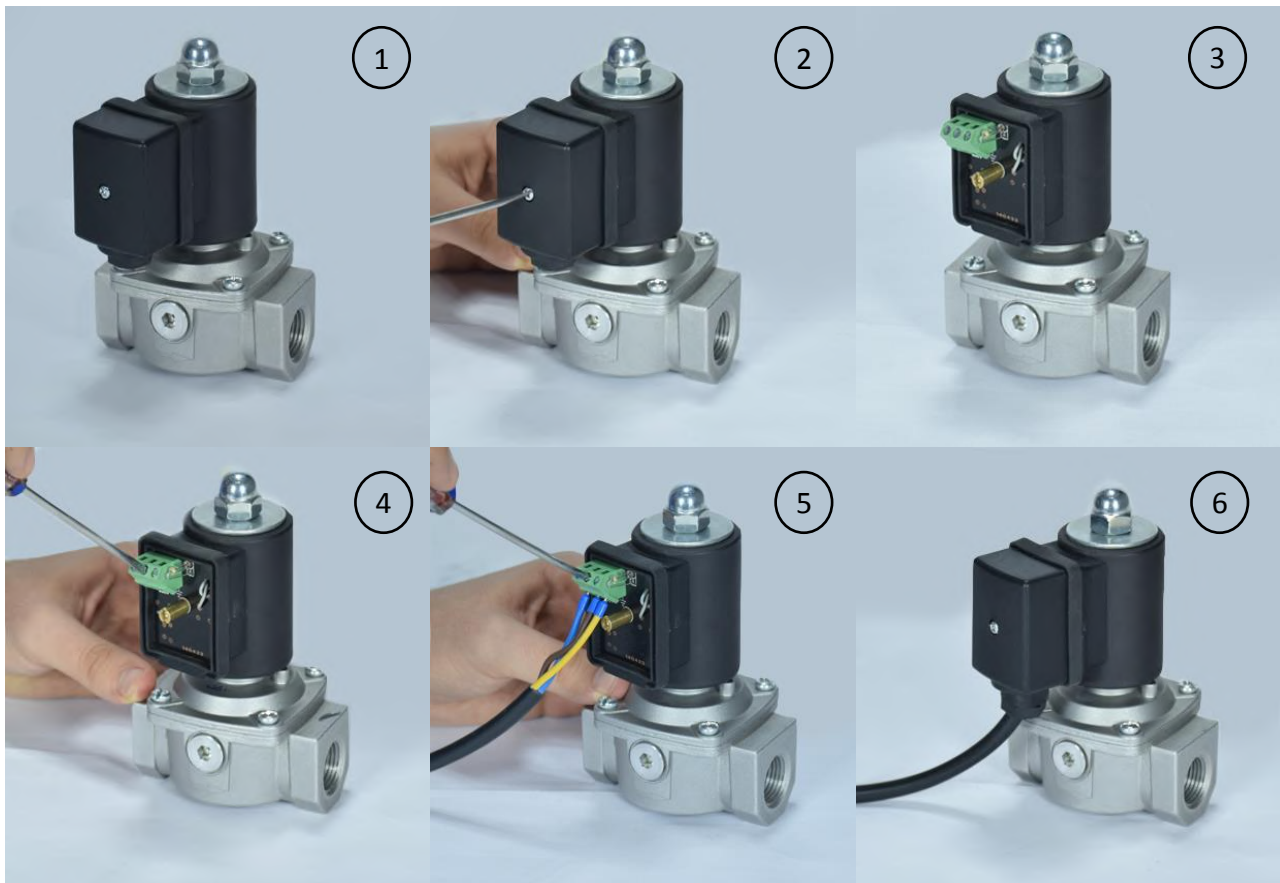
Example

- | | | | |
|--------------------------------|----------------|---------------------------------|-----------|
| 1. Fast Opening Solenoid Valve | SET144/RQ/DN15 | 2. Lever Hand Valve | SET271 |
| 3. Filter | SET352 | 4. Max. Pressure Shut off Valve | SET275 |
| 5. Regulator | SET252 | 6. Fast Opening Solenoid Valve | SET144/RQ |
| 7. Slow Opening Solenoid Valve | SET144/SQ | 8. Regulator | SET201 |
| 9. Relief Valve | SET150 | | |



Electrical wiring

- 1- Loosen the center screw on the electrical box (04) to take out the cover. Cable gland (07) will also be apart with it.
- 2- Pass the cable through the cable gland, then securely connect to the terminal. Connect the right terminal (⊥) to the earth wire and connect the other two terminals to the 230 VAC power supply.
- 3- Secure the cable gland (07) with a 17mm commercial spanner.
- 4- After making sure that the sealing gasket is in place, tighten the central screw of the electric box



Adjusting the gas flow rate (Capacity)

- At first, unscrew the nut (08) then use a screwdriver to turn the adjustment screw (12) to set the desired capacity. Gas flow rate decreases as the adjusting screw is turned clockwise. On completion, tighten the nut(08).



Maintenance

NOTE: Installing and maintaining must be done by qualified personnel.

ATTENTION:

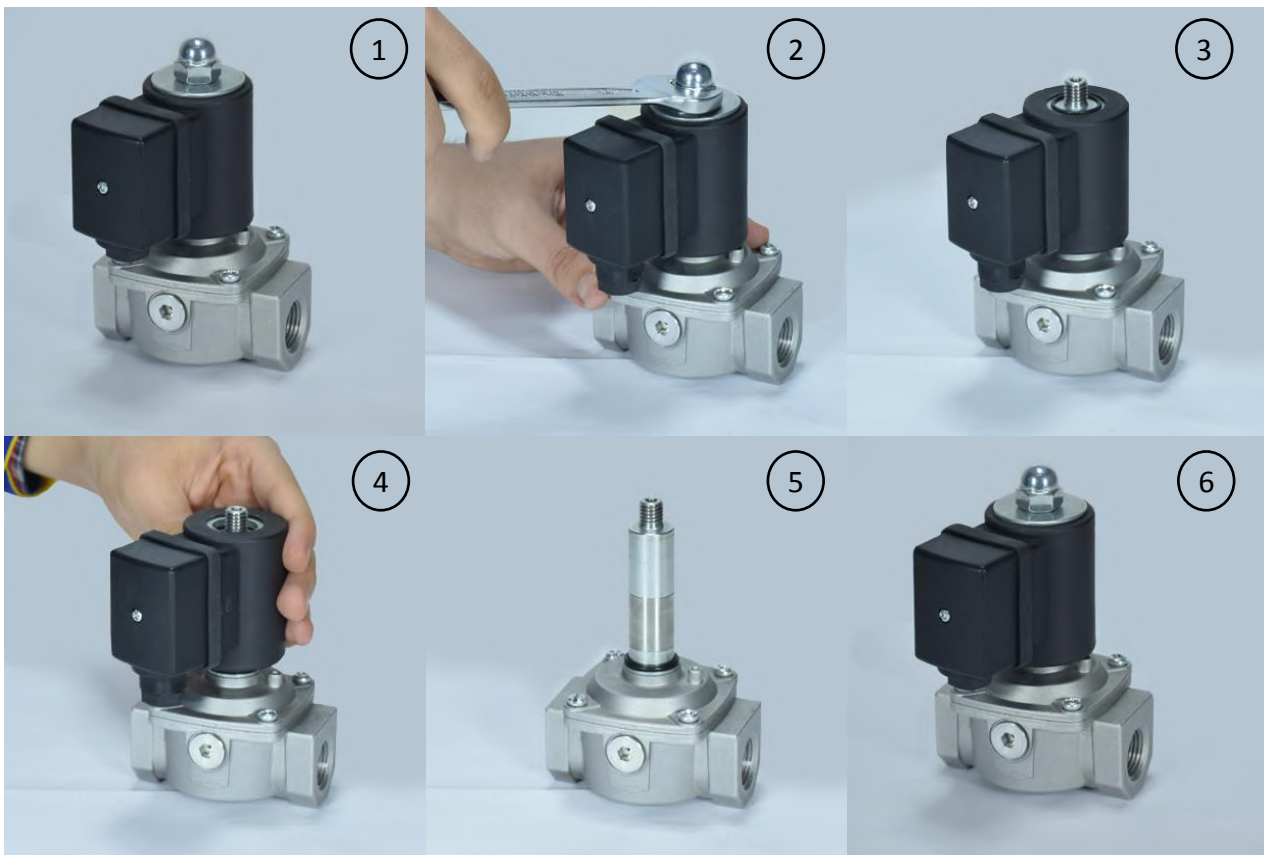
- It is necessary to close the gas upstream of the device prior to installation. Also, make sure that there is no pressurized gas inside.
- Ensure that the power is off before performing any operations.
- Due to the coil's permanent connection to electricity, it is usually hot. So, if the coil has been electrically powered for more than 20 minutes, it is recommended to wait for it to cool down.
- Once the installation is complete, ensure that there are no leaks.

Replacing the coil

- To release the electrical wires, follow steps 1 and 2 of "replacment electronic circuit".
- Use a 17mm commercial spanner to remove the nut (08).
- Remove the washer (03) and take out the O-ring (10).
- Take out and remove the coil.
- Insert the new coil and position the O-ring (10).
- Place the washer (03) on the coil then secure the nut (08).



NOTE: Make sure there is an O-ring (09, 10) under the coil and another one on top of the coil.

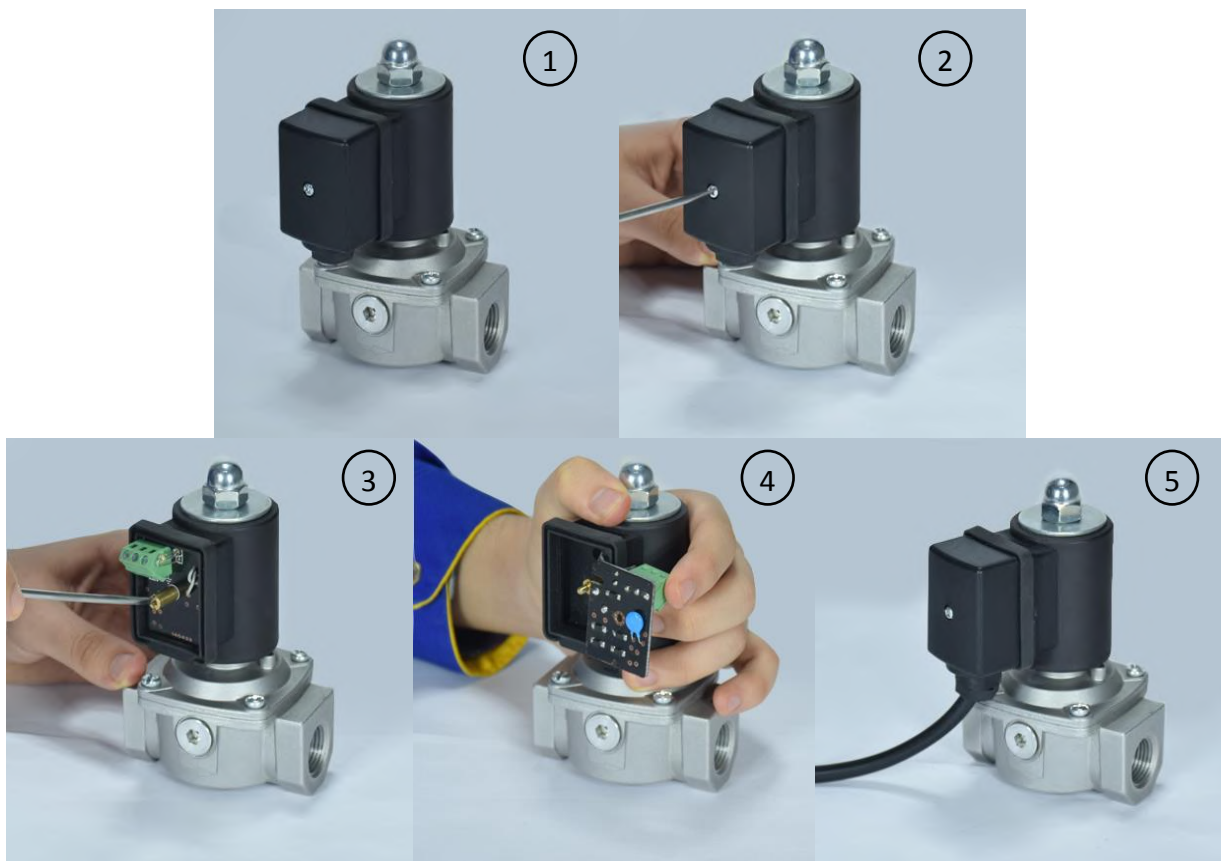


Checking the filter

- 1- Loosen the fastening screws (05) and carefully remove the top cover (02).
- 2- Check the piston and, if necessary, replace the O-ring (11).
- 3- Pull out the filter (06) and check it. clean it by windy, if necessary, wash it.
- 4- During assembly, make sure that Wear-resistant pads are properly seated between the piston and cylinder, then mount the top cover (02) and tighten the screws (05). Make sure the sealing O-Ring (11) is inside the relevant groove before putting it back on. To tighten the screws, apply 4.5 N.m (with a tolerance of -15%).

Electrical circuit replacement

- 1- Loosen the center screw on the electrical box and take out the cover (04).
- 2- Take out the wires from the terminal by loosening the screws.
- 3- Using a screwdriver, loosen the central nut and remove it together with the toothed washer.
- 4- Carefully remove the electronic circuit. It is important not to pull the two wires behind the circuit when removing it. Release the wires of the coil that are soldered to the circuit, using a 40W soldering machine.
- 5- Replace the new electronic circuit and solder the wires to the circuit.
- 6- Follow steps 2 to 4 of the Electrical wiring.




Warranty

The warranty period on all SETAAK gas controls is 24 months, beginning on the day of the production.
For damage caused by:

- Misuse of the device;

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- Failure to observe the requirements described in guide booklet;
 - Failure to observe the regulations pertaining to installation;
 - Tampering, modification and use of non-original spare parts;
- are not covered by the rights of the warranty or compensation for damage.

The warranty also excludes maintenance work, the assembly of other manufacturers' parts, making changes to the device.

Insurance

SETAAK gas controls are covered by 60 months of civil liability insurance from the date of manufacture.

Location of warranty and insurance services

Warranty, support and insurance are limited to the Islamic Republic of Iran. Obviously, in export cases, the agreement with the customer is the criterion.

Further Information

You can get required information about SETAAK gas controls through <https://www.setaak.ir/en/igc-fa>.

Label Information

- 1) Manufacturer's Name/Logo: **SETAAK**
- 2) Product Ordering Code: *SET144/RQ/DN15/020/A230/NC*
- 3) Protection rating & Supply voltages & Absorbed power: *IP54-230V/50-60Hz 54/16 VA*
- 4) Reference Standard: *ISIRI6800 CL.A, Gr.2* acc to EN161
- 5) Maximum inlet pressure: *P_{1max} : 200 mbar*
- 6) Ambient temperature: *-20 C to 60 C*
- 7) batch number: *3501*
- 8) Product code: *3311700000001*
- 9) Coil code: *SO-2012*
- 10) Iranian Standard mark
- 11) Standard ID: *63889800*
- 12) Standard product inquiry SMS number: *10001517*
- 13) QR code for receiving applied information



If you have any questions, contact the sales through the web site

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