

TWO STAGE SOLENOID VALVES



Serie IED...



DESCRIPTION

Gas automatic normally closed solenoid valves dual stage version. Solenoid valve opens when it is electrically powered and closes when there is no tension.

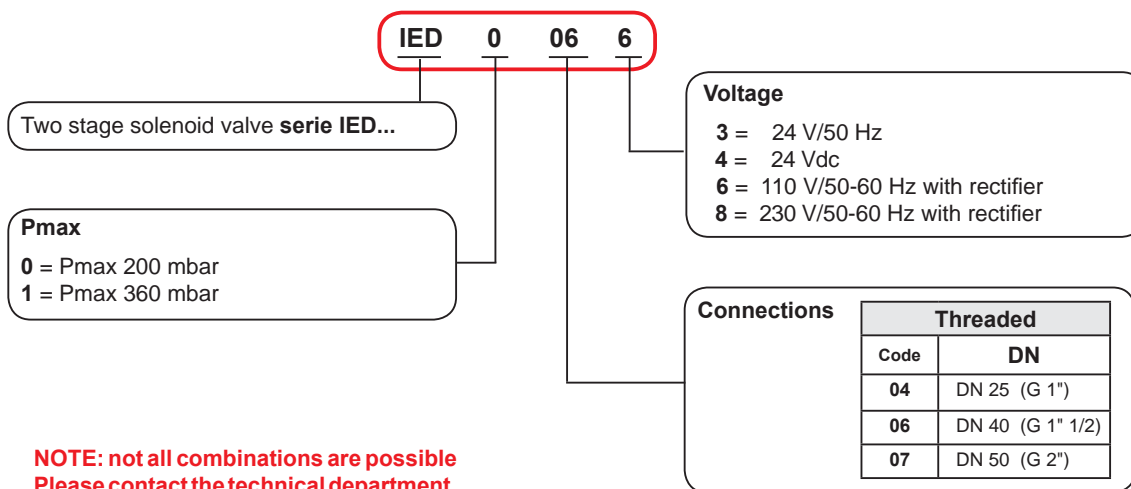
It is possible to regulate the flow of the first stage and the maximum flow of the solenoid valve.

Pmax = 360 mbar

Pmax = 200 mbar

- In conformity with EN 161
- In conformity with Directive 2009/142/EC (Gas Directive)
- In conformity with Directive 2004/108/EC (Electromagnetic Compatibility)
- In conformity with Directive 2006/95/EC (Low Voltage)

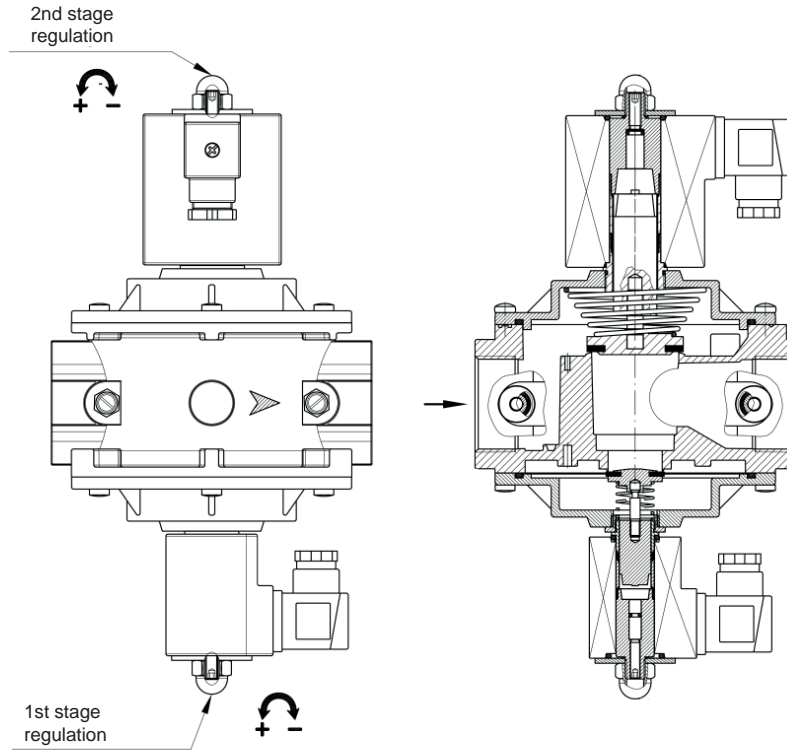
IDENTIFICATION



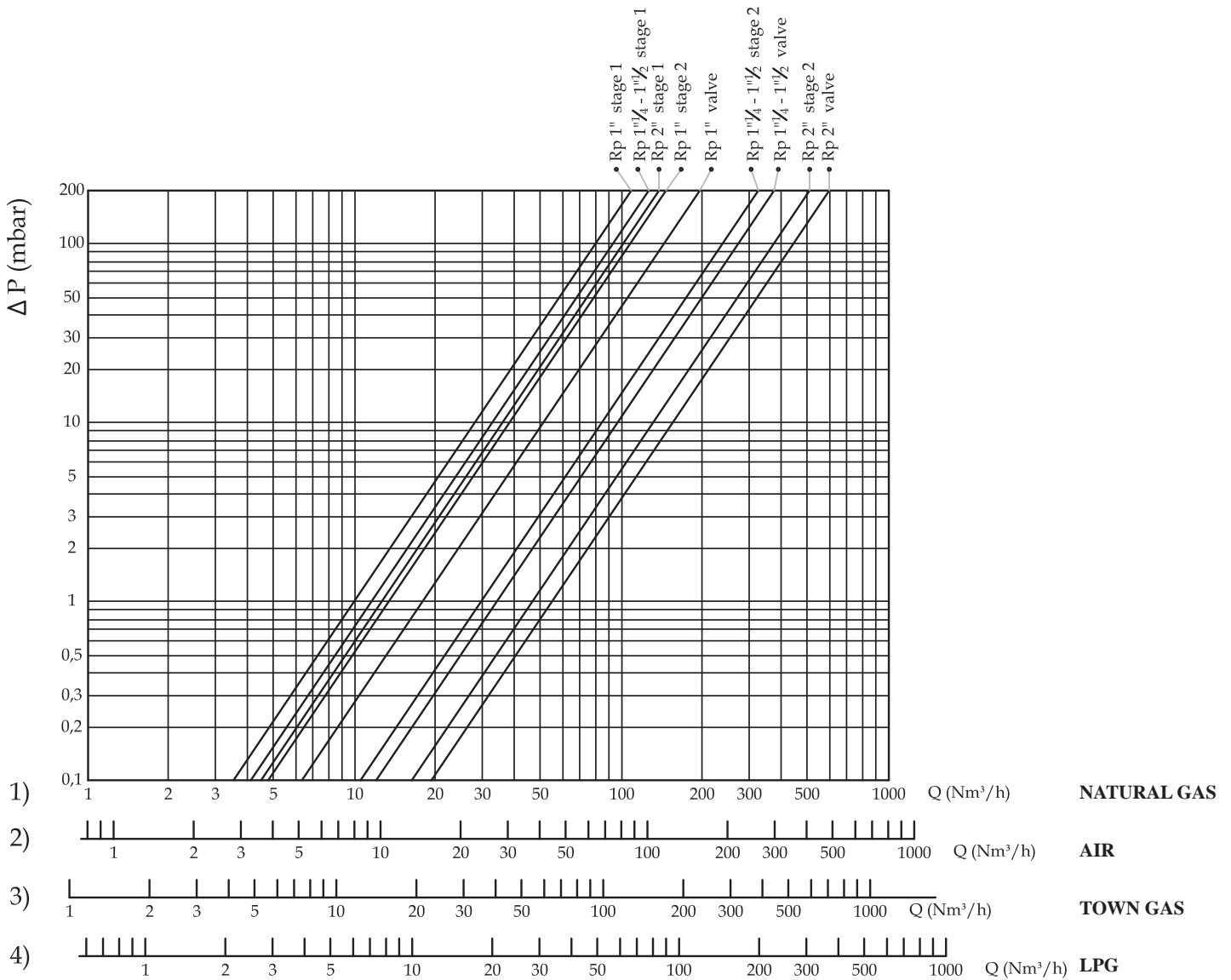
GENERAL DATA

TECHNICAL DATA

- Use: not aggressive gases of the 3 families (dry gases)
- Threaded connections: DN 25, DN 40, DN 50 according to ISO 7/1
- Power supply voltage: 230 V/50-60 Hz, 110 V/50-60 Hz
- Max. working pressure: 360 mbar (DN 25); 200 mbar (DN 40 - DN 50)
- Environment temperature: -20 ÷ +60 °C
- Protection degree: IP65
- Class: A
- Group: 2



PRESSURE DROP DIAGRAM



COILS AND CONNECTORS

COILS AND CONNECTORS								
Connections	Voltage	1st stage coil code	1st stage coil stamping	1st stage connector code	2nd stage coil code	2nd stage coil stamping	2st stage connector code	Total power absorption
DN 20 - DN 25 (P.max 200 mbar)	24 Vdc	BO-0410	BO-0410 24 VDC 17W	CN-0010	BO-0520	BO-0520 24 VDC 28W	CN-2100	44 VA Energy saving 24 VA
	24 V/50 Hz	BO-0410	BO-0410 24 VDC 17W	CN-0050	BO-0520	BO-0520 24 VDC 28W	CN-2110	41 VA Energy saving 21 VA
	110 V/50-60 Hz	BO-0420	BO-0420 110 V RAC 17W	CN-0045	BO-0530	BO-0530 110 V RAC 28W	CN-2130	46 VA Energy saving 26 VA
	230 V/50-60 Hz	BO-0430	BO-0430 230 V RAC 17W	CN-0045	BO-0540	BO-0540 230 V RAC 28W	CN-2130	48 VA Energy saving 27 VA
DN 20 - DN 25 (P.max 360 mbar)	24 Vdc	BO-0520	BO-0520 24 VDC 28W	CN-2100	BO-0300	BO-0300 24 VDC W45	CN-2100	72 VA Energy saving 18 VA
	24 V/50 Hz	BO-0520	BO-0520 24 VDC 28W	CN-2110	BO-0300	BO-0300 24 VDC W45	CN-2110	69 VA Energy saving 18 VA
	110 V/50-60 Hz	BO-0530	BO-0530 110 V RAC 28W	CN-2130	BO-0310	BO-0310 V 98 DC W45	CN-2130	82 VA Energy saving 24 VA
	230 V/50-60 Hz	BO-0540	BO-0540 230 V RAC 28W	CN-2130	BO-0320	BO-0320 V 196 DC W45	CN-2130	85 VA Energy saving 25 VA
DN 32 - DN 40 - DN 50 (P.max 200-360 mbar)	24 Vdc	BO-0417	BO-0417 24 VDC ES	CN-2100	BO-0355	BO-0355 24V RAC ES	CN-2100	95 VA Energy saving 25 VA
	24 V/50 Hz	BO-0417	BO-0417 24 VDC ES	CN-2110	BO-0355	BO-0355 24V RAC ES	CN-2110	92 VA Energy saving 25 VA
	110 V/50-60 Hz	BO-0427	BO-0427 110 V RAC ES	CN-2130	BO-0365	BO-0365 110 V RAC ES	CN-2130	106 VA Energy saving 32 VA
	230 V/50-60 Hz	BO-0437	BO-0437 230 V RAC ES	CN-2130	BO-0375	BO-0375 230 V RAC ES	CN-2130	129 VA Energy saving 34 VA
<p style="text-align: center;">Connector type</p> <p style="text-align: center;"> CN-0010 = Normal CN-0045 = (230 Vac, 110 Vac) = Rectifier CN-0050 = (24 Vac, 12 Vac) = Rectifier CN-2100 = Energy Saving 12 Vdc - 24 Vdc CN-2110 = Energy Saving 12 Vac - 24 Vac CN-2130 = Energy Saving 110 Vac - 230 Vac </p>								

INSTALLATION



Installation must be in compliance with local legislation in force!

**WARNING: Read carefully the instruction sheet of each product before installing.
Installation and maintenance operations must be carried out by qualified personnel.**

- The gas supply must be shut off before installation.
 - Check that the line pressure **DOES NOT EXCEED** the maximum pressure stated on the product label.
 - The device is normally installed before the user. It must be installed with the arrow on the body towards the user and in horizontal position.
 - Outside the device, there are some checking pressure nipples for the control of the regulation pressure.
 - During installation take care not to allow debris or scraps of metal to enter the device.
 - If the device is threaded check that the pipeline thread is not too long; overlong threads may damage the body of the device when screwed into place.
 - Do not use the coil for leverage when screwing into place; use the appropriate tool.
 - If the device is flanged check that the inlet and outlet counterflanges are perfectly parallel to avoid unnecessary mechanical stresses on the body of the device.
- Also calculate the space needed to fit the seal. If the gap left after the seal is fitted is too wide, do not try to close it by over-tightening the device's bolts.
- Always check that the system is gas-tight after installation.

ELECTRICAL CONNECTIONS

- Before making electrical connections, check that the mains voltage is the same as the power supply voltage stated on the product label.
- Disconnect the power supply before wiring.
- Wire the connector with cable type H05RN-F 3X1 mm², Ø outside from 8,3 to 9,5 mm taking care to ensure that the device has IP65 protection.
- Connect the power supply to terminals 1 and 2 and the ground wire to terminal \perp .

The coil is suitable for permanent power supply as well.

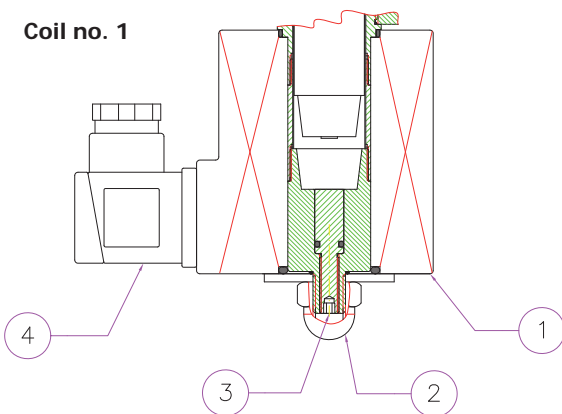
In order to limit the power absorption and heating coils, valves are equipped with Energy Saving.

However, in case of continuous duty, it is absolutely normal for the coil to heat up.

The coil should not be touched with bare hands after it has been continuously powered for more than 20 minutes. Before maintenance work, wait for the coil to cool or use suitable protective equipment.

1st stage calibration

Coil no. 1



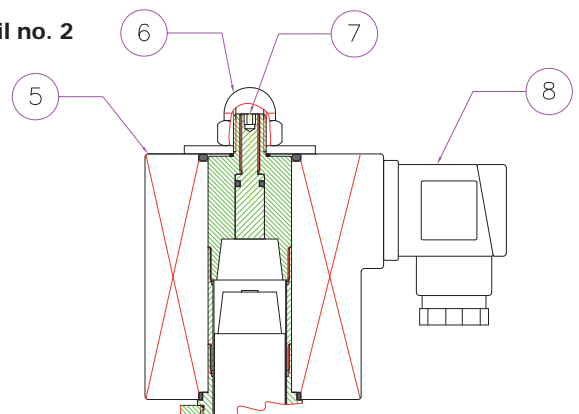
- 1 - Coil
- 2 - Fixing coil nut
- 3 - Flow calibration screw
- 4 - Electrical connector

To set the flow of the 1st stage:

- Unscrew the nut (2)
- Power electrically coils no. 1 and 3 and start the system
- Operate on the regulation screw (3) till obtaining the flow value you need.
- Screw and close the nut (2) in its original position

2nd stage calibration

Coil no. 2



- 5 - Coil
- 6 - Nut for fixing coil
- 7 - Flow calibration screw
- 8 - Electrical connector

To set the flow of the 2nd stage:

- Unscrew the nut (6)
- Power electrically all the coils of the device and start the system
- Operate on the regulation screw (7) till obtaining the flow value you need.
- Screw and close the nut (6) in its original position



All operations must be carried out only by qualified technicians.

FOR FORWARD INFORMATION PLEASE CONTACT OUR TECHNICAL OFFICE.