Multifunctional Gas Control Valve

From the NEGAHBAN GAS COMPANY

NGC 6801/2/3/4 Series

Safety and Control Valve

Description

Combination gas safety and control valve for semi-automatic operation. Version with thermoelectric flame failure device, peizo igniter and flow control by means of disc valve.

Supply pressure up to max. 100 mbar.

Application

For gas fires, convector heaters and associated gas appliances fitted with simplex or duplex burners.

NGC 6801/2/3/4 Multifunctional Gas Control Valves

Main components

Control valve with:

Single knob operation

Proportional flow control

Thermoelectric flame failure device

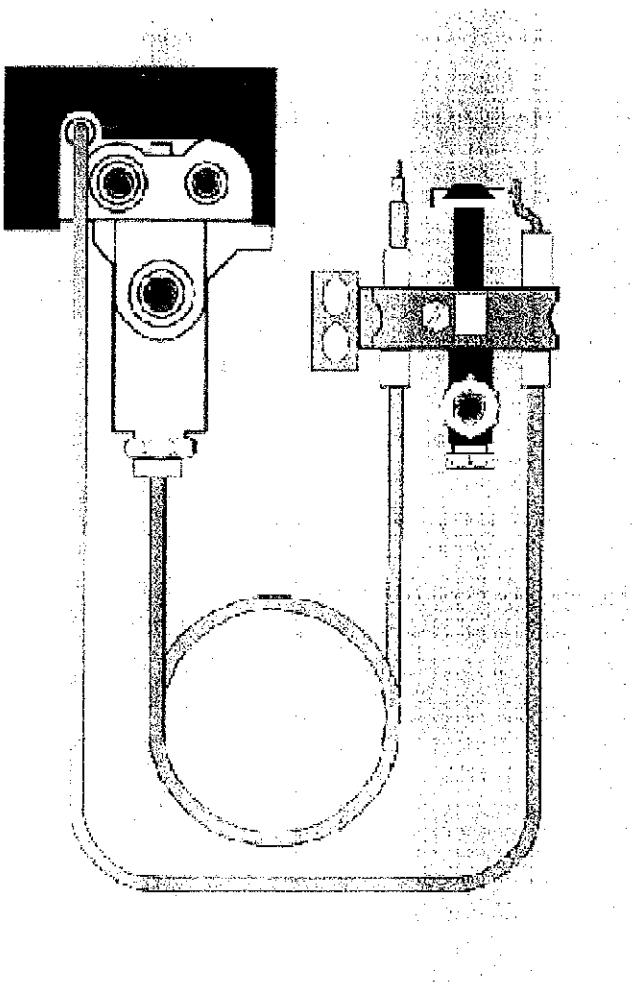
Separate setting of max. and min. capacity

Integrated piezo igniter

Pilot gas filter

Pilot burner with ignition electrode and thermocouple

Pilot gas setting (optional)



Description of main components

Control of gas flow
The flow-rate can be regulated proportionally by means of the control knob (3) and a rotating disc valve (6) between min. and max.

The min. and max. capacity can be set separately. Pilot gas setting, optional.

Piezo ignition
A piezo igniter consisting of a piezo crystal and hammer is integrated in the valve body. Ignition is carried out by depressing and turning the control knob to the ignition position.

Flame failure device
Acts as a thermoelectric safety valve. The power source is a thermocouple which, when heated up, generates enough current to keep the safety valve open.

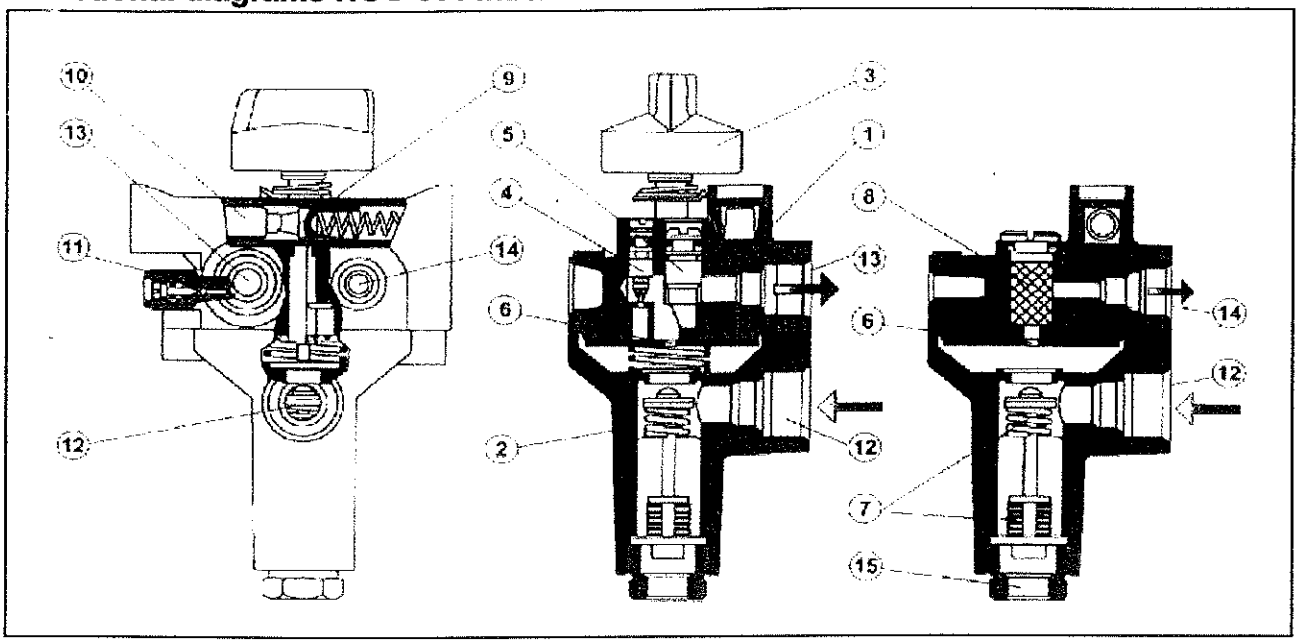
If the pilot flame goes out or the thermocouple is dirty, the safety valve shuts off the gas supply 100%.

A separate pilot burner with ignition electrode and thermocouple is part of the integrated safety system/flame monitor.

Filter
A pilot gas filter (8) is installed in the internal gas supply line for the pilot gas flame.

Ignition electrode adjustment
A distance of 3 to 5 mm between the electrode and pilot burner produces the most favourable ignition.

Functional diagrams NGC 6801/2/3/4



Method of operation

Switching-on/ignition
Depress the control knob and turn anti-clockwise. Gas flows to the pilot burner and the piezo igniter gives off a high-voltage spark.
Keep the control knob depressed for approx. 10 s until the flame monitor responds.
By turning the control knob anti-clockwise, gas is released via the main gas outlet to the main burner.

Control of gas flow
Turning the control knob clockwise reduces the gas rate from the max. to the preset min. setting. Turning between max. and min. does not actuate the piezo igniter. The control valve can only be set on pilot by depressing the control knob and turning it to the preselected PILOT position.

Switching off
Press control knob in PILOT position and turn clockwise to OFF.

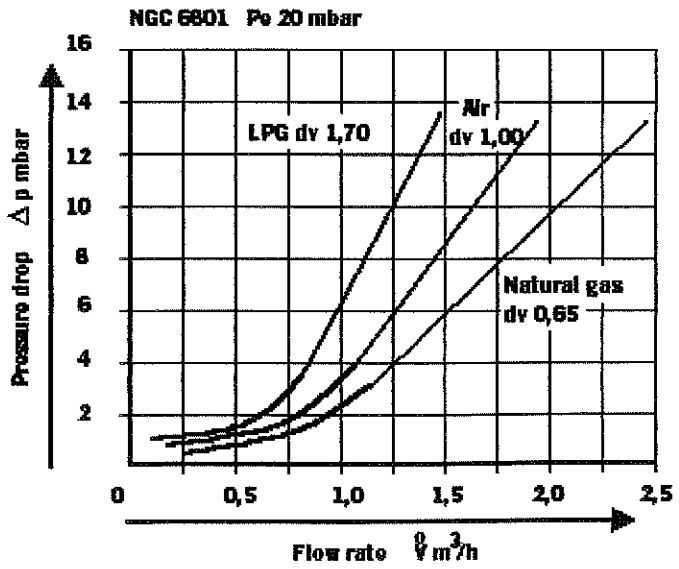
Setting max. capacity
Turn control knob to max. position. Set max. capacity by means of max. setting screw (5).

Setting min. capacity
Turn control knob from max. to min. position. Set min. capacity by means of min. setting screw (4).

Legend to functional diagrams

1 Valve body, top section
2 Valve body, bottom section
3 Control knob
4 Min. setting screw
5 Max. setting screw
6 Disc valve
7 Thermoelectric flame failure device
8 Pilot gas filter
9 Piezo hammer
10 Piezo crystal
11 Pressure test nipple
12 Main gas inlet
13 Main gas outlet
14 Pilot gas outlet
15 Connection for thermocouple

Performance Characteristics



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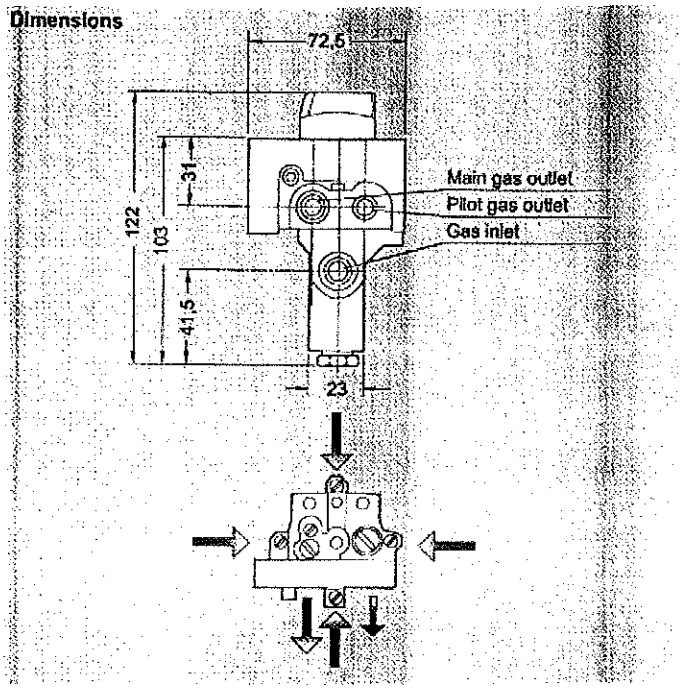

Installation

The NGC 6801 series multifunctional gas control valve are safety devices. Installation, adjustment and servicing may only be performed by qualified personnel and must conform with requirements and codes of local authorities. Before starting the appliance a test for security and valve tightness must be carried out.

For reasons of fire safety, the control valve must not be directly exposed to the open burner.

During assembly, ensure that the control valve remains free of burs, dirt or foreign particles.

Technical data

Connections	Pilot gas	M10 x 1 o.d.6mm
	Main gas inlet	M14 x 1.5 o.d.8mm
	Main gas outlet	M14 x 1.5 o.d.8mm
	Thermocouple	M9 x 1
	Flame failure device	holding current max. 200mA Drop out current min. 70mA
	Supply pressure	max. 100 mbar
	Ambient temperature	0....+80°C
	Installation position	multipurpose
	Valve body (bottom section)	rotatable 4 x 90°

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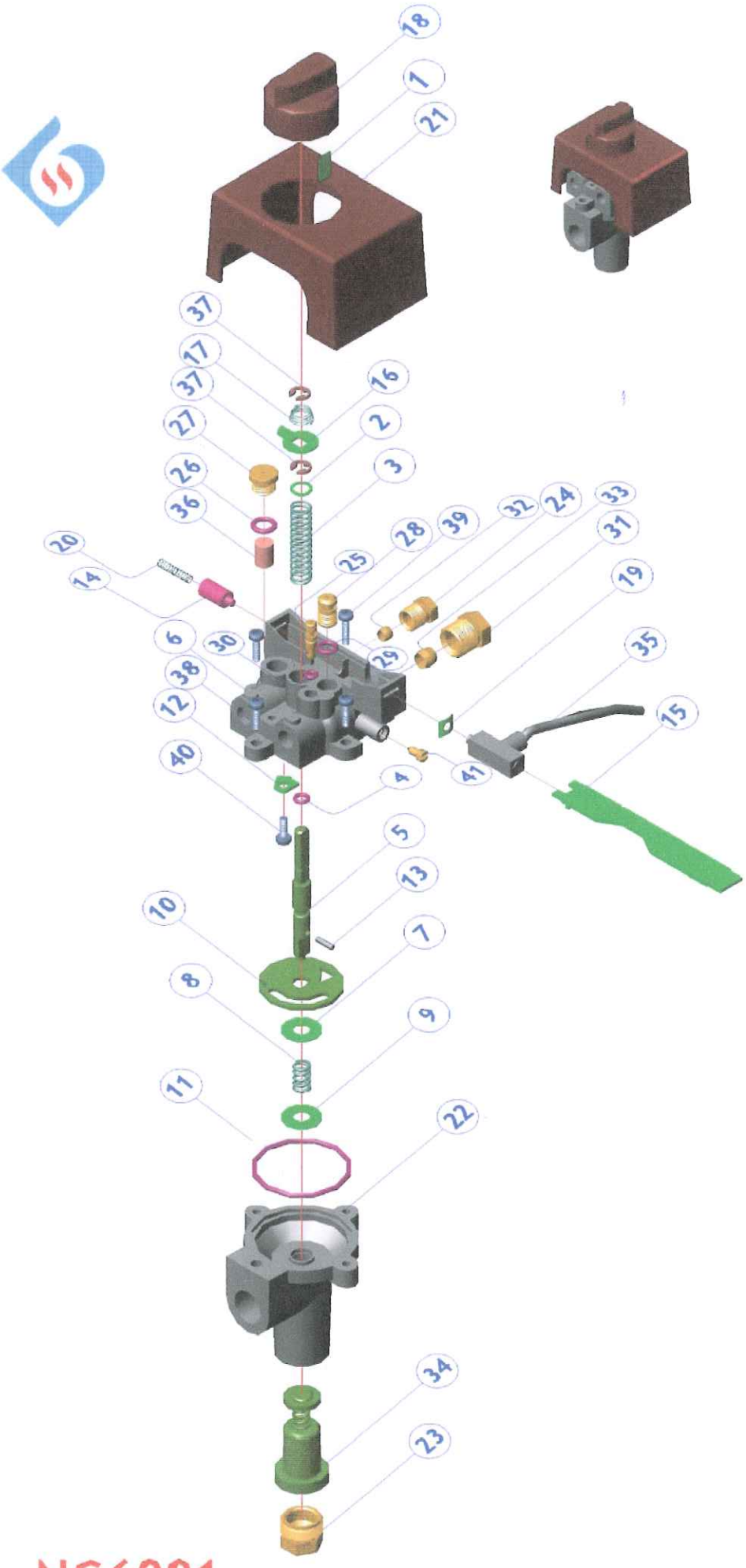
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