

Title (en)  
Proportional control gas valve

Title (de)  
Proportionales Gasregelventil

Title (fr)  
Soupape de commande proportionnelle à gaz

Publication  
**EP 1146288 A1 20011017 (EN)**

Application  
**EP 00108147 A 20000413**

Priority  
EP 00108147 A 20000413

Abstract (en)  
A proportional control gas valve includes a valve body formed with an inlet having a first orifice, a first chamber communication with the inlet through the orifice, a second chamber formed with a balancing orifice and a second orifice, a third chamber in communication with the first chamber through the balancing orifice, a fourth chamber in communication with the first chamber via the second orifice, a fifth chamber in communication with the fourth chamber, and an outlet in communication with the fifth chamber, a solenoid assembly mounted in the first chamber for controlling gas flowing from the first chamber to the fourth chamber via the second orifice, a main diaphragm arranged between the inlet and the third chamber, a valve spring mounted under the main diaphragm and urging the main diaphragm to move upwardly to close a passage from the inlet to the third chamber, a regulation diaphragm mounted inside the fifth chamber, a regulation spring mounted on the regulation diaphragm, an adjust stem connected with the regulation diaphragm for controlling gas flow rate from the fourth chamber to the outlet, and a servomotor drivingly connected with the adjust stem, whereby the proportional control gas valve only requires a small amount of energy to control the gas pressure and flow rate simultaneously.  
<IMAGE>

IPC 1-7  
**F23N 1/00**

IPC 8 full level  
**F23N 1/00** (2006.01)

CPC (source: EP)  
**F23N 1/007** (2013.01); **F23N 2225/04** (2020.01); **F23N 2235/14** (2020.01); **F23N 2235/16** (2020.01); **F23N 2235/20** (2020.01)

Citation (search report)  
• [Y] US 5413141 A 19950509 - DIETIKER PAUL [US]  
• [Y] DE 3841816 A1 19900719 - VAILLANT JOH GMBH & CO [DE]  
• [A] EP 0113876 A2 19840725 - HONEYWELL INC [US]  
• [A] EP 0614050 A1 19940907 - VAILLANT JOH GMBH & CO [DE]

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