

The proposed pneumatic reducing valve contains a casing, an inlet calibrated orifice, an outlet opening, a spring, a spring-loaded ball throttle valve, a control diaphragm, a valve seat with an elastic seal, and a vent valve coupled with the control diaphragm. The diameter of the calibrated orifice and the diameter of the vent valve are defined according to a specified relationship. The present invention provides the possibility to reduce the effective area of the diaphragm and, as a result, increase the stability of air pressure at the outlet of the reducing valve.