

Counterflow gas generator with an automated control system consists of a housing and a fuel gasification chamber in the form of a perforated tube, positioned between two truncated cones and concentrically located in the lower part of the housing. The upper part of the gasification chamber is designed as a truncated cone, with its larger base positioned at the bottom, an air supply device, a gas outlet pipe installed in the upper part of the upper housing, a grate bar, and an ash-collection chamber with a lid. The fuel supply device is designed as a sluice gate; the device for cooling synthesis gas and heating air is designed with a casing, inside which a pipe for discharging synthesis gas is installed, with a nozzle that exits at the bottom of the casing. Dampers are located in the upper part of the upper cone of the gasification chamber, through which synthesis gas flows from the fuel gasification chamber. Additionally, the upper part of the housing contains a fuel level control device in the form of a microwave radar level gauge, connected together with the sluice valve to a control unit that automatically maintains the set fuel level in the gasification chamber.