

The invention relates to exhaust systems used in motor vehicles, in particular to devices for removing particles, nanoparticles and toxic gases from vehicle exhausts to reduce pollution.

The device consists of a filter (1) for capturing solid particles larger than 50 nm from exhaust gases, a vortex tube (2), a diaphragm (3), placed at the cold end of the vortex tube (2), a vortex chamber (4) with nozzles directed tangentially to the inner wall of the energy separation chamber (8) of the vortex tube (2), a conical valve (5), placed at the hot end of the vortex tube (2), a conducting rod (6), coated with electrical insulation, a corona-forming electrode (7) in the form of a metal spiral, a precipitating electrode (9) in the form of a metal round pin, a high-voltage pulse current source (10), an activator (11) of the conical valve (5), a control unit (12) of the internal combustion engine, electric air heaters (13), in particular glow plugs, and a relay for connecting (14) electric air heaters (13) to an accumulator.

Claims: 3

Fig.: 2

