

A cyclonic type gas-liquid recirculating separator intended for removal of fine dispersed liquid and solid particles from the gas flow is the object of invention. The separator can be used in petroleum, gas, chemical, food and in other branches of industry. The separator includes a housing equipped with input tangential and output ducts, located inside the housing: inlet chamber, chamber of precipitation of liquid and solid particles, shielding partition, vortex chamber, axial pipe, drain branch pipe, separate partition between input and output chambers. In the output is located a louvered cap of cone-shaped form, which is connected by apex with drain branch pipe and is made from corrugated tape coiled into the multi-turn spiral. The drain branch pipe is connected to the surface of separate partition by means of radial branch pipes located in the axial pipe. The corrugations of the tape twisted into multi-turn spiral are made in the form of $1\frac{1}{2}$ periods of sinusoid, and each following turn is displaced for $\frac{3}{8}$ periods of the sinusoid relative to the previous one. Spiral is twisted against the direction of rotation of gas flow. Radial branch pipes have in the cross section a form of ellipsis. The diameter of shielding partition does not exceed the diameter of axial pipe. The technical result is in increase of the degree of separation of liquid from the gas-liquid flow, extension of functional capability and increase in the reliability of separator.