

Reusable replaceable dust cartridge for respirators consists of a protective screen, a housing, a pre-filter, upper and lower partitions, a pleated absolute filter, and a ring retainer. A lever system is installed in the lower part of the housing, where the lower partition is designed to be movable and is connected through a rigidly fixed hinge support with a lever that contacts the integrated control and data processing unit, which is located on the outer side of the dust cartridge housing and consists of a microcontroller, a data storage and recording device, a thin-film resistive pressure sensor, a support bracket, power supply components, and a display.