

Dust and fume eliminator unit of recirculation type DEU-CJ

Dust and fume eliminator unit of recirculation type DEU-CJ is used for the high efficient cleaning of air from all types of dust including finely dispersed solid aerosols welding fume.

CHARACTERISTICS

Characteristics	Parameter
Nominal air flow, m ³ /h	1000
Efficiency of cleaning, not less %	
- without additional filter	99
- with additional filter, up to %	99,999
Reserve of static ("free") pressure at the connection to system of ventilation, Pa	500
Inlet socket internal diameter, mm	160
Compressed air pressure, MPa (kgs/cm ²)	0,5-0,6 (5-6)
Power of engine, kW	2,2
Dimensions, mm:	
Length	764
Width	634
Height	1742
Weight, kg	181



Fig. 1. DEU-CJ

GENERAL DEVICE

The unit is equipped with the cartridge filtering element of type CFE and with the device for pulse-jet regeneration by the compressed air.

By request the DEU-CJ unit may be equipped supplementary by the additional filter of type CPF, HEF of classes from F6 to H14 to ensure additional air cleaning from finely dispersed aerosols or from gaseous containants carbon filter of CCF type. In this case the filter is installed on the upper part of the body of the unit that enlarges its height to 300 mm. The choice of an additional filter depends on the disperse qualities of aerosols captured and the requirements to the air clearness.

The unit consists of the following main parts: the body of filter, centrifugal ventilator, the cartridge filtering element of type CFE (hereinafter, in the text "a cartridge") and devices for regeneration of the cartridge by the compressed air. The DEU-CJ unit has a removable door for the cartridge installing on one side. The cartridge is installed at the supporting angles, welded on the perimeter of the body, and is hermitically pressed to the body with a rubber sealing and special tightening devices. The sealing of the door is carried out through tightening rubber and the door is hermitically fixed to the body with screw clamps. The unit is equipped with an air distributing grid, installed in the outlet. The unit is equipped with a removable box for dust collection.

The unit is equipped with 4 wheels and a handle, they permit to move the unit easily along the works and install in a place, suitable for servicing some technological equipment. The unit can be performed for a stationary usage as well, herewith instead of wheels the unit is equipped by special supporting handholds with the regulation. For checking of the cartridge final pressure drop there is a sensor of pressure swing with the light signal in the unit. When the certain resistance is obtained by the cartridge, the light signals of the required regeneration system submit. Regeneration must be carried out at ventilator

switched-off by means of a special device on regeneration control, included into the equipment set.

While the unit is maintained, it can be equipped with different cantilever-turning devices or connected by air pipes with the local sucker. The resistance of the said devices should not be more than the reserve of static (“free”) pressure, specified in the table.

The regeneration of the unit is realized by the use of compressed air at pressure of 5-6 mPa (0,5-0,6 kgc/cm²) connected through connecting pipes 5 (d=1”). The compressed air must be cleaned.

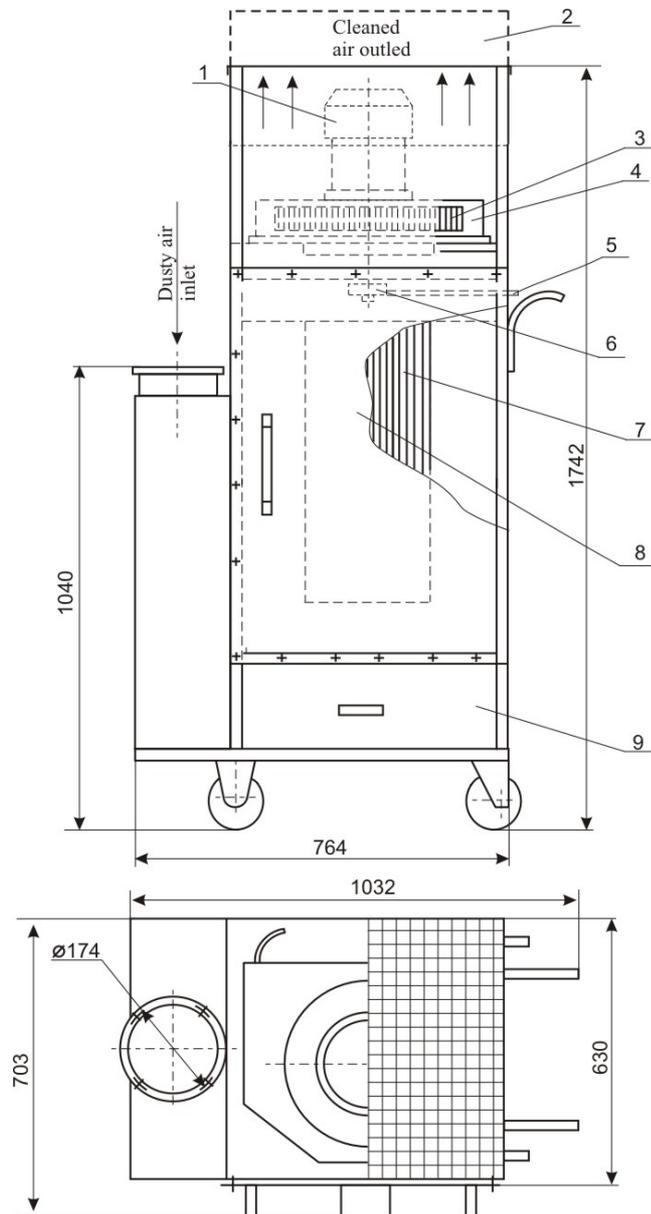


Fig. Scheme of unit a DEU-CJ

- 1 - engine; 2 - additional filter; 3 - wheel of ventilator; 4 - body of ventilator;
5 - connecting pipes for compressed air connection; 6 - pulse valve; 7 - cartridge filtering element;
8 - removable door; 9 - box for collection of dust.**