

Electric filters of type EF

Electric filters of type EF are used for clearing air of aerosols of solid and liquid substances, including oil fog and welding smoke in systems of exhaust ventilation. In some cases cleaning air can be used for recirculation.

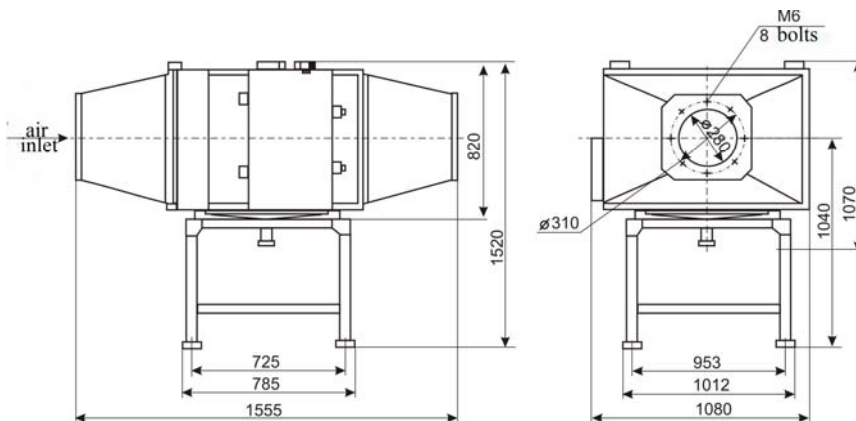
Filters are operational and keep characteristics at temperature of air not lower than +5°C.

Maximum temperature of cleaning air should be 20°C below ignition temperature of trapped liquid and should not exceed 80°C.

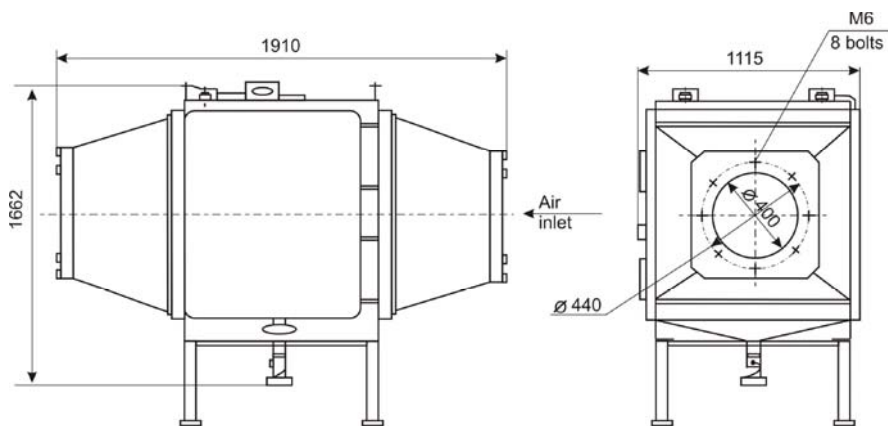
The ambience and cleaning air should not be explosive and contain aggressive gases and vapours.



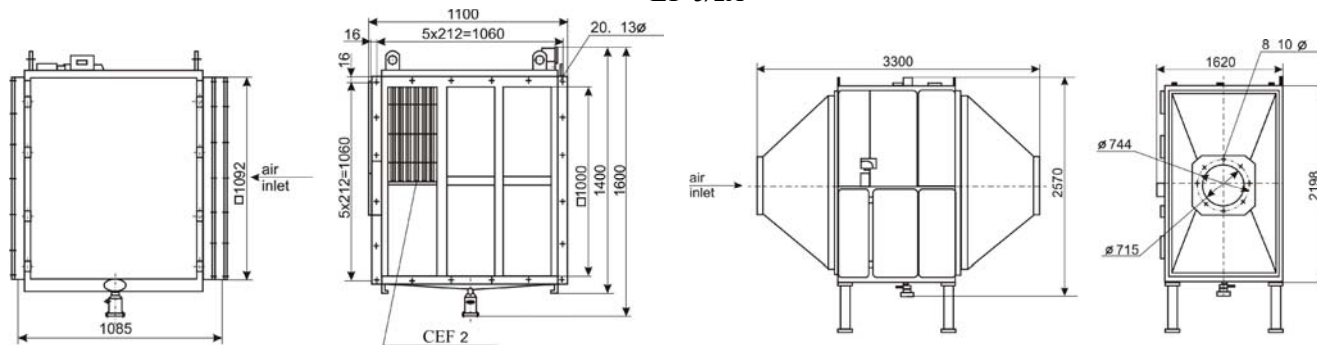
Electric filter of type EF



EF-2,5/2

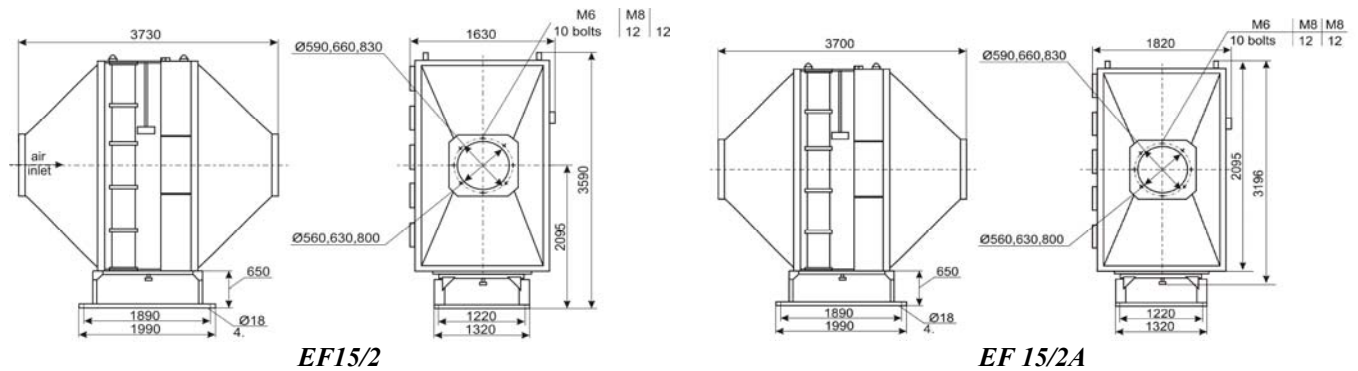


EF 5/2A



EF 10/3

EF 13/2



CHARACTERISTICS

Table 1

| Type of filter EF | Nominal air flow, m ³ /h | Maximum air flow, m ³ /h | Pressure drop, Pa | Efficiency, % | Dimensions, mm | | | Weight, kg |
|----------------------|---|---|----------------------|------------------|----------------|-------|--------|---------------|
| | | | | | length | width | height | |
| 2,5/2 | 2500 | 3000 | 50 | 94-98 | 1670 | 1100 | 1390 | 140 |
| 5/2(5/2A)* | 5000 | 6000 | 50 | 94-98 | 1827 | 1200 | 1400 | 400 |
| 10/3 | 10000 | 14000 | 50 | 94-96 | 1085 | 1100 | 1500 | 350 |
| 13/2(13/2A)* | 13000 | 16000 | 50 | 94-96 | 3300 | 1620 | 2990 | 800 |
| 15/2 | 15000 | 20000 | 70 | 94-98 | 3730 | 1620 | 3590 | 1485 |
| 15/A* | 15000 | 20000 | 70 | 94-98 | 3730 | 1820 | 3590 | 1485 |

* Filters with index «A», for example, EF-5/2A, are equipped with automatic washing device.

Filter owns input power is 15-20 W per 1000 m³/h cleaning air.

GENERAL DESIGN AND OPERATION

Filters consist of metal body in which cells of the electric filter of type CEF 2, and power supply are placed. Filters with index "A" are equipped with the automatic washing device. High voltage of 12 and 6 kV is supplied to the filter cells. The power supply is plugged into electric main with 220 V, 50 Hz.

Air clean is carried out in cells of the electric filter due to preceding charging of aerosols in ionisation zone to which 12 kV voltage is applied, and subsequent trapping of charged aerosol particles in sedimentation zone to which 6 kV is applied. The zone of sedimentation of a filter cell is a set of flat parallel plates between which cleaned air passes. Aerosols contained in cleaned air are charged in a zone of ionisation and then are attracted and precipitate on plates in sedimentation zone.

During trapping of liquid aerosols they flow down by themselves from plates of sedimentation zone into of the filter pallet and are removed from it through hydroseal. Trapped solid aerosols accumulate on plates and are removed in regeneration whose periodicity depends on conditions of operation of the filter. Regeneration of filters is carried out by washing cells taken out from body, in a water bath; for filters with an index "A" - by turning on washing device.

Filters are equipped with a bulb of light-signal armature and have automatic blocking of cell doors through which access to conductive elements of filter is provided. After opening this door the high voltage source is automatically turned off, and conductive parts of cells are grounded by mechanical discharging device which shorting on filter body.