

APZEM Electronics Dry scrubber model No ADS 60

It is used for Advanced Chemical Vapour Deposition Process gas abatement, PCF, PECVD, LPCVD & MOCVD process gases. We have developed and produced client specific point of use facilities for waste gas treatment in the global high-tech industries. In principle, these scrubbers treat condensable, flammable, corrosive, reactive, toxic and/ or pyrophoric gases (e. g. silanes, silane organics, terpenoids, hydrogen, ammonia or hydrogen halides) and fine dust.

Applications:

Semiconductor Industry, Solar – Photovoltaic Industry, TFT (Thin Film Transistors), LED industry, NANO technology Manufacturing, MEMS Manufacturing, R&D center, Advanced research institute, etc.

Working Principle:

The principle involved in the dry scrubber unit is adsorption technology. The adsorption media present in the unit helps in controlling the pollutants. This is done by forcing the fumes across a bed of adsorption media.

Adsorption theory:

Adsorption is a process that involves adhesion and accumulation of atoms, ions, molecules at higher concentrations on the surface of the substrate. The unbalanced force exerted by the molecules or atoms present in the solid surface aids in easy adsorption. When substances or pollutants hit the solid surface they are attracted by these forces and tend to adhere. Adsorption is a phenomenon where gas molecules passing through a bed of solid particles are selectively held there by attractive forces which are weaker and less specific than those of chemical bonds. During adsorption, a gas molecule migrates from the gas stream to the surface of the solid where it is held by physical attraction. At equilibrium, the quantity of gas that is adsorbed on activated carbon is a function of the adsorption temperature and pressure, the chemical species being adsorbed, and the carbon characteristics, such as carbon particle size and pore structure. For a given adsorbent- pollutant gas combination at a given temperature, an adsorption isotherm can be constructed which relates the mass of adsorbate per unit weight of adsorbent (equilibrium adsorption capacity) to the partial pressure of pollutants in the gas stream. The adsorption

capacity increases with increasing pollutants partial pressure and decreases with increasing temperature.

Technical Specifications:

Dimension: 850 x 850 x 1400 mm (L x B x H)

Air handling volume: 100 LPM

Pressure drop: 75 mm of wc

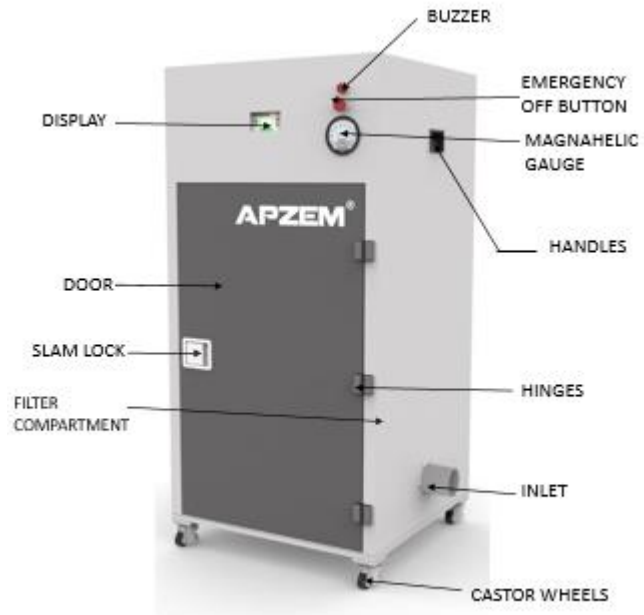
Removal efficiency: Above 99%

MOC: MS Powder coated

Adsorption media quantity: 100 Kgs

Features:

- Minimum installation needed
- Shall be conveniently transported and installed in virtually any location
- Continuous operation with less maintenance
- Quick and easy changeouts
- Sturdy and compact designed
- Low operating cost
- Zero waste water technology



CVD Scrubber