

EXHAUST SYSTEMS, GENERAL & COMFORT VENTILATION

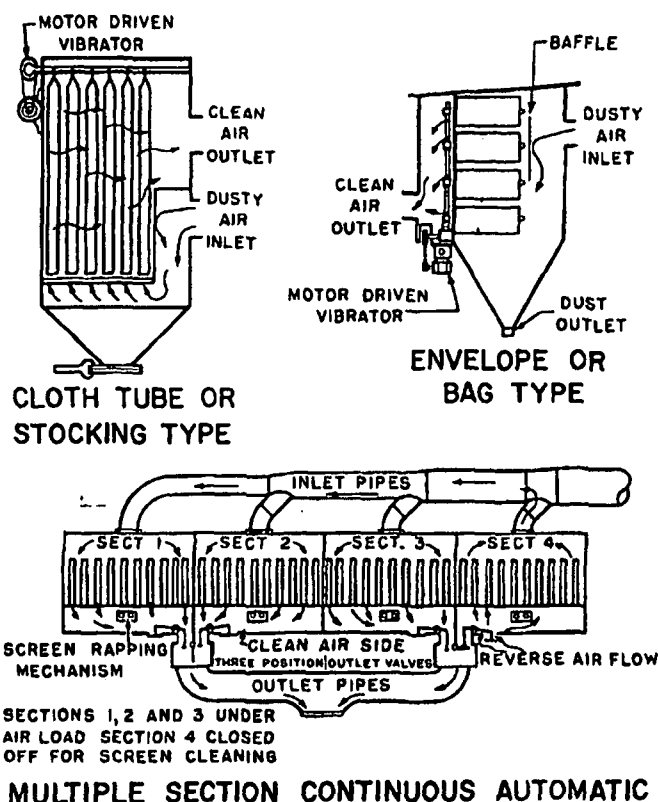


Fig 28-11. Three types of cloth filters

Courtesy American Conference of Industrial Hygienists "Industrial Ventilation"

stopped periodically, at which time the shaker comes on automatically for a variable period, usually two to five minutes, and then shuts off. Regular shaking is essential, and this is the best way to assure it. A U-tube or water manometer should be permanently mounted on the outside of the casing, so the pressure drop can be checked at least daily. A buildup of filter resistance, as shown by increased pressure drop, is the warning sign that the filter is becoming plugged and needs to be shaken.

Access doors should be located conveniently so the interior of the casing can be checked periodically, perhaps weekly, for leaks in the bags, bridging of dust in the hopper, etc. Too often filters are located

where they are inaccessible—and are then neglected.

Cloth filters of the "reverse air jet" type that can be continuously cleaned during filtration (no shutdown) are widely used (see Fig 28-12). They consist of a felt-like tube with the dusty air entering on the inside. On the outside is a slotted ring made of pipe that continuously travels up and down the bag surface. Compressed air is blown at high velocity out the slot, which in passing through the bag dislodges the dust, so it falls down in the dust hopper. The rate of air flow delivered by the exhaust system may be 15 to 40 cfm per square foot of cloth, far higher than in the