Water booth vs. Dry filter spray booth

Water wash booths are designed to minimize particle matter emissions. Water continuously circulates through the system and is discharged into a container or pit where it is chemically treated with detackifiers, flocculants and defoamers to coagulate particulates into larger particles and remove stickiness. Sunken particulates form sludge which is decanted and shoveled into containers for waste disposal. Floating particulates are skimmed from the surface of the water for disposal. In some applications, particulates are collected, washed, homogenized, dewatered and blended with virgin coating for reuse.

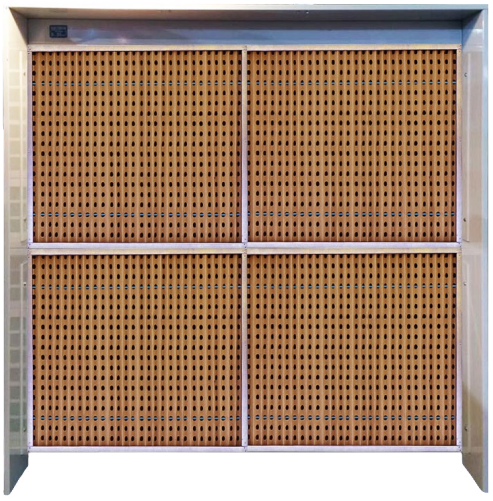
If make-up water is not continuously added to the system, the exhaust will become inefficient in removing particles and may result in particle recirculation. The addition of alkali and oil will keep the water at the correct pH and chemical composition to ensure effective removal of particulates. A sight glass is used to monitor water conditions and levels, the best indicator of water filter performance.

The primary disadvantage of water curtains is the generation of wastewater and sludge. Additional costs include water, chemicals, labor, wastewater treatment and hazardous material (sludge) removal.

Dry filter booths use dry filter media, to capture any wet solids or liquid particles from the constant airstream passing through the exhaust filter.

Benefits of dry filters are decreased operating costs: no water, chemical, or sewer costs, reduced waste generation and labor, and increased particle arrestance efficiency.

Wash Spray booth



Dry Spray booth

How to convert a water spray booth to dry filtration

1. Remove everything out of the exhaust chamber that directs water or may otherwise impede airflow.

2. Seal all openings for water drainage and patch any panels that may allow air leaks.

3. Install exhaust frame at front of opening.