

## ■ Cross-Flow Scrubber

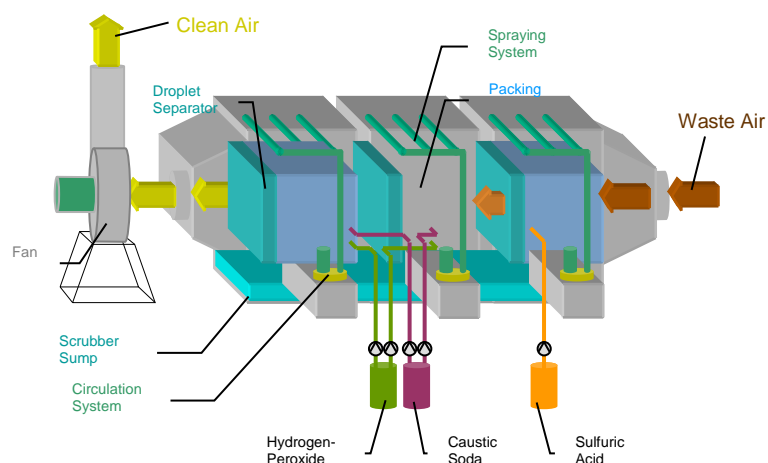
In horizontal scrubbers the air to be cleaned flows horizontally through the filling material bed and here gets in touch with the trickling scrubbing liquid in a cross-flow. The harmful substances are hereby transferred from the air to the scrubbing liquid.

### Functional Principle

Depending on the application a chemical-oxidative or biological operation mode is possible.

The thin square filaments of the packing material cause the liquid drops in the packing to be divided and new droplets to be built on the lower edge of the packing. Thus, the liquid surface of the single droplets is continuously renewed. This action is the reason for the excellent absorption and cleaning properties of this packing material.

This design has especially proved itself for multi-stage applications because all stages are passed through "in line", space-saving at the lowest possible pressure loss. However, since each washing stage is equipped with its own autarkic scrubbing water system, different settings can be adjusted in each stage in order to ensure an optimal absorption of diverse contaminants. So it is possible to use acid as a scrubbing medium in one stage and alkaline in another stage. Therefore alkaline and acid contaminants can be absorbed successively in one unit. The chemicals are added automatically through controlled dosing pumps. In this way the chemicals are only added as needed and in a concentration set in advance. Sudden fluctuations of contamination are ideally absorbed by increased addition of chemicals. Cross-flow scrubbers are usually made of fiberglass reinforced plastic in order to guarantee ideal corrosion- and weather resistance. Fiberglass reinforced plastic is light and a roof can be erected if space is limited.



### Characteristics

- Horizontal air flow
- Multiple stages in one housing / simultaneous scrubbing of various contaminants
- High performance / high efficiency
- High flexibility at fluctuating raw gas contamination  
Ideal utilization of fresh water and deployed chemicals
- Low space requirements / low and firm design
- Low pressure drop
- Corrosion- and weather resistance
- High plant safety (internal redundancy)
- Low risk of clogging by selection of suitable filling material
- Clear and easy-to-maintain operation panel
- Can also be operated as a bio scrubber

### Application Examples

- Sewage plants
- Sewage sludge drying
- Rubber industry
- Collagen production

