

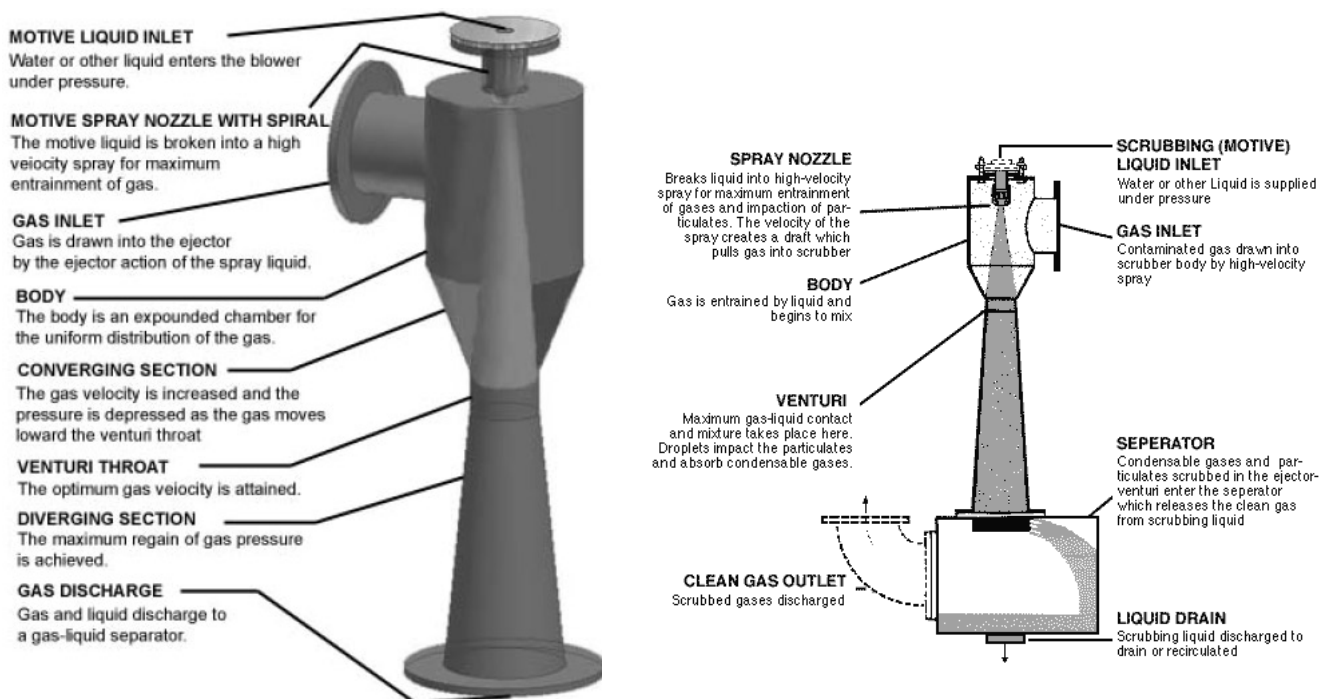
Compact WET SCRUBBER

Process description

A venturi scrubber consists of a converging section, a throat (the narrowest part of the venturi tube) and a diffuser. The dust/gas mix flows through the venturi tube and reaches top speed in the throat section. Thereafter, the mixture passes into the diffuser where the speed drops again. Liquid is added to the gas flow either in the throat section or prior to it. Intensive mixing takes place between the gas and the liquid in the throat section of the venturi tube. Due to the high speed realised by the gas and liquid, water is released in fine water droplets.

The venturi scrubber itself has a low volume. The dimensions of the installation are primarily determined by the droplet separator, which can be a few times larger than the scrubber.

Venturi scrubbers can be used to remove small particles ($< 1 \mu\text{m}$) from a gas stream. However, they can also be used for larger particles, though energy use is relatively high in such cases.



Applications

Venturi scrubbers are used in a variety of settings, including:

- The chemical industry, to separate dust and aerosols;
- The metal industry for various types of waste gases;
- Waste incineration installations;
- Gasification processes;
- Potato-processing industry for the removal of starch;
- Glass industry;
- Melting processes in metallurgy;
- Foundries;
- Sintering processes;
- Drying processes;
- Fertiliser production;
- Pharmaceutical industry;
- Plastics industry.

Product specifications

Jadition designs, develops and manufactures wet scrubber for restrain installation. We are focused to solve dirty gas process. Our goal is to help R&D departments, laboratories and univeristies to improve their ecological footprint during their research.

We are not focus on big plants we rather work with small and medium sized industries.

Specifications

All our skids are made with 316L stainless steel , you can move it with a 2 fork elevators.

The scubber also include: pump, pressure sensor, electrovalves, level sensors, touchpad screen, pH meter, other instruments might be add upon your request/needs...



Dimensions

Dimensions 210x50x140 cm

Weight +- 500 kg

Water vessel capacity 550 liters



Flow capacities

Air flow rate From 60 m³/h - 2 mbar Vacuum
To 120 m³/h - 4 mbar Vacuum

Electrical control panel

The entire plant is driven and controlled in a fully automatic way by a programmable logic controller installed in the electrical control panel.

Power supply : 220 V

Functions

- Fix the set point of the pump
- ON/OFF electrovalve to fill in the vessel
- pH value
- Add neutralizer manually
- Pressure value inside the piping
- Emergency STOP
- Level value of the vessel
- Set high/low pH contact to add neutralizer
- Other possibilities on request

Chimney

Upon your needs we adapt the inlet and outlet on request

Pump consumption

0.75 kW



Advantages & disadvantages

Advantages

- Relatively low maintenance
- High removal yield
- Simple and compact construction
- No mechanical components
- Gaseous components are absorbed
- Able to deal with fluctuating gas flows
- No ventilator required

Disadvantages

- Large pressure drops
- Signs of erosion when scrubbing abrasive mediums



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