Horizontal Knit Mesh Chemical Fume Scrubber and Fan

Stock No	DPS600
Model	Horizontal Knit Mesh Fume Scrubber
Condition	From a working environment, Seen working by RSW
Approx Duty CFM / M³/Hr	15000 // 25500
Filter Area ft² / m²	N/A
Location	Derby, UK
External Dimensions (WxDxH mm)	5100m x 2200mm x 3100mm

Description

This horizontal polypropylene fume scrubber and matching 30kW extraction fan is designed to process acidic and corrosive fumes, complete with control panel and associated equipment.

Polypropylene chemical resistant scrubbers handle all types of fumes, vapors, odors and particulates that arise in any type of fuming processing.

Polypropylene scrubbers for all chemical abatement applications. Suitable applications include pharmaceutical manufacturing, chemical milling, anodizing, acids caustics, etch, pickling, bulk storage, chemical mixing, metal finishing, solvents, clean lines, clean rooms, NOX, food processing, alcohol production and sterilization of containers.

The horizontal fume scrubber is designed in order to treat fumes from chemical treatments line. This vapor was laden with

particulate so the integration of equipment which injected reagent chemistry, kept the process under control.

Suitable Applications

Polypropylene horizontal scrubbers can perform the removal of acidic, alkaline, soluble organic gasses, vapors, and odors from a gas stream. The horizontal technology scrubbing covers the widest range of vapor and gas scrubbing available.

Applications

- Metal pickling lines
- Chemical cleaning/milling lines
- Acid etching lines
- Acid/Chemical bulk storage
- Solvent bulk storage
- Metal finishing lines
- Metal plating lines
- Chemical mixing operations
- Chemical processing equipment
- Food processing
- Pharmaceutical blending
- Pharmaceutical production

General Overview

A scrubber uses the natural process of recirculating water decontaminating air - essentially the same process that occurs during a rainstorm, but made more efficient by technology and engineering.

1. Contaminated air is passed through the scrubber using either negative or positive pressure, created from a the fan on either upstream or downstream from the scrubber unit.
2. The gas stream enters the scrubber unit and travels through the twin packed bed section (where the contaminants are actually separated from the gas).
3. The gas stream is vigorously exposed to the scrubber solution, through a demister assembly (to remove the liquid droplets from the exiting gas).
4. The clean gas stream is then discharged either to the atmosphere or routed back through the original process.

Efficiency

The scrubbers feature a high amount of active surface area contained within a knit mesh filter pads (the filter material composite chosen is based on the individual fume application), ensuring that it breaks the liquid streams into multiple, even surface films that create intimate gas/liquid contact at a low pressure drop.

Operation

During operation, gas flows through the filters while pumped scrubbing liquid flows down over the packing material. This counter-flow design principle offers the optimal mass transfer to effectively wet the gas stream.

The wetted and neutralised gas steam then passes through a second free air void whereby it is sprayed a second time with its neutralising solution before the chemical droplets are removed from the gas stream in the vaned eliminator section, with the chemistry being returned to the sump tank for pumped recirculation.

Safety Features

The recirculation of the neutralising chemistry by the large 11kW chemical resistant pump are both monitored for flow rates and contamination levels to keep the system at peak efficiency.

Dimensions

- Fan and frame dimensions - 3000mm x 2200mm x 2200 mm,
- Inlet size - Ø1000mm,
- Discharge size - 700mm x 900 mm
- Scrubber size - 2350mm x 2200mm x 3100 mm
- Overall dimensions (WxDxH) - 5100mm x 2200mm x 3100mm (With silencer and stack, height approximately - 4700mm)

Photographs taken prior refurbishment. Our refurbishment service is not available on all machines.