



Johndec Engineering Plastics

# High Performance Fume Scrubbers



Johndec manufactures a complete range of high performance scrubbers that are used for removing undesirable acid fumes, chemical substances or odours from the gas stream. Fume scrubbers manufactured by Johndec are individually designed to remove mist, entrained liquid particles, noxious corrosive gases and vapours from the exhaust air stream. A packed bed using Johndec Scrubber Packers is the heart of the scrubber. Pollutant gases can generally be removed to any desired concentrations to meet local air pollution regulations. The pollutants are removed by means of:

**Gas Absorption:** Noxious or otherwise undesirable gases are absorbed into the liquid phase.

**Impingement:** Particulate matter is removed through impingement as it is first forced through a wetted packed bed and then through a chevron blade or mesh pad filter section.



# Construction and Engineering

Johndec utilizes its extensive knowledge about materials of construction, chemical process design, and experience with scrubbers in our system applications to design, engineer and construct the best, most efficient fume scrubbers available.

Regardless of how specialized a fume scrubber needs to be, Johndec provides the design calculations, air flow requirements, specification performance data, and removal efficiency for obtaining the air permit.

Scrubbers can be manufactured from PVC, Polypropylene or Polyethylene. Each scrubber application is individually designed and engineered. These units are used to help companies comply with emission control for EPA regulations or to preserve the quality of the environment for workers and the community.

Johndec scrubbers are constructed according to the highest quality standards in the industry and are built for maximum corrosion resistance under the most severe duty conditions.

## Suitable Applications

Johndec scrubbers can perform the removal of acidic, alkaline, soluble organic gases, vapours, and odours from a gas stream. The packed bed technology scrubbing covers the widest range of vapour and gas scrubbing applications.

Being an independent fabricator of fume scrubbers allows us to choose the best materials of construction, as well as choose the best packing for your application. We have designed and/or specified scrubbers for the following 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
- ▶ Fume Cupboards
- ▶ Electrowinning Cell and Gold Room Exhaust Systems

## Efficiency

Our scrubbers feature a high amount of active surface area with random dumped packing. The packing material chosen is based on the applications; ensuring that it breaks the liquid streams into multiple, even surface films that create intimate gas/liquid contact at a low pressure drop.

During operation, gas flows through a packed bed while scrubbing liquid flows down (by gravity) over the packing material. This design principle offers optimal mass transfer.

For further information on the range of Johndec High Performance Fume Scrubbers, please contact us.

