

Turbotak Scrubber

Gas Absorption and Particulate Emissions Control

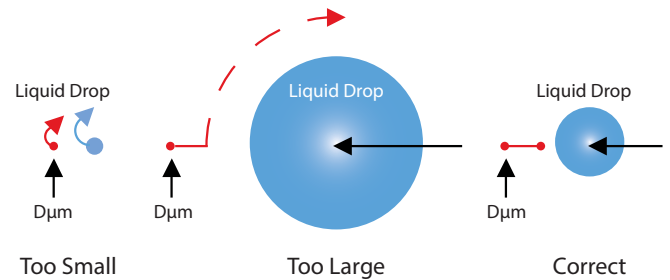


Turbotak Scrubber

How it Works

The Dürr Megtec Turbotak wet scrubber is a low maintenance, low-pressure drop air pollution control solution. The scrubber uses a finely atomized liquid to remove combinations of particulate, acid gases (Cl_2 , ClO_2 , SO_2 , etc.), fumes, vapors, and mists from industrial process gas streams.

Particulate or mist suspended in the gas stream collides with the liquid droplets. Droplet size distribution is crucial: the optimum droplet diameter for particulate removal is 15 to 20 times the particulate aerodynamic diameter.



Agglomerated droplets are removed by inertial means, gravity, and a downstream mist eliminator.

When absorbing acid gases, the quantity of gas transferred to the liquid phase is proportional to the surface area of the atomized spray.

The significant collective surface area of the large number of extremely fine droplets in a Turbotak wet scrubber provides superior removal efficiency.

Superior Design

The Turbotak wet scrubber features a superior design that has no internal obstructions, such as packing media, thereby reducing the potential for fouling. In addition, low gas velocity minimizes or eliminates abrasion of internals. Along with this, the multiple stages of our patented Turbotak™ atomizing nozzles saturate the gas stream for optimum gas absorption and particulate control. These erosion and plug-resistant atomizing nozzles feature superior control and range of droplet size distributions.

The Turbotak atomizing nozzles are controlled independently of the gas stream. This gives the scrubber a low sensitivity to fluctuations in gas flow rates and contaminant concentrations. Pressure drop across the Turbotak wet scrubber is typically less than 2 in. w.g. (0.5 kPa), a critical factor for retrofit installations because process induced draft (ID) fans rarely have significant excess capacity.

Horizontal or vertical configurations accommodate plants with limited available space. Installing the Turbotak wet scrubber in-line provides high-efficiency contaminant gas removal, while reducing costs related to connecting ductwork.

The scrubber includes a low-maintenance mist eliminator that is proven to provide an effective combination of low-pressure drop and high-efficiency droplet removal.

Superior Performance

The combination of droplet sizing and surface area provides simultaneous removal of contaminant gases, particulate and mists.

Contaminant gas absorption is achieved using a suitable scrubbing liquor. Selected based on the contaminant to be removed, cost and operational considerations, scrubbing liquors include water, chemical solutions and slurries. Unlike packed towers, the Turbotak wet scrubber features low maintenance and is not susceptible to fouling in particulate-laden gas streams.

The scrubber typically uses less energy, fewer chemicals, and lower water volumes for gas absorption applications than other designs.

Additional Features

- Scrubbing liquor can be circulated for improved chemical utilization and reduced effluent
- Maintenance can be performed without shutting down the system; inspecting nozzles without interrupting production maximizes uptime rates
- Design is optimized to help meet regulatory compliance and process performance goals
- Easy-to-use controls enhance operator performance and safety
- Industry-leading performance from an engineered design that is patented as a chemical reactor

Turbotak Scrubber Pilot Plant

A Turbotak pilot system is available for on-site performance demonstrations and data collection. This cost-effective approach provides actual process results prior to scale-up to a full-size commercial installation.

Superior Solutions

Dürr Megtec products are proven to meet stringent emissions regulations, improve process performance, and protect downstream air pollution control and process equipment. Our scrubbers, wet electrostatic precipitators, and evaporative gas cooling systems are engineered to meet your specific performance requirements. With patented solutions and over 45 years of application experience, our engineers have a thorough understanding of how equipment operation and variations in process relate to the design of air pollution control systems.

Complete Service

The Dürr Megtec project scope can range from equipment supply (including fans, ductwork, pumps, and instrumentation) to complete turnkey contracts. We handle the installation and manage the start-up and commissioning services, as well as provide on-site operator training, spare parts, and post-installation maintenance services. Upgrades and repairs to competitor products are also available.

Single-Source Responsibility

Through strategic alliances with leading companies, we have extended our international reach and expanded our range of solutions to provide solutions for most industrial air emissions control requirements.



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