KIMRE™
CLEAN AIR TECHNOLOGY

How Do Tower Scrubbers Work?

Reducing the harmful impact on the environment has become a legal, ethical, and practical responsibility of industries across the globe. Unfortunately, most industrial processes involve the release of air pollutants. Luckily, wet scrubbers have been an effective option for controlling this release and limiting air pollution as a whole.

They are able to remove both organic and inorganic pollutants that contribute to global warming by the depletion of the ozone layers and the disruption of our ecosystem. A **packed tower scrubber** can also prevent illnesses caused by severe air pollution that has become prevalent in several countries worldwide.

Packed tower scrubbers are also referred to as packed column or packed bed scrubbers. They are specifically designed to eliminate harmful chemicals from gas flows. They are highly reliable and versatile systems that can be used in a wide variety of applications. Some of the pollutants that they can effectively eliminate are:

- Inorganic gasses
- Fumes
- Odors

Typically, they are best used in systems that produce gasses of extreme pH.

Types of Packed Towers Scrubbers and How They Work

Packed bed scrubbers contain **scrubbing packing media** such as spiral rings. There are two types of packed tower scrubbers: vertical packed bed scrubbers and horizontal packed bed scrubbers.

The vertical-packed bed scrubbers are designed for gas that flows upwards while the scrubbing liquid flows downward. The scrubbing liquid meets a liquid in a spray distribution

system, and gasses are absorbed in the random packing section. Clean, filtered gas is obtained at the top of the vessel.

As the name implies, gas flows left and right in a horizontal packed bed scrubber. The scrubbing liquid, on the other hand, flows down through the distribution system.

Just as with the vertical packed bed scrubber, the gasses are absorbed in the random packing section. There is no need for an external tank in a horizontal packed bed scrubber as an integral sump is placed at the bottom of the packing section.

Why Tower Scrubbers Are Used

There are numerous advantages to using tower scrubbers. They are effective against a wide variety of toxic chemicals and contaminants, including noxious gasses, odors, fumes, and acids. These chemicals and contaminants are produced as by-products in most, if not all, industrial and municipal processes. Benefits of using tower scrubbers include:

- Reduced capital cost
- Mass transfer is done with greater efficiency
- Operations can be carried out in corrosive environments as well
- More compact in terms of space when compared to other wet air scrubbers

Mass transfer is a crucial part of the processes such as absorption, scrubbing, stripping, and distillation. Tower scrubbers aid this part of the process. Tower scrubbers are different from other types of wet scrubbers as the internal **scrubber packing** is held within the scrubbing vessel.

To explore our one-of-a-kind KON-TANE Scrubber and Tower Packing, visit our website to learn how it can address all your needs!

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