

Packed Bed Wet Gas Scrubber Design

Water Only Scrubbing - Proper Packing Choice

Alcohols (methanol, ethanol, propanol – iso and normal), Methyl Ethyl Ketone, Ethylene Glycol
Acetone, Acetaldehyde, Formaldehyde, Dimethylformamide
And Other Water Soluble Light, Volatile Organics and Other Light Highly Water Soluble Species



Gas contaminated with water soluble light organic, such as those listed in the header above, is often cleaned in a packed bed wet scrubber using water only to scrub. The gas with offending constituent(s) is passed over bed of packing as water is passed over the packing either counter current or sometimes in cross current design. The packing enhances mass transfer of the pollutant species from gas to liquid (water) phase. Often the scrubbing is done as ***water once through***. This means that there is no recirculation of the scrubbing liquor. The water enters the scrubber with no solvent and the same flow exits the scrubber – now laden with a solution of the target pollutant(s). Special care must be taken when designing such a scrubber. For example, methanol, CH₃OH, is infinitely miscible in water. So is water dissolved in methanol or is methanol dissolved in water? The latter is what is needed – and care must be taken so that the volatile, light methanol does not re-emit to atmosphere as the water laden with the alcohol exits the scrubber.

To help us design a wet scrubber for your air flow, please provide the data requested below. Find a form to use on the other side of this flyer.

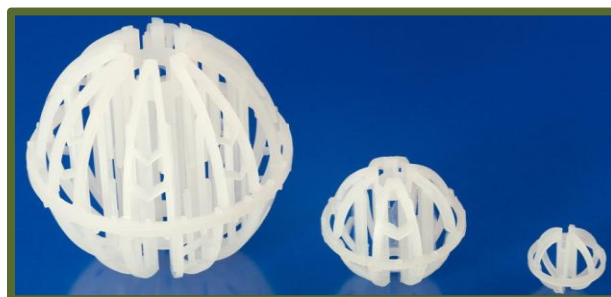
Required Data – Design of New Tower

Contaminant(s) with Inlet Concentrations
Required Outlet Concentration(s) or % Removal
Gas Inlet Temperature and Pressure

If Repack / Retrofit of Existing Tower, please add:

Current Packing and ΔP of the Packed Bed
Diameter of Tower, Depth of Packed Bed

Lastly – any additional project information that may be useful to us. Examples, if new tower is there a height restriction? If an existing tower, is fouling an issue? Do not hesitate to provide as much information as you wish.



3.5", 2" and 1" sizes of Jaeger Tri-Packs®
Wet Scrubber and Air Stripper Tower Packing
Jaeger Tri-Packs® is a trademark of Raschig-USA, Inc.



Low Profile Rings® Wet Scrubber and Air Stripper
Tower Packing – in Various Plastic Resins
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Water Only Wet Scrubber Design - New and Repacks

Name:

Firm:

Address:

Phone:

FAX:

Email:

Gas Flow / Please Define Units:

Inlet Gas Temperature °F or °C:

Inlet Gas Pressure:

Contaminant(s)	Inlet	Outlet or % Removal Required
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IF RETROFIT / REPACK

Diameter of Tower:

Current Packing Type / Size:

Packed Bed Depth:

Packed Bed Pressure Drop:

Water Flow Rate:

Water Recycle Rate, If Any:

Additional Information: Examples; Height limitation for new tower? Is packing in existing tower fouling? If so, how often? Do not hesitate to provide as much information as possible – use an extra sheet if needed. Please fax or scan / email to us.