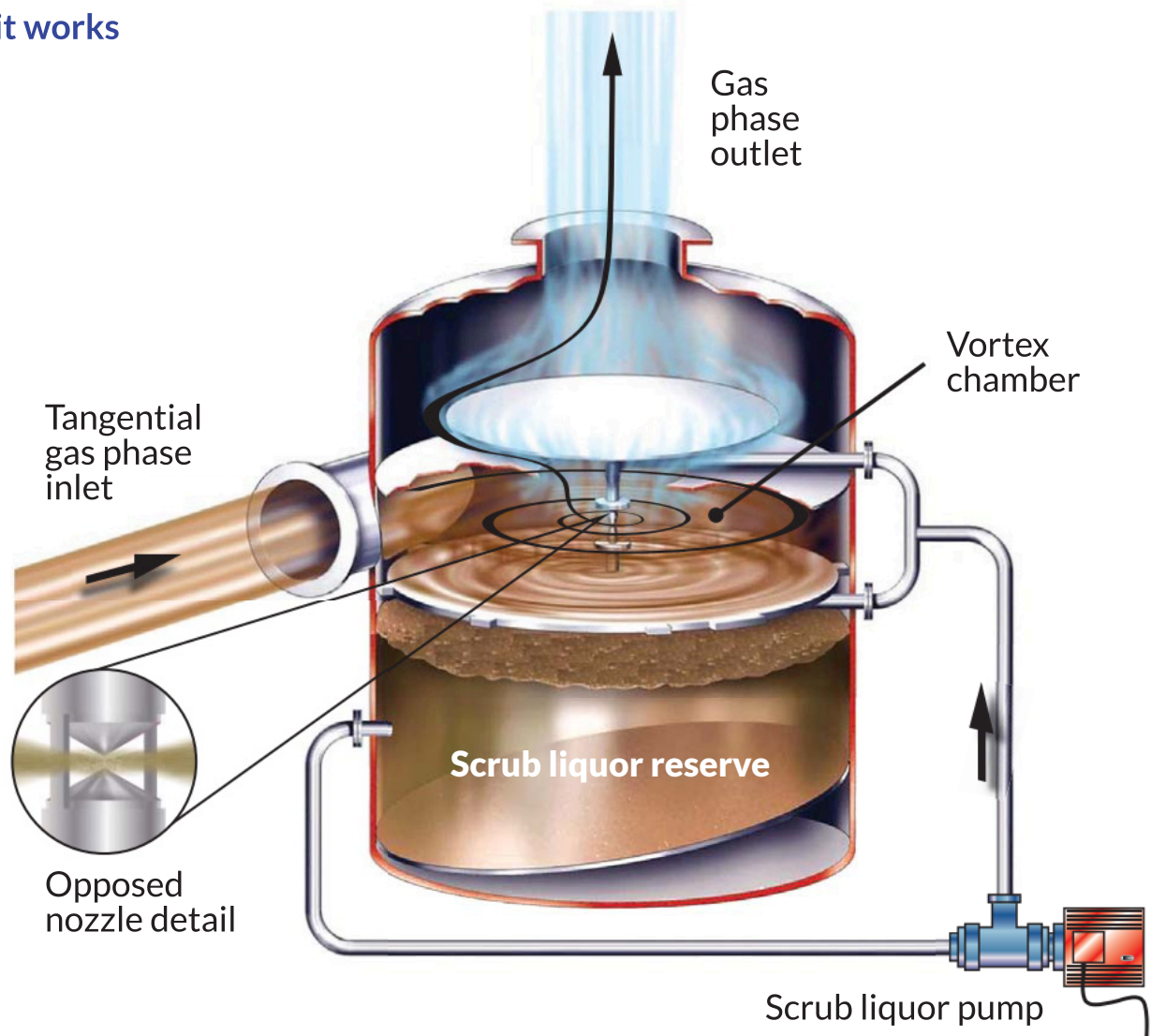


V-tex[®]

Compact gas cleaning technology

Technology
for a
Sustainable Future

How it works



V-tex[®] is an innovative gas scrubber that is particularly suited to tough and challenging gas scrubbing applications where traditional scrubbing technologies cannot cope. The patented design of V-tex[®] harnesses the properties of a vortex to deliver exceptionally high scrubbing efficiencies within a compact footprint. It has no moving parts in contact with the process stream and no packing to foul - properties that clients across many industries value highly.

Gas to be scrubbed enters the body of the V-tex[®] chamber tangentially and spirals towards the centre to form a vortex. At the heart of the vortex in the center of the chamber are opposed jet nozzles through which scrubbing liquor is pumped under pressure.



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The action of the pressurised liquor streams colliding as they exit the opposing nozzles produces an array of fine liquor droplets that are flung centrifugally at high velocity towards the walls of the chamber. As the droplets pass through the gas stream, they absorb the gas contaminants, eventually impinging on the outer wall of the chamber, where they coalesce and flow down to the sump at the base of the unit. The cleaned gas then exits the V-tex[®] system, passing through a disengagement chamber at the top of the unit, where fugitive liquor droplets are captured and returned to the sump.

Patented nozzles

At the heart of the system are the patented directly opposed nozzles. These nozzles are the critical design feature that create the array of droplets to provide the very intense gas/liquid contact. In addition, the design of the nozzles means that they are self-cleaning in the event of any blockage. Any particulate contaminant in the liquor causing a nozzle to be blocked would be broken down by the force of the liquor jet from the nozzle directly opposing it. The system is therefore largely self-cleaning and maintenance free.

Inherent advantages

When the scrubbing liquor is pumped to the spray nozzles, the conditions in the V-tex[®] are ready to treat an incoming gas flow. Even at near zero gas flow, the intensity of the gas/liquid contact is maintained. This means that the V-tex[®] operates at near peak efficiency even with very high gas turndown ratios, theoretically down to zero gas flow. This is a distinctive feature that permits V-tex[®] to be used for applications which are impossible for other types of scrubber, such as standby and emergency scrubbing applications, or treatment of batch reactor vent gas. Furthermore, as there is no packing within the vessel, there can be no possibility of fouling. This avoids the kind of problems associated with packed columns, as shown on the right.

Some applications of V-tex[®]

- Acid/Alkali gas scrubbing
- De-dusting
- De-odourising
- Gas quenching
- Emergency gas scrubbing
- Tank vent scrubbing
- Air stripping
- Steam stripping
- Distillation
- Halogen scrubbing
- Particulate removal
- Fuel gas cleaning
- VOC removal
- Reactor gas scrubbing

