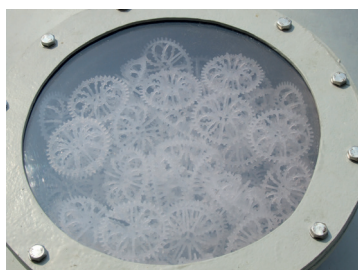


Chlorwäscher

Chlorine Gas Neutralization Scrubber



Configuration Lutz-Jesco Chlorwäscher

Packed bed scrubbers are versatile, reliable systems that are specially designed as emergency chlorine gas neutralization or scrubbing units. The gas neutralization system comprises of

- Control panel
- Pumps
- Discharge pipes
- Fan
- Reagent storage tank
- Scrubber tower (single or two stage)
- Interconnecting ducting from tower to fan and fan outlet ducting

We can of course customize our units to the customer requirements and specifications. As different countries requires different standards or local DOSH requirements, we can customize our delivery in accordance to these conditions. Units are supplied in complete knock-down components (CKD) to enable economical transportation and handling to the installation site where they are easily re-assembled. Units can be supplied as a fully assembled unit upon special request.

Product range

Category range	Capacity	Washing period
CHLORWÄSCHER Single stage	1 Tonne	1 hour and more
CHLORWÄSCHER Double stage	1 Tonne	1 hour and more

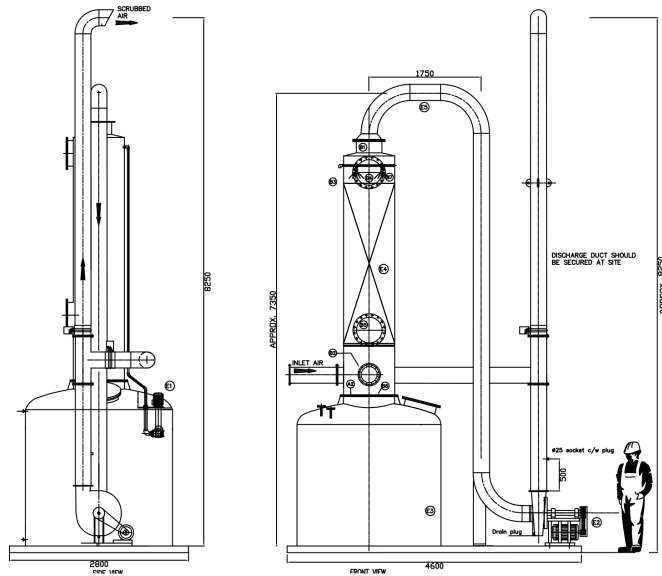
NOTE: We can build other designs according to given required specifications in accordance with local or international standards and regulations.

Operation description

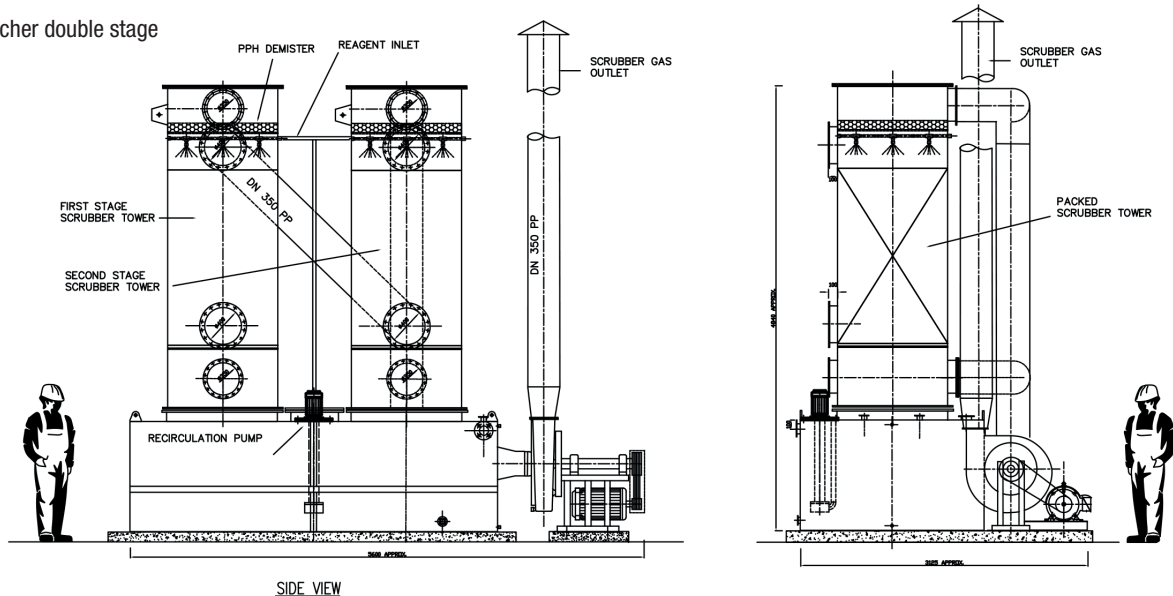
The standard neutralization system adopted in a single stage or double stage configuration of the "counter-flow" packed bed type wet scrubber design, where air contaminated with chlorine gas is sucked into the lower section of the scrubber tower or scrubber bed under negative pressure and directed vertically upwards (for single stage) or through a second stage (for double /two stage designs). The negative pressure system provides the advantage of low or no possibility for the contaminated air with chlorine to escape into the atmosphere in event of a leak in the inlet duct. Scrubbed air will discharge from the suction fan to a high point. A reagent re-circulation pump will spray or "rain" the neutral-izing fluid in the opposing direction of the air flow. Inside the scrubber tower, contaminated air with chlorine gas will be neutralized with the absorption of the scrubbing fluid with a removal efficiency of more than 99.5%. Mass is transferred from a gas stage into liquid. Only "full" cone type nozzles are employed for use to distribute the neutralizing agent. Inside the scrubber tower or bed are random packing rings, of sufficient area and height to enable the quick, safe and efficient absorption of chlorine gas. A demister or mist eliminator installed at the top of the scrubber tower will prevent aerosol being discharged as well as loss of neutralizing agent. Our standard scrubbers utilize NaOH or caustic as the scrub-ber media and with excess of stoichiometric requirements. The storage tank is also designed to store both the stoichiometric and excess of the neutralizing agent utilized which is necessary as the strength of the agent decreases during the scrubbing process. Tanks are complete with inspection manholes, overflow, drain, inlet and level gauge. All pipes, valves, specials and spray header for the pump re-circulating and spraying system as well as fan ducting to the tower/bed are included.

Schematic drawing of the Chlorwäscher

Chlorwäscher single stage



Chlorwäscher double stage



Standard Materials of Construction

Standard materials used on our units are compatible with the exothermic reaction of the absorption process and are corrosion resistant to the scrubber media as well as the by products created during the reaction

- Tanks PP/FRP
- Scrubber tower PP/FRP
- Packing PP
- Packing support PP/FRP
- Grid
- Re-circulating uPVC
- Pipes
- Fan ducts PP/FRP
- Bolting material SS304 on flanges

Other materials are also available on request or based on specifications