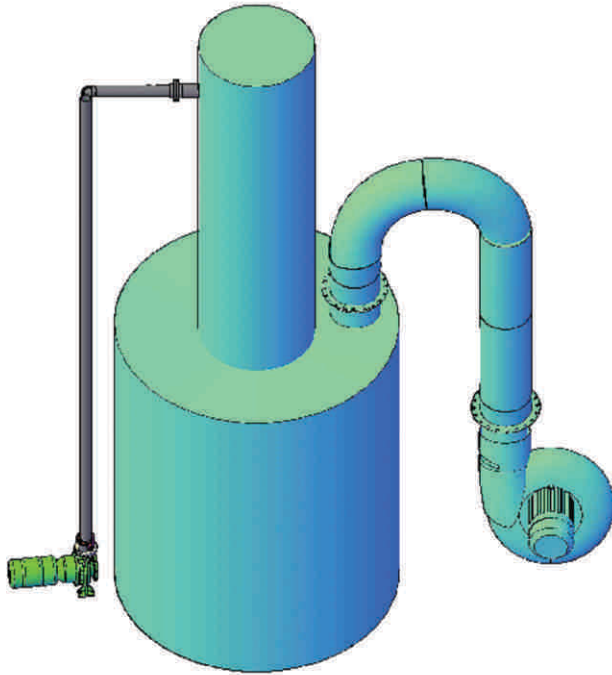


Water Engineering Services FZE

Chlorine Neutralizing Scrubber



Chlorine Neutralizing Scrubber Series ASA100



Configuration

WES **ASA100** chlorine neutralizing scrubbers are versatile, reliable systems that are specially designed as emergency chlorine gas neutralization or scrubbing units.

WES chlorine scrubbers are engineered to meet national codes for the neutralizing of hazardous gas releases from pressurized 65kg cylinders and one-ton containers of chlorine gases.

WES wet scrubbers are safe, user-friendly, low maintenance systems tested and proven for use in municipal and industrial applications where the potential exists for the accidental release of heavier-than-air hazardous gases.

The WES **ASA100** wet emergency scrubber is used to scrub the entire contents of a filled one-ton container at the exhaust rate of 3000 CFM. For smaller containers like 65-kg cylinders, the scrubber house system will exhaust and clean air from the contaminated room at the rate of 400 CFM.

WES **ASA100** wet type Scrubbers are fabricated from industrial grade Fiberglass-Reinforced Plastic (FRP)/GRP to provide internal as well as external corrosion resistance over years of operation and exposure to harsh weather conditions.

WES emergency scrubber system is designed to scrub a leak from an overfilled one-ton portable tank in accordance with the Uniform Fire Code worst-case release of hazardous gas through a fusible plug. It has a room exhaust rate of 3000 cubic feet per minute. The leak from a one-ton portable chlorine container could reach an initial 2400 CFM peak rate. The 3000 CFM scrubber exhaust rate assures a negative pressure on the room, resulting in fugitive gas containment.

A typical **ASA100** gas scrubber 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(OPTIONAL)

Units are supplied in complete knock-down components (CKD) to enable economical transportation and handing to the installation site where they are easily re-assembled. Units can be supplied as a fully assembled unit upon special request.

Pumps

We use corrosive proof plastic centrifugal pumps for our system. Horizontal re-circulation pumps are standard.

Options

- Electrical Damper
- Local Control Panel
- Extra Caustic Soda Pumps
- Heaters

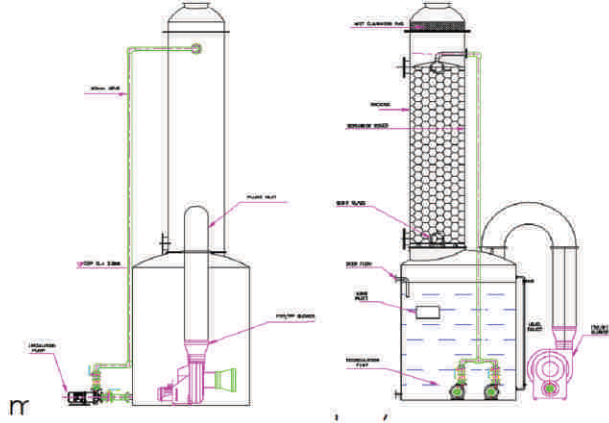
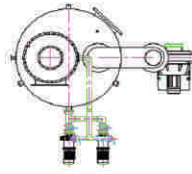
Operation

Chlorine scrubber systems are crucial in chlorination plants. In case of an emergency leak of chlorine within the drum room and/ or equipment room, chlorine Scrubber system is a must for safety insurance. WES chlorine scrubbers system consists of a packed column mounted above a caustic soda holding tank forming one integral unit together with a re-circulation caustic soda pump, a ventilation fan and a Cl₂ leak detector (Optional).

Under normal conditions, the neutralization system will be in a standby mode. The system will hold caustic soda of 20% concentration (NaOH), with a suitable capacity enough to neutralize the leaked chlorine contained in the largest container in the drums room. (I.e. if the drums are ton-containers, the system should be capable to neutralize one complete drum).

When the system is activated, the caustic soda is pumped from the Holding tank and sprayed over the top of the packed column as the extracted air, contaminated with chlorine gas, is blown up through the column the caustic soda reacts with the chlorine to produce sodium hypochlorite and sodium chloride solution.

The pump shall continue to recycle the caustic soda until the leak condition has stopped Washing liquid (Caustic Soda) is sprayed and uniformly distributed by



Drops retention, caused by the spraying system, is made within the packed column itself by means of a vertical flow demister, of high efficiency and low loss of head. This device avoids the dragging and projection of drops into the atmosphere as well as losses of neutralizing solution.

Material and Specifications:

Scrubber Body	: Glass Reinforced Plastic (GRP or FRP)
Capacity	: 1000kg of Chlorine in one hour
Tank Volume	: 8 m ³
Blower Capacity	: 6000 m ³ /hr
Scrub chemical	: Caustic Soda (20% concentration)
Scrubber material	: GRP/FRP
Packing material	: PP
Re circulation	: 25-35m ³ /hour (plastic centrifugal Pump)
Design type	: Single stage single tower
Dimension	: 2300(Dia) x (L) x 8200(H) mm (approx)

To learn more about WES's Products, Services or Brands, or to enquire about how WES could improve your business, contact us today on sales@waterengrs.com



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