



Case Study # 100

A supplier of special industrial gases had a unique problem. Returned cylinders contained small volumes of various toxic gases that needed to be completely vented prior to reusing the cylinders. The exhaust volume was typically very small but the gases were essentially pure contaminants such as SO_2 , Cl_2 , H_2S , HCl , and NH_3 . Verantis was able to offer a customized solution consisting of an EVS series eductor venturi and packed tower scrubber mounted on a fiberglass chemical holding tank.

The system was designed to operate on a batch basis using either alkaline or acidic scrubbing solution depending on the contents of the cylinders to be vented. The equipment was provided as a skid-mounted, pre-assembled arrangement including the recirculation system, controls, and control panel. The system was designed to achieve >99.99% removal of all expected contaminants.

Product Literature: (click on links to take you to the literature)

[SPT Bulletin 12-2](#)

[EVS Bulletin 12-16](#)

Industrial Gas Cylinder Venting



Application	Returned Cylinder Evacuation
Exhaust Volume	10—20 CFM
Exhaust Temperature	Ambient
Exhaust Pressure	1" W.C.
Contaminant	SO_2 , Cl_2 , H_2S , HCl , NH_3
Removal Efficiency	99.99%
Scrubbing Solution	Dilute NaOH or H_2SO_4
Materials of Construction	FRP