



MSHA APPROVED EXPLOSION-PROOF CARBON DIOXIDE SCRUBBER

(High Volume CO Removal System in Development)

- This is a self-contained system designed to absorb carbon dioxide exhaled by occupants that are present in a sealed area or refuge in an underground mine.
- The system is also designed to replace the oxygen that is consumed by the human occupant respiratory process during the time that he/she is present in a sealed area or refuge in an underground mine.
- The blower provides 150-160 cubic feet per minute of air flow at a static pressure of .05 inches of water gauge.
- The system powered air blower provides the necessary flow to circulate all of the atmosphere contained within the sealed area or refuge at a rate of approximately 12-13 complete air exchanges per hour based upon a typical volume of 800 cubic feet per minute.
- The system provides effective removal of carbon dioxide by filtering the atmosphere containing carbon dioxide through a chemical called soda lime.
- Oxygen is replaced by a constant flow medical grade oxygen meter that is set to replace the proper amount of oxygen that is used by the occupants of sealed area or refuge.
- The carbon dioxide scrubber is free standing and is provided with sufficient consumable products to maintain breathable air in the sealed area or refuge for a period of 96 hours.
- The carbon dioxide scrubber is provided with a meter to provide an instant status of the systems electrical battery charge condition.
- Simple easy to follow instructions on how to operate the carbon dioxide scrubbing system are provided in an instruction manual and on placards at the system components.
- The soda lime chemicals are packaged to minimize or eliminate chemical dust and the need for occupants to come into physical contact with the chemicals in the specialized containers.

