

# Carbon Dioxide Self Powered Absorber - CASPA™

Fully portable, absorber unit offering rapid CO<sub>2</sub> removal in confined spaces.



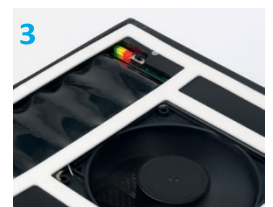
- The unit is designed to remove carbon dioxide from an enclosed environment, as part of a life support system.
- This unit is intended for emergency use.
- This unit is for trained professional use only.

## Safety

- **Stay calm - there is no great urgency as carbon dioxide levels usually takes an hour rather than minutes to build up to significant levels.**
- **Take a note of the time the enclosed space is sealed and the number of people present - time zero.**
- Do not remove seals until ready to use.
- The proper number of units needs to be activated together - see local emergency procedure.
- The unit contains material that is irritant, if allowed to escape.
- **The unit operates with moving parts that can cause minor injury** - the fan is not normally guarded, as this would restrict the airflow and reduce its primary function. Touching the fan whilst running may cause minor injury. An optional clip-on fan guard is available for routine use.
- The edge of the tear-off metal seals may be sharp when they have been removed.
- Keep units out of reach of children.

## Operating instructions

1. Read all the instructions before operating the first units.
2. It is strongly recommended that a log of the time and number of units started is kept. A suitable form is attached.
3. Remove the required number of units from any transport or storage packing and place the unit(s) in a free space, clear of obstructions to the inlet (top) and outlet (bottom).
4. Remove the outlet (bottom) seal by placing the unit on a side or inverting it. Peel off the metal seal covering, by pulling steadily towards the diagonally opposite corner (see photo 1). Discard the removed seal away from the unit, so that it does not affect the airflow (**caution** - the edges may be sharp).
5. Place the unit right way up (feet down) and remove the top seal by peeling back the tag, with a steady pull towards the opposite side of the seal (see photo 2). Discard the seal away from the unit (**caution** - the edges may be sharp).
6. The unit is now ready to operate. Start the unit with the switch located on the top next to the six light emitting diodes (LEDs) - see photo 3. The fan unit and the timer circuit will start and all six LEDs will light (two green, two yellow and two red) initially. In some cases, the unit may start in test mode, in which case the LEDs will sequentially go out at 2 second intervals and end with a single flashing red LED. If this occurs, the unit can be reset to normal timer mode by switching the unit briefly off, then on again. (**Caution** - avoid placing objects or fingers into the fan blade - there is no finger guard fitted as this would reduce the airflow, which is critical to proper operation).



7. Once the unit is started and the fan is running, the timer circuit is started and cannot be reset to zero. One of the LEDs will go out every 4 hours starting with the green LED. Switching the unit off will stop the fan and place the timer on hold. If the unit is restarted, the timer will carry on from the same time it was stopped.
8. **Do not switch off the initial units** until they have run for at least 16 hours (2 red LEDs left) under normal conditions. It does not matter if you leave the units running until they stop (approx. 24 hours).
9. Do not stop units unless you know the carbon dioxide levels are low or you have ventilated and are leaving the enclosure.

### Log sheet for CASPA™ carbon dioxide level control

Date:	Location:
Number of people present:	Person in charge:
	Volume of room: (height x width x length in meters) <span style="float: right;">m<sup>3</sup></span>

Time	Number of CASPA™ units running	CO <sub>2</sub> level % (if measured)	set reminder time for next change	Comments