



Welltech Instrument Company Limited

CO₂ - SCRUBBER



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Direct CO2 absorption

Welltech CO2 scrubber is designed for human chamber to absorb the CO2 breath out from the athlete and keep the chamber CO2 in low level

During training exercise the CO2 breath out from the athletic is more than 5000ppm. Without the CO2 scrubber, the CO2 level in the chamber can go to 20000ppm in very short time. It is not healthy to athlete. Normal acceptance CO2 level during exercise is <2000ppm.

CO2 Scrubber

- ▶ Direct CO2 absorption
- ▶ Fast absorption rate

Application

- ▶ Athlete Training
- ▶ Research Analysis
- ▶ Rehabilitation Research
- ▶ Hypoxic Training
- ▶ Hypoxic Sleeping Room



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CO2 Purifier

- ▶ Controller Siemen PLC with LCD display
- ▶ Filtering Manual mode
Time mode
CO2 mode
- ▶ Regeneration Manual mode
Time mode



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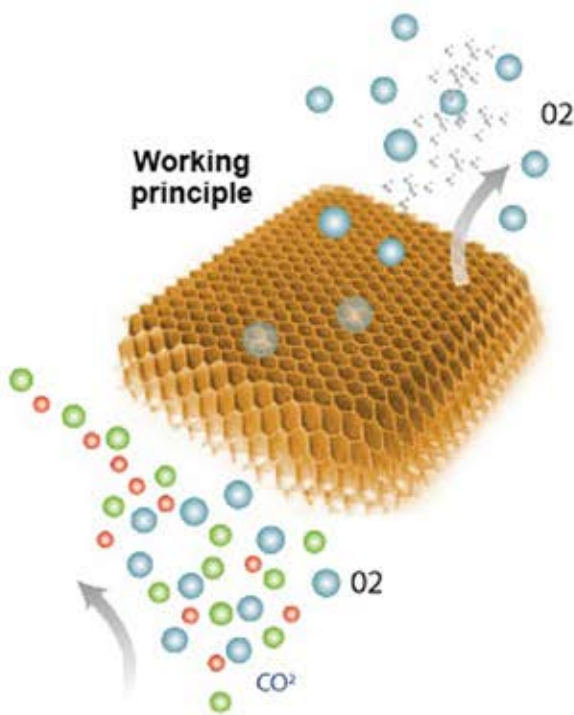
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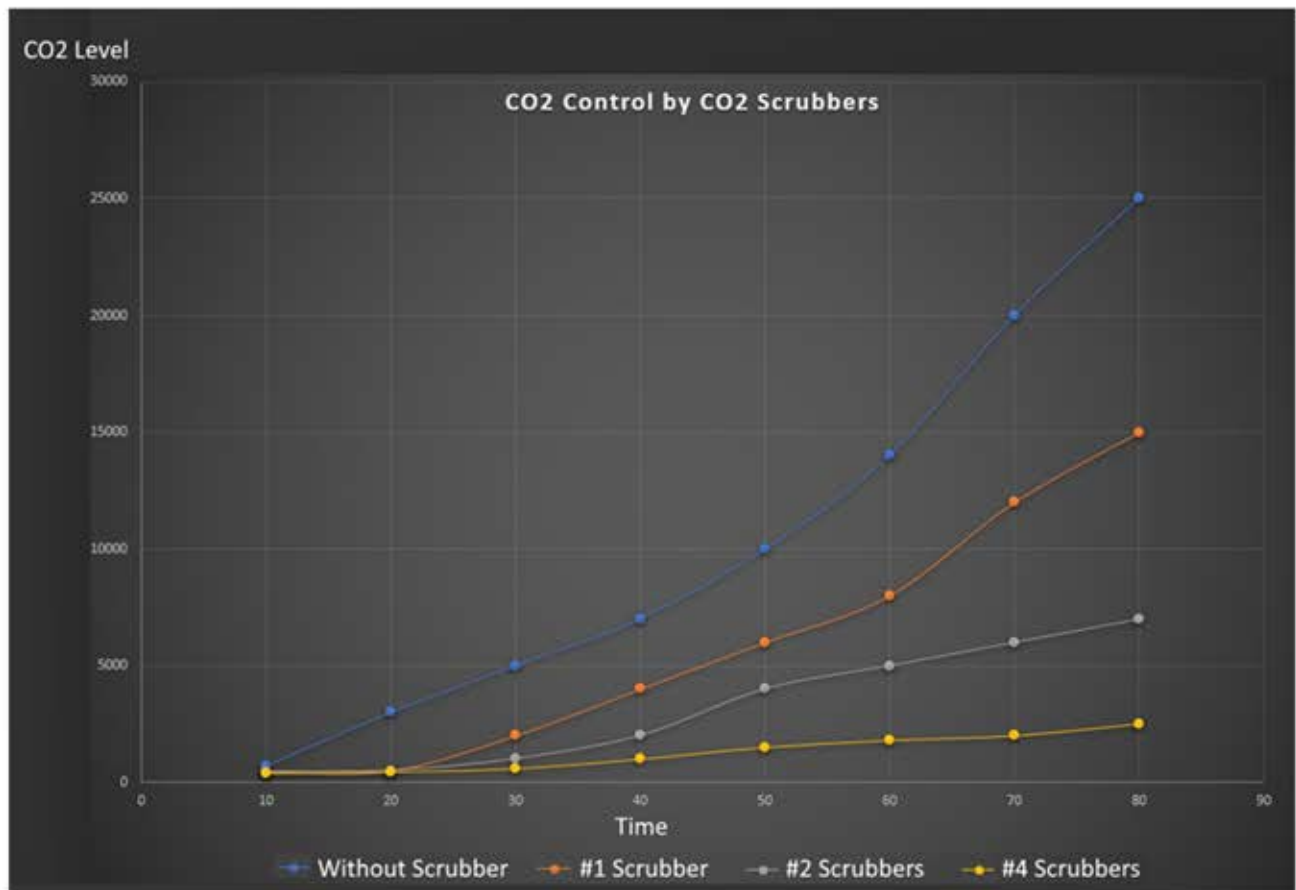


Filitering Ability



Air Inlet (CO2 level)	Air Outlet (CO2 level)
500ppm	30ppm
1000ppm	300ppm
1500ppm	500ppm
1800ppm	700ppm
20000ppm	1500ppm

- Noted: During filtering, the air outlet ppm depends on the air inlet ppm concentration

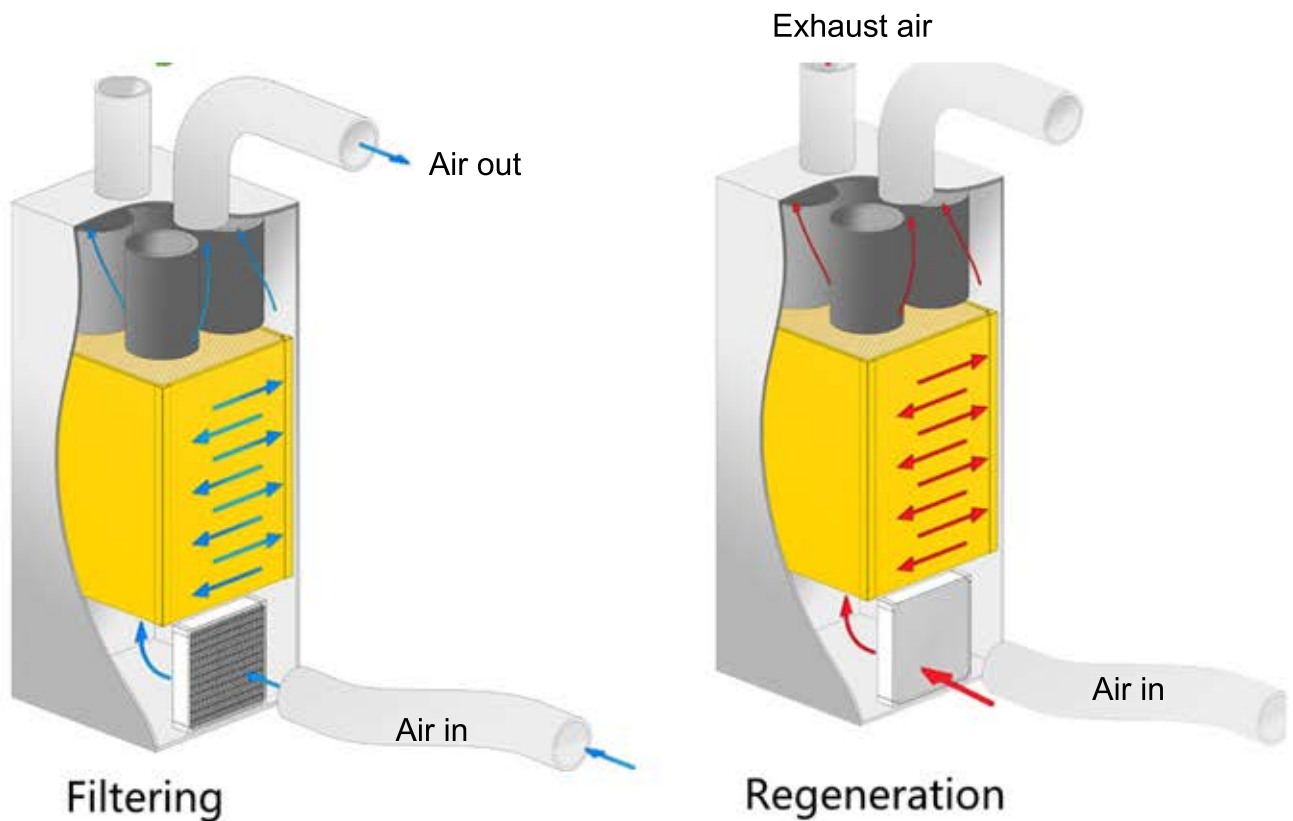


- Using more scrubbers, the lower CO2 level it can maintain

Working principle

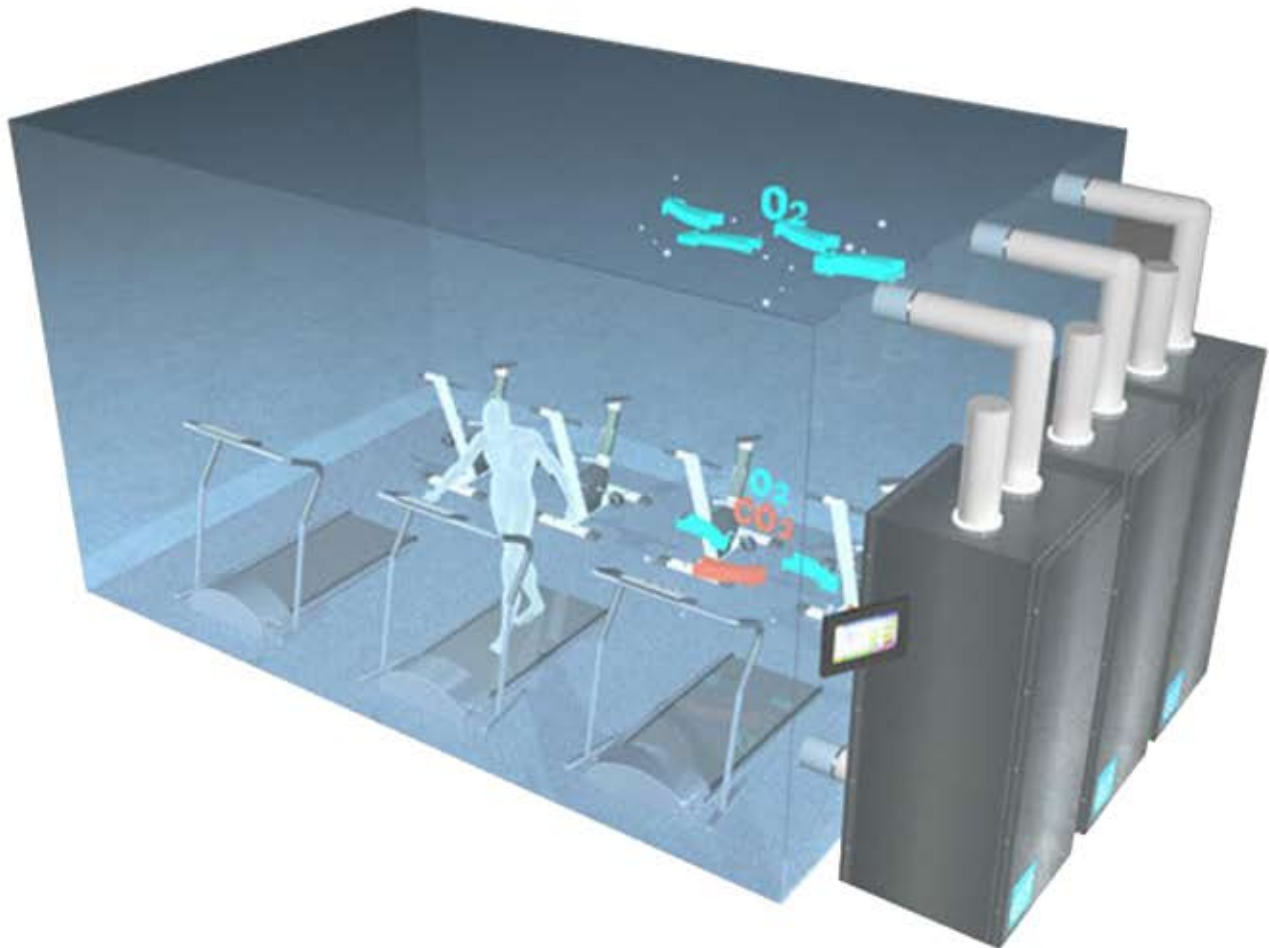
During filtering, the scrubber absorbs the CO₂ from incoming air until the catalyst is saturated. After saturation, regeneration is required to exhaust out the high concentration of CO₂ before the next use.

Air flow Diagram



Installation

► Behind the chamber



Multi-Screen
C02 Level: 400 ppm

Scrubber	1	2	3	4	5	6
Run Time (Min)	0	5	17	17	16	16
Saturation Level	Low	Low	Low	Low	Low	Low
Regen Status	On	Off	Off	Off	Off	Off
Filter Status	Stop	Idling	On	On	On	On
	Set	Set	Set	Set	Set	Set

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No. of scrubbers depends on chamber size and number of athletes training inside

Specification

LCD Touch Screen

- Filtering Mode: Manual,time or CO2
- Regeneration Mode: manual or time Control
- With datalog function

Activated Carbon Filter

- Remove Smell
- Regenable

CO2 sensor

- Range:0-20000ppm
- Accuracy: +/-10ppm

HEPA Filter

- HEPA Filter
class of H12

Casing

- All 304 stainless steel or wooden casing
or g.steel with coating

CO2 Filter

- CO2 Filter: Amines, non-toxic
- Only remove CO2 gas
- Can work under high or low humidity
- Regenable

MODEL

Model	CS1000	CS2000
CO2 Absorbing Capacity before regen	1000L	2000L
Air flow rate	150 to 200m3/h	
Power supply	220Vac single phase or 3 phase 380V to 415 Vac	
Regeneration time	2-4 hours	