

Mushroom/plant purifying indoor air system



CO2 Controller FOX-8STC

- Reduces unnecessary supply of CO₂ by adding illumination sensor and timer. (cost down)
- Time setting for maximum 9 channels.
- Open/close device for vinyl house depending on changes of temperature.
- DATA collects & storage(Viewer program)

Multi sensor FS-600R

- Transmit the sensor measured of CO₂, temperature, humidity, illumination (RS-485)
- Dual Sensor type's NDIR CO₂ sensor equipped
- Pollutant block, well ventilation by using the unique filter(Gore Protective Vent)



:: CO₂ Control Device

1. What is CO₂ Control Device?

It is a control device that calculates the volume of CO₂ in the green house or crop cultivating house and automatically offsets the lost volume of CO₂ to maintain the predetermined value of CO₂.

2. The need of supplying CO₂

Photosynthesis accounts most growth of plant. However, CO₂ in the air is amounted to only 300~350PPM so it is far short of the volume of CO₂ that needs in Photosynthesis: Plant needs 1000~1500PPM of CO₂ and if CO₂ is not sufficient, the plant growth is delayed which, in turn, becomes the cause of lowering its qualities and yield.

The plant in the closed green house consumes all CO₂ within short time (20~30 minutes) so to produce high quality products, continuous CO₂ supply is absolutely needed.

	Crop	Required CO ₂
Vege table	Tomato	1,000
	Cucumber	1,500~2,000
	Green pepper	1,000
	Lettuce	1,000~1,500
	Melon	1,000
	Strawberry	1,500
Potted plants	Violet	700~1,000
	Begonia	600~800
	Chrysanthemum	700~900
Cut flower	Carnation	1,000~1,500
	Gerbera	600~800
	Rose	1,000~1,200



MAINTAIN
OPTIMAL
TEMPERATURE
/HUMIDITY

INCREASE IN
FARM INCOME,
CONTRIBUTE
TO ACTIVATING
EXPORTS

〈SUPPLY CO₂〉
OPTIMAL
PHOTOSYNTHESIS

Culture Medium



Put medium in the bottle



Inoculation



Seal the bottle



Pull out of the bottle



Mycelial culture
(Culture in dark condition)



Mycelial culture
(Culture with light)



Grow the mushroom



Harvest



:: Introduction on main functions

1. Choose system for mushroom/plant cultivation or indoor air purification

The user can choose the system fit into the using environment among mushroom/plant cultivation mode and indoor air purification mode.

- Mushroom/Plant Cultivation : Set an environment appropriable to cultivating mushroom/ plant by controlling temperature, CO₂, humidity and Illumination with time setting of 9 channels
- Indoor Air Purification : Set an environment suitable to indoor air by controlling temperature, CO₂ and humidity

2. Control CO₂/Temperature/Humidity/Illumination

- Mushroom Plant Cultivation : Set time by each channel/ temperature and door-open or door-close/ humidity/ illumination in sunny day and cloudy day/ CO₂ by illuminations and Choose output
- Indoor Air Purification : Set temperature/ humidity/ CO₂(Fan)

3. RS485 communications function(MODBUS-RTU)

- Be able to collect and preserve DATA

4. Alarm High/low temperature, High/low humidity and High/low CO₂

5. Provide convenient using environment by applying graphic LED

6. Apply high precised digital temperature, humidity, CO₂ and illumination sensor

:: Product Specifications

1. Temperature Range : -20.0 ~ 65.0℃
2. Temperature Accuracy : ±0.1℃
3. Humidity Range : 0 ~ 100%
4. Humidity Accuracy : ±0.1%
5. CO₂ Range : 0 ~ 5000ppm
6. CO₂ Accuracy : ±3%
7. Illumination Range : 0 ~ 54600Lux
8. Illumination Accuracy : ±2%
9. Input Sensor : FS-600R(Sensor' s cable length : 5M)
10. Output: 5 Relay (Open/Cooler, Close/Heater, Humidification/Dehumidification, CO₂ supply, FAN)
250Vac 2A
11. Control Methods : ON/OFF
12. Power Supply Voltage : AC100V~240V 50/60Hz
13. Setting Methods : Set/Up/Down Key
14. Surrounding temperature in operation : 0~60℃ (32~140°F), under 80% RH
15. Weight 1pc : 262g

:: Product Strengths



- 1) Reduce unnecessary CO₂ supply by adding a/an illumination sensor and timer
- 2) Expand user' s choice with time setting of max. 9 channels
- 3) Vinyl house door open and close device in accordance with temperature changes
- 4) Be able to collect and store communications DATA
- 5) Sensor integrated type
- 6) Prepare an accident with alarm output
- 7) Use dual channel CO₂ sensor
(No need to be adjusted till max. 3 years)
- 8) Adopt Goretex vent (Max. 10 years)

It improves the air permeability by adopting VE4 type: Gore' s unique ePTFE membrane has an excellent character that prevents infiltration of liquid or various pollutants while freely ventilating a gas and evaporation.



Sensor specifications : Temperature/ Humidity/ CO₂/ Illumination integrated type

Model : FS-600R

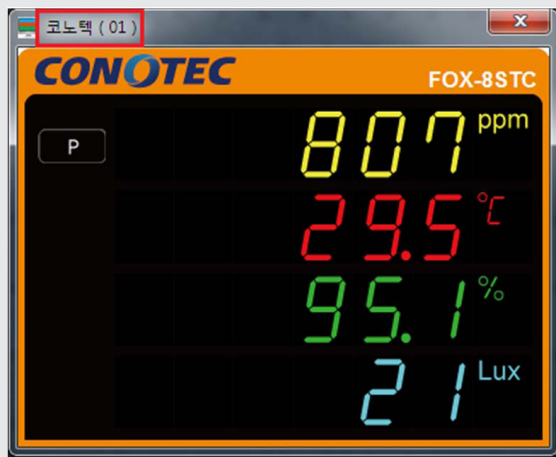
- Temperature Expressing Range : -20.0~65.0℃
- Temperature Accuracy : ±0.1℃
- Humidity Expressing Range : 0~100%
- Humidity Accuracy : ±0.1%
- CO₂ Expressing Range : 0~5000PPM
- CO₂ Accuracy : ±3%
- Illumination Display Range : 0~54600Lux
- Illumination Accuracy : ±2%

:: Viewer program

1. View Function

The screen on the below will come up when double clicks the registered product (Communications ON)

The product name and the number will be marked on the top of the screen,



2. Graph Function

- 1) Horizontal scroll: Move left and right based on time (Scroll will appear when puts the mouse.)
- 2) Vertical scroll: Move up and down based on calculated value (Scroll will appear when puts the mouse)
- 3) Mouse wheel – Up ▶ Reduce the gap of calculated values
Down ▶ Increase the gap of calculated values
- 4) Move while pushing the right button of the mouse
- 5) The window size can be adjusted.



:: Brand-New Bakery Equipments



FOX-DC1 (Dough conditioner)

Vertical type



FOX-EPI (Electric proofer)

Horizontal type



〈Features〉

- Easy to set-up
- High-precision digital sensor
- Manual & auto mode
- Various output types
- User's convenient interface
- Installer setting Mode
- Installation direction select (Vertical/horizontal)



FOX-N900 (OVEN CONTROLLER I)

- Power supply : 100~240VAC 50/60Hz
- Allowable voltage range :90~110% of Voltage
- Consumption power : Less than 16VA
- Display type : 7 Segment LED Display
- Input sensor : CA(K)
- Control : ON/OFF
- Range : -40°C~590°C



FOX-800A (OVEN CONTROLLER II)

- Steam ejection
- Upper & bottom lamp control
- Baking time alarm(timer)
- Power : 100~240VAC 50/60Hz
- Input sensor : CA(K)
- Range : -50°C~350°C



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