

Growth chamber



Electric heating
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Animal applications
CA Series

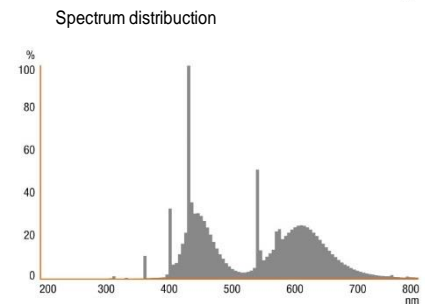
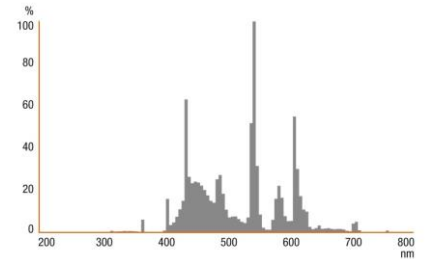
Plant applications
CV Series

Temperature range lights on/off (°C)	-10/+50 -5/+55
Temperature stability (°C)	± 0,1
Humidity range (%)	10/98
Humidity stability (%)	± 1
Electric power (V/Hz)	220/50
Noise level (dB)	50/55



For applications with animal organisms are used, the environmental chambers of the CA series, fluorescent lamps are optimized to favor the biological processes in animals, thanks to a complete emission spectrum that simulates sunlight. The illuminance values on the individual can vary from 5,000 lux to 30,000 lux.

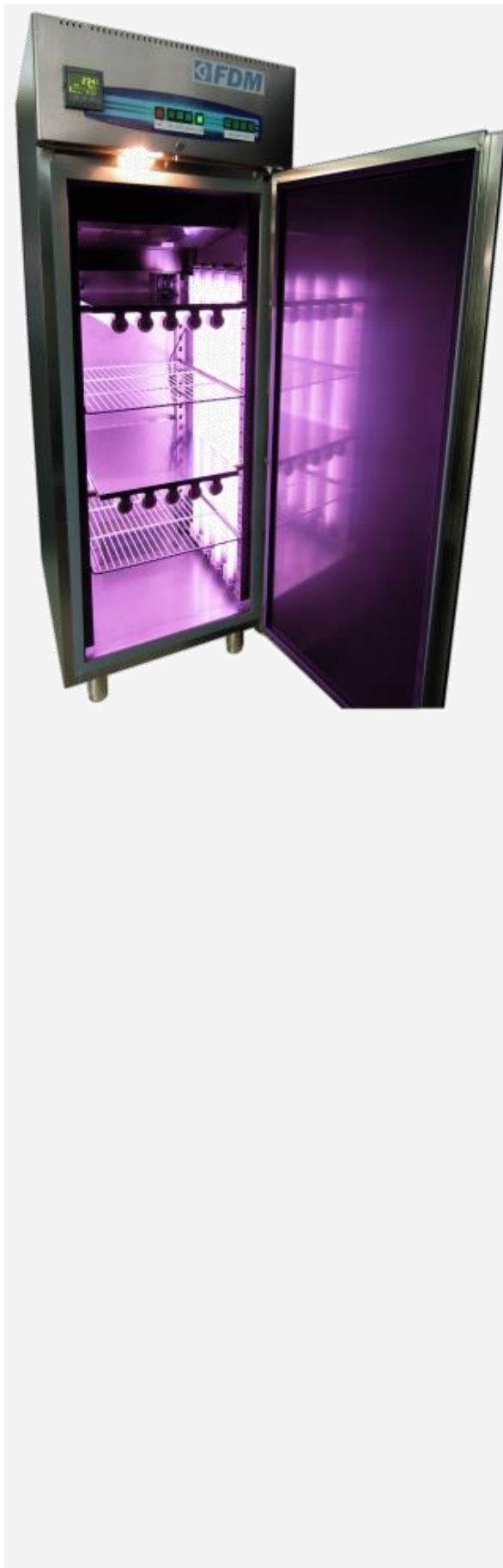
For applications with plant organisms are used, the CV series environmental chambers, fluorescent lamps are optimized to favor the photobiological processes in plants, with accentuation in the range of blue and red. The values of the photosynthetic photon flux (PPF) on the single shelf are shown below.



Model	CA Series		CV Series		Capacity (liters)	Out sizes (WxDxH mm)	Inner sizes (WxDxH mm)	Doors (n°)	Shelves (n°)	Lamps for shelves (n°)	Electric power (W)
	5000 / 30.000Lux illumination (lux)		*PPF [$\mu\text{mol}/\text{m}^2\text{s}$]								
			Conf. A3	Conf. B4							
C140			150	280	140	604x615x840	519x475x669	1	2	4	550
C370			170	320	370	600x600x1920	500x480x1250	1	3	5	1500
C440			170	320	440	600x700x1920	500x580x1250	1	3	5	1500
C600			170	360	600	750x700x2100	600x570x1300	1	3	5	1600
C700			230	420	700	750x820x2100	600x670x1300	1	3	6	1800
C900			440	770	900	1200x700x1920	1100x580x1250	2	3	10	2000
C1200			550	960	1200	1500x700x2100	1320x570x1300	2	6	12	2000
C1500			550	960	1500	1500x820x2100	1320x670x1300	2	6	12	2000

PPF [$\mu\text{mol}/\text{m}^2\text{s}$]

- 1 Other values on request
- 2 Values refer to a temperature of 25°C and at a distance of 15 cm from the lamps.
- 3 Configuration A: only horizontal lamps installed.
- 4 Configuration B: lamps installed both horizontal and vertical.



Temperature range

Temperature range -10 / +50 ° C with lights off;
-5 / +55 ° C with lights on.

Temperature stability

Setting and readability temperature in increments of 0.1 ° C. Temperature stability of ± 0.1 ° C. Average speed up / down temperature 1 ° C / min.

Structure and insulation

Construction completely in white plastic coated galvanized steel or stainless steel AISI 304. Polyurethane insulation CFC and HCFC free. Reversible doors fitted with self-closing hinges with stop opening beyond 90 ° and replaceable magnetic gaskets plug. Inside with rounded corners. Grids removable and height adjustable plastic-coated steel. Adjustable steel feet.

Monitoring devices

The chamber is equipped with a microprocessor controller with a single program in 20 steps by which you can set the photoperiod. Electronic temperature controller with microprocessor to continuously monitor and digital display light of the internal temperature and the set temperature.

Alarm and safety devices

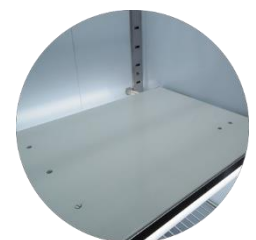
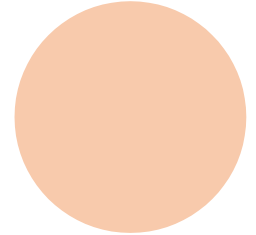
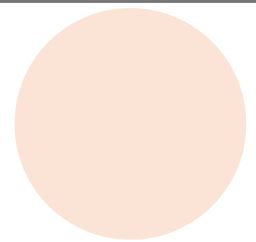
Audio-visual alarm for maximum temperature with acoustic acknowledgment and dry contact remote connection. The temperature settings and the alarm can be inhibited to strangers via password access controls. Safety device with manual reset class 1 (DIN 12880): completely off the heating when the temperature exceeds the preset maximum value and not editable.

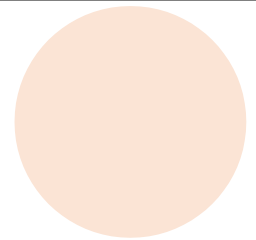
Humidity and system control

Control relative humidity between 10% and 98% $\pm 1\%$. Humidification with adjustable generator of low pressure steam can operate with demineralized water, sweetened or aqueduct with hardness from 0 to 400 ppm of CaCO₃. Power supply with mains water pressure between 1 and 10 bar. Dehumidification with direct expansion evaporator in Freon. Heating elements with low inertia. Double internal ventilation to ensure greater uniformity of temperature and relative humidity.

Internal lighting

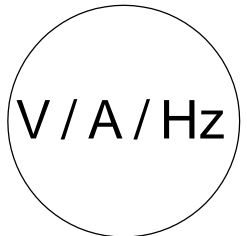
Interior lighting on a single shelf with special fluorescent lamps with maximum emission wavelengths of blue and red (on request). Ability to independently adjust the lighting on each shelf. Adjust the lighting in either the ON / OFF switch is in the intensity of the light output (optional). Chance of light on the inner vertical walls to increase lighting (optional). Internal reflective to ensure a complete reflectivity for better light diffusion.





These devices are also known with the name of phytotrons. Due to their high flexibility, adjustability and stability are suitable for all applications to:

- Micropropagation
- Germination, growth and flowering of plants
- Cultivation of Arabidopsis
- Tissue culture plant and organic
- Incubation of insects
- Indoor Hydroponic Growing
- Growing indoor aeroponics
- Crop land in indoor
- Seed Conservation (in which case you can ask for the version without light and without control of relative humidity).
- Studies fotomorfofenetici.



Noise level and Power supply

Noise level below 55 dB. Power supply 220-230V 1-50Hz.

Options

Lexan inner doors

Inspection window

Additional lighting on the internal walls

Independent adjustment of illumination on individual shelves

Adjust the lighting with dimmable

Special lighting with LED

Lighting lamps at the specific request of the customer.

Replacement system indoor air

Carbon filter to eliminate odors in the indoor environment (available only in combination with the replacement system indoor air) .

Dispenser with CO2 cylinder

Humidifier high temperature , to ensure a flow of sterile steam

Holes with diameters from 35 to 50 mm and insulating cap rubber .

Lock with key

Digital recorder for temperature, humidity and lighting.

Program of continuous monitoring network with PC for local management of alarm devices , recording and printing graphs of normalized values of temperature, humidity and lighting.

RS485 or RS232 port for remote control via PC .

Doors to Glass

Programmer with 10 programs and 50 steps, 25 programs and 100 steps or 50 programs and 200 to be installed in place of the serial programmer (1 program and 20 steps).

Reinforced wheels .

Internal power supply .

Power supply 110V 50-60Hz .

