TOTAL CONTROL AT YOUR FINGER-TIPS!

bronson

CLIMATE BV

INCREMENTUM 3000

INCREMENTUM 3000

This extreme performance multi-tier dual comparment reach-in is designed to push beyond the performance envelopelimits where others stop performing.

The Incrementum 3000 can be used for a broad range of research & test applications Plant Growth, Tissue Culture, Enviromental testing, Stress testing, Seed Germination, Insect-breeding, Product testing & various applications for life sciences.

bronson
CLIMATE BV

ENVIRONMENTAL RESEARCH

The Bronson Incrementum 3000 Extreme Performance Multi tier dual compartment reach-in is developed because of the growing demands for Extreme Environmental Testing with maximum growth surface.

To see how plants behave and grow in extreme conditions we need to be able to simulate extreme conditions without limits.

With the Bronson Incrementum 3000 this is now possible, you can create a wide range of extreme climate conditions from tropical heat stress experiments to artic nightfrost simulations all in one reach-in.

Temperature and humidity alone are not sufficient to create your controlled environment. We need to combine it with high light intensities.

This cabinet is designed to cope with a huge heat load and is capable of delivering up to 2000 µmol/m^2/s (PPFD) at 150mm from light source.

Cooling 3 layers with 600 µmol/m^2/s (PPFD) at 150mm from light source is also no problem for the Bronson

ENVIRONMENTAL RESEARCH

The Bronson Incrementum 3000 is a multi-tier dual compartment cabinet with a flexible
shelving system to maximise the required growth height from
150mm up to 1450mm.

Max grow height:
- 1 layer ±1450mm.
- 2 layers ±700mm.
- 3 layers ±450mm.
- 4 layers ±300mm.

Cabinet Benifits:
- White coating for good reflection
- Shelves are made of stainless steel
- Shelves are adjustable in height
- Shelves are removeable (plug and play)
- Surface is easy to clean
- Removable backwall for cleaning
- No column 1600mm wide clearance
- Double door design
- Doorlock and door switch

Options for cabinet:
- Viewport with magnetic door
- Entry port for probes

TECHNICAL SPECIFICATIONS 3000

GENERAL:				
Volume	2x 1372 Litre			
External dimensions (W x D x H mm)	3576 x 925 x 2000			
Internal dimensions (W x D x H mm)	2x 1310 x 680 x 1540			
Exterior	White coated steel			
Interior	White coated stainless steel			
Number of doors	4			
Keylock	Yes			
Shelf and shelf size (mm)	Stainless steel 1300x610			
Number of growth layers	1 up to 4			
Growth surface per layer	2 layer =1.60m^2	4 layers =3.20m^2	6 layers =4.80m^2	8 layers =6.40m^2
Capacity 600x400mm trays	up to 24 (3 per shelf)			
Growth height	Adjustable from 150mm up to 1450mm			
Chassis	On 10 swivel wheels			

TEMPERATURE	LIGHTS ON	LIGHTS OFF
Temperature range (permanent)[3]	+5°C to +40°C	+5°C to +45°C
Night frost simulation up to 6 hours[2]	-4°C	-10°C
Temperature precision controller	0,1°C	0,1°C
Temperature variation setpoint chamber	< ± 0,2°C	< ± 0,2°C
Temperature uniformity per shelf	< ± 1,0°C	< ± 0,3°C

HUMIDITY[1]	LIGHTS ON	LIGHTS OFF
Humidity range at +5°C to +40°C	40 to 80% RH	30 to 95% RH
Humidity precision controller	1% RH	1% RH
Humidity variation setpoint chamber	± 5% RH	± 2% RH
Humidity uniformity per shelf	± 5% RH	± 2% RH

LIGHT INTENSITY LED[4]	NUMBER OF SHELVES
up to 400 µmol/m^2/s (PPFD) at 150mm	4
up to 800 µmol/m^2/s (PPFD) at 150mm	3
up to 1000 µmol/m^2/s (PPFD) at 150mm	2
up to 2000 µmol/m^2/s (PPFD) at 150mm	1

TECHNICAL DATA	
PLC Controller	Siemens S7-1200 controller
Touchscreen	Siemens SIMATIC Unified 7 inch comfort panel
Temperature sensor	PT1000
Humidity sensor	Hygrometric
Airflow	Horizontal; 0,1 to 0,3 m/s (adjustable at touchscreen 50% up to100%)
Humidifier[1]	Ultrasonic
Dryer[1]	Desiccant dehumidifier or by seperate cooling coil.
CO2[1]	50-5000 ppm

INSTALLATION REQUIREMENTS	
Location	Air conditioned room controlled between 10°C and 25°C
Water (for optional humidifier[1])	Demineralized or RO water 1-5 bar
Drain	Drain at floor level near the cabinet
Weight	± 1250 Kg. (depending on configuration)
Electrical connection	3 Phase 16A type C 230V 50Hz (0,6 - 7,0 kW depending on configuration)
Connection	Potential alarm contact / internet UTP

(1) Optional
(2) Nightfrost simulation depends on the heatload and moisture levels, no humidity control below +5°C
(3) Depending on heatload, moisture levels , evaporation and surrounding conditions..
(4) There are different light intensities available, the maximum light intensity depends on the number of shelves and heatload.

www.bronsonclimate.nl

bronson
CLIMATE BV

Distributor:

Bronson Climate b.v.
Valeton 19
5301 LW
Zaltbommel
The Netherlands

0031 418 760 310
CLIMATE@BRONSON.NL

Bronson Climate Grows