

TOTAL CONTROL AT YOUR FINGER-TIPS!

CLIMATE BV

INCREMENTUM 1500

INCREMENTUM 1500

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

The Incrementum 1500 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.





ENVIRONMENTAL RESEARCH

The Bronson Incrementum 1500 Extreme Performance Multi tier reach-in is developed because of the growing demands for Extreme Environmental Testing.

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 1500 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 μ mol/m²/s (PPFD) at 150mm from light source.

Cooling 3 layers with 600 µmol/m²/s (PPFD) at 150mm from light source is also no problem for the Bronson Incrementum 1500









ENVIRONMENTAL RESEARCH



The Bronson Incrementum 1500 is a multi-tier 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 1300mm wide clearance
- Double door design
- Doorlock and door switch

Options for cabinet:

- Viewport with magnetic door
- Entry port for probes
- Electronic lock with PIN or TAG





TECHNICAL SPECIFICATIONS 1500

GENERAL:			
Volume	1372 Litre	1372 Litre	
External dimensions (W x D x H mm)	1973 x 900 x 2000		
Internal dimensions (W x D x H mm)	1310 x 680 x 1540		
Exterior	White coated steel		
Interior	White coated stainless steel		
Number of doors	2		
Keylock	Yes		
Shelf and shelf size (mm)		Stainless steel 1300x610	
Number of growth layers		1 up to 4	
Growth surface per layer	1 layer =0.80m ² 2 layers =1.60m ² 3 layers =2.40m ² 4 layers =3.20m ²		
Capacity 600x400mm trays	up to 12 (3 per shelf)		
Growth height	Adjustable from 150mm up to 1450mm		
Chassis	On swivel wheels		
TEMPERATURE	LIGHTS ON	LIGHTS OFF	
TEMPERATORE Temperature range (permanent) ⁽³⁾	+5°C to +40°C	+5°C to +45°C	
	-4°C		
Night frost simulation up to 6 hours ⁽²⁾		-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 HUMIDITY ⁽¹⁾	< ± 1,0°C	<±0,3°C	
	LIGHTS ON		
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⁾ up to 400 μmol/m ² /s (PPFD) at 150mm	NUMBER OF S	HELVES	
	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/m²/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⁾	150-2000 ppm		
INSTALLATION REQUIREMENT:	S		
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	± 550 Kg. (depending on configuration)		
Electrical connection	1 Phase 16A type C 230V 50Hz (0,6 - 3,0 kW depending on configuration		
Connection	Potential alarm contact /	Potential alarm contact / internet UTP	
1) Optional			

(1) Optional

(2) Nightfrost simulation depends on the heatload and moisture levels, no humidity control below $+5^{\circ}$ 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



Distributor:

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

0031 418 760 310 CLIMATE@BRONSON.NL

Bronson Climate Grows