



# (Cooled) incubators



Sharing technology

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The base for the development of this new line of (Cooled) Incubators comes from years of manufacturing experience of years with advanced climate and low temperature systems. The incubators have been developed from a practical point of view, easy to control, quiet, safe and durable. Each incubator is tested for performance and quality over at least 2 weeks before it leaves the production process ready for shipping.

## Exterior:

A modern design in combination with an extremely strong box frame construction. Finished with a scratch proof epoxy coating, colour grey-white RAL 9010. Standard mounted on adjustable legs.

## Interior:

The interior is made of high quality, easy to clean stainless steel (DIN 1.4301). The use of a tangential fan in the return air maintains the highest temperature uniformity possible. A lockable entry port, water drain and height adjustable stainless steel platforms are fitted as standard.

## Conditioning:

A powerful, but energy saving, climate system for heating and cooling guarantees a high temperature stability and fast temperature recovery. The tangential fan in the return air guarantees the temperature uniformity. The use of this type of fan helps ensure that the same conditions are reached at every point within the chamber removing cold spots and hence condensation within the entire chamber (Fig. 1).



EB 1



EB 2

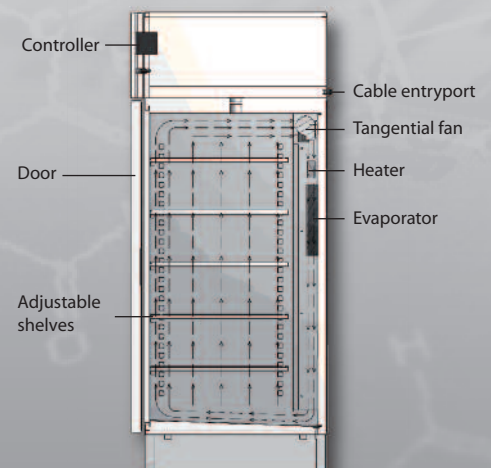


Fig. 1 Aircirculation



### Flexibility:

All incubators can be delivered with or without cooling. All models can be installed side by side to form an incubator wall. Practical division for each application within the chamber is also possible, e.g. by height adjustable platforms or a drawer system mounted on telescopic arms.

### Effectivity:

Sustainability, environmental friendly and lower energy usage were the keyword issues in the development of the incubator range. In other words as low a carbon footprint as possible. This for example has been achieved by using durable material sourced from European suppliers only and efficient cooling using a bypass system, driven by the latest energy saving compressors.

The slim line design optimizes capacity within the chamber while maintaining a small footprint on the laboratory floor.

### Temperature controller:

The controller displays temperature and time digitally and can be programmed in 8 Temperature Setpoints (TS-1 upto TS- 8) in association with 8 Time-units (T-1 upto T-8).

The temperature is linear and hence ensures the tightest possible control of temperature over the entire temperature range (Fig. 3)

By installing additional software it is also possible to link multiple incubators together for remote monitoring and control.

External temperature alarms are routed via a potential-free contact or a SMS alert system over the internet.

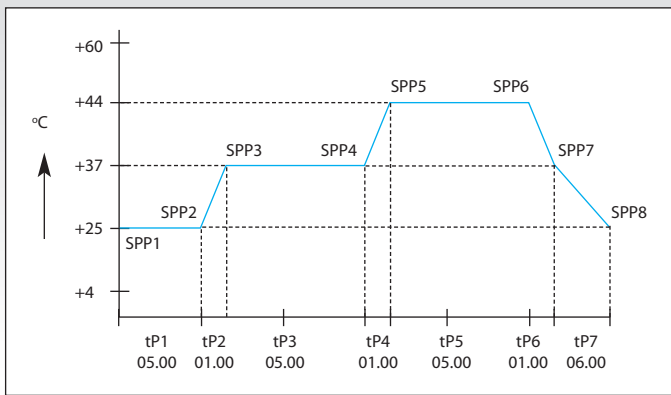


Fig. 2 Program example

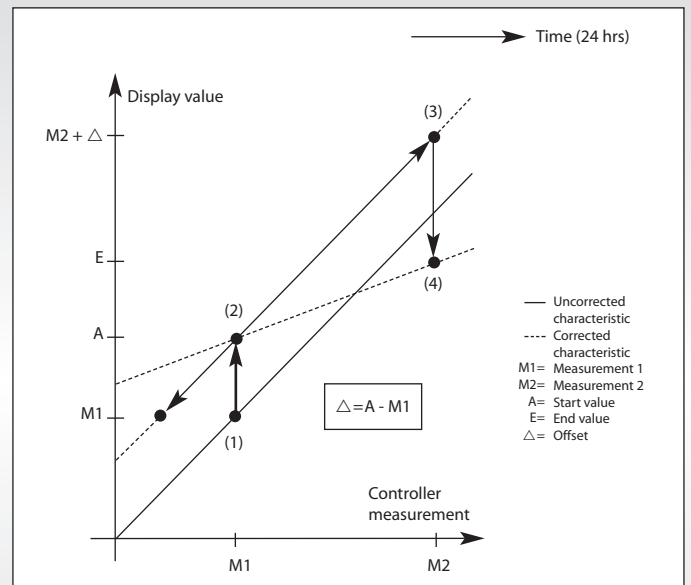


Fig. 3 Configuration: linear calibration

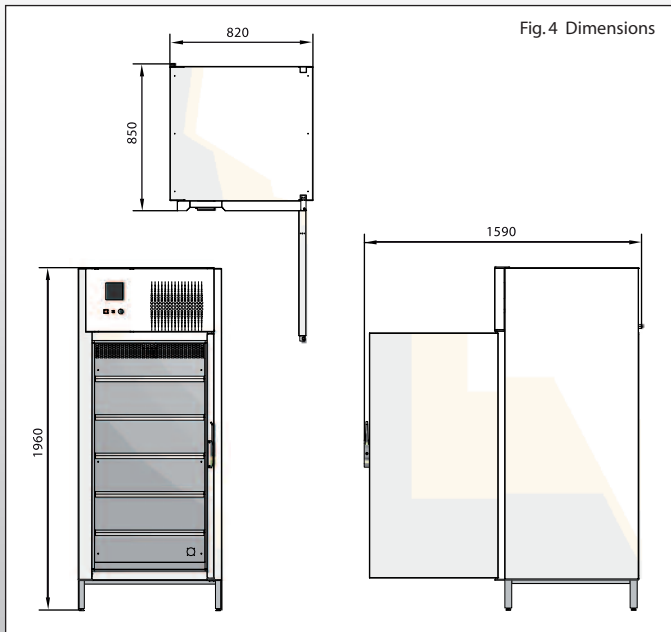


Fig. 4 Dimensions



### Safety:

Various safety features have been built-in for the protection of the product within the incubator. Firstly there is an alarm activated from within the controller if the band width is exceeded by +/- 5°C from set. Secondly there are backup safety thermostats for both high and low temperatures. All alarms are acoustic and optical.

### Auto defrost:

In durability tests longer than 24 hours and below +4°C, an auto defrost has to be used to avoid ice forming on the evaporator. The frequency, temperature and length of time for the auto defrost system is adjustable. The settings for the defrost cycle(s) are dependent on the required set temperature for the chamber and the usage of the incubator.

### Anti-condensation system:

Desiccation occurs when humidity is drawn, for example, from the media in a Petri dish due to a "cold spot" where it condenses out of the atmosphere. The unique Snijders anti condensation system eliminates the potential for "cold spots" inside the working area and hence avoids desiccation. This system consigns the problem of desiccation to history.

Description	INCUBATOR BR1E	INCUBATOR BR2E	COOLED INCUBATOR EB1-NE / EB1-DE	COOLED INCUBATOR EB2-NE / EB2-DE
Nett volume / ltr.	494	(2x) 231	494	(2x) 231
Gross volume / ltr.	576	(2x) 269	576	(2x) 269
Material internal:	Stainless steel	Stainless steel	Stainless steel	Stainless steel
Material external:	Coated steel	Coated steel	Coated steel	Coated steel
Insulation	Polyurethane	Polyurethane	Polyurethane	Polyurethane
External dimensions, (wxdxh) in mm	820x855x1960	820x855x1960	820x855x1960	820x855x1960
Internal dimensions (wxdxh) in mm	600x635x1295	(2x) 600x635x605	600x635x1295	(2x) 600x635x605
Platform dimensions, (bxd) in mm	625x580	625x580	625x580	625x580
Minimal transportation dimensions, (wxdxh) in mm	820x775x1945	820x775x1945	820x775x1945	820x775x1945
Platforms: standard / max. quantity	5/29	(2x) 2/10	5/29	(2x) 2/10
Distance between platforms in mm	40	40	40	40
Entry port Ø in mm	45	45	45	45
Timer within controller	Digital	Digital	Digital	Digital
Controller	Electronic PID	Electronic PID	Electronic PID	Electronic PID
Temperature sensor	PT100 Ω	PT100 Ω	PT100 Ω	PT100 Ω
Temperature safety	Adjustable by high temperature thermostat with separate PT100 sensors	Adjustable by high temperature thermostat with separate PT100 sensors	Adjustable by high temperature thermostat with separate PT100 sensors	Adjustable by high temperature thermostat with separate PT100 sensors
Auto defrost	No	No	Optional	Optional
<b>Specifications (DIN 12880)</b>				
Temperature range, in °C	(T <sub>amb</sub> +8°C) tot +60	(T <sub>amb</sub> +8°C) tot +60	+4 tot +60 / -10 tot +60	+4 tot +60 / -10 tot +60
Temperature setting, in °C	0,1	0,1	0,1	0,1
Temperature fluctuation, in °C (at 1 spot)	≤ 0,2	≤ 0,2	≤ 0,2	≤ 0,2
Temperature variation, in °C (in chamber)	≤ 0,5	≤ 0,5	≤ 0,5	≤ 0,5
Airflow m/s	0,2	0,2	0,2	0,2
<b>General</b>				
Rotation point of the door	Left or right (at the right= ex works)	Left or right (at the right= ex works)	Left or right (at the right= ex works)	Left or right (at the right= ex works)
Lockable	Grip incl. cylinder lock	Grip incl. cylinder lock	Grip incl. cylinder lock	Grip incl. cylinder lock
Legs	30x40 mm, adjustable, height 150 mm	30x40 mm, adjustable, height 150 mm	30x40 mm, adjustable, height 150 mm	30x40 mm, adjustable, height 150 mm
Power supply	220-240V; 50 Hz.	220-240V; 50 Hz.	220-240V; 50 Hz.	220-240V; 50 Hz.
Nett weight / kg	196	209	224	237

snijders scientific b.v.

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Please visit our website: [www.snijders-scientific.com](http://www.snijders-scientific.com)

There you find your local distributor, actual information and the complete product range such as:

- Climate chambers and its applications, for example: seed germination, insects incubation, tissue culture and photobiology tests.
- Ultra Low Temperature freezers (-86°C) and Low Temperature freezers (-45°C).
- Walk-in (plantgrowth) climate rooms.

\* Specifications subject to changes.



Snijders Scientific B.V. meets the requirements of the Dutch foundation for the authorization of handling refrigerants during installation and maintenance of refrigeration and airconditioning equipment.



ISO-9001 certified by Lloyd's / CE approved.