

Cell Incubation



SCILA

CO₂ 4-Position cell incubator

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The most compact small scale cell incubator for lab automation.

SCILA product line

Product description

The SCILA (SiLA-based Cell Incubator for Lab Automation) incubator is especially designed for automated cell culture applications for liquid handling systems. The extremely compact SCILA offers four drawer-based positions for SBS microplates in a copper incubation chamber with control of temperature, humidity, and gas atmosphere. The patented, innovative drawer design moves the complete drawer mechanics outside of the incubation chamber, which makes the inside copper surface with rounded edges very easy to clean. For further reduction of contamination, the water tubing of the humidification system is also made out of copper.

The modular design of the SCILA allows to scale up with additional units when required. Fast access of less than 10 seconds and an optimized concept for temperature, humidity and gas atmosphere control enable quick recovery of the incubation conditions after plate access. For easy maintenance and service access to the incubation chamber, the complete front frame and the drawers can be removed by hand and without tools.



SCILA front view

Seamless integration into your lab automation system

- Easy fit in and around liquid handling systems due to small size
- Quick and flexible software interfacing with SiLA communication standard
- Simple scale-up from 4 to 4ⁿ plate positions with independent access and control of each unit
- 2 Drawer versions: For 96 well culture plates with less than 20 mm in height, and for culture plates up to 23 mm in height, easily exchangeable

To operate the SCILA, an external gas mixer is required. We offer the SCILA MIX as a 2- or 3-gas mixing device, perfectly aligned to the requirements for mixed gas supply of the SCILA incubator. The gas mixer can be used in the range of 2-10 bar inlet pressure for each supplied gas. An in-house gas mixing system can be used as well, provided that the mixed gas can be supplied with 1 bar.

The 2-gas mixer works with CO₂ and air, while the 3-gas mixer needs CO₂, N₂ and air.



Removable drawer

In case a cellular assay test system needs to be established on the lab bench – upfront and separate from a full integration into a liquid handling workstation – the SCILA can be comfortably controlled by the enclosed device manager software.

Excellent control of temperature, humidity and gas atmosphere

- Internal temperature uniformity @ 37 °C: Max. difference between the plates, 1K, within a plate position, 0.3 K
- Saturated humidity with inbuilt security mechanism to control the water level
- External control unit for gas atmosphere, optional
- The SCILA MIX can supply gas for up to 3 SCILA CO₂ MP-4

Main specifications

Specifications	7300104 SCILA CO ₂ MP-4
Temperature Range	Ambient +5 K to 45 °C with CO ₂ and humidity
Temperature Accuracy	@ 37 °C ± 1.0 K
Temperature Uniformity	@ 37 °C max. temp. difference 1.0 K between plates, 0.3 K within one plate
Steady state temp. RT ¹ to 37 °C ²	19 minutes (air temperature)
Temperature recovery @ 37 °C ^{2,3}	3 minutes (air temperature)
Humidity recovery@ 37 °C ²	25 minutes
Relative humidity @ 37 °C	95% +5/-10% (not actively controlled)
CO ₂ ratio (part 3800101)	up to 10% (premixed Gas)
CO ₂ accuracy (part 3800101)	± 0.5% (see product information of SCILA MIX)
CO ₂ recovery	instantly, 5 min boost with premixed gas after last drawer closure
Sample evaporation @ 37 °C	0.04% per hour, 4 NUNC 167008 96 well plates x 250µl liquid, rH > 85%, closed drawers

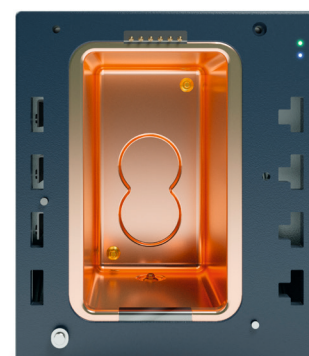
¹ Start temperature 22 °C, with water prefilled (22 °C), with CO₂, measured in air with 2 temperature sensors in drawer 2

² All drawers subsequently opened 10s each

³ When measured with the INHECO Measurement Plate IMP - with comparable thermal mass to filled cell culture plate - the specified temperature range of 37 °C ±1K is maintained.



3800101 SCILA MIX 2-gas mixing device, optional



Copper incubation chamber

Designed for easy maintenance and service

- High level of contamination protection due to copper surface in the incubation chamber and water supply tubings
- State of the art external supply mechanism for sterile water with automated refill
- Additional safety – water tubing is equipped with replaceable Luer-Lock for sterile filter connection
- Easy decontamination due to fast access for service – tool-free disassembly of front cover and drawers.

Verification plate

INHECO offers a compact and precise measurement plate (IMP) in ANSI/ SLAS format for verification of temperature and humidity in the SCILA device. The IMP can be used on heating, cooling, shaking devices and inside incubation chambers. We refer to the IMP brochure for more information.



7901000: INHECO Measurement Plate, IMP

Product	Part No.	Dimensions W x D x H (mm)	Weight	Temperature range
IMP	7901000	87.5 x 128 x 14.9	100 g	4 °C to 60 °C

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Drawings

