



SCILA CO₂ MP-4

General Specifications

Dimensions (H x W x L): 287 mm x 410 mm x 250 mm

Dimensions (H x W x L) with Opened Drawer: 287 mm x 644 mm x 250 mm

Volume of Process Chamber: 4.6 l

Weight: Approx. 16.3 kg

Interface: SiLA, Ethernet (RJ45 connector)

IP Protection Class: IP 21 according to IEC60529-1

EMV Device Class: Group 1 / class A (industrial requirements)

SCILA Device DC Input ^{*1)}: 24 Vdc

Noise While Drawer Opens: 65 dB(A)

Noise Closed (Only in Heating Mode): 45 dB(A)

Horizontal Precision of the Labware in X and Y Direction (End Position per Opened Drawer): ± 0.3 mm

Vertical Precision of Labware in Z Direction (End Position per Opened Drawer): 1.5 mm

Cell Culture Plates 6-96 Wells: Suitable for all kind of robot grippable plates (according to SLAS)

Maximum Load on Drawer: 200 g

Height of Plate Incl. Lid: Up to 20 mm with standard labware carrier → chapter 8.5.2
Up to 23 mm with additional labware carrier → chapter 8.5.2

Environmental Conditions

Tolerable Relative Humidity:

Operation: 30-60% ^{*2)}

Transportation and storage: Transportation and storage 10-80% ^{*2)}

Temperature: Max. 4.4 K/sec

Operation (at altitude 0 - 2500 m): +15 °C to +32 °C [+59 °F to +90 °F]

Transportation and storage (water needs to be removed before shipment): -20 °C to +60 °C [-4 °F to +140 °F], non-condensing ^{*2)}

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Thermal Specifications

Temperature range: 5 K above ambient to +45 °C

Temperature accuracy in steady state at +37 °C: ±1.0 K

Temperature uniformity in steady state at +37 °C: Max temperature difference between plates: 1.0 K within one plate: 0.3 K

Temperature recovery at +37 °C (conditions see table below ^{*3)}): Approx. 16.3 k

Max. Heat up time from +22 °C ambient to +37 °C ^{*4)}: ~ 19 minutes (air temperature)

CO₂ Specifications - Gas inlet SCILA CO₂ MP-4

Pressure Range for SCILA Inlet: 0.9 - 1 bar (gas pressure reduction valve necessary if inlet pressure is higher than 1 bar)

Flow Rate Range for SCILA Inlet: 0 - 4.5 l/min

Gas flow - Normal: 0.2 l/min

Gas flow - Boost: 4 l/min

CO₂ specifications - incubation chamber SCILA CO₂ MP-4

CO₂ Gas Concentration: < 10%

CO₂ Recovery Time at 5% (Conditions See Table Below ^{*3)}): < 5 minutes

Humidity Specifications

Max. Water Filling Volume in Incubation Chamber: 175 ml

Max. Operation Time at +37 °C, without Opening Any Drawer and without Refill: ~ 140 hours

Evaporation of Sample rH > 85% at +37 °C ^{*5)}): Typically < 0.04% per hour

Evaporation of Sample without Humidification at +37 °C ^{*5)}): < 4% per hour

Humidity Recovery Time (Conditions See Table Below ^{*3)}): 25 minutes

Relative Humidity over Complete Temperature Range: 95% +5%/-10% (not actively controlled)

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- 1) SCILA device shall only be powered by the included power supply.
- 2) Condensate can prevent the SCILA from operating properly and can damage the SCILA.
- 3) Table showing the standard drawer opening and closure cycle (basis for recovery time tests):

Standard drawer opening and closure cycle

1	SCILA in steady state (2 h after turning on)
2	Drawer 4 (top drawer): open; hold for 10 s; close
3	10 s dead time
4	Drawer 3: open; hold for 10 s; close
5	10 s dead time
6	Drawer 2: open; hold for 10 s; close
7	10 s dead time
8	Drawer 1: open; hold for 10 s; close
9	start measuring recovery time

- 4) Start temperature +22 °C, with water prefilled (22 °C), with CO₂, measured in air with 2 temperature sensors in drawer 2.
- 5) Incubation device loaded with 4* NUNC 167008 96 well plates x 250 µl liquid with lid, closed drawers

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