User and Installation Manual

SCILA

Set Part No.:
7300104 SCILA CO2 MP - 4

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This manual and the information herein have been assembled with due diligence. **INHECO GmbH** does not assume liability for any misprints or cases of damage resulting from misprints in this manual. If there are any uncertainties, please feel free to contact INHECO. → How to contact INHECO, page 6.

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1   IMPORTANT NOTES

1.1.   General information

Read the user instructions completely. The manual explains how to handle the SCILA Incubator (Part# 7300104 SCILA CO2 MP-4 Incubator). For the operation of the SCILA a third party SiLA capable PMS is necessary → Communication with SCILA, chapter 5

In the following the word SCILA is used for all SCILA versions. Only when necessary the exact type of SCILA will be stated.

In case the instructions contained in this manual are not followed, injury or product damage cannot be excluded.

Missing or insufficient knowledge of the manual leads to loss of liability against INHECO GmbH.

This manual is part of the SCILA and must be retained until the device is disposed of and must be passed on with the SCILA when the device is taken over by a new user.

Manual instructions must be followed in order to limit safety risks during operation of the SCILA.

Safety-related warnings in this manual are classified into four hazard resp. warning levels:

- The signal word WARNING indicates hazards which – without precautionary measures – can result in death or serious injuries.

- The signal word CAUTION indicates hazards which – without precautionary measures – can result in minor to moderate injuries.

- The signal word NOTE stands for the general precautionary measures that have to be taken to avoid damaging the device.

- The signal word NOTICE stands for the general measures that help using the device.

Contact INHECO in case there are any uncertainties of how to operate or how to handle the SCILA device.

Your opinion about this manual provides us with valuable insights on how we can improve this document. Please do not hesitate to direct your comments to **INHECO**, → How to contact INHECO, page 6.

1.2. Explanation of symbols

Symbol	Explanation
⚠️	Potential danger of injury or death. → signal words WARNING and CAUTION indicate the severity
🛑 (STOP)	Note: Device will get damaged, if you do not follow instructions
·	Bullet points indicate steps of instructions.
-	Hyphens are used for enumerations.
→	Arrows indicate: "refer to" and are mostly an active link
blue writing	indicates a software button

1.3. Abbreviations and glossary

The document uses the following terms	
SCILA	SiLA-based Cell Incubator for Lab Automation
°C	Degree Celsius
°F	Degree Fahrenheit
K	Kelvin
kg	Kilogram
RH	Relative Humidity
Vdc	Direct Voltage
W	Watt
IVD	In Vitro Diagnostic
FDA	Food and Drug Administration
SiLA	Standardization in Lab Automation
PMS	Process Management Software (control software of automated system)
Gbit/s	Gigabit per second
ln/min	Flow rate (standard liters / minute)
CO_2	Premixed CO_2 with concentration between 5-10%. Other gas mixtures are possible.
MP	Microplate
db(A)	Decibel (class A)
MSDS	Material Safety Data Sheet
water	Sterile water

1.4.   Warranty

The warranty period starts on the date of shipment. Any damage caused by operating the SCILA devices outside the specifications and guidelines leads to the loss of warranty.

INHECO will only accept parts / devices for return that do not pose a threat to the health of our staff. In particular, the devices may not have been used in Biosafety Level 3 and 4 environments or have been exposed to radioactive or radiation materials. → Cleaning and Decontamination, page 34.

Devices exposed to Biosafety level 3 and 4 Environments or radioactive materials are not accepted by INHECO for return.

1.5.   How to contact INHECO

INHECO GmbH	
Address	Fraunhoferstr. 11
	82152 Martinsried
	Germany
Telephone - Sales	+49 89 899593 120
Telephone - Techhotline	+49 89 899593 121
Fax	+49 89 899593 149
E-Mail - Sales	**sales@inheco.com**
E-Mail - Technical - Hotline	**techhotline@inheco.com**
Website	www.inheco.com

Technical Support & Trouble Shooting Instructions:

http://www.inheco.com/service/technical-support.html

2 PRODUCT DESCRIPTION

2.1. Intended use

The new 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 cell culture plates in a copper incubation chamber with control of temperature and gas atmosphere, with saturated humidity. The patented innovative drawer design moves the complete drawer mechanics outside of the incubation chamber, which makes the inside copper surface very easy to clean. 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.

For further reduction of contamination, the water tubing of the humidification system is also made of copper.

For CO_2 control an external third-party gas mixing device or gas supply is needed. As an option INHECO offers the SCILA MIX gas mixing device (PN 3800100).

The SCILA devices are delivered with CE- and UL- certification.

The SCILA is designed specifically for use in Life Science and In Vitro Diagnostics. The SCILA devices are prepared for easy integration into IVD applications, but the final IVD validation must be performed by the first marketer (IVD application).

When using the SCILA in a Biosafety Laboratory Environment, the user is responsible for labeling the devices according to the WHO Laboratory Biosafety Manual (ISBN 92 4154650 6) and for operating the devices according to this Biosafety Manual.

When using the SCILA with a CO_2 gas mixing device the user is responsible for operating the devices in accordance to the MSDS of CO_2 and other used gases with the local Gas Safety Regulations.

The SCILA needs to be installed by a skilled technical integrator, assisted by a system administrator for network settings. The device is made for use in a local area network without any connection to the global network. It is the user´s responsibility to integrate the SCILA accordingly.

The SCILA must be used exclusively by laboratory professionals who are familiar with the instructions of this manual as well as with the instructions of their workstation manual and the gas mixer manual.

2.2.   Components & Accessories - scope of supply

Before initial operation, make sure that the shipment of your unit and its scope of supply is complete, and no parts are damaged.

In case of parcel or product damages, take photos of the damaged boxes and products and email them to **techhotline@inheco.com** without delay. Transportation damages must be reported to INHECO within 7 days of delivery. The following components should be included in each shipment:
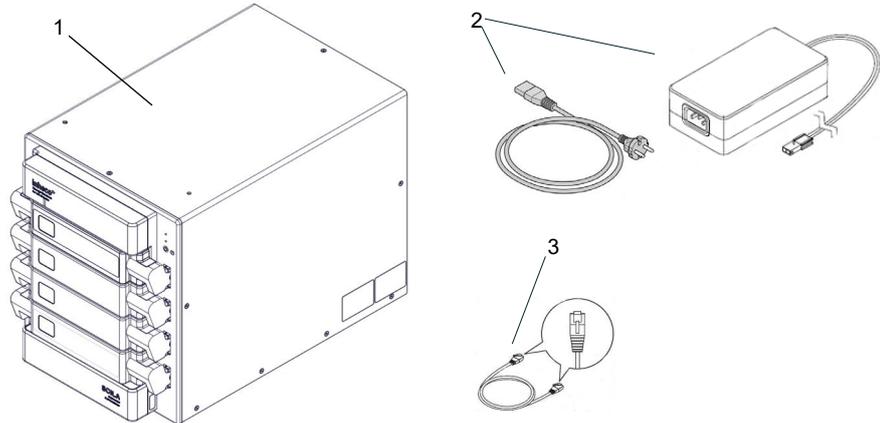
Fig.1:   Components

(1) SCILA

(2) Power supply and cable

(3) Ethernet cable (RJ45)
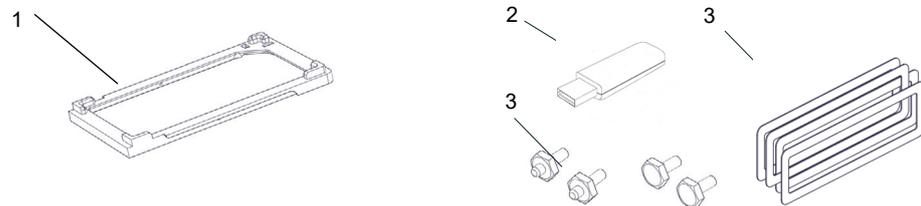
Fig.2:   Further accessories

(1) Labware carrier for labware with maximum height of 23mm (labware carrier for labware with maximum height of 20mm preinstalled)

(2) USB flash drive (contains SCILA manual, Firmware Command Set and SCILA Device Manager)

(3) Two different types of height adjustable feet (one type with positioning pin)

(4) Set of 4 sealing rings for drawers
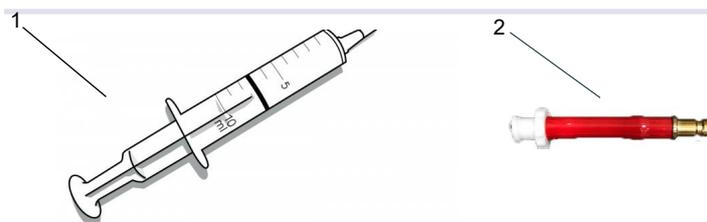
Fig.3:   Accessories for water refill

(1) Syringe for manual refill and sterile filter with Luer Lock

(2) Adapter from quick release coupling to LUER Lock

2.3. Functional Elements

- **SCILA front:**
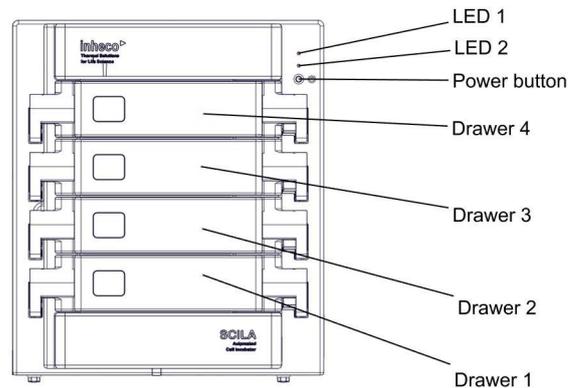
Fig.4: Functional elements of SCILA at the front

LED 1	Description of status
green flashing	device is booting
green steady light	device is ready for operation
red flashing	malfunction, the temperature is still controlled
red light	malfunction, temperature control is off and RH and CO_2 inside the chamber is unknown

LED 2	Description of status
blue steady light	water level is ok
blue flashing	water is on minimum level and needs to be refilled
LED is off	water is empty
read steady light	water level is too high overfilled

Power Button	Description of status
Turn on	press and hold (about 1.0 sec) until the Status LED 1 is flashing green
Turn off	press and hold the power button for about 5 sec LED 1 has not light

- **SCILA back side**

The SCILA does have a small fan integrated to minimize humidity within the rear part of the system where the electronics are located. A free air exchange is needed to ensure sufficient cooling for the electronics in this part of the device.
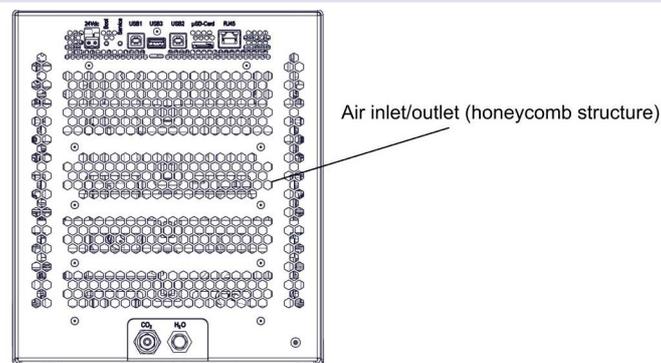
Fig.5: SCILA back with honeycomb structure

- **SCILA back side (close-up top of the device)**

A

B
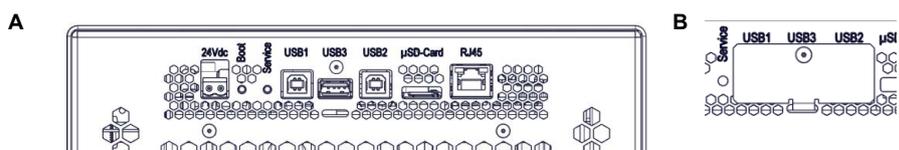
Fig.6: *SCILA connectors at the back A) access to all connectors, but the covered USB connectors are covered (B) as they are for INHECO use only*

USB	Description
USB1	only for INHECO use, secured with cover
USB2	only for INHECO use, secured with cover
USB3	only for INHECO use, secured with cover
RJ45	connection to network
24Vdc	connector for power supply
microSD-Card	storage for log and trace files. The log files are primarily stored on the mini PC of the SCILA and synchronized to the microSD-Card during the SCILA is powered off

Boot and Reset Button	Description of status
Boot	should only be used after contacting INHECO
Service	reset to INHECO default settings (should only be used after contacting INHECO)

> **NOTE**
> The SCILA contains a microSD-Card. This microSD-Card is used for storing trace files. Do not remove the microSD-Card without written approval by INHECO as the trace files are necessary for proper support of the device.

- **SCILA back side (close-up bottom of the device): CO_2 and H_2O connector**

Fig.7: *CO_2 and H_2O quick connector at the back of the SCILA*

- **CO_2 connector for pre-mixed gas:**
  G1/4" internal thread for Quick connector with 6mm tube outside diameter for 0.9 -1.0 bar inlet pressure. If your supply system has a higher pressure an additional pressure regulator is needed to reduce the pressure to 0.9-1.0 bar.

> **WARNING**
> Please follow the instructions of your gas mixer manual, the MSDS of your CO_2 and other used gases. Furthermore, also follow your local safety regulation rules for working with gas, otherwise you could get harmed due to uncontrolled gas exhaust. For your own safety: Install gas detectors according to your used gases in your laboratory.

> **NOTE**
> The use of the 0.2 µm sterile filter (Sartorius Midisart 2000 0.2M PTFE - 17805 NPE or NPG) is tested and approved for use with the CO_2 connector. If you need further information on the filter type, please check the accessory list.

The gas flow is monitored. In case of a power shut down the CO_2 circuit will be closed.

- **Water connector:**
  Use the supplied quick connector for filling up water into the system.

> **NOTE**
> Use water containers/bags for the water supply, do not connect directly to a water line resp. tap.
> Please make sure that the water will not get in contact with any electronics or other water sensitive materials in case of a leakage of the water bag.

- **SCILA drawer**

The SCILA has 4 drawers which can be individually opened. Please note (keep in mind) that only one drawer can be opened at a time. The SCILA device automatically generates a warning if you try to open more than one drawer at a time.

INHECO does not recommend pipetting into the labware placed on an open drawer. Long opening times will have influences on the internal gas atmosphere, humidity conditions and temperature stability.

> **NOTE**
> After a drawer is closed and the temperature control is still activated, a gas boost will be automatically initiated to get the gas atmosphere to the set concentration as quickly as possible. Gas is boosted for 5 minutes, starting 60 seconds after all drawers are closed.
> The automated gas boost is enabled by default for the SCILA. The INHECO SCILA Device Manager allows to read out and enable/disable the CO_2 auto boost.

A   **B**
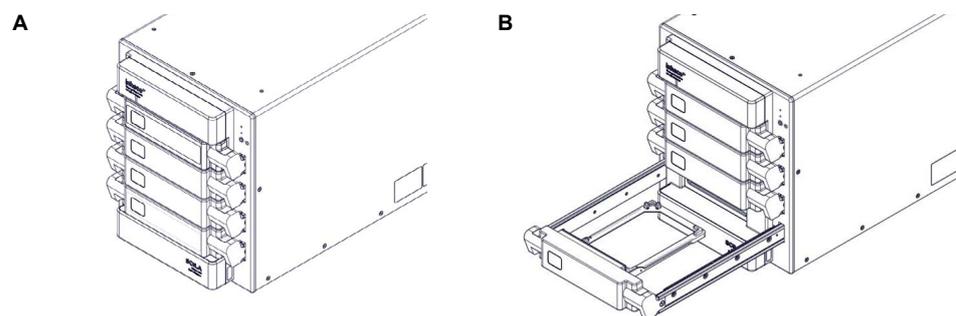
Fig.8:   SCILA Drawer 1 closed position (A) and open position (B)
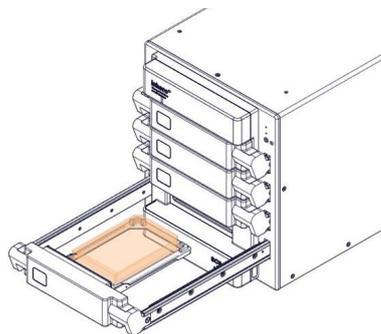
Fig.9:   SCILA Drawer 1 including labware

The drawer can easily be exchanged → Maintenance/Service, page 32ff.

- **SCILA labware carrier**

To provide the option to work with different labware heights (up to 20 mm or up to 23 mm) the SCILA comes with two different types of labware carriers.
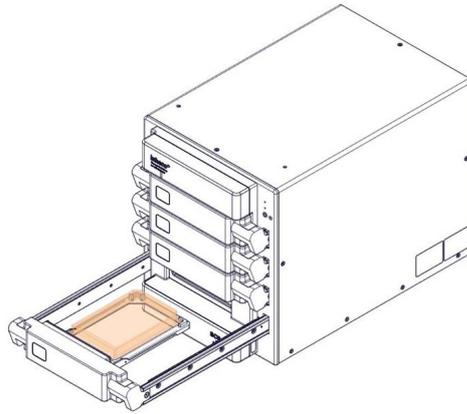
Fig.10: SCILA labware carrier in opened drawer (with standard 20mm carrier)
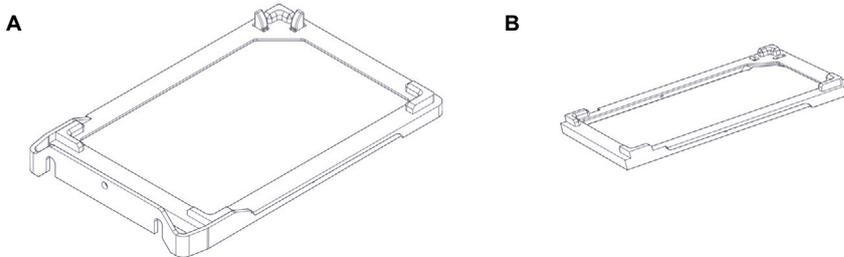
Fig.11: SCILA labware carrier for plate up to 20 mm (A) and for plate up to 23 mm (B)

> **NOTE**
> In case a 20 mm labware is placed on the 23mm carrier it might be that a gripper won´t be able to grip the plate (depending on gripper design).
> In case a 23 mm labware is placed on the 20mm carrier the labware will collide with the drawer opening and the drawer won´t be able to close.
> The 23mm carrier has an engravement showing > 20mm.

The labware carrier can easily be exchanged → Maintenance/Service, page 32ff.

- **SCILA drawer interlock**

The drawer has a drawer interlock to ensure that the drawer is always inserted at correct position after drawer removal.
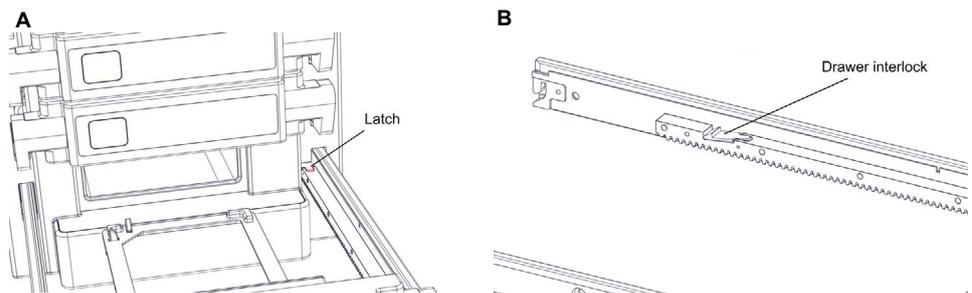
Fig.12: SCILA drawer interlock position

- **SCILA front frame**

The incubation chamber can easily be reached for cleaning by removing the drawers and the front frame. The front frame is magnetically fixed to the housing for easy removal by hand. → Maintenance/Service, page 32ff.

A   B
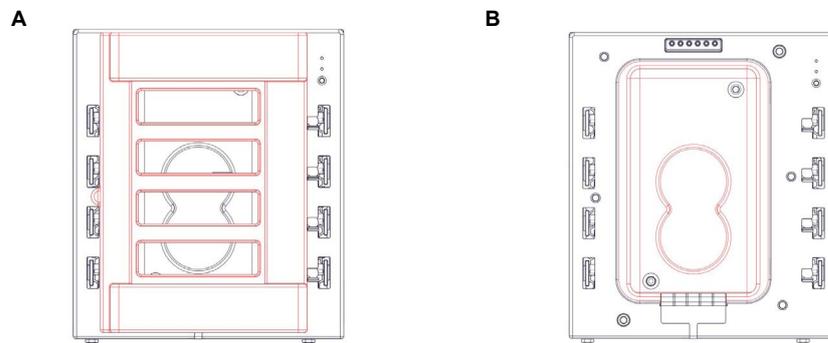
Fig.13: SCILA front frame (A) and SCILA without front frame (B)
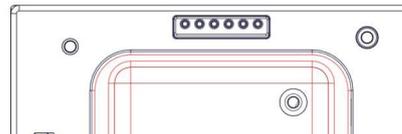
Fig.14: Contact pins for magnetic front frame

NOTE
Front frame may only be removed or installed while the SCILA is powered off. When using/sending the maintenance command all 4 drawers will subsequently open. The SCILA will automatically shut down the power.

- **SCILA incubation chamber**

The incubation chamber includes the water inlet, the water reservoir, the sensor for water level detection, the inlet and outlet for the CO_2 mixture. The side walls and the back of the incubation chamber are heated to ensure a most uniform heat distribution in the incubation chamber.
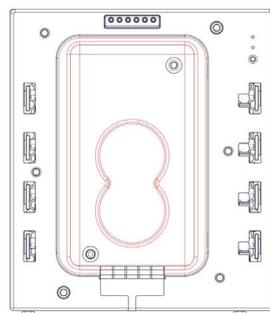
Fig.15: SCILA incubation chamber
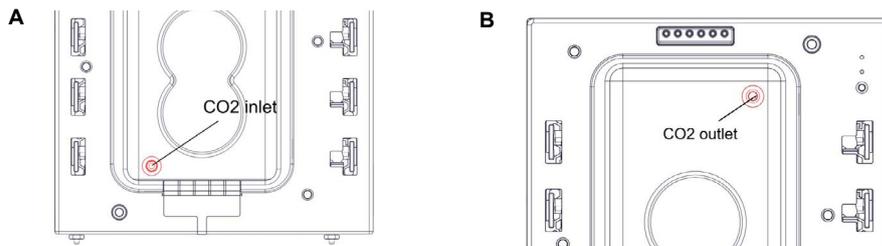
Fig.16: SCILA CO₂ inlet (A) and CO₂ outlet (B)

The inlets have a filter, and these should be checked whether they are clogged if problems with the water supply or CO_2 supply arise. → Maintenance/Service, page 32ff.
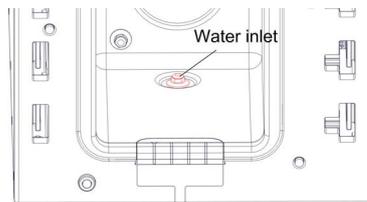
Fig.17: SCILA water inlet (B)

> **NOTE**
> CO_2 flow rate is checked continuously. As soon as the measured value differs from defined tolerance band for more than 10 minutes a warning will be generated → Manual Firmware Command Set for warning description.
> The CO_2 AutoBoost is monitored continuously. As soon as the measured value differs from defined tolerance band for more than 100 seconds a warning will be generated

The SCILA has four liquid level detection states to control and monitor the water level.
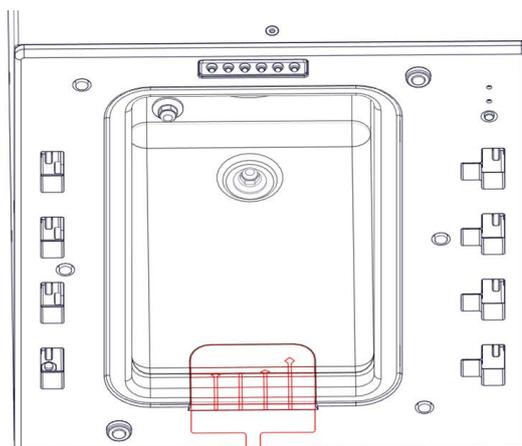
Fig.18: SCILA incubation chamber: location of liquid level sensor (red)

- **Filling level states**
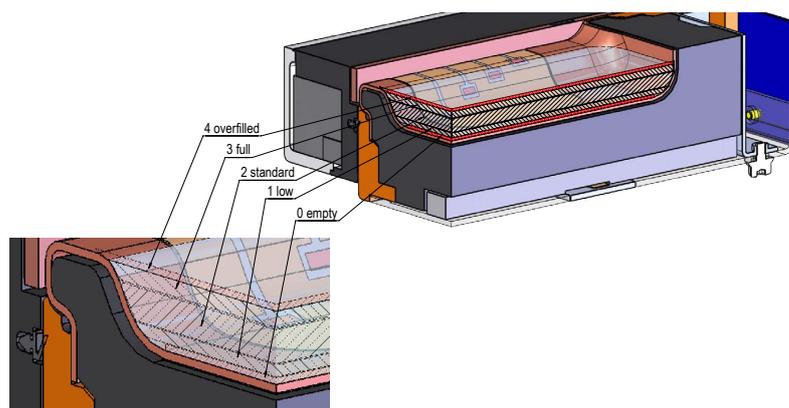
Fig.19: Different states of the SCILA liquid level sensor

State	Description	Description of state	action required	Valve	LED	time of operation* at 37°C
4	overfilled	water level **too high** (water might be spilled)	please see warning for overfilled reservoir, page 45	closed	on	
3	full	water level on **maximum**	no	closed	on	~ 6 days
2	standard	water level **ok**	no	closed	on	~ 2 days
	standard	water level **ok**	**refill possible**	open	flashing	
1	low	water level **low**	**refill recommended**	open	flashing	
0	empty	water level not detectable (device **empty**: there might be a small amount of water left but the amount is unknown)	**refill mandatory**	open	off	0

* remaining time depends on several factors, e.g. ambient temperature and drawer cycles.

NOTE

The water level is checked continuously. If the state low and empty is permanent for more than 20 minutes a warning is generated. If the state overfilled is detected the device closes the valve to avoid further overfilling and spilling. In case of valve failure resulting in overfilled device a warning is generated. → Firmware Command Set for warning description.
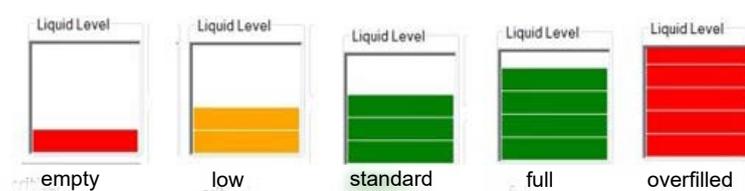
Fig.20: Example how states look like in the INHECO SCILA Device Manager

- **SCILA temperature control**

Both side walls of the incubation chamber and the front of the drawers are heated

The heating is divided into 3 separate controlled heating circuits. Each heating circuit consists of 2 temperature sensors, one for controlling and one for monitoring.

2.4.   Labels

The identification label with part number and serial number also contains important technical indications. The electrical specification on the label must meet your local situation. The label is placed on the side of the SCILA. The identification label must not be removed. If it has become illegible or falls off, it has to be replaced by a new identification label. New labels can be ordered at INHECO.

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SCILA CO2 MP-4

PN: 7300104   Rev.: 05
SN: 0013   2021-10

Input: 24V ⎓ 130W

Fig.21: Product label on the SCILA

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SiLA Service Configuration

Node name: SCILA_04E964
MAC:00055104E964
Web service: http://**<ip_address>**:8080
WSDL URI: http://**<ip_address>**/scila.wsdl

MAC Address:

Fig.22: SiLA configuration information

NOTICE

The node name shown on the label for the SiLA Service Configuration can be used to ping the device, e.g. "ping SCILA_04E964".

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SCILA CO$_2$ 4 MTP

PN: 7300104   Rev.: 01
SN: 0001   2018-05

Storage and transportation conditions:
-10°C to +60°C [+14.0°F to +140°F],
10% to 80% RH, non condensing
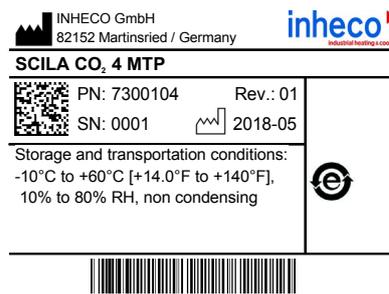
Fig.23: Shipment labels on the package

Warranty label

Fig.24: Other labels clearly visible on the housing of the product

2.5. Technical Data

General Specifications - SCILA CO2 MP-4	
Dimensions (WxDxH)	410 mm x 250 mm x 287 mm
Dimensions (WxDxH) with opened drawer	644 mm x 250 mm x 287 mm
Volume of process chamber	4.6 l
Weight	approx. 16.3 kg
Interface	SiLA, Ethernet (RJ45 connector)
Degree of protection to IEC 60529	IP 21 according to IEC60529-1
EMV protection clasee	Group 1 / class A (industrial requirements)
Pollution degree	2 (laboratory equipment)
SCILA device DC Input[1]	24 Vdc
Power consumption	130W
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

[1] SCILA device shall only be powered by the included power supply

Environmental Conditions - SCILA CO2 MP-4		
Tolerable relative humidity	Operation (at altitude 0 - 2500m)	30-60%, non condensing[2]
	Transportation and storage	10-80% non condensing[2]
Temperature	Operation (at altitude 0 - 2500m)	+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]
Altitude	max 2,000.00 m	

[2] Condensate can prevent the SCILA from operating properly and can damage the SCILA.

Thermal Specifications - SCILA CO2 MP-4	
Temperature range	5K 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])	3 minutes (air temperature)
Max. heat up time from +22°C ambient to +37°C [4]	~ 19 minutes (air temperature)

CO_2 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 ln/min
Gas flow - normal	0.2l/min
Gas flow - boost	4l/min

CO_2 Specifications - Incubation chamber SCILA CO2 MP-4	
CO_2 gas concentration	≤ 10%
CO_2 recovery time at 5% (conditions see table below [3])	≤ 5 minutes

Humidity Specifications - SCILA CO2 MP-4	
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)

[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 turn on)
2	Drawer 4 (top drawer): open ; hold for 10s; close
3	10s dead time
4	Drawer 3: open ; hold for 10s; close
5	10s dead time
6	Drawer 2: open ; hold for 10s; close
7	10s dead time
8	Drawer 1: open ; hold for 10s; close
9	start measuring recovery time

[4] Start temperature +22°C, with water prefilled (22°C), with CO_2, 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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3 SAFETY INSTRUCTIONS

3.1. Product-specific Risks

⚠️ **WARNING**
Follow the safety instructions given below in order to avoid danger for the user.

⚠️ **WARNING**
The power plug of the SCILA power supply must always be readily indentifiable and easiliy reachted (not more than 3 m away from the SCILA) to shut down the systems in case of emergency.

General

- The main power switch of the SCILA must always be accessible to shut down the system in case of emergency.

- The SCILA needs marginal maintenance on a regular basis, e.g. check the CO_2-connector or check and clean sealing ring of front frame, as otherwise CO_2 might be released. → Maintenance, page 32ff. and Trouble Shooting/Service, page 36ff.

- The SCILA has to be placed in an upright and level position.

- Free ambient air supply at the back of the SCILA must be ensured to prevent malfunction caused by insufficient cooling. Do not cover the air outlet at the back panel at any time and keep the grid clean. In case of doubt, please contact INHECO for further analysis.

- Ensure that there is no other device installed next to the SCILA increasing the surrounding temperature for the SCILA above the specified temperatures. In case of doubt, please contact INHECO for further analysis.

- Do not exceed minimum or maximum ambient temperature and humidity conditions during operation or storage of the SCILA → Technical Data, page 18

- The SCILA must not be used in environments with risk of explosion or with explosive liquid samples.

- The SCILA is for indoor use only.

⚠️ **Electrical Shock**:

- The unit must not be used if the unit itself or the power cable shows visible signs of damage.

- You can suffer an electric shock and injuries, if the SCILA is not connected properly or if you do not disconnect the unit (resp. the power supply) from the wall power outlet before opening the housing.

- Never connect or remove the power plug of the device or of the power supply with wet hands.

- Make sure that the interior (electronics) of the SCILA does not get in contact with liquids while the unit is connected to the power outlet.

- The original power cable provided by INHECO has to be used to guarantee safe and proper operation.

- The wall power socket for the power supply connection must have a ground earth connection (Safety Class 1).

- Where an ungrounded receptacle is encountered, a qualified electrician must replace it with a properly (PE) grounded receptacle in accordance with the local electrical code.

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- Make sure that the electrical specification on the identification label at the side panel meets your local situation. → Labels and Serial Numbers, page 17.

Biosafety Laboratory Environment

- When using the SCILA in a Biosafety Laboratory Environment, the user is responsible for labeling it according to the WHO Laboratory Biosafety Manual (ISBN 92 4154650 6) and for operating the devices in accordance with the Biosafety Level Regulations of the WHO Laboratory Biosafety Manual.

- When biohazardous substances are used within the device (SCILA) or come into contact with it, the user is responsible for taking protective measures including labelling on the device (SCILA) according to IEC 61010-1/-2-081.

Gas Laboratory Environment

- All appropriate safety provisions and precautionary measures must always be fully observed to avoid hazards that can occur when handling the gas mixer. All pertinent national accident prevention regulations (e.g. for Germany : Unfallverhütungs-vorschriften [UVV]) and any relevant safety regulations set out by professional associations must also be observed.

- In addition to the instruction manual of the gas mixer and the SCILA and the applicable mandatory regulations governing accident prevention in the country of use and at the place of operation, all recognized technical regulations relating to safety compliant and proper working procedures must also be observed.

- When using the SCILA with a CO_2 mixture the user is responsible for operating the devices in accordance to the MSDS of CO_2 and other used gases with your local Gas Safety Regulations and according the user manual of gas mixer.

- The material of all components used in the gas supply (e.g. lines that run from the gas supply to the gas mixer inlets), all fittings installed at this point (e.g. shut-off valves, manometers etc.) and any sealing elements located there must be suitable for all gas types in use.

- The maximum specified gas inlet pressures as stated in the technical specification must not be exceeded in order to ensure its safe operation.

- The maximum ambient temperatures must not be exceeded in order to ensure safe operation.

- Also make sure that the connections, inlets and tubing´s are checked on a regular basis to detect and avoid any leakage of gas.

- It is recommended to install a gas warning device to avoid any harm to the user.

Electromagnetic field

- The SCILA is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

3.2. Technical Alterations

- Do not alter the product. Any modification or change which is not approved by INHECO leads to the loss of warranty and INHECO´s liability → Warranty, page 6

- Use only original parts provided by INHECO. Parts provided by other suppliers can impair the functionality of the unit.

- Damages due to the use of non-original parts are excluded from INHECO´s liability.

3.3. Malfunctions

- In case of a malfunction, switch off and disconnect the device immediately. Make sure to inform the authorized person in charge.

- Make sure that the malfunctioning unit is not accidentally re-installed and used before the malfunction is effectively eliminated.   → Trouble Shooting and Support, page 32.

4 HARDWARE INSTALLATION

The Installation should only be performed by technically trained personnel.

⚠️ **WARNING**
The main power switch (resp. the power plug of the power supply) of the SCILA must always be accessible to shut down the system in case of emergency.

4.1. Scope of supply

Before initial operation, make sure that the shipment of your unit is complete and neither packaging nor parts are damaged → Components, chapter 2.2, page 8.

⚠️ **WARNING**
As the SCILA CO2 MP-4 weighs app. 17 kg you could get hurt when a device is dropped down.

4.2. Mechanical integration

The SCILA is primarily designed for the use / integration on or besides liquid handling workstations. INHECO delivers the SCILA with 4 preinstalled feet. Furthermore, there are height adjustable feet delivered with the SCILA. For integration you can replace the front feet with the feet incl. positioning pin and the feet in the back with the feet w/o pin. It is the responsibility of the integrator/customer to decide and test which integration is needed. Visit Appendix 10.2 to see another integration example.

The recommended option is to replace the feet by screws to fix the SCILA on a defined position.
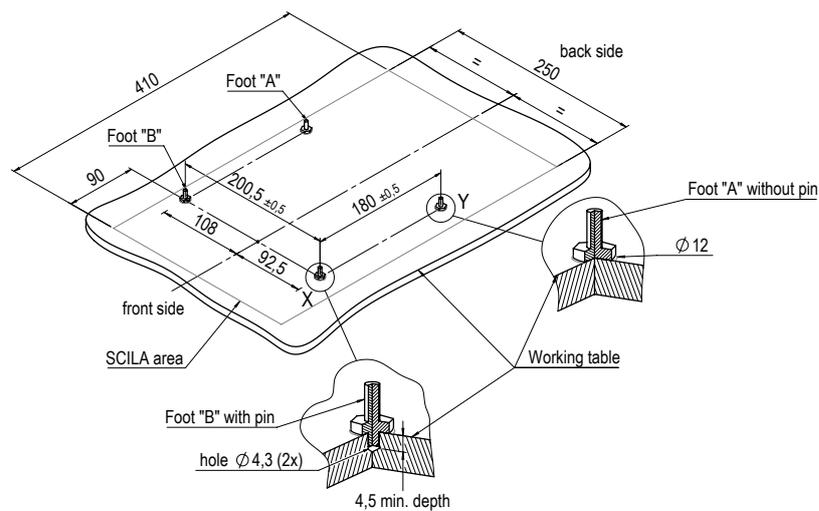
Fig.25: Drilling Scheme with feet position when using feet with positioning pin

Fig.26: (A) height adjustable foot
(B) height adjustable foot with positioning pin

NOTE
Make sure that the SCILA device is in level position (included feet might be used for this). The SCILA needs to be levelled to ensure that the water level control is working correctly.

> ⚠️ **WARNING**
>
> If the SCILA is filled with more water than allowed (maximum filling level) or moved while it is still filled with water, the water will likely flow out of the incubation chamber. Please make sure that the water will not get in contact with any electronics or other water sensitive materials.

If you plan to stack the devices, please take the following into account:

- Use the height adjustable feet with positioning pin (in the front) at the upper SCILA. These positioning pins perfectly match with the 2 holes on top of the lower SCILA and guarantee a secure mechanical connection between both devices.

Holes for positioning pins
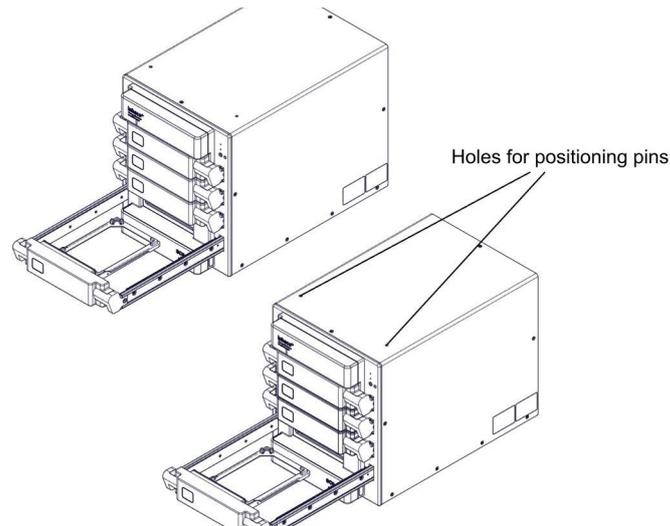
Fig.27: Image showing the holes for positioning pins on the top side of the SCILA
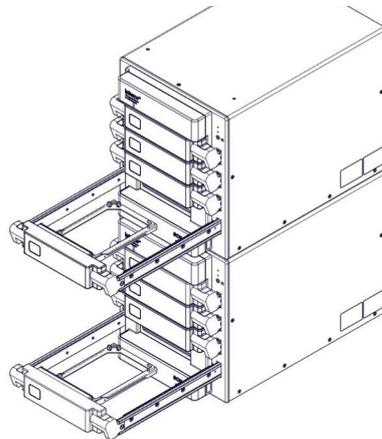
Fig.28: Image with two stacked SCILAs

- Do not stack more than 3 devices. INHECO also recommends having an additional fixation between the devices. If you need to stack more than 3 devices a shelf for additional devices is required.

- Each unit needs its own power supply.

- The best mechanical stability is achieved if the lower SCILA device is screwed to the base plate and is very well levelled.

- The water bag/cask for each unit need to be always above the respective SCILA level to ensure that the automated refilling process works correctly. We recommend about 75cm.

- Do not use the preinstalled plastic feet if you stack units.

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4.3.   Additional Integration Example

For integration you can for example use the Foot A with 2 pins in the middle to fix the SCILA in position. In this case place pins on your deck and use Foot A.

The recommended option is to replace the feet by screws to fix the SCILA on a defined position.
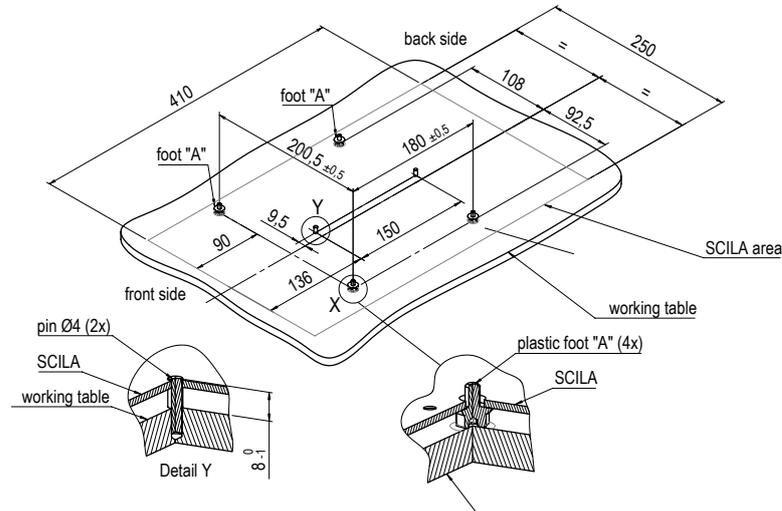
Fig.29: Drilling Scheme with feet positions

A
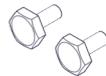
Fig.30: (A) height adjustable foot

⚠️ **WARNING**
If the SCILA is filled with more water than allowed (maximum filling level) or moved while it is still filled with water, the water might flow out of the device. Please make sure that the water will not get in contact with any electronics or other water sensitive materials.

NOTE
Make sure that the SCILA device is in level position (included feet might be used for this). The SCILA needs to be levelled to ensure that the water level control is working correctly.

4.4. Initial Operation

4.4.1. How to connect the SCILA to the PC and to power supply

- Connect the Ethernet cable (RJ45) to the Ethernet socket → SCILA Device Manager Manual

- Level the device to make sure that the water level detection of the SCILA works correctly.

- Connect the power supply to the SCILA (24Vdc).

NOTE
Make sure that the power connector is connected correctly (+ and - pole). The screws of the connector must show upwards.

- Connect the power supply to the wall power outlet.

- Push the power button until the LED 1 is flashing green (takes about 1.0 sec).
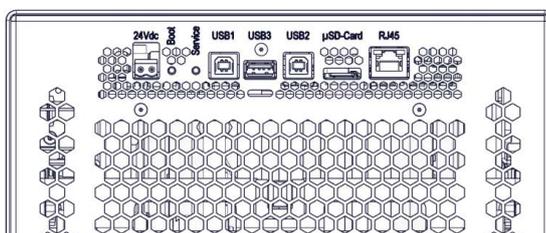
Fig.31: Connecting the SCILA with RJ45 to the computer and 24 Vdc to power
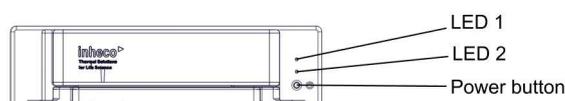
Fig.32: Power button and Status-LEDs

4.4.2. How to connect CO_2 mixing device

- Connect your gas mixing device or gas supply to the CO_2 connector (G1/4" internal thread for Quick connector with 6mm tube outside diameter) at the back of the SCILA. (hose specifications: outer diameter 6 mm and inner diameter 3 mm, max. length 5m).

- Make sure all connections are tight and there are no damages in the tubes.
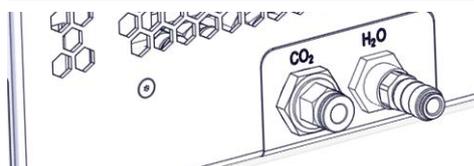
Fig.33: CO_2 quick connector at the back of the SCILA

WARNING
Please follow the instructions of your gas mixer manual, the MSDS of your CO_2 and other used gases. Furthermore, also follow your local safety regulation rules for working with gas, otherwise you could get harmed due to uncontrolled gas exhaust.
For your own safety: Install gas detectors according to your used gases in your laboratory.

4.4.3.   How to connect H$_2$O

The water reservoir will be filled via the water connector at the back of the device.
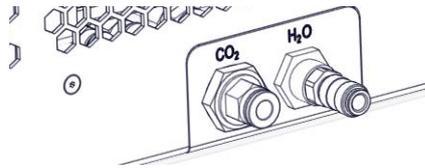
Fig.34: H$_2$O quick connector at the back of the SCILA

There are two options of refilling:

- automated refill → example for this, in chapter 6.2.2.1, page 30

- manual refill → chapter 6.2.2.2., page 31

4.4.4.   Disinfection of device

The SCILA must to be disinfected before first use.

Approved chemicals are the following:

Chemical	Category
Ethanol 80%	alcoholic
Isopronal 70%	alcoholic
Incubator Clean	QAV
Incuwater Clean	
Incidin Plus	glucoprotamin
Kohrsolin extra	aldehydbased

STOP

NOTE
When cleaning with Isopropanol 70% the housing of the SCILA device should not be exposed more than one hour, as otherwise the housing might get damaged.

WARNING
Depending on the desinfection solution you are using you need to take protective actions:
Please check the corresponding MSDS of your chemicals for cleaning regarding protective actions. The chemical might be poisonous or corrosively,
We strongly recommend to always:
- Wear gloves (Nitril natural rubber gloves) and safety glasses
- avoid contact with your skin
- avoid contact with drinks or food
during cleaning or desinfection.

5 COMMUNICATION WITH SCILA

A system administrator has to install and integrate the SCILA control software.

The SCILA has a SiLA (Standardization in Lab Automation) communication interface. Ideally the SCILA should be addressed by a SiLA PMS (Process Management System) for operation.

For non SiLA based workstations an additional driver must be written which translates the workstation protocol into a SiLA based protocol. The SCILA command set and the SiLA communication standard are stored on an USB flash drive which is part of the scope of delivery. Please contact your workstation provider for the integration.

The "SCILA Device Manager" is stored on the USB flash drive. (→ chapter 2.2., Scope of Supply, page 8)

- Open the file SCILA_PMS.exe with a double click.

- After 30sec to 3 min (depending on network connection) the SCILA should be shown in the field (IP/Name = Node name) or dropdown menu.
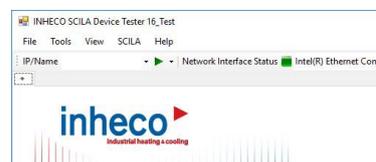
Fig.35: Screenshot of SCILA Device Manager before SCILA is located

When the SCILA is initialized (green light at LED1→ page 9) the Node name is shown:
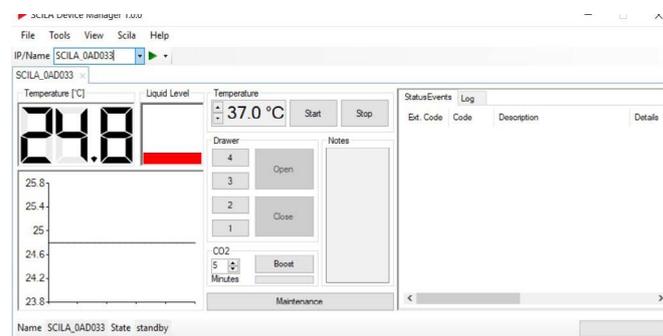
Fig.36: Screenshot of Device Finder after SCILA® is initialized

If you have several SCILA connected you can choose them via the drop down and their Node name or by selecting the tap with its Node name

Fig.37: Node name on label device (here SCILA_04E964)

The SCILA and the SCILA Device Manager are now ready for use. For detailed information please refer to the INHECO SCILA Device Manager manual.

6 OPERATION

The SCILA is designed for the use/integration with robotic platforms. For daily operation the SCILA should be operated through the PMS of the liquid handling workstation. The INHECO SCILA Device Manager can be provided for stand-alone testing the functionality of the device. The SCILA must be used exclusively by laboratory professionals who are familiar with the instructions of this manual as well as with the instructions of their workstation.

6.1. Safety Instructions for Operation

> **WARNING**
> The power plug of the SCILA power supply must always be readily indentifiable and easiliy reachted (not more than 3 m away from the SCILA) to shut down the systems in case of emergency.

6.1.1. Automated operation of SCILA drawer

The SCILA has to be controlled by a PMS which contains the SiLA and SCILA specific command set.

The horizontal movement of the SCILA drawer is controlled by the PMS commands for opening and closing the drawer.
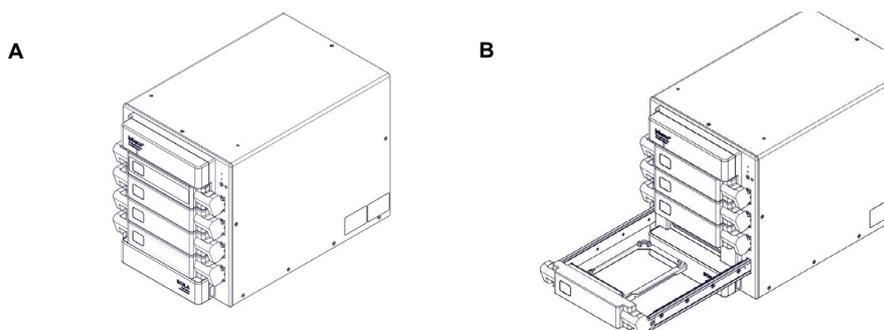
Fig.38: SCILA drawer (A = closed position, B = opened position)

> **NOTE**
> Never move the SCILA while any drawer is open.

> **NOTICE**
> To reduce the risk evaporation and cross contamination it is recommended to use a standard disposable lid.

6.1.2. Use of CO_2 or other gases

> **WARNING**
> Please follow the instructions of your gas mixer manual, the MSDS of your CO_2 and other used gases. Furthermore, also follow your local safety regulation rules for working with gas, otherwise you could get harmed due to uncontrolled gas exhaust.
> For your own safety: Install gas detectors according to your used gases in your laboratory.

> **WARNING**
> Check connections and tubing´s on a regular basis to avoid leakage of gas due to a damaged or incorrect installed gas loop.

6.2.   CO$_2$ and humidity control in daily routine

6.2.1.   CO$_2$ control

If you use the SCILA MIX please follow the instruction manual provided on the USB Stick. Otherwise follow the instructions of your own gas mixing device. Please refer to Technical Data for Gas inlet specifications.

> **NOTICE**
> The SCILA is delivered with a pre-installed 6mm gas quick connector. In case 6mm is not appropriate this quick connector can easily be exchanged. (G1/4" internal thread).

6.2.2.   Humidity control and filling of the SCILA water reservoir

The water reservoir can be filled either with a water bag/cask or with a syringe through the H$_2$O connector at the back of the SCILA.
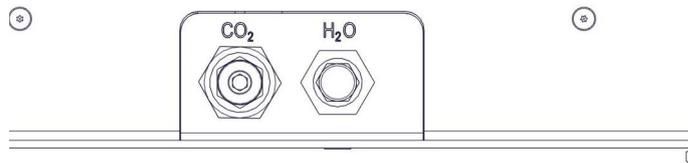
Fig.39: H$_2$O connector at the back of the SCILA

The maximum filling quantity is about 175ml. This water quantity will last for ~ 140 hours at a temperature of 37 °C and if the drawers are not opened during that time.

> **NOTICE**
> The SCILA needs to be levelled as otherwise the liquid level sensor will not show the correct water level. Do not move the SCILA while it is filled with water.

The LED 2 on the front of the SCILA indicates the water level:
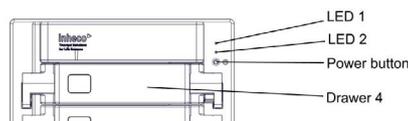
Fig.40: Functional elements of SCILA at the front

LED 2	Description of status	action required
blue steady light	water level is ok	no
blue flashing	water level on minimum	refill water
LED is off	water level is not detectable (device empty)	refill water

6.2.2.1.　Example of automated refilling

Infusion bottle (such as AmpuWA) with sterile water and infusion set with LUER Lock adapter needs to be purchased by customer.

- Start the SCILA.

- Insert the infusion set to the infusion bottle and place the bottle about 75cm above the water adapter of the SCILA.

- Connect the adapter (quick connector to Luer Lock) to the infusion set.

- Push the quick connector on the water adapter of the SCILA.

- Open the regulator of the infusion set.

- Refill of the device will start as soon as the blue LED 2 is either flashing or off. If blue LED is steady the SCILA water valve is closed.

We recommend checking your water system on a regular basis.

> **NOTICE**
> When disconnecting the water supply please make sure to disconnect only the quick connector and NOT the Luer Lock as otherwise the water will flow out of the SCILA .

> **NOTICE**
> Adapter and quick connector are not sterile. Please make sure to sterilize both in a recommended way.

6.2.2.2.　Manual refilling

As soon as the LED 2 is flashing the reservoir of the SCILA should be manually refilled.

Fig.41: Accessories for water refill delivered with the device

(1) Syringe with LUER Lock adapter

(2) Adapter (quick connector to LUER Lock)

- Start the SCILA.

- Connect the adapter (quick connector to LUER Lock) to the syringe.

- Connect the quick connector with the water adapter of the SCILA (just push adapter on connector till it locks).

- Slowly refill water until the valve closes => maximum water level achieved.

Fig.42: Manual H$_2$O filling

6.2.2.3. Disconnecting water supply

> **NOTICE**
> When disconnecting the water supply please make sure to disconnect only the quick connector and NOT the Luer Lock as otherwise the water will flow out of the SCILA.

- Push the ring back (direction to the device) until the adapter is released.
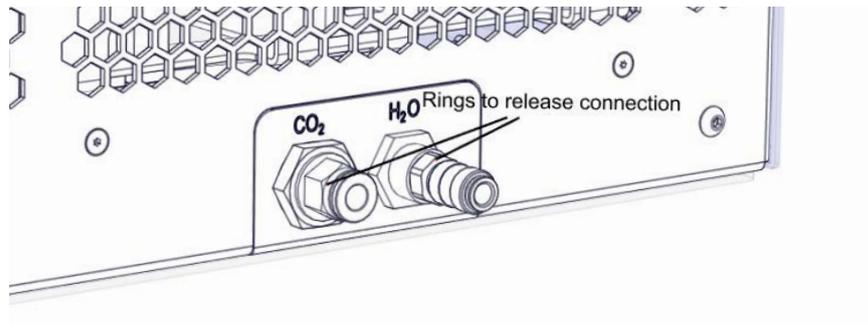
Fig.43: Ring from quick connector to release connection

7 MAINTENANCE

The SCILA must be used exclusively by laboratory professionals who are familiar with the instructions of this manual as well as with the instructions of their workstation.

7.1.   Software Updates

For updates of the SCILA Device Manager, please contact **techhotline@inheco.com** → How to contact INHECO, page 6.

7.2.   Support

In case of an operation failure, follow the trouble-shooting instructions of this chapter.

Please provide the following information when contacting INHECO for support:

- INHECO product name of SCILA (shown on device label)

- INHECO part number of SCILA (shown on device label)

- INHECO serial number of SCILA (shown on device label)

For best support provide as much information as possible about your problem.

7.3.   Return for Repair only with RMA Number

INHECO devices must be repaired by INHECO only. Parts may not be exchanged by the user. Opening of the unit and/or the exchange of parts will lead to the loss of warranty. Excluded from this are the parts which need to be removed for cleaning and service → Chapter 8, page 33 ff.

INHECO will only accept parts / devices for return that do not pose a threat to the health of our staff. In particular, the devices may not have been used in Biosafety Level 3 and 4 environments or may not have been exposed to radioactive or radiation materials. → Cleaning and Decontamination, page 34 and page 42.

Devices exposed to Biosafety level 3 and 4 Environments or radioactive materials are not accepted by INHECO for return.

Please contact **techhotline@inheco.com** or visit **http://www.inheco.com/service/ returns-rma.html** for the return procedure before returning the device to INHECO. Do not return any devices without INHECO´s RMA number. INHECO´s RMA number must be shown on the outside of the return package. Returns without RMA number are not being processed by INHECO.

Devices should be returned in the original packaging.

STOP

NOTE
Before returning the device, all water needs to be removed from the system and the system should be cleaned according instructions. **Only return the device completely emptied** → Removal of water, chapter 7.4.1, page 30.

7.4. Transportation and Storage

It is recommended to keep the original SCILA packaging, also the protection insert. The SCILA should be shipped and stored in its original packaging. Adhere to required environmental conditions for transportation and storage →Technical Data, page 18.

7.4.1. Removal of water for shipment / storage

- Use maintenance button to prepare for drawer and front frame removal.
- SCILA will be automatically powered off drawer are opened.
- Disconnect the power cable.
- Disconnect the water supply (push back ring to release the quick connector)
- Disconnect the gas supply.
- Remove the drawers and the front frame.
- Remove all water from incubation chamber bottom with a syringe or cloth.
- Reinstall the front frame.
- Connect the power cable.
- Start tje SCILA.
- Connect the syringe with quick connector to the water connector at the back of the SCILA and extract the rest water (about 3ml) out of the tubing´s.
- Insert the drawers.
- Power off the SCILA.

Fig.44: H_2O **extraction**

NOTE
The SCILA cannot be started if the front frame is not mounted.

7.5. Cleaning

The incubation chamber, the front frame and the labware carrier should be cleaned regularly to avoid contamination. Always clean the surface after a spillage. Use a cloth with an Ethanol or 70% Isopropanol 70% solution or the Incubator-Clean (supplier AppliChem) and make sure that no deposits are left on the surface. The ventilation inlets should be checked for contamination and should be cleaned if necessary. Liquids may not enter the unit.

Do not use aggressive cleaning fluids such as acetone, or abrasive cleaners. The copper surface of the incubation chamber walls could be damaged.

Contact INHECO in case you prefer other cleaning liquids or methods to rule out possible damage or increased wear of treated parts and surfaces.

Please visit chapter 8.7, page 42 to see how to get full access to the incubation chamber for cleaning and to learn about the recommended cleaning procedure

7.6. Decontamination

Decontamination is required before return of a device to INHECO in case it has been exposed to human or animal blood/fluid/tissue/cells or has been exposed to other biological or chemical materials.

The surface decontamination should include a wipe-down of the housing surface with a decontaminating solution. A solution of 70% Ethanol / 70% Isopropanol solution can be used, in case it is proven to be effective against the respective target material or organism. Otherwise a specific appropriate and proven decontamination method must be applied to eliminate any risk. Approved chemicals are the following:

Chemical	Category
Ethanol 80%	alcoholic
Isopronal 70%	alcoholic
Incubator Clean	QAV
Incuwater Clean	
Incidin Plus	glucoprotamin
Kohrsolin extra	aldehydbased

🛑 **NOTE**
When cleaning with Isopropanol 70% the housing of the SCILA device should not be exposed more than one hour, as otherwise the housing might get damaged.

⚠️ **WARNING**
Depending on the desinfection solution you are using you need to take protective actions:
Please check the corresponding MSDS of your chemicals for cleaning regarding protective actions. The chemical might be poisonous or corrosively,
We strongly recommend to always:
- Wear gloves (Nitril natural rubber gloves) and safety glasses
- avoid contact with your skin
- avoid contact with drinks or food
during cleaning or desinfection.

Fumigation (e.g. with toxic formaldehyde gas) might be required if decontamination of inaccessible areas is needed. Oxid vaporization should not be used as this might have influence on the copper material. Ensure to take precautions for your health and skin when using toxic gases or fluids for decontamination.

NOTICE
Contact INHECO if you are not sure whether the used decontamination method or solution could damage the device or its surface material.

Handling and disposal of infectious material shall be performed according to local safety guidelines.

7.7. Verification

7.7.1. Thermal

The SCILA is delivered calibrated and adjusted.

To prove that the SCILA is working within the thermal specifications, INHECO recommends performing a thermal verification at least once a year with the INHECO Measurement Plate (IMP). The IMP can be ordered at INHECO, it comes with a DAkkS certificate.

7.7.2. Humidity

The IMP can also be used for verification of humidity. The humidity is calibrated but doesn´t come with a DAkkS certificate as default. A DAkkS certification is available on request.

7.7.3. CO_2

INHECO recommends checking the CO_2 level with the respective measurement device (Atmo Check device (HTK)). Further information about this device are available at INHECO.

7.8. Shut Down and Disposal

The device must be scrapped and/or recycled of in accordance with environmental and biosafety directives. You have to arrange for correct electric waste disposal following actual safety regulations for your country.

All INHECO devices are RoHS and WEEE compliant.

8 TROUBLESHOOTING / SERVICE

8.1. SCILA is not connecting with PMS

In case your workstation computer is not able to communicate with the SCILA, check all cables for a correct and tight connection. Use the original cables provided with the device. Check whether the device is powered on. Check IP-address and network settings. Contact your workstation provider if the device is correctly connected and the communication issue remains.

In case a static IP is used for the SCILA and it is necessary to switch back to the default AutoIP (dynamic IP) the Service Button can be used.

If the device encounters a communication problem during operation the SCILA goes into "in error state" (red LED). After a restart the SCILA LED should show green again. If the communication problem is persistent please contact your workstation provider.

8.2. Humidity failures

• Check LED for water level and whether the water reservoir needs to be refilled.

The LED 2 in the front of the SCILA indicates the water level:
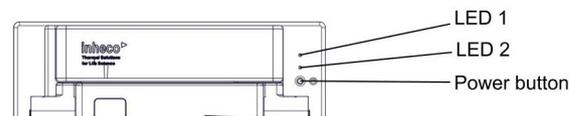
Fig.45: LED2 for water level

LED 2	Description of status	action required
blue steady light	water level is ok	no
blue flashing	water level on minimum	refill water
LED is off	water level is not detectable (device empty)	refill water

• Check H_2O inlet to ensure that it is not clogged.
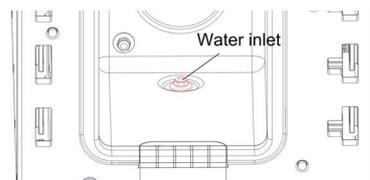
Fig.46: H₂O inlet (in red)

• If the inlet is clogged, unscrew the filter and clean it.

• Check the sensor for dirt and clean it, if necessary.
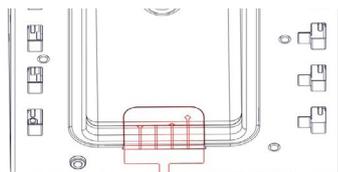
Fig.47: H₂O sensors (in red)

8.3. CO$_2$ failure

- Check the CO$_2$ inlet connector for tight fit.

- Check CO$_2$ inlet for clogging
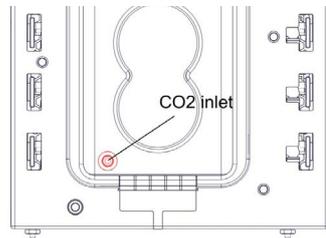
Fig.48: CO$_2$ inlet (in red)

- If the inlet is clogged, unscrew the filter and clean it.

- Read the gas mixing device manual for further actions.

8.4. Condensation on microtiter plate

- Disposables and samples should be pre-heated to the operating temperature of the SCILA to prevent condensation. Any lower temperature of disposable and sample may cause the forming of condensate, which can lead to cross-contamination.

8.5. SCILA Drawer Failure (in error codes: Drawer Failure)

- Check height of labware.

- Check weight of labware.

- Check guide rail for any dirt which may hamper proper operation.

- Check end position and report it to **techhotline@inheco.com**

8.5.1.   Exchange of drawer

The complete drawer can easily be exchanged.

• Open the door that should be exchanged by either using the INHECO SCILA Device Manager or by sending the respective command through your own PMS.
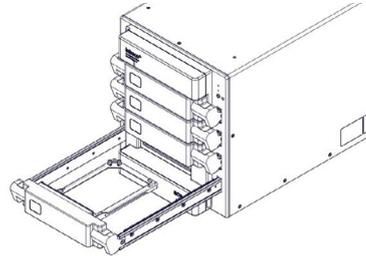
Fig.49: SCILA drawer open

• Gently press down the drawer interlock.
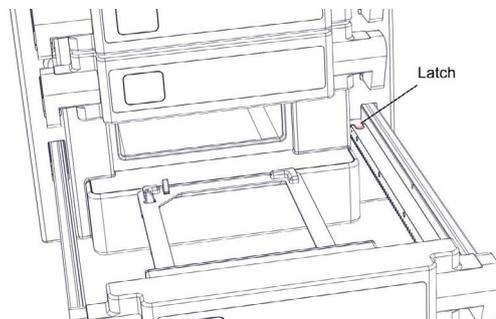
Fig.50: SCILA drawer with the interlock

• Dismantle the drawer by pulling out BOTH rails gently and simultaneously.

• Insert the new drawer and push in until the drawer interlock snaps in place. Close the drawer completely by using the INHECO SCILA Device Manager or by sending the respective command in your PMS.

8.5.2. Exchange of labware carrier

The labware carrier can be exchanged for cleaning or to enable the usage of a labware with a different height. .
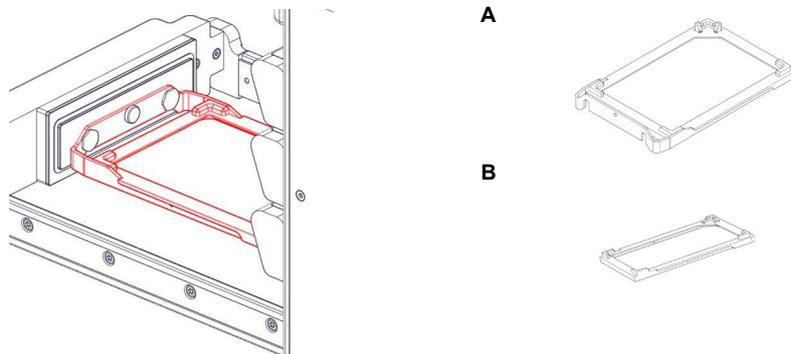
Fig.51: Labware carrier in open drawer (red) and (A = for plate up to 20 mm, B = for plate up to 23 mm)

- Take out the drawer as explained in chapter 8.5.1., page 38
- Loosen the screw in the center of the drawer front anticlockwise (no screwdriver needed).
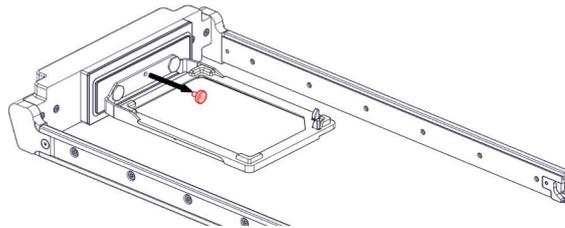
Fig.52: Remove screw (red)

- Lift up carrier.
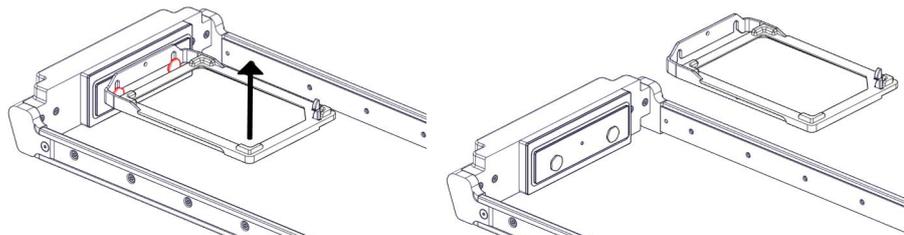
Fig.53: Lift up the carrier from the positioning bolts (red)

- Insert the new carrier onto the positioning bolts.
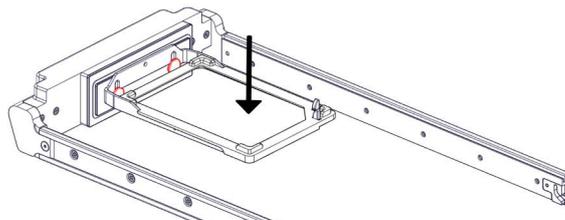
Fig.54: Insert the new carrier onto positioning bolts

- Insert the screw and screw down hand tight.
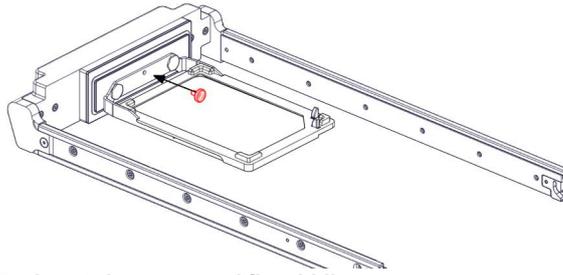
Fig.55: Insert the screw and fix middle screw

- Insert the drawer in the SCILA as explained in chapter 8.4.1

8.6.   How to unload the disposable in case the drawer does not open via PMS command

In case you cannot open the drawer by PMS command gently pull on both sides of the drawer → fig. 50 page 38 .
To close the drawer by hand gently push simultaneously on both sides of the drawer.

8.7.   Cleaning

8.7.1.   Access to incubation chamber for cleaning

The design of the SCILA device allows an easy access to the incubation chamber without using tools.

- Turn off gas mixing device.

- Disconnect water supply.

- Select maintenance mode => all drawers will open.

- Remove all drawers as explained in chapter 8.5.1., page 38.

- Gently remove the front frame, which is fixed by magnets only.
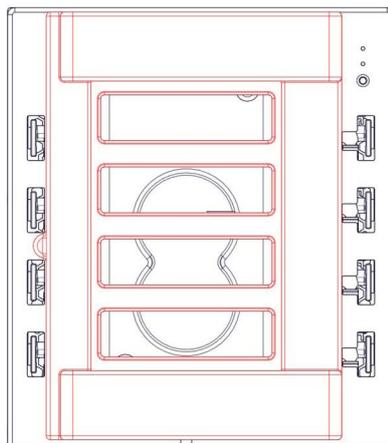
Fig.56: SCILA without drawer showing the front frame fixed by magnets

NOTE

Front frame may only be removed or installed while the SCILA is powered off. When using the Maintenance command, the SCILA is automatically switched off after all drawers are opened.
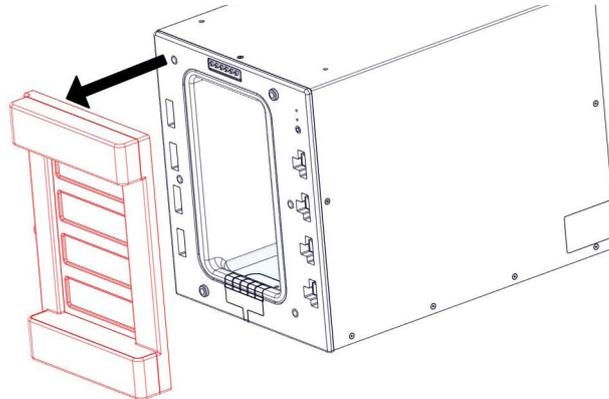
Fig.57: Removal of front frame
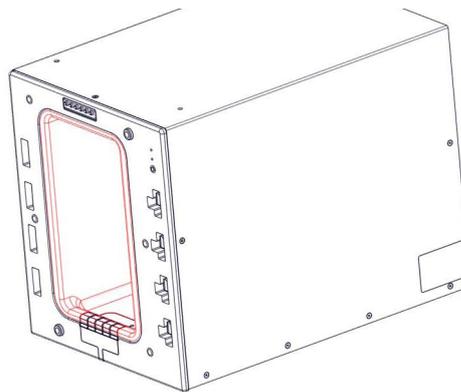
Fig.58: SCILA after front frame is removed

8.7.2.   Recommended Cleaning procedure

- Dismount all drawers.

- Remove labware carrier from drawer → chapter 8.5.2., page 39.

- Dismantle the sealing rings of the drawers and the front frame and check them for damages and/or brittleness.

- Remove water.

- Dry the incubation chamber with cloth.

- Clean the chamber, labware carrier, sealing rings and copper parts of drawer with soap sud.

CAUTION
According to GLP always use gloves while cleaning the SCILA.

- Clean the front frame contact pins with 70% Ethanol or 70% Isopropanol

- Clean the chamber, labware carrier, sealing rings and copper parts of drawer with 70% Ethanol or 70% Isopropanol 3 times in a row.

WARNING
Depending on the desinfection solution you are using you need to take protective actions:
Please check the corresponding MSDS of your chemicals for cleaning regarding protective actions. The chemical might be poisonous or corrosively,
We strongly recommend to always:
- Wear gloves (Nitril natural rubber gloves) and safety glasses
- avoid contact with your skin
- avoid contact with drinks or food
during cleaning or desinfection.

- Clean the drawer bars with 70% Ethanol or 70% Isopropanol

NOTE
Contaminated and polluted guide rails might cause a rough running drawer.

NOTE
The exposure time on the outside of the device with Isopropanol 70% should not exceed one hour as otherwise the material could be influenced.

- Leave all parts to dry.

- Reinstall the sealing ring of front frame → The sealing ring of the front frame has 2 flat sides, 1 side with 1 lip seal and 1 side with 2 lip seals. When you look from the front you need to see the flat side. While the side with 2 lip seals need to show to the inner ring.

We recommend exchanging the sealing ring on a regular basis (e.g. 500 hours; lifetime of sealing ring depends on temperature and closing cycles of drawer). Please check whether the sealing looks porous, feels brittle or shows physical damage. For part number refer to chapter 9, page 46.
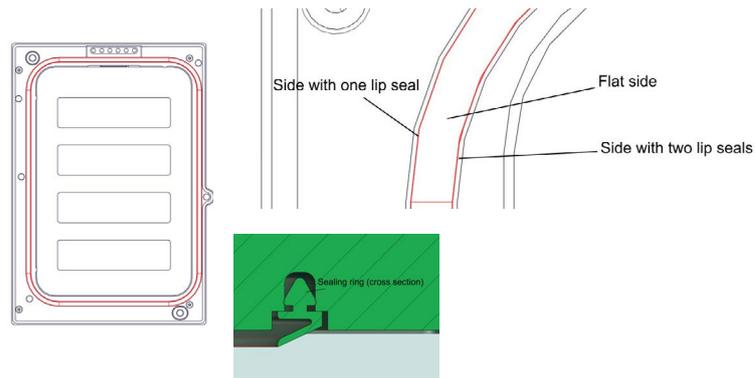
Fig.59: SCILA front frame with sealing ring

• Reinstall front frame.

NOTE
Front frame may only be installed or removed while the SCILA is powered off. When using the Maintenance command, the SCILA is automatically switched off after all drawers are opened.

• Turn on the SCILA with the power button at the front.

• Reinstall sealing ring of drawer

NOTE
Make sure the sealing ring is inserted into the sealing joint and that the sealing ring lays flat on the copper part.

• Reinstall labware carrier → chapter 8.5.2, page 39.

• Make sure the labware carrier screw is tight

• Insert the drawer 1 to 4 again according to chapter 8.5.1., page 38.
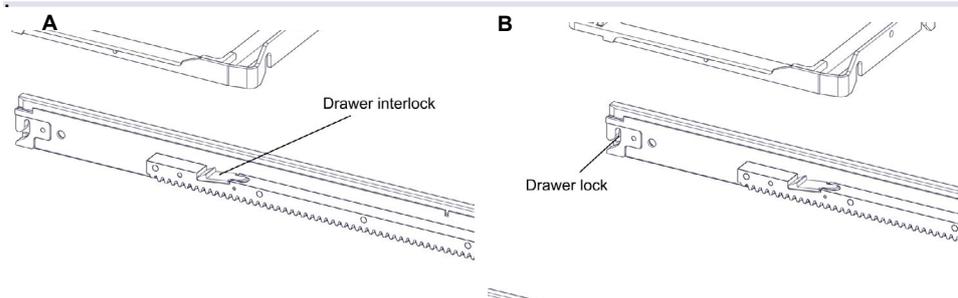
Fig.60: SCILA drawer interlock position (A =drawer interlock, B = drawer lock)

8.8.   Condensation at the doors

In case the sealing function of the respective door is not given, and humid air is leaking to the environment. Check the positioning and function of this sealing and replace if necessary → chapter 9, page 46
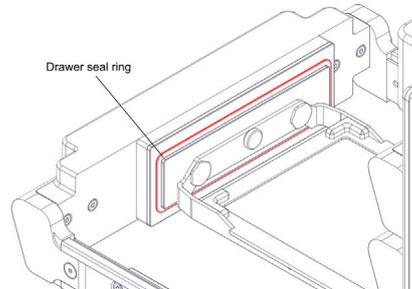
Fig.61: SCILA drawer with sealing ring

- Remove the drawer as explained in chapter 8.5.1., page 38.

- Remove the old sealing ring.

- Insert the new sealing ring.

NOTE
Make sure the sealing ring is inserted into the sealing joint and that the sealing ring lays flat on the copper part.

NOTE
Please exchange the seal when condensation is observed but also when the ring looks porous or feels brittle.

8.9.   Overheating protection

Within the system there is a control sensor to check the overall temperature of the device. In case of overtemperature this sensor triggers a fuse, which results in a shut down of the instrument.

In case you receive a failure message regarding an overheated system a temperature fuse will shut down the instrument when 70°C are reached. Please check, whether:

- the ventilation grid at the backside of the SCILA is not blocked.

- there is enough distance (appr. 25mm) between the ventilation grid and nearby installations to enable free air flow.

- there are not additional heat source around the SCILA which might increase air inlet temperature and/or wall temperatures.

8.10.   Water is spilled or observed high water consumption

- Check water pressure.

- Check tubing´s of outer water system.

- Check whether the device is correctly levelled.

- Check seals of the front frame and the drawers.

8.11.   SCILA does not power up

- Check whether the front frame is correctly installed.
- Check whether the front frame contact pins are corroded and need to be cleaned.

8.12.   Overfill warning

- Check whether device is levelled correctly.
- Check whether the SCILA was moved while it was filled with water.

How to restart the SCILA after an overfill warning:

- Use maintenance button to prepare for drawer and front frame removal.
- SCILA will be automatically powered off after all drawers are opened.
- Remove the drawers and front frame.
- Disconnect the power cable.
- Disconnect the water supply.
- Disconnect the gas supply.
- Remove water from incubation chamber bottom with a syringe.
- Reinstall the drawers and the front frame.
- Connect the power cable.
- Start the SCILA.

NOTE
The SCILA cannot be started if the front frame is not mounted.

9 ACCESSORIES

9.1. Miscellaneous

Product Name	Description	Part Number
SCILA power supply	Power Supply 24V FSP 180-AAAN2	2400121
SCILA drawer	Drawer	5000080
Front frame	Magnetic Front frame	5000078
Water connector	Luer-Lock SCILA Water connector	5000090
SCILA MIX	Gas mixing device	3800100
Labware carrier for plates up to 20 mm	Labware carrier for plates up to 20 mm	5000081
Labware carrier for plates up to 23 mm	Labware carrier for plates up to 23 mm	5000088
Foot with Positio-ning pins	Positioning pin SCILA	3201282
Foot without pin	Supporting bolt SCILA	3201283
Sealing Ring front frame	Sealing ring for the magnetic front frame (part number 5000078)	1014140
Sealing Ring drawer	Sealing rings for the drawer (üart number 5000080)	3203163

10 APPENDIX

10.1. CE Declaration

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thermal solutions for life science

EC - Declaration of Conformity

in accordance with *Directive 2014/35/EU (LVD), 2014/30/EU (EMC), 2012/19/EU (WEEE)* and *2011/65/EU (RoHS II)*

Product	*Incubator for Robotic Systems:*
	SCILA CO2 MP-4
	SCILA CO2 DWP-2
Part No:	*73001xx*
	7300104
	7300102
Standards (Safety):	*EN 61010-1:2010*
	EN 61010-2-010:2014
	EN 61010-2-081:2015
Standards (EMC):	*EN 61326-1: 2013*
	EN 61000-4-2:2009
	EN 61000-4-3:2006 + A1:2008 + A2:2010
	EN 61000-4-4:2004 +A1:2010
	EN 61000-4-5:2006
	EN 61000-4-6:2009
	EN 61000-4-8:2010

This product complies with the essential requirements of the Low Voltage Directive (LVD) and Electromagnetic Compatibility (EMC) directive, when used for its intended use.

International Standards: For international standards please see UL certificate: not yet available

Manufacturer address: INHECO Industrial Heating and Cooling GmbH
Fraunhoferstr. 11
82152 Martinsried
Germany

Martinsried,   14.12.2018

Place and date of issue   Günter Tenzler, Managing Director

10.2.   Other Integration Example

For integration you can for example use the Foot A with 2 pins in the middle to fix the SCILA in position. In this case place pins on your deck and use Foot A.

The recommended option is to replace the feet by screws to fix the SCILA on a defined position.
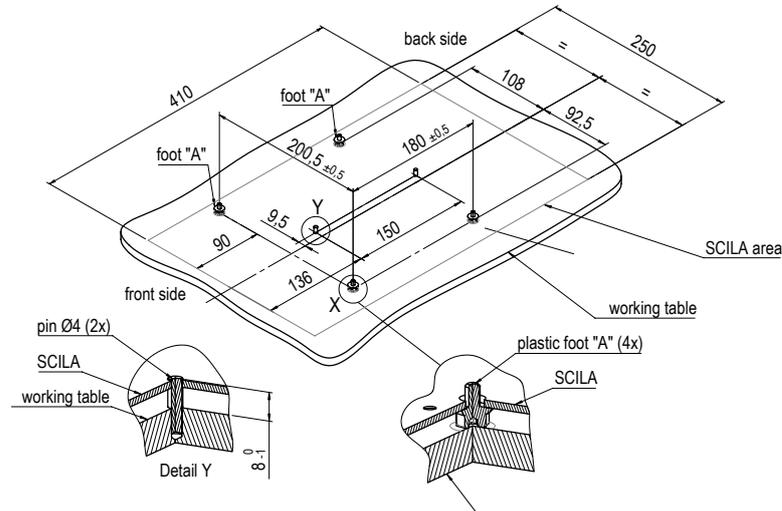
Fig.62: Drilling Scheme with feet positions

A
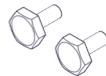
Fig.63: (A) height adjustable foot

WARNING
If the SCILA is filled with more water than allowed (maximum filling level) or moved while it is still filled with water, the water might rinse out of the device. Please make sure that the water will not get in contact with any electronics or other water sensitive materials.

NOTE
Make sure that the SCILA device is in level position (included feet might be used for this). The SCILA needs to be levelled to ensure that the water level control is working correctly.