

SCILA MIX
Instruction manual

HTK Hamburg GmbH

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1 Important information about this instruction manual

1 Important information about this instruction manual

You have decided to purchase a gas mixer from HTK Hamburg GmbH. We are certain that you have made the right decision, and we would like to provide you with the latest instruction manual, as well as all the information and details regarding its appropriate and safe use, set up and operation.

1.1 What does this instruction manual cover?

To ensure the gas mixer's safe use, the necessary steps covering its operation and maintenance are described in this instruction manual. Complying with this instruction manual helps to avoid hazards, minimise any downtime as a result of its incorrect operation and ensure both the long service life and reliability of the gas mixer. It is therefore imperative that you have read and understood these instructions before commissioning the gas mixer.

Should you experience any unanticipated faults, which cannot be rectified with the help of this instruction manual and fault table, please ensure that you contact us directly or an accredited service partner, and please provide the necessary device data (type plate):

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1.2 Instruction manual breakdown

This instruction manual is broken down into several chapters:

- Chapter 1 „Important information about this instruction manual“ explains the layout of this instruction manual, and contains definitions of the terms and symbols used in it.
- Chapter 2 „Safety provisions and precautionary measures“ contains important details and information on how to safely use the gas mixer. We recommend paying particular attention to this chapter, due to the fact that any work involving gas requires the highest level of caution!

1.3 Intellectual Rights to this instruction manual

- Chapter 3 „Description“ explains how the gas mixer works using a functional schematic.
- Chapter 4 „Setup and installation“ contains all the important information you require to ensure a proper set up in the right location, as well as instructions on installing gas and electrical components.
- Chapter 5 „Commissioning and operation“ covers all the important details on the commissioning, operation and decommissioning of the gas mixer. It is particularly important that the operator reads this chapter and checks to determine whether the correct approach has been understood.
- Chapter 6 „Maintenance and servicing“ lists the necessary maintenance work that can be carried out independently. This chapter also lists a fault table, which provides answers should something not be working correctly.
- The „Attachments“ chapter lists all the technical data as well as a brief set of instructions which, in short steps, explain the gas mixer's proper operation.

1.3 Intellectual Rights to this instruction manual

This instruction manual is subject to copyright by HTK Hamburg GmbH. It may not be reproduced or used in a manner that contradicts the justifiable interests of HTK Hamburg, without the company's prior written consent. The forwarding of this instruction manual to third parties shall only be permitted in conjunction with the transfer of the gas mixer described therein.

1.5 Symbols used

1.4 Terms used

- Gas inlet pressure:** the term gas inlet pressure denotes the pressure that is produced from the supply side for the individual gases. It should be noted here that a differentiation is made between static and dynamic pressure. If no gas mixture is produced, no gas can flow. The resulting pressures at the inlet to the gas mixer are static pressures. If, however, a gas mixture is produced, the gas inlet pressure drops to the so-called dynamic pressure in relation to the dimensioning of the gas supply. Due to the fact that static pressure is always higher than dynamic pressure, it should be noted when commissioning the device that the static pressure (without gas mixture production) does not exceed the maximum permissible gas supply inlet pressure, and that the dynamic pressure (during gas mixture production) does not fall below the minimum required gas supply inlet pressure (during activated inlet pressure monitoring, this would trigger an alarm).
- Gas mixture outlet:** the term gas mixture outlet denotes the point at which the individual gases are mixed together. A solenoid shut-off valve is fitted at this point. The buffer tank is situated behind the gas mixture outlet. If the valve closes at the gas mixture outlet, any gas mixture that has already been produced and which is still trapped in the buffer tank and in the lines can still be released.
- Buffer tank pressure:** the buffer tank pressure denotes the pressure created by the gas mixture in the gas mixture collecting tank. It fluctuates between the prescribed minimum and maximum tank pressures, which are set within the software. If the measured pressure level in the gas mixture collecting tank exceeds or falls below the pre-set threshold values, gas mixture production is automatically suspended. i.e. all target values are set to 0, and the solenoid valve located at the gas mixture outlet closes.
- Collecting tank alarm contact:** the collecting tank alarm contact actuates a relay in the device. The volt-free contacts can be accessed via a connector on the back of the device. When operating normally, the relay is kept energised, holding the contacts closed. Should a fault occur, the relay is deactivated and the relay contacts will open. The fault type can be determined by looking at the display. The collecting tank alarm contact is optional and has to be noted at moment of order.
- Additive gas:** the term additive gas denotes all gases which are added to the instrument gas.

1.5 Symbols used



This symbol is used to denote safety-relevant sections within the instruction manual. The text contained in the safety-relevant section is also written in italics, in addition to the symbol itself.

2 Safety provisions and precautionary measures

2 Safety provisions and precautionary measures

All appropriate safety provisions and precautionary measures must be fully observed at all times. They are there to help you avoid hazards that can occur when handling the gas mixer. In addition, all pertinent national accident prevention regulations (Unfallverhütungsvorschriften [UVV]) and any relevant safety regulations set out by professional associations must also be observed.

For example, when using the product in Germany:

- Accident prevention provisions set out by the commercial professional associations
 - a) DGUV Provision 1 Underlying principles of prevention
 - b) DGUV Provision 3 Electrical installations and operating resources
 - c) BGR Chapter 2.33 Gases
 - d) BGR Chapter 2.33 Oxygen (when using additive gas)

No claim is made with regard to the completeness of this list.

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

The operator is required to ensure that only authorised individuals are allowed to work on or with the equipment. The gas mixer is constructed using the latest technology and is deemed to be operationally safe. Hazards may result from using the gas mixer when untrained individuals are given the opportunity to use it incorrectly, or in contravention of its intended purpose.

2.1 General safety instructions



- *The gas mixer may only be used by authorised and trained individuals.*
- *Please ensure that you observe any and all national valid regulations concerning the use of gases.*
- *Please ensure that you observe any and all national valid accident prevention provisions.*
- *Any conversion work undertaken on, or changes made to the gas mixer are prohibited.*

2.1 General safety instructions

- *Faults may only be rectified by authorised individuals.*
- *Any maintenance and repair work that fails to rectify a fault after following the maintenance schedule and fault-finding table provided, must be carried out exclusively by the manufacturer.*
- *When undertaking any maintenance or repair work, the gas mixer must be disconnected from any gas and electrical supply. Gas lines must be able to be closed off externally and removed from the gas inlets and outlets. To ensure the absence of any electrical supply, the plug must be removed from the socket.*
- *All supply lines (gas hoses) running from and to the gas mixer must be certified to safely withstand the maximum permitted gas pressure. Should this not be possible for the system situated downstream of the gas mixer, it must then be ensured by way of the installation of suitable valves, e.g. rupture discs or safety valves, that the pressure for the downstream system does not exceed its maximum permissible pressure.*
- *The material used in the gas supply lines (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 material used for the gas outlet line (the line that runs from the gas mixer's outlet to the consumer), 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 permissible gas inlet pressures as stated in the technical specification must not be exceeded. In order to ensure its safe operation, a safety relief valve may have to be integrated into the gas supply line.*
- *The impermeability of all gas line contacts and connections as well as the supply line to the consumer is to be tested at regular intervals against the atmosphere. The tests are to be documented. Please ensure that you only use approved leak detection procedures; never test with a naked flame. Should you discover a leak, this must be rectified without delay. Otherwise the gas mixer must be taken out of operation immediately.*
- *Please ensure that you regularly inspect the electrical supply cables for any signs of damage.*
- *When setting up the gas mixer in confined spaces and/or in rooms with limited ventilation, and when using gases which, in the event of their release would expel the atmospheric oxygen in the working area, all pertinent national safety regulations must be observed. Basically we recommend the continual monitoring of the atmosphere in the working area by using appropriate gas warning systems.*

Improper use of the gas mixer can introduce safety risks. Examples of inappropriate usage include:

- *using the device with gases other than those stated in the technical data.*
- *using the gas mixer with liquids.*

2.2 Liability

- *the use of the gas mixer in ambient temperatures that exceed the temperature range specified in the technical data.*
- *the use of the gas mixer where the temperature of the gas exceeds the temperature range specified in the technical data.*
- *setting up and operating the gas mixer in areas where a risk of explosion exists.*
- *any unauthorised or prohibited alterations, attachments or conversions involving the gas mixer.*

2.2 Liability

Liability for the installation, commissioning and maintaining the good working order of the gas mixer shall, in all circumstances, be transferred to its owner or operator upon receipt.

HTK Hamburg GmbH shall not be liable for damage resulting from:

- the device being inappropriately installed, commissioned or serviced by individuals not affiliated with HTK Hamburg GmbH Service.
- any action being undertaken does not conform with the device's intended use.
- any action being undertaken that is in contravention of the correct procedure.

3 Description

3 Description

3.1 Type designation

The PCU10 series gas mixer consists of the standard device types PCU10/60_MIX_2K/3K/4K. The differences can be found in the flow-rate range and the number of gas mixture components.

The gas mixer is defined more specifically by way of the following supplementations. Please refer to the technical data attached for the specifications of the gas mixer.

Type	Flow-rate range	Number of additive gases
PCU	10	2
PCU	60	3
		4

The flow-rate range is to be applied in each case up to 10/60 l/min. The gas mixer can also be set up for flow-rate ranges of between 0 and 60 l/min depending on the customer's specific needs. The number of gases 2, 3 and 4 indicate the number of gases to be mixed.

3.2 Scope of application for the gas mixer

The gas mixer should be used for the discontinuous production of gas mixtures from 0 up to the maximum gas mixture discharge quantity, consisting of 2, 3 or 4 different component gasses. The gas mixer is not suitable for flammable gases. The gas mixer has a buffer container downstream of the factory. The gas mixture can be removed from this buffer tank on a discontinuous basis without altering the precise mixture ratio.

The gas mixer is only suited for use as specified in the technical data. The key information listed in chapter 2 of this instruction manual as well as the respective safety instructions must be observed.

In order to avoid any impurities or moisture in the device, the gas mixer may only be operated with technical gases of a purity grade of 5.0 or higher.

3.3 Functional description for the gas mixer

3.3 Functional description for the gas mixer

A functional description is shown in the attached functional schematic. The numbering of symbols on the functional schematic can also be found on the individual components. Using the list of symbols and the functional schematic, you will be able to clearly identify the individual components of the gas mixer.

The individual gases are fed into the gas mixer separately via the gas connectors, which are labelled and situated on the reverse side.

An internal buffer tank is situated downstream of the gas mixer. Its volume is designed in accordance with the respective flow-rate range. Please consult the attached technical data for the precise technical specifications. The gas mixture can be taken from the buffer tank from 0 to the maximum gas mixture flow rate.

With the help of the internal pressure equaliser, the gases are fed into the flow controllers with equal pressure. This ensures that, in the event of decreased pressure, the mixture ratio and gas mixture product remain constant.

If one gas supply ceases completely, gas mixture production is automatically suspended. In other words, the target values are set to 0 and the solenoid valve closes at the gas mixture outlet. An error message is shown on the display.

The desired mixture ratio can be set as required in vol.% or ppm. The internal software only permits settings which always result in 100%. The instrument gas is always automatically regulated.

The current mixture ratio is shown on the display.

The pre-set target values are transferred digitally (RS485) to the flow controllers. The flow controllers automatically adjust to the correct through-flow value in each case.

If the minimum buffer tank pressure is reached as a result of excessive gas mixture extraction, the solenoid valve located at the gas mixture outlet of the gas mixer will open, and the downstream buffer tank is filled with the gas mixture until the maximum buffer tank pressure is reached. The minimum and maximum buffer tank pressures are configured during manufacturing and cannot be adjusted.

Any faults are detected by the PCU control unit and shown on the display. In addition, a volt-free alarm contact is triggered, which, for example, can be used for signalling with an LED 24V flashing light. The volt-free alarm contact is optional and has to be noted at moment of order.

3.4 Technical data for the gas mixer

The respective technical data can be taken from the relevant data sheet located in the "Attachments" chapter.

4 Setup and installation

4 Setup and installation

This chapter provides important information on an appropriate setup location, and on the installation of gas and electrical components.

4.1 Inspection for damage during transport

- Every transport operation must be undertaken correctly and involve packaging that is suitable for the transport and weight of the device. All gas inlets are to be sealed off before transport in order to prevent impurities such as, for example, packaging material, entering into the gas supply lines.
- A visual inspection must be carried out for any signs of damage to the casing following every transport operation. The inlet fittings, the connector plugs and connector cables must also be checked. If a kink or damage has occurred to the power cable, it should be replaced by a new power cable.
- The gas mixer is supplied in a ready-to-use state

4.2 Setup location

- Never position the gas mixer in direct sunlight or expose it to other significant sources of heat.
- Do not operate the gas mixer in an environment with increased electromagnetism (that exceeds normal threshold values).
- Please ensure to comply with the minimum safety distances during setup. The gas mixer must be accessible for our service technicians, should maintenance work need to be carried out.
- Please ensure that the gas mixer is protected against the elements and positioned on a solid base to prevent it tipping over.
- Please ensure compliance with the environmental conditions stipulated in the technical data including temperature, humidity, altitude etc.

4.3 Safety instructions for installation

4.3 Safety instructions for installation



- *Before commissioning the device and following any alteration, overhaul or extension of the gas mixer, the necessary safety inspections pursuant to DGUV Provision 3 (with reference to industry standards DIN VDE 0100, DIN VDE 0701, DIN VDE 0702 etc.) must be carried out and documented accordingly. The inspection comprises activities such as conducting a visual assessment, testing and measuring, in order to determine the effectiveness of the protective measures (e.g. emergency off switch functions, safety locks, pressure monitors etc.). If the operator is unable to conduct the inspection, an inspection can be carried out by HTK Service that complies with industry-standard DIN VDE 0702.*
- *Pursuant to DGUV Provision 3 a protective conductor terminal (PE connection) of Protection Class 1 must be installed.*
- *Subsequent to commissioning the device and following any alteration, overhaul or extension of the gas mixer, the integrity of the connections to the atmosphere must be inspected by way of suitable leak detection procedures, and must be documented in line with operational health and safety directives. In doing so, please ensure to only use suitable leak detection procedures (never inspect using a naked flame). Should you discover any leaks, please rectify these without delay while ensuring compliance with the valid safety provisions.*
- *All supply lines (gas hoses) running from and to the gas mixer must be certified to safely withstand the maximum permissible gas pressure. Should this not be possible for the gas mixer SCILA MIX, it must then be ensured - by installing suitable valves, e.g. rupture discs or safety valves, that the pressure for the system does not exceed its maximum permissible pressure.*
- *The material used in the gas supply lines (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 the relevant gas type in use.*
- *The material used for the gas supply lines (the line that runs from the gas mixer's outlet to the consumer) 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 gases to be mixed may only be fed into the gas mixer via the designated gas inlet contacts.*
- *The maximum permissible gas inlet pressures stated in the technical data must not be exceeded. This can be safeguarded as required by, for example, installing safety valves and/or rupture discs.*

4.4 Installing the lines

4.4 Installing the lines

- Connecting the gas supply lines / hoses must be done in the absence of any pressure. Please ensure to install the necessary gas connectors correctly.
- Our gas mixer devices are NOT equipped with input filters during manufacturing. These can be supplied with the device as an optional extra. Filters serve to protect the gas mixer and increase its service life. The filters are designed for normal industrial application with clean gases and a flushed out, clean supply line system. If increased loads are expected, additional filters are to be installed by the customer, which are designed for the form and performance of the gas mixer. We shall be happy to provide you with suitable components.
- Please ensure the sufficient dimensioning of the supply lines / gas connectors that feed into the gas mixer, in order to safeguard the supply of the individual gases to be mixed (the inner diameter should be at least as large as the connectors; please refer to the technical data).
- All gas supply lines should have a shut-off function situated before the gas mixer.
- All gas supply lines should be free from oil, grease and other impurities. All gas supply lines should be sufficiently cleaned before being connected to the gas mixer, to ensure that all impurities are removed.
- The gas supply line to the equipment should be designed as short as possible.
- The gas supply line to the equipment should have a shut-off function situated immediately before its entry situation.

4.5 Electrical installation

- Connect the device to the mains power supply using a cold-device plug.
- The use of unapproved power supply cables can lead to their destruction in the event of an increased mechanical load. Twisted and/or kinked power supply cables can render a signal analysis inaccurate.
- Please ensure to protect the power supply cables against any excessive mechanical load (e.g. by using an appropriate cable tray/trough). An excessive mechanical load can damage the cables.
- Please make absolutely certain to verify that the voltage of the power supply complies with that specified in the technical data.
- Do not turn on the power supply yet.

5 Commissioning and operation

5 Commissioning and operation

5.1 Commissioning and operation

The gas mixer will start up automatically as soon as a power supply is connected and the system is switched on. During the start-up process, the manufacturer's logo is initially displayed (figure 5.1).



Figure 5.1: Start-up screen

Following this, the contact details are displayed (figure 5.2).

When the start-up process is completed, the mixer's main operating screen is displayed (figure 5.3). The set CO₂ concentration is displayed on the first line. In addition, there are two status indicators. The second line indicates whether the device is on (green area and caption ON) or off (red area and caption OFF). The status can be changed via the ON / OFF button. The third line shows the error status of the device. If there are no problems, the device shows the error status OK and a green area. As soon as an error occurs, the device displays an error code and a red area.

Four buttons are arranged at the bottom of the screen. The *Information* button accesses the information window. This provides general information about the device. The *Error Log* button displays an overview page of the pending errors. The button *Settings* opens a configuration dialog where adjustment to the settings of the gas

5.2 Information

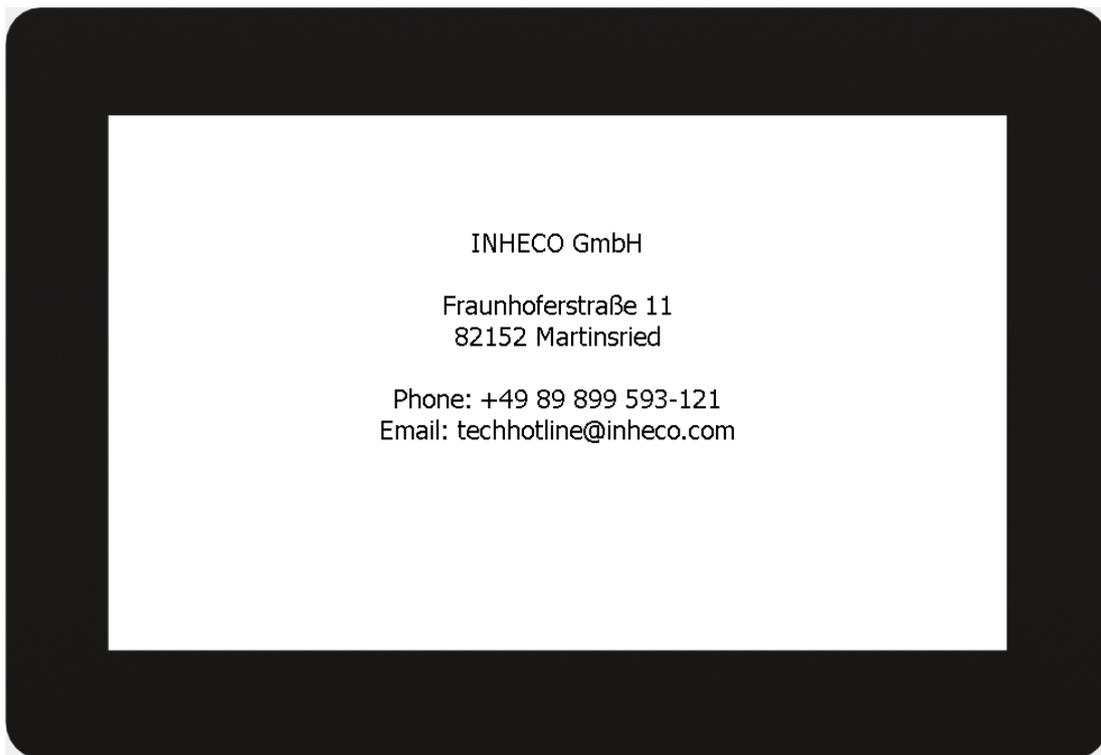


Figure 5.2: Contact information

mixer is possible. With the button *Status* an overview page for error diagnostics and a page for advanced settings can be accessed.

5.2 Information

The information page presents general information about the device. These include e.g. the serial number and firmware version of the device.

5.3 Error handling

If the button *Error Log* is pressed on the main screen, an overview of current Error messages is displayed (figure 5.5). Each list contains the error code with a short error description. In addition, the date and time of the first occurrence of the error is displayed. The following Errors may occur (sorted by error code):

Attention: Depending on the version of the device, the error conditions may be activated or deactivated. Not all messages are available on every device.

5.3 Error handling

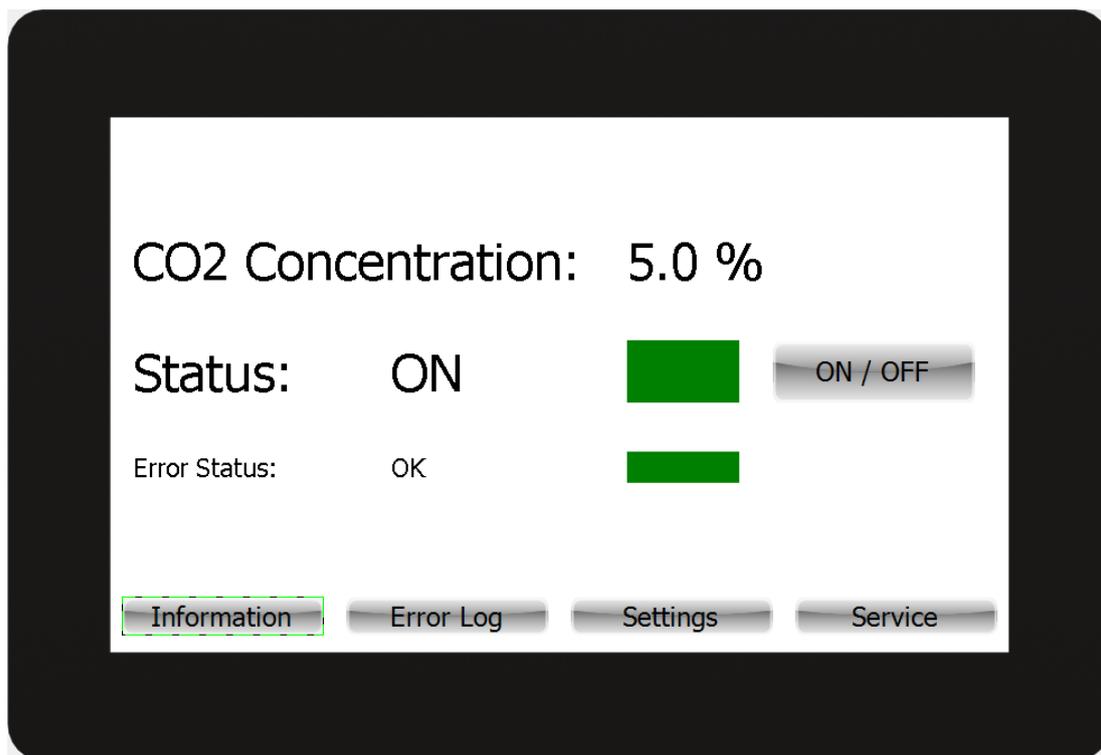


Figure 5.3: Main screen

1. *Deviation from the pre-set target flow-rate.* An error is displayed when for longer than 10 seconds, there is a discrepancy of greater than 10 % between the actual flow-rate and the target flow-rate.
2. *Pressure exceeding or falling below the set threshold values.* A pressure hysteresis is used when filling the buffer tank. If the measured pressure falls below the lower threshold by one bar, or if the measured pressure exceeds the upper threshold by one bar, an error is reported. The monitoring function is rendered active 30 seconds after the device has been activated, as a minimum pressure level must first be generated.
3. *Analog input outside the specification.* If the analog signal of the pressure transmitter is less than 2 or more than 22 mA, an error is reported.
4. *Communication problems.* If more than 3 faulty communications are registered within a time interval of 30 seconds, an error is reported. Please note: If there is an error in the communication process with one of the mass flow meters, it is possible that the target value of the device cannot be reset. In this case, the gas flow is only interrupted by the solenoid valve.

Please note: For safety reasons, a communications error can only be eliminated after the device has been restarted. Any issues concerning the internal device wiring may only be rectified by qualified professionals when the device is switched off. A defined mass flow meter can only be ensured after initiating a restart.

5.4 Configuration Options



Figure 5.4: Information

5. *Target value specification: flow-rate outside of permitted flow-rate values.* During the master/slave operation, the target flow-rate for all slave controllers is calculated automatically. If the calculated value breaches the value range specified by the device, this will be displayed as an error. An error will be immediately reported if the maximum threshold value is exceeded. If the minimum threshold value is reached, an error will be displayed only after the value has remained below the threshold value consistently for 5 seconds.

The *Reset All* button is used to acknowledge and dismiss the faults before the gas mixer can be reactivated. Depending on the configuration of the mixer, a password may be required.

5.4 Configuration Options

Activating the *Settings* button on the main screen takes the user through to the Settings menu (figure 5.6). Access to the menu is protected by the password 123456. The parameters to be set are listed as follows:

5.5 Service Menu

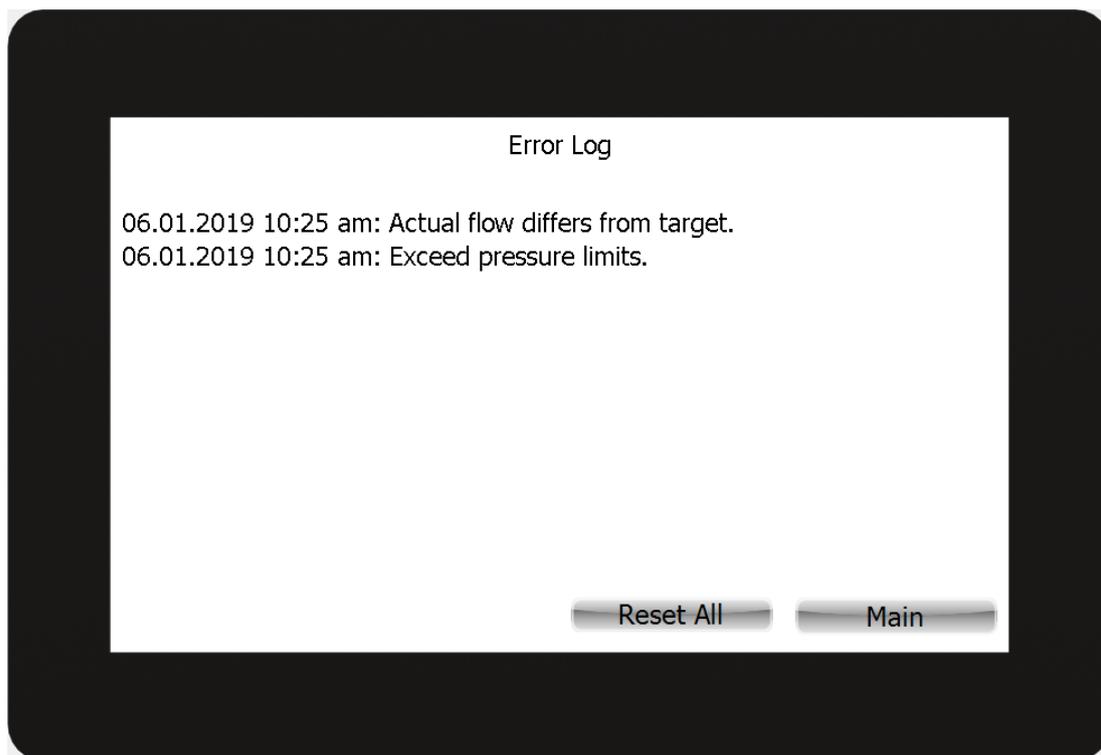


Figure 5.5: Error Log

Identifier	Functional description
CO2 Concentration	Stipulates the target concentration of the additive gas. The flow-rate of the mass flow controller is calculated from the concentration entered here, and the current flow-rate of the master controller.
SCILA Devices	Here the number of Scilas connected to the device is displayed. This defines the maximum flow rate.
Date	Here the current date is set. It is used to correctly display the date of the occurrence of errors. The date must be entered in the format DD.MM.YY.
Time	Here the current time is set. It is used to correctly display the time of the occurrence of errors. The time must be entered in the format hh.mm.ss. [am / pm]. A 0 after the last dot stands for am, a 1 for pm. To set the time to 15:10, the correct input would therefore be: 03.10.00.1

The main window can be accessed by pressing the *Main* button.

5.5 Service Menu

Pressing the Button *Service* on the main screen, depending on the password used, either opens the troubleshooting overview page or a page with advanced settings. This options can only be used by trained staff.

5.5 Service Menu

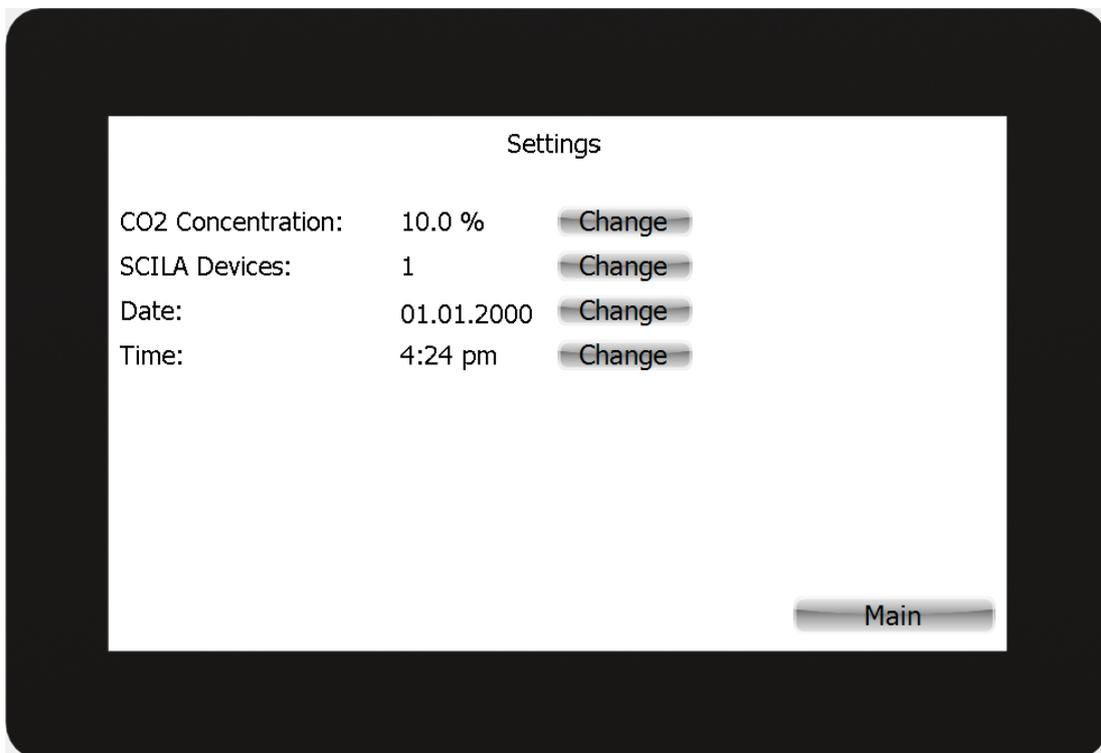


Figure 5.6: Settings

6 Maintenance and servicing

6 Maintenance and servicing

This maintenance instruction manual should answer important questions concerning care and maintenance tasks in a clear and concise format. Failure to comply with the maintenance and servicing requirements shall invalidate the warranty for any damage that subsequently occurs to the product. Any liability for damage resulting from the use of the product shall also be negated.

6.1 Safety instructions for maintenance and servicing



- *The gas mixer may only be opened by authorised and trained professionals.*
- *The “Health and Safety“ Regulations and all applicable national accident prevention provisions (Unfallverhütungsvorschriften [UVV]) must be observed during all maintenance and repair work, and suitable personal protective equipment must be worn.*
- *When undertaking any maintenance and repair work, please ensure that the gas mixer is free from any gas pressure and disconnected from the mains electrical supply.*
- *Before commissioning and following any alteration, overhaul or extension of equipment or devices, the integrity of the all connections to the atmosphere must be inspected. In doing so, please ensure to only use suitable leak detection procedures (never inspect using a naked flame). Should you discover any leaks, please rectify these without delay while ensuring compliance with the valid safety provisions. If leakages cannot be rectified, the device must be taken out of operation without delay. Please ship the device along with a short description of the fault to us or a repair specialist authorised by us for inspection. The gas mixer may only be commissioned after it has been inspected and repaired by us or by a repair specialist authorised by us.*

We recommend subjecting the device to an analysis at regular intervals, in order to monitor the concentration of the gas mixture. We recommend calibrating the integrated MFC at regular intervals (1 x year) and adjusting it as required.

6.2 Repair instructions

6.2 Repair instructions

Repairs may only be undertaken after prior consultation with the manufacturer. Any warranty claims shall be invalidated in the event of independent repair work, extensions or conversions undertaken to the gas mixer that have not been given prior approval by the manufacturer.

The manufacturer shall not be liable for any damage attributable to the non-observance of the above information and instructions.

6.3 Inspections and maintenance work

The gas mixer can work with virtually no servicing.

For safety reasons, and in order to ensure the device's fault-free operation, the following inspections are to be conducted at regular intervals (at least monthly):

- During operation, are the gas inlet pressures within the inlet pressure range specified in the technical data? If required, the gas inlet pressures should be recalibrated.
- Are the externally installed inlet filters blocked?
- Clean the gas mixer with a moist cloth. Do not use any solvent-based cleaning agents or high pressure washers for this purpose.
- In the event of any faults, please contact us or a repair specialist approved by us to arrange an inspection.
- The gas mixer may only be re-commissioned once it has been inspected and repaired by one of our team members or by another authorised specialist.

7 Fault table

7 Fault table

Fault	Cause	Remedy
No flow rate of gas mixture	Gas supply incorrectly connected Gas inlet pressure incorrectly set Total flow-rate incorrectly set	Open gas supply Set min. inlet pressure Configure setting
Flow rate level declining and/or too low	Cross-section of supply line too small total flow-rate set too low Inlet blocked Min. inlet pressure breached	Optimise supply line Configure setting Clean inlet Increase inlet pressure
Flow rate level too high, gas consumption too high	Total flow rate incorrectly set impurities in the MFC Leakage in the device	Configure setting Gas mixer to manufacturer Rectify external leakage. The gas mixer must be returned to the manufacturer in the event of any internal leakages
Incorrect gas mixture	The MFC dynamic area does not fit the gas mixture setting Mixing ratio incorrectly set Inlet pressure too varied	Configure setting Configure setting Configure setting

In the event of any further faults, please contact us or a repair specialist approved by us to arrange an inspection. The gas mixer may only be re-commissioned once it has been inspected and repaired by one of our team members or by another authorised specialist.

8 Technical data

8 Technical data

Type:	SCILA MIX
Customer:	INHECO
Device number:	
Year of construction (MM/YYYY):	
Functional schematic:	F1692811 A date: 17.06.2016
Set up (use):	indoors
Protection class:	IP 40
Ambient temperature:	0°C to +35°C
Storage temperature:	-20°C to +40°C
Altitude:	<2000 m above sea level
Dimensions (HxWxD) in mm:	155 x 357 x 304 without connectors
Weight:	9 kg
Gas inlet temperature:	min. +5°C max. +40°C
Gas types	N2, CO2, Air (purity 5.0 or higher)
Mixing area:	0 - 10 Vol.-%
Gas inlet pressure:	min. 6,0 bar g for dynamic, max. 10,0 bar g for static
Difference in gas inlet pressures:	max. 1,0 bar
Outlet pressure:	0,9 - 1,0 bar g
Gas mixture supply:	max. 16 l/min
Gas inlet connectors:	G1/8" IG
Gas outlet connector:	G1/8" IG
Supply:	230 V.AC
Power:	120 VA
Fuse 230 V.AC:	2 pcs. 5x20 mm, Time-Lag, 0,63 A, 250 VAC