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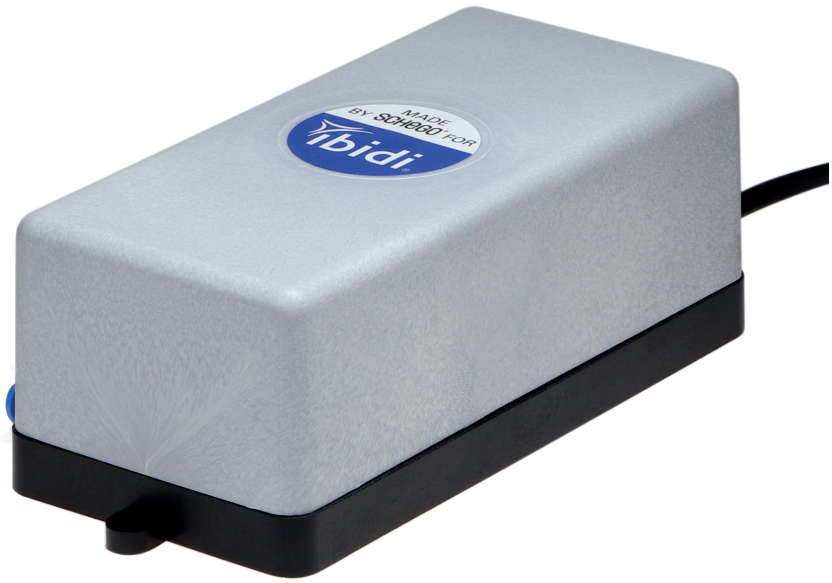
Instruction Manual

ibidi Air Pressure Generator – for ibidi Gas Mixers



11928-230 ibidi Air Pressure Generator 230V, 50Hz

Version 1.1

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1 Preamble

1.1 Introduction

This manual is your guide to using the ibidi Air Pressure Generator with the ibidi Gas Incubation Systems. The ibidi Air Pressure Generator is a membrane pump manufactured by Schemel & Goetz GmbH & CoKG Elektrogeraetebau (SCHEGO) tailored by ibidi GmbH for practical use with Gas Mixers of the ibidi Gas Incubation Systems (product numbers 11920, 11921, 11922, 11923).

Before using the ibidi Air Pressure Generator, please read this instruction manual carefully and make sure that the contents are fully understood.

1.2 Intended Use

The ibidi Air Pressure Generator is approved by ibidi GmbH to be used as a source for pressurized air for the Gas Mixers of the ibidi Gas Incubation Systems. The ibidi Air Pressure Generator can be used as alternative to laboratory lab lines or gas bottles for pressurized air to operate the ibidi Gas Mixers (please see instructions of the ibidi Gas Incubation Systems).

For Research Use Only! Not for use in diagnostic procedures.

1.3 Safety Symbols

Note that the signal words **WARNING**, **CAUTION** and **NOTE** have specific meanings in this manual. Do not proceed beyond a signal word until you have performed the indicated actions. Please see section 1.6 for general safety considerations.

WARNING – A potentially hazardous situation which, if not avoided, could result in serious injury or even death.

CAUTION – A potentially hazardous situation which, if not avoided, could result in minor or moderate injury. It is also used to alert against damaging the equipment or the instrument.

NOTE – Additional information to help achieve optimal instrument and assay performance.

Symbols on the product identification label and back panel of the device:

CE Marking: This symbol indicates the product's compliance with EU legislation.

UKCA Marking: This symbol indicates the product's compliance with UK legislation.

Product disposal: The symbol indicates that this product must be recycled/disposed of separately from other household waste. See page 8 for details.

Indoor use: The symbol indicates that this product is for indoor use only.

1.4 Specifications

Table 1: Specifications of the ibidi Air Pressure Generator

Electrical Specifications	
Protection class	IP X4
Overvoltage category	II
Electrical grid requirements	220–240 V / 50 Hz
Power	7 W

Operating Conditions	
Operating site	For indoor use only
Operating temperature	18–30°C/64–86°F
Operating humidity	max. 70% relative humidity (RH)
Operating altitude	max. 2000 m (atmospheric pressure 800–1060 hPa/11.6–15.4 psi)
Storage conditions	-5–50°C/23–122°F, humidity <60% relative humidity (RH)

Outer Dimensions and Characteristics	
Dimensions	94 × 171 × 60 mm^3
Weight	880 g / 1.94 lbs
Cable	1.0 m

Connection to gas tubing for ibidi Gas Mixer	
Gas tubing connector	Push-in fitting for gas tubing with OD 6 mm
Gas tubing	Polyurethane, hydrolysis resistant tubing with ID 4 mm, OD 6 mm

Output
Ca. 300–350 mbar at a flow rate of 10–20L/h of an ibidi Gas Mixer. Maximum 400 mbar. Please see instructions of the ibidi Gas Incubation Systems for further details on the flow rate.

CAUTION – Only use the ibidi Air Pressure Generator at the line voltage and frequency suitable for the product.
The suitable line voltage and frequency is also indicated on the bottom plate of the pump.

1.5 Disclaimer

- ibidi shall not be held liable, either directly or indirectly, for any damage incurred as a result of product use.

- The contents of this manual are subject to change without notice for product improvement.
- This manual is considered complete and accurate at publication.
- This manual does not guarantee the validity of any patent rights or other rights.
- ibidi is a registered trademark of ibidi GmbH in Germany and other countries.

1.6 Safety Considerations

WARNING

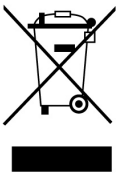
- Only operate the ibidi Air Pressure Generator with the supplied components.
- Only use the cables and plugs delivered with the system. The power plug of the control unit must be inserted in an outlet with a ground (earth) contact.
- Only use extension cables that have a protective ground wire.
- Do not operate the ibidi Air Pressure Generator under conditions that pose a risk of explosion, implosion, or the release of gases.
- Do not place flammable solids, liquids, gases, or gas outlets near the system (e.g., matches, ethanol, propane gas, solvents). Do not bring these products in contact with any other component of the system either.
- Do not operate a damaged ibidi Air Pressure Generator. If the housing seems damaged, contact ibidi technical support.

CAUTION

- Ensure that the external power supply is easily accessible. The ibidi Air Pressure Generator must be installed in a manner such that none of its components hinders access to the external power supply.
- Immediately replace damaged cords, plugs, or cables to avoid risk of personal injury or damage to the instrument.
- The external power supply should not be brought into contact with moisture. If the housing is damaged, the external power supply should not be used.
- Avoid strong magnetic fields and sources of high frequency. The ibidi Air Pressure Generator might not function properly when located near a strong magnetic field or high frequency source.
- Avoid dust and corrosive gas. Do not install the ibidi Air Pressure Generator where it could be exposed to high levels of dust or to outside air or ventilation outlets.
- Install the ibidi Air Pressure Generator in a location that enables easy access for maintenance.
- Install the ibidi Air Pressure Generator in a stable and secure position, such as a table, bench, or desk.

1.7 Waste Disposal – WEEE

The ibidi Air Pressure Generator must be disposed of in compliance with the WEEE Directive 2012/19/EC.



This symbol on the product is in accordance with the European Union's Waste Electrical and Electronic Equipment (WEEE) Directive. The symbol indicates that this product must be recycled/disposed of separately from other household waste. It is the end user's responsibility to dispose of this product by taking it to a designated WEEE collection facility for the proper collection and recycling of the waste equipment. The separate collection and recycling of waste equipment will help to conserve natural resources and protect human health and the environment. For more information about recycling, please contact your local environmental office, an electrical/electronic waste disposal company or distributor where you purchased the product.

2 Equipment

Description	Picture
SCHEGO membrane pump modified with push-in fitting for gas tubing to ibidi Gas Mixers (arrow), with cable and plug	
Piece of gas tubing (ca. 25 cm) with 0.2 µm sterile filter	
Prefilters for the gas inlet (see section 4)	

3 Operation

3.1 Installation & Operation

CAUTION – Before operating the ibidi Gas Mixer, connect and turn on the ibidi Air Pressure Generator

To operate the ibidi Air Pressure Generator, perform the following steps in the indicated order:

1. Place the ibidi Air Pressure Generator within reach of the tubing to the ibidi Gas Mixer.
2. Optional (for additional air filtration): Connect the gas tubing piece with the sterile filter to the gas outlet of the ibidi Air Pressure Generator (Figure 1A).
3. Connect the blue gas tubing of the ibidi Gas Mixer to the ibidi Air Pressure Generator (to the sterile filter or directly to the push-in fitting) and to the "Air" input port at back of the ibidi Gas Mixer (Figure 1B, C).
4. Turn on the ibidi Air Pressure Generator by connecting it to the external power supply.

NOTE – Avoid placing the ibidi Air Pressure Generator on the microscope table. The vibration might disturb the measurement.

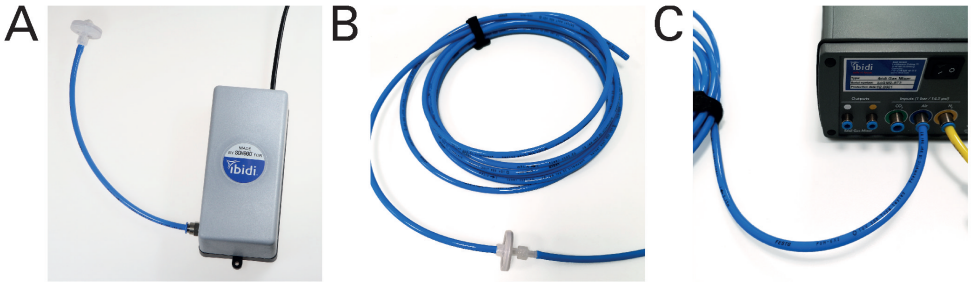


Figure 1: Connection of the ibidi Air Pressure Generator to the gas tubing of the ibidi Gas Mixer. See description A, B, C in the text above.

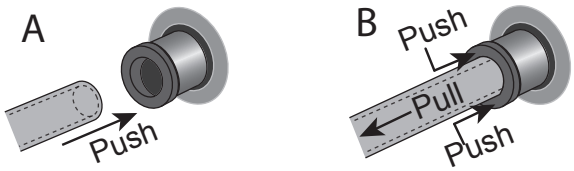


Figure 2: How to connect and disconnect the gas tubing to the push-in fittings of the ibidi Air Pressure Generator and the ibidi Gas Mixer. Push in to connect (A). Push and pull to disconnect (B).

NOTE – The ibidi Air Pressure Generator comes without an on/off switch. To turn off the ibidi Air Pressure Generator after use with the ibidi Gas Mixer, disconnect the plug or use a switchable power strip.

3.2 Power Off & Disconnection

To disconnect the ibidi Air Pressure Generator, perform the following steps in the indicated order:

1. Turn off the ibidi Gas Mixer.
2. Disconnect the ibidi Air Pressure Generator from the external power supply.
3. Disconnect the gas tubing from the ibidi Air Pressure Generator (see Figure 2B).

4 Maintenance

Change the prefilter at the air inlet in the base plate when dirty (Figure 3).

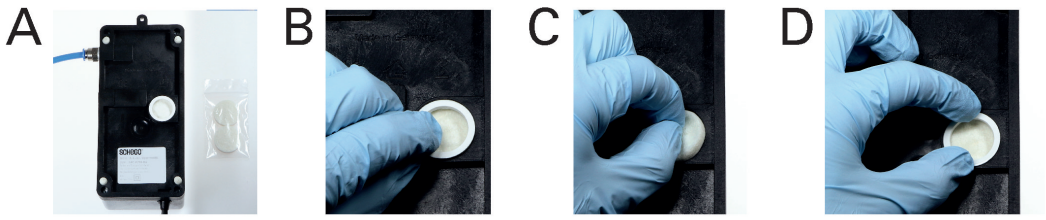


Figure 3: Exchanging the prefilter in the base of the ibidi Air Pressure Generator.

To exchange the prefilter in the base plate of the ibidi Air Pressure Generator, perform the following steps in the indicated order:

1. Make sure that the ibidi Air Pressure Generator is turned off and disconnected from the ibidi Gas Mixer.
2. Use one of the two extra filters that are provided for exchanging the prefilter at the air inlet in the base of the ibidi Air Pressure Generator (Figure 3A).
3. Remove the white ring that holds the filter in position in front of the air inlet (Figure 3B).
4. Take out the old filter and replace it by a new one (Figure 3C).
5. Fix the new filter by placing back the white ring (Figure 3D).

In case of performance loss or strong contamination please contact ibidi technical support.

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