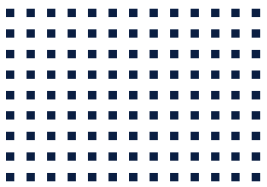


CETONI

CE QMIX BASE Hardware Manual



ORIGINAL INSTRUCTIONS 2.04 – SEPTEMBER 2017



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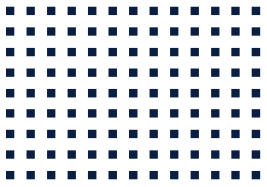
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1.2 Change History

REV	DATE	CHANGE
1.00	01.06.2012	First version of Qmix hardware manual
1.01	05.02.2013	Various minor changes
1.10	12.09.2013	Added Qmix BaseXT and TC, power consumption Q+
1.11	21.08.2014	Adaptation of the maximum heating temperature of the Reaction module Q+ heating column and the High temperature T-mixer due to material changes.
2.00	08.04.2015	Thematic splitting of the manual "Qmix hardware"
2.01	11.03.2016	New corporate design
2.03	24.05.2017	New image material for new design of BASE 120 and BASE 600
2.04	08.09.2017	Legal notice updated

2 Application Purpose

2.1 General Description of the Device

The Qmix base modules BASE 120, BASE 600 und BASE 600XT are used to supply the Qmix modules with a supply voltage of 24V. BASE 120 and BASE 600 also provide a USB interface for connection to a PC.

2.2 Intended Use

The Qmix base modules BASE 120, BASE 600 und BASE 600XT are to be used for the appropriate CETONI GmbH laboratory devices. Application usually takes place in laboratory-like rooms.

2.3 Reasonably Foreseeable Faulty Application

A use for applications distinct from the intended purpose can lead to dangerous situations and is to be omitted.



CAUTION. The unit must not be used as a medical device or for medical purposes.

2.4 Safety Advice

For the safe operation of Qmix base module it is necessary to observe the safety measures from the general section of the manual for the Qmix micro reaction module.



IMPORTANT. Please read this manual as well as the related software manual carefully and completely before putting your Qmix system into operation. Additionally please read the general parts of the manual carefully and completely before putting your Qmix system into operation.

3 Transportation and Storage

Please do not lift and transport the modules in the plugged-together state. Transport in the plugged-together state only permitted in the original packaging.

Use the original packaging for transport and shipping of the modules.

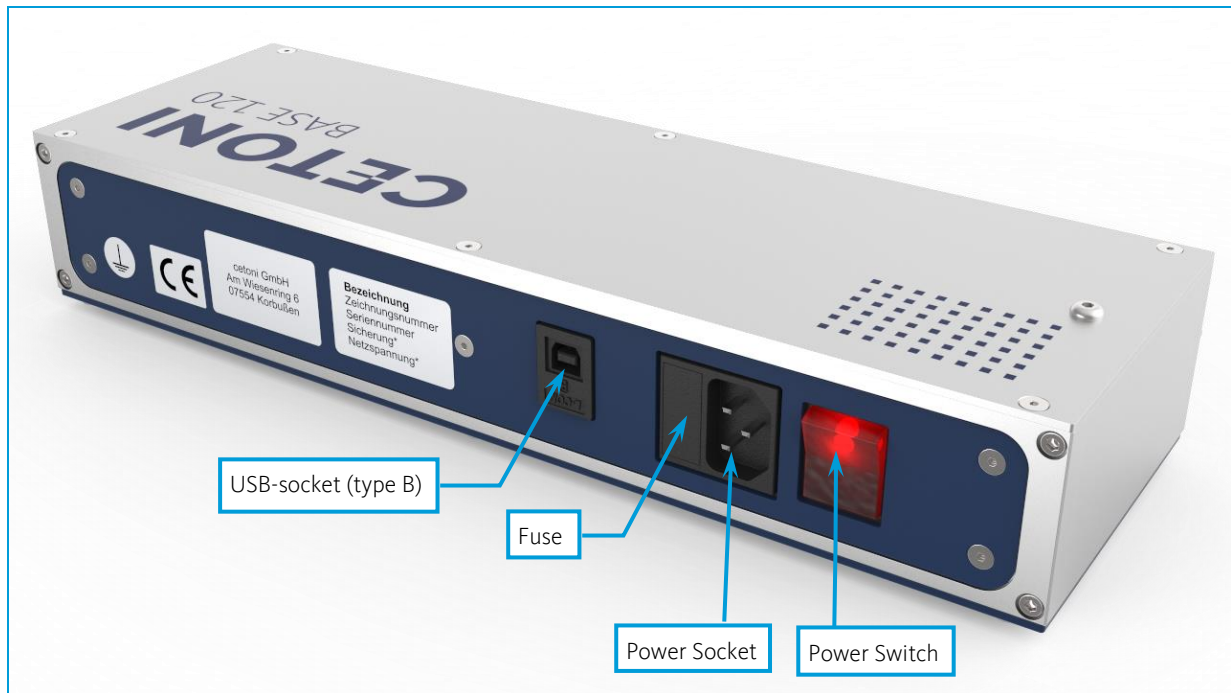
Observe the specifications in chapter "Technical data" for storage.



CAUTION. Risk of damaging the device. Do not transport the modules plugged-together.

4 Hardware

4.1 Base Module BASE 120



The base module supplies all other modules with power and serves as an interface to your PC.

The BASE 120 base module can continuously supply a power of 120 W. In the section *technical data* → *electrical data* you can find the power consumption of every module you may want to connect. Please make sure that the total power consumption of the assembly must not exceed the power supply capability of the base module. In case of overload the base module will deactivate itself and all connected devices and you will lose control of your application.

Should the power supply capacity of the BASE 120 base module be insufficient, you may also use the BASE 600 base module or the BASE 600XT extension.



CAUTION. Danger of sudden deactivation! Make sure that the total power consumption of all connected devices does not exceed the power supply capacity of the base module.

On one side of the device there is a power connector with a fuse box. A replacement fuse (Ø5x20mm) can be found in the same box. The rated current of the fuse may vary depending on the country of use and can be seen on the type plate.

The power switch is located to the right of the power socket and will light up red when the device is turned on. The type B USB-connector is used to connect the device to your PC.

4.1.1 Technical Data

4.1.1.1 MECHANICAL DATA

DIMENSION (L X B X H)	310 x 100 x 56 mm
WEIGHT	≈1800 g

4.1.1.2 ELECTRICAL DATA

SUPPLY VOLTAGE	90 ~ 260VAC
FREQUENCY	47 ~ 63 Hz
POWER OUTPUT	24VDC; 5A; 120 W

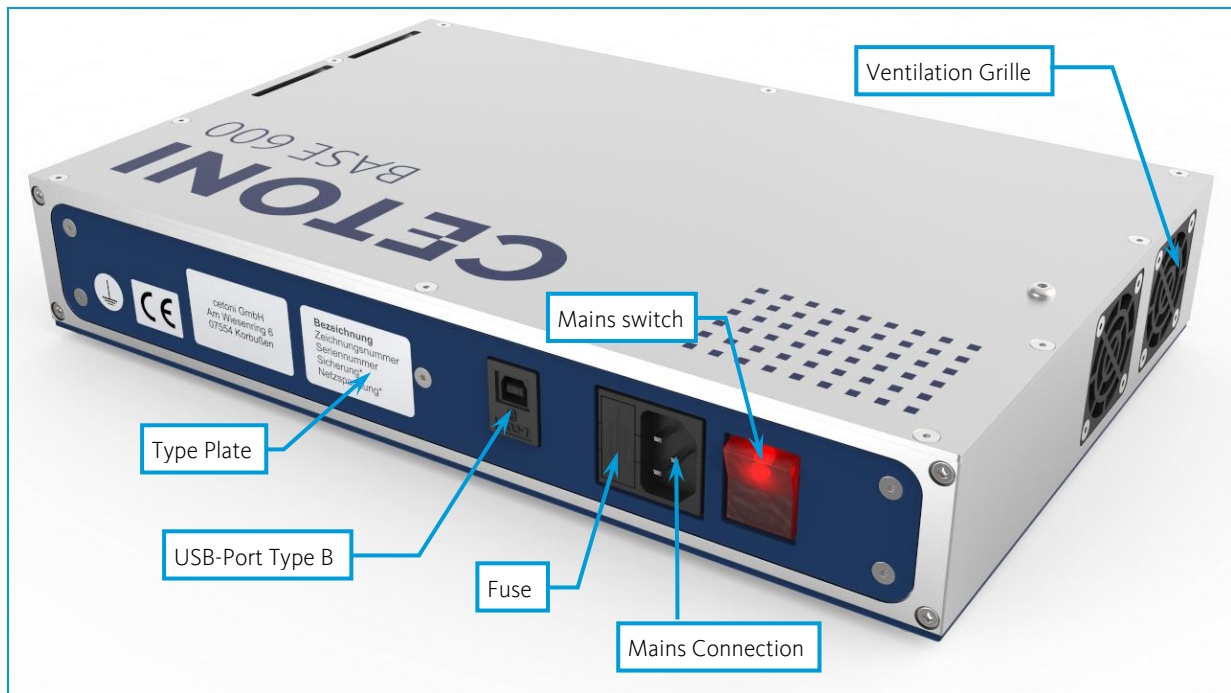
4.1.1.3 INTERFACES

USB	1.1 und 2.0
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4.1.1.4 ENVIRONMENT

OPERATING TEMPERATURE	0°C to 50°C
STORAGE TEMPERATURE	-20°C to 75°C
OPERATING / STORAGE AIT HUMIDITY	20% to 90%, non-condensing

4.2 Base Module BASE 600



The Base Module supplies all connected modules with electricity and serves as an interface to your PC.

The Qmix Base Module can provide a maximum power output of 650W permanently. For any module you connect, the power consumption value can be found in the section *Technical Data* → *Electrical Data*. Please observe that the total power consumption of all connected modules does not exceed the power output of the Base module. The Base module and all connected Modules will switch off in the event of an overload and you will no longer have the control over your application.

Instead of the Qmix Base Module you can also use the smaller NEMESYS Base module, which has a maximum power output of 120W.



CAUTION. Risk of sudden shut down! Observe that the total power consumption of all connected modules does not exceed the power output of the Base module.

The mains connection including the fuse compartment is located on the side of the device. A replacement fuse (Ø5x20mm) can be found in the same compartment. The rated current of the fuse can vary between countries and is specified on the type plate.

The mains switch is located to the right of the mains connection. It will light up red when the device is connected and switched on.

The USB-port (type B) is used to connect the Qmix system with your PC.

Pay attention not to cover the ventilation grilles. Otherwise the device might switch off to avoid damage due to overheating. This would happen unexpectedly and without an advance warning.

On one side there are additional ventilation slots on the base plate of the device. The ventilation grilles on this side may be covered, for instance for upright use, as long as the ventilation slots allow free air flow (as shown in the following picture).



4.2.1 Technical Data

4.2.1.1 MECHANICAL DATA

DIMENSION (L X B X H)	310 x 200 x 56 mm
WEIGHT	≈3700 g

4.2.1.2 ELECTRICAL DATA

SUPPLY VOLTAGE	90 ~ 260VAC
FREQUENCY	47 ~ 63 Hz
POWER OUTPUT	24VDC; 27A; 650 W

4.2.1.3 INTERFACES

USB	1.1 und 2.0
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4.2.1.4 ENVIRONMENT

OPERATING TEMPERATURE	0°C to 50°C
STORAGE TEMPERATURE	-20°C to 75°C
OPERATING / STORAGE AIT HUMIDITY	20% to 90%, non-condensing

4.3 Extension Base Module BASE 600XT



The Extension Base Module is used if the power of the normal Base Module is not sufficient to feed your entire system with energy. It also provides a maximum power of 650 W.

For any module you connect, the power consumption value can be found in the section *Technical Data* of the appropriate manual. Please observe that the total power consumption of all connected modules does not exceed the power output of the Extension Base Module. The Extension Base Module and all connected Modules will switch off in the event of an overload and you will no longer have the control over your application.



CAUTION. Risk of sudden shut down! Observe that the total power consumption of all connected modules does not exceed the power output of the Base module.

The Extension Base Module can only be operated in connection with an existing system. It automatically turns on and off with this.

The connections of the Extension Base Module are explained below:



NO.	DESCRIPTION
1	Mains connection with fuse (Ø5x20mm see type plate)
2	Connector for connection to the base system via Interconnect cable
3	Display for the current power output (650W max.)
4	Three connectors for off-line loads (450W max. per connector)
5	Connector for additional modules (on opposite side)

4.3.1 Technical Data

4.3.1.1 MECHANICAL DATA

DIMENSIONS (L X B X H)	310 x 200 x 56 mm
WEIGHT	≈3700 g

4.3.1.2 ELECTRICAL DATA

SUPPLY VOLTAGE	90 ~ 264VAC
FREQUENCY	47 ~ 63 Hz
POWER OUTPUT	24VDC; 27A; 650 W

4.3.1.3 AMBIENT CONDITIONS

OPERATING TEMPERATURE	0°C to 50°C
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STORAGE TEMPERATURE

-20°C to 75°C

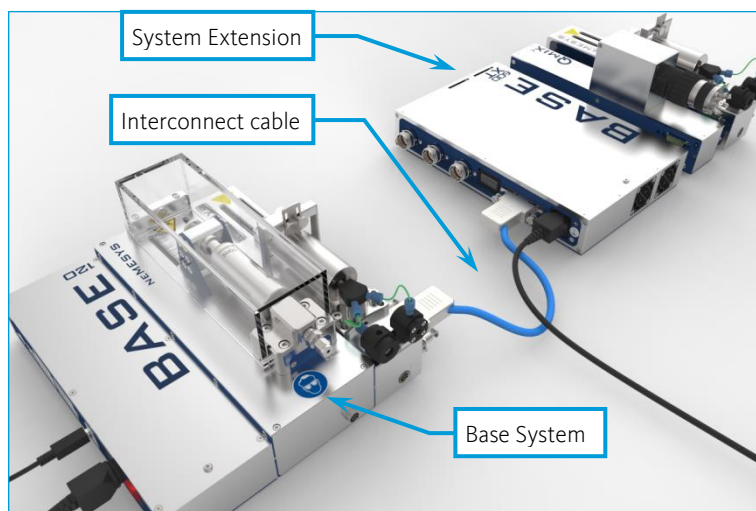
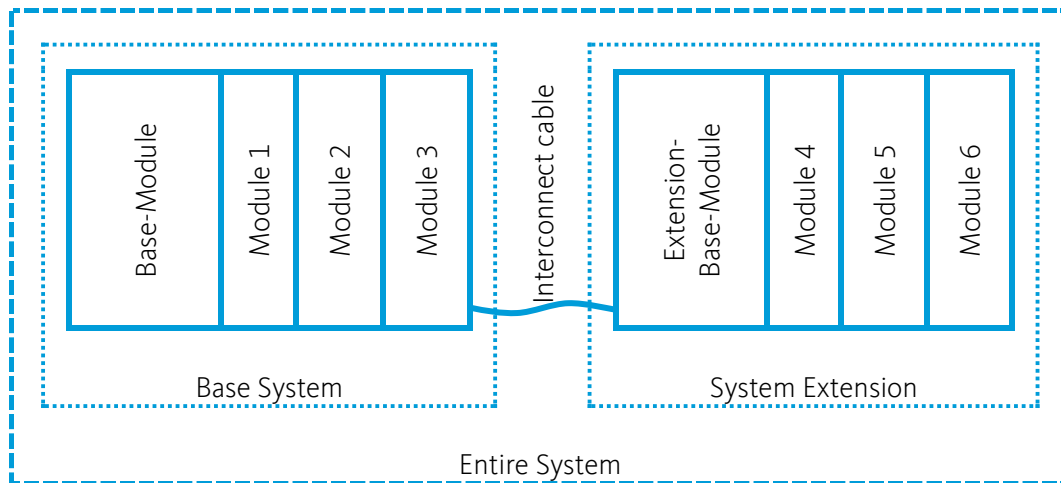
OPERATING / STORAGE AIT HUMIDITY

20% to 90%, non-condensing

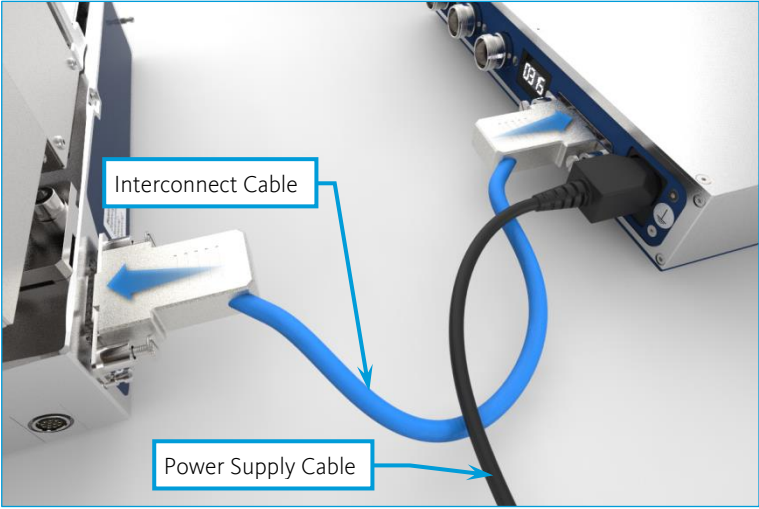
The extension base module can be used in two different ways, which are explained below:

4.3.2 In-Line System Extension

In the case of in-line system extension, the Extension Base Module is connected to an existing base system via an interconnect cable. Now additional modules can be connected to the Extension Base Module as usual (see general part of the manual, section “Connection of additional modules”). The entire system is controlled by the PC, which is connected to the Base Module of the base system. The Extension Base Module automatically switches on and off together with the Base Module of the base system.

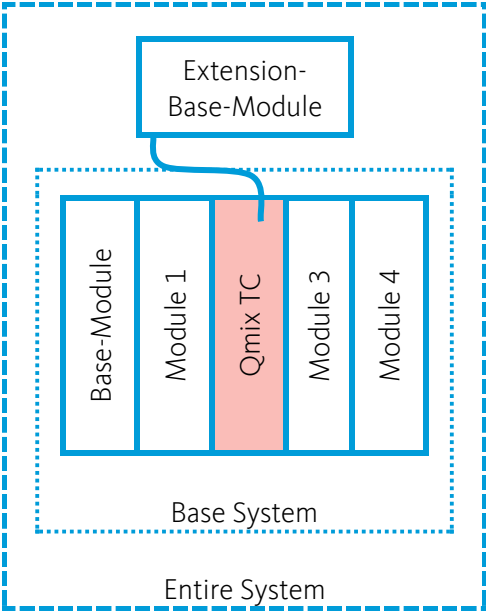


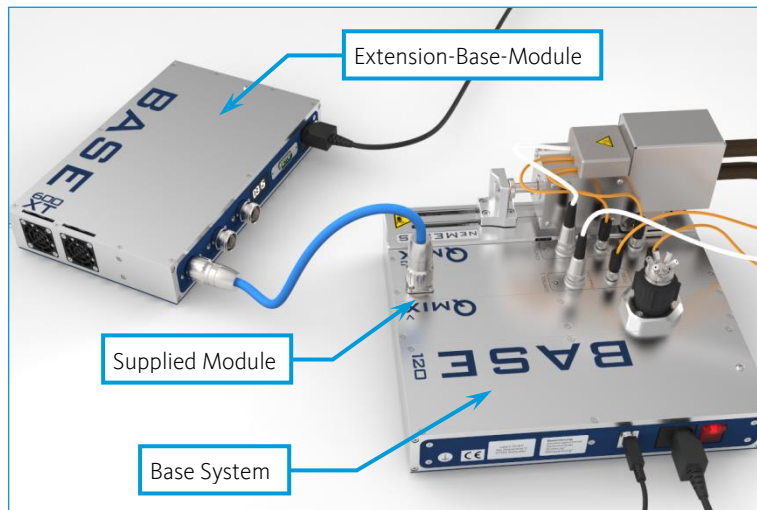
Simply connect the last module of your base system to the corresponding connector of the Extension Base Module via the interconnect cable. Furthermore connect it to the mains supply.



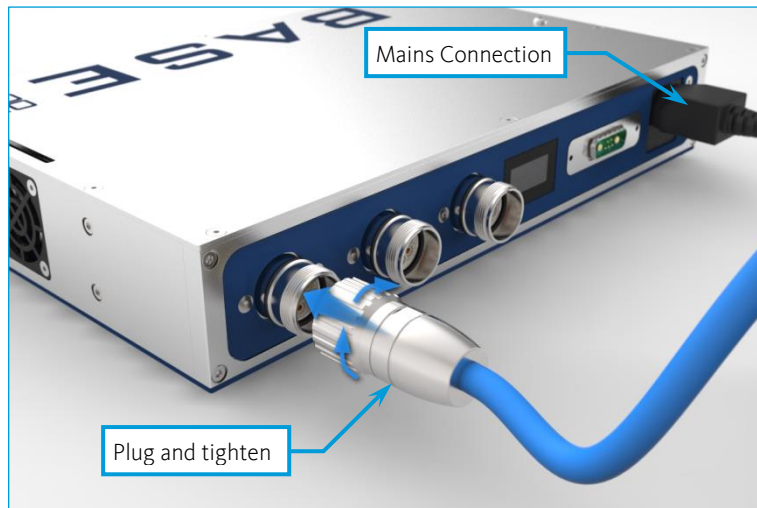
4.3.3 Off-Line Power Supply

When used Off-Line, at most three devices can be supplied with power by the Extension Base Module. Only devices with potentially high power consumption, which are equipped with the appropriate connector, can be connected Off-Line. All other devices of the base system are still supplied with power by the Base-Module of the base system. The Off-Line use is explained below using the example of the temperature control module Qmix TC.





Plug the cable connectors of the connecting cable to corresponding connectors of the Extension-Base-Module and the module to be supplied and slightly tighten the union nuts.



5 Maintenance and Care

If used in accordance with intended purpose, the device is maintenance-free. Should there be a failure despite this, which you cannot eliminate yourself, or which requires opening the device, please contact CETONI GmbH to coordinate further actions. The device may only be opened by CETONI GmbH or thereby authorized service staff. Otherwise the warranty and guarantee claims are void.

Software-related troubles are dealt with in the Software Manual.

For cleaning it please rub the surface gently with a soft, damp cloth. The cloth must not be wet, so that no fluency can trickle into the device. In case of a heavier soiling you can also use a little bit of detergent or alcohol.