KNAUER

AZURA

Pre-installation guide

for Bio Purification Systems

Note: For your own safety, read the manual and always observe the warnings and safety information on the device and in the instructions!

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Table of contents

1. Overview

This manual describes how to prepare for installing an AZURA®
Bio purification system. It contains information on the following:

- Intermediate storage of shipping boxes
- System set-up
- Installation site requirements
- Dimensions of a typical AZURA® Bio purification system
- Power supply
- Characteristic data of individual modules
- Computer requirements for software

2. Storing unopened shipping boxes

The shipping boxes are supplied on a pallet sized 80 x 120 cm. In your
planning, include the following information for immediate storage of
this pallet.

- Sufficient space
- Storage temperatures must be in the temperature range 4–40 °C,
  39–104 °F

3. Installation site requirements

> ⚠ **CAUTION**
>
> **Bruising danger**
>
> Heavy instruments. Damage to the device by carrying or lifting it alone.
> The device may fall and thus cause injuries.
>
> ➔ A minimum of two people need to be present at the time of
>   installation.

The AZURA® Bio purification system will be set up, installed and com-
missioned by KNAUER or a company authorized and contracted by
KNAUER.

ⓘ **Note:** KNAUER recommends inviting future users to be pre-
sent while setting up and commissioning the system so that
they can become familiar with it.

3.1 Amount of sockets

System	Sockets
AZURA® Bio Compact*	5
AZURA® Bio Lab*	7
AZURA® Bio Pilot*	8

* for basic configuration including PC, monitor and switch

Additional device	Sockets
Additional detectors/detectors not included in ASM 2.1L	1
Additional ASM 2.1L	1
pH electrode	None
Air sensor**	1
External pressure control**	1

** if both air sensor and external pressure control are included in the system only one further socket is needed

3.2 Ambient conditions

The intended use can only be ensured if the environmental conditions are met. Details on the operating conditions can be found in the instructions of the individual device under "technical data".

- Humidity: below 90 % (non-condensing)
- Temperature range: 4 – 40 °C; 39 – 104 °F

NOTICE

Device defect

The device overheats at exposure to sunlight and insufficient air circulation. Device failures are very likely.

➔ Set up the device in such a way that it is protected against exposure to direct sunlight.

➔ Leave room for air circulation: See paragraph „space requirements".

3.3   Requirements of the AZURA® Bio Purification System

3.3.1   Space requirements

- At least 5 cm additionally on the side panels if another device is set up on one side.
- At least 10 cm additionally on the side panels if further devices are set up on both sides.
- At least 15 cm on the rear panel for the fan.
- Leave the power plug on the rear of the device accessible to be able to disconnect the device from the mains.

3.3.2   General requirements

- Position the device on a level and even surface.
- Set up the device at a location not exposed to air drafts (A/C systems).
- Do not set up the device near other machines that cause floor vibrations.

> **Note:** The leak sensor may malfunction if the device is placed on an inclined surface. Use a level to check that the device is in horizontal position.

3.3.3   Requirements for earth quake regions

If the device is set up in a region where earth quakes are common, secure the device at the two fixing points ① . The fixing points are situated on both sides of the device.
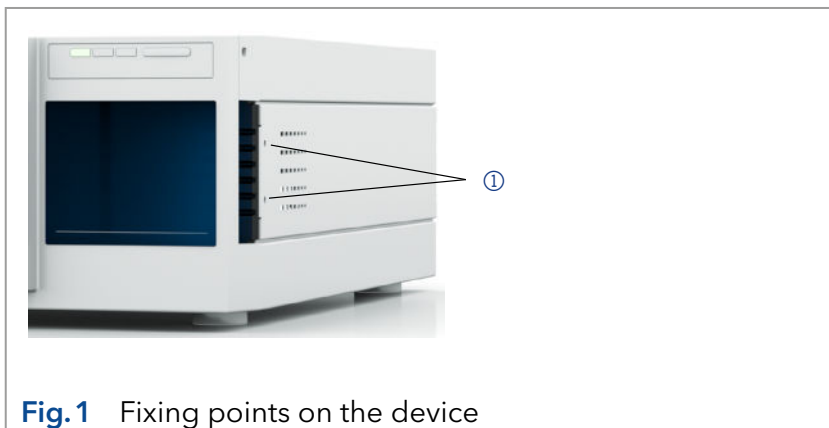

Fig. 1   Fixing points on the device

4.   AZURA® Bio Purification System

> **ⓘ** **Note:** The installation of doors (front covers) during operation is not intended for bio purification systems.

4.1   System layout examples

4.1.1   AZURA® Compact system

A basic AZURA® Compact system typically consists of the following devices:

- Solvent tray
- Assistant including one isocratic pump and injection valve and a single wavelength detector
- Fraction collector or fractionation valve

① Solvent tray

② Assistant

③ Fraction collector Foxy® R1

Fig. 2   AZURA® Compact system
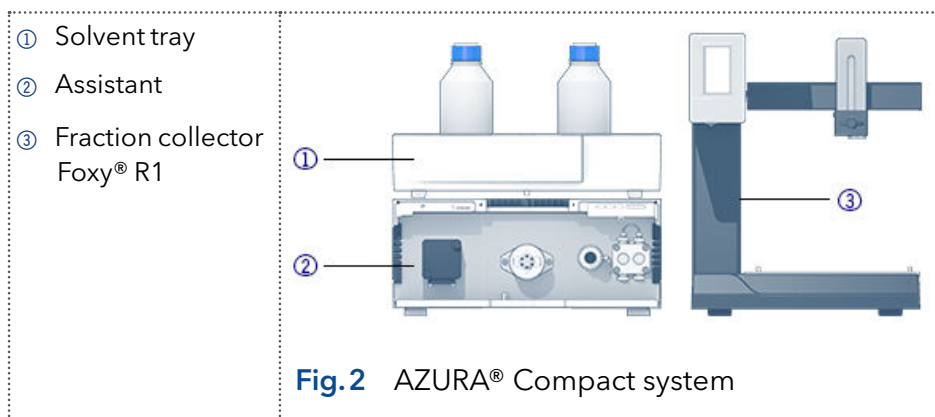
4.1.2 AZURA® Lab system

A basic AZURA® Lab system typically consists of the following devices:

- Solvent tray
- Gradient pump
- Assistant including a single wavelength detector, injection valve and optional an isocratic sample pump
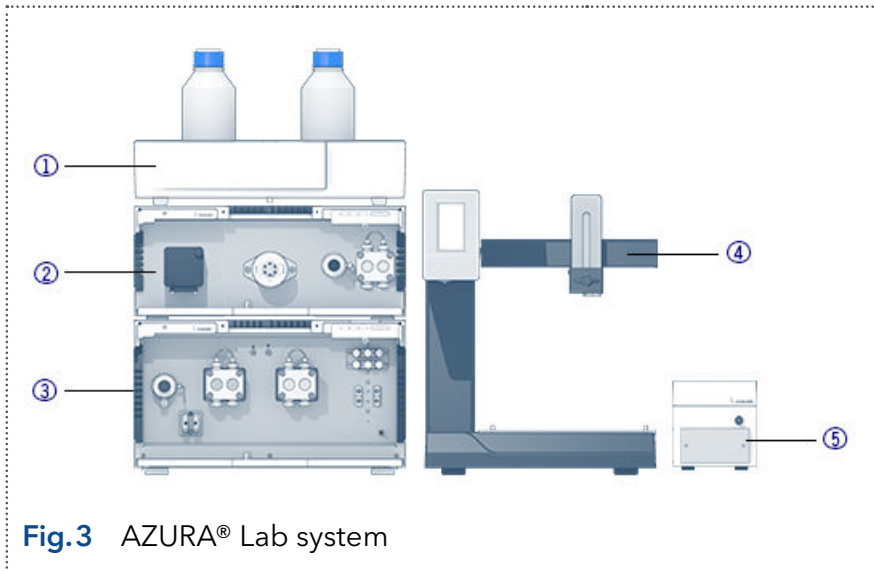- Fraction collector
- Conductivity monitor

Fig. 3 AZURA® Lab system

| ① Solvent tray | ③ Gradient pump | ⑤ Conductivity Monitor |
| ② Assistant | ④ Fraction collector | |

4.1.3 AZURA® Pilot System

A basic AZURA® Pilot system typically consists of the following devices:

- Solvent tray
- Gradient pump consisting of two AZURA® P2.1L
- Assistant including a single wavelength detector, injection valve and an isocratic sample pump
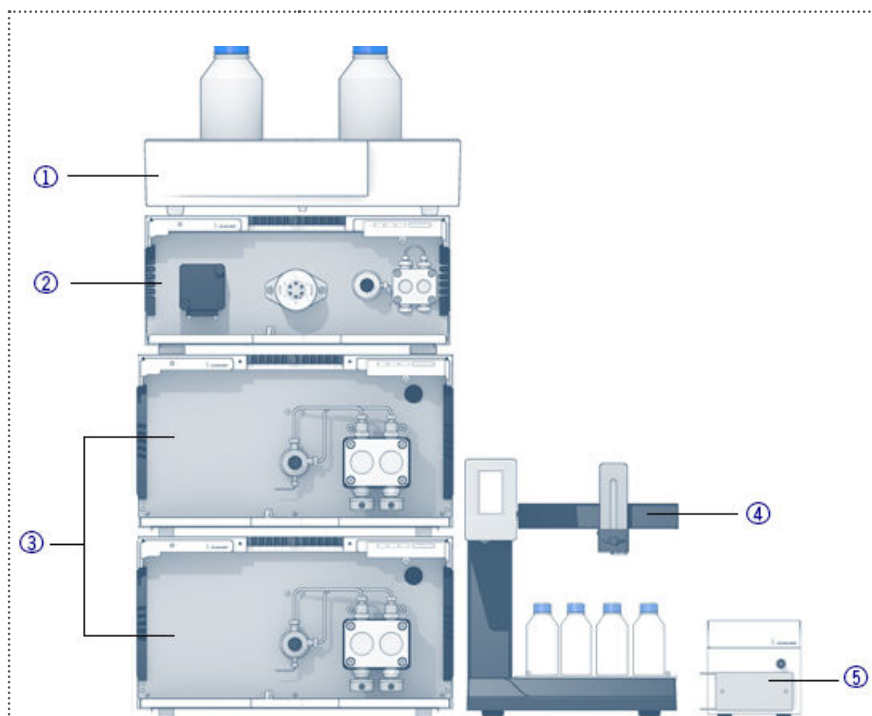- Fraction collector
- Conductivity monitor

Fig. 4 AZURA® Pilot system*

①	Solvent tray	③	Gradient pump	⑤	Conductivity monitor
②	Assistant	④	Fraction collector		

5.   Power supply

5.1   Universal AC/DC switching power adapter

The modules are equipped with an universal AC/DC switched-mode power adapter rated for 100–240 V AC.

5.2   Power cable

Power cables are part of the delivery. They are available for the following destinations: EU, USA, Switzerland, UK

5.3   Power connection

Prerequisites for power connection:
- The electrical power supply at the installation site must be connected directly to the nearest main power line.
- The power must be free from ripple, residual current, voltage peaks and electromagnetic interference.
- The connectors for the mains voltage are grounded accordingly.
- The modules receive sufficient power and reserve capacity.
- The number of sockets corresponds to the number of devices in the system.
- Use a multiple socket strip with ON / OFF switch for individual devices of the system and additionally required devices.

NOTICE

Electronic defect
Damage to the electronics if the device is turned on while connecting or interrupting the power connection.

➔ Switch off the device beforehand.

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6. Minimum computer requirements

6.1 Minimum computer requirements for PurityChrom®

Requirements are fulfilled by the chromatography workstation offered with the instrument by KNAUER.

Operating system	Windows 10, 32/64 bit Windows 8, 32/64 bit Windows 7, 32/64 bit Windows Vista (SP2), 32/64 bit
CPU	2 GHz
Memory (RAM)	2 GB
Graphics/resolution	1024 x 768
Free disc space	20 GB
Connections	USB for license dongle LAN, COM or USB for device control (depends on device type)

7.   Uninstalling software, KNAUER drivers and extensions

To uninstall chromatography software and device drivers, use the Windows Control Panel (CONTROL PANEL > UNINSTALL A PROGRAM).

7.1   Settings for sleep function

When you are working with the chromatography software, disable the sleep function. Going to CHANGE ADVANCED POWER SETTINGS and DEVICE MANAGER, change the following settings to NEVER:

- Turn off the screen
- all hardware settings as hard drive, USB, netword adapter
- Hibernate mode

In case hibernate mode is active during data collection, the run is interrupted and no more data is collected.

Deactivate the option ALLOW THE COMPUTER TO TURN OFF THIS DEVICE TO SAVE POWER in the power management of the network adapter. The power management is customized by the network-adapter producer and can not always be changed.

Set the WINDOWS UPDATES settings to manual. In case you allow automatic installation for WINDOWS UPDATES, the computer boots automatically. Booting interrupts data collection.

8. Technical data

ℹ **Note:** For technical data about external devices, please refer to the website of the producer.

Device	Weight in kg	Dimensions (W×H×D) in mm	Power consumption in W
Chromatography workstation (PC + 24" monitor)	Approx. 8	Approx. 560 x 560 x 530	PC: 180 Monitor: 27.3
AZURA® ASM 2.1L	About 14 (depending on configuration)	361 × 158 × 523	100
AZURA® CM 2.1S	3.2	121 x 129 x 187	20
AZURA® P 2.1L	19	361 x 208,2 × 523	320
AZURA® RID 2.1L / RID 2.1L HighFlow	10.8	361 × 158 × 523	65
AZURA® UVD 2.1L	5.9	361 × 158 × 523	75
AZURA® UVD 2.1S	1.5	121 x 129 x 236	60
AZURA® VU 4.1 (Without valve)	2	80 x 123 x 192	65
Flowmeter M13/M14	3.2	40 x 189 x 240	3
Foxy® R1	7.1	311 x 355 x 330	Max. 240
Foxy® R2	10.4	311 x 378 x 533	Max. 240

System	Weight in kg	Dimensions (W×H×D) in mm
Compact	25	700 x 365 x 523
Lab	45	800 x 470 x 253
Pilot	75	1235 x 470 x 253

9. Checklist

Transportation and storage

There is enough space available for storing the shipping pallet. ☐

Bio purification system set-up

- A lab table with adequate carrying capacity and dimensions is available. ☐
- The power supply and cable are available. ☐
- The power supply and cable comply with the requirements. ☐

Ambient conditions at installation site

The installation site complies with the requirements with respect to equipment, temperature, humidity, vibration and high frequency emissions. ☐

Computer and operating system

The computer complies with the requirements or is delivered by KNAUER. ☐

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