

Azura

Pre-installation guide for analytical systems



Exemplary layout



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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1. Overview

This manual describes how to prepare for installing an analytical AZURA® System. It contains information on the following:

- Intermediate storage of shipping boxes
- System set-up
- Installation site requirements
- Dimensions of analytical systems
- 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 HPLC system will be set up, installed and commissioned by KNAUER or a company authorized and contracted by KNAUER.



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

3.1 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“.
-

3.2 Requirements of the HPLC system

3.2.1 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.

3.2.2 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.

3.2.3 Requirements for earthquake regions

In earthquake-endangered areas, do not stack more than 3 devices on top of each other. Otherwise there is risk of injury due to falling devices or loose parts.

4. Analytical AZURA® HPLC systems

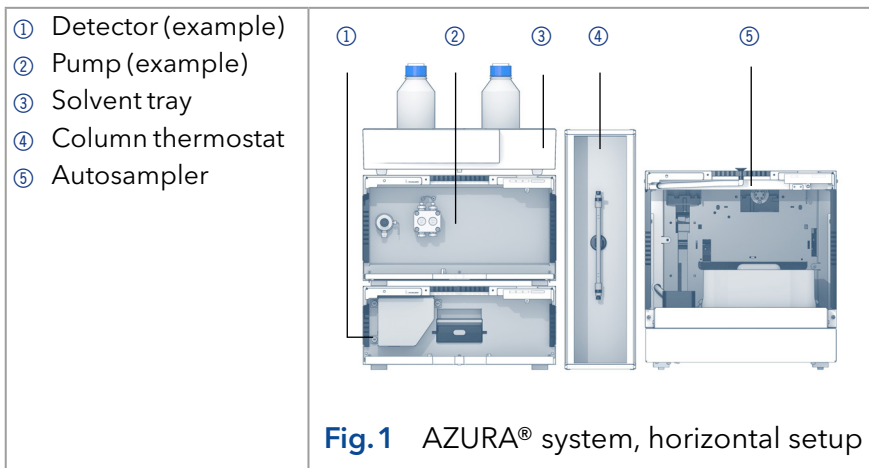
4.1 Individual devices

Systems for analytical applications typically consist of the following devices:

- Solvent tray
- Pump (quaternary, binary, or isocratic) with degasser, mixing chamber, and pressure sensor
- Autosampler or manual injection valve
- Analytical column
- Column thermostat
- Detector/s

4.2 System layout examples

Examples for set-up of an AZURA® HPLC system:



- ① Solvent tray
- ② Pump (example)
- ③ Detector (example)
- ④ Column thermostat
- ⑤ Autosampler

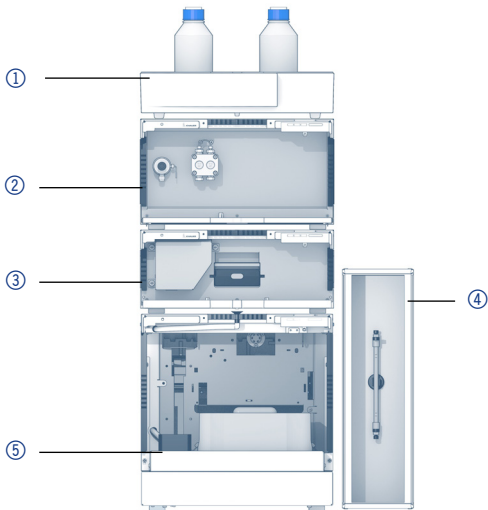


Fig.2 AZURA® system, vertical setup (recommended)

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.

6. Minimum computer requirements

6.1 KNAUER ClarityChrom® 8.x

Operating system	Windows 10, 32/64 bit Windows 8, 32/64 bit Windows 7, 32/64 bit
CPU	Pentium 2 GHz
Memory (RAM)	4 GB
Graphics/resolution	Separate graphics card recommended if more than one system is to be controlled.
Drive	DVD ROM (12x)
Free disc space¹	80 GB for installation and data storage. The program uses approx. 1 GB of disc space. The chromatogram file size of PDAs ranges between 2 and 5 MB, for MS data the range is 3 – 6 MB. An SSD instead of a HDD is highly recommended.
Connections²	USB for license dongle; LAN and/or COM or USB for device connections; compatible PC card slots for control cards, if required .

¹At high data transfer rates of the PDA detector, files with up to 100 MB file size may be created.

²A separate COM interface is required for each device that is to be connected via the serial interface. A USB-to-COM adapter may be used to increase the number of ports.

6.2 OpenLAB® CDS EZChrom Edition

For the OpenLAB® Distributed Systems license, you need a Shared Services Server. For Distributed Systems licenses, the Shared Services server must be installed on a separate computer with Windows Server operating system.

Prerequisite

Microsoft.NET Framework 3.5 with SP1 and Windows Installer 4.5 (for SQL Installation with Shared Services Server) must be installed.

Operating system	For version A.04.09: Workstation: Windows 10 Professional or Enterprise 64-bit, Windows 7 Professional or Enterprise 64- or 32-bit
CPU	3 GHz Dual-Core
Memory (RAM)	4 GB (32 bit) 6 GB (64 bit)
Graphics/resolution	Separate graphic card for > 1 system
Drive	DVD ROM (12x)
Free disc space	160 GB
Connections	100/1000 Mbit LAN Adapter LAN, COM or USB for device control (depends on device type)

6.3 KNAUER PurityChrom® 5

Operating system	Windows 10, 32/64 bit Windows 8, 32/64 bit Windows 7, 32/64 bit Windows Vista (SP2), 32/64 bit Windows XP (SP3)
CPU	2 GHz

Memory (RAM)	512 MB (Windows XP) 1.5 GB (Windows 8/7/Vista: 32 bit) + 128 MB for a PDA-Detector + 128 MB for every additional system 2 GB (Windows 8/7/Vista: 64 bit) + 4 GB for DAD 6.1L
Graphics/resolution	1024 × 768
Drive	DVD ROM (12x)
Free disc space	20 GB
Connections	USB for the licence dongle LAN, COM or USB for device control (depends on device type)

6.4 Thermo Scientific™ Dionex™ Chromeleon™ 7.x CDS

Operating system	Depends on version; currently 7.2.9 is the latest version: Windows 10 Enterprise or Professional, 64-bit; Windows 8.1 Professional, 64-bit; Windows 7 SP1 Professional, 64-bit
CPU	3 GHz Intel Core 2 Duo
Memory (RAM)	3 GB
Graphics/resolution	1024 × 768, 32 bit colours
Drive	DVD ROM (12x)
Free disc space	60 GB
Connections	USB for the licence dongle LAN for device control

6.5 KNAUER Mobile Control 5.5

Operating system	Only for Windows 10
CPU	1.5 GHz Dual-Core
Memory (RAM)	1 GB without data acquisition, 2 GB with data acquisition

Graphics/resolution	1280 x 800
Drive	-
Free disc space	500 MB
Connections	LAN, WIFI for download of installation data and device control

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, network 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



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

AZURA® Device	Weight in kg	Dimensions (W×H×D) in mm	Power consumption in W
Solvent tray E 2.1L	3.4	361 × 85 × 523	-
Pump P 6.1L HPG	14.1	361 × 208.2 × 523	100
Pump P 6.1L LPG	12.7	361 × 208.2 × 523	100
Pump P 6.1L isocratic	11.5	361 × 208.2 × 523	100
Autosampler AS 6.1L	28	361 × 379 × 567	200
Autosampler AS 6.1L cool/ heat version	30	361 × 379 × 623	200
Column thermostat CT 2.1	8.4	150 × 470 × 310	100
Detector RID 2.1L	10.8	361 × 158 × 523	65
Detector UVD 2.1L	5.9	361 × 158 × 523	75
Detector DAD 6.1L	13.8	361 × 158 × 523	75
Detector DAD 2.1L	12.2	361 × 158 × 523	75

AZURA® Device	Weight in kg	Dimensions (W×H×D) in mm	Power consumption in W
Detector MWD 2.1L	12.2	361 × 158 × 523	75
Assistant ASM 2.1L	Approx. 14 (depending on configuration)	361 × 158 × 523	100
Assistant ASM 2.2 L	Approx. 17 (depending on configuration)	361 × 208.2 × 523	130
Valve drive V 2.1S (without valve)	1.2	121 × 138 × 190	60
Valve drive VU 4.1 (without valve)	2.2	80 × 123 × 192	65

9. Checklist

Transportation and storage

There is enough space available for storing the shipping pallet.

HPLC 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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