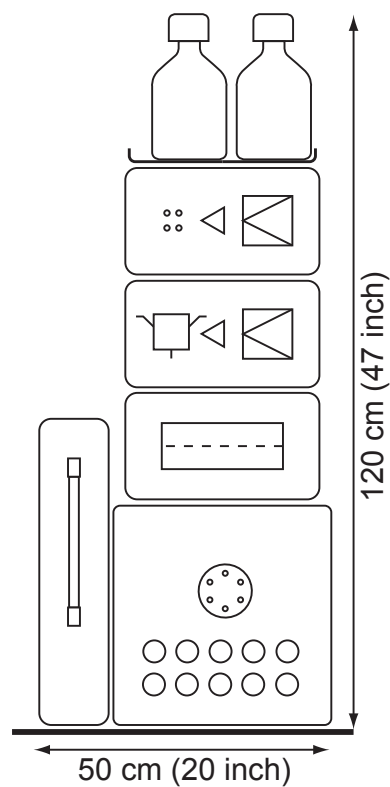


# PLATINblue

## ► Pre-Installation Guide

V6920A



# UHPLC/HPLC

## Overview

This manual describes how to prepare for installing a UHPLC system. It contains information on the following:

- Intermediate storage of shipping boxes
- System layout
- Installation site requirements
- Space requirements and dimensions of separate systems
- Power supply
- Characteristic data of individual modules
- Computer with mass spectrometer software Xcalibur™

**Checklist** Fill out the checklist at the end of the manual and send it to KNAUER so that a date can be found for setting up and installing the UHPLC system.

## UHPLC Systems

The UHPLC product family consists of three systems for chromatographic analyses in the ultra-high pressure range.

**HPG system** This UHPLC system is suitable for applications with high-pressure gradients (HPG) and consists of the following modules:

- High-pressure pump with degasser module and pressure sensor
- High-pressure pump with mixing chamber and pressure sensor
- Photodiode array detector or, alternatively, multiple wavelength detector
- Autosampler for autoinjection with special injection valve or manual valve with system fastening bracket
- Column thermostat
- UHPLC columns kit

**LPG system** This UHPLC system is suitable for applications using low-pressure gradients (LPG), and consists of the following modules:

- High-pressure pump with mixing chamber and pressure sensor
- Manager for degassing liquids and integrated low-pressure gradients
- Photodiode array detector or, alternatively, multiple wavelength detector
- Autosampler for autoinjection with special injection valve or manual valve with system fastening bracket
- Column thermostat
- UHPLC columns kit

**System for isocratic analyses** This UHPLC system can be operated with a high-pressure pump for chromatographic analyses without gradients. A degassing module is built into the high-pressure pump.

## Transportation and Storage

### Storing unopened shipping boxes

The shipping boxes are supplied on a pallet sized 80 x 120 cm. The total height including the shipping box is 160 cm. In your planning, include sufficient space for immediate storage of this pallet.

## System Layout

The UHPLC system will be set up, installed and commissioned by KNAUER or a company authorized and contracted by KNAUER.

### Practical Tip!

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

## Ambient Conditions at Installation Site

- Air humidity: below 90%, non-condensing
- Temperature range: 4–40 °C (39.2–104 °F)
- Sunlight: Protect the UHPLC system against direct exposure to sunlight
- AC system: Set up the UHPLC system at a location not exposed to air drafts
- Vibration: Do not set up the UHPLC system in the vicinity of other machines that cause floor vibrations.
- High-frequency emissions: Some possible sources of emissions include cell phones, wireless equipment and alarm systems. Install the UHPLC system in an environment exposed to only very low levels of high-frequency emissions.

### Mass spectrometer

If the UHPLC system is to be connected to a mass spectrometer from a third-party manufacturer, take this manufacturer's requirements into consideration when planning the installation site.

## Space Requirements of UHPLC System

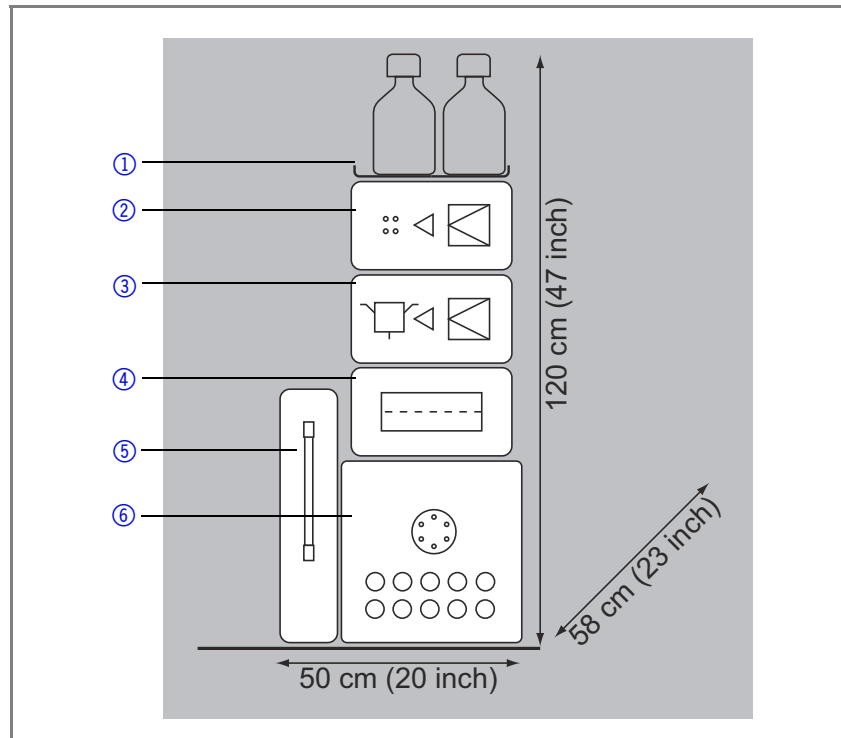
- Lab table with adequate carrying capacity
  - approx. 95 kg as safety margin without mass spectrometer
- Lab table with sufficient space for safe working
  - approx. 195 x 90 cm for a UHPLC system set up horizontally, including KNAUER workstation, keyboard, flat monitor and router
  - 30 cm (12 inches) distance to system for ventilation
  - If required, also include space for a printer.

## HPG Systems

### HPG System with Autosampler

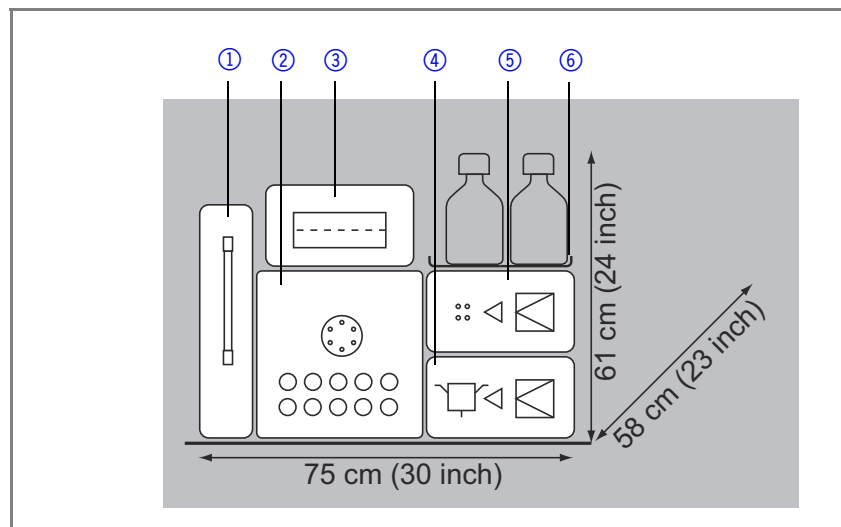
#### Variant A

- ① Solvent tray
- ② Pump with degasser module
- ③ Pump with mixing chamber
- ④ PDA detector
- ⑤ Column thermostat
- ⑥ Autosampler



#### Variant B

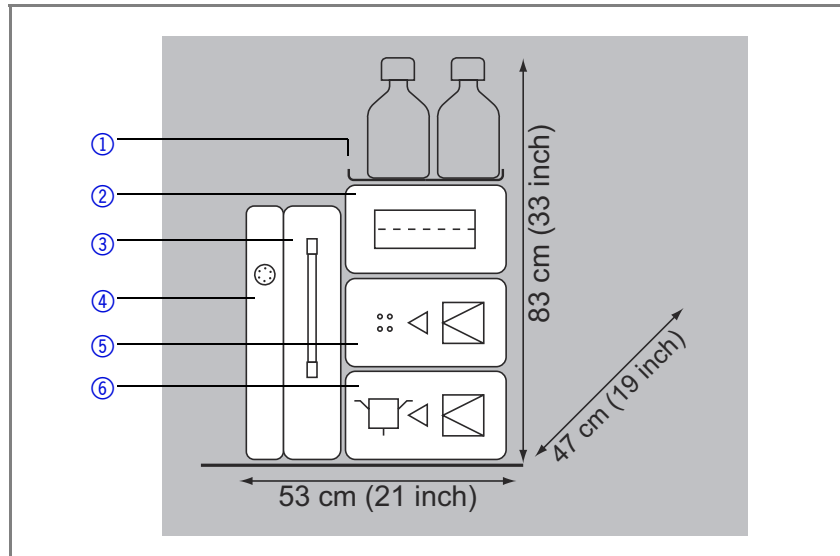
- ① Column thermostat
- ② Autosampler
- ③ PDA detector
- ④ Pump with mixing chamber
- ⑤ Pump with degasser module
- ⑥ Solvent tray



## HPG System with manual Injection Valve

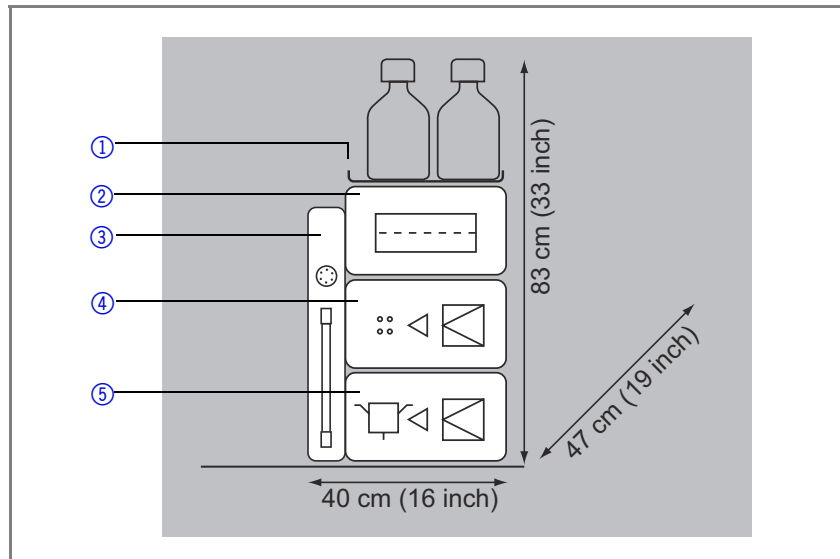
### Variant A

- ① Solvent tray
- ② PDA detector
- ③ Column thermostat
- ④ System bracket with manual injection valve
- ⑤ Pump with degasser module
- ⑥ Pump with mixing chamber



### Variant B

- ① Solvent tray
- ② PDA detector
- ③ System bracket with manual injection valve and holder for column
- ④ Pump with degasser module
- ⑤ Pump with mixing chamber

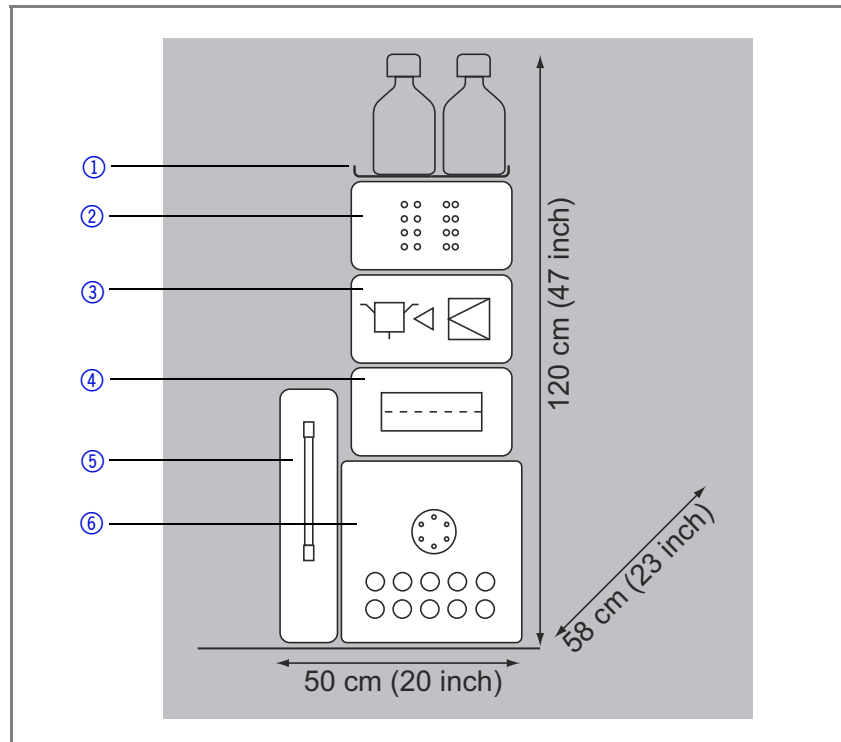


## LPG Systems

### LPG System with Autosampler

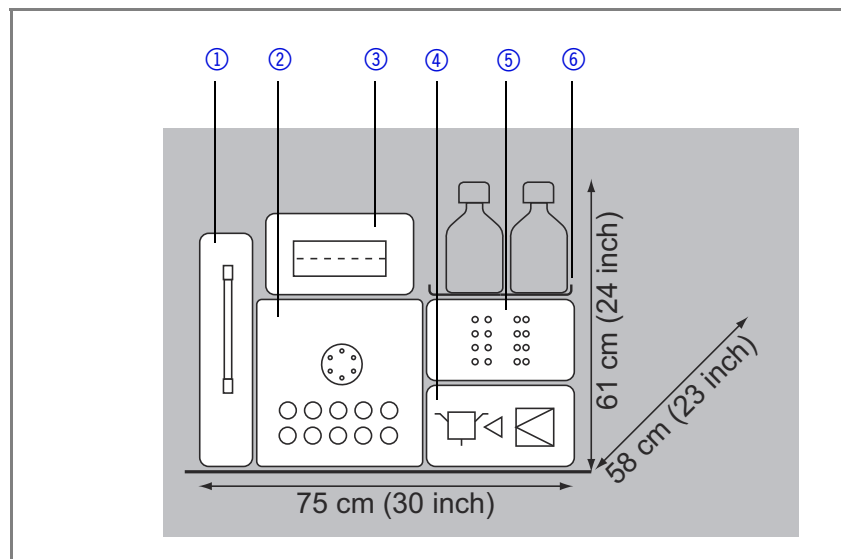
#### Variant A

- ① Solvent tray
- ② Manager with degasser module
- ③ Pump with mixing chamber
- ④ PDA detector
- ⑤ Column thermostat
- ⑥ Autosampler



#### Variant B

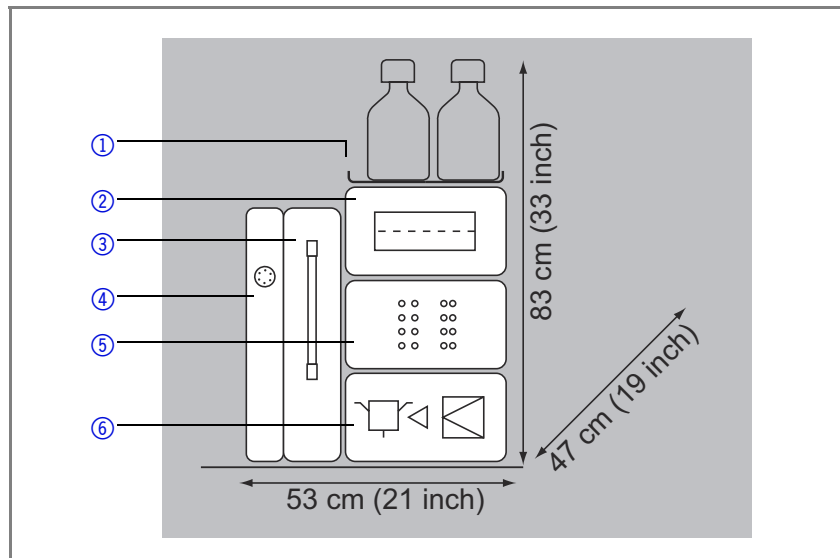
- ① Column thermostat
- ② Autosampler
- ③ PDA detector
- ④ Pump with mixing chamber
- ⑤ Manager with degasser module
- ⑥ Solvent tray



## LPG System with manual Injection Valve

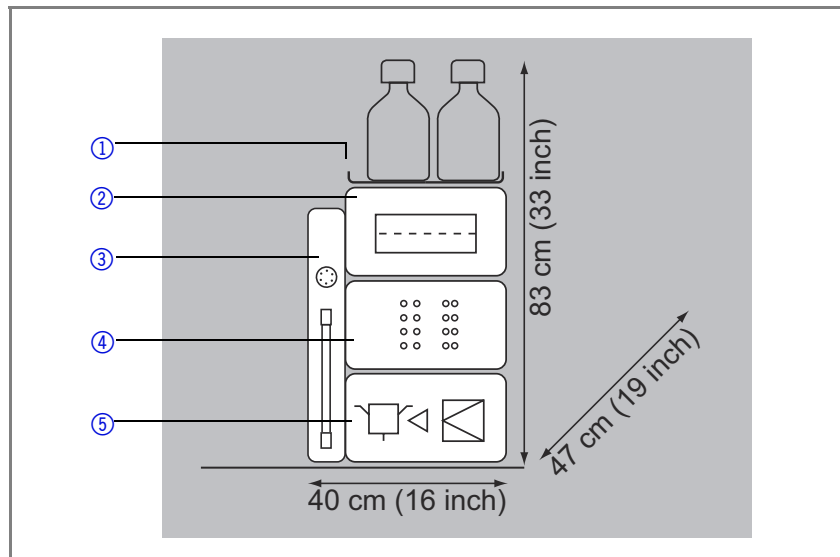
### Variant A

- ① Solvent tray
- ② PDA detector
- ③ Column thermostat
- ④ System bracket with manual injection valve
- ⑤ Manager with degasser module
- ⑥ Pump with mixing chamber



### Variant B

- ① Solvent tray
- ② PDA detector
- ③ System bracket with manual injection valve and holder for column
- ④ Manager with degasser module
- ⑤ Pump with mixing chamber



## Power Supply and Connection

### Universal AC/DC switching power supply

The modules are equipped with universal AC/DC switching power supplies rated for 85–264 V AC.

### Power supply cable

The PLATINblue UHPLC system includes power cables for continental Europe or North America. A power cable or adapter for the UK and other countries can be requested at KNAUER.

### Note

The nominal capacity of the connected devices must be maximum 50% of the power supply to account for larger inrush currents when switching on the modules.

- The electrical power supply at the installation site must be directly connected to the nearest main power line.
- The power must be free from ripple, residual current, voltage peaks and electromagnetic interference.
- Ground connections for main power in accordance with regulations
- Modules receive sufficient power with reserve capacity
- Multi-outlet power strip with 10 sockets and ON/OFF switch for individual system modules and additionally required modules.

## Computer with Mass Spectrometer Software Xcalibur™

The PLATINblue UHPLC system can be connected to a mass spectrometer. KNAUER recommends using the MSQ Plus™ mass spectrometer together with the Xcalibur™ data system.

If mass spectrometer software Xcalibur™ is to be run on a different computer instead of the KNAUER workstation, this computer must fulfill the following minimum requirements:

- Xcalibur™ 2.0.7 SP1 is installed
- KNAUER LC module driver CD is available
- 100 Mbps PCI Ethernet network card is installed or included with computer



## Characteristic Data of individual Modules

### PLATINblue P-1 High-pressure pump

Weight in kg (with degasser)	12.2 kg
Weight in kg (w/o degasser, with SmartMix)	11.0 kg
Dimensions (W x H x D)	263 x 221.3 x 466.4 mm (190.5 mm without touch-screen)
Active power consumption	maximum 40 W

### PLATINblue PDA-1 Photodiode array detector

Weight kg	12.7 kg
Dimensions (W x H x D)	263 x 221.4 x 466.4 mm (190.5 mm without touch-screen)
Active power consumption	maximum 75 W

### PLATINblue MW-1 UV-Vis detector

Weight	11.8 kg
Dimensions (W x H x D)	263 x 221.4 x 466.4 mm (190.5 mm without touch-screen)
Active power consumption	maximum 75 W

### T-1 Column thermostat

Weight	23.7 kg
Dimensions (W x H x D)	211 x 567 x 487 mm
Active power consumption	72 W

**PLATINblue AS-1 Autosampler**

Weight	18 kg
Dimensions (W x H x D)	300 x 377 x 577 mm
Active power consumption	maximum 75 W

**PLATINblue M-1 Manager**

Weight	8.6 kg
Dimensions (W x H x D)	263 x 190.5 x 464 mm

**Solvent tray**

Weight	3.3 kg
Dimensions (W x H x D)	240 x 60 x 334 mm

## Checklist

Send back the filled out checklist

By fax: +49-30-8015010

By post:

Wissenschaftliche Gerätebau Dr. Ing. Herbert Knauer GmbH  
Hegauer Weg 38  
14163 Berlin, Germany

### Transportation and storage

There must be enough space available for storing the shipping pallet.

### UHPLC system including KNAUER workstation

A lab table with adequate carrying capacity and dimensions must be available.

### Power supply and connection

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.

When a mass spectrometer is used, the manufacturer's requirements with respect to the installation site must be fulfilled.

### Computer with mass spectrometer software Xcalibur™

The computer complies with the requirements. Only check this option if mass spectrometer software Xcalibur™ is to be run on a different computer instead of the KNAUER workstation.

I confirm that all requirements have been met for setting up the PLATINblue UHPLC system.

**Date:**

**Signature:**

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(company stamp)

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