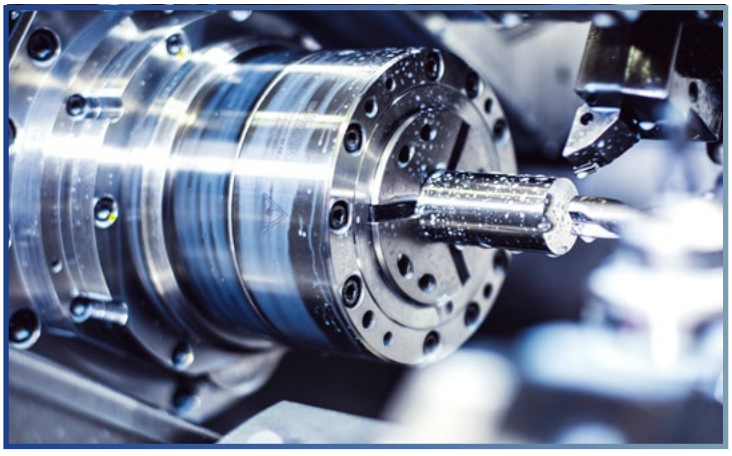
Science with Passion

KNAUER

## KNAUER OEM.

LIQUID CHROMATOGRAPHY SYSTEMS AND MODULES

HIGH-PRESSURE DOSING PUMPS

LC DETECTORS

AUTOSAMPLERS AND LIQUID HANDLING

CUSTOMIZED VALVES

SOFTWARE

**Your innovative solutions.**
**Made in Germany since 1962.**

# KNAUER

## Independent and family-owned

### OUR EXPERIENCE FOR YOUR SUCCESS

KNAUER is a Berlin-based, independent company with

- its own hardware and software development
- process-controlled development and manufacturing
- a dedicated OEM team to serve customers
- development and production in Germany

Alexandra Knauer (Owner and CEO) and Carsten Losch (CEO)

KNAUER has a long history of developing and manufacturing liquid chromatography instruments. Our focus has always been on creating innovations and solutions that fulfil our customers' needs. Our extensive experience, coupled with the gold standard of German engineering, enables us to manufacture the finest analytical and preparative devices. As well as manufacturing our own brand, we also offer contract manufacturing and development services. KNAUER partners have always benefited from our in-depth knowledge of liquid chromatography and our advanced quality and environmental management systems. As a producer of HPLC, FPLC, LNP and SMB systems, KNAUER is the ideal development and supply partner, not only for all areas of liquid chromatography, but also for other applications such as flow chemistry or flow injection analysis. We develop innovative and customized solutions according to your specifications.

KNAUER OEM.

KNAUER mechanical shop in Berlin, Germany

### GET IN TOUCH

**oem@knauer.net**
**www.knauer.net/oem**

# FROM YOUR INNOVATIVE IDEA TO YOUR IDEAL SOLUTION

**Sometimes the requirements of you and your clients can be complex. We develop and implement solutions that fulfil them.**

| | OEM Partner | KNAUER Team |
|---|---|---|
| 01 \| **FIRST STEP** | Defines the technical and functional requirements, as well as the design | Evaluates the demands and analyzes the feasibility of the concept |
| | Defines the design requirements | Reviews the design |
| | Engineering meeting with both parties | |
| 02 \| **SECOND STEP** | Defines project scope and timeline | Evaluates project costs and timeline |
| | Both parties approve the customization level and requirements | |
| 03 \| **THIRD STEP** | Shares process control and verification requirements | Evaluates the process and adapts within KNAUER if applicable |
| | Approves the performance and design specifications | Develops a prototype according to the requirements |
| | Approves the prototype | Initiates a pilot series |
| 04 \| **FOURTH STEP** | Defines the documentation requirements | Provides all manuals and associated documents |
| | Defines sales and service training levels | Provides all required sales & service trainings |

MARKET LAUNCH

# AZURA® SYSTEM


Typical analytical AZURA® HPLC system configuration

ELUENT TRAY

PUMP

DETECTOR

COLUMN THERMOSTAT

AUTOSAMPLER/
LIQUID HANDLER

# PUMP

What requirements do you have for the pump?
Tell us and we will find the ideal solution for you!

### On KNAUER portfolio:

- High-pressure metering pumps
- Analytical and preparative pumps
- Completely metal-free pumps for bioinert (FPLC) applications

### Along with:

- Different kinds of pulse dampeners
- Different kinds of dynamic and static mixers

| Specifications – Pumps | |
|---|---|
| **Pump head max. flow rate (ml/min)** | 5, 10, 50, 100, 250, 500, 1000 |
| **Pressure** | 400 bar metal free up to 1240 bar for UHPLC application |
| **Piston seal washing** | Passive (compact pumps), active (all other pumps) |
| **Wetted materials** | Aluminum oxide/Zirconium oxide, PEEK/PCTFE, Graphite Fiber Reinforced PTFE, FKM/FFKM, Ruby, Titanium, Stainless steel |
| **Optional modules** | Solvent selection valve: 3/2 solenoid valve, 24V, Base: PEEK, Seals: FFKM, 8.7 x 37 x 68.8 mm (WxDxL)<br>Degasser: 2 & 4 channels, internal volume per chamber 285 µl<br>LPG valve: 2/2 valve, FFPM, 24 |
| **Static mixer volume (µl)** | 50, 100, 200, 250, 400, 600 (Microfluidic mixing technology) |
| **Dynamic mixer (ml)** | 1.74, 5.90 (using magnetic stirrer) |
| **Control** | LAN, RS-232, USB, analog, standalone, Mobile Control |
| **Supported by** | ClarityChrom®, PurityChrom®, OpenLab CDS EZChrom Edition, Chromeleon™, knauerOS® |

# DETECTOR

As our partner, you get the flexibility to choose between variable single and multi wavelength detectors, as well as diode array detectors to acquire a full UV spectrum.

### On KNAUER portfolio:

- UV/VIS variable single wavelength detectors
- UV/VIS variable multi wavelength detectors
- Diode array detectors
- Conductivity and pH monitors/detectors
- Refractive index detectors
- Electrochemical, fluorescence and light scattering detectors

### Along with:

- Nano, analytical, semi-preparative and preparative UV flow cells in different
  - path lengths
  - capillary connections
  - flow rate ranges
  - volumes
  - pressure ranges
  - materials

| Specifications – UVD and DADs | |
|---|---|
| **Light source** | Deuterium lamp, high brightness deuterium lamp, halogen lamp<br>All light sources hold an integrated GLP chip |
| **Wavelength range (nm)** | 190-500 (1), 190-700 (2), 190-750 (4,5), 190-750/900 (depends on one or two lamp version) (3), 190-1 000 (6) |
| **Linearity** | >2.0 AU @270 nm (1,2), >2.2 AU @270 nm (3), >2.0 AU @274 nm (4,5) , >2.5 AU @274 nm (6) |
| **Biocompatible version** | all |
| **Control** | LAN, RS-232, Analog, Stand-alone, Mobile Control |
| **Supported by** | OpenLab® EZChrom, ClarityChrom®, PurityChrom®, Chromeleon®, knauerOS® |
| **KNAUER service tool** | Available for all products |
| **Operation temperature (°C)** | 4–40 |
| **Required ventilation power*** | 0.5 W, 40x40 ( x1) (1), 1 W, 60x60 (x1) (2,3), 1.9 W, 60x60 (x1) (4,5,6) |
| **Supplements** | User & service manuals, service notes, service SOPs & videos, device & service communication protocol |

* Depending on the model: 1: UVD 2.1S; 2,3: UVD 2.1L, 40D; 4,5,6: MWD 2.1L, DAD 2.1L, DAD 6.1L

## COLUMN THERMOSTAT

Our forced air column thermostat with microprocessor-controlled Peltier elements for heating and cooling in a range of 5-85 °C is an essential add-on for most HPLC applications.

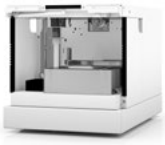
**On KNAUER portfolio:**

- Column thermostat for up to 8 HPLC columns

**Along with:**

- Pre-heater in 0.10 and 0.18 mm ID

## AUTOSAMPLER / LIQUID HANDLER



The requirements for an automatic sampler have increased a lot. With our autosamplers you can fulfil those requirements easily.

**On KNAUER portfolio:**

- Analytical autosampler in 862 and 1240 bar
  - With cool/heat option
- Bio analytical autosampler in 345 bar
  - With cool/heat option
- Preparative autosampler in 350 bar for injections up to 10 ml
  - With cool/heat option
- Bio preparative autosampler in 350 bar
  - With cool/heat option

## ELUENT TRAY

Handling eluents requires an eluent tray. This can be a separate tray or an integrated part of the system box. Choose whichever option best suits your needs and we will make it happen. If you want your new product to complement your industrial design, we can help you select the most suitable paint and design.


**KNAUER Product Selection Guide**
For more information on the KNAUER product portfolio visit:
**www.knauer.net/brochures**

## VALVES AND VALVE DRIVES

KNAUER valves are engineered for a wide range of chromatography and dosing applications. Versatility is ensured by the choice of various materials and dimensions, as well as by drivers for different software packages. The valves are driven either manually or automatically via an electric valve drive.


The Valve Unifier is an intelligent valve drive featuring LAN, USB, analog, CAN and RS-232 control options, as well as RFID technology. Therefore, independent of the valve head design from analytical to preparative scale, only one valve drive is required, which keeps your logistics highly cost-effective.

### On KNAUER portfolio:

- Operated manually and electrically, offering different
  - Functionalities
  - Ports
  - Rotor and stator materials
  - Bore sizes
  - Back pressures
  - Capillary connections

| Specifications | |
|---|---|
| **Valve scale** | Analytical, Preparative |
| **Valve function** | Injection, column selection, fraction collection, other switching tasks |
| **Max pressure (bar/psi)** | 1 240/18 000 depending on the valve design |
| **Bore size (mm)** | 0.2 – 2.0 |
| **Capillary connection (inch)** | 1/16", 1/8", 3/16", 1/4" |
| **Stator material** | Stainless steel DLC, PEEK |
| **Rotor material** | Vespel, PEEK, PPS, POM |

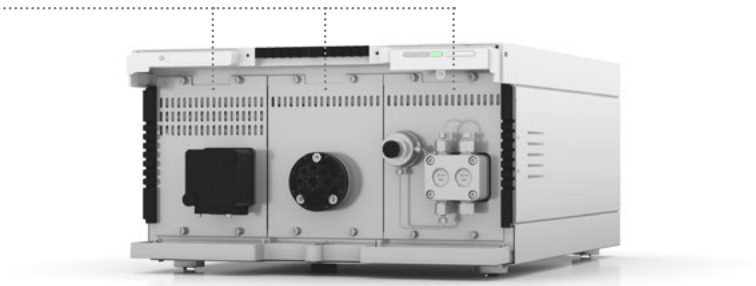
# SAVE COSTS AND SPACE WITH OUR LC DOCKING STATION

**Less space, yet higher demand? The docking station is your solution!**

The KNAUER LC module docking station can be configured with up to three plug-in modules in the left, middle and right position for chromatography applications and beyond. Choose freely between different pumps, valves and detectors and where they should be positioned.

**You believe it is a fantastic idea, but you do not have enough budget or qualified applications to occupy all three positions at the moment? Leave one or two positions empty and add the modules later!**

**Freely combine pumps, valves and detectors in one housing**



### On KNAUER portfolio:

- Complete modular freedom to customize for your application with:
  - Four modules
    - Column holder
    - Valve drive
    - Compact pump with different configurations and materials
    - Compact detector in normal and fiber optic version
  - Various positioning alternatives

# CHOOSE YOUR SOFTWARE DRIVER

We provide you with drivers for several chromatographic data systems for our modular OEM platform. If you prefer to use your own software, we supply you with all the required communication protocols.

**On KNAUER portfolio:**

- Mobile Control (Chrom)
- OpenLAB® CDS EZChrom Edition
- ClarityChrom® CDS
- PurityChrom®
- Chromeleon™ 7.2 / 7.3 drivers
- RC.NET
- knauerOS®

**KNAUER service tool is available for a broad variety of OEM products for several purposes such as monitoring, adjusting, calibrating, diagnosing, and software upgrades.**

## MOBILE CONTROL

### KNAUER´s intuitive software for tablets, laptops, and PCs.

If you need a basic, easy-to-use, and cost-effective software for your LC system OR even if you are running a non-LC system, Mobile Control is the solution for you.

### Pay only for what you need

Mobile Control features basic functions to operate AZURA devices and systems. Mobile Control can operate dedicated applications which do not require a highly developed and cost-intensive chromatographic data system (CDS).

**On KNAUER portfolio:**

- Mobile Control
- Mobile Control Chrom

## knauerOS®

The best hardware is worthless without great software. Chromatographic data systems (CDSs) are highly sophisticated architectures, but they tend to forget about the most important thing: the user.

**That is why we introduce knauerOS**

knauerOS was solely developed based on customer feedback. This involves features which we believe should be standard but are not, such as:

**Scalable license model:**

You will only need one license for every system. The amount of users? Does not matter! You need a second system? No problem, you can simply update your license. There are no limits for licenses, controllers or users.

**Centralized Server Architecture:**

knauerOS uses a modern client-server web architecture for easy data processing, analysis and a unified sample database. This also enables access via browser and remote work with multiple team members.

**Efficient Data Processing:**

All data processing is handled on the server side, ensuring optimal performance and efficiency. knauerOS was developed with 2D-LC in mind.

**OEM-Customizability:**

- Name interchangeable
- Change color and style
- Set your own settings
- Dedicated driver development kit available

More information can be found at: **knauer.net/software**

# PUMPS

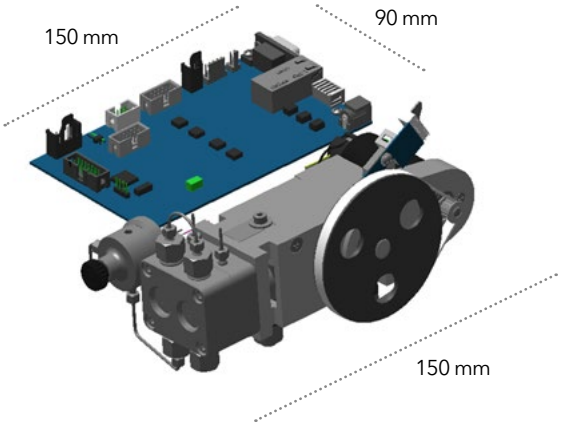
**If you want to verify the compatibility of our products with your system, KNAUER will provide you with all STEP files for the required components.**

## DOSING PUMP


### COMPACT HIGH PRESSURE PUMP

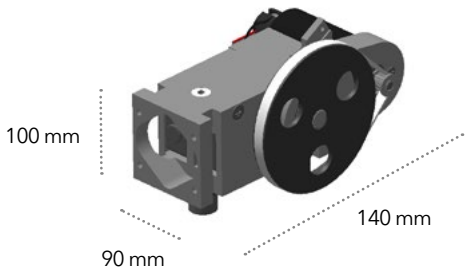
For LC and dosing applications

- Configurable with or without pressure sensor
- Stand-alone and integrated versions available
- Available with or without keypad




### PUMP KIT WITH HORIZONTAL MAIN BOARD

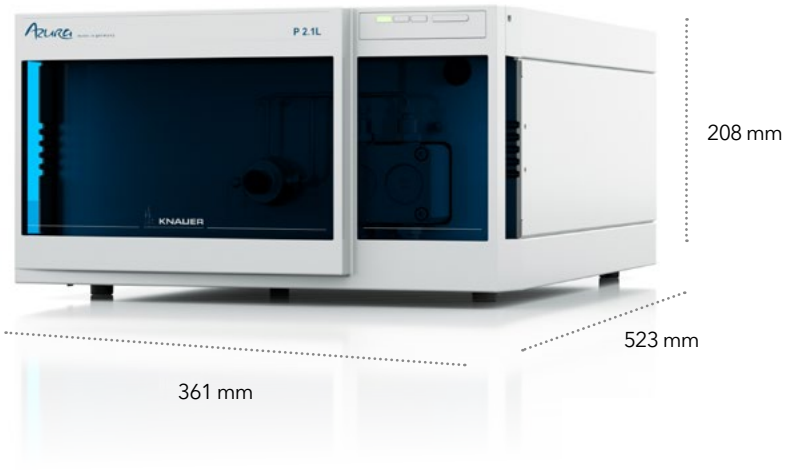
(vertically positioned in original configuration)




### PUMP DRIVE

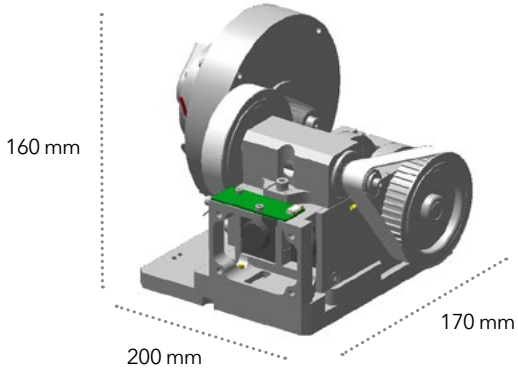
The dimensions of this drive are the same in all analytical versions.

# PREPARATIVE PUMP




**HIGH PRESSURE PREPARATIVE PUMP**
L-size housing

**HIGH PRESSURE DOSING PUMP**
Preparative OEM version

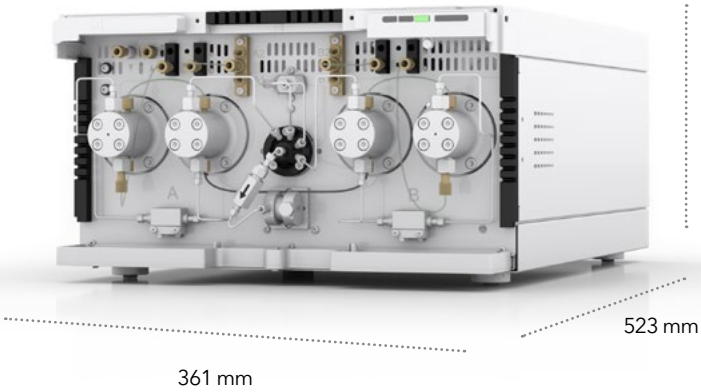




**PREPARATIVE PUMP DRIVE**
Available in BlueShadow 80P and AZURA® P 2.1L

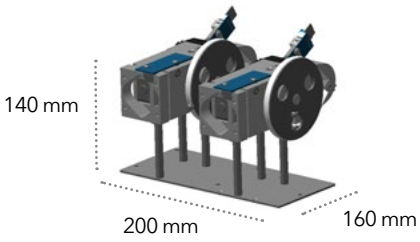
# ANALYTICAL PUMP


**HIGH PRESSURE ANALYTICAL PUMP**
L-size housing

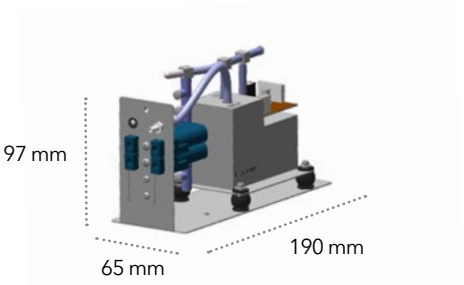
**HIGH PRESSURE DOSING PUMP**
Analytical OEM version

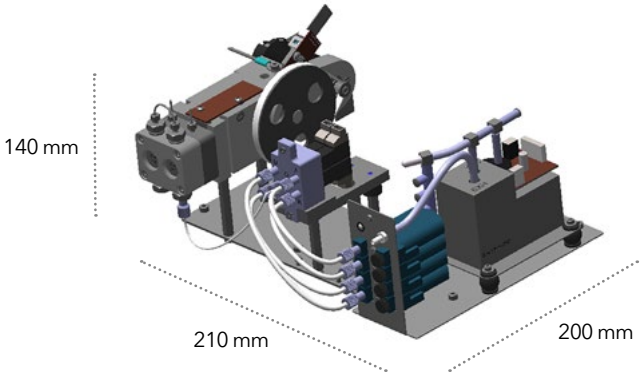

**HIGH PRESSURE UHPLC PUMP**
L-size housing




## DOUBLE PUMP DRIVES (BINARY PUMP)

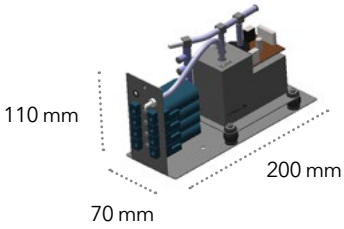



## 2-CHANNEL DEGASSER UNIT (AVAILABLE IN BINARY PUMP)

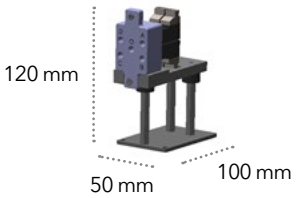



## COMPLETE PUMP KIT (QUARTERNARY PUMP)

Excluding electronics



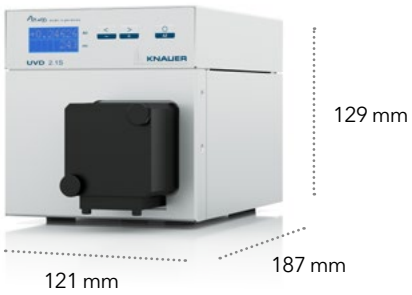

## 4-CHANNEL DEGASSER UNIT (QUARTERNARY PUMP)




## LPG VALVE UNIT (QUARTERNARY PUMP)

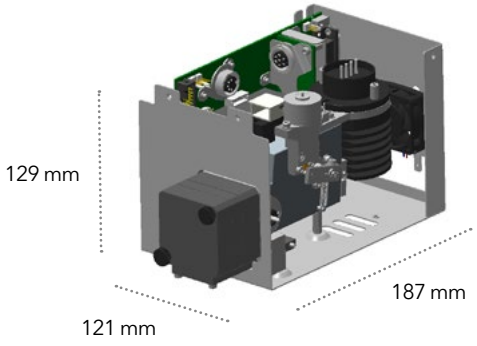
# DETECTORS

**Detector kits shall be considered as electronic components. Any modification of cable lengths must be discussed in advance.**



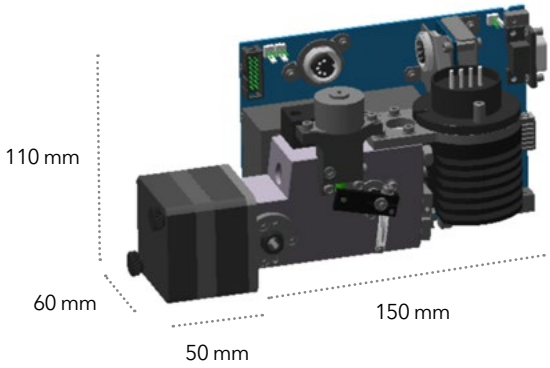

## COMPACT VARIABLE SINGLE WAVELENGTH DETECTORS

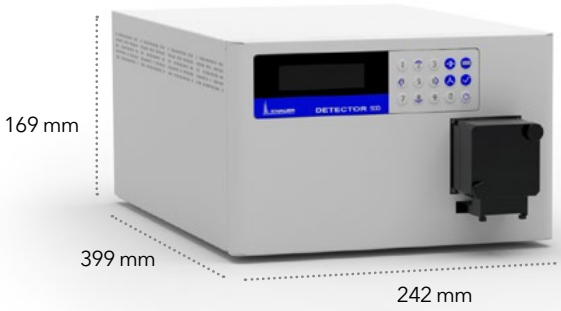
Normal and fiber optic, stand-alone and integrated versions available.




## AS KIT TO INTEGRATE INTO THE CUSTOMER SYSTEM

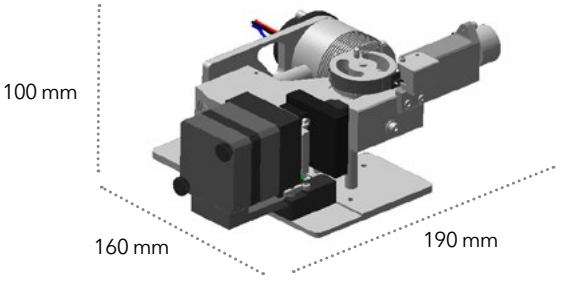
Available as normal and slide-in module (for first option the conditions and requirements should be discussed).





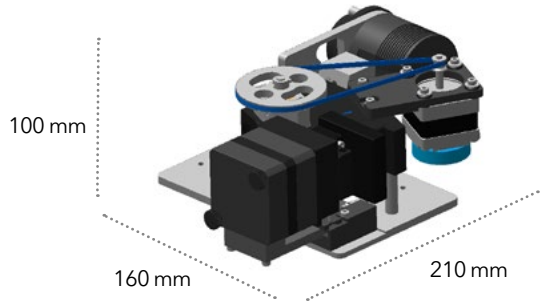

## UV-VIS SINGLE/MULTI WAVE-LENGTH DETECTOR

Normal and fiber optic, stand-alone and integrated versions available.




## SINGLE WAVELENGTH DETECTOR KIT

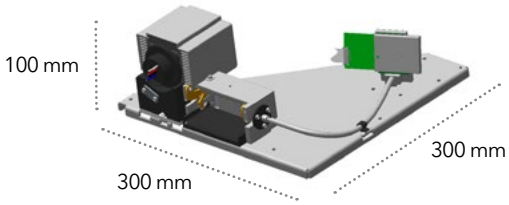
Detectors are available with electronical parts, the image only shows the dimensions of the optical bench.



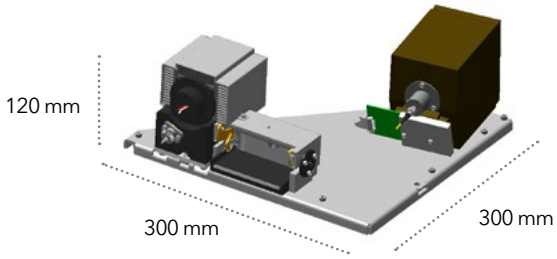

## MULTI WAVELENGTH DETECTOR KIT

Detectors are available with electronical parts, the image only shows the dimensions of the optical bench.

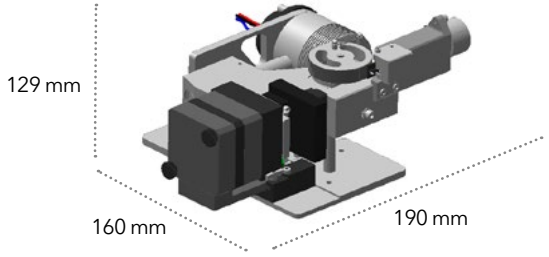

**HIGH-END LC DETECTORS**
L-size housing



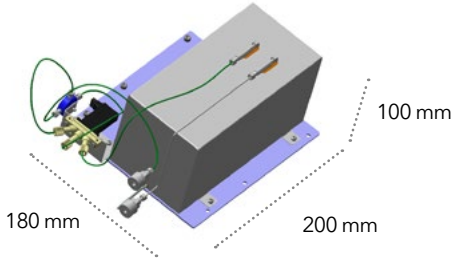

**DAD/MWD 2.1L KIT**



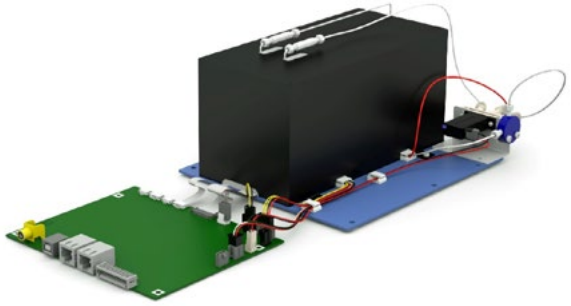

**DAD 6.1L KIT**




**UVD 2.1L KIT**




**RID 2.1L KIT**

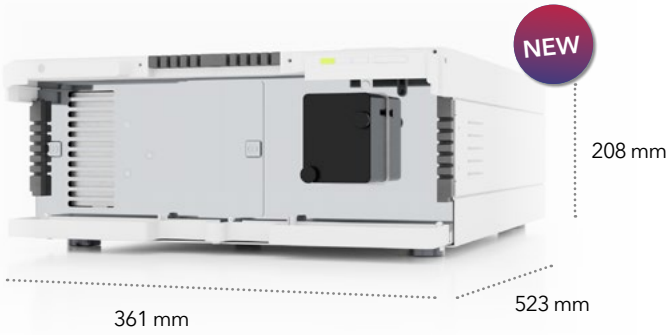


**AZURA® RID 2.1L OEM KIT**
Designed for OEM integration and business

## COMBINING UV, CONDUCTIVITY AND PH IN ONE DEVICE

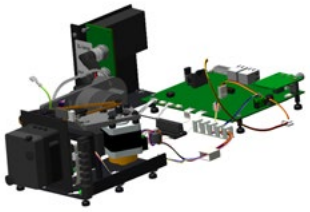
# VWD 2.1L

The 4-in-1 package: The AZURA VWD 2.1L is a versatile, variable-wavelength detector designed to take your chromatography system to the next level. When equipped with KNAUER's patented CombiLight flow cell, it can simultaneously monitor conductivity and eluent temperature alongside up to four UV channels. A pH glass electrode can also be connected to complete FPLC systems and enable real-time pH monitoring. The VWD 2.1L is also compatible with the classic KNAUER flow cell, including the fiber optic version, for detecting up to four compound-specific wavelengths across 190–900 nm.




## Technical data

| | |
|---|---|
| **Detection** | |
| **UV measurement**<br>**Wavelength range:**<br>**Accuracy:** | 4 UV channels<br>190-900 nm<br>± 1.5 nm |
| **Conductivity measurement**<br>**Range:**<br>**Accuracy:** | Available in combination with CombiLight flow cell<br>0.1-1000 mS/cm<br>± 0.5 mS/cm or ± 2 % whichever is greater (0.1-200 mS/cm) |
| **Eluent temperature**<br>**Range:**<br>**Accuracy:** | Available in combination with CombiLight flow cell<br>1-99 °C<br>± 1.5 °C (4-40 °C) |
| **pH measurement**<br>**Range:**<br>**Accuracy:** | Available in combination with pH electrode<br>0-14<br>± 0.1 (pH 2-12) |
| **Light source** | Deuterium (D2) and halogen lamp with integrated GLP chip |
| **Spectral bandwith** | 6 nm at Hα line |
| **Noise** | ± 0.0075 mAU<br>± 0.0125 mAU |
| **Drift** | 0.2 mAU/h<br>0.4 mAU/h |
| **Linearity** | > 2.5 AU |
| **Maximal data rate** | 1 UV channel: 100 Hz<br>4 UV channel: 5 Hz (DI=100 nm) |
| **Communication** | |
| **Inputs** | Error-In, Start-In, AutoZero |
| **Outputs** | Events 1-3, Error-out, Start-out |
| **Analog outputs** | Not available |
| **Control via software***<br>*Drivers for other CDS in preparation | OpenLab EZChrom®, ClarityChrom®, PurityChrom®, Chromeleon® |
| **Interfaces** | 2x LAN (for software control), BNC (for pH electrode), USB (for service), multi-pin connector (for Events) |



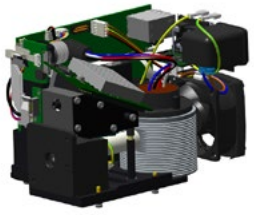
## SMALL FOOTPRINT, LARGE SPECTRUM

# DAD 4.1S

Diode array detectors are becoming increasingly state-of-the-art technology and are indispensable in modern liquid chromatography. Conventional DADs are large, costly instruments that not only consume budget, but also valuable instrument space. This is where the new Knauer DAD 4.1S comes in. The DAD 4.1S is a highly compact diode array detector that can display the entire UV spectrum, from 190 to 500 nm. Thanks to its patented CombiLight flow cell, which is available in a wide range of path lengths, it can also monitor conductivity. This economical solution offers high flexibility thanks to its extremely small dimensions. It is also available as a kit with fibre optics.


## Technical data

| Detection | |
|---|---|
| **UV measurement** | Whole spectrum |
| **Wavelength range:** | 190-500 nm |
| **Accuracy:** | ± 3 nm |
| **Conductivity measurement** | Available in combination with CombiLight flowcell |
| **Range:** | 0.1-1 000 mS/cm |
| **Accuracy:** | ± 0.5 mS/cm or ± 2 % whichever is greater (0.1-200 mS/cm) |
| **Light source:** | Deuterium (D2) lamp with integrated GLP chip |
| **Spectral bandwith:** | 10 nm |
| **Noise:** | ±0.020 mAU |
| **Drift:** | 0.5 mAU/h |
| **Linearity:** | > 2.0 AU |
| **Maximal data rate:** | 100 Hz (LAN) |



| Communication | |
|---|---|
| **Inputs:** | Error-In, Start-In, Autozero |
| **Outputs:** | 1 Event, Error-Out |
| **Analog outputs:** | 4 channels |
| **Control via software*** *Drivers for other CDS in preparation | PurityChrom® 6, ClarityChrom®, Mobile Control |
| **Interfaces** | 2x LAN, multi-pin connector (for Events) |

## FLEXIBLE, RELIABLE AND ECONOMICAL

# THE NEW FRACTION COLLECTOR FC 6.1

A flexible, reliable and economical fraction collector with a main rack for tubes and a side rack for bottles in one setup. Sampling is made easy with highly accessible fraction tubes. Thanks to its wide flow rate range with flow rates up to 250 ml/min it is ready for your application. Various drivers for easy time-, volume-, drop- or threshold-based fraction collection – or use the communication protocol. Your choice!

With the capillary guide, organized and proper capillary routing is possible, and all the wetted materials are available as a biocompatible version. The FC 6.1 has a leakage tray with drain – just in case. Of course, OEM customizations such as different colors, or different racks can be arranged.

| Specifications | |
|---|---|
| **Main rack** | 165 x 1 ml… 8 x 250 ml |
| **Side rack** | 4 x 100 ml; 3 x 250 ml |
| **Fraction modes (SW-supported)** | Time, Volume intervals, Drop counting, Fill level |
| **Wetted materials** | Bio-compatible; EPDM-valve (FDA-certified) |
| **Ports** | ¼-28 UNF, flat bottom |
| **Drivers** | ClarityChrom®, Chromeleon™, PurityChrom® |

**Fraction Collector FC 6.1**
For more information:
**www.knauer.net/brochures**

## NEW POSSIBILITES IN THE WORLD OF AUTOMATION

# THE NEW LIQUID HANDLER LH 8.1

The world of small XYZ robotic liquid handlers has long been dominated by a single product. KNAUER now offers an alternative in the form of the new LH 8.1 liquid handler. In-house design and development has made possible a new level of simplicity and speed. Originally designed as a high-throughput autosampler, the LH 8.1 offers great versatility for a range of applications.

KNAUER offers several OEM packages, ranging from customization of the exterior design to optimization, modification or adaptation of the hardware and software according to the customer's requirements. Additionally, an SDK (Software Development Kit) supports Win10, Linux, C++, C# and Python.


| Available Modules: | |
|---|---|
| **Robotic cooler** | Automated cooling unit with 3 drawers and cooling function 4 – 40 °C |
| **Fast wash station** | Automated wash station for minimal carry-over inc. dual liquid pump |
| **Injection valve drive** | Injection valve incl. drive for injections up to 1200 bar |
| **Manual tray holder** | Tray Holder for differently sized trays |

Adapted modules possible

**Liquid Handler LH 8.1**
For more information:
**www.knauer.net/brochures**

# LABOMATIC HD-5000 & HD-6000

With an integrated system controller for method programming and full control of the entire HPLC system. The HD-5000 controller also enables binary, ternary, or quaternary high-pressure or low-pressure gradient elution with virtually pulsation-free flow.

## HD-5000

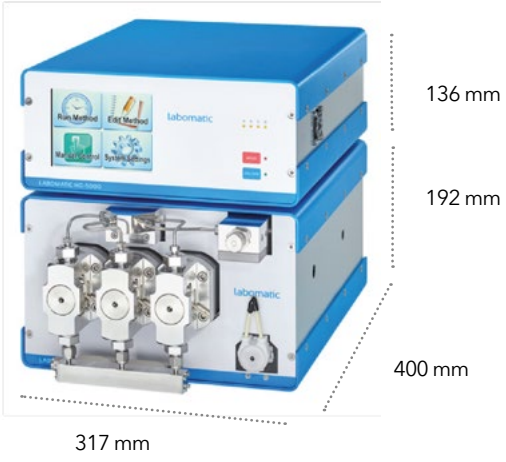
- Flow rates from 5 to 1640 ml/min
- Three-piston system with primary and secondary pistons
- Five different pump heads available, which can also be combined
- Pressures up to 600 bar (8 700 psi)
- Active piston backflushing ensures the trouble-free use of buffer eluents
- Supports up to quaternary high or low pressure gradients
- Active mixing system for low pressure gradients
- Control of 12 or more pump mechanisms
- Control of up to 20 valves, static or pulsed
- Flow- or constant-pressure operation
- Programmable flow gradient
- Modifier addition with microliter accuracy (e.g. DEA/TFA)

## HD-6000

- Flow rates up to 9 000 ml/min and 100 bar

**Communications**

- LAN
- USB
- RS-232




The LABOMATIC HD-5000 Preparative HPLC system is an easy-to-use platform for automated sample injection when gradient elution is required for sample purification. The binary to quaternary gradient pump delivers flow rates from 5 ml/min up to 1 640 ml/min, enabling purification across a wide range of column sizes This system is tailor-made for routine, high-throughput and laboratory-scale purifications of sample volumes reaching from miligram- to gram-scale.

**Max. flow pump sizes available:**

- 280 ml/min
- 360 ml/min
- 570 ml/min
- 810 ml/min
- 1 640 ml/min

## LABOCOL VARIO 4000 / PLUS

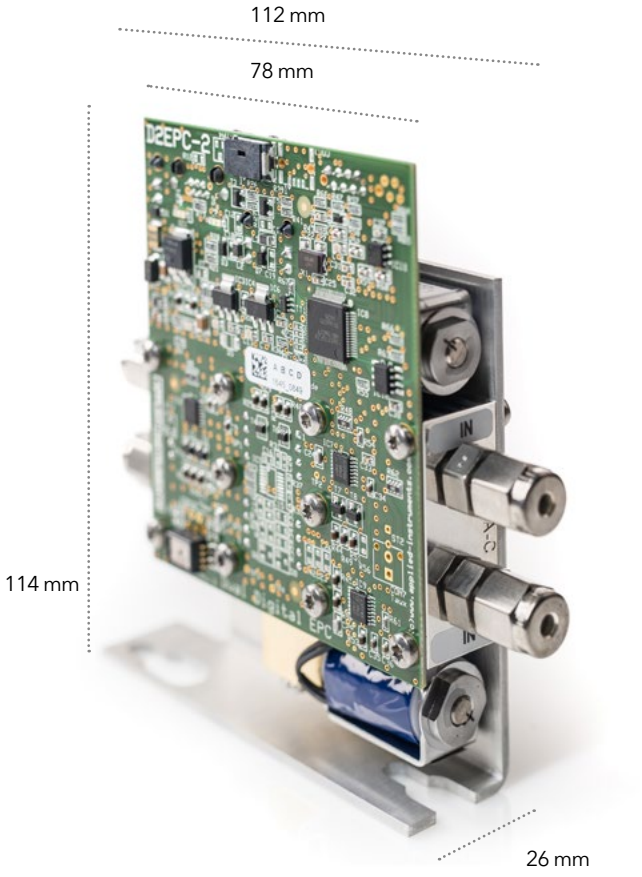
The LABOCOL Vario 4000 fraction collectors are characterized by their high robustness and optimal ratio of size to performance. Users are not restricted to predefined rack types. Rack layouts can be configured according to individual needs. Any rack type can be integrated by defining the number of fraction vessels and their position. The wide application range makes the Vario 4000 series ideal for use in research and development as well as in production environments. A wide range of flow rates is covered by different models of the Vario 4000.

| Rack type |
|---|
| 80 tubes 18 mm / max. 36 ml |
| 125 tubes 10.5 mm / max. 9 ml |
| 20 tubes 36 mm / max. 140 or 240 ml |
| 39 tubes 26 mm / max. 80 ml |
| 24 centrifuge tubes 50 ml |

## LABOMATIC LIQUID HANDLER LH-5000

The state-of-the-art LH-5000 liquid handler offers customizable dimensions up to a width of 280 cm to meet your individual requirements. Work more efficiently than ever with the simultaneous execution of multiple applications. The freely programmable XYZ system provides maximum flexibility, featuring up to four Z-axes and two height-adjustable Y-axes, which can be mounted laterally on the Y-axis.
Experience maximum speed and precision while working with a variety of liquid containers – from microtiter plates to larger containers in any desired size. The removable and raised rack plates easily adapt to any container type. The LH-5000 is resistant to aggressive solvents, making it particularly durable and reliable.
Removable drip trays that catch leaks, as well as a light barrier that prevents unwanted access, provide additional safety. Flexible hose routing, with or without an energy chain, further enhances the versatility of the system.
Put your trust in a product that impresses not only with its impressive performance, but also with its adaptability and safety. Maximize your efficiency and precision in liquid handling.

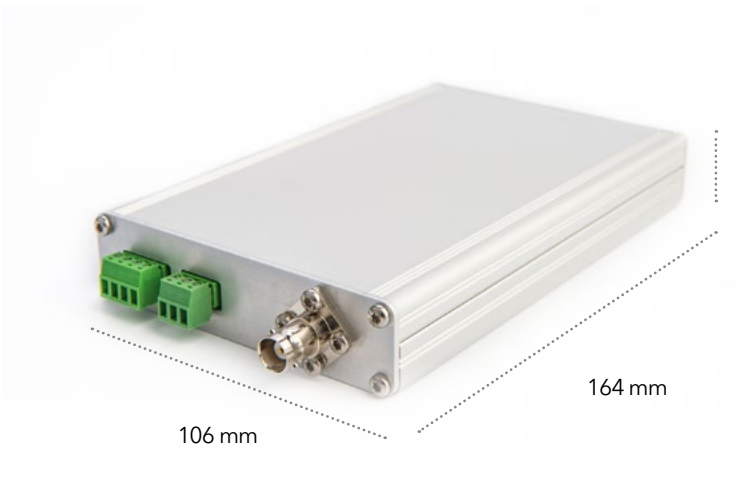
# MODULES FOR GAS BASED ANALYSIS




**DUAL GAS FLOW AND/OR PRESSURE CONTROLLER FOR ANALYTICAL APPLICATIONS – D2EPC-2**

Can be fully tuned to any customer application such as Split/Splitless GC Injection. Narrow footprint for optimum use of (rear panel) space.

| Specifications | |
|---|---|
| **Valve drive** | PWM - Spread Spectrum for low EMI |
| **Valve function** | Injection, column selection, fraction collection, other switching tasks |
| **Input pressure** | up to 1 000 kPag |
| **Operating temperature** | 5 °C...60 °C |
| **Pneumatic connection** | Swagelok® 1/8" and 1/16", Valco® 1/16", reducing back-ferrule from 1/8" to 1/16" |
| **Reducing back-ferrule** | 1/8" to 1/16" Stainless steel metal to metal seal |
| **Dimensions** | 78 x 110 mm (without pneumatic connections) |




### HIGH RESOLUTION FID CONTROLLER – FIDCU-3

All-in-one auto-ranging interface including High Voltage and Ignite Current generator. Digitizes to 0.5 fA resolution.

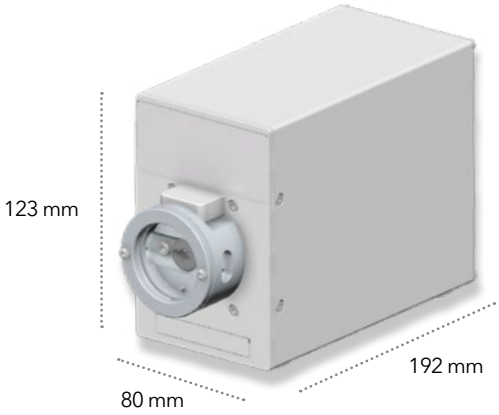
### HIGH RESOLUTION TCD CONTROLLER - TCDCU-3

Precision controller that agitates and reads and digitizes TCD signals in high resolution down to 1 ppm.

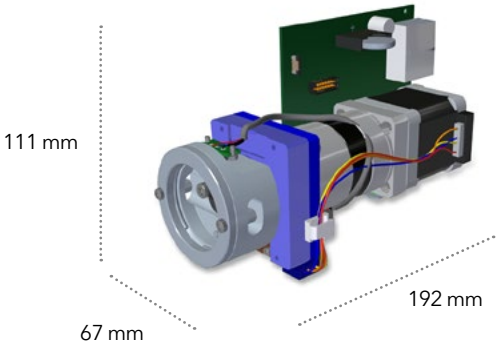
### NEXTGC™ MAIN INSTRUMENT CONTROLLER – NXT-USC-1

Includes software SDK for analytical instrument control and connectivity. Manages timed events and data streaming in real time. Compatible with all modules (EPC, Detector, Temperature Control, Solenoid Drivers) of the NextGC™ family.

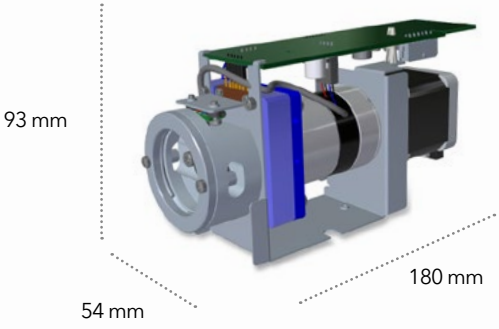
# VALVE DRIVE




**VALVE DRIVE W/O DISPLAY & KEYPAD**

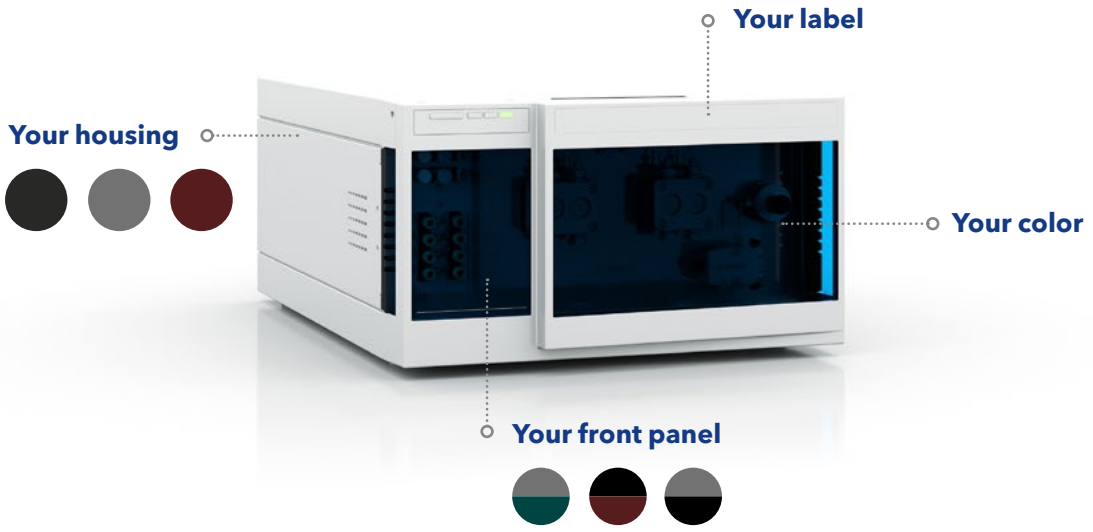



**VALVE DRIVE WITH MOTOR CIRCUIT AND INTERFACE BOARDS**




**SLIDE-IN MODULE WITHOUT MAINBOARD**

# DESIGN YOUR PRODUCT



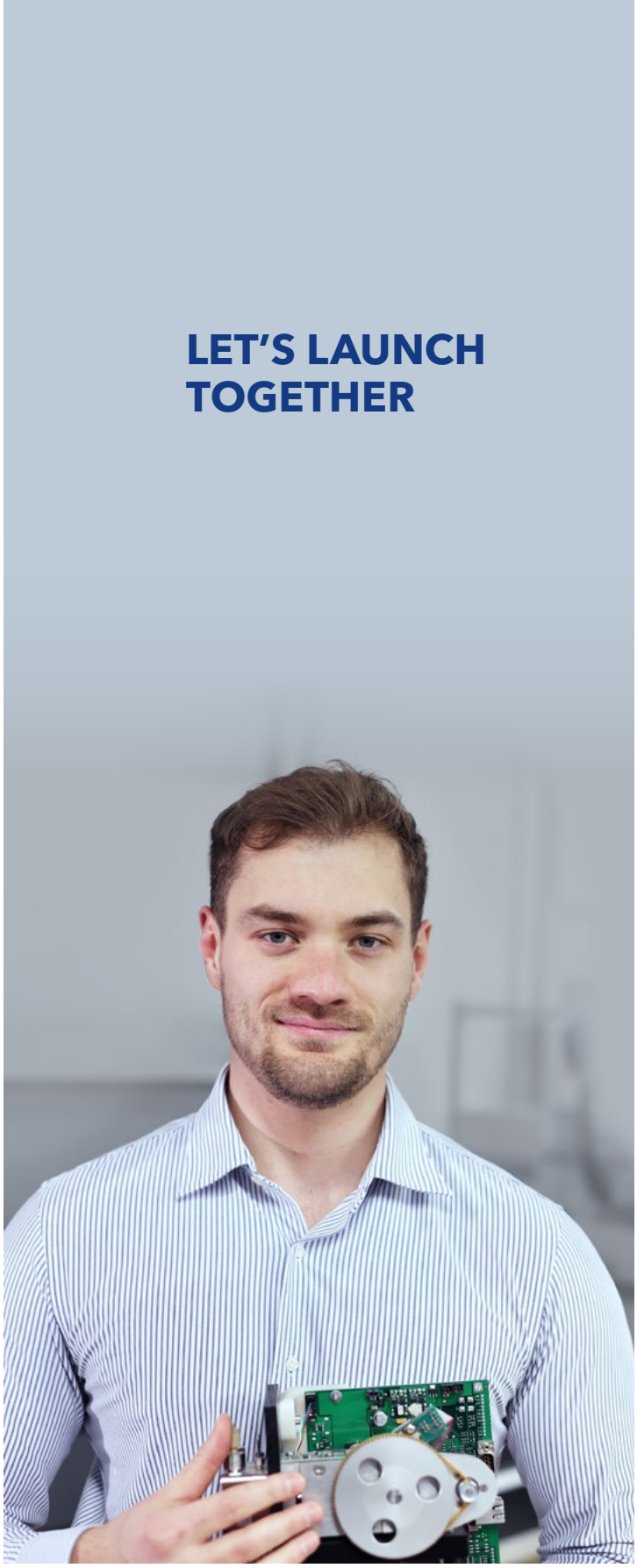

## YOUR INDIVIDUAL BRANDING

Design your own front cover and present your own unique system.
Most of our OEM partners are interested in a front cover that is

- lightweight
- neutral
- printable and color customizable with logos and scripts

**DESIGN EXAMPLE**
**Dynamic Biosensors, Germany**
Protein purification system proFIRE®

# LET'S LAUNCH TOGETHER



Dr. Lukas Glanz, Business Development Manager

Fulfilling a mission requires team work, long-term partnership and collaboration. We are proud to have business partners all over the world who integrate our technology into their workflows.

Whatever your plans may be, whether you want to add your own LC system to your analytical instruments or choose from one of our state-of-the-art modules or accessories, you will find a wide selection that meets a variety of needs.

## GET IN TOUCH

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Hegauer Weg 38 • 14163 Berlin
+49 30 809727-0 • +49 30 8015010 (Fax)
oem@knauer.net • www.knauer.net/oem