

opus® dispenser

Motorized dispensing ensures reproducible results



*opus[®] dispenser.
Increased productivity and
maximum reliability of results.*

- **User-independent:**
Inaccuracy caused by manual operation is excluded
- **High chemical resistance:**
High-quality materials for functional reliability and precision
- **Efficient:** *Serial dispensing and maximum reliability of results*
- **Time-saving:** *Stepper function as standard option*

An intelligent unit concept makes opus[®] a laboratory instrument that considerably facilitates dispensing routines and increases productivity. You can configure settings on the display, start dispensing: at the push of a button and opus[®] will take care of the rest: the volume is electronically controlled and dispensed with the aid of a motor. You can repeat this process up to 9999 times – with the first results as accurate as all subsequent operations

Motorized dispensing ensures reproducible results

Regardless of the size of volume to be delivered, the viscosity of the medium or whoever pushes the button: the electronic drive ensures that dispensing is always realised with mechanical precision. Inaccuracies in dispensed volumes caused by manual operation are ruled out.

Quality materials ensure enduring functional reliability


Use of superior materials (e.g. fluoroplastics) makes opus[®] an extremely robust dispenser which can be utilised in a very broad range of applications.

Automation enhances efficiency

User-friendliness, functional reliability, serial dispensing, integration in automated processes, maximum reliability of results: these not only contribute to a convincing price/performance ratio, but also make an important contribution to increased efficiency.




Simple menu guide: you can configure all values rapidly, simply and comfortably via the main screen. A light touch of the respective function symbol and you can directly access the selection or configuration menu.

 enables you to access the selection menu: calibration, operating language selection, working with the pedal switch? A further push of the button and you can access the configuration menu.



USB link and RS 232 interface for direct PC connection

The complete spectrum of functions can be triggered from the PC and all data read out via the USB connection and RS 232 interface.

You can enter the desired value as usual at the push of a button in the configuration menu. Tick it off  and opus® will operate to your specifications.



Universal Luer connection

Perfection in detail ensures efficient, professional working: dry tube, filters and similar can be connected directly via the Luer connection.

Do you want to dispense several different volumes from a single cylinder filling? The stepper function enables you to define an individual dispensing process start it by simply pressing the button.





50 ml or 20 ml basic unit?

opus® gives you the choice between the 50 ml and 20 ml basic unit – for even smaller volumes and greater precision.



The Hirschmann recirculation system: user, environmentally and budget-friendly

The comfortable Hirschmann recirculation system facilitates rapid aeration without loss of reagent.



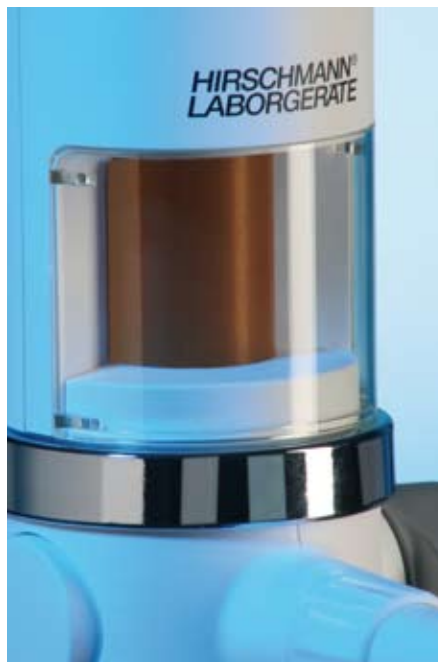
Only the individual quality test ensures reliability

Each opus® is tested for its accuracy in compliance with DIN EN ISO 8655. The individual quality certificate with serial number can be added directly to the quality documentation in compliance with DIN EN ISO 9001.



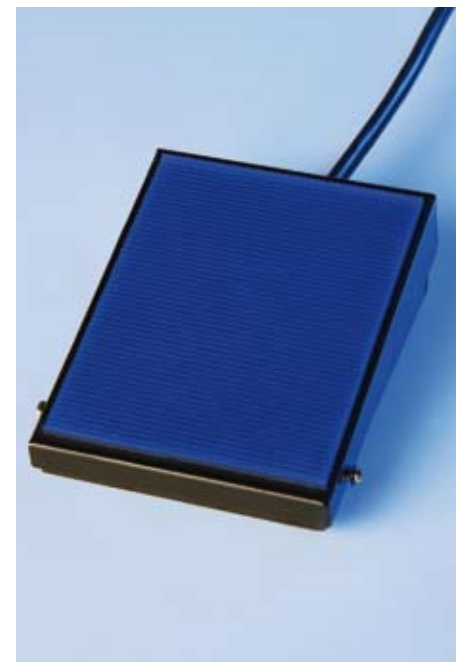
Free rotation: flexible and secure

EA valuable detail for daily working routines: opus® can be freely rotated on the bottle. This means that the bottle label is always pointing towards the user, and you can keep an eye on everything.



Brown glass cylinder for light-sensitive media

Dispensing of a light-sensitive medium? No problem for opus®: the valve block is also available with a brown glass cylinder which can be simply changed.



So you have both hands free

An ingenious accessory range ensures that you have complete freedom of action. For example, you can start dispensing with the pedal switch and have both hands free for work on the laboratory table.

You push the button, opus[®] takes care of the rest.

The high-quality colour TFT touch screen can also be clearly read in strong daylight.



Clear, self-explanatory, menu-guided. The dispensing process is configured on the TFT touch screen: from volume settings to individual calibration.

Nine different dispensing tasks with their complete settings (e.g. volume, speed and cycle times) can be saved in the method memory and reactivated repeatedly if required. This saves bothersome and expensive preparation time.

Dispensing itself is triggered by lightly touching the keys on the touch screen.

The last setting is automatically saved when the unit is deactivated, enabling continuous further working when it is restarted.

opus[®] provides professional support in daily laboratory routines

- Dispensing directly from the laboratory bottle
 - Stepper function: dispensing of several volume dosages (differing volumes possible) from a single cylinder charge
 - Serial dispensing up to 9999 times
 - Quick-Cal: individual, simple and time-saving calibration
 - Comfortable media recirculating system
 - USB and RS232 interface for PC connection
 - Secure piston sealing with PTFE compound sealing lip system, even where problematic media are involved
 - Enables integration in automated processes
 - Mains operation, optional battery.
- DMoreover, the opus[®] encompasses many other convincing intelligent

details: simple sterilisation of parts conveying medium, suctioning and dispensing speed which can be individually adjusted to suit the task in hand.

opus® dispenser. High-class in motorised dispensing.

Performance data for the opus® basic unit	
Unit type	Microprocessor-controlled, motorised piston lift system with recirculation
Volume range	0.1 ml – 200 ml (maximum piston lift 20 ml, automatic addition), resolution: < 1 µl. 1 ml – 500 ml ((maximum piston lift 50 ml, automatic addition), resolution: < 2 µl.
Volume accuracy	dispenser: 50 ml: R = 0,6 %, CV = 0,2 % 20 ml: R = 0,6 %, CV = 0,2 % stepper: 50 ml: R = 0,5 %, CV = 0,25 % 20 ml: R = 0,5 %, CV = 0,3 %
Velocity	Configuration in up to 10 increments, independent for suctioning and dispensing velocity
Working temperature range	+4°C to +40°C
Power supply	Plug-in mains unit 15V 850 mA (optional via battery in control unit)
Optional battery operation	Battery charge for an average of 2.5 - 3 h continuous operation, battery capacity indicated on TFT display, charging time approx. 6.5 h, intelligent electronics prevent overloading and deep discharging
Materials	Housing made of PA6 reinforced glass fibre, all parts in contact with liquid are made of chemically inert material (ECTFE, borosilicate glass 3.3, Hastelloy, FEP, PTFE)
Cleaning, sterilisation	Motorised rinsing function at the push of a button; dry and wet components can be disconnected without tools; all parts coming in contact with the dispensing liquid can be steam sterilised (121°C)
Aeration	Automatic at the push of a button
Dimensions / Weight	320 mm x 80 mm x 63 mm (H x D x W) / 660 g
Quality control	In compliance with DIN EN ISO 8655
Documentation	DIN EN ISO 9001 compliant certification through individual unit protocol with serial number

Performance data for the opus® control unit	
Module type	External control module incl. touch screen control
Touch screen	3.5" with 320 X 240 pixel, most important functions achieved directly from main screen
Individual dispensing	Volumes from 1 ml – 500 ml (50 ml unit) or 0.1 ml – 200 ml (20 ml unit)
Time-controlled serial dispensing	Volumes from 1 ml – 500 ml (50 ml unit) or 0.1 ml – 200 ml (20 ml unit) Number of repetitions (1 to 9999). Cycle time (1 s to 9999 s)
Stepper function	Dispensing of up to 10 partial volumes (can differ) from a single cylinder, manual or serial dispensing functions
Quick-Cal	Calibration of other temperature or other medium possible
Method memory	Up to 9 different unit configurations can be saved
Languages	4 languages (D, GB, F, S) integrated as standard option
PC interface	USB or RS232
Remote control	The unit can be remotely controlled via an additional cable-connected device
Dimensions / Weight	55 mm x 130 mm x 110 mm (H x D x W) / 230 g (without battery)

Scope of delivery
opus® with A 45 internal thread and additional A 32, A 38 and S 40 threaded adapters
Suction hose, recirculation hose, dispenser ejection unit, valve fitting wrench, touch screen control unit, power supply unit, data power cable, operating manual, individual quality certificate

Order number	Article designation
958 10 20	opus dispenser 20 ml, power supply unit with Euro plug 230 Volt
958 11 20	opus dispenser 20 ml, power supply unit with UK plug 230 Volt
958 12 20	opus dispenser 20 ml, power supply unit with US plug 120 Volt
958 10 50	opus dispenser 50 ml, power supply unit with Euro plug 230 Volt
958 11 50	opus dispenser 50 ml, power supply unit with UK plug 230 Volt
958 12 50	opus dispenser 50 ml, power supply unit with US plug 120 Volt

Please visit www.hirschmannlab.de for more information on pipetting, dispensing, titration, volumetric measuring and our precision glass capillary solutions

Hirschmann Laborgeräte GmbH & Co. KG
Hauptstraße 7 - 15
74246 Eberstadt, Germany
Fon +49 (0) 71 34/5 11-0
Fax +49 (0) 71 34/5 11-90
www.hirschmannlab.de
info@hirschmannlab.de