

HIRSCHMANN®



solarus®

High-class in digital titration

LabFriend

solarus®

advanced energy concept, precision results

solarus® sets standards as the world's first digital burette with an integrated solar cell. The power supply for the electronics and display is derived exclusively from an integrated solar cell. Batteries can be completely dispensed with.

Easily replaceable valves, individual calibration with "Quick-Cal" and permanent storage of the manufacturer's calibration mean that solarus® can be adapted rapidly and flexibly. The vivid digital display prevents meniscus reading errors and is always clearly legible, regardless of the viewing angle. The handwheels with a soft touch surface are ergonomically optimised for particularly precise control.

solarus® is available in a 10 ml, 20 ml and 50 ml version. Thanks to its innovative technology, the solarus® 10 ml enables titration of the smallest volumes with an indicating range of 10 µl to 99.99 ml in 10 µl graduations. The ejection unit with a fine tip is supplied as a standard component.

Overview of details

- Power supplied by a solar cell
- Free rotation
- Media recirculating system for simple and rapid venting without reagent loss
- Easily replaceable valves
- Handwheels with soft touch surface
- Clearly legible display, regardless of the viewing angle
- Individual calibration of user-specified adaptations with "Quick-Cal"
- Serial bidirectional interface (RS 232 and USB)



Solar technology for sustainable performance

Use of solarus® ensures that the term “sustainable” is related directly to work in the laboratory. The unique solar-powered digital burette is powered exclusively using photovoltaic.

Power is supplied to the solarus® electronics via the solar cell at the rear. Charging and changing of batteries, excessive stand-by costs or returning the unit for replacement of lithium cells are therefore a thing of the past.

solarus® exploits instead the advantages of solar technology: comfortable, simple, environmentally friendly, inexhaustible and free.

Use of superior-quality solar cells ensures a reliable power supply at all times, even where lighting conditions are restricted in the laboratory.

perfect ergonomics

For efficient, non-fatiguing work

maintenance-friendly

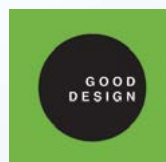
Easily replaceable valves

clear

Large, clearly legible display

inspected

Individual quality certificate, conformity certificate



2011 - Green
Good Design



2002 - Blauer
Engel



Designpreis der
Bundesrepublik
Deutschland

Nominiert 2004

2004 - Designpreis der Bundesrepublik
Deutschland Rat für Formgebung - nominée



2002 - iF Design Award,
Hannover



red dot
2002 - red dot

Performance data	
Titration graduations	10 µl
Titration range	0,01 ml- 99,99 ml
Volume accuracy	solarus® 10 ml: Precise and reproducibility with absolute accuracy (R) of 0.3% and standard deviation (CV) of 0.1% solarus® 20 ml: Precise and reproducibility with absolute accuracy (R) of 0.2% and standard deviation (CV) of 0.1% solarus® 50 ml: Precise and reproducibility with absolute accuracy (R) of 0.2% and standard deviation (CV) of 0.1%
Pistons	Teflon compound ECTFE, PTFE
Cylinders	Extremely inert and wear-free design made of calibrated DURAN® glass*
Valves	Extremely inert and wear-free design, ball and seat made of borosilicate glass, valve springs made of Hastelloy. The valves can be easily removed and replaced using the fitting wrench (included in scope of delivery)
Plastic parts	All parts which come into contact with the medium are made of highly resistant fluoroplastics Valve block and valve housing made of ECTFE, FEP suction and ejection hose
Sterilisability	Media-conveying components (including ejection unit) are suitable for steam sterilisation at 121 °C
Breakage resistance	Completely enclosed protective plastic jacket with clear inspection window protects against breakage
Test protocol	Each instrument is individually tested, certified and bears a unique instrument number

Scope of delivery
<ul style="list-style-type: none"> • solarus®, with fitted ejection unit and A 45 internal thread • A 32, A 38 and S 40 threaded adapters • Suction hose with union nut, recirculation hose, fitting wrench, quality certificate, brown light protection window

Order number	Article designation
9.287 779	solarus® 10 ml
9.287 780	solarus® 20 ml
9.287 781	solarus® 50 ml

Accessory available on request.



Ejection unit



Link to the future via the serial bidirectional interface



The Hirschmann recirculation system



Ejection unit, titration, 400 mm, FEP



Light protection window for light-sensitive media