

Smartline

▶ Autosampler KNAUER Optimas



Reliable and cost-effective HPLC autosampler

Featuring several robust injection methods with high precision and accuracy, the autosampler KNAUER Optimas offers top-class autosampler performance at a moderate price.

The autosampler KNAUER Optimas was developed for optimal automation of routine injections. With a choice of carousel trays, it provides sample vial flexibility and with the proven PASA™ injection concept, reliable and accurate sample handling is guaranteed. The autosampler also features three distinct injection modes, including zero-sample-loss injection, for ultimate flexibility.

The autosampler KNAUER Optimas offers:

- exchangeable vial trays for high capacity or high sample volumes
- low sample carryover through effective needle wash (inside and outside)
- full and partial loopfill or μ l-pickup injection available
- easy internal standard addition, sample dilution or derivatization
- optional sample tray cooling without limitation of sample tray access
- optional biocompatible liquid handling or kit for preparative applications

For all injection modes, sample injection with pressure-assisted sample aspiration (PASA™) is selectable. This technique reduces the risk of bubbles and provides excellent accuracy. The needle does not move to an extra port for injection, and thus prevents contamination.

Complete integration into KNAUER's ChromGate® (based on the EZChrom Elite™ kernel) and ClarityChrom® chromatography data software make the autosampler easy to control. Alternatively, the autosampler can be used in standalone mode.

Technical data

Sampling

Sample capacity	standard tray: for 84 vials x 1.5 ml + 3 vials x 10 ml; optional trays: for 96 vials x 1.5 ml or 24 vials x 10 ml
Cool option	4–15 °C ± 2 °C; minimum is 20 °C below ambient temperature
Injection volume	1– 5 000 µl (preparative option: 10 000 µl when software-controlled)
Sample loop	100 µl standard; 10 ml for preparative option
Dispenser syringe	250 µl standard; 1 000 µl optional; 2 500 µl for preparative option
Vial detection	missing vial detection by sensor
Headspace pressure	built-in compressor
Switching time inj. valve	< 100 ms
Piercing precision needle	± 0.6 mm
Wash solvent	external wash solvent bottle
Wetted materials	stainless steel (SS316), PTFE, Tefzel®, Vespel®, glass, Teflon®. For biocompatible version: PEEK
Injection cycle time	73 sec for 10 µl partial loopfill including 250 µl needle wash

Analytical performance

Injection modes	full loop, partial loopfill and µl-pickup mode; PASA™ (pressure-assisted sample aspiration)
Injection volume	full loop injection: max. 5 000 µl partial loopfill injection: up to ½ loop volume (1 µl increment) µl pickup injection: up to ½ loop volume – 1.5 x needle volume
Injections per vial	max. 9 injections (unlimited when controlled by software; in sequence mode: max. 9 injections)
Analysis time	max. 9 h, 59 min, 59 s
Reproducibility	full loop injections: ≤ 0.3 % RSD Partial loopfill: ≤ 0.5 % (prep. ≤ 1.0 %) RSD, injection volume > 10 µl µl-pickup: ≤ 1.0 % RSD, injection volume > 10 µl
Sample carryover	< 0.05 % (prep. < 0.1 %) with programmable needle wash

Communication

Outputs	2 inject marker (relay, TTL), 2 auxiliary (relay), alarm (relay)
Inputs	next injection, freeze, stop (all TTL)
Control	RS-232, standalone

General

Power supply	115–230 Volt AC +10% / -22%; 50–60 Hz; 200 VA
Dimensions	300 mm x 500 mm x 340 mm (W x H x D)
Weight	19 kg (21 kg incl. cooling option)

Ordering information

Order no.	Autosampler KNAUER Optimas
A5007	standard version
A50071	cool version
A50072	preparative option kit, consisting of tray for 10 ml vials, large bore injection valve, 2.5 ml syringe, 10 ml sample loop
A50073	biocompatible option kit, consisting of PEEK injection valve, biocompatible needle, 100 µl PEEK sample loop
A50074	large sample capacity tray for 96 x 1.5 ml vials
A50075	large sample volume tray for 24 x 10 ml vials
A50076	wash bottle bracket for 2 x 250 ml wash bottles (including wash bottles)

Technical data are subject to change without notice.

Visit www.knauer.net for details on complete HPLC systems, HPLC columns, and osmometers.

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



Your local distributor:

Printed on paper awarded the EU Ecolabel

EU Ecolabel : FI/11/1

Phone: +49-(0)30-80 97 27-0
Telefax: +49-(0)30-8 01 50 10
E-Mail: info@knauer.net
Internet: www.knauer.net