

Autosampler AL 3110 / AL 3110 Cool



The Bischoff Autosamplers Model AL 3110 or AL 3110 Cool are designed to meet the needs of modern HPLC in daily routine and automated Sample handling. Beside the Basic Injection modes Full Loop, Partial Loop and μ l Pick-up they offer mixing and diluting. Injections can be made from vials (96) and from 2 well plates (96, 384 shallow and deep). For preparative applications 2 x 48 standard vials or 10 ml prep vials can be used. The injection cycle time is less than 60 sec. That means both models are very fast. The model AL 3110 Cool is the refrigerated version of model AL 3110. It's sample tray cooling (Peltier forced air) allows air temperature in the sample compartment of 4°C +/-2°C.



Most of the options are user installable and are therefore not very cost intensive. For Bio-compatibility a bio-compatible sample flow path and valve are available in PEEK. Inert sample - needles are available in titanium or Silco steel.



P/N3110 0000

or P/N 3110 000R

AL 3110 / AL 3110 Cool Specifications

The Bischoff AL 3110 / AL 3110 Cool autosamplers are designed to meet the following specifications:

GENERAL

Sound pressure level LeAq <70 dB

Working temperature 10 - 40°C, Humidity 20 - 80% RH

Safety and EMC compatibility According to EC-directives. UL Approved

SAMPLING

Sample capacity: 2 MTP's according SBS standards, 96 Well and 384 well format or 2 x 48 standard vials or 2 trays for 10 ml prep vials

Vial / Plate dimensions (cap included): Maximum vial / plate height: 47 mm (including septa or cap-mat)

Loop volume 1 - 1000 µl programmable, 10 ml loop optional

Dispenser syringe 500µl (standard) or 2500µl syringe (optional)

Vial detection Missing vial / well-plate detection by sensor.

Headspace pressure Built-in compressor, but only for vials with septa

Switching time injection valve Electrically <100 msec

Piercing precision needle ± 0.6 mm

Wash solvent External wash solvent bottle. (Bracket optional)

Wetted parts in flow path SS316, PTFE, TEFZEL®, VESPEL®, Glass, Teflon. Optional: PEEK

Injection cycle time < 60 sec. in all injection modes for 1 injection ≤ 100 µl including 300 µl wash.

ANALYTICAL PERFORMANCE

Injection Modes Full loop, Partial loopfill and µl Pick-up mode

Reproducibility RSD ≤ 0.3% for full loop injections,

RSD ≤ 0.5% for partial loopfill injections, injection volumes >10 µl

RSD ≤ 1.0% for 1µl pick-up injections, injection volumes >10 µl

Cary over < 0.05% with programmable needle wash

PROGRAMMING

User Interface -SparkLink communication protocol integrated in McDacq-Software

-ASM (Alias Service Manager), -Xcalibur user interface.

Injection methods Injection mode: Full loop injection, Partial loopfill injection, µl pick-up injection

Injection volume 1 µl - 450µl, with 1 µl increment

Full loop injection: max. 1000 µl, Partial loopfill injection: max. 450 µl, µl pick-up injection: max. 400 µl

Injections per vial / well max. 9 injections

Analysis time max. 9 hr 59 min 59 sec

Wash Programmable: Wash between injections, Wash between vials, Timed events Programmable:

Built in on request Priority sample Programmable

COMMUNICATION .

Outputs 1 programmable relay output programmable as:

Inject marker (default), Alarm. Inputs 2 programmable TTL inputs, programmable as:

Next injection input (default), Freeze input, Stop Input

Serial communication port RS232C standard

PHYSICAL

Dimensions (W x D x H) 300 mm x 520 mm x 360 mm. (Without cooling option).

300 mm x 580 mm x 360 mm (with optional cooling installed).

ELECTRICAL

Power requirements 90 – 230 Volt AC +/- 10%. 50/60 Hz

OPTIONS (User installable)

Bio-compatible sample flow path and valve, Inert sample-needle (titanium or Silco steel) and bio-compatible valve (PEEK)

Prep Kit 2.5 ml syringe, Prep valve, 10 ml sample loop, LSV needle and sampletray for 10 ml vials.

RSD: . 1.0% (for inj. vol. > 10 µL up to 50% of loop volume

Valve brand Rheodyne or Valco

OPTIONS (Factory installed)

Sample tray cooling Built-in Peltier cooling, Range: 4°C -- ambient - 3°C

Temp: Air temperature in sample compartment: 4°C +/- 2°C

Accuracy: ± 2°C (at temperature sensor) (Temperature at relative humidity of 80% and ambient temperature of 25°C)