Spark
HOLLAND

Nexas™

Designed for the most advanced (U)HPLC separation routines

> **sparkholland.com**

Better Sample Care.

Nexas™

Versatile, smart and easy-to-use

The autosampler for the most advanced applications

The Nexas™ is a smart and user-friendly autosampler with lots of extra features. Next to its modern state-of-the-art injection technology and excellent cooling performance, the autosampler can be equipped with a second valve or wash pump. Both the design and flow path configuration of the autosampler are versatile, making the Nexas™ the best option for advanced (U)HPLC separation routines.

Excellent temperature control

Flow path/tray recognition

Optional wash pump

Second valve option

User friendly
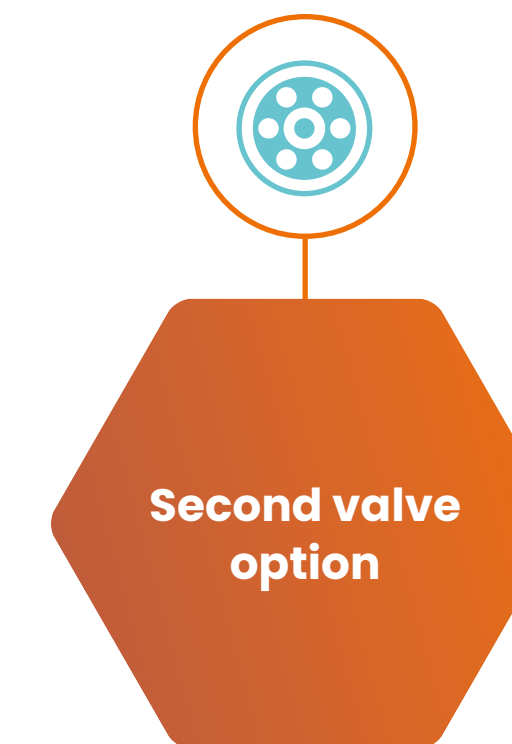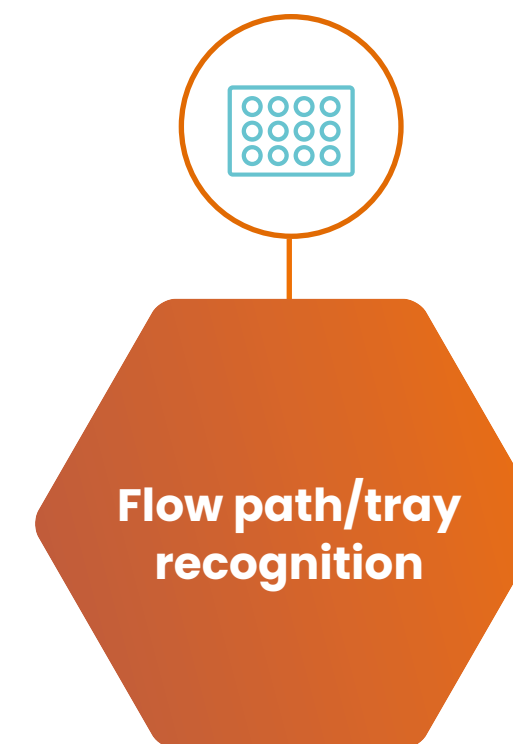
Sublime sample temperature conditioning

Nexas™ is equipped with excellent temperature conditioning operating between 4 - 40 degrees Celsius, using using multiple sensors at critical locations to optimally monitor sample compartment temperature. It also uses 'forced air' technology to reduce condensation in humid atmospheres.

Easy and versatile flow path configuration

Nexas™ is versatile in its use and design. A wide array of flow path configurations can be implemented just by changing needles and extension loops, using a preassembled click system. Besides that, Nexas™ is highly flexible in accepting a wide range of sample carriers ranging from 2 mL vials up to 20 mL vials.

The autosampler is compatible with a variety of injection valves in different materials (Stainless steel, PEEK, ceramics, coatings), volumes and pressure rates, always giving an injection performance with optimal resolution and speed balance. The UHPLC version handles injection volumes up to 30 µL at 20,000 psi, or up to 100 µL at 20,000 psi with an extension loop. The HPLC version handles injection volumes up to 100 µL at 10.000 psi, or up to 1,000 µL at 10,000 psi with an extension loop.

Mix and dilute functionality

The autosampler is able to perform sample preparation steps. Using the mix and dilute functionality, samples can be diluted, or reagents can be added to the samples before injection. Derivatization and calibration curve preparation have never been this easy.

Wide array of wash strategies

To handle challenges concerning carry over, the autosampler facilitates a wide array of wash strategies. Nexas™ is equipped with a thorough and flexible outside needle wash and the possibility to switch to an inside needle wash. Up to three wash solvents can be selected to eliminate carry over. Due to a smart wash solvent calculation, the application will never run out of wash solvent. An optional wash pump is available to reduce wash cycle time.
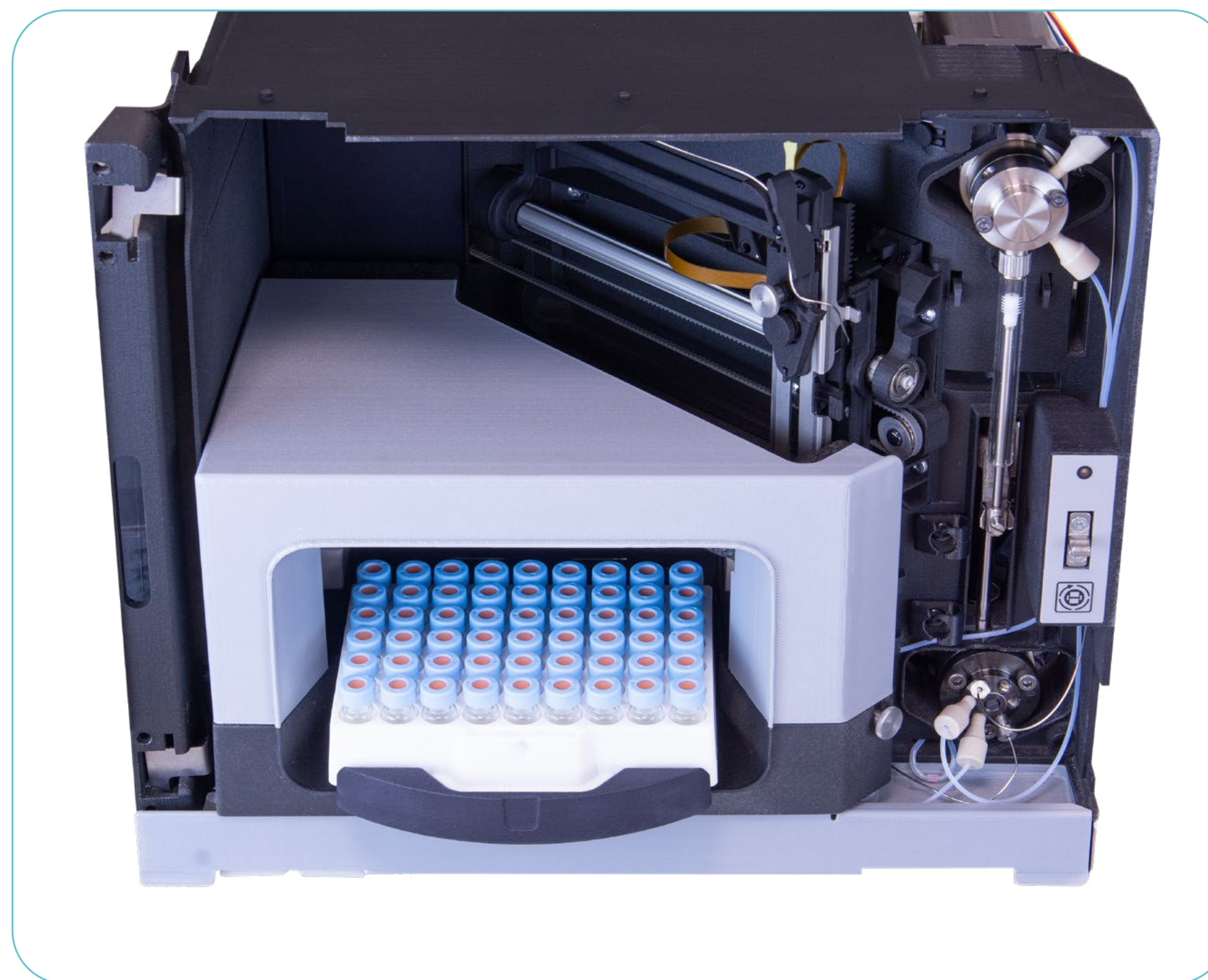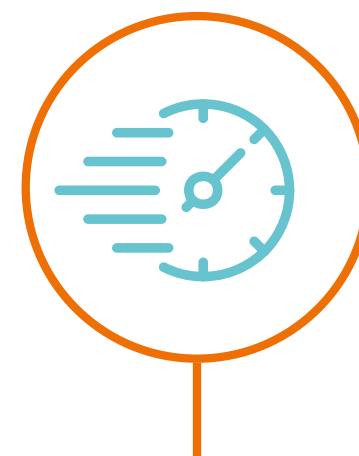
Features and options
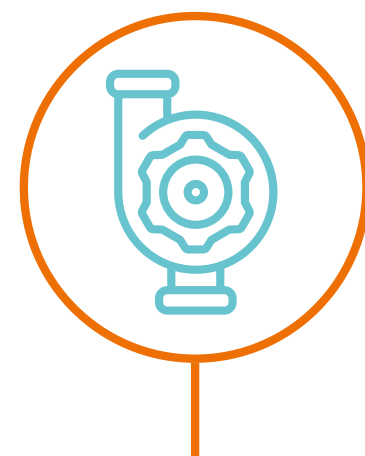
External wash pump
When your application demands high wash volumes or when cycle time needs to be reduced, the autosampler can be equipped with an with an additional wash pump that will perform the needle wash routine.

Reduce the cycle time to zero seconds
It is possible to implement a prep ahead function, potentially reducing the sample to sample cycle time to zero. The firmware and SDK are designed to integrate the prep ahead functionality into your system driver.
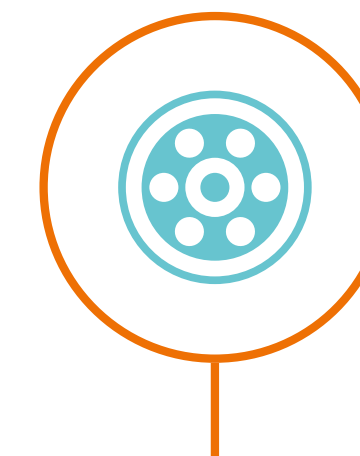
Second valve
Nexas™ can be equipped with a second injection valve or selection valve enabling a wide array of application possibilities like, for example, but not limited to, 2D LC, online SPE, parallel LC injections, flow diversion or multichannel Surface Plasmon Resonance (SPR).

Great user-friendliness

Nexas™ is designed with modern features to make your customers' life easy.

- **Easy sample loading**
  The rotating tray design, with sliding drawers, facilitates easy sample loading

- **System purge option**
  Push the button and your system is ready to use

- **Flexible software integration**
  The embedded software building blocks facilitate OEM customized routines and control by hand helds

- **Easy hardware integration**
  With its stackable design and resourceful tubing pathways, Nexas™ can be easily integrated with your systems and other Spark Holland instruments

- **Easy needle (seat) exchange**
  Changing a needle seat has never been this easy

Safe and smart

**Smart features prevent misconfiguration and mitigate human errors**

- **Flow path recognition using NFC tags**
  Prevents a mismatch between the programmed method and the hardware which helps service engineers to order the correct parts

- **Tray recognition**
  Detection of tray and well plate type to prevent a mismatch with the programmed method

- **Positioning detection**
  Detection of missing vials and automatic rerouting

- **Smart sample vial tray design**
  Prevents incorrect installation of the tray to assure an injection from the correct sample vial

- **Risk prevention**
  When the door opens, all movements will slow down to prevent risk of harm

- **Advanced leakage system**
  A leak sensor in combination with controlled leakage disposal prevent loss of solvents, pollution of the environment and exposure of solvents to users

Specifications

|	
Injection range	0.1 - 100 µL or 0.1 - 1000 µL depending on configuration
Carry over	< 0.003 %
Accuracy	+/- 0.1 µl for 10 µl injection
Precision	< 0.3 %
Viscosity range	0.2 - 5 cp
pH range	2 - 12
Cycle time	< 30 sec for standard injection and standard wash
Linearity injection range	> 0.9999
Minimal sample required	Residual sample < 3 µl
Sample capacity	2 well plates and 24 x 2 ml vials or 2 ml vial adapter with more or equal to 132 positions
Maximum vial volume	20 mL
Supported vials and well plate format	2, 10 & 20 ml vial, 96 well (high, low), 384 (high, low)
Sample temperature control (option)	Cool/heat , 4-40 degrees C
Wash solvents	3
Cap piercing	Through septa and well plate sealings
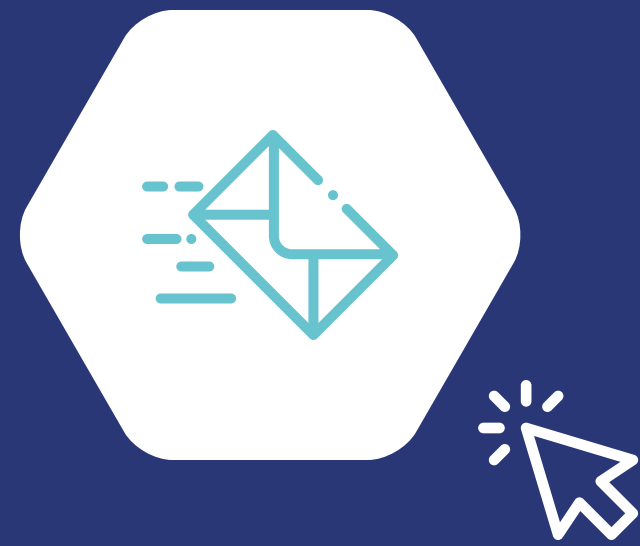
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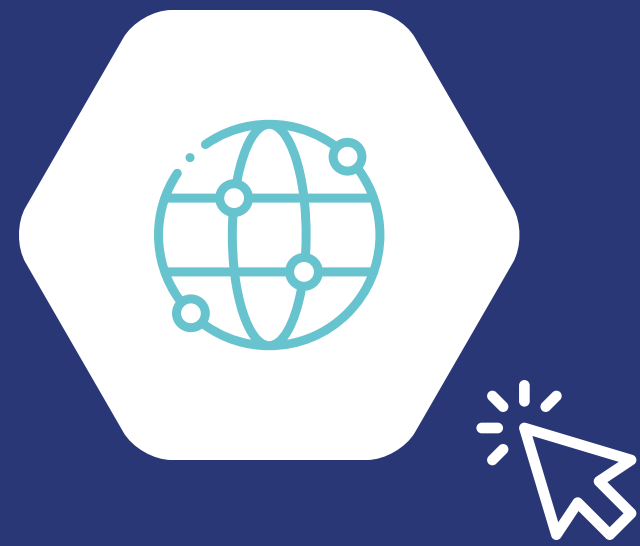
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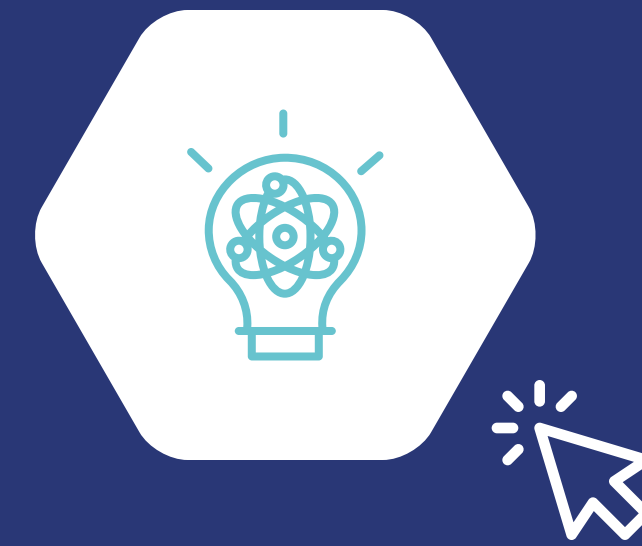
Our technologies

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