

AVANT® (U)HPLC CHROMATOGRAPHY SYSTEMS

Providing simple, high-performance, LC/CMS
with the expression® CMS



THE AVANT® (U)HPLC SERIES

Advion Interchim Scientific's range of AVANT®, high performance, liquid chromatography systems can be used standalone with a UV/Vis detector or with the **expression®** CMS (compact mass spectrometer) to provide seamlessly integrated LC/CMS under the full control of the simple, intuitive LC Express and Mass Express software suites.

A modular, stackable design with many options, the AVANT® provides custom solutions for both HPLC and UHPLC needs. From the simplest manual injection HPLC to a fully automated and streamlined UHPLC system and everything in-between, the AVANT® series can be configured to fit your analytical requirements and your budget.

Pumps:

The AVANT® LC systems are available as 10,000 psi (691 bar) HPLC, or 18,850 psi (1300 bar) UHPLC. Low pressure mixing quaternary gradient pumps, including deaassing and with a dwell volume <700 µL are available at both these pressure regimes. For ultimate performance AVANT® also offers HPLC and UHPLC high

pressure mixing dual piston binary gradient pumps with a dwell volume of only 50 µL, with automated degassing and 4-way solvent selection.

All pumps are provided with solvent waste trays and solvent organizers are also available.



YOUR CUSTOM (U)HPLC SOLUTION

Detector:

High-performance UV/Vis with 20 Hz full spectrum scanning speed over 190 to 800 nm, and up to 8 programmable wavelengths.

Column Oven:

The column oven comes with integrated solvent preheater and has optional automated column selection for up to 6 columns and optional divert valve. It provides accurate, stable temperatures from 10 °C above ambient to 90 °C (75 °C if the column selection valve is installed) at ± 0.1 °C stability and accuracy.

Autosamplers:

Autosamplers are available for the HPLC (10,000 psi) pressure range and UHPLC (18,850 psi) pressure range. Both are available with optional cooling (ambient – 3°C to 4°C). They accept two 96 or 384-well plates or two 48 position trays of 2 mL sample vials. They can be operated in full loop, partial loop and µL-pick-up injection modes depending on sample size, injection accuracy, and reproducibility required.



MORE THAN LC/MS

The AVANT® (U)HPLC series is the latest in an innovative line of sample inlet devices for the expression® CMS, which include:

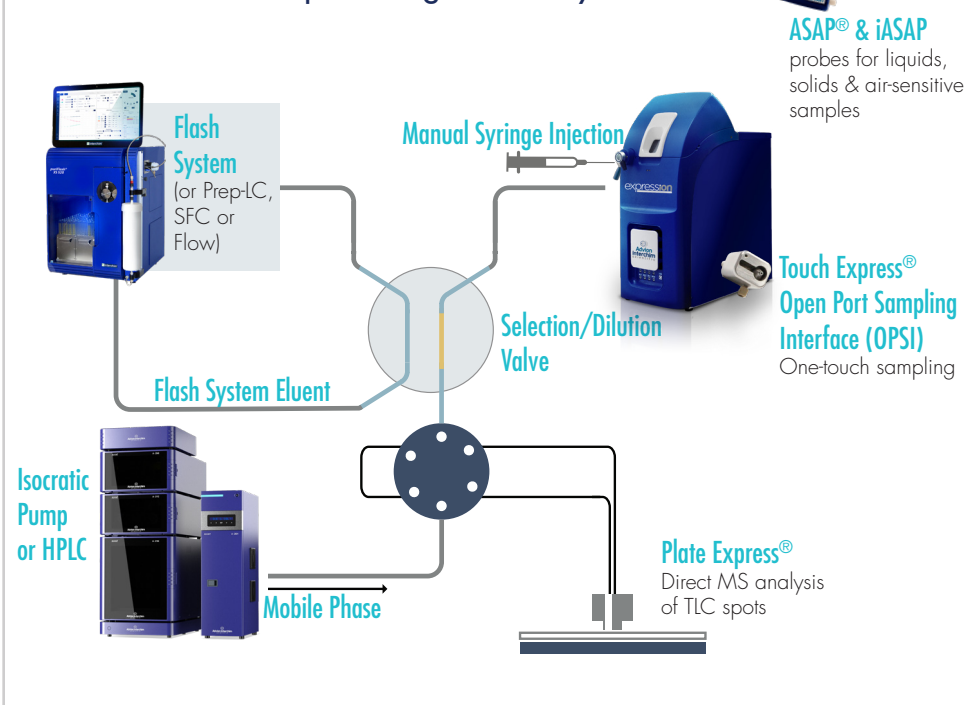
- Plate Express® TLC Plate Reader for automated mass assays from TLC plates
- The Atmospheric Solids Analysis Probe (ASAP®) for direct analysis of solids, liquids, and even air-sensitive samples
- Touch Express® OPSI Open Port Sampling Interface for one-touch sampling of solids, liquids, sample preparation tips and fibers
- Volatile APCI (vAPCI) for analysis of volatile organic compounds (VOCs) from head spaces, breath, and other gas samples
- Flow chemistry interfaces

All these techniques can be simply, simultaneously, interfaced with the CMS so that the chemist can move quickly and effortlessly between workflows.



MULTI-MODE MASS SPEC

Combined flash chromatography, TLC, (U)HPLC and manual injection interface. No re-plumbing necessary.



A Complete Benchtop Solution

The expression® CMS with the AVANT® HPLC, the Plate Express® TLC plate reader, the ASAP® and iASAP probes for liquids, solids and even inert compounds, the OPSI for one-touch sampling, plus a direct injection interface - all at the bench.

SPECIFICATIONS:

Quaternary gradient pumps:

A-4012 HPLC pumping system	maximum 10,000 psi (689 bar, 69 MPa)	Flow Rate Range	1 to 2,000 µL/min
A-4112 UHPLC pumping system	maximum 18,850 psi (1,300 bar, 130 MPa)	Flow Accuracy	Better than ± 1% or ± 10 µL whichever is greater
		Flow Precision	0.075% RSD
		Delay Volume	691 µL

Includes vacuum degasser and solvent waste tray.

Binary gradient pumps:

A-2012 HPLC pumping system	maximum 10,000 psi (689 bar, 69 MPa)	Flow Rate Range	1 to 4,000 µL/min
A-2112 UHPLC pumping system	maximum 18,850 psi (1,300 bar, 130 MPa)	Flow Accuracy	Better than ± 1% or ± 10 µL whichever is greater
		Flow Precision	0.075% RSD
		Delay Volume	50 µL
		Dimensions (WxDxH)	330 x 540 x 110 mm
		Weight	21 kg

Includes automated solvent selection (2 solvents per pump), high pressure mixing, low volume mixer, vacuum degasser and solvent waste tray.

Autosamplers:

A-2054 HPLC (10,000 psi) • A-2055 HPLC (10,000 psi) with cooling
A-2154 UHPLC (18,850 psi) • A-2155 UHPLC (18,850 psi) with cooling

Capacity	2 x 96 or 384 well microtiter plates Or 2 x 48 position 2 mL vials Optional: 2 x 12 position 10 mL vials
Injection modes	Full loop Partial loop µL-pick-up
Injection volume	Programmable from 0 – 9999 µL in 1 µL increments
Injection precision	Full loop injection <0.3% RSD Partial loop fill < 0.5% RSD µL-pick-up <1.0% RSD
Sample viscosity	0.1 to 5 cP
Standard syringe volume	HPLC 500 µL UHPLC 250 µL (other options possible)
Standard injection loop	HPLC 100 µL UHPLC 50 µL
Injection cycle time	Typically <5 s
Valve switching time	60 ms

Autosamplers, continued:

Carry-over	<0.05% with standard wash <0.01% with additional wash
Sample cooling option	Minimum: 4 °C ± 2 °C Maximum: ambient – 3 °C
Dimensions (WxDxH)	330 x 510 x 360 mm 330 x 575 x 360 mm with cooling
Weight	19 kg 21 kg with cooling

UV/Vis Detector:

A-2046 UV-DAD diode array detector

Wavelength range	190 – 800 nm
Light source	Deuterium discharge lamp, halogen lamp
Scanning speed	20 Hz
Programmable wavelengths	8 maximum
Noise level	3 x 10 ⁻⁶ AU
Spectral half-width	6 nm
Accuracy adjustment	± 1 nm
Reproducibility	± 0.5 nm

Column Oven:

A-2031 (-D) and A-2033 (-D) column oven options

A-2031 - Operating Range	10 °C above ambient to 90 °C
- Column Switching	Not included
A-2033 - Operating Range	10 °C above ambient to 75 °C
- Column Switching	6-way column selection valve 15,000 psi max
A-203X-D	Diverter valve included
Accuracy	± 1 °C
Repeatability	± 1 °C
Stability	± 1 °C
Column capacity	Maximum 6 x 30 cm columns
Dimensions (WxDxH)	170 x 600 x 345 mm

Solvent Organizer:

A-2063 solvent organizer

Dimensions (WxDxH) - A-2063	330 x 510 x 80 mm
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HOW TO REQUEST MORE INFORMATION, A QUOTATION OR TO PLACE AN ORDER

Please see from the list below:



By Area

Europe, Israël

info.EU@advion-interchim.com
quotes.EU@advion-interchim.com
orders.EU@advion-interchim.com
Phone: +33 4 70 03 88 55

Asia Pacific

info.APAC@advion-interchim.com
quotes.APAC@advion-interchim.com
orders.APAC@advion-interchim.com
Phone: +46 703108410

North America

info.NAM@advion-interchim.com
quotes.NAM@advion-interchim.com
orders.NAM@advion-interchim.com
Phone: +1 607 266 9162

South America

info.SAmerica@advion-interchim.com
quotes.SAmerica@advion-interchim.com
orders.SAmerica@advion-interchim.com
Phone: +46 703108410

Online

www.advion-interchim.com

Live Demo

Our team will be pleased to give you a live demonstration of our products.
Let's arrange a personal appointment!

Advion Interchim Scientific® is the market-facing name of a partnership between Advion, Inc. and Interchim SAS, separate companies that have agreed to market and distribute their products together.