

Product Range

- UHPLC for all LC Systems
- UHPLC Accessories and Supplies
- HPLC and UHPLC
- GC, GC-MS and ICP-MS
- Columns and Accessories
- LC-MS
- Orbitrap LC-MS
- Ion Chromatography (IC)
- IC and RFIC Accessories
- Chromatography, MS and LIMS Software
- Sample Preparation
- Service and Support

UHPLC

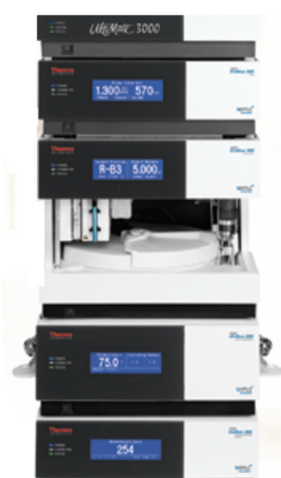
UHPLC delivers important benefits – faster runs, better resolution, and lower operating costs. With Dionex part of the brand, UHPLC performance can be offered at standard HPLC prices to a greater number of laboratories across a wider range of applications.

UHPLC Focused

The Dionex UltiMate 3000 HPLC system offers UHPLC compatibility across all modules, ensuring maximum performance. With flow rates from 20nL/min to 10mL/min and offering a wide range of pumping, sampling, and detection modules, the UltiMate 3000 series provides solutions for all your chromatography needs.

Features and Benefits:

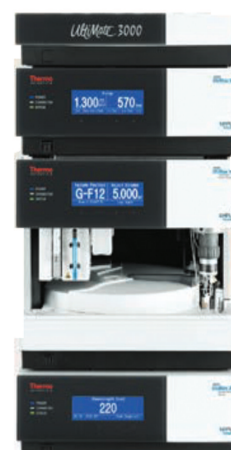
- UHPLC design for all RSLC, nano and standard analytical systems
- 620 bar maximum pressure for basic and standard analytical systems – setting a new benchmark in HPLC
- x2 Dual systems form a unique platform for routine analysis, increased productivity solutions, and advanced chromatographic techniques
- Systems are controlled using Dionex Chromeleon® Chromatography Data System software – providing Intelligent Functionality and Operational Simplicity™
- Systems are offered with Viper™ and nanoViper™ fitting systems – fingertight, zero-dead-volume connections even at UHPLC pressures



UltiMate 3000 Standard LC Systems

The Dionex UltiMate 3000 Standard LC systems provide the right solution for demanding, analytical, and semipreparative LC applications.

- Optimal performance and reliability for conventional LC applications
- 620 bar maximum pressure and 100Hz detectors for UHPLC compatibility
- Widest range of system configurations for maximum application flexibility
- Flow rates up to 10mL/min covering all application needs
- Biocompatible version available (up to 350 bar)



UltiMate 3000 Basic LC Systems

The Dionex UltiMate 3000 Basic systems are cost-effective solutions for conventional HPLC and UHPLC. Fully-scaleable, modular basic systems are designed to provide consistent, robust operation and are even compatible with UHPLC applications.

- Cost effective system for routine applications
- 620 bar maximum pressure and 100Hz data rate for UHPLC compatibility
- Optional Autosampler Column Compartment with integrated sampling and temperature control

UHPLC

UHPLC compatibility has been added to all standard and basic automated Dionex HPLC systems, and we've extended the UHPLC performance of the UltiMate® 3000 RSLC systems, giving you more versatility for your analytical needs.



UltiMate 3000 Rapid Separation LC Systems

The Dionex UltiMate 3000 Rapid Separation LC (RSLC) systems integrate unique hardware features for ultrafast separations and excellent resolution using columns with small particles. In addition, they are characterised by a maximum level of reliability and flexibility.

- Binary or quaternary systems for both UHPLC and conventional HPLC applications
- Extensive flow-pressure-footprint for ultrafast, ultrahigh-resolution separations
- Column pressures up to 1000 bar
- x2 Dual RSLC systems for ultimate productivity solutions

UltiMate 3000 RSLCnano Systems

The Dionex UltiMate 3000 RSLCnano systems have been designed to optimize low flow separations and facilitate easy coupling to mass spectrometry to provide the best resolution, sensitivity, and selectivity for nano LC and proteomics applications.

- Ideal for analysis with limited sample amounts
- High sensitivity to allow detection of femtomoles or even lower
- Maximum robustness and repeatability for consistent results
- Increased resolution and selectivity for more reliable identification
- Widest nano/cap/micro flow range from 20nL/min up to 50L/min



Analytical Instrumentation

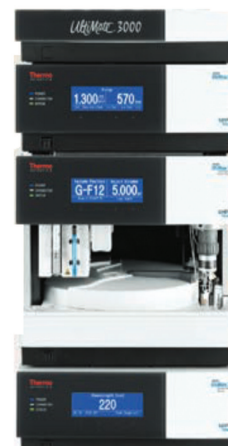
UHPLC

UltiMate™ 3000 Basic Automated System

Enjoy cost effective access to automated UHPLC separations in a simple, expandable system. The UltiMate™ 3000 Basic Automated system offers unique LC and entry level UHPLC capabilities without compromise. The integrated autosampler and thermostatted column compartment deliver retention time precision and the ability to fine tune backpressure, resolution and speed. With adjustable gradient delay volume, quaternary or isocratic pump, and excellent flow stability, the Automated Basic system is perfect for teaching or moderate sample throughput, routine applications.

Specifications and Ordering Information

Max. Pressure	[MPa/bar/psi] 62 /620 / 9000
Solvent Channels	1 or 4
Column Temperature Range	5 °C above ambient to 50 °C
Detector Data Collection Rate	100 Hz [Max.]



Product Description

Recommended Use

For moderate throughput laboratories that need LC and entry level UHPLC capabilities and are investing in their first systems. As an LC/UHPLC starter kit this automated modular system can be extended with additional detectors, a more spacious column compartment, or even access to column switching techniques.

Typical application areas are teaching laboratories or quality control laboratories with moderate sample throughput requirements. The quaternary pump is recommended for methods deploying either conventional 3-5µm, or UHPLC sub-2µm particle columns where a moderately fast gradient response is acceptable for the benefit of increased mobile phase flexibility (i.e., multiple solvents, extended column wash, ternary or quaternary gradients). A four-channel solvent degasser is integrated in the pump module to simplify operation.

Important Capabilities / Features

- Up to 10 mL/min flow rate supporting up to 62 MPa (9000 psi/620 bar) backpressure for column format and column particle size flexibility
- Fast and stable column thermostating between 5°C above ambient and 50°C improves retention time precision. Compact and integrated autosampler column compartment to automate injections of multiple samples and calibration standards
- Obtain near-zero dead volume for optimal peak shapes even over extended periods using Dionex™ Viper™ Fingertight Fitting system
- Get precise and accurate flow rates for stable retention times, robust peak integration, and confident identification from the Dionex™ SmartFlow™ technology

Chromeleon CDS Software Makes Operation Easy

- Integrated service and validation monitoring with Thermo Scientific Dionex Chromeleon™ CDS, versions 6.x and 7.x
- Automated system startup, standby and shutdown with Chromeleon CDS, versions 6.x and 7.x
- Compatible with Chromeleon 7.x eWorkflow walk-up solution and advanced reporting features

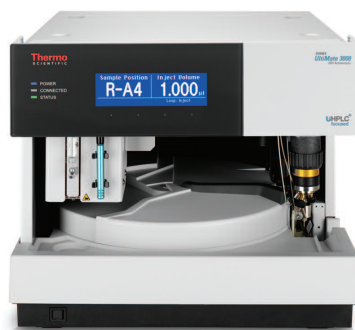
Choose the Right Configuration for You

- Four-solvent channel pump for versatile gradient methods, with integrated 4-channel degasser
- (LPG-3400SD) or a single solvent channel pump for isocratic applications without degassing (ISO-3100SD)
- Spacious solvent rack for six 1-liter solvent bottles or one large mobile phase reservoirs (SR-3000)
- Thermostatted or nonthermostatted autosamplers/column compartments (ACC-3000T/ACC-3000)
- Diode array, multiple wavelength, variable wavelength, fluorescence, charged aerosol, refractive index or mass spectrometry detectors
- Fraction collector (AFC-3000)
- Chromeleon 7.2 software package (standalone or networked, may also control your other chromatography equipment)

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UHPLC Modules

Dionex LC modules integrate innovation and intelligent features into a broad selection of autosampler, injector, pump, flow-control, thermostatted column compartment, and detector modules. We offer a wide variety of LC and Bio columns for any analytical application, as well as accessories for use with our HPLC systems.



UltiMate 3000 Pumps

The Dionex UltiMate 3000 pump family offers the most complete choice in the industry. From nano LC to rapid separation applications, from conventional applications to UHPLC, the UltiMate 3000 pumps always provide industry-leading flow, pressure and precision.

- Isocratic:** Analytical
- Binary:** RSLCnano, Analytical, RSLC
- Quaternary:** Micro, Analytical, RSLC
- Dual-Gradient:** Micro, Analytical, RSLC

Samplers and Column Compartments

The Dionex UltiMate 3000 autosamplers ensure reliable, precise, and accurate injections of nL to mL sample volumes, with extremely low carry-overs. Fraction collection options range from simple collection to advanced collection-reinjection workflows such as automated off-line 2D-LC.

- Autosamplers:** Split-Loop, Pulled-Loop with integrated column compartment
- Fraction Collectors:** Fraction Collector, Autosampler/Fraction Collector, MALDI Spotter
- Column Compartments:** Integrated Switching Valves

Detectors

Optical Detectors: The Dionex UltiMate 3000 optical detectors are available for UV-vis absorbance, fluorescence, and refractive-index detection of a wide variety of analytes.

Charged Aerosol Detectors: The Dionex ESA Corona® charged aerosol detectors provide universal detection of any non-volatile analyte and are compatible with gradients.

Electrochemical Detectors: The Dionex ESA Coulochem® III is an electrochemical detector for easily oxidised or reduced analytes. It offers outstanding performance for amperometric, coulometric, and pulsed amperometric detection.

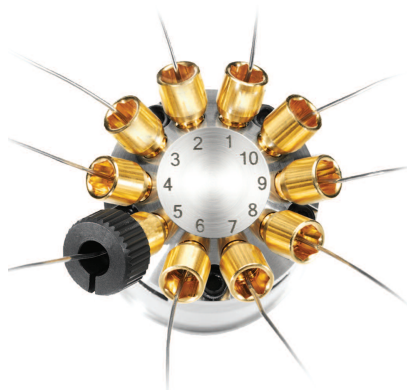


Mass Spectrometer, UHPLC - Accessories and Supplies



MSQ Plus Mass Spectrometer

The MSQ™ Plus Mass Spectrometer can be used in a wide range of applications and methodologies in both HPLC and IC. Only 12 inches wide, the MSQ Plus is a compact mass spectrometer providing universal detection and characterisation of analytes in the 17–2000 m/z range. Compatible with existing LC and IC methods, the MSQ Plus is sensitive, rugged, powerful, easy to use, and integrates seamlessly with LC and IC systems.



Viper Fitting System

The Viper and nanoViper fitting systems eliminate problems experienced with conventional fitting systems. They provide a perfect fit each time and ensure superior chromatographic performance.

- Zero-dead-volume UHPLC fingertight fittings for nano/cap, micro, and analytical LC
- Compatible with virtually every type of valve and column hardware
- Flexible stainless steel or fused silica capillaries



LC Columns

Nano Columns: A wide range of dedicated Acclaim® PepMap™ nano columns with zero dead volume connections

Rapid Separation LC Columns: Acclaim RSLC columns for ultimate speed and resolution in UHPLC

Mixed-Mode Columns: Includes unique chemistries with tunable selectivities for charged and non-charged analytes

Bio Columns: Chemistries that include a unique monolith technology for separations of biomolecules

Speciality Columns: Customised selectivities for dedicated application requirements

Standard Columns: Acclaim columns with innovative bonding for a wide range of different selectivities