Rapid Separation HPLC System - RSLC Liquid Chromatograph - 75 MPa Pump - 190-800 nm DAD

Model **MSHPLC-W3400SWISS** | Brand **Master Science**





The Master Science Rapid Separation HPLC is a modular rapid separation liquid chromatography (RSLC) system. Its pump withstands up to 75 MPa, so it works with small-particle columns and lets existing methods be transferred without redevelopment.

KEY HIGHLIGHTS

- Faster runs on small-particle columns
- No sample loss
- Low carry-over
- Stable acetonitrile delivery
- Reliable integration

AT A GLANCE

75 MPa
MAXIMUM PUMP PRESSURE

190 to 800 nm, 1024-element photodiode array
DAD WAVELENGTH RANGE

188 to 900 nm with deuterium and optional tungsten lamps
UV DETECTOR RANGE

75 MPa pump.
PRESSURE LIMIT BLOCKING SMALL-PARTICLE COLUMNS

Request a Quotation
Contact us for pricing, configuration options and delivery details.

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Overview

The autosampler uses a needle-in-flow design in which the whole sample is swept onto the column. Pumps are available as quaternary with 5-channel degassing or binary with a solvent switching valve, and the detector range covers UV, DAD, FLD, ELSD and RID.

Key Benefits

Faster runs on small-particle columns
the Master Science Rapid Separation HPLC delivers up to 75 MPa.

No sample loss
needle-in-flow injection.

Low carry-over
optimised needle wash path.

Stable acetonitrile delivery
dedicated check valve design.

Reliable integration
intelligent detection of shoulders and small peaks.

For standard-pressure work, see the Master Science quaternary HPLC system.

Technical Specifications

GENERAL

Brand	Master Science
Model Number	MSHPLC-W3400SWISS
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Model Number	MSHPLC-W3400SWISS
SKU	MSHPLC-W3400SWISS
System Type	Modular rapid separation LC (RSLC)
Maximum Pump Pressure	75 MPa
Pump Options	Quaternary with 5-channel degassing (A, B, C, D, AS); binary with solvent switching valve
Check Valve	Acetonitrile-resistant, self-restoring
Autosampler	Needle-in-flow injection with metering pump
Autosampler Functions	Obstacle protection, empty vial detection, online enrichment, derivatisation, dilution and mixing
Column Oven	Semiconductor cooling and resistive heating, forced air circulation, eluent preheating
Column Capacity	**Up to 3 columns of 300 mm**
RID	Two-chamber design, LED light source
ELSD	Low-temperature evaporation, built-in gas mass flow meter

OPTICAL PERFORMANCE

DAD Wavelength Range	**190 to 800 nm, 1024-element photodiode array**
UV Detector Range	**188 to 900 nm with deuterium and optional tungsten lamps**
Fluorescence Detector	Dual monochromator, 4 wavelength channels, xenon lamp

COMMON PROBLEMS AND HOW THIS SYSTEM HELPS

Common Problems and How This System Helps	How the Master Science Rapid Separation HPLC tackles common LC limitations:
Pressure limit blocking small-particle columns	75 MPa pump.
Carry-over between injections	needle-in-flow design with optimised wash.
Check valves sticking in acetonitrile	acetonitrile-resistant valve.
Manual integration of shoulder peaks	intelligent peak detection.

Applications

The Master Science Rapid Separation HPLC is used for
High-throughput liquid chromatography Method transfer from conventional HPLC to small-particle columns Analysis needing UV, DAD, fluorescence, refractive index or light-scattering detection

High-Pressure Pump

- Fluid compression compensation with real-time pulsation suppression
- Two-stage floating technology reduces seal wear
- Touch panel switch for stand-alone operation
- Linked purge with the autosampler, no manual purge valve

Autosampler

- Metering pump for precise sampling
- Multiple sample tray formats
- Optional sample cooling
- Optional active condensate drainage

Column Oven

- Heating and cooling in one unit
- Upgradeable to 2D with built-in high-pressure switching valve
- Optional column GLP information recording

Detectors

- DAD with 3D spectra, contour plots and peak purity
- UV with multi-standard wavelength calibration, stop-flow scanning and dual-wavelength detection
- ELSD for thermally unstable and semi-volatile compounds
- RID, FLD and ELSD with touch LCD and analogue/digital outputs

Workstation Software

- Audit trail with records that cannot be edited or deleted
- Automatic backups covering the latest 7 days
- Second-order peak detection with Gaussian, exponential and tangent skimming
- Control of instruments from multiple manufacturers

Optional Accessories

- UV, DAD, FLD, ELSD and RID detectors
- Autosampler refrigeration unit
- External switching valves
- Chromatography consumables