

The Thermo Scientific EASY-nLC 1000 provides effortless split-free, nano-flow UHPLC performance up to 1000 bar with minimal investment. Dual in-line flow sensors before mixing gives uncompromising gradient precision.

Thermo Scientific EASY-nLC 1000

Binary ultra high pressure liquid chromatography with predefined tubing for instant trouble-free separation of biomolecules

- Precise gradients for nano-flow separations
- Wizard-style method development
- Easy interfacing to MS and control software

Advanced Flow Control

- Intelligent Flow Control (IFC) during loading and equilibration provides robust performance and protects against blocked columns
- Advanced Flow Control (AFC) during gradients provides outstanding reproducibility, sample to sample and over time

Intelligent Maintenance

- Automated, built-in maintenance steps
- Remote access via internet for system interrogation
- Event log for troubleshooting
- Automated leak test indicates actual position of leak
- System back pressure test quickly detects flow-line blockage

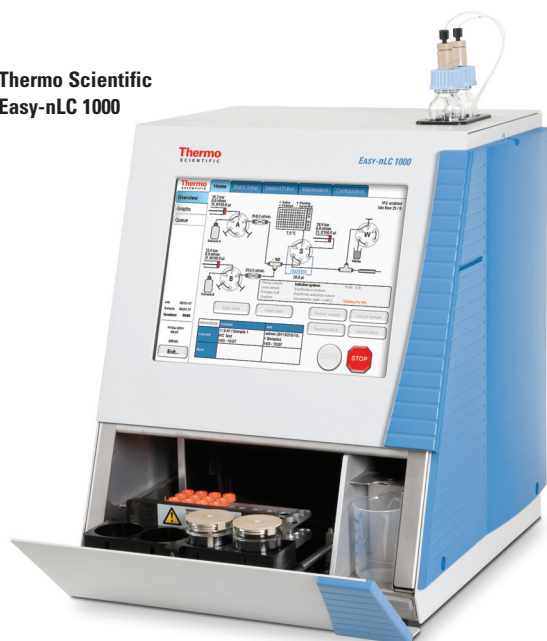
Integrated Design with Built-in PC

- Intuitive control from touch screen interface
- Structured layout for easy component exchange
- Pulsation-free pumps minimize need for replacement of seals, valves and fittings
- Optimized flow paths are utilised by software
- Easy maintenance, access and service

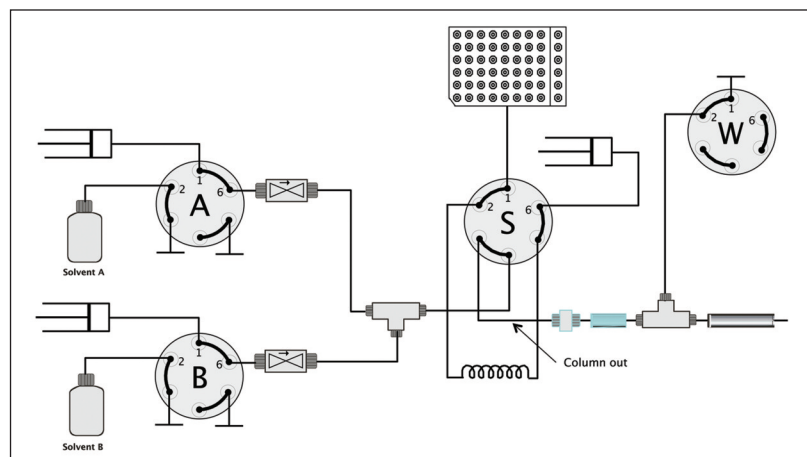
Stable, Pulsation-free Gradients from 100 nL/min

- Factory-configured flow paths minimize swept volume
- Maximum chromatographic accuracy with:
 - Split-free gradient mixing
 - Step-controlled nano-flow syringe pumps
 - Flow sensor control of mobile phase delivery

Thermo Scientific
Easy-nLC 1000

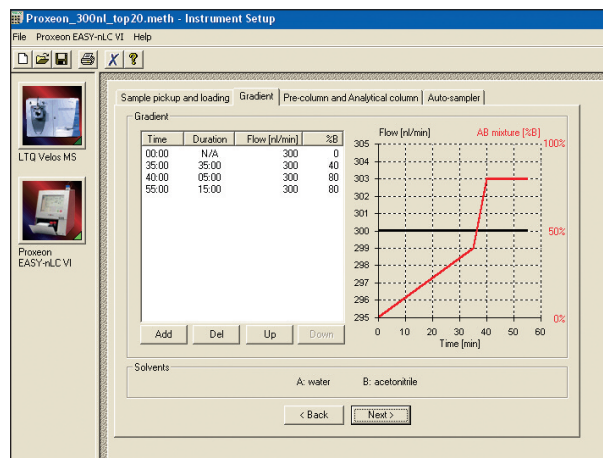


Easily Switch between 1 or 2 Column Configuration



Thermo Scientific Xcalibur Data System

Xcalibur™ is an extremely versatile, easy-to-use mass spectrometry data system with tools for 21 CFR Part 11 compliance. Whether the user is a lab manager or a technician, Xcalibur's Home Page offers easy navigation through the process of instrument setup, method development, sequence setup, and data acquisition. When operating the Thermo Scientific EASY-nLC system as part of an LC-MS solution, use Xcalibur for complete instrument control and mass spectrometer data handling.



Easy Connections

The EASY-nLC™ instruments are very easy to connect and interface with the following Thermo Scientific MS instruments:

- LTQ Orbitrap™, LTQ FT™, LTQ™, and LTQ Velos™ Mass Spectrometers
- Exactive™ High Performance Benchtop LC-MS Mass Spectrometer
- TSQ Quantum™, TSQ Quantum Access, TSQ Quantum Discovery MAX™, TSQ Quantum Ultra, and TSQ Vantage™ Mass Spectrometers
- LCQ™ DECA XP Max Mass Spectrometer
- LCQ™ Fleet Mass Spectrometer

The EASY-nLC instruments also connects very easily to the Thermo Scientific Nanospray Flex Ion Source (ES071).



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Specifications

Injection Loops

20 µL (5 µL or 50 µL optional)

Pick-up Volume Range

0.1–18 µL (20 µL loop) in
 0.01 µL steps Pick-up

Reproducibility (Injection RSD)

0.2% at 5 µL; 3.0% at 100 nL

Pick-up Linearity

BSA: 0.9985 at 0.5–10 µL injection vol.
 Caffeine: 0.9995 at 0.3–1.6 µL injection vol.

Flow Range

Gradient: 20 nL/min – 2,000 nL/min;
 100 nL/min – 1,000 nL/min (rec.);
 Loading and re-equilibration: up to
 25 µL/min (back-pressure-limited);
 Sample pick-up: 0–40 µL/min

Injection Pump

Single-acting syringe pump (sapphire piston),
 140 µL vol. Refill speed: 40 µL/min;
 Injection loop bypass volume: 408 nL

Carryover

<0.05%. Two extra solvents (in addition to water/solvent A) are available for repeated custom wash cycles for thorough cleaning of injection needle

Formats

Vial capacity: 6 × 8 vials;
 Microplates: 1 × 384 well, 1 × 96 well;
 Microplate adaptor strips: 6 × 8 and 3 × 8;
 Plus 6 extra standard vials

Gradient Swept Volume

110 nL

Gradient Pumps

Single-acting syringe pumps (sapphire piston),
 140 µL vol. Refill speed: 100 µL/min

Valves

4 identical 6-port, 2 position micro-valves
 from VICI® Valco®

Pressure Range

0–1000 Bar

Retention Time Reproducibility

Typically 0.1–0.4% RSD at
 recommended flow

Sensitivity (Typical Peak Widths)

3–5 sec. FWHM using a 10 cm, 50 µm ID
 column with 1.9 µm beads

Mobile Phase Compatibility

Wetted Parts

Fused silica, PEEK, 316 Stainless steel

MS Drivers

HyStar™ 3.2, Xcalibur 1.4, 2.0 and 2.1

Remote Support

Secure, direct internet access for rapid,
 online diagnostics by EASY-nLC experts

Dimensions

Integrated System

45 × 36 × 38 cm (H × W × D)
 (14" × 15" × 18")

Weight

37 kg

Mains Power

100 V – 240 V, 50 Hz – 60 Hz, 250 VA

Ordering Information

Part Number	Description
LC120	EASY-nLC 1000 ultra high pressure liquid chromatography instrument
ES071	Nanospray Flex™ Ion Source