

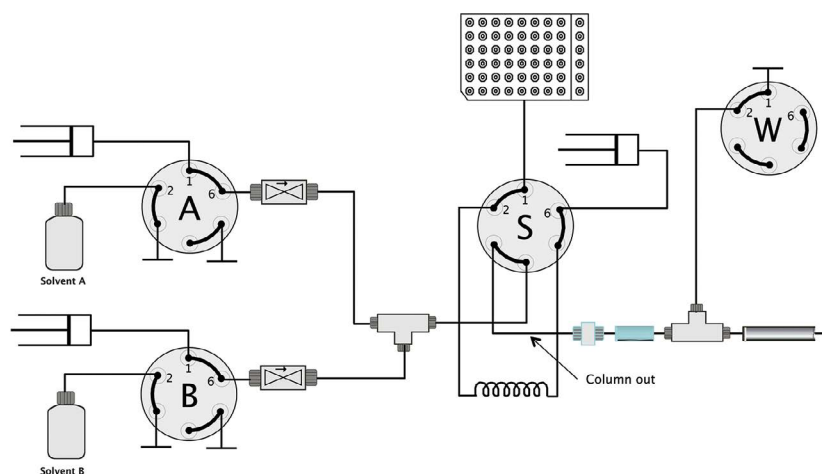
Thermo Scientific EASY-nLC 1000

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

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.

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

Predefined Tubing for Instant Trouble-Free Separation



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

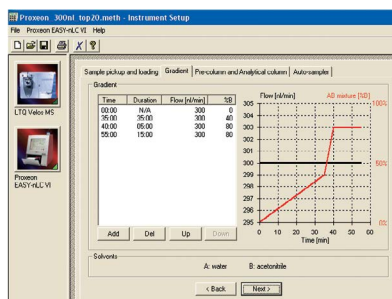


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Thermo Scientific™ Xcalibur™ Data System

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
- OrbiTrap Fusion™
- TSQ Endura™, TSQ Quantiva™

The EASY-nLC instruments also connects very easily to all Thermo Scientific nano-ESI sources (Nanospray Flex and EASY-Spray).



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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	<i>Wetted Parts:</i> Fused silica, PEEK, 316 Stainless steel
MS Drivers	HyStar™ 3.2, Xcalibur 2.1 or later
Remote Support	Secure, direct internet access for rapid, online diagnostics by EASY-nLC experts
Dimensions	<i>Integrated System:</i> 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

In the U.S., call (800) 346-6390 or contact the Thermo Fisher Scientific Regional Office nearest you. Outside the U.S., order through your local Thermo Fisher Scientific office or distributor. Refer to the following part numbers.

Description	Part Number
EASY-nLC 1000 ultra high pressure liquid chromatography instrument	LC120
Nanospray Flex™ Ion Source	ES071
Nanospray Flex Ion Source NG	ES072
EASY-Spray Ion Source	ES081
EASY-Spray Ion Source NG	ES082

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