

Thermo Scientific Accela 600 Pump

Quaternary capabilities with flow rates up to 5 mL/min and a maximum operating pressure of 600 bar

The Thermo Scientific Accela 600 Pump provides accurate and precise flow and gradients under all operating conditions with minimal pulsation. A delay volume of 90 μL reduces pump equilibration and system cycle times.



- Rapid gradient formation, equilibration, and cycle times with a low 90 μL delay volume
- Exact gradients with extraordinary compositional accuracy (better than $\pm 0.50\%$) over the entire operating range
- Accelerated method development time with the use of quaternary gradient capabilities
- Minimized seal and piston wear with (optional) automatic seal wash

Stable and Rapid Solvent Delivery

The Thermo Scientific Accela 600 pump is the ideal quaternary solvent delivery solution for all HPLC applications. An extremely low pulsation (lower than 0.5 bar amp.) without the need of a pulse dampener guarantees smooth detector baselines.

Unique and innovative Force Feedback Control (FFC)* technology, enables the delivery of accurate and precise flow and gradients under all operating conditions by continuously adjusting valve timing and pumping efficiency based on the measured compressibility of the actual solvents providing the flexibility of a quaternary pump with unparalleled performance.

Integrated Vacuum Degassing

The Accela™ 600 Pump has an integrated constant vacuum membrane degasser that effectively removes dissolved gases from the mobile phases resulting in increased flow rate stability, accurate gradient composition, low pulsation, and stable baselines.

Simplified Maintenance

Regular preventive maintenance is simplified with self-aligning piston chambers that ensure a perfect fit every time. Pistons and seals can be easily changed by the end user. The optional automatic seal wash helps minimize seal and piston wear, in particular when working with buffers.

Software Control

The Accela 600 Pump can be controlled by Thermo Scientific Data Systems including ChromQuest, Xcalibur and Atlas, as well as other multi vendor software solutions. Thermo Scientific software solutions provide computer control of the pump to ensure automated control and data handling of the system.

* Patent pending.

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, our Xcalibur software offers easy navigation through the process of instrument setup, sequence setup, and data acquisition. Data analysis is simplified using any of the three browser environments: Qual Browser, Quan Browser, and Library Browser. Reporting is straightforward and effortless with the intuitive XReport software. Thermo Scientific LCQUAN quantitation software provides a structured and secure workflow. When operating the Accela system as part of an LC-MS solution, use Xcalibur for complete instrument control and mass spectrometer data handling.

Thermo Scientific ChromQuest Chromatography Data System

ChromQuest™ offers maximum flexibility and efficiency in setting up chromatographic methods and optimizing the performance of the Accela LC system. ChromQuest protects your results by ensuring data traceability and integrity with enhanced security features, electronic documentation, and features for 21 CFR Part 11 compliance. Sophisticated analytical tools facilitate high sample throughput and powerful data processing for liquid chromatography.

ChromQuest maximizes laboratory efficiency with project management for information storage and transfer. ChromQuest uses robust integration, flexible calibration routines, and advanced spectral analysis tools to accelerate data analysis and results generation. When operating the Accela LC system as a stand alone LC solution, use ChromQuest for complete instrument control and data handling.

Certification and Qualification Services

Every pump is tested at the factory prior to shipment to ensure that it meets or exceeds performance specifications. A Declaration of Conformity (DC) accompanies each pump and documents test results. On-site field testing (optional) qualifies system performance.

Specifications

Minimum Flow Rate

1.0 µL/min (isocratic)

Maximum Flow Rate

5000 µL/min

Flow Rate Resolution

0.1 µL/min

Flow Rate Accuracy

± 0.5% at set point or + 1 µL/min whichever is greater

Pressure Range

0 to 600 bar (0 to 8,700 psi)

Pressure Resolution

0.01 bar (0.15 psi)

Solvent Capacity

Quaternary valve system

Delay Volume

90 µL

Compositional Accuracy

± 0.50% at all operating flow rates and pressures

Compositional Precision

< 0.2% RSD

Primary Piston Volume

46 µL

Degasser Type

Integral, self-adjusting, 4 channel vacuum membrane (Teflon® AF)

Degasser Hold Volume

< 500 µL per channel

Residual Pulsation

< 0.5 bar amp. (typical)

Pulse Dampener

No pulse dampener

Wetted Parts

316SS, titanium, PEEK™, sapphire, TZP-ceramic, FEP, GFP, ruby

Remote Controls

Start, USB, RS232 interface for software control

Ambient Environment

10–40 °C, 40–80% relative humidity (non-condensing)

Operating Temperature

10–40 °C

Dimensions

18 × 36 × 47 cm (H × W × D)

Weight

12 kg

Power Requirements

100/120 VAC, 220/240 VAC nominal; 500 VA max, 50 to 60 Hz

Product Certification

EMC
CE
TUV CUS
FCC (EMI)

Ordering Information

Part Number	Description
60057-60110	Accela 600 Pump
60057-60020	Accela Autosampler
60057-60140	Accela PDA with 1 cm Thermo Scientific LightPipe flow cell
60057-60141	Accela PDA with 5 cm LightPipe™ flow cell
60057-60060	Accela System Kit
60057-60070	Thermo Scientific Hypersil GOLD, 50 × 2.1 mm, 1.9 µm column

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Africa-Other +27 11 570 1840
Australia +61 2 8844 9500
Austria +43 1 333 50 34 0
Belgium +32 2 482 30 30
Canada +1 800 530 8447
China +86 10 8419 3588

Denmark +45 70 23 62 60
Europe-Other +43 1 333 50 34 0
Finland/Norway/Sweden +46 8 556 468 00
France +33 1 60 92 48 00
Germany +49 6103 408 1014

India +91 22 6742 9434
Italy +39 02 950 591
Japan +81 45 453 9100
Latin America +1 608 276 5659
Middle East +43 1 333 50 34 0
Netherlands +31 76 579 55 55

South Africa +27 11 570 1840
Spain +34 914 845 965
Switzerland +41 61 716 77 00
UK +44 1442 233555
USA +1 800 532 4752
www.thermo.com



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