

ION CHROMATOGRAPH - TORON-IC™ 180



Ion Chromatograph - Toron-IC™ 180

Toron-IC™ 180 is an intelligent, high-performance system engineered for the precise separation and quantification of anions and cations within complex matrices. Utilizing advanced eluent generation, high-pressure pumping, and ultra-sensitive conductivity detection, it provides the stability and reproducibility required for rigorous analytical work. This robust design ensures the system meets the specific demands of both routine testing and advanced laboratory research.

Beyond its core analytical capabilities, the Toron-IC™ 180 is designed to streamline laboratory operations through smart automation. Features such as real-time system visualization, automated degassing, and intelligent monitoring functions significantly reduce manual intervention and simplify workflows. This integration of smart technology ensures consistent, high-accuracy results while maximizing efficiency for operators.

APPLICATIONS

Ion Chromatograph - Toron-IC™ 180 Applications



The Toron-IC™ 180 is a versatile solution engineered to meet the rigorous analytical demands of key industries:

- Environmental Monitoring: Delivers precise determination of inorganic anions and cations across drinking water, wastewater, and surface water systems to ensure regulatory compliance.
- Pharmaceutical & Biotechnology: Essential for the analysis of counter-ions, impurity profiling, and the qualification of raw materials.
- Food & Beverage Safety: Accurately measures preservatives, additives, and ionic contaminants to maintain product quality and safety standards.
- Chemical & Petrochemical: Supports strict quality control protocols for process chemicals, reagents, and industrial fluids.
- Power & Electronics: Optimized for high-sensitivity trace ion analysis in ultrapure water and electronic-grade chemicals.



FEATURES

Ion Chromatograph - Toron-IC™ 180 Key Features

The Toron-IC is engineered with a suite of advanced features designed to maximize performance, reliability, and ease of use in ion chromatography applications.

Core Operational Features

- **High-Definition Touchscreen Interface:** This modern, intuitive interface provides users with real-time visualization of all critical system parameters. Operators can instantly monitor flow paths, operating status, pressure readings, and analytical parameters such as conductivity and pH, enabling immediate diagnostic checks and adjustments.
- **Built-In Eluent Generator:** The integrated eluent generator simplifies method setup and improves reproducibility by eliminating the need for manual preparation of eluents. It supports a wide range of common chemistries, including KOH (Potassium Hydroxide), NaOH (Sodium Hydroxide), LiOH (Lithium Hydroxide), and MSA (Methanesulfonic Acid). The system offers precise, continuous concentration control, ensuring stable baselines and highly accurate gradient elution.
- **Intelligent Monitoring System:** This comprehensive system acts as a watchdog for the entire chromatographic process. It actively detects and monitors essential parameters such as eluent levels, waste levels, and overall system status. By anticipating and identifying potential issues before they cause problems, it effectively works to prevent analytical interruptions and preserve valuable sample runs.
- **Advanced Degassing Technology:** Critical for baseline stability, the integrated degassing unit combines both heating and vacuum degassing. This synergistic approach efficiently removes dissolved atmospheric gases from the eluents, leading to a significant improvement in baseline stability and consequently, enhanced analytical accuracy and lower limits of detection.

- **High-Pressure, Low-Pulse Pump Design:** At the heart of the fluid delivery system is a state-of-the-art pump designed for exceptional performance. The high-pressure capability allows for the use of smaller particle columns for faster separations, while the low-pulse design ensures excellent flow precision and minimal pressure ripple. This stable flow is paramount for reliable retention times and high-quality chromatograms.
- **Electrolytic Self-Regenerating Suppressor:** The robust electrolytic suppressor unit delivers stable and consistent suppression without the need for external regenerants. By continuously regenerating itself using only water, it dramatically minimizes maintenance requirements and reduces the operational cost and complexity associated with traditional suppressors.

Smart Connectivity and Remote Management

- **Smart Connectivity:** TheToron-IC™ 180 embraces modern laboratory standards with its optional mobile app integration. This feature allows users to step away from the laboratory bench while remaining fully connected. The app enables remote monitoring of active runs and provides real-time analysis tracking, giving users the flexibility to manage their work and receive critical alerts anytime, anywhere.

TECHNICAL SPECIFICATIONS

Ion Chromatograph - Toron-IC™ 180 Technical Specifications

Parameter	Specification
Instrument Type	Ion Chromatograph
Eluent Types	KOH / NaOH / LiOH / MSA
Eluent Concentration Range	0.1 – 100 mM
Flow Rate Range	0.001 – 12 mL/min
Maximum System Pressure	Up to 42 MPa

Parameter	Specification
Gradient Accuracy	±0.15%
Degassing Method	Built-in heating vacuum degasser
Conductivity Detector	Auto-range conductivity detector
Detection Range	0 – 50,000 µS/cm
Detection Resolution	≤ 0.0020 nS/cm
Baseline Noise	≤ 0.0005 µS/cm
Linearity	≥ 0.999
Quantitative Repeatability	≤ 0.5%
Qualitative Repeatability	≤ 0.2%
Column Compatibility	2–5 mm I.D., up to 250 mm
Column Oven Temperature	Ambient +5 to 60 °C
Power Consumption	150 W
Dimensions (W × D × H)	361 × 504 × 610 mm
Net Weight	35 kg



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