



TORONTECH

TT-TITRATE AUTOMATED POTENTIOMETRIC TITRATOR



TT-Titrate Automated Potentiometric Titrator meets ASTM D664 and ASTM D2896 standards for determining the acid and base numbers of petroleum products through potentiometric titration. This fully automated, PC-controlled system provides direct TAN and TBN analysis for mineral oil products. Designed for durability, it withstands the solvents used in these tests. The system operates through reliable titration software, ensuring precise data acquisition and full process control.

APPLICATIONS

The Torontech TT-Titrate is an automated system for determining the Total Acid Number (TAN) and Total Base Number (TBN) of petroleum products in strict accordance with ASTM D664 and D2896. These analyses are fundamental to any condition-monitoring program, as TAN indicates lubricant degradation and the formation of corrosive acids, while TBN measures the oil's remaining reserve alkalinity to neutralize those acids.

This critical chemical analysis is essential for predictive maintenance and quality control in:

- **Lubricant Manufacturing:** As a primary quality control test to certify that new engine oils, turbine oils, and hydraulic fluids meet their specified acid or base number performance claims before sale.
- **Marine & Heavy-Duty Transport:** For routine in-service oil analysis of large diesel engines in ships and trucks, allowing for condition-based oil changes that optimize drain intervals, reduce costs, and prevent engine corrosion.
- **Power Generation:** To monitor the health of turbine and transformer oils, where an increase in acidity is a key indicator of oil degradation that can lead to sludge formation and compromise the reliability of critical assets.
- **Industrial Maintenance & MRO:** As a cornerstone of predictive maintenance programs for large hydraulic systems, compressors, and gearboxes, providing the data needed to proactively change oil before acidic byproducts cause component wear and failure.

FEATURES

- **Integrated Dosing Unit:** Prevents unintended chemical leaks for safe operation.
- **Advanced Self-Check Features:** Reduces errors by detecting potential issues.
- **Customizable Titration Modes:** Operators can save and reuse test settings with a single click.
- **Versatile Connectivity:** Equipped with RS232/USB ports and CAN bus communication.
- **User-Friendly Interface:** Intuitive keypad with guided function display for effortless operation.
- **Built-in TAN/TBN Software:** Ensures seamless analysis with results in mg KOH/g.
- **Efficient Data Entry:** Supports external PC keyboards for quick input of sample details.
- **Device Compatibility:** Connects with various printers, PCs, and balances.
- **Data Logger:** Automatically stores the last 55 analysis results for easy tracking.
- **Premium Electrode:** Features Hamilton 238060 FLUSHTRODE model for precise measurements.

TECHNICAL SPECIFICATIONS

Measuring range	-2500.0MV ~ +2500.0MV, ± 0.1 MV
Temperature measuring range	0 ~ 100°C, ± 0.1 °C
PH measuring range	-20.000PH ~ +20.000PH
Burette	5ml, 10ml, 25ml
PH resolution	0.001PH, Accuracy: ± 0.003 PH
Burette resolution	1/48,000
Operation	PC controlled
Burette rehydration time	16s (100% filling rate)



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