

TitrIC flex



All you need for comprehensive water analysis

Determine all ions on a single system

TitriC flex is the most flexible, reliable and easy to use system for water analysis ever. Combining titration, direct measurement, and ion chromatography (IC), TitriC flex allows you to determine the complete range of ions typically present in water. TitriC is fast, reliable, and allows you to analyze even large sample series completely unattended. The results for all three methods (titration, direct measurement, and ion chromatography) are collected in a common database and combined a shared report.

TitriC flex is a dedicated solution for comprehensive water analysis, but may also be used for many other applications.



Highlights:

- Unique combination of titration, direct measurement, and ion chromatography (all from the same vendor)
- Titrations and ion chromatography performed in parallel
- All results in a common database and combined in a shared report
- Straightforward calculation of the ionic balance
- Use titration or ion chromatography alone or both techniques combined
- One autosampler (OMNIS Sample Robot) shared by three analytical techniques
- Increase throughput by expanding the modular autosampler (OMNIS Sample Robot)



Application areas of TitriC flex

TitriC flex was designed for combining maximum ease-of-use with high-throughput automation. It is the preferred solution for comprehensive water analysis for ...

- Municipal water works
- Desalination plants
- Environmental institutes
- Food manufacturers
- Pharmaceutical companies
- Metal working industry
- Automotive industry
- Testing labs



TitriC flex – the details

Customizable

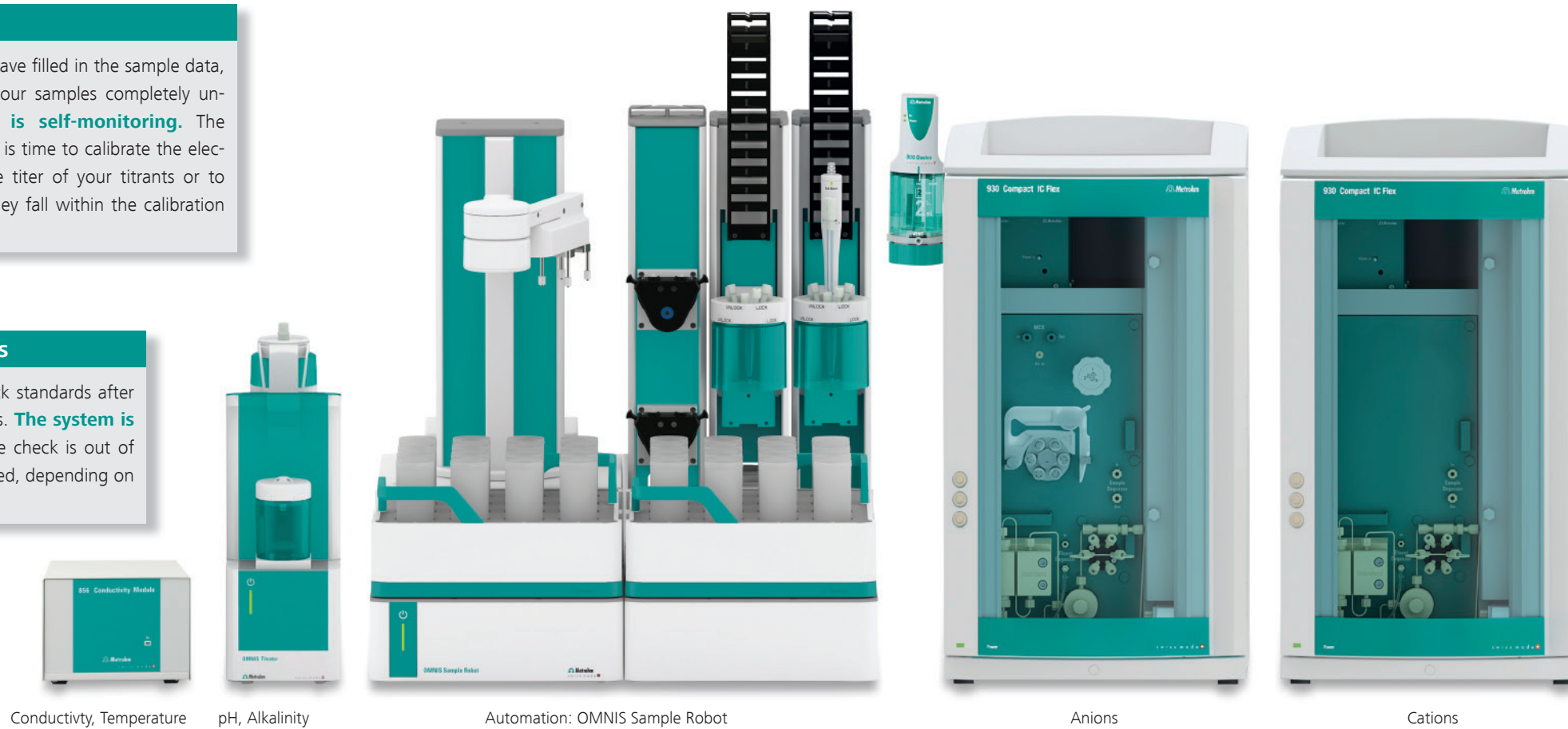
TitriC flex can be customized and upgraded at any time to meet user specific requirements. For higher sample throughput, the autosampler (OMNIS Sample Robot) can be expanded and physical parameters such as turbidity and colour index can likewise be integrated at any time.

Easy to use

From the moment you have filled in the sample data, TitriC flex analyses all your samples completely unattended. **TitriC flex is self-monitoring.** The system tells you when it is time to calibrate the electrodes or determine the titer of your titrants or to dilute the samples so they fall within the calibration curve.

Perfect reliability of results

TitriC flex automatically injects check standards after any user-defined number of samples. **The system is automatically recalibrated,** if the check is out of specification or can simply be stopped, depending on your preferences.



Conductivity, Temperature

pH, Alkalinity

Automation: OMNIS Sample Robot

Anions

Cations

Analysis à la carte

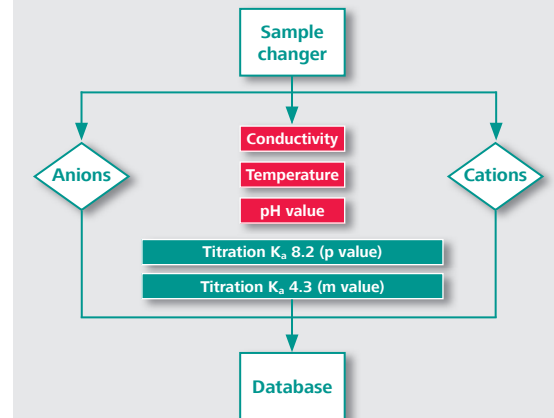
You can always decide for each sample whether to do just a titration, only determine conductivity, only use ion chromatography, or to run all methods. Simply use the drop-down menu in the sample table and decide for each sample what you would like to do.

Your current investment is protected

If any of the TitriC methods or instrumentation are already being used in your lab, there **is no need to spend extra money.** We will try to find a way to integrate them and get the most out of your Metrohm instruments and methods.

All parameters in a single report

TitriC flex is controlled by MagIC Net, the Metrohm standard software for ion chromatography, while the software for titration (OMNIS) runs in the background. Results are displayed in **a common table** for both systems and **a shared report is given out at the end.**



Efficient: Titrations and ion chromatography are performed simultaneously.

Maximum throughput

TitriC flex is completely automated. **Up to 175 samples* can be determined completely unattended.** All TitriC flex methods share the same hardware for liquid handling as well as the same autosampler (OMNIS Sample Robot). Samples are automatically filtered through a 0.2 µm filtermembrane in order to protect the IC from particles.

*depending on set up

TitrIC flex – tailored to fit your requirements

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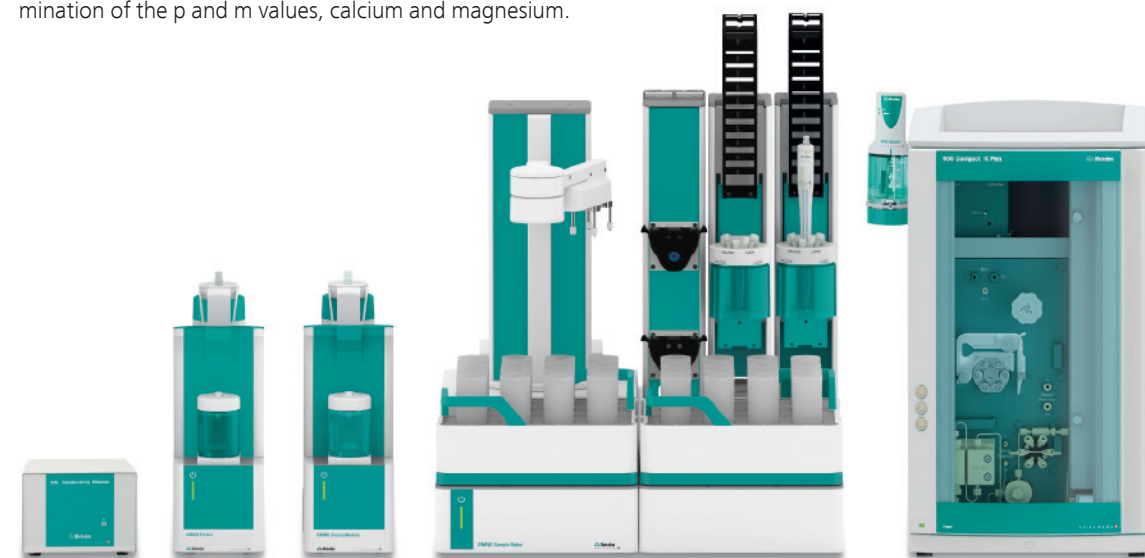
The flexibility of TitrIC flex means that different methods and procedures can be combined, depending on your specific requirements. TitrIC flex is available in two main versions.

Determinations	TitrIC flex I	TitrIC flex II
pH value	•	•
Temperature	•	•
Conductivity	•	•
p + m value	•	•
Hardness (Calcium/Magnesium)	•	•
Cation: Lithium, Sodium, Ammonium, Calcium, Magnesium ...	-	•
Anion IC: Fluoride, Chloride, Bromide, Nitrite, Nitrate, Phosphate, Sulfate, ...	•	•
Molar concentrations of all cations	-	•
Molar concentrations of all anions	•	•
Ionic balance	-	•

TitrIC flex I – the basic system

Fully automated system for direct measurement of temperature, conductivity and pH value, the titrimetric determination of the p and m values, calcium and magnesium.

Anions are determined simultaneously by ion chromatography after passing through the Inline Ultrafiltration cell.

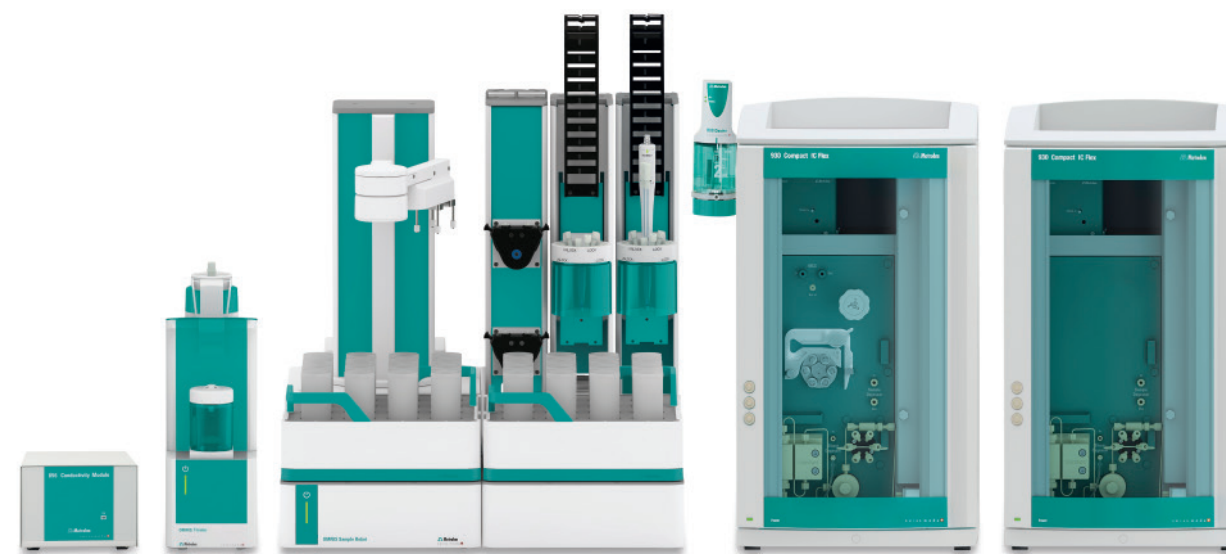


TitrIC flex II – for complete anion and cation analysis

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Fully automated system for the direct measurement of temperature, conductivity and pH value and the titrimetric determination of p and m values. Cations (including calcium and magnesium) and anions are determined

simultaneously by ion chromatography after the sample has been passed through the Inline Ultrafiltration cell. An automatic ion balance calculation provides for maximum confidence in your results.



TitrIC flex – upgrade options

TitrIC flex can easily be upgraded with predefined accessories from Metrohm.

Discover – protect your samples from contamination

The Sample Robot can be equipped with the DISCOVER function, where a cap covers the vials, to prevent the solutions from evaporating and/or absorbing CO₂, which would result in a changed pH value. Only right before the analysis, the cap is removed automatically.



Inline Eluent Preparation – keep going, and going, and going

The 941 Eluent Production Module provides for the automatic production of eluents for continuous IC analyses over several weeks. It allows you to operate your IC system

without manual intervention and guarantees stable retention times.

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