

TitrIC Vario pro I – The basic hyphenated system for IC and titration

TitrIC Vario pro I

TitrIC Vario pro I – The basic system

Fully automatic system for direct measurement of temperature, conductivity and pH value; the titrimetric determination of p value, m value, calcium and magnesium and the determination of anions by ion chromatography.

The system consists of the 856 Conductivity Module, four 800 Dosinos, 802 Stirrer (rod stirrer), 905 Titrando, 815 Robotic USB Sample Processor XL and 930 Compact IC Flex Oven/SeS/PP/Deg with sequential suppression and the "iDetector" conductivity detector.

TitrIC Vario – The power pack for ion analysis.

Below, the accessories are grouped into Scope of delivery and Optional accessories.
Please keep this printout at hand for ordering replacement material.
These lists may be subject to change.

Scope of delivery TitrIC Vario pro I

Order Number	Description	Quantity
2.786.0040 	**786 Swing Head** Additional equipment for Robotic Sample Processors XL without titration or transfer heads.	1 PCS
2.800.0010 	**800 Dosino (cable: 1.5 m)** The 800 Dosino is a drive with write/read hardware for intelligent dosing units. With permanently attached cable (length 1.5 m).	4 PCS
2.802.0020 	**802 Stirrer for sample changer** Rod stirrer for sample changer and Sample Processor. With 104 mm 6.1909.020 stirring propeller and permanently installed cable.	1 PCS

2.815.0020

815 Robotic USB Sample Processor XL (1T/2P) 1 PCS



Robotic USB Sample Processor XL with one workstation and two built-in membrane pumps for the automatic processing of routine samples in series with large quantities and for complex sample preparation or parallel runs. Up to three dosing devices for Liquid Handling tasks can be connected.

Because of the multitude of application variants, rack, stirrer, titration head, robotic arm, Swing Head and sample vessels must be tailored to the application and ordered separately.
The control is "stand alone" using Touch Control. The following software products can be selected for the PC control: tiamo™ titration software, MagIC Net chromatography software, viva voltammetry software, or OMNIS.

2.856.0010

856 Conductivity Module 1 PCS



Conductivity measuring module as supplement to an existing Titrando system or "stand-alone" in combination with a 900 Touch Control. With the 856 Conductivity Module, not only conductivity and temperature can be determined, but also TDS and salinity. It supports state-of-the-art conductivity measuring cells, i.e. 5-ring measuring cells.

The Conductivity Module is equipped with two USB interfaces for connecting printers, barcode readers, or sample changers and four MSB interfaces for stirrers or Dosinos.
For use with OMNIS Software, tiamo software, or Touch Control unit. Compliance with GMP/GLP and FDA regulations such as 21 CFR Part 11, if required.

2.930.2560

930 Compact IC Flex Oven/SeS/PP/Deg 1 PCS



The 930 Compact IC Flex Oven/SeS/PP/Deg is the intelligent Compact IC instrument with column oven, sequential suppression, peristaltic pump for suppressor regeneration and built-in degasser. The instrument can be used with any separation and detection methods.

Typical areas of application:

– Anion or cation determinations with sequential suppression and conductivity detection

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6.0277.300

iAquatrode Plus with Pt1000 1 PCS



Intelligent, combined pH electrode with integrated memory chip for storing sensor data and with Pt1000 temperature sensor for pH measurements/titrations in ion-deficient aqueous media (e.g., drinking water, process water). This electrode shows a very short response time in these samples.

The fixed ground-joint diaphragm is insensitive to contamination.
When c(KCl) = 3 mol/L is used as bridge electrolyte, storage in storage solution is recommended.
The bridge electrolyte can be easily replaced with a chloride-free electrolyte (e.g., potassium nitrate c(KNO_3) = 1 mol/L (6.2310.010)). Storage in the used bridge electrolyte.
iTrodes can be connected to Titrando, Ti-Touch, or 913 /914 meters.

6.0510.100

Combined polymer membrane electrode, Ca 1 PCS



Combined calcium-selective electrode with polymer membrane.
This ISE is suitable for:

– ion measurements of Ca^{2+} in aqueous solutions
– complexometric (back) titrations (e.g., determination of water hardness)

Thanks to a robust/break-proof plastic shaft made of propylene and an impact protection for the polymer membrane, this sensor is mechanically very resistant.
The reference electrolyte used is $c(NH_4NO_3) = 1$ mol/L.

6.0915.100

5-ring conductivity measuring cell c = 0.7 cm-1 with Pt1000 (fixed cable) 1 PCS



5-ring conductivity measuring cell with cell constant c = 0.7 cm^{-1} (guide value), with integrated Pt1000 temperature sensor and with fixed cable (1.2 m) for connecting to an 856 Conductivity Module.
This sensor is suitable for measurements of medium conductivities, e.g., in:
– drinking water
– surface water
– wastewater

6.1414.060

Micro titration vessel lid / ECO 1 PCS



6.1415.250 **Titration vessel / 50-150 mL** 1 PCS



6.1462.040 **Robotic arm with transfer head for 786 Swing Head, right swinging** 1 PCS

Transfer robotic arm for liquid handling purposes



6.1543.170 **Aspiration tip / M8 thread** 1 PCS

Aspiration tip for the Sample Processors.



6.1543.210 **3-way stopper with antidiffusion valve** 1 PCS

Stopper with three buret tips for connecting 3 x M6 tubing

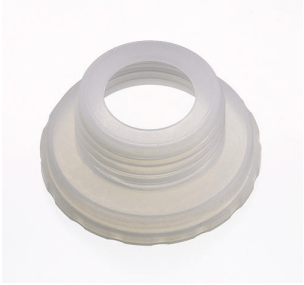


6.1608.030 **Round glass bottle / 1000 mL / GL 45** 3 PCS



6.1618.020 **Thread adapter S 40 to GL 45** 1 PCS

Adapter for bottles with S40 thread (Merck...) to GL45.



6.1805.030 **FEP tubing / M6 / 150 cm** 1 PCS

With light and kink protection



6.1805.060 **FEP tubing / M6 / 60 cm** 3 PCS

With light and kink protection



6.1805.110

FEP tubing / M6 / 80 cm

2 PCS

With light and kink protection



6.1808.010

Coupling piece 2 X M6

1 PCS

2 M6 outer threads. Part of the screw connections for Exchange Units and 676 Sample Changer



6.1808.060

T connector / M6 inner

1 PCS

3 M6 inner threads.



6.1808.280

Adapter 807 Dosing Unit Port 4, M6 inner

1 PCS

Adapter for using Port 4 of the 807 dosing Unit for connection with an FEP tubing / M6.



6.1835.050

PEEK sample tube 1 PCS



For sample changers for transferring larger-sized sample volumes, e.g. for brightener determination.

6.2001.070

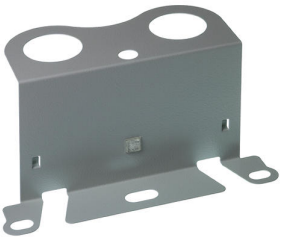
Support stand for Sample Processors 1 PCS



Support stand for Sample Processors, for external titrations and dilutions (IC)

6.2057.210

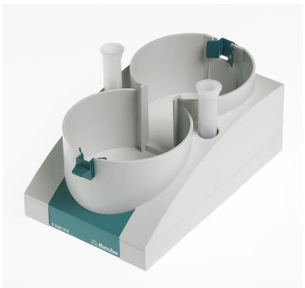
Holder for Dosino to IC instruments 1 PCS



Mounting part for Dosinos at the IC instrument housing.

6.2061.010

Bottle holder for Dosinos 1 PCS



Bottle holder for up to two Dosinos, mounted on 1 L reagent bottles.

6.2104.020

Electrode cable / 1 m / F 1 PCS



For connecting electrodes with Metrohm plug-in head G to Metrohm instruments (socket F).

6.2134.040

RS-232 DB9 - IBM-PC(DB9) connecting cable 1 PCS



For the Metrohm RS-232 interface - PC connection. For Titrinos, Titrino plus and 756, 831 KF Coulometer, RS-232 /USB Box

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6.2148.050

USB/RS-232 Converter for 900 Touch Control 2 PCS



Extends the 900 Touch Control by an RS-232 interface for the connection of e.g. balance.

6.2151.000

Cable USB A – mini-DIN 8-pin 2 PCS



Controller cable

6.2307.230

Buffer solutions pH 4, 7 and 9 1 PCS

Mixed buffer solutions pH 4.00/7.00/9.00 (25 °C) in single use sachets, colourless, box of 3 x 10 x 30 mL



6.2325.000

pHit kit 1 PCS

Maintenance kit for pH electrodes
The kit contains:
– 50 mL cleaning solution
– 50 mL 3M KCl solution
– 50 mL storage solution
– 2 Storage vessels
– Instructions for use



6.2327.000

Electrolyte NH4NO3 1 mol/L (50 mL) 1 PCS

Electrolyte solution c(NH_4NO_3) =1 mol/L (for combined Ca-ISE 6.0510.100)



6.2629.000

Screw nut to needle holder IC 1 PCS

On Sample Processors



6.2709.090

Stopper 1 PCS



PTFE. Used with 6.5613.000 ECO titration equipment

6.2730.020

Septum stopper 1 PCS



With E.301.0041 O-ring. For 6.1448.010 Septum and 6.1414.030 Titration vessel lid. Used for KF applications.

6.2730.030

Stopper 5 PCS



Complete with nipple and O-ring. For 6.1414.030 titration vessel lids. For KF instruments, VA measurement stands, VA Computrace and IC Dilution.

6.2730.060

Screw nipple 3 PCS



PCTFE. With M16 thread. Used with 6.5613.000 ECO titration equipment

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6.2730.080

Screw nipple 1 PCS



PCTFE. Used with 6.5613.000 ECO titration equipment with 722 Stirrer

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6.2744.070

Pressure screw short 1 PCS

Short version. With UNF 10/32 connection. 5 pieces. For the connection of PEEK capillaries



6.2744.080

M6 thread / UNF 10/32 adapter 2 PCS



With M6 outer thread. For IC instruments.

6.2763.000

Flow-through cell for the 6.0915.100/6.0920.100 1 PCS



Flow-through cell for the 6.0915.100/6.0920.100 5-ring conductivity measuring cell

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6.2833.020

Needle holder 1/8 in. With tubing connection M6 1 PCS



For Sample Processors. For the connection of FEP tubing with M6 connectors

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6.3032.210

807 Dosing Unit 10 mL 1 PCS



807 Dosing Unit with integrated data chip with 10 mL glass cylinder and light protection, mountable to a reagent bottle with ISO/DIN GL 45 glass thread. FEP tubing connection, antidiffusion tip.

6.3032.220

807 Dosing Unit 20 mL 2 PCS



807 Dosing Unit with integrated data chip with 20 mL glass cylinder and light protection, mountable to a reagent bottle with ISO/DIN GL 45 glass thread. FEP tubing connection, antidiffusion tip.

6.3032.250

807 Dosing Unit 50 mL 1 PCS



807 Dosing Unit with integrated data chip with 50 mL glass cylinder and light protection, mountable to a reagent bottle with ISO/DIN GL 45 glass thread. FEP tubing connection, antidiffusion tip.

6.2832.000

MSM Rotor A 1 PCS



Suppressor rotor for all IC instruments with MSM (Metrohm Suppressor Module)

6.2842.020

Adapter sleeve, MSM 1 PCS



Not only the MSM Rotor A but also the MSM-LC Rotor A can be installed in the rotor housing with the aid of the adapter sleeve.

2.854.0010

854 iConnect 1 PCS



The 854 iConnect – Electrode cable and measuring amplifier for intelligent "iTrodes" electrodes (cable length 150 cm).

2.905.0020

905 Titrando 1 PCS



High-end titrator for potentiometric titration with two measuring interfaces for use with Dosino dosing systems.

– up to four dosing systems of the 800 Dosino type
– dynamic (DET), monotonic (MET), and endpoint titration (SET)
– Measurement with ion-selective electrodes (MEAS CONC)
– Dosing functions with monitoring, Liquid Handling
– four MSB connectors for additional stirrers or dosing systems
– "iTrode" intelligent electrodes
– USB connector
– For use with OMNIS Software, *tiamo* software, or Touch Control unit
– Compliance with GMP/GLP and FDA regulations such as 21 CFR Part 11, if required

Optional accessories

2.804.0010
804 Ti Stand without stand rod



Titration stand and controller for 802 Stirrer. The 804 Ti Stand together with the optional 802 Stirrer provides an alternative to the magnetic stirrer. Without stand.

6.2041.800
Sample rack, 100 x 75 mL, (PVC)



Sample rack for 815 Robotic USB Sample Processor XL, 855 Robotic Titrosampler "Basic" suitable for 100 sample beakers. The following sample beakers can be used: 6.1432.210, 6.1459.400.
Plastic: Polyvinyl chloride (PVC)

6.2041.810
Sample rack, 34 x 150 mL, (PVC)



Sample rack for 815 Robotic USB Sample Processor XL, 855 Robotic Titrosampler "Basic" suitable for 34 sample beakers. The following sample beakers can be used: 150 mL beaker (tall).
Plastic: Polyvinyl chloride (PVC)

6.2041.820

Sample rack, 28 x 250 mL, (PVC)



Sample rack for 815 Robotic USB Sample Processor XL, 855 Robotic Titrosampler “Basic” suitable for 28 sample beakers. The following sample beakers can be used: 6.14332.320, 6.1432.323, 6.1453.220, 6.1453.250.
Plastic: Polyvinyl chloride (PVC)

6.2041.830

Sample rack, 28 x 200 mL, (PVC)



Sample rack for 815 Robotic USB Sample Processor XL, 855 Robotic Titrosampler "Basic", suitable for 28 sample beakers. The following sample beaker can be used: 6.1459.310.
Plastic: Polyvinyl chloride (PVC)

6.2041.840

Sample rack, 59 x 120 mL, (PVC)



Sample rack for 815 Robotic USB Sample Processor XL, 855 Robotic Titrosampler "Basic", suitable for 59 sample beakers. The following sample beakers can be used: 6.1459.300, 6.1459.307.
Plastic: Polyvinyl chloride (PVC)

6.1432.210

Sample beaker, clear glass, 75 mL, 1 piece



Sample beaker, clear glass, 75 mL, suitable for sample racks: 6.2041.340, 6.2041.350, 6.2041.800 and 6.2041.900, 1 piece

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6.1432.320

Sample beaker, clear glass, 250 mL, 1 piece



Sample beaker, clear glass, 250 mL, suitable for sample racks: 6.2041.310, 6.2041.400, 6.2041.430, 6.2041.510, 6.2041.820, 6.2068.020 and 6.2068.030, 1 piece

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6.1459.300

Sample beaker, plastic (PP), 120 mL, 250 pieces



Sample beaker, plastic (polypropylene, PP), 120 mL, suitable for sample racks: 6.2041.470, 6.2041.840, 6.2041.850, 6.2068.010, 6.2068.020, 6.2068.030, and 6.9920.141, 250 pieces

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