

# 916 Ti-Touch, 915 KF Ti-Touch and 917 Coulometer



Compact titrator for routine analysis

## Technical specifications

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	916 Ti-Touch	915 KF Ti-Touch	917 Coulometer
Dosing element with Intelligent Exchange Unit/Dosing Unit with an integrated data chip	Max. 2 × 800 Dosino or 2 × 805 Dosimat		
Dosing steps per cylinder content	800 Dosino: 10,000 pulses; 805 Dosimat: 20,000 pulses		
Operation, dialog	Touch Control		
Stirrers, titration stand	Incl. 802 Rod Stirrer Additionally 1 × 801 Magnetic Stirrer or 1 × 802 Rod Stirrer or 1 × 803 KF Titration Stand	Built-in magnetic stirrer Additionally 1 × 801 Magnetic Stirrer or 1 × 802 Rod Stirrer or 1 × 803 KF Titration Stand	
Integrated membrane pump	–	Yes	
Attachment of Dosimats, Dosinos, stirrers	2 MSB connectors (Metrohm Serial Bus, Daisy Chain)		
Attachment of sample changers	1 Sample changer (814, 815) via USB		885 Compact Oven SC via Remote Box (optional)
Attachment of balances, printer, PC, PC keyboard, barcode reader	Via USB Slave Port, USB/RS-232 Converter (optional)		
Generation of forge-proof PDF reports without a PC	Yes		
USB flash drive for saving methods, results und PDF reports	Yes		
Ethernet interface to connect to a local network for data archiving or printing on network printers	Yes		
Temperature sensor	Pt1000 or NTC		
«iTrodes» – intelligent electrodes	Yes	–	
GLP-compliant electrode test	Yes	–	
I <sub>pol</sub> and U <sub>pol</sub> – integrated programmable polarizer	Yes		
Real-time curve display on the Touch Control (90 mm × 120 mm, high-resolution color display)	Yes		
DET Dynamic Equivalence-point Titration	Yes	–	
MET Monotonic Equivalence-point Titration	Yes	–	
SET Titration to a preset endpoint with automatic conditioning	Yes	–	
MAT Manual Titration	Yes	–	
KFT Volumetric Karl Fischer Titration	–	Yes	–
KFC Coulometric Karl Fischer Titration	–	Yes	
BRC Coulometric Bromine Index Titration	–	Yes	
MEAS Measuring mode for pH, U/mV, T/°C	Yes	–	
CAL Calibration with automatic buffer recognition	Yes	–	
MEAS Measuring mode for I <sub>pol</sub> /, U <sub>pol</sub> /, T/°C	–	Yes	Yes
Method storage, sample data storage, result memory, data storage	Yes		
Dialog languages: German, English, Spanish, French, Chinese	Yes		
Favorites for quick method access	14 (per user)		
Automatic titration start	–	–	Yes



## Ti-Touch – the modern way to titrate

«Reduce to the max» – this is the Ti-Touch concept. The new compact titrator from Metrohm offers maximum performance in routine analysis in the smallest possible space:

- **Maximum system integration:** buret, stirrer and control module in one practical unit.
- **Maximum data security and network integration – without a PC!**
  - Generate forge-proof reports in PDF format and save them to a USB flash drive or to the network.
  - Ethernet interface for direct access to the Intranet. Method archiving and determination data storage directly in the LIMS.
  - USB interface for direct connection to a printer, a USB flash drive or a barcode reader.
- **Maximum user safety:** no-touch reagent replacement thanks to patented Dosino technology.
- **Maximum ease of use:** 14 short cut icons per user to start favorite methods at a single touch.

## 916 Ti-Touch – the compact titrator for potentiometric titration

The 916 Ti-Touch is the new compact titrator designed for potentiometric titration. The instrument supports all titration modes: DET (dynamic equivalence point titration), MET (monotonic equivalence point titration), SET (titration to one or two specified endpoints) and MAT (manual titration). The new compact titrator comes in the all-inclusive package versions 916 Salt Ti-Touch, 916 Oil Ti-Touch and 916 Food Ti-Touch.

- **Save and print data, etc. – without a PC**

USB interface for printer, keyboard or barcode reader.  
Save methods and determination data directly to a USB flash drive for uploading again at a later date.

- **Direct access to Intranet and LIMS – without a PC**

Ethernet interface: direct access to the Intranet and LIMS for method archiving and data management.

- **Fully automation-ready**

Up to 100 samples can be determined automatically (with the 814/815 Sample Processor).

- **Plug-and-play operation**

All system components are recognized and registered automatically upon connection.

- **More efficiency thanks to 2 MSB connectors**

Two installed Metrohm Serial Bus (MSB) ports permit the connection of a second titration stand complete with buret, e.g. for the sequential titration of total acidity and chloride.



- **Contact-free reagent replacement**

No contact with reagents thanks to the patented 800 Dosino technology.

- **Intelligent stirrer**

The stirrer rotational speed adapts automatically.

- **Incorrect results excluded**

All system components (electrodes, exchange units, etc.) and measurement results are monitored and malfunctions area displayed – in plain text.

- ***tiBase* titration database for perfect workflow**

Store determination data on a USB flash drive or in your network for direct importing from there into *tiBase*.

- **Paperless PDF reports**

Generate forge-proof PDF reports without a PC and save them to a USB flash drive or to the network.

- **Personalized touchscreen for fast method start**

Up to 14 methods per user can each be linked to a favorites icon. Standard methods start with a single tap on the touchscreen.



## 915 KF Ti-Touch – the titrator for volumetric Karl Fischer titration

Just as with the 916 Ti-Touch, the 915 KF Ti-Touch Karl Fischer version is also an outstanding instrument: buret, stirrer and operating module are integrated in a single, compact system unit. This is not only practical but also and in particular saves a great deal of space on the laboratory table.

- **Fully automation-ready**

Straightforward automation possible with the 814/815 Sample Processor.

- **Paperless PDF reports**

Generate forge-proof PDF reports without a PC and save them to a USB flash drive or to the network.

- **Save and print data, etc. – without a PC**

USB interface for printer, keyboard or barcode reader. Save methods and determination data to a USB flash drive for uploading again at a later date.

- **Personalized touchscreen for fast method start**

Up to 14 methods per user can each be linked to a favorites icon. Standard methods start with a single tap on the touchscreen.

- **Plug-and-play operation**

All system components are recognized and registered automatically upon connection.

- **Access the Ethernet and LIMS – without a PC**

Direct access to the Intranet and LIMS for method archiving and data management.







- **Contact-free reagent replacement**

Contact with KF reagents is avoided with the patented Dosino technology. The moment of replacement is freely selectable.

- **Keeping track thanks to KF icons**

KF icons show whether the instrument is still conditioning or if water determination can now be started.

- ***tiBase* titration database for perfect workflow**

Store determination data on a USB flash drive or in your network for direct importing from there into *tiBase*.

- **«Safety Stop» prevents the cell from overflowing**

The electrode test and the «Safety Stop» parameter prevent cell overflow during conditioning. If, for example, the electrode is inadvertently not properly connected or the titration cell is very humid, conditioning will be discontinued after a certain time or after a certain volume of KF reagent has been added. This feature enhances work safety in your laboratory.

- **Integrated pump for maximum safety**

Thanks to the integrated pump, the titration cell can be emptied and filled again afterwards with fresh solvent at the push of a button.



## 917 Coulometer – the compact titrator for coulometry

The 917 Coulometer is the compact titrator for coulometric Karl Fischer titration. The operating module, stirrer, and pump for reagent exchange are combined into a single, space-saving, compact instrument.

- **Automation is always an option**

Measurements can be easily automated with the 885 Compact Oven Sample Changer.

- **Paperless PDF reports**

Generate forge-proof PDF reports without a PC and save them to a USB flash drive or to the network.

- **Personalized touchscreen for fast method start**

Up to 14 methods per user can each be linked to a favorites icon. Standard methods start with a single tap on the touchscreen.

- **Reagent monitoring for maximum safety**

The reagent is continuously monitored. Once self-defined criteria (number of added samples, amount of added water, etc.) are met, the user is prompted to replace the reagent.







- **Integrated pump for optimum convenience**

The integrated pump enables the titration cell to be emptied and then refilled with fresh reagent at the touch of a button. Contact with reagents is completely avoided.

- **Keeping track with KF icons**

KF icons show whether the instrument is still conditioning or if water content determination can now be started.

- **Automatic titration start**

No manual titration start required. The instrument automatically begins the titration after the sample has been added.

- **tiBase titration database for maximum convenience**

Save determination data to a USB flash drive or to a network drive, from where it can be imported directly into the **tiBase** database software.

## Ordering information

### 916 Ti-Touch all-inclusive packages\*

- 2.916.2010 Salt Ti-Touch  
All-inclusive package for the argentometric titration of chloride, etc.
- 2.916.3010 Oil Ti-Touch  
All-inclusive package for the nonaqueous acid-base titration of oil products
- 2.916.4010 Food Ti-Touch  
All-inclusive package for aqueous acid-base titration in foodstuffs, etc.

### 915 KF Ti-Touch

- 2.915.0110 KF Ti-Touch  
All-inclusive package\*\* for volumetric KF titrations

### 917 Coulometer

- 2.917.0010 917 Coulometer with generator electrode with diaphragm
- 2.917.0110 917 Coulometer with generator electrode without diaphragm
- 2.917.1110 917 Coulometer with generator electrode without diaphragm and with 860 KF Thermoprep
- 2.917.2110 917 Coulometer with generator electrode without diaphragm and with 885 Compact Oven Sample Changer

\* ready-to-use all-inclusive package contains 800 Dosino, 20 mL Dosing Unit, iConnect, i-Trode, rod stirrer, **tiBase** Demo version and detailed collection of applications.

\*\* ready-to-use all-inclusive package contains 800 Dosino, 10 mL dosing unit, electrode, accessories for safe reagent replacement and **tiBase** Demo version.





### Optional accessories

2.800.0020	800 Dosino as additional buret for titration or addition of auxiliary solutions	
2.805.0010	805 Dosimat as additional buret for titration or addition of auxiliary solutions	
6.2061.010	Bottle holder for Dosino	as expansion to a second titration stand
2.801.0040	801 Magnetic stirrer compl.	
6.3026.110	Intelligent exchange unit 1 mL	
6.3026.150	Intelligent exchange unit 5 mL	
6.3026.210	Intelligent exchange unit 10 mL	
6.3026.220	Intelligent exchange unit 20 mL	
6.3026.250	Intelligent exchange unit 50 mL	
6.3032.120	Intelligent dosing unit 2 mL	
6.3032.150	Intelligent dosing unit 5 mL	
6.3032.210	Intelligent dosing unit 10 mL	
6.3032.220	Intelligent dosing unit 20 mL	
6.3032.250	Intelligent dosing unit 50 mL	
6.2148.010	Remote Box MSB	
6.2148.050	USB/RS-232 Converter	
6.2151.030	Cable USB A – USB B / 0.6 m	

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