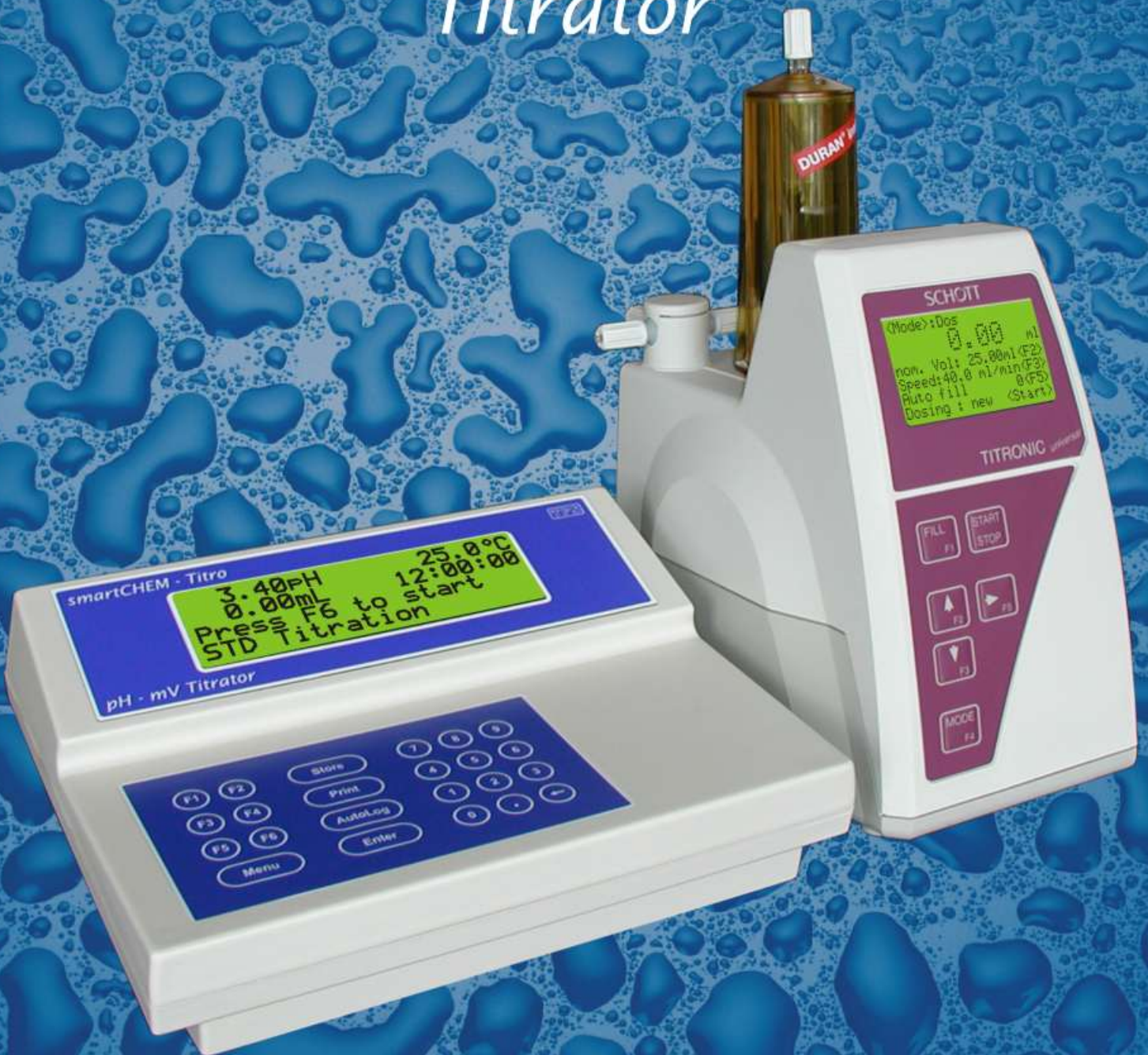




Quality. Service. Value.

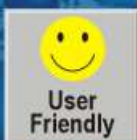
# smartCHEM - Titro Automatic pH / mV Titrator



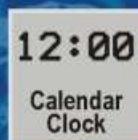
www.tps.com.cn



Waterproof



User Friendly



Calendar Clock



GLP



Notepad Function



Automatic Logging



RS232 Port

This brochure is a supplement to the complete smartCHEM Series brochure

## smartCHEM - Titro

- **Automatic pH and mV Titrator.**
- **Fully programmable titration function can be fine tuned for speed and reproducibility.**
- **Interfaces with Schott Titronic Universal piston burette**
- **2730 Reading Memory**

## Ordering Information

**smartCHEM - Titro. . 121106**

### Kit Includes

pH Sensor with Porous Teflon . . . 121207  
Double Junction Reference  
Temperature/ATC Sensor . . . . . 121248  
Burette Connection Cable . . . . . 130122  
pH6.88 Buffer, 200mL . . . . . 121306  
pH4.00 Buffer, 200mL . . . . . 121381  
AC/DC Power Adaptor. . . . . 130037  
smartCHEM-Titro Handbook . . . . 130050

### Options

Schott Titronic Universal . . . . . 130350  
Piston Burette, 50mL  
Flexible Arm Electrode Holder . . . 130088  
RS232 Serial Interface Cable . . . 130041  
Serial to USB Adaptor . . . . . 130087  
(must also use 130041 Serial Cable)  
Analogue Recorder Port . . . . . 130028  
(includes cable)  
WinTPS Communication . . . . . 130086  
Software for Windows 95 and later

### Optional Sensors

Intermediate Junction pH. . . . . 121234  
ORP Sensor with Porous Teflon. . 121262  
Double Junction Reference  
Intermediate Junction ORP . . . . . 121263  
Double Platinum Sensor . . . . . 122209  
for Karl Fischer Titrations

## Automatic Titrator

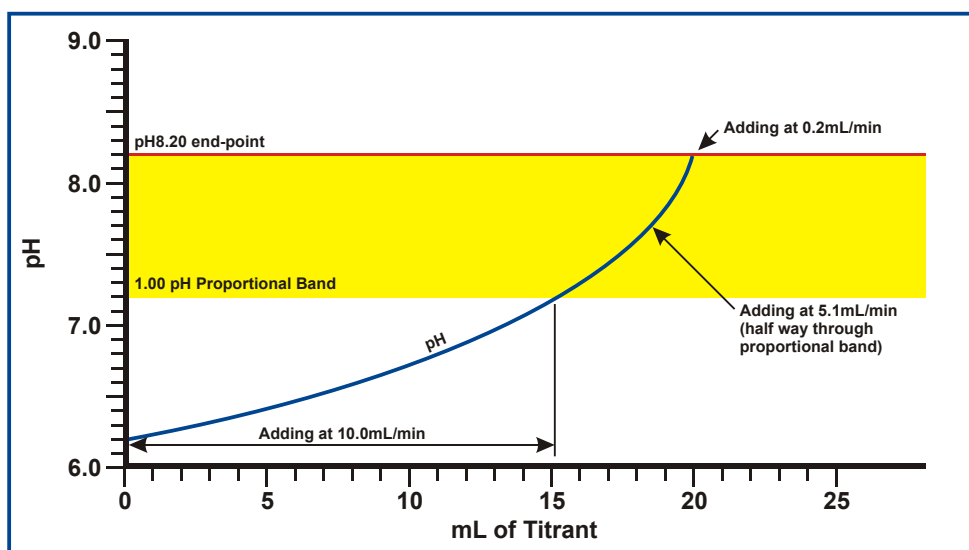
The **smartCHEM - Titro** has all the features of the **smartCHEM - pH** but with an Automatic Titration function. The meter has a second serial port that is used to interface with the Schott Titronic Universal piston burette. TPS has chosen this burette, as Schott is widely recognised as one of the World's leading manufactures of precision glassware and laboratory equipment. Once connected, **smartCHEM - Titro** controls all burette operations, making operation quick and easy for the user. The volume of titrant added is displayed on the **smartCHEM - Titro** and included with logged data.

## Fine Tune Titration Process

The Automatic Titration process can be fine tuned by the user to suit individual requirements. Changing the settings can, for example, speed up the titration process for higher daily throughput. The following settings are user adjustable ...

- Titrate from Acid → Base or Base → Acid.
- Titrate from Low mV → High mV or High mV → Low mV.
- Proportional dosing band width.
- Maximum and minimum dosing rates as reading approaches end point.
- Delay time when end point has been reached.

The diagram below shows a typical titration curve using the default titration settings. It is an Acid → Base titration with a pH8.20 end point.



## Enhanced Datalogging

The standard Automatic Datalogging has been updated for the **smartCHEM - Titro**. The unit can be programmed to commence logging at the beginning of a titration and stop when the titration is complete. The user can then export the logged data to a computer (requires optional serial cable), and plot the titration curve, like the chart above.