



12 Wiggins Analytics

Chemtron Auto Titrator

The easiest titration ever...

CAT Automatic Titrator has been designed to simply and precisely perform the widest range of potentiometric titrations. has always been the first choice if you where looking for a very easy-to-use automatic titrator for any application. A special training or a deeper knowledge of automatic titration was not necessary to get precise and quick results. That and much more is exactly what the new generation of CAT stands for:

- > High resolution pH/mV-measurement input for pH-, silver-, mV-electrodes and double platinum electrode
- > Pt 100 temperature measurement input for automatic temperature compensation
- > Pre-installed standard methods for alkalinity, total acidity in drinks, free and total SO₂ in wine, chloride etc.
- > Constant and progressive titration to equivalence points
- > Titration to pH and mV-end points
- > Automatic pH measurement (If auto sampler is present)



Typical applications of water/wastewater and environmental analysis

- > Automatic pH measurement
- > Alkalinity (p+m value)
- > Total kjeldahl nitrogen
- > Chloride in wastewater



Typical applications of food analysis

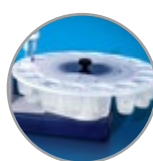
- > Salt content (chloride, sodium chloride)
- > pH-value, total acidity in wine, drinks and other food products
- > Ascorbic acid
- > protein determination (Kjeldahl-nitrogen in milk and dairy products)
- > Free SO₂, total SO₂ determination in wine
- > Iodine and peroxide value

CAT. Everything you need. The advantages at a glance.



Brilliant

Bright display with strong illumination can be viewed easily from a long distance.



Auto-level adjuster

Designed to optimize the procedure of samples auto level, in order to speed up the sample preparation.



Compact

Compact instrument and can be both upgraded and configured to satisfy the everchanging laboratory needs.



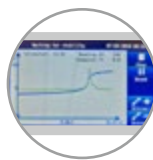
Auto-degassing system

Nitrogen valve for sample degassing.



Easy-to-use

The wide colour touch screen display contains all the messages and the icons that make CAT extremely easy to use. The titrator guides the user in each programming phase, analysis and data interpretation.



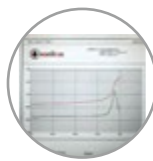
Titration curve

During the titration process the graphic trend is displayed in real time, so that the operator is immediately informed about the analysis trend.



Modular design

Up to 2 burettes and 3 peristaltic pumps, operated together or separately, every stage of titration process can be made truly automatic.



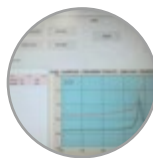
Report

pH electrode calibration report, Standard titration report and Sample titration report.



Peripheral modules

Single analysis stand, 16 positions autosampler, 35 positions autosampler, Printer and Software.



Software

Data management software via external PC



Methods

Default methods, Method template make to quickly edit and start your experiments.



Switch on. And off you go.

Intelligent operating concept. Ready for operation with just a few quick and easy steps.

Features

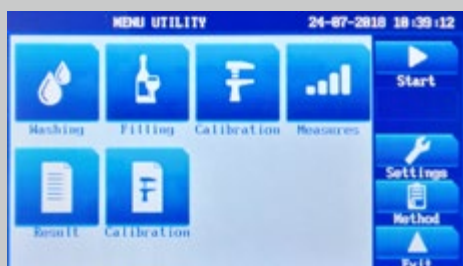


Standard methods

- > Pre-installed standard methods for alkalinity, total acidity in drinks, chloride, SO_2 in wine etc.
- > Each standard method can be used directly or edited according to actual needs
- > The commonly used titration method can be marked and set to the top, which is easy for operators to choose quickly.

Menu

Built-in system setting, date and time setting, calibration solution setting, operator setting, burette manual operation, creep pump manual operation, electrode lifting device manual setting, and continuous titration turntable manual setting function

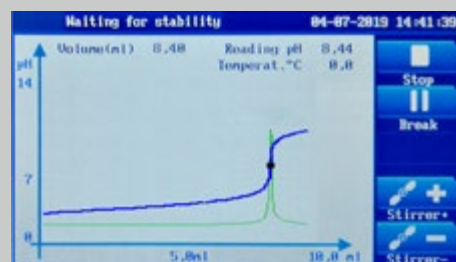


Utility

Including: manual setting of cleaning steps, manual filling of burette, calibration program settings, pH measurement settings, titration results query, import, transfer and deletion, calibration reports and records

Titration curve

- > During the titration process, the titration curve is displayed in real time, and the integral curve will be shown after the titration is finished
- > After titration, display titration results, including starting values, ending values and calculation results



Specification – CAT

	Features
Display	4.3" monochromatic LCD touch screen
Burette dispensation accuracy	Syringe volume: 10mL (It is possible to install up to 2 burettes) Burette for titrant dosage resolution at 12,000 steps (means 0.83 µL at any step)
Dispensation accuracy	<0.2% (2µL with 10ml syringe)
Dispensation repeatability	± 0.2% (2µL with 10ml syringe)
Peristaltic pump	Interchangeable pump head (up 3 per unit), 1ml/sec.
pH	Range:0-14pH, Accuracy: ± 0.02pH, Resolution: ± 0.01pH
mV	Range: ± 2000mV, Accuracy: ± 2mV, Resolution: ± 0.1mV
µA	Range: ± 10µA, Accuracy: ± 2µA, Resolution: ± 0.1µA
Temperature	Range:0-100°C , Accuracy: ± 1°C , Resolution: ± 0.1°C
Utility procedures	1.Priming 2.Cleaning 3.Electrode calibration
Method template	EP, EQ, free SO2, total SO2 and double SO2
pH calibration	Buffer auto-recognize. Refusal defective electrodes. Notice expired calibration (to be set from 0 to 7 days). Temperature compensation with pt100 probe during pH calibration 1. 1buffer calibration (7) 2. 2 buffers calibration (7, 4 or 10) 3. Theoretical (Nernst equation) 4. Oenological: 2 buffers calibration (7, 3)
Communication	1. Electrode port (x2) 2. USB A 3. USB B 4. RS232 serial (for external printer) 5. RS232 serial (for sampler) 6. Bluetooth (for external PC)
Internal memory	Last 50 analyses and last 10 calibrations Up 30 methods Data export: (date, hour, operator ID, sample ID, method, result, titrant volume) a) To USB pen drive (file csv) b) To external pc (via dedicated)
Accessories	1. Printer 2. Single analyses stand 3. 16 positions sampler 4. 35 positions micro-sampler 5. Auto-level adjuster 6. Automatic degasser 7. Software for data management on external PC

Order index, for your custom unit configuration

Order No.	CAT	-	M1	-	T1	-	S1	-	B1	-	P1	-	G1	-	L1
M1	pH electrode														
M2	Ag-combined electrode														
M3	Double platinum electrode														
M4	pH electrode and Ag-combined electrode														
M5	pH electrode, Ag-combined electrode and double platinum electrode														
M6	pH micro electrode, for AS24 35 position micro-sampler														
M7	Ag-micro combined electrode, for AS24 35 position micro-sampler														
M8	pH micro electrode and Ag-micro combined electrode, for AS24 35 position micro-sampler														
T0	Without temperature sensor														
T1	With temperature														
S1	single analysis stand														
S2	AS24 16 position micro-sampler														
S3	AS24 35 position micro-sampler														
B1	1 burette														
B2	2 burettes														
P1	1 peristaltic pump														
P2	2 peristaltic pumps														
P3	3 peristaltic pumps														
G0	Without automatic degassing system														
G1	With automatic degassing system														
L1	Without auto-level adjuster														
L2	With auto-level adjuster (The third peristaltic pump must be fitted.)														

Order Information



CAT1 Automatic titrator with magnetic stirrer

Order No.	Model	Description
CAT1-1-M1	Basis set	Basic unit without electrode, Included CAT1, Magnetic stirrer(1), Stir bar(1), 10ml burette(1), titration tube(1), power supply(1), 1L glass bottle(1), GL45 and S40 adapter(1), drying tube(1).
CAT1-1-M2	For pH titration	CAT1-1-M1 with pH electrode and buffer solution
CAT1-1-M3	For Precipitation titration	CAT1-1-M1 with Ag electrode
CAT1-1-M4	For Redox titration	CAT1-1-M1 with Pt electrode
CAT1-1-M5	For Dead stop titration	CAT1-1-M1 with Double Platinum electrode



CAT2 Automatic titrator with magnetic stirrer

Order No.	Model	Description
CAT2-1-M1	Basis set	Basic unit without electrode, Included CAT2, Magnetic stirrer(1), Stir bar(1), 10ml burette(2), titration tube(2), power supply(1), 1L glass bottle(2), GL45 and S40 adapter(2), drying tube(2).
CAT2-1-M2	For pH titration	CAT2-1-M1 with pH electrode and buffer solution
CAT2-1-M3	For Precipitation titration	CAT2-1-M1 with Ag electrode
CAT2-1-M4	For Redox titration	CAT2-1-M1 with Pt electrode
CAT2-1-M5	For Dead stop titration	CAT2-1-M1 with Double Platinum electrode



CAT2 Automatic titrator with 16 position auto-sampler

Order No.	Model	Description
CAT2-16-M1	Basis set	Basic unit without electrode, Included CAT2, AS24 16 position auto-sampler (1), Stir bar(1), 10ml burette(40), titration tube(2), power supply(1), 1L glass bottle(2), GL45 and S40 adapter(2), drying tube(2).
CAT2-16-M2	For pH titration	CAT2-16-M1 with pH electrode and buffer solution
CAT2-16-M3	For Precipitation titration	CAT2-16-M1 with Ag electrode
CAT2-16-M4	For Redox titration	CAT2-16-M1 with Pt electrode
CAT2-16-M5	For Dead stop titration	CAT2-16-M1 with Double Platinum electrode



CAT2 Automatic titrator with 35 position micro-sampler

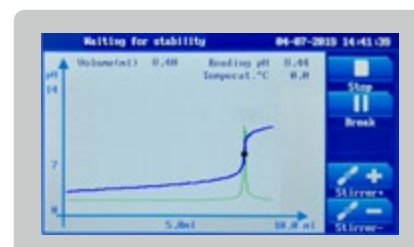
Order No.	Model	Description
CAT2-35-M1	Basis set	Basic unit without electrode, Included CAT2, AS24 35 position micro-sampler (1), Stirring paddle(2), 10ml burette(2), titration tube(2), power supply(1), 1L glass bottle(2), GL45 and S40 adapter(2), drying tube(2).
CAT2-35-M2	For pH titration	CAT2-35-M1 with Micro pH electrode and buffer solution
CAT2-35-M3	For Precipitation titration	CAT2-35-M1 with Micro Ag electrode
CAT2-35-M4	For Redox titration	CAT2-35-M1 with Micro Pt electrode
CAT2-35-M5	For Dead stop titration	CAT2-35-M1 with Micro Double Platinum electrode

Case study



Case 1. Determination of total acidity in fruit juice

Application	This method is used for the quantitative determination of total acidity in fruit juice. Here, the citric acid is the main use as a reference.
Model Recommendations	CAT1-1-M2, CAT2-1-M2, CAT2-16-M2, CAT2-35-M2
Reagents	Titrant: sodium hydroxide solution 0.1 mol/l Soda lime for carbon dioxide uptake of the reagent. Titer: potassium hydrogen phthalate (reference material)



Case 2. Determination of chloride/sodium chloride (salt) in food samples

Application	Potentiometric determination of chloride/sodium chloride ("salt") in food samples such as salt, spice mixtures, cheese, meat or tomato sauce.
Model Recommendations	CAT1-1-M3, CAT2-1-M3, CAT2-16-M3, CAT2-35-M3
Reagents	Solvent: distilled water Titration agent: silver nitrate solution (AgNO ₃) 0.1 mol/L Standard: NaCl titrimetric standard, HNO ₃ 1 mol/l



Case 3. Determination of Free and Total SO₂ in Wine and fruit juice

Application	This application note describes the titration procedure with iodine solution.
Model Recommendations	CAT1-1-M5, CAT2-1-M5, CAT2-16-M5, CAT2-35-M5
Reagents	Solvent: distilled water Standardisation: Na ₂ S ₂ O ₃ Titrant: Iodine solution (I ₂) 0.025 mol/L or 0.01 mol/L Other reagents: H ₂ SO ₄ 10 %, NaOH 4 mol/l, KI-solution 5 %



Case 4. Quantitative analysis of ascorbic acid with Iodine titrant

Application	This method is used to determine the content of ascorbic acid (Vitamin C) with the Iodine titrant in juices like orange or apple juice. The sulfite (SO ₂) in the juice is masked before with glyoxal solution.
Model Recommendations	CAT1-1-M5, CAT2-1-M5, CAT2-16-M5, CAT2-35-M5
Reagents	Titration agent: Iodine solution 0.01 mol/L Other reagents: H ₂ SO ₄ 25 % and Glyoxal solution 40 %



Professional pH meter pH 90

Professional pH Meter pH 90 is a portable yet highly accurate pH meter. It is used in all industries as well as commercial and educational teaching aids.

The meter uses a regular BNC connector and accepts a variety of other electrodes for special measurement needs. The meter comes complete in a hard carrying case with calibration buffer solutions.

Features

- > Large LCD with multiple display, display of pH, temperature and time simultaneously
- > Auto lock Measurement, meter automatically sense a stabilized endpoint reading
- > This ensures workers only takes in an accurate reading all the time and every time.
- > Multi-point calibration (ISO, NIST and manual, up to 5 points calibration)
- > Electrode status indicator, able to display percentage of slope of the electrode after successive calibration. This feature enables user to determine if the electrode should be replaced due to wear and tear.
- > Real time memory, able to save records of up to 99 data memory with date and time, enable download to PC.
- > Online PC link, able to link to a PC for online display with optional PC kit (sold separately) and download saved data.

Meter uses regular AAA size batteries and tap power source from PC when connected via the USB cable.

Specifications

	pH	mV		Temperature
Range	-2 to 16 pH	± 700.0mV	± 2,000mV	0 to 120°C
Resolution	0.01pH	0.1mV	1mV	0.1°C
Accuracy	± 0.02pH	± 0.5mV	± 2mV	± 0.1 °C ± 0.5°C (Probe)
Calibration	Min. 2 point, Max. 5 point			
Buffer Recognition	up to 60°C or 95°C depending on buffer type			
Automatic Temperature Compensation	pH electrode temperature error compensation 0 to 120°C			
Memory	99 data with real time clock			
Power source	4 x 1.5Volt AAA size battery			
Operating temperature	5 to 40°C			
Storage temperature	-20 to 60°C			
Operating humidity	Up to 95% RH			



Professional conductivity meter CON 90

Professional Conductivity-TDS-Salinity Meter CON 90 is a portable yet highly accurate Conductivity meter. It is used in all industries as well as commercial and educational teaching aids. It has full functionality that matches an expensive bench meter.

The meter comes complete in a hard carrying case with calibration buffer solutions.

Features

- > Large LCD with multiple display, display of conductivity, TDS, Salinity with temperature and time simultaneously, able to display reading in µSiemen, mSiemen, ppm, ppt.
- > Auto lock Measurement, meter automatically sense a stabilized endpoint reading
- > This ensures workers only takes in an accurate reading all the time and every time.
- > Automatic Range, meter able to automatically switch to the next higher range to enhance the accuracy over the 5 calibrated points.
- > Cell Constant, meter can accept probe of different cell constant 0.1, 1.0 and 10.0
- > TDS Factor, TDS factor can be adjusted to allow higher accuracy of different type of chemical or liquid of known conversion.
- > Real time memory, able to save records of up to 99 data memory with date and time, enable download to PC.
- > Online PC link, able to link to a PC for online display with optional PC kit (sold separately) and download saved data.

Meter uses regular AAA size batteries and tap power source from PC when connected via the USB cable.

Specifications

Range	Conductivity / TDS					Salinity	Temperature
	0~19.99µS	0~199.9µS	0~1999µS	0~19.99mS	0~199.9mS	0~100.0ppt	0~120 °C
	0~9.99ppm	0~99.9ppm	0~999ppm	0~9.99ppt	0~99.9ppt		
Resolution	0.01	0.1	1	0.01	0.1	0.1ppt	0.1 °C
	µS / ppm	µS / ppm	µS / ppm	mS / ppt	mS / ppt		
Accuracy	±1% Full Scale						± 0.5 °C
Calibration	5 points with 1 point on each range						
TDS Factor	Adjustable from 0.40 to 1.00						
Cell constant	Selectable from 0.1 , 1.0 & 10.0						
ATC	Automatic from 0 - 100 °C						
Memory	99 data with real time clock						
Power source	4 x 1.5Volt AAA size battery						
Battery Life	40 hrs of continuous use with white backlight on						



Digital dissolved oxygen meter DO 60 / DO 80

DO 60 is designed for full portability. It is most suitable for use at sea level and for fresh water. It comes with a standard 1 meter probe. An optional 3 or 5 meter probe can be purchased or ordered on request. The specially designed strap-on, hang over bag is fully equipped with all accessories needed to operate the meter. Each unit comes with an extra membrane, a bottle electrolyte and with a salinity conversion table for quick conversion. This basic DO meter is most popular with aquaculture users due to its simplicity. Advanced Features: Utilization of microcontroller technology provides fast, accurate readings allowing digital repeatability Fast In-Air calibration. Uses durable long lasting components including a light weight chemical resistant HDPP casing Large and easy to read Liquid Crystal Display

DO 80 is a top range meter for field use. Each meter comes with a 3 meter probe for submerged testing under water in streams, ponds or water tanks. Users can preset salinity compensation and atmospheric compensation to allow direct reading without any conversion tables. It can store up to 99 memory with date and time records. To allow night visibility, there is a backlit display handy. The HD3030 is suitable for aquaculture or industrial users. Advanced Features: Dual DO and temperature display One touch calibration in air Able to set salinity and atmospheric pressure compensation Save up to 99 data in memory with real time clock Make online data logging on PC with optional RS232 kit Able to show maximum and minimum reading over saved data Backlite for night display



Specifications

Model	Digital Dissolved Oxygen Meter DO 60	Professional Dissolved Oxygen Meter DO 80
Range	0 - 20 mg/L	0 - 20 ppm, 0 - 50°C
Display Resolution	0.1 mg/L	0.01 ppm, 0.1°C
Accuracy (machine only)	± 0.4 mg/L	± 1.5% FS, 0.3°C
Operating Temperature	0 to 50°C	0 to 50°C
Calibration	Single point calibration in air at 100%	Single point calibration in air at 100%
Battery type	DC9V (1604A, 6LF22 or equivalent)	4 x 1.5V AAA size battery or DC9V adaptor (optional item)
Battery life	Approximately 80 hours	Approximately 100 hours continuous use
Size	164 x 83 x 35mm	195 x 40 x 36mm
Weight	350gm (main unit including battery)	150gm

Multiparameter instrument HM3070

The HM3070 is specially designed for full portability, simplicity and ease of use which meets general environmental measurements. the meter is ideally suitable for Aquaculture monitoring, open or closed water systems, environmental water checks, waste water control etc.

Calibration is made simple with 3point buffer recognition calibration for pH, single point calibration at a preferred Conductivity range and in-air calibration for Dissolved Oxygen.

This meter is robust and rugged with a waterproof rating at IP67 for usage in harsh weather conditions. Regular 1meter cable probe for pH and conductivity and 3 meter cable probe for DO will meet most measuring situation. Meter is able to store up to 99 data memory on site.



Specifications

Model	HM3070				
Range	2.0~12.0pH	0~30ppm	0~69.9mS	0~42.0ppt	0~60.0°C
Display Resolution	0.01	0.1ppm	0.1uS	0.1ppt	0.1°C
Accuracy	± 0.1pH	± 1ppm	± 2% FS	± 1% FS	± 0.5 °C
Operating Temperature	0 to 50 °C				
Battery Type	6 x AAA size battery				

Professional benchtop pH meter pH 610

Features

- > Large LCD with Multiple Display, display of pH, temperature and time simultaneously
- > Hold Display function, automatically lock reading when a stable reading is established.
- > Multi point calibration, automatic buffer recognition with built in standards:
ISO - pH7.00, 4.01, 10.01
NIST - pH6.68, 4.01, 9.18
Custom - Manual set to any buffer standard.
Up to 5 points calibration

Specifications

	pH	mV	Temperature
Range	0 to 14 pH	± 1999 mV	0 to 90°C
Display Resolution	0.01 pH	0.1-199.9 mV 1-1999 mV	0.1°C
Accuracy	± 0.02 pH	± 0.2 mV ± 2 mV	± 0.5°C
Calibration	5 point selectable		
Operating Voltage	9 to 12V DC, min 650mA		
Operating Temperature	5 to 40°C		
Storage Temperature	-20 to 60°C		
Slope recognition	± 60 mV		
Meter Size	217 x 168 x 58mm		
Package Weight	2.1 kg		



Benchtop conductivity meter CON 600

The Professional Conductivity Bench Meter is a dedicated stationary meter specially designed for laboratory and educational use. It is able to link with a PC for online data logging, or a user can save data in its memory with the date and time and download the data later to a PC. For enhanced accuracy, the meter can calibrate up to 5 points at 1 point on each of its range. The meter is complete with an electrode stand and a PC communication kit.

Specifications

Model	CON600 Professional Conductivity Bench meter				
Range	0- 19.99µS	0 - 199.9µS	0 -1999 µS	0 -19.99 mS	0 - 199.9 mS
Display Resolution	0.01 µS	0.1 µS	1 µS	0.01 mS	0.1 mS
Accuracy	± 1% F.S. + 1digit				
Calibration	5 point with 1 point on each range				
TDS factor	Adjustable 0.3 to 1.00				
Temperature compensation	Automatic 0 to 80°C				
Memory	99 data with real time clock				
Operating Temperature	5 to 40°C				
Storage Temperature	-20 to 60°C				
Operating humidity	Up to 95% relative humidity				
Meter Size	217 x 168 x 585mm				
Weight	2.1 kg				



Digital LUX meter HL9040

Digital Lux Meter is a versatile and portable light meter. It measures up to 50,000 Lux with a semi-spherical sensor. The remote sensor allows user to set the light sensor at various tight locations and angles thus providing flexibility to measure light intensity at the exact spot. The digital Lux meter is widely used in commercial setups and agriculture setups.

Features

- > Large LCD
- > Remote Light Sensor
- > 3 switching ranges for 1, 10, 100 Lux resolution

Specifications

Model	Digital Lux Meter
Range	0 - 50,000 Lux
Display Resolution	Selectable at 1, 10, 100 Lux
Accuracy (machine only)	± 5% F.S.
Operating Temperature	0 to 50°C
Operating humidity	Maximum 80% relative humidity
Battery type	DC9V (1604A, 6LF22 or equivalent)
Battery life	Approximately 80 hours
Size	164 x 83 x 35mm
Weight	260gm (main unit including battery)



Order Information

Portable meter (complete with Electrode / Probe, calibration solution in carry-bag)

Order No.	Description
HP9010	pH meter pH 90
HC9021	Conductivity meter CON 90
HD9030	Digital dissolved oxygen meter DO 60 with 1 meter probe
HD9033	Digital dissolved oxygen meter DO 60 with 3 meter probe
HD9035	Digital dissolved oxygen meter DO 60 with 5 meter probe
HL9040	Digital LUX meter
HD3030	Professional Dissolved Oxygen meter DO 80



Bench meter

Order No.	Description
BP3001	Professional Bench Top pH meter pH 610
BC3020	Professional Bench Top Conductivity meter CON 600



Multi-parameter meter

Order No.	Description
HM3070	Multiparameter instrument pH-cond-sal-DO-temp.





Accessories

Order No.	Description
AX30-232	RS232 communication cable & CD set for 3000 series
AX30USB	USB communication cable & CD set for 3000 series
AX9010U	PC link USB cable & software for 9000 series
AXESTD	Stand electrode
VX0009	Battery 9Volts
VXLR44Q	Button Cell Battery - 1.5 volts (4pcs pack)
VX2A15Q	Battery AA size - 1.5 volts (4pcs pack)
VX3A15Q	Battery AAA size - 1.5 volts (4pcs pack)
VX2032D	Button Cell Battery CR2032 - 3 volts (2pcs Pack)
AX9190F	Replacement Iron Rod for Electrolyzer 2i (2pcs Pack)
AX9190A	Replacement Aluminium Rod for Electrolyzer 2i (2pcs Pack)
AX3AFUS	Replacement 3A Fuse for Electrolyzer 2i

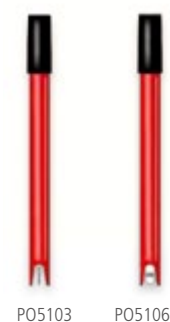
pH Electrodes



Electrode / Probe

Order No.	Description
PT2020	PT9010 Temperature probe for pH 90
PT3001	Temperature probe for pH 610
PP5003	PE03 Plastic body combination pH electrode, General purpose
PP5003-6	PE03-6 Plastic body combination pH electrode with 6m Cable, General purpose
PP5004	PE04 Plastic body combination pH electrode with Pointed Tip and Polymer Reference
PP5010	PP4010 Plastic body combination pH electrode with build-in Temperature Sensor for pH 610
PP5052	PG02 Glass body combination pH electrode, General purpose
PP5053	PG03 Glass body combination pH electrode, with polymer reference for Viscous liquid
PP5054	PG04 Glass body combination pH electrode with Pointed-Tip and Polymer Refere
PP5055	PG05 Glass body combination pH electrode -5 to 130 °C
PP5056	Glass body combination pH electrode with Flat tip
PP5057	Glass body combination pH electrode for Low Ion liquid
PP5060	PG10 Glass body combination pH electrode with Re-fillable Reference
PP5061	Glass body combination pH electrode with Re-fillable Ref. & Sleeve Junction for petroleum or ethanol
PO5106	ORP106 Plastic body combination platinum ring ORP electrode
PO5103	ORP103 Plastic body combination platinum wire ORP electrode
PC5201	CD101T10 Glass body Conductivity electrode, Platinized Platinum cell K=1 with temp.sensor
PC4021	Plastic body Conductivity probe Platinized Platinum cell K=1 with pt1000 sensor & 1 meter Cabel for CON 90
PC5321	Plastic body Conductivity Probe Graphite Cell K=1 with pt1000 sensor & 1 meter Cabel for CON 90
PD9031	DO-01 Dissolved Oxygen electrode with 1 meter cable for DO 60
PD9033	DO-02 Dissolved Oxygen electrode for with 3 meter cable DO 60
PD9035	DO-03 Dissolved Oxygen electrode with 5 meter cable for DO 60
AD9032	Dissolved Oxygen Diaphragm Cap(2pcs pack)
PD3030-3	Dissolved Oxygen Probe with 3meter cable for DO 80
AD3030	Membrane Cap for DO 80 (2pcs pack)
PC3010	Graphite Conductivity Probe for CON 600
PO3001	Probe ORP for pH 610
PD3070	Dissolved Oxygen Probe with 3 meter cable for HM3070
PP3070	pH Electrode with 1 meter cable for HM3070
PC3070	Conductivity Probe with 1 meter cable for HM3070
AD3070	Membrane Cap for HD3070 (2pcs pack)

ORP Electrodes

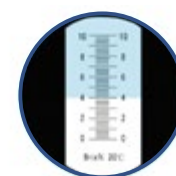
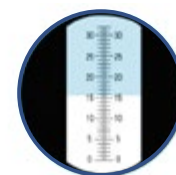


Refractometer

WIGGENS offer various model of refractometer for the measurement of Sugar, prediction of Alcohol and Salinity. These meters are self contain and made of precision prism and optics. Most of the meter comes with bi-metal automatic temperature compensation. The mechanical designs requires no batteries to operate.

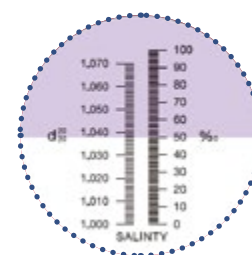
Brix Refractometer

Order No.	Description
RBX0010	Brix Refractometer 0~10% ATC
RBX0018	Brix Refractometer 0~18% ATC
RBX0032	Brix Refractometer 0~32% ATC
RBX2826	Brix Refractometer 28~62% ATC
RBX4582	Brix Refractometer 45~82% ATC
RBX0080	Brix Refractometer 0~80%



Winery Refractometer

Order No.	Description
RBA0025A	US Wine Refractometer, 0 to 40% Brix / 0 to 25% v/v Alcohol ATC
RBA0020A	Euro Wine Refractometer, 0 to 20° Baume / 0 to 25% v/v Alcohol ATC
RBO0032A	US-German Wine Refractometer, 0 to 32% Brix / 30 to 140° Oe ATC
RBOK0032A	US-Euro Wine Refractometer, 0 to 32% Brix/0 to 140° Oe / 0 to 25° KMW ATC
RBOK0044	US-Euro Wine Refractometer, 0 to 44% Brix/0 to 190° Oe / 0 to 40° KMW
WN-1N	Range: 0~140Oe, Resolution: 1 Range: 0~25KMW(Babo) , Resolution: 0.2 Range: 0~32%Mas Sacch, Resolution: 0.2%
WN-2N	Range: 0~170Oe, Resolution: 2
WN-3N	Range: 3~140Oe, Resolution: 1 Range: 0~32%, Resolution:0.2%
WN-1T	Range: 0~140Oe, Resolution: 1 Range: 0~25KMW(Babo) , Resolution: 0.2 Range: 0~32%Mas Sacch, Resolution: 0.2% Temperature offset
WN-2T	Range: 0~170Oe, Resolution: 2 Temperature offset
WN-3T	Range: 3~140Oe, Resolution: 1 Range: 0~32%, Resolution:0.2% Temperature offset



Salinity Refractometer

Order No.	Description
SA0010	Range: 0~100‰ Resolution: 1‰ Range: 1.000~1.070, Resolution: 0.005
SA0028	Range: 0~28‰, Resolution: 0.2%
SA0035	Range: 0~35‰, Resolution: 0.5%
SA0040	Range: 0~40PPT, Resolution: 1PPT Range: 1.000~1.030, Resolution: 0.001
SA00BS1	Range: 0~100‰ , Resolution: 1‰ Range: 1.000~1.070, Resolution: 0.005 Range: 0~10Brix, Resolution: 0.1%
SA00BS2	Range: 0~28‰, Resolution: 0.2% Range: 0~32Brix, Resolution: 0.2%



Salinity Refractometer (Temperature offset)

Order No.	Description
RSA0010	Salinity / SG Refractometer 0~100ppt / 1~1.070sg ATC
RSA0028	Salinity Refractometer 0~28% ATC
SA0010T	Range: 0~100‰ Resolution: 1‰ , Range: 1.000~1.070, Resolution: 0.005
SA0028T	Range: 0~28%, Resolution: 0.2%
SA0040T	Range: 0~40PPT, Resolution: 1PPT, Range: 1.000~1.030, Resolution: 0.001
SA00BS1T	Range: 0~100‰ , Resolution: 1‰ , Range: 1.000~1.070, Resolution: 0.005, Range: 0~10Brix, Resolution: 0.1%
SA00BS2T	Range: 0~28%, Resolution: 0.2%, Range: 0~32Brix, Resolution: 0.2%
RW2025	Euro Wine Refractometer, 0~20 Baume / 0~25 Alcohol prediction ATC
RW0025	Grape Alcohol Refractometer, 0~25 Alcohol prediction ATC
RW4025	US Grape Refractometer, 0~40 Brix / 0~25% Alcohol prediction ATC

Grape Refractometer

Order No.	Description
RW3230	US-German Grape Refractometer, 0~32 Brix / 30~140Oe ATC
RW3224	US-Euro Grape Refractometer, 0~32 Brix / 0~140Oe / 0~25° KMW.ATC
RW4440	US-Euro Grape Refractometer, 0~44 Brix / 0~190Oe / 0~40° KMW

US-Euro Honey Refractometer

Order No.	Description
RH5890	US-Euro Honey Refractometer

Alcohol Refractomet

Order No.	Description
RAL0080	Alcohol Refractometer 0~80% v/v Alcohol
AL-3T	Range: 0~25%VOL, Resolution: 0.2%
AL-4T	Range: 0~25%VOL, Resolution: 0.2%, Range: 0~40%Brix, Resolution: 0.2%
AL-5T	Range: 0~25%VOL, Resolution: 0.2%, Range: 0~20Baume, Resolution: 0.2
AL-6T	Range: 0~25%VOL, Resolution: 0.2%, Range: 0~20Baume, Resolution: 0.2, Range: 0~40%Brix, Resolution: 0.2%

Sugar Refractomet

Order No.	Description
BR0010N	Range: 0~10%, Resolution: 0.1%
BR0018N	Range: 0~18%, Resolution: 0.1%
BR0032N	Range: 0~32%, Resolution: 0.2%
BR2862N	Range: 28~62%, Resolution: 0.2%
BR4582	Range: 45~82%, Resolution: 0.5%
BR5892N	Range: 58~92%, Resolution: 0.2%

Sugar Refractomet (Temperature offset)

Order No.	Description
BR0010T	Range: 0~10%, Resolution: 0.1%
BR0018T	Range: 0~18%, Resolution: 0.1%
BR0032T	Range: 0~32%, Resolution: 0.2%
BR2862T	Range: 28~62%, Resolution: 0.2%
BR4582T	Range: 45~82%, Resolution: 0.5%
BR5892T	Range: 58~92%, Resolution: 0.2%



Lab Burners

Features

- > Automatic ignition due to piezo effect
- > Max. Temperature: 1300°C
- > Adjustable flame
- > Refillable butane tank

Applications

- > Sterilizing
- > Welding
- > Heating
- > Cooking



Dragon 100



Dragon 200



Dragon 220

Specifications

Model	Dragon 100	Dragon 200	Dragon 220
Max. temperature (°C)	1300	1300	1300
Fuel tanker capacity (g)	45	45	45
Working time (min)	60	60	60
Dim. H x W x D (mm)	161x137x79	92x115x79	94x115x78
weight (g)	380	407	425
Safety switch	yes	--	--
Order No.	177100-00	177200-00	177220-00

Colony Counter

- > Adjustable dish-holder suitable for Petri-dishes of various sizes with diameters ranging from 90 mm to 150 mm or for special 60 mm dishes
- > Pressure sensor allows the use of any marking pen, without the contamination of the sample
- > CE certification
- > Suitable for total bacteria and total coliform counting

Specifications

Model	Galaxy 230
Display	4-Digit Bright Red 0.6" LED Display
Magnification	2 ~ 3 Times
Petri Dish Diameter	60 mm, 90 - 150 mm Adjustable
Zero Reset	Yes
Illumination	Ring-Shaped Lamp
Pressure Sensitivity	Adjustable
Acoustical Counting Signal	Adjustable
Dimensions (W x L x H in mm)	313 x 360 x 346
Net Weight (kg)	5.2



Ordering Information

Order No.	Product Description
175200	Galaxy 230 Colony Counter

Sensor-controlled turntable for Petri dishes

- > The touch-free IR-Sensor technology guarantees extremely simple operation with movements of the hand. Alternatively the new Sensorturn / Sensorturn pro can be operated with a foot pedal.
- > An extraordinarily low working height allows effortless work. The highest degree of sterility is ensured by the device's stainless steel construction.
- > The Sensorturn / Sensorturn pro is a high-performance, UV resistant and flame-sterilizable device.
- > For both options different operating modes are available:
 - Flexible Start-Stop functions or the second timer control with variable rotational periods from 1 - 25 seconds. For longer applications the time can be extended to 125 seconds.
 - A continuously variable rotational speed control of 14 - 110 rpm (Sensorturn) or 14 - 210 rpm (Sensorturn pro) ensures uniform and individual plating of the Petri dishes up to a diameter of 100 mm (optional: up to 150 mm).



Specifications

- > Stainless steel construction
- > Variable rotational speed control:
- > Sensorturn: 14 - 110 rpm; Sensorturn pro: 14 - 210 rpm
- > Short time operation 1 - 125 seconds
- > Turntable with silicone covering & centring ring (autoclavable)
- > Switch on and off with movements of the hand or foot pedal*
- > UV-resistant and flame-sterilizable
- > Minimum space requirement
- > Includes IR-Sensor and connector for foot pedal
- > 5 operating modes:
- > IR-Sensor: Time / Constant
- > Foot pedal: Standard / Start-Stop / Time
- > Turntable with transparent silicone covering & centring ring
- > Screwdriver for IR-Sensor detection range
- > Power connection

Specifications

Model	Sensorturn	Sensorturn Pro
Rotary speed range	14 - 110 rpm	14 - 210 rpm
Petri dish size	up to Ø 100 mm (Ø 150 mm optional)	
Rotational direction	clockwise	
Detection range IR-Sensor	5 - 50 mm, adjustable	
Connector for foot pedal	yes	
Timer range Time operation	1 - 25 sec or 5 - 125 sec, adjustable	
Constant operation	unlimited	
Operating voltage / input	9 V - 15 V DC / 1.5 VA	
Measurements (w x h x d)	160 x 74 x 109 mm	
Weight	980 g	
Order No.	7.001.000	7.002.000

Accessories

- ① Foot pedal/stainless steel

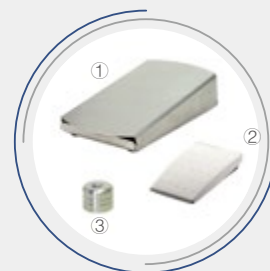
Order No. 6.000.402

- ② Pedal mini/ plastic

Order No. 6.000.403

- ③ Benchtop switch / stainless steel

Order No. 6.000.405



- Tray, right or left side, stainless steel

Order No. 8.000.340

- triangle spatula / glass

Order No. 6.000.370

- triangle spatula / stainless steel

Order No. 6.000.369



- Inoculation loop holder

stainless steel, with sleeve nut, for inoculation loops wire Ø 0.6 - 1 mm

length 245 mm

Order No. 6.000.360

length 215 mm

Order No. 6.000.365



- Turntable

extra wide for Petri dishes up to 150 mm with transparent silicone covering
Order No. 7.000.150

