CATALOGUE 2022/'23

SECTORS

OUR BRANDS

XS INSTRUMENTS

XS SENSOR

XS GREEN LINE

XS BALANCE

ARGO LAB

NEYA by XS

ONDA
SPECTROPHOTOMETER

Chemitec

HOW TO ORDER

Telephone: Call +31 88 876 0101
Monday to Friday from 9.00 to 18.00.

email: Send to: info@hydrocal.nl

Hydrocal B.V.
Wallerstraat 125A, 3862CN, Nijkerk, The Netherlands
tel. +31 88 876 0101
www.hydrocal.nl
info@hydrocal.nl

pH METERS
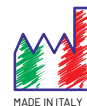
HOW TO CHOOSE

	Violab pH 50	Violab pH 60	pH 8+	pH 80+
Resolution	0,01 pH	0,01 pH	0,01 pH	0,001 pH
Display	Coloured LCD	Coloured LCD	Coloured graphic	Coloured graphic
GLP	○	●	●	●
Calibration password	○	○	●	●
Calibration points	3	3	3	5
Calibration due alarm	○	●	●	●
Electrode status indication	○	○	●	●
Selective ION	○	○	○	●
Data logger	○	●	●	●
PC / Printer connection	○	●	●	●
Analog view	○	○	●	●
Alarm settings	○	○	●	●
Multilanguage	○	○	●	●
On-Line manual	○	○	○	●
External keyboard	○	○	○	●

pH 80 + DHS

○ **Resolution** *0,1 / 0,01 / 0,001 pH*

○ Backlit coloured high-definition **graphic display.**

○ **Data logger** auto and manual, up to **1000 savings** *in GLP*

○ **On line guide** multilanguage

○ Alphanumeric **password**

○ Graphic **calibration report**

pH

MAIN FEATURES

Automatic calibration up to 5 pH points according GLP with date and time.
IP54 keyboard.
Selectable buffer solutions NIST, USA, DIN or custom (5 values).
ISE calibration up to 5 points.
Calibration report and innovative graphic view of the status of the sensor.
Calibration points indications.
Intuitive menu. **Multilanguage menu.**
Entering company data, operator ID, sample ID and sensor ID via external keyboard (included).
Functions for setting alarms and analog view, "Hold reading" and "Stability" with titration and timed stability mode for ISE.
Calibration due alarm, self-diagnosis messages.
Alphanumeric **password for calibration** management and memory reset.
2 USB outputs for external keyboard connection (included) and PC. RS232 port for printer connection.
Magnetic stirrer with independent control. Quick manual online.
Data Link software freely downloadable from www.hydrocal.nl.

Measuring range:
pH: -2,000...20,000 (0,001 pH)
mV: -2000...+2000 (0,1 mV)
ISE: 0,001...19999ppm
Temperature: -20...120,0 °C (0,1 °C)

Equipped with:
S7/BNC cable, temperature sensor NT 55, electrode holder, buffers solutions, USB cable and power supply.

Name	Description	p/n
pH 80+DHS STIRRER	Complete with **digital electrode XS Standard DHS, magnetic stirrer with adjustable speed**	50001392
pH 80+DHS STIRRER	Complete with **electrode XS Standard, magnetic stirrer with adjustable speed**	50001402
pH 80+DHS STIRRER	Without electrode, with **magnetic stirrer with adjustable speed**	50001412
pH 80+DHS BASIC	**Complete** with **digital electrode XS Standard DHS,** without magnetic stirrer	50001442
pH 80+DHS BASIC	**Complete with electrode XS Standard S7,** without magnetic stirrer	50001422
pH 80+DHS BASIC	Without electrode and magnetic stirrer	50001432
KEYBOARD	External soft keyboard with USB cable for 80+ Series	50001462
IQ-OQ MANUAL 80 SERIES	Printed manual IQ-OQ for **XS 80 Series**	50001472

pH 8 + DHS

○ **Resolution** *0,1 / 0,01 pH*

○ Backlit coloured high-definition **graphic display**.

○ **Automatic** and manual **temperature compensation**

○ **Data logger** auto and manual, up to **1000 savings** *in GLP*

pH

MAIN FEATURES

Digital bench multi parameter for **pH, mV, ORP and temperature**.
IP54 keyboard.
Automatic pH calibration from 1 to 3 points according to **GLP** with
date and time.
Selectable buffer solutions NIST, USA and user definable (2
values).
Calibration report and innovative graphic view.
Calibrated points indication.
Manual and automatic **Data Logger** function, **up to 1000
savings** with date / time according to GLP.
Intuitive parameter management via icons.
Multilanguage menu.
Functions for setting alarms and analog view,
"Hold-reading" and "Stability" with titration mode,
calibration due alarm, self-diagnosis messages.
USB output for PC connection and RS232 port for printer connection.
Numeric password for calibration management and memory deletion.
Magnetic stirrer with independent control.
Data Link software freely downloadable from www.hydrocal.nl.

Measuring range:
pH: –2,00...16,00 (0,01 pH)
mV: –1000...+1900 (0,1 mV)
Temperature: -10...110,0 °C (0,1 °C)

Equipped with:
S7/BNC cable, temperature sensor NT 55, electrode
holder, buffers solutions, USB cable and power supply.

Name	Description	p/n
pH 8 + DHS STIRRER	Complete with **digital electrode XS Standard DHS, magnetic stirrer with adjustable speed**	50001252
pH 8 + DHS STIRRER	Complete with **electrode XS Standard, magnetic stirrer with adjustable speed**	50001232
pH 8 + DHS STIRRER	Without electrode, with **magnetic stirrer with adjustable speed**	50001242
pH 8 + DHS BASIC	Complete with **digital electrode XS Standard DHS,** without magnetic stirrer	50001192
pH 8 + DHS BASIC	Complete with **electrode XS Polymer,** without magnetic stirrer	50001202
pH 8 + DHS BASIC	Without electrode and magnetic stirrer	50001212
MANUAL IQ-OQ 8 SERIES	Printed manual IQ-OQ for **XS 8+ Series**	50001472

ACCESSORIES 8 / 80 SERIES

Description		p/n
MAGNETIC STIRRER	**Adjustable speed,** with electrode holder and connection cable	50001132
PRINTER RS 232	External printer with **normal paper** for XS 60 VioLab / 8 / 80 series	50001502
POWER SUPPLY	Power supply **12V/1A** for XS 8+ e 80+ series	50001512

pH 60 VioLab

pH *(side tab)*

- ◯ **Resolution** *0,1 / 0,01 pH*
- ◯ Automatic and manual **temperature compensation**
- ◯ Coloured backlit high definition **LCD display**
- ◯ **Data logger** auto and manual , **up to 1000 savings** *in GLP*
- ◯ **Automatic calibration up to 3 points**
- ◯ **DHS digital sensors** management

MAIN FEATURES

Professional bench meters with innovative **backlit high definition coloured LCD display,** with possibility of brightness adjustment.
Management of **DHS digital sensors**.
Possibility to select the parameters to show on the display.
The **step by step guide** in setup and calibration allows a simple and immediate use of the device.
Automatic pH calibration with USA and NIST buffers, up to 3 points and 2 points defined by the user.
Automatic ORP calibration on 1 point.
Measurement **stability indication** and possibility to select 3 stability levels.
All operations are constantly monitored and shown to the operator by the **coloured LED** above the display and
self-diagnosis messages.
GLP function: Date and time, recall of calibration data
and function "**Calibration due".**
Data logger up to 1000 savings, manual and automatic, PC connection via micro-USB.
Data-Link + software available from www.hydrocal.nl.
RS 232 external **printer connection**

Measuring range
pH: –2,00...16,00 (0,1 - 0,01 pH)
mV: –1000...+1999 (0,1 - 1 mV)
Temperature:–10...110,0 °C (0,1 °C)

Equipped with:
Electrode holder stand, pH buffer solutions, USB cable, power supply and instructions for use.

Name	Description	p/n
pH 60 VIOLAB DHS ELECTRODE	Complete with **digital electrode XS 201 T DHS,** with temperature sensor integrated	50101102
pH 60 VIOLAB ANALOG ELECTRODE	Complete with **electrode XS 201 T**, with temperature sensor integrated	50101092
pH 60 VIOLAB WITHOUT ELECTRODE	With accessories, S7-BNC cable, temperature sensor NT 55, **without electrode**	50101112
PRINTER RS 232	External printer with **normal paper** for XS 60 / 8 / 80 series	50001502

pH 50 VioLab

○ **Resolution** *0,1 / 0,01 pH*
○ Automatic and manual **temperature compensation**
○ Coloured backlit high definition **LCD display**
○ **Automatic calibration up to 3 points**
○ **DHS digital sensors** management

pH

MAIN FEATURES

Professional bench meters with innovative **backlit high definition coloured LCD display**, with possibility of brightness adjustment.
Management of **DHS digital sensors**.
Possibility to select the parameters to show on the display.
The **step by step guide** in setup and calibration allows a simple and immediate use of the device.
Automatic pH calibration with USA and NIST buffers, up to 3 points and 2 points defined by the user.
Automatic ORP calibration on 1 point.
Measurement **stability indication** and possibility to select 3 stability levels.
All operations are constantly monitored and shown to the operator by the **coloured LED** above the display and self-diagnosis messages.

Measuring range
pH: 0,00...14,00 (0,1 - 0,01 pH)
mV: ±1000 (1 mV)
Temperature: 0...100,0 °C (0,1 °C)

Coloured LCD Display

Equipped with:
Electrode holder stand, pH buffer solutions, and instructions for use.

Name	Description	p/n
pH 50 VIOLAB **DHS ELECTRODE**	Complete with **digital electrode XS 201 T DHS,** with temperature sensor integrated	50101032
pH 50 VIOLAB **ANALOG ELECTRODE**	Complete with **electrode XS 201 T**, with temperature sensor integrated	50101002
pH 50 VIOLAB **WITHOUT ELECTRODE**	With accessories, S7-BNC cable, temperature sensor NT 55, **without electrode**	50101012

pH 70 Vio

Hd

- ○ **Resolution** *0,1 / 0,01 pH*
- ○ Coloured backlit high definition **LCD display**
- ○ Automatic and manual **temperature compensation**
- ○ **Data logger** auto and manual , **up to 1000 savings** *in GLP*
- ○ **GLP** functions
- ○ **DHS digital sensors** management

MAIN FEATURES

Professional portable multiparameter with **innovative high-resolution colour display**, suitable to work in any conditions, thanks to the automatic and manual brightness adjustment.

Possibility to select the parameters you want to show.

The **step by step guide** in setup and calibration mode allows a simple and intuitive use of the device.

Automatic pH calibration with USA and NIST buffers up to 3 points and 2 points custom defined by the user.

Automatic ORP calibration in 1 point.

Measurement **stability indicator** and possibility of selecting 3 levels of stability.

All operations and errors are constantly monitored and shown to the operator via the **coloured LED** above the display.

GLP function: Date and time, recall of calibration data and function "Calibration due".

Data logger up to 1000 savings, manual and automatic, PC connect via **micro-USB**.

Data-Link + software available from www.hydrocal.nl.

Measuring range
pH: –2,00...16,00 (0,1 - 0,01 pH)
mV: –1000...+1999 (0,1/ 1 mV)
Temperature: –10...+110,0 (0,1 °C)

Equipped with;
coloured buffer solutions of pH,
USB cable and power supply,
instructions for use and plastic
carrying case.

pH 70 Vio Kit

Name	Description	p/n
pH 70 VIO DHS ELECTRODE	Complete with **digital electrode XS 201 T DHS,** with temperature sensor integrated	50110182
pH 70 VIO ANALOG ELECTRODE	Complete with **electrode XS 201 T**, with temperature sensor integrated	50110112
pH 70 VIO WITHOUT ELECTRODE	With accessories, S7-BNC cable, temperature sensor NT 55, **without electrode**	50110122
pH 70 VIO FOOD DHS	Complete with **penetration digital electrode XS 2 Pore DHS,** for food applications	50110192
pH 70 VIO FOOD	Complete with **penetration electrode XS 2 Pore T ,** for food applications	50110162
POWER SUPPLY	Power supply USB for XS 70 Vio Series	50010172

pH 7 Vio

○ **Resolution** *0,1 / 0,01 pH*
○ Coloured backlit high definition **LCD display**
○ Automatic and manual **temperature compensation**
○ **Data logger** auto and manual , **up to 1000 savings** *in GLP*
○ **DHS digital sensors** management

MAIN FEATURES

Professional portable multiparameter with **innovative high-resolution colour display**, suitable to work in any conditions, thanks also to the possibility to adjust automatically and manually contrast and brightness of the display.
Possibility to select the parameters you want to show.
The guide onboard in setup and calibration mode allows a simple and intuitive use of the device.
Automatic pH calibration with USA and NIST buffers up to 3 points and 2 points custom defined by the user.
Automatic ORP calibration in 1 point.
Measurement stability indicator and possibility of selecting 3 levels of stability.
All operations and errors are constantly monitored and shown to the operator via the **coloured LED** above the display.

Measuring range
pH: 0,00...14,00 (0,1 - 0,01 pH)
mV: - 1000... + 1000 (1 mV)
Temperature: 0...+100,0 (0,1 °C)

Equipped with:
coloured buffer solutions of pH, instructions for use and plastic carrying case.
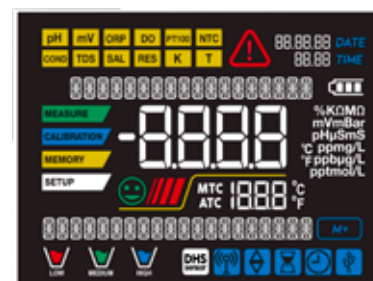
Coloured LCD display

Name	Description	p/n
pH 7 VIO **DHS ELECTRODE**	Complete with **digital electrode XS 201 T DHS,** with temperature sensor integrated	50110072
pH 7 VIO **ANALOG ELECTRODE**	Complete with **electrode XS 201 T**, with temperature sensor integrated	50110012
pH 7 VIO **WITHOUT ELECTRODE**	With accessories, S7-BNC cable, temperature sensor NT 55, **without electrode**	50110022
pH 7 VIO **FOOD DHS**	Complete with **penetration digital electrode XS 2 Pore DHS,** for food applications	50110082
pH 7 VIO **FOOD**	Complete with **penetration electrode XS 2 Pore T,** for food applications	50110032
pH 7 VIO **GEL**	Complete with **pH Gel electrode,** plastic body, 1 m cable with BNC, T sensor NT55	50110062

ACCESSORIES pH

pH

pH ELECTRODES

Name	Description	p/n
XS STANDARD DHS DIGITAL pH ELECTRODE	Digital pH electrode combined with DHS technology. Glass body and cylindrical membrane for general applications. Refillable KCl 3M electrolyte. **Excellent chemical resistance and easy to clean. Included with serial number and certificate.** Dimensions (LxØ) mm 120x12 - **pH 0...14 - Temperature -10...100 °C**	32200123
XS STANDARD PH ELECTRODE	pH Electrode combined with S7 head. Glass body, for general use. Refillable KCl 3M Electrolyte. **Excellent chemical resistance and easy to clean. With serial number and certificate.** Dimensions (LxØ mm) 120x 12 - **pH 0...14 - Temperature -10...100 °C.**	32200363
XS POLYMER S7	Combined pH Electrode S7 head. Glass Body for general use. Cylindrical membrane. Polymer filling, open pore. **For a fast response with high accuracy in samples that might contaminate normal diaphragms.** Maintenance-free. Dimensions (LxØ) mm 120x12 - **pH 0...14 - Temperature -10...80 °C**	32200223
201 T DHS DIGITAL pH ELECTRODE	Digital pH electrode combined with DHS technology. Plastic body for general use. Gel Filling, ceramic diaphragm. Maintenance-free. Dimensions (LxØ) mm 120x12. **pH 0...14 - Temperature 0...60 °C**	32200103
201 T PH ELECTRODE	Combined pH electrode with NTC temperature sensor integrated. Epoxy body for general applications. Polymer filling with ceramic diaphragm. Maintenance-free. Fixed cable 1 mt., BNC + RCA plug. Dimensions (LxØ) mm 120x12 - **pH 0...14 - Temperature 0...60 °C**	50002002
201 T / 5 PH ELECTRODE	Combined pH electrode with NTC temperature sensor integrated. Epoxy body for general applications. Polymer filling with ceramic diaphragm. Maintenance-free. Fixed cable 5 mt., BNC + RCA plug. Dimensions (LxØ) mm 120x12 - **pH 0...14 - Temperature 0...60 °C**	50002022
XS 2 PORE DHS DIGITAL pH ELECTRODE	Digital pH electrode combined with DHS technology. Glass Body. Filled with polymer, maintenance-free. **Penetration tip, Ideal for meats and cheese samples.** Dimensions (LxØ) mm 35x6 - **pH 0...14, Temperature 0...60 °C**	32200113
XS 2 PORE T BNC + RCA	Glass Body. Filled with polymer, maintenance-free. With temperature sensor integrated NTC 30 KΩ, **Penetration tip. Ideal for meats and cheese samples** Fixed cable 1 mt length, **pH 0...14, Temperature 0...60 °C**	32200323
pH GEL ELECTRODE	Plastic body. For XS 7 / 70 Vio Series. Cable length 1 m, BNC plug. **pH 0...14, Temperature 0...60 °C**	32105223

REDOX ELECTRODES

Name	Description	p/n
REDOX ELECTRODE REDOX	Fix cable **1 m**, BNC connector, epoxy body. Gel filling, double junction, maintenance-free. Ceramic diaphragm. **Range ± 1.000 mV, Temperature 0...60 °C.** Dimensions (LxØ) 120 x 12 mm	32105302
REDOX / 5 ELECTRODE REDOX	Fix cable **5 m**, BNC connector, epoxy body. Gel filling, double junction, maintenance-free. Ceramic diaphragm. **Range ± 1.000 mV, Temperature 0...60 °C.** Dimensions (LxØ) 120 x 12 mm	32105102

CONNECTING CABLE

Connecting cable with **S7 head** and BNC plug for XS pH-meter.
Diameter 3 mm, length 1 m.

Name	Description	p/n
BNC	Cable S7-BNC	33551733

STORAGE SOLUTION

Name	Pack	p/n
Storage solution for electrodes	55 ml	32208043
Storage solution for electrodes	500 ml	32208053

TEMPERATURE SENSORS

NT 55 TEMPERATURE SENSOR	Temperature sensor NTC 30 K for XS instruments, **for liquids and air.**	50002012
NT 7P TEMPERATURE SENSOR	Temperature sensor NTC 30 K, **penetration tip**, diameter 4 mm, cable fix 1m	50011122

ACCESSORIES

Name	Description		p/n
ST 10 MAGNETIC STIRRER	**Magnetic stirrer, adjustable speed,** with rechargeable batteries, magnetic bar and power supply.		50000132
ELECTRODE HOLDER MOD: 3900	Flexible electrode holder		50000112
PRINTER	External printer with normal paper for XS 8 / 80 SERIES XS VIOLAB 60 power supply and RS 232 cable		50001502
POWER SUPPLY VIO - PORTABLE	Power supply and cable for XS Vio portable series		50110172
POWER SUPPLY VIOLAB - BENCHTOP	Power supply and cable for XS VioLab benchtop series		50001052

pH

STANDARD BUFFER SOLUTION
With **certificate of analysis downloadable from www.hydrocal.nl**

pH

○ SACHETS 25 ml

Name	Description	p/n
pH 4.01 (25°C)	Pack of 20 sachets 25 ml, red, with certificate of analysis	51102013
pH 7.00 (25°C)	Pack of 20 sachets 25 ml, green, with certificate of analysis	51102023
pH 10.01 (25°C)	Pack of 20 sachets 25 ml, with certificate of analysis	51102043
SET CAL pH BIS	Pack of 20 sachets 25ml (10 x pH 4.01 and 10 x pH 7.00)	51102203
SET CAL pH BIS	Pack of 20 sachets 25ml (7 x pH 4.01, 7 x pH 7.00 and 6 x pH 10.01)	51102213
STORAGE	Pack of 20 sachets 10 ml, pH/ORP Sensor Storage Solution	51102083
H2O	Pack of 20 sachets 25ml, Distilled water for sensor cleaning	51102093

○ BOTTLE **250 ml** with calibration compartment integrated

Name	Description	p/n
pH 4,01	±0,01 / 25°C - Red	51100033
pH 7,00	±0,01 / 25°C - Green	51100043
pH 10,01	±0,02 / 25°C - Uncoloured	51100063

○ BOTTLE **500 ml** with calibration compartment integrated

Name	Description	p/n
pH 4,01	±0,01 / 25°C - Red	51100133
pH 7,00	±0,01 / 25°C - Green	51100143
pH 10,01	±0,02 / 25°C - Uncoloured	51100163

Brochures *XS Vio and XS VioLab* are available on our website www.hydrocal.nl

CONDUCTIVITY METER

PORTABLE INSTRUMENTS — WARRANTY **5** YEARS

BENCHTOP INSTRUMENTS — WARRANTY **3** YEARS

CE

MADE IN ITALY
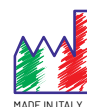
HOW TO CHOOSE

	Violab COND 50	Violab COND 60	COND 8+	COND 80+
COND and TDS	●	●	●	●
Salinity	○	●	●	●
Resistivity	○	○	○	●
Ultra pure water compensation	○	○	○	●
Display	Colour backlit LCD	Colour backlit LCD	Colour graphic	Colour graphic
GLP Calibration	○	●	●	●
Calibration password	○	○	●	●
Calibration points	4	4	4	4
Calibration due alarm	○	●	●	●
Electrode status indication	○	○	●	●
Data logger	○	●	●	●
PC / printer connection	○	●	●	●
Multilanguage menu	○	○	●	●
Online guide	○	○	○	●
External keyboard	○	○	○	●

COND 80+

○ **Resolution** *0,01 µS*

○ Coloured backlit high definition **LCD display**

○ Automatic and manual **temperature compensation**

○ **Data logger** auto and manual , **up to 1000 savings** *in GLP*

○ **Online guide** multilanguage

○ **Alphanumeric password**

MAIN FEATURES

Simultaneous view of COND and temperature.
IP54 keyboard**.**
Automatic and manual EC calibration
 with 4 standards recognition (84; 1413 µS, 12,88 and 111,8 mS) up to 4 points
with calculation of the different cell constants and a standard defined by the user.
Automatic scale. Reference temperature (15...30°C).
Linear temperature coefficient(0,00...10,00%) and non linear **for ultra pure water.** Selectable cell constant (C = 0,1- 1- 10,0).
Calibration points indications.
Intuitive menu. **Multilanguage menu**.
Entering company data, operator ID, sample ID and sensor ID via external keyboard (included). Functions for setting alarms and analog format, "Hold reading" and "Stability" with titration and timed stability mode for ISE.
Calibration due alarm, self-diagnosis messages. **Alphanumeric password for calibration** management and memory reset.
2 USB outputs for external keyboard connection (included) and PC. RS232 port for printer connection.
Magnetic stirrer with independent control. Quick manual online.
Data Link+ software freely downloadable from www.hydrocal.nl.

Measuring range:
Cond: 0,0 µS ...1000 mS (0,01 µS - automatic)
Resistivity: 1 Ω ...10 MΩ
Salinity: 0,01...100,0 ppt
TDS: 0,01 mg/l...500,0 g/l
Temperature: –20... +120,0 (0,1 °C)

Equipped with:
Electrode holder stand, conductivity standard, external keybo-ard, USB cable, power supply and user manual.

Name	Description	p/n
COND 80+ **STIRRER**	Complete with **EC cell VPT 1 glass/platinum** (C=1) with **temperature sensor integrated, and magnetic stirrer** with adjustable speed	50003402
COND 80+ **STIRRER**	**Without EC cell**, with magnetic stirrer with adjustable speed	50003412
COND 80+ **BASIC**	Complete with **EC cell VPT 1 glass/platinum** (C=1) with **temperature sensor integrated,** without magnetic stirrer	50003422
COND 80+ **BASIC**	Without EC cell and magnetic stirrer	50003432
KEYBOARD	Soft external keyboard for XS 80 Series	50001462
IQ-OQ MANUAL **80 SERIES**	Paper manual IQ-OQ for **XS 80 Series**	50001472

COND 8 +

- ○ **Resolution** *0,01 µS*
- ○ Coloured backlit high definition **LCD display**
- ○ Automatic and manual **temperature compensation**
- ○ **Data logger** auto and manual , **up to 1000 savings** *in GLP*

EC

MAIN FEATURES

Digital bench multi parameter for **COND, TDS, Salinity, temperature**. IP54 keyboard.

Simultaneous display of COND and Temperature.

Automatic and manual conductivity calibration with recognition of 4 standards (84; 1413 µS, 12.88 and 111,8 mS) from 1 to 4 points with calculation of the different cell constants and a standard defined by the user.

Automatic scale, Reference temperature (15... 30 ° C), Linear temperature coefficient (0.00 ... 10.00 %), selectable cell constant (C = 0.1- 1- 10.0) .

Calibrated points indication.

Manual and automatic **Data Logger** function, **up to 1000 savings** with date / time **according to GLP.**

Intuitive parameter management via icons. Multilanguage menu.

Functions for setting alarms and displaying in analog format, "Hold-reading" and "Stability" with titration mode, **calibration due alarm**, self-diagnosis messages.

USB output for PC connection and RS232 port for printer connection.

Numeric password for calibration management and memory deletion.

Magnetic stirrer with independent control.

Data Link + software freely downloadable from www.hydrocal.nl.

Measuring range:
Cond: 0,0 µS ...200 mS (0,01 µS - automatic)
Salinity: 0,01...100,0 ppt
TDS: 0,01 mg/l...100,0 g/l
Temperature: –10...+110,0 (0,1 °C)

Equipped with:
Electrode holder stand, conductivity standard, USB cable, power supply and user manual.

Name	Description	p/n
COND 8 + **STIRRER**	**Complete with epoxy EC cell 2301T** (C=1) temperature sensor integrated, and magnetic stirrer with adjustable speed	50003232
COND 8 + **STIRRER**	Without EC cell, **with magnetic stirrer** with adjustable speed	50003242
COND 8 + **BASIC**	**Complete with epoxy EC cell 2301T** (C=1) temperature sensor integrated, without magnetic stirrer	50003202
COND 8 + **BASIC**	Without EC cell and magnetic stirrer	50003212
IQ-OQ MANUAL **8 SERIES**	Paper manual IQ-OQ for **XS 8 Series**	50001472

ACCESSORIES 8 / 80 SERIES

Name	Description	p/n
PRINTER	External printer with normal paper for **XS VIOLAB 60 - 8 - 80**	50001502
STIRRER	Magnetic stirrer with adjustable speed for **XS 8+ and 80+ series**, complete with electrode holder and connecting cable	50001132

COND 60 VioLab

○ **Resolution** *0,01 µS*
○ Coloured backlit high definition **LCD display**
○ Automatic and manual **temperature compensation**
○ **Data logger** auto and manual , **up to 1000 savings** *in GLP*
○ **PC/Printer** connection

MAIN FEATURES

Professional bench meters with innovative **backlit high definition coloured LCD display**, with possibility of brightness adjustment.
Possibility to select the parameters to show on the display.
The **step by step guide** in setup and calibration allows a simple and immediate use of the device.
Automatic conductivity calibration up to 4 points (84; 147; 1413 µS e 12,88; 111,8 mS) and 1 point custom.
Automatic resolution, reference temperature from 15 to 30 °C, and selectable cell constant (C= 0,1; 1; 10).
Indication of the calibrated points, with icons.
Measurement stability indication.
All operations are constantly monitored and shown to the operator by the **coloured LED** above the display and **self-diagnosis messages.**
GLP function: Date and time, recall of calibration data and function "**Calibration due".**
Data logger up to 1000 savings, manual and automatic, PC connection via micro-USB.
Data-Link + software available from www.hydrocal.nl.
RS 232 external printer connection.

Measuring range
Cond: 0,0 µS ...199,9 mS (0,01 µS - automatic)
Salinity: 0,1 ppm ... 100 ppt
TDS: 0,01 mg/l...200 g/l
Temperature: - 10...+ 110,0 (0,1 °C)

Equipped with:
Electrode holder stand, conductivity standard, USB cable, power supply and instructions for use.

Name	Description	p/n
COND 60 VIOLAB WITH EC CELL	Complete with conductivity cell2301T , temperature sensor integrated, 1 m cable	50103072
COND 60 VIOLAB WITHOUT EC CELL	With accessories, **without conductivity cell**	50103082

COND 50 VioLab

○ **Resolution** *0,01 µS*
○ Coloured backlit high definition **LCD display**
○ Automatic and manual **temperature compensation**

MAIN FEATURES

Professional bench meters with **innovative backlit high definition coloured LCD display**, with possibility of brightness adjustment.
Possibility to select the parameters to show on the display.
The **step by step guide** in setup and calibration allows a simple and immediate use of the device.
Automatic conductivity calibration up to 4 points (84; 147; 1413 µS e 12,88; 111,8 mS) and 1 point custom.
Automatic resolution, reference temperature from 15 to 30 °C, and selectable cell constant (C= 0,1; 1; 10).
Indication of the calibrated points, with icons.
Measurement **stability indication**.
All operations are constantly monitored and shown to the operator by the **coloured LED** above the display and **self-diagnosis messages.**

Measuring range:
Cond 0,0 µS ...199,9 mS (0,01 µS - automatic)
TDS: : 0,01 mg/l...200 g/l
Temperature: 0...+100,0 (0,1 °C)

Equipped with:
Electrode holder stand, conductivity standard and instructions manual.

Name	Description	p/n
COND 50 VIOLAB WITH EC CELL	Complete with conductivity cell 2301T , temperature sensor integrated, 1 m cable	50103002
COND 50 VIOLAB WITHOUT EC CELL	With accessories, **without conductivity cell**	50103012

Cond 70 Vio

- ○ **Resolution** *0,01 µS*
- ○ Automatic and manual **temperature compensation**
- ○ **Automatic calibration** on 4 standard points and 1 custom
- ○ **Data logger** auto and manual , **up to 1000 savings** *in GLP*
- ○ Coloured backlit high definition **LCD display**
- ○ **GLP** functions

EC

MAIN FEATURES
Professional portable meter with innovative **backlit high definition coloured LCD display**, suitable to work in any conditions, thanks also to the possibility to adjust automatically and manually contrast and brightness of the display. Possibility to select the parameters you want to show.
The **step by step guide** in setup and calibration mode allows a simple and intuitive use of the device.
Automatic calibration of conductivity up to 4 points and 1 point custom defined by the user.
Adjustable reference temperature and selectable cell constant.
Indication with icons of the calibrated points.
Measurement **stability indicator**.
All operations and errors are constantly monitored and shown to the operator via the **coloured LED** above the display.
GLP function: Date and time, recall of calibration data and function **"Calibration due".**
Data logger up to 1000 savings, manual and automatic, PC connection via **micro-USB.**
Data-Link + software available from www.hydrocal.nl.

Measuring range:
Cond: 0,01 µS ...200,0 mS (0,01 µS - automatic)
Salinity: 0,1 ppm ... 100 ppt
TDS: 0,01 mg/l ... 200,0 g/l
Temperature: –10...+110,0 (0,1 °C)

Data Link Software

Equipped with:
Conductivity standard, USB cable, power supply, user manual and carrying case.
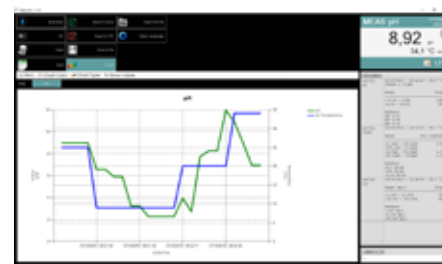
Name	Description	p/n
COND 70 VIO WITH CELL	Complete with **conductivity cell 2301T with temperature sensor integrated**. Cable 1 m	50110512
COND 70 VIO WITHOUT CELL	With accessories, **without conductivity cell**	50110522

Cond 7 Vio

- Resolution *0,01 µS*
- Automatic and manual **temperature compensation**
- Coloured backlit high definition **LCD display**
- **Automatic calibration** on 4 standard points and 1 custom
- 3 selectable **cell constants**

MAIN FEATURES

Professional portable conductivity meter with innovative **backlit high definition coloured LCD display**, suitable to work in any conditions, thanks also to the possibility to adjust automatically and manually contrast and brightness of the display.

The **step by step guide** in setup and calibration mode allows a simple and intuitive use of the device.

Automatic calibration of conductivity up to 4 points and 1 point custom defined by the user.

Adjustable reference temperature and selectable cell constant.

Indication with icons of the calibrated points.

Measurement **stability indicator** and possibility of selecting 3 levels of stability.

All operations and errors are constantly monitored and shown to the operator via the **coloured LED** above the display.

Measuring range:
Cond: 0,1 µS ...200 mS (0,01 µS - automatic)
TDS: 0,01 mg/l ... 200,0 g/l
Temperature: 0 ... 100,0 (0,1 °C)

Cond 7 Vio Kit

Equipped with:
Conductivity standard, user manual and carrying case.

Name	Description	p/n
COND 7 VIO **WITH CELL**	Complete **with conductivity cell 2301T with temperature sensor integrated**. 1 m cable	50110412
COND 7 VIO **WITHOUT CELL**	With accessories, **without conductivity cell**	50110422

ACCESSORIES

CONDUCTIVITY CELL

Name	Description	p/n
VP 1 EC CELL	Cell in **glass body with platinum plates C=1**, fixed cable 1 mt. with BNC plug. Measuring range: 10µS...10 mS – Temperature 0...80 °C	50004062
VPT 1 EC CELL	Cell in **glass body with platinum plates C=1**, with temperature sensor integrated. Fixed cable 1 mt., BNC + RCA Cinch plug. Measuring range: 10µS...100 mS – Temperature 0...80 °C	50003352
VPT 01 EC CELL	Steel and PVC cell, C=0,1, with temperature sensor integrated. Fixed cable 1 mt., BNC + RCA plug. Measuring range: 0,1µS...1 mS – Temperature 0...60 °C	50004012
VPT 10 EC CELL	Cell in glass body with platinum plates C=10, temperature sensor integrated, fixed cable 1 mt. BNC + RCA Cinch plug. Measuring range: 100µS...200 mS..	50004072
VPT 10 H EC CELL	Cell in **glass body with platinum plates C=10**, temperature sensor integrated, fixed cable 1 mt. BNC + RCA Cinch plug. **Measuring range: 100µS...500 mS.** Only for XS COND 80+	50003372
2301 T EC CELL	**Cell in epoxy body C=1, with temperature sensor integrated.** Fixed cable 1 **mt.** BNC+RCA Cinch plug. Measuring range: 10µS...200 mS – Temperature 0...60 °C	50004002
2301 T / 5 EC CELL	**Cell in epoxy body C=1, with temperature sensor integrated.** Fixed cable 5 **mt.** BNC+RCA Cinch plug. Measuring range: 10µS...200 mS – Temperature 0...60 °C	50004022
VPT SOIL EC CELL	Conductivity cell with temperature sensor integrated and penetration tip, C=1, **for soil measurement**, cable 1,5 m. Measuring range 10 µS...50 mS	50004082

BUFFER SOLUTIONS

With **certificate of analysis**

○ SACHETS **25 ml**

Name	Description	p/n
EC 1413 µS/cm (25°C)	Pack of 20 sachets, with certificate of analysis	51102053
EC 12880 µS/cm (25°C)	Pack of 20 sachets, with certificate of analysis	51102063
SET CAL COND	Includes 10 x EC 1.413 µS and 10 x EC 12.880 µS	51102223
COND REPLACEMENT	Includes 7 x EC 1.413 µS, EC 12.880 µS and 6 x deionized H2O	51102253
H2O	Pack of 20 sachets of deionized water	51102093

○ BOTTLE **500 ml ,** with calibration compartment

Name	Description	p/n
84 µS/cm (25°C)	N.I.S.T. Accuracy ±1%	51100613
147 µS/cm (25°C)	N.I.S.T Accuracy ±1%	51100623
1413 µS/cm (25°C)	1278 µS/cm (20°C) - N.I.S.T. Accuracy ±1%	51100633
12.880 µS/cm (25°C)	11670 µS/cm (20°C) - N.I.S.T. Accuracy ±1%	51100643

TEMPERATURE SENSOR

Name	Description	p/n
NT 55 TEMPERATURE SENSOR	Temperature sensor for XS VioLab series	50002012

ACCESSORIES

Name	Description		p/n
ST 10 MAGNETIC STIRRER	**Magnetic stirrer, adjustable speed,** with rechargeable batteries, magnetic bar and power supply.		50000132
ELECTRODE HOLDER MOD: 3900	Flexible electrode holder		50000112
PRINTER	External printer with normal paper for XS 8 / 80 SERIES XS VIOLAB 60 power supply and RS 232 cable		50001502
POWER SUPPLY VIO - PORTABLE	Power supply and cable for XS Vio portable series		50110172
POWER SUPPLY VIOLAB - BENCHTOP	Power supply and cable for XS VioLab benchtop series		50001052

EC

EC

DATA LINK +

On the software are shown all the information about the instruments and calibrations, like slope and offset.
It is possible to view all saved data in graphic form, to see the trend, or in table form.
It is also possible to export data in Excel and in PDF.
On the top right corner, the real time view allows to check measurement directly on the PC.
Multilanguage: English - Italian – French - German – Spanish - Czech.
And then there are a lot of functions for the remote control of the instruments, like data saving and memory reset.

Software **Data Link +** available for free on our website www.hydrocal.nl

Brochures **XS Vio and XS VioLab** are available on our website www.hydrocal.nl

MULTIPARAMETER
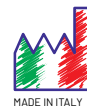
HOW TO CHOOSE

	Violab PC50	Violab PC 60	PC 8+	PC 80+
pH Resolution	0,01 pH	0,01 pH	0,01 pH	0,001 pH
ION	○	○	○	●
COND e TDS	●	●	●	●
Salinity	○	●	●	●
Resistivity	○	○	○	●
Ultra pure water compensation	○	○	○	●
Display	Colour backlit LCD	Colour backlit LCD	Colour graphic	Colour graphic
Analogic view	○	○	●	●
GLP Calibration	○	●	●	●
Calibration password	○	○	●	●
Calibrations points	3	3	3	5
Calibration due alarm	○	●	●	●
Electrode status indication	○	○	●	●
Data logger	○	●	●	●
PC / Printer connection	○	●	●	●
Multilanguage	○	○	●	●
Online guide	○	○	○	●
External keyboard	○	○	○	●

PC 80 + DHS

- ○ **Resolution** *0,1 / 0,01 / 0,001 pH - 0,01 µS*
- ○ Backlit coloured high-definition **graphic display**
- ○ **Data logger** auto and manual, up to **1000 savings** *in GLP*
- ○ **On line guide** multilanguage
- ○ Alphanumeric **password**
- ○ Graphic **calibration report**

PC

MAIN FEATURES

Simultaneous view of pH/COND and temperature.
Automatic calibration up to 5 pH points according GLP
with date and time. **IP54** keyboard.
Selectable buffers NIST, USA, DIN or custom (5
values). **ISE calibration up to 5 points**.
**Calibration report and innovative graphic view of
the status of the sensor**.
Calibration points indications.
Automatic and manual EC calibration with 4 standards
recognition (84; 1413 µS, 12,88 and 111,8 mS) up to 4 points
with calculation of the different cell constants and a
standard defined by the user.
Automatic scale. Reference temperature (15...30°C).
**Linear temperature coefficient (0,00...10,00%) and non
linear for ultra pure water.** Selectable cell constant (C = 0,1-
1- 10,0).
Calibration points indications.
Intuitive menu. **Multilanguage menu**.
Entering company data, operator ID, sample ID and sensor ID via external keyboard (included).
Functions for setting alarms and analog format, "Hold reading" and "Stability" with titration and timed
stability mode for ISE.
Calibration due alarm, self-diagnosis messages.
Alphanumeric password for calibration management and memory reset.
2 USB outputs for external keyboard connection (included) and PC. RS232 port for printer connection.
Magnetic stirrer with independent control. Quick manual online.
Data Link software freely downloadable from www.hydrocal.nl.

Measuring range:
pH: −2,000...20,000 (0,001 pH)
mV: −2000...+2000 (0,1 mV)
ISE: 0.001...19999 ppm
Cond: 0,0 µS ...1000 mS (0,1 µS - automatic)
Resistivity: 1 Ω ...10 MΩ
Salinity: 0,01...100,0 ppt
TDS: 0,1 mg/l...500,0 g/l
Temperature: −20...120,0 °C (0,1 °C)

Equipped with:
S7/BNC cable, temperature sensor NT 55, electrode hol-
der, buffer solutions, USB cable and power supply.

Name	Description	p/n
PC 80+DHS STIRRER	**Complete with pH XS Standard DHS**, **EC cell VPT 1** glass/platinum (C=1) with temperature sensor incorporated, magnetic stirrer with adjustable speed.	50004232
PC 80+DHS STIRRER	**Complete with pH XS Standard**, **EC cell VPT 1** glass/platinum (C=1) with temperature sensor incorporated, magnetic stirrer with adjustable speed.	50004242
PC 80+DHS STIRRER	**Without pH electrode**, **conductivity cell VPT 1** glass/platinum (C=1) with temperature sensor incorporated, magnetic stirrer with adjustable speed.	50004252
PC 80+DHS STIRRER	**With pH electrode XS Standard**, **without conductivity cell** , magnetic stirrer with adjustable speed.	50004262
PC 80+DHS STIRRER	**Without pH electrode**, without **conductivity cell**, with magnetic stirrer with adjustable speed.	50004272

PC 8 + DHS

○ **Resolution** *0,1 / 0,01 pH - 0,01 µS*

○ Backlit coloured high-definition **graphic display**

○ **Automatic** and manual **temperature compensation**

○ **Data logger** auto and manual, up to **1000 savings** *in GLP*

MAIN FEATURES

Digital bench multi parameter **pH, mV, COND, TDS, Salinity, temperature.** IP54 keyboard.

Simultaneous display of pH / COND and Temperature.

Automatic pH calibration from 1 to 3 points according to GLP with date and time.

Selectable buffer NIST, USA or custom (2 values).

Calibration report and innovative graphic view.

Calibrated points indication.

Automatic and manual conductivity calibration with recognition of 4 standards (84; 1413 µS, 12.88 and 111,8 mS) from 1 to 4 points with calculation of the different cell constants and a standard defined by the user.

Automatic scale, Reference temperature (15... 30 ° C),

Linear temperature coefficient (0.00 ... 10.00 %), selectable cell constant (C = 0.1- 1- 10.0).

Calibrated points indication.

Manual and automatic **Data Logger** function, **up to 1000 savings with date / time according to GLP.**

Intuitive parameter management via icons. Multilanguage menu.

Functions for setting alarms and displaying in analog format, "Hold-reading" and "Stability" with titration mode, calibration due alarm, self-diagnosis messages.

USB output for PC connection and RS232 port for printer connection.

Numeric password for calibration management and memory deletion. Magnetic stirrer with independent control.

Data Link software freely downloadable from www.hydrocal.nl.

PC

Measuring range:

pH: −2,00...16,00 (0,01 pH)

mV: −2000...+2000 (0,1 mV)

Temperature: -10...110,0 °C (0,1 °C)

Cond: 0,0 µS ...200 mS (automatic)

Salinity: 0,01...100,0 ppt

TDS: 0,1 mg/l...100,0 g/l

Equipped with:

S7/BNC cable, temperature sensor NT 55, electrode holder, buffer solutions, USB cable and power supply.

Name	Description	p/n
PC 8 + DHS STIRRER	**Complete with pH XS Standard DHS, EC cell VPT 1** glass/platinum (C=1) with temperature sensor incorporated, magnetic stirrer with adjustable speed.	50004132
PC 8 + DHS STIRRER	**Complete with pH XS Standard, EC cell VPT 1** glass/platinum (C=1) with temperature sensor incorporated, magnetic stirrer with adjustable speed.	50004142
PC 8 + DHS STIRRER	**Without pH electrode, conductivity cell VPT 1** glass/platinum (C=1) with temperature sensor incorporated, magnetic stirrer with adjustable speed.	50004152
PC 8 + DHS STIRRER	**With pH electrode XS Polymer, without conductivity cell ,** magnetic stirrer with adjustable speed.	50004162
PC 8 + DHS STIRRER	**Without pH electrode,** and without **conductivity cell,** with magnetic stirrer with adjustable speed.	50004172

ACCESSORIES 8 / 80

Name	Description	p/n
PRINTER	External printer, **normal paper** with RS 232 cable	50001502
STIRRER	**Magnetic stirrer with adjustable speed for 8+ e 80+ Series,** complete with electrode holder and connecting cable	50001132
IQ-OQ MANUAL 8 SERIES	Paper IQ-OQ manual for **XS 8 Series**	50001472

PC 60 VioLab

- ○ **Resolution** *0,1 / 0,01 pH - 0,01 µS*
- ○ Automatic and manual **temperature compensation**
- ○ **Data logger** auto and manual , **up to 1000 savings** *in GLP*
- ○ **PC/Printer** connection
- ○ **DHS digital sensors** management

MAIN FEATURES

Professional bench meters with innovative **backlit high definition coloured LCD display**, with possibility of brightness adjustment.
Management of DHS digital sensors.
Possibility to select the parameters to show on the display.
The **step by step guide** in setup and calibration allows a simple and immediate use of the device.
Automatic pH calibration with USA and NIST buffers, up to 3 points and 2 points defined by the user.
Automatic ORP calibration on 1 point.
Automatic conductivity calibration up to 4 points (84; 147; 1413 µS e 12,88; 111,8 mS) and 1 point custom.
Automatic resolution, reference temperature from 15 to 30 °C, and selectable cell constant (C= 0,1; 1; 10).
Indication of the calibrated points, with icons.
Measurement **stability indication** and possibility to select 3 stability levels.
All operations are constantly monitored and shown to the operator by the **coloured LED** above the display and
self-diagnosis messages.
GLP function: Date and time, recall of calibration data
and function "Calibration due".
Data logger up to 1000 savings, manual and automatic, PC connection via **micro-USB.**
Data-Link + software available from www.hydrocal.nl.
RS 232 external **printer connection**

Measuring range:
pH: –2,00...16,00 (0,01 pH)
mV: –1000...+1999 mV (0,1 mV)
Cond: 0,0 µS ...200 mS (0,01 µS - automatic)
Salinity: 0,1 ppm ... 100 ppt
TDS: 0,01 mg/l...200,0 g/l
Temperature:-10...110,0 °C (0,1 °C).

Equipped with:
Electrode holder stand, pH and conductivity buffer solutions, USB cable, power supply and user manual.

Name	Description	p/n
PC 60 VIOLAB **DHS ELECTRODE**	Complete with digital pH electrode XS 201 T DHS and conductivity cell 2301T (C=1), both with integrated temperature sensor	50103942
PC 60 VIOLAB **ANALOGIC ELECTRODE**	Complete with pH electrode XS 201 T and conductivity cell 2301T (C=1), both with integrated temperature sensor	50103952
PC 60 VIOLAB **WITHOUT ELECTRODE**	With conductivity cell 2301T (C=1), accessories, cable S7-BNC and temperature sensor NT 55 **Without pH electrode**	50103972

PC 50 VioLab

○ **Resolution** *0,1 / 0,01 pH - 0,01 µS*

○ Automatic and manual **temperature compensation**

○ **DHS digital sensors** management

MAIN FEATURES

Professional bench meters with innovative **backlit high definition coloured LCD display**, with possibility of brightness adjustment.
Possibility to select the parameters to show on the display.
The **step by step guide** in setup and calibration allows a simple and immediate use of the device.
Automatic pH calibration with USA and NIST buffers, up to 3 points and 2 points defined by the user.
Automatic ORP calibration on 1 point.
Automatic conductivity calibration up to 4 points (84; 147; 1413 µS e 12,88; 111,8 mS) and 1 point custom.
Automatic resolution, reference temperature from 15 to 30 °C, and selectable cell constant (C= 0,1; 1; 10).
Indication of the calibrated points, with icons.
Measurement stability indication and possibility to select 3 stability levels.
All operations are constantly monitored and shown to the operator by the **coloured LED** above the display and self-diagnosis messages.

Measuring range:
pH: 0,00...14,00 (0,01 pH)
mV: –1000...+1000 (0,1 mV)
Cond: 0,0 µS ...200 mS (0,01 µS - automatic)
TDS: 0,01 mg/l...200,0 g/l
Temperature: 0...100,0 °C (0,1 °C).

Coloured backlit LCD display

Equipped with:
Electrode holder stand, pH and conductivity buffer solutions, power supply and user manual.

Name	Description	p/n
PC 50 VIOLAB DHS ELECRODE + CELL	Complete with digital pH electrode XS 201 T DHS and conductivity cell 2301T (C=1), both with integrated temperature sensor	50103892
PC 50 VIOLAB ELECTRODE + CELL	Complete with pH electrode XS 201 T and conductivity cell 2301T (C=1), both with integrated temperature sensor	50103902
PC 50 VIOLAB WITHOUT ELECTRODE	With conductivity cell 2301T (C=1), accessories, cable S7-BNC and temperature sensor NT 55 Without pH electrode	50103912

XS INSTRUMENTS

REVIO   NEW

WARRANTY
3
YEARS

○ **3 Inputs: pH / ISE – Cond – O2**
○ **Colour graphic display**
○ **Data logger,** manual and automatic, **up to 10.000 savings in GLP**

MAIN FEATURES

Professional portable multiparameter with triple **power supply** (battery, PC, electric network) with **innovative backlit colour display**, suitable to work excellently in any conditions, thanks to the automatic and manual adjustment of contrast and brightness.

Possibility to measure **pH, mV, ORP, ISE, Conductivity, TDS, Salinity, Resistivity, Dissolved Oxygen and Temperature**.

The **step by step** guide in setup and calibration mode allows a simple and intuitive use of the device.

Simultaneous display of multiple parameters defined by the user.

Automatic pH calibration with USA and NIST buffers up to 5 points and 5 points defined by the user.

Automatic ORP calibration in 1 point.

Automatic calibration of conductivity up to 4 point and 1 point defined by the user. Adjustable reference temperature and selectable cell constant.

Automatic O2 calibration up to 2 points (0% – 100%).

Indication with icons of the calibrated points.

GLP functions: Date and time, recall of calibration data and setting of calibration deadline.

Manual and automatic data logger with possibility to download data to PC via micro-USB.

Data Link software available to download for free from www.giorgiobormac.com.

Stability indicator of measurement and possibility to select 3 stability levels.

All operations are constantly monitored and reported to the user through the **coloured LED** above the display and the self-diagnosis messages.

Equipped with:
Field support with 3 holes for electrodes, buffer solutions, USB cable, power supply, instructions for use and carrying case

XS Revio connectors

Measuring range
pH: –2,000...20,000 (0,001 pH)
mV: –2000...+2000 (0,1 mV)
ISE: 0.001...19999 ppm
Cond: 0,0 µS ...1000 mS (0,1 µS – automatic)
Resistivity: 1 Ω ...10 MΩ
Salinity: 0,1 ppm ... 100 ppt
TDS: 0,1 mg/l...500,0 g/l
DO: 0,0...50 mg/l (0,01 / 0,1 mg/l)
Saturation: 0,0...400 % (0,1 / 1 %)
Barometric pressure: 0...1100 mbar (1 mbar)
Temperature: –30...130,0 °C (0,1 °C)

Multiview

PC

Name	Description	p/n
REVIO DHS KIT	Complete with **digital pH electrode 201 T DHS, conductivity cell 2301 T and polarographic sensor**, with built-in temperature sensor and fixed cable 3m, in carrying case.	50110952
REVIO KIT IN CARRYING CASE	Complete with **pH electrode 201 T, conductivity cell 2301T and polarographic sensor**, with built-in temperature sensor and fixed cable 3m, in carrying case.	50110912
REVIO pH ELECTRODE + OXY	Complete with **electrode XS 201 T and polarographic sensor**, both with built-in temperature sensor and fixed cable 3m, in carrying case.	50110922
REVIO COND + OXY	Complete with **conductivity cell 2301T and polarographic sensor**, both with built-in temperature sensor and fixed cable 3m, cable S7-BNC and NT55 3m, in carrying case.	50110942
REVIO ONLY INSTRUMENT	Instrument in carrying case with NT55 probe with cable 3m, cable S7-BNC, and accessories	50110932

PC

ACCESSORIES

ELECTRODES AND SPARE PARTS

Name	Description	p/n
201 T – DHS pH ELECTRODE – 3 m	**Digital** pH electrode combined with DHS technology with built-in temperature sensor. Gel filling with porous separator. Maintenance-free. Fixed cable 3m. **pH 0...14, temperature 0...60 °C**. Dimensions (L x Ø) mm 120x12	32200153
201 T – ATC pH ELECTRODE – 3 m	Plastic body pH electrode with temperature sensor for general applications. Gel filling with porous separator Maintenance-free. Fixed cable 3 m. **pH 0...14, temperature 0...60 °C**. Dimensions (L x Ø) mm 120x12	50002072
2301 T EC CELL – 3 m	Conductivity cell C=1 with built-in temperature sensor, epoxy body, cable 3 m. **Working range**: 10µS...200 mS	50004092
DO7 / 3mt OXY SENSOR – 3 m	**Polarographic sensor**, cable 3 m, 2 replacement membranes, refill solution (30ml)	50010242
REDOX REDOX SENSOR – 3 m	Combined Redox electrode with plastic body for general applications. Fixed cable 3 m with BNC connector. Gel filling with porous separator. Maintenance-free. **Working range**: ± 1.000 mV, temperature 0...60 °C	51004132
NT 55 T SENSOR – 3 m	Temperature sensor NTC 30 K, cable 3 m, **for liquids and air**	50002082
MEMBRANE	Kit 2 replacement membranes for sensor DO7/3MT	50010252
ELECTROLYTE	Refill solution for sensor DO7/3MT (30ml)	50010262
0% STANDARD	Zero Oxygen standard - **1 bottle**	50010292
0% STANDARD	Zero Oxygen standard - **5 bottles pack**	50010272

PC 70 Vio

○ **Resolution** *0,1 / 0,01 pH - 0,01 µS*
○ Automatic and manual **temperature compensation**
○ **Data logger** auto and manual , **up to 1000 savings** *in GLP*
○ **GLP** function
○ **DHS digital sensors** management

PC

MAIN FEATURES

Professional portable multiparameter with **innovative high-resolution colour display**, suitable to work in any conditions, thanks to the automatic and manual brightness adjustment.
Possibility to select the parameters you want to show.
The **step by step guide** in setup and calibration mode allows a simple and intuitive use of the device.
Automatic pH calibration with USA and NIST buffers up to 3 points and 2 points custom defined by the user.
Automatic ORP calibration in 1 point.
Automatic calibration of conductivity up to 4 points and 1 point custom defined by the user.
Adjustable reference temperature and selectable cell constant.
Indication with icons of the calibrated points.
Measurement **stability indicator** and possibility of selecting 3 levels of stability.
All operations and errors are constantly monitored and shown to the operator via the **coloured LED** above the display.
GLP function: Date and time, recall of calibration data
and function **"Calibration due"**.
Data logger up to 1000 savings, manual and automatic, PC connection via micro-USB.
Data-Link + software available from www.hydrocal.nl.

Measuring range
pH: –2,00...16,00 (0,01 pH)
mV: –1000...+1900 (0,1 mV)
Cond: 0,01 µS ...200 mS (0,01 µS - automatic)
Salinity: 0,1 ppm ... 100 ppt
TDS: 0,01 mg/l ... 200 g/l
Temperature:-10...110,0 °C (0,1 °C)

Equipped with:
Field support with 3 holes for electrodes, coloured buffer solutions of pH and conductivity, USB cable and power supply, instructions for use and plastic carrying case.

PC 70 Vio Kit

Name	Description	p/n
PC 70 VIO **DHS ELECTRODE + CELL**	With digital pH electrode 201 T DHS and conductivity cell 2301T, both with integrated temperature sensor and cable 1 m	50110872
PC 70 VIO **ELECTRODE + EC CELL**	With pH electrode 201 T and conductivity cell 2301T, both with integrated temperature sensor and cable 1 m	50110812
PC 70 VIO **ONLY EC CELL**	Without pH electrode. With conductivity cell 2301 T, temperature sensor NT55 , S7-BNC cable and accessories	50110822

PC 7 Vio

○ **Resolution** *0,1 / 0,01 pH - 0,01 µS*

○ Automatic and manual **temperature compensation**

○ **DHS digital sensors** management

MAIN FEATURES

Professional portable multiparameter with **innovative high-resolution color display,** suitable to work in any conditions, thanks also to the possibility to adjust automatically and manually contrast and brightness of the display.

Possibility to select the parameters you want to show.

The **step by step guide** in setup and calibration mode allows a simple and intuitive use of the device.

Automatic pH calibration with USA and NIST buffers up to 3 points and 2 points custom defined by the user.

Automatic ORP calibration in 1 point.

Automatic calibration of conductivity up to 4 points and 1 point custom defined by the user.

Adjustable reference temperature and selectable cell constant.

Indication with icons of the calibrated points.

Measurement **stability indicator** and possibility of selecting 3 levels of stability.

All operations and errors are constantly monitored and shown to the operator via the **coloured LED** above the display.

Measuring range:
pH: 0,00...14,00 (0,01 pH)
mV: –1000...+1000 (0,1 mV)
Cond: 0,01 µS ...200 mS (0,01 µS - automatic)
TDS: 0,01 mg/l ... 200 g/l
Temperature: 0...100,0 °C (0,1 °C)

Equipped with:
Field support with 3 holes for electrodes, coloured buffer solutions of pH and conductivity, instructions manual and plastic carrying case.

Connectors protected by the semitransparent case

Name	Description	p/n
PC 7 VIO **DHS ELECTRODE + CELL**	With digital pH electrode 201 T DHS and conductivity cell 2301T, both with integrated temperature sensor and cable 1 m	50110752
PC 7 VIO **ELECTRODE + EC CELL**	With pH electrode 201 T and conductivity cell 2301T, both with integrated temperature sensor and cable 1 m	50110712
PC 7 VIO **ONLY EC CELL**	Without pH electrode. With conductivity cell 2301 T, temperature sensor NT55 , S7-BNC cable and accessories	50110722

PC ACCESSORIES

PC

pH ELECTRODES

Name	Description	p/n
XS STANDARD DHS DIGITAL pH ELECTRODE	**Digital pH electrode combined with DHS technology.** Glass body and cylindrical membrane for general applications. Refillable KCl 3M electrolyte. **Excellent chemical resistance and easy to clean. Included with serial number and certificate.** Dimensions (LxØ) mm 120x12 - **pH 0...14 - Temperature -10...100 °C**	32200123
XS STANDARD PH ELECTRODE	pH Electrode combined with S7 head. Glass body, for general use. Refillable KCl 3M Electrolyte. **Excellent chemical resistance and easy to clean.** **With serial number and certificate.** Dimensions (LxØ mm) 120x 12 - pH 0...14 - Temperature -10...100 °C.	32200363
XS POLYMER S7	Combined pH Electrode **S7 head**. Glass Body for general use. Cylindrical membrane. Polymer filling, open pore. **For a fast response with high accuracy in samples that might contaminate normal diaphragms.** Maintenance-free. Dimensions (LxØ) mm 120x12 - **pH 0...14 - Temperature -10...80 °C**	32200223
201 T DHS DIGITAL pH ELECTRODE	**Digital pH electrode combined with DHS technology.** Plastic body for general use. Gel Filling, ceramic diaphragm. Maintenance-free. Dimensions (LxØ) mm 120x12. **pH 0...14 - Temperature 0...60 °C**	32200103
201 T PH ELECTRODE	**Combined pH electrode with NTC temperature sensor integrated.** Epoxy body for general applications. Polymer filling with ceramic diaphragm. Maintenance-free. Fixed cable 1 mt., BNC + RCA plug. Dimensions (LxØ) mm 120x12 - **pH 0...14 - Temperature 0...60 °C**	50002002
201 T / 5 PH ELECTRODE	**Combined pH electrode with NTC temperature sensor integrated.** Epoxy body for general applications. Polymer filling with ceramic diaphragm. Maintenance-free. Fixed cable 5 mt., BNC + RCA plug. Dimensions (LxØ) mm 120x12 - **pH 0...14 - Temperature 0...60 °C**	50002022

CONDUCTIVITY CELLS

Name	Description	p/n
VP 1 EC CELL	Cell in **glass body with platinum plates C=1**, fixed cable 1 mt. with BNC plug. Measuring range: 10µS...10 mS – Temperature 0...80 °C	50004062
VPT 1 EC CELL	Cell in **glass body with platinum plates C=1**, with temperature sensor integrated. Fixed cable 1 mt., BNC + RCA Cinch plug. Measuring range: 10µS...100 mS – Temperature 0...80 °C	50003352
VPT 01 EC CELL	**Steel and PVC cell, C=0,1**, with temperature sensor integrated. Fixed cable 1 mt., BNC + RCA Cinch plug. Measuring range: 0,1µS...1 mS – Temperature 0...60 °C	50004012
VPT 10 EC CELL	Cell in glass body with platinum plates C=10, temperature sensor integrated, fixed cable 1 mt. BNC + RCA Cinch plug. Measuring range: 100µS...200 mS..	50004072
VPT 10 H EC CELL	Cell in **glass body with platinum plates C=10**, temperature sensor integrated, fixed cable 1 mt. BNC + RCA Cinch plug. **Measuring range: 100µS...500 mS.** **Only for XS COND 80+**	50003372
2301 T EC CELL	**Cell in epoxy body C=1**, with temperature sensor integrated. Fixed cable 1 **mt**. BNC+RCA Cinch plug. Measuring range: 10µS...200 mS – Temperature 0...60 °C	50004002
2301 T / 5 EC CELL	**Cell in epoxy body C=1**, with temperature sensor integrated. Fixed cable 5 **mt**. BNC+RCA Cinch plug. Measuring range: 10µS...200 mS – Temperature 0...60 °C	50004022

TEMPERATURE SENSORS

Name	Description	p/n
NT 55 TEMPERATURE SENSOR	Temperature sensor NTC 30K **for liquids and air**	50002012
NT 7P TEMPERATURE SENSOR	Temperature sensor NTC 30K **at penetration temp. sensor**, diameter 4 mm, fixed cable 1 m	50011122

REDOX SENSORS

Name	Description	p/n
REDOX SENSOR	Electrode in epoxy body. Gel filling, double junction, maintenance-free. Ceramic diaphragm. Cable S7-BNC, 1 m. Dimensions (LxØ) mm 120X12 **Measuring range: ± 1.000 mV, temperature 0...60 °C**	32105302
REDOX / 5 SENSOR	Electrode in epoxy body. Gel filling, double junction, maintenance-free. Ceramic diaphragm. Cable S7-BNC, 5 m. Dimensions (LxØ) mm 120X12 **Measuring range: ± 1.000 mV, temperature 0...60 °C**	32105102

CONNECTION CABLE

Connecting cable with **S7 head** and BNC plug for XS pH-meter.
Diameter 3 mm, length 1 m.

Name	Description	p/n
BNC	Cable S7-BNC	33551733

CALIBRATION KIT - SACHETS BUFFER SOLUTIONS

Name	Description	p/n
SET CAL pH BIS	It contains 10 x pH 4.01 and 10 x pH 7.00, 25 ml	51102203
SET CAL pH TRIS	It contains 7 x pH 4.01, 7 x pH 7.00, 6 x pH 10.01, 25 ml	51102213
SET CAL COND	It contains 10 x EC 1.413 µS and 10 x EC 12.880 µS , 25 ml	51102223
SET CAL PC	It contains 7 x pH 4.01 and 7.00, 6 x EC 1.413 µS , 25 ml	51102233
REPLACEMENT pH	It contains 6 x pH 4.01, pH 7.00, H2O, and 2 x Storage , 25 ml	51102243
REPLACEMENT COND	It contains 7 x EC 1.413 µS, EC 12.880 µS and 6 x deionized H2O, 25 ml	51102253
REPLACEMENT PC	It contains 5 x pH 4.01, pH 7.00 and 1.413 µS, 3 x H2O, 25 ml and 2 x Storage 10 ml	51102263
STORAGE	Storage solution for electrodes **55 ml**	32208043
STORAGE	Storage solution for electrodes **500 ml**	32208053

ACCESSORIES

Name	Description	p/n
ST 10 MAGNETIC STIRRER	**Magnetic stirrer, adjustable speed,** with rechargeable batteries, magnetic bar and power supply.	50000132
HOLDER MOD: 3900	Flexible electrode holder	50000112
PRINTER	External printer with normal paper for 60 / 8 / 80 Series, power supply and RS 232 cable	50001502

Oxy 70 Vio

○ High accuracy with **low oxygen level**
○ High resolution backlit *coloured* LCD Display
○ **Automatic compensation** of temperature and pressure
○ **Data logger** *auto and manual,* **up to 1000 savings** in GLP
○ **GLP** *with date and time of the last calibration*
○ **Auto calibration** *DO 0%-100%*
○ **Optical sensor** *maintenance free*

OXY

MAIN FEATURES

Professional **portable oxygen meter with innovative backlit high-resolution colour display** for excellent data view in all conditions thanks to the possibility of automatically and manually adjusting the contrast and lighting of the display.

The guide onboard in setup and calibration mode allows a simple and intuitive use of the device.
Automatic calibration up to two points (0% - 100%).
Automatic compensation of temperature and barometric pressure, manual salinity.
Measurement stability indicator and possibility to select 3 stability levels.
All operations are constantly monitored and reported to the operator via the coloured LED above the display and the self-diagnosis messages.

GLP function: Date and time, recall of calibration data
and function "Calibration due".
Data logger up to 1000 savings, manual and automatic, PC connection via micro-USB.
Data-Link + software available from www.hydrocal.nl.

Measuring range:
DO: 0,0...50 mg/l (0,01 / 0,1 mg/l)
Saturation: 0,0...400 % (0,1 / 1 %)
Barometric pressure: 0...1100 mbar
Temperature: -10...+110,0 °C

Equipped with:
0% Oxygen standard, , USB cable and power supply, user manual and plastic carrying case.

Optical sensor

Name	Description	p/n
OXY 70 VIO 2 mt	Complete with optical sensor OXY LDO70, with temperature sensor integrated. Cable length: **2 m**	50110302
OXY 70 VIO 10 mt	Complete with optical sensor OXY LDO70, with temperature sensor integrated. Cable length: **10 m**	50110312
LDO70 / 2mt SENSOR	Optical sensor for OXY 70 Vio, with temperature sensor integrated. Cable 2 mt.	50010342
LDO70 / 10mt SENSOR	Optical sensor for OXY 70 Vio, with temperature sensor integrated. Cable 10 mt	50010352
MEMBRANE	Replacement **membrane** for LDO70	50010362
ARMOR STEEL	**Steel armor** for LDO70 / 10 mt	50010372

Oxy 7 Vio

○ High resolution backlit *coloured* LCD Display
○ **Automatic compensation** of temperature and pressure
○ **Auto calibration** *DO 0%-100%*
○ **Automatic resolution** of the measure
○ **Polarographic sensor**
○ **Polarization timer**

MAIN FEATURES

Professional portable oxygen meter with **innovative backlit high-resolution colour display** for excellent data view in all conditions thanks to the possibility of automatically and manually adjusting the contrast and lighting of the display.

The **step by step guide** in setup and calibration mode allows a simple and intuitive use of the device.

Automatic calibration up to two points (0% - 100%).
Automatic compensation of temperature and barometric pressure, manual salinity.
Measurement **stability indicator** and possibility to select 3 stability levels.

All operations are constantly monitored and reported to the operator via the **coloured LED** above the display and the self-diagnosis messages.

Measuring range:
DO: 0,0...50 mg/l (0,01 / 0,1 mg/l)
Saturation: 0,0...400 % (0,1 / 1 %)
Barometric pressure : 0...1100 mbar (1 mbar)
Temperature: 0...+100,0 °C

Equipped with:
0% Oxygen standard, replacement membrane, user manual and plastic carrying case.

Polarogaphic sensor

Name	Description	p/n
OXY 7 VIO **COMPLETE**	**Complete with polarographic sensor DO7/3MT with temperature sensor integrated**, cable length 3 m, 1 replacement membranes, refill solution (30ml), 0 Oxygen standard, user manual and carrying case	50110202
OXY 7 VIO **ECO**	**Only instrument without oxygen sensor**, in Ecopack with user manual.	50110212
DO7 / 3mt **SENSOR**	**Polarographic sensor,** with temperature sensor incorporated. Cable 3m, 2 replacements membranes, refill solution (30ml)	50010242
MEMBRANE	Kit **2 replacement membranes** for DO7/3MT	50010252
ELECTROLYTE	**Refill solution** for DO7/3MT (30 ml)	50010262
ARMOR **PPE**	PPE armor for DO7/3MT	50010282
0% **STANDARD**	0 Oxygen standard - **1 bottle**	50010292
0% **STANDARD**	0 Oxygen standard - **5 bottles pack**	50010272

OXY

ACCESSORIES

Name	Description		p/n
IP67 CASE	Waterproof carrying case IP 67 for portable pH-meters Vio		50010972
SOFT CASE	Soft case with adjustable shoulder strap in eco-friendly material for portable pH-meters Vio		50010962
POWER SUPPLY	Power supply and cable for XS Vio 70		50110172

DATA LINK +

On the software are shown all the information about the instruments and calibrations, like slope and offset.
It is possible to view all saved data in graphic form, to see the trend, or in table form.
It is also possible to export data in Excel and in PDF.
On the top right corner, the real time view allows to check measurement directly on the PC.
Multilanguage: English - Italian - French - German - Spanish - Czech.
And then there are a lot of functions for the remote control of the instruments, like data saving and memory reset.

Software **Data Link +** available for free on our website
www.hydrocal.nl
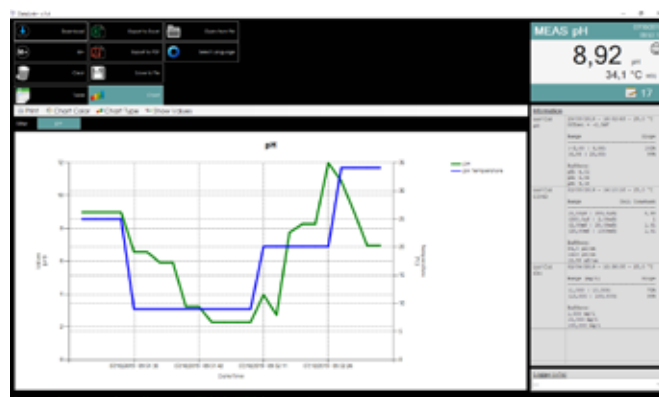
Brochures **XS Vio and XS VioLab** are available on our website www.hydrocal.nl

ELECTRODES

XS

DHS
Digital **H**igh **S**ensor

SWISS MADE

WARRANTY **6** MONTHS

CE
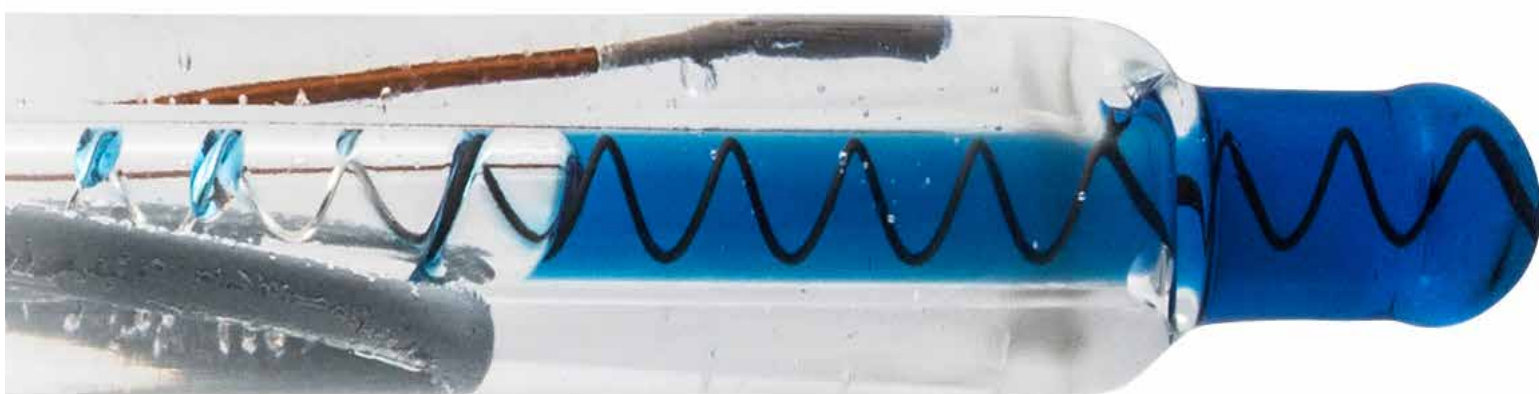
QUALITY REPORT

The Standard and Flow models of the XS Sensor range are supplied with the individual quality certificate, with reference to the electrode serial number, shown on the internal label for traceability, according to GLP standards, of calibration and pH measurements.

XS — QUALITY TEST REPORT

Model	**Electrode Type:** *Elektrodentyp / Elettrodo*	STANDARD
	Product number: *Produktnummer / Codice prodotto*	32200373
	Serial number: *Seriennummer / Numero seriale*	0009
Batch	**Batch number:** *Chargennummer / Numero di lotto*	444
Test results	**Reading in pH 7 buffer (0 ± 20mV)*:** *Lesen im pH 7 / Lettura in pH 7**	-5 mV
	Reading in pH 4 buffer (174 ± 20mV)*: *Lesen im pH 4* / Lettura in pH 4**	169 mV
	Measuring range: *Messbereich / Range di misura*	0...14 pH
Technical features	**Temperature range:** *Temperaturbereich / Range di temperatura*	-10...80 °C
	Temperature sensor: *Temperatursensor / Sensore di temperatura*	
	Reference electrolyte: *Bezugselektrolyt / Elettrolita di riferimento*	KCl 3M

* Measurements are performed in Certified Reference Materials.
* Die Messungen werden in zertifizierten Referenzmaterialien durchgeführt.
* Le misurazioni sono eseguite in materiali di riferimento certificati

A change of the measurement values above during storage and use is a normal behavior of the electrochemical sensors.
Eine Änderung der Meßwerte oberhalb während der Lagerung und der Verwendung ist ein normales Verhalten der elektrochemischen Sensoren.
Una variazione dei valori di misura di cui sopra, durante la conservazione e l'uso, è un comportamento normale dei sensori elettrochimici.

Date	**Passed Quality Control** *Bestanden Qualitätskontrolle / Controllo Qualità Effettuato*	16/02/2018

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HOW TO CHOOSE THE RIGHT ELECTRODE

ELECTRODES

	GEL	POLYMER	POLYMER TIP	STANDARD	201T / POLYMER PLAST	STANDARD HA	FLAT	STANDARD HF	FOOD	2 PORE SLIM	2 PORE	2 PORE F	FOOD SLIM	SEMIMICRO	MICRO	MICRO P	MICRO SPECIAL	FLOW
Waste Water		●	●		●	●												●
Deionized Water									●									●
Tap Water	●	●	●	●	●				●									●
Food									●	●	●	●	●					
Butter									●	●	●	●	●					
Samples With Protein		●	●						●		●	●				●		
Alkali Samples						●												
High Temperature Samples				●		●			●									
Samples In Tube For Nmr																	●	
Small Volume Samples					●										●	●	●	
Samples With Hydrofluoric Acid								●										
Viscous Samples		●	●						●									●
Cosmetics		●	●	●	●				●									●
Cream		●	●						●									●
Detergents	●	●	●	●	●	●			●									●
Aqueous Emulsions		●	●	●					●									●
Cheese										●	●	●	●					
Fruit And Vegetables										●	●	●	●					
Milk		●	●						●	●	●	●	●					
Mayonnaise									●		●							●
Marmalade		●	●						●		●							●
Bread and pasta			●						●	●	●	●	●					
Leather							●											
Brine	●	●	●	●	●				●									●
Soap		●	●	●					●									●
Samples With Low Ionic Strenght																		●
Aqueous Suspensions		●	●	●					●									●
Semi Aqueous Suspensions									●									●
Fruit Juice		●	●	●					●									●
Surfaces							●											
Tris Swab				●														●
Tip			●							●	●	●	●					●
Titolation				●					●									●
Non Aqueous Titolation																		●
Galvanic Treatment		●	●			●												●
Water-Based Paints		●	●	●					●									●
Paints				●					●									●
Wine		●	●	●					●									●
Yogurt		●	●						●	●	●	●	●					●

DHS Electrodes — Digital High Sensor

Intelligent Sensor management

Digital High Sensors are the new pH sensors with internal chip, that store parameters, date of last calibration, model and production batch of the electrode. After connecting the pH DHS sensor to the instrument, with the same technology, all the data stored in the sensor chip are automatically transferred to the instrument and shown on the display.

After a new calibration of the DHS electrode, the data are automatically stored in the electrode chip. If we move this electrode to another DHS-enabled instrument, we can start working immediately and with extreme security as the data from the last calibration will automatically be transferred and used for pH measurements.

Our DHS electrodes have integrated temperature sensor, fixed cable with BNC and RCA connectors and work without an internal battery, this allow to store them as normal pH electrode and can be connected to any instrument with BNC and RCA connection.

Name	Description	p/n
201 T DHS DIGITAL pH ELECTRODE	Digital pH electrode combined with DHS technology. **Plastic body for general use.** Gel Filling, ceramic diaphragm. Maintenance-free. Dimensions (LxØ) mm 120x12. pH 0...14 - Temperature 0...60 °C	32200103

Name	Description	p/n
STANDARD DHS DIGITAL pH ELECTRODE	Digital pH electrode combined with DHS technology. Glass body and cylindrical membrane for general applications. Refillable KCl 3M electrolyte. **Excellent chemical resistance and easy to clean.** Included with serial number and certificate. Dimensions (LxØ) mm 120x12 - pH 0...14 Temperature -10...100 °C	32200123

Name	Description	p/n
FLOW DHS DIGITAL pH ELECTRODE	Digital pH electrode combined with DHS technology. Glass body. Refillable KCl 3M electrolyte. With Teflon sleeve diaphragm **for measurements in suspensions and samples with low conductivity**. With serial number and certificate. Dimensions (LxØ) mm 120x12. pH 0...14 Temperature -10...+80 °C	32200133

Name	Description	p/n
2 PORE DHS DIGITAL pH ELECTRODE	Digital pH electrode combined with DHS technology. Glass Body. Filled with polymer, maintenance-free. **Ideal for meats and cheese samples.** Dimensions tip (LxØ) mm 35x6 - pH 0...14, Temperature 0...60 °C	32200113

Name	Description	p/n
2 PORE F DHS DIGITAL pH ELECTRODE	Digital pH electrode combined with DHS technology. Plastic body (PEEK) and glass membrane. Polymer filling, maintenance-free. **Ideal for meat and cheese samples.** Dimensions tip (LxØ) mm 35x6 - pH 0...14, Temperature 0...60 °C	32200143

ELECTRODES

Laboratory electrodes

A very famous Swiss manufacturer developed a complete line of laboratory pH, ORP and conductivity electrodes with glass and plastic body. XS Sensors are available with S7 head or fixed cable with BNC or DIN connector plug.
For food application many models are equipped with temperature sensor included for a fast temperature compensation.
Some models have internal serial number and quality certificate to work in accordance with GLP rules

ELECTRODES

Name	Description		p/n
STANDARD S7	pH Electrode combined with S7 head. Glass body, for general use. Refillable KCl 3M Electrolyte. **Excellent chemical resistance and easy to clean. With serial number and certificate.** Dimensions (LxØ mm) 120x 12 - pH 0...14 Temperature -10...100 °C.		32200363
STANDARD BNC	With fixed cable 1 mt - **BNC connector**		32200263
STANDARD DIN	With fixed cable 1 mt - **DIN connector**		32200273
STANDARD T BNC + RCA	With temperature sensor NTC 30 KΩ, fixed cable **BNC+RCA Cinch**		32200473
STANDARD T DIN + BANANA	With temperature sensor NTC 30 KΩ, fixed cable **DIN+banana 4 mm**		32200463

Name	Description	p/n
STANDARD HA S7	pH electrode combined for **minimal alkali error**, S7 head. Glass body and cylindrical membrane. Refillable KCl 3M electrolyte. **Excellent chemical resistance and easy to clean. With serial number and certificate.** Dimensions (LxØ mm) 120x 12 - pH 0...14 Temperature -10...100 °C.	32200423

Name	Description	p/n
STANDARD HF S7	Combined pH electrode, S7 head. Glass body. With special membrane f**or measurements in samples containing hydrofluoric acid** (0.01 M / 200 mg at 20 °C). Refillable KCl 3M electrolyte. Excellent chemical resistance and easy to clean. Dimensions (LxØ mm) 120x 12 - pH 0...14 Temperature -10...100 °C.	32200433

ELECTRODES

Name	Description	p/n
GEL S7	Combined pH electrode, S7 head. Body in glass for general applications. Cylindrical membrane. Gel Filling, maintenance-free. Dimensions (LxØ) mm 120x12 - pH 0...14 Temperature -10...60 °C	32200203

Name	Description	p/n
POLYMER S7	Combined pH Electrode S7 head. Glass Body for general use. Cylindrical membrane. Polymer filling, open pore. **For a fast response with high accuracy in samples that might contaminate normal diaphragms**. Maintenance-free. Dimensions (LxØ) mm 120x12 - pH 0...14 - Temperature -10...80 °C	32200223

Name	Description	p/n
POLYMER TIP S7	Combined pH electrode with tipped membrane for pH in the soil. S7 head. Glass body. Polymer filling, two open pores. **For a fast response with high accuracy in samples may contaminate normal diaphragms**. Maintenance-free. Dimensions (LxØ) mm 120x12 - pH 0...14 - Temperature -10...80 °C	32200443

Name	Description	p/n
FLOW S7	Combined pH electrode, S7 screw head. Glass body. Refillable KCl 3M electrolyte. With Teflon sleeve diaphragm **for measurements in viscous samples with low conductivity.** With serial number and certificate. Dimensions (LxØ) mm 120x12 - pH 0...14 - Temperature -10...80 °C	32200373
FLOW T BNC	With **temperature sensor integrated NTC 30 KΩ** fixed cable 1 mt length BNC+RCA Cinch	32200723
FLOW T DIN	With **temperature sensor integrated PT 1000** fixed cable 1 mt length DIN+banana 4 mm	32200733

Name	Description	p/n
FLAT S7	Combined pH electrode, S7 head. Glass Body. Polymer filling. **With flat membrane for surface measurements.** Dimensions (LxØ) mm 120x12 - pH 0...14 - Temperature 0...60 °C	**32200413**

Name	Description	p/n
SEMI MICRO S7	Combined pH electrode, S7 head. Glass body "micro 6". Refillable KCl 3M electrolyte. **Suitable for measurements in test tubes.** Dimensions tip (LxØ) mm 100 x 6 - pH 0...14 - Temperature 0...100 °C	**32200383**

Name	Description	p/n
MICRO S7	Combined pH electrode, S7 head. Glass body "micro 3". Refillable KCl 3M electrolyte. **For small volume of samples <2 ml.** Dimensions tip (LxØ) mm 60 x 3 - pH 0...14 - Temperature 0...100 °C	**32200213**

Name	Description	p/n
MICRO P S7	Combined pH electrode, S7 head. Glass body "micro 3". Refillable Glycerin KCl electrolyte. **Suitable for small volumes in microbiological and biochemical applications.** Dimensions tip (LxØ) mm 60 x 3 - pH 0...14 - Temperature 0...100 °C	**32200253**

Name	Description	p/n
MICRO SPECIAL S7	Combined pH electrode, S7 head, Glass body "micro 3". Refillable KCl 3M electrolyte. **For small volume of samples <2 ml. Ideal for NMR tubes.** Dimensions tip (LxØ) mm 180x3 - pH 0...14 - Temperature 0...100 °C	**32200453**

Electrodes for food applications

Name	Description	p/n
FOOD S7	Combined pH electrode with 3 diaphragm, S7 head. Glass body. Refillable Glycerin KCl electrolyte. **For dairy and food applications.** Dimensions (LxØ) mm 120x12 - pH 0...14 - Temperature -10...100 °C	32200393

Name	Description	p/n
FOOD SLIM S7	Combined pH electrode, S7 head. Glass body. Refillable Glycerin KCl for sample containing proteins. **6 mm tip for penetration measurement.** Dimensions tip (LxØ) mm 25x6 - pH 0...14 - Temperature -10...100 °C	32200243

Name	Description	p/n
ZAVATRODE S7	Combined pH electrode, S7 head. Glass body. Refillable Glycerin KCl for sample containing proteins. **4 mm tip for penetration measurements.** Dimensions tip (LxØ) mm 120x4 - pH 0...14 - Temperature 0...60 °C	32200403

Name	Description	p/n
2 PORE S7	Combined pH electrode, S7 head. Glass body. Polymer filling, two open pores, maintenance free. **Ideal for meat and cheese application.** Dimensions tip (LxØ) mm 35x6 - pH 0...14 - Temperature 0...60 °C	32200333
2 PORE T BNC + RCA	With temperature sensor integrated NTC 30 KΩ, fixed cable 1 mt length, BNC+RCA Cinch	32200323

Name	Description	p/n
2 PORE SLIM S7	Combined pH electrode, S7 head. Glass body. Polymer filling. Two open pores, maintenance-free. **Ideal for meat and cheese application.** Dimensions tip (LxØ) mm 35x4,5 - pH 0...14 - Temperature 0...60 °C	32200283

ELECTRODES

ELECTRODES

Name	Description		p/n
2 PORE F S7	Combined pH electrode, S7 head. Plastic body (PEEK) and glass tip. Polymer filling, two open pores, maintenance-free. **Ideal for meat and cheese application.** Dimensions tip (LxØ) mm 35x6 - pH 0...14 - Temperature 0...60 °C		32200293
2 PORE F T BNC + RCA	With temperature sensor integrated NTC 30 KΩ fixed cable 1 mt., BNC+RCA.		32200703
2 PORE F T DIN + BANANA	With temperature sensor PT1000, fixed cable 1 mt., plug DIN+banana 4 mm		32200713

Name	Description		p/n
2 PORE STEEL T BNC + RCA	Combined pH electrode, steel body. Polymer filling, maintenance-free. **Ideal for meat and cheese application or penetration measurement.** With temperature sensor integrated NTC 30 KΩ, fixed cable 1 mt., BNC + RCA cinch plug Dimensions tip (LxØ) mm 50x6 - pH 0...14 - Temperature 0...80 °C		32200313
2 PORE STEEL T DIN + BANANA	With temperature sensor NTC 30 KΩ, fixed cable 1 mt., plug DIN + Banana 4mm.		32200643

Name	Description		p/n
2 PORE K S7	Combined pH electrode, S7 head. Steel body with replaceable blade. Polymer filling, two open pores, maintenance-free. **Ideal for meat and cheese application or penetration measurement.** Dimensions tip (LxØ) mm 35x6 - pH 0...14 - Temperature 0...60 °C		32200303
2 PORE K WITHOUT BLADE	Only electrode, without knife.		32200343
BLADE	Replaceable knife for 2 Pore K		32200353

Plastic electrodes for general use

Name	Description		p/n
POLYMER PLAST S7	Combined pH electrode, S7 head, with epoxy body. Good chemical resistant. Polymer filling, one open pore and one ceramic diaphragm, **for a fast response in samples that contain substances that might contaminate the diaphragm.** Maintenance-free. Dimensions (LxØ) mm 120x12 - pH 0...14 - Temperature 0...60 °C		32200493
POLYMER PLAST BNC	With fixed cable 1 mt., BNC plug		32200503
POLYMER PLAST DIN	With fixed cable 1 mt., DIN plug		32200513

Name	Description		p/n
201 T BNC	Combined pH electrode with NTC temperature sensor integrated. **Epoxy body for general applications.** Polymer filling with ceramic diaphragm. Maintenance-free. Fixed cable 1 mt., BNC + RCA plug. Dimensions (LxØ) mm 120x12 - pH 0...14 - Temperature 0...60 °C		50002002
201 T DIN	With temperature sensor integrated NTC 30 KΩ, fixed cable 1 mt., DIN+ 1 Banana 4mm plug		50002052
201 T DIN + 2 BANANA	With temperature sensor integrated NTC 30 KΩ, fixed cable 1 mt., DIN+ 2 Banana 4mm plug		50002042

Name	Description		p/n
201 BNC	Combined PHSTANDARD GEL filled electrode **Plastic body for general applications.** Maintenance-free. Fixed cable 1 mt., BNC plug. Dimensions (LxØ) mm 120x12 - pH 0...14 - Temperature 0...60 °C		32105209
201 BNC	Combined PHSTANDARD GEL filled electrode **Plastic body for general applications.** Maintenance-free. Fixed cable 5 mt., BNC plug. Dimensions (LxØ) mm 120x12 - pH 0...14 - Temperature 0...60 °C		32105049
Poliplast S7	Poliplast combination pH electrode, S7 screw head. No PG13.5 outer tread. Epoxy body. Gel filled, maintenance free. Max. pressure of 6 bars. 0 ... 14 pH, temperature 0 ... 60 °C		32105199

ORP Electrodes

Name	Description	p/n
STANDARD ORP S7	Combined pH electrode, S7 head. Glass body. Refillable KCL 3M Electrolyte. **Platinum ring** for ORP measurement. Dimensions (LxØ) mm 120x12 - Temperature -10...100 °C	32200233

Name	Description	p/n
STANDARD AG S7	Combined electrode, S7 head. Glass body. Refillable KNO3 1M Electrolyte. **Silver pin for argentometric titrations.** Dimensions (LxØ) mm 120X12 - Temperature 0...80 °C	32200483

Name	Description	p/n
STANDARD KF S7	Glass Body, S7 head. Maintenance-free. **Double platinum pin for KF and SO2 titrations** Dimensions (LxØ) mm 120X12 – Temperature 0...80 °C	32200523

Name	Description	p/n
PLAST ORP S7	S7 head, epoxy body. Gel filling, double junction, maintenance-free. Ceramic diaphragm. Dimensions (LxØ) mm 120X12 - Temperature 0...60 °C	32200663
PLAST ORP BNC	With fixed cable 1mt., BNC Plug	32200673

Conductivity cells

Name	Description		p/n
VP 1 SENSOR	Cell in glass body with platinum plates **C=1**, fixed cable 1 mt. with BNC plug. Measuring range: 10μS...10 mS – Temperature 0...80 °C		**50004062**
VPT 1 SENSOR	Cell in glass body with platinum plates **C=1**, **with temperature sensor integrated**. Fixed cable 1 mt., BNC + RCA Cinch plug. Measuring range: 10μS...100 mS – Temperature 0...80 °C		**50003352**

Name	Description		p/n
VPT 01 SENSOR	Steel and PVC cell, **C=0,1**, **with temperature sensor integrated**. Fixed cable 1 mt., BNC + RCA plug. Range of measurement 0,1μS...1 mS – Temperature 0...60 °C		**50004012**

Name	Description		p/n
VPT 10 SENSOR	Cell in glass body with platinum plates **C=10**, temperature sensor integrated, fixed cable 1 mt. BNC + RCA Cinch plug. Measuring range: 100μS...200 mS.		**50004072**

Name	Description		p/n
NEW **VPT 10 H** SENSOR	Cell in glass body with platinum plates **C=10**, temperature sensor integrated, fixed cable 1 mt. BNC + RCA Cinch plug. **Measuring range: 100μS...500 mS.** **Only for XS COND 80+**		**50003372**

Name	Description		p/n
2301 T SENSOR	Cell in epoxy body **C=1**, **with temperature sensor integrated**. Fixed cable 1 mt. BNC+RCA Cinch plug. Measuring range: 10μS...200 mS – Temperature 0...60 °C		**50004002**

Name	Description		p/n
VPT SOIL SENSOR	Conductivity cell with temperature sensor integrated, **C=1**, **For measures in soil. Measuring range: 10 μS...50 mS**		**50004082**

ELECTRODES

Cables and accessories

LABORATORY

Cables are provided with S7 head to screw at the electrodes head.
The plug choice is related to the instrument used. Diameter 3 mm, length 1 m.

Name	Description		p/n
BNC	Cable S7-BNC		33551733
DIN	Cable S7-DIN		33551743

PROCESS

Connecting cable for process electrodes. **Diameter 5 mm.**
Plug and length of the cable must be chosen based on the application.

Name	Description	p/n
Cable 5 MM	Coaxial cable with antistatic sheath for electrodes, diameter 5mm	33550533
S7 HEAD	Only S7 head for 5mm cable	33412913
BNC	Only BNC plug for 5 mm cable	33412923
DIN	Only DIN plug for 5 mm cable	33550903

	Length	p/n
ASSEMBLED CABLE WITH **S7 HEAD - OPEN WIRES**	3 m	33550733
	5 m	33550663
	10 m	33550803
	20 m	33550763
ASSEMBLED CABLE WITH **S7 HEAD - BNC PLUG**	1 m	33550673
	3 m	33550743
	5 m	33550563
	10 m	33550753
	20 m	33550773

Cleaning and maintenance solutions

Name	Pack	p/n
Solution 3M KCL	60 ml	32208003
Solution 3M KCL	500 ml	32208013
Solution GLYCERIN-KCl	60 ml	32208023
Solution KNO3 1M for Electrode STANDARD Ag	60 ml	32208033
Solution STORAGE for Electrodes	60 ml	32208043
Solution STORAGE for Electrodes	500 ml	32208053
Solution PROTEINS CLEANING (PEPSIN) for FOOD application Electrodes	60 ml	32208063
Solution PROTEINS CLEANING (PEPSIN) for FOOD application Electrodes	250 ml	32208093
Solution DIAPHRAGM CLEANING (THIOUREA)	60 ml	32208073
Solution DIAPHRAGM CLEANING (THIOUREA)	250 ml	32208103
Solution REGENERATION (with HF) for pH Electrodes	60 ml	32208083

ELECTRODES

BUFFER SOLUTIONS

XS GREEN LINE SOLUTIONS
CALIBRATION AND QUALITY

pH and conductivity measurements and redox potential are routine operations in most laboratories and processes. Reliability and accuracy of measurements are essential for the quality control.
The XS Green Line Solutions range suits your needs and guarantees an impeccable calibration.

XS PROFESSIONAL
ASSURANCE AND ACCREDITATION

The more accurate the pH and conductivity measurements are, the more reliable the calibration solutions are. XS Professional solutions are a guarantee of metrological traceability of your measurement chain and are ideal for regulated areas. Traceability is ensured by the certifications of accredited external calibration laboratories UNI CEI EN ISO/IEC 17025. pH buffer solutions are DKD-DAkkS certified by calibration at the ZMK Zentrum für Messen und Kalibrieren. Conductivity standards are DANAK certified by calibration at the DFM Danish Institute of Fundamental Metrology.
Upon request, it is available the Certification Report in accordance to ISO 17034.

XS BASIC
TRACEABILITY AND RELIABILITY

XS standard solutions are traceable to the IUPAC pH scale, using an unbroken chain of comparisons directly to NIST Standard Reference materials.
Each solution is provided with the Certificate of Analysis of the Hydrocal internal Laboratory, which guarantees quality, traceability and accuracy. XS Basic solutions are your perfect partner to verify your sensors and measurement systems every day.

XS PROFESSIONAL pH

All solutions are ISO 9001 - DAkkS/DKD certified (ACCREDIA equivalent).
The analysis certificate is always supplied free of charge.

○ BOTTLE 250 ml

Name	Description	p/n
pH 4.01	±0,01 / 25°C - Red	51300003
pH 7.00	±0,01 / 25°C - Green	51300013
pH 9.21	±0,02 / 25°C - Blue	51300023
pH 10.01	±0,02/ 25°C - Yellow	51300033

○ BOTTLE 500 ml

Name	Description	p/n
pH 4.01	±0,01 / 25°C - Red	51300103
pH 7.00	±0,01 / 25°C - Green	51300113
pH 9.21	±0,02 / 25°C - Blue	51300123
pH 10.01	±0,02/ 25°C - Yellow	51300133

XS PROFESSIONAL COND

With DFM (Accredia equivalent) and N.I.S.T traceability,

○ BOTTLE 300 ml Glass

Name	Description	p/n
1,3 µS/cm (25°C)	DFM. Accuracy ±0,1µS	51300303
5,0 µS/cm (25°C)	DFM. Accuracy ±0,1µS	51300313

○ BOTTLE 500 ml with built-in calibration compartment

Name	Description	p/n
84 µS/cm (25°C)	DFM. Accuracy ±1%	51300323
147 µS/cm (25°C)	DFM. Accuracy ±1%	51300333
1413 µS/cm (25°C)	1278 µS/cm (20°C) - DFM. Accuracy ±1%	51300343
12.880 µS/cm (25°C)	11670 µS/cm (20°C) - DFM. Accuracy ±1%	51300353

XS BASIC

BUFFER SOLUTIONS IN SACHETS
WITH N.I.S.T. TRACEABILITY.

○ SINGLE BUFFER

Name	Description	p/n
pH 4.01 (25°C)	Pack of 20 sachets 25 ml, red, with certificate of analysis	51102013
pH 7.00 (25°C)	Pack of 20 sachets 25 ml, green, with certificate of analysis	51102023
pH 10.01 (25°C)	Pack of 20 sachets 25 ml, with certificate of analysis	51102043
EC 1413 µS/cm (25°C)	Pack of 20 sachets 25 ml, with certificate of analysis	51102053
EC 12880 µS/cm (25°C)	Pack of 20 sachets 25 ml, with certificate of analysis	51102063
STORAGE	Pack of 20 sachets 10 ml, pH/ORP Sensor Storage Solution	51102083
H2O	Pack of 20 sachets 25ml, Distilled water for sensor cleaning	51102093

○ CALIBRATION SET

Name	Description	p/n
SET CAL pH BIS	Pack of 20 sachets 25ml (10 x pH 4.01 and 10 x pH 7.00)	51102203
SET CAL pH BIS	Pack of 20 sachets 25ml (7 x pH 4.01, 7 x pH 7.00 and 6 x pH 10.01)	51102213
SET CAL COND	Pack of 20 sachets 25ml (10 x EC 1.413 µS and 10 x EC 12.880 µS)	51102223
SET CAL PC	Pack of 20 sachets 25ml (7 x pH 4.01, 7 x pH 7.00 and 6 x EC 1.413 µS)	51102233
REPLACEMENT pH	Pack of 20 sachets 25ml (6 x pH 4.01, 6 x pH 7.00, 6 x H2O distilled water and 2x Storage 10 ml)	51102243
REPLACEMENT COND	Pack of 20 sachets 25ml (7 x EC 1.413 µS, 7 x EC 12.880 and 6 x H2O distilled water)	51102253
REPLACEMENT PC	Pack of 20 sachets 25ml (5 x pH 4.01, 5 x pH 7.00, 5 x 1.413 µS, 3 x H2O distilled water and 2 x Storage 10 ml)	51102263

DISPOSABLE BOTTLE 60 ml

Name	Description	p/n
pH 4,01	±0,01 / 25°C - Red	32383123
pH 7,00	±0,01 / 25°C - Green	32383133
pH 7,00	±0,01 / 25°C - Yellow	32393133
pH 9,00	±0,02 / 25°C - Clear	32383143
pH 9,21	±0,02 / 25°C - Blue	32383973
pH 10,00	±0,02 / 25°C - Yellow	32383963
pH 10,00	±0,02 / 25°C - Blue	32383983
465 mV	± 5mV / 25°C - Yellow	32383163
475 mV	± 5mV / 25°C - Yellow	32383153
EC 84 µS/cm	± 1% / 25°C - Uncoloured	60000613
EC 1413 µS/cm	± 1% / 25°C - Uncoloured	60000423
EC 12880 µS/cm	± 1% / 25°C - Uncoloured	60000433

BUFFER SOLUTIONS

pH BUFFERS

With N.I.S.T traceability.

○ BOTTLE 250 ml with built-in calibration compartment

Name	Description	p/n
pH 1,68	±0,01 / 25°C - Clear	51190013
pH 2,00	±0,02 / 25°C - Clear	51190033
pH 4,01	±0,01 / 25°C - Red	51100033
pH 6,86	±0,01 / 25°C - Clear	51190023
pH 7,00	±0,01 / 25°C - Green	51100043
pH 7,00	±0,01 / 25°C - Yellow	51190043
pH 9,00	±0,02 / 25°C - Clear	51100053
pH 9,18	±0,02 / 25°C - Clear	51190083
pH 9,21	±0,02 / 25°C - Blue	51100073
pH 10,01	±0,02 / 25°C - Yellow	51100063
pH 10,01	±0,02 / 25°C - Blue	51100083
pH 12,45	±0,05 / 25°C - Clear	51100093

○ BOTTLE 500 ml with built-in calibration compartment

Name	Description	p/n
pH 1,68	±0,01 / 25°C - Clear	51190113
pH 2,00	±0,02 / 25°C - Clear	51190133
pH 4,01	±0,01 / 25°C - Red	51100133
pH 6,86	±0,01 / 25°C - Clear	51190123
pH 7,00	±0,01 / 25°C - Green	51100143
pH 7,00	±0,01 / 25°C - Yellow	51190143
pH 9,00	±0,02 / 25°C - Clear	51100153
pH 9,18	±0,02 / 25°C - Clear	51190183
pH 9,21	±0,02 / 25°C - Blue	51100173
pH 10,01	±0,02 / 25°C - Yellow	51100163
pH 10,01	±0,02 / 25°C - Blue	51100183
pH 12,45	±0,05 / 25°C - Clear	51100193

⭘ BOTTLE 1000 ml with built-in calibration compartment

Name	Description	p/n
pH 1,68	±0,01 / 25°C - Clear	51190313
pH 2,00	±0,02 / 25°C - Clear	51190323
pH 4,01	±0,01 / 25°C - Red	51190333
pH 6,86	±0,01 / 25°C - Clear	51190393
pH 7,00	±0,01 / 25°C - Green	51190343
pH 7,00	±0,01 / 25°C - Yellow	51191343
pH 9,00	±0,02 / 25°C - Clear	51190353
pH 9,18	±0,02 / 25°C - Clear	51191383
pH 9,21	±0,02 / 25°C - Blue	51190373
pH 10,01	±0,02 / 25°C - Yellow	51190363
pH 10,01	±0,02 / 25°C - Blue	51190383
pH 12,45	±0,05 / 25°C - Clear	51190393

⭘ CUBITAINER 5000 ml (5 L)

Name	Description	p/n
pH 1,68	±0,01 / 25°C - Clear	51190213
pH 2,00	±0,02 / 25°C - Clear	51190223
pH 4,01	±0,01 / 25°C - Red	51100233
pH 6,86	±0,01 / 25°C - Clear	51100223
pH 7,00	±0,01 / 25°C - Green	51100243
pH 7,00	±0,01 / 25°C - Yellow	51190243
pH 9,00	±0,02 / 25°C - Clear	51100253
pH 9,18	±0,02 / 25°C - Clear	51190283
pH 9,21	±0,02 / 25°C - Blue	51100273
pH 10,01	±0,02 / 25°C - Yellow	51100263
pH 10,01	±0,02 / 25°C - Blue	51100283
pH 12,45	±0,05 / 25°C - Clear	51100293

CONDUCTIVITY STANDARD

With N.I.S.T traceability

○ **BOTTLE 300 ml** glass

Name	Description	p/n
1,3 µS/cm (25°C)	N.I.S.T. Accuracy ±0,1µS	51100503
5,0 µS/cm (25°C)	N.I.S.T. Accuracy ±0,1µS	51100513

○ **BOTTLE 250 ml** with built-in calibration compartment

Name	Description	p/n
84 µS/cm (25°C)	N.I.S.T. Accuracy ±1%	51190513
147 µS/cm (25°C)	N.I.S.T Accuracy ±1%	51100523
1413 µS/cm (25°C)	1278 µS/cm (20°C) - N.I.S.T. Accuracy ±1%	51100533
12.880 µS/cm (25°C)	11670 µS/cm (20°C) - N.I.S.T. Accuracy ±1%	51100543

○ **BOTTLE 500 ml** with built-in calibration compartment

Name	Description	p/n
84 µS/cm (25°C)	N.I.S.T. Accuracy ±1%	51100613
147 µS/cm (25°C)	N.I.S.T Accuracy ±1%	51100623
500 µS/cm (25°C)	N.I.S.T Accuracy ±1%	51100673
1413 µS/cm (25°C)	1278 µS/cm (20°C) - N.I.S.T. Accuracy ±1%	51100633
5000 µS/cm (25°C)	N.I.S.T Accuracy ±1%	51100653
12880 µS/cm (25°C)	11670 µS/cm (20°C) - N.I.S.T. Accuracy ±1%	51100643
80000 µS/cm (25°C)	N.I.S.T Accuracy ±1%	51100663
111800 µS/cm (25°C)	N.I.S.T Accuracy ±1%	51100683

○ **CUBITAINER 5000 ml** (5 L)

Name	Description	p/n
84 µS/cm (25°C)	N.I.S.T. Accuracy ±1%	51100713
147 µS/cm (25°C)	N.I.S.T Accuracy ±1%	51100723
1413 µS/cm (25°C)	1278 µS/cm (20°C) - N.I.S.T. Accuracy ±1%	51100733
12880 µS/cm (25°C)	11670 µS/cm (20°C) - N.I.S.T. Accuracy ±1%	51100743

REDOX / ORP STANDARD

○ BOTTLE 250 ml with built-in calibration compartment

Name	Description	p/n
200 mV (25°C)	± 5mV Bottle 250 ml	51100303
475 mV (25°C)	± 5mV Bottle 250 ml	51100313
650 mV (25°C)	± 5mV Bottle 250 ml	51109313

○ BOTTLE 500 ml with built-in calibration compartment

Name	Description	p/n
200 mV (25°C)	± 5mV Bottle 500 ml	51100353
250 mV (25°C)	± 5mV Bottle 500 ml	51100343
475 mV (25°C)	± 5mV Bottle 500 ml	51100323
650 mV (25°C)	± 5mV Bottle 500 ml	51109333

○ BOTTLE 1000 ml with built-in calibration compartment

Name	Description	p/n
200 mV (25°C)	± 5mV Bottle 1000 ml	51109373
475 mV (25°C)	± 5mV Bottle 1000 ml	51109383

○ CUBITAINER 5000 ml (5 L)

Name	Description	p/n
650 mV (25°C)	± 5mV Bottle 5000 ml	51100333

CLEANING AND MAINTENANCE SOLUTIONS

Name	Pack	p/n
Solution 3M KCL	60 ml	32208003
Solution 3M KCL	500 ml	32208013
Solution GLYCERIN–KCl	60 ml	32208023
Solution KNO3 1M for Electrode STANDARD Ag	60 ml	32208033
Solution STORAGE for Electrodes	60 ml	32208043
Solution STORAGE for Electrodes	500 ml	32208053
Solution PROTEINS CLEANING (PEPSIN) for FOOD application Electrodes	60 ml	32208063
Solution PROTEINS CLEANING (PEPSIN) for FOOD application Electrodes	250 ml	32208093
Solution DIAPHRAGM CLEANING (THIOUREA)	60 ml	32208073
Solution DIAPHRAGM CLEANING (THIOUREA)	250 ml	32208103
Solution REGENERATION (with HF) for pH Electrodes	60 ml	32208083

Brochures **XS Buffer solutions** is available on our website
www.hydrocal.nl

TESTER

XS INSTRUMENTS

SENSOR **WARRANTY 6 MONTHS** ELECTRONIC PART **WARRANTY 1 YEAR** CE **IP67 WATERPROOF** MADE IN ITALY

APPLICATIONS:

○ FARMING
○ WATER AND WASTEWATER TREATMENT
○ HYDROPONIC CROPS AND AQUARIUMS
○ ENVIRONMENTAL MONITORING
○ POOLS AND THERMAL CENTERS
○ FOOD AND BEVERAGE
○ COOLING TOWER
○ GALVANIC
○ GRAPHIC INDUSTRY
○ SCHOOLS

SELECTION GUIDE

	PX4	pH5	pH5FOOD	COND 5	ORP 5	PC 5	PC 6
pH	●	●	●	○	○	●	●
Redox	●	○	○	○	●	○	●
Conductivity	○	○	○	●	○	●	●
TDS	○	○	○	●	○	●	●
Salinity	○	○	○	●	○	●	●
Temperature	●	●	●	●	●	●	●
pH measuring range	-2 … 16	-2 … 16	-2 … 16	-		-2…16	-2…16
Resolution	0.01	0.01	0.01	-		0.01	0.01
Calibration points	1…3	1…3	1…3	-	-	1…3	1…3
Stability indications	Yes	Yes	Yes	Yes	Yes	Yes	Yes
mV (pH) measuring range	-1000…+1000 mv	-1000…+1000 mv	-1000…+1000 mv	-		-1000…+1000mv	-1000…+1000 mv
Resolution	0.1 / 1 mv	0.1 / 1 mv	0.1 / 1 mv	-	-	0.1 / 1 mv	0.1 / 1 mv
mV(redox) range	-1000…+1000 mv	-	-		-1000…+1000 mv		-1000…+1000 mv
Resolution	0,1 / 1 mv	-	-		0,1 / 1 mv		0,1 / 1 mv
Calibration	1 point	-	-		1 point		1 point
COND measuring range	-	-	-	0,01uS…199,99 mS	-	0,01uS…199,99mS	0,01uS…199,99mS
Resolution	-	-	-	Auto	-	Auto	Auto
Calibration point	-	-	-	1…3	-	1…3	1…3
Reference T	-	-	-	20 / 25 ºC	-	20 / 25 ºC	20 / 25 ºC
TDS measuring range	-	-	-	0,01ppm…199,9ppt	-	0,01ppm…199,9ppt	0,01ppm…199,9 ppt
TDS factor	-	-	-	0.40 … 1.00	-	0.40 … 1.00	0.40 … 1.00
Salinity measuring range	-	-	-	0,1 mg/l … 100,0 g/l	-	0,1 mg/l…100,0 g/l	0,1 mg/l…100,0 g/l
Temperature range	0 … 60 °C	0 … 60 °C	0 … 60 °C	0 … 60 °C	0 … 60 °C	0 … 60 °C	0 … 60 °C
Display	3 colour	3 colour	3 colour	3 colour LCD	3 colour LCD	3 colour	3 colour
IP protection	IP 67	IP 67	IP 67	IP 67	IP 67	IP 67	IP 67
Sensor	Replaceable	Replaceable	Replaceable	Replaceable	Replaceable	Replaceable	Replaceable
Code	50014143	50014063	50014113	50014213	50014313	50014263	50014293

The KIT includes: sachets buffer solutions 25 ml, calibration cap, lanyard, tissue, quick manual and cardboard case.

pH 1

○ pH

MAIN FEATURES

IP67 watertight portable pH meter. Resolution 0.1 pH with microprocessor and fixed sensor. Push-button calibration on 1 or 2 points (choosing between pH 4, 7, 10). Wide LCD display with indication of the buffers used for calibration and measurement stability. **Automatic temperature compensation**. Auto power off function. **Self-diagnosis messages: low batteries, calibration errors**. Power supply with 2 x 1.5V AAA batteries included, compatible with rechargeable batteries too.
6-month warranty on electronic parts.

Measuring range: pH 0,0...14,0 (0,1 pH). Working temperature: 0..50°C

The KIT includes: standard buffer solutions sachets pH 7 and pH 4 , 25 ml, sachets storage solution, calibration cap, lanyard, tissue, quick manual and cardboard case.

Name	Description	p/n
pH 1 KIT	pH 1 **Kit complete**	50014013
Plastic Case PH version	Plastic Case - pH version - includes: 1x55 ml pH 7 and pH 4 colored buffer solutions, 1x10 ml electrode storage solution, string for neck, tissues, 2 x 1,5V AAA batteries.	50014273

TESTER

COND 1

○ Conductivity - TDS

MAIN FEATURES

IP67 watertight portable conductivity meter for Conductivity and TDS measurement.
Indication of the buffers used for calibration and measurement stability. Auto power off function. Self-diagnosis messages. Power supply with 2 x 1.5V AAA batteries included, compatible with rechargeable batteries too.
6-month warranty on electronic parts.

Measuring range: COND 0,01 µS...200 mS; TDS 0,01 ppm...199,9 ppt. Working temperature: 0..50°C

The KIT includes: standard buffer solutions sachets 1413 µS e 12,88 mS 25 ml, lanyard, tissue, quick manual and cardboard case.

Name	Description	p/n
COND 1 KIT	COND 1 **Kit complete**	50014163
Plastic Case COND version	Plastic Case - Cond version - includes: 1x55 ml EC 1413 and EC 12880 calibration solutions, string for neck, tissues, 2 x 1,5V AAA batteries.	50014297

pH 5
○ pH – mV – T

MAIN FEATURES

IP67 watertight portable pH meter. **Resolution 0,01 pH**. Interchangeable electrode, temperature sensor and open partitions. **Wide 3-colour LCD display with indication of the buffers used for calibration and measurement stability**. Push-button calibration on 3 points with 5 values of USA buffers. mV reading for pH electrode diagnosis. **Temperature reading**. Auto power off function. **Automatic temperature compensation** (0...60 °C). Self-diagnosis messages: low batteries, calibration errors. Power supply with 2 x 1.5V AAA batteries included, compatible with rechargeable batteries too.
1 year warranty on electronic parts.

Measuring range: pH: –2,00...16,00 (Resolution 0,01 pH); mV: –1.000...+1.000 mV; °C: 0,0...60,0 (0,1 °C).

The KIT includes: 1 sachet x 25ml pH 7 and pH 4 buffer solution, 1 sachet of electrode storage solution, calibration cap, lanyard, tissue, quick manual and cardboard case.

Name	Description	p/n
pH 5 KIT	pH 5 **Kit complete**	50014063
pH 5 ONLY BODY	pH 5, **without sensor**	50014073
ELECTRODE pH	Replacement electrode for pH 5	50014403
Plastic Case PH version	Plastic Case - pH version - includes: 1x55 ml pH 7 and pH 4 colored buffer solutions, 1x10 ml electrode storage solution, string for neck, tissues, 2 x 1,5V AAA batteries.	50014273

pH 5 Food
○ pH – mV – T

MAIN FEATURES

IP67 watertight portable pH meter. **Resolution 0,01 pH**. Interchangeable polymer-tipped electrode, temperature sensor and open partitions for **measurements in the food industry**. **Wide 3-colour LCD display with indication of the buffers used for calibration and measurement stability**. Push-button calibration on 3 points with 5 values of USA buffers. mV reading for pH electrode diagnosis. **Temperature reading**. Auto power off function. **Automatic temperature compensation** (0...60 °C). Self-diagnosis messages: low batteries, calibration errors. Power supply with 2 x 1.5V AAA batteries included, compatible with rechargeable batteries too.
1 year warranty on electronic parts.

Measuring range: pH: –2,00...16,00 (Resolution 0,01 pH); mV: –1.000...+1.000 mV; °C: 0,0...60,0 (0,1 °C).

The KIT includes: 1 sachet x 25ml pH 7 and pH 4 buffer solution, 1 sachet of electrode storage solution, calibration cap, lanyard, tissue, quick manual and cardboard case

Name	Description	p/n
pH 5 Food KIT	pH 5 Food **Kit complete**	50014113
ELECTRODE pH	Replacement electrode for pH 5 Food	50014423
Plastic Case PH version	Plastic Case - pH version - includes: 1x55 ml pH 7 and pH 4 colored buffer solutions, 1x10 ml electrode storage solution, string for neck, tissues, 2 x 1,5V AAA batteries.	50014273

TESTER

COND 5

○ Conductivity - TDS - Salinity - T

MAIN FEATURES

IP67 watertight portable conductivity meter for Conductivity, TDS and Salinity measurement.
High-durable interchangeable electrode. **Wide 3-color LCD display** with **indication of the buffers used for calibration** and measurement stability. Push-button calibration on 3 points with 3 standard values, choosing between 84, 1413 µS and 12,88 mS. Reading and automatic temperature compensation with TR= 20/25 °C and adjustable coefficient TC= 0,00...4,00%/°C. TDS Factor: 0,40...1,00. Self-diagnosis messages. Power supply with 2 x 1.5V AAA batteries included, compatible with rechargeable batteries too.
Auto power off function.
1-year warranty on electronic parts.

Measuring range: COND 0,01 µS...200 mS; TDS 0,01 ppm...199,9 ppt; Salinity 0,1mg/l...100,0 g/.

The KIT includes: 1 sachet x 25ml 1413 µS and 12,88 mS buffer solution, calibration cap, lanyard, tissue, quick manual and cardboard case.

Name	Description	p/n
COND 5 KIT	COND 5 **Kit complete**	50014213
COND 5 ONLY BODY	COND 5, without sensor	50014223
SENSOR COND	Replacement sensor for COND 5	50014413
Plastic Case COND version	Plastic Case - Cond version - includes: 1x55 ml EC 1413 and EC 12880 calibration solutions, string for neck, tissues, 2 x 1,5V AAA batteries.	50014297

TESTER

ORP 5

○ Redox - T

MAIN FEATURES

IP67 watertight portable ORP/Redox meter. **Resolution** 0,1/1 mV. With microprocessor and interchangeable **high-durable electrode**. ORP calibration on one point defined by the user.
Wide 3-color LCD display with indication of measurement stability. Auto power off function.
Temperature reading. **Self-diagnosis messages**. Power supply with 2 x 1,5V AAA batteries included, compatible with rechargeable batteries too.
1 year warranty on electronic parts.

Measuring range: mV: -1.000...+1.000 mV; °C: 0,0...60,0 (0,1 °C).

The KIT includes: : 1 bottle x 55ml Redox 475 mV solution, 1 sachet of electrode storage solution, calibration cap, lanyard, tissue, quick manual and carboard case.

Name	Description	p/n
ORP 5 KIT	ORP 5 **Kit complete**.	50014313
SENSOR REDOX	Replacement sensor for ORP 5	50014443

PX 4

○ pH – Redox – T

MAIN FEATURES

IP67 watertight portable pH and ORP/Redox meter. **Resolution** 0,01 pH and mV. With microprocessor and interchangeable combined electrode. **Wide 3-colour LCD display** with **indication of the buffers used for calibration** and measurement stability. **pH automatic calibration** on 3 points with 5 values of USA buffers and **ORP calibration** on 1 point defined by user. **mV reading for pH electrode diagnosis** and ORP/Redox measurement. **Temperature reading**. Auto power off function. **Automatic temperature compensation** (0...60 °C). Indication of measurement stability. Auto power off function. Temperature reading. Self-diagnosis messages: low batteries, calibration errors. Power supply with 2 x 1.5V AAA batteries included, compatible with rechargeable batteries too.
1 year warranty on electronic parts.

Measuring range: pH: –2,00...16,00 (0,01 pH); mV: -1.000...+1.000 mV; °C: 0,0...60,0 (0,1 °C).

The KIT includes: 1 sachet x 25ml pH 7 and pH4, 1 bottle x 55ml Redox 475 mV, 1 sachet of electrode storage solution, calibration cap, lanyard, tissue, quick manual and carboard case.

Name	Description	p/n
PX 4 KIT	PX 4 **Kit complete**	50014143
ELECTRODE pH + REDOX	Replacement sensor for PX 4	50014463

PC 5

○ pH – Conductivity– TDS – Salinity –T

MAIN FEATURES

IP67 watertight portable multiparameter for pH, Conductivity, TDS and Salinity measurement. Combined **interchangeable electrode. Indication of the buffers used for calibration** and measurement stability. Self-diagnosis messages. Power supply with 2 x 1.5V AAA batteries included, compatible with rechargeable batteries too.
Auto power off function.

pH: Resolution 0,01 pH. Push-button calibration on 3 points with 5 values of USA buffers.
mV reading for pH electrode diagnosis.
COND: Push-button calibration on 3 points with 3 standard values, choosing between 84, 1413 µS e 12,88 mS. Adjustable coefficient TC= 0,00...4,00%/°C.
TDS Factor: 0,40...1,00.

Measuring range:
pH: –2,00...16,00 (0,01 pH);
mV: -1.000...+1.000 mV;
COND 0,01 µS...200 mS;
TDS 0,01 ppm...199,9 ppt;
Salinity 0,1mg/l...100,0 g/l;
T: 0,0...60,0°C (0,1 °C).

The KIT includes: 1 sachet x 25ml pH 7 and pH 4, 1 sachet of electrode storage, 1 sachet x 25ml 1413 µS buffer solution, calibration cap, lanyard, tissue, quick manual and cardboard case.

Name	Description	p/n
PC 5 KIT	PC 5 **Kit complete**	50014263
ELECTRODE PC	Replacement electrode for PC 5	50014433
Plastic Case PC version	Plastic Case - PC version - includes: 1x55 ml pH 7 and pH 4 colored buffer solutions, 1x55 ml EC 1413 calibration solution, 1x10 ml electrode storage solution, string for neck, tissues, 2 x 1,5V AAA batteries.	50014283

PC 6

○ pH -Redox - Conductivity- TDS - Salinity - T

MAIN FEATURES

IP67 watertight portable multiparameter for pH, ORP, Conductivity, TDS and Salinity measurement. High-durable combined interchangeable electrode. **Wide 3-colour LCD display** with **indication of the buffers used for calibration** and measurement stability. **Automatic temperature compensation** (0...100°C). Auto power off function. Self-diagnosis messages: low batteries, calibration errors. Power supply with 2 x 1.5V AAA batteries included, compatible with rechargeable batteries too. 1 year warranty on electronic parts.

pH: Resolution 0,01 pH. Push-button calibration on 3 points with 5 values of USA buffers and . ORP calibration on one point defined by the user.
mV reading for pH electrode diagnosis and ORP/Redox measurement.
COND: Automatic **calibration on 3 points with 3 standard, choosing between 84, 1413 µS and 12,88 mS.**
Automatic temperature compensation with TR= 20/25°C and adjustable coefficient TC= 0,00...4,00%/°C.
TDS factor: 0,40...1,00.

Measuring range :
pH: -2,00...16,00 (0,01 pH);
mV: -1.000...+1.000 mV;
COND 0,01 µS...200 mS;
TDS 0,01 ppm...199,9 ppt;
Salinity 0,1mg/l...100,0 g/l; °
C: 0,0...60,0°C (0,1 °C).

COND Sensor
T Sensor
ORP Sensor
pH Sensor
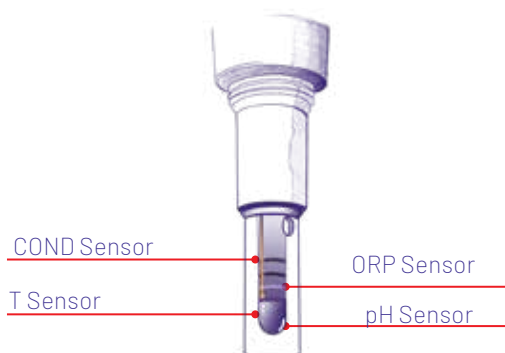
The KIT includes: pH 7 and pH 4 buffer solutions (sachets 25 ml), storage solution in sachet, 1413 µS sachets 25 ml standard solution, calibration cap, lanyard, tissue, quick manual and carboard case.

Name	Description	p/n
PC 6 KIT	PC 6 **Kit complete**	50014293
ELECTRODE PC	Replacement electrode for PC 6	50014483

CALIBRATION BUFFER SOLUTIONS

Name	Description	p/n
pH 4,01	1 bottle x 60 ml buffer solution. Accuracy ±0,01 pH	32383123
pH 7,00	1 bottle x 60 ml buffer solution. Accuracy ±0,01 pH	32383133
475 mV	1 bottle x 60 ml buffer solution for REDOX	32383153
1413 µS	1 bottle x 60 ml buffer solution	60000423
12 880 µS	1 bottle x 60 ml buffer solution	60000433
84 µS	1 bottle x 60 ml buffer solution	60000613

TESTER

pH 5 Tester kit

○ pH - mV - T

Sensor

MAIN FEATURES

pH 5 tester KIT, without electrode.
It is possible to connect it with compatible electrode to make it a professional proper pH-meter.

The KIT included: pH5 only instrument body, buffer solutions 25 ml, storage solution sachets, lanyard, tissue, quick manual and cardboard case, suitcase and 2 batteries 1,5 V AAA. Without sensor.

201 T - pH5　　　Standard T - pH5　　　2 Pore T - pH5
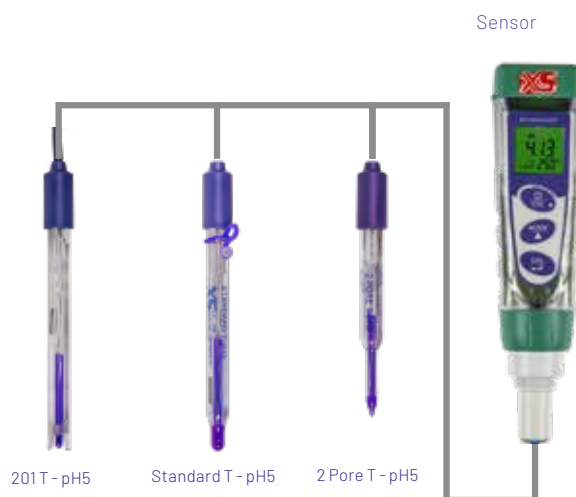
TESTER

Name	Description	p/n
pH 5 TESTER KIT	Instrument body only, 1 sachet x 25ml pH 7 and pH 4 buffer solution, 1 sachet of electrode storage solution, lanyard, tissue, quick manual, carboard case and 2 1,5 V AAA batteries. **Without sensor.**	50014073
201 T pH 5	Plastic body pH electrode with temperature sensor for general uses, without maintenance. 1 mt fixed cable with connector for pH tester 5. **pH 0...14 temperature 0...60°C**	50014603
STANDARD T pH 5	Combined glass body electrode with temperature sensor for general use, 3M KCl refillable. 1 m fixed cable with connector for pH tester 5. **pH 0...14 temperature -10...100°C**	50014613
2 PORE T pH 5	Combined glass body electrode with temperature sensor for general use, maintenance-free polymer filling. 6 mm tip ideal for meat and cheese. 1 mt fixed cable with connector for pH tester 5. **pH 0...14 temperature 0...60°C**	50014623

COND 5 Tester kit

MAIN FEATURES

COND 5 tester kit, without sensor.
It is possible to connect it with compatible electrode to make it a professional proper conductivity meter.

The KIT included: instrument, buffer solutions 1413 µS and 12.88 mS in sachets 25 ml, lanyard, tissue, quick manual and cardboard case, suitcase and 2 batteries 1,5 V AAA. Without sensor.

2301 T - COND5　　　VPT Soil - COND5

Name	Description	p/n
COND 5 TESTER KIT	Instrument body only, 1 sachet x 25ml 1413 µS and 12.88 mS buffer solutions, lanyard, tissue and carboard case, with 2x 1,5V AAA batteries and quick manual Included. **Without sensor.**	50014223
2301 T COND 5	Conductivity cell C=1 for COND 5 conductivity meter with 2 electrodes with built-in temperature sensor, epoxy body, 1 mt cable, working range 10µS...100 mS – temperature 0...60°C	50014703
VPT SOIL COND 5	Conductivity cell with temperature probe, C = 1, for ground measurement, working range 10 µS ... 50 mS, cable 1.5 m for COND 5	50014713
COND 5 SOIL SOIL TESTER KIT	COND 5 Tester, 1 sachet x 25ml 1413 µS and 12.88 mS buffer solutions, lanyard, tissue and carboard case, with 2x 1,5V AAA batteries and quick manual Included. **With VPT SOIL.**	50014299

BALANCES

HOW TO CHOOSE

Resolution (g)	Capacity (g)	Model	Calibration	RS-232	Batteries	p/n
0,0001	220	**BL 224** TOUCHSCREEN	Internal	●		27006013
0,0001	220	**BL 224**	Internal	●		27006003
0,0001	220	**BL 224** BASIC	External	●		27005993
0,001	300	**BL 303**	External	●	●	27000513
0,001	110	**BM 113** MOISTURE ANALIZER	External	●		27001303
0,01	600	**BL 602**	External	●	●	27000323
0,01	2.000	**BL 2002** BASIC	External		●	27000303
0,01	2.000	**BL 2002**	External	●	●	27000313
0,1	3.000	**BL 3001**	External	●	●	27000113
0,1	6.000	**BL 6001**	External	●	●	27000123
0,1	30.000	**BL 30K1**	External		●	27000133
1	3.000	**BW 3000** WATERPROOF	External		●	27001003
1	30.000	**BL 30K**	External	●	●	27001203
10	100.000	**BL 100K**	External	●		27001213

BL 224 TOUCH

- ○ **Touchscreen graphic display**
- ○ **Capacity:** *220 g*
- ○ **Resolution:** *0,0001 g (0,1 mg)*

MAIN FEATURES

Analytical, digital balance of precision. Stainless steel pan. Protection case against air currents in laboratory. Upper opening for pipetting without having to remove the case.
Standard RS 232 output for connection to PC or printer.
Provided with standard 220V power supply.
Supplied with external standard weight for calibration 200 g - F1 class.
Supplied with Certificate of calibration made with weights certified Accredia, including test of repeatability, linearity and decentered load.

Name	Calibration	Ø Plate (mm)	Repeatability (g)	Linearity (g)	p/n
BL 224 TOUCHSCREEN	INTERNAL	80	0,0002	± 0,0003	27006013

BL 224

- ○ **Capacity:** *220 g*
- ○ **Resolution:** *0,0001 g (0,1 mg)*

MAIN FEATURES

Analytical, digital balance of precision. Backlit display. Stainless-steel pan.
Protection case against air currents in laboratory. Upper opening for pipetting without having to remove the case. Piece counter mode, determination of %, formulations, pipette calibration function, statistics and density calculation (with optional accessory kit).
Standard RS 232 output for connection to PC or printer.
Provided with standard 220V power supply.
Supplied with Certificate of calibration made with weights certified Accredia, including test of repeatability, linearity and decentered load.

Name	Calibration	Ø Plate (mm)	Repeatability (g)	Linearity (g)	p/n
BL 224	INTERNAL	90	0,0002	± 0,0002	27006003

BALANCES

BL 224 BASIC

○ **Capacity:** *220 g*
○ **Resolution:** *0,0001 g (0,1 mg)*

MAIN FEATURES

Analytical, digital balance of precision. Backlit display. Stainless-steel pan. Protection case against air currents in laboratory. Upper opening for pipetting without having to remove the case. Standard RS 232 output for connection to PC or printer. Standard 220V power supply.
Supplied with external standard weight for calibration 100 g - E2class.
Supplied with **Certificate of calibration made with weights certified Accredia, including test of repeatability, linearity and decentered load.**

Name	Calibration	Ø Plate (mm)	Repeatability (g)	Linearity (g)	p/n
BL 224 **BASIC**	EXTERNAL	80	0,0003	± 0,0003	27005993

BL 303

○ **Capacity:** *300 g*
○ **Resolution:** *0,001 g (1 mg)*

MAIN FEATURES

Backlit display. Round pan with diameter 118 mm in stainless-steel.
Protection case against air currents in laboratory.
Upper opening for pipetting without having to remove the case.
Piece counter mode, determination of % and 21 different selectable measurement units.
Balance with dual power supply, AGM rechargeable battery and standard power supply.
Standard RS 232 output for connection to PC or printer.
Supplied with case and a weight of 100 g M1 class.
Provided with Certificate of calibration with weights Accredia certified, including test of repeatability, linearity and decentered load.

Name	Calibration	Ø Plate (mm)	Repeatability (g)	Linearity (g)	p/n
BL 303	EXTERNAL	118	0,001	± 0,003	27000513

BALANCES

BL 602

○ **Capacity:** *600 g*
○ **Resolution:** *0,01 g*

MAIN FEATURES

Technical, digital balance of precision. Backlit Display.
Round pan with diameter 118 mm in stainless-steel.
Protection case, easily removable, ideal for counting small pieces, protected from external disturbances.
Upper opening for pipetting without having to remove the case.
Piece counter mode, determination of % and 21 different selectable measurement units.
Balance with dual power supply, AGM rechargeable battery standard power supply.
Standard RS 232 output for connection to PC or printer.
Supplied with case and 2 standard weights of 100 g M1 class.

Name	Calibration	Ø Plate (mm)	Repeatability (g)	Linearity (g)	p/n
BL 602	EXTERNAL	118	0,01	± 0,03	27000323

BL 2002

○ **Capacity:** *2000 g*
○ **Resolution:** *0,01 g*

MAIN FEATURES

Technical, digital balance of precision. Backlit Display.
Rectangular stainless-steel pan.
Piece counter mode, determination of % and 21 different selectable measurement units.
Balance with dual power supply, AGM rechargeable battery and standard power supply.
Standard RS 232 output for connection to PC or printer.
Supplied with dust protection cover and a standard weight of 1 Kg M1 class.

Name	Calibration	Ø Plate (mm)	Repeatability (g)	Linearity (g)	p/n
BL 2002	EXTERNAL	188 x 148	0,01	± 0,02	27000313

BL 2002 BASIC

○ The cheapest
○ Capacity: *2000 g*
○ Resolution: *0,01 g*

MAIN FEATURES

Technical, digital balance of precision. Backlit Display.
Rectangular stainless-steel weighing plate mm 160 x 120.
Piece counter mode.
Balance with dual power supply, AGM rechargeable battery and standard power supply.

Name	Calibration	Ø Plate (mm)	Repeatability (g)	Linearity (g)	p/n
BL 2002 **BASIC**	EXTERNAL	160 x 120	0,02	± 0,03	27000303

BALANCES

BL 3001 / 6001

○ Capacity: *3 Kg / 6 Kg*
○ Resolution: *0,1 g*

MAIN FEATURES

Technical, digital balance of precision. Backlit Display.
Rectangular stainless-steel pan mm 188 x 148.
Piece counter mode, determination of % and 21 different selectable measurement units. Balance with dual power supply, AGM rechargeable battery and standard power supply.
Standard RS 232 output for connection to PC or printer.
Supplied with dust protection cover and a standard weight of 1 Kg M1 class.

Name	Calibration	Ø Plate (mm)	Repeatability (g)	Linearity (g)	p/n
BL 3001	EXTERNAL	188 x 148	0,1	± 0,2	27000113
BL 6001	EXTERNAL	188 x 148	0,1	± 0,2	27000123

BL 30K 1

- ○ Capacity: *30 Kg*
- ○ Resolution: *0,1 g*

MAIN FEATURES

Technical, digital balance of precision. Backlit Display.
Rectangular stainless-steel weighing plate.
Piece counter mode, determination of % and different selectable measurement units.
Balance with dual power supply, AGM rechargeable battery and standard power supply.

Name	Calibration	Ø Plate (mm)	Repeatability (g)	Linearity (g)	p/n
BL 30K 1	EXTERNAL	320 x 260	0,2	± 0,2	**27000133**

BL 30K

- ○ Capacity: *30 Kg*
- ○ Resolution: *1 g*

MAIN FEATURES

Technical, digital balance of precision.
Rectangular stainless-steel weighing plate.
Piece counter mode, determination of % and different selectable measurement units.
Balance with dual power supply, AGM rechargeable battery and standard power supply. Standard RS 232 output for connection to PC or printer.

Name	Calibration	Ø Plate (mm)	Repeatability (g)	Linearity (g)	p/n
BL 30K	EXTERNAL	255 X 190	1	± 3	**27001203**

BL 100K

- ○ Capacity: *100 Kg*
- ○ Resolution: *10 g*

MAIN FEATURES

Technical, digital balance of precision.
Removable Backlit Display.
Rectangular stainless-steel weighing plate.
Piece counter mode, determination of % and different selectable measurement units.
Standard 220V power supply.

Name	Calibration	Ø Plate (mm)	Repeatability (g)	Linearity (g)	p/n
BL 100K	EXTERNAL	300 X 400	10	± 10	**27001213**

BM 113 MOISTURE ANALYSER

○ **Capacity:** *110 g*
○ **Resolution:** *0,001g*

MAIN FEATURES

Precision thermobalance. Backlit Display.
Stainless steel round weighing plate with an external diameter of 90 mm.
GLP protocol.
Internal memory for automatic sequence of 15 drying programs.
Three drying methods: Soft, Standard, Fast.
Three switch-off methods: Auto, Manual, Timer.
400W Halogen lamp.
Standard RS 232 output for connection to PC or printer.
Supplied with: standard weight of 100 g for calibration and control, and 50 aluminium plates, and calibration report, including test of repeatability, linearity, decentered load and temperature check.

Name	Calibration	Ø Plate (mm)	Repeatability (g)	Linearity (g)	p/n
BM 113	EXTERNAL	90	40 - 199 °C	1 - 99 min	27001303
PLATES	Single use aluminium plates with external diam. 90 mm, 1 pack x 50 pieces				27000883

BW 3000 WATERPROOF

○ **Capacity:** *3000 g*
○ **Resolution:** *1 g*
○ **IP67**
○ **Double display**

MAIN FEATURES

IP67 watertight digital precision technical balance.
Dual display, one on the front and one in the back, very useful for assembly line work.
Stainless steel rectangular weighing plate with dimensions 220 x 180 mm.
Piece counter mode, determination of %
Metal outer case
Balance with dual power supply, AGM rechargeable battery and standard power supply.

Name	Calibration	Ø Plate (mm)	Repeatability (g)	Linearity (g)	p/n
BW 3000	EXTERNAL	220 X 180	1	± 1	27001003

ACCESSORIES

Name	Description		p/n
COVER	Protective cover for XS BALANCE compatible with the models: BL602, BL2002, BL3001, BL6001.		27000803
PRINTER **RS 232**	Thermal paper printer for XS BALANCE with RS 232 output.		27000863
CERTIFICATE	Accredited Calibration certificate Accredia for XS BALANCE. To be ordered together with the balance (when not already included)		27000903
WEIGHT 100 g	Weight 100 g in class M1 for XS Balances		27000813
WEIGHT 1 Kg	Weight 1000 g in class M1 for XS Balances		27000823
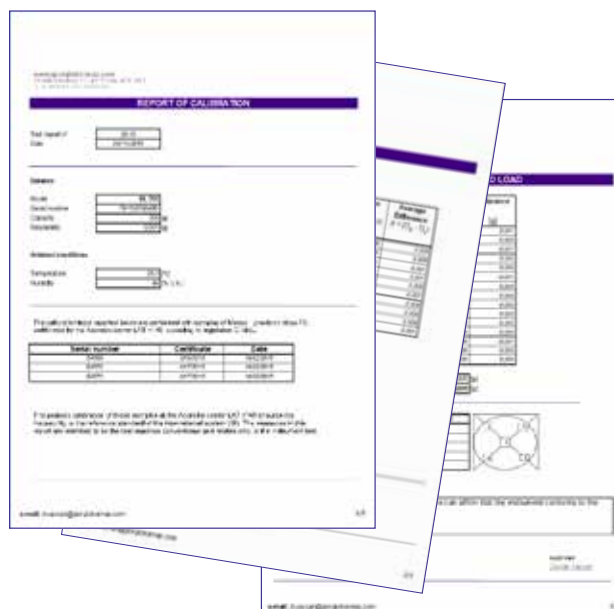
BALANCES

CALIBRATION REPORT

Certificated Accredia weights are used for testing the balances.

On the Certificate are reported the test results of:
- **REPEATIBILITY**
- **LINEARITY**
- **Decentered LOAD**

- **TEMPERATURE CHECK (**only BM 113**)**

According to Accredia guidelines for balance calibration

CENTRIFUGES

NEYA by XS

WARRANTY **2** YEARS CE **EU** Designed ISO certified manufacturer JCR

HOW TO IDENTIFY THE ACCESSORIES

FIRST LETTER

A = Fixed angle rotor
S = Swing out rotor
B = Bucket
SB = Swing out rotor + Buckets (KIT)
L = Lid of bucket
I = Insert for bucket
C = Cushion
RE = Reductor
T = Tube
PCR = PCR rotor

CENTRAL NUMBERS*

1° NUMBER = maximum number of tubes
2° NUMBER = capacity of the tube (ml)

Only in the reducers (RE), the central numbers identify the capacity reduction (ml); in case of only one central number, it represents the capacity. In the PCR rotor the central numbers identify the number of PCR strips and the number of tubes for each single strip.

FINAL LETTER

F = Falcon® tube or conical bottomed tube included
P = Plastic round-bottomed tube included
G = Glass round-bottomed tube included
R = Suitable for round-bottomed tube
X = Additional bucket (long version)

A 32-15	Fixed-angle rotor for 32 – 15 ml tubes
S 4 -175	Swing out rotor for 4 buckets of 175 ml
B 16 - 5 / 7	Aluminium bucket for 16 tubes of 5/7 ml
SB 4 -175	Kit composed by swing out rotor S 4-175 and 4 glasses B 175 of 175 ml
I 4-15R	Insert for 4 round-bottomed tubes of 15 ml
RE 50-15F	Conical bottomed reductor from 50 ml to 15 ml
B 50XF	Test tube rack extra version with Falcon® test tube 50 ml

CENTRIFUGING

The centrifuges are instruments used in many laboratories to separate particles in liquid solutions or in liquids with a different density, using an artificial centrifugal field.
The application of the centrifuges allows to develop a much higher force than the Earth's gravity, speeding-up the separation and sedimentation process.

SWING OUT ROTORS
(with variable angle)

During the centrifugation, the tubes turn into a perpendicular position with respect to the rotation axis of the rotor. Therefore, the distance and the time necessary for the sedimentation are higher, but the phases limits develop clearly and perpendicular. The swing out rotors are generally used to centrifuge a bigger quantity of samples at medium speed.

Gel barrier   Blood cells

Plasma
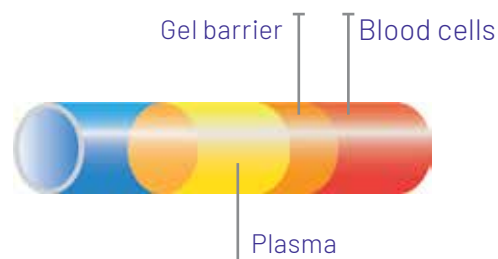
ANGLE ROTORS
(with fixed angle)

The oblique angle of the tubes reduces the sedimentation distance, decreasing the necessary time for the separation of the phases, that are inclined with respect to the tube and less net. The angle rotors are generally used to centrifuge a smaller quantity of samples at high speed.

Gel barrier   Blood cells

Contaminated
Plasma

CALCULATION OF THE CENTRIFUGAL FORCE

Generally, the performances of a centrifuge are indicated following the maximum achievable speed. However, the speed indicates approximately the real force which developed in the centrifuged sample and which generates the separation. This power expresses as Relative Centrifugation Force (RCF).
Its value indicates the multiple of times that the force exceeds the acceleration caused from the gravity "g".
Looking at the formula here on the left, the RCF is directly proportional to the ray of the rotor and linked to the square of the speed. This means that the RCF doubles if the ray doubles and quadruplets if the speed doubles.

Therefore, the performances of the centrifuges should be compared on values expressed in RCF only.

h

r

r max

The simplified formula for the RCF is:
$$RCF = (n/1000)^2 \times r \times 11{,}18$$
where n = speed (rpm) and r = ray in cm

CENTRIFUGES

NEYA 8 Basic

- ○ **Max load capacity:** *4x175 ml*
- ○ **Maximum speed:** *6000 rpm*
- ○ **Automatic rotor detection**
- ○ **Control of the maximum speed of the rotor**
- ○ **Safety speed limiter function**
- ○ **Backlit colour LCD display**

MAIN FEATURES

Ventilated centrifuge with **automatic rotor detection**, check of presence of accessories and of allowed max. speed.
Speed limiter for laboratory safety. Contemporary visualization of all centrifugal parameters.
Low number of keys, adjustment handle with confirming function and guide for an extremely intuitive operativity.
Equipped with brushless motor, maintenance free and silent.

Programmable speed from 500 to 6000 rpm (subjected to the placed rotor) with step of 50 rpm.
Centrifugation time from 00:30 to 99:50 (mm:ss) with increases in 10 seconds or constantly function.
Acceleration and deceleration adjustable on 3 levels.
Automatic locking system of the lid with possibility to recover the tubes in case of electric power absence.
Imbalance detection system with automatic functioning stop.
The centrifuge follows the directives EN61010-1; EN61010-2-020; EN61326-1.
Compact sizes to optimize the space in laboratory
The room access height of only 27,5 cm makes the loading and unloading operation of the centrifuge easy.

Power supply: 220V, 50 Hz.
Max. noisiness: 55 dB

CENTRIFUGES

Name	Max load	Max speed.	External dimensions (L x P x A)	Weight	p/n
NEYA 8 WITHOUT ROTOR	4 x 175 ml	6000 rpm	45 x 59 x 33 cm	40 Kg	**40100302**

NEYA 10 Professional

○ **Maximum loading capacity:** *4x175 ml*
○ **Maximum speed:** *6000 rpm*
○ **Automatic rotor detection**
○ **Max speed control**
○ **Safety speed limiter** function
○ **Backlit display multicolor** LCD

MAIN FEATURES

Ventilated centrifuge with a**utomatic rotor detection**, check of presence of accessories and of allowed max. speed.
Speed limiter for laboratory safety. Contemporary visualization of all centrifugal parameters.
Low number of keys, adjustment handle with confirming function and guide for an **extremely intuitive operativity**.
Equipped with brushless motor, maintenance free and silent.

Programmable speed from 500 to 6000 rpm (subjected to the placed rotor) with step of 50 rpm. Centrifugation time from 00:30 to 99:50 (mm:ss) with increases in 10 seconds or constantly function.
Acceleration and deceleration adjustable on 3 levels.
Automatic locking system of the lid with possibility to recover the tubes in case of electric power absence.
Imbalance detection system with automatic functioning stop.
The centrifuge follows the directives **EN61010-1; EN61010-2-020; EN61326-1**.
Compact sizes to optimize the space in laboratory
The room access height of only 27,5 cm makes the **loading and unloading operation of the centrifuge easy**.

Power supply: 220V, 50 Hz.
Max. noisiness: 55 dB

NEYA 10 R

REFRIGERATED VERSION

Adjustable temperature from **−10 °C to +40 °C** (from +14 to +104 °F) with increases and decreases of 1 °C (or 1°F).
"**Precool**" function for the fast cooling of the centrifuge

Power supply: 220V, 50 Hz.
Max. noisiness: 55 dB

Name	Max load	Max speed	External dimensions (L x P x A)	Weight	p/n
NEYA 10 WITHOUT ROTOR	4 x 175 ml	6000 rpm	45 x 59 x 33 cm	40 Kg	**40100312**
NEYA 10 R WITHOUT ROTOR	4 x 175 ml	6000 rpm	73 x 64 x 33 cm	70 Kg	**40100332**

NEYA 16 High Speed

- ○ **Maximum loading capacity::** *4x175 ml*
- ○ **Maximum speed:** *16000 rpm*
- ○ **Automatic rotor detection**
- ○ **Max speed control**
- ○ **Safety speed limiter** function
- ○ **Backlit display multicolor** LCD

MAIN FEATURES

Ventilated or refrigerated centrifuge (CFC-free), with a**utomatic rotor detection**, check of presence of accessories and of allowed max. speed.
Speed limiter for laboratory safety. Contemporary visualization of all centrifugal parameters.

Low number of keys, adjustment handle with confirming function and guide for an extremely intuitive operativity. Equipped with brushless motor, maintenance free and silent.

Programmable speed from 500 to 16000 rpm (subjected to the rotor placed) with step of 50 rpm.
RCF adjustable up to 21000 xg (subjected to the placed rotor).
Centrifugation time from 00:30 to 99:50 (mm:ss) with increases in 10 seconds or constantly function.
Acceleration and deceleration adjustable on 10 levels.
10 Programs with overwriting security system.
Centrifugal function **SPIN**.
Lighting and acoustic signal for after centrifugation.
Automatic locking system of the lid with possibility to recover the tubes in case of electric power absence.
Imbalance detection system with automatic functioning stop.
The centrifuge follows the directives **EN61010-1; EN61010-2-020; EN61326-1.**
Compact sizes to optimize the space in laboratory
The room access height of only 27,5 cm makes the **loading and unloading operation of the centrifuge easy.**

Max. noisiness: 55 dB
Power supply: 220V, 50 Hz.
Warranty: 24 months

NEYA 16 R

REFRIGERATED VERSION

Adjustable temperature from **–10 °C to +40 °C** (from +14 to +104 °F) with increases and decreases of 1 °C (or 1°F).
" Precool " function for the fast cooling of the centrifuge.

Name	Max load	Max speed	External dimensions (L x P x A)	Weight	p/n
NEYA 16 WITHOUT ROTOR	4 x 175 ml	16000 rpm	45 x 59 x 33 cm	40 Kg	**40100322**
NEYA 16R WITHOUT ROTOR	4 x 175 ml	16000 rpm	73 x 64 x 33 cm	70 Kg	**40100342**

CENTRIFUGES

SWING OUT ROTOR

Nome	Description	p/n
SB 4-175 KIT	**Kit** includes : Swing out rotor S 4-175 , maximum capacity 4 x 175 ml. Maximum speed 4.500rpm, RCF max. 3600xg. 4 buckets B 175 4 Biosafe lids L 175	40100502
L 175 SPARE PART COVER	Biosafe lid for bucket B 175.	40101522
B 175 SPARE PART GLASS	Aluminium bucket of 175 ml for rotor S 4-175.	40101512

HOW TO CHOOSE
THE INSERT
CONSIDERING
THE TUBE

I 12-2	Ø ≤ 10,6 mm H ≤ 42 mm	I 7-5/7	Ø ≤ 13 mm H ≤ 116 mm	I 7-10	Ø ≤ 16 mm H ≤ 114 mm	I 4-15F	Ø ≤. 17 mm H ≤ 120 mm
I 4-15R	Ø ≤ 17 mm H ≤. 110 mm	I 1-50 SF	Ø ≤ 29 mm H ≤ 116 mm	I 1-50R	Ø ≤ 30 mm H ≤ 110 mm	I 1-100	Ø ≤ 46 mm H ≤ 102 mm

INSERTS FOR BUCKETS B 175 – KIT OF 4 PIECES – Tubes not included

Name	Description	Max Tubes	p/n
I 12-2	Kit of inserts (12 tubes each) of 1,5-2 ml type Eppendorf ®	48	40100602
I 7-5/7	Kit of inserts (7 tubes each) from levy Vacutainer® of 5-7 ml. (Ø x L) 13x75 and 13x100 mm.	28	40100612
I 7-10	Kit of inserts (7 tubes each) from levy Vacutainer® of 10 ml. (Ø x L) 16x100 mm	28	40100622
I 4-15 F	Kit of inserts (4 tubes each) with conical bottom type Falcon® of 15 ml. (Ø x L) 17x120 mm	16	40100632
I 4-15 R	Kit of inserts (4 tubes each) with round bottom of 15 ml (Ø x L) 17x110 mm	16	40100642
NEW **I 1-50 SF**	Kit of inserts (1 tube each) with conical bottom type Falcon® of 50 ml (Ø x L) 29x116 mm. The insert is suitable with conical bottomed self-standing tubes.	4	40100682
I 1-50 R	Kit of inserts (1 tube each) with round bottomed of 50 ml. (Ø x L) 30x110 mm	4	40100662
I 100 R	Kit of inserts (1 tube each) with round bottomed of 100 ml. (Ø x L) 46x102 mm	4	40100672

TUBES

Name	Description	p/n
T 15F	Plastic tube type Falcon® of 15 ml (Ø x L) 17 x 120 mm	40003402
T 15G	Glass round bottomed tube of15 ml (Ø x L) 17 x 110 mm (max. speed 3000 rpm)	40003412
T 15P	Plastic round bottomed tube of 15 ml (Ø x L) 17 x 102 mm	40003422
T 50F	Plastic tube type Falcon® of 50 ml (Ø x L) 29 x 116 mm	40003432
T 50G	Glass round bottomed tube of 50 ml (Ø x L) 30 x 110 mm (max. speed 3000 rpm)	40003442
T 50P	Plastic round bottomed tube of 50 ml (Ø x L) 30 x 100 mm	40003452
T 100G	Glass round bottomed tube of 100 ml (Ø x L) 46 x 102 mm (max. speed 3000 rpm)	40003462
T 100P	Plastic round bottomed tube of 100 ml (Ø x L) 46 x 100 mm	40003472
T 175	Plastic bottle with round bottom of 175 ml with screw lid (Ø x L) 57 x 97 mm	40003492

CENTRIFUGES

SWING OUT ROTOR

Name	Description	p/n
S 4-175 ONLY ROTOR	Swing out rotor maximum capacity 4 x 175 ml for aluminium carrier and buckets. Max. speed 4.500rpm, RCF max. 3.600 xg.	40101502
S 6-96 MP PLATES INCLUDED	Swing out rotor for microplates, maximum capacity of 6 plates of 96 wells. Maximum speed 3.200rpm, RCF max. 1.950 xg. Supplied with 2 trays.	40100522

S 4-175
ONLY ROTOR
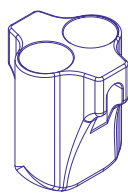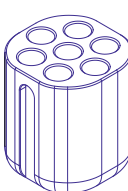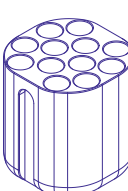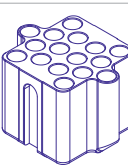
S 6-96 MP
PLATES INCLUDED

CARRIERS FOR SWING ROTOR S 4-175
MINIMUM ORDER QUANTITY 4 PIECES

Name	Description	Max n° of tubes	p/n
B 2-50 F	Carrier for 2 conical bottomed tube type Falcon® of 50 ml (Ø x L) 29x116 mm.	8	40101532
B 2-50 R	Carrier for 2 round bottomed tubes of 50 ml (Ø x L) 30x110 mm .	8	40101582
B 7-15 F	Carrier for 7 conical bottomed tubes type Falcon® of 15 ml (Ø x L) 17x120 mm.	28	40101542
B 7-15 R	Carrier for 7 round bottomed tubes of 15 ml (Ø x L) 17x110 mm.	28	40101592
B 12-10	Carrier for 12 collection tubes Vacutainer® of 10 ml (Ø x L) 16x110 mm.	48	40101552
B 14-5/7	Carrier for 14 collection tubes Vacutainer® of 5-7 ml (Ø x L) 13x100 mm.	56	40101562
B 16-5/7	Carrier for 16 collection tubes Vacutainer® of 5-7 ml (Ø x L) 13x75 mm.	64	40101572

CENTRIFUGES

HIGH CAPACITY FIXED ROTOR

Name		Description	Max. speed.	RCF max (xg)	n° of tubes max	p/n
A 32-15 N		37° fixed angle rotor for 15 ml tubes	5200	4020	32	40100802
A 8-50		37° fixed angle rotor for 50 ml tubes	6000	4800	8	40100812
A 6-100		37° fixed angle rotor for 100 ml tubes	5000	3330	6	40100822

All the rotors are supplied without buckets.

BUCKETS– FOR HIGH CAPACITY ROTORS – TUBE INCLUDED

For rotor	Name	Description	p/n
A 32-15 MIN. 32 PCS	**B 15 F**	For conical bottomed tubes of 15 ml. Complete with Falcon® tube of 15 ml. (Ø x L) 17x120 mm	40101002
	B 15 G	For round bottomed tubes of 15 ml . Complete with glass tube of 15 ml. (Ø x L) 17x110 mm	40101012
	B 15 P	For round bottomed tubes of 15 ml . Complete with plastic tube of 15 ml. (Ø x L) 17x102 mm	40101022
A 6-50 MIN. 6 PCS **A 8-50** MIN. 8 PCS	**B 50 XF**	for conical bottomed tubes of 50 ml. Complete with Falcon® tube of 50 ml (Ø x L) 29x116 mm	40101032
	B 50 XG	for round bottomed tube of 50 ml. Complete with glass tube of 50 ml (Ø x L) 30x110 mm	40101042
	B 50 XP	for round bottomed tubes of 50 ml. Complete with plastic tube of 50 ml. (Ø x L) 30x100 mm	40101052
A 6-100 MIN. 6 PCS	**B 100 G**	for round bottomed tubes of 100 ml. Complete with glass tube of 100 ml. (Ø x L) 46x102 mm	40101092
	B 100 P	for round bottomed tubes of 100 ml. Complete with plastic tube of 100 ml. (Ø x L) 46x110 mm	40101102

CENTRIFUGES

HIGH SPEED ROTOR

FOR **NEYA 16** AND **NEYA 16 R**

Name		Description	Max speed (rpm)	RCF max (xg)	n° of tubes max	p/n
A 6-50 HIGH SPEED		34° fixed angle rotor for 50 ml tubes. With BIOSAFE lid It is **supplied without buckets.**	9500	10050	6	40100862
A 12-5		45° fixed angle rotor for 5 ml Eppendorf® tubes With BIOSAFE lid	14000	20380	12	40100832
A 24-2		45° Fixed angle rotor for 1,5-2 ml Eppendorf® tubes With BIOSAFE lid	15000	21000	24	40100842
A 36-05		37° fixed angle rotor for 0,5 ml Eppendorf® tubes With BIOSAFE lid	15000	21.000	36	40100852
PCR 4-8		45° fixed angle rotor for PCR strip of 8 tubes With BIOSAFE lid	15000	21000	4	40100872

REDUCTORS – COMPLETE WITH BUCKETS – TUBE NOT INCLUDED

Name	Description	p/n
RE 15-5/7	Reductor for round bottomed tubes of 5/7 ml (Ø x L) 13x75 and 13x100 mm for rotor A32-15N	40101292
RE 50-15 F	Reductor for conical bottomed tubes type Falcon® of 15 ml. (Ø x L) 17x120 mm for rotor A 8-50 e A 6-50	40101322
RE 50-15 R	Reductor for round bottomed tubes of 15ml (Ø x L) 17x110 mm for rotor A 8-50 and A 6-50	40101332
RE 50-10	Reductor for round bottomed tubes of 10 ml (Ø x L) 16x100 mm for rotor A 8-50 and A 6-50	40101342
RE 100-50 F	Reductor for conical bottomed tubes of 50 ml type Falcon®. (Ø x L) 29x116 mm for rotor A 6-100	40101352
RE 100-50 R	Reductor for round bottomed tubes of 50 ml (Ø x L) 30x110 mm for rotor A 6-100	40101362
RE 100-15 F	Reductor for conical bottomed tubes of 15 ml type Falcon®. (Ø x L) 17x120 mm for rotor A 6-100	40101372
RE 100-15 R	Reductor for round bottomed tubes of 15 ml (Ø x L) 17x110 mm for rotor A 6-100	40101382

REDUCTOR – TUBE NOT INCLUDED

Name	Description	p/n
RE 2-05	Reductor for microtubes of 0,5 ml for rotor A 24-2. Kit of 24 pieces	40101262
RE 2-02	Reductor for microtubes of 0,2 ml for rotor A 24-2. Kit of 24 pieces.	40101272
RE 05-02	Reductor for microtubes 0,2 ml for rotor A 36-05. Kit of 36 pieces	40101282

CENTRIFUGES

R-5S +

○ **Max load capacity** *12X15 ml*
○ **Max speed** *5250 rpm*
○ **Max RCF** *4280xg*
○ **Timer** *from 1 to 60 min or continuous*

MAIN FEATURES

Ventilated centrifuge with LCD display to set the speed and time of centrifugation.
Low number of keys, adjustment handle with confirming function and guide for an extremely intuitive operativity.
Equipped with brushless motor, maintenance free and silent.

Programmable speed from 500 to 5250 rpm with step of 50 rpm.
Centrifugation time from 1 to 99 minutes with increases in 1 minute or constantly function.

Lower breaking time thanks to the function " **BREAK** "
Imbalance detection system with automatic functioning stop.
Automatic locking system of the lid with possibility to recover the tubes in case of electric power absence.
Compact sizes to optimize the space in laboratory.
The centrifuge follows the directives EN61010-1; EN61010-2-10

Power supply: 220V, 50 Hz.
Max. noisiness: 53 dB

Supplied with:
fixed angle aluminium rotor R-83A, 12x15 ml, steel buckets B 15-P and plastic round bottomed tubes T 15-P of 15 ml 17x100 mm.

R-83 A

Name	Load capacity	Max speed	External dimensions (L x P x A)	Weight	p/n
R-5S + CENTRIFUGE	12 X 15 ml	5250 rpm	33 x 37 x 28 cm	24 Kg	40000022

ACCESSORIES - FOR R-5S+

Name	Description	p/n
R-83 A ROTOR	Replacement rotor complete with tubes and buckets B 15-P	40000272
B 15-P CANISTER	Replacement metal bucket complete with plastic tube of 15 ml	40101022
B 15-F CANISTER	Spare part metal bucket complete with Falcon® tube of 15ml Max. 6 buckets to be placed into the internal spaces	40101002
RE 15-5/7	Reductor for round bottomed tubes of 5/7 ml (Ø x L) 13x75 and 13x100 mm for rotor R 83-A	40101292

CENTRIFUGES

MULTISPIN 12 - ULTRACOMPACT

○ **Max load capacity** *6 X2 ml*

○ **Max speed** *12000 rpm*

○ **Timer** *from 30 sec to 99 min*

MAIN FEATURES

Ultra-compact minicentrifuge, equipped with silent induction motor and maintenance free; speed: adjustable from 1000 to 12,000 rpm with steps of 1000 in 1000 rpm.
Power supply: 220V, 50-60 Hz. Max. consumption: 30 W.
Max. noisiness: 45 dB.

Supplied with 2 rotors:

model A 6-2 able to hold simultaneously no. 6 tubes of 2 ml, no. 6 tubes of 0,5 ml, nr. 6 tubes of 0,2 ml;
model PCR 2-8 for no. 2 strips of 8 PCD tubes of 0,2 ml.

Name	Load capacity	Max speed	External dimensions (L x P x A)	Weight	p/n
MULTISPIN 12 MINICENTRIFUGE	6 x 2 ml	12000 rpm	122 x 176 x 196 mm.	1,5 Kg	40005012

CENTRIFUGES

STIRRERS

All these instruments have passed the rigorous quality and reliability tests that are used for each new product.

The manufacturer, ISO 9001 certified with registered office in P.R.C., has accepted to make the improvement changes requested by us.

With these premises we decided to use our brand : ARGO LAB

M2-A

MAIN FEATURES

Analog magnetic stirrer with **heating plate.**
Stainless steel plate with diameter of 135 mm.
Induction motor without maintenance. Degree of protection: IP 42.
Dimensions (W x H x D): 280x160x65mm.

Name	Volume	Speed	T Max heating	Power heating	p/n
M2-A	20 L	0...1500 rpm	340 °C	500 W	22002013

M2-D Pro

MAIN FEATURES

Digital magnetic stirrer microprocessor with **heating plate**.
Multifunction LCD display with continuous indication of speed and temperature.
3 pre-set operating modes, control and maximum temperature protection with visual alarm on the display, "Stirring" function control. Stainless steel plate with diameter of 135 mm.
Input for PT 1000 external temperature sensor, RS 232 interface for remote control.
Induction motor without maintenance.
Degree of protection: IP 42.
Dimensions (W x H x D): 280x160x65mm.

Name	Volume	Speed	T Max heating	Power heating	p/n
M2-D Pro	20 L	0...1500 rpm	340 °C	500 W	22002063

M3-D

MAIN FEATURES

Digital magnetic stirrer microprocessor with ceramic glass plate.
LED display with continuous indication of temperature.
Accuracy ± 1 °C with internal sensor, ± 1 °C with external sensor.
Plate size 184 x 184 mm. **External sensor input for temperature PT 1000.**
Induction motor without maintenance.
Degree of protection: IP 42.
Dimensions (L x W x H): 215x360x112mm.

Name	Volume	Speed	T Max heating	Power heating	p/n
M3-D	10 L	0...1500 rpm	550 °C	1000 W	22003013

STIRRERS

ACCESSORIES FOR MAGNETIC STIRRERS

Description		p/n
Adjustable support for PT 1000		22002523
PT 1000 probe, length 230 mm for stirrer M2-D Pro, M3-D		22002513
Reaction block for 100 ml round bottom flask		22002663
Reaction block for 250 ml round bottom flask		22002673
Reaction block for 500 ml round bottom flask		22002683
Black quarter pie 4 holes 40ml Ø 28 mm		22002623
Blue quarter pie 4 holes 30ml Ø 28 mm		22002613
Violet quarter pie 4 holes 20ml		22002603
Gold quarter pie 4 holes 16ml Ø 21,6 mm		22002643
Green quarter pie 6 holes 8ml Ø 17,8 mm		22002633
Red quarter pie 11 holes 4ml Ø 15,2 mm		22002593
Blue carrying plate for quarter pies		22002583
Plastic protective cover for stirrer M2-A, M2-D Pro		22002533

STIRRERS

AM 20-D

MAIN FEATURES

Mechanical shaft stirrer with LED display.
Safe stop function with indicator light for overheating motor.
Upper passage hole for stirring shafts.
Supplied with automatic spindle (Ø shaft max 10 mm).
Protection degree IP 42. Power supply 220V. Warranty: 24 months.

Supplied without universal reaction block (check part no. 22005153).

Name	Stir Volume	Speed	Power	p/n
AM 20-D	20 L	50...2.200 rpm	50 W	22005013

AM 40-D Pro

MAIN FEATURES

Mechanical shaft stirrer with LCD display.
Effort control with speed auto-adjustment.
Torque trend display.
Safe stop function with indicator light for overheating motor .
Upper passage hole for stirring shafts.
Supplied with automatic spindle (Ø shaft max 10 mm).
Protection degree IP 42. Power supply 220V.

Supplied without universal reaction block (check part no. 22005153).

Name	Stir Volume	Speed	Power	p/n
AM 40-D PRO	40 L	50...2.200 rpm	100 W	22005043

ACCESSORIES for AM 20-D and AM 40-D PRO

Description	p/n
Universal plate stand for mechanical shakers. Supplied with clamp. Plate dimensions 200 x 315 mm, length shaft mm 800, diameter mm 18.	22005153
TYPE 1: Stirring shaft with floating blade. Shaft length 400 mm, width 89 mm	22005193
TYPE 2: Stirring shaft with fixed blade. Shaft length 400 mm, width 60 mm	22005173
TYPE 3: Stirring shaft with propeller blade. Shaft length 400 mm, width 50 mm	22005163
TYPE 4: Stirring shaft with 3 holes blade. Shaft length 400 mm, width 68 mm	22005183

Universal plate   Type 1   Type 2   Type 3   Type 4

STIRRERS

MIX

MAIN FEATURES

Mixer for test tubes, speed regulation from 0... 2,500 rpm.
Working at the touch or continuously.
Orbital shaking movement.
Eccentric motor with oil-free gears.
Degree of protection IP 21.
Dimensions (L x W x H): 127 x 160 x 130 mm. Weight: 3.5 kg.
220V power supply.

Name	Description	p/n
MIX	Vortex mixer	22008013

ArgoLab stirrer brochures are available on our website www.Hydrocal.nl , in PDF format.

STIRRERS

SKO-D XL

MAIN FEATURES
Shaking stirrer.
Double LCD display with indication of speed and time.
Stirring time adjustment from 1min. ...20 hours or continuous.
Exit RS 232 for remote control.
Maintenance-free brushless DC motor.
Plate dimensions: 320 x 320mm.
Overall dimensions (L x P x H): 370 x 420 x 100 mm. Weight: 13,5 Kg.
Protection degree IP 21. Power supply 220V.

Supplied without any support.

Name	Movement	Max load	Speed	p/n
SKO-D XL ORBITAL	Orbital clockwise and counterclockwise	7,5 Kg	100...500 hit/min	**22006013**
SKO-D XL LINEAR	Linear amplitude 10 mm	7,5 Kg	100...350 hit/min	**22006033**
SKO-D XL 3D	3D clockwise and counterclockwise	5,0 Kg	10...70 hit/min	**22006023**

ACCESSORIES

Description	p/n
Support with anti-slip film	22006223
Universal support with 4 adjustable rollers	22006233
Additional bars for universal support	22006553
Drilled support for clips fixing	22006243
Fixing clip for flask volume 25 ml for fixing clip attachment. Max 28 clips	22006453
Fixing clip for flask volume 50 ml for fixing clip attachment. Max 16 clips	22006463
Fixing clip for flask volume 100 ml for fixing clip attachment. Max 16 clips	22006473
Fixing clip for flask volume 200/250 ml for fixing clip attachment. Max 9 clips	22006483
Fixing clip for flask volume 500 ml for fixing clip attachment. Max 9 clips	22006493

STIRRERS

Dish attachment with non-slip mat
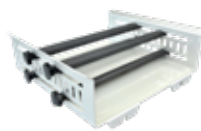
Universal attachment with 4 bars

Fixing clip attachment

SKI 4

○ **Working range:** *+5 C Ta ... +60°C*
○ **Stirring speed:** *40...300 rpm*
○ **Stirring time:** *1...9999 min (or continuous)*
○ **Safety class** *3.1(DIN 12880)*

MAIN FEATURES

Shaking incubator with orbital rotating movement.
Backlit wide LCD display with simultaneous viewing of the real and set
temperature and of the stirring speed and time.
Temperature range adjustable from 37 °C ± 0,1 °C, temperature uniformity in space at 37 °C ± 0,5 °C.
Maximum stirring width 20 mm.
The instrument can be used as "incubator" (stirring = 0) and "shaking" mode only (Incubation = ambient temperature).

Universal platform with springs support, useful dimensions 320 x 320mm suitable for flasks, blocks, pipes and boxes with different dimensions. Supplied as standard.
Stirring standard capacity of nr. 7 flasks of 500 ml or nr. 4 flasks of 1000 ml (with universal support and platform).
Possibility to place a drilled support for flasks/blocks clips holder.
A wide 8 mm thick plexiglass dome for optimum viewing of samples, without loss of heat, equipped with gas springs for easy opening.
Shaking and heating block system for dome opening with automatic restart after closing.
Safety systems for overheating protection and safety variable flow expansion thermostat.
Safety class 3.1 (DIN 12880).
Maintenance-free induction motor. Overall dimensions (L x W x H): 500 x 610 x 470) mm. Weight: 40 Kg.
Power supply: 220V, nominal power 500 W.

Equipped with universal support and platform.

Name	Description	p/n
SKI 4	Incubator with shaking stirrer	41102012

ACCESSORIES

Description	p/n
Platform with no-slip mat	41102052
Universal platform with 4 adjustable bars	41102042
Additional bar for universal platform	41102062
Holed platform for clips	41102112
Spring clips for 100 ml flasks for holed platform SKI 4. Max 16 clips	41102132
Spring clips for 200 / 250 ml flasks for holed platform SKI 4. Max 9 clips	41102142
Spring clips for 500 ml flasks for holed platform SKI 4. Max 9 clips	41102152
Spring clips for 1000 ml flasks for holed platform SKI 4. Max 4 clips	41102162
Spring clips for 2000 ml flasks for holed platform SKI 4. Max 4 clips	41102172

STIRRERS

ARGO FILLER 3

Battery pipette filler, compatible with most of the plastic and glass pipettes from 1 to 100 ml, volumetric or graduated.
Exceptional aspiration and dispensing control thanks to compact and light design.
Ergonomic design of the handle providing easy usability.
Eight different speeds of selection and large LCD display showing low battery warning.
The knurled handle, the ambidextrous design, the concave buttons and an easy control assure an easy and comfortable use of the operator's hands for many hours.
The fully autoclavable mouth includes a silicone adapter and a 0,45 μm hydrophobic membrane filter.
The kit includes the benchtop stand and a wall-mounted holder, a power supply for the rechargeable batteries and nr. 1 filter, as spare part.

Name	Description	p/n
ARGO FILLER 3	Pipette filler	15100053
MEMBRANE FILTER SPARE PARTS	Membrane filters, hydrophobic 0,45μm. Kit of 10 pieces	15100573

OZ - OZONE GENERATORS

High power portable air / air Argolab ozonizers for home and professional use, equipped **with multifunction digital timer**, for daily/weekly programs.
Ozone guarantees the natural inactivation of viruses, bacteria, mites, molds, spores, fungi, parasites and bad smells thanks to his hyper-oxidizing capacity.
Ozone reacts in a short time, returning O_2 without leaving traces of toxins.

Rapid test can quickly detect protein residues after the ozone treatment.
It's an easy way to monitor the cleanliness of surfaces.
Just sample the surface and release the reagent :
it will change colour in case of protein residues.

○ **Fast results** (10 minutes)
○ **Easy to use**
○ **Easy to understand**

Argolab ozone generators are supplied with 2 quick tests.

Name	Ozone production	Operation Area	Weight	Dimensions (LxWxH)	p/n
OZ 10	10 g/h	150 m³ / h	4 Kg	380 x 170 x 260 mm	41400103
OZ 30	30 g/h	230 m³/h	4 Kg	380 x 170 x 260 mm	41400203
PROTEIN CHECKING KIT		Rapid protein test for surfaces		50 test	41401003
				100 test	41401013

ARGO LAB

WARRANTY **2** YEARS

CE

Save Energy

EU Designed

SAFETY CLASS 3.1

(STANDARD DIN 12880)

Double over-temperature protection: in case of exceeding in set temperature, an electronic and an electromechanical control, both adjustable by the operator, intervene in succession. Even in the event of an unlikely total breakdown, the second protection is able to interrupt quickly the power of the heating element, being constituted by a fluid expansion switch and a temperature probe, which are totally independent from the electronics. All Argolab instruments have a degree of protection of Class 2 at least.

The ovens and other instruments with more powerful heating elements are in Safety Class 3.1.

Temperature [°C]

Over – temperature protection Class 3.1

Over – temperature protection Class 2

Set temperature

Malfunction   Electronic fault
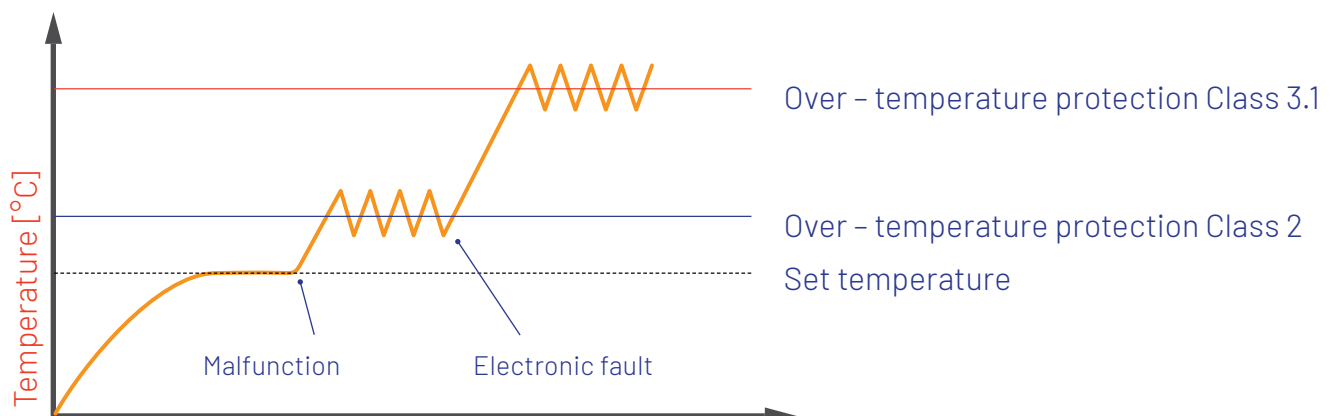
Super

P R O J E C T

All on board
Touch screen colour display for the selection of different functions. All parameters on a single screen: temperature, fan speed, time, program number and step, USB drive, date and time.

Easy to use
Easy and intuitive setting of all working parameters thanks to easy-to-understand icons and symbols. The capacitive display guarantees touch sensitivity and precision, even when wearing gloves.
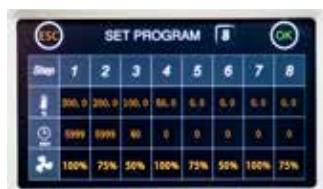
Programs
Professional controller equipped with 8 storable programs with 8 steps each and an additional basic program (PROG 0) with single step.
Simple programming of all working steps in a single screen.

Safety of use
Setting menu with 3 access levels: no. 1 free and no. 2 protected by password in order to avoid accidental changes on the "sensitive" machine's parameters.

Recording and downloading data
The work cycles are automatically stored inside the instrument, always downloadable thanks to the USB port.
With USB drive inserted, the recording takes place without capacity limits.

THERMOSTATATION

USB connected	memory	19 Jul 2018	17:1	Date and time
Real temperature	300.0 °C	04:55 hh:mm		Timer
Fan speed				Set time
Set temperature	SET 300.0°C	SET 100%	SET 05:00 hh:mm	STEP 8 PROG 8	Program
Start/Stop	STOP	Delay 0 Cycle 1	PROG	Settings
Info				Programming
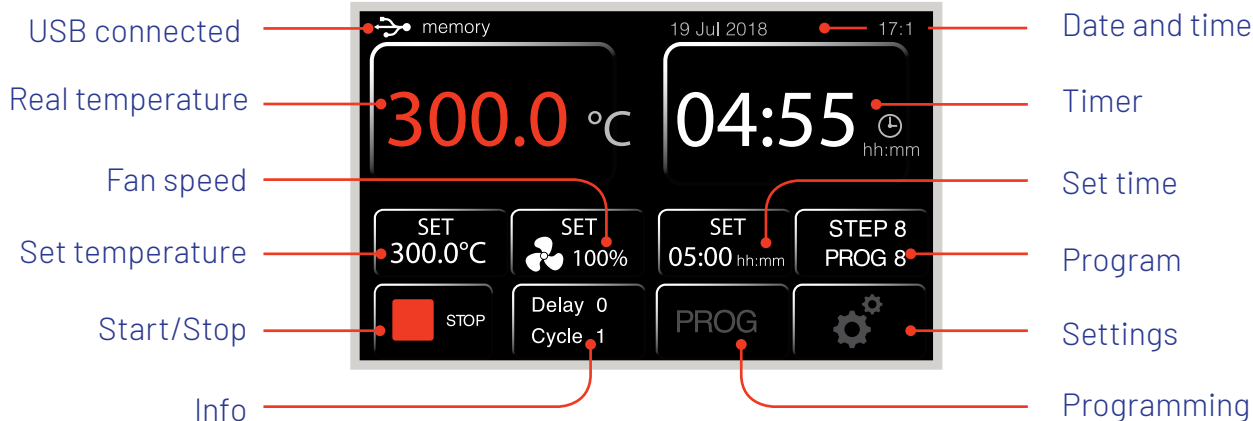
SERIE
Plus

All in one
Backlit LCD display with all parameters in one screen: real temperature, set temperature, fan speed and running program

Intuitive reading
Easy reading of the most important parameters, thanks to the clear and logical distribution of numerical values, symbols and user-friendly icons.

Easy to use
The limited number of keys and setting steps ensures an extremely intuitive and fast operability

Step n°
Prog n°
Fan speed
Cooling ON
Heating ON
Working

Timer
Real temperature
Set temperature
Alarm
Acoustic alarm

THERMOSTATATION
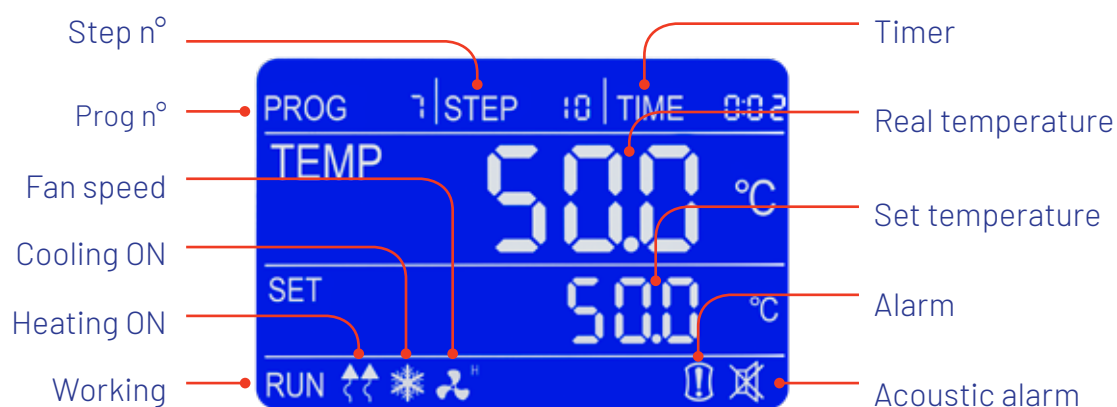
TCN SERIE *Super*

- ○ **Working range:** *+5 °C RT... +300 °C*
- ○ **Colour touchscreen display**
- ○ **8 storable programs** with 8 steps each
- ○ **Basic program** single step
- ○ **Data recording and downloading**

MAIN FEATURES

Natural convection oven ArgoLab
Simultaneous display of all operating parameters. Visual and acoustic alarms which can be silenced by the operator.
Digital timer with a range of programming 1 min - 99 h 59 min. and continuous working.
Possibility to set a delayed start of heating cycle.
"Safe temperature" function: working temperature limiter for sample protection.
Minimum heating times and reduced heating power for low energy consumption in every application.
Recording of working data without limit on USB drive.
Safety class 3.1 (DIN 12880): maximum temperature regulator with fluid expansion.
Standard passage hole of Ø 5 mm (upper side) for insertion of an external temperature probe to control and/or certification of internal temperature.

Stainless steel chamber with rounded corners, supports and shelves completely removable for an easy cleaning.
Power supply 220 ± 10% V - 50 Hz.

Supplied with: two steel wire shelves, calibration report at 150°C executed with certificated Accredia instrument, USB drive for recording and downloading data.

TCN **SUPER**

Name	Volume (l)	Stability at 150 °C	Homogeneity a 150 (°C)	External dim. LxAxP (mm)	Weight (kg)	Power (W)	p/n
TCN 50 SUPER	50	± 0,5	± 3,5	690 x 635 x 470	53	1000	**41100502**
TCN 115 SUPER	115	± 0,5	± 3,5	815 x 750 x 600	74	1900	**41100512**
TCN 200 SUPER	200	± 0,7	± 4,0	940 x 905 x 660	103	2100	**41100522**

TCN **PLUS**

Name	Volume (l)	Stability at 150 °C	Homogeneity a 150 (°C)	External dim. LxAxP (mm)	Weight (kg)	Power (W)	p/n
TCN 30* PLUS	30	± 0,5	± 3,5	460 x 685 x 530	40	700	**41100062**
TCN 50 PLUS	50	± 0,5	± 3,5	690 x 635 x 470	53	1000	**41100002**
TCN 115 PLUS	115	± 0,5	± 3,5	815 x 750 x 600	74	1900	**41100012**
TCN 200 PLUS	200	± 0,7	± 4,0	940 x 905 x 660	103	2100	**41100022**

* Working range TCN 30: *+10°C T amb. ... +200 °C*

THERMOSTATATION

TCN SERIE *Plus*

○ **Working range:** *+5°C RT ... +300 °C ***

○ **Backlit LED display**

○ **7 storable programs** with 10 steps each

○ **Basic program** *single* step

* except TCN 30: *+10°C T amb. ... +200 °C*

MAIN FEATURES

Natural convection oven Argolab

Simultaneous display of all operating parameters. Visual and acoustic alarms which can be silenced by the operator.

Digital timer with a range of programming 1 min - 99 h 59 min. and continuous working.

Possibility to set a delayed start of heating cycle.

"Safe temperature" function: working temperature limiter for sample protection.

Minimum heating times and reduced heating power for low energy consumption in every application.

Safety class 3.1 (DIN 12880): maximum temperature regulator with fluid expansion.

Standard passage hole of Ø 5 mm (upper side) for insertion of an external temperature probe to control and/or certification of internal temperature.

Stainless steel chamber with rounded corners, supports and

shelves completely removable for an easy cleaning.

Power supply 220 ± 10% V - 50 Hz.

Supplied with: two steel wire shelves, calibration report at 150°C executed with certificated Accredia instrument.

ACCESSORIES FOR TCN (SUPER AND PLUS)

Description	p/n
Steel wire shelves for **TCN 30**	41100142
Steel wire shelves for **TCN 50**	41100102
Steel wire shelves for **TCN 115**	41100112
Steel wire shelves for **TCN 200**	41100122
Holed platform for oven **TCN 30**	41100192
Holed platform for oven **TCN 50**	41100152
Holed platform for oven **TCN 115**	41100162
Holed platform for oven **TCN 200**	41100172
Internal hole Ø 25 mm complete with closing cap (Only on the sides shown in the picture –position to choose)	41110152
Internal hole Ø 50 mm complete with closing cap (Only on the sides shown in the picture – position to choose)	41110142
Wheels for TCN 200. Kit of 4 pieces	41101172
Manual **IQ-OQ**	41119002

THERMOSTATATION

TCF SERIE *Super*

- ○ Working range: *+10 °C RT ... +300 °C*
- ○ Colour touchscreen display
- ○ 8 storable programs with 8 steps each
- ○ Basic program single step
- ○ Data recording and downloading

MAIN FEATURES

Forced air oven ArgoLab

Simultaneous display of all operating parameters. Visual and acoustic alarms which can be silenced by the operator.

Digital timer with a range of programming 1 min - 99 h 59 min. and continuous working.

Possibility to set a delayed start of heating cycle.

"Safe temperature" function: working temperature limiter for sample protection.

Adjustable fan on 3 levels: High= 100% – Medium = 75% – Low= 50%

Minimum heating times and reduced heating power for low energy consumption in every application.

Recording of working data without limit on USB drive.

Safety class 3.1 (DIN 12880): maximum temperature regulator with fluid expansion.

Standard passage hole of Ø 5 mm (upper side) for insertion of an external temperature probe to control and/or certification of internal temperature.

Stainless steel chamber with rounded corners, supports and shelves completely removable for an easy cleaning.

Power supply 220 ± 10% V – 50 Hz.

Supplied with: 2 steel wire shelves (3 on the TCF 400), calibration report at 150°C executed with certificated Accredia instrument, USB drive for recording and downloading data.

TCF **SUPER**

Name	Volume (l)	Stability at 150 °C	Homogeneity a 150 (°C)	External dim. LxAxP (mm)	Weight (kg)	Power (W)	p/n
TCF 50 SUPER	50	± 0,3	± 2%	690 x 635 x 570	54	980	**41100602**
TCF 120 SUPER	120	± 0,3	± 2%	810 x 750 x 690	74	1900	**41100612**
TCF 200 SUPER	200	± 0,4	± 2%	945 x 870 x 755	103	2400	**41100622**
TCF 400 SUPER	400	± 0,5	± 2%	1285 x 1060 x 750	160	3200	**41100632**

TCF **PLUS**

Name	Volume (l)	Stability at 150 °C	Homogeneity a 150 (°C)	External dim. LxAxP (mm)	Weight (kg)	Power (W)	p/n
TCF 50 PLUS	50	± 0,3	± 2%	690 x 635 x 570	54	980	**41100202**
TCF 120 PLUS	120	± 0,3	± 2%	810 x 750 x 690	74	1900	**41100212**
TCF 200 PLUS	200	± 0,4	± 2%	945 x 870 x 755	103	2400	**41100222**
TCF 400 PLUS	400	± 0,2	± 2%	1285 x 1060 x 750	160	3200	**41100232**

THERMOSTATATION

TCF *SERIE* **Plus**

- ⭘ **Working range:** *+10 °C RT ... +300 °C ***
- ⭘ **Backlit LED display**
- ⭘ **7 storable programs** with 10 steps each
- ⭘ **Basic program** *single* step

MAIN FEATURES

Forced air oven ArgoLab
Simultaneous display of all operating parameters. Visual and acoustic alarms which can be silenced by the operator.
Digital timer with a range of programming 1 min - 99 h 59 min. and continuous working.
Possibility to set a delayed start of heating cycle.
"Safe temperature" function: working temperature limiter for sample protection.
Adjustable fan on 3 levels: High= 100% - Medium = 75% - Low= 50%
Minimum heating times and reduced heating power for low energy consumption in every application.
Safety class 3.1 (DIN 12880): maximum temperature regulator with fluid expansion.
Standard passage hole of Ø 5 mm (upper side) for insertion of an external temperature probe to control and/or certification of in-

ternal temperature.
Stainless steel chamber with rounded corners, supports and shelves completely removable for an easy cleaning.
Power supply 220 ± 10% V - 50 Hz.

Supplied with: 2 steel wire shelves (3 on the TCF 400)s, calibration report at 150°C executed with certificated Accredia instrument

ACCESSORIES TCF (SUPER AND PLUS)

Description		p/n
Steel wire shelves for **TCF 50**		41100102
Steel wire shelves for **TCF 120**		41100112
Steel wire shelves for **TCF 200**		41100122
Steel wire shelves for **TCF 400**		41100132
Holed platform for oven **TCF 50**		41100152
Holed platform for oven **TCF 120**		41100162
Holed platform for oven **TCF 200**		41100172
Holed platform for oven **TCF 400**		41100182
Internal hole Ø 25 mm complete with closing cap (Only on the sides shown in the picture –position to choose)		41110152
Internal hole Ø 50 mm complete with closing cap (Only on the sides shown in the picture – position to choose)		41110142
Wheels for TCF 200 and 400. Kit of 4 pieces		41101172
Manual **IQ-OQ**		41119002

THERMOSTATATION

ICN SERIE *Super*

- ○ **Working range:** *+5 °C RT ... +70 °C*
- ○ **Colour touchscreen display**
- ○ **8 storable programs** with 8 steps each
- ○ **Basic program** single step
- ○ **Data recording and downloading**

MAIN FEATURES

Natural convection oven ArgoLab

Simultaneous display of all operating parameters. Visual and acoustic alarms which can be silenced by the operator.

Digital timer with a range of programming 1 min - 99 h 59 min. and continuous working.

Possibility to set a delayed start of heating cycle.

"Safe temperature" function: working temperature limiter for sample protection.

Minimum heating times and reduced heating power for low energy consumption in every application.

Recording of working data without limit on USB drive.

Safety class 2 (DIN 12880)

Samples checking without heat loss: wide glass window door (ICN 16 ICN 35), double door (the internal one is made of glass) for the other models.

Standard passage hole of Ø 5,5 mm (upper side) for insertion of

an external temperature probe to control and/or certification of internal temperature.

Stainless steel chamber with rounded corners, supports and shelves completely removable for an easy cleaning.

Power supply 220 ± 10% V - 50 Hz.

Supplied with: two steel wire shelves, calibration report at 150°C executed with certificated Accredia instrument, USB drive for recording and downloading data.

ICN **SUPER**

Name	Volume (l)	Stability at 150 °C	Homogeneity a 150 (°C)	External dim. LxAxP (mm)	Weight (kg)	Power (W)	p/n
ICN 16 SUPER	16	± 0,3	± 0,4	530 x 370 x 400	23	85	**41101302**
ICN 35 SUPER	35	± 0,3	± 0,4	620 x 440 x 460	33	125	**41101312**
ICN 55 SUPER	55	± 0,3	± 0,5	660 x 500 x 545	42	250	**41101322**
ICN 120 SUPER	120	± 0,3	± 0,5	780 x 610 x 645	61	350	**41101332**
ICN 200 SUPER	200	± 0,3	± 0,5	875 x 755 x 710	77	600	**41101342**

ICN **PLUS**

Name	Volume (l)	Stability at 150 °C	Homogeneity a 150 (°C)	External dim. LxAxP (mm)	Weight (kg)	Power (W)	p/n
ICN 16 PLUS	16	± 0,3	± 0,4	530 x 370 x 400	23	85	**41101002**
ICN 35 PLUS	35	± 0,3	± 0,4	620 x 440 x 460	33	125	**41101012**
ICN 55 PLUS	55	± 0,3	± 0,5	660 x 500 x 545	42	250	**41101022**
ICN 120 PLUS	120	± 0,3	± 0,5	780 x 610 x 645	61	350	**41101032**
ICN 200 PLUS	200	± 0,3	± 0,5	875 x 755 x 710	77	600	**41101042**

THERMOSTATATION

ICN SERIE *Plus*

○ **Working range:** *+5 °C RT... +70 °C* *
○ **Backlit LED display**
○ **7 storable programs** with 10 steps each
○ **Basic program** *single* step

MAIN FEATURES

Natural convection oven Argolab

Simultaneous display of all operating parameters. Visual and acoustic alarms which can be silenced by the operator.

Digital timer with a range of programming 1 min - 99 h 59 min. and continuous working.

Possibility to set a delayed start of heating cycle.

"Safe temperature" function: working temperature limiter for sample protection.

Minimum heating times and reduced heating power for low energy consumption in every application.

Safety class 2 (DIN 12880)

Samples checking without heat loss: wide glass window door (ICN 16 ICN 35), double door (the internal one is made of glass) for the other models.

Standard passage hole of Ø 5,5 mm (upper side) for insertion of an external temperature probe to control and/or certification of internal temperature.

Stainless steel chamber with rounded corners, supports and shelves completely removable for an
easy cleaning.

Power supply 220 ± 10% V - 50 Hz.

Supplied with: 2 steel wire shelves, calibration report at 37°C executed with certificated Accredia instrument.

Glass window

ACCESSORIES FOR ICN (SUPER AND PLUS)

Description	p/n
Steel wire shelves for **ICN 16**	41101112
Steel wire shelves for **ICN 35**	41101122
Steel wire shelves for **ICN 55**	41101132
Steel wire shelves for **ICN 120**	41101142
Steel wire shelves for **ICN 200**	41101152
Wheels for ICN 200. Kit of 4 pieces	41101172
Manual IQ-OQ	41119002

THERMOSTATATION

ICF   SERIE *Super*

○ **Working range:** *+5 °C RT ... +80 °C*
○ **Colour touchscreen display**
○ **8 storable programs** with 8 steps each
○ **Basic program** single step
○ **Data recording and downloading**

MAIN FEATURES

Forced air incubator ArgoLab
Simultaneous display of all operating parameters. Visual and acoustic alarms which can be silenced by the operator. Digital timer with a range of programming 1 min - 99 h 59 min. and continuous working.
Possibility to set a delayed start of heating cycle.
"Safe temperature" function: working temperature limiter for sample protection.
Sterilization special program at 130° C
Adjustable fan on 3 levels: High= 100% - Medium = 75% - Low= 50%
Minimum heating times and reduced heating power for low energy consumption in every application.
Recording of working data without limit on USB drive.
Minimum heating times and reduced heating power for low energy consumption in every application.

Recording of working data without limit on USB drive.
Safety class 3.1 (DIN 12880): maximum temperature regulator with fluid expansion.
Standard passage hole of Ø 5 mm (upper side) for insertion of an external temperature probe to control and/or certification of internal temperature.
Stainless steel chamber with rounded corners, supports and shelves completely removable for an easy cleaning.
Power supply 220 ± 10% V - 50 Hz.

Supplied with: 2 steel wire shelves (3 on the ICF 400), calibration report at 37 °C executed with certificated Accredia instrument, USB drive for recording and downloading data.

ICF **SUPER**

Name	Volume (l)	Stability at 150 °C	Homogeneity a 150 (°C)	External dim. LxAxP (mm)	Weight (kg)	Power (W)	p/n
ICF 120 SUPER	120	± 0,1	± 0,4	810 x 750 x 690	74	600	**41100912**
ICF 200 SUPER	200	± 0,2	± 0,4	945 x 870 x 755	103	700	**41100922**
ICF 400 SUPER	400	± 0,3	± 0,5	1285 x 1060 x 750	160	1500	**41100932**

ICF **PLUS**

Name	Volume (l)	Stability at 150 °C	Homogeneity a 150 (°C)	External dim. LxAxP (mm)	Weight (kg)	Power (W)	p/n
ICF 120 PLUS	120	± 0,1	± 0,4	810 x 750 x 690	74	600	**41100812**
ICF 200 PLUS	200	± 0,2	± 0,4	945 x 870 x 755	103	700	**41100822**
ICF 400 PLUS	400	± 0,3	± 0,5	1285 x 1060 x 750	160	1500	**41100832**

THERMOSTATATION

ICF *SERIE Plus*

○ **Working range:** *+5 °C RT ... +80 °C **
○ **Backlit LED display**
○ **7 storable programs** with 10 steps each
○ **Basic program** *single* step

MAIN FEATURES

Forced air incubator ArgoLab
Simultaneous display of all operating parameters. Visual and acoustic alarms which can be silenced by the operator. Digital timer with a range of programming 1 min - 99 h 59 min. and continuous working.
Possibility to set a delayed start of heating cycle.
"Safe temperature" function: working temperature limiter for sample protection.
Sterilization special program at 130° C
Adjustable fan on 3 levels: High= 100% - Medium = 75% - Low= 50%
Minimum heating times and reduced heating power for low energy consumption in every application.
Safety class 3.1 (DIN 12880): maximum temperature regulator with fluid expansion.
Standard passage hole of Ø 5 mm (upper side) for insertion

of an external temperature probe to control and/or certification of internal temperature.
Stainless steel chamber with rounded corners, supports and shelves completely removable for an easy cleaning.
Power supply 220 ± 10% V - 50 Hz.

Supplied with: 2 steel wire shelves (3 on the ICF 400),, calibration report at 37 °C executed with certificated Accredia instrument.

ACCESSORIES FOR ICF (SUPER AND PLUS)

Description	p/n
Steel wire shelves for **ICF 120**	41100112
Steel wire shelves for **ICF 200**	41100122
Steel wire shelves for **ICF 400**	41100132
Holed platform for **ICF 120**	41100162
Holed platform for **ICF 200**	41100172
Holed platform for **ICF 400**	41100182
Internal hole Ø 25 mm complete with closing cap (Only on the sides shown in the picture –position to choose)	41110152
Internal hole Ø 50 mm complete with closing cap (Only on the sides shown in the picture – position to choose)	41110142
Wheels for ICF 200 and ICF 400. Kit of 4 pieces	41101172
Manual **IQ-OQ**	41119002

THERMOSTATATION

IC 150-R

○ **Working range:** *0 ... +60 °C*

○ **Volume** *150 l*

○ **Backlit LED display**

○ **7 storable programs** with 10 steps each

○ **Basic program** *single* step

MAIN FEATURES

Air forced cooled incubator Argolab.
Simultaneous display of all operating parameters.
Visual and acoustic alarms which can be silenced by the operator.
Digital timer with a range of programming 1 min – 99 h 59 min. and continuous working.
Possibility to set a delayed start of heating cycle.
"Safe temperature" function: working temperature limiter for sample protection.
Safety class 3.1 (DIN 12880): maximum temperature regulator with fluid expansion.
Lateral internal passage hole of Ø 25 mm for insertion of one or more external temperature probes to control and/or certification of internal temperature.
Stainless steel chamber with rounded corners, supports and shelves completely removable for an
easy cleaning.
Power supply 220 ± 10 % V – 50 Hz.

Supplied with: three steel wire shelves, calibration report at 25°C executed with certificated Accredia instrument.

THERMOSTATATION

Name	Volume (l)	Stability at 150 °C	Homogeneity a 150 (°C)	External dim. LxAxP (mm)	Weight (kg)	Power (W)	p/n
IC 150-R PLUS	150	± 0,1	± 0,5	650 x 1350 x 620	100	700	**41101512**

ACCESSORIES IC 150-R

Description	p/n
Steel wire shelves for **IC 150-R**	41101562
Internal hole Ø 25 mm complete with closing cap (On upper and lateral sides only)	41110152
Internal hole Ø 50 mm complete with closing cap (On upper and lateral sides only)	41110142
Manual **IQ-OQ**	41119002

CH 150 / CH 250 CLIMATIC CHAMBER

- ○ **Working range RH:** *+50... +95 % RH*
- ○ **Working range with humidity:** *+10 ... 70 °C*
- ○ **Working range without humidity:** *-10 ... +85 °C*
- ○ **Storable programs** from 1 to 100 steps

MAIN FEATURES

Climatic chamber ArgoLab.
Backlit digital LCD.
Digital timer, clock with hour and date for GLP functions.
Standard supplied mini printer for operating and set parameters output.
Safety class 3.1 (DIN 12880): maximum temperature regulator with fluid expansion.
Stainless steel chamber with rounded corners.
External steel door with wide glass window and led inner lamp for observation of the samples.
Lateral internal passage hole of Ø 25 mm for insertion of one or more external temperature probes to control and/or certification of internal temperature.
Power supply 220 ± 10% V – 50 Hz.
Temperature homogeneity in the chamber:
±0,5 °C (without humidity), ± 1,5 °C (10 °C ÷ 70 °C / 50 ÷ 95% RH)
Temperature variation over time:
±0,2 °C (without humidity), ± 0,5 °C (10 °C ÷ 70 °C / 50 ÷ 95% RH)
Humidity fluctuation:
≤ 2 % (10 °C ÷ 70 °C / 50 ÷ 95% RH)

Supplied with: three steel wire shelves, water tank for humidity generator.
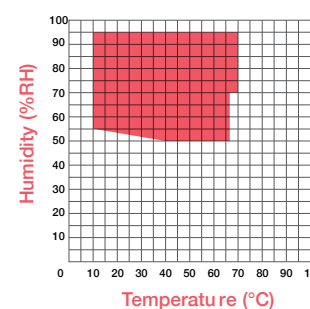
T-H working range

Name	Volume (l)	External dimensions LxAxP (mm)	Weight (kg)	p/n
CH 150	150	690 x 1520 x 790	145	41101412
CH 250	250	740 x 1680 x 885	185	41101422

ACCESSORIES CH 150 / CH 250

Description	p/n
Steel wire shelves for **CH 150**	41101462
Steel wire shelves for **CH 250**	41101472
Internal hole Ø 25 mm complete with closing cap (Only on the sides shown in the picture –position to choose)	41110152
Internal hole Ø 50 mm complete with closing cap (Only on the sides shown in the picture – position to choose)	41110142
Manual **IQ-OQ**	41119002

THERMOSTATATION

CB 5 SERIES CIRCULATING BATH

○ **Working range:** *-30 / -20 / -10 ... +100 °C*
○ **Volume:** *5 l*
○ **External PT100** to control the temperature of the cycle
○ **Backlit LED display**

MAIN FEATURES

Circulating bath Argolab

Simultaneous display of all operating parameters. Visual and acoustic alarms which can be silenced by the operator.

Digital timer with a range of programming 1 min - 99 h 59 min. and continuous working.

Possibility to set a delayed start of heating cycle.

"Safe temperature" function: working temperature limiter for sample protection.

Safety class 2 (DIN 12880): maximum temperature regulator with fluid expansion.

Standard passage hole of Ø 5 mm (upper side) for insertion of an external temperature probe to control and/or certification of internal temperature.

Contemporary circulation of the fluid inside and outside the tank to improve the thermic stability and inertia.

Automatic reading of the temperature of the external cycle through the probe PT100 supplied as standard.

Handy pipe to exclude the external circulation for an easy cleaning and maintenance.

Safety system in case of absence of the thermal fluid.

Internal stainless-steel tank, equipped with lid, easily accessible.

Power supply: 220 ± 10% V - 50 Hz.

Supplied with: probe PT100 for the external control of the temperature.

Set of two 2 mt. pipes with insulating material (working range -40...+60 °C), metal clamps, and pipe fittings.

MODELS

Name	Volume (l)	Working range (°C)	Dimensions LxAxP (mm)	Weight (kg)	p/n
CB 5-10	5	-10 ... +100	290 x 570 x 710	34	41102202
CB 5-20	5	-20 ... +100	380 x 670 x 840	54	41102212
CB 5-30	5	-30 ... +100	380 x 670 x 840	54	41102222

ACCESSORIES FOR CB

	Description	p/n
PIPES	Kit of two 2 mt. pipes with insulating material (working range -40...+60 °C), complete with metal clamps for fastening to the pipe fittings.	41102302
WHEELS	Kit of 4 swivel wheels, two of which can be braked	41102312
THERMAL FLUID	Pre-mixed ready-to-use thermal fluid, working range -30÷+80 °C. 5 liters tank.	41102322
PT 56 TFE	External temperature probe in TFE for CB	51000252

THERMOSTATATION

WB SERIES

○ **Working range :** *+5°C RT ... +85 / +100 °C*
○ **Volume** *12 / 22 / 40 l*
○ Backlit LED display

MAIN FEATURES

Waterbath Argolab. **Safety class 2 (DIN 12880).**
Visual and acoustic alarms which can be silenced by the operator.
Digital timer with a range of programming 1 min - 99 h 59 min. and continuous working.
Possibility to set a delayed start of heating cycle.
"Safe temperature" function: working temperature limiter for sample protection.
Internal tank and drilled bottom plate (removable) in high quality stainless steel.
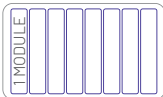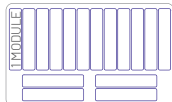
WB 22 Pump and WB 40 Pump ensure a faster and more uniform temperature distribution thanks to the recirculation pump.
Power supply: 220 ± 10% V - 50 Hz.

Supplied with: stainless steel lid with 5 mm hole for the passage of an external probe, drilled bottom plate and pipes kit for the tank emptying.

Name	Volume (l)	Working range (°C)	Stability at 37 °C	Tank dimensions LxAxP (mm)	Disposition rack	p/n
WB 12	12	+5 RT ... +100	± 0,1	300 x 240 x 200		41101602
WB 22	22	+5 RT ... +100	± 0,1	500 x 295 x 200		41101712
WB 22 PUMP	22	+5 RT ... +85	± 0,1	500 x 295 x 200		41101612
WB 40 PUMP	40	+5 RT ... +85	± 0,2	645 x 395 x 200		41101622

ACCESSORIES FOR WB

Description	Modules	p/n
RACK 1 for pipes Ø13mm / 20 places	1	41101802
RACK 2 for pipes Ø18mm / 20 places	1	41101812
RACK 3 for pipes Ø31mm / 5 places	1	41101822
RACK 4 for pipes Ø56mm / 8 places (biberon)	3	41101842
RACK 5 for blood sachets / 5 places	3	41101852

RACK 1 Ø13mm	**RACK** 2 Ø18mm	**RACK** 3 Ø31mm	**RACK** 4 Ø56mm	**RACK** 5 for blood sachets

THERMOSTATATION

SB 35 SHAKING BATH

○ **Working range :** *+5°C RT ... +100 °C*
○ **Tank capacity:** *35 liters*
○ **Backlit LED display**

MAIN FEATURES
Shaking bath Dubnoff Argolab.
Visual and acoustic alarms which can be silenced by the operator.
Digital timer with a range of programming 1 min - 99 h 59 min. and continuous working.
Possibility to set a delayed start of heating cycle.
 "Safe temperature" function: working temperature limiter for sample protection.
Safety class 2 (DIN 12880).
Power supply: 230V/50Hz, weight: 28kg.

Supplied with: stainless steel lid with 5 mm hole for the passage of an external probe, universal basket with stainless steel spring supports, tank emptying pipe and quick-coupling valve for the periodic liquid replacement.

MODELS

Name	Volume (l)	Working range (°C)	Stability at 37 (°C)	Homogeneity at 37 (°C)	Basket dimensions LxAxP (mm)	p/n
SB 35	35	+5 RT ... +100	±0,5	±1	320 x 115 x 200	41101732

THERMOSTATATION

DU - DIGITAL ULTRASONIC BATHS

- ⃝ **Working range :** *+5°C RT ... +80 °C*
- ⃝ **Backlit LED display**
- ⃝ **Ultrasonic frequency:** *40 KHz.*
- ⃝ **Timer** *from 1 to 99 minutes.*

MAIN FEATURES

Digital ultrasonic bath Argolab.
Bright digital controller and simultaneous indication of actual temperature and the set one.
Separated control of the ultrasonic power and time.
Temperature adjustment up to 80°C.
Adjustable timer from 1 to 99 minutes.

The valve for tank emptying is available on DU-100 model.

Supplied with: stainless steel mesh basket and lid, 1x 30 ml concentrate universal cleaner.

MODELS

Name	Volume (l)	Heating power (W)	Ultrasonic power (W)	Tank dimensions LxPxA (mm)	Weight (kg)	p/n
DU-06	0,6	Not heating	50	150 x 85 x65	1,35	41300323
DU-32	3,2	100	120	240 x 135 x100	3,80	41300333
DU-45	4,5	200	180	300 x 150 x 100	4,40	41300343
DU-65	6,5	200	180	300 x 150 x150	5,40	41300353
DU-100	10	500	240	300 x 240 x150	8,20	41300363

CE-5700

MAIN FEATURES

No-heating digital ultrasonic bath with volume: 0,75L.
Particularly **recommended for jewelers.**

Digital display, touch screen panel,
Adjustable timer 90-180-280-380-480 Sec.
Ultrasonic frequency 42 KHz.
Tank dimensions (L x P x H) mm.

Supplied with: basket and cover, 1x 30 ml concentrate universal cleaner.

Name	Volume (l)	Ultrasonic power (W)	Tank dimensions LxPxA (mm)	Weight (Kg)	p/n
CE-5700	0,75	50	150 x 130 x 50	0,97	41300303

THERMOSTATATION

AU - **ANALOGIC** ULTRASONIC BATHS

○ **Working range :** *+5°C RT ... +80 °C*

○ **Ultrasonic frequency:** *40 KHz.*

○ **Timer** *from 1 to 30 minutes, or continuous.*

MAIN FEATURES

Analogic ultrasonic bath.
Temperature adjustment up to 80°C .
Adjustable timer from 1 to 30 minutes and infinite.
Ultrasonic frequency 40 KHz.
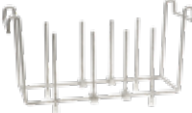
Supplied with: basket and cover, 1x 30 ml concentrate universal cleaner.

MODELS

Name	Volume (l)	Heating power (W)	Ultrasonic power (W)	Tank dimensions LxPxA (mm)	Weight (kg)	p/n
AU-32	3,2	100	120	240 x 135 x100	3,80	**41300403**
AU-65	6,5	200	180	300 x 150 x150	5,40	**41300413**
AU-220	22	500	480	500 x 300 x 150	13,20	**41300433**
AU-450	45	1000	750	500 x 300 x 300	17,00	**41300423**

ACCESSORIES

Name	Description		p/n
CLEANER	Universal cleaning solution. Bottle of 30 ml		**41300253**
CLEANER	Universal cleaning solution. Bottle of 500 ml		**41300263**
BECKER SUPPORT	For **DU-45**, with 2 holes		**41300513**
BECKER SUPPORT	For **DU-65 e AU-65**, with 2 holes		**41300523**
BECKER SUPPORT	For **DU-100**, with 4 holes		**41300533**
SS-200 SIEVE HOLDER	Holder for sieve cleaning Compatible with AU-450 model only. Holder for no. 5 sieves of 80 mm or no. 6 sieves of 60 mm thick.		**41300203**

THERMOSTATATION

THERMOMETERS

XS INSTRUMENTS ®

WARRANTY **5** YEARS

CE

IP56 WATERPROOF

30KΩ

DATA SHEET

Sensor	Measuring range	Max tolerance	Class
THERMOCOUPLE **K**	–60...+1200 °C	±1,5 °C or 0,4% T*	1
THERMOCOUPLE **T**	–40...+350 °C	±0,5 °C or 0,4% T*	1
THERMISTOR **NTC**	+25...+85 °C –40...+125 °C	±0,5 °C ±1 °C	–
PT 100	–100 °C +0 °C +100 °C +200 °C	±0,35 °C ±0,15 °C ±0,35 °C ±0,55 °C	Class A
PT 100	–100 °C +0 °C +100 °C +200 °C	±0,16 °C ±0,06 °C ±0,16 °C ±0,26 °C	Class 1/5 DIN

T*=Measured temperature. Take the worst condition.
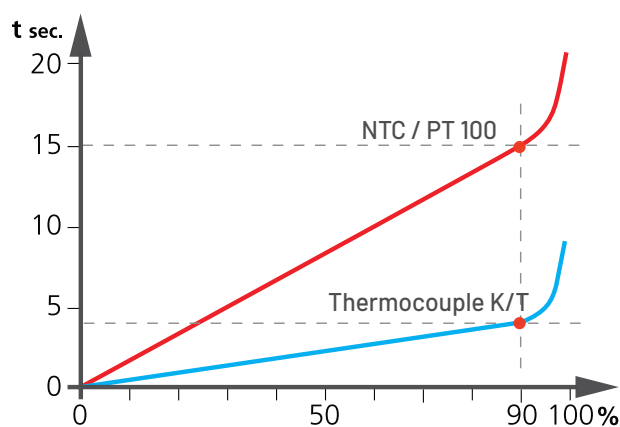
Response time for probe immersed in a liquid.

t sec.
20
15 — NTC / PT 100
10
5 — Thermocouple K/T
0
0   50   90 100 %

TEMP 70 Vio PT100 NEW

- ○ **Resolution** 0,01 °C
- ○ **Measuring range** -200,0...+999,9 °C
- ○ **Dual channel PT100**
- ○ **High definition** backlit coloured LCD **Display**
- ○ **Data logger** up to 1000 data

OTHER FEATURES

GLP portable thermometer, with **double channel for PT 100 probes.**
Innovative **high resolution color display**, excellent readability in all light conditions.
"Hold" functions and recording of Min and Max values.
Protected calibration on 1 point with indication of the correction made.
Manual and automatic data logger, up to 1,000 records with date and time.
Data-Link free software downloadable on the website www.giorgiobormac.com.
Guided procedures on the display for a simple and intuitive use.
LED and self-diagnosis messages indicate the status of the measurement to the operator.
Powered by battery, PC, or USB power supply. Auto shutdown.

Supplied with:
Transport case, USB power supply, USB cable for PC connection, batteries and user manual.

Model	Measuring range	Resolution	T Accuracy	p/n
TEMP 70 Vio PT100 WITHOUT PROBE	-200,0...+999,9 °C	0,01 °C (-99,99...+99,99°C) 0,1 °C elsewhere	±0,03°C (-99,99...+99,99°C) ± 0,1°C elsewhere	50111082

TEMP 7 Vio PT100 NEW

- ○ **Resolution** 0,1 °C
- ○ **Measuring range:** *-200 ... +999°C*
- ○ **High definition** backlit coloured LCD **Display**

OTHER FEATURES

Portable thermometer, for PT100 probes, with **backlit color display.**
Recording of Min and Max values, measure stability indicator.
Protected calibration on 1 point with indication of the correction made.
Hold function and **auto-off** after 20 minutes (can be disabled).
Guided procedures on the display for a simple and intuitive use.
LED and self-diagnosis messages indicate the status of the measurement to the operator.

Supplied with:
Transport case, batteries and user manual.

Model	Measuring range	Resolution	T Accuracy	p/n
TEMP 7 VIO PT100 WITHOUT PROBE	-200...+999 °C	0,1 °C (-99,9...+199,9°C) 1 °C elsewhere	±0,2°C (-99,9...+99,9°C) ±2 °C elsewhere	50111012

THERMOMETERS

PT100 *SENSORS*

PROBES WITH HANDLE

| **CABLE =** 1,5 M | **HANDLE** | **STAINLESS STEEL** STEM | **TIP** |

Name	Stem length	Stem diameter	Tip	Measuring range °C	Certification range °C	t$_{90}$ sec	Precision class	p/n
PT56 L LIQUID AND AIR	200 mm	Ø= 3 mm		- 50 ... +400	- 50 ... + 300	30	A	51000202
PT56 C CONTACT	200 mm	Ø= 5 mm		- 50 ... +400	- 50 ... + 300	120	A	51000212
PT56 P PENETRATION	150 mm	Ø= 4 mm		- 50 ... +400	- 50 ... + 300	60	A	51000222
PT56 A AIR	200 mm	Ø= 4 mm		- 50 ... +250	- 50 ... + 150	60	A	51000232
PT56 L 1/5 DIN	200 mm	Ø= 3 mm		- 50 ... +400	- 50 ... + 300	30	1/5 DIN	51000242
PT56 /500 LIQUIDS AND AIR	500 mm	Ø= 6 mm		- 50 ... +400	- 50 ... + 300	60	A	51000262
PT56 /1000 LIQUIDS AND AIR	1000 mm	Ø= 6 mm		- 50 ... +400	- 50 ... + 300	60	A	51000272

PROBES WITHOUT HANDLE- PERFECT FOR OVEN AND INCUBATORS

| **CABLE =** 3 M - TEFLON | | **STAINLESS STEEL** STEM |

Name	Stem length	Stem diameter	Tip	Measuring range °C	Certification range °C	t$_{90}$ sec	Precision class	p/n
PT56 TFE LIQUIDS AND AIR	100 mm	Ø= 4 mm		-100... +300 cable included	- 100 ... + 250	30	A	51000252

THERMOMETERS

TEMP 7 Vio NTC   NEW

- ○ **Resolution** 0,1 °C
- ○ **Measuring range:** *–50,0...+150,0 °C*
- ○ **High definition** backlit coloured LCD **Display**

OTHER FEATURES

Portable thermometer, for NTC 30KΩ probes, with **backlit color display.**
Recording of Min and Max values, measure stability indicator.
Protected calibration on 1 point with indication of the correction made.
Hold function and **auto-off** after 20 minutes (can be disabled).
Guided procedures on the display for a simple and intuitive use.
LED and self-diagnosis messages indicate the status of the measurement to the operator.

Supplied with:
Transport case, batteries and user manual.

Model	Description	p/n
TEMP 7 Vio NTC WITHOUT PROBE	Portable thermometer	50111052
TEMP 7 Vio NTC WITH PROBE FOR AIR AND LIQUID	Portable thermometer **with NT7L probe** for air and liquid	50111062
TEMP 7 Vio NTC WITH PENETRATION PROBE	Portable thermometer **with NT7P probe** with penetration tip	50111092

PROBES NTC

CABLE = 1,5 M   **HANDLE**   **STAINLESS STEEL** STEM   **TIP**

Name	Stem length	Stem diameter	Tip	Measuring range °C	Certification range °C	t_{90} sec	p/n
NT7L LIQUIDS AND AIR	200 mm	Ø= 3 mm		– 50 ... +150	–50 ... +150	30	50011142
NT7P PENETRATION	150 mm	Ø= 4 mm		– 50 ... +150	–50 ... +150	30	50011122

THERMOMETERS

TEMP 7 Vio K/T *NEW*

- ○ **Resolution** 0,1 °C
- ○ **Measuring range:** -200,0...+1.350 °C
- ○ **High definition** backlit coloured LCD **Display**

OTHER FEATURES

Portable thermometer, for **thermocouple K/T** probes, with **backlit color display.**
Recording of Min and Max values, measure stability indicator.
Protected calibration on 1 point with indication of the correction made.
Hold function and **auto-off** after 20 minutes (can be disabled).
Guided procedures on the display for a simple and intuitive use.
LED and **self-diagnosis messages** indicate the status of the measurement to the operator.

Supplied with:
Transport case, batteries and user manual.

Model	Measuring range	Resolution	T Accuracy	p/n
TEMP 7 Vio K/T WITHOUT PROBE	K =-200,0...+1.350 °C T= 250,0...+400 °C	0,1 °C (-99,99...+99,99°C) 1 °C elsewhere	±0,1 % / ±0,4 % measure > 150 °C ±0,25 % / ± 1 °C measure < 150 °C	50111032

Calibration Certificates

All the thermometer can by supplied with an calibration certificate, the calibration is done by an accredited laboratory

Calibration type	Temperature range	Calibration points	p/n
Type A	0 °C to + 100 °C	3 points positive	21005999
Type B	0 °C to + 100 °C	4 points positive	21005989
Type C	0 °C to + 600 °C	3 points positive	21006039
Type D	0 °C to + 1100 °C	3 points positive	21006009
Type E	-40 °C to + 600 °C	1 point negative + 2 points positive	21006059
Type F	0 °C to + 1100 °C	4 points positive	21006019
Type G	0 °C to + 1100 °C	5 points positive	21006029

XS Portable thermometers brochures are available on our website www.hydrocal.nl

THERMOMETERS

THERMOCOUPLE PROBES **K**

PROBES WITH HANDLE

| **CABLE=** 1,5 M | **HANDLE** | **STAINLESS STEEL** STEM | **TIP** |

Name	Stem length	Stem diameter	Tip	Measuring range °C	Certification range °C	t$_{90}$ sec	Precision class	p/n
3K 220 LIQUIDS AND AIR	200 mm	Ø= 2 mm		- 60 ... +600	0 ... + 400	3	1	51000752
3K 320	200 mm	Ø= 3 mm		- 60 ... +800	0 ... + 600	3	1	51000762
3K 350	500 mm	Ø= 3 mm		- 60 ... +800	0 ... + 800	3	1	51000772
3K 6100	1000 mm FOLDING	Ø= 6 mm		- 60 ... +1100	0 ... + 1100	6	1	51000782
3K 6120	1200 mm FOLDING	Ø= 6 mm		- 60 ... +1100	0 ... + 1100	6	1	51000822
3K 650	500 mm FOLDING	Ø= 6 mm		- 60 ... +1100	0 ... + 1100	6	1	51000792
3K 415 P PENETRATION	150 mm	Ø= 4 mm		- 50 ... +600	0 ... + 600	3	1	51000832
3K 520 C CONTACT	200 mm	Ø= 5 mm		- 60 ... +600	0 ... + 400	15	1	51000802

PROBES WITHOUT HANDLE - PERFECT FOR TUBES AND HARD PLACES TO REACH

| **MANIPULABLE WIRE =** 2 M |

Name	Stem length	Stem diameter	Tip	Measuring range °C	Certification range °C	t$_{90}$ sec	Precision class	p/n
3K 1200 MANIPULABLE WIRE	2000 mm	Ø= 2 mm		- 60 ... +400	0 ... + 300	2	1	51000812

THERMOMETERS

THERMOCOUPLE PROBES **T**

PROBES WITH HANDLE SUGGESTED FOR FOOD AND PHARMACEUTICAL INDUSTRY

CABLE = 1,5 M   **HANDLE**   **STAINLESS STEEL** STEM   **TIP**

Name	Stem length	Stem diameter	Tip	Measuring range °C	Certification range °C	t$_{90}$ sec	Precision class	p/n
3T 320 LIQUIDS AND AIR	200 mm	Ø= 3 mm		- 50 ... +350	-40 ... +300	2	1	51000902
3T 415 PENETRATION	150 mm	Ø= 4 mm		- 50 ... +350	-40 ... +300	3	1	51000912
3T 215 PENETRATION	150 mm	Ø= 2 mm		- 50 ... +350	-40 ... +300	2	1	51000942
3T 520 C CONTACT	200 mm	Ø= 5 mm		- 50 ... +350	-40 ... +300	5	1	51000922
3T 420 A AIR	200 mm	Ø= 4 mm		- 50 ... +250	-40 ... +200	3	1	51000932

PROBES WITHOUT HANDLE - PERFECT FOR OVEN AND INCUBATORS
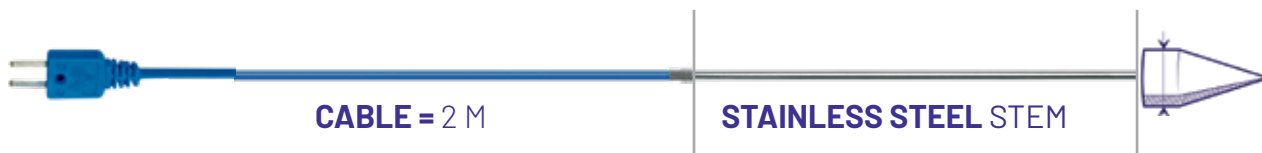
CABLE = 2 M   **STAINLESS STEEL** STEM

Name	Stem length	Stem diameter	Tip	Measuring range °C	Certification range °C	t$_{90}$ sec	Precision class	p/n
3T 210 LIQUIDS AND AIR	100 mm	Ø= 2,5 mm		- 50 ... +300	-40... + 300	3	1	51000952

4 Channels Thermometer datalogger

○ Data logger with 4 channels

○ Working range : −200...+1300 °C

○ Probes: Thermocouple and PT100

Name	Description	p/n
TM-947SD Datalogger	TM-947SD – 4 channels thermometer datalogger, −200..1300 °C. For thermocouple and PT100 temperature probes. Supply without probe. Included carrying case.	52000102

THERMOMETERS

MINI 1 WAY

○ **Data logger Single Trip**
○ **Working range :** –40...+80 °C
○ **Memory :** 13000 savings

MAIN FEATURES

Data logger with 1 channel, IP65 protection with internal temperature sensor.
Active LED (OK) and 4 LED for the 4 alarm thresholds.
Start with START button. Start button used also to mark an event.
Memory up to 13,000 measurements (interval 5 sec ... 24 hours). Internal battery (1 year battery life).
Working range: –40...+80 °C. **Resolution** 0,01°C. **Temperature accuracy** ±0,3°C (–10...+80°C), ±0,5°C (–40...–10°C).

Name	Description	Qty	p/n
MINI 1 WAY **PREPROGRAMMED**	Preprogrammed with alarm thresholds (LL = 0 ° C, L = 2 ° C, H = 8 ° C, HH = 10 ° C), 5 minute acquisition interval, STOP button not activated.	10 pcs	70101013
MINI 1 WAY **PROGRAMMABLE ON REQUEST**	Provide to Giorgio Bormac alarm thresholds with delays, the acquisition interval, and the activation or not of the STOP button.	10 pcs	70101003

MINI T – T1 – TH

○ **Working range T :** –40...+80 °C
○ **Working range H :** 0...100 % RH
○ **Resolution :** 0,01 °C - 0,01 % RH
○ **Memory :** 48000 measurements

MAIN FEATURES

Temperature data logger. IP65 protection.
1 channel with internal or external sensor, and multifunction display for viewing: **current value and minimum, maximum and average temperature, time spent by the logger outside the set thresholds.** Marking an event on the logger via the Start button. Ability to store 48,000 measurements (interval 5 sec ... 24 hours). Internal battery (1 year battery life) replaceable. Start with START button with delayed start option. STOP button activated via software to manually stop the recording.
USB for connection to PC.

The MINI T1 Data Logger is equipped with an external pointed steel probe,
Ø 4mm L = 80mm, with 1 meter cable.
Suitable for detections inside freezers.

Name	Range	Resolution	Accuracy	p/n
MINI T **INTERNAL TEMPERATURE SENSOR**	T: – 40 ...+80 °C.	0,01 °C	±0,3°C (-10...+80°C) / ±0,5°C (-40...-10°C).	70100003
MINI T1 **EXTERNAL TEMPERATURE SENSOR**	T: – 40 ...+80 °C.	0,01 °C	±0,3°C (-10...+80°C) / ±0,5°C (-40...-10°C).	70100103
MINI TH **INTERNAL SENSOR TEMPERATURE + HUMIDITY**	T – 40 ...+80 °C. H: 10...90 % RH	0,01 °C 0,01 % RH	T: ±0,3°C (-10...+80°C) / ±0,5°C (-40...-10°C) H: ±3%RH (+15 ... 25 °C) / ± 5% out of range	70100203

THERMOMETERS

SPECTROPHOTOMETERS
VIS *AND* UV/VIS

Touchscreen
A 5" TFT high definition color display for a new level of experience.
Easy user interface, built-in features (photometry, quantitation, spectrum scan).
In addition: File management, System Utility and Performance verification.

Connectivity and Storage
USB Flash Drive   connection for data and methods storage.
PC remote control, RS-232 port for printer connection.
Internal memory to save methods and data.

Access and maintenance
Removable front panel, anticorrosive material cell holder, drain hole inside the sample
compartment: designed to protect the instrument from accidental spills, time wear and damages.

Lamp compartment
Removable top panel for an easier and faster access to the sources compartment, for a rapid
inspection of the lamps, check of alignment and lamp replacement.

Multi-language user interface
Select your preferred language to improve the interactivity with Onda Touch instruments. Available
languages: English, German, Spanish, French, Italian and Portuguese.

UV-31 SCAN

- UV / VISIBLE
- Coloured **Display 5" TOUCH SCREEN**
- **Range** *190 - 1100 nm*
- **Bandwidth** *2 nm*

MAIN FEATURES

Onda UV/VISIBLE Spectrophotometer.
2 nm bandwidth, single beam, Tungsten/Deuterium sources.
Flash memory USB port, multilanguage OS.

Features: photometry, quantitation, spectrum scan, file management, performance verification.

External dimensions: (LxPxA) 456x360x185mm. Weight: 10.7 kg.
Power supply: 100 - 240 V AC - 50/60 Hz – Power consumption: 120 W.

Always supplied with: 4 optical glass cells o.p. 10mm, 2 quartz cells o.p. 10mm, 10 mm 4-cell holder, power cable, dust cover, USB flash drive and Calibration Report.

Name	Range	Bandwidth	Beam	Source	p/n
UV-31 SCAN	190 - 1100 nm	2 nm	Single	Tungsten/Deuterium	11000082

V-11 SCAN

- VISIBLE
- Coloured **Display 5" TOUCH SCREEN**
- **Range** *320 - 1100 nm*
- **Bandwidth** *4 nm*

MAIN FEATURES

Onda VISIBILE Spectrophotometer.
4 nm Bandwidth, single beam, Tungsten sources
Flash memory USB port, multilanguage OS.
Features: photometry, quantitation, spectrum scan, file management, performance verification.

External dimensions: (LxPxA) 456x360x185mm. Weight: 10.5 kg
Power supply: 100 – 240 V AC, 50/60 Hz - Power consumption 75 W.

Always supplied with: 4 optical glass cells o.p. 10mm, 2 quartz cells o.p. 10mm, 10 mm 4-cell holder, power cable, dust cover, USB flash drive and Calibration Report.

Name	Range	Bandwidth	Beam	Source	p/n
V-11 SCAN	320 - 1100 nm	4 nm	Single	Tungsten	11000062

SPECTROPHOTOMETERS

UV-21

○ UV / VISIBLE
○ Coloured **Display 5" TOUCH SCREEN**
○ **Range** *195 - 1050 nm*
○ **Bandwidth** *4 nm*

MAIN FEATURES

Onda UV/VISIBLE Spectrophotometer.
4 nm Bandwidth, single beam, Tungsten/Deuterium sources.
Flash memory USB port, multilanguage OS.
Features: photometry, quantitation, spectrum scan, file management, performance verification.

External dimensions: (LxPxA) 456x360x185mm. Weight: 10.7 kg.
Power supply: 100 - 240 V AC - 50/60 Hz - Power consumption: 120 W.

Always supplied with: 4 optical glass cells o.p. 10mm, 2 quartz cells o.p. 10mm, 10 mm 4-cell holder, power cable, dust cover, USB flash drive and Calibration Report.

Name	Range	Bandwidth	Beam	Source	p/n
UV-21	195 - 1050 nm	4 nm	Single	Tungsten/Deuterium	**11000072**

SOFTWARE EASY UV FOR ONDA TOUCH SERIES

Easy UV is the application software based on Windows operating systems for the remote control of ONDA touch Series instruments. The application range, data analysis and file management function are greatly expanded, for example to clinical applications (hemoglobin oxygen saturation) and basic biotechnology research (UV methods for DNA/proteins, range DNA 0,2–70 μg/ml).

Functions:
Photometry, Quantitative, Kinetics, Multi wavelength, Spectrum scan, DNA/protein (UV methods).

Main Menu
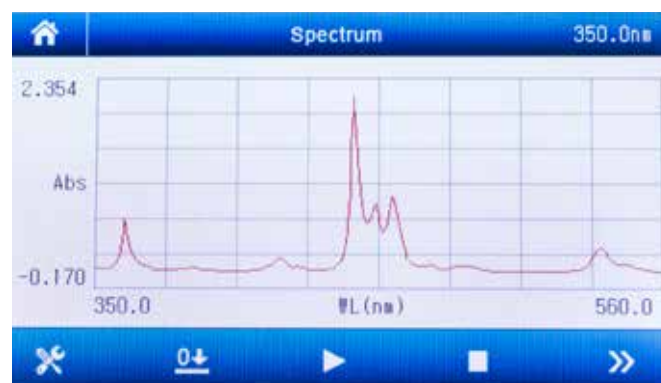
Graphic view

ACCESSORIES

Name	Description	p/n
EASY UV SOFTWARE	Functions included: Photometry, Quantitative, Kinetics, DNA/protein, spectrum scan. Includes the installer CD, USB cable, USB dongle usage license key, User manual	11000972
MICRO PRINTER RS 232	Supplied with power supply, RS232 connection cable, roll of normal paper	11000442
IQ-OQ MANUAL	IQ-OQ paper manual for ONDA spectrophotometers. Filled in by Giorgio Bormac staff to order separately (cod. 11000959)	11000192
VISIBLE SOURCE REPLACEMENT LAMP	VISIBLE range source. Tungsten-Halogen lamp. Vertical filament.	11000912
VISIBILE SOURCE REPLACEMENT LAMP	VISIBLE range source. Tungsten-Halogen lamp. Horizontal filament.	11000942
UV SOURCE REPLACEMENT LAMP	UV range source. Deuterium lamp.	11000922
ADAPTOR TUBES 1 mm	Adaptor 10x10 for optical path tubes 1 mm **Min. quantity order: 2 pcs**	11000582
DUST COVER	for ONDA spectrophotometer	11000932

SUPPORTS

Description		p/n
4 position cell holder for up to 50mmx10mm square cuvettes		11000212
4 position cell holder for up to 100mmx10mm square cuvettes		11000222
Single position cell holder for micro-cells 10mmx10mm (central beam height: 15mm)		11000232
5° Reflectance measurements Support (minimum sample: 20mmx20mmx4mm, central beam height: 50mm)		11000412
Single position Solid sample holder (dimensions 50x30x2mm)		11000422
8 position automatic cell holder for up to 10 mm optical path square cuvettes		11000242
5 position automatic cell holder for 10mm-100mm optical path cuvettes		11000432
Test tube holder Ø 16mm, max height: 90mm, central beam height: 45mm		11000532

OPTICAL GLASS CELLS FOR VISIBLE – RANGE 335 – 2500 nm

Description	Dimensions (W x L x H) mm	Volume ml	p/n
Square cuvettes, optical glass, optical path o.p. 1mm. Set of 2 pcs	12,5 x 3,5 x 45	0,4	**11000382**
Square cuvettes, optical glass, optical path o.p. 10mm. Set of 4 pcs	12,5 x 12,5 x 45	3,5	**11000252**
Square cuvettes, optical glass, optical path o.p. 20mm. Set of 4 pcs	12,5 x 22,5 x 45	7	**11000262**
Square cuvettes, optical glass, optical path o.p. 30mm. Set of 4 pcs	12,5 x 32,5 x 45	10,5	**11000272**
Square cuvettes, optical glass, optical path o.p. 50mm. Set of 4 pcs	12,5 x 52,5 x 45	17,5	**11000282**
Square cuvettes, optical glass, optical path o.p. 100mm. Set of 4 pcs	12,5 x 102,5 x 45	35	**11000292**
Glass flow cuvette, optical path o.p. 10mm (beam height 15mm). Single position cell holder for micro-cells is required p/n 11000232	12,5 x 12,5 x 45	0,7	**11000492**

QUARTZ CELLS FOR UV – RANGE 190 – 2700 nm

Description	Dimensions (W x L x H) mm	Volume ml	p/n
Square cuvettes, quartz, optical path o.p. 1mm. 1 piece	12,5 x 3,5 x 45	0,4	**11000522**
Square cuvettes, quartz, optical path o.p. 10mm. Set of 2 pcs	12,5 x 12,5 x 45	3,5	**11000302**
Square cuvettes, quartz, optical path o.p. 20mm. Set of 2 pcs	12,5 x 22,5 x 45	7	**11000312**
Square cuvettes, quartz, optical path o.p. 30mm. Set of 2 pcs	12,5 x 32,5 x 45	10,5	**11000322**
Square cuvettes, quartz, optical path o.p. 50mm. Set of 2 pcs	12,5 x 52,5 x 45	17,5	**11000332**
Square cuvettes, quartz, optical path o.p. 100mm. Set of 2 pcs	12,5 x 102,5 x 45	35	**11000342**
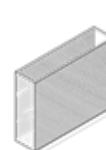
1 mm   10 mm   20 mm   30 mm   50 mm   100 mm

SPECIAL CELLS– MICRO-CELLS HOLDER REQUIRED Part. No.11000232

Description	Dimensions (W x L x H) mm	Volume µl	p/n
MICRO-cell, quartz, optical path o.p. 10mm	12,5 x 12,5 x 45	100	**11000352**
MICRO-cell, quartz, optical path o.p. 10mm	12,5 x 12,5 x 45	200	**11000362**
MICRO-cell, quartz, optical path o.p. 10 mm	12,5 x 12,5 x 45	500	**11000372**
MICRO-cell, quartz, optical path o.p. 10mm	12,5 x 12,5 x 45	1000	**11000392**
FLOW-cell, optical glass, optical path 10 mm (central beam height:15 mm)	12,5 x 12,5 x 45	700	**11000492**
FLOW-cell, quartz, optical path 10mm (central beam height:15 mm)	12,5 x 12,5 x 45	700	**11000502**

quartz 100-200 µl   quartz 500-1000 µl   flow

SPECTROPHOTOMETERS

SIPPER and PELTIER SYSTEM

Name	Description	p/n
SIPPER A-1101 **FLOWING SYSTEM**	Flow cell system, complete with external unit, power cable, support for micro-cells, flow cell, silicone flushing pipes, adjustable flow rate from 1 to 8 ml/min. Outer dimensions (WxLxH) 270x170x115mm. Weight 3 kg. Power supply 40 V AC, 50/60 Hz.	**11000552**
PELTIER A-1201 **THERMOSTATIC SYSTEM**	System for constant temperature selectable range 10-60°C, complete with external unit, power cable, connection cable, thermostatic finned special support micro-cells, micro cell. Outer dimensions (WxLxH) 270x170x115mm. Weight 3 kg. Power Supply 240 V AC, 50/60 Hz.	**11000562**
SIPPER / PELTIER A-1001 **COMBINED SYSTEM**	Selectable constant temperature and flow cell system. Range 10-60°C, adjustable flow rate from 1 to 8 ml/min. Complete with external unit, power cable, connection cable, thermostatic finned special support micro-cells, flow cell, silicone flushing pipes. Outer dimensions (WxLxH) 270x170x115mm. Weight 3 kg. Power supply 240 V AC, 50/60 Hz.	**11000572**

CALIBRATION REPORT

All Onda spectrophotometers are supplied with a calibration report performed according to ISO 17025 requirements, to measure with traceability.

On the calibration report are reported:
- **WAVELENGTH ACCURACY**
- **PHOTOMETRIC ACCURACY**
- **STRAY LIGHT TEST**
- **MEASUREMENT UNCERTAINTY**
- **TRACEABILITY STATEMENT**

SPECTROPHOTOMETERS
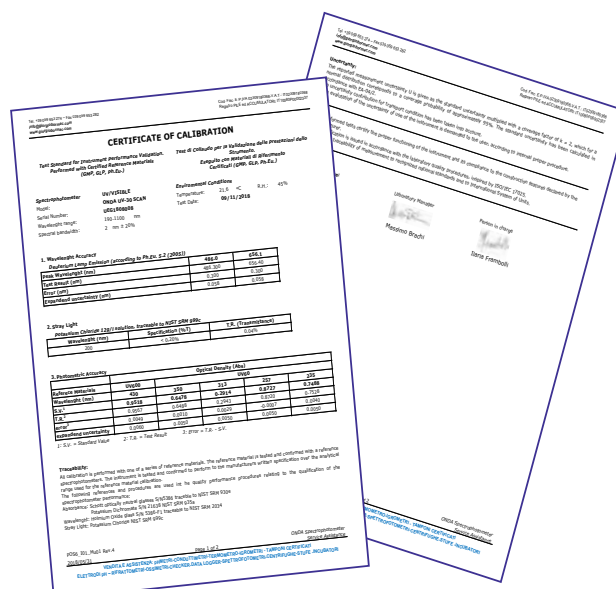
V-10 PLUS

○ **VISIBLE**
○ **Range** *325 - 1000 nm*
○ **Bandwith** *4 nm*

MAIN FEATURES

VISIBLE Spectrophotometer.
Single beam optical system, 4 nm bandwidth, Source: Tungsten. LCD Display, membrane keypad.

Spectral Resolution 0,1 nm, Photometric accuracy ±0,5%T,
Photometric accuracy ±0,3%T.
Photometric Range 0...200%T, –0,3...3Abs, 0...1999Conc.
Functions: Transmittance, Absorbance, Concentration, Coefficients.

Outer dimensions (WxLxH) 490x360x210mm. Weight 12 kg.
Power supply 100 – 240 V AC, 50/60 Hz. Power consumption 75 W.

Provided with: Basic PC Software including the methods: Absorbance, Transmittance, Working Curve, Coefficient Method, Kinetics measurements.

Supplied with: 4 position sled cell holder for 10mm cuvettes, 4 optical glass square cuvettes optical path 10mm, EU power cable, Basic Software, dust cover, calibration report.
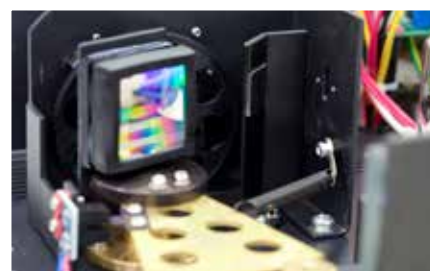
Monochromatic: grid from 1200 lines/mm

Name	Range	Bandwidth	Beam	Source	p/n
V-10 PLUS	325 - 1000 nm	4 nm	Single	Tungsten	**11000052**

ACCESSORIES FOR V-10 PLUS

Name	Description	p/n
PRO-WINE **SOFTWARE**	Software for V-10 PLUS (Includes the installer CD, USB cable, USB dongle usage license key, User manual). Necessary PC with Windows operating system and two USB ports.	**11000962**
SIPPER A-101 **FLOWING SYSTEM**	Flow cell system, complete with external unit, power cable, support for micro-cells, flow cell, silicone flushing pipes, adjustable flow rate from 1 to 15 ml/min. Outer dimensions (WxLxH) 270x170x115mm. Weight 3 kg. Power supply 240 V AC, 50/60 Hz	**11000462**
MICRO PRINTER **RS 232**	Thermal printer, supplied with power supply, connection cable, paper roll	**11000452**
MANUAL IQ-OQ	Paper manual IQ-OQ for ONDA spectrophotometer. Filled in by Giorgio Bormac staff to order separately (part no. 11000959)	**11000192**
VISIBLE SOURCE **REPLACEMENT LAMP**	VISIBLE range Source. Tungsten-Halogen Lamp.	**11000912**
ADAPTOR **TUBES 1 mm**	Adaptor 10x10 for optical path tubes 1 mm **Min. quantity order: 2 pcs**	**11000582**

SPECTROPHOTOMETERS

SUPPORTS

Description	p/n
4 position cell holder for up to 50mmx10mm square cuvettes	11000212
4 position cell holder for up to 100mmx10mm square cuvettes	11000222
Single position cell holder for micro-cells 10mmx10mm (central beam height: 15mm)	11000232
Test tube holder (Ø 16mm, max height: 90mm, central beam height: 45mm)	11000402
5° Reflectance measurements Support (minimum sample: 20mmx20mmx4mm, central beam height: 50mm)	11000412
Single position Solid sample holder (dimensions 50x30x2mm)	11000422

CUVETTES FOR VISIBLE - RANGE 335 - 2500 nm

Description	Dimensions (W x L x H) mm	Volume ml	p/n
Square cuvettes, optical glass, optical path o.p. 1mm. Set of 2 pcs	12,5 x 3,5 x 45	0,4	11000382
Square cuvettes, optical glass, optical path o.p. 10mm. Set of 4 pcs	12,5 x 12,5 x 45	3,5	11000252
Square cuvettes, optical glass, optical path o.p. 20mm. Set of 4 pcs.	12,5 x 22,5 x 45	7	11000262
Square cuvettes, optical glass, optical path o.p. 30mm. Set of 4 pcs	12,5 x 32,5 x 45	10,5	11000272
Square cuvettes, optical glass, optical path o.p. 50mm. Set of 4 pcs.	12,5 x 52,5 x 45	17,5	11000282
Square cuvettes, optical glass, optical path o.p. 100mm. Set of 4 pcs	12,5 x 102,5 x 45	35	11000292
Glass flow cuvette, optical path o.p. 10mm (beam height 15mm). Single position cell holder for micro-cells is required p/n 11000232	12,5 x 12,5 x 45	0,7	11000492

1 mm   10 mm   20 mm   30 mm   50 mm   100 mm

SPECTROPHOTOMETERS

ONDA brochure is available on our website
www.hydrocal.nl

REFRACTOMETERS

WARRANTY
2 YEARS

CE

A refractometer is an optical measuring instrument used to determine the refractive index of a substance, or some physical property of a substance that is directly related to its refractive index.
It can be used to establish the identity of an unknown substance based on its refractive index, to establish the purity of a particular substance or to determine the concentration of one substance dissolved in another.

Commonly the refractometers are used to measure fluid concentrations such as the sugar content (Brix level) of fruits, vegetables, juices and carbohydrate drinks or for cutting fluids, specific gravity of urine, concentration of protein in the blood, degree of moisture in the honey (myelometer), salinity, antifreeze properties, industrial fluids.
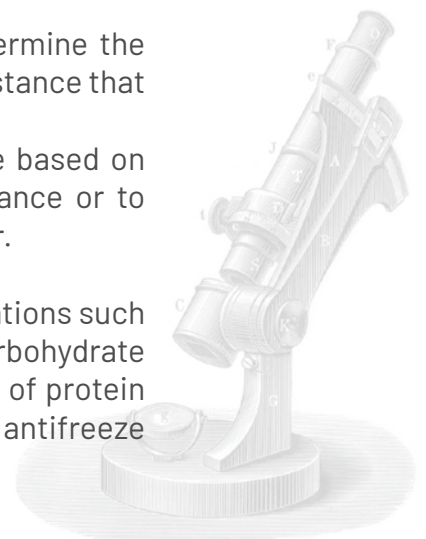
DBR 95

○ **Measuring range** *0,0..95,0 % Brix*

○ **Simultaneous display** of brix, temperature and refractive index

MAIN FEATURES

Portable and benchtop digital refractometer.
Automatic temperature compensation.
Self-calibrating system with water.
Sample volume 1ml.
Programmable MIN/MAX alarm threshold.
3,7 V rechargeable battery power.

Working range
BRIX= 0,0..95,0 % Brix (±0,3 %),
Refractive index = 1,3330...1,5318 nD,
Temperature = 0..40 °C (±0,1 °C).

Always equipped with:
Carrying case, power supply and USB cable, user manual.

Name	Description	Measuring range	Accuracy	p/n
DBR 95	Benchtop digital refractometer	0 - 95 % Brix	±0,3 %	44000063

DBR 55 / DBR SAL

○ **Measuring range:** *0,0..55,0 % Brix*

○ **Salinity measuring range:** *0,0..28,0 % NaCl*

MAIN FEATURES

Portable and benchtop watertight digital refractometer.
Backlit display.
Automatic temperature compensation 10,0..60,0 °C.
Self-calibrating system with water. Sample volume 0,5 ml.
Rubber cover and hard case.
Power supply 2 x 1,5 V (AAA Alkaline).
Dimensions 58 x 36 x 122 mm. Weight 150 g.

Name	Description	Measuring range	Accuracy	p/n
DBR 55	Benchtop digital refractometer	0,0..55,0 % Brix	±0,2 %	44000073
DBR SALT	Salinity digital refractometer	0,0..28,0 % Brix	±0,2 %	44000053

REFRACTOMETERS

DBR WINE

○ **Measuring range:** *0,0..55,0 % Brix*

MAIN FEATURES

Portable and benchtop watertight digital refractometer.
Backlit display.
Automatic temperature compensation 10,0..60,0 °.
Self-calibrating system with water. Sample volume 0,5 ml.
Rubber cover and hard case.
Power supply 2 x 1,5 V (AAA Alkaline).
Dimensions 58 x 36 x 122 mm. Weight 150 g.

RANGE

	Measuring range	Resolution
Brix	0.0 ~ 55.0%	0,1 %
Temperature	0°C ~ 70°C	0,1 %
Bé (Baumé)	0.0° ~ 29.8°	0,1 %
Babo	0.0° ~ 46.4°	0,1 %
Oe (Oechsle)	0° ~ 256°	1 %
TAVP *	0.0% - 37,9%	0,1 %

* ALCOHOL CONTENT BY VOLUME

Name	Description	Measuring range	Accuracy	p/n
DBR WINE	Benchtop digital refractometer	0,0..55,0 % Brix	±0,2 %	44000093

DBR COFFEE

App HMCoffee App Store Google play

○ **Measuring range** *0,0..26,0 % Brix*

○ **Bluetooth connection:** *downloadable App for data storage.*

MAIN FEATURES

Portable and benchtop watertight digital refractometer.
Backlit display.
Automatic temperature compensation 10,0..60,0 °C.
Self-calibrating system with water. Sample volume 0,5 ml.
Rubber cover and hard case.

Power supply 2 x 1,5 V (AAA Alkaline).
Dimensions 58 x 36 x 122 mm. Weight 150 g.

Measuring range
BRIX = 0,00..26,00 % Brix (±0,2 %),
TDS = 0,00..23,00 % TDS (±0,1 %),
Temperature = 0..70 °C (±0,1 °C).

Name	Description	Measuring range	Accuracy	p/n
DBR COFFEE	Benchtop digital refractometer	0,0..26,0 % Brix	±0,2 %	44000083

REFRACTOMETERS

OPTICAL REFRACTOMETERS

Lid with led
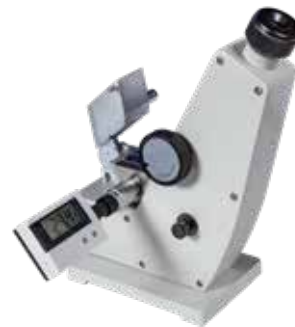
mod. 110 – ABBE

All refractometers are supplied with hard case and calibration screwdriver.

Model	Measuring range	Features	p/n
110 ABBE	Brix: 0,0 - 95,0 % (±0,25%) nD: 1,3000 - 1,7000 (±0,0002)	Bench refractometer with thermostatable prism. Complete with digital thermometer and calibration prism	43000133
THERMOMETER **DIGITAL FOR ABBE**	Replacement thermometer for Abbe 110		43000153

Model	Measuring range (% BRIX)	Features	p/n
101	Brix: 0-32 % (±0,2%)		43000013
101 ATC	Brix: 0-32 % (±0,2%)	Automatic temperature compensation	43000103
101 ATC LED	Brix: 0-32 % (±0,2%)	Automatic temperature compensation	43000203
102	Brix: 28-62% (±0,2%)		43000023
103	Brix: 0-80 % (±0,5%)		43000033
103 LED	Brix: 0-80 % (±0,5%)		43000223
104 **HONEY**	Brix : 58-92% Water : 12-27% Be : 38-43°	Triple scale	43000043
105 **CLINIC**	Serum : 0-12 g/dL Urine specific gravity:1000 - 1050 nD Refraction index:1,3330 - 1,3600	Triple scale	43000053
106 **SALINITY**	Sodium Chloride: 0-28% (±0,2%)		43000063
106 ATC **SALINITY**	Sodium Chloride: 0-100 ‰ Specific gravity: 1000-1070	Double scale Automatic temperature compensation	43000113
107 ATC **WINE**	Brix: 0-35 % Babo: 0-28%	Double scale Automatic temperature compensation	43000123
107 ATC LED **WINE**	Brix: 0-35 % Babo: 0-28%	Double scale Automatic temperature compensation	43000233
414 ATC **ANTIFREEZE** **BATTERIES**	Ethylene glycol: –50 °C / 0 °C Propylene glycol:–50 °C / 0 °C Cleaner: -40 °C / 0 °C Batteries fluid: 1.10 / 1.40 sg.	Automatic temperature compensation	43000173
UREA	Brix: 0-40 %	Signal mark at 32% Brix	43000193

Accessories			p/n
LID	Spare part lid for telescope refractometers without lighting		43000163
LID **WITH LED**	Spare part lid with LED lighting It allows a perfect reading even if there's no or low lighting The cover is interchangeable and can be installed on all the optical refractometers models.		43000003

REFRACTOMETERS

Industrial and Process

Chemitec **HYDROCAL**

- Controllers and Transmitters
- Industrial pH electrodes
- Industrial ORP electrodes
- Industrial Dissolved Oxygen electrodes
- Electrode cables and connectors
- Electrode Armatures

Controllers and Transmitters
30 Serie   Single Measurements (+Temperature)

○ **Automatic temperature compensation** *(ATC)*
○ **Microprocessor** *and* **SMD** *technology*
○ **Backlight** *display*
○ **Two set point** outputs
○ With programmable hysteresis and **ON/OFF** delay
○ Outputs are programmable as **alarm** or **wash** contact
○ **Analogue** outputs 0/4-20mA

MAIN FEATURES
30 Series entry level instruments for pH, Redox potential, Conductivity, and temperature measurement. The 30 transmitters are available for DIN rail, panel and wall mounting, featuring SMD technology and easy programming.

Industrial

Mounting type:	DIN Rail
Dimensions:	box DIN six module
Set point:	2
Output:	0/4-20mA
Waterproof housing:	No, IP40

Model	Resolution	Measurement	Range	p/n
3037D pH/Redox	± 0.01 pH/ ± 1 mV	pH/Redox	0 .... 14 pH ±2000mV	9700640080
3022D COND	± 1%	Conductivity	0 .... 200µS/2000µS/20mS/200mS	9700650080

Mounting type:	Panel Mount
Dimensions:	96mm x 96mm
Set point:	2
Output:	0/4-20mA
Waterproof housing:	Front Panel IP65

Model	Resolution	Measurement	Range	p/n
3037 pH/Redox	± 0.01 pH/ ± 1 mV	pH/Redox	0 .... 14 pH ±2000mV	9700941050A
3022 COND	± 1%	Conductivity	0 .... 200µS/2000µS/20mS/200mS	9700940050A

Mounting type:	Wall Mount
Dimensions:	144mm x 144mm
Set point:	2
Output:	0/4-20mA
Waterproof housing:	IP65

Model	Resolution	Measurement	Range	p/n
3037 pH/Redox	± 0.01 pH/ ± 1 mV	pH/Redox	0 .... 14 pH ±2000mV	970094101DA
3022 COND	± 1%	Conductivity	0 .... 200µS/2000µS/20mS/200mS	970094001DA

Controllers and Transmitters
42 Serie   Single Measurements (+Temperature)

○ Measuring of Temperature using a **PT100/pT1000** or **NTC**

○ **Automatic compensation** of Temperature (ATC)

○ **Programming** keypad with 5 keys

○ **"CAL" Function Key** for direct access to the calibration menu

○ **"GRAPH" Function key** for direct access to the graphics of the measurement

○ **LCD Graphic display** 128x64 with background illumination

○ **Internal Data Logger** (flash 4Mbit) with the possibility of graphic and table visualization

○ **PID** control

○ **Serial output** RS485 MODBUS RTU

○ **Data download** on USB memory stick (optional)

○ **2 Programmable Analogical Outputs**

○ **2 Relay Outputs** for the setpoints, with hysteresis, and on/off delay

○ **1 Relay output for alarm** or Temperature Setpoint

○ **1 Relay output for probe washing** or Temperature Setpoint

○ **1 Digital input** for disabling the dosing

MAIN FEATURES

The 42 Series controllers for industrial applications, are equipped with an output for proportional control, control functions for the probe conditions and other various outputs. The user has full control of the programming.

User Interface:
Programming keypad with 5 keys for calibration and instrument configuration with: GRAPH key to display the stored data in table and graphic form.
Monochrome display 128 x 64 pixel with graphic icons to display the status of the digital output, the recording data, the wash cycle and the alarm and Scrolling through the output values.

Software & Functions:
Manual controls: thanks to the intuitive programming menu it is very easy to start and control the dosing system.
Data Logger: on an internal flash memory with a recording interval of 1 to 99 min. (about 16000 records).
RS485 Serial Port for set-up and remote real time data acquisition or for downloading the stored data on a portable or desktop PC (using dedicated software), through MODBUS RTU communication protocol.
USB Port to download measurement data directly on a removable USB memory stick (available on request).
Digital Input for disabling of dosage or to start the washing from a remote location.
Temperature compensation through pT100, pT1000 sensor with 3 or 4 wires or NTC (for Dissolved oxygen)

Mounting type:	**Wall Mount**
Dimensions:	**144 mm x 144 mm x 123 mm**
Set point:	**2 + 1 alarm + 1 Wash**
Output:	**0/4-20mA, RS458, USB**
Waterproof housing:	**YES IP66**

Model	Resolution	Measurement	Range	p/n
4238 pH/Redox	± 0.01 pH/ ± 1 mV	pH/Redox	0 .... 14 pH ±1500mV	9710612010A
4222 COND	± 0.2% from range	Conductivity	0 .... 200µS/2000µS/20mS/200mS	9710610010A
4283 OXYGEN	± 0.5% from range	Oxygen	0 .... 40 ppm/ 0.... 200%	9710616010A

Industrial

Controllers and Transmitters
42 Serie   Single Measurements (+Temperature)

Mounting type:	Panel Mount
Dimensions:	96 mm x 96 mm x 92 mm
Set point:	2 + 1 Alarm + 1 Wash
Output:	0/4-20mA, RS458, USB
Waterproof housing:	No, IP54

Model	Resolution	Measurement	Range	p/n
4238 pH/Redox	± 0.01 pH/ ± 1 mV	pH/Redox	0 .... 14 pH ±1500mV	9710612050
4222 COND	± 0.2% of range	Conductivity	0 .... 200µS/2000µS/20mS/200mS	9710610050
4283 OXYGEN	± 0.5% of range	Oxygen	0 .... 40 ppm/ 0 ... 200%	9710616050

Controllers and Transmitters
42 Serie   DUAL Measurements (+Temperature)

MAIN FEATURES

The 42 series controllers are also available for double measurement. It will display the 2 different measurements simultaneously. The specifications and features are for the dual measurement for 42 series controllers are the same as the single measurement controllers as described above.
The available configurations are: pH-Redox and pH-conductivity. All with pH as priority functionality.
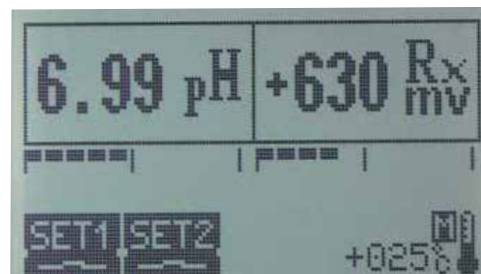
Panel Mount

Model	Resolution	Measurement	Range	p/n
4238-38 pH/Redox	± 0.01 pH/ ± 1 mV	pH/Redox	0 .... 14 pH ±1500mV	9720611050
4238-22 PH/REDOX/COND	± 0.01 pH/ ± 1 mV ± 0.2% from range	PH/REDOX Cond	0 .... 14 pH ±1500mV 0 .... 200µS/2000µS/20mS/200mS	9720610050
4238-83 PH/REDOX/OXYGEN	± 0.01 pH/ ± 1 mV ± 0.5% from range	pH/Redox Oxygen	0 .... 14 pH ±1500mV 0 .... 40 ppm/ 0.... 200%	9720614010A

Wall Mount

Model	Resolution	Measurement	Range	p/n
4238-38 pH/Redox	± 0.01 pH/ ± 1 mV	pH/Redox	0 .... 14 pH ±1500mV	9720611010A
4238-22 PH/REDOX/COND	± 0.01 pH/ ± 1 mV ± 0.2% from range	PH/REDOX Cond	0 .... 14 pH ±1500mV 0 .... 200µS/2000µS/20mS/200mS	9720610010A
4238-83 PH/REDOX/OXYGEN	± 0.01 pH/ ± 1 mV ± 0.5% from range	pH/Redox Oxygen	0 .... 14 pH ±1500mV 0 .... 40 ppm/ 0.... 200%	9720614050

Controllers and Transmitters

50 Serie   Multiple Simultaneous Measurements (+Temperature)

- Automatic temperature compensation *(ATC)*
- Microprocessor *and* SMD *technology*
- Backlight *display*
- **Easy to use Software**
- **Automatic recognition** of sensors
- Up to **4 simultaneous** measurements
- Equipped with **2 RS485 serial ports** (RS485 and MODBUS RTU**)**
- Incorporates a **Real Time Clock** for storing chronological LOG-Files
- Parameters: **pH, ORP, COND, DO, TURB, TSS** ... etc

MAIN FEATURES

Complete and flexible system for a wide range of applications in water treatment with easy to use software and automatic recognition of sensors: available in two configurations, with up to two (2) and up to four (4) simultaneous measurements, freely selectable. Equipped with two RS485 serial ports: one (1) for sensors with RS485 digital interface and MODBUS RTU protocol and one (1) opto-isolated for the connection with the communication devices (Setup Computer, Remote Control Terminals etc.) of the local networks. Incorporates a Real Time Clock (clock with date) which allows the software to archive the data chronologically to the flash memories also used for storing LOG files of the events.

Industrial

Mounting type:	**Wall Mount**
Dimensions:	**144 mm x 144 mm x 123 mm**
Set point:	**2 + 1 alarm + 1 Wash**
Output:	**4 x 0/4-20mA, RS458, MODBUS, USB**
Waterproof housing:	**YES IP66**

Model	Resolution	Parameters	Range	p/n
50-2	pH/ORP: ± 0.01 pH/ ± 1 mV COND: ± 0.2% from range DO: ± 0.5% from range	2 parameters	0 .... 14 pH ±1500mV 0 .... 200µS/2000µS/20mS/100mS 0 .... 40 ppm/ 0.... 200%	9740610010A
50-4	pH/ORP: ± 0.01 pH/ ± 1 mV COND: ± 0.2% from range DO: ± 0.5% from range	4 parameters	0 .... 14 pH ±1500mV 0 .... 200µS/2000µS/20mS/100mS 0 .... 40 ppm/ 0.... 200%	9740611010A

Electrodes 50 serie

Model	Range	Pressure	Protocol	Temperature	p/n
S401 DIG/N pH	0 ... 14 pH	0 ... 11 bar	MODBUS RTU	NTC 30K	9701010097
S406 DIG/N ORP	0 .... ± 1500 mV	0 ... 11 bar	MODBUS RTU	NTC 30K	9711010097
S411 DIG/N COND	0 .... 200µS/2000µS/20mS	0 ... 10 bar	MODBUS RTU	NTC 30K	9700914097
S423/C/OPT DO	0 .... 20 ppm/ 0 ... 200%	0 ... 5 bar	MODBUS RTU	NTC 22K	9700830067

Industrial pH Electrodes

Many XS process electrodes have an encapsulated reference system that guarantees a long life to the electrode and a constant reference potential. The reference system is separate from the electrolyte, which allows you to use a filler free of AgCl and guarantees high stability even if the electrode is subject to temperature fluctuations.
The XS sensors are available with PG13.5 outer tread and S7 head. For basic and special applications, including models which are equipped with temperature sensor inside for easy cleaning and fast temperature compensation.
Some models are designed to help in daily work in GLP condition with non-removable internal serial number and certificate for final quality test.
All XS sensors are connectable to all common transmitter/controller brands in the market.

Industrial

Shaft Material	Glass
Temp Probe	No
Diaphragm	Ceramic
Reference System	Ag/AgCl
Electrolyte	Gel electrolyte

Model	pH Range	Temp °C	Application	Pressure	p/n
Basic Pro	0 ... 14	0 .. +60 °C	General, non demanding	0 ... 2 bar	32201021

Shaft Material	Epoxy
Temp Probe	No
Diaphragm	Open Pore
Reference System	Ag/AgCl
Electrolyte	Polymer

Model	pH Range	Temp °C	Application	Pressure	p/n
Plastic Pro	0 ... 14	–10 .. +60 °C	General, Robust	0 ... 6 bar	32201101

Shaft Material	Glass
Temp Probe	No
Diaphragm	Open Pore
Reference System	Encapsulated
Electrolyte	Polymer

Model	pH Range	Temp °C	Application	Pressure	p/n
Polymer Pro	0 ... 14	–10 .. +60 °C	Low conductivity, no clogging	0 ... 6 bar	32201111

Shaft Material	Glass
Temp Probe	No
Diaphragm	Open Pore
Reference System	Encapsulated
Electrolyte	Polymer

Model	pH Range	Temp °C	Application	Pressure	p/n
Polymer HT Pro **Also in 225 mm**	0 ... 14	0 .. +130 °C	Chemical, pharmaceutical and sugar industries	0 ... 6 bar	32201011 32201051 (225 mm)

Shaft Material	Glass
Temp Probe	No
Diaphragm	Open Pore
Reference System	Coated reference
Electrolyte	Polymer

Model	pH Range	Temp °C	Application	Pressure	p/n
Polymer HA Pro	0 ... 14	0 .. +130 °C	Pharmaceutical and chemical process, low alkaline error.	0 ... 6 bar	32201061

Shaft Material	Glass
Temp Probe	No
Diaphragm	Ceramic
Reference System	Coated reference
Electrolyte	Gel electrolyte

Model	pH Range	Temp °C	Application	Pressure	p/n
Gel HT Pro Also in 225 mm	0 ... 14	0 .. +130 °C	Chemical industry, oxides, water, waste water	0 ... 16 bar	32201001 32201041 (225 mm)

Shaft Material	Glass
Temp Probe	No
Diaphragm	Open Pore
Reference System	Coated reference
Electrolyte	Polymer

Model	pH Range	Temp °C	Application	Pressure	p/n
Polymer HF Pro	0 ... 14	–5 .. +100 °C	Containing hydrofluoric acid	0 ... 6 bar	32201071

Shaft Material	Glass
Temp Probe	No
Diaphragm	Open Pore
Reference System	Encapsulated
Electrolyte	Polymer Plus

Model	pH Range	Temp °C	Application	Pressure	p/n
Polymer Plus Pro Also in 225 mm	0 ... 14	0 .. +130 °C	Chemical and petrochemical industries	0 ... 6 bar	32201121 32201211 (225 mm)

Shaft Material	Glass
Temp Probe	No
Diaphragm	Sleeve diaphragm
Reference System	Incapsutaled
Electrolyte	3M KCL

Model	pH Range	Temp °C	Application	Pressure	p/n
Pure Pro	0 ... 14	0 .. +40 °C	Ion weak media, low conductivity	0 ... 0,5 bar	32201081

Industrial

Industrial Redox (ORP) Electrodes

Industrial

Shaft Material	Glass
Temp Probe	No
Diaphragm	Ceramic
Reference System	Ag/AgCl
Electrolyte	Gel electrolyte

Model	Range mV	Temp °C	Application	Pressure	p/n
Basic ORP Platinum	± 2000 mV	0 .. +60 °C	General, non demanding	0 ... 2 bar	32201031

Shaft Material	Glass
Temp Probe	No
Diaphragm	Open Pore
Reference System	Encapsulated
Electrolyte	Polymer

Model	Range mV	Temp °C	Application	Pressure	p/n
Polymer ORP	± 2000 mV	-10 .. +60 °C	Waste water treatment, swimming pools	0 ... 6 bar	32201131

Shaft Material	Glass
Temp Probe	No
Diaphragm	Ceramic
Reference System	Coated reference
Electrolyte	Gel electrolyte

Model	Range mV	Temp °C	Application	Pressure	p/n
Gel HT ORP	± 2000 mV	0 .. +130 °C	Chemical industries, high temperature	0 ... 16 bar	32201091

Industrial pH Electrodes with ATC

Shaft Material	Glass
Temp Probe	Yes, PT1000
Diaphragm	Open pore
Reference System	Encapsulated
Electrolyte	Polymer Plus

Model	pH Range	Temp °C	Application	Pressure	p/n
Polymer PLUS VP **Also in 225 mm**	0 ... 14	0 .. +130 °C	Chemical and petro-chemical industries	0 ... 6 bar	32201351 **32201361** (225 mm)

Shaft Material	Glass
Temp Probe	Yes, PT100
Diaphragm	Open Pore
Reference System	Encapsulated
Electrolyte	Polymer

Model	pH Range	Temp °C	Application	Pressure	p/n
Polymer HT VP **Also in 225 mm**	0 ... 14	0 .. +130 °C	Chemical, pharmaceutical and sugar industries	0 ... 6 bar	32201301 **32201311** (225 mm)

Industrial Dissolved Oxygen Electrodes

Shaft Material	Stainless steel
Temp Probe	Yes
Electrolyte	None

Model	Range DO	Temp °C	Application	Pressure	p/n
Visiferm	0.05 ... 300%	−10 .. +130 °C	Chemical, pharmaceutical industry, biotechnology, food/ beverage industry, water and sewage management	−1 ... 12 bar	242450-02

Shaft Material	Stainless steel
Temp Probe	Yes
Cable length	5 m
Electrolyte	None

Model	Range DO	Temp °C	Application	Pressure	p/n
Oxysens OXY1	0 ... 20 mg/l	0 .. +60 °C	Water, swimming pools and fish farms	0 ... 4 bar	99210006

Electrode Cables

With the following parts you can construct your own (extension) cables:

33550533 – Coaxial Cable, dia 5 mm, no connectors, per meter.

7264963 – Adapter BNC to BNC, to connect extension cable to electrode with BNC connector

33412913 – S7 screw head connector for 5 mm coaxial cable

33550903 – DIN Connector for 5 mm coaxial cable

33412923 – BNC Connector for 5 mm coaxial cable

Pre-assembled cable:

With S7-Open end

Length:	Order Code:
3 m	33550733
5 m	33550663
10 m	33550803
20 m	33550763

With S7-BNC

Length:	Order Code:
3 m	33550743
5 m	33550563
10 m	33550753
20 m	33550773

VP6 Cable
(7 wires)

Length:	Order Code:
3 m	33551091
5 m	33551101

VP8 Cable
(9 wires)

Length:	Order Code:
3 m	355218

Electrode Armatures

Material	PVC
Mounting thread	½" NPT
Inner Diameter	12 mm

Model	Temp °C	Application	Pressure	p/n
PSS3	0 .. +60 °C	Standard electrode without PG 13 .5	0 ... 7 bar	**9900106670**

Material	Polypropylene
Mounting thread	¾" and ¾" NPT
Inner Diameter	12 mm
PG 13.5	Yes
Immersion	23 mm

Model	Temp °C	Application	Pressure	p/n
Sontack PP	0 .. +100 °C	Industrial electrode with PG 13 .5	0 ... 4 bar	**VI81**

Material	Polypropylene
Mounting	open tank, channel
Inner Diameter	12 mm
Outer Diameter	40 mm
PG 13.5	Yes
Cleaning connection	Yes

p/n	Length	Temp °C	Application	Pressure
VI-88N	1 m	0 .. +100 °C		0 ... 4 bar
VI-88-1.5N	1.5 m	0 .. +100 °C	Water, Waste water, Aquaculture,	0 ... 4 bar
VI-88-2N	2 m	0 .. +100 °C	Galvanic industries	0 ... 4 bar
VI-88-X	On request	0 .. +100 °C		0 ... 4 bar

Material	PVC
Mounting	open tank, channel
Inner Diameter	12 mm
Outer Diameter	40 mm
PG 13.5	Yes
Cleaning connection	No

p/n	Suitable electrode	Temp °C	Length	Application	Material
33550943	PG13.5	0 .. +60 °C	40 cm		PVC
33550913	PG13.5	0 .. +60 °C	80 cm	Water, Waste water,	PVC
33550944	SCDLT	0 .. +60 °C	40 cm	Aquaculture	PVC
33550914	SCDLT	0 .. +60 °C	80 cm		PVC

Electrode Armatures

Material	Polypropylene and PVC
Mounting	Open tank, Channel, Pipe
Inner Diameter	12 mm
Outer diameter	40 mm
PG 13.5	Yes
Cleaning connector	No

p/n	Temp °C	Application	Pressure	Length	Material
33412353	0 .. +60 °C	Water, Waste Water, Aquaculture	0 ... 16 bar	20 cm	PP and PVC

Material	Polypropylene
Mounting	Open tank, Channel
Inner Diameter	12 mm
Outer diameter	42 mm and 63 mm (2 pcs)
PG 13.5	Yes
Cleaning connector	Yes

Model	Temp °C	Application	Pressure	Length	Pieces Electrode	p/n
S315/50	0 .. +90 °C	Water, Waste Water, Aquaculture	0 ... 6 bar	57 cm	1	9500420000
S315/100	0 .. +90 °C	Water, Waste Water, Aquaculture	0 ... 6 bar	107 cm	1	9500420001
S315/150	0 .. +90 °C	Water, Waste Water, Aquaculture	0 ... 6 bar	157 cm	1	9500420002
S315/250	0 .. +90 °C	Water, Waste Water, Aquaculture	0 ... 6 bar	257 cm	1	9500420010
S315/2/50	0 .. +90 °C	Water, Waste Water, Aquaculture	0 ... 6 bar	57 cm	2	9500430003
S315/2/100	0 .. +90 °C	Water, Waste Water, Aquaculture	0 ... 6 bar	107 cm	2	9500430004
S315/2/150	0 .. +90 °C	Water, Waste Water, Aquaculture	0 ... 6 bar	157 cm	2	9500430005
S315/2/250	0 .. +90 °C	Water, Waste Water, Aquaculture	0 ... 6 bar	257 cm	2	9500430013

Model	Temp °C	Application	Pressure	Length	Material	p/n
Nozzle/42	0 .. +60 °C	Cleaning the probe in the S315	0 ... 16 bar	20 cm	Stainless steel	7600420001
Nozzle/63	0 .. +60 °C	Cleaning the probes in the S315	0 ... 16 bar	20 cm	Stainless steel	7600430001

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50004022	Conductivity cell mod. 2301T/5 with ATC, C=1, measuring range 10µS...100mS, cable length 5 mt BNC/Cinch	20
50004062	Conductivity cell mod. VP 1, measuring range 10 µS...10 mS, temp. 0...+80 °C, Cable fix / BNC, cell constant C= 1.	47
50004072	Conductivity cell mod. VPT 10, measuring range 100 µS...200 mS, temp. 0...+80 °C, Cable fix / BNC	47
50004082	Conductivity cell mod. VPT SOIL for soil conductivity measurement with ATC, C=1, measuring range 10 µS...50mS	47
50004092	Conductivity cell C=1 with built-in temperature sensor, epoxy body, cable 3m. Working range: 10 uS...200 mS	29
50004132	PC 8+ DHS kit STIRRER with pH electrode XS STANDARD T BNC DHS, conductivity cell 2301T with ATC.	25
50004142	PC 8+ DHS kit STIRRER with pH electrode XS Polymer, conductivity cell 2301T with ATC. Cable S7/BNC	25
50004152	PC 8+ DHS kit STIRRER without pH electrode, with cond. cell 2301T. Cable S7/BNC, temperature probe NT55	25
50004162	PC 8+DHS kit STIRRER with pH electrode XS Polymer, without cond. cell. Cable S7/BNC. Temp. probe NT55	25
50004172	PC 8+ DHS kit STIRRER without pH electrode and cond. cell. Cable S7/BNC, temperature probe NT55	25
50004232	PC 80+ DHS kit STIRRER with pH electrode XS STANDARD T BNC DHS, cable S7/BNC, temperature probe NT55	24
50004242	PC 80+ DHS kit STIRRER with pH electrode XS STANDARD S7, 1 mt cable S7/BNC, temperature probe NT55	24
50004252	PC 80+ DHS kit STIRRER without pH electrode, with cond. cell glass VPT 80/1. Cable S7/BNC, temp. probe NT55	24
50004262	PC 80+ DHS kit STIRRER with pH electrode XS STANDARD S7, without cond. cell. Cable 1 mt cable S7/BNC	24
50004272	PC 80+ DHS kit STIRRER without pH electrode and cond. cell. Cable S7/BNC, temperature probe NT55	24
50010172	Power supply USB for 70 series	36
50010242	Polarographic sensor OXY DO7/3MT with 3 meter cable, 2 membrane and filling solution (30ml)	29
50010252	Kit 2 membrane for sensor OXY DO7/3MT	29
50010262	Filling solution for electrode OXY DO7/3MT 1x 120ml	29
50010272	Standard zero (0) Oxygen, single use. Kit of 5 bottle for DO7/3MT, LDO70/2MT, LDO70/10MT	29
50010282	Plastic armature (PPE) for electrode immersion DO7/3MT (to be ordered with OXY 7)	35
50010292	Standard zero (0) Oxygen single use 1 bottle for DO7/3MT, LDO70/2MT, LDO70/10MT	29

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50010342	Optical sensor LDO70/2MT with 2 meter cable	34
50010352	Optical sensor LDO70/10MT with 10 meter cable	34
50010362	Replaced membrane LDO for sensor LDO70/2MT and LDO70/10MT	34
50010372	Steel armature for sensor immersion LDO70/10MT	34
50010962	Soft case with shoulder strap in eco-friendly material for portable meters Violine	36
50010972	IP67 carrying case for REVIO instruments	36
50011122	NT7P, Penetration measurements, mm 150x4	114
50011142	NT7L, For measurements in liquids/air, mm 200x3	114
50014003	pH 1 Tester ECOPACK - 0,1 pH resolution, with ATC (automatic temperature compensation), fix electrode	57
50014013	pH 1 Tester KIT - 0,1 pH resolution, with ATC (automatic temperature compensation), fix electrode, in carton case	57
50014053	pH 5 Tester ECOPACK - 0,01 pH resolution, with ATC (automatic temperature compensation)	58
50014063	pH 5 Tester KIT - 0,01 pH resolution, with ATC (automatic temperature compensation)	58
50014073	pH 5 Tester only BODY instrument - 0,01 pH resolution, with ATC (automatic temperature compensation)	58
50014113	pH 5 FOOD Tester KIT - 0,01 pH resolution, with ATC (automatic temperature compensation)	58
50014123	pH 5 FOOD Tester ECOPACK - 0,01 pH resolution, with ATC (automatic temperature compensation)	58
50014143	pX 4 Tester KIT - 0,01 pH resolution, ORP (-1000 / + 1900 mV), mV for electrode quality test, ORP	62
50014153	COND 1 Tester ECOPACK, Cond (0,01 µS...200 mS) and TDS (0,01 ppm...199,9 ppt), with ATC	59
50014163	COND 1 Tester KIT, Cond (0,01 µS...200 mS) and TDS (0,01 ppm...199,9 ppt), with ATC	59
50014173	pX 4 Tester ECOPACK - 0,01 pH resolution, ORP (-1000 / + 1900 mV), mV for electrode quality test, ORP	62
50014203	COND 5 Tester ECOPACK - Cond (0,01 µS...200 mS), TDS (0,01 ppm...199,9 ppt), Salinity (0,1 mg/l...100,0 g/l), °C/°F	61
50014213	COND 5 Tester KIT - Cond (0,01 µS...200 mS), TDS (0,01 ppm...199,9 ppt), Salinity (0,1 mg/l...100,0 g/l), °C/°F	61
50014223	COND 5 Tester only BODY instrument - Cond (0,01 µS...200 mS), TDS (0,01 ppm...199,9 ppt)	61
50014253	PC 5 Tester ECOPACK - 0,01 pH resolution, mV for electrode quality test, Cond (0,01 µS...200 mS), TDS	62
50014263	PC 5 Tester KIT - 0,01 pH resolution, mV for electrode quality test, Cond (0,01 µS...200 mS), TDS	62
50014293	PC 6 Tester KIT - 0,01 pH resolution, mV for electrode quality test, ORP (-1000 / + 1900 mV)	63
50014313	ORP 5 Tester KIT - ORP (-1000 / + 1900 mV) with customer calibration point, °C/°F, replaceable sensor	61
50014403	pH 5 Replacement spare pH electrode for tester pH 5	60
50014413	COND 5 replacement spare COND sensor for COND 5	61
50014423	SPH 5 Replacement spare pH electrode with ATC for tester pH 5 FOOD	60
50014433	PC 5 replacement spare PC electrode for PC 5	62
50014443	ORP 5 replacement spare ORP sensor for ORP 5	61
50014463	pX 4 Replacement spare pH/ORP sensor for pX 4	62
50014483	PC 6 Replacement spare pH/ORP/COND sensor for PC 6	63
50014603	201T-pH5 plastic body electrode, range pH 0...14, temp. 0...+60 °C, 1 m cable for tester pH5	62
50014613	Standard T-pH5 glass body electrode, range pH 0...14, temp. -10...+100 °C, 1 m cable for tester pH5	62
50014623	2PoreT-pH5 glass body electrode, range pH 0...14, temp.0...+60 °C, 6 mm membrane suitable for FOOD and CHEESE	62
50014703	2301T-COND5 Conductivity cell with ATC, C=1, measuring range 10µS...100mS, temp. 0...+60 °C	62
50014713	VPT SOIL-COND5 Conductivity cell for soil conductivity measurement with ATC, C=1, measuring range 10 µS...50mS	62
50101002	pH 50 VioLab DHS complete kit included pH electrode 201T with temperature sensor inside and BNC	7
50101012	pH 50 VioLab DHS without pH electrode. Cable S7/BNC, temperature probe NT55	7
50101032	pH 50 VioLab DHS complete kit included pH electrode 201T DHS with temperature sensor inside and BNC	7
50101092	pH 60 VioLab DHS complete kit included pH electrode 201T with temperature sensor inside and BNC	6
50101102	pH 60 VioLab DHS complete kit included pH electrode 201T DHS with temperature sensor inside and BNC	6
50101112	pH 60 VioLab DHS without pH electrode. Cable S7/BNC, temperature probe NT55	6
50103002	COND 50 VioLab complete kit include cond. cell 2301T with ATC, cable length 1m. Cell holder	17
50103012	COND 50 VioLab without conductivity cell. standard calibration solutions 1413 µS and 12,88 mS, cell holder	17
50103072	COND 60 VioLab complete kit include cond. cell 2301T with ATC, cable length 1m. Cell holder	16

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50103892	PC 50 VioLab DHS complete kit with pH electrode 201T DHS with temperature sensor inside, conductivity cell	27
50103902	PC 50 VioLab DHS complete kit with pH electrode 201T with temperature sensor inside, conductivity cell	27
50103912	PC 50 VioLab DHS without pH electrode, included S7/BNC cable, temperature probe NT 55, conductivity cell	27
50103942	PC 60 VioLab DHS complete kit with pH electrode 201T DHS with temperature sensor inside	26
50103952	PC 60 VioLab DHS complete kit with pH electrode 201T with temperature sensor inside, conductivity cell	26
50103972	PC 60 VioLab DHS without pH electrode, included S7/BNC cable, temperature probe NT 55, conductivity cell	26
50110012	pH 7 Vio DHS complete kit included pH electrode 201T plastic body with temperature sensor inside	9
50110022	pH 7 Vio DHS kit without pH electrode with temperature probe NT 55, BNC/S7 1mt cable, colored pH buffer	9
50110032	pH 7 Vio DHS FOOD complete kit included pH spear electrode 2 Pore T with temperature sensor inside	9
50110062	pH 7 Vio DHS complete kit included pH GEL electrode plastic body 1 mt. cable with BNC.	9
50110072	pH 7 Vio DHS complete kit included pH electrode 201T DHS plastic body with temperature sensor inside	9
50110082	pH 7 Vio DHS FOOD complete kit included pH spear electrode 2 Pore T DHS with temperature sensor inside	9
50110112	pH 70 Vio DHS complete kit included pH electrode 201T plastic body with temperature sensor inside	8
50110122	pH 70 Vio DHS kit without pH electrode with temperature probe NT 55, BNC/S7 1mt cable, colored pH buffer	8
50110162	pH 70 Vio DHS FOOD complete kit included pH spear electrode 2 Pore T with temperature sensor inside	8
50110182	pH 70 Vio DHS complete kit included pH electrode 201T DHS plastic body with temperature sensor inside	8
50110192	pH 70 Vio DHS FOOD complete kit included pH spear electrode 2 Pore T DHS with temperature sensor inside	8
50110202	Oxy 7 Vio with polarographic sensor OXY DO7/MT with 3 mt cable, 1 bottle 0% Oxygen standard	35
50110212	Oxy 7 Vio ECO only meter, without probe in carton box ECOpack	35
50110302	Oxy 70 Vio with optical Oxygen sensor LDO70/2MT with 2 mt cable. 1 bottle 0% Oxygen standard, power supply	34
50110312	Oxy 70 Vio with optical Oxygen sensor LDO70/10MT with 10 mt cable. 1 bottle 0% Oxygen standard, power supply	34
50110412	COND 7 Vio with TDS complete kit included cond. cell 2301 T with ATC, cable length 1mt with BNC/Cinch plug	19
50110422	COND 7 Vio with TDS without conductivity cell, standard calibration solution, carrying case and accessories.	19
50110512	COND 70 Vio complete kit included cond. cell 2301 T with ATC, cable length 1mt with BNC/Cinch plug	18
50110522	COND 70 Vio without conductivity cell, standard calibration solution, power supply, software PC-Link	18
50110712	PC 7 Vio DHS complete kit included pH electrode 201T plastic body with temperature sensor inside	31
50110722	PC 7 Vio DHS without pH electrode, included conductivity cell 2301 T with ATC, cable length 1mt with BNC/Cinch	31
50110752	PC 7 Vio DHS complete kit included pH electrode 201T DHS plastic body with temperature sensor inside	31
50110812	PC 70 Vio DHS complete kit included pH electrode 201T plastic body with temperature sensor inside	30
50110822	PC 70 Vio DHS without pH electrode, included conductivity cell 2301 T with ATC, cable length 1mt with BNC	30
50110872	PC 70 Vio DHS complete kit included pH electrode 201T DHS plastic body with temperature sensor inside a	30
50110912	REVIO DHS kit portable multiparameter included with sensors pH/EC/DO	29
50110922	REVIO DHS kit portable multiparameter included with sensors pH/DO without EC cell	29
50110932	REVIO DHS kit portable multiparameter without sensors pH/EC/DO	29
50110942	REVIO DHS kit portable multiparameter included with sensors EC/DO, without pH electrode	29
50110952	REVIO DHS kit portable multiparameter with 201T DHS, EC and DO sensors	29
50111012	XS Temp 7 Vio portable thermometer for PT 100 RTD probe.	112
50111032	XS Temp 7 Vio K/T portable thermometer for thermocouple T and K probe.	115
50111052	XS Temp 7 Vio NTC portable thermometer for NTC probe.	114
50111062	XS Temp 7 Vio NTC KIT L portable thermometer for NTC probe.	114
50111082	XS Temp 70 Vio Portable thermometer data logger for 2 PT 100 RTD probes.	112
50111092	XS Temp 7 Vio NTC KIT P portable thermometer for NTC probe.	114
51000212	PT56C, For contact measurements, mm 200x5	113
51000222	PT56P, Penetration measurements, mm150x4	113
51000232	PT56A, For measurement in air, mm200x4	113
51000242	PT56L 1/5 DIN, For measurements in liquids, mm 200x3	113

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51000252	PT56 TFE, Teflon cable ideal for oven and freezer, mm 100x4	113
51000262	PT56/500, For measurements in liquids, mm 500x6	113
51000272	PT56/1000, For measurements in liquids, mm 1000x6	113
51000752	3K220, For measurements in liquids/air, mm 200x2	116
51000762	3K320, mm 200x3	116
51000772	3K350, mm 500x3	116
51000782	3K6100, mineral oxide folding probe, mm 1000x6	116
51000792	3K650, mineral oxide folding probe, mm 500x6	116
51000802	3K520C, For contact measurements , mm200x5	116
51000812	3K1200, Wire manipulable probe, mm 2000x2	116
51000822	3K6120, mineral oxide folding probe, mm 1200x6	116
51000832	3K415P, Penetration measurements, mm150x4	116
51000902	3T320, For measurements in liquids/air, mm 200x3	117
51000912	3T415, Penetration measurements, mm150x4	117
51000922	3T520C, For contact measurements , mm200x5	117
51000932	3T420A, For measurement in air, mm200x4	117
51000942	3T215, Penetration measurements, mm150x2	117
51000952	3T210, Ideal for oven and freezer, mm 100x2,5	117
51004132	REDOX combined electrode, cable length 3 m.	29
51100033	1x250 ml XS buffer solution pH 4,01 ± 0,01 / 25°C red color with N.I.S.T certificate	52
51100043	1x250 ml XS buffer solution pH 7,00 ± 0,01 / 25°C green color with N.I.S.T certificate	52
51100053	1x250 ml XS buffer solution pH 9,00 ± 0,02 / 25°C blue color with N.I.S.T certificate	52
51100063	1x250 ml XS buffer solution pH 10,01 ± 0,02 / 25°C Yellow color with N.I.S.T. certificate	52
51100073	1x250 ml XS buffer solution pH 9,21 ± 0,02 / 25°C blue color with N.I.S.T certificate	52
51100083	1x250 ml XS buffer solution pH 10,01 ± 0,02 / 25°C blue color with N.I.S.T. certificate	52
51100093	1x250 ml XS buffer solution pH 12,45 ± 0,05 / 25°C clear color with N.I.S.T. certificate	52
51100133	1x500 ml XS buffer solution pH 4,01 ± 0,01 / 25°C red color with N.I.S.T certificate	52
51100143	1x500 ml XS buffer solution pH 7,00 ± 0,01 / 25°C green color with N.I.S.T certificate	52
51100153	1x500 ml XS buffer solution pH 9,00 ± 0,02 / 25°C blue color with N.I.S.T certificate	52
51100163	1x500 ml XS buffer solution pH 10,01 ± 0,02 / 25°C yellow color with N.I.S.T. certificate	52
51100173	1x500 ml XS buffer solution pH 9,21 ± 0,02 / 25°C blue color with N.I.S.T certificate	52
51100183	1x500 ml XS buffer solution pH 10,01 ± 0,02 / 25°C blue color with N.I.S.T certificate	52
51100223	1x5Lt XS buffer solution pH 6,86 ± 0,01 / 25°C clear color with N.I.S.T certificate	53
51100193	1x500 ml XS buffer solution pH 12,45 ± 0,05 / 25°C clear color with N.I.S.T certificate	52
51100233	1x5Lt XS buffer solution pH 4,01 ± 0,01 / 25°C red color with N.I.S.T certificate	53
51100243	1x5Lt XS buffer solution pH 7,00 ± 0,01 / 25°C green color with N.I.S.T certificate	53
51100253	1x5Lt XS buffer solution pH 9,00 ± 0,02 / 25°C blue color with N.I.S.T certificate	53
51100263	1x5Lt XS buffer solution pH 10,01 ± 0,02 / 25°C yellow color with N.I.S.T certificate	53
51100273	1x5Lt XS buffer solution pH 9,21 ± 0,02 / 25°C blue color with N.I.S.T certificate	53
51100283	1x5Lt XS buffer solution pH 10,01 ± 0,02 / 25°C blue color with N.I.S.T certificate	53
51100293	1x5Lt XS buffer solution pH 12,45 ± 0,05 / 25°C clear color with N.I.S.T certificate	53
51100303	1x250 ml XS Redox/ORP 200 mV ± 5mV / 25°C (dark bottle)	55
51100313	1x250 ml XS Redox/ORP 475 mV ± 5mV / 25°C	55
51100323	1x500 ml XS Redox/ORP 475 mV ± 5mV / 25°C	55
51100333	1x5Lt XS Redox/ORP 650 mV ± 5mV / 25°C (Politainer Cubibox)	55
51100343	1x500 ml XS Redox/ORP 250 mV ± 5mV / 25°C	55
51100353	1x500 ml XS Redox/ORP 200 mV ± 5mV / 25°C	55

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51100503	1x300 ml XS Conductivity Standard 1,3 μS/cm ± 0,1 / 25°C glass bottle with N.I.S.T certificate	54
51100513	1x300 ml XS Conductivity Standard 5 μS/cm ± 0,1 / 25°C glass bottle with N.I.S.T certificate	54
51100613	1x500 ml XS Conductivity Standard 84 μS/cm ± 1% / 25°C with N.I.S.T certificate	54
51100623	1x500 ml XS Conductivity Standard 147 μS/cm ± 1% / 25°C with N.I.S.T certificate	54
51100633	1x500 ml XS Conductivity Standard 1413 μS/cm ± 1% / 25°C with N.I.S.T certificate	54
51100643	1x500 ml XS Conductivity Standard 12'880 μS/cm ± 1% / 25°C with N.I.S.T certificate	54
51100653	1x500 ml XS Conductivity Standard 5000 μS/cm ± 1% / 25°C with N.I.S.T certificate	54
51100663	1x500 ml XS Conductivity Standard 80000 μS/cm ± 1% / 25°C with N.I.S.T certificate	54
51100673	1x500 ml XS Conductivity Standard 500 μS/cm ± 1% / 25°C with N.I.S.T certificate	54
51100683	1x500 ml XS Conductivity Standard 111800μS/cm ± 1% / 25°C with N.I.S.T certificate	54
51102013	1x20 SACHET 25ml pH 4,01 ± 0,01 / 25°C (red), with Certificate of Analysis	51
51102023	1x20 SACHET 25ml pH 7,00 ± 0,01 / 25°C (green), with Certificate of Analysis	51
51102043	1x20 SACHET 25ml pH 10,01 ± 0,02 / 25°C (yellow), with Certificate of Analysis	51
51102053	1x20 SACHET 25ml EC 1413 μS/cm ± 1% / 25°C, with Certificate of Analysis	51
51102063	1x20 SACHET 25ml EC 12880 μS/cm ± 1% / 25°C, with Certificate of Analysis	51
51102083	1x20 SACHET 10ml STORAGE Solution for pH/ORP sensor	51
51102093	1x20 SACHET 25ml Distilled Water	51
51102203	Set CAL pH BIS 1x20 SACHET 25ml (10 x pH 4.01/7.00)	51
51102213	Set CAL pH TRIS 1x20 SACHET 25ml (7 x pH 4.01/7.00 + 6 x pH 10.01)	51
51102223	Set CAL COND 1x20 SACHET 25ml (10 x EC 1413/12880 μS/cm)	51
51102233	Set CAL PC 1x20 SACHET 25ml (7 x pH 4.01/7.00 + 6 x EC 1413 μS/cm)	51
51102243	Set REFILL pack for pH 1x20 SACHET 25ml (6 x pH 4.01/7.01/H2O + 2 x Storage 10ml)	51
51102253	Set REFILL pack for COND 1x20 SACHET 25ml (7 x EC 1413/12880 μS/cm + 6 x H2O)	51
51102263	Set REFILL pack for PC 1x20 SACHET 25ml (5 x pH 4.01/7.01/EC 1413 μS/cm + 3 x H2O + 2 x Storage 10ml)	51
51109313	1x250 ml XS Redox/ORP 650 mV ± 5mV / 25°C	55
51109333	1x500 ml XS Redox/ORP 650 mV ± 5mV / 25°C	55
51109373	1x1000 ml XS Redox/ORP 200 mV ± 5mV / 25°C	55
51109383	1x1000 ml XS Redox/ORP 475 mV ± 5mV / 25°C	55
51190013	1x250 ml XS buffer solution pH 1,68 ± 0,01 / 25°C clear color with N.I.S.T certificate	52
51190023	1x250 ml XS buffer solution pH 6,86 ± 0,01 / 25°C red color with N.I.S.T certificate	52
51190033	1x250 ml XS buffer solution pH 2,00 ± 0,02 / 25°C clear color with N.I.S.T certificate	52
51190043	1x250 ml XS buffer solution pH 7,00 ± 0,01 / 25°C Yellow color with N.I.S.T certificate	52
51190083	1x250 ml XS buffer solution pH 9,18 ± 0,01 / 25°C clear color with N.I.S.T certificate	52
51190113	1x500 ml XS buffer solution pH 1,68 ± 0,01 / 25°C clear color with N.I.S.T certificate	52
51190123	1x500 ml XS buffer solution pH 6,86 ± 0,01 / 25°C clear color with N.I.S.T certificate	52
51190133	1x500 ml XS buffer solution pH 2,00 ± 0,02 / 25°C clear color with N.I.S.T certificate	52
51190143	1x500 ml XS buffer solution pH 7,00 ± 0,01 / 25°C yellow color with N.I.S.T certificate	52
51190183	1x500 ml XS buffer solution pH 9,18 ± 0,02 / 25°C clear color with N.I.S.T certificate	52
51190213	1x5Lt XS buffer solution pH 1,68 ± 0,01 / 25°C clear color with N.I.S.T certificate	53
51190223	1x5Lt XS buffer solution pH 2,00 ± 0,02 / 25°C clear color with N.I.S.T certificate	53
51190243	1x5Lt XS buffer solution pH 7,00 ± 0,01 / 25°C yellow color with N.I.S.T certificate	53
51190283	1x5Lt XS buffer solution pH 9,18 ± 0,02 / 25°C clear color with N.I.S.T certificate	53
51190313	1x1000 ml XS buffer solution pH 1,68 ± 0,01 / 25°C clear color with N.I.S.T certificate	53
51190323	1x1000 ml XS buffer solution pH 2,00 ± 0,02 / 25°C clear color with N.I.S.T certificate	53
51190333	1x1000 ml XS buffer solution pH 4,01 ± 0,01 / 25°C red color with N.I.S.T certificate	53
51190343	1x1000 ml XS buffer solution pH 7,00 ± 0,01 / 25°C green color with N.I.S.T certificate	53

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51190353	1x1000 ml XS buffer solution pH 9,00 ± 0,02 / 25°C clear color with N.I.S.T certificate	53
51190363	1x1000 ml XS buffer solution pH 10,01 ± 0,02 / 25°C yellow color with N.I.S.T certificate	53
51190393	1x1000 ml XS buffer solution pH 12,45 ± 0,05 / 25°C clear color with N.I.S.T certificate	53
51190373	1x1000 ml XS buffer solution pH 9,21 ± 0,02 / 25°C clear color with N.I.S.T certificate	53
51190383	1x1000 ml XS buffer solution pH 10,01 ± 0,02 / 25°C blue color with N.I.S.T certificate	53
51190393	1x1000 ml XS buffer solution pH 6,86 ± 0,01 / 25°C clear color with N.I.S.T certificate	53
51191343	1x1000 ml XS buffer solution pH 7,00 ± 0,01 / 25°C yellow color with N.I.S.T certificate	53
51191383	1x1000 ml XS buffer solution pH 9,18 ± 0,02 / 25°C clear color with N.I.S.T certificate	53
51300003	1x250 ml XS buffer solution pH 4,01 ± 0,01 / 25°C red color with DAKKS certificate	50
51300013	1x250 ml XS buffer solution pH 7,00 ± 0,01 / 25°C green color with DAKKS certificate	50
51300023	1x250 ml XS buffer solution pH 9,21 ± 0,02 / 25°C blue color with DAKKS certificate	50
51300033	1x250 ml XS buffer solution pH 10,01 ± 0,02 / 25°C yellow with DAKKS certificate	50
51300103	1x500 ml XS buffer solution pH 4,01 ± 0,01 / 25°C red color with DAKKS certificate	50
51300113	1x500 ml XS buffer solution pH 7,00 ± 0,01 / 25°C green color with DAKKS certificate	50
51300123	1x500 ml XS buffer solution pH 9,21 ± 0,02 / 25°C blue color with DAKKS certificate	50
51300133	1x500 ml XS buffer solution pH 10,01 ± 0,02 / 25°C yellow with DAKKS certificate	50
51300303	1x300 ml XS Conductivity Standard 1,3 µS/cm ± 0,1 / 25°C glass bottle with DFM certificate	50
51300313	1x300 ml XS Conductivity Standard 5 µS/cm ± 0,1 / 25°C glass bottle with DFM certificate	50
51300323	1x500 ml XS Conductivity Standard 84 µS/cm ± 1% / 25°C with DFM certificate	50
51300333	1x500 ml XS Conductivity Standard 147 µS/cm ± 1% / 25°C with DFM certificate	50
51300343	1x500 ml XS Conductivity Standard 1413 µS/cm ± 1% / 25°C with DFM certificate	50
51300353	1x500 ml XS Conductivity Standard 12'880 µS/cm ± 1% / 25°C with DFM certificate	50
60000423	1x55 ml XS buffer solution 1413 µS/cm ± 1% / 25°C colourless, without certificate	50
60000433	1x55 ml XS buffer solution 12'880 µS/cm ± 1% / 25°C colourless, without certificate	50
70100003	mini T Temperature datalogger	118
70100103	mini T1 Temperature datalogger	118
70100203	mini TH Temperature and humidity datalogger	118
70101003	mini 1way Single trip temperature datalogger	118
70101013	mini 1way Single trip temperature datalogger	118
99210006	OXY 1 - Dissolved Oxygen Probe. Range: 0 – 20 mg/l O2. Diameter 12 mm. Cable 5 m. Pg 13,5 mm. Flow: min 0,03 m/s.	139
7600420001	Nozzle/42 for automatic rinsing. Can be fitted to S315 Ø 42 mm type immersion probe holder. Stainless Steel body.	142
7600430001	Nozzle/63 for automatic rinsing. Can be fitted to S315 Ø 63 mm type immersion probe holder. Stainless Steel body.	142
9500420000	S315/50 Immersion probe holder, PP body. For 1 pc. PG13.5 electrode. 0-90 ºC, length= 57 cm	142
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