





HORIBA







# LAQUA 2000 Series Benchtop Water Quality Meters



# Auto Cal Standards

Icon lights up after calibration making standard solutions used viewable at a glance



# Auto Data Log

Captures and stores data into memory based on specified time interval



#### Real Time Clock Keeps precise time and date

and facilitates functions that are time-dependent



# Password Protected

A 4-digit password secures the meter setup mode from unauthorized access



### Large Internal Memory

Accepts up to 2000 data sets



# Software Upgrade

Latest software version can be loaded into the meter when available



### Adjustable Shut-Off Time

Switches the meter off at idle (up to 30 minutes)

# Data Acquisition Software Connectivity

Data can be transferred to computer and exported to CSV/Excel/PDF via USB cable and complimentary DAS20 software

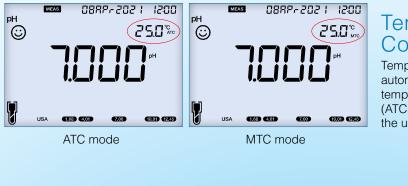


# Temperature Calibration

CAL Temp Mode allows temperature calibration



LAQUA 4



### Temperature Compensation

Temperature in °C or °F is either automatically detected when temperature sensor is connected (ATC mode) or manually entered by the user (MTC mode)



Auto Stable mode signals stable reading, Auto Hold mode locks stable reading, and Real Time mode continuously displays live readings

8 DA

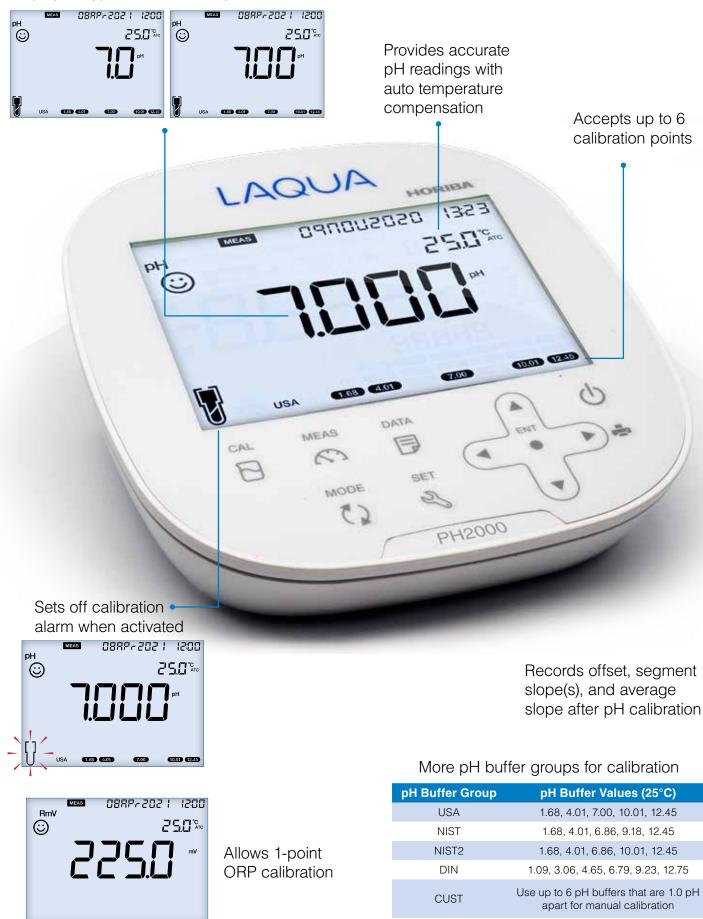
# Data Printing Capability

Data with date and time stamp can be printed for GLP/GMP compliance



# LAQUA-PH2000

Displays 3 types of selectable pH resolutions



### LAQUA pH Electrodes

Initial         pH/ORP/Temp (*C/*F) Bench Meter           pH Range         -2.000 to 20.000 pH           Resolution         0.1 / 0.01 / 0.001 pH           Accuracy         ± 0.003 pH           pH Buffer Groups         USA, NIST, NIST2, DIN, Custom           Calibration Points         Up to 5 (USA, NIST, NIST2) / Up to 6 (DIN, Custom)           ORP Range         ± 2000.0 mV           Resolution         0.1 mV           Accuracy         ± 0.2 mV           Calibration Option         Yes (Up to ± 200 mV)           Temperature Range         -30.0 to 130.0 °C / -22.0 to 266.0 °F           Resolution         0.1 °C / °F           Accuracy         ± 0.5 °C / ± 0.9 °F           Calibration Option         Yes (± 10.0 °C / ± 18.0 °F range in 0.1 °C increments)           Memory         2000           Auto Data Log         Yes           Pate & Time Stamp         Yes           Offset & Slope Display         Yes (Programmable: up to 90 days)           Auto Shut-Off         Yes (Programmable: up to 30 mins.)           Electrode Status         On screen display           Diagnostics         Yes           Password Setting         Yes           Power Requirement         AC adaptor 100 - 240V, 50 - 60Hz           Disp	Medel	LAQUA-PH2000
Resolution0.1 / 0.01 / 0.001 pHAccuracy± 0.003 pHpH Buffer GroupsUSA, NIST, NIST2, DIN, CustomCalibration PointsUp to 5 (USA, NIST, NIST2) / Up to 6 (DIN, Custom)ORP Range± 2000.0 mVResolution0.1 mVAccuracy± 0.2 mVCalibration OptionYes (Up to ± 200 mV)Temperature Range-30.0 to 130.0 °C / -22.0 to 266.0 °FResolution0.1 °C / °FAccuracy± 0.5 °C / ± 0.9 °FCalibration OptionYes (± 10.0 °C / ± 18.0 °F range in 0.1 °C increments)Memory2000Auto Data LogYesPaeal-time ClockYesMeasurement ModesAuto Stable / Auto Hold / Real TimeOffset & Slope DisplayYes (Programmable: up to 90 days)Auto Shut-OffYes (Programmable: up to 30 mins.)Electrode StatusOn screen displayDiagnosticsYesPassword SettingYesPC / Printer CommunicationPhono jack (USB / RS232C)Meter InputsBINC, phono (ATC), DC socketsDisplay5° Custom LCD with backlight and 320 segmentsPower RequirementAC adaptor 100 - 240V, 50 - 60Hz	Model	pH/ORP/Temp (°C/°F) Bench Meter
Accuracy         ± 0.003 pH           pH Buffer Groups         USA, NIST, NIST2, DIN, Custom           Calibration Points         Up to 5 (USA, NIST, NIST2) / Up to 6 (DIN, Custom)           ORP Range         ± 2000.0 mV           Resolution         0.1 mV           Accuracy         ± 0.2 mV           Calibration Option         Yes (Up to ± 200 mV)           Calibration Option         Yes (Up to ± 200 mV)           Temperature Range         -30.0 to 130.0 °C / -22.0 to 266.0 °F           Accuracy         ± 0.5 °C / ± 0.9 °F           Calibration Option         Yes (± 10.0 °C / ± 18.0 °F range in 0.1 °C increments)           Memory         2000           Auto Data Log         Yes (± 10.0 °C / ± 18.0 °F range in 0.1 °C increments)           Date & Time Stamp         Yes           Measurement Modes         Auto Stable / Auto Hold / Real Time           Offset & Slope Display         Yes (Segment & Average Slopes)           Calibration Alarm         Yes (Programmable: up to 90 days)           Auto Shut-Off         Yes (Programmable: up to 90 days)           Auto Shut-Off         Yes (Programmable: up to 90 days)           Diagnostics         Yes           Password Setting         Yes           Pono jack (USB / RS232C)         Yes <t< td=""><td>pH Range</td><td>-2.000 to 20.000 pH</td></t<>	pH Range	-2.000 to 20.000 pH
pH Buffer GroupsUSA, NIST, NIST2, DIN, CustomCalibration PointsUp to 5 (USA, NIST, NIST2) / Up to 6 (DIN, Custom)ORP Range± 2000.0 mVResolution0.1 mVAccuracy± 0.2 mVCalibration OptionYes (Up to ± 200 mV)Temperature Range-30.0 to 130.0 °C / -22.0 to 266.0 °FResolution0.1 °C / °FAccuracy± 0.5 °C / ± 0.9 °FCalibration OptionYes (± 10.0 °C / ± 18.0 °F range in 0.1 °C increments)Memory2000Auto Data LogYesReal-time ClockYesDate & Time StampYes (Programmable: up to 90 days)Auto Shut-OffYes (Programmable: up to 30 mins.)Electrode StatusOn screen displayDiagnosticsYesPassword SettingYesPotre InputsBNC, phono (ATC), DC socketsDisplayS' Custom LCD with backlight and 320 segmentsPower RequirementAC adaptor 100 - 240V, 50 - 60Hz	Resolution	0.1 / 0.01 / 0.001 pH
Calibration PointsUp to 5 (USA, NIST, NIST2) / Up to 6 (DIN, Custom)ORP Range± 2000.0 mVResolution0.1 mVAccuracy± 0.2 mVCalibration OptionYes (Up to ± 200 mV)Temperature Range-30.0 to 130.0 °C / -22.0 to 266.0 °FResolution0.1 °C / °FAccuracy± 0.5 °C / ± 0.9 °FCalibration OptionYes (± 10.0 °C / ± 18.0 °F range in 0.1 °C increments)Memory2000Auto Data LogYes (± 10.0 °C / ± 18.0 °F range in 0.1 °C increments)Date & Time StampYesPaeal-time ClockYesDate & Time StampYes (Segment & Average Slopes)Calibration AlarmYes (Programmable: up to 90 days)Auto Shut-OffYes (Programmable: up to 30 mins.)Electrode StatusOn screen displayDiagnosticsYesPassword SettingYesPC / Printer CommunicationPhono jack (USB / RS232C)Meter InputsS' Custom LCD with backlight and 320 segmentsPower RequirementAC adaptor 100 - 240V, 50 - 60Hz	Accuracy	± 0.003 pH
ORP Range± 2000.0 mVResolution0.1 mVAccuracy± 0.2 mVCalibration OptionYes (Up to ± 200 mV)Temperature Range-30.0 to 130.0 °C / -22.0 to 266.0 °FResolution0.1 °C / °FAccuracy± 0.5 °C / ± 0.9 °FCalibration OptionYes (± 10.0 °C / ± 18.0 °F range in 0.1 °C increments)Memory2000Auto Data LogYesReal-time ClockYesDate & Time StampYes (Segment & Average Slopes)Calibration AlarmYes (Programmable: up to 90 days)Auto Shut-OffYes (Programmable: up to 30 mins.)Electrode StatusOn screen displayDiagnosticsYesPassword SettingYesPort UpgradeYesPC / Printer CommunicationPhono jack (USB / RS232C)Meter InputsS' Custom LCD with backlight and 320 segmentsPower RequirementAC adaptor 100 - 240V, 50 - 60Hz	pH Buffer Groups	USA, NIST, NIST2, DIN, Custom
Resolution         0.1 mV           Accuracy         ± 0.2 mV           Calibration Option         Yes (Up to ± 200 mV)           Temperature Range         -30.0 to 130.0 °C / -22.0 to 266.0 °F           Resolution         0.1 °C / °F           Accuracy         ± 0.5 °C / ± 0.9 °F           Calibration Option         Yes (± 10.0 °C / ± 18.0 °F range in 0.1 °C increments)           Memory         2000           Auto Data Log         Yes           Real-time Clock         Yes           Measurement Modes         Auto Stable / Auto Hold / Real Time           Offset & Slope Display         Yes (Segment & Average Slopes)           Calibration Alarm         Yes (Programmable: up to 30 mins.)           Electrode Status         On screen display           Diagnostics         Yes           Password Setting         Yes           Software Upgrade         Phono jack (USB / RS232C)           Meter Inputs         BNC, phono (ATC), DC sockets           Display         5° Custom LCD with backlight and 320 segments	Calibration Points	Up to 5 (USA, NIST, NIST2) / Up to 6 (DIN, Custom)
Accuracy         ± 0.2 mV           Calibration Option         Yes (Up to ± 200 mV)           Temperature Range         -30.0 to 130.0 °C / -22.0 to 266.0 °F           Resolution         0.1 °C / °F           Accuracy         ± 0.5 °C / ± 0.9 °F           Calibration Option         Yes (± 10.0 °C / ± 18.0 °F range in 0.1 °C increments)           Memory         2000           Auto Data Log         Yes           Real-time Clock         Yes           Date & Time Stamp         Yes           Measurement Modes         Auto Stable / Auto Hold / Real Time           Offset & Slope Display         Yes (Programmable: up to 90 days)           Auto Shut-Off         Yes (Programmable: up to 30 mins.)           Electrode Status         On screen display           Diagnostics         Yes           Password Setting         Yes           PC / Printer Communication         Phono jack (USB / RS232C)           Meter Inputs         BNC, phono (ATC), DC sockets           Display         5" Custom LCD with backlight and 320 segments	ORP Range	± 2000.0 mV
Calibration OptionYes (Up to ± 200 mV)Temperature Range-30.0 to 130.0 °C / -22.0 to 266.0 °FResolution0.1 °C / °FAccuracy± 0.5 °C / ± 0.9 °FCalibration OptionYes (± 10.0 °C / ± 18.0 °F range in 0.1 °C increments)Memory2000Auto Data LogYesReal-time ClockYesDate & Time StampYesOffset & Slope DisplayAuto Stable / Auto Hold / Real TimeOffset & Slope DisplayYes (Programmable: up to 90 days)Auto Shut-OffYes (Programmable: up to 30 mins.)Electrode StatusOn screen displayDiagnosticsYesPassword SettingYesPC / Printer CommunicationPhono jack (USB / RS232C)Meter InputsBNC, phono (ATC), DC socketsDisplay5" Custom LCD with backlight and 320 segmentsNew RequirementA'C adaptor 100 - 240V, 50 - 60Hz	Resolution	0.1 mV
Temperature Range-30.0 to 130.0 °C / -22.0 to 266.0 °FResolution0.1 °C / °FAccuracy± 0.5 °C / ± 0.9 °FCalibration OptionYes (± 10.0 °C / ± 18.0 °F range in 0.1 °C increments)Memory2000Auto Data LogYesReal-time ClockYesDate & Time StampYesMeasurement ModesAuto Stable / Auto Hold / Real TimeOffset & Slope DisplayYes (Segment & Average Slopes)Calibration AlarmYes (Programmable: up to 90 days)Auto Shut-OffYesPassword SettingYesPassword SettingYesPC / Printer CommunicationPhono jack (USB / RS232C)Meter InputsBNC, phono (ATC), DC socketsDisplay5° Custom LCD with backlight and 320 segmentsAc adaptor 100 - 240V, 50 - 60HzAction 240V, 50 - 60Hz	Accuracy	± 0.2 mV
Resolution0.1 °C / °FAccuracy± 0.5 °C / ± 0.9 °FCalibration OptionYes (± 10.0 °C / ± 18.0 °F range in 0.1 °C increments)Memory2000Auto Data LogYesReal-time ClockYesDate & Time StampYesMeasurement ModesAuto Stable / Auto Hold / Real TimeOffset & Slope DisplayYes (Segment & Average Slopes)Calibration AlarmYes (Programmable: up to 90 days)Auto Shut-OffYes (Programmable: up to 30 mins.)Electrode StatusOn screen displayDiagnosticsYesPassword SettingYesPC / Printer CommunicationPhono jack (USB / RS232C)Meter InputsSNC, phono (ATC), DC socketsDisplayS" Custom LCD with backlight and 320 segmentsPower RequirementAC adaptor 100 - 240V, 50 - 60Hz	Calibration Option	Yes (Up to ± 200 mV)
Accuracy± 0.5 °C / ± 0.9 °FCalibration OptionYes (± 10.0 °C / ± 18.0 °F range in 0.1 °C increments)Memory2000Auto Data LogYesReal-time ClockYesDate & Time StampYesMeasurement ModesAuto Stable / Auto Hold / Real TimeOffset & Slope DisplayYes (Segment & Average Slopes)Calibration AlarmYes (Programmable: up to 90 days)Auto Shut-OffYes (Programmable: up to 30 mins.)Electrode StatusOn screen displayDiagnosticsYesPassword SettingYesPC / Printer CommunicationPhono jack (USB / RS232C)Meter Inputs5° Custom LCD with backlight and 320 segmentsPower RequirementAC adaptor 100 - 240V, 50 - 60Hz	Temperature Range	-30.0 to 130.0 °C / -22.0 to 266.0 °F
Calibration OptionYes (± 10.0 °C / ± 18.0 °F range in 0.1 °C increments)Memory2000Auto Data LogYesReal-time ClockYesDate & Time StampYesMeasurement ModesAuto Stable / Auto Hold / Real TimeOffset & Slope DisplayYes (Segment & Average Slopes)Calibration AlarmYes (Programmable: up to 90 days)Auto Shut-OffOn screen displayElectrode StatusOn screen displayDiagnosticsYesPassword SettingYesPC / Printer CommunicationPhono jack (USB / RS232C)Meter InputsS" Custom LCD with backlight and 320 segmentsPower RequirementAC adaptor 100 - 240V, 50 - 60Hz	Resolution	0.1 °C / °F
Memory2000Auto Data Log2000Auto Data LogYesReal-time ClockYesDate & Time StampYesMeasurement ModesAuto Stable / Auto Hold / Real TimeOffset & Slope DisplayYes (Segment & Average Slopes)Calibration AlarmYes (Programmable: up to 90 days)Auto Shut-OffOn screen displayElectrode StatusOn screen displayDiagnosticsYesPassword SettingYesPC / Printer CommunicationPhono jack (USB / RS232C)Meter InputsSn Custom LCD with backlight and 320 segmentsPower RequirementAC adaptor 100 - 240V, 50 - 60Hz	Accuracy	± 0.5 °C / ± 0.9 °F
Auto Data LogYesAuto Data LogYesReal-time ClockYesDate & Time StampYesDate & Time StampAuto Stable / Auto Hold / Real TimeMeasurement ModesAuto Stable / Auto Hold / Real TimeOffset & Slope DisplayYes (Segment & Average Slopes)Calibration AlarmYes (Programmable: up to 90 days)Auto Shut-OffGresen display:Electrode StatusOn screen displayDiagnosticsYesPassword SettingYesPC / Printer CommunicationPhono jack (USB / RS232C)Meter InputsS" Custom LCD with backlight and 320 segmentsPower RequirementAC adaptor 100 - 240V, 50 - 60Hz	Calibration Option	Yes (± 10.0 °C / ± 18.0 °F range in 0.1 °C increments)
Real-time ClockYesDate & Time StampYesMeasurement ModesAuto Stable / Auto Hold / Real TimeOffset & Slope DisplayYes (Segment & Average Slopes)Calibration AlarmYes (Programmable: up to 90 days)Auto Shut-OffSegment & Average Slopes)Electrode StatusOn screen displayDiagnosticsYesPassword SettingYesPC / Printer CommunicationPhono jack (USB / RS232C)Meter InputsS' Custom LCD with backlight and 320 segmentsPower RequirementAC adaptor 100 - 240V, 50 - 60Hz	Memory	2000
Date & Time StampYesDate & Time StampYesMeasurement ModesAuto Stable / Auto Hold / Real TimeOffset & Slope DisplayYes (Segment & Average Slopes)Calibration AlarmYes (Programmable: up to 90 days)Auto Shut-OffYes (Programmable: up to 30 mins.)Electrode StatusOn screen displayDiagnosticsYesPassword SettingYesPC / Printer CommunicationPhono jack (USB / RS232C)Meter InputsSn Cy custom LCD with backlight and 320 segmentsPower RequirementAc adaptor 100 - 240V, 50 - 60Hz	Auto Data Log	Yes
Measurement ModesAuto Stable / Auto Hold / Real TimeOffset & Slope DisplayYes (Segment & Average Slopes)Calibration AlarmYes (Programmable: up to 90 days)Auto Shut-OffYes (Programmable: up to 30 mins.)Electrode StatusOn screen displayDiagnosticsYesPassword SettingYesPC / Printer CommunicationPhono jack (USB / RS232C)Meter InputsBNC, phono (ATC), DC socketsDisplay5" Custom LCD with backlight and 320 segmentsPower RequirementAC adaptor 100 - 240V, 50 - 60Hz	Real-time Clock	Yes
Offset & Slope DisplayYes (Segment & Average Slopes)Calibration AlarmYes (Programmable: up to 90 days)Auto Shut-OffGerogrammable: up to 30 mins.)Electrode StatusOn screen displayDiagnosticsYesPassword SettingYesSoftware UpgradeYesPC / Printer CommunicationPhono jack (USB / RS232C)Meter InputsSnC, phono (ATC), DC socketsDisplay5" Custom LCD with backlight and 320 segmentsPower RequirementAC adaptor 100 - 240V, 50 - 60Hz	Date & Time Stamp	Yes
Calibration AlarmYes (Programmable: up to 90 days)Auto Shut-OffYes (Programmable: up to 30 mins.)Electrode StatusOn screen displayDiagnosticsYesPassword SettingYesSoftware UpgradeYesPC / Printer CommunicationPhono jack (USB / RS232C)Meter InputsBNC, phono (ATC), DC socketsDisplay5" Custom LCD with backlight and 320 segmentsPower RequirementAC adaptor 100 - 240V, 50 - 60Hz	Measurement Modes	Auto Stable / Auto Hold / Real Time
Auto Shut-OffYes (Programmable: up to 30 mins.)Electrode StatusOn screen displayDiagnosticsYesPassword SettingYesSoftware UpgradeYesPC / Printer CommunicationPhono jack (USB / RS232C)Meter InputsBNC, phono (ATC), DC socketsDisplay5" Custom LCD with backlight and 320 segmentsPower RequirementAC adaptor 100 - 240V, 50 - 60Hz	Offset & Slope Display	Yes (Segment & Average Slopes)
Electrode StatusOn screen displayDiagnosticsYesPassword SettingYesSoftware UpgradeYesPC / Printer CommunicationPhono jack (USB / RS232C)Meter InputsBNC, phono (ATC), DC socketsDisplay5" Custom LCD with backlight and 320 segmentsPower RequirementAC adaptor 100 - 240V, 50 - 60Hz	Calibration Alarm	Yes (Programmable: up to 90 days)
DiagnosticsYesPassword SettingYesSoftware UpgradeYesPC / Printer CommunicationPhono jack (USB / RS232C)Meter InputsBNC, phono (ATC), DC socketsDisplay5" Custom LCD with backlight and 320 segmentsPower RequirementAC adaptor 100 - 240V, 50 - 60Hz	Auto Shut-Off	Yes (Programmable: up to 30 mins.)
Password SettingYesSoftware UpgradeYesPC / Printer CommunicationPhono jack (USB / RS232C)Meter InputsBNC, phono (ATC), DC socketsDisplay5" Custom LCD with backlight and 320 segmentsPower RequirementAC adaptor 100 - 240V, 50 - 60Hz	Electrode Status	On screen display
Software UpgradeYesPC / Printer CommunicationPhono jack (USB / RS232C)Meter InputsBNC, phono (ATC), DC socketsDisplay5" Custom LCD with backlight and 320 segmentsPower RequirementAC adaptor 100 - 240V, 50 - 60Hz	Diagnostics	Yes
PC / Printer CommunicationPhono jack (USB / RS232C)Meter InputsBNC, phono (ATC), DC socketsDisplay5" Custom LCD with backlight and 320 segmentsPower RequirementAC adaptor 100 - 240V, 50 - 60Hz	Password Setting	Yes
Meter InputsBNC, phono (ATC), DC socketsDisplay5" Custom LCD with backlight and 320 segmentsPower RequirementAC adaptor 100 - 240V, 50 - 60Hz	Software Upgrade	Yes
Display5" Custom LCD with backlight and 320 segmentsPower RequirementAC adaptor 100 - 240V, 50 - 60Hz	PC / Printer Communication	Phono jack (USB / RS232C)
Power Requirement AC adaptor 100 - 240V, 50 - 60Hz	Meter Inputs	BNC, phono (ATC), DC sockets
· · · ·	Display	5" Custom LCD with backlight and 320 segments
Dimensions & Weight 155(L) x 150(W) x 67(H) mm, 765g	Power Requirement	AC adaptor 100 - 240V, 50 - 60Hz
	Dimensions & Weight	155(L) x 150(W) x 67(H) mm, 765g

Meter Kits		
<b>PH2000</b> 3200912571	<ul> <li>Meter with integrated electrode stand</li> <li>Universal power adaptor with 6 plugs</li> <li>Manual</li> </ul>	
<b>PH2000-S</b> 3200905158	<ul> <li>PH2000</li> <li>9615S-10D refillable, glass-body pH electrode with built-in temperature sensor</li> <li>502-S USA pH buffers kit</li> </ul>	
<b>PH2000-SN</b> 3200905163	<ul> <li>PH2000</li> <li>9615S-10D refillable, glass-body pH electrode with built-in temperature sensor</li> <li>501-S NIST pH buffers kit</li> </ul>	



#### **ToupH Standard Electrode**

**9615S-10D** General laboratory application

pH Range: 0-14 Operating Temperature Range (°C): 0-100 Liquid Junction: Ceramic



#### **ToupH Sleeve Electrode**

**9681S-10D** High viscosity application

pH Range: 0-14 Operating Temperature Range (°C): 0-60 Liquid Junction: Movable Sleeve



#### **ToupH Micro Electrode**

9618S-10D Precious trace amount sample

pH Range: 0-14 Operating Temperature Range (°C): 0-60 Liquid Junction: Ceramic

For more electrode options



# LAQUA-EC2000

Allows auto and manual conductivity calibrations



Meter Kits		
<b>EC2000</b> 3200912572	<ul><li>Meter with integrated electrode stand</li><li>Universal power adaptor with 6 plugs</li><li>Manual</li></ul>	
<b>EC2000-S</b> 3200905159	<ul> <li>EC2000</li> <li>9382-10D Ti/Pt black plastic-body conductivity electrode k=1.0 with built-in temperature sensor</li> <li>503-S Conductivity standard solutions kit</li> </ul>	

	LAQUA-EC2000
Model	Conductivity/Resistivity/TDS/Salinity/Temp (°C/°F) Bench Meter
Conductivity Range	0.000 to 1.999 $\mu$ S/cm (k = 0.1) 2.00 to 19.99 $\mu$ S/cm (k = 0.1, 1) 20.0 to 199.9 $\mu$ S/cm (k = 0.1, 1, 10) 200 to 1999 $\mu$ S/cm (k = 0.1, 1, 10) 2.00 to 19.99 mS/cm (k = 0.1, 1, 10) 20.0 to 199.9 mS/cm (k = 1, 10) 0.200 to 2.000 S/cm (k = 10)
Units	Auto ranging S/cm, S/m (μS ↔ mS)
Resolution	0.05% full scale
Accuracy	$\pm$ 0.6% full scale; $\pm$ 1.5% full scale > 18.0 mS/cm
Reference Temperature	15.0 to 30.0 °C (adjustable)
Temperature Coefficient	0.00 to 10.00 % per °C (adjustable)
Cell Constants	0.0700 to 13.000 (adjustable)
Calibration Points	Up to 4 (Auto) / Up to 5 (Manual)
Resistivity Range	0.000 Ω•cm to 20.0 MΩ•cm
Resolution	0.5% full scale
Accuracy	$\pm$ 0.6% full scale; $\pm$ 1.5% full scale > 1.80 MQ•cm
Total Dissolved Solids (TDS) Range	0.01 to 9.99 mg/L (ppm) 10.0 to 99.9 mg/L (ppm) 100 to 999 mg/L (ppm) 1.00 to 9.99 g/L (ppt) 10.0 to 100 g/L (ppt)
Resolution	0.01, 0.1, 1 mg/L ↔ g/L (ppm ↔ ppt)
Accuracy	± 0.1% full scale
TDS Curves	EN27888, 442, NaCl, Linear (0.40 to 1.00)
Salinity Range	0.0 to 100.0 ppt / 0.00 to 10.00 %
Resolution	0.1 ppt / 0.01%
Accuracy	± 0.2% full scale
Salinity Curves	NaCI / Seawater
Calibration Option	Yes
Temperature Range	-30.0 to 130.0 °C / -22.0 to 266.0 °F
Resolution	0.1 °C / °F
Accuracy	± 0.5 °C / ± 0.9 °F
Calibration Option	Yes (± 10.0 °C / ± 18.0 °F range in 0.1 °C increments)
Memory	2000
Auto Data Log	Yes
Real-time Clock	Yes
Date & Time Stamp	Yes
Measurement Modes	Auto Stable / Auto Hold / Real Time
Auto Shut-Off	Yes (Programmable: up to 30 mins.)
Electrode Status	On screen display
Diagnostics	Yes
Password Setting	Yes
Software Upgrade	Yes
PC / Printer Communication	Phono jack (USB / RS232C)
Meter Inputs	BNC, phono, DC sockets
Display	5" Custom LCD with backlight and 320 segments
Power Requirement	AC adaptor 100 - 240V, 50 - 60Hz
Dimensions & Weight	155(L) x 150(W) x 67(H) mm, 765g
Dimensions & weight	100(L) × 100(W) × 07(H) Hilli, 700g

#### Pre-programmed with TDS and salinity curves for various applications

TDS Curves	Applications
EN27888	Environmental
442 (Na <sub>2</sub> SO <sub>4</sub> , NaHCO <sub>3</sub> , NaCl)	Boiler water, HVAC
NaCl	Aquaculture, pickling
Linear (KCI)	General

#### LAQUA Conductivity Electrodes

#### Stainless Steel Conductivity Cell

**9371-10D** Low conductivity application

**Cell Constant:** 0.1 cm<sup>-1</sup>; 10 m<sup>-1</sup> **Measurement Range:** 0.01 μS/cm - 500 μS/ cm; 1 μS/m - 50 mS/m **Temp. Range (°C):** 0 - 100

#### Titanium Conductivity Cell

R R ST

**9382-10D** General purpose application

Cell Constant: 1 cm<sup>-1</sup>; 100 m<sup>-1</sup> Measurement Range: 1 µS/cm - 100 mS/cm; 0.1 mS/m - 10 S/m Temp. Range (°C): 0 - 80

#### Platinum Conductivity Cell

**3553-10D** High conductivity application

 $\begin{array}{l} \mbox{Cell Constant: } 10\ cm^{-1}; 1000\ m^{-1} \\ \mbox{Measurement Range: } 10\ \mu S/cm \ -1 \ S/cm; 1 \\ mS/m \ -100\ S/m \\ \mbox{Temp. Range (°C): } 0\ -60 \\ \end{array}$ 

# LAQUA-ION2000



Records segment slope(s) after ion calibration.

Provides accurate pH and ORP readings with auto temperature compensation

рн 	₩ W W W W W W W W W W W W W
7.000*	225.0 -

Model	LAQUA-ION2000
Model	pH/ORP/Ion/Temp (°C/°F) Bench Meter
pH Range	-2.000 to 20.000 pH
Resolution	0.1 / 0.01 / 0.001 pH
Accuracy	± 0.003 pH
pH Buffer Groups	USA, NIST, NIST2, DIN, Custom
Calibration Points	Up to 5 (USA, NIST, NIST2) / Up to 6 (DIN, Custom)
ORP Range	± 2000.0 mV
Resolution	0.1 mV
Accuracy	± 0.2 mV
Calibration Option	Yes (Up to $\pm$ 200 mV)
Ion Range	0.000 μg/L to 9999 g/L
Units	$\mu$ g/L $\leftrightarrow$ mg/L $\leftrightarrow$ g/L, ppm $\leftrightarrow$ ppt, mmol/L $\leftrightarrow$ mol/L
Resolution	4 Significant digits
Accuracy	$\pm$ 0.3% full scale or $\pm$ 0.2 mV, whichever is higher
Calibration Points	Up to 5
Temperature Range	-30.0 to 130.0 °C / -22.0 to 266.0 °F
Resolution	0.1 °C / °F
Accuracy	± 0.5 °C / ± 0.9 °F
Calibration Option	Yes (± 10.0 °C / ± 18.0 °F range in 0.1 °C increments)
Memory	2000
Auto Data Log	Yes
Real-time Clock	Yes
Date & Time Stamp	Yes
Measurement Modes	Auto Stable / Auto Hold / Real Time
Offset & Slope Display	Yes (Segment & Average Slopes)
Calibration Alarm	Yes (Programmable: up to 90 days)
Auto Shut-Off	Yes (programmable: up to 30 mins.)
Electrode Status	On screen display
Diagnostics	Yes
Password Setting	Yes
Software Upgrade	Yes
PC / Printer Communication	Phono jack (USB / RS232C)
Meter Inputs	BNC, phono (ATC), DC sockets
Display	5" Custom LCD with backlight and 320 segments
Power Requirement	AC adaptor 100 - 240V, 50 - 60Hz

	Meter Kits
<b>ION2000</b> 3200912573	<ul> <li>Meter with integrated electrode stand</li> <li>Universal power adaptor with 6 plugs</li> <li>Manual</li> </ul>
NH3 2000-S 4000052303	<ul><li>ION2000</li><li>5002S-10C Ammonia electrode</li></ul>
<b>CA 2000-S</b> 4000052304	<ul><li>ION2000</li><li>6583S-10C Calcium electrode</li></ul>
<b>CL 2000-S</b> 4000052305	<ul><li>ION2000</li><li>6560S-10C Chloride electrode</li></ul>
<b>F 2000-S</b> 4000052306	<ul><li>ION2000</li><li>6561S-10C Fluoride electrode</li></ul>
<b>NO3 2000-S</b> 4000052307	<ul><li>ION2000</li><li>6581S-10C Nitrate electrode</li></ul>
<b>K 2000-S</b> 4000052308	<ul><li>ION2000</li><li>6582S-10C Potassium electrode</li></ul>



Provides a selection of ion electrode types and allows ion valence setting

LAQUA

LAQUA

LAQUA

LAQUA

AQUA

LAQUA

5002S-10C Ammonia Electrode

6583S-10C Calcium Electrode

6560S-10C Chloride Electrode

6561S-10C Fluoride Electrode

6581S-10C Nitrate Electrode

6582S-10C Potassium Electrode

# LAQUA-PC2000

PH

LAQUA

ARU

MEAS

63

MODE

MEAD

CAL

040005050

1.68 (4.01)

ATAO

E

SET

HORIBA

ESEI

250%

7.00

PC2000

PH

(0.0) (2.1)

10.27

# Combination of ION2000 and EC2000



# Multi-parameter meter with dual channel input

Meter Kits		
<b>PC2000</b> 3200912574	<ul> <li>Meter with integrated electrode stand</li> <li>Universal power adaptor with 6 plugs</li> <li>Manual</li> </ul>	
<b>PC2000-S</b> 3200905161	<ul> <li>PC2000</li> <li>9615S-10D refillable, glass-body pH electrode with built-in temperature sensor</li> <li>9382-10D Ti/Pt black plastic-body conductivity cell k=1.0 with built-in temperature sensor</li> <li>502-S USA pH buffers kit</li> <li>503-S Conductivity standard solutions kit</li> </ul>	
<b>PC2000-SN</b> 3200905166	<ul> <li>PC2000</li> <li>9615S-10D refillable, glass-body pH electrode with built-in temperature sensor</li> <li>9382-10D Ti/Pt black plastic-body conductivity cell k=1.0 with built-in temperature sensor</li> <li>501-S NIST pH buffers kit</li> <li>503-S Conductivity standard solutions kit</li> </ul>	

Model	LAQUA-PC2000	
	pH/ORP/Ion/Conductivity/Resistivity/TDS/Salinity/Temp (°C/°F)	
pH Range	-2.000 to 20.000 pH	
Resolution	0.1 / 0.01 / 0.001 pH	
Accuracy	± 0.003 pH	
pH Buffer Groups	USA, NIST, NIST2, DIN, Custom	
Calibration Points	Up to 5 (USA, NIST, NIST2) / Up to 6 (DIN, Custom)	
ORP Range	± 2000.0 mV	
Resolution	0.1 mV	
Accuracy	± 0.2 mV	
Calibration Option	Yes (Up to ± 200 mV)	
Ion Range	0.000 µg/L to 9999 g/L	
Units	μg/L ↔ mg/L ↔ g/L, ppm ↔ ppt, mmol/L ↔ mol/L	
Resolution	4 Significant digits	
Accuracy	$\pm$ 0.3% full scale or $\pm$ 0.2 mV, whichever is higher	
Calibration Points	Up to 5 0.000 to 1.999 µS/cm (k = 0.1) 200 to 1999 µS/cm (k = 0.1, 1, 10) 20.0 to 199.9 mS/cm (k = 1, 10)	
Conductivity Range		
Units	Auto ranging S/cm, S/m (µS ↔ mS)	
Resolution	0.05% full scale	
Accuracy	$\pm$ 0.6% full scale; $\pm$ 1.5% full scale > 18.0 mS/cm	
Reference Temperature	15.0 to 30.0 °C (adjustable)	
Temperature Coefficient	0.00 to 10.00 % per °C (adjustable)	
Cell Constants	0.0700 to 13.000 (adjustable)	
Calibration Points	Up to 4 (Auto) / Up to 5 (Manual)	
Resistivity Range	0.000 Ω∙cm to 20.0 MΩ∙cm	
Resolution	0.5% full scale	
Accuracy	± 0.6% full scale; ± 1.5% full scale > 1.80 MΩ•cm	
Total Dissolved Solids	0.01 to 9.99 mg/L (ppm) 100 to 999 mg/L (ppm) 10.0 to 100 g/L (ppt)	
(TDS) Range	10.0 to 99.9 mg/L (ppm) 1.00 to 9.99 g/L (ppt)	
Resolution	0.01, 0.1, 1 mg/L ↔ g/L (ppm ↔ ppt) + 0.1% full scale	
Accuracy TDS Curves		
	EN27888, 442, NaCl, Linear (0.40 to 1.00)	
Salinity Range	0.0 to 100.0 ppt / 0.00 to 10.00 %	
Resolution	0.1 ppt / 0.01% ± 0.2% full scale	
Accuracy		
Salinity Curves	NaCl / Seawater Yes	
Calibration Option		
Temperature Range Resolution	-30.0 to 130.0 °C / -22.0 to 266.0 °F	
Accuracy	0.1 °C / °F	
Calibration Option	± 0.5 °C / ± 0.9 °F Yes (± 10.0 °C / ± 18.0 °F range in 0.1 °C increments)	
	2000	
Memory Auto Data Log	Yes	
Real-time Clock	Yes	
Date & Time Stamp	Yes	
Measurement Modes		
Offset & Slope Display	Auto Stable / Auto Hold / Real Time Yes (Segment & Average Slopes)	
Calibration Alarm	Yes (Programmable: up to 90 days)	
Auto Shut-Off	Yes (Programmable: up to 30 mins.)	
Electrode Status	On screen display	
Diagnostics	Yes	
	Yes	
Password Setting Software Upgrade	Yes	
PC / Printer Communication	Phono jack (USB / RS232C)	
Meter Inputs	2 x BNC, 2 x phono (ATC), DC sockets	
Display Power Requirement	5" Custom LCD with backlight and 320 segments	
Rowor Roguiromont	AC adaptor 100 - 240V, 50 - 60Hz	

# Solutions & Accessories

pH Buffers		
Part No.	Model	Description
3999960015	501-S	NIST pH Buffers Kit (pH 4.01, 6.86, 9.18 buffers & 3.33M KCI, 250ml each)
3999960016	502-S	USA pH Buffers Kit (pH 4.01, 7.00, 10.01 buffers & 3.33M KCI, 250ml each)
3999960028	500-2	pH 1.68 Buffer at 25°C, 500ml
3999960029	500-4	pH 4.01 Buffer at 25°C, 500ml
3999960030	500-686	pH 6.86 Buffer at 25°C, 500ml
3999960031	500-7	pH 7.00 Buffer at 25°C, 500ml
3999960032	500-9	pH 9.18 Buffer at 25°C, 500ml
3999960033	500-10	pH 10.01 Buffer at 25°C, 500ml
3999960034	500-12	pH 12.46 Buffer at 25°C, 500ml

Conductivity Standards		
Part No.	Model	Description
3999960017	503-S	Conductivity Standard Solutions Kit (84µS/cm, 1413µS/cm, 12.88mS/cm & 111.8mS/cm, 250ml each)
3999960035	500-21	84µS/cm Conductivity Standard Solution at 25°C, 500ml
3999960036	500-22	1413µS/cm Conductivity Standard Solution at 25°C, 500ml
3999960037	500-23	12.88mS/cm Conductivity Standard Solution at 25°C, 500ml
3999960038	500-24	111.8mS/cm Conductivity Standard Solution at 25°C, 500ml

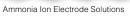
ORP Standard Solution & Powders			
Part No.	Model	Description	
4000047848	500-225	ORP Standard Solution 225 mV at 25°C, 50	)0ml
3200043618	160-51	ORP Powder 89 mV at 25°C (for 250ml), 10 sachets/pack	
3200043617	160-22	ORP Powder 258 mV at 25°C (for 250ml), 10 sachets/pack	

Ion Standard Solutions		
Part No.	Model	Description
3200697171	500-NH4-SH	1000 mg/L Ammonium Ion Standard Solution, 500ml
3200697172	500-NH4-SL	100 mg/L Ammonium Ion Standard Solution, 500ml
3200697175	500-CA-SH	1000 mg/L Calcium Ion Standard Solution, 500ml
3200697176	500-CA-SL	100 mg/L Calcium Ion Standard Solution, 500ml
3200697167	500-CL-SH	1000 mg/L Chloride Ion Standard Solution, 500ml
3200697168	500-CL-SL	100 mg/L Chloride Ion Standard Solution, 500ml
3200697163	500-F-SH	1000 mg/L Fluoride Ion Standard Solution, 500ml
3200697164	500-F-SL	100 mg/L Fluoride Ion Standard Solution, 500ml
3200697179	500-NO3-SH	1000 mg/L Nitrate Ion Standard Solution, 500ml
3200697180	500-NO3-SL	100 mg/L Nitrate Ion Standard Solution, 500ml
3200697183	500-K-SH	1000 mg/L Potassium Ion Standard Solution, 500ml
3200697184	500-K-SL	100 mg/L Potassium Ion Standard Solution, 500ml











Nitrate Ion Electrode Solutions

LAQUA 14

Ionic Strength Adjustors			
Part No.	Model	Description	
3200697174	500-NH3-ISA	Ammonia Ionic Strength Adjustor, 500ml	
3200697178	500-CA-ISA	Calcium Ionic Strength Adjustor, 500ml	
3200697170	500-CL-ISA	Chloride Ionic Strength Adjustor, 500ml	
3200697166	500-F-TISAB	Fluoride Ionic Strength Adjustor, 500ml	
3200697182	500-NO3-ISA	Nitrate Ionic Strength Adjustor, 500ml	
3200697186	500-K-ISA	Potassium Ionic Strength Adjustor, 500ml	

Electrode Filling Solutions		
Part No.	Model	Description
3999960023	525-3	3.33M KCl pH / ORP Electrode Filling Solution, 250ml
3200043640	300	3.33M KCl pH / ORP Electrode Filling Solution, 250ml
3200697173	500-NH3-IFS	Ammonia Electrode Filling Solution, 500ml
3200697177	500-CA-IFS	Calcium Electrode Filling Solution, 500ml
3200697169	500-CL-IFS	Chloride Electrode Filling Solution, 500ml
3200697165	500-F-IFS	Fluoride Electrode Filling Solution, 500ml
3200697181	500-NO3-IFS	Nitrate Electrode Filling Solution, 500ml
3200697185	500-K-IFS	Potassium Electrode Filling Solution, 500ml

pH Electrode Cleaning Solutions		
Part No.	Model	Description
3014028653	220	Electrode Cleaning Solution (for general contaminants), 50ml x 2
3200530494	230	Electrode Cleaning Solution (for rejuvenating elec- trode) includes Solution A (30ml) & Solution B (100ml)
3200366771	250	Electrode Cleaning Solution (for protein contami- nants), 400ml

	Accessories	
Part No.	Description	
3200861022	Integrated Electrode Stand for LAQUA 2000 Series Bench Meters	
3014028368	X-51 pH/mV/Ion/DO/Temperature Digital Simulator	
3014028370	X-52 Conductivity/Temperature Digital Simulator	
3200869791	Universal power adaptor	
3014030146	120V Printer with paper (printer cable is sold separately)	
3014030147	230V Printer with paper (printer cable is sold separately)	
3200779639	PC Cable (1.5m phono to USB cable for connecting meter to PC)*	
3200779638	Printer Cable (1.5m phono to 25-pin D-sub cable for connecting meter to printer)	
3014030149	Printer Paper, 20 rolls	
3014030150	Printer Ink Ribbon, 5pcs/pack	

\*Packaged with complimentary data acquisition software in USB stick





PC (USB) cable (Meter to Computer)



Printer ink ribbon





Cleaning Solutions



Integrated Electrode Stand for LAQUA 2000 Series Bench Meters





X-51 Digital Simulator

X-52 Digital Simulator



Printer paper

Printer

#### Visit HORIBA's website!

#### Water Quality Analyzers

www.horiba-laqua.com

With over 60 years of engineering excellence, HORIBA's diverse range of water quality analyzers and electrodes are ideal for everyday laboratory needs through to the most demanding of applications. Visit our website for a wealth of useful information and water quality measurement tips to help you obtain the best results in your work.







#### **Benchtop Meters**

Developed using extensive feedback from users, our new LAQUA meters deliver the best solution for water quality analysis. Our LAQUA website features an online 'Selection Guide' to enable you to find the perfect LAQUA meter and electrode for your need.

#### **Handheld Meters**

In the lab, in the field or anywhere you need it. LAQUA Handheld meters are designed for use with one hand and with an IP67 waterproof rating and shock-resistant casing. Meters can be used for long periods, even in dark places, making it ideal for field measurements in rivers and lakes.

#### Electrodes

Various electrodes to match any application. A wide range of products for both benchtop and portable systems are available, including easy and reliable standard models, applicationfocused models for small samples or large containers, and special electrodes for specific sample characteristics.

#### **Pocket Meters**

Analyzing water quality is simplified when using our LAQUAtwin range of meters. Designed to produce accurate and reliable results. Anyone, anywhere, at any time can measure samples easily with a LAQUAtwin meter. See just how good they are at our website.

25





LAQUAtwin pocket meters offer quick and convenient alternative to analyze important parameters with high accuracy. Several application notes are available at (http://goo.gl/znwE6j) detailing the use of LAQUAtwin and the results achieved for the respective applications. Additional application notes will be added when available.



Visit the HORIBA LAQUA Singapore Channel on YouTube and subscribe to see more of our videos.

#### S CE

THAC

3 .

· The contents of this catalog are subject to change without prior notice, and without any subsequent liability to this company.

- The color of the actual products may differ from the color pictured in this catalog due to printing limitations
- It is strictly forbidden to copy the content of this catalog in part or in full.
  All brand names, product names and service names in this catalog are trademarks or registered trademarks
- of their respective companies.

  Windows is a registered trademark of Microsoft Corporation in the United States and other countries.

Asia Pacific HORIBA Instruments (Singapore) Pte. Ltd. 83 Science Park Drive, #02-02A, The Curie, Singapore 118258 Phone: 65 6908-9660 Fax: 65 6745-8155 e-mail: lagua@horiba.com

#### Europe, Middle East, & Africa HORIBA UK Limited Kyoto Close, Moulton Park, Northampton NN3 6FL Phone: +44 1604 642500 e-mail: waterquality@horiba.com



RoHS

Brochure - APAC - BTM2K-05-2021A

HORIBA

Explore the future