

CONDUCTIVITY
LABORATORY
INSTRUMENTS

YSI's benchtop conductivity instruments feature conductivity cells with built-in temperature sensors, assuring the most accurate measurements. The line includes an easy-to-use fill cell.



YSI 3200 Conductivity Instrument This innovative instrument offers unmatched accuracy for ultrapure water analysis, multi-point calibration, and a high/low alarm for process applications. Measurements include:

- Conductivity
- Resistivity
- Salinity
- Total Dissolved Solids
- Temperature

With our new, highly-accurate Resistance Ratio Technology™ (RRT), the YSI 3200 Conductivity Instrument continually compares the resistance of the sample to a calibrated resistor in the circuit. This microprocessor-based unit offers a wide variety of temperature compensation options, including linear and nonlinear, as well as data storage and logging capability.

YSI 3100 Conductivity

Instrument The YSI 3100 provides accuracy and reliability in measuring conductivity, salinity, and temperature. The instrument uses forced-current measurement technology, including direct-reading digital display, adjustable temperature coefficient, and automatic temperature compensation.

Conductivity Performance Specifications

YSI Model	3200	3100	85	30
Readout	LCD	LCD	LCD	LCD
Accuracy				
conductance	±0.10 to 1.0% fs*	±0.5% fs***	±0.5% fs	±0.5% fs
salinity	±0.1 PPT	±2% or ±0.1 PPT	±2% or ±0.1 PPT	±2% or ±0.1 PPT
temperature	±0.1°C	±0.1°C +1 lsd	±0.1°C +1 lsd	±0.1°C +1 lsd
TDS	±0.50%			
resistance	±0.1 to 1.0% fs**			
Range				
conductance	0 µS to 3.00 S	0 µS to 500 mS	0 to 200 mS	0 to 200 mS
salinity	0 to 80 PPT	0 to 80 PPT	0 to 80 PPT	0 to 80 PPT
temperature	5 to +100°C	-5 to +95°C	-5 to +65°C	-5 to +95°C
TDS	0 to 19,999 mg/L			
resistance	0 Ω to 29.9 MΩ			
Resolution				
conductance	0.0001 µS	0.01 µS	0.1 µS	0.1 µS
salinity	0.1 PPT	0.1 PPT	0.1 PPT	0.1 PPT
temperature	0.01°C	0.1°C	0.1°C	0.1°C
TDS	0.1 mg/L			
resistance	0.001 Ω			
Power	AC	AC	Battery	Battery
Temp Comp	Auto, linear Nonlinear	Auto, linear	Auto	Auto
Other Features	Laboratory R2-232 RRT	Laboratory Backlit display	Handheld Backlit display DO	Handheld Backlit display

* For YSI 3200 Conductance Range/Accuracy: 0-0.9999 µS ±0.30% of full scale (fs); 0-9.999 µS ±0.20% fs; 10.00 µS-49.99 mS ±0.10% fs; 50.00-99.99 mS ±0.20% fs; 100 mS-1 S ±0.30% fs; 1.00-3.00 S ±1.0% fs.

** For YSI 3200 Resistance Range/Accuracy: 0-9.999 Ω ±0.2% of full scale (fs); 0-99.99 Ω ±0.1% fs; 0-999.9 Ω ±0.1% fs; 0-9.999 kΩ ±0.1% fs; 0-99.99 kΩ ±0.1% fs; 100.0-999.9 kΩ ±0.2% fs; 1.00-9.99 MΩ ±0.5% fs; 10.0-29.9 MΩ ±1% fs.

*** For YSI 3100 Conductance Range/Accuracy: 0-49.99 µS ±0.50% of full scale (fs); 990-499.9 µS ±0.50% fs; 0-4999 µS ±0.50% fs; 0-49.99 mS ±0.50% fs; 0-200 mS ±0.50% fs; 0-500 mS ±0.50% fs (with K10 cell).

To metrology and testing labs in pharmaceutical, healthcare, chemical, and other industrial facilities, conductivity is a critical parameter for testing chemical or diagnostic products. Conductivity can indicate impurities or the presence of certain species in the water. For many scientists and lab technicians, the YSI 3200, with Resistance Ratio Technology™, is the standard for ultrapure water.

Features important to these applications include:

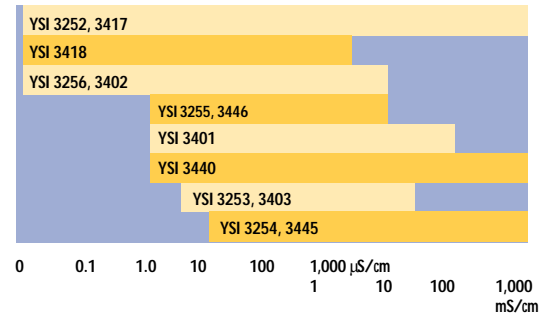
- NIST traceability
- user-selected measurement mode for conductivity, temperature, resistivity, conductance, salinity, resistance, or total dissolved solids
- high and low alarms for process applications
- four-wire measurement for use with YSI 4-electrode cells



NIST-Traceable Conductivity Cells

YSI manufactures standard conductivity cells traceable to the NIST. YSI conductivity cells come in three styles — fill, dip, and flow-through. Cells for the new YSI conductivity instruments have built-in temperature sensors.

Conductivity Cell Selection Chart



Cells with built-in temperature sensors

	Model	cgs Cell Type	S.I. Cell Constant	Cell Constant	Material	Overall Length	Max O.D.	Chamber I.D.	Chamber Depth	Volume
A	3252	dip	1.0/cm	100/m	ABS plastic	146 mm	13 mm	10 mm	20 mm	
B	3253	dip, micro	1.0/cm	100/m	Pyrex 7740	178 mm	13 mm	10 mm	51 mm	
C	3254	fill	1.0/cm	100/m	Pyrex 7740	135 mm	19 mm	11 mm	83 mm	5 mL
D	3255	flow	0.1/cm	10/m	Pyrex 7740	146 mm	25 mm	21 mm	76 mm	30 mL
E	3256	dip	0.1/cm	10/m	Pyrex 7740	159 mm	25 mm	21 mm	52 mm	

Cells without built-in temperature sensors*

	Model	cgs Cell Type	S.I. Cell Constant	Cell Constant	Material	Overall Length	Max O.D.	Chamber I.D.	Chamber Depth	Volume
F	3401	dip	1.0/cm	100/m	Pyrex 7740	191 mm	25 mm	21 mm	76 mm	
G	3402	dip	0.1/cm	10/m	Pyrex 7740	159 mm	25 mm	21 mm	52 mm	
H	3403	dip	1.0/cm	100/m	Pyrex 7740	178 mm	13 mm	10 mm	51 mm	
I	3417	dip	1.0/cm	100/m	ABS plastic	146 mm	13 mm	10 mm	20 mm	
	3418	dip	0.1/cm	10/m	ABS plastic	159 mm	13 mm	10 mm	30 mm	
J	3440	dip	10/cm	1000/m	Pyrex 7740	203 mm	13 mm	2 mm	86 mm	
K	3445	flow	1.0/cm	100/m	Pyrex 7740	146 mm	19 mm	10 mm	76 mm	15 mL
L	3446	flow	0.1/cm	10/m	Pyrex 7740	146 mm	25 mm	21 mm	76 mm	30 mL

*Requires a YSI 3232 Cell Adaptor for use with YSI 3100 and 3200 Conductivity Instruments. For automatic temperature compensation, use a YSI 3220 or a YSI Series 700 Temperature Probe.

YSI Resistor Sets Optimize Your Instruments

Used with the YSI 3232 Cell Adaptor, YSI 3166 Resistor Set tight-tolerance calibrators are more precise than common resistors and can verify instrument performance.



YSI 3166 Resistor Set

NIST-Traceable Conductivity Solutions

Calibrate your conductivity cells and instruments together for maximum accuracy with YSI solutions.

Solutions are available in nominal values of 1,000, 10,000, 50,000, and 100,000 µS/cm at 25°C. Bottles include a table of corrections at temperatures between 20° and 30°C. At 25°C, the YSI 3161 solution has a tolerance of ±0.50%, the YSI 3163 and 3165 ±0.25%, and the YSI 3167-3169 ±1.0%.



- YSI 3161**
1,000 µS/cm quart
- YSI 3163**
10,000 µS/cm quart
- YSI 3165**
100,000 µS/cm quart
- YSI 3167**
1,000 µS/cm 8 pints
- YSI 3168**
10,000 µS/cm 8 pints
- YSI 3169**
50,000 µS/cm 8 pints