600 2ND GENERATION

Fully-Integrated, Bench Top, Instrument for Proton Exchange Membrane (PEM) Water Electrolysis

High-Pressure Ready: Integrate our Cell & Regulator to experiment with Differential Pressure up to 30 Bar

FEATURES

ADVANCED DIAGNOSTICS

Electrochemical Impedance Spectroscopy (EIS) & High-Frequency Resistance (HFR) Over Full 100 A Current Range

Automated Switching Between Potentiostat & Power Supply For High Resolution Measurement Over Full Current Range

Expanded Data Collection & External Sensor Integration

Half Cell Measurements

UNATTENDED OPERATION

Conductivity Monitoring, Smart Feedstock Management With Automatic Filling, Self Draining Condensation Tanks, & Electronically Controlled Purge Gas

Firmware Level, Robust, Safety Monitoring & Alarms

INTUITIVE CONTROLS

FlowCell® FlowCell-ETS® Fully Integrated Software For Control, Experimental Sequencing & Graphing

ZView® ZView® World's Leading Impedance Analysis & Equivalent Circuit Modeling

scribner

SPECIFICATIONS

ELECTRICAL

Power Supply Max Current:
100 A

Voltage Range:
0 – 5.000 V

Maximum Power:
500W

Potentiostat Current Ranges:
±20 / 7 / 0.7 / 0.07 A

Current Resolution:
0.007% of range

Current Limit of Error:
±1.0% of range

Set & Read Voltage:
>±5.000 V

Cell Voltage Sense Lead:
Differential

Voltage Measurement Resolution:
152 µV

Sense Lead Input Resistance:
1.0 GΩ

Modes of Operation:
Constant, Scan, Step-Stair; V and I

Impedance Frequency Range:
1 mHz to 10 kHz – Power Supply
1 mHz to 40 kHz – Potentiostat

Impedance Measurement Types:
Sweep EIS and Single-Freq HFR Real-Time Measurement, Whole Cell and Aux / Half / Reference

CELL & ELECTROLYTE HANDLING

Flow Path:
All 316 SS

Feed Water Reservoir:
2L, 316 SS, Auto-Water Fill

Feed Stock Conductivity:
In-Situ DI Water Conductivity Probe

Feed Water Supply Pump:
50 – 700 mL/min

Feed Water Temperature Range:
Ambient – 95 °C

Ion Exchanger/Deionizer:
In-line De-Ionized Recycling Loop

Back Pressure:
Dual, 0 – 2 bar, (0 – 30 psig), Manual

Purge Gas:
2x 0.5 SLPM N_2 MFC

Water / Gas Separation:
2x Auto-Draining Condensers

Product Mass Flow Measurement:
1 SLPM H_2 & 0.5 SLPM O_2

Additional Data Acquisition:
7 Temp & 7 Analog (0 – 5 V, 4 – 20 mA)

Cell Temperature:
Ambient – 120 °C

Cell Connection:
4-Terminal (I+, I-, V+, V-) & Differential Aux (REF)

PHYSICAL

Operating Temperature:
5 – 35 °C

Power Source:
100 – 120 or 220 – 240 VAC 50/60 Hz

Size (Excluding Connections):
53 x 53 x 90 cm (21 x 21 x 35.5 in)

Weight (Empty):
~60 kg (130 lbs)

SAFETY

Robust:
Embedded Firmware Level Decisions

Fail Safe Design:
N_2 Purge On Alarm Condition

Continuous Monitoring:
E-Stop, Voltage, Current, Temperate, Gas Contamination & External Signals

External Alarm:
Integrate Full Building E-Stop

Software Alarm:
User Configurable Limits

Certification:

CE RoHS

INTERNAL OPTIONS

TEFLON™ COATED FEED TANK

Adds extra corrosion resistance to the feed stock tanks by coating 316SS in durable Teflon™.

SWAGELOCK® SC-11

Adds **Cleaned for Oxygen Service** tubing and fittings on the oxygen side of the product flow path.

Ensure **No Organic Contaminates** which can act as fuels in oxygen rich environments.

ACCESSORIES

SAFETY SENSORS
H_2 in O_2 & O_2 in H_2

Continuous Monitoring of Hydrogen gas in the Oxygen gas stream. Programable detection levels of product as they approach an unsafe ratio.

Alarm Condition places machine into safe configuration and purges with Nitrogen automatically.

GOW Sensor technology leveraging thermal conductivity to make direct comparison to ambient versus feed gas.

DI WATER SENSOR
External Inline Smart Probe

In-Line DI Water Conductivity monitoring via smart probe connected to 892 data acquisition module.

Easily Convert Between PEM & AEM setups with the same machine. No modifications needed to the test system, simply connect probe inline with cell fixture

Ultra-Low Conductivity sensor specifically developed for the measurement of pure water, ultra-pure water, and DI water.

AUTOMATIC ELECTROLYSIS PRESSURE REGULATOR

30 Bar Differential Pressure experiments with automatic back pressure control, automatic draining, and automatic purge control.

Two Phase Flow separation for highly stable control of back pressure, returns product to test system at ambient pressure.

Seamless Integration with Scribner's High-Pressure Cell Fixture, 600, 620 or other test systems, standalone software with robust safety monitoring.

CELL FIXTURES

PROTON EXCHANGE MEMBRANE

PEM Electrolyzer Cell Fixture superior performance for water electrolysis, with convenient porting, electrical heating, customizable materials and flow fields.

ANION EXCHANGE MEMBRANE

AEM Electrolyzer Cell Fixture offers customizable materials for chemical resistance and usability. Fluid is routed directly into flow field through end plate.

HIGH-PRESSURE ELECTROLYSIS

50 Bar Capable. Available in Aluminum Stainless Steel, and Nickel 200 End-Plates, as well as a wide range of Flow Field materials and patterns.

PRODUCT CONFIGURATION

LET'S CONFIGURE YOUR TEST SYTEM

If It Isn't On The Page, Let's Talk Customization

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POWER SUPPLY	
Code	**Description**
X	500W, 100A, 5V, EIS

THERMOCOUPLE CODE	
Code	**Cell Thermocouple Type**
T	Type T

INTERNAL OPTION CODE		
Code	**Teflon™ Tank Coating**	**SC-11 Cleaned Oxygen Product Flow Path**
0	N	N
1	Y	N
2	Y	Y
#	Custom Configuration	

PLUG (VOLTAGE) CODE	
Code	**Plug Type**
C	Chinese Plug (230V)
E	European Plug (230V)
N	North American Plug (120V)
U	UK Plug (230V)

EMPOWERING ELECTROCHEMISTRY

ABOUT US

We're the power behind the pioneers—advancing electrochemical research with precision instruments, deep expertise, and unwavering support.

More than a supplier, we're a trusted partner in innovation, removing technical barriers so scientists can focus on breakthroughs that shape the future.

From lab bench to global impact, Scribner makes complex research possible, precise, and scalable.

OUR EXPERTISE

Electrochemistry isn't just what we do—it's who we are. With decades of experience and industry-defining innovation, we deliver cutting-edge electrochemical instrumentation and expert insight that empower scientists to push boundaries.

Whether you're optimizing performance at the molecular level or scaling up for global impact, we provide the precision tools and partnership to turn possibility into progress.

Our product catalog includes:
-Fuel Cell Test Systems
-Electrolyzer Test Systems
-Membrane Conductivity Test Systems
-Redox Flow Cell Test Systems
-Battery Test Systems

STAY CONNECTED

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