



620 Water Electrolysis Test Station

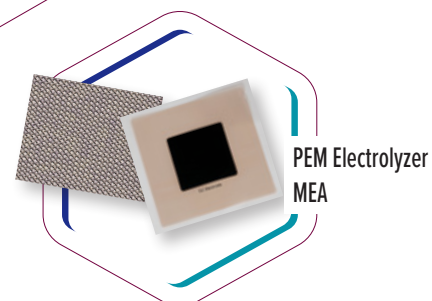
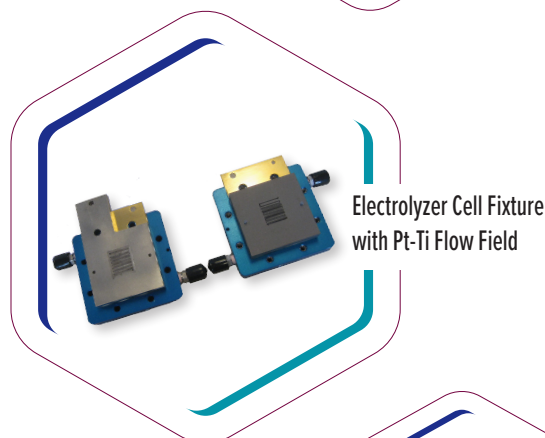
A bench-top, fully-integrated instrument for R&D of PEM & AEM water electrolysis

The 620 Electrolyzer Test Station (ETS) is ideal for labs requiring detailed control, diagnostics and analysis of electrolysis cells operating on DI water or alkaline solutions

The 620 features

- 4 current range Potentiostat $\pm 0.07 / 0.7 / 7 / 20$ A, ± 5 V, 100 W
- Programmable Power Supply for operation up to 100 A, 5 V, 500 W
- Automated switching between Potentiostat and Power Supply mode
- Mass flow meters for real-time O_2 and H_2 product flow rate monitoring
- EIS and HFR in Potentiostat mode
- EIS data compatible with ZView®, the world's leading impedance analysis & equivalent circuit modelling software
- Whole cell voltage plus two high-impedance reference electrode inputs for half-cell data
- FlowCell-ETS® application software for complete system control, experiment sequencing, graphing and data acquisition
- Independent, dual heated liquid feeds for cell positive and negative electrodes
- Integrated back pressure to 2 barg
- Compatible with DI Water and Alkaline Feed Stocks
- N_2 purge on Cathode with Supplemental N_2 on Anode
- Recirculating or single-pass operating mode
- Feed tank level balancing and recirculating
- In-line high-temperature Ion Exchange cartridge to maintain DI water purity
- Integrated 892 Data Expansion Module for additional 8 temperature + 8 analog inputs, e.g., pressure transducers
- Safety features: E-Stop, Over Voltage/Current, Over Temperature, Product Gas Cross-Contamination

OPTIONS



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SPECIFICATIONS: 620 Electrolysis Test Station

Cell Connections:

Cell Connection	4-terminal (I+, I-, V+, V-) & differential Aux (REF)
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Cell Potentiostat:

Full Scale Current Ranges	$\pm 20 / 7 / 0.7 / 0.07$ A
Current Resolution	0.007% of range
Current Limit of Error	$\pm 1.0\%$ of range
Set and Read Voltage vs. WE	$> \pm 5.000$ V
Cell Voltage Sense Lead	Differential w/ driven shields
Voltage Measurement Resolution	152 μ V
Sense Lead Input Resistance	1.0 G Ω
Modes of Operation	Constant, Scan, Step-Stair; V and I

Cell Power Supply:

Maximum Current	100 A
Voltage Range	0 - 5.000 V
Power	Up to 500 W

Impedance Measurement (Potentiostat Mode):

Frequency Range:	1 mHz to 10 kHz
Measurement Types	Sweep EIS and single-frequency HFR real-time measurement, Whole Cell and Aux

Cell and Electrolyte Handling:

Flow Path	All 316 SS; compatible with DI water and alkaline solutions
Liquid Feed Water Reservoir	2x; 1 L, 316 SS, auto-water fill, conductivity probe
Liquid Feed Water Supply Pump	2x; 50 – 700 mL/min, software controlled
Liquid Feed Temperature Range	Ambient to 95 °C
Ion exchanger / Deionizer	In-line water recycling loop
Back Pressure	Dual, 0-2 bar _g (0-30 PSIG), Manual
Cell Temperature Range	Ambient to 120 °C
Purge Gas	PC-controlled MFC on Negative; Manual on Positive
Water/Gas Separator/ Dehumidifiers	2 (Negative, Positive), condensers & collection tanks
Product Mass Flow Meters	2 (1 SLM H ₂ , 0.5 SLM O ₂)

Additional Data Acquisition (892e):

Data Acquisition (892e):	8 Temperature + 8 Analog (e.g., 0-5 V, 4-20 mA)
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Options:

In-Line Gas Sensors	H ₂ Transmitter for monitoring of H ₂ in Product O ₂ O ₂ Transmitter for monitoring of O ₂ in Product H ₂
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Physical and Environment:

Operating Temperature	5-35 °C
Power Source	100-120 or 220-240 VAC, 50/60 Hz
Size (excluding tubing connections)	53 cm x 53 cm x 90 cm (21 in. x 21 in. x 35.5 in.)
Weight	64 kg (140 lb.)