LBWS-100 (Alkaline Electrolysis Stack Test Station)



Stack Potentiostat: Full Scale Current Ranges 40A Current Resolution: 0.1% of range Voltage Measurement Resolution 10 mV Sense Lead Input Resistance 1.0 GΩ Modes of Operation Constant, Scan, Step-Stair, V and I Power Supply: Maximum Current 40 A Voltage Range 0 - 30 V Power Up to 1.2kW Water & Electrolyte Handling: Flow Path All 316 SS Feed Water Reservoir 1 L, 316 SS, auto-water fill, Circulation Pump(electrolyte) 200 – 2500 mL/min, software controlled Feed Water Temperature Range Ambient to 95 °C Ion exchanger / Deionizer In-line water recycling loop Stack Temperature Range Ambient to 120 °C Purge Gas (N2) PC-controlled MFC on Negative; Manual on Positive Liquid/Gas Separator/Dehumidifiers 2 (Negative, Positive), condensers & collection tanks Data Acquisition: Product Mass Flow Meters 4 Temperature for monitoring of H2 in Product O2 O2 Transmitter for monitoring of O2 in Product H2 Pressure sensor 0~10barg 4~20mA Physical and Enviro	Stack Connections	2-terminal (V+, V-)
Current Resolution: 0.1% of range Voltage Measurement Resolution 10 mV Sense Lead Input Resistance 1.0 G\(\Omega\$) Modes of Operation Constant, Scan, Step-Stair; V and I Power Supply: Maximum Current 40 A Voltage Range 0 - 30 V Power Up to 1.2kW Water & Electrolyte Handling: Flow Path All 316 SS Feed Water Reservoir 1 L, 316 SS, auto-water fill, Circulation Pump(electrolyte) 200 - 2500 mL/min, software controlled Feed Water Temperature Range Ambient to 95 °C Ion exchanger / Deionizer In-line water recycling loop Stack Temperature Range Ambient to 120 °C Purge Gas (N2) PC-controlled MFC on Negative; Manual on Positive Liquid/Gas Separator/Dehumidifiers 2 (Negative, Positive), condensers & collection tanks Data Acquisition: 4 Temperature + 6 Analog (e.g., 0-5 V, 4-20 mA) Product Mass Flow Meters 2 (H2 O2) In-Line Gas Purity Sensors 0~10barg 4~20mA Physical and Environment: Operating Temperature \$-35 °C Power Source \$20.240 VAC, 50/60 Hz Size (excluding tubing connections) 497 mm x 725 mm x 751 mm	Stack Potentiostat:	
Voltage Measurement Resolution Sense Lead Input Resistance 1.0 G\(\Omega\) Modes of Operation Power Supply: Maximum Current 40 A Voltage Range 0 - 30 V Power Up to 1.2kW Water & Electrolyte Handling: Flow Path All 316 SS Feed Water Reservoir 1 L, 316 SS, auto-water fill, Circulation Pump(electrolyte) 200 - 2500 mL/min, software controlled Feed Water Temperature Range Ambient to 95 °C Ion exchanger / Deionizer In-line water recycling loop Stack Temperature Range Ambient to 120 °C Purge Gas (N2) Liquid/Gas Separator/Dehumidifiers Pata Acquisition: Qirculations: Product Mass Flow Meters Qirculations: Product Mass Flow Meters Pressure sensor Physical and Environment: Operating Temperature Power Source Size (excluding tubing connections) 10 mV A A A A A A A A A A A A A A A A A A A	Full Scale Current Ranges	40A
Sense Lead Input Resistance 1.0 GΩ Modes of Operation Constant, Scan, Step-Stair, V and I Power Supply: Maximum Current 40 A Voltage Range 0 - 30 V Power Up to 1.2kW Water & Electrolyte Handling: Flow Path All 316 SS Feed Water Reservoir 1 L, 316 SS, auto-water fill, Circulation Pump(electrolyte) 200 - 2500 mL/min, software controlled Feed Water Temperature Range Ambient to 95 °C Ion exchanger / Deionizer In-line water recycling loop Stack Temperature Range Ambient to 120 °C Purge Gas (N2) PC-controlled MFC on Negative; Manual on Positive Liquid/Gas Separator/Dehumidifiers 2 (Negative, Positive), condensers & collection tanks Data Acquisition: Product Mass Flow Meters 4 Temperature + 6 Analog (e.g., 0-5 V, 4-20 mA) Pressure sensor 0° Transmitter for monitoring of H² in Product O² O² Transmitter for monitoring of O₂ in Product H² Pressure sensor 0°-10barg 4~20mA Physical and Environment: 0°-10barg 4~20mA Physical and Environment: 0°-200 A Operating Temperature 5-35	Current Resolution:	0.1% of range
Constant, Scan, Step-Stair; V and I Power Supply: Maximum Current 40 A Voltage Range 0 - 30 V Power Up to 1.2kW Water & Electrolyte Handling: Flow Path All 316 SS Feed Water Reservoir 1 L, 316 SS, auto-water fill, Circulation Pump(electrolyte) 200 - 2500 mL/min, software controlled Feed Water Temperature Range Ambient to 95 °C Ion exchanger / Deionizer In-line water recycling loop Stack Temperature Range Ambient to 120 °C Purge Gas (N2) PC-controlled MFC on Negative; Manual on Positive Liquid/Gas Separator/Dehumidifiers 2 (Negative, Positive), condensers & collection tanks Data Acquisition: 4 Temperature + 6 Analog (e.g., 0-5 V, 4-20 mA) Product Mass Flow Meters 4 (Hz Oz) In-Line Gas Purity Sensors 4 Temperature for monitoring of Hz in Product Oz Oz Transmitter for monitoring of Oz in Product Hz Pressure sensor 0~10barg 4~20mA Physical and Environment: Oz Transmitter for monitoring of Oz in Product Hz Operating Temperature 5-35 °C Power Source 220-240 VAC, 50/60 Hz Si	Voltage Measurement Resolution	10 mV
Power Supply: Maximum Current 40 A Voltage Range 0 - 30 V Power Up to 1.2kW Water & Electrolyte Handling: Flow Path All 316 SS Feed Water Reservoir 1 L, 316 SS, auto-water fill, Circulation Pump(electrolyte) 200 - 2500 mL/min, software controlled Feed Water Temperature Range Ambient to 95 °C Ion exchanger / Deionizer In-line water recycling loop Stack Temperature Range Ambient to 120 °C Purge Gas (N2) Pc-controlled MFC on Negative; Manual on Positive Liquid/Gas Separator/Dehumidifiers Product Mass Flow Meters 2 (Negative, Positive), condensers & collection tanks Data Acquisition: 4 Temperature + 6 Analog (e.g., 0-5 V, 4-20 mA) Product Mass Flow Meters 2 (H2 O2) In-Line Gas Purity Sensors Physical and Environment: Operating Temperature 5-35 °C Power Source 497 mm x 725 mm x 751 mm	Sense Lead Input Resistance	1.0 GΩ
Maximum Current40 AVoltage Range0 - 30 VPowerUp to 1.2kWWater & Electrolyte Handling:Flow PathAll 316 SSFeed Water Reservoir1 L, 316 SS, auto-water fill,Circulation Pump(electrolyte)200 - 2500 mL/min, software controlledFeed Water Temperature RangeAmbient to 95 °CIon exchanger / DeionizerIn-line water recycling loopStack Temperature RangeAmbient to 120 °CPurge Gas (N2)PC-controlled MFC on Negative; Manual on PositiveLiquid/Gas Separator/Dehumidifiers2 (Negative, Positive), condensers & collection tanksData Acquisition:Product Mass Flow Meters4 Temperature + 6 Analog (e.g., 0-5 V, 4-20 mA)Product Mass Flow Meters2 (H2 O2)In-Line Gas Purity SensorsH2 Transmitter for monitoring of H2 in Product O2 O2 Transmitter for monitoring of O2 in Product H2Pressure sensor0~10barg 4~20mAPhysical and Environment:O~10barg 4~20mAOperating Temperature5-35 °CPower Source220-240 VAC, 50/60 HzSize (excluding tubing connections)497 mm x 725 mm x 751 mm	Modes of Operation	Constant, Scan, Step-Stair; V and I
Voltage Range 0 - 30 V Power Up to 1.2kW Water & Electrolyte Handling: Flow Path All 316 SS Feed Water Reservoir 1 L, 316 SS, auto-water fill, Circulation Pump(electrolyte) 200 - 2500 mL/min, software controlled Feed Water Temperature Range Ambient to 95 °C Ion exchanger / Deionizer In-line water recycling loop Stack Temperature Range Ambient to 120 °C Purge Gas (N2) PC-controlled MFC on Negative; Manual on Positive Liquid/Gas Separator/Dehumidifiers 2 (Negative, Positive), condensers & collection tanks Data Acquisition: 4 Temperature + 6 Analog (e.g., 0-5 V, 4-20 mA) Product Mass Flow Meters 2 (H2 O2) In-Line Gas Purity Sensors 2 (H2 O2) Pressure sensor 0~10barg 4~20mA Physical and Environment: Operating Temperature 5-35 °C Power Source 220-240 VAC, 50/60 Hz Size (excluding tubing connections) 497 mm x 725 mm x 751 mm	Power Supply:	
Power Up to 1.2kW Water & Electrolyte Handling: Flow Path All 316 SS Feed Water Reservoir 1 L, 316 SS, auto-water fill, Circulation Pump(electrolyte) 200 – 2500 mL/min, software controlled Feed Water Temperature Range Ambient to 95 °C Ion exchanger / Deionizer In-line water recycling loop Stack Temperature Range Ambient to 120 °C Purge Gas (N2) PC-controlled MFC on Negative; Manual on Positive Liquid/Gas Separator/Dehumidifiers 2 (Negative, Positive), condensers & collection tanks Data Acquisition: Product Mass Flow Meters 4 Temperature + 6 Analog (e.g., 0-5 V, 4-20 mA) Product Mass Flow Meters 2 (H² O²) In-Line Gas Purity Sensors 02 Transmitter for monitoring of H² in Product O² O² Transmitter for monitoring of O² in Product H² Pressure sensor 0~10barg 4~20mA Physical and Environment: Operating Temperature 5-35 °C Power Source 220-240 VAC, 50/60 Hz Size (excluding tubing connections) 497 mm x 725 mm x 751 mm	Maximum Current	40 A
Water & Electrolyte Handling: Flow Path All 316 SS Feed Water Reservoir 1 L, 316 SS, auto-water fill, Circulation Pump(electrolyte) 200 − 2500 mL/min, software controlled Feed Water Temperature Range Ambient to 95 °C Ion exchanger / Deionizer In-line water recycling loop Stack Temperature Range Ambient to 120 °C Purge Gas (N2) PC-controlled MFC on Negative; Manual on Positive Liquid/Gas Separator/Dehumidifiers 2 (Negative, Positive), condensers & collection tanks Data Acquisition: 4 Temperature + 6 Analog (e.g., 0-5 V, 4-20 mA) Product Mass Flow Meters 2 (H² O₂) In-Line Gas Purity Sensors 4 Transmitter for monitoring of H² in Product O² O² Transmitter for monitoring of O₂ in Product H² Pressure sensor Physical and Environment: Operating Temperature 5-35 °C Power Source Size (excluding tubing connections) 497 mm x 755 mm x 751 mm	Voltage Range	0 - 30 V
Flow Path Feed Water Reservoir Feed Water Reservoir Feed Water Reservoir Feed Water Temperature Range Feed Water Temperature Pc-controlled MFC on Negative; Manual on Positive Feed Water Reservoir Feed Water Reservo	Power	Up to 1.2kW
Feed Water Reservoir Circulation Pump(electrolyte) 200 – 2500 mL/min, software controlled Feed Water Temperature Range Ambient to 95 °C Ion exchanger / Deionizer In-line water recycling loop Stack Temperature Range Ambient to 120 °C Purge Gas (N2) PC-controlled MFC on Negative; Manual on Positive Liquid/Gas Separator/Dehumidifiers 2 (Negative, Positive), condensers & collection tanks Data Acquisition: 4 Temperature + 6 Analog (e.g., 0-5 V, 4-20 mA) Product Mass Flow Meters 2 (H2 O2) In-Line Gas Purity Sensors Pressure sensor Physical and Environment: Operating Temperature 5-35 °C Power Source Size (excluding tubing connections) 497 mm x 725 mm x 751 mm	Water & Electrolyte Handling:	
Circulation Pump(electrolyte) Feed Water Temperature Range Ambient to 95 °C Ion exchanger / Deionizer In-line water recycling loop Stack Temperature Range Ambient to 120 °C Purge Gas (N2) PC-controlled MFC on Negative; Manual on Positive Liquid/Gas Separator/Dehumidifiers 2 (Negative, Positive), condensers & collection tanks Data Acquisition: 4 Temperature + 6 Analog (e.g., 0-5 V, 4-20 mA) Product Mass Flow Meters 2 (H² O²) In-Line Gas Purity Sensors B² Transmitter for monitoring of H² in Product O² O² Transmitter for monitoring of O² in Product H² Pressure sensor Physical and Environment: Operating Temperature 5-35 °C Power Source 220-240 VAC, 50/60 Hz Size (excluding tubing connections)	Flow Path	All 316 SS
Feed Water Temperature Range Ion exchanger / Deionizer In-line water recycling loop Stack Temperature Range Ambient to 120 °C Purge Gas (N2) Pc-controlled MFC on Negative; Manual on Positive Liquid/Gas Separator/Dehumidifiers 2 (Negative, Positive), condensers & collection tanks Pata Acquisition: 4 Temperature + 6 Analog (e.g., 0-5 V, 4-20 mA) Product Mass Flow Meters 2 (H². O²) In-Line Gas Purity Sensors Pressure sensor Physical and Environment: Operating Temperature Operating Temperature S-35 °C Power Source Size (excluding tubing connections) Ambient to 95 °C Ambient to 92 °C Ambient to 95 °C Ambient to 120 °C Amb	Feed Water Reservoir	1 L, 316 SS, auto-water fill,
Ion exchanger / Deionizer Stack Temperature Range Ambient to 120 °C Purge Gas (N2) Pc-controlled MFC on Negative; Manual on Positive Liquid/Gas Separator/Dehumidifiers 2 (Negative, Positive), condensers & collection tanks Data Acquisition: 4 Temperature + 6 Analog (e.g., 0-5 V, 4-20 mA) Product Mass Flow Meters 2 (H2, O2) In-Line Gas Purity Sensors 42 Transmitter for monitoring of H2 in Product O2 Transmitter for monitoring of O2 in Product H2 Pressure sensor 0~10barg 4~20mA Physical and Environment: Operating Temperature 5-35 °C Power Source 5-35 °C Power Source 497 mm x 725 mm x 751 mm	Circulation Pump(electrolyte)	200 – 2500 mL/min, software controlled
Stack Temperature RangeAmbient to 120 °CPurge Gas (N2)PC-controlled MFC on Negative; Manual on PositiveLiquid/Gas Separator/Dehumidifiers2 (Negative, Positive), condensers & collection tanksData Acquisition:4 Temperature + 6 Analog (e.g., 0-5 V, 4-20 mA)Product Mass Flow Meters2 (H². O²)In-Line Gas Purity SensorsH² Transmitter for monitoring of H² in Product O² O² Transmitter for monitoring of O² in Product H²Pressure sensor0~10barg 4~20mAPhysical and Environment:Operating Temperature5-35 °CPower Source220-240 VAC, 50/60 HzSize (excluding tubing connections)497 mm x 725 mm x 751 mm	Feed Water Temperature Range	Ambient to 95 ℃
Purge Gas (N2) Liquid/Gas Separator/Dehumidifiers 2 (Negative, Positive), condensers & collection tanks Data Acquisition: 4 Temperature + 6 Analog (e.g., 0-5 V, 4-20 mA) Product Mass Flow Meters 2 (H² O²) In-Line Gas Purity Sensors 4² Transmitter for monitoring of H² in Product O² O² Transmitter for monitoring of O² in Product H² Pressure sensor Physical and Environment: Operating Temperature 5-35 °C Power Source 5-35 °C 220-240 VAC, 50/60 Hz Size (excluding tubing connections)	Ion exchanger / Deionizer	In-line water recycling loop
Liquid/Gas Separator/Dehumidifiers 2 (Negative, Positive), condensers & collection tanks Data Acquisition: 4 Temperature + 6 Analog (e.g., 0-5 V, 4-20 mA) Product Mass Flow Meters 2 (H² O²) In-Line Gas Purity Sensors H² Transmitter for monitoring of H² in Product O² O² Transmitter for monitoring of O² in Product H² Pressure sensor Physical and Environment: Operating Temperature 5-35 °C Power Source 220-240 VAC, 50/60 Hz Size (excluding tubing connections) 497 mm x 725 mm x 751 mm	Stack Temperature Range	Ambient to 120 °C
Data Acquisition: 4 Temperature + 6 Analog (e.g., 0-5 V, 4-20 mA) Product Mass Flow Meters 2 (H². O²) In-Line Gas Purity Sensors H² Transmitter for monitoring of H² in Product O² O² Transmitter for monitoring of O² in Product H² Pressure sensor 0~10barg 4~20mA Physical and Environment: Operating Temperature 5-35 °C Power Source 220-240 VAC, 50/60 Hz Size (excluding tubing connections) 497 mm x 725 mm x 751 mm	Purge Gas (N2)	PC-controlled MFC on Negative; Manual on Positive
Product Mass Flow Meters 2 (H2 O2) In-Line Gas Purity Sensors Pressure sensor 0~10barg 4~20mA Physical and Environment: Operating Temperature 5-35 °C Power Source 5-35 °C 220-240 VAC, 50/60 Hz Size (excluding tubing connections)	Liquid/Gas Separator/Dehumidifiers	2 (Negative, Positive), condensers & collection tanks
In-Line Gas Purity Sensors H² Transmitter for monitoring of H² in Product O² O² Transmitter for monitoring of O² in Product H² Pressure sensor O~10barg 4~20mA Physical and Environment: Operating Temperature 5-35 °C Power Source 220-240 VAC, 50/60 Hz Size (excluding tubing connections) H² Transmitter for monitoring of H² in Product O² O² in Product H² O~10barg 4~20mA 497 mm x 725 mm x 751 mm	Data Acquisition:	4 Temperature + 6 Analog (e.g., 0-5 V, 4-20 mA)
Pressure sensor O2 Transmitter for monitoring of O2 in Product H2 Pressure sensor O~10barg 4~20mA Physical and Environment: Operating Temperature 5-35 °C Power Source 220-240 VAC, 50/60 Hz Size (excluding tubing connections) 497 mm x 725 mm x 751 mm	Product Mass Flow Meters	2 (H ₂ , O ₂)
Physical and Environment: Operating Temperature 5-35 °C Power Source 220-240 VAC, 50/60 Hz Size (excluding tubing connections) 497 mm x 725 mm x 751 mm	In-Line Gas Purity Sensors	
Operating Temperature 5-35 °C Power Source 220-240 VAC, 50/60 Hz Size (excluding tubing connections) 497 mm x 725 mm x 751 mm	Pressure sensor	0~10barg 4~20mA
Power Source 220-240 VAC, 50/60 Hz Size (excluding tubing connections) 497 mm x 725 mm x 751 mm	Physical and Environment:	
Size (excluding tubing connections) 497 mm x 725 mm x 751 mm	Operating Temperature	5-35 ℃
Size (excluding tubing connections)	Power Source	220-240 VAC, 50/60 Hz
	Size (excluding tubing connections)	497 mm x 725 mm x 751 mm
	Weight	60 kg