

— AEM WATER ELECTROLYSIS

HXB-V1

Available now

2 kW AEM electrolyser system

A modular 2 kW system that makes hydrogen on site from power and water.



KEY RATINGS

1 kg/dayRated H₂ output**0 / 10 barg**

Hydrogen production pressure

≥ 99.999%

Purity with a dryer

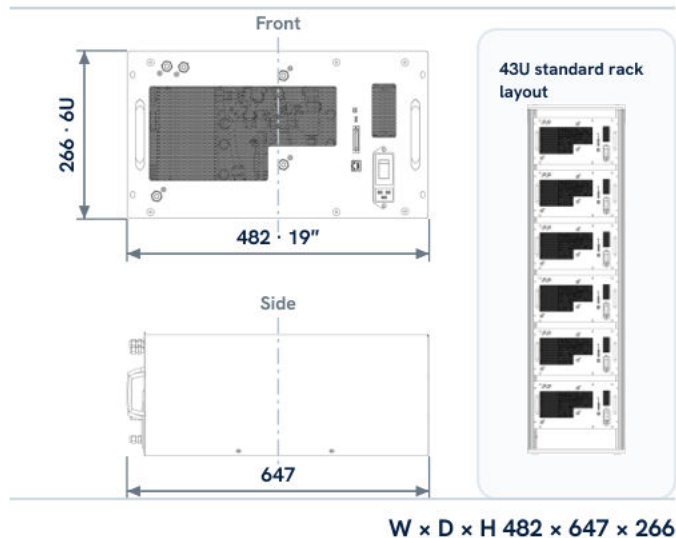
Product boundary · Standard supply

System unit and desktop operating software

— HXB-V1 · ENGINEERING SPECIFICATIONS

Design specifications · operating range

Dimension drawing · rack layout



Performance

PERFORMANCE

H ₂ production	500 L/h · 1 kg/day
Operating power	2.4 kW · BOL · 50 A
Power breakdown	Stack 2.0 kW · BoP 0.4 kW
Operating current	15-67 A · 50 A recommended
Power consumption (stack/system)	45 / 54 kWh/kg-H ₂
Efficiency (HHV)	88% · BOL
H ₂ purity @ 0 barg	98-99% · ≥99.999% with a dryer
H ₂ purity @ 10 barg	99% · ≥99.999% with a dryer
H ₂ pressure	0 / 10 barg · 0 / 145 psig

Physical

PHYSICAL

Size W×D×H	482×647×266 mm
Weight	51.3 kg

Utility · safety

UTILITY · SAFETY

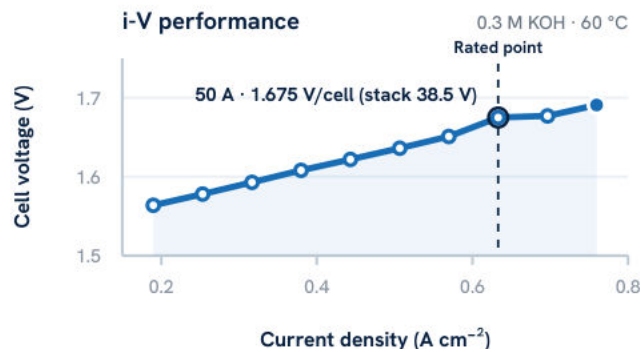
Power supply	AC 200-240 V · single-phase · 50/60 Hz
Feedwater quality @ 25 °C	ASTM D1193 Type II · ≤1 µS/cm
Feedwater consumption	0.55 L/h · 50 A · 60 °C
Water top-up	Automatic refill by built-in pump
Electrolyte	0.1-1 M KOH · 2-5 L/min
Ambient temperature	5-45 °C
Operating monitoring	Pressure · temperature · gas leak
Safety shutdown	Hydrogen detection · emergency stop · safety logic
Overpressure protection	Automatic shutdown on tank overpressure
Alarm log	alarms and events logged automatically
Operating data	1 s interval · set and stop in the desktop app

Interface · Installation

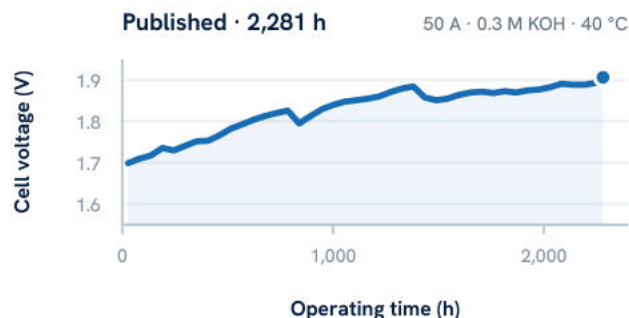
INTERFACES · INSTALL

Water connection	H ₂ O IN · 1/4" double-ferrule
H ₂ outlet	H ₂ OUT · 1/4" double-ferrule
O ₂ outlet	O ₂ OUT · 1/4" double-ferrule
Vent · drain	VENT / DRAIN · 1/4" double-ferrule
Product gas	Moist hydrogen
Standard dryer	not included
Dryer support	Modular dryer in development · a partner unit can be recommended
Power connection	C19 power cable
Installation clearance	Front ≥300 mm · rear ≥400 mm
Storage · transport	Store and transport upright · indoors · ≥5 °C

i-V performance



Published · 2,281 h



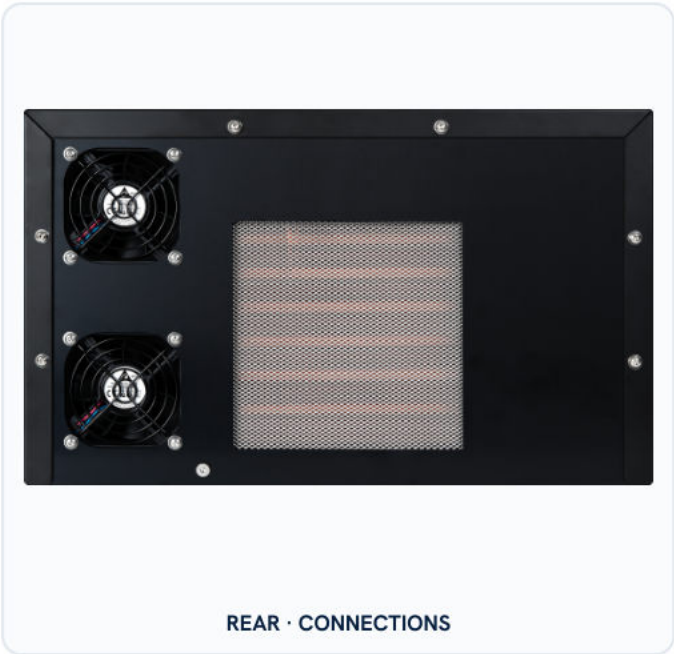
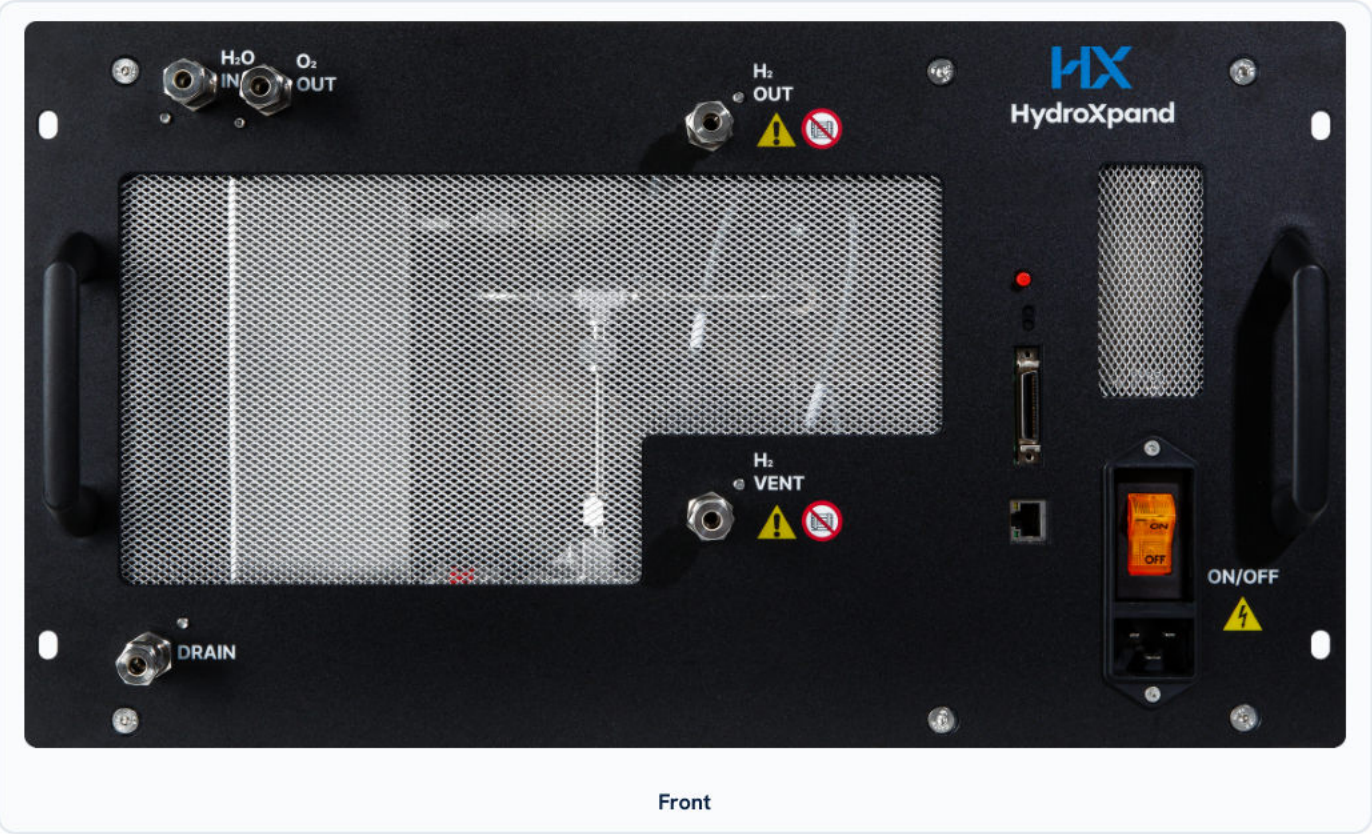
Measured reference

- Latest continuous operation of the installed HXS-2: 2,400 h+ · approx. 77 µV/h/cell
- Published graph window: 2,281 h · 80.2 µV/h/cell · 0.3 M KOH · 40 °C · 50 A

— HXB-V1 · PRODUCT VIEWS

Product views

Front view, side depth and rear connections are shown together for rack integration.

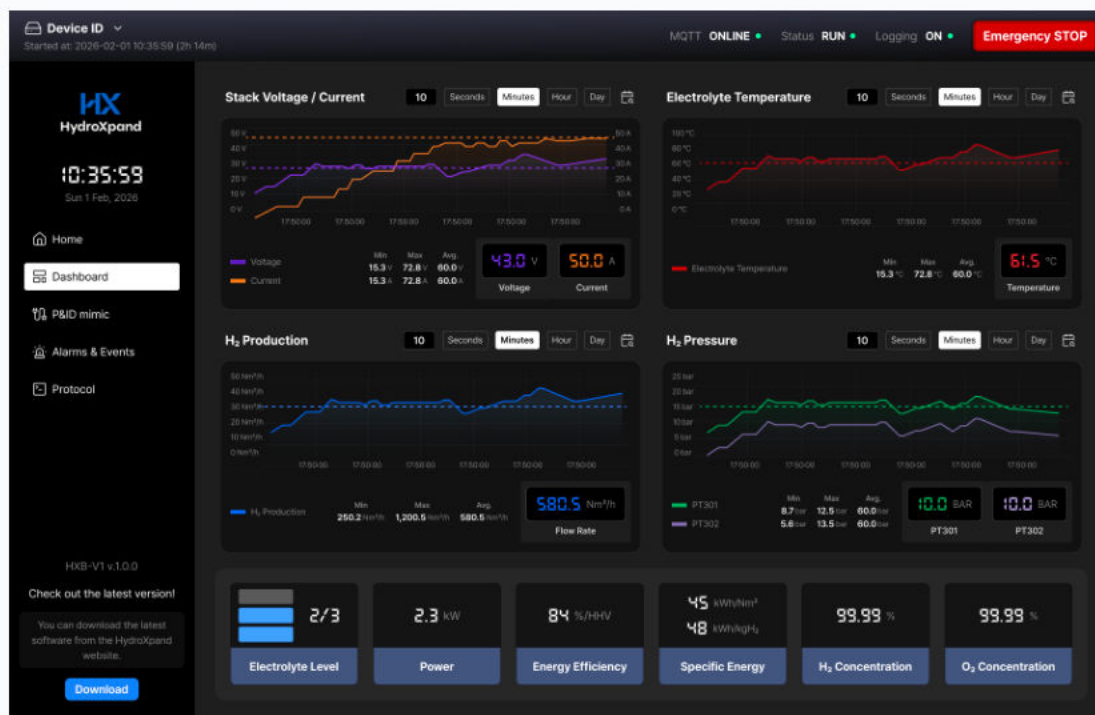


19-inch rack mount · 6U	482 × 647 × 266 mm	51.3 kg
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HXB-V1 · SINGLE-UNIT CONTROL

Single-unit operation

Operate one HXB-V1 in real time and monitor process status and alarms.



DASHBOARD · real-time operating trends



P&ID · process status

Alarms					
ID	Time	Category	Label / Message	Limit / Value	Status
1	2025-08-11 10:30:58	EMF	Stack Voltage High - TSP	0.0% 0.00%	Active
2	2025-08-11 10:30:58	EMF	Stack Temperature High	90.0% 61.5%	Active
3	2025-08-11 10:30:58	EMF	Stack Voltage High - TSP	0.0% 0.00%	Active
4	2025-08-11 10:30:58	EMF	Stack Temperature High	90.0% 61.5%	Active
5	2025-08-11 10:30:58	EMF	Stack Voltage High - TSP	0.0% 0.00%	Active

Events					
ID	Time	Type	Action	Status	Details
1	2025-08-11 10:30:58	Emergency	Emergency Stop	Applied	
2	2025-08-11 10:30:58	Emergency	Emergency Stop	Applied	
3	2025-08-11 10:30:58	Emergency	Emergency Stop	Applied	
4	2025-08-11 10:30:58	Emergency	Emergency Stop	Applied	
5	2025-08-11 10:30:58	Emergency	Emergency Stop	Applied	
6	2025-08-11 10:30:58	Emergency	Emergency Stop	Applied	

ALARMS · alarm history

Real-time operation

Voltage · current · temperature · flow · pressure

Direct control

Setpoint changes · stop · emergency stop

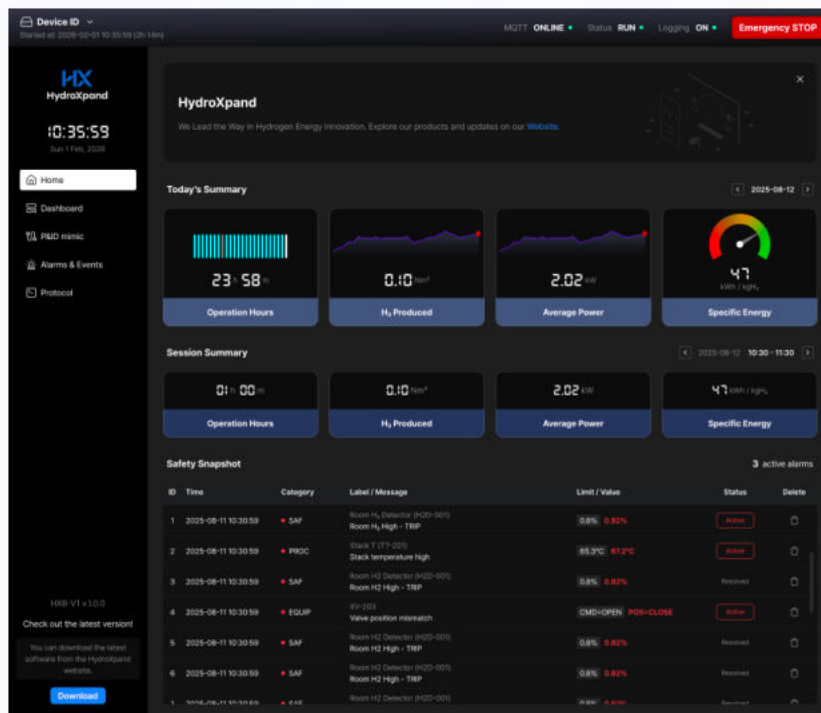
Operating history

1 s data cycle · alarm logging

— HXB-V1 · MULTI-UNIT CONTROL

Multi-unit control

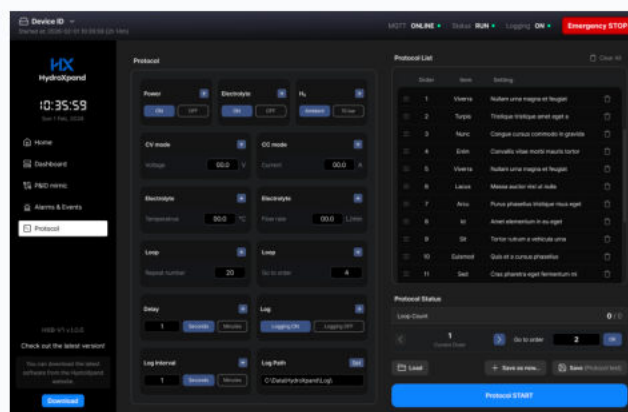
Select units in one app and switch between equipment status, settings and operating history.



HOME · unit selection and operating status



DASHBOARD · selected-unit details



PROTOCOL · operating-sequence setup

Unit selection

Status · settings · stop by unit

Scalability

Software design limit: up to 50 units

Control scope

Automatic load sharing not provided