

— AEM WATER ELECTROLYSIS

HXS-2

Available now

2 kW AEM electrolyser stack

A 2 kW stack for lab and pilot use, supporting hydrogen-side operation up to 10 barg.



KEY RATINGS

1 kg/dayRated H₂ output**10 barg**

Hydrogen-side pressure

2,400 h+

Latest continuous run

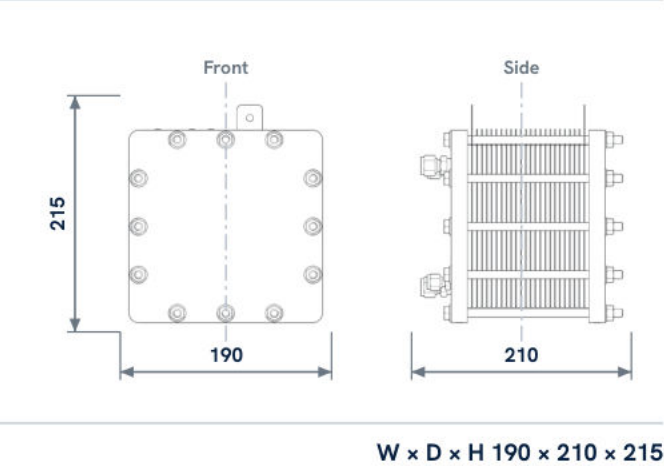
Product boundary · Standard supply

Stack assembly. Rectification, circulation, cooling and gas treatment are configured in the customer's system.

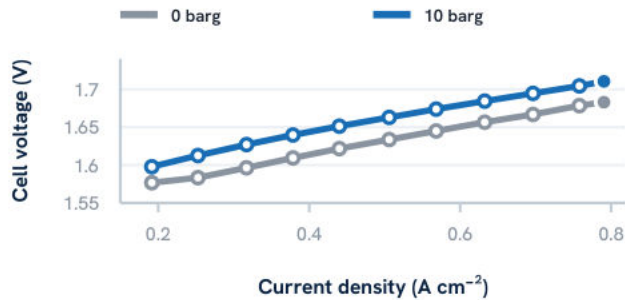
HX-S-2 · ENGINEERING SPECIFICATIONS

Design specifications · operating range

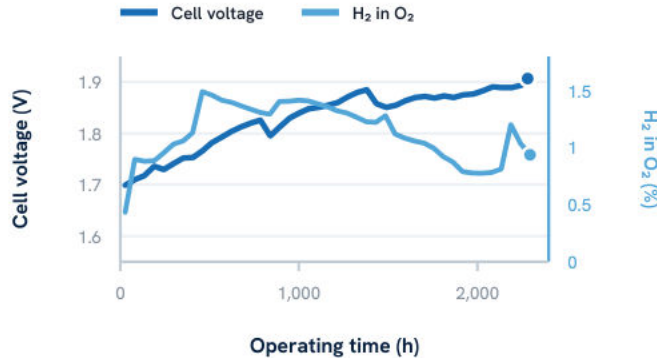
Dimensional drawing



0 / 10 barg i-V comparison



Published · 2,281 h 50 A · 0.3 M KOH · 40 °C



Performance

PERFORMANCE

H ₂ production	500 L/h · 1 kg/day
Efficiency (HHV)	88% · BOL
Operating power	2 kW · 50 A
Feedwater consumption	0.42 L/h · 50 A
Operating temperature	up to 80 °C
0 / 10 barg i-V conditions	0.1 M KOH · 50 °C

Physical

PHYSICAL

Cell count	23
Active area (anode/cathode)	100 / 79 cm ²
Dimensions	190x210x215 mm
Weight	19 kg

Connections

CONNECTIONS

Electrolyte inlet	3/8" double-ferrule
H ₂ outlet (2)	1/4" double-ferrule
O ₂ ·Electrolyte outlet	3/8" double-ferrule
DC terminal	M6
external circulation	4 L/min

Materials

MATERIALS

Anode	HXP-an (non-precious-metal NiFe-LDH)
Cathode	HXP-ca (Pt- or PtRu-based · 0.2 mgPGM/cm ²)
electrolyte membrane	Polymer ion-exchange membrane

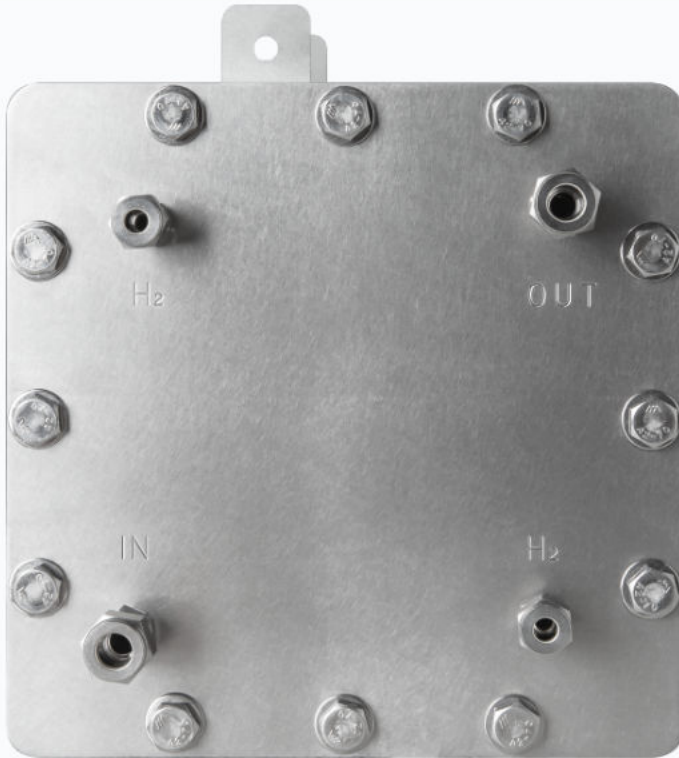
Measured reference

- Current density based on 79 cm² cathode active area
- 0 / 10 barg i-V: 0.1 M KOH · 50 °C
- Continuous run: 23 cells · 0.3 M KOH · 40 °C · 50 A
- Cell voltage: 1.699 → 1.907 V · linear regression 80.2 μV/h/cell
- Cathode loading: 0.2 mgPGM/cm² · PtRu-based loading is total Pt+Ru

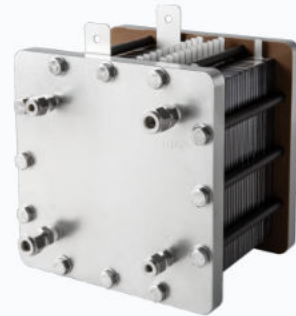
HXS-2 · VIEWS & INTERFACES

Views and pressurised operating data

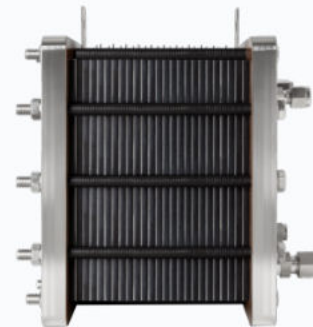
Check the port markings on the front face and the stacked side view, and compare gas crossover under pressurised operation.



Front · port markings

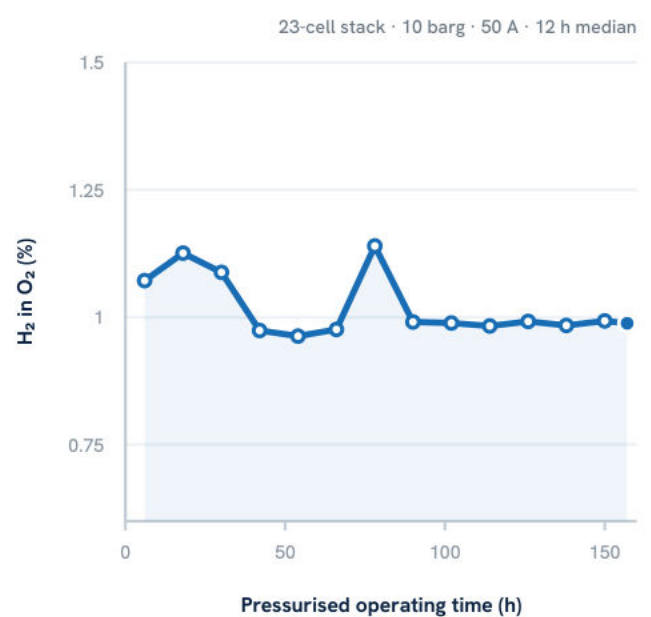
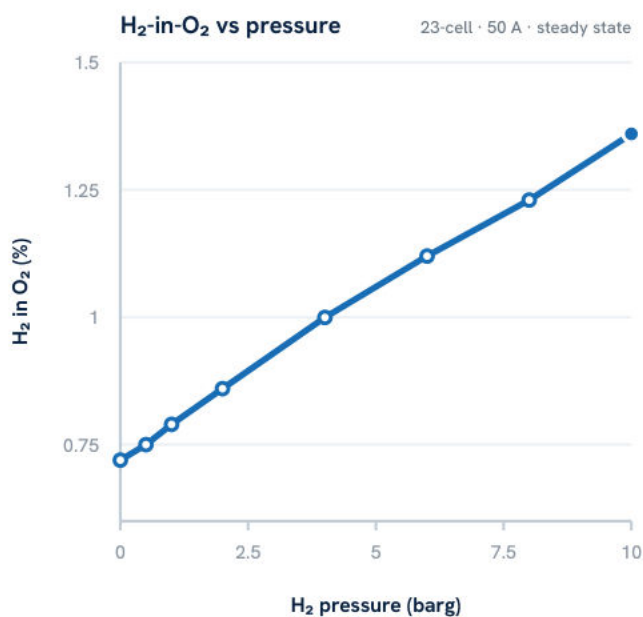


Isometric



Side · 23-cell stack

Pressurised operation · gas quality



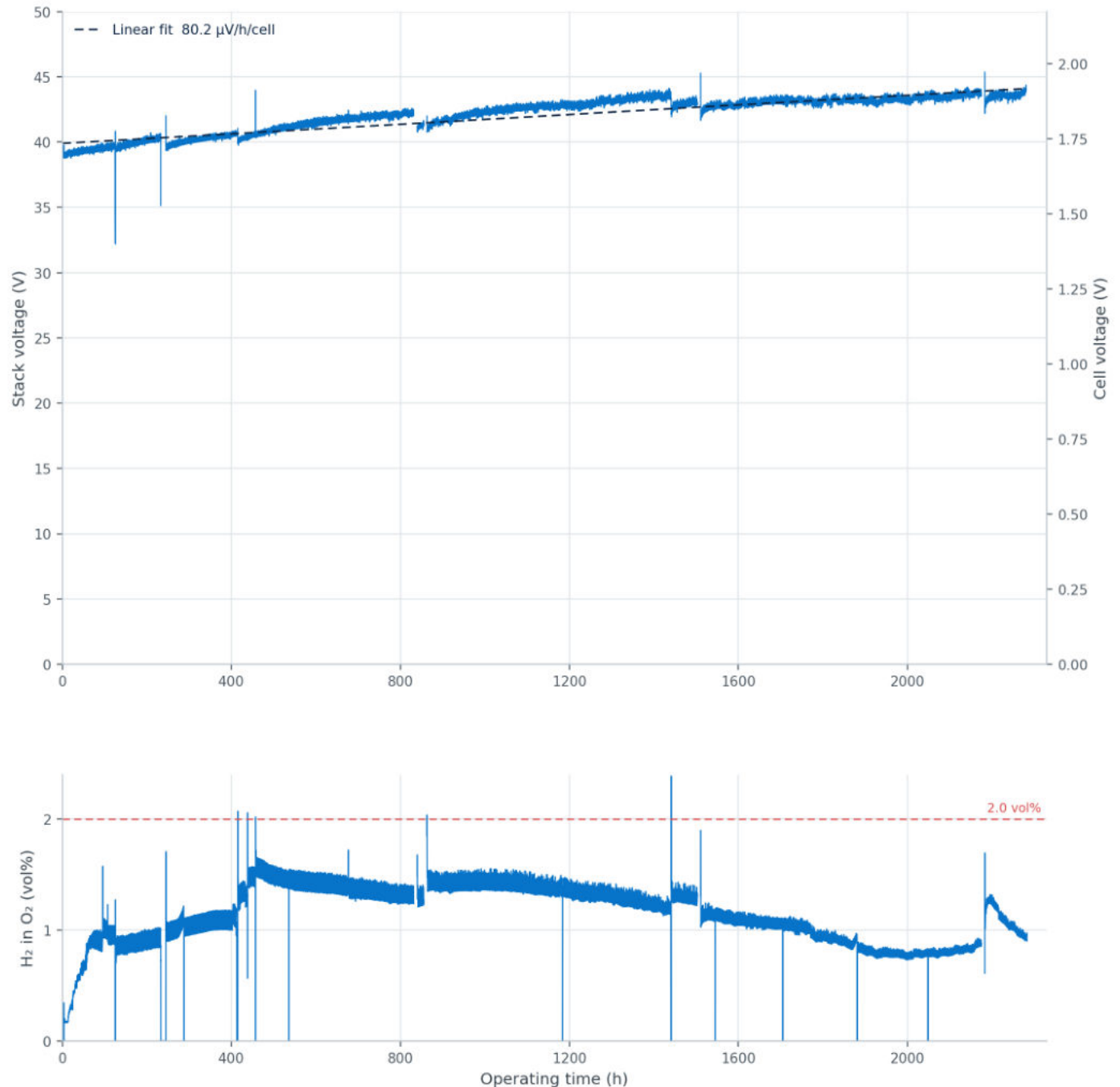
Gas concentration varies with operating conditions and analyser stabilisation time. The measured data is available on request.

— HXS-2 · MEASURED DATA

Published graph window · 2,281 hours

Stack voltage · H₂-in-O₂ trend

23 cells · 50 A galvanostatic · 0.3 M KOH · 40 °C · ambient · full-run linear fit 80.2 μ V/h/cell

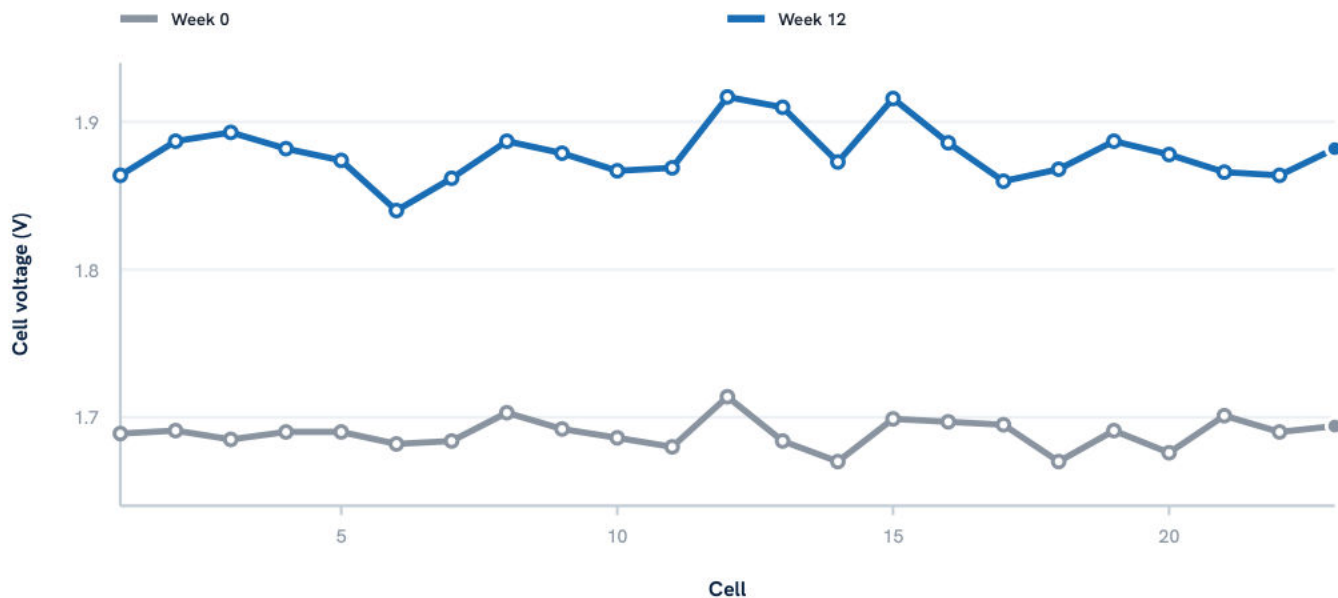


— HXS-2 · MEASURED DATA

Cell uniformity · low-load H₂-in-O₂

23-cell voltage distribution

23 cells · 50 A constant current · 0.3 M KOH · 40 °C · week 0 / week 12



H₂-in-O₂ by load · 49 measured points

23 cells · 0.1 M KOH · 43-45 °C · 20-50 A · atmospheric to 6 barg

