

— AEM WATER ELECTROLYSIS

HXP-ca

Made to order

AEM electrolysis cathode (Pt/PtRu)

A high-performance, low-Loading cathode available with Pt/C or PtRu/C.



KEY RATINGS

0.2 mgPGM/cm²

Catalyst loading

Pt/C · PtRu/C

Catalyst options

200×300 mm

Standard

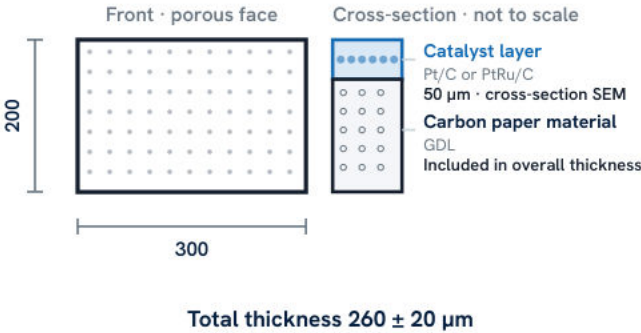
Product boundary · Standard supply

Electrode sheets in the specified catalyst, size and quantity. MEA assembly and the counter electrode are separate.

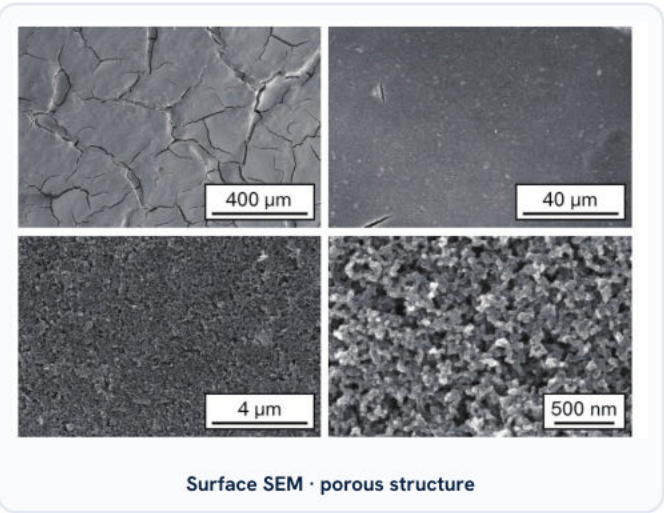
HX
P-ca · ENGINEERING SPECIFICATIONS

Design specifications · operating range

Dimensional drawing



Surface SEM



Materials

MATERIAL

Catalyst	Pt/C · PtRu/C + binder
GDL	Carbon paper
Loading	0.2 mgPGM/cm ² (XRF) · PtRu based on total Pt+Ru loading
Area density	105 ± 10 g/m ²

Characterisation

CHARACTERIZATION

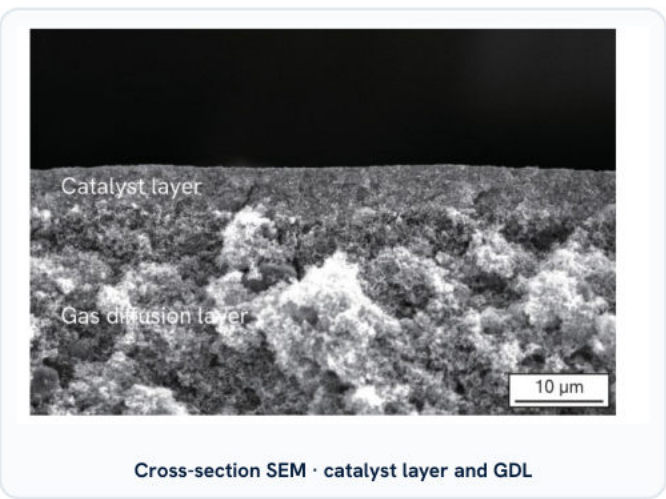
Catalyst layer	low surface roughness
Cross-section ²	Catalyst layer · GDL

Performance

PERFORMANCE

Tafel slope ¹	PtRu 45.7 · Pt 52.2 mV/dec
Accelerated durability ³	10,000 cycles

Cross-section



Notes

- 1) Tafel slope and curves: three-electrode, 0.3 M KOH, RT, N₂ purge.
- 2) Cross-section SEM shows a catalyst layer of about 50 μm.
- 3) AST: 1.0 ↔ 0.05 A/cm² · 5 s · 10,000 cycles.

HXP-ca · MICROSTRUCTURE & PERFORMANCE

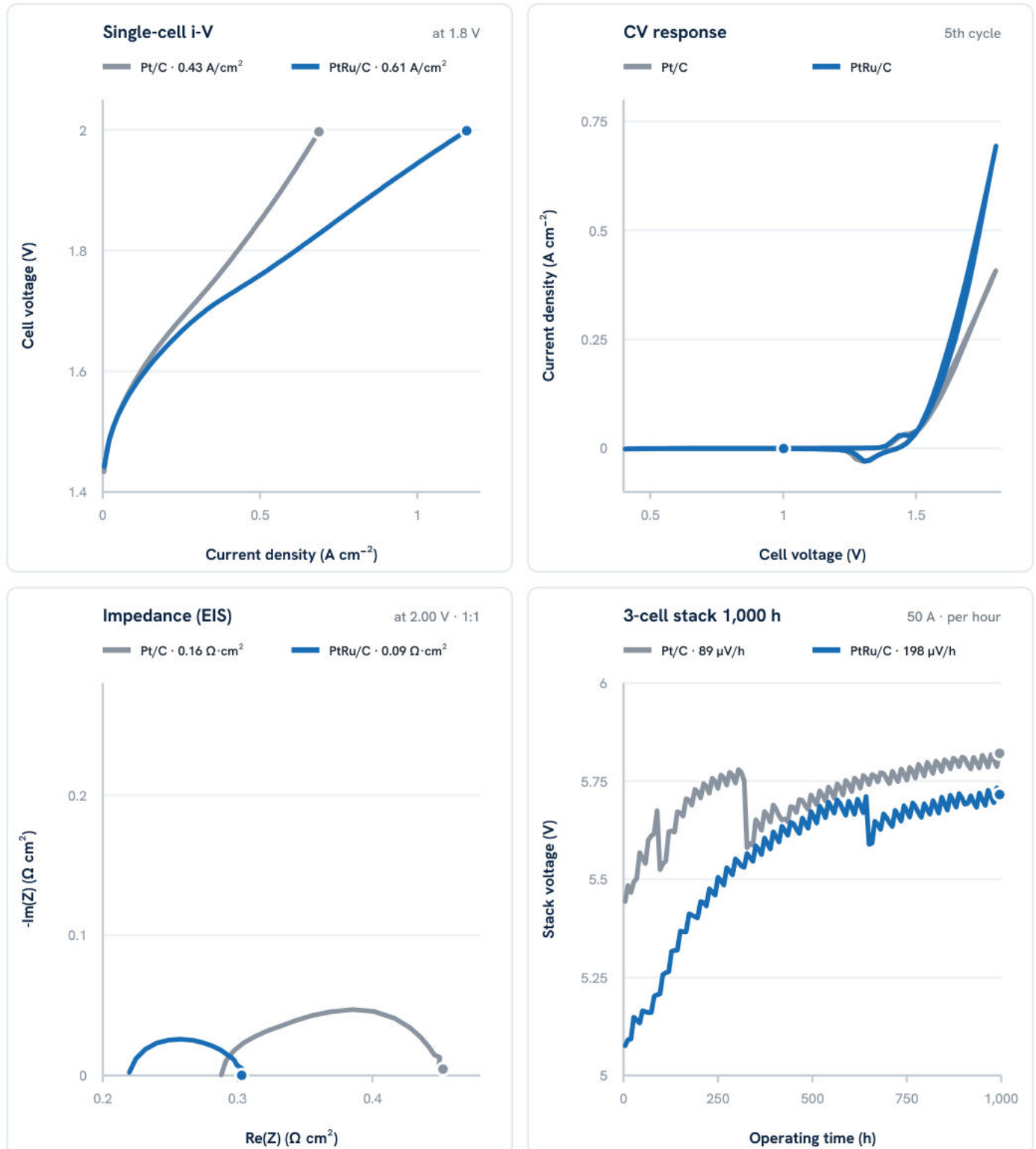
Performance and durability

Both cells use the same HXP-anode; only the cathode catalyst differs (Pt/C or PtRu/C).

All four charts show measured values as recorded.

Pt/C vs PtRu/C, measured

0.3 M KOH · 60 °C



— HXP-ca · EXTENDED SPECIFICATIONS

Extended specifications

Supply · custom sizes

Supply format	Catalyst-coated cathode
Custom	Custom size on review · thickness 260 ± 20 µm

Catalyst selection

Pt/C	Lower initial output · higher durability
PtRu/C	Higher initial output · lower durability

Quality specification

Dimensions (nominal)	Standard 200 × 300 mm · custom sizes on review
Loading tolerance	Per approved order spec · tolerance agreed before order
Coating uniformity	XRF sample + 100% visual check
Visual criteria	No folds, tears, contamination, bare areas or delamination
Lot CoA	Not standard · test scope/format agreed before order

Ordering · logistics

Lead time (standard)	Ships in 2 weeks
Lead time (custom)	Up to 2 months
MOQ	1 sheet · no minimum order value
Packaging	Multiple sheets packed together
Storage	Cool, dry indoor storage · no direct sunlight
HS code	8545.90.9000

Notes

- Loading is the combined Pt and Ru value and is verified by XRF.
- Catalyst performance and durability comparisons are based on in-house tests; actual results vary with operating conditions.

Design review checklist

01	02	03
Catalyst type and required quantity	Size, thickness and cell active area	Test electrolyte, temperature, current

Product boundary Low-loading hydrogen-evolution electrode with a Pt/C or PtRu/C catalyst layer on carbon paper

Final contract specifications are defined in the quotation, approved drawings and order configuration.