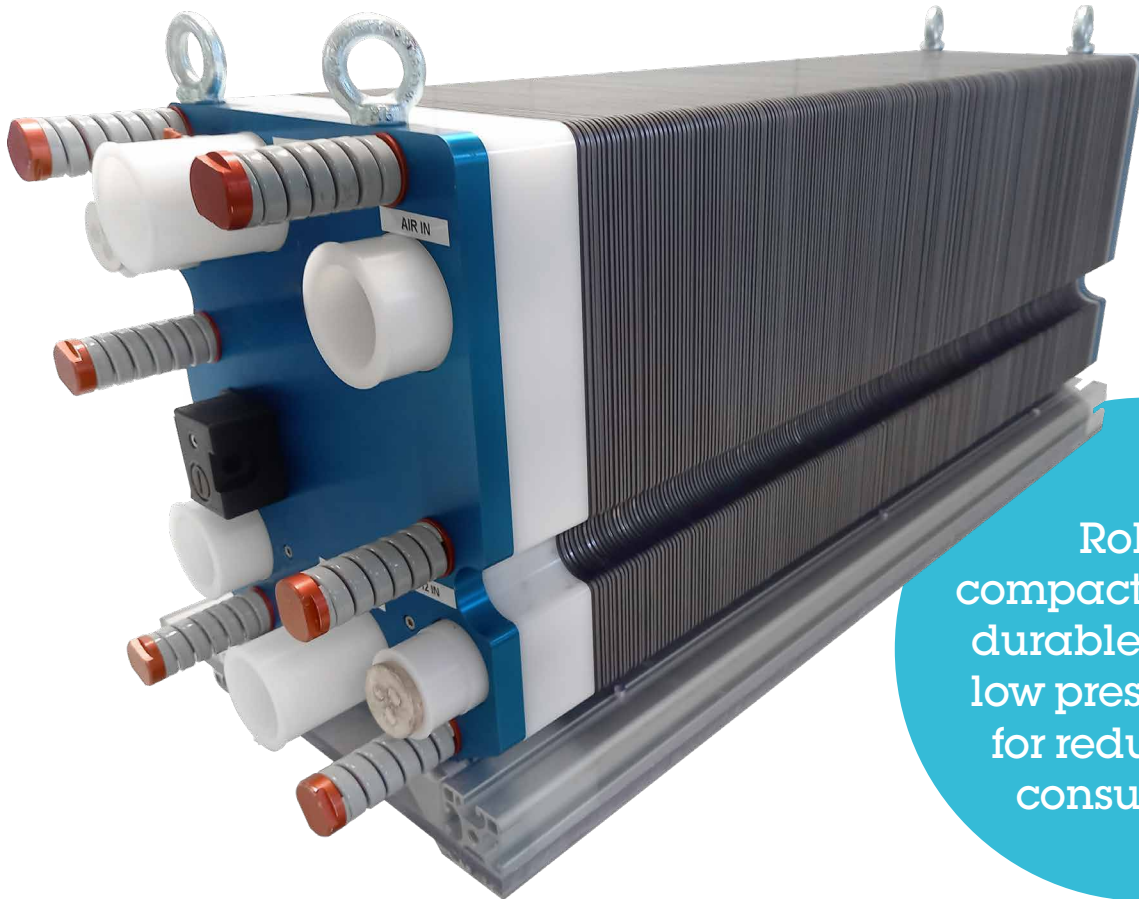


PEM* fuel cell stack

Heavy duty / stationary carbon stack, 260 cm², 10–100 kW



Robust, compact, scalable, durable and very low pressure drop for reduced BoP consumption



Powerfull
> 2 kW/L & > 1.4 kW/kg



Long lifetime
> 20,000 h



Robust: freeze-start & unlimited start-stops



Cost killing < 250 €/kW for 1,000 stacks



Manufacturing under license



Technology transfer



Sharing of intellectual property



Easy assembly with reduced parts count

Technical characteristics

Configuration

# of cells	100	200	300
Power (kW)	36	72	108
Voltage (V)	60	120	180
Power density (kW/L)*	1.83	1.83	1.83
Volume (L)	22	42	61
Weight (kg)	26.9	42.9	58.8
Width x height (mm)	275 x 235		
Length (mm)	350	650	950

* Calculated with cell volume only

Flexible integration

- Horizontal or vertical
- Fluid ports located on 1 or 2 sides
- Ready for CVM (Cell Voltage Measurement)

Compliant with:

- Air or oxygen cathodic feed
- Multiple stacks within one system

Strength of a Group

- Axane is a 100% Air Liquide subsidiary
- Air Liquide hydrogen solutions can be handled globally and worldwide
- Patented technologies



Contacts

Axane

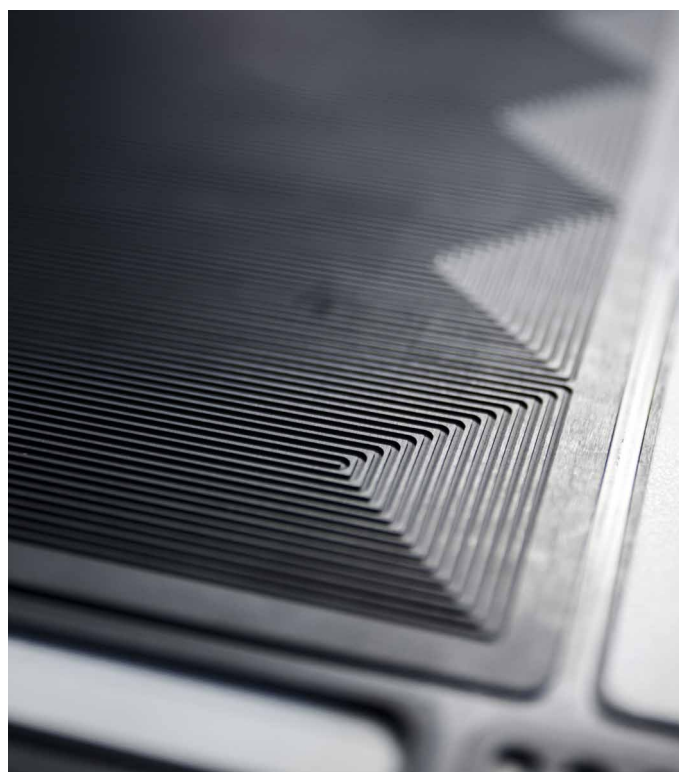
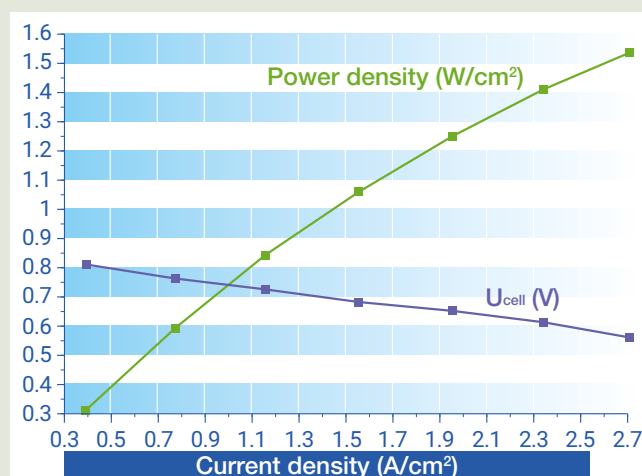
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Operational range

Air (or pure O ₂)	Pressure: between atmospheric and 1.5 barg
H ₂	P _{H₂} = P _{air} ± 1,000 mbar & P _{H₂} < 1.5 barg, dead-end or recirculation
Coolant	ΔT < 10°, DI water or anti frost: typically BASF Glycantin®

C-260 polarization curve

ST_{air} 2.5, HR_{air} = 60%, T° = 65°C, P = 1 barg



www.airliquide.com



The world leader in gases, technologies and services for Industry and Health, Air Liquide is present in 75 countries with approximately 66,400 employees and serves more than 3.8 million customers and patients.