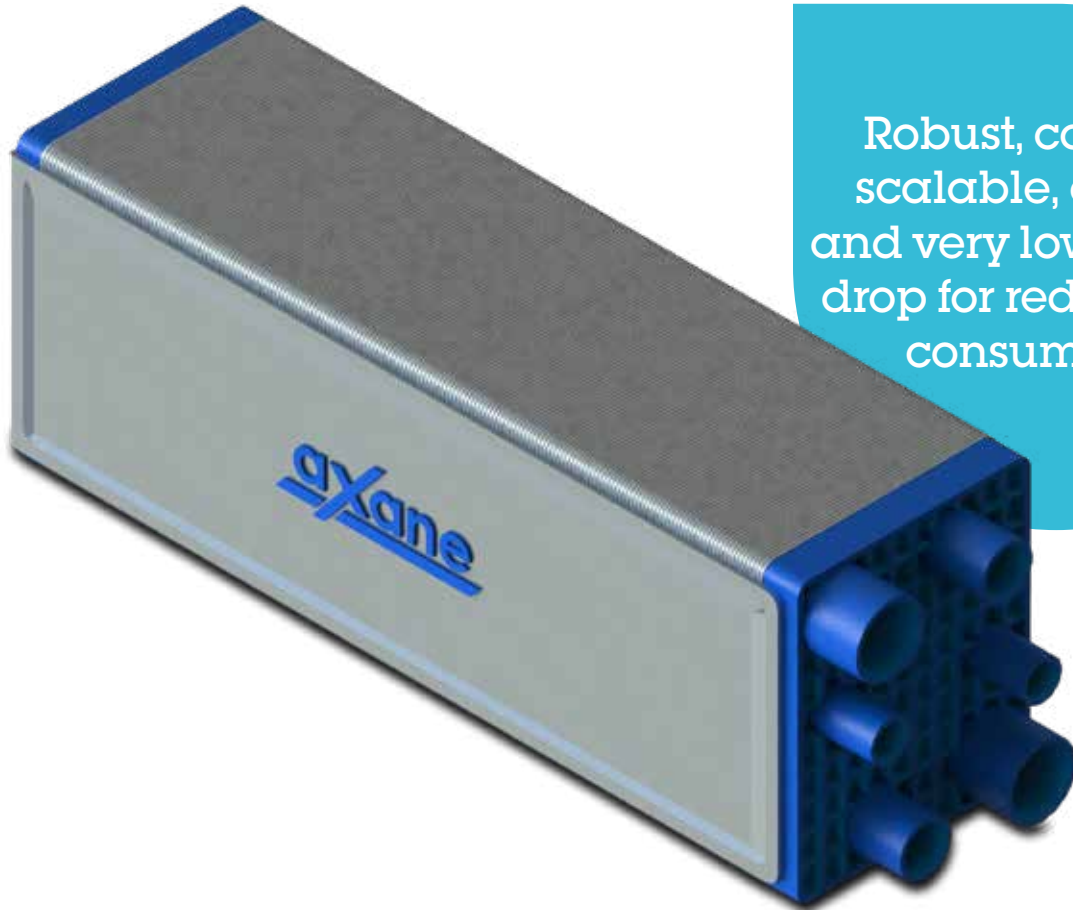


PEM* fuel cell stack

Heavy duty carbon C-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)	32	64	97
Voltage (V)	65	130	195
Power density (kW/L)	1.97	2.12	2.18
Volume (L)	16.3	30.4	44.4
Weight (kg)	26.9	42.9	58.8
Width x height (mm)	230 x 200		
Length (mm)	355	660	965

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



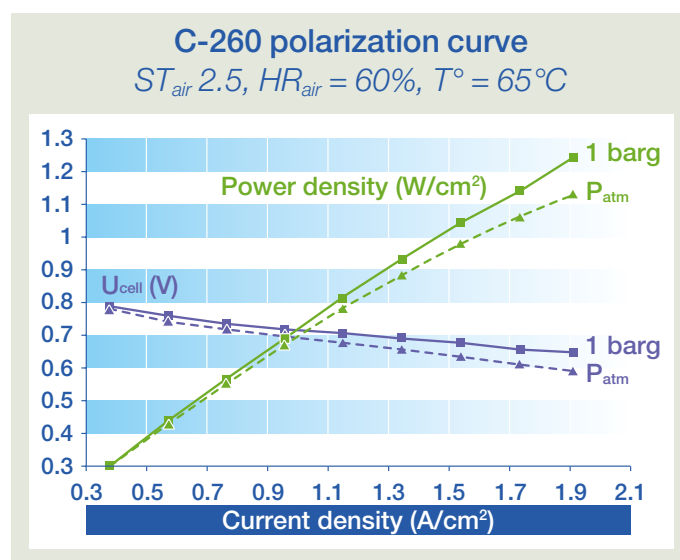
Contacts

Axane

2, rue de Clémencière
 BP 15 – 38360 Sassenage, France
 Phone: +33 4 76 43 60 47
 E-mail: fralat-contact-axane@airliquide.com
www.axane.com

Operational range

Air (or pure O ₂)	Pressure: between atmospheric and 1.5 barg
H ₂	$P_{H_2} = P_{air} \pm 500 \text{ mbar}$ & $P_{H_2} < 1.5 \text{ barg}$, dead-end or recirculation
Coolant	$\Delta T < 10^\circ$, DI water or anti frost: typically BASF Glysantin®



www.airliquide.com



The world leader in gases, technologies and services for Industry and Health, Air Liquide is present in 80 countries with approximately 67,000 employees and serves more than 3.7 million customers and patients.