DQ1000
Alkaline Electrolyser

1000 Nm^3/h

H2
Green Hydrogen



h2.johncockerill.com

John Cockerill

DQ1000, Alkaline Electrolyser | 1000 Nm^3/h

Large Scale Applications

Leader in the energy transition

John Cockerill Hydrogen offers efficient and reliable solutions for the production of green hydrogen. We meet the needs of major players in the industry, mobility, and energy sectors.

Driven by its pioneering spirit, John Cockerill Hydrogen has already delivered electrolysers to nearly 1,000 satisfied customers in a wide range of industries. Today, we offer some of the most powerful electrolysers on the market, capable of producing up to 1,000 Nm^3 per hour (5 MW of power consumption).

Pressure

Green hydrogen is delivered at 30 bar (g).

Scalability

The DQ1000 is a 5MW stack easily duplicable to reach large scale plants.

High H_2 purity

Our purification system enables 99.999% of H2 purity and the using in fuel cell vehicles.

The purification system is autonomous and does not consume any gases.

	DQ1000 ELECTROLYSER
H_2 gas production	
Nominal H2 flow	1000 Nm^3/h (2136 kg/day)
Flow range	40% - 100%
Delivery pressure	30 bar (g) without compression
H^2 purity before purification system	99.8%
H^2 purity after purification system	99.999% suitable for fuel cell application
Electrical requirements	
Plant power consumption (AC)	5000 kW
Stack consumption (DC)	4.16 – 4.66 kWh/Nm^3 H2
Electrical converter power factor	≥ 95%
Primary voltage	3.3 – 20 kV (typical 10 kV) (optional up to 34 kV)
Feed water and electrolyte	
Water conductivity required	< 1 µS/cm (demineralization process available in option)
Demineralized water consumption	0.92 l/Nm^3 H2
Electrolyte	30% KOH aqueous solution
Stack lifetime	
Expected lifetime	≥ 20 years
Optimal runtime	Approx. 12 years
Degradation rate	Approx. ≤ 1% /year
Dimensions & weight	
Plant footprint	Approx. 400 m^2
Stack dimensions (LxWxH)	6.9 m x 2.2 m x 2.2 m
Stack weight	58 000 kg
Norms & standards	
Marking	CE
Norms compliancy	ISO 22734-1

DQ1000 ®John Cockerill Energy – Design : NNstudio.be

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