

DQ500 Alkaline Electrolyser

500 Nm³/h

H₂

Green Hydrogen



h2.johncockerill.com

 **John
Cockerill**

DQ500, Alkaline Electrolyser | 500 Nm³/h

Medium Scale Applications

John Cockerill's technology

More than 200 years of history.

Active in the hydrogen sector for more than 25 years of R&D and production of electrolysis systems.

Pressure

Green hydrogen is delivered at 30 bar (g)

Scalability

The DQ500 is a 2,5MW stack easily duplicable to reach large scale plants.

High H₂ purity

Our purification system can deliver 99.999% purity H₂ purity. This H₂ is suitable for the use in fuel cell vehicles.

The purification system is autonomous and does not consume any gases

DQ500 ELECTROLYSER

H ₂ gas production	
Nominal H ₂ flow	500 Nm ³ /h (1068 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)	2500 KW
Stack consumption (DC)	4.0 – 4.3 kWh/Nm ³ H ₂
Electrical converter power factor	≥ 95%
Total Harmonic Distortion (THD)	≤ 5%
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 H ₂
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. 300 m ²
Stack dimensions (LxWxH)	3.5 m x 2.2 m x 2.2 m
Stack weight	26 000 kg
Norms & standards	
Marking	CE
Norms compliancy	European PED, ATEX, EMC