

AEM NEXUS 2500



Key features

- Unmatched system efficiency: **51.3 kWh/kg**
- Fully automatic operation, AI optimized
- **Modular** architecture for max. redundancy
- Rapid reaction times to variable renewables
- Low maintenance requirements

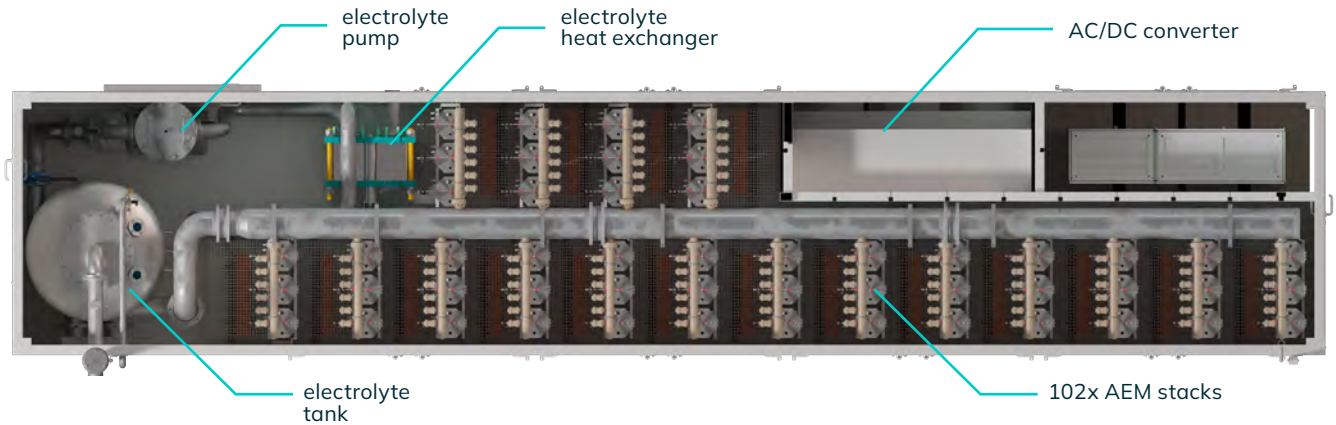
The AEM Nexus 2500 is a megawatt class containerized AEM Electrolyser featuring many AEM stacks around a common balance of plant (BoP) that includes rectifiers, safety system, cooling/heating and electrolyte loop.



AEM Nexus 2500
www.enapter.com/aem-nexus

Specifications

Enapter
AEM Nexus 2500



Nominal H ₂ production	500 Nm ³ /h 44.9 kg/h	
H ₂ purity	99.95 % in molar fraction	Impurities: H ₂ O < 500 ppm, O ₂ < 5 ppm
H ₂ purity with optional dryer	99.999 % in molar fraction	Impurities: H ₂ O < 5 ppm, O ₂ < 5 ppm (additional power consumption during Dryer regeneration phase)
H ₂ outlet pressure	Up to 35 barg	
H ₂ outlet temperature	5 – 55 °C	
O ₂ nominal flow	250 Nm ³ /h	Vented at atmospheric pressure
Specific power consumption (Efficiency)	4.61 kWh/Nm ³ H ₂ 51.3 kWh/kgH ₂	Including all utilities inside the battery limits of the AEM Nexus 2500 (excluding optional H ₂ dryer). Beginning of life (BOL)@15 °C ambient temperature, nominal conditions, full load
Nominal power consumption	2.305 kW	Including all utilities inside the battery limits of the AEM Nexus 2500 (excluding optional H ₂ dryer). Beginning of life (BOL)@15 °C ambient temperature, nominal conditions, full load.
Voltage	400Vac 3ph+N+PE 230Vac 1ph+N+PE	± 10 %
Frequency	50 Hz	± 10 %
Power factor	cos φ > 0.99	At full capacity
Harmonic distortion	THD < 5 %	
H ₂ O nominal consumption	410 L/h	Purified water.
H ₂ O inlet purity (recommended)	Type II water Acidity < 0.1 meq/l	According to ASTM D1193-06 According to ASTM D1067
H ₂ O inlet temperature	5 – 40 °C	1 – 4 barg
Operational flexibility	<1% – 100%	Of nominal H ₂ flow rate (with optional dryer: 3% - 100% for a continuous time of max 24h. Then 10% - 100%)
Hot startup time	0 – 100% in 135 seconds	Electrolyte is at min. 35° C
Cold startup time	0 – 100% in 25 minutes	Assuming 15° C ambient T.
Container coating	C3 High as per ISO 12944-2 C5-M as per ISO 12944-2	Standard version Marine version (optional)
Ambient operating temperature	-15 – 40 °C	Up to 45°C with hot-ambient version
Dimensions (preliminary)	12x2.4x2.9 m	(L x W x H) excluding power electronics and H ₂ dryer

Note: The product is under continuous improvement and the technical specifications and layouts might be subject to change.