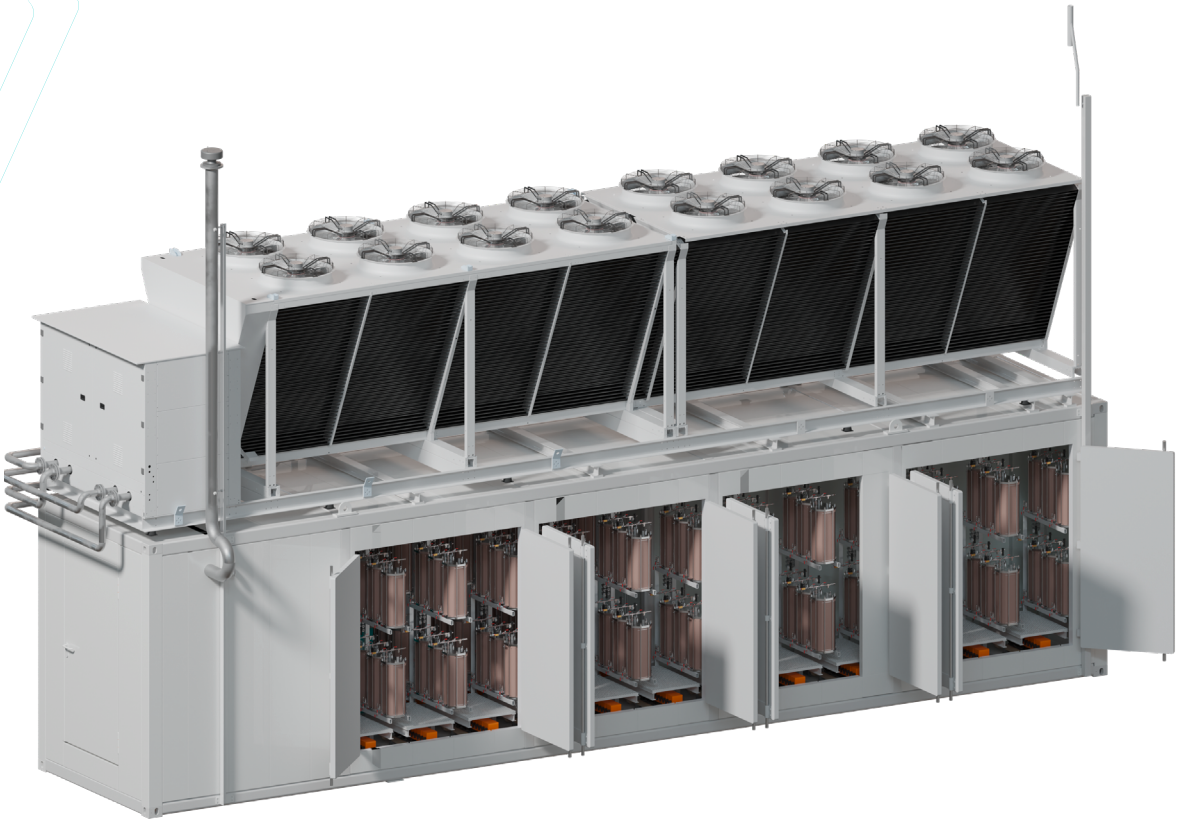
Enapter

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

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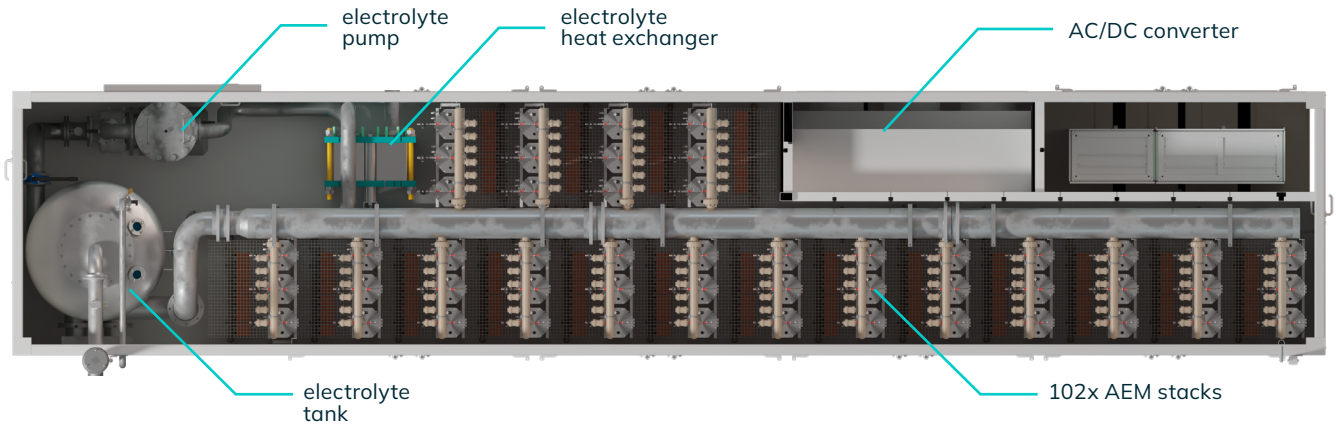

Nominal H_2 production	500 Nm^3/h 44.9 kg/h	
H_2 purity	99.95 % in molar fraction	Impurities: H_2O < 500 ppm, O_2 < 5 ppm
H_2 purity with optional dryer	99.999 % in molar fraction	Impurities: H_2O < 5 ppm, O_2 < 5 ppm (additional power consumption during Dryer regeneration phase)
H_2 outlet pressure	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^3H_2 51.3 kWh/kgH_2	Including all utilities inside the battery limits of the AEM Nexus 2500 (excluding optional H2 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 H2 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_2O nominal consumption	410 L/h	Purified water.
H_2O inlet purity (recommended)	Type II water Acidity < 0.1 meq/l	According to ASTM D1193-06 According to ASTM D1067
H_2O inlet temperature	5 – 40 °C	1 – 4 barg
Operational flexibility	<1% – 100%	Of nominal H2 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 H2 dryer

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

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