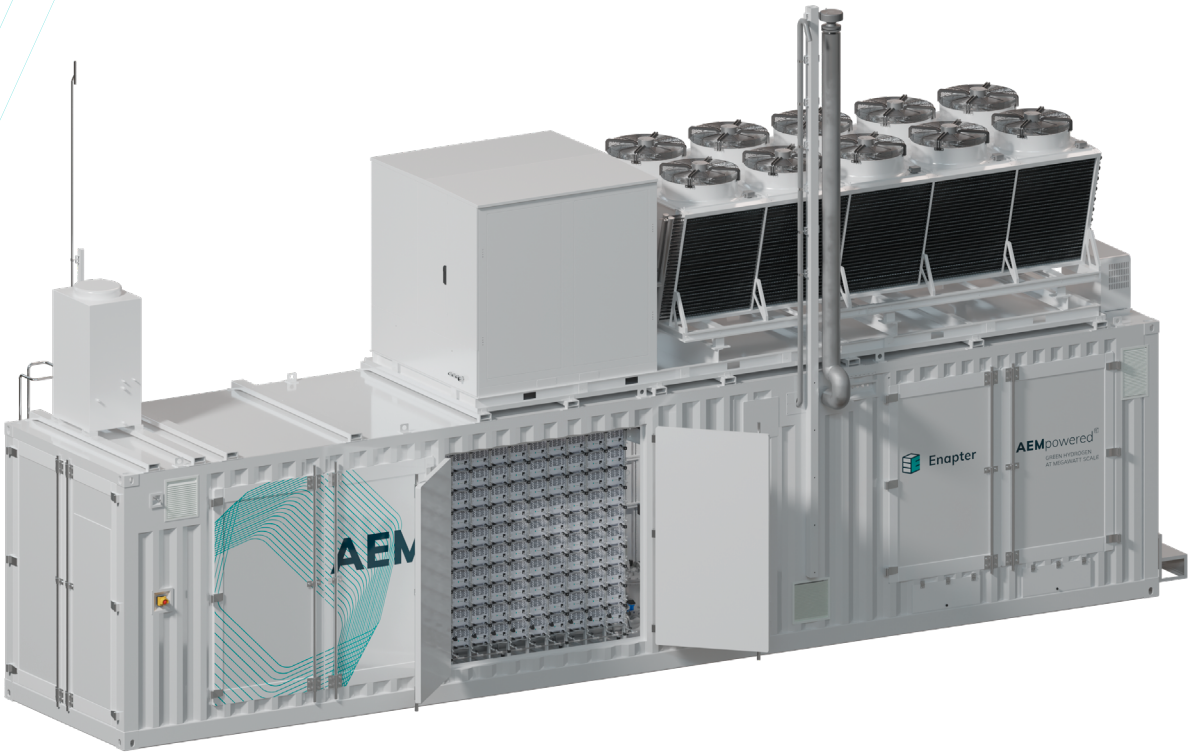
Enapter

AEM NEXUS 1000



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 1000 is a megawatt class containerized AEM Electrolyser featuring many AEM stacks around a common balance of plant (BoP) that includes rectifiers, control/safety system, cooling/heating and electrolyte loop.

AEM Nexus 1000
www.enapter.com/aem-nexus

Specifications

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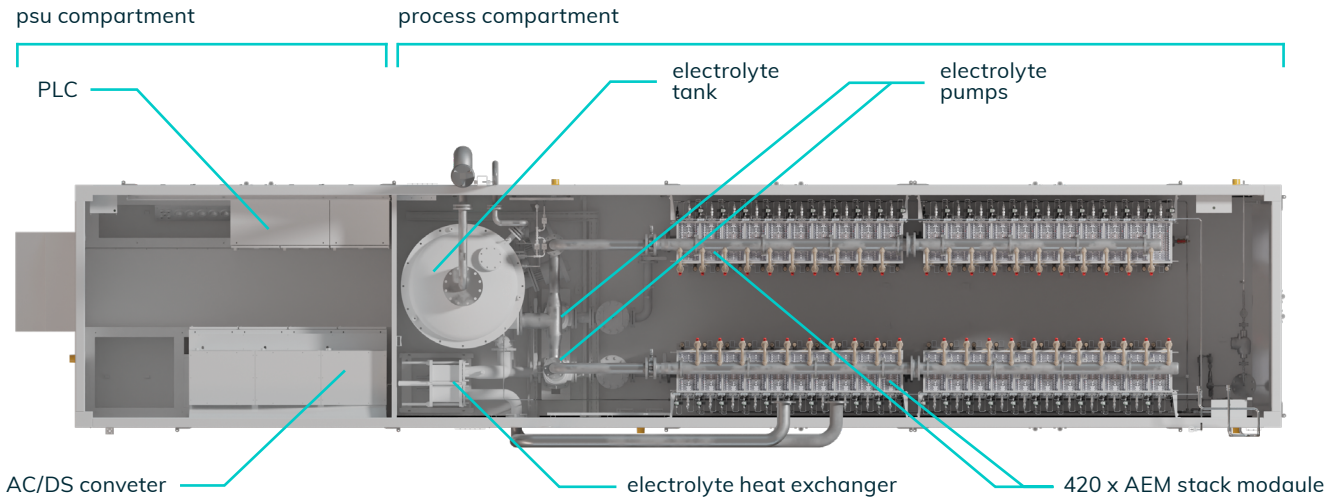

H_2 nominal flow	210 Nm^3/h 453 kg/24h	Net volume flow rate
H_2 outlet pressure	Up to 35 barg	(507.63 psig)
H_2 purity	99.95% in molar fraction	Impurities: H_2O < 500 ppm, O_2 < 5 ppm
H_2 purity with optional dryer	99.999% in molar fraction	Impurities: H_2O < 5 ppm, O_2 < 5 ppm Max ≈ 8 kW consumption during regeneration
H_2 outlet temperature	5 – 55 °C (41 – 131 °F)	
O_2 nominal flow	105 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 1000 (excluding optional H2 dryer). Beginning of life (BOL) at 15 °C ambient temperature, nominal conditions and full load.
Nominal power consumption	968 kW	Including all utilities inside the battery limits of the AEM Nexus 1000 (excluding optional H2 dryer). Beginning of life (BOL) at 15 °C ambient temperature, nominal conditions and full load.
Voltage	3 × 400 VAC	± 10 %
Frequency	50	± 10 %; THD < 5 %(60 Hz available)
H_2O nominal consumption	190 L/h	(50.19 gal/h) purified water
H_2O inlet purity (recommended)	Type II Water Acidity < 0.1 meq/l	According to ASTM D193-06 According to ASTM D1067
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. 38 °C (95 °F)
Cold startup time	0 – 100% in ≈ 25 minutes	Assuming 15 °C (59 °F) ambient temperature
Ambient operating temperature	-15 – 40 °C	(5 – 104 °F) Up to 45 °C (113 °F) with optional hot-ambient version
Sound Pressure Level	85 db(A) Max.	At 1 m (Including all utilities)
Container coating	C3 High as per ISO 12944-2 C5-M as per ISO 12944-2	Standard version Marine version (optional)
Dimensions (L × W × H)	12.19 × 2.44 × 5.13 m 40 × 8 × 17.3 ft	L x W x H (H= 8.98 mor 29 ft including standard vent lines)

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

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