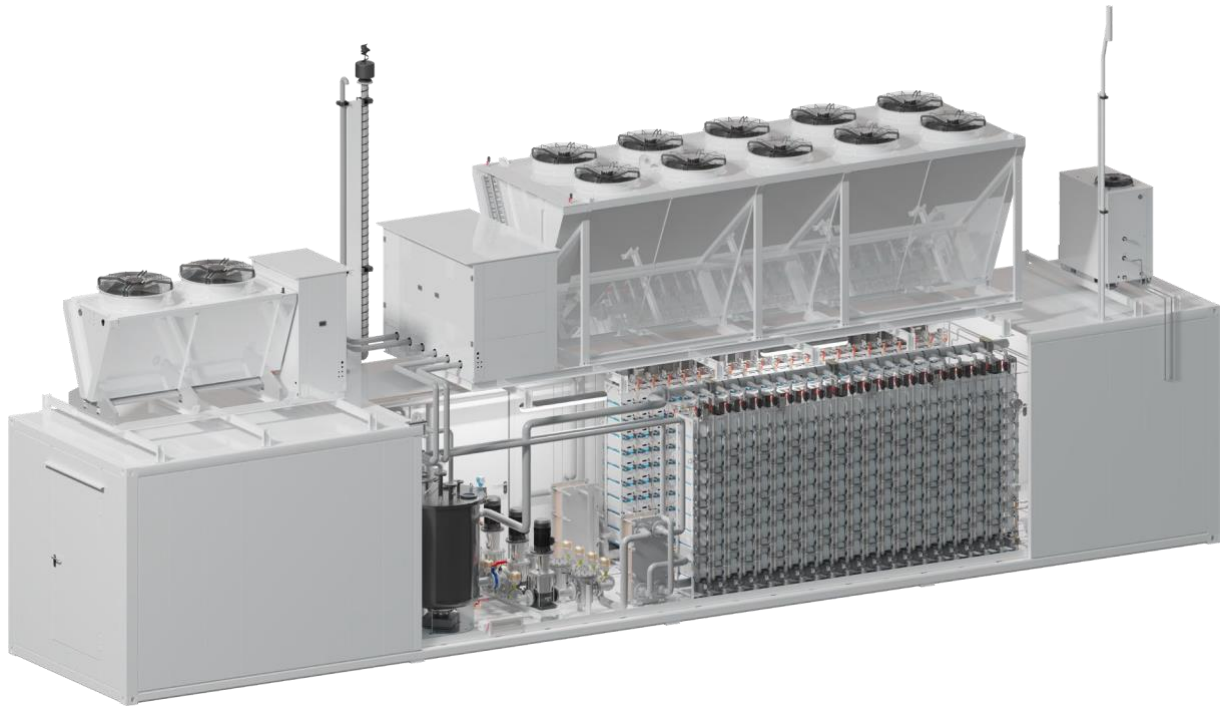


AEM Nexus 1000



Key features

- ≡ H₂ Output: 210 Nm³/h, up to 35 barg, (453kg/day at continuous operation) 99.95% purity (99.999% with optional dryer)
- ≡ Cost-efficiency
- ≡ High degree of redundancy
- ≡ Rapid reaction times to variable renewables

The AEM Nexus 1000 is the first AEM Electrolyzer of the megawatt class. A ≈ 1 MW containerized electrolyzer largely pre-assembled for fast commissioning featuring 420 AEM stack modules around a common balance of plant (BoP).

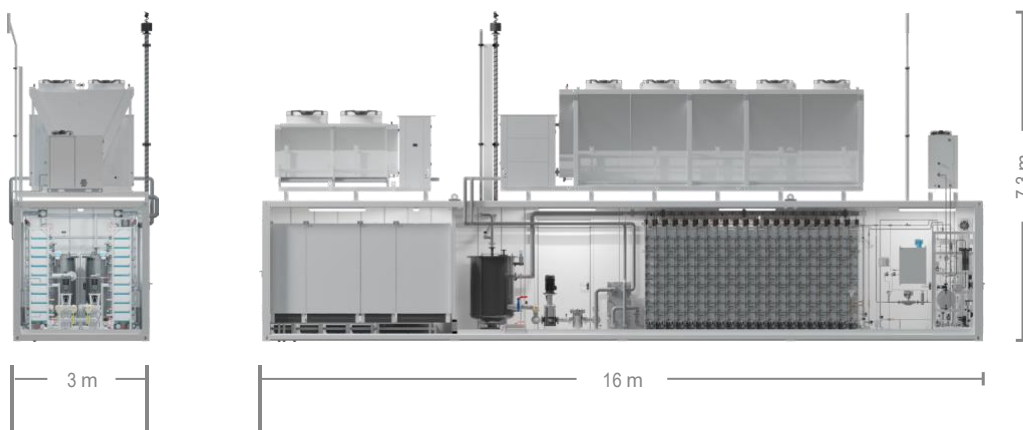


AEM Nexus 1000

www.enapter.com/aem-nexus

Specifications

Enapter
AEM Nexus 1000



H₂ nominal flow	210 Nm ³ /h 453 kg/24h	Net volume flow rate
H₂ outlet pressure	Up to 35 barg (508 PSI)	
H₂ purity	99.95% in molar fraction, equals dew point of -22 °F (-30 °C)	Impurities: H ₂ O < 500 ppm, O ₂ < 5 ppm
H₂ purity with optional dryer	99.999% in molar fraction, equals dew point of -85 °F (-65 °C)	Impurities: H ₂ O < 5 ppm, O ₂ < 5 ppm ≈ 5 kW consumption during regeneration
H₂ outlet temperature	40 – 130 °F (5 – 55 °C)	
O₂ nominal flow	105 Nm ³ /h	Vented at atmospheric pressure
Nominal power consumption	1,008 kW 1,200 kW	Beginning of life (BOL) Near end of life (EOL)
Voltage	3 × 480 VAC	±10 %
Frequency	50/60 Hz	± 10 %; THD < 5 %
H₂O nominal consumption	50.2 Gal/h (190 L/h)	Purified water
H₂O inlet quality	Minimum ASTM D1193-06 Type IV	or recommended Type II or Type III ¹
H₂O inlet temperature	40 – 130 °F (5 – 55 °C)	1 – 4 barg (14.5 – 58 PSI)
Operational flexibility	3% – 100%	Of nominal H ₂ flow rate
Turndown ratio	33:1	Maximum flow/Minimum flow
Specific power consumption (Efficiency)	4.8 kWh/Nm ³ H ₂ 53.3 kWh/kgH ₂ 62.5% (LHV)	Including all utilities inside the battery limits of the AEM Nexus 1000 (at BOL)
Hot startup time	0 – 100% in 100 seconds	Electrolyte is at min. 95°F (35 °C)
Cold startup time	0 – 100% in 30 minutes	Assuming 40 °F (5 °C) ambient temperature
Shut down time	100 – 0 % in 3 minutes	Normal, gradual shut down
Hot standby power consumption	160 kW Max.	Stacks are hydrated and electrolyte circulates at min. temperature (95°F (35 °C))
Cold standby power consumption	20 kW Max.	All components in standby; container heating is on (only with < 5 °C ambient)
Ambient operating temperature	5°F to 95°F (-15 to 35 °C)	Up to 113°F (45 °C) with hot-ambient version
Sound Pressure Level	62 db(A) Max.	At 30ft (10 m) (Including all utilities)
Process heat output	300 kW	BOL; ≈ 122°F (50 °C)
Dimensions	52.5 ft (16 m) × 10 ft (3 m) × 24 ft (7.3 m)	(L × W × H)
Weight	≈ 88,180 Lbs. (40 tons)	

¹ Please, check the Battery limits and the Owner's Manual for the complete requirements list.

Note: The product is under continuous improvement and the technical specifications might be subject to change. Please make sure to refer to our website for the most recent specifications.