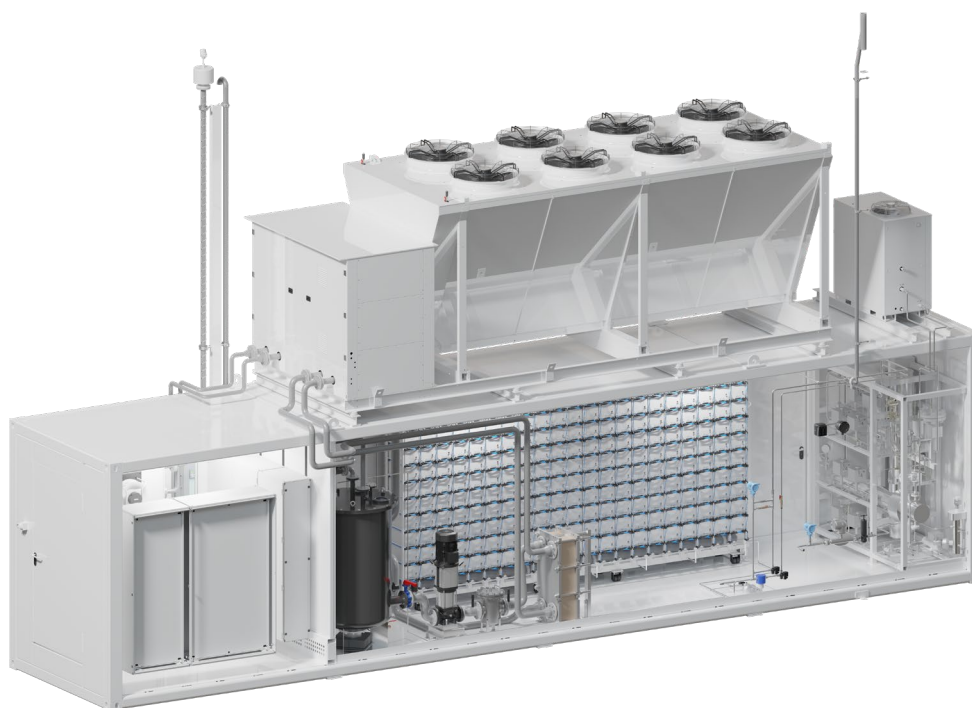


# AEM Nexus 500



## Key features

- ≡ H<sub>2</sub> Output: 105 Nm<sup>3</sup>/h, up to 35 barg, 99.95% purity (99.999% with optional dryer)
- ≡ Cost-efficiency
- ≡ High degree of redundancy
- ≡ Rapid reaction times to variable renewables
- ≡ Containerised in 40 ft container

This AEM Nexus 500 is a 500 kW containerised electrolyser largely pre-assembled for fast commissioning featuring 210 AEM stack modules around a common balance of plant (BoP).



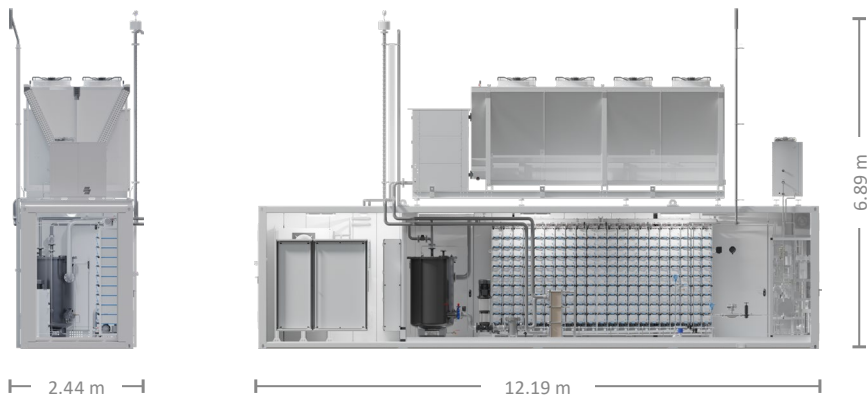
AEM Nexus 500

[www.enapter.com/aem-nexus](http://www.enapter.com/aem-nexus)

# Specifications

Enapter

**AEM Nexus 500**



<b>H<sub>2</sub> nominal flow</b>	105 Nm <sup>3</sup> /h 226.5 kg/24h	Net volume flow rate
<b>H<sub>2</sub> outlet pressure</b>	Up to 35 barg	
<b>H<sub>2</sub> purity</b>	99.95% in molar fraction, equals dew point of -30 °C	Impurities: H <sub>2</sub> O < 500 ppm, O <sub>2</sub> < 5 ppm
<b>H<sub>2</sub> purity with optional dryer</b>	99.999% in molar fraction, equals dew point of -65 °C	Impurities: H <sub>2</sub> O < 5 ppm, O <sub>2</sub> < 5 ppm ≈ 5 kW consumption during regeneration
<b>H<sub>2</sub> outlet temperature</b>	5 – 55 °C	
<b>O<sub>2</sub> nominal flow</b>	52,5 Nm <sup>3</sup> /h	Vented at atmospheric pressure
<b>Nominal power consumption</b>	504 kW 600 kW	Beginning of life (BOL) Near end of life (EOL)
<b>Voltage</b>	3 × 400 VAC	±10 %
<b>Frequency</b>	50/60 Hz	± 10 %; THD < 5 %
<b>H<sub>2</sub>O nominal consumption</b>	95 L/h	Purified water
<b>H<sub>2</sub>O inlet quality</b>	Minimum ASTM D1193-06 Type IV or recommended Type II or Type III <sup>1</sup>	
<b>H<sub>2</sub>O inlet temperature</b>	5 – 55 °C	1 – 4 barg
<b>Operational flexibility</b>	3% – 100%	Of nominal H <sub>2</sub> flow rate
<b>Turndown ratio</b>	33:1	Maximum flow/Minimum flow
<b>Specific power consumption (Efficiency)</b>	4.8 kWh/Nm <sup>3</sup> H <sub>2</sub> 53.3 kWh/kgH <sub>2</sub> 62.5% (LHV)	Including all utilities inside the battery limits of the AEM Nexus 500 (at BOL)
<b>Hot startup time</b>	0 – 100% in 100 seconds	Electrolyte is at min. 35 °C
<b>Cold startup time</b>	0 – 100% in 30 minutes	Assuming 5 °C ambient temperature
<b>Shut down time</b>	100 – 0 % in 3 minutes	Normal, gradual shut down
<b>Hot standby power consumption</b>	80 kW Max.	Stacks are hydrated and electrolyte circulates at min. temperature (35 °C)
<b>Cold standby power consumption</b>	10 kW Max.	All components in standby; container heating is on (only with < 5 °C ambient)
<b>Ambient operating temperature</b>	-15 – 35 °C	Up to 45 °C with hot-ambient version
<b>Sound Pressure Level</b>	62 db(A) Max.	At 10 m (Including all utilities)
<b>Process heat output</b>	150 kW	BOL; ≈ 50 °C
<b>Dimensions</b>	12.19 × 2.44 × 6.89 m	(L × W × H)
<b>Weight</b>	≈ 31 tons	

<sup>1</sup> 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.