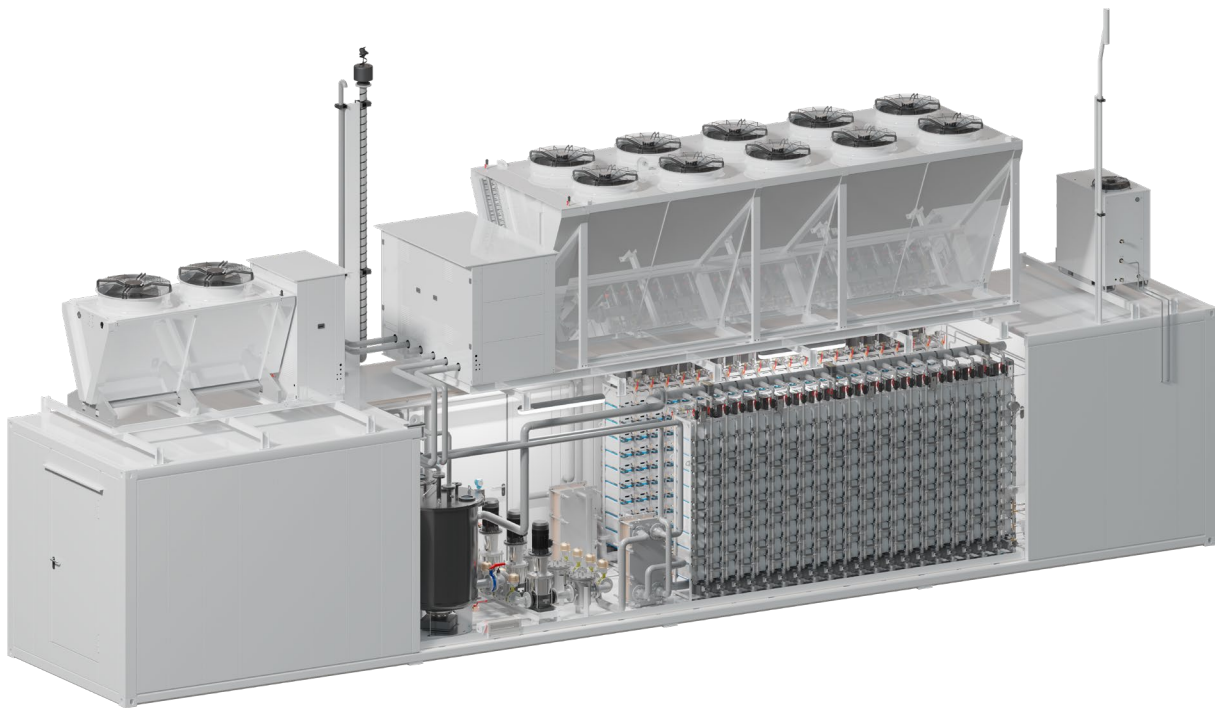


AEM Multicore™

~ 450 kg/24 h



Key features

- ≡ H₂ Output: 210 Nm³/h, up to 35 barg, 99.9% purity (99.999% with optional dryer)
- ≡ Cost-efficiency
- ≡ High degree of redundancy
- ≡ Rapid reaction times to variable renewables
- ≡ Compressed air not needed for operation
- ≡ N₂ or other gasses not needed for operation

The AEM Multicore™ is the first AEM Electrolyser of the megawatt class. A ~ 1 MW containerised electrolyser largely pre-assembled for fast commissioning featuring 420 AEM stack modules around a common balance of plant (BoP).



AEM Multicore™

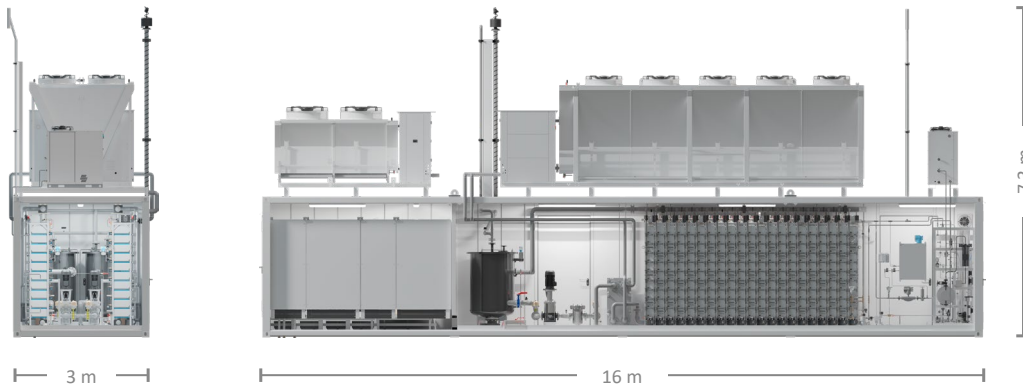
www.enapter.com/multicore

Specifications

Enapter

AEM Multicore™

~ 450 kg/24 h



H₂ nominal flow	210 Nm ³ /h 450 kg/24h	Net volume flow rate
H₂ outlet pressure	Up to 35 barg	
H₂ purity	99.9% in molar fraction, equals dew point of -30 °C	Impurities: H ₂ O < 1,500 ppm, O ₂ < 5 ppm
H₂ purity with optional dryer	99.999% in molar fraction, equals dew point of -65 °C	Impurities: H ₂ O < 5 ppm, O ₂ < 5 ppm ~ 5 kW consumption during regeneration
H₂ outlet temperature	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 × 400 VAC	-20 % / +10 %
Frequency	50/60 Hz	± 10 %; THD < 5 %
H₂O nominal consumption	190 L/h	Purified water
H₂O inlet conductivity	< 5 μS/cm	
H₂O inlet temperature	5 – 55 °C	1 – 4 barg
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 Multicore (at BOL)
System efficiency over different loads	60 – 100%: 4.8 kWh/Nm ³ 30 – 60%: 5.0 kWh/Nm ³ 3 – 30%: 5.2 kWh/Nm ³	
Hot startup time	0 – 100% in 100 seconds	Electrolyte is at min. 35 °C
Cold startup time	0 – 100% in 30 minutes	Assuming 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 (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	-15 – 35 °C	Up to 45 °C with hot-ambient version
Sound Pressure Level	62 db(A) Max.	At 10 m (Including all utilities)
Process heat output	300 kW	BOL; ~ 50 °C
Dimensions	16 × 3 × 7.3 m	(L × W × H)
Weight	~ 40 tons	