Be1 | REMA

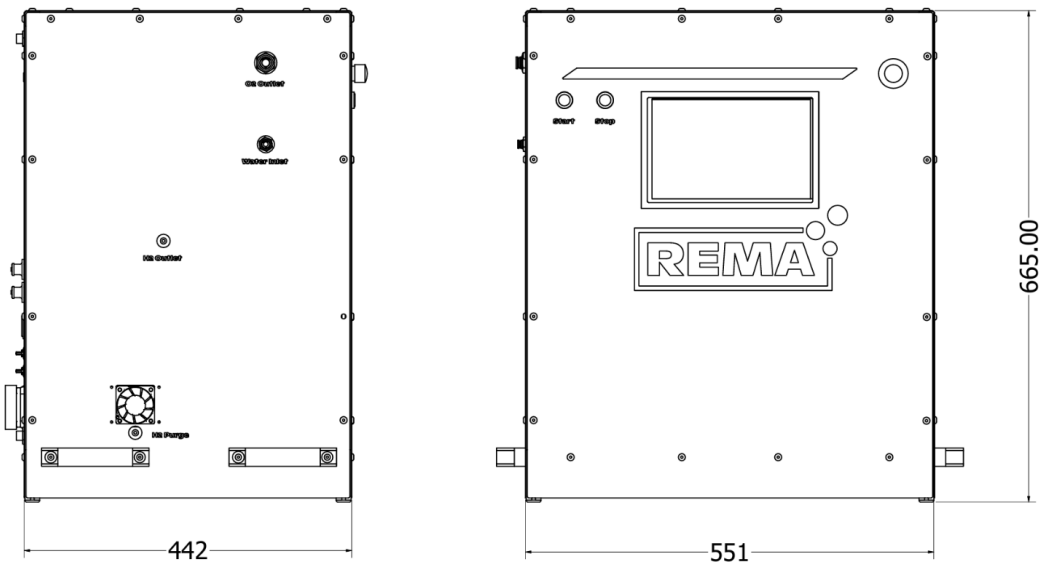
AEM Electrolyzer

Description

Be1 is a compact, standalone electrolyzer built on REMA's anion exchange membrane (AEM) technology. It produces up to 1 kg of dry, high-purity hydrogen per day at 30 bar(g), using only tap water and electricity. Water treatment, process instrumentation, control software, and safety systems are fully integrated into a single unit. Through the REMA app, monitoring and controlling Be1 remotely is possible from anywhere.

A turnkey unit that ends the dependence on cylinder deliveries providing a reliable, on-demand hydrogen supply for small-scale applications





Application

- Laboratories and R&D
- Fuel-cell testing
- Heat treatment, brazing & glass processing
- Energy pilot projects

Contact details

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Specifications

Hydrogen production	500 NL/h | 1 kg/day
Hydrogen outlet pressure *(fixed)*	30 bar(g)
Hydrogen purity *(30 bar, incl. REMA's dryer)*	99.999 % | < 5 ppm H_2O
Hydrogen production range	65 - 100 %
Power supply	• 3.1 kW (230 VAC) • 210 - 240 VAC | 50/60 Hz | single phase
System energy consumption	59.7 kWh per 1kg of hydrogen
Water supply	**Input pressure range:** 1 - 4 bar **Water type:** Tap water **Water consumption:** 9.3 liters per 1kg of hydrogen **Water refill mechanism:** Automatic
Human machine interface	10" touchscreen | REMA's developed interface for operation, live process monitoring, alarm management and data logging
Ambient operating temperature	5 - 40 °C
Ambient operating humidity	≤ 90 % RH, non-condensing
Electrolyte solution	1 M KOH
Cooling system	• Forced-air cooling |adjusted automatically to the production rate • ≥ 200 mm installation clearance required at the rear
Process interfaces	**H_2O inlet:** 6 mm push-in fitting **O_2 outlet:** 10 mm push-in fitting **H_2/H2O purge:** G1/8 female thread **H_2 outlet:** G1/8 female thread **Drain/ Refill electrolyte:** Male NW 3.2 - 1/8" barb connection **Electrical:** Panel mounted screw terminal - 2.5 mm^2
Safety & protection	• Real-time monitoring of critical process values *(incl. hydrogen & electrolyte leakage detection, hydrogen-in-oxygen concentration)* • Automatic fault detection with safe shutdown and depressurization • Hardwired emergency shutdown circuit *(E-stop & dry contact)*
Noise level	≤ 44 dB
Communication	• Ethernet (TCP/IP): remote monitoring and control via REMA's app • CAN 2.0B: a second interface for integrating Be1 into third-party systems • Hardwired start/stop input for remote operation
Enclosure protection	IP20
Storage conditions	Indoor | 5 - 45 °C | ≤ 90 % RH, non-condensing
System dimensions	665 (H) × 555 (L) × 442 (D) mm
Weight	80 kg (approx.)