

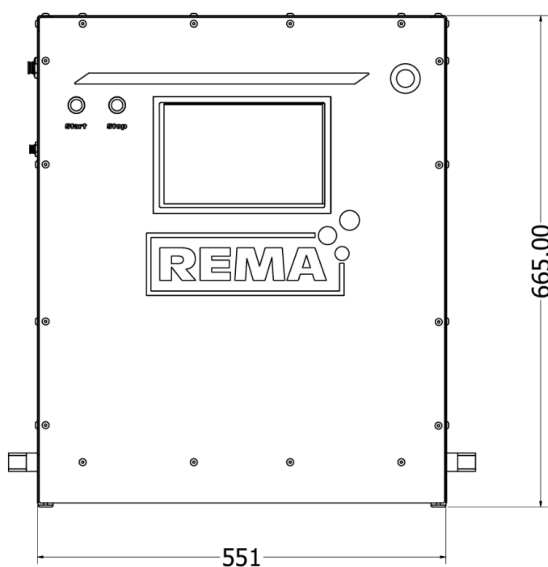
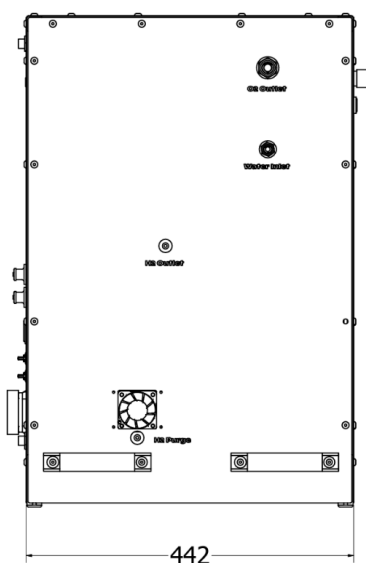
Be1 | REMA

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

e-Mail

Letstalk@h2rema.ch

Website

<https://www.h2rema.ch/>

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 ₂ O
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 lt 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	H₂O inlet: 6 mm push-in fitting O₂ outlet: 10 mm push-in fitting H₂/H₂O purge: G1/8 female thread H₂ 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 (<i>incl. hydrogen & electrolyte leakage detection, hydrogen-in-oxygen concentration</i>) - Automatic fault detection with safe shutdown and depressurization - Hardwired emergency shutdown circuit (<i>E-stop & dry contact</i>)
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.)