

HIGH-PRESSURE ELECTROLYZER



Specification

Power consumption to produce 1 m ³ hydrogen and 0.5 m ³ oxygen, kW · h	4.0–4.1
Gas pressure, MPa	15.0–20.0
Efficiency, %	75–77
Hydrogen yield, m ³	1.0–6.0
Oxygen yield, m ³	0.5–3.0
Water consumption for generation of 1 m ³ hydrogen, g	840 ± 20

Advantages

The electrolyzer generating the gases at a pressure up to 20.0 MPa, there is no need to use the compressor technique; no need to use rare-earth and platinum group metals for activation of electrodes materials; its energy transformation factor is by 12–15% higher than that of the existing analogs; operates in the automatic mode

Areas of Application

The device is designed to produce high-purity hydrogen and oxygen by the water electrolysis method. The electrolyzer can be used in power engineering, chemical, metallurgical, and food industries, etc.

IPR Protection

IPR1, IPR3

Stage of Development.

Suggestions for Commercialization

IRL7, TRL6

Customized manufacture, delivery, and designer's supervision, upon request

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