

PEM Electrolysis

MODULAR SYSTEM

HyAxiom PEM Electrolysis products provide high system efficiency and scalable technology that connect to renewable power resources to generate 100% green hydrogen.

Flexible Operations

Load following and demand following for ease of integration with renewables.

Remote Monitoring & Control

Leveraging industry-leading remote monitoring and data analytics from our fuel cell experience to maximize product efficiency and uptime.

Modular & Scalable

Hydrogen and water processing equipment and installations that scale with application needs.

SYSTEM HIGHLIGHTS (per 10MW module)

HYDROGEN PRODUCTION

H ₂ Production Rate	4,300 kg/day
System Efficiency @ BOL	51 kWh/kg H ₂
H ₂ Product Purity	99.995%+ (ISO 14687 Type I Grade C)
H ₂ Product Pressure	30 barg

OPERATING CHARACTERISTICS

Start Time from Standby.....	<60 sec
Ramp Time to Full Capacity	10 sec
Turndown Capability	≤10%

ENVIRONMENTAL CHARACTERISTICS

Ambient Operating Temp.....	-29°C to 50 °C
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WATER MANAGEMENT CHARACTERISTICS

Water Supply Quality.....	Potable Water
Water Consumption (40°C base model).....	<0.0156 m ³ /kg H ₂
Water Discharge	<0.0051 m ³ /kg H ₂

SITE ELECTRICAL INTERFACES

Supply Voltage.....	4.16-35kV (13.8kV base)
Frequency.....	50/60 Hz
Power Quality (with aux load).....	0.9 PF, <5% THD

CODES AND STANDARDS

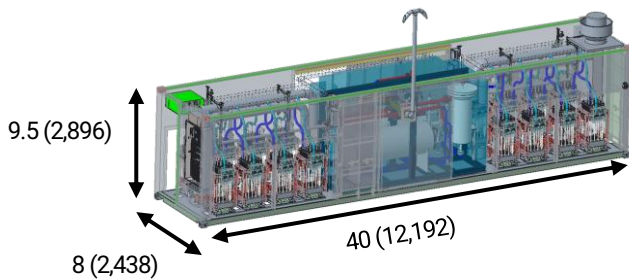
ISO 22734: Hydrogen generators using water electrolysis

Our system can adhere to region-specific certification requirements as needed, ensuring compliance wherever you operate

SYSTEM DIMENSIONS (per 10MW module)

HYDROGEN SUPPLY SYSTEM (HSS) Module (4300 kg H₂/day)

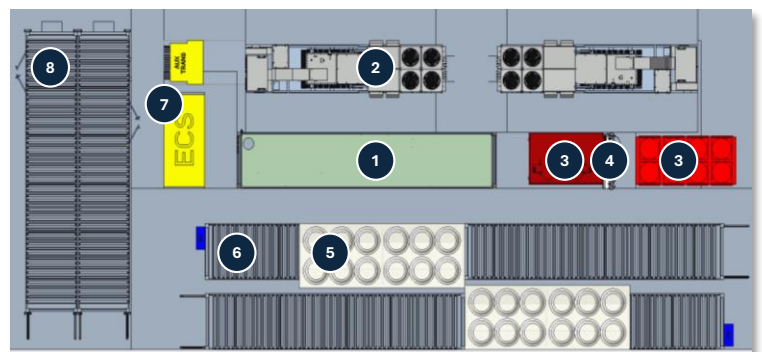
Dimensions in ft (mm):



- **Modular hydrogen generation system** allows for ease in multi-MW scale-up from 10MW to 100MW+
- Sub-assembly systems have been optimized for system efficiency and product cost, leading to **lower production costs (LCOH)**
- Flexible design allows for **HyAxiom balance of plant scope optimization with partners based on site supply requirements**

HyAxiom can supply all balance of plant items shown in illustrative layout

Example 4300 kg H₂/day site with Balance of Plant Equipment



- 1 HSS** - Hydrogen Supply System
- 2 PSCS** - Power Supply Conditioning System
- 3 HPS-DRY-CHL** - Hydrogen Purification System - Dryer Stage
- 4 NPS** - Nitrogen Processing System
- 5 TMS** - Thermal Management System Cooling Module(s)
- 6 WTS Polish** - Cell Stack Water Treatment System
- 7 ECS** - Electrolyzer Control System
- 8 Pre-WTS/CIP** - Intake Water Treatment System