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## Q1.4 - QLH2-1500 Hydrogen Liquefier



Logtile/	
Feature	

- Rapid cool down
- HMI touch screen + Ethernet connection
- Auto-control including computerized pressure control, safety protection unit
- Pressure, temperature, level PLC controls
- Electrically safe design
- **Emergency Shut Down Interlock**
- Turbine Speed Control for lower production
- Built-in analysis for purity monitoring and safety
- Can be scaled up to 15,000 kg/day

## **Options:**

- Hydrogen purification
- Helium purification
- Plant gas compression system
- Stationary storage tanks and filling stations
- Additional equipment available, including storage dewars and transfer lines
- **Iso-containers**

Specification/ Model	QLH2-1500
Liquefaction Rate	1,500 kg/day guaranteed at 20 bar feed H2
LN2 Consumption	~700 L/hr
LN2 Supply Pressure	3 bara
Hydrogen Feed Pressure	20 bara (suitable for operation at 13-25 bara)
Heat Exchanger Pressure Rating and Cooling Rate	25 bara, max 2° C/min
Liquid Hydrogen Filling Pressure	> 1.5-2.5 bara
Power Requirement	800 kW (system total)
Cooling Water Temperature	< 30° C
Cooling Water Pressure	> 3 bara
Cooling Water Flow	100 m <sup>3</sup> /hr (system total)
Required Hydrogen Purity	> 99.999%
Instrument Air	24 Nm³/hr
Vacuum Requirement	10 <sup>-3</sup> mbar abs
Dimensions	4 x 4 x 5 m high, 15,000 kg (cold box only)
Codes and Standards	ASME, PED, ATEX, NFPA, CE