FABRUM.

HYDROGEN LIQUEFIERS

HYDROGEN LIQUEFIERS

Drawing from a legacy of over a decade in providing containerised cryogenics solutions worldwide, Fabrum's HLQ Liquid Hydrogen Plants are designed for point-of-use liquid hydrogen production and boil-off-gas management (BOGM) of existing liquid hydrogen storage systems.

At the core of these innovative systems lies a pulse-tube cryocooler, powered by our patented pressure-wave-generation technology, eliminating the necessity for sacrificial liquid nitrogen and marking a significant leap in efficiency. Equipped with an advanced boil off gas management (BOGM) technology for zero-loss operation.

APPLICATIONS

Liquid hydrogen vehicle fuelling
Energy storage
Hydrogen transportation/ distribution
Research and development
Mining
BOGM

INDUSTRIES

Aviation
Mining
Marine
Heavy vehicle road transport
Energy research

KEY BENEFITS

High efficiency
Low cost of ownership
Rapid deployment/relocatable

The Fabrum Hydrogen Liquefiers deliver these attributes:

01 Utilisation of pulse-tube, Gifford-McMahon, and turbo-expander technologies for high efficiency cooling

02 Patented pressure-wave-generator pulse-tube cryocooler technology

03 No requirement for sacrificial liquid nitrogen precooling

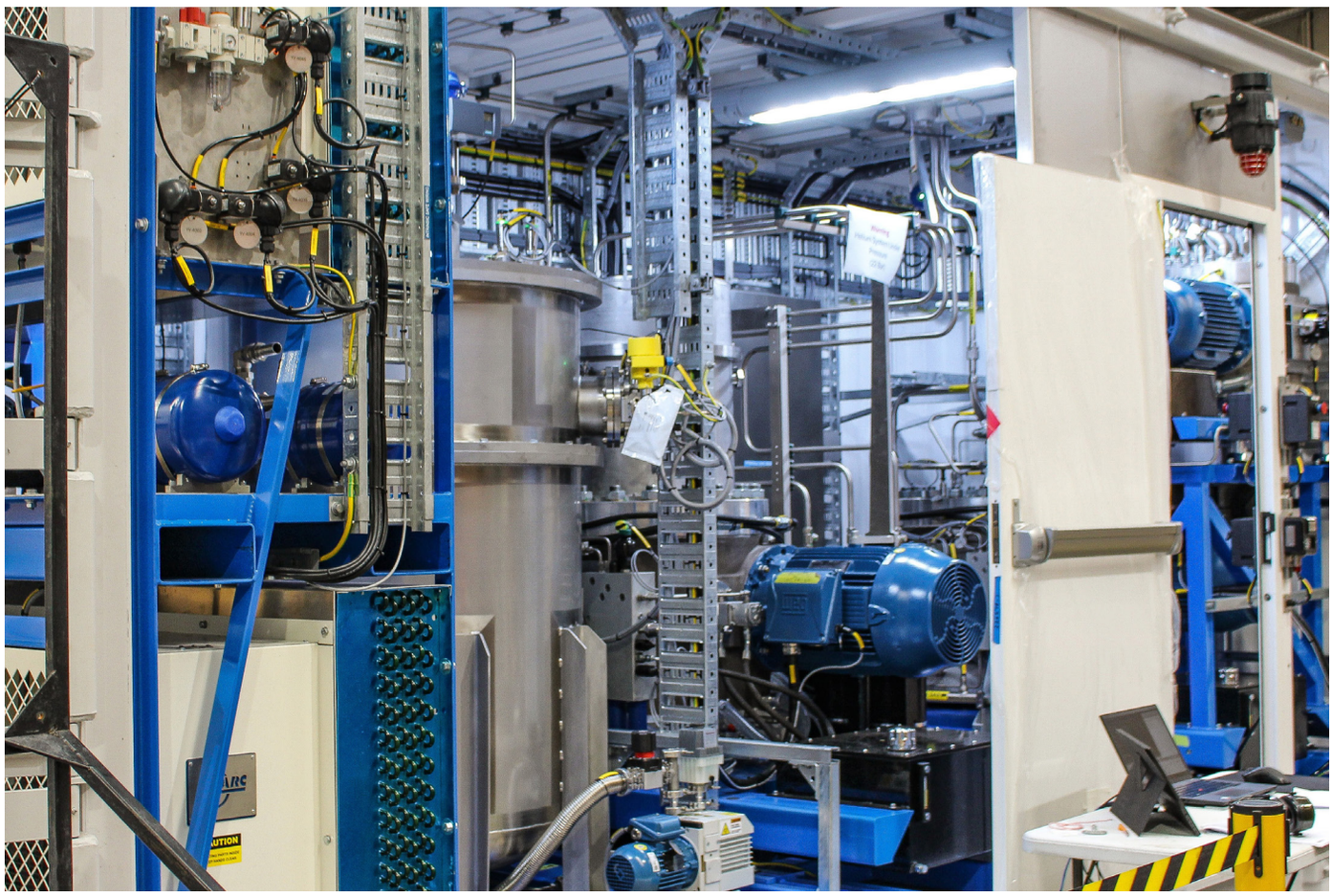
04 Rapid turn-up/turn-down response: ideal for renewable energy

05 Integration into existing operation

06 Standby, zero-boil-off mode

07 Flexible liquefaction pressure

Innovating Hydrogen Liquefaction: Fabrum's Containerised HLQ Liquid Hydrogen System



PRODUCT SPECIFICATIONS	FABRUM HLQ500	FABRUM HLQ1000	FABRUM HLQ5000
Nominal daily liquefier capacity (kg)	Up to 30	Up to 75	Up to 400
Liquefaction pressure (barg)	6-10	3-7	3-7
Hydrogen supply purity requirement (%)	99.9	99.9	99.9
Turn-down available	Yes	Yes	Yes
Minimum output (% of full scale)	-	5%	10%
Storage included (L)	1,500	3,000	10,000
Zero boil-off mode	Optional	Yes	Yes
Footprint [1]	Optional configurations	1 x 40’ ISO container	5 x 40’ ISO container
Input voltage	380 - 480 VAC @50 Hz, 3 phase	400 VAC @50 Hz, 3 phase	400 - 480 VAC @60 Hz, 3 phase
Nominal power consumption (kW)	70	95	525
Cold Start	~2 hours	<1 hr	<1 hr

[1] Excluding main storage vessel

“We operate at the bottom of the world but we perform at the top of it; and this is just the beginning of our story.”

Telarc. Registered
Quality ISO 9001

NEW ZEALAND.COM
Licence No.100526

Mission Critical Solutions.
Providing world leading solutions in engineering and cryogenic technology.
Clever Solutions for a Better Future.

NEW ZEALAND
128A Waterloo Road
Hornby
Christchurch 8042
Phone +64 3 982 2810