Hiperbaric
HIGH PRESSURE TECHNOLOGIES

SPEC SHEET

Ks-50

HYDROGEN COMPRESSOR

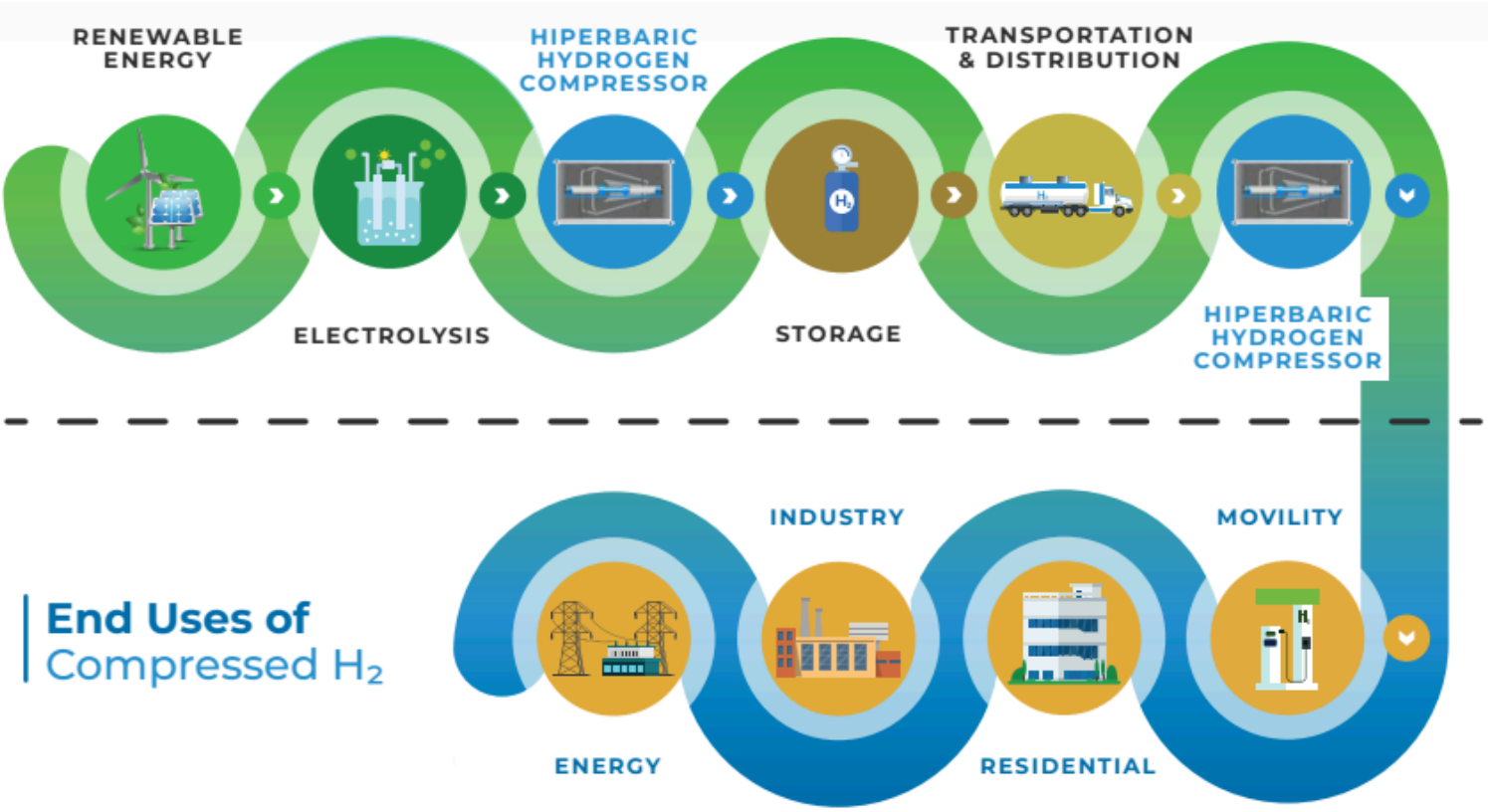


High Pressure Hydrogen Compression Technology

Hiperbaric has developed a range of hydraulic piston compressors designed for compressing hydrogen at refueling stations. These compressors can pressurize hydrogen from 200 to 500 bar for recharging stations, or up to an ultra-high 950 bar for hydrogen refueling stations (HRS).

To meet the requirements of this application, this compressor works without lubrication in the pistons, which guarantees maximum gas purity since there is no possible contamination with oil. Another outstanding aspect is the high efficiency thanks to the cooling system, which makes this process resemble an isothermal compression process.



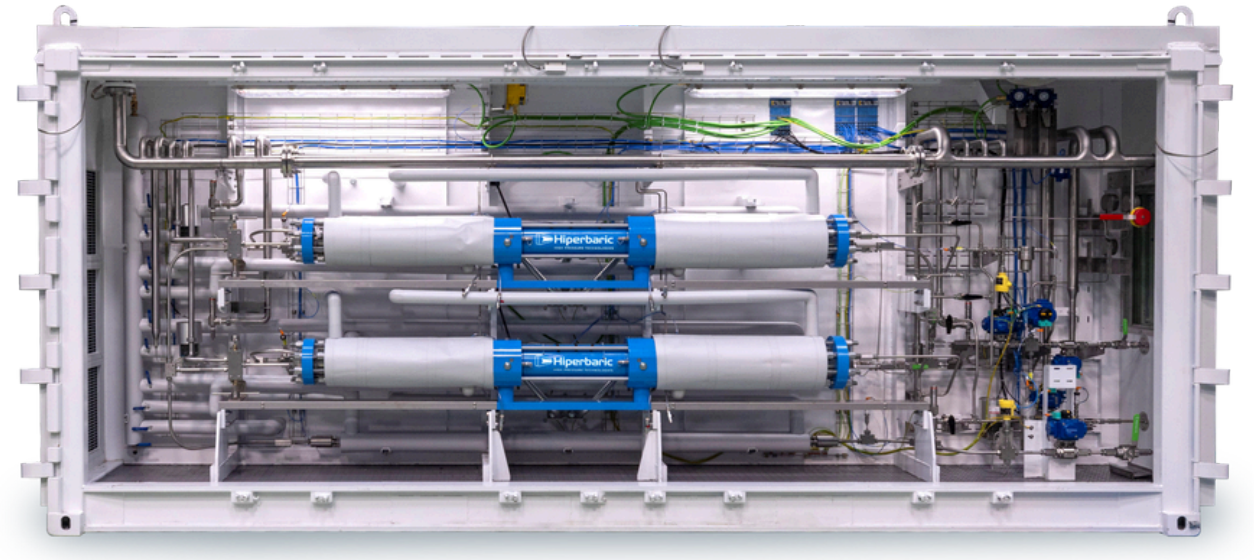


Hiperbaric
HYDROGEN GAS COMPRESSION

Ks 50

MAXIMUM WORKING PRESSURE	500 BAR

INLET PRESSURE RANGE	15 - 45 BAR



ENERGY CONSUMPTION	1.3 - 1.4 kw/kg

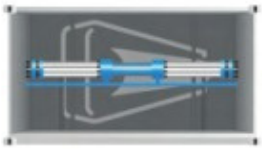
Without Cooling

FLOW RATE	21 - 42 kg/hour

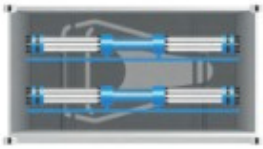
30 bar inlet pressure

Plug-and-Play Compressor Groups: Safe, Efficient and Reliable

Hiperbaric Ks-50 plug and play hydrogen compressor ideal for projects where it is required to build the pressure after an electrolyzer up to maximum 500 bar all in one compact and integrated 20’ container. Heavy-mobility, hydrogen distribution or storage up to medium pressures are the perfect fit for this compressor model.



One compressor



Two compressors

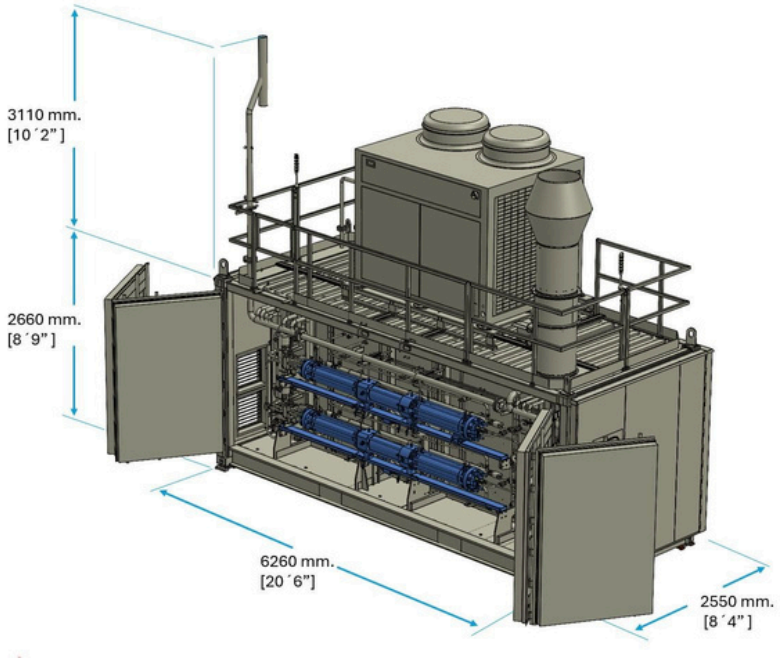
LEAD TIME	8 MONTHS

14,000 KG	TOTAL WEIGHT

Hiperbaric
HYDROGEN GAS COMPRESSION

DIMENSIONS (feet)	L: 20 W: 8.3 H: 16.7

DIMENSIONS (meters)	L: 6.1 W: 2.53 H: 5.1



SCOPE OF SUPPLY

Cooling Circuit:Dedicated chiller to absorb the heat generated during the process.

Vent Circuit / Safety System:For the proper and safe functioning of the compressor package including gas sensors, PSVs, etc.

Control System: Composed by PLC for the integration with the DCS system, HMI, complete remote access.

Hydraulic System:Composed by motor, axial piston pumps and instrumentation for the movement of the compressor unit.

Complete instrumentation for control and operation including several categorized sensors.

WARRANTIES

24/7 Remote Support:Lifetime after-sales support warranty to help with troubleshooting. Available 24/7 to all customers.

General Warranty:12 months for spare parts, service and manufacturing defects (excluding consumables)

ANCILLARY EQUIPMENT & REQUIREMENTS

HYDRAULIC OIL
40 liters
RENOLIN MR 46 MC

AIR SUPPLY
>6 bar
AC 0.003 kg/hour

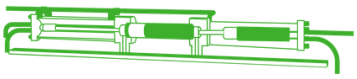
ETHERNET
1 Ethernet cable, Cat 5e or above
Internet Speed: 1Mb/s minimum

N2 SUPPLY
>5 bar
AC 0.01 kg/hr. MC 5 kg/hr.

ELECTRICITY
1.4 kw/kg H2
compressed
(without colling)

Hiperbaric H2 Compressor Design Advantages

The compressor package's core component is the advanced two-stage, reciprocating-piston high-pressure intensifier. With multiple sections enabling compression, our modular solution allows configuring one or two intensifiers to double the hydrogen flow.



"Oil-Free" Design

The oil-free design ensures maximum hydrogen purity due to the absence of oil in the pistons.



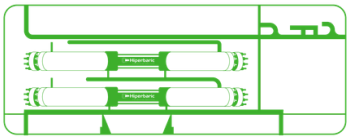
Efficient Cooling

The piston compressor's innovative cooled jacket design enables near-isothermal compression, boosting efficiency and minimizing wear.



Complete Turndown of Unit

0-100% flow adjustment achieved by fully adjustable compressor pump speed, enabling flow rate adjustments in just a few seconds.



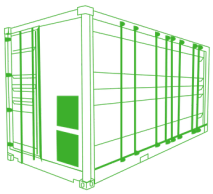
Modular, Compact Design

One or two intensifiers depending on the desired flow rate all in a single 20' container.



Safe and Reliable

The compressor incorporates a vent system that monitors, evacuates, and shuts down on gas detection.



Low Noise level

Isolated compressor walls enable superior noise reduction <75dB at 1m distance, convenient for residential proximity.

Quality Standards and Certifications

Hiperbaric's Integrated Management System for the design and production of high-pressure equipment is certified by AENOR to ISO 9001, ISO 14001 and ISO 45001 standards. This guarantees the quality and durability of our products and services.

ISO 9001 ISO 14001 ISO 45001

Hiperbaric
HYDROGEN GAS COMPRESSION

Hiperbaric, The Global Leader in High Pressure Technologies

Hiperbaric is an international benchmark in the industrial development of high-pressure technologies such as HPP (High Pressure Processing) and HIP (Hot Isostatic Pressing) for various sectors and applications. Hiperbaric has over 1,000 water compressors installed in more than 50 countries. They operate at up to 6,000 bar for HPP applications. Hiperbaric is now a major player in the hydrogen compression sector.

Members of Global H2 Associations and Institutions

PTE H2 PLATAFORMA TECNOLÓGICA ESPAÑOLA DEL HIDRÓGENO

European Clean Hydrogen Alliance

AEH2 ASOCIACIÓN ESPAÑOLA DEL HIDRÓGENO

H2 CYL ASOCIACIÓN

Hydrogen (H2) Compressor Customers

Lhyfe

framatome

MADIC group

enagas

Centro Nacional del Hidrógeno

Iberdrola

serveo

Adsensys

voestalpine ONE STEP AHEAD.

SCHULZ

EUROMEKANIK



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