

H2TAINER

FLEXIBLE. SAFE. FUTURE-ORIENTATED.

YOUR MOBILE CONTAINER SOLUTION FOR AN EFFICIENT HYDROGEN SUPPLY!

Whether as an emission-free energy source for commercial vehicles, as a key component in the production of green steel or as a sustainable raw material in industrial processes - the H2Tainer flexibly adapts to your requirements as a logistics solution for gaseous hydrogen and transports it wherever you need it.



TECHNICAL DATA OVERVIEW

Container length	40 ft (12,192 mm)	
Storage capacity	Rail transport	Payload from 840 to 950 kg H ₂ (2 containers per wagon)
	Road transport	Payload of max. 420 kg H ₂ (1 container per trailer)
Maximum storage pressure	500 bar	
Single storage element	Seamless steel pipes with the hydrogen-tight premium connection VAhyper® by voestalpine Tubulars	
	Dimension	7 5/8 inch (193.68 mm)
	Max. length	10,800 mm
	Quantity	Max. 48 pipes per container (depending on storage pressure and means of transport)
	Patents	Patent pending
	Product Features	<ul style="list-style-type: none">» Metal to metal seal - the robust metal to metal seal design ensures hydrogen-tightness under combined loads at 100 % efficiency» Hydrogen-tightness - successfully tested according to an in-house developed fit-for-purpose test protocol for hydrogen-tightness of pipe connections with 100 % H₂ at high pressure (in cooperation with an Austrian Hydrogen Research Center). The effectiveness of the metal to metal seal is additionally confirmed by standardized tests in accordance with EN ISO 13679 CAL IV» In combination with H₂ grades - ensures improved resistance to hydrogen embrittlement. These grades are qualified according to actual test methods for materials with resistance against molecular hydrogen environment (dry gas and wet conditions)

CUSTOMER BENEFITS

» Fast availability of the H2Tainer

- » Efficient container production due to high production capacity for single pipe storage elements and seamless hollow sections from voestalpine Tubulars, as well as Innofreight's container construction expertise
- » Optimized assembly times due to the modular design and sophisticated system integration

» System supplier and service

- » One stop shop - from material and product development to production and the completely finished container and logistics solution
- » In-house production of seamless pipes, hollow sections and containers for maximum quality and control

» Flexibility and intermodality

- » Multimodal use - compatible with rail and truck for maximum freedom of transport
- » Simple and secure loading, unloading and filling right at the train and trailer
- » Versatile use - H2Tainer as a transport, tank and mobile or stationary storage solution

» Inspection and maintenance

- » Easy maintenance - individual pipes can be easily dismantled, inspected and replaced
- » Successful and simple execution of regular, mandatory inspections due to the screw solution for end caps
- » Inspection of pressure vessels every 2 years

» Safety and resilience

- » Bundled interconnection ensures a high degree of operational safety
- » The use of Type I steel cylinders prevents the risk of critical heating
- » Reduced number of threaded connections minimizes the risk of leakage

» Sustainable product solution

- » Pure steel solution (Type I) enables a complete recycling process and ensures sustainable material utilization

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Partnership voestalpine Tubulars & Innofreight

voestalpine Tubulars combines comprehensive know-how in the production of high-quality seamless steel tubes and hollow sections with decades of experience in the development and manufacture of innovative Proprietary Connections for the oil and gas industry. The use of state-of-the-art testing technologies and profound technical expertise results in customized product solutions that meet the highest industrial requirements—reliable, efficient, and future-oriented.



Innofreight develops customized logistics solutions for a wide range of industrial sectors, including the European steel and energy industries. With modular railcar and container systems, Innofreight enables maximum transport capacities, ensures efficient loading and unloading, and connects rail and road transport with intermodal projects. Along the entire logistics chain, Innofreight guarantees a high level of safety and reliability with its comprehensive range of services.

The innovative complete solution **H2Tainer** unites the combined expertise of these two leading companies. The result is a mobile hydrogen container solution that fulfills the highest standards of efficiency, safety and flexibility.

voestalpine

ONE STEP AHEAD.