

Voith Plug & Drive H₂ Storage System

Complete system from one source

Our Plug & Drive system is the new standard for the hydrogen mobility market: from tank nozzle to fuel cell inlet – all from one source.

Thanks to our modular basic components, optimized customer-specific solutions are always possible – as well as deep customer integration and co-development.

According to Voith's guiding principles for innovation projects, safety and quality prevail in every single fiber of our product solutions. Over the complete lifecycle, sustainability and circularity are ensured.

Discover the most important features and innovative advantages of our new Plug & Drive H₂ Storage System!

Most important features and innovative advantages

- + System lifetime of 1.6 Mio km/30,000 hrs
 - + Large TowPreg H₂ pressure vessels (700-bar)
 - + Optimized thermodynamic system layout for fast refueling (<10 min)
 - + Holistic sustainability concept (e.g. recycling)
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Our Plug & Drive H₂ Storage System at a glance



- 1 H₂ Core Module 2 Large side tank 3 Small side tank

H₂ Core Module including:

- Four 700-bar type IV pressure tanks with TowPreg winding technology
- Complete H₂ periphery (valves, pressure regulator, receptacles, filters, pipes)
- Tank Control Unit (TCU) including software, sensors (pressure, temperature, H₂), cables, “state of health” function
- Mechanical structure including mounting system for tanks in rack/on chassis and rack to chassis

Modular system design

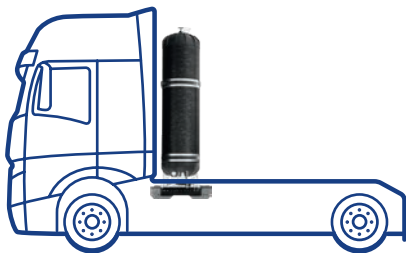
- Additional side tanks for extended capacity/range:
 - Optional: large side tank (14.0 kg H₂) including On Tank Valve (OTV), end-plug and pipes
 - Optional: small side tank (5.7 kg H₂) including On Tank Valve (OTV), end-plug and pipes

Key facts

Attribute	H ₂ Core	H ₂ Tank
H ₂ capacity	56.0 kg	14.0 kg
Pressure level	700 bar	700 bar
Certification	R134 ¹ , ADR ² , HGV-2 ²	R134 ¹ , HGV-2 ²
Fueling time	10 minutes	-

¹ part 1 + part 2, ² planned

Different variants for flexible user needs



Variant: Basic H₂ Core Module

H ₂ capacity	56.0 kg
Weight	982 kg



Variant: H₂ Core Module + two side tanks¹

H ₂ capacity	75.7 kg
Weight	1,243 kg

¹ One large + one small side tank



Variant: H₂ Double Core Module

H ₂ capacity	112.0 kg
Weight	1,909 kg

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