

# Voith Plug & Drive H<sub>2</sub> 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 H<sub>2</sub> Storage System!**

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### Most important features and innovative advantages

- + System lifetime of 1.6 Mio km/30,000 hrs
  - + Large TowPreg H<sub>2</sub> 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 H<sub>2</sub> Storage System at a glance



1 H<sub>2</sub> Core Module    2 Large side tank    3 Small side tank

### H<sub>2</sub> Core Module including:

- Four 700-bar type IV pressure tanks with TowPreg winding technology
- Complete H<sub>2</sub> periphery (valves, pressure regulator, receptacles, filters, pipes)
- Tank Control Unit (TCU) including software, sensors (pressure, temperature, H<sub>2</sub>), cables, “state of health” function
- Mechanical structure including mounting system for tanks in rack/on chassis and rack to chassis

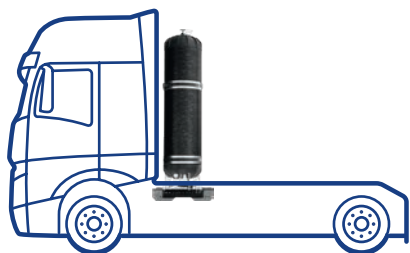
### Modular system design

- Additional side tanks for extended capacity/range:
  - Optional: large side tank (14.0 kg H<sub>2</sub>) including On Tank Valve (OTV), end-plug and pipes
  - Optional: small side tank (5.7 kg H<sub>2</sub>) including On Tank Valve (OTV), end-plug and pipes

### Key facts

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

## Different variants for flexible user needs



### Variant: Basic H<sub>2</sub> Core Module

H <sub>2</sub> capacity	56.0 kg
Weight	982 kg



### Variant: H<sub>2</sub> Core Module + two side tanks<sup>1</sup>

H <sub>2</sub> capacity	75.7 kg
Weight	1,243 kg

<sup>1</sup> One large + one small side tank



### Variant: H<sub>2</sub> Double Core Module

H <sub>2</sub> capacity	112.0 kg
Weight	1,909 kg

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