



H2 Injection & Ignition







Elevating the performance of
your H2 engine to the next level


HOERBIGER

HOERBIGER pioneers H2 research for more than 20 years

For more than 125 years we have been striving to deliver excellence to our customers in the gas and automotive industry, while advancing innovations in hydrogen for more than two decades! Our headquarter for the injection business is located in Vienna and our automotive lead plant in Poland. Our competence center for ignition and controls, Altronic (a company of the HOERBIGER Group) is operating out of Girard, Ohio, USA while the localized plant in Guangzhou, China, supports the Asian market.

HOERBIGER Engine Solutions product overview

Product group		Short description	Platform name
Port Fuel Injection (PFI)		Injectors suitable for fuel gas admission upstream of the mechanical intake valve	PFI GV / GVC H2 PFI GV / GVC
Direct Injection (DI)		Injectors suitable for main combustion chamber direct injection	DI GV / GVC H2DI GV / GVC
Pre-Chamber Injection (ePCC)		Injectors suitable for direct/indirect pre-combustion chamber injection	ePCC GV / GVC ePCC DI
Ignition Systems		Capacitive discharge & high-energy ignition for industrial engines	NGI / CPU / CD AH2IS
Engine Controls		All-in-one engine control system for speed, air-fuel ratio, starting, fuel & knock control	EPC / AFR ActuCOM / DriveCOM
Instruments & Automation		Instrumentation & automation for control of rotating equipment	ACM / DE / DSG



Application	Engine size	HOERBIGER portfolio for H2-ICEs		
		H2PFI	H2DI	H2 Ignition
Medium Duty Mobility (on- and off-road)	6-10 L	GVC10		AH2IS-M
Heavy Duty Mobility (on- and off-road)	10-13 L	GVC10	GV7 / GVC13	AH2IS-M
Heavy Duty+ Mobility (on- and off-road)	15+ L	GV40 / GVC40	GV8	AH2IS-M
Small Stationary Gensets	<1 MW	GVC10	GVC24	AH2IS-S
Midsize Stationary Gensets	2-4 MW	GV40 / GVC40		AH2IS-S
Large Stationary Gensets	>10 MW	GV400		AH2IS-S



Benefits at a glance

H2 injectors

HOERBIGER injectors are tailored and fine-tuned to the specific engine design & parameters to allow highest integration flexibility and operational performance.



- Adoptable nozzle design
- Tailored to the specific engine design
- Top-feed and side-feed options
- High in-cylinder air-fuel conformity
- Low-pressure tech for extended mileage
- Mature and validated technology
- Production to automotive standards

H2 ignition

The patented technology adjusts the spark energy in real-time within microseconds to ensure consistent combustion across cycles, mitigating misfires and optimizing performance.



- Controls variations during combustion
- Adjusts ignition energy in microseconds
- Prevents hot spots, misfiring & knocking
- Significantly increases spark plug life
- Patented spark prediction technology
- Validation for stationary, mobile & marine use (see our AdaptH2 brochure)

Our references

Mobile applications

- World's first H2 PFI injector for serial hydrogen passenger car in 2004
- HyFLEET CUTE busses equipped with HOERBIGER H2 injectors to collect more than 400,000 km on public roads
- First off-road H2 ICE equipped with HOERBIGER injectors
- First H2 carrier vehicle equipped with HOERBIGER injectors

Stationary applications

- Established supplier for mid to large engines
- First H2-fueled 1MW engine running with HOERBIGER injectors
- More than 20 H2 field engines running on HOERBIGER injectors and collecting +8,000 hours of runtime
- Successful upgrades of serial natural gas injectors for up to 100% hydrogen operation

Ignition & controls

- Established and recognized market leader since 1953
- Innovation leader with more than 50 patents worldwide
- Continuous conduct of research and publication



Learn more by visiting
www.hoerbiger.com/engine
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Contact us via email
enginetech@hoerbiger.com

Locally close to the customers – globally successful: HOERBIGER is active worldwide in 43 countries on all continents. 6,174 employees at 133 locations – including 30 production plants – deliver reliable solutions for better performance, increased safety, and fewer emissions. In 2023, they generated sales of 1.416 billion euros. For renowned customers from the energy sector, the process industry, the automotive industry, the mechanical engineering industry, safety technology, and the electronics industry, performance-determining products and services from HOERBIGER make the difference. With innovations for decarbonization and energy transition, HOERBIGER is already enabling change today for a better tomorrow. As majority shareholder, the HOERBIGER Foundation preserves the 129-year-old entrepreneurial heritage and guarantees stability, independence, and a future-oriented strategy.

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