



Hydrogen technologies



- International level -

ISO/TC 197 Hydrogen Technologies

Scope	Standardization in the field of systems and devices for the production, storage, transport, measurement and use of hydrogen.	
Committee information	Published standards	26
	Standards under development	24
	National delegates	3

Major “ISO/TC 197” standards

Published standards	ISO 13984:2026	Liquid hydrogen — Land vehicle fuelling protocol
	ISO/TS 15916:2026	Hydrogen technologies — Basic considerations for the safety of hydrogen systems
	ISO 14687:2025	Hydrogen fuel quality — Product specification
	ISO 22734-1:2025	Hydrogen generators using water electrolysis — Part 1: Safety
Standards under development	ISO/AWI 19886	Hydrogen technologies — General hydrogen station requirements
	ISO/DIS 19884-1	Gaseous hydrogen — Pressure vessels for stationary storage — Part 1: General requirements
	ISO/CD TS 19889-1	Hydrogen technologies — Interoperability — Part 1: Interface between gaseous hydrogen trailer and hydrogen fuelling station

ISO/TC 197/SC 1 – Hydrogen at scale and horizontal energy systems

Scope	Standardization of large-scale hydrogen energy systems and applications including aspects of testing, certification, sustainability and placement, and coordination with other relevant standardization bodies and stakeholders.	
Committee information	Published standards	2
	Standards under development	6

Major “ISO/TC 197/SC 1 standards”

Published standards	ISO 19870-1:2026	Hydrogen technologies — Methodology for determining the greenhouse gas emissions associated with the hydrogen supply chain Part 1: Emissions associated with the production of hydrogen up to the production gate
	ISO/TS 19870:2023	Hydrogen technologies — Methodology for determining the greenhouse gas emissions associated with the production, conditioning and transport of hydrogen to consumption gate
Standards under development	ISO/DIS 19870-2	Hydrogen technologies — Methodology for determining the greenhouse gas emissions associated with the hydrogen supply chain — Part 2: Emissions associated with the conditioning and transport of gaseous and liquid hydrogen up to consumption gate
	ISO/DIS 19870-3	Hydrogen technologies — Methodology for determining the greenhouse gas emissions associated with the hydrogen supply chain — Part 3: Emissions associated with the production, storage and transport of ammonia up to delivery gate and the conversion of ammonia into hydrogen
	ISO/TS 22734-2	Hydrogen generators using water electrolysis — Part 2: Testing guidance for performing electricity grid service

- European level -



CEN/CLC/JTC 6 – Hydrogen in energy systems

Scope	Standardization in the field of systems, devices and connections for the production, storage, transport and distribution, measurement and use of hydrogen from renewable energy sources and other sources, in the context of the European strategy for the development and acceptance of the hydrogen market.	
Committee information	Published standards	4
	Standards under development	4
	National delegates	1
Major “CEN/CLC/JTC 6” standards		
Published standards	CEN ISO/TS 15916:2026	Hydrogen technologies - Basic considerations for the safety of hydrogen systems
	EN ISO 19870-1:2026	Hydrogen technologies - Methodology for determining the greenhouse gas emissions associated with the hydrogen supply chain - Part 1: Emissions associated with the production of hydrogen up to the production gate
	EN ISO 22734-1:2025	Hydrogen generators using water electrolysis - Part 1: Safety
Standards under development	prCEN/TS(JT006004)	Hydrogen Gas Safety in Enclosed Spaces
	JT006002	Safe use of hydrogen in built constructions
	prEN ISO 19870-2	Hydrogen technologies - Methodology for determining the greenhouse gas emissions associated with the hydrogen supply chain - Part 2: Emissions associated with the conditioning and transport of gaseous and liquid hydrogen up to consumption gate
	prEN ISO 19870-3	Hydrogen technologies - Methodology for determining the greenhouse gas emissions associated with the hydrogen supply chain - Part 3: Emissions associated with the production, storage and transport of ammonia up to delivery gate and the conversion of ammonia into hydrogen

CEN/TC 23 – Transportable gas cylinders

Scope	Standardization of transportable gas cylinders, their fittings, and requirements relating to their design, testing and operation.[Extract]	
Committee information	Published standards	101
	Standards under development	12
	National delegates	1
Major “CEN/TC 23” standards		
Published standards	EN 17533:2025	Gaseous hydrogen - Cylinders and tubes for stationary storage
	EN 17339:2024	Transportable gas cylinders – Hoop wrapped and fully wrapped carbon composite cylinders and tubes for hydrogen
	EN 12245:2022	Transportable gas cylinders - Fully wrapped composite cylinders
Standards under development	EN 17339:2024/prA1	Transportable gas cylinders - Hoop wrapped and fully wrapped carbon composite cylinders and tubes for hydrogen
	EN ISO 11117:2019/prA1	Gas cylinders - Valve protection caps and guards - Design, construction and tests - Amendment 1 (ISO 11117:2019/DAM 1:2026)
	EN ISO 11439:2013/prA2	Gas cylinders — High pressure cylinders for the on-board storage of natural gas as a fuel for automotive vehicles — Amendment 2
	prEN ISO 17879	Gas cylinders - Self-closing cylinders valves - Specification and type testing