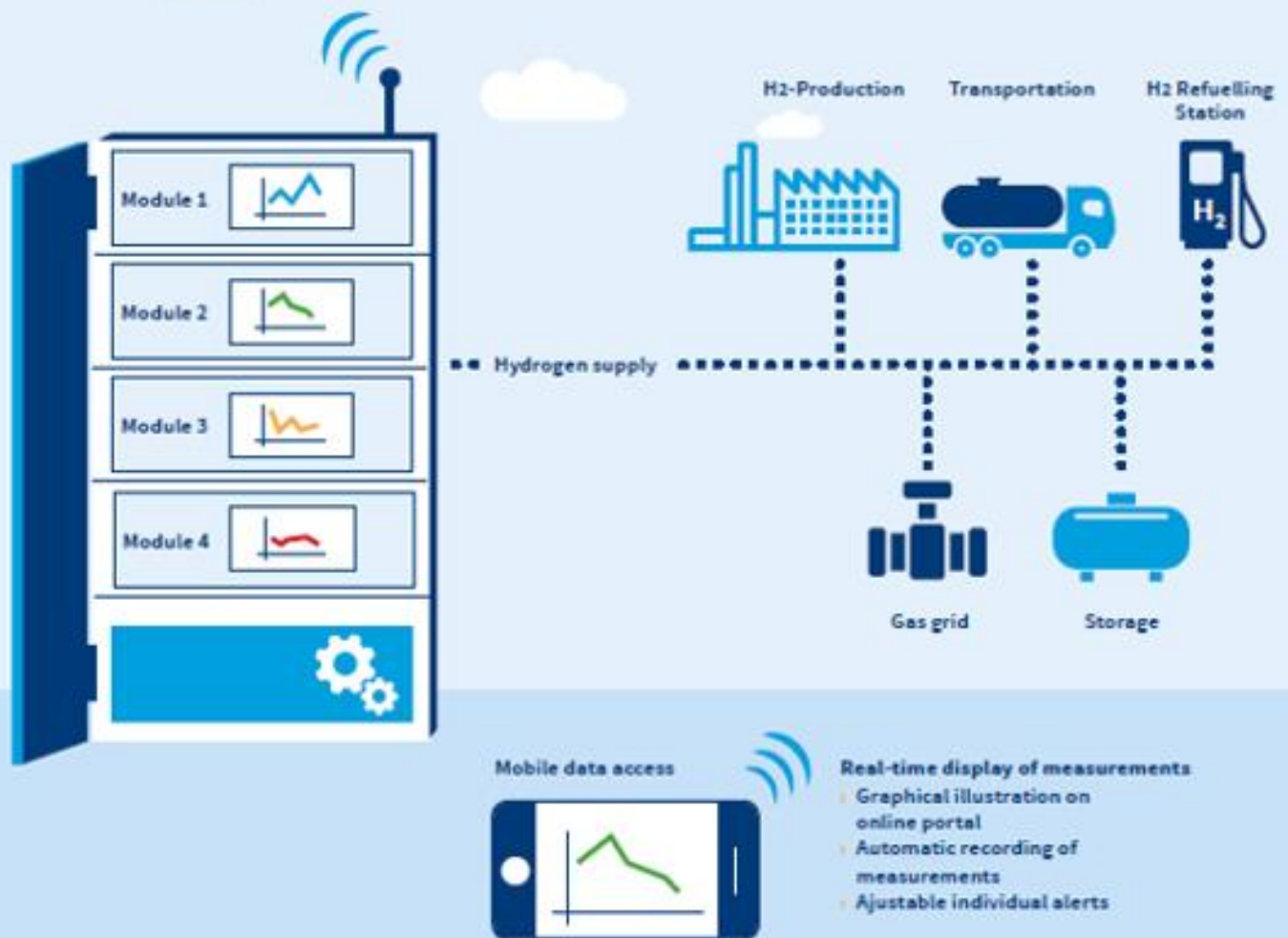


H₂-Quality Measurement Device



The hydrogen measurement system for outdoor utilisation with laboratory quality

- › We help to optimise your hydrogen process
- › Continuous measurement every 3 minutes & real-time display
- › Substances according to DIN EN 17124 / ISO 14687 / SAE J2719 measurable
- › Complex hydrocarbons such as oils and greases measurable
- › Available for purchase, rent or as a measurement service

Facts & Figures

The outdoor measuring system in detail

- Particularly high-detection measuring methods
- Weatherproof measuring system
- Transportable equipment
- Web-based measurement App incl. data portal
- Cost-effective Measurement Device through modular structure in 19"-Format
- Detection of specific and general Impurities

Modular Structure

Module 1 GC-IMS

Measurement of the most critical and irreversibly damaging contaminants

Module 2 GC-PED

Measurement of the potentially reversible impurities and the gaseous carbon compounds

Module 3 IR Laser

Especially sensitive measurement of gaseous carbon compounds

Module 4 GC-WLD

Measurement of potentially diluting and reversible impurities

Possible Options

Automatic reference measurement (e.g. with H₂ 6.0)
Further measuring channels can be configured
Pressure control up to 1.000 bar

Normbezogene Nachweisgrenzen

Substances	DIN EN 17124 (ppm)	Module 1 GC-IMS	Module 2 GC-PED	Module 3 IR Laser	Module 4 GC-WLD
NH ₃	0,1	✓			
Total sulfur	0,004	✓			
Formic Acid	0,2	✓			
Formalehyde	0,2	✓			
Halogens	0,05	✓			
H ₂ O	5,0	✓		✓	
Complex HC, Oils and Greases	2	✓			
HC	2		✓		≤ 10 ppm
O ₂	5,0		✓	✓	✓
CO	0,2		✓	✓	≤ 10 ppm
CO ₂	2,0		✓	✓	≤ 10 ppm
CH ₄	100		✓	✓	✓
He	300,0				✓
N ₂	300,0		✓		✓
Argon	300,0		✓		✓
Other substances and details on request					

Technical facts of the outdoor measuring system

Environmental conditions	
Temperature range	- 20 bis + 40 °C
Relative humidity	≤ 85 %
Degree of protection	IP54

Properties of measurement cabinet	
Dimensions min. (LxWxH)	ca. 50 x 80 x 120 cm
Weight min.	60 kg
Weight max.	140 kg

Hydrogen supply	
Flow rate	0,01 bis 10 l / min
Temperature	- 20 bis + 40 °C
Pressure	< 10 bar



EMCEL GmbH

Engineering Company for Fuel Cells
Hydrogen Technology and E-Mobility

STEP GmbH

Gas Measurement and Analysis Technology
with Ion Mobility Spectrometry and GC-PID

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