



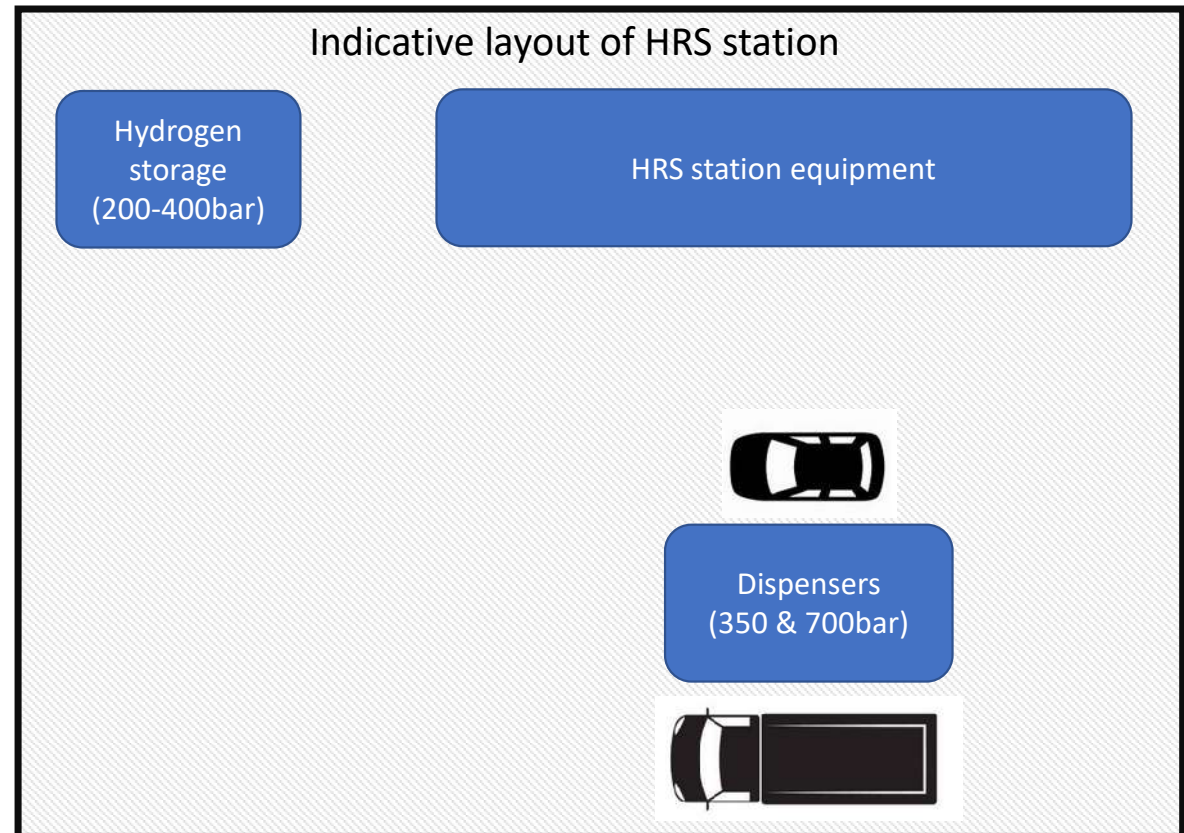
R2X
solutions

Green hydrogen refuelling station

*Järvenpää
Finland*

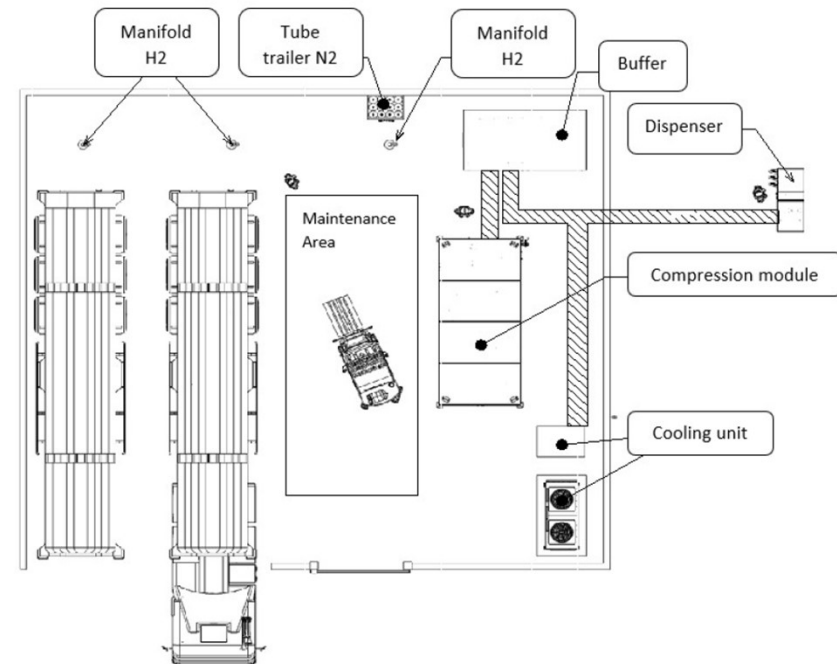
Järvenpää HRS station – basic information

- Applicability
 - Passenger cars and trucks
- Refuelling pressures
 - 350bar and 700bar
- Hydrogen storage capacity
 - 700-1000kg (extensible)
- Origin of hydrogen
 - Harjavalta/Finland (Green H₂)
- Number of dispensers
 - 2pcs
- Operational
 - Summer 2024



Filling station: Main components/ modules

- **The entry module** is the entry point of the H2 source. Its design allows H2 pressure up to 350b / 350b High Flow / 700b.
- **The compression module** is made up of two compressors that can work in parallel or independently. The compressor technology is based on hydraulic driven gas booster.
- **The cooling system** for compression module regulates the temperature of the compressed hydrogen by cooling the gas down to -18°C. Committed to an environmental protection approach, the refrigerants used will be compatible with future applicable standards.
- **The storage module** (1 to 3 extra storages) make available a large quantity of Hydrogen in the event of peak consumption.
- **The dispenser** is the exit point of the system, they enable the distribution at different pressures of 350b, 350HF (high flow) and 700b.

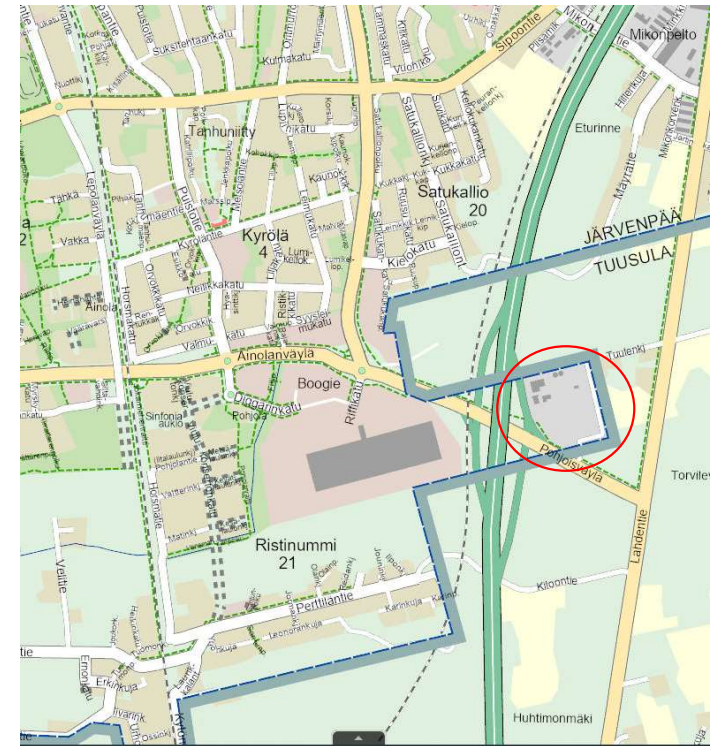


Technical data

- Min. process area for installation 200 sqm
- Approval & Certifications: CE Marked, DESP, ATEX, Machine
- Power needs: (kW) 180kW
- Power supply: (VAH/HZ/Amp) 400 / 50 / 400
- Data monitoring & Control System
- Solution payment Fill&Drive
- H2 source (min 30 bar)
Trailer/Electrolyser/On-site
- Compression capacity (Max) 14 kg/h
- Vehicles H35 – H35HF - H70
- Dispenser 1 to 2
- Buffer storages 1 to 3 (1600l/950bar)
- Example Refueling duration:
 - Light Duty (5kg-70Mpa) 3-4 min
 - Vans (10kg-70Mpa) 4-5 min
 - Heavy Duty (30kg-35Mpa) 10-20 min
 - Heavy Duty (30kg-70Mpa) 20-30 min

Location

- Address
 - Pohjoisväylä 27, Järvenpää
- Driving directions
 - Highway 4/E75, exit 10
- Distances to major cities
 - Helsinki 37km
 - Helsinki-Vantaa Airport 24km
 - Lahti 68km
 - Mikkeli 194km
 - Jyväskylä 233km



We open the Finnish hydrogen market with 20 MW electrolyser in 2024

Green hydrogen plant in brief

Green H₂ production **E-methane production** **20 MW H₂ capacity** **2024 operational** **~70M € CAPEX**



- **Plant:** 20 MW green hydrogen and e-methane production plant in Harjavalta, Finland.
- **End products of the plant:**
 - Green hydrogen, and
 - Synthetic e-methane that is further processed from the green hydrogen and captured biobased CO₂.
- **Final Investment Decision:** Made in January 2022.
- **Public funding received:** 26 MEUR from Finnish Ministry of Economic Affairs and Employment and 10 MEUR from Finnish Climate Fund in December 2021.
- **The first plant operational:** Summer 2024
- **Electrolysis technology:** Commercially proven alkaline from German Sunfire GmbH.
- **Methanation technology:** Finnish Q-Power Oy

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cleaner - together**

