



H₂ TALKS

Stazioni autostradali di rifornimento a idrogeno in Italia: situazione ed esperienze dirette.

Andrea Salomoni – Business Development Italy
KEY Expo 2025 – Piacenza
7 marzo 2025

Maximator Hydrogen GmbH

BOOTH
B3/341



MAXIMATOR HYDROGEN | HYDROGEN NETWORK SK GROUP



SCHMIDT
KRANZ GROUP

Founded in 1885



MAXIMATOR®

Advanced Technology

Centre of excellence for H2 research and development

MAXIMATOR®

maximum pressure

Development and production of hydrogen components, such as valves, fittings, compressors and compression systems

FEST

Electrolysers for the production of green hydrogen and complete systems, including filling and supply



MAXIMATOR®

Gas Solutions

Modular high-pressure storages and bundles



Development and production of test benches for hydrogen storage systems



ADVANCED
TRAINING
TECHNOLOGIES

Training and qualification for H2-related processes through blended learning

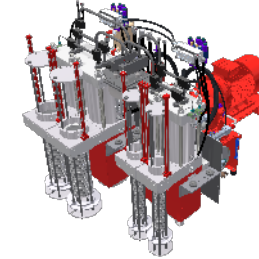
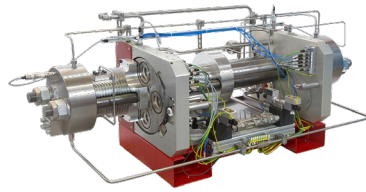


- founded as a GmbH in January 2022
- spin-off of the existing hydrogen division from Maximator GmbH within the Schmidt Kranz Group
- over 200 highly qualified and motivated employees

ROADMAP



MAXIMATOR®
Advanced Technology



2017

- project start
MAX Compression

2018

- Presentation of MAX
Compression mockup
- start of MAX
Compression series
production
- start HRS production

2019

- international market
launch of hydrogen
refueling systems

2021

- opening production
plant Maximator
Hydrogen GmbH
- about 50 HRS projects
in 2021
- project start MAX
Compression 2.0
- Start of series
production of
hydrogen refueling
stations

2022

- development MAX
Compression 2.0
- presentation at the
H2FC in Hanover
- foundation
Maximator Hydrogen
GmbH

2023

- development
hydrogen dispenser
MAX Dispenser 1.5
presentation at the
H2FC in Hanover
- foundation
Maximator Hydrogen
France & Benelux,
more to follow

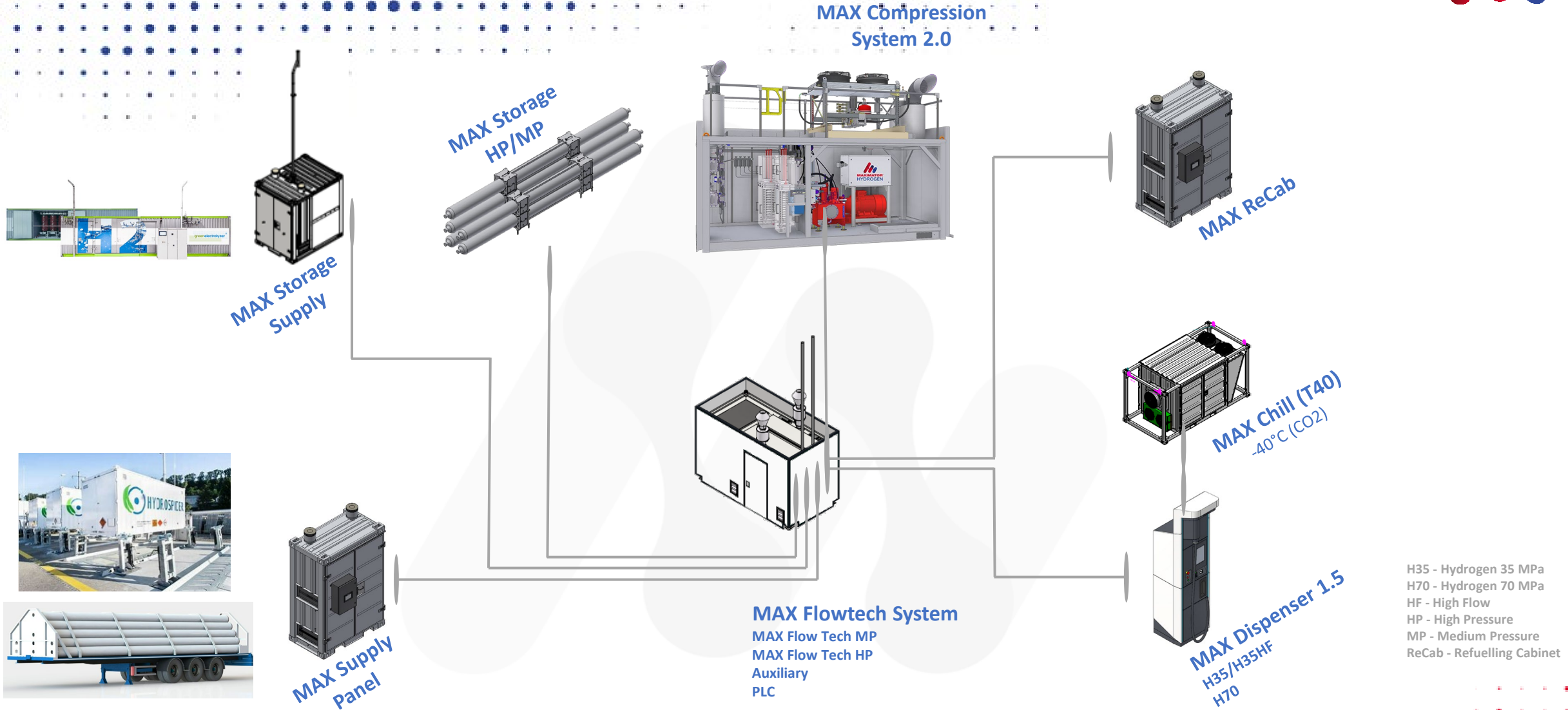


PRODUCTION PLANT NORDHAUSEN - THURINGIA

Germany's largest production facility for hydrogen refueling stations

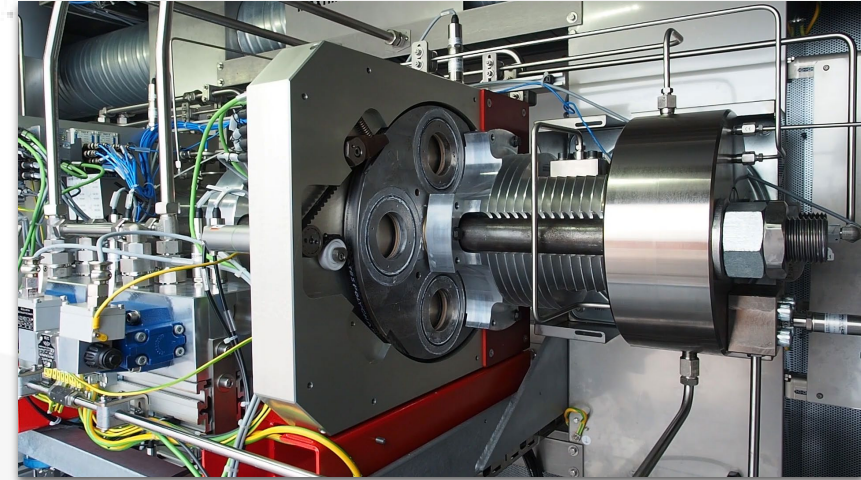
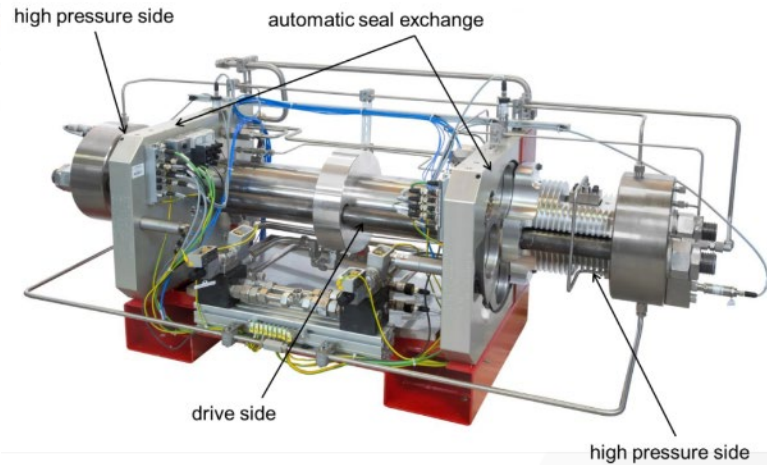
Series production capacity of HRS systems (100 pcs./year)

CONCEPT OF A HYDROGEN FILLING STATION



H35 - Hydrogen 35 MPa
 H70 - Hydrogen 70 MPa
 HF - High Flow
 HP - High Pressure
 MP - Medium Pressure
 ReCab - Refuelling Cabinet

HRS – CORE TECHNOLOGY MAX COMPRESSION



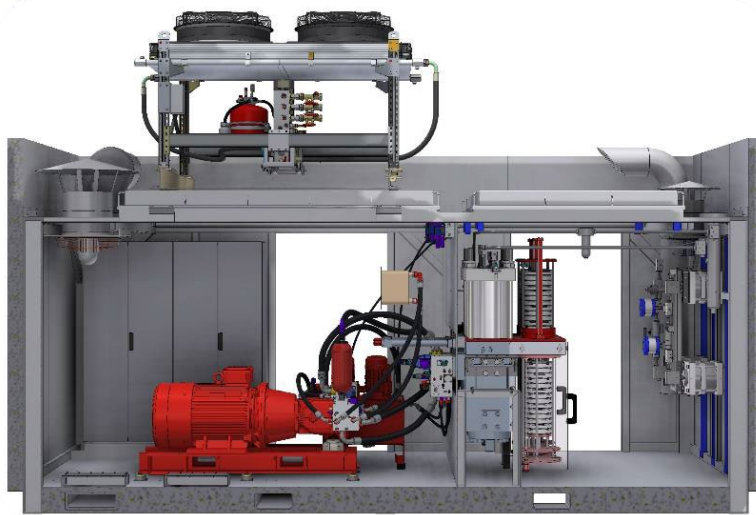
MAX Compression 1.6

- hydraulically driven 2-stage piston compressor
- supplies H₂ with up to 1000 bar
- clean and safe hydrogen compression
- unmatched service lifetime of seals and valves
- **lowest maintenance costs with highest energy efficiency**

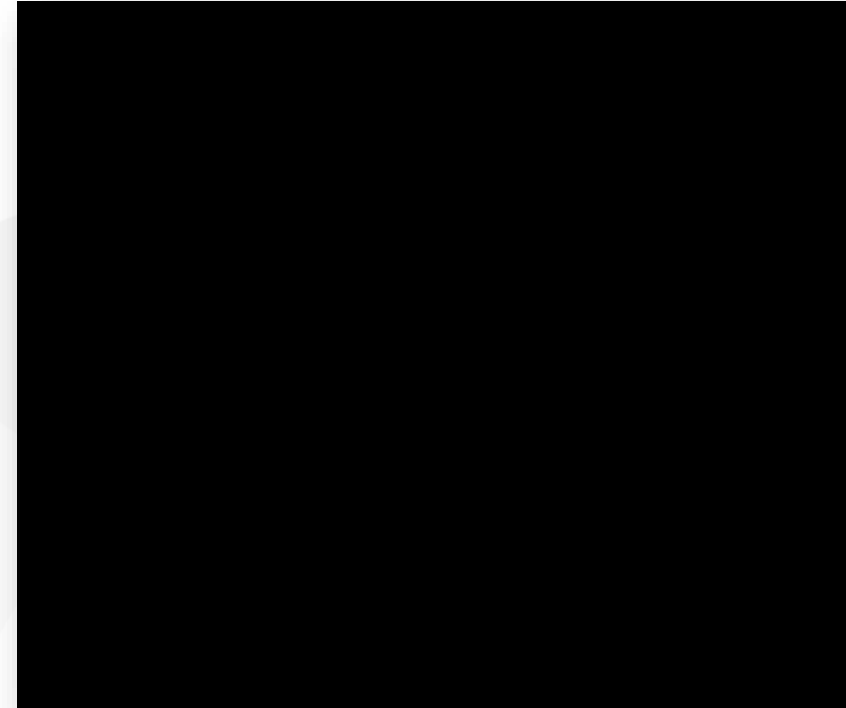
ASX (Automatic Seal Exchange)

- all MAX Compression units are equipped with the ASX function
- this function describes the automatic seal change of the Hydrogen high pressure seal
- **unplanned downtime is reduced to a minimum**
- seal change itself takes **ONLY ~ 4 minutes** per pressure converter compared to some working days for existing technology

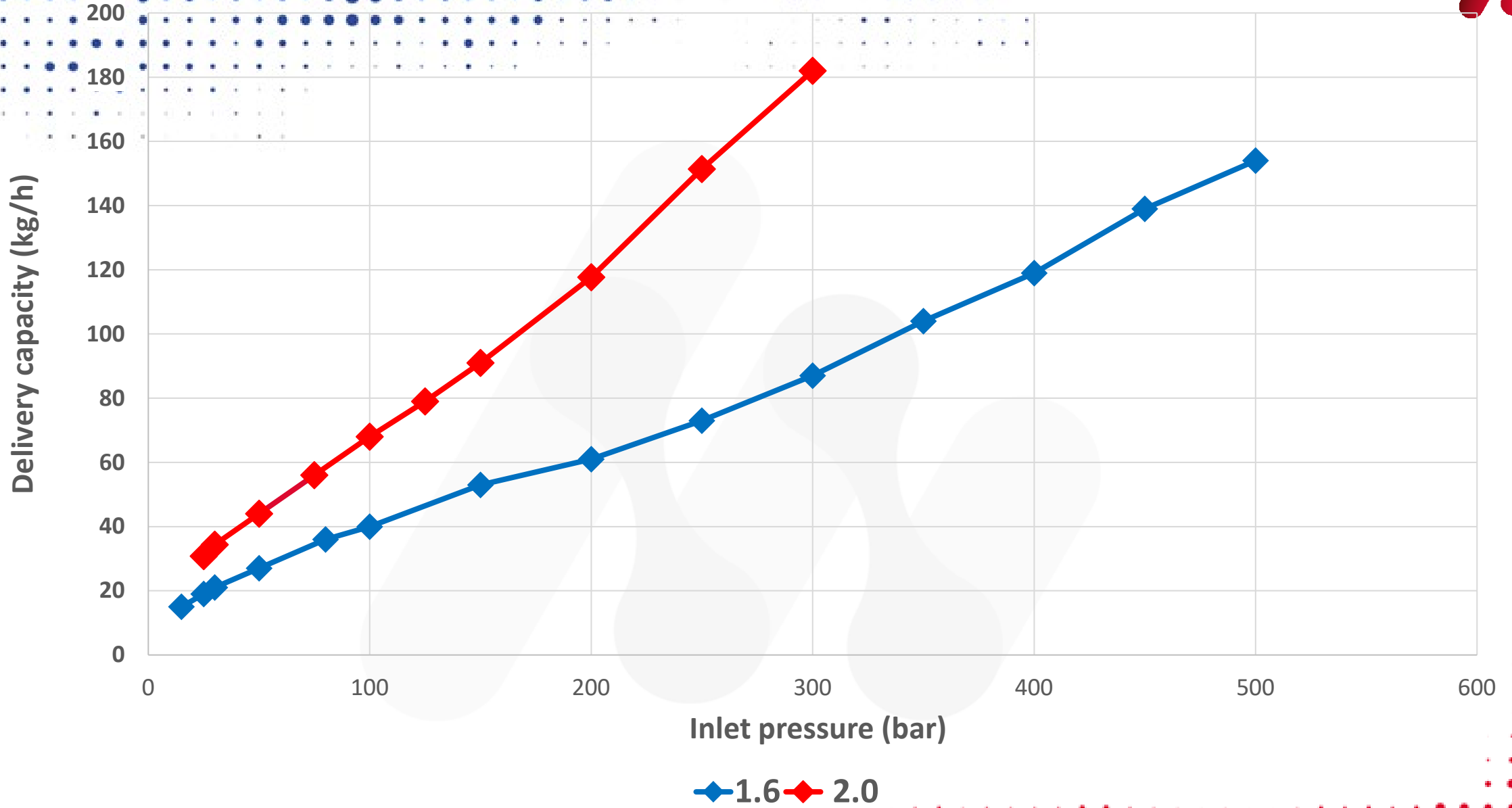
MAX COMPRESSION 2.0

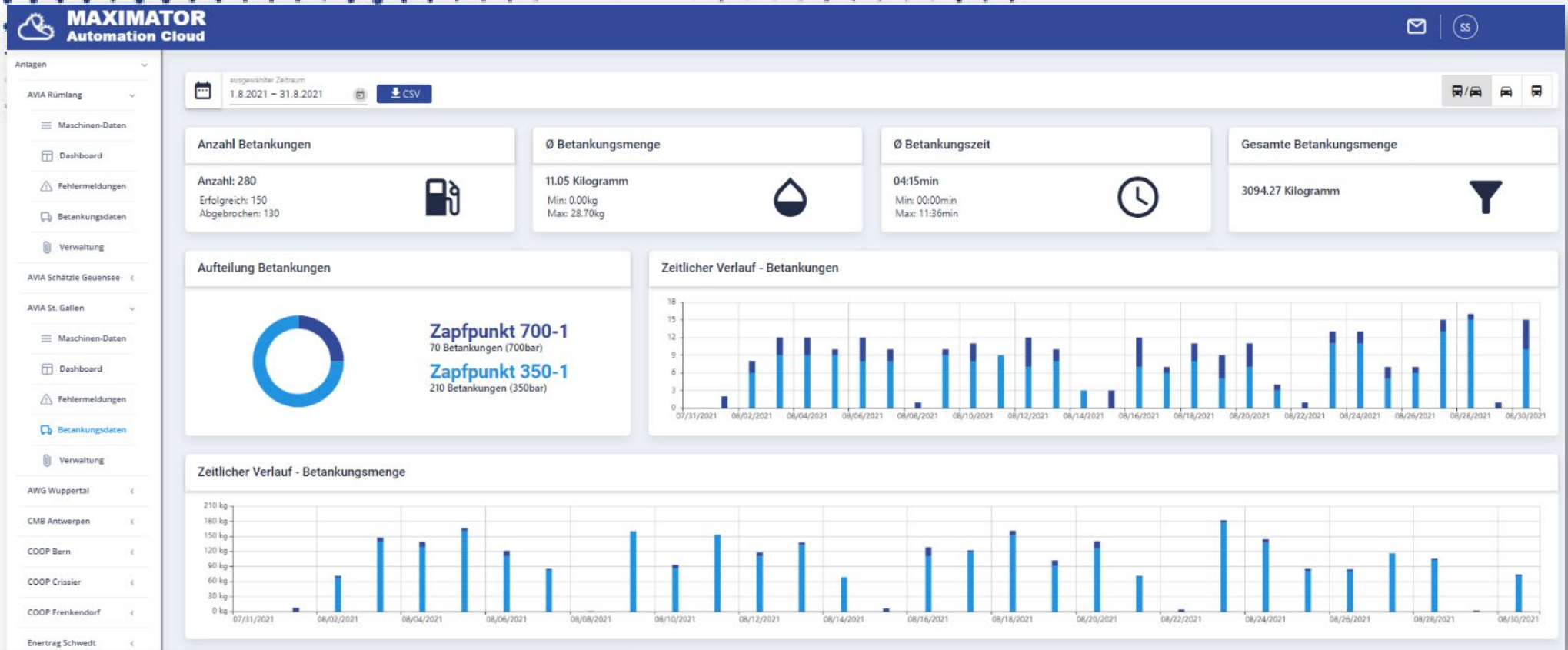


- Hydrogen inlet pressure range 15 - 600 bar
- Hydrogen outlet pressure range 15 - 950 bar (MAWP = 1050bar)
- delivery rate 25 - 110 kg/h
- footprint 6200 x 2485 mm
- stroke frequency of up to 1,5Hz due to mass balancing
- precise piston movement and deadspot optimization
- highly efficient water cooling
- reduced leakage possibilities due to straight design
- Automatic Seal Exchange (ASX)



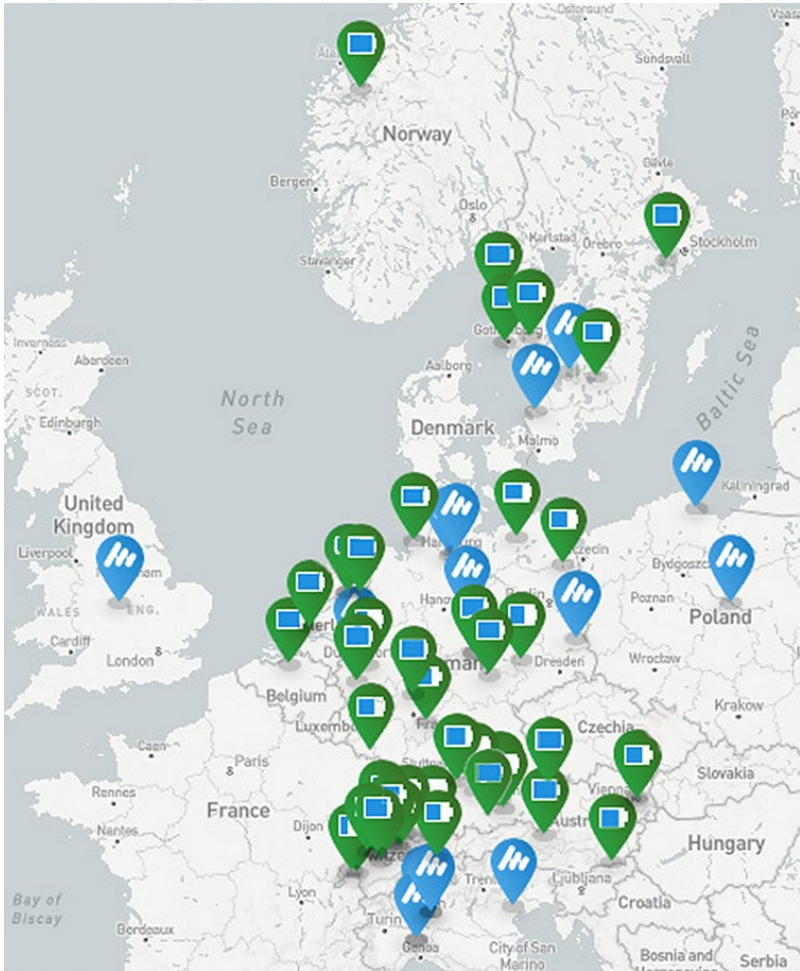
DELIVERY CAPACITY UP TO 500b - MAX COMPRESSION 1.6 VS 2.0



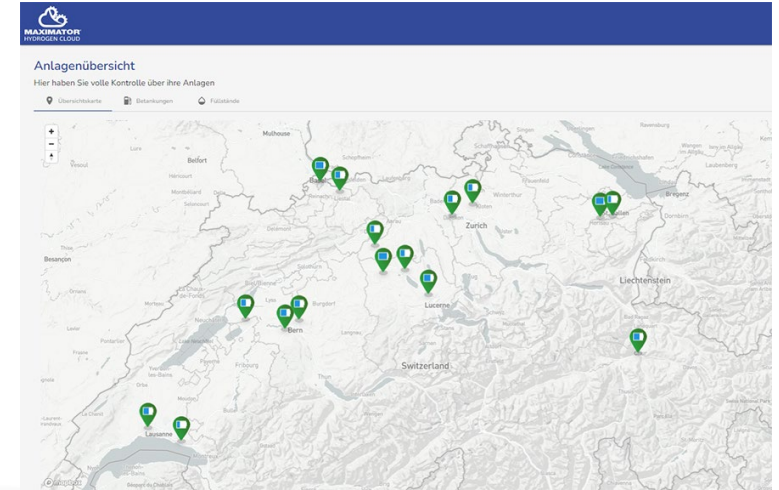


- detailed overview of refuelling data per station
- report and export function
- filtering by refuelling type and dispenser
- **24/7 SERVICE**

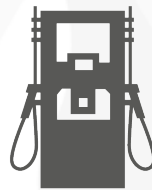
REFERENCES



| Country | H2 stations in operation (extract) |
|-----------------|------------------------------------|
| Switzerland | 17 |
| Germany | 16 |
| The Netherlands | 3 |
| Austria | 4 |
| Sweden | 7 |
| Norway | 1 |
| Italy | 6 (in construction) |



17 stations in Switzerland



150.000+
refuelings



1.600+ tH₂
mass refueled



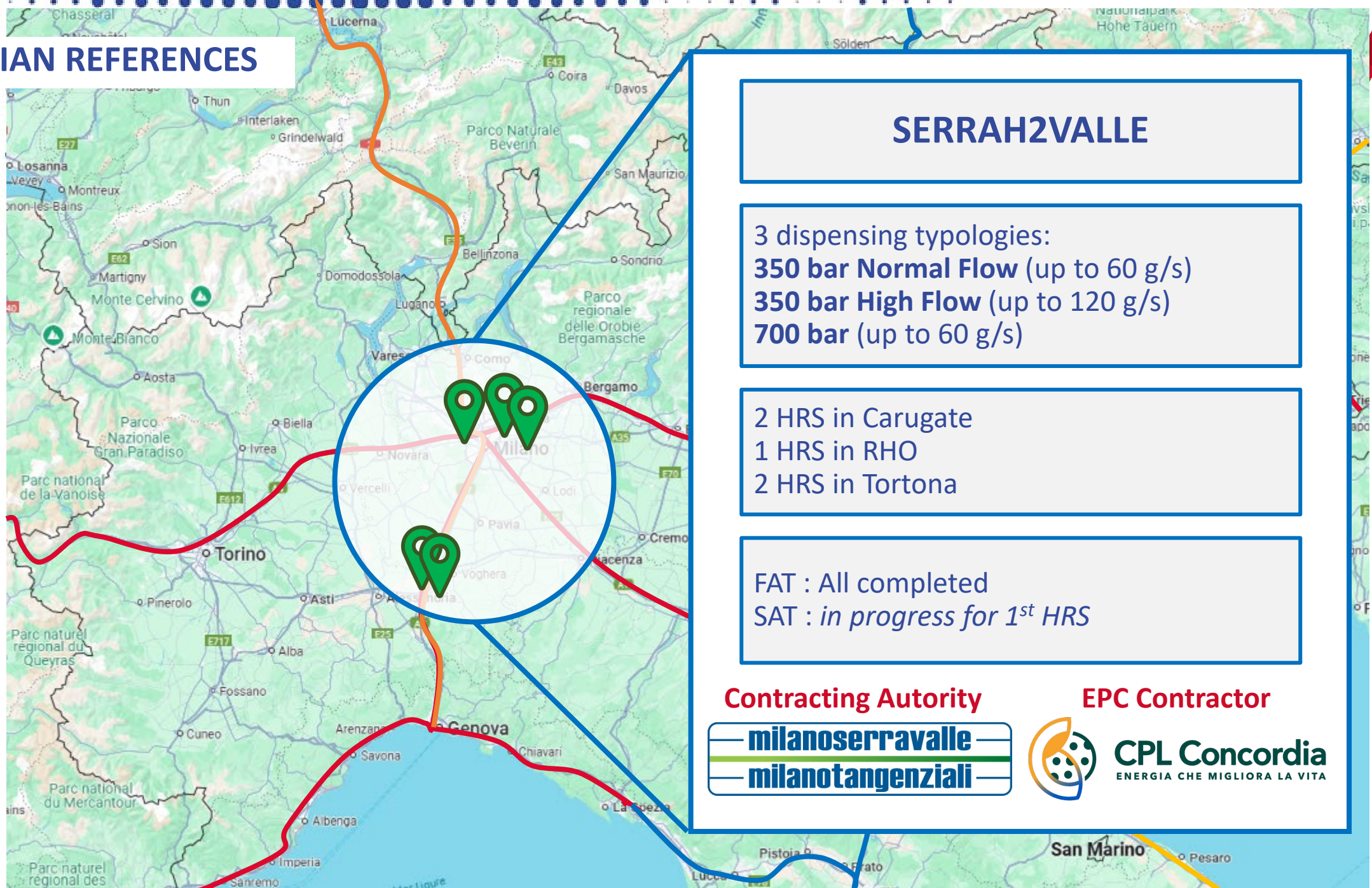
48
Trucks



10 mln +
Kilometers driven

>80 stations worldwide by 2025

ITALIAN REFERENCES



SERRAH2VALLE

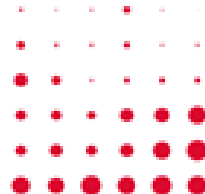
3 dispensing typologies:
350 bar Normal Flow (up to 60 g/s)
350 bar High Flow (up to 120 g/s)
700 bar (up to 60 g/s)

2 HRS in Carugate
1 HRS in RHO
2 HRS in Tortona

FAT : All completed
SAT : *in progress for 1st HRS*

Contracting Authority
milanoserravalle
milanotangenziali

EPC Contractor
**CPL Concordia**
ENERGIA CHE MIGLIORA LA VITA



ITALIAN REFERENCES



PAESE

2 dispensing typologies:
350 bar High Flow (up to 120 g/s)
700 bar (up to 60 g/s)

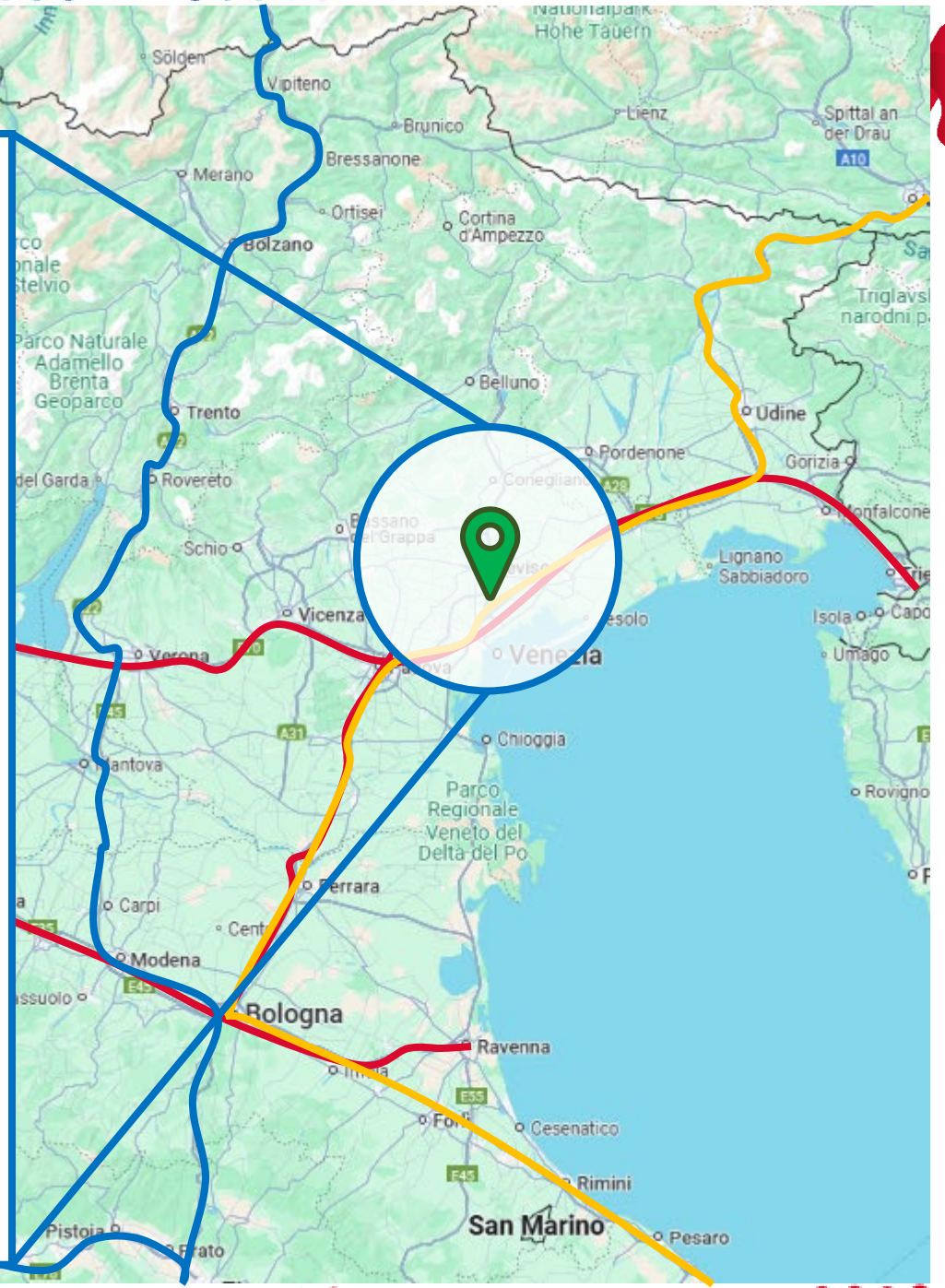
1 HRS in Castagnole di Paese (Treviso)

FAT : Q2 2025
SAT : *TBD*

Contracting Authority



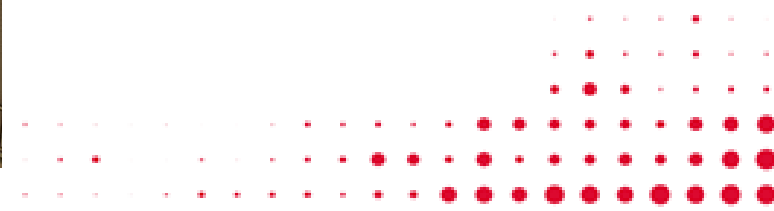
EPC Contractor

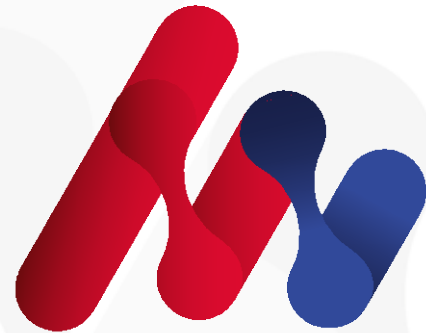


WORK IN PROGRESS IN CARUGATE EAST



WORK IN PROGRESS IN CARUGATE EAST





MAXIMATOR[®]
HYDROGEN

