



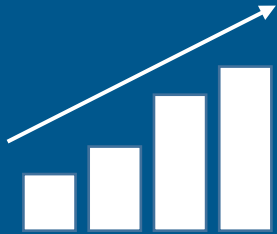
# German-Finnish Green Hydrogen Conference

An open dialogue between two  
countries

09.05.2023 Epicenter (Mikonkatu 9 / 00100 Helsinki)

sera Hydrogen GmbH  
Immenhausen – Germany  
Dipl.-Ing. Roland Tittel  
Managing Director

SINCE 78 Years



**Continuous Growth**

Over



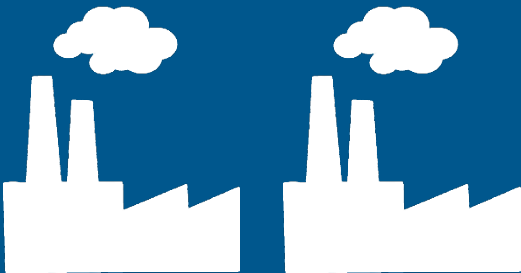
EURO TURNOVER



MORE THAN 12%  
TRAINEES

## THE sera GROUP

2 Production Sites  
IN IMMENHAUSEN



OVER 250 PEOPLE  
WORLDWIDE

1 Group



WITH 9 SITES  
WORLDWIDE<sub>2</sub>



# THE sera GROUP



Headquarter and Production Site I in Immenhausen



Production Site II in Immenhausen



# THE sera GROUP



Charging station for e-vehicles at site I



Solar modules in site I





sera

sera

H2  
ENERGY  
OF THE  
FUTURE

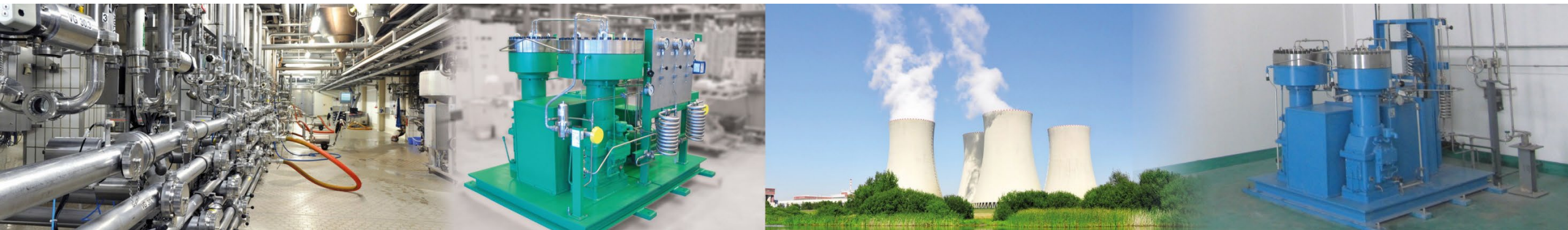
sera

**HYDROGEN**  
TECHNOLOGY

**DOSING**  
TECHNOLOGY



# GAS-COMPRESSORS





# sera TECHNOLOGIES FOR HYDROGEN APPLICATIONS



**H2** **ENERGY  
OF THE  
FUTURE**



# sera HYDROGEN – OUR H2 EXPERIENCE



- Over 60 Years of experience in hydrogen compression
- Over 1.000 H<sub>2</sub>-Compressors worldwide running
- three Technologys for the Hydrogen-Compression
- First Hydrogen-Refuelling Station in Nordhessen 2016 at the Headquarter in Immenhausen



# sera HYDROGEN – PRODUCTS AND SERVICE







- Specially developed for Home Power Applications
- Cooperation with company HPS - Picea System
- Series production
- Operating pressure up to 500 bar(a)
- Inlet pressure 20 - 40 bar(a)
- Delivery rate  
1 - 20 Nm<sup>3</sup>/h

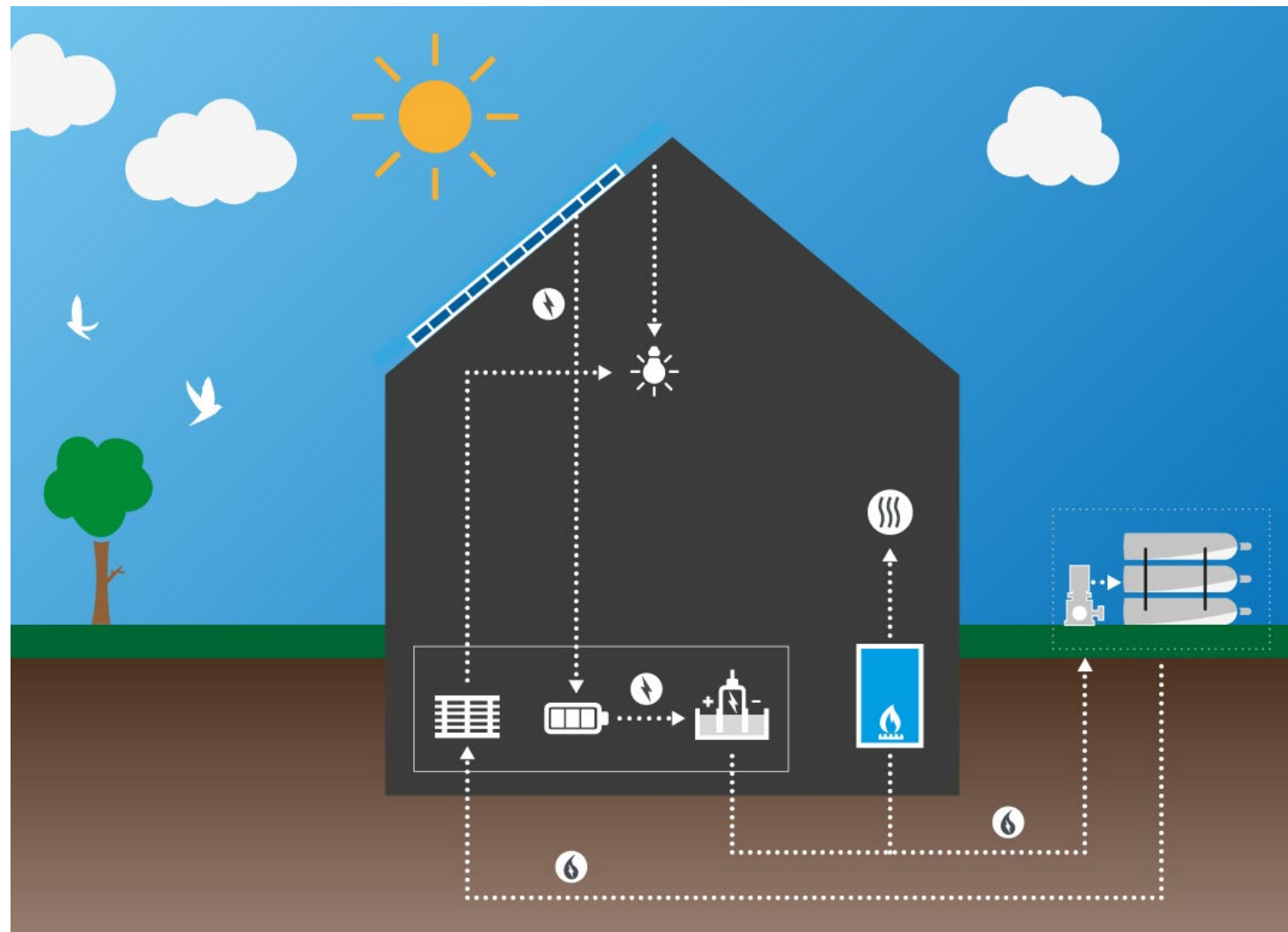




# APPLICATION FOR AGILITY

## HOME POWER APPLICATION

- independent and emission-free supply of energy - all year round, even in winter
- Clean and self-sufficient energy
- essential growth market in the new construction sector and modernization of buildings



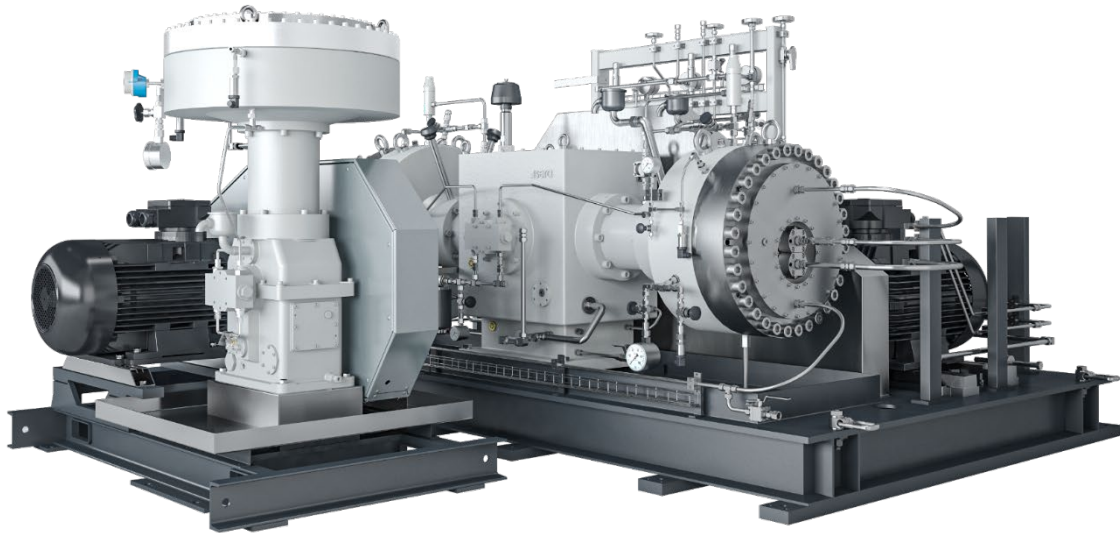


# APPLICATION FOR AGILITY





# PURITY



- Hydraulically coupled metal diaphragms
- Vertical or horizontal design
- 1- or 2-stage design
- MV series
- Pressure up to 900 bar
- suitable for Ex-Zone 1 & 2
- useable for every gas
- available as a unit or as a complete system
- Over 1000 compressors in operation for hydrogen alone



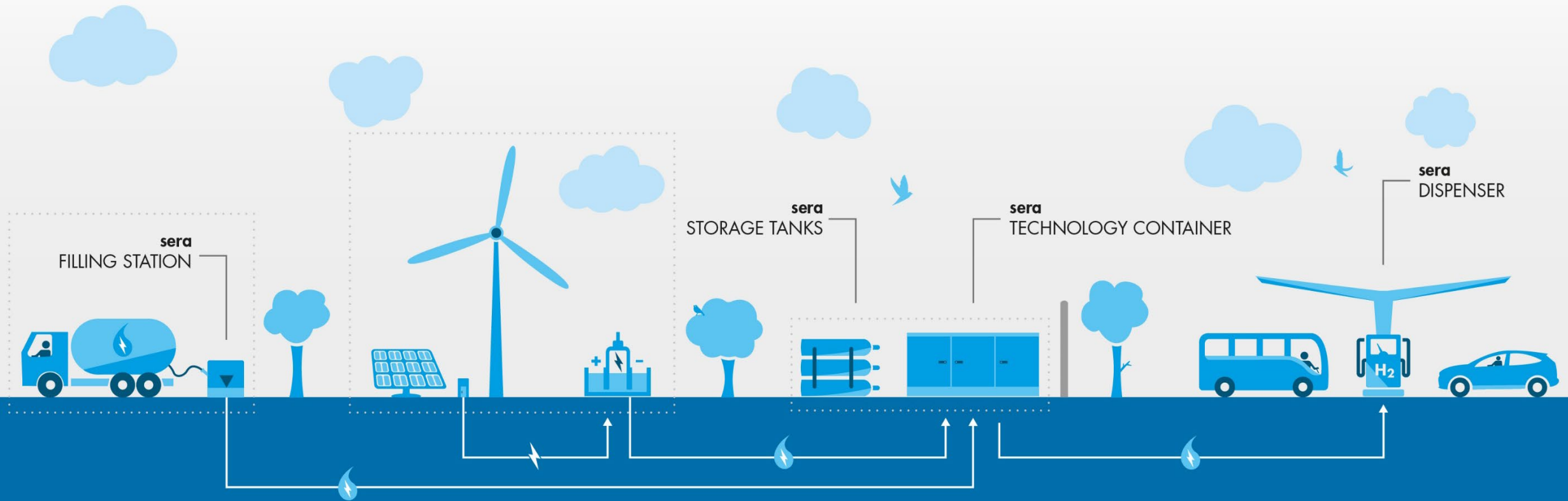
# POWER-TO-GAS STATIONS



- Modular systems
- Up to 200Nm<sup>3</sup>/h
- Bottle Filling
- Trailer Filling
- Compact System
- Up to 500bar
- Inlet pressure 20-40bar
- Equipped with all safety and controlling instruments
- Control cabinet integrated



# THE sera H2-STATION G2

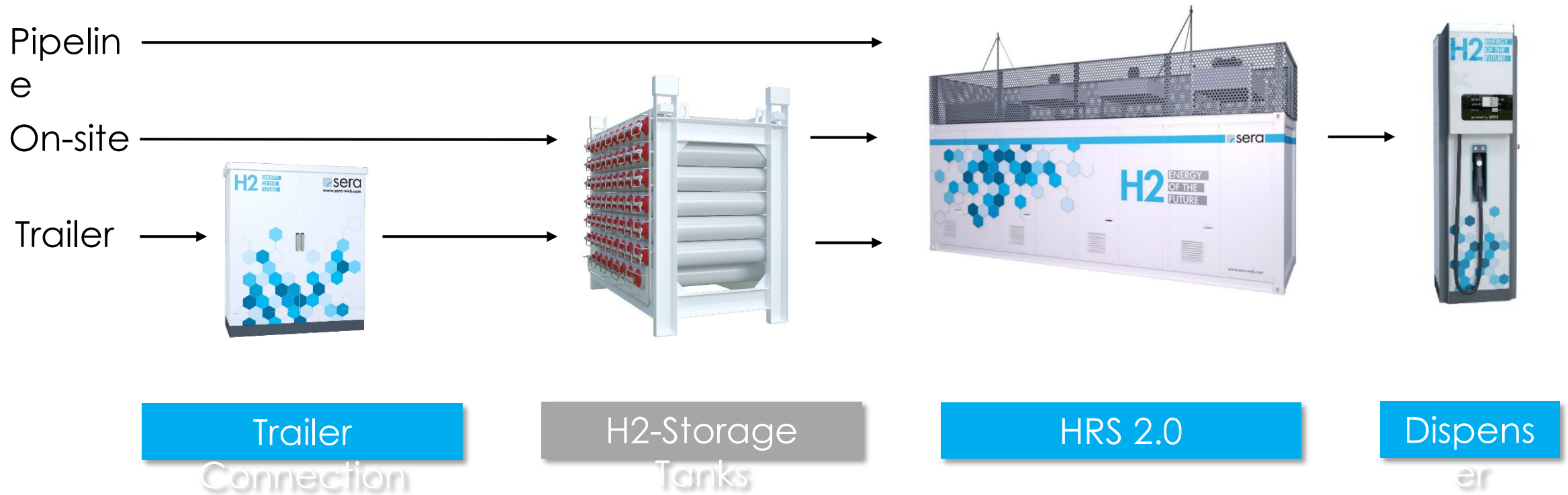




# sera HYDROGEN – KEY PRODUCTS

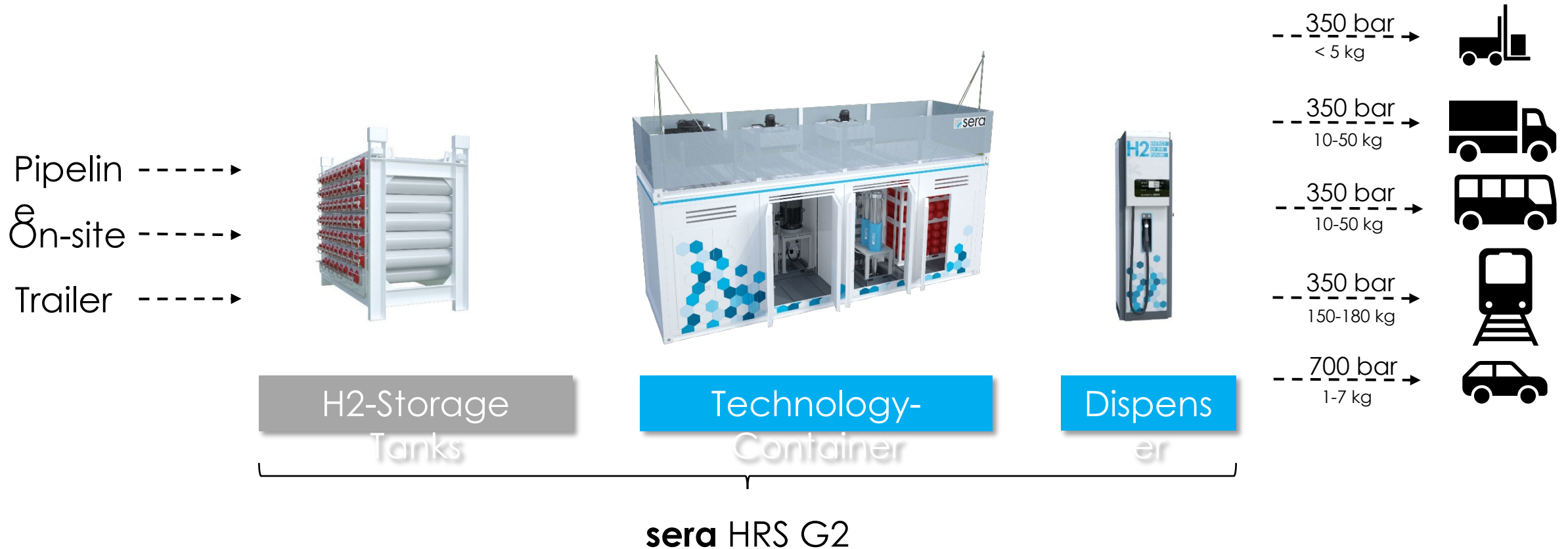


## sera HRS 2.0 (2022)



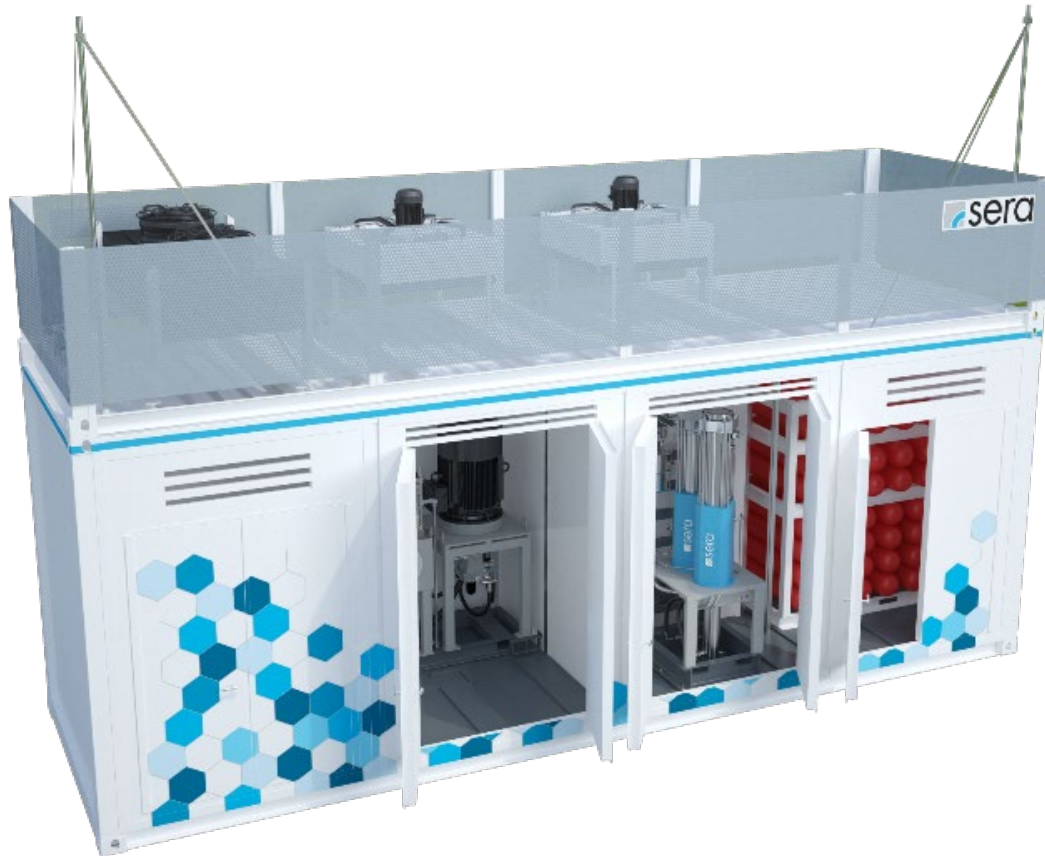


# THE sera H2-STATION G2





# THE sera H2-STATION G2



- Compressor
- Cooling System
- Control Modul
- Pressure tanks
- Refrigeration
- Control- and Load Cabinet
- Compressed air unit
- Gas leakage system
- Conformity: DGRL 2014/68/EU, ATEX 2014/34/EU, NSR 2014/35/EU, EMV 2014/30/EU

# sera HRS – DISPENSER



- 350 bar and 700 bar
- with or without flow measurement
- Dimensions: 620x520x2.200
- According to SAE J2600 und J2799
- Start and Stopp Button
- Outdoor Installation
- -15°C up to +40°C
- Connection to the Technology Container
- Conformity: DGRL 2014/68/EU, ATEX 2014/34/EU, NSR 2014/35/EU, EMV 2014/30/EU



# REQUIREMENTS FOR THE HRS



- high energy efficiency and technical reliability
- low Maintenance cost
- high flexibility through modularity



# HRS-REFERENCES

## OPERATION DATA

- Year of delivery: 2020
- Location: Germany
- Application: Light Duty
- Pressure: 30 bar (a) → 700 bar (a)
- Compressor technology: piston compressor
- Hydrogen supply: electrolyser





# HRS-REFERENCES

## OPERATION DATA

- Year of delivery: 2022/23
- Location: Germany
- Application: Light Duty & Heavy Duty
- Pressure: 30 bar (a) → 500 & 900 bar (a)
- Compressor technology: piston compressor
- Hydrogen supply: electrolyser



# AUSGEZEICHNETE LEISTUNG



**Großer Preis des  
MITTELSTANDES**

Oskar-Patzelt-Stiftung



**AWARDED**  
**We stand for innovation.**



# PRE- AND AFTER-SALES SERVICE



THANK YOU FOR YOUR ATTENTION.

[www.sera-web.com](http://www.sera-web.com)







[www.sera-web.com](http://www.sera-web.com)

