

2019-2022

# COSMHYC<sup>XL</sup>

INNOVATIVE H2 COMPRESSION

**COSMHYC XL** continues and enhances the work of its sister project COSMHYC. It focusses on the scale-up of the new compression technology for XL applications.

## TARGETS

- ▶ Scale-up of the COSMHYC technology
- ▶ Improve electrical efficiency by > 30%
- ▶ Further reducing costs and noise levels

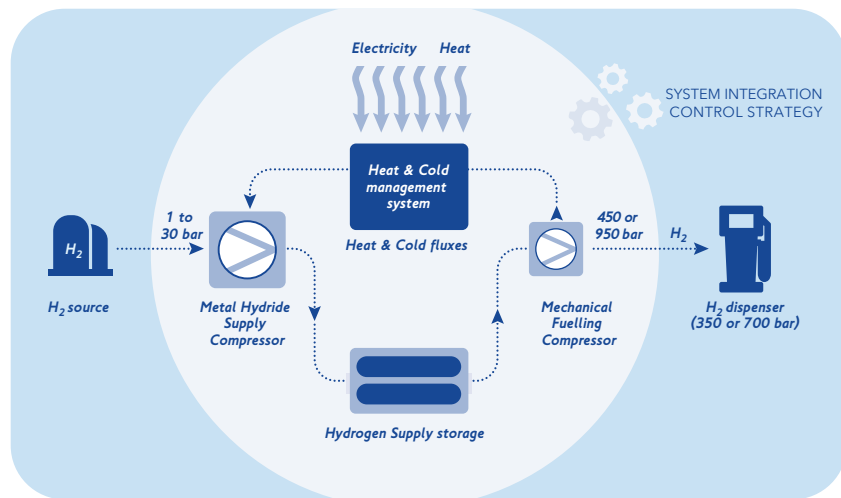


Co-funded by  
the European Union

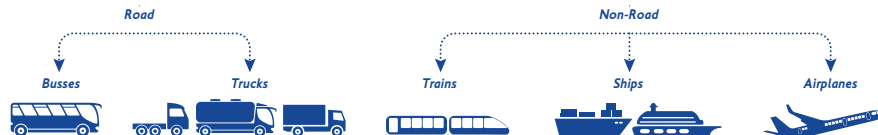
The project is supported by the Clean Hydrogen Partnership and its members Hydrogen Europe and Hydrogen Europe Research.

**THE COSMHYC  
SOLUTION**  
metal hydride  
compression  
+ mechanical  
compression





**COSMHYC XL**  
provides a modular  
and flexible concept  
that is adaptable to  
nearly all large-scale  
transport & industry  
applications.



| Pressure MHC | Pressure MC | Baseload capacity of hybrid concept | Peak flow rate of hybrid concept | Energy requirements                       | Noise levels                                      | Critical materials                             | Outlet $H_2$ purity |
|--------------|-------------|-------------------------------------|----------------------------------|---|---|--|---------------------|
| 1 - 500 bar  | 950 bar     | 200 kg/day                          | ~ 60 kg/h                        | Electricity can be replaced by waste heat | Core technology: very low noise; system: max 60dB | None, thanks to rare-earth-free metal hydrides | Compatible with ISO |

**DISCOVER MORE**  
[www.cosmhye.eu](http://www.cosmhye.eu)