

H2 activities proposed by Akira

Design, powertrain calibration and R&D testing on our Hydrogen test bench
Development, set up & installation of specific H2 test bench on customer facilities

Hydrogen Facilities, Applications & Roadmap

Hydrogen Test cells

Akira hydrogen test cells

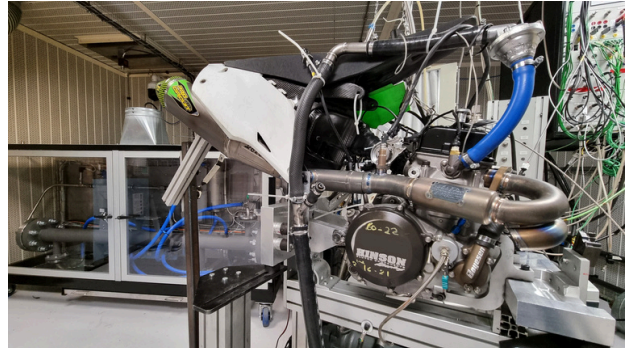
- 2 test cells fully equipped & certified
↳ (1 cell certified in 2022 / 1 cell certified in 2024)
- For piston engine and gas turbine application
- Equipped with an electrical machine
250 kW - 10 000 rpm

Large size turbomachine & propeller test cell

- Up to 750 kW
- Turbolab platform in cooperation with ESTIA

Customer test cell

- 1 hydrogen test cell for gas turbine installed in 2024



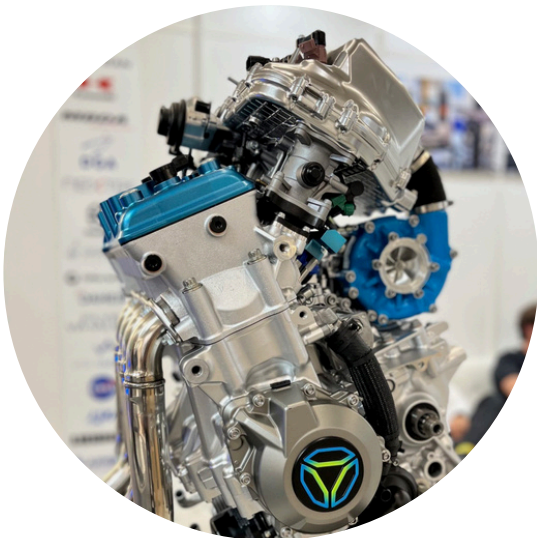
Hydrogen pistons engines (ICE)

R&D projects 2023 / 2024

- R&D on high performance turbocharged monocyliner
[Specific Power target = 240 kW/L]
- Testing of new lubricants for H2-ICE
- R&D on 4 cylinders supercharged pistons engine
[Specific Power target = 240 kW/L]

On going 2024 / 2025

- R&D on monocyliner with PFI and DI H2 injection
[Specific Power = 100 kW/L]
- Retrofit of a 4 cylinders 2L gasoline engine to H2 with a target of 150 kW/L



Hydrogen gas turbines

Performed on 2024

- Conversion of 7 kW micro turbine to hydrogen
↳ Succesfull tests with an electrical power output of 6.5 kW
- Conversion of 250 kW Turbofan to hydrogen
↳ Successful results on combustor sector model

On going 2024-2025

- Tests of new H2 injectors design
- Development & tests of Hydrogen Core HP

