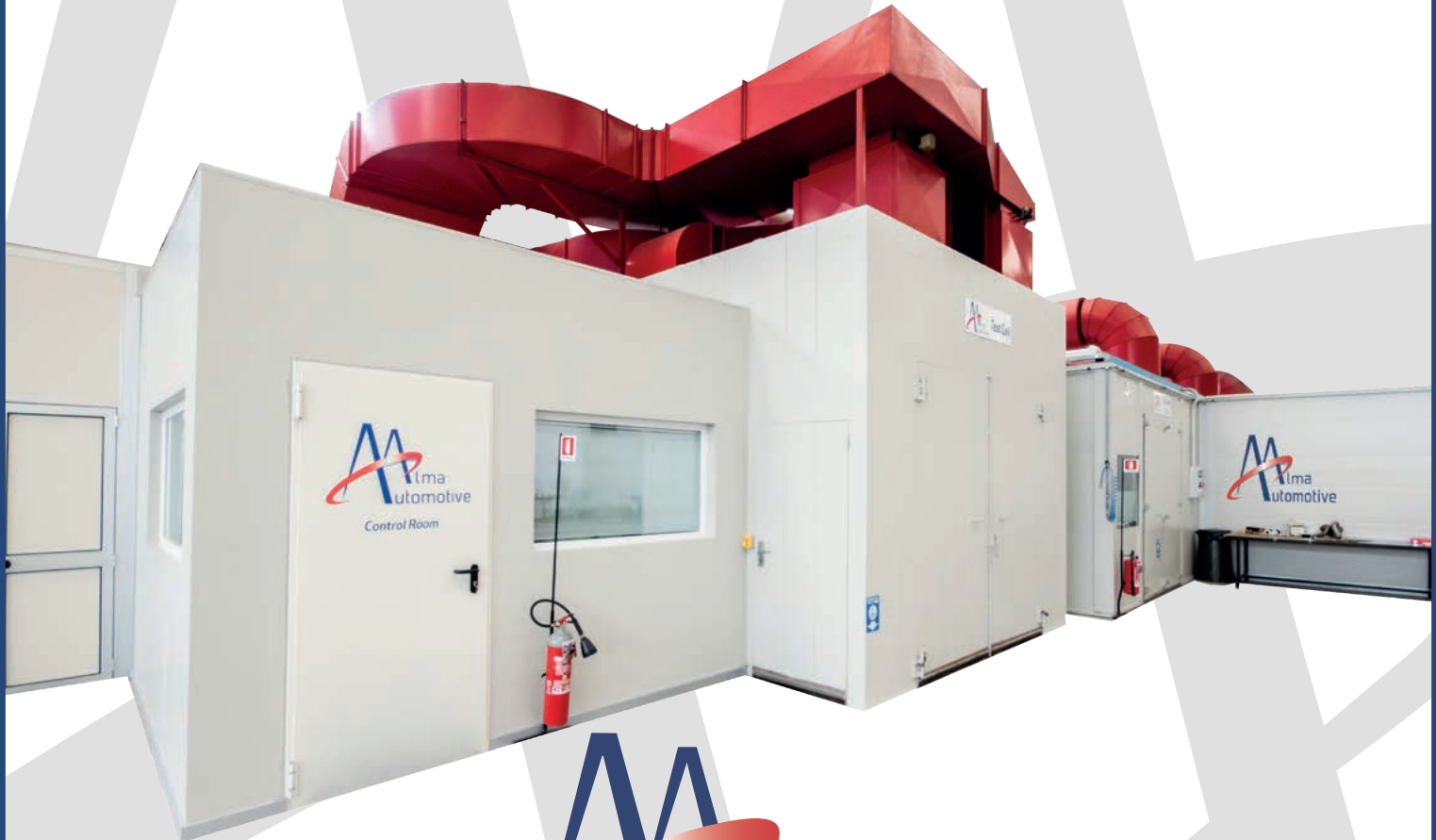


ALMA AUTOMOTIVE ENGINE TESTING



Engine Testing

Our Expertise

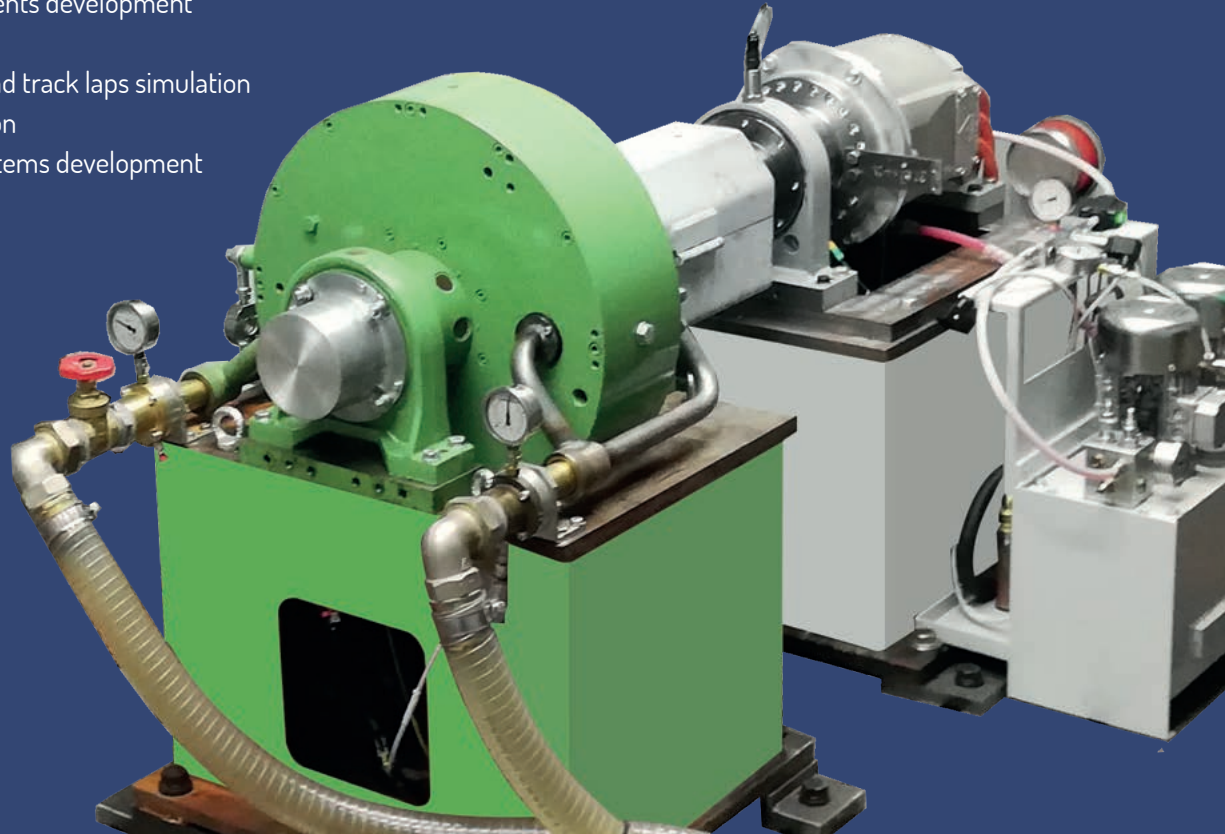
- Engine testing experience since 2016
- Customer-tailored solutions for engine testing,
- Turnkey engine test cells
- The test cell automation and acquisition
- Engineering support

Our Offer

- Performance evaluation
- Engine components development
- Durability tests
- Driving cycles and track laps simulation
- Engine calibration
- Combustion systems development

Your benefits

- Uncompromising confidentiality
- Cost effectiveness
- Unbeatable responsiveness
- Great experience with local manufacturers on gasoline and diesel engines testing and calibration



Engine dyno ready to use

ECU management/calibration:

- Possibility to use and automate several ECU calibration software
- Custom automatic calibration procedures
- Possibility to interact with the ECU using the test bench control software
- Capability of managing the engine with prototype ECUs by Alma Automotive with custom control SW
- Capability of bypassing ECU strategies with other implemented on realtime platforms (designed in Simulink or LabVIEW)



Dyno charchteristic

- AC asynchronous machine
- Power 221 (266) kW, Torque 455 (546) Nm from 0 to 4636 rpm when used as generator, max speed: 10000
- Moment of Inertia: 0.3 kgm²
- Encoder 512 pulses/rev, redundant sensing

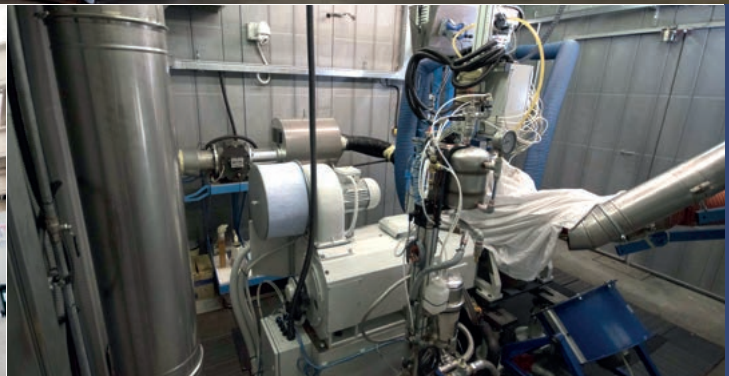
Engine dyno test cells capabilities

- 5 test bench cells
- Cells dimensions 5m x 6m x 3m (L x P x H)
- Basements dimensions: from 1.4m x 3m to 1.6m x 2m
- Engine dynos: from 3.7kW 20Nm to 1250kW 10500Nm see Borghi&Saveri catalogue
- One cell available from January 2021 with a 200kW Permanent Magnet machine and 600V common DC bus, speed up to 10500RPM.



[Borghi&Saveri catalogue](#)

Engine dynos test cells, signals acquisition, test automation and emissions measurement can be customize on customer requirements.



Engine testing site



ENGINE TEST SITE C/O

Borghi & Saveri

Via Provinciale per Bologna, 28/30

40066 Pieve di Cento (BO) Italy

Tel +39 051 975364/5

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Originally established as a spin-off of University of Bologna, Alma Automotive represents the synergy between knowledge acquired in academic research activities and years of experience in developing applied solutions. The company has now evolved to offer both ready-to-use products and engineering services supported by bespoke hardware and software solutions.

Highly oriented towards new challenges, Alma Automotive's mission is to provide innovative solutions

and tools to help customers in the development of ever more efficient engines and powertrains. Our partnership with National Instruments and the strong relationship we have with top-tier automotive companies is testimonial to the high level of skill and quality of services offered to our clients.



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