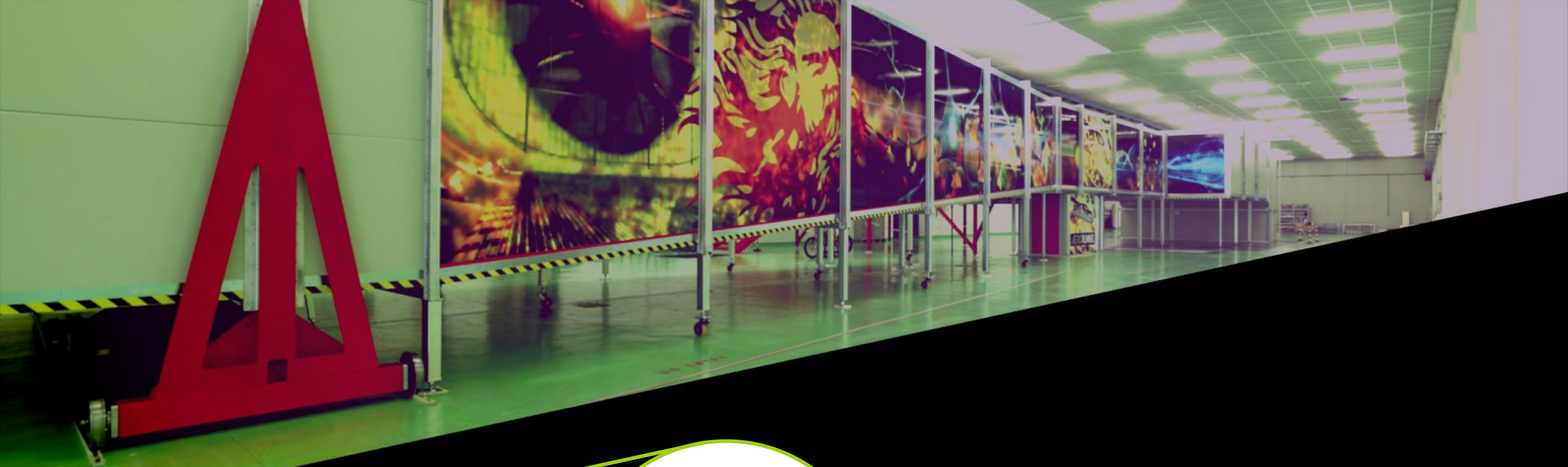


AEROTUNNEL

LEVERAGE OUR TECH

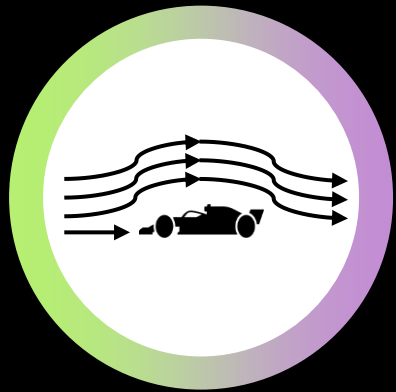
www.aerotunnel.it



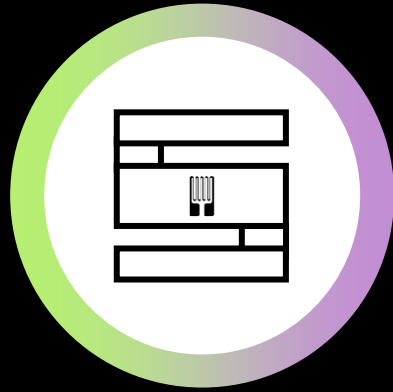
What is **AEROTUNNEL**?

A **closed-circuit wind tunnel** facility, located in Gorizia, Friuli Venezia Giulia - Italy

What do we offer?



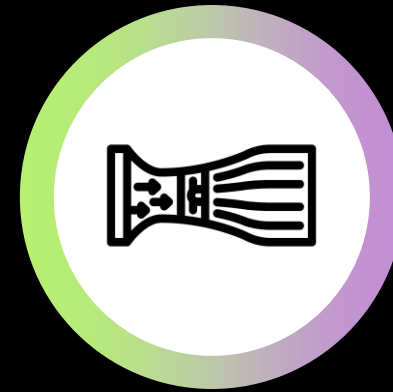
Aerodynamic
testing



Load cells
design and
manufacturing



Balances
design and
manufacturing



Wind tunnel
design and
manufacturing



Dedicated
software
development

AEROTUNNEL's test facility and core instrumentation has been entirely developed by its team of engineers and manufactured at ASSE's workshop.

HSTS

High Speed Test Section

Upper TS

Front area: 2,4 x 2,4 m

Length: 6 m

Max speed: 40 m/s (144 km/h)

- Higher speed tests in real scale for sports (skiing, cycling, motorcycling) or scaled models (aeronautical and other industrial sectors)
- Equippable with a support mast with variable pitch and yaw angles to measure aerodynamic coefficients





LSTS

Low Speed Test Section

Lower TS

Front area: 7,0 x 2,4 m

Length: 10 m

Max speed: 14 m/s (50 km/h)

- Low speed tests on auto vehicles, ship models and buildings
- Built-in 360° rotation capability to expose the model to different yaw angles

Atmospheric Boundary Layer

One of **Italy's largest** Atmospheric Boundary Layer wind tunnels.

AEROTUNNEL's lower branch allows ABL development for different scales and ground environments for **naval, civil and aeronautical applications.**



Our testing equipment

- Internal/external 6DOF **balances**
- **Hot wire** anemometers
- **Pressure probes**
- **Pitot** tubes
- In-house designed and manufactured **force transducers**
- 64 channels **Scanivalve pressure scanner**
- **Smoke** generator
- Bruel & Kjaer **phonometer with binaural microphones**
- Real time **3D flow measurement and visualization**



Test data and video footage



Data acquisition

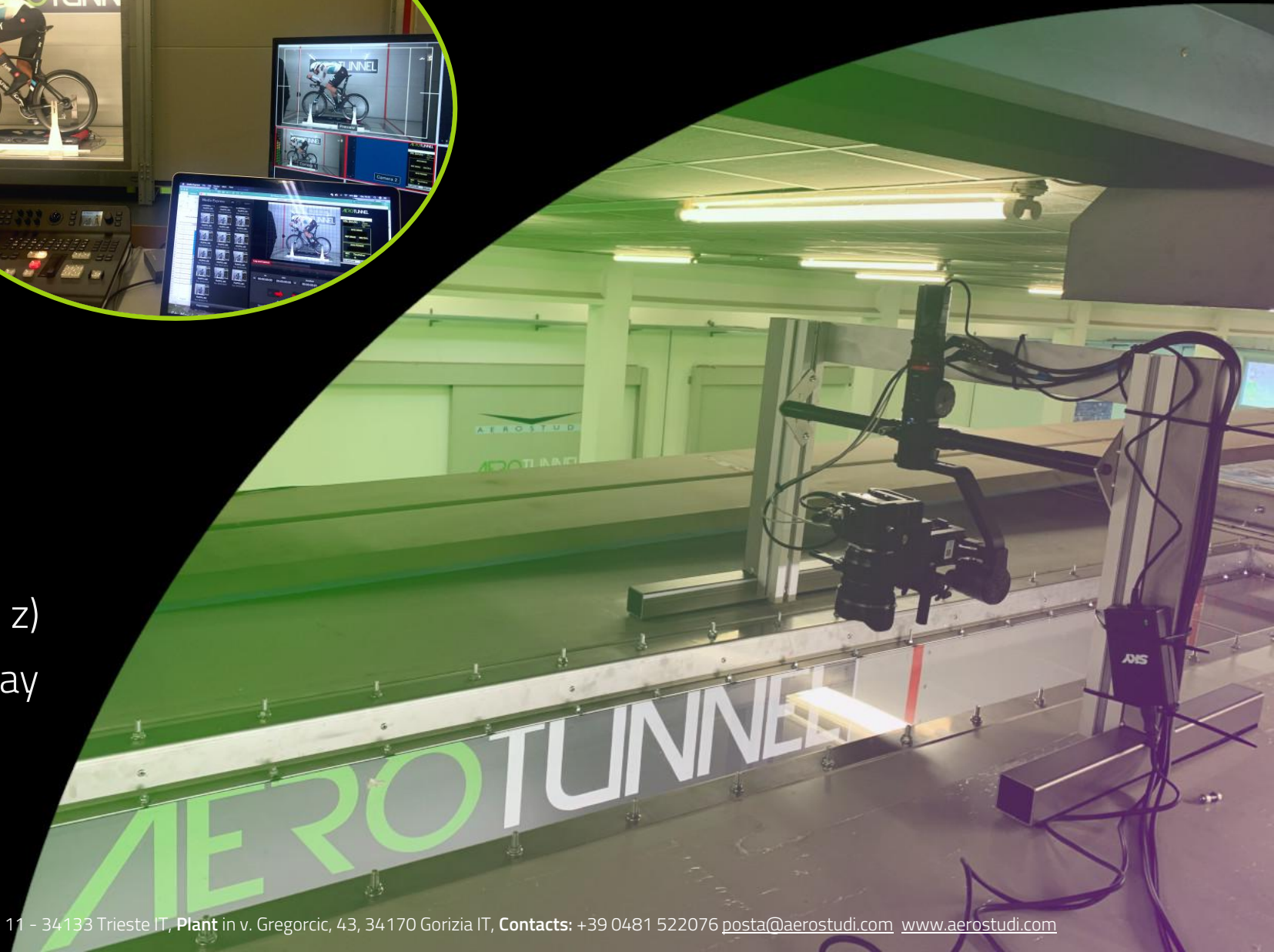
In-house software to configure instruments, acquire and record data.

Real time results

TV studio

3 UHD (4k) TV cameras on 3 axis (x, y, z)

State of the art video console to display and record tests



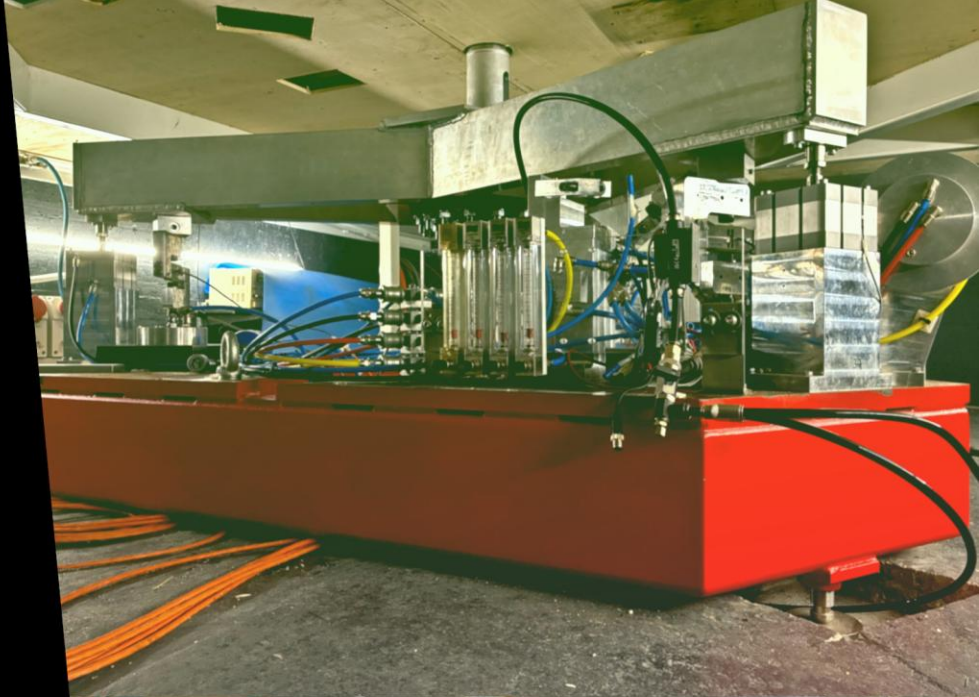
Our load cells

- Precision < 2 % of full scale
- Specifically designed to meet customer's demands

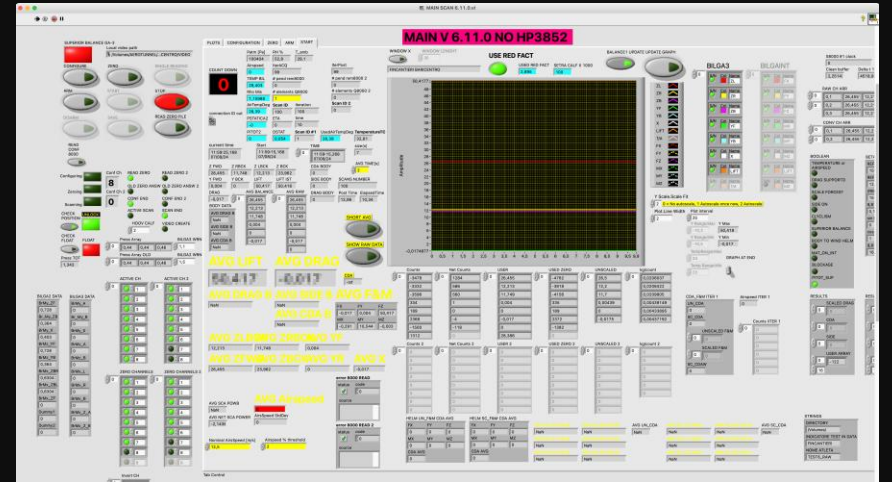
Our balances

- 6 DOF
- **Fully computerized** data acquisition and model attitude control systems
- Continuously electronically controlled **yaw angle**: -360° to $+360^\circ$
- Additional mast on request for continuously electronically controlled **pitch angle**

- Precision $< 2 \text{ ‰}$ of full scale
- Sensitivity on x and y axes $< 0,01 \text{ ‰}$ of the z load (a 5 g drag force can be measured with a 500 kg load along z)
- Dimensions from $\varnothing 300 \text{ mm}$ up to $\varnothing 4000 \text{ mm}$ with loads from 10 kg up to 10.000 kg



Software



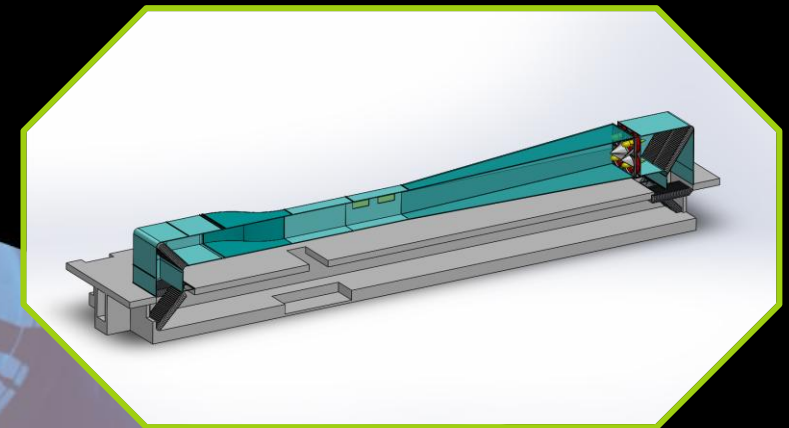
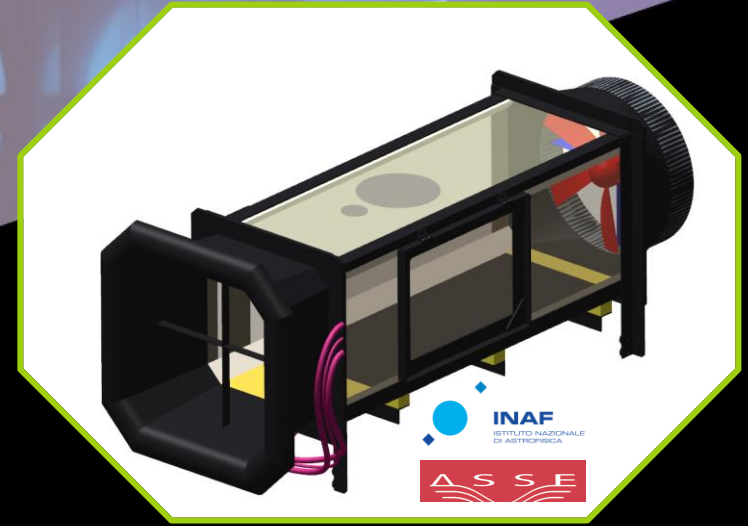
Written, tested and validated **in house** for wind tunnel testing management

- Manages **data acquisition and video recording**
- Few manual inputs required
- The operator's role is mainly to oversee the test, paying attention to possible anomalies

Wind tunnels design and manufacturing

Longstanding expertise in wind tunnel design and manufacturing **based on customers requirements.**

- Open and closed loop
- Vertical and horizontal
- From little test sections for didactic purposes up to industrial scale
- Designed for any specific needs
- Integration of existing hardware





If you want to **know more...**

Follow us on **LinkedIn!**



AEROTUNNEL and **AEROSTUDI™** by **ASSE S.r.l.**

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