

Testing and Certification of Ventilation Systems

EN 12101-3 : Smoke and heat exhaust ventilation (SHEVS)



30 years' experience in fire safety and unique facilities for testing fans

Applus+ Laboratories is the European leader in fire testing, both for its number of accreditations and recognitions and for the volume of tests it conducts annually. Our fire laboratories, located in Barcelona and Asturias (Spain), boast versatile and high-capacity facilities which allow us to adapt to the characteristics of each manufacturer's fans.

- Fans of all types and positions
- Fans up to 3.5 metres in diameter and 1 MW power

The Applus+ facilities also include a unique tunnel for carrying out real-scale fire simulations and testing the capabilities of smoke and heat exhaust ventilation systems used in closed settings like tunnels, parking garages and transportation infrastructure.

EN 12101-3: The European standard and a global benchmark for high-temperature fans

Both our laboratories are accredited to test and certify fans to the EN 12101-3 standard (LGAI Technological Center S.A. - 9/LE895 and Tunnel Safety Testing S.A.- 710/LE1238)

. This European standard defines testing requirements, classification and certification for smoke and heat control systems. Conformity with this standard is mandatory in order to obtain CE marking, and it has become a worldwide reference to demonstrate a ventilation system's quality, including in markets without a fire-resistance testing requirement for this type of fan.

CE Marking

To obtain CE marking for their products and to market them in the EU, manufacturers and distributors of mechanical smoke and heat extraction systems for permanent use in buildings and infrastructure must demonstrate conformity with this standard. The most recent version of the EN 12101-3:2015 standard came into full force in April 2017. From this date, any fan that is put on the market must have been tested under the latest version of the standard.

Applus+ Fire Safety Certification

Applus+ has its own voluntary certification mark for high temperature fans based on the EN 12101-3 standard and the European certification process. The Applus+ Fire Safety certification scheme is recognised by the Gulf Council Countries, granting market access in this area. The Applus+ Fire Safety Certification mark is also a differentiating factor that allows manufacturers and distributors to demonstrate the quality of a product in markets where a testing and certification process is not mandatory.

The best path to Certification

The majority of manufacturers produce a wide range of products with varying sizes, positions and types of fan. Our experts study each project to identify the best path to certification for the product. This study allows us to identify which models should be used as test samples in order to maximise the number of certified products for the fewest possible tests.

- Project study and sample selection
- Testing in the accredited laboratory



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- Product classification
- Factory production control system inspection
- Certification and market access