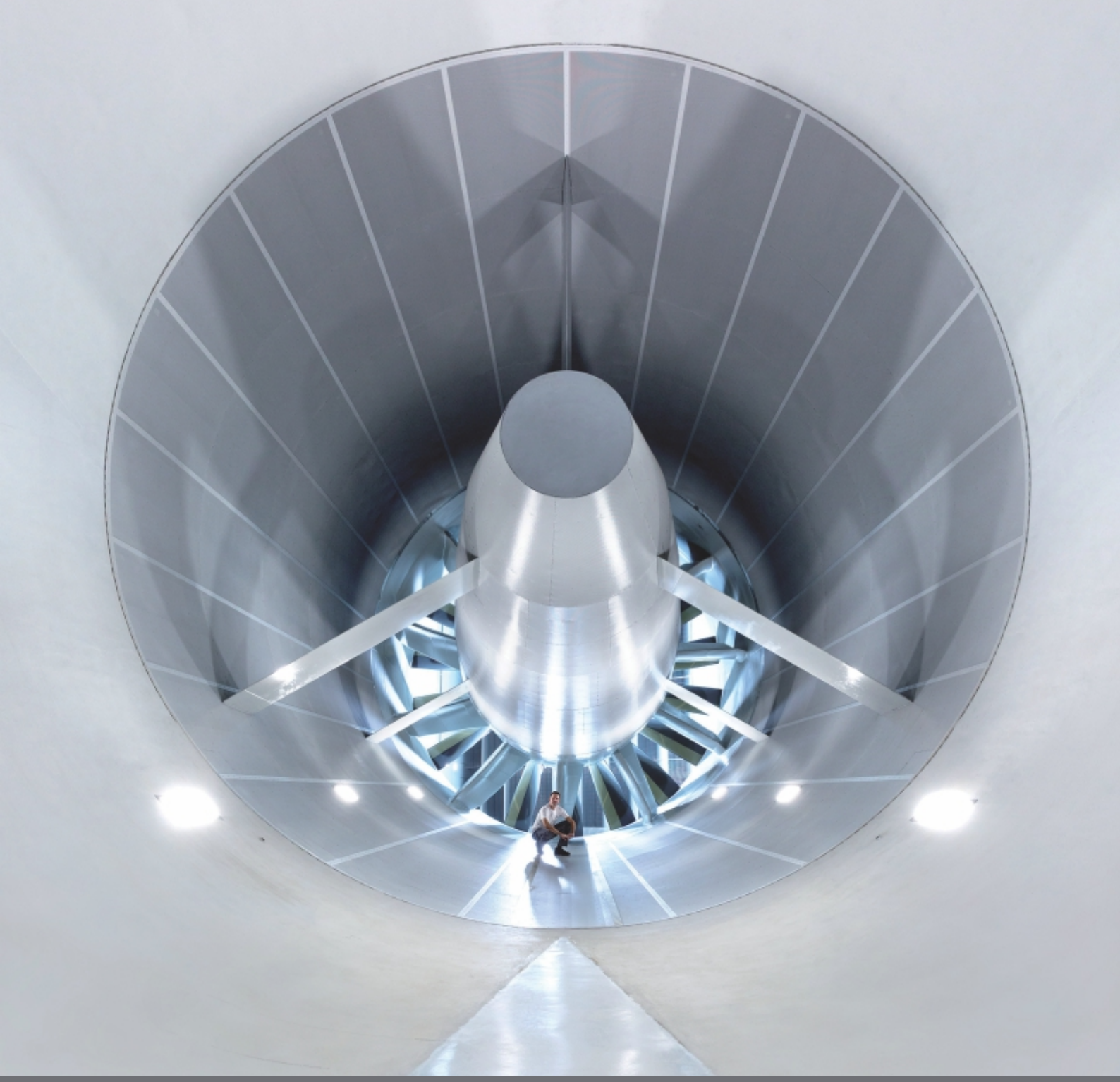


Wind Tunnel

Quiet. Efficient. Innovative.

TLT-Turbo

a company of POWERCHINA

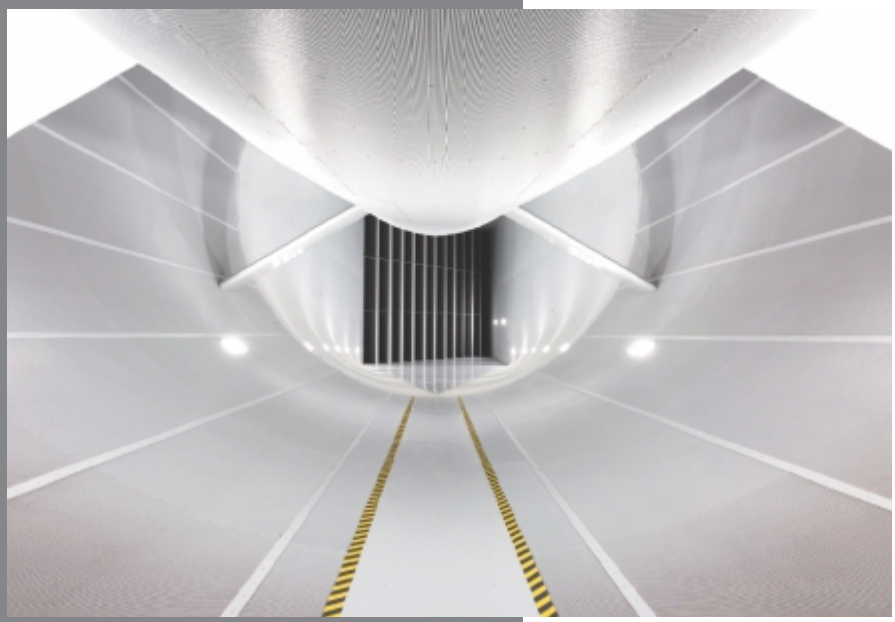
TLT-Turbo – 145 years of ventilation innovation.

TLT Turbo is founded on a strong tradition of pioneering technology and innovation in industrial ventilation. From 1873 TLT has been developing fans and blowers that have enhanced our clients' operations in diverse sectors across the globe. In 2014 TLT-Turbo GmbH was acquired by POWERCHINA (Power Construction Corporation of China).

Aerodynamic wind tunnel fans.

For decades, TLT-Turbo has supplied turn-key wind tunnel solutions to clients worldwide. From 2007, this offering changed to focus solely on the fan itself as the key component of a wind tunnel system. Our clients benefit from our extensive experience and expertise in wind tunnel systems. This expertise allows TLT-Turbo to provide a tailored solution because we understand how the separate components interact with each other.

Aero-acoustic wind tunnel fans.



TLT-Turbo provides fan solutions tailored to the complex requirements of wind tunnel systems. Our aerodynamic, aero-acoustic and climatic wind tunnel fan design is influenced by our commitment to developing products that incorporate the latest and most efficient technological innovations. This is evident in components such as our spherically designed rotating nose cone that reduces noise emission. The rotor, stator and other components are designed for optimal blade passing frequencies which influences wind tunnel acoustic and aerodynamic fan performance.

Climatic wind tunnel fans.

Climatic wind tunnels provide an opportunity to test the performance of various types of vehicles under extreme weather conditions, such as from -40 °C to 60 °C combined with high humidity, pressure variants and high wind speeds. TLT-Turbo's track record includes numerous tailor made climatic wind tunnel fan installations of up to 9 m in diameter for clients worldwide.

Skydiving wind tunnel fans.

In recent years, indoor skydiving has soared in popularity. TLT-Turbo has developed solutions for this application, amongst others, in the form of vertical operating fans. Our vertical fan installation allows the equipment to be lifted and manoeuvred for easy access and maintenance.

In-house manufacturing.

All TLT-Turbo fan and blower components are developed and manufactured in-house. As part of the global POWERCHINA Group, we have the benefit of numerous manufacturing facilities located worldwide. These manufacturing capabilities guarantee delivery of high quality products backed up by world class manufacturing processes, professional project management and experienced on-site service staff.

Our services.

To ensure machine reliability and operational availability after installation, TLT-Turbo provides fully integrated after sale services throughout the fan system life cycle. Our repair, maintenance and parts supply departments are trained to assist clients in maximising the economic performance and duty life time of TLT-Turbo products. We also have the expertise to service a wide range of other fan brands. Assessments and repairs can be carried out on-site or at one of our workshop facilities. Our customers appreciate our swift turnaround time.

For a high quality technical and economical ventilation solution that is tailor made to your requirements contact us or visit our website to locate your nearest TLT-Turbo branch or authorised agent.

R&D.

Composite Materials.

TLT-Turbo is proud of 145 year history of strong commitment to continuous product improvement and implementation of innovations. We have a strong in-house research and development department and centres of excellence located across the globe ensuring that our clients benefit from state-of-the-art ventilation technology. Our research and findings are verified through the use of the latest CAE programs and test rigs on all models up to a full size test stand with a motor power capacity of more than 6 MW. Our testing methodology meets DIN/ISO 5801 and AMCA 210 criteria.

The use of composites reduces the weight of the rotor and lowers the moment of inertia. This allows for quick start up, acceleration and stopping of the fan which reduces power consumption. Additionally composite fan blades offer superior damage tolerance. For wind tunnel fans we predominantly use carbon fibre blades that are designed, tested and manufactured in-house.

Control system.

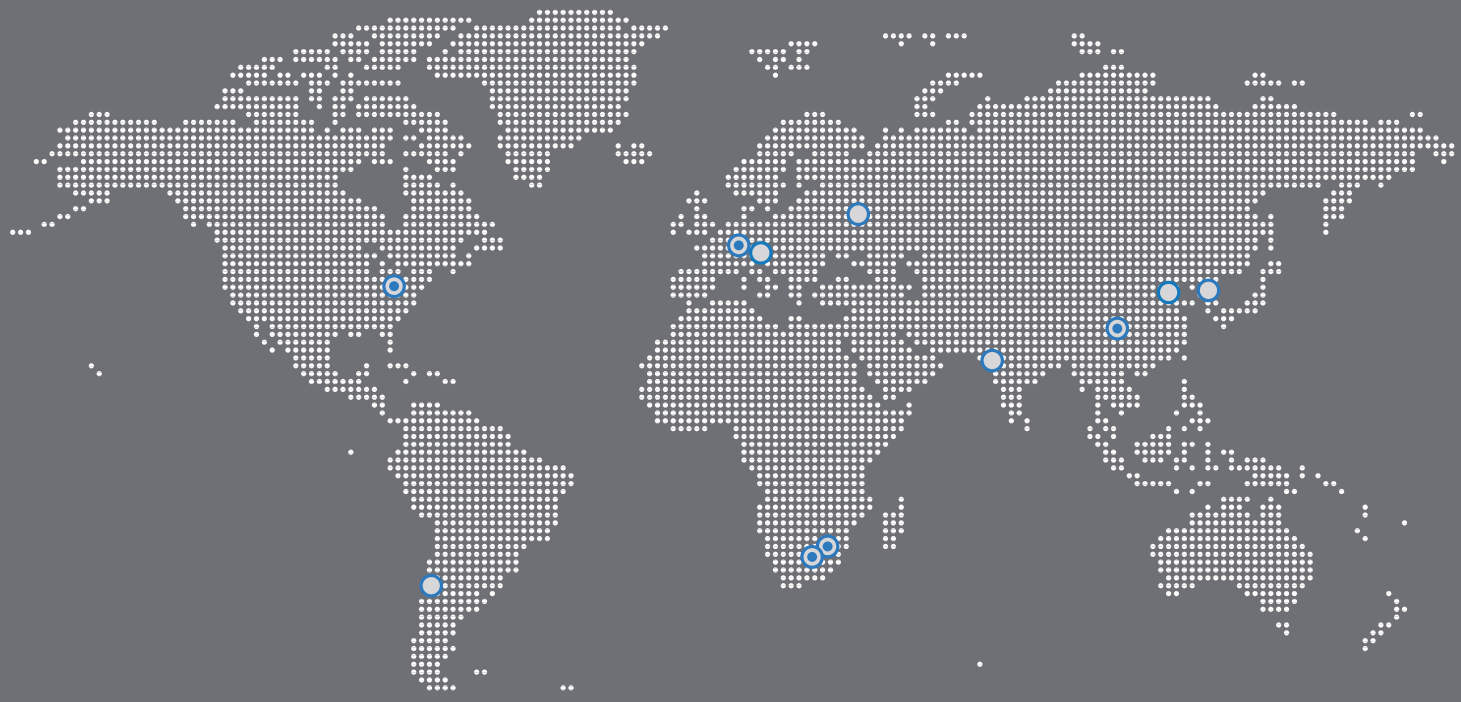
The TLT-Turbo Control Unit provides our clients with an up-to-date monitoring and control system for our fan systems. This stand-alone unit is multi-compatible.

Some references of wind tunnel fans.

Application	Customer	Country	Outer Diameter	Drive Power
Aerodynamic WT	Aerospace	Germany	4,5 m	65,000 kW
Aerodynamic WT	Aerospace	France	15 m	88,000 kW
Aero-Acoustic WT	Automotive Industry	China	9 m	4,000 kW
Aero-Acoustiv WT	University	China	8,5 m	4,000 kW
Climatic WT	Automotive Industry	China	4 m	1,000 kW
Climatic WT	Automotive Industry	China	3 m	315 kW
Aerodynamic WT	Skydiving	Polen	6 m	1,200 kW
Aerodynamic WT	Skydiving	Finnland	6 m	1,000 kW

A Passion for Solutions.

Germany . China . South Africa . USA
Austria . Chile . Hungary . India . Russia . South Korea



Business Location w/ Manufacturing and Service Workshop

TLT-Turbo GmbH . Germany
TLT-Turbo (Sichuan) Co., Ltd. . China
TLT-Turbo Africa . South Africa
TLT-Turbo Inc. . USA

Business Location

TLT-Turbo Rep. Office . Austria
TLT-Turbo South America SpA . Chile
TLT-Turbo Rep. Office . China
TLT-Turbo Rep. Office . Hungary
TLT-Turbo India (Pvt.) Ltd. . India
TLT-Turbo Rep. Office . Russia
TLT-Turbo Korea . South Korea

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