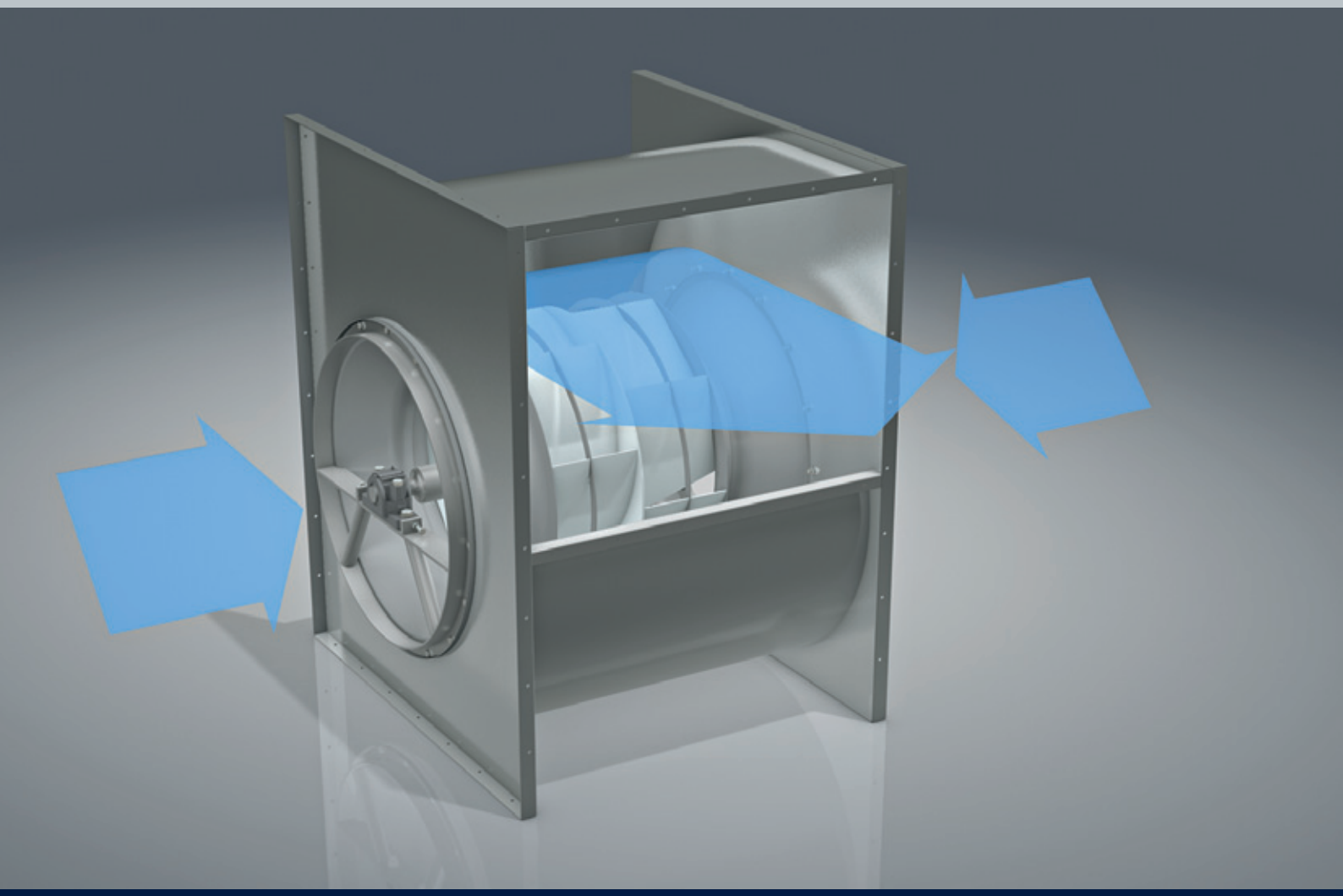
The Innovation Company

LTG Aktiengesellschaft



LTG High Performance Centrifugal Fans

High pressure
For conveying pure gas or solids

LTG High Performance Centrifugal Fans

LTG centrifugal fans are continuous flow machines for conveying pure gas or solids. They are especially suitable for applications that require high pressure.

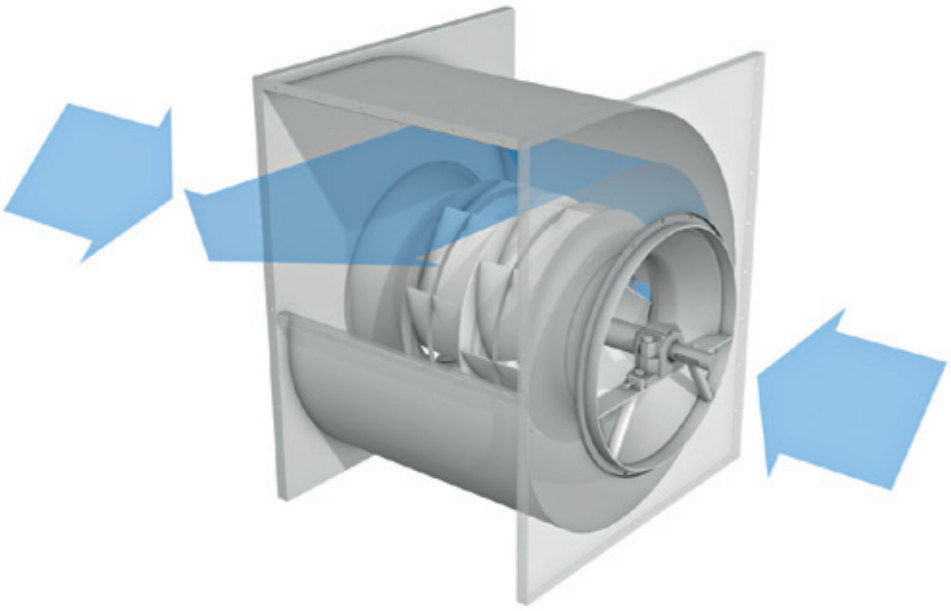
In centrifugal fans the air to be conveyed flows axially through the intake nozzle toward the centre of the impeller. The rotating impeller accelerates the air in radial direction to the outlet.

The performance of the fan is determined by the impeller design and the blade geometry. Afterwards the air exits on the discharge side of the housing.

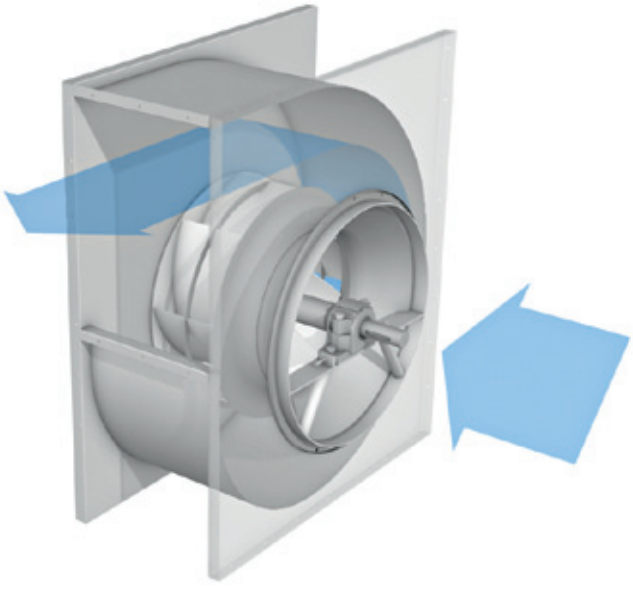
The version with double sided intake has two radial impellers in a mirror-inverted arrangement. Air is drawn in axially from the opposite sides and exits in a single flow from the discharge side of the housing.

This arrangement provides twice the air volume at the same pressure.

A basic distinction is made between fans for conveying pure gas and fans for conveying solids. The geometry of the impeller and the materials used are adapted to the medium being conveyed.

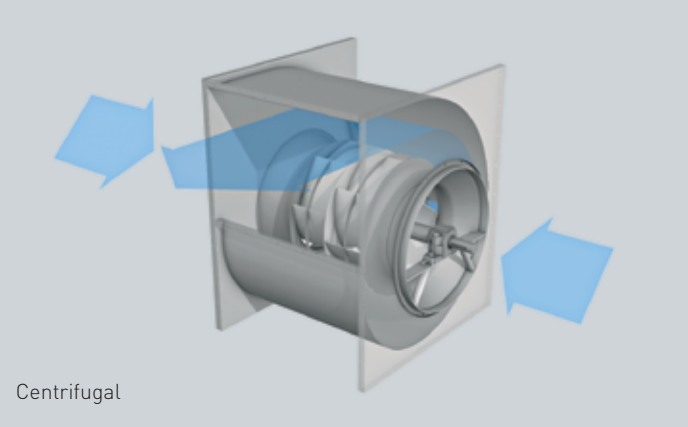


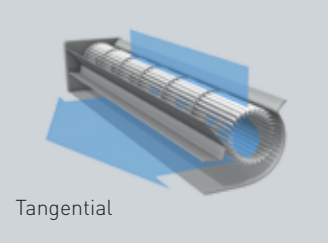
Centrifugal fan with double sided intake

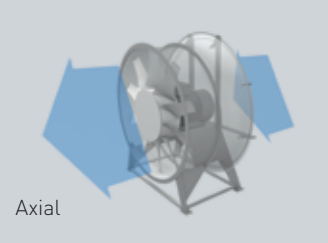


Centrifugal fan with single sided intake

Choose LTG High Performance Centrifugal Fans


Centrifugal


Tangential


Axial

LTG High Performance Centrifugal Fans for solving your air handling problems

The wide spectrum ranges from low to high pressure fans, including the perfect fan type with suitable performance characteristic for any given operating point.

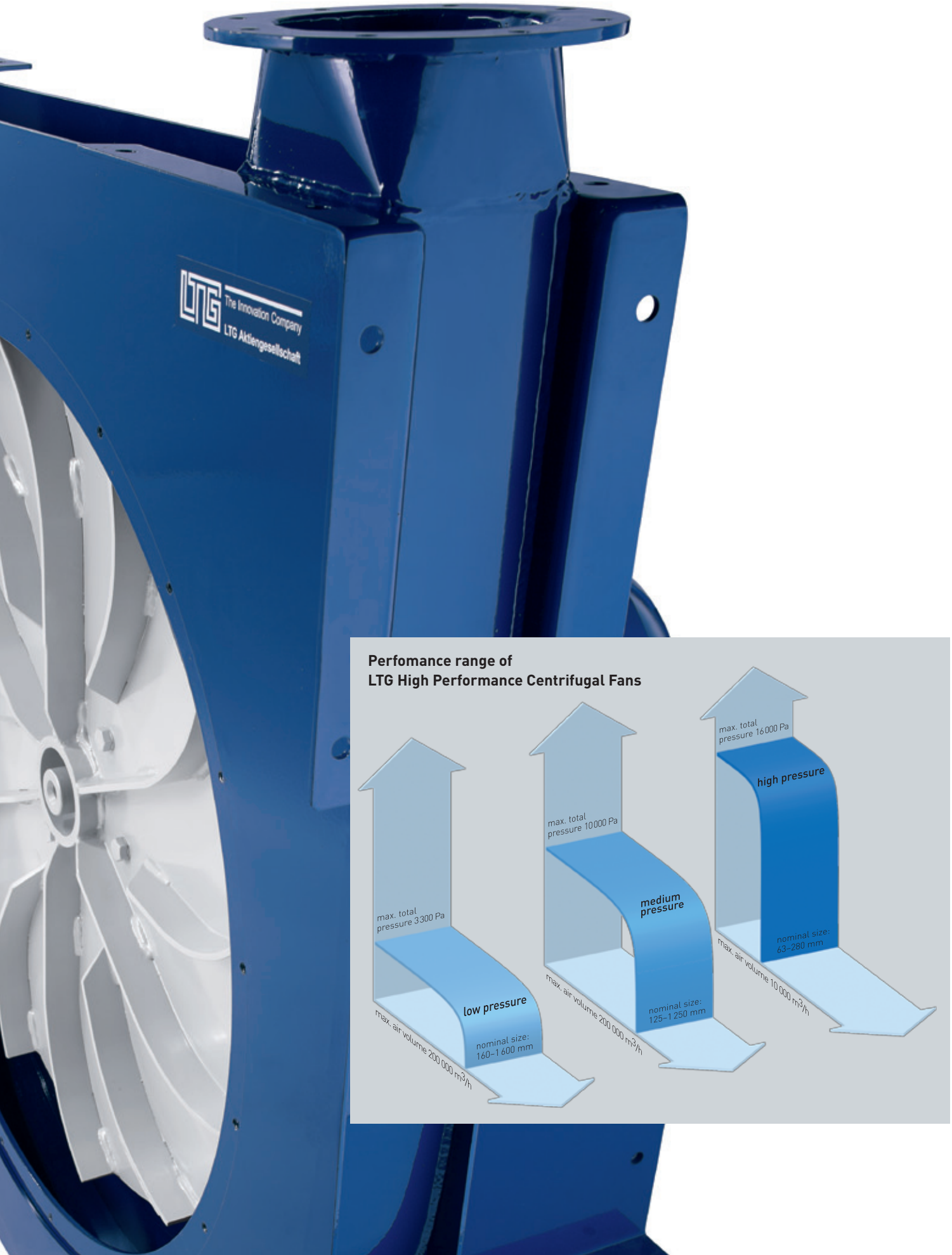
Besides standard models, specifically designed models for integration into existing systems are available.

LTG Aktiengesellschaft offers fans for all airflow patterns: the best prerequisite for objective technical advice.

Advantages:

- High pressure
- Optimum aerodynamic characteristics
- High degree of efficiency
- Energy-efficient drives
- Characteristic curve with limit rating (no motor overload under operating conditions differing from optimum design range)
- Quiet operation due to optimized impeller and housing design
- Long life expectancy due to robust design
- Wide variety of impeller designs
- High wear protection
- Designs for use under extreme conditions (e.g. high temperatures, aggressive media)
- Explosion-proof models according to ATEX
- Customer-specific solutions

LTG High Performance Centrifugal Fans



Perfomance range of
LTG High Performance Centrifugal Fans

Our extensive product range

series	nominal size	max. air volume	max. total pressure	pressure range	specification
Combustion Air Fans					
VRA	63–280 mm 2.5–11 in	5 500 m^3/h 3 200 cfm	12 000 Pa 48.2 in H_2O	high pressure	• single sided intake • direct drive • with filter and silencer
High Performance Centrifugal Fans					
VRK	280–1 000 mm 11–39.4 in	100 000 m^3/h 59 000 cfm	2 000 Pa 8 in H_2O	low pressure	• single or double sided intake • belt drive
VRS	450–1 250 mm 17.7–49.2 in	200 000 m^3/h 118 000 cfm	4 000 Pa 16 in H_2O	medium pressure	
VSR N.	160–1 600 mm 6.3–63 in	200 000 m^3/h 118 000 cfm	3 300 Pa 13.2 in H_2O	low pressure	• single sided intake • direct or belt drive
VSR M./H	250–1 250 mm 9.8–49.2 in	120 000 m^3/h 70 000 cfm	10 000 Pa 40 in H_2O	medium pressure	
VSR 5./RU	80–280 mm 3–11 in	10 000 m^3/h 6 000 cfm	16 000 Pa 64.2 in H_2O	high pressure	
Conveying Fans					
VSR M.	125–1 000 mm 5–39.4 in	90 000 m^3/h 53 000 cfm	6 700 Pa 26.9 in H_2O	medium pressure	• single sided intake • direct or belt drive • armoured against wear
VRR 5./MS	80–180 mm 3–7 in	1 800 m^3/h 1 000 cfm	11 000 Pa 40 in H_2O	high pressure	

Customer-specific solutions on request.

Applications of LTG High Performance Centrifugal Fans:

- Agricultural engineering (hay drying)
- Air-conditioning technology
- Air processing technology
- Automotive industry
- Biogas plants
- Biomedicine
- Building materials industry
- Cellulose industry
- Chemical industry
- Cleaning technology
- Dedusting technology
- Drying technology
- Fibre manufacturing
- Food industry
- Furnace technology
- Furniture industry
- Heat treatment technology
- Insulating materials industry
- Mechanical and plant engineering
- Metalworking industry
- Nonwoven industry
- Packaging industry
- Paper industry
- Personal care industry
- Pharmaceutical industry
- Plaster industry
- Plastics industry
- Power plant engineering
- Printing industry
- Process engineering
- Refrigeration technology
- Surface technology
- Textile industry
- Tobacco industry
- Wood industry
- ...

Impellers for LTG High Performance Centrifugal Fans

For conveying pure gas or solids

COMBUSTION AIR FANS

pure gas

VRA

HIGH PERFORMANCE CENTRIFUGAL FANS

pure gas

VSR N.

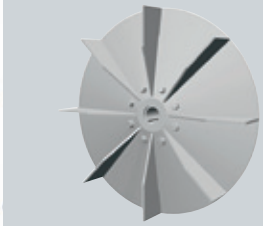
VRS

CONVEYING FANS

solids

VSR M.

VSR M.



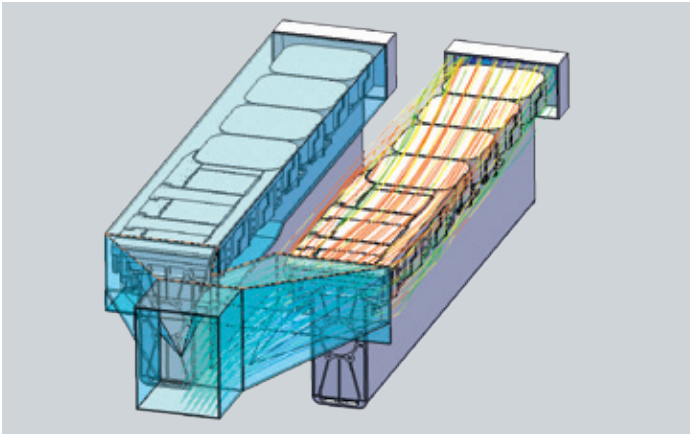
VRR 5./MS

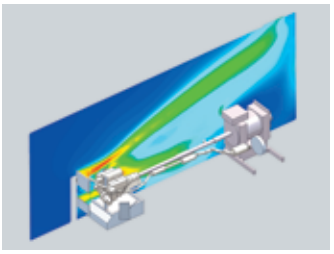
LTG Engineering Services

Make use of our knowledge to solve your problems

Whether you are designing a production facility, a building or a machine, our highly qualified engineers will assist you with your ventilation, airflow and air conditioning problems from the very start.

As professionals, we can provide everything you need for optimum implementation of your project: individual advice, broad know-how and the necessary tools, for example, a fully equipped R&D lab.





Our services

- We analyze your existing systems, machinery and processes.
- Together with you, we define your requirements, taking all the relevant parameters into account.
- To find solutions, we use our broad know-how plus numerical and experimental flow analysis.
- The result: solutions that are tailored according to your needs. For example, we optimize the airflow in your process and maximize your energy efficiency.

On-site measurements

Our specialists determine the parameters of the existing system on site. Based on these parameters, together with you, we define your requirements and suggest ways to solve your particular problem. This information is used for numerical flow simulations and experimental verification.

Computational Fluid Dynamics (CFD)

Computational fluid dynamics permits the calculation and visualization of airflow for existing or planned systems and processes. By varying different parameters we develop reliable, innovative flow concepts and significantly shorten the development time.

Experimental flow investigations and optimization

The visualization of airflow on site or in an LTG flow laboratory, at reduced or original scale, provides certainty. Process parameters such as air speed, pressure and temperature can be optimized. We apply the results of CFD simulations to the given situation and verify them with the product or process.

Acoustic optimization

Measurements of your product's acoustic power level in LTG's reverberant echo chamber are part of our engineering services. Here we analyze sound spectra and optimize your product's acoustic properties in a systematic manner. Additionally, we measure sound pressure levels on site at your workstations and systems.

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LTG Aktiengesellschaft

Comfort Air Technology

Air Conditioning Systems
- Dezentralized Façade Ventilation Units
- Fan Coil Units
- Induction Units, Active Chilled Beams

Air Diffusers
- Linear Air Diffusers
- Wall and Floor Mounted Air Diffusers
- Swirl Diffusers
- Industrial and Special Air Diffusers

Air Distribution
- Flow Rate and Pressure Controllers
- Shut-off and Balancing Dampers
- Silencers

Process Air Technology

Fans
- Tangential Fans
- Axial Fans
- Centrifugal Fans
- Fahrtwind-Simulators

Filtration Technology
- Suction Nozzles
- Dampers
- Filters, Dust Collectors
- Separators, Compactors

Humidification Technology
- Air Humidifiers
- Product Humidifiers

Engineering Services

Fluid Engineering
- Flow analysis
- Flow visualization
- CFD simulations
- Flow optimization
- Air conditioning concepts

Thermodynamics
- Calorimetric performance measurement
- Thermal, dynamic, unsteady system simulations

Acoustics
- Sound level measuring
- Vibration analysis
- Echo chamber measurement
- Acoustic optimization

Comfort
- Evaluation
- Optimization

Customer-specific Solutions
- Product development
- Process optimization
- Installation analysis

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