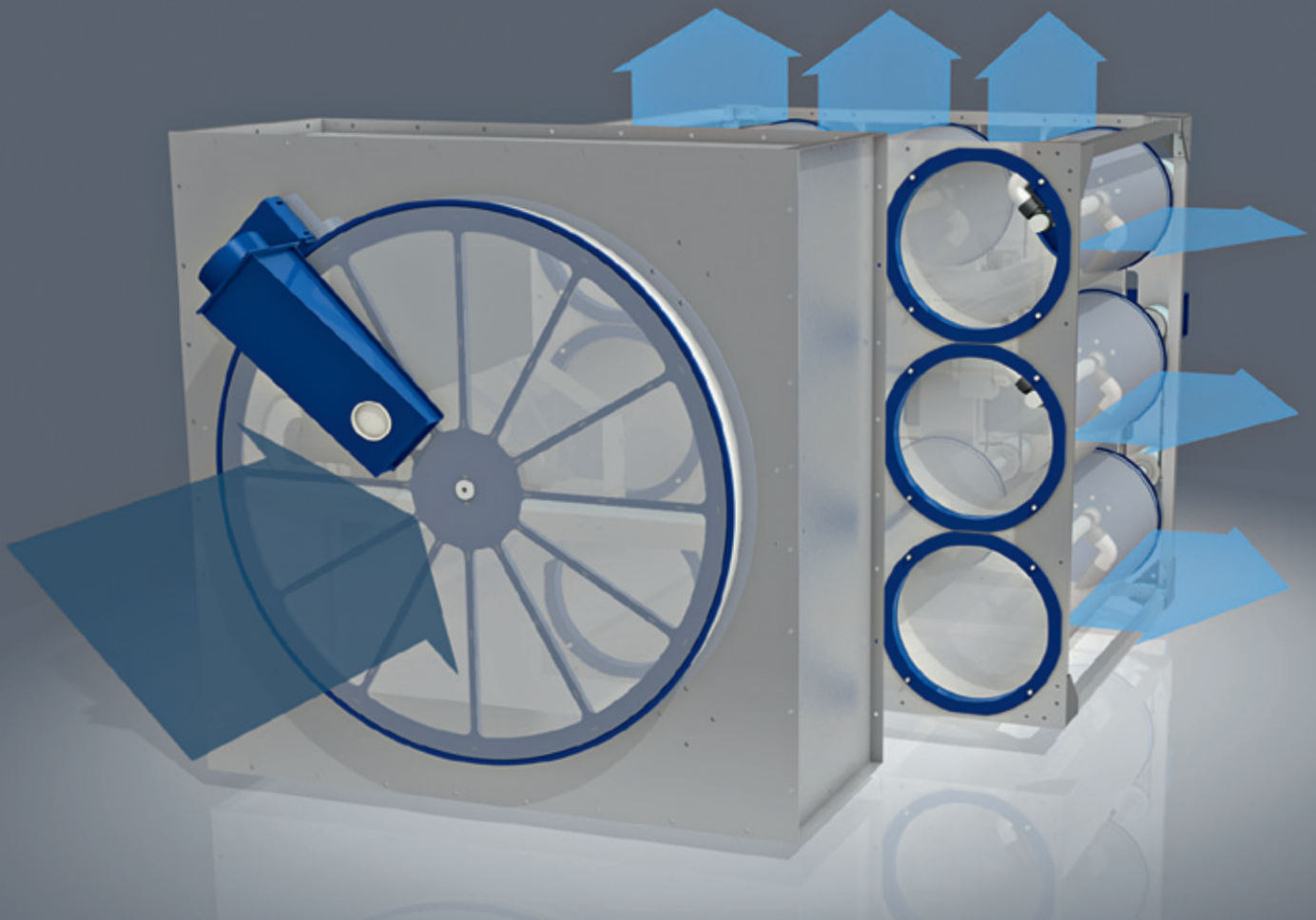




The Innovation Company

LTG Aktiengesellschaft



LTG Filtration Technology

For clean air.
For recovering valuable materials.

Discover the principle of LTG Filtration Technology

LTG Aktiengesellschaft offers a modular system of filter components individually adaptable to your process conditions.

The system parameters such as air quantity and concentration of fibre and dust particles, are already incorporated into the design at the planning stage.

The various filter stages:

Coarse filtration:

A continuously self-cleaning prefilter separates fibres and coarse particles using a filter media. The vacuumed off coarse particles are taken to a separator with a conveying fan.

Fine filtration:

A continuously self-cleaning fine filter separates any dust still remaining in the airstream almost completely. The airflow through the filter drums is from the inside to the outside. The dust collects on the filter media, is continuously vacuumed off by rotating nozzles and passed to a cyclone separator.

All drive elements are located on the clean air side.

The filter surface is adapted to the requirements by changing the number of filter drums.

Secondary airflow 1 and 2:

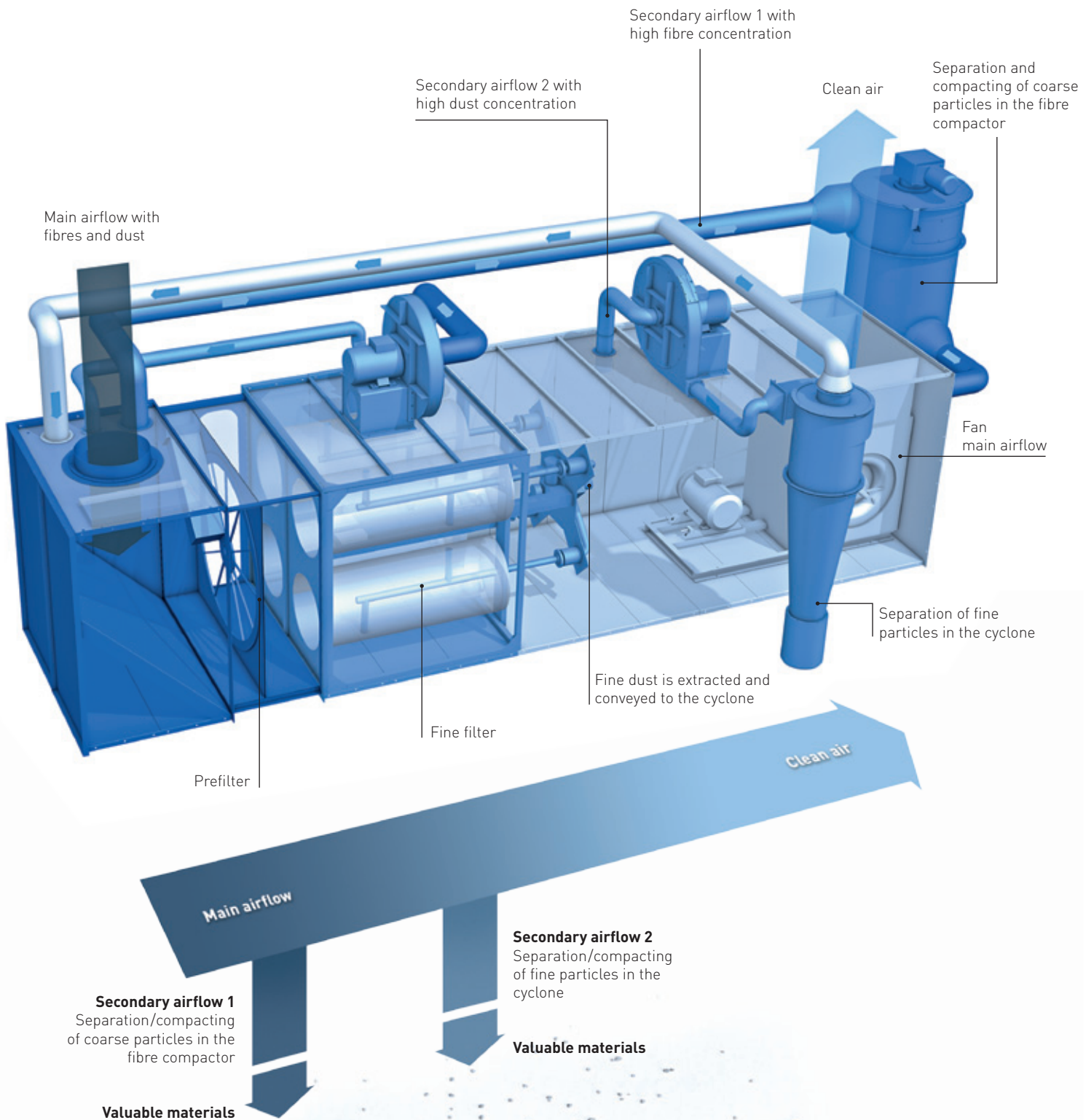
The cleaning of both prefilter and fine filter is done by suction nozzles. The necessary pressure and volume flow is generated by fans. Fibres and dust are discharged without pressure from the respective secondary circuit. The fibre compactor and the cyclone, if required with an additional compacting power screw, are used for this.

The materials recovered can be returned to the production process.

Application of LTG Filtration Technology

Air processing technology
Automotive industry
Building materials industry
Cellulose industry
Chemical industry
Fibre manufacturing
Food industry
Furniture industry
Insulating materials industry
Metalworking industry
Nonwoven industry
Packaging industry
Paper industry
Personal care industry
Pharmaceutical industry
Plaster industry
Plastics industry
Printing industry
Process engineering
Textile industry
Tobacco industry
Wood industry
...

Discover the principle of LTG Filtration Technology



Our extensive product range

Series	Air volume	Material through-put	Specification
Prefilters TV.	up to 135 000 m ³ /h up to 80 000 cfm	20–130 kg/h 45–290 lbs/h	<ul style="list-style-type: none"> • continuous cleaning • mesh sizes 50–10 000 µm/ 0.002–0.4 in • 200 °C/390 °F version optional • filter class G1–G3
Fine filters CDF/TF.	up to 270 000 m ³ /h up to 160 000 cfm	up to 250 kg/h up to 550 lbs/h	<ul style="list-style-type: none"> • continuous cleaning • all drive elements are located on the clean air side • 170 °C/340 °F version optional • filter class F4–F6
Fibre compactors FK.	up to 10 000 m ³ /h up to 6 000 cfm	up to 500 kg/h up to 1100 lbs/h	<ul style="list-style-type: none"> • perforated sheet metal cone with auger and tangential air inlet • pressureless material discharge • 150 °C/300 °F version optional
Centrifugal separators/cyclones ZS.	up to 5 500 m ³ /h up to 3 000 cfm	up to 100 kg/h up to 220 lbs/h	<ul style="list-style-type: none"> • material discharge at pressure differential up to 5 000 Pa/20 in H₂O
Dust compactors CPS		up to 100 kg/h up to 220 lbs/h	<ul style="list-style-type: none"> • material discharge at pressure differential up to 5 000 Pa/20 in H₂O • dust-free material discharge by compacting rate of approx. 2–3
Shut-off dampers PKA / KLB			<ul style="list-style-type: none"> • airtight shut-off, low flow resistance, easy to install

Customer-specific solutions on request.

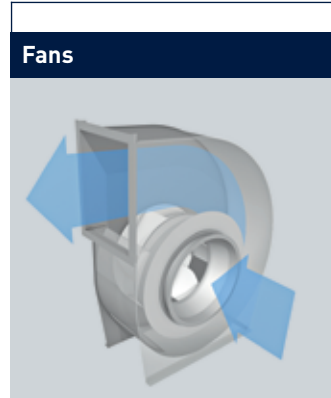
The process stages that will persuade you

COLLECTING



LTG suction nozzles are individually optimized for each application. The required airflow speeds are adapted to the particle speeds and the type of application. Especially in the case of endless materials such as edge strips, monofilaments, paper strips, etc. specifically designed LTG venturi systems are applicable.

CONVEYING

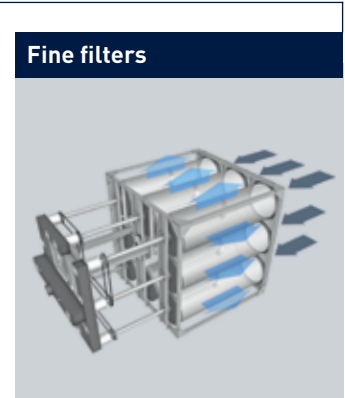


LTG High Performance Fans convey gaseous media over a large flow rate and pressure range. Depending on the type, the flow through the fan is either axial or radial. The use of inlet nozzles, specific impeller blades, outlet guide vanes and diffusers provides aerodynamically optimized features to ensure highest efficiency and energy-saving operation.

FILTRATION



The airstream carrying coarse particles passes through a filter media. The mesh size can be adjusted to the particle size. The filter media is cleaned with continuous suction.



The dusty air passes through the filter drums from the inside so that the dust deposits on the inner surface from where it is continuously removed by rotating suction nozzles. Continuous cleaning provides a constant pressure level in the system. All drive elements are located on the clean air side and are thus protected from pollution.

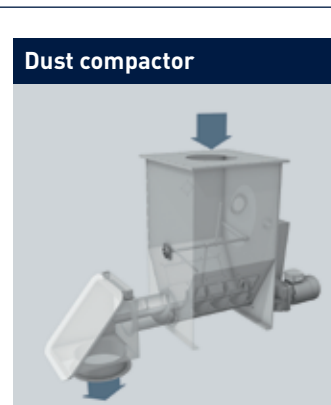
SEPARATING & COMPACTING



The airstream carrying coarse particles enters the unit at the top, then passes through a perforated sheet metal cone. The airborne solids accumulate on the inside of the perforated sheet metal cone and are continuously stripped off by an auger, pushed down, compacted and discharged at zero pressure at the bottom.



The airstream carrying fine particles enters the cyclone (centrifugal separator) tangentially at the top. The solids are carried to the outside by the rotating centrifugal airflow and pass spirally either to the collecting container or to the dust compactor mounted underneath.



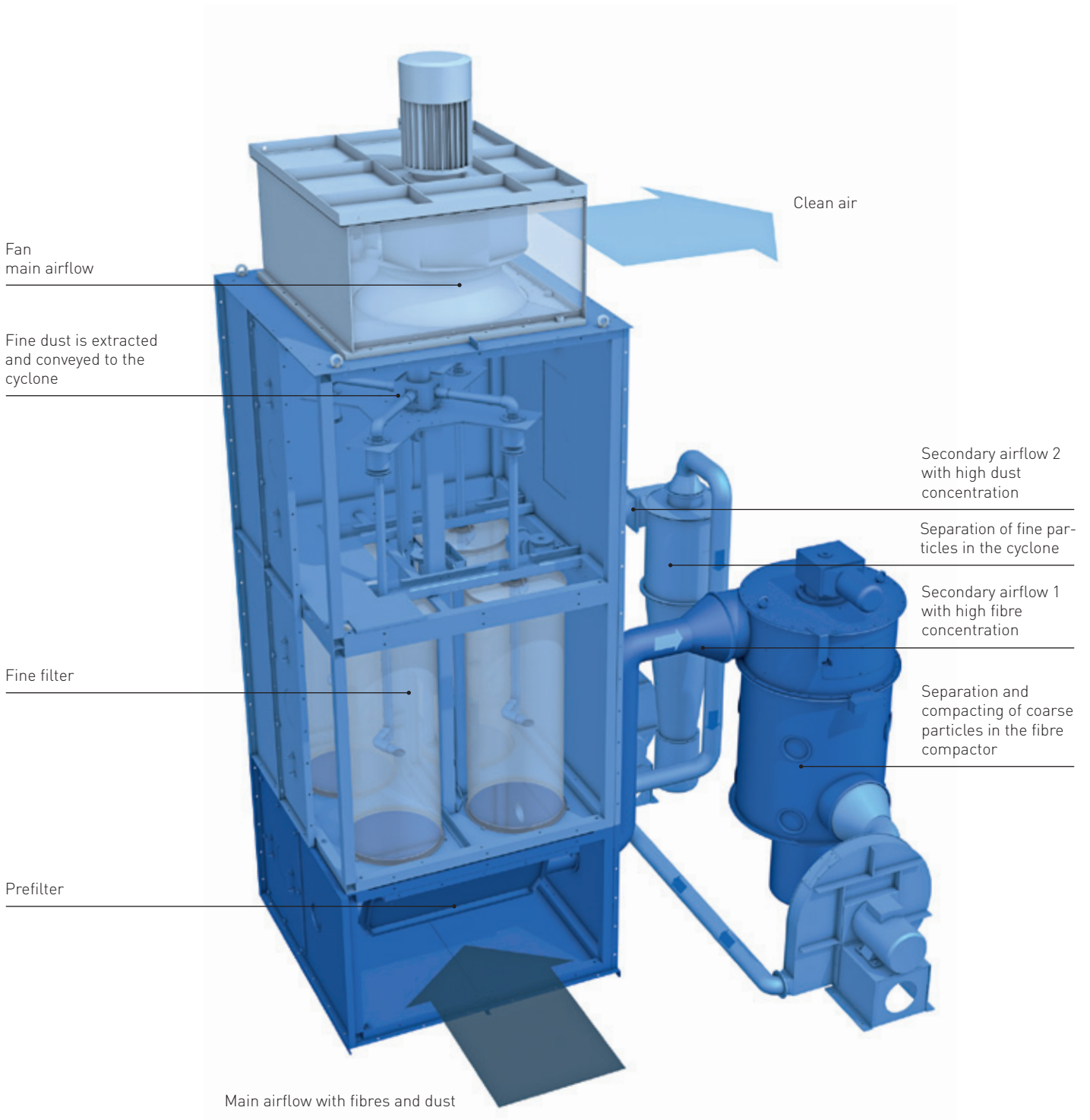
The material previously separated is picked up by a horizontal compacting screw and discharged. An agitator ensures an even feed to the screw and prevents clogging. The material is compacted by a metal spring diaphragm.

DISTRIBUTING



Separation of single or multiple air ducts. Closing/opening of ducts conveying material. Combining of air and material conveying ducts.

Choose LTG Filtration Technology



Advantages:

- High filtration output
- Recovery of valuable materials
- Continuous operation
- Energy-efficient
- Pressure surge-free
- Low maintenance
- Modular and space-saving structure
- Low operating costs
- Direct installation at the production process is possible
- High performance density
- Long service life of filter media
- 🚫 Explosion-proof models according to ATEX available
- Process temperatures up to 200 °C/390 °F
- Customer-specific solutions

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

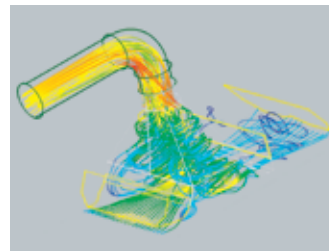
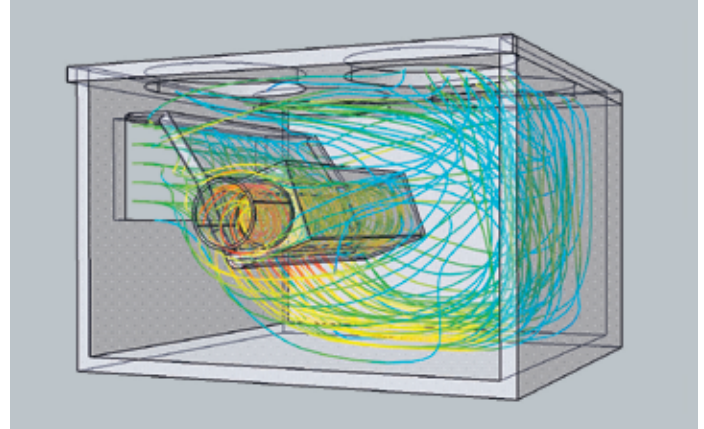
- We analyse your existing systems, machinery and processes.
- Together with you, we define your requirements, taking all the relevant parameters into account.
- To find solutions, we use our broad know-how plus numerical and experimental flow analysis.
- The result: solutions that are tailored to your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

On-site measurements

Our specialists determine the process parameters of the existing system on site. Based on these parameters, we define your requirements together with you, suggest ways to solve your particular problem, determine the optimum filter parameters and flow velocities, and select suitable filter media for an efficient filtration performance with the lowest energy consumption. A mobile filter system permits the maximum possible dependability thanks to experimental optimization of the filter parameters incorporated into its manufacturing process.

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 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 sound power level in LTG's reverberant echo chamber are part of our engineering services. Here we analyse 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.



Comfort Air Technology

Air Diffusers

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

Air Conditioning Systems

- Decentralised Façade Ventilation Units
- Fan Coil Units
- Induction Units, Active Chilled Beams

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 on a scale of 1:1
- Flow visualization
- Small scale tests
- CFD simulations
- Experimental flow optimization
- Comfort measuring on site
- Optimization of air conditioning concepts

Thermodynamics

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

Acoustics

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

Customer-specific Solutions

- Product development
- Process optimization
- Installation analysis

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