Product Overview

LTG Comfort Air Technology

Air Technology Solutions for Humans and Products.
LTG air diffusers meet highest standards for quality and efficiency

For almost 90 years, LTG has pioneered air and climate technology, always a step ahead with trailblazing innovations. When it is crucial to achieve ideal environmental conditions for people and products, LTG creates inspiring, tailor-made comfort air technology solutions: These include air diffusers, air-water systems (such as induction units and fan coil units) and products for air distribution (flow rate controllers and shut-off valves).

In the VDI 3804 all essential ventilation and air condition concepts are compared. To VDI 3804’s development LTG Aktiengesellschaft essentially contributed. On this basis, we offer high-performance products for any requirement and installation situation. These include air-water systems, air diffusers or air distribution components. LTG engineering services provide you with decades of expert know-how in comfort air and process air technology, as well as a state-of-the-art lab. We will gladly support you in selection of the best system. Contact us!

LTG planning tools – we support you!

Ask for your own DVD with helpful tools, such as dimensioning programs, streaming videos and product information! Also available: our product overviews about air diffusers and air distribution products.

Visit us on www.LTG-AG.com and get detailed technical information as PDF files at „Download“. 

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LTG Air-Water Systems

Product Overview and Applications

**LTG Induction** – Induction Units

<table>
<thead>
<tr>
<th>Ceiling</th>
<th>Sill</th>
<th>Floor</th>
</tr>
</thead>
<tbody>
<tr>
<td>HFFsuite</td>
<td>HFV/HFVs</td>
<td>HFB/HFBs</td>
</tr>
<tr>
<td>SilentSuite</td>
<td>System SmartFlow</td>
<td>System SmartFlow</td>
</tr>
<tr>
<td>LHG System Indivent*</td>
<td>HFG</td>
<td>HFB/HFBs</td>
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<tr>
<td>HDF/HDFsf</td>
<td>QHG</td>
<td></td>
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<tr>
<td>System SmartFlow</td>
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<td>HDC</td>
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**LTG FanPower** – Fan Coil Units

<table>
<thead>
<tr>
<th>Ceiling</th>
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</thead>
<tbody>
<tr>
<td>LVC System Indivent*</td>
<td>VFC</td>
<td>VKB</td>
</tr>
<tr>
<td>VKH/VKH</td>
<td>QVC</td>
<td>SKB</td>
</tr>
<tr>
<td>KFA cool wave*</td>
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**LTG Decentral** – Decentralised Ventilation Units

<table>
<thead>
<tr>
<th>Ceiling</th>
<th>Sill</th>
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</thead>
<tbody>
<tr>
<td>FVS Univent*</td>
<td>FVM</td>
<td>FVD</td>
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The mixed/displacement air flow developed by LTG and assumed into the VDI 3804 permits high cooling output at high thermal comfort. It can be implemented in any LTG device type with optimized air distributors.
### LTG Induction – Induction Units

**Induction Technology - Comfortable and Efficient**

LTG induction units have been developed further continually since the first patent was registered by founder Dr. Albert Klein for an induction plant in 1915. Induction Units are now also perfectly applicable for other applications than offices, e.g. hotel rooms. LTG induction units of the latest generation are energy-efficient and can be operated and demand-controlled with LTG SmartFlow technology.

**Benefits**
- Silent
- No additional fan needed in the unit
- Sustainable: long service life and low maintenance
- Low energy costs / variable ventilation
- High cooling and heating output
- Cooling / heating and fresh air supply in one unit

### LTG FanPower – Fan Coil Units

**The air conditioning classic – energy-efficient and low-noise**

LLTG fan coil units use both radial and cross-flow fans to implement the best flow and acoustics for different installation situations. LTG fan convectors with cross-flow technology are characterized by a particularly even and large-area flow through the heat exchanger. Low pressure loss and low noise level with high cooling or heating output. The latest drive technology generation (EC-technology) also permits capacity modulation at the lowest electrical energy consumption.

**Benefits**
- Best flow form
- Demand-controlled air conditioning
- Low power consumption of the fan by smart EC-technology
- Rapid response for cooling and heating output
- No central air conditioning plant or duct system
- Lower floor height possible for reduced construction costs and efficiently space use
- High user acceptance by individual control
- High energy efficiency by demand-controlled ventilation with heat recovery
- Latest innovation: Decentralized solution with pulsating flow in the new FVP pulse System Pulse-Ventilation

### LTG Decentral – Dec. Ventilation Units

**Flexible and energy-efficient!**

Decentralized Ventilation Units with Highly Efficient Heat Recovery

Decentralized ventilation units offer unique flexibility in combination with high economic efficiency to architects and planners.

**Benefits**
- No central air conditioning plant or duct system
- Lower floor height possible for reduced construction costs and efficiently space use
- High user acceptance by individual control
- High energy efficiency by demand-controlled ventilation with heat recovery
- Latest innovation: Decentralized solution with pulsating flow in the new FVP pulse System Pulse-Ventilation

### LTG Air-Water Systems

- Low energy costs / variable ventilation
- High cooling and heating output
- Cooling / heating and fresh air supply in one unit
## LTG Air Diffusers

### Product Overview and Applications

### LTG Air Diffusers for Ceiling, Wall or Floor

<table>
<thead>
<tr>
<th></th>
<th>Ceiling</th>
<th>Wall</th>
<th>Floor</th>
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</thead>
<tbody>
<tr>
<td><strong>Linear-Diffusers</strong></td>
<td>LDB</td>
<td>LDK-B</td>
<td>LDU</td>
</tr>
<tr>
<td></td>
<td>LDB LTG System clean®</td>
<td>LDK-B LTG System clean®</td>
<td>LDU-W</td>
</tr>
<tr>
<td><strong>Swirl-Diffusers</strong></td>
<td>DLA</td>
<td></td>
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<tr>
<td><strong>Transfer Air-Device</strong></td>
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<td>LDO-T</td>
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LTG air diffusers can be installed in ceilings, walls and floors. Custom diffusers are available for special applications. Ideal choice of air diffuser is dependent on building type, building use and interior design specification.

### LTG System clean® – unique and ingenious!

LDB linear air diffusers with variable settings ensure effective ventilation and optimized air conditions. Contaminants within the room air like dust, tobacco smoke, carpet abrasions, dust or oil vapour deposit around the ceiling and diffuser as a result of entrainment. The LTG System clean® prevents surface staining almost completely by providing a screen of clean supply air across the ceiling.

**Benefits:** The costs of renovation and maintenance are considerably reduced. The LTG System clean® is available for the products LDB, LDK-B, LDR and now also as metal diffuser LDB 12/M.

Profiles and cylinders are available in all colour systems (e.g. RAL, Pantone) and can be combined individually.
Product Overview

Flow rate controllers variable and constant

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<tr>
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<tr>
<td><strong>Variable</strong></td>
<td><strong>Variable</strong></td>
</tr>
<tr>
<td>VREactive</td>
<td>VRFactive</td>
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<tr>
<td>VRDactive</td>
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</table>

VREactive is an LTG Map Control System ActiveControl. Highest precision, short installation length.

VRDactive is an LTG Map Control System ActiveControl. Highest precision, short installation length.

VRE is to combine with customised drives; also available in PPS.

VRD is to combine with customised drives; also available in PPS.

VRW is without external power supply, pollution-insensitive.

VRX is without external power supply, pollution-insensitive.

Alle variable flow rate controllers are available with static or dynamic measuring principle.

Pressure controllers

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<thead>
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<tbody>
<tr>
<td><strong>Round</strong></td>
<td><strong>Square</strong></td>
</tr>
<tr>
<td>DRE</td>
<td>DRF</td>
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</tbody>
</table>

DRE is to balance extreme pressure level differences.

DRF is to balance extreme pressure level differences.

LTG Map control – Differential pressure + Damper setting = Flow rate

Contrary to common measuring techniques, the differential pressure is not measured using an upstream element such as orifice plate or differential pressure sensor. Flow rate controllers VREactive and VRFactive measure the differential pressure directly in the damper blade area (stronger signal due to locally accelerated air flow). This measuring technique provides the most precise measurements among all known systems in low air speed ranges.
LTG Engineering Services offer reliable and detailed reports with recommendations for optimizing function and cost for comfort air technology installations prior to final design. As early as the design proposal for a new building or a renovation, we determine the facts and data precisely for you to secure your investment.

Your benefits

- **Cost-optimized from the very start:** Investment costs, energy consumption and operation costs can be minimized at the planning stage.
- **Implementation risks** can be significantly reduced.
- **Comfortable and user-friendly:** the greatest possible thermal and olfactory comfort through simulation and testing.
- **Security** when renovating indoor air technology systems.
- No time-wasting adjustments when commissioning the devices in the room, because presets are made at the factory.
- **Choice of the best climate system** for each building type.
- Benefit from our modern development centre with various flow laboratories, an echo chamber, a calorimetric test stand and simulation tools for optimizing your project.

Our services

- **Realistic room flow tests** in various scales (model test or full scale).
- **Comfort parameter measurements** and **room climate evaluation** in the lab and on site.
- **Evaluation and optimization** of existing ventilation systems and devices.
- Evaluation and visualization of air flows, heat flows, ventilation efficiency and much more, including Computational Fluid Dynamics (CFD) simulation **Acoustic and aerodynamic**.
- Acoustic and aerodynamic investigations for assessing noise, sound level, attenuation characteristics, flow rate and pressure loss of climate control products and devices.
- **Comparative studies of various room climate systems** as to costs of investment, operation and life cycle.

Echo chamber
Laboratory