



Full Air-Conditioning Units Vindur® Compact



Choose full flexibility. Everywhere.

Whether operating theatre, precision measuring room, sensitive products or technical room: when climate is important, your technology must perfectly match the conditions. We'll support you.



Ensure constant conditions.

Compliance with defined climatic conditions is becoming increasingly important in order to provide optimal protection for persons, processes and products. Air-conditioning systems accurately and reliably regulate the room temperature, provide constant humidity via humidification and dehumidification and ensure the required air purity.

Compact and versatile solutions.

Full air-conditioning units Vindur Compact are particularly space-saving and ideal for integration into existing buildings, for example when upgrading an existing air-conditioning system. In new buildings, they offer simple options for integrating a high-quality, high-performance air-conditioning system at a later date.

More inside. More possibilities. More expertise.

Full Air-Conditioning Units Vindur Compact.

Compact full air-conditioning.

Vindur Compact offers all the advantages of a high-performance full air-conditioning system. This ensures both temperature control and air purity. The complete control and regulation system intelli.4 is already integrated, meaning that an additional control cabinet is not necessary.

Maximum flexibility.

The compact, extremely powerful and flexible air-conditioning solutions have a variety of connection options and are suitable for a range of applications. Depending on the design, they provide the necessary climatic conditions for hygiene, processes and procedures as well as for technical equipment and sensitive products.

Experienced system partner.

We provide many years of air-conditioning experience in almost all fields. Our solutions are developed according to customer specifications, tailored to the respective needs from initial planning to after-sales service. As a system provider, we ensure that all components perfectly match and that the climate control unit complies with the required regulations.



Highlights at a glance:

- Full air-conditioning unit in compact cabinet design
- VDI-6022-certified
- Two filter stages available
- Flexible socket arrangement
- Available as upflow or downflow version
- High compression possible

Our knowledge for your safe future.

Industry-specific solutions for your applications.

Our many years of global experience in air-conditioning technology, broad industry expertise and process reliability enable us to specialise in the development of individually planned air-conditioning solutions for all industries. With Vindur Compact, we offer future-proof, efficient and economical full air-conditioning units.

Life Sciences

- Pharmaceutical industry
- Medical technology
- Genetic and biotechnology
- Active ingredient production
- Optics



Indoor Farming

- Vertical farming
- Research institutions
- Production facilities



Electronics

- Microelectronics
- Optoelectronics
- Micromechanics
- Nanotechnology



Automotive + Aerospace

- Vehicle manufacturers
- Aerospace technology
- Battery production
- Hydrogen technology
- Fuel cell production



Health

- Operating theatres
- Laboratories
- Pharmacies
- Central sterilisation



Further fields of application

- Museums
- Archives
- Industrial applications



Modular design – customisable.

Our flexible components for all your air-conditioning requirements.

Complete means complete.

The full air-conditioning units are complete solutions and integrate all relevant functions in one housing: ventilation, filtering, cooling, heating, humidifying and dehumidifying as well as the electrical components. This saves you valuable space, to be used for other technical building equipment components.

Highly efficient EC fan.

- Complies with ERP/Ecodesign Directive
- Speed control
- Highest efficiencies
- Lowest sound level
- Volume flow control by integrated inlet jet with pressure measurement nozzle and integrated sensors

Temperature and humidity under control.

- Steam humidification available from 8% to a precision of +/- 2% relative humidity as standard
- Preheater as hot water coil pump (HWCP)
- Reheater as HWCP, electric heating or optional as refrigerant reheater
- Cooling with chilled water (CW) or direct evaporation cooling (DX)
- Available refrigerants: R513A (GWP: 631), R449A (GWP: 1,398), R407C (GWP: 1,774)

The right solution for every requirement.

- 6 sizes
- Air volume 800–22,000 m³/h
- High external pressing up to over 800 Pa possible
- Humidity and temperature always constant*
 - Humidity tolerance +/- 2%
 - Temperature tolerance +/- 0.1 K

*Standard configuration temperature +/- 0.5 K.

Flexible without compromise.

- Available as upflow or downflow variant
- Connection options via nozzles, flaps, free suction/exhaust with grid (no separate plenum necessary)
- Variable connection at the front, rear, side, top and bottom

Certified according to VDI 6022 and DIN 1946-4.

- Full-surface windows for viewing the air-guiding path
- Lateral inspection openings for cleaning and testing of building components
- Filter control system and indication on the display
- Air-guiding surface (optionally powder-coated)

Intelligent regulation.

- Operation and failure monitoring
- All unit and climate data via web visualisation
- Alarm memory with date/time
- Automatic restart after mains failure
- Modbus RTU/TCP and BACnet IP for network integration
- Integrated web server (Ethernet TCP/IP)
- Modbus master/slave function

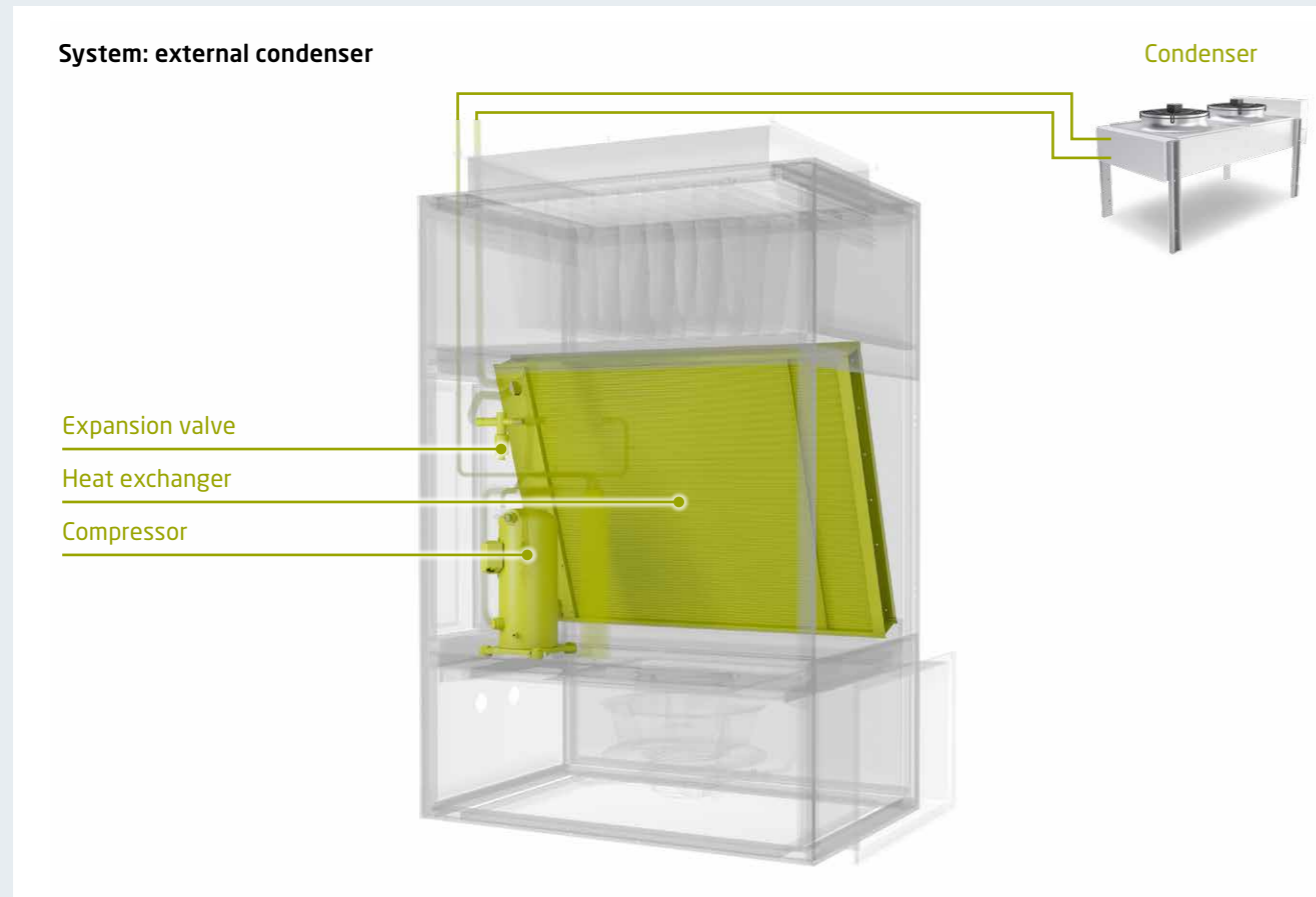
Choice of cassette, pocket filters and filter inserts.

- Filter classes according to DIN EN ISO 16890
- Optional 2nd filter stage
- Optional activated carbon filter



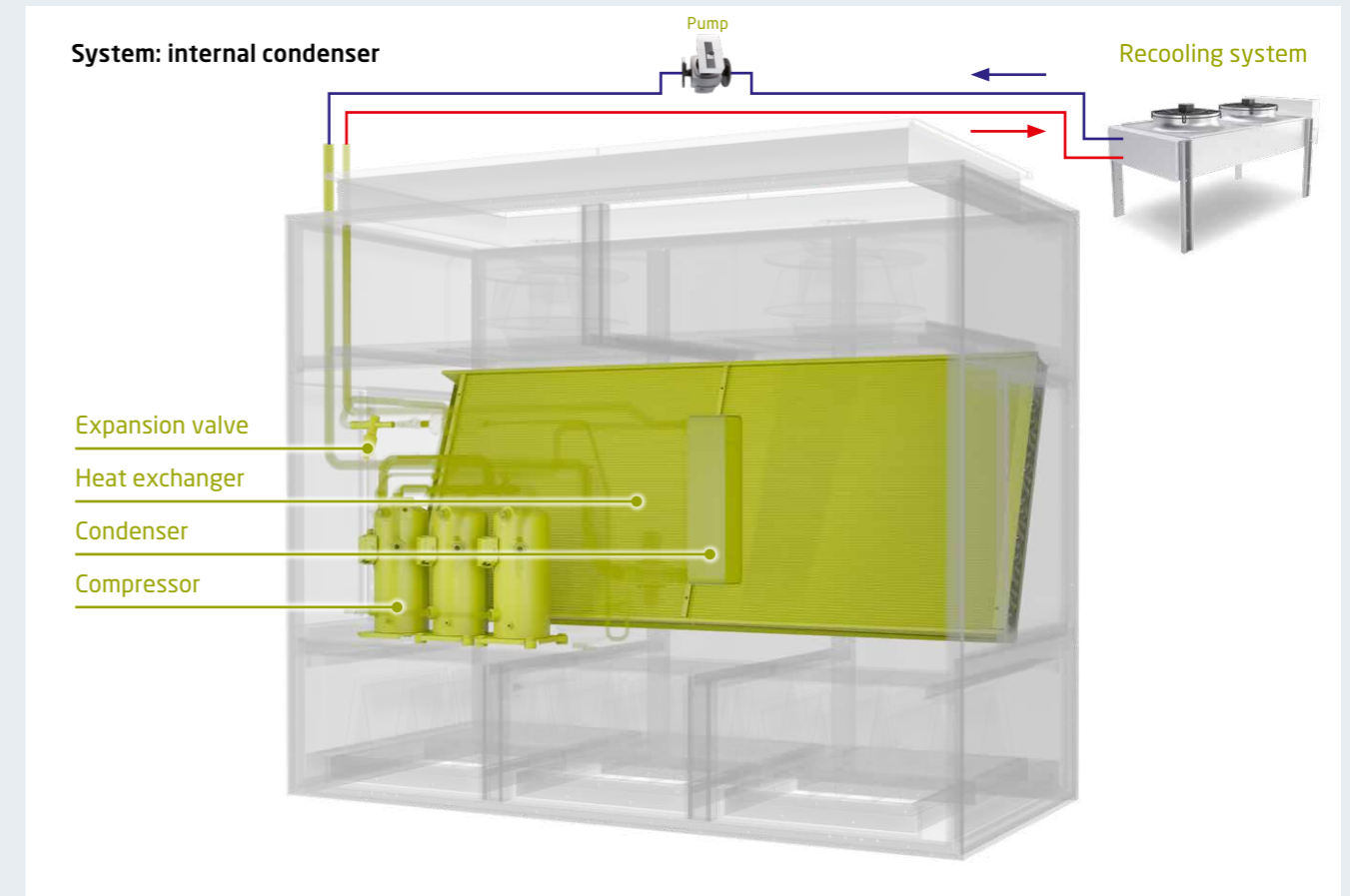
Either way, always the right choice. Vindur Compact.

Optimal systems for any requirements.



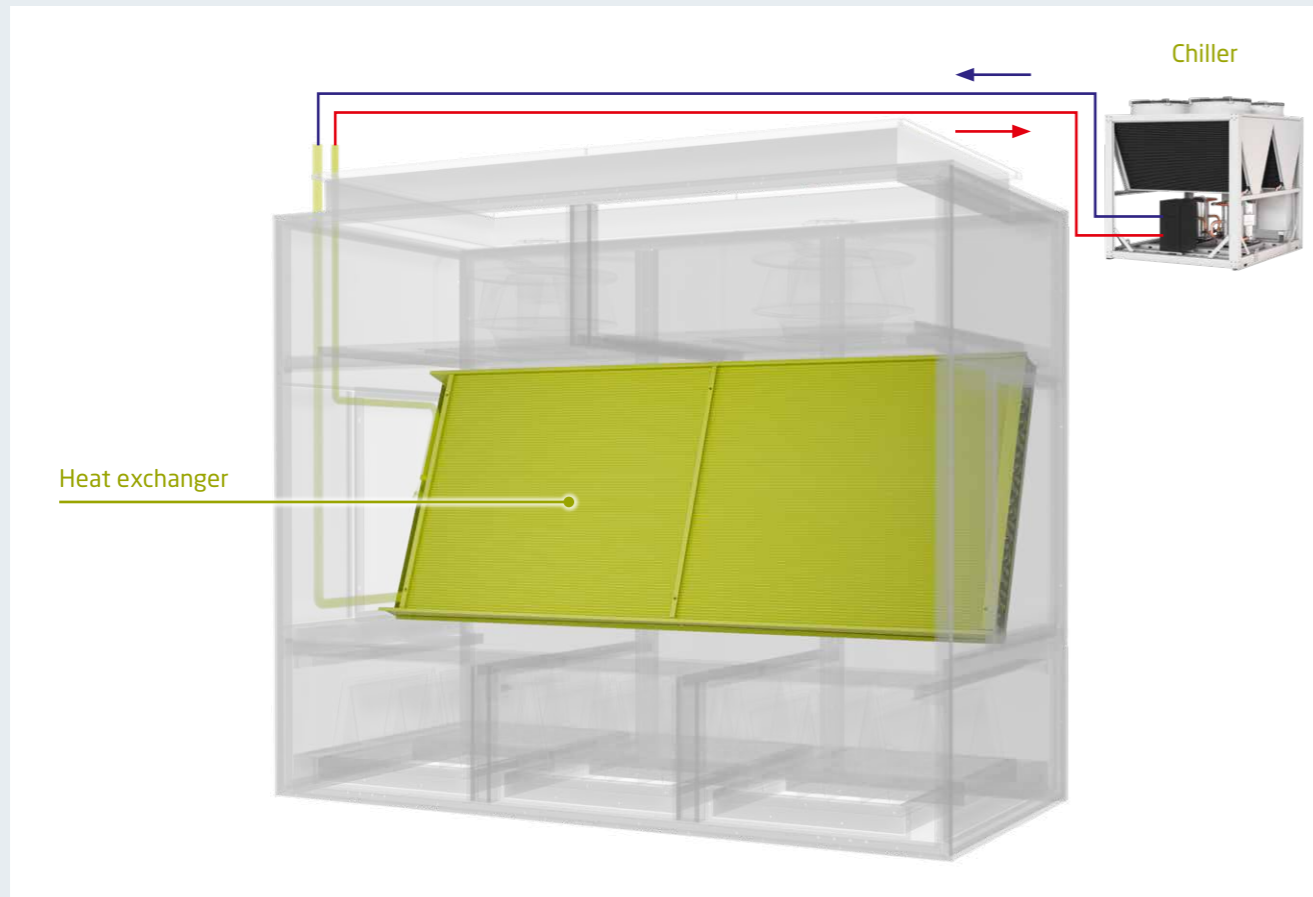
Air-cooled direct expansion system (DX) with external condenser.

In Vindur Compact (DX), the integrated refrigeration circuit consists of an evaporator, compressor and expansion valve. Connected to this is an external air-cooled condenser, via which the refrigerant, concentrated by the compressor, transfers its heat to the outside air. The liquefied refrigerant is expanded by the expansion valve in the full air-conditioning unit and flows through the evaporator, thus cooling the air sucked in from the room. This means that water is not required as a medium on site.



Water-cooled direct expansion system (DX) with internal condenser.

Alternatively, the integrated refrigeration circuit also contains an internal water-cooled condenser. This can be integrated in the machine module or laterally in an annexed housing (base). In this system, the refrigerant concentrated by the compressor releases its heat via the water-cooled condenser, which is connected to a recooling system provided on site. The heat absorbed by the recooling system is cooled via a free cooler using the outside air.



System (CW) with chiller.

Vindur Compact in CW design uses a chilled water heat exchanger to cool the air intake from the room, which is supplied with chilled water from an external chiller. Therefore, an integrated refrigeration circuit is not required.

With one chiller as the central cooling system, several full air-conditioning units can also be supplied with chilled water. In addition, it is possible to generate part of the required cooling capacity energy-efficiently via a stand-alone chiller at low outside temperatures.

Exactly what you need!

The indoor chiller from weissttechnik ensures temperature tolerances of +/- 0.1 K and can be used directly next to the Vindur Compact or optionally as a stand-alone solution for special applications.



System with adsorption dryer.

Our complete air-conditioning unit can also be used in connection with an adsorption dryer to ensure particularly dry air with low dewpoint temperatures that a direct evaporation system cannot achieve.

The adsorption dryer is integrated into the ventilation system via a bus interface and is controlled centrally via Modbus. The dried air flows through the Vindur Compact and is conditioned according to the specific requirements and fed back to the area of application.

It couldn't be more flexible!

From universal dehumidifiers with basic functions in different capacities through to customised designs - we offer tailor-made solutions, perfectly matched to your requirements.

Convincing technology. Reliable results.

Performance data at a glance:

| FULL AIR-CONDITIONERS VINDUR COMPACT | | | | | | | | | |
|---|-------------------|---|-----------|-----------|-----------|-----------|-----------|-----------|------------|
| Size | | 35.5 min | 35.5 | 55.5 | 75.5 | 90.5 | 120.5 | 160.5 | 220.5 |
| Nominal volume flow | | | | | | | | | |
| Volume flow at max. external pressure drop | m ³ /h | 2000 | 3500 | 5500 | 7500 | 9000 | 12000 | 16000 | 22000 |
| External pressure drop ¹ | Pa | 800 | 800 | 800 | 800 | 600 | 800 | 800 | 600 |
| Housing dimensions | | | | | | | | | |
| Height | mm | 1950 | 1950 | 1950 | 1950 | 1950 | 1950 | 1950 | 1950 |
| Width | mm | 1087 | 1087 | 1087 | 1352 | 1607 | 2137 | 2402 | 2402 |
| Depth | mm | 695 | 695 | 895 | 895 | 895 | 895 | 1145 | 1145 |
| Cooling (overall/sensitive) | | | | | | | | | |
| Cooling capacity according to Eurovent (DX) ² | kW | 8.9/6.9 | 14.8/11.9 | 18.4/17.9 | 29.2/26.2 | 34.9/31.4 | 45.4/41.7 | 54.4/52.3 | 73.1/71.0 |
| Chilled water ³ | kW | 7.3/6.0 | 11.6/9.8 | 26.1/20.4 | 36.6/28.5 | 42.9/33.5 | 60.6/46.8 | 75.0/58.9 | 106.0/82.7 |
| Fan motor unit | | EC motor, direct drive, freewheel | | | | | | | |
| Exhaust air filter class | | ISO ePM ₁ > 50% (F7 according to EN 779) | | | | | | | |
| Weight of the complete base unit (DX/CW)⁴ | kg | 319/286 | 325/286 | 384/312 | 534/471 | 628/523 | 890/778 | 1153/1038 | 1284/1086 |
| Supply voltage | | V/Ph/Hz 400/3/50 | | | | | | | |
| Options | | | | | | | | | |
| Exhaust air filter class | | ISO ePM ₁ > 80% (F9 according to EN 779) | | | | | | | |
| Humidifying - steam generator | | Electrode or resistance steam humidifier | | | | | | | |
| Heating - electric heating | kW | 7.5 | 7.5 | 15.0 | 15.0 | 21.0 | 21.0 | 21.0 | 30.0 |
| Heating - hot water 70/50 ⁵ | kW | 11.8 | 16.9 | 23.6 | 32.4 | 38.8 | 52.9 | 66.5 | 72.4 |
| Heating - hot water 70/50 (PH) ⁶ | kW | 22 | 31.2 | 49.2 | 67.0 | 81.5 | 112 | 161.4 | 196.6 |

¹ Depending on the unit configuration. Higher pressing on request.

² Intake temperature +27 °C/46% RH; tc = 50 °C; other temperatures on request.

³ Intake temperature +27 °C/46% RH; water temperature 7/12.5 °C; other temperatures on request.

⁴ DX = unit with compressor(s) and evaporator; CW = unit with water cooler.

⁵ Intake temperature 15 °C, water 70/50 °C; other temperatures on request.

⁶ Intake temperature -15 °C, water 70/50 °C; PH = preheater in attachment box (downflow only).

Everything under control.

With our software and control packages.

intelli.4 - our smart control for your optimum room climate.

Simply intuitive.

intelli.4 allows you to operate all functions conveniently and intuitively. Their control via app icons is easy and simple to learn. In addition, the simple menu navigation reduces the risk of operating errors.

Maximum operating flexibility.

Regardless of whether via the touch screen, a computer of the building management system (BMS), tablet or smart-phone: all intelli.4 functionalities can be conveniently controlled via a web browser at any time and from any place with network access.



Monitoring systems - safe is safe.

The core task of a monitoring system is the safe observation and documentation of certain parameters and defined conditions. With intelligent software solutions, **weisstechnik** also offers a number of other advantages. This means that the flexible control and documentation software can also be used for existing devices and thus ensure uniform monitoring. It can also be adapted and expanded in many ways through various options.



Vindur cockpit.

Intelligent service tool for your peace of mind.

Fast reaction.

When air-conditioning systems in critical infrastructures malfunction, action must be taken quickly. Vindur Cockpit is the most effective solution for this. Your installed units are in contact with our service centre via reliable, user-friendly remote access services. All devices are programmed to communicate and transmit data at regular intervals or when an alarm is triggered. This enables us to react immediately to an incident. We determine the best course of action based on data and ensure a timely and professional intervention. Online or through the use of a service specialist on site.

Professional remote service.

During remote maintenance, our service technician monitors your devices and systems by means of an encrypted VPN tunnel. This direct access to the user interface of the controller allows our services to begin immediately from the desktop.

Effective maintenance operations.

Thanks to the extensive parametric data and measurements of the units, our experts can accurately isolate and diagnose any operating condition. In this way, we ensure that the technician is perfectly prepared for an immediate solution in the event of an assignment at your site.

Just to make sure.

When using Vindur Cockpit for the management of your climate solutions, the protection of your data is also a top priority for us. We ensure a secure connection and implement reliable security measures and the highest IT security standards.



We measure ourselves by our service.

We think and act collaboratively service-oriented. With our service teams, we offer sustainable solutions for long-term safe system operation.



Our services -
lots of good reasons:

- Global service network
- Wide range of preventive maintenance
- Reliable spare part supply
- Special deployments available any time
- Certified proper disposal of outdated devices

Our Service Experts are always near you.

24/7-Service-Helpline:
+49 1805 666 556

Expert advice.

Our experienced experts are ready to support you from the first idea to after-sales service in every step of your project, by telephone or on site.

Maintenance and servicing.

We offer different service levels and guaranteed reaction times after the receipt of the fault report. Our full maintenance service provides additional safety with calculable costs.

Spare part management.

Many spare and wearing parts are directly available in our warehouse. To further increase operational reliability, selected spare parts can additionally be stocked on site. We would be pleased to advise you further.

Instruction and training.

We provide regular trainings covering the application, operation and software of the units. We also offer customer-specific workshops at your location on request.

Passionately innovative.

We work in partnership to support companies in research, development, production and quality assurance.
With 22 companies in 15 countries at 40 locations.

weisstechnik

For a safe future.



Environmental Simulation

The first choice for engineers and researchers for innovative, safe environmental simulation facilities. In fast motion, our test systems can simulate all the influences in the world as well as for instance in space. In temperature, climate, corrosion, dust or combined stress tests. With a very high degree of reproducibility and precision.



Air Solutions

As the leading provider of clean rooms, climate technology and air dehumidification, we consistently ensure optimal climatic conditions for people and machines. For industrial production processes, in hospitals, mobile operation tents or in the field of information and telecommunications technology. From project planning to implementation.



Heat Technology

Experienced engineers and designers develop, plan and produce high-quality, reliable heat technology systems for a broad range of applications from heating and drying cabinets to microwave systems and industrial furnaces.

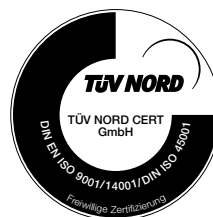


Pharmaceutical Technology

With decades of experience and know-how, we guarantee the most sophisticated clean air and containment solutions. Our comprehensive and innovative range of products includes barrier systems, laminar flow systems, safety workbenches, isolators, airlocks and stability test systems.

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Passion for Climate.

Illustrations may contain options.
Subject to technical changes.