Ventilation
Air conditioning
Clean rooms



OTTO ENGINEERING POLSKA Sp. z o.o.
Rzeszów, ul. Połonińska 15
www.ottoindustries.com.pl

Tel. + 48 17 249 00 30
Fax: + 48 17 249 00 39
rzeszow@ottoindustries.com.pl

OTTO Engineering Polska Sp. z o.o. was founded as a branch of the German company OTTO Luft- und Klimatechnik GmbH & Co.KG in operation since 1967.

Thanks to the close cooperation between our companies, current know-how and extensive experience, we realize a comprehensive program of supplies and services, as well as supervision over the projects.

The offer of OTTO Engineering Poland Sp. z o.o. includes technical consulting, design, manufacturing and servicing of modern systems and technologies.

To meet the needs of companies of adapting many areas of their operations to new requirements, including EU standards, we offer professional assistance in comprehensive management of planned and implemented investments. As a company, OTTO Engineering Poland Sp. o.o. has a highly qualified staff of engineers taking steps to introduce innovative solutions and technologies.

RYNKOWY LIDER INNOWACJI 2013
JAKOŚĆ • KREATYWNOŚĆ • EFEKTYWNOŚĆ

SYSTEM CERTIFICATION ISO 9001 SGS

PCA Polskie Centrum Akredytacji BADANIA
AB 1426

Experts in building technology

rzeszow@ottoindustries.com.pl

The factors, necessary to be successful in research on advanced technologies and in production based on these technologies, are the quality and reproducibility of the product, as well as ensuring the safety of workers and the environmental protection.

The Clean Room technology is now used not only in traditional industries, such as microelectronic and pharmaceutical industries, but also in almost all industries, where advanced technologies are used: in the food processing, optical, packaging, medical device and sensor, as well as precision mechanic industries.

Continuous technological progress and increasingly complex and changing regulations require rapid adaptation of production processes to the specific needs and consequently – the use of clean working environments and shorter production cycles. We want to meet this challenge. That is why we have developed solutions that allow to maintain the process reliability and at the same time guarantee its high economic efficiency.

This was achieved thanks to our extraordinary commitment, modern technical expertise and detailed knowledge of key processes implemented by our clients.

VENTILATION AND AIR CONDITIONING – CLEAN ROOMS

When creating any new system, we use our growing experience in implementing projects ranging from feasibility studies to "turnkey" clean room systems. By the concept of OTTO Clean Systems, we understand complex dealing with a specific issue, realized in an individual way, planning, design and construction of clean room projects.

We offer comprehensive solutions in adapting existing infrastructure to the highest standards and customer requirements of the precision mechanic production, including walls, ceilings, floors, heating installations, ventilation facilities, connecting all the process media and measuring equipment as well as automation and monitoring.

The stages of the implementation of Clean Room Systems:

CONSULTING

- Location analysis
- Feasibility studies
- Project development
- Analysis of profitability and productivity
- Planning concepts for all industries
- Qualification and validation audits
- Audits of compliance with GMP
- (currently valid good manufacturing practices)
- Risk analysis

PLANNING

- Project management
- Development of a concept
- Concept plan
- Detailed plan
- Process optimization
- Increasing production scale
- Simulations

IMPLEMENTATION

- Prefabrication
- Installation
- Commissioning
- Adherence to schedules
- Quality assurance

VENTILATION AND AIR CONDITIONING – PAINT SHOPS

Design and construction

Performing all the work necessary to start surface preparation and coating application workshops.

The life cycle of your facilities begins with designing. Your ideas, needs and wishes are specific architectural, construction and installation requirements.

The pictures beside present a sample implementation (design and construction) of a paint shop facility for one of our customers from the aviation industry.

VENTILATION AND AIR CONDITIONING – BAUER OPTIMISING SYSTEM

In the field of technical facility management, we offer modular solutions of energy-efficient operation of all installations with optimized consumption of media. We can remotely monitor, operate and supervise the maintenance.

Using the Bauer Optimising System to create a room climate provides the airflow in the opposite direction than the one resulting from its physical properties:

- The cold air does not flow down, the warm air does not flow up.

The permanent process of controlling and optimising the operation of the air handling unit takes place by means of a special measuring and control technology:

- A separate control for the supply and exhaust air is purposed to create a non-directed, turbulent airflow inside a room, while maintaining a small flow velocity and uniform distribution of temperatures and fresh air.

The airflow is adjusted to the needs resulting from the load.

PROJECTS - EXAMPLES OF REFERENCES
ventilation and air conditioning

Bolts and nuts factory

- A conceptual design of a ventilation (80 000 m^3/h), heating (80 kW), gas (128 Nm^3/h) systems and electroplating processing facilities of PR1 shop floor.

Sorting and Composting plants

- Design of ventilation systems for three waste sorting plants in Poland.

Sewage treatment plants

- Design and construction of ventilation systems in sewage treatment plants and sewage pumping stations for several sewage treatment plants in Poland.

Printing shops

- Design and construction of ventilation and gas systems for afterburning facilities.

Aviation industry

- Design and construction of the heating (3.5 MW), general and technological ventilation (400 000 m^3/h), gas, compressed air, central vacuum, and sprinkler systems along with complete automation for the entire H3 workshop.
- Executive design of the general and technological ventilation (1 000 000 m^3/h), heating (4.5 MW), gas, compressed air, central vacuum, and sprinkler systems along with complete automation for the entire H12 workshop.
- The design of a precision foundry along with a ventilation (40 000 m^3/h), air conditioning, and cooling systems (700 kW), and local exhausts.
- Installation of the ventilation system and local exhausts for a paint stripping and cleaning facility.
- Project of the thermal oil heating system for a gear-motor at the HTG workshop.
- Inventory of the general ventilation system and process lines for the W-81 plating plant, together with the conceptual design.

Aviation industry

Design of the technological heat (3.0 MW), heating (0.3 MW), and heat recovery (1.2 MW) systems, heat distribution centre (3.3 MW), compressed air, gas, general ventilation, and technological ventilation (210 000 m^3/h) systems.

Energy industry

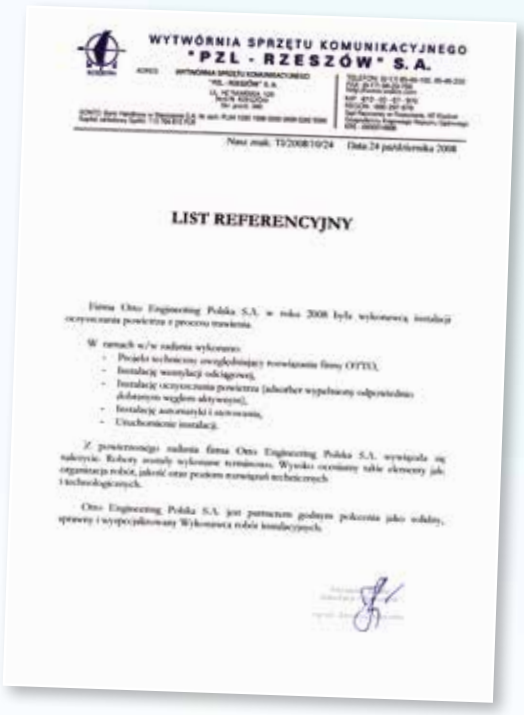
Design of the heating (100 kW), heat recovery (400 kW), compressed air, gas, general ventilation, and technological ventilation systems (100 000 m^3/h).

Logistics complex

Design of the heating (2.3 MW) and air conditioning systems (135 kW).

Automotive industry

Design of the chilled water (500 kW) and freon systems.



WYTWÓRNIA SPRZĘTU KOMUNIKACYJNEGO
"PZL - RZESZÓW" S.A.

LIST REFERENCYJNY

Experts in building technology

REFERENCES – Clean rooms

NOVARTIS BEHRING (Marburg, Germany)
Production of vaccines
Design and construction of the air conditioning and automation systems, the total area of 780 m^2 of clean rooms of the Class 10 000 and 100 000 of air quality.

HERAEUS HANAU (Hanau, Germany)
Production of cardiac pacemakers
Design and construction of the air conditioning system of the capacity of 25 000 m^3/h for the area of 520 m^2 and the Class 100 000 of air quality.

PROCTER & GAMBLE (Weiterstadt, Germany)
Renewal of production
Design and construction of the complete air conditioning and automation system of the capacity of – at the ceilings of clean rooms – 160 000 m^3/h for the area of 3 000 m^2 and the Class 100 000 of air quality.

DR. KOHLER CHEMIE (Bensheim, Germany)
Reconstruction and expansion of the factory
Design and construction of the air conditioning and automation systems – clean room ceilings, walls and air-locks and the processing and air-conditioning cooling systems of the capacity of 40 000 m^3/h for the area of 600 m^2 and the Class 10 000 and 100 000 of air quality.

LIMES (Bonn, Germany)
Lecture building and laboratory
Execution of the air conditioning and automation systems of the power of 1300 + 900 kW and the capacity of 60 000 m^3/h + 16 000 m^3/h for the area of 3 600 m^2 and the Class 10 000 and 100 000 of air quality.

Leading technologies
Individual solutions

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OTTO COMPANY ALSO PROVIDES THE FOLLOWING SERVICES:

- Design and implementation within the following areas:
- Processes involving absorption and adsorption phenomena:
  - adsorbers – adsorption on activated charcoal,
  - chemical scrubbers with chemical injector kit,
  - scrubbers and wet cleaners with the possibility of dosing chemicals.
- Thermo and catalytic combustion.
- Concentrators for increasing the concentration of pollutants in the air.

OTTO ALL OVER THE WORLD

Otto has a lot of branches all over the world!
We provide services to more than 15 000 customers!
The headquarters is located in Germany Bad Berleburg.
We also have a number of operational centres in Germany, Canada, Poland, Russia, Bulgaria and Hungary.

Accredited measurements of pollutants:
a. Work Environment Laboratory
b. Air Protection Laboratory
c. Environmental Protection Engineering

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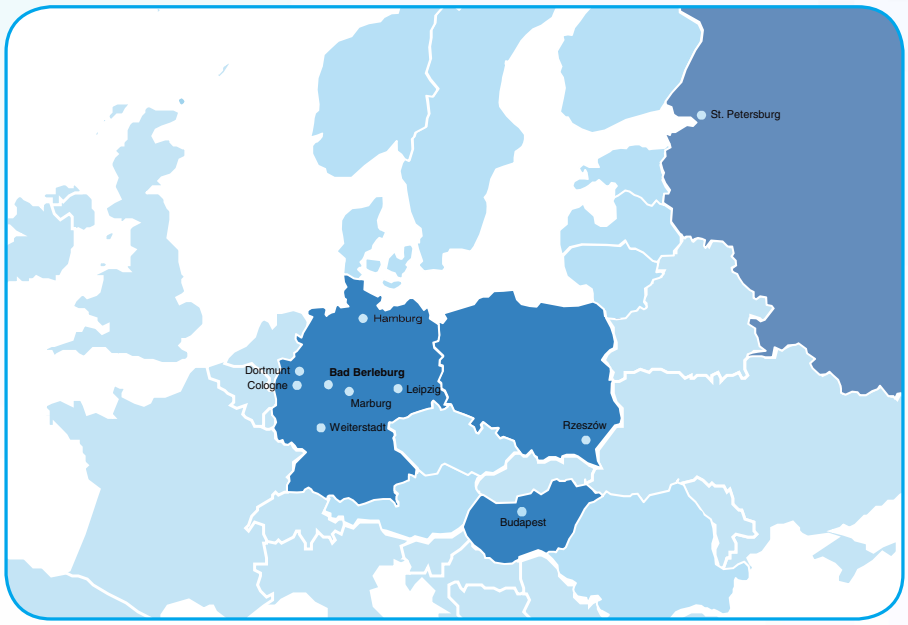
BADANIA
AB 1426

Site locations of OTTO

300 specialists in the field of industry and construction



Germany
Headquarters: Bad Berleburg
Hamburg
Dortmund
Cologne
Weiterstadt
Marburg
Leipzig
Siegen

Other countries:
Rzeszów (Poland)
Budapest (Hungary)
St. Petersburg (Russia)
Krasnoyarsk (Russia)
Guelph, Ontario (Canada)
BIOREM Technologies

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