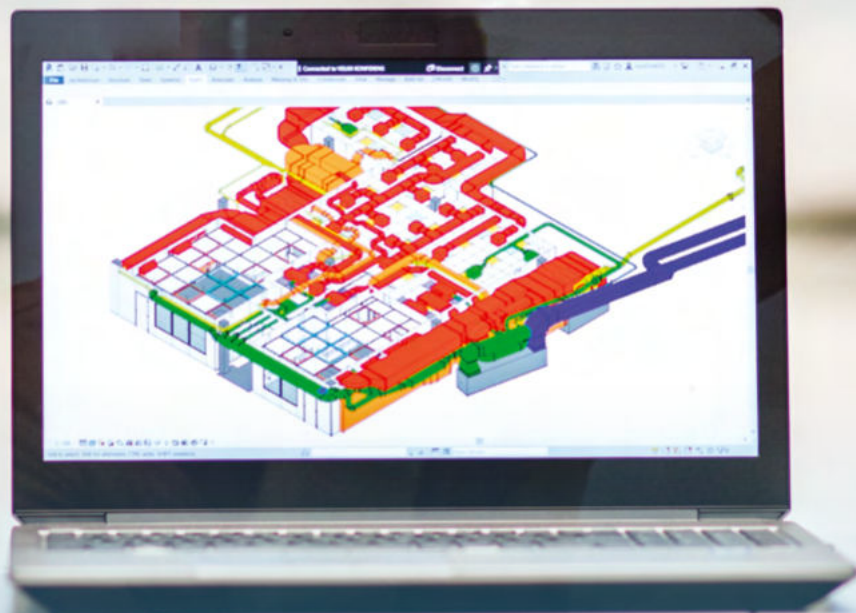


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CLEANROOM ENGINEERING

INTRODUCTION

As a company we are devoted to creating ideal work environments with minimal expenses and to developing products that can satisfy even the most rigorous of quality and energy efficiency standards. Through compliance with sustainable development principles, our efforts are aimed at Termovent's future evolution.

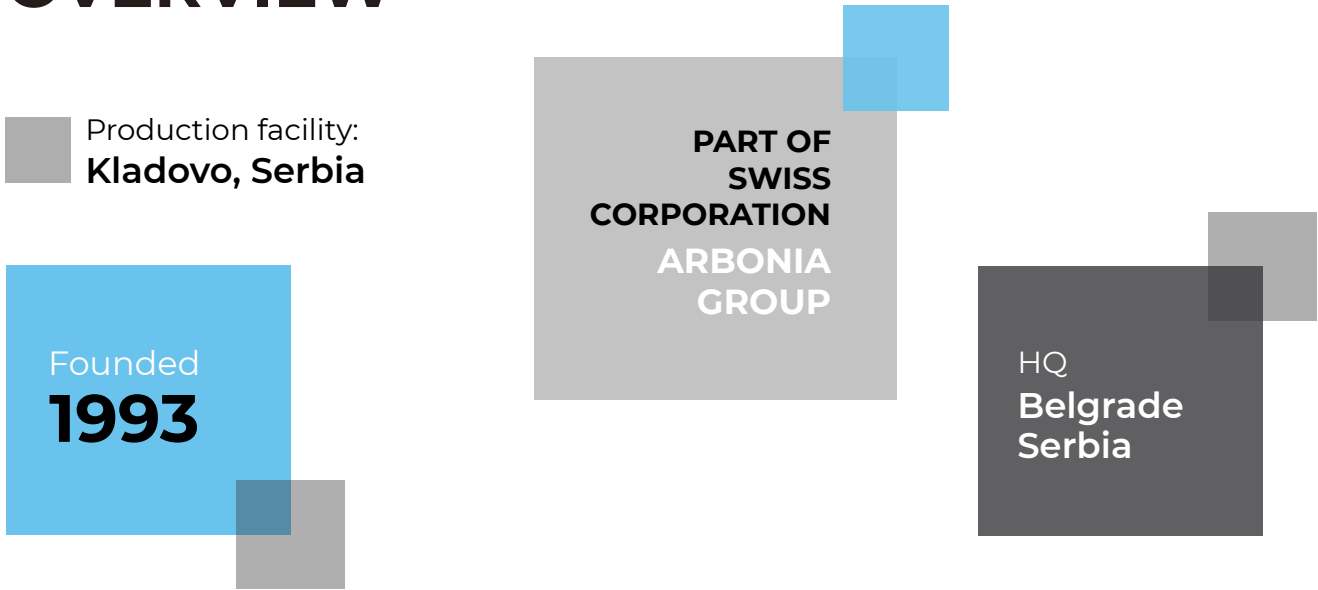
Cleanroom is an environment that has a controlled level of contamination that is specified by the number of particles per cubic meter for the appropriate particle size.

Termovent specializes in production of modular panel systems, which are used in the field of clean room technology.

The whole system is aligned with GMP and FDA directives, as well as ISO 14644 standard. Compliance with applicable regulations in the field of clean room technology enables its use in rooms from ISO 9 to ISO 1 class (GMP classes A, B, C and D).



OVERVIEW



Modular component systems are easily integrated with all other systems. By combining a variety of materials in panel production for cleanrooms, Termovent company offers a vast range of use in:

- Pharmaceutical industry,
- Micro-electronics,
- Chemical industry,
- Food industry,
- Health facilities,
- Laboratories etc.

A team of young experts that is responsible for cleanrooms development consists of a group of people that participated in international competitions throughout Europe and Asia, and with their experience, hard work and devotion they are responsible for the great satisfaction of our partners.

Through the pursuit of modernization and contemporaneous business, the entire production and design system is based on automation and BiM design.



CONTENTS

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TURNKEY PROJECT EXECUTION

CONSULTING & PLANNING

ENGINEERING & DESIGN

PROJECT & CONSTRUCTION

EQUIPMENT & SYSTEM PRODUCTION

COMMISSIONING QUALIFICATION & VALIDATION



CONSULTING AND PLANNING

- Familiarization with Client's Requirements and Analysis
- Documentation Package for Tendering and Execution
- HVAC Systems
- BMS / EMS Systems
- Black Utility Systems
- Clean Utility Systems
- Clean Room Modular System
- Qualification and Validation Package

ENGINEERING AND DESIGN

- Concept Design
- Basic Design
- Detailed Design
- Cost Optimization
- PLC, HMI, SCADA Application Software Design
- Project Planning and Scheduling
- Equipment Procurement Management
- Factory Simulations and Factory Acceptance Test (FAT)
- REVIT and MAGIC CAD software packages
- Health and Safety Plan

SITE MANAGEMENT

- Site Preparation
- Equipment / Material Delivery
- Sorting and Stock
- Assembly and Installation
- Construction Work
- Project Execution Level following
- Site Coordination with Other Contractors
- Implementation of Safety Procedures
- Quality Control and Quality Assurance
- Commissioning and Validation Phase Planning
- Budget Tracking

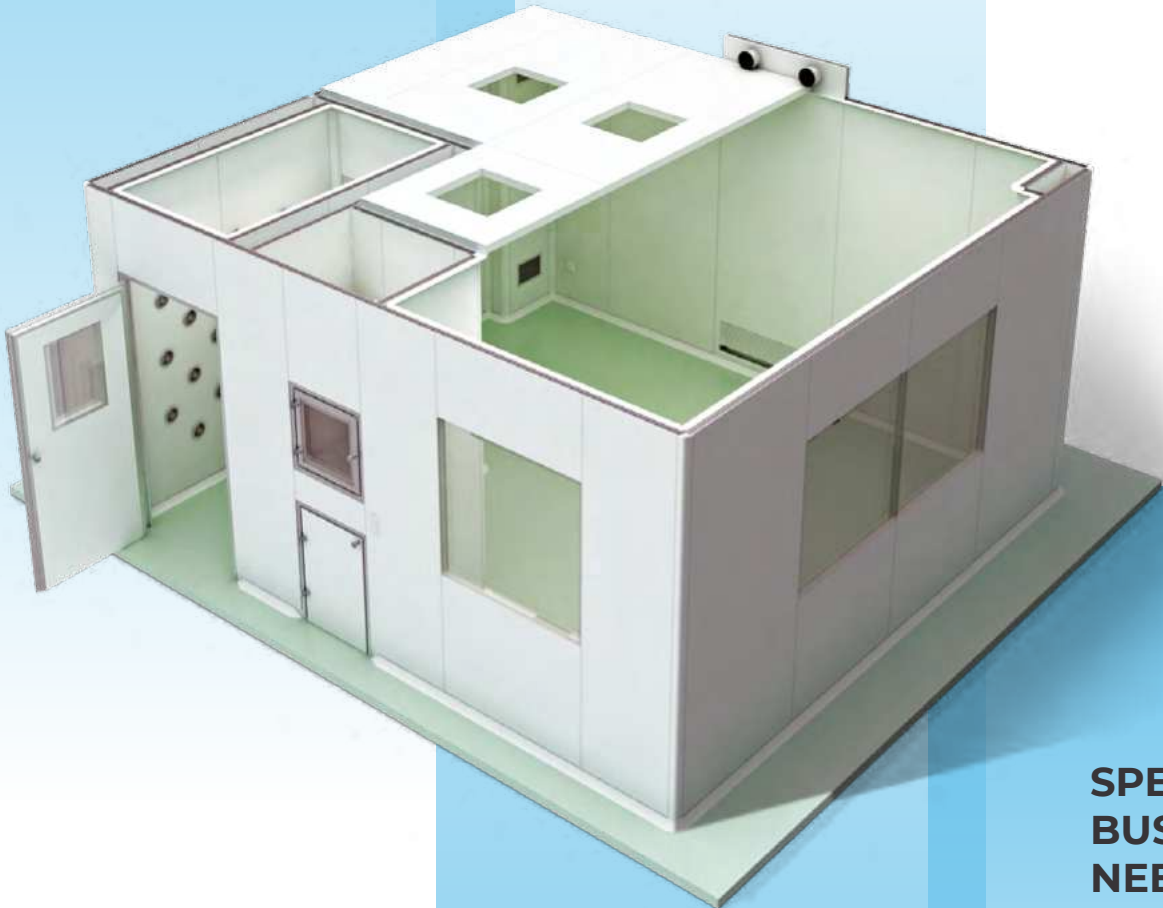
COMMISSIONING, QUALIFICATION AND VALIDATION

- Equipment Parameters Set-Up
- IO Signal Check
- System Start-up and Commissioning
- System HVAC Balancing
- Site Acceptance Test (SAT)
- As Built Documentation
- Qualification and Validation
- Installation Qualification (IQ)
- Operational Qualification (OQ)

FAST GROWING INDUSTRIES

LIFE SCIENCE AND CHEMICALS INDUSTRY

Pharmaceutical
Biotechnology
Food and Nutrition
Consumer Care
Chemicals



SPECIFIC BUSINESS NEEDS

ADVANCED TECHNOLOGY INDUSTRY

Batteries
Semiconductors
Photovoltaics



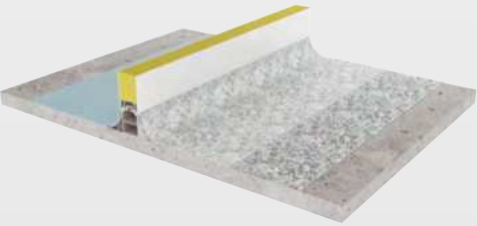
WALL



CEILING



FLOOR



GLAZING



DOOR



ACCESSORIES

AIR SHOWER
PASS BOX
PROTECTION
GRIDS
LAF
FFU



REFERENCES



**PFIZER GLOBAL
MANUFACTURING**
Puurs, Belgium



**DISHMAAN
LABORATORIES**
Veenendaal, Netherlands



ZOETIS
Louvain La Neuve,
Belgium



KATOD
Novosibirsk, Russia



GRAND MEDICA
Novokuznetsk, Russia



ASPECTUS PHARMA
Skopje, North
Macedonia



**WELLPHARMA
MEDICAL SOLUTIONS**
Abu Dhabi,
United Arab Emirates



**TRENKER
LABORATORIES**
Nivelles, Belgium



PHARMASYNTEZ
Bratsk, Russia



**BILTHOVEN
BIOLOGICALS**
Bilthoven, Netherlands



**PURNA
PHARMACEUTICALS**
Puurs, Belgium



**RASAN
PHARMACEUTICALS**
Sulaymaniyah, Iraq



SPIMACO
Riyadh, Saudi Arabia

PFIZER GLOBAL
MANUFACTURING

Puurs, Belgium

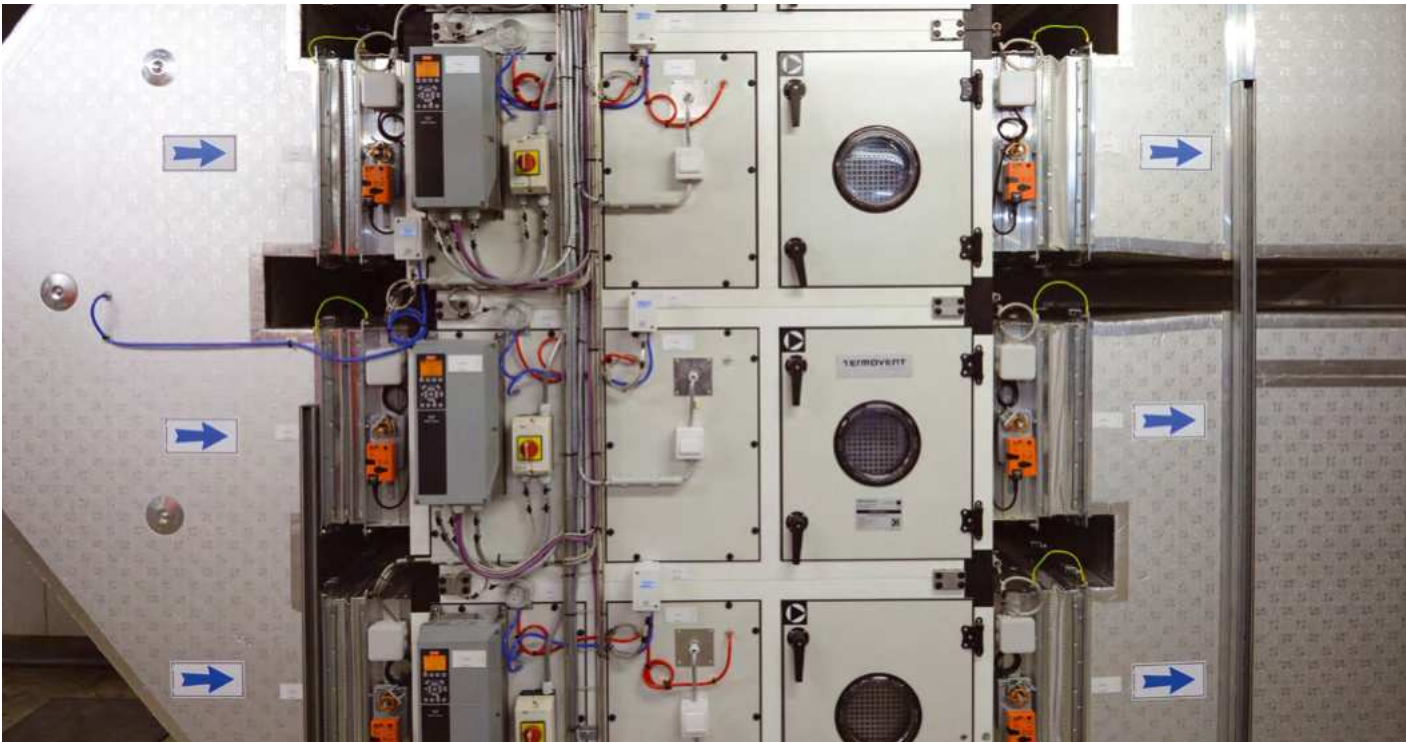


PROJECT:
Pilot Plant, Focus Cell 2, Formulation Boots, Flexible
Cartridge Center

MISSION:
Design and installation of
HVAC ductwork with associated equipment

Room class
ISO5 / ISO6 / ISO7 / ISO8

One of worlds
biggest
pharmaceutical
companies



ZOETIS

Louvain La Neuve, Belgium



PROJECT:
HVAC system for NGF supporting equipments
and upgrade

MISSION:
Complete HVAC design, engineering, installation,
Revit design, BMS / EMS system, iFix SCADA
HVAC, EMS qualification / validation
BMS commissioning

Room class
A, B, C, D

Revamping
project for 3/4
of production
area completed
in 6 weeks

**PURNA
PHARMACEUTICALS**

Puurs, Belgium

PURNA
PHARMA

PROJECT:
Production & Packaging

MISSION:
HVAC design, engineering and installation
BMS system, HVAC, BMS commissioning

Room class
D, NC

First project
in EU done in
accordance to
ATEX directive



BILTHOVEN BIOLOGICALS

Bilthoven, Netherlands

 Bilthoven Biologicals
Cyrus Poonawalla Group

PROJECT:
HVAC system for IPV Manufacturing facility
in A-7 Building

MISSION:
HVAC design review, engineering, installation
HVAC qualification / validation
BMS commissioning

Room class
BSL3 laboratory, C, D, CNC, UC

BSL3 area
Full welded inox
ducting on the
extraction with
"0" leakage

PHARMASYNTEZ

Bratsk, Russia



PROJECT:
Production, delivery and installation of HVAC system's equipment for clean room environment

MISSION:
Clean room design, engineering, installation
Design, engineering, installation of complete HVAC systems
BMS / EMS system
HVAC, EMS, Clean room qualification / validation

Room class
ISO8

This project is based in Siberia, 7000 km from Termovent HQ



KATOD

Novosibirsk, Russia



PROJECT:
HVAC systems for clean room production of Night Vision Device

MISSION:
Clean room design, engineering, installation
Design, engineering, installation of HVAC systems
BMS system, HVAC, BMS commissioning

Room class
ISO5 / ISO6 / ISO7



The first ISO5 CleanRoom project for night vision equipment production

WELLPHARMA MEDICAL SOLUTIONS

Abu Dhabi, United Arab Emirates



PROJECT:
Delivery of the Control Boards, HVAC systems for The Intravenous Solutions (IV) production plant in Abu Dhabi

MISSION:
Engineering and installation of HVAC systems
BMS / EMS system, HVAC, BMS commissioning
EMS qualification / validation

Room class
C, D

UAE's first
production
of infusion
solution



DISHMAN LABORATORIES

Veenendaal, Netherlands



PROJECT:
VDA Production Lab, Dishman

MISSION:
Design and installation of HVAC ductwork with associated equipment
HVAC commissioning

Room class
PbOEL Class 1, PbOEL Class 3

High
containment
cGMP
laboratory



TRENKER LABORATORIES

Nivelles, Belgium



PROJECT:
HVAC systems for Trenker New Laboratories

MISSION:
HVAC system engineering and installation
BMS system, HVAC qualification / validation
Warehouse temperature mapping
BMS commissioning

Room class
D, CNC, Warehouses zone

Source of
hot and
chilled water
provided by
one four-pipe
heat pump



GRAND MEDICA

Novokuznetsk, Russia



PROJECT:
Complete new hospital in Novokuznetsk

MISSION:
Clean room design, engineering, installation
HVAC system engineering and installation
BMS system, HVAC qualification
HVAC commissioning

Number of operating rooms:
10 operating rooms

First purpose
of the building
was shopping
center

BESI

Radfeld, Austria



PROJECT:
Implementation of clean rooms and accompanying

MISSION:
project documentation, production of clean rooms and Air Handling Units (AHU), delivery and installation of system equipment (HVAC, Black Utility, Electrical, BMS/EMS), commissioning and validation of the system

Room class
Room classes: ISO4, ISO5, ISO7

First engineering project in the semiconductor industry



BIONIKA

Skopje, North Macedonia



PROJECT:
Expansion of production capacity for pharmaceutical company Bionika

MISSION:
Complete ductwork with associated elements, delivery and installation of air handling units and clean rooms, hot and cold water pipelines, compressed air pipes with associated fittings, steam boiler, steam distribution pipelines, electrical cabinets for the fields of energy and automation, cabling of peripheral equipment (sensors, actuators, pressure switches, etc), steel structure for bearing external channels

Number of operating rooms:
Room classes: C, D

Termovent cooperated with the company Bionika for the first time in 2011. In 2021, we were pleased to renew this cooperation.



Termovent Komerc - recommendation letter

"Termovent Komerc company from Belgrade, Serbia was working for Bilthoven Biologicals B.V. company in period 2012/2015 in next projects:

- 2012 / 2013 HVAC installation for **U3** building
For this project Termovent was responsible for delivery and installation of Air Handling Units, produced by them, sensors and air ducts with all accessories for distribution and regulation. Termovent's engineers gave us full assistance during commissioning and start up this project.
- 2015 - HVAC installation for **G7** building
For this project Termovent did main design of HVAC installation, delivery and installation of HVAC equipment, produced by them, ducting, piping with all accessories, balancing air and water side, commissioning, IQ/OQ, measuring, and start up.
- 2015 - HVAC installation for **A7** building - BSL3 area.
For this project Termovent is responsible for all activities regarding general design reviewing, delivery and installation of HVAC equipment, which is made by them, installation of ducting with elements for air distribution and regulation, electrical cabinets for power and automation, cabling, signal checking, software for BMS, balancing air and water side, commissioning, IQ/OQ, measuring, and start up.
Contract value is more than 2.300.000,00 euro.

In these projects Termovent Komerc has done all tasks: designing, FAT in their factory, installation, commissioning, IQ/OQ, and start up, in time, without remarks and in a really excellent quality.

We are very satisfied with Termovent's work and organization.
This company has our full recommendation."

Bilthoven Biologicals
Cyrus Poonawalla Group
P.O. Box 457
3720 AL BILTHOVEN
10-12-2015



Ets. Beaupain
Mr. Olivier Burguet



Pfizer NV
Rijksweg 12
2870 Puurs
Belgium
Tel: 03 / 890.92.00

Puurs, August 3rd 2009

I hereby confirm that Termovent - Komerc successfully completed the new HVAC system for a critical filling line in our plant in Louvain-La-Neuve.

The scope of the works included qualification and commissioning and the respective documentation according to the GMP requirements and the internal Pfizer procedures.

The works were completed in due time, within budget and to the satisfaction of the plant management.

Pfizer Global Engineering

Jean Nomes
Director PGE Europe

PURNA

PHARMA

Puurs, 15 October 2013

Purna Pharmaceuticals NV
Rijksweg 17
2870 Puurs
Belgium

We hereby confirm that company Termovent-Komerc, for needs of our pharmaceutical factory deduced a complete HVAC system, with responsive IQ, OQ documentation, commissioning and fitting requested parameters.

HVAC system is generated according to valid GMP demands.

All work is generated according to Contract No's: 05.102.3/02.12, 05.481.6/05.12, 05.315.5/05.12, 05.630.3/10.12 and 05.1008.7/1.13.

PURNA PHARMACEUTICALS NV
Raymond Van Gucht
Chairman of the board

Zoetis Belgium SA
Rue Laid Burniat 1
B 1348 Louvain-la-Neuve
BELGIUM
T +32 10 470211
F +32 10 452006

zoetis

Termovent Komerc
Subotička 23,
11000 Beograd
SERBIA

Louvain-la-Neuve, 10 février 2014

Termovent Komerc - recommendation letter

"Termovent-komerc company from Belgrade, Serbia was working for purpose of Zoetis company in period 2012/2013 (starting in 2007) in next projects:

- P2179, Filling syringes line - (2012),
- P2100, Revamping HVAC for Lyo rooms - (2013),
- P2100 Revamping HVAC for Bloc 200 - (2013),
- P2186 Isolator room - (2013-2014).

In these project Termovent-komerc was responsible for all activities regarding general design, delivery and installation of HVAC equipment, which is made by them, installation of ducting with elements for air distribution and regulation, delivery and installation of electrical cabinets for power and automation, cabling with signal checking, commissioning and start up.

Special organization skills Termovent-komerc company showed in project P2100 - revamping bloc 200 \$6 weeks shutdown for 2/3 of our production area), contract value approximately 1.460.000,00 euro. In this project Termovent-komerc has done all tasks: designing, dismantling, FAT in their factory, installation and finally commissioning and start up of all systems in a really short time, and in a really excellent quality.

Our company is satisfied with work and organization of Termovent-komerc company.

This company is finishing its projects in time and quality, and without remarks, which is confirmed with our contract in period of 5 (five) years.

This company has our full recommendation."

Best Regards,

Christophe DUMONT
Director Engineering
Zoetis Global Manufacturing and Supply
B1348- Louvain-la-Neuve
Phone: +32(0)10470213 or +32(0)10470480

QUALITY MANAGEMENT SYSTEM

CERTIFICATES AS THE GUARANTEE OF QUALITY

Termovent is fully committed to meeting the customer's requirements in terms of quality, environmental protection and safety. The set high quality standards are the cornerstone of our operations.

In order to achieve the goals we set at all times, our employees are involved in the processes of continuous improvement and optimization of our products and services. The success of this approach is confirmed by numerous certificates held by Termovent, which guarantee the highest standards to our customers.



Eurovent Certita Certification

Eurovent Certita Certification Eurovent Certita Certification has certified that Termovent Air Handling Units, Range KK, and Software for calculation of performances SELECT:pro, Trade name TERMOVENT, have been assessed according to requirements of the following standard: OM-5-2017



CE marking for Termovent AHUs

CE marking for Termovent AHUs Termovent Air handling Units hold CE Marking of Conformity to Machinery Directive 2006/42/EC Annex II, Point A. In addition, Termovent AHUs are designed and produced according to set of harmonized standards: EN ISO 12100:2010, EN ISO 12100:2010, EN ISO 13850:2015, EN 1037:1995+A1:2008, EN ISO 14120:2015, EN 60204-1:2006/A1:2009 and EN 61000-6-2:2005/AC:2005



ISO 13485:2016

ISO 13485:2016 Certification body SIQ confirmed that Termovent introduced Quality Management System in accordance with ISO 13485:2016 in the field of manufacturing, design and installation of Termovent panels for the construction of clean rooms.



ISO 9001: 2015

ISO 9001: 2015 Certification body TUV SUD Management Service GmbH confirmed that Termovent introduced Quality Management System in accordance with ISO 9001:2015 standard in the field of manufacturing, installation and sales of equipment for air conditioning, heating and cooling.



ISO 14001:2015

ISO 9001: 2015 Certification body TUV SUD Management Service GmbH confirmed that Termovent introduced Quality Management System in accordance with ISO 9001:2015 standard in the field of manufacturing, installation and sales of equipment for air conditioning, heating and cooling.



ISO 45001:2018

OHSAS 18001:2007 Certification body TUV SUD Management Service GmbH confirmed that Termovent introduced Health and Safety Management System in accordance with OHSAS 18001:2007 in the field of manufacturing, installation and automation of air conditioning, heating and cooling equipment and systems.



AAA Creditworthiness Rating

AAA Creditworthiness Rating Bisnode Serbia awards Golden certificate of Creditworthiness Rating



TERMOVENT

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