

Clinical cleanrooms

**Flexible hygienic
solutions for your
room design**

Viessmann Kältetechnik AG

Position	Leader on the europe market
Employees	approx. 380
Export rate	30 %
Head Office	Hof (Germany)
Locations	D / F / DK / A / VAE
Turn over	80 Mio./anno



VISSMANN

- Pathology cooling
- Blood and plasma cooling
- Coldrooms and deep-freezing rooms
- Refrigeration units
- Coldroom doors
- Shelving systems

VISSMANN TECHNOLOGIES

- Modular operating theatres
- Modular life science clean rooms
- Modular safety laboratorys
- Radiation protection/Radiopharmacology



Benefits at a glance

- Flexibility and freedom of design for designers, builders and operators
- Minimum construction time and hence enormous cost savings
- Quality maintenance through industrial prefabrication

Viessmann modular operating theatres combine optimum flexibility with full compliance to hygiene standards and disinfection guidelines.

- The surfaces are made of galvanized sheet steel or stainless steel and finished with certified, antimicrobial **SilverProtec®** powder coating, and have excellent resistance to chemicals and mechanical wear and tear
- Wall thickness 50 - 350 mm
- Flush sterile glazing, with a long-lasting, flexible seal, incl. motorized Venetian blinds
- Radiation protection furnishings for solid walls, glass elements and doors



- Special elements to integrate X-ray screens, control panels, electric distribution elements
- Utility supply units for medicinal gases and electrical supplies
- Flush vertical air ducts, integrated into the walls
- With lint separators
- Manual and automatic single-action and sliding doors
- Flush wall-integrated furnishings
- Ceiling system with ergonomically optimized surroundings lighting



Our modular system solutions for operating theatres (available as mono-block type and SLP type - Single Leaf Planking) are suitable for complex installations for the most diverse application areas in clinical applications, and offer the greatest flexibility and individuality thanks to their variable designs.

With few handgrips, the fitted wall panels can also be dismantled and re-installed by non-specialised workmen. This means that any damages can be removed easily and ensures that technical retrofitting can be installed simply and cost-efficiently.

Planking material is high resistible HPL in different patient oriented designs or sheet, galvanized, powder coating and stainless steel.



- Monoblock elements made of galvanized, coated steel or stainless steel sheet
- Doors and windows wall-flush integrable on request
- Very high stability and resistance of the wall elements against damages and the effects of humidity
- If required doors also available in hermetically sealed design
- Ceiling-high wall elements and grid widths up to 1250 mm to reduce the joint part by up to 80 %
- Absolutely dry construction, without humidity content
- Antibacterial, fungicidal and microbiologically harmless wall finish



- Variable modular system guarantees flexible finish for different requirements (e.g. noise, radiation or fire protection)
- Wall heating with a performance of up to 140 W/m^2 ready for connection and integrable
- Trouble-free cleaning of the surfaces with commercially available cleaning and disinfection agents
- Surfaces with antimicrobial **SilverProtec®** powder coating, which provides sustained protection against micro-organisms and ensures maximum hygienic properties
- Ceiling connection profiles suitable for all ceiling systems. This enables simple and non-destructive dismantling of the wall elements



From a hygienic point of view, intensive care rooms are just as sensitive as intervention rooms, so it is also necessary to install cleanroom wall systems here.

Since the installation requirements in the wall systems are not as large dimensionally as in an operating theatre, a mono-block system with a wall thickness of 50 mm is sufficient in many cases.



Product characteristics

- Electrical and water installations ready for connection, integrated
- Apertures for wall internals industrially manufactured ex-works
- Our own-produced windows and doors for flush-mounted assembly
- High degree of prefabrication guarantees the shortest construction times and reduced investment costs

Environmental and occupational protection are of vital importance in the area of radiology and nuclear medicine. For this reason Viessmann radiation protection systems for walls, ceilings, doors, windows and glass offer the necessary protection in the following areas:

- X-ray
- Magnetic resonance tomography MRT
- Computed tomography CT
- EWL
- Digital analysis system DAS
- Cardiac catheter
- Linear accelerator
- Afterloading
- Nuclear medicine



We can also offer you individualised designs for special requirements and for any constructional situations. In addition to compactly installed radiation protection elements, we also deliver light or mobile radiation protection screens.

Medical fixtures made from high pressure laminate (HPL) are robust and very resistant to mechanical damage and the effects of humidity. They are integrated superbly in the modular operating wall system type SPL (laminate), so that an optimal unit is produced and hygiene is ensured thanks to the combined system.

With a considerable and attractive colour palette, the fittings are an ideal addition to your working environment.



- Surfaces are easy to clean with commercially available cleaning and disinfection agents
- Fittings are anti-static and need no equipotential bonding
- High stability and resistance to mechanical damage and humidity
- Antibacterial, fungicidal and microbiologically harmless materials
- Manufacture covers all current medical cabinet and worktable systems
- Variable dimensions range from standard via module dimensions in DIN and ISO through to individual production custom-made and constructional situations
- Fittings are available with the module layouts of all well known manufacturers
- A complete variety of medically appropriate worktable coverings such as HPL, CNS, mineral materials (on an environmentally friendly acrylic base), amongst others, are part of the standard program



Hospitals / Lifescience / Modular operating theatres

- UKT – Tübingen – *Modular OP- theatres*
- Klinik Ibbenbüren – *Modular OP- theatres*
- US Hospital, Landstuhl – *Intensive care units*
- Hospital Multan – *Modular OP- theatres*
- CMH Lahore – *Modular OP- theatres*
- El Alamein Hospital Cairo Egypt – *Modular OP- theatres*
- Mahdi Military Hospital Cairo Egypt – *Intensive care units*
- Ain Shams University Hospital Cairo (Egypt) - *Intensive care units*
- GerTech Kumasi Ghana – *Intensive care units*
- NCI National Cancer Institut Cairo Egypt – *Intensive care units*

Hospitals / Lifescience / Modular operating theatres

- Acibadem, Istanbul (TK) – *Stem cell lab*
- Apotheke Manhardt Augsburg – *Cytostatic drug manufacture*
- Apotheke Waren – *Cytostatic drug manufacture*
- Cryo Thessaloniki (GR) – *Stem cell lab*
- Euroapotheke Bremen – *Cytostatic drug manufacture*
- Helios Klinik Berlin – *Clinical pharmacy*
- Intercell Wien (A) – *L3 lab*
- Uni Ankara (TK) - *L3 lab*
- FhG Leipzig – *L3 lab*
- Altana Pharma Ltd. Cork (IR) – *Pharmaceutical production*
- Altana Pharma, Hamburg – *Pharmaceutics-research & development*

Lifescience

- Klinik Ibbenbüren - *OP- theatres*
- US Hospital, Landstuhl - *Hospital*
- GerTech, Kumasi (Ghana) - *Intensive care units*
- NCI – National Cancer Institut, Cairo (Egypt) - *Intensive care stations, bone marrow transplantation*
- Acibadem, Istanbul (Turkey) - *Stem cell lab*
- Apotheke Manhardt, Augsburg - *Cytostatic drug manufacture*
- Apotheke Waren - *Cytostatic drug manufacture*
- Cryo Thessaloniki (Greece) - *Stem cell lab*
- Euroapotheke Bremen - *Cytostatic drug manufacture*
- Helios Klinik Berlin - *Clinical pharmacy*
- Altana Pharma Ltd, Cork (Ireland) – *Pharmaceutical production*
- Altana Pharma, Hamburg - *Pharmaceutics-research & development*

Lifescience

- Fraunhofer Institut IZI, Leipzig - Genetic research
- Agrarinstitut, Budapest (Hungary) – *Biotechnology-research*
- Biotectid, Leipzig – *Pharmaceutics*
- Sengewald, Rosenheim – *Medical technology*
- Rationpharm, Ulm – *Pharmaceutics*
- Abott Vascular, Ludwigshafen – *Pharmaceutics*
- Merck, Darmstadt – *Pharmaceutics*
- Fraunhofer Institut Molekularbiologie und Angewandte Ökologie (IME), Aachen – *Biotechnology research*
- Synthon BV, Maastricht (Netherlands) – *Pharmaceutics*
- R. P. Scherer GmbH & Co. KG, Eberbach – *Pharmaceutical production*
- Technologiepark Warnemünde, Rostock-Warnemünde – *Biotechnology*
- Fresenius AG, St. Wendel – *Medical devices technology/analytcs*

Lifescience

- Reinz GmbH, Ulm – *Medical devices technology*
- Telegärtner Kunststofftechnik GmbH, Steinenbronn – *Medical devices technology*
- Oncotec Rodleben – *Pharmaceutics*
- Rentschler Biotechnologie GmbH – *Pharmaceutics*
- Merckle Biotec GmbH, Ulm – *Pharmaceutics, clean rooms*
- Möller Pharma, Recklinghausen – *Pharmaceutics*
- Aeropharm Rudolfstadt – *Pharmaceutics*
- Pharmadule Talinn (Estonia) – *Pharmaceutics*
- Degudent Frankfurt – *Pharmaceutics*
- Ronak Teheran (Iran) - *Pharmaceutics*

Industrie

- Fraunhofer Institut Mikroelektronische Schaltungen und Systeme (IMS), Duisburg – *Research & development*
- Balda AG, Bad Oeyenhausen – *Mobile phone displays*
- Wacker Siltronic AG, Burghausen – *Semiconductor production*
- Universität Mainz – *Nanotechnology*
- Institut für Ostseeforschung Warnemünde, *Clean room*
- Jumo Fulda – *Electronic*
- Universität Bielefeld – *Nanotechnology*
- FHG Isit Itzehoe – *Semiconductor production*
- TGF Schmalkalden – *Plastics processing*
- DGLR Stuttgart - *Space research*