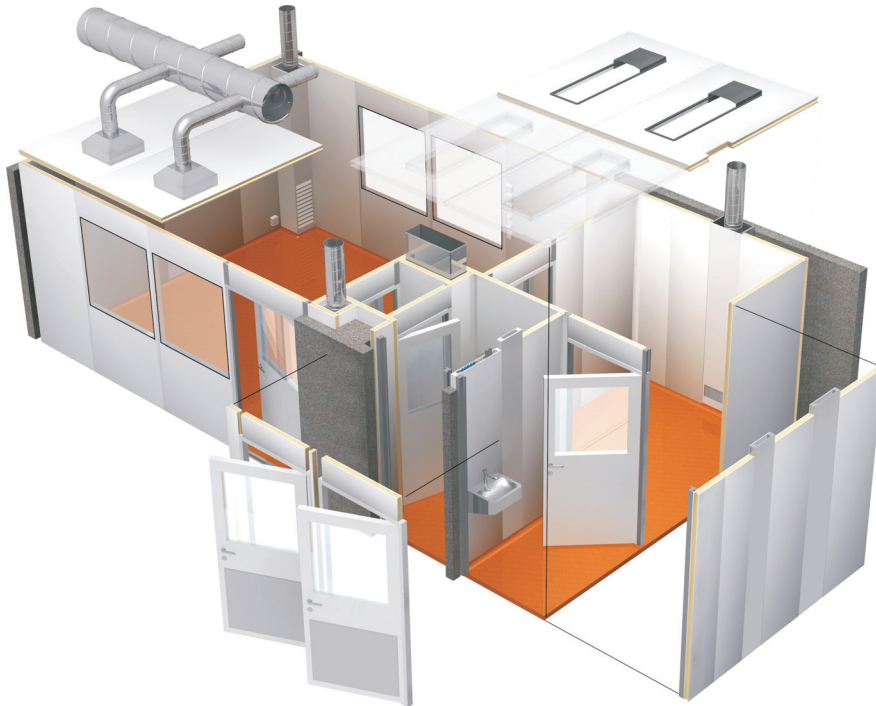




**Cleanroom modular system
Hermetel Oy**



A cleanroom is a closed environment with a controlled level of airborne pollutants, temperature, humidity and pressure according to a set of ambient requirements. Hermetel Oy's cleanroom modular structure system with its components has been designed for those requiring and using cleanroom technology. The cleanrooms are manufactured to meet the standards of high technology and hygiene. The products are made industrially using special cleanroom materials which do not shed particles and which have surfaces that can be cleaned easily.

The chosen structures, materials and forms, together with the cleanroom air conditioning, create a seamless environment that conforms to the required standards. For a cleanroom to meet the demands set by the user, the incoming air must be filtered to remove contaminants and its particle concentration must be lowered by using the air conditioner prefilters as well as the filters in the ceiling unit. Very demanding environments require laminar flow complete with filters.

Together with the exhaust air, the devices are set for the desired ambient pressure. In order to reach the required ambient pressure, the cleanroom structure and its doors and windows must be completely sealed. For this purpose, Hermetel Oy has developed a cleanroom modular system offering a full range of products to create the required cleanroom.

STRUCTURE AND MATERIALS

The modules, doors, windows and other components of Hermetel Oy's cleanroom modular system have been designed and manufactured to be mutually compatible thus allowing a very accurate creation of the desired layout. The modules are fitted with a speedlock system.

The doors, windows and components are fitted into the modules to create flush surfaces and to avoid any extra panelling. This keeps surfaces dust-free and makes them easy to clean.

The system with its speedlocking ensures easy layout modifications. It also enables partial dismantling of the walls and re-mounting of removable walls. The main surface materials are epoxy or polyester powder coating and stainless steel plates which offer the highest standard of cleanliness and the best performance. Other materials are available.

APPLICATIONS

- Medical industry
- Electronics industry
- Hospitals
- Food industry
- Research facilities and laboratories
- Optical industry
- Microbiology
- Any industry in which different stages or components require high technology and a low level of contaminants to minimise disruption

WALL AND CEILING MODULES

- surface panels 0.5-0.7 mm thick hot-dip galvanised steel plate, sandwich panels with profiled edges
- surface panels are powder-coated to match the cleanroom colour. Standard colours RAL 9002 and 9010, special colours on a case by case basis from the RAL colour chart.
- polyurethane foam sandwiched between surface panels, 40 kg/m³
- tongue and groove joints, rounded corners available for R 25 rooms
- polyurethane-based materials are used in joints during installation, other sealants are available

Standard dimensions

- module thickness 52, 65, 80, 100 mm
- maximum width 1200 mm, maximum length 3600 mm
- higher structures are possible by stacking the modules

DOORS

- manufactured in the same thickness (65 mm) and with the same materials as the wall modules
- fitted with the frame, flush with the wall surface
- frame 65 mm aluminium profile, with a sealant groove
- stainless steel hinges
- Abloy 4291 lock case and Presto button on both sides as standard, other speciality locks, lock cases and electric locks are available
- standard colours the same as in the modules, other colours from the RAL colour chart
- all doors equipped with automatically lowering gaskets or thresholds
- cleanroom sliding doors, roll-up doors, swing doors for interior walls and components also available
- doors can be fitted with a logistics-controlled Interlock system and/or other automatics, if needed

Standard dimensions for Farma and Electronic doors

Single panel	Double panel
PT- 70 x 210 cm	PTP-140 x 210 cm
PT- 80 x 210 cm	PTP-160 x 210 cm
PT- 90 x 210 cm	PTP-180 x 210 cm
PT-100 x 210 cm	PTP-200 x 210 cm
PT-110 x 210 cm	PTP-220 x 210 cm
PT-120 x 210 cm	PTP-240 x 210 cm

PASS-THROUGH CHAMBERS AND NITROGEN CABINETS

- free-standing models sold separately
- nitrogen cabinets and furnishings by special order

Most common interior dimensions

400 x 400 x 400 mm
 600 x 600 x 600 mm
 800 x 800 x 800 mm
 Other dimensions by separate order.

Pass-through chamber structure

- stainless steel interior
- GMP model has rounded corners with continuous welding, other models come with right angle corners
- powder-coated or stainless steel exterior
- shelves, HEPA and exhaust filter and lighting available upon request
- two matching doors, equipped with handles and a window
- available door functions: manual locking (handles), signal light (red/green)
- Interlock solenoid locks (lights as an optional extra) or Interlock with electromagnets

WINDOWS

Farma window

- glass case, with two or three panels, matching the module thickness
- window is mounted without separate mounting panels
- special sealant between the glass case and the module
- module structure fits the case

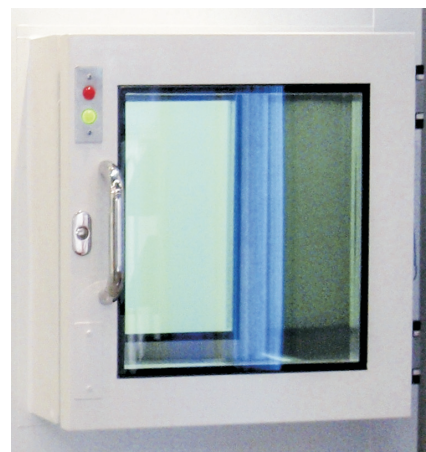
Most common dimensions

Walls	Doors
F- 800 x 800 mm	F-500 x 500 mm
F- 900 x 900 mm	F-600 x 600 mm
F-1000 x 1000 mm	F-700 x 700 mm
F- 900 x 1000 mm	
F- 900 x 1500 mm	

Other dimensions upon request.

MOUNTING

Special panels are available for mounting. Panels are used to encase electric cables, plumbing, the central vacuum cleaner, etc. Various sizes available.



HLAK pass-through chamber



For more information on cleanrooms and other products, contact Hermetel Oy or visit the website www.hermetel.com

MANUFACTURING, SALES AND ASSISTANCE

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