

# Viessmann coldrooms and deep-freezing rooms

 **VISSMANN**



*Tecto Standard coldroom optionally with SilverProtect®*



*Control panel with pressure release valve*



*Coldroom fastening*



*Rising door hinge*

## Cooling and freezing in ice cold perfection!

Innovative and safe cooling is an essential component of our modern everyday life and the key to success in gastronomy, trade and industry. No matter whether meat and sausage products, dairy products, fish, bakery goods, drinks or pharmaceutical products: for decades Viessmann coldrooms and deep-freezing rooms have been demonstrating their excellence worldwide as result of multi-functional cooling and exceptional quality characteristics.

In efficient functionality, they are indispensable in foodstuff production, supermarkets, retail trade, factories and transportation as well as in gastronomy

and hotel trade. The pharmaceutical industry, hospitals, regional crime authorities, pathology, chemical processing plants in the mineral oil industry or the fabrication of synthetic raw materials are no longer imaginable without the innovative quality products of Viessmann.

In alignment with the high requirements of trade and industry, Viessmann coldrooms capture the attention with their stability, above-average hygiene characteristics and high utilisation comfort. Experience a reliable dimension of technological top performance with Viessmann!

- For temperature ranges from  $-50^{\circ}\text{C}$  to  $+60^{\circ}\text{C}$
- 60 - 150 mm thick, CFC-free insulation
- Defined assembly quality and easy extension with groove/tongue system with self-centering eccentric cam locks
- Fully hygienic wall and floor radii in the Tecto Special programme

## Well-designed system with perfect functionality



- |  |  |   |
|--|--|---|
| <b>1</b> Wall system with eccentric cam locks in Tecto version | <b>6</b> Ramp                                | <b>11</b> Suspension system to fix the coldroom ceiling to construction ceiling with spans greater than 6 m |
| <b>2</b> Wall-hanging refrigeration unit                       | <b>7</b> Shelving system Rega Stabio         | <b>12</b> Coldroom ceiling system   |
| <b>3</b> Single hinged coldroom door                           | <b>8</b> Coldroom sight window round         | <b>13</b> Compartment partition wall for the separation of chilling and freezing area within a coldroom     |
| <b>4</b> Coldroom window                                       | <b>9</b> Stainless steel coldroom floor      | <b>14</b> Control panel with pressure release valve   |
| <b>5</b> Coldroom sliding door                                 | <b>10</b> Ceiling-mounted refrigeration unit |   |

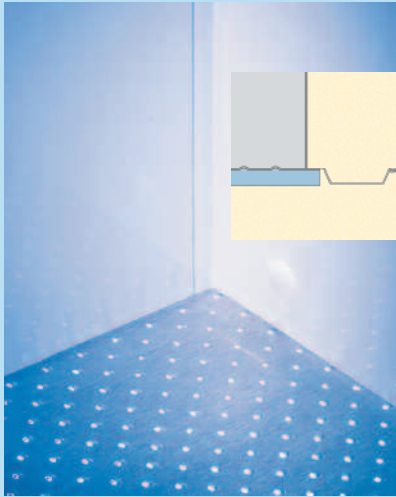
### Advantages at a glance:

- Fully hygienic finish
- Technology orientated towards the future and efficient reliability
- Effective economy as a result of an extremely high degree of efficiency
- 100 percent insulation and low current consumption due to true-to-fit fabrication
- Extremely long operating life
- Constant operating security
- Ecologically optimised through CFC-free manufacture, recyclable
- Well-designed, quick assembly system for easy assembly and cost saving
- German proprietary quality with excellent processing
- Perfectly co-ordinated system engineering with Viessmann refrigeration units
- Comprehensive service performance
- Flexible solutions for individual requirements

## Tecto coldroom programme – hygienic, stable and economic!

### Tecto Standard version

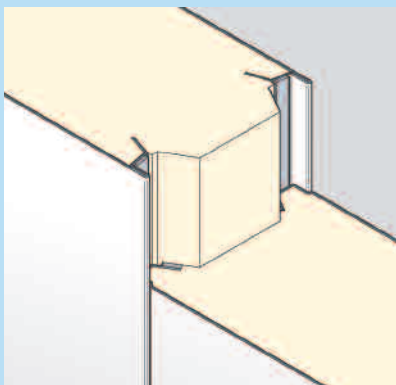
Wall thicknesses 60, 80, 100, 120, 150 mm



*Coldroom version with Tecto Standard stainless steel floor cone pressed*

Our Tecto Standard version efficiently fulfils all quality characteristics which are necessary for hygienic and germ-free storage of refrigerated products. With Tecto Standard coldrooms and deep-freezing rooms, the wall panels close immediately with the heat insulated stainless steel coldroom floor. As a result of high quality sealing and joint-free overlapping of the walls, the collection of dirt and water is prevented.

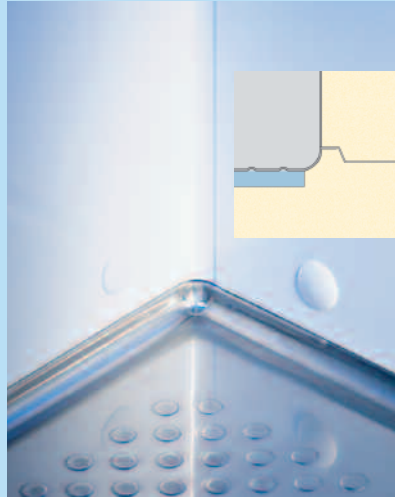
The joints of the wall panels of the Tecto coldrooms and deep-freezing rooms Standard WL80, WL100 are finished free of thermal bridges by means of groove and tongue and sealing in between. The Tecto overlapping ensures a joint free transition from wall to wall.



*Tecto Standard WL wall joint*

### Tecto Special version

Wall thickness 100 mm



*Coldroom version with Tecto Special stainless steel floor circle pressed*

In the Tecto Special version, the heat insulated stainless steel floor is connected to the wall panels with large, hygienic radii. Additionally, the floor corners are rounded, the floor surfaces are designed without joints, stepless and form-locking, thus completely and permanently preventing the accumulation of dirt particles.

The coldroom walls are overlapped without any gaps and when placed on the

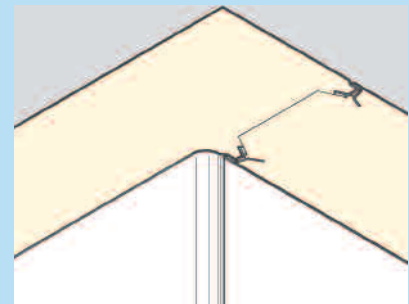
floor radius are in a raised position. Due to this construction, cleaning water or cooling goods' moisture cannot penetrate between floor and wall panel. Germ accumulation which develops primarily in joints and corners is therefore effectively prevented. Additionally, the circulating radius allows easy and hygienically effective cleaning.

### Tecto Special wall joint

The wall panels are supplied with joint free Tecto overlapping. The corners of the wall panels are finished with an additional radius on the inside of the coldroom.



Special versions such as the NSF certified Tecto Special Cert or coldrooms for ships with USPH standard complement the highly demanding Tecto programme.



*Tecto Special wall joint*



*Coldroom and deep-freezing room in Tecto Standard version*

## Wall and ceiling panels – modular and optimally insulated

Optimal insulation has elementary priority in refrigeration technology, as the energy for cooling - depending on operation - is up to 10-times more expensive than heat energy. To save costs, optimal heat insulation is necessary, for which polyurethane (PUR) hard foam is extremely well-suited. PUR has the lowest heat conductivity of all insulation materials currently used ( $\lambda < 0.025$  W/mK at +10°C mean temperature).

Additionally, PUR hard foam is resistant to chemicals, solvents, fungi and microbes and it is odour-neutral and free of toxic emissions. The PUR heat insulation of the Viessmann coldrooms is foamed with cyclopentane, CFC-free. Processing procedures can be carried out precisely and true-to-measure with PUR hard foam. Therefore Viessmann coldrooms excel with their accurate fit, enormous stability, low weight and excellent assembly friendliness.

### Connections between the coldroom panels

The connection of the sandwich coldroom panels (floors, walls, ceilings) is carried out by a self-centring groove/tongue system. Eccentric cam locks with plastic housing and corrosion protected clamping hooks are foamed into the panels. The cam locks are easy to operate from the inside, the coldroom does not have to be accessible from the outside during assembly.



*Eccentric cam lock*

### Viessmann ceiling panels

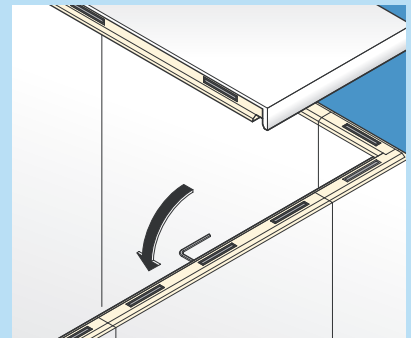
The Viessmann ceiling panels are a complement to the proven wall panels of the Tecto Standard and Tecto Special product range. Here, the practical groove/tongue system also ensures quick and comfortable assembly. With an adequate reinforcement or static protection in construction, the Viessmann ceiling panels are excellently suited for attachments such as meat hanging, pipe lines or the assembly of the Viessmann ceiling units. The maximum free-carrying span of the ceiling elements is 6 m with Tecto cold-rooms WL80 and WL100.

With larger spans or with divided ceiling elements, carrying or hanging constructions are necessary which we like to construct and fabricate specially designed for your requirements. Self-supporting or suspended supports made from two steel C-profiles are especially

suitable. This enables, for instance, spans to be constructed from 6 m to almost indefinite lengths with construction fastening on the ceiling or using steel construction. If the circumstances of the construction do not allow a fastening of the carriers on the building, there is the possibility of using self-supporting grid carriers for larger spans.

### System „Floor as ceiling“

With high demands on the heat insulation and the simultaneous requirement for driving into the coldroom on ground level (i.e. in the freezer area), Viessmann ceiling elements can also be



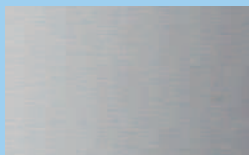
*Assembly of the ceiling*

used as high quality heat insulation due to their stable construction. During the preparation of the building, the inclusion underneath the respective floor covering (i.e. floor finish) is possible.

## Resistant materials and surface finishes

The surface finishes of our sandwich panels consist of hot galvanised steel sheet which is supplied with the high quality Viessmann standard white powder coating (similar to RAL 9016). This guarantees hygienic-smooth and resistant surfaces without unsealed cut edges which would otherwise be subject to possible corrosion. Additionally, there is a choice of numerous stainless steel surfaces as well as the innovative anti-microbial Viessmann **SilverProtec®** powder coating.

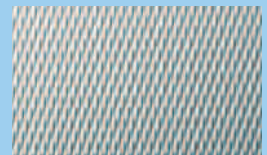
### Stainless steel surfaces



*Grain polished*



*Linen structure*



*Wave structure*



*Rhombic structure*



*Leather structure*



*Circle matted*

## Viessmann stainless steel floors – comfortable safety

As a result of design of Viessmann floors made from stainless steel 1.4301, our coldrooms fulfil the highest requirements on hygiene. Viessmann stainless steel floors are designed with a joint free, step-less and form-locking under-lapping.

### Non-slip floor pressing

Manufactured with multi-directional non-slip (with certificate) by specific Viessmann pressing, Viessmann stainless steel floors guarantee a decisive advantage in safety! For different applications we offer our stainless steel floors in different cone- and circle-pressed versions

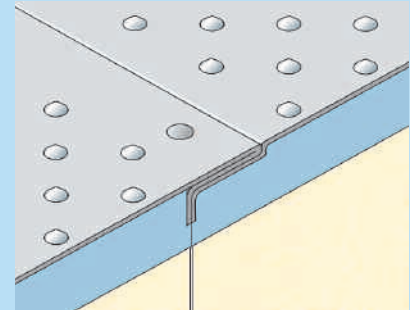
as well as unpressed ones.

### Floor with high load-bearing capacity

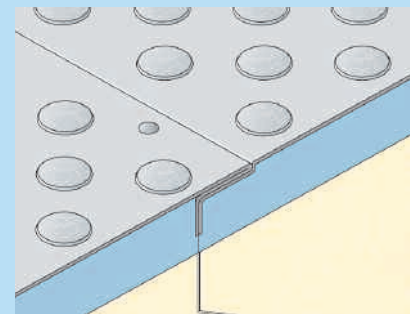
Due to the processing of high quality stainless steel, Viessmann coldroom floors have a high load-bearing capacity. Of course, depending on the admissible wheel load, the Viessmann coldroom floors can be driven on with small-wheeled vehicles, comfortably and vibration-free.

### Coldrooms without floor panels

In coldrooms without stainless steel floors, the wall panels are screwed to the floor on site by means of plastic profiles in U-shape.



Stainless steel floor, Cone pressed



Stainless steel floor, Circle-pressed

Type	Finish	Wheel load*	Class**	Surface
KR 09	circle-pressed	100   200   400 Kp/wheel	R 09	unpolished
G 36	without pressing	100   200   400 Kp/wheel	R 10	lengthwise polished
KR 11	circle-pressed	100   200   400 Kp/wheel	R 11	lengthwise polished
KE 11	cone-pressed	100 Kp/wheel	R 11	with/without lengthwise polish
KR 12	circle-pressed	100   200   400 Kp/wheel	R 12	crosswise polished

Wheel load\*: load surface > 4 cm<sup>2</sup> / wheel | Group\*\*: non-slipping class (german BG). Further types of floors on request. All floor versions can be welded optionally.

## Application examples



DRK blood donor service West



Hannover Trade Fair



Pharmaceutical wholesaler Hageda-Stumpf



Kältetechnikfachschule Maintal



Confectionery Eisenrieder, Munich

## Viessmann coldroom doors open new dimensions!



*Coldroom door single hinged with sight window*



*Strip curtain*



*Coldroom sliding door*

With more than 1000 different variants, we offer you a diverse door range for coldrooms. Our doors are of high quality, with powder coated steel sheet or optionally available in a variety of stainless steel versions with complete PUR insulation and finished without wood inserts in door leaf and frame. For safe temperature decoupling, door leaf as well as door frame have a cold interruption profile. The 3-sided, highly elastic magnet sealing frame can be exchanged without tools and is hygienically easy to clean. It is supplemented at the lower door edge with a load-bearing floor sliding seal.

The Viessmann-typical hairpin locking system with built-in profile cylinder and spring loaded latch ensures a safe locking and can be unlocked from inside at any time with an emergency opener. The maximum door opening angle of 180° enables a small swing radius.

Due to the rising design of the door bands, the doors lift automatically during opening – eliminating the problem of the door scraping on the floor! The door bands with stainless steel pin are adjustable in three dimensions: a valuable advantage if an adapted adjustment is required as a result of the condition of the building!

Viessmann products combine the highest measure of fabrication quality with valuable details which avoid unnecessary energy consumption. When entering the Viessmann coldroom, the operation of the refrigeration unit is temporarily switched off automatically by means of a door contact switch to save valuable energy and to prevent ice formation in the coldroom.

To prevent abnormal pressure increase as a result of the air masses of different temperature inside and outside the coldrooms, the required pressure com-

### Complete programme of doors

- Coldroom doors single and double hinged
- Sliding doors
- Swinging doors
- Conventional coldroom doors
- Sectional doors
- Hatch doors
- Glass door units for shop areas

pensation is handled automatically by the integral Viessmann pressure release valve during the opening procedure.



*Viessmann feature Magnet sealing frame*



*Glass door unit for shop areas*



*Hatch doors*

## Survey of Viessmann coldrooms and deep-freezing rooms

Performance overview	Tecto Standard Small coldroom	Tecto Standard WL80	Tecto Standard WL100	Tecto Special 100	Tecto Standard 120	Tecto Standard 150
Specification						
Wall thickness (in mm)	60	80	100	100	120	150
Recommended temperature difference to VDI 2055 ( $\Delta T = \text{Kelvin}$ )	30 K	38 K	45 K	45 K	56 K	70 K
Temperature range	+3°C to +19°C	-20°C to +60°C	-25°C to +60°C	-25°C to +60°C	-30°C to +60°C	-50°C to +60°C
K-Value according to DIN 52612 ( $\text{W/m}^2 \text{K}$ )	0,34	0,25	0,20	0,20	0,17	0,14
Standard coldroom sizes* (Width (W) x depth (D) in mm)	W 1500-3000 x D 1200-6000	W 1500-6000 x D 1200-6000	W 1500-6000 x D 1200-6000	W 1500-6000 x D 1200-6000	W 1500-6000 x D 1200-6000	W 1500-6000 x D 1200-6000
External height with floor (in mm)	2150	2110	2150	2150	2490	2550
	900 x 1900	800 x 1800	800 x 1800	800 x 1800	800 x 2000	800 x 2000
Dimension standard door (width x height in mm)	2450	2410	2450	2450	-	-
	900 x 1900	800 x 2000	800 x 2000	800 x 2000	-	-
	-	2710	2750	2750	-	-
	-	800 x 2000	800 x 2000	800 x 2000	-	-

\* 30 cm and 10 cm grid, made-to-measure fabrication and larger coldroom dimension on request

Equipment overview	Tecto Standard Small coldroom	Tecto Standard WL80	Tecto Standard WL100	Tecto Special 100	Tecto Standard 120	Tecto Standard 150
Specification						
Tecto overlapping	-	■	■	■	-	-
Light switch with control lamp	□	■	■	■	■	■
Thermometer	□	■	■	■	■	■
Pressure release valve	□	■	■	■	■	■
Door frame heating and heated pressure release valve	-	□	■	■	■	■
Oval lamp for humid rooms 60 Watt	□	-	-	-	-	-
Oval lamp for humid rooms 100 Watt	-	■	■	■	■	■
Floor 100 kp KE11	■	■	■	■	■	■
Further floor variants according to product survey	-	□	□	□	□	□
Threshold flush to floor level	■	■	■	■	■	■
Building material classification B1 (DIN 4102/part 1) with general appraisal certificate	-	□	□	□	□	□

■ Standard equipment □ Optionally available - Not available

## Coldroom planning, assembly and service

The usage of cyclopentane foamed polyurethane leads to a true-to-measure fabrication of the panels and ensures problem-free coldroom assembly with a groove/tongue system.

When choosing the installation site areas should be chosen with sufficient ventilation to reduce the running time of the refrigeration unit, to save current costs and to save material. The heat created by the refrigeration unit is conducted off better in this way so that a heating of the room of installation is avoided.

Viessmann coldrooms can also be installed outdoors. In this case, local construction measures (self-supporting roofing and side walls) have to ensure that the coldroom is not exposed to weather (snow load, rain water, wind

pressure etc.). These precautions must be completed before assembly.

Everyone who knows Viessmann knows: We demand more from ourselves – and from our customer service! Our cold engineering specialists and a network of competent cold engineering specialist companies in direct customer proximity can advise you when choosing and planning your coldroom. Individual consultation, unbureaucratic communication as well as reliable technical service distinguish us, whereby Viessmann transport and assembly teams deliver and install the coldroom panels professionally.

Furthermore, due to our national and international representation, a specialist contact is ready to help you with all questions.



Viessmann supply and assembly service



Perfection right from the start – the Viessmann coldroom planning software for cold engineering users

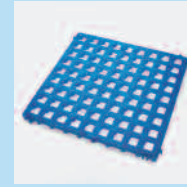
## Viessmann accessories programme for coldrooms



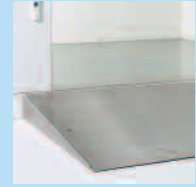
Wall-hanging unit with thermostatic control



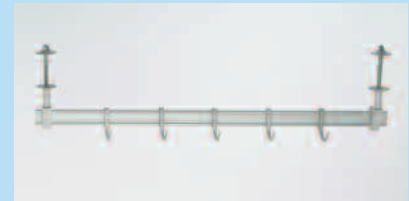
Shelving system Rega Almo



Plastic floor grid



Ramp



Meat and sausage hanging rail for ceiling assembly

### Viessmann refrigeration units

Due to the company owned fabrication of refrigeration units we are able to offer an ideal system supplement to our coldrooms.

Viessmann refrigeration units and their function are especially adapted to the coldrooms and can be mounted without a great deal of time or effort. No matter whether wall-hanging, split or ceiling-mounted units with electronic or thermostatic control are used: Viessmann refrigeration units convince not only through ready-to-plug-in commissioning but also through above average cold output. These units can be ideally combined with electric heating and/or moisturising in order to be able to create a controlled atmosphere in the coldroom.

You will find more detailed information in our product data sheet:

„**Refrigeration units**“.

### Viessmann shelving systems

We not only achieve the well-known Viessmann quality in the development of the most modern cold engineering but also in the precise design of functional shelving systems.

The stable Stabio-shelving system offers the highest load-bearing capacity thanks to its excellent stainless steel material quality and can be easily cleaned thanks to its smooth surfaces. The intrinsically stable Almo-shelving system proves itself through its lightweight aluminium quality, especially for cooling goods of medium weights.

You will find more detailed information in our product data sheet:

„**Shelving systems**“.

### Accessories programme

A wide range of useful accessories supplements the Viessmann coldroom range, whereby the equipment of your coldroom can be flexibly adapted to your individual requirements.

Diverse equipment options such as ramps, bumper rails and many more ensure optimal utilisation.

You will find more detailed information on our accessories range in our current Viessmann price list.