TopInfo

Save energy with Viessmann cold rooms

18% more energy savings with TectoCell cold rooms*

+ *Independent market analysis by TÜV Süd (2016) reveals Viessmann as the most energy-efficient partner for cold rooms out of nineteen cold room suppliers
+ Viessmann cold rooms outperformed market average cold rooms with 18% better energy efficiency, and least performing cold rooms with 49%

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KEY BENEFITS

+ Lower aging effect of Viessmann cold rooms due to the use of cyclopentane as blowing agent resulting in an stable high insulation value for many years
+ Reliable management of thermal bridges due to extremely precise and qualitive production and foaming
+ Less joints in cold rooms to minimize thermal bridges
+ Integrated corners ensuring optimal insulation
+ Enabling the customer to reach their sustainability goals

Reduce life-cycle costs with the highest energy efficient cold rooms in the market

Investment costs for a cold room make up just the small part of 10-20% of the whole life cycle costs, whereas 80-90% of the life cycle costs come from operating the cold room, like primary energy and some extent maintenance costs.

Cold room energy costs - example for a 25 m² combi-room configuration

Energy cost (eur/kWh)	Average energy costs of tested cold rooms (eur/a)	Viessmann cold room energy cost (eur/a)	Savings (eur/a)
0,20	1091,-	901,-	190,-
0,30	1637,-	1351,-	286,-
0,40	2182,-	1802,-	380,-
0,50	2728,-	2252,-	476,-

*based on an independent market analysis of nineteen European cold room suppliers by TÜV Süd in 2016

Viessmann cold room features for improved energy efficiency

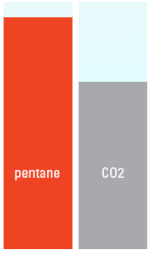
1 **High insulation quality over the full lifetime**

+ Viessmann is using cyclopentane as blowing agent in the PUR foam
+ Using cyclopentane result in a 4 times lower decrease of insulation performance compared with CO2 driven PUR systems

after 25 years

Pentane driven PUR loses about 7% of insulation performance
CO^2 driven PUR loses about 29% of insulation performance

The aging effect is highest in the first 300 days



2 **Precise and high-quality production and foaming**

+ Minimum number of panels used for a cold room
+ Production processes ensure low tolerances
+ Various features supporting the optimal door installation such as 3D hinges for a perfect ajustment

3 **High insulation efficiency confirmed by TÜV Süd**

+ Thermal images taken by TÜV Süd confirm the superior insulation efficiency of Viessmann cold rooms

Set up of cold rooms from 19 different suppliers for energy efficiency tests by TÜV Süd

Energy savings tips for cold rooms - How to ensure energy efficiency in the daily use

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INITIAL PLANNING OF THE COLD ROOM ACCORDING TO USAGE NEEDS

During the planning phase of a cold room it is important to adapt wall thickness, floor characteristics, choice of materials as wel as the layout to the application and needs for daily use. A well-fitting refrigeration unit and technology create perfect conditions for energy savings during operation.

ENSURE PROPER CLOSING OF THE COLD ROOM DOORS

Do not keep doors open for a long time and do not wedge them to stay open while picking of the goods. A well structured storage system can help to minimise the stay inside the cold room and increase energy efficiency. A strip curtain can help to save energy during longer opening of the door.

DO NOT STORE HOT GOODS

Cool down warm goods as much as possible before storing them in the cold room. Warm goods influence the energy efficiency of the storage room as they have a big impact on refrigeration temperature inside.

REMEMBER STACKING HEIGHTS

When stacking goods in the cold room always remember to ensure a undisturbed circulation of cold air for perfect cooling of in all corners and height levels of the cold room. There are maximum stacking heights to respect.

CORRECT STORAGE TEMPERATURES

Set storage temperatures according to the goods you are storing. Required temperatures for various products you can find in relevant directives and regulations. For different goods in one and the same room, always choose the lowest temperature requirement of a product category you store.

TEMPERATURE SETTINGS FOR COLD OR FREEZER ROOMS NOT IN USE

Increase the temperature for a temporarily empty freezer room to -5°C. Keeping the room temperature even for an empty freezer room slightly under 0°C, you can save up to 35% of energy.

If a cold room will be empty in the medium or long-term you can turn off the refrigeration supply to save energy.

ENERGY EFFICIENT LIGHTING OF A COLD ROOM

Use LED lights and turn off lights after leaving the cold room. LED lights have the advantage of a high light supply and high energy efficiency and therefore a low heat emission at the same time. Consult your Viessmann qualified supplier if a motion detector with time delay could be useful according to your needs.

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