

The LEGALETT System Reduces Cooling Requirements By Absorbing Excess Heat When It Is Being Generated And Releasing It Later. This Makes The Room Temperature More Constant During The Day.

Thus A LEGALETT Heated Structure Requires Less Cooling Capacity Than A Normal Structure By 'Shaving The Peaks', Or Reducing The Effect Of Heat Spikes.

Common questions we get are:

“What about Air Conditioning?” or

“Can the LEGALETT system be used to Cool?”

To understand the answers to these questions, one must step back and look at the whole picture.

#### **The Basics:**

Cooling and heating are two very opposite processes. Everyone knows that hot air rises, and cold air falls. What does this tell us? Well, it tells us that heating should come from the floor, and cooling should come from the ceiling. Putting your heating and cooling together in EITHER the floor or the ceiling is counterproductive, and reduces the efficiency of the heating or cooling effect.

#### **What Should You Do?:**

For maximum practicality and efficiency, the cooling and heating systems should be separated - you should heat from the floor, and cool from the ceiling. Heating from the floor is easy - simply use the LEGALETT System. Cooling from the ceiling is also easy - simply cool your ventilation air. Ventilation air is required by code, and it is a simple matter to add cooling to that air flow, if cooling is indeed required, which brings us to the next point ...

#### **Do You Need a Cooling System?**

Cooling systems are used to reduce the heat and humidity levels in a structure to increase comfort. To reduce cooling requirements, you must reduce the influx of heat and humidity into the conditioned space, or moderate its presence. The former is a function of building construction techniques, while the latter is something that the LEGALETT System can help with. Refer to the LEGALETT Product Data Sheet '[Ventilation And Building Techniques \(General\)](#)' for more information.

#### **How Does LEGALETT Reduce the Need for Cooling?**

Since the LEGALETT System has tremendous thermal storage capacity. This thermal mass can moderate temperature swings that would otherwise be present from an intermittent influx of heat, i.e. during the day when the sun is out, or a heat spike. Simply put, the LEGALETT system reduces cooling requirements by absorbing excess heat when it is being generated and releasing it later. This makes the room temperature more constant during the day. Thus a LEGALETT heated structure requires less cooling capacity than a normal structure by 'shaving the peaks', or reducing the effect of heat spikes.

#### **Can The LEGALETT System Be Used To Cool?**

Based on the above, the answer is simply no - you don't want a cold floor for your feet. That would be the total antithesis of the LEGALETT System - a horrible COLD floor!

#### **Slab Cooling and Moisture:**

The LEGALETT System eliminates mould and mildew by maintaining a minimum positive temperature differential between the slab and the ground. The polystyrene (EPS) insulation provides a capillary break to prevent moisture from migrating (especially) during summer conditions from the ground into the slab. To cool the slab would be analogous to inviting moisture into the slab to provide a breeding ground for mould bacteria. This concept is totally opposite to the LEGALETT Way, which is to have safe, warm, dry, mould and mildew free concrete!

The Tremendous Thermal Energy Storage of up to 8" (200 mm) of Concrete in the LEGALETT System Moderates the Interior Temperature Against Sudden Changes in Temperature, Simply, Silently and Effectively!