

# Savings and Return on Investment

## Hanno® Clima-Tect

[www.clima-tect.com](http://www.clima-tect.com)

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## 1. Preamble: Hanno® Clima-Tect

Analysts from Gartner have estimated that it is possible to achieve a 10% reduction in costs of air conditioning energy by closing unnecessary openings in false floors. The air conditioning costs account for approx ca. 35 to 50% of the total energy costs for a computer centre. On the basis of a 10% reduction in the air conditioning energy costs with the air conditioning costs accounting for 35% to 50% of the total energy costs, it is possible to make savings of between 3.5% and 5% of the total computer centre energy costs. This document includes a simple sample energy costs savings and Return on Investment (RoI) calculation.

## 2. Assumptions

The following assumptions have been defined for the savings and Return on Investment calculation:

Parameter	Calculation values
Server power consumption	230 watt
Price of electricity per kw/h	15 cents
Monthly server operating duration	30 days
Number of servers per server rack	20 units
Installation engineer costs per hours	60€
Installation time for Hanno® Clima-Tect	10 minutes
Price for each Clima-Tect panel	45€

## 3. Basis of the Calculations

Some calculations which were taken as the basis for the savings and Return on Investment calculation are shown below.

### 3.1 Material and installation costs

Installation costs

(Installation engineer costs per hour / 60 minutes) x installation duration = (60€/60Min.) x 10Min. = **10€**

Installation costs per server rack

Price for each Clima-Tect panel + installation costs = 45€ + 10€ = **55€**

### 3.2 Electricity costs

Electricity costs for the server costs per hour

(Price of electricity/1000 watt) x server power consumption = (15 cents/1000 watt) x 230watt = **3.45 cents**

Monthly electricity costs

3.45 cents cost of electricity per hour x 24 hours x 30 days = 24.84 €/month = **approx. 25€**

Monthly electricity costs per server rack

Number of servers per rack x monthly electricity costs = 20 servers x 25€ = **500€**

### 3.3 Air conditioning costs

Air conditioning costs accounting for 50% of the total costs

Electricity costs for the server = electricity costs for the air conditioning = **500€**

Air conditioning costs accounting for 35% of the total costs

Electricity costs for the server (65% of the total costs) + electricity costs for the air conditioning (35% tot. costs) = 269.23€ = **270€**

#### **4. Savings with Clima-Tect (10% of the Total Air Conditioning Costs)**

Monthly reduction in costs if the air conditioning costs account for 50% of the total costs

10% of the total air conditioning costs = **saving of 50€ per month**

Monthly reduction in costs if the air conditioning costs account for 35% of the total costs

10% of the total air conditioning costs = **saving of 27€ per month**

#### **5. Return on Investment (RoI)**

(30 days/costs reduction per month with Clima-Tect) x installation costs= RoI

RoI if the air conditioning costs account for 50% (best case) of the total costs

(30 days/50€) x 55€= 33 days = **RoI after nearly a month**

RoI if the air conditioning costs account for 35% (worst Case) of the total costs

(30 days/27€) x 55€= 61 days = **RoI after only two months**