



**GRUNDFOS
ACADEMY**

HIGH EFFICIENCY HYDRONIC SYSTEMS

**QUANTIFYING SALARY SAVINGS
ACHIEVABLE BY IMPROVING
INDOOR CLIMATE**

Calculating savings in hydronic systems compared to air-based systems when lowering temperatures

EXAMPLE 1

Annual savings if temperatures above 24 °C could be lowered by 2 °C.

Hydronic systems improve office staff productivity by creating a better indoor climate.

Key questions and data points

Key questions	Value	In formula
? How many hours above 24°C do you have in average per day?	hours	<i>Hours>24</i>
? How many days a year is your office open for business?	days	<i>Office_days</i>
? What is the average monthly salary for your office staff?	€	<i>Avg_salary</i>
? What are the average monthly working hours at the office?	hours	<i>Monthly_hours</i>
? How many employees are working at the office?	emp	<i>Employees</i>

Value calculation

$Affected_salary = Hours>24 * Office_days * Employees * (Avg_salary / Monthly_hours)$	€	<i>Affected_salary</i>
$Savings = Affected_salary * 2^{\circ}C * 1.5\%$	€	<i>Savings</i>

Calculating savings in hydronic systems compared to air-based systems when increasing temperatures

EXAMPLE 2

Annual saving if temperatures below 20 °C could be increased by 2 °C.

Hydronic systems improve office staff productivity by creating a better indoor climate.

Key questions and data points

Key questions	Value	In formula
? How many hours below 20°C do you have in average per day?	hours	<i>Hours>24</i>
? How many days a year is your office open for business?	days	<i>Office_days</i>
? What is the average monthly salary for your office staff?	€	<i>Avg_salary</i>
? What are the average monthly working hours at the office?	hours	<i>Monthly_hours</i>
? How many employees are working at the office?	emp	<i>Employees</i>

Value calculation

$Affected_salary = Hours>24 * Office_days * Employees * (Avg_salary / Monthly_hours)$	€	<i>Affected_salary</i>
$Savings = Affected_salary * 2^{\circ}C * 2\%$	€	<i>Savings</i>



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be
think
innovate

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