



WATER SAVING SYSTEM

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EXAMPLE OF THE WATER AND ENERGY SAVINGS OF A BUSINESS HOTEL AFTER INSTALLATION OF ELLESS®

ELLESS® water saving products are installed in a hotel in Sweden with 100 room. The hotel has approximately 1.2 guests per day on a yearly basis.

Energy: SEK 0,70 per kWh (average price in Sweden)

Water: SEK 17,50 per m³ (median price in Sweden)

The year-average temperature of cold water in Sweden is 8 degrees Celsius. It takes 40 Wh to heat 1 liter of 8-degree water to 40 degrees Celsius (average water temperature when taking a shower). The heating and distribution losses are 10 %. To increase the temperature of 1 m³ of water by 1°, approximately 1.16 kWh are needed.

$(40 - 8 \text{ degrees}) \times 1,16 \times 100/90 = 41,24 \text{ kWh}$.

The average price of 1 m³ of 40-degree hot water is according to this:

$41,24 \times 0,70 + 17,5 = \text{SEK } 46,37 / \text{m}^3$ (VAT not included)

The average water savings with ELLESS® faucet aerators are approx. 4 liters/min (sink).

Time in use approx. 6* minutes per person and day.

The average water savings with ELLESS® showers are approx. 6 liters/min.

Time in use approx. 7** minutes per person and day.

* We have estimated the time of use for sink and shower to 7.2 minutes/day (6*1.2) Other calculations say 10 minutes. In addition, cleaners use the sink when they clean the bathroom.

** Statistically, an average Swedish person showers approximately 7 minutes/day.

Savings (sink): $100 \times 1,2 \times 4 \text{ lit/min} \times 6^* \times 365 \times 0,8 \times 46,37 = \text{SEK } 38.995$

Savings (shower): $100 \times 1,2 \times 6 \text{ lit/min} \times 7^{**} \times 365 \times 0,8 \times 46,37 = \text{SEK } 68.242$

Savings with ELLESS® shower hose or reducing valve LSP-109:
 $100 \times 1,2 \times 1,5 \text{ l/min} \times 7 \times 365 \times 0,8 \times 46,37 = \text{SEK } 17.060$

Total savings $38.995 + 68.242 + 17.060 = \text{SEK } 124.297$

VAT (25 %) $= \text{SEK } 24.859$

Sum including VAT $= \text{SEK } 99.438$

Cost of investment from SEK 18.300 + VAT (25%) = SEK 22.875

1 tap aerator LSP-005/6 RSK 8242165 (sink) +

1 hand shower LSP-311 RSK 8183690 +

1 saving hose (PVC-free) LSP-130/UV RSK 8181925, 1.7 m

Pay-back time:

$22.875 / (124.297 / 365) = 63 \text{ DAYS}$