

## INVESTMENT CALCULATION OVER A 5-YEAR PERIOD

This investment calculation compares the costs of a "Smart Sauna Heater" and a "Continuously Heated Sauna Heater" based on different annual usage levels, taking into account both operating cost differences and initial purchase costs.

- Basis for Smart Heater: Based on the GL0750, 16.2 kW, 180 Kerkes standby consumption estimate of 1–1.5 kW per hour, and an empirical estimate that consumption, including sauna sessions, is approximately 3 kW per hour.
- Basis for Continuous Heater: Based on an estimate that the average consumption of a continuously heated sauna heater is half of its nominal power, i.e., 16 kW / 2 = 8 kW per hour, including sauna sessions.
- Energy Cost: The price of one kilowatt is 0.30€ per hour.
- Durability: The heating elements (panels) of the Smart Heater last 2–3 times longer than those of a standard heater.
- Cost of a heating element replacement for a continuously heated sauna heater: 2 × 4,000€ per 8,760 operating hours.
- Cost of a heating element replacement for a Smart Heater: 4,000€ per 8,760 operating hours.

### CALCULATION BASED ON DIFFERENT SAUNA USAGE TIMES

24/7 Annual Usage Scenario Electricity Cost (5 years)	Smart Heater	Continuous Heater	Savings %
Calculation formula	$(5v \cdot 8760h \cdot 8kW) \cdot 0,3€$	$(5v \cdot 8760h \cdot 8kW) \cdot 0,3€$	
Electricity costs	39 420	105 000	-62
Annual savings = $(105120 - 39420) / 5$	13 140	Not included in the calculation	
Heating element cost	4 000	8 000	
Heater maintenance	5 000	5 000	
Purchase price + installation	11 000	3 000	
Lifecycle cost	72 560	121 120	-39
Savings with the Smart Heater over 5 years	48 560		

Sauna time 16 hours/day year-round	Smart Heater	Continuous Heater	Savings %
Electricity cost over 5 years			
Calculation formula	$(5*5760*3+5*360*0,3h*16)*0,3€$	$(5*5760*8+5*360*16)*0,3$	
Electricity costs	28 512	77 760	-62
Annual savings = $(77760-28512)/5$	9 850	Not included in the calculation	
Heating element cost	2 680	5 360	
Heater maintenance	3 350	3 350	
Purchase price + installation	11 000	3 000	
Lifecycle cost	55 392	89 470	-37
Savings with the Smart Heater over 5 years	34 078		

Sauna time 8 hours/day year-round	Smart Heater	Continuous Heater	Savings %
Electricity cost over 5 years			
Calculation formula	$(5*2920*3+5*360*0,7*16)*0,3$	$(5*2920*8+5*360*16)*0,3$	
Electricity costs	19 188	43680	-55
Annual savings = $(43680-19188)/5$	4 898	Not included in the calculation	
Heating element cost	1 340	2 680	
Heater maintenance	1 730	1 730	
Purchase price + installation	11 000	3 000	
Lifecycle cost	38 156	51 090	-24
Savings with the Smart Heater over 5 years	12 934		

Sauna time 8 hours/day year-round	Smart Heater	Continuous Heater	Savings %
Electricity cost over 5 years			

Calculation formula	$(5 \cdot 2080 \cdot 3 + 5 \cdot 260 \cdot 0,5 \cdot 16) \cdot 0,3$	$(5 \cdot 2080 \cdot 8 + 5 \cdot 260 \cdot 16) \cdot 0,3$	
Electricity costs	12 480	31 200	-59
Annual savings = $(77760 - 28512) / 5$	3 744	Not included in the calculation	
Heating element cost	1 340	2 680	
Heater maintenance	1 730	1 730	
Purchase price + installation	11 000	3 000	
Lifecycle cost	30 294	38 610	-21
Savings with the Smart Heater over 5 years	8 316		

Every day: morning sauna 6–10 and evening sauna 16–22	Smart Heater	Continuous Heater	Savings %
Morning sauna 6–10			

Calculation formula	$(5 \cdot 1800 \cdot 3 + 5 \cdot 360 \cdot 0,5 \cdot 16) \cdot 0,3$	$(5 \cdot 1800 \cdot 8 + 5 \cdot 360 \cdot 16) \cdot 0,3$	
Electricity costs	12 420	30 240	-58
Annual savings = $(30240 - 12420) / 5$	3 564	Not included in the calculation	

Evening sauna 16–22	Smart Heater	Continuous Heater	Savings %
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Calculation formula	$(5 \cdot 2160 \cdot 3 + (5 \cdot 360 \cdot 0,5 \cdot 16) \cdot 0,3 \text{€})$	$(5 \cdot 2160 \cdot 8 + 5 \cdot 360 \cdot 16) \cdot 0,3 \text{€}$	
Electricity costs	18 360	34 560	-46
Annual savings = $(34560 - 18360) / 5$	3 240	Not included in the calculation	

Electricity bill for morning and evening combined	30 780	64 800	Savings % -52
Annual savings $= (64800 - 30780) / 5$	6 804	Not included in the calculation	
Heating element cost	1 500	3 000	
Heater maintenance	1 730	1 730	
Purchase price + installation	11 000	3 000	
Lifecycle cost	51 814	72 530	-28
Savings with the Smart Heater over 5 years	20 716		

