Guidelines for public and corporate contractors

Water heaters

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Why adopt the Topten criteria?

- Topten is an initiative based on active web portals in different parts of the world that helps professionals, public contractors and large buyers to find the most energy-efficient products available in each country. Products are continuously selected and updated according to their energy efficiency and environmental performance. This is independent of manufacturers.
- All washing machines shown on www.topten.pe meet the criteria contained in these guidelines. Therefore, buyers can use the website to check the availability and variety of products currently on the market that meet Topten's selection criteria.

How much can you save?

At www.topten.pe washing machines are divided into the following categories:

WATER HEATERS
Water heaters – electric
Water heaters – electric “rapiducha”

Taking into account the models listed in Topten and the following considerations, it is possible to achieve the savings indicated in the table below.

Considerations	• Lifetime: 15 años
	• Electricity cost: 0.5 S/./kW.h

WATER HEATERS

	Topten Model: Electric water heater 20L - 80 L	Inefficient model Electric water heater 20L - 80 L	Topten Model: Electric water heater 100 - 150 L	Inefficient model Electric water heater 100 - 150 L
Energy class	A	B, C y D	A	B, C y D
Energy consumption	180 kWh/year	360 kWh/year	360 kWh/year	630 kWh/year
Water consumption	S/. 90	S/. 180	S/. 180	S/. 315
Electricity cost in 15 years	**S/. 90/ unit**	**50% energía / unit**	**S/. 135 / unit**	**43% energía / unit**

Note: For the calculation of electricity consumption shown in the table above, it was taken into account that the average time of use of the electric water heater is 0.5 hours per day, therefore, 180 hours per year were considered. The power ratings for the 20 to 80 L topten model and 100 to 150 L topten model are 1 kW and 2 kW, respectively. The power ratings for the inefficient 20 to 80 L and 100 to 150 L models are 2 kW and 3.5 kW, respectively. This is how the information in the table was obtained.

Topten models consume 50% and 43% less energy in 20L to 80L electric water heaters and 100L to 150L electric water heaters respectively; compared to inefficient models. They can achieve average savings of 90 S/. /unit in 20L to 80L water heaters and 135 S/. unit in 100L to 150L water heaters during their lifetime.

ELECTRIC WATER HEATERS – RAPIDUCHAS

	Topten Model: Electric water heater rapiduchas	Inefficient model Electric water heater rapiduchas
Energy class	A y B	C y D
Energy consumption	900 kWh/year	1800 kWh/year
Water consumption	S/. 450	S/. 900
Electricity cost in 15 years	**S/. 450 / unit**	**50% energy/ unit**

Note: For the calculation of electricity consumption shown in the table above, it was taken into account that the average time of use of the rapiducha electric water heater is 0.5 hours per day, therefore, 180 hours per year were considered. The power for the topten model of the rapiducha electric hot water heater is 5 kW and for the inefficient model of rapiducha electric hot water heater is 10 kW. This is how the information in the table was obtained.

Topten models consume 50% less energy compared to inefficient models and can achieve average savings of 450 S/. /unit during their lifetime.

Selection criteria for water heaters

Topten peru offers users an updated list of the most efficient water heaters in the national market to reduce their energy consumption, promoting an efficient and rational use.

In the website's listings, we select the domestic hot water heater models with the lowest consumption and highest energy efficiency, according to the manufacturer's technical data sheet and based on the selection criteria of the Peruvian technical regulations.

How to read our tables?

The list of selected products is sorted in order to show the most efficient models, however, the user can modify this order by placing his preferences in the filter menu at the top.

Although there are differences in the energy consumption of the products, all the equipment in the Topten lists are efficient.

Detail of table columns

Model: Commercial name of the product.

Brand: Brand that markets the product.

Efficiency class: Justified on the basis of its power (kW).

Energy consumption (kWh/L): Energy consumption in kilowatt hours per liter of water consumed.

Water consumption (l/cycle): The nominal water flow rate of the appliance, in liters/minute.

Nominal power (kW): Nominal appliance power kW.

Energy cost: Estimated cost of energy used by the appliance over 15 years (estimated useful life of the appliance).

Energy Efficiency Classification

The energy efficiency classification or power class is represented by a letter, according to the nominal power of the domestic hot water heater, it will be determined according to the following Table

Clase de Eficiencia Energética	Potencia nominal (P)
A	P ≤ 2400 W
B	2400 W ≤ P < 3500 W
C	3500 W ≤ P < 4600 W
D	4600 W ≤ P < 5700 W
E	5700 W ≤ P < 6800 W
F	6800 W ≤ P < 7900 W

Advice and support

For further assistance in using the information presented, please contact the Topten national team (find links at www.topten.pe).

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