



ELNUR



STORAGE HEATERS
& PANEL HEATERS



Gabarrón
Manufacturing Excellence



ELNUR HISTORY

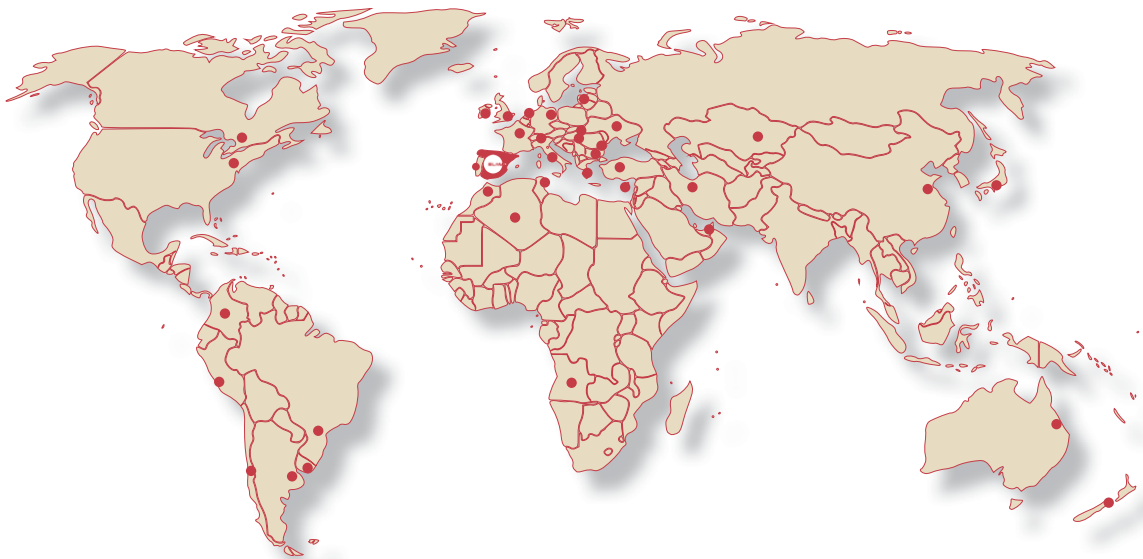
ELNUR was founded in 1973 and since then, we have established ourselves as one of the leading European providers of the most efficient heating system in the world: electric heating.

With facilities spanning over 20,000 m², an extensive general and technical team and a complete range of products developed to meet the highest expectations of our customers. At **ELNUR** we provide you with the most efficient solutions in an ever-changing world.

40 years on, we maintain the same enthusiasm and commitment to offering a wide range of unique products which can cater to the varying needs of our customers, wherever in the world they may be.

With a commercial presence in more than 35 countries, and a strong exclusive distribution network in 15 of these, we have gained a presence in thousands of homes, always offering the best solution in electric heating.

Our greatest wish is for our customers to have the luxury of experiencing excellence by using **GABARRÓN** products, which are guaranteed to bring real warmth and comfort to your home.



“Let us invite you to meet **ELNUR** and experience the values and benefits that our **GABARRÓN** products will bring to your life.”



QUALITY

ELNUR is fully committed to quality. We therefore have complete control over the processes occurring in all areas of the company, which is certified by the official ISO 9001 standard.

Take for example, the rigorous control applied to each phase of the production process from initial design of the product, through the continuous assessment of suppliers and materials, to the monitoring of each stage in the manufacturing process and the final check of every single product which are tested one by one before packaging.

As a result, complete traceability is established for each of the products that we design and manufacture, and we guarantee our customers that every appliance leaving our factory is in full working order.

GABARRÓN products are uniquely designed and manufactured using high quality materials and components, which constitutes a significant advantage when it comes to providing an excellent level of performance and efficiency.

ELNUR holds various official certifications which guarantee compliance with quality and environmental standards.



INTERNATIONAL COMPANY CERTIFICATIONS



ISO 9001

ISO 9001: 2008 Quality Control Management System, which certifies the implementation and maintenance of the system through a cycle of continuous improvement in the performance of its procedures in all areas of the company, with the aim of achieving greater customer satisfaction..



ISO 14001

ISO 14001: 2004 Environmental Management System, which guarantees that our procedures are developed in accordance with environmental care and respect throughout the production process, from the design stage to the final stages of production.

SERVICE

The same level of demand, dedication and commitment that we offer with our products is also reflected in our customer service: personalised assistance, continuous monitoring, technical advice, project management, professional after-sales technical support....

A product manufactured in accordance with the highest level of quality performance deserves to be complemented by excellent service. At **ELNUR**, all departments are customer-focused, offering quick and efficient solutions to any problems that may arise.

If you have any queries about the company or our products, please email us at the following address:

esales@elnur.co.uk

CUSTOMER SERVICE

Our Customer Service Team will answer each and every query you may have, whether it relates to delivery schedules, confirmation of when a product is dispatched, or placing an order. Any member of the team will be able to help you and deal with your request as quickly as possible keeping you informed at all times.

Customer Service Telephone Numbers: 01942 670119

You can also contact us by email at:

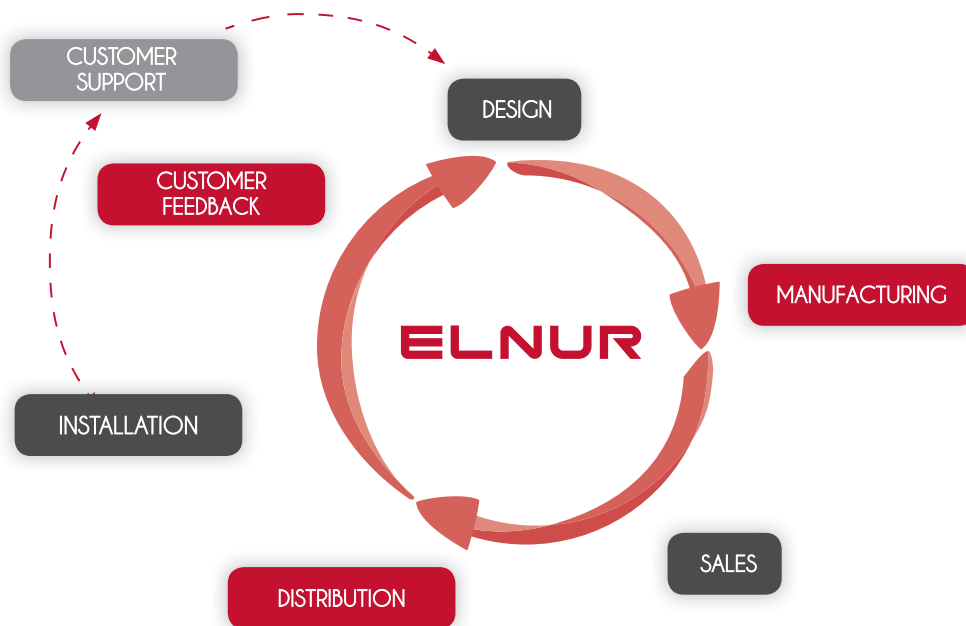
esales@elnur.co.uk



AFTER-SALES TECHNICAL SUPPORT

ELNUR's job does not finish when the goods are dispatched. We are committed to initial development, manufacturing and customer service. And this customer service includes not only the delivery, but also a professional after-sales service to help our customers with any concerns or technical issues. We have an Authorised Technical Services Network providing effective technical assistance all over the country, irrespective of the location or the product.

If you have any questions on this matter, our Customer Service Team will be able to inform you of your nearest



Authorised Technical Service or will make a record of your issue so that the technical team can get in contact with you as soon as possible.

technical@elnur.co.uk

PROJECT MANAGEMENT

We know that many concerns may arise when it comes to evaluating your project requirements. Our Projects Department will advise you on each of the areas of your project and will offer you the best solution, taking into account potential options so that you can suggest a number of different alternatives to the end customer.

projects@elnur.co.uk

PROFESSIONAL ADVICE

In this department you can get the assistance you need in order to solve any technical concerns you may have. We will provide direct and personalised assistance, offering the support necessary to resolve any issues with installing or setting up any of our products.

advice@elnur.co.uk

CONTINUOUS TRAINING

In line with our commitment to customers and end users, we cannot ignore the fact that professionals need support in order to gain a complete knowledge base with regard to **GABARRÓN** product ranges and to the potential technical solutions that they may require for the different systems.

For this reason, we have developed a complete Training Program which includes technical training courses for each of our product ranges. These courses are taught by our best experts. Their ultimate aim is to help professionals in their daily work and for them to become more familiar with the significant advantages of installing **GABARRÓN** products.

These courses are totally free of charge, and can be given at on-site locations all over the country.

If you are an installer, don't think twice. Take advantage of this training opportunity based on the principles of real quality and continuous improvement. You can request information about upcoming conferences or specific technical courses for the different ranges of **GABARRÓN** products.

training@elnur.co.uk



SAFETY

Electric heating is one of the cleanest and safest heating solutions currently available.

None of our products emit gases or direct pollution when operating. They do not require materials such as gas or diesel fuel to function, so there is no risk of leaks or explosions.

Due to the simplicity and safety of their installation and operation, **GABARRÓN** electric heating products do not require any form of regular maintenance, therefore avoiding the inconvenience of unnecessary annual costs for users.

Just the electric boilers and storage water heaters with magnesium anode inside require a minimum maintenance.



"Because safety for your family is what matters most, investing in electric heating systems is the right decision"

SUSTAINABILITY

Interest in environmental care is increasing, as well as the concept of manufacturing in compliance with environmental protection standards. Human beings use the natural resources of the planet believing that they constitute an inexhaustible source, and at the same time the current levels of industrialization and consumption increasingly pollute the habitat that surrounds us.

This is why **ELNUR** is totally committed to working and manufacturing in accordance with the appropriate certification under the Environmental Management System which guarantees environmental care and respect under the parameters established in the ISO 14001 standard.

Not only do we wish to minimize the negative impact on our ecosystem, we also continuously strive to improve and produce increasingly advanced and efficient products with minimum energy consumption.

Gabarrón ranges do not produce gases or fumes, nor do they directly emit any pollutants to the environment when operating.

They can be used with renewable energy sources coming from natural resources such as sun or wind.

Please join us in reducing the carbon footprint, and together we can combat its negative impact.



"Taking care of the planet is in our hands"



QUALITY AND EFFICIENCY

GABARRÓN ranges of Storage Heaters created by **ELNUR** use the best quality components.

Thermal insulation products using the best currently available technology on the market (such as Microtherm, an insulation material used by the aerospace industry), high density ceramic heat storage blocks, highly efficient control and safety components, very thick reinforced steel structures as well as exclusive patents such as the DUAL SENSOR charge controller – all of these elements work together to give the storage heaters their unique features and exceptional performance.

A storage heater charges energy internally for a set period of time, which usually coincides with the time in which electricity is cheaper (off-peak tariff), before releasing it into the room continuously throughout the day. The quality and quantity of the materials used in the construction of the storage heaters is crucial, as these machines must be capable not only of storing a large amount of heat internally under strict safety parameters, but also, and most importantly, of heating a room comfortably, over 24 hours.

It is also very important to determine precisely the size and amount of units necessary to meet the heating demand of one or several rooms. An incorrect calculation (above or below what is needed) will have an adverse effect on the storage heater system and on the cost of the installation, as well as the levels of efficiency and comfort required.

The correct calculation of heat requirements in each room by a professional will be key to optimising the installation and reducing running costs.



ADAPTATION TO THE CUSTOMER

Especially designed for use during the off-peak period, **GABARRÓN** storage heaters are the ideal solution for obtaining constant heat 24 hours a day. They provide a warm and comfortable temperature that is ideal for cold climate zones, where heating is required not only for a few hours, but where a pleasant and warm temperature is preferable around the clock.

STORAGE HEATERS

GABARRÓN storage heaters work while you are sleeping. At night, during the off peak period when electricity is cheaper, storage heaters internally charge their energy before slowly releasing it into the room.

Static Storage systems release the heat continuously over 24 hours, while Dynamic Storage Heaters (Fan Forced Storage Heaters) offer the possibility to the user of deciding when and how that heat is released.

Their quick and easy installation, in new and old buildings alike, eliminates the risk of expensive alterations or modifications, as well as any needless inconvenience for the customer. They can be installed in a few hours.

They do not require maintenance or any form of annual servicing, providing a considerable saving over the years compared to other heating systems.



SAFETY AND SUSTAINABILITY

In a world in which we are becoming increasingly concerned about respecting the environment, looking for efficient products with low energy consumption, or even maintaining healthier lifestyle that minimises environmental impact, **GABARRÓN** storage heaters are an ideal and efficient solution to provide constant heating 24 hours a day, without using fossil fuels such as diesel or gas, and at really low costs.

The storage heaters manufactured by **ELNUR** can be used with renewable energy sources coming from alternative resources such as sun or wind. Furthermore, they neither emit CO₂ nor pollute the environment during use.

This type of product is 100% efficient and safe. Their design -based on high quality insulation materials, the best heat storage blocks and other safety features, are capable of retaining all of the heat stored internally before releasing it during the discharge periods, maintaining a moderate and pleasant temperature in the room.

These safety features also enable the prevention of potential accidental damage and unnecessary expenditure, not only when the machine is installed, but also throughout its life time.

MAXIMUM EFFICIENCY IN HEAT STORAGE

ELNUR offers two main ranges of storage heaters: Dynamic and Static.

Both versions store heat internally in high density ceramic blocks, but release it in different ways. They also offer different advantages adapted to the needs of the end user.

Dynamic (fan assisted) storage heaters release the hot air using controlled convection with a silent fan that makes the air circulate inside the bricks, heating it and then releasing it into the room through the grille located at the bottom of the machine. This controlled convection allows the user to manage the temperature of the room and the heat release time.

Static storage heaters release heat by natural convection in two different ways. There is a primary convection controlled by a top flap that releases hot air after the storage heater is charged.

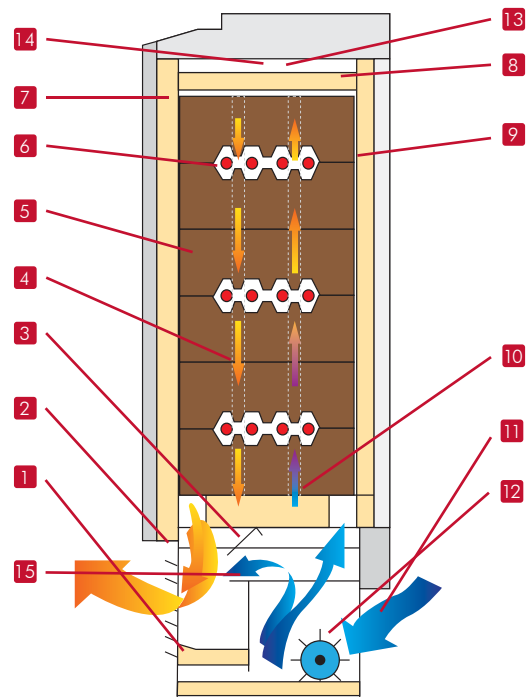
But there is also a natural secondary convection that releases hot air 24 hours a day. This air is heated when it passes through the air chambers of the storage heater and is released through the top grille and the front and rear apertures. This natural secondary convection is generated by the design of the machine allowing a constant release of heat without leading to additional energy costs. Storage heater only consumes energy during off-peak hours at night.

The high level of efficiency of **GABARRÓN** ranges of storage heaters can be seen in the following thermographies thermal images obtained as a part of some of the tests carried out on the products.

In these images we see the evolution of the surface temperature (the equivalence of these temperatures and the colours appear in the column on the left.

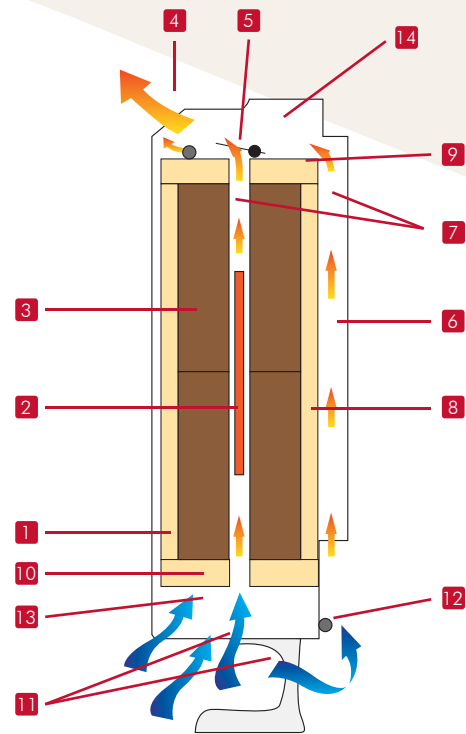
DYNAMIC STORAGE HEATER (fan-assisted) convection

- 1 Floor isolation.
- 2 Hot air flow out. Grill.
- 3 Hot/cold air mixer. Includes a discharge security thermostat.
- 4 Air flow inside the heating core.
- 5 Accumulation core.
- 6 Heating elements.
- 7 Front insulation.
- 8 Upper insulation.
- 9 Rear insulation.
- 10 Lower insulation.
- 11 Cold air flow in.
- 12 Convection fan.
- 13 Control Thermostat bulb sensor.
- 14 Manual reset safety cut-off bulb sensor.
- 15 Discharge manual reset safety cut-off.



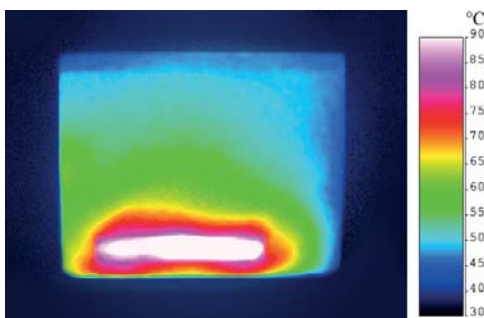
STATIC STORAGE HEATER Natural convection

- 1 Front insulation.
- 2 Heating element.
- 3 Accumulation core.
- 4 Air flow out. Grill.
- 5 Discharge door, includes automatic damper control.
- 6 Air Chamber.
- 7 Air flow.
- 8 Rear insulation.
- 9 Vermiculite upper insulation.
- 10 Vermiculite lower insulation.
- 11 Fresh air inlet.
- 12 Dual sensor control thermostat.
- 13 Manual reset thermal safety cut-off.
- 14 Thermal limiter.

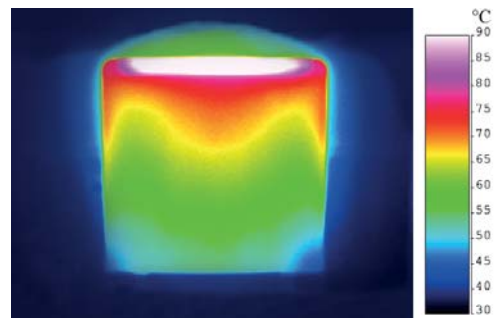


Due to their high quality insulation, GABARRÓN ranges store and adequately retain the heat inside them during the charging off peak period, before releasing it during the discharging period.

Both thermographies show how the heaters maintain a high degree of control over the energy inside them. This heat is released through the top or bottom grille depending on the version, and at the same time the rest of the storage heater remains at a moderate temperature.



Fan Assisted Storage Heater
Thermography



Static Storage Heater
Thermography

Engineering of the GABARRÓN ranges of storage heaters is totally safe and provide maximum efficiency in their operation. They use only the energy stored in off-peak periods. These ranges are manufactured with storage blocks considerably better than the market average and with an insulation technology that it is definitely the best in the industry. This is why **ELNUR** can guarantee excellent heating comfort 24 hours a day.

TOP QUALITY ENGINEERING AND MANUFACTURING

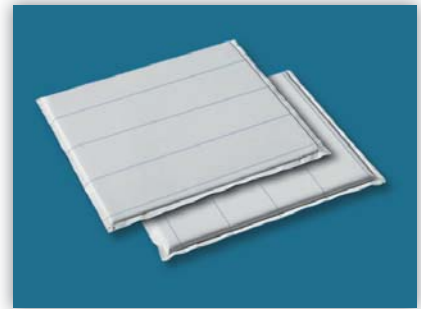
INSULATION

GABARRÓN storage heaters are engineered using three different types of thermal insulation.

Microtherm, one of the most efficient and innovative insulation materials available in the industry. Given its low conductivity and high heat resistance features, it is one of the most efficient insulation materials working at high temperatures. It is the basis of the main insulation products used in the aerospace industry.

Storage Heaters include this material in order to achieve perfect insulation of the temperature in the heater's internal charge core to prevent heat losses. At the same time also maintains the outer body of the storage heater at a low and safe temperature.

GABARRÓN storage heaters contain between 20 to 30% more Microtherm insulation than any other similar product on the market. We are proud to say that Gabarron range of Storage Heaters extend their heat retention capacity and enlarge the real period of heat release into the room over a longer period of time.



Vermiculite is the second insulation material used by **ELNUR** in the construction of storage heaters. It is one of the most compact and lightest of existing insulation materials. Weighing up to 60% less than any other insulation product on the market. It is highly fireproof and, above all, does not deteriorate or decompose.

This high resistance makes it the ideal insulation material for use in the areas of the storage heater where, in addition to insulation, a resistant product is required that adequately combines with the heavy heat storage blocks.

Finally, the third of the insulation products used is ceramic fibre, with a high resistance to high temperatures and heat cycles. One of its advantages is its behaviour in high temperatures, with the lowest level of shrinkage compared to other fibres on the market.

Another reason why we use ceramic fibre in **GABARRÓN** storage heaters is that it does not contain any organic binder, thus enabling us to eliminate the possibility of any unpleasant smells being released during the charging cycles, as is often the case with other types of similar insulation fibres.

It is very flexible and adaptable to any design, and has a very low thermal conductivity, improving the overall efficiency of the heater.



HEAT STORAGE BLOCKS

The energy storage blocks represent another essential part in the construction of these devices. From the different existing options on the market, we have selected one material, magnetite, which offers the highest density and heat storage capacity.

This material prevents the blocks from breaking at high temperatures and provides greater heat concentration, therefore prolonging the release of heat for longer and guaranteeing a comfortable heat for more hours during the day.

The higher the density, the higher the capacity for offering hours of heat our devices offer real heat 24 hours a day.

In this actual image of the inside of a GABARRÓN storage heater we can see most of the above referred materials and their position inside the heater.



Section of a SHM Storage Heater

- 1 Vermiculite insulation.
- 2 Automatic damper control.
- 3 Bimetal regulator.
- 4 Charging thermostat.
- 5 Charging sensor phial.
- 6 Lateral insulation of ecological fibre.
- 7 Rear air chamber.
- 8 Rear 10 mm Microtherm G insulation.
- 9 Heating Elements.
- 10 Lower vermiculite insulation.
- 11 High density magnetite refractory.
- 12 Safety thermostat.
- 13 Front 10 mm Microtherm G insulation.
- 14 Front air chamber.
- 15 Side air chamber.

OFF-PEAK ELECTRICITY

GABARRÓN storage heaters are the ideal heating system for heating your home 24 hours a day at an unbeatable cost. They store heat in high density ceramic blocks.

They are designed to use the Time-Of-Use (TOU) or Time-Of-Day (TOD) low cost off-peak electricity rates.

How does Off Peak Electricity work?

Most electricity providers offer heavily discounted rates for electricity consumed during off peak electricity times, giving you the chance to save money on your energy bill. Off peak electricity is provided during set times of the day when homes and businesses use a lot less electricity. Off peak times are typically between 12 am and 7am, but they can vary depending on the area.

What are Off Peak Electricity times?

Electricity providers would prefer to provide a steady supply of electricity throughout the day and night, because the turbines that generate electricity cannot be easily turned on and off as we need power in our homes. People generally use most of their electricity during the morning and evening. To encourage people to use electricity during other times of the day, many providers offer cheaper electricity during periods known as off peak electricity times. In homes, off peak electricity is commonly used to heat water and can also be used to power other heating appliances that are able to store heat when not in use.

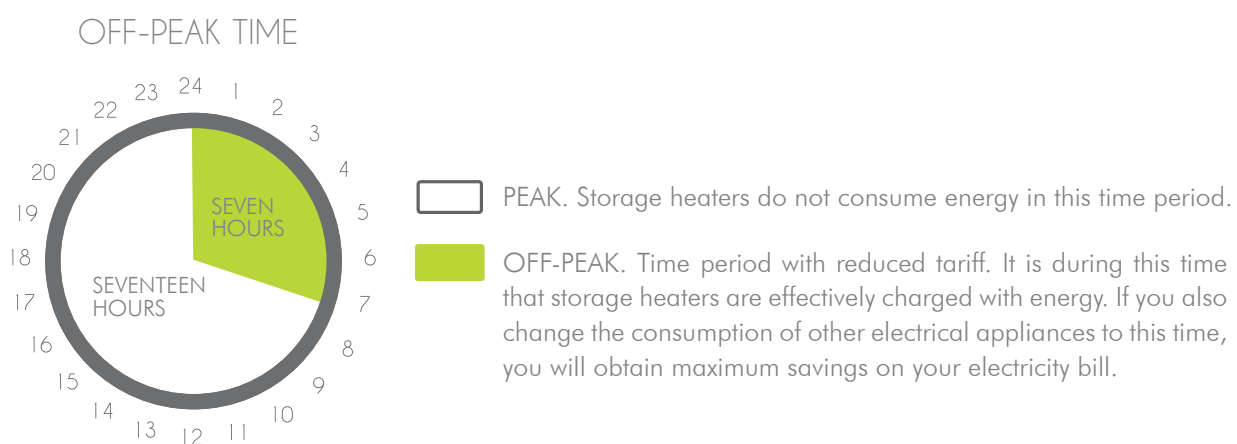
How do you access Off Peak Electricity rates?

You have to contact your local Electricity provider to get more details about Time-Of-Use (TOU) or Time-Of-Day (TOD) low cost Off Peak electricity rates availability in your area.

GABARRÓN storage heaters are designed to make the most of the advantages of electric tariffs with time restrictions, as they consume energy during the off-peak hours at the cheapest price and release the heat into the room gradually offering a comfortable temperature 24 hours a day.

During the Off peak hours we can find a lower kW/h price, which will represent big savings on your electricity bill.

On the other hand, peak hours are the hours in which the electricity companies usually have an excess demand for electricity. These hours have a higher price per kW/h.



PERFECTLY ADAPTED TO CUSTOMER REQUIREMENTS

GABARRÓN storage heaters are the perfect heating system for temperate, cold and very cold climate zones, where the user can enjoy a pleasant and warm feeling of comfort 24 hours a day.

Thanks to their operation during off-peak hours, you will have permanent heat in your home, reducing your electricity bill as well as recovering your initial investment in the heater in a short period of time.

Their quick and easy installation, in new and old buildings alike, eliminates the risk of expensive alterations or modifications, as well as any needless inconvenience for the customer. They can be installed in a few hours.

They do not require regular maintenance or any form of annual servicing, providing a considerable saving over the years.

100% SAFE AND ENVIRONMENTALLY FRIENDLY

GABARRÓN storage heaters are a heating solution that, while providing heat 24 hours a day, avoids consuming fossil fuels such as diesel heating oil or gas. They have no fuel tanks or hydraulic circuits, and therefore there is no risk of leaks.

They can be used and operated with renewable energy sources coming from alternative resources such as sun or wind. Furthermore, they neither emit CO₂ nor pollute the environment.

They are 100% safe. Each and every storage heater that we manufacture is rigorously tested to ensure its proper functioning and compliance with the strictest international requirements with regard to electrical safety.



ADL RANGE

Dynamic storage heater



Technical features

- ▶ Designed to use Off-Peak electricity.
- ▶ Efficient solution to obtain constant heat when is required during 24 hours a day.
- ▶ Low speed silent fan.
- ▶ Hot air/fresh air mixer with thermostat for a homogenous air output.
- ▶ Precise control over the released heat.
- ▶ Charging thermostat with sensor tube.
- ▶ Safety thermostat with manual reset.
- ▶ Class I insulation.
- ▶ Connection in one or three phases.
- ▶ Microtherm G 25 mm insulation.
- ▶ Vermiculite and ceramic fibre insulations.
- ▶ Front and side air chambers.
- ▶ Powder coated RAL 9010 steel structure.
- ▶ It works together with Ambient Thermostats TA3, CPT10 and X2D, available as accessory.



MODEL		ADL-2012	ADL-3018	ADL-4024	ADL-5030
Output 230 V / 240 V	W	2000 / 2178	3000 / 3267	4000 / 4355	5000 / 5444
Accumulated energy	kWh	16	24	32	40
Length	cm	63	81	99	117
Width*	cm	24	24	24	24
Height	cm	66	66	66	66
Total weight	kg	117	167	215	265
Number of Blocks 7.5kg		12	18	24	30
Frecuency	Hz	50	50	50	50
Units per pallet					
- 1200x800	mm	8	8		
- 1200x1100	mm			8	8
EAN 13		84432336200458	84432336200465	84432336200472	84432336200489

*Plus 2cm separated from the wall

SH-A / SH-M RANGES

Automatic or manual static storage heaters



Technical features

- ▶ Designed to use Off-Peak electricity.
- ▶ Grille painted in a heat resistant colour.
- ▶ Damper control device (SH-M version).
- ▶ Automatic damper control device (SH-A version).
- ▶ Safety thermostat with manual reset.
- ▶ Class I insulation.
- ▶ Discharge thermostatic regulator. In the SH6-M this regulation is automatic, not including the discharge control.
- ▶ Charging thermostat with phial (SH-M version) or with Dual Sensor (SH-A version).
- ▶ Microtherm G 10 mm insulation, vermiculite and ecological fibre.
- ▶ Side, front and rear air chambers.
- ▶ High density storage blocks.
- ▶ Ultra slim, only 15 cm.
- ▶ Robust plastic fittings.
- ▶ Powder coated RAL 9010 steel structure.
- ▶ Optional knob control blocking system.



MODEL	AUTOMATIC MODELS				MANUAL MODELS			
		SH12-A	SH18-A	SH24-A	SH6-M	SH12-M	SH18-M	SH24-M
Output 230 V / 240 V	W	1600 / 1742	2400 / 2613	3200 / 3484	800 / 871	1600 / 1742	2400 / 2613	3200 / 3484
Accumulated energy	kWh	12.8	19.2	25.6	6.4	12.8	19.2	25.6
Length	cm	54	76.5	99	31.5	54	76.5	99
Width*	cm	15	15	15	15	15	15	15
Height	cm	72.5	72.5	72.5	72.5	72.5	72.5	72.5
Total weight	kg	79	116	152	43	79	116	152
Number of Blocks 8kg		8	12	16	4	8	12	16
Frecuency	Hz	50-60	50-60	50-60	50-60	50-60	50-60	50-60
Units per pallet								
- 1200x8000	mm		12				12	
- 1200x1000	mm	24		12	12	24		12
EAN 13		8432336106309	8432336106507	8432336106705	8432336105104	8432336105302	8432336105500	8432336105708

*Plus 2cm separated from the wall

CSH-A RANGE

Automatic combined storage heater



Technical features

- ▶ Automatic storage heater with integral convector heater.
- ▶ Independent thermostatic control convector.
- ▶ Designed to use Off-Peak electricity.
- ▶ Grille painted in a heat resistant colour.
- ▶ Automatic damper control.
- ▶ Safety thermostat with manual reset.
- ▶ Class I insulation.
- ▶ Charging thermostat with DUAL SENSOR.
- ▶ Microtherm G 10mm insulation, vermiculite and ecological fibre.
- ▶ Side, front and rear air chambers.
- ▶ High density storage blocks.
- ▶ Robust plastic fittings.
- ▶ Powder coated RAL 9010 steel structure.



MODEL		CSH12-A	CSH18-A	CSH24-A
Output 230 V / 240 V	W	1600 / 1742	2400 / 2613	3200 / 3484
Accumulated energy	kWh	11.90	17.85	23.8
Length	cm	54	76.5	99
Width*	cm	18.5	18.5	18.5
Height	cm	73	73	73
Total weight	kg	80	117	154
Number of Blocks 8kg		8	12	16
Frecuency	Hz	50-60	50-60	50-60
Units per pallet				
- 1200x8000	mm		10	
- 1200x1000	mm	20		10
EAN 13		8432336104305	8432336104503	8432336104701

*Plus 2cm separated from the wall



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