

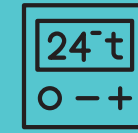
The Energy Rating Labels for air conditioners show how efficient the appliance is by the number of stars it has. The more stars, the better.

Nine stars category is the most energy efficient for split unit and five stars category is the most energy efficient for window type. Its rated products use less energy and help you to lower your energy bills and CO2 emissions.

The label tells you how much electricity the product uses in kilowatt hours (kWh) and allows you to compare different models. The lower kWh the less energy it will use, hence saving you more money on your energy bills.

If you can't find the energy label on the product you should ask the retailer as they must provide this information by law.

## A CONSUMER'S GUIDE TO



Tips to using an air conditioner efficiently

# ENERGY STAR RATING OF AIR CONDITIONER



Choosing an air conditioner

### Qatari Energy Star rating of air conditioners

Tested EER Values (Btu/h)/watt at T1\* and T3\*\*

Number of stars

The Unit consumes less energy

The Unit consumes more energy

Certification number

Date of expiry

Supplier

Brand name

Country of origin

Model

Air conditioner type

Tested Cooling Capacity (Btu/h)

Voltage/Hz

Star rating

EER rating

Percentage Energy Reduction

11.5 is the Minimum EER rating for Split units air conditioner

Star rating	6	7	8	9
EER rating	11.5	12.5	13.5	14.5
% Energy reduction	46.8	51.0	55.1	59.2

Tested EER Values (Btu/h)/watt at T1\* and T3\*\*

Number of stars

The Unit consumes less energy

The Unit consumes more energy

Certification number

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Model

Air conditioner type

Tested Cooling Capacity (Btu/h)

Voltage/Hz

Star rating

EER rating

Percentage Energy Reduction

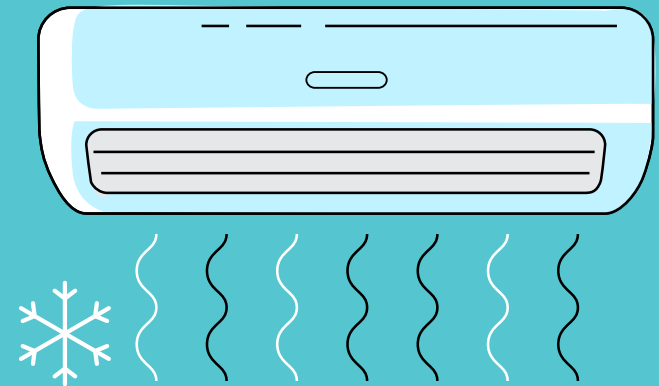
8.5 is the Minimum EER rating for Window air conditioner

Star rating	3	4	5
EER rating	8.5 - 9.0	9.0 - 10.0	10.0 - 11.0
% Energy reduction	27.5	32.9	39.8

\* T1: The normal ambient temperature condition required according to test standard.  
\*\* T3: The high ambient temperature condition required according to test standard.

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\*\* T3: The high ambient temperature condition required according to test standard.

Save energy and money by choosing an energy-efficient Air Conditioner!



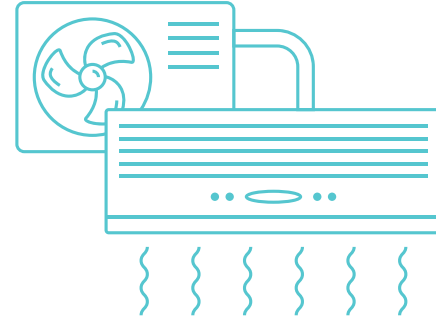
Air conditioning is that process used to create and maintain certain temperature, relative humidity and air purity conditions in indoor spaces. This process is typically applied to maintain a level of personal comfort



What is the Qatari energy label of an air conditioning units?

# Choosing an air conditioner

When choosing an air conditioner for your home get expert advice on sizing it correctly and consider the energy rating. The running costs of an air conditioner, over its lifetime can be high, so choosing an energy efficient model will save your money and reduce your impact on the environment.



## Qatar standard specifies the energy labelling requirements and the Minimum Energy Performance Standard (MEPS) requirements for these types of products:



### Window/wall units:

These products contain all parts in a single unit (rather than having a separate outdoor and indoor unit). They are installed either through windows or can be mounted into walls (where the back of the unit will be outdoors).



### Split system (non-ducted):

The most common type of household air conditioners. These products have an outdoor unit that houses the compressor and condenser, and an indoor unit that is commonly mounted on a wall. They can range in size to suit a small bedroom, to much larger products that could suit large open plan living areas.



### Ducted systems:

Ducted products can provide heating and cooling for an entire home or premises, delivering cool air via ducts positioned in various rooms. These systems can be zoned so that only certain areas are being conditioned.

## What is the Qatari energy label of an air conditioning units?

The Qatari energy label gives information about the energy efficiency of the air conditioning units which are using in Qatar, this label was emanated according on QS SASO 2663/2019. The label rates products from nine stars (most efficient) to six stars (least efficient) for split units and from five stars (most efficient) to three stars (least efficient) for window types. A higher star rating indicates a higher energy efficiency. It is derived from the actual measured Energy Efficiency Ratio (EER). The label also shows the cooling capacity, Annual consumption, percentage of energy reduction, certificate number, date of expiry and provides other information relevant to that product.

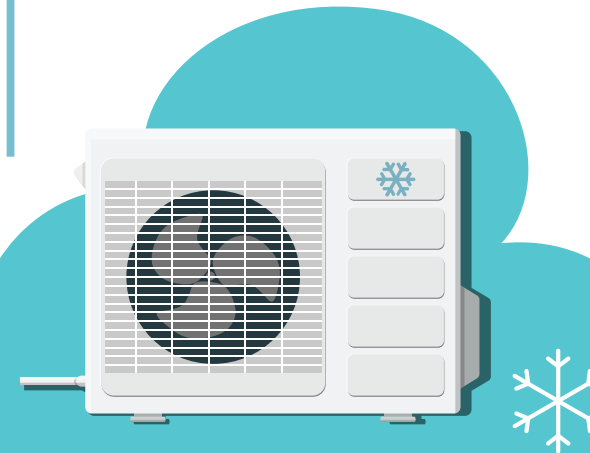
### Energy Efficiency Ratio (EER)

EER is the ratio of net cooling capacity in Btu/h to the total rate of electric input in Watts under designated operating conditions.

### QS SASO 2663/2019:

According to the standard, the split units should have the minimum EER of 11.5 (Btu/h)/watt, while the window types should have the minimum EER of 8.5 (Btu/h)/watt.

Nowadays all air conditioning units in Qatar carry an energy rating label, so look for one with as many stars as possible to save on your energy bill and reduce your impact on the environment".



"In order to achieve better performance of the AC unit, Keep the outdoor component of the air conditioning units out of the direct sunlight by providing it with shade from an awning, shade mesh, or a similar structure. It's important though to avoid any restrict air movement around the outdoor unit, so plenty of clearance is required around and above the unit."

## The star ratings for each EER categories

Split units:

EER limits (Btu/h)/w at T1	EER limits (Btu/h)/w at T1	Star Rating
EER ≥ 14.5	EER ≥ 10.44	9
14.5 > EER ≥ 13.5	10.44 > EER ≥ 9.72	8
13.5 > EER ≥ 12.5	9.72 > EER ≥ 9.00	7
12.5 > EER ≥ 11.5	9.00 > EER ≥ 8.28	6

Split units:

EER limits (Btu/h)/w at T1	EER limits (Btu/h)/w at T1	Star Rating
11 > EER ≥ 10	7.92 > EER ≥ 7.20	5
10 > EER ≥ 9	7.20 > EER ≥ 6.48	4
9 > EER ≥ 8.5	6.48 > EER ≥ 6.12	3

T1: The normal ambient temperature condition required according to test standard.  
T3: The high ambient temperature condition required according to test standard.

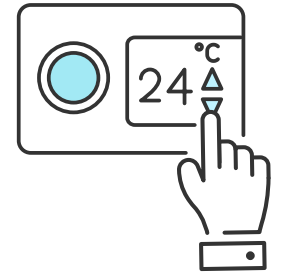
### Saving resulting from using Air conditioner having EER of 12.5 (Btu/h)/watt comparing to EER of 9.5 (Btu/h)/watt:

#### Assumptions:

Building type: Residential Air conditioner capacity: 2 Tons Annual working hours: 4000 hours Electricity tariff: 0.18 QR/kWh.

#### Results:

For EER= 12.5 (Btu/h)/watt, the annual electricity consumption will be 7680 kWh which is cost QR 1382, while at EER= 9.5 (Btu/h)/watt, the annual electricity consumption will be 10105 kWh which is cost QR 1819. The total energy saving will be 2425 kWh which is cost QR 437. The payback period will be 4.6 years. (Assuming the AC unit cost is QR 2000).



## Tips to using an air conditioner efficiently

- Set thermostats between 24 and 26 degrees. Every 1 degree lower can increase running costs by up to 10 percent.
- Limit the amount of sunlight coming directly into your home during the hottest hours of the day by keeping your shutters, curtains or blinds closed.
- For maximum efficiency, set the air conditioning unit to recirculate cool air instead of pulling warmer air in from outside.
- Ensure that your home and the ductwork are well insulated.
- Install or use a programmable timer to turn your unit on and off automatically.
- Don't leave your cooling system running when you are out during the day this wastes energy and money.
- Maintain and service your air conditioner regularly for optimal efficiency.
- Where possible, choose an air conditioner with a variable speed drive or inverter drive they are more energy efficient and have lower running costs.
- To achieve better performance of the AC unit, Put the outdoor unit out of the direct sunlight by providing it with shade, direct sunlight by providing it with shade, and avoid any restrict air movement