How to choose the appropriate air conditioner capacity

Selecting the lack of air-conditioning capacity will lead to the operation of the machine too high, resulting in a waste of electricity even if it is used for a long time.

To cope with hot and sweltering summer months, many people choose to buy air conditioning to improve family life. When choosing to buy and use the air conditioner, you can choose according to the criteria: capacity, one-way or two-way machine, brand. However, the problem that everyone should consider first is to calculate the capacity of the air conditioner to match the room space.

When properly calculated, the air conditioner will run at maximum capacity and can cool the room, and the electricity cost will not be too high.

1. Select air conditioner according to capacity:

In order to calculate the conditioning capacity for the purpose of use, you need to rely on the area factor, the volume of space to be cooled. Cooling volume is the main factor used to calculate capacity.

The capacity of the conditioner is calculated in units of **BTU / h** . The smallest air conditioner in the market usually has a capacity of 9000 BTU / h.

BTU / h is the heat transfer capacity between two parts of the machine, not the power consumption of the machine. The power consumption of air conditioners is 9,000 BTU / h of about 0.97KW, meaning that the machine's performance is about 2.72 times. Better machine, less power, high performance can be more than 3 times. Machines with larger capacity often have higher performance.

According to the BTU / h unit usage, the air conditioner capacity in the market includes:

1. 1 HP is equal to 9000 BTU
2. 1.5 HP is equivalent to 12000 BTU
3. 2 HP is equivalent to 18000 BTU

Formula to calculate room capacity: one cubic meter is equivalent to 200 BTU. From there we have the formula **BTU = Vx200** , where V is the volume of space to install air conditioner, similar to **HP = Vx200 / 9000** . Specifically:

1. Room size: (3 x 4 x 3.5) m3 = 42m3, choose 1 HP conditioner
2. Room size: (4 x 5 x 3.5) m3 = 70m3, choose air conditioner 1.5 HP or 2 HP.
3. Room size: (5 x 6 x 3.5) m3 = 105m3, choose air conditioner 2.5 HP.

If the user calculates the capacity based on the area, he can use the formula: **room height x 600x m2 / 3.3** .

For example, the room has an area of ??16 m2 and a height of 3.6 m, we have calculations: 3.6 x 16 x 600 / 3.3 = 10,472 BTU. Specifically:

1. Room size of 15m or less should use air conditioners with a capacity of 9000 BTU
2. With an area of ??15-20m2, use air conditioner with a capacity of 12,000 BTU
3. The area of ??over 20m2 using air conditioner has a capacity of 18,000 BTU

2. Experience of selecting air conditioners according to each room type:

Air conditioner for family room

Use for common space such as living room, kitchen, plus 0.5 HP. Specifically:

1. Volume of about 40 m3 choose 1.0 HP air conditioner (9000 BTU)
2. Volume is about 60 m3 = 1.5 HP (12000 BTU)
3. Volume of about 80 m3 = 2.0 HP (18000 BTU)

Air conditioner for cafe, restaurant

Due to the fact that there are many people at the time, with ventilation fans, they must choose the capacity for the highest load density (heat emitted by the person, outside ventilation). Specifically

1. Volume of about 30 m3 = 1.0 HP (9000 BTU)
2. Volume of about 45 m3 = 1.5 HP (12000 BTU)
3. Volume of about 60m3 = 2.0 HP (18000 BTU)

Air conditioner for the hotel

Particularly, hotel guests who rent short-term rooms, or foreigners often require machines to quickly cool since entering the ventilation room, so the capacity is higher than the family bedroom. Specifically:

1. Volume of about 35 m3 = 1.0 HP (9000 BTU)
2. Volume of about 70 m3 = 2.0 HP (18000 BTU)

Air conditioner for office

Select standard office is the number of stable people equipped with working computers for each person, photocopier, fax machine, printer . If the case is few and the number of devices is not much, it can be calculated as air conditioner for family living room. Specifically:

1. Volume of about 35 m3 = 1.0 Hp (9000 BTU)
2. Volume of about 55 m3 = 1.5 Hp (12000 BTU)
3. Volume of about 70 m3 = 2.0 Hp (18000 BTU)

Above, we have introduced ways for you to calculate the capacity to buy air conditioners. Depending on the purpose of using the room, choose the right air conditioner

Hope the above article is useful to you!

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