

## Choosing an economical boiler for heating

If you need to choose a **boiler** with which you plan to heat your home, it is desirable to assess its characteristics such as price, efficiency and convenience in **servicing boilers** during operation. Nowadays, **combined boilers** are becoming increasingly popular. These appliances can use gas or electricity. In any case, before buying gas equipment or a new **electric boiler**, it is desirable to try to understand its main advantages and disadvantages, as well as the principles according to which the boiler **heat exchanger** works.

The **industrial boiler** has enough power to heat large production facilities. For operation of a **steam boiler** of this type the presence of a special boiler room of the closed type in which automatic or manual supply of fuel is carried out is provided. **Rehabilitation** in the sauna also requires a powerful unit. An **ordinary boiler** can be considered optimal for a private home, the area of which is not too large. If we compare the two main types of **boilers** designed for individual needs, it should be noted that each has both advantages and disadvantages.

A **conventional gas-fired boiler** will cost more, but by purchasing it, you will be able to save on fuel. One of its disadvantages is that this type of **boiler** is considered explosive, so the **maintenance of boilers** of this type requires compliance with certain safety rules.

**Electric boiler** is much cheaper, its operation is safer. One of the main advantages is that the **maintenance of boilers** of this design does not require a separate chimney. It is quite profitable to use as an **electric boiler for hot water**. But if it functions as a **main boiler**, you will have to pay for heating many times more than in the case of using a gas unit.

Recently, solid fuel **steam boilers** are often used. Solid fuel is seen as an alternative to electricity and gas, the price of which is constantly rising. Unfortunately, this method is not environmentally friendly. In addition, compared to a **conventional boiler**, fuel is not always available.

One of the most environmentally friendly sources of heat in the house is [solar energy](#), which can be accumulated during the day and spent at night when the temperature is lowest - thus replacing a gas appliance or **electric boiler**. Another option is a heat pump. This appliance can be used for heating, cooling or ventilation.

## Advantages of using combined boilers

Nowadays, the popularity of new **combined boilers** is growing. They are able to run on both gas and electricity. The main feature is the presence of two types of boiler **heat exchangers** in different housings and the ability to automatically switch from one type of fuel to another.

We ask ourselves: "Is it profitable to use a **combined boiler** as a heating device in your own home?". The answer will be yes This type of boiler is economical and easy to operate. Among its main advantages are:

- High **boiler efficiency**;
- Ability to compensate for the absence of one fuel by connecting another;
- Small size, which simplifies the installation process;
- Possibility of use as an **electric boiler for hot water**.

There are three main types of **combined boilers**, each of which has its own characteristics and

advantages:

- The first - electric and gas heaters work synchronously;
- Second - the main is the **electric heater of the boiler**, the gas component is connected in cases where the mains voltage is too low;
- Third - runs on gas, electricity is used to initially heat the system.

The main disadvantages of the **combined boiler** should be considered a fairly high cost of equipment and the need to connect three-phase electricity. When installing a **new boiler**, it is desirable to carry out the general **improvement** of the atmosphere in the house. This requires a [quality renovation](#) of the house.

### Basic principles of boiler maintenance

For reliable and safe operation of the equipment, **boilers** are periodically maintained.

What should you pay attention to during the periodic monitoring of the condition of a **conventional boiler**?

First of all, you need to do the following:

- Clear all filters;
- Check the tightness of hydraulic connections and the gas path;
- Inspect the external surfaces and clean the boiler **heat exchanger**;
- Assess the correct operation of **boiler** control and regulation systems;
- Check that the pressure in the expansion tank complies with the specified standard.

When inspecting an **electric boiler**, the same operations are important. The condition of the electrical equipment and **heat exchanger** of the boiler should be assessed. This is necessary for the **main boiler** of your house to work reliably and provide the required level of warmth and comfort.

A novelty is an individual bath for **sanitation**, the water in which is heated by a wood-fired boiler. **Boiler maintenance** in this case does not require much effort.

### Sauna as an effective means of sanitation

Many people make sure to visit the saunas for **health** and relaxation. And the satisfaction with the quality of steam is related to which **boiler** is used in the bath to maintain the proper temperature level. True connoisseurs of this popular kind of **health** of body and soul prefer the **usual boiler** which works on firewood and is capable to recreate the corresponding mood in the sauna room.

But, as a rule, such institutions are increasingly switching to the use of **electric boilers**. The main advantage of this transition is that in this case the **efficiency of the boiler** increases significantly. In addition, the **new boiler** will be much more convenient during operation.

The **main boiler** of such an institution as a sauna must be reliable and safe. Of course, it should not be compared to an **industrial boiler**, but it must have the power needed to relax and **heal** a certain number of people. **Boiler** power is calculated at the rate of 1 kW / h. per 1 m<sup>3</sup>. Boiler maintenance becomes much more convenient.

A traditional wood-fired **steam boiler** will look much more attractive in a sauna because it recreates a unique atmosphere for its visitors. But the installation of combined boilers, which use electricity as the main source of energy is becoming more common. Environmental friendliness of electricity should be provided by new ways of its production, for example, [wind turbines](#).

### Installation of an electric boiler in a private house

Before buying a **new boiler**, you need to determine the place where you are going to install it. The wall-mounted **electric boiler** is much easier to fit into the interior of the room. A large **industrial boiler** needs a special boiler room. In the same way the floor unit of household purpose can be established in a separate room. But most often the place of installation of a **new boiler** is the kitchen.

The **electric boiler heater** is considered to be quite safe, so it is installed even in the hallway or living room. A popular is a double-circuit design, which uses an **electric boiler for hot water**. The most profitable is the installation of a **combined boiler**. Since it operates simultaneously on two energy sources, the **efficiency of the boiler** becomes much higher compared to a **conventional boiler**.

Among the newest developments which allow to save on heating, it is necessary to name the **heat pump**. This device operates at a temperature difference and is used in conjunction with the **main boiler**, which operates on non-traditional fuel. The air-to-air **heat pump** has two units. One of them is installed on the outside wall of the house, the other - inside the room.

#### The new boiler is a guarantee of comfort

An economical **boiler**, which is planned to be installed in a private house or in a country house, will help to solve many problems. To correctly calculate the power, you should consult an expert.

What are the requirements for a new boiler for individual use?

The efficiency of the main boiler of your home is affected by various factors.

First of all it is necessary to consider the following characteristics of the heating equipment:

1. Compliance with the type of fuel that the user is going to use;
2. Safety of the boiler and reliability of its operation;
3. Convenient maintenance of boilers of the type you have chosen.

In a country house sometimes install a steam boiler running on firewood. But thanks to the electric boiler you can always heat the room quickly. It is very convenient to use an electric boiler for hot water. Due to the fact that the cost of electricity is quite high, the best option is to purchase a combined boiler.

A significant advantage is the presence of two boiler heat exchangers - for heating and hot water. If the quality of gas in the network is insufficient, the required power of the system can compensate for the electric heater of the boiler. When installing electrical or gas equipment as the main boiler, a heat pump can be used for further savings. It can be attributed to the new generation of heaters.

A powerful industrial boiler is installed in the presence of a significant production area. A source of thermal energy for heating can also be a melting furnace that runs on solid fuel or electricity.

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