

The right return temperature to the boiler and optimal accumulation loading - new ESBE solid fuel products are setting a new standard.

Simple, compact installation, a broad range, optimal regulation and reliable, safe operation. ESBE's new load units and load valves have unique qualities to allow the best possible energy efficiency and environmentally friendly solid fuel firing.

With the increased interest in solid fuels as a good energy source customers and consumers are making new requests and demands. ESBE has taken this on board in its work on developing the entirely new product range designed for optimal loading of accumulation tanks, from the smallest pellet stoves up to 150 kW boilers. These products are now available from wholesalers in Sweden.

Optimal loading and lower energy consumption

The new valve design offers outstanding control performance, thereby achieving efficient accumulation loading and good layering in the accumulation tank. For users, this results in more convenient operation and high utilisation of energy.

The load units are available in two main variants so as to ensure the right dimensions are available for the respective systems. The integral circulation pumps in these variants are of different sizes. For the smaller load unit variant, this reduces electricity consumption by 30 % over other comparable load units available on the market, as well as improving energy utilisation.

Safe system

A wood boiler has a high combustion temperature in order to keep emissions low. The return temperature of the boiler should not be too low either, as this will lead to internal corrosion damage.

The new valves ensure that the boiler gets up to temperature quickly. They maintain a high, guaranteed return temperature to the boiler throughout the entire combustion cycle. This results in greater boiler efficiency, fewer emissions of environmentally hazardous substances and a reduction in tar formation inside the boiler. It also increases the service life of the boiler.

The load unit has an integrated auto-circulation function which allows the tank to go on loading even if there is a power cut or the circulation pump stops working. The auto-circulation function is blocked at the time of delivery, but it can easily be enabled or disabled by the installer or user if required.

Easy, compact installation

Installation space is often scarce, for example between a boiler and an accumulation tank. This is why the construction dimensions of the new load unit are so small and compact, despite lots of built-in functions.

The fact that the load valve regulates at two ports improves control performance and also means that no separate adjustment valve is required on the bypass pipe - a significant advantage. This reduces installation time by facilitating installation and doing away with the need for any particular system tuning.

A shut-off function for the load unit is integrated into the adapters, which for instance makes any future servicing of the pump or load valve easy without having to drain the entire system.

A broad range

In order to achieve good energy utilisation and the best possible operating economy it is

important to use correctly dimensioned valves for the relevant facilities. This is why there are as many as 95 different standard variants to choose from. These are divided into three product groups: one load unit series and two load valve series.

Load unit series LTC100:

- consists of an integrated pump, thermal load valve, auto-circulation function with enable/disable capability, shut-off valves and thermometers. The entire unit has insulation to protect it and to save energy.
- available in two main variants, for boiler outputs of up to 50 kW or 100 kW.
- available with pipe connection DN 25–50, internal thread or compression fitting connection.
- opening temperature can be selected: 45 °C, 55 °C, 60 °C, 70 °C or 80 °C.
- has a valve housing made from nodular iron (EN-JS 1050).

Load valve series VTC500:

- available in two main variants (series VTC510 is a load valve only). Series VTC530 is a complete unit and consists of a load valve, thermometers, shut-off valves and insulation.
- designed for boiler outputs of up to 150 kW.
- available with pipe connection DN 25–50, internal thread or external thread.
- opening temperature can be selected: 45 °C, 55 °C, 60 °C, 70 °C or 80 °C.
- has a valve housing made from nodular iron (EN-JS 1050).

Load valve series VTC300:

- designed for boiler outputs of up to 30 kW. Compact dimensions also make it suitable for pellet stoves.
- has pipe connection DN 20. Four different connection variants; internal thread, external thread, pump flange or rotating nut.
- opening temperature can be selected: 45 °C, 55 °C, 60 °C, 70 °C or 80 °C.
- manufactured from corrosion-resistant DZR (Dezincification Resistant Brass, CW 602N).

ESBE manufactures, develops and markets valves and actuators for regulating fluid-borne systems in both large and small properties. The products offer improved energy consumption, comfort and safety in heating, cooling and tap water systems. With rising energy prices and increased demand for comfort, these are important considerations for all homes. We have 180 employees and have an annual turnover of approximately EUR 30 million. Our headquarters are in Reftele in Sweden. We have sales companies in Germany, France and Italy. Our sales representatives operate in more than 20 countries.

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