Wood heating systems from 50 to 1250 kW:

**VITOLIGNO**
**VITOFLEX**
Heating with wood – the most natural fuel in the world

The rising cost of fossil fuels and growing environmental awareness are creating an ever increasing demand for renewable forms of energy. An advanced wood heating system is an environmentally responsible and economical alternative, or addition, to conventional heating systems for fossil fuels.

Sustainable
When wood is harvested in sustainable forestry, it is a renewable and environmentally compatible source of energy and an important part of sustainable resource management.

CO₂ neutral
When wood is burned, only as much CO₂ is released as the trees actually absorbed during the course of their life. That’s why heating with wood is CO₂ neutral.

Economical
As an indigenous fuel, wood is very cost efficient and not subject to extreme price fluctuations.

Top technology and reliability
Advanced biomass systems are fully automatic and equipped with control and safety devices for reliable, efficient and safe operation.

Homegrown and independent
Wood is a homegrown product, is harvested with a minimum of energy and contributes to the regional economy.
Rising energy prices, limited fossil fuel resources and increasing requirements for environmental protection make biomass ever more important as a fuel. Viessmann’s wood heating systems cover the medium output range from 50 to 1250 kilowatts. The products available include wood boilers that are suitable for logs, shavings, pellets and woodchips.

With fuel supply and discharge systems, flue gas cyclones, fine dust filters and even heating containers and heating centres, the company supplies all system components from a single source.

These boilers are mainly designed for industrial, commercial and municipal clients. As a leading manufacturer of wood combustion systems and biomass CHP stations, Viessmann offers complete and bespoke system solutions for heat generation from biomass for many kinds of wood fuel.

**Extensive range of services**

Generally, every project is individually engineered and adapted to the specific requirements of the user. Creating a concept, organising service and installation, testing emissions, carrying out analyses and modernising existing systems, form part of our extensive range of services. Rapid service through emergency telephone numbers and in-house spare parts stocks reduce down times to a minimum.

**Digital control unit for linking into the Viessmann system**

An extensive range of comprehensive solutions including high quality system components, such as DHW cylinders, components for heat distribution and solar thermal systems, etc. can be controlled with the Ecotronic. The boiler control unit, including its programming unit, is not susceptible to problems arising from dust and dirt.

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**VITOLIGNO 300-C**

Fully automatic biomass boiler for pellets
60 to 101 kW
Page 6

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**VITOLIGNO 300-H**

Fully automatic biomass boiler for pellets or woodchips
50 to 101 kW
Page 8

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**VITOFLEX 300-RF**

Innovative wood boiler with rotation combustion for pellets, woodchips and shavings, moisture content: max. M35
150 to 540 kW
Page 12

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**VITOFLEX 300-UF**

Fully automatic wood boiler with grate combustion for pellets, woodchips, wood shavings and mixed wood, moisture content: max. M50
390 to 1250 kW
Page 14
Convenient heating centre for automatic charging with pellets

The Vitoligno 300-C biomass boiler offers a multitude of automatic functions that make for particularly convenient operation. These functions include an efficient automatic ignition system with low power consumption, as well as fully automatic ash removal from the grate and heat exchanger. Because of the vertical arrangement of the heat exchanger, very little ash is deposited, making long cleaning intervals possible. The turbulators provide permanently efficient heat transfer and lower dust emissions. Emptying the large, sealable and mobile ash box is an almost entirely dust-free process.

Efficient and environmentally responsible
The Vitoligno 300-C has an efficiency level of up to 96 percent when converting pellets into heat. With its weather-compensated control unit and a modulation range of 1:3, the biomass boiler adapts its output precisely to the heat demand. This means that the Vitoligno 300-C has impressively low fuel consumption.

Staged combustion means high efficiency and low emissions, with primary and secondary air control with Lambda support. The secondary combustion chamber was developed using CFD simulation and provides optimum mixing of combustion gases with secondary air. Both the constriction of the diameter and the profiled combustion chamber bricks of the flame tube induce swirling to thoroughly mix the combustion gases for complete burnout. The extremely heat-resistant silicon carbide bricks also contribute to a hot combustion zone. This leads to particularly low emissions, compliant with the 1st BImSchV, stage 2.

Flexible fuel supply
Depending on requirements and application, the boiler can be charged with pellets via either a flexible screw conveyor or a vacuum system. Filling the pellet hopper is particularly quiet, thanks to innovative sound optimisation.

To save space, the fuel supply can be mounted on either the right or the left (from 80 kW). Up to 70 kW, the fuel supply comes from the back. This allows flexible and space saving positioning with single sided wall installation to the right. No maintenance or inspection work needs to be carried out from this side.

Innovative and versatile control
The integral Ecotronic control unit can regulate the following:
- Up to three heating circuits with mixer
- Two heating circuits with mixer and DHW heating
- One heating circuit with mixer, one solar circuit and DHW heating
- A fourth heating circuit with mixer for connection via the KM-BUS

In combination with the Vitotrol 350-C (option), the boiler can also be controlled from the living space. In addition, the system can be extended using control modules to include up to 24 control...
VITOLIGNO 300-C
60 to 101 kW

loops. These can be used for heating circuits, DHW heating or in conjunction with a district heating supply line. The clear colour touchscreen with graphic capability ensures straightforward and intuitive operation.

The Vitotrol 350-C can also be used as a room controller, control loop extension and cascade controller for up to four wood boilers. This means that different fuels and boilers with various output ratings can be combined. In addition, a further oil/gas boiler can be enabled as a peak load boiler.

Matching accessories
The accessories for the Vitoligno 300-C include extensive storage and supply systems for pellets. For pellet stores without a sloping floor, modular 4-/8-way wand changeover is available. Suction wands, evenly distributed in the pellet store, transport the pellets from the store to the boiler. The routing of the wand system is flexible and suitable for various room formats (e.g. L-shaped, very elongated spaces or even split stores). As the sloping floor is no longer required, usable space is increased by up to 1/3 – this ensures optimum use of the pellet store.

TAKE ADVANTAGE OF THESE BENEFITS
+ Fully automatic biomass boiler with efficiency of up to 96 %
+ Heating output: 60 to 101 kW
+ Low fuel consumption through high efficiency, modulating operation and weather-compensated control
+ Ecotronic control unit with commissioning assistant for up to 4 heating circuits
+ High operational reliability through self-cleaning grate
+ Integral, controlled return temperature raising facility (up to 70 kW)
+ High operating convenience and extended service intervals thanks to automatic cleaning and removal of ash from heat exchanger and grate
+ Fuel supply via either a vacuum system or a flexible screw conveyor
+ Pellet hopper can be filled during operation
+ Sound-optimised pellet hopper for quiet fuel supply
+ Low power consumption due to automatic ignition with ignition element
+ Broadband Lambda probe for optimised combustion control
+ Low dust emission levels comply with the first German Immissions Ordinance (1st BImSchV), stage 2
+ Extensive accessories for pellet supply and storage
+ Cascade of up to 4 wood boilers with the Vitotrol 350-C (option)

For specification, see page 22
The Vitoligno 300-H biomass boiler has been designed for great flexibility when it comes to the small and medium output range. The heating centre can be charged with either pellets or woodchips. A multitude of automatic functions make the Vitoligno 300-H particularly easy to operate. These functions include an efficient automatic ignition system with low power consumption, as well as fully automatic ash removal from the grate and heat exchanger. Because of the vertical arrangement of the heat exchanger, very little ash is deposited, making long cleaning intervals possible. Emptying the large, sealable and mobile ash box is an almost entirely dust-free process.

**High efficiency**
With its weather-compensated control unit and a modulation range of 1:3, the biomass boiler adapts its output precisely to the current heat demand. This means that the Vitoligno 300-H has impressively low fuel consumption.

The Vitoligno 300-H has been developed for the automatic combustion of all kinds of dry and damp wood fuels (woodchips and pellets) with a maximum moisture content of 30 percent. To save space, the fuel supply can be mounted on either the right or the left (from 80 kW).

Up to 60 kW, the fuel supply comes from the back. This allows flexible and space saving positioning with single sided wall installation to the right. No maintenance or inspection work needs to be carried out from this side.

**Futureproof through low emission levels**
Staged combustion means high efficiency and low emissions, with regulated primary and secondary air supply. Combustion gases are combined with secondary air in the flame tube where – because of its constricted diameter – they are mixed very well. This ensures long burnout times and thus complete combustion.

### Regulates up to four heating circuits
The integral Ecotronic control unit can regulate the following:

- Up to three heating circuits with mixer
- Two heating circuits with mixer and DHW heating
- One heating circuit with mixer, one solar circuit and DHW heating
- A fourth heating circuit with mixer for connection via KM-BUS

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**VITOLIGNO 300-H**

- Integral Ecotronic control unit
- Fully automatic heat exchanger cleaning
- Vertical heat exchanger with turbulators
- High temperature-resistant combustion chamber with variable combustion and regulated primary and secondary air supply
- Twin rotary finned grate
- Sliding grate
- Fully automatic ash removal from grate and heat exchanger
- Mobile ash box
In combination with the Vitotrol 350-C (option), the boiler can also be controlled from the living space. In addition, the system can be extended using control modules to include up to 24 control loops. These can be used for heating circuits, DHW heating or in conjunction with a district heating supply line. The clear colour touchscreen with graphic capability provides straightforward and intuitive operation. The Vitotrol 350-C can also be used as a room controller, control loop extension and cascade controller for up to four wood boilers. This means that different fuels and boilers with various output ratings can be combined. In addition, a further oil/gas boiler can be enabled as a peak load boiler.

**Matching accessories**
The Vitoligno 300-H range of accessories includes storage and supply systems for pellets and woodchips, as well as intelligent buffer management for efficient heating water stratification.

**TAKE ADVANTAGE OF THESE BENEFITS**

- Fully automatic biomass boiler with efficiency of up to 95.1 %
- Rated heating output range from 50 to 101 kW
- Low fuel consumption through high efficiency, modulating operation and weather-compensated control
- Ecotronic control unit with commissioning assistant for up to four heating circuits
- High operational reliability through self-cleaning grate
- Integral, controlled return temperature raising facility (up to 60 kW)
- High operating convenience and extended service intervals thanks to automatic cleaning and removal of ash from heat exchanger and grate
- Extensive accessories for fuel supply and storage
- Flexible and space saving positioning through corner installation against the wall (up to 60 kW)
- Clean and efficient combustion though regulated primary and secondary air supply
- Cascade of up to 4 wood boilers with the Vitotrol 350-C (option)
- Mobile remote access via Viessmann apps

For specification, see page 22
Convenient heating centre for automatic charging with pellets and woodchips

The Vitoligno 300-H is a convenient, compact and fully automatic biomass boiler. Its features include straightforward handling, automatic ignition and fully automatic ash removal from the grate and heat exchanger. Thanks to the vertical arrangement of the heat exchanger, very little ash is deposited, making long cleaning intervals possible.

Turbulators provide permanently efficient heat transfer and low dust emissions. The large 85 litre ash box or the 240 litre ash bin ensure long emptying intervals. Emptying the two closable ash containers is an almost entirely dust-free process, and transportation is equally simple and straightforward.

Efficient and environmentally responsible
With its weather-compensated Ecotronic control unit and a modulation range of 1:3, the boiler adapts its output precisely to the current heat demand. This results in low fuel consumption. High efficiency is the result of staged combustion. The Lambda-assisted primary and secondary air control system enables low emissions. Dust emissions can be significantly reduced again by means of the optional electrostatic precipitator.

Flexible fuel supply
Pellets are fed in via a new vacuum system. The sound-optimised design of the pellet hopper enables particularly low-noise operation.

The Vitoligno 300-H has been developed for the automatic combustion of all kinds of dry and damp wood fuels (woodchips and pellets) with a maximum moisture content of 30 percent. Alternatively, woodchips or pellets can be used as fuel. The fuel supply can be mounted on either the left or the right, enabling optimum use of space and flexible siting.

VITOLIGNO 300-H
1. Integral Ecotronic control unit
2. Fully automatic heat exchanger cleaning
3. Vertical heat exchanger with turbulators
4. High temperature-resistant combustion chamber with staged combustion and regulated primary and secondary air supply
5. Sliding grate
6. Fully automatic ash removal from grate and heat exchanger
7. Ash box, 85 litre capacity
8. Pellet hopper
TAKE ADVANTAGE OF THESE BENEFITS

+ Fully automatic biomass boiler, 135 and 150/160 kW
+ Straightforward handling thanks to compact design and sectional boiler
+ Low fuel consumption through high efficiency of up to 94.6%
+ Fully automatic and quiet operation (new low-noise pellet hopper)
+ Optional electrostatic precipitator for even lower dust emissions
+ Optimum use of space and flexible siting as the feed can be installed on the right or left
+ Convenient ash management thanks to:
  - Long emptying intervals with 85 l ash box or 240 l ash bin
  - Easy to transport on a cart or ash wheelie bin
+ Staged combustion in the primary and secondary combustion chambers for consistently high efficiency and low emissions
+ Fully automatic ash removal from heat exchanger and grate for permanently efficient and reliable operation
+ Modulating operation and weather-compensated control unit with graphic display for a high level of operating convenience
+ Low power consumption due to energy saving components
+ Simple and intuitive control unit operation with display of buffer status
+ Reduction of maintenance and spare part costs due to new suction turbine
+ Eligible for subsidies (grants from the KfW bank) due to low emissions (compliant with 1st BImSchV, stage 2)

Innovative and versatile control

Depending on the configuration, the menu-guided Ecotronic controls up to four heating circuits:

- Up to three heating circuits with mixer
- Two heating circuits with mixer and DHW heating
- One heating circuit with mixer, one solar circuit and DHW heating
- A fourth heating circuit with mixer for connection via the KM-BUS

Convenient control via app

The Vitoconnect can be connected at the Optolink interface. The heating circuits can then be adjusted using the ViCare app.

For specification, see page 23
Proven wood boiler with rotation combustion from 150 to 540 kW – for wood fuels with a maximum moisture content of 35 percent

The patented rotation combustion system of the Vitoflex 300-RF wood boiler is state of the art. A feed screw conveyor continuously conveys wood fuel onto a moving grate, where gasification of the fuel occurs (with Lambda regulated primary air supply). Continuous gasification occurs under air starvation. Rotary fans mix rising combustion gases with secondary air that has been atomised and subjected to angular momentum. This ensures thorough mixing with the combustion gases.

Clean and efficient combustion
The proven combustion technology of the Vitoflex 300-RF achieves similar emission values to those of a modern gas combustion system and keeps the release of CO, NOx and dust particles to a minimum, subject to fuel type. The combination of combustion technology and digital modulating output control enables efficiency levels of up to 94 percent.

Mobile heating centre in container
Vitoflex 300-RF wood boilers are available as containerised complete solutions for situations where there are no boiler houses available or where on-site building costs have to be reduced to a minimum. These ready-to-use solutions include a pre-assembled wood boiler inside a special container, plus all auxiliary appliances. Individual container solutions can be specially adapted to meet specific requirements.
TAKE ADVANTAGE OF THESE BENEFITS

+ Fully automatic wood boiler with rotation combustion
+ Rated heating output range: 150 to 540 kW
+ For dry wood fuels with a maximum moisture content of 35 %
+ High efficiency (up to 94 %) and low emissions in load operation due to controlled primary and secondary air supply, and low particle combustion
+ Permissible flow temperature up to 100 °C
+ Permissible operating pressure: 3 bar (4.5 bar on request)
+ Two-pass heat exchanger and modulating output control (4:1 control range)
+ Automatic ignition precludes the need for firebed maintenance and saves fuel
+ Easy to service thanks to fully automatic ash removal, optional pneumatic cleaning system and flue gas dust extractor
+ Highly developed safety equipment ensures safe and reliable operation
+ Available as a complete, ready-to-use containerised solution

For specification, see page 23

Mobile heating centre in container
Wood boiler with grate combustion from 390 to 1250 kW – for wood fuels with a maximum moisture content of 50 percent

The moving infeed grate, proven combustion retort and sloping external grate in the Vitoflex 300-UF optimally combine the benefits of infeed and underfeed combustion. A feed screw conveyor guides the wood fuel into the combustion retort, where it is pre-dried. The fuel is completely degassed on the external grate and the moving infeed grate. The wood gases are then burned with the aid of a regulated supply of secondary air.

**Top quality design and construction**

The Vitoflex 300-UF wood boiler features high quality construction for use under the toughest conditions (high fuel flexibility from M10 to M50). The inside of the combustion chamber is lined with pressed fireclay bricks with a high clay content for greater durability. All grate elements are high quality, heavy gauge chromium steel castings that can withstand very high temperatures. A distinguishing feature of the Vitoflex 300-UF wood boiler is its proven three-pass heat exchanger, providing maximum heat transfer and exceptional efficiency.

**Clean and efficient combustion**

The combustion technology of the Vitoflex 300-UF achieves low emission values (particularly for CO and NOx). Operation with modulating output control and the optimised combustion principle enables efficiency levels of up to 92 percent.
VITOFLEX 300-UF

390 to 1250 kW

TAKE ADVANTAGE OF THESE BENEFITS

- Fully automatic wood boiler with grate combustion
- Rated heating output range: 390 to 1250 kW
- For the use of wood fuels with a moisture content of up to 50 % (M50*)
- High efficiency thanks to proven combustion technology, three-pass heat exchanger, modulating output control and regulated primary and secondary air supply
- Permissible flow temperature up to 100 °C
- Maximum operating pressure: 6 bar
- Easy servicing thanks to fully automatic ash removal and optional pneumatic cleaning system
- Highly developed safety equipment ensures safe and reliable operation
- Optimum system output results from the design and delivery of all system components from a single source
- Automatic ignition precludes the need for firebed maintenance and saves fuel (optional – only for fuels with moisture content below 40 %)
- Individual design of your system by our team of experts
- Excellent output control from 30 to 100 %

* According to EN ISO 17225-1

For specification, see page 23
Comprehensive energy management
Modulating output control for maximum and safe performance of the heating system.

Advanced boiler control units for biomass systems offer the same control convenience as most standard control units for fossil fuel systems. Thanks to its modulating output control and a heating water buffer cylinder, the system flow temperature can be matched to the prevailing weather conditions.

Boiler control (for Vitoflex 300-RF)
The digital modulating output control ensures optimum combustion by accurately controlling the relationship between the combustion air, recirculated flue gas and fuel. The control unit monitors:
- Flow and return temperatures of the wood boiler
- Condition of the firebed
- Light barriers on the supply system
- Flue gas temperature
- Oxygen content in the flue gas (Lambda probe)

Boiler control (for Vitoflex 300-UF)
The boiler control unit is fully programmable and regulates both the system and the modulating output. It regulates all variable speed fans and activates the fuel charging unit, and monitors:
- Flow and return temperatures of the wood boiler
- Light barriers on the supply system
- Pressure sensor for reliable negative pressure
- Flue gas temperature
- Combustion chamber sensor (upper temperature limit)
- Oxygen content in the flue gas (Lambda probe)
Heating water buffer cylinder
For biomass systems, a heating water buffer cylinder is an important component for control accuracy (the ability to adapt the system output to the actual demand).

The heating water buffer cylinder makes it easier to form temperature layers, effectively reduces how often the combustion system is switched on and off, and adjusts the system flow temperature to meet the heat demand. With all control units, there are five sensor inputs available for optimum burner modulation in accordance with the buffer temperature.

Remote monitoring (option)
The heating system can be remotely monitored and serviced via a web interface. It enables the monitoring and adjustment of various system parameters. System monitoring is ideally used in public facilities, cooperative systems or CHP plants.

All control units for biomass systems are made in house.

Additional benefits include:
+ Quick installation as all functions are combined in a single control unit
+ Ease of operation
System components

An extensive range of system components from a single source ensures the automatic, reliable and low maintenance operation of the entire system.

Pneumatic cleaning system (option)
A clean heat exchanger is crucial to the service life and efficiency of a wood boiler. With short blasts of compressed air, the pneumatic pipe cleaning system regularly removes ash from the heat exchanger, thereby considerably extending maintenance intervals.

Automatic ash removal (option)
The clean combustion leaves only the minerals stored in the wood behind as ash. A grate with moving elements extracts the ash from the combustion chamber and transfers it into the ash box. As soon as it has cooled down, the ash removal screw conveyor transports the ash into a large external ash container.

Flue gas recirculation system
Flue gas with low oxygen content (6 to 8 percent) is fed back into the boiler. Mixing it with primary air ensures the complete gasification of the fuel under air starvation. This enables a low grate temperature, which results in higher efficiency. In addition, particle emissions are reduced and the service life of the grate is extended.
Storage and supply systems

Each fuel storage and supply system is unique and designed for a specific application. Advanced, fully automatic supply solutions are delivered ready for installation.

All Viessmann wood heating systems come equipped with:

- High performance screw conveyors with large diameter
- Spur geared motors for high torque
- Large, optimised supply channels
- A certified device for effective fire protection

**Basement storage with screw conveyor discharge**

Basement rooms or former oil storage spaces can be turned into pellet stores without any major conversion work. Pellets can be blown in across large distances, while special screw conveyors transport them reliably and with low energy consumption.

**Bunker with spring core or horizontal discharge**

This is the best solution for square or slightly rectangular bunkers. A sprung arm pushes the fuel onto a discharge screw conveyor (flexible agitator discharge). For high bulk densities, the stable horizontal discharge is used (separately driven bottom agitator and discharge screw conveyor).

**Bunker with push floor discharge**

This version is ideal for large, rectangular storage bunkers. Sliding hydraulic pushrods guide the fuel onto a supply screw conveyor. This enables quick filling with large amounts of fuel.

**Silo with funnel**

Fuel is discharged from the silo via a pendulum screw conveyor in the funnel – the automatic reverse function ensures operational reliability. A fire tested rotary lock valve separates the silo from the heating system. This system is recommended for wood processing facilities.
Safe and reliable operation

All Viessmann wood heating systems meet the strictest safety requirements. Safety equipment using state of the art technology guarantees safe and reliable operation of your system at all times.

Reignition protection (RZS)
This provides protection against reignition through flying sparks by means of a permanent, monitored barrier layer and constant, controlled negative pressure operation.

Burn-back resistant device
A sensor situated in the fuel charge pipe recognises the risk of burn-back and immediately counteracts this by increasing the amount of fuel charged into the wood boiler.

Burn-back protection device
A horizontally acting slide valve with spring return interrupts the fuel supply in the event of a power failure and if there is a risk of burn-back. If negative pressure occurs in the fuel store, a rotary lock valve is used in place of the slide valve for the same purpose. The rotary lock valve prevents unwanted leakage air reaching the combustion process.

Safety heat exchanger
A safety heat exchanger built into the wood boiler is connected to the water supply and prevents the wood boiler from overheating in the event of a power failure. A non-electric, thermally activated valve responds at a predetermined boiler water temperature and cools the boiler water down via indirect heat transfer through the heat exchanger.

Additional safety equipment
In addition to the listed safety equipment, Viessmann wood boilers also feature the following safety devices specified by relevant safety standards:

- Low water shutdown
- Pressure and temperature sensors
- High limit safety cut-out

Cross transport of woodchips from the push floor discharge system
With Viessmann system technology, you can easily expand your wood heating system to enjoy all the benefits of an integrated system based on renewable energy.

**Wood heating systems**
Wood heating systems are ideal for integrating one or more further energy sources, such as fossil fuels or solar energy. Our comprehensive product range offers heating systems which operate with all forms of energy, and which add up to considerably more than the sum of the individual parts. Whether it is an oil/gas boiler or a solar thermal system, all parts fit together perfectly and form a reliable and economical system.

**Solar thermal systems**
Vitosol flat-plate or vacuum tube collectors are ideal for DHW heating and for providing central heating backup for the biomass system. By incorporating solar energy, domestic hot water costs can be reduced by up to 65 percent (depending on the size of the solar thermal system), while simultaneously helping to protect the environment.

**High performance DHW cylinders**
Vitocell DHW cylinders enable a fast and reliable supply of domestic hot water at all times. For applications requiring large amounts of DHW, the vertical and horizontal DHW cylinders can be combined to create cylinder banks. By integrating the DHW supply into the wood heating system you can save up to 50 percent of running costs compared to directly heated DHW.

**Boilers**
As a system based on renewables, a wood heating system is often linked to a conventional oil/gas boiler that covers peak loads or backs up the biomass boiler. Depending on the type and temperature demand of the system, Viessmann offers highly efficient condensing boilers, as well as low temperature boilers.
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<tr>
<td>Height</td>
<td>mm</td>
<td>1856</td>
<td>1856</td>
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<tr>
<td>Weight</td>
<td>kg</td>
<td>1473</td>
<td>1473</td>
<td>1473</td>
</tr>
<tr>
<td>Flue gas connection Ø</td>
<td>mm</td>
<td>200</td>
<td>200</td>
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### VITOLIGNO 300-H

<table>
<thead>
<tr>
<th>Model</th>
<th>150</th>
<th>220</th>
<th>300</th>
<th>400</th>
<th>540</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rated heating output kW</td>
<td>135</td>
<td>150/160</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dimensions</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Length (mm)</td>
<td>2145</td>
<td>2145</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Width (mm)</td>
<td>1920</td>
<td>1920</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Height (mm)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Weight Shut-off gate valve / rotary lock valve kg</td>
<td>1770/1784</td>
<td>1770/1784</td>
<td></td>
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</tr>
<tr>
<td>Flue gas connection Ø (mm)</td>
<td>200</td>
<td>200</td>
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<td></td>
<td></td>
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</tbody>
</table>

The details for width, length and weight are for the boiler including the feed and the 85 l ash box.

**Note**
With 150/160 kW, the rated heating output depends on the fuel:
- With woodchips = 150 kW
- With pellets = 160 kW

### VITOFLEX 300-RF

<table>
<thead>
<tr>
<th>Model</th>
<th>150</th>
<th>220</th>
<th>300</th>
<th>400</th>
<th>540</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rated heating output kW</td>
<td>150</td>
<td>220</td>
<td>300</td>
<td>400</td>
<td>540</td>
</tr>
<tr>
<td>Dimensions</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Length (mm)</td>
<td>2513</td>
<td>2537</td>
<td>2893</td>
<td>2877</td>
<td>3105</td>
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<tr>
<td>Width (mm)</td>
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<td>1330</td>
<td>1330</td>
<td>1570</td>
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<tr>
<td>Height (mm)</td>
<td>1825</td>
<td>2084</td>
<td>2084</td>
<td>2422</td>
<td>2492</td>
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<tr>
<td>Weight (kg)</td>
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<td>3024</td>
<td>3433</td>
<td>4438</td>
<td>5108</td>
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<td>Maximum operating pressure (bar)</td>
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### VITOFLEX 300-UF

<table>
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<tr>
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<th>390</th>
<th>530</th>
<th>720</th>
<th>950</th>
<th>1250</th>
</tr>
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<tbody>
<tr>
<td>Rated heating output kW</td>
<td>390</td>
<td>530</td>
<td>720</td>
<td>950</td>
<td>1250</td>
</tr>
<tr>
<td>Dimensions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Length (mm)</td>
<td>3282</td>
<td>3782</td>
<td>3877</td>
<td>3835</td>
<td>4380</td>
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<td>Width (mm)</td>
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<td>1274</td>
<td>1380</td>
<td>1612</td>
<td>1612</td>
</tr>
<tr>
<td>Height (mm)</td>
<td>2378</td>
<td>2536</td>
<td>2834</td>
<td>3035</td>
<td>3230</td>
</tr>
<tr>
<td>Weight (kg)</td>
<td>5230</td>
<td>7554</td>
<td>8869</td>
<td>11463</td>
<td>12918</td>
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<tr>
<td>Maximum operating pressure (bar)</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
</tbody>
</table>
Advanced and energy efficient reference projects using wood heating systems.

Wood heating systems
Advanced biomass systems are fully automatic and equipped with control and safety devices for reliable, efficient and safe operation.

Design and commissioning service
Each installation begins with a system design devised by a team of experts. We examine the special requirements and conditions of the project and provide you with bespoke system solutions – from individual wood boilers to fully integrated systems that could include a fossil fuel heating system and a solar thermal system.

We offer comprehensive system solutions and service from a single source.
Heating centre for the Erzabtei St. Ottilien, Germany
The Erzabtei St. Ottilien [archabbey of St Ottilia] in Upper Bavaria is one of Europe’s largest Benedictine monasteries. It comprises some 45 buildings with an area to be heated of 32,000 square metres. The outdated oil boilers have been replaced by a new heating centre that operates with a minimal carbon footprint. The Vitoflex 300-UF woodchip heating plant has an output of nearly 2000 kW and supplies around 85 percent of the heating energy required.

Alzey Hospital, Germany
At the heart of this multi mode system is a Vitoflex 300-UF biomass boiler fired with solid fuel. The boiler meets around 70 to 80 percent of the hospital’s energy needs. A CHP unit contributes a further 7 to 8 percent. Up to 100 percent of the power generated as part of the heating process is used on site. Two Vitomax 300 boilers, each with 2.9 MW output and equipped with dual fuel burners for oil or gas, cover peak loads.

La Cité Verte, Quebec City, Canada
The “Green City” project set itself the strict goal of retaining green areas by modernising and replacing existing buildings. One of the most advanced biomass district heating networks in North America provides heating for this estate with more than 800 residential units.

Residential development, Hubelmatt, Switzerland
Comprising 30 detached houses and six apartment buildings, the Hubelmatt residential development near Lucerne, Switzerland, is supplied with CO₂ neutral heating by a Vitoflex 300-RF biomass boiler. The 400 kW wood boiler consumes about 180 tonnes of pellets a year. The heat for central and DHW heating is delivered to the connected households via a district heating supply line.
Sustainability in action
As a family business Viessmann takes the long view and places great value on acting responsibly; sustainability is firmly enshrined in the company’s principles. For Viessmann, sustainability in action means striking a balance between economy, ecology and social responsibility throughout the company; meeting current needs without compromising the quality of life of future generations.

With its strategic sustainability project, Viessmann demonstrates at its own head office in Allendorf (Eder) that the energy and climate policy goals set by the German government for 2050 can in fact be achieved today with the help of commercially available technology.

Milestones of heating technology
As an environmental pioneer and technological trailblazer for the heating sector, Viessmann has been supplying exceptionally clean and efficient systems for heating, refrigeration and decentralised power generation for decades. Many of the company’s developments are recognised as heating equipment milestones.

Viessmann comprehensive range
- Boilers for oil or gas
- Combined heat and power generation
- Hybrid appliances
- Heat pumps
- Wood combustion technology
- Biogas production plants
- Biogas upgrading plants
- Solar thermal
- Photovoltaic
- Electric heating/DHW systems
- Refrigeration systems
- Accessories

MatriX-Plus burner

Practical partnership
As part of its comprehensive range, Viessmann also offers a wide selection of complementary services. These services include a comprehensive training and further development programme for trade partners at the well equipped training facilities of the Viessmann Academy.

With its new digital services, Viessmann offers innovative solutions such as the operation and monitoring of heating systems by smartphone. Users benefit from greater reassurance and convenience, whilst contractors can keep a constant eye on the systems for which they are responsible.

Number 1 Trade Partner for the 15th consecutive time
Viessmann is a leading international manufacturer of efficient energy systems.

Viessmann Group in Figures

1917 — Viessmann was founded
12,000 — employees
2.5 — Group turnover in billions of euros
54 — export share in percent
23 — production companies in
12 — countries
120 — sales offices worldwide
74 — countries with agents and sales companies