

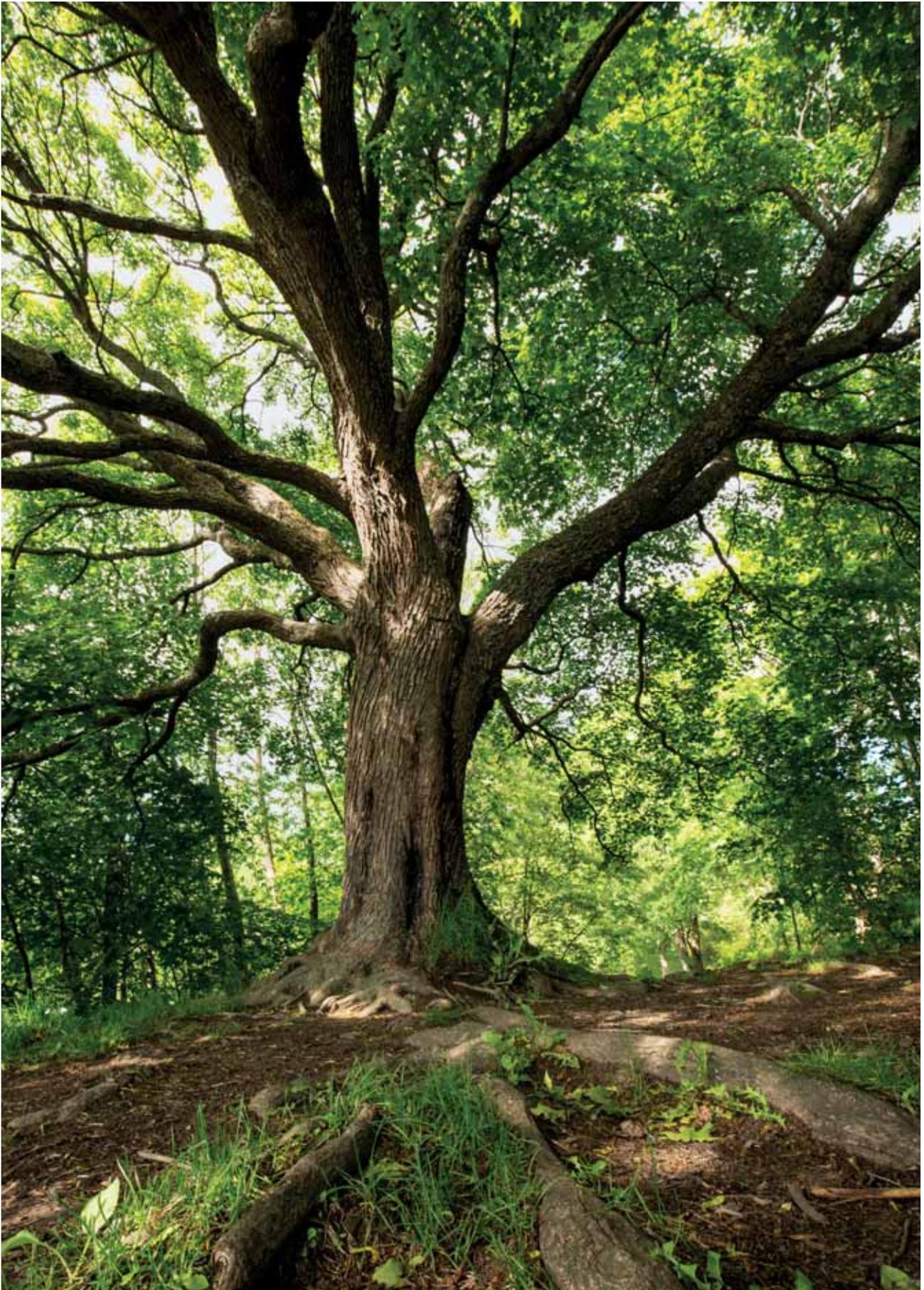


TECHNOLOGY BROCHURE

Pellet boilers up to 48 kW:
VITOLIGNO 300-C

Vitoligno pellet boiler

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.

On the following pages, we will provide you with comprehensive information about efficiently burning pellets, a sustainable fuel, in advanced boilers.

A wood burning heating system is a good alternative to heating with oil or gas. Alongside environmental considerations, there are also economic reasons for relying on this natural raw material: As an indigenous fuel, wood is very cost efficient and not subject to extreme price fluctuations.

Thanks to advanced Viessmann technology, heating with wood is now both efficient and convenient. This brochure shows all that the Viessmann range has to offer in the way of flexible solutions fired with pellets, from auxiliary appliances to complete heating systems.



Viessmann pellet boilers meet the demand for an efficient and economical heating system.

What you should know about pellets

Pellets are the most compact form of wood-based energy and have a high calorific value. Ensure that the pellets used conform to standard branded quality (such as ENplus-A1 or EN ISO 17225-2 A1 quality).

Can anyone heat with a wood boiler?

Viessmann wood boilers are so convenient to use that they can supply practically any detached house or apartment building with heat. One important requirement is a dry storage room, as the residual moisture in the wood is one of the crucial factors influencing the combustion quality. Conversions, for example of the chimney stack, are generally not required. Wood heating systems from Viessmann are also a perfect companion for oil and gas heating systems.

What about heating with pellets?

Pellets are made from sawdust and created under pressure. Due to their low residual moisture content they have a high calorific value. Pellets are easy to deliver and store. Supplying and dosing them out to the wood heating system is automatic and convenient.

Where can I obtain pellets?

Pellets are now stocked by most fuel merchants. As with fuel oil, they are "pumped" into the pellet store. This is accomplished quickly and simply. Many sawmills and wood processing enterprises also offer pellets.

The Vitoligno 300-C range up to 48 kW

Whether as an auxiliary or complete heating system, using logs, pellets or woodchips, Viessmann offers the full product range for heating with wood. By choosing a Vitoligno wood boiler, you'll always be on the safe side.

THERE ARE LOTS OF REASONS FOR THIS:

- Saving on energy costs and protecting the climate (CO₂ neutral)
- Economical and sustainable alternative for greater independence
- Renewable – a natural fuel
- Independence from oil and gas
- Clean and efficient combustion
- Mono mode, dual mode and even system solutions possible

New subsidies for biomass

A new German government subsidy is now available for the use of biomass boilers. The German Federal Office for Economic Affairs and Export Control (BAFA) is subsidising boilers up to 100 kW rated heating output.

Further information and comprehensive advice is available from Viessmann trade partners or can be obtained in advance from the Viessmann subsidy database at: www.viessmann.de/foerdermittel



VITOLIGNO 300-C

Pellet boiler
8 and 12 kW

Page 6



VITOLIGNO 300-C

Pellet boiler
18 to 48 kW

Page 8



The Vitoligno 300-C pellet boiler is an efficient solution for new build and for existing buildings of low energy standard. In the 2.4 to 8 kW or 2.4 to 12 kW output range, the pellet boiler modulates with a ratio of 1:3 and features impressively low energy consumption. Operating the Vitoligno 300-C is extremely easy, making heating with pellets highly convenient. Almost everything is automatic – from charging with pellets right through to cleaning.

Compact dimensions for flexible siting

The pellet boiler allows flexible and space efficient siting as all components are directly accessible for service and maintenance. An ideal option is installation in a corner of the boiler room. Viessmann offers a complete range of accessories for pellet storage and transport from a single source.

Convenient automatic functions

Pellets burn with few residues – and even these are taken care of automatically by the Vitoligno 300-C. Fully automatic cleaning of the finned grate in the combustion chamber takes place at least once a day. This guarantees low losses and excellent fuel utilisation. Automatic ash removal compresses the ash in the ash box. Due to the fact that the ash box is sealed, ash removal is also clean and stress-free.

Flexible fuel supply

As standard, the Vitoligno 300-C is equipped with a vacuum system for automatic pellet discharge from the storage room. The Vitoligno 300-C can be converted quickly and easily from automatic to manual charging. Commercially available bags of pellets can be used for manual charging if necessary, e.g. if there is no space

for a pellet storage room.

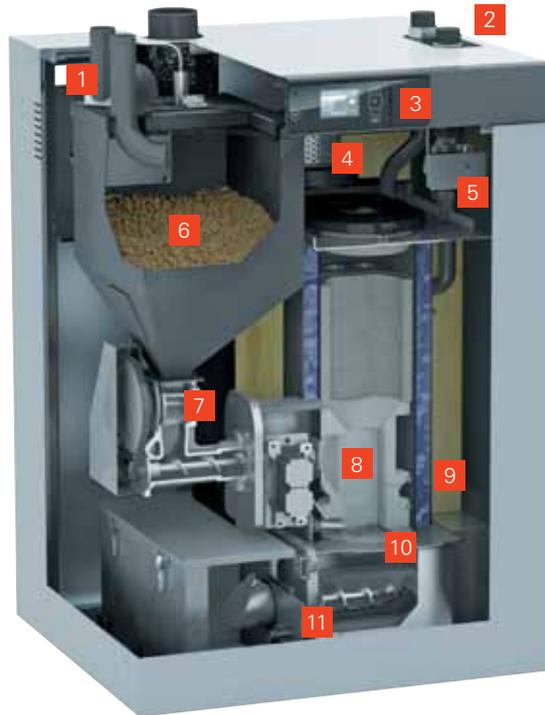
Matching accessories

For pellet storage rooms, modular 4 or 8-way wand changeover is available. This is regulated by the Ecotronic and ensures an even discharge of pellets from the pellet store, by changing the wands over automatically. Installation of the system is flexible and suitable for a wide range of different storage rooms. Optimum use of the pellet store is ensured.

For manual charging from pellet sacks, the pellet box can be positioned right next to the Vitoligno 300-C or, if preferred, anywhere inside the room. A 260 kilogram load is sufficient for up to ten days.

VITOLIGNO 300-C

- 1 Integral suction turbine with connection for supply and return hose
- 2 All connections at the top – corner installation possible
- 3 Ecotronic menu-guided control unit
- 4 Variable speed flue gas fan for modulating operation
- 5 Built-in regulated return temperature raising facility with high efficiency pump
- 6 Pellet hopper for 32 kg of fuel
- 7 Rotary lock valve for 100 % burn-back protection
- 8 Combustion chamber made from high temperature-resistant ceramics
- 9 Highly effective thermal insulation
- 10 Self-cleaning finned grate made from stainless steel
- 11 Automatic ash removal with large ash box



Intelligent Ecotronic control unit

Operating the Vitoligno 300-C is easy with the digital, weather-compensated Ecotronic control unit. Up to three heating circuits can be controlled with the standard version. The boiler with pellet supply, heating circuits and cylinder temperature can all be controlled intuitively. Adjusting all relevant parameters is made easy by the clear display with graphic capability and multiple line plain text prompts.

Prepared for solar

In combination with a solar thermal system, current solar data is also shown on the display. The collector and cylinder temperature are included in this data, as are the operating hours of the solar thermal system.

TAKE ADVANTAGE OF THESE BENEFITS

- + Fully automatic pellet boiler with a rated heating output range of 2.4 to 12 kW
- + Can be located anywhere as its operation does not depend on ambient air
- + Efficiency of up to 95.3 % for excellent utilisation of wood-based energy
- + Innovative combustion technology for lowest dust emission levels – meets the first German Immissions Ordinance (1st BImSchV), stage 2
- + Flexible, space saving installation – can be sited in a corner
- + Ecotronic control unit with menu-guided plain text display and automatic function monitoring, plus solar and buffer charging control
- + Automatic ash removal from the combustion chamber through a stainless steel finned grate ensures highly reliable operation and long cleaning intervals
- + Ash box requires emptying only once or twice a year
- + Flexible fuel feed, e.g. pellet vacuum system or manual charging with pellet sack
- + Convenient operation via smartphone with Viessmann app

For specification, see page 15



Vitoligno 300-C (18 to 48 kW)
with pellet hopper (left)



VITOLIGNO 300-C

- 1** Ecotronic menu-guided control unit
- 2** Automatic heat exchanger cleaning
- 3** Integral suction turbine
- 4** Variable speed flue gas fan for modulating operation
- 5** Pellet hopper
- 6** Rotary lock valve for 100 % burn-back protection
- 7** Combustion chamber made from high temperature-resistant ceramics
- 8** Self-cleaning finned grate made from stainless steel
- 9** Automatic ash removal via ash box

The Vitoligno 300-C – compact, fully automatic pellet boiler for new and existing installations

The Vitoligno 300-C is a fully automatic pellet boiler with an output range from 6 to 48 kW. It offers versatile and flexible supply system options for almost any application. It stands out on account of its compact design which is ideal for limited room heights. A suction turbine and pellet hopper sufficient for one day's operation are already integrated.

Convenient automatic functions

The pellet boiler is convenient to use and is partially automated. The automated features include ignition, heat exchanger cleaning, self-cleaning finned grate and fully automatic compaction of ash inside the ash box. The mobile ash box only needs emptying once or twice a year.

Intelligent Ecotronic control unit

Operating the Vitoligno 300-C is easy with the digital, weather-compensated Ecotronic control unit.

It regulates:

- 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

The boiler with pellet supply, heating circuits and cylinder temperature can all be controlled intuitively. Adjusting all relevant parameters is made easy by the clear display with graphic capability and multiple line plain text prompts. In addition, an integral assistant facilitates commissioning of the Vitoligno 300-C. Using the help function, the installer is guided through the commissioning process by the control unit.

Efficient and environmentally responsible

The Vitoligno 300-C has an efficiency level of up to 95 percent when converting pellets into heat. Modulation of 1:3 leads to low consumption and clean combustion

under partial load conditions. The ceramic ignition unit consumes little power, whilst innovative combustion technology keeps dust values low. This boiler complies with the 1st BImSchV, stage 2 [Germany].

Matching accessories

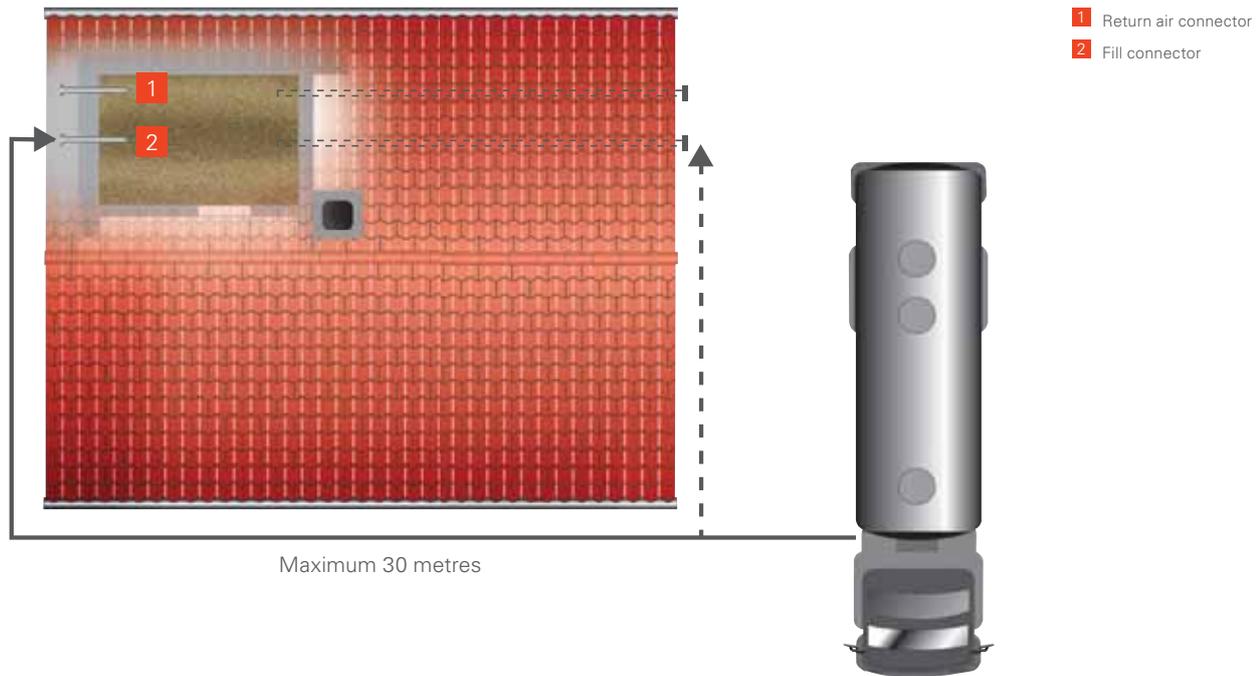
The controlled return temperature raising facility ensures the perfect hydraulic connection of the Vitoligno 300-C. Delivered as a fully assembled unit, the return temperature raising facility can be connected to the boiler within a very short time. For pellet stores, modular 4 or 8-way wand changeover is available. This is regulated by the Ecotronic and ensures an even discharge of pellets, by changing the wands over automatically. The wand system can be routed flexibly and is suitable for the most diverse spaces, making optimum use of the pellet store.

For manual charging from pellet sacks, the pellet box can be positioned right next to the Vitoligno 300-C or, if preferred, anywhere inside the room. A 260 kilogram load is sufficient for up to ten days.

TAKE ADVANTAGE OF THESE BENEFITS

- + Fully automatic, convenient pellet boiler with a rated heating output range of 6 to 48 kW
- + Pellet boiler for limited room heights
- + Adjacent pellet hopper for one week's operation
- + Efficiency of up to 95.1 % for excellent utilisation of wood-based energy
- + Innovative combustion technology for lowest dust emission levels – meets the first German Immissions Ordinance (1st BImSchV), stage 2
- + Modulation 1:3
- + Self-cleaning finned grate made from stainless steel
- + Ecotronic control unit with menu-guided plain text display
- + Automatic ash removal via mobile ash box, which only needs to be emptied once or twice a year
- + Convenient operation via smartphone with Viessmann app

Pellet storage room requirements



Pellet storage room location

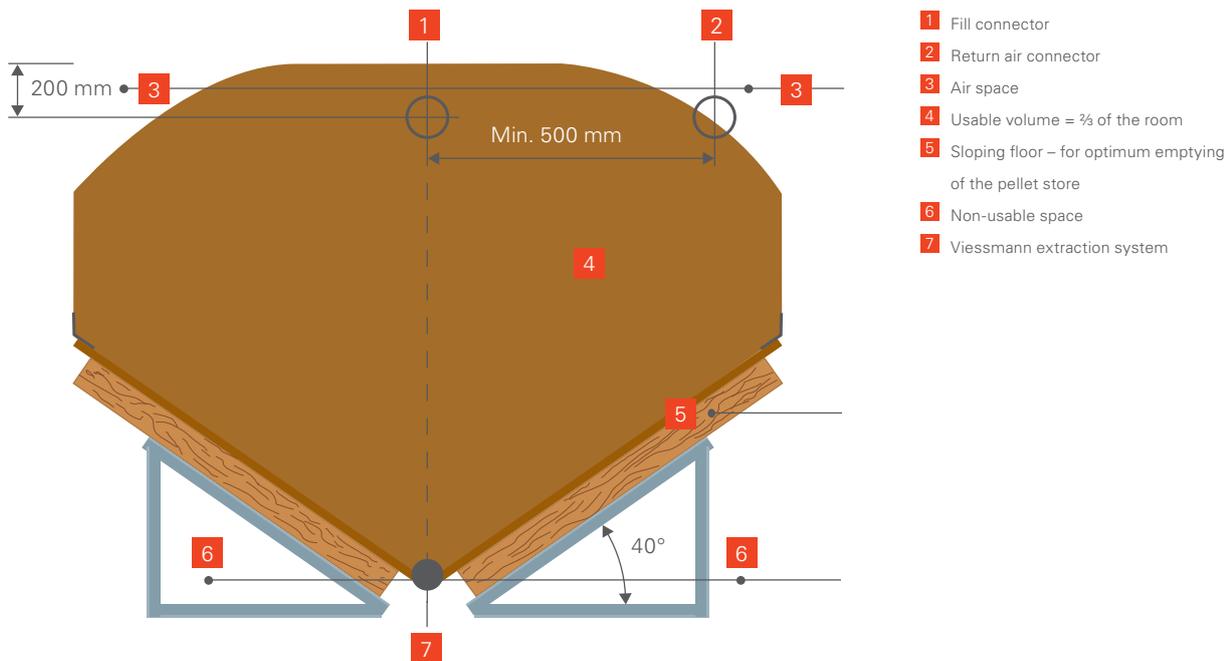
Pellets can be brought to the property in tankers and blown into the pellet store.

A hose length of 30 metres should not be exceeded for filling the pellet store. If longer hose lengths are to be expected, please consult your pellet supplier to discuss the options available.

The access route must be suitable for tankers. Generally a road width of at least three metres and an overhead clearance of at least four metres is required. If possible, the pellet store should adjoin an outside wall. There

should be a 230 volt power supply for the pellet supplier's vacuum fan and an electrical isolator for the pellet boiler.

Size and shape of the pellet storage room



Storage room with a sloping floor

Experience has shown that it is best if the storage room has a rectangular footprint. Ensure the easy accessibility of the fill and return air connectors. The size of the required storage room depends on the heat demand of the building. If non-usable space is taken into account, the following rule of thumb can be used to calculate the spare requirement:

RULE OF THUMB:

- Per 1 kW heat demand = 0.9 m³ of the space (incl. non-usable space)
- Non-usable storage space: $\frac{2}{3}$ of the room
- 1 m³ pellets = 650 kg
- Energy content: approx. 5 kWh/kg

EXAMPLE:

Heat demand for a detached house: 15 kW
 15 kW heat demand \times 0.9 m³/kW = 13.5 m³ storage room volume (including non-usable space)

Non-usable space = 13.5 m³ \times $\frac{2}{3}$ = 9 m³

Amount of pellets = 9 m³ \times 650 kg/m³ = 5850 kg

Size of storage room = 13.5 m³/2.4 m (room height)
 = 5.6 m² floor area (not smaller than 2 m \times 3 m)

Complete pellet systems



Pellet silo



Pellet box – the flexible and compact pellet store

Pellet storage with discharge systems for every application

For reliable, long term operation, the pellet boiler, discharge system and pellet store must form an integrated unit.

Pellet box – the small pellet storage solution of choice

The pellet box is useful if there is not enough space for a pellet storage room. It provides an affordable and simple way to store pellets.

STORAGE AND SUPPLY SYSTEMS FOR PELLETS

Storage and supply via a vacuum system

A vacuum system is deployed wherever the storage room does not directly adjoin the room where the pellet boiler is installed.

Pellets can be transported over a distance of up to 25 metres. The flexible positioning of the vacuum supply system enables installation even in tight spaces.

The vacuum system can be adapted for use with a room discharge screw conveyor, pellet silo or modular 4-/8-way wand changeover with freely positionable suction wands.

Installation example showing storage room and supply to the pellet boiler via a vacuum system



Pellet silo (fabric container) with supply to the pellet boiler via a vacuum system



Storage room without sloping floor with supply to the pellet boiler via suction wands

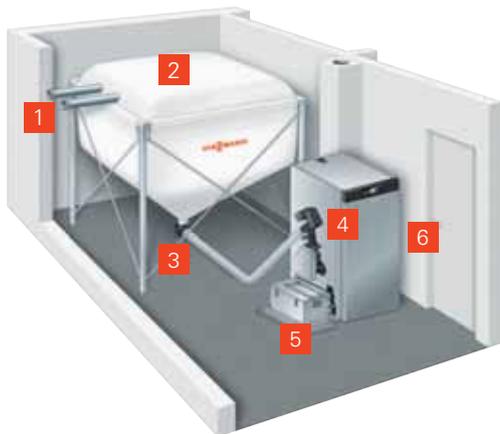


Storage room with supply to the pellet boiler via flexible screw conveyor



- 1 Pellet storage room
- 2 Fill and return air connectors
- 3 Deflector plate
- 4 Extraction screw conveyor
- 5 Flexible screw conveyor
- 6 Connection unit, flexible screw conveyor
- 7 Connection unit for feed with rotary lock valve
- 8 Vitoligno 300-C

Pellet silo (fabric container) with supply to the pellet boiler via flexible screw conveyor



- 1 Fill and return air connectors
- 2 Fabric container
- 3 Flexible screw conveyor with adaptor for fabric container
- 4 Connection unit, flexible screw conveyor
- 5 Connection unit for feed with rotary lock valve
- 6 Vitoligno 300-C



Storage room with supply to the pellet boiler via mole system

Storage with supply via flexible screw conveyor

If the storage room or pellet silo is situated immediately adjacent to the boiler room, the pellet boiler can be supplied via a flexible screw conveyor directly to the rotary lock valve. Using this system means there is no need for a pellet hopper at the boiler. The drive unit for the flexible screw conveyor is installed directly at the boiler on the rotary lock valve.

Storage and supply via mole system

This extraction system offers the best use of space, and is suitable for flexible storage rooms with a capacity of up to 12 tonnes. There is also no need for a sloping floor in the storage room. Unlike the screw conveyor system, extraction takes place via a mole from the top. With this method, the discharge system comes to the pellets rather than vice versa.

SPECIFICATION



Vitoligno 300-C
8 and 12 kW

Rated heating output	kW	2.4 – 8	2.4 – 12
Dimensions			
Length	mm	770	770
Width	mm	850	850
Height	mm	1250	1250
Weight	kg	310	310
Flue gas connection Ø	mm	100	100
Energy efficiency class	III'	A+	A+



Vitoligno 300-C
18 to 48 kW

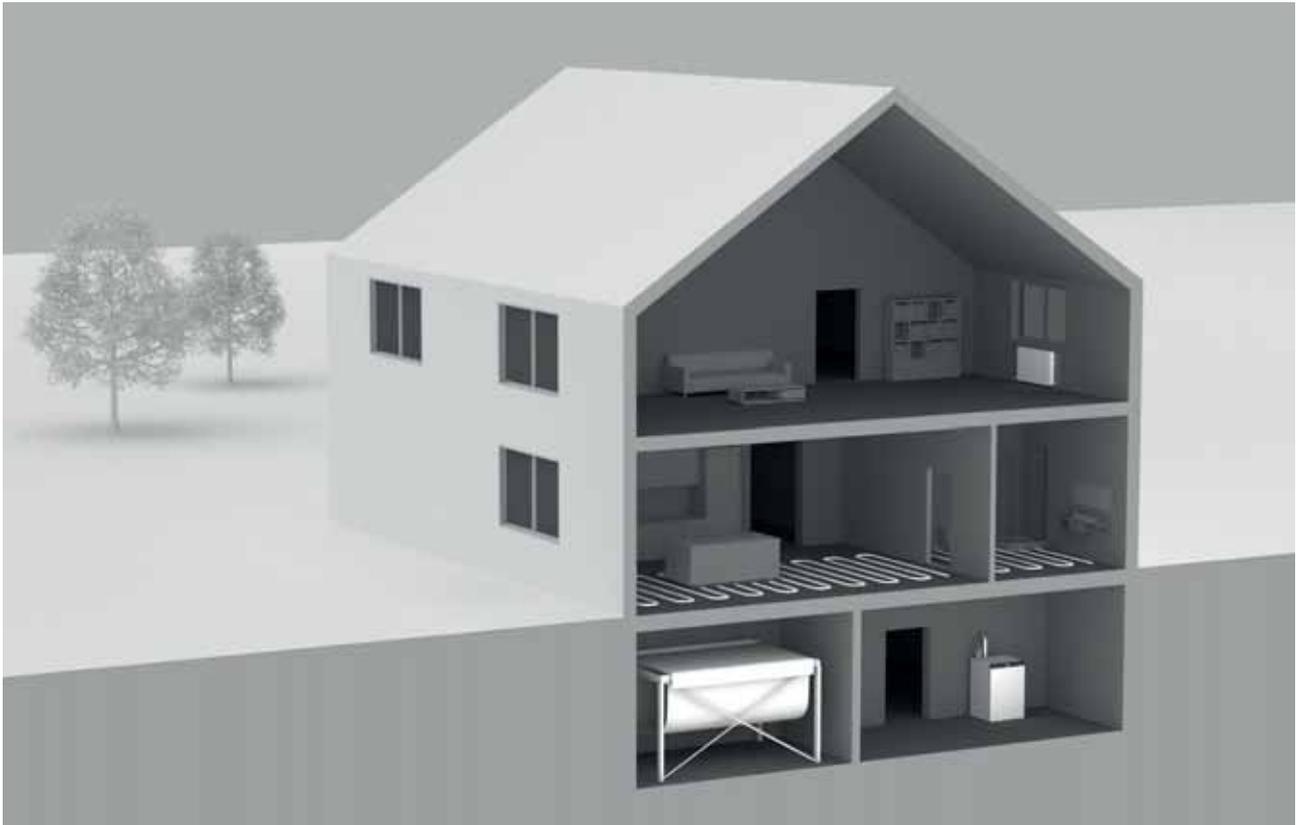
Rated heating output	kW	6 – 18	8 – 24	11 – 32	13 – 40	18 – 48
Dimensions with pellet hopper						
Length	mm	1127	1127	1224	1224	1224
Width	mm	1175	1175	1332	1332	1332
Height	mm	1367	1367	1539	1539	1539
Dimensions with connection unit, flexible screw conveyor						
Length	mm	1127	1127	1224	1224	1224
Width	mm	1142	1142	1244	1244	1244
Height	mm	1367	1367	1539	1539	1539
Weight incl. pellet hopper	kg	510	510	650	650	650
Weight incl. flexible screw conveyor	kg	492	492	615	615	615
Boiler water capacity	litres	100	100	180	180	180
Pellet hopper capacity	kg	40	40	65	65	65
Flue gas connection Ø	mm	130	130	150	150	150
Energy efficiency class	III'	A+	A+	A+	A+	A+

Pellet box for manual charging from pellet sacks

For manual charging from pellet sacks, the pellet box can be positioned right next to the Vitoligno 300-C or, if preferred, anywhere inside the room. A 260 kilogram load is sufficient for up to ten days.



Pellet box – the flexible and compact pellet store



Viessmann system technology ensures reliable and economical operation

"The whole is greater than the sum of its parts." In accordance with this philosophy, Viessmann does not simply supply individual heating equipment components that meet the high Viessmann standards for quality, reliability and effectiveness. In addition, all products are part of a matching overall concept, where all components complement one another. After all, only perfect interaction between all system parts can draw out the maximum potential of our innovative leading technology.

Viessmann system technology incorporates everything which constitutes a reliable heating system that is economical to run: This includes the heating water buffer cylinders, powerful Vitocell DHW cylinders for high levels of DHW convenience, and high quality solar thermal systems for cost effective DHW heating and central heating backup.

Naturally this also includes the complete range of accessories for pellet storage with discharge systems for every application area.



OPERATING CONVENIENCE

Clear, convenient and intelligent: Boiler and heating circuit control units offer perfect functionality for fast and precise control of any heating system. The intelligent control unit extension also enables the integration of further control circuits and boilers.



SOLAR THERMAL AND PHOTOVOLTAICS

Energy from the sun is free and solar thermal systems provide hot water for DHW heating and central heating backup. By installing a photovoltaic system, everyone can become their own electricity supplier and use the power they have generated on site.



DHW CYLINDERS

DHW convenience for every demand: Vitocell DHW cylinders are convenient solutions for supplying a household with hot water – the perfect complement to any new wood boiler.



HEATING WATER BUFFER CYLINDER

Due to their bulky shape and size, logs do not fill the hopper perfectly. Furthermore, log boilers have to be recharged manually. Heat that is not required by the heating system is transferred to the heating water buffer cylinder to compensate for output fluctuations. A continuous heat supply is thus ensured at all times, such as overnight.



SYSTEM ACCESSORIES

In addition to high quality Viessmann products, we also offer system components from other well known manufacturers with the Vitoset range of accessories.

Radiators, expansion vessels, pipework systems, pumps, filters and valves – Vitoset offers the complete range of accessories for your Viessmann heating system.



Scan the QR code for further information about the Vitocell

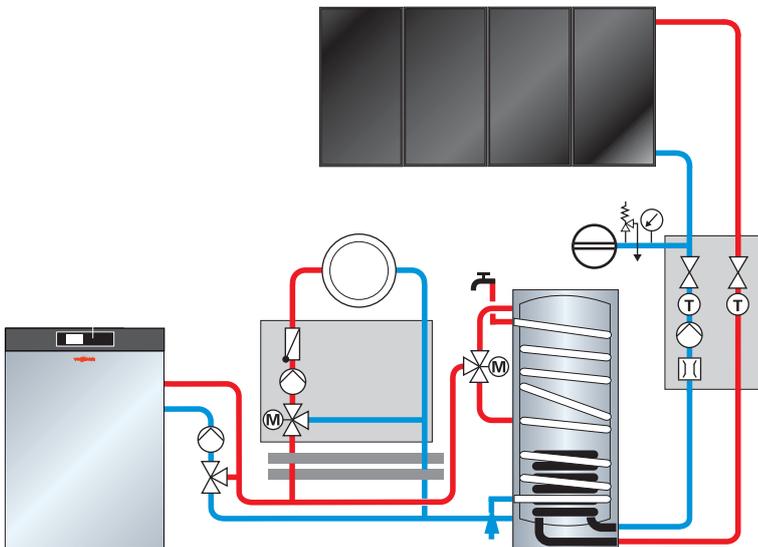


Scan the QR code to find out more about the radiator range

Control technology – heating economically by design



Ecotronic control unit with multiple line, backlit screen and plain text display, also offering simplified commissioning (commissioning assistant) thanks to the plug & work function



Wood boiler with one heating circuit, DHW heating and solar thermal system

The integral control unit enables operation of the entire system with up to four heating circuits for DHW heating and central heating backup.

Regulates up to four heating circuits

The digital, weather-compensated Ecotronic boiler and heating circuit control unit is a decentralised microprocessor system.

The Ecotronic regulates 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

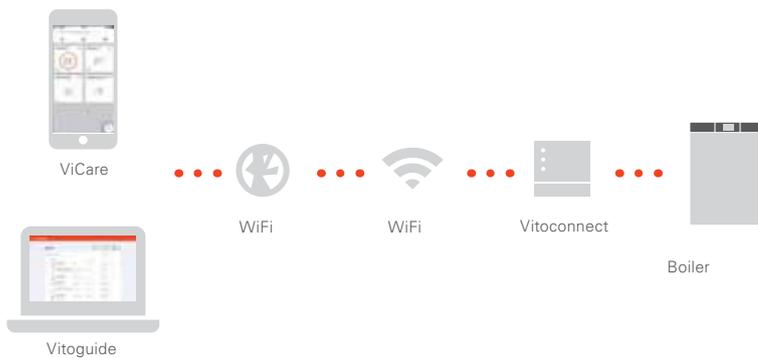
In combination with the Vitotrol 350-C digital control unit (option), the boiler can also be controlled from the living space. With the 5" colour touchscreen in 16:9 format, operation could hardly be easier. The Vitotrol 350-C enables remote control of the boiler with all the necessary adjustment options and displays all the relevant information about the boiler and heating water buffer cylinder.



Vitotrol 350-C with 5" colour touchscreen as a remote control, additional controller or cascade controller

Explanation in brief

ViCare accesses the Vitoconnect online interface to control the heat generator. Once the system user has given their consent, the contractor can use Vitoguide to keep a constant eye on their customer's system.



Vitoconnect with sockets for the plug-in power supply unit (left) and data connection

5 year guarantee

with system web connection/ connectivity

For conditions, see www.viessmann.de/garantie

REASSURANCE

Warmth and reassurance:

- + Green for go – see at a glance whether everything is OK
- + Be informed about a pending service
- + Direct access to the address of the saved contractor



ECONOMY

Simply set your preferred temperature – save costs when you're not at home:

- + Straightforward, convenient operation of the heating system
- + Record your daily routine and automatically save on energy costs
- + Set standard functions at the tap of a button on your smartphone



SUPPORT

A direct link to the contractor – just in case:

- + Simply enter the contact details of the contractor
- + Quick and effective assistance – the contractor has all of the important information
- + All-inclusive carefree safety and maintenance package



Simply download the app and tap "Discover ViCare" on the app's start screen – and off you go, with no need for an actual heat generator or internet connection.

At Viessmann, proximity to our trade partners is the basis for success. Everyone can benefit from their expertise by choosing a Viessmann log boiler. You're in good hands.

Property developers and system users can receive advice and support regarding sales, installation and customer service exclusively via Viessmann heating contractors, who complete regular training at the Viessmann Academy, and have an in-depth knowledge of the company's products. Every system user benefits from the comprehensive service that all installation contractors offer as standard.



Technology from Viessmann – subsidies from the government

With Viessmann, it's not only running costs you save. Energy saving and environmentally responsible heating technology is also financially supported by local, regional and national bodies as well as by power supply utilities [in Germany].

Subsidies for log boilers

Thanks to its efficient technology and renewable fuel, wood heating is one of the most environmentally responsible heating solutions. If you purchase a

wood burning heating system for a new house or replace an old boiler with a new wood burning heating system as part of a modernisation project, you can usually apply for public subsidies [in Germany]. The best known institutions include the Federal Office for Economic Affairs and Export Control (BAFA) and the Kreditbank für Wiederaufbau (KfW).

Current information can be found online at www.viessmann.de/foerderprogramme or from one of our trade partners.



Reliable and competent advice from Viessmann employees and contractors on site and at their offices

EXAMPLES OF THE SERVICE WE PROVIDE

- Free, no-obligation and individual consultation, even on site
- Free Energy Economy Check
- Clear calculation of heating cost savings after modernisation of the heating system – including systems combined with solar collectors, of course
- Calculation of the payback period, after which the new heating system will have paid for itself through energy savings
- Calculation of the actual heat and DHW demand for the household or property
- Information on the most viable combination of a new heating system with a solar thermal system for central heating backup and DHW heating
- Up to date information about public subsidy programmes that could help to finance a new log boiler and solar thermal system
- Support in applying for subsidies

CreditPlus

Attractive finance – invest now and save on heating costs immediately

Viessmann's finance model avoids red tape. The fast and reliable process makes modernisation projects easier, and keeps financial planning flexible. The particular advantage is that with Viessmann's favourable terms, savings on heating costs are generally significantly higher than finance costs.

PLEASE NOTE:

Applications for subsidies and finance must be made before the heating and/or solar thermal system is purchased. Subsidies and finance agreements cannot be arranged retrospectively. For detailed information on the Viessmann finance model, please contact your local contractor.

Terms and conditions to shout about

If you invest now in a new heating system for your property, you may be eligible for an attractive finance package from Viessmann in conjunction with CreditPlus bank: just 3.99 percent* effective APR.

* Over 24 months



Matrix-Plus burner

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

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.

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.



We create living spaces
for generations to come.



Number 1 Trade Partner for the 15th consecutive time

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.



Viessmann is a leading international manufacturer of efficient energy systems.

VISSMANN 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



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Your trade partner

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