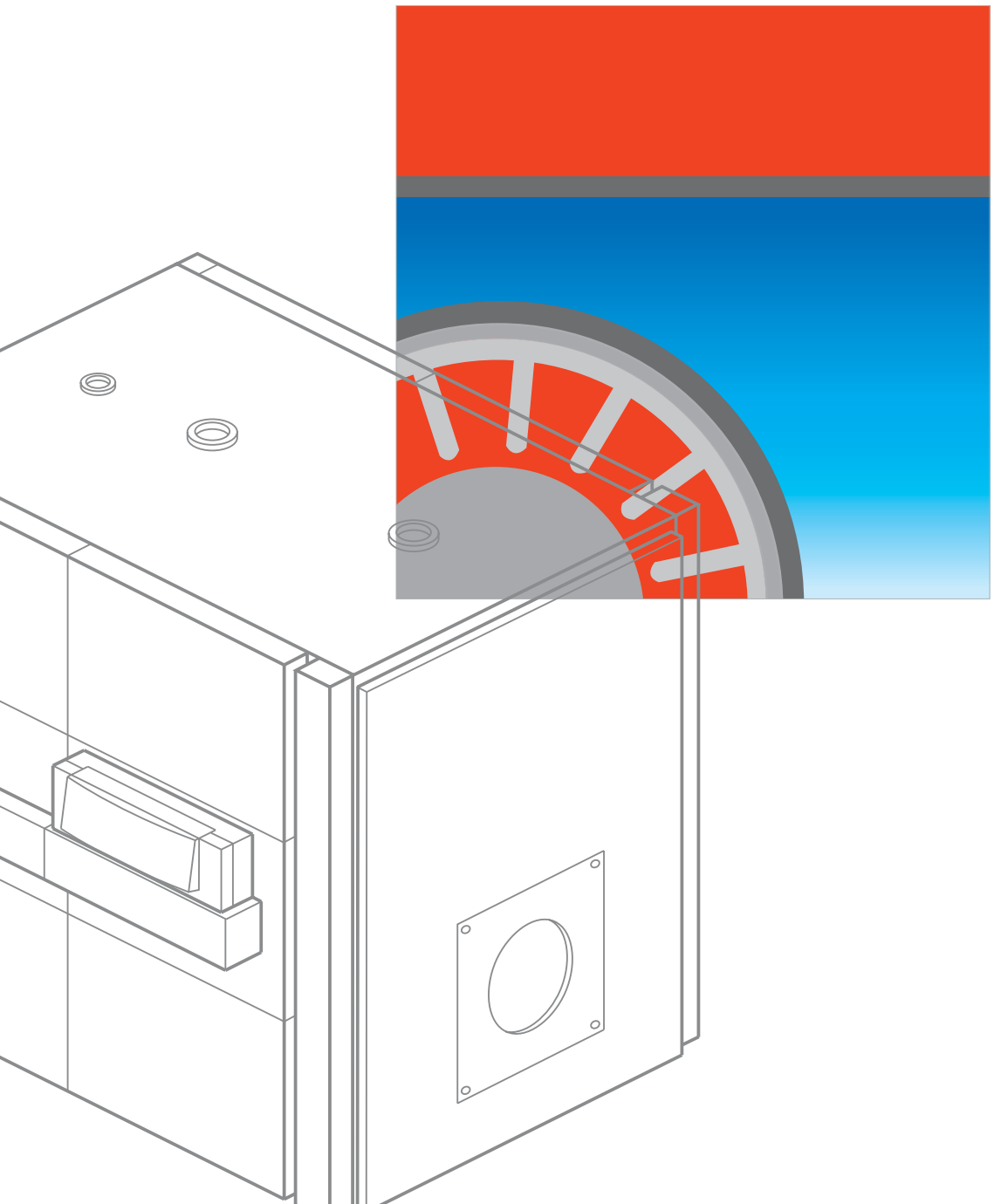
VITOPLEX

Low temperature oil and gas fired boilers
Rated output
Vitoplex 100: 575 to 1750 kW
Vitoplex 200: 90 to 560 kW
Vitoplex 300: 80 to 1750 kW



Vitoplex
low temperature
boiler from
80 to 1750 kW

Low temperature boiler persuasive design and quality: Vitoplex

Economical heating: Vitoplex low temperature boiler with Therm-Control

New low temperature boilers for apartment blocks, factories, schools and offices save fuel and consequently protect the environment. However, boilers must be suitable for such operations, otherwise condensation will lead to corrosion. This applies particularly on start-up. When the heating water temperature in the system is low, a lowering of the hot gases below the dew point on the boiler surfaces must be prevented. The Vitoplex 200 and Vitoplex 300 start-up control system Therm-Control regulates this efficiently. The Therm-Control even makes the shunt pump or a constant return temperature raising facility unnecessary, simplifying the hydraulic boiler connection and saving costs.

Vitoplex boilers are well worth it

Excessive fuel consumption, incomplete combustion and inappropriate emissions harm not only the environment but also your bank-balance. Therefore, changing from a boiler with a constantly high boiler water temperature to a Vitoplex can save energy up to a figure of 20 %.

Environmentally responsible combustion

Burning fossil fuels creates nitrogen oxide emissions (NO_x) that lead to the development of poisonous ozone and contribute to the creation of acid rain. Many factors influence the amounts of NO_x produced, the flame temperature being one of them. The correct routing of hot gases to cool the flame and prevention of the hot gases dwelling in the reaction zone are therefore vital design concepts for medium and large boilers.

Designed to reduce NO_x

Vitoplex 200 and Vitoplex 300 boilers are designed as three-pass boilers. The size and geometry of the combustion chamber are selected not only to reduce the flame temperature but also the hot gas dwell time in the reaction zone. Additionally, the three-pass design of Vitoplex boilers reduces emissions.

Large water content – longer burner runtimes – reduced effects on the environment

Vitoplex boilers have a large water content and thus long burner runtimes. This reduces boiler cycling and protects the environment.

Wide water galleries and continuous water chambers simplify the hydraulic connection

The wide water galleries, large water content and continuous water chambers in the Vitoplex boiler, reduce the drop in water pressure so much, that the heat transfer to the boiler water occurs by natural circulation, making forced circulation by circulation pump unnecessary.

Vitoplex 200
90 to 560 kW

Vitoplex 100
575 to 1750 kW

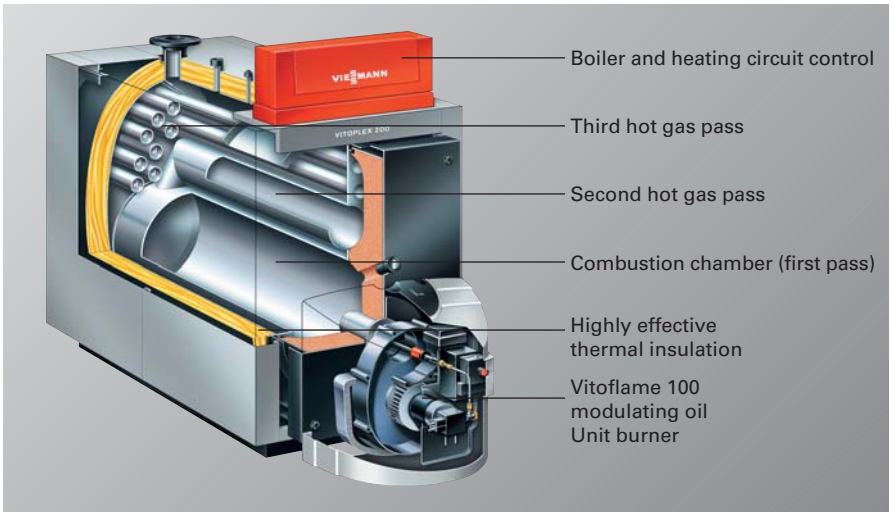
Easier to handle, the compact three-pass boiler

The Vitoplex 200 low temperature three-pass boiler sets new benchmarks in the medium boiler range by its compact design and low weight.

The compact Vitoplex 200 three-pass boiler has not only become 30 % lighter than its predecessor but with up to 350 kW, it now fits through any standard doorway (80 cm). That makes handling much easier. The Vitoplex 200 is a genuine three-pass boiler with low combustion chamber loading and, therefore, clean combustion with particularly low nitrogen oxide emissions.

The Therm-Control start-up system that is an integral part of all boilers no matter what their size, increases the operational reliability and extends the service life. Shunt pump and constant return temperature raising are a thing of the past.

- Low temperature oil/gas fired boiler
  Vitoplex 100, 575 to 1750 kW
  Vitoplex 200, 90 to 560 kW
- Economical and environmentally friendly through modulating boiler water temperature.
  Standard efficiency for operation with fuel oil: 88 % (H_s) / 94 % (H_i).
  Standard efficiency improved by utilising condensing technology with stainless steel flue gas/water heat exchanger Vitotrans 300
- Three-pass boiler with low combustion chamber loading. Therefore, clean combustion with low nitrogen oxide emissions
- No minimum heating water flow rate required – wide water galleries and large water content provide excellent natural circulation and a reliable heat transfer – simplified hydraulic connection
- Integral Therm-Control start-up system for easy hydraulic connection – a shunt pump and a return temperature raising facility are not required
- Low water indicators are not required up to 300 kW
- Compact design for easy handling into boiler rooms and space-saving installation – important for modernisation projects
- Fastfix system for medium and large boilers ensures that time is saved during the installation of boiler casing and control unit.
- From 575 kW with walk-on boiler covers for easier installation and maintenance.
- Long burner runtimes and fewer switching intervals due to large water content protect the environment
- Optimum and clean combustion through two-stage Vitoflame 100 oil/gas pressure-jet burner up to 200 kW, tested and set-up in the factory at operating temperature by computer. Plus matching, fully wired, oil/gas pressure-jet burners from Elco or Weishaupt for the output range 270 to 560 kW.
- Easy and quick installation with Divicon heating circuit distributor up to 270 kW and safety equipment block up to 200 kW.
- Safe and economical heating system operation through the digital Vitotronic control system with communication capability. Tailored to every need, covering all known control strategies and applications. Standardised LON BUS for complete integration into building management systems. Remote monitoring via internet TeleControl using the Vitocom and Vitodata as well as the optional integration into the Vitocontrol control panel.



Vitoplex 300
80 to 460 kW

Vitoplex 300
575 to 1750 kW

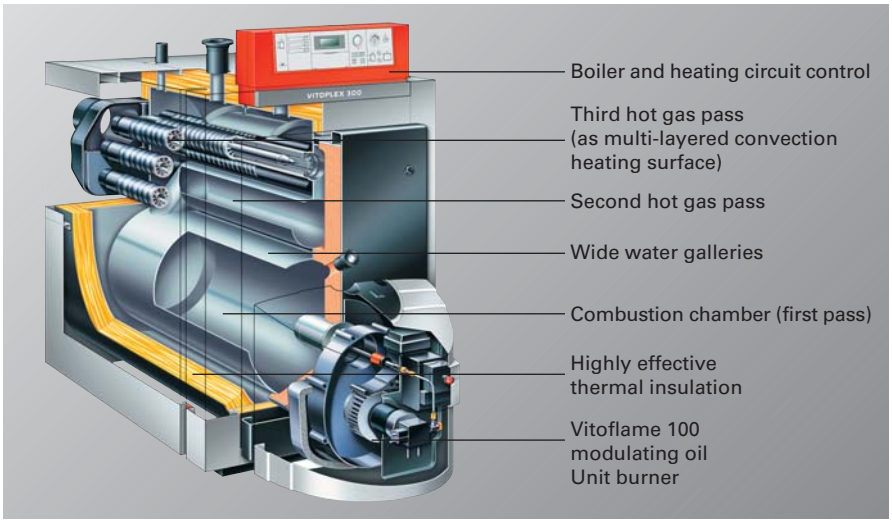
Three-pass boiler with multi-layered convection heating surfaces

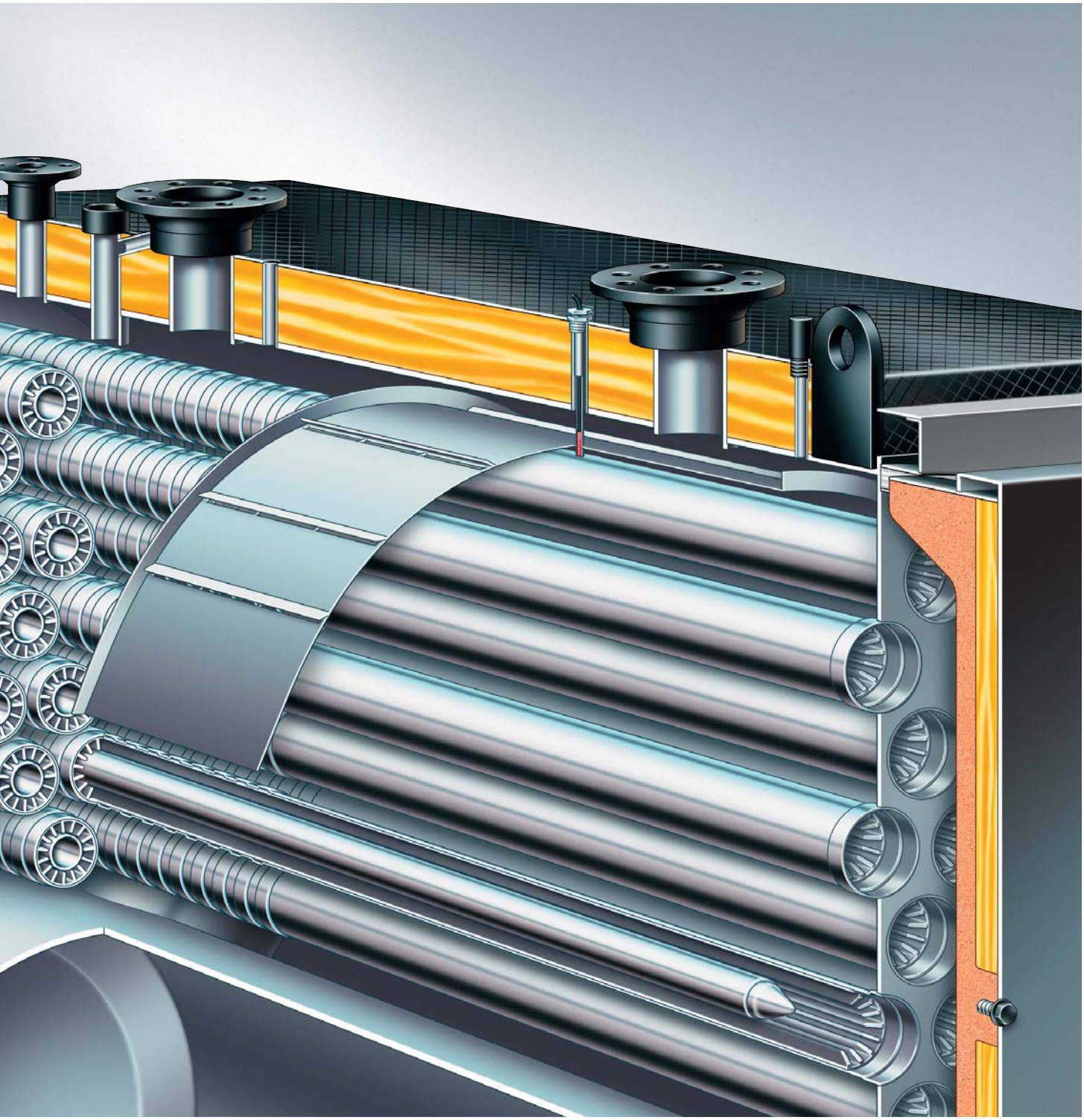
The three-pass boiler Vitoplex 300, with its proven multi-layered convection heating surfaces, offers a particularly economical, clean and reliable operation. The integral start-up system Therm-Control makes a separate return temperature raising facility unnecessary.

Multi-layered convection heating surfaces made from triplex tubes

The multi-layered convection heating surfaces of the Vitoplex 300 comprise telescopically arranged steel pipes pressed into each other for ideal heat transfer. The internal tube with its swaged linear ribs provides a heating surface 2.5 times that of smooth pipes. The heat throughput is metered by the different intervals between the press points so that the back area of the triplex tubes, through which slightly less hot combustion gases circulate, transfers less heat to the boiler water. This way, the surface temperature remains above the dew point temperature, the formation of condensate is counteracted and corrosion damage is prevented.

- Low temperature oil/gas fired boiler, 80 to 1750 kW
- Multi-layered convection heating surfaces for high operational reliability and a long service life
- Standard efficiency for operation with fuel oil: 90 % (H_s) / 96 % (H_i)
  Standard efficiency improved by utilising condensing technology with stainless steel flue gas/water heat exchanger Vitotrans 300
- Three-pass boiler with low combustion chamber loading. Therefore, clean combustion with low nitrogen oxide emissions
- No minimum heating water flow rate required – wide water galleries and large water content provide excellent natural circulation and a reliable heat transfer – simplified hydraulic connection
- Integral Therm-Control start-up system for easy hydraulic connection – a shunt pump and a return temperature raising facility are not required
- No low water indicator required for systems up to 300 kW – saving even more
- Compact design for easy handling and low height – important for modernisation projects
- Long burner runtimes and fewer switching intervals due to large water content protect the environment
- No additional intermediate flow piece required, the connections required for fitting the safety equipment are available at the boiler
- Optimum and clean combustion through matching fully wired oil/gas pressure-jet burners up to 1750 kW
- Easy and quick installation with Divicon heating circuit distributor up to 285 kW and safety equipment block up to 170 kW
- The flue gas header is not welded immediately to the boiler wall that is in contact with water, but is mounted on top of the triplex tubes protruding from the boiler. This counteracts condensation of hot gases
- From 575 kW with walk-on boiler cover for easier installation and maintenance
- Safe and economical heating system operation through the digital Vitotronic control system with communication capability. Tailored to every need, covering all known control strategies and applications.
  Standardised LON for complete integration into building management systems.
  Remote monitoring via internet TeleControl with the Vitocom and Vitodata as well as the optional integration into the Vitocontrol control panel





Therm-Control
start-up system

Simple integration with Therm-Control start-up system

The Therm-Control start-up system replaces the shunt pump in Vitoplex systems and reduces the installation time

Utilising the Therm-Control start-up system makes a shunt pump or other additional equipment, such as boiler circuit pump or constant return control superfluous. This simplifies the hydraulic boiler connection saving you material, time and therefore costs.

Important: The arrangement of the temperature sensor

The arrangement of the temperature sensor for the start-up control in the area of the boiler return is crucial to operational reliability. Fitting the sensor into the flow would mean that a control system would only be activated if the boiler had been cooled down by cold return water. This action would therefore be too late, as it would happen after the creation of corrosive condensate.

Function of the Therm-Control start-up system

The Therm-Control temperature sensor detects the return and boiler water temperatures where it is required namely next to the return connector. This provides timely recognition of the need to start the system. Where the temperature has fallen below the factory-set temperature that is subject to boiler and fuel, the heating surfaces downstream are supplied with more heat by raising the output. Simultaneously, the system flow rate is reduced by the selected heating circuit controls, butterfly valves or heating circuit pumps. The system is prevented from falling below the dew point thereby reliably avoiding the formation of condensate.

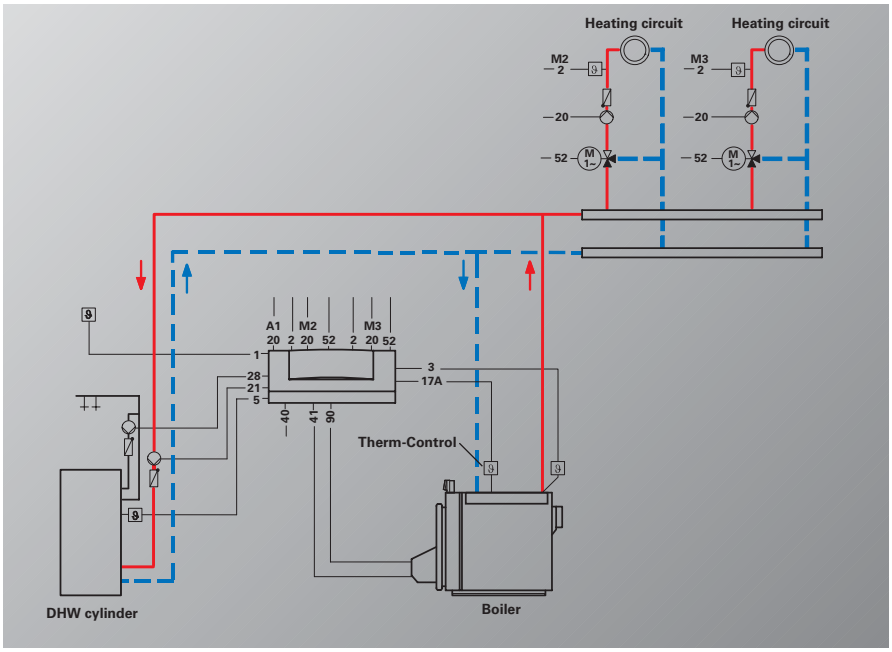
The large water content and the wide water galleries of the Vitoplex boilers ensure an even heating up of the boiler water and prevent burner “cycling”. To guarantee the correct function of the Therm-Control start-up system ensure that, during start-up, the system flow rate is reduced by at least 50 %. Once the factory-set temperature has been reached, the reduced heating circuits are re-enabled again.

Application of the Therm-Control start-up system

The Therm-Control start-up system can be used with the following boilers:
– Vitoplex 200,
  from 90 to 560 kW
– Vitoplex 300,
  from 80 to 1750 kW.

These Vitoplex boilers are delivered with the Therm-Control temperature sensor as standard.

The flow rate is reduced by the Vitotronic boiler control unit and the Vitotronic 200-H heating circuit control unit, both of which communicate via the LON.



Vitoplex 300 with
flue gas/water
heat exchanger
Vitotrans 300

Oil/gas condensing utilisation up to 6600 kW

Rising fuel costs are of particular concern to users of medium and large boiler systems. The utilisation of condensing technology has a particularly high impact on operating costs of medium and large boiler systems. The energy-conscious condensing technology therefore increasingly gains significance. For larger systems or retrofit into existing systems, separate flue gas/water heat exchangers are used. Flue gas temperatures are further reduced to condense water vapours. The latent condensation heat gained and the low flue gas temperatures provide a significant increase in efficiency.

By installing a Vitotrans 300 flue gas/water heat exchanger when using natural gas, the standard efficiency can increase by up to 12 % and when using fuel oil by up to 7 %.

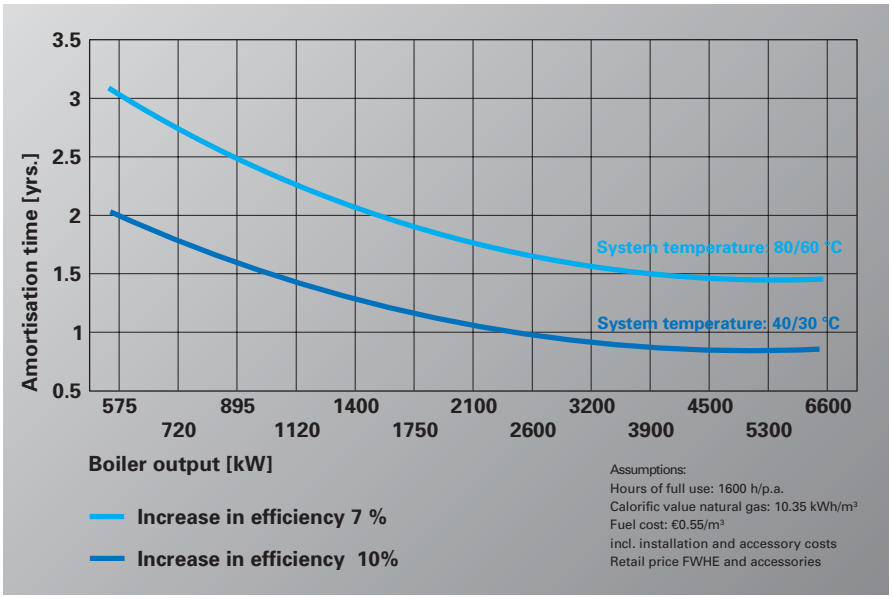
High quality materials for a long service life

The Vitotrans 300 is made from stainless steel. This prevents the risk of corrosion through acidic condensate.

The heating surfaces of the Vitotrans 300 are made from high grade stainless steel (1.4539), to enable the utilisation of condensing technology with fuel oil.

The countercurrent principle of boiler water and hot gases flowing in opposite directions creates a particularly high condensation rate. The vertical design supports the self-cleaning effect. Any condensate can freely drain off downwards. In doing so, it flushes the heating surfaces and keeps them clean.

- High operational reliability and a long service life due to corrosion-resistant stainless steel. Stainless steel grade 1.4571 is suitable for gas operation and for short-term use with fuel oil EL in dual-fuel operation, stainless steel grade 1.4539 ist suitable for continuous operation with fuel oil EL to utilise condensing technology.
- Compact design – space-saving for installation directly behind the boiler
- Easy hydraulic connection – either the entire flow or, to optimise the utilisation of condensing technology, a part of the water volume may be routed through the Vitotrans 300
- Vitotrans 300 flue gas/water heat exchanger with Inox-Crossal heating surface for boilers from 80 to 1750 kW
- Vertical Inox-Crossal heating surfaces for high operational reliability and a long service life
- Highly effective heat transfer and a high condensation rate
- Neutralising systems matched to the Vitotrans 300 flue gas/water heat exchangers are available



Amortisation time for the Vitotrans 300 flue gas/water heat exchanger with an increase of 7 % or 12 % in standard efficiency

Single boiler systems

VITOTRONIC 100

Digital boiler control unit for operation with constant boiler water temperature or modulating operation in conjunction with an external control unit

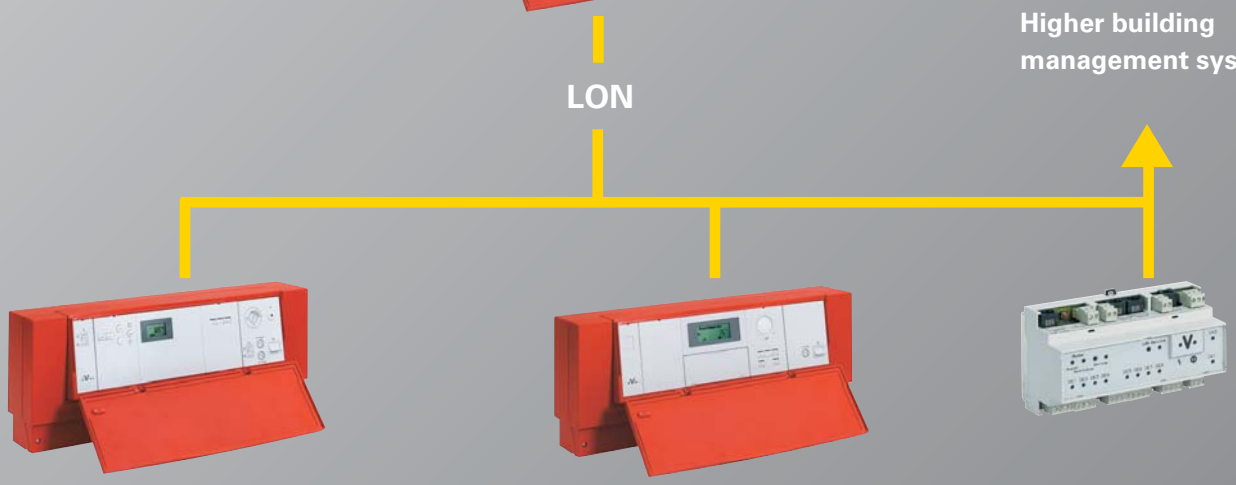
VITOTRONIC 200/300

Weather-compensated digital boiler control unit for the system circuit and, as Vitotronic 300, for two additional heating circuits with mixer

Multi-boiler systems

VITOTRONIC 300-K

Weather-compensated, digital cascade control unit for operating up to four boilers and two heating circuits with mixer



Vitotronic
digital control system
with communication
capability

Economic energy management requires a bright spark

The digital control system Vitotronic with communication capability is the electronic management system for the economical and safe operation of heating systems.

Exemplary installation, operation and maintenance

The modular technology based on the Viessmann platform strategy enables essential components and functions of Vitotronic control units for small boiler systems to be utilised for medium and large boiler systems too. Common features are standardised operation and simple installation, commissioning and maintenance with our Rast-5 connection system, Plug & Work function and Optolink laptop interface.

The Vitotronic control unit for medium and large boilers offers sufficient space for clear and tidy wiring. All Vitotronic control units have been VDE-tested in conjunction with Viessmann boilers.

As an alternative to controlling the DHW cylinder temperature, a DHW cylinder primary system with three-way valve can also be controlled to achieve DHW heating.

The **Vitotronic 100** is a digital boiler control unit for operating with a constant boiler water temperature in single boiler systems or for the first to fourth boiler in multi-boiler systems (in conjunction with the cascade control unit Vitotronic 300-K).

The **Vitotronic 200** is designed as a digital, weather-compensated boiler control unit for single boiler systems with system circuit and burners with stepped or modulating operating modes.

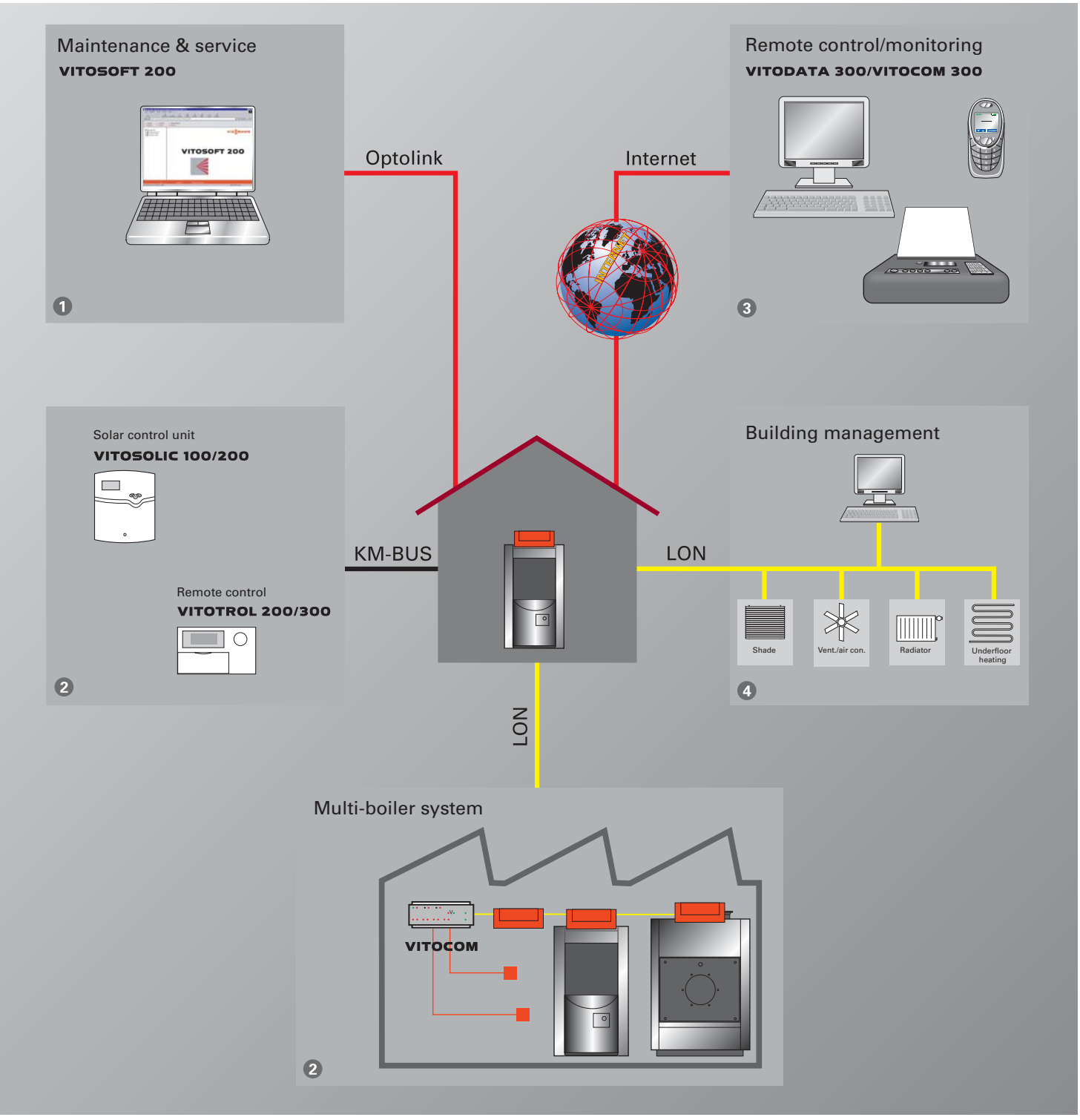
In addition to providing the complete range of functions of the Vitotronic 200, **Vitotronic 300** also enables the control for two further heating circuits with mixer. For more than 2 heating circuits with mixer, a maximum of 32 Vitotronic 200-H heating circuit control units can be connected up using the LON communication module (accessories).

Viessmann Vitocontrol control panel

The **Vitotronic 300-K** is a weather-compensated digital cascade control unit for operating up to four boilers with Vitotronic 100, incl. control of two mixer circuits. In addition, it supports the direct connection to the LON of up to 32 Vitotronic 200-H heating circuit control units. It provides all known control strategies for multi-boiler systems. Communication within the control system is achieved via the LON. This enables the easy integration into building management systems without additional interface. Viessmann devices are connected via Autobinding (automatic component connection and configuration).

The **Vitotronic 300-K** can be boiler or wall mounted or be integrated into the Vitocontrol control panel; it enables the central operation of the entire system.

The **Vitotronic 200-H** are heating circuit control modules for wall, control panel or mixer mounting.



Vitosoft 200
TeleControl and
Optolink interface – for
easy commissioning,
maintenance and service

Everything under control – even from afar

The medium and large boiler range is designed for linking up with communication systems, including telephone, BUS and internet.

Maintenance and service with the Vitosoft 200 ①

The Vitosoft 200 is the software module for connecting heating systems to a laptop. Simplified local commissioning, maintenance and service. Automatic setup of a system report by entering the system description and system-specific data.

System integration ②

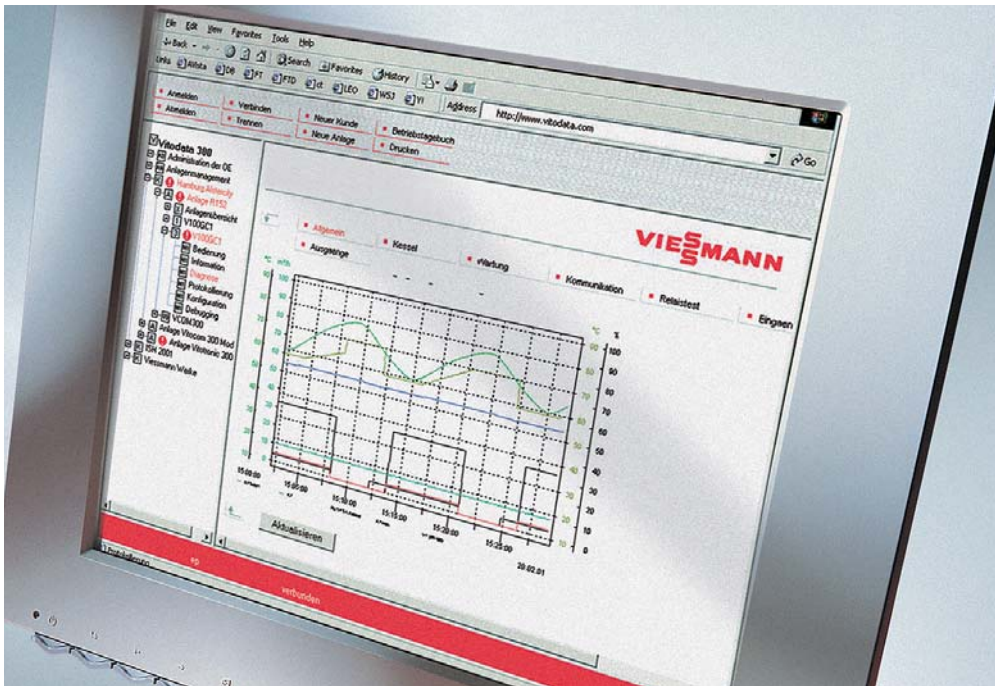
Information and data exchange between all Viessmann components.

Service via the internet with Vitodata 300 ③

Vitodata 300 enables the remote monitoring and remote control of your heating system round the clock by your heating contractor. Access via the internet.

Linking with building management systems ④

All Vitoplex boilers are prepared for a direct integration into LON building management systems.



Remote control and monitoring via the internet with Vitodata 300

Vitodata 300
Internet TeleControl

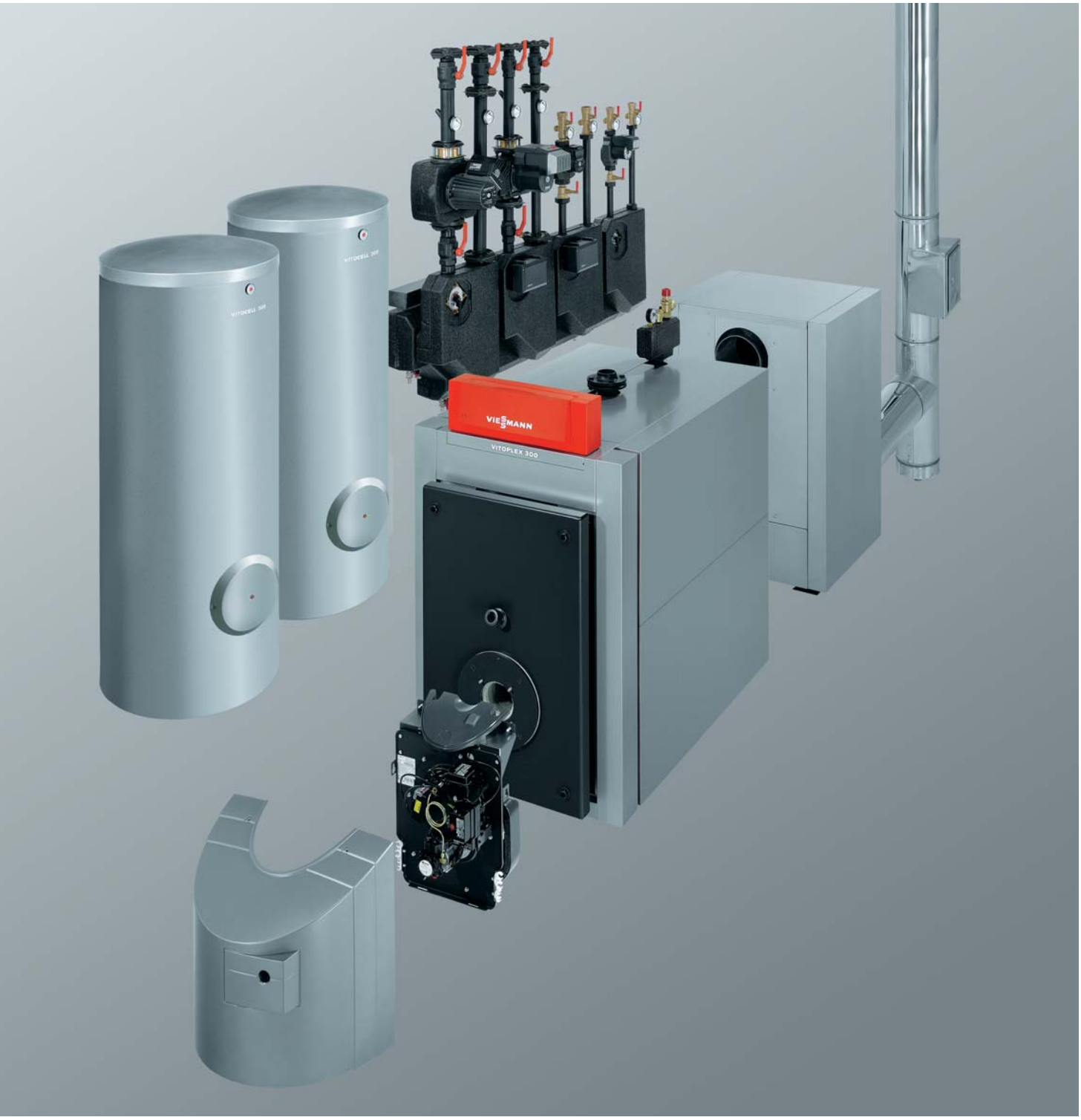
Vitodata 300 internet TeleControl – the new, innovative remote monitoring and control concept for Viessmann heating systems utilises state of the art communication networks, such as the internet, e-mail, voice or text messaging.

The Vitodata 300 enables the remote monitoring and control of your heating system round the clock. You dial into it via the internet and familiar program screens. It requires no special software on a PC, making updates a thing of the past.

Vitodata 300 controls the access rights for every heating specialist and, via Vitocom, makes the connection to the required heating system. Vitodata immediately notifies all irregularities to a mobile phone (text message) or to a fax machine. This avoids the need for a permanent internet connection.

Components for monitoring buildings

In conjunction with the communication interfaces Vitocom 100 and 300, numerous components are available (e.g. smoke detectors, heat meters) for monitoring oil and gas fired heating systems and buildings as part of the standard Viessmann product range.



System design
for the Vitoplex

A perfect match

System components:

- Economical and safe operation of the heating system through the digital Vitotronic control system with communication capability. Tailored to every need, covering all known control strategies and applications.

  A standardised LON makes the complete integration into building management systems possible. Remote monitoring via internet TeleControl with the Vitocom and Vitodata as well as optional integration into the Vitocontrol control panel

- Two-stage Vitoflame 100 oil/gas pressure-jet burner up to 225 kW, set-up and tested in the factory at operating temperature

- Matching, fully wired oil/gas pressure-jet burners ranging from 240 to 1750 kW output

- DHW cylinders, hygienic and economical DHW heating with DHW cylinders in steel with Ceraprotect enamel coating or high-alloy stainless steel

- Divicon heating distribution for boilers up to 285 kW for 1 to 4 heating circuits

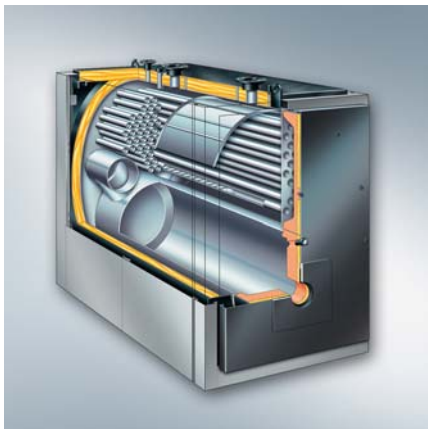
- Safety equipment block up to 200 kW, complete with safety equipment and moulded insulation shells

- Vitoair – combined draught stabiliser for installation into the chimney side

- Standard efficiency improved by up to 12 % through utilising condensing technology with the stainless steel Vitotrans 300 flue gas/water heat exchanger

- Viessmann Vitocontrol control panels for regulating all boiler-specific control equipment – fully wired and tested

The complete Vitoplex range

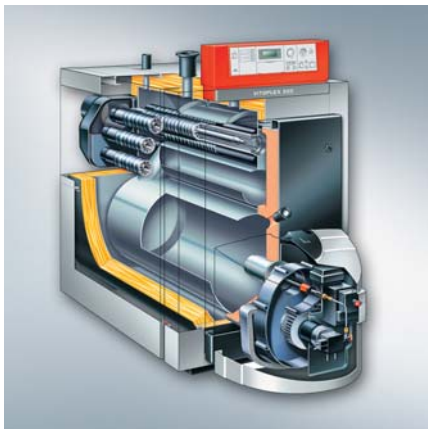


VITOPLEX 100

Rated output	kW	575	720	895	1120	1400	1750
Total dimensions							
Length	mm	2290	2290	2490	2700	2985	3220
Width	mm	1285	1285	1375	1375	1480	1480
Height	mm	1695	1695	1955	1955	2145	2145
Weight incl. thermal insulation	kg	1516	1645	2255	2397	3103	3542
Boiler water content	litres	1033	935	1398	1531	2040	2131

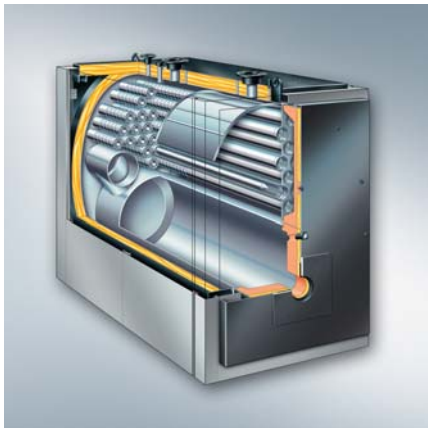
VITOPLEX 200

Rated output	kW	90	120	150	200	270	350	440	560
Total dimensions									
Length	mm	1310	1510	1495	1690	1730	1930	1950	2095
Width	mm	755	755	825	825	905	905	1040	1040
Height	mm	1315	1315	1350	1350	1460	1460	1625	1625
Weight incl. thermal insulation	kg	345	390	455	505	680	760	990	1095
Boiler water content	litres	180	220	260	395	375	435	605	645



VITOPLEX 300

Rated output	kW	80	105	130	170	225	285	345	405	460
Total dimensions										
Length	mm	1285	1485	1430	1645	1680	1815	1880	2080	2080
Length incl. burner and hood	mm	1630	1830	1768	2007	2039	–	–	–	–
Width	mm	780	780	870	870	950	950	1025	1025	1025
Height	mm	1360	1360	1490	1490	1555	1555	1705	1705	1705
Weight incl. thermal insulation	kg	418	482	588	696	875	959	1161	1389	1419
Boiler water content	litres	157	194	265	317	360	402	553	621	605



VITOPLEX 300

Rated output	kW	575	720	895	1120	1400	1750
Total dimensions							
Length	mm	2160	2315	2515	2725	3010	3245
Width	mm	1285	1285	1375	1375	1480	1480
Height	mm	1695	1695	1955	1955	2145	2145
Weight incl. thermal insulation	kg	1568	1859	2892	3042	3672	4259
Boiler water content	litres	903	948	1364	1452	1964	2066

Our comprehensive product range sets new standards

Viessmann offers future-oriented heating systems for oil, gas, solar, wood and natural heat, qualifying them as an independent partner concerning all energy questions.

Our heating systems cover all output demands from 1.5 to 20 000 kW – from apartments to large industrial plants.

Our product range, categorised in three steps according to price and technology, offers the right solution for every demand and every budget.

Viessmann matches up all products and consequently offers an optimum level of efficiency – from the initial design to system operation.

Wall mounted boilers for oil and gas, employing conventional and condensing technology

Heating system components, from fuel storage to radiators and underfloor heating systems

Mawera biomass systems up to 13 000 kW

Energy systems for the utilisation of environmental energy, solar energy and sustainable fuel supplies

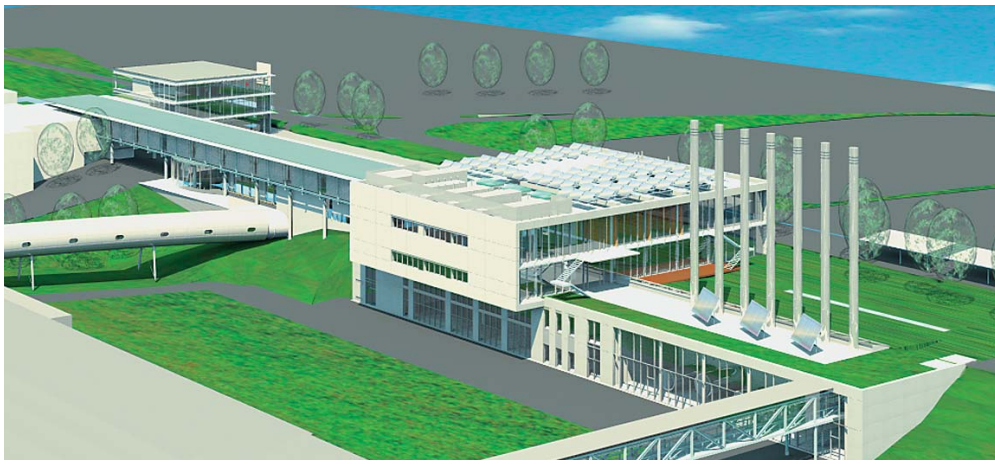
Freestanding boilers for oil and gas, employing conventional and condensing technology

The Viessmann Group

For three generations, the Viessmann family business has been committed to generating heat conveniently, economically, with environmental responsibility and in accordance with the prevailing demand. With a number of outstanding product developments and problem-solving solutions, Viessmann has created many milestones which have frequently made them the technical pacemaker and trendsetter for their entire industry.

Viessmann's orientation is decidedly international – it maintains 11 factories in Germany, Austria, France, Canada, Poland and China, sales organisations in Germany and 35 other countries, plus 112 sales offices around the world.

Responsibility for the environment and society at large, fairness in dealing with business partners and employees, as well as striving for perfection and the highest efficiency in all business processes are core values for Viessmann. This applies to every individual employee and therefore to the whole company. It offers its customers, with the multitude of its products and associated services, the particular benefit and added value of a strong brand.

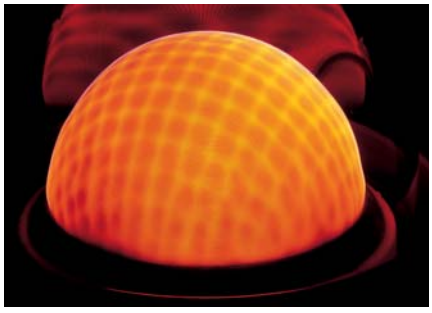


The new training and information centre at the Viessmann Academy – completion August 2007

Production of wall mounted gas fired boilers

Research and development

Inox-Radial heat exchanger made from stainless steel for reliable utilisation of condensing technology



MatriX gas burner for extremely low emissions

climate of innovation

Your local heating contractor:

Viessmann Werke
D-35107 Allendorf (Eder)
Tel. +49 6452 70-0
Fax +49 6452 70-2780
www.viessmann.com

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