



TECHNOLOGY BROCHURE

Steam boilers – efficient systems up to 31.5 t/h

**Industrial solutions
from Viessmann**

Futureproof
Sustainable
Environmentally friendly
Efficient
Economical
Superior quality



System solutions for economical steam generation

Energy efficient and clean provision of steam, as well as high operational reliability and plant availability, are essential requirements for production facilities and industrial plants. Each individually tailored system solution will have specific requirements that need to be taken into account when designing the boiler house concept. This requires competent consultation, together with a comprehensive range of services and products that guarantee cost effective, futureproof steam generation.

Vast experience ensures superior quality

Through their design and configuration, Vitomax steam boilers are best placed to meet these demands. Thanks to many features particular to these heat generators, as well as our extensive experience in building industrial/commercial boilers, we are able to ensure superior quality, consistently high operational reliability and a long service life. Experts from our industrial/commercial boiler team work together with customers and local partners to design a system that can operate with maximum efficiency whilst also being specifically tailored to the customer's needs.

Perfectly matching system technology

The comprehensive product range from Viessmann includes low and high pressure steam boilers up to 31.5 t/h, as well as waste heat boilers for high pressure steam. The range also includes everything required for a complete energy system, such as perfectly matching system technology for instrumentation and control, combustion systems, water treatment systems, feedwater tanks, flue systems, heat recovery systems and water analysis.

Viessmann industrial/commercial boiler technology is distinguished by its quality, efficiency, sustainability and service!



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for every customer requirement

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every demand

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a range of industries

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Boiler assemblies and entire Vitomax boilers are inspected for fault-free weld seams and material weakness inside the X-ray chamber.



Welding robots ensure that quality is kept consistently high during production.

Innovative design and production methods ensure high quality

Viessmann industrial/commercial boiler production takes place in Mittenwalde near Berlin. Our engineering specialists there guarantee individual advice and processing for every system.

Alongside industrial/commercial boiler manufacture with advanced production systems, the facility has its own research and development department. Stresses are analysed using finite element calculation methods, for example, and pipe layouts and welded joints are optimised. Input of this nature supports and ensures design in compliance with relevant regulations.

Viessmann production technology meets the requirements of all current country-specific rules and regulations. Furthermore, we have high standards for the materials used and their workmanship. In addition to regulations, welding employees must hold specific qualifications. We make agreements with suppliers to ensure tolerances and material properties are even more accurate than the minimum levels required by standards.

Low stress design for a long service life

The low stress, space saving design of Viessmann industrial/commercial boilers, established right from the layout phase, lays the foundations early on for the product's long service life. Special features, such as the optional wear-resistant burner entry point, subsequently contribute to savings during operation.

Most stringent production and inspection processes

Automated production processes, avoidance of welding in constrained conditions and special weld seam preparations are just some examples of the care we take in our quest for the perfect product. The most stringent quality inspections throughout the entire manufacturing process ensure that every boiler reaches our high product quality standards. In accordance with country-specific regulations, weld seams undergo testing with ultrasound and X-ray methods, ruling out even the smallest defects.

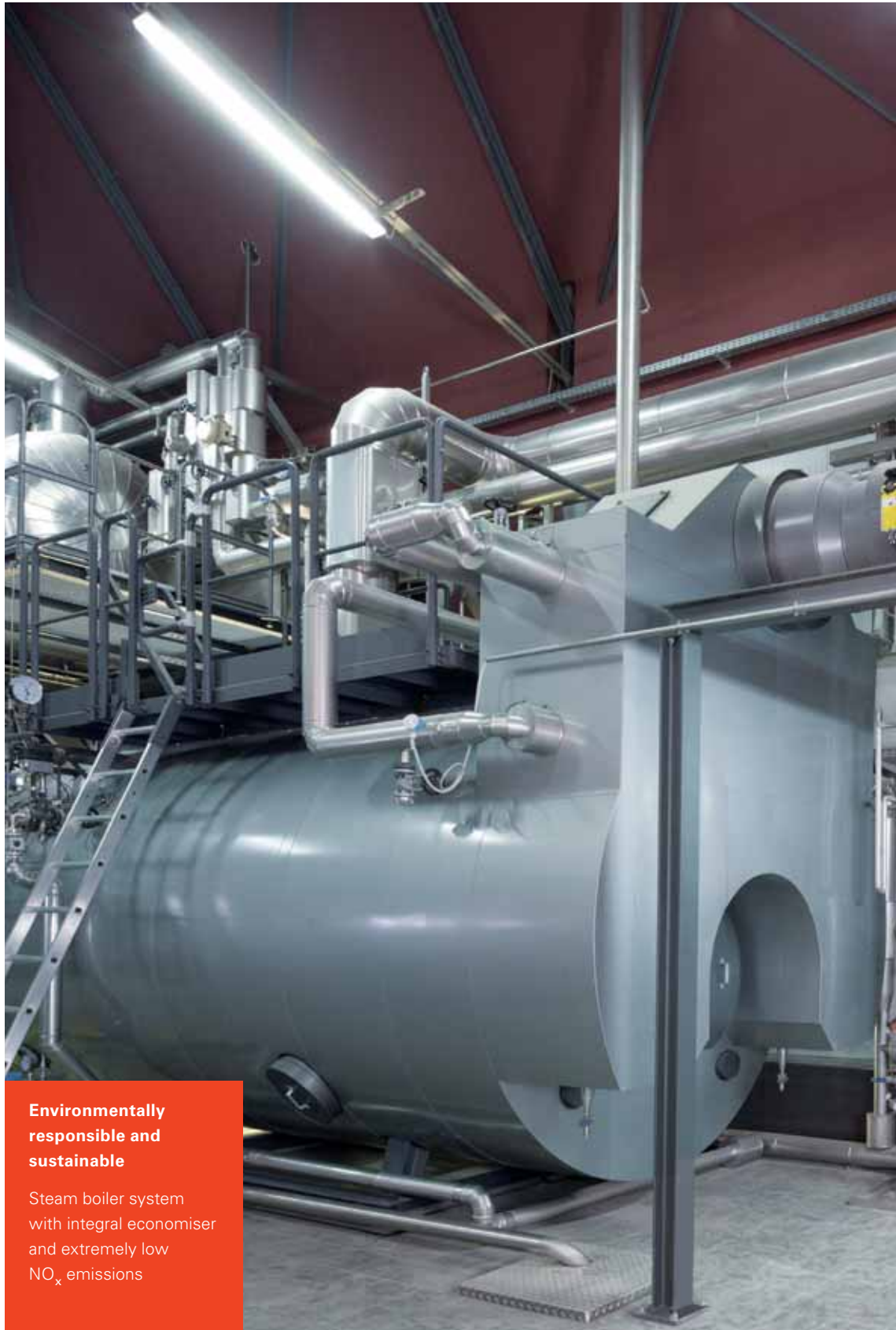
Viessmann's high level of environmental awareness and ongoing digitisation process play a role here, too. By utilising digital X-ray images, there is no need for the chemicals previously used to develop X-ray film. If necessary, the customer can access the images online.

Superior quality through selected suppliers

Viessmann only works with reputable manufacturers that meet high quality standards. This ensures consistently reliable quality for all system components.



Advanced machines guarantee high quality steam boiler production.



**Environmentally
responsible and
sustainable**

Steam boiler system
with integral economiser
and extremely low
NO_x emissions

Efficiency and sustainability

A perfectly matching product range is a prerequisite for efficient and economical system operation. Viessmann also places great importance on environmental responsibility and sustainability.

High efficiency

Viessmann industrial/commercial boilers can be equipped with integral or external heat exchangers in order to increase their efficiency. They utilise waste heat, which can be used to preheat freshwater or combustion air, for example. Thermal equipment, from mixing coolers and TDS expanders through to vapour coolers, convert waste heat into usable energy for the system. This reduces fuel costs and protects the environment.

Intelligent control units help each system operate viably and efficiently through networking and system management. Analysis and evaluation of measured values and consumption figures provide maximum assurance of optimum and efficient operation.

Environmentally friendly and sustainable

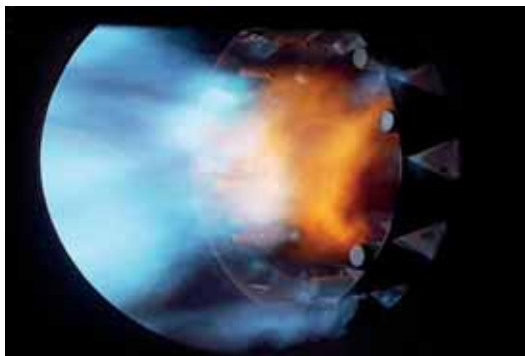
Vitamax HS high pressure steam boilers meet all the requirements for clean combustion. They have low NO_x emissions of less than 70 mg/Nm^3 in gas operation and less than 150 mg/Nm^3 in oil operation. Efficient combinations of boilers and different burner makes can be optimised even further by using O_2 and speed controllers.

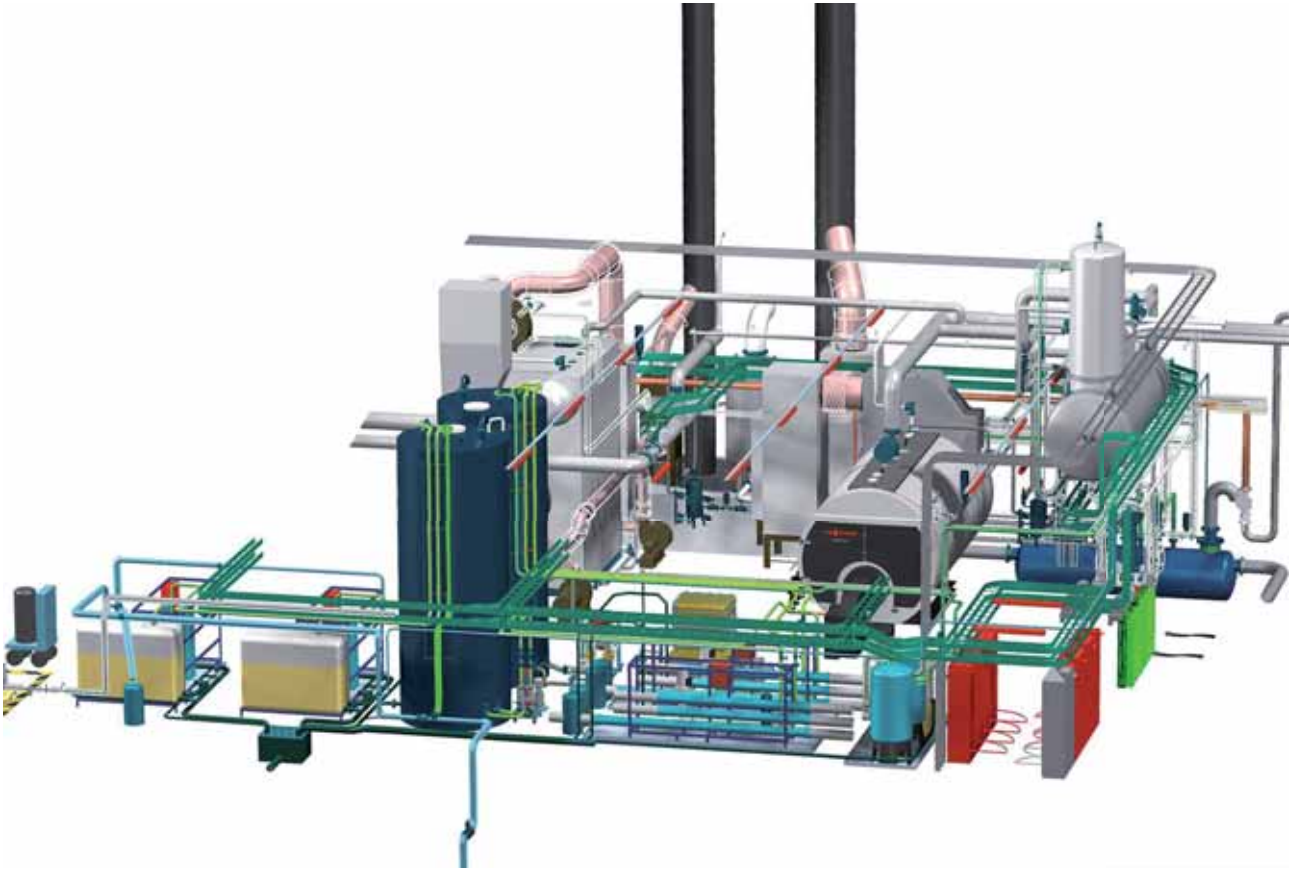


Vitamax HS with a steam output of 6 t/h and 10 bar pressure



Low NO_x burners for extremely low emissions: gas burner (above), dual fuel burner





Viessmann uses 3D boiler room planning to facilitate boiler house system design.



Engineering specialists from Viessmann are available to system users at every stage, from design right through to commissioning.

Early consultation and reliable service

Investment in an industrial/commercial boiler is usually part of a larger project, such as the construction of a new boiler house or to enable uninterrupted operation during modernisation measures when replacing a boiler.

No matter the situation, Viessmann experts are on hand to provide the help needed for design and scheduling at an early stage.

Correctly identifying and realising customer requirements

The vast experience of our engineering and sales teams is key to identifying necessary measures and designing a system that is right for the customer. Professional support at every stage of the project is a given.

This results in tailor-made solutions achieved using modular products and the right selection of suitable additional functions and equipment.



Extensive logistical expertise is needed to transport a Vitomax boiler.

Top priority: customer satisfaction!

Even after commissioning, Viessmann provides round-the-clock assistance, whether in the form of remote access, or a visit from our own service engineers. Customer satisfaction is our top priority!

OVERVIEW OF THE MAIN SERVICES

- + Engineering includes designing entire boiler systems
- + Pre-assembled, fully wired and plumbed systems ex works on request – for reduced installation work on site
- + Just-in-time transport and handling at the destination based on years of experience
- + Commissioning and training of personnel for trouble-free operation
- + All-round carefree service with tailor-made maintenance contracts contributes to the operational reliability of our boiler systems
- + Reliable spare parts management with system component availability
- + Individual spare parts concepts for provision of common parts in accordance with the system design

Highly flexible through modular design



Standard boiler and equipment – can be flexibly extended as needed

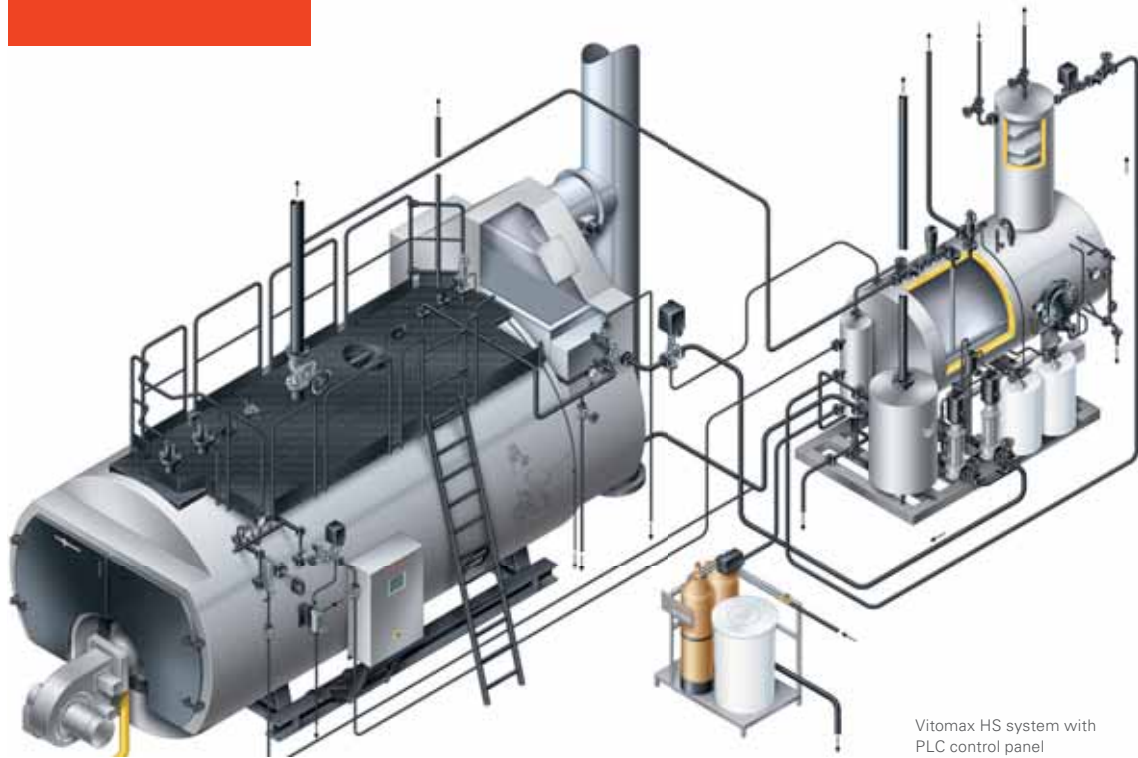
Right from the design stage, a helpful online configurator can be used to put together individual systems. Starting from the output required, the attractively priced Vitomax standard boiler is designed precisely to meet the customer's requirements.

Vitomax steam boilers are based on a modular system. The modules included offer a wide range of individual equipment versions for all boiler outputs. This includes:

- Modular boiler cover including support points for an operating platform
- Flexible turbulator lengths for efficiency gains
- Flame tube geometry for various NO_x emissions
- Wear-resistant, water-cooled burner entry point (concrete refractory lining as standard)
- Boiler support with I-beams for improved load distribution
- Flue gas hood with a round flue gas connection (DIN nominal diameters) with outlet to the top, rear, right or left
- With or without integral heat exchangers with an angular connection
- Other connectors, e.g. safety valve connector (SV)
- Extensions for superheaters or additional waste heat flues

Modular design for an efficient steam system

From a standard boiler to a customised steam generation system – modular, efficient and with high added value



Vitomax HS system with PLC control panel

Futureproof equipment creates added value

Futureproof equipment adds value to any system and ensures long term operation. Furthermore, matched accessory packs or complete system solutions ensure highly economical and sustainably efficient systems.

Available for every boiler:

- Automation and control technology
- Instrumentation and control technology
- Combustion systems with fuel supply
- Water treatment systems and analysis
- Feedwater and other thermal tanks
- Heat recovery systems
- Pipework and flue systems

Convenient and easy to service boiler design

Numerous design aspects and well engineered features facilitate the installation, operation and service of Viessmann steam boilers: longitudinal supports on the boiler base provide optimum pulling and lifting options for ease of handling. The improved load distribution across the longitudinal supports means less stress is applied to foundations, making them less costly.

A boiler base with additional reinforcements is available for earthquake prone areas.

Boiler cover with good and safe accessibility

The walk-on boiler cover is not just for employee safety. It offers optimum operating convenience, simplifies installation work and prevents damage to the casing.

Inspection ports and fittings on the boiler top are always accessible. Retrofitting a guardrail to the boiler platform later on is easy thanks to integral support points.

Boiler platform available in right-hand and left-hand versions

The boiler cover is turned into a fully fledged boiler platform remarkably quickly. For this, the existing walk-on area is extended, and a guardrail and ladder are installed. Operating and service personnel then no longer require additional fall protection. All fittings can be reached and operated from within the guardrail. The boiler platform is available in a left-hand and right-hand version.



Steam boiler with superheater module for higher steam demands



Steam boiler with modular operating platform for convenient and safe access to fittings and inspection ports on the boiler top

Wear-resistant burner entry point

No concrete is needed for the burner entry point. This makes it wear and maintenance-free, eliminating the need to replace it during the service life of the Vitomax boiler. Down times required for drying out the concrete refractory lining are completely eliminated. The design principle results in increased (operational) safety and significantly lower operating costs.

Turbulators as equivalent heating surface

Turbulators achieve greater efficiency despite a smaller nominal heating

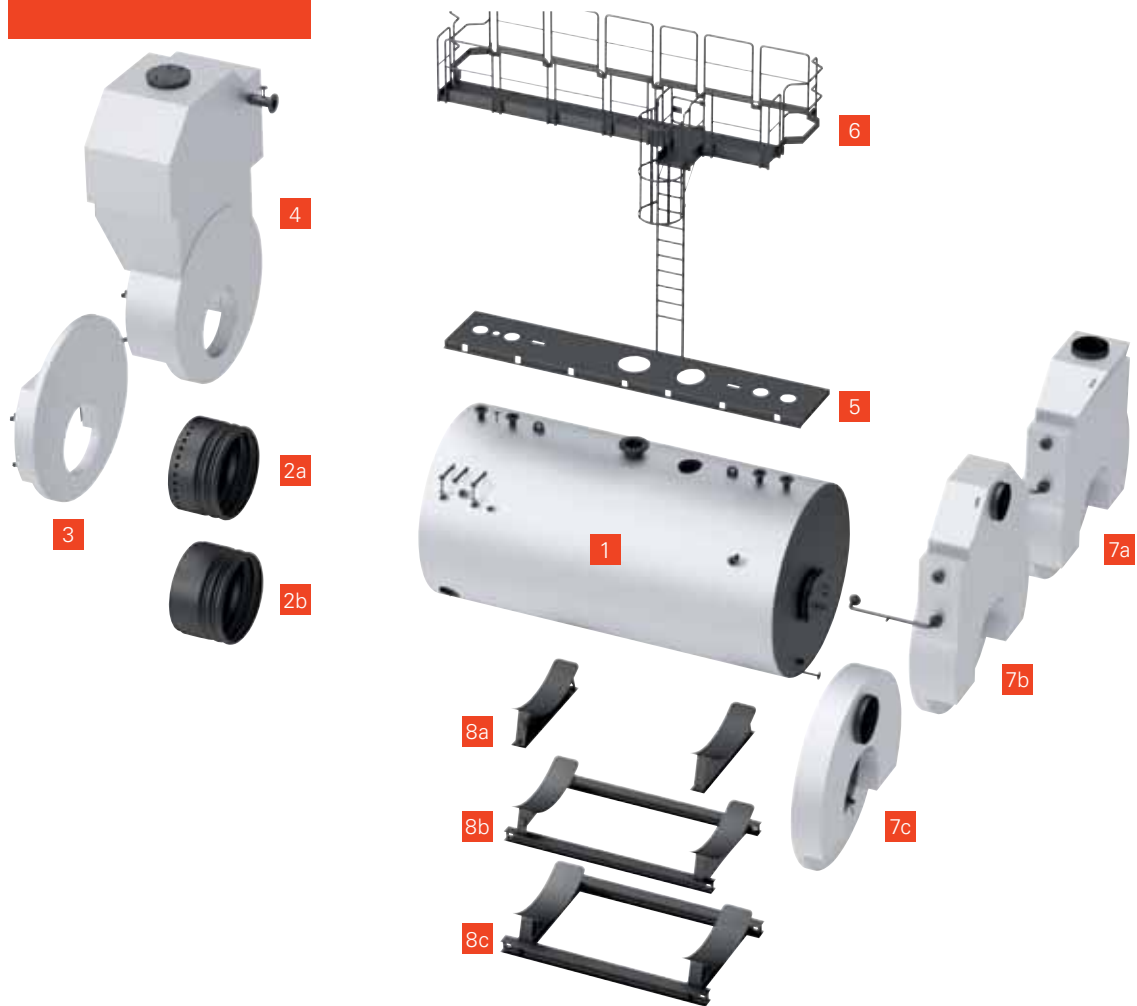
surface. They swirl the flue gases and ensure better heat transfer inside the smoke tubes. The length of the turbulators is subject to the residual pressure of the burner used and further raises efficiency. Fuel consumption and operating costs are further reduced.

Greater efficiency and economy

Integral or separate heat exchanger solutions increase the system efficiency. They contribute to lower fuel consumption and reduce operating costs considerably. The heat exchangers can be flexibly adapted to any system.

Individual and flexible configuration

Thanks to the modular design, any boiler can be tailored to the available budget and any special requirements.



- 1** Vitomax steam boiler
- 2a** Wear and maintenance-free burner entry point
- 2b** Concrete burner entry point
- 3** Front reversing chamber with boiler doors
- 4** Front reversing chamber with mounted superheater module
- 5** Walk-on boiler cover
- 6** Boiler platform
- 7a** Flue gas collector with ECO and flue gas outlet to the top
- 7b** Flue gas collector with ECO and flue gas outlet to the rear (or to the right/left if required)
- 7c** Flue gas collector with round flue gas outlet
- 8a** Boiler support as cross plates
- 8b** Boiler support as cross plates with longitudinal I-beams
- 8c** Boiler support as full I-beam version



High pressure or low pressure boiler

Full steam ahead for any boiler system – with efficient and economical steam generation

For every demand in the comprehensive Viessmann range: high and low pressure steam boilers

Whatever the demand, Viessmann has a Vitomax HS high pressure steam boiler or Vitoplex LS low pressure steam boiler to suit. Both are three-pass boilers with low combustion chamber loading and are designed for clean combustion and low emissions.

Vitomax HS – ideal for industrial use

The Vitomax HS steam boiler complies with category IV of the Pressure Equipment Directive 97/23/EC, with a permissible operating pressure of 6 to 30 bar. It is used in manufacturing industries such as food processing, fertiliser production, construction materials, paper, beverages, chemical and pharmaceutical industries, hospitals and refineries, where steam is used as a process, propulsive or reaction medium.

Vitoplex LS – recommended in commercial and trade settings

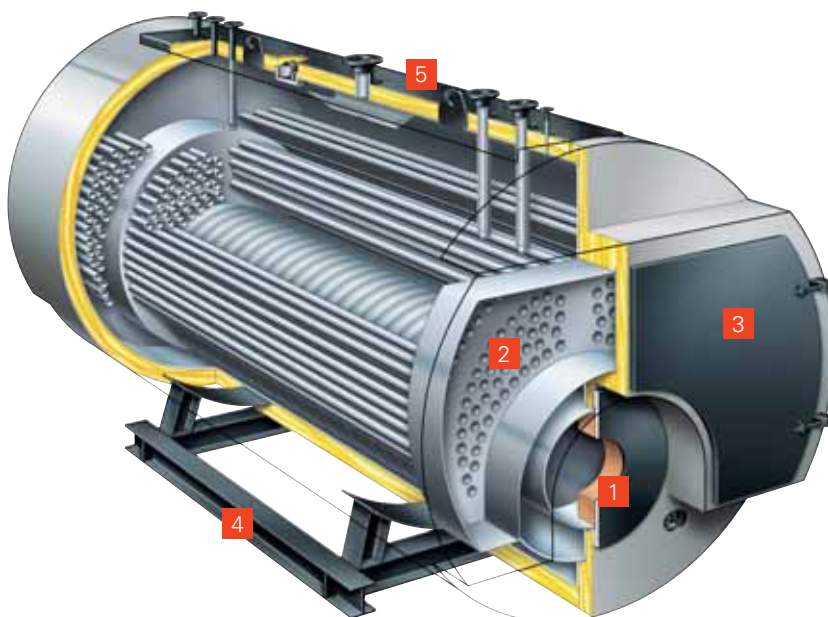
The Vitoplex LS boiler is designed for a permissible operating pressure of 1 bar (high pressure), but this can be reduced to 0.5 bar (low pressure) subject to use. Typical applications for this boiler are in laundries and bakeries, with their need for low steam pressures.



Vitomax HS high pressure steam boiler



Vitoplex LS low pressure steam boiler

**VITOMAX HS**

- 1 Water-cooled and wear-resistant burner entry point
- 2 Low stress design through optimum expansion clearances
- 3 Easy to open hinged cleaning doors without the need to remove the burner and fuel supply
- 4 Boiler support with longitudinal I-beams for better load distribution and ability to connect components, pipework, etc.
- 5 Walk-on cover

Steam boilers from 0.5 to 31.5 t/h

Vitomax HS high pressure steam boilers meet all the statutory requirements for clean combustion. The efficiency of these boilers with economiser is over 95.5 percent, even at 100 percent load.

Irrespective of the fuel used, the Vitomax HS delivers an output of up to 31.5 tonnes of steam per hour. It is specifically designed for manufacturing industries, where steam is required continuously. Thanks to its large evaporator with integral steam drier, high steam quality with low residual moisture is a key feature. The Vitomax HS can be operated very flexibly with light or heavy fuel oil, bio-oil or even (bio) natural gas.

Water-cooled and low NO_x levels

No concrete is used for the optional, innovative burner entry point in Vitomax boilers. This means it is water-cooled, and wear and maintenance-free, eliminating the need for replacement during the service life of the boiler. The water cooling guarantees a constant temperature at the burner head – the otherwise usual reflection from a refractory lining (which causes thermal NO_x to form) does not occur.

The burner entry point and the rear flue gas reversing chamber of the Vitomax HS are water-cooled, so the energy in the flue gases is used exclusively for steam generation.

Long boiler service life thanks to low shearing forces

The spacing between the individual smoke tubes, as well as from the smoke tubes to the boiler casing

and to the flame tube, comply with statutory requirements. The shearing force on the end face flues caused by different linear expansion in the smoke tubes and the flame tube is therefore extremely low. This design guarantees a long service life for the Vitomax HS.

To make it particularly easy to service and maintain, just like all other Vitomax boilers, the Vitomax HS is equipped with sufficient inspection and access ports for carrying out important checks inside the boiler. As a result, Vitomax high pressure steam boilers achieve the longest possible inspection intervals. Easy to open boiler doors and a cleaning door at the end of the boiler also ensure that maintenance is simple and contribute to low operating costs.



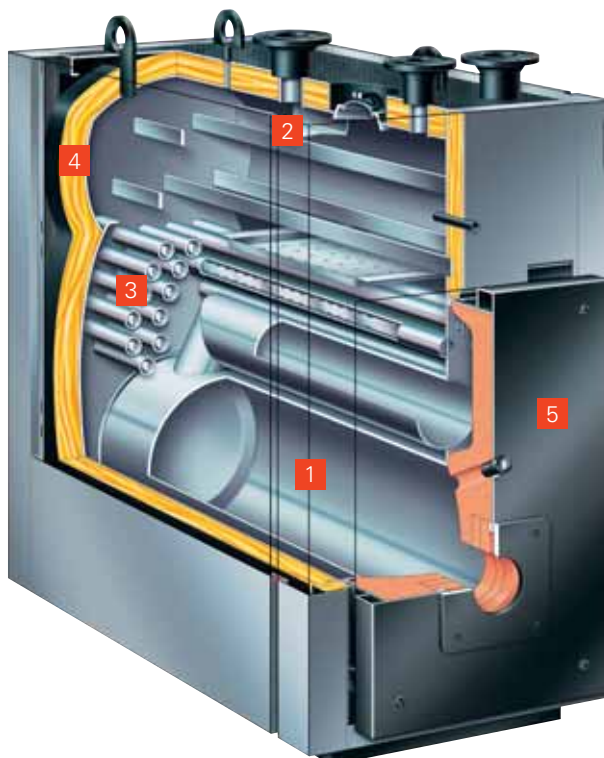
Vitomax HS (13.0 t/h, 10 bar)
Customer: PT. B. Braun
Pharmaceutical Indonesia

PRODUCT CHARACTERISTICS AND BENEFITS AT A GLANCE

- + Vitomax HS high pressure steam boiler, 0.5 to 31.5 t/h
- + Pressure levels: 0.5 to 30 bar
- + Fuels:
 - Fuel oil (EL), NO_x emissions (< 150 mg/m³ flue gas possible)
 - Heavy fuel oil, mazut 100
 - Natural gas, NO_x emissions (< 70 mg/m³ flue gas possible)
 - And much more, e.g. biogases/bio-oils, animal fats
- + High efficiency in excess of 95.5 %
- + Steam chamber, precisely sized for the output, with low load (no water entrainment)
- + Integral steam drier for high steam quality
- + Corner stays arranged in pairs reduce stress in the boiler
- + Optimum flame tube geometries for clean combustion
- + Longest possible inspection intervals and easy to service due to sufficient inspection and access ports
- + Use in manufacturing industries such as food processing, fertiliser production, construction materials, paper, beverages, chemical and pharmaceutical industries, hospitals and refineries



Typical application for smaller industrial premises: a Vitoplex LS (front) and two Vitocrossal boilers are in use here



VITOPLEX LS

- 1 Generously proportioned flame tube for clean combustion
- 2 Integral steam drier
- 3 Low stress design through optimum expansion clearances between the individual pipes and from the pipes to the boiler casing
- 4 Highly effective thermal insulation to increase efficiency by reducing radiation losses
- 5 Hinged boiler door facilitates boiler cleaning and maintenance

Design proven in thousands of applications

The Vitoplex LS is a compact three-pass boiler for generating low pressure steam in the output range from 0.26 to 2.2 t/h. The design of this boiler has been tried and tested in thousands of applications.

This boiler is designed for a permissible operating pressure of 1 bar (high pressure). Subject to requirements, the operating pressure can be reduced to 0.5 bar (low pressure). The output range of the Vitoplex LS meets requirements in commercial businesses, such as laundries and bakeries, with low steam pressures.

Good steam formation through large water content

Good steam formation and draw-off are ensured by the large water content in conjunction with wide clearances between the individual flue pipes, as well as from inbuilt components to the boiler casing.

Low material loading through the completely water-cooled rear reversing

chamber and the absence of refractory linings mean an extremely low stress boiler design.

Versatility and high steam quality

The versatility of the boiler in the event of load fluctuations brought about by the large water content is judged to be particularly positive.

Thanks to the design, residual moisture in the steam is prevented, even in the event of sudden or high steam demand. High quality steam is still available. The large steam chamber, with a correspondingly sized evaporator and integral steam drier, supports this flexible functionality.

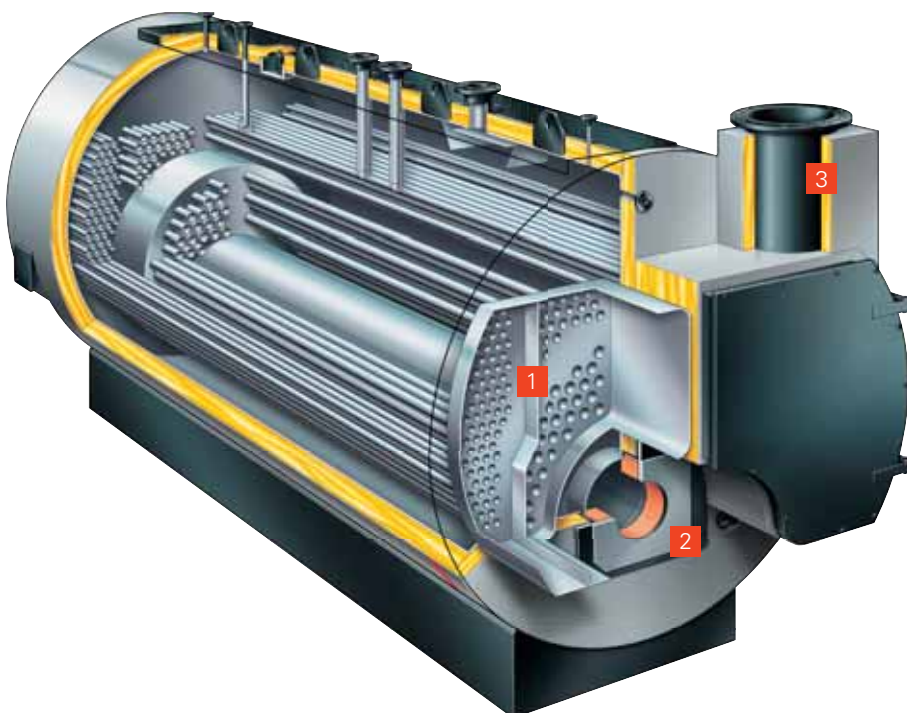
The very low combustion chamber volume loading in conjunction with the three-pass design enable this boiler to comply with even the strictest of emission limits.



Vitoplex 100-LS with safety valves

PRODUCT CHARACTERISTICS AND BENEFITS AT A GLANCE

- + Three-pass boiler with low combustion chamber loading – therefore clean combustion
- + Vitoplex LS low pressure steam boiler, 0.26 to 2.2 t/h
- + Boiler efficiency: > 91.5 %
- + High steam quality thanks to the integral steam drier and large evaporator
- + Thermal insulation of the boiler shell reduces heat loss
- + Load bearing boiler cover – easier installation and maintenance
- + A comprehensive range of accessories tailored to the boiler reduces the amount of engineering work – and can also be supplied pre-assembled, plumbed and fully wired from the factory

**VITOMAX RS**

(individually configured)

- 1** Pipe bundle for waste heat source
- 2** Conventional boiler with combustion equipment
- 3** Inlet point for waste heat gases

Economical combination with gas turbines and CHP units

Waste heat boilers utilise the heat from flue gases generated during combustion processes or hot exhaust air from industrial processes to generate saturated steam.

Due to economic and statutory considerations, waste heat boilers are frequently used in conjunction with gas turbines and combined heat and power units. Given increasing energy costs in particular, waste heat boilers can be a very good choice.

With or without auxiliary combustion

Waste heat boilers without auxiliary combustion equipment use only flue gas/exhaust air to generate saturated steam.

Waste heat boilers with combustion equipment are conventional boilers with a burner and waste heat utilisation.

Customer-specific requirements dictate the choice of version.

How waste heat boilers work

Viessmann waste heat boilers are designed according to the flame tube:smoke tube principle. Hot flue gas is routed through pipe bundles, where the heat is transferred to the water inside the boiler body.

To minimise radiation losses, the waste heat boiler is fitted with 100 millimetre thermal insulation and a metallic casing. Like all Vitomax boilers, a base frame spreads the load evenly across a large floor area.



Vitomax RS steam boiler with waste heat utilisation and burner



Vitomax RS

PRODUCT CHARACTERISTICS AND BENEFITS AT A GLANCE

- + Use of process and waste heat as a "waste product" from industrial products or hot flue gases
- + Reduced running costs due to fossil fuel savings
- + Flexible use through individual or standardised designs in conjunction with combined heat and power units

Water treatment reduces costs and protects your system



TWA-V water treatment module



Reverse osmosis system

In contrast to hot water boilers, steam boilers are continuously supplied with chemically and thermally treated feedwater. So that the constituents of water, such as calcium, magnesium, oxygen and carbon dioxide, do not permanently damage the steam boiler over the course of time through pitting corrosion or limescale deposits, the steam boiler must be supplied with the "right" kind of water, from which these substances have been removed.

Water treatment modules

Viessmann offers various water treatment modules for its steam boilers, depending on the specific requirements and subject to freshwater quality and the amount of condensate where the system is located. The modules provide water softening, chemical dosing and thermal deaeration. Depending on the water quality and the process, either double-pendulum softening systems, complete desalination systems or reverse osmosis systems are employed.

Preserving the value of the steam system

Generally speaking, water treatment reduces corrosion and deposits in steam boiler systems and ensures they operate as intended. It guarantees longer availability through reduced component stress and helps preserve the value of the system.

Fully automated operation can ensure that the operating mode of the boiler system is in line with requirements for any chosen period. This improves the steam quality and extends the service life of the boiler. As a bonus, operators will notice a significant reduction in running costs.



Pre-assembled feedwater pumps and tanks



Double-pendulum softening system

Fewer TDS and blow-down losses of boiler water also mean less topping up with treated and heated feedwater. Last, but not least, the use of chemicals can be reduced. As a result, less energy is utilised to cover the system's own demands, and maintenance and repair costs are lower.

Vitocontrol HS – the benchmark for automation and control technology



Detailed information on the boiler operating state at all times



Vitocontrol HS being used with a Viessmann double flame tube boiler



The Vitocontrol HS can also be used to control all auxiliary systems.



Most information can be accessed directly from the freely configurable menu.



Energy monitoring shows the current boiler output at a glance.

The Viessmann Vitocontrol HS automation solution is a system controller for industrial steam systems. Intelligent networking and transparent system management ensure viable and efficient operation.

Predictive maintenance

Analysis and evaluation of measured values and consumption figures identify incorrect operation and inefficiencies, which can then be quickly corrected (predictive maintenance). This allows any signs of wear to be detected early on.

Energy monitoring

Besides predictive maintenance, the Vitocontrol HS provides continuous transparency of power and energy data from the grid connection point to the steam system through energy monitoring. Viessmann thereby meets the statutory requirements for continuous improvement of the energy balance in production in accordance with EN ISO 50001.

Keep an eye on everything – even from afar

Users can quickly check the system status at any time on the home screen, and call up specific system information whenever and wherever they choose via the internet.

Viessmann also supports system users online, if they wish, via remote maintenance, remote service offers and telephone support.

Touchscreen for status display

The status of each component in the entire system can be selected at different levels by tapping the touchscreen.

Detailed information on operating states, temperatures or current output are shown. A password-protected menu level allows only authorised individuals to access the configuration.

Quick integration through flexible interfaces

Flexible, customer-specific control solutions are added through selectable modules. The functionality of the PLC control system can then also be subsequently extended at any time.

Thanks to a large number of commonly used interface modules, the Vitocontrol HS controller can be integrated into, or connected to, existing building or energymanagement systems.



Vitocontrol HS modular control panel for the Vitomax HS with PLC, intuitive colour touchscreen and optional air conditioning

PRODUCT CHARACTERISTICS AND BENEFITS AT A GLANCE

- + Flexible, customer-specific control solution through programmable logic control (PLC) and selectable modules (extended functionality an option at any time)
- + Flexible connection to the customer's control and visualisation systems through various bus interfaces, Ethernet or Profinet
- + Just one controller needed for the boiler and system components
- + Analysis and evaluation of measured values and consumption figures provide assurance of optimum and efficient operation, as:
 - incorrect and inefficient operation can be indicated
 - wear can be detected at an early stage, preventing faults that could otherwise result
- + Rapid commissioning due to individual configuration and intuitive operation via colour touchscreen
- + Central indication of system status and further relevant information (customer-specific)

A strong partner for more than 60 years – exemplifying efficiency and competence worldwide!

Customer satisfaction is fundamental to our global energy business at Viessmann. As a supplier of turnkey energy solutions worldwide, Viessmann is a key partner for a wide range of customers from many fields of application. This is reflected in our many reference systems used in almost all industrial and commercial sectors, public institutions, hotels and medical facilities.

Our customers trust innovative and efficient system solutions from Viessmann. We help them grow economically and achieve sustainable energy and fossil fuel savings through system modernisations.

The following reference systems provide a brief insight into selected industries. Please do not hesitate to contact us if you have any queries or would like to discuss how we could help you to become more efficient.

BEVERAGE INDUSTRY

A new steam boiler means economical and sustainable beer production for the Westerwald-Brauerei brewery. As a general contractor, Viessmann supported the project from the engineering stage through to commissioning and supplied a turnkey system. Besides very high efficiency of almost 96 percent thanks to the integral economiser, the system also impresses with its extremely low NO_x emissions. The company thereby not only saves on fossil fuels, but also respects the environment. The new thermal full deaeration system (TWA-V) supplies consistently high steam quality. Thermally treated feedwater helps extend the service life of boilers and components. Harmful elements in the water (such as oxygen, carbon dioxide, etc.) are removed at an early stage, so they do not reach the boiler in the first place.



System data

Customer:	Westerwald-Brauerei
Year of manufacture:	2017
Boiler:	Vitomax HS high pressure steam boiler
Special features:	Low NO _x version
Medium:	Saturated steam
Steam mass flow rate:	5 t/h
Permiss. operating pressure:	10 bar
Burner:	ELCO (natural gas)
Efficiency:	Approx. 96 %

FOOD PROCESSING INDUSTRY

9000 tonnes of waffles and biscuits are produced each year at the new Rakhat-Shymkent LLP production facility in Shymkent (Kazakhstan). Viessmann delivered three high pressure steam boilers with integral economisers and superheaters for the new production facilities. The complete system also included all accessories, such as burners, water treatment, thermal equipment, fittings, safety equipment, control technology and control panels. The steam system was installed and commissioned in cooperation with local partner companies.



System data

Customer:	Rakhat-Shymkent LLP Lotte Corporation (South Korea)
Year of manufacture:	2015
Boiler:	3x Vitomax HS high pressure steam boilers
Medium:	Saturated and superheated steam
Steam temperature:	Approx. 215 °C
Steam mass flow rate:	7.5 t/h
Permiss. operating pressure:	13 bar
Control panels:	PLC controllers with touchscreens
Burner:	Weishaupt (natural gas, EL fuel oil)

PHARMACEUTICAL INDUSTRY

The new steam boiler system at the Indonesian plant of the B. Braun pharmaceutical group went into operation in early 2017. B. Braun produces large volume parenteral (LVP) infusion systems at this plant. The Vitomax HS supplied and commissioned by Viessmann produces saturated steam for a number of the company's divisions and processes, including for water distillation equipment, the laundry and water sterilisation systems (autoclaves). The positive experience that the B. Braun parent company in Melsungen, Germany had previously had with projects using Viessmann industrial/commercial boilers was also pivotal in its decision to choose a Vitomax HS for its Indonesian production facility. Further Vitomax HS systems have been earmarked for the new production facilities that are planned for the years ahead.



System data

Customer:	PT. B. Braun Pharmaceutical Indonesia
Year of manufacture:	2017
Boiler:	Vitomax HS high pressure steam boiler
Medium:	Saturated steam
Steam mass flow rate:	13 t/h
Permiss. operating pressure:	10 bar
Efficiency:	95 %



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 14th 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

12,100

— employees

2.37

— Group turnover in billions of euros

55

— 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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