

Vaillant Specification boiler range





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About Vaillant



The Vaillant Group

Vaillant is a brand within the Vaillant Group, a family-owned business that was founded by Johann Vaillant in his workshop in Remscheid, Germany in 1874.

In 1894, Johann patented a new closed-system gas-fired bathroom boiler. Johann's technical innovations continued and in 1924, he launched the world's first central heating boiler. Since these revolutionary inventions, the Vaillant brand has become synonymous with innovative heating solutions and continues to drive the evolution of heating technologies to this day.

The Vaillant Group is still family owned, and the family's consideration for safeguarding the environment for future generations runs through everything that Vaillant does. Vaillant is passionate about developing technologies that use the quality and efficiency of German engineering to create heating solutions that reduce carbon emissions and energy use to help to reduce our impact on the planet.

As the premium brand for sustainable and responsible heating and hot water solutions, it is Vaillant's mission to create a better climate, inside each home and the world around it.

There are now over 13,000 employees across 10 sites around the world who share this vision.

“We have worked very closely with Vaillant for many years and have always had a strong, reliable and trustworthy relationship. The service and support that we receive has always been of a high standard.”

Jane Duckers, Procurement Officer, Wales & West Housing

Setting the standards since 1874

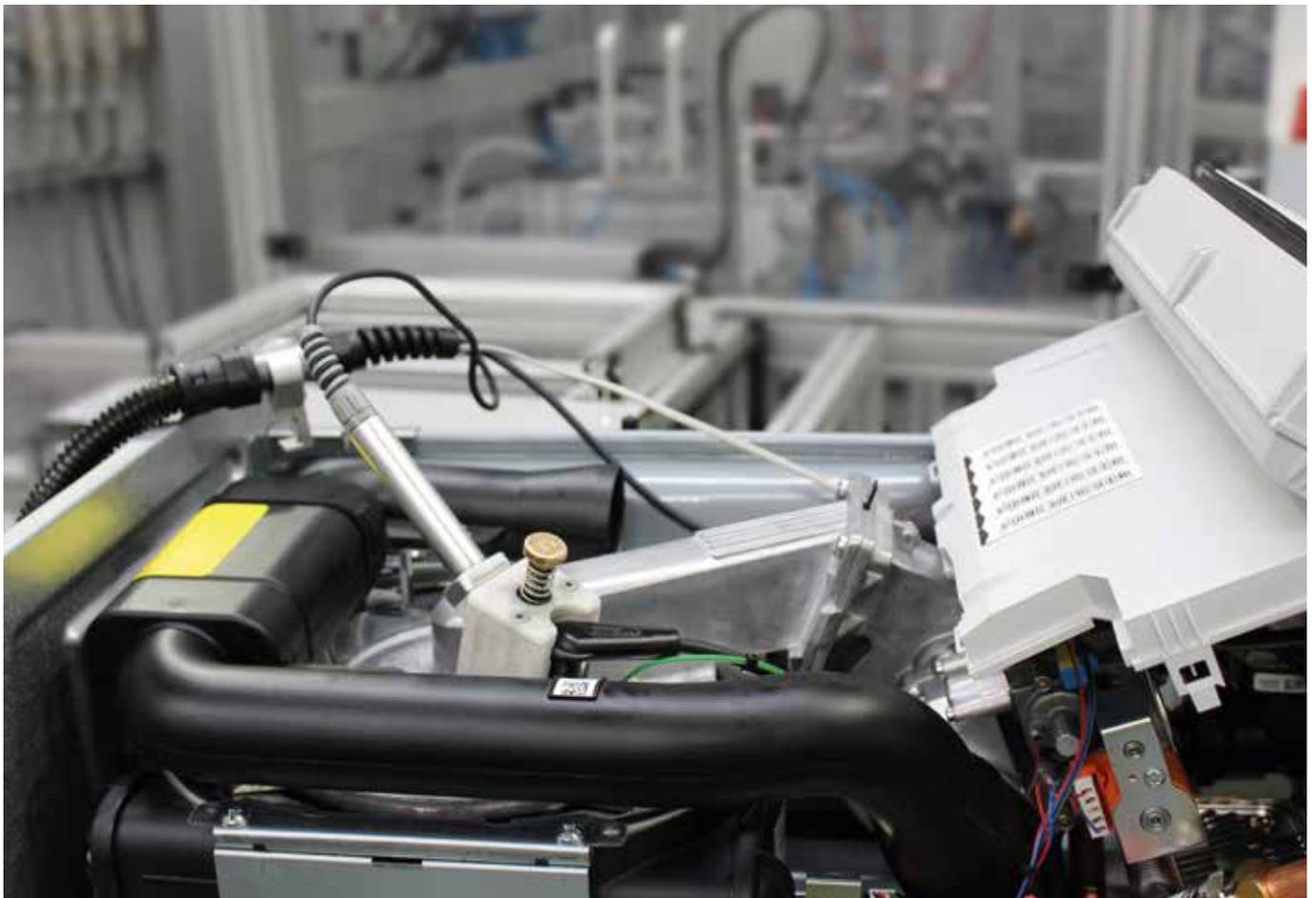
Manufacturing at its finest

At Vaillant, we think ahead. By choosing our heating appliances, you choose the pioneering excellence of German design and UK manufacturing expertise that create reliable products specially designed for application in the specification markets.

As well as designing products to be as efficient as possible, we constantly review and update our manufacturing processes and environments.

Our UK factory continues to receive awards year after year in many categories. In addition to the many manufacturing awards we have received, we are especially proud to have been awarded the RoSPA Gold Award for world-class health and safety management systems for three consecutive years. We also have a gold Investors in People Award.

Vaillant has very high standards in manufacturing to ensure we make outstanding products. Our products meet ISO 9001, 18001, 14000 and many are Quiet Mark™ approved, which means that they use innovative and efficient technology that guarantees reduced noise levels.



Our specification partners

Supplying contract boilers for over 40 years

Vaillant's large product portfolio means we have an efficient, cost-effective and future-ready solution for every specification. We work closely with our customers, delivering best-in-class pre- and post-installation support. Here's what they have to say:



"Vaillant have provided our tenants with an improved product and service. We are installing more new Vaillant boilers every year. Reliable product and service to support makes my life a lot easier."

Howard Worwood,
Gas Production Supervisor, Severn Vale Housing



"Curo Group specify Vaillant products as our central heating boiler of choice due to the unrivalled quality of the product."

Dean Roberts,
Gas Safety Manager, Curo Group



"We moved from a rival manufacturer to Vaillant over 15 year ago and have never looked back. The quality, performance, value and international leading name, makes the specification of Vaillant boilers a must for us. The sales and support back up are first rate. The engineering, sustainability support and synergies with the renewable elements fit really well with our high level of quality specification and green ethos. The controls available smash through SAP and Part L, giving us savings opportunities in other fabric areas."

Scott Leather,
Erris Homes



"Wandsworth Borough Council have been installing Vaillant boilers for a number of years. Vaillant are our preferred boiler manufacturer due to the fantastic efficiency levels, long lifespan, high performance and great controllability of their products."

Peter Hedges,
Heating Manager,



"The Acis Group have been successfully using Vaillant for years. We specified them on the promise of quality and reduced life-cycle costs. Our repairs section are gradually benefiting from this decision."

James Hamilton,
Project Manager, Acis Group



"Moat have been installing Vaillant boilers for many years. Vaillant provide reliability, serviceability, best value and efficiencies of their extensive product range."

Jason Amos BSc,
Director of Property Services, Moat



"From the outset, we have been impressed with Vaillant's exceptional level of innovation, combined with its ability to work to deadlines, product knowledge, industry awareness and ability to deliver projects on time and to agreed budgets. From the initial tender stage, through to customer service on occupied properties, Vaillant has always adopted a professional and methodical approach and updated us regularly on its progress."

Andy Startin,
Wheeldon Homes



"For us, it's all about keeping it simple. No one ever bought a property because of the choice of boiler - so what people are after is trusted brand with a great reputation at the right price. That's why Vaillant makes sense for us. Their boilers are reliable and high performance. We know that whatever the property size, Vaillant will fit the most efficient choice. And the five-year warranty means all our homeowners have peace of mind. It's as simple as that."

Mark White,
Bargate Homes



"We wanted to create an estate of energy-efficient homes that could showcase how renewables can reliably deliver lower energy consumption, reduced energy costs and minimal environmental impact. Using Vaillant's flexoTHERM ground source heat pump, we know we have utilised the latest technology alongside additional sustainable technologies incorporated into the new homes. The heat pump effectively provides the energy needed for heating and domestic hot water, but does so in an environmentally friendly way.

"We believe such renewable solutions for homes are the way forward. Vaillant's extensive experience and expertise when it comes to such technologies, as well as their outstanding levels of service support, made them an ideal partner on this project.

"The homeowners at the developments will enjoy comfortable, warm and highly efficient homes, whilst benefitting from reduced energy bills."

Garry Woods,
Be Green Systems



"Our working relationship with Vaillant has been very good from the start and we now consider Vaillant our manufacturer of choice. It is clear to see the quality of the products Vaillant manufactures, and their dedication to service and support means there is always reliable back-up should it ever be needed."

Martin Ardon,
J Tomlinson



"There's no such thing as a 'standard' property for Shanly Homes - every property and every development provides us an opportunity for individuality.

"Therefore we require a heating solutions partner for every situation: from combination boilers that can fit in a kitchen cupboard to systems delivering enough hot water for three bathrooms at the same time. Vaillant provide Shanly Homes with quality products to cover the wide range of solutions required."

Andy Howard,
Shanly Homes



"The best thing about Vaillant for us is the service. They always go the extra mile to make sure we've got everything we need to make our customers happy. You just can't put a value on that level of service.

"I've never known a supplier that offers us training for the products - and knows enough about our business to recommend precisely the right model that's going to deliver the highest performance and maximum efficiency. I've nothing but praise for Vaillant and the way they do business."

Marco Dimuccio,
Wynyard Homes



THAKEHAM
GROUP

"Thakeham is proud of its partnership with Vaillant Group UK. Having worked closely with Vaillant Group UK to develop a boiler specification that was cost efficient, beneficial for SAP calculations and worked with all standard house types.

"Thakeham is excited to continue this relationship and produce further successful results on future projects."

Adam Eaton,
Thakeham Group



"Having used other systems, I decided to move to Vaillant for this type of renewable solution because the company offers a broad product range, and access to invaluable technical resources, to help with the system design and commissioning.

"The 15kW aroTHERM heat pump was the ideal solution for the care homes we were constructing. With no mains gas, we needed to think of an alternative energy source and we are delighted with the sustainability, reliability and running cost benefits that aroTHERM provides. In addition, attending the training courses on offer at Vaillant's Centre of Excellence has been invaluable for my team as we learn more about the system, its capabilities and its best use."

John Ryan,
John Ryan Developments Ltd.

ecoFIT sustain

Combi, system and open vent boilers



Overview

The ecoFIT sustain is an ErP A rated range of boilers designed specifically for the specification market. It has a wide range of outputs in combi, open vent and system models.

All ecoFIT sustain models have high quality components, including an automotive-grade aluminium heat exchanger that means it is light and easy to install. The use of aluminium means that the ecoFIT delivers a high SAP rating and ensures compliance with the latest building regulations. It also means lower bills and energy use. It is low maintenance, so offers predictable cost of ownership.

All of these features bring peace of mind, whatever your specification requirements.

In addition, the ecoFIT sustain has rear and top flue options whilst being compact enough to fit neatly into a cupboard.

All ecoFIT boilers are compatible with a wide range of Vaillant controls, including the vSMART™ app-based control and wired and wireless room thermostats.

Vaillant is proud to have received the Quiet Mark™ for the combi model in the ecoFIT sustain range.



ecoFIT sustain 25, 30 and 35kW

Key features and benefits

- **Cupboard fit**
Compact size for all models offers flexibility of siting, including the option to cupboard fit
- **Choice of rear or top flue**
For flexible siting options in a wide variety of properties
- **High SAP performance**
Highly efficient and economical to run – up to an 89.3% efficiency rating (SAP 2009)
- **High-quality lightweight aluminium heat exchanger**
Lightweight, compact design offers long life with an excellent power-to-weight ratio to make installs/maintenance easier
- **Heat exchanger includes patented 4-sided cooling**
Increases efficiency and reduces stress to minimise the cost of maintenance over the life of the product
- **Familiar Vaillant diagnostics**
Offers quick and easy maintenance
- **Patented condensate trap**
Easy install with a safety back-up

- **Fully modulating low NOx burner and fan**
For improved energy efficiency
- **Grundfos high-efficiency pump**
The combi and system models have a modulating high-torque pump that uses low energy to deliver a balanced output to meet the boiler demand, helping to reduce energy consumption
- **Built-in two-stage frost protection**
To ensure optimal performance all year round
- **Warm start function (combi model only)**
Provides instant hot water instant hot water
- **Modulation range of up to 1:5**
Ensures low energy consumption and maximum efficiency
- **Clear bright LCD display**
Easy-to-read boiler display wherever it is sited
- **Flexible flueing options**
60/100 flues up to 10m and 80/125 flues up to 25m
- **Enhanced weather compensation (combi only)**
Compatible with the VRC 693 outdoor sensor for enhanced performance and compliance with Boiler Plus

Vaillant controls have been designed to maximise the performance of the heating system

For full details of our range of compatible controls, please see page 26-31
All Vaillant boilers are compatible with third party controls.

Heating controls:



vSMART™
App controlled, programmable room thermostat



VRT 350
VRT 350f
Wall mounted, programmable room thermostat (wired and wireless options)



VRT 50
Intelligent digital room thermostat



timesWITCH 150
Fascia mounted analogue timer

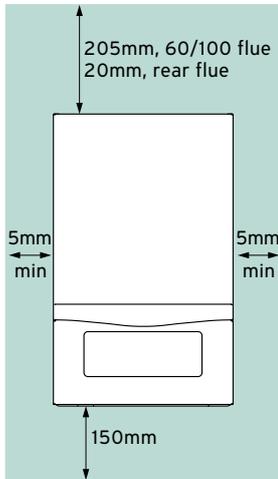
Compatible with combi boilers only.

Technical data

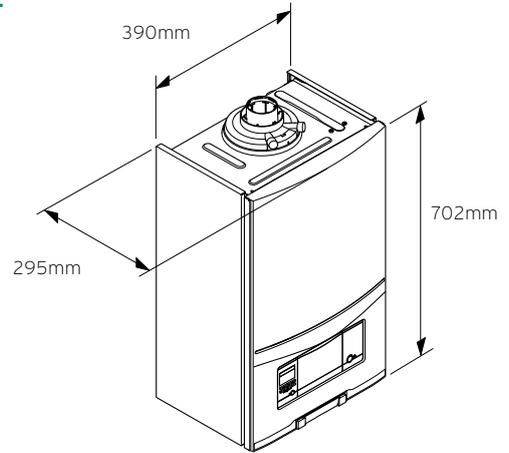
ecoFIT sustain combi boiler 25, 30 and 35kW



Clearances:

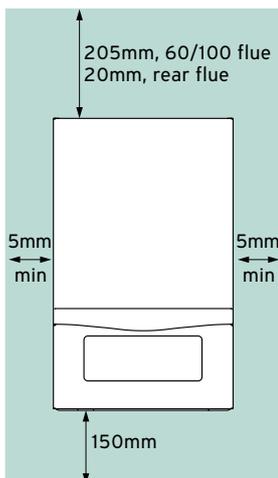


Dimensions:

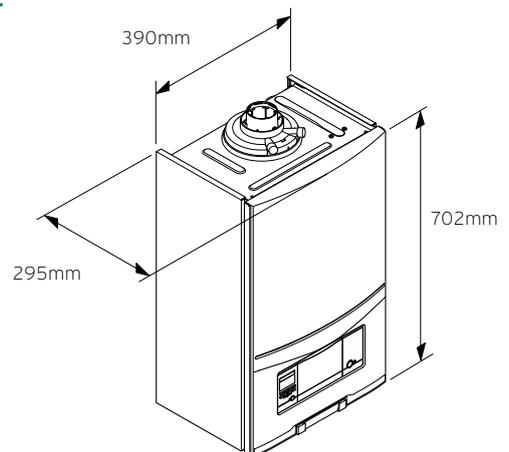


ecoFIT sustain system boiler 15, 18 and 30kW

Clearances:

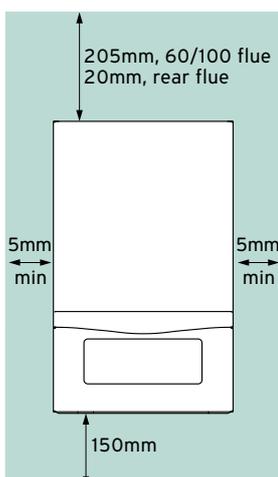


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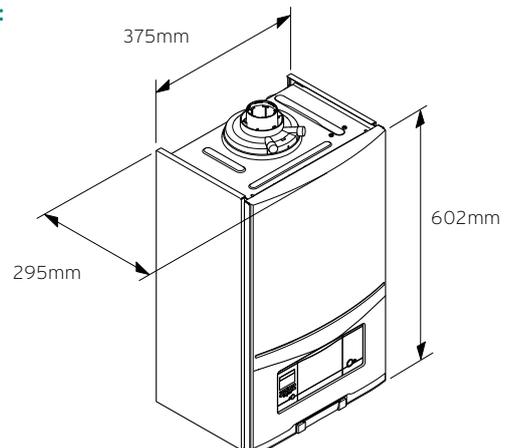


ecoFIT sustain open vent boiler 15, 18 and 30kW

Clearances:



Dimensions:



Note: A minimum of 600mm clearance in front of the boiler is required to enable easy access for servicing. This can be reduced to 5mm if fitted behind removable door/panel.

Technical data	Unit of measure	25kW combi	30kW combi	35kW combi
Article number		0010020392	0010020393	0010020394
PCDB number		017958	017959	017960
Boiler dimensions (HxWxD)	mm	702 x 390 x 295	702 x 390 x 295	702 x 390 x 295
Flue options		Top / rear	Top / rear	Top / rear
Maximum flue length (60/100) horizontal/vertical	m	10 / 10	10 / 10	10 / 10
Maximum flue length (80/125) horizontal/vertical	m	25 / 25	25 / 25	25 / 25
Boiler lift weight - dry boiler	kg	32	33	33
Nominal heat output range at 50/30 °C (condensing mode)	kW	5.3 - 19.1	6.3 - 19.1	7.5 - 19.1
Nominal heat output range at 80/60 °C (condensing mode)	kW	5.1 - 18.3	6.1 - 18.3	7.2 - 18.3
Maximum flow temperature	°C	80	80	80
Flow temperature range	°C	10 - 80	10 - 80	10 - 80
Domestic hot water flow rate (at ΔT = 35K)	l/min	10.4	12.2	14.1
Flow temperature factory setting	°C	75	75	75
PCDB seasonal efficiency (SAP 2012)	%	89.3	89.3	89.3
ErP efficiency	%	93	93	93
ErP rating (heating/hot water)	A+++ - D/A+ - F			
Sound power/ErP decibel rating	dB(A)	49	44	45
NOx (En 15502-2-1)	mg/kWh	39	38	37
		15kW system	18kW system	30kW system
Article number		0010025271	0010025272	0010025273
PCDB number		18403	18404	18405
Boiler dimensions (HxWxD)	mm	702 x 390 x 295	702 x 390 x 295	702 x 390 x 295
Flue options		Top / rear	Top / rear	Top / rear
Maximum flue length (60/100) horizontal/vertical	m	10 / 10	10 / 10	10 / 10
Maximum flue length (80/125) horizontal/vertical	m	25 / 25	25 / 25	25 / 25
Boiler lift weight - dry boiler	kg	31	31	32
Nominal heat output range at 50/30 °C (condensing mode)	kW	4.7 - 15.9	5.2 - 19.1	7.5 - 31.8
Nominal heat output range at 80/60 °C (condensing mode)	kW	4.5 - 15.2	5.0 - 18.3	7.2 - 30.5
Maximum flow temperature	°C	80	80	80
Flow temperature range	°C	10 - 80	10 - 80	10 - 80
Flow temperature factory setting	°C	75	75	75
PCDB seasonal efficiency (SAP 2012)	%	89.8	89.7	89.8
ErP efficiency	%	94	94	94
ErP rating (heating)	A+++ - D/A+ - F			
Sound power/ErP decibel rating	dB(A)	48	49	54
NOx (En 15502-2-1)	mg/kWh	33	39	40
		15kW open vent	18kW open vent	30kW open vent
Article number		0010025274	0010025275	0010025276
PCDB number		18400	18401	18402
Boiler dimensions (HxWxD)	mm	602 x 375 x 295	602 x 375 x 295	602 x 375 x 295
Flue options		Top / rear	Top / rear	Top / rear
Maximum flue length (60/100) horizontal/vertical	m	10 / 10	10 / 10	10 / 10
Maximum flue length (80/125) horizontal/vertical	m	25 / 25	25 / 25	25 / 25
Boiler lift weight - dry boiler	kg	22	22	22
Nominal heat output range at 50/30 °C (condensing mode)	kW	4.7 - 15.9	5.2 - 19.1	7.4 - 31.8
Nominal heat output range at 80/60 °C (condensing mode)	kW	4.5 - 15.2	5.0 - 18.3	7.1 - 30.5
Maximum flow temperature	°C	80	80	80
Flow temperature range	°C	10 - 80	10 - 80	10 - 80
Flow temperature factory setting	°C	75	75	75
PCDB seasonal efficiency (SAP 2012)	%	89.8	89.7	89.8
ErP efficiency	%	94	94	94
ErP rating (heating)	A+++ - D/A+ - F			
Sound power/ErP decibel rating	dB(A)	48	51	55
NOx (En 15502-2-1)	mg/kWh	33	39	40

* Vaillant combi boilers are fitted with a flow regulator set to achieve a temperature rise of 42°C. This maintains comfortable bathing and showering during the colder months of the year.

ecoTEC sustain

Combi boilers



Overview

The ecoTEC sustain range of combi boilers has been designed especially for the specification market with ease of use, longevity and low maintenance in mind.

It has the same footprint as the ecoTEC pro, making it ideal for replacement, retrofit and new installations. ecoTEC sustain boilers have removable side panels and a push-fit flue system. Each model has a uniquely designed condensate trap with a safety back-up.

These features are designed to make the boiler components easy to access for quicker and simpler installation and maintenance.

The ecoTEC sustain has a highly efficient stainless steel heat exchanger that delivers a high SAP rating. This ensures compliance with building regulations and saves energy, lowering bills for occupiers.

A large, easy-to-read illuminated LED display with a simple interface makes the ecoTEC sustain easy to operate wherever it is sited.



ecoTEC sustain 24, 28 and 34kW

Key features and benefits

- **Compact dimensions**
720mm (H) x 440mm (W) x 338mm (D)
For flexible siting options (ecoTEC sustain is the same size as ecoTEC pro)
- **High-quality heat exchanger**
Stainless steel heat exchanger designed for long life and easy maintenance
- **Removable side panels and push-fit flue system**
For improved accessibility and ease of installation
- **Modulating low NOx burner and fan**
Lower carbon emissions help specifiers to meet their carbon reduction targets
- **Grundfos high-efficiency pump**
Modulating high-torque pump uses less energy, reducing carbon outputs and energy bills

- **Patented condensate trap**
Easy install with a safety back-up
- **Large illuminated blue on black LED display**
Easy-to-read boiler display wherever it is sited with simple fault code identifications
- **Compatible with aroTHERM air-to-water heat pump hybrid system**
The perfect entry into renewable systems
- **Familiar footprint and flue position**
Makes replacing an existing ecoTEC pro with an ecoTEC sustain quicker and easier; compatible with all existing Vaillant flue components
- **ErP 'A' rated product**
Suitable for both refurbishment and new build specifications, reducing energy use and bills
- **Front access for service and maintenance**
For quick and efficient access once installed in a property

Vaillant controls have been designed to maximise the performance of the heating system

For full details of our range of compatible controls, please see page 26-31
All Vaillant boilers are compatible with third party controls.

Heating controls:



vSMART™

App controlled, programmable room thermostat with weather compensation to reduce energy use



VRT 350 / VRT 350f

Wall mounted, programmable room thermostat (wired and wireless options)



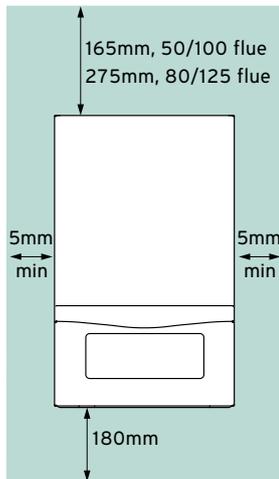
VRC 693

Outdoor sensor enables weather compensation functionality for ecoFIT and ecoTEC sustain boilers

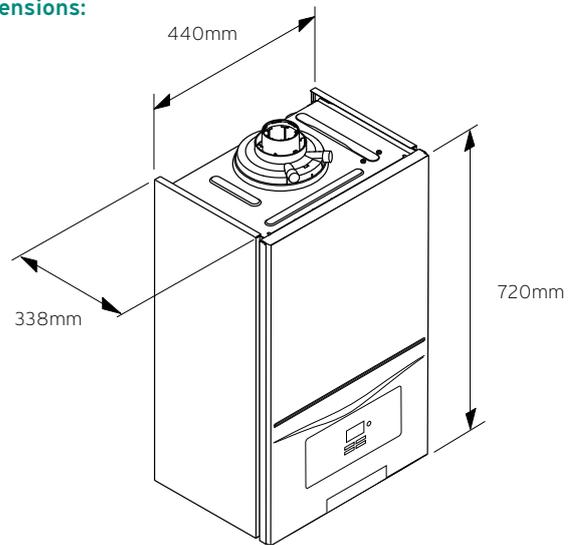
Technical data

ecoTEC sustain combination boilers 24, 28 and 34kW

Clearances:



Dimensions:



Note: A 500mm front clearance is recommended to allow easy access during inspection and maintenance

Technical data	Unit of measure	24kW combi	28kW combi	34kW combi
Article number		0010019980	0010019981	0010019982
PCDB number		18118	18119	18120
Boiler dimensions (HxWxD)	mm	720 x 440 x 338	720 x 440 x 338	720 x 440 x 338
Flue options		Top	Top	Top
Maximum flue length 60/100) horizontal/vertical	m	9 / 10	9 / 10	10 / 11
Maximum flue length (80/125) horizontal/vertical	m	23 / 23	28 / 28	31 / 31
Boiler lift weight - dry boiler	kg	30.8	30.8	32.8
Nominal heat output range at 50/30°C (condensing mode)	kW	7.0 - 20.1	8.0 - 20.1	9.1 - 19.9
Nominal heat output range at 80/60°C (condensing mode)	kW	6.4 - 18.5	7.4 - 18.5	8.4 - 18.5
Maximum flow temperature	°C	80	80	80
Flow temperature range	°C	30 - 80	30 - 80	30 - 80
Domestic hot water flow rate (at ΔT = 35K)	l/min	9.9	11.6	14.1
Flow temperature factory setting	°C	75	75	75
PCDB seasonal efficiency (SAP 2012)	%	89.2	89.1	89.2
ErP efficiency	%	92	92	92
ErP rating (heating/hot water)	A+++ - D/A+ - F	A/A	A/A	A/A
Sound power/ErP decibel rating	dB(A)	49	48	43
NOx (En 15502-2-1)	mg/kWh	33	34	31

* Vaillant combi boilers are fitted with a flow regulator set to achieve a temperature rise of 42°C. This maintains comfortable bathing and showering during the colder months of the year.

Introducing Green iQ



A smart badge: Green iQ

The Vaillant brand demonstrates the philosophy of the Vaillant Group with the development of our flagship ecoTEC exclusive range of boilers and heat pumps with Green iQ. We are proud that these products are incredibly efficient, have a low carbon footprint, are more than 85% recyclable and are engineered to be networked for the future.

The products under the Green iQ umbrella combine our complete range of smart technologies and features to provide great performance.

flexoTHERM is the heat pump in the Green iQ range, and can be connected to any of three thermal sources: water, air or ground source. It comes in outputs from 5kW to 19kW, is supremely efficient and quiet, and can be cascaded for larger properties.

The ecoTEC exclusive with Green iQ range of boilers intelligently manages energy consumption and output. This ensures the components of each boiler only work as hard as required to ensure optimum performance. Components will therefore last longer and be more reliable, reducing overall maintenance costs.

The ecoTEC exclusive with Green iQ boiler range consists of two large output combi models with a host of features including extra condense technology. The system boiler in the range includes an integrated diverter valve, a first for Vaillant UK.



ecoTEC exclusive with Green iQ

Combi and system boilers



Overview

The ecoTEC exclusive is our first ever boiler range with the Green iQ technology. Combining our complete range of smart technologies and features, you can be sure you're fitting the very best when you fit an ecoTEC exclusive combi or system boiler.

As well as providing great performance, the ecoTEC exclusive intelligently manages consumption and output to keep all its components running at peak performance, for longer, providing a low maintenance solution that you can rely on.

The combi range features 35kW and 43kW models, which can deliver much higher than average central heating outputs and hot water flow rates, making the ecoTEC exclusive a must have for larger properties. Additionally, the design of the ecoTEC exclusive combination boilers allows domestic hot water to be pre-heated using what would be wasted flue gas energy (full heat condense). This makes the boiler best in class for efficiency and Boiler Plus compliant out of the box.

All models in the ecoTEC exclusive range have patented high quality stainless steel heat exchangers that provide superior heat transfer and highly efficient performance.

The ecoTEC exclusive system boiler includes an integrated diverter valve for the first time in a Vaillant UK product.



ecoTEC exclusive with Green iQ

Key features and benefits

- **Extra condense stainless steel heat exchanger**
Taking overall combi boiler efficiency to the next level, and almost eliminating plume in DHW mode
- **Boiler Plus compliant out of the box**
Integrated flue gas heat recovery uses extra condense heat exchanger to deliver market leading efficiency
- **Green iQ mode**
Outstanding eco-credentials that optimise running cycles, resulting in even lower gas consumption
- **Highly recyclable**
ecoTEC exclusive is more than 85% recyclable at the end of its life
- **Premium quality components**
Including brass diverter valve, ensuring highest reliability and performance
- **Wide modulation range of up to 1:10**
Adapts perfectly to all systems in every situation, ensuring lowest fuel bills for your customers

- **Awarded Quiet Mark accreditation**
One of the quietest boilers on the market, designed for a peaceful home
- **Step by step full text installation wizard**
For quicker, "first time right" set up and installation
- **High output 43kW combi model available**
Delivers Vaillant's highest ever flow rate
- **All-gas system**
As a self-adaptive system, it automatically adjusts to all types of gas including LPG for off-gas areas
- **Compatible with Vaillant's range of intelligent controls**
Delivers an easy to use and energy efficient system, saving money on energy bills
- **Self diagnostic combustion intelligence**
Includes flame lift detection for more efficient and quieter combustion

Vaillant controls have been designed to maximise the performance of the heating system

For full details of our range of compatible controls, please see page 26-31
All Vaillant boilers are compatible with third party controls.

Heating controls:



vSMART™

App controlled, programmable room thermostat



VRT 350 / VRT 350f

Wall mounted, programmable room thermostat (wired and wireless options)



VRT 50

Intelligent digital room thermostat



timesWITCH 150

Fascia mounted analogue timer



VRC 700 / 700f

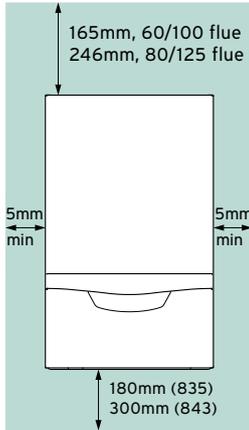
The complete intelligent control for your central heating and hot water

Compatible with combi boilers only.

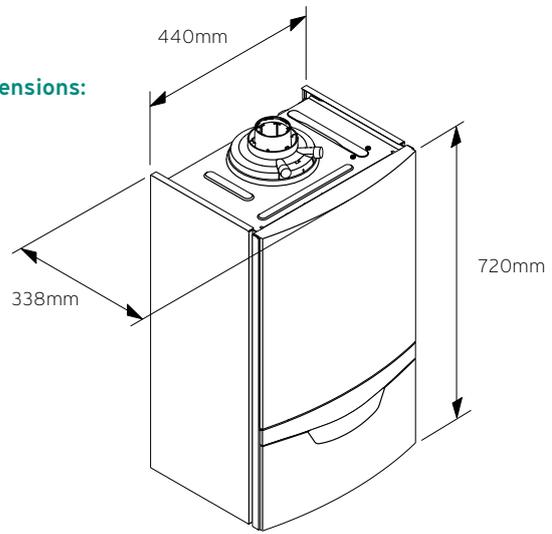
Technical data

ecoTEC exclusive with Green iQ 35 and 43kW combi, and 27kW system

Clearances:



Dimensions:



Note: A minimum of 500mm clearance in front of the boiler is required to enable easy access for servicing. This can be reduced to 5mm if fitted behind removable door/panel.

Technical data	Unit of measure	35kW combi	43kW combi	27kW system
Article number		0010017064	0010017065	0010017063
PCDB number		17953	17954	17952
Boiler dimensions (HxWxD)	mm	720 x 440 x 406	720 x 440 x 474	720 x 440 x 338
Flue options		Top	Top	Top
Maximum flue length 60/100 horizontal/vertical	m	5.5 / 8	5.5 / 8	5.5 / 8
Maximum flue length (80/125) horizontal/vertical	m	32 / 34	32 / 34	32 / 34
Boiler lift weight - dry boiler	kg	47.5	55.0	37.5
Nominal heat output range at 50/30°C (condensing mode)	kW	3.9 - 26.4	4.8 - 36.0	3.4 - 26.7
Nominal heat output range at 80/60°C (condensing mode)	kW	3.4 - 24.6	4.3 - 33.4	3.0 - 24.7
Maximum flow temperature	°C	85	85	85
Flow temperature range	°C	30 - 80	30 - 80	30 - 80
Domestic hot water flow rate (at ΔT = 35K)	l/min	14.5	17.8	N/A
Flow temperature factory setting	°C	75	75	75
PCDB seasonal efficiency (SAP 2012)	%	89.7	89.6	89.6
ErP efficiency	%	94	94	94
ErP rating (heating/hot water)	A+++ - D/A+ - F	A/A	A/A	A
Sound power/ErP decibel rating	dB(A)	43	51	46
NOx (En 15502-2-1)	mg/kWh	35	36	30

* Vaillant combi boilers are fitted with a flow regulator set to achieve a temperature rise of 42°C. This maintains comfortable bathing and showering during the colder months of the year.

VR 100 Social Housing Gateway



Overview

The Social Housing Gateway is a scalable solution that integrates into existing property portfolio management tools to provide the data needed so landlords can pro-actively manage the heating in their housing stock.

The VR 100 GSM* Gateway allows landlords to intelligently manage boiler stocks by using boiler data to make informed decisions that can drive business and operational efficiencies. It monitors data points on compatible boilers and controls in the portfolio to provide insights on the health and status of the boilers it's connected to. These insights are combined with historical data that Vaillant has collected since 2006. This means the Social Housing Gateway can recommend fixes and parts required to help landlords maintain their stock as efficiently as possible. This data also gives insight into energy usage that can help landlords advise their tenants on their energy consumption.

* The Global System for Mobile Communications is a standard developed by the European Telecommunications Standards Institute to describe the protocols for second-generation digital cellular networks used by mobile devices such as mobile phones and tablets.

Why is energy monitoring so important?

According to the Energy Saving Trust, heating accounts for about 55% of the energy bill. So having visibility of how much gas consumption is being used is a pro-active method of managing the heating costs.

Vaillant is dedicated to supporting the fight against fuel poverty, whilst helping customers improve the standard of living for social housing tenants.

Sample of available data points

Example

Appliance data



- Energy consumption (gas/electric - CH/DHW)
- Current status & fault code
- Service timer
- kW output for DHW & CH
- Number of burner starts (CH & DHW)
- Primary flow & return (CH & DHW)
- Current hot water temperature
- System water pressure
- Diverter valve position
- Serial number(s) & year of production
- Appliance model
- Operating hours (CH & DHW)
- Guarantee status

Example

Control data



- Time and date
- Current operation mode
- Target room temperatures
- Current indoor / outdoor temperature
- Installer contact details (name & number)
- Heating program (Mon to Sun)
- Heating scheduled setpoints (Mon to Sun)
- Holiday start date & end date
- Holiday setback temperature
- DHW program (Mon to Sun)
- DHW set point
- Heating curve
- Maintenance date

The Social Housing Gateway provides the insights to:

- Receive gas consumption metrics (+/- 10%)
- Use consumption data to set targets to keep energy costs down
- Remotely control the boiler so when tenants are away, you can ensure the heating appliance is turned off and saving money
- Receive boiler modulation levels to see how efficiently the boiler is
- Detect under-performing boilers which are using too much energy
- Identify irregular energy use when tenants are using excess energy

Key features and benefits

• Fault notifications

Instant notification of faults means landlords can act quickly, sometimes even before the tenant is aware of an issue. Error messages are received 15 minutes after an error occurs and status data is sent daily. In addition, up to 50 data requests can be supplied on-demand per device per month

• Improving first-time fix rates

Fix recommendations are provided and spare parts identified ahead of visits

• Open API

Vaillant's open API seamlessly integrates into existing work/asset management systems

• eSIM technology

An eSIM in each VR 100 Gateway ensures a strong and secure connection at all times, with no need to access tenants' Wi-Fi. The eSIM card is updated remotely when changes are made to mobile networks, such as from 2G to LTE: no changes to the hardware are necessary

• JSON readable format

Data is transmitted in JSON format - the most widely recognised format in the industry

• Simple installation

Discreet and non-branded, the VR 100 Gateway plugs straight onto the PCB board via the X31 or X32 edge connection

• Boiler compatibility

Currently compatible with the ecoFIT sustain, ecoTEC sustain, ecoTEC exclusive with Green iQ and ecoTEC pro ranges of boilers (dating back to 2006)

• Control compatibility

View and remotely manage desired control parameters

• Global System for Mobile Communications (GSM)

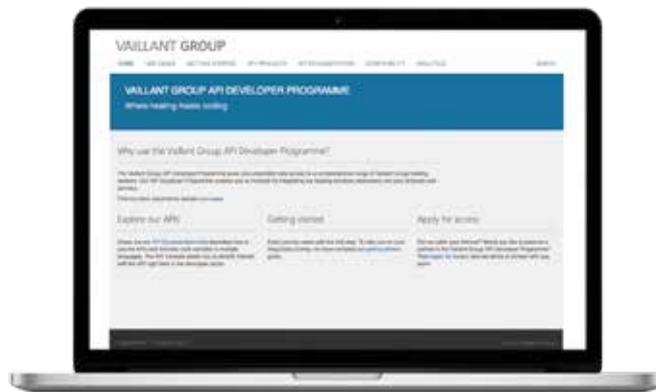
This is the standard developed by the European Telecommunications Standards Institute (ETSI) to describe the protocols for second-generation (2G) digital cellular networks used by mobile devices such as mobile phones and tablets. The VR 100 uses a GSM network that offers a strong and secure connection and comes with a 10 year prepaid mobile data contract

API integration

What's an Application Programming Interface (API)?

An API is a software library with a set of functions and procedures that allow the creation of applications that access the features or data of an operating system, application, or other service. Essentially, it allows for seamless communication between the VR 100 and existing software systems.

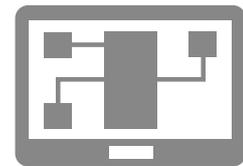
All of Vaillant Group's APIs are implemented as REST-APIs and are in JSON readable format.



Vaillant Cloud



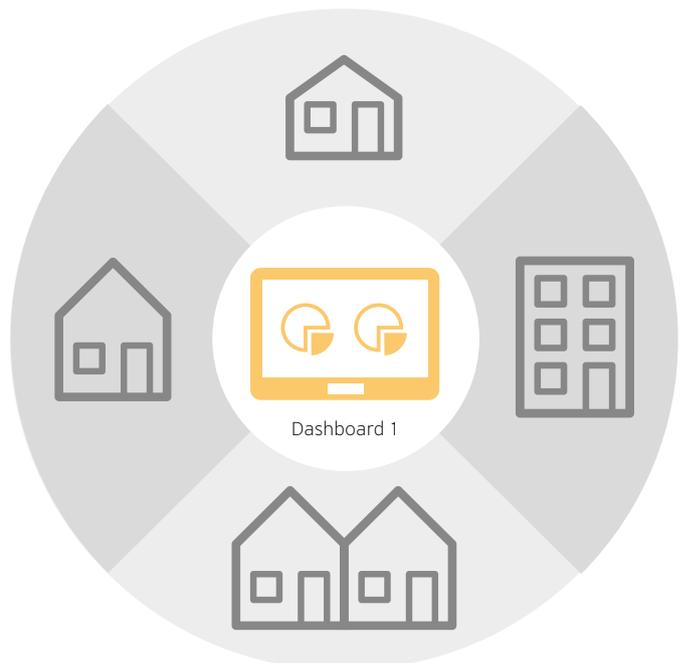
Vaillant REST API



Current asset/workforce management platform

Key features and benefits

- **Clear choice for scaling IoT**
No requirement for managing multiple manufacturers' portals: everything can be managed from within your existing software and processes
- **Notifications**
Never miss a notification due to having to manage multiple manufacturers' portals
- **Total data and development flexibility**
Complete flexibility to develop the additional insights from the data provided as required
- **Reduced training requirements**
Integration into existing systems means staff won't need training on a new system or portal



eSIM technology

Future proof for network changes

The VR 100 GSM Gateway comes equipped with a future proof eSIM card that is designed to be updated remotely when the mobile networks inevitably change over the coming years from 2G to LTE. Due to this you do not need to change any sim cards or replace any hardware when changes to the mobile network are carried out.

Compatibility

The Social Housing Gateway is compatible with most Vaillant boilers* and can be used in two ways: as a standalone Gateway only or with a VRT 350 (traditional) control. Alternatively, it can be used in conjunction with the vSMART app-based control, although this option requires a WiFi connection.

* Compatible with all sustain, pro and exclusive models

Hardware solutions

<p>Option 1</p> <p>VR 100 Gateway</p>  <p>GSM solution</p>	<p>Option 2</p> <p>VR 100 Gateway VRT 350 control</p>  <p>GSM solution with traditional control</p>	<p>Option 3</p> <p>vSMART</p>  <p>WiFi solution</p>
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Trial portal - socialASSIST

Vaillant has created a trial portal for customers who want to test this service before committing to full integration with existing portfolio management tools.

The socialASSIST trial portal is compatible with the VRT 350 control (only) and is available for free for up to six months. This time period will give valuable insight into the value of the data and the benefits of the Social Housing Gateway.

For more information, speak to your Vaillant Specification Manager.

<p>Key features and benefits</p> <p>View boiler health information</p> <ul style="list-style-type: none">• Flow and return temperatures• kW DHW output• kW CH output• System water pressure	<p>Fault alerts</p> <ul style="list-style-type: none">• Fault alerts are delivered directly to the portal for instant analysis and action <p>Export jobs</p> <ul style="list-style-type: none">• Ability to send notifications to service and repair engineers
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Vaillant's products are secured and protected to the highest level.

Vaillant is proud to partner with Microsoft®, using the Microsoft Azure Cloud to provide multi-layered security to ensure the ultimate data protection service.

Additionally, Vaillant's products are approved by VDE, an independent association that certifies electro-technical equipment fulfils legal protection requirements.

Controls



Controls are an essential part of all heating systems

We always recommend our appliances are fitted with a Vaillant control. Vaillant has a wide range of controls and each uses eBUS, technology that enables each element of a Vaillant system to communicate to ensure it's always working with ultimate efficiency.

Vaillant's controls range from simple analogue controls to app-controlled models that can be integrated with smart home systems and alert you to faults. All of our controls come with load compensation as standard. Every Vaillant heating appliance can be matched with the perfect control to ensure compliance with Boiler Plus legislation.

As well as allowing the user to choose the times their heating and/or hot water switches on or off, controls can set preferred temperature parameters. Controls can also monitor weather conditions in a variety of ways; either by using data from weather forecasts or by using an external sensor. For Vaillant controls, this means the control can take this information and modulate the output of the boiler to deliver the most efficient flow rate to reach the desired temperature. This modulation reduces energy use and carbon outputs that reduce bills while increasing the longevity of the boiler.



The VDE institute is an independent and neutral European technical-scientific association that assesses products and services for smart home security.

All of Vaillant's products have been rigorously tested and have met VDE's strict testing criteria for approval by the Institute. You can therefore rest assured that any data used by Vaillant products is protected and secure.



Search for Vaillant on Google Play or the App Store

Traditional digital controls



timeSWITCH 160

Vaillant digital plug-in controls have been designed to be easy to use. They allow users to choose three heating and hot water time periods over the course of a day. Whilst feeling familiar, they do also offer intelligent functionality via the eBUS language.



VRT 15

Vaillant room controls have been designed to feel familiar and be easy to use. This 230Vac thermostat offers intelligent functionality with Vaillant's eBUS technology.

Note: These traditional controls should always be used together and are suitable for open vent and system boilers only. These controls do not comply with Boiler Plus out of the box

Key features and benefits

- **Simplistic menu layout**
Easy to set heating and hot water time programs
- **Flexible time programs**
Three heating and three hot water time periods can be set for each week or 24 hour period
- **Quick mode selection**
Quick mode selection easily overrides heating and hot water schedules without making any changes to set programs
- **Service, maintenance and fault indicator**
Appliance service, fault and maintenance indication is displayed on the screen
- **Clear, high contrast backlit display**
Blue backlit display uses proven technology to offer outstanding contrast and low energy use
- **Automatic daylight saving**
Automatically adjusts to British summer/winter time

Key features and benefits

- **Holiday function**
Holiday mode ensures heating is off whilst you're away and ready for your return
- **Discreet plug-in timer**
Plugs directly into the fascia of the Vaillant boiler without the need for any cable harnesses
- **Easily control traditional S and Y plan systems**
Can control either an S or a Y plan system when used with our VR 66 wiring centre

Traditional controls



timeSWITCH 150

Vaillant traditional mechanical controls have been designed to be easy to use and feel familiar, all whilst automatically offering advanced intelligent functionality for our combi boilers (only).



VRT 50

This easy-to-use digital thermostat has a familiar design that shows the current room temperature. It is more efficient than an analogue thermostat and allows for easy changes to the desired temperature. It uses Vaillant's eBUS technology for enhanced functionality and to ensure compatibility with the timeSWITCH 150.

Note: To comply with Boiler Plus, the timeSWITCH 150 and VRT 50 must be used together.

Key features and benefits

- **Easy to use**
Simple 24 hour timer allows for easy programming, with up to 48 heating on/off times
- **Traditional familiar mechanical timer**
Sliding tappets and a large analogue clock display for easy setting of your time programs
- **Simple override function**
Manual override does not adjust the time program when the temperature is in the Off and Constant On heating modes
- **Quick mode selection**
Heating mode selection dial to enable easy switching between Off, Constant On and Timed modes
- **Time periods as short as 15 minutes**
15 minute time intervals for flexible setting of time programs
- **Discreet**
Plugs directly into the fascia of the Vaillant boiler without the need for any cable harnesses

Key features and benefits

- **Boiler modulation with our eBUS protocol**
Takes advantage of Vaillant's eBUS protocol to take total control of your Vaillant boiler
- **Enhanced load compensation**
Uses enhanced load compensation to adjust the output of your Vaillant boiler, ensuring it only uses the energy it needs to
- **Service, maintenance and fault indicator**
Appliance service, fault and maintenance indication is displayed on the screen
- **Clear digital display**
With 0.5°C temperature intervals
- **Wide range of temperatures for your comfort**
The room temperature can be adjusted between 5 - 30°C
- **Simple installation often utilising existing cable**
Two core low voltage wired connection for simplicity

Load compensating control



VRT 350 / 350f

This elegant and sleek control enables seven days of comfort with three temperature settings throughout the day. This control will modulate your boiler to operate as cost efficiently as possible.

Vaillant programmable thermostat controls have been designed to be easy to use and feel familiar whilst automatically offering advanced functionality. The VRT 350 is available in a wireless model (VRT 350f).

The blue backlit screen and plain text display make the VRT 350 easy and clear to understand. Only two push buttons and one rotary dial are needed to select and change data.

Plus, when you go on holiday the VRT 350 and VRT 350f have a holiday set-back function, which reduces the temperature in your property and heats it up before you come back home.

Key features and benefits

- **Boiler modulation with our eBUS protocol**

Takes advantage of Vaillant's eBUS protocol to take total control of your Vaillant boiler

- **Enhanced load compensation**

Enhanced load compensation ensures the boiler modulates so it only ever uses the energy it needs

- **Flexible time programs**

Three heating and hot water periods can be set for each week or 24 hour period

- **Quick mode selection**

This menu allow user to quickly override heating and hot water schedules without affecting set programs

- **Clear, high contrast backlit display**

Blue backlit display offers outstanding contrast and low energy consumption

- **Easy to use intuitive menu layout**

Simple to set heating and hot water programs

- **Fully compatible**

Compatible with Vaillant combi, system and open vent boilers

- **Easily control traditional S and Y plan systems**

Can control either an S or a Y plan system when used with our VR 66 wiring centre

- **Multizone option for S plan plus systems**

Multiple wired VRT 350 can be installed with our VR 66 wiring centre to provide two heating zones and hot water (S plan plus)

- **Service, maintenance and fault indicator**

Appliance service, fault and maintenance indication is displayed on the screen

- **Automatic daylight saving**

Automatically adjusts to British summer/winter time

- **Holiday function**

Ensure heating is turned off for the duration of your holiday, but back on in time for your return

- **Programs stored in memory permanently**

Holds times and temperature programs permanently, even in the event of power failure

Internet connected control



vSMART

vSMART is a wireless heating and hot water control that is managed via an app, allowing for control from a mobile device, anywhere, anytime.

vSMART can be installed in as little as 25 minutes. Quick-fit connections from the gateway wires are fed straight into the boiler, using our intelligent low voltage eBUS connection which requires easily available 0.75mm, 2 core cable.

The vSMART room thermostat can be either wall mounted or free-standing, depending on the homeowner's preference.

Simply search for Vaillant on Google Play or the App Store



Key features and benefits

- **Boiler modulation**

Vaillant's eBUS protocol ensures the boiler modulates for optimal efficiency and peak performance

- **Internet weather compensation**

Optimises system flow temperatures and efficiency based on the temperature outside your home

- **ErP class VI**

High ErP performance for up to 4% increased efficiency

- **Boiler Plus compatible**

Meets Boiler Plus requirements with ease due to being a smart, weather compensating and modulating control

- **Intelligent self-learning**

Immediately begins to learn the thermal behaviour of the building to better respond to your requirements

- **Android and Apple iOS application**

Easy remote control of heating and hot water via a mobile app

- **Multi-user sharing and multi-home control**

The app allows for multiple users to access one control. You can also use one app to connect to multiple controls, e.g. family home and holiday home

- **Electronic paper display**

Black and white display uses proven electronic paper technology offering outstanding contrast, resulting in crystal clear information. vSMART only uses power when the display is refreshed

- **Holiday function**

Preventing the heating from coming on whilst you are away and putting it back on ready for when you return

- **Multiple personalised usage profiles**

Profiles can be added, providing a completely tailored heating and hot water system

- **Wall mounted or table stand installation**

vSMART is delivered with a wall bracket and a table stand that enables the user to choose the perfect location

Weather compensating control



VRC 700 / 700f

Installing Vaillant system solutions has never been so easy!

The VRC 700 system control allows you to manage multi-zone heating and hot water systems. The VRC 700 effortlessly ensures your appliances are working to their peak performance and always maintaining optimum efficiency. Available in a wired version (VRC 700) or wireless version (VRC 700f) and with the addition of the VR920, the VRC 700 / 700f can be controlled via the smartphone app.

The VRC 700 control allows for a single interface, that will communicate and control all Vaillant appliances. The VRC 700 will automatically identify and use the most efficient, and therefore most cost effective product at any time.

Simply search for Vaillant on Google Play or the App Store



Key features and benefits

- **Boiler modulation**
eBUS connection to fully modulate the boiler, ensuring peak performance
- **Multiple heating circuits with domestic hot water control**
The wired VRC 700 control can control up to nine heating circuits and the wireless VRC 700f control can control up to three heating circuits
- **Individual zone control**
Compatible with ambiSENSE thermostatic radiator valves enabling up to 20 individually controlled rooms
- **Designed with simplicity and familiarity in mind**
Uses a familiar menu structure for ease of use
- **Takes care of all Vaillant equipment automatically**
When used on a hybrid system, it automatically chooses the most efficient and cost effective appliance in the system to deliver the most energy efficient solution
- **Flexible time programs**
Three heating and hot water programs can be set per week or 24 hour period
- **Holiday function**
Turns heating off while you're away and back on for when you return
- **Accepts on/off signals from third party devices**
Can interface with third party underfloor heating controls to provide total system flexibility
- **Clear, high contrast backlit display**
Blue backlit display uses proven technology for super clear information and low energy consumption
- **Programs stored in memory permanently**
Holds times and temperature programs permanently even in the event of a power failure
- **Works with S, S+ and W plan systems**
Can control S, S+ and W plan systems when used with our VR 70 and VR 71 wiring centres
- **Works with Y plan system**
Can control a Y plan system when used with our VR 66 wiring centre
- **Fully compatible**
Compatible with Vaillant combination, system and open vent boilers

Connected thermostatic radiator valve



ambiSENSE

ambiSENSE is the name of Vaillant's intelligent thermostatic radiator valves (TRVs). They fit onto radiators to control the temperature in the most precise way possible.

Controlled via an app, ambiSENSE TRVs allow users to create personalised heating schedules to ensure each room has its own temperature and timing programs.

The TRVs are fitted with a VRC 700 or VRC 700f, allowing for app based control. Up to 20 zones can be created.

ambiSENSE valves save energy as well as creating perfect comfort for each individual room.

Simply search for Vaillant on Google Play or the App Store



Key features and benefits

• Refined comfort

ambiSENSE works in conjunction with the VRC 700 system control to meet the personalised requirements of everyone in the home

• Control up to 20 valves

Each controller can work with up to 20 valves. Each valve head has its own signal booster, so distance from the controller is never a problem

• Control your system on the go

The VRC 700 app means that you can control your heating from your mobile device to boost or delay your heating if required

• Weather compensating

Automatically compensates for the weather outside using weather data via the VRC 700

• Easy to install

It's simple to replace standard TRVs with ambiSENSE smart valves. Full instructions are provided

• Up to seven devices per profile

Up to six valve heads and one thermostat can be fitted per room. They will automatically sync with each other

• Easily identify which room you want to control

Replace the symbol for the zone with a snapshot of that room for increased personalisation and clarity

• Detects open windows

If a window is open, the ambiSENSE valve head will detect this and stop trying to heat the room, saving you energy

• Manually alter the temperature

Turn the dial on the valve heads to directly alter the temperature for an hour without disrupting your time program

• Child lock

Prevent unscheduled temperature changes by activating the child lock through the app

• Clear digital display

Digital screen on the valve heads displaying the set temperature

Controls compatibility finder

Boiler	Zones	Heating system				Control				
		Weather/load compensation	Wired/wireless	Fascia mounted	App availability	timeSWITCH 150 (analogue, 24 hour)	timeSWITCH 160 **	VRT 350	VRT 350f	
Combi	1	Load	Wired	Yes	No	√*				
		N/A	Wired	Yes	No		√			
		Load	Wired	No	No			√		
		Load	Wireless	No	No				√	
		Weather	Wired	Yes	Yes					
		Weather	Wireless	Yes	Yes					
		Weather	Wireless	No	Yes					
	2	Load	Wired	No	No			√		
		Weather	Wired	Yes	Yes					
		Weather	Wireless	Yes	Yes					
	Multi	Weather	Wired	Yes	Yes					
		Weather	Wireless	Yes	Yes					
	System or open vent	1	Load	Wired	Yes	No	√*			
			N/A	Wired	Yes	No		√		
Load			Wired	No	No			√		
Load			Wireless	No	No				√	
Weather			Wired	Yes	Yes					
Weather			Wireless	Yes	Yes					
Weather			Wireless	No	Yes					
2		Load	Wired	No	No			√		
		Weather	Wired	Yes	Yes					
		Weather	Wireless	Yes	Yes					
Multi		Weather	Wired	Yes	Yes					
		Weather	Wireless	Yes	Yes					

* timeSWITCH 150 is not compatible with the ecoTEC sustain boiler range

** Not Boiler Plus compliant

Notes: When installing wireless controls/timeSWITCH 160 on the ecoTEC sustain, the receiver/timeSWITCH 160 must be installed externally to the boiler
 Unless otherwise stated all controls are digital and 7-day
 VRC 700 and VRC 700f are also compatible with heat pumps, hybrid and solar systems

			Wiring centre			Thermostat			
VRC 700	VRC 700f	vSMART	VR 66	VR 70	VR 71	VRT 15	VRT 50	VR 91	VR 91f
							✓		
						✓			
✓									
	✓								
		✓							
			✓						
✓				✓				✓	
	✓			✓					✓
✓					✓			✓	
	✓				✓				✓
			✓				✓		
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✓				✓				✓	
	✓			✓					✓
✓					✓			✓	
	✓				✓				✓

Vaillant flues and accessories



Overview

Vaillant has its own comprehensive range of flues and accessories. Vaillant's high quality flues and accessories must be used with installations of our boilers so that we can guarantee the quality of these items. The use of alternative flues and accessories will invalidate the guarantees of the other system components.

High rise flues

Following an amendment to the Building Regulations (England & Wales) due to the Grenfell disaster, no combustible material can be used for items passing through any external wall in high rise buildings. This effectively means that any boilers that have a polypropylene flue pipe cannot be installed through the wall due to the polypropylene inner exhaust part of the standard flue not being classed as A1 fire resistant to EN 13501-1:2018. In England and Wales, this applies to all floors in a building that is over 18 metres high. It is important to note that in Scotland, this legislation applies to buildings that are more than 11 metres high.

To ensure our customers can comply with this legislation, Vaillant now supplies a High Rise Flue Terminal Kit and an extension kit that are specifically engineered to achieve the fire resistance to meet New Building regulations (Part B) requirements of A1 rating to EN 13501-1:2018. The bespoke High Rise Flue Terminal Kit and extension piece are now available from merchants.

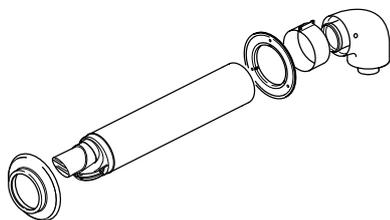
Maximum flue lengths

Technical data	Horizontal flues		Vertical flues	
Diameter	60/100 DN	80/125 DN	60/100 DN	80/125 DN
Combi boilers				
ecoTEC exclusive with Green iQ 35 and 43kW	5.5m	32m	8m	34m
ecoTEC sustain 24kW	9m	23m	10m	23m
ecoTEC sustain 28kW	9m	28m	10m	28m
ecoTEC sustain 34kW	10m	31m	11m	31m
ecoFIT sustain 25, 30 and 35kW	10m	25m	10m	25m
System boilers				
ecoTEC exclusive with Green iQ 27kW	5.5m	32m	8m	34m
ecoFIT sustain 15, 18 and 30kW	10m	25m	10m	25m
Open vent boilers				
ecoFIT sustain 15, 18 and 30kW	10m	25m	10m	25m

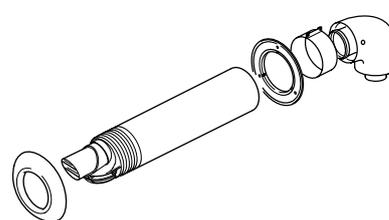
60/100 DN flue range

Component	Description	Unit of measure	Article number	Part number
			60/100 DN	80/125 DN
A	Bends (x2)	45°	303911	303211
B	Elbow	87°	303910	303210
C	Flue terminal for ridge tile		303982	-
D	Extension	2.0m	303905	-
E	Extension	4.0m	0020138174	-
F	Fixing clamp (x5)		303821	303616
G	Flue support clips (x5)		303935	-
H	Flue terminal kit (black)		0020219537	-
I	Horizontal flue kit	1.7m	0020219519	-
J	Horizontal flue kit		0020219517	303209
K	Horizontal telescopic flue kit		0020219518	-
L	Pitched roof tile flexible (black)		303980	303980
M	Pitched weather collar		009076	009076
N	Plume deflector kit (black)		0020219533	-
O	Plume deflector kit (white)		0020219534	-
R	Roof terminal (black)		0020223472	0020030797
S	Sliding sleeve		303915	303215
T	Variable termination kit (black)		0020219529	-
U	Variable termination kit (white)		0020219530	-
V	VTK elbow (x2) - (black)	45°	0020219551	-
W	VTK elbow (x2) - (white)	45°	0020219552	-
X	VTK elbow (black)	87°	0020219543	-
Y	VTK elbow (white)	87°	0020219544	-
Z	Flat roof weather collar		009056	009056
	Horizontal Terminal Kit DN60/100 ALU		0010035512	4024074890738
	High Rise Extension 1m DN60/100 SS		0010035514	4024074890622

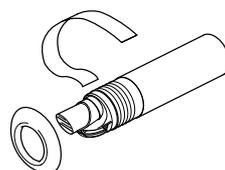
Standard top horizontal flue



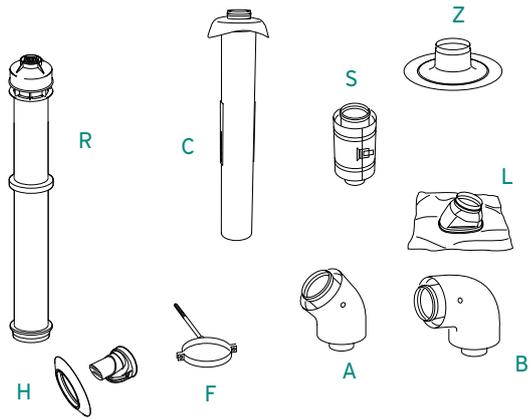
Horizontal telescopic flue



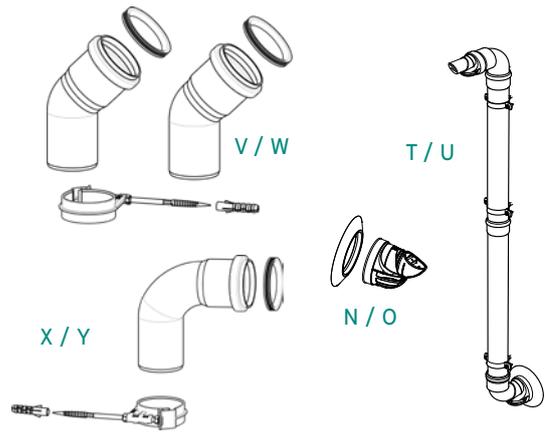
Direct rear flue kit



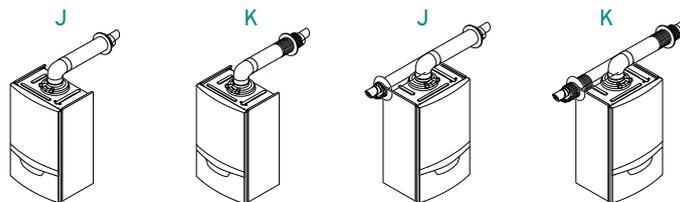
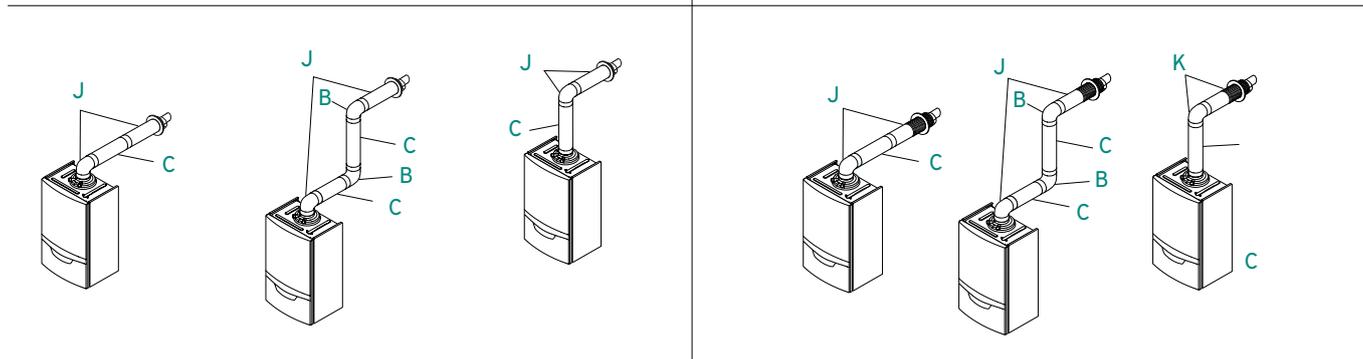
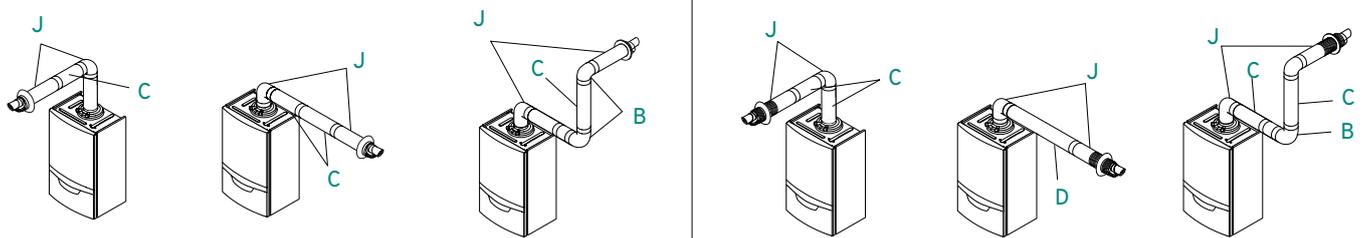
Vertical accessories



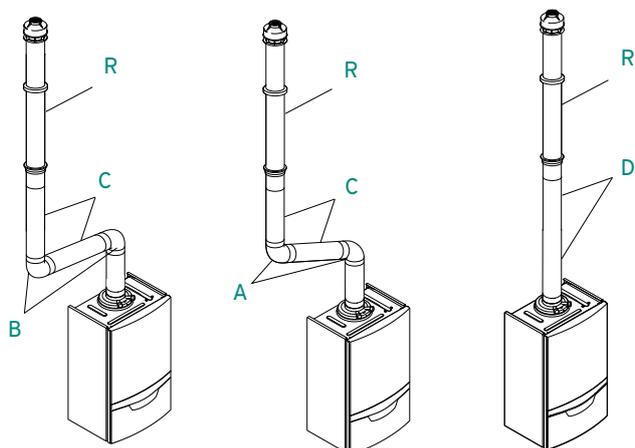
Variable termination kits



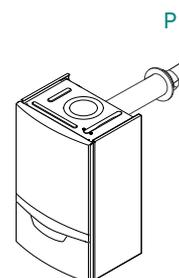
Horizontal flue configurations



Vertical flue configurations



Rear flue configuration (ecoFIT sustain only)



Terminal clearances



A	300	300mm adjacent to a boundary.
B	25	The dimension below eaves, balconies and car ports can be reduced to 25mm, as long as the flue terminal is extended to clear any overhang. External flue joints must be sealed with a suitable silicon sealant
C	1500	1500mm between a vertical flue terminal and a window or dormer window on a roof.
D	1200	1200mm between terminals facing each other.
E	300	Vertical flue clearance, 300mm adjacent to a boundary line.
F	600	600mm distance to a boundary line, unless it will cause a nuisance. BS 5440:Part 1 recommends that care is taken when siting terminal in relation to boundary lines.
G	300	300mm minimum clearance from a skylight to a vertical flue or to another vertical flue.
H	500 1500	Vertical flue clearance, 500mm to non-combustible building material, and 1500mm clearance to combustible building material
J	300	300mm above, below and either side of an opening door, air vent or opening window.
K	600	600mm diagonally to an opening door, air vent or opening window.
L	300	300mm to an internal or external corner.
M	2000	2000mm below a Velux window, 600mm above or to either side of the Velux window.
N	400	400mm from a pitched roof or 500mm in regions with heavy snowfall.
P	25	25mm from vertical drain pipes and soil pipes.
Q	200	200mm below eaves and 75mm below gutters, pipe and drains.
R	25	The dimensions below eaves, balconies and car ports can be reduced to 25mm, as long as the flue terminal is extended to clear any overhang. External flue joints must be sealed with suitable silicon sealant.

S	300	300mm above adjacent ground or balcony.
T	600	600mm distance to a surface facing a terminal, unless it will cause a nuisance. BS 5440: Part 1 recommends that care is taken when siting terminals in relation to surfaces facing a terminal.
U	300	300mm clearance alongside another terminal
V	300	300mm above roof level
W	300	300mm min to vertical structure on roof, roof vent
X	2000	2000mm min. to opening in adjacent building
Y	600	600mm min. at an angle to a boundary which is not less than 300mm to the terminal.
Z	600	600mm min, measured to the nearest corner of the OPEN window.
Ab	300	No more than 300mm above ridge
Ba	300	Not less than 300mm below the opening window

- All measurements are the minimum clearances required.
- Terminals must be positioned so to avoid combustion products entering the building.
- Support the flue at approximately one metre intervals and at a change of direction, use suitable brackets and fixings.
- Installations in a car port aren't recommended. However, if this is unavoidable, the car port must have at least two open sides.
- The flue cannot be lower than 1 metre from the top of a light-well due to the build up of combustion products.
- Dimensions from a flue terminal to a fanned air inlet to be determined by the ventilation equipment.
- The terminal clearances are only applicable where the appliance has been installed, commissioned and maintained in line with the manufacturer's instructions.

Domestic hot water cylinders



Overview

Performance and reliability are what Vaillant is all about.

That's why our products have been expertly designed and engineered to work to their full potential together. Working in perfect harmony with all the Vaillant domestic boilers, the uniSTOR cylinder range uses state of the art, best in class insulation that provides ultimate efficiency.

Vaillant cylinders are tested in accordance with all industry standards. In addition, Vaillant fully supports and complies with the additional requirements of the Hot Water Association and the rigorous auditing process that ensures the highest quality standards are maintained.

Key features and benefits

- **Extended cylinder range**

Easy to select the right product required for the system

- **Slimline cylinders available**

Perfect for smaller spaces

- **Pre-plumbed cylinders**

For faster installation and time and money savings

- **Improved insulation**

Best in class ErP rating and very low heat loss

- **Metal outer jacket**

High quality protection for the cylinder that makes it easier to keep clean the cylinder and makes it easier to keep clean

- **Controls mounting plate**

For easy location of controls (pre-plumbed only)

- **In-line front connections**

For easy and neat installation

- **Adjustable feet**

For easy installation on uneven ground

- **Hidden cable duct** (not with slimline models)

Easy and neat wiring of cylinder

- **Un-vented kit and expansion vessel**

(supplied with product)

No additional cost to meet G3 requirements

- **25 year guarantee**

The shells of the cylinders have a 25 year guarantee for total peace of mind

- **Flexible**

Designed to work perfectly with Vaillant system and open vent boilers as well as heat pumps. Suitable for retro-fitting

uniSTOR slim-line pre-plumbed cylinder

Technical data	Unit of measure	120l	150l
Article number		0010019209	0010019210
Maximum height	mm	1427	1642
Diameter	mm	435	435
Un-vented kit	l	12	12
ErP	A+ - F	C	C
Heat loss	kW / 24hrs	1.68	1.80
Coil output	kW	16.4	16.1
Coil size		0.65	0.65
Primary flow rate	l/h	900	900
Re-heat (70%)	mins	15.2	18.4
Heat up 15 to 60C	mins	21.7	26.3
Actual water capacity	l	121	141
Weight empty	kg	49.5	53.6
Weight full	kg	171	195

uniSTOR pre-plumbed cylinder

Technical data	Unit of measure	180l	200l	250l	300l
Article number		0010019211	0010019212	0010019213	0010019214
Maximum height	mm	1165	1265	1535	1745
Diameter	mm	595	595	595	595
Un-vented kit	l	18	18	25	25
ErP	A+ - F	B	B	B	B
Heat loss	kW / 24hrs	1.11	1.22	1.41	1.59
Coil output	kW	17.1	16.9	16.6	16.5
Coil size		0.80	0.80	0.80	0.80
Primary flow rate	l/h	900	900	900	900
Re-heat (70%)	mins	20.7	22.1	30.3	34.0
Heat up 15 to 60C	mins	29.6	31.6	43.3	48.5
Actual water capacity	l	175	194	245	284
Weight empty	kg	59.0	61.2	70.9	76.0
Weight full	kg	234	255	316	360

uniSTOR standard cylinder

Technical data	Unit of measure	120l	150l	180l	200l	250l	300l
Article number		0020235265	0020235266	0020235267	0020235268	0020235269	0020235270
Maximum height	mm	840	1000	1165	1265	1535	1745
Diameter	mm	595	595	595	595	595	595
Un-vented kit	l	12	12	18	18	25	25
ErP	A+ - F	A	A	B	B	B	B
Heat loss	kW / 24hrs	0.83	1.00	1.11	1.22	1.41	1.59
Coil output	kW	15.8	17.2	17.1	16.9	16.6	16.5
Coil size		0.69	0.69	0.80	0.80	0.80	0.80
Primary flow rate	l/h	900	900	900	900	900	900
Re-heat (70%)	mins	14.3	18.6	20.7	22.1	30.3	34.0
Heat up 15 to 60C	mins	20.4	26.6	29.6	31.6	43.3	48.5
Actual water capacity	l	115	145	176	194	245	284
Weight empty	kg	33.0	36.0	40.0	42.0	52.0	56.0
Weight full	kg	148	181	216	236	297	340

Renewable and hybrid systems



Overview

Vaillant Group takes pride in designing and manufacturing its own range of renewable heating appliances.

We manufacture heat pumps that take thermal energy from the environment and convert that energy to heat. That energy can come from either the air, ground or water, and the only other energy needed is electricity to run the system.

All of our heat pumps can be used standalone or as part of a hybrid system (that also contains a gas boiler and may contain solar panels). Heat pumps are suitable for all property types, but are especially energy efficient when fitted to buildings in off-gas areas.

Our heat pumps are very flexible and can be fitted in a wide variety of environments. We've even fitted them onto balconies in blocks of flats.

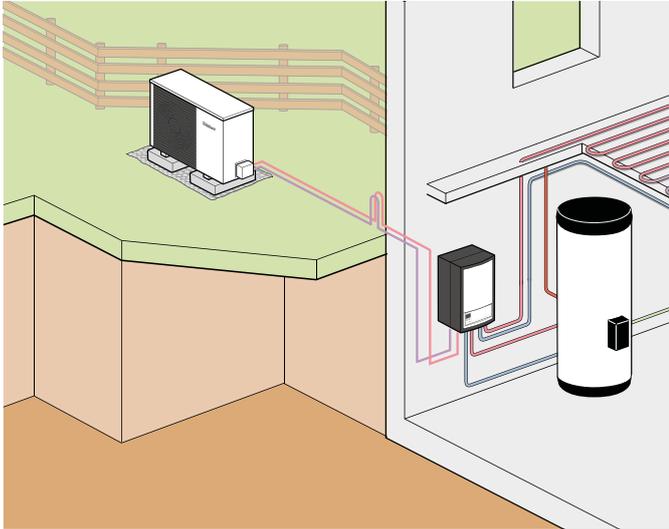
The Non-Domestic Renewable Heat Incentive (RHI) is a Government environmental program administered by OFGEM. The scheme provides financial incentives to increase the uptake of renewable heat by businesses, the public sector and non-profit organisations. Generally, if the renewable heating system is in commercial, public or industrial premises, then you can apply for the Non-Domestic RHI. This can include small and large businesses, hospitals, schools, and organisations with district heating schemes where one heating system serves multiple homes (such as blocks of flats). It doesn't apply to single domestic dwellings (which may be eligible for the Domestic RHI scheme).

Installations of renewable heating technologies (including heat pumps) that meet the criteria set by OFGEM receive quarterly payments over 20 years based on the amount of heat generated. The scheme covers installations that have been completed and commissioned since July 2009 in England, Scotland, and Wales.

What are heat pumps?

Heat pumps use the energy that nature gives us for free, so they're cheaper and more eco-friendly than conventional appliances that use fossil fuels

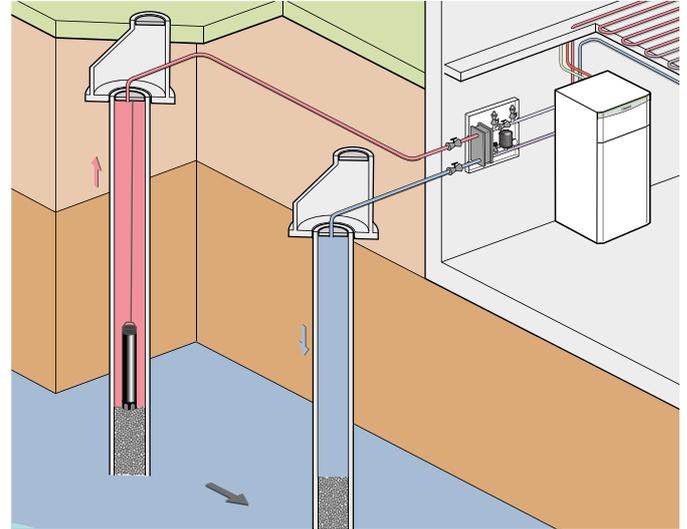
Air source system



Air source

Air source heat pumps extract thermal energy (heat) from the outside air and convert this into heating and hot water. Vaillant's heat pumps are designed to work in cold temperatures and are suitable for a range of homes, from a small apartment to a large detached home. 75% of energy used to operate the heat pump comes from the renewable source outside helping to reduce emissions and CO² impact.

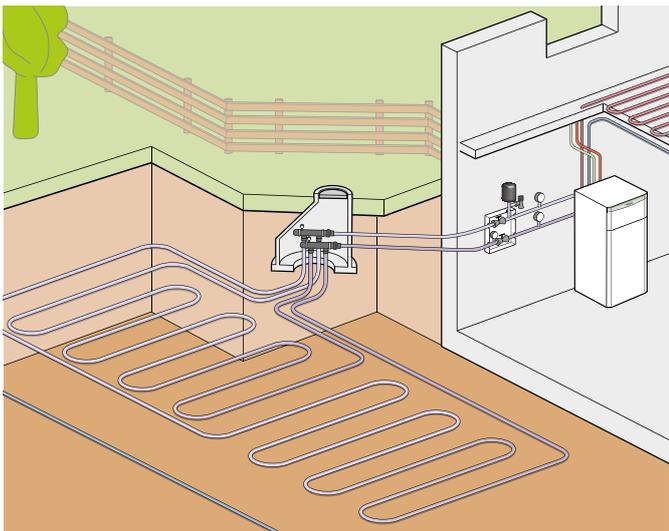
flexoTHERM with fluoCOLLECT for water source systems



Water source

Heat pumps can draw heat from water. The temperature of the water is constant regardless of the season and the outside temperature. Extracting heat from water requires access to lakes, wells or streams.

Ground array system example

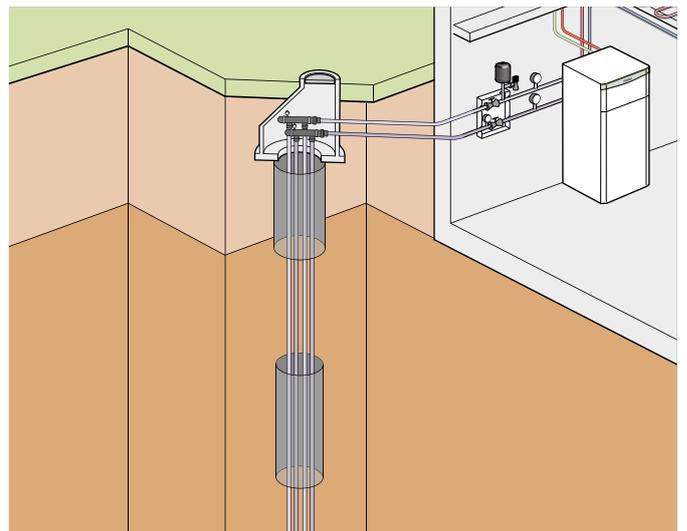


Ground source

Ground source heat pumps draw thermal energy from the ground. This heat can be collected via horizontal collectors or vertical boreholes.

Horizontal - Horizontal collectors are installed across a large area at a depth of approximately 1.2 metres, where the temperature remains almost uniform for the whole year, all over the world.

Borehole system example



Vertical - Vertical collectors are installed in space-saving boreholes. Special ground probes extract the latent heat in the ground as much as 125 metres deep into the earth, where the temperature is constantly 10 - 12°C all year long.

Renewable products from Vaillant

Renewable technology	Vaillant product				
Air source	 aroTHERM	 aroTHERM Split	 aroCOLLECT	 flexoTHERM	 aroSTOR cylinder
Ground source	 geoTHERM mini	 flexoTHERM	 geoTHERM		
Water source	 flexoTHERM	+	 fluoCOLLECT		
uniSTOR heat pump cylinders	 uniSTOR Slimline Pre-plumbed cylinder	 uniSTOR Standard Pre-plumbed cylinder	 uniSTOR Standard cylinder		

Key features and benefits

- **Unique triVAI® intelligent control system feature**
Vaillant's proprietary VRC 700 / 700f control uses triVIA to select from three possible energy tariffs to reduce energy use and carbon emissions
- **Excellent green credentials**
Provides significant carbon and energy bill savings
- **Compatible with all boiler systems**
Including gas, oil and LPG
- **Easy to install and commission**
Uses the Vaillant set-up wizard
- **Suitable for a wide range of properties**
Can be installed in new build properties and can be retrofitted into older properties or those that already use an expensive heating system

Flexible siting options

Suitable for flats and different housing types

- **Communal ground source options**
flexoTHERM can draw energy from boreholes or horizontal collectors to feed energy into more than one property
- **High quality, robust design**
Durable vandal-proof covers with anti-corrosive properties: Perfect for installation in coastal areas
- **Super quiet**
Operating noise is no louder than a fridge
- **Eligible for RHI**
The UK government's Renewable Heat Incentive scheme provides financial rewards for heat generated by renewables

Controls

When fitted to a hybrid system, the VRC 700 / 700f takes advantage of Vaillant's triVAI® intelligent tariff selection tool feature. This tool takes the energy tariff data for each heat source option (gas boiler and electric heat pump) and analyses the Coefficient of Performance (CoF) of the heat pump alongside the efficiency of the boiler. It can then assess this data to independently select the most cost-effective heat source in the system, saving both energy and money.

This smart approach to integrating renewable technology with existing heating systems offers more scope and flexibility for a wider range of properties.

Why choose Vaillant for your specification?



Overview

The Vaillant Group strives to produce the most reliable and efficient heating appliances in the world. To demonstrate our commitment to this vision, we have recently invested around €54 million in a brand new Research and Development Centre at our headquarters in Remscheid, Germany. With about 700 employees, this is one of the largest international development teams in the heating technology industry.

How we can support you

Industry leading support - Vaillant offers outstanding pre- and post-sales support to help specifiers at each stage of the project.

Total cost of ownership - Vaillant can provide a comprehensive prediction on the cost of ownership, taking into account every detail of installation, including appliance costs, labour rates, spare parts and servicing. Rebates or discounts will also be taken into account.

By analysing this data, Vaillant can predict the whole life cost of ownership and deliver this data to contract customers in the format they require.

Easy asset management - Vaillant Solutions is an online heating assets management tool for landlords to manage the heating appliances in their properties. Crucially, this portal allows users to record system water test results. Access to this data means property managers have the information they need to prevent breakdowns due to poor water quality in the system. Ensuring system water is clean can reduce the chance of future boiler breakdowns by up to 83%.

Key features

- Record system water test results
- Register guarantees
- Create ErP labels
- Access installation and user guides
- View spares catalogue



“Vaillant Solutions allowed us to become more efficient with our day-to-day repairs, with all our order history stored online by address for easy reference. The Vaillant Solutions water testing facility keeps installation standards at a high level and leads to best practice. So there are no different rules for each department which can cause so many problems.”

Jane Duckers, Procurement Officer, Wales & West Housing

Visit www.vaillant-solutions.co.uk for more information

Corporate Social Responsibility

Responsibility as a principle

We believe that social responsibility is one of the key areas that the Vaillant Group should be investing time in. Vaillant Group and Vaillant UK have well developed programs of corporate social responsibility (CSR) projects that operate on an international and local level. From working with SOS Children's Villages to construct new buildings in Africa to sponsoring local football teams, Vaillant Group and its subsidiaries work hard to support and drive charitable initiatives that make a positive contribution to communities around the world. We even give our staff days off to help with the charitable causes that are close to their hearts.

In addition to these initiatives, Vaillant UK continually supports our customers in the social housing market with their own CSR programs. From helping to introduce electric car schemes to cleaning the streets, we're proud to contribute our skills, people and facilities to aid a variety of projects across the UK. These projects are in addition to providing the products, service and support that help to reduce energy bills and carbon emissions in social housing properties across the UK.



Vaillant UK supports National Energy Action (NEA), a charity that works towards ending fuel poverty. We raise funds in variety of ways, including holding regular fundraising events at our head offices in Belper.



Derby Homes Normanton Project

Smartening up the streets for a better community

We joined forces with Derby Homes and Derby City Council to tidy up residential streets in Normanton, making a real impact on a community where there's a lack of clean, affordable and safe housing.

Clearing waste, weeding and washing the streets, painting window sills - and even getting local kids involved in planting hanging baskets for their homes - our volunteers helped build relationships with residents whilst giving the local streets a makeover.

For this project, Vaillant and Derby Homes were awarded the H&VNews Collaboration of the Year Award.



Service and spares support



Spares and support, year after year

Vaillant is committed to responsible spares provision and provides spares for a minimum of 15 years after production ceases. We have a nationwide network of genuine spares stockists and a dedicated spare parts team to help you identify the parts you require.

Vaillant has even developed an app that helps identify spare parts to make ordering easier.

sparesCHECK app

- ✓ Trade only
- ✓ Online & offline
- ✓ Exploded device views
- ✓ Over 4,000 pictures
- ✓ Serial number scanning
- ✓ Part "where used"



Simply search for Vaillant on Google Play or the App Store

Service you can count on

At Vaillant UK, we invest as much of our resources into our service and support as we do in creating our outstanding heating solutions. So you can rest assured that when you choose a Vaillant product, you will be supported by the best service in the industry.

Vaillant has specialist teams available to support installers and end-users with all enquiries. We are also able to offer help with our online 'Ask Vaillant' tool, where installers and end users can find answers to a large variety of questions. Our other online tools can help end users book service appointments.

Vaillant has over 250 service engineers. This includes the largest specialist fleet of renewable and commercial systems engineers in the UK. With phone operators available 364 days a year, service and support from Vaillant UK is never far away.

"Vaillant provide a breakdown service that is second to none... the availability of heating spares is paramount to us and the availability of items has not once been a concern to me."

Dean Roberts, Gas Safety Manager, Curo Group

Vaillant design services



As well as understanding the needs of our customers, we pride ourselves on being easy to work with. Vaillant's design hub offers a free, fully indemnified, heating layout design service to support your specification process.

We liaise with any developers' technical experts at an appropriate level and our team welcomes the opportunity to interact with developers' own in-house design teams. We will engage with and support SAP assessors to supply a detailed schedule package for all system components.

To find out more contact your Specification Manager.





Project background

Wheeldon Homes, Derby

Building type

A range of properties, from two-bedroom starter to five-bedroom family homes, reflecting the belief that Building Excellence lies at the heart of every Wheeldon home.

Boilers used

ecoFIT sustain 24kW boilers

ecoFIT sustain combi boilers 30 - 35kW boilers

Controls used

VRC 700 and VR 920 heating controls

vSMART app-based heating controls

Quality, reliability and value

Wheeldon Homes was attracted by the Vaillant brand's reputation for quality, reliability and value, which also helped to sell their properties to discerning customers.

Wheeldon was also impressed by the eco credentials of Vaillant boilers. By choosing the ErP A-rated ecoFIT sustain boilers fitted with weather and load compensating controls, they were able to demonstrate their commitment to reducing emissions and increasing efficiency - a must for Wheeldon. Deciding to install app-based, smart controls was a great choice by Wheeldon and they received excellent feedback from their customers on the controls chosen.

By selecting ecoFIT sustain models for their specification, Wheeldon Homes could offer their customers high performance boilers with cupboard fit dimensions and rear flues that fit discreetly in their new homes.

Choosing Vaillant also meant that Wheeldon was able to offer its customers an additional guarantee on top of the standard two-year NBHC guarantee.

The Vaillant brand's service and support offerings were another factor in Wheeldon's choice. Vaillant has a 98% first-fix rate, bespoke service and guarantee packages and a comprehensive range of services to support specifiers at every stage of their project.

About Wheeldon Homes

- Medium-sized property developer based in Derbyshire
- Full heating systems provided by Vaillant, including boilers, cylinders and controls
- Commissioned first trial of Vaillant's new VRC 700 and VR 920 heating controls, which connect the boilers to the internet
- Emphasis on quality, reliability and value

Installers

Neil Shacklock Plumbing & Heating
MCK Plumbing & Heating Engineers

Why Vaillant?

Production Director Andy Startin said: "From the outset, we have been impressed with Vaillant's exceptional level of innovation, combined with its ability to work to deadlines, product knowledge, industry awareness, and ability to deliver projects on time and to agreed budgets. From the initial tender stage, through to customer service on occupied properties, Vaillant has always adopted a professional and methodical approach and updated us regularly on its progress."

Industry leading training for industry leading engineers



Our training team provides industry brilliance with its tailored training courses, striving to keep you one step ahead of the ever-evolving heating and hot water technologies and industry regulations.

Our courses

Vaillant domestic

- ecoTEC Commissioning and Servicing
- ecoTEC Diagnostics and Fault Finding
- ecoFIT Commissioning and Servicing
- ecoTEC exclusive with Green iQ Commissioning and Servicing
- Vaillant High Output for Domestic Systems

Vaillant controls

- Vaillant Controls Installation and Set-up

Vaillant commercial

- Vaillant High Output for Commercial Systems

Vaillant renewables

- AWP Systems Installation and Commissioning
- GSHP Systems installation and Commissioning
- Vaillant Solar Thermal Systems (subject to availability and locations)

BPEC (prerequisites and costings apply)

- Water regulations
- Unvented
- Heat Pump

Our locations

For more information on our courses or to visit one of our UK Centres of Excellence:

Telephone: 0345 601 8885

or email: training@vaillant.co.uk

Belper

Nottingham Road, Belper, Derbyshire DE56 1JT
Telephone 0345 601 8885

Bristol

Unit 1390, Aztec West, Almondsbury, Bristol
BS32 4RX
Telephone 0345 601 8885

Cambridge

Ground Floor, 7400 Building, Cambridge
Research Park, Waterbeach, Cambridge CB25 9TL
Telephone 0345 601 8885

Elland

Unit D1, Lowfields Business Park, Elland,
West Yorkshire HX5 9DG
Telephone 0345 601 8885

Farnborough

Ground Floor (West) Templer, 25 Templer Avenue,
Farnborough Business Park, Farnborough,
Hampshire GU14 6FE
Telephone 0345 601 8885

Glasgow

Maxim 1, 2 Parklands Way, Eurocentral, Glasgow,
Lanarkshire ML1 4WR
Telephone 0345 601 8885

Maidstone

6 Alexander Grove, Kings Hill, West Malling,
Maidstone, Kent ME19 4XR
Telephone 0345 601 8885

Sunderland

Unit 7H
Southwick Ind. Est.
North Hylton Road
Sunderland
SR5 3TX



Contacts

Specification enquires

We can provide you with bespoke solutions to accommodate a variety of different installations. To discuss your requirements, please contact your nearest Vaillant Specification Manager.

Phone: **0345 602 2922**

Renewables

For renewable products aftersales service and commissioning.

Phone: **0345 602 0262**

Email: **aftersales@vaillant.co.uk**

General enquiries

If you are unsure of who you need to speak to or you have a general enquiry, our friendly reception staff will happily point you in the right direction.

Phone: **0345 602 2922**

Training

We offer a range of courses and can design a course especially for your team.

Phone: **0345 601 8885**

Email: **training@vaillant.co.uk**

Technical enquiries

If you have a technical query, you can contact us by phone or email.

Phone: **0344 693 3133**

Email: **technical@vaillant.co.uk**

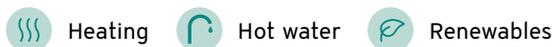
Spares enquiries

If you need helping finding a spare part, you can download our app from the appStore or Google Play.

Phone: **01773 596 615**

Option 1: Vaillant stock availability

Option 2: If you require a part number



Vaillant Group UK Ltd.

Nottingham Road, Belper, Derbyshire DE56 1JT

Telephone 0345 602 2922

www.vaillant.co.uk/specifiers

info@vaillant.co.uk



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