Commercial heating

ecoTEC, ecoCRAFT
and atmoCRAFT
commercial boilers

Vaillant - the best in the business

For more than 130 years, Vaillant has set the standards in the heating market, creating products that have revolutionised the industry. As Europe's **number 1** boiler manufacturer, innovation still comes as second nature. Our products boast the highest energy efficiency ratings and lowest emissions, and come with an enviable reputation for performance, quality and reliability.
At the same time we continue to invest in developing new technologies for solutions that further simplify installation, commissioning and servicing, and make everyday operation even easier. Add this to our legendary training and sales support services and you will understand why there's no better total product and service package for your business.

ecoTEC wall hung commercial boiler

ecoTEC
wall hung condensing boilers

High efficiency condensing gas system boilers
With a whole host of built-in features, installation and servicing of ecoTEC commercial boilers could not be more straightforward. Light weight for its class, compact design, and a comprehensive range of flues, fittings and accessories means that ecoTEC boilers can be sited almost anywhere. For larger buildings, or buildings with more complex layouts, multiple boilers can be installed in cascade to provide a highly effective and extremely efficient heating system. They are configured to automatically optimise heat and hot water supply according to the demands on the system at any particular time.

Two models
- ecoTEC 46
  heat output range (heating 50/30 °C) 12.9 - 46.4 kW
  heat output range (heating 80/60 °C) 12.3 - 44.1 kW
- ecoTEC 65
  heat output range (heating 50/30 °C) 14.6 - 67.6 kW
  heat output range (heating 80/60 °C) 13.7 - 63.7 kW

High performance
- High efficiency SEDBUK band 'A' rating
- Fully modulating low NOx burner and fan (Class 5)
- Heating output up to 65 kW
- Stainless steel heat exchanger

Easy installation
- Case dimensions:
  - ecoTEC 46 H800 mm x W480 mm x D450 mm
  - ecoTEC 65 H800 mm x W480 mm x D472 mm
  - Delivered with $1^1/_4$" female BSP flow and return service valves and 1" female BSP gas service valve
- Connections:
  - Flow/Return – 1" internal, $1^1/_2$" external
  - Gas - 20mm with adapter for 1" (ecoTEC 46)
    - 25mm with adapter for 1" (ecoTEC 65)
  - Pressure safety valve outlet -
    $^3/_4$" female BSP (ecoTEC 46)
    1" female BSP (ecoTEC 65)
  - Condensate – 19mm
  - Combined filling/emptying valve on return pipe
- All major components built-in:
  - Siphonic condensate discharge (ecoTEC 65 only)
  - Condensate trap (ecoTEC 46)
  - Energy saving 2-stage frost protection
  - 0 – 10v compatible for BEMS applications (via VR34 accessory)
- 8m head shunt pump
  - Pressure sensor to monitor system pressure via diagnostics
  - Flow sensor to monitor water flow through boiler
  - Air separator with auto air vent and filter for bleeding system and filtering of fine particles
- Push-fit flue system with telescopic accessories
- LPG conversion kit available (ecoTEC 46 only)
- Full range of intelligent eBUS controls including weather compensators and multiple boiler management controls available.

Flexible siting
- Flue lengths up to 18m horizontal or 21m vertical with 125 mm flue
- Optional 125mm stainless façade kit available
- 3 bar PRV
- IPX4D electrical safety rating
- No compartment ventilation needed*

Easy service and repair
- Built-in comprehensive boiler status/diagnostic display system
- Blue backlit display for easy reading
- Easy access to all components from the front
- Single electronic circuit board
- Flue gas analysis point

Quality and reliability
- Stainless steel heat exchanger
- Production to ISO 9001
- 2 year warranty on boiler
- Commissioning service available

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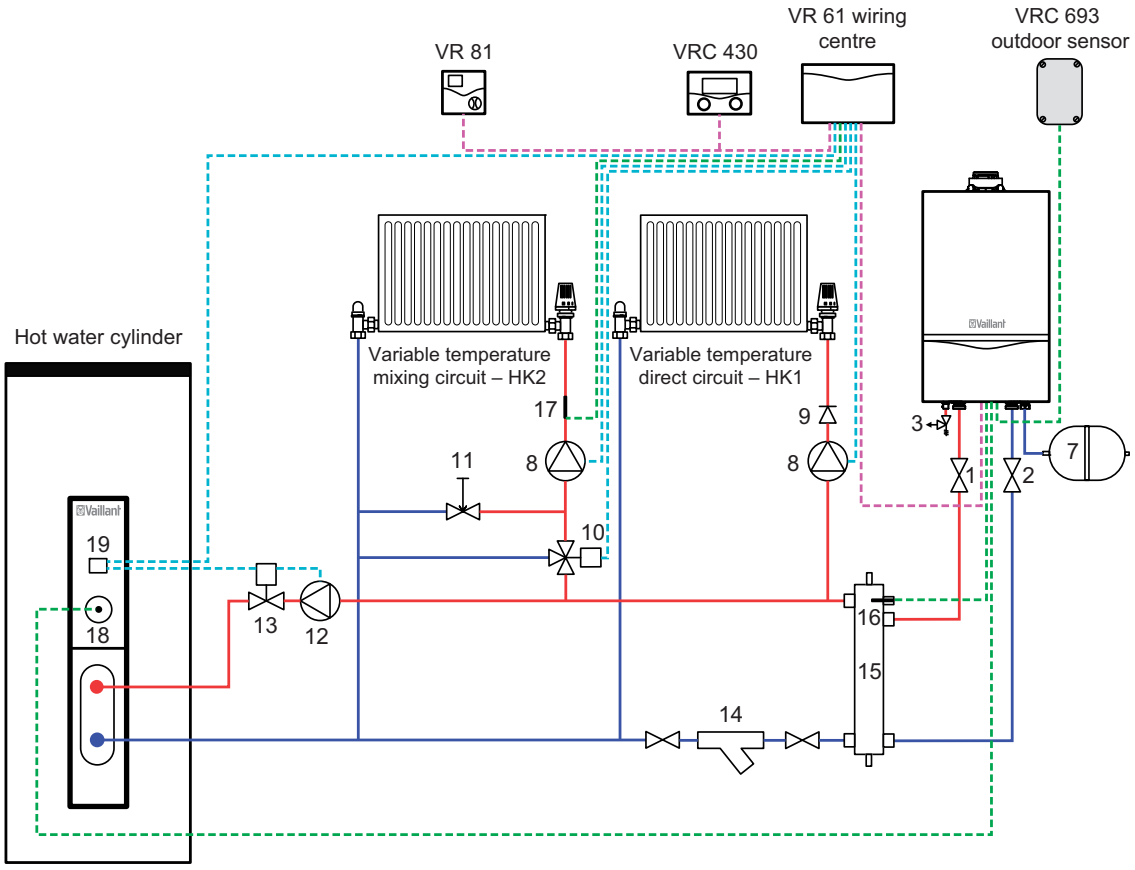
*See BS6644 for more specific advice if appliance installed in boiler room/enclosure.

System design



Note:
Vaillant strongly recommend the installation of a suitably sized dirt separator in the return pipe work to the low loss header, particularly in the case of old systems.

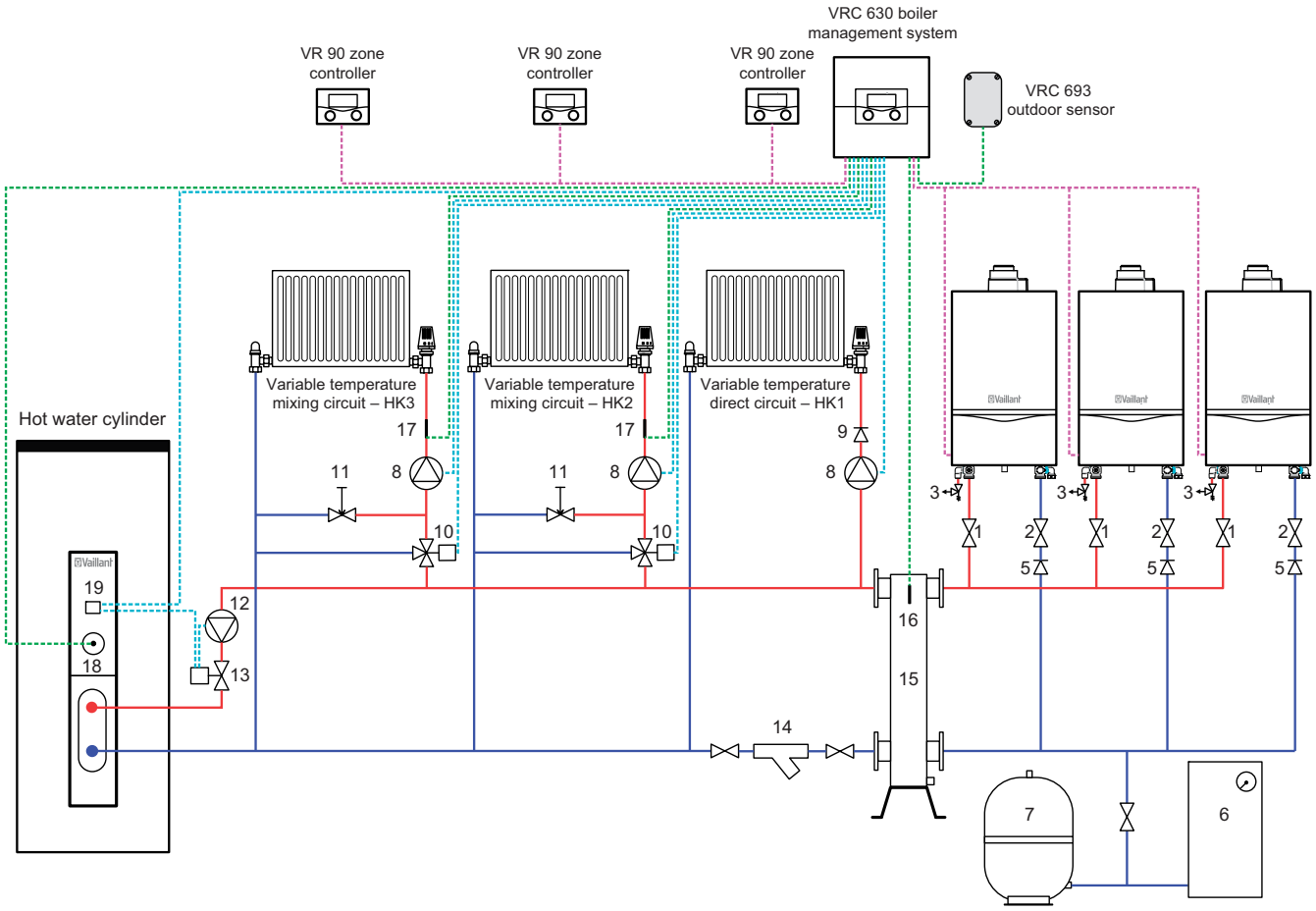
Key

1. Boiler flow isolation valve (supplied only with ecoTEC)
2. Boiler return isolation valve (supplied only with ecoTEC)
3. Boiler safety valve (supplied only with ecoTEC)
4. Boiler shunt pump (supplied only with ecoTEC (internal) or available as an accessory with ecoCRAFT)
5. Single check valve
6. Primary pressurisation unit (available as an accessory)
7. Primary expansion vessel (available as an accessory)
8. Heating pumps
9. System check valve
10. Heating circuit mixing valve
11. Regulating valve
12. Cylinder primary pump
13. Cylinder motorised valve (supplied only with uniSTOR cylinder)
14. Dirt separator or strainer (available as an accessory)
15. Low loss header (available as an accessory)
16. Low loss header VR 10 sensor (supplied with VRC 630 controller)
17. Heating circuit VR 10 sensor (supplied with VRC 630 controller) or VR 692 clip on pipe sensor (available as an accessory)
18. Cylinder VR 10 sensor (supplied with VRC 630 controller)
19. Cylinder high limit thermostat (supplied only with uniSTOR cylinder)

Note: items are not supplied by Vaillant unless stated

Wiring Colours

- purple – eBUS
- green – sensors
- blue – 230 volt



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3. Boiler safety valve (supplied only with ecoTEC)
4. Boiler shunt pump (supplied only with ecoTEC (internal) or available as an accessory with ecoCRAFT)
5. Single check valve (not supplied)
6. Primary pressurisation unit (available as an accessory)
7. Primary expansion vessel (available as an accessory)
8. Heating pumps
9. System check valve
10. Heating circuit mixing valve
11. Regulating valve
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Wiring Colours

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Key components

Quality and reliability – the inside story

Push-fit flueing
A wide range of flue options, all with push-fit connection provides total flexibility in siting

Main heat exchanger
High-performance, circular stainless steel heat exchanger allows more heat to be extracted by recapturing other-wise wasted heat

Fully modulating low NOx pre-mix burner
Automatically matching heat output to demand, achieves best class emissions within European standards

Condense trap
The 46kW model is supplied with an internal condensate trap whilst the larger 65kW model has an external siphonic discharge trap

Shunt pump
Pumps from the boiler to the low loss header. Ensures correct flow of water is circulating between boiler and low loss header

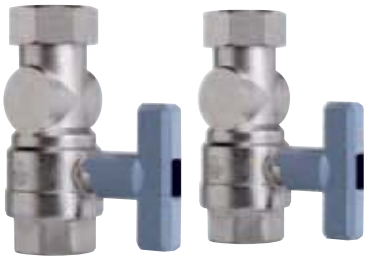
Air separator
An integral means of removing air from the boiler

Boiler fascia
Backlit display provides comprehensive status and diagnostic information for easy servicing. The Vaillant weather compensator control (VRC430) can also be plugged into the boiler fascia

Water pressure
Manometer to indicate system pressure with additional electronic pressure gauge for accurate reading up to 3bar

ecoTEC 46

ecoTEC 65



Flow and return isolation valves

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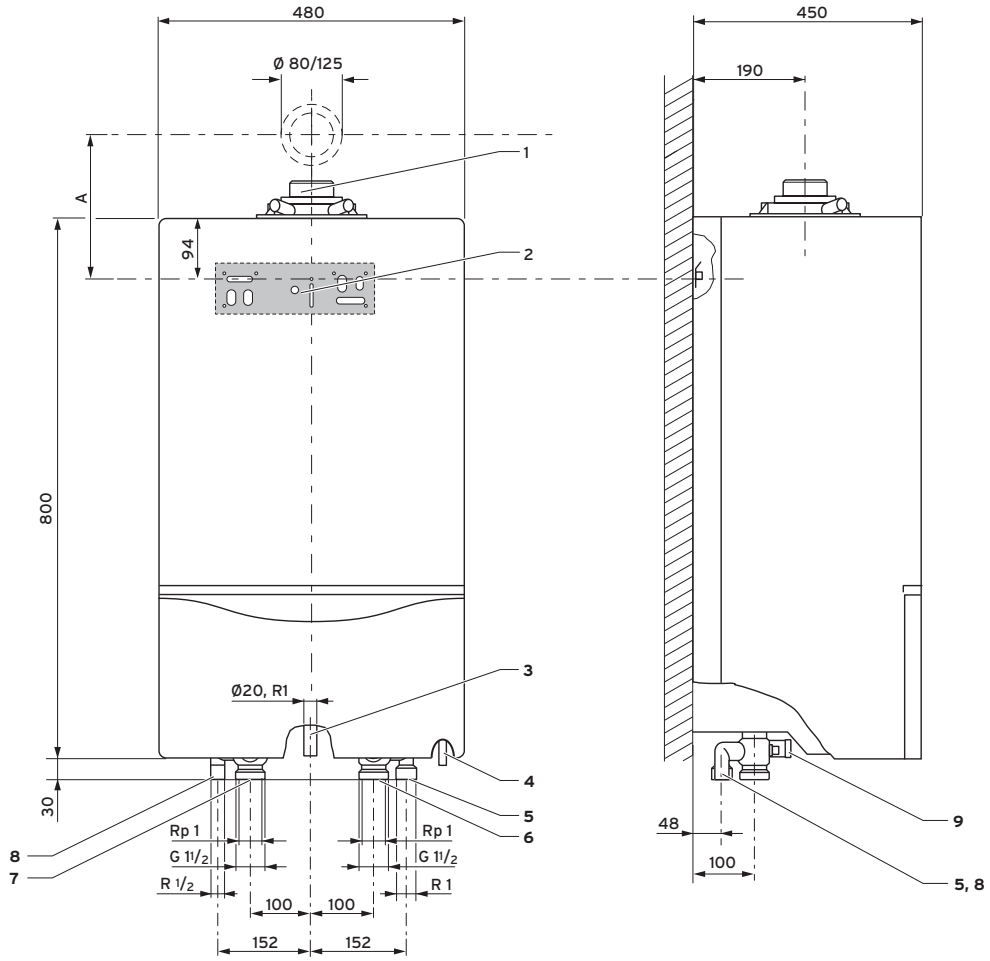
Dimension drawing and connection dimension

ecoTEC 46kW



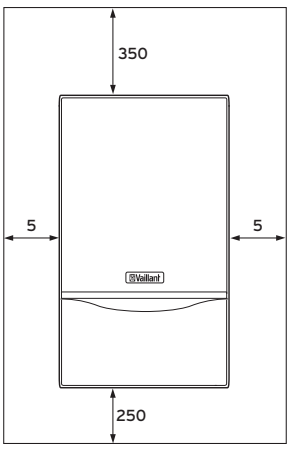
Connection dimensions in mm

Key

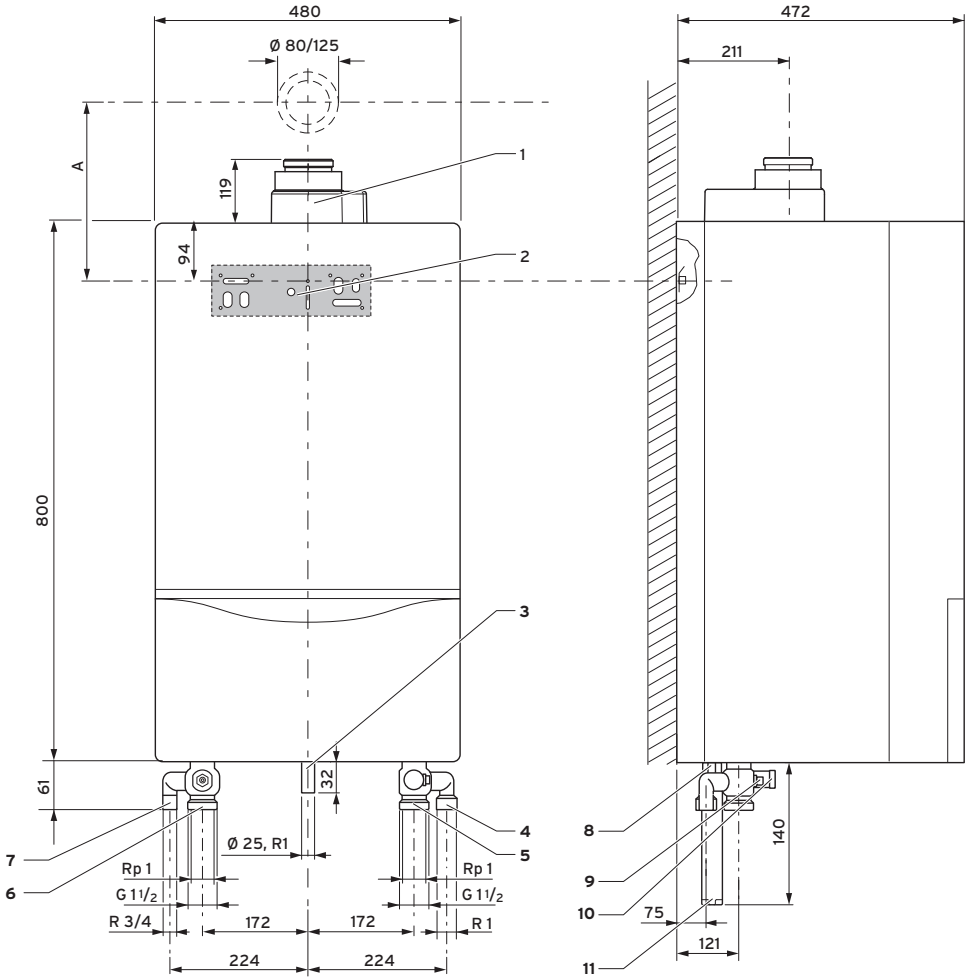
1 Flue gas connection, 80/125 mm diameter, dimension A (hanging bracket – centre of air/flue gas pipe) with 87° elbow: 253 mm
2 Hanging bracket
3 gas pipe, 20 mm diameter, gas connection R1"
4 Connection for condensate drain pipework
5 Connection for expansion vessel
6 Connection for heating return
7 Connection for heating flow
8 Connection for expansion relief valve
9 Filling device (combined filling and emptying valve)

Required minimum gaps/assembly clearances

For the installation/assembly of the boiler as well as for carrying out future maintenance tasks, you need the minimum gaps and assembly clearances given below:



ecoTEC 65kW



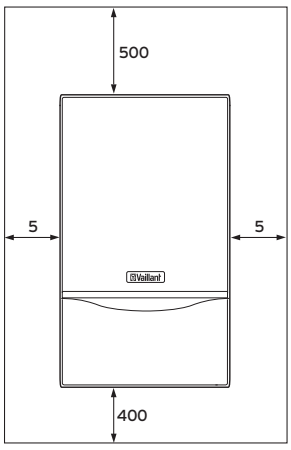
Connection dimensions in mm

Key

1 Flue gas connection, 80/125 mm diameter, dimension A (hanging bracket – centre of air/flue gas pipe) with 87° elbow: 297 mm
2 Hanging bracket
3 Gas pipe, 25 mm diameter, gas connection R1"
4 Connection provision - expansion vessel
5 Connection for heating return
6 Connection for heating flow
7 Connection provision - expansion relief valve
8 Connection for condensate drain pipework
9 Flow line drainage opening
10 Connection provision - filling (combined filling and emptying valve)
11 Siphon cartridge

Required minimum gaps/assembly clearances

For the installation/assembly of the boiler as well as for carrying out future maintenance tasks, you need the minimum gaps and assembly clearances given below:



ecoTEC 46kW, 65kW

Technical specification – ecoTEC

ecoTEC		VU GB 466	VU GB 656
Article number		**0010004139**	**0010004140**
Heat output range (heating 50/30 °C)	kW	12.9 - 46.4	14.6 - 67.6
Heat output range (heating 80/60 °C)	kW	12.3 - 44.1	13.7 - 63.7
Maximum heat input (Net)	kW	45	65
Net efficiency @ 100% load	%	98.4	97.4
Net efficiency @ 30% load	%	108.3	107.6
SEDBUK rating		A	A
SEDBUK seasonal efficiency	%	91.1	90.35
SAP efficiency (natural gas)	%	95.8	95.2
SAP efficiency (LPG)	%	98.0	N/A
Inlet gas working pressure required (natural gas)	mbar	20	20
Inlet gas working pressure required (LPG)	mbar	37	N/A
NOx class	-	5	5
NOx levels	mg/kWh	36	36
CO_2 percentage (after 5 minutes full load +/- 1)	%	8.8	8.8
Maximum CO level	ppm	150	150
Gas rate (natural gas)	m^3/h	4.8	6.9
Gas rate (LPG)	kg/h	3.5	N/A
Water flow rate (when ΔT = 20K)	l/h	1935	2750
Available pump head (without check valve)	mbar	280	280
Available pump head (with check valve)	mbar	190	190
Pressure drop across the heat exchanger (at full load and 20K temperature difference)	mbar	350	375
Maximum flow temperature	°C	85	85
Maximum operating primary pressure	bar	3	3
Minimum operating primary pressure	bar	0.8	0.8
Condensate volume (pH value: 3.0-4.0)	l/h	4.5	6.5
Electrical connection	V / Hz	230 / 50	230 / 50
Electrical power consumption min./max. (with integrated pump)	W	138 / 180	170 / 260
Electrical protection rating	-	IP X 4 D	IP X 4 D
Dimensions			
Height	mm	800	800
Width	mm	480	480
Depth	mm	450	472
Lift weight	kg	46	75
Water content	l	4.5	6.5
Flue			
Flue gas mass flow min./max	g/s	5.7 / 20.5	6.5 / 30.3
Flue gas temperature min./max.	°C	40 / 70	40 / 70
Maximum length of concentric flue horizontal	m	18	15
Maximum length of concentric flue vertical	m	21	18
Connections			
Heating flow/return (isolation valve size)		1¼" female BSP	1¼" female BSP
Gas isolation valve size		1" female BSP	1" female BSP
Pressure safety valve outlet		¾" female BSP	1" female BSP
Condensate drain	mm	19	19
Flue connection	mm	80/125	80/125

ecoCRAFT

ecoCRAFT
floor standing condensing gas boiler

The complete solution
Starting at 80kW, the range consists of six models and enables the closest load matching with modulation ranges as wide as 17% to 100% on the 160kW boiler.

The ecoCRAFT range has a compact size for its class with an appliance width of 695mm and is delivered to site on a single pallet. Its easy manoeuvrability offers flexible siting and a modular heat exchanger design utilising a single pre-mix burner and fan to achieve part load efficiencies as high as 108.4% (net) enabling you to maximise Building Regulations rating of your installation.

The class 5 NOx rating of ecoCRAFT ensures that less than 60mg/kWh of NOx is produced satisfying the most stringent of environmental standards.

High Performance
- Large output range from 14.1 - 281.4kW (60/40C)
- High efficiency exceeding Part L2 Building Regulations 2005
  - VKK 806, VKK 1206 and VKK 1606 net efficiency 108.4% low, 97.8% high
  - VKK 2006, VKK 2406 and VKK 2806 net efficiency 108.2% low, 98.4% high
- Sectional heat exchanger with single burner control allowing boiler modulation ranges of 16.8% - 100%
- Adjustable maximum flow temperature from 35 – 85°C
- Fully modulating, low NOX pre-mix horizontal firing burner (class 5) <60mg/kWh
- Aluminium/silicon alloy heat exchanger

Easy Installation
- Connections
  - Flow and return 2" male BSP
  - Gas 1 1/2"male BSP
  - Condensate 21mm
- Pro E electrical connections
- Modulating primary pump (3 sizes available as accessory)
- 0 – 10v compatible for BEMS applications (via VR34 accessory)
- Compatible with Vaillant VRC 630 cascade controller
- Cascade installations via Vaillant ebus (via VR 32 accessory)
- Push fit appliance flue outlet
  - VKK 806, 1206 & 1606 - 150mm
  - VKK 2006, 2406 & 2806 - 200mm

Flexible siting
- Flue categories B23, B23P, C33, C53, C43, C83, C63
- Maximum system working pressure 6bar
- Remote safety circuit interlock (24Volt)
- Fully programmable boiler interface to match system requirements
- Compact size for output to enable easy transport and manoeuvrability
- VKK 806, VK 1206 and VK 1606 (HxWxD) 1285x695x1240
- VKK 2006, VK 2406 and VK 2806 (HxWxD) 1285x695x1550

Easy service and repair
- Simple case assembly and removal

Quality and reliability
- Removable condensate siphon trap
- Air inlet filter to maintain clean air for combustion
- Integral boiler frost protection
- 1 year standard warranty (2 years when commissioned by Vaillant)

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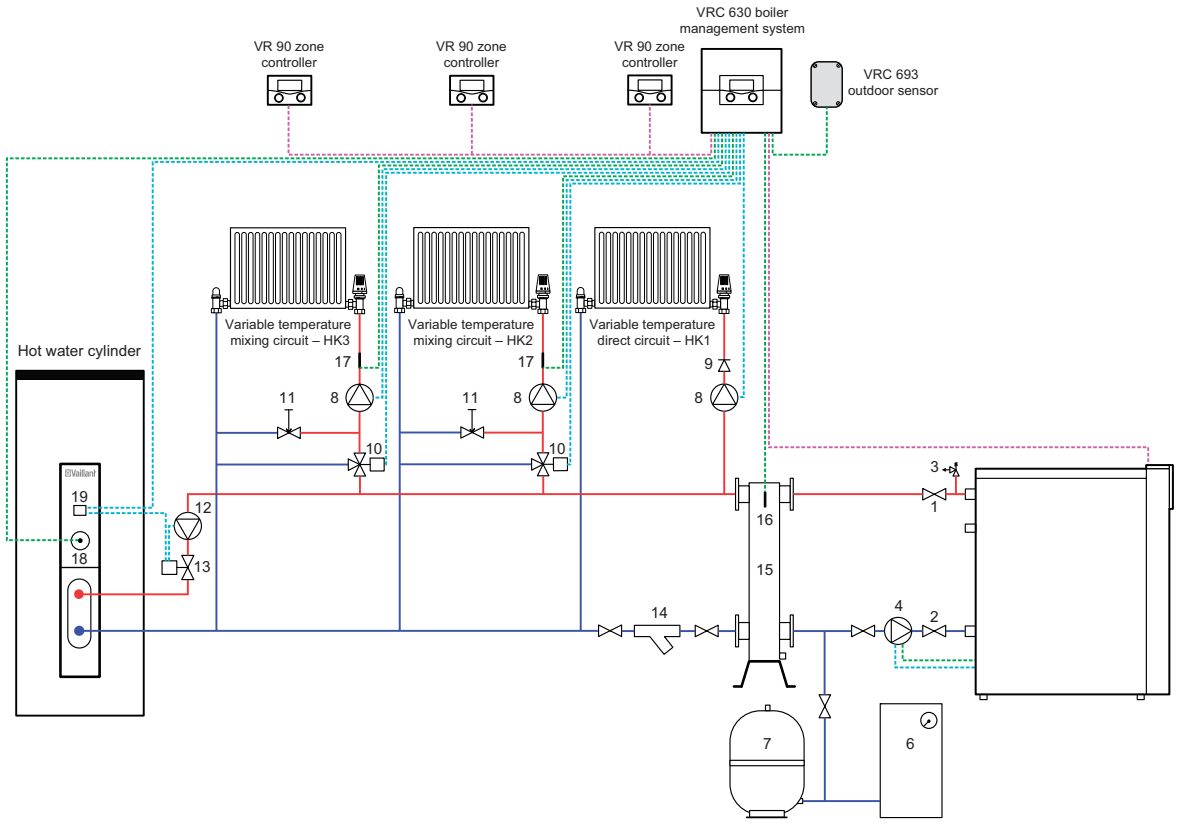
Standard Vaillant interface for ease of operation

System design



Note:
Vaillant strongly recommend the installation of a suitably sized dirt separator in the return pipe work to the header, particularly in the case of old systems.

Key

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2. Boiler return isolation valve (supplied only with ecoTEC)
3. Boiler safety valve (supplied only with ecoTEC)
4. Boiler shunt pump (supplied only with ecoTEC (internal) or available as an accessory with ecoCRAFT)
5. Single check valve
6. Primary pressurisation unit (available as an accessory)
7. Primary expansion vessel (available as an accessory)
8. Heating pumps
9. System check valve
10. Heating circuit mixing valve
11. Regulating valve
12. Cylinder primary pump
13. Cylinder motorised valve (supplied only with uniSTOR cylinder)
14. Dirt separator or strainer (available as an accessory)
15. Low loss header (available as an accessory)
16. Low loss header VR 10 sensor (supplied with VRC 630 controller)
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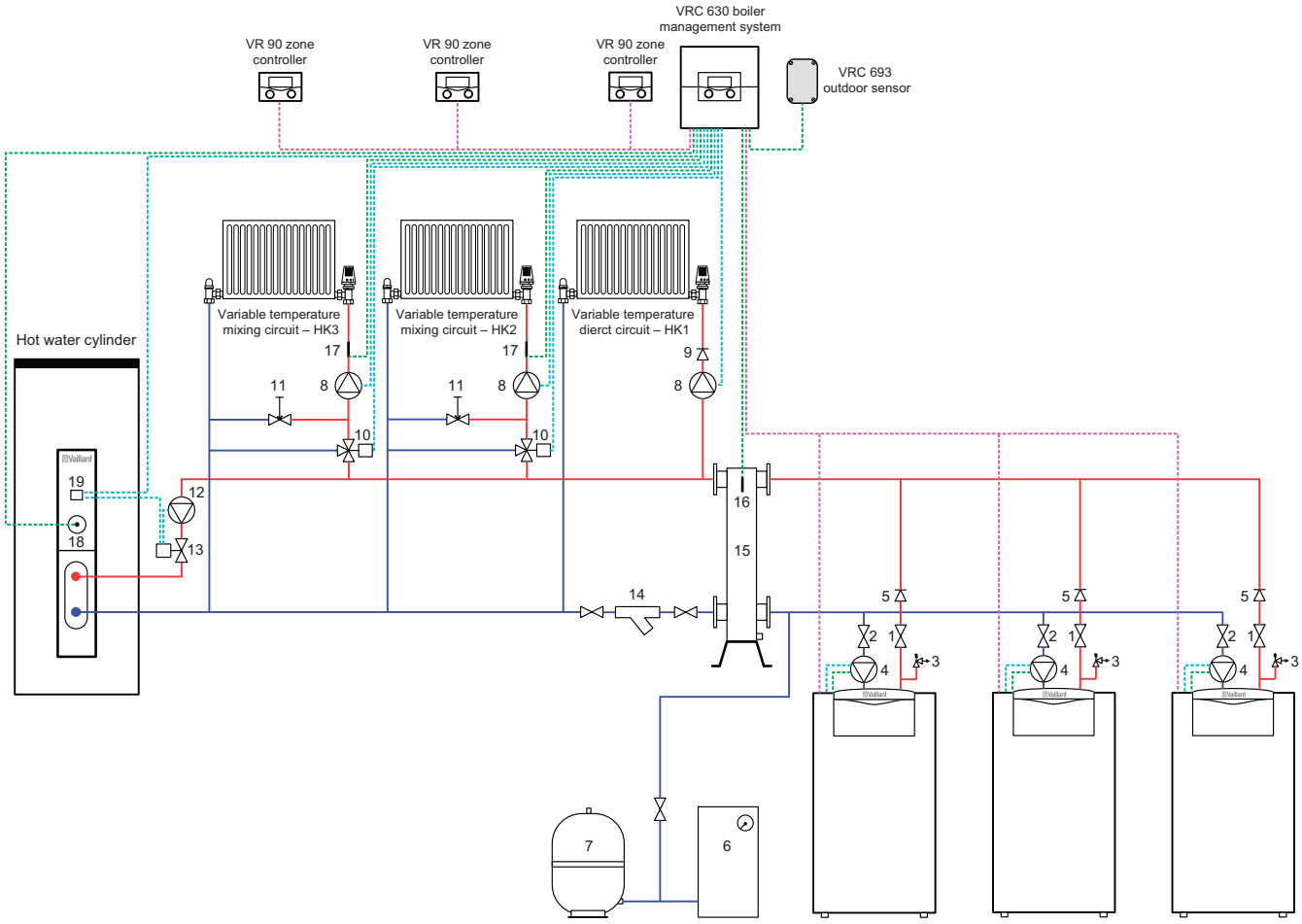
18. Cylinder VR 10 sensor (supplied with VRC 630 controller)
19. Cylinder high limit thermostat (supplied only with uniSTOR cylinder)

Note: items are not supplied by Vaillant unless stated

Wiring Colours

- purple – eBUS
- green – sensors
- blue – 230 volt



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Key components

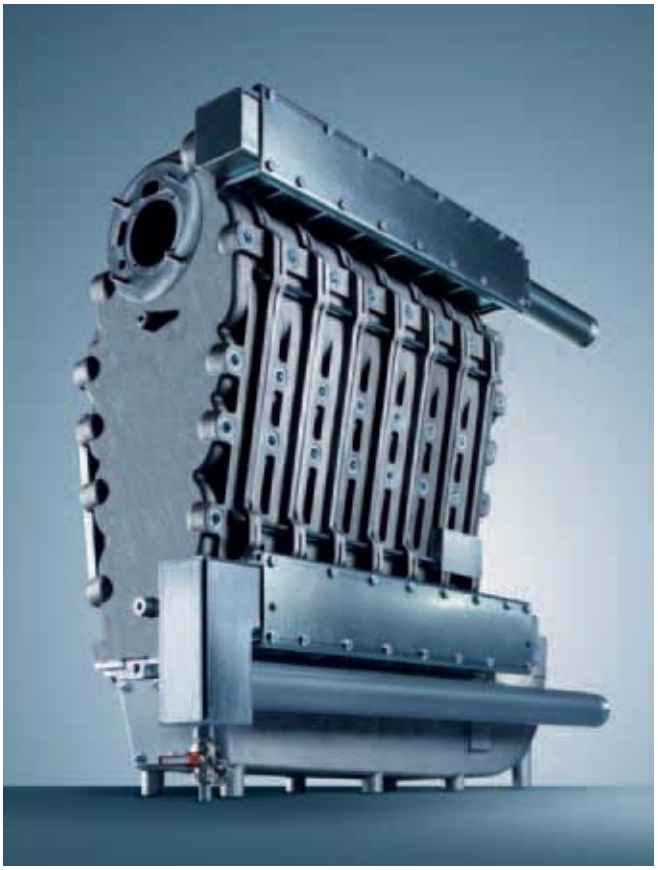
Modulating low NOx pre-mix burner
A single pre-mix burner enables low NOx performance of less than 60mg/kwh to be achieved.

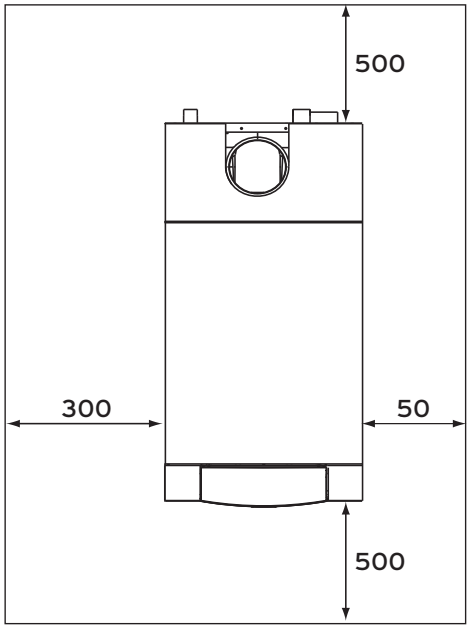
Levered controls flap
Stylish drop down mechanism opens to display the boiler control panel.

Air inlet filter
To ensure the combustion is maintained at optimum performance, the filter removes damaging dust particles to ensure that it is always at peak efficiency. Simple replacement during servicing ensures prolonged life of your appliance.

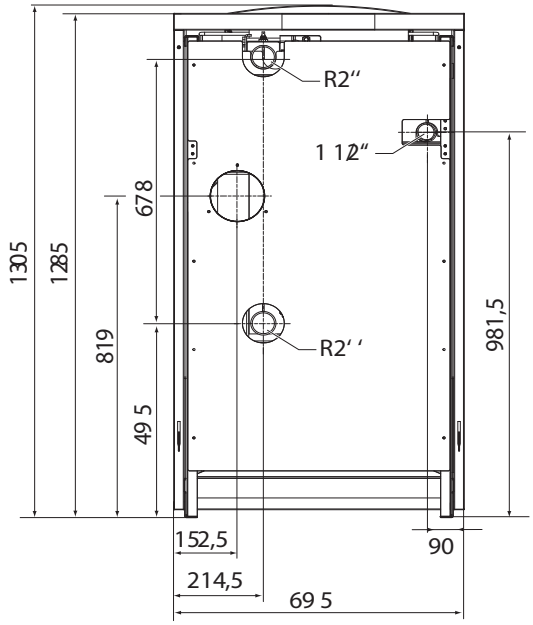
Main heat exchanger
High performance aluminium based alloy heat exchanger for long-life. The matching range of modulating pumps compliment the low hydraulic resistance of the heat exchanger.

Boiler fascia
Backlit display provides comprehensive status and diagnostic information for easy servicing.



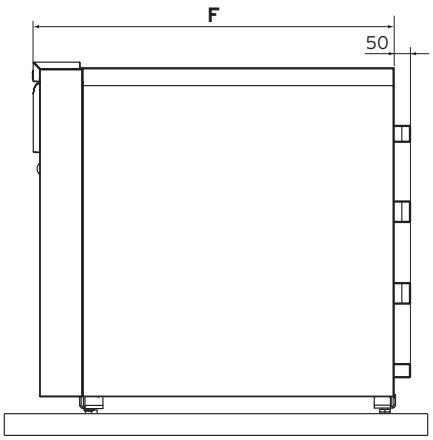


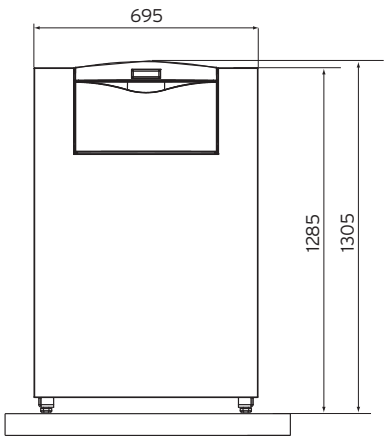
Recommended minimum distances
for installation

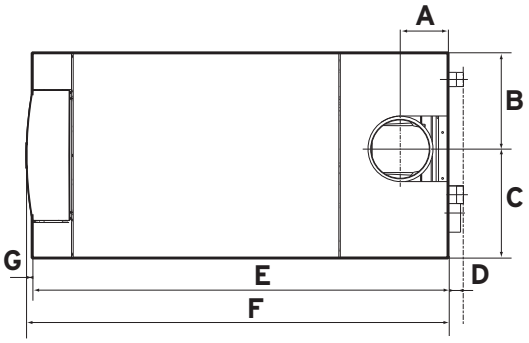


Pipe connection
dimensions

Note:
All dimemsions in millimetres (mm)







	VKK GB 200-2806/3-E-H	VKK GB 80-1606/3-E-H
A	165	165
B	326	326
C	369	369
D	50	50
E	1478	1168
F	1550	1240
G	22	22

Technical specification – ecoCRAFT

ecoCRAFT		VKK 806/3-E	VKK 1206/3-E	VKK 1606/3-E	VKK 2006/3-E	VKK 2406/3-E	VKK 2806/3-E
Article number		**0010005410**	**0010005411**	**0010005412**	**0010005413**	**0010005414**	**0010005415**
Heat output (80/60°C)	kW	13.6 - 77.9	21.3 - 112.9	26.2 - 155.8	43.1 - 196.8	47.0 - 236.2	51.0 - 275.5
Heat output (60/40°C)	kW	14.1 - 80.4	22.1 - 116.5	27.1 - 160.8	44.2 - 201	48.2 - 241.2	52.3 - 281.4
Heat output (40/30°C)	kW	14.7 - 84.1	23.1 - 121.8	28.4 - 168.2	46.2 - 210.2	50.4 - 252.2	54.7 - 294.3
Maximum heat input (net)	kW	80	115.9	160	200	240	280
Flow Temperature (min/max°C)	°C	35/85	35/85	35/85	35/85	35/85	35/85
Net Efficiency 100% load	%	97.8	97.8	97.8	98.4	98.4	98.4
Net Efficiency 30% load	%	108.4	108.4	108.4	108.2	108.2	108.2
Part L2 seasonal efficiency	%	95.85	95.85	95.85	95.76	95.76	95.76
Condensate volume @ 40/30 (pH value: 3.4)	l/h	13	20	27	34	40	47
Gas supply pressure (natural gas) (G20)	mbar	20	20	20	20	20	20
Gas type	-	I2H	I2H	I2H	I2H	I2H	I2H
Gas rate natural gas (G20)	m^3/hr*	8.5	12.3	16.9	21.2	25.4	29.6
Nominal water circulating volume (Δt = 20K)	m^3/hr	3.44	4.99	6.88	8.60	10.33	12.05
Primary water flow pressure drop (Δt = 20K)	mbar	80	85	90	95	100	105
Maximum operating primary pressure	bar	6	6	6	6	6	6
Electrical connection	V/Hz	230/50	230/50	230/50	230/50	230/50	230/50
Electrical protection rating	-	IP 20	IP 20	IP 20	IP 20	IP 20	IP 20
Electrical power consumption (max)	W	260	260	320	320	320	320
Electrical power consumption (stand-by)	W	8	8	8	8	8	8
Dimensions							
Dry Weight	kg	200	220	235	275	295	310
Height	mm	1285	1285	1285	1285	1285	1285
Width	mm	695	695	695	695	695	695
Depth	mm	1240	1240	1240	1550	1550	1550
Water content	l	5.74	8.07	10.40	12.73	15.05	17.37
Gas connection Ø	BSP(m)	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"
Flow and return connection	BSP(m)	2"	2"	2"	2"	2"	2"
Condensate pipe Ø	mm	21	21	21	21	21	21
Flue							
Flue type classification		B_{23}, B_{23P}, C_{33}, C_{53}, C_{43}, C_{63}, C_{83}					
Nox Class		5	5	5	5	5	5
Nox emmissions (EN 483)	mg/kWh	<60	<60	<60	<60	<60	<60
CO_2 percentage (G20) (Max output)	%	9.3	9.3	9.3	9.3	9.3	9.3
CO_2 percentage (G20) (Min output)	%	9.1	9.1	9.1	9.1	9.1	9.1
Recommended CO maximum	ppm	80	80	80	80	80	80
Flue outlet diameter	mm	150	150	150	200	200	200
Flue gas temperature min (80/60)	°C	60-65	60-65	60-65	60-65	60-65	60-65
Flue gas temperature max (80/60)	°C	65-70	65-70	65-70	65-70	65-70	65-70
Flue gas volume (nominal minimum)	g/s	6.3	10	12.2	19.9	21.7	23.5
Flue gas volume (nominal maximum)	g/s	35.4	51.2	70.7	88.4	106.1	123.8
Residual fan pressure	Pa	100	100	150	150	150	150
CE							
CE number (PIN)		CE-006BS3986					

* 15°C 1013mbar

atmoCRAFT

atmoCRAFT
floor standing atmospheric gas boiler

Complete replacement boiler solution
Incorporating robust cast iron design, atmoCRAFT delivers a high performance with low pollutant NOx class 5 burner. Starting at 65kW, the range enables flexible and close load matching right up to 165kW. Coming in a single package, the atmocraft is delivered ready assembled for installation. Finalising your installation could not be more straightforward, a separate easy to assemble casing pack ensures your installation measures up to its performance in looks too.

For enhanced efficiency, atmoCRAFT boilers are compatible with Vaillant's weather compensated controllers and system components to ensure you maximise your heating credits under the Building Regulations. Integration with BEMS systems ensure a flexible approach to your installation.

As well as being competitively priced, atmoCRAFT boilers are packed with a host of built-in features to ensure that installation, commissioning and servicing could not be more straightforward. They are configured to allow simple adjustment of the central heating and hot water parameters to suit your individual requirements.

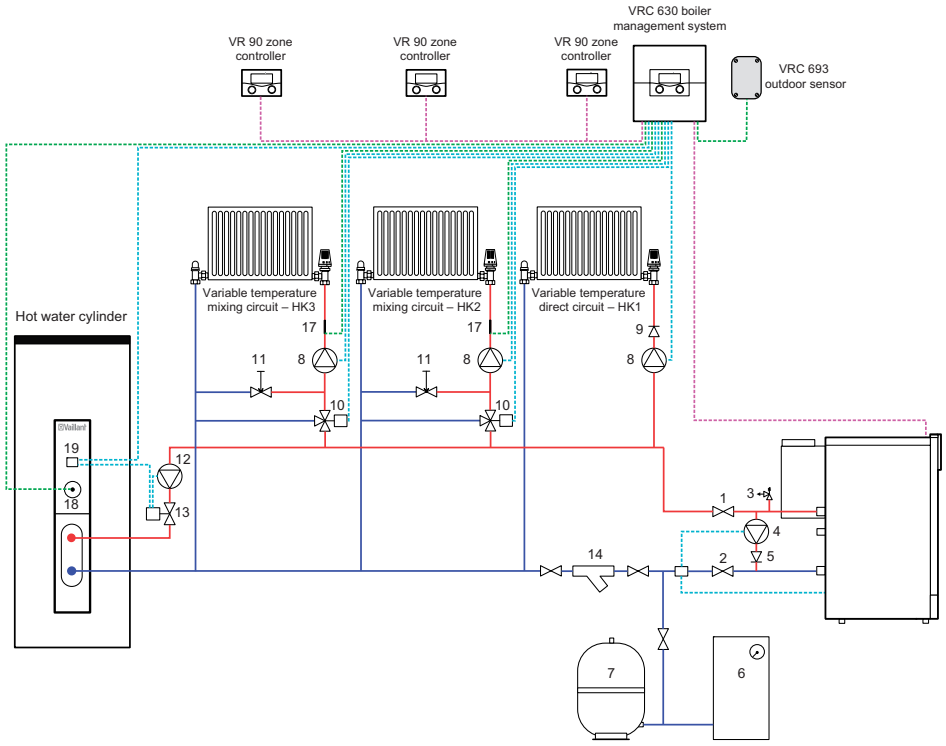
Vaillant's atmoCRAFT range of commercial atmospheric boilers is available in eight power outputs. Perfect for the replacement installation in commercial applications, atmoCRAFT delivers solid cast iron performance and power.

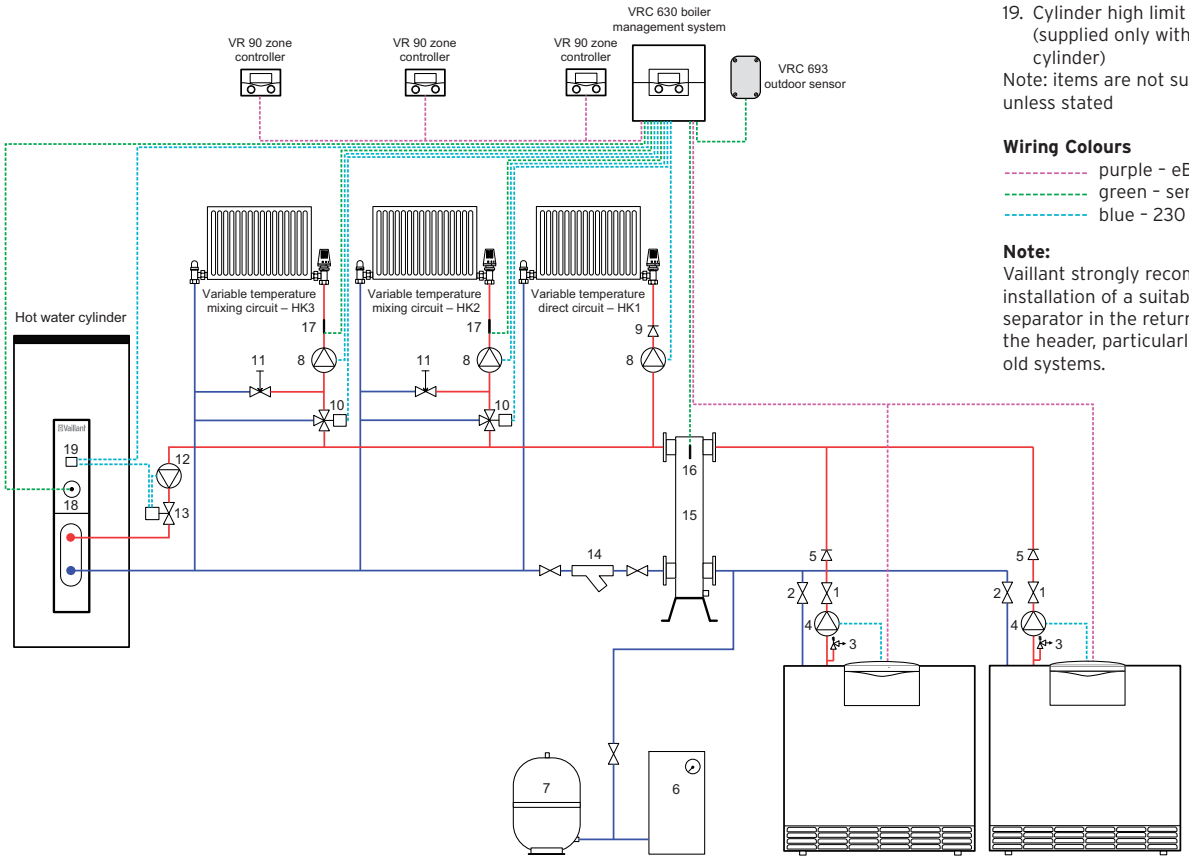
Each unit features an easy to use, advanced diagnostic display, which, combined with a single electronic circuit board simplifies commissioning, servicing and operation.

atmoCRAFT features and benefits
Eight models available
- with outputs ranging from 65 - 165kW

Features and benefits
- A sealed combustion chamber ensures minimal NOx levels – typically less than 80mg/kWh (class 5)
- Close load matching with modulation ranges from 65% to 100%
- Vaillant weather compensated controller and systems components compatible to ensure maximised heating credits under the Building Regulations act
- BEMS compatible
- Comprehensive diagnostic numeric display that enables simple and efficient commissioning, servicing and operation

System design





Key

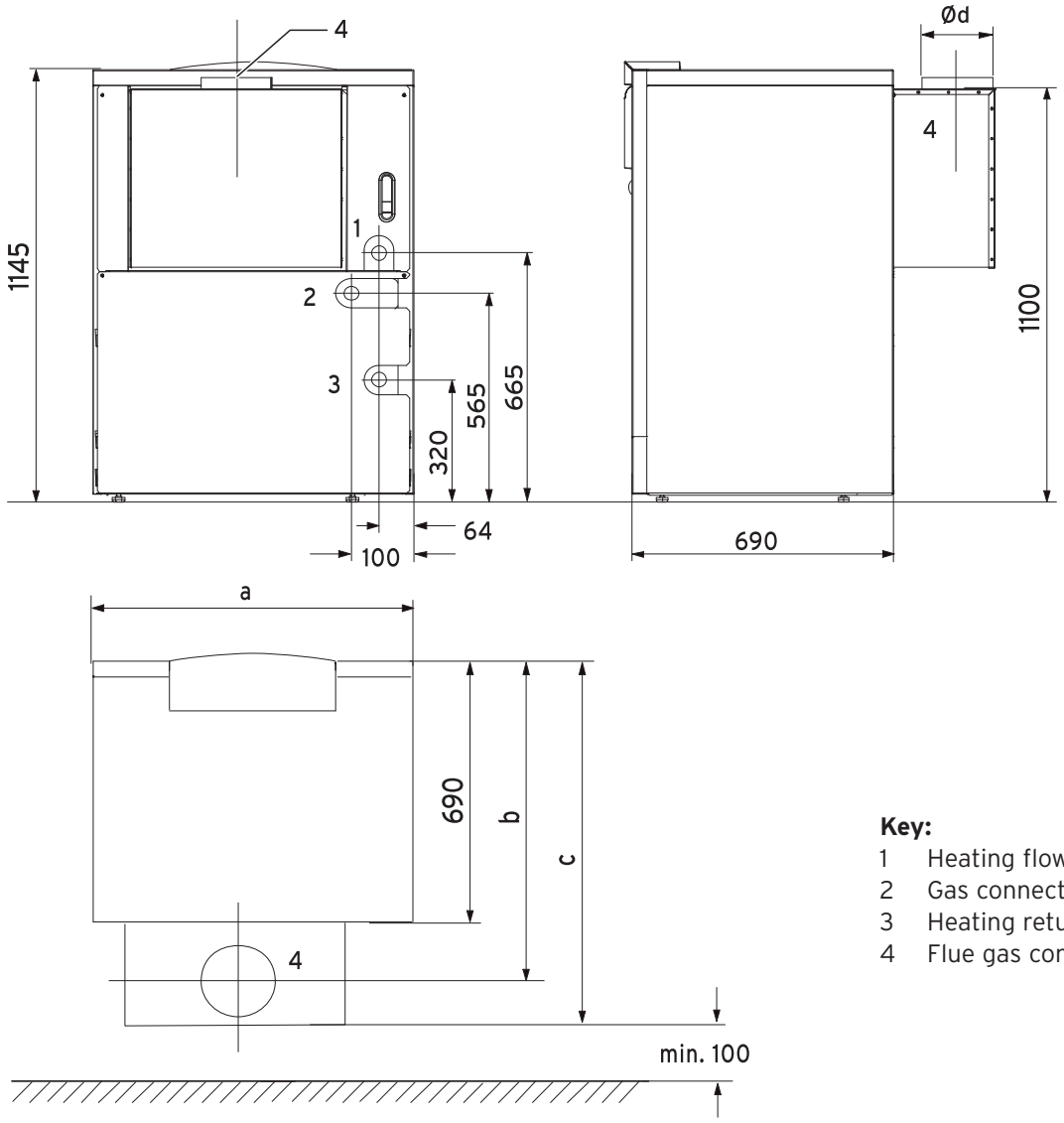
1. Boiler flow isolation valve (supplied only with ecoTEC)
2. Boiler return isolation valve (supplied only with ecoTEC)
3. Boiler safety valve (supplied only with ecoTEC)
4. Boiler shunt pump (supplied only with ecoTEC (internal) or available as an accessory with ecoCRAFT and atmoCRAFT)
5. Single check valve (not supplied)
6. Primary pressurisation unit (available as an accessory)
7. Primary expansion vessel (available as an accessory)
8. Heating pumps
9. System check valve
10. Heating circuit mixing valve
11. Regulating valve
12. Cylinder primary pump
13. Cylinder motorised valve (supplied only with uniSTOR cylinder)
14. Dirt separator or strainer (available as an accessory)
15. Low loss header (available as an accessory)
16. Low loss header VR 10 sensor (supplied with VRC 630 controller)
17. Heating circuit VR 10 sensor (supplied with VRC 630 controller) or VR 692 clip on pipe sensor (available as an accessory)
18. Cylinder VR 10 sensor (supplied with VRC 630 controller)
19. Cylinder high limit thermostat (supplied only with uniSTOR cylinder)

Note: items are not supplied by Vaillant unless stated

Wiring Colours

- purple – eBUS
- green – sensors
- blue – 230 volt

Note:
Vaillant strongly recommend the installation of a suitably sized dirt separator in the return pipe work to the header, particularly in the case of old systems.

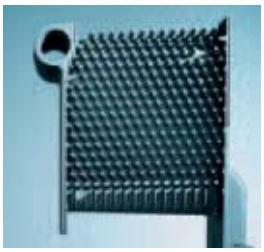


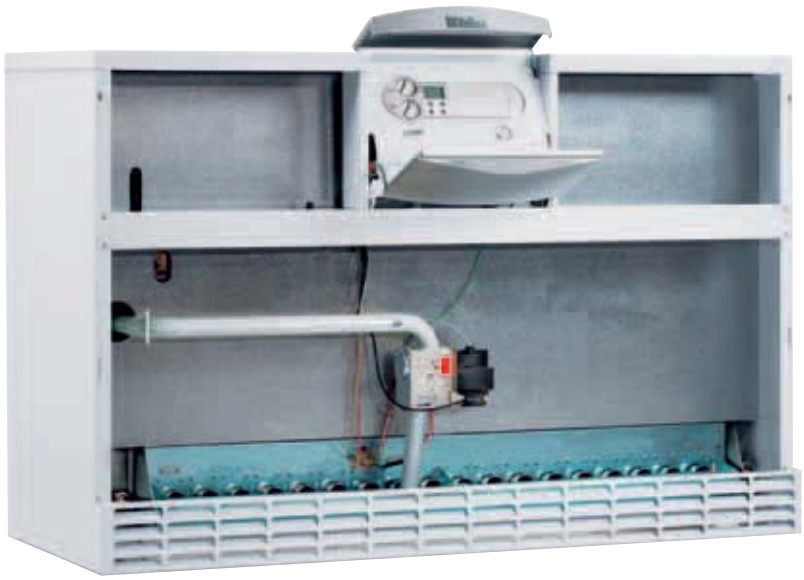
Key:

1 Heating flow
2 Gas connection
3 Heating return
4 Flue gas connection

Boiler type	A	B	C	Ø d	Heating feed/ Heating return	Gas connection
65 kW	850mm	860mm	960mm	180mm	1 1/2" male BSP	1" male BSP
75 kW	930mm	850mm	960mm	200mm	1 1/2" male BSP	1" male BSP
85 kW	1010mm	850mm	960mm	200mm	1 1/2" male BSP	1" male BSP
105 kW	1170mm	838mm	960mm	225mm	1 1/2" male BSP	1" male BSP
115 kW	1250mm	838mm	960mm	225mm	1 1/2" male BSP	1" male BSP
130 kW	1410mm	825mm	960mm	250mm	1 1/2" male BSP	1 1/4" male BSP
150 kW	1570mm	825mm	960mm	250mm	1 1/2" male BSP	1 1/4" male BSP
165 kW	1730mm	852mm	1012mm	300mm	1 1/2" male BSP	1 1/4" male BSP

Key components





Heat exchanger
Cast iron sectional design heat exchanger delivered fully assembled as a single unit for quick and simple installation. The heat exchanger can be dismantled on site for easier siting of boiler, and then re-assembled using new boiler nipples and sealant. Vaillant provides a boiler assembly tool hire service (please contact Vaillant for more details).

Heat exchanger insulation
A heavy duty insulation covers the heat exchanger improving overall thermal efficiency and reduces standing heat losses.

Low NOX burner
Atmospheric burner designed to produce NOx levels <80mg/kWh (class 5).

Automatic flue damper
Adjustment of the excess air being drawn through the heat exchanger to the flue system, whilst the burner is in low fire, will maintain a greater efficiency. Whilst in stand-by mode the flue damper will remain in the closed position there-by reducing the standing losses of the appliance.

Sealed combustion chamber
The burner utilises a sealed combustion chamber enabling only primary combustion air to burn with the gas. This ensures the NOx levels are kept to an absolute minimum.

Controls
atmoCRAFT boilers can be controlled with the optional VRC 410s weather compensator to maximise system and boiler efficiency.

The digital display unit can be wall-mounted and automatically matches the boiler flow temperature to the outside temperature.

To prevent back end corrosion of the heat exchanger, a shunt pump and thermostat are recommended. Vaillant dedicated pumps and thermostats are available as accessories.

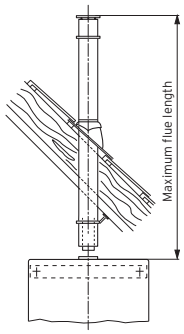
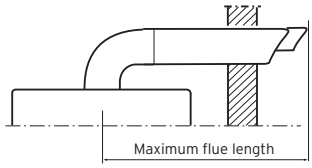
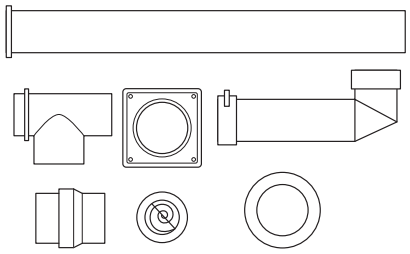
Boiler display with optional VRC 410s
Provides status and diagnostic information for easy servicing, as well as optional climate and time control with the VRC 410s weather compensator.

Technical specification – atmoCRAFT

atmoCRAFT		VK 654	VK 754	VK 854	VK 1054	VK 1154	VK 1304	VK 1504	VK 1654
Article number		**301928**	**301929**	**301930**	**301931**	**301932**	**3019333**	**301934**	**301935**
Heat output (80/60°C)	kW	42.2 - 65	48.7 - 75	55.2 - 85	68.2 - 105	74.7 - 115	84.5 - 130	97.5 - 150	107.5 165
Maximum heat input (net)	kW	70.7	81.5	92.5	114	125	141.3	163	179.3
Number of sections		8	9	10	12	13	15	17	19
Net Efficiency 100% load	%	91.23	91.33	90.91	91.21	91.14	91.28	91.41	91.51
Net Efficiency 30% load	%	91.56	91.46	91.01	91.41	90.98	90.68	90.84	90.94
SAP seasonal efficiency (natural gas)	%	82.40	82.30	81.90	82.30	82.00	81.80	81.90	82.00
SAP seasonal efficiency (LPG)	%	84.20	84.20	83.80	84.10	83.80	83.60	83.70	83.80
Modulation range	%	65-100							
Flow Temperature (max/min)	°C	35/83							
Inlet gas working pressure required (natural gas)	mbar	20							
Inlet gas working pressure required (lpg propane)	mbar	37							
NOx Class		5							
NOx emissions	mg/kWh	<80							
CO_2 percentage (after 5mins full load +/-1)		6.5	6.5	6.5	6.5	6.6	6.6	6.6	6.6
Flue type classification		B_{11}							
Gas type		II_{2H3P}							
Gas rate natural gas (G20)	m^3/hr	7.4	8.5	9.7	11.9	13.0	14.9	17.0	18.8
Gas rate lpg propane (G31)	kg/hr	5.5	6.3	7.2	8.8	9.7	11.0	12.7	14.0
Primary water flow pressure drop (ΔT = 20K)	mbar	18	25	32	44	46	52	60	68
Primary water flow pressure drop (ΔT = 10K)	mbar	76	110	130	150	180	220	250	280
Maximum operating primary pressure	bar	3							
Electrical connection	V/Hz	230/50							
Electrical power consumption	W	<60							
Dimensions Height	mm	1145	1145	1145	1145	1145	1145	1145	1145
Width	mm	850	930	1010	1170	1250	1410	1570	1730
Depth	mm	960	960	960	960	960	960	960	1012
Dry Weight	kg	317	343	369	421	447	499	550	601
Water content	l	28.0	31.0	34.3	40.9	44.0	51.0	57.0	65.0
Gas connection	BSP(m)	1"	1"	1"	1"	1"	1¼"	1¼"	1¼"
Flow and return connection	BSP(m)	1½"	1½"	1½"	1½"	1½"	1½"	1½"	1½"
Flue Flue outlet diameter	(mm)	180	200	200	225	225	250	250	300
Flue gas temperature (min/max)	°C	80/115	80/115	80/115	80/115	80/115	80/115	80/115	80/115
Flue gas volume (nominal)	kg/h	162	180	205	252	270	317	360	403

Flueing

ecoTEC flueing and lengths

Elements	Article No.		ecoTEC	
			VU GB 466/4-5	VU GB 656/4-5
Vertical flue terminal 	303 200	Max. permissible length of concentric flue	21.0 m without elbow	18.0 m without elbow
			Maximum length of flue is reduced by 2.5 m for each additional 87° elbow Maximum length of flue is reduced by 1.0 m for each additional 45° elbow	
Horizontal flue terminal 	303 209	Max. permissible length of concentric flue	18.0 m plus 1 elbow, 87°	15.0 m plus 1 elbow, 87°
			Maximum length of flue is reduced by 2.5 m for each additional 87° elbow Maximum length of flue is reduced by 1.0 m for each additional 45° elbow	
Façade kit connection set 	00 2004 2748	Max. permissible length of concentric flue gas pipe	22.0 m plus 3 elbows 87° and support elbow	22.0 m plus 3 elbows 87° and support elbow
			Air intake piece positioned no further than 4 m from the connection with the boiler	

Alternative termination accessories

Concentric system Ø 80/125

303 200 = Vertical air/flue duct (black)

303 209 = Horizontal air/flue duct

00 2004 2748 = Connection to flue gas pipe, installation on external wall

Optional connection accessories	Accessory No.	303 200	303 209	00 2004 2748
Air/flue duct extensions, concentric 470 mm - Ø 80/125 	303 202	X	X	X
Air/flue duct extensions, concentric 970 mm - Ø 80/125 	303 203	X	X	X
Air/flue duct extensions, concentric 1970 mm - Ø 80/125 	303 205	X	X	X
Bends (PP), concentric (pack of 2) 45° - Ø 80/125 	303 211	X	X	X
Elbow (PPs), concentric 87° - Ø 80/125 	303 210	X	X	X
Flue support clips (pack of 5), Ø 125 	303 616	X	X	X
Sliding sleeve (PPs) Ø 80/125 	303 215	X	X	X
Adjustable roof tiles for pitched roof 	009 076 (black)	X		
Flat roof penetration collar 	009 056	X		
Flexible pitched roof seal 	303 980	X		

Façade kit

The façade kit system is a stainless steel solution which enables the flue outlet to be re-sited to a different location outside the property. It is designed for installations where flue vapour (pluming) is, or might be, an issue. The façade kit is available in stainless steel only.

The façade kit can only be used with the 80/125 flue system and is connected to the boiler with a basic connection set which forms the interface between the standard concentric 80/125 flue system and the stainless steel components. The façade kit should be mounted vertically outside the building.

Concentric system Ø 80/125

00 2004 2748 = Connection to flue gas pipe, installation on external wall

Optional connection accessories	Accessory No.	00 2004 2748
External wall bracket (50 to 300 mm, adjustable), stainless steel 	0020042749	X
Fastening clamp (50 to 90 mm), stainless steel 	0020042751	X
Extension for fastening clamp (90 to 280 mm), stainless steel 	0020042752	X
0.5 m extension for external wall installation, concentric 80/125, stainless steel 	0020042753	X
1.0 m extension for external wall installation, concentric 80/125, stainless steel 	0020042754	X
0.5 m extension for external wall installation, concentric 80/125, stainless steel, shortenable 	0020042755	X
87° elbow for external wall installation, concentric 80/125, stainless steel 	0020042756	X
45° elbow (2 pieces) for external wall installation, concentric 80/125, stainless steel 	0020042757	X
Rain collar for roof penetration, stainless steel 	0020042760	X

ecoTEC cascade flueing

Example of typical cascade flueing intallation

Flue gas non-return flap

ecoTEC commercial boilers can be used in cascade configuration similar to that shown above.
Each boiler must be fitted with the flue gas non-return flap accessory (303960). Please refer to the flue installation manual (0020046373) for further help.

The non-return flap is not necessary if the chimney is designed to EN 13384-2 and the natural draft is greater than the pressure losses.

- Standard flue connection 125mm Ø
- Range of 125mm Ø horizontal and vertical flue accessories available
- Stainless steel 80/125mm concentric facade system available

Note:
For non-standard flueing systems (e.g. chimneys with flexible liners and cascade flue system) advice from specialist flue companies must be sought. All flue installations must comply with the current Gas Safety (Installation and Use) regulations as well as current editions of BS5440-1, BS6644 and where necessary for installations over 150kW The Clean Air Act. Additionally any flue material must be suitable for the use and CE marked or comply with the current edition of BS715, also the flue system must be sized in accordance with EN13384-2 (chimneys - Thermal and fluid dynamics calculation methods - Part 2: Chimneys serving more than one heating appliance

ecoCRAFT flueing

ecoCRAFT/3		VKK 806/3	VKK 1206/3	VKK 1606/3	VKK 2006/3	VKK 2406/3	VKK 2806/3
Flue gas temperature min (80/60)	°C	60-65	60-65	60-65	60-65	60-65	60-65
Flue gas temperature max (80/60)	°C	65-70	65-70	65-70	65-70	65-70	65-70
Flue gas volume (nominal minimum)	g/s	6.3	10	12.2	19.9	21.7	23.5
Flue gas volume (nominal maximum)	g/s	35.4	51.2	70.7	88.4	106.1	123.8
Residual fan pressure	Pa	100	100	150	150	150	150

atmoCRAFT flueing

atmoCRAFT		VK 65/4	VK 75/4	VK 85/4	VK 105/4	VK 115/4	VK 130/4	VK150/4	VK 165/4
Flue outlet diameter	mm	180	200	200	225	225	250	250	300
Flue gas temperature min (80/60)	°C	80	80	80	80	80	80	80	80
Flue gas temperature max (80/60)	°C	115	115	115	115	115	115	115	115
Flue gas volume (nominal)	g/s	45	50	57	70	75	88	100	112

Controls

VRC 630

A range of controls is available for use with Vaillant commercial boilers and offers a whole building approach to improve operating efficiencies.

VRC 630 boiler management control
The VRC 630 control provides weather-compensated flow temperature control for a heating system and has time programs for controlling a heating and hot water system. This versatile control is able to control multiple boilers in cascade and multiple heating circuits using additional accessories. The VRC 630 control can also be easily used for single boiler applications bringing benefits of multiple heating zone control.

The VRC 630 can control the following system circuits:
- A direct heating circuit
- Two mixed circuits, e.g. compensated heating
- An indirectly heated hot water cylinder (can be designated as a heating circuit)
- A hot water secondary re-circulation pump

The system can be extended by adding up to six further extension circuit modules (accessory VR 60) each VR 60 allows two further circuits which can either be central heating or hot water. A maximum of 15 heating circuits can be controlled in total (1 X VRC 630 – 3 circuits and 6 X VR 60 – 2 circuits each). The extension circuits are programmed at the central VRC 630 control. For more convenience the heating circuits can be controlled locally using separate room/zone controls (VR 80 or VR 90) for each extension circuit. These room/zone controls can be connected to the first eight heating circuits.

Up to eight Vaillant ecoTEC, ecoCRAFT or atmoCRAFT boilers can be connected to the VRC 630 using a bus coupler (accessory VR32 for ecoTEC/ecoCRAFT and VR30/2 for atmoCRAFT).

VRC 430
The VRC430 is a weather compensator designed for use with single eBUS (ecoTEC/ecoCRAFT) boilers. It features a backlit plain text display with two click and turn knobs which together with numbered screens make navigation easy. It has time and temperature control for heating and hot water channels and an additional timed channel for a circulation pump. Programming for 7 day, 5/2 day or 24hr operation is possible with three different switching periods for all three channels and three temperature profiles can be set for the heating channel. Additional features include; set-back temperature, heating and hot

water advance, automatic summer winter changeover, holiday mode, optimum start/stop. With additional accessories (VR61 and VR81) the VRC430 can be used to control two heating zones and hot water circuit. Simple two-wire low voltage eBUS connections make installing the VRC430 easy or simply fit into boiler fascia for true plug and play flexibility.

VR 90 room/zone control (for use with VRC630 only)
A separate control can be connected to eight heating circuits (room/zone/ 1 ... room/zone 8). The VR 90 allows a user to set the operating mode and the target room temperature. The control can take into account the actual room temperature measured by the built-in room sensor, if necessary. It is also possible for the user to adjust some parameters for the associated heating circuit (time program, heating curve etc.) and to select special functions (over-ride/party etc.). It is also possible to query the heating circuit, and show maintenance and fault messages for the boiler. The VR 90 control is connected to the rest of the control system via 2-core eBus cable to enable communication.

VR 80 room/zone control (for use with VRC630 only)
Similar to the VR 90, the control can be connected to eight heating circuits (room/zone 1 ... room/zone 8). The VR 80 allows a user to set the target room temperature and heating mode (auto, eco, off and over-ride/party). The control can take into account the actual room temperature measured by the built-in room sensor. It is also possible for the user to adjust some parameters for the associated heating circuit and to select special functions (party etc.). The VR 80 control is connected to the rest of the control system via 2-core eBus cable to enable communication.

VRC 410s weather compensator
The VRC 410s is designed for use with atmoCRAFT floor standing atmospheric boilers only. An externally mounted temperature sensor monitors the outside temperature and adjusts the boiler flow temperature to achieve the required room temperature. The relationship between outdoor and boiler flow temperature is programmed by the installer who selects the appropriate heat curve based on the design temperature of the heating system. Ideal for properties with low heat losses, the control creates a constant indoor temperature whilst maximising fuel savings. The control offers timed control of both central heating and hot water. The control can be plugged into the boiler fascia or installed on an internal wall. A room thermostat is not required.

VRC 430

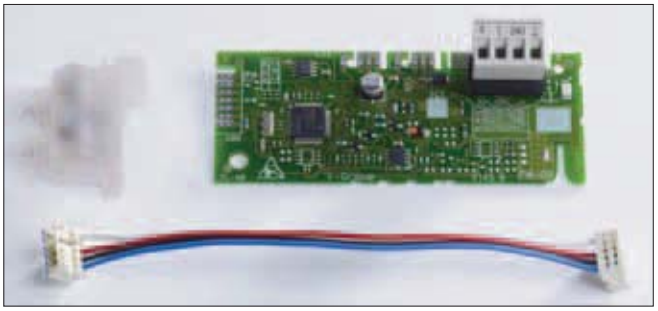
VR 90

VR 80

VRC 410

Controls

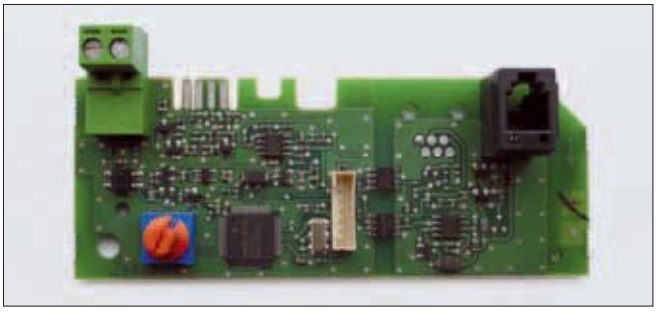
The VR34 is a 0-10 Volt coupler for ecoTEC and ecoCRAFT 3 that transfers a voltage input from the BEMS equipment into a temperature set point for the boiler. The VR34 also has a 24Volt fault signal output in the event of a boiler failure, this will remain active until the fault is cleared and the boiler reset.
The VR34 also has an LED to indicate operation.



VR34 0-10 Volt coupler

Vaillant controls compatibility table

Boilers			**Non - eBUS control**	**eBUS controls**				
			Single boiler	**Single boiler controls**				
			Weather compensator	Weather compensator		Remote control	2 ch zone wiring centre	1 ch zone wiring centre
	Model		**VRC410**	**VRC400**	**VRC430 blue backlight**	**VR81**	**VR61**	**VR65**
Article number			**300647**	**0020010843**	**0020028520**	**0020028540**	**0020028532**	**307215**
								
		Number of boilers	CH time & temp DHW time & temp circulation pump time	CH time & temp DHW time & temp circulation pump time single heating zone only	CH time & temp DHW time & temp circulation pump time two heating zones with VR61 accessory	For use with VRC430 ony	For use with VRC430 only	For use with VRC430 or VRC400
Wall hung	**ecoTEC** 	Single boiler installation	N/A	Yes	Yes	Yes	Yes (low loss header required)	Yes (low loss header required)
		2 + boiler installation	N/A	N/A	N/A	N/A	N/A	N/A
Floor standing	**ecoCRAFT 3** 	Single boiler installation	N/A	Yes	Yes	Yes	Yes (low loss header required)	N/A
		2 + boiler installation	N/A	N/A	N/A	N/A	N/A	N/A
Floor standing	**atmoCRAFT** 	Single boiler installation	Yes	N/A	N/A	N/A	N/A	N/A
		2 + boiler installation	N/A	N/A	N/A	N/A	N/A	N/A



VR32

The VR32 is a bus coupler for use with ecoTEC and ecoCRAFT 3 boilers. It is needed for cascade installations and allows the VRC630/2 controller to identify the boilers connected to it. The VR32 sits alongside the boiler main PCB and connects via an interface cable. A simple numbered rotary switch is used to set the address of the boiler. The VR32 can then be connected to the VRC630/2 controller using the eBUS terminals.

eBUS controls continued				**Bus couplers**		**Accessories**			
Multi boiler controls									
Cascade control	Zone expansion module	Remote zone controls							
VRC630	**VR60**	**VR80**	**VR90**	**VR30**	**VR32**	**VR34**	**1-in-5**	**2-in-6**	**VR40 (2-in-7)**
0020040075	**306782**	**306766**	**0020040079**	**0020003985**	**0020003986**	**0020017897**	**306253**	**306247**	**0020017744**
									
3 heating 1 hot water 1 circulating pump	VRC630 + 2 heating circuits	For each heating circuit	For each heating circuit	For each boiler	For each boiler	0-10Volt coupler	Expansion module for additional pump or remote fault indication	Expansion module for additional device connections or remote fault indication	Expansion module for additional device connections or remote fault indication
Connected via VR32	Connected via eBUS	Connected via eBUS	Connected via eBUS	N/A	Fitted in each boiler	Connect to boiler eBUS	N/A	N/A	Yes
Connected via VR32	Connected via eBUS	Connected via eBUS	Connected via eBUS	N/A	Fitted in each boiler	One in each boiler connect to eBUS	N/A	N/A	Yes
Connected via VR32	Connected via eBUS	Connected via eBUS	Connected via eBUS	N/A	Fitted in each boiler	Connect to boiler eBUS	N/A	N/A	Yes
Connected via VR32	Connected via eBUS	Connected via eBUS	Connected via eBUS	N/A	Fitted in each boiler	One in each boiler connect to eBUS	N/A	N/A	Yes
Connected via 7-8-9	Connected to VRC630 via eBUS	Connected to VRC630 via eBUS	Connected to VRC630 via eBUS	Fitted in each boiler	N/A	N/A	Yes	Yes	N/A
Connected via 7-8-9	Connected to VRC630 via eBUS	Connected to VRC630 via eBUS	Connected to VRC630 via eBUS	Fitted in each boiler	N/A	N/A	Yes	Yes	N/A

vrnetDIALOG - remote system monitoring

The tool for Building managers everywhere and anywhere!

Vaillant have been the innovators of heating technology for over 130 years and continue to develop new ways to enhance the level of service we offer to our customers. vrnetDIALOG has been developed with Building managers in mind. It offers the opportunity to identify when a system is not performing to specification and can save both time, in un-necessary site visits, and cost in wasted fuel. Maintenance can also be more effective with the ability to track system performance and in the event of a fault become alerted before your client allowing you to respond quicker equipped with the correct information and a shorter down time for your client.

Real time monitoring and the ability to adjust boiler and control operational parameters are one of the key features offered by vrnetDIALOG. Past performance of the boilers can also be displayed in graphical form allowing Building managers not only the ability to streamline operating performance but also a more cost effective package for their client.

What is vrnetDIALOG?
vrnetDIALOG is a monitoring system that allows remote access via the internet (no special software required) to allow customers to monitor the performance and status of all Vaillant eBUS boilers and controls. This is an ideal product for building and facilities managers who may be responsible for multiple sites to monitor them from the comfort of their own office.

How does it work?
Vaillant boilers and controls that use eBUS technology are simply connected to the vrnetDIALOG unit which in turn must be connected to a dedicated telephone line. Access to the equipment is now possible via the internet using a web browser from any PC or Laptop, simply log on with a dedicated username and password and you will now have access to the following features:

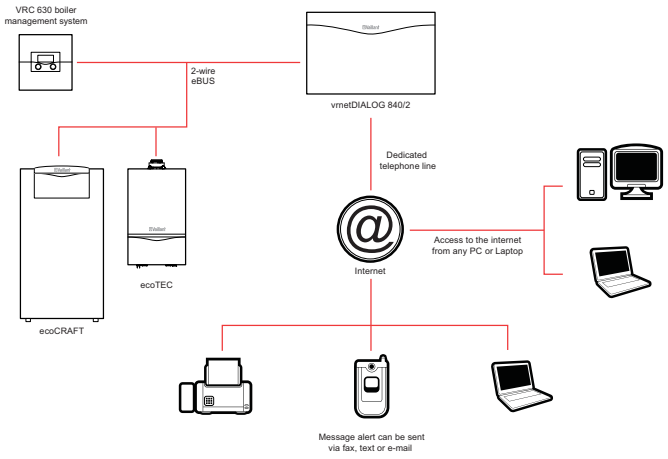
- Up to sixteen boilers, including all parameters
- Associated controls e.g. VRC630 or VRC430
- Programming times, temperature set-points and functions of any eBUS control can be altered remotely.
- Alerts can be set-up in the form of text message to mobile devices, e-mail or fax in the event of a boiler fault occurring.
- Different access rights can be given to users of the system to prevent unnecessary changes to controls or boiler parameters.
- Boiler performance and functionality can be modified remotely.
- Proactive service visits can be arranged if a fault cannot be fixed remotely.
- Enhanced level of service for your customers.

What equipment is required?

- A dedicated telephone line.
- A computer with internet access.
- vrnetDIALOG 840/2.
- VR32 bus couplers – one is required for every boiler, this allows each boiler to be communicated with.

What is included in the package?

- vrnetDIALOG 840/2 unit.
- Licence fee
- Half day training at a Vaillant centre close to you for up to 6 people (or at an additional cost on site training for up to 6 people).
- Annual license renewal fee
- Refresher training for up to six people at Vaillant centre or on your site.
- For more details of pricing and to order please contact after sales support on:
  Telephone: 0870 85030372
  E-mail: aftersales@vaillant.co.uk



System accessories

atmoCRAFT thermal bypass pump

Cold starts and low return temperatures can mean that condensation affects a cast iron boiler. To prevent corrosion, caused by condensation, a range of dedicated bypass pumps and thermostat kits are available as a dedicated accessory.

The minimum return temperature of the boiler can be maintained at all times prolonging boiler life and performance.

Article number	009732	009733	009734
Boiler size	VK 654	VK 105	VK 1304
	VK 754	VK 115	VK 1504
	VK 854		VK 1654

Speed Setting	1	2
VK 654	009732	
VK 754	009732	
VK 854		009732
VK 1054	009733	
VK 1154		009733
VK 1304		009734
VK 1504		009734
VK 1654		009734

ecoCRAFT modulating pumps

A range of dedicated modulating pumps are available to be installed with the boiler and have pre-configured electronics matched as close as possible to each boiler requiring minimal or no adjustment. The pumps are designed to modulate their water flow in relation to the boiler output therefore allowing the boiler to produce more condensation and therefore reduce running costs. The pump simply plugs into the boiler control box using the leads supplied.

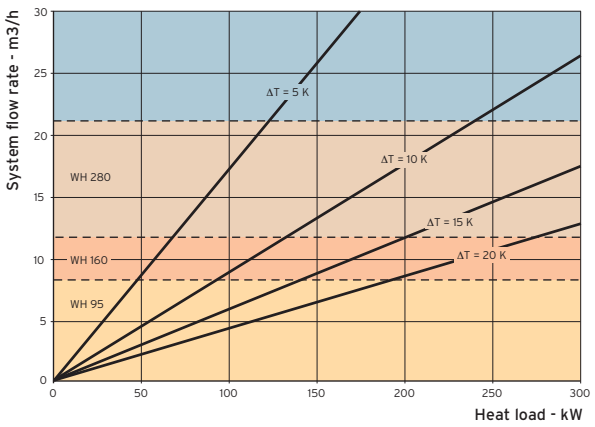
Article number	Description
0020022253	Modulating pump ecoCRAFT 80 & 120kW
0020022254	Modulating pump ecoCRAFT 160, 200 & 1240kW
0020022255	Modulating pump ecoCRAFT 280kW

Low loss headers

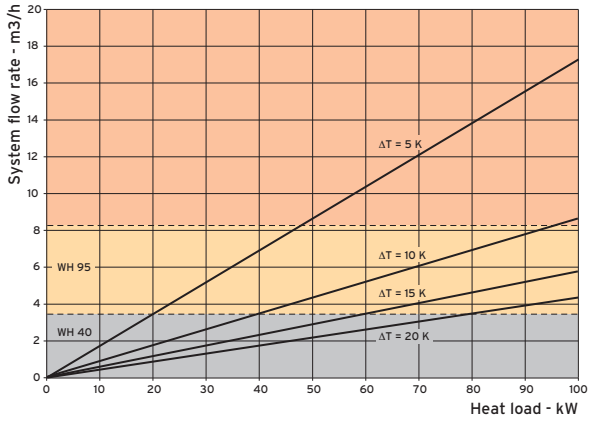
Boiler	Low loss header	△t
ecoTEC 46	WH 40	20
ecoTEC 46 (X2)	WH 95	20
ecoTEC 46 (X3)	WH 95	20
ecoTEC 46 (X4)	WH 160	20
ecoTEC 65	WH 95	20
ecoTEC 65 (X2)	WH 95	20
ecoTEC 65 (X3)	WH 160	20
ecoTEC 65 (X3)	WH 160	20
ecoTEC 65 (x4)	WH280	20
ecoCRAFT 806	WH 95	20
ecoCRAFT 1206	WH 160	20
ecoCRAFT 1606	WH 160	20
ecoCRAFT 2006	WH 280	20
ecoCRAFT 2406	WH 280	20
ecoCRAFT 2806	WH 280	20
atmoCRAFT 654	WH 95	15
atmoCRAFT 754	WH 95	15
atmoCRAFT 854	WH 95	15
atmoCRAFT 1154	WH 95	15
atmoCRAFT 1304	WH 160	15
atmoCRAFT 1504	WH 160	15
atmoCRAFT 1654	WH 160	15

The main purpose of the low loss header is to maintain correct flow of water through the boiler and allow a constant temperature supply of water to multiple heating circuits downstream of the low loss header connection. These heating circuits may have different temperature and flow rate requirements, (e.g. underfloor heating and radiator circuits). Cooler return water from the heating circuits is mixed with water from the boiler in the low loss header. An NTC (supplied) is used to monitor the temperature of water supplied by the boiler. It is recommended that a suitable strainer is fitted in the return flow between the low loss header and the heating circuits as a precaution to prevent system dirt from entering the boiler.

WH 95



WH Low Loss Header Selection Graph

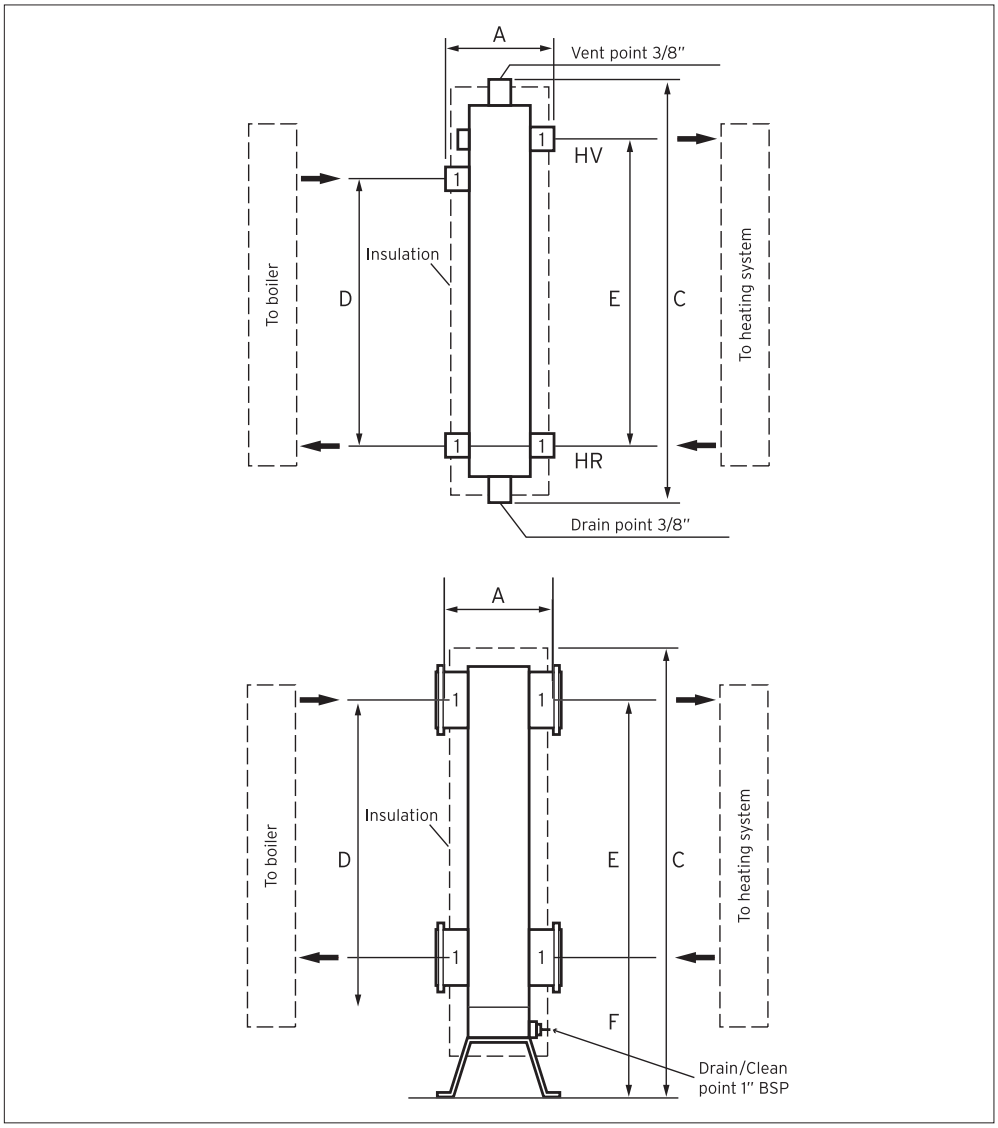


WH Low Loss Header Selection Graph

Dimensions

Model	Article number	Connection sizes 1	Header width A	Header depth (not shown)	Total height C	Insulation dimensions	To boiler D	To heating circuit E	Height from floor F	Maximum flow rate m^3/hr
WH 40	306720	1 1/4" BSP (f)	115	115	500	115/115	280	340	N/A	3.5
WH 95	306721	2" BSP (f)	155	155	750	155/155	470	540	N/A	8
WH 160	306726	DN65	520*	120	1350	220/220	900	900	300	12
WH 280	306725	DN80	600*	160	1390	260/260	930	930	300	21.5

All dimensions in mm * = distance between flanges



Large headers available on application.

WH 95

WH 160

WH 280

Condensate pumps

ecoLEVEL condensate pump

Condensate neutraliser with pump

Vaillant have a range of condensate pumps to suit most applications up to 300kW. The ecoLEVEL condensate pump, ideally suited to single boiler applications is a small unit that can be fixed to the wall close to the boiler. It can connect directly to the ecoTEC or ecoCRAFT PCB and prevent the boiler from firing if the outlet is blocked or there is a fault with the condensate pump (e.g. blocked drain).

For applications where there is a larger volume of condensate to dispose of, or where disposal of condensate into waste is a problem the commercial neutralisation condensate pump should be used. Larger than the ecoLEVEL and floor mounted it is wired in line with the boiler 230V supply and like the ecoLEVEL will stop the boiler in the event of a blockage or failure.

Description	Article Number
ecoLEVEL condensate pump	0020030797
Condensate neutraliser with pump	301374
Condensate neutraliser without pump	009730
Refill neutralisation granules (5kg)	009741

uniSTOR
unvented cylinders

uniSTOR is a range of six high grade stainless steel unvented cylinders from Vaillant. Finished with stylish casing they are available in a range of sizes from 125 litres to 310 litres. uniSTOR can be used with proprietary system boilers. However when installed with ecoTEC plus system or open vent boilers, a total heating and hot water solution is provided.

uniSTOR features a high recovery heating coil and insulation which exceeds CHeSS Best Practice. All seams are laser welded and the cylinder shell is supported by a 25 year guarantee.

- uniSTOR cylinders operate using a mains water pressure supply and do not require a feed from a cold water storage tank
- all necessary cold and hot water controls and a 2-port valve for control of domestic hot water are supplied
- all uniSTOR cylinders are backed by a full 2 year guarantee as well as a 25 year guarantee on the cylinder shell

uniSTOR stainless steel unvented cylinder		125	155	180	210	260	310
Article number		**307200**	**307201**	**307202**	**307203**	**307204**	**307205**
External case height	mm	969	1179	1339	1499	1789	2109
External case width	mm	598	598	598	598	598	598
External case depth	mm	554	554	554	554	554	554
Weight approx.	kg	28	30	33	39	44	49

Customer support services

Vaillant sales and aftersales support team
We aim to provide the best service standards in the industry. Our nationwide service network provide an expert, highly responsive, commissioning and after sales service.

Vaillant's complete and comprehensive commissioning service helps ensure optimum boiler performance. All ecoCRAFT boilers carry a one year warranty for parts, but any ecoCRAFT commercial boiler which is commissioned by Vaillant benefits from a two year parts and labour warranty.

In addition, our dedicated helpline is on hand to offer help and technical support before, during and after purchase.

High quality training
Vaillant's detailed product training – available at our dedicated training centres nationwide – is unrivalled in the industry and provides delegates with practical, expert knowledge of our commercial heating range.

Contact details

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E-mail info@vaillant.co.uk

Website **www.vaillant.co.uk**

Sales enquiries
E-mail commercialheating@vaillant.co.uk

Training
Telephone 01634 292370
Fax 01634 292354
E-mail training@vaillant.co.uk

Commissioning, Technical and Service Support
Telephone 0870 8503072
Fax 01773 525946
E-mail aftersales@vaillant.co.uk

Setting the standard for customer training

As the industry's leading training provider, Vaillant offer comprehensive training courses which can add value to your business.

Every year we train thousands of professionals. We are continually developing and improving our training programmes and facilities to provide a service that matches your requirements.

Every one of Vaillant's training courses is based on practical and detailed hands-on experience, backed up by expert tuition.

The aim of each Vaillant Training Course is to help improve your skills, which in turn can help you to improve your profit. That's why so many choose Vaillant as their training provider.

Who are Vaillant training courses designed for?
- Gas Safe Registered Installers (UK & Isle of Man)
- Corgi Registered Installers (Northern Ireland)
- IPHE Registered Installers
- SNIPEF Registered Installers
- Local Authorities and Housing Associations
- Service Organisations
- Architects and Specifiers
- Merchants and Spare Part Stockists
- Solar DHW installers
- Commercial boiler heating installers
- Air conditioning contractors

Current training courses

Commercial boiler range
A one-day course covering commercial installation, operation, servicing and repair.

Solar Product Course
A one-day course for heating professionals wanting to get a basic understanding of solar domestic heating systems.

BPEC Solar DHW course
A two-day course for heating professionals looking to gain solar heating BPEC certification.

ecoTEC High efficiency domestic boiler range
A one-day course covering our latest range of condensing boilers, including installation, operation, servicing and repair.

BPEC Unvented DHWSS Course
A one-day BPEC certified course covering unvented domestic hot water storage systems for Certificate of Competence, as defined by the Building Regulations G3.

Air to air Appreciation course
A one-day course designed for installers who wish to learn about Vaillant's range of Air to Air Heat Pumps.

Domestic Controls training
A one-day course designed to give you the best knowledge and expertise with our range of controls and accessories.

Certificate in Energy Efficiency for Domestic Heating
A one-day course to help you promote the benefits of high efficiency boilers to your customers.

BPEC Combustion Performance Assessment (CPA1) course

Other courses:

Tailor-made service engineer courses
The Vaillant training department creates custom made programmes to suit your company's individual training needs.

Commercial training centre locations:
Birmingham, B37 7UU
Slough, SL1 4NH
Bristol, BS32 4RX
Elland, HX5 9DG

For more information on any Vaillant training course please contact our Training Department on:

Telephone: 01634 292370
Fax: 01634 292354
Email: training@vaillant.co.uk

www.vaillant.co.uk/installers/training

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0020032512 • 05 2009 • Commercial heating brochure.