

# Radiator & Underfloor Central Heating

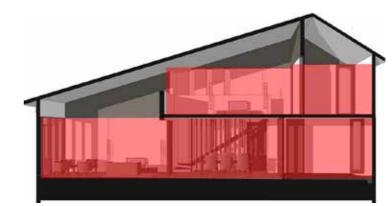


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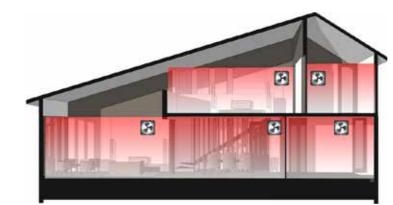


# **Defining Comfort**

The natural radiation and convection of warmth emanates from a range of fashionable radiator styles or hidden underfloor pipes.







## **Central Heating**

Central heating via radiators or underfloor heats every space in your home evenly, without hot or cold drafts using only natural radiation and convection.

## **Spot Heating**

Spot heating solutions e.g. a fireplace, portable heaters, heat pumps etc create significant temperature differences between different rooms or even within the same room.

## **Blowing Air**

Systems that blow hot air e.g. heat pumps, ducted hot air system etc create some background noise and circulate dust which can aggravate asthma and allergies.

# **Underfloor vs Radiators**

Radiator and underfloor systems share the same high level of comfort but each method has unique characteristics which suit some applications better than others.

**Underfloor Central Heating** 

The most discrete and most comfortable form of central heating.

- Constant temperature day and night
- No interior compromise

Warm water is gently circulating through pipes

warm underfoot

Due to the large thermal mass of a concrete slab, it takes less energy to keep its temperature stable

than allowing it to cool down

encapsulated

within the slab so the system is effectively invisible

• Warm floors

Since the heat is radiating from the floor, its surface is nice and

RBM Kilma flex underfloor heating pipe is made from high density cross-linked polyethylene (PeXc) with an EVOH oxygen barrier layer. PeXc is the highest and most durable polyethylene pipe for use in underfloor systems. Our system designs are typically based on 200mm pipe center spacing and maximum circuit lengths of 100m. Made in Italy.

16x2x300	20x2x300	
90		
PeX c EVOH		
ора	que	
	PeX c	



Modern radiators emit warmth via a combination

timetable plus unoccupied rooms can be switched

When there is access below the floor, radiators are

Radiator systems are not dependent on concrete

Radiators heat up quickly (within minutes) and can be programmed precisely around your

the simplest and least evasive to install

of natural convection and radiant heat.

**Radiator Central Heating** 

• Lowest running cost

Renovation or new build

Concrete and timber floors

floor construction

completely off



## **Caleffi Underfloor Panels**

Caleffi's composite manifolds ensure a precisely regulated flow of warm water is maintained in each underfloor zone. They are supplied factory assembled and contained within a powder coated cabinet with a lockable door, featuring flow meters, balancing valves, automatic air vent, fill/drain cock, manifold shut off valves and liquid crystal temperature indicators all as standard. Made in Italy.

UF182 Mixing Panel Type 10 12 4 6 14 Zones 700 700 700 700 Height (mm) 700 700 800 800 1000 1000 1200 600 Width (mm) 110 110 110 110 110 110 Depth (mm)

The underfloor pipe and the distribution panel controlling the flow of warm water around the floor circuits are both critical components - as is the correct size, length and placement of the circuits.

# **Underfloor Pipe and Panels**



		τ	JF670 Distri	bution Pane	el 🛛	
4	4	6	8	10	12	14
0	500	500	500	500	500	700
00	600	600	800	800	800	1000
0	80	80	80	80	80	110

### **RBM Kilma Underfloor Pipe**



# **Radiator Options**

A variety of styles from classic to modern. Make them a feature or blend them into the background.



### **Brugman Radiators**

Brugman radiators from Belgium are our premium brand steel panel radiator and beautifully finished to a high standard. Being constructed from pressed steel they are also durable in the case of accidental impact. Available in 400mm, 600mm, 1800mm or 2000mm high, 68mm or 102mm thick and up to 2400mm long.



**Blitz Alloy Radiators** Blitz alloy radiators are a clean modern design made in Italy by the Fondital Group. They are available in 350mm or 600mm heights by an infinite range of lengths thanks to their modular construction.



### **Stilly Radiators**

Stilly radiators also from Italy present a unique aesthetic design and an infinite range of lengths thanks to their modular construction. They have the added advantage of being available in a wide range of heights; 350mm, 600mm, 1200mm and 1800mm and therefore are a good solution for homes with limited wall space.

# **Radox Radiators**

Radox designer radiators from Romania are an indent range of unique styles, sizes and colour choices that can be advance ordered specifically to suit your project.

# **Brugman Steel Panel Radiators**

**Brugman steel panel convector radiators** from Belgium are beautifully finished to a high standard. They generate radiated and convected heat for all round comfort including a problem solving tall version for when wall space is at a premium.



Type 21 Single Convector





Type 22 Double Convector

Specifications	Height(B)	Width	Type 21 Output(W)	Type 22 Output(W
RSB**400600	400	600	726	NA
RSB**400800	400	800	968	NA
RSB**400100	400	1000	1210	1567
RSB**400120	400	1200	1453	1831
RSB**400140	400	1400	NA	2137
RSB**400160	400	1600	1937	2442
RSB**400180	400	1800	NA	2748
RSB**400200	400	2000	2421	3053
RSB**600600	600	600	1007	1283
RSB**600800	600	800	1344	1709
RSB**600100	600	1000	1679	2137
RSB**600120	600	1200	2014	2565
RSB**600140	600	1400	2351	2992
RSB**600160	600	1600	2686	3420
RSB**600180	600	1800	3023	3847
RSB**600200	600	2000	3358	4275
RSB**600240	600	2400	NA	5130
RSB**180400	1800	400	1647	1979
RSB**180600	1800	600	2470	2969
RSB**180800	1800	800	3294	3959
RSB**200400	2000	400	1786	2129
RSB**200600	2000	600	2680	3193
RSB**200800	2000	800	3573	4257





Project side entry Side mounted 'classic' polished chrome valves and thermostatic head.

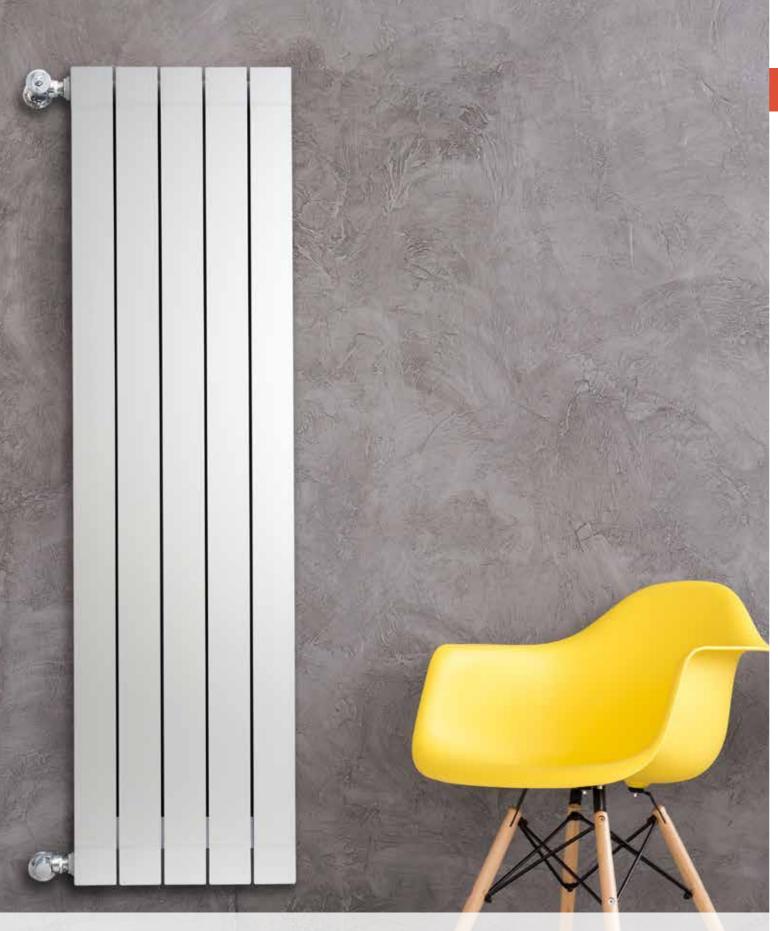


**Project bottom entry** Under mounted chrome monoblock valve and thermostatic head.



**Optima side entry** Side mounted 'modern' polished chrome valves and thermostatic head.





# Blitz radiator valve options



**Optima side entry** Side mounted 'modern' polished chrome valves and thermostatic head.



**Project side entry** Side mounted 'classic' polished chrome valves and thermostatic head.

# **Blitz Alloy Radiators**

**Blitz** is an elegant modern die-cast aluminium alloy radiator made in Italy. Its clean, essential line elegantly furnishes any living space. Fondital puts the same care into the design as it did the technology thereby producing a fashionable radiator with high output performance - particularly so with the Blitz Garda vertical version. Its modular construction allows any number of elements to be coupled together for a customised length and output.



Specifications	Height(B)	Width	Output(W)	#Sections
RBS350480	427	480	764	6
RBS350640	427	640	1019	8
RBS350800	427	800	1274	10
RBS350960	427	960	1528	12
RBS350112	427	1120	1783	14
RBS600480	676	480	1145	6
RBS600640	676	640	1527	8
RBS600800	676	800	1909	10
RBS600960	676	960	2291	12
RBS600112	676	1120	2673	14
RBG180320	1800	320	1536	4
RBG180480	1800	480	2304	6

# **RC Stilly Aluminium Radiators**

**Stilly radiators** from Italy are an interesting aesthetic high end design available in standard or very tall models which work well where wall space is at a premium. Modular construction allows for virtually any width by combining single elements at a time.



Specifications	Height (mm)	Width (mm)	Depth (mm)	Pipe centers (mm)	Output (W)	Sections (no.)
RC350500	420	470	101	574	660	10
RC350700	420	658	101	762	924	14
RC350900	420	846	101	950	1188	18
RC350110	420	1034	101	1138	1452	22
RC600500	670	470	101	574	950	10
RC600700	670	658	101	762	1330	14
RC600900	670	846	101	950	1710	18
RC600110	670	1034	101	1138	2090	22
RC120400	1270	376	101	480	1320	8
RC120500	1270	470	101	574	1650	10
RC120600	1270	564	101	668	1980	12
RC180400	1870	376	101	480	1880	8
RC180500	1870	470	101	574	2350	10
RC180600	1870	564	101	668	2820	12
Outputs calculated with 85°C flow, 75°C return						



6 2

100 111



**Optima side entry** Side mounted 'modern' polished chrome valves and thermostatic head.



**Project side entry** Side mounted 'classic' polished chrome valves and thermostatic head.



# **Radox Designer Radiators**

**Radox designer radiators** from Romania are an indent range of unique styles, sizes and colour choices that can be advance ordered specifically to suit your project. They are manufactured from high quality raw materials using eco conscious manufacturing techniques. See our Radox catalogue for full size range and colour details.



**Cento** A modern boxy aesthetic. Couple together any number of 100mm deep modular elements 800mm, 1500mm, 1800mm or 2000mm high.

### Kazar

At home in any room, bathroom or kitchen. Available 780mm, 960mm, 1140mm, 1320mm or 1500mm high by 500mm or 600mm wide.

### Multicolona

A modern version of a classic design. Couple together any number of 107mm deep modular elements 667mm, 1867mm or 2067mm high.



### **RC Convectors**

A powerful floor mounted natural convector. Available 1000mm, 1200mm, 1500mm or 2000mm long by 280mm high by 133mm or 194mm deep.







### Tosca

Can look classic or modern. Couple together any number of 100mm deep modular elements 800mm, 1500mm, 1800mm or 2000mm high.



### **Floor Convectors**

A floor recessed fan assisted convector. Ideal for heating and demisting large glassed areas. Available 1300mm, 2100mm, 2900mm, or 3700mm long by 190mm or 260mm wide.

## Empire

Traditional English heritage style towel rail. Available 480mmH x 480mmW, 920mmH x600mmW or 1000mmH x 700mmW.



## River

Stylish and practical side access towel rail. Available 1000mm or 1400mm high by 500mm or 600mm wide.



## **Empire Multi**

Empire style with added heating horsepower. 920mmH x 600mmW.



# **Heated Towel Rail Options**

Heat the bathroom space and enjoy warm, dry towels

# Lazzarini Heated Towel Rails

**Lazzarini heated towel rails** from Italy provide both a place to hang and dry towels but also provide radiated heat for bathroom comfort. The horizontal bars have a slightly curved round tube profile to assist hanging the towels over them. They are made of high quality steel and protected with a thick layer of hard chrome plating.



# **Radox Heated Towel Rails**

The widely spaced bars on the **Radox heated towel rails** from Romania provide plenty of space to hang and dry towels while also providing modest radiant heating for the bathroom space. They are made of high quality steel and finished with a rock hard textured matt black coating or glossy chrome plated.



## Towel rail valve options



**Optima side entry** Side mounted 'modern' polished chrome valves and thermostatic head.



Specification	Height	Width	Output(W)	Element(W) (optional)
RTM500800	800	500	231	100
RTM500115	1150	500	327	100
RTM500160	1600	500	577	100
RTM600800	800	600	281	100
RTM600115	1150	600	386	100
RTM600160	1600	600	693	100

Outputs calculated with 75°C flow, 65°C return



### Electric Element Option

These heated towel rails are designed primarily to utilise the radiator heating circuit. A 100 watt elements (code:RTE100) is available separately to heat the towel rail either in the summer months when the central heating is switched off or as a stand alone electric towel rail.

Specification	Height	Width	Output(W)	Element(W) (optional)
RTR550500	550	500	231	100
RTR850500	850	500	327	100
RTR115500	1150	500	577	100
Outputs calculat	ed with 75°C flo	w, 65°C return		



**Project side entry** Side mounted 'classic' polished chrome valves and thermostatic head.





# System Control – Automated Simplicity

Your home can be programmed to be warm according to your schedule and budget. You can even control your system via a smart phone.





### **Temperature Compensating Thermostat**

According to changes in outdoor conditions, temperature compensating controls make small preemptive changes indoor to maintain a more constant temperature.

### Standard Room Thermostats

Easy to use touch ring technology and intuitive programming make the **Salus** thermostat our most popular choice. Available in a range of options to suit every application.

### **Internet Enabled Thermostats**

Internet enabled thermostats allow the home owner remotely control their heating system via any mobile or fixed device.

- colour accents
- wall mounted or free standing







• Vaillant temperature compensating controllers result in an increased level of comfort. and reduced running costs (for Vaillant appliances only)

• The wireless **Netatmo thermostat** by 'Stark' is a compact design which can be wall mounted or free standing and comes with a range of changeable

• The wireless **Salus thermostat** is a contemporary design which can also be



# **The Heating Appliance**

Gas, Diesel, Electricity or Wood



The heat appliance generates the hot water and is the heart of your heating system. In most cases the best choice will be influenced by the lowest cost fuel options available at your location. We represent the very best brands available in Europe and strict European emission legislation means we benefit from the latest energy saving innovations.

### Gas

Gas boilers are the most cost effective option in terms of both installation and running costs. They are ultra efficient, compact and almost silent when in use.

Typical running costs: NG = 0.07c/kWh LPG = 0.18c/kWh

### Heatpumps

Air to water heatpumps scavenge heat from the ambient air to create hot water. They are extraordinarily efficient, over 400%, which makes electricity a viable energy if gas is not available.

Typical running costs: 0.07c/kWh

### Diesel

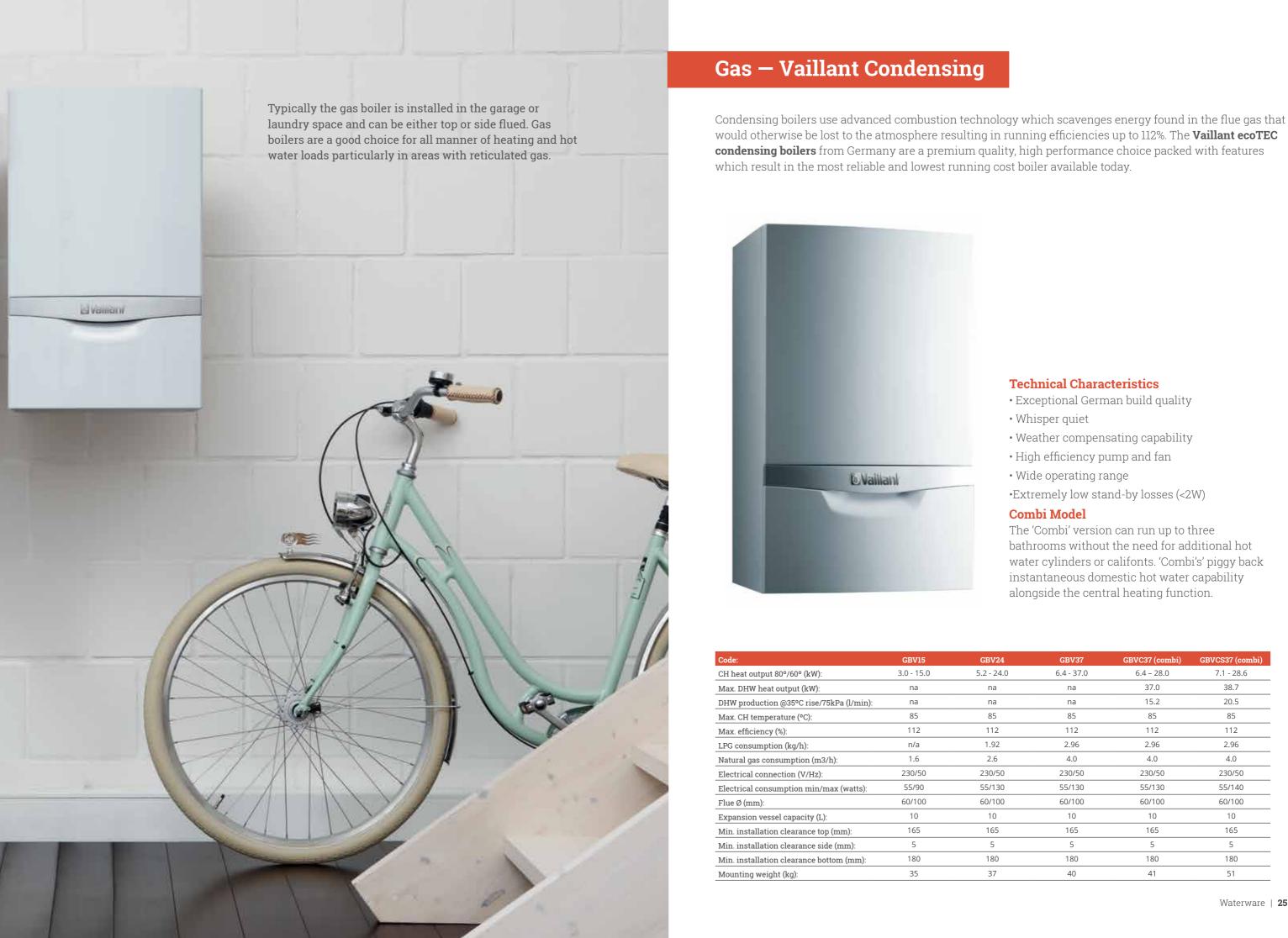
Modern diesel boilers are quiet, clean burning and reliable. The installation of a diesel boiler is typically more involved and costly than gas boilers but remain a good option for areas without natural gas.

Typical running costs: 0.10c/kWh

### **Wood Boilers**

Wood boilers now days utilize advanced wood gasification combustion technology to produce high outputs and minimal clean air approved emissions.

Typical running cost dependent on wood type and cost



## **Technical Characteristics**

- Exceptional German build quality
- Whisper quiet
- Weather compensating capability
- High efficiency pump and fan
- Wide operating range
- •Extremely low stand-by losses (<2W)

### **Combi Model**

The 'Combi' version can run up to three bathrooms without the need for additional hot water cylinders or califonts. 'Combi's' piggy back instantaneous domestic hot water capability alongside the central heating function.

	GBV37	GBVC37 (combi)	GBVCS37 (combi)
)	6.4 - 37.0	6.4 - 28.0	7.1 - 28.6
	na	37.0	38.7
	na	15.2	20.5
	85	85	85
	112	112	112
	2.96	2.96	2.96
	4.0	4.0	4.0
	230/50	230/50	230/50
	55/130	55/130	55/140
	60/100	60/100	60/100
	10	10	10
	165	165	165
	5	5	5
	180	180	180
	40	41	51



# **Gas – Fondital Non Condensing**

Standard or non-condensing boilers are a lower cost option compared to the more advanced condensing type and consequently cost less to install for the sake of a modest reduction in running efficiency. The **Fondital Formentera non condensing boilers** from Italy have proven to be extremely reliable and trouble free. While less sophisticated, they are still a high performance appliance taking advantage of many years of non-condensing boiler technology.



Specifications	GBTF24	GBTF32	GBTFC32 (combi)
CH heat output 80°/60° (kW):	8.5 – 23.1	14.3 - 30.8	14.3 - 30.8
Max. DHW heat output (kW):	na	na	32.0
DHW production @35°C rise/75kPa (l/min):	na	na	15.1
Max. CH temperature (°C):	83	83	83
Max. efficiency (%):	93.4	93.4	93.4
LPG consumption (kg/h):	1.98	2.56	2.56
Natural gas consumption (m3/h):	2.7	3.49	3.49
Electrical connection (V/Hz):	230/50	230/50	230/50
Electrical consumption (watts):	86	134	134
Flue Ø (mm):	60/100	60/100	60/100
Expansion vessel capacity (L):	7	7	7
Width x Height x Depth (mm:	420/750/315	420/750/315	420/750/315
Mounting weight (kg):	35	38	41

### **Technical characteristics**

- Well engineered and manufactured in Italy
- Very quiet operation
- Three speed circulating pump
- LCD screen display

## Combi Model

The 'Combi' version includes instantaneous domestic hot water capability (alongside the central heating load) which can run one to two bathrooms without the need for additional hot water cylinders or califonts.

# **Diesel Condensing – Grant Unit Boiler**

The whisper quiet Grant condensing unit boiler is an indoor, ultra high efficiency, floor standing heat generator for domestic heating and hot water production. Advanced condensing flue combustion technology scavenges energy found in the flue gas that would otherwise be lost to the atmosphere resulting in running efficiencies up to 97%. The combustion is controlled by a microprocessor and a digital interface with advanced temperature control functions. Made in Ireland.

# **Diesel – Ferroli Atlas Unit Boiler**

The **Atlas unit boiler** is an indoor, high efficiency, floor standing heat generator for domestic heating and optional hot water production. A blown diesel oil burner regulates the fuel while a standard atmospheric style flue exhausts minimal low temperature emissions. The combustion is controlled by a microprocessor and a digital interface with advanced temperature control functions. Made in Italy.



### **Technical characteristics**

- 92.1 97% Gross SAP2005 annual efficiency rating
- High efficiency circulating pump
- Internal condensate trap
- Digital control panel suitable for connection to digital controller and outdoor probe
- Advanced setting and control digital interface for hydraulic circuit pressure, central heating temperatures
- Self-diagnostic micro processor
- Central Heating frost protection system
- Grant EZ-Fit top or side flue system
- Internal insulated Riello RDB burner

Specifications	DBV26	DBV36	DBV46
Heat output (kW):	15 to 26	26 to 36	36 to 46
Heating water content (L)	19	21	21
Expansion tank capacity (L)	10	12	16
Efficiency Pmax 80-60°C (%):	95	97	92.6
Max working pressure in heating (bar)	2.5	2.5	2.5
Dry weight (kg)	127	142	142
Max. heating temp (°C)	75	75	75
Power supply (V/Hz)	230/50	230/50	230/50
Riello Burner	RDB1	RDB2	RDB2.2
Flue Ø (mm)	100	100	100



Specifications	DBA30U	DBA42U
Heat output (kW):	30	42
Heating water content (L)	18	23
Expansion tank capacity (L)	10	12
Efficiency Pmax 80-60°C (%):	93	93.3
Max working pressure in heating (bar)	2.5	2.5
Dry weight (kg)	157	196
Max. heating temp (°C)	95	95
Power supply (V/Hz)	230/50	230/50
Sun Burner	G6	G6
Flue Ø (mm)	130	130
**The Atlas outdoor boiler kit can be used to convert the standard boiler to an outdoor installation.		

### **Technical characteristics**

- High performing three-pass cast iron element
- 3 stars efficiency according to EN 92/42 CEE;
- Digital control panel suitable for connection to digital controller and outdoor probe
- Advanced setting and control digital interface for hydraulic circuit pressure, central heating temperatures
- Self-diagnostic micro processor
- Central Heating frost protection system
- Easy-to-maintain thanks to hinged combustion chamber door
- New compact design
- Oil fired burner Ferroli Sun G6



# **Electricity – Vaillant Arotherm Air to Water Heat Pump**

**Vaillant's** Arotherm heatpumps benefit from the same exacting DNA found in Vaillant's outstanding gas boilers. German precision ensures these complex machines are the most capable and reliable heat pumps ever seen. They can be used to radiantly heat and cool small or large sized residential spaces and have built in domestic hot water production as standard.





Specifications
OEM part number
Heat output (kW): (Water 35°C / Air 7°C D.B)
Total input (kW): (Compressor + fan)
COP EN 14511:2004: (30/35°C / 7°C D.B)
Max. heating temp (°C):
Factory set point (°C):
Pump working head (kPa):
Number of refrigerant circuits:
Max. pressure in heating (bar):
Number & type of compressor:
Sound power level (dBa): (40/45°C / 7°C D.B)
Power supply (V/Ph/Hz):
FLA (Amps)
Dry weight (kg):
Height (mm):
Width (mm):
Depth (mm):



### Features

- Outdoor temperature compensation minimises running costs and maximises comfort
- Modulating fan speed and an 'invertor' compressor for extremely efficient and quiet operation with soft start technology
- Separate indoor 'hydrobox' module simplifies the installation and protects vulnerable control hardware from harsh environments
- Integrated domestic hot water production
- Electric back-up boost heater for extreme conditions and high temperature domestic hot water production (with an external tank)
- Slab cooling capability for all season comfort
- Over 450% efficient (\*refer COP conditions below) which makes electricity an affordable energy option
- Solid high-quality coated heat exchanger with large fin spacing's to prevent icing

HPV9	HPV16
VWL 85/2 A230V	VWL 155/2 A230V
8.1	14.6
1.8	3.4
4.8	4.5
60	60
Compensating	Compensating
45	37
1	1
3	3
1 scroll	1 scroll
60	66
230/1/50	230/1/50
16	25
106	165
975	1380
1103	1103
463	463

# **Electricity – Clivet Air to Water Heat Pump**

**Clivet** is Italy's undisputed leader of heat pump technology and critically these 'air to water' units are optimised for NZ's difficult low temperature and high humidity conditions. They are designed to satisfy the under-floor heating requirements of small or large sized residential and commercial spaces. All the units are suitable for outdoor installation.

# **Wood – Atmos Wood Gasification Boiler**

**Atmos wood or pellet boilers** utilize advanced wood gasification combustion technology to produce high outputs and minimal clean air approved emissions. They can be used to heat medium or large homes via either radiators and or under floor systems with optional connection to a hot water storage tank for domestic hot water production. Made in Czech Republic.



### Features

- Able to heat medium to large homes via under floor systems even under extreme conditions helped by a variable speed fan and water pump technology
- DC invertor technology automatically modulates compressor speed preventing on/ off cycling which compromises efficiency and durability
- Extremely quiet operation with soft start technology
- Nearly 400% efficient (\*refer COP conditions below) which makes electricity an affordable energy option
- Unique anti frost features designed into the heat exchange plates and a special heated drip tray in the floor of the unit which prevents frost from rising.

Specifications	HPC8	HPC14	HPC25
Heat output (kW): (Water 35°C / Air 7°C D.B)	8.8	14.5	25.6
Total input (kW): (Compressor + fan)	2.17	3.57	6.64
*COP EN 14511:2004: (30/35°C / 7°C D.B)	3.9	3.92	3.82
Max. heating temp (°C):	60	60	50
Factory set point (°C):	45	45	41
Pump working head (kPa):	70	69	134
Number of refrigerant circuits:	1	1	1
Max. pressure in heating (bar):	6	6	6
Number & type of compressor:	1 scroll	1 scroll	1 scroll
Sound power level (dBa): (40/45°C / 7°C D.B)	63	67	47
Power supply (V/Ph/Hz):	230/1/50	230/1/50	400/3/50
FLA (Amps)	19	29.5	n.a.
Dry weight (kg):	122	173	310
Height (mm):	992	1234	1517
Width (mm):	895	1038	1685
Depth (mm):	378	410	629



Specifications	Wood	Pellet
Code:	WB30	WB30P
Heat output (kW):	32	32
Working efficiency (%):	>90	>90
Specified stack draught (Pa):	24	24
Hopper volume (dm3):	93	93
Maximum log length (mm):	330	330
Maximum working pressure (kPa):	250	250
Water volume (L):	83	83
Minimum return temperature (°C):	65	65
Power supply (V/Hz):	230/50	230/50
Dry weight (kg):	365	395
Height (mm):	1279	1279
Nidth (mm):	678	678
Depth (mm):	840	1140

### Features

- Two models for burning either wood logs & briquettes or wood pellets at high efficiency of around 90%
- Full digital combustion control for accurate and safe hot water production.
- Ceramic gasifying chamber with rotating cast iron grate with intake of secondary preheated air
- Good combustion by firing up and achieving of operation temperature very quickly
- Easy to clean burning chamber and turbulator from ash

### **Installation Requirements**

To operate at claimed efficiencies the Atmos boiler should be installed with a 500L buffer tank

• A minimum of 6 - 7m of flue length is required to ensure correct draft is generated for proper operation.

# High Efficiency Multi-tasking

domestic hot water production and pool heating.



### **Domestic Hot Water**

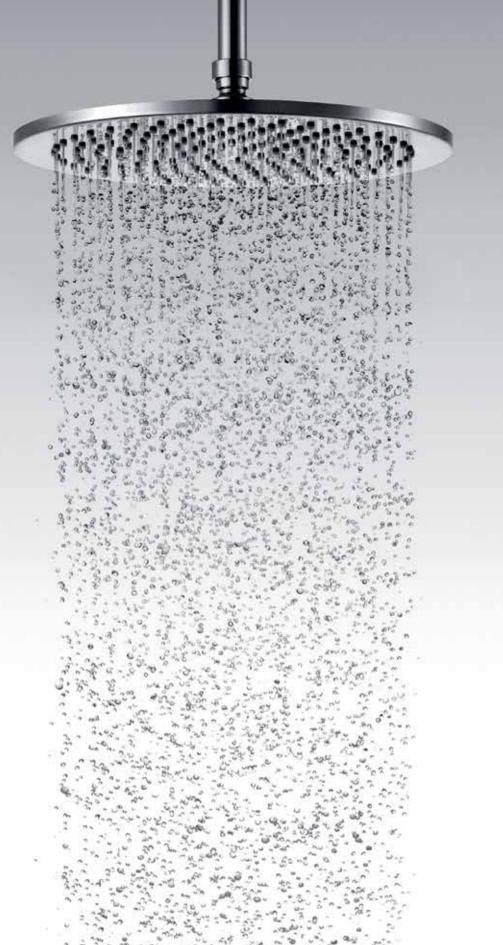
Integrating a Protank stainless steel hot water cylinder provides a high capacity, high efficiency domestic hot water system. This solution not only reduces hot water costs but also saves further expenditure on additional plumbing equipment and systems. Made in Britain.

Specification	250L	300L	350L	500L	500L (Thermal store)
Inlet / Outlet ports	20mm	20mm	25mm	25mm	25mm
TPR / CWE ports	20mm	20mm	20mm	20mm	20mm
Solar ports (qty x Ø)	2x20mm	none	none	none	none
Dry stat pockets (qty x Ø)	3x22mm	3x22mm	3x22mm	3x22mm	2 x 22mm
Heating element	3kW	3kW	3kW	3kW	3kW
Overall (Height x Ø)	1690x545mm	1940x545mm	1350x720mm	1830x720mm	1830x720mm
Weight full	287kg	341kg	408kg	590kg	590kg
Weight empty	37kg	44kg	59kg	90kg	90kg
Insulation quantity	139cm <sup>2</sup>	159cm <sup>2</sup>	145cm <sup>2</sup>	211cm <sup>2</sup>	211cm <sup>2</sup>
Standing heat loss @45°C ∆ t	1.76kW/day	2.03kW/day	1.71kW/day	2.05kW/day	2.05kW/day
Reheat time	131mins	158mins	184mins	263mins	263mins

### **Pool Heating**

A heat exchanger is used to transfer heat energy from the heating appliance to the pool water. The Pahlen range from Sweden is optimized for pool systems and made of materials that permit their use for a wide variety of installations.

Specifications	HXP40	HXP40T	HXP75	HXP75T
Coil material:	316L SS	Titanium	316L SS	Titanium
Body material:	Thermoplastic	Thermoplastic	Thermoplastic	Thermoplastic
Chlorination type:	Chemical	Salt	Chemical	Salt
Output:	40 kW	40 kW	75 kW	75 kW
Max. pool capacity:	40m <sup>3</sup> (@1°/hr)	40m³ (@1º/hr)	130m³ (@1º/hr)	130m³ (@1º/hr)
Slip connection:	50mm	50mm	50mm	50mm
Max. prim. press:	500 kPa	500 kPa	500 kPa	500 kPa
Max. secon. press:	400 kPa	400 kPa	400 kPa	400 kPa







## The heating appliance has the capacity to be integrated and multi-task a range of extra duties including

# **Alternative Heating Comparisons**

A central heating system amounts to an investment similar to a kitchen or bathroom so its important your choices meet or exceed your expectations. Below is our opinion of what to expect with some common home heating alternatives.

### Wood Stove or Cooker Style Radiator Systems

Utilizing a wood fired stove or cooker in place of a dedicated boiler is a nice option if you have access to low cost or free wood.

- Combines the benefits of hydronic central heating and the ambiance of an indoor fire
- Requires manual and continuous stoking of the fire to maintain output

### HRV Energy Recovery Systems

Recommended for humidity control and air purification but fall well short of the kind of energy required to heat a home unless supplemented by additional heating energy.

• Have a history of misrepresenting the home heating capacity and function

### **Electric Underfloor**

Cost effective solution for spot heating small areas with solid floor surfaces.

• Prohibitively expensive running costs make this an impractical consideration as an entire home heating solution. For example a winter month running costs in a typical 200m<sup>2</sup> home = \$890/ mnth @0.24c/kWh x 8hrs/day

### Ducted Hot Air Systems or Air Heat Pumps

Heating via blown hot air is effective but provides a low level of comfort.

- The movement of hot air circulates dust which can aggravate asthma and allergies
- Heating air is up to 4 times less efficient than using the natural
- convection and radiation principals of hydronic systems
- Fans create background noise
- Hot air furnaces cannot multi-task hot water production
- Hot air furnaces in ducted systems tend to be less efficient than central heating boilers
- Air heat pumps are limited to the space in which they are installed and are expensive if considering
- to heat the whole home
- Air heat pumps have a negative visual impact on any interior design
- Air heat pumps decrease in performance and efficiency as the outdoor temperature drops not ideal for heating



# **Professional System Design**

Our friendly tech team will design a system specifically for you and your home. We appreciate most home owners find the decision making process complex and we are here to help you make the best choices. Every new design begins with a heat loss calculation based on a floor plan and if there is any information not evident on your plan, our tech team will make contact to ask any relevant questions.



### Here are some fundamental questions to get you started;

### What is your best choice of energy?

Reticulated natural gas is often the best choice if its available in your location but LPG, diesel, wood or heatpumps all have merit depending on your location and the shape of your system.

### **Underfloor or radiators?**

Don't dismiss radiators too early in the decision making process. Its still the most popular choice in European markets for good reason.

### Are you also considering the plumbing?

All new builds and many renovations need a hot water system too. Integrating domestic hot water with your central heating system will reduce your overall budget and hot water consumption costs.





## Waterware is a privately owned and family run business, established in 1989.

For over 25 years Waterware NZ has been a specialist importer and distributor of bathroom, plumbing and central heating products.

We are an established industry supplier who has built our reputation as being technical experts of what we sell. Our full time technical team are dedicated to trouble shooting and supporting the installer network to ensure our products meet or exceed your expectations.

- We support the products we sell with market leading warranty terms and an inventory of spare parts for every past and current product we sell.
- We ensure our products are fully compliant with national regulatory requirements which are often overlooked by suppliers of discount products.

Your installer;



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