



# RENEWABLE HEATING SOLUTIONS

THE NEXT GENERATION R290 HEATPUMP



HEAT PUMPS • CYLINDERS • HEAT EMITTERS



Grant Engineering has been designing and manufacturing reliable, efficient and innovative heating products since 1978. Specialising in condensing oil-fired boilers and an expanding range of renewable appliances, including air-source heat pumps and solar thermal, the Grant brand has established a reputation for quality second to none.

At Grant, we combine precision engineering, innovation, performance, and value for money to produce sustainable heating solutions trusted by installers and homeowners alike. While the technology is sophisticated, Grant products are easy to install, straightforward to maintain and backed up by excellent after-sales support. When customers choose Grant, they also get the added peace of mind that comes with the outstanding reliability and superb efficiencies of our products.

At the heart of everything we do is continuous product development. Every Grant product incorporates the latest technologies and materials, enabling them to exceed performance and environmental standards and ensuring they make the best use of our natural resources. Consequently, Grant products meet the heating needs of tomorrow, today.

Think Heating. Think Grant.

# INTRODUCING THE PRODUCTS

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## **Aerona R290 Air Source Heat Pumps with Smart Controls**

The Aerona R290 inverter driven air source heat pumps utilise the more environmentally friendly R290 refrigerant and have exceptional SCOPs (Seasonal Coefficient of Performance), delivering high performance while also having minimal impact on their surroundings both aesthetically and acoustically.

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## **High Performance Cylinders**

The Grant cylinder range consists of single, twin coil and pre-plumbed variants which are all manufactured to the highest specification to help deliver maximum heat transfer and recovery for effective hot water heating.

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## **Uflex Underfloor Heating**

Grant's wet underfloor heating range, which includes systems suitable for both new build and retrofit situations, distributes heat into a room while also helping the heat source, such as an air source heat pump, operate at optimal efficiency.

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## **Afinia Aluminium Radiators**

The Afinia aluminium vertical and horizontal radiators have excellent thermal conductivity which makes them highly responsive and incredibly effective for both low and high temperature systems.

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## **Sahara Solar Thermal**

Available as on-roof mounting options, Grant's Sahara solar thermal systems offer a clean, sustainable and cost effective low carbon alternative to providing homes with hot water.

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## **Biomass**

Condensing woodpellet boilers with ranges from 5kW to 33kW. Self cleaning and modulating burners. The unique Grant Spira Pell condensing woodpellet boiler combines easy installation with straight forward daily operation and low maintenance.

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# PACKAGE SOLUTIONS BY GRANT

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Renewable technologies are becoming increasingly popular amongst homeowners who want their property to be heated by a sustainable system. Consumer demand and industry legislation are driving manufacturers to develop products which have less impact on the environment, helping householders to reduce their carbon footprint and to lead greener lifestyles. Consequently, products which offer viable alternatives to traditional fossil fuel heating systems are playing a more prominent role in today's market with householders opting to install cleaner, renewable heating products within their home.

To meet this growing demand for greener heating solutions, Grant has carried out extensive research and development to design, manufacture and supply a comprehensive range of renewable heating technologies. Grant's renewable product portfolio consists of the heat sources and complementary products including a growing range of heat emitters. Not only can installers turn to Grant for a complete range of products but their customers benefit from the peace of mind that comes from sourcing their heating system from one manufacturer.

Grant's renewable technologies all achieve impressive individual efficiencies however, when multiple technologies are combined, the overall efficiency of the complete heating system can be further improved. For example, installing an air source heat pump alongside a high performance cylinder and effective heat emitters can take a home's heating system into a new class of efficiency. All of Grant's products have been developed to complement one another, allowing each product to work at its best when installed alongside the other components within the system helping it to achieve maximum overall efficiency.

Alongside its comprehensive product offering, Grant also provides customer support in the form of design assistance and quotations. The dedicated Grant Renewables Support Team is on hand to assist with the design and sizing requirements for renewable and underfloor heating installations. From answering design queries and assisting with heat loss calculations through to providing full system drawings and complete product specifications, the Renewables Support Team can provide expert advice to help installers and their customers make informed decisions when choosing the right heating solutions for their requirements.

Through its design and quotation services and product supply, Grant delivers complete home heating packages and with so many different products available within its portfolio, there is a package solution to meet almost any home's heating requirements. The diverse range of products available from Grant delivers choice and flexibility for customers, allowing them to select the technologies which best meet their heating needs. From new builds through to retrofits and renovations, Grant's heating products are suitable for installation within a wide range of properties.

**For multiple package solutions, choose Grant.**



# AERONA R290 AIR SOURCE HEAT PUMPS

The Aerona R290 inverter driven air source heat pumps are Grant's greenest and most efficient heat pumps yet. Incorporating R290 refrigerant, which has a significantly lower Global Warming Potential than traditional refrigerants, the Aerona R290 range models are cleaner and more eco-friendly while also being incredibly practical. With excellent SCOPs, all Aerona heat pumps achieve high performance, allowing homeowners to lower their dependence on fossil fuels.



# AERONA R290 RANGE

Consisting of five single-phase models – 4kW, 6.5kW, 9kW, 12kW and 16kW – the Aerona R290 heat pumps provide heating and hot water for properties. Each unit operates at high efficiency even at low external temperatures, making it a cost-effective renewable alternative to traditional off-gas heating methods. Furthermore, the Aerona R290 heat pumps have a minimal impact on their surroundings, being compact in size and quiet in operation, with all models achieving the Quiet Mark. The range is also Keymark approved.

A+++



## FEATURES

-  Grant designed and tested  
Built for Irish weather conditions
-  4-16kW Output
-  R290 Refrigerant Gas
-  Outdoor
-  Highly efficient
-  Weather Compensation
-  Inverter Driven
-  Domestic hot water/Central heating
-  3kW Backup Heater
-  65°C Flow temperature easily achieved



## Features & Benefits

The new Grant Aeronas R290 air source heat pump incorporates all the features and benefits of our existing Aeronas<sup>3</sup> range such as DC inverter driven and built in weather compensation, while now using R290 refrigerant. R290 is an environmentally friendly natural refrigerant gas. As it is a pure gas, it does not emit greenhouse gases into the atmosphere, resulting in a significantly lower Global Warming Potential (GWP) than other refrigerants. With an ERP rating of A+++ @ 35degC, a low GWP of 3, Remote Monitoring Software and Smart Control Options, the Aeronas R290 is our most efficient air source heat pump to date.

## How the Aeronas R290 works

Air source heat pumps use basic thermodynamic principles to convert thermal energy contained within the air we breathe to heat energy that can be used to provide heating and hot water. This "ambient heat" is replenished by the sun making our heat pumps both effective and environmentally friendly.

Grant Aeronas R290 heat pumps use an air to water system which uses energy absorbed from the air and transfers it to a water based heating system. The process uses the same vapor/compression cycle that extracts heat in a domestic fridge. A refrigerant with a low boiling point is exposed to external air temperatures in an evaporator. The liquid boils off to a gas and absorbs the thermal energy of the air. This gas is then compressed, increasing the heat energy contained within the refrigerant. It then passes through a heat exchanger where it condenses back to a liquid form, whilst transferring the heat to the water of the heating system. The liquid refrigerant is then re-circulated through the evaporator and the cycle is repeated.

## Fit for the Future

With the recent fluctuations in price and supply of fossil fuels, air source heat pumps offer both an environmentally and economically sustainable alternative. Home heating accounts for approximately 30% of CO<sub>2</sub> emissions. The heat source used by Grant Aeronas R290 heat pumps is entirely renewable which helps reduce the amount of harmful greenhouse gases being released into the atmosphere and, in doing so, lowers the carbon footprint of the household.

## Lower Heating Costs

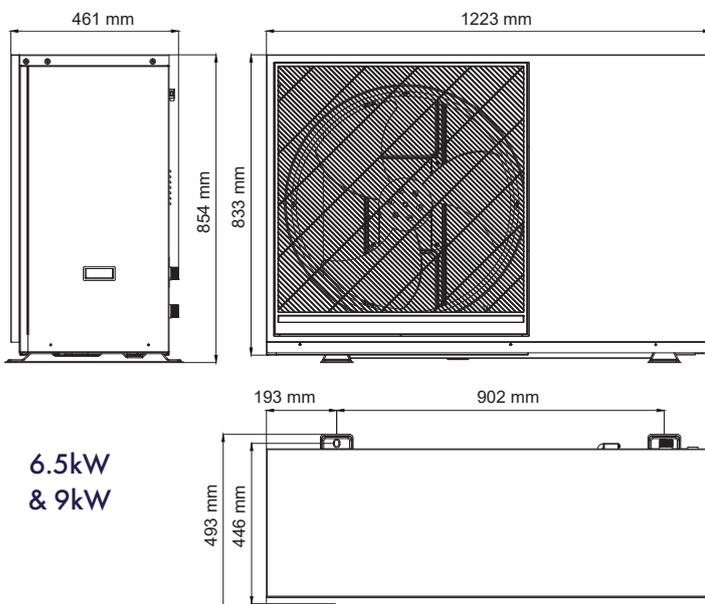
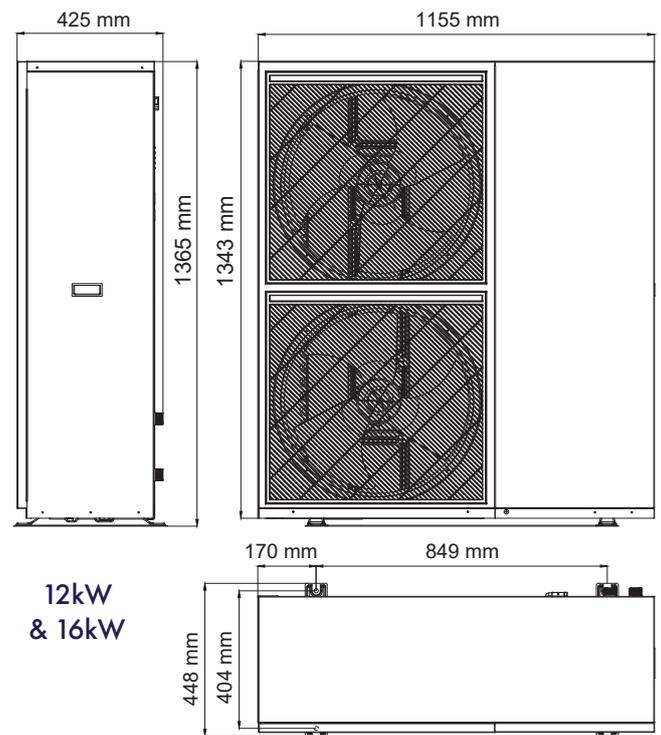
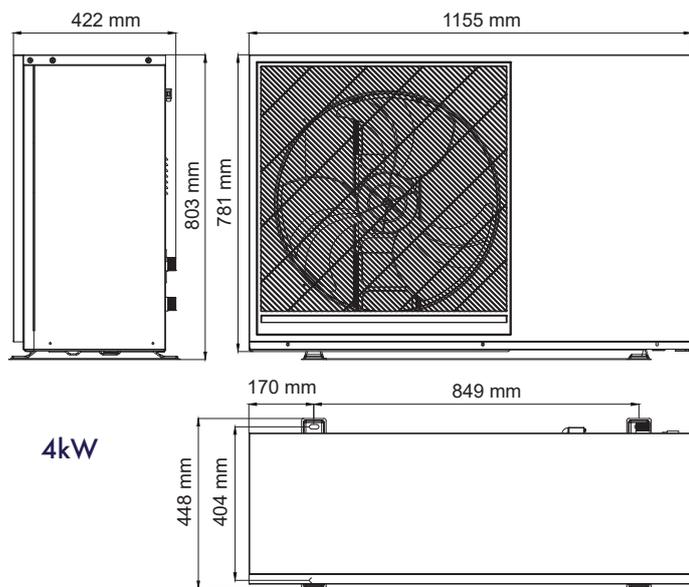
Compared with other domestic heating methods, the Grant Aeronas R290 can benefit homeowners by creating annual savings on fuel bills. The units can deliver over four times the amount of energy for every 1kW of electricity used depending on the flow temperature and the climate conditions prevailing at the time. Homes utilising this type of heat generator will obviously have a lower dependency on fossil fuels, making them less susceptible to rising fuel costs.

# AERONA R290 TECHNICAL SPECIFICATIONS

	HPR290i40	HPR290i65	HPR290i90	HPR290i120	HPR290i160
ERP Rating (35°C/55°C)	A+++ / A++	A+++ / A++	A+++ / A++	A+++ / A++	A+++ / A++
Height (mm)	803	854	854	1365	1365
Width (mm)	1155	1223	1223	1155	1155
Depth (mm)	422	461	461	419	419
Weight (Net/Gross) (kg)	101/116	117/137	132/149	155/182	182/210
Heating capacity (BS EN 14511 - air: 7°C / water: 55°C)	4.36	7.23	9.30	12.21	16.33
Power Input (A7W35) (kW)	0.82	1.54	1.9	2.53	3.43
COP (BS EN 14511 - air: 7°C / water 35°C)	4.99	4.95	4.93	4.81	4.72
SCOP average climate conditions (BS EN 14825 at 35°C)	4.67	4.88	4.57	4.68	4.50
Refrigerant (R290) (kg)	0.59	0.81	0.96	1.2	1.65
Power Supply	230V/1Ph/50Hz				
Water Connections	1" BSP				
Min/Max Operating Temp (°C)	-25 to 43*				

\* DHW

## Dimensions



# AERONA SMART CONTROLLER



The Aerona Smart Controller is an intuitive solution to control Grant heat pumps, cleverly incorporating sophisticated controller technology in a sleek display. Easy to install, this weather compensated controller incorporates heating curve configuration and advanced monitoring software to help with maximising the efficiency of Aerona R290 heat pumps.

Using the Aerona Smart Controller, installers can set, view and adjust the time schedules for the heating circuits, domestic hot water and the heat pump's on/off schedule as well as accessing in-built system configurator features which support the set-up and commissioning of an Aerona R290 heat pump and the system circuits. Supplied with the Aerona WiFi Hub, the Aerona Smart Controller can also be accessed remotely by homeowners and installers using a supporting browser-based platform and app.

INTUITIVE  
DESIGN



7 DAY  
PROGRAMMING



EASY  
SET UP



HEATING CURVE  
SELECTION



WEB BASED  
MONITORING &  
CONTROL



3 HEATING  
ZONES + DHW





## Grant High Performance Cylinders

The cylinder range comprises high-efficiency indirect hot water solutions that can partner with all of Grant's heat source appliances. Each model can complement traditional and renewable technologies, providing an eco-friendly, reliable, and energy-efficient solution for a home's hot water needs. All of the Cylinder models are suitable for use as unvented or open-vented cylinders. They are designed for multiple installation scenarios, making them Grant's most versatile range of hot water cylinders.

# INTRODUCTION TO THE CYLINDER RANGE

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## Universal Compatibility

All of the Cylinders are suitable for installation alongside boilers, air source heat pumps and solar thermal systems. This means they can be fitted as part of a package with either a Vortex oil boiler, an Aeronia R290 air source heat pump or a Grant Solar Thermal system. When an installation involves more than one heat source, such as a heat pump and solar thermal system, both systems can be combined using one of the twin coil Cylinder models. The streamlined Cylinder range is, therefore, incredibly adaptable with each model being suitable for multiple applications which can make specification very straightforward.

## Excellent Performance

The Cylinder range is Grant's most efficient generation of cylinder models, boasting our fastest heat-up times and improved standing heat losses.

## Clever Design

Each Cylinder incorporates a number of design features which make for an easier installation. The connections are all compression fittings and the pre-plumbed models include a fully integrated wiring centre. A 100mm high plinth is also an optional accessory and is suitable with all cylinders except the Integrated. This allows the pipework to be neatly routed under the cylinder and onto the cylinder connections as required. With these features and the cylinders' streamlined design, the range successfully combines function and aesthetics.

## Quality build

The Cylinder range is produced to the highest standards so that each model delivers maximum heat transfer and recovery. They are manufactured using a high quality duplex stainless steel inner shell and the large internal coils are made from 22mm stainless steel tubing. Each cylinder is also insulated with 50mm of CFC/HCFC free, fire retardant, polyurethane foam which is injected between the stainless steel cylinder and the galvanised outer casing. This high level of insulation ensures low standing heat losses and outstanding efficiency. All of the cylinders within the range have a 10 year guarantee on their shell, reflecting their exceptional build quality and providing ultimate peace of mind.

## Features

- 10 year material guarantee on cylinder shell (subject to full Terms and Conditions)
- 22mm stainless steel compression bosses supplied with polypropylene caps for protection during transit (Pre-plumbed and Integrated Cylinders have 28mm compression fittings supplied in the kit)
- No anode required
- Factory-fitted 3kW immersion heater
- Fast recovery stainless steel coils
- Labelled tappings and connections
- Factory fitted temperature and pressure relief valve
- Supplied with an unvented kit. The kit includes an expansion vessel, inlet manifold, tundish, 2-port motorised valve and dual thermostat
- Quality external finish with organic Estectic Tex paint
- Global Warming Potential (GWP) of 3.1
- Ozone Depletion Potential (ODP) of 0



# CYLINDER MODELS

The Grant unvented, indirect mains pressure cylinders are available in single coil and twin coil variants. Available in sizes from 150 litres up to 300 litres, the Cylinders are high-performing units which provide homes with an efficient, reliable hot water storage solution. The range includes pre-plumbed models, which make for a quicker and easier installation, as well as slimline units, which are ideally suited for properties where space is at a premium. Internal and external volumisers are also available to complement the Cylinder range.

## Models - Nominal Volumes

### Single Coil

HPCY150G	150 litres
HPCY180G	180 litres
HPCY210G	210 litres
HPCY300G	300 litres

### Single Coil | Slimline

HPCY150SLIM	180 litres
HPCY180SLIM	180 litres
HPCY210SLIM	210 litres

### Single Coil | Pre-Plumbed

HPCY180SMARTPPGR290	180 litres
HPCY210SMARTPPGR290	210 litres
HPCY300SMARTPPGR290	300 litres

### Single Coil | Integrated

HPAWAVE180	180 litres
HPAWAVE210	210 litres

## Pre-Plumbed Models

The Pre-Plumbed cylinder models are supplied with the following:

- Factory-fitted pre-wired controls
- Factory-fitted cold water inlet pipework
- Potable water expansion vessel for the cylinder
- Factory-fitted primary system pipework including a built-in filling loop, system pressure gauge, a 2-port zone valve for the hot water and two 2-port zone valves for two heating zones
- Optional white plinth (100mm or 470mm).

## Grant Integrated Cabinet Cylinder

The Integrated Cylinder is Grant's first cabinet cylinder model. This product encloses a Pre-Plumbed 210 litre single coil cylinder within a white casing which is suitable for kitchen and utility room installations. This innovative product, which has a similar footprint to that of a washing machine or fridge, has been designed with both the installer and homeowner in mind. The self-contained cabinet cylinder includes multiple factory-fitted features so installation is simple and straightforward. Meanwhile, the design of the unit allows for a cylinder to be easily integrated into a home, ideal when a separate airing cupboard or plant room is not available.

## Supplied as standard:

- Both the heating system and hot water expansion vessels
- Pressure gauge and filling loop
- Pre-wired electrics and factory-fitted pipework including a built-in filling loop, system pressure gauge, automatic system bypass, a 2-port zone valve for the hot water and two 2-port zone valves for two heating zones
- Easy to access pipe connections and electrical cable outlets positioned at top of the unit towards the rear
- Spacer channels provided to create a 100mm deep void between the rear of the cabinet and the wall to accommodate and conceal the pipework and electrical wiring, if required

# GRANT WAVE CYLINDERS

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## Features & Benefits

Grants range of Wave cylinders are manufactured from duplex stainless steel and are indirect, mains water cylinders with single and double coil options available. The single and double coil cylinders are high gain, which leads to a much faster heating time and quicker recovery. The range of cylinders have been specifically designed to operate in conjunction with the Grant Aerona R290 heat pump range.

- 10 year guarantee (subject to T&C's)
- Available from 150ltr - 300ltr
- Immersion heater & fast recovery stainless steel solid coils
- Suitable for use with heat pumps, biomass, gas, oil boilers and solar
- Suitable for both domestic and light commercial use
- T&P valve factory fitted
- Manufactured from 'Duplex' stainless steel for superior corrosion resistance
- 28mm and 22mm compression fittings
- 50mm CFC and HCFC-free foam lagging for low heat loss
- Additional sizes may be available upon request
- Cylinder kits available
- Good flow rate ideal for homes with multiple bathrooms and fast filling of baths
- Economical to run with minimal maintenance
- Fast reheat times for quick availability of hot water
- Not suitable for well or private water supplies



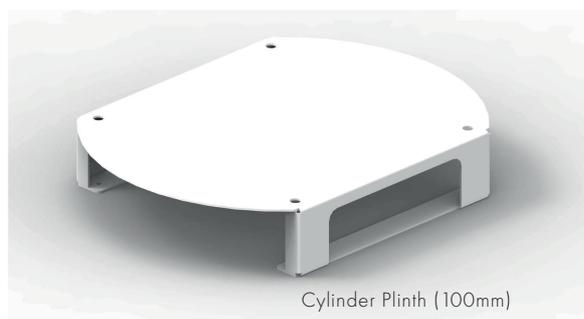
# GRANT PRE-PLUMBED CYLINDERS

## Features & Benefits

Our 210 litre smart pre-plumbed cylinder still features the same quality and efficiencies of the existing Grant cylinder range.

It comes configured for 2 heating zones and a domestic hot water zone, with an option to add an extra heating zone. It also includes a factory fitted automatic bypass. The Grant wiring centre now comes pre-fitted onto the cylinder for speed and ease of installation. This is a pre-configured electronic wiring centre that allows the installer to connect controls (stats, clocks etc), pumps, motorised valves etc together in a coherent and simple to understand manner. The wiring centre does all the complicated cross wiring during installation.

- Pre-plumbed & Pre-wired for speed of installation
- Available in 180 & 210ltr
- 10 year guarantee (subject to T&C's)
- Can be supplied with a plinth for increased options for pipe connections
- Filling valve
- Domestic hot water zone that allows hot water priority and a two-zone heating, with an option for a third heating zone
- Heating and DHW expansion vessels are installed
- Pressure reducing manifold installed and plumbed
- Good flow rate ideal for homes with multiple bathrooms and fast filling of baths
- Economical to run with minimal maintenance
- Fast reheat times for quick availability of hot water



Cylinder Plinth (100mm)

## Technical Specifications

Cylinder Plinth code		Height (mm)	Diameter (mm)
MBK-24	Cylinder Plinth	100	550
470CP	Cylinder Plinth	470	550

# GRANT INTEGRATED UNIT

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## Features & Benefits

Standing at 1.8 metres high and with a footprint of 625 x 595mm, the Grant Integrated Unit can be installed neatly within domestic spaces of a property. Featuring aesthetically pleasing white paneling, the unit is easily incorporated into the design of most modern homes, with the system controls and display easily accessed by the homeowner if required. If access is required, homeowners can find the system's controls, heat pump controller and pressure gauge behind the top door of the easy open unit.

The Integrated Unit has been pre-plumbed and pre-wired for a domestic hot water zone that allows hot water priority and a two-zone heating, with an option for a third heating zone. As the unit is pre-plumbed and pre-wired, it is time saving and enables a hassle free installation for the installer. The Grant 210 litre capacity single coil Integrated Unit has a solid, stainless steel coil which will lead to a much faster heating and recovery time.

When installing a Grant Integrated Unit with a Grant Aerona R290 heat pump, it is very important that the unit has been correctly sized to ensure the hot water needs of the property are fulfilled. Sizing will be carried out by the Grant technical team as part of the home heating design service.

Stainless steel cylinders should not be fitted on private water source, bore hole or well.

- High gain 210 litre capacity single coil
- Solid stainless steel coil
- System controls and display easily accessed
- Pre-plumbed and pre-wired
- Domestic hot water zone that allows hot water priority and a two-zone heating, with an option for a third heating zone
- Heating and DHW expansion vessels are installed
- Pressure reducing manifold installed and plumbed
- Fitted with fill and flush point
- Good flow rate ideal for homes with multiple bathrooms and fast filling of baths
- Economical to run with minimal maintenance
- Fast reheat times for quick availability of hot water

NOTE: Not suitable for a private well or bore hole



# CYLINDER RANGE TECHNICAL SPECIFICATIONS

## Single Coil

Model	Actual Capacity (ltrs)	ErP Rating	Coil rating primary (kW)	Standing heat loss (kW/24hrs)	Weight empty (kg)	Weight full (kg)
HPCY150G	135	B	44.70	1.15	36.5	174.5
HPCY180G	168	B	42.14	1.21	39	207
HPCY210G	200	B	39.58	1.41	44	242
HPCY300G	281	C	31.90	1.81	54.5	342

## Single Coil | Slimline

Model	Actual Capacity (ltrs)	ErP Rating	Coil rating primary (kW)	Standing heat loss (kW/24hrs)	Weight empty (kg)	Weight full (kg)
HPCY150SLIM	127	B	37.50	1.24	37	179
HPCY180SLIM	170	B	36.55	1.40	44	214
HPCY210SLIM	200	C	35.60	1.57	49	248.5

## Grant Smart | Pre Plumbed

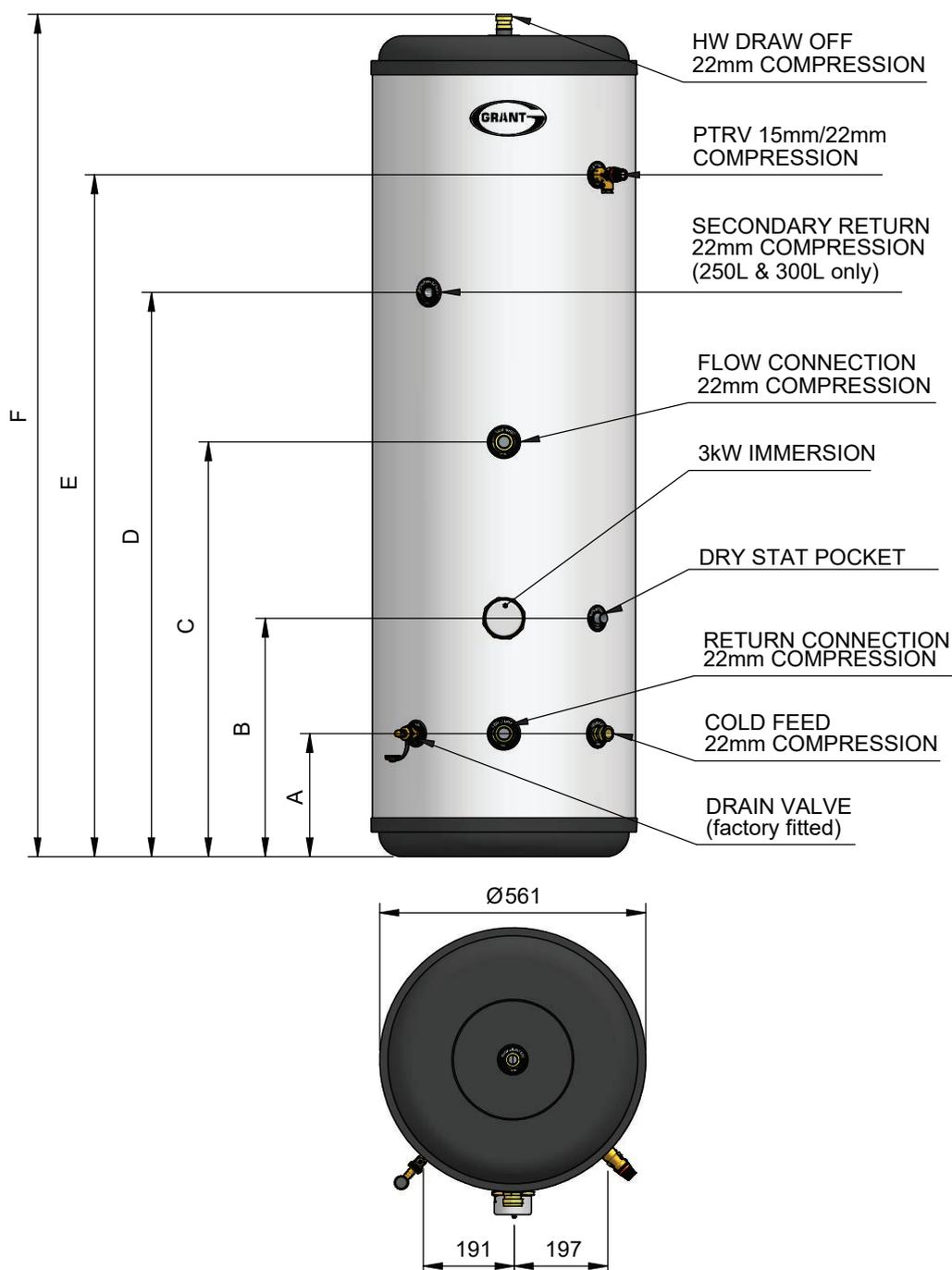
Model	Actual Capacity (ltrs)	ErP Rating	Coil rating primary (kW)	Standing heat loss (kW/24hrs)	Weight empty (kg)	Weight full (kg)
HPCY180SMARTPPGR290	168	B	42.14	1.21	46	214
HPCY210SMARTPPGR290	200	B	39.58	1.41	51	249
HPCY300SMARTPPGR290	281	C	31.90	1.81	61.5	349

## Single Coil | Integrated

Model	Actual Capacity (ltrs)	ErP Rating	Coil rating primary (kW)	Standing heat loss (kW/24hrs)	Weight empty (kg)	Weight full (kg)
HPAWAVE180	168	B	42.14	1.21	46	214
HPAWAVE210	200	B	39.58	1.41	51	249

# CYLINDER RANGE TECHNICAL SPECIFICATIONS

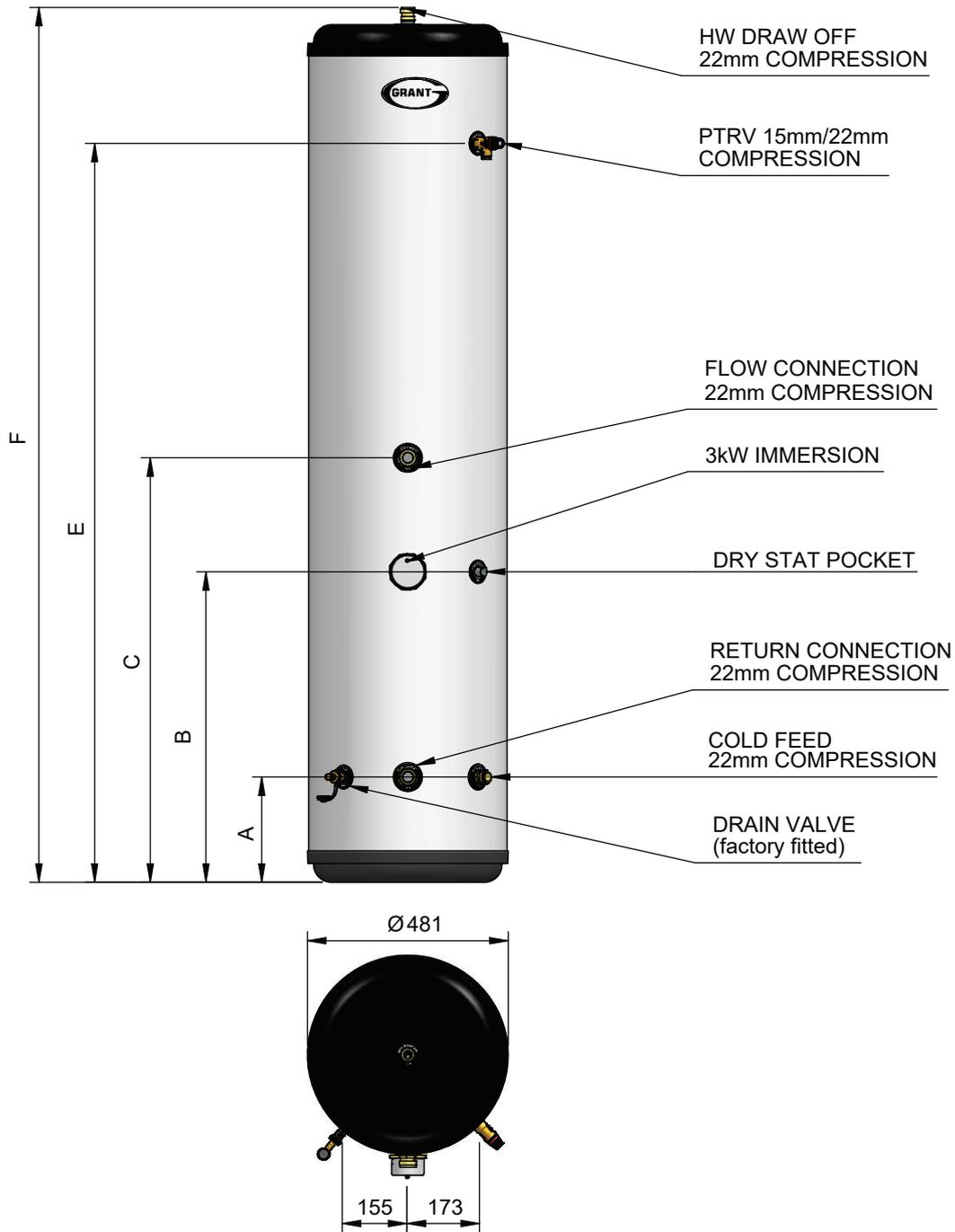
Grant QR single coil Heat Pump cylinder dimensions



Dimensions (mm)	150 litre	180 litre	210 litre	300 litre
A	263	262	262	262
B	512	507	507	507
C	884	882	882	882
D	-	-	-	1512
E	884	1013	1200	1762
F	1175	1354	1541	2103

# CYLINDER RANGE TECHNICAL SPECIFICATIONS

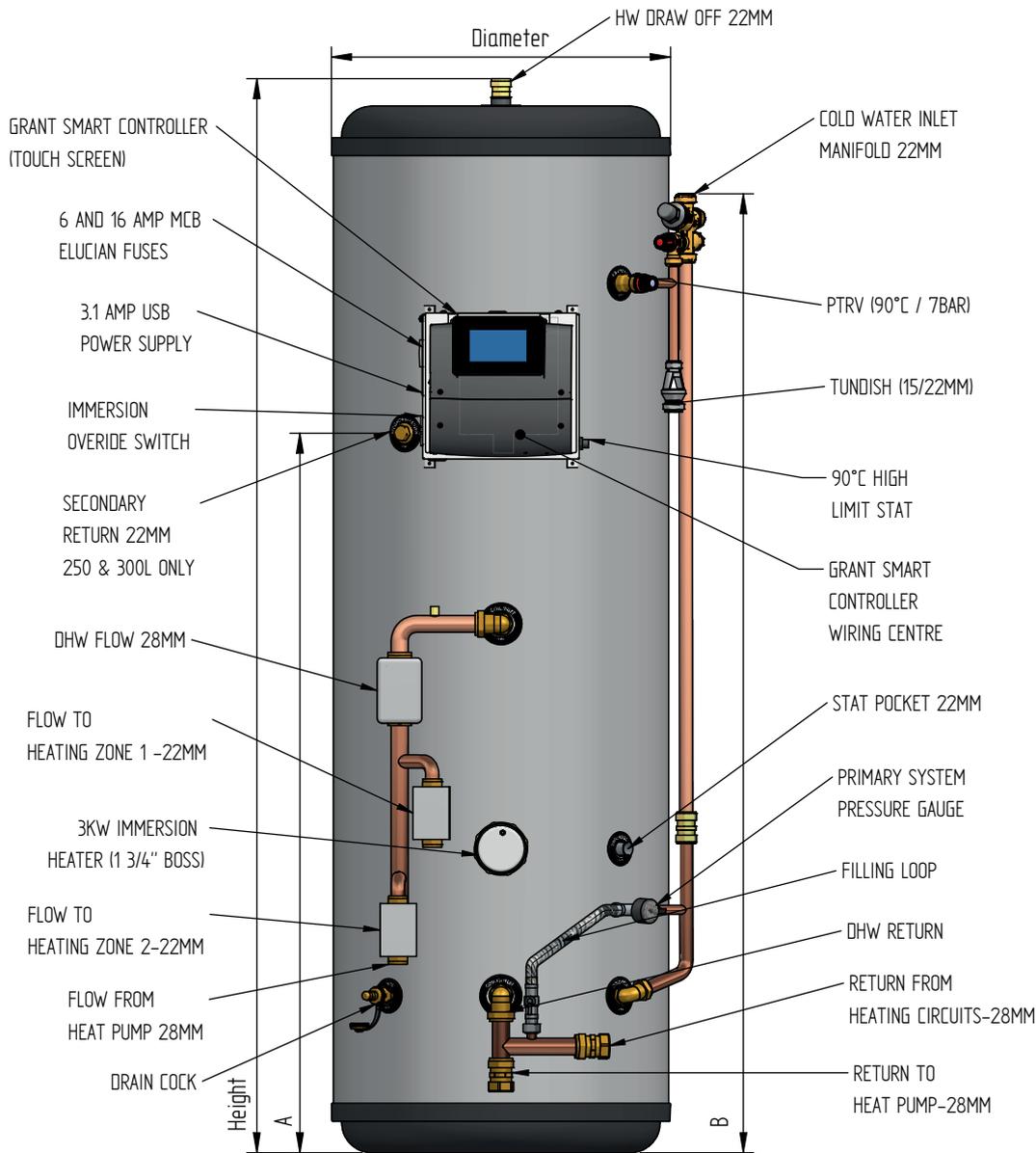
## Grant Slimline QR single coil Heat Pump cylinder dimensions



Dimensions (mm)	150 litre	180 litre	210 litre
A	254	254	254
B	749	749	749
C	1024	1024	1024
D	-	-	-
E	1240	1511	1783
F	1567	1839	2110

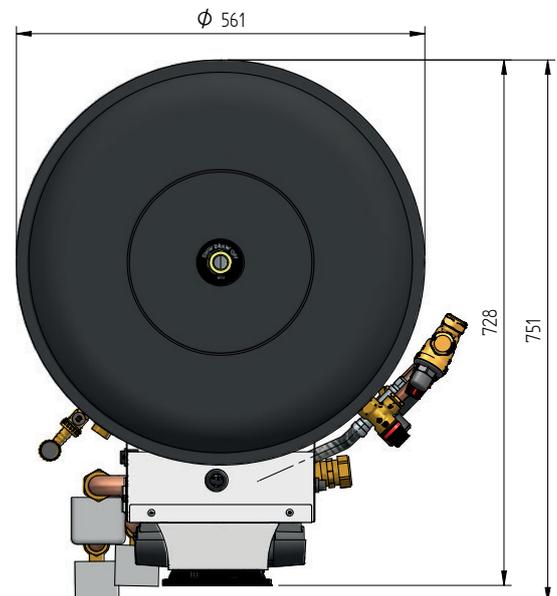
# CYLINDER RANGE TECHNICAL SPECIFICATIONS

## Grant QR Smart pre-plumbed indirect heat pump cylinder dimensions

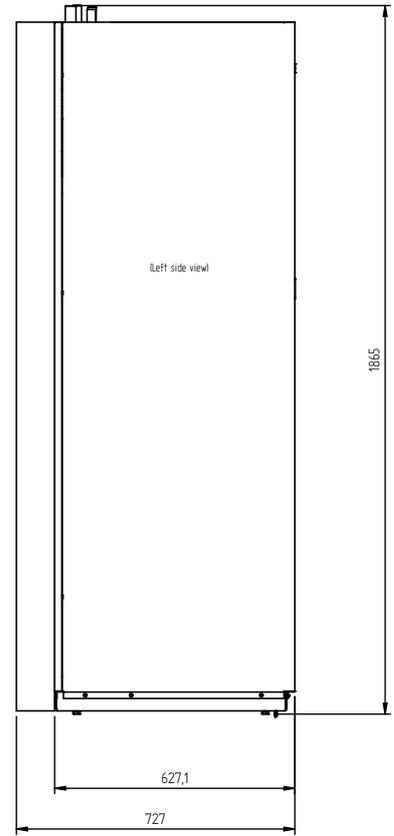
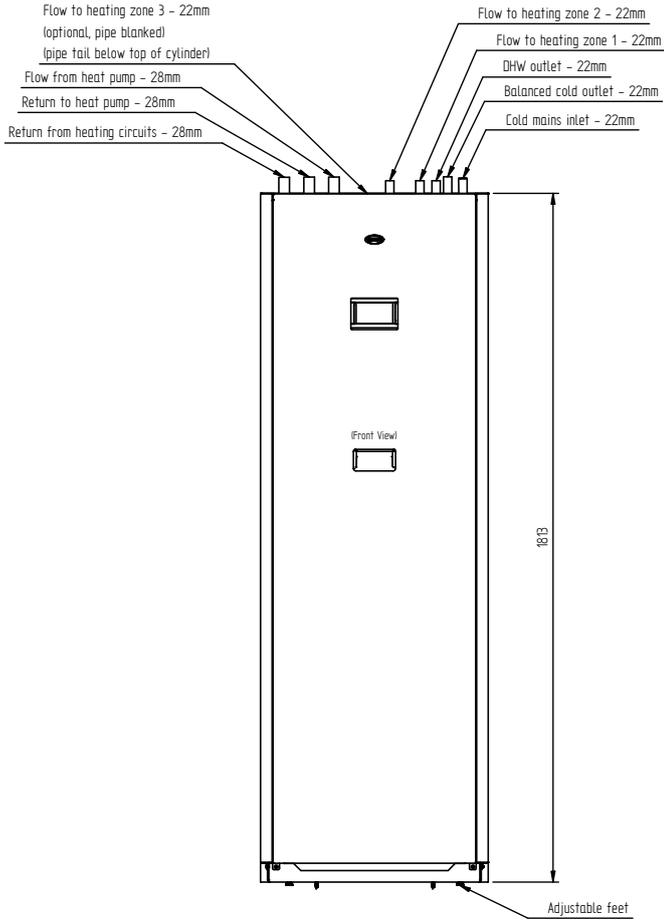


Dimensions (mm)	180 litre	210 litre	300 litre
A*	-	-	1511
B	1159	1354	1940
Height	1354	1541	2103
Diameter	561	561	561

\* Secondary return on 300 litre models ONLY



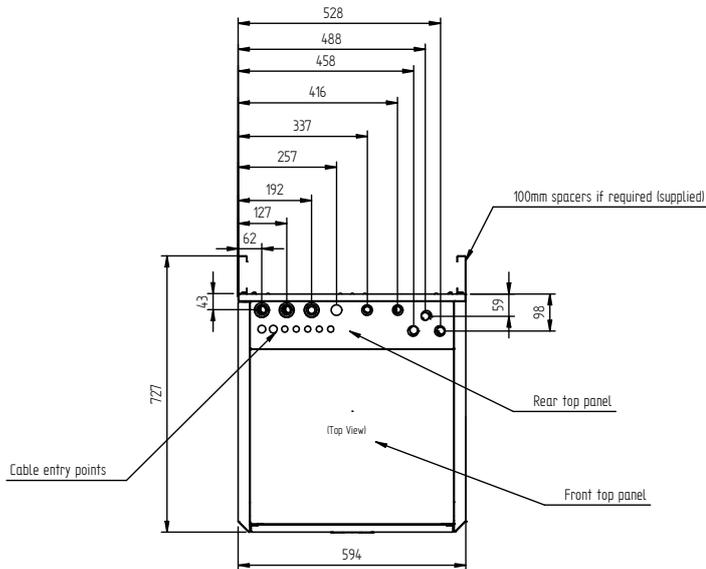
# TECHNICAL SPECIFICATIONS



Front View

Side View

## Single Coil | Integrated



Top View



## UFLEX UNDERFLOOR HEATING

The Grant Uflex underfloor heating system is embedded into the floor construction. It is ideally suited for new builds whereby the pipework is installed during the initial stages of the property's development. The Uflex pipework is then positioned and clipped into place once the flooring's insulation and membrane has been fitted, after which a sand/cement or flow screed is laid over the top and allowed to fully dry before heat is introduced.

# UNDERFLOOR HEATING BY GRANT

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## Highly efficient

The warm water used in underfloor heating systems has a much lower flow temperature, compared to conventional radiator systems, as it feeds into a much larger surface area. This enables it to heat a room very effectively and efficiently. Grant's underfloor systems operate at their most efficient when they are not frequently switched off and on. The floor screed takes time to heat up, but once up to temperature it only requires a small amount of energy to maintain this. Switching the system off and on, as is commonly the case with a radiator system, results in the floor losing temperature, requiring more heat input to reach that temperature when switched back on again, and so on.

## Optimal control and comfort

When designing an underfloor heating system, the pipework layout can be easily divided into zones. With Uflex underfloor, the rooms can either be split into more than one zone or multiple rooms can be incorporated into one zone. This allows homeowners to precisely control the temperature in a particular room or a space within a room. The temperature delivered is also evenly distributed from one side of the room to the other. The pipework is positioned so that the entire room will receive heat with no 'hot spots' or cool draughts. Underfloor systems radiate heat uniformly upwards, achieving a constant temperature throughout the space to deliver ultimate comfort.

## Quick & easy installation

Grant underfloor heating is supplied as packs specifically suited to meet the requirements detailed in the system designs. From the pipework and connections through to the edging strip and controls, Grant can supply all the components required. Straightforward to install. Grant's underfloor range is user-friendly to work with and simple to maintain. Furthermore, Grant can be on hand with a full design service, providing installers with assistance from start to finish.

## Dedicated design team

Grant has a Design Team who are on hand to provide product and design assistance. This Team has extensive experience in a range of products including air source heat pumps, complementary technologies, and heat emitters such as underfloor. From product specification through to producing full designs, Grant can help installers develop bespoke package solutions to suit the heating needs of their customers.

## Underfloor design service

Specifying the required parts to complete an underfloor heating installation can be time-consuming so Grant are able to provide installers with comprehensive quotations, quickly and efficiently. Each quotation will detail the components required to complete the specific job being quoted for. These components can then be supplied as a pack once the order is finalised.

# UFLEX UNDERFLOOR HEATING



## Features

-  Highly efficient when paired with a heat pump
-  Easy Installation
-  Optimal control and comfort
-  Uniform heat distribution across the room area & constant room temperature
-  Operates at lower flow temperatures
-  Can provide individual zone control
-  Increased hygiene due to reduced air circulation transferring dust particles

## Quality Underfloor Pipe

The basic operation of a water-based underfloor heating system is pipe embedded within a concrete screed, with warm water circulating through the pipe work allowing for the gradual heating of the screed and eventual emitting of heat from the floor into the room.

## Features

- WRAS Approved
- Five layer composite pipe using PEX-AL-PEX pipe, with inner and outer layers and a 0.2mm thick edge-welded aluminium core.
- Butt welded manufacturing method.
- Can be formed by hand and maintains its shape perfect for underfloor heating pipework.
- Suitable for general use in underfloor and low temperature heating applications, maximum temperature 90°C and 10 bar maximum pressure.
- White outer layer looks good even in exposed runs.
- A wide range of complimentary accessories to ensure trouble-free fitting. Pipe connectors, mounting rail, pipe staples, tacker guns and bend supports are all available in the UFH Accessories section.
- Simple and easy to use 16mm multi-layer heating pipe.

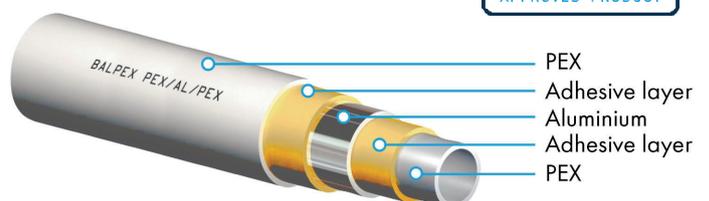
## Screeded System

Once the Uflex pipework has been secured into place, the manifold installed and system pressure tested, a screed is laid with a thickness, specified by the architect/engineer and then left to dry. The screed suppliers recommend that during the drying period, no heat should be introduced to the system and no one should walk over the floor construction. Using a flow or sand/cement screed, as opposed to a solid screed system, means that the drying time is much quicker with the flow screed mix drying in up to thirty days. Again, the drying time and screed thickness will be specified by the project's architect/engineer.

## Quick reaction time

The Uflex system is designed for continuous operation with heat being supplied through the screed all day. This means that the screed acts as a thermal store. As the change in the temperature demand between unoccupied and occupied will be relatively small (17°C to 21°C for example), the manifold and controls will manage the flow of water into the system at the correct temperature and flow rate to satisfy the heat demand.

## PEX-AL-PEX Pipe



# PREFERRED CONTROLS STRATEGY



Full time and temperature control and keylock feature to prevent temperature tampering



Slim and stylish in design



Backlit display which turns off when not in use



App enabled option



Controls are simple to install and setup

## Heating Controls

In addition to the mechanical components such as pipework, manifold and other components, Grant also supply the necessary controls to operate the underfloor heating system as efficiently and as effectively as possible.

The Grant control system provides homeowners with the ability to control the underfloor heating system with the touch of a button.

The wiring centre allows for different heating zones.

The stat allows full time and temperature control. The stat can be set to provide different room temperatures at different time intervals on individual heating zones. The room thermostat can be controlled from anywhere wirelessly.

Having open loops on the heating system is an alternative and highly efficient control strategy for controlling underfloor heating. This type of control is done on a purely weather compensated basis from the main heat pump controller. This removes the need for room stats around the building, reducing installation costs and can lead to higher efficiencies.

Whilst it may seem counter-intuitive, the lesser the number of controls used with a heat pump, the greater the overall heat pump and system efficiency is.

All heat pump systems work best with unobstructed flow rates and minimal heating controls.

Open loop heating systems are the best and most efficient method with any heat pump. This is achieved with:

No (or minimal) TRVs on radiators.

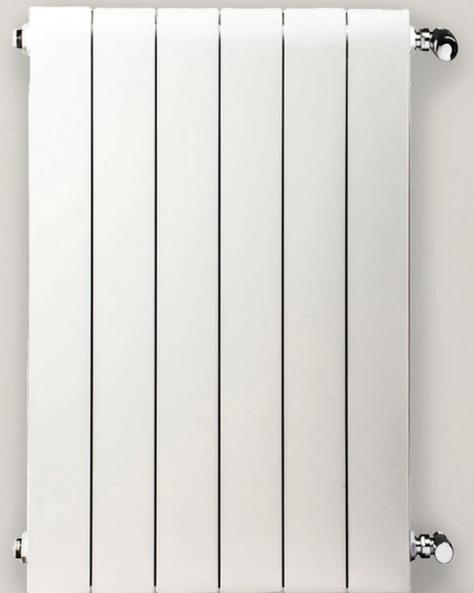
No (or minimal) Underfloor actuators.

Minimal room thermostats.

Weather compensation control.

# AFINIA ALUMINIUM RADIATORS

The Afinia Aluminium radiators combine functionality and aesthetics to deliver the ideal partner for both traditional and renewable heating systems. Available in horizontal and vertical options, the Afinia radiators are superb conductors of heat and incredibly responsive, heating up and cooling down quickly. Their curved design and sleek appearance also make them a stylish addition to any room.



# AFINIA RANGE

Grant's Afinia aluminium radiators are more efficient than traditional radiator materials, such as steel and cast iron. Aluminium has excellent thermal conductivity, and this, combined with its low water content, makes these radiators incredibly effective. With low energy consumption, Afinia radiators can help householders save on their energy bills.

Being a great conductor of heat, aluminium radiators heat up and cool down very quickly, enabling them to respond rapidly to changes in the temperature demand set by the thermostat. Afinia radiators can heat a room quickly when set by the thermostat and, equally, if the temperature setting is reduced, they will cool down quickly. This functionality makes Afinia radiators highly adaptable heat emitters, delivering maximum room comfort.

## Compatibility & flexibility

Afinia aluminium radiators can be installed with high and low temperature heating systems which makes them compatible with all of Grant's heating products. Their performance levels, which comply with European requirements, make the Afinia range an ideal partner for renewable appliances in particular. With their smaller size, compared to steel radiators, the Afinia models work incredibly effectively with air source heat pumps.

Supplied fully assembled and available in both horizontal and vertical options, the Afinia range is adaptive to suit the location where it will be sited. The horizontal radiators are available in three heights – 430mm, 580mm and 680mm – with 6 to 20 section combinations, delivering choice and flexibility when it comes to installation. Meanwhile, the vertical models are supplied with 6 or 8 sections and are available in two heights – 1,842mm and 2,042mm – providing the perfect solution when space is limited.

## Simple installation

Afinia radiators have a number of features which make for an easy installation. They are light in weight and manageable for a single engineer to install. Each Afinia radiator comes with robust steel wall brackets which allow for the straightforward mounting of each radiator. In addition, no electricians are involved with the fitting of these aluminium radiators which allows for a quick installation, reducing installation costs.

## Aesthetics

One of the distinctive features of radiator's aesthetics is their curved, rounded surface. This design makes them stylish in appearance allowing them to subtly suit their environment. Slim in build and supplied in an off-white colour finish, Grant's Afinia radiators can suit many a home's bespoke requirements.

## Peace of mind guaranteed

All the models within the Afinia aluminium radiator range are supplied with a 15 year guarantee, reflecting their quality of build. Following extensive testing and independent verification of the radiators' efficiency, reliability and output, a market leading 15 year guarantee accompanies the Afinia aluminium radiators to provide complete peace of mind for householders.

NOTE: All aluminum radiator systems must have system inhibitor added as standard

# AFINIA ALU RADS

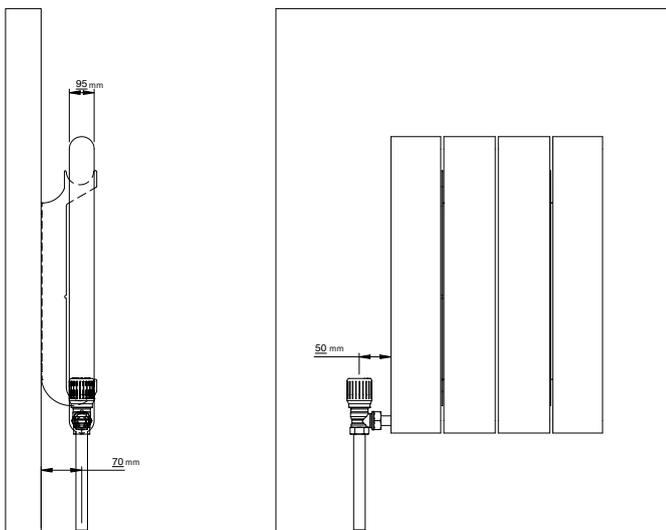


## Features & Benefits

The Afinia Aluminium Radiator has curved surfaces, an off white powder coated finish and is available from 6 to 20 sections, as either a standard rad or vertical rad, ensuring that it can fit any application.

Designed to work with both low and high temperature heating systems, the Afinia radiators deliver superior quality and performance matched by the sleek and stylish finish.

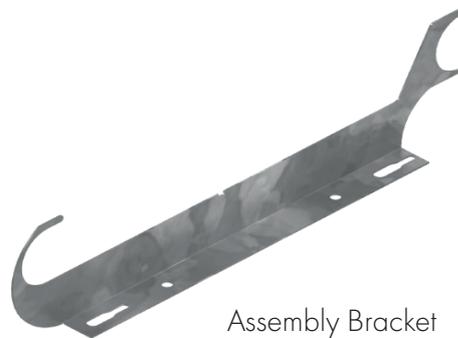
## Dimensions



\*Subject to full T&C's

## FEATURES

-  White powder coated finish
-  Curved surfaces
-  6-20 sections
-  Easy installation
-  Highly efficient
-  Low surface temperature
-  Slim and compact design
-  Standard colour RAL 9010 Faral
-  The thermal power complies with the European standard UNI EN 442-2



Assembly Kit

# AFINIA RANGE TECHNICAL SPECIFICATIONS

## Horizontal

	430MM	580MM	680MM
Height (mm)	430	580	680
Width per section (mm)	80	80	80
Depth (mm)	95	95	95
Centres (mm)	Add 100mm to width of rad	Add 100mm to width of rad	Add 100mm to width of rad
Water Volume (L)	0.25	0.34	0.39
Output 20(W)	28	38	41
Output 50(W)	92	124	142

Sections	430MM			580MM			680MM			Width of rad (mm)
	Code	Output	Output	Code	Output	Output	Code	Output	Output	
		W $\Delta$ T20	W $\Delta$ T50		W $\Delta$ T20	W $\Delta$ T50		W $\Delta$ T20	W $\Delta$ T50	
6	GALU4306	169	552	GALU5806	228	744	-	-	-	480
8	GALU4308	225	736	GALU5808	304	992	GALU6808	330	1136	640
10	GALU43010	281	920	GALU58010	380	1240	GALU68010	413	1420	800
12	GALU43012	338	1104	GALU58012	456	1488	GALU68012	495	1704	960
14	GALU43014	394	1288	GALU58014	532	1736	GALU68014	578	1988	1120
15	-	-	-	GALU58015	570	1860	-	-	-	1200
16	-	-	-	GALU58016	608	1984	-	-	-	1280
18	-	-	-	GALU58018	684	2232	-	-	-	1440
20	-	-	-	GALU58020	760	2480	-	-	-	1600

## Vertical

	1842MM	2042MM
Height (mm)	1842	2042
Width per section (mm)	80	80
Depth (mm)	80	80
Centres	Add 100mm to width of rad	Add 100mm to width of rad
Water Volume (L)	0.68	0.75
Output 20(W)	79	85
Output 50(W)	271	293

Sections	1842MM			2042MM			Width of rad (mm)
	Code	Output	Output	Code	Output	Output	
		W $\Delta$ T20	W $\Delta$ T50		W $\Delta$ T20	W $\Delta$ T50	
6	GALUV18426	474	1626	GALUV20426	510	1758	480
8	GALUV18428	632	2168	GALUV20428	680	2344	640

Please note: Afinia aluminium radiators are sized in accordance with the heat requirement of each individual room.

## GRANT SOLAR RANGE

Solar Thermal Systems from Grant allow householders to utilise the power of the sun to provide hot water to their home. An environmentally responsible alternative to traditional energy sources and fossil fuels, solar thermal technology has zero CO<sub>2</sub> emissions and efficiently uses the energy from the sun within a central heating system. Grant Solar Thermal systems are compatible with different types of roof and easily incorporate into an existing or new heating system so accessing the benefits of the inexhaustible supply of sunshine is made simple and easy.



# SAHARA SOLAR RANGE

Grant supply their Solar Thermal Systems as a series of individually numbered kits that meet the requirements of most installations. Each kit consists of the Sahara collector(s) (either portrait or landscape), a roof mounting system, expansion vessel, pump station, controller, pipe connections and solar fluid.

## Features & Benefits

Grant Solar thermal collectors can integrate easily with conventional heating systems.

The range includes a high efficiency flat plate collector, multi functional controller with LCD display.

Grant Sahara collectors have a durable aluminium frame with a bronze anodised finish, which has been designed to blend in with most domestic roof types.

## Heat Transfer Technology

Grant use a unique patented system where the heat transfer sheet interlocks both the pipe and absorber for perfect thermal transfer. Additional aluminium plates enclose the copper pipes. The plates combined with an industrial strength adhesive result in 360° heat transfer.

When choosing a solar thermal system, there are a number of factors to consider. Almost any roof type is suitable, however, a south facing arrangement could gain 100% of the light available during the day. If the roof was to face South-East or South-West, there will be a reduction in yield by 5-10%.

## Features

-  82.6% collector efficiency
-  4mm self cleaning glass
-  Copper absorber with sun select coating for most efficient solar absorption
-  Solar Key Mark approved
-  On roof mounting options

## Designing your system

Grant Solar collectors have an absorber (or nett) area of 2.14m<sup>2</sup>. As a rule of thumb, when sizing a system, you should allow 1.0-1.3m<sup>2</sup> of nett collector area, per person.

Cylinder requirements are 50-60 litres capacity per m<sup>2</sup> of nett collector area. To simplify this, for a 2-collector system of 2 x 2.14 = 4.28m<sup>2</sup>, you would require a cylinder of approximately 200-250 litres. This should be sufficient for 4 people and satisfy up to 70% of your hot water demand per annum.

## Things to consider

- Location of building
- Orientation of building
- Angle of inclination (roof)
- Shading of collectors
- Collector array in m<sup>2</sup>
- Hot water requirements
- Size of cylinder
- Pipework requirements

## Free energy!

Many people believe that solar panels only work in the summer, however this type of free energy is available throughout the year. From May to September, Grant Solar can produce 100% of the energy required for heating your domestic water (see right). The Grant Sahara collector operates not just with direct sunlight, but also diffused sunlight, so they even work on cloudy days.

**On average, Grant Solar can provide up to 70% of your hot water needs per year, for free!**



# SOLAR THERMAL SYSTEM DESIGN

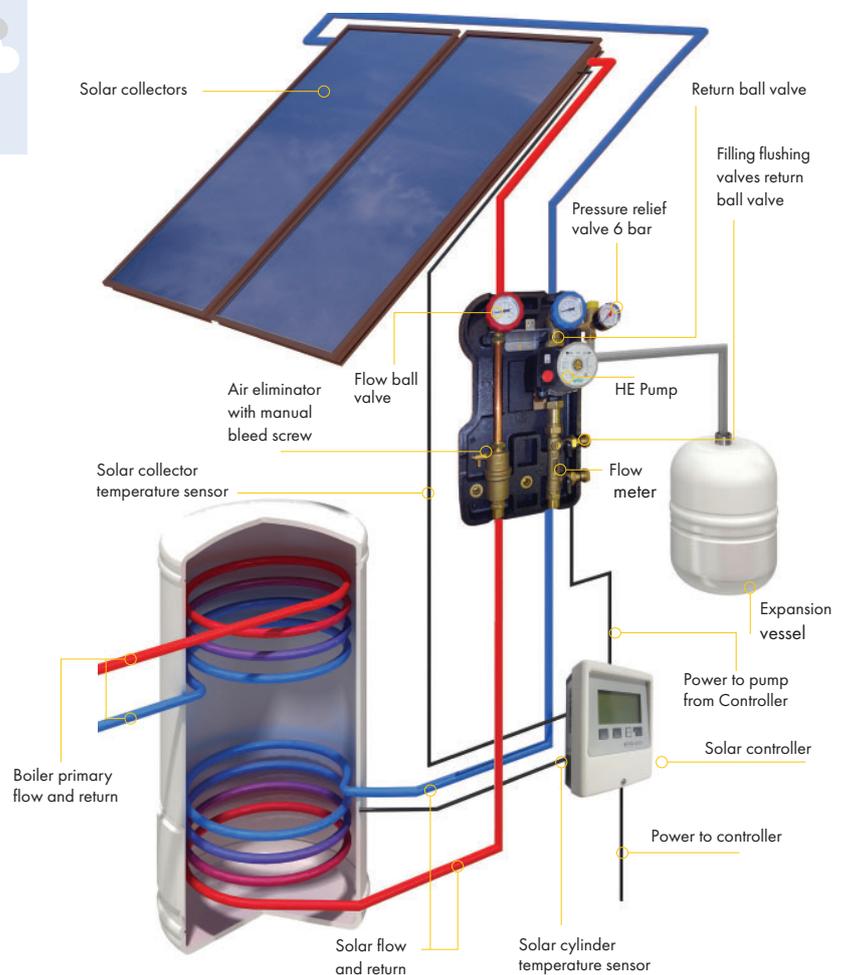
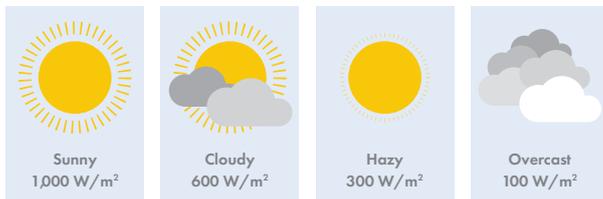
## TECHNICAL SPECIFICATIONS

Length	mm	2043
Width	mm	1143
Depth	mm	80
Weight	kg	40
Collector gross area	m <sup>2</sup>	2.34
Degree of efficiency no	%	82.6
Heat loss coefficient	(a1)	4.4
Zero-loss collector efficiency	(n)	0.826
Heat capacity	kW	1.7
Stagnation temperature	°C	177*
Maximum operating pressure	bar	10
Fluid content	litre	1.6

### Absorber

Absorption	%	95
Emission	%	5.0
Absorber net area	m <sup>2</sup>	2.14
Material/coating	Copper/sunselect	
Minimum efficiency	kWh/m <sup>2</sup> a	525

\*Test conditions-irradiance 1000 W/m<sup>2</sup> ambient temperature 30 °C



## BIOMASS BOILERS

Condensing woodpellet boilers with ranges from 5kW to 33kW. Self cleaning and modulating burners. The unique Grant Spira Pell condensing woodpellet boiler combines easy installation with straight forward daily operation and low maintenance.



# GRANT SPIRA PELL



The Grant Spira Pell is a condensing wood pellet boiler that is easy to install with low maintenance and straightforward to operate. SEAI awarded the Spira, our first condensing woodpellet boiler “The best renewable energy product” in 2011 on its launch due to its unique twin baffle system. The Spira pell which launched in 2022 will give some of the highest efficiencies and environmentally friendly results from biomass boilers. The Grant Spira Pell has a rapid ignition system and generally does not require a buffer tank. When combined with our modulating and self cleaning burner, the system can operate in similar characteristics to an oil or gas boiler. For the homeowner, the patented boiler and burner self cleaning system, along with automatic fuel delivery, results in minimal intervention once installed. Wood pellets to EN Plus standards are some of the highest calorific value available in Biomass, with a low moisture content, and when combined with the unique boiler and burner combinations, excellent combustion and efficiency is achieved.

## Features and Benefits

The Spira was one of the first condensing biomass boilers on the market following many years of research and development. The Spira Pell is available in a number of different models, all of which can be integrated into the home in a safe, convenient, and cost effective manner. The boiler is commonly installed in a garage / out-house or plant room. Your installer will advise on the best location for your Spira Pell, especially if you intend to use a bulk pellet store.

## FEATURES

-  Unique and award winning condensing boiler
-  Grant pellet vacuum system up to 10m distance kits available
-  Automatic pellet feed, ignition and cleaning system for the boiler and burner
-  Supplied with a side pellet store
-  Highly efficient
-  Self cleaning modulating burner

Spira Pell boilers are available in outputs of 5-18kW, 7-25kW and 9-33kW. All Boilers are supplied with a Universal hopper. Also included is the pellet feed auger which supplies pellets when needed to the burner. If required for larger applications, two boilers with separate flues can be utilized, with a central twin auger hopper option up to 66kW.

This is a very cost effective method giving larger outputs with excellent efficiency. In this scenario, both burners can modulate as one and reduce to a quarter of the maximum output when not required. With the incredibly high efficiency, low flue gas temperature and easy maintenance, the Spira Pell is a unique option when installing a wood pellet boiler.

## Boiler Dimensions

Grant Spira Pell model	A	B	C
5-18kW 200kg left/right hand hopper	719	1120	1492
7-25kW 200kg left/right hand hopper	719	1120	1492
9-33kW 200kg left/right hand hopper	719	1220	1492

# GUARANTEES

Provided below is a summary of the standard guarantees which are available from Grant on their renewable product ranges.



	Aerona ASHP		5 years
	Solar Thermal	Collector	5 years
		Kit	5 years
	Cylinders & Thermal stores	Body	10 years
		Components	1 year
	Uflex Underfloor Heating	Pipe	25 years
		Mechanical & Electrical components	2 years
	Afinia Radiators		15 years*
	Spira Pell II		5 years on Boiler, 1 Year on Burner & other components

All guarantees are subject to Terms & Conditions

\*Product must be fitted with Grant Mag One magnetic filter and have system inhibitor added

# GRANT TRAINING ACADEMY

Designed for Installers and Service Engineers

With a range of courses, experienced trainers, online learning and state of the art facilities, keep installer knowledge up to date with the Grant Training Academy.

-  Air source heat pumps
-  Oil/HVO fired boilers
-  Underfloor heating & Alu Rads
-  Solar thermal systems



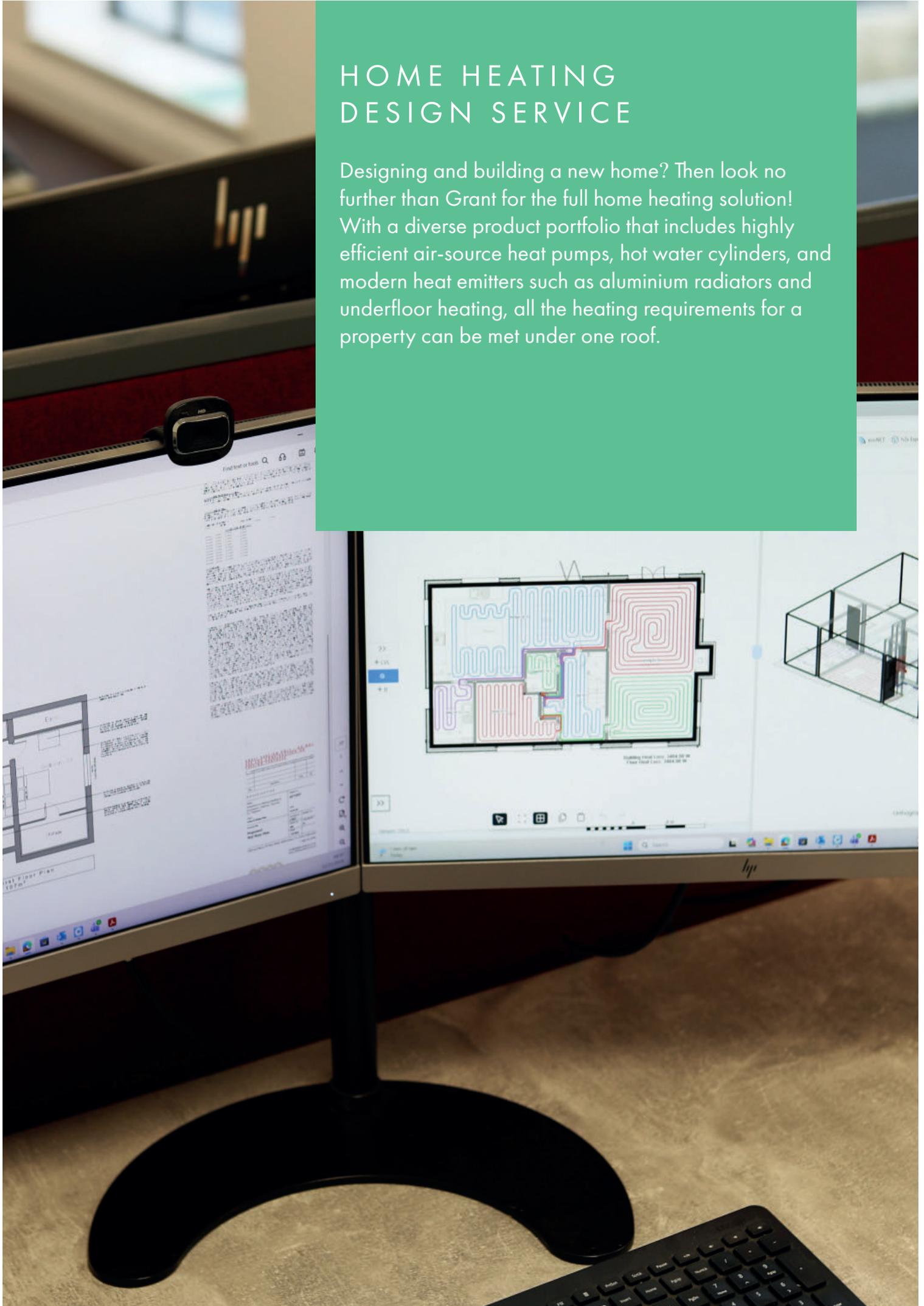
## ADDITIONAL RESOURCES



We have a library of informative videos on our YouTube channel, view by scanning this QR code

# HOME HEATING DESIGN SERVICE

Designing and building a new home? Then look no further than Grant for the full home heating solution! With a diverse product portfolio that includes highly efficient air-source heat pumps, hot water cylinders, and modern heat emitters such as aluminium radiators and underfloor heating, all the heating requirements for a property can be met under one roof.



# HOME HEATING DESIGN SERVICE

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## Package Offer

- Technical Design
- [Detailed heating specification for tenders](#)
- Estimation and quoting service
- [SR 50 calculations](#)
- Expert and experienced advice
- [45 years of after sales advice](#)
- Service engineers network
- [Customer focus and satisfaction to a standard of ISO 9001](#)
- Commissioning of all installs
- [Designer Installer sign off forms completed](#)
- Professional Indemnity Insurance
- [Employers liability](#)
- Public and product liability
- [Ancillary certification](#)
- Installer training
- [CPD training](#)
- eLearning Academy
- [Commissioning and servicing training](#)
- Bespoke training
- [Full warranty of parts and labour](#)
- In house marketing team, design and printing facilities
- [Product videos for end user](#)
- On site R+D that are continuously developing and testing new products and standards

## Grant Design Service

Popular amongst self-builders, architects, and those in the trade, our free of charge home heating design service enables those working on new build or retrofit projects the opportunity to have a bespoke heating solution for the property created and specified under one roof.

Providing a complete heating solution, our bespoke integrated heating packages are individually sized and specified by our technical specialists to suit both the property and the owner's current and future heating requirements. On receipt of home design drawings our technical team provides full heat loss calculations based on SR:50 guidelines, which prove compliance with Part L building regulations for new builds and ensures NZEB (nearly zero-energy building) standards are met.

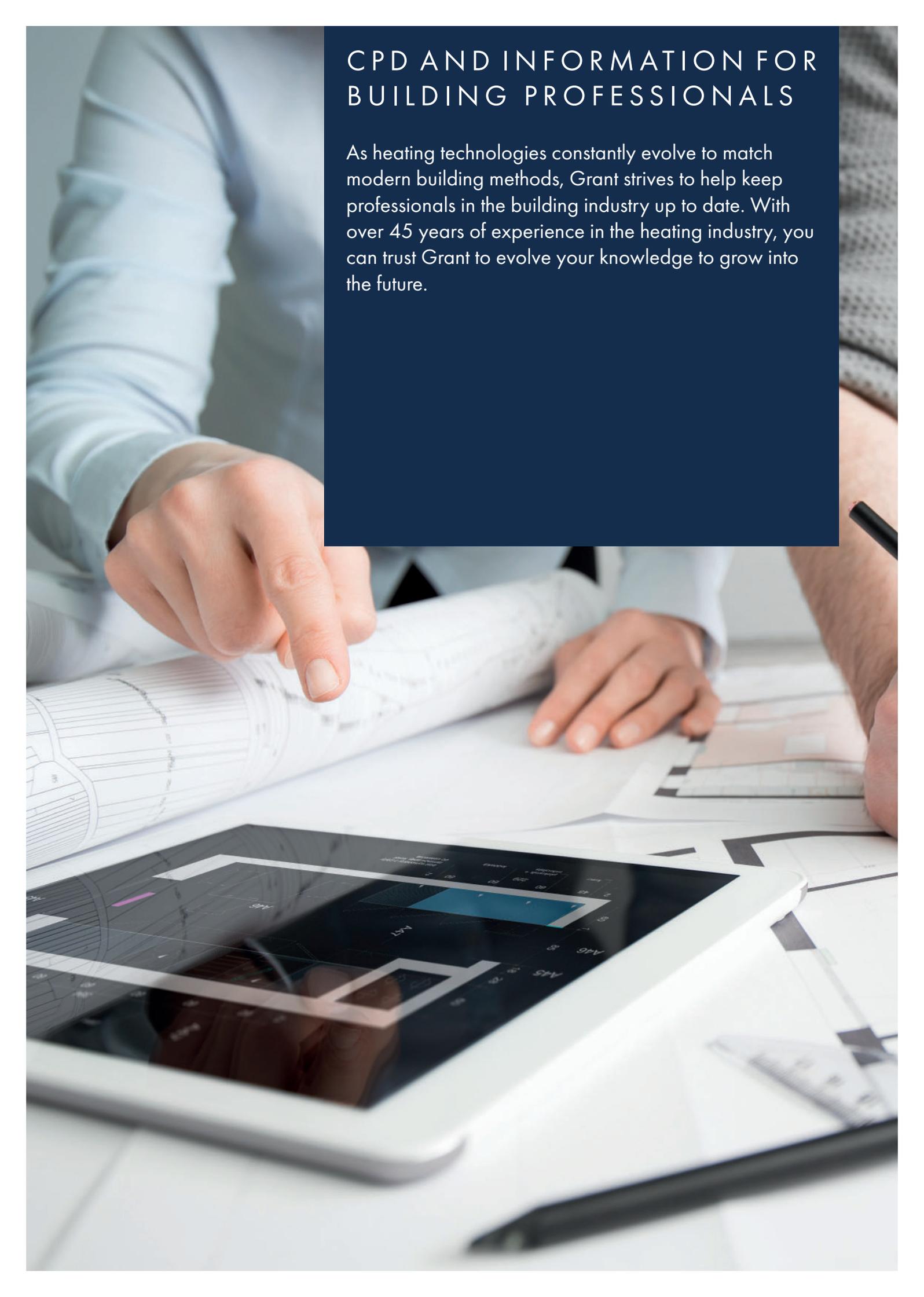
The free heating design service and integrated heating package offering for new builds, are helping housebuilders throughout Ireland maximise heating efficiencies and save time on projects.

Each bespoke heating package features award-winning heating technologies from our portfolio including the Grant Aerona R290 air to water air source heat pump, the most efficient hot water storage to support the system which includes either the Grant Integrated Unit or Grant pre plumbed and pre wired cylinder, and finally the chosen heat emitters for each

individual room which includes the Grant Uflex underfloor heating system and/or Grant AFINIA aluminium radiators. Grant smart heating controls can also be included within the package.

There are three easy steps to the **free** home heating design service.

1. Send the drawings of your house to [heatpump@grant.ie](mailto:heatpump@grant.ie) or call [+353 \(057\) 912 0089](tel:+3530579120089)
2. A member of the Grant team will be in touch with you to discuss requirements
3. You will receive full property specifications with recommended products all available from Grant.

A person in a light blue shirt is pointing at a tablet displaying a technical drawing. The tablet is on a desk with architectural blueprints and a ruler. The background is a dark blue gradient.

## CPD AND INFORMATION FOR BUILDING PROFESSIONALS

As heating technologies constantly evolve to match modern building methods, Grant strives to help keep professionals in the building industry up to date. With over 45 years of experience in the heating industry, you can trust Grant to evolve your knowledge to grow into the future.

# CPD AND INFORMATION FOR BUILDING PROFESSIONALS

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## Continuous Personal Development (CPD)

Training we provide here and off site for architects, engineers, energy assessors and similar minded professionals. These certified courses are available in many technologies, give an insight and knowledge on current and new products and areas for which are relevant to attendees. We currently have three CPD courses available which are RIAI and Engineers Ireland approved.

- An introduction to condensing oil boilers, woodpellet boilers and air to water heatpumps
- Condensing oil, woodpellet and heatpump product training
- Heatpump technology & appropriate heat emitter sizing

## Bimstore

Collaborates the design, construction, and operating process to create a unique 3D model of Grant products. BIM is the latest modernized development in the construction industry and Grant has worked closely with the BIMSTORE to create Revit models of our Heat Pump and Cylinders range. The Grant products are free to download and give Engineers, Architects etc the ability to see how the Grant products will fit into their projects.

## Product Fiches



Please scan QR code to view our R290 Heat Pump product fiches.





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