

The Breacan Mooney
Geothermal
Installation of the Year 2016 Competition
Streamstown, Co. Westmeath

Adjudicated by John Burgess

11th March 2016



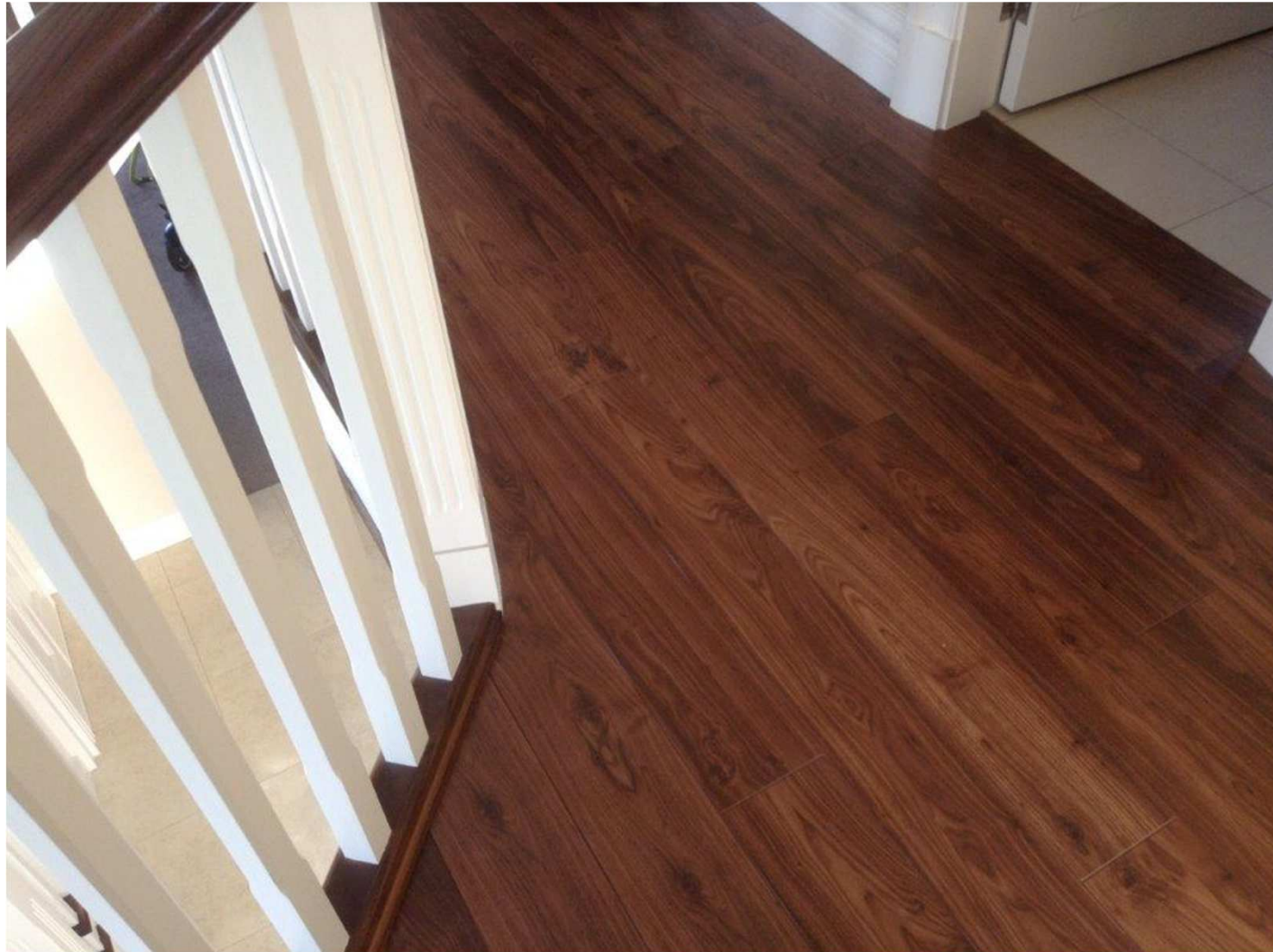








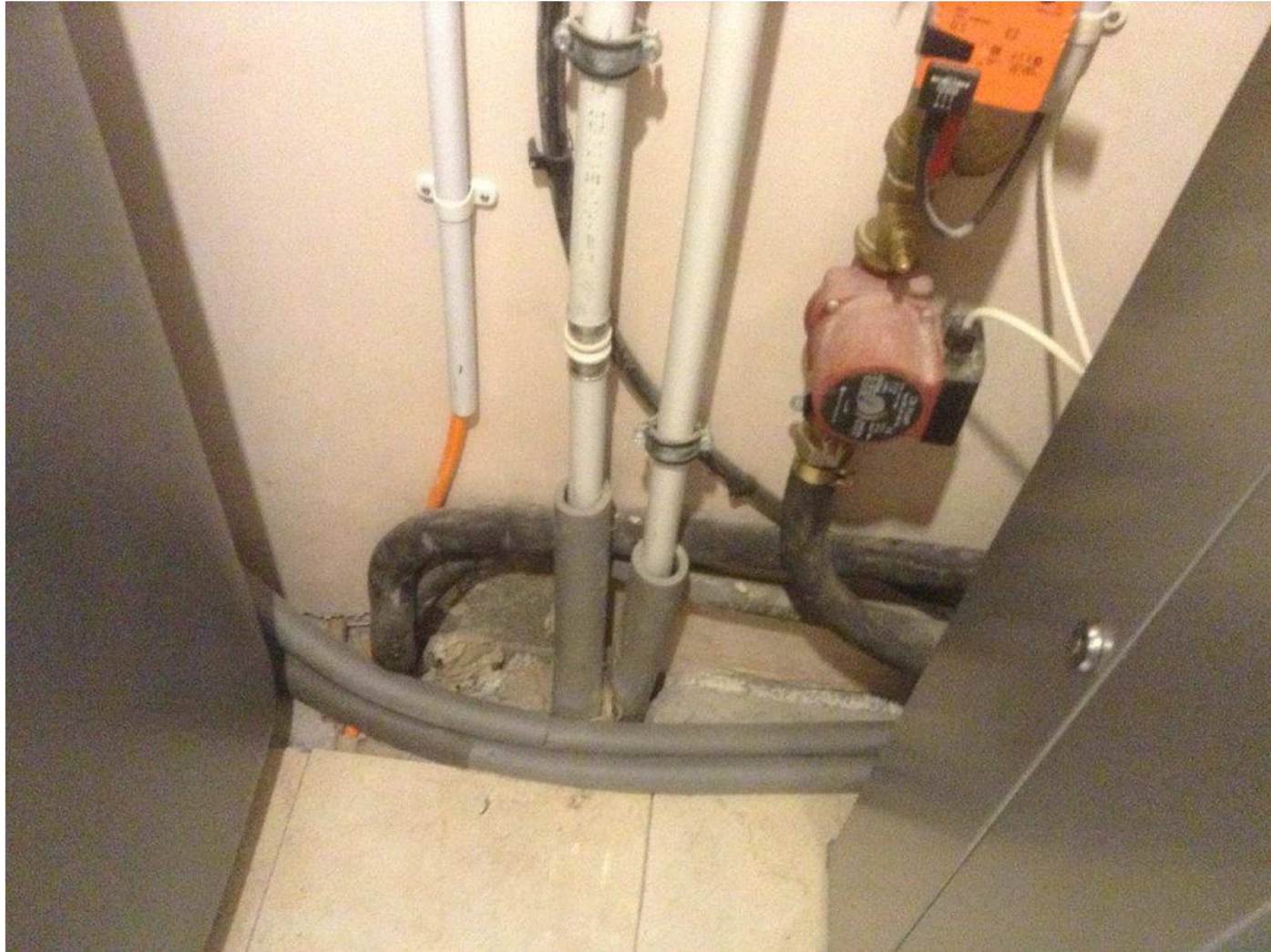


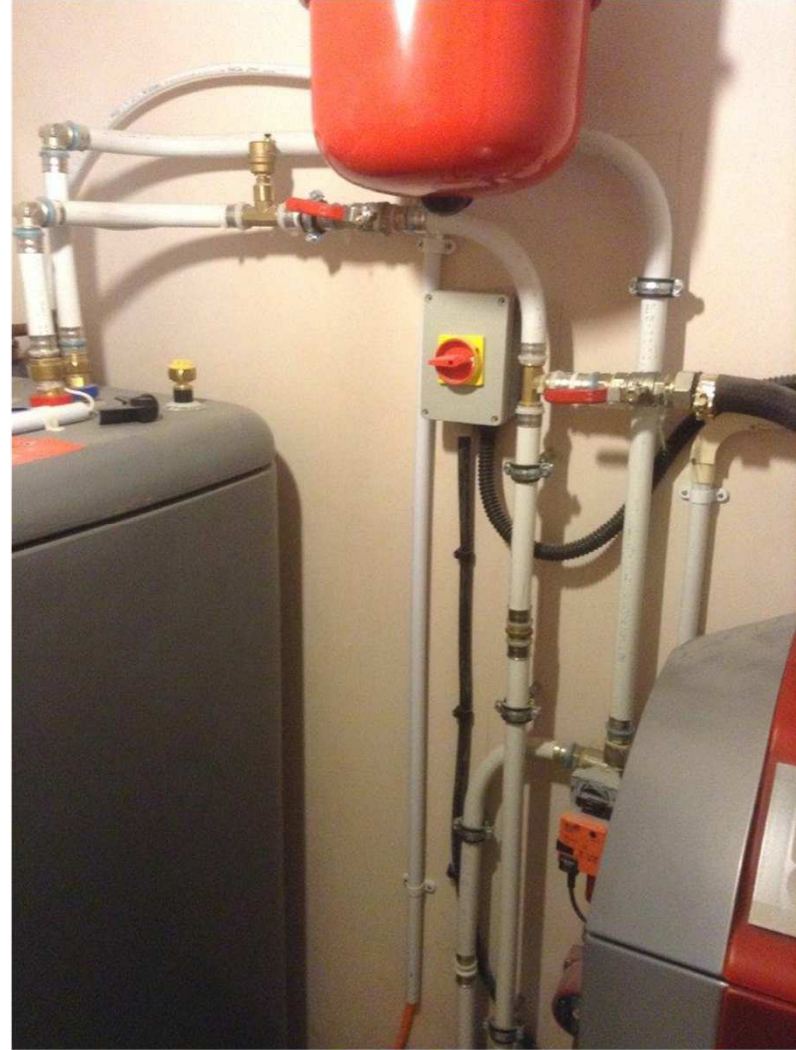


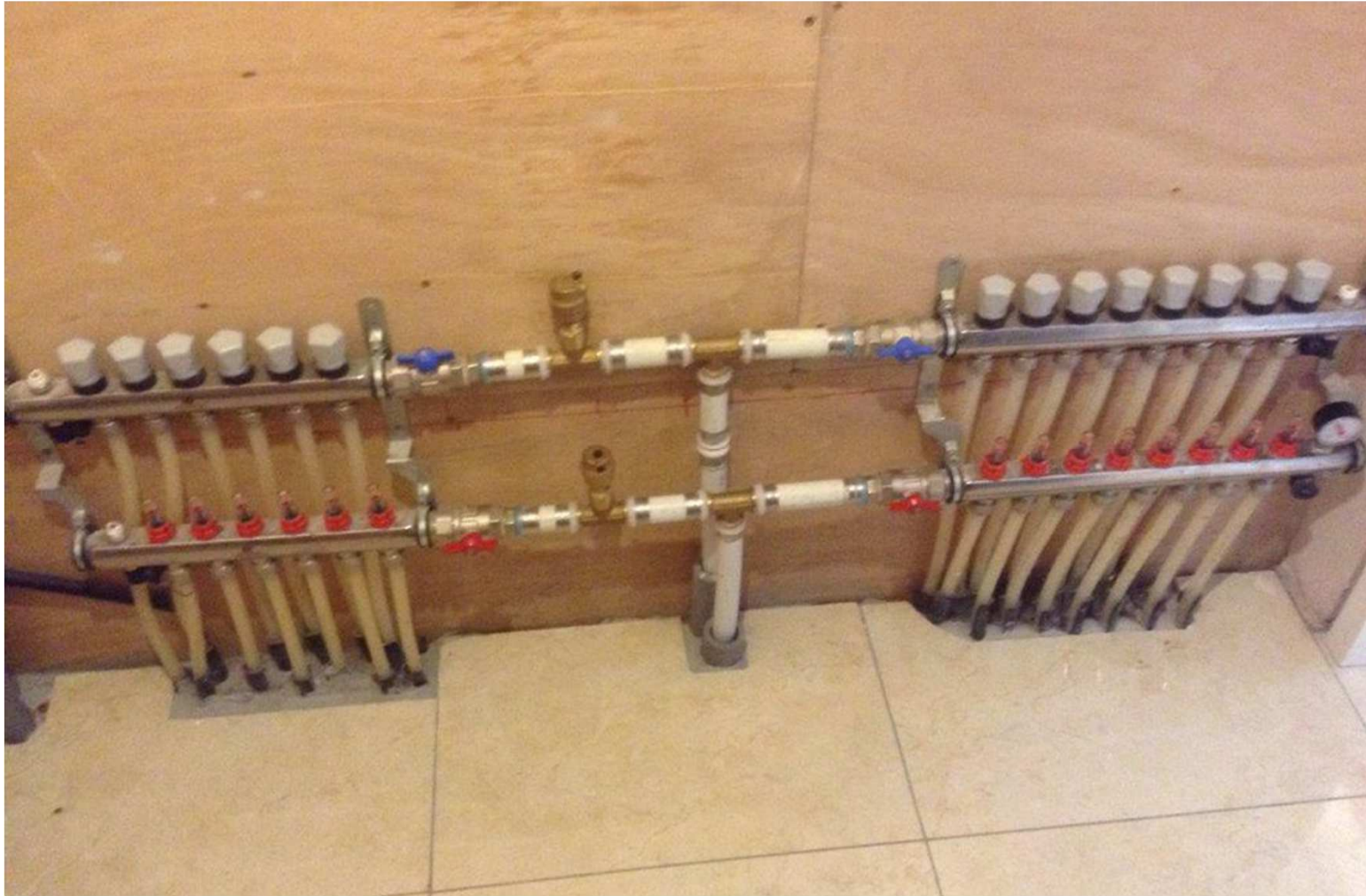




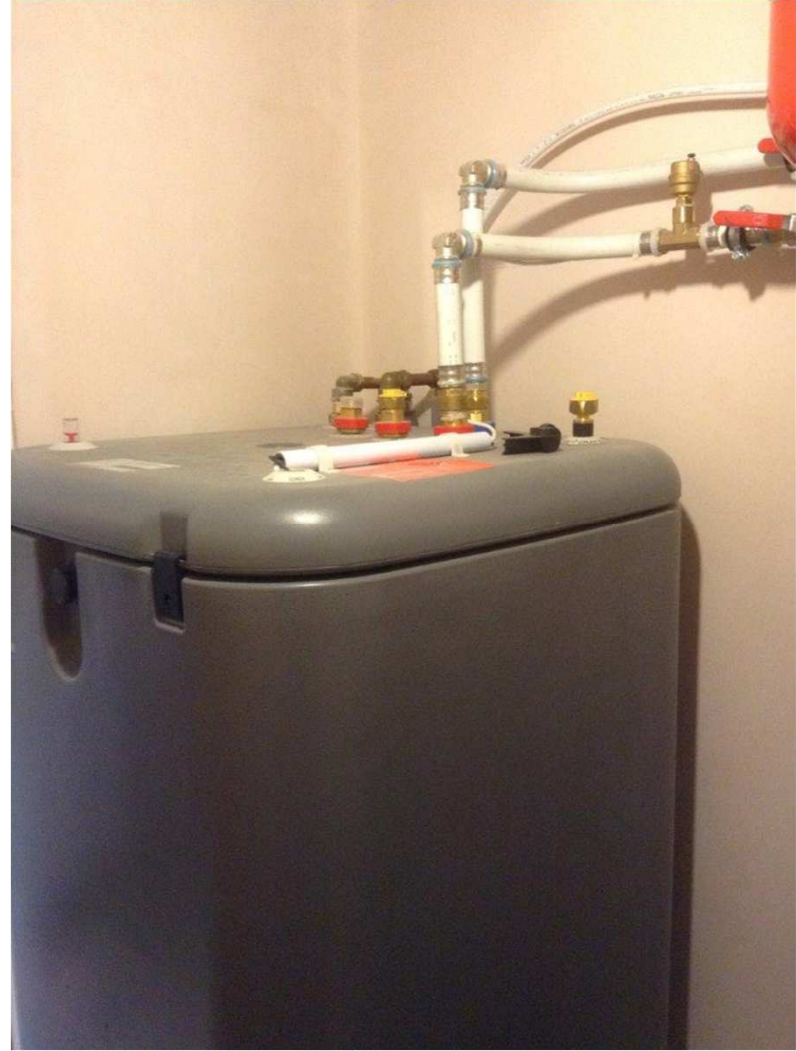












Hot water storage tank

Type: EKHWF500A

- Storage tank volume: $V = 500 \text{ l}$
- Drinking water - nominal content: 29 l
- Empty weight: 92 kg
- Total weight: 592 kg
- Corrosion protection: corrosion resistant
- Max. permitted storage tank temperature: $T_{max} = 85 \text{ }^\circ\text{C}$

- Max. permitted operating pressure in
-the INOX heat exchanger: $P_{max} = 6 \text{ bar}$
-intermediary medium: unpressured

SER. NO. A272203000096

3PWA5924-4



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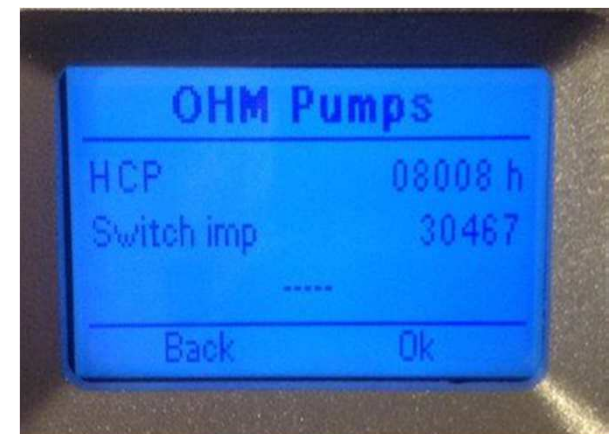
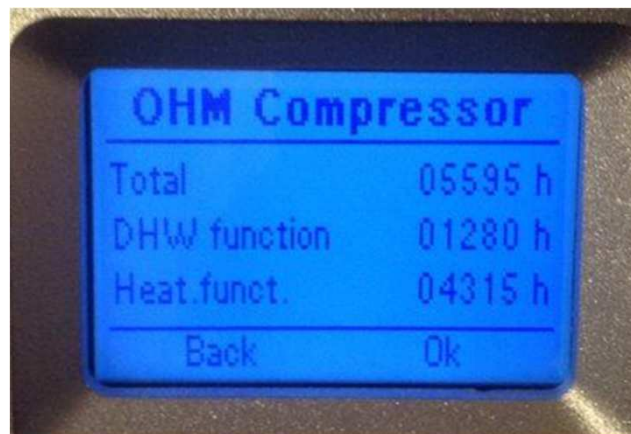
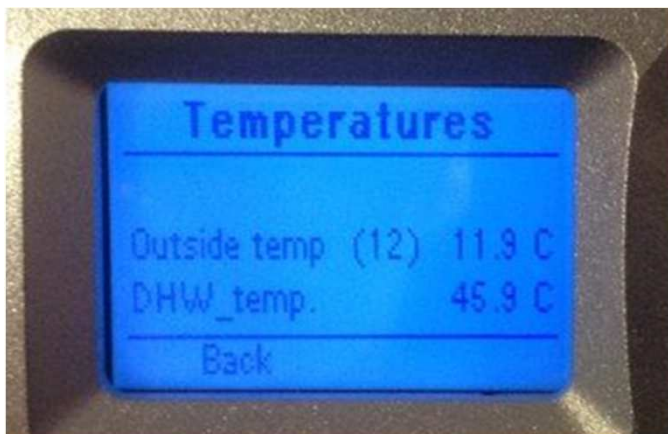
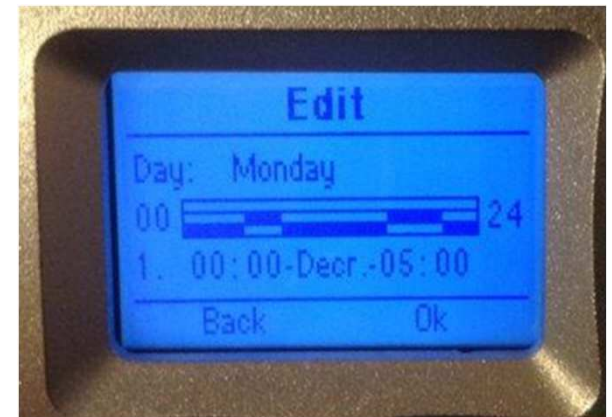
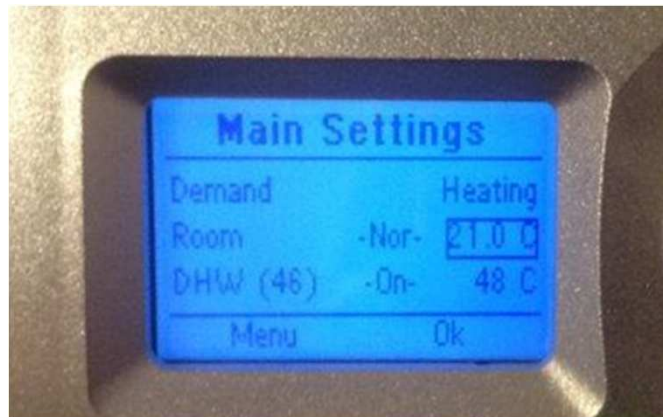
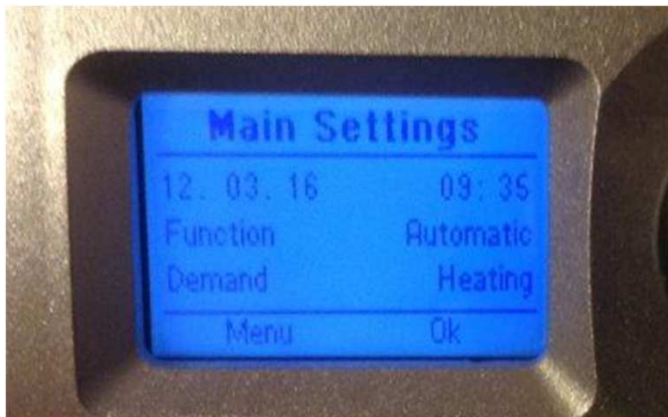
DAIKIN EUROPE N.V.

Made in Germany

[001 14 005 11]







CLIMATE CONTROL
Heatpumps - Underfloor - Heat Recovery

Weirs, Tully, Co. Galway.
Tel: 093 28124
Fax: 093 28124
Email: info@climatecontrol.ie
Web: www.climatecontrol.ie


Mr Andrew McCormack & Ms Niamh Lynam
Streamstown
Mullingar
Co Westmeath

Date: 12/08/2010
Quote No: 1032

Heliotherm HP10E-WEB €12,904
Direct Evaporating
12.11kw output/2.16kw Input
COP 5.6
Refrigerant R410a

Highest efficiency heat pump on the market
A+ Energy rating
Independently tested by Arsenal Research
European Heat Pump Association Certified
Best Price to Performance
DSG Housing for super quiet operation
Weather compensation
Dsi Technology
Twin X technology
Web control regulation
Internet accessible

The Heatpump comes with a **5yr Guarantee** on all parts and labour



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€2,559

500L Domestic hot water cylinder
75mm PU foam insulation
Stainless steel Domestic hot water heat exchanger
Legionella free domestic hot water
No back up electrical immersions

Our domestic hot water system caters for all your hot water needs, 24 hrs a day at a fraction of the cost that other heatpumps require for hot water production

Other systems produce hot water up to a temperature of 50C with the heatpump. This is about the max temperature a heatpump should produce. While this temperature is more than adequate for use, it is a perfect breeding environment for legionella bacteria. This water therefore needs to be boosted by an immersion to 65C in order to kill off bacteria before it is sent to your tap





With our system, the water we heat to 50C never leaves the tank. A special, stainless steel coil runs through the tank. Fresh water is pumped through this coil and heated as it travels by the water in the tank. When it leaves the tank it will be within 1C of the temperature in the tank and because it has just been heated, completely legionella free.

In this manner we can produce your hot water for around **15Cent** per day as opposed to the €1 - €1.50 it costs with other systems

CLIMATE CONTROL
 Pumps - Underfloor - Heat Recovery

Weirs, Tuam, Co. Galway
 Tel: 093 28166
 Fax: 093 28124
 Email: info@climatecontrol.ie
 Web: www.climatecontrol.ie

Mr Andrew McCormack & Ms Niamh Lynam
 Streamstown
 Mullingar
 Co Westmeath

Date: 12/08/2010
Quote: 1032

Gabotherm Underfloor Heating System

- Highest Quality German piping and controls
- Oxygen impermeable 17mm PERT piping
- Piping installed at 120mm centers to reduce required water temp
- Pipe positioning clips to ensure sound spacing of pipework
- Manifolds and controls
- Floor heating pump to match required duty
- System designed to run on 30 Degree water temp
- Installation and commissioning of system

Why your floor heating system is important!

Your heating system components should not be taken in isolation. One weak link in the chain can have knock on effects to other areas of the system and drag down system performance.

Your underfloor system is a case in point. A heatpumps efficiency rises as the temperature it is asked to produce decreases. As this is the case, it makes sense to produce a floor heating system that requires as low a temp as possible, in order to maximise the performance of your heat pump

Unfortunately, with most suppliers this is not the case and their floor heating systems tend to be designed for use with a high temperature system such as oil, gas or pellet burners. While the effects of this may not be apparent to you immediately, the additional heating costs and shortened lifetime of the system will prove that a poorly designed floor heating system was not the best investment.

At Climate Control we design our whole system around maximising efficiency. This includes our underfloor systems. In order to do this we lay a wire mesh panel ontop of your existing insulation. Special clips are attached to this mesh in order to grip the pipe and maintain a constant spacing. The 17mm PERT pipe is then fitted at spacings of 120mm, this means we install between **30% - 70% more pipe** than a standard floor heating system. We also keep our loops **below 90m in length**, in order to have the **perfect 5C difference** between inlet and outlet, which keeps the refrigeration cycle of the heatpump working at its optimum.

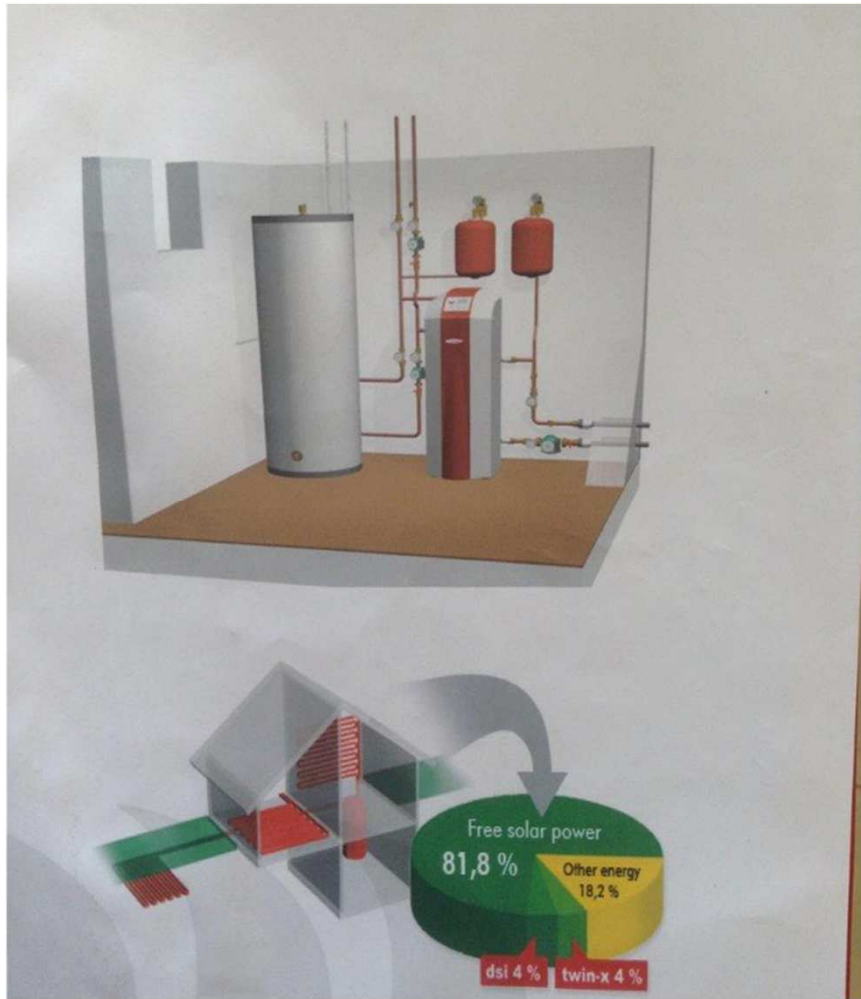
The design of our floor heating system allows us to have up to 20% greater efficiency than other suppliers. Couple to that our heatpump, which is already 25% more efficient than other heatpumps on the market and we believe that is a difference worth having.



A typical standard Floor heating installation



A Climate Control Installation



COMMISSIONING CERTIFICATE 311

CLIMATE CONTROL
 Weirs, Tusc, Co. Galway
 Tel: 093 28166 Fax: 093 28124
 Email: climatecontrol@oceanfree.net

Date: 28/8/12

Client: Andrew McCormack
 Address: Streamstown, Moate, Co. Westmeath

Model: HPO8E-WEB Serial No: 9111019
 Refrigerant: R410a
 Condensing Pressure: OK
 Evaporating Pressure: OK

CHECKS

Refrigerant Charge: OK (8.7kg)
 Pressure Test: OK
 Water Pumps: OK
 Shut Off Valves: OK
 Water Flow: OK
 Running Amps: OK
 Electrical Connections: OK

Comments:

Clients Signature: Andrew McCormack Engineers Signature: Simon Cooley
 This is to certify that all equipment has been checked in operation and commissioned.
 Guarantee Commencement Date: 28/8/12
 Guarantee Duration: _____