

The Brecan Mooney Geothermal Installation of the Year 2016 Competition Lisdoonan, Co. Monaghan

Adjudicated by
John Burgess
12th March 2016







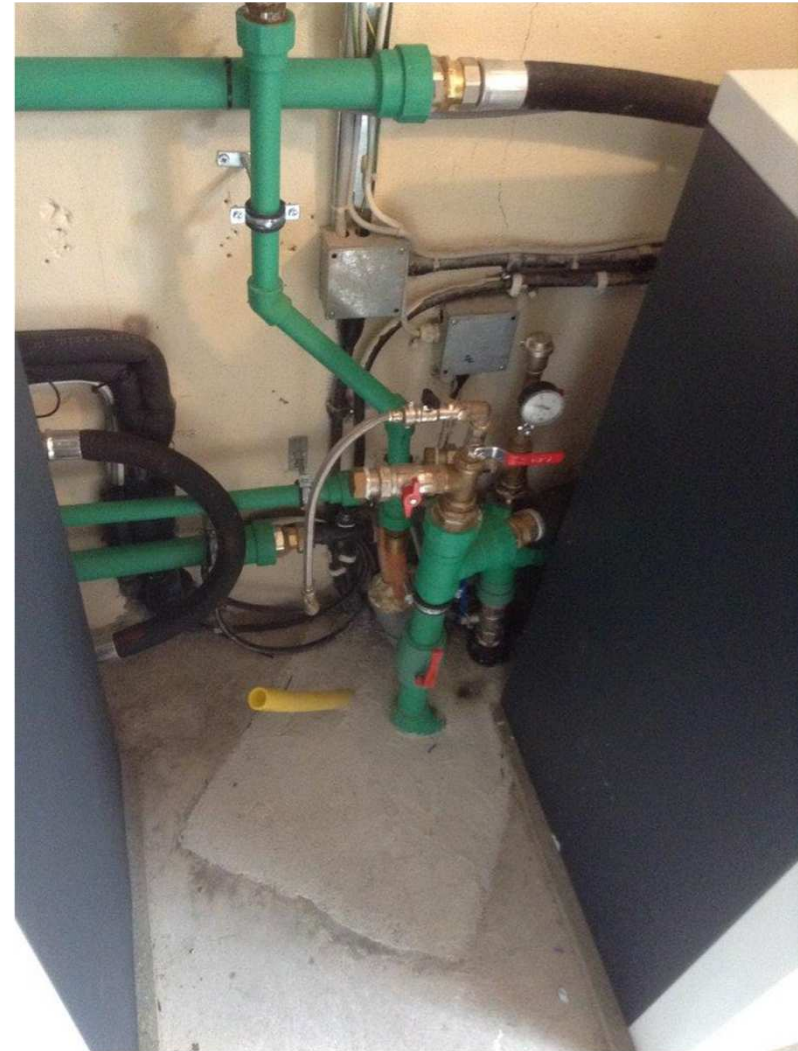


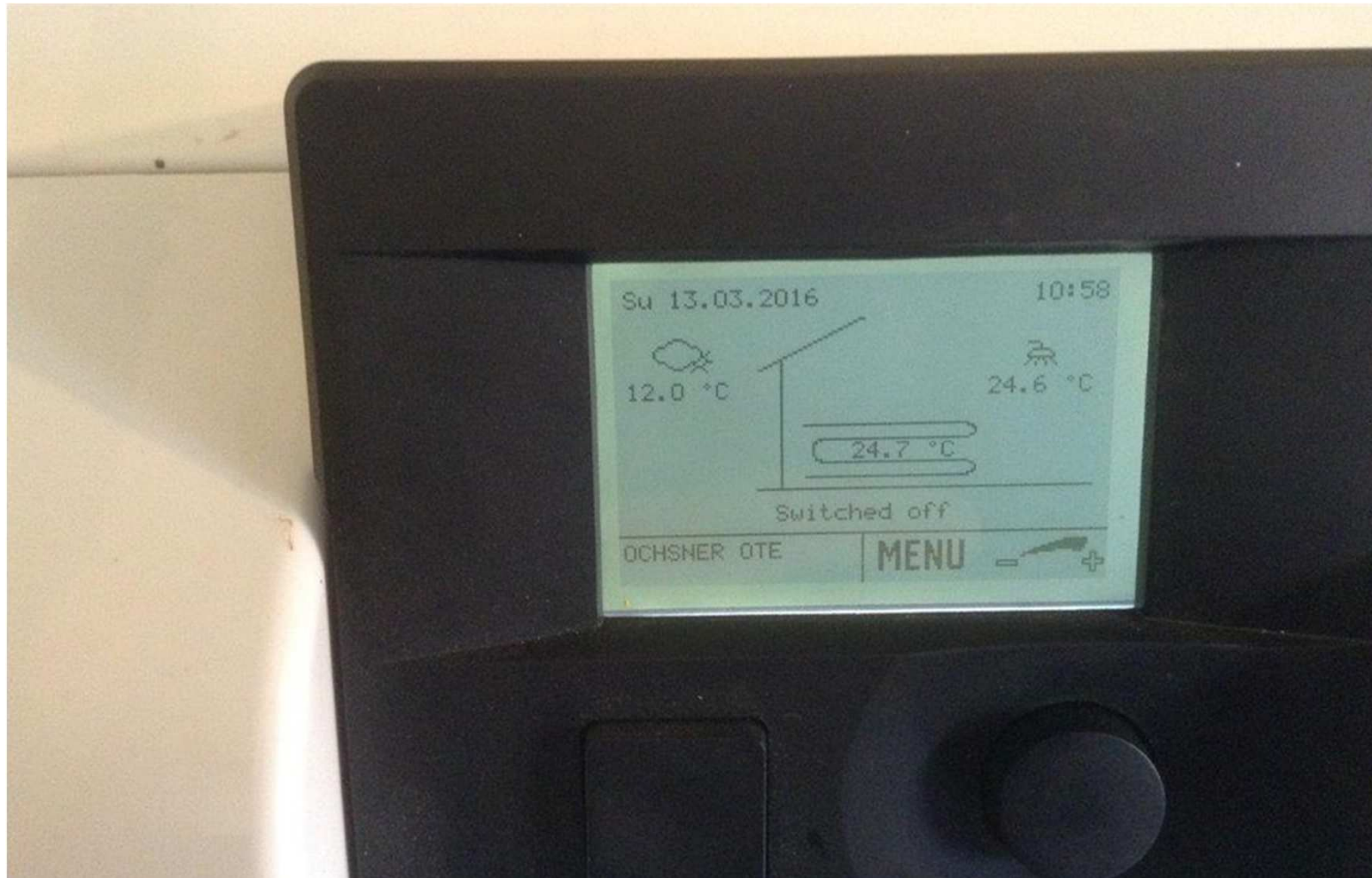




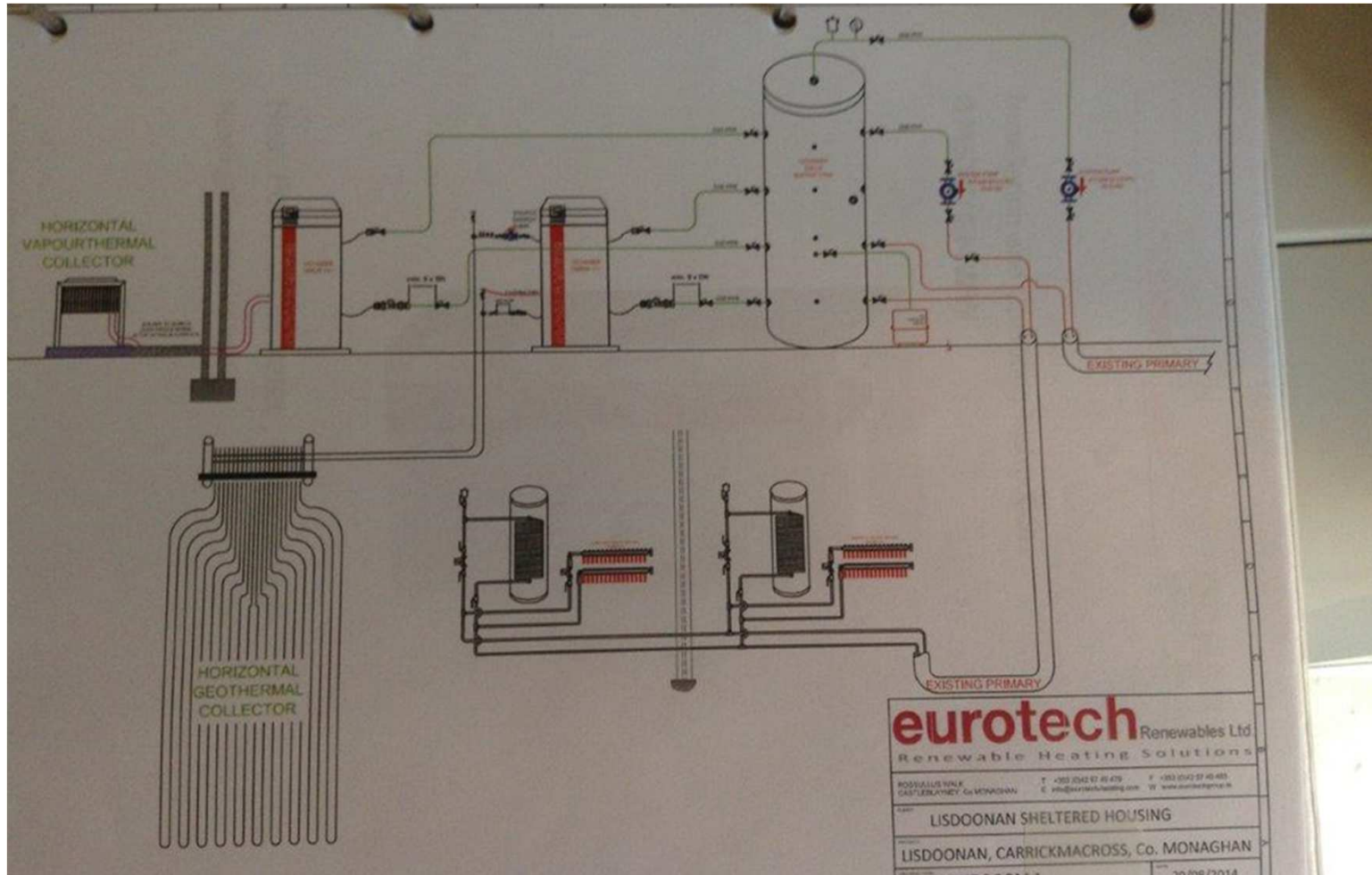












OCHSNER
HEAT PUMPS

Note:

	13-March 2016	Hours	Heating Kw	Hot Water Kw
13 Heat Pump SMLW 14				
Defrost 3,137.5	13/3/16	4,797	61,492.9	43,805.6
Heat Pump SMSW		1,086	6134	10,111.8



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OCHSNER Ireland
The Heat Pump Company

OCHSNER COMMISSIONING CERT./TEST SHEET FOR HEAT PUMP OPERATION

Customer Name: Lisdoonan District Housing PR 1 Cert No. **986**
 Pump Serial No. 514201193 Superheat Range **8K - 10K**
 OTE Version 5.03/3.03 Subcooling Range **3K - 5K**
 Date: 04.09.2014

Temp. measurement / Heat Source (WQA)

Collector Heat Flow Temp. TVLQ:	18.9°C	Evap Pressure	8.1bar
Collector Heat Return Temp. TVLQ:	9.8°C	Evap Temp	21.5°C
Temp. Difference:	9.1°C	Suction Gas	29.9°C
Brine Concentration:	7%	Superheat	8.4°C
Heat Pump Model:	GMLW14+		

Temp. Measurement Heating System (WMA)

Heat Flow Temp. TVLH:	35.0°C	Hot Water Flow Temp:	65°C
Heat Return temp:	30.0°C	DHW Return Temp	60°C
Temp. Difference ΔT:	5K°C	Temp. Difference: Max ΔT:	5°C
		Max temp Achievable	60°C

Temp. Cooling Circuit

Test Pressure (Prescribed 20bar Max):	20bar
Testing Period (min 1Hour):	1HR
Vacuum (prescribed 0.1bar):	-1bar
Refrigerant Type:	R407C
Quantity:	7.0Kg
Evaporator Pressure PVD:	4.9bar From Pressure Gauge
Equals Evaporating temp TVD:	7.3°C From Scale Ruler vapour 4076
Suction Gas Temp TSG:	12.3°C Read Beside Exp Valve Bulb
Overheating/Superheat (TSG-TVd):	5.0°C Suction Gas Temp - Evap Temp
Condensing Pressure PKD:	14.7bar Read off gauges
Equals Condensing Temp TKD:	35.9°C Scaled ruler liquid- 4076 Gas Read
Liquid Temp (above reservoir) TFL:	30.7°C Above reservoir
Hot Gas temp THG:	Read with Stat at discharge side of compressor
Subcooling (TKD-TFL):	4.7°C Should be 25°C higher than condensing temp

Tested By: G. Duffy

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The Heat Pump Company

OCHSNER COMMISSIONING CERT./TEST SHEET FOR HEAT PUMP OPERATION

Customer Name: Lisdoonan District Housing PR 1 Cert No. **987**
 Pump Serial No. 514201194 Superheat Range **8K - 10K**
 OTE Version 5.03/3.03 Subcooling Range **3K - 5K**
 Date: 04.09.2014

Temp. measurement / Heat Source (WQA)

Collector Heat Flow Temp. TVLQ:	11.6°C
Collector Heat Return Temp. TVLQ:	8.3°C
Temp. Difference:	3.3°C
Brine Concentration:	-14%
Heat Pump Model:	GMLW17

Temp. Measurement Heating System (WMA)

Heat Flow Temp. TVLH:	35.0°C	Hot Water Flow Temp:	65°C
Heat Return temp:	30.0°C	DHW Return Temp	60°C
Temp. Difference ΔT:	5K°C	Temp. Difference: Max ΔT:	5°C
Heat flow rate:	48.7l/min		
Collector flow rate:	66.3l/min		

Temp. Cooling Circuit

Test Pressure (Prescribed 20bar Max):	20bar
Testing Period (min 1Hour):	1HR
Vacuum (prescribed 0.1bar):	-1bar
Refrigerant Type:	R407C
Quantity:	7.0Kg
Evaporator Pressure PVD:	4.9bar From Pressure Gauge
Equals Evaporating temp TVD:	7.3°C From Scale Ruler vapour 4076
Suction Gas Temp TSG:	15.1°C Read Beside Exp Valve Bulb
Overheating/Superheat (TSG-TVd):	7.8°C Suction Gas Temp - Evap Temp
Condensing Pressure PKD:	14.7bar Read off gauges
Equals Condensing Temp TKD:	35.9°C Scaled ruler liquid- 4076 Gas Read
Liquid Temp (above reservoir) TFL:	32.0°C Above reservoir
Hot Gas temp THG:	Read with Stat at discharge side of compressor
Subcooling (TKD-TFL):	3.9°C Should be 25°C higher than condensing temp

Tested By: G. Duffy







