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DE VIGO

ESCUELA TÉCNICA SUPERIOR DE INGENIEROS INDUSTRIALES Área de Máquinas y Motores Térmicos

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LABORATORY OF REFRIGERATION AND THERMAL ENGINEERING

Test Report of a Brine-Water heat pump

Heat pump:

Brand: Clausius
Models: Classic/Elite 3-15

Client:

CEO2 GREEN S.L.
C/ Estrada pola Vía 27 H
36350 Nigrán (Spain)

Date: 20/07/2016

Test according to EN 14511 1-4 as brine-water heat pump.

TEST RESULTS

Test conditions	Heating capacity (kW)	Coefficient of performance
B0 / W35	15.5	4.6
B0 / W45	12.1	4
B0 / W55	7.2	3.1

Vigo, July 7th 2016.

Prof. Dr-Eng. José Fernández Seara
Head of the Laboratory

ANNEX

1. TESTED UNIT

The unit was provided by CEO2 Green S.L.

UNIT IDENTIFICATION

Branch: CLAUDIUS
Model: Clausius 3-15
Serial number: 11103160008
Year of manufacture: 2016

TECHNICAL DATA

Type: Brine/water heat pump
Refrigerant: R410A
Compressor: Copeland scroll
Condenser: Alfa Laval plate heat exchanger
Evaporator: Alfa Laval plate heat exchanger
Expansion valve: Carel electronic

2. MEASURING DEVICES

Measured value	Sensor type	Measurement range	Uncertainty
Temperature	RTD Pt100 A	0-100 °C	± 0,05 °C
Voltage	Gossen Metrawatt A2000	0-290 V	± 0,25% VN+ 1 digit
Current		0 – 5 A	± 0,25% VN+ 1 digit
Electric power		...	± 0,5% VN+ 1 digit
Power factor		...	± 0,02%
Pressure difference	Siemens SITRANS DS II	0 - 600 mbar	± 0,075%
Volume flow	Caudalímetro electromagnético Siemens MAG3100/MAG5000	0-3500 m³/h	± 0,5%