

Thermal Response Test Equipment Data

Country: SPAIN

Contact Person: ALFREDO FERNÁNDEZ PÉREZ

Organisation/Company: INGEO

Address:
PARQUE TECNOLÓGICO DE GALICIA
32901 SAN CIBRAO, OURENSE

Phone: +34 988 36 81 93 – +34 647 495 785

Email: ingeo@ingeo.es



General TRT data

Type: <i>Heat injection</i>	No TRTs: <i>3</i>	Size, weight: <i>1100x800x550, ca.70 kg (only box)</i>
Aim: <i>commercial</i>		Pump: <i>~2m³/h</i>
Powered by: <i>Electricity</i>		Heater: <i>Electrical, 9 kW step less</i>
Built on/in: <i>Caterpillar</i>		HP/Cooler: <i>Without</i>
<p>Principle outline</p>		Temperature measurements: - Inside box, at heat exchanger head, double PT 500, PT1000 & PT 100, direct installation and immersion sleeves, from $\pm 0.01^{\circ}\text{C}$
		Flow rate measurements: - <i>Direct installation as IDM or mechanical</i>
		Voltage stabilization: <i>Optional</i>
		Electricity measurement: <i>Yes, $\pm 0.1\text{kWh}$</i>
		GPS: <i>No</i>
		Remote Control: <i>No</i>
		Remote Data Collection: <i>Yes</i>
		Logger: <i>Automatic</i>

TRT Experience

Years of operation: *5*

Number of performed measurements: *~80*

Typical borehole depths: *up to 280 m*

Applications: *BHE*

Typical collector type: *1U, 2U, any types of filling*

Typical fluid type: *Water*

Typical groundwater temperature: *min 10°C – max 22°C*

Geographical area: *Europe*

Analysis Method: *Numerical / Line source + parameter estimation (own software) / continuous temperature depth profiling.*