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GEOThermal Technology for economic Cooling and Heating



GEOTeCH

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Collaborative Project

D4.2 Heat pump prototype 1

Executive Summary

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Lead beneficiary	HIR
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CI	Classified, information as referred to in Commission Decision 2001/844/EC.	

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1. PUBLISHABLE EXECUTIVE SUMMARY

This deliverable (D4.2 - Heat pump prototype 1) is related to the delivery of the 1st heat pump prototype, as described in details in deliverable D4.1 (Dual source heat pump design).

The objective is to provide the unit to UPV to carry out the testing phases inside their facilities, in order to get all the information necessary to deliver prototypes nr.2 and 3 and to develop the plug and play geothermal system.

The unit, as described and showed, is a 8 kW dual source and polyvalent. In other words, the thermal source can be either air or geothermal, and should be switched according to further strategies to be developed. Finally, polyvalent means that a total heat recovery heat exchanger is used to produce domestic hot water simultaneously to summer cooling.

The selected refrigerant is R32. The compressor is a new Scroll compressor from Copeland designed for R32.