# GROUND SOURCE HEAT PUMPS FOR HEATING AND COOLING IN AREAS WITH MEDITERRANEAN CLIMATE

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With more that one million systems installed, ground source heat pumps are an established technology for heating, cooling and domestic hot water provision, which is gaining more and more market share. The European project Ground-Med aims at developing and demonstrating the next generation of ground source heat pump systems, of extraordinary energy efficiency, installed in buildings located at areas with Mediterranean climate. In the framework of the Ground-Med project 8 ground source heat pump prototypes have been developed of 15-75 kW(th) capacity, which will provide heating and cooling in 8 buildings.

The main objective of the project is to demonstrate the feasibility of providing useful heating and cooling at least 5 times more than the corresponding power consumption. For this purpose, technology development considers development of energy efficient heat pumps, fan-coils, and air handling units, as well as developing energy efficient options for borehole heat exchangers, thermal storage and controlling system operating parameters. All demonstration systems will be monitored and the results will be made available on line through the internet.

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