

PERIPHERAL EQUIPMENT

For greater heat requirements, additional equipment may be associated with the geothermal loop.

GEOHERMAL & SOLAR HEATING

Geothermal baskets

Geothermal baskets are used to increase the heat exchange capacity between the loop and the ground. Buried deeper (4 to 5 m) they act as temperature regulators of the loop. During the phase of heat loading, they will bring additional degrees to the loops to avoid excessive cooling. In the heat unloading phase, it will evacuate excessive calories in the deeper layers to preserve the environment of the loop, and therefore its average temperature.

The geothermal baskets, like the elements constituting the water loop are sized for 100 years of operation to guarantee you a use of your installation on the very long term.

Each basket represents a heat capture capacity of 0.700 to 1.200 kW depending on the type of soil and climatology.



Roof sensors

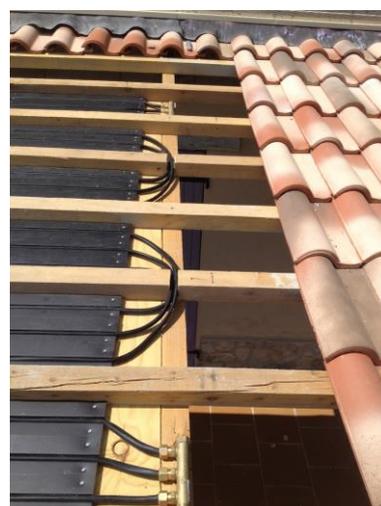
In order to preserve, in all circumstances, the capacities of the heat pump, and regulate the temperature of the water loop, an additional heat capture on the roof can be recommended.

Under the tiles (and therefore invisible), PE tubes installed on frames fixed between the frame ties recover solar heat during the day and thus contribute to maintaining the temperature of the water loop.

On flat roofs, the pipes can be installed under the gravel of the roof, thus recovering the heat of stones naturally heated by the sun.

In some cases, these sensors can be installed on facades of industrial buildings, under the cladding.

At night, taking advantage of the cool night, these sensors can then serve as heat sinks and help improve the performance of air conditioning in hot weather.



RECOVERY OF GRAY WATER, FATAL HEAT AND COGENERATION

Energy recovery from greywater

The term "greywater" refers to the used sanitary waters. With 40l per day and per person (in housing), domestic hot water (DHW) used for showering or bathing represents a significant deposit of untapped thermal energy. Heated at 60°C and mixed with cold water, it contributes to the comfort of everyone.

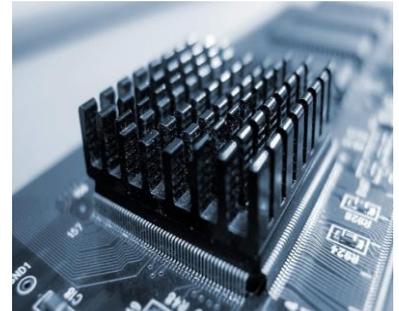
By passing this water (before its evacuation to the sewer) in a tank equipped with a heat exchanger, we can recover some of the thermal energy it contains and reuse it to supply the heating system at a lower cost.



The fatal heat

Fatal heat refers to the thermal energy produced by equipment as a result of its operation, without the production of heat being the primary purpose of this equipment. For example, a data center produces heat even if any of it being the purpose of its operation.

By capturing this heat and associating it with the operation of the system via the water loop, we create a heat network for a larger number of people.



Cogeneration

Cogeneration refers to the association of a thermal energy generator with the production of electrical energy. For example, some equipment uses a biomass gasifier to convert biomass (organic waste) into fuel and burn it from there. The resulting heat is used to heat oil, which in turn will be used to produce electricity (ORC module from Cogebio). The recovery of the heat of the cogenerator and the associated electrical production allow to cover all or part of the heat and electricity needs of urban areas or community district.



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