

Thermosyphons

Two-Phase Liquid / Vapor Convection Refrigeration

RADIATOR

The refrigerant vapor condenses on the interior walls of the condenser giving off heat which is radiated to atmosphere.

The condensate returns to the evaporator by gravity.

REFRIGERATION

Refrigeration of the soil occurs when the ambient air temperature is lower than the soil temperature.

Startup of the two-phase cycle can be initiated by a temperature differential between the evaporator and condenser of 0.1°C .

Soil / Air Interface

EVAPORATOR

Heat transferred from the soil boils the liquid refrigerant. The vapor rises to the condenser.

Condensate returns to the evaporator by gravity wetting the walls of the thermosyphon.

