



TURBOCOLLECTOR®

**BETTER HEAT TRANSFER  
GIVES A HIGHER COP.**

**MuoviTech®**

MuoviTech UK, Carr Hall, Whalley Road, Blackburn, Lancashire, BB1 9LJ, UK  
PHONE +44 1706 82 5035 EMAIL [sales@muovitech.com](mailto:sales@muovitech.com) WEB [www.muovitech.com](http://www.muovitech.com)



# TURBOCOLLECTOR®

## THE IDEA BEHIND TURBOCOLLECTOR IS TO CREATE TURBULENT FLOW AS EARLY AS POSSIBLE.

### TURBULENT FLOW

Turbulent flow is a necessary for creating an effective geothermal energy system. With laminar (non-turbulent flow), a layer of almost stationary liquid is created next to the pipe wall. This liquid has an insulating effect and gives a poorer heat transfer from the rock to the heat pump. The turbulence of a liquid is usually measured as a Reynolds number.

Tests have shown that TurboCollector has better heat transfer in the Reynolds number range 2,000-4,000 than a traditional smooth collector. Heat pumps usually work in the range 2,000-5,000.

### PATENTED TECHNOLOGY

The secret of TurboCollector is the ribbed inside, that's what creates a more turbulent flow and a better geothermal energy system. TurboCollector has been patented technology since 2008. Since then, over 100,000 TurboCollectors have been installed for satisfied property owners worldwide.

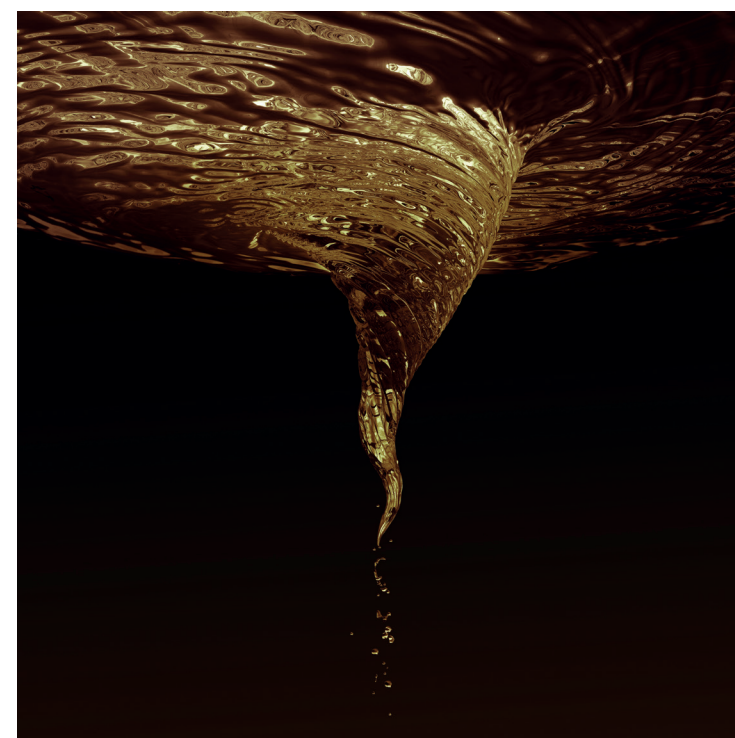
### INVERTER PUMP - VARIABLE CIRCULATION PUMPS

The latest heat pumps are known as inverter pumps. These pumps adapt the revolutions of the circulation pump and the compressor according to the need for heating/cooling at any given time. This means that the flow in the collector varies during the season. With a traditional collector, there is a great risk that the heat transfer between the rock and the heat transfer medium will be ineffective.

Thanks to the TurboCollector's outstanding ability to create the best possible heat transfer in a wide range of flows, it is the obvious choice to go with the new generation of heat pumps.

### BETTER HEAT TRANSFER - HIGHER COP

How effective a collector is can be explained by how much resistance there is to heat in the rock reaching the heat pump. This is usually called borehole resistance. Tests show that TurboCollector has up to 33% lower bore hole resistance than a traditional collector. Low borehole resistance delivers heat transfer medium to the heat pump at a higher temperature and leads to a better COP. Quite simply, more energy is taken from the ground and the heat pump consumes less energy.



## MORE THAN 100,000 INSTALLATIONS OF TURBOCOLLECTOR WORLDWIDE.

### PRODUCT INFORMATION

Dimensions: 32mm, 40mm, 45mm, 50mm  
Lengths: 50-500m  
Pressure class: PN16 SDR11, PN12.5 SDR13.6 and PN10 SDR17  
Material: PE100 and PE100RC



Supplied with factory-customised return weight. The return bend is well protected. The length is adapted for optimum transport and easy installation. The collector is delivered in standard lengths from 50 to 500m.



### GREATER SECURITY IN SYSTEMS AND PROJECTS

It is often difficult to know in advance what flow will be obtained in the collector in a project. There are several factors that can affect the eventual flow, such as the number of boreholes, the choice of valves, oval collectors due to frozen boreholes etc.

TurboCollector gives greater security by delivering the lowest borehole resistance possible in all flows.

### CERTIFICATE

P-marking by RISE with approval number SC1106-11.

