TURBOCOLLECTOR®

BETTER HEAT TRANSFER GIVES A HIGHER COP.

MuoviTech®

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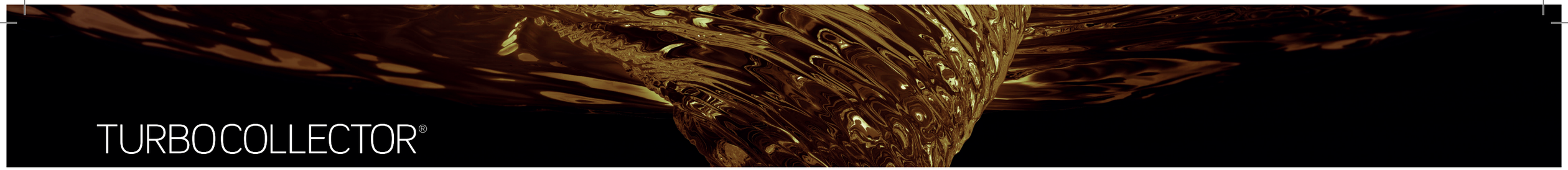


TURBOCOLLECTOR®

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

Best Possible Heat Transfer:
The TurboCollector is designed to create turbulent flows, which are crucial for efficient heat transfer.

Early Creation of Turbulent Flows:
Its internal fins ensure turbulent flow even at low flow rates.

Energy Efficiency:
The TurboCollector achieves turbulent flow without requiring high flow rates, making it energy-efficient.

Suitability for Inverter Heat Pumps:
Compatible with modern inverter heat pumps, the TurboCollector ensures optimal heat transfer across various flow rates throughout different seasons.

Larger Operational Window:
The design of the TurboCollector allows for effective operation over a wider range of conditions.

Higher Brine Temperature:
Improved heat transfer capabilities result in higher brine temperatures.

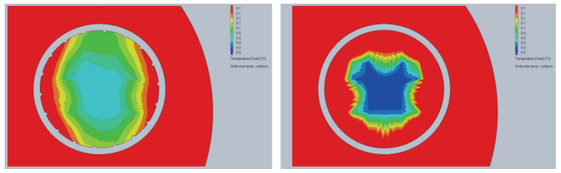
TURBULENT FLOW

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.

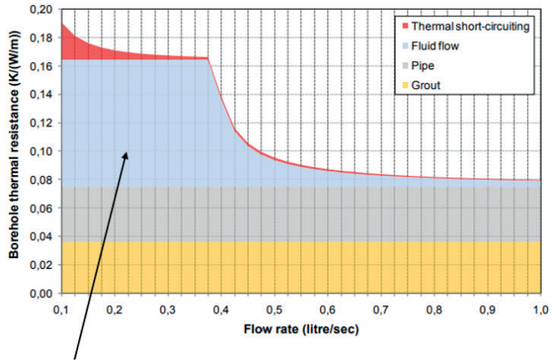
PATENTED TECHNOLOGY

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.



TURBULENT FLOW

The images above illustrate the heat distribution between laminar flow and turbulent flow in a pipe. The image on the right shows laminar flow, where distinct layers are visible in the flow, and the temperature in the middle of the pipe is lower. In the picture on the left is a turbulent flow, where the temperature is more evenly distributed. This provides a better heat exchange in the borehole and a higher temperature to the heat pump.



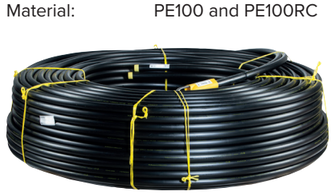
TURBULENT FLOW AFFECTS BOREHOLE RESISTANCE THE MOST

The difference between turbulent and laminar flow greatly influences the total borehole resistance. Unlike backfill material and the pipe wall, the resistance in the liquid is affected by the flow rates. TurboCollector's internal fins help to transition to turbulent flow earlier. TurboCollector ensures the lowest possible thermal resistance in the fluid flow at each specified flow rate.

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.

Technical data sheet: