

# MuoviELLIPSE

ELLIPTICAL DESIGN MAXIMIZES  
BOREHOLE UTILIZATION

COST EFFECTIVE DRILLING

EASIER INSTALLATION IN DEEP  
BOREHOLES

OPTIMIZED USE OF BOREHOLE  
SURFACES

MINIMIZED PRESSURE DROP

LESS GROUTING REQUIRED

DURABLE CONSTRUCTION



**MuoviTech**<sup>®</sup>

MuoviTech AB, Tvinnargatan 11, 507 30 Brämhult, Sweden  
TEL +46 (0)33 22 85 85 EMAIL [info@muovitech.com](mailto:info@muovitech.com) WEB [www.muovitech.com](http://www.muovitech.com)

TURBO COLLECTOR<sup>®</sup>



# MuoviELLIPSE

**THE ELLIPTICAL DESIGN OF THE MUOVIELLIPSE ENABLES LARGER DIAMETER PIPES TO BE USED IN NARROW BOREHOLES.**

## FOR INSTALLATIONS UTILIZING MOST OF THE BOREHOLE AREA

Unleash the power of earth's natural energy with our cutting edge elliptical TurboCollector®, designed for the most challenging geothermal applications. Engineered to excel the geothermal system, this probe is your key to sustainable and efficient heating and cooling solutions. The oval design makes it possible to install a larger diameter probe in a more narrow borehole.

As if the pioneering elliptical shape is not enough, adding the inside rotating fins of the patented TurboCollector® for higher turbulent flow, makes this product a game changer!

Elevate your geothermal energy projects to new depths with our elliptical probe. For eco conscious businesses and environmentally responsible energy solutions, this is the choice that leads the way.

**Contact us today to learn more.**



# MuoviELLIPSE

**THE OVAL DESIGN MAXIMIZES BOREHOLE UTILIZATION. FOR SUSTAINABLE AND EFFICIENT HEATING AND COOLING SOLUTIONS.**

## INCREASE THE DIMENSION OF THE PROBE

It is clear that two oval pipes utilize the space in a round borehole more efficiently than two round pipes.

But how significant is the difference?  
- A lot!

By using MuoviELLIPSE 45 mm instead of:

40 mm round pipes: 27% more area utilized  
32 mm round pipes: 98% more area utilized  
MuoviELLIPSE provides the same cross-sectional area as a round pipe of the same dimension. However, thanks to its innovative oval shape, it can be installed in boreholes that typically accommodate only smaller pipe dimensions.

The illustration on the right depicts a cross-section of a borehole.



The white area illustrates the additional space in the borehole when upsizing to a larger, oval-shaped dimension. As shown, there is still sufficient room for a smooth installation.

## KEY FEATURES

### COST EFFECTIVE DRILLING

Narrower boreholes significantly reduce drilling costs. With 30% faster drilling, installations are completed more quickly and with less fuel consumption, making it more environmentally friendly. For example, instead of drilling a 5.5" borehole, a 4.5" borehole is sufficient to install a MuoviELLIPSE 50 mm probe smoothly.

### EASIER INSTALLATION IN DEEP BOREHOLES

Deeper boreholes often become narrower at the bottom, making deep probe installation more challenging. MuoviELLIPSE provides extra space for smooth installation, ensuring ease compared to installation of traditional 50 mm round probes. -Why not exchange all your 50 mm round projects into elliptical shaped MuoviELLIPSE 50mm to feel extra secured when installing?

### OPTIMIZED USE OF BOREHOLE SURFACES

The elliptical design maximizes contact with the borehole walls, enhancing heat transfer and improving energy extraction efficiency.

### MINIMIZED PRESSURE DROP

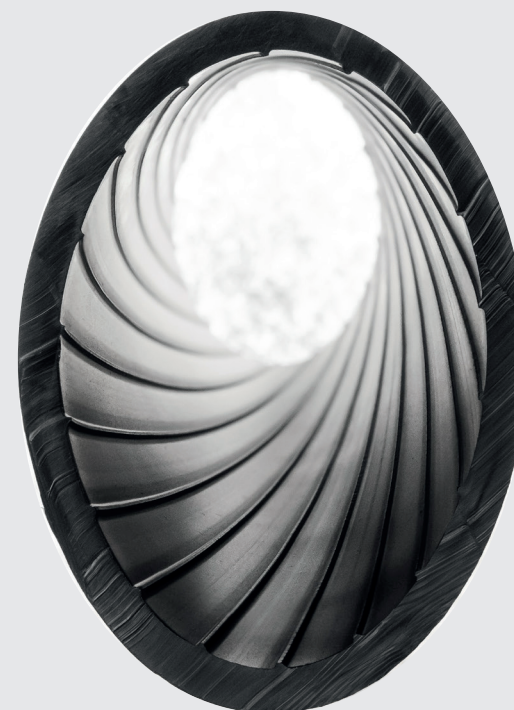
Traditional round probes in deep boreholes often cause pressure drops. MuoviELLIPSE, equipped with TurboCollector® fins, eliminates this issue,

### LESS GROUTING REQUIRED

In most European countries back filling with grouting is mandatory by law. When drilling a narrower borehole and using more of the space in the drillhole with a MuoviELLIPSE probe, less grouting is needed.

### DURABLE CONSTRUCTION

Crafted from top quality materials, the elliptical geothermal probe is built to last, providing long term reliability and minimal maintenance requirements.



Patent Pending

## PRODUCT INFORMATION

Design:	Elliptical TurboCollector®
Dimensions:	Ø 40 mm (46x33 mm) Ø 45 mm (51x37 mm) Ø 50 mm (57,9x40,5 mm) Ø 63 mm* (73x52 mm)
Lengths ≤ 50 mm:	Up to 400 m
Lengths 63 mm:	Up to 700 m*
Pressure classes:	PN10 SDR17, PN16 SDR11
Material:	PE100 and PE100RC
Delivery:	In coils on pallets*

Brine: A fluid with a higher density than the surrounding water (>1 kg/m³) is recommended, eg Kilfrost® 1,1 kg/m³.

The U-bend at the bottom of the probe is welded on the probe at the factory, and is designed to create a smooth and easy installation, with a probe length of your choice. Solid and well protected U-bend. Bottom weights are required.

\*See separate folder for semi-deep drilling. MuoviELLIPSE 63 mm 400-700 m is suitable for semi-deep drilling and will be delivered on two drums.

