

ROTEX ground source heat pump

a member of **DAIKIN** group

ROTEX



Natural geothermal energy.

ROTEX HPU ground – the **ground source heat pump** that heats with free geothermal energy. Compact, environmentally responsible and uniquely efficient.



“It was important for us to find a heat pump that used the most efficient technology. And when it comes to efficiency, the ROTEX ground source heat pump with its inverter technology was hard to beat! It meets every single one of our requirements and looks good too. On a more practical level, it can fit into the smallest of spaces without any trouble at all.”

Petra and Lutz Wolf, homeowners

Geothermal heating – so simple with the ROTEX ground source heat pump.

An inexhaustible heat source right under your feet.

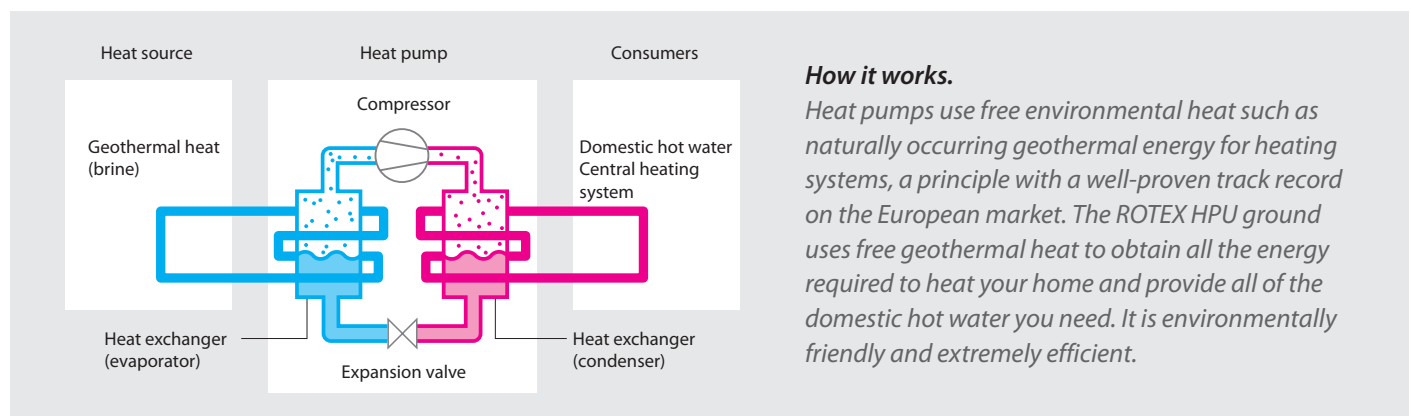
Geothermal heat is a natural energy source. Thanks to ROTEX technology, you can benefit from this constant, free and inexhaustible heat supply for heating your home and domestic hot water. The ROTEX HPU ground heat pump unit uses this environmental heat to heat your home with maximum efficiency.

How does a ground source heat pump work?

Even in the coldest places there is plenty of energy in the ground in the form of free geothermal heat. At a depth of 15 metres and below, the temperature is a fairly constant 10 °C. This trapped energy represents an inexhaustible heat source which the ground source heat pump can tap into to heat your home. Using geothermal probes or geothermal collectors, a mixture of water and antifreeze, also known as brine, is pumped around the underground circuit as a heat transfer medium. The brine then flows through the heat pump where the heat is transferred to a refrigerant with a low evaporating point. The refrigerant is then compressed so the heat can be used for heating and domestic hot water.

What are the benefits of this technology?

Ground source heat pumps are highly efficient regardless of the outside temperature. This is particularly advantageous in cold regions. The ROTEX ground source heat pump offers a stable heating output no matter what the outside temperature. Provided the system is properly designed, no additional backup heating – such as an immersion heater – is required. This means that you can heat using only renewable and environmentally responsible geothermal energy.



How it works.

Heat pumps use free environmental heat such as naturally occurring geothermal energy for heating systems, a principle with a well-proven track record on the European market. The ROTEX HPU ground uses free geothermal heat to obtain all the energy required to heat your home and provide all of the domestic hot water you need. It is environmentally friendly and extremely efficient.



INVERTER
INVERTER



The thermostat – easy to set.

The controller is extremely user friendly. Operating modes, time programs and parameters can be set easily and intuitively via the plain text display screen. The controller can also be used as a thermostat. The room temperature can be raised or lowered quickly and easily with just a few clicks – the intelligent system automatically adjusts the water temperature accordingly.

It's all about the technology – maximum efficiency with ROTEX inverter heat pumps.

Inverter technology for greater efficiency.

The ROTEX ground source heat pump delivers exceptional performance thanks to its highly efficient inverter technology. As it is demonstrably much more efficient than comparable ON/OFF ground source heat pumps, the ROTEX HPU ground reduces operating costs. When the building does not require full heating capacity, the heat pump reduces its output. It draws less energy from the ground, which means that the temperature of the brine rises. This makes the heat pump more efficient.

Benchmark – the seasonal performance factor.

This indicates the ratio of heating energy you use throughout the year in relation to the auxiliary energy used. The higher the seasonal performance factor, the more efficient the heat pump. Intelligent inverter technology means that the heat pump is run with higher brine temperatures in standard mode. This significantly increases the efficiency of the system, as shown by the high seasonal performance factor. The ROTEX HPU ground sets a whole new standard for ground source heat pumps.

The benefits of the ROTEX ground source heat pump HPU ground.

Outstanding efficiency

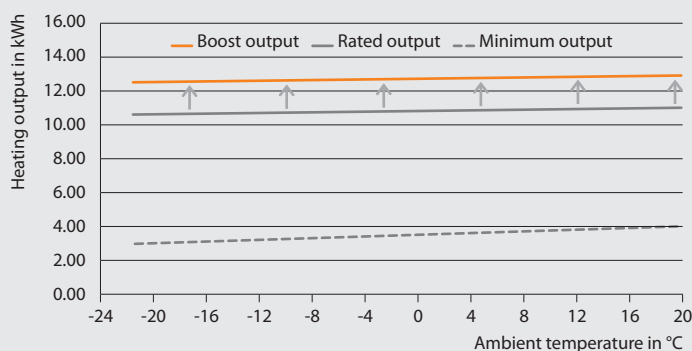
- Use of free, renewable geothermal energy

Innovative technology

- Inverter technology ensures efficient operation at any outside temperature
- User friendly control with integrated energy management

Meets your needs

- For central heating and domestic hot water
- Economical and quiet to run
- Compact dimensions, easy installation – on a very small footprint



Boost function for maximum heating output.

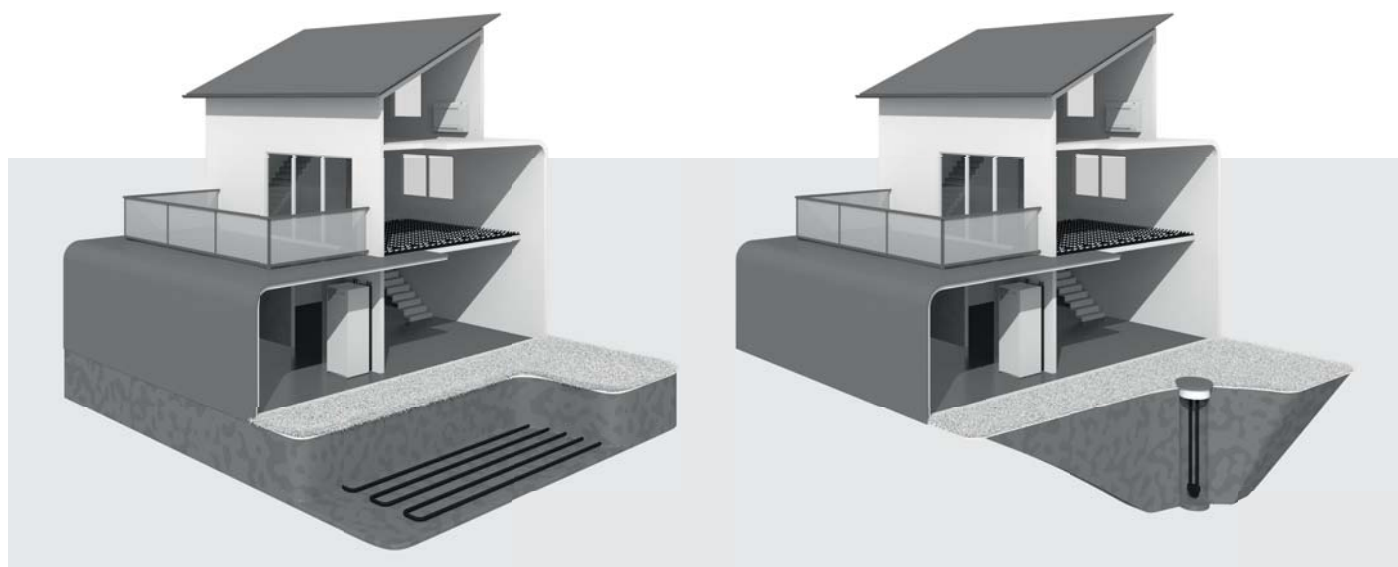
If the building requires a greater heating capacity, ROTEX HPU ground uses its integrated boost function to increase the output without the need for an additional immersion heater.

Very easy to install with compact, attractive design and sophisticated technology.

Fast installation – including DHW tank.

The HPU ground is factory-fitted with an integrated 180 l stainless steel domestic hot water tank, which considerably reduces installation time. The pipe connections ready fitted on the upper section of the unit additionally minimise connection work.

The ground source heat pump is impressively compact and requires only a small installation area, because all the key components are housed within the unit itself. This gives you plenty of options in terms of where to install it in your home.



Geothermal energy is a free energy source for central heating and domestic hot water. This energy can be harnessed using geothermal collectors (left) or a geothermal probe (right).

Specification



		HPU ground
Rated heating output B0/W35	kW	10.2
Maximum heating output B0/W35	kW	13
Rated COP B0/W35		4.35
Heating flow temperature operating range (with heating element)	°C	min. 24 / max. 60 (65)
DHW operating range (with heating element)	°C	min. 25 / max. 55 (60)
Heating output (heating element)	kW	9
Dimensions (WxD xH)	mm	600 x 728 x 1732
Weight of unit	kg	210
Total tank volume	l	180
Sound power level in heating mode	dB(A)	46
Sound pressure level in heating mode	dB(A)	32
Refrigerant		R410A
Refrigerant charge	kg	1.8
GWP		2087.5
TCO ₂ eq		3.8



Attractive design with a very small footprint.

Thanks to its compact design, the system needs a very small installation area of just 728 x 600 mm – roughly the same as a washing machine. At just 1,732 mm tall, the combined heat pump module and DHW tank fits in any standard room.

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What makes ROTEX different?

We offer individual solutions for optimum living and working that are straightforward, intelligent, and futureproof.

ROTEX is a manufacturer and supplier of complete innovative and environmentally responsible heating systems – building on decades of experience. Since 1973, ROTEX has stood for innovation and know-how in the field of heat generation, storage and distribution. In the development of products for our high grade and perfectly matched components we focus on user benefits.

The ROTEX product range extends from air-to-water heat pumps, condensing boilers for oil and gas, solar thermal systems and thermal stores, not forgetting underfloor heating, heating oil tanks and rainwater tanks, right up to a comprehensive installation system for all sanitary and heating equipment. Innovative systems that facilitate the optimum use of conventional and alternative fuel types in both modernisation and new build projects. ROTEX products stand for unique cost efficiency with maximum environmental compatibility and the highest levels of flexibility.

ROTEX Heating Systems GmbH is a wholly owned subsidiary of Daikin Europe NV, making it a member of the DAIKIN Group, the world's leading manufacturer and supplier of products for heating, ventilation and climate control. Our combined competence generates optimum product solutions to meet the highest user aspirations.

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