



Our Energy Fence

Your answer to rising
heating costs

www.schlemmer-ecotech.com

A Special Type of Garden Fence

Don't let heating costs encroach on your budget

When frosty outdoor temperatures face you with an indoor choice: Comfort? Or cold? Because heating costs have gone up again. The new Schlemmer ecotech Energy Fence makes your choice easy: Feel comfortable without straining your budget!

This fence easily covers all your heating requirements. And it does so by combining low costs with beauty: Just cover it with greenery of your choice such as foliage trees or shrubs. The Energy Fence works like a solar collector. It absorbs the energy of the sun and feeds it to a brine-water heat pump. A ground collector stores the solar energy. Even at night or on cold days there is no need for an additional heating source.

The Energy Fence can be harmoniously integrated with your garden landscape and its installation is easy. There is no need for deep drilling. And as a positive side effect, you'll be actively helping to protect the environment when choosing this natural form of heat supply.



A hot solution

Low investment, compact dimensions, huge effect



1 | The control unit

The control unit determines whether the part of the Energy Fence that is above the ground is included in the transfer fluid loop, the collector charged or energy extracted from the collector.

2 | The heat pump

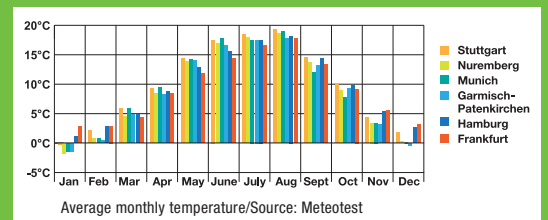
The heat pump gains brine from the ground collector at a high, above-average temperature. It then converts the warm brine into heat for the home's heating and hot water systems.

3 | The "heat trap"

As soon as solar radiation or ambient heat have raised the temperature in the Energy Fence above the temperature in the ground collector the section located above the ground is included in the transfer fluid loop. This charges the ground collector with solar energy.

4 | The "heat accumulator" in the ground

The ground collector is located below the frost line. Even the standard size of 0.8 m x 5 m provides sufficient extraction capacity for a 7.5 kW heat pump. The stored energy suffices to ensure operation of the heat pump for 15 days at -15 °C.



Energy also on cold days:

In addition to the type of soil and the size of the ground collector, the local climatic conditions determine the calculation of the required storage capacity of the ground collector. The chart shows a year-long average of average monthly temperatures prevailing in selected German cities. Extreme temperatures below zero occur as peaks and are compensated for by the ground collector.

5 | The "look"

The visible part of the Energy Fence can be planted with greenery that retains all of its foliage in summer or half of its foliage in winter. This allows a harmonious integration of the Energy Fence with the surrounding garden landscape.

The system in detail

Facts, figures, function

The fence that pays for itself

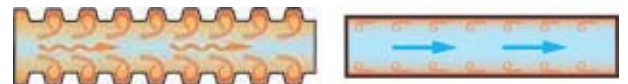
After 4.1 years the installation costs have been recovered*

	Oil/gas heating	7.5 kW heat pump with Energy Fence
1 brine/water HP 7.5 kW, 1 Energy Fence, connections etc.		11,000 €
Control unit, distribution set		1,000 €
Brine unit		800 €
Earthwork		1,500 €
Installation	3,500 €	3,500 €
Tank/natural gas connection	2,500 €	not required
Oil/gas central heat	5,200 €	not required
Hot water tank	1,000 €	1,000 €
Chimney sweeper (annual)	80 €	not required
Chimney	2,800 €	not required
Space for oil tank	not included	not required
Total**	15,080 €	18,800 €
Energy costs/year for oil/gas	1,500 €	600 €
Energy savings because of heat pump/year		900 €
Additional costs of the system/annual energy cost savings = Amortization	3,720 € 900 € 4.1 years	

Made by Schlemmer

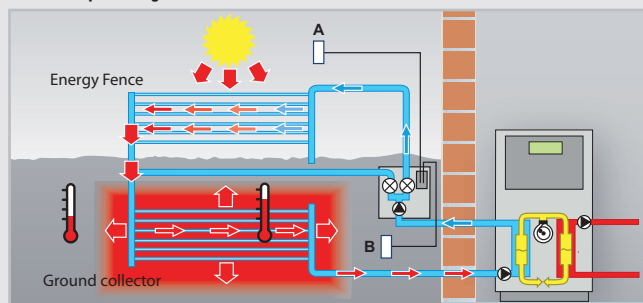
Original Schlemmer corrugated tubes

The tubes for our Energy Fence are produced in-house. This gives us assurance of the required quality. In addition, our corrugated tubes do a much better job of transferring and distributing the heat to the transfer fluid than non-corrugated tubes. The reason is that the corrugation profile provides a larger surface for heat absorption and evenly distributes the heat to the inside of the tube. Proven quality made by Schlemmer!



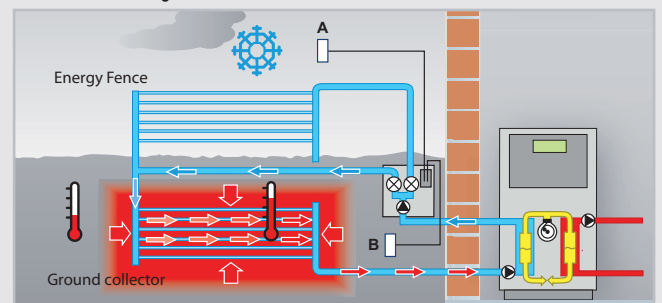
Comparison between the flow conditions in a corrugated and a non-corrugated tube. In the corrugated tube the heat is effectively conducted to the center flow of the tube.

Heat absorption of ground collector



The ground collector is charged with solar energy.

Heat abstraction of ground collector



On cold days or nights the ground collector completely supplies the required energy.

A: Air temperature sensor
B: Ground collector temperature sensor

Product overview

Article No.	Heat pump thermal rating	Collector cooling capacity ***	Dimensions (height x length) Energy Fence	Number x dimensions (height x length) ground collector
3900353	7.5 kW	6 kW	0.80 m x 5.00 m	2 x 0.80 m x 5.00 m
3900354	10 kW	7.5 kW	0.80 m x 6.00 m	2 x 0.80 m x 6.00 m
3900355	12.5 kW	10 kW	0.80 m x 8.00 m	2 x 0.80 m x 8.00 m

For different capacity requirements, please inquire. * Sample calculation for Germany ** + tax *** Average value, depending on type of soil.



Easy and cost-efficient: Heat from the Energy Fence by Schlemmer ecotech

Benefits at a glance:

- ▶ Heating cost savings
- ▶ No additional heat source required in winter due to heat storage
- ▶ For any plot size
- ▶ Capacity from 7.5 kW in 2.5 kW increments
- ▶ Combinable
- ▶ Subsequent installation and extension possible
- ▶ Absolutely noiseless operation
- ▶ No costly deep drilling
- ▶ High COP (4.5 – 5)
- ▶ Eco-friendly
- ▶ Frost-resistant
- ▶ Sustainable energy circuit due to heat recirculation
- ▶ No cool-down of the ground
- ▶ Dual function as heat absorber and garden fence
- ▶ Precise cost calculation

New from Schlemmer ecotech: The Energy Fence made of Schlemmer corrugated tubes

The Schlemmer ecotech Energy Fence is a compact and inconspicuous yet powerful performer. The ground collector is so effective that you won't need to spend any additional money on energy even in low winter temperatures!

- ▶ Good for the budget
- ▶ Good for the environment
- ▶ Good for a comfortable home – in any kind of weather

Your contact

The Schlemmer Group

The Schlemmer Group is a worldwide manufacturer and development partner of international corporations in the general industrials and automotive sectors. The success story of the technology corporation started in 1954. Therefore, Schlemmer is a name that stands for over 50 years of delivering innovative, cost-efficient and customized product concepts.

The Schlemmer Group develops, produces and sells corrugated and protection tube systems, connection systems with gland technology, mechatronics systems with probes and sensors, and air and fluid systems with conduits and reservoirs. In addition, the turning parts business segment with in-house production of customized metal turning parts is playing an increasingly important role in the consistent expansion of the company's business activities.

Schlemmer ecotech is totally focused on environmental technology, with a portfolio of solar absorbers, pool heaters, pool accessories, drip irrigation systems – and Energy Fence solutions.

Schlemmer ecotech

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