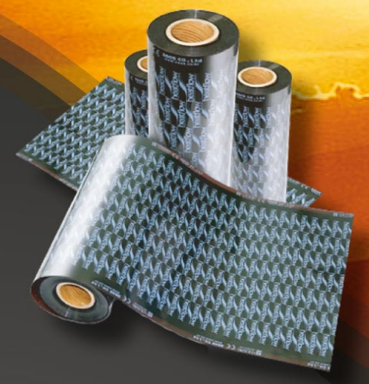
Informational comparison of gas underfloor heating with heatflow heating *

Gas	€	HEATFLOW	€	€
Installation costs				**Difference**
Gas connection, protection, regulator, gas meter	1 200,00	heatflow Carbon Heating Film	2 610,00	
Protherm Panther boiler with installation, connection and commissioning	1 400,00	Bitumen, cable terminals, boxes, ring terminals	245,00	
Sheetmetal chimney with façade installation	520,00	CYKY cables, silicone wires	195,00	
Underfloor pipes laying, fittings, insulation	4 000,00	Polifoam reflective insulation lining, protective PE foil	399,00	
Heating pipework	300,00	Switchboard components (RCDs, contactors, circuit breakers)	120,00	
Thermostatic regulation valves (4 pcs)	200,00	Programmable thermostats with a weekly mode (5 pcs)	510,00	
Underfloor pipework grouting (screed, steelfixing, expansion joints)	1 500,00	Insulation laying, hf, connection, connecting cables and wires	769,00	
Projects, tests, completion and inspection	300,00	Measuring, programming, inspection and functional tests	115,00	
Total costs	**9 420,00**	**Total costs**	**4 963,00**	**4 457,00**
Operating costs (calculated at 50W/m² building heat loss)				
Gas consumption in €/month (yearly gas consumption 1 980 m³)	80,80	Electricity consumption (yearly electricity consumption 7 920 kWh)	86,90	
Electricity consumption (50W pump)	3,45			
Cleaning, system inspections	3,33			
End-user fee	7,75	End-user fee	5,12	
Total monthly	**95,33**		**92,02**	**3,31**
Total yearly	**1 143,98**	**Total yearly**	**1 104,24**	**39,74**

* calculation for two identical houses of 110 m² (the calculations have been performed using the average goods and energy prices in Slovak Republic)

heatflow
HEALTHIER WAY TO HEAT



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Your distributor:

heatflow
HEALTHIER WAY TO HEAT

NAOS EUROPE
carbon-fiber technologies

Heat of the Future

www.naoseurope.eu

Extremely thin technology, only 0.5mm thick

Healthy heat

Provable antibacterial effect

Air quality improvement

No undesirable electromagnetic radiation

Wide range of usage

Significant energy savings

Affordable price

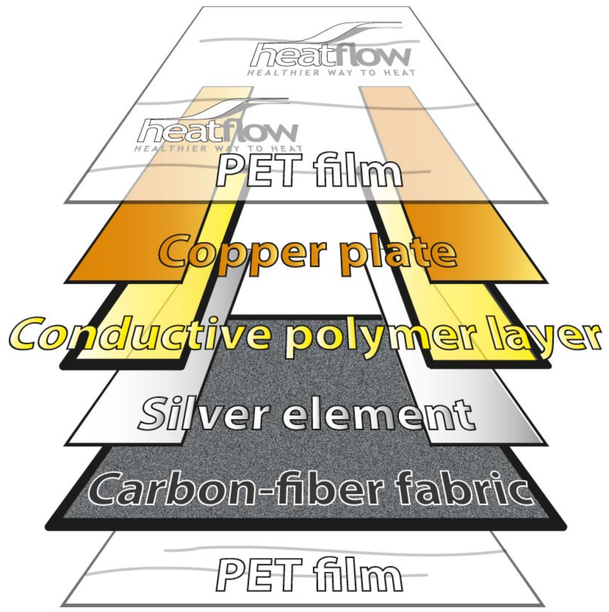
Quick installation and dismounting

Service life of more than 30 years

Quick warming-up of the heating film

10 years warranty

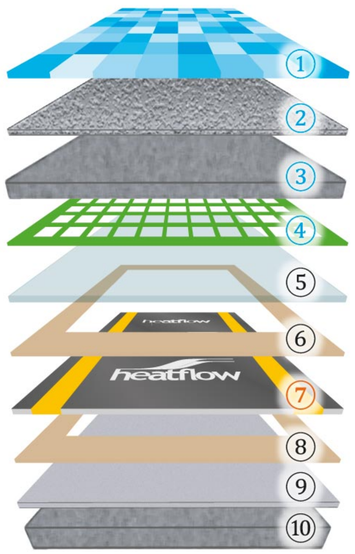
heatflow heating film structure



heatflow heating film installation options

1. Ceramic tiles
2. Adhesive mortar (glue)
3. Screed, cement layer
4. Reinforcing mesh

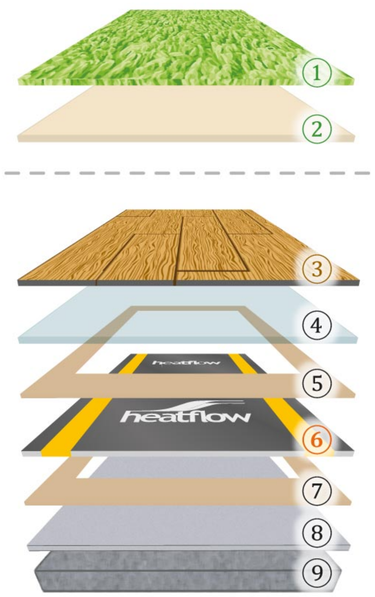
5. PVC foil
6. Insulation tape
7. heatflow
8. Insulation tape
9. Insulation (styrodur)
10. Floor (concrete)



1. Carpet (linoleum)
2. Protecting heating board (Magnesium plate)

3. Floating floor (parquet)

4. PVC foil
5. Insulation tape
6. heatflow
7. Insulation tape
8. Insulation (styrodur)
9. Floor (concrete)



Advantages of heatflow infrared heating film

Water heating	Cable systems	⇦▯⇨	HEATFLOW	Advantages of our technology
Requirement for a cement layer	Requirement for a cement layer	Process of laying	Process of laying	Cost-effective installation
10 cm or more	More than 2 cm	Foundation layer thickness	No foundation layer thickening	Corresponds to the room height
Additional space for heating source installation required	Lowers the room height when using cement covering	Increase of utility area	No additional space required	Keeps the original room characteristics
Floors and walls	Floors and walls	Layout options	No limitation	Installation suitable for various architectural projects
High, depends on boiler modification	High, from 150 W/m²	Energy consumption	Low, 10 to 270 W/m² according to the circuit type (series, parallel)	Energy efficiency
No operation when damaged	No operation when damaged	Operational capability	Operational even when damaged	Stability even when parts of the system are damaged
Limited to 10 years	Up to 15 years	Service life	Long, more than 30 years	Long service life
After drying up the foundation layer, 14 – 20 days	After drying up the foundation layer, 14 – 20 days	Operation	Immediately after installation	Quick installation and commissioning
Slow, requires preheating: 30 – 60 minutes	Slow, 15 – 20 minutes	System warming up speed	Quick, 5 minutes!	Quick warming up - feeling of heat and comfort
No	No	Room ionization, saturation of air with oxygen ions	Yes, air ionization takes place during heating process	Improves immunity and heart function, decreases stress and nerve strain
No	No	Antibacterial effect	Yes, 72.6 % effect	Kills bacteria and fungi, makes living space healthier
No	No	Removal of unpleasant odors	Yes, 81.0 % effect	Healthy microclimate
Local heating effect	Impact of adverse effect	Impact on human organism	Healthy heat source	Beneficial effect on whole organism