MADE IN GERMANY
MADE BY HEMSTEDT

all you can heat
Hemstedt®
HEIZLEITUNGEN · KÜHLHAUSTECHNIK

House Technology

Innovative products for optimized temperatures

Status 03/2021

hemstedt.de

CONTENTS

QUALITY AND INNOVATION ARE A PROMISE TO OUR CUSTOMERS!







The tradition and success of a family company

MADE IN GERMANY
MADE BY HEMSTEDT

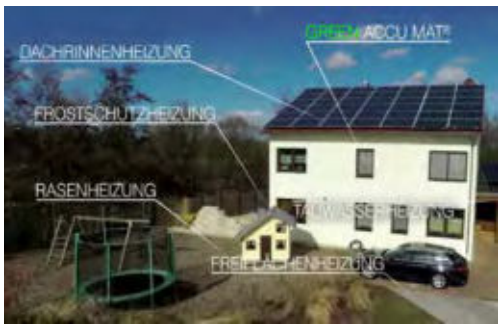
Where we come from

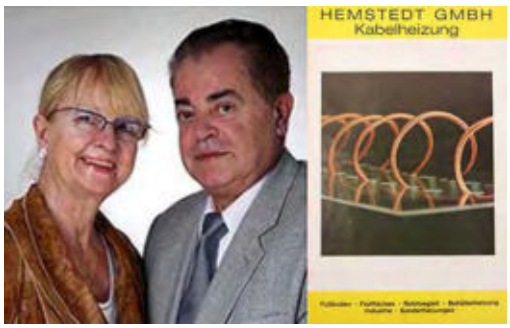
Everything started in 1974 in a small village near the metropolis region of Stuttgart: Dieter and Silvi Hemstedt found their own company with the aim of manufacturing high-quality and specialised heating cables. And they got their sums right: Only four years later, the company already has 20 employees, revenue and the need for more space are increasing fast. And the exact same applies to the product range. Cold storage technology joins the list and more and more customers are demanding specialised solutions, which Hemstedt can implement in a fast and precise manner. This flexibility and the high quality is what quickly makes Hemstedt well-known across the whole world. Ever more frequently, deliveries are leaving the Swabian production warehouse and heading to China, the USA, Russia and to many other countries. Today, over 70 people are working in development and production on around 17,500 square metres.
As well as chairman of the board Dieter Hemstedt, there are two other members belonging to the management board of Hemstedt GmbH. In 1990, Sabine and Andreas Hemstedt took the company into its second generation. From 2006, they were active as authorised signatories until they were finally welcomed onto the board in 2011.

And as such, the company is now focused above all on the development and production of energy-efficient heat-ing systems and integral concepts which make essential contributions, not just to becoming climate-neutral, but even to creating a climate-positive house. Regarding this goal, Hemstedt was already awarded twice, in 2008 and 2015, with the "Top 100" seal and the "Industry Prize Best Of" in 2014, 2016 and 2018 at the Hanover trade fair.

But however much we try to develop something new, the tradition will always remain the same:
Perfect 100% "Made in Germany" Quality!

HEMSTEDT QUALITY: EXCELLENT!





Silvi and Dieter Hemstedt – Founders

QUALITY SIGNED AND SEALED

Top innovator 2008 and 2015 – a distinction which confirms our business!

Hemstedt receives the Top 100 award for especially innovative products related to underfloor heating and frost protection.

Together with mentor Ranga Yogeshwar, each year, TOP 100 awards the 100 most innovative medium-sized German companies. For over 20 years, TOP 100 has been the only benchmark for innovation management in Germany. This means that instead of individual products being awarded, all steps of the innovation process are closely examined. Prof. Nikolaus Franke and his team from Vienna University of Economics and Business are responsible for running the academic side of the project. And we are proud to announce that we have already received this coveted award for a second time, as this confirms that we are on the right track with our business and actions – to offer our customers forward-thinking innovations and to always stay a step ahead together!

Industry Prize 2014, 2016 and 2018 for our resource-saving GREEN products!

Today, electric heating is now completely environmentally sound. The industry prize confirms this for Hemstedt underfloor heating.

With the new heating mats GREEN ELECTRIC MAT® and GREEN ACCU MAT®, we haven't just brought a high-quality "Made in Germany" product onto the market where you can heat your home in a 100% climate-neutral manner; we have also created an excellently innovative and forward-thinking product. This is confirmed by the industry prizes from 2014, 2016 and 2018. Since 2000, the awarding of prizes at this regular competition has been decided on by an independent jury of around 30 professors at notable German universities and research institutes as well as specialist journalists and representatives of branches for the more than 5,000 submitted products. Crucial factors here are the product maturity and future orientation, but of course, also effective use, efficiency increase and practical relevance. As a consequence, Hemstedt raises itself above the masses and proves that tried and tested quality, paired with forward-thinking innovation spirit are the ingredients for customer-oriented, successful products. This was confirmed again two and four years later with the "Industry Prize" 2016 and 2018.

QUALITY SIGNED AND SEALED

HEMSTEDT GmbH Your partner for 100% quality.

To enable us to adhere to this very high standard of quality, we are affiliated with many test centres, organisations and commissions:

- Heilbronn University of Applied Sciences
- VDE test centre
- TÜV Süd
- IEC International Electrotechnical Commission
- BVF Bundesverband Flächenheizungen und Flächenkühlungen e. V.
- DEKRA Arnhem (NL)
- EAC certificate for Russia
- sic cert

Additionally, at Hemstedt, 100% end control is carried out with professional testing equipment for:

– resistance measurement

– insulation resistance

– high voltage testing

– function testing according to the applicable protection class

– as well as further, customer-specific testing.

Traceability of a guaranteed 10 years of the test data und the course of manufacture for each product using the distinct serial number.
Thus, the standard-compliant CE labelling is ensured, and maximum product reliability guaranteed.

HEM-SYSTEM®

Innovation as Standard

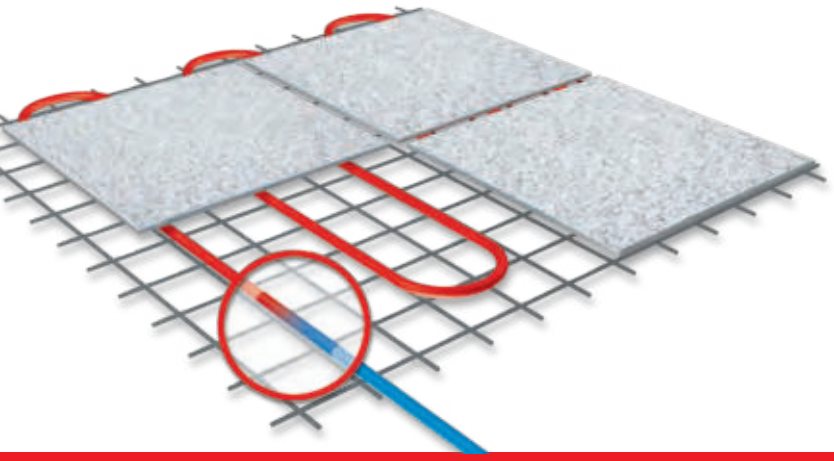
The sleeveless transition

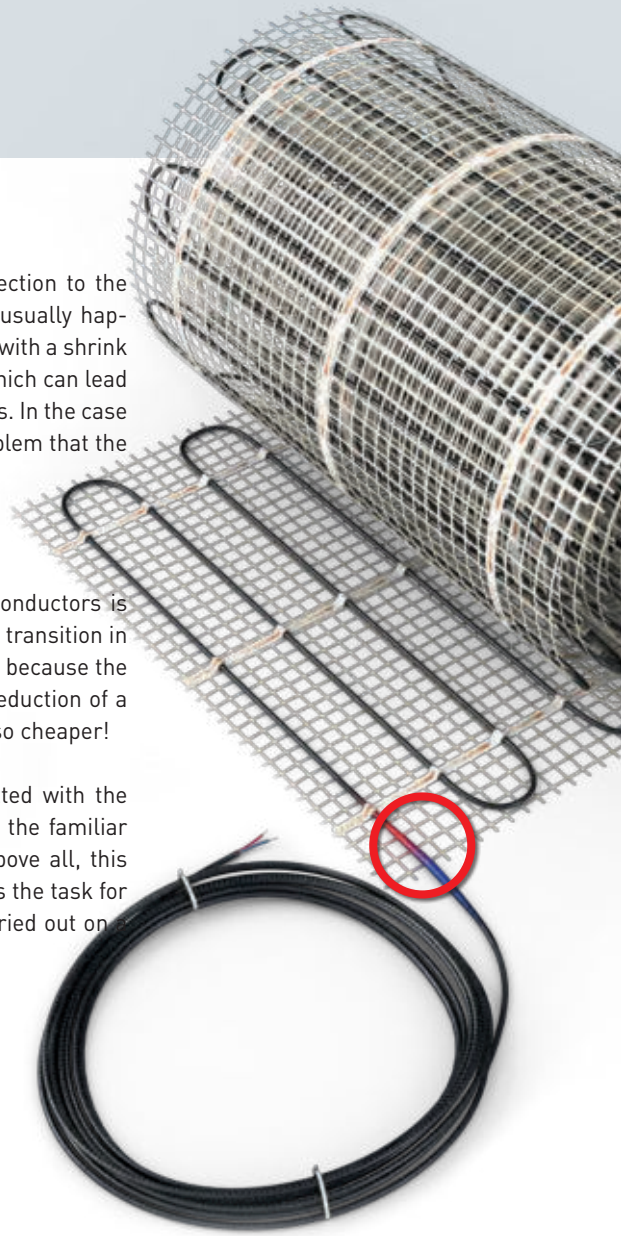
This Hemstedt invention revolutionised the industry: Up until then, a connection to the connection cable had to be made somewhere for each heating cable. This usually happened by means of a mechanical connection which was then mainly insulated with a shrink sleeve. The problem: On one hand, this process is not always 100% sealed, which can lead to breakdowns sooner or later in gutter heating or open space heating systems. In the case of underfloor heating, as well as the sealing problem, there was also the problem that the connections were thicker which made the cables harder to lay.

The breakthrough

With the HEM-SYSTEM®, the transition between hot and cold connecting conductors is sleeveless, because the pipe system is produced and insulated along with the transition in one piece. The advantages are obvious: Absolutely water-tight and easy to lay because the overall pipe system is narrow and thin. And one more advantage: With the reduction of a work process, the heating system is not just better and longer-lasting, but also cheaper!

Since 2005, the self-adhesive Hemstedt thin-bed heating mat has been fitted with the HEM-SYSTEM®: The cold/hot transition is now sleeveless. This means that the familiar installation problems no longer occur thanks to the thick shrink sleeve. Above all, this makes the job easier for the worker laying the tiles, but also clearly simplifies the task for the electrician installing the system. All subsequent work stages can be carried out on a flat surface. The HEM-SYSTEM® has established itself successfully.





PRODUCT INNOVATION
FOR AN EVEN SIMPLER INSTALLATION

Cold connection line | Seamless sleeve | Heating cable

The seamless sleeve transition is absolutely watertight and distinguishes itself as advantageous for this application (moisture protection).

Hemstedt
HEM-SYSTEM®

- **Heat to order**
- **Direct from the manufacturer**
- **Self-adhesive**
- **100% water-tight**
- **Continuous insulating sleeve chemical and temperature resistant**

DOES UNDERFLOOR HEATING MAKE SENSE?

Pros and cons of underfloor heating

In order to compare the costs of electric underfloor heating with a traditional heating system powered by fossil fuels or pellets, it is important not just to compare only the gas, pellet or electricity prices, but you also have to take the purchase costs into account. You should also think about how we won't have gas and oil forever. We should have learned this during the oil crisis in 1973 at the latest. It's true, pellets are an alternative, but when you look at the aims of the energy transition, then this should certainly not be burning up forests. In any country! Instead, one should focus on promoting uncomplicated, affordable sources of energy which produce as little CO_2 as possible. Ideally, this means not burning anything. In Germany, for example, solar panels and wind power; in other countries, geothermics and water power or – if controversial – atomic energy, as in Finland. From this angle, electricity will be the energy source of the future – and the reason many states will be free from the need to import energy.

Does it make sense to heat with electricity? How high are the costs?

The considerations of heating areas with electricity on a permanent basis are certainly not wrong – electricity can be produced easily, even by individuals thanks to photovoltaic systems, and energy storage heating and energy-saving underfloor heating systems are also affordable and easy to use. In this way, costs can even be saved even in the short-term.

But the development of energy prices can only ever be speculative. No one knows what gas, oil, power or pellets are going to cost in 3, 8 or 15 years. We only have a limited influence over this, and if at all, this is actually only if we have our own photovoltaic system. Here, manufacturers are giving long-term guarantees of around 20 years, even with regard to profit ... which would bring us back to electricity ...

The costs of electric underfloor heating vs. a traditional heating system

Let's look at an old building, from the 1970s, for example, or even older. The whole heating system must be replaced: pipes, convector heaters, boilers, etc. Even just opening up the walls and plastering them again will result in a significant accrual of costs. Electric underfloor heating is much cheaper to install, by comparison. Here, we are talking about less than half the costs. It also eliminates costs for chimneys, chimney sweeps and maintenance, which are a dead certainty with traditional heating systems. The notable manufacturers of electric underfloor heating systems can give long-term guarantees, unlike gas boiler manufacturers, for example.

Electric underfloor heating is a question of the energy mix!

If you meaningfully combine solar-supported water heating, photovoltaics and heating mats for electric underfloor heating, you can save ten thousand euros in installation costs, which will offset potentially higher operating costs over the years. In modern houses, the Hemstedt tile heating system GREEN ELECTRIC MAT® and the energy storage heating system GREEN ACCU MAT® come in handy. Furthermore, using electric underfloor heating means using a more pleasant, healthier radiant heat and, above all, a future-proof source of energy.

As a result of the continuing changes in the political sphere regarding electricity and power applications in spatial heating, the topic continues to be exciting and is becoming increasingly interesting. Changes are on the horizon, even in Europe.

IS UNDERFLOOR HEATING HARMFUL TO HEALTH?

Is underfloor heating harmful to health?

You often encounter this statement in connection with underfloor heating. It is actually not completely wrong – but it is unfortunately completely dated. This finding comes from the 1960s when we had very little experience with underfloor heating and these were often operated with surface temperatures of well over 30 °C. This could encourage the spread of dust mites and lead to dust particles rising in the hot air or even exacerbate existing vein problems.

Modern underfloor heating systems reduce airborne dust

However, modern underfloor heating works differently. Temperature sensors ensure that the ground is only warmed to a maximum of 26 °C and does not raise the temperature in an uncontrolled manner. This is important for reasons of energy efficiency alone and, compared to traditional underfloor heating, electric underfloor heating is automatically regulated faster and with more precision.

As such, the whole situation has now turned around: Underfloor heating generates a very even, well distributed radiant heat which does not cause any intense streams of hot air. Wall radiators, which are as popular now as they were before, don't just take up place, they also generate a perceptible warm or hot stream of air above them. A slipstream forms underneath the radiator which can carry dust with it and convey it up to the ceiling. The dust is then distributed across the room as the air cools – no fun if you suffer from allergies.

Underfloor heating will help you avoid mould and dust mites

And now we have discovered another positive aspect of underfloor heating which promotes health in all cases:

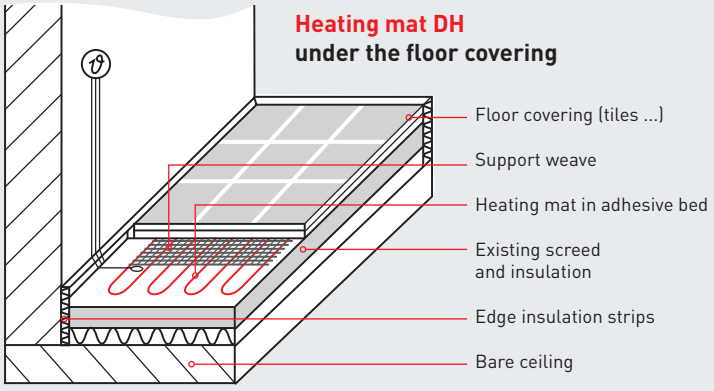
Mould is everywhere, even if only in small amounts. Quite frequently also in new carpets or wallpaper paste. Often we carry it into the house from outside on the soles of our shoes. The same is true for dust mites. In spite of the most thorough cleaning, we will never get completely rid of them. Humid air (over 60% of relative air moisture) promotes the growth of mites and mould. Underfloor heating ensures a lower level of air humidity at floor level, which cannot be achieved with radiators at the walls as the air flow produced means that moisture falls to the ground with the cooling air – to the delight of mites and mould!

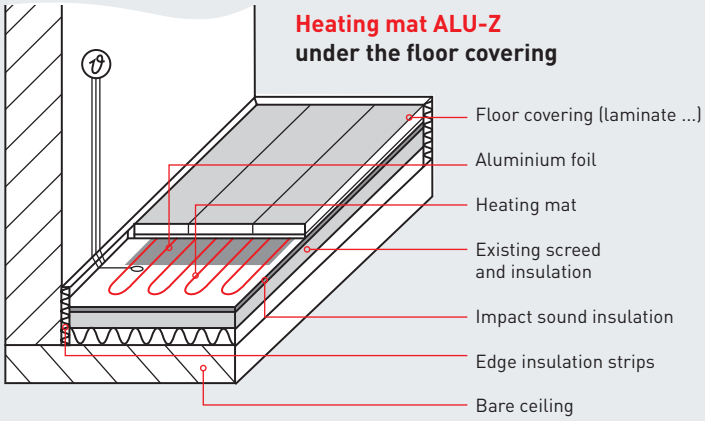
Underfloor heating therefore creates a better room climate with less contaminated air for people suffering from allergies, which reduces the possibility of mould and mites due to the reduction in air moisture.

For any floor covering – new build and renovation

THIN-BED HEATING MATS

Easy to lay – extremely thin





UNDERFLOOR HEATING FOR A PERFECT, HEALTHY ROOM CLIMATE

Easy to achieve and customise in new and old buildings with thin-bed heating mats and heating systems

Faster heating – less energy

This means that when the underfloor heating is switched on, after just a few minutes there is a pleasant radiant heat which is well-distributed across the room. This "direct reaction" of the underfloor heating with thin-bed heating mats ensures shorter warming up times and, as a consequence, lower energy consumption.

Ideal for any floor covering

In the Hemstedt range, you will find underfloor heating for every type of floor covering. No matter whether carpet, laminate, parquet, tile or natural stone. Furthermore, Hemstedt has its own unique HEM-System, which means that the transition between hot and cold connection for Hemstedt underfloor heating is sleeveless and 100% water tight – and therefore just as thin as the rest of the heating system. This means that laying underfloor heating is easier, and any necessary raising of the floor level is brought to a minimum. This makes Hemstedt underfloor heating ideal for renovating old buildings, for example.

Healthy heat from below

Even the Romans or the Mongolian king Genghis Khan recognised the pleasant warmth of underfloor heating. We can also have this today! Children can play on the floor, residents can simply wander about the house barefoot – a soothing and healthy relief for the feet in a more and more stressful everyday life. As modern underfloor heating systems no longer warm the surface of the floor covering to more than 26 °C as the ancient systems did, less dust is conveyed into the air from the floor than is produced by heaters/radiators, for example, due to a significantly greater "slipstream effect" resulting from their higher temperatures. In addition, underfloor heating at floor level ensures a lower level of air humidity and thus reduces the spread of mould and dust mites – a revelation for allergy sufferers. Electric underfloor heating has an important meaning here, as the temperature can be better and more directly regulated than with traditional underfloor heating.

A space-saving miracle thanks to underfloor heating

A factor related to underfloor heating that we shouldn't forget: No radiators have to be installed. Because no matter how small, low or thin these are – they simply take floor area away from the room. If you ever want to reorganise the furniture in your living space, your individuality is quickly restricted by the position of the heaters or radiators. In rented properties, this is a definite argument for underfloor heating.

Underfloor heating for more safety, for every area of use

Underfloor heating is thus not just suitable for living spaces, but also particularly for bathrooms. Underfloor heating can create heat much faster here which is found to be pleasant. This also dries moisture on the floor much faster, making the system much safer. Ring or piece goods give you the opportunity to create completely customised spaces, meaning that underfloor heating is even possible in corners and at angles, or in the smallest of rooms.

DHSU THIN-BED HEATING MAT SET

with clock thermostat, UP, self-adhesive, for installation in tile cement

EN/IEC 60335-2-96

HEM-SYSTEM® heating mats with a **one-sided connection** for installation in tile adhesive/or levelling compounds. Ideally suited to renovations of old buildings, new builds as well as for bathrooms, showers, living rooms, offices, etc. The sleeveless technology also makes it especially suitable for walk-in showers.

MADE IN GERMANY
MADE BY HEMSTEDT

The thin-bed heating mat set contains the following products:

1 HEM direct heating mat with a single connection 150 W/m² and 4.00 m connection
1 temperature control with self-learning clock thermostat and sensor, UP
1 sensor sleeve for the sensor pipe
1 sensor pipe for the room thermostat
1 switch
1 assembly instructions

Technical data	
Nominal voltage	230 volt
Output	150 W/m²
Cold connection	1 x 4.00 m
Minimum laying temperature	5 °C
Lowest bend radius	6 x dA
Resistance tolerance	-5%/+10%
Approval	VDE
Cold/warm transition	seamless, without shrinking technology
Insulation	Fluoroplastic
Supply width	0.46 m
Calculation width	0.50 m
Protection type	IP67
Protection class	2

150 W/m² 230 V

DHSU thin-bed heating mats with one-sided connection

Heating output W	Surface m²	Calculation width m	Mat length m	Order no.
150	1.00	0.50	2.00	30751-150 U-SET
225	1.50	0.50	3.00	30751-225 U-SET
300	2.00	0.50	4.00	30751-300 U-SET
375	2.50	0.50	5.00	30751-375 U-SET
450	3.00	0.50	6.00	30751-450 U-SET
525	3.50	0.50	7.00	30751-525 U-SET
600	4.00	0.50	8.00	30751-600 U-SET
675	4.50	0.50	9.00	30751-675 U-SET
750	5.00	0.50	10.00	30751-750 U-SET
900	6.00	0.50	12.00	30751-900 U-SET
1050	7.00	0.50	14.00	30751-1050 U-SET
1200	8.00	0.50	16.00	30751-1200 U-SET
1350	9.00	0.50	18.00	30751-1350 U-SET
1500	10.00	0.50	20.00	30751-1500 U-SET
1800	12.00	0.50	24.00	30751-1800 U-SET
2250	15.00	0.50	30.00	30751-2250 U-SET

Cold connection 1.00 m²-4.00 m² → 0.50 mm² I 4.50 m²-9.00 m² → 0.75 mm² I 10.00 m²-15.00 m² → 1.00 mm²
Heat insulation in the floor area is a definite requirement.

Accessories

Item name	Order no.
Cold connection for extension 3 x 1.00 mm², 1.00 m, black	81302-1,00 BL/SW
Assembly sleeve (1x, assembled in the factory), for extension	26121
Aluminium sensor sleeve (ED 15.20 mm/ID 12.50 mm)	20079
Plastic switch box for room thermostat	20702
Sensor pipe for room thermostat, length: 2.50 m	20703
Clock thermostat	93089
Spare temperature sensor for clock thermostat	93089-Fuehler
Repair sleeves on request	

As a protective measure, we recommend residual-current-operated protective device (RCD < 30 mA).
Extended cold connections are not accepted as returns.

IEC 60800:2009
EN/IEC 60335-2-96

DH-PREMIUM THIN-BED HEATING MATS
DR-PREMIUM THIN-BED HEATING CABLES

Extremely thin, self-adhesive and child's play to lay

MADE IN GERMANY
MADE BY HEMSTEDT

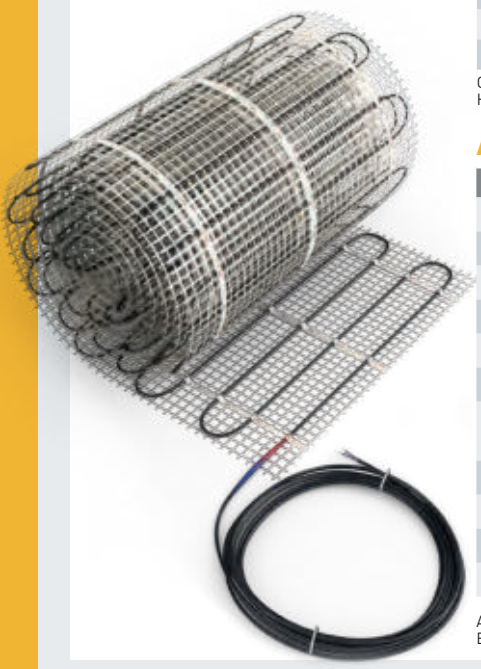
Pleasant radiant heat in every room!

With the Hemstedt thin-bed heating mats, every room can have electric underfloor heating, because the heating mats are just a few millimetres thick and can therefore be installed anywhere without difficulty. Electric underfloor heating is usually installed directly in the tile adhesive or in a levelling compound. The advantages here are obvious:

Technical data

Nominal voltage ..... 230 volt
Output ..... 150 W/m²
Cold connection ..... 1 x 4.00 m
Minimum laying temperature ..... 5 °C
Lowest bend radius ..... 6 x dA
Resistance tolerance ..... -5%/+10%
Approval ..... CE
Cold/warm transition ..... seamless, without shrinking technology
Insulation ..... Fluoroplastic
Supply width ..... 0.46 m
Calculation width ..... 0.50 m
Protection type IP67
Protection class 2

CE EAC



150 W/m² 230 V

DH-Premium thin-bed heating mats with one-sided connection					DR-Premium thin-bed heating cables	
Heating output W	Surface m²	Calculation width m	Mat length m	Ordner no.	Element length m	Ordner no.
150	1.00	0.50	2.00	30751-150	12.07	37702-12,07
225	1.50	0.50	3.00	30751-225	17.66	37702-17,66
300	2.00	0.50	4.00	30751-300	23.77	37702-23,77
375	2.50	0.50	5.00	30751-375	29.87	37702-29,87
450	3.00	0.50	6.00	30751-450	35.97	37702-35,97
525	3.50	0.50	7.00	30751-525	41.56	37702-41,56
600	4.00	0.50	8.00	30751-600	47.67	37702-47,67
675	4.50	0.50	9.00	30751-675	53.77	37702-53,77
750	5.00	0.50	10.00	30751-750	59.87	37702-59,87
900	6.00	0.50	12.00	30751-900	71.57	37702-71,57
1050	7.00	0.50	14.00	30751-1050	83.77	37702-83,77
1200	8.00	0.50	16.00	30751-1200	95.47	37702-95,47
1350	9.00	0.50	18.00	30751-1350	107.67	37702-107,67
1500	10.00	0.50	20.00	30751-1500	119.37	37702-119,37
1800	12.00	0.50	24.00	30751-1800	143.27	37702-143,27
2250	15,00	0,50	30,00	30751-2250	179,37	37702-179,37

Cold connection 1.00 m²-4.00 m² → 0.50 mm² I 4.50 m²-9.00 m² → 0.75 mm² I 10.00 m²-15.00 m² → 1.00 mm²
Heat insulation in the floor area is a definite requirement.

Accessories

Item name	Order no.
Cold connection for extension 3 x 1.00 mm², 1.00 m, black	81302-1,00 BL/SW
Assembly sleeve (1x, assembled in the factory), for extension	26121
Aluminium sensor sleeve (ED 15.20 mm/ID 12.50 mm)	20079
Plastic switch box for room thermostat	20702
Sensor pipe for room thermostat, length: 2.50 m	20703
Analogue points scale control with sensor, UP	93088
Intelligent temperature monitoring clock thermostat with self-learning function and sensor, U-UP	93089
Spacer bar MS 1	20060
Spare temperature sensor for analogue control	93088-Fuehler
Spare temperature sensor for clock thermostat	93089-Fuehler
Repair sleeves on request	

As a protective measure, we recommend residual-current-operated protective device (RCD < 30 mA).
Extended cold connections are not accepted as returns.

ALU-Z dry laying

Especially developed for laying under laminate and pre-assembled wooden parquet Also suitable for yachts, also available as a set

EN/IEC 60335-2-96

Heating mats with a **two-sided connection**. The aluminium coating, applied onto a textile glass fabric, allows for a homogeneous heat distribution below the floor covering. Thanks to the low structural height of approx. 5 mm + floor covering, this product is ideally suited for renovations and new builds. And fulfils all the requirements for installation on yachts.

The product is controlled via a thermostat perfectly matched to this product.
The HEM dry laying system is manufactured in accordance with VDE 60335-2-96.

Laying (short description):
If required, a vapour barrier should be laid and fixed. The room is completely covered with temperature-resistant impact noise and heat insulation (B2). Cover the area with our HEM dry laying system. Apply the floor covering.

MADE IN GERMANY
MADE BY HEMSTEDT

CE EAC

Technical data

Nominal voltage	230 volt
Output	100 W/m²
Cold connection	1 x 2.50 m/1 x 6.00 m
Minimum laying temperature	5 °C
Lowest bend radius	6 x dA
Resistance tolerance	-5%/+10%
Standard	60335-2-96
Cold/warm transition	seamless, without shrinking technology
Heating conductor diameter	approx. 2.80 mm
Insulation	Fluoroplastic
Supply width	0.45 m
Calculation width	0.50 m
Protection type	IP67
Protection class	2

Example for pricing:

- The room must be completely fitted with impact noise/heat insulation (order no.: 20106)
- Determine the surface to be tempered = site of the heating mat (order no.: 30600...)
- Selection and determining the temperature control (order no.: 93088 or 93089)

100 W/m² 230 V

Dry laying system

Heating output W	Surface m²	Calculation width m	Mat length m	Order no.
100	1.00	0.50	2.00	30600-100
200	2.00	0.50	4.00	30600-200
300	3.00	0.50	6.00	30600-300
400	4.00	0.50	8.00	30600-400
500	5.00	0.50	10.00	30600-500
600	6.00	0.50	12.00	30600-600
700	7.00	0.50	14.00	30600-700
800	8.00	0.50	16.00	30600-800

Impact noise/heat insulation

Item name	Width m	Length m	Surface m²	Thickness mm	VPE	Order no.
Fire protection class 2	0.50	1.00	0.50	4.00	25 m²	20106

Accessories

Item name	Order no.
Cold connection for extension 1.00 mm², 2 x 1.00 m	81101-1,00 SW
Assembly sleeve (2x, assembled in the factory), for extension	26123
Aluminium sensor sleeve (ED 15.20 mm/ID 12.50 mm)	20079
Plastic switch box for room thermostat	20702
Sensor pipe for room thermostat, length: 2.50 m	20703
Intelligent temperature monitoring clock thermostat with self-learning function and sensor, U-UP	93089
Spare temperature sensor for clock thermostat	93089-Fuehler
Repair sleeves on request	

As a protective measure, we recommend residual-current-operated protective device (RCD < 30 mA).
Extended cold connections are not accepted as returns.

NEW! Extra-thin and super-fast!
IEC 60800:2009
EN/IEC 60335-2-96

MADE IN GERMANY
MADE BY HEMSTEDT

DHM MINI THIN-BED HEATING MATS
DRM MINI HEATING CABLES

Self-adhesive heating mats

HEM-SYSTEM® MINI heating mats with a one-sided connection and MINI thin-bed rings for installation in tile adhesive or levelling compounds. Ideally suited for renovating old buildings as well as for bathrooms, showers or similar. Also suitable as an installation kit for hot panels for self-assembly. Also suitable for boats, yachts, etc.

Technical data

Nominal voltage ..... 230 volt
Output ..... 150 W/m²
Cold connection ..... 1 x 3.00 m (0.50 mm²)
Minimum laying temperature ..... 5 °C
Lowest bend radius ..... 6 x dA
Resistance tolerance ..... -5%/+10%
Cold/warm transition ..... sleeveless

150 W/m² 230 V

	DHM Mini thin-bed heating mats with one-sided connection				DHM Mini thin-bed heating cables with one-sided connection	
Heating output W	Surface m²	Calculation width m	Mat length m	Ordner no.	Element length m	Ordner no.
45.00	0.30	0.30	1.00	30900-45	4.57	37701-4,57
67.50	0.45	0.30	1.50	30900-67,5	6.76	37701-6,76
90.00	0.60	0.30	2.00	30900-90	8.96	37701-8,96
112.50	0.75	0.30	2.50	30900-112,5	11.42	37701-11,42

Heat insulation in the floor area is a definite requirement.

Accessories

Item name	Order no.
Cold connection for extension 3 x 1.00 mm², 1.00 m, black	81302-1,0 BL/SW
Assembly sleeve (1x, assembled in the factory)	26121
Aluminium sensor sleeve (ED 15.20 mm/ID 12.50 mm)	20079
Plastic switch box for room thermostat	20702
Sensor pipe for room thermostat, length: 2.50 m	20703
Analogue points scale control, UP	93088
Intelligent temperature monitoring clock thermostat with self-learning function, digital	93089
Spare temperature sensor for analogue control	93088-Fuehler
Repair sleeves on request	

As a protective measure, we recommend residual-current-operated protective device (RCD < 30 mA).
Extended cold connections are not accepted as returns.

Pleasant radiant heat in every room!

With the HEM-SYSTEM® MINI heating mats and the MINI heating rings, every room can have electric underfloor heating, because the MINI heating mats are just a few millimetres thick and can therefore be installed anywhere without difficulty. Electric underfloor heating is usually installed directly in the tile adhesive or in a levelling compound. The advantages here are obvious:

Direct heating effect

The heating effect starts almost at once, as shortly after the electric underfloor heating is switched on, the pleasant radiant heat rises. Long pre-heat times, as with underfloor heating from deeply laid, water conduits or classic heating such as wall radiators, are eliminated and thus safe energy effectively.

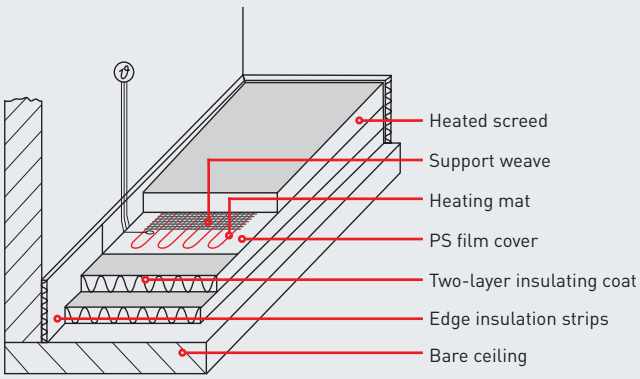
Ideal for allergy-sufferers

As modern electric underfloor heating only heats with floor temperatures of up to 28 °C, this creates a pleasant, gradual heat distribution in the room. There is no strong air circulation as would be necessary with classic radiators. This whirls up less dust and almost completely prevents the spread of dust mites thanks to the warm, dry floor.

CONCRETE HEATING MATS
CONCRETE HEATING CABLES

As direct or storage heating

BH-IM Competent Warm® in or under screed



IEC 60800:2009

BR-IM CONCRETE HEATING CABLES

Suitable for concrete and screed

MADE IN GERMANY
MADE BY HEMSTEDT

With a **one-sided connection** and seamless sleeve transition. Excellently suited to thawing ice and snow outdoors, as well as for concrete and sand installations for snow and ice melt. Also suitable for external systems, e.g. stairs. Not suitable for bitumen.

Technical data	
Nominal voltage	230 volt
Output	17 W/m
Cold connection	1 x 4.00 m (1.00 mm²)
Minimum laying temperature	5 °C
Outer casing max. temperature	65 °C
Lowest bend radius	5 x dA
Resistance tolerance	-5%/+10%
VDE standard	tested in accordance with IEC60800:2009 ◁ VDE-REG 8600 ▷
Cold/warm transition	seamless, without shrinking technology
External diameter	approx. 7.50 mm
Insulation	XLPE/PVC
Protection type	IP67
Protection class	2

CE EAC

DVE

17 W/m 230 V

BR-IM concrete heating cables

Heating output W	Element length m	Order no.
150	8.86	37710-8,86
220	13.75	37710-13,75
300	18.50	37710-18,50
400	24.77	37710-24,77
500	31.04	37710-31,04
600	34.74	37710-34,74
700	40.59	37710-40,59
850	49.35	37710-49,35
1000	58.11	37710-58,11
1250	72.71	37710-72,71
1500	87.32	37710-87,32
1700	99.00	37710-99,00
1900	110.69	37710-110,69
2100	122.37	37710-122,37
2300	134.05	37710-134,05
2600	151.58	37710-151,58
3356	197.00	37710-197,00

Accessories

Item name	Order no.
Cold connection for extension 3 x 2.50 mm², 1.00 m, black	81302-2,50 BL/SW
Assembly sleeve (1x, assembled in the factory), for extension	26182
Plastic nails for fastening (VU = 100x)	20304
Spacer bar (assembly bar)	20063
Spare temperature sensor for analogue control	93088-Fuehler
Spare temperature sensor for clock thermostat	93089-Fuehler
Repair sleeves on request	

As a protective measure, we recommend residual-current-operated protective device (RCD < 30 mA).

You can find more information in our assembly instructions.
For thermostats see page 58.

BR-IM-Z CONCRETE HEATING CABLES

DIN EN/IEC 60800

Concrete heating cables with **two-sided connection** and seamless sleeve transition. Excellently suited to thawing ice and snow outdoors, as well as for concrete and sand installations for snow and ice melt. Also suitable for external systems, e.g. stairs. Not suitable for bitumen.

MADE IN GERMANY
MADE BY HEMSTEDT

Technical data

Nominal voltage	230 volt
Output	17 W/m
Cold connection	2 x 2.50 m (1.00 mm²)
Minimum laying temperature	5 °C
Outer casing max. temperature	65 °C
Lowest bend radius	5 x dA
Resistance tolerance	-5%/+10%
Cold/warm transition	seamless, without shrinking technology
External diameter	approx. 7.00 mm
Insulation	XLPE/PVC
Protection type	IP67
Protection class	2

17 W/m 230 V

BR-IM Z concrete heating cables

Heating output W	Element length m	Order no.
310	18.07	37720-18,07
410	24.24	37720-24,24
510	30.42	37720-30,42
600	34.55	37720-34,55
700	41.09	37720-41,09
850	49.61	37720-49,61
1000	59.15	37720-59,15
1260	74.28	37720-74,28
1530	89.34	37720-89,34
1750	101.88	37720-101,88
1980	111.79	37720-111,79
2200	124.59	37720-124,59
2430	136.06	37720-136,06
2780	163.34	37720-163,34

CE EAC

Accessories

Item name	Order no.
Cold connection for extension 1 x 1.50 mm², 1.00 m, black	81101-1,50 SW
Cold connection for extension 1 x 2.50 mm², 1.00 m, black	81101-2,50 SW
Assembly sleeve (1x, assembled in the factory), for extension	26184
Plastic nails for fastening (VU = 100x)	20304
Spacer bar (assembly bar)	20063
Analogue points scale control, UP	93088
Intelligent temperature monitoring clock thermostat with self-learning function, digital	93089
Spare temperature sensor for analogue control	93088-Fuehler
Spare temperature sensor for clock thermostat	93089-Fuehler
Sensor pipe for room thermostat, length: 2.50 m	20703
Aluminium sensor sleeve (ED 15.20 mm/ID 12.50 mm)	20079
Repair sleeves on request	

As a protective measure, we recommend residual-current-operated protective device (RCD < 30 mA).

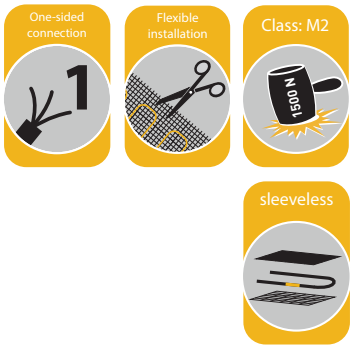
You can find more information in our assembly instructions.
For thermostats see page 58.

IEC 60800:2009

BH-IM CONCRETE HEATING MATS COMPETENT WARM®

Sleeveless, for laying in/under heated screed/concrete. Not suitable for bitumen.

MADE IN GERMANY
MADE BY HEMSTEDT



HEM-SYSTEM® Competent Warm® Heating mats with a **one-sided connection** and **seamless sleeve transition**. For underfloor storage/direct heating only in dry, humid and wet rooms, and under plaster and in floor screed.

Technical data

Nominal voltage ..... 230 volt
Output ..... 100/120/140/160 W/m²
Cold connection ..... 1 x 4.00 m (1.00 mm²)
Minimum laying temperature ..... 5 °C
Outer casing max. temperature ..... 65 °C
Lowest bend radius ..... 5 x dA
Resistance tolerance ..... -5%/+10%
VDE standard ..... tested in accordance with IEC60800:2009 ◁ VDE-REG 8600 ▷
Cold/warm transition ..... seamless, without shrinking technology
External diameter ..... approx. 7.00 mm
Insulation ..... XLPE/PVC
Protection type IP67
Protection class 2

CE EAC

100 W/m² 230 V

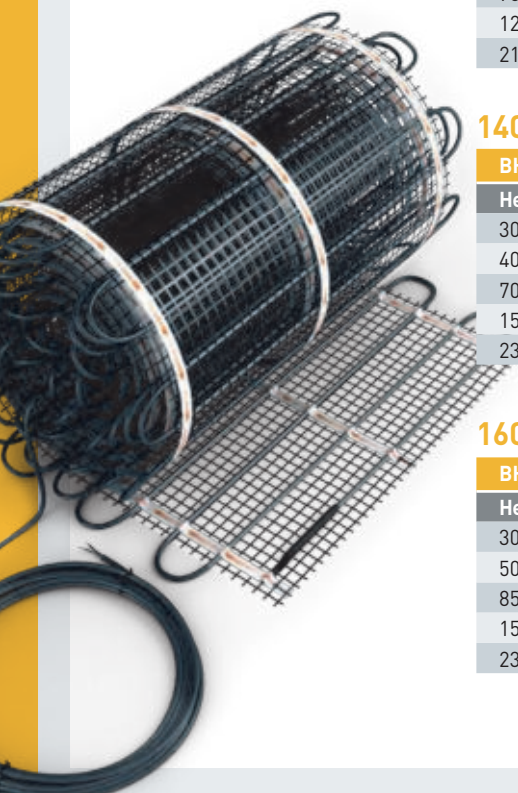
BH-IM concrete heating mats Competent Warm®

Heating output W	Surface m²	Calculation width	Mat length m	Order no.
220	2.20	0.90	2.44	31801-220
300	3.00	0.90	3.33	31801-300
500	5.00	0.90	5.55	31801-500
700	6.66	0.90	7.40	31801-700
1000	9.52	0.90	10.58	31801-1000

120 W/m² 230 V

BH-IM concrete heating mats Competent Warm®

Heating output W	Surface m²	Calculation width	Mat length m	Order no.
300	2.49	0.90	2.77	31802-300
400	3.33	0.90	3.70	31802-400
700	5.47	0.90	6.08	31802-700
1250	9.77	0.90	10.85	31802-1250
2100	16.38	0.90	18.20	31802-2180



140 W/m² 230 V

BH-IM concrete heating mats Competent Warm®

Heating output W	Surface m²	Calculation width	Mat length m	Order no.
300	2.14	0.90	2.38	31804-300
400	2.85	0.90	3.17	31804-400
700	4.70	0.90	5.22	31804-700
1500	10.08	0.90	11.20	31804-1250
2300	15.48	0.90	17.20	31804-2100

160 W/m² 230 V

BH-IM concrete heating mats Competent Warm®

Heating output W	Surface m²	Calculation width	Mat length m	Order no.
300	1.94	0.90	2.15	31806-300
500	3.12	0.90	3.47	31806-500
850	5.22	0.90	5.80	31806-850
1500	9.18	0.90	10.20	31806-1500
2300	14.13	0.90	15.70	31806-2300

BH-IM CONCRETE HEATING MATS COMPETENT WARM®

Sleeveless, for laying in/under heated screed/concrete.
Not suitable for bitumen.

Accessories

Item name	Order no.
Cold connection for extension 3 x 2.50 mm², 1.00 m, black	81302-2,50 BL/SW
Assembly sleeve (1x, assembled in the factory), for extension	26182
Plastic nails for fastening (VU = 100x)	20304
Sensor extension 1.00 m	20090
Analogue points scale control, UP	93088
Intelligent temperature monitoring clock thermostat with self-learning function, digital	93089
Spare temperature sensor for analogue control	93088-Fuehler
Spare temperature sensor for clock thermostat	93809-Fuehler
Sensor pipe for room thermostat, length: 2.50 m	20703
Aluminium sensor sleeve (ED 15.20 mm/ID 12.50 mm)	20079
Repair sleeves on request	

As a protective measure, we recommend residual-current-operated protective device (RCD < 30 mA).

MADE IN GERMANY
MADE BY HEMSTEDT

You can find more information in our assembly instructions.

For thermostats see page 58.

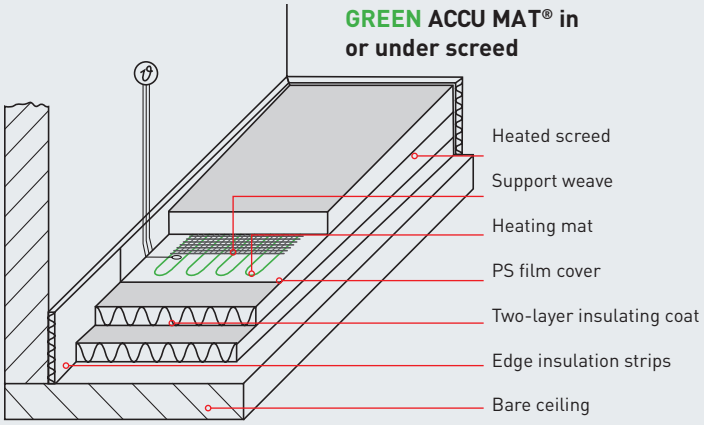
HEM-SYSTEM® – THE ENERGY-SAVING HEATING SYSTEM WITH RESERVE HEATING CIRCUIT

Green Product Award Selection 2018

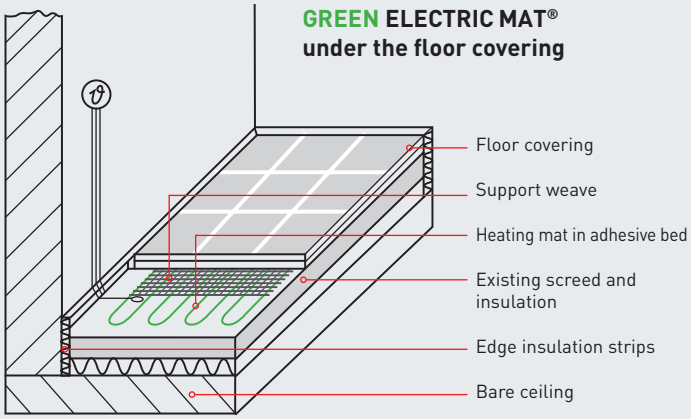
BEREITS ZUM 3. MAL INDUSTRIE PREIS 2018 BEST OF

As direct or storage heating

GREEN ACCU MAT® in or under screed



GREEN ELECTRIC MAT® under the floor covering



ENVIRONMENTALLY FRIENDLY HEATING – USING ENERGY SENSIBLY

With sleeveless cold/warm transition

Heat smart and protect the climate!

The thin bed heating mats **GREEN ELECTRIC MAT®** and **GREEN ACCU MAT®** are optimally tailored to the heating needs of modern single and multiple dwelling residential buildings and are also outstandingly suitable for use in energy renovation and modernisation projects thanks to their low thickness.

A doubly designed heating circuit system with low absorption makes it possible to heat in a much more need-orientated manner and thus to save energy: if heat is required, two heating conductors heat the floor up to the desired temperature much more quickly than floor heating systems with just one heating circuit. If the optimal floor temperature has been reached, a circuit is switched off automatically, and thus the room temperature is maintained with considerably lower energy use than in the case of traditional systems.

100% climate-neutral heating – protecting resources

The discussion has long since arrived among the general masses: the combustion of fossil fuels or wood produces CO_2 as well as fine dust – hence, the classic heating systems can hardly be described as "smart" for the environment and the future.
Electric heating, on the other hand, can, for if the **GREEN** heating mats, e.g. in combination with a photovoltaic plant, are supplied with electricity from wind or water power, they heat on a 100% climate-neutral basis. And today, intelligent, connected systems and battery storage units are already securing a reliable supply of "smart" electricity.
Thus, with the Hemstedt **GREEN** low energy heating systems and the right energy mix, you make a valuable contribution to saving the climate!
Store heat – use energy efficiently!

STOP COMBUSTION – PROTECT THE CLIMATE!

Store energy – optimise own consumption

The **GREEN ACCU MAT®** takes up the idea of the "night storage heater", which has acquired something of a negative reputation. But in Version 2.0!

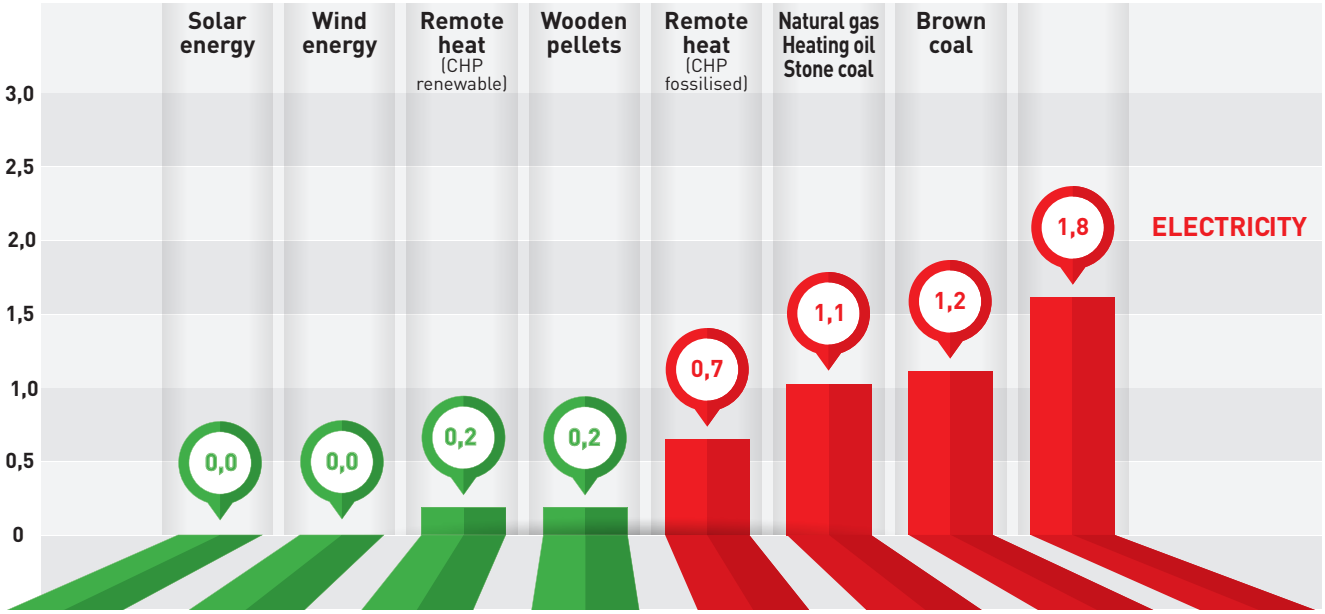
In combination with an intelligent control system, the system heats up whenever, for example, more electricity comes out of a photovoltaic plant than is currently being consumed. Since the **GREEN ACCU MAT®** is built into the concrete deep under the floor, the energy is stored in the form of heat here and is slowly released again over a period of hours without further energy having to be used.

In the near future, it will be possible in "intelligent power grids" to heat whenever, for example, excess wind energy is available. In this way, grid peaks could be reduced that would otherwise lead to a destabilisation of the power supply. Already today, the control systems needed for this are available and not only look after your heating but also switch on, for example, the washing machine or tumble drier.
Efficient battery stores for domestic use or the use of electric cars as a "power bank" make the whole thing even more flexible.
The future is SMART!

CLIMATE PROTECTION – SECURE THE FUTURE AND SAVE MONEY!

Our energy consumption must become smarter!

The consumption of fossil fuels and traditional electricity is not so smart at all! The primary energy factor shows that with coal, oil and gas 1.1 kilowatts of energy must be put in to gain, for example, one kilowatt of effectively usable energy … With renewable energies, however, only a few watts must be invested in order to generate a kilowatt. Thus, power from such energy sources brings us all forward!



Source: Wuppertal Institut für Klima, Umwelt, Energie GmbH

Availability of smart electricity

In the European Union, already nearly 20% of the total, effective energy consumption is covered from renewable energy sources – and this trend is rising. In Germany, the range and availability of electricity from climate-neutral sources has more than doubled in the last ten years!

Active climate protection

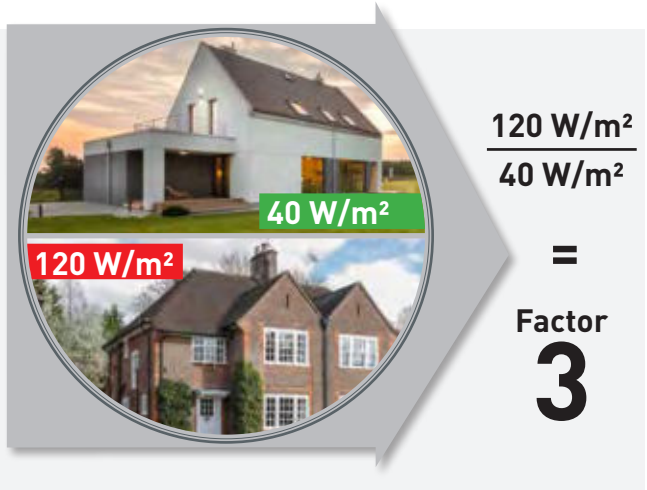
The **GREEN ACCU MAT®** and the **GREEN ELECTRIC MAT®** offer the chance to heat efficiently and directly with electric energy – and with an outstanding degree of effectiveness. In this way, the use of fossil fuels can be reduced and climate change actively decelerated!

Save money with smart GREEN heating concepts from Hemstedt

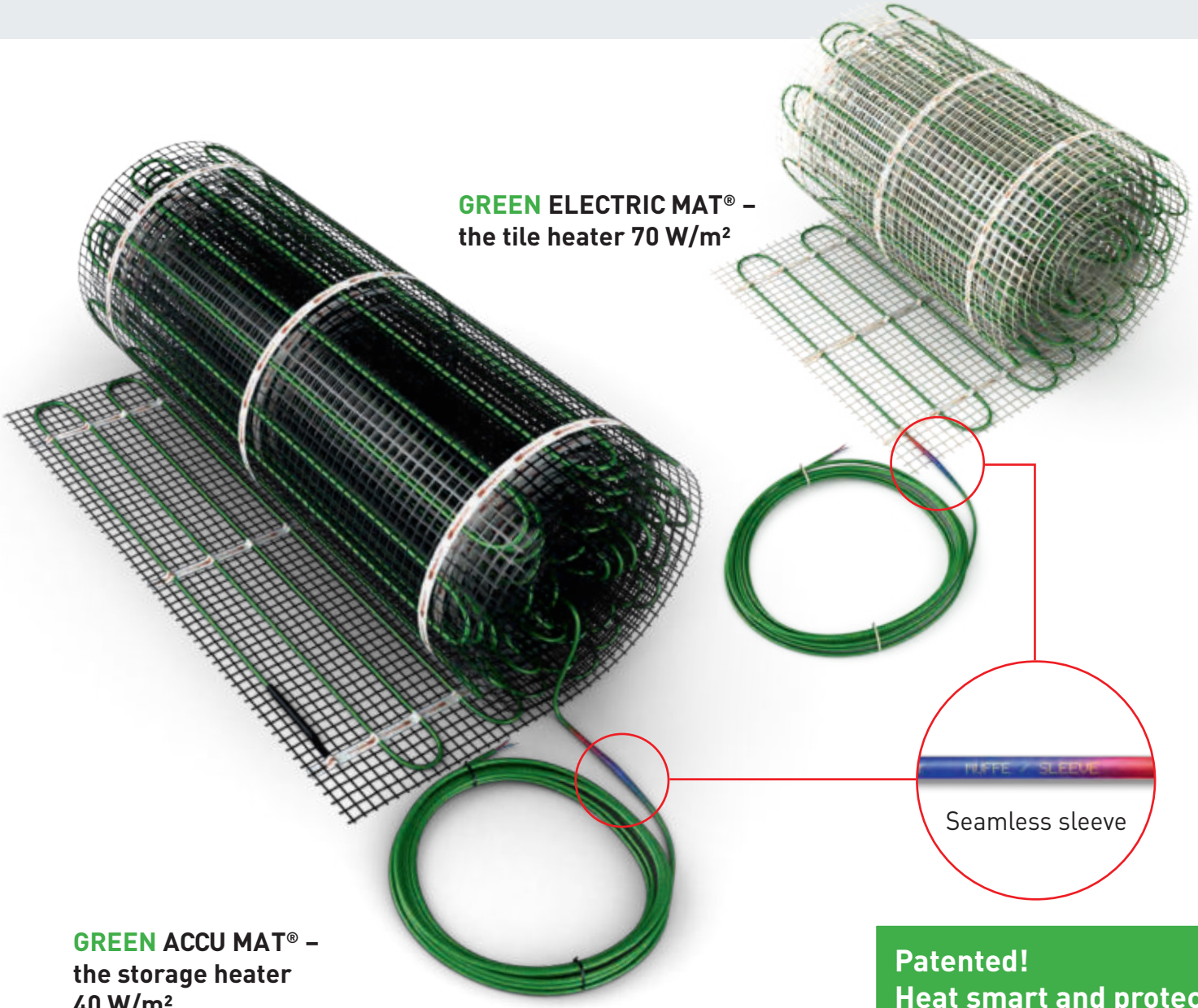
Modern new builds require 70% less energy than, for example, houses from the 1980s.
The **GREEN ACCU MAT®** follows this trend and offers operation with just a third of the usual heating output of floor heating systems.

The thin bed heating mats from Hemstedt are also just right for renovation and modernisation, being ideal for installation directly in the tile adhesive, for example. In this way, traditionally heated buildings can be converted quickly, easily and affordably to climate-neutral, electric floor heating systems.

Save money in future and actively co-determine climate protection – that is SMART!



CLIMATE PROTECTION HEATING – COMFORTING WARMTH WITH CLEAN ENERGY!



GREEN ELECTRIC MAT® – the tile heater 70 W/m²

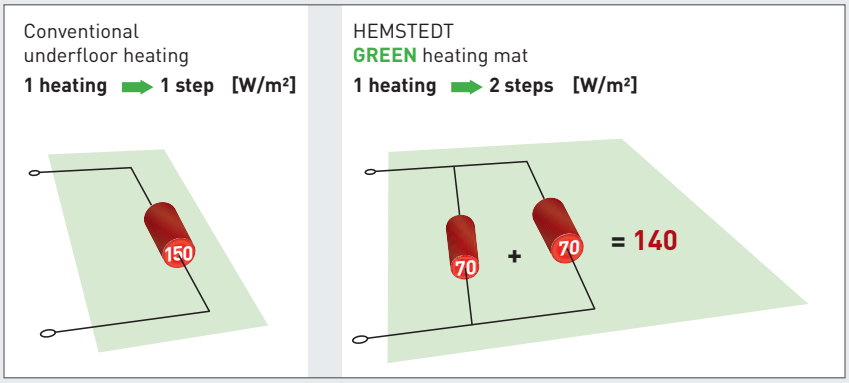
GREEN ACCU MAT® – the storage heater 40 W/m²

Patented!
Heat smart and protect the climate!

HEMSTEDT technology inside, using the example of the GREEN ELECTRIC MAT®

Advantages at a glance:

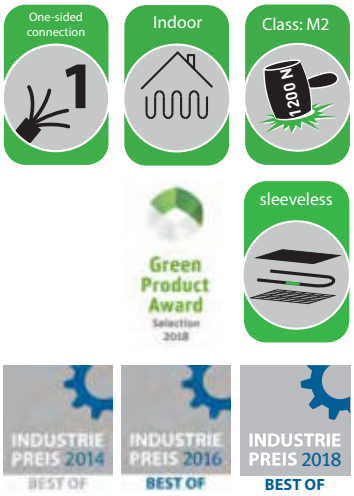
- Energy-saving operation
- Thin heating system thanks to slim, sleeveless connection technology
- Two heating circuits – for targeted, fast and need-based heating.



IEC 60800:2009

GREEN ACCU MAT®
The energy storage heater –
The storage heater

MADE IN GERMANY
MADE BY HEMSTEDT



The GREEN ACCU MAT® with a one-sided connection and sleeveless connection technology is the storage and direct heater for more efficiency and comfort. The mat is installed under the floor at a depth of approximately 8 – 10 cm. The GREEN ACCU MAT® uses the floor and concrete as a storage medium. Specially designed for low-energy houses.

Technical data

Nominal voltage	230 Volt
Output	approx. 40 / 40 / 80 W/m²
Cold connection cable one-sided	1 x 4.00 m
Minimum laying temperature	5 °C
Outer casing max. temperature	65 °C
Lowest bend radius	5 x dA
Resistance tolerance	-5 % / +10 %
VDE standard	tested in accordance with IEC60800:2009 ◁ VDE-REG 8600 ▷
Cold/warm transition	seamless, without shrink technology
Insulation	XLPE
Supply width	0.85 m / 0.50 m
Calculation width	1.02 m / 0.67 m
Protection type	IP67
Protection class	2

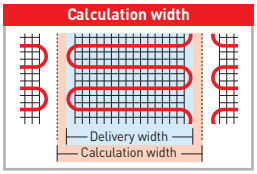
2 x 40 = 80 W/m² 230 V

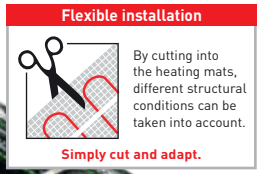
GREEN ACCU MAT®

Heating output W 2 x 40 W/m²	Surface m²	Calculation width	Mat length m	Order no.
2 x 64	1.61	0.67	2.40	31875-64/64
2 x 102	2.55	0.67	3.80	31875-102/102
2 x 137	3.42	0.67	5.10	31875-137/137
2 x 180	4.49	0.67	6.70	31875-180/180
2 x 225	5.63	0.67	8.40	31875-225/225
2 x 255	6.37	0.67	9.50	31875-255/255
2 x 275	7.04	1.02	6.90	31875-275/275
2 x 329	8.57	1.02	8.40	31875-329/329
2 x 407	10.10	1.02	9.90	31875-407/407
2 x 474	11.73	1.02	11.50	31875-474/474
2 x 541	13.26	1.02	13.00	31875-541/541
2 x 619	15.20	1.02	14.90	31875-619/619
2 x 670	17.34	1.02	17.00	31875-670/670
2 x 779	19.28	1.02	18.90	31875-779/779
2 x 860	21.22	1.02	20.80	31875-860/860
2 x 925	23.26	1.02	22.80	31875-925/925
2 x 1019	26.32	1.02	25.80	31875-1019/1019

CE EAC

93082





Accessories

Item name	Order no.
Cold connection cable for extension 4 x 1.50 mm², 1.00 m	81303-1.50
Assembly sleeve (1x, assembled in the plant), for extension	26170
Plastic nails for fixation (PU = 100 units)	20304
Sensor extension 1.00 m	20090
Dual circuit controller – digital controller	93082
Spare temperature sensor for two-circuit regulator	93082-Fuehler
Repair sleeves on request	

As a protective measure, we recommend residual-current-operated protective device (RCD < 30 mA).

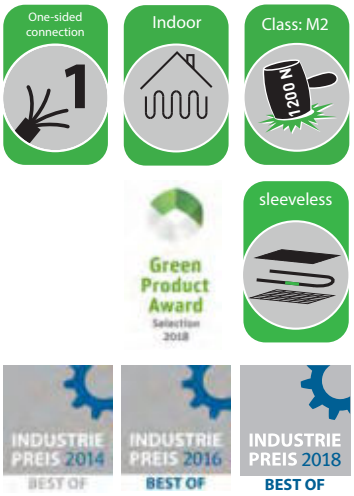
GREEN ACCU MAT®-SET
The energy storage heater –
The storage heater

IEC 60800:2009

The GREEN ACCU MAT® with a one-sided connection and sleeveless connection technology is the storage and direct heater for more efficiency and comfort. The mat is installed under the floor at a depth of approximately 8 – 10 cm. The GREEN ACCU MAT® uses the floor and concrete as a storage medium. Specially designed for low-energy houses.

MADE IN GERMANY
MADE BY HEMSTEDT

The GREEN ACCU MAT® set includes the following products:
1 HEM direct heating mat with one-sided connection 2 x 40 W/m² and 4.00 m connection cable; 1 temperature regulator with self-learning clock thermostat and sensor, UP; 1 sensor sleeve for sensor tube; 1 sensor tube for room thermostat; 1 outlet socket; 1 assembly manual



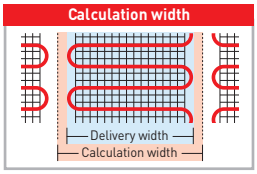
CE EAC

Technical data	
Nominal voltage	230 Volt
Output	approx. 40 / 40 / 80 W/m²
Cold connection cable one-sided	1 x 4.00 m
Minimum laying temperature	5 °C
Outer casing max. temperature	65 °C
Lowest bend radius	5 x dA
Resistance tolerance	-5 % / +10 %
VDE standard	tested in accordance with IEC60800:2009 ◁ VDE-REG 8600 ▷
Cold/warm transition	seamless, without shrink technology
Insulation	XLPE
Supply width	0.85 m / 0.50 m
Calculation width	1.02 m / 0.67 m
Protection type	IP67
Protection class	2

2 x 40 = 80 W/m² 230 V

GREEN ACCU MAT®				
Heating output W 2 x 40 W/m²	Surface m²	Calculation width	Mat length m	Order no.
2 x 64	1.61	0.67	2.40	31875-64/64-Set
2 x 102	2.55	0.67	3.80	31875-102/102-Set
2 x 137	3.42	0.67	5.10	31875-137/137-Set
2 x 180	4.49	0.67	6.70	31875-180/180-Set
2 x 225	5.63	0.67	8.40	31875-225/225-Set
2 x 255	6.37	0.67	9.50	31875-255/255-Set
2 x 275	7.04	1.02	6.90	31875-275/275-Set
2 x 329	8.57	1.02	8.40	31875-329/329-Set
2 x 407	10.10	1.02	9.90	31875-407/407-Set
2 x 474	11.73	1.02	11.50	31875-474/474-Set
2 x 541	13.26	1.02	13.00	31875-541/541-Set
2 x 619	15.20	1.02	14.90	31875-619/619-Set
2 x 670	17.34	1.02	17.00	31875-670/670-Set
2 x 779	19.28	1.02	18.90	31875-779/779-Set
2 x 860	21.22	1.02	20.80	31875-860/860-Set
2 x 925	23.26	1.02	22.80	31875-925/925-Set
2 x 1019	26.32	1.02	25.80	31875-1019/1019-Set


93082



Accessories

Item name	Order no.
Cold connection cable for extension 4 x 1.50 mm², 1.00 m	81303-1.50
Assembly sleeve (1x, assembled in the plant), for extension	26170
Plastic nails for fixation (PU = 100 units)	20304
Sensor extension 1.00 m	20090
Dual circuit controller – digital controller	93082
Spare temperature sensor for two-circuit regulator	93082-Fuehler
Repair sleeves on request	
Aluminium sensor sleeve (ED 15.20 mm/ID 12.50 mm)	20079
Plastic switch box for room thermostat	20702
Sensor pipe for room thermostat, length: 2.50 m	20703

As a protective measure, we recommend residual-current-operated protective device (RCD < 30 mA).

IEC 60800:2009

GREEN ELECTRIC MAT®
The energy storage heater –
The tile heater

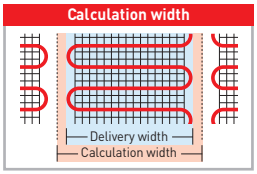
MADE IN GERMANY
MADE BY HEMSTEDT

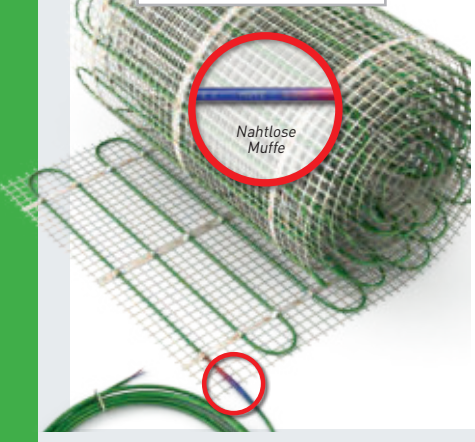
The GREEN ELECTRIC MAT® with a one-sided connection and sleeveless connection technology is the tile heater for more efficient heating. The mat is installed in the tile adhesive. The particularly thin mat with slim, sleeveless connection technology can be used in both new and old buildings.

INDUSTRIE PREIS 2014 BEST OF
INDUSTRIE PREIS 2016 BEST OF

CE EAC

93082





Technical data

Nominal voltage	230 Volt
Output	ca. 70 / 70 / 140 W/m²
Cold connection	1 x 4,00 m
Minimum laying temperature	5 °C
Lowest bend radius	6 x dA
Resistance tolerance	-5 % / +10 %
VDE standard	in accordance with IEC60800:2009
Cold/warm transition	seamless, without shrinking technology
Insulation	Fluoroplastic
Supply width	0.46 m
Calculation width	0.50 m

2 x 70 = 140 W/m² 230 V

GREEN ELECTRIC MAT®

Heating output W 2 x 70 W/m²	Surface m²	Calculation width	Mat length m	Order no.
2 x 70	1.00	0.50	2.00	30770-70/70
2 x 105	1.50	0.50	3.00	30770-105/105
2 x 140	2.00	0.50	4.00	30770-140/140
2 x 175	2.50	0.50	5.00	30770-175/175
2 x 198	3.00	0.50	6.00	30770-198/198
2 x 238	3.50	0.50	7.00	30770-238/238
2 x 275	4.00	0.50	8.00	30770-275/275
2 x 300	4.50	0.50	9.00	30770-300/300
2 x 343	5.00	0.50	10.00	30770-343/343
2 x 423	6.00	0.50	12.00	30770-423/423
2 x 488	7.00	0.50	14.00	30770-488/488
2 x 562	8.00	0.50	16.00	30770-562/562
2 x 611	9.00	0.50	18.00	30770-611/611
2 x 715	10.00	0.50	20.00	30770-715/715

Accessories

Item name	Order no.
Cold connection cable for extension 4 x 1.50 mm², 1.00 m	81303-1.50
Assembly sleeve (1x, assembled in the factory), for extension	26170
Plastic nails for fixation (PU = 100 units)	20304
Sensor extension 1.00 m	20090
Dual circuit controller – digital controller	93082
Spare temperature sensor for two-circuit regulator	93082-Fuehler
Repair sleeves on request	

As a protective measure, we recommend residual-current-operated protective device (RCD < 30 mA).

GREEN ELECTRIC MAT®-Set
The energy storage heater –
The tile heater

IEC 60800:2009

The GREEN ELECTRIC MAT® with a one-sided connection and sleeveless connection technology is the tile heater for more efficient heating. The mat is installed in the tile adhesive. The particularly thin mat with slim, sleeveless connection technology can be used in both new and old buildings.

MADE IN GERMANY
MADE BY HEMSTEDT

The GREEN ELECTRIC MAT® set includes the following products:

1 HEM direct heating mat with one-sided connection 2 x 70 W/m² and 4.00 m connection cable
1 temperature regulator with self-learning clock thermostat and sensor, UP
1 sensor sleeve for sensor tube
1 sensor tube for room thermostat
1 outlet socket
1 assembly manual

CE EAC

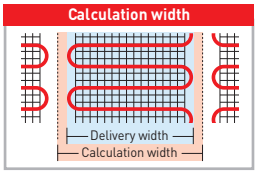
Technical data	
Nominal voltage	230 Volt
Output	ca. 70 / 70 / 140 W/m²
Cold connection	1 x 4,00 m
Minimum laying temperature	5 °C
Lowest bend radius	6 x dA
Resistance tolerance	-5 % / +10 %
VDE standard	in accordance with IEC60800:2009
Cold/warm transition	seamless, without shrinking technology
Insulation	Fluoroplastic
Supply width	0.46 m
Calculation width	0.50 m

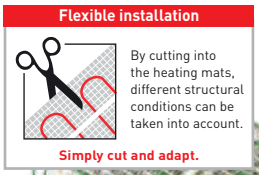
2 x 70 = 140 W/m² 230 V

GREEN ELECTRIC MAT®

Heating output W 2 x 70 W/m²	Surface m²	Calculation width	Mat length m	Order no.
2 x 70	1.00	0.50	2.00	30770-70/70-Set
2 x 105	1.50	0.50	3.00	30770-105/105-Set
2 x 140	2.00	0.50	4.00	30770-140/140-Set
2 x 175	2.50	0.50	5.00	30770-175/175-Set
2 x 198	3.00	0.50	6.00	30770-198/198-Set
2 x 238	3.50	0.50	7.00	30770-238/238-Set
2 x 275	4.00	0.50	8.00	30770-275/275-Set
2 x 300	4.50	0.50	9.00	30770-300/300-Set
2 x 343	5.00	0.50	10.00	30770-343/343-Set
2 x 423	6.00	0.50	12.00	30770-423/423-Set
2 x 488	7.00	0.50	14.00	30770-488/488-Set
2 x 562	8.00	0.50	16.00	30770-562/562-Set
2 x 611	9.00	0.50	18.00	30770-611/611-Set
2 x 715	10.00	0.50	20.00	30770-715/715-Set

93082

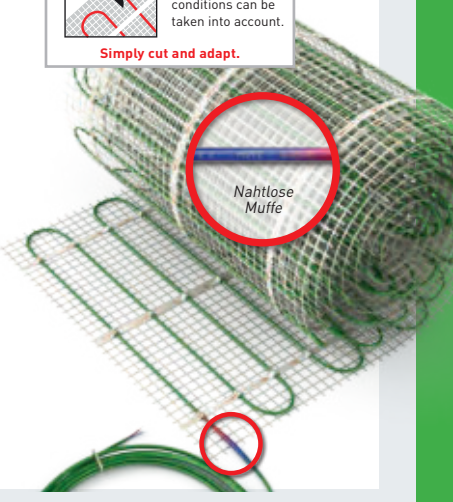




Accessories

Item name	Order no.
Cold connection cable for extension 4 x 1.50 mm², 1.00 m	81303-1.50
Assembly sleeve (1x, assembled in the factory), for extension	26170
Plastic nails for fixation (PU = 100 units)	20304
Sensor extension 1.00 m	20090
Dual circuit controller – digital controller	93082
Spare temperature sensor for two-circuit regulator	93082-Fuehler
Repair sleeves on request	
Aluminium sensor sleeve (ED 15.20 mm/ID 12.50 mm)	20079
Plastic switch box for room thermostat	20702
Sensor pipe for room thermostat, length: 2.50 m	20703

As a protective measure, we recommend residual-current-operated protective device (RCD < 30 mA).



GREEN ACCU MAT® AND GREEN ELECTRIC MAT® HEMSTEDT INNOVATIONS, SIGNED AND SEALED.

With the new, resource-friendly heating mats from Hemstedt, we have not only brought a high-quality product "Made in Germany" onto the market with which you can heat 100% climate neutrally, but also an outstandingly innovative and forward-looking product. This is proved by the industry awards from 2014, 2016 and 2018.

In this competition, which has been held regularly since 2000, an independent panel of approximately 30 professors from renowned German universities and research institutions as well as specialised journalists and industry representatives decides on which of the more than 5,000 submitted products to recognise.

Key factors in the decision are product maturity and future orientation, but of course also effective use, efficiency enhancement and practicality.

The panel members' requirements are clear:

» To me, innovation means that a product or process elevates itself significantly and surprisingly from the recognised state of the art.«

Prof. Dr. Thorsten M. Buzug,
University of Lübeck

» An innovative industrial solution uses the current technical and scientific potential, protects the resources, offers innovative functionality and absolute safety and is characterised by optimal user friendliness.«

Prof. Dr. Rainer Laur,
University of Bremen

Hemstedt thus again elevates itself above the masses and demonstrates that tried-and-tested quality, combined with future-orientated innovative spirit, are the ingredients for customer-orientated, successful products.

In 2019, approximately 500 participants from over 60 countries were involved in the race for the awards from the renowned British trade journal (https://www.build-review.com). The Build Awards pursue two objectives: innovative companies are to be recognised, of course, but reliability and resilience as a partner of the construction industry also play a major role. So it is no wonder that Hemstedt, with over 40 years of experience and a whole portfolio of innovative ideas – especially in the field of climate-neutral heating – is among the winners.

In March 2019, the GREEN ACCU MAT® was given the sought-after "Green Product Award" – a prize that recognises outstanding, climate and resource-protecting alternatives to existing solutions.
Naturally, Hemstedt would be there!

A high-calibre, international panel of scientists, architects and politicians makes the selection from submissions coming from over 40 countries in all six continents! Another particularly important objective of this initiative is the "Green Product Network", in which established companies are brought together with students and start-ups in order to work together on a better future.
Naturally, Hemstedt would be there!

Nils Bader, Managing Director and initiator of the Green Product Award.

DUAL CIRCUIT CONTROLLER – everything under control, everything in view

for GREEN ELECTRIC MAT® – The tile heater and GREEN ACCU MAT® – The storage heater

Clear Touch-Display

Fit for the future – smart living or optimising own consumption!

Order no. 93082

The Hemstedt regulator is specially designed for GREEN ELECTRIC MAT® and GREEN ACCU MAT® and controls the two heating conductors separately and in a manner optimised for consumption and need. A clear touch display allows the desired room temperature to be set conveniently or time-controlled operation with four individually programmable weekly programmes.

In addition to the basic function of a floor heater, the output accessed by the regulator from the house grid can additionally be restricted by means of a control inlet, so that it can be used in connection with PV or other systems to generate renewable energy, particularly favourable for optimising own consumption.

- Display of the current room temperature
- Clear presentation of up to 4 weekly programmes
- Touch-Display
- Adjustable brightness of the display, ideal e.g. in bedrooms
- Combinable with Smart Home solutions

Depending on the current difference between the target and actual value of the floor temperature, the heating circuit regulator activates one or both of the heating circuits.

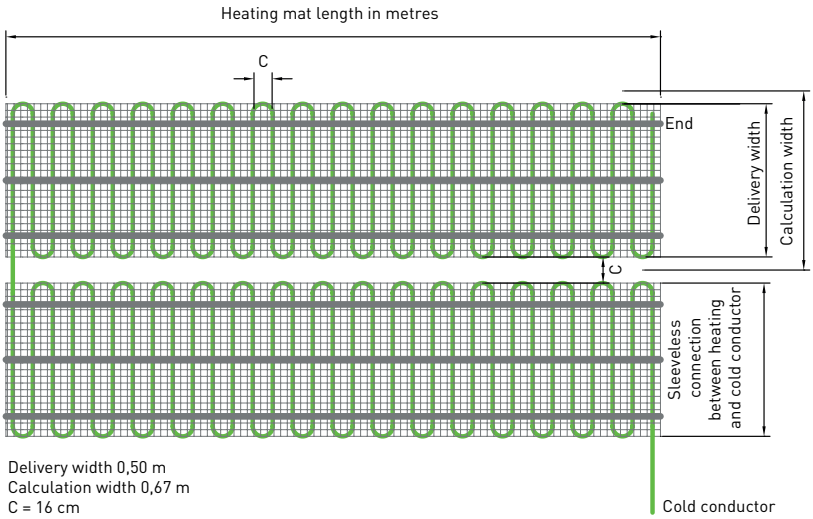
Technical Data

Nominal operating voltage	AC 230 V ±10 %, 50 Hz
Nominal load	max. 10 A at AC 230 V; two-pole with seperate relay, each max. 5 A
Floor temperature restriction	adjustable from 20 to 40 °C
Max. adjustable range	10 .. 40 °C
Floor sensor monitoring	of short circuit an interruption
Integration into outlet sockets	according to DIN 49073, floating
Protection class	II, with corresponding integration
Protection type	IP20, use at room temperature
Device security and EMC	according to EN 60730-1, EN 60730-2-9, EN 50559
Sensor	2 m

The two-circuit regulator fulfils the requirements of EN 50559:2013 (VDE 0705-559)
This standard applies to electric floor heating systems for residential buildings and all other buildings whose use corresponds to that of residential buildings or is at least similar to it, with a maximum traffic load of 4 kN/m². This standard defines the main properties of electric floor heating systems and establishes the test processes for these properties for the information of the users. Special feature of the two-circuit regulator: in the case of heating outputs over 120 W/m², the heating function can be time-limited according to DIN.

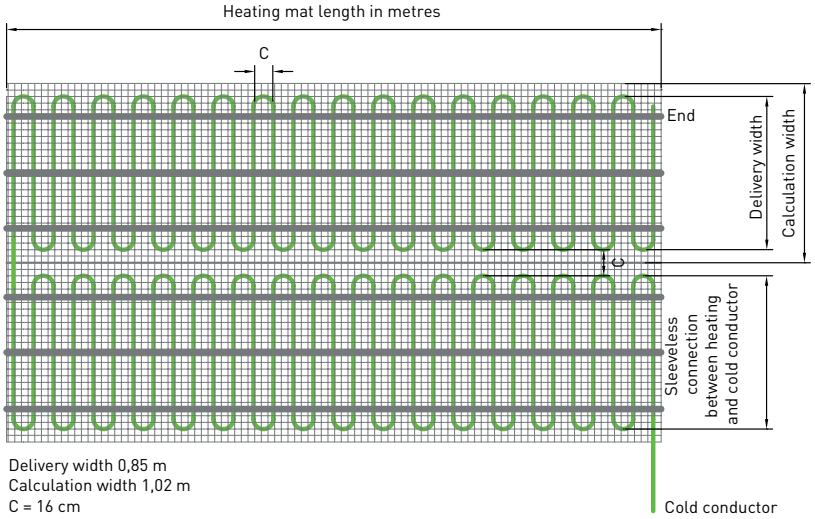
INSTALLATION
of the GREEN ACCU MAT® and GREEN ELECTRIC MAT®

GREEN ACCU MAT® 50 cm delivery width 2 x 40 W/m²



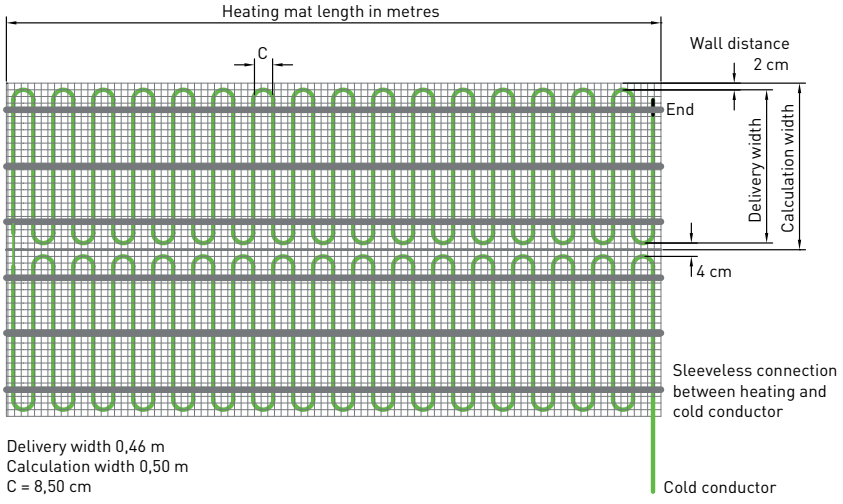
Delivery width 0,50 m
Calculation width 0,67 m
C = 16 cm

GREEN ACCU MAT® 85 cm delivery width 2 x 40 W/m²



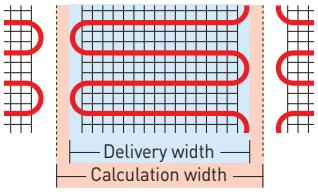
Delivery width 0,85 m
Calculation width 1,02 m
C = 16 cm

GREEN ELECTRIC MAT® 46 cm delivery width 2 x 70 W/m²



Delivery width 0,46 m
Calculation width 0,50 m
C = 8,50 cm

Calculation width



Flexible installation

By cutting into the heating mats, different structural conditions can be taken into account.

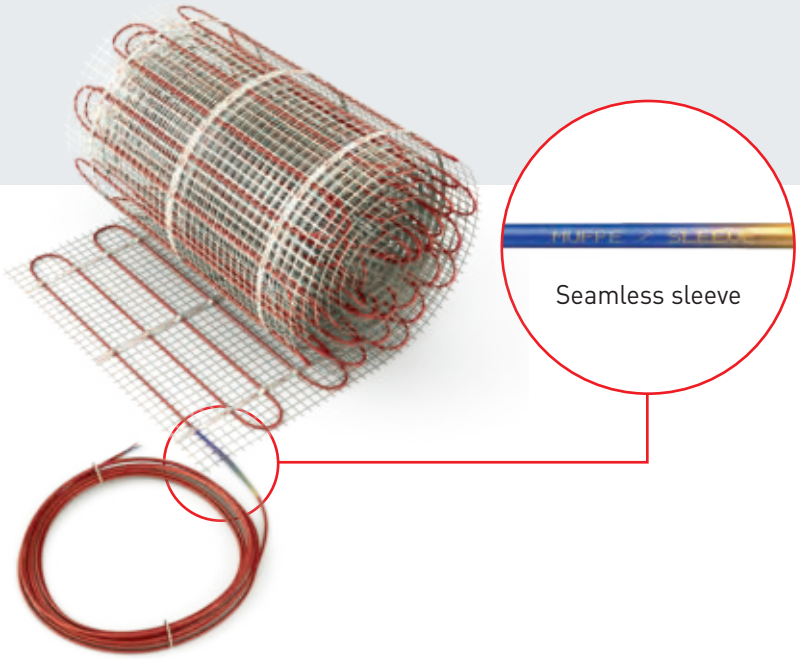
Simply cut and adapt.

TWIN TURBO MAT®

THE FAST-HEATING SYSTEM with reserve heating circuit

2-Level heating output in one heating mat

TWIN TURBO MAT® –
the intelligent revolution



TWIN TURBO MAT® –
the underfloor heating system
220 W/m²

TWO-CIRCUIT CONTROL – everything in hand, everything in view
for TWIN TURBO MAT® – the underfloor heating system

The Hemstedt regulator is specially designed for GREEN ELECTRIC MAT® and GREEN ACCU MAT® and controls the two heating conductors separately and in a manner optimised for consumption and need. A clear touch display allows the desired room temperature to be set conveniently or time-controlled operation with four individually programmable weekly programmes.

In addition to the basic function of a floor heater, the output accessed by the regulator from the house network can additionally be restricted by means of a control inlet, so that it can be used in connection with PV or other systems to generate renewable energy, particularly favourable for optimising own consumption.

- Display of the current room temperature
- Clear presentation of up to 4 weekly programmes
- Touch display
- Adjustable brightness of the display, ideal e.g. in bedrooms
- Combinable with Smart Home solutions

Ideal for fast heating!

Order no. 93082

Depending on the current difference between the target and actual value of the floor temperature, the heating circuit regulator activates one or both of the heating circuits.

The dual circuit controller fulfils the requirements of EN 50559:2013 (VDE 0705-559)
This standard applies to electric floor heating systems for residential buildings and all other buildings whose use corresponds to that of residential buildings or is at least similar to it, with a maximum traffic load of 4 kN/m². This standard defines the main properties of electric floor heating systems and establishes the test processes for these properties for the information of the users. Special feature of the two-circuit regulator: in the case of heating outputs over 120 W/m², the heating function can be time-limited according to DIN.

Technical Data

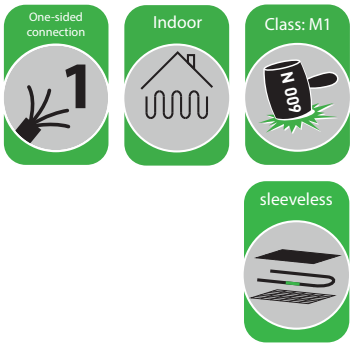
Nominal operating voltage	AC 230 V ±10 %, 50 Hz
Nominal load	max. 10 A at AC 230 V; two-pole with seperate relay, each max. 5 A
Floor temperature restriction	adjustable from 20 to 40 °C
Max. adjustable range	10 .. 40 °C
Floor sensor monitoring	of short circuit an interruption
Integration into outlet sockets	according to DIN 49073, floating
Protection class	II, with corresponding integration
Protection type	IP20, use at room temperature
Device security and EMC	according to EN 60730-1, EN 60730-2-9, EN 50559
Sensor	2 m

TWIN TURBO MAT®

The tile heating system

IEC60800:2009

The **TWIN TURBO MAT®** with one-sided connection and I-sleeve is the tile heating to allow you to heat your home quickly. The mat is laid in the tile adhesive. The particularly thin mat with narrow, sleeveless connection technology can be used in new builds as well as old.



Technical data	
Nominal voltage	230 Volt
Output	110/220 W/m²
Cold connection	1 x 4.00 m
Minimum laying temperature	5 °C
Lowest bend radius	6 x dA
Resistance tolerance	-5%/+10%
VDE standard	in accordance with IEC60800 Ed.3
Cold/warm transition	seamless, without shrinking technology
Insulation	Fluoroplastic
Supply width	0.46 m
Calculation width	0.50 m
Protection type	IP67
Protection class	2

2 x 110 = 220 W/m² 230 V

TWIN TURBO MAT®

Heating output W 2 x 110 W/m²	Surface m²	Calculation width	Mat length m	Order no.
2 x 110	1.00	0.50	2.00	30771-110/220
2 x 165	1.50	0.50	3.00	30771-165/330
2 x 220	2.00	0.50	4.00	30771-220/440
2 x 275	2.50	0.50	5.00	30771-275/550
2 x 330	3.00	0.50	6.00	30771-330/660
2 x 385	3.50	0.50	7.00	30771-385/770
2 x 440	4.00	0.50	8.00	30771-440/880
2 x 495	4.50	0.50	9.00	30771-495/990
2 x 550	5.00	0.50	10.00	30771-550/1100
2 x 660	6.00	0.50	12.00	30771-660/1320

CE

Accessories

Item name	Order no.
Cold connection for extension 4 x 1.50 mm², 1.00 m	81302-1,50
Assembly sleeve (1x, assembled in the factory), for extension	26173
Sensor extension 1.00 m	20090
Dual circuit controller	93085
Spare temperature sensor for two-circuit regulator	93085-Fuehler
Repair sleeves on request	

As a protective measure, we recommend residual-current-operated protective device (RCD < 30 mA).

TWIN TURBO MAT®-SET

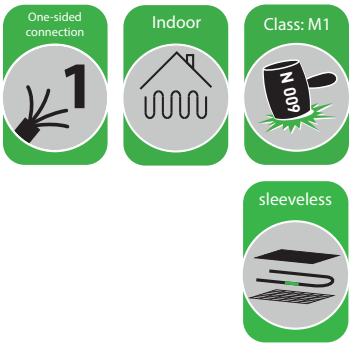
The tile heating system

IEC 60800:2009

The **TWIN TURBO MAT®** with one-sided connection and I-sleeve is the tile heating to allow you to heat your home quickly. The mat is laid in the tile adhesive. The particularly thin mat with narrow, sleeveless connection technology can be used in new builds as well as old.

The TWIN TURBO MAT®-set contains the following products:

1 HEM direct heating mat with a single connection 2 x 110 W/m² and 4.00 m connection
1 temperature control with self-learning clock thermostat and sensor, UP
1 sensor sleeve for the sensor pipe
1 sensor pipe for the room thermostat
1 switch
1 assembly instructions



Technical data	
Nominal voltage	230 Volt
Output	110/220 W/m²
Cold connection	1 x 4.00 m
Minimum laying temperature	5 °C
Lowest bend radius	6 x dA
Resistance tolerance	-5%/+10%
VDE standard	in accordance with IEC60800 Ed.3
Cold/warm transition	seamless, without shrinking technology
Insulation	Fluoroplastic
Supply width	0.46 m
Calculation width	0.50 m
Protection type	IP67
Protection class	2

CE

2 x 110 = 220 W/m² 230 V

TWIN TURBO MAT®-SET

Heating output W 2 x 110 W/m²	Surface m²	Calculation width	Mat length m	Order no.
2 x 110	1,00	0,50	2,00	30771-110/220-Set
2 x 165	1,50	0,50	3,00	30771-165/330-Set
2 x 220	2,00	0,50	4,00	30771-220/440-Set
2 x 275	2,50	0,50	5,00	30771-275/550-Set
2 x 330	3,00	0,50	6,00	30771-330/660-Set
2 x 385	3,50	0,50	7,00	30771-385/770-Set
2 x 440	4,00	0,50	8,00	30771-440/880-Set
2 x 495	4,50	0,50	9,00	30771-495/990-Set
2 x 550	5,00	0,50	10,00	30771-550/1100-Set
2 x 660	6,00	0,50	12,00	30771-660/1320-Set

Accessories

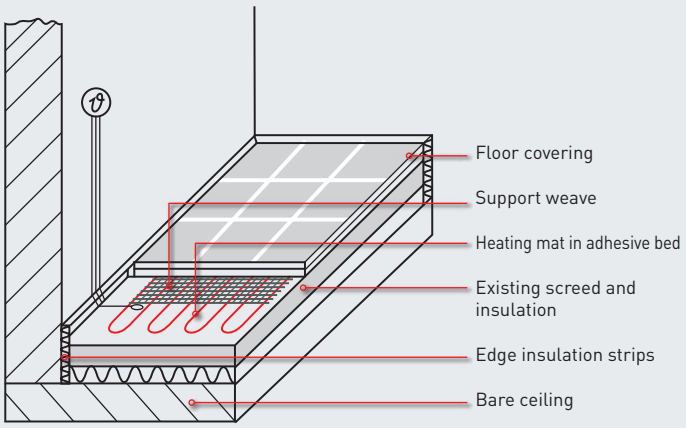
Item name	Order no.
Cold connection for extension 4 x 1.50 mm², 1.00 m	81302-1,50
Assembly sleeve (1x, assembled in the factory), for extension	26173
Sensor extension 1.00 m	20090
Dual circuit controller	93085
Spare temperature sensor for two-circuit regulator	93085-Fuehler
Repair sleeves on request	
Aluminium sensor sleeve (ED 15.20 mm/ID 12.50 mm)	20079
Sensor pipe for room thermostat, length: 2.50 m	20703
Plastic switch box for room thermostat	20702

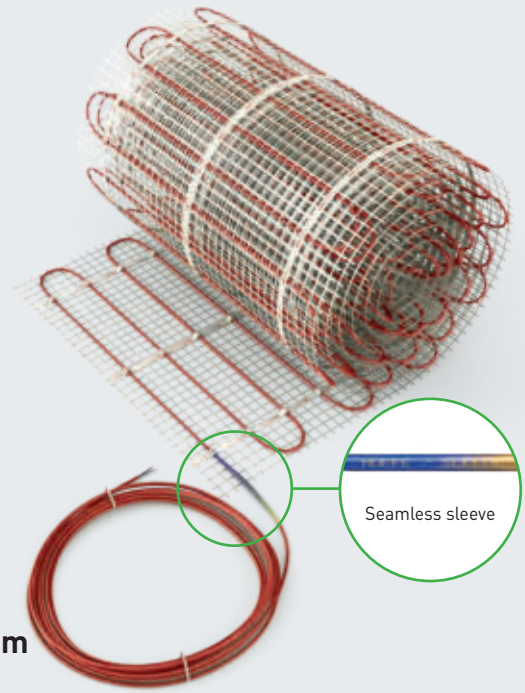
As a protective measure, we recommend residual-current-operated protective device (RCD < 30 mA).

TWIN TURBO MAT®

– with integrated safety (2-level) –

TWIN TURBO MAT® under the floor covering





Instantly warm floors

TWIN TURBO MAT®
– the tile heating system

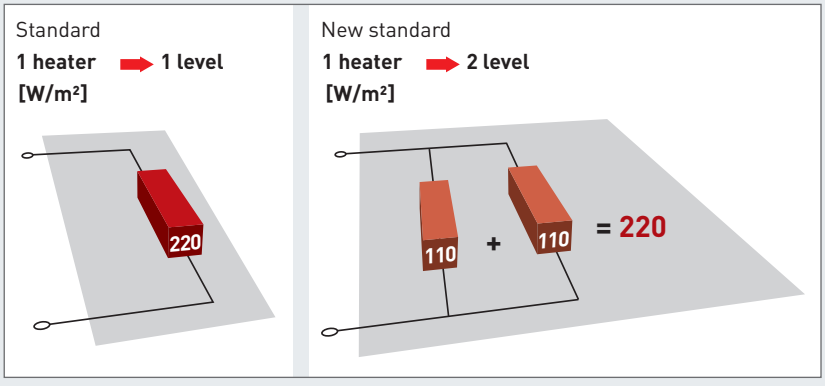
The **TWIN TURBO MAT®** is the tile heating system for economic heating. The mat is laid in the tile adhesive. The particularly thin mat with narrow, sleeveless connection technology can be used in new builds as well as old.

+ **Reserve heating level available with 110 W/m² for fast heating**
+ **Comfort heating level with 110 W/m²**
+ **Reserve heating level + comfort heating level = fast-heating operation with a total of 220 W/m²**

HEMSTEDT technology inside with the example of the TWIN TURBO MAT®

Advantages at a glance:

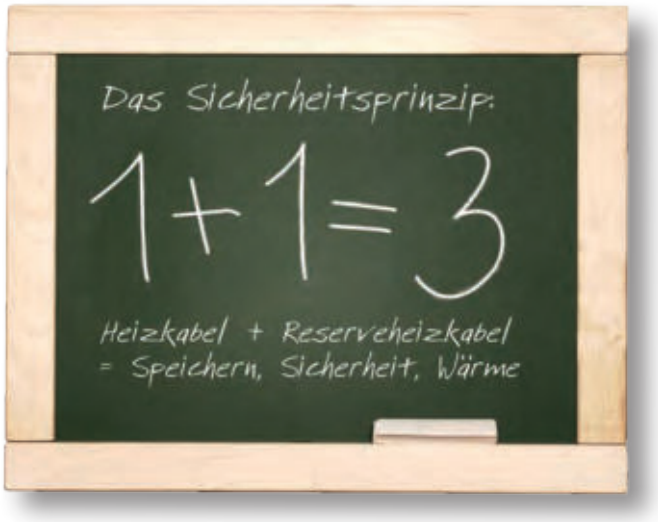
- Quick-heating operation
- Thin heating system thanks to narrower and sleeveless connection technology
- Reserve heating circuit, meaning extra security in case the active heat circuit breaks down



DOUBLY SAFE:

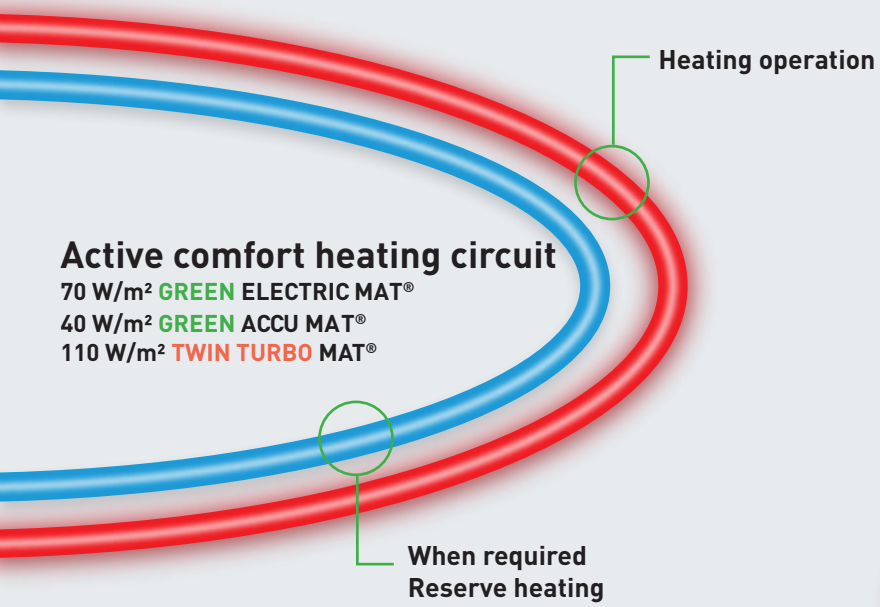
Heating cable + reserve heating cable

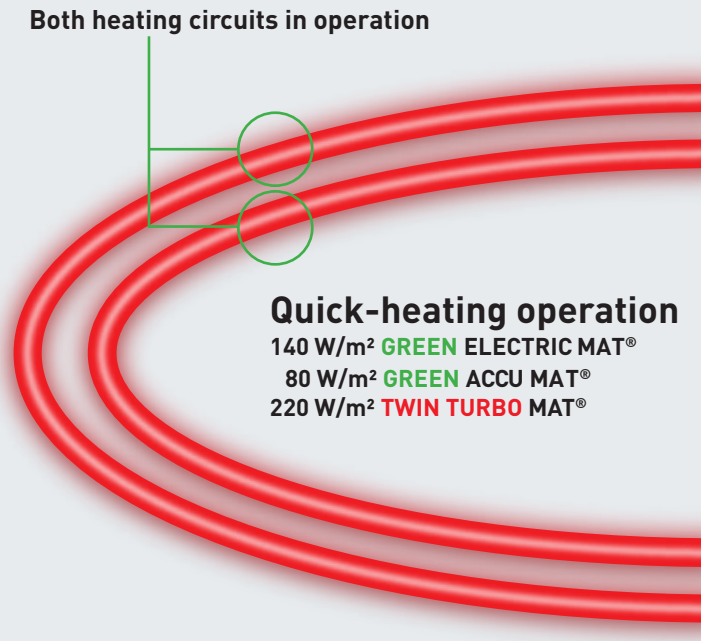
The**TWIN TURBO MAT®** and the **GREEN ACCU MAT®** are the energy-storing heating systems from HEMSTEDT with integrated safety. The same applies for the **GREEN ELECTRIC MAT®** . All three heating mats give you the option of using the second heating circuit as a "reserve heating circuit" as well. In this way, in the rare event of a breakdown, you can continue to heat at a comfortable level.



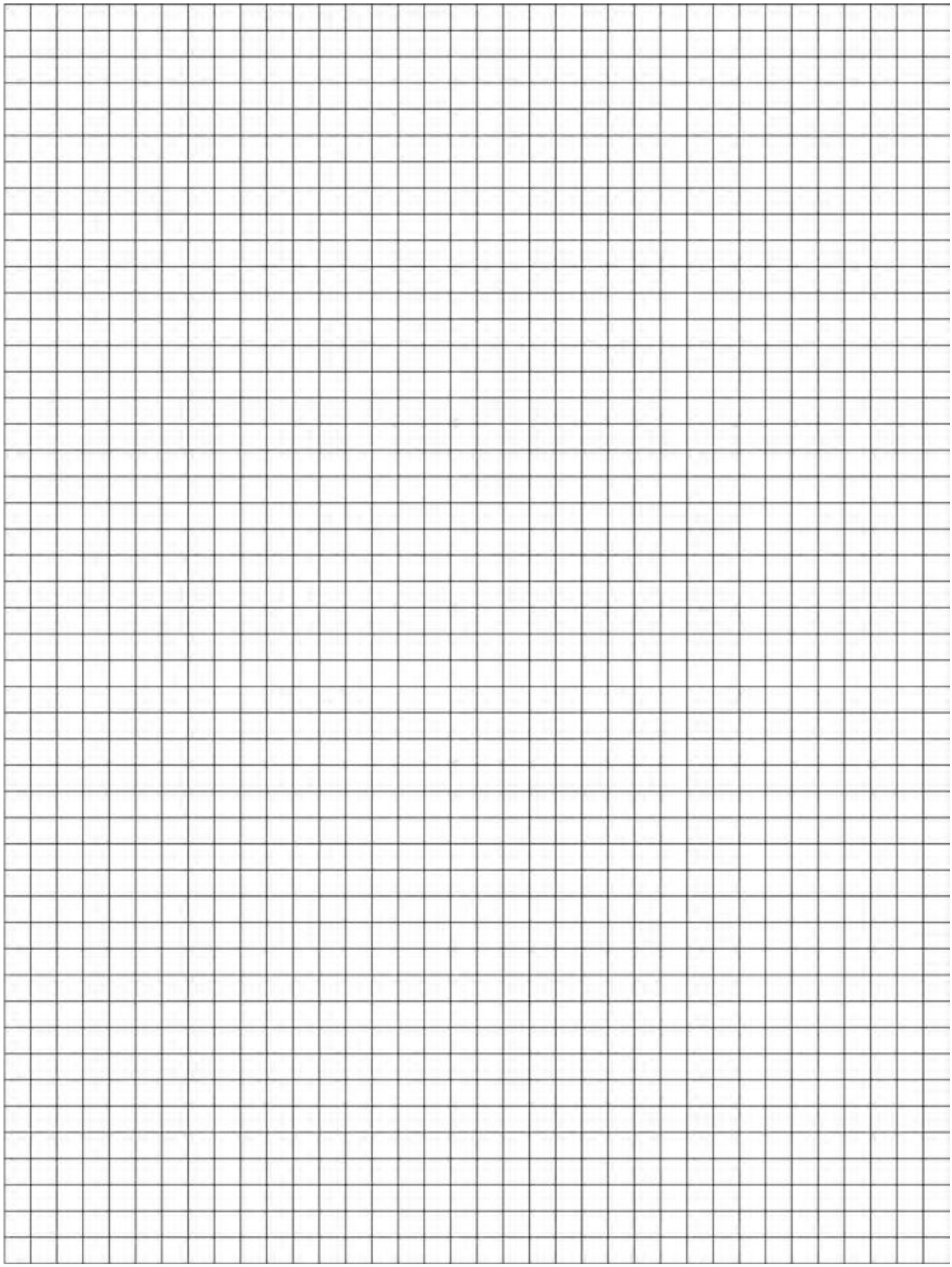
Your advantage:

- You will receive a heating mat set with a heating mat which contains two **IDENTICAL** heating circuits.
- In the rare event of a breakdown, you can continue to heat reliably.
- Repair costs can be avoided.





NOTES

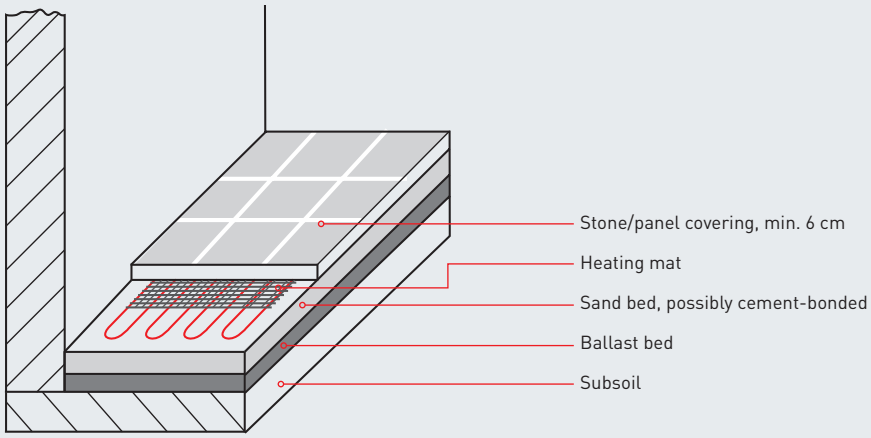


HEM-SYSTEM®
OPEN SPACE HEATING MATS AND HEATING CABLES

For concrete, screed and sand

Practical!
Economical!
Safe!

Safely laid in sand and concrete!



NO MORE SHOVELLING SNOW WITH AN OPEN SPACE HEATING SYSTEM!

Easy to lay, simple to use

More safety in winter thanks to heated driveways, footpaths and even lawn areas thanks to open space heating!

Footpaths, bridges, garage driveways, outdoor steps, ramps, hospital entryways, helicopter landing pads – many traffic areas have to be kept snow and ice free around the clock in winter to allow people to walk and drive on them. For this difficult application, Hemstedt® offers reliable, electric open space heating systems, concrete, screed and sand. They guarantee the safe thawing of snow and ice and avoid the build-up of snow and ice surfaces during operation.

The 80 cm-wide mats have an effective width of 90 cm and are operated with 230 V. The connection at 7 cm installation depth runs on 300 W/m².

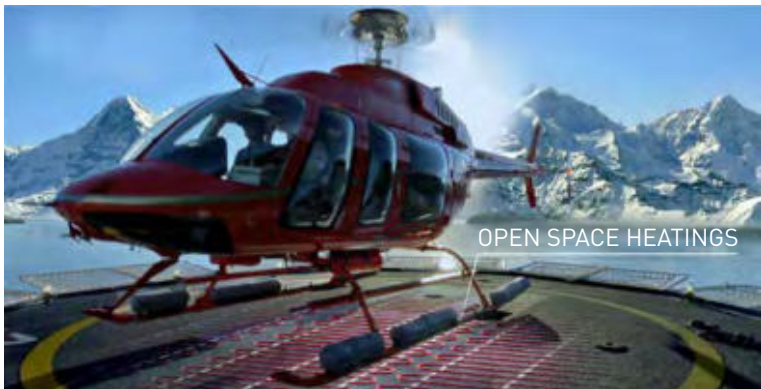
Area of use: Concrete, screed and sand
The open space heating mats are robust and designed and manufactured for installation in concrete and sand surfaces.

The heating cables are also available as a complete pre-assembled ring item.

The seamless sleeve transition is absolutely watertight and distinguishes itself as advantageous for this application (moisture protection).

Hemstedt
HEM-SYSTEM®
sleeveless

- **Direct from the manufacturer**
- **Factory-tested**
- **100% water-tight**
- **100% electrical safety**
- **With one and two-sided connections**



BHF-IM HEATING MATS
BRF-IM CONCRETE HEATING CABLES D-COLD®

Open space heating

DIN EN/IEC 60800

HEM-SYSTEM® heating mats and concrete heating cables with a **one-sided connection** and a seamless sleeve transition. Only for open spaces! Excellently suited for the thawing of ice and snow outdoors as well as for concrete and sand installation to melt snow and ice. Not for warm asphalt.

MADE IN GERMANY
MADE BY HEMSTEDT

Technical data

Nominal voltage	230 volt
Output	approx. 27 W/m
Cold connection	1 x 7.00 m (1.00 mm²)
Minimum laying temperature	5 °C
Outer casing max. temperature (coloured red)	65 °C
Lowest bend radius	5 x dA
Resistance tolerance	-5%/+10%
Cold/warm transition	seamless, without shrinking technology
Diameter	approx. 7.50 mm
Insulation	XLPE/PVC
Supply width	0.80 m
Calculation width	0.90 m
Protection type	IP67
Protection class	2

300 W/m² 230 V

BHF-IM heating mats

Heating output W	Surface m²	Calculation width m	Mat length m	Order no.
891	2.97	0.90	3.30	31800-891
1068	3.56	0.90	3.95	31800-1068
1350	4.50	0.90	5.00	31800-1350
1593	5.31	0.90	5.90	31800-1593
1905	6.35	0.90	7.05	31800-1905
2430	8.10	0.90	9.00	31800-2430

CE EAC

BRF-IM ring item D-COLD®

Heating output W	Element length m	Order no.
135	5.00	37731-5,00
300	10.46	37731-10,46
405	15.00	37731-15,00
891	32.15	37731-32,15
1068	38.10	37731-38,10
1350	48.29	37731-48,29
1593	57.64	37731-57,64
1905	68.69	37731-68,69
2080	75.35	37731-75,31
2430	87.38	37731-87,38
2772	96.61	37731-96,61
3132	107.23	37731-107,23
3248	118.42	37731-118,42
3489	129.05	37731-129,05

Only suitable for winter operation outdoors!

UV-resistant

Accessories

Item name	Order no.
Cold connection for extension 3 x 2.50 mm², 1.00 m, black	81302-2,50 BL/SW
Assembly sleeve (1x, assembled in the factory), for extension	26182
Spacer bar (assembly bar)	20063
Digital ice and snow monitor (for gutters and open spaces)	93159
Ice sensor with 6.00 m supply line, with casing (for outdoors)	93167
Repair sleeves on request	

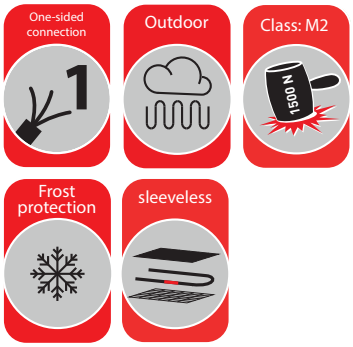
As a protective measure, we recommend residual-current-operated protective device (RCD < 30 mA).

DIN EN/IEC 60800

D-COLD® MAT BHF-IM

Open space heating, D-cold®

MADE IN GERMANY
MADE BY HEMSTEDT



HEM-SYSTEM® heating mats with a **one-sided connection** and a seamless sleeve transition. Only for open spaces! Excellently suited for the thawing of ice and snow outdoors as well as for concrete and sand installation to melt snow and ice. Not suitable for bitumen.

Technical data	
Nominal voltage	230 volt
Output	300 W/m²
Cold connection	1 x 7.00 m (1.00 mm²)
Minimum laying temperature	5 °C
Outer casing max. temperature (coloured red)	65 °C
Lowest bend radius	5 x dA
Resistance tolerance	-5%/+10%
Cold/warm transition	seamless, without shrinking technology
Diameter	approx. 7.00 mm
Insulation	XLPE/PVC
Supply width	approx. 0.50 m
Calculation width	approx. 0.60 m
Protection type	IP67
Protection class	2

CE EAC

250 W/m² 230 V – calculation width
300 W/m² 230 V – supply width

D-cold mat BHF-IM

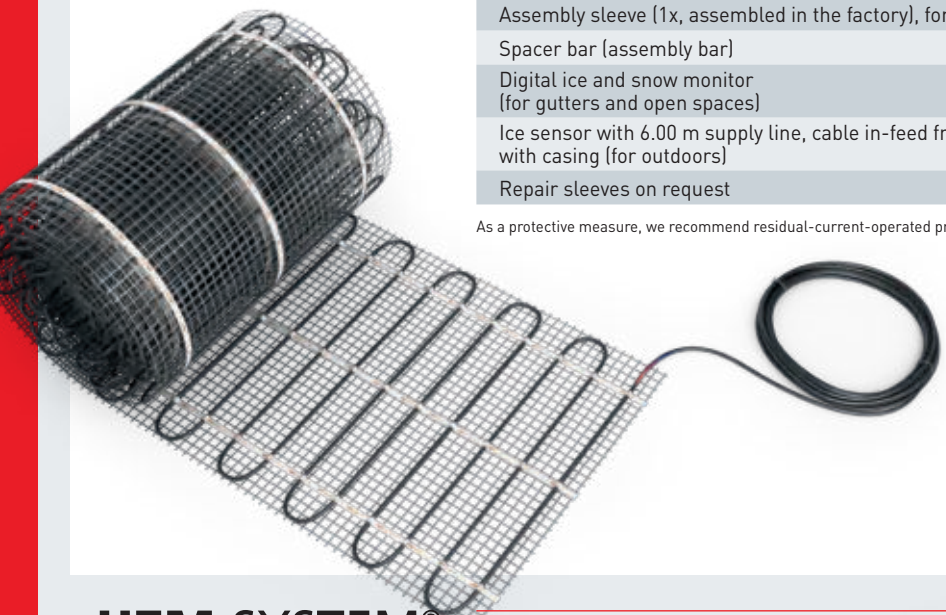
Heating output W	Surface m²	Calculation width m	Mat length m	Order no.
300	1.20	0.60	2.00	31849-300
624	2.40	0.60	4.00	31849-624
900	3.60	0.60	6.00	31849-900
1200	4.80	0.60	8.00	31849-1200
1480	6.00	0.60	10.00	31849-1480
1760	7.20	0.60	12.00	31849-1760
2080	8.40	0.60	14.00	31849-2080
2300	9.60	0.60	16.00	31849-2300
2770	10.80	0.60	18.00	31849-2770
3130	12.00	0.60	20.00	31849-3130
3250	13.20	0.60	22.00	31849-3250
3490	14.40	0.60	24.00	31849-3490

Only suitable for winter operation outdoors!

Accessories

Item name	Order no.
Cold connection for extension 3 x 2.50 mm², 1.00 m, black	81302-2,50 BL/SW
Assembly sleeve (1x, assembled in the factory), for extension	26182
Spacer bar (assembly bar)	20063
Digital ice and snow monitor (for gutters and open spaces)	93159
Ice sensor with 6.00 m supply line, cable in-feed from below, with casing (for outdoors)	93167
Repair sleeves on request	

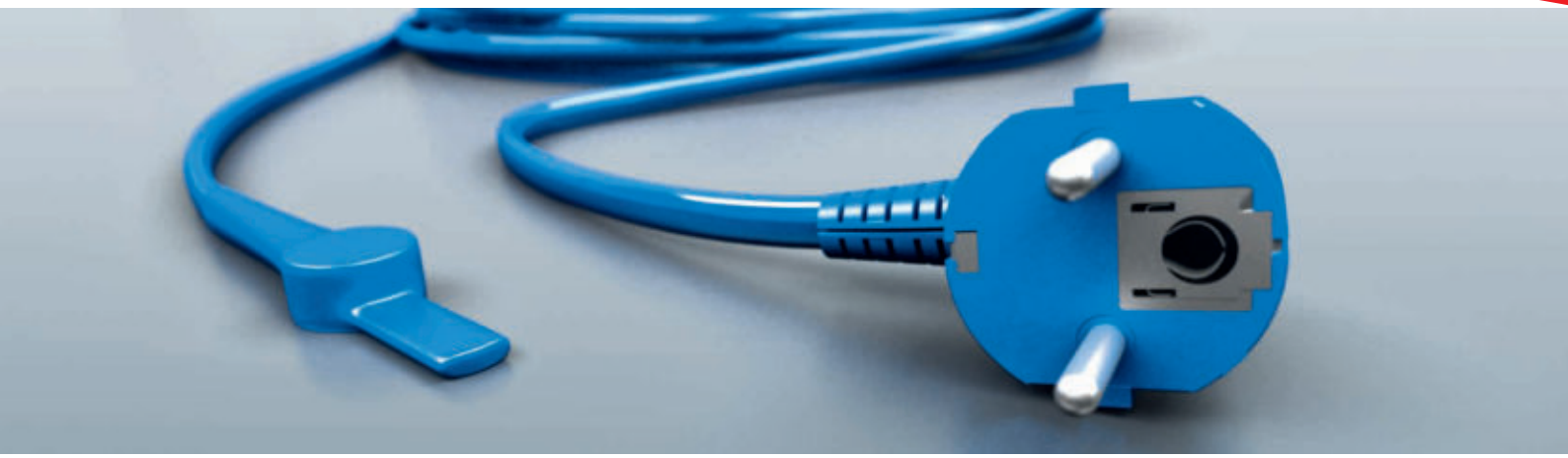
As a protective measure, we recommend residual-current-operated protective device (RCD < 30 mA).



HEM-SYSTEM®
FROSTYCONTROL®

Frost protection heating cable with thermostat

At + 5 °C ON
At +15 °C OFF



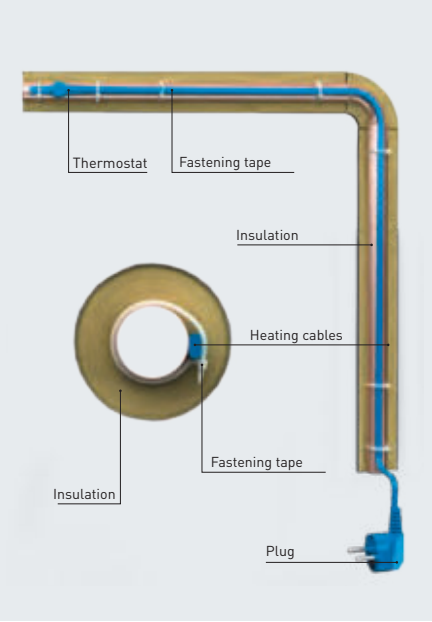
Care-free frost protection all year round

PIPE TRACE HEATING AS EFFECTIVE FROST PROTECTION IN THE HOME AND GARDEN

Plug and Heat – reliably frost-safe

Self-regulating and easy to install – frost damage is effectively prevented with pipe trace heating

The HEM heating cabling is designed for heating metal or plastic water pipes which are in danger of frost damage up to -20 °C. Through self-monitoring processes, it prevents an intolerable level of cooling, generally prevents frost damage and ensures a minimum temperature, for example for the drinking water supply of outdoor animals and in stables. Here, a thermostat monitors the place on the pipe with presumably the lowest temperature. When frost protection is activated, the heating cables are activated at +5 °C and switched off when the temperature exceeds +15 °C. The advantages: The electrical energy requirement is independently reduced to a necessary minimum.



All in one: Easy and quick to install

The HEM-SYSTEM® heating cables are applied loosely with light bends, preferably along the underside of the pipe. In places with a higher energy requirement, such as valves, for example, loosely applied heating cable coils ensure the necessary energy supply.
The cable is attached using aluminium adhesive tape or loosely applied temperature-resistant plastic cable ties. Plastic pipes must be wrapped in aluminium foil beforehand.
A standard heat insulation layer of at least 20 mm thickness does not just guarantee the function of the heating cables, but also significantly reduces the heat requirement. Now just plug in and be free of frost.

The seamless sleeve transition is absolutely watertight and distinguishes itself as advantageous for this application (moisture protection).

Hemstedt
HEM-SYSTEM®
sleeveless

- Direct from the manufacturer
- Factory-tested
- 100% water-tight
- Sleeveless
- Plug-and-play
- 100% electrical safety
- VDE approved
- With one-sided connection

FS FROST PROTECTION PIPE TRACE HEATING FROSTYCONTROL®

With temperature control and shockproof plug

Self-regulating!

VDE tested!

Heating cable with a **<u>one-sided cold connection cable</u>,** shockproof plug and temperature control, +5 °C on/+15 °C off; 10 W/m HEM-SYSTEM® heating cables laid along water pipes prevent an intolerable cooling and also secure the drinking water supply for animals outdoors and in stables.

MADE IN GERMANY
MADE BY HEMSTEDT

Technical data

Nominal voltage	230 volt
Output	approx. 10 W/m
Cold connection	1 x 2.00 m
Minimum laying temperature	5 °C
Nominal temperature	65 °C
Temperature control 16 A	+5 °C ON/+15 °C OFF
Lowest bend radius	5 x Ad
Resistance tolerance	-5%/+10%
Approval (heating cable)	VDE
Cold/warm transition	seamless
External diameter	approx. 9.00 mm
Protection type	IPX7
Protection class	I

approx. 10 W/m 230 V

FS frost protection pipe trace heating, ready to connect

Heating output W	Element length m	Order no.
10	1.00	35602-01
20	2.00	35602-02
30	3.00	35602-03
40	4.00	35602-04
50	5.00	35602-05
60	6.00	35602-06
70	7.00	35602-07
80	8.00	35602-08
90	9.00	35602-09
100	10.00	35602-10
120	12.00	35602-12
140	14.00	35602-14
160	16.00	35602-16
180	18.00	35602-18
220	22.00	35602-22
240	24.00	35602-24

As a protective measure, we recommend residual-current-operated protective device (RCD < 30 mA).

Easy installation!

Energy-saving!

Plug & Play!

HEM-SYSTEM®
DA GUTTER HEATING

Heating system against the build-up of ice and snow

DA gutter heating

NO MORE FROST DAMAGE WITH HEM-SYSTEM® DA GUTTER HEATING!

Safety for people and buildings

The build-up of ice is dangerous!

It happens quickly: In winter, thawed water leads to thick icicles on rain gutters. If an icicle breaks off, people walking underneath could suffer a serious injury. Enough reason to ensure adequate frost protection on gutters, completely aside from the liability, e.g. for buildings which are directly next to public walkways.

Gutter heating is also a reliable form of frost protection, simply to avoid damage to the gutter itself. That is annoying enough, because repairs can quickly become very expensive, depending on the height of the roof.

Ice build-ups on buildings, in gutters and rooftop surfaces are the result of heat losses from buildings and unfavourable sun radiation. The resulting thawed water can't run off and freezes over. HEM-SYSTEM® DA the gutter heating system keeps susceptible areas reliably snow and ice free and prevents:

- **The formation of icicles (danger to people and goods)**
- **Downpipes bursting**
- **Downpipes icing over in the frosty area (soil)**
- **Water getting into buildings**
- **Damage to building exteriors**

Completely pre-assembled. With seamless sleeve transition. HEM-SYSTEM® DA gutter heating can be used multiple times for roof slopes, semi-circular and box gutters and downpipes. Only in connection with the snow and ice detectors. With a normal semi-circular gutter, the energy requirement can be calculated at approx. 50 to 60 W/m of gutter metres. This also applies for downpipes which must be heated up to the frost limit (approx. 1 m in the soil area).

Important: When calculating the requirements and the length, you must take into account that the heating cable may need to be guided several times.

Cold connection line | Seamless sleeve | Heating cables

The seamless sleeve transition is absolutely watertight and distinguishes itself as advantageous for this application (moisture protection).

Hemstedt
HEM-SYSTEM®
sleeveless

- **Direct from the manufacturer**
- **Factory-tested**
- **100% water-tight**
- **Sleeveless**
- **100% electrical safety**

DIN EN/IEC 60800

DA GUTTER HEATING

Only in connection with the digital ice and snow detectors

MADE IN GERMANY
MADE BY HEMSTEDT

HEM-SYSTEM® DA gutter heating with one-sided connection, XLPE insulating sleeve, seamless sleeve transition, and UV-resistant PVC coating (black).

Technical data	
Nominal voltage	230 volt
Output	approx. 30 W/m
Cold connection	1 x 4.00 m (0.5-1 mm²)
Minimum laying temperature	5 °C
Nominal temperature according to VDE 0253	90 °C
Lowest bend radius	5 x Ad
Resistance tolerance	-5%/+10%
Cold/warm transition	seamless, without shrinking technology
External diameter	approx. 7.90 mm
Insulation	XLPE/PVC
Protection type	IP67
Protection class	2

CE EAC

approx. 30 W/m

DAS gutter heating		
Output W	**Length m**	**Order no.**
120	4.00	36612-04
200	6.00	36612-06
290	10.00	36612-10
370	12.00	36612-12
419	14.00	36612-14
471	16.00	36612-16
627	20.00	36612-20
700	23.00	36612-23
919	30.00	36612-30
1103	35.00	36612-35
1265	41.00	36612-41
1440	49.00	36612-49
1719	55.00	36612-55
2062	70.00	36612-70

Accessories

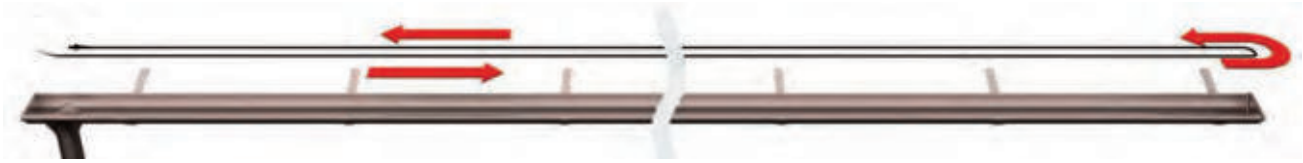
Item name	Order no.
Stainless steel suspension (only for gutter heating)	20075
Stainless steel strain relief clamps (only for gutter heating)	20076
Suspension rope (only for gutter heating)	20074
Spacer bar (assembly bar) see page 67	20063
Edge protection	20103
Repair sleeves on request	
Digital ice and snow monitor (for gutters and open spaces)	93159
Moisture and temperature sensor (for gutters)	93156

As a protective measure, we recommend residual-current-operated protective device (RCD < 30 mA).

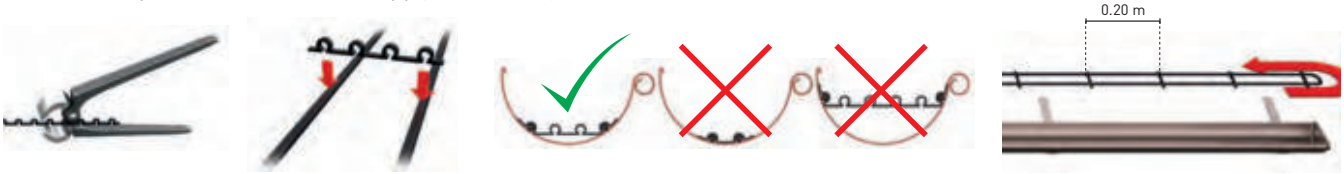
You can find more information in our assembly instructions.
For thermostats see page 62.

Laying cables in the gutter

1.1 Lay out the heating cable in a loop

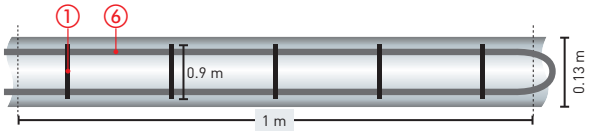


1.2 Cut the spacer bars to size and apply these every 20 cm



What do you have to order?

Calculation model 1
Gutter: Width 0.13 m/length 8 m



What do you have to order?

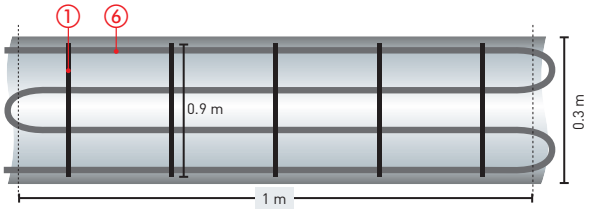
⑥ **Heating cable**
1 m gutter = 2 m heating cable (guided twice)

8 m gutter x 2 = 16 m heating cable
➡ Order no. 38613-16

① **Spacer bars**
1 m gutter = 5 x 0.09 m spacer bars = 0.45 m

8 m gutter = 8 x 0.45 m spacer bars = 3.60 m
rounded up to 4 m, as product sold by meter
➡ 4 x order no. 20063

Calculation model 2
Box gutter: Width 0.30 m/length 15 m



What do you have to order?

⑥ **Heating cable**
1 m gutter = 4 m heating cable (guided four times)

15 m gutter x 4 = 60 m heating cable
➡ 2 x order no. 38613-30

① **Spacer bars**
1 m gutter = 5 x 0.30 m spacer bar = 1.50 m

15 m gutter = 15 x 1.50 m spacer bar = 22.50 m
rounded up to 23 m, as product sold by meter
➡ 23 x order no. 20063

Calculation model 3
Downpipe: Length 10 m
(Includes 1 m frost barrier)

What do you have to order?

⑥ **Heating cable**
1 m downpipe
= 2 m heating cable
(guided twice)

10 m downpipe x 2
= 20 m heating cable
➡ Order no. 38613-20

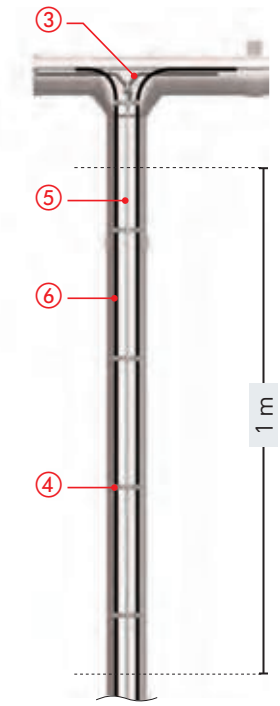
④ **Strain relief clamp**
1 m downpipe
= 4 x strain relief clamp
(4x per meter)

10 m downpipe x 4
= 40 x strain relief clamp
➡ 40x order no. 20070

③ **Stainless steel suspension**
1 x per downpipe
➡ Order no. 20075

⑤ **Suspension rope**
1 m downpipe
= 1 m suspension rope

10 m downpipe
= 10 m suspension rope
➡ Order no. 20074



SPORT LAWNS

Lawn heating, snow load, emergency routes and more ...

ELECTRIC LAWN HEATING

Particularly effective, particularly robust

No more cancelled games in winter:

Cancelled games due to snow or icy ground are a significant financial burden for every club. This is why more and more sports associations are insisting that the lawn must also be kept in a playable condition in winter. There are generally two systems which allow you to fulfil this condition: On one hand, a heating system using water as a conductor and on the other hand, electric heating cables laid approx. 20 cm below the lawn subsoil and above the drainage system.

Advantages of electrical systems

Electrical systems are clearly superior here for several reasons. First of all, of course, they do not freeze, even in the event of extreme drops in temperature and thus withstand damage. On the other hand, when damaged, they do not release any polluting antifreeze agents into the environment. Additionally, more even temperature distributions can be achieved.

With water-conducting systems, hot water is piped through several thousand metres of pipes and cools naturally relatively quickly when running through the system. With an electrical system, the same warm temperature is distributed everywhere immediately and in this way, temperatures can be reached in a very precise manner and be maintained that way, which is important because the lawn itself is actually "hibernating" and should not be subjected to heat or a lot of warmth under any circumstances.

Lawn heating is not just for real lawn – it's about the risk of injury!

Even artificial lawns should actually also be heated in winter. The issue here is effectively the elasticity and hardness of the playing field.

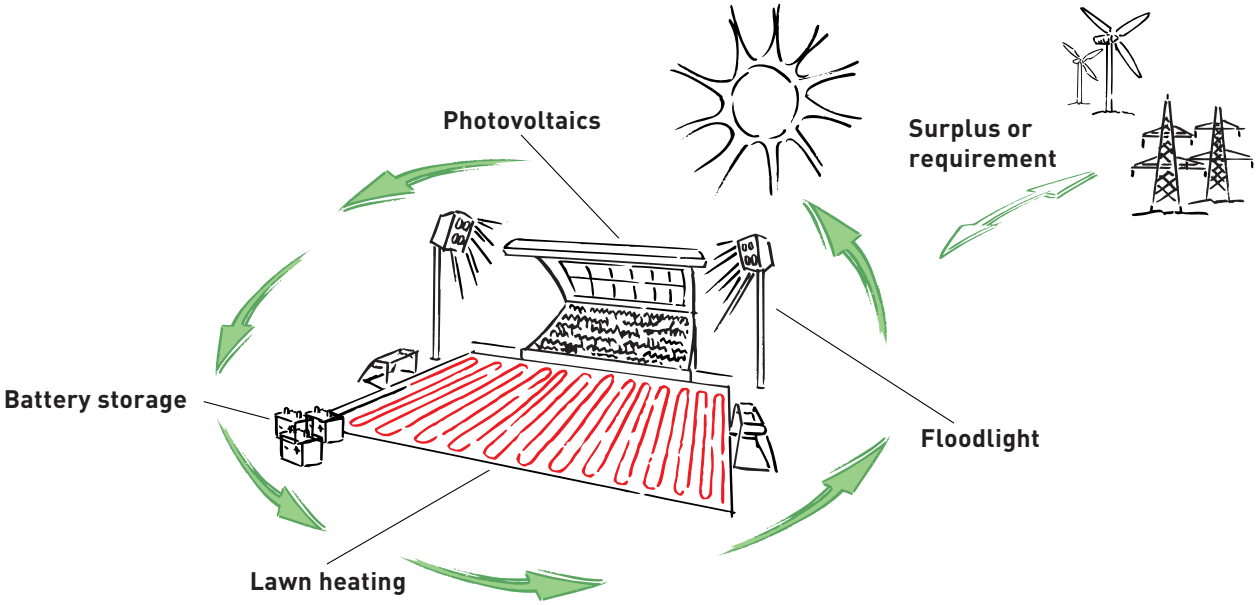
Frozen ground or artificial lawns made almost rigid through cold weather leads to a higher risk of injury to the players.

MINIMISE COSTS – SAVE RESOURCES

The perfect zero-emission stadium

Sustainable, energy-efficient, climate-neutral!

Investing in lawn heating is an important decision. The issue here isn't just the purchasing costs, but also the running costs – and the environmental sustainability. And here, electric lawn heating systems from Hemstedt have clear advantages if planned correctly from the beginning.



Sports facilities are currently offering many areas where solar or even wind power plants can be installed, for example. Heat pumps can also be used effectively. Modern battery systems from Daimler-Benz daughter company "Accumotive", for example, offer the possibility of storing energy obtained here. In this way, a football stadium can be run in a completely self-sufficient manner. Between games, the stadium produces and stores energy itself and, for example, every 14 days before a game, they gradually start up the lawn heating and operate the floodlight system.

Red card for greenhouse effects!

In order for everything to work perfectly, Hemstedt has partners all over Europe who can take on the complete planning, implementation and servicing of your lawn heating system. In this way, you will receive an integral solution, intelligently controlled by experts who have already fitted large stadiums who have been awarded 5 UEFA stars.

HEATING CABLES FOR LAWN AREAS IN STADIUMS AND SPORTS FACILITIES

For use all year round

Lawn heating with heating cables by Hemstedt

Management and representatives of professional sports facilities such as football stadiums or golf courses are starting to use lawn heating more and more.

The hard, frozen ground is thawed, the snowy surface melted and lawn growth extended. In this way, play can be maintained all year round or the season extended, and the field will dry quicker after rainfall. At the same time, the risk of injury to the players is significantly reduced.

Electric lawn heating offers clear advantages over warm water heating, such as lower investment and running costs, quicker use and a higher degree of effectiveness. Hemstedt® heating systems are ideally set up to cope with these hard requirements. They can be used to heat any type of lawn available.

For heating, depending on the requirements, heating cables with an output of 15–20 Watt/m and 230 or 400 Volt are used to deal with hard weather conditions.

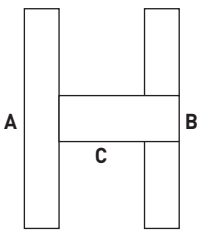
Technical data	
Nominal voltage	400 V
Cold connection	e.g. 2 x 30 m (2.50 mm²)
Minimum laying temperature	5 °C
Lowest bend radius	6 x dA

Element length of e.g. approx. 200 m, is also available with cold connection and sleeve.

Heating cable for lawn areas in stadiums and sports facilities
On request

The following items can be ordered as accompaniments:

Order no.	Description	Quantity/measurement
20021	Wooden spool	500 x 200 x 280
00002	Sleeve	2x per spool
88002-2,5	Cold connection	2.5 mm²
Palette	One-way pallet	1P./ 2 spools



A	B	C	Order no.
500 mm	200 mm	280 mm	20021

All prices on request.

DIN EN/IEC 60800

HEATING CABLES FROM CABLE DRUM FOR SELF-ASSEMBLY

Simple heating cables (1-wire) as drum goods

MADE IN GERMANY
MADE BY HEMSTEDT

Use

The heating cable is suitable for floor heating in concrete. It is also used to melt snow, for frost protection of pipes, gutters and run-offs, and as a lawn heating system.

Structure

- Heating cable, strand
- Tin-plated grounding wire
- PVC external casing
- XLPE insulation
- Aluminium isolation
- External diameter approx. 6.5 mm

Technical data

Max. permissible operating temperature of external casing.....65 °C
Fixed resistance heating
Minimum bend radius.....5 x cable diameter
Resistance tolerance.....-5/+ 10%
Max. permissible nominal voltage.....300/500 V
Minimum volume.....3000 m
Protection type.....IP67

CE EAC

Standard types approx. 10 W/m 230 V

Heating output W	W/m	RE Ohm/m	Element length m	Order no.
204.18	10.01	12.700	20.40	65406-12,700
257.30	10.01	8.000	25.70	65406-8,000
311.40	10.05	5.480	31.00	65406-5,480
383.73	9.99	3.590	38.40	65406-3,590
461.70	9.99	2.480	46.20	65406-2,480
616.82	10.00	1.390	61.70	65406-1,390
727.65	10.01	1.000	72.70	65406-1,000
869.64	10.00	0.700	86.90	65406-0,700
1049.60	10.00	0.480	105.00	65406-0,480
1150.00	10.00	0.400	115.00	65406-0,400
1327.81	10.00	0.300	132.80	65406-0,300
1454.30	10.00	0.250	145.50	65406-0,250
1627.69	10.02	0.200	162.50	65406-0,200
1942.71	9.99	0.140	194.50	65406-0,140

Standard types approx. 17 W/m 230 V

Heating output W	W/m	RE Ohm/m	Element length m	Order no.
267.01	17.12	12.700	15.60	65406-12,700
335.66	17.04	8.000	19.70	65406-8,000
405.60	17.04	5.480	23.80	64506-5,480
501.20	17.05	3.590	29.40	64506-3,590
602.56	17.02	2.480	35.40	64506-2,480
804.60	17.01	1.390	57.30	64506-1,390
948.03	16.99	1.000	55.80	64506-1,000
1133.00	16.99	0.700	66.70	64506-0,700
1369.05	17.01	0.480	80.50	64506-0,480
1499.43	17.00	0.400	88.20	64506-0,400
1732.15	17.02	0.300	101.80	64506-0,300
1897.76	17.02	0.250	111.50	64506-0,250
2121.09	17.01	0.200	124.70	64506-0,200
2535.95	17.02	0.140	149.00	64506-0,140
3356.60	17.04	0.080	197.00	64506-0,080
3719.59	17.00	0.065	218.80	64506-0,065
4249.00	17.06	0.050	249.00	64506-0,050
6011.36	17.08	0.025	352.00	64506-0,025

Accessories

Item name	Order no.
Wooden spool (flange 800 mm/core 320 mm/range 600 mm	20031
One-way pallet	00002

HEMSTEDT PARTNERS IN SPORT

for the perfect stadium

France's Ligue 1 plays on pitches heated by Hemstedt!

The Stade de France as well as the Parc des Princes, the two most important and historic stadiums in France, both have Hemstedt electric lawn heating. Just like stadiums in Lille, Lyon, Le Havre, Saint Etienne and many other cities. The first installation in France was in 2010 in Auxerre. 34 km of Hemstedt heating cables were so convincing that by 2015, a further 500 km of Hemstedt heating cables had been laid in French football stadiums.

Hemstedt solutions for safety and building protection in sports facilities

At Hemstedt, you will find even more solutions for more comfort, safety and building protection in sports facilities, such as

Condensation water drain heating
For the active, needs-regulated frost protection of run-offs e.g. from roofs, stages or drainage below lawns.

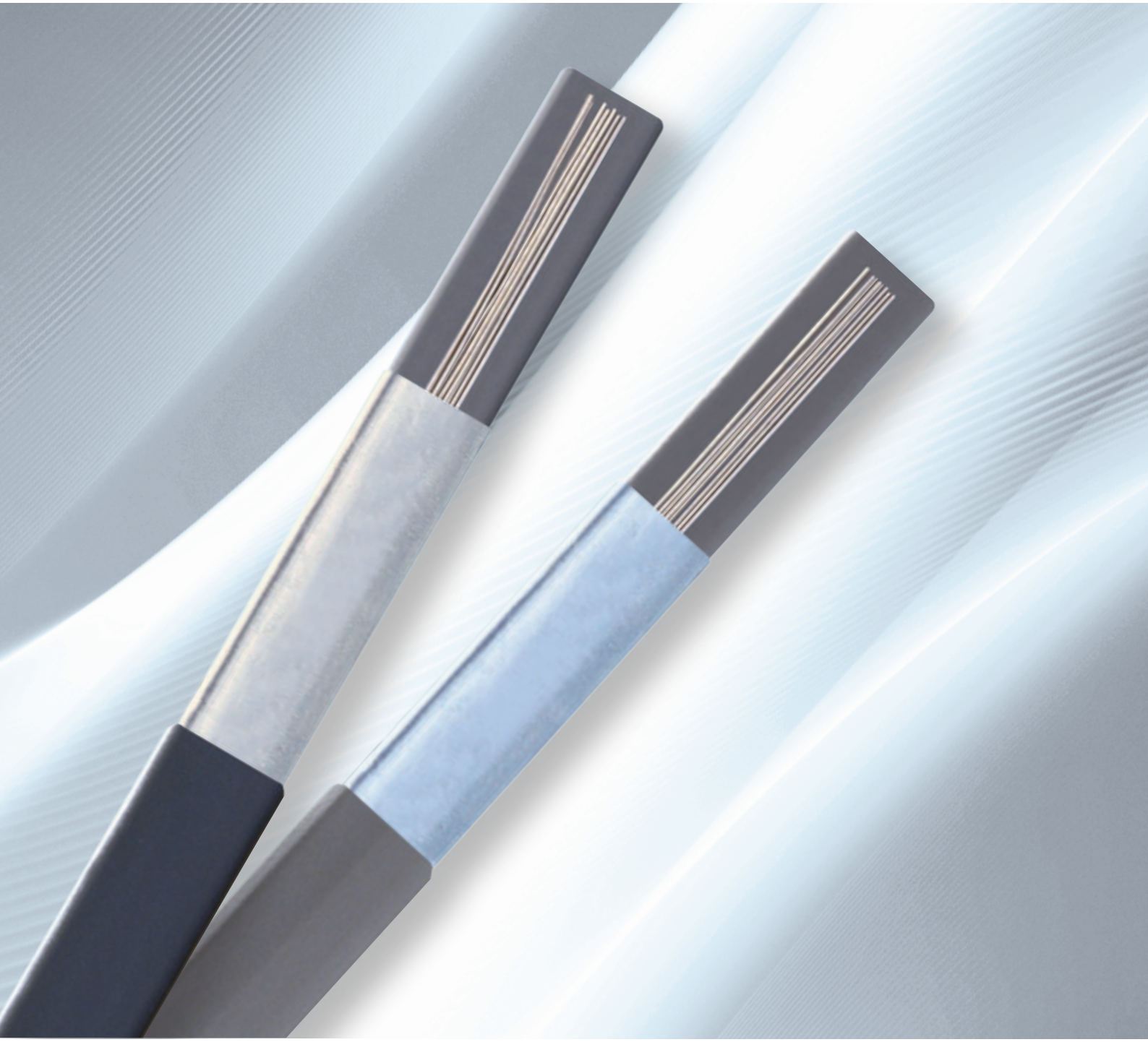
Rooftop heating
For the active avoidance of dangerously high snow loads or snow falling from roofs.

Underfloor heating
For faster drying, e.g. in changing rooms and sanitary areas to minimise slipping hazards.

Open space heating
As protection from black ice and snow, e.g. on escape routes and emergency service entryways.

Floor-level frost protection heating
For ice rinks to protect the foundations and subsoil.

Gutter heating
Frost protection for gutters and downpipes and the active avoidance of icicle formation, e.g. above walkways and stands.



Variable output

FROST PROTECTION AGAINST ICE AND LOW TEMPERATURE MAINTENANCE

for pipes, tanks, containers, valves, gutters

Reliable for frost protection and temperature maintenance

Self-regulating and needs-oriented

Self-regulating heating bands from Hemstedt are the ideal solution for frost protection and maintaining temperature for pipes, vents, containers and gutters. Different types are available depending on how they are used.

The heating bands consist of two parallel copper supply lines with a networked plastic heating element between them where the carbon particles are introduced.

The heating element changes its output depending on the environmental temperature. If the temperature increases, the plastic expands on a molecular level, the carbon particle bonds break open, the resistance increases and the output is lowered. If the temperature cools, the process is reversed and the output increases. Thus, the heating band conforms to the heat requirement at every point.

Advantages at a glance:

- Mounted on spools
- Can be cut to length on site as required
- No overheating, cables can be laid to cross one another
- Variable output
- No temperature limiter required

Easy and quick to install

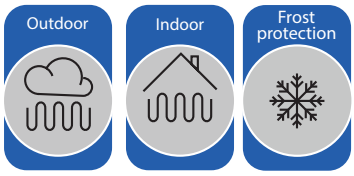
HEM-SYSTEM® heating bands can be cut to the required length on site. The connection technology is easy to assemble. The heating band is fastened with temperature-resistant cable ties to the lower side of the pipes.

Aluminium tape must only be applied to the whole surface for plastic, cast and glass pipes as well as for containers. For larger pipe diameters, several bands are used according to requirements.

HEM-SYSTEM® SELF-REGULATING HEATING BANDS 10/20/30/40 W

Frost protection against ice and low temperature maintenance for pipes, tanks, containers, valves, gutters

MADE IN GERMANY
MADE BY HEMSTEDT



Self-regulating parallel heating bands consist of two parallel copper supply cables embedded in a networked plastic heating element containing carbon particles and with a positive temperature coefficient, meaning that the heating element changes its output depending on the environmental temperature. If the temperature increases, the plastic expands on a molecular level, the carbon particle bonds break open, the resistance increases and thus the output is lowered. If the temperature cools, the process is reversed and the output increases. Thus, the heating band conforms to the heat requirement at every point of the heat output.

The reliable solution for your frost protection and temperature maintenance problems.

CE DVE EAC

Technical data

Nominal voltage	230 V
Tolerance	-0/+5 W
Output at 10 °C	10, 20, 30, 40 W/m
Min. laying temperature	-35 °C
Max. permitted workpiece temperature	65 °C switched on 80 °C switched off
Temperature class	T6
Max. protective braiding resistance	< 18.2 Ohm
Smallest bend radius	25 mm
Polyolefin casing	black
Weight (from/to)	90-105 kg/km
Protection type	IP67
Protection class	2

HEM System – self-regulating heating bands with protective braiding

Order no.	C characteristics	m	Thickness x width mm	Nominal output W/m* at +5 °C	Form of supply
69500-10	16 A	188	4.9 x 13.0	11.5	Sold by the meter 100 m drum** 200 m drum** 500 m drum***
	20 A				
	25 A				
69500-20	16 A	93	4.9 x 13.0	23	Sold by the meter 100 m drum** 200 m drum** 500 m drum***
	20 A	116			
	25 A	142			
69500-30	16 A	63	5.3 x 15.6	33.5	Sold by the meter 70 m drum** 140 m drum** 500 m drum***
	20 A	87			
	25 A	102			
69500-40	16 A	160	5.3 x 15.6	40	Sold by the meter 70 m drum** 140 m drum** 500 m drum***
	20 A	76			
	25 A	96			
39302					Desired length assembled at the factory with 1.80 m cold end (H05RN F 3 x 2.5 mm², black) and with end connection set

* Nominal output with insulated metal pipes at +5 °C (W/m)
** We will calculate € 3.25 per spool + € 11 packing costs.
*** We will calculate € 5.50 per spool + € 8/OWP or € 5/HP.

ACCESSORIES FOR HEM SELF-REGULATING HEATER BANDS

MADE IN GERMANY
MADE BY HEMSTEDT

	Bestell-Nr.
100 m Wooden spool, 300 x 120 x 200, Surcharge for small quantities	20025
200 m Wooden spool, 500 x 200 x 280, Surcharge for small quantities	20021
500 m Wooden spool, 600 x 600 x 325	00002

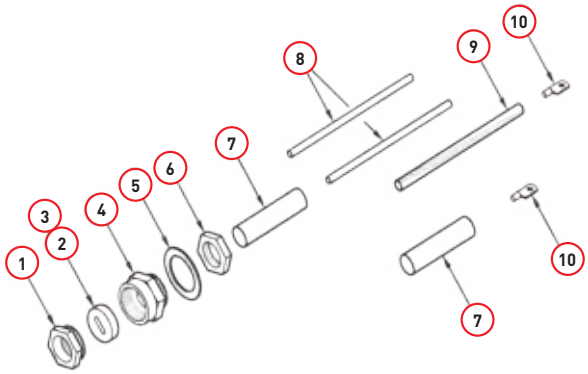
Assembled heating cables article 39302		
Heating length (m)	Cold end (m)	W/m
1,00 – 1,99	1,80	10, 20, 30, 40
2,00 – 2,99	1,80	10, 20, 30, 40
3,00 – 3,99	1,80	10, 20, 30, 40
4,00 – 4,99	1,80	10, 20, 30, 40
5,00 – 5,99	1,80	10, 20, 30, 40
6,00 – 6,99	1,80	10, 20, 30, 40
7,00 – 7,99	1,80	10, 20, 30, 40
8,00 – 8,99	1,80	10, 20, 30, 40
9,00 – 9,99	1,80	10, 20, 30, 40
10,00 – 10,99	1,80	10, 20, 30, 40
11,00 – 11,99	1,80	10, 20, 30, 40
12,00 – 12,99	1,80	10, 20, 30, 40
13,00 – 13,99	1,80	10, 20, 30, 40
14,00 – 14,99	1,80	10, 20, 30, 40
15,00 – 15,99	1,80	10, 20, 30, 40
16,00 – 16,99	1,80	10, 20, 30, 40
17,00 – 17,99	1,80	10, 20, 30, 40
18,00 – 18,99	1,80	10, 20, 30, 40
19,00 – 19,99	1,80	10, 20, 30, 40
20,00 – 20,99	1,80	10, 20, 30, 40
21,00 – 21,99	1,80	10, 20, 30, 40
22,00 – 22,99	1,80	10, 20, 30, 40
23,00 – 23,99	1,80	10, 20, 30, 40
24,00 – 24,99	1,80	10, 20, 30, 40
25,00 – 25,99	1,80	10, 20, 30, 40
26,00 – 26,99	1,80	10, 20, 30, 40
27,00 – 27,99	1,80	10, 20, 30, 40
28,00 – 28,99	1,80	10, 20, 30, 40
29,00 – 29,99	1,80	10, 20, 30, 40
30,00 – 30,99	1,80	10, 20, 30, 40

Descprition:
Connection cable 3x 2,5 mm²

Connection cable:
1,80 m inclusive

Power:
10, 20, 30, 40 Watt/m

Application:
door frame heating, pipe trace heating



1. Cover
2. & 3. Seal
4. Screw fitting
5. Seal
6. Lock nut
7. Shrinking sleeve Ø 12:4 length 5 cm (number: 2)
8. Shrinking sleeve Ø 3:1 length 10 cm (number: 2)
9. Shrinking sleeve Ø 6:2 length 10 cm
10. Earth cable connection (number: 2)

Connection and end connection set accessories	
	Order no.
Connection and end connection set	26142

SH SILICON HEATING CABLES

5 W/m/10 W/m low voltage

HEM silicon heating cables are available as single conductors and double conductors.

MADE IN GERMANY
MADE BY HEMSTEDT

CE

Technical data	
Output	depending on heat dissipation conditions
Max. temperature	150 °C
Voltage	on request
Diameter	approx. 3.9 mm without copper braiding
Connection	two-sided PVC connection cable 1.00 m (1 x 0.75 mm²)
Protection type	IP67
Protection class	3 (safety extra-low voltage)

5 W/m 12 V

Element length m	Voltage V	Leistung Watt	Order no.
2.08	12	10.50	42505
3.90	12	19.50	42505
6.66	12	33.30	42505
8.95	12	44.75	42505
10.70	12	53.50	42505
12.65	12	63.25	42505

10 W/m 12 V

Element length m	Voltage V	Output Watt	Order no.
1.90	12	19.00	42506
3.80	12	38.00	42506
6.32	12	63.20	42506
7.59	12	75.90	42506
8.94	12	89.40	42506
12.65	12	63.25	42506

5 W/m 24 V

Element length m	Voltage V	Output Watt	Order no.
3.09	24	15.45	42507
5.45	24	26.85	42507
7.80	24	39.00	42507
10.70	24	53.50	42507
12.56	24	63.25	42507
16.08	24	80.00	42507
17.88	24	89.40	42507
21.47	24	107.30	42507
25.30	24	126.50	42507

10 W/m 24 V

Element length m	Voltage V	Output Watt	Order no.
2.95	24	29.70	42508
5.50	24	55.00	42508
9.40	24	94.00	42508
11.31	24	113.10	42508
12.65	24	126.50	42508
15.18	24	150.80	42508
17.90	24	179.00	42508

Accessories

Item name	Order no.
Cold connection for extension Wire colour (blue/blue) 1.00 m (1 x 0.75 mm²)	81201-0,75 BL
Spacer bar (assembly bar)	20060
Control box 0 °C to +80 °C 2000 W/230 V with analogue control Including 10.00 m sensor	98406
Replacement sensor 10.00 m	94010
Component for a sleeve	26000
Assembly sleeve by factory (1x)	20304

For further versions, see pre-assembled heating cables brochure.

GSISI SILICON HEATING CABLES

HEM silicon heating cables for installation in natural stone heating

MADE IN GERMANY
MADE BY HEMSTEDT

Active building protection and comfortable climate – with energy-efficient wall heating.

Building protection with wall heating
This area of application for wall heating is probably the most common. Because often, old and new buildings have moisture in the masonry because condensation water forms, e.g. on external walls or on walls leading to colder building components. Or consider the condensation moisture in bathrooms, for example. Wall heating reliably ensures your building structure remains dry and prevents expensive consequential damage.

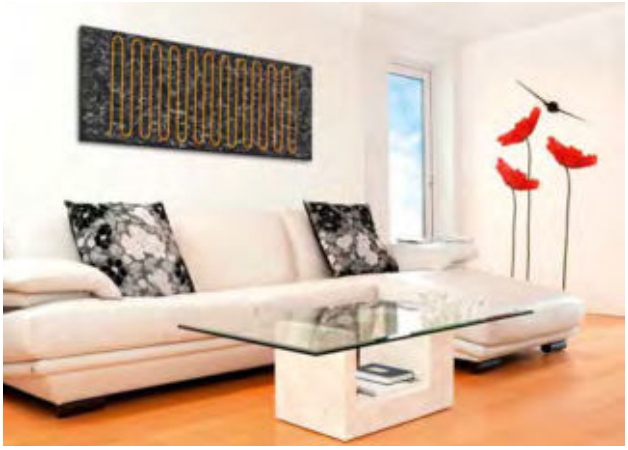
Comfortable climate with wall heating and less dust!
Particularly in combination with underfloor heating, wall heating can make a significant contribution to an ideal room temperature. Pleasant radiant heat from all sides and above all very few movements of air thanks to the very even distribution of heat. The consequence: No dust is whirled up and conveyed into the room air – a bonus for allergy sufferers.

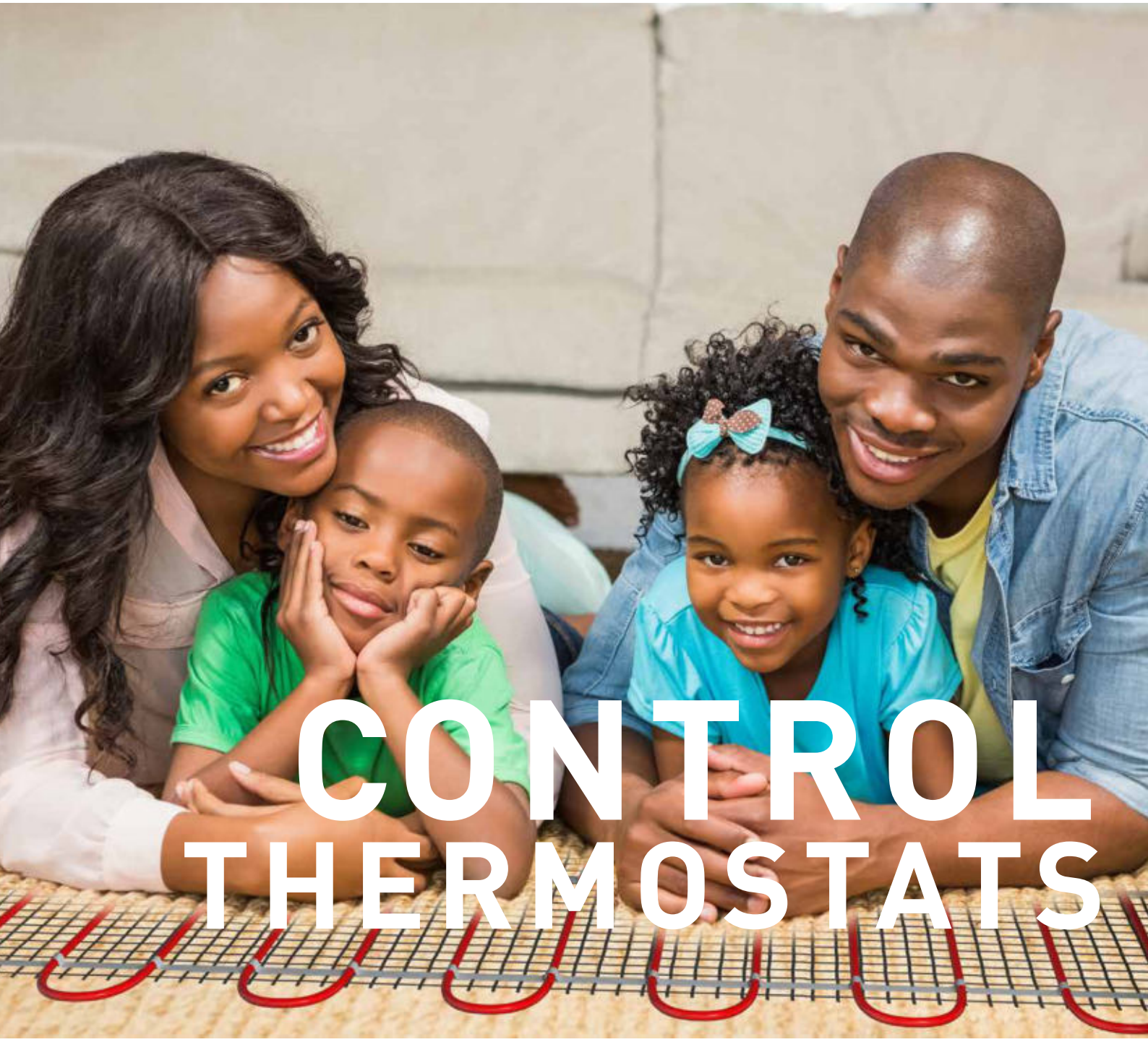
CE VDE

Technical data	
Voltage	230 Volt
Output	approx. 40 to 67 W/m
Minimum laying temperature	5 °C
Lowest bend radius	5 x Ad
Resistance tolerance	-5%/+10%
VDE	approval (heating cables)
Nominal temperature	140 °C
External diameter	4.80 mm
Cold/warm transition	with shrink sleeve and temperature monitor 105 °C or 120 °C

Prices and lengths depending on project, on request

Order no.	472…
Connection cable	2 x 0.75 mm² blue/brown; white coating
	2 x 1.00 mm² blue/brown; white coating





CONTROL THERMOSTATS

Optimise costs and advantages with the right control technology.

From frost monitors to intelligent building management – everything under control

Optimise costs and advantages with the right control technology!

- Care-free frost protection
- Ice and snow detectors
- Controls for individual rooms
- Energy management
- Own consumption optimisation
- Adaptive controls

The right controls and thermostats for any purpose

It doesn't matter whether it's frost protection for open spaces, underfloor heating or lawn heating in a football stadium: Heating systems are only as good as their regulating technology: Thanks to the exact temperature monitoring and well configured on and off switching of the heating cables, a large amount of energy can be saved without scrimping on comfort and safety. Hemstedt offers the right control for every area of use.

Intelligent control systems

The adaptive control systems are interesting in particular. These monitor all electric consumers in the house and reconcile these using data from the energy suppliers as well as weather forecasts. In this way, own consumption from solar energy can be optimised or overnight energy can be used in a more efficient manner.

Safety and building protection with Hemstedt technology

Snow-free driveways, ice-free helicopter landing pads, frost protection for water pipes and garden ponds with optimal energy efficiency. This is what you get from the Hemstedt ice and snow detectors and frost monitors. Heating cables are only activated when there is an acute need for them. But in an absolutely reliable fashion!

Operating comfort and design

Some might like to control the room temperature, pool heating and heated driveways easily with the app; others might prefer having the classic dial control in each room. Hemstedt offers the most varied of controls for all tastes and all needs.

MADE IN GERMANY
MADE BY HEMSTEDT

Dual circuit controller

Everything under control, everything in view

The Hemstedt regulator is specially designed for GREEN ELECTRIC MAT®, GREEN ACCU MAT® and TWIN TURBO MAT® and controls the two heating conductors separately and in a manner optimised for consumption and need. A clear touch display allows the desired room temperature to be set conveniently or time-controlled operation with four individually programmable weekly programmes.

Art.-Nr. 93082

Technical data

Nominal operating voltage ..... AC 230 V ±10 %, 50 Hz
Nominal load ..... max. 10 A at AC 230 V; two-pole with seperate relay, each max. 5 A
Floor temperature restriction .... adjustable from 20 to 40 °C
Max. adjustable range.....10 .. 40 °C
Floor sensor monitoring ..... of short circuit an interruption
Integration into outlet sockets ... according to DIN 49073, floating
Protection class ..... II, with corresponding integration
Protection type ..... IP20, use at room temperature
Device security and EMC ..... according to EN 60730-1, EN 60730-2-9, EN 50559
Sensor ..... 2 m

Dual circuit controller	**Order no.** 93082

As a protective measure, we recommend residual-current-operated protective device (RCD < 30 mA).
Assembly in UP docket using an intermediate frame 50 x 50 (in accordance with DIN 49075) in almost all wall sockets.
Fits in DIN wall sockets, compatible with Busch-Jäger, Jung, etc.

Spare temperature sensor for dual circuit controller	93089-Fuehler

U-UP clock thermostat

The intelligent temperature monitoring system

The Hemstedt clock thermostat has a clear display where all functions can be operated quickly and easily. In this way, the integrated timer in the clock thermostat allows the heating programmes to be set individually. The desired temperature and actual temperature, time, night reduction, etc. – everything under control. The clock thermostat from Hemstedt does not leave anything to be desired. It is also adaptive: Thanks to a self-optimisation system, the clock thermostat can calculate the heating up and cooling down times. Independent of the room heating, the user can set the floor temperature individually according to their wishes. Thanks to the time-controlled heating operation, economic operation is ensured.

Art.-Nr. 93089

Technical data

Hemstedt HEM U intelligent temperature monitoring: Thermostat with self-learning function, programmable, time-switch zones, with sensor (digital)

Nominal voltage .....230 V/50 Hz
Switching capacity.....16 (2) A
Settings range .....+10 °C to +40 °C with mechanical range restriction under the setting dial
Switching difference .....approx. 1.5 K
Display .....heating mode
Temperature reduction.....freely selectable within the control range (via external switch/pilot clock)
Temperature sensor .....NTC 4 m in accordance with DIN 44574. If the sensor fails or there is a short circuit, the heating is switched off
Protection type.....IP30 – protection class II in accordance with the corresponding assembly
Casing colour.....similar to RAL 9010 pure white

Clock thermostat	**Order no.** 93089

As a protective measure, we recommend residual-current-operated protective device (RCD < 30 mA).
Assembly in UP docket using an intermediate frame 50 x 50 (in accordance with DIN 49075) in almost all wall sockets.
Fits in DIN wall sockets, compatible with Busch-Jäger, Jung, etc.

Spare temperature sensor for clock thermostat	93089-Fuehler-RO

PA-UP temperature control with points scale

MADE IN GERMANY
MADE BY HEMSTEDT

For everyone who likes it classic!

Simple, clear, yet efficient. The room thermostat with points scale from Hemstedt is the classic among room thermostats for underfloor heating systems. A switch, a control, nothing else. But it's still efficient! An integrated temperature sensor monitors the room temperature and it is only heated as much as is desired. In addition, there is a night reduction option available which is indicated on the LED display of the Hemstedt room thermostat. The Hemstedt room thermostat design is simple and timeless. It fits into every DIN wand socket and thus matches all common light switches. This makes installation, and retrofitting, particularly simple.

Technical data

Nominal voltage ..... 230 V/50 Hz +-10%/-15%
Switching capacity..... 16 (2) A
Settings range..... +10 °C to +40 °C with mechanical range restriction under the setting dial
Displays (LED) ..... heating (red) and subsiding (green)
Temperature reduction..... 5 K via external switch/pilot clock
Temperature sensor ..... NTC 4 m in accordance with DIN 44574. If the sensor fails or there is a short circuit, the heating is switched off
Protection type..... IP30 – protection class II in accordance with the corresponding assembly
Casing colour..... similar to RAL 9010 pure white

Art.-No. 93088

PA-UP temperature control with points scale and sensor (analogue)	**Order no.** 93088

As a protective measure, we recommend residual-current-operated protective device (RCD < 30 mA).
Assembly in UP docket using an intermediate frame 50 x 50 (in accordance with DIN 49075) in almost all wall sockets.
Fits in DIN wall sockets, compatible with Busch-Jäger, Jung, etc.

Spare temperature sensor for analogue control	93088-Fuehler

CE VDE EAC

DES ICE AND SNOW DETECTORS
Digital

MADE IN GERMANY
MADE BY HEMSTEDT

The digital ice and snow detector has the task of identifying ice and snow at an early stage and keeping the monitored areas free by switching on a thaw function, in connection to with one or two combined moisture and temperature sensors.

Technical data	
Nominal voltage	1/N/AC, 50 Hz, 230 V, in accordance with DIN EN 60730
Voltage range	230 V +6/-6%
Nominal output	approx. 10 VA
Output contact	Load max. 250 V~, 6 (2) A
Surrounding temperature	0 to 50 °C, thawing not permitted
Protection class	II in accordance with DIN 57700, for installation in distribution cabinet
Weight	approx. 0.4 kg

Art.-No. 93159

DES ice and snow detector	
Item name	**Order no.**
Digital ice and snow monitor (for gutters and open spaces)	93159
Moisture and temperature sensor (for gutters)	93156
Ice sensor with 6.00 m supply line, with casing (for outdoors)	93167

As a protective measure, we recommend residual-current-operated protective device (RCD < 30 mA).

CE

FR FROST MONITOR AND CONTROL
For gutter heating

This device is a meaningful/affordable version for the digital detection of ice and snow and is used to regulate gutter heating in a cost-saving way. The critical temperature range is captured by two controllers so that the heating is only in operation when there is actually a danger of freezing moisture. The heating is therefore only on in the critical range of -5 °C to +5 °C.

Art.-No. 93167

Technical data	
Nominal voltage	230 V AC
Switching power	16 (4) A
Surrounding temperature	-30 to +50 °C
Temperature range	-20 to -35 °C
Protection class	IP65
Dimensions	122 x 120 x 55 mm
Contact	1 opener/1 closer

Art.-No. 93160

FR frost monitor and controller	
Item name	**Order no.**
Frost monitor and control for gutter heating	93160

As a protective measure, we recommend residual-current-operated protective device (RCD < 30 mA).

ACCESSORIES

Installation of home and building technology made simple.

D SPACER BARS

For attaching heating cables

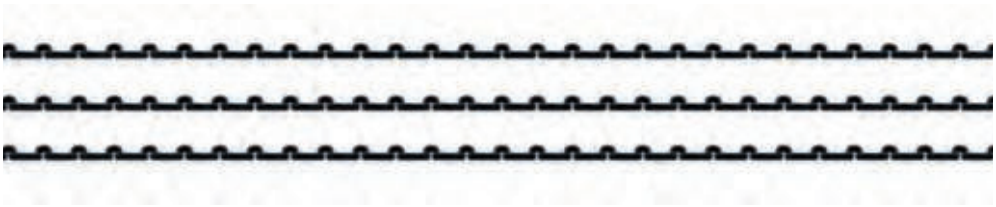
MADE IN GERMANY
MADE BY HEMSTEDT

- **Heating mats can be manufactured with spacer bars.**
- **Thanks to the grid dimension of the spacer bars, different Watt/m²-heating mat production is possible.**
- **Application examples: Heating mats, heating cables and heating loops.**
- **Not suitable for bitumen.**
- **Halogen-free and UV-resistant.**

Space bars					
Item name	Length m	Grid mm	Cable diameter mm	Bar width mm	Order no.
Space bar MS-1	~ 1,00	20,00	3,5 – 4,5	8	20060
Space bar MS-2	~ 1,00	25,00	4,5 – 5,5	8	20061
Space bar MS-3	~ 1,00	25,00	5,6 – 6,5	8	20062
Space bar MS-4	~ 1,00	25,00	6,6 – 8,0	8	20063

Packaging unit VPE 10 pieces

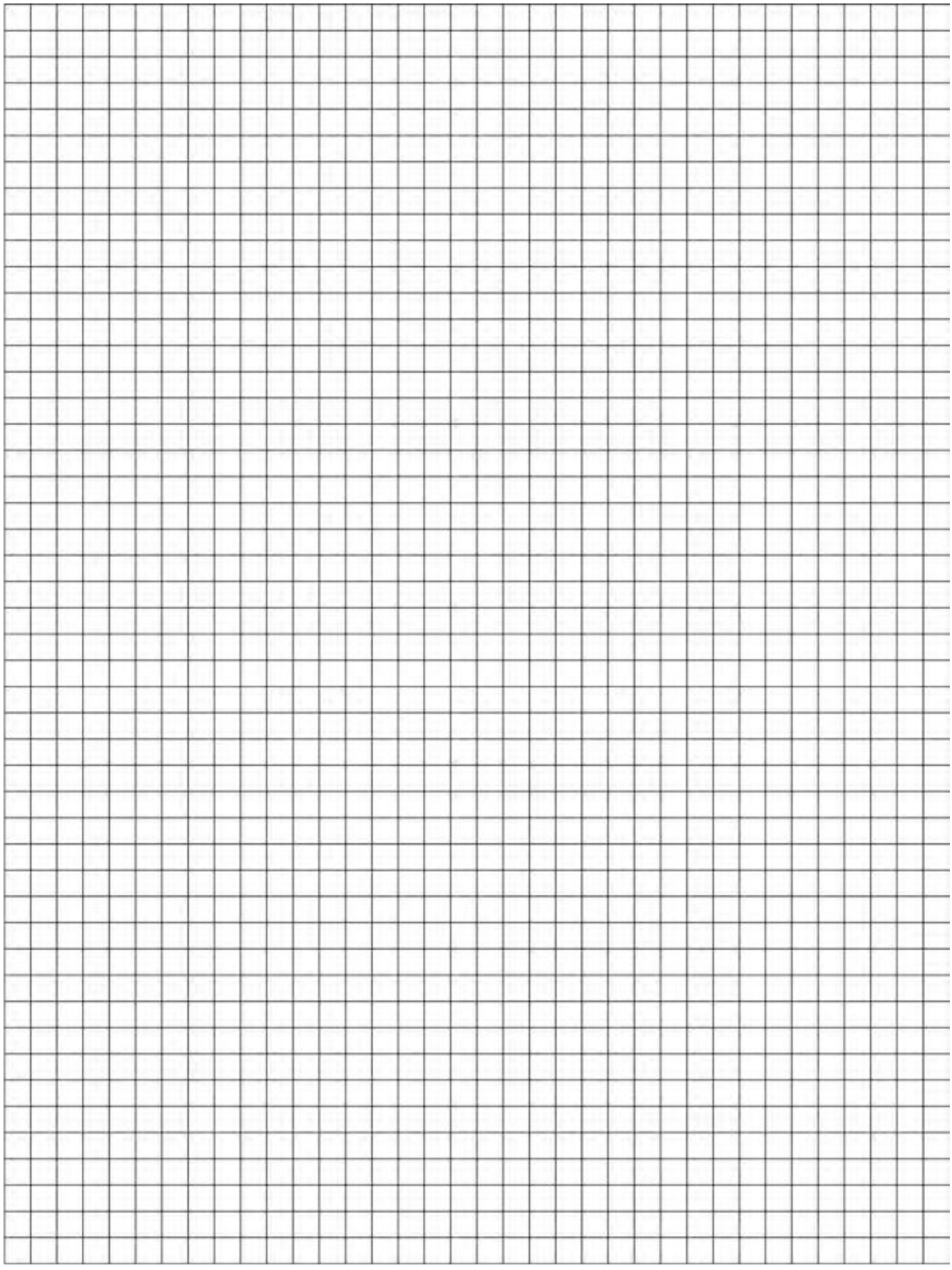
CE



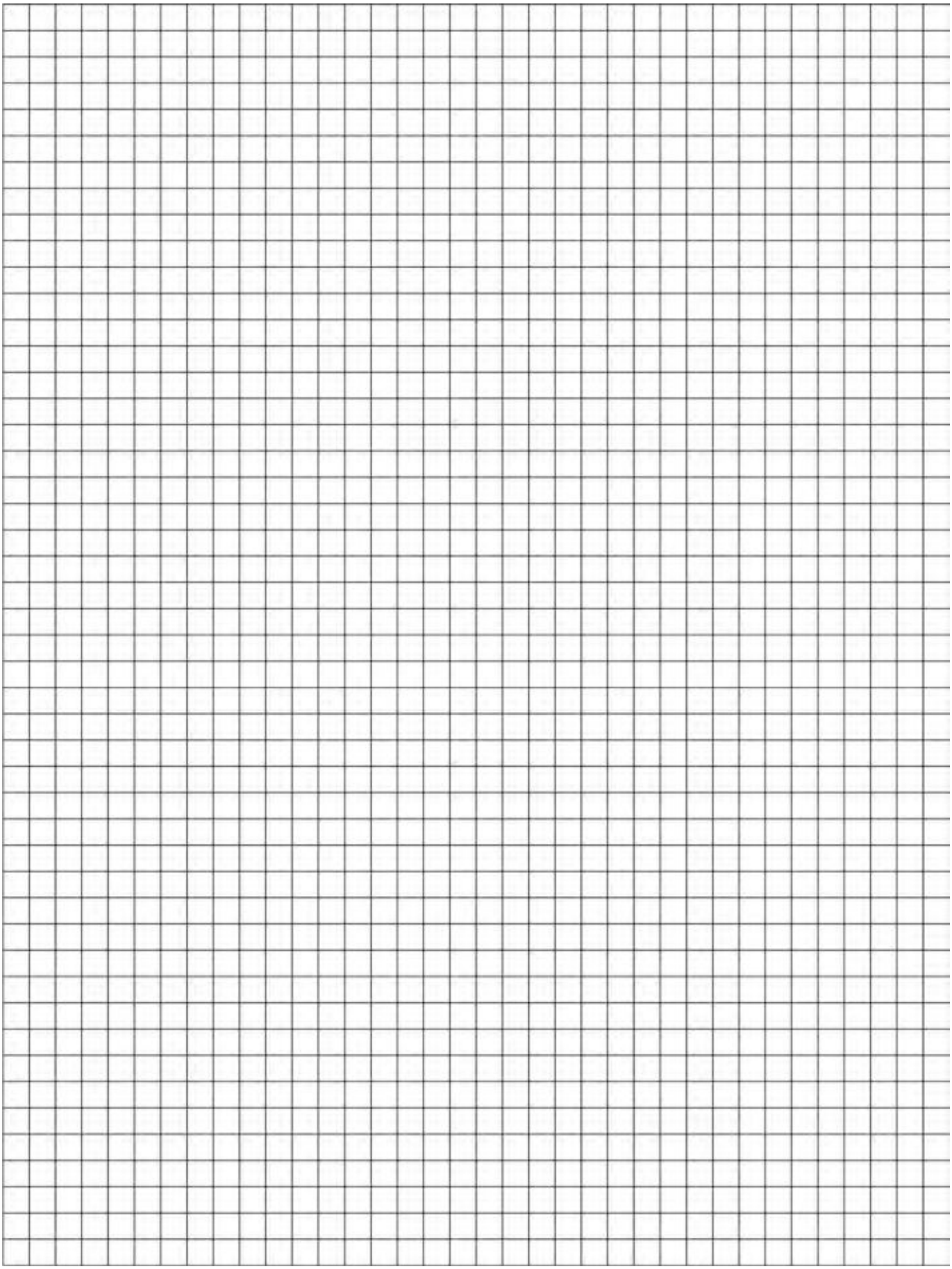
Application examples:

- **Heating mats**
- **Heating cables**
- **Heating loops**

NOTES



NOTES

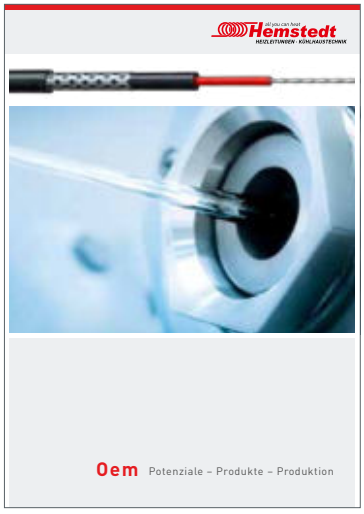


HEMSTEDT – EVERYTHING UNDER ONE ROOF

Our range of services

Hemstedt is the successful specialist and reliable OEM partner for innovative electric underfloor heating systems. Together with consulting, project planning and development, cold storage technology and special solutions round off the portfolio.

Benefit from a comprehensive range from one source:



Legal Notice

Hemstedt GmbH
Schleicherweg 19
74336 Brackenheim
Germany
Tel: +49 (0) 7135/9898-0
Fax: +49 (0) 7135/2197
Email: office@hemstedt.de
Web: www.hemstedt.de

Trade register: HRB 320170, Heilbronn
VAT ID no.: DE145773309

Managing directors: Dieter Hemstedt, Andreas Hemstedt, Sabine Hemstedt

Worldwide: Direct

As a global player, Hemstedt GmbH supplies and supports international customers and projects, together with overseas representatives on all continents, directly from the main factory in Brackenheim.

all you can heat
Hemstedt®
HEIZLEITUNGEN · KÜHLHAUSTECHNIK

Tel: +49 (0) 7135/9898-0
Fax: +49 (0) 7135/2197
Email: office@hemstedt.de
Web: www.hemstedt.de