

DECOUPLING # WARMING # FEELING GOOD

DECOUPLING MAT
WITH ELECTRIC UNDERFLOOR
HEATING FOR NEW
BUILD/RENOVATION

DURAL

DURABASE CI-H/DEVI



*You will love
your floor*



THE **EVOLUTION** OF COMFORT HEATING

In the beginning there was fire - and with fire came heat. The technological development of available and controllable heat has accompanied the entire development of mankind and is never actually complete, but must always adapt to current economic and ecological conditions.

The available energy potential has always changed over the centuries. At the moment, we are saying goodbye to open fires, but not to heat.

Wind power, storable solar power and heat exchangers in the energy mix with existing technologies such as gas or oil heating systems and solid fuel heating systems enable highly customised concepts for generating comfortable room temperatures for all generations.



One of the most stable forms of energy in modern times is electricity. The sheer variety of ways in which electricity can be produced speaks in favour of its use in the generation of room heating.

In new-build and refurbishment projects, there is a growing demand for efficient construction and thermal insulation to reduce the amount of energy required.

Individual, durable heating concepts that are customised to individual living areas are therefore in demand.

The DURABASE CI-H decoupling mat in combination with the DEVI by Danfoss electrical heating and control components fulfils all these requirements.

OPTIMAL WITH **SOLAR AND WIND POWER**

The result is maintenance-free, electric underfloor heating systems, which can also be installed on critical substrates in combination with heat-retaining ceramic and natural stone floor coverings for energy-efficient properties.



*you will love
your floor*



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CONTROLLABLE HEAT IN **ALL ROOMS**

LIVING ROOM/DINING ROOM

When laying the individual heating cable, you decide whether the DURABASE CI-H/DEVI underfloor heating should be the primary or supporting comfort heat for your heating system, which is particularly advantageous in large, open-plan rooms. After renovation work, the DURABASE CI-H decoupling mat also protects the new tile covering against stresses and crack transmission from the old covering or substructure.

BATHROOM

A high level of comfortable warmth is required here, precisely when you are doing your morning routine in minimal attire or stepping into the shower.

The underfloor heating ensures a pleasant flow of heat from bottom to top. Bare feet appreciate the warmth and the heated tiled floor dries much faster. After using the bathroom, it's time to switch off and save - no problem with the DEVI thermostat control.

STUDY

You usually only feel the cold in a room when it's too late. This is particularly true for the study.

If a DURABASE CI-H/DEVI underfloor heating system is installed under the ceramic floor covering, spending long periods of time at your desk will be much more pleasant and cosy. Your feet stay warm and, as the ambient heat rises from midday onwards, the programmed thermostat control adjusts the room climate to suit your sense of warmth.

KITCHEN

In the kitchen, various heat sources come together throughout the day, e.g. the hob or the oven. If you use DURABASE CI-H/DEVI underfloor heating as a convenient heat source here, the floor will stay warm exactly when you want it to. And the extractor fan removes unpleasant odours, but not the cosy warmth.

CHILDREN'S ROOM/BEDROOM

DURABASE CI-H/DEVI underfloor heating really comes into its own in children's rooms. Children like to play on the floor and need a higher ambient temperature than adults as they grow. This is good for their health and the underfloor heating hardly stirs up any dust. The air does not become dry and during the night you can regulate the temperature individually as in all other rooms.

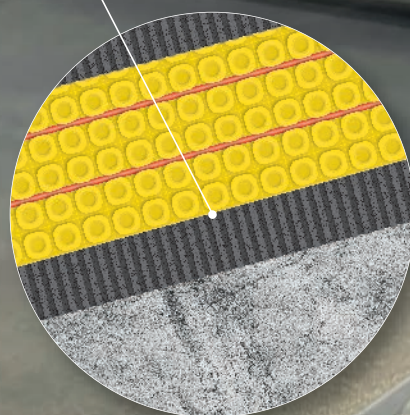
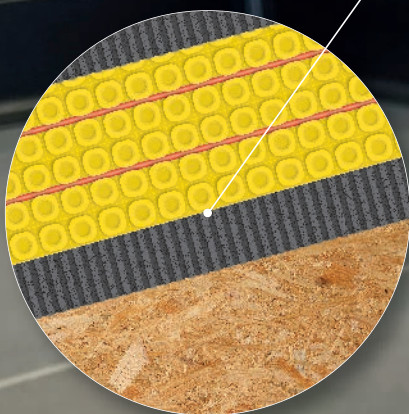
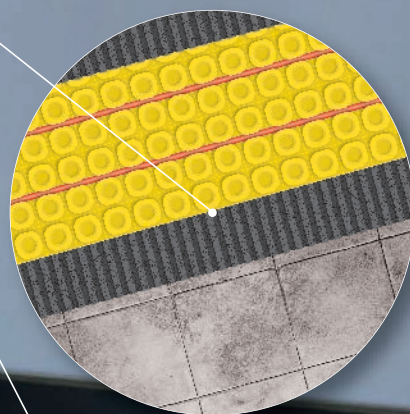


Laying the DURABASE CI-H decoupling mat in thin-bed adhesive

On critical old floor coverings

On new/old screed or concrete

On problematic subfloors Wooden
floors/OSB boards



DECOUPLING MAT DURABASE CI-H

DECOUPLING OF CRITICAL OLD FLOOR COVERINGS DURING RENOVATION

Thanks to the low material thickness of just 6 mm, the DURABASE CI-H decoupling mat is ideal for laying on existing old coverings such as damaged or outdated tiling, as well as critical screed and concrete substrates. The decoupling mat can be laid directly after the cement is ready to be walked on.

DECOUPLING PROBLEMATIC SUBSTRATES DURING RENOVATION

It is difficult to assess the contraction behaviour of existing mixed substrates or wooden substrates (OSB boards). By laying the DURABASE CI-H decoupling mat on critical substrates, contractions can be compensated for and any cracks that may occur can be bridged. Its use protects the covering and the covering joints permanently from damage - ideal for the installation of electric underfloor heating.

DECOUPLING IN NEW BUILDINGS

The floor is protected against moisture, cracks from the substrate (screed shrinkage) are not transferred to the tile covering and the decoupling ensures a durable and attractive floor covering.

Available areas	1 / 2.5 / 5 / 7.5 / 15 m ²
Width	100 cm
Material thickness	6 mm
Material	Polyethylene, yellow
Packaging	1 mat sheet 1 m ² 1 roll 2.5 / 5 / 7.5 / 15 m ² 1 pallet 9 x 15 m ²
Processing	Surface bonding in thin-bed adhesive

LAYER STRUCTURE/INSTALLATION

Top layer: Tiles or natural stone
Tile adhesive
DEVIcomfort 10T heating cable
DURABASE CI-H decoupling mat
Tile adhesive
Suitable substrates:
Constructions such as wooden floors, OSB,
screed, fresh screed (from walkable), concrete





Take a photo of the respective QR codes with your mobile phone. Then place your mobile phone on the marking and see how easy it can be to lay the DEVIcomfort 10T heating cable.
(Data transfer charges may apply)

DEVICOMFORT 10T HEATING CABLE

DEVicomfort 10T is a 360° shielded two-wire heating cable of particularly high quality with a resistant outer sheath (not UV-resistant). The round profile and robust design enable quick, uncomplicated and safe installation of underfloor heating indoors.

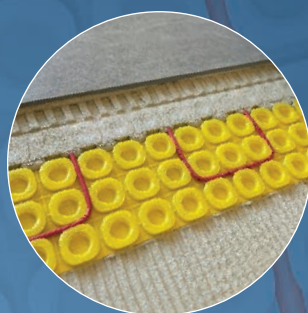
The PTC thermistor with the solid conductors simplifies clamping work. The clearly recognisable transition sleeve from the heating cable to the PTC thermistor prevents unintentional installation of the heating cable in the wall. To ensure a long service life, a comprehensive quality check is carried out during the heating cable production process. The ohmic resistance is measured and the insulation resistance is monitored by means of a high-voltage test. We can therefore offer you the extended DEVI guarantee for the entire floor construction.

INSTALLATION

Simply click the DEVicomfort 10T heatsealing band (red) into the gaps between the studs of the DURABASE CI-H decoupling mat. Run the hot conductor up to the wall, then lay the cold conductor (black) flush-mounted up to the sensor. Completely seal the DURABASE CI-H decoupling mat with flexible adhesive for the subsequent installation of a tile or natural stone covering.

Detailed installation instructions can of course be found at dural.com

Nominal voltage	230 V~
Structure	Round, double conductor with 100% shielding, one PTC thermistor
Output	10 W/m @ 230 V~
Max. permissible operating temperature, on / off	85 °C / 90 °C
Cable thickness	4 mm
Deformation resistance	600N
Tensile strength	120N
Conductor insulation	FEP
Outer sheath	Lead-free PVC
Shield	Aluminium foil; 0.5 mm ² , tinned copper wire
PTC thermistor	4 m DTWB, 2 x 1.0 mm ² , with shield
Min. installation temperature	-5 °C
Bending Ø, min.	5 cm
IP Class	IPX7
Set with double-sided adhesive tape	Double-sided adhesive tape 25 mm x 50 m
Set with Flexpipe	Flexpipe, inside ø 6.7 mm, outside ø 10 mm, 2.5 m, black
Available heating cable lengths	10 / 20 / 28 / 41 / 50 / 57 / 70 / 81 / 90 / 100 / 129 / 142 / 170 m
Conformity to standards	IEC60800:2009



Electrical systems and equipment may only be installed, modified or maintained by a qualified electrician or under the direction and supervision of a qualified electrician. The electrotechnical regulations must be observed (§ 3 Para. 1 DGUV-V 3).

PTC thermistor cable for flush-mounted installation in the wall from the transition sleeve to the thermostat.

PTC thermistor cable for precise installation on the floor in the studded structure of the DURABASE CI-H decoupling mat.



**Dry rooms,
thermally insulated
floors**

Recommended
floor heating output
 $\geq 100 \text{ W/m}^2$



Wet rooms

Recommended
floor heating output
 $150\text{-}180 \text{ W/m}^2$

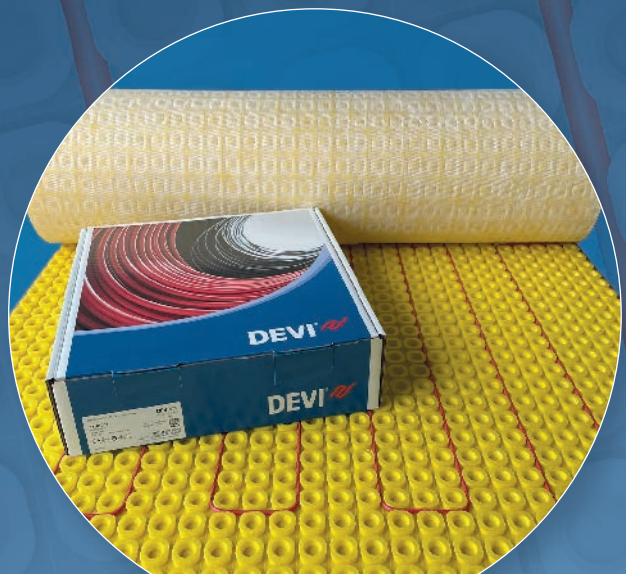


**Floors without
thermal insulation**

Recommended
floor heating output
 $130\text{-}160 \text{ W/m}^2$

**RECOMMENDED OUTPUT VALUES
FOR DEVI COMFORT
UNDERFLOOR HEATING SYSTEMS**

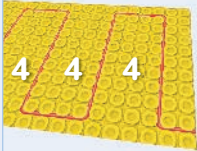
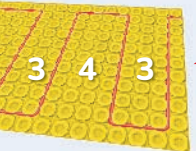
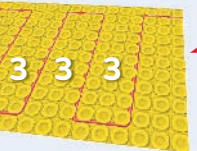
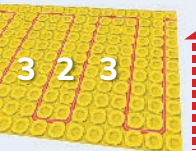
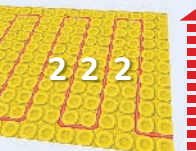
Based on the input provided, the recommended output values for comfort underfloor heating systems are calculated here, taking into account the floor construction, insulation level, surface types, room air temperature and individual user preferences.



TARGETED HEATING OF ROOMS WITH THE RIGHT HEATING CABLE LENGTH

The individually desired power output can be achieved by adjusting the heating cable installation within the studded membrane structure of the DURABASE-SE-CI-H decoupling mat. A denser installation of the heating

cable in the dimpled structure increases the power output, a more open installation reduces it. Below you will find recommendations for five different cable laying distances and their effects on the maximum possible heating power output.

Cable selection table Length/ area/ output	stud spacing - W/m ² 	stud spacing - W/m ² 	stud spacing - W/m ² 	stud spacing - W/m ² 	stud spacing - W/m ² 
Area to be heated	Available cable lengths in m* with laying distance 4 studs achieves max. heating output 83 W/m ²	Available cable lengths in m* with laying distance 3-4 studs achieves max. heat output 95 W/m ²	Available cable lengths in m* with laying distance 3 studs achieves max. heat output 111 W/m ²	Available cable lengths in m* with laying distance 2-3 studs achieves max. heat output 133 W/m ²	Available cable lengths in m* with laying distance 2 studs achieves max. heat output 167 W/m ²
1.0 m ²	–	10 m*	10 m*	–	–
1.5 m ²	10 m*	–	–	20 m*	–
2.0 m ²	20 m*	20 m*	20 m*	28 m*	10 m* + 20 m*
2.5 m ²	20 m*	–	28 m*	10 + 20 m*	41 m*
3.0 m ²	–	28 m*	10 + 20 m*	41 m*	50 m*
3.5 m ²	28 m*	10 + 20 m*	10 + 28 m*	20 m* + 28 m*	57 m*
4.0 m ²	10 m* + 20 m*	10 + 28 m*	41 m*	50 m*	70 m*
4.5 m ²	10 m* + 28 m*	41 m*	50 m*	57 m*	70 m*
5.0 m ²	41 m*	20 m* + 28 m*	57 m*	70 m*	81 m*
5.5 m ²	20 m* + 28 m*	50 m*	20 m* + 41 m*	70 m*	90 m*
6.0 m ²	50 m*	57 m*	70 m*	81 m*	100 m*
6.5 m ²	57 m*	20 m* + 41 m*	81 m*	90 m*	50 m* + 57 m*
7.0 m ²	57 m*	70 m*	81 m*	90 m*	41 m* + 70 m*
7.5 m ²	20 m* + 41 m*	70 m*	81 m*	100 m*	129 m*
8.0 m ²	70 m*	20 m* + 57 m*	90 m*	50 m* + 57 m*	129 m*
8.5 m ²	70 m*	81 m*	90 m*	41 m* + 70 m*	142 m*
9.0 m ²	20 m* + 57 m*	28 m* + 57 m*	100 m*	57 m* + 57 m*	70 m* + 81 m*
9.5 m ²	81 m*	90 m*	50 m* + 57 m*	129 m*	70 m* + 90 m*
10.0 m ²	81 m*	41 m* + 57 m*	50 m* + 57 m*	129 m*	170 m*
10.5 m ²	90 m*	100 m*	41 m* + 70 m*	142 m*	90 m* + 90 m*
11.0 m ²	90 m*	50 m* + 57 m*	50 m* + 70 m*	57 m* + 90 m*	90 m* + 90 m*
11.5 m ²	41 m* + 57 m*	50 m* + 57 m*	129 m*	70 m* + 81 m*	90 m* + 100 m*
12.0 m ²	100 m*	57 m* + 57 m*	129 m*	81 m* + 81 m*	100 m* + 100 m*
12.5 m ²	50 m* + 57 m*	50 m* + 70 m*	142 m*	170 m*	81 m* + 129 m*
13.0 m ²	50 m* + 57 m*	129 m*	142 m*	170 m*	90 m* + 129 m*
13.5 m ²	41 m* + 70 m*	129 m*	70 m* + 81 m*	90 m* + 90 m*	90 m* + 129 m*
14.0 m ²	50 m* + 70 m*	129 m*	81 m* + 81 m*	90 m* + 100 m*	100 m* + 129 m*
14.5 m ²	50 m* + 70 m*	70 m* + 70 m*	81 m* + 81 m*	90 m* + 100 m*	100 m* + 142 m*
15.0 m ²	129 m*	70 m* + 81 m*	170 m*	100 m* + 100 m*	81 m* + 170 m*
15.5 m ²	129 m*	70 m* + 81 m*	170 m*	81 m* + 129 m*	129 m* + 129 m*
16.0 m ²	129 m*	70 m* + 81 m*	90 m* + 90 m*	81 m* + 129 m*	129 m* + 142 m*

Use the cable selection table to determine the appropriate cable length based on the size of the area to be heated and the required output power.

The calculation is based on a tolerance of +/- 10% for the power output at each column.

Note: Max. load capacity 3600 W per thermostat (several heating cables can be controlled with one thermostat).

m* = Available DEVIcomfort 10T heating cable lengths - heating cables cannot be connected.

DURABASE CI-H/DEVI

ALL ADVANTAGES AT A GLANCE

*you will love
your floor*



ADVANTAGES - TECHNOLOGY/ INSTALLATION

- Familiar installation practice - decoupling mat and underfloor heating in one system
- The floor is protected against moisture, possible cracks in the substrate (screed shrinkage) are bridged
- No water-based heating system - the heating cables are maintenance-free, no venting required, no freezing or risk of water leaks/leaks
- Quick and easy installation - heating cable is integrated into the decoupling mat with Easy-Click and requires no further work step
- 13 different cable lengths available
- Long service life, safe and robust heating cables
- Heating cable (heat) and cold cable (connection cable to thermostat) with one-piece sleeve connection
- Thermostat control



ADVANTAGES - REGULATION/ PLANNING

- Invisible heating creates space for interior design - no disruptive radiators
- The DEVIREG thermostat allows each room to be controlled individually. This function is known as individual room control and allows the temperature in each room to be controlled independently.
- Ideal supplementary heating for passive energy houses with low heating requirements
- Temporary/seasonal heating of weekend or holiday homes - no maintenance work
- In a new build, underfloor heating can be planned as full heating or as comfort heating. Individual heating plans are possible with the free distribution of the heating cables in the mat and with programmable thermostats
- Heating speed can be controlled by cable configuration. The closer the cables are laid, the faster the floor can be heated
- DEVI Control App
The DEVIREG Room and Basic thermostats can be controlled both via Bluetooth and manually

IMPORTANT

The connection of a thermostat and a heating cable for a mains voltage of 230 V should only be carried out by a qualified electrician. This is essential for safety reasons, as incorrect installation can lead to electric shocks, fires or damage to the system.



ADVANTAGES - INDOOR CLIMATE

- Comfort heating with a feel-good factor - warmth directly under your feet
- Ceramic tile coverings and natural stone floors are natural heat accumulators
- Low air circulation of the underfloor heating reduces the spread of bacteria and mould spores
- Less dust is stirred up - ideal for allergy sufferers
- The even heat distribution ensures a pleasant room climate and prevents dry heated air



ADVANTAGES - REFURBISHMENT

- Retrofitting underfloor heating
- Refurbish individual rooms
- More space, as radiators can be eliminated
- Ideal for renovations - thanks to low installation height
- Decoupling of critical or old floor coverings
- Decoupling of problematic substrates during renovation



DEVICOMFORT 10T CONFORMITY TO STANDARDS

- IEC60800:2009
- Approvals:

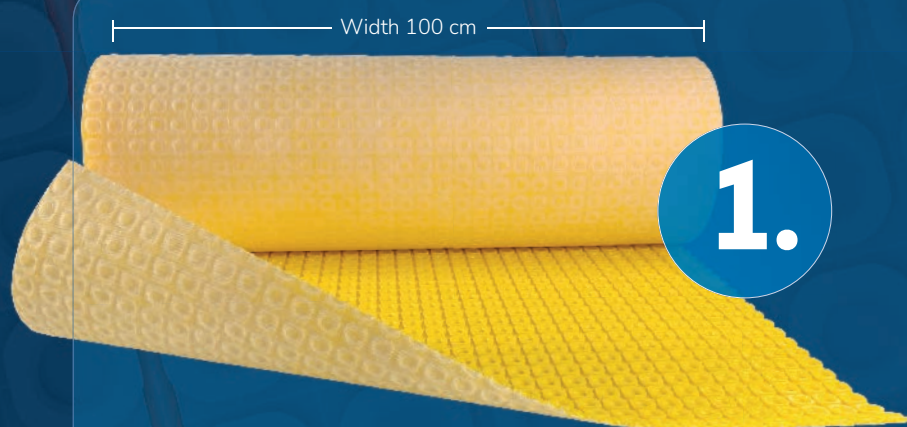


ADVANTAGES - DURAL/DEVI

- Partnership with DEVI (by Danfoss)
- Highest standards for heating systems
- Long service life
- 20-year guarantee on cables

PRODUCT OVERVIEW

1 + 2 + 3 AND THE CONVENIENT ELECTRIC UNDERFLOOR HEATING IS READY



Decoupling mat DURABASE CI-H

Available single rolls

REFERENCE	DESCRIPTION	SIZE
CI-H 1/1	DURABASE CI-H	1 m ²
CI-H 2,5/1	DURABASE CI-H	2.5 m ²
CI-H 5/1	DURABASE CI-H	5 m ²
CI-H 7,5/1	DURABASE CI-H	7.5 m ²
CI-H 15/1	DURABASE CI-H	15 m ²

Available pallet acceptance

CI-H 15/9	DURABASE CI-H	9 x 15 m ²
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HEATING PIPE DEVIcomfort 10T

(incl. thermostat connection - PTC thermistor black 4 m)

Available cable lengths (heating conductor red)

REFERENCE	DESCRIPTION	LENGTH	HEAT OUTPUT
DC 10T 100 W	DEVIcomfort 10T	10 m	100 W
DC 10T 200 W	DEVIcomfort 10T	20 m	200 W
DC 10T 300 W	DEVIcomfort 10T	28 m	300 W
DC 10T 400 W	DEVIcomfort 10T	41 m	400 W
DC 10T 500 W	DEVIcomfort 10T	50 m	500 W
DC 10T 600 W	DEVIcomfort 10T	57 m	600 W
DC 10T 700 W	DEVIcomfort 10T	70 m	700 W
DC 10T 800 W	DEVIcomfort 10T	81 m	800 W
DC 10T 900 W	DEVIcomfort 10T	90 m	900 W
DC 10T 1000 W	DEVIcomfort 10T	100 m	1,000 W
DC 10T 1250 W	DEVIcomfort 10T	129 m	1,250 W
DC 10T 1400 W	DEVIcomfort 10T	142 m	1,400 W
DC 10T 1700 W	DEVIcomfort 10T	170 m	1,700 W

DEVlreg™ thermostats (incl. temperature sensor)

REFERENCE	DESCRIPTION
DREG BASIC	DEVlreg Basic thermostat
DREG ROOM	DEVlreg Room thermostat
DREG TOUCH POLAR WHITE	DEVlreg Touch Polar White thermostat
DREG TOUCH BLACK	DEVlreg Touch Black thermostat



DEVI accessories

REFERENCE	DESCRIPTION
DEVI TEMP	DEVI Extra temperature sensor


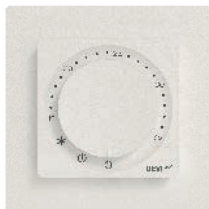



THERMOSTAT OVERVIEW

THE NEW **DEVI RANGE** OF ELECTRONIC UNDERFLOOR HEATING **THERMOSTATS**

Top seller
price/performance

Also available
in black

Features and functions	 DEVIreg™ Basic	 DEVIreg™ Room	 DEVIreg™ Touch
Energy savings potential	● ● ● ● ●	● ● ● ● ●	● ● ● ● ●
Convenience	● ● ● ● ●	● ● ● ● ●	● ● ● ● ●
Installation options	● ● ● ● ●	● ● ● ● ●	● ● ● ● ●
Installation wizard	✓	✓	✓
EcoDesign	✓	✓	✓
Mobile app	✓	✓	—
Floor thermostat	✓	✓	✓
Room thermostat	—	✓	✓
Combi thermostat	—	✓	✓
Display	—	—	✓
Bluetooth**	✓	✓	—
Colour variants	white	white	white and black
Frames	Compatible frame systems	Compatible frame systems	Compatible frame systems
Sensor customisation	15* kΩ	2, 6, 8, 10, 12, 15*, 33, 47 kΩ	6, 8, 10, 12, 15*, 33, 47 kΩ
Maximum load capacity	3600 W*** per thermostat	3600 W*** per thermostat	3600 W*** per thermostat
Installation	Flush-mounted	Flush-mounted	Flush-mounted
Warranty period	2 years	2 years	5 years

* Standard 15 kΩ sensor 25°C, 3 m (standard).

** Bluetooth range is up to 10 m.

*** Several heating cables can be controlled with one thermostat

DURAL IS A **COMPREHENSIVE PROVIDER**
OF **FLOOR-LEVEL SHOWER SYSTEMS,**
PROFILES AND MATTING SYSTEMS
FOR WALLS AND FLOORS

DURAL



PROFILES FOR TILES



STAIR NOSING PROFILES



EXPANSION JOINT PROFILES



LED



OUTDOOR ELEMENTS
PROFILES FOR BALCONIES
AND TERRACES



MATTING SYSTEMS



FLOOR LEVEL SHOWER
SYSTEMS / DRAINS /
SHELF SYSTEMS



DOORMAT SYSTEMS
TACTILE ORIENTATION AIDS



FLOORBASE - FLOORING
SURFACE PROFILES



SKIRTING PROFILES



TOOLS

DURAL GmbH

Südring 11

D-56412 Ruppach-Goldhausen

Tel. +49 [0] 2602/9261-0

Fax +49 [0] 2602/9261-50

info@dural.com

www.dural.com

With the kind recommendation of:

