INDUSTRY

White paper

HEATING CABLES

The different types of heating cables each have their specific advantages and disadvantages. Which cable to choose depends on your application.

NEWTRONIC

Heating cables are made for a wide range of industrial, commercial and housing applications. The amount of different cable technologies is substantial – you can have both self-regulating, constant wattage, mineral insulated and series resistant cables. **So which type to choose?** That depends entirely on whether you are using them for process temperature maintenance, frost protection, flow security, water temperature maintenance, melting snow, gutters or floor heating. Here we'll give you an overview of the three most popular cable types.

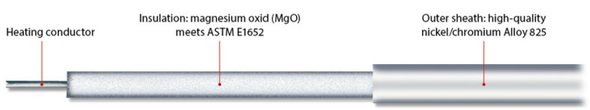
MINERAL INSULATED

These cables are often referred to as MI-heating cables.

The MI-cable is typically used for very high temperatures and where more traditional heating cables are not applicable. The MI-cable can resist temperatures up to 700 C˚. This is due to the construction with magnesium oxide, which is also popular in tube heating elements. They can resist most types of chemicals and because of a jacket produced in either stainless steel or Alloy, they have a very high mechanical stability.

The MI-cable must be very carefully dimensioned as it is not possible to shorten this cable type. You can get cables in many lengths from very short 30 cm cables to several kilometers.

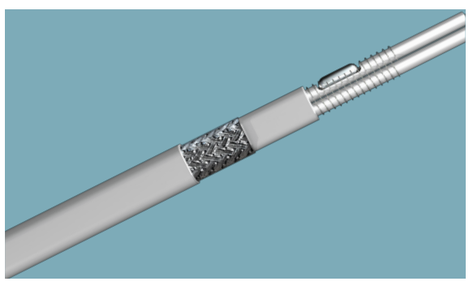
MI-cables are used for heating of pipes as it is possible to produce this type of cable with a very high effect. Other possible applications are Bitumen production and condensation protection of filter systems.



CONSTANT WATTAGE

The constant wattage cables have been produced for more than 30 years and as the name indicates the cables deliver the same effect without being affected by the pipes they are mounted on. These heating cables are applicable for a wide range of applications, for example pipe and container temperature maintenance and as floor heating cables.

Constant wattage cables are constructed in zones, typically with a length of 0,5-1 cm. This depends on the effect and the voltage that the cable is constructed for. When terminating the cable, you need to pay attention to these zones as it is possible to make the first part of the cable a cold zone with no effect.
It is vital that the dimensioning of the cable is done by a technically competent person, because there are many different solutions within voltage, effect, outer jacket material and classifications.



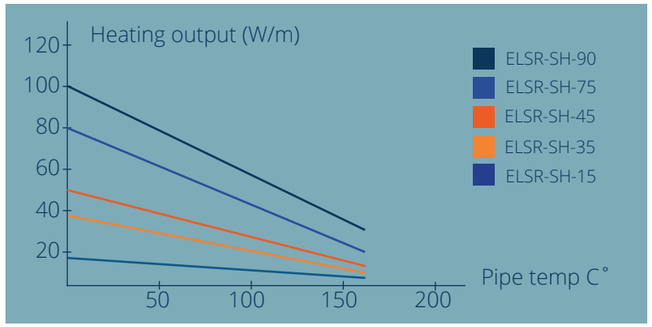
SELF-REGULATING

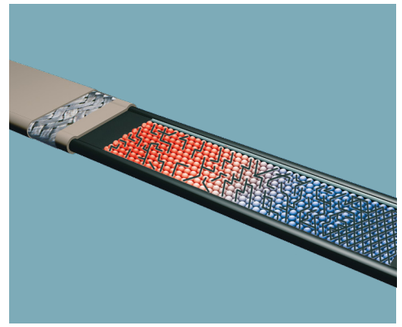
Self-regulating heating cables are the most commonly used heating cables in the world. The polymer technology is under constant improvement, currently enabling producers worldwide to deliver cables with a very high technical solution compared to similar electrical heating products.

Self-regulating heating cables can be used for many applications, for example frost protection of pipes and containers, temperature maintenance, road, ramp and sidewalk heating as well as for gutters.
The self-regulating cables have the clear advantage that it is possible to cut the cables on the spot.

On top of that they automatically regulate the effect they give according to the surroundings. They will therefore always give little effect compared to the specific cable's temperature curve.

Termination of the self-regulating heating cable is usually done with complete termination kits or directly in the mounting socket.





5 THINGS TO CONSIDER BEFORE CHOOSING YOUR CABLES

1. Know your needs. Are you heating, keeping a temperature or frost protecting?
2. Afklar om der er noget, der kan aflede varmen fra kablet. F.eks. rørbæringer (som direkte afleder), pumper og motorer (som kræver ekstra opvarmning)
3. Is it an ATEX or "Safe Area"?
4. Take care of the practical details: isolation on the spot, aluminum tape, number of mounting kits, mounting boxes, fuse dimensioning
5. Distance to the supply point.

CONCLUSION

The dimensioning of the right heating cable is the most important parameter for lifetime and your guarantee that your product in the pipes or containers reach the right temperature.

The heating cable must be installed by professional personnel that have been given the right instructions in cooperation with the supplier who understands the importance of a reliable installation.

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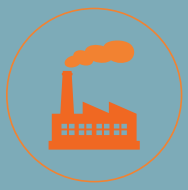

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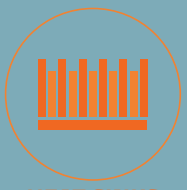

HEAT SINKS

Newtronic counsel, design and distribute solutions within electrical heating, sensors, heat sinks and thermally conductive material. The challenges are often complex, but we aim to make the process as uncomplicated as possible. We believe in a close dialogue with our business partners. Because we know, that a good solutions fits you.

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This white paper is produced in cooperation with:

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innovations in heat tracing

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