Product catalogue
Outdoors
Market leader

MAGNUM has become market leader thanks to our smart range or high technology, extremely high quality products and our team of trained specialists. Outside the Netherlands our products are distributed by a carefully selected network of partners. Through continual investment in people, knowledge, training and product innovation, MAGNUM has been able to retain its leading position for many years now.

Business philosophy

Technology, continuity, reliability and service form the foundations on which the company was established in 1992. For more than 20 years we have been convinced that expertise, high quality technical materials and high levels of service form the only way in which products should be brought to market. Therefore our motto is: MAGNUM keeps you warm. This slogan fits us like a warm glove!

Development

Current structural engineering developments mean that enormous advances have been made specifically in the area of insulation; therefore consumers are paying more attention towards having comfortable and healthy living environments. MAGNUM’s electrical heating system offers an ideal and affordable solution to meet all these demands.

Products

In this catalogue you will find out everything about the various MAGNUM Outdoor products as well as all the possible applications. You will also find recommendations, handy tips and much more. MAGNUM also offers innovative products for Indoor heating. You will find all the details in our Indoor catalogue. View it on the website, request a copy via info@magnumheating.nl, or call us during office hours on +31(0)166-609300.
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Contact

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Thermal or infra-red energy is light that is invisible because the wave length is too long for the human eye and forms the part of the electromagnetic spectrum that we experience as heat. Contrary to visible light, everything with a temperature above absolute zero radiates heat in the infra-red range. This is the source of our heat.

Infra-red energy

Infra-red heating or radiated heat works just like nature: Each day heat waves originating from the sun reach the walls of your house for example. The walls in turn store the heat that is then released at a slower rate. In the evening the ambient air cools down but you can still feel the heat coming from the walls. A hot stone massage for example, works on the same principle.

Radiated heat

Safety, prevention and continuity are the key words that justify the cost of laying a frost-proof installation. Especially for angled access slip roads in distribution centres, multi-storey car parks, hospitals, fire stations, office buildings, etc. In other words: wherever operational safety may be compromised during the winter period, the MAGNUM Outdoor system can offer safety and reliability at a minimum cost for both the initial investment and the running and maintenance costs. The ingenious concept of heating cables, sensors and thermostats provides an adequate response to all wintry circumstances. With MAGNUM Outdoor you can ensure a safe entry at all times!

Road surface heating

MAGNUM Infra Red heaters can be used in virtually every type of situation. On terraces, patios, under the eaves and even in areas where direct heat is required such as in stores and workshops.

Infra red heaters
Electronic tracing

Apart from keeping things frost-proof, another purpose of Electronic Tracing also to keep the piping and ducts at a constant temperature (Process temperature). MAGNUM self-regulating cables consist of two parallel metal wires that are encased in a semi-conductive PTC polymer. When an electric current is led through the conductive Polymer to the other copper wire, a closed circuit is determined.

Electricity warms the Polymer and increases the resistance value. When the temperature of this conductive core increases, the electrical resistance decreases and so there is a decrease in temperature. This happens at each point along the pipe. This is why they are energy-efficient and in this way overheating or burning due to overlap of the heating cables is avoided.
Applications

Loading docks  Staircases  Entry paths

Piping  Roofs  Drainpipes
Angled lanes  Walking paths  Terraces

Gutters  Water pipes  Olive trees
Advantages

Through precise digital control by using advanced thermostats that can be set fully according to need, an optimal result is guaranteed. Furthermore, MAGNUM Outdoor systems can be linked into new and existing (domotic) systems very easily so that it does not need any extra attention.

Energy-efficient

Our systems save energy due to the efficient control methods. In addition, they are completely silent and there are no maintenance costs. MAGNUM products are produced under our own management and under very strict conditions. They comply with the strictest European inspection requirements and therefore have a very long life-cycle.

Maintenance free
Safety first

Safety, prevention and continuity are the key words that justify the cost of laying a frost-proof installation. Also for smaller surfaces, such as driving tracks or walking paths that need to be frost-proof, the MAGNUM Outdoor concept offers you safety and reliability against minimal investment, use and maintenance costs.

Sustainable

Combined with the accurate and efficient control systems, direct heat emission, extra long life-cycle and the possibility to regulate each zone independently, electronic frost protection systems provide the perfect solution. This is certainly the case over the past few years, with dramatically increased gas prices, resulting in electrically heated rooms being equivalent to gas fired heating with respect to running costs.
Custom-made

In principle, the standard programme offers sufficient possibilities to meet virtually every type of situation. Experience tells us that ready-made solutions are not always available. In such circumstances we can find a custom designed and manufactured solution.

Full Service

The wide range of heating systems and control mechanisms gives MAGNUM the possibility to reach or develop solutions for every type of heating problem. The delivery and installation of tracing, insulation, supply cables and switchboards, as well as testing and supplying the installation work, are all possible.

Projects
We only want to supply top quality products, therefore all MAGNUM products are produced and tested to the ISO 9001:2008 standard by the largest European testing bodies. Our products therefore comply with the highest testing requirements allowing us to offer you excellent warranty terms.

Advice

You can always get help and advice from our expert consultants for analysing problems and coming up with innovative solutions for your project. We are happy to collaborate with you in meeting challenges and to share our knowledge and experience.

Calculation

MAGNUM Calculation provides advice, engineering, calculations, offers, support, service and after-sales service. No matter if it concerns a simple access ramp, a very complex control system for a large project, or the engineering for an entire plant with tracing, including circuit layout and AutoCAD drawings.

Help desk

Our help-desk is your contact point for all your enquiries as well as the more complex issues including: heat loss calculations, special requirements such as stabilising or heating pipes, managing critical temperatures and the application of differing supply voltages can all be provided.

Tests

We only want to supply top quality products, therefore all MAGNUM products are produced and tested to the ISO 9001: 2008 standard by the largest European testing bodies. Our products therefore comply with the highest testing requirements allowing us to offer you excellent warranty terms.
Groot Baronie | Alphen aan den Rijn
Angled pathway heating
830 m² MAGNUM Outdoor Cable

Lidl | Nationwide
Keeping freezer unit floors frost-proof
Custom made heating cables

Ziggo Dome | Amsterdam
Entrance and exit parking garage
125 m² MAGNUM Outdoor Cable

Burgers Zoo | Arnhem
Keeping walking paths free of snow and ice
500 m² MAGNUM Outdoor Mat

Waste material power plant | Harlingen
Angled pathway heating
680 m² MAGNUM Outdoor Cable

Central Station | Tilburg
Access stairs (prefab)
460 m² MAGNUM Outdoor Cable

Audi Munstadt | Zeist
Angled pathway heating
500 m² MAGNUM Outdoor Cable

IKEA Concept Center | Delft
Angled pathway heating
2200 m² MAGNUM Outdoor Cable

Friesland Campina | Ede
Roof heating
1275 m² MAGNUM Outdoor Cable
References

A selection of some of the many projects in which MAGNUM Outdoor products have been installed:

- **Schiphol tunnel | Haarlemmermeer**
  - Keeping the water drain frost-proof
  - 600 meters MAGNUM Trace Gutter Heat

- **Albert Heijn XL | Heemstede**
  - Frost protection sprinkler installation garage
  - 225 meters MAGNUM Trace Micro

- **Montevideo | Rotterdam**
  - Frost protection
  - 600 meters MAGNUM Trace Regular
Road surface heating
Applications

- Entrance and exit ramps
- Parking garages
- Loading docks
- Stairs
- Helicopter platforms
- Bridges
- Entrances
- Walkways
- Etc.

Products

Within this category three different MAGNUM product groups are available:

- MAGNUM Outdoor Cable
- MAGNUM Outdoor Mat
- MAGNUM Outdoor Control

Outdoor Cable

Especially for larger surfaces, such as loading docks or entrance and exit ramps for parking garages, where safety needs to be guaranteed. The MAGNUM Outdoor Cable can be secured directly onto the reinforcement steel before the concrete is poured.

Outdoor Mat

This mat has been designed specifically to heat walkways and driving tracks. The heating mat is easy to roll out, can be cut and can be folded for easy and quick installation.

Outdoor Control

Here you will find switch panels (custom-made), thermostats and sensors for optimal handling of your Outdoor Cable or Mat system. The advanced sensors measure temperatures in combination with moisture, which means the thermostat can determine very accurately whether the system needs to be turned on.
Especially for larger surfaces, such as loading docks or entrance and exit ramps for parking garages, where safety needs to be guaranteed. The MAGNUM Outdoor Cable can be secured directly onto the reinforcement steel before the sand bed, concrete or asphalt is poured.

MAGNUM Outdoor is a highly advanced system of heating cables, 2 sensor units that measure moisture in combination with the outside temperature, and a custom-made control box.

The power cord is connected to the resistance wire with an electric welding. The aluminium casing protects the resistance wire against mechanical damage and shields the cable against EMC (electromagnetic radiation). The advantage of this is that the cable will not cause interference on mobile phones, electric garage doors and gateways, security installations etc.

The cable is equipped with PTFE (Teflon) inner jackets and a PVC outer jacket which is resistant against the influence of chemicals.
Technical details

Complete systems
MAGNUM Outdoor installations are specially drawn and designed per case. A full watertight switchboard (IP-65) is made and installed to the ratio of the number of cables/mats and power capacity. For bigger works, the switchboard can be extended with modulating power regulators up to 50kW, that avoid peak load and besides also save energy. The system can be implemented in 230V as well as in 400V.

Technical specifications
- Power capacity 600/1200/1900 & 3400 Watt
- Connection voltage: 230 V/50Hz
- IEC 800 and CE norms
- ISO 9001 produced
- IPX7
- PTFE (Teflon) core insulation
- Suitable for poured asphalt up to 240°C

Warranty
10 years warranty on the electromechanical operation of the cable.

<table>
<thead>
<tr>
<th>Part no.</th>
<th>Capacity</th>
<th>Length</th>
<th>Length connection cable</th>
<th>Volts</th>
<th>Amperes</th>
<th>Ohms</th>
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<tbody>
<tr>
<td>125006</td>
<td>600 watts</td>
<td>20 meters</td>
<td>10 meters</td>
<td>230V</td>
<td>2.6</td>
<td>88.2</td>
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<tr>
<td>125012</td>
<td>1200 watts</td>
<td>40 meters</td>
<td>10 meters</td>
<td>230V</td>
<td>5.2</td>
<td>44.1</td>
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<tr>
<td>125019</td>
<td>1900 watts</td>
<td>63.3 meters</td>
<td>10 meters</td>
<td>230V</td>
<td>8.3</td>
<td>27.8</td>
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<tr>
<td>125034</td>
<td>3400 watts</td>
<td>113.3 meters</td>
<td>10 meters</td>
<td>230V</td>
<td>14.8</td>
<td>15.6</td>
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</table>

Installation under cobblestone

Installation in asphalt
MAGNUM Outdoor Mat

This mat has been designed specifically to heat walkways and driving tracks. The heating mat is easy to roll out, can be cut and can be folded for easy and quick installation.

MAGNUM Outdoor Mat is a highly advanced system of heating mats, 2 sensor units that measure moisture in combination with the outside temperature, and a custom-made control box.

The power cord is connected to the resistance wire with an electric welding. The aluminium casing protects the resistance wire against mechanical damage and shields the cable against EMC (electromagnetic radiation). The advantage of this is that the cable will not cause interference on mobile phones, electric garage doors and gateways, security installations etc.

The cable is equipped with PTFE (Teflon) inner jackets and a PVC outer jacket which is resistant against the influence of chemicals.
Complete systems

MAGNUM Outdoor installations are specially drawn and designed per case. A full watertight switchboard (IP-65) is made and installed to the ratio of the number of cables/mats and power capacity. For bigger works, the switchboard can be extended with modulating power regulators up to 50kW, that avoid peak load and besides also save energy. The system can be implemented in 230V as well as in 400V.

Technical specifications
- Dimensions 2, 5, 8 & 10 m²
- Power capacity 600, 1500, 2400 & 3000 watts
- Connection voltage: 230 V/50Hz
- IEC 800 and CE norms
- ISO 9001 produced
- IPX7
- PTFE (Teflon) core insulation
- Suitable for poured asphalt up to 240°C

WARRANTY
10 years warranty on the electromechanical operation of the cable.

<table>
<thead>
<tr>
<th>Part no.</th>
<th>Dimensions</th>
<th>Capacity</th>
<th>Dimensions</th>
<th>Volts</th>
<th>Amperes</th>
<th>Ohms</th>
</tr>
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<tr>
<td>126002</td>
<td>2 m²</td>
<td>600 watts</td>
<td>0.5 x 4 meters</td>
<td>230V</td>
<td>2.6</td>
<td>88.2</td>
</tr>
<tr>
<td>126005</td>
<td>5 m²</td>
<td>1500 watts</td>
<td>0.5 x 10 meters</td>
<td>230V</td>
<td>6.5</td>
<td>35.3</td>
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<tr>
<td>126008</td>
<td>8 m²</td>
<td>2400 watts</td>
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<td>10.4</td>
<td>22</td>
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<tr>
<td>126010</td>
<td>10 m²</td>
<td>3000 watts</td>
<td>0.5 x 20 meters</td>
<td>230V</td>
<td>13</td>
<td>17.6</td>
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</table>
MAGNUM Outdoor Control

Full watertight switchboards, made and installed to the ratio of the number of cables/mats and power capacity. For bigger works, the switchboard can be extended with modulating power regulators up to 50kW, that avoid peak load and besides also save energy. The system can be implemented in 230V as well as in 400V.

Sensor units (ETOG-55)
The sensor units are equipped with a heating element that melts snow or glazed frost. This means the system is only activated when the outside temperature is lower than the set value (p.e. +3°C) and the sensor unit detects moisture at the same time. This method guarantees energy-efficient control.
## Technical details

### Part no. Switch panels

<table>
<thead>
<tr>
<th>Part no.</th>
<th>Switch panels</th>
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<tbody>
<tr>
<td>900004</td>
<td>3.6 kW incl. ETO-4550 DIN-rail thermostat and 2x ETOG-55 Sensor units</td>
</tr>
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<td>900010</td>
<td>10 kW incl. ETO-4550 DIN-rail thermostat and 2x ETOG-55 Sensor units</td>
</tr>
<tr>
<td>900020</td>
<td>20 kW incl. ETO-4550 DIN-rail thermostat and 2x ETOG-55 Sensor units</td>
</tr>
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<td>900030</td>
<td>30 kW incl. ETO-4550 DIN-rail thermostat and 2x ETOG-55 Sensor units</td>
</tr>
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<td>900040</td>
<td>40 kW incl. ETO-4550 DIN-rail thermostat and 2x ETOG-55 Sensor units</td>
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<td>900050</td>
<td>50 kW incl. ETO-4550 DIN-rail thermostat and 2x ETOG-55 Sensor units</td>
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### Part no. Thermostats

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<th>Thermostats</th>
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<tbody>
<tr>
<td>893550</td>
<td>ETO-4550 DIN-rail thermostat temp./moisture 3x16A 230V</td>
</tr>
<tr>
<td>900066</td>
<td>ETR-2 DIN-rail thermostat temp./moisture 1x16A 230V</td>
</tr>
<tr>
<td>892551</td>
<td>ETN-4 Digital DIN-rail thermostat -20/+70°C 16A 230V</td>
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### Part no. Sensors

<table>
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<th>Part no.</th>
<th>Sensors</th>
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</thead>
<tbody>
<tr>
<td>890065</td>
<td>ETOG-55 Sensor unit temp./moisture for road surface</td>
</tr>
<tr>
<td>900055</td>
<td>ETOR-55 Sensor unit moisture for eaves or gutter</td>
</tr>
<tr>
<td>901441</td>
<td>ETF-744/99 External outside temperature sensor</td>
</tr>
</tbody>
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**Connection box watertight (IP-65 conform NEN 1010)**

Fully pre-assembled at delivery, including:
- ETO-4550 DIN-rail Thermostat 0/+5°C 230V
- 2x ETOG-55 Sensor units (Moisture & Temp.)
- Potential free contacts 3x16 Amperes
- Needed magnet switches (relay) 230V/400V
- Needed circuit breakers 16 Amperes
- Connecting terminals for mounting power supply cables.
- Indicator lights

---

**ETO-4550 DIN-rail thermostat**

An intelligent all-in-one solution for melting snow and ice. Optimal operation is guaranteed by a power capacity regulator.

---

**ETOG-55 Sensor unit (Moisture & Temp.)**

This all in 1 sensor registers temperature as well as moisture. The built-in heating element takes care of highly accurate control. Supplied with installation pipe and 10 meters connection cable.

---

**ETR-2 DIN-rail thermostat**

The ETR-2 gives an economical control for melting snow and ice in smaller applications. With a focus on energy use and simple installation.

---

**ETOR-55 Sensor unit (Moisture)**

This moisture sensor is designed especially for installation in gutters and drains. Can only be used in combination with Outdoor sensor type ETF-744/99.

---

**ETN-4 DIN-rail thermostat**

An all-in-one thermostat with extensive temperature regulation, suitable for a wide range of applications. Simple to operate and program.

---

**ETF-744/99 Sensor unit (Temp.)**

This Outdoor sensor registers only the temperature. Can be used for temperature detection only, or in combination with Outdoor sensor type ETOR-55.
Electronic tracing

Within this category, 7 products are available:

- Ideal Anti-Frost ribbon
- Trace Regular
- Trace Micro
- Trace Micro Plug & Go
- Trace Gutter Heat
- Trace Water
- Trace Hot Water

Applications

MAGNUM Trace systems can be applied on:
- Cold and warm water pipes
- Eaves
- Drainpipes
- Drains
- Sprinkler systems
- Oil pipelines
- Process pipes (food industry)
Simple installation

Unlike regular heating cables, MAGNUM Tracing cables are equipped with parallel circuits. This means you can cut the cable at any point without breaking the circuit. Thanks to this parallel circuit, these cables are very easy to install. They can be installed in a linear way, in spiral shape or with overlap. During the installation, you can simply cut them in the right size, lengthen them or split them according to your needs. There are various connection possibilities. For example, a pre-assembled cable is available in various lengths, with quick coupling pieces in order to complete tasks quickly. Because the MAGNUM Tracing cables do not require thermostatic control, they are not subject to malfunctions. MAGNUM Tracing cables can be used on plastic as well as metal piping.

Ideal Anti-Frost ribbon
Ready to plug in anti-frost ribbon, designed especially to keep (water-) piping, taps etc. frost-proof.

Trace Regular
Self-regulating cable available in either 10, 15, 25 or 33 watts per meter length.

Trace Micro
Self-regulating cable for piping with a small diameter.

Trace Micro Plug & Go
Ready-to-fit Trace Micro cable system complete with connectors and connecting cable.

Trace Gutter Heat
To protect your eaves and rainwater drainpipe against frost.

Trace Water
Self-regulating cable suitable for installation in water pipe.

Trace Hot Water
For compensating heat loss in hot water systems.

Thermostats & Sensors
From simple to fully automatic switching of temperature in combination with moisture.

Connection materials
Various connecting and securing materials for the MAGNUM Tracing program.
MAGNUM Ideal Frost-proof band

In many situations outdoor taps and pipes are shut off during winter to avoid freezing and damage. MAGNUM offers a much simpler solution: the MAGNUM Ideal frost-proof ribbon makes frozen and leaking pipes a thing of the past! The MAGNUM Ideal delivery programme has been specially designed to keep piping, taps, discharge pipes from freezing.

Problems with freezing are easily avoided by fitting a frost-proof ribbon along the piping - it is ready to plug in and fitted with an automatic thermostat. Once the pipe insulation has been applied, it is not only safe, but extra expenses for repairing water pipes, as well as damage from leaking pipes is avoided. When installing it on plastic piping, the piping needs to be fully wrapped in aluminium tape before the cable can be applied.

The MAGNUM Ideal frost-proof ribbon (with a 2 meter connecting cable with earthed plug) is equipped with a bi-metal temperature regulator. The MAGNUM Ideal frost proof ribbon is available in lengths of 1 to 48 meters. The heating band is switched on at temperatures below +5°C and automatically switches off when the temperature exceeds +13°C.
Technical details

MAGNUM Ideal can very easily be applied to piping using aluminium tape or plastic tie-wraps. When installing it on plastic piping, this needs to be fully wrapped in aluminium tape before the cable can be applied. MAGNUM Ideal should always be used in combination with a (polyethylene) pipe insulation that has a minimum thickness of 10 mm. This gives optimal protection and insulation, thereby warranting energy-efficient operation.

MAGNUM Ideal is supplied as standard with the following:
- Ready to plug in heating cable with built-in bi-metal thermostat
- Installation instructions
- PVC tape

Technical details

<table>
<thead>
<tr>
<th>Part no.</th>
<th>Length</th>
<th>Capacity</th>
<th>Volts</th>
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<tbody>
<tr>
<td>155001</td>
<td>1 meter</td>
<td>10 watts</td>
<td>230V</td>
</tr>
<tr>
<td>155002</td>
<td>2 meters</td>
<td>20 watts</td>
<td>230V</td>
</tr>
<tr>
<td>155004</td>
<td>4 meters</td>
<td>40 watts</td>
<td>230V</td>
</tr>
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<td>155006</td>
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</table>

WARRANTY

2 years on the electromechanical operation of the cable.
MAGNUM Trace Regular
Self-regulating heating ribbon < 85°C

MAGNUM trace Regular - MTR is an industrial grade self-regulating heating tape that can be used for freeze protection or temperature maintenance of pipework and vessels up to 85°C. For use in non-hazardous, hazardous and corrosive areas. It can be cut-to-length on-site to match exact piping lengths without any complicated design considerations. Its self-regulating characteristics improve safety and reliability. This MTR will not overheat or burn, even when overlapping upon itself. It’s power output self-regulates in response to the pipe temperature. MTR is available with a corrosion resistant thermoplastic outer jacket.

Applications
Cold water pipes
Drains
Sprinkler systems
Oil pipelines

Additional information
The extent of the loss of heat depends on the diameter of the piping, the ambient temperature and the flow of liquid. Extra insulation is advised. Use of a temperature regulator reduces energy consumption.

For calculating the heat loss and the applicable cable, you can contact the sales department of MAGNUM Heating.
Technical details

Maximum temperature
Without power 85°C
With power 65°C

Min. operating temperature
-30°C

Max. resistance
18.2 Ohm/km

Nominal voltage
230V

Outer jacket
Tinned copper

Coating
TPE

Water resistance
100%

Dimensions
13 x 6.8 mm

Min. bending radius
25 mm

Weight
12 kg/100 m

T-classification 10, 15, 25 W/m T6
T-classification 33 W/m T5

Colour
Grey

Inspections
10MTR & 25MTR: CE /RU
15MTR & 33MTR: CE/RU/FM/EX, according to DIN EN 62395-1

Maximum advised cable length at 230V with use of Type-C relay:

<table>
<thead>
<tr>
<th>Category</th>
<th>Switch Temp.</th>
<th>16A</th>
<th>20A</th>
<th>30A</th>
</tr>
</thead>
<tbody>
<tr>
<td>10MTR</td>
<td>+10°C</td>
<td>205 m</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>-15°C</td>
<td>140 m</td>
<td>186 m</td>
<td>195 m</td>
</tr>
<tr>
<td></td>
<td>-25°C</td>
<td>123 m</td>
<td>165 m</td>
<td>195 m</td>
</tr>
<tr>
<td>15MTR</td>
<td>+10°C</td>
<td>145 m</td>
<td>162 m</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>-15°C</td>
<td>93 m</td>
<td>125 m</td>
<td>160 m</td>
</tr>
<tr>
<td></td>
<td>-25°C</td>
<td>82 m</td>
<td>111 m</td>
<td>160 m</td>
</tr>
<tr>
<td>25MTR</td>
<td>+10°C</td>
<td>88 m</td>
<td>117 m</td>
<td>126 m</td>
</tr>
<tr>
<td></td>
<td>-15°C</td>
<td>60 m</td>
<td>75 m</td>
<td>117 m</td>
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<td></td>
<td>-25°C</td>
<td>50 m</td>
<td>70 m</td>
<td>105 m</td>
</tr>
<tr>
<td>33MTR</td>
<td>+10°C</td>
<td>70 m</td>
<td>90 m</td>
<td>108 m</td>
</tr>
<tr>
<td></td>
<td>-15°C</td>
<td>50 m</td>
<td>65 m</td>
<td>95 m</td>
</tr>
<tr>
<td></td>
<td>-25°C</td>
<td>45 m</td>
<td>58 m</td>
<td>85 m</td>
</tr>
</tbody>
</table>

Art.No. Type Power capacity per meter Nominal voltage
151010 MTR-10 10 Watt @ 10°C 230V
151015 MTR-15 15 Watt @ 10°C 230V
151025 MTR-25 25 Watt @ 10°C 230V
151033 MTR-33 33 Watt @ 10°C 230V

1.2 mm² tinned copper cable
self-limiting heating element
protection insulation
TPE insulation
earthing braid
TPE protection casing

2 YEAR WARRANTY
MAGNUM Trace Micro
Self-regulating heating ribbon < 65°C

MAGNUM Trace Micro - MTM is an industrial grade self-regulating heating tape that can be used for frost protection or maintaining the temperature of pipework and vessels. It is especially suitable for use on pipes and instruments with small diameters. It can be cut to length at site to match exact piping lengths without any complicated design considerations. Its self-regulating characteristics improve safety and reliability. This MTM will not overheat or burn, even when overlapped upon itself. Its power output self-regulates in response to the pipe temperature. MTM is available with a corrosion resistant thermoplastic outer jacket; and with a fluorine polymer outer jacket (MTM-Fluorine polymer) in cases when greater corrosion resistance is required.

Applications
- Cold water pipes
- Drains
- Sprinkler systems
- Oil pipelines (MTM-Fluorine polymer)

Additional information
The extent of the loss of heat depends on the diameter of the piping, the ambient temperature and the flow of liquid. Extra insulation is advised. Use of a temperature regulator reduces energy consumption.

For calculating the heat loss and the applicable cable, you can contact the sales department of MAGNUM Heating.
### Technical details

- Maximum temperature: 65°C
- Min. operation temperature: -30°C
- Max. resistance: 18 Ohm/km
- Nominal voltage: 230V
- Outer jacket: Tinned copper
- Coating: Thermoplastic or Fluorine polymer, watertight
- Dimensions (mm): 8 x 5 mm
- Minimum bending radius: 25 mm
- Weight: 7 kg/100 m
- Colour:
  - MTM 11: 11 Watt Fluorine polymer (Blue)
  - MTM 17: 17 Watt Fluorine polymer
- Tests: CE / RU, according to DIN EN 62395-1

### Maximum advised cable length at 230V with use of Type-C relay:

<table>
<thead>
<tr>
<th>Category</th>
<th>Reference</th>
<th>Temp.</th>
<th>Switch</th>
<th>Enabled relay</th>
<th>Power capacity per meter</th>
<th>Nominal voltage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>6 Amp</td>
<td>10 Amp</td>
<td>16 Amp</td>
<td></td>
</tr>
<tr>
<td>11MTM</td>
<td>+5°C</td>
<td>70 m</td>
<td>100 m</td>
<td>110 m</td>
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<tr>
<td></td>
<td>0°C</td>
<td>65 m</td>
<td>95 m</td>
<td>105 m</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>-20°C</td>
<td>44 m</td>
<td>77 m</td>
<td>90 m</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>-30°C</td>
<td>38 m</td>
<td>67 m</td>
<td>80 m</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17MTM</td>
<td>+5°C</td>
<td>39 m</td>
<td>60 m</td>
<td>70 m</td>
<td></td>
<td></td>
</tr>
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<td></td>
<td>0°C</td>
<td>37 m</td>
<td>58 m</td>
<td>65 m</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>-20°C</td>
<td>25 m</td>
<td>44 m</td>
<td>50 m</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>-30°C</td>
<td>23 m</td>
<td>41 m</td>
<td>47 m</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Art.No. Table

<table>
<thead>
<tr>
<th>Art.No.</th>
<th>Type</th>
<th>Length</th>
<th>Power capacity per meter</th>
<th>Nominal voltage</th>
</tr>
</thead>
<tbody>
<tr>
<td>150211</td>
<td>MTM-11</td>
<td>Per meter</td>
<td>11 Watt @ 10°C</td>
<td>230V</td>
</tr>
<tr>
<td>150411</td>
<td>MTM-11</td>
<td>Roll 25 meters</td>
<td>11 Watt @ 10°C</td>
<td>230V</td>
</tr>
<tr>
<td>150511</td>
<td>MTM-11</td>
<td>Roll 50 meters</td>
<td>11 Watt @ 10°C</td>
<td>230V</td>
</tr>
<tr>
<td>150611</td>
<td>MTM-11</td>
<td>Roll 100 meters</td>
<td>11 Watt @ 10°C</td>
<td>230V</td>
</tr>
<tr>
<td>150217</td>
<td>MTM-17</td>
<td>Per meter</td>
<td>17 Watt @ 10°C</td>
<td>230V</td>
</tr>
<tr>
<td>150417</td>
<td>MTM-17</td>
<td>Roll 25 meters</td>
<td>17 Watt @ 10°C</td>
<td>230V</td>
</tr>
<tr>
<td>150517</td>
<td>MTM-17</td>
<td>Roll 50 meters</td>
<td>17 Watt @ 10°C</td>
<td>230V</td>
</tr>
<tr>
<td>150617</td>
<td>MTM-17</td>
<td>Roll 100 meters</td>
<td>17 Watt @ 10°C</td>
<td>230V</td>
</tr>
<tr>
<td>150311</td>
<td>MTM-11 Fluorine polymer</td>
<td>Per meter</td>
<td>11 Watt @ 10°C</td>
<td>230V</td>
</tr>
<tr>
<td>150317</td>
<td>MTM-17 Fluorine polymer</td>
<td>Per meter</td>
<td>17 Watt @ 10°C</td>
<td>230V</td>
</tr>
</tbody>
</table>
MAGNUM Trace Micro Plug & Go
Self-regulating heating ribbon < 65°C

MAGNUM Trace Micro Plug & Go is an industrial grade self-regulating heating ribbon that can be used for frost protection or to maintain the temperature of pipework and vessels up to 65°C. Suitable for use in non-hazardous, hazardous and corrosive areas. The self-regulating characteristic of MAGNUM Tracing cables avoids overheating or burning, even when heating cables overlap. The power capacity regulates itself in response to the temperature of the pipe. The conductive polymer core transmits the required heat automatically at each point along the pipe without using a thermostat.

Applications
Cold water pipes
Drains
Sprinkler systems

Additional information
The extent of the loss of heat depends on the diameter of the piping, the ambient temperature and the flow of liquid. Extra insulation is advised. Use of a temperature regulator reduces energy consumption.

For calculating the heat loss and the applicable cable, you can contact the sales department of MAGNUM Heating.
Technical details

Technical data of the cable
See also MAGNUM Trace Micro

MAGNUM Trace Micro Plug & Go
- Ready-to-install heating elements including connectors
- Power capacity 11W/meter @ 10°C 230V
- IP67 connection

Connection cable
- Earthed connection cable
- Including connector and end cap
- Available with or without thermostat
- Thermostat enabled at < 5°C

Maximum advised cable length at 230V with use of Type-C relay:

<table>
<thead>
<tr>
<th>Category</th>
<th>Switch Temp.</th>
<th>Enabled relay</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reference</td>
<td>Reference</td>
<td>6 Amp</td>
</tr>
<tr>
<td>11MTM</td>
<td>+5°C</td>
<td>70 m</td>
</tr>
<tr>
<td></td>
<td>0°C</td>
<td>65 m</td>
</tr>
<tr>
<td></td>
<td>-20°C</td>
<td>44 m</td>
</tr>
<tr>
<td></td>
<td>-30°C</td>
<td>38 m</td>
</tr>
</tbody>
</table>

Art.No. | Type | Length | Capacity | Nominal voltage |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>159711</td>
<td>MTM-PG 1</td>
<td>1 meters</td>
<td>11 Watt @ 10°C</td>
<td>230V</td>
</tr>
<tr>
<td>159703</td>
<td>MTM-PG 3</td>
<td>3 meters</td>
<td>33 Watt @ 10°C</td>
<td>230V</td>
</tr>
<tr>
<td>159705</td>
<td>MTM-PG 5</td>
<td>5 meters</td>
<td>55 Watt @ 10°C</td>
<td>230V</td>
</tr>
<tr>
<td>159709</td>
<td>MTM-PG 9</td>
<td>9 meters</td>
<td>99 Watt @ 10°C</td>
<td>230V</td>
</tr>
<tr>
<td>159715</td>
<td>MTM-PG 15</td>
<td>15 meters</td>
<td>165 Watt @ 10°C</td>
<td>230V</td>
</tr>
<tr>
<td>159722</td>
<td>MTM-PG 22</td>
<td>22 meters</td>
<td>242 Watt @ 10°C</td>
<td>230V</td>
</tr>
</tbody>
</table>

159701 | Connection cable 2 meters without thermostat incl. connector and end cap. |
159702 | Connection cable 2 meters with thermostat incl. connector and end cap. Switch temperature < 5°C |
MAGNUM Trace Gutter Heat
Self-regulating heating ribbon for eaves < 85°C

MAGNUM Trace Gutter Heat (MTGH) is a self-regulating heating cable specifically designed to prevent snow and ice building up on roofs, in eaves and in drainpipes. In snow and icy water the cable operates at full power. As the snow melts and the water drains away MTGH self regulates to half power while it dries; as it gets warmer it gradually reduces its output. It can be cut-to-length during installation. The MTGH is a self-regulation cable and therefore prevents overheating. It can even be installed directly into plastic gutters and with a black, corrosion stable and UV stable outer jackets the system is durable and reliable.

The installation of MTGH is quick and simple and requires no special skills or tools. Termination, splicing and connection components are available.

Additional information
- It is recommended that an additional temperature controller is used. A controller that measures the ambient temperature and the presence of snow or moisture is the most efficient.
- This cable should not be placed on Bitumen surfaces.

For calculating the heat loss and the applicable cable, you can contact the sales department of MAGNUM Heating.

A - In snow and ice water, the cable will work at full capacity.
B - When the snow melts, the power capacity decreases automatically.
C - The power capacity decreases further until all snow and ice has gone.
Technical details

Maximum temperature
Without power 85°C
With power 65°C

Structure
Aluminium foil with UV-resistant TPE-O sheath

Bus leads
Nickel plated copper wire

Power output
Air at 10°C - 20W/ Ice at 30W

Nominal voltage
230V

Minimum bending radius
25 mm

Lowest installation temp.
-45°C

Dimensions (mm)
10.5 x 5.9

Weight
7.4 kg/100 m

Cable colour
Black / UV stable

Maximum length (m) vs. circuit breaker size:

<table>
<thead>
<tr>
<th>Category</th>
<th>Reference</th>
<th>Switch Temp.</th>
<th>6A</th>
<th>16A</th>
<th>20A</th>
</tr>
</thead>
<tbody>
<tr>
<td>MTGH-20</td>
<td>MTGH-20</td>
<td>10°C</td>
<td>44</td>
<td>72</td>
<td>80</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0°C</td>
<td>36</td>
<td>58</td>
<td>80</td>
</tr>
</tbody>
</table>

MTGH Kit
Ready to use heating elements with built-in thermostat. Easy to use and installed directly. Equipped with a thermostat that switches on below 5°C and switches off below -10°C.
- Including a 3 meter connection cable
- Securing clips
- IP67 protected

<table>
<thead>
<tr>
<th>Art.No.</th>
<th>Type</th>
<th>Power capacity per meter.</th>
<th>Nominal voltage</th>
</tr>
</thead>
<tbody>
<tr>
<td>151020</td>
<td>MTGH-20</td>
<td>20 Watt @ 10°C</td>
<td>230V</td>
</tr>
<tr>
<td></td>
<td>Kits</td>
<td></td>
<td></td>
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<tr>
<td>159605</td>
<td>MTGH-Kit 5 m</td>
<td></td>
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<tr>
<td>159610</td>
<td>MTGH-Kit 10 m</td>
<td></td>
<td></td>
</tr>
<tr>
<td>159615</td>
<td>MTGH-Kit 15 m</td>
<td></td>
<td></td>
</tr>
<tr>
<td>159625</td>
<td>MTGH-Kit 25 m</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
MAGNUM Trace Water
Self-regulating heating ribbon for water pipes < 65°C

MAGNUM Trace Water (MTW) is a self-regulating heating cable that can be used for internal as well as external frost protection of water pipes. It can also be cut to length at site and exact piping lengths can be matched without any complicated design considerations. Its self-regulating characteristics improve safety and reliability, as the heat output is regulated by the pipe temperature.

The MAGNUM Trace Water is equipped with a Polyolefin outer jacket that covers all requirements and therefore safely to be used in combination with drinking water.

Additional information
The extent of the loss of heat depends on the diameter of the piping, the ambient temperature and the flow of liquid. Extra insulation is advised. Use of a temperature regulator reduces energy consumption.

For calculating the heat loss and the applicable cable, you can contact the sales department of MAGNUM Heating.
Technical details

Maximum temperature: Without power 65°C
Nominal voltage: 230V
Minimum bending radius: 25 mm
Max. cable length: 100 meters with 16A circuit breaker
Lowest installation temp.: -40°C
Dimensions (mm): 8 x 5.9 mm
Weight: 7.3 kg/100 m
Colour: Violet
Tests: CE according to DIN EN 62395-1

MTW Kit
Ready to use heating elements incl.:
- MTW self regulating cable with end seal
- 3/4-inch brass cable lead and pipe connector
- Power lead connection kit

Art.Nr. | Type | Power capacity per meter | Nominal voltage
---|---|---|---
159000 | MTW-10 | 20 Watt @ 10°C | 230V

Kits
159002 | MTW-Kit 2 meters | 20 Watt @ 10°C | 230V
159003 | MTW-Kit 3 meters | 30 Watt @ 10°C | 230V
159004 | MTW-Kit 4 meters | 40 Watt @ 10°C | 230V
159005 | MTW-Kit 5 meters | 50 Watt @ 10°C | 230V
159006 | MTW-Kit 6 meters | 60 Watt @ 10°C | 230V
159008 | MTW-Kit 8 meters | 80 Watt @ 10°C | 230V
159010 | MTW-Kit 10 meters | 100 Watt @ 10°C | 230V
159013 | MTW-Kit 13 meters | 130 Watt @ 10°C | 230V
159020 | MTW-Kit 20 meters | 200 Watt @ 10°C | 230V
159025 | MTW-Kit 25 meters | 250 Watt @ 10°C | 230V

1.2 mm² tinned copper cable
self-limiting heating element
TPE insulation
earthing braid
Polyolefin protection case
Self-regulating heating ribbon for warm-water pipes < 85°C

MAGNUM Trace Hot Water (MTHW) is a self-regulating heating cable designed to compensate for heat loss from hot water distribution systems.

When hot taps are not continuous used, the water in the distribution pipework cools and is usually run to waste before hot water from the source arrives at the tap.

This MTHW does not become overheated and does not burn, even when it overlaps on itself. The electrical current regulates itself based on the temperature of the pipe. Its self-regulating characteristics improve safety and reliability. By applying to the pipework (beneath the thermal insulation), heat losses are eliminated and the water is maintained at the required temperature.

The installation of MTHW is quick and simple and the cable can be cut to match the exact length of the pipework. It requires no special skills or tools. Termination, splicing and power connection is available separately.

Additional information
The extent of heat loss depends on the diameter of the piping, the ambient temperature and the flow of liquid. Extra insulation is advised. Use of a temperature regulator reduces energy consumption.

For calculating the heat loss and the applicable cable, you can contact the sales department of MAGNUM Heating.
Technical details

Maximum temperature without power 85°C
with power 65°C
Intermittent 1000 cumulative hours
Nominal voltage 230V (120V available upon order)
Minimum bending radius 25 mm
Minimum installation temp. -30°C
Max. resistance of braid 18.2 Ohm/km
Dimensions (mm) 13 x 6.8 mm.
Weight 12 kg/100 m
Colour Brown
Tests CE according to DIN EN 62395-1

Maximum length (m) vs. Circuit breaker size:

<table>
<thead>
<tr>
<th>Category</th>
<th>Switch</th>
<th>Reference</th>
<th>Temp.</th>
<th>6A</th>
<th>10A</th>
<th>16A</th>
<th>20A</th>
</tr>
</thead>
<tbody>
<tr>
<td>MTHW-9</td>
<td>18°C</td>
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<td>56</td>
<td>92</td>
<td>128</td>
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<tr>
<td>MTHW-12</td>
<td>18°C</td>
<td>0°C</td>
<td>34</td>
<td>56</td>
<td>90</td>
<td>94</td>
<td>80</td>
</tr>
</tbody>
</table>

For use with Type C circuit breakers to BS EN60898:1991

Recommended insulation thickness (mm):

<table>
<thead>
<tr>
<th>Category</th>
<th>Maintain Pipe Size (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reference</td>
<td>Temp.</td>
</tr>
<tr>
<td>MTHW-9</td>
<td>60°C</td>
</tr>
<tr>
<td></td>
<td>55°C</td>
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<tr>
<td></td>
<td>50°C</td>
</tr>
<tr>
<td>MTHW-12</td>
<td>45-70°C</td>
</tr>
</tbody>
</table>

The above figures are based on the thermal insulation having a K-value of 0.038W/mK at an average temperature of 36°C.

<table>
<thead>
<tr>
<th>Art.No.</th>
<th>Type</th>
<th>Power capacity per meter.</th>
<th>Nominal voltage</th>
</tr>
</thead>
<tbody>
<tr>
<td>159555</td>
<td>MTHW-9</td>
<td>9 Watt @ 55°C</td>
<td>230V</td>
</tr>
<tr>
<td>159565</td>
<td>MTHW-12</td>
<td>12 Watt @ 65°C</td>
<td>230V</td>
</tr>
</tbody>
</table>
Thermostats for MAGNUM Tracing

893550  ETO2-4550 DIN-rail thermostat
Temperature / moisture 3 x 16A - 230V

An intelligent all-in-one solution for melting snow and ice. Optimal operation is guaranteed by power regulating which renders the system effective and economical.

- Electronic on/off switch up to 11kW
- 2 zone control, can be individually controlled simultaneously
- Economical control - minimum energy consumption
- Detection of temperature and moisture (moisture sensitivity can be regulated)
- Display and "turn/press control" for easy programming
- Language options

900056  ETR-2 DIN-rail thermostat
Temperature / moisture 1 x 16A - 230V

The ETR-2 gives an economical control for melting snow and ice in smaller applications. With a focus on energy use and easy installation, the ETR-2 keeps gutters and small surfaces free of snow and ice.

- Monitoring of melting of snow and ice in outside areas and gutters
- Detection of temperature and moisture (moisture sensitivity can be regulated)
- Electronic on/off switch up to 3600 Watts
- For application on roof or eaves
- Easy to install

892551  ETN-4 Digital DIN-rail thermostat
-20/+70°C 16A - 230 V + floor sensor

An all-in-one thermostat with extensive temperature regulation, suitable for a wide range of applications. Easy to operate and program.

- This thermostat is perfect for: frost protection, melting ice & snow
- Extensive temperature range: -19.5° to +70°C.
- Entry for night lowering and frost protection
- Optimal safety due to built-in 2 pole 16A interrupter
- Simple menu navigation and programming make for a quick set-up
- Big backlit display
- Supplied with thin floor sensor

891551  ETI-1551 DIN-rail thermostat
-10/+50°C, 230V 10A

For frost protection of pipework. The ETI-1551 is an on/off thermostat with adaptable differentiation for temperature control. Because the ETI is equipped with changeover relay, the thermostat can be used as a cooler thermostat. An ETF-622 pipe sensor is supplied with this thermostat.
Sensors for MAGNUM Tracing

900055  ETOR-55 Sensor unit (Moisture) for eaves
        + 10 meter of connecting cable

This moisture sensor is designed especially for installation in gutters and drains. Can only be used in combination with Outdoor sensor type ETF-744/99.

901441  ETF-744/99 External Outdoor temperature sensor

This Outdoor sensor registers only the temperature. Can be used in combination with Outdoor sensor type ETOR-55 or on its own for temperature registration only.

891651  ETF-622 Pipe sensor
        -40/+120°C

Can be connected to a DIN-rail thermostat. This sensor has a wide range and is therefore widely applicable. The metal encasing makes for quick and accurate temperature measurement.

860199  ETF-144 Floor sensor
        -20/+70°C

Standard floor sensor NTC for floor temperature detection.

<table>
<thead>
<tr>
<th>Part no.</th>
<th>Thermostats for MAGNUM Tracing</th>
</tr>
</thead>
<tbody>
<tr>
<td>893550</td>
<td>ETO-4550 Din rail thermostat temperature/moisture 3 x 16A - 230 Volt</td>
</tr>
<tr>
<td>900056</td>
<td>ETR-2 DIN-rail thermostat temperature/moisture x 16A - 230 Volt</td>
</tr>
<tr>
<td>892551</td>
<td>ETN-4 Digital DIN-rail thermostat -20°C/+ 70°C 16A - 230 Volt + Floor sensor</td>
</tr>
<tr>
<td>891551</td>
<td>ETI-1551 DIN-rail thermostat -10°C/+50°C, 10A - 230V</td>
</tr>
</tbody>
</table>

Sensors for MAGNUM Tracing

900055  ETOR-55 Sensor unit moisture for eaves incl. 10 meters of connecting cable
901441  ETF-744/99 External Outdoor temperature sensor
891651  ETF-622 Pipe sensor -40°C/+120°C
860199  ETF-144 Floor sensor -20/+70°C
Connection materials for MAGNUM Tracing

159710 MT-Connection unit
for MTR, MTGH and MTHW
Connection piece (straight) for connecting or transferring tracing cables. Supplied with 1 x 160103 MT-Shrinkage insulation end seal kit.

Technical details
Dimensions (mm) 26.5-32 mm x -115-130 mm.
Class IP68 / 5 Bar
T marking T85°C
Operating temp. -40°C to +125°C
Tracing index PTI250

159711 MT-Connection unit
for MTM & MTW
Connection piece (straight) for connecting or transferring tracing cables. Supplied with 1 x 160103 MT-Shrinkage insulation end seal kit.

Technical details
Dimensions (mm) 26.5-32 mm x -115-130 mm.
Class IP68 / 5 Bar
T marking T85°C
Operating temp. -40°C to +125°C
Tracing index PTI250

159712 MT-Dividing unit
for MTR, MTGH and MTHW
Connection piece (T) for connecting or splitting tracing cables. Supplied including 2x 160103 MT-Shrinkage insulation end seal kits.

Technical details
Dimensions (mm) 36 x 137 x 118 mm.
Class IP54-IP65
Operating temp. -40°C to +125°C

159713 MT-Dividing unit
for MTM & MTW
Connection piece (T) for connecting or splitting tracing cables. Supplied including 2x 160103 MT-Shrinkage insulation end seal kits.

Technical details
Dimensions (mm) 36 x 137 x 118 mm.
Class IP54-IP65
Operating temp. -40°C to +125°C
910060 MT-Cable gel connection piece

A universal connection piece that is also suitable for each cable type. Highly reliable and can be installed without advanced tools.

The following connections can be made:

- Connection cable
- Increasing cable length
- Y-connection
- End seal

160100 Shrinkage insulation connection kit

For connecting an connection cable, connecting cables to each other, or repairing damaged cables. Kit contains all needed components, including shrink tubing and connectors.

Use: 1 kit for each cable

160103 MT-Shrinkage insulation end seal kit

For sealing a cable end. Use: 1 Shrink tube per cable end.

<table>
<thead>
<tr>
<th>Part no.</th>
<th>Connection materials for MAGNUM Tracing</th>
</tr>
</thead>
<tbody>
<tr>
<td>159710</td>
<td>MT-Connection unit for MTR, MTGH and MTHW</td>
</tr>
<tr>
<td>159711</td>
<td>MT-Connection unit for MTM &amp; MTW</td>
</tr>
<tr>
<td>159712</td>
<td>MT-Splitting unit (T) for MTR, MTGH and MTHW</td>
</tr>
<tr>
<td>159713</td>
<td>MT-Splitting unit (T) for MTM &amp; MTW</td>
</tr>
<tr>
<td>910060</td>
<td>MT-Cable gel connection piece</td>
</tr>
<tr>
<td>160100</td>
<td>MT-Shrinkage connection kit</td>
</tr>
<tr>
<td>160103</td>
<td>MT-Shrinkage end sealing kit</td>
</tr>
</tbody>
</table>
Connection materials for MAGNUM Tracing

160105  MT-Connection box IP55

Connection box IP55 including DIN-rail connection clips. For connecting or splitting more than one tracing cable.

Technical details

<table>
<thead>
<tr>
<th>IP-class</th>
<th>IP55</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimensions</td>
<td>125 x 125 x 75 mm</td>
</tr>
</tbody>
</table>

160109  MT-Cable gland (20mm) for MTM, MTW, MTR and MTGH

For feeding an MTM, MTW, MTR and MTGH tracing cable through into an MT-Connection box. One gland for each cable.

160110  MT-Cable gland (25mm) for MTHW

For feeding an MTHW tracing cable through into an MT-Connection box. One gland for each cable.

159001  MT-¾" Brass cable conductor/pipe connection for MTW

Brass cable conductor for watertight sealing of the water pipe. For applying a MAGNUM Trace Water in a water pipe with a minimum diameter of 22 mm.

910033  MT-Glass fibre tape

Special adhesive glass fibre tape for installing a tracing cable on piping.

Technical details

| Breadth tape | 25 mm |
| Length tape  | 33 meters |
| Installation | 3 windings for each 30 cm |

720200  Alutape 50 mm x 22.5 meters

Especially for winding around plastic piping when a tracing cable is needed. This tape gives a higher heat outlet for plastic piping.

Technical details

| Breadth tape | 50 mm |
| Length tape  | 22.5 meters |
160107 MT-Support bow for eaves | Set of 3 pieces

These support bows support the cable and keep it in position in the gutter or drain. In gutters where 2 cables are needed, these bows make sure the cables stay at the correct distance.

160108 MT-Eaves clips | Set 10 pieces

With these eaves clips you can fix the cables in the eaves in an easy manner. Needed: 1 clip per 0.5 meter tracing.

160107 MT-Support bow for eaves | Set of 3 pieces

These support bows support the cable and keep it in position in the gutter or drain. In gutters where 2 cables are needed, these bows make sure the cables stay at the correct distance.

160108 MT-Eaves clips | Set 10 pieces

With these eaves clips you can fix the cables in the eaves in an easy manner. Needed: 1 clip per 0.5 meter tracing.

160113 MT-Warning Sticker | Set of 5 pieces

To be applied as a warning in places where tracing has been installed.
Applications

MAGNUM Infra Red heaters can be used in virtually every type of situation. On terraces, patios, under the eaves and even in areas where direct heat is required such as in stores and workshops.

Products

Within this category there are two different MAGNUM products available:

• MAGNUM Infraline Heater
• MAGNUM Arena

MAGNUM Infraline

MAGNUM Infraline Heater is a long wave infra-red radiator. These heaters are specifically suited to factories, warehouses, workshops, showrooms, gymnasiums, etc. The panels are easily and simply installed flat against the ceiling or at an angle using the brackets supplied.

MAGNUM Arena

MAGNUM Arena terrace radiators were initially designed for the catering and industrial sectors, but are also useful in domestic situations. The radiators are ideal for using on terraces and perfect in the autumn or spring or even on those chilly summer evenings, allowing the stay outdoors to be extended.
Infra red heaters
MAGNUM Infraline Heater

MAGNUM Infraline Heater is a long wave infra-red radiator. These heaters are specifically suited to factories, warehouses, workshops, showrooms, gymnasiums, etc. Also providing extra comfort for terraces, sun-lounges and patios in the cooler days in spring and autumn.

MAGNUM Infraline Heater is supplied as standard with an installation system and is therefore very easy to fit. Controlling the heater can be done via an extensive digital clock thermostat, or an on/off thermostat and either built-in or wireless. This heater is not suitable for flush mounting.

ATTENTION: These infra-red radiators are only suitable for applications where there is good protection against the wind.
The Infraline Heater is supplied as standard with the following:
• Connection cable with euro-plug
• Mounting brackets
• Installation instructions

Technical data
Capacity  1000 to 3200 Watts
Class     IPX-4
Max. temperature  380°C
Safety    Through max. temperature limiting device
Indication LED
Radiation range Up to 90°C maximum
Connection cable 2 meters incl. euro-plug
Minimum height No less than 2.4 meters
Mounting angles  0° - 15° - 30° - 45°
Testing    CE

WARRANTY
2-year warranty on the electromechanical operation.

Example calculation:
Heat requirement  100 watts per m²
Ceiling height    6 meters
Result            MAGNUM Infraline Heater 2400 watts

<table>
<thead>
<tr>
<th>Partno.</th>
<th>Capacity</th>
<th>Volts</th>
<th>Amperes</th>
<th>Dimensions</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>661000</td>
<td>1000 watts</td>
<td>230V 50/60Hz;</td>
<td>4.3A</td>
<td>600 x 189 x 67 mm</td>
<td>3.7 kg</td>
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<tr>
<td>661800</td>
<td>1800 watts</td>
<td>230V 50/60Hz;</td>
<td>7.8A</td>
<td>1000 x 189 x 67 mm</td>
<td>6.2 kg</td>
</tr>
<tr>
<td>662400</td>
<td>2400 watts</td>
<td>230V 50/60Hz;</td>
<td>10.4A</td>
<td>1500 x 189 x 67 mm</td>
<td>8.8 kg</td>
</tr>
<tr>
<td>663200</td>
<td>3200 watts</td>
<td>230V 50/60Hz;</td>
<td>13.4A</td>
<td>2000 x 189 x 67 mm</td>
<td>11.6 kg</td>
</tr>
</tbody>
</table>
MAGNUM Arena terrace radiators were initially designed for the catering and industrial sectors, but are also useful in domestic situations.

The dark infra-red heat waves are ideal for using on terraces and perfect in the autumn or spring or even on those chilly summer evenings, allowing the stay outdoors to be extended. The heat yield is very high. At least 90% of the dark infra-red waves reach the ground and people standing within radiation range.

MAGNUM Arena terrace radiators suffer no losses through combustion processes of e.g. propane gas, resulting in a yield of 100%. The effect is immediately noticeable.
Technical details

The terrace radiators are all safe while in use (protective grill), simple to operate, quick to install and mount. They should be fitted where they cannot be splashed with water at a minimum height of 2.5 meters (1500 watts) to a maximum of 4 meters (3000 watts). The MAGNUM Arena heat radiators cannot be built in flush because of the heat emission. Every heat radiator comes with a complete mounting system. If desired, the MAGNUM Arena can also be statically mounted.

MAGNUM Arena is supplied as standard with the following:
• Suspension bracket
• Protective grill
• Gold-yellow lamp (2 pieces for 3000 watts version)
• Installation instructions

Technical specifications
Available in 1500 and 3000 watts
Connection voltage 230 V/50Hz
Class IP22 class 1/EC
Colour Black or White
Housing Enamelled steel and aluminium
Dimensions 1500W 43 x 22 x 10 cm
            3000W 43 x 44 x 10 cm
Colour lamp Gold/yellow (red also optional)

WARRANTY
2-year warranty on the electromechanical operation.

<table>
<thead>
<tr>
<th>Part no.</th>
<th>Capacity</th>
<th>Dimensions</th>
<th>Colour of encasing</th>
<th>Colour of lamp</th>
</tr>
</thead>
<tbody>
<tr>
<td>621500</td>
<td>1500 watts</td>
<td>43 x 22 x 10 cm</td>
<td>Black</td>
<td>Gold-yellow</td>
</tr>
<tr>
<td>621501</td>
<td>1500 watts</td>
<td>43 x 22 x 10 cm</td>
<td>White</td>
<td>Gold-yellow</td>
</tr>
<tr>
<td>623000</td>
<td>3000 watts</td>
<td>43 x 44 x 10 cm</td>
<td>Black</td>
<td>Gold-yellow</td>
</tr>
</tbody>
</table>

Options
650000    Lamp 1500 watts RED
650002    Lamp 1500 watts GOLD-YELLOW
641050    Connection cable 10 meters, 3 x 2.5 mm² incl. plug
Floor heating

MAGNUM floor heating systems can be used in virtually every type of situation. Completely new building, renovations or even installation under wooden floors does not present a problem. In kitchens, living-rooms and bedrooms, bathrooms, sun-lounges, offices, etc.

Wall heating

Wind panels for heating a hobby area, a luxurious marble panel, anti-condensation mirror heating or modern towel radiator for use in bathrooms. For each heating-related request, we have a solution.

Infra red heaters

Infra red heaters for office areas, workplaces or factory halls. Even terrace heaters for the catering industry or under your own roofed terrace are all included in the product range of MAGNUM Heating.

Thermostats

Specific thermostats are available for all our products. This ranges from the most advanced thermostat for electrical floor heating and wireless thermostats including receiver, to the most simple on/off thermostats with temperature control.
Request our extensive Indoor Catalogue via info@magnumheating.nl or phone +31 (0)166-609 300 during office hours.