



Heating Cables and Tapes

Heating cables and tapes are one of the most versatile product lines in the Isopad range. Available in a vast array of technologies, the Isopad range is one of the broadest in the industry.

Isopad offers a variety of heating tapes and cables to give fast and efficient direct contact heating. They are suitable for a wide range of applications from simple frost or condensation protection through to process requirements up to 1000°C.

Where space is tight, heating tapes are the perfect solution, allowing high temperatures to be reached quickly and maintained on pipelines, containers and other irregular shapes. In addition pre-terminated tapes are available in a variety of popular lengths, ready to install and easy to use requiring no special skills or tools.

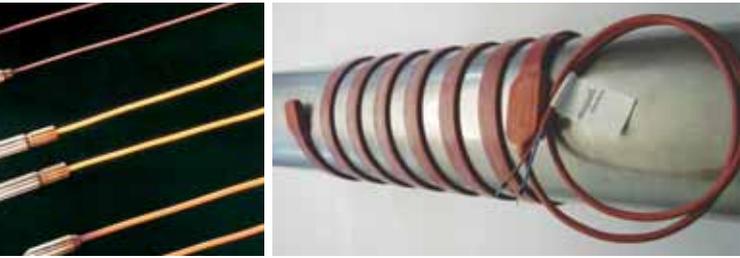


Technology

Constant wattage tapes

These flexible and rugged tapes are constructed from parallel resistive cores insulated with various materials from silicone to quartz glass. Strict manufacturing tolerances ensure these heaters have a uniform element resistance, and due to the relationship between current, resistance and power, they deliver a constant, predetermined power density along the entire length.

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Mineral insulated heating cables

Mineral insulated (MI) heating cables and units are rugged, long lasting and suitable for extreme conditions for example, to 1000°C for very low vacuum/high pressure (or 600°C for  applications). They are constructed from a metallic tube and a conductor which is supported and insulated from the tube with an inorganic insulating powder, magnesium oxide. The conductor is usually Nichrome 80/20 although other materials such as copper and ferric can also be supplied for specific applications. The most common sheath materials are 321 stainless steel and Inconel 600, copper and cupronickel are also available.

Various methods can be employed to connect the MI heating element to the cold lead cable such as brazing or silver solder, however, no method offers the same temperature rating or proven longevity as that of the laser-welded cold lead joint developed and employed by Isopad. A significant improvement on previous jointing techniques, this laser welding provides a totally mechanically secure joint. As the welding is done at lower temperatures, heat stresses to the sheath material and the danger of the main failure mechanism of moisture ingress is avoided.

Applications

Due to the versatile nature and broad range of applications for Isopad heating cables and tapes it's impossible to list all of the industries serviced, the following are just a few.

Food processing



Cables and tapes are used in a variety of ways in the food industry: for keeping freezer doors and drain lines frost free, heating conveyor systems, creating anti-stick surfaces, heat for sealing applications including lids on pre-packed foods and sealing plastic bags.

Condensation protection for motors



Isopad anti-condensation motor (ACM) heaters have been specifically designed in conjunction with major motor manufacturers to prevent condensation in motor windings which would otherwise lead to sudden or premature failure of the equipment; they are installed around the stator and are popular with manufacturers and motor rewind companies alike.