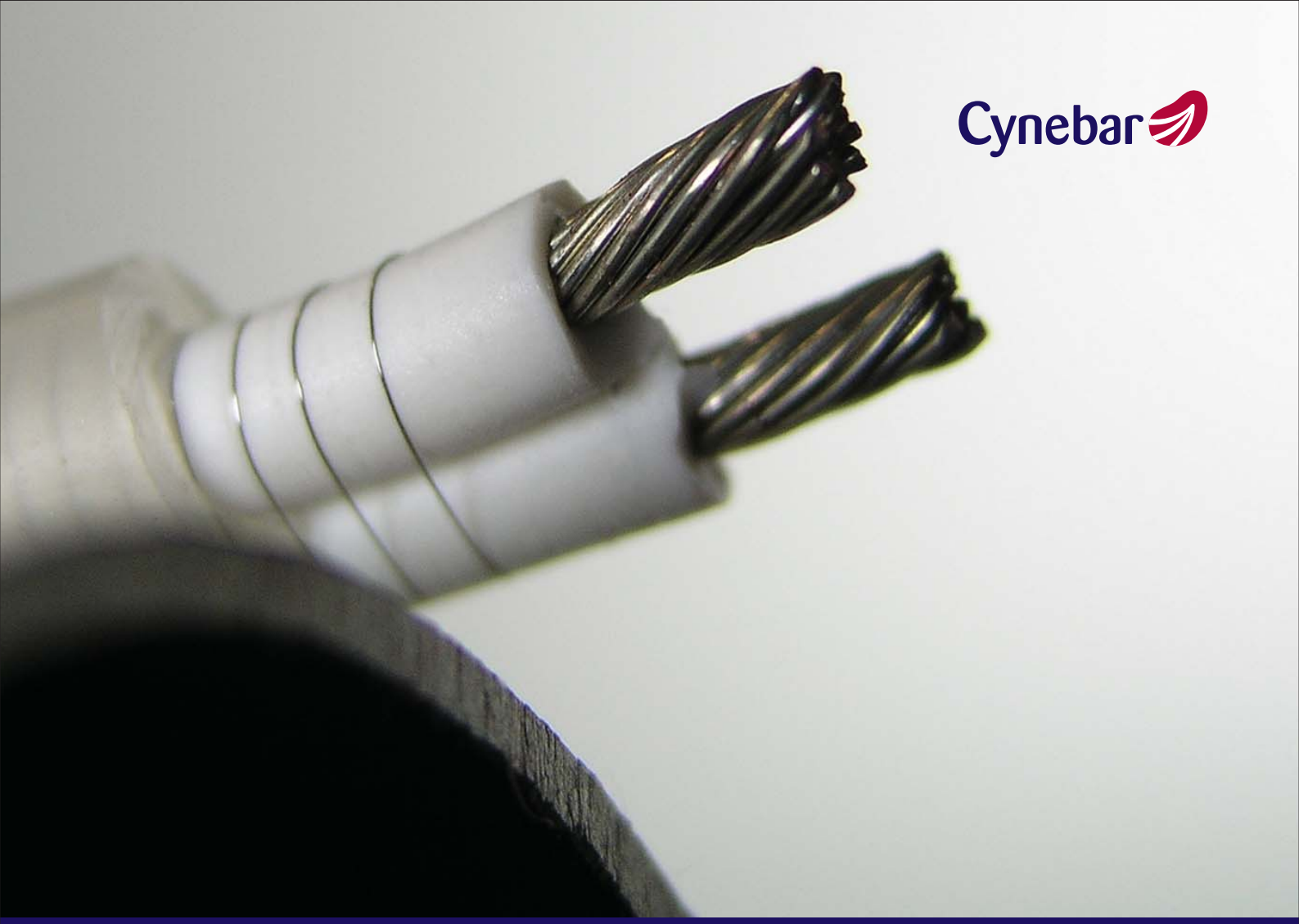


Cynebar

04 Trace Heating

Precision Electrical Heating

Trace Heating

Electric trace heating provides a quick and easy way to achieve accurate and reliable temperature maintenance of a wide range of products in pipes, tanks, silos & hoppers. Due to the ease of design, installation, maintenance and overall cost, electric trace heating is being increasingly used in place of steam heating.

Why use trace heating?

Trace heating is required when a pipe, vessel or tank needs to be maintained at a higher temperature than the surrounding ambient temperature. Trace heating tapes, or cables, applied to the surface to be heated ensure correct temperature maintenance is achieved by replacing these unavoidable losses to the atmosphere.

Applications

Process temperature maintenance of liquids, solids or gaseous materials such as fuel oils, bitumen, petro chemicals, printing inks, gas pipelines, pharmaceutical and food processes. Freeze protection is also necessary for the correct operation of a number of refrigeration plants and systems.

Self Limiting Tape

Max Process Temp. = 120°C

Freeze protection, process temperature maintenance and hot water temperature maintenance. A temperature-dependant resistive element between two parallel copper conductors regulates and limits the heat output of the heating tape according to the ambient temperature.

- Parallel circuit configuration allows easy design, planning and installation as heating tape can be cut to length as required on site, power output per length remains unaffected.
- Self limiting heating output prevents risk of overheating. For frost protection or non critical process temperature maintenance, no temperature control required.
- Can be used in explosive atmospheres without temperature limiter for a simplified system.

Constant Power Cable

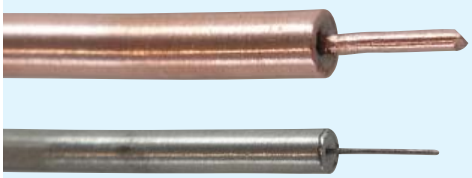
Max Process Temp. = 140°C

Process temperature maintenance. Heating cable consists of two parallel, insulated copper busbars covered with silicone insulation. A resistance wire is wound around the silicone insulation. At 500 to 1000mm spacings the wire is soldered alternately to one of the busbars.

- Parallel circuit configuration allows easy design, planning and installation as heating tape can be cut to length as required on site, power output per length remains unaffected.
- Structure of heating cable has built in cold lead, easy termination into control or junction box.
- Higher temperature withstand, suitable for wide range of applications and pipes can be steam cleaned. Flexible construction allows for easy installation around valves and flanges.

Mineral Insulated Heating Cable

Max Process Temp. = 550°C



A single-core mineral insulated heating cable with the availability of high quality materials, can be used at extremely high operating process temperatures.

- Extremely high heat outputs are attainable to suit a wide range of requirements including heat raising.
- Range of outer sheaths available (Copper, Cupro Nickel, Stainless Steel & Inconel), which offer robust mechanical strength and higher temperature capabilities.
- Solid metal sheath offers excellent earthing facility.
- Supply voltage up to 500 volts allows for three phase design and circuits. Suitable for Ex areas.

Products

Fibreglass Heating Tapes

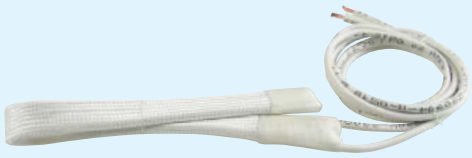
Max Process Temp. = 400°C

These highly flexible heating tapes are used mainly in laboratories and other industries when quick heating at high temperature is needed. They must be used in a dry atmosphere, they are not suitable for wet areas. It is strongly recommended to use a temperature control.

- Construction gives high flexibility and easy installation.
- High output of 250 watts per meter gives quick heat up time.
- Earthing gives electrical protection.
- Built with 500mm cold tail, ready to ship.

Anti Condensation Heaters

Suitable for Class F Windings (155°C)



Electric motors are warm while operating. When stopped they cool down. As a consequence humidity condenses inside the motor. When switched back on a short circuit may occur damaging the motor.

Specifically designed for the electric motor manufacturing industry these heater tapes prevent the formation of condensation in electric motors. Factory made to length and protected with a glass braid. The anti condensation heater switches on when the motor switches off.

- Good thermal contact provides maximum heat transfer and efficiency.
- Totally moisture proof.
- Wide range of lengths and power ratings to suit most sizes of motors.
- Suitable for use in hazardous areas, ATEX approved.
- Easily installed and glass braid enables tapes to be varnished into motor stators.

Heater Cords

In refrigerated display cabinets and food freezers, heater cord is mounted in the door frame to prevent condensation and dampness forming on the front pane when the door is being opened and closed. Can also be applied to the hand rails of freezer cabinets to avoid frost burn.

- Wide range of heater cord resistances to cater for different door sizes and applications.
- Can be supplied by the meter, 150m rolls, or longer spools to suit end-user needs.
- Pre-made to exact OEM requirements with built-in cold lead section provides electrical reliability, quick installation and complete moisture proofing.

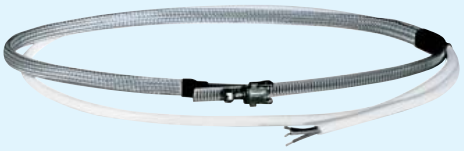
Drain Line Heaters

In cold stores, after a certain time of operation, the cooling circuit of an evaporator must be defrosted. The ice in the cooler fins is melted with the water collected at the base of the evaporator and removed through a drain pipe. This pipe may be located several meters inside the cold room, it is necessary to put a heating cable inside the pipe to make sure that the defrosted water does not freeze before it drains away.

- Factory made and terminated to length with 1m built in cold lead providing total waterproofing.
- Extremely flexible for installation
- Wide range of lengths kept in stock ready to ship.
- Double insulation provides good electrical protection.
- Additional range available with built in thermostat added for extra safety and efficiency.
- Moulded termination.

Products

Crankcase Heater



A range of heaters for air conditioners and refrigeration crankcases to prevent refrigerant absorption into the oil. The lower the temperature, the faster and more complete is the absorption. This will cause severe damage when the crankcase starts due to lack of lubrication.

- Quick and easy installation.
- Completely moisture proof, tinned copper braid for mechanical protection and earthing provides a safe installation.
- Number of sizes available ready to ship and also special dimensions on request.

Frost Heave Heating Cable

To prevent the ground from freezing (frost heave), causing structural damage to the cold room floor, heating cables are installed in the concrete under the insulation. Also at the entrance of the cold room when the door is opened humid warm air and cold air meet. The condensation generated will freeze and create ice on the floor. As the ice may cause accidents, a heating cable is installed in the concrete above the insulation in the area near the door.

- Cable construction gives high flexibility and easy installation.
- Total wattage per square metre is easily designed to suit the application (20 – 200 watts per square metre).
- Earthing gives electrical protection.
- Built with 500mm cold tail, ready to ship.

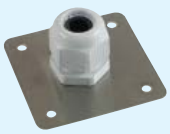
Accessories

Accessories for control, terminations and fixings of trace heating cables.

1

2

3



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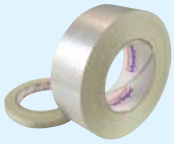

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1 Thermostat boxes for quick and easy installation. Models to suit various temperatures.
2 Standard terminations.
3 Terminations with a built in junction box are quick and easy to install. They are also easy to service and maintain.
4 Insulation entry kit is used to prevent the heating tape being damaged where it passes through the thermal insulations' metal cladding.
5 Fibreglass and Aluminium fixing tapes provide good contact of the heating tape to the surface being heated. This aids efficient heat transfer and temperature maintenance.
6 Warning labels for extra safety of personnel and plant.

Supplier Cross Reference Table

	Self Limiting Tapes	Constant Power Cables	Mineral Insulation Cables	Heater Cords	Drain Line Heaters	Crankcase Heaters	Heating Cable Flexfloor
Jan Bloom				○			
Cynebar	●	●	●	●	●	●	●
Thermon	○	○	○	○	○	○	○
Raychem	○	○	○				

CYN04B10702

Precision Electrical Heating

t +61 (0)7 3252 4257
f +61 (0)7 3252 3720
mail@cynebar.com.au
www.cynebar.com.au

164 Abbotsford Road
Bowen Hills, Brisbane
Queensland 4006
Australia

PO Box 213
Albion, Brisbane
Queensland 4010
Australia

Cynebar