



# Company Profile

[www.capitaltrace.co.uk](http://www.capitaltrace.co.uk)

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# About Us

Capital Trace sits within Capital Thermal, offering a full range of systems and services, from trace heating to insulation. [www.capitalthermal.com](http://www.capitalthermal.com)

At Capital Trace we pride ourselves on professional project delivery with a proactive approach to HSE.

Together with market-leading manufacturers we supply, install, and deliver to the highest specification using quality products across all our services.



Capital Thermal



# Why Choose Trace Heating?

Trace Heating is a system used to maintain or raise the temperature of pipes and vessels using heat tracing cables. Trace heating takes the form of an electrical heating element run in physical contact along the length of a pipe.

As with other elements of our business we work in collaboration with market-leading manufacturers to deliver high-quality projects.





# Frost Protection & Sprinkler Frost Protection

Frost or freeze protection of charged water pipework is a necessity for all critical water services and exposed pipework.

Thermal insulation alone is no guarantee against water or water-based products freezing during winter. Having Sprinkler frost protection is good practice and is fitted with two separate trace heating systems to ensure there is a backup to maintain frost protection.





Internal Sprinkler System

# Heat Maintenance

Have instant hot water from every tap by using highly energy-efficient Electrical Trace Heating. Self-regulating cables have been successfully employed for many years to give just that, in hospitals, schools, sports complexes, prisons, hotels, offices, and apartments. Having heat maintenance on your hot water services will also help control legionella bacteria by maintaining 55-60.0C. Trace heating systems may be on pipes and vessels to maintain process temperatures



# Legionnaires' Disease

Legionellosis is a collective term for diseases caused by legionella bacteria including the most serious legionnaires' disease, as well as the similar but less serious conditions of Pontiac fever and Lochgoilhead fever.

Legionnaires' disease is a potentially fatal form of pneumonia and everyone is susceptible to infection. The risk increases with age, but some people are at higher risk, eg people over 45, smokers and heavy drinkers, people suffering from chronic respiratory or kidney disease, diabetes, lung and heart disease, or anyone with an impaired immune system.

The bacterium *Legionella pneumophila* and related bacteria are common in natural water sources such as rivers, lakes, and reservoirs, but usually in low numbers. They may also be found in purpose-built water systems, such as cooling towers, evaporative condensers, hot and cold water

to encourage growth, eg cooling towers, evaporative condensers, hot and cold water systems, and spa pools used on all sorts of premises (work and domestic).

Legionnaires' disease is normally contracted by inhaling small droplets of water (aerosols), suspended in the air, containing the bacteria. Certain conditions increase the risk of legionella if: (a) the water temperature in all or some parts of the system may be between 20–45 °C, which is suitable for growth; (b) it is possible for water droplets to be produced and if so, they can be dispersed; (c) water is stored and/or re-circulated;

(d) some deposits can support bacterial growth, such as rust, sludge, scale, organic matter, and biofilms.

It is important to control the risks by introducing measures that do not allow the proliferation of the organisms in the water systems and reduce, so far as is reasonably practicable, exposure to water droplets and aerosol. This will reduce the possibility of creating conditions in which the risk of exposure to legionella bacteria is increased.



**The bacterium *Legionella pneumophila* and related bacteria are common in natural water sources. They may also be found in purpose-built water systems, such as cooling towers, evaporative condensers, hot and cold water systems, and spa pools.**

systems, and spa pools. If conditions are favorable, the bacteria may multiply, increasing the risks of legionnaires' disease, and it is, therefore, important to control the risks by introducing appropriate measures. *Legionella* bacteria are widespread in natural water systems, eg rivers, and ponds. However, the conditions are rarely conducive for people to catch the disease from these sources. Outbreaks of the illness occur from exposure to legionella growing in purpose-built systems where water is maintained at a temperature high enough





# Maintenance Programmes

We offer a full range of testing on previously installed systems to ensure they are working correctly and running cost-efficiently. If any faults are found we will inform you and give you options on how to get the system running efficiently. Each system that is tested will have a commissioning certificate and will be carried out by a trained installer.



# Testing & Commissioning

Insulation resistance (Megger) test Insulation resistance (IR) testing checks the integrity of the electrical insulating barrier between the resistive heating element and the cable jacket. IR testing is analogous to pressure testing a pipe and detects damage to the heating jacket or termination. IR testing can also be used to isolate the damage to a single run of heating cable.

Fault location can be used to further locate damage. IR testing is recommended at five stages during the installation process, as part of regular system inspection, and after any maintenance or repair work.

Resistance and continuity test Resistance and continuity testing measurements ensure that the correct product at the specified circuit length is installed and the conductors are connected properly. Continuity testing is recommended at commissioning, prior to system start-up, as part of regular system inspection, and after any maintenance or repair work.

**All our installs have a visual and insulation resistance test using a calibrated tester.**



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