

Self Regulating Trace Heating Systems Installation and Maintenance

Non-Hazardous Area Installations

Installation

- Heating tape should be installed on clean, dry pipe free from burrs, weld splatter or any rough, sharp projections.
- Heating tape may be straight traced or spiralled along the pipe. If straight traced, the heating tape should be held in place with adhesive tape at 300mm intervals. For spiral tracing, fixing at 1m intervals is suitable.
- Use the correct adhesive tape suitable for the temperature application.
- A 30mA trip Residual Current Circuit Device (RCCB) or Earth Leakage Circuit Breaker (ELCB) is recommended for use with heating tapes.
- If in doubt about electrical installation consult a qualified electrician.
- Use mineral or glass fibre insulation and ensure that it is kept dry for maximum efficiency.
- Fit warning labels on the outside of thermal insulation at approximately 3-meter intervals.
- For PVC, ABS, Polythene and other 'Plastic' pipes use heating tape not exceeding 12 watts per meter and having an earth screen covering. It is recommended that heating tape be covered in 50mm wide adhesive aluminium foil. An RCC or ELCB unit must be used in conjunction with this type of installation.
- It is recommended that all Heating tape should be installed in conjunction with a thermostatic controller.
- Heating cable should be terminated using a suitable termination kit.

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Heating Tape Straight Traced – Fixed at Max 300mm



Heating Tape Spirally Traced – Fixed at Max 1000mm



When Spiral tracing keep turns evenly spaced



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Straight Trace along the outside of pipe bends



Valves may be traced with extra tape to allow for increased heat loss for larger valves (>2"). The use of extra tape around valves also enables removal of the valve.



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Heating Tape should pass through pipe mounting supports/Insulation blocks with clearance but **<u>MUST NOT</u>** be fitted between pipe mounting clamps and the pipework.



Flange heating loss can be compensated by additional tracing.



It is the responsibility of the installer to ensure that the final installation complies with all relevant standards and current wiring regulations.

If in doubt, consult a qualified electrician.

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System Testing

Test all heating cable:

- Prior to installation
- Following Installation

Depending on the type of heating cable installed, the following tests must be carried out and recorded.

IMPORTANT

- All electrical testing and system checking should be carried out by an electrician or other competent person(s).
- Drawings/Sketches/Photos Should be taken of the installation
- All tests should be carried out at every stage of the installation
- All results should be recorded and signed-off at every stage of the installation

SELF REGULATING - Maintenance

The system will operate automatically via the thermostatic or temperature control set point.

No maintenance of the system is required but it is recommended that the system is checked for operational and electrical integrity periodically or prior to the winter.

With electrical supply disconnected the Insulation Resistance should be tested using a minimum 500Vdc tester and should record a resistance reading of $<20M\Omega$ to ensure that there is no damage to the heating cable.

To ensure efficient operation of the trace heating system it is recommended that the system is controlled via a suitable thermostat unit.

Depending on the application requirements there are several RS Components Ltd thermostats that will be suitable for trace heating projects.

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- Heating Cable Termination Kit (GB
 - Heizband-Abschluss-Set (D
- Kit de terminals para cable de calentamiento
 - Kit de terminal de cable chauffant (F
 - Kit di terminazione cavo di riscaldamento
 - Aftslutningssæt til varmekabler (DK
 - Aansluitset voor verwarmingskabel (NL
 - Anslutningssats till värmekabel (SE





Instruction Leaflet Bendienungsanleitung Hojas de instrucciones Feuille d'instructions Foglio d'instruzioni Betjeningsvejledning Instructies Instruktionsfolder GB

RS Stock No.

When used with Heat cable (**RS** stock no. 256-244, 6657419, & 6657413) this kit will be sufficient for three sets of terminations. The kit consists of the following:

- 3 end seal moulds
- 3 small silicone tubes
- 1 tube of silicon adhesive
- 3 Warning labels

Preparations

- 1. Look for the first heating joint in the cable. Cut 50mm from the joint.
- 2. Measure the exact length of tape required and look for the nearest heating joint.
- 3. Then add up to 950mm and cut the cable. (do not cut closer than 50mm from the next heating joint).

Blank end termination (short cold tail)

- 1. Strip off 6mm of the silicon sheath with a sharp knife.
- 2. Unwind the heating element.
- 3. Cut along centre between the conductors and cut back one insulated conductor 3mm (figure 1).
- 4. Squeeze some silicon adhesive into an end seal mould and cover the end of the heating tape.
- 5. Pinch the end mould to exclude as much air as possible
- releasing pressure at the same time (figure 2).
- 6. Leave to set for approximately 30mins.

Cold tail section termination

- If a cable gland is to be used in the installation fit it to the cable at this stage. (For suitable cable glands see current RS catalogue).
- 2. Strip off a maximum of 50mm of outer silicone sheath.
- 3. Unwind and cut off heating element.
- 4. Take the small silicon tube and squeeze some silicone adhesive into it.
- 5. Apply silicone adhesive over the conductors and fit the small silicon tube over them as far as possible.(figure 3).

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