

# Comfort and Space Heating Specification

## 1.0 General

Furnish and install a complete ACNOR / CSA approved system for the floor and space heating system under ceramic or marble tiles, including heaters, components, controls and associated accessories.

## 2.0 Products

- 2.1 The heating cable shall be a self-regulating heating cable with a polyolefin or fluoropolymer outer jacket, bonded thermoplastic inner jacket and stranded tin plated Copper Conductors. Both 6CCA and 5FPS self-regulating cables are rugged, industrial grade heaters that have a bonded inner jacket for enhanced moisture and dielectric protection. The heating cables will be cut in the field to the desired length.  
For the maximum lengths and quantities, consult the "Maximum segment length vs breaker amps" in the latest version of the HT-235 brochure.
- 2.2 The heating cable shall operate at \_\_\_\_ volts. (120, 208, 240, 277).
- 2.3 All heating cable components shall be UL listed, CSA certified for use as part of the system to provide comfort or space heating.
- 2.4 The heat tracing cable shall be warranted against manufacturing defects for a period of 10 years from date of shipment.

## 3.0 System Performance

- 3.1 Heat requirements shall be determined from recommendations in the 1999 ASHRAE Handbook. Heater design and selection shall be based on the desired heat load and in accordance with the manufacturers published specifications and guidelines.  
See the most recent version of the HT-235 flyer.
- 3.2 The system shall provide \_\_\_\_ watts / ft<sup>2</sup> at \_\_\_\_ volts.

## 4.0 Control

- 4.1 There are two types of controls that may be used with floor heating systems: programmable or non-programmable (max. 15A). The AUBE thermostats can be set for floor temperature sensing or ambient temperature control. Floor temperature sensing control must be used for heat loss replacement and comfort floor heating applications. The ambient temperature control can be used for space heating applications.
- 4.2 A master and slave unit system is also available and specially designed for large floor heating applications exceeding 15 A. The master thermostat controls a single or multiple floor heating zones driven by slave units. The master thermostat can control up to 10 slave units. Each slave unit drives its own zone and is equipped with a GFCI test button and warning light as well as an On/Standby switch to facilitate maintenance on specific zones of the floor installation.

## 5.0 Installation

- 5.1 Heater installation and electrical design shall conform to the manufacturer's published specifications and guidelines. See the latest version of the HT-235 flyer.
- 5.2 All electrical heat tracing components shall be supplied by the same manufacturer and approved for the application by a certifying agency.
- 5.3 System installer shall have complete understanding of product and product literature from manufacturer or authorized representative prior to installation.
- 5.4 Electrical connections shall be completed by a licensed electrician in conformance to the National Electrical Code.

## **6.0 Testing**

- 6.1 Insulation resistance tests should be performed at the following points of the installation process (refer to the most recent HT-213 "INSTALLATION AND MAINTENANCE MANUAL FOR SELF-REGULATING HEATING CABLES") :
  - a. Upon receipt of the heating cable
  - b. During the installation, before the installation of the tiles.
  - c. After complete installation.
- 6.2 The heating cable should be tested with at least a 500VDC megger. Do not use a megger with an excess of 2500VDC.  
Minimum acceptable readings should be 20 megohms per circuit, regardless of length.
- 6.3 Test documentation shall be maintained of installation and start-up values and retained by responsible personnel to assistance in system maintenance.

## **7.0 Approvals**

- 7.1 ACNOR/ CSA approved for Comfort and space heating Systems.