CSI: DIVISION: 22 00 00—PLUMBING
           Section: 22 11 00—Facility Water Distribution

Product certification system:

> The ICC-ES product certification system includes testing samples taken from the market or supplier's stock, or a combination of both, to verify compliance with applicable codes and standards. The system also involves factory inspections, and assessment and surveillance of the supplier's quality system.

Product: Heat Meter

Listee: CALEFFI North America, Inc.
            3883 W. Milwaukee Road
            Milwaukee, WI 53208
            www.caleffi.us

Compliance with the following standards:

> ASTM E3137 – 2018, Standard Specification for Heat Meter Instrumentation

Identification:

> A heat meter, or its subassemblies, or both shall be marked clearly and indelibly with the information listed and the ICC-ES PMG listing mark.

> Flow Sensor:
> - Supplier (name or trademark);
> - Type identification, year of manufacturer, and serial number;
> - Accuracy class, as defined in ASTM E3137;
> - Limits of flow rate (q_i, q_p, and q_s);
> - Limits of temperature (t_{min} and t_{max});
> - Maximum admissible working pressure (PN-class);
> - One or more arrows to indicate flow direction;
> - Environmental class as defined in ASTM E3137;
> - Heat-conveying liquid if other than water;
> - Nominal meter factor (gallons/pulse and liters or corresponding factor for normal output); and
> - Orientation limits for installing the meter.

> Temperature Sensor Pair:
> - Supplier (name or trademark);
> - Type identification (for example, Pt 100, year of
> - manufacture, and serial number);
> - Limits of temperature (t_{min} and t_{max});
> - Limits of temperature difference ($\_t_{min}$ and $\_t_{max}$);

- Maximum admissible working pressure for direct
- mounted sensors (PN-class); and
- Identification of flow and return temperature sensors, if applicable.

Heat Calculator:
- Supplier (name or trademark);
- Type identification, year of manufacture, and serial number;
- Type of temperature sensors (for example, Pt 100 or Pt 500, and so forth);
- Environmental class;
- Installation requirements, including wiring of temperature sensors and indication if shielding is required;
- Limits of temperature (t_{min} and t_{max});
- Limits of temperature difference ($\_t_{min}$ and $\_t_{max}$);
- Required input signal from the flow sensor (linear or pulse or both);
- Heat-conveying liquid if other than water; and
- Flow sensor to be operated at the flow or return of heat exchanger.

Complete Instrument:
- Supplier (name or trademark);
- Type identification, year of manufacture, and serial number;
- Limits of flow rate (q_i, q_p, and q_s);
- Limits of temperature (t_{min} and t_{max}) of the flow sensor/temperature sensor pair;
- Limits of temperature difference ($\_t_{min}$ and $\_t_{max}$);
- Accuracy class as defined in ASTM E3137;
- Maximum admissible working pressure (PN-class);
- Environmental class as defined in ASTM E3137;
- Maximum admissible working pressure for the flow sensor, MAP;
- Heat-conveying liquid if other than water;
- Meter to be installed in flow or return;
- One or more arrows to indicate the direction of flow; and
- Orientation limitations for installing the meter.

Installation:

Products shall be installed in accordance with the manufacturer's instructions and the applicable codes.

Models:

CONTECA Heat Meter, 7504 Series

Conditions of listing:

1. Electrical or mechanical safety is outside scope of this listing.
2. The CALEFFI's products recognized in this listing must be installed in accordance with the manufacturer's published installation instructions.
3. The CALEFFI's products recognized in this listing are manufactured under a quality control program with annual surveillance inspections by ICC-ES.