

BTU METERING SYSTEM SPECIFICATION: MODEL 5202

AS MANUFACTURED BY ISTECH CORPORATION

5 PARK LAKE ROAD, SPARTA, NJ 07871

The contractor shall furnish and install as shown on the plans an electronic BTU Metering System. The system shall be designed and programmed exclusively for energy (BTU) metering. It shall be factory assembled, calibrated and tested, incorporating the following features:

ELECTRONIC CALCULATING UNIT

The Electronic Calculating Unit, Model 5202, shall be of solid state microprocessor based construction incorporating Chip Card Technology. It shall be capable of measuring heating and/or cooling energy (BTU's). The changeover from heating to cooling energy measurement shall be performed automatically. The unit shall contain a non-resettable Liquid Crystal Display (LCD) to continually indicate the total accumulated heating BTU's. The unit shall allow the user to access the following information on the LCD: supply temperatures, return temperatures, temperature difference, total flows, momentary energy consumption, momentary flow rates, maximum energy consumption and maximum flow rates. In addition, the LCD shall provide status and error indication, including segment test, days-of-operation as well as type of error. The Electronic Calculating Unit shall automatically compensate for fluid density. It shall contain a terminal strip for connection to the temperature sensors and flow meter.

CHIP CARD SYSTEM

The Electronic Calculating Unit shall incorporate Chip Card Technology to provide error-free transfer of data to a Chip Card. The Chip Card shall be capable of storing information from up to 50 units. A Chip Card Reader and software shall be available to transfer the data from the Chip Card into a computer for trend logging and billing purposes.

POWER SOURCE

The Electronic Calculating Unit shall be powered by an integral 6-year battery. An optional 10-year battery or 24 volt, 60 Hz power adapter shall be available

SENSORS

Temperature sensors shall be the Platinum RTD type to provide high accuracy, stability and long term reliability. They shall be calibrated and supplied in matched pairs with a 13-foot long cable. The sensor probe shall be available in lengths of; 1½"/40mm, 3½"/90mm and 5¾"/145mm to accommodate different pipe sizes. They shall be designed to fit tightly into immersion wells that are inserted into the water flow.

SENSOR WELLS

Sensor Wells shall be 1½"/40mm long x ⅜" NPT for pipe sizes up to 1"/25mm and 4"/100mm long x ½" NPT for pipe sizes 1¼"/32mm to 3"/80mm. For pipe sizes 4"/100mm and above a 6"/150mm long x ½" NPT well shall be available. They shall incorporate a locking screw to secure the sensor.

OUTPUT

The Electronic Calculating Unit shall provide an open collector or dry contact pulse output proportional to the heating energy count.

FLOWMETER (see Istech 1700 or 1800 Series Flowmeter Engineering Manual for complete data)

A separate Flowmeter shall be utilized so various temperatures, pressures and flow rates can be accommodated. It shall be the multi-wing turbine type, Istech Model A . It shall have a line size of B inch(s) (C mm). The body shall be constructed of brass/cast iron. The unit shall have a hermetically sealed mechanical counter, which shall be non-resettable. It shall be constructed so that the flow insert assembly and counter can be replaced without removing the meter body. The Flowmeter shall have an accuracy of + 1.5% at D gpm (E lph). It shall have a continuous flow rating of F gpm (G m³ph). The peak flow, which the meter can not be subjected to for more than one hour per day, shall be H gpm (I m³ph). The Flowmeter shall provide a "pulse" type output of 1 contact closure for every 1/10/100 gallon(s) of flow (metric counters provide 1 pulse for every 1/10/100 liter(s) of flow).