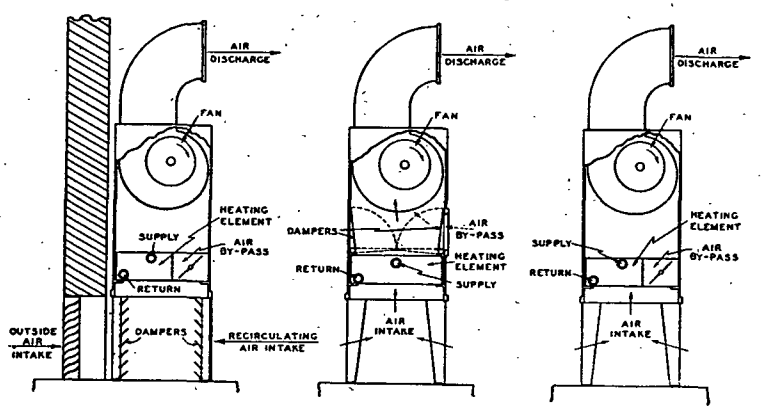

FIG. 1. CENTRIFUGAL FAN TYPE UNIT HEATER—FLOOR MOUNTED

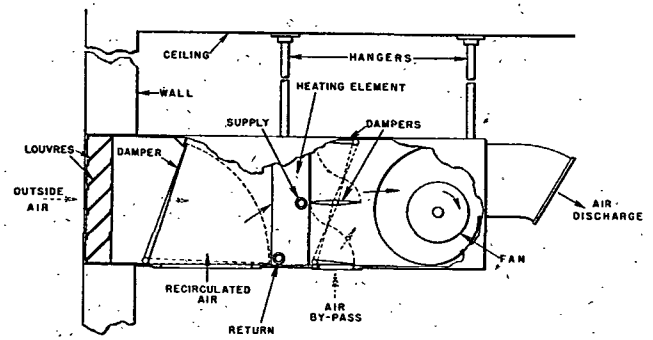

FIG. 2. CENTRIFUGAL FAN TYPE UNIT HEATER—SUSPENDED

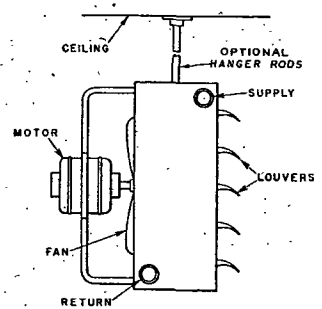

FIG. 3. PROPELLER FAN TYPE UNIT HEATER—HORIZONTAL BLOW

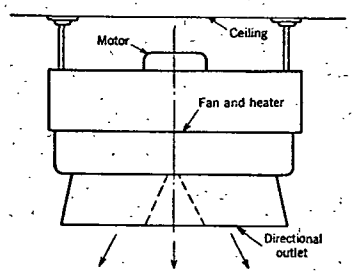

FIG. 4. PROPELLER FAN TYPE UNIT HEATER—VERTICAL BLOW

entering water at 200 F; entering air at 60 F (29.92 in. Hg barometric pressure); and heater operating free of external resistance to air flow. This code also prescribes a method of translating the output in Btu and the temperature rise as obtained under test conditions to standard conditions of air and water temperature.

Ratings for Electric Type

Electric type unit heaters are usually limited in size to a maximum of about 9 kw capacity. They consist of resistance type heating elements combined with fan and motor, together with a suitable casing. Electric unit heaters are made in the built-in-wall model, suspension model, and free-standing or portable model.

Electric unit heaters are rated on the energy input to the heater, expressed in terms of kilowatts, Btu or EDR. Quite often all three ratings are given in parallel columns in the catalogs.

Ratings for Gas Fired Type

Gas fired type unit heaters are built with either the propeller or centrifugal type fans. They are available in a wide range of sizes from 45,000 to 1,650,000 output capacity and in suspended or floor models.

Gas fired unit heaters are usually rated in terms of both input and output according to the approval requirements of the *American Standards Association*.

Ratings for Oil Fired Type

The oil fired type of unit heater is usually equipped with the centrifugal type of fan only and can be secured in sizes ranging from 125,000 to 1,650,000 Btu per hour output capacity in standard units. It is furnished in either the floor mounted or in smaller sizes in the suspended type.

Ratings for Coal Fired Type

The stoker fired type of unit heater can be secured in ranges of from 300,000 to 6,000,000 (or more) Btu per hour output capacity. Ratings are based upon the delivered output at the heater outlet.

Effect of Resistance Upon Capacity

Unit heaters are customarily rated as free delivery type units. If outside air intakes, air filters, or ducts on the discharge side are used with the unit, a reduction in air and heating capacity will result because of this added resistance. The percentage of this reduction in capacity will depend upon the characteristics of the heater and on the type, design and speed of the fans, so that no specific percentage reduction can be assigned for all heaters at a given added resistance. In general, however, propeller fan type units will experience a larger reduction in capacity than housed centrifugal fan units for a given added resistance and a given heater will have a larger reduction in capacity as the fan speed is lowered. The heat output to be expected under other than free delivery conditions should be secured from the manufacturer.

Inlet, Outlet and Space Temperatures with Unit Heaters

In the selection of unit heaters for any particular design, consideration should be given to the temperature of air entering the heaters as well as the temperature to be maintained in the working zone of the space. In