

Without the weight of the refrigerating equipment, these units may be located almost any place space permits, such as suspending from ceilings, on roofs and in basements, or in the conditioned area itself. All combinations of filtering, humidification, cooling and heating may be employed, with control as elaborate or as simple as is required. The

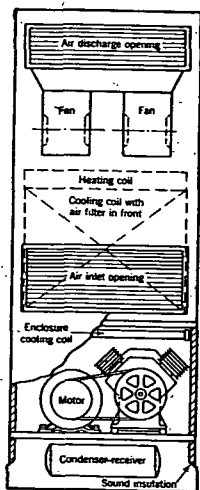


FIG. 2. SELF-CONTAINED WATER-COOLED AIR CONDITIONER

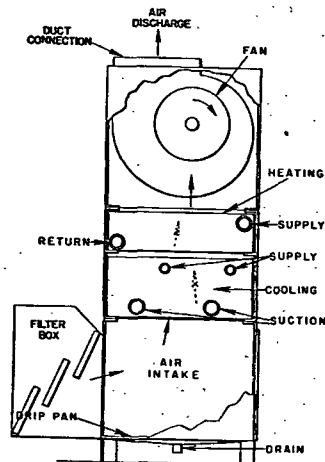


FIG. 3. VERTICAL REMOTE TYPE UNIT AIR CONDITIONER

remote unit is particularly adaptable where a variety of application conditions is to be met from a single source of refrigeration, such as the modern industrial plant which may have a laboratory, executive offices, a cafeteria, together with various processing departments.

The cooling and heating mediums, consisting of a refrigerant, chilled water or brine, and steam or hot water, are piped to the units, and transfer takes place by means of coils, or in the case of air washers, by means of water or brine sprays in the air stream, or a combination of the two.

The floor mounted or vertical type and the suspended or horizontal type of remote units are respectively shown in Figs. 3 and 4. The cabinets are generally of sheet steel, insulated to prevent heat transfer, finished to prevent corrosion and suitable for applying additional decoration if desired.

A spray type remote unit is illustrated by Fig. 5. Many designers prefer the air washing and coil wetting features. Air is circulated by means of attached or built-in fans, delivering the conditioned air through a system of ducts which include outside air connections if desired.

Some types of units, mostly those suitable for suspension, employ a propeller fan such as in Fig. 6. These are located in the conditioned area, are without ducts and seldom do more than cool and dehumidify, due to the design of the propeller fan for moving air against low resistance. Generally these units are provided with a lint screen instead of filters to limit resistance to air flow.

Individual floor mounted type remote units are available for use in offices or hotel rooms. Similar in appearance but somewhat smaller in

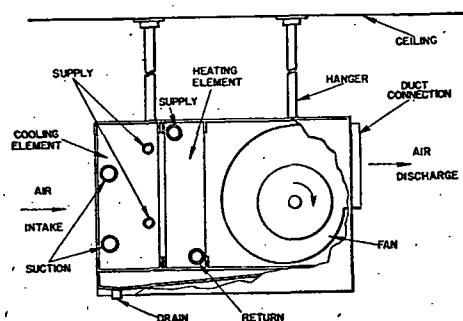


FIG. 4. HORIZONTAL REMOTE TYPE UNIT AIR CONDITIONER

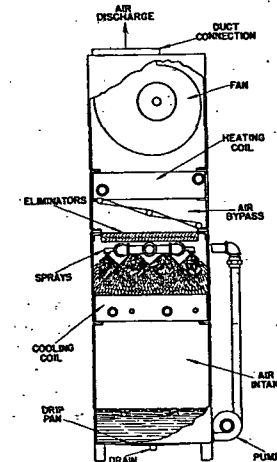


FIG. 5. (right) SPRAY TYPE REMOTE UNIT AIR CONDITIONER

size than the self-contained room unit, this form of equipment may be grouped:

1. Mechanical, year 'round type containing blowers, filters, humidifiers and coils, with outside air connection. Manual or automatic controls provided with each unit.
2. Mechanical, semi-year 'round type with no outside air connection, containing blowers (filters optional), and coils. Usually used where there is an existing radiation or ventilating system. Controls provided with each unit.
3. Non-mechanical type containing coils, using air ejected under pressure from a remote source for inducing circulation over coils (see Chapter 21). Manual or automatic control of air temperature only is provided. Both summer and winter air conditioning functions may be performed by the one unit.

One coil for cooling and heating may be provided or a single coil used, through which hot water in winter and cold water in summer is circulated. All three types of systems require remote sources of refrigeration, with the first group obtaining outside air from the window, the second group having no outside air unless used in connection with a central plant or ventilating system and in the case of the third group, all air delivered under pressure is outside air.

Various combinations or alterations of these room units are available. Different filtering, humidifying and air delivery methods are employed