air distributor headers, equipped with directional louvers, on one or more sides, for discharging the air directly into the conditioned space in which the unit is located. Above 5 hp this method usually becomes impractical and a system of ducts is employed. Arrangements for outside air supply are similar to those in central plant design, although simpler, hand operated dampers are usually employed.

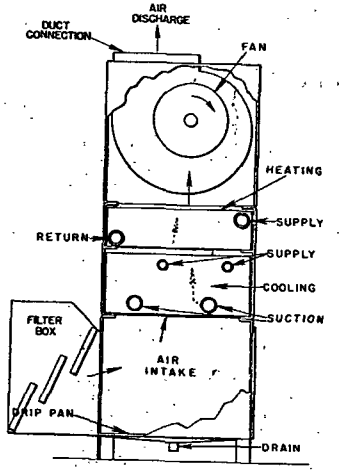


FIG. 3. VERTICAL REMOTE TYPE UNIT AIR CONDITIONER

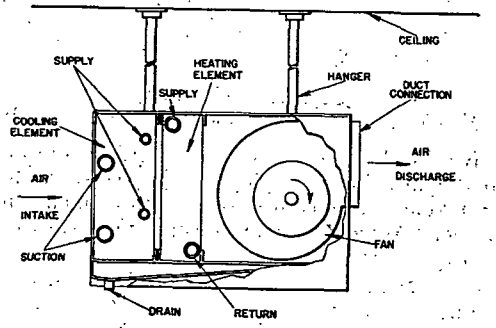


FIG. 4. HORIZONTAL REMOTE TYPE UNIT AIR CONDITIONER

Accessory equipment for the self-contained unit conditioners include heating coils, humidifiers, and controls for utilizing the unit for winter heating and ventilating. Refinements of dust and odor control and constant temperature and humidity regulation are considered to be special application problems with this type of equipment.

A typical unit with water-cooled condenser is illustrated in Fig. 2. The header arrangement permits air distribution in several directions, and

in such a way as not to fall on the room occupants. All side panels are removable for complete access to equipment. It is only necessary to bring water, drain and electrical service to the unit, and a source of heat if desired.

Remote type units cover a much broader range of size and application and generally are used in connection with or in lieu of a central plant system. They may be used individually or in groups in the place of self-contained equipment.

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

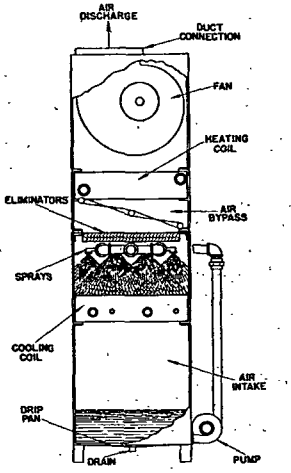


FIG. 5. SPRAY TYPE REMOTE UNIT AIR CONDITIONER

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