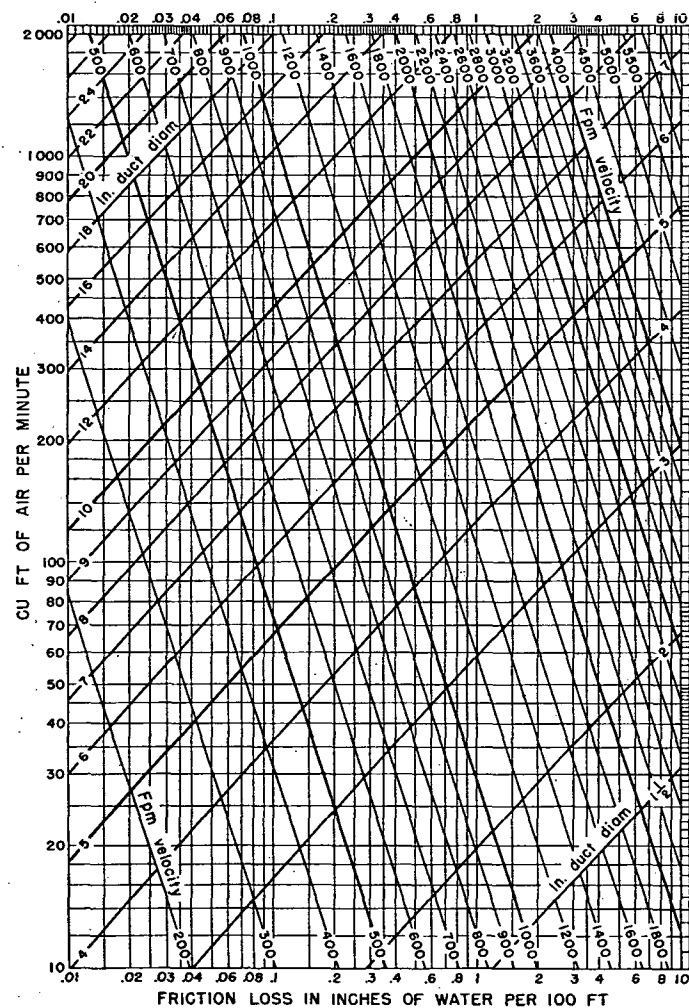
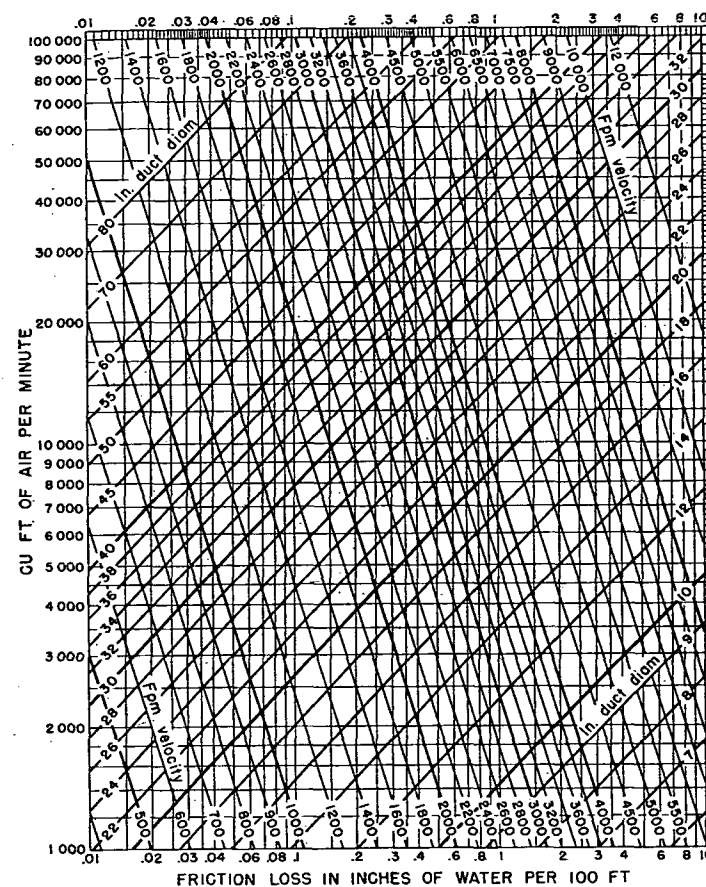




(Based on Standard Air of 0.075 lb per cu ft density flowing through average, clean, round, galvanized metal ducts having approximately 40 joints per 100 ft.) Caution: Do not extrapolate below chart.

Fig. 2.....Friction of Air in Straight Ducts for Volumes of 10 to 2000 Cfm



(Based on Standard Air of 0.075 lb per cu ft density flowing through average, clean, round, galvanized metal ducts having approximately 40 joints per 100 ft.)

Fig. 3.....Friction of Air in Straight Ducts for Volumes of 1000 to 100,000 Cfm

The distinction between *static* and *total* pressure is important, because the former is conventionally used as the basis for system design, but the latter determines the actual mechanical energy that must be supplied to the system. Note in Fig. 1 that the static pressure decreases and then increases in the direction of flow. Moreover, it even becomes negative (below atmospheric). Therefore, in dealing with static pressures, distinction must always be made between static pressure

loss (Section AB) and static pressure *change* as a result of conversion of velocity pressure (Section BC).

FRICTION LOSSES

Pressure drop in a *straight* duct is caused by surface friction, and this friction loss is most readily calculated by means of the Air Friction Charts, Figs. 2 and 3, covering volume ranges of 10 to 2000 cfm, and 1000 to 100,000 cfm,