

TABLE 22. APPLICATION OF PIPE, TUBE AND FITTINGS FOR HEATING AND AIR CONDITIONING

APPLICATION	BETTER CLASS	FOR ECONOMY
Chilled Water ^a Small Installations Large Installations 4-in. and smaller 5-in. and larger	Type K or L hard copper Type K or L hard copper Black steel, Sch. 40	Black steel, Sch. 40 Black steel, Sch. 40 Black steel, Sch. 40
Cooling Tower ^a Small Installations Large Installations	Type K, hard copper Wrought iron or black steel, Sch. 40	Type L, hard copper. Black steel, Sch. 40 Type L, hard copper. Black steel, Sch. 40
Underground Water ^a Small Installations 2-in. and smaller Large Installations 3½-in. and smaller 4-in. and larger	Type K, soft copper Type K, soft copper or Cast iron, Class 150 Cast iron, Class 150	Type K, soft copper. Black steel, Sch. 40 Galvanized steel, Sch. 40 Galvanized steel, Sch. 40
City Water Inside Building ^a Small Installations Large Installations	Type L, hard copper Type K or L, hard copper	Galvanized steel, Sch. 40 Galvanized steel, Sch. 40 or Type L, hard copper
Underground Rain Water Conductors Small Installations Under paved areas Large Installations 8-in. and smaller 10- to 24-in. 30-in. and larger 5 feet outside bldg. and under paving	Vitrified clay or cast iron soil Cast iron soil Cast iron soil XH Vitrified clay Concrete Cast iron soil XH	Vitrified clay or cast iron soil Cast iron soil Vitrified clay Concrete Concrete Cast iron soil XH
Interior Rain Water Conductors Small Installations Large Installations	Black wrought iron, Sch. 40 Cast iron soil XH	Black steel, Sch. 40 or Galvanized steel, Sch. 40 Cast iron soil XH or Galvanized steel, Sch. 40
Panel Heating ^a Small Installations Large Installations 2-in. and smaller 2½-in. and larger	Type K or L soft copper. Mild black steel. Wrought iron Type K soft copper. Mild black steel. Wrought iron Mild black steel	Type L soft copper. Mild black steel Type L soft copper. Mild black steel Mild black steel
Hot Water Heating ^a Small Installations Large Installations 1½-in. and smaller 2-in. and larger	Type K, hard copper. Black steel, Sch. 40 Type K hard copper. Black steel, Sch. 40 Black steel, Sch. 40	Black steel, Sch. 40 Black steel, Sch. 40 Black steel, Sch. 40

TABLE 22. APPLICATION OF PIPE, TUBE AND FITTINGS FOR HEATING AND AIR CONDITIONING (Concluded)

APPLICATION	BETTER CLASS	FOR ECONOMY
Refrigerant ^b 3½-in. and smaller 4-in. and larger	Type K or L hard copper Black steel, weld	Type L hard copper Black steel, weld
Steam Heating Small Installations 90 psi and less Large Installations 100 psi and over Return Pipe All sizes	Black steel, Sch. 40 Black steel, Sch. 80. XH fittings Black wrought iron. Standard fittings	Black steel, Sch. 40. Standard fittings. Black steel, Sch. 40. XH fittings Black steel, Sch. 40. Standard fittings
Receiver Vent All Sizes	Galvanized wrought iron. Standard fittings	Black steel, Sch. 40. Standard fittings
Sanitary ^a Small Installations Waste: 1½-in. and smaller 2-in. and larger Vents: 2½-in. and smaller 3-in. and larger Large Installations Waste: 2-in. and larger Vents: 2-in. and larger	Galvanized wrought iron Cast iron XH Galvanized wrought iron Cast iron XH Cast iron XH Cast iron XH	Galvanized steel, Sch. 40. Cast iron SW Galvanized steel, Sch. 40 Cast iron SW Cast iron SW Cast iron SW
Gas Fired All Sizes	Black steel, Sch. 40. Malleable iron fittings	Black steel, Sch. 40. Malleable iron fittings

^a Fittings for copper water pipe may be either wrought copper or cast brass.

^b Refrigerant fittings on copper pipe must be wrought copper. All welded fittings should be long turn.

^c Panel heating copper fittings should be soldered with 95-5 solder. Steel fittings should be welded.

^d Installation tested to 300 psi hydrostatic for two (2) hours.

^e All underground feed and return lines buried in slab, should be equipped with fittings as outlined for panel heating.

^f House sewer to main should be cast iron XH.

the line before it can be transferred to such equipment as boilers or pumps. By means of solid anchors, the anchors can be used to divide the piping into isolated sections that cannot transmit the stresses to other sections.

Hangers are used to support the piping and to take out the bending stresses. They are of the spring, roller, or rod type. Such types generally allow the free movement of the pipe and yet maintain full support.

The *Code for Pressure Piping*, ASA B31.1, has strict requirements for the materials used in hangers and supports. The structural properties have a safety factor of five, and consequently there is little chance of failure due to a sudden change of load.

There is a type of support for almost every conceivable requirement. Complete information can best be obtained from a hanger manufacturer.

APPLICATION OF PIPE, TUBE AND FITTINGS

In the application of pipe, tube and fittings it is necessary to comply with regulations contained in local codes and ordinances. Table 22 is