

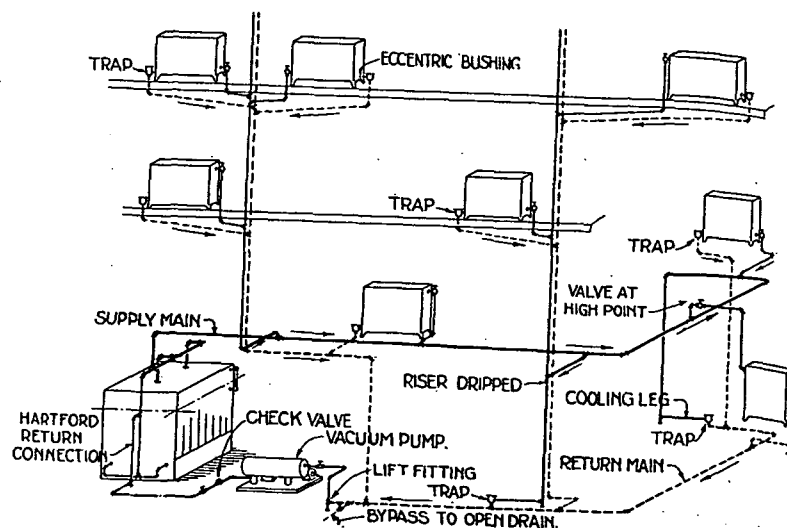


FIG. 5. TYPICAL INSTALLATION USING VACUUM PUMP

Table 12 is for comparatively small vapor systems. One ounce pressure drop may be understood to mean that the water in the vertical pipe which drains the end of the supply main will stand about 2 in. higher than the water line in the boiler, under normal conditions.

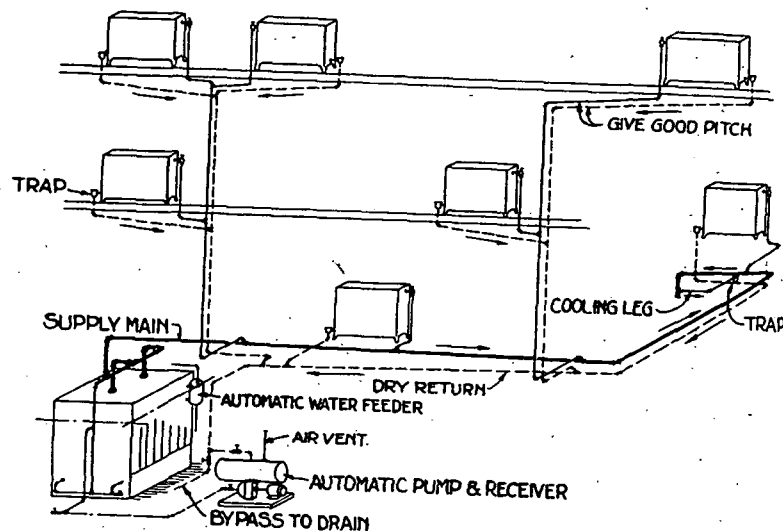


FIG. 6. TYPICAL INSTALLATION USING CONDENSATION PUMP

Table 13 shows the pipe sizes for larger vapor systems than those in Table 12. Using these sizes, the water in the vertical pipe which drains the end of the supply main, will stand about 4 in. higher than the water line in the boiler under normal operation.

Table 14 shows the pipe sizes for vapor systems where a still greater difference in water line may be allowed between that in the boiler and in the return drop-pipe under normal operation. Where the basement

TABLE 9. PIPE SIZES FOR ONE-PIPE AIR-VENT LOW PRESSURE STEAM HEATING SYSTEM, WHERE EQUIVALENT LENGTH OF RUN FROM BOILER OR SOURCE OF SUPPLY TO THE FARTHEST RADIATOR DOES NOT EXCEED 200 FT.

Capacity in Sq. Ft. of Equivalent Radiation
Based on Total Pressure Drop of 1 oz. per 100 ft.

PIPE SIZE INCHES	SUPPLY MAIN DRIPPED AND BRANCHES TO RISERS DRIPPED Steam and Condensate flowing in the same direction.	SUPPLY RISERS Up-Feed	BRANCHES TO SUPPLY RISERS AND RADIATORS NOT DRIPPED	WET RETURN MAIN	DRY RETURN MAIN	RADIATOR VALVE SIZES AND VERTICAL CONNECTIONS
A	B	C	D ^a	E	F	G
1	56	45	20	700	320	20
1 1/4	122	98	55	1200	670	55
1 1/2	190	152	81	1900	1058	81
2	386	288	165	4000	2300	165
2 1/4	635	464	260	6700	3800	260
3	1163	799	475	10,700	7000	475
3 1/2	1737	1144	745	17,000	10,000	745
4	2457	1520	1110	27,000	15,000	1110
5	4546	2800	2180	50,000	28,000	2180
6	7462	4500	3500	80,000	45,000	3500

Copyright, 1927 { AMERICAN SOCIETY OF HEATING AND VENTILATING ENGINEERS } Not to be Reprinted Without Special Permission
Heating and Piping Contractors National Association

INSTRUCTIONS FOR USING TABLE 9

1. Radiator branches more than 8 ft. in length should be one size larger than shown in Col. D.
2. These tables apply where pipes are properly reamed. No allowances for defective material or workmanship have been made. (See Tables 7 and 8).
3. Capacities based on 1/4 lb. condensation per square foot per hour equivalent radiation and actual diameter of standard pipe.
4. Extra length to be added to straight run of pipe, for various fittings and valves to determine equivalent length. (See Table 4).
5. Where it is necessary to drip a steam main, branch to riser or risers, same should be dripped separately into wet return.
6. Pitch of mains should be not less than 1/4 in. in 10 ft.; on horizontal branches to radiators and risers at least 1/2 in. in 10 ft.
7. In general it is desirable not to have a supply main smaller than 2 in. in diameter. When the supply main is larger than 2 1/2 in. at the beginning, it is desirable that it shall not be smaller than 2 1/2 in. at the end.