

# Radiant Flooring

Design Factor	Residential
Room Temperature	60-72F (15-22C)
Water Temperature	90-140F (36-60C)
Surface Temperature	75-85F (23-29 C)
Heat Output	10-30 BTU (h.ft <sup>2</sup> ) (47-95 W/m <sup>2</sup> )
Temperature Drop	15-20F (8-11C)
Flow/Loop	=0.7 gpm (= 0.04 L/s)
Pressure Drop	3-10 ft. H <sub>2</sub> O (9-30 kPa)
Loop Length	300 ft (90 m)
Tube Size	1/2" (13 mm)
Tube Centers	6-12" (150-300 mm)

Determine the total number of circuits (TC) by dividing the Total Tube Required (TT) by the max length allowed (ML). Round up fractional numbers to the next highest whole number. Divide the Total Tube Required by the Number of Circuits to obtain the Actual Circuit Length. (ACL) To simplify balancing, make all the circuits on a given manifold the same length.

$$TT/ML = TC \quad TT/TC = ACL$$

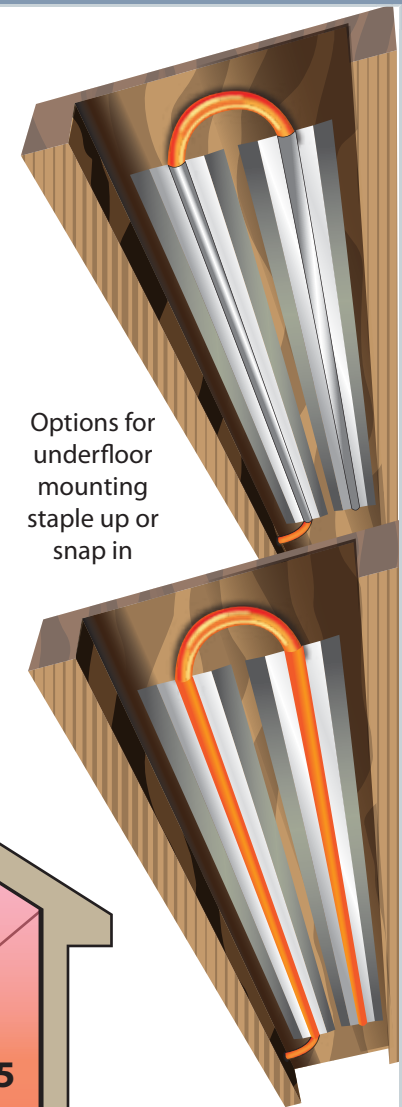
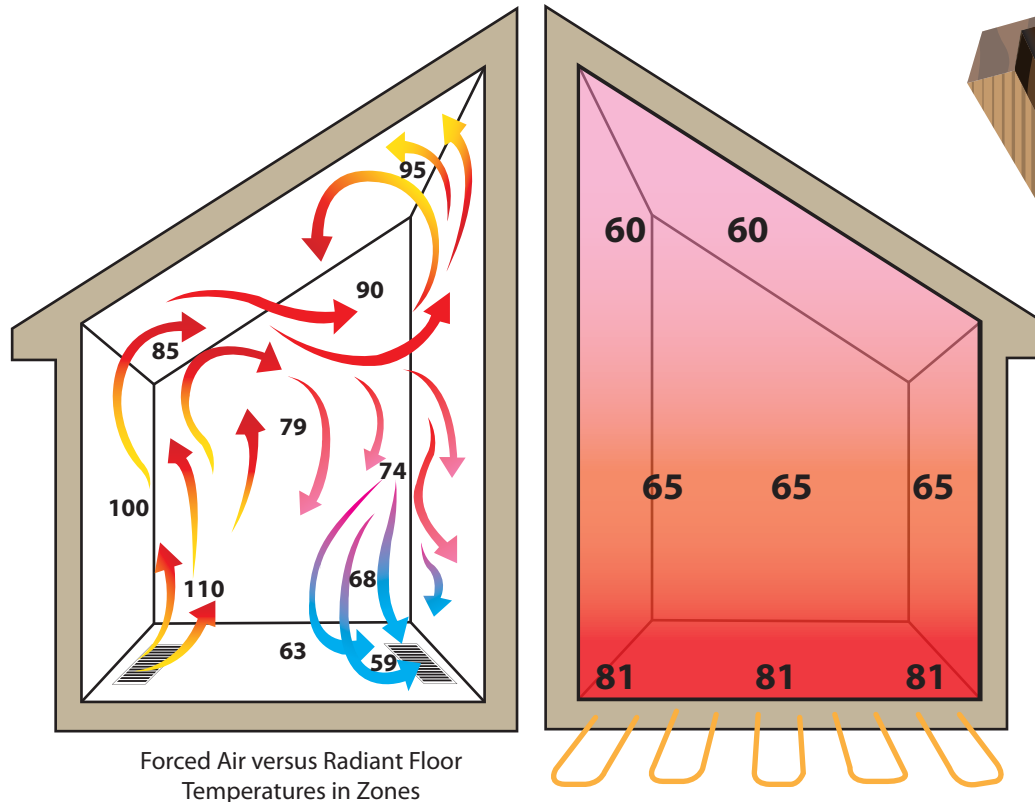
The actual layout of tubing on a plan is usually unnecessary. The designer need only identify the control and manifold locations, number and length of circuits and tube spacing.

Recommended Tube Length

1/2" tube - 300 ft (13mm / 90 mm)

Radiant floor heat costs less to operate than other forms of heat, and most people find that they are more comfortable at lower room temperatures with a radiant floor.

With radiant, there are no air grates, radiators, or thermal baseboards to factor in - there's no interference with room function or furniture layout.



Radiant Floor 1/2

For More Radiant Floor Info Check Radiant Flooring Diagram 2