



Advanced Comfort Systems, Inc.

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Before building you need to make some decisions.

1. The method of construction you are going to use.
 - a) Under Joist – Tubes with heat emitting plates under the sub floor with insulation under the tubes and plates.

Points that need to be considered with Under Joist:

- a) The plates and tubes should to be installed before the strapping for the Sheetrock is done.
 - b) You need to insulate under all floors that have Under Joist heating. It is very important that no air gap is left in the bay. Insulation should be pushed up to the plates.
 - c) The placement of manifolds when installing on second floor. Need access panels to gain access to manifolds to balance system. (Usually inside closets) If you have a finished cellar where can manifolds be located on the ceiling?
 - d) For retro jobs, if there are any nails sticking thru the sub floor will have to be removed before the installation of plates.
- b) Underlayment – Tubes are stapled to the sub floor and 1 ½” of concrete or gypcrete is poured over tubes.

Points that need to be considered with Underlayment:

- 1) With choosing this option you need to make sure the builder is aware and that he accounts for the 1 ½” difference. Putting an extra plate under the wall plate usually does this. Example; If the outside wall is 2 x 6 than a 2 x 8 is put down first. If the inside wall is a 2 x 4 than a 2 x 6 is put down first and the 2 x 4 wall is placed in the middle of the 2 x 6.
- 2) If you are doing tile in an area make sure the nailer on the outside wall is not installed.
- 3) You need to account for the extra weight. Concrete (Special Mix) = 110 P.C.F
Gypcrete = 115 P.C.F (18 lbs per square foot)
- 4) If using wood floor which direction do you want your flooring to go.

- 5) The placement of manifolds when installing on second floor. Need access panels to gain access to manifolds to balance system. (Usually inside closets) If you have a finished cellar where can manifolds be located on the ceiling?
 - 6) Floors need to be clean swept before installation can begin.
 - 7) You need to insulate under all floors that have radiant heating. It is very important that no air gap is left in the bay. Insulation should be pushed up to the sub floor.
- c) Quik Trak – ½” plywood with heat transfer plates attached to the bottom of them are installed on top of the sub floor.

Points that need to be considered with Quik Trak:

1. The placement of manifolds when installing on second floor. Need access panels to gain access to manifolds to balance system. (Usually inside closets) If you have a finished cellar where can manifolds be located on the ceiling?
 2. Floors need to be clean swept before installation can begin.
 3. You need to insulate under all floors that have radiant heating. It is very important that no air gap is left in the bay. Insulation should be pushed up to the sub floor.
 4. If using wood floor which direction do you want your flooring to go.
2. Select the type of floor covering you will be using. This is very important as each floor covering has different insulation value (R-Value).
 3. Select zoning for your house.
 4. Construction of your house is a big factor in your heating system. It is very important to make sure air leaks are sealed by drywall is installed. Air leaks are one of the biggest problems with not being able to heat your house to the desired temperature with radiant heat. Air leakage in the walls also brings down the r value of the insulation installed in the walls.
 5. Insulation, the more the better. A good insulation job will give you pay backs both in the summer and winter. Most people are unwilling to spend money on things they can't see.
 6. Select a contractor. We at Advanced Comfort Systems, Inc. design and engineer the Heating System with the customer. If you do not have any say in the above items find someone else. You should also look for a company who does their own design and not give it to someone else.