COIL COMPUTER SELECTION PROGRAMS

JULY 1979

Water Temperature Change Option - Both Hot and Chilled Water Multiple Selections

It is now possible to input minimum water temperature rise or drop on multiple selections for chilled water and hot water coils. From the formula:

$Q = 500 \times gpm \times$ Change in Water Temperature

For a given capacity, as the gpm is increased, the change in water temperature will decrease. By inputting minimum water temperature rise or drop, a maximum gpm is specified. Using this option, all of the selections received will be useful to a particular application.

For example, when selecting cooling coils, if a maximum gpm is specified, this can be translated to a minimum water temperature rise. If this minimum water temperature rise is input into the selection program, all selections that are output will be meaningful to the specific application, i.e., gpm will be less than maximum gpm specified.

Alternate Tube Feed - Hot Water Coils

One-row, series 13 (alternate tube) coils are available but will not be output from the computer selection program. If a one-row, series 13 AW coil is required, the capacity check must be done manually.

Extended Header Height - Hot Water Coils

If a header height of 36", 42", or 48" is input into the hot water program, it is possible that the output will indicate an alternate tube series coil. Alternate tube coils are not available in header heights of this size and the program has assumed that you have two stacked coils with alternate tubes.

Summer Design Condition Option - Coil Loop

In most applications, a coil loop will show a greater net savings during the winter months than the summer months. In some cases, it is not economical to run the coil loop during the summer. The option is available to leave summer design conditions blank on the coil loop selection program input form. If this is done, only winter results at design will be printed, and the economic section will only show results for the winter mode.

Water Temperature Change Option - Coil Loop

Many times, it is useful to know the water temperature rise or drop through the exhaust and supply coils in a coil loop. If this output is desired, it is necessary to put an "X" in the fluid temperature option block which is located in the option line of the input form. If this is done, the output will indicate the water temperature rise or drop for the exhaust and supply coils at the design conditions.

Distributor Loading - Refrigerant Coil Selection

In the past, it has been recommended to use an "F1" coil in conjunction with an R-12 system and an "F2" coil with an R-22 system. As stated in EB COIL-20, the only difference between an "F1" and "F2" coil is in the size of the distributor assembly furnished. The basic fin-tube bundles are identical. In order to achieve optimum distributor loading, a check is done to see which distributor assembly "F1" or "F2" offers optimum distributor loading, given a specific suction temperature and MBh per circuit. The refrigerant coil selection program does this check automatically and the type of refrigerant coil to use ("F1" or "F2") will be output.

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Fin Type Option

With the advent of Prima-Flo coils, all the computer selection programs have been revised to select either Sigma-Flo®, Prima-Flo, or both fin types. This choice can be specified in the fin type option block. If nothing is specified here, the program will select both Prima-Flo and Sigma-Flo selections.

System International Option

All coil computer selection programs have been adapted so that System International units can be input. If this type of input is desired, an "S" must be filled in the block provided for this. If this is done, the output will be "System International" units.

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