

HEAT EXCHANGERS • HEAT TRANSFER FLUIDS • AIR HANDLING UNITS



OUR COIL SELECTION/RATING PROGRAM

You have just received the newest version of our Coil Selection and Rating Program. This coil program was designed with the end user in mind. Obtaining a correct and easy-to-understand coil selection or rating can be accomplished in a few simple steps:

- 1 Launch the Application
- 2 Click on the desired coil type
- 3 Enter your project and coil information on the General Tab
- 4 Enter the coil inputs in the Coil Input Tab
- 5 Click the Performance Tab to obtain the performance
- 6 Click the Dimensions Tab to view a dimensional coil drawing

On the following pages of this Procedures Manual, we have tried to detail these steps. If you should have any questions about our coil line or the selection process, please contact us at (800) 339-7991.

SELECTION or RATING

SELECTION of a heat transfer coil is based on defining the size, construction, arrangement and performance criteria to establish the amount of heat transfer (rows and fins per inch). All of the input screens must be completed. Please try to define either one of the following: Leaving Air Temperature or BTUH. When fluid is involved in the selection, it is better to use Entering Water and GPM. **You can use Entering and Leaving Water, but it is preferred to use GPM instead.*

Circuits on a coil always have a direct influence on overall coil capacity and water pressure drop (resistance). Therefore, an understanding of circuitry and common circuit names is important when selecting water/glycol heating or cooling coils. In the selection mode, our program will select the circuit for you based on capacity information and max. water pressure drop values entered. Our program will search for the best selection based on your conditions.

RATING of a heat transfer coil is based on defining the existing size, construction, arrangement and performance data, and defining the rows, fins per inch and circuitry. The program will give you the maximum characteristics.

When rating a coil, a little knowledge is important. On the following page, we have listed some common terms for circuits and their meanings. Please remember that all of the terms are derived from one full row of tubes on coil selected.

Quarter Circuit The supply header is feeding 25% of the tubes in one row on the coil (example: 5/8" tube, 12 tubes high, feed 3). All number of rows of coil will be same end connections.

Half Circuit The supply header is feeding 50% of the tubes in one row on the coil (example: 5/8" tube, 12 tubes high, feed 6). All number of rows of coil will be same end connections.

Three Quarter The supply header is feeding 75% of the tubes in one row on the coil (example: 5/8" tube, 12 tubes high, feed 9). Same end connections on 3 row, 6 row, 9 row and 12 row coils.

Full Circuit The supply header is feeding 100% of the tubes in one row on the coil. (example: 5/8" tube, 12 tubes high, feed 12). All even numbers of rows are same end connection.

One and Half The supply header is feeding 150% of the tubes in one row on the coil. (example: 5/8" tube, 12 tubes high, feed 18). Same end connections on 3 row, 6 row, 9 row and 12 row coils.

Double Circuit The supply header is feeding 200% of the tubes in one row on the coil. (example: 5/8" tube, 12 tubes high, feed 24). Same end connections on 4 row, 8 row and 12 row coils.

NON-HEADERED CIRCUITS

Headers are on a Water/Glycol Coil because more than two tubes are fed, and you need the manifold for incoming fluid. Many coils with low GPM flows may require the use of non-headered circuits, which simply means only feeding one or two tubes. When using our program to rate Water Coils, change the circuit to "Custom" and enter "One" or "Two" in the Number of Feeds Box.

SUGGESTED FLOWS AND FEEDS

5/8" OD Tube Coil	We can suggest 2 – 4 GPM Per Feed with 3 GPM being optimum for most applications.
1/2" OD Tube Coil	We can suggest 1 – 3 GPM Per Feed with 2 GPM being optimum for most applications.
3/8" OD Tube Coil	We can suggest .5 – 1.5 GPM Per Feed with 1 GPM being optimum for most applications.

Note: We can't take responsibility for these guidelines since every application has its own specific characteristics and requirements.

COIL TYPE SELECTION SCREEN



The main Coil Type Selection screen is the first screen, and it gives you the ability to select:

- ⌚ Water Coils (heating or cooling)
- ⌚ DX Evaporator Cooling Coils
- ⌚ Standard Steam or Steam Distributing Coils
- ⌚ Condenser Coils
- ⌚ Booster Heating Coils
- ⌚ You may also select REPLACEMENTS, which will give you coil ordering forms, appropriate drawing sheets, and instructions for ordering replacement coils.

At the top of the screen, there is a **FILE** menu for opening previously saved selections which you might need to open later.

Once you have selected your Coil Type, you will begin entering data for the Coil Selection/Rating process.

GENERAL SCREEN

The screenshot shows a software window titled "Coil Suite - [Fluid Selection v2.1.1]". The window has a menu bar with "File", "Print", and "Help". Below the menu bar are four tabs: "General", "Coil Input", "Performance", and "Dimensions". The "General" tab is selected and contains a "General Information" section with the following fields:

Project Name:	<input type="text"/>
Location:	<input type="text"/>
Date:	08/24/2004
Special Notes:	<input type="text"/>

The first screen contains **GENERAL** fields for entering your **PROJECT NAME**, **LOCATION** and **DATE**, all of which are self-explanatory.

The **SPECIAL NOTES** section can be used to give a more complete name to the project or the particular selections at this time. This information will show up on all output performance forms.