

Models and database information can be imported from *Piping Systems FluidFlow (F2)* into *FluidFlow3 (F3)*. Although this option has been extensively tested, no guarantees are given. Possible problems are:

- Large networks may not come over correctly, or the F3 flowsheet may require a considerable amount of tidying up.
- Some equipment items may not come over.
- Data imported from the F2 database to F3 database **MUST** be checked by the user.

The following issues must be kept in mind:

1. Pipe data in the F3 database is limited to the 14 types of pipe (materials) already hardcoded into the software. Additional sizes may be added to each type, but no new *types or materials* can be added. F2 allows different “types” of pipes to be added but the F3 database cannot import these pipes from the F2 database. Models containing ‘non-standard’ pipes can be imported with the flowsheet displaying the internal diameter and absolute roughness.
2. Fluid data cannot be imported from the F2 database into the F3 database. This is due to the essentially different nature of the fluids data required by F3 to that used by F2. F3 fluids data contains full thermophysical properties of more than 800 fluids. These properties are required for heat change calculations and for the future liquid/gas 2-phase module. Imported F2 models containing a fluid not present in the F3 database will register a warning that the fluid is not available. It can then be added to the F3 database using the “Simple Fluid” option.

IMPORTING MODELS

To import models simply open the F2 model from with F3 using the appropriate “Files of Type” definition in the browser. Do not make any keystrokes or entries until the “Complete” message is displayed. Then check the Messages Inspector. If equipment data has not been imported, you may have to do this direct into the appropriate database and then use the Input Editor to select this equipment.

IMPORTING DATA

Those databases which allow the import of F2 data will display and import button. This button becomes active when you have selected (highlighted) the appropriate descriptor.

GENERAL

F3 will make an entry into the Manufacturers database for equipment items imported which have an appropriate “manufacturer” name.

LARGE F2 MODELS

Because both F2 and F3 have schematic layouts of the pipes rather than a scaled layout, F3 has to make some decisions on how far apart each node should be when porting over an F2 model. This often results in overlapping of nodes, which then need to be tidied up.

Note: Overlapping elements in F3 cannot be avoided. You must search the model thoroughly for such conditions. Slightly moving an element will quickly reveal a hidden element underneath.

Porting over large models (500 pipes+) in one go may therefore cause problems – overlapping nodes, difficulty in tidying up and checking.

A better approach would be...

Open the F2 model in Piping Systems FluidFlow.

Break the large model up into manageable bites or sub-models (in fact such a large model should have been originally developed in this way!). You can do this by copying and passing parts of the model to different flowsheets/files.

It would be preferable if you could define input/output (boundary) nodes for these sub-models defining a reasonable set flow or pressure and then solve.

Import these sub models to F3, check the solution is consistent with and save to individual F3 files. Then merge the F3 files into one model.

Although this is tedious, you have to keep in mind the need for assurance that what is carried over is an accurate copy of F2. Only by doing this in sub-models can you really check this.

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