

The following information has been requested by the addressee during the registration process of a PIPE-FLO or PUMP-FLO program, or when downloading the PIPE-FLO demo. Instructions to unsubscribe can be found at the end of this message.

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1. NEW TABLE MANAGER, NOW YOU CAN ADD FLUIDS

PIPE-FLO version 7 includes a new Table Manager program. A new feature of Table Manager 7 is the ability to create your own Fluid Data Files for use with PIPEFLO Professional, Compressible and Lite. You can still create and customize your own Pipe and Valve engineering data tables used by all PIPE-FLO programs.

Your existing version 6 engineering data tables will not work with PIPE-FLO version 7. But since we created new version 7 pipe tables for all the pipe materials, you should not have any difficulty using the standard tables available on the distribution CD or from the Download directory.

PIPE-FLO Professional and Compressible version 7 now include over 550 fluids (free of additional charge) from Molecular Knowledge System's Fluid Compilation, which should minimize any difficulties with fluid properties.

Table Manager version 7 was initially released as an Excel macro. We received a large number of support calls from customers who:

- * Didn't have a copy of Excel on their computer
- * Their company didn't allow the use of Excel Macros
- * Are customers outside the United States.

To better meet your needs we just released a version of Table Manager version 7 as a Visual Basic application. You can download the newest release of Table Manager 7 by clicking on the following link: http://www.engsoftware.com/file/download/Pf-700-e_update.exe

One final point: If you create any customer pipe or valve tables in version 6, and you are a TechNet subscriber; our technical support group will recreate your customized version 6 tables for you, free of charge.

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2. WHEN TO BREAK A PIPE SEGMENT

Many of the systems we review do not have bends in the pipelines; they consist of single line segments connected end to end. PIPE-FLO's drawing interface allows pipelines to have multiple vertices-in other words; a single pipeline on the FLO-Sheet can have many bends. This really saves you time by eliminating the need to enter multiple pipelines just to have a pipeline look like it does on a P&ID.

When our technical support people mention this to a customer, the next question is "When do I need to insert a pipe junction."

The answer is:

- * When pipelines changes diameter, fluid zone, or pipe specification
- * The flow branches from a single pipeline into multiple pipelines
- * To obtain a pressure at a given location in the system
- * Connect to a pump, tank, component, or control

If you are changing the pipe diameter, specification, or fluid zone, you must create a new pipeline. The only exception to this rule is when placing a reduced seated valve in a pipeline; they are in the pipeline and are on the Pipeline Design dialog box under the Valve tab.

If the flow branches from a single pipeline to multiple pipelines, each pipeline must be connected to a junction or node. A maximum of 6 pipelines can be connected to a single node. One point to remember: PIPE-FLO does not automatically insert a tee at the junction.

All PIPE-FLO programs calculate the pressure at a pipeline junction or node. If you need to determine the pressure at a specific point in the system, you will need to insert a node at that location.

In version 7 all pumps, control valves, and components are installed between pipelines. This allows you to place objects on the flow sheet, and then draw the interconnecting pipelines. This is a new feature in version 7. In previous version these devices were placed within a pipeline.

A Knowledge Base article entitled "When to Break a Pipeline into Segment" covers this subject in greater detail. <http://kb.eng-software.com/questions/207/When+to+Break+a+Pipeline+into+Segments+>

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3. THE TAG FEATURE

PIPE-FLO's tag feature allows you to highlight important results on the FLOSheet and the printed list reports.

If your piping system is rather large with a large number of pipelines, nodes, and other objects, the important results can often get lost in the clutter. By using the tag feature you can "Tag" the pipelines, nodes, pumps, controls, tanks, and components that you are most interested in, and have them be the only items displayed on the FLO-Sheet results.

To tag an object, choose the Tag tool from the PIPE-FLO Tool Bar. Individual objects can be tagged by clicking it with the Tag tool. Multiple objects can be tagged by dragging the Tag tool over the area. To un-tag a tagged object, click on it again with the Tag tool.

A Knowledge Base article entitled "Tagging Overview" covers this subject in greater detail. <http://www.eng-software.com/kb/item.asp?ID=1158>

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4. TIME SIMULATION USING LINEUPS

It is often necessary to see how a piping system operates over time. For example, as a tank is

pumped down the suction pressure of the tank decreases resulting in less flow rate through the pumps. This reduction in flow rate through the pump causes the tank to take longer to pump down as the level decreases. PIPE-FLO does not perform an extended period simulation, but you can see how the system operates over time using the Lineup feature, and some simple calculations outside PIPE-FLO.

We can use the following method to calculate how long it will take to empty a tank to a given level.

1. Create a design case lineup with the tank level set.
2. Create a lineup for equally spaced tank levels you want to consider.
3. Calculate the flow rate through the pump for each lineup. This calculates the flow rate of the fluid leaving the tank for that level.
4. Outside the PIPE-FLO program, calculate the volume of fluid per foot of tank level.
5. Outside PIPE-FLO, determine how long it will take to pump the tank down the tank level increment established in step 2 above.
6. Sum the times it takes to pump down the tank for each tank increment.

This calculation can be done very quickly with PIPE-FLO, and your favorite spreadsheet program. A Knowledge Base article entitled "Using PIPE-FLO for Time Simulation" covers this subject in greater detail. <http://kb.eng-software.com/questions/77/Time+Simulation+with+PIPE-FLO>

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5. PRINTED REPORTS

PIPE-FLO version 7 has many enhancements to the printed reports. There are reports for the entire piping system as well as detailed design reports for the pipelines, pumps, and components. In this article we will limit our discussion to system reports. You can get system reports in a List, FLO-Sheet or Bill of Material format by selecting the File / Print menu item or clicking on the Printer tool bar button. Each report type is described below:

The System List report provides information about everything in the piping system and includes:

- Specifications & Fluid Zones
- Pipelines
- Nodes
- Pumps, components, and controls
- Tanks & Demands
- Notes

You have the option of displaying:

- The list sections that are of interest
- Inserting a page break between sections
- Summary information or design information
- Calculated results.

You can also:

- Print only items that are tagged (see article 3, THE TAG FEATURE above)
- Print exception items only.

FLO-Sheet reports provide you with a printed FLO-Sheet report of the active area of the PIPE-FLO drawing. The FLO-Sheet report prints to any Windows supported printer or plotter. If you have a

large format plotter, you have the option of using large format paper to print large FLO-Sheets. The Tiled Printing option gives you the ability to print a large FLO-Sheet without the aid of a large format printer or plotter. The tiled printing divides the current FLO-Sheet view to be sent to the selected number of pages. PIPE-FLO provides match marks so you can tape the individual sheets together.

The Bill of Materials lists the pipe, valves, and fittings used in the piping project. The report consists of a materials report for each pipeline in the system as well as a system summary report. The pipeline report provides a listing of the pipe identifier, the specification, nominal size and length, along with a summary of the valves and fittings used in the pipeline. The summary report gives a total of all the pipelines by specification and nominal size including the total length of pipe and number of valves and fittings for that nominal pipe diameter. The summary report also provides a listing of the Total Pipe Volume in the system.

Detailed information about the printed reports can be found in the PIPE-FLO Help file.

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6. FLO-MASTER SEMINARS

Engineered Software will be running seven FLO-Masters seminars in 2002. These two-day seminars are scheduled for Houston, TX, Tampa, FL, Boston, MA, Los Angeles, CA, and Las Vegas, NV.

The FLO-Master Seminars will help you:

- * Design a clear model of a piping system in less time;
- * Visualize core fluid flow theories through a simulation computer model;
- * Become proficient with the use of the software;
- * Shorten the learning cycle;
- * Provide you with valuable resources and examples for use after the seminar.

Additional information about the upcoming FLO-Master seminars can be found on the Engineered Software Website <http://eng-software.com/products/PSTraining/FLO-Master/default.aspx>. The next seminar is March 4-5 2002 in Houston TX. To register for this or any of the upcoming FLO-Master seminars, contact your Engineered Software sales rep.

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