FIRSTVUE Sizing

FISHER

FISHER-ROSEMOUNT™ Managing The Process Better.™

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Chapter 1: Getting Started

Welcome to the FIRSTVUE™ application from Fisher-Rosemount. FIRSTVUE™ provides complete control valve, actuator, and monitor sizing, and enables complete process equipment selection and specification sheet generation.

This User's Guide describes the tasks you can perform with FIRSTVUE™ and gives an overview of the program's main functions and screens. Useful tips are also provided. You will find additional information in the on-line Help contained in the program.

This chapter provides instructions for installing FIRSTVUE™ and using the manual. It contains the following sections:

- How to Use this Manual
- System Requirements
- Installing FIRSTVUE™
- Removing FIRSTVUE™
- Opening FIRSTVUE™
- Closing FIRSTVUE™ and Saving Your Work

How to Use this Manual

This manual contains an overview of FIRSTVUE™ functions, tasks, and screens. Most Windows users will find the information in this manual all they need to use the program. Additional help is available in FIRSTVUE™'s extensive on-line Help system.

This manual assumes that you are familiar with your computer and performing basic Windows tasks, such as using a mouse, selecting menu commands, and opening and saving files. If you need help with any of these tasks, please consult your Windows documentation.

System Requirements

To run FIRSTVUE™, you should have a personal computer 486 DX or higher.

FIRSTVUE™ is fully compatible with Windows 95 and 97. FIRSTVUE™ is able to run on Windows 3.11, but will not support Import ISA File, Export ISA File, and Edit ISA Map File commands found under the pull-down File menu.

Memory requirements are 8 Megabytes of RAM and 30 Megabytes of hard drive space.

Installing FIRSTVUE™

Before you begin, we suggest making a backup copy of your FIRSTVUE™ disks, storing the original disks in a safe place, and using your copies for installation.

To install FIRSTVUE™:

1. Start Windows and File Manager.
2. Insert the first setup disk in floppy drive A or B.
3. Choose Run from File Manager's File Menu or Windows 95 Start button.
4. In the command line, type: **A:SETUP** (if you put the setup disk in drive A), or **B:SETUP** (if you put the disk in drive B).
5. Follow the instructions on your screen to complete installation.

   The installer places FIRSTVUE™ in the **FIRSTVUE™** directory on your C drive and installs MS DLLs into your Windows System Directory, if necessary. You can view a complete history of files placed during installation in the **INSTALL.LOG** file on your hard drive.

Removing FIRSTVUE™

To remove FIRSTVUE™:

1. Select the FIRSTVUE™ program from your Windows 95 Start button.
2. Select Uninstall.
3. Follow the instructions on your screen to uninstall FIRSTVUE™.
4. Another method of removing FIRSTVUE™ is deleting the program folder from My Computer in a Windows 95 or Windows 3.11 operating system environment.

Opening FIRSTVUE™

To open FIRSTVUE™:

1. Select the Start button on the Windows 95 or 97 workspace.
2. Select Programs.
3. Move the mouse to highlight the FIRSTVUE™ program.
4. Select the FIRSTVUE™ program item by depressing the left mouse button.
5. FIRSTVUE™ will launch and automatically take you to the header tab to begin working in the software.

Closing FIRSTVUE™ and Saving Your Work

To close FIRSTVUE™ and save your work:

1. Select **Exit** from the **File Menu**.

   The following dialog box appears:

2. Click the **Yes** button to save your work.

Chapter 2: FIRSTVUE™ Overview

Welcome to the FIRSTVUE™ application from Fisher-Rosemount. FIRSTVUE™ software provides customers complete control valve, actuator, and monitor sizing, as well as project management capability by enabling complete process equipment selection and specification sheet generation.

This chapter will outline the basic functionality of FIRSTVUE™ and provide an overview of the data and capabilities of the software. This section provides a brief roadmap to the capabilities of the software and useful field definitions to increase understanding of the software. It contains the following sections:

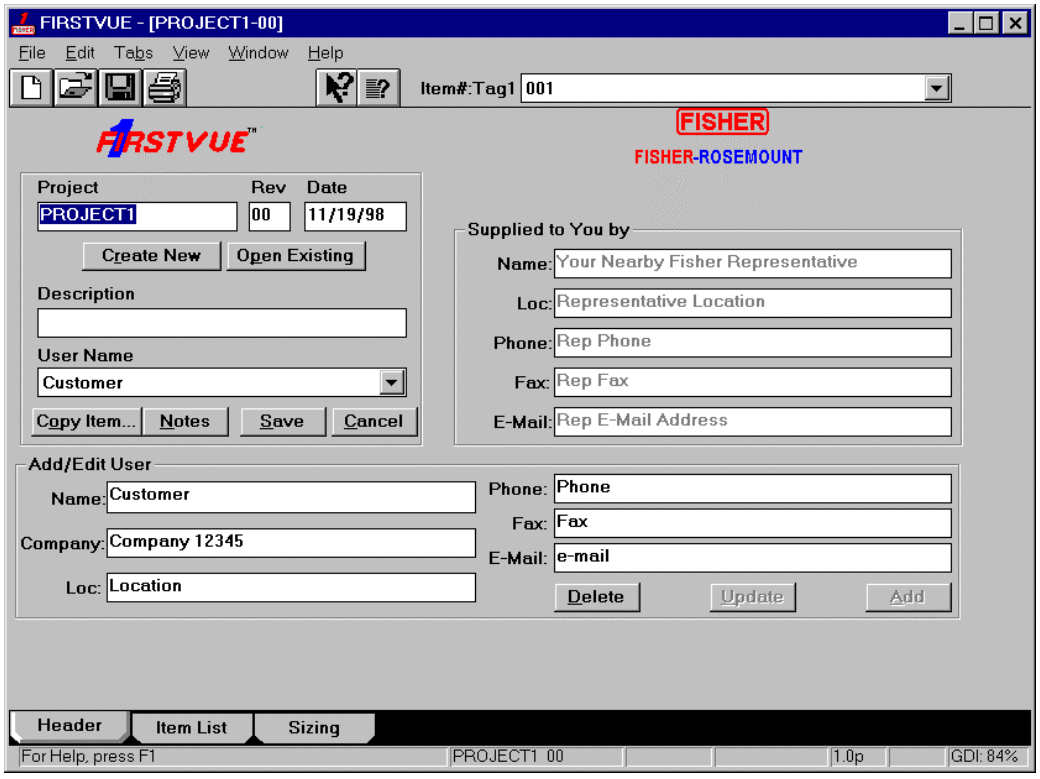
- Header Tab
- Item List Tab
- Sizing Tab
- Pull Down Menus
- Program Overview Diagram

Header Tab

The header tab is the first screen visible upon launching the software package. This screen provides basic information about the user, their location, and specific information about the plant area or project in question.

Information provided for the header tab will also be included on the reports generated by FIRSTVUE™.

From this screen projects and specific plant locations can be identified by tag number. Specific fields contained in this screen are as follows:



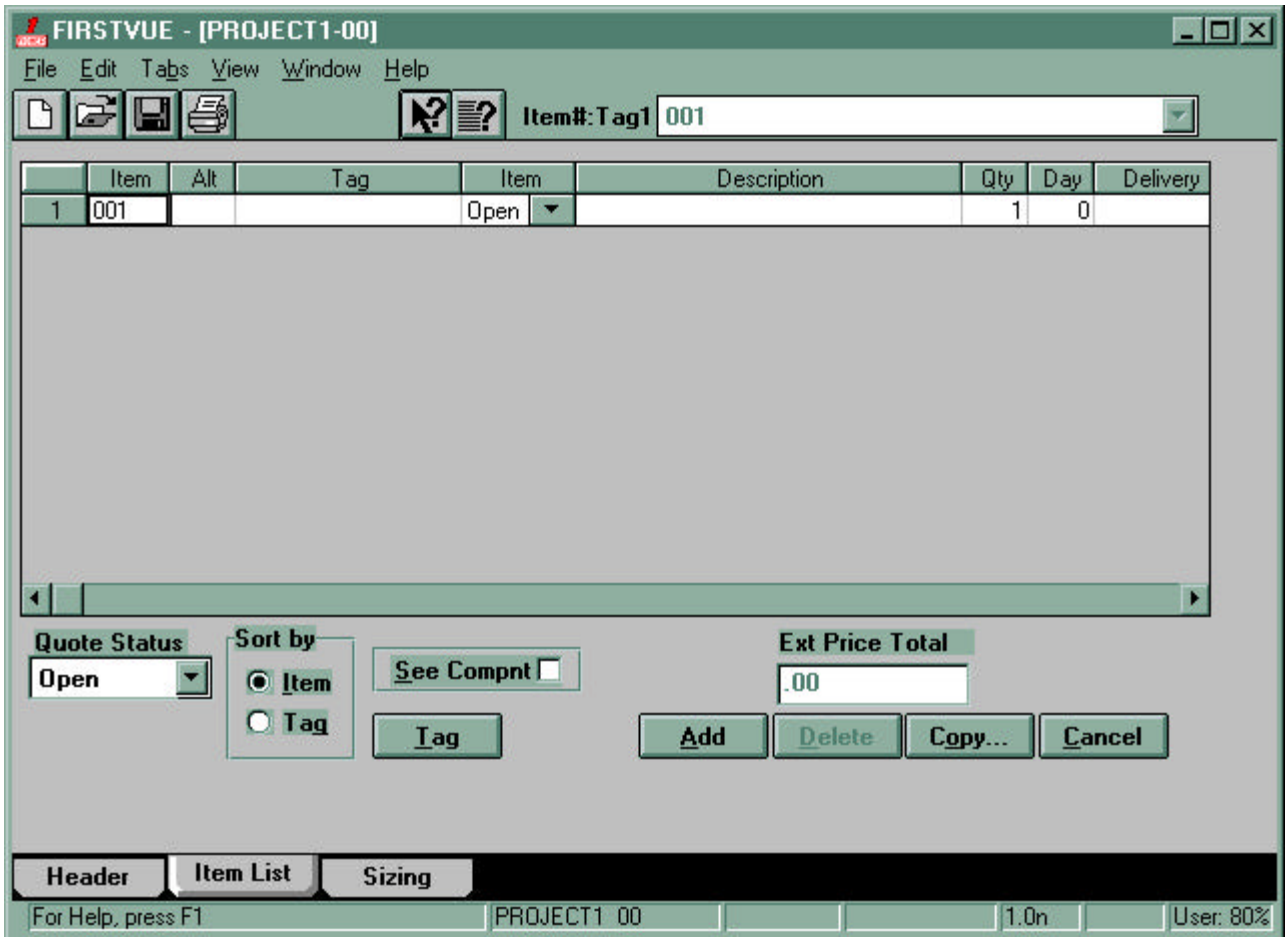
Project Information Field Definitions	**FIRSTVUE™ categorizes all sizing and selection activity into projects for manageability. By default, PROJECT1, Revision 00 is selected when the program opened.**
Project	Name of particular project or plant area
Rev	Revision number of the project in question
Date	Today's date, in number format set by Windows display preferences. MM/DD/YY or DD/MM/YY
Create New	Creates a new project by name given in Project field.
Open Existing	Opens an existing project by querying all project files of a certain name, revision number or between specific dates.
Description	Brief description of project, 35 characters in length

User Name	Pull-down selection of users that have been added to FIRSTVUE™. Information used for reports
Copy Item	Allows copying one item from one project to another project. Will ask for specific project to query to copy item from.
Notes	A free-form text note, these are useful for noting issues, questions for specific tag numbers, and progress in project related work. They are not tied to a specific item number, but are visible from any item.
Save	Saves the project to the Microsoft Access (.MDB) database file. This can take a while if you have many items in your project.
Cancel	Cancels changes made before a save is done. It will not cancel changes made after the Save command is executed.
Supplied to You By	**The Supplied to You By data will typically already be filled in when you receive your software from your local representative. If needed, both the logo and the data can be modified by accessing the FIRSTVUE™ directory or the FIRSTVUE.INI file, respectively. For specific information on this, see Chapter 4: Project Management using FIRSTVUE™.**
Name	Representative name.
Loc	Representative location/address.
Phone	Representative phone number.
Fax	Representative fax number.
E-mail	Representative e-mail address.
Add/Edit User	**The Add/Edit User section allows the customer to include their name for reference on sizing and selection information and can be updated accordingly.**
Name	User first and last name
Company	Company user works for
Loc	Location of company, such as city, state.
Phone	User's phone number
Fax	User's fax number

E-mail	User's e-mail address
Delete	Deletes the selected user from the list of FIRSTVUE™ user names
Update	Update user information to reflect changes in phone, location, etc.
Add	Add a new user to the list of user names.

Item List Tab

The item list tab is used when large projects are being handled by FIRSTVUE™. In this view, the project can be sorted by item or tag number. When the See Compnt (Component) box is selected, size and model information found in the description is displayed for each tag or item number.



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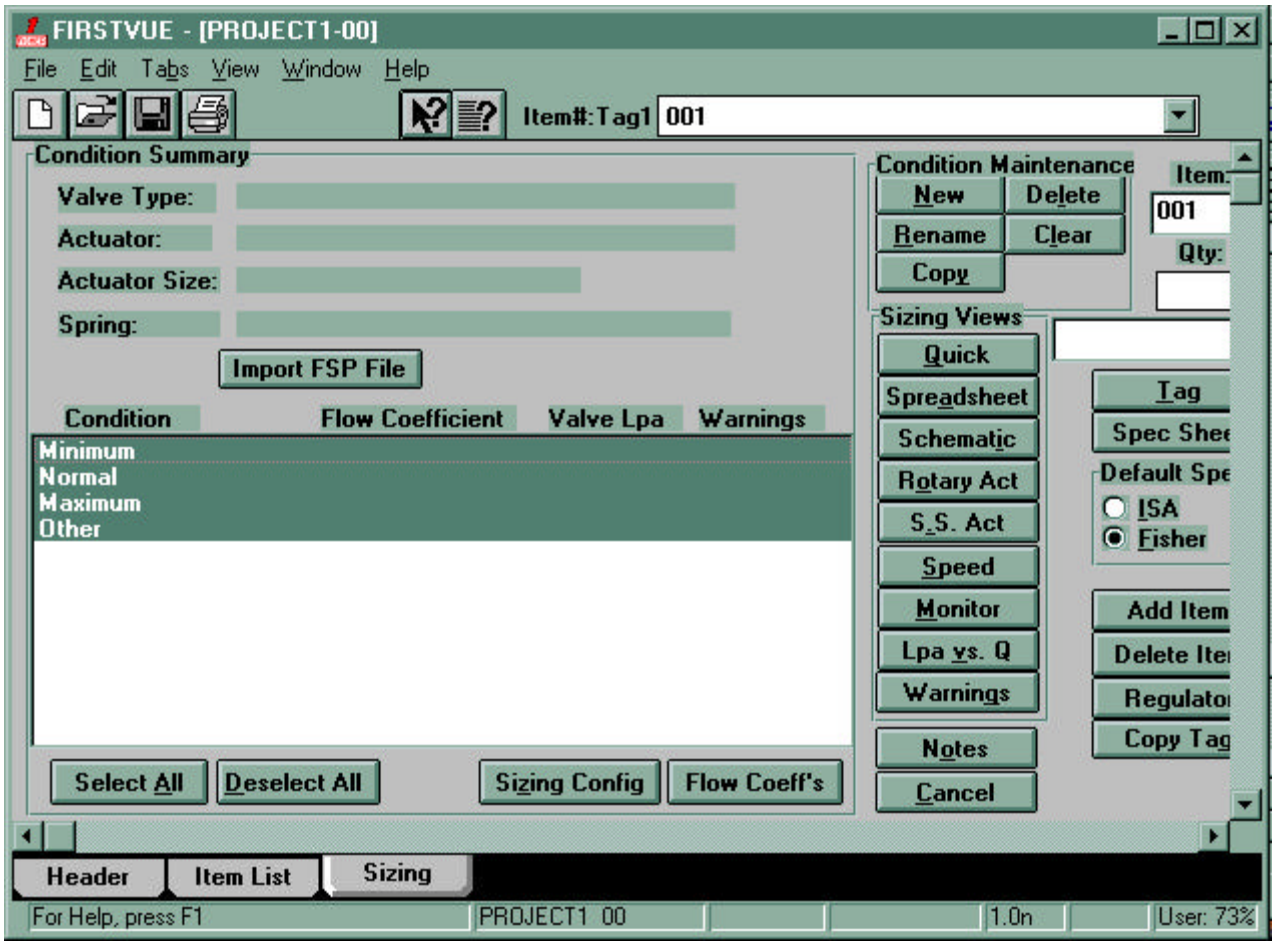
Item Information Field Definitions	
Item No	Item number as assigned by program in sequential order.
Alt	Alternate item number for a specific unit. Useful for comparing choices for a particular selection.
Tag	User assigned tag number, used for control system identification, as well as maintenance records.
Item	Status of each individual item, either open, won, lost, or cancelled. Default is open.
Description	Brief description of valve selected, may include actuator.
Qty	Quantity desired for that particular item number. Useful for identifying tag numbers that are identical valves.
Day	The number of European delivery days
Delivery	Unit of time for delivery, such as hours, days, weeks or months.
Spec	The type of specification sheet required for the item.
Quote Status	Changes all items to reflect changes in quote status, such as open to won, etc.
Sort by Item/Tag	Changes view to either alpha-numerically by item number to alpha-numerically by tag.
See Compnt	When selected, shows the first component of each item. Shows size and model information from the description. Useful to identify a particular valve if the tag number is unknown.
Tag	Displays an option box to allow adding tag numbers to a particular item. Used when more than one valve has identical process conditions. Tags can also be updated, deleted or added with this selection.
Ext Price Total	Sums the total price for the project based on information received from your local Fisher representative by exchanging .FFV files.
Add	Adds another item to the item list.
Delete	Deletes a selected item from the item list.

Copy	Copies an item from another project.
Cancel	Reverts order status and tags back to original values when tag was entered.

Information generated by a user can be easily transferred to your local Fisher representative by saving the file using the Save As .FFV option. This electronic transferal of data allows your Fisher representative the ability to review all sizing and provide the user with a quotation based on the information provided.

Sizing Tab

FIRSTVUE™ offers a complete sizing engine for control valves, actuators, and monitors. Initial sizing estimates, called Quick Sizing is possible, as well as specific cases. Sizing information can be displayed in spreadsheet mode or as one condition results. The Sizing Tab appears as follows:



Condition Summary Field Definitions	
Valve Type	Valve type model number selected based on flow and pressure class requirements.
Actuator	Actuator model number selected to provide necessary shut off and actuation force
Actuator Size	Specific size of actuator model selected
Spring	Specific spring needed to provide actuation forces in spring and diaphragm actuators
Import FSP file	Allows import of sizing information of FSP 1.42 (Fisher Sizing Program) files only. It does not allow for specification

	sheet input from FSP 1.42.
Condition	Up to ten conditions are possible, updated in the condition maintenance selection.
Flow Coefficient	Flow coefficient calculated for each process condition to pass required amount of fluid.
Valve LpA	Noise estimate of fluid flow, pertains to gas sizing only.
Warnings	Warnings issued by the sizing program to identify areas of concern, such as noise, cavitation, flashing, etc will be displayed as a Y if warnings are present. Press Warnings button to display any warnings present.
Select All	Selects up to four process conditions for viewing in the spreadsheet mode.
Deselect All	Removes selection of all process conditions to allow for specific condition viewing in spreadsheet mode.
Sizing Config	Allows selection of units of measure for pressure, gas flow, vapor flow, liquid flow, temperature, mass (gas), density, area, length, force, velocity, spring rate, viscosity, torque and atmospheric pressure. Choices can also be made to have either all English or Metric conventions.
Flow Coeffs	Sizing information for Fisher control valves are displayed for the selected process conditions. The user can select between viewing all Cv data, or just those that pertain to the flow coefficients calculated.

Condition Maintenance	
New	Allows addition of another flow coefficient, up to ten maximum.
Rename	Renames highlighted condition to another name.
Copy	Copies process conditions from one condition to another.
Delete	Deletes the highlighted process condition.
Clear	Clears either all information for highlighted conditions or just valve, actuator, or monitor sizing information.

Sizing Views	
Quick	Basic sizing for liquids, ideal gas or vapor. Fluid information of liquids and ideal gas based on published critical pressure, vapor pressure and specific gravity. Useful to identify range of flow coefficients required to pass flow.

Spreadsheet	Displays sizing information in spreadsheet format for highlighted process conditions. Useful to identify flow range required, as well as how changes in process conditions affect valve performance and requirements.
Schematic	A visual method of valve sizing showing pressure drop, flow and fluid information schematically. Uses same sizing methodology as the quick sizing approach.
Rotary Act	Sizing of rotary actuator based on valve selected on same screen. Calculates torque based on actuator orientation and preferences.
S.S. Act	Sizes sliding stem actuator to match selected control valve. Calculates forces required, and can also select actuators automatically if needed.
Speed	Calculates fill and relief times associated with actuator selected. Identifies if quick release valves and other accessories are needed to provide fail-safe operation.
Monitor	Calculates flow rates required for proper monitor operation. A monitor configuration, essentially two regulators piped in various configurations, provides downstream overpressure protection by controlling intermediate pressure between the two regulators.
LpA vs Q	A tabular view of flow and corresponding noise level predictions. This view is useful in sizing diffusers or other methods of controlling noise due to process flow.
Warnings	A summary of all warnings associated with the process conditions highlighted.

Item Specific Information

Item	Item number as assigned by program in sequential order. May be alpha-numeric and can be modified in this field.
Qty	Quantity requested for the particular item.
Combo box	Contains list of tags and item numbers.
Tag	User assigned tag number, used for control system identification, as well as maintenance records.
Spec Sheet	Specification sheet generated upon request based on the default spec selection, either ISA or Fisher based. Further selections can be made to reflect sliding stem, rotary, regulator, and diffuser choices.

Default Spec (ISA/Fisher)	Provides either an ISA or Fisher specification sheet, depending on user preference. Only used the first time that a spec sheet is entered for an item.
Add Item	Adds an additional item to the project to the end of the project.
Delete Item	Deletes the selected item and requires confirmation of the deletion.
Regulator	Calculates regulator flow requirements in a tabular format.
Copy Tag	Enables copying of flow sizing and selection data to another item in the same project. The tag number must be modified before the OK portion of the command is enabled.
Notes	Free form note field for actuator, valve sizing or stroking speed information.
Cancel	Returns screen information to information present when the sizing tab was first selected.

Pull Down Menus

FIRSTVUE™ offers traditional Windows functionality by means of pull-down menus accessible throughout all tabs and views as well as icons visible from every screen. Cutting, pasting and copying is possible within FIRSTVUE™, as well as jumping from one project to another via the Window option.

File

New (Model On)	Models a new project on a project in the database. Existing project can be accessed by using the query button.
New Project	Opens a new project.
Open (Database)	Allows user to open a project from the database.
Save to Database	Saves project information to FIRSTVUE.MDB database for use by FIRSTVUE™ or Microsoft Access or Excel applications.
Open FFV File	Opens .FFV (First First Vue) file format.
Save to FFV File	Saves project in .FFV (First First Vue) format to allow for electronic quotation with local Fisher representative or saving data to a network.

Delete from Database	Allows deletion of project from database.
Close Project	Closes current project and prompts for saving changes.
Import ISA File	Allows importation of .BSV (Bar separated value) file formats from Intergraph's IDM™ software.
Export ISA File	Allows export of .BSV (Bar separated value) file formats to Intergraph's IDM™ software.
Edit ISA Map File	Edits field ordering for ease of import/export flexibility.
Reports	Allows additional report options, such as summary, sizing calculations, print warnings, and custom headers and footers for all or specific item numbers.
Print Setup	Basic print setup information, such as printer selection, default printer, paper orientation, and paper location.
Exit	Exits FIRSTVUE™ software package.
Edit	
Cancel Changes	Context specific cancellation of changes.
Cut	Cut data, for moving purposes <Ctrl X>.
Copy	Copy data, or use shortcut <Ctrl C>.
Paste	Paste data, or use shortcut <Ctrl V>.
Delete	Deletes data.
Tabs	
Header	Project header information <Ctrl 1>.
Item List	Detailed information by item or tag number <Ctrl 2>.
Sizing	Sizing information by item or tag number <Ctrl 3>.
View	
Tool bars	Toggles tool bar.
Status bar	Toggles status bar.
Tab bar	Toggles tab bar.

Window	Allows selection between open project files.
Help	
Content	Hypertext links to specific FIRSTVUE™ topics of interest.
Search	Allows keyword searches for specific topics.
Using Help	Provides help on Windows specific information
About FIRSTVUE™	Provides software version number, as well as copyright information.

Shortcuts and Hints

Several shortcuts exist that can improve the efficiency of a user. Of particular note is the use of <Ctrl C> pushed simultaneously to copy and <Ctrl V> to paste.

Another hint that makes the sizing program easier to use is the use of the caret and yellow highlighted fields visible on the spreadsheet sizing view. When the caret appears, that indicates a field that can be changed from user supplied to calculated or system supplied information. The yellow highlighting denotes fields that are calculated. For example, if flow rate is provided, Cv can be calculated. Also, a single click on a field can change the parameters associated with that value, such as toggling between pipe size and schedule and pipe diameter and thickness information.

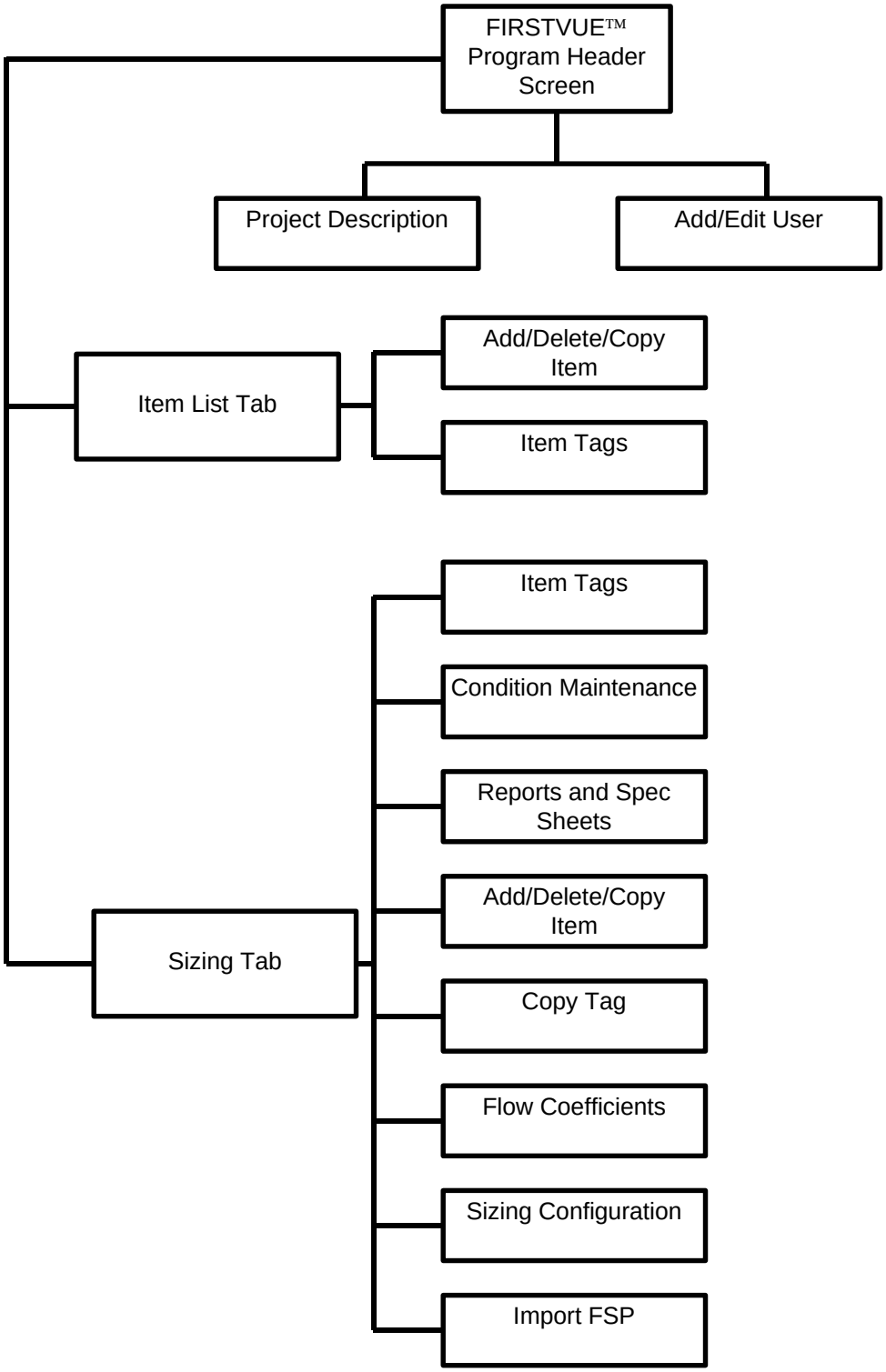
The Import FSP button on the Sizing Tab only imports sizing data, not specification data from FSP 1.42.

Notes are very useful to expand on explanation of product, location, needs, etc.

Use extreme caution when changing Atmospheric Pressure when sizing data has already been entered on one or more items. All sizing data can be lost if care is not taken in this area. To not lose sizing data, highlight the entire spreadsheet, hit <Ctrl C>, go to the Sizing Config, change the Atmospheric Pressure, and press OK, go to the sizing spreadsheet and hit <Ctrl V>, Otherwise, you risk losing all calculated data due to the change in atmospheric pressure. This copying and re-pasting of spreadsheet information will enable atmospheric pressure changes without having to re-key all valve related information. This process must be done on an item by item basis.

Program Overview Diagram

The map of the FIRSTVUE™ sizing program is as follows:



Chapter 3: Sizing and Selection Using FIRSTVUE™

In the last chapter, you saw an overview of the FIRSTVUE™ software. In this chapter, you will begin to use the powerful sizing engine contained within FIRSTVUE™ for sizing valves, actuators and monitors. Selection of products and inserting sizing notes will also be covered.

This chapter contains the following sections:

- Sizing a Valve
  - — Entering and Selecting Process Conditions
  - — Using the Quick Valve Sizing Screen
  - — Using the Schematic Sizing Screen
  - — Using the Spreadsheet Sizing Dialog Box
    - Selecting calculated fields
    - Changing default field data
- Setting Sizing preferences
- Viewing Warnings
- Viewing a Table of Noise versus Flow
- Selecting a Control Valve
- Sizing an Actuator
  - — Sliding Stem Actuator Sizing
  - — Rotary Actuator Sizing
- Checking the Stroking Speed of an Actuator
- Sizing Monitors
- Inserting Sizing Notes

Sizing a Valve

FIRSTVUE™ gives you several options for sizing a valve, depending on the amount of information you have and the level of detailed calculations you need.

This section contains instructions for using the main sizing screens or options for valve sizing. It consists of the following sections:

- Entering and Selecting Process Conditions

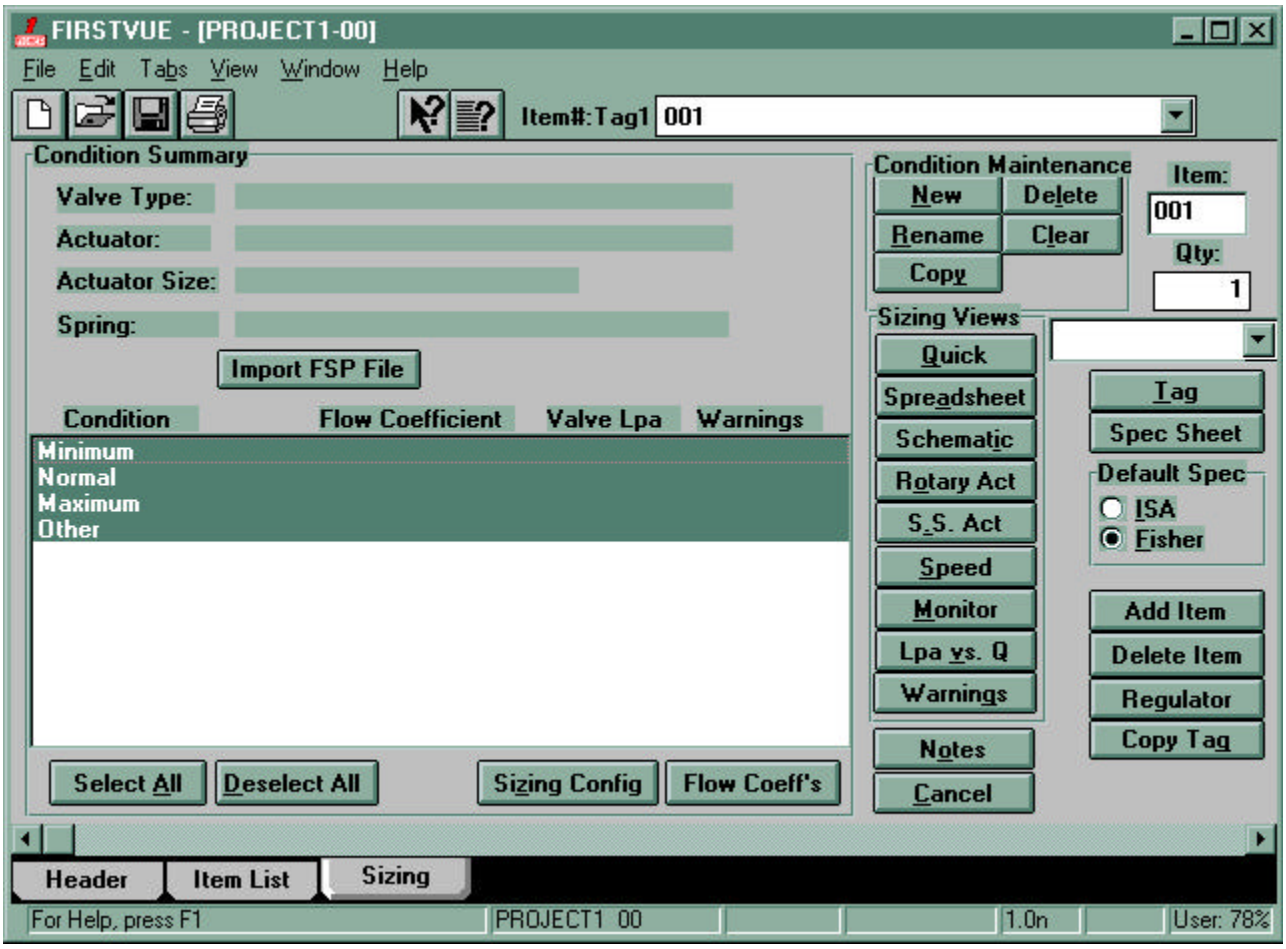
- Using the **Quick Valve Sizing Screen**
- Using the **Schematic Sizing Screen**
- Using the **Spreadsheet Sizing Dialog Box**

Entering and Selecting Process Conditions

FIRSTVUE™ lets you enter up to 10 sets of process conditions for each item.

To name and select sets of process conditions, you use the **Sizing Screen**. To display the **Sizing Screen**, click the **Sizing Tab**.

Here is an example of the **Sizing Screen**:



The **Sizing Screen** lets you select sets of process conditions, and then navigate to other screens on which you enter data for each set of conditions. When done entering data on other screens and dialogs, the results are calculated and then displayed on the **Sizing Screen**.

To fill in the **Sizing Screen**:

1. In the **Item#:Tag1** field, enter or select the item, if not already selected. Once you select the item, the screen displays data previously entered for it.
2. Select one or more sets of process conditions.

The spreadsheet area of the **Condition Summary** section displays process conditions you can select for your calculations. Minimum, Normal, Maximum, and Other are the default condition names.

You can add a new condition, rename, delete, copy, or clear all conditions by clicking on the appropriate **Condition Maintenance** buttons.

Click a condition to select it or click the **Select All** or **Deselect All** buttons to select or deselect all conditions respectively. A condition is highlighted when it is selected. You can select up to 10 process conditions.

NOTE: You must select at least one condition to access other screens and dialogs.

Once you select a process condition, the **Sizing Views** buttons along the right side of the screen become active, giving you access to other sizing screens.

FIRSTVUE™ offers three screens used in sizing valves:

- **Quick Valve Sizing Screen**—Lets you calculate the flow coefficient, for one condition.
- **Schematic Sizing Screen**—Lets you calculate the outlet pressure, flow, or flow coefficient for one condition.
- **Spreadsheet Sizing Dialog Box**—Lets you do detailed calculations for multiple conditions at one time.

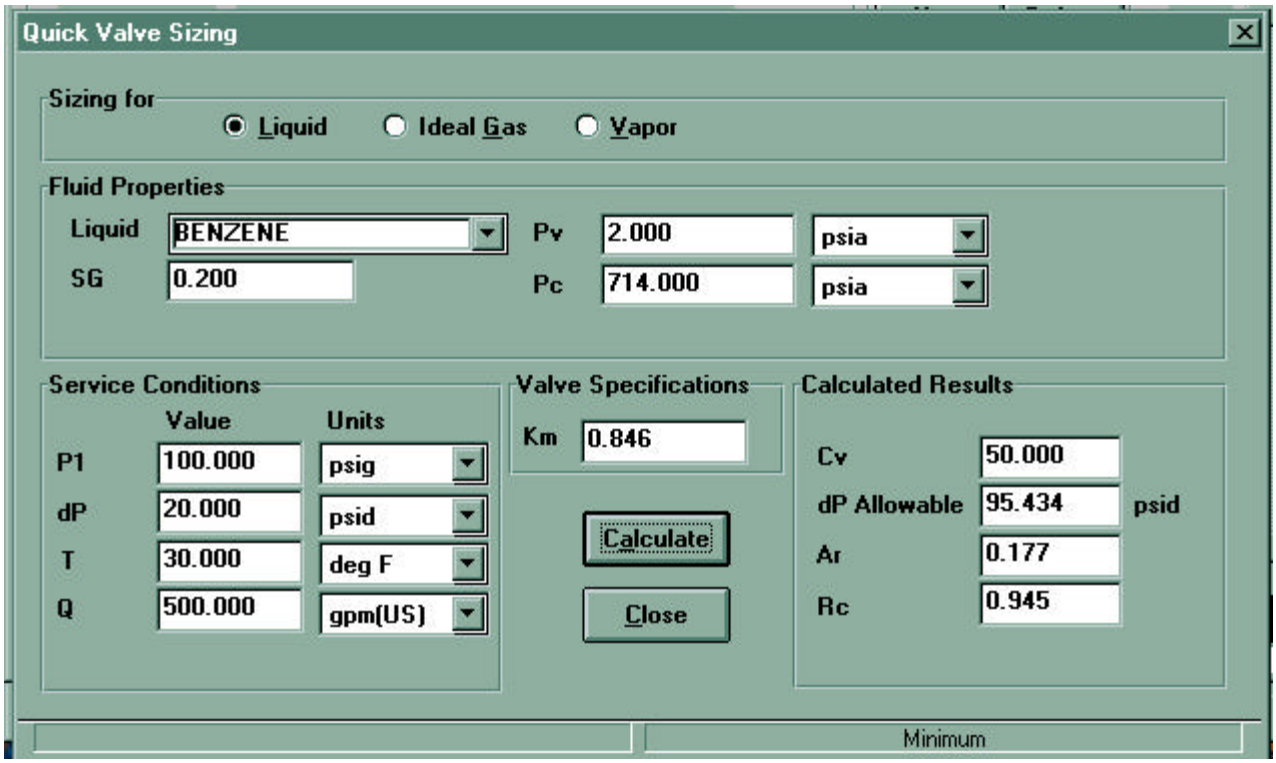
The following sections contain instructions for using the valve sizing screens.

Using the Quick Valve Sizing Screen

The **Quick Valve Sizing Screen** lets you enter basic information for one process condition, and then calculates and displays the flow coefficient for that condition. You can repeat this procedure for any number of process conditions.

To display this screen, click the **Quick** button on the **Sizing Screen**.

Here is an example of the **Quick Valve Sizing Screen** for liquids:



To fill in the **Quick Valve Sizing Screen**:

1. Select a fluid by clicking on the appropriate radio button: **Liquid**, **Ideal Gas**, or **Vapor**.

   Once you select a fluid, the screen displays entry fields for the corresponding fluid properties, service conditions, and valve specifications.

2. Fill in the rest of the screen by typing the conditions in the appropriate fields, and selecting from the drop-down lists. If allowable pressure drop needs to be calculated, leave the dP field blank and click **Calculate**.

3. When done, click the **Calculate** button. The program then calculates and displays the results.

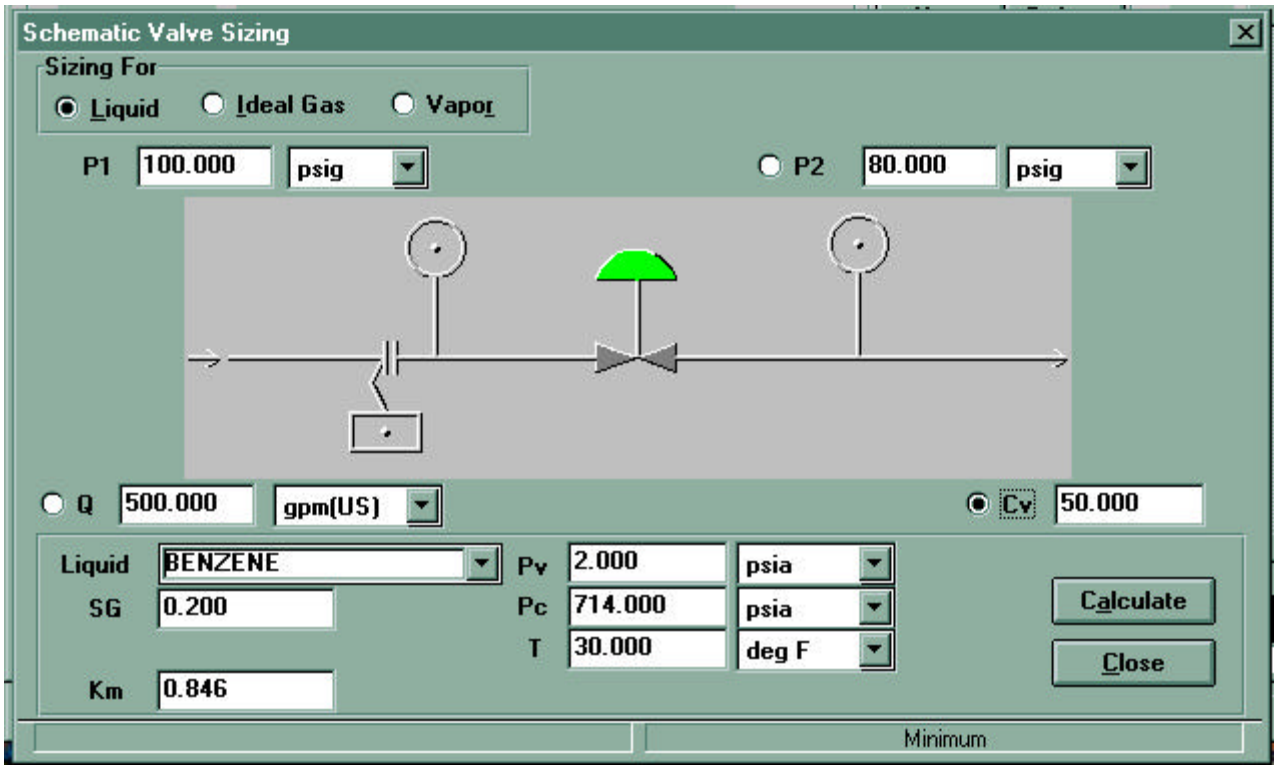
4. Click the **Close** button to display the **Sizing Screen**.

Using the Schematic Sizing Screen

The **Schematic Sizing Screen** lets you enter information for one process condition, and then calculates and displays your choice of the flow coefficient, flow, or outlet area. You can repeat this procedure for any number of process conditions.

To display this screen, click the **Schematic** button on the **Sizing Screen**.

Here is an example of the **Schematic Sizing Screen** for liquids:



To fill in the **Schematic Sizing Screen**:

1. Select a fluid by clicking the appropriate radio button: **Liquid**, **Ideal Gas**, or **Vapor**.

   Once you select a fluid, the screen displays entry fields for the corresponding fluid properties, service conditions, and valve specifications.

2. Select a calculation field. To do this, click the radio button of the field you wish calculated: **P2** (Outlet Pressure), Q (Flow), or **Cg** or **Cv** (Flow Coefficient for Gas or Vapor).

3. Fill in the rest of the screen by typing the conditions in the appropriate fields and selecting from the drop-down lists.

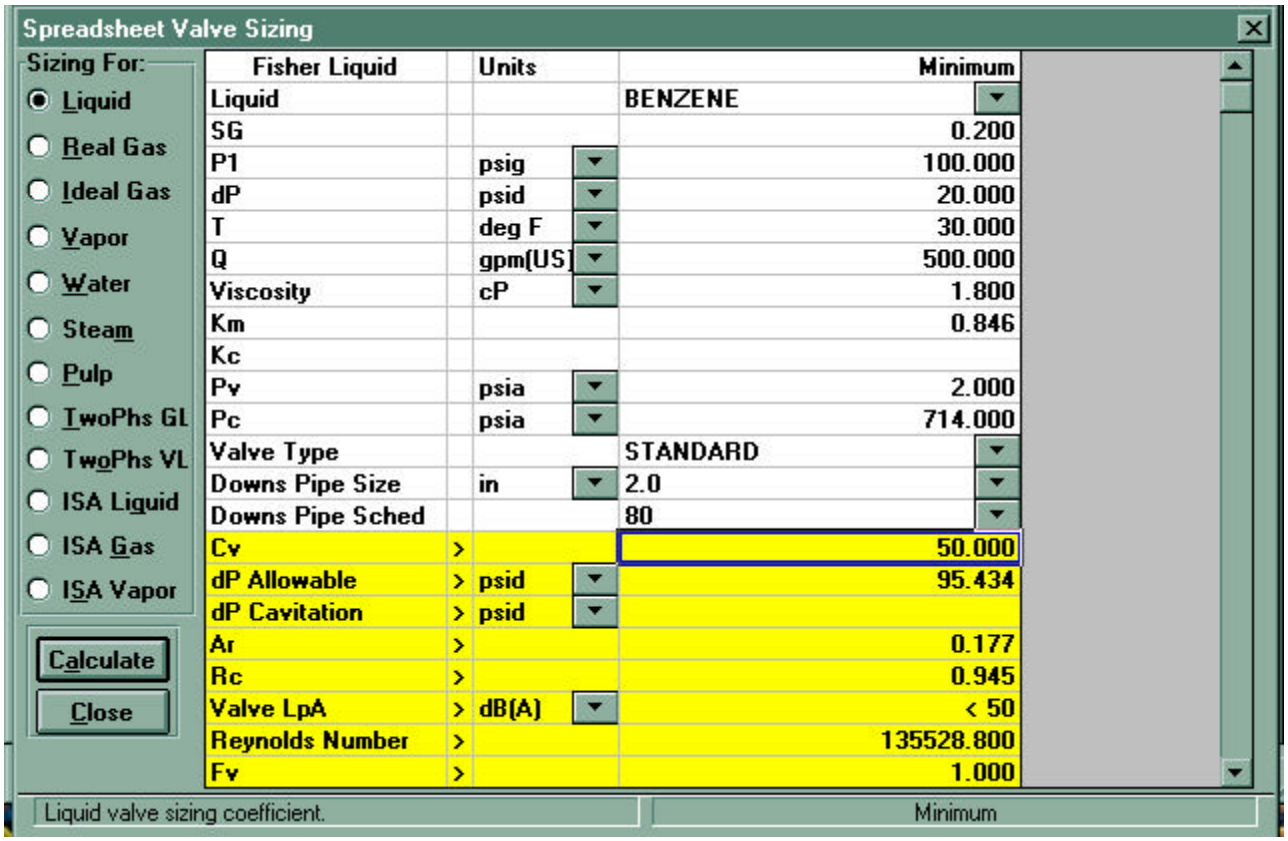
4. When done, click the **Calculate** button. The program calculates and displays the results.

5. To display the **Sizing Screen,** click the **Close** button.

Using the Spreadsheet Sizing Dialog Box

The **Spreadsheet Sizing Dialog Box** lets you enter detailed data for one or more process conditions. To display this dialog, select one or more conditions and click the **Spreadsheet** button on the **Sizing Screen**.

Here is an example of the **Spreadsheet Sizing Dialog Box** for Liquid:



The **Spreadsheet Sizing Dialog Box** lets you enter detailed information for the process conditions you selected on the **Sizing Screen**.

To fill in the dialog:

1. Select a fluid by clicking the appropriate radio button on the left side of the screen. Once you select a fluid, the screen displays entry and calculations fields for that fluid.

NOTE: The **TwoPhs GL** radio button refers to gas/liquid two-phase flow sizing. The **TwoPhs VL** radio button refers to vapor/liquid two-phase flow sizing.

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2. **Select calculated fields** by clicking in the second column of the appropriate fields to display the **>** symbol. Calculated fields are also denoted by the yellow highlighting.

   The second column is either blank, indicating the field accepts entry, or contains the **>** symbol, indicating the program calculates and displays the results in that field.

   You can select whether the program calculates Cv (Flow Coefficient), Q (Fluid Flow Rate), or dP (Valve Pressure Drop). For example, to calculate the dP, click in the dP calculation column to display the **>** symbol and then enter the flow rate and flow coefficient in the **Q** and **Cv** fields.

3. Select the units of measurement for each field, if desired.

The third column of the dialog displays the default units of measurement for each field. **Changing default field data** is done by selecting from the drop-down lists to overwrite the defaults.

NOTE: Downstream piping information can be toggled between Downs Pipe Size/Downs Pipe Sched to Downs Pipe O.D./Downs Pipe Thick by simply clicking the mouse on one of those fields.

4. Enter the process data.

   The fourth through thirteenth columns contain entry fields for each process condition you selected on the **Sizing Screen**. To fill in these fields, type or select from drop-down lists, depending on the field and fluid.

NOTE: The **Spreadsheet Dialog Box** displays four process conditions at a time. To enter information for additional process conditions, you must select them on the **Sizing Screen** and then return to the **Spreadsheet Dialog Box**.

5. To view a table of noise versus flow for a process condition, click the **LpA vs Q** button for that condition. You can include the table of noise versus flow in your spec sheets.
6. To calculate velocity, select the **Upstream Area** and **Downstream Areas** valve sizes by selecting from the drop-down lists, and then type data in the condition cells of the spreadsheet.
7. The **Valve Incr. Velocity** section lets you predict noise of the valve with velocity higher than the standard guidelines allow. For assistance, contact your Fisher Salesperson.
8. For gas, vapor, or steam calculations that require additional noise attenuation
   a. Scroll down the Spreadsheet view until the diffuser information section is visible.
   b. Choose a diffuser for each set of conditions by selecting from the drop-down lists.
   c. In the **Diffuser Incr. Velocity** section, in the **Actual Outl. Area** field, type the actual outlet area in each cell, if necessary.
   d. Click the **Calculate** button.

      The program calculates and displays the noise levels.

      The program may show different diffuser Cgs required for different process conditions. However, since a diffuser is a fixed device, it can have only one Cg. Therefore, you need to recalculate using the highest diffuser Cg displayed. To do this:

      i. Click the second (calculation) column of the **Diffuser Cg** row to remove the **>** symbol.
      ii. In each cell of the **Diffuser Cg** row, enter the highest diffuser Cg previously calculated.
      iii. Click the **Calculate** button.

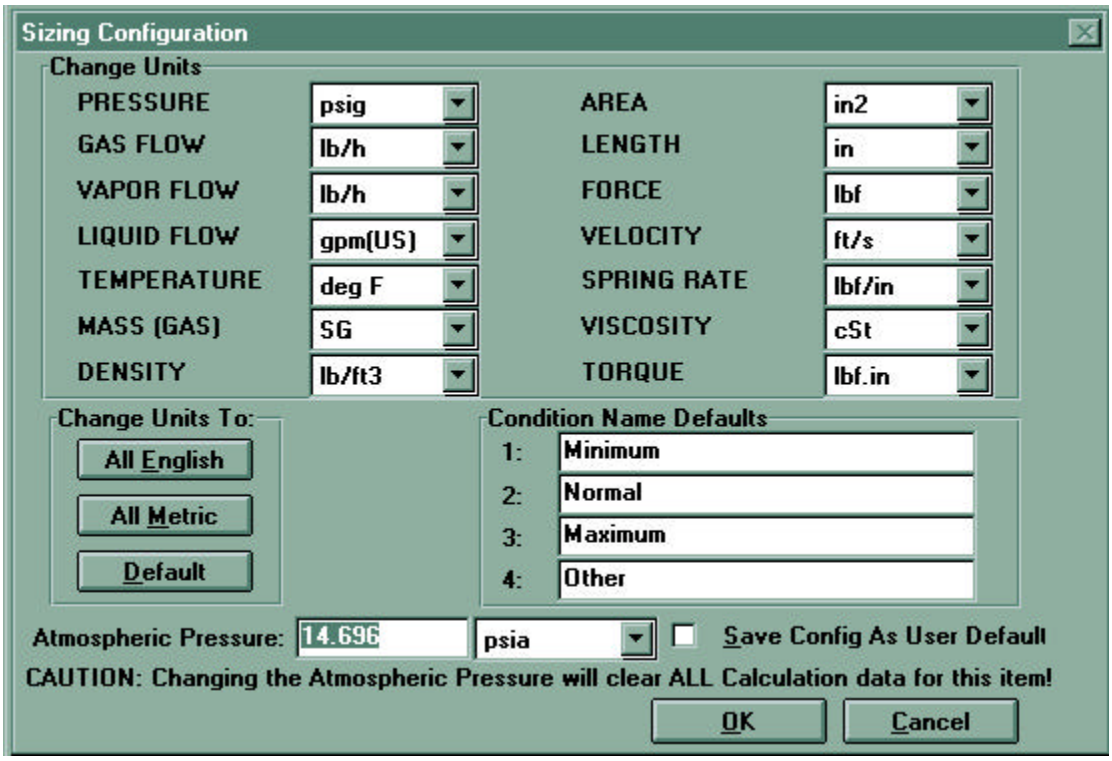
      The program recalculates and displays the accurate noise levels for the diffuser Cg.
9. When done entering conditions, click the **Calculate** button. The program calculates and displays the results.

To return to the **Sizing Screen**, click the **Close** button. The **Sizing Screen** displays the results of your entries and calculations.

Setting Sizing Preferences

You can set defaults for the units of measurement displayed throughout FIRSTVUE™. To do this, you use the **Sizing Configuration Dialog Box**. To display this dialog, click the **Sizing Config** button on the **Sizing Screen**.

Here is an example of the **Sizing Configuration Dialog Box**:



The **Sizing Configuration Dialog Box** displays the system defaults for units of measurement and atmospheric pressure. You can overwrite the default units of measurement on a field-by-field basis on any data entry screen.

The **Sizing Configuration Dialog Box** allows you to reset the system defaults to units of measurement you use most frequently, and allows you to change the atmospheric pressure used in the program's calculations. It offers the following options:

- To change system defaults for individual fields, select from drop-down lists in each field.
- To change all the system defaults to English measurements, click the **All English** button. To change them to metric measurements, click the **All Metric** button.
- To change the atmospheric pressure, type in the **Atmospheric Pressure** field.

NOTE: Changing the atmospheric pressure will clear any calculations made with the previous atmospheric value!!

NOTE: To change the atmospheric pressure value for valves already sized without re-keying the process conditions, do the following: Highlight the specification sizing sheet data and use <Ctrl C> to copy it into the clipboard memory. Then, change the atmospheric pressure, go back to the spreadsheet and paste, using <Ctrl V>, and then calculate.

- To erase your entries and revert to the previous system defaults, click the **Default** button.
- To save your entries, click the **OK** button. This creates new defaults for the program. You can still revert to the built-in system defaults by clicking on the **Default** button. To overwrite the built-in system defaults with your entries, click in the **Save Units As User Default** check box.
- When you click the **OK** button, the **Sizing Screen** appears.

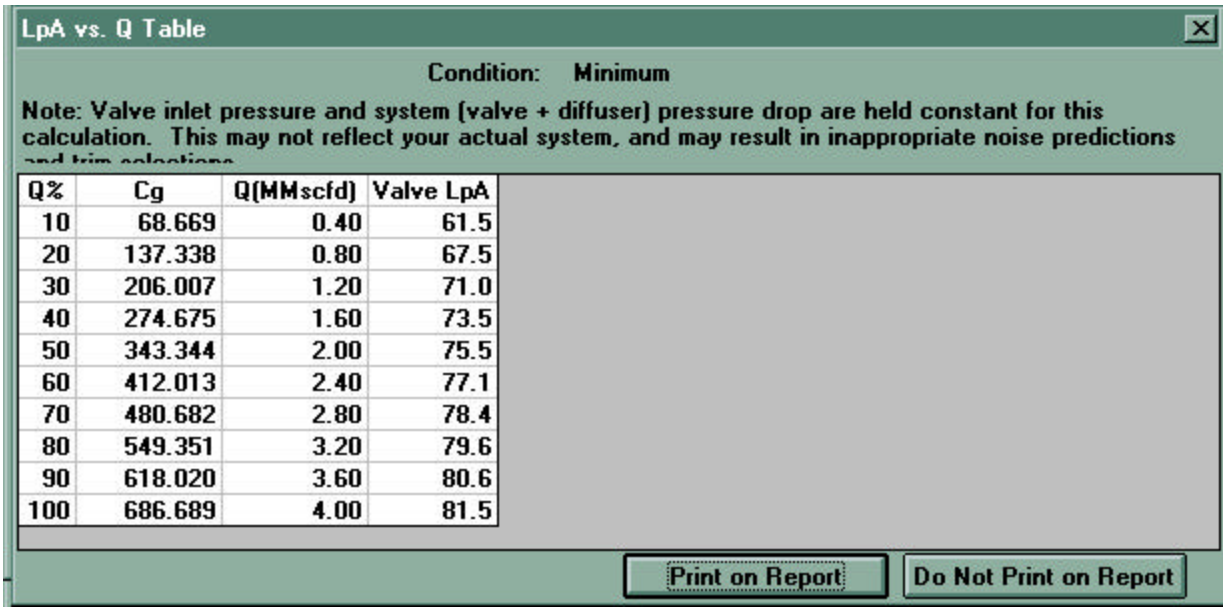
Viewing Warnings

FIRSTVUE™ issues warnings if a process condition exhibits cavitation, flashing, noise, excess velocity, or other conditions requiring attention. To view warnings, click the **Warnings** button on the **Sizing Screen**. The program then displays a series of dialog boxes showing warnings for each process condition. The user can also select if the warnings issued by FIRSTVUE™ will be included on specification sheet reports.

Viewing a Table of Noise versus Flow

You can view a table of noise versus flow for each process condition in your case, and print the table on your spec sheets. To do this, you use the **LpA vs. Q Table**. To display this table, click the **LpA vs. Q** button on either the **Sizing Screen** or the **Sizing Spreadsheet**. Both methods display the table.

Here is an example of the **LpA vs. Q Table**:



Q%	Cg	Q(MMscfd)	Valve LpA
10	68.669	0.40	61.5
20	137.338	0.80	67.5
30	206.007	1.20	71.0
40	274.675	1.60	73.5
50	343.344	2.00	75.5
60	412.013	2.40	77.1
70	480.682	2.80	78.4
80	549.351	3.20	79.6
90	618.020	3.60	80.6
100	686.689	4.00	81.5

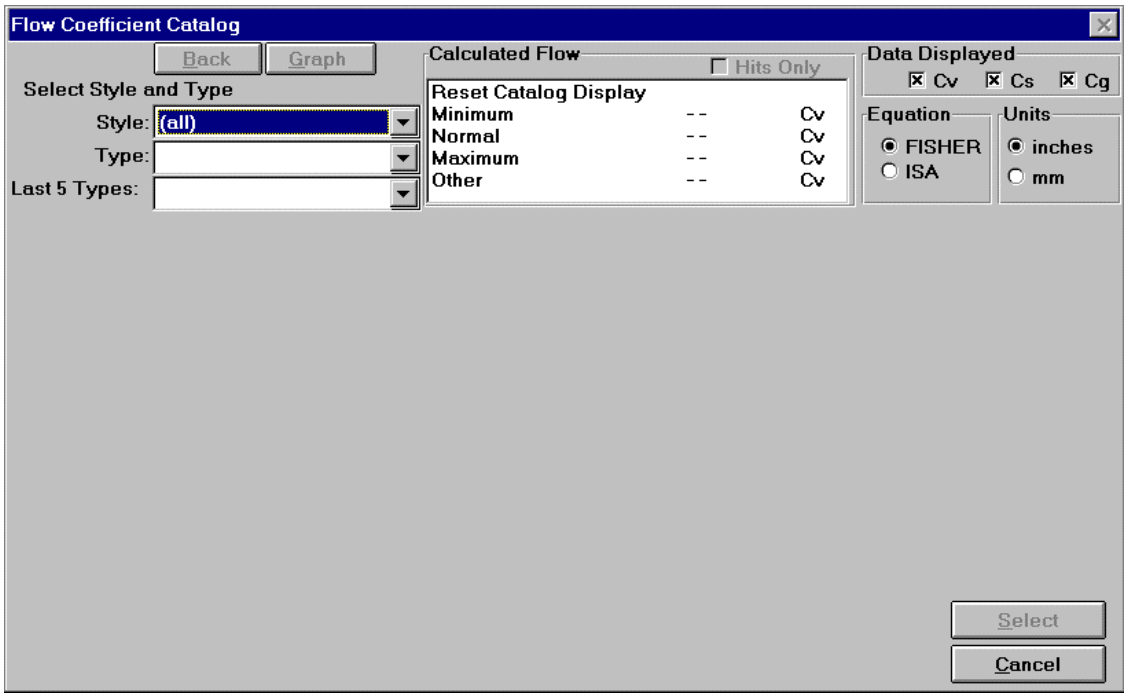
The **LpA vs. Q Table** displays a spreadsheet of noise, Cv, and flow at different percentages of flow. This table is display only. To print the table for this condition on your spec sheet, click the **Print on Report** button. You must repeat this process for each condition you want the table to be printed on your spec sheet.

This table assumes a constant pressure drop and inlet pressure across the control valve and/or control valve + diffuser. Therefore, care should be taken to ensure correct noise abatement selections for all process conditions.

To return to the **Sizing Tab**, either click on the "**X**" in the upper right hand corner of the **LpA vs** Q box, or press <**Escape**>.

Selecting a Control Valve

Once you have determined the flow coefficient, you can select a valve size and type. To find which control valves can pass the required calculated flow, click on the **Flow Coeff's** button on the **Sizing Tab**.

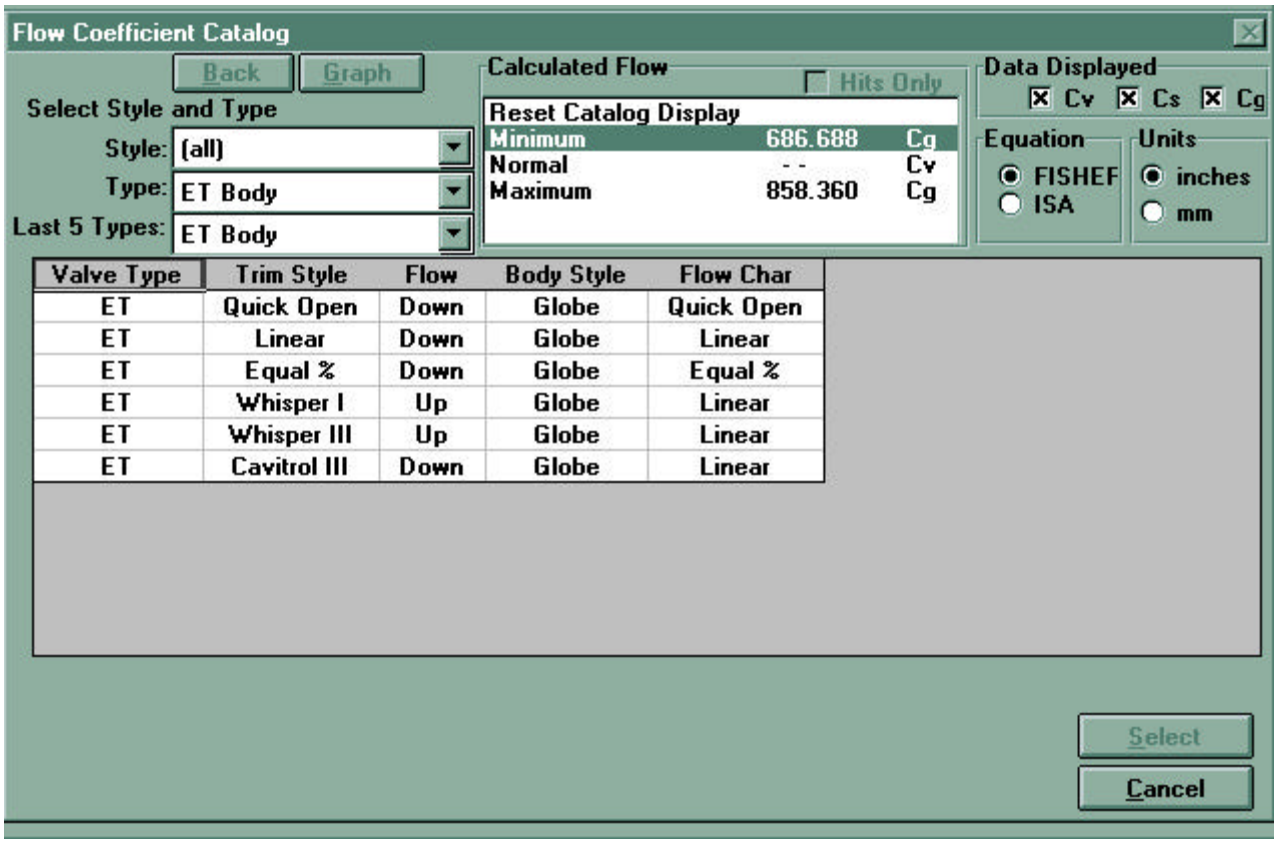


The **Flow Coefficient Catalog Dialog Box** lets you view flow coefficients for control valves contained in Fisher Catalog 10 (Fisher standard equation) and Catalog 12 (ISA standard equation). You can view whole pages of the selected catalog, or you can view just those selections that meet your criteria for valve style, type, and flow coefficient.

To display this dialog, click the **Flow Coeff's** button on the **Sizing Screen**. To view only those control valves that meet your calculated flow requirements, select **Hits Only**.

Restricted trim sizes are shown in the blue shaded rows. Full port valve flow coefficients are shown in the white rows.

The **Flow Coefficient Catalog Dialog Box** consists of two views. The first (entry) view lets you enter criteria for valve selection and displays a spreadsheet of selections based on your criteria. You then double-click on a selection to show the second view of the screen, which displays an actual catalog page.

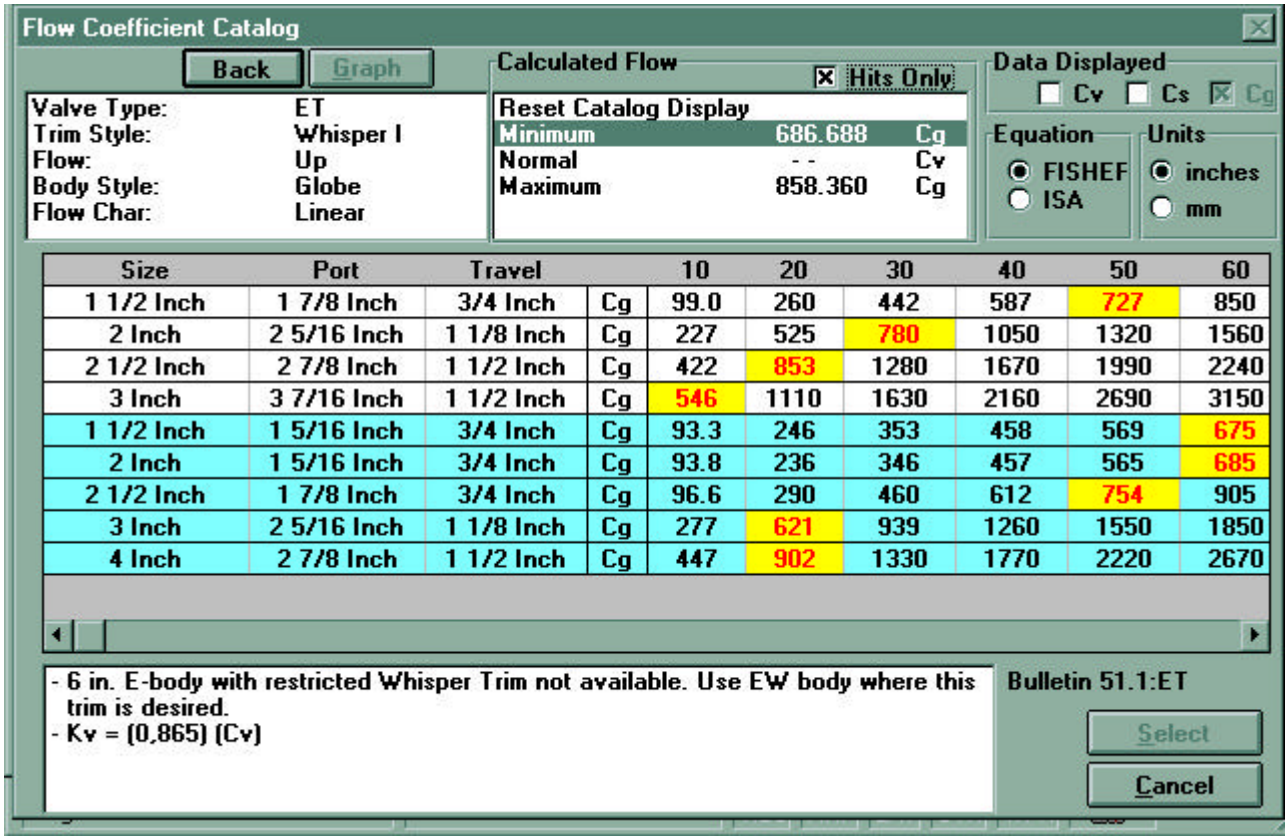


The second view lets you select a valve, and view and print a graph of the valve's flow coefficients. To select a valve from the second (catalog) view, you double-click on it and then click the **Select** button.

To fill in the first (entry) view of the **Flow Coefficient Catalog Dialog Box**:

1. Select the catalog you wish to view by clicking the **Fisher equation (Catalog 10 equivalent)** or **ISA equation (Catalog 12 equivalent)** radio button in the **Equation** box.
2. Fill in the **Style** and **Type** fields by selecting from the drop-down lists. You can further modify your conditions as follows:
   a. To specify whether measurements are shown in inches or millimeters, click the **Inches** or **mm** radio button in the **Units** box.
   b. To specify the data displayed, click the **Cv**, **Cs**, and/or **Cg** radio buttons in the **Data Displayed** box to select them. You can select any or all of them.
3. When done, double-click a selection to display the second (catalog) view of the dialog box.

The second view of the **Flow Coefficient Catalog Dialog Box** displays the catalog page resulting from your valve criteria, lets you select a valve, and lets you view and print a graph of the valve's flow coefficients.



The dialog displays the valve type, class, trim style, etc. you selected. You can change these attributes only on the first view of the **Flow Coefficient Catalog Dialog Box**. To display the first view of the dialog, click the **Back** button.

The **Display** box shows the catalog page for the conditions selected. The bulletin number describing the valve appears just below this box. Notes pertaining to valve construction and/or sizing, also found in Catalogs 10 and 12, appear in the **Notes** box. You can scroll to view the full 10%-100% range of the valve characteristics.

To use the **Flow Coefficient Catalog Dialog Box**:

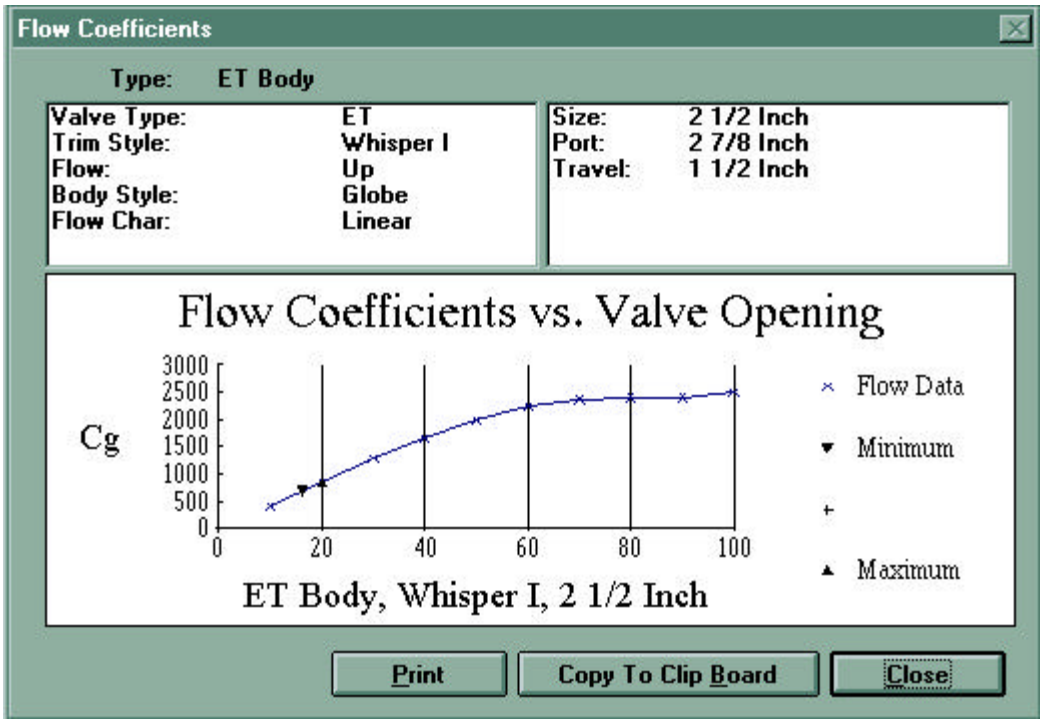
1. Select a process condition in the **Calculated Flow** box by clicking on it. A process condition is highlighted when it is selected.

NOTE: You can collapse the display to show only the valve and port size combinations that meet the selected process condition. To do this, click the **Hits Only** radio button. To reset the catalog display to show all port sizes, travels, etc., click **Reset Catalog Display** in the **Calculated Flow** box.

---

2. To view a graph of flow coefficients for the selected valve, double-click on a valve to select it, and then click the **Graph** button.

To print the resulting graph, you must copy it to your clipboard, paste it into a word processor, page layout, or graphics application, and then print it. You cannot print the graph directly from FIRSTVUE™.



3. To select a valve, double-click on it and then click the **Select** button. The **Sizing Screen** appears, displaying the results of your selection.

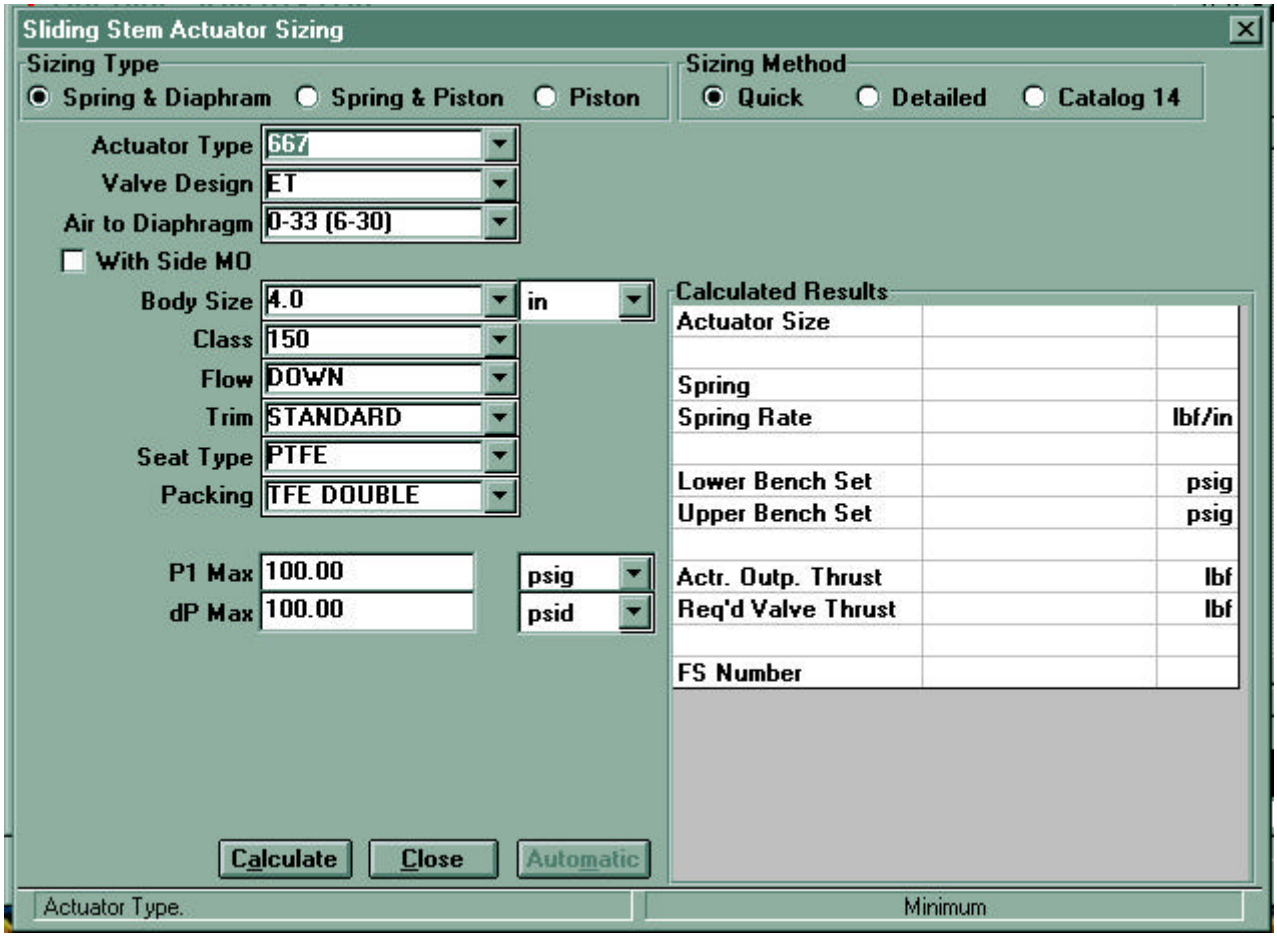
Sizing an Actuator

Sizing of both sliding stem and rotary actuators is possible with FIRSTVUE™.

Sliding Stem Actuator Sizing

To size a sliding stem actuator for your control valve, you use the **Sliding Stem Actuator Sizing Screen**. To display this screen, click the **S. S. Act** button on the **Sizing Screen**.

Here is an example of the **Sliding Stem Actuator Sizing Screen** for a spring and diaphragm sliding stem actuator:



The **Sliding Stem Actuator Sizing Screen** offers two ways to size: Automatic and Manual. In Automatic sizing, you enter data, and based on that data, select an actuator. In Manual sizing, you enter the actuator size and spring and the program calculates and displays the data based on your entry. You use Manual sizing when you have an actuator in mind and want to know if it meets your criteria.

The program displays the Automatic view by default. To display the Manual view, click the **Automatic** button, which toggles between Automatic and Manual views. Then, fill in the **Actuator Size** and **Spring** fields from the drop-down lists.

To fill in the **Sliding Stem Actuator Sizing Screen** in Automatic view:

1. Select the **Sizing Type** (Spring & Diaphragm, Spring & Piston, or Piston) by clicking on the appropriate radio button.
2. Select an **Actuator Type and Valve Design** from the drop-down lists.

   Once you select the **Sizing Type** and **Actuator Type and Valve Design**, the screen displays fields appropriate to your selections.
3. To select a sliding stem actuator for a valve with bellows, click the **Bellows** check box. The **Bellows Dialog Box** appears, allowing you to enter relevant data.
4. Select a **Sizing Method** (Quick, Detailed, or Catalog 14) by clicking the appropriate radio button. Each **Sizing Method** displays a different view of the screen, with different entry fields:

   - **Quick** view lets you enter basic information, such as the body size, flow, trim, and packing material.
   - **Detailed** view requires detailed information, such as the numeric values of valve travel, friction, and unbalanced area.
   - **Catalog 14** view requires the standard information used in Fisher Catalog 14—more information than the **Quick** view and less than the **Detailed** view.

NOTE: You can start by entering information in **Quick** or **Catalog 14** views and then click the **Detailed** radio button to display the **Detailed** view. The information you enter in **Quick** or **Catalog 14** view is then translated into the correct numeric values and displayed in the appropriate **Detailed** view fields. For example, when you enter a packing material in **Quick** view, the corresponding numeric friction value for that packing material appears in **Detailed** view.

---

4. Fill in the rest of the fields by typing or selecting from the drop-down lists.
5. When done, click the **Calculate** button.

   The **Select Sliding Stem Actuator Dialog Box** appears, displaying a list of sliding stem actuators that meet your specifications. Each line of the dialog displays the actuator size, the spring part number, and the spring rate.
6. Select an actuator by double-clicking on it.

   The **Sliding Stem Actuator Sizing Screen** appears. The right side of the screen displays thrust data from the actuator size you selected.

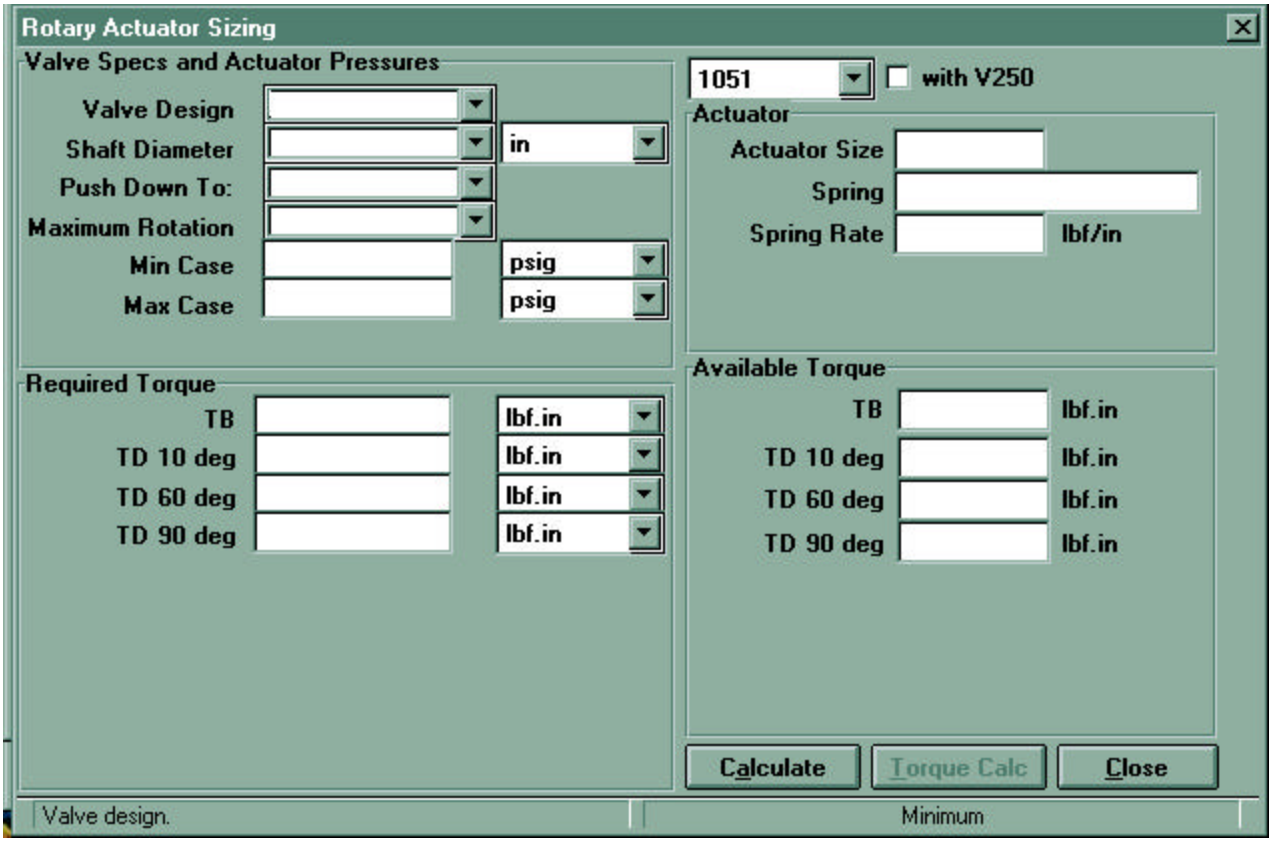
NOTE: If you want a non-standard product, you must manually override the data displayed. To do this, click the **Detailed** radio button to display the **Detailed** view. Then, overwrite the appropriate fields with your exact data. For example, if you entered a non-standard port in the **Quick** view, after selecting a sliding stem actuator you need to change the port diameter in **Detailed** view. When done, click the **Calculate** button to recalculate based on your entries.

---

7. When done, click the **Close** button. The Sizing Screen appears, displaying the sliding stem actuator, actuator size, and spring you selected.

Rotary Actuator Sizing

Here is an example of the **Rotary Actuator Sizing Screen** for a spring and diaphragm rotary actuator:



To fill in the **Rotary Actuator Sizing Screen**:

1. Select an actuator model number from the drop-down list at the top of the screen.
2. If you are using the actuator with a V250 control valve, click the **With V250** check box.

   The screen displays entry fields for your selected actuator model number.
3. Fill in the fields on the left side of the screen, either by typing or selecting from drop-down lists:

   - In the **TD** (Dynamic Torque) field, enter the dynamic torque, based upon the valve construction and effective pressure drop.
   - In the **TB** (Breakout Torque) field, enter the breakout torque, based upon the friction factors of the control valve and the shutoff pressure drop.

NOTE: To use FIRSTVUE™'s built-in torque calculation screen, click the **Torque Calc** button.

4. When done, click the **Calculate** button.

The **Select Rotary Actuator Dialog Box** appears, displaying a list of rotary actuators that meet your specifications. Each line of the dialog displays the actuator size, the spring part number, and the spring rate. For 1051 series, the screen also displays the seat number.

5. Select an actuator by double-clicking on it.

   The **Rotary Actuator Sizing Screen** reappears. The right side of the screen is filled in with torque data from the actuator size you selected.

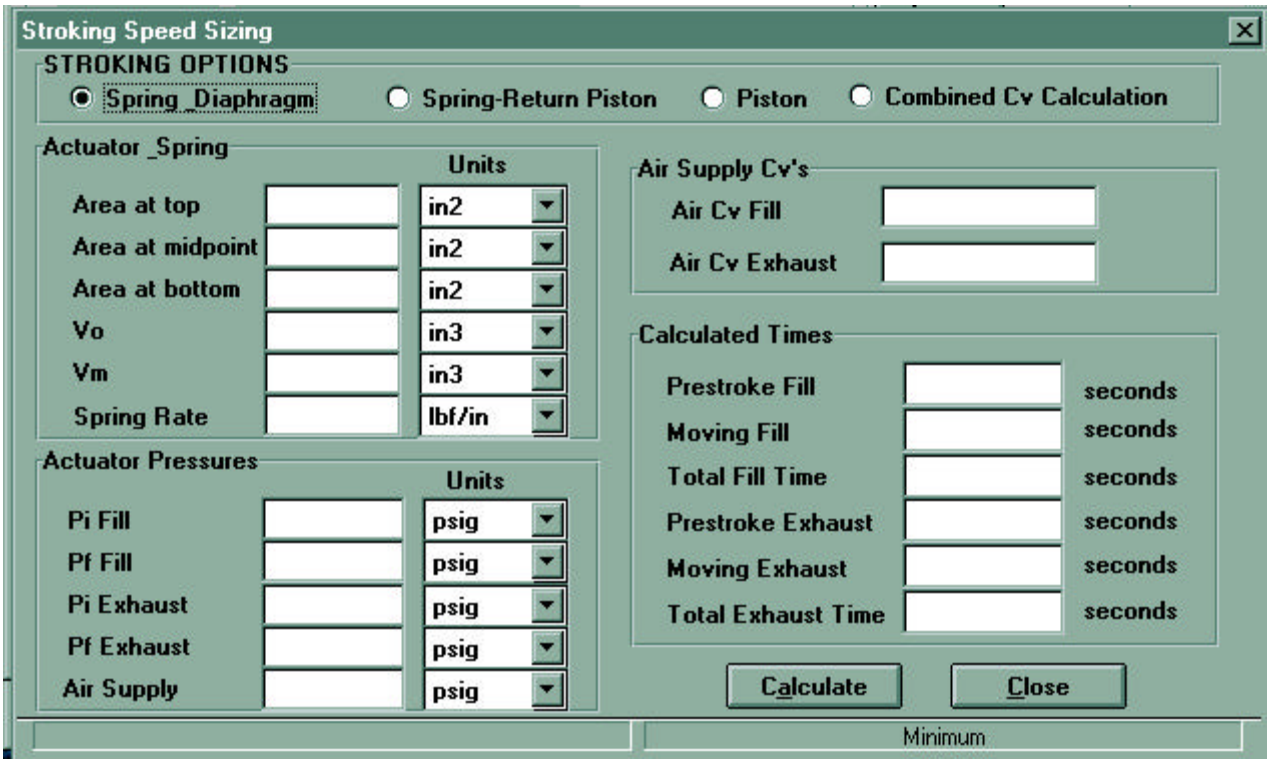
6. Compare the required torque entered on the left side of the screen with the available torque on the right side of the screen to be sure the actuator size you selected has adequate capacity. If not, click the **Calculate** button to display the **Select Rotary Actuator Dialog Box** and select a different actuator.

7. When done, to display the **Sizing Screen,** click the **Close** button. The **Sizing Screen** displays the actuator, actuator size, and spring you selected.

Checking the Stroking Speed of an Actuator

To calculate the stroking speed of actuator, you use the **Stroking Speed Sizing Screen**. To display this screen, click the **Speed** button on the **Sizing Screen**.

Here is an example of the **Stroking Speed Sizing Screen** for a spring and diaphragm actuator:



To fill in the **Stroking Speed Sizing Screen**:

1. Select a stroking option by clicking on the appropriate radio button: **Spring Diaphragm**, **Spring-Return Piston**, or **Piston**.

   Once you select an option, the screen displays data entry fields for that option.

2. Fill in the fields on the left side of the screen by typing or selecting from drop-down lists.

NOTE: You must enter accurate figures for the initial and final filling stroking pressures (**Pi Fill** and **Pf Fill** fields), and initial and final exhausting stroking pressures (**Pi Exhaust** and **Pf Exhaust** fields). For equations used to calculate these figures, see the on-line Help topic, "Valve Sizing Supplemental Information."

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3. Fill in the **Air Cv Fill** field with the combined flow coefficient of the filling air supply apparatus.

   You need to enter the combined Cvs of each apparatus in the air supply line to the actuator. To calculate the combined Cvs:

   a. Click the **Combined Cv Calculation** radio button to display a Cv calculation worksheet.

   b. Enter the Cv for each apparatus.

   c. Click the **Calculate** button.

      The **Calculated Results Dialog Box** appears, displaying the combined Cv. You need to make a note of this figure or copy it to the clipboard; the program does not copy it automatically to the proper field.

   d. When done, click the appropriate radio button (**Spring Diaphragm**, **Spring-Return Piston**, or **Piston**) to display the screen you wish.

   e. Type the combined Cv in the **Air Cv Fill** field.

4. Fill in the **Air Cv Exhaust** field with the combined flow coefficient for the exhaust apparatus. To calculate the combined Cv for the air exhaust apparatus, repeat steps 3a—3e, using Cv's for each apparatus in the exhaust line.

5. Click the **Calculate** button. The calculated results appear on the right side of the screen.

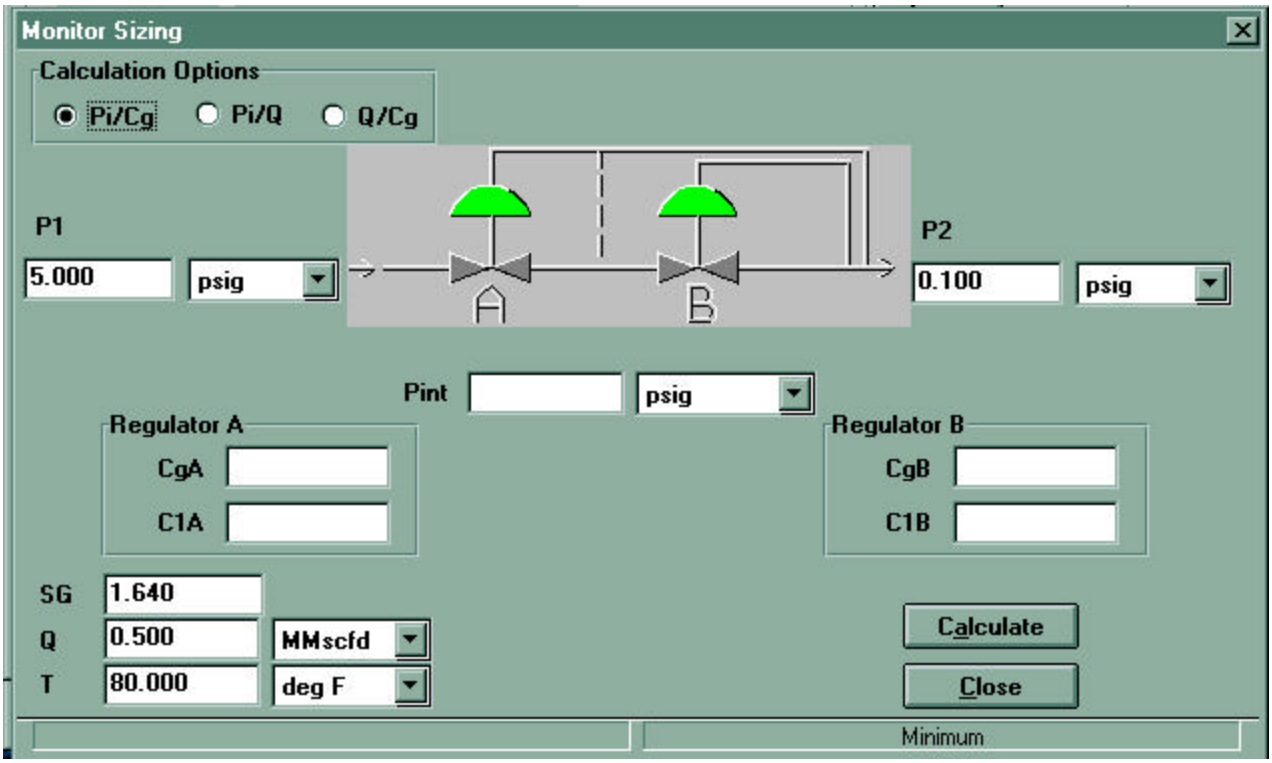
6. When done, to display the **Sizing** Screen, click the **Close** button.

Sizing Monitors

FIRSTVUE™ lets you calculate the intermediate pressure, flow coefficients, and flow capacity for monitoring systems. This chapter contains instructions for using FIRSTVUE™ for your monitor sizing calculations.

To size monitors, you use the **Monitor Sizing Screen**. To display this screen, you click the **Monitor** button on the **Sizing Screen**.

Here is an example of the **Monitor Sizing Screen**:



The **Monitor Sizing Screen** lets you calculate intermediate pressure, flow coefficients, and/or flow rate of your monitoring system.

To fill in the **Monitor Sizing Screen**::

1. Select the calculation option by clicking on the appropriate radio button:
   - To calculate the intermediate pressure and flow coefficients for both the monitor and worker, click **Pi/Cg**.
   - To calculate the intermediate pressure and flow rate for the monitor system, click **Pi/Q**.
   - To calculate the flow rate and flow coefficient when you know the intermediate pressure, click **Q/Cg**.

   Once you select a calculation option, the screen displays the appropriate entry fields.
2. Enter data all in the fields except the fields you want the program to calculate. For example, if you selected the **Pi/Cg** option, enter information in every field except the **Pint** (Intermediate Pressure) and **CgA** and **CgB** (Flow Coefficients for regulators A and B) fields.
3. When done, click the **Calculate** button. FIRSTVUE™ calculates and displays the results.
4. When done, to display the **Sizing** Screen, click the **Close** button.

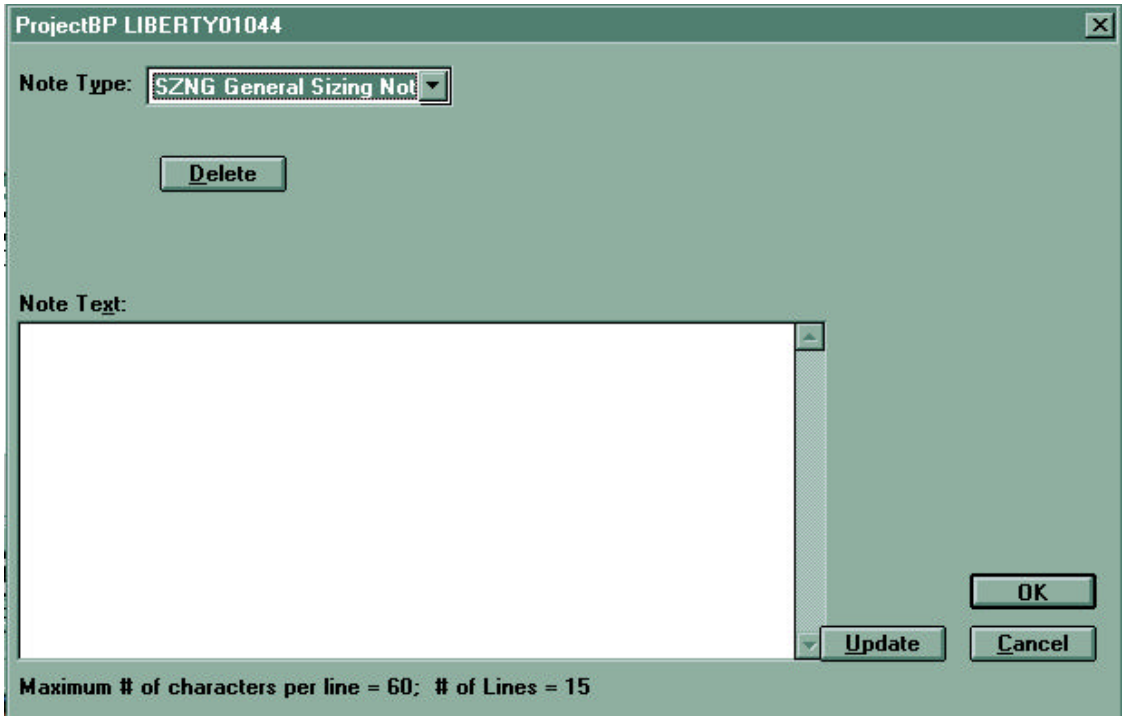
Inserting Sizing Notes

FIRSTVUE™ allows the user the ability to add notes to each individual item for clarification and quotation purposes. These notes are added to the Valve Sizing Report, Actuator Sizing Report, and the Stroking Speed Sizing Report. Only one note is allowed for each item.

To add sizing notes:

1. Click the **Notes** button on the **Sizing Screen**.

   The **Sizing Notes Dialog Box** appears:



To add a new note:

1. Select the type of note you want to add from the **Note Type** drop-down list.
2. Click the **New Note** button.
3. Type your note in the **Note Text** field.
4. Click **OK**.

FIRSTVUE™ saves your note. The **Sizing Screen** appears.

To update a note:

1. Display the note on your screen by selecting from the **Note Type** drop-down list.
2. Click the **Update** button.
3. Type your changes in the **Note Text** field.
4. Click **OK**.

FIRSTVUE™ saves your changes. The **Sizing Screen** appears.

Chapter 4: Project Management Using FIRSTVUE™

We call each FIRSTVUE™ record a *Project*. A Project can contain one or more *items*—valves, actuators, monitors, etc. Your Fisher Representative uses the data files, spec sheets, and reports from FIRSTVUE™ Projects, saved in .FFV file formats, to provide you with accurate and timely price quotations.

When you create a new Project, you assign a Project number and include the name and address of your company contact and other information identifying the Project. When you save a Project, the program stores it in the MS Access database within the program. When you open the Project, the program loads it and displays its data in FIRSTVUE™ screens.

This chapter contains instructions for working with projects and items. It contains the following sections:

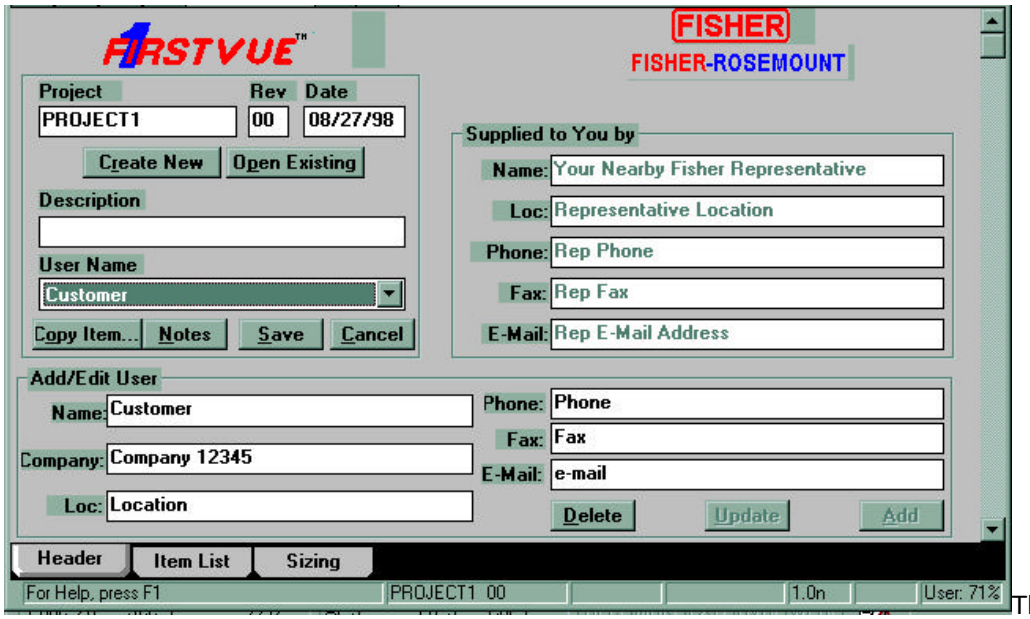
- Creating a New Project
  - Adding, Changing, and Deleting User Information
  - Filling in Project Information
- Changing “Supplied to You By” Information
- Opening an Existing Project
- Modeling a New Project on an Existing Project
- Working with Items
  - Adding a New Item
  - Copying an Item
  - Finding an Item
  - Deleting an Item
  - Adding, Changing, and Deleting Item Tags

Creating a New Project

To create a new Project, you use the **Project Header Screen**. To display a blank **Project Header Screen**, select **New Project** from the **File Menu**.

NOTE: If the **Project Header Screen** is already displayed, you can click the **Create New** button to display a blank **Project Header Screen**.

Here is an example of the **Project Header Screen**:



The **Project Header Screen** lets you identify the Project with a Project number, contact information, and other information.

Information you enter on this screen prints on your spec sheets and reports. You can use this information later to find and display the Project.

The **Supplied to You by** box displays the name, address, phone numbers, and e-mail address of your Fisher Representative.

To complete the **Project Header Screen**, you enter the name and address information of the person in your company to contact about the project, and enter information identifying the Project.

Adding, Changing, and Deleting User Information

The **Project Header Screen** contains an address book in which you can store information about your company contacts, or *users*.

To select a user from the address book, you select from the drop-down list in the **User** box. The user's name then appears in the **Current** field, and their address, phone, and email information appears in the **Company** box.

The following sections describe how to add, change, and delete users from the address book.

Adding a User

To add a user to the address book:

1. In the **Current** field, type the contact's name.
2. In the **Company** box, enter your company or division name, location, phone, fax, and email address in the appropriate fields.
3. Click the **Add** button in the **User** box.

The program saves the contact information.

Updating User Information

To change or update information about a user:

1. Select the user from the drop-down list.
2. Type over the information you wish to change.
3. Click the **Update** button in the **User** box.

The program saves your changes.

Deleting a User

To delete a user from the address book:

1. Select the user from the drop-down list.
2. Click the **Delete** button in the **User** box.

The program deletes the user.

Filling in Project Information

To fill in Project information:

1. In the **Project** box, type the Project number. You can assign any combination of 10 numbers or characters to identify the Project.

NOTE: Project numbers must be unique. If you assign a duplicate Project number, when you save the new Project the program will overwrite the 'old' Project with your new information.

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2. In the **Rev** field, type the revision ID. You can type two numbers or characters to identify the revision.
3. Fill in the **Date** field as follows:
   - Type the date in the MM/DD/YY format. For example, to enter November 26, 1998, type: **11/26/98**. The program will default to the date format preferences established in Windows' settings, making DD/MM/YY formats possible.

     — OR —
   - Double-click on the **Date** field to display the **Calendar Dialog Box**. Then, use your mouse to select a year, month, and date.
4. In the **Description** field, type a brief description of the Project.
5. When done, to save the Project:
   - Select **Save** from the **File Menu.**

     — OR —
   - Press **Control + S.**

     — OR —
   - Click the **Save** button.

Changing "Supplied to You By" Information

The Supplied to You By data will typically already be filled in when you receive the software from your local Fisher representative. If modifications are needed, make them in the FIRSTVUE.INI file found in c:\Windows\.

Once FIRSTVUE™ is installed, the FIRSTVUE.INI file is copied to the Windows directory. "Supplied to You By" data can be edited in the FIRSTVUE.INI file located in c:\Windows\. The FIRSTVUE.INI file in the FIRSTVUE™ directory is detached from the working copy of FIRSTVUE™ - revisions to it will only take effect if they are made before installation.

Opening an Existing Project

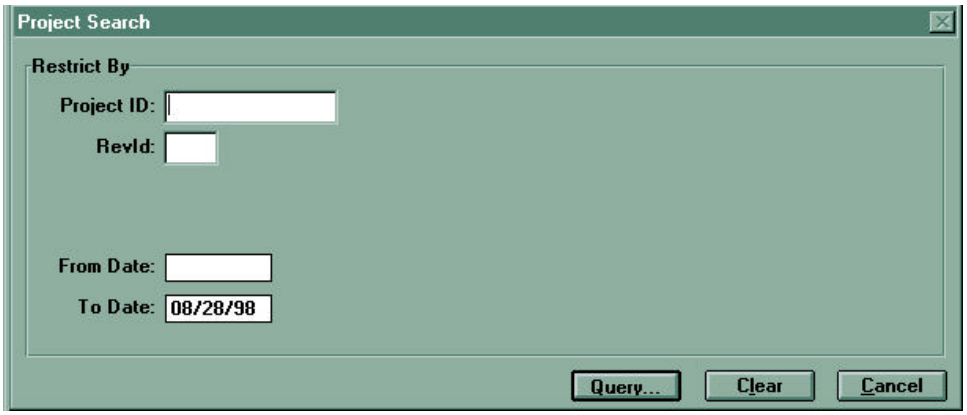
To open an existing Project, you use the **Project Search Dialog Box**. To display this dialog:

1. Select **Open** from the **File Menu.**

   — OR —

   Click the **Open Existing** button on the **Project Header Screen**.

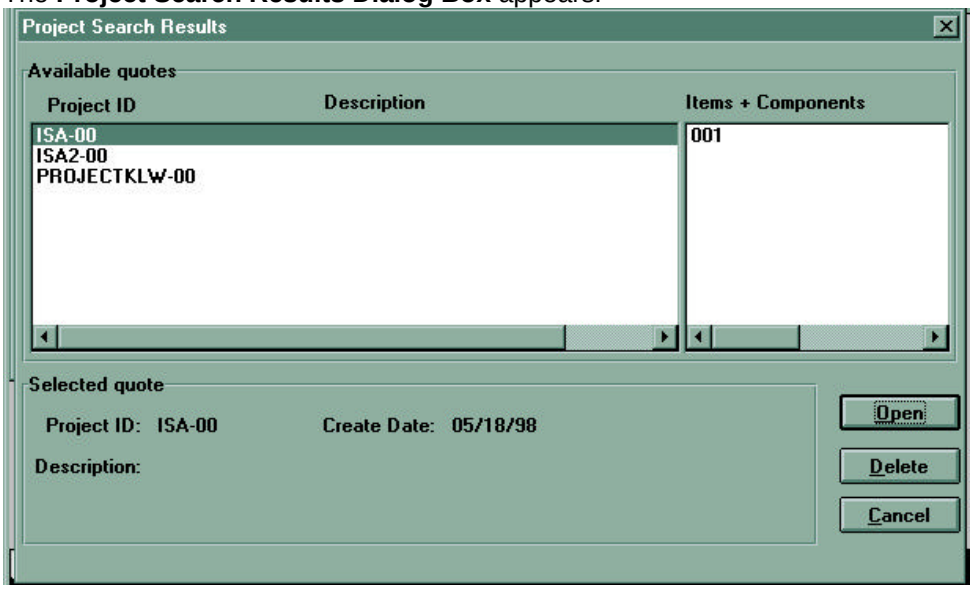
The **Project Search Dialog Box** appears:



The **Project Search Dialog Box** lets you search for a Project by Project ID # or by date.

2. To find a specific Project, fill in the appropriate fields and click the **Query** button.

The **Project Search Results Dialog Box** appears:



The **Project Search Results Dialog Box** lists Projects that match your search criteria.

3. To select a Project, click on it to highlight it and then click the **Open** button.

The selected Project loads into FIRSTVUE™. The **Project Header Screen** appears, filled in with data from the selected Project.

Modeling a New Project on an Existing Project

You can select an existing Project as a model for a new Project.

To do this:

1. Click Open Existing button on the Project Header Screen.

   The **Project Search Dialog Box** appears.

2. Find and select the Project you want to use as a model. For complete instructions, see the previous section of this chapter.

3. Once you select the Project, the **Project Header Screen** appears, filled in with data from the selected project.

4. Type a new Project ID # in the **Project** box.

   Changing the Project ID # creates a new record in the FIRSTVUE™ database. Your new record contains all the data from the previous Project, including any valve, monitor, and actuator sizing information previously entered. You can now change any information you wish.

Working with Items

Each Project can contain any number of items. Each item can have up to two components; Component A, usually the valve body, selected from Fisher Catalog 10 or Catalog 12; and Component B, usually the actuator selected from your calculations.

NOTE: You can note additional components or accessories on your spec sheets. For more information, see **Chapter 6: Creating Specification Sheets** and Reports

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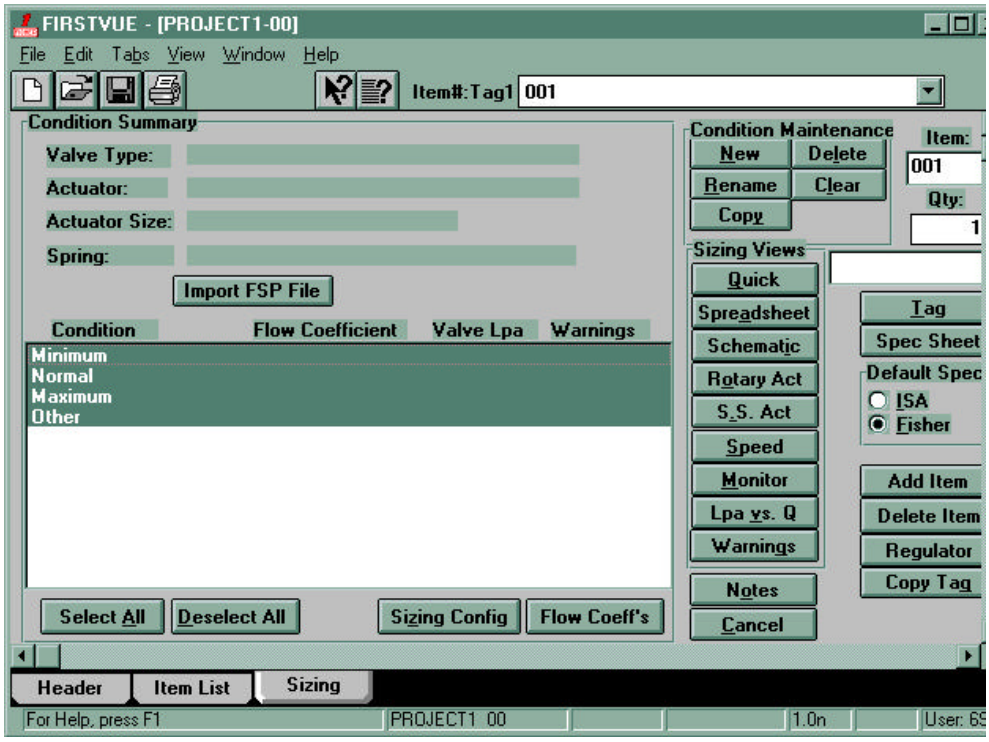
In this section, you will learn how to add, find, and delete items from a Project. In the chapters that follow, you will learn how to size valves or items, and select components for them.

Adding a New Item

When you add a new item, FIRSTVUE™ appends it to the current Project. To add an item to a Project:

1. Open the Project if it is not already open. For instructions on opening a Project, see the previous section of this chapter.
2. Display the **Sizing Screen** by clicking on the **Sizing Tab**.

The **Sizing Screen** appears:

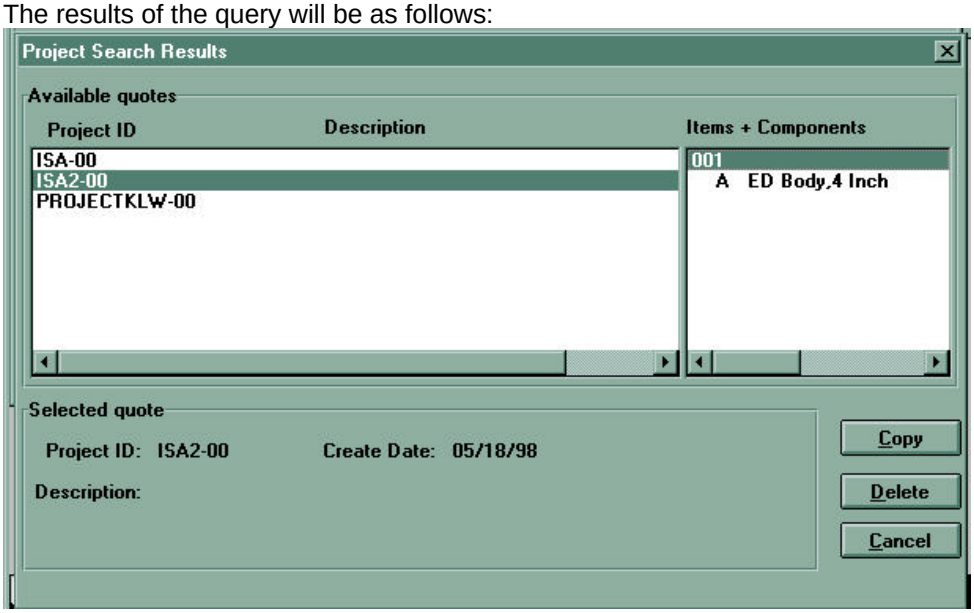


2. Click the **Add Item** button.
3. A blank **Sizing Screen** appears. The number shown in the **Item # Tag1** field increases by one. For example, if your Project had four items previously, the new item number is "5".

Copying an Item:

To copy an item from another project:

1. From the **Header Screen**, select **Copy Item**.
2. The **Project Query Dialog Box** appears. Enter project name, revision, or date.
3. The results of the query will be as follows:



4. To copy particular item(s), highlight the item number from the right column.
5. Select **Copy**.
6. Item information now becomes part of the current project.

Finding an Item

To find an existing item:

1. Open the Project if it is not already open. For instructions on opening a Project, see the previous section of this chapter.
2. Display the **Sizing Screen** by clicking on the **Sizing Tab**.
3. Select the item from the drop-down list in the **Item #** field.

Deleting an Item

To delete an item from a Project:

1. Open the Project if it is not already open. For instructions on opening a Project, see the previous section of this chapter.
2. Display the **Sizing Screen** by clicking on the **Sizing Tab**.
3. Select the item from the drop-down list in the **Item # Tag1** field.
4. Click the **Delete Item** button.

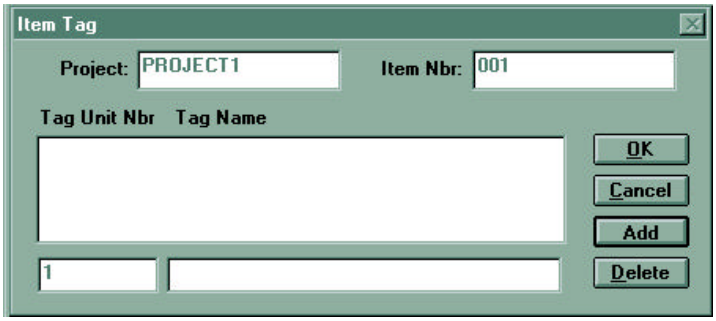
Adding, Changing, and Deleting Item Tags

FIRSTVUE™ lets you identify items with *tags*—names or numbers that you assign to the item. If your project contains more than one quantity of the same item, you can identify each item with its own tag. Your tags print on spec sheets and reports.

To add, change, or delete tags, you use the **Item Tag Dialog Box**. To display this screen:

1. Open the Project if it is not already open. For instructions on opening a Project, see the previous section of this chapter.
2. Display the **Sizing Screen** by clicking on the **Sizing Tab**.
3. Select the item from the drop-down list in the **Item # Tag1** field.
4. Click the **Tag** button.

The **Item Tag Dialog Box** appears:



The **Item Tag Dialog Box** displays the Project number and item number, and lets you add, delete, and change tag names.

The cursor is active in the text box at the bottom of the dialog. To add a tag name:

1. Type the tag name. You can type up to 20 characters—letters, numbers, or special characters.
2. Click the **Add** button. The tag name appears in the **Tag Name** box next to the tag unit number.
3. If you have more than one quantity of an item, you can add tag names for each item. To do this, repeat steps 1 and 2 for each tag name you want to add.

NOTE: To change a tag name, click on the tag name to select it, type the new tag name in the text field, and then click the **Add** button. To delete a tag name, click on the tag name to select it and then click the **Delete** button.

---

4. When done, click the **Ok** button.

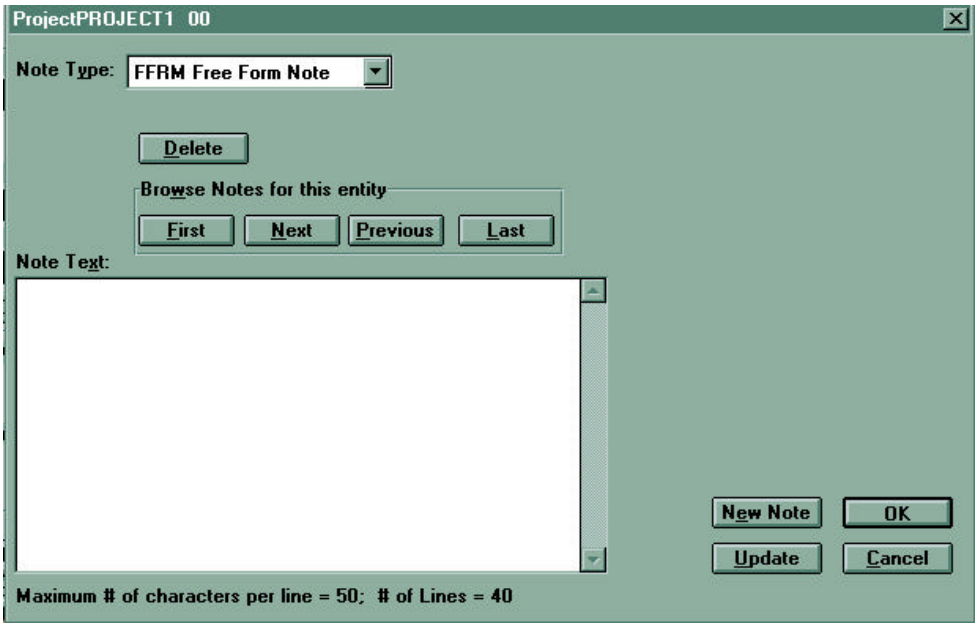
   The **Sizing Screen** appears, displaying the tag name for the first item in the **Item # Tag1** field.

Adding Project Notes

Project notes let you add special shipping, packaging, and bar code requirements to your project. Unlike sizing notes, which allow only one note per item, a project can have unlimited notes associated with it.

To add project notes, use the **Project Notes Dialog Box**. To display this box, click the **Notes** button on the **Project Header Screen**.

The **Project Notes Dialog Box** appears:



If the Project has any notes, the first one appears. You can browse notes within the Project by clicking the **First, Next, Previous,** and **Last** buttons.

To update an existing note:

1. Display the note on your screen by using the browse buttons.
2. Click the **Update** button.
3. Type your changes in the **Note Text** field.
4. Click **OK**.

FIRSTVUE™ saves your changes. The **Project Header Screen** appears.

To add a new note:

1. Select the type of note you want to add from the **Note Type** drop-down list. For descriptions of the note types, see the table at the end of this section.
2. Click the **New Note** button.
3. Type your note in the **Note Text** field.
4. Click **OK**.

FIRSTVUE™ saves your note. The **Project Header Screen** appears.

To delete a note:

1. Display the note on your screen by using the browse buttons.
1. Click the **Delete** button.

Chapter 5: Import/Export Capabilities of FIRSTVUE™

It is possible to import and export files from FIRSTVUE™ for use with different applications and software packages. Specifically, the following will be discussed:

- Using .MDB File Formats
- Importing and Exporting .FFV File Formats
- Importing and Exporting .BSV File Formats
- Importing and Exporting ISA File Formats
- Exporting Dimensional Data

Using .MDB File Formats

When you save projects using the **Save** command or pressing **<Ctrl S>**, FIRSTVUE™ appends the data to the FIRSTVUE.MDB file in your FIRSTVUE™ directory. The .MDB file format is a Microsoft Access file format. If you are proficient in designing Access queries and reports, you can directly use the FIRSTVUE.MDB file for other uses. Since Access is a Microsoft product, it can readily be transferred to and from Excel and Word.

Importing and Exporting .FFV File Formats

.FFV file formats allow transferal of data from customer to representative and vice versa. The .FFV format, an acronym for **F**IRST **F**IRST**V**UE, is recommended when working on large projects or when saving data to a network. .FFV file formats are also readily attached to e-mail for discussion with your local Fisher representative regarding sizing issues or formal request for quotation.

To save a project in .FFV format:

1. Select the **File** pull-down menu.
2. Select the **Save to .FFV File** option.
3. Follow the remaining instructions.

Importing and Exporting .BSV File Formats

Bar separated value (.BSV) flat file formats are very similar to comma delimited file formats, except the character separating the fields is a vertical bar, "|". In this file format, import and export of FIRSTVUE™ data is possible to Intergraph's Instrument Data Manager (IDM™) software.

The interface between IDM™ and FIRSTVUE™ begins in IDM™. The IDM™ user inputs tag numbers and other pertinent valve information. Then, the export file is translated via some additional software into .BSV file formats. This information is then imported by the following steps:

To import the ".BSV" file into FIRSTVUE:

1. Select Import ISA File from the FIRSTVUE file menu.
2. Select the file created in Step 5.
3. Click the Browse Map button
4. Select the "isa_all.csm" file.
5. Verify that the File Delimiter is set to "|".
6. Click the Import button at the bottom of the window to start the import process.
7. As the import process runs, messages will appear in the Import Log. If any error messages appear, click the Save Log button when the import process is finished. Enter the name of a file to save the log to.
8. Click the Close button to close the window.

NOTE: FIRSTVUE imports items into the project you have open. If you get the error "Warning: No Active Document" it means that you don't have a project open. Open a project and try again.

The FIRSTVUE™ import process is "add-only". This means you cannot update existing items via the import. Imported items are added to the end of the open project. For example, if you are working in a project that already has 3 items, the first item you import will be set to item 4. We recommend importing into a new project so that the first item you import will be item 1.

Data is imported into two places. Sizing fields are imported into sizing. Non-sizing fields are imported as ISA Spec Sheet User Overrides. Some fields are imported into both places.

Exporting is done in a similar manner. For more information, see the IDM/FIRSTVUE Interface User's Manual.

Importing and Exporting ISA File Formats

FIRSTVUE can import and export ISA Sizing and Specification data to and from projects. When using this feature for a project, you should also use ISA Sizing and the ISA Spec Sheet. The data fields available for import/export include: all fields that appear on the current ISA S20.50 Control Valve Specification Sheet, fields required by ISA Sizing, and a few other related fields. For a complete list of fields that can be imported/exported, check Appendix I at the end of this manual. It is not necessary to import or export all of the available fields - you can pick and choose just the fields you need.

Data is imported-from and exported-to a delimited text file. The first line of the file contains the ordered field names of the data. The remaining file lines contain the actual data, with each line representing one item of the project. Any printable character can be used as the field delimiter.

The import will load the process conditions and sizing data into the appropriate fields within FIRSTVUE. This data can then be used to generate a completed sizing for the item. Non-

sizing data will be imported as ISA spec sheet overrides where applicable, and can be viewed on the spec sheet dialog. The import process only adds items to a project - it does NOT update existing items.

Similarly, all the fields that can be imported into FIRSTVUE can be exported from FIRSTVUE. Before exporting, be sure to review the ISA spec sheet for each item being exported. You can export all or some of the items in a project.

Special features of the import/export are the ability to map user defined field names to the standard FIRSTVUE ISA names and to import/export only the fields you need in any order that you want. These features are accomplished by building a comma separated "mapping" (.CSM) text file for each unique import/export format that you need. This mapping file also allows you to include "customer defined" fields which are imported and exported but never used by FIRSTVUE (in effect they are place holders for fields not related to ISA data). The following sections detail how to Import an ISA file, Export an ISA file, and create a Mapping file within FIRSTVUE.

Using FIRSTVUE's ISA Import/Export functionality, Fisher has developed interfaces with Intergraph's IDM and PID's INtools® instrumentation systems. These interfaces greatly reduce the time required to exchange process and specification data with FIRSTVUE. They also eliminate errors caused by the re-keying of data. To find out more about these interfaces and what you need to use them, contact your Fisher representative.

Importing an ISA Specification File:

1. You must have the project open that you want to import items into. The Import process will only create new items in your project, it will not update existing items.

2. Click on the 'Import ISA File' choice in the File Menu. This will bring up an Open File Dialog from which you can select the file you want to import. After selecting the file, the Import ISA File Dialog will appear with your file name displayed in the File Name field. To change this file name click on the 'Browse File' button to select a different import file.

3. If a mapping file is needed in order to import this file, then select it by clicking on the 'Browse Map' button or create a new one by clicking on the 'Create/Edit Map' button. After selecting/creating the mapping file, it's name will appear in the Map File To Use field.

4. Select the File Delimiter for the file you are importing. You can select a character from the dropdown list, or key-in any printable character.

5. Click on the 'Import' button to begin the import process. The Import Log list box will show the status of your import as well as any errors that might occur. The log can be saved to a file if needed by clicking the 'Save Log' button. If errors occurred the import file can be corrected by manually editing it with most text editors or if the lines are too long, with a spreadsheet program such as Microsoft Excel. Errors in field names will cause an item to NOT be created. Errors in field data will cause that field to not be imported and left blank, but the item will still be created. Errors in unit of measure for a field will also cause an item to NOT be created.

6. Click on the 'Close' button to exit the Import ISA File Dialog.

Exporting an ISA Specification File:

1. You must have the project open that you want to export items from.

2. Click on the 'Export ISA File' choice in the File Menu. This will bring up the Export ISA File Dialog.

3. Click on the 'Browse File' button to select the file name you want to export to. After selecting the file, it's name will appear in the File Name field.

4. If the export file only needs certain fields, or needs a unique order, or needs unique field names then you need to select or create (see Creating or Editing an ISA Mapping File) a mapping file by clicking on the 'Browse Map' or 'Create/Edit Map' button. After selecting/creating the mapping file, it's name will appear in the Map File To Use field. If no map file is specified, the export will contain ALL fields in the default order with standard names.

5. Two other radio button selections come into play if you are using a mapping file to export. If you want to use a mapping file, but want to export the standard field names; then click the Standard ISA Names button. If you want to ignore the mapping file; then click the All Fields button. Generally you will accept the settings defaulted to, but these options allow for complete flexibility.

6. Select the File Delimiter that you want to use for the file you are exporting. You can select a character from the dropdown list, or key-in any printable character. This is the character that will be used to separate fields values within the export file.

7. A list of all items on the project appears in the Select Items to Export listbox. You can select which items you want to export here by clicking on them individually, or click the Select All Items check box if you want to export all the items on this project.

8. Click on the 'Export' button to begin the export process. This will bring up an Open File Dialog from which you can select the path and file name of the export file you want to create. After selecting the file name, a status box will appear telling you the item which is currently being exported and at the end telling you the results of your export. The export file can be viewed with most text editors or if the lines are too long, with a spreadsheet program such as Microsoft Excel.

9. Click on the 'Close' button to exit the Export ISA File Dialog.

Creating or Editing an ISA Mapping File:

1. Click on the 'Edit ISA Map File' choice in the File Menu or click the 'Create/Edit Map' button from the Import or Export Dialogs. This will bring up the Map File Edit Dialog.

5. To open an existing map file click on the 'Open Map File' button to select the file. After selecting the file, it's name will appear in the Map File Name field and the fields associated with that file will appear in the Fields Selected/Custom Name spreadsheet on the right side of the screen. If you are creating a new map file, the Fields Selected/Custom Name spreadsheet will be empty initially.

6. The Fields Available list on the left side of the screen lists all the non-selected fields available with the Fisher standard field name. The order of these fields is roughly top to bottom on a Standard ISA printed spec sheet. To Add a field or fields to a map file, select the Add/Delete button in the Select Mode box, click the fields desired to highlight them in the Fields Available list, then click on the 'Select >' button to move them over to the Fields Selected List. All the fields can be selected with the 'Select All >>' button. Deselecting

works the same way, but in the opposite direction using the '< Deselect ' and '<< Deselect All' buttons. A special "CUSTOMER-DEFINED" field is listed first in the list. This field allows for Non-ISA fields to be allowed for in an import or export file. This field can be selected as many times as needed and renamed (see 5 below) to a custom name just like the rest of the fields.

7. To change the field order of your map file, highlight the field in the Fields Selected/Custom Name spreadsheet and click the 'Move UP' or 'Move DOWN' buttons to move that field up or down in the order. Multiple fields can be moved at once by highlighting a group of fields.

8. To define a custom field name for a field simply type the name in the Custom Name column of the spreadsheet next to the standard name you want it to stand for. To reset ALL custom names to the default standard name click the 'Reset Custom Names' button.

9. If you have a copy of the customer import file you can import it to make the building of the map easier by entering the Delimiter of the file and clicking the Import Custom File button. This will load the custom names in row one of the file into the Custom Name column of the Fields Selected/Custom Name spreadsheet while leaving the Fields Selected column blank. The Overlay button will be selected in the Select Mode box and you can now highlight fields in the Fields Available list and Select them to "overlay" the blank fields in the spreadsheet. Deselecting while in Overlay mode will blank out the highlighted field(s).

10. Click the 'Save' button to save to the file listed in the Map File Name field. Click the 'Save As' button to save to a new or different map file name.

11. Click on the 'Close' button to exit the Map File Edit Dialog. **Important: Closing the dialog does NOT automatically save your map file. You must click the 'Save' or 'Save As' buttons to save your file.

Exporting Dimensional Data

After valve selections have been made in FIRSTVUE™ and Autodraw has assembled Type I drawings by tag number, it is possible to export a table to dimensions into Excel by tag number. It can also provide a by tag basis for each dimension which can be imported into CAD systems that can accept Excel spreadsheets.

Chapter 6: Creating Specification Sheets and Reports

FIRSTVUE™ lets you create three types of reports: Summary Reports, Sizing Calculation Reports, and Specification (Spec) Sheets.

A Summary Report lists selected items in a Project and includes a brief description of each item. A Sizing Calculation Report shows criteria you entered for a selected process condition and the calculated results.

This chapter contains instructions for creating and printing reports and includes an example of each type of report. It contains the following sections:

- Creating a Spec Sheet
- Printing Spec Sheets and Reports
- FIRSTVUE™ Reports Examples
  - Summary Report
  - Sizing Calculations Reports
  - Fisher Spec Sheet
  - ISA Spec Sheet
  - Diffuser Spec Sheet

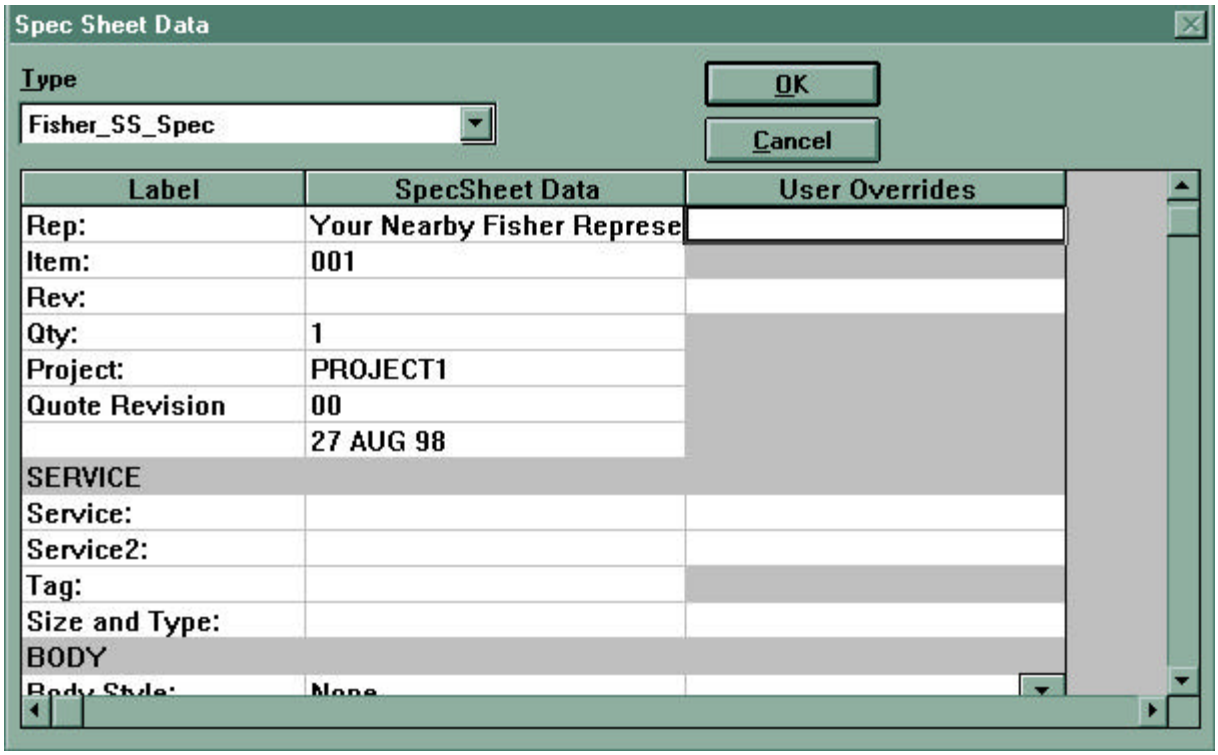
Creating a Spec Sheet

When you create a specification sheet, you first use the **Spec Sheet Data Dialog Box** to select data and then use the **Reports Dialog Box** to select the specification sheet types and other options for printing.

To display the **Spec Sheet Data Dialog Box:**

1. Open the appropriate Project. For instructions on opening a Project, see Chapter 4: Creating and Opening Projects and Items.
2. Display the **Sizing Screen** by clicking on the **Sizing Tab**.
3. Click the **Spec Sheet** button.

The **Spec Sheet Data Dialog Box** appears:



The **Spec Sheet Data Dialog Box** lets you customize your specification sheet.

To fill in the **Spec Sheet Data Dialog Box**:

1. In the **Type** field, select one of the following specification sheet types from the drop-down list:

   - **Fisher Diffuser—**Use if you have selected a diffuser to go with your valve.
   - **Fisher Reg Spec**—Use with regulators.
   - **Fisher Rot Spec—**Use with rotary valves.
   - **Fisher SS Spec—**Use with sliding stem valves.
   - **ISA PM—**Use if you want an ISA specification sheet. (“PM” stands for Process Measurement and Control Instruments and Valves).

NOTE: If you selected a valve body from Catalog 10 or Catalog 12, **Fisher SS Spec** or **Fisher Rot Spec** appear automatically in the **Type** field. You can change this entry by selecting from the drop-down list.

Once you select a specification sheet type, the screen displays a spreadsheet with appropriate display and entry fields:

- The **Label** column displays the labels in the different areas of the specification sheet, such as Service, Body, etc. in gray, and field labels in white.

- The **SpecSheet Data** column displays the data provided by the program.

2. Make any changes you like by selecting or typing in the **User Overrides** column.
3. Note any additional components or accessories on your specification sheet by entering information and selecting from drop-down lists the **Positioner**, **Controller**, **Transducer**, and **Other** sections.
4. When done making changes, click **OK** to save your entries. The **Sizing Screen** appears.

Printing Spec Sheets and Reports

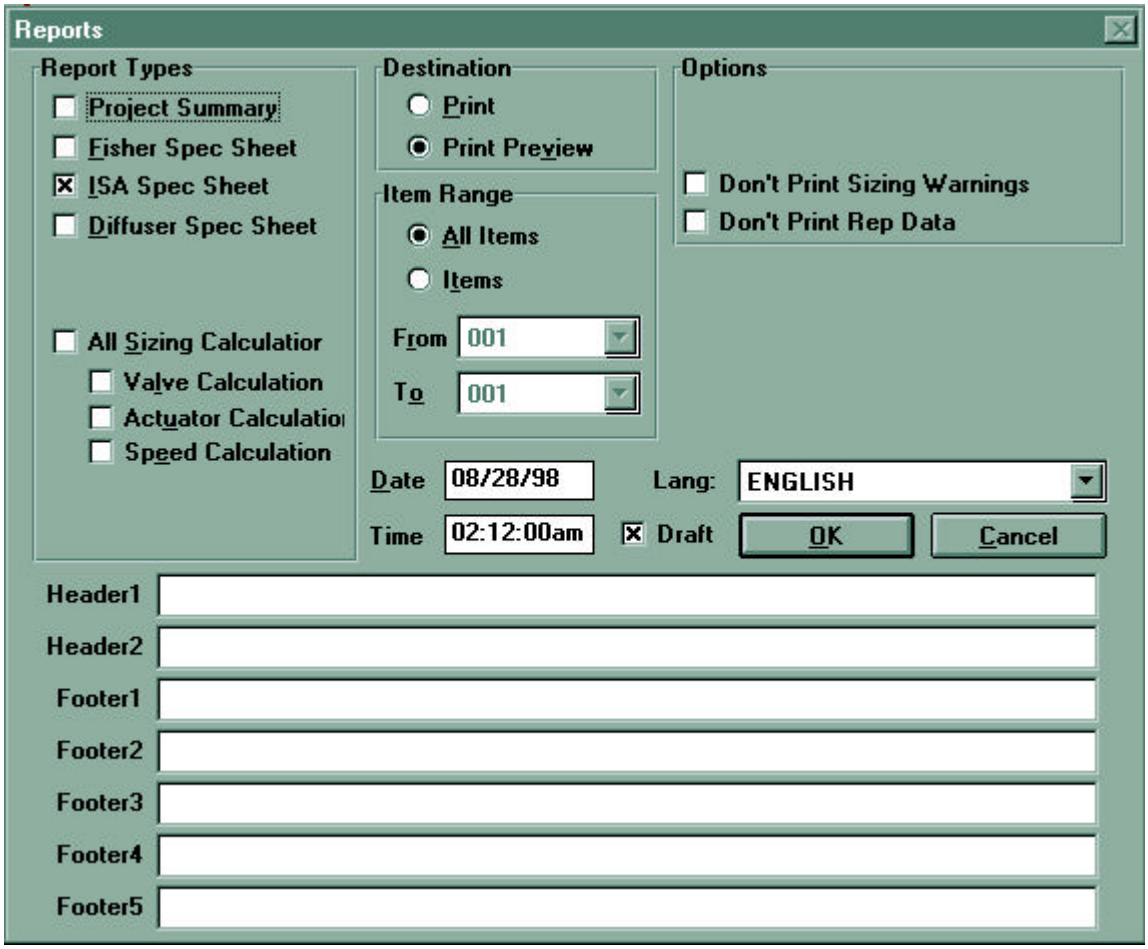
To print specification sheets and Summary Reports, you use the **Reports Dialog Box**. To display this dialog:

1. Open the appropriate Project. For instructions on opening a Project, see Chapter 4: Creating and Opening Projects and Items.
2. From the **File Menu**, select **Reports.**

   OR

   Click the **Printer** icon located on the Toolbar.

The **Reports Dialog Box** appears:



The **Reports Dialog Box** lets you select the type of report and the range of items included.This dialog displays any data previously entered in it.

To fill in the **Reports Dialog Box**:

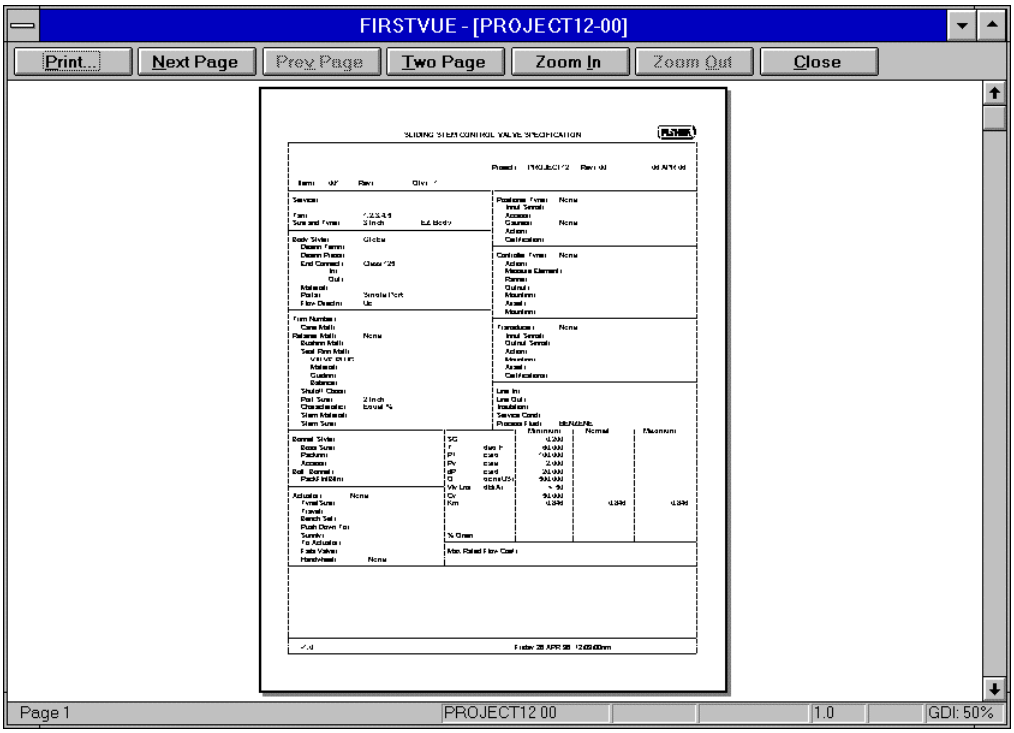
1. In the **Report Types** box, click one or more check boxes to select the type(s) of reports you want to print:
   - Click **Project Item List** to produce a **Summary Report** listing the items and brief item descriptions.
   - Click **Fisher Spec Sheet** to produce Fisher's custom formats for sliding stem actuators, rotary valves, and regulators.
   - Click **ISA Spec Sheet** to produce an ISA-defined process management specification sheet for sliding stem actuators or rotary valves.
   - Click **Diffuser Spec Sheet** if an item includes a diffuser. You can print Diffuser Reports only for items that include diffuser calculations in your sizing screens and spreadsheets.
2. In the **Report Types** box, click check boxes to select the types of calculations you want to include on Sizing Calculation Reports. You can select **All Sizing Calculations**, or any combination of **Valve Calculation**, **Actuator Calculation**, and/or **Speed Calculation**.
3. In the **Destination** box, click the appropriate radio button:
   - Click **Print Preview** to view the report on your screen before printing.
   - Click **Print** to send the report directly to the printer.
4. In the **Item Range** box, select the range of items you want to include in the report:
   - To include all items, click the **All Items** radio button.
   - To limit the report to a range of items:
     a. Click the **Items** radio button.
     b. Enter the range of items in the **From** and **To** fields by selecting from the drop-down lists.
5. In the **Options** box, click in the appropriate check boxes if you want to omit warnings and/or material code descriptions.

6. To print or preview the report, click the **OK** button.

NOTE: You can reduce your printing time by up to 80% by printing in draft mode. To do this, click the **Draft** check box before printing. For most printers, the only difference between draft mode and normal printing is that in draft mode the vertical lines in FIRSTVUE™ reports are thicker than the vertical lines printed in normal mode.

7. If you select **Print**, the Windows print dialog appears. Select the number of copies and other options you wish and click **Ok**. The reports print and the **Sizing Screen** appears.

If you select **Print Preview**, the **Print Preview Dialog Box** appears:



The **Print Preview Dialog Box** lets you view the report on your screen before printing. To use this dialog, click the appropriate buttons at the top of the dialog:

- **Print**—Displays the Windows print options dialog and lets you print the report.
- **Next Page**—Displays the next page of the report on your screen.
- **Prev Page**—Displays the previous page of the report on your screen.
- **Two Page**—Displays two pages at a time on your screen.
- **Zoom In**—Increases the report size on your screen. You can view the report at 75%, 110% and 200% of a full page size.
- **Zoom Out**—Reduces the report size on your screen.

NOTE: You can use the vertical scroll bar on the right of the screen to move within a page and from page to page. When the screen displays a full page, scrolling takes you to the next or previous pages. When the screen displays part of a page in expanded views, scrolling moves you within the page.

FIRSTVUE™ Reports Examples

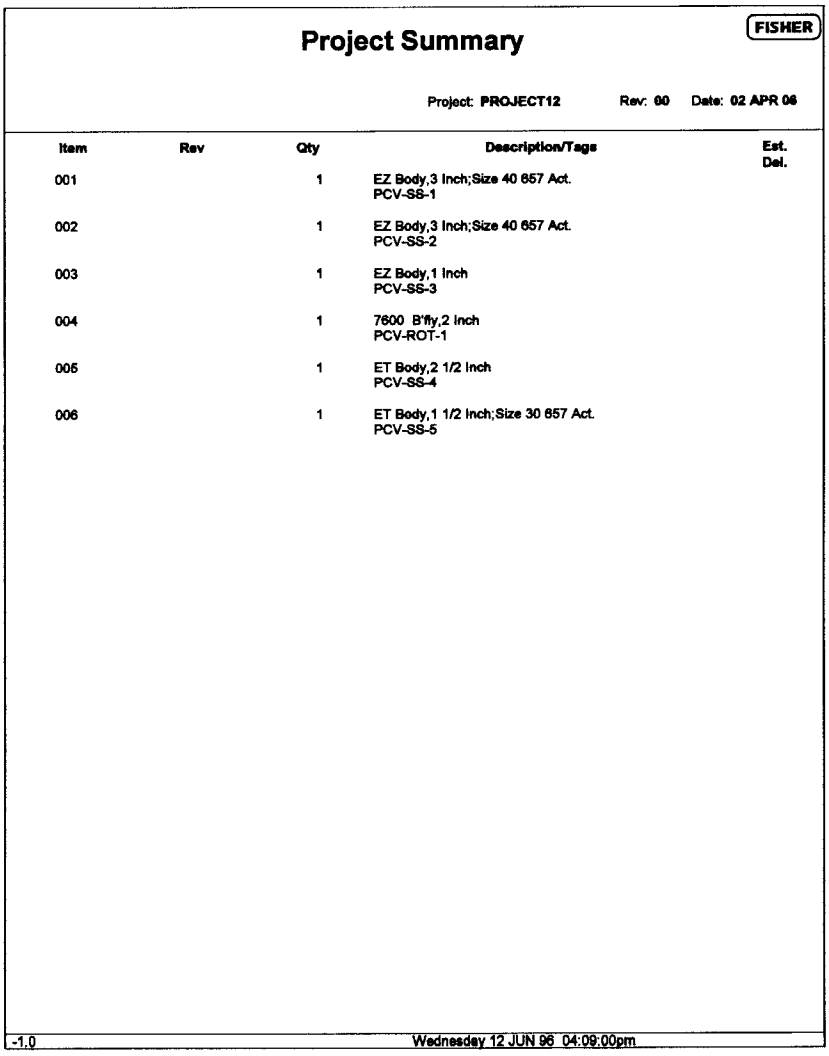
FIRSTVUE™ lets you create the following types of reports:

- **Summary Report**—Lists each item in a Project and a brief description of each item.
- **Sizing Calculation Report**—Contains the sizing data you entered and calculated results for a selected condition.
- **Fisher Spec Sheet**—Uses Fisher's custom formats to display sliding stem actuator, rotary valve, and regulator specifications.
- **ISA Spec Sheet**—Uses ISA-defined process management format to display sliding stem actuator or rotary valve specifications.
- **Diffuser Spec Sheet**—Displays diffuser data.

The following pages contain examples of each type of report.

Summary Report

A Summary Report lists the items in a Project and includes a brief description of each item. Here is an example of a Summary Report:



Project Summary

FISHER

Project: **PROJECT12** Rev: **00** Date: **02 APR 06**

Item	Rev	Qty	Description/Tags	Est. Del.
001		1	EZ Body,3 Inch;Size 40 657 Act. PCV-SS-1	
002		1	EZ Body,3 Inch;Size 40 657 Act. PCV-SS-2	
003		1	EZ Body,1 Inch PCV-SS-3	
004		1	7600 B'fly,2 Inch PCV-ROT-1	
005		1	ET Body,2 1/2 Inch PCV-SS-4	
006		1	ET Body,1 1/2 Inch;Size 30 657 Act. PCV-SS-5	

-1.0 Wednesday 12 JUN 96 04:09:00pm

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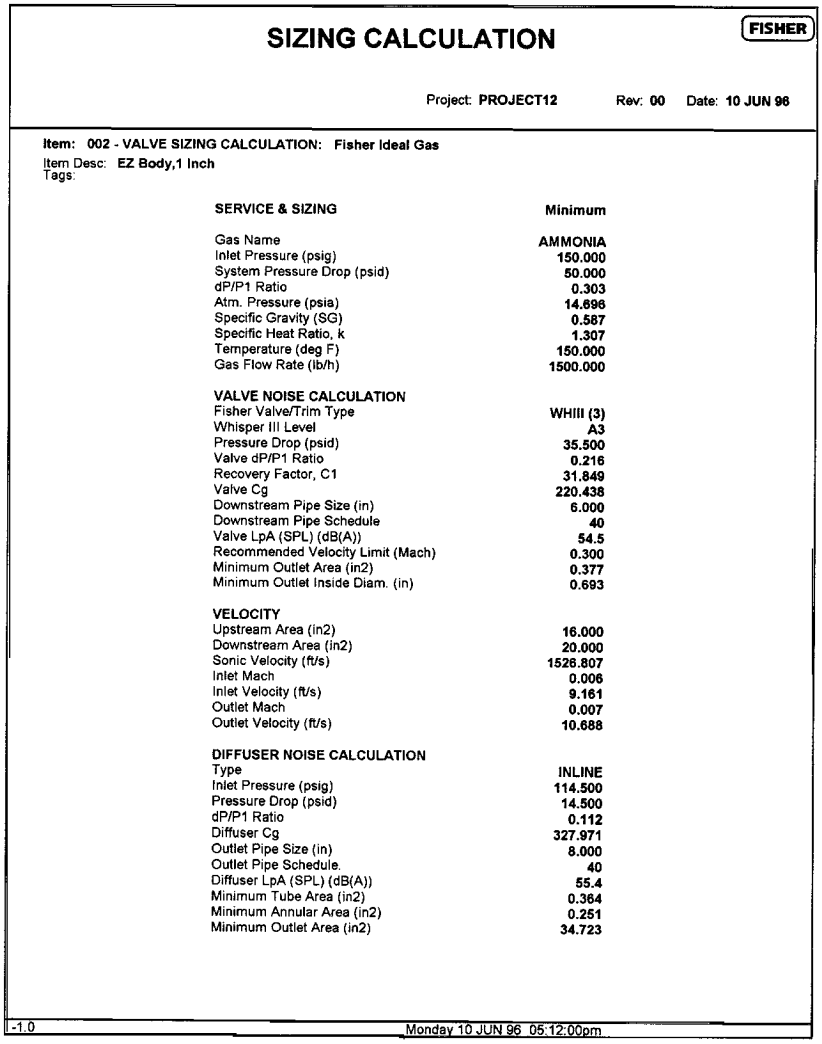
Sizing Calculation Report

A Sizing Calculation Report contains sizing data you entered and calculated results for a selected condition. Here is an example of a Sizing Calculation Report:



SIZING CALCULATION

FISHER

Project: **PROJECT12** Rev: **00** Date: **10 JUN 96**

Item: 002 - VALVE SIZING CALCULATION: Fisher Ideal Gas
Item Desc: **EZ Body,1 Inch**
Tags:

SERVICE & SIZING	**Minimum**
Gas Name	**AMMONIA**
Inlet Pressure (psig)	**150.000**
System Pressure Drop (psid)	**50.000**
dP/P1 Ratio	**0.303**
Atm. Pressure (psia)	**14.696**
Specific Gravity (SG)	**0.587**
Specific Heat Ratio, k	**1.307**
Temperature (deg F)	**150.000**
Gas Flow Rate (lb/h)	**1500.000**
VALVE NOISE CALCULATION	
Fisher Valve/Trim Type	**WHIII (3)**
Whisper III Level	**A3**
Pressure Drop (psid)	**35.500**
Valve dP/P1 Ratio	**0.216**
Recovery Factor, C1	**31.849**
Valve Cg	**220.438**
Downstream Pipe Size (in)	**6.000**
Downstream Pipe Schedule	**40**
Valve LpA (SPL) (dB(A))	**54.5**
Recommended Velocity Limit (Mach)	**0.300**
Minimum Outlet Area (in2)	**0.377**
Minimum Outlet Inside Diam. (in)	**0.693**
VELOCITY	
Upstream Area (in2)	**16.000**
Downstream Area (in2)	**20.000**
Sonic Velocity (ft/s)	**1526.807**
Inlet Mach	**0.006**
Inlet Velocity (ft/s)	**9.161**
Outlet Mach	**0.007**
Outlet Velocity (ft/s)	**10.688**
DIFFUSER NOISE CALCULATION	
Type	**INLINE**
Inlet Pressure (psig)	**114.500**
Pressure Drop (psid)	**14.500**
dP/P1 Ratio	**0.112**
Diffuser Cg	**327.971**
Outlet Pipe Size (in)	**8.000**
Outlet Pipe Schedule.	**40**
Diffuser LpA (SPL) (dB(A))	**55.4**
Minimum Tube Area (in2)	**0.364**
Minimum Annular Area (in2)	**0.251**
Minimum Outlet Area (in2)	**34.723**

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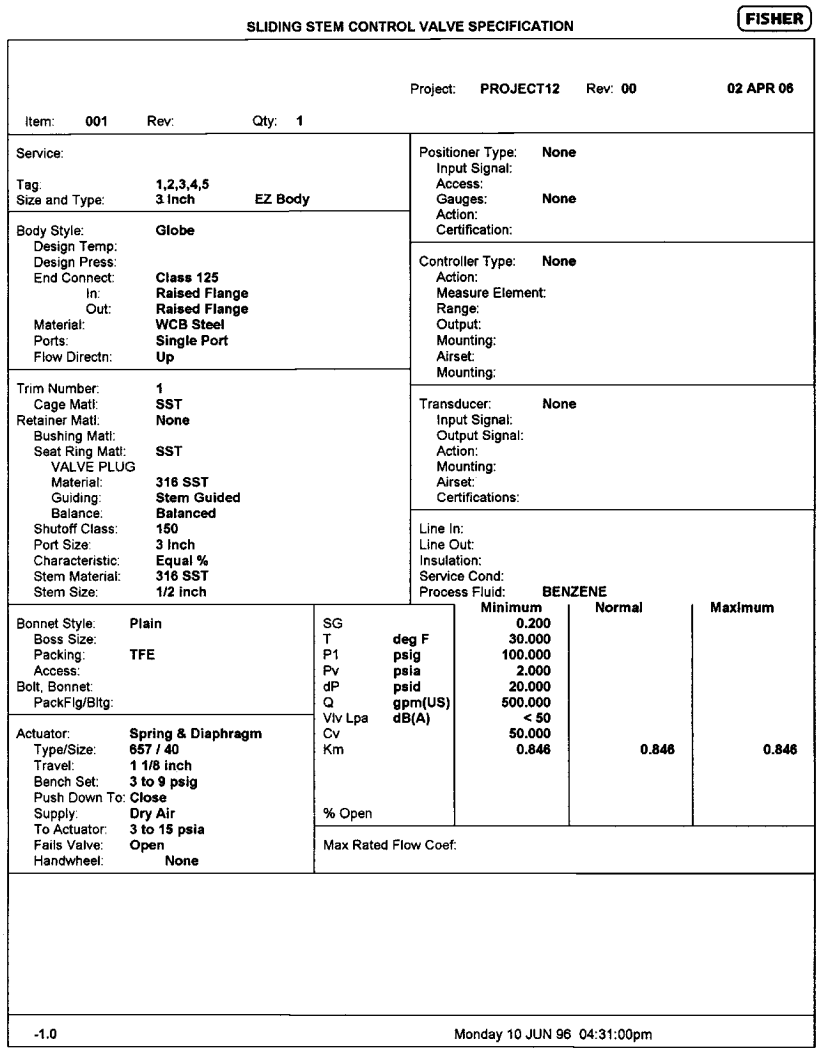
Fisher Spec Sheet

A Fisher Spec Sheet uses Fisher's custom formats for displaying sliding stem actuator, rotary valve, and regulator specifications. Here is an example of a Fisher Spec Sheet:



SLIDING STEM CONTROL VALVE SPECIFICATION

FISHER

Project: PROJECT12 Rev: 00 02 APR 06

Item: 001 Rev: Qty: 1

Service:

Tag: 1,2,3,4,5
Size and Type: 3 Inch EZ Body

Body Style: Globe
Design Temp:
Design Press:
End Connect: Class 125
In: Raised Flange
Out: Raised Flange
Material: WCB Steel
Ports: Single Port
Flow Directn: Up

Trim Number: 1
Cage Matl: SST
Retainer Matl: None
Bushing Matl:
Seat Ring Matl: SST
VALVE PLUG
Material: 316 SST
Guiding: Stem Guided
Balance: Balanced
Shutoff Class: 150
Port Size: 3 Inch
Characteristic: Equal %
Stem Material: 316 SST
Stem Size: 1/2 inch

Bonnet Style: Plain
Boss Size:
Packing: TFE
Access:
Bolt, Bonnet:
PackFlg/Bltg:

Actuator: Spring & Diaphragm
Type/Size: 657 / 40
Travel: 1 1/8 inch
Bench Set: 3 to 9 psig
Push Down To: Close
Supply: Dry Air
To Actuator: 3 to 15 psia
Fails Valve: Open
Handwheel: None

Positioner Type: None
Input Signal:
Access:
Gauges: None
Action:
Certification:

Controller Type: None
Action:
Measure Element:
Range:
Output:
Mounting:
Airset:
Mounting:

Transducer: None
Input Signal:
Output Signal:
Action:
Mounting:
Airset:
Certifications:

Line In:
Line Out:
Insulation:
Service Cond:
Process Fluid: BENZENE

		Minimum	Normal	Maximum
SG		0.200		
T	deg F	30.000		
P1	psig	100.000		
Pv	psia	2.000		
dP	psid	20.000		
Q	gpm(US)	500.000		
Vlv Lpa	dB(A)	< 50		
Cv		50.000		
Km		0.846	0.846	0.846
% Open				

Max Rated Flow Coef:

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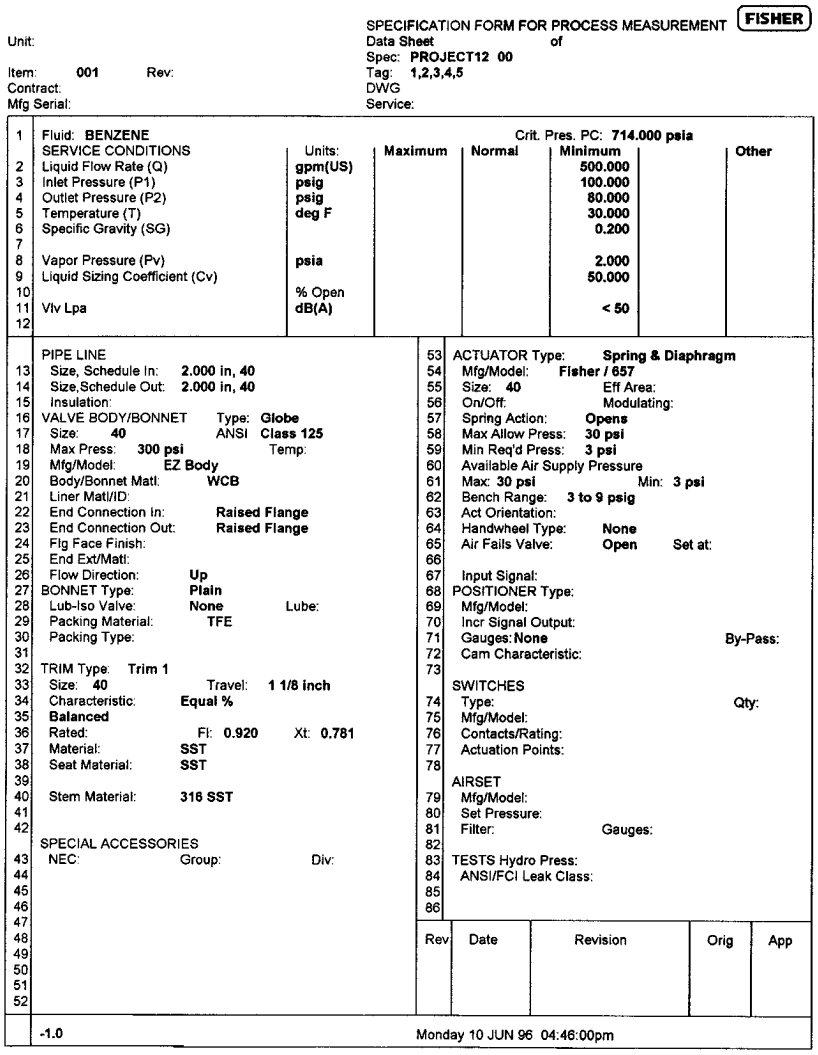
ISA Spec Sheet

An ISA Spec Sheet uses the ISA-defined process management format for displaying sliding stem actuator or rotary valve specifications. Here is an example of an ISA Spec Sheet:



SPECIFICATION FORM FOR PROCESS MEASUREMENT FISHER

Unit:
Data Sheet of
Spec: **PROJECT12 00**
Item: **001** Rev:
Tag: **1,2,3,4,5**
Contract:
DWG
Mfg Serial:
Service:

Fluid: **BENZENE** Crit. Pres. PC: **714.000 psia**

SERVICE CONDITIONS	Units:	Maximum	Normal	Minimum		Other
Liquid Flow Rate (Q)	**gpm(US)**			**500.000**		
Inlet Pressure (P1)	**psig**			**100.000**		
Outlet Pressure (P2)	**psig**			**80.000**		
Temperature (T)	**deg F**			**30.000**		
Specific Gravity (SG)				**0.200**		
Vapor Pressure (Pv)	**psia**			**2.000**		
Liquid Sizing Coefficient (Cv)				**50.000**		
	% Open					
Vlv Lpa	**dB(A)**			**< 50**		

PIPE LINE
Size, Schedule In: **2.000 in, 40**
Size,Schedule Out: **2.000 in, 40**
Insulation:
VALVE BODY/BONNET Type: **Globe**
Size: **40** ANSI **Class 125**
Max Press: **300 psi** Temp:
Mfg/Model: **EZ Body**
Body/Bonnet Matl: **WCB**
Liner Matl/ID:
End Connection In: **Raised Flange**
End Connection Out: **Raised Flange**
Flg Face Finish:
End Ext/Matl:
Flow Direction: **Up**
BONNET Type: **Plain**
Lub-Iso Valve: **None** Lube:
Packing Material: **TFE**
Packing Type:

TRIM Type: **Trim 1**
Size: **40** Travel: **1 1/8 inch**
Characteristic: **Equal %**
Balanced
Rated: Fl: **0.920** Xt: **0.781**
Material: **SST**
Seat Material: **SST**

Stem Material: **316 SST**

SPECIAL ACCESSORIES
NEC: Group: Div:

ACTUATOR Type: **Spring & Diaphragm**
Mfg/Model: **Fisher / 657**
Size: **40** Eff Area:
On/Off: Modulating:
Spring Action: **Opens**
Max Allow Press: **30 psi**
Min Req'd Press: **3 psi**
Available Air Supply Pressure
Max: **30 psi** Min: **3 psi**
Bench Range: **3 to 9 psig**
Act Orientation:
Handwheel Type: **None**
Air Fails Valve: **Open** Set at:

Input Signal:
POSITIONER Type:
Mfg/Model:
Incr Signal Output:
Gauges: **None** By-Pass:
Cam Characteristic:

SWITCHES
Type: Qty:
Mfg/Model:
Contacts/Rating:
Actuation Points:

AIRSET
Mfg/Model:
Set Pressure:
Filter: Gauges:

TESTS Hydro Press:
ANSI/FCI Leak Class:

Rev	Date	Revision	Orig	App

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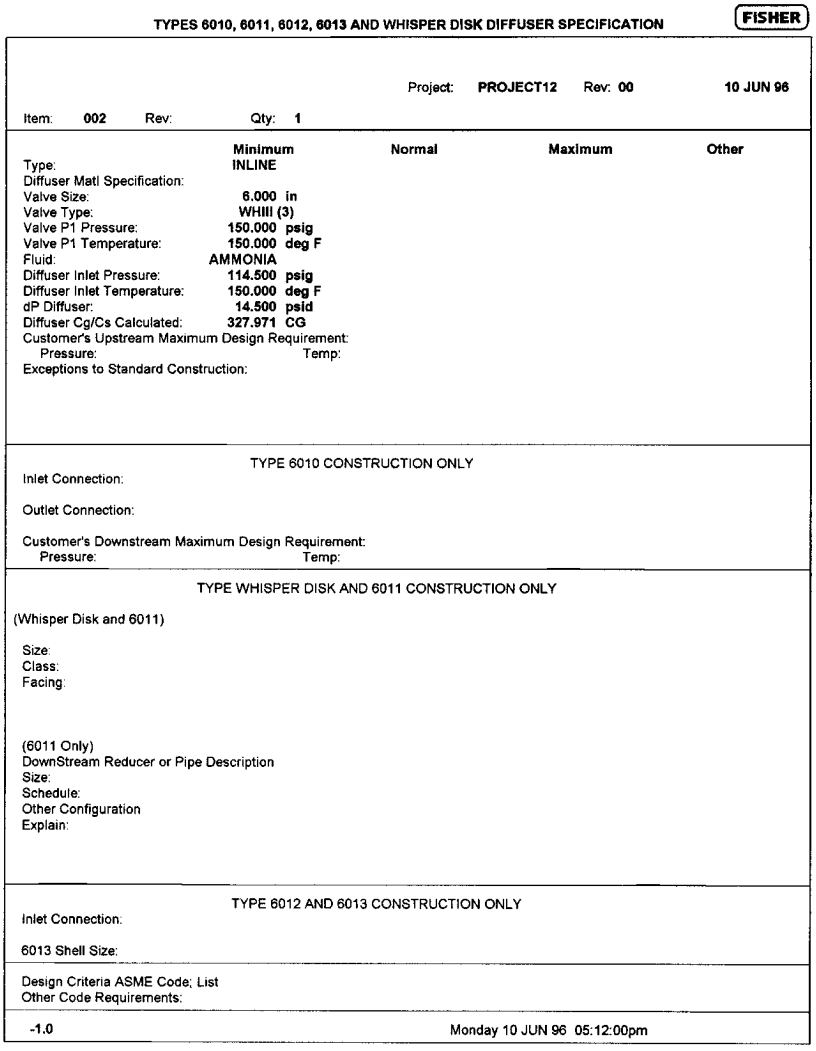
Diffuser Spec Sheet

A Diffuser Spec Sheet displays diffuser data. Here is an example of a Diffuser Spec Sheet:



TYPES 6010, 6011, 6012, 6013 AND WHISPER DISK DIFFUSER SPECIFICATION FISHER

Project: **PROJECT12** Rev: **00** **10 JUN 96**

Item: **002** Rev: Qty: **1**

	Minimum	Normal	Maximum	Other
Type:	**INLINE**			
Diffuser Matl Specification:				
Valve Size:	**6.000 in**			
Valve Type:	**WHIII (3)**			
Valve P1 Pressure:	**150.000 psig**			
Valve P1 Temperature:	**150.000 deg F**			
Fluid:	**AMMONIA**			
Diffuser Inlet Pressure:	**114.500 psig**			
Diffuser Inlet Temperature:	**150.000 deg F**			
dP Diffuser:	**14.500 psid**			
Diffuser Cg/Cs Calculated:	**327.971 CG**			

Customer's Upstream Maximum Design Requirement:
Pressure: Temp:
Exceptions to Standard Construction:

TYPE 6010 CONSTRUCTION ONLY

Inlet Connection:

Outlet Connection:

Customer's Downstream Maximum Design Requirement:
Pressure: Temp:

TYPE WHISPER DISK AND 6011 CONSTRUCTION ONLY

(Whisper Disk and 6011)

Size:
Class:
Facing:

(6011 Only)
DownStream Reducer or Pipe Description
Size:
Schedule:
Other Configuration
Explain:

TYPE 6012 AND 6013 CONSTRUCTION ONLY

Inlet Connection:

6013 Shell Size:

Design Criteria ASME Code; List
Other Code Requirements:

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Chapter 7: Additional Help Resources

This chapter provides an overview of the Help system and its contents. Additional instructions for using Help are contained in the On-line Help system itself.

This chapter contains the following sections:

- Getting Help for the Active Screen or Field
- Getting Help for a Selected Topic
- Using Hypertext Links
- Accessing On-line Data Tables
- Accessing the On-line Glossary

Getting Help for the Active Screen or Field

FIRSTVUE™'s context-sensitive Help provides information about the active field or screen. To display context-sensitive Help:

1. Click the **Help Icon**  in the **Tool Bar** at the top of your screen.

   The cursor turns into a question mark, indicating Help is active.
2. Click on a field to display information about it, or click on the screen background to display information about the whole screen.
3. When done, to turn off context-sensitive Help, click the **Help Icon**.

Getting Help for a Selected Topic

FIRSTVUE™ Help files contain instructions for using the program.

To get help for a selected topic:

1. Display the Help files as follows:

   - Click the **Help Files Icon** in the **Tool Bar** at the top of the screen.

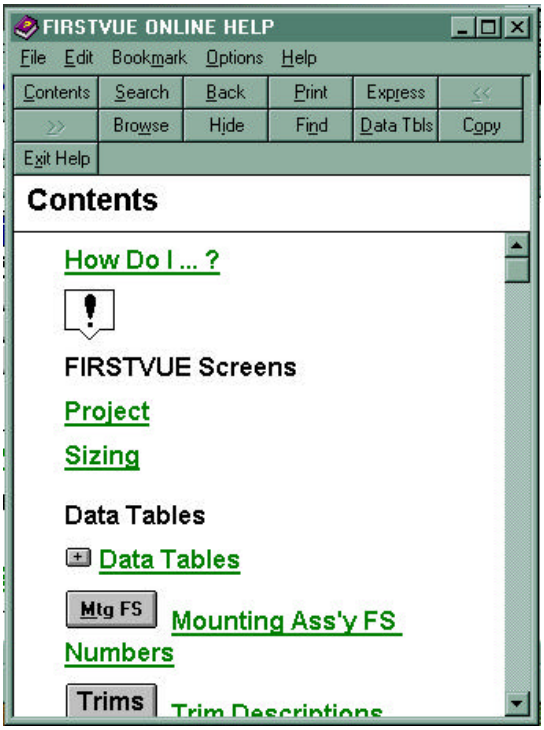
     — OR —

   - Press: **[F1].**

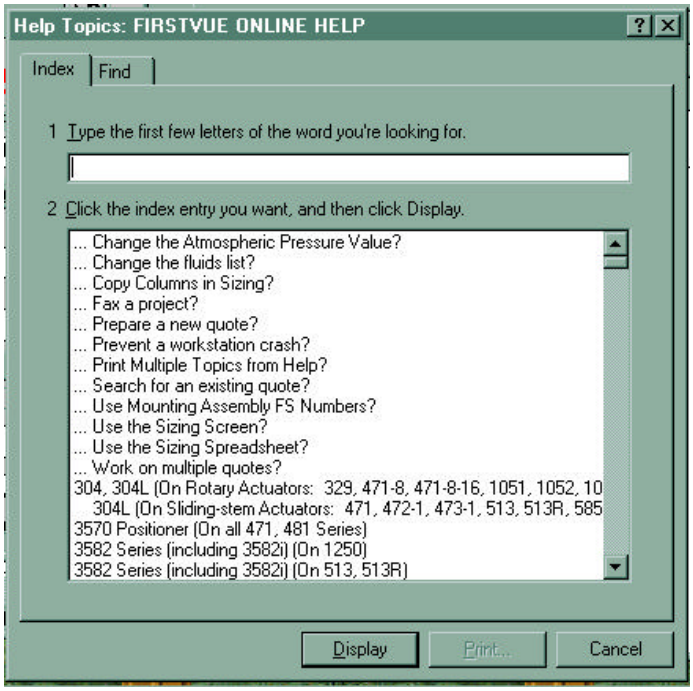
     — OR —

   - Select the **Contents**, **Search** or **Using Help** command from the **Help Menu.**

The **Help Dialog Box** appears:



2. Click the **Search button**.
3. The **Help Search Index Box** appears:



3. Select a topic from the **Help Search Index Box**:

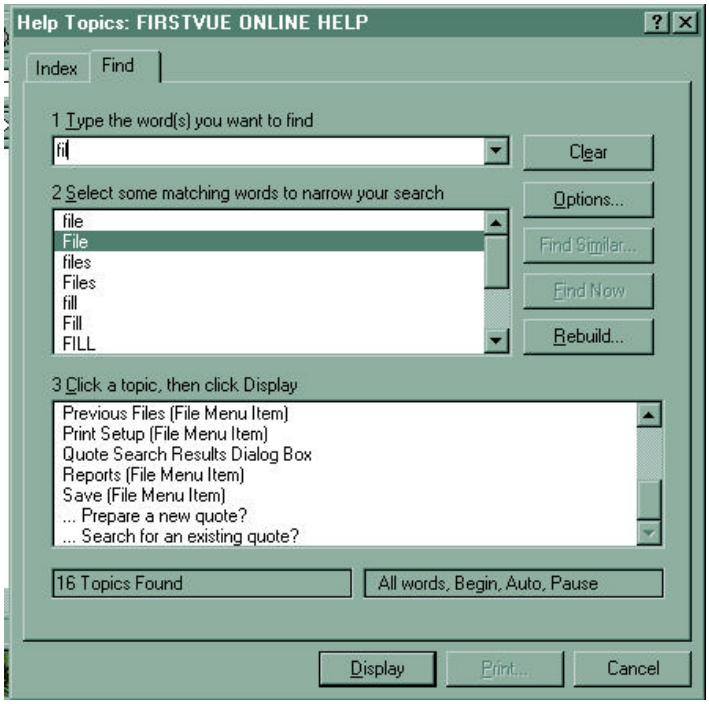
   a. Type a word or select one from the list.

   b. Click the **Show Topics** button.
   The available topics appear in the lower text area.

   c. Click on a topic to select it, and then click the **Display** button.

   Help on the selected topic appears.

4. To locate where specific words appear within On-line Help, select the **Find** tab. By typing the words, specific locations where those words appear will be identified in the lower box. Selecting **Display** will move Help to the identified topic.



5. You can navigate within Help and print and copy topics by using the following buttons and commands:

   - To print the topic, click the **Print** button.
   - To copy the topic to your clipboard, click the **Copy** button.
   - To view the previous Help screen, click the **Back** button.
   - To display the preceding topic, click the **<<** button.
   - To display the next topic, click the **>>** button.
   - To display a list of topics you viewed recently, click the **History** button.
   - To get help on using Help, select **How to Use Help** from the **Help Menu.**

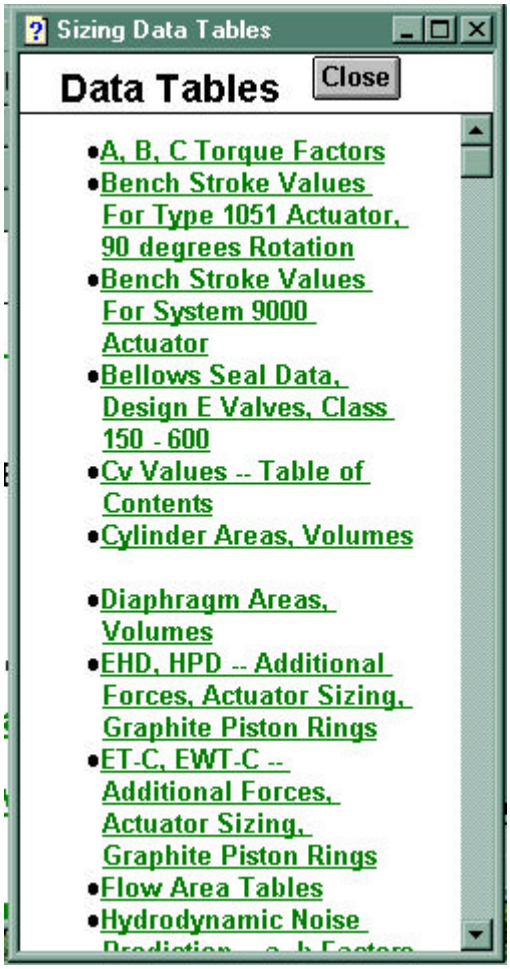
5. When done, to close Help, click the **Exit Help** button.

Using Hypertext Links

Hypertext links let you jump to related topics quickly. Hypertext links appear as green, underlined words or phrases within the on-line Help text. To jump to the topic, double-click the underlined word or phrase.

Accessing On-line Data Tables

On-line Help contains comprehensive data tables of engineering values, calculations, and measurements. To access these tables, click “Data Tables” in the Table of Contents within Help.



Accessing Express Help

FIRSTVUE™ Help contains a quick access capability for commonly referenced items. By selecting “Express” in the Help Table of Contents, the following box will appear:

Index

—D—

—E—

—F—

—G—

—H—

—I—

—K—

FISHER-ROSEMOUNT™

—R—

—S—

—T—

—U—

—V—

—W—

Appendix I

FIELDS available for FIRSTVUE Import/Export

NOTES

- FIRSTVUE imports/exports delimited text files.

- The delimeter can be any printable character. For Excel applications, we suggest using the COMMA (.csv).
For applications where you have more delimiter choices, we suggest the VERTICAL BAR "|".

- The fields available for Import/Export are based on the ISA S20.50 Control Valve Spec Sheet.

- You can import/export All or Some of the available fields.

- The first row of the import/export file must contain the Field Names of the fields being imported/exported.

- The remaining rows in the import/export file consist of 1 row per Item.

- Up to 15 Sizing Notes can be imported/exported for each item - these notes do NOT print on the spec sheet.

- "CUSTOMER-DEFINED" fields are fields that are imported and eventually exported unchanged.
They cannot be seen or modified in FIRSTVUE. There is no limit to the number of these fields that can be used per item.

LEGEND:

FIRSTVUE Field Name: (*= Appears on list of available fields in FIRSTVUE, but is not used anywhere. Not recommended for use at this time.)

ISA Line#: ISA S20.50 Spec Sheet Line Number ("N/A" = Not Applicable - i.e. field is not on ISA Spec Sheet)

Length: FIRSTVUE Maximum Length (BLANK = No set limit as long value is within an acceptable range. Most sizing fields = 3 decimal places.)

Valid Values: Valid Values for FluidState and Unit-of-Measure (UOM) Fields, separated by a comma.

FIRSTVUE Field Name	ISA Line#	Length	Valid Values, Separated by a Comma “,”
ItemTag	Header	20	
ProjectName	Header	33	
ProjectUnit	Header	10	
PONum	Header	34	
QuoteItemNum	Header	6	
POItemNum	Header	6	
POItemRev	Header	4	
ContractNum	Header	25	
MFRSerial	Header	25	
DataSheetNum	Header	5	
DataSheetOf	Header	5	
QuoteId	Header	10	
QuoteRevId	Header	3	
DWGNum	Header	25	
ServiceDesc	Header	30	
FluidName	1	24	
FluidState	N/A		Liquid, Gas, Vapor
CriticalPress	1		
CriticalPressUOM	1		psig, psia, in. wc g, bar(a), bar(g), kg/cm2g, kg/cm2a, kPa(a), kPa(g)

OtherConditionName	1		
FlowRateUOM	2		lb/h, kg/h, gpm(US), l/m, m3/h, barrel/d, scfh, Mmscfd, scfm, Nm3/h,
FlowRateMax	2		
FlowRateNorm	2		
FlowRateMin	2		
FlowRateOther	2		
InPressUOM	3		psig, psia, in. wc g, bar(a), bar(g), kg/cm2g, kg/cm2a, kPa(a), kPa(g)
InPressMax	3		
InPressNorm	3		
InPressMin	3		
InPressOther	3		
OutPressUOM	4		psig, psia, in. wc g, bar(a), bar(g), kg/cm2g, kg/cm2a, kPa(a), kPa(g)
OutPressMax	4		
OutPressNorm	4		
OutPressMin	4		
OutPressOther	4		
InTempUOM	5		deg F, deg C, deg R, deg K
InTempMax	5		
InTempNorm	5		
InTempMin	5		
InTempOther	5		
DensityUOM	6		lb/ft3, kg/m3
DensityMax	6		
DensityNorm	6		
DensityMin	6		
DensityOther	6		
SpecificGravityMax	6		
SpecificGravityNorm	6		
SpecificGravityMin	6		
SpecificGravityOther	6		
MolWeightMax	6		
MolWeightNorm	6		
MolWeightMin	6		
MolWeightOther	6		
ViscosityUOM	7		cSt, cP, SSU, mPa.s
ViscosityMax	7		
ViscosityNorm	7		
ViscosityMin	7		
ViscosityOther	7		
SpecHeatRatioMax	7		
SpecHeatRatioNorm	7		
SpecHeatRatioMin	7		
SpecHeatRatioOther	7		
SpecVaporPressUOM	8		psig, psia, in. wc g, bar(a), bar(g), kg/cm2g, kg/cm2a, kPa(a), kPa(g)
SpecVaporPressMax	8		
SpecVaporPressNorm	8		
SpecVaporPressMin	8		
SpecVaporPressOther	8		
ReqCvMax	9		
ReqCvNorm	9		
ReqCvMin	9		
ReqCvOther	9		
TravelMax	10	9	
TravelNorm	10	9	
TravelMin	10	9	
TravelOther	10	9	
AllowSPLMax	11	5	

AllowSPLNorm	11	5	
AllowSPLMin	11	5	
AllowSPLOther	11	5	
PredictSPLMax	11		
PredictSPLMaxLTSignOnly	11	1	<
PredictSPLMaxValueOnly	11		
PredictSPLNorm	11		
PredictSPLNormLTSignOnly	11	1	<
PredictSPLNormValueOnly	11		
PredictSPLMin	11		
PredictSPLMinLTSignOnly	11	1	<
PredictSPLMinValueOnly	11		
PredictSPLOther	11		
PredictSPLOtherLTSignOnly	11	1	<
PredictSPLOtherValueOnly	11		
Line12ConditionName	12	25	
Line12UOM	12	9	
Line12Max	12	9	
Line12Norm	12	9	
Line12Min	12	9	
Line12Other	12	9	
InPipeLineSched	13	25	
InPipeLineSize	13	25	
PipeLineUOM	13,14		in, mm
OutPipeLineSched	14	25	
OutPipeLineSize	14	25	
OutPipeLineOD	14		
OutPipeLineWallThick	14		
PipeInletDiameter	N/A		
PipeOutletDiameter	N/A		
ValveInletOutletDiameter	N/A		
PipeLineInsType	15	14	
PipeLineInsThick	15	5	
PipeLineInsThickUOM	15	5	
ValveBodyType	16	17	
ValveBodySize	17	12	
ValveBodySizeUOM	17	12	in, mm
ValveBodyANSIClass	17	17	
MaxPress	18	8	
MaxPressUOM	18	8	
MaxTemp	18	6	
MaxTempUOM	18	5	
ValveMFR	19	10	
ValveModel	19	20	
BodyMatl	20	25	
BonnetMatl	20	25	
BodyLinerMatl	21	20	
BodyLinerID	21	4	
BodyLinerIDUOM	21	2	
InEndConn	22	20	
InEndConnSize	22	4	
InEndConnSizeUOM	22	2	
InEndConnRating	22	6	
OutEndConn	23	20	
OutEndConnSize	23	4	

OutEndConnSizeUOM	23	2	
OutEndConnRating	23	6	
FlgFaceFinish	24	25	
EndExtLength	25	4	
EndExtLengthUOM	25	2	
EndExtMatl	25	20	
FlowDirection	26	25	
BonnetType	27	25	
LubIsoValve	28	10	
Lube	28	10	
PackingMatl	29	23	
PackingType	30	25	
ExtraBodyBonnetAttr	31	40	
TrimType	32	25	
TrimSize	33	18	
TrimSizeUOM	33	18	
TrimRatedTravel	33	16	
TrimRatedTravelUOM	33	16	in, mm
TrimCharacter	34	25	
TrimBalance	35	40	
TrimRatedCv	36	11	
TrimRatedCvValueOnly	36	9	
TrimRatedCvUnitOnly	36	2	Cv, Cg, Cs
TrimRatedFl	36	8	
TrimRatedXt	36	8	
ClosureMatl	37	25	
SeatMatl	38	25	
CageGuideMatl	39	25	
StemMatl	40	25	
ExtraTrimAttr	41	40	
ExtraTrimAttr2	42	40	
NECClass	43	15	
NECDiv	43	7	
NECGroup	43	9	
SpecAccReq1	44	40	
SpecAccReq2	45	40	
SpecAccReq3	46	40	
SpecAccReq4	47	40	
SpecAccReq5	48	40	
SpecAccReq6	49	40	
SpecAccReq7	50	40	
SpecAccReq8	51	40	
SpecAccReq9	52	40	
ActuatorType	53	24	
ActuatorMFR	54	10	
ActuatorModel	54	25	
ActuatorSize	55	17	
ActuatorSizeUOM	55	17	
DiaphragmArea	55	6	
DiaphragmAreaUOM	55	3	in2, mm2, cm2
ActuatorServiceInd	56	7	
ActuatorModulating	56	13	
SpringActionInd	57	25	
ActuatorMaxAllowPress	58	8	
ActuatorPressUOM	58.59	8	psig, psia, in. wc g, bar(a), bar(g), kg/cm2g, kg/cm2a, kPa(a), kPa(g)
ActuatorMinReqPress	59	8	
MaxAvailAirSupplyPress	61	8	

AvailAirSupplyPressUOM	61	8	psig, psia, in. wc g, bar(a), bar(g), kg/cm2g, kg/cm2a, kPa(a), kPa(g)
MinAvailAirSupplyPress	61	8	
MinBenchRange	62	25	
MaxBenchRange	62	25	
BenchRangeUOM	62	25	psig, psia, in. wc g, bar(a), bar(g), kg/cm2g, kg/cm2a, kPa(a), kPa(g)
ActuatorOrient	63	24	
HandWheelType	64	24	
AirFailValveInd	65	7	
AirFailValvePress	65	10	
AirFailValvePressUOM	65	8	
ExtraActuatorAttr	66	40	
InputSignalMin	67	23	
InputSignalMax	67	23	
InputSignalUOM	67	23	
PositionerType	68	24	
PositionerMFR	69	10	
PositionerModel	69	26	
SignalOutIncrDecr	70	22	
AirPressGaugeInd	71	26	
PositionerBypassInd	71	4	
CamCharacter	72	22	
ExtraPositionerAttr	73	40	
SwitchType	74	25	
SwitchQty	74	6	
SwitchMFR	75	10	
SwitchModel	75	25	
ContactForm	76	4	
SwitchCurrentRating	76	4	
SwitchCurrentRatingUOM	76	2	
SwitchVoltageRating	76	3	
SwitchVoltageRatingUOM	76	2	
SwitchFrequency	76	3	
SwitchFrequencyUOM	76	2	
ActuationPoints	77	24	
ExtraSwitchAttr	78	40	
AirSetMFR	79	10	
AirSetModel	79	25	
AirSetPress	80	8	
AirSetPressUOM	80	8	
AirSetFilterInd	81	10	
AirSetGaugeInd	81	18	
ExtraAirSetAttr	82	40	
HydroPressTest	83	8	
HydroPressTestUOM	83	8	
LeakageClass	84	23	
ExtraTestReq1	85	40	
ExtraTestReq2	85	40	
ISASpecRev	Revision	3	
ISASpecRevDate	Revision	11	
ISASpecRevDesc	Revision	20	
ISASpecRevOrig	Revision	6	
ISASpecRevAppv	Revision	6	
ISASpecRev2	Revision	3	
ISASpecRevDate2	Revision	11	
ISASpecRevDesc2	Revision	18	

ISASpecRevOrig2	Revision	6	
ISASpecRevAppv2	Revision	6	
ISASpecRev3	Revision	3	
ISASpecRevDate3	Revision	11	
ISASpecRevDesc3	Revision	18	
ISASpecRevOrig3	Revision	6	
ISASpecRevAppv3	Revision	6	
ISASpecRev4	Revision	3	
ISASpecRevDate4	Revision	11	
ISASpecRevDesc4	Revision	18	
ISASpecRevOrig4	Revision	6	
ISASpecRevAppv4	Revision	6	
ISASpecRev5	Revision	3	
ISASpecRevDate5	Revision	11	
ISASpecRevDesc5	Revision	18	
ISASpecRevOrig5	Revision	6	
ISASpecRevAppv5	Revision	6	
CriticalTemperature	N/A		
CriticalTemperatureUOM	N/A		deg F, deg C, deg R, deg K
CompressibilityFactor	N/A		
ValveStyleModifierFd	N/A		
LineNumber	N/A	30	
LineType	N/A	20	
FLMax	N/A		
FLNorm	N/A		
FLMin	N/A		
FLOther	N/A		
XTMax	N/A		
XTNorm	N/A		
XTMin	N/A		
XTOther	N/A		
CompressibilityFactorMax	N/A		
CompressibilityFactorNorm	N/A		
CompressibilityFactorMin	N/A		
CompressibilityFactorOther	N/A		
PressureDropMax	N/A		
PressureDropNorm	N/A		
PressureDropMin	N/A		
PressureDropOther	N/A		
PressureDropUOM	N/A		
InstrumentTypeName	N/A	6	
PlantName	N/A	30	
AreaName	N/A	30	
UnitNumber	N/A	6	
LoopName	N/A	20	
MeasuredVariable	N/A	6	
SpecFormNumber	N/A	20	
EnclosureTag	N/A	20	
SolenoidTag	N/A	20	
ActuatorTag	N/A	20	
AirFailValveTag	N/A	20	
PositionerTag	N/A	20	
SwitchTag	N/A	20	
AirsetTag	N/A	20	
RepName	N/A	35	
SIZING-NOTE	N/A		Can have up to 15 Sizing Notes per Tag
CUSTOMER-DEFINED	N/A		Cannot be seen or modified in FIRSTVUE. Unlimited number can be

ItemOwner*	N/A		
SpecSheetType*	N/A		
ResponseOrg*	N/A		
RefSpec*	N/A		
CustomerName*	N/A		
JobNum*	N/A		
PlantSite*	N/A		
InPressShutoff*	N/A		
OutPressShutoff*	N/A		
InTempShutoff*	N/A		
InPipeLineOD*	N/A		
InPipeLineWallThick*	N/A		
EndExtSched*	N/A		
IPXcderInd*	N/A		
SolenoidValveInd*	N/A		
EstWeight*	N/A		
EstWeightUOM*	N/A		
FaceToFaceDim*	N/A		
FaceToFaceDimUOM*	N/A		
OverallHgt*	N/A		
OverallHgtUOM*	N/A		
RemoveClearance*	N/A		
RemoveClearanceUOM*	N/A		