StationManager[™] Getting Started Guide



B3PE LLC 419 East Columbia Street Colorado Springs, Colorado 80907 USA (719) 578-9391 www.b3pellc.com

© 2023 B3PE LLC - All rights reserved. Revision 010

StationManager and the "B-Cubed" logo are trademarks of B3PE LLC. Windows is a trademark of Microsoft Corporation.

Hardware/Software Requirements

StationManagerTM will operate on any personal computer (PC) configured to run Windows 8 through Windows 11. The StationManager software will require a minimum of 110 MB of free hard disk space when installed with full documentation. Each station will require approximately 19 KB of free hard disk space.

Installing StationManager

An appropriate version of Windows must be running in order to install StationManager. If it is not, start Windows now, then proceed with the installation process described below.

On Windows Vista and newer devices, you will need to be logged on as the Full Administrator or use the "*Run as administrator*" option when executing the installation file.

• Using the provided link, download the setup file (.exe) to your device. Using Windows File Explorer, navigate to the file's location.

• Double-click on the setup file name. If a Windows Security warning appears, allow your device to execute the file.

• After the setup program has been started, several screens will be displayed during the installation process. Read the contents of each screen carefully and respond appropriately.

Note...

On the License Agreement screen, read the terms of the License Agreement carefully and select the "*I agree to...*" option. If you do not wish to accept the License Agreement, you will not be able to continue with the installation process.

• A message will be displayed when the installation process is complete. The message will indicate whether the installation was successful or whether it failed. Select the appropriate option to clear the message.

Starting StationManager

Note...

• An appropriate version of Windows must be running before StationManager may be executed. If Windows is not running, begin its execution now.

• On Windows Vista and newer devices, you will need to be logged on as the Full Administrator or use the "*Run as administrator*" option the first time you execute the software.



Note...

StationManager[™] 2.0

- From the Windows Desktop, select the *StatMan 2.0* shortcut icon.
- The StationManager software will be started.

Note... • Some versions of StationManager will require the software to be registered. If your version does, the Registration screen will be displayed. This displays the Serial Number associated with your license and will prompt you to enter the Registration Number. To request the Registration Number, either select the *Request Registration Number* command button or manually request the Registration Number) to registration@b3pe.com. Once you have received the Registration Number, enter the number at the prompt, then select the *Continue* command button. You will **not** be able to fully use the software until it has been registered.

• If you need to enter the Registration Number later, select the *Cancel* command button to close the Registration screen. After you have received the Registration Number, restart StationManager and enter the number at the prompt.

• After the software has been loaded into memory, the Welcome screen will be displayed. Select the *Continue* command button.



Depending on the preference settings, a blank screen may be displayed, or the last opened database will be displayed. In either case, choose the desired option from the pull-down menus.



User Count

The number of Users that can simultaneously run the StationManager software depends on the license style purchased. This number is referred to as the User Count. A Single-User License allows only one User at a time. An Unlimited User License allows an unlimited number of Users.

When StationManager is executed, it checks the number of Users currently using the software. If the User Count is not exceeded, the software will be started. If the User Count is exceeded, a message will be displayed.

If StationManager is abnormally terminated, the User Count may become corrupt, and StationManager may erroneously report the number of current Users. If this occurs, select the *Reset User Count* item from the *Technical Support* submenu of the *Help* menu.

Using StationManager

StationManager is designed to be easy and intuitive to use. However, a few general concepts need to be learned before becoming proficient with the software. There are two ways to get started with StationManager.

First, the *General Information* section in this User's Manual introduces many of the basic concepts required to use StationManager. Review this section to obtain general information needed to use the software.

The other method is to work the example contained in the Demonstration Guide. The guide will introduce the basic concepts required to create, populate, access, analyze, review, and print a simple example database. If time is short, we suggest you start with the Demonstration Guide - and then review the contents of the User's Manual when more time is available.

Database Design

The StationManager software provides the User with a comprehensive predefined database for maintaining design, operation, inspection, and compliance data associated with pressure-reducing stations. Data is accessed through an easy-to-use spreadsheet-style interface. The spreadsheet interface is enhanced by several complementary interface options.

- A pop-up Data Entry Form allows "fill-in-the-blank" access and entry.
- A pop-up Audit Report allows view-only access to the station and compliance data and results.



• A powerful pop-up Schematic Data Interface allows graphical viewing of data values and results, and point-and-click access to the station data.

Integral to the database is a full calculation engine for performing capacity and pressure calculations to ensure regulatory and operational compliance.

The StationManager database consists of a group of files containing various values associated with different aspects of the station data. These include a file containing general database setup and default information, a file containing general station information, a file containing the data required for the hydraulic analysis, a file containing inspection results, and a file containing specific equipment information for the pressure regulating and relief devices. The Station Data file includes a record for each station. Each station record is linked to the remaining data files, so all of the data can be accessed based on the selected station record.

StationManager defines a station as a collection of runs, stages, devices, and piping sections. A run consists of one or more stages. A stage consists of one or more devices and the associated piping sections. A device is a pressure limiting or overpressure device - regulator or relief valve. Devices are designated as upstream (regulator) or downstream (regulator or relief valve). The piping sections are defined as upstream (supply or inlet), intermediate (between the upstream and downstream device), downstream (outlet of station), and stack (outlet of relief valve).

A station can contain one or two runs. A run can have one or two stages. A stage can include one or two devices. Stages can be configured as regulator only, regulator-regulator, regulator-relief valve, dual regulator-relief valve, or relief valve only. Operation schemes for regulator-regulator configurations can be upstream monitoring - downstream controlling, upstream working monitor - downstream controlling, or upstream controlling.

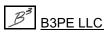
When two stages are present, the downstream section of the first (upstream) stage is disabled, and the upstream piping of the second (downstream) stage is assumed to be connected directly to the outlet of the first-stage downstream device.

If a stage consists of a regulator only, the downstream device is disabled. The regulator must be assigned as the upstream device. The intermediate piping is disabled, and the downstream piping is assumed to be connected directly to the outlet of the upstream device (regulator).

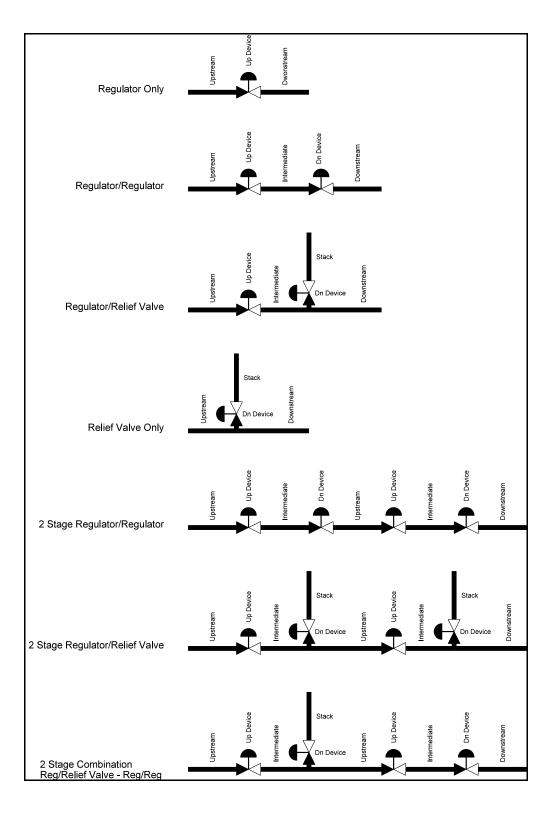
If a stage consists of a relief valve only, the upstream device is disabled. The relief valve must be assigned as the downstream device. The intermediate piping is disabled, and the upstream piping is assumed to be connected directly to the inlet of the downstream device (relief valve).

In addition to the station data, a set of data files referred to as "Property Tables" are also maintained. These files contain common information about pipe, fitting, regulator, and relief valve properties. The common data includes values such as inside pipe diameter, equivalent lengths for fittings, and valve factors for the regulator and relief valves. The User can customize the Property Tables to reflect their specific needs.

Some of the supported station configurations are shown in the following figure.



StationManager[™] 2.0



B3PE LLC

In addition to the configurations shown, relief valves can be "shared" between a parallel run and stage or "combined" on stages in series. Sharing a relief valve refers to the case where regulators in a parallel run and stage are protected by a single relief valve, assumed to be installed on one run or the other. Combining a relief valve refers to the case where an upstream regulator is protected by two (different) downstream relief valves - the capacity of the relief valves is combined during the compliance check. The combined relief valves are assumed to be installed in series on the same run.

Control Line Sense Location		
Configuration	Device	Sense Location
Regulator Only	Upstream (Control)	Inlet of Downstream Piping
Monitor - Upstream	Upstream (Monitor)	Inlet of Downstream Piping
	Downstream (Control)	Inlet of Downstream Piping
Monitor - Downstream	Upstream (Control)	Inlet of Downstream Piping
	Downstream (Monitor)	Inlet of Downstream Piping
Monitor - Upstream Working	Upstream (Control)	Inlet of Intermediate Piping
	Upstream (Monitor)	Inlet of Downstream Piping
	Downstream (Control)	Inlet of Downstream Piping
Regulator/Relief Valve	Upstream (Regulator)	Inlet of Intermediate Piping
	Downstream (Relief Valve)	Outlet of Intermediate Piping
Relief Valve Only	Downstream (Relief Valve)	Outlet of Upstream Piping

The device control lines are assumed to be connected as follows:

Sample Database

A sample database is included when StationManager is installed. The database contains sample records for each type of station configuration supported by StationManager. The database will be automatically opened when StationManager is first executed. To open the database at other times, use the *Open* item from the *File* menu. The *Example* section of this Demonstration Guide provides instructions for browsing and manipulating the database contents. If changes are made to the sample database, the original contents can be restored using the *Restore Samples* item from the *File* menu.



Database Interface

The values contained in the database are accessed through a spreadsheet-style report. The data is grouped by functionality into separate report sections, displayed on different report tabs. The report consists of tabs, rows, and columns. Each row represents a record, and each column represents a specific data item. Each station is represented by a record and a set of sub-records for each run and stage.

Several options are available for viewing and entering data values and results. The primary means of access is through the Database Report. This access option allows direct access to the data values and results and provides a variety of data manipulation tools. The Report interface is complimented by several additional specialized interfaces. The pop-up Data Form allows data to be entered using a fill-in-the-blank style interface, and the results are presented in a similar style. The pop-up Audit Form allows view-only access to station and compliance data. The pop-up Schematic Data Interface provides graphical access to the data values and results, allowing point-and-click data editing and graphical display of the calculation results.

The Station Data Report is the only access option that allows station records to be inserted or deleted. Records can be added to the end of the database with any edit-enabled interfaces. The report must be open to access the station data or any of the other data access interfaces. Tools are provided to create a selection set and sort it, limit the data displayed, add, enter, insert, and move records, update values en masse based on User-defined selection criteria, and save a selected set of data.

Notes On Dimensional Units

When StationManager first starts, its default dimensional units are set to standard US values (feet, inches, psi, Fahrenheit). However, you will notice that the software supports a variety of dimensional units.

To change the default dimensional units, use the Default Data Values screen found from the *Set Default Values* item in the *Utilities* menu. Select the *Dimensional Units* tab to access the currently selected dimensional units. Make any changes by selecting the desired item from the associated lists. Click the *Apply Dimensional Units Only* command button to change the values used in the current database. *Note* - Do <u>not</u> click the *Apply All Values* command button unless you are sure that you want to apply all of the default setting values on the various data tabs to the current database.

As used in StationManager, all pressure units represent "gauge" units unless otherwise specified. Within the documentation, gauge pressure units are generally shown without a suffix, and absolute pressure units are shown with an "a" or "(Abs)" suffix. Gas volume values or volumetric flow rates are expressed in "standard" cubic units, based on (adjusted to) the specified base pressure and temperature.



Notes For International Users

StationManager attempts to accommodate the needs of international Users by providing a robust set of dimensional units. These units can be selected as appropriate for the User's particular needs.

StationManager does have a particular weakness when it comes to the various Property Tables that contain predefined data. These lists are primarily oriented toward US manufacturers and sizes. These Property Tables can be easily modified by the User to more specifically meet the particular needs of each User. The Property Tables provided with the software are intended to provide a starting point to allow the User to create their own custom Property Tables.

Note...

The example database provided by StationManager uses US units of measure. To obtain valid results, these examples must be worked using the US units. When working these examples, if the default data values and dimensional units have been changed, they must be reset to their original US values before working with the example database.

Getting Help - Contact Us

Hours: Our normal work hours are 8:00 A.M. to 5:00 P.M. Mountain Time, Monday through Friday. However, if you have a problem, please try anytime - we may be in.

Telephone: (719) 578-9391

Email: <u>help@b3pe.com</u>

Website: <u>www.b3pellc.com</u>

Uninstalling StationManager

If, after using the StationManager software, you wish to remove it, select the *Uninstall StationManager 2.0* item from the Windows *StationManager* menu list.

• After the Uninstall Program has been started, read the contents of each screen carefully and respond appropriately.

Note...

If the Uninstall Program asks to remove any shared system files, select the No command button.



• A message will be displayed when the Uninstall routine is complete. The message will indicate whether the routine was successful or whether it failed. Select the appropriate option to clear the message.

Note...

On some devices, the Uninstall routine will not be able to remove any directory or file that has been created after the initial installation.

• Some of the files and folders created by StationManager after the installation may include files in the initialization directory (ini), files in the default database file directory (files), and files in the application directory (app).

• To remove these files and folders, use Windows File Explorer to find and delete the remaining files and folders. An example of the path for the initialization folder is shown below. The other folders have similar path locations.

- 32-bit machines C:\Program Files\StatMan 2\ini
- 64-bit machines C:\Program Files (x86)\StatMan 2\ini

Getting Started Guide



