

EES - Professional vs. Standard Versions

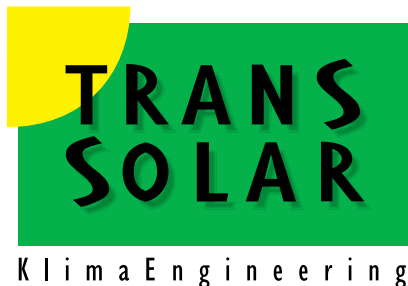
EES provides many additional features such as curve-fitting, linear regression, property plots, contour plots, uncertainty analyses, solutions to complex and differential equations and others. EES is available in both Commercial and Professional versions. All of the major capabilities are provided in the Commercial version. The Professional version provides the following additional capabilities.

1. A **Make Distributable** command is provided to create a special purpose version of EES that will run one to five preselected problems. EES, the problems, and supporting files are placed in a single executable file that can be freely distributed to others. They do not need to own EES to run the calculations or create/change/view the plots and tables. The equations can be hidden from the user, if desired.
2. A Diagram window is provided in the Commercial version in which a picture can be imported and text, input variables, and calculated variables may be superimposed in this window. The capabilities of the Diagram Window are expanded in the Professional version to define **'hot areas'** in the Diagram Window which, when clicked, bring up Child Diagram windows. The Child Diagram Window has all of the capabilities of a Diagram Window including the ability to launch other Child Diagram Windows. Link buttons may be placed on any of the Diagram windows to start external programs, run a macro, show a movie, start another EES file or other tasks.
3. The Professional version provides **animation** capabilities. Graphical objects and text placed in the Diagram window can have attributes such as location, size angle, and color, that are specified with EES variables. As the values of these variables change, the display in the Diagram and child Diagram windows is automatically updated. In addition, the animation can be coupled with the plots. A red circle indicates the current value of a variable as the calculations proceed. Animations can only be created with the Professional version, but once created, they can be used in the Distributable and Commercial versions.
4. A series of EES instructions (i.e., a macro) can be recorded with the **Build Macro** command in the File menu. EES can later be started from the Windows Run command or from a different program to replay all of the instructions in the Macro file. Used in this manner, EES can be directed to solve a set of equations in a specified text or EES file and put the solution into another specified text file without ever appearing on the screen.
5. **Variable information** can be read from or saved to a file. A variable information file has a .VAR filename extension, but it is a text file that can be opened in a word processor or spreadsheet. Variable information data can be saved to an existing .VAR file. In this case, the file is updated with the current information for the variables that are in use. Information in the file concerning variables that are not currently in use is not modified or deleted. If a program contains one or more modules, a dropdown list appears at the top center of the Variable Info dialog from which the module or main program can be selected. Variable information are read or saved for the selected module or main program. Variable information files make it very easy to prepare and use a file containing your common variables with appropriate guess values, limits, and units.
6. The Professional version allows a maximum of **12,000 variables** and equations and the number of rows in the Parametric table is limited only by available memory.
7. The Professional version provides high accuracy properties for water substance at pressures up to 1000 MPa using the 1995 Formulation for the Thermodynamic Properties of Ordinary Water Substance for General and Scientific Use, issued by The

International Association for the Properties of Water and Steam ([IAPWS](#)).

8. A **Report Window** is provided in the Professional version. The Report Window operates just like a word processor offering the usual choice of fonts, font sizes, text style, sub and superscripts, color, tabs, left and right indents, etc. Graphics can be pasted into the window. The graphics can be equations copied from the Formatted Equations window, a plot from the Plot window, or any graphics in the Diagram window. Graphics can also be pasted from other applications. In addition, the Report Window can include EES variables that are automatically updated as their values change.
9. The Professional version provides a Genetic optimization algorithm in addition to the Variable Metric and Direct Search optimization algorithms. The Genetic optimization is slow but it is able to find a global optimum for a specified search area even when local optima exist. Results of the optimization process can be logged to a text file.
10. The Equations window in the Professional version is provided with a splitter bar that allows two simultaneous views of different parts of the Equations window. This capability makes it easier to edit large files.
11. One or more selected equations in the Formatted Equations window can be automatically converted to LaTeX or MathType format in the Professional version. The MathType equations can be pasted directly into Microsoft Word. Double-clicking on an equation in Word starts MathType allowing the equation can be further edited.

If you have further questions, please do not hesitate to contact us:



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