

# TRNSYS 18

a TRaNsient SYstem Simulation program

## Installation Guide



Solar Energy Laboratory, Univ. of Wisconsin-Madison  
<http://sel.me.wisc.edu/trnsys>



TRANSOLAR Energietechnik GmbH  
<http://www.trnsys.de>



CSTB – Centre Scientifique et Technique du Bâtiment  
<http://software.cstb.fr>



TESS – Thermal Energy Systems Specialists  
<http://www.tess-inc.com>

## ***About This Manual***

The information presented in this installation guide is intended to provide a simple guide to help you during the TRNSYS 18 installation process. This manual is not intended to provide detailed reference information about the TRNSYS simulation software and its utility programs. More details can be found in other parts of the TRNSYS documentation set. The latest version of this manual is always available for registered users on the TRNSYS website (see here below).

## ***Revision history***

- 2004-10 For TRNSYS 16.00.0000
- 2009-11 For TRNSYS 17.00.0006
- 2010-04 For TRNSYS 17.00.0013
- 2011-11 For TRNSYS 17.01.0000
- 2014-05 For TRNSYS 17.02.0000
- 2017-03 For TRNSYS 18.00.0008

## ***Where to find more information***

Further information about the program and its availability can be obtained from the TRNSYS website or from the TRNSYS coordinator:

TRNSYS Coordinator Thermal Energy System Specialists 22 North Carroll Street – Suite 370 Madison, WI 53703 – U.S.A.	Email: <a href="mailto:techsupport@tess-inc.com">techsupport@tess-inc.com</a>
TRNSYS website: <a href="http://sel.me.wisc.edu/trnsys">http://sel.me.wisc.edu/trnsys</a>	

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# 1. INSTALLATION GUIDE

## 1.1.1. System requirements

### 1.1.1.1. Software

#### **OPERATING SYSTEM**

TRNSYS requires Vista, Windows 7, Windows 8 or Windows 10.

#### **DOCUMENTATION**

Viewing the documentation requires the free Acrobat reader (Version 6.0 or higher is recommended to benefit from advanced searching capabilities).

#### **ADD-ON SOFTWARE**

Various parts of TRNSYS require the use of add-on software. In some cases the add-on tools are freely available while in other cases they may require additional purchases. Please refer to a component's documentation in the 04-MathematicalReference manual for requirements.

Historically adding new components to TRNSYS has required the purchase of an add-on FORTRAN (or other language) compiler. Thanks to the TypeStudio a FORTRAN compiler is now included in the Trnsys18 standard package.

### 1.1.1.2. Hardware

TRNSYS requirements will mostly depend on the simulations you want to run. The specifications here below list the basic requirements and the recommended configuration. The latter should allow you to run yearly simulations with a 0.1 sec time step using the full capabilities of the online plotter, while the basic configuration will allow you to run more typical simulations.

#### **MINIMUM CONFIGURATION**

- Pentium III processor or equivalent
- 128 MB of RAM
- 200 MB of available disk space (up to 2 GB if you install all the optional weather data files)

#### **RECOMMENDED CONFIGURATION**

- Pentium IV processor 2.0 GHz or equivalent
- 512 MB of RAM
- 1 GB of available disk space (up to 3 GB if you install all the optional weather data files)

## 1.1.2. Installing TRNSYS 18

Run the Setup program (trnsys18-setup-18-xx-xxxx.exe) where xx.xxxx is the exact release number. The Setup program will guide you through a series of dialog boxes with simple options. You can navigate between the dialog boxes using the Back and Next Buttons. You are first asked to read and accept the TRNSYS license agreement.

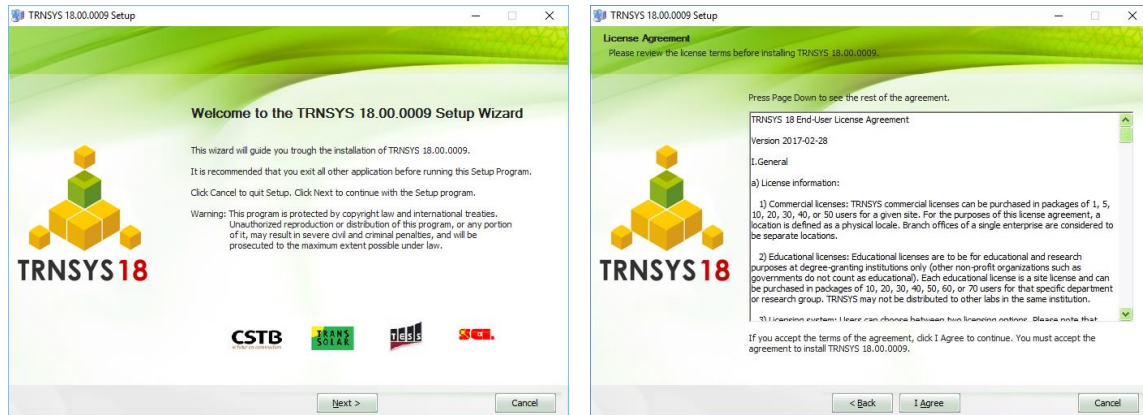


Figure 1–1: Installing TRNSYS 18 - Part 1

Next, you will be prompted to select optional add-ons that are included in the standard package but necessitate separate installers. You will then be asked to choose a default set of libraries for building data (materials and glazing). If you have many TRNSYS 17 projects that you need to update, choose the libraries that you were using in TRNSYS 17. If your country is listed, use those libraries (they were created by local distributors and are often in languages other than English). If you do not know what to do, keep the default choice (Basic). Note that you can always change the default libraries later in TRNBuild.

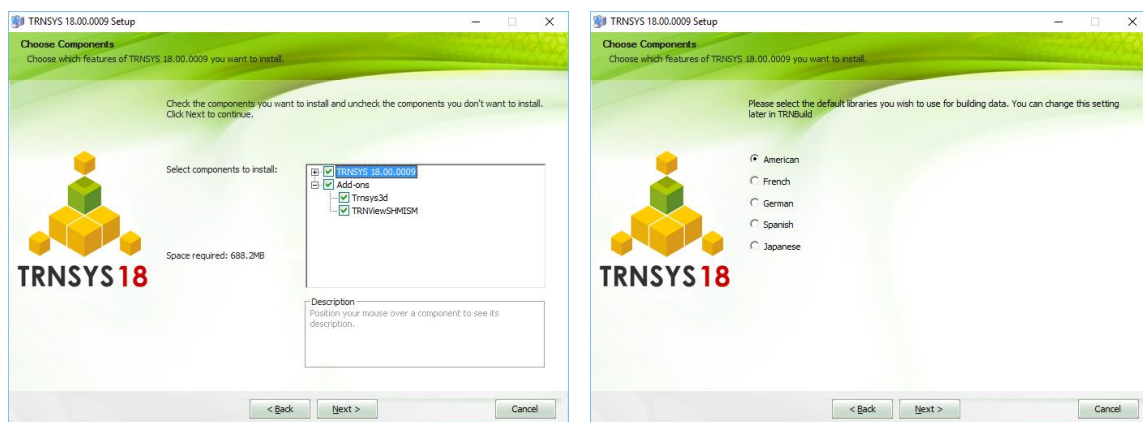


Figure 1–2: Installing TRNSYS 18 - Part 2

At the next stage you will also be asked for a destination directory. It does not matter what drive letter you choose but it is highly recommended that you NOT install TRNSYS in the Program Files directory. If at all possible install TRNSYS at the root level of a drive in its own folder. You will next be asked to provide the location of the TRNSYS 18 license file.

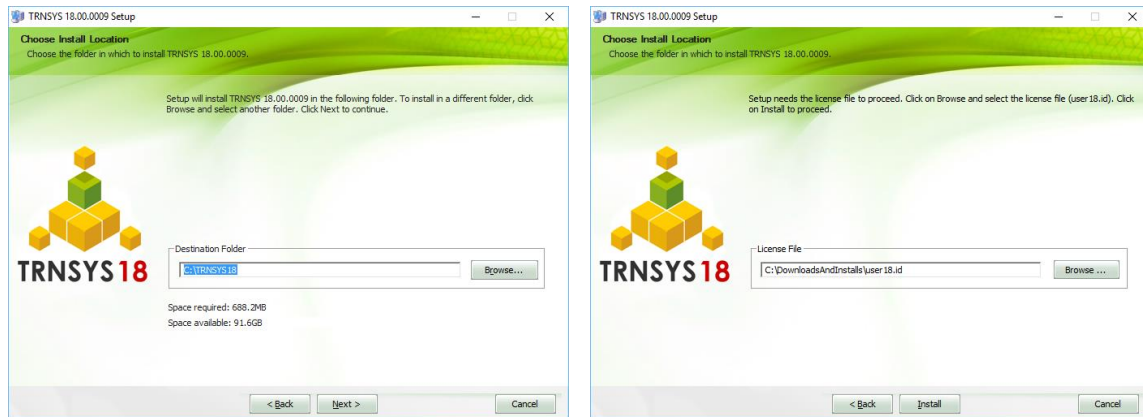


Figure 1–3: Installing TRNSYS 18 – Part 3

Once you have provided the location of the license file, setup will begin automatically.

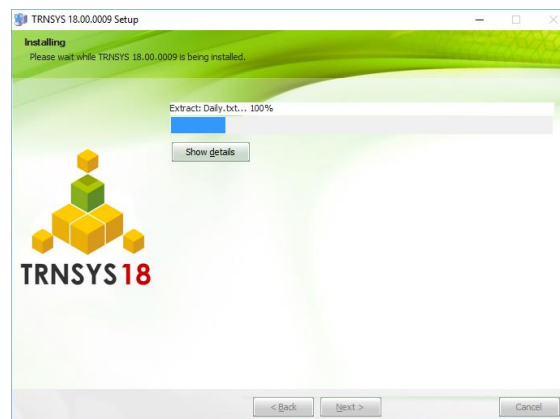


Figure 1–4: Installing TRNSYS 18 – Part 4

When you click "Finish", Setup will exit and launch your default browser to display the release notes of the version you have just installed. You can skip this by unchecking the "Display Release Notes" checkbox on the last screen of the Setup program (this is not recommended as the Release Notes have important information on the program you have just installed).

### 1.1.3. Launching Trnsys 18 for the First Time

Next, you must register your copy of TRNSYS online. The procedure is as follows.

- Launch the Simulation Studio by using the created shortcut or by browsing to %TRNSYS18%\Studio\Exe and launching the Program called Studio.exe.
- The first time you launch the Studio, a window will pop up containing a code that corresponds to the processor of your computer and a link to a website.
- Click the link and you will arrive at the following website:

<http://sel.me.wisc.edu/trnsys/trnsys18registration.html>

- The website contains links to each of the TRNSYS Distributors. Click on the “Register your TRNSYS 18” link listed underneath the Distributor from whom you purchased TRNSYS 18; you will be redirected to a second webpage.
- Once you are redirected, you are asked to enter two pieces of information, the email address that you gave when you purchased TRNSYS 18 and paste the access code that the Simulation Studio displayed. Enter the requested information into the appropriate fields and click “okay” or “get the activation key”
- The website will return back an activation key code. Copy this code and paste it back in the original window in the Simulation Studio. Now you are registered!

If you have trouble with the registration, make sure that you are using the same email address that you gave when you purchased TRNSYS. The website is checking a data base to make sure that the email address that you are entering is associated with a copy of TRNSYS.

PLEASE NOTE: if you purchased a node-locked TRNSYS license you do not need to be connected to the internet in order to use the software. If you purchased a floating license you do need an internet connection in order to use the software.

If you want to move TRNSYS from one computer to another and not use up one of your additional licenses, you must deactivate TRNSYS first in order to free up the license then uninstall TRNSYS, then install TRNSYS on the new machine. In order to deactivate a TRNSYS license, select “About” from the “?” menu in the TRNSYS Simulation Studio.

### 1.1.4. Installing the expanded weather data

The TRNSYS Setup installs a few weather data files that will show you an example of the available data sources and data formats. However, TRNSYS 18 comes with a comprehensive set of weather data files including more than 1000 locations in more than 140 countries. Please refer to Volume 8 of the documentation (Weather Data) for more information on the available data sources and locations.

If you wish to proceed with the installation of the expanded weather data base, just run the weather data Setup program, trnsys18-weather-18-xx-xxxx.exe (where xx-xxxx is the release number). The Setup program is very similar to the TRNSYS 18 installation program and will lead you through a few steps with dialog boxes.

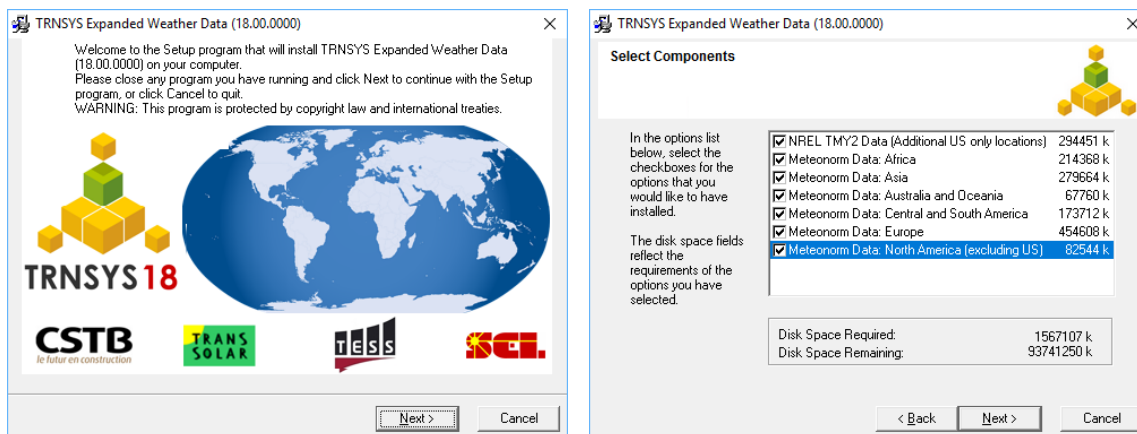


Figure 1–5: Installing the expanded weather data

You can choose which datasets to install or not (the available packages may not match the screenshot here below depending on your version). Please note that installing all the data files will require more than 1.5 GB of available disk space on your computer.

When the weather data installation is completed, you are ready to use TRNSYS. Please proceed to the 01-GettingStarted.pdf manual located in the ..\Trnsys18\Documentation folder.