

# Quick Installation Guide: macOS®

Thermo-Calc Version 2025b



## macOS® User Credentials Installations



There are two *license activation types* available as of 2025b: (1) **User credentials**, which are entered after installation and managed via an online portal or (2) where a **license file** is installed directly on the computer or a licensing server. Many users have already started using the *user credentials* activation type and all users will eventually be migrated to the new system.



Visit our website to [watch the installation video](#) showing how to install with user credentials (in both online and offline mode), which will replace the license files. The video library also includes the installation videos using the old method (license files) and other installations such as for TC-Python.

This section is applicable to:

- Operating system: macOS
- Installation type: Single User (SUNLL) or Floating Network Licenses (NWL)
- License activation type: User credentials (online and offline)
- Upgrading to a new version of Thermo-Calc (maintenance plan only)



For instructions about other operating systems, network installations, or installing an SDK (e.g. TC-Python or TC-Toolbox for MATLAB®) search the *Thermo-Calc Installation Guide*, which is also [available on our website](#). You can also review the [Licensing Options](#) included on our website.

## Step 1: Install Required macOS Software

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To install and run Thermo-Calc on a Mac computer with an ARM processor, Rosetta first needs to be installed.

The XQuartz open-source X.Org X Window system is required to run Thermo-Calc on macOS.


1. In a web browser go to <https://www.macupdate.com> or to download it directly from XQuartz, <https://www.xquartz.org/>.
2. In the **Search Mac Apps** field, enter *XQuartz*.
3. Click the **XQuartz** search result. For example, based on the recent version, the name is XQuartz-2.8.5.dmg.
4. Click **Download**.
5. Double-click the **XQuartz-<version>.pkg** file. Follow the instructions.
6. Click **OK** when the message about logging out displays and click **Close** when the installation is successful.

## Step 2: Download Thermo-Calc Software



Administrative rights are required to complete this installation. An email from Thermo-Calc Software (or from someone in your organization) includes the links and information you need to access and activate the current version of the software you want to download.

1. Click the link from the email and the first page of the **Download Center** opens. Under the **macOS** section, select the OS version. Click **Go to download page**.
2. In the **Sign in to access this site** window, enter the **Username** and **Password** (found in the email) and click **Sign in**.
3. On the **Download Center** page under **Software**, click the **.zip** link to download the file for the current software version for your operating system (2025b).

Thermo-Calc  Software

Download Center

Software Package

2025b - 2025.2.173512-230

Software

Thermo-Calc-osx-2025.2.173512-230.zip

Installation Guides

Thermo-Calc\_Installation\_Guides.pdf

Thermo-Calc\_Quick\_Install-Mac.pdf

TC-Python\_Installation\_Guide.pdf

Licensing

Licensing Tools

Getting Started Guides

Getting Started Videos

Installation Videos

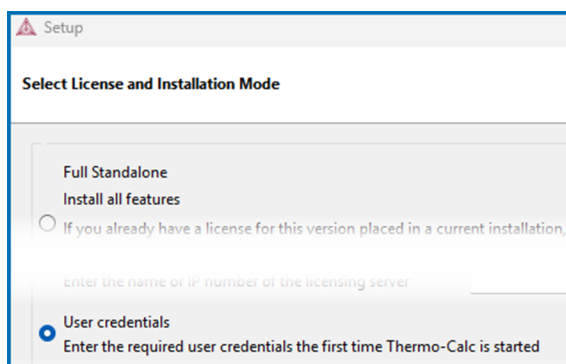
Examples Videos

Bilibili Videos (China)

## Step 3: Install Thermo-Calc Software

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1. Once the download is complete, navigate to the folder where you downloaded the software. Double-click the downloaded program file (the suffix is based on the operating system). Remember that administrative rights are needed, so when you are prompted for that user name and password, enter those credentials here, not the ones sent to you from Thermo-Calc.
2. Click **Yes** to continue.
3. On the **Setup - Thermo-Calc 2025b** window click **Next**.
4. On the **License Agreement** window click to accept the license agreement. Click **Next**.
5. In the **Select License and Installation Mode** window click **User credentials** and then click **Next**.



6. TC-Python is automatically installed when the **User credentials** option is chosen. The **Install TC-Python** page is a reminder for users of TC-Python that additional installation and license credential procedures are needed after Thermo-Calc is installed. Read the separate installation instructions (also included in the full installation guide) for more information if applicable. Click **Next**.
7. In the **Ready to Install** window click **Next**. The software continues installing.
8. At the end of installation, click **Finish**. Once this is done, open Thermo-Calc either from the shortcut on your desktop or from the menu.

## Step 4: Activate the License

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If your work environment does not allow an Internet connection to activate the license, as a last resort you can use the option **Create offline activation file**.

Overall it is best to use the **Activate online** option as this provides more flexibility and future benefits including being able to easily update your license. See the last section for details.

1. Open Thermo-Calc. The first window includes highlights from the current release. Click **Close**.
2. In the **License status** window, enter the **User** and **Password** provided to you.



Your license user credentials are sent to you in an email from Thermo-Calc or a representative. This is different from the Download Center login details. If you have not received the information, first ask the main Thermo-Calc contact in your organization. Otherwise, [contact Support](#) for clarification.

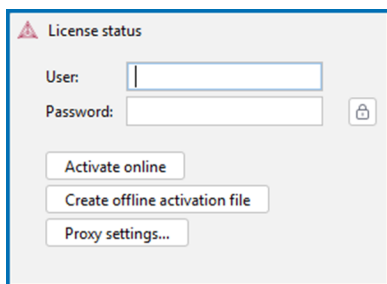
3. If you use a proxy server, click **Proxy settings**. Click **Use proxy** and enter your information. Click **OK**.
4. Click **Activate online**.



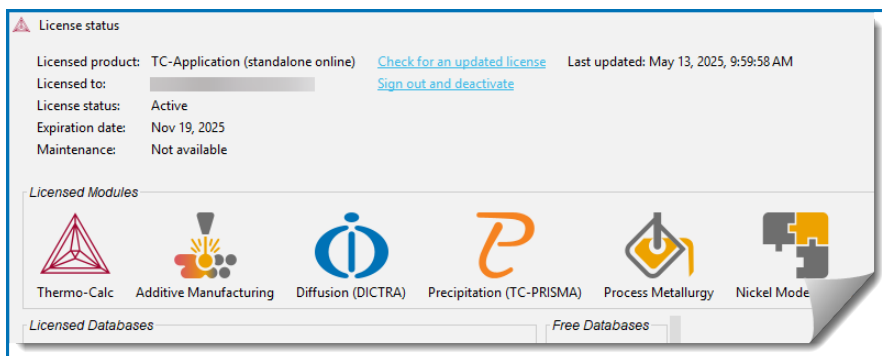
If the fields become empty when you click **Activate online**, this means the activation did NOT work. See the troubleshooting section for details about next steps [When Activate Online Does Not Work](#).

5. Once it is activated you will see the **License status** window with a list of the products

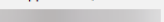
you have access to. Click **Close** and start using Thermo-Calc.



A dialog box titled "License status" with a red triangle icon. It contains two input fields: "User:" and "Password:". To the right of the "Password:" field is a small lock icon. Below the input fields are three buttons: "Activate online", "Create offline activation file", and "Proxy settings...".



A window titled "License status" showing license information. It includes the following details:

- Licensed product: TC-Application (standalone online) [Check for an updated license](#) Last updated: May 13, 2025, 9:59:58 AM
- Licensed to:  [Sign out and deactivate](#)
- License status: Active
- Expiration date: Nov 19, 2025
- Maintenance: Not available

Below this information is a section titled "Licensed Modules" with six icons and labels:

- Thermo-Calc (red triangle icon)
- Additive Manufacturing (orange and yellow sun icon)
- Diffusion (DICTRA) (blue circle with 'i' icon)
- Precipitation (TC-PRISMA) (orange 'P' icon)
- Process Metallurgy (yellow and black icon)
- Nickel Mode (gray and yellow icon)

At the bottom, there are two tabs: "Licensed Databases" (selected) and "Free Databases".



At any time you can view the product license information by selecting **Help → Show License Info** from the menu in Thermo-Calc.

## Step 5: Optional Offline License Activations

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Offline activations are only available for single user (SUNLL) licenses and should only be used as a last resort, i.e. if there is no option provided by your organization to achieve online activation. The computer only needs to be connected to a network during the license activation, not when working with the software.

Offline activations can be an alternative for users who are in a highly secure environment that does not allow Internet connections.



In general it is highly recommended to use the **Online activation** option as this provides more flexibility including faster and easier license updates, i.e. for offline activations license updates require repeating the full offline activation procedure.

You will need access to the Internet to complete the activation. You can do this either by:

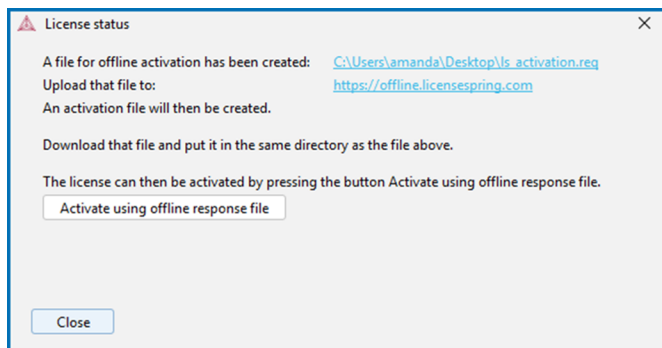
- Accessing the Internet temporarily from the computer you will use Thermo-Calc on, or
- Activating the license on another computer then transferring the license to the computer you will use Thermo-Calc on.



These instructions are a continuation from previous steps and assume you have already installed Thermo-Calc and entered your user credentials.



1. Click **Create offline activation file**. The **License status** window opens with instructions you can refer to.



2. A local file to use for the offline activation is created and the link to where it is downloaded to your computer is provided. The file is named `ls_activation.req`. Click the link to go to this location on your computer.

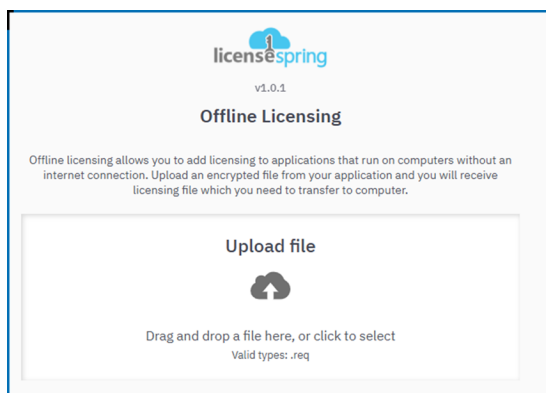


If you have downloaded the file to a computer that does not have Internet access, then copy this file to one that does and continue the process. Later you will copy the generated offline license back to the computer where Thermo-Calc is installed.

3. On the computer that has Internet access, go to the URL shown on the **License status** window: <https://offline.licensespring.com>.
4. Navigate to the `ls_activation.req` file on your computer and drag and drop it into the center of the window. The program generates another file and downloads it to your computer. This file is named `ls_activation.lic`.



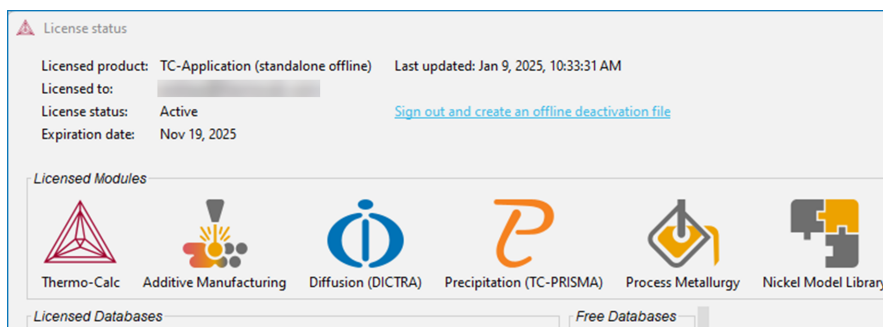
As soon as the `ls_activation.req` file is uploaded the license is considered by the software to be activated.



If at this point you want to switch to an online activation instead (recommended), you can delete the `ls_activation.req` file from the computer location to end the offline activation process.

5. Navigate to the downloaded `ls_activation.lic` file. If needed, this is when you copy this file back to the computer where Thermo-Calc is installed. In both cases the new file should be copied back to the same folder where the original file `ls_activation.req` is located.
6. Once the two files are in the same folder, you are ready to generate an offline license.
7. Go to the **License status** window and click **Activate using offline response file**.

Once activated you will see the **License status** window with a list of the products you have access to. Click **Close** and start using Thermo-Calc.



8. You do not need to keep the files you downloaded. Return to where these files are downloaded and delete them.



At any time you can view the product license information by selecting **Help → Show License Info** from the menu in Thermo-Calc.

## Troubleshoot User Credential License Activations



All users are being migrated to this new *user credentials* license activation type. For this type of activation, the information is managed via an online portal system as well as accessible from within Thermo-Calc. Customers are being contacted directly by email to provide the necessary information to install and use your purchased products. During the transition from using the old license file activations, some users may need to [contact support for assistance](#).

This section is specific to troubleshoot some common problems with the *user credentials* license activation option.

### When Activate Online Does Not Work

If the fields become empty (i.e. go blank) when you click **Activate Online**, this means that the final step of the license activation has failed. You need to contact support to troubleshoot further.

1. Close the license activation window.
2. Go to the bottom left corner of Thermo-Calc and click to open the **Event Log** window.
3. Copy all the red error messages and send these to your local support contact should you have one. Otherwise copy and paste these into an email and send to [support@thermocalc.com](mailto:support@thermocalc.com).

### Firewall or Anti-virus Issues

If you have trouble with a local or non-local firewall or anti-virus software blocking Thermo-Calc from accessing LicenseSpring API, then try this solution.

Make an exception allowing Thermo-Calc to connect to the following IP addresses through TCP ports 443 and 80:

- 34.250.134.210
- 34.251.49.36
- 52.18.228.254
- 54.78.102.217

### Proxy Service or SSL Certification Issues

If you see this error

```
ERROR LicenseManager: . Thrown at:  
com.licensespring.internal.services.LicenseSpringApiRetryer:tryCauseMessage:LineN  
o:96 PKIX path
```

then it is either because you are behind a proxy server OR the SSL certification has failed.



For both of these types of issues you typically need to contact your organization's IT department for assistance.

- A proxy service is used for an Internet connection, which blocks the connection. Use the **Proxy Settings** option available on the license activation window, or contact your proxy service provider to make an exception.
- For SSL certification: The [Let's Encrypt](#) root public CA should be installed (ISRG Root X1). This is included in all supported OS, but can be missing in the organization's security service.

## Other Common Errors

Some general troubleshooting suggestions are included in this section.

<i>Problem</i>	<i>Suggested Solution</i>
The incorrect password is entered	There can be issues when you copy and paste passwords from other sources. Check that no extra spaces were accidentally copied at the beginning or end of a password, and that all of the string is included in the selection.
Offline activation procedure was initiated but not completed, thus blocking the final activation.	<p>It is recommended that where possible an online activation is used instead.</p> <p>First try to fix this issue by deleting the <code>ls_activation.req</code> file on your computer as described in the step for Offline Activation described for your specific OS.</p> <p>In other cases, once an offline activation is attempted, and if it does not work, the license can still be registered by the license software as being activated, thus blocking the final activation. Contact <a href="mailto:support@thermocalc.com">support@thermocalc.com</a> to reset the license.</p>

## macOS® Standalone (License File) Installations



There are two *license activation types* available as of 2025b: (1) **User credentials**, which are entered after installation and managed via an online portal or (2) where a **license file** is installed directly on the computer or a licensing server. Many users have already started using the *user credentials* activation type and all users will eventually be migrated to the new system.

This section is applicable to:

- Operating system: macOS
- Installation type: Full Standalone (SUNLL)
- License activation type: License file where the software and the license file are installed together on one computer.
- Upgrading to a new standalone version of Thermo-Calc (maintenance plan only)



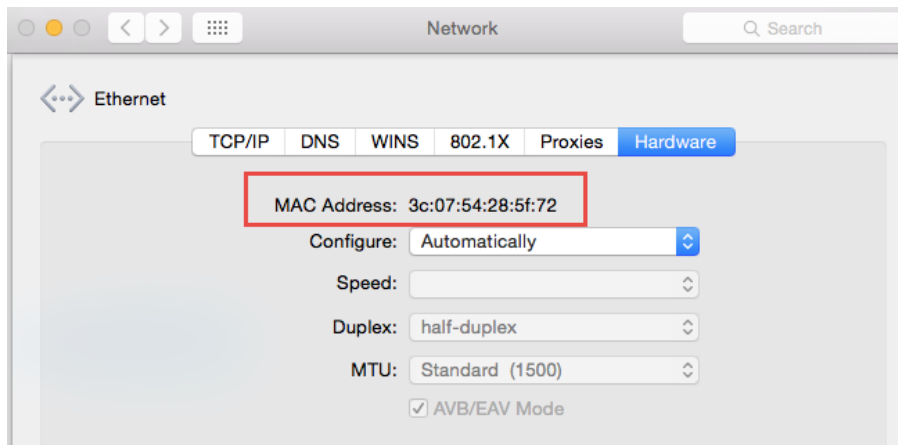
For instructions about other operating systems, network installations, or installing an SDK (e.g. TC-Python or TC-Toolbox for MATLAB®) search the *Thermo-Calc Installation Guide*, which is also [available on our website](#). You can also review the [Licensing Options](#) included on our website.

## Step 1: Request a License File



**Upgrading to a new version of Thermo-Calc:** Skip this section if you are upgrading to a new version of Thermo-Calc (and you have a maintenance plan), or you have already been provided with the license file.

1. From the Apple main menu, select **System Preferences**.
2. Click **Network**.
3. In the left column select **Ethernet** or **Built-in Ethernet** (do not select a WiFi connection as a local static MAC address is required).
4. Click **Advanced** → **Hardware**. The **Network** window shows you the **MAC Address**. For example, the MAC address (the host ID) might be **3c:07:54:28:5f:72**.



5. Send an email to [support@thermocalc.com](mailto:support@thermocalc.com) and copy and paste the MAC address into the body of the email. Make sure to include the following in the subject line:

**License diagnostic information from <Name>** where Name is replaced with your **name**, the **organisation name** and the **Site Number**. *You can find the five-digit site number on an invoice or any correspondence from Thermo-Calc Software.*

Designated Site 12345  
XYZ Company  
Dpt. of Material Science  
900 Main Street  
Stockholm 11190  
SWEDEN

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To:	support@thermocalc.com
Cc:	
License diagnostic information from Jane Smith, XYZ Company, Site 12345	
Add attachments  tclog.log (7.3 KB) 	

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6. A representative from Thermo-Calc Software replies to the email address provided and attaches your license file or files.
7. Save your license file to your computer or network.



## Step 2: Install Required macOS Software

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To install and run Thermo-Calc on a Mac computer with an ARM processor, Rosetta first needs to be installed.

The XQuartz open-source X.Org X Window system is required to run Thermo-Calc on macOS.


1. In a web browser go to <https://www.macupdate.com> or to download it directly from XQuartz, <https://www.xquartz.org/>.
2. In the **Search Mac Apps** field, enter *XQuartz*.
3. Click the **XQuartz** search result. For example, based on the recent version, the name is XQuartz-2.8.5.dmg.
4. Click **Download**.
5. Double-click the **XQuartz-<version>.pkg** file. Follow the instructions.
6. Click **OK** when the message about logging out displays and click **Close** when the installation is successful.

## Step 3: Download Thermo-Calc Software



Administrative rights are required to complete this installation. An email from Thermo-Calc Software (or from someone in your organization) includes the links and information you need to access and activate the current version of the software you want to download.

1. Click the link from the email and the first page of the **Download Center** opens. Under the **macOS** section, select the OS version. Click **Go to download page**.
2. In the **Sign in to access this site** window, enter the **Username** and **Password** (found in the email) and click **Sign in**.
3. On the **Download Center** page under **Software**, click the **.zip** link to download the file for the current software version for your operating system (2025b).

Thermo-Calc  Software

Download Center

Software Package

2025b - 2025.2.173512-230

Software

Thermo-Calc-osx-2025.2.173512-230.zip

Installation Guides

Thermo-Calc\_Installation\_Guides.pdf

Thermo-Calc\_Quick\_Install-Mac.pdf

TC-Python\_Installation\_Guide.pdf

Licensing

Licensing Tools

Getting Started Guides

Getting Started Videos

Installation Videos

Examples Videos

Bilibili Videos (China)

## Step 4: Install Thermo-Calc Software

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For macOS and when you first run the installer, you may see a message that *Thermo-Calc-osx-<version> can't be opened because Apple cannot check it for malicious software*. If this happens, select **Show in Finder**. Then, in the opened **Finder** window right-click the downloaded file `Thermo-Calc-osx-<version>` and select **Open**.


1. Navigate to the folder where you downloaded the software. Double-click the **.zip** program. Remember that administrative rights are needed, so when you are prompted for that user name and password, enter these credentials here. Click **Yes** to continue.
2. On the **Setup - Thermo-Calc 2025b** window click **Next**.
3. On the **License Agreement** window click to accept the license agreement. Click **Next**.

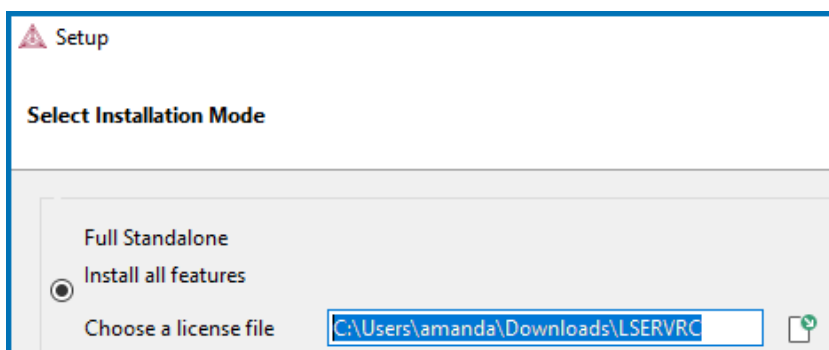
## Step 5: Select License and Installation Mode

1. In the **Select License and Installation Mode** window click **Full Standalone: Install all features**.



If you also have a license for TC-Python, it is installed when the **Full Standalone** or **Full Network Client** option is chosen, but there are additional steps required as described separately for this SDK.

2. For a **Full Standalone** installation, in the **Choose a license file** field either enter the file path or click the file button  to navigate to where you saved the license file emailed to you from Thermo-Calc Software.



The license file is called **lservrc**. Click **Next**. To prevent errors, leave this field blank if you did not get a license file yet.



TC-Python is installed for all users even if you do not have a license. The **Install TC-Python** window is a reminder that additional installation procedures are required after Thermo-Calc is installed. See the *TC-Python Installation Guide*.

3. In the **Ready to Install** window click **Next**. Click **Finish** and start using Thermo-Calc.

### *Import User Settings*



For macOS installations and if you have previous Thermo-Calc installations:  
When you launch Thermo-Calc with the new or updated version, the splash screen hides the **Import User Settings** dialog box. In order to proceed you need to click the splash screen and then click **Yes** or **No** in the dialog box.