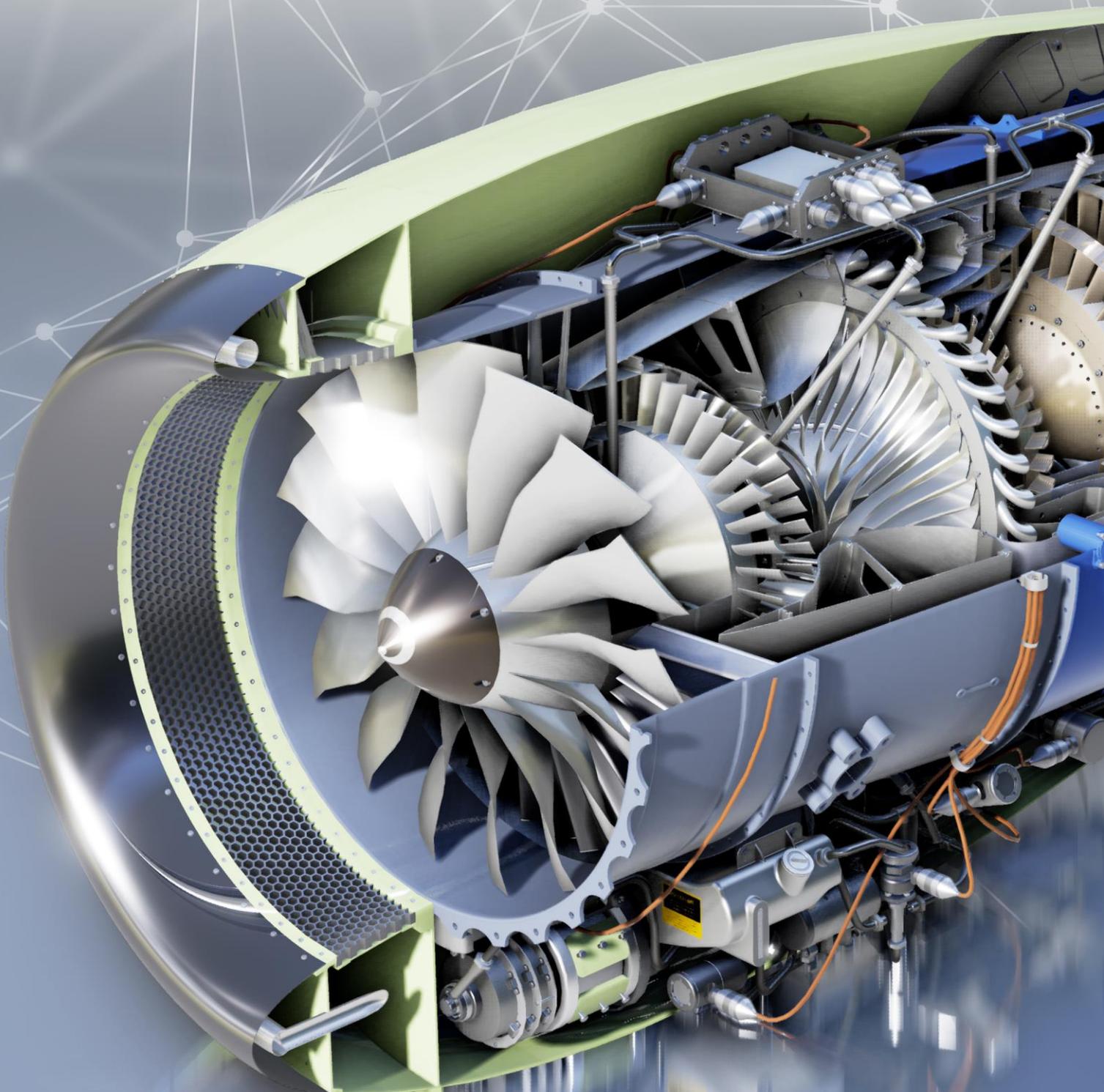


T-FLEX CAD 17

INSTALLATION GUIDE

for Linux OS with Wine



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Introduction

This document gives instructions on how to install T-FLEX Parametric CAD using Wine on Linux operating systems.

Wine – is a set of free open-source programs and libraries, that allows to run 16-, 32- and 64-bit applications developed for Microsoft Windows on UNIX-based operating systems supporting CPU x86 and AMD64 architectures. Windows applications are running without any virtualization or emulation.

The instructions are provided for following Linux distributions

- Debian (version 11 and higher)
- Ubuntu (version 22.04 and higher)

Commands to be executed using terminal of operating system are marked as follows within this document:

- Command applicable to all versions of T-FLEX Parametric CAD and all aforementioned versions of operating system:

The text to be typed into the terminal

- Command applicable to particular versions only:

Version	The text to be typed into the terminal
---------	---

Instead of typing commands, you can just copy them to clipboard from the current document and then paste into the terminal. In case of long commands not fitting a single line of the document, it may be necessary to remove line breaks, upon pasting a command into the terminal, or copy lines one by one.

Upon inputting a command text, press **Enter** to execute the command.

Preparing Debian to Wine installation

Before installing Wine on Debian, you should [provide superuser rights to the current user](#) and [add the additional branch of the Debian repository into the list of sources](#).

If you're using Ubuntu, skip this chapter and proceed to the [Wine and related components installation](#).

Managing superuser rights on Debian

In order to install or uninstall some of the operating systems components required to run T-FLEX Parametric CAD, you need superuser rights.

Superuser mode on Debian

You can enter the superuser mode by executing the following command in the terminal:

Debian	<code>su root</code>
--------	----------------------

Upon executing this command, the system asks for a root password. Type the password into the terminal and press **Enter**.

When the superuser rights are no longer needed, you can exit the superuser mode by pressing **Ctrl+D** in the terminal.

However, some steps of T-FLEX Parametric CAD and related components installation should be performed outside the superuser mode. Therefore, in order to avoid switching back and forth between the current user and the superuser, it is recommended to give superuser rights to the current user, as specified below.

Giving superuser rights to the current user on Debian

Superuser rights can be provided to the current user as follows:

1. Open the terminal and enter the superuser mode:

Debian	<code>su root</code>
--------	----------------------

Upon executing this command, the system asks for a root password. Type the password into the terminal and press **Enter**.

2. Open the **sudoers** file:

Debian	<code>nano /etc/sudoers</code>
--------	--------------------------------

3. Scroll down the file, until you find the following line:

```
root ALL=(ALL:ALL) ALL
```

Add the similar line below, but use the current username instead of **root**.

Then close the file by pressing **Ctrl+X** and confirm changes by typing **Y** and pressing **Enter**.

4. Exit the superuser mode by pressing **Ctrl+D** in the terminal.

After installing or uninstalling T-FLEX Parametric CAD and related components, when you no longer need superuser rights, open the **sudoers** file again and remove the previously added line. Then close the file by pressing **Ctrl+X** and confirm changes by typing **Y** and pressing **Enter**.

Adding the additional branch of the Debian repository into the list of sources

Before installing Wine and related components, you should add the additional branch of the Debian repository into the list of package sources.

To do so, perform the following actions:

1. Open the terminal and enter the superuser mode:

Debian	<code>su root</code>
--------	----------------------

Upon executing this command, the system asks for a root password. Type the password into the terminal and press **Enter**.

2. Open the sources list file from the terminal:

Debian	<code>nano /etc/apt/sources.list</code>
--------	---

In the opened file, find the line starting with:

```
deb cdrom:[Debian GNU/Linux 12.4.0
```

where **12.4.0** – version number of your operating system.

Depending on the OS installation source, the line may be commented out or not. If commented out, it additionally starts with **#** symbol.

On Debian 11 replace this line with the following:

```
deb http://ftp.de.debian.org/debian bullseye main contrib
```

On Debian 12 replace this line with the following:

```
deb http://ftp.de.debian.org/debian bookworm main contrib
```

Instead of `ftp.de.debian.org/debian` you can specify any other server from [the list](#).

Then close the file by pressing **Ctrl+X** and confirm changes by typing **Y** and pressing **Enter**.

3. Exit the superuser mode by pressing **Ctrl+D** in the terminal.

Installing Wine and related components

If you're using Debian, instructions given below presume, that you have [provided superuser rights to the current user](#) and [added the additional branch of the Debian repository into the list of sources](#).

1. Open the terminal and enable the ability to install packages of 32-bit architecture:

```
sudo dpkg --add-architecture i386
```

Upon executing this command, the system asks for a root password. Type the password into the terminal and press **Enter**.

2. Get WineHQ apt keyring:

```
sudo mkdir -pm755 /etc/apt/keyrings

sudo wget -O /etc/apt/keyrings/winehq-archive.key
https://dl.winehq.org/wine-builds/winehq.key
```

3. Download WineHQ source file:

Ubuntu 22.04	<code>sudo wget -NP /etc/apt/sources.list.d/ https://dl.winehq.org/wine-builds/ubuntu/dists/jammy/winehq-jammy.sources</code>
Ubuntu 23.04	<code>sudo wget -NP /etc/apt/sources.list.d/ https://dl.winehq.org/wine-builds/ubuntu/dists/lunar/winehq-lunar.sources</code>
Debian 11	<code>sudo wget -NP /etc/apt/sources.list.d/ https://dl.winehq.org/wine-builds/debian/dists/bullseye/winehq-bullseye.sources</code>
Debian 12	<code>sudo wget -NP /etc/apt/sources.list.d/ https://dl.winehq.org/wine-builds/debian/dists/bookworm/winehq-bookworm.sources</code>

4. Update the packaging index:

```
sudo apt-get update
```

5. Install Wine 8.0.1:

Ubuntu 22.04	<code>sudo apt install winehq-stable=8.0.1~jammy-1 wine-stable=8.0.1~jammy-1 wine-stable-amd64=8.0.1~jammy-1 wine-stable-i386=8.0.1~jammy-1</code>
Ubuntu 23.04	<code>sudo apt install winehq-stable=8.0.1~lunar-1 wine-stable=8.0.1~lunar-1 wine-stable-amd64=8.0.1~lunar-1 wine-stable-i386=8.0.1~lunar-1</code>
Debian 11	<code>sudo apt install winehq-stable=8.0.1~bullseye-1 wine-stable=8.0.1~bullseye-1 wine-stable-amd64=8.0.1~bullseye-1 wine-stable-i386=8.0.1~bullseye-1</code>
Debian 12	<code>sudo apt install winehq-stable=8.0.1~bookworm-1 wine-stable=8.0.1~bookworm-1 wine-stable-amd64=8.0.1~bookworm-1 wine-stable-i386=8.0.1~bookworm-1</code>

After getting info on the packages to be installed, the system will ask to allow additional disk space usage. Type **Y** and press **Enter** to proceed the installation.

6. Install Cabextract:

```
sudo apt install cabextract
```

After getting info on the packages to be installed, the system will ask to allow additional disk space usage. Type **Y** and press **Enter** to proceed the installation.

7. Install Winetricks:

```
sudo apt install winetricks
```

After getting info on the packages to be installed, the system will ask to allow additional disk space usage. Type **Y** and press **Enter** to proceed the installation.

8. Update Winetricks:

```
sudo winetricks --self-update
```

Upon executing this command, the system will ask for confirmation. Type **Y** into the terminal and press **Enter**.

Installing T-FLEX Parametric CAD and related components

Instructions given below presume, that you have [installed Wine and related components](#).

If you're using Debian, instructions given below also presume, that you have [provided superuser rights to the current user](#).

1. Put the T-FLEX Parametric CAD 17.msi or T-FLEX Parametric CAD Student Edition 17.msi installer into the **Downloads** directory.
2. Put following archives into the **Downloads** directory:

[T-FLEX 17 Linux Components.zip](#)

[T-FLEX Prerequisites 17.zip](#)

3. Open the terminal, change working directory to **Downloads** and extract T-FLEX_17_Linux_Components.zip:

```
cd ~/Downloads  
  
unzip -x T-FLEX_17_Linux_Components.zip
```

4. Extract T-FLEX 17 Prerequisites.zip:

```
unzip -x T-FLEX\ 17\ Prerequisites.zip
```

5. Copy the content of the **winetricks** folder into the **.cache** directory:

```
cp -R winetricks ~/.cache/
```

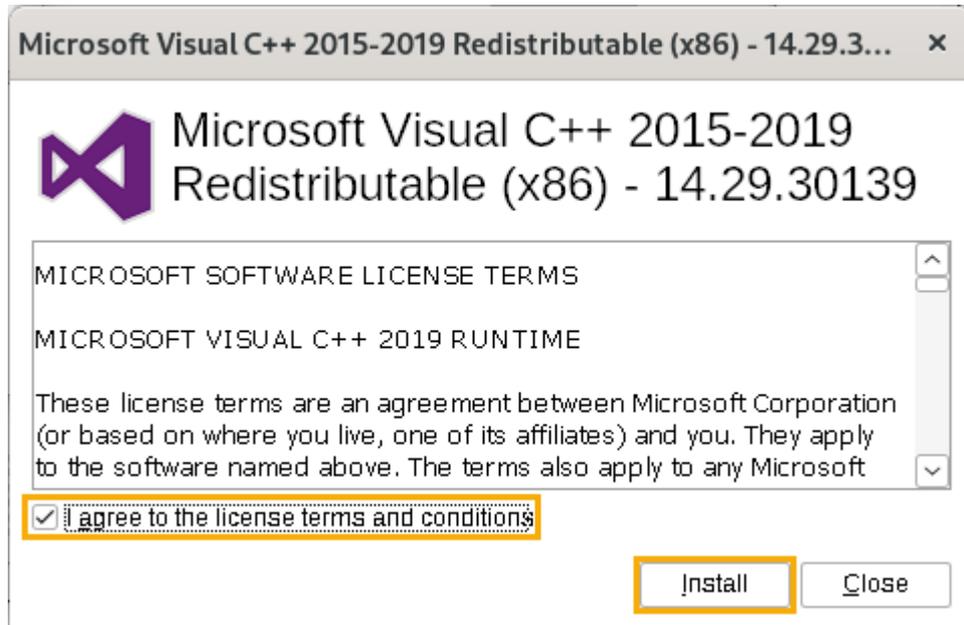
6. Install Microsoft Visual C++ Redistributable:

```
winetricks --force vcrun2019
```

As Wine gets launched for the first time, Wine Mono installation dialog may pop-up. Disallow the installation by pressing the **Cancel** button.



Upon launching the Microsoft Visual C++ Redistributable installer, follow its instructions.



First, the command launches the installer of x86 version of the package. Upon its installation, the command launches the installer of the x64 version. Install both.

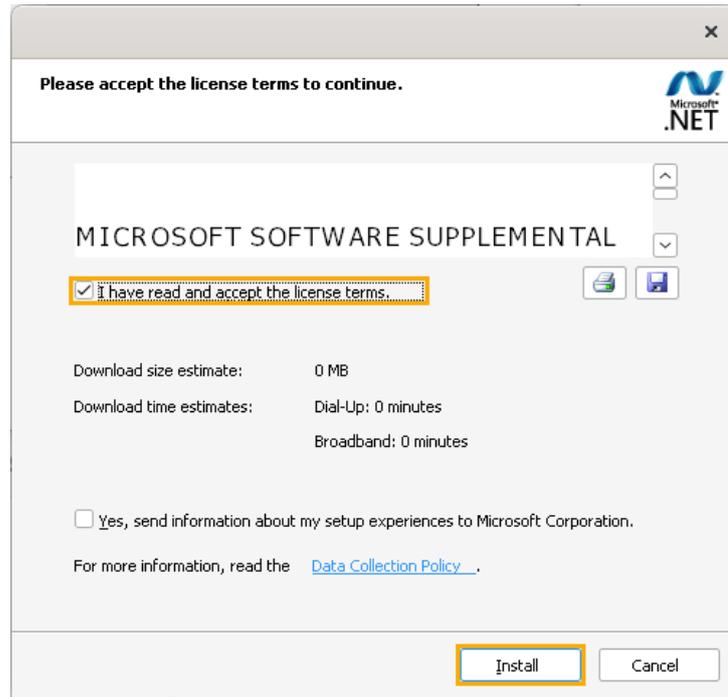
7. Install d3dcompiler_47 library:

```
winetricks d3dcompiler_47
```

8. Install Microsoft .NET Framework:

```
winetricks --force dotnet48
```

Upon launching the Microsoft .NET Framework installer, follow its instructions.

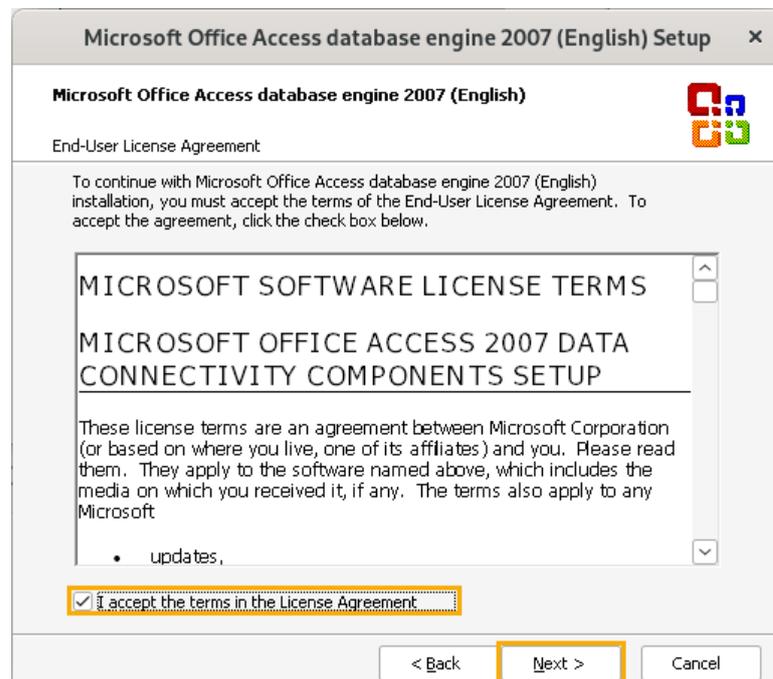


First, the command launches the installer of .NET Framework 4.0. Upon its installation, the command launches the installer of .NET Framework 4.8. Install both. Upon installation you may be asked to reboot. If so, reboot, then re-open the terminal and proceed to the next step.

9. Change working directory to the **Access Database Engine 2007** directory, previously unpacked from the **T-FLEX Prerequisites 17.zip** archive, and install Microsoft Access Database Engine 2007:

```
cd ~/Downloads/Access\ Database\ Engine\ 2007  
wine AccessDatabaseEngine.exe
```

Upon launching the Microsoft Access Database Engine 2007 installer, follow its instructions. Use the default installation path.



10. Change working directory to **Downloads/Components**:

```
cd ~/Downloads/Components
```

11. If you're installing commercial version of T-FLEX Parametric CAD, add into your Wine registry the HASP registry key:

Commercial version	<code>wine regedit fake_hasp.reg</code>
--------------------	---

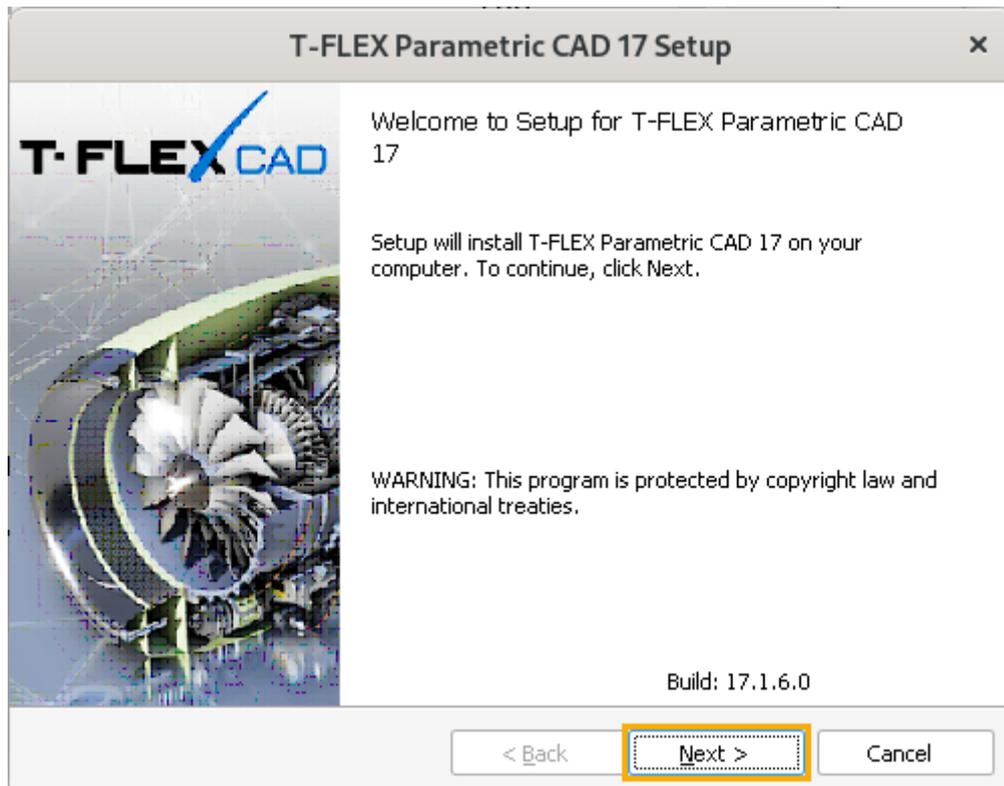
12. Change working directory to **Downloads**:

```
cd ~/Downloads
```

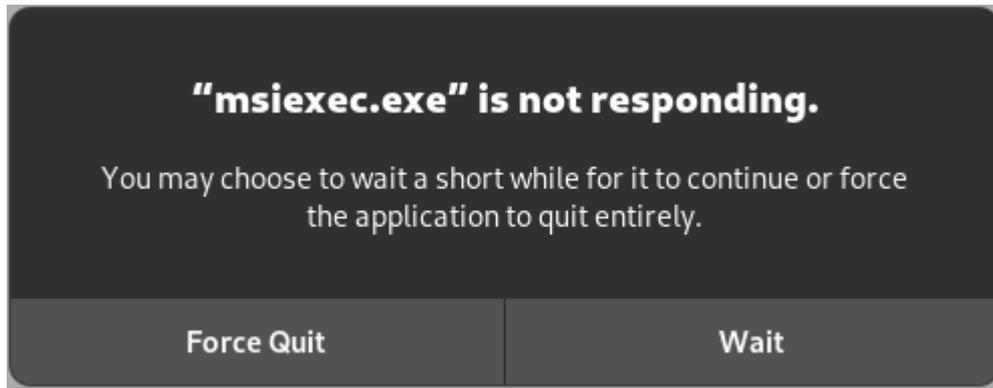
13. Launch the T-FLEX Parametric CAD installer:

Commercial version	<code>wine msiexec /i T-FLEX\ Parametric\ CAD\ 17.msi</code>
Student edition	<code>wine msiexec /i T-FLEX\ Parametric\ CAD\ 17\ Student\ Edition.msi</code>

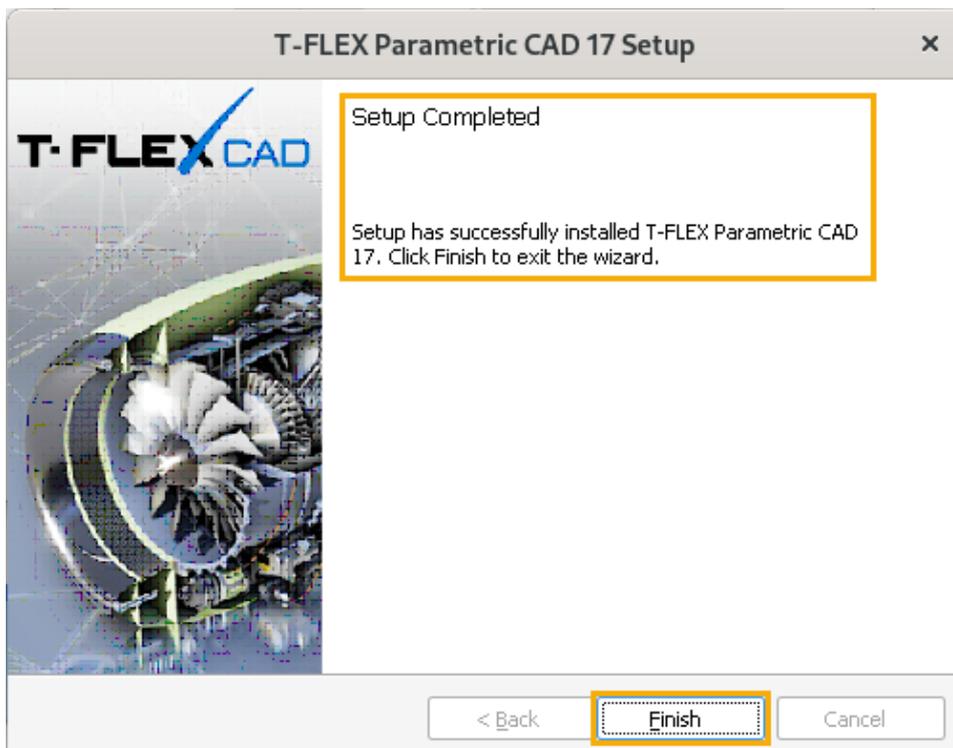
Upon launching the T-FLEX Parametric CAD installer, follow its instructions. Use the default installation path.



If the system considers the installer to be non-responding during the installation process, ignore the warning message and keep waiting until the setup gets completed. Installation might take several minutes on low-spec hardware.



As the setup is completed, press **Finish**.



14. If you're installing commercial version of T-FLEX Parametric CAD, change working directory to the **aksusbd** directory, and install the aksusbd package:

Commercial version	<pre>cd ~/Downloads/HASP_Linux/aksusbd sudo chmod +x dinst sudo ./dinst</pre>
--------------------	---

Upon executing this command, the system asks for a root password. Type the password into the terminal and press **Enter**.

15. If you're installing commercial version of T-FLEX Parametric CAD, check that the HASP License Manager service is running:

Commercial version	<pre>systemctl status hasplmd.service</pre>
--------------------	---

```

debian-555@debian:~$ systemctl status hasplmd.service
● hasplmd.service - Sentinel LDK Runtime Environment (hasplmd daemon)
   Loaded: loaded (/etc/systemd/system/hasplmd.service; enabled; preset: enab>
   Active: active (running) since Tue 2023-12-26 20:08:23 MSK; 2min 16s ago
   Process: 4776 ExecStart=/usr/sbin/hasplmd -s (code=exited, status=0/SUCCESS)
   Main PID: 4779 (hasplmd)
   Tasks: 7 (limit: 2207)
   Memory: 11.7M
   CPU: 467ms
   CGroup: /system.slice/hasplmd.service
           └─4779 /usr/sbin/hasplmd -s

```

If the service is not running, try reinstalling the aksubd package, as described in the previous step, and notice errors occurring during installation. Then check again that the service is running, and, if it isn't, contact Top Systems technical support and provide information on performed actions and detected errors.

16. Move folders from **Components** directory into corresponding directories within default Wine prefix:

```

cd ~/Downloads/Components

rm -fR ~/.wine/drive_c/Program\ Files/Common\ Files/System

cd Program\ Files/Common\ Files

mv -f System ~/.wine/drive_c/Program\ Files/Common\ Files/

rm -fR ~/.wine/drive_c/Program\ Files\ \(\x86\) /Common\ Files/System

cd ~/Downloads/Components/Program\ Files\ \(\x86\) /Common\ Files

mv System ~/.wine/drive_c/Program\ Files\ \(\x86\) /Common\ Files/

cd ~/Downloads/Components/Windows/System32

mv -f *.dll ~/.wine/drive_c/windows/system32

```

17. Change working directory to **Components** again and add registry keys into your Wine registry:

```

cd ~/Downloads/Components

wine regedit ado-32.reg

/opt/wine-stable/bin/wine64 regedit ado-64.reg

wine regedit tflex.reg

```

18. If you're installing commercial version of T-FLEX Parametric CAD, move HASP libraries into the **hasplm** directory within your **var** system directory:

Commercial version	<code>sudo mv -f ~/Downloads/HASP_Linux/*.so /var/hasplm/</code>
--------------------	--

19. If you're installing commercial version of T-FLEX Parametric CAD, restart HASP License Manager service:

Commercial version	<code>sudo systemctl restart hasplmd.service</code>
--------------------	---

20. If you are using an NVIDIA video adapter with proprietary drivers, delete link to the GL library (if such link exists), in order to ensure the correct work of T-FLEX Parametric CAD:

Installing T-FLEX Parametric CAD and related components

```
sudo rm /usr/lib32/i386-linux-gnu/libGL.so.1
```

Launching T-FLEX Parametric CAD

Launching T-FLEX Parametric CAD from terminal

1. Open the terminal and change working directory to the one containing the TFlexCad.exe executable file:

Commercial version	<code>cd ~/.wine/drive_c/Program\ Files/T-FLEX\ Parametric\ CAD\ 17/Program/</code>
Student edition	<code>cd ~/.wine/drive_c/Program\ Files/T-FLEX\ Parametric\ CAD\ 17\ Student\ Edition/Program/</code>

2. Launch the TFlexCad.exe executable file using Wine:

```
wine TFlexCad.exe
```

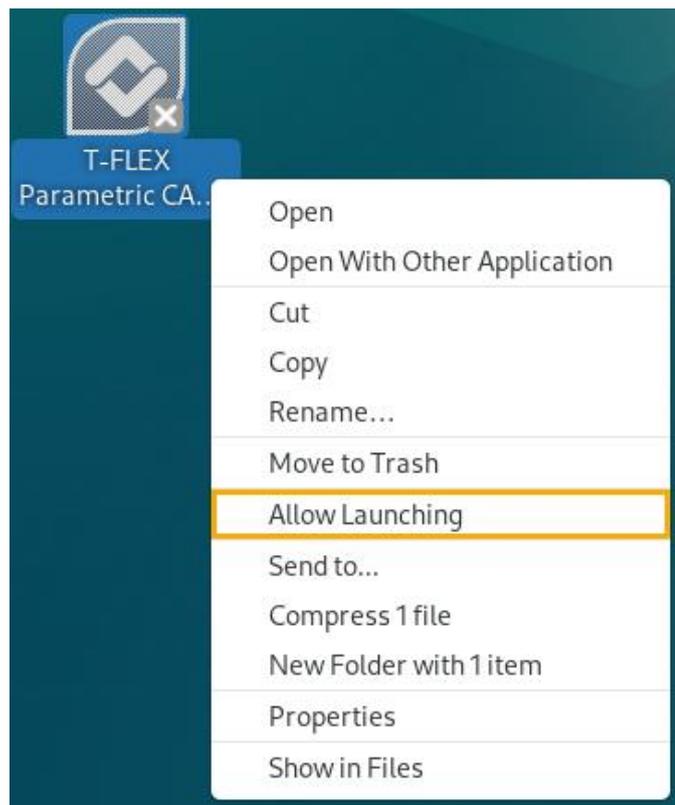
Creating T-FLEX Parametric CAD desktop shortcut

Debian uses GNOME graphic environment by default. It doesn't allow desktop shortcuts usage without installing additional extensions. A shortcut may be created, even if extension is not installed, but it won't be visible until you install an extension.

1. Open the terminal and copy the existing T-FLEX CAD 17.desktop shortcut onto the desktop:

Commercial version	<code>cp ~/.local/share/applications/wine/Programs/T-FLEX\ Parametric\ CAD\ 17/T-FLEX\ Parametric\ CAD\ 17.desktop ~/Desktop/T-FLEX\ Parametric\ CAD\ 17.desktop</code>
Student edition	<code>cp ~/.local/share/applications/wine/Programs/T-FLEX\ Parametric\ CAD\ 17\ Student\ Edition/T-FLEX\ Parametric\ CAD\ 17\ Student\ Edition.desktop ~/Desktop/T-FLEX\ Parametric\ CAD\ 17\ Student\ Edition.desktop</code>

2. Right-click the shortcut on the desktop and select the **Allow Launching** option in the contextual menu.



Troubleshooting

T-FLEX Parametric CAD can't be launched

If you cannot launch T-FLEX Parametric CAD, as described above, upon its installation, try rebooting the system and launching CAD again. If CAD still cannot be launched, check the installed version of Wine:

```
wine --version
```

If the installed version is not 8.0.1, delete it:

```
sudo apt remove winehq-stable
```

Upon executing this command, the system asks for a root password. Type the password into the terminal and press **Enter**.

After getting info on the packages to be uninstalled, the system will ask for confirmation. Type **Y** and press **Enter** to proceed the uninstallation.

Then delete Wine-related packages:

```
sudo apt autoremove
```

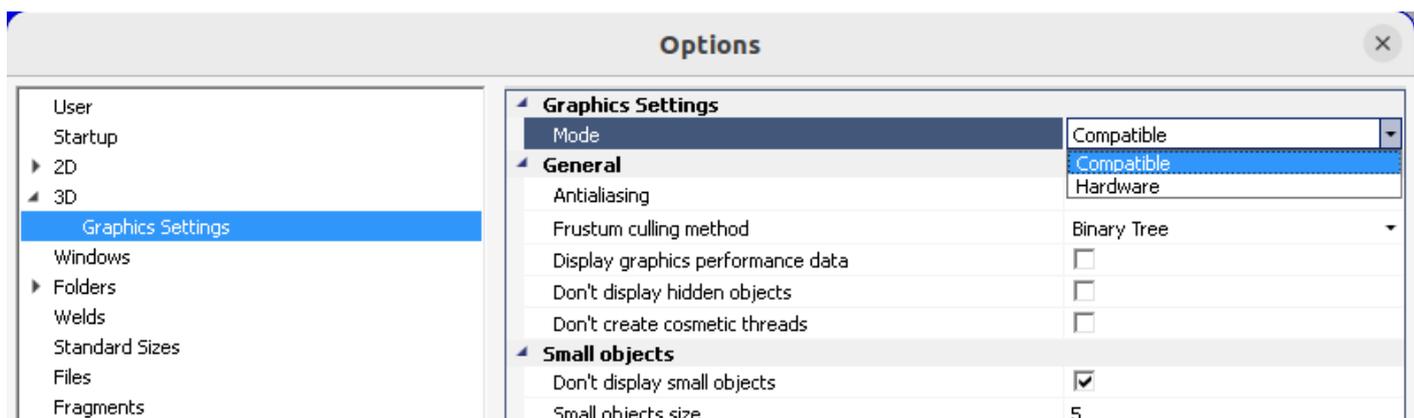
Then install Wine 8.0.1 again, as specified below and re-try launching CAD.

Ubuntu 22.04	<code>sudo apt install winehq-stable=8.0.1~jammy-1 wine-stable=8.0.1~jammy-1 wine-stable-amd64=8.0.1~jammy-1 wine-stable-i386=8.0.1~jammy-1</code>
Ubuntu 23.04	<code>sudo apt install winehq-stable=8.0.1~lunar-1 wine-stable=8.0.1~lunar-1 wine-stable-amd64=8.0.1~lunar-1 wine-stable-i386=8.0.1~lunar-1</code>
Debian 11	<code>sudo apt install winehq-stable=8.0.1~bullseye-1 wine-stable=8.0.1~bullseye-1 wine-stable-amd64=8.0.1~bullseye-1 wine-stable-i386=8.0.1~bullseye-1</code>
Debian 12	<code>sudo apt install winehq-stable=8.0.1~bookworm-1 wine-stable=8.0.1~bookworm-1 wine-stable-amd64=8.0.1~bookworm-1 wine-stable-i386=8.0.1~bookworm-1</code>

If CAD still cannot be launched, contact Top Systems technical support and provide information on performed actions and detected errors.

3D window displays bluescreen

If you encounter incorrect display of 3D windows content, enable the **Compatible** graphics mode in T-FLEX Parametric CAD system options (**Options > 3D > Graphic Settings > Graphic Settings > Mode**) and restart CAD.



Updating T-FLEX Parametric CAD

1. Put the **T-FLEX Parametric CAD 17.msi** or **T-FLEX Parametric CAD 17 Student Edition.msi** installer of the new version of CAD into the **Downloads** directory.
2. Open the terminal and change working directory to **Downloads**:

```
cd ~/Downloads
```

3. Launch the installer:

Commercial version:	<code>wine msiexec /i T-FLEX\ Parametric\ CAD\ 17.msi</code>
Student edition:	<code>wine msiexec /i T-FLEX\ Parametric\ CAD\ 17\ Student\ Edition.msi</code>

Upon launching the installer, follow its instructions.

Uninstalling T-FLEX Parametric CAD, Wine and related components

If you're using Debian, instructions given below presume, that you have [provided superuser rights to the current user](#).

1. Open the terminal and remove the Wine prefix:

```
rm -fR ~/.wine
```

If you have other Windows applications installed, keep in mind that this action removes all applications installed in the default prefix.

2. Remove the directory containing shortcuts of Wine applications:

```
rm -R -f ~/.local/share/applications/wine
```

3. Remove the T-FLEX Parametric CAD shortcut from desktop (if such shortcut exists):

Commercial version:	<code>rm -f ~/Desktop/T-FLEX\ Parametric\ CAD\ 17.desktop</code>
Student edition:	<code>rm -f ~/Desktop/T-FLEX\ Parametric\ CAD\ 17\ Student\ Edition.desktop</code>

4. Remove Wine:

```
sudo apt remove winehq-stable
```

Upon executing this command, the system asks for a root password. Type the password into the terminal and press **Enter**.

After getting info on the packages to be uninstalled, the system will ask for confirmation. Type **Y** and press **Enter** to proceed the uninstallation.

5. Remove Cabextract

```
sudo apt-get remove cabextract
```

After getting info on the packages to be uninstalled, the system will ask for confirmation. Type **Y** and press **Enter** to proceed the uninstallation.

6. Remove the Winetricks folder:

```
rm -R -f ~/.cache/winetricks
```

7. If you're uninstalling commercial version of T-FLEX Parametric CAD, remove the aksusbd package:

Commercial version	<code>sudo dpkg --purge aksusbd</code>
--------------------	--

8. If you're uninstalling commercial version of T-FLEX Parametric CAD, remove the HASP Licence Manager directory:

Commercial version	<code>sudo rm -R -f /var/hasplm</code>
--------------------	--

9. Remove packages related to previously removed components:

```
sudo apt autoremove
```

After getting info on the packages to be uninstalled, the system will ask for confirmation. Type **Y** and press **Enter** to proceed the uninstallation.