

# CFturbo2ICEM

Automatic Geometry and Mesh Generation  
in ANSYS ICEM CFD  
based on CFturbo Geometries

Version 4  
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Dresden, Germany

[www.cfturbo.com](http://www.cfturbo.com)

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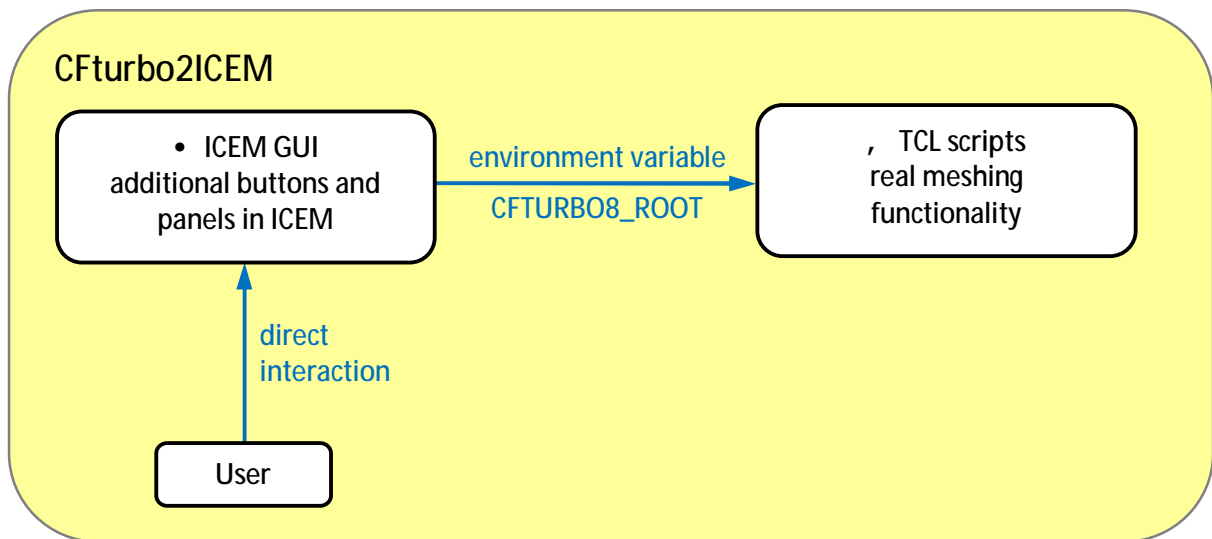
Used files and their file system position  
(manual installation)

On **Windows** the installation is made by a comfortable setup program “CFturbo2Icem\*.exe”. Pre-condition is an installed ICEM and an installed CFturbo. In this case no manual effort is necessary.

On **Linux** CFturbo is not executable, but CFturbo2ICEM can be used. Currently no installation program exists, therefore the files have to be installed/ copied manually with the help of this instruction.

On Linux one has to observe strictly the case sensitivity of file names.

## General schema for using CFturbo2ICEM



Files are stored in two different locations:

- Files for script handling in the ICEM GUI
- TCL scripts

The connection between ICEM and the TCL scripts is handled by the environmental variable CFTURBO8\_ROOT. This variable contains the directory where the scripts are located.

Operating system	Windows	Linux
Environmental variable	%CFTURBO8_ROOT%	\$CFTURBO8_ROOT
Value assignment	automatically by installation program	depending on used shell, e.g. export (bash), setenv (tcsh)

On Windows systems where CFturbo is installed, the environmental variable CFTURBO8\_ROOT is created during the installation and points to the CFturbo installation directory, by default „C:\Program Files\CFturbo 8“. On Linux systems the environmental variable CFTURBO8\_ROOT has to be defined manually before starting ICEM.

## • ICEM GUI

These files are images (icons) and modified ICEM configuration files for displaying the CFturbo2ICEM buttons inside the ICEM GUI.

Operating system	Windows	Linux
ICEM installation directory <ICEM-Root>	%ICEMCFD_ROOT% e.g. "C:\Program Files\ANSYS Inc\v120\icemcfd"	find directory by „which icemcfd“ e.g. /usr/ansys_inc/<version>/icemcfd
ICEM system directory <ICEM-Sys>	%ICEMCFD_SYSDIR% e.g. „win“	depending on processor type e.g. linux64_amd

The following files have to be copied:

File name	Directory	Description
cfturbo.tcl	<ICEM-Root>/<ICEM-Sys>/ lib\ai_env\scripts	creates link between ICEM GUI and the script files
CFturbo.gif ImpGeo35.gif ImpMesh35.gif StageCasing35.gif VolGeo35.gif VolMesh35.gif CasingMesh35.gif	<ICEM-Root>/<ICEM-Sys>/ lib\ai_env\icons	icons for additional buttons in ICEM
GeometryTab.ttkrf MeshTab.ttkrf geometryDEZs.ttkrf meshDEZs.ttkrf	<ICEM-Root>/<ICEM-Sys>/ lib\ai_env\resource	modified ICEM files for displaying the icons

## , TCL scripts

In the directory CFTURBO8\_ROOT a new folder “Skript” has to be created where all TCL script files have to be copied.

Example:

Operating system	Windows	Linux
environmental variable CFTURBO8_ROOT	C:\Data\CFturbo2ICEM	/usr/cfturbo8
Folder „Skript“	C:\Data\CFturbo2ICEM\Skript	/usr/cfturbo8/Skript

Here the file „version.dat“ and the directories “Casing”, “Impeller”, “udf” und “volute2 with the corresponding files have to exist.