

# **LISEGA Tools for AutoCAD and AutoCAD Plant 3D**



Version 13.0.0.16

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## System requirements

- AutoCAD Version 2024 or higher
- AutoCAD Plant 3D Version 2024 or higher
- **LICAD Version 2026.0**

## UPDATE

An already existing version of the plugin must be deinstall.

An update installation is not supported!

### IMPORTANT NOTE:

The customization of the user interface is carried out by the AutoDesk Plug-In manager. A final uninstallation is therefore only completed when AutoCAD or Plant3D is started once after the uninstallation and a file is then opened. The AutoDesk Plug-In manager does not start working until a file has been opened in AutoCAD or Plant3D.

## Installation

Start the installation program and follow its instructions.

This version of the plugins is using the new AutoCAD plugin technique. This requires that the files are stored in folder that AutoCAD is looking at for plug-ins.

AutoCAD will load the plugin automatically if it's recognized.

This doesn't require neither configuration nor manual loading plugins.

The installation directory is:

- %ProgramFiles%\Autodesk\ApplicationPlugins\LISEGA Plugin.bundle

Hint: %ProgramFiles% is normally „C:\Program Files“

## 2D library

This plugin version contains the 2D library that was previously separate available!

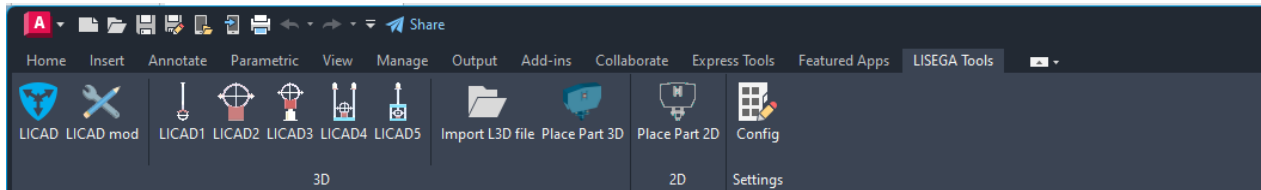
## General Plugin information

The plugin is identical to the BricsCAD plugin. That means that the same commands are available in the AutoCAD plugin as in the BricsCAD plugin.

## AutoCAD menu extension, tool box and ribbon for plug-in

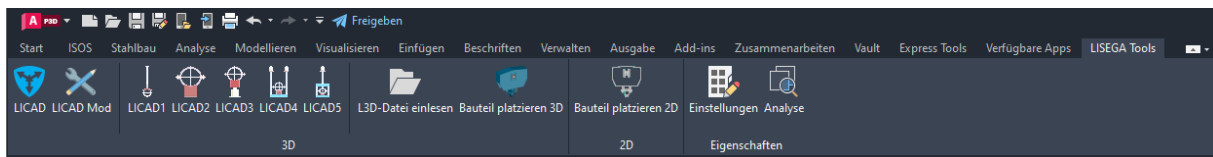
The following toolboxes are available

### AutoCAD



### Pant3D

The "Analysis" button is also available.



## Insertion of LISEGA supports

Two variants are available for placing LISEGA components.

The first possibility is the interactive process by which LICAD<sup>1</sup> program is directly accessed during the creation of the support in the 3D model.

The second possibility is the import<sup>2</sup> of L3D files created with LICAD. The information contained in the L3D file is then transferred to corresponding 3D objects.

### Variant 1:

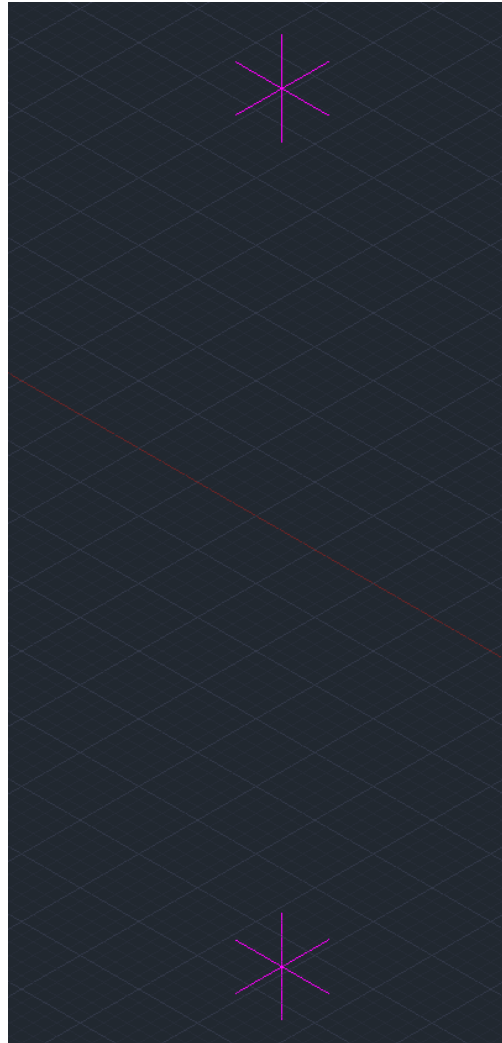
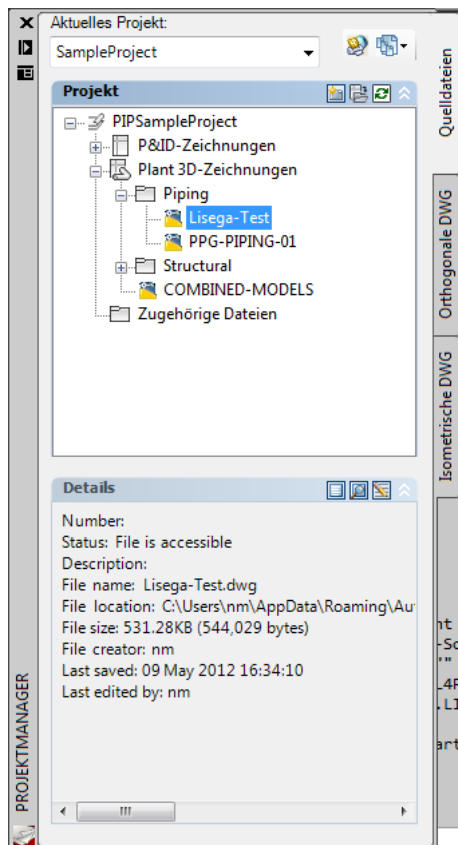
Example of the command „LICAD“ of the plug-in Licad4Plant3D\_V18 under Plant 3D 2011.

An empty drawing file is used here to draw attention to the essential points. A support is to be placed between the two 3D crosses displayed here.

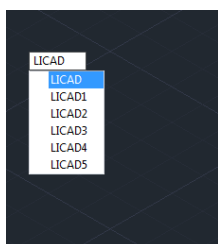
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1 For this, the LICAD program must be installed on the computer

2 The installation of LICAD is not necessary for this.

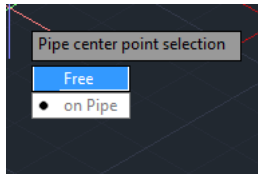


Configuration 1 is used. This can be carried out by the command „LICAD“ and subsequent request for the configuration number or by the command „LICAD1“, which already has the number in the name.

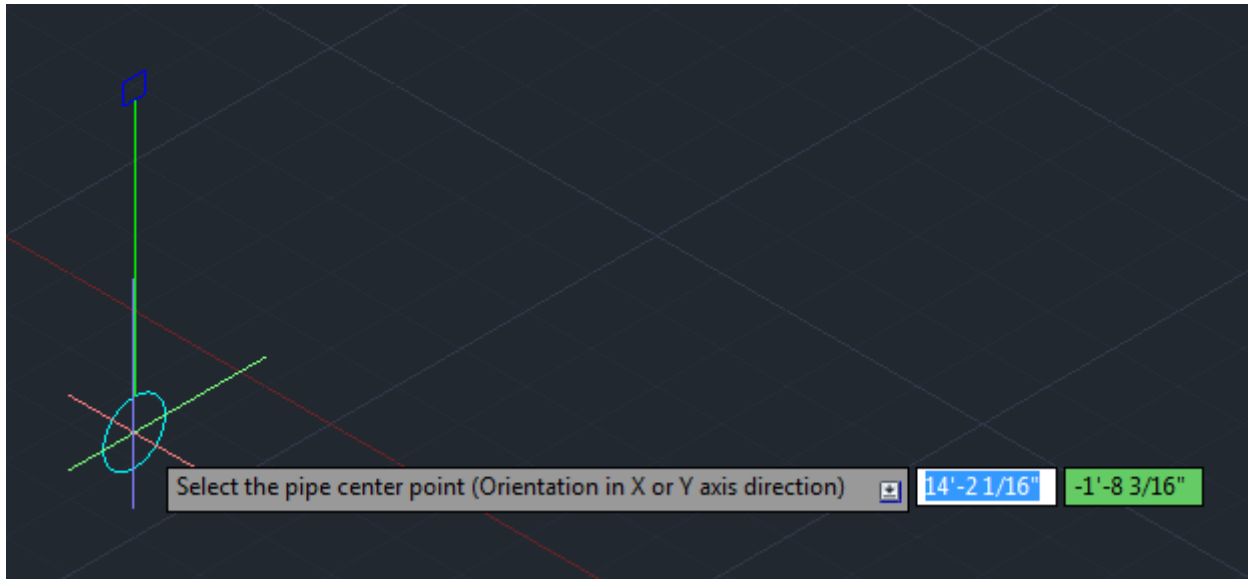


As the “LICAD1” command was activated, the request for the configuration number is skipped over.

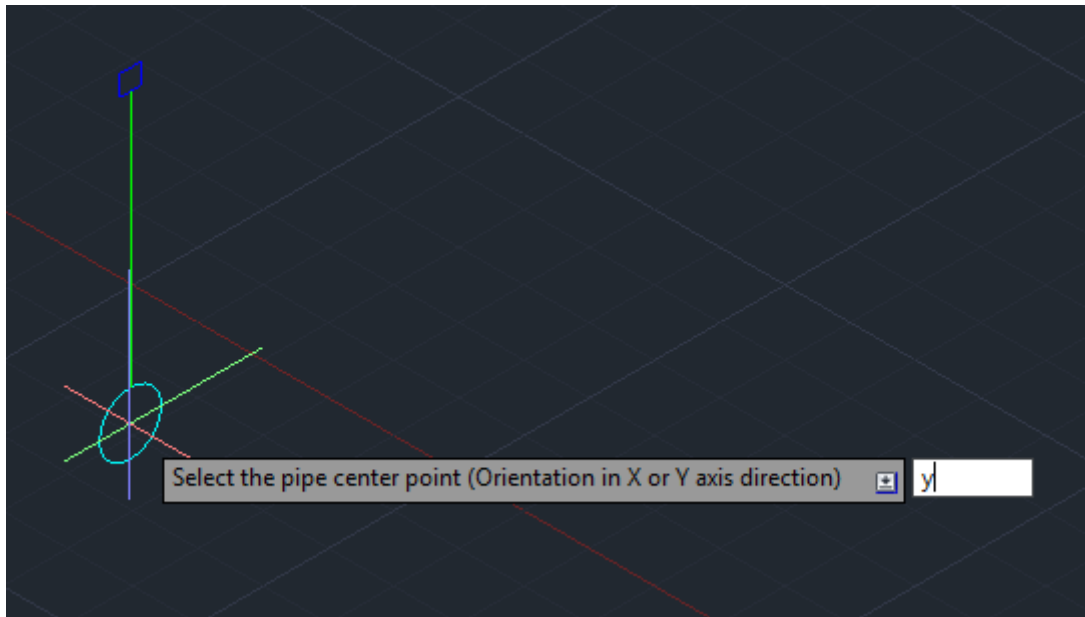
The question is then put as to whether the support is to be free or placed on the piping.



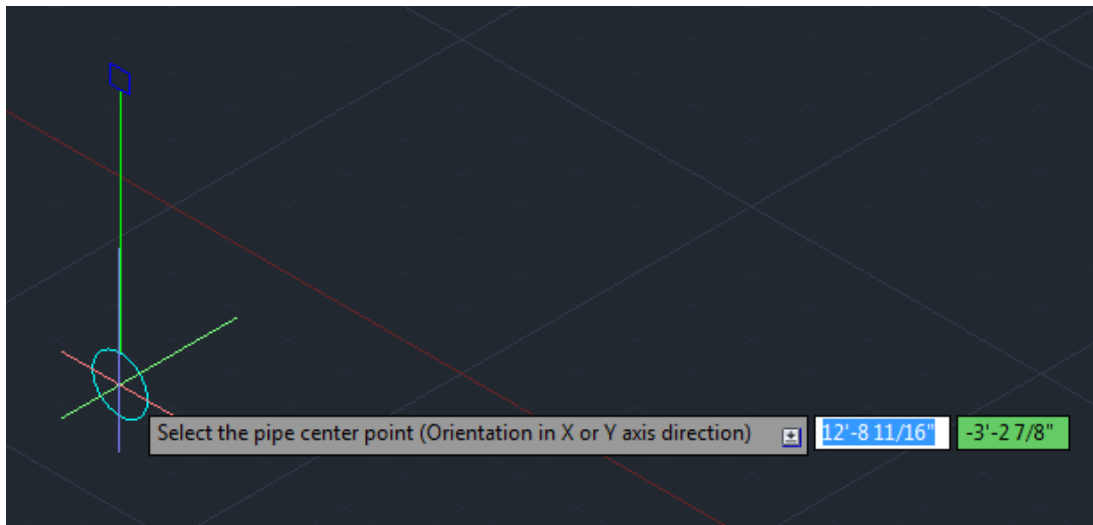
As an empty drawing was used in the example, the „on pipe“ option does not function, so the „free“ option was chosen. During the pipe center point input, the positioning of the clamp in the direction „X“ or „Y“ axis can be decided on. The specification is the „X“ direction.



After the entry of „Y“ instead of a point the clamp is correspondingly displayed rotated by 90° (see the two following illustrations).

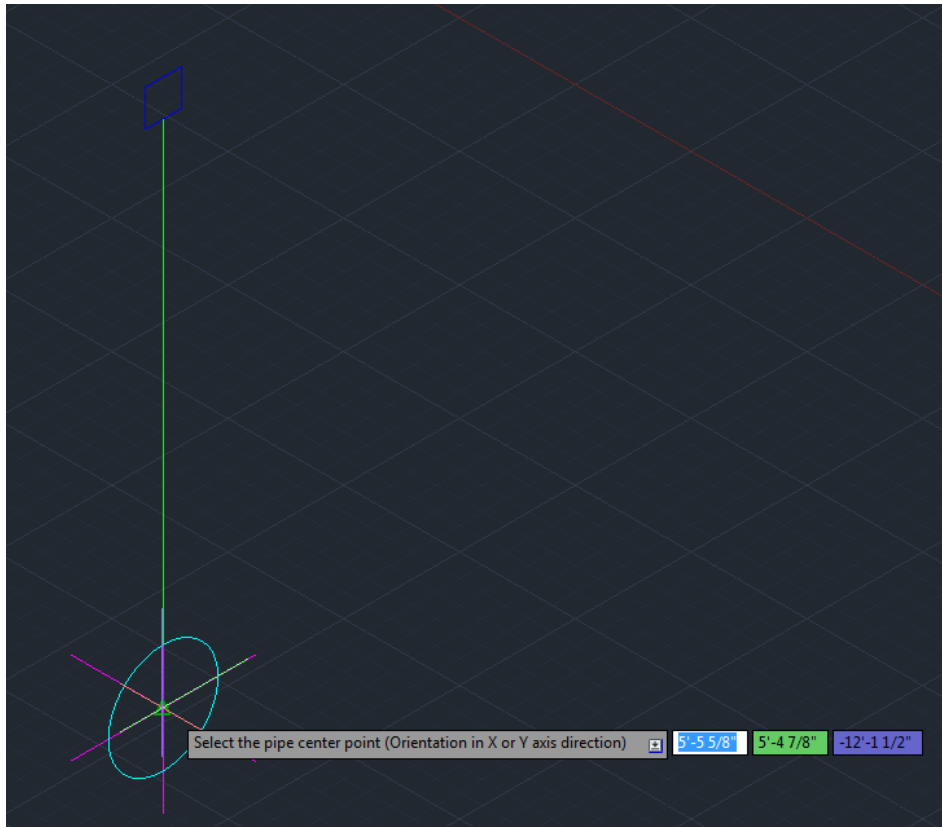


After confirmation of the entry the clamp rotates in the „Y“ axis direction.

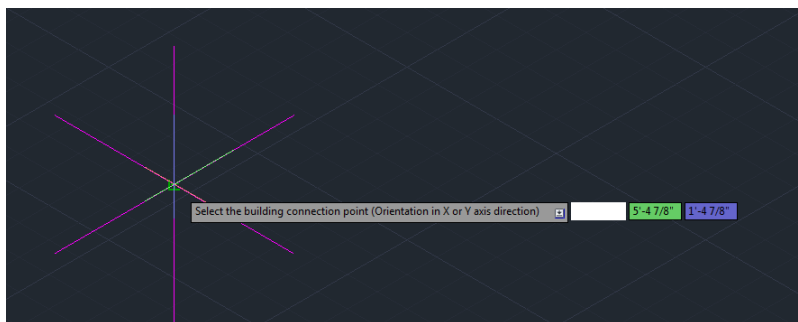


By entering the letter „X“, and following confirmation, the positioning of the clamps is again carried out in the direction of the X axis. Now the pipe center point is determined here on the intercept of

the lines of the lower star.

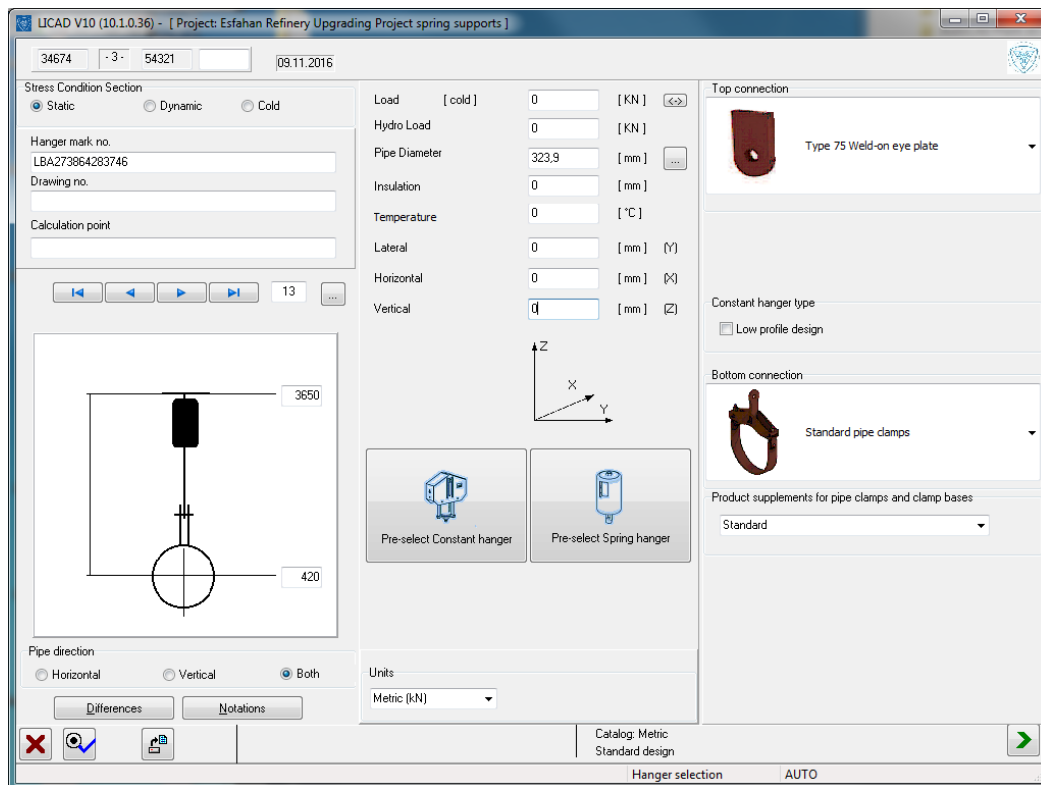


After that the upper attachment point of the support to the intercept of the lines of the upper star is determined.

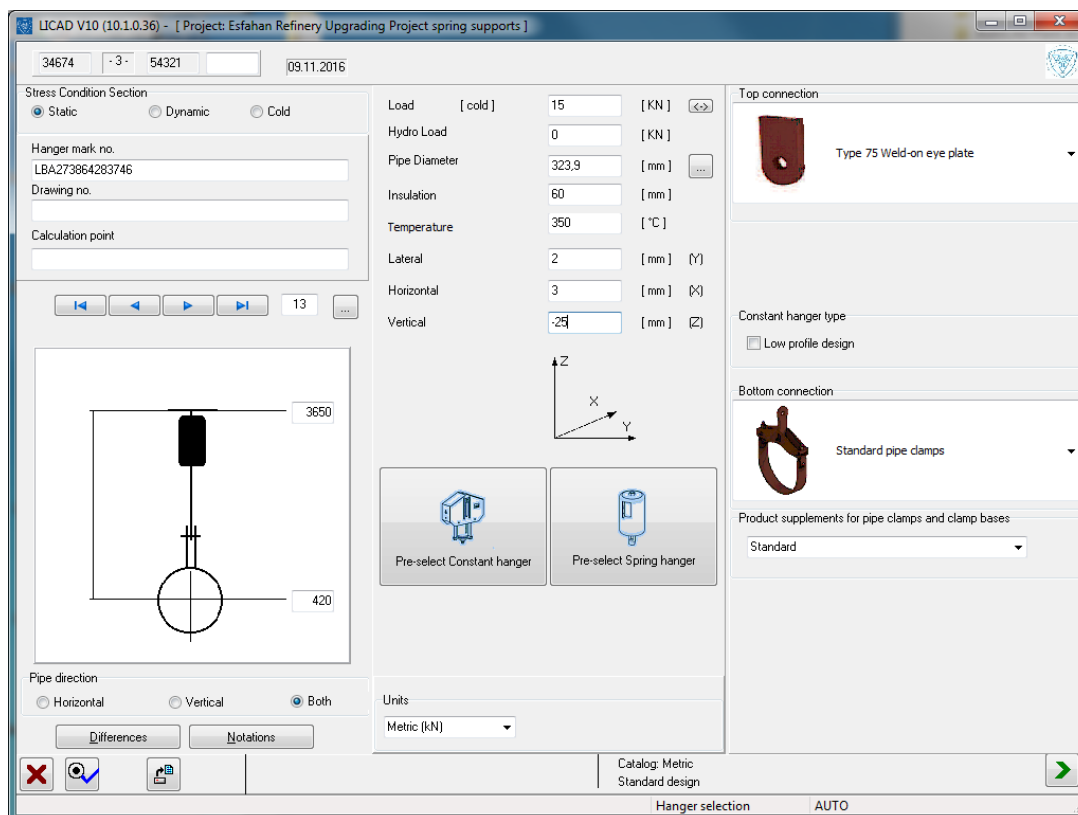


After confirmation of the structural attachment point the LICAD program is automatically started. There the relevant data available (the configuration selected in LICAD is No. 13, the elevation numbers are entered) are already in the input fields. As the free mode was selected, no pipe data are on hand. In the „on pipe“ mode the data for the diameter, temperature and insulation would have been taken over.





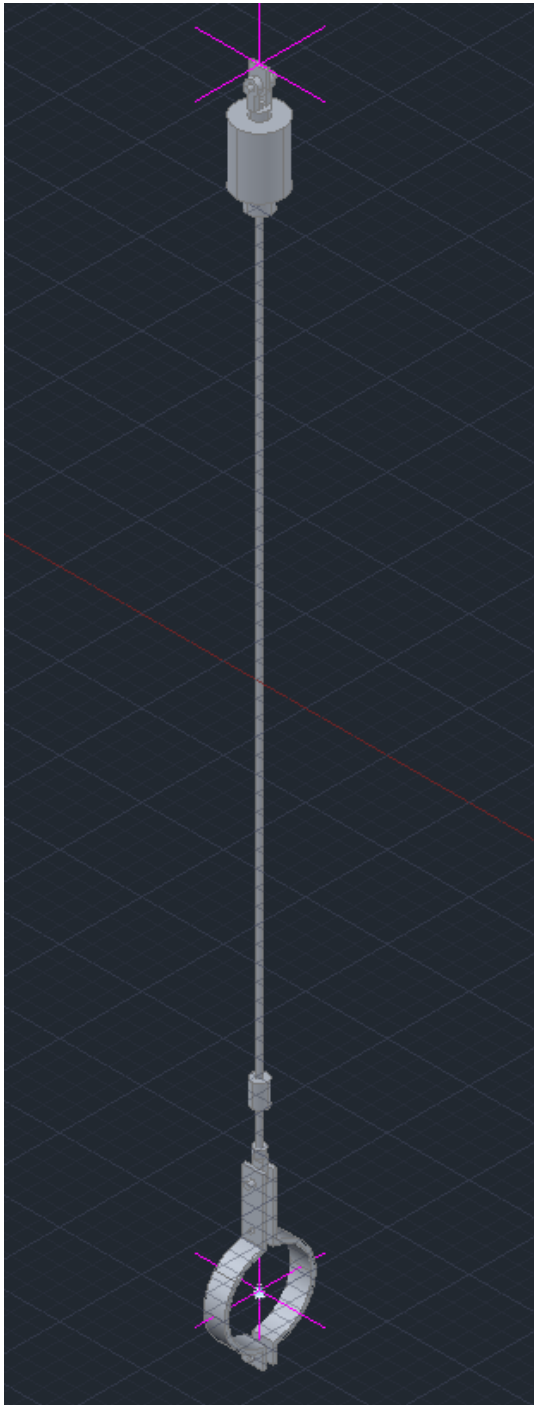
The missing data needed by LICAD for the design can now be simply supplemented.



On completion of all inputs, only the button at the bottom right with the green arrow now has to be pressed. LICAD then assembles the components required and supplies the information to the plug-in.

The plug-in reads this information and generates from it the whole support out of the individual components composed from 3D bodies.

The result of this example looks as follows:



### Configurations available

For the commands LICAD, LICAD1, LICAD2, LICAD3, LICAD4 or LICAD5 the following configurations are currently available.

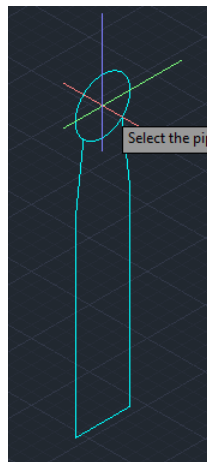
#### Configuration 1:

(Simple suspension for horizontal pipes)

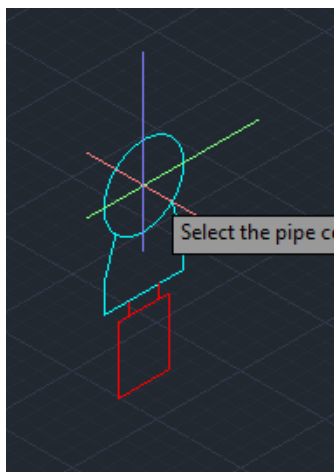


#### Configuration 2:

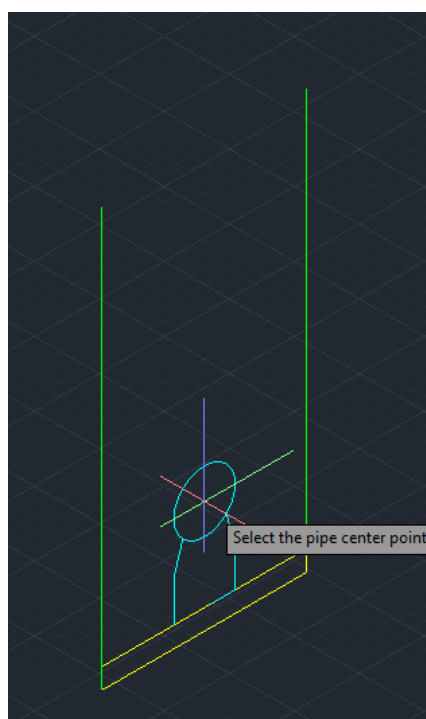
(Clamp base / pipe shoe for horizontal pipes)



#### Configuration 3: (Clamp base with spring support for horizontal pipes)



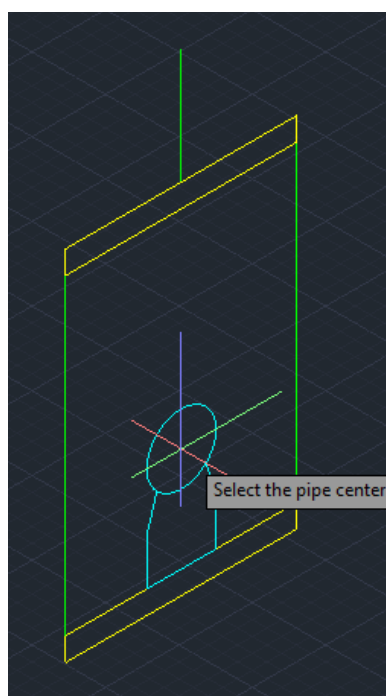
Configuration 4 (for horizontal pipes):



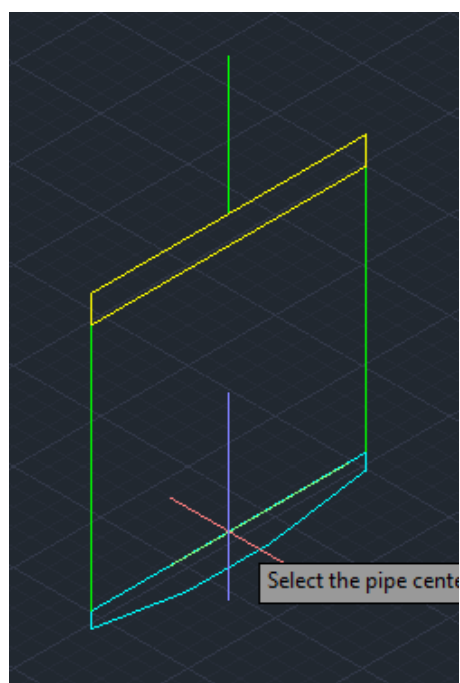
Configuration 4 (for vertical pipes):



Configuration 5 (for horizontal pipes):

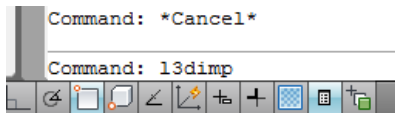


Configuration 5 (for vertical pipes):

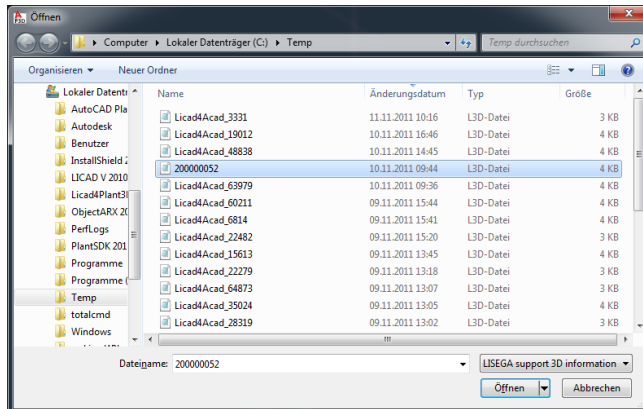


## Variant 2: Import of L3D files

Command input:

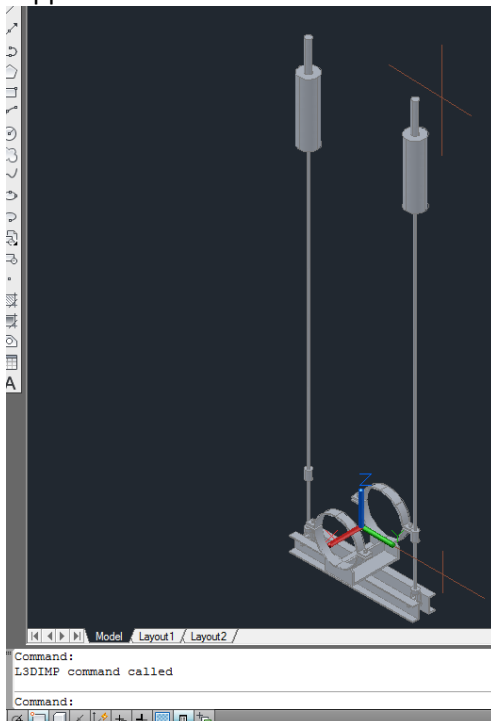


1. An „open file“ dialog appears, in which files of the type „LISEGA support information (\*.L3D)“ can be selected.



Select a file and press the „open“ button.

2. The plug-in reads the information from the L3D file and creates from it the 3D model of the support.



Note for Plant3D: A connection to the pipe is established if the tolerances defined in the settings are adhered to.

## Commands available

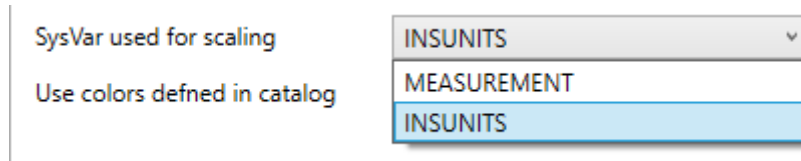
The commands are identical in AutoCAD and AutoCAD Plant3D. In Plant3D, however, a distinction is made between the Plant3D variant and the AutoCAD variant, depending on whether the drawing belongs to the current Plant3D project or not.

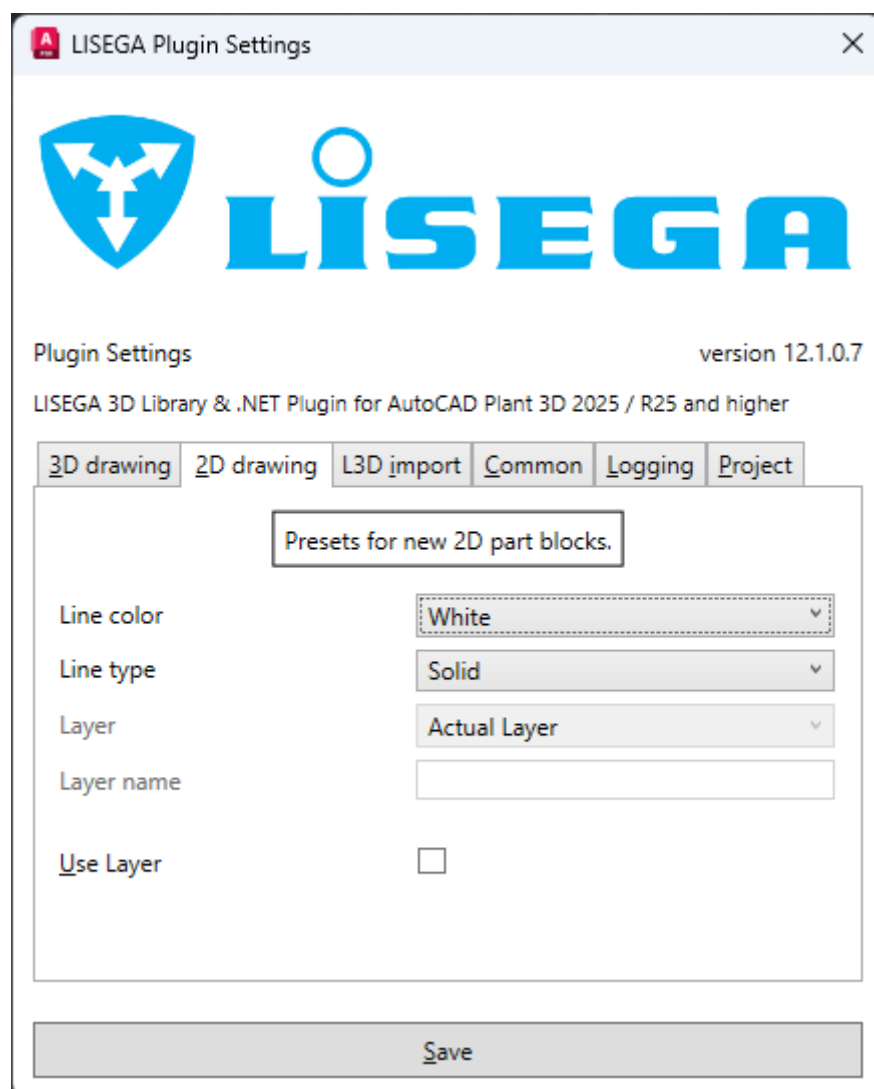
## LISET

The settings for the plug-in can hereby be displayed and if necessary altered.

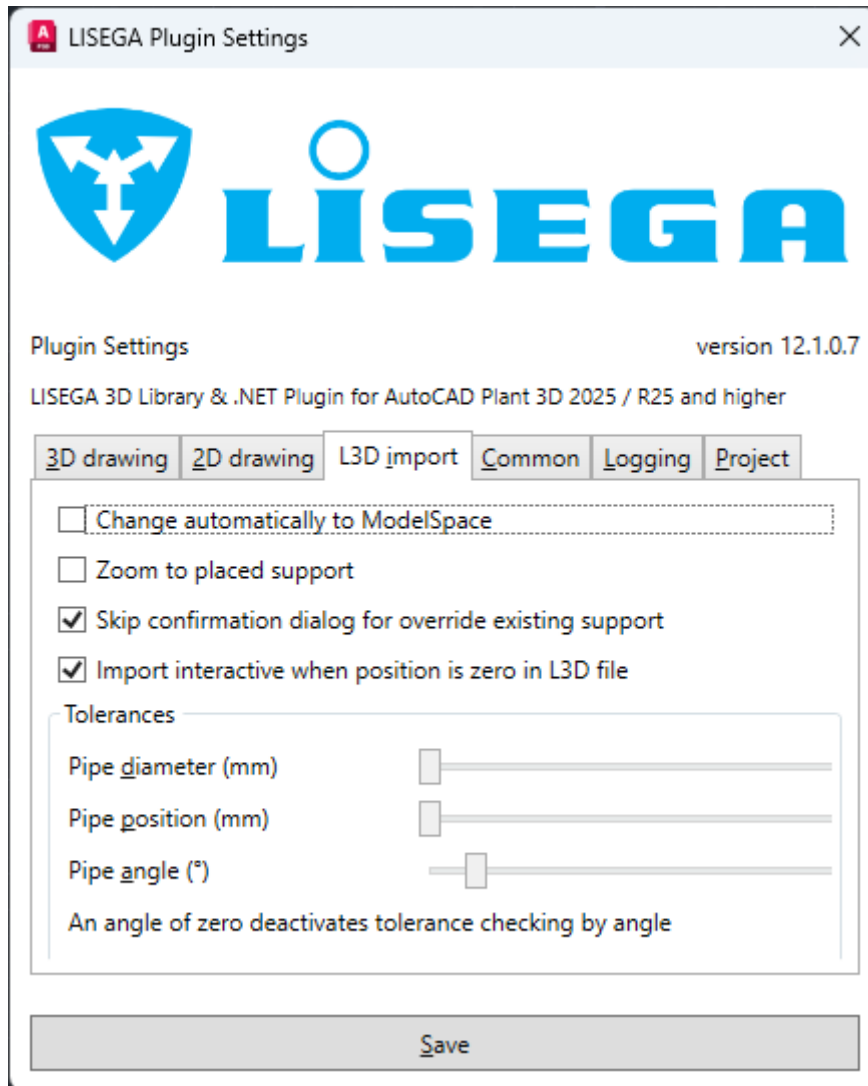


The "SysVar used for scaling" setting must be used to specify how the plug-in should calculate the scaling of the LISEGA components when they are inserted into the model. The two settings "INSUNITS" and "MEASUREMENT" are supported. It was necessary to include this switch as these two variants are used to define the scaling. Please set the variant you use here.





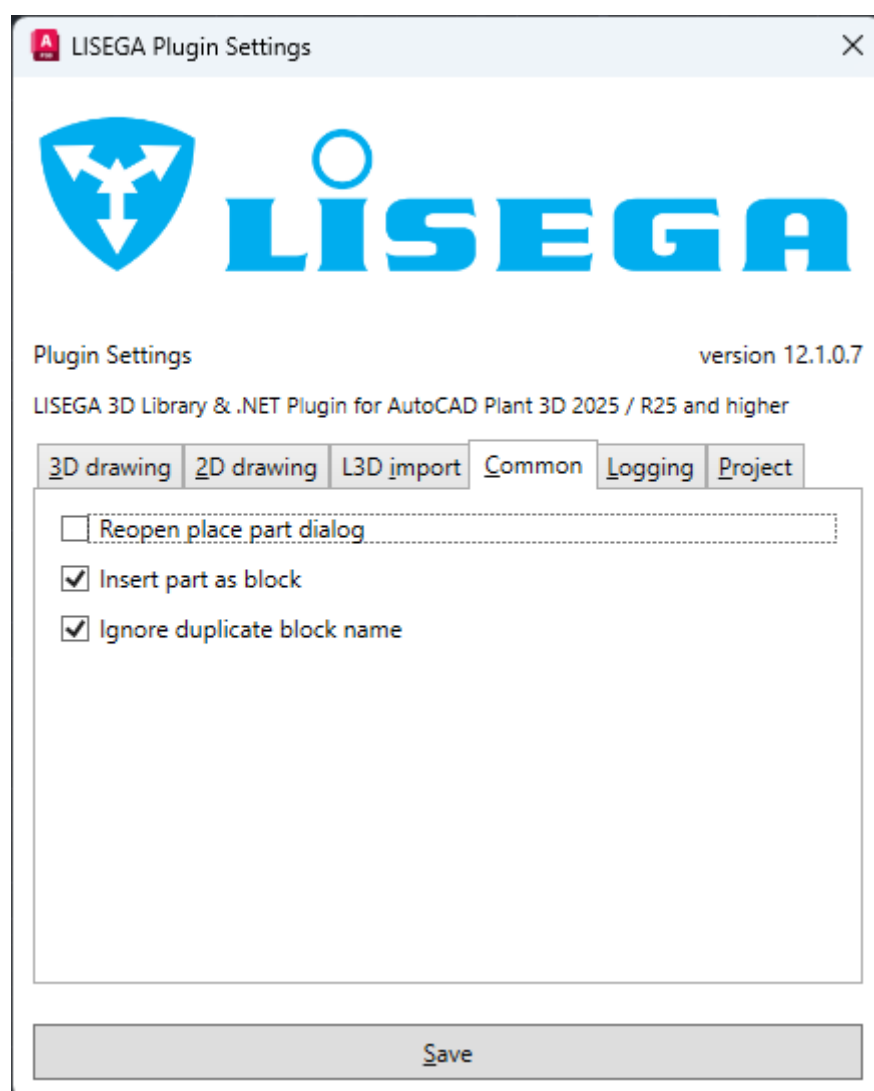
Plant3D Variant

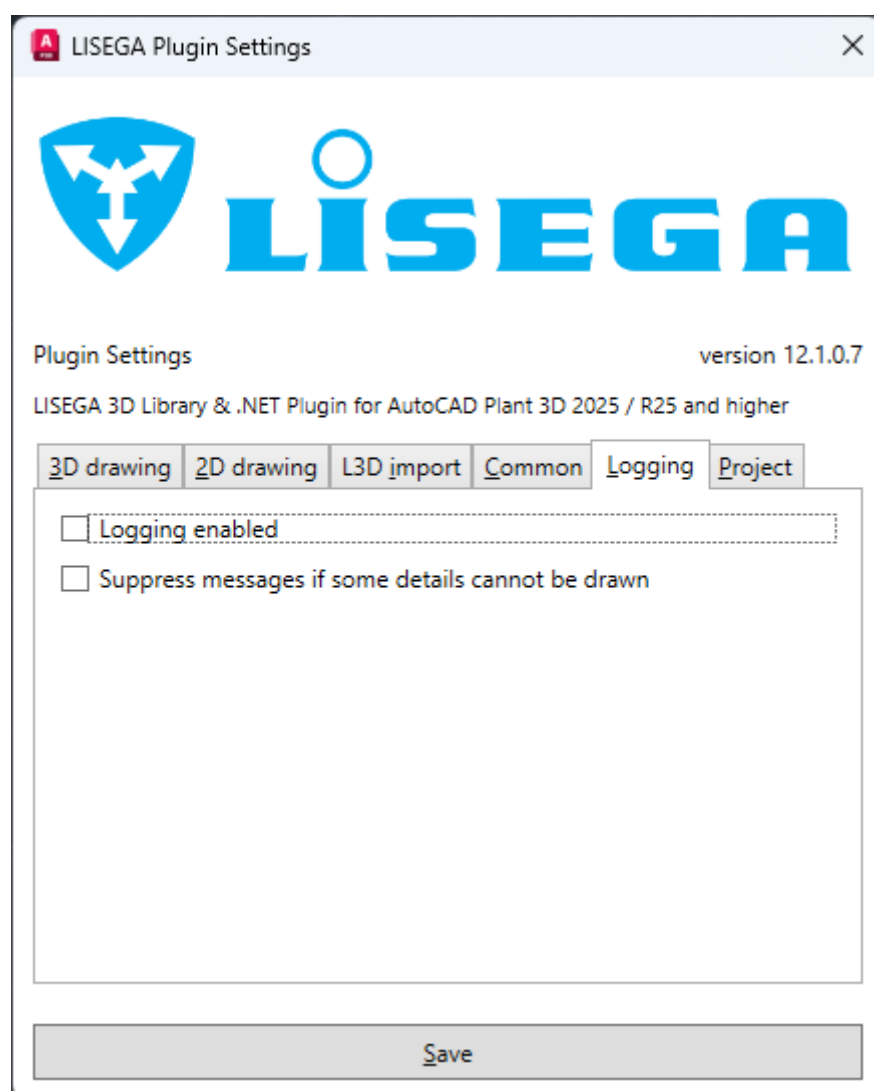


The "Tolerances" extension was necessary so that the plugin in Plant3D can establish a connection to the pipe after it has checked these tolerances.


NOTE: If the data in LICAD was imported from a pipe calculation, the correct direction of the pipe may be missing. To ensure that the plugin can still establish the connection in such a case, the tolerance for the angle must be set to 0°. This means: No angle check!







**LISEGA Plugin Settings** [X]



Plugin Settings version 12.1.0.7

LISEGA 3D Library & .NET Plugin for AutoCAD Plant 3D 2025 / R25 and higher

3D drawing   2D drawing   L3D import   Common   Logging   Project

Local

Remote {1}

Name

Project

0

Network

Host

Port

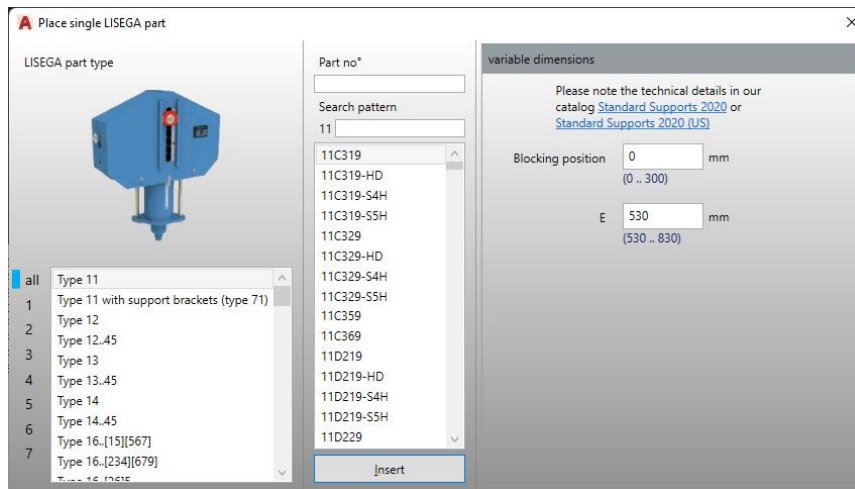
0

Add   Delete   None

Save

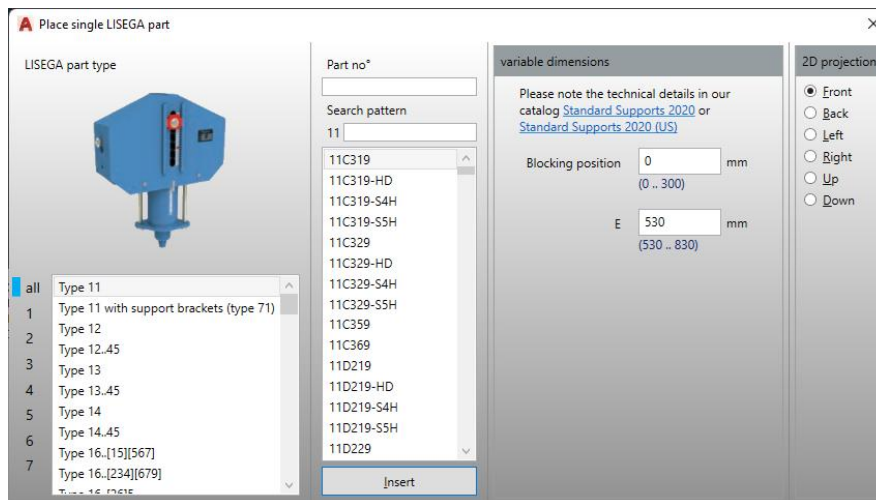
## LIPART3D

With the aid of this command individual components from the LISEGA catalog can be inserted into the 3D model.



## LIPART2D

With the aid of this command individual 2D views of a part from the LISEGA catalog can be inserted into the 2D drawing.



## LILICAD

### LILICAD1

### LILICAD2

### LILICAD3

### LILICAD4

### LILICAD5

### LILICADmod

These commands always start the LICAD program after requesting the necessary information in AutoCAD/Plant 3D. A distinction is only made with regard to the preselection of the configuration.

### L3DIMP or -L3DIMP

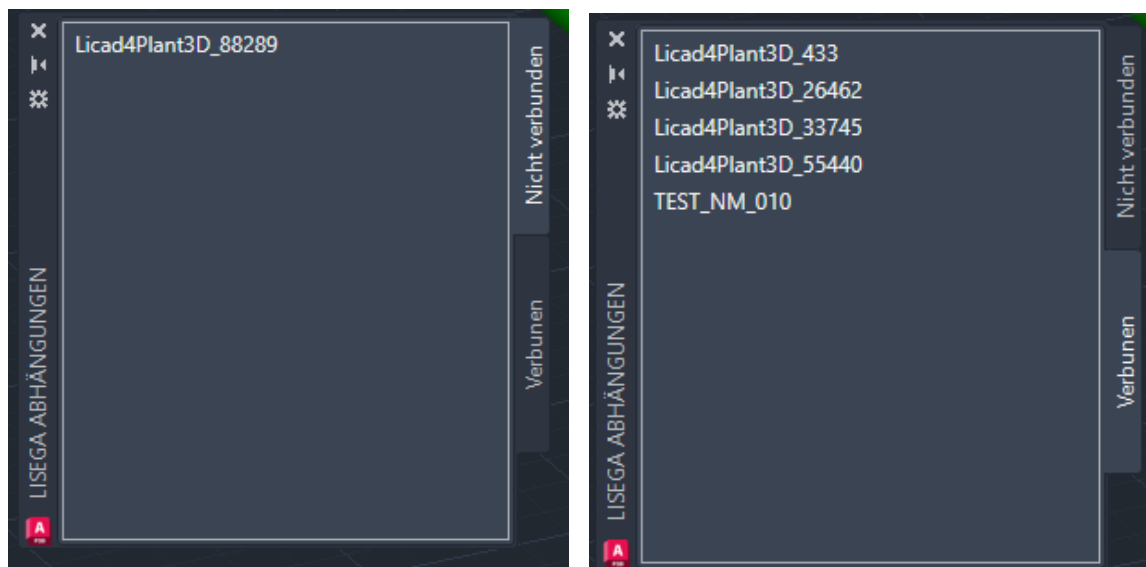
These two commands import LISEGA supports available in the shape of L3D files.

The command „...L3DIMP“ opens an „open file“ dialog. The „-...L3DIMP“ command is the command line variant of the command „...L3DIMP“ and queries the file name in the command line.

It is necessary that a support is created, stored and exported beforehand as an L3D file with the LICAD program. (See attachment - LICAD creation of a support, export of a stored support as L3D file)

### LIANALYZE (Only in Plant3D available)

The LISEGA supports present in the model are displayed in a dialog box.



A distinction is made between connected and unconnected supports. It is therefore possible to find brackets without a pipe connection directly in the model so that you can create the connection yourself before an ISO is generated. So far, it has only been possible to determine there that brackets have no connection, as they are not shown in the ISO. Clicking on one of the list elements automatically zooms to the selected support in the model.

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